

ARMY
NAVY
AIR FORCE

TM 11-5895-856-34-19
EE640-CA-MMI-190/E154 CPU
TO 31 W2-2T-122-19

TECHNICAL MANUAL

**DIRECT SUPPORT AND GENERAL SUPPORT
MAINTENANCE MANUAL
FOR
CENTRAL, MESSAGE SWITCHING, AUTOMATIC
AN/TYC-39(V)1
AND
CENTRAL OFFICE, TELEPHONE, AUTOMATIC
AN/TTC-39(V)2**

**AUTOMATIC DATA PROCESSING
ASSEMBLIES**

**DEPARTMENTS OF THE ARMY, NAVY, AND AIR FORCE
22 SEPTEMBER 1983**



5

SAFETY STEPS TO FOLLOW IF SOMEONE IS THE VICTIM OF ELECTRICAL SHOCK

1

DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL

2

IF POSSIBLE, TURN OFF THE ELECTRICAL POWER

3

IF YOU CANNOT TURN OFF THE ELECTRICAL POWER, PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A DRY WOODEN POLE OR A DRY ROPE OR SOME OTHER INSULATING MATERIAL

4

SEND FOR HELP AS SOON AS POSSIBLE

5

AFTER THE INJURED PERSON IS FREE OF CONTACT WITH THE SOURCE OF ELECTRICAL SHOCK, MOVE THE PERSON A SHORT DISTANCE AWAY AND IMMEDIATELY START ARTIFICIAL RESUSCITATION

WARNING

HIGH VOLTAGE

is used in the operation of thin equipment.

DEATH ON CONTACT

may result if personnel fail to observe safety precautions. Learn the areas containing high voltage in each piece of equipment. Be careful not to contact high-voltage connections when installing or operating this equipment. Before working inside the equipment, turn power off and ground points of high potential before touching them

WARNING

USE OF CLEANING SOLVENT

Adequate ventilation should be provided while using TRICHLORO-TRIFLUOROETHANE (NSN 6850-00-105-3084). Prolonged breathing of vapor should be avoided. The solvent should not be used near heat or open flame, the products of decomposition are toxic and irritating. Since TRICHLOROTRIFLUOROETHANE dissolves natural oils, prolonged contact with skin should be avoided. When necessary, use gloves which the solvent cannot penetrate. If the solvent is taken internally, consult a physician immediately

LIST OF EFFECTIVE PAGES

Dates of issue for original and changed pages are

Original . .0 . .

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 432 CONSISTING OF THE FOLLOWING

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#Zero in this column indicates an original page.

TECHNICAL MANUAL
NO 11-5895-856-34-19
TECHNICAL MANUAL
EE640-CA-MMI-190/E154 CPU
TECHNICAL ORDER
TO 31W2-2T-122-19

DEPARTMENTS OF THE ARMY
THE NAVY, AND
THE AIR FORCE

Washington, DC, 22 September 1983

**DIRECT SUPPORT AND GENERAL SUPPORT
MAINTENANCE MANUAL
FOR
CENTRAL, MESSAGE SWITCHING, AUTOMATIC
AN/TYC-39(V)1
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AN/TTC-39(V)2**

**AUTOMATIC DATA PROCESSING
ASSEMBLIES**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in back of this manual direct to Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN DRSEL-ME-MP, Fort Monmouth, New Jersey 07703

For Air Force, submit AFTO Form 22 (Technical Order System Publication Improvement Report and Reply) in accordance with paragraph 6-5, Section VI, T.O. 00-5-1. Forward direct to prime ALC/MST.

For Navy, mail comments to the Commander, Naval Electronics Systems Command, ATTN ELEX 8122, Washington, DC 20360.

In either case, a reply will be furnished direct to you

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VOLUME 19 TM 11-5895-856-34-19

Card Cage Assembly, Input/Output Unit-L.H., Wire List, Logic (149019-860)

This volume is part of a 24-volume set covering the direct support and general support maintenance of the automatic data processing assemblies. This volume contains the logic wire list for the left-hand card cage assembly of the input/output unit, drawing number 149019-860. Refer to volume 1 of tints series (TM 11-5895-856-34-1) for an explanation of how to use this wire list as well as other lists contained in the set

NOTE

The pages in volumes 2 through 24 of TM 11-5895-856-34 have been numbered in a special manner. Pages within these volumes are found by keying to two page identifiers the drawing number and the page number. To find the page that you desire within the volume, follow the steps listed below:

1. Find the applicable wire run list in the table of contents and note the applicable drawing number.
2. Look through the pages of the volume until you find the particular drawing number of the wire run list that you seek. This will insure that you are in the correct wire run section.
3. Go through these pages until you find the page number you are looking for within this particular wire run list.

Remember, pages in the volumes cited above are found by keying to the drawing number applicable to a particular wire run list, as well as, a page number. Make sure you are on the correct page by checking both page identifiers.

**CARD CAGE ASSEMBLY, INPUT/OUTPUT UNIT
-LEFT HAND
LOGIC WIRE LIST
149019-860**

NOTES: UNLESS OTHERWISE SPECIFIED

1. REFERENCE TO SHEET 3 FOR DEFINITION OF FIELDS.
2. REFERENCE TO SHEET 4 FOR CONFIGURATIONS OF SHIELD AND WIRE TERMINATIONS
3. REFERENCE TO SHEET 5 OF STRING LIST FOR WIRE CODE DEFINITIONS
4. REFERENCE TO SHEET 6 OF STRING LIST FOR WIRE SUMMARY LIST
5. ALL ABBREVIATIONS PER MIL-STD-12.
6. THROUGHOUT THE BODY OF THIS DOCUMENT THE UNIT NAME IS REFERRED TO AS: CARD CAGE ASSY, I/O UNIT

H78 STRING AND CONNECTOR LIST, DEFINITION OF FIELDS

1. **Record Number**-A unique Data Processing number which associates all information pertaining to a wire "FROM" Connector, "TO" Connector, Wire Code, etc. This number is the wire ID when that field is blank.
2. **Prefix**-An assembly alphanumeric to be used when a wire terminates in two assemblies. This number will be the reference designation as required by USAS Y32 16-1968.
3. **Connector**-Any type of terminating point, plug, receptacle, etc. Designations are in accordance with USAS Y32 16-1968.
4. **Pin**-Exact terminating point of the respective connector. Designations are unique
 - A. SHXXX Indicates the junction of a shield and a pigtail, the four digits to the right are the wire amenity of the shielded wire.
 - B. JCT indicates a common point of two or more shield pigtails.
 - C. Jacket the terminology used when describing the line that defines the identification of a shielded wire.
5. **Sh Fg**-References a graphic representation showing how a shielded wire or coax is to be terminated. A number in this field indicates the level of automatic wire wrapping.
6. **Multi Group**-Associates wires of a group such as "twisted wire" or "shielded wire." Jacket, pigtails and center conductors will be shown as a common group.
7. **Wire Code**-A three-digit code for wire type and gage or bus bar.
8. **Wire Color**-Standard RETMA color code
 - A. Base Stripe Tracer
 - B. Stripe, Tracer 1 and Tracer 2 if the digit to the left is other than 9 and the two positions to the right are not blank and not equal. The Base Color is understood to be white.
9. **Wire Ident**-A number used for reference to differentiate one wire from another. This number will be used to identify the wire when specified in the wire list sleeve code field.
10. **Spc Inst**-A code which indicates that a wire must be given special attention as follows:
 - A. Direct routing, no service loops, no harnessing.
 - B. See general notes or instruction pages.
 - C. See general notes or instruction pages.
 - D. See general notes or instruction pages.
 - E. See general notes or instructor pages.
 - F. See signal description.
 - G. This connection does not go directly to the "TO" connector, but intersects a line going to the "TO" connector.
 - H. See special routing page.
 - I. Junction point for multi-layer laminated board (MLB) connection.
 - J. Denotes a bus reference point.
 - K. Blank out "TO" connector and pin.
 - L. Will cause a signal name of three characters or less to be entered in the string list.
 - M. Will cause a record to be omitted from the string list. (This record will print in the connector list).
 - N. Will suppress printing the wire identity in the harness string and double entry list.
 - P. Will cause the equation to be used as the signal name for sorting purposes only in the string list.

Drawing No.
149019-860
Rev G, sheet 2

H78 STRING AND CONNECTOR LIST, DEFINITION OF FIELDS-Continued

- Q. Will cause an equation record to be omitted from logic listing
- R. Will suppress printing the "FROM/TO" pin number in the string and connector lists.
- S. Do not move record number to the Dent field for an ADD transaction in the harness string and double entry only. (Use only when adding a file.)
- T. Twist wire code.
- U. Not available.
- V. See general notes or instruction pages.
- W. Fixed wire length submitted.
- X. Sequence of string is to be left as is.
- Y. See general notes or instruction pages.
- Z. Will suppress printing of the "FROM" pin.

10. **Misc-**Unless otherwise noted, the number 1 indicates a pre-wired connector

11. **Signal-**An alphanumeric signal name, mnemonic where feasible, which identifies one specific function from another.

- SPP Denotes an available termination.
- SPF Denotes an unwired termination which has an assigned function.
- SPW Denotes a non-functional wire which is terminated at one or both ends.
- SPO Denotes a spare output of a circuit.
- DNW Indicates that a termination may not be wired.
- SPA Denotes an unassigned circuit, as one of a group on a printed circuit board.
- SPI Denotes a spare input of a circuit.
- SPG Denotes an unassigned logic gate, as one of a group on a printed circuit board.
- SPR Denotes a spare resistor.
- SPD Denotes an unassigned Input diode of an assigned logic gate.

12. **Seq No.-**A number which, in conjunction with SIGNAL, allows a signal string to be consistently printed in a given order.

13. **Equation-**A mnemonic name assigned to each gate of an element.

14. **Term-**An "OR" function composed of one or more factors

15. **Factor-**A specific input to a logical gate or active element.

16. **Ckt or Chip Type-**Denotes a specific circuit board type

17. **Group-**Denotes a specific circuit on a printed circuit board.

18. **Load or Power Plane-**Denotes the current draw in milliamps by a specific circuit or voltage.

19. **AND Test Point-**Denotes the input test point for a specific circuit on a printed circuit board.

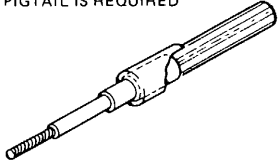
20. **OR Test Point-**Denotes the output test point for a specific circuit on a circuit board.

21. **Signal Description-**A written description or name of a signal or voltage

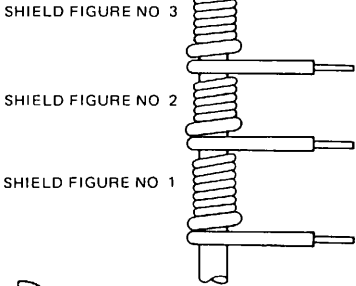
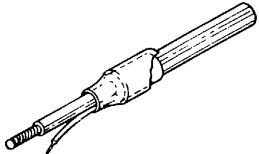
22. **ECO No.-**A letter number combination to show the Engineering Change Order level of that particular wire list record.

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Rev G, sheet 3

SHIELD FIGURE A
SHIELD TERMINATION FOR SHIELDED,
SINGLE AND MULTIPLE CONDUCTORS,
NO PIGTAIL IS REQUIRED

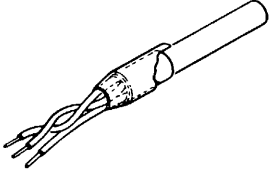


SHIELD FIGURE B
SHIELD TERMINATION FOR SHIELDED,
SINGLE AND MULTIPLE CONDUCTORS,
FRONT PIGTAIL IS REQUIRED

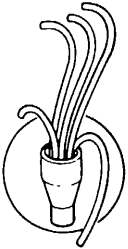
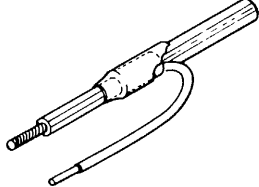


SHIELD FIGURE NUMBER
INDICATES LEVEL OF WIRE WRAP

SHIELD FIGURE G
SHIELDED CABLE TERMINATION WITH DRAIN WIRE

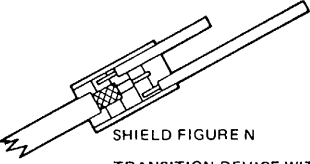
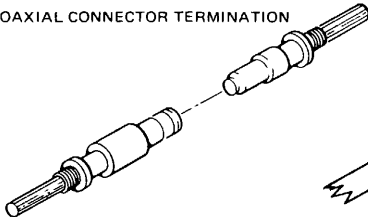


SHIELD FIGURE C
SHIELD TERMINATION FOR SHIELDED,
SINGLE AND MULTIPLE CONDUCTORS,
A REAR PIGTAIL IS REQUIRED

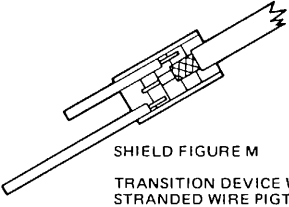


SHIELD FIGURE X
SHIELDED WIRE
PIGTAILS—HYBRID

SHIELD FIGURE Z
COAXIAL CONNECTOR TERMINATION



SHIELD FIGURE N
TRANSITION DEVICE WITH
SOLID WIRE PIGTAILS



SHIELD FIGURE M
TRANSITION DEVICE WITH
STRANDED WIRE PIGTAILS

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT FILE IDENT

LOGIC
UNIT ASSEMBLY NO. 149019
T39BIUX2

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19

REV G
DATE 09-03-82

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
				IOPWRB	00	=		
XA118	DCF	C3	30B	()	01		IOPWRDX 55 30B	
XA119	DCF	C3	30B	()	02	+	IOPWTOX 55 30B	IQU PWR DISPLAY
XA118	DCF	C3	30B	IOPWRDX	00	=		IOPWRB BUSS
XA118	DCF	C3	29A	(55)	01		KGNDCA 52 29A	
XA118	DCF	C4	29B	IOPWROX	00	=		
XA118	DCF	C4	28B	(56)	01		JUMP01 51 28B	
XA119	DCF	C3	30B	IOPWTOX	00	=		IOPWRB BUSS
XA119	DCF	C3	29A	(55)	01		HKLTSA 52 29A	
XA119	DCF	C4	29B	IOPWTOX	00	=		
XA119	DCF	C4	28B	(56)	01		SPI002 51 28B	
XA127	TLD	D4	27B	JACKAD4	00	=		CPU ACKNOWLEDGE
XA127	TLD	D4	25B	(51)	01		SPI011 JACKAO 47 25B 49 26B	
XA427	TLD	A3	04B	JBSTAD4	00	=		BOOTSTRAP 2 TO CPU
XA427	TLD	A3	02A	(09)	01		TBSTSO TMRUCA4 03 02A 07 03A	
				JDB00B4	00	=		
XA127	TLD	E1	31A	()	01		T000C0 66 31A	DATA TO CPU
XA348	TLD	A1	05A	()	02	+	T500S0 06 05A	STATE COUNTER TO CPU
XA427	TLD	C1	18A	()	03	+	T400S0 38 18A	ADDRESS TO CPU
				JDB01B4	00	=		
XA127	TLD	E2	28A	()	01		T001C0 60 28A	DATA TO CPU
XA348	TLD	C1	18A	()	02	+	T501S0 38 18A	STATE COUNTER TO CPU
XA427	TLD	C2	15A	()	03	+	T401S0 30 15A	ADDRESS TO CPU
				JDB02B4	00	=		
XA127	TLD	E3	30B	()	01		T002C0 57 30B	DATA TO CPU
XA348	TLD	C2	15A	()	02	+	T502S0 30 15A	STATE COUNTER TO CPU

DRAWING NUMBER
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149019-860
CARD CAGE ASSY, I/O UNIT FILE IDENT

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UNIT ASSEMBLY NO. 149019
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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM. DESIG.	FACTOR	COMMENT
XA427	TLD C3	16B	()	03 +	TA02SD 33 16B	ADDRESS TO CPU
XA127	TLD E4	33B	JDB0384 ()	00 = 01	TD03CD 63 33B	DATA TO CPU
XA348	TLD D1	24A	()	02 +	TS03SD 52 24A	STATE COUNTER TO CPU
XA427	TLD C4	19B	()	03 +	TA03SD 39 19B	ADDRESS TO CPU
XA127	TLD F1	37B	JDB0484 ()	00 = 01	TD04CD 75 37B	DATA TO CPU
XA348	TLD D2	21A	()	02 +	TS04SD 46 21A	STATE COUNTER TO CPU
XA427	TLD D1	24A	()	03 +	TA04SD 52 24A	ADDRESS TO CPU
XA127	TLD F2	34A	JDB0584 ()	00 = 01	TD05CD 72 34A	DATA TO CPU
XA348	TLD E1	31A	()	02 +	TS05SD 66 31A	STATE COUNTER TO CPU
XA427	TLD D2	21A	()	03 +	TA05SD 46 21A	ADDRESS TO CPU
XA127	TLD F3	35A	JDB0684 ()	00 = 01	TD06CD 69 35A	DATA TO CPU
XA348	TLD E2	28A	()	02 +	TS06SD 60 28A	STATE COUNTER TO CPU
XA427	TLD D3	24B	()	03 +	TA06SD 45 24B	ADDRESS TO CPU
XA127	TLD F4	39A	JDB0784 ()	00 = 01	TD07CD 80 39A	DATA TO CPU
XA348	TLD F1	37B	()	02 +	TS07SD 75 37B	STATE COUNTER TO CPU
XA413	TLD C3	16B	()	03 +	TI10SD 33 16B	TI10 TO DATA BUSS FOR CTS DI
XA126	TLD A1	05A	JDB0884 ()	00 = 01	TD08CD 06 05A	DATA TO CPU
XA348	TLD F2	34A	()	02 +	TS08SD 72 34A	STATE COUNTER TO CPU
XA413	TLD C4	19B	()	03 +	TI20SD 39 19B	TI20 TO DATA BUSS FOR CTS DI

DRAWING NUMBER
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CARD CAGE ASSY, I/O UNIT FILE IDENT

LOGIC
UNIT ASSEMBLY NO. 149019
T39BIUX2

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DATE 09-03-82 PAGE 7

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERMINAL	DESIGNATOR	FACTOR	COMMENT
				JDB09B4	00	=		
XA126	TLD	A2	02B	()	01		TD09CD 01 02B	DATA TO CPU
XA348	TLD	B1	12A	()	02	+	TS09SD 22 12A	STATE COUNTER TO CPU
XA413	TLD	D1	24A	()	03	+	TI30SD 52 24A	TI30 TO DATA BUSS FOR CTS DI
				JDB10B4	00	=		
XA126	TLD	A3	04B	()	01		TD10CD 09 04B	DATA TO CPU
XA348	TLD	B2	09A	()	02	+	TS10SD 14 09A	STATE COUNTER TO CPU
XA413	TLD	A1	05A	()	03	+	TR00SD 06 05A	TRO0 TO DATA BUSS FOR CTS DI
				JDB11B4	00	=		
XA126	TLD	A4	07B	()	01		TD11CD 15 07B	DATA TO CPU
XA348	TLD	A3	04B	()	02	+	TS11SD 09 04B	STATE COUNTER TO CPU
XA413	TLD	A2	02B	()	03	+	TR01SD 01 02B	TRO1 TO DATA BUSS FOR CTS DI
				JDB12B4	00	=		
XA126	TLD	B1	12A	()	01		TD12CD 22 12A	DATA TO CPU
XA348	TLD	A4	07B	()	02	+	TS12SD 15 07B	STATE COUNTER TO CPU
XA413	TLD	A3	04B	()	03	+	TR02SD 09 04B	TRO2 TO DATA BUSS FOR CTS DI
				JDB13B4	00	=		
XA126	TLD	B2	09A	()	01		TD13CD 14 09A	DATA TO CPU
XA348	TLD	B3	10B	()	02	+	TS13SD 21 10B	STATE COUNTER TO CPU
XA413	TLD	A4	07B	()	03	+	TR03SD 15 07B	TRO3 TO DATA BUSS FOR CTS DI
				JDB14B4	00	=		
XA126	TLD	B3	10B	()	01		TD14CD 21 10B	DATA TO CPU
XA348	TLD	B4	13B	()	02	+	TS14SD 27 13B	STATE COUNTER TO CPU
XA413	TLD	B1	12A	()	03	+	TR04SD 22 12A	TRO4 TO DATA BUSS FOR CTS DI

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UNIT ASSEMBLY NO. 149019
T39BIUX2

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
				JDB15B4	00 =		
XA126	TLD	B4	13B	()	01	TD15CD 27 13B	DATA TO CPU
XA348	TLD	C3	16B	()	02 +	TS15SD 33 16B	STATE COUNTER TO CPU
XA413	TLD	B2	09A	()	03 +	TR05SD 14 09A	TR05 TO DATA BUSS FOR CTS DI
				JDB16B4	00 =		
XA126	TLD	C1	18A	()	01	TD16CD 38 18A	DATA TO CPU
XA348	TLD	C4	19B	()	02 +	TS16SD 39 19B	STATE COUNTER TO CPU
XA413	TLD	B3	10B	()	03 +	TR06SD 21 10B	TR06 TO DATA BUSS FOR CTS DI
				JDB17B4	00 =		
XA126	TLD	C2	15A	()	01	TD17CD 30 15A	DATA TO CPU
XA348	TLD	D3	24B	()	02 +	TS17SD 45 24B	TS17 TO MEM BUSS
XA413	TLD	B4	13B	()	03 +	TR07SD 27 13B	TR07 TO DATA BUSS FOR CTS DI
				JDB18B4	00 =		
XA126	TLD	C3	16B	()	01	TD18CD 33 16B	DATA TO CPU
XA348	TLD	D4	27B	()	02 +	TS18SD 51 27B	TS18 TO MEM BUSS
XA413	TLD	C1	18A	()	03 +	TR08SD 38 18A	TR08 TO DATA BUSS FOR CTS DI
				JDB19B4	00 =		
XA126	TLD	C4	19B	()	01	TD19CD 39 19B	DATA TO CPU
XA348	TLD	E3	30B	()	02 +	TS19SD 57 30B	TS19 TO MEM BUSS
XA413	TLD	C2	15A	()	03 +	TR09SD 30 15A	TR09 TO DATA BUSS FOR CTS DI
				JDB20B4	00 =		
XA126	TLD	D1	24A	()	01	TD20CD 52 24A	DATA TO CPU
XA348	TLD	E4	33B	()	02 +	TS20SD 63 33B	TS20 TO CPU BUSS
XA413	TLD	D2	21A	()	03 +	TMO0SD 46 21A	TMO0 TO CPU (CTS)

DRAWING NUMBER 149019-860

LOGIC

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UNIT ASSEMBLY NO. 149019

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UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG. FACTOR	FACTOR	COMMENT
				JDB27B4	00	=		
XA126	TLD	E4	33B	()	01		TD27CD 63 33B	DATA TO CPU
XA249	TLD	C2	15A	()	02	+	TS27SD 30 15A	TS27 TO CTS
XA413	TLD	F1	37B	()	03	+	TBC1SD 75 37B	BYTE 01 TO CPU (CTS)
				JDB28B4	00	=		
XA126	TLD	F1	37B	()	01		TD28CD 75 37B	DATA TO CPU
XA249	TLD	C3	16B	()	02	+	TS28SD 33 16B	TS28 TO CPU
XA413	TLD	F2	34A	()	03	+	TBC2SD 72 34A	BYTE 02 TO CPU (CTS)
				JDB29B4	00	=		
XA126	TLD	F2	34A	()	01		TD29CD 72 34A	DATA TO CPU
XA249	TLD	C4	19B	()	02	+	TS29SD 39 19B	TS29 TO CPU
XA413	TLD	F3	35A	()	03	+	TBC3SD 69 35A	BYTE 03 TO CPU (CTS)
				JDB30B4	00	=		
XA126	TLD	F3	35A	()	01		TD30CD 69 35A	DATA TO CPU
XA413	TLD	F4	39A	()	02	+	TBC4SD 80 39A	BYTE 04 TO CPU (CTS)
				JDB31B4	00	=		
XA126	TLD	F4	39A	()	01		JDB31D 80 39A	
XA126	TLD	F4	39A	(80)	01		TTDM40 TD31BQ 76 37A 78 38A	JDB31B4 BUSS
XA127	TLD	C3	16B	JDIG1D4	00	=		DIAGNOSE LIGHT 1 DRIVER
XA127	TLD	C3	14B	(33)	01		TBY1C0 SPI009 29 14B 31 15B	
XA127	TLD	C2	15A	JDIG2D4	00	=		DIAGNOSE LIGHT 2 DRIVER
XA127	TLD	C2	16A	(30)	01		TCMP20 TCMW20 34 16A 36 17A	
XA127	TLD	C1	18A	JDIG3D4	00	=		DIAGNOSE LIGHT 3 DRIVER
XA127	TLD	C1	19A	(38)	01		SPI009 TBY2C0 40 19A 42 20A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19

UNIT ASSEMBLY NO. 149019

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CARD CAGE ASSY, I/O UNIT

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA127	TLD	B4	13B	JDIG4D4	00 =		DIGNOSE LIGHT 4 DRIVER
XA127	TLD	B4	11B	(27)	01	TCMW40 TCMP40 23 11B 25 12B	
XA127	TLD	B3	10B	JDIG5D4	00 =		7 BYTES IN MEM CYCLE CHECK ST
XA127	TLD	B3	08B	(21)	01	TS02C0 TOIG8S 17 08B 19 09B	
XA127	TLD	B2	09A	JDIG6D4	00 =		MEMORY CYCLE COMPLETED
XA127	TLD	B2	10A	(14)	01	TS01C0 TOIG60 18 10A 20 11A	
				JDIG8B4	00 =		
XA427	TLD	A1	05A	()	01	JEIG8D 06 05A	
XA127	TLD	A2	02B	()	02 +	JDIG8D 01 02B	BOOTSTRAP DIAGNOSTIC LIGHT IF
XA127	TLD	A2	02B	JDIG8D	00 =		JDIG8B4 BUSS
XA127	TLD	A2	04A	(01)	01	YBT120 SPI009 04 04A 05 03B	
XA427	TLD	A1	05A	JEIG8D	00 =		JDIG8B4 BUSS
XA427	TLD	A1	06A	(06)	01	YBT120 SPI034 08 06A 10 07A	
XA127	TLD	D3	24B	JIPEDB4	00 =		INPUT PARITY (DEVICE PARITY
XA127	TLD	D3	22B	(45)	01	SPI011 TIPEBQ 41 22B 43 23B	ERROE
XA127	TLD	D2	21A	JITT0D4	00 =		DEVICE TIMEOUT
XA127	TLD	D2	22A	(46)	01	SPI011 TITMRQ 48 22A 50 23A	
XA427	TLD	A2	02B	JLITAD4	00 =		LVL INTRPT TO CPU
XA427	TLD	A2	04A	(01)	01	TS12BQ TPEN3A 04 04A 05 03B	
XA511	ACF	A1	05A	JMTSAD4	00 =		CPU RESET
XA511	ACF	A1	03A	(11)	01	JMTSBD1 SPI300 07 03A 09 04A	
XA421	ACF	A2	06B	JMTSBD4	00 =		
XA421	ACF	A2	08B	(10)	01	ZDDORI TMTSAA 19 08B 15 07B	
XA249	TLD	A1	05A	JSSGAD4	00 =		START SIGNAL DRIVER 180 NSEC
XA249	TLD	A1	06A	(06)	01	TSS100 SPI019 08 06A 10 07A	TO UPPER CPU

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA249	TLD	A2	02B	JSTPAD4	00 =		STOP CPU
XA249	TLD	A2	04A	(01)	01	TFIOCO TFIOCR 04 04A 05 03B	CPU)
XA427	TLD	B1	12A	JS02AD4	00 =		STIMULATE 02 TO CPU
XA427	TLD	B1	13A	(22)	01	RTCT10 SPI034 24 13A 26 14A	
XA426	THI	E5	30B	JS77AD4	00 =		STIMULATE 77 TO CPU
XA426	THI	E5	31B	(57)	01	TS77A0 59 31B	
XA213	THI	A1	06A	KCMALA	00 =		COMPUTER MALEFUNCTION-A
XA213	THI	A1	07A	(13)	01	KCMALO 11 07A	
XA216	TSB	E1	31B	KCMALO	00 =		COMPUTER MALEFUNCTION-O
XA216	TSB	E1	29B	(59)	01	KMR14R SPI003 SPI004 SPI015 KMR12R KMR11R KMR13R SPI014 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	
XA117	DCF	D1	32B	KCMPMDX4	00 =		
XA117	DCF	D1	36A	(65)	01	KGNDCA 72 36A	
XA117	DCF	D2	33B	KCMPMOX	00 =		
XA117	DCF	D2	34B	(69)	01	KMR02S 71 34B	
				KDVBLB	00 =		
XA118	DCF	C7	25A	()	01	KDVBLDX 43 25A	BOOTSTRAP DISPLAY
XA119	DCF	C7	25A	()	02 +	LDVBLDX 43 25A	
XA118	DCF	C7	25A	KDVBLDX	00 =		KDVBLB BUSS
XA118	DCF	C7	29A	(43)	01	KGNDCA 52 29A	
XA118	DCF	C8	26A	KDVBLOX	00 =		
XA118	DCF	C8	28A	(48)	01	KMR04S 50 28A	
				KDVC1B	00 =		
XA117	DCF	A7	02A	()	01	KDVC1DX 01 02A	LSB DVC ADD DSPLY
XA118	DCF	B7	10A	()	02 +	LDVC1DX 23 10A	

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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERMINAL	DESIGNATOR	FACTOR	COMMENT
XA117	DCF A7	02A	KDVC10X	00	=		
XA117	DCF A7	05A	(01)	01		KGNDCA 06 05A	KDVC1B BUSS
XA117	DCF A8	03A	KDVC10X	00	=		
XA117	DCF A8	04A	(03)	01		KMR31S 04 04A	
XA117	DCF A5	08B	KDVC2B	00	=		
XA117	DCF B5	16A	()	02	+	KDVC2DX 14 08B	2ND LSB DVC ADD DSPLY
XA117	DCF A5	08B	KDVC2DX	00	=		
XA117	DCF A5	05A	(14)	01		KGNDCA 06 05A	KDVC2B BUSS
XA117	DCF A6	07A	KDVC20X	00	=		
XA117	DCF A6	06A	(10)	01		KMR30S 08 06A	
XA117	DCF A3	07B	KDVC4B	00	=		
XA117	DCF B3	15B	()	02	+	KDVC4DX 17 07B	3RD LSB DVC ADD DISPLAY
XA117	DCF A3	07B	KDVC4DX	00	=		
XA117	DCF A3	05A	(17)	01		KGNDCA 06 05A	KDVC4B BUSS
XA117	DCF A4	06B	KDVC40X	00	=		
XA117	DCF A4	05B	(15)	01		KMR29S 13 05B	
XA125	THI E5	30B	KGNDCA	00	=		
XA125	THI E5	31B	(57)	01		SPI009 59 31B	
XA213	THI C3	15A	KGNDCA	00	=		
XA213	THI C3	16A	(34)	01		SPI006 36 16A	
XA313	TLD E1	31A	KGND0B	00	=		
XA313	TLD E2	28A	()	02	+	KGND0D 66 31A	GROUND 0
XA313	TLD E2	28A	()	02	+	KGND1D 60 28A	GROUND 1

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19

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CONNECTOR	RECUP TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	RESISTOR RATOR	FACTOR	COMMENT
XA313	TLD	E1	31A	KGNDOD	00	=		
XA313	YLD	E1	32A	(66)	01		SPI023 SPI022 68 32A 70 33A	KGNDOR BUSS
XA313	TLD	E2	28A	KGND1D	00	=		
XA313	YLD	E2	29A	(60)	01		SPI023 SPI022 62 29A 64 30A	KGNDOR BUSS
				KIR11B	00	=		
XA313	YLD	E3	30B	()	01		KIR11D 57 30B	ITR ADDRESS 01
XA313	YLD	E4	33B	()	02	+	KIR12D 63 33B	ITR ADDRESS 01
XA313	TLD	E3	30B	KIR11D	00	=		
XA313	YLD	E3	28B	(57)	01		TMRCAA SPI023 53 28B 55 29B	KIR11B BUSS
XA313	TLD	E4	33B	KIR12D	00	=		
XA313	YLD	E4	31B	(63)	01		TMRCAA SPI023 59 31B 61 32B	KIR11B BUSS
				KIR21B	00	=		
XA313	YLD	F1	37B	()	01		KIR21D 75 37B	ITR ADDRESS 02
XA313	YLD	F2	34A	()	02	+	KIR22D 72 34A	ITR ADDRESS 02
XA313	TLD	F1	37B	KIR21D	00	=		
XA313	YLD	F1	38B	(75)	01		SPI023 TCCCAA 77 38B 79 39B	KIR21B BUSS
XA313	TLD	F2	34A	KIR22D	00	=		
XA313	YLD	F2	36A	(72)	01		TCCCAA SPI023 71 36A 73 36B	KIR21B BUSS
				KIOCTB	00	=		
XA117	DCF	B3	15B	()	01		KIOCTDX 37 15B	
XA119	DCF	B3	15B	()	02	+	LIOCTDX 37 15B	IOC TIMEOUT DSPLY
XA117	DCF	B3	15B	KIOCTDX	00	=		
XA117	DCF	B3	13A	(37)	01		KGNDCA 36 13A	KIOCTB BUSS
XA117	DCF	B4	14B	KIOCTOX	00	=		
XA117	DCF	B4	13B	(35)	01		KMR14S 33 13B	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
					KIOC1B	00			
XA117	DCF	A1	02B	()		01	N	KIOC1DX 07 02B	4TH MTB DVC ADD DISPLAY
XA118	DCF	B1	10B	()		02	+	LIOC1DX 27 10B	
XA117	DCF	A1	02B		KIOC1DX	00	=		KIOC1B BUSS
XA117	DCF	A1	05A	(07)		01		KGNDCA 06 05A	
XA117	DCF	A2	03B		KIOC10X	00	=		
XA117	DCF	A2	04B	(09)		01		KMR28S 11 04B	
					KIOC2B	00	=		
XA117	DCF	B7	10A	()		01		KIOC2DX 23 10A	
XA119	DCF	B7	10A	()		02	+	LIOC2DX 23 10A	3RD MSB DVC ADD DI
XA117	DCF	B7	10A		KIOC2DX	00	=		KIOC2B BUSS
XA117	DCF	B7	13A	(23)		01		KGNDCA 36 13A	
XA117	DCF	B8	11A		KIOC20X	00	=		
XA117	DCF	B8	12A	(30)		01		KMR27S 34 12A	
					KIOC4B	00	=		
XA117	DCF	B5	16A	()		01		KIOC4DX 41 16A	2ND MSB DVC ADD DI
XA119	DCF	B5	16A	()		02	+	LIOC4DX 41 16A	
XA117	DCF	B5	16A		KIOC4DX	00	=		KIOC4B BUSS
XA117	DCF	B5	13A	(41)		01		KGNDCA 36 13A	
XA117	DCF	B6	15A		KIOC40X	00	=		
XA117	DCF	B6	14A	(40)		01		KMR26S 38 14A	
					KIOC8B	00	=		
XA118	DCF	C5	31B	()		01		KIOC8DX 60 31B	
XA119	DCF	C5	31B	()		02	+	LIOC8DX 60 31B	MSB DVC ADD-N

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	=	FACTOR	COMMENT
XA118	DCF	C5	31B	KIOC8DX	00	=		
XA118	DCF	C5	29A	(60)	01	=	KGNDCA 52 29A	KI0C8B BUSS
XA118	DCF	C6	31A	KIOC80X	00	=		
XA118	DCF	C6	30A	(57)	01	=	KMR25S 54 30A	
				KIOPRB	00	=		
XA117	DCF	B1	10B	()	01	=	KIOPROX 27 10B	IO DVC PAR ERR DSP
XA119	DCF	B1	10B	()	02	+	LIOPROX 27 10B	
XA117	DCF	B1	10B	KIOPROX	00	=		KIOPRB BUSS
XA117	DCF	B1	13A	(27)	01	=	KGNDCA 36 13A	
XA117	DCF	B2	11B	KIOPROX	00	=		
XA117	DCF	B2	12B	(29)	01	=	KMR08S 31 12B	
				KIOT0B	00	=		
XA118	DCF	A7	02A	()	01	=	KIOT0DX 01 02A	
XA119	DCF	A7	02A	()	02	+	LIOT0DX 01 02A	IO DVC TIMEOUT DSP
XA118	DCF	A7	02A	KIOT0DX	00	=		KIOT0B BUSS
XA118	DCF	A7	05A	(01)	01	=	KGNDCA 06 05A	
XA118	DCF	A8	03A	KIOT00X	00	=		
XA118	DCF	A8	04A	(03)	01	=	KMR09S 04 04A	
				KMCPRB	00	=		
XA118	DCF	A5	08B	()	01	=	KMCPRDX 14 08B	CPU MEM PAR ERR DSP
XA119	DCF	A5	08B	()	02	+	LMCPRDX 14 08B	
XA118	DCF	A5	08B	KMCPRDX	00	=		KMCPRB BUSS
XA118	DCF	A5	05A	(14)	01	=	KGNDCA 06 05A	
XA213	THI	B2	11A	KMCPRO	00	=		CPU MEMORY PARITY ERROR
XA213	YHI	B2	12A	(25)	01	=	JQMPED4 23 12A	

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LOGIC

 TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM. DESIGNATOR	FACTOR	COMMENT
XA118	DCF	A6	07A	KMCPROX	00 =		
XA119	DCF	A6	06A	(10)	01	KMCPRO 08 06A	
				KMEA1B	00 =		
XA117	DCF	C5	31B	()	01	KMEA1DX 60 31B	MEM BK LSB DSPL
XA118	DCF	D5	38B	()	02 +	LMEA1DX 80 38B	
XA117	DCF	C5	31B	KMEA1DX	00 =		KMEA1B BUSS
XA117	DCF	C5	29A	(60)	01	KGNDCA 52 29A	
XA117	DCF	C6	31A	KMEA10X	00 =		
XA117	DCF	C6	30A	(57)	01	KMR24S 54 30A	
				KMEA2B	00 =		
XA117	DCF	C3	30B	()	01	KMEA2DX 55 30B	
XA118	DCF	D3	37B	()	02 +	LMEA2DX 78 37B	
XA117	DCF	C3	30B	KMEA2DX	00 =		KMEA2B BUSS
XA117	DCF	C3	29A	(55)	01	KGNDCA 52 29A	
XA117	DCF	C4	29B	KMEA20X	00 =		
XA117	DCF	C4	28B	(56)	01	KMR23S 51 28B	
				KMEA4B	00 =		
XA117	DCF	C1	25B	()	01	KMEA4DX 46 25B	MEM BK MSB DSPL
XA118	DCF	D1	32B	()	02 +	LMEA4DX 65 32B	
XA117	DCF	C1	25B	KMEA4DX	00 =		KMEA4B BUSS
XA117	DCF	C1	29A	(46)	01	KGNDCA 52 29A	
XA117	DCF	C2	26B	KMEA40X	00 =		
XA117	DCF	C2	27B	(47)	01	KMR22S 49 27B	
				KMEPRB	00 =		
XA118	DCF	A3	07B	()	01	KMEPROX 17 07B	
XA119	DCF	A3	07B	()	02 +	LMEPROX 17 07B	I/O MEM PAR ERR DI

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA118	DCF	A3	07B	KMEPRDX	00	=		
XA118	DCF	A3	05A	(17)	01		KGNDCA 06 05A	KMEPRB BUSS
XA108	TT3	D3	27B	KMEPRO	00	=		
XA108	TT3	D3	24B	(51)	01		KMR12R KMR11R SPI001 45 24B 47 25B 49 26B	MEMORY PARITY ERROR
XA118	DCF	A4	06B	KMEPROX	00	=		
XA118	DCF	A4	05B	(15)	01		KMEPRO 13 05B	
				KMETOB	00	=		
XA118	DCF	A1	02B	()	01		KMETODX 07 02B	CPU MEM TIMEOUT DSP
XA119	DCF	A1	02B	()	02	+	LMETODX 07 02B	
XA118	DCF	A1	02B	KMETODX	00	=		
XA118	DCF	A1	05A	(07)	01		KGNDCA 06 05A	KMETOB BUSS
XA207	TQ2	D4	27B	KMET00	00	=		
XA207	TQ2	D4	25B	(51)	01		JQMT0D4 SPI015 47 25B 49 26B	MEMORY TIME OUT CPU MEMORY TIME-OUT
XA118	DCF	A2	03B	KMET00X	00	=		
XA118	DCF	A2	04B	(09)	01		KMET00 11 04B	
				KMITOB	00	=		
XA117	DCF	C7	25A	()	01		KMITODX 43 25A	IOU MEM TIMEOUT DSP
XA118	DCF	D7	33A	()	02	+	LMITODX 61 33A	
XA117	DCF	C7	25A	KMITODX	00	=		
XA117	DCF	C7	29A	(43)	01		KGNDCA 52 29A	KMITOB BUSS
XA117	DCF	C8	26A	KMIT00X	00	=		
XA117	DCF	C8	28A	(48)	01		KMR13S 50 28A	
XA209	TT3	A1	04A	KMR00R	00	=		
XA209	TT3	A1	05A	(04)	01		TMRUMB4 K0200A KMR00S 06 05A 08 06A 10 07A	MEM TIME OUT CPU MASTER RESET - FANOUT

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERMINATOR	DESIGNATOR	FACTOR	COMMENT
XA108	TT3	F1	36B	KMROOS	00	=		MONITOR REG BIT 00-SET
XA108	TT3	F1	37B	(73)	01		SPI001 K0100A KMR00R 75 37B 77 38B 79 39B	
XA209	TT3	A2	03A	KMR01R	00	=		MONITOR REG BIT 01-RESET
XA209	TT3	A2	02B	(07)	01		K0201A KMR01S TMRUMB4 01 02B 03 02A 05 03B	
XA108	TT3	F2	35B	KMR01S	00	=		MONITOR REG BIT 01-SET
XA108	TT3	F2	34B	(74)	01		KSMALA K0101A KMR01R 65 34B 71 36A 72 34A	
XA209	TT3	A3	07B	KMR02R	00	=		MONITOR REG BIT 02-RESET
XA209	TT3	A3	04B	(15)	01		TMRUMB4 KMR02S K0202A 09 04B 11 05B 13 06B	MASTER RESET - FANOUT
XA108	TT3	F3	39A	KMR02S	00	=		MONITOR REG BIT 02-SET
XA108	TT3	F3	35A	(80)	01		KMR02R JCPUEB4 K0102A 69 35A 76 37A 78 38A	
XA307	TT3	A1	04A	KMR03R	00	=		MONITOR REG BIT 03-RESET
XA307	TT3	A1	05A	(04)	01		TMRUMB4 K0203A KMR03S 06 05A 08 06A 10 07A	MASTER RESET - FANOUT
XA407	TQ2	F4	39A	KMR03S	00	=		MONITOR REG BIT 03-SET
XA407	TQ2	F4	37A	(80)	01		KMR03R K0103A 76 37A 78 38A	
XA307	TT3	A2	03A	KMR04R	00	=		MONITOR REG BIT 04-RESET
XA307	TT3	A2	02B	(07)	01		TMRUMB4 K0204A KMR04S 01 02B 03 02A 05 03B	MASTER RESET - FANOUT
XA306	TT3	A2	03A	KMR04S	00	=		MONITOR REG BIT 04-SET
XA306	TT3	A2	02B	(07)	01		KMR04R K0104A TB ST1P 01 02B 03 02A 05 03B	
XA307	TT3	A3	07B	KMR05R	00	=		MONITOR REG BIT 05-RESET
XA307	TT3	A3	04B	(15)	01		TMRUMB4 K0205A KMR05S 09 04B 11 05B 13 06B	MASTER RESET - FANOUT
XA306	TT3	A3	07B	KMR05S	00	=		MONITOR REG BIT 05-SET
XA306	TT3	A3	04B	(15)	01		K0105A KSRSTA KMR05R 09 04B 11 05B 13 06B	
XA346	TQ2	F4	39A	KMR06A	00	=		
XA346	TQ2	F4	37A	(80)	01		SPI031 KMR060 76 37A 78 38A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIG	FACTOR	COMMENT
XA209	TT3	D3	27B	KMR06R	00 =		MONITOR REG BIT 06-RESET
XA209	TT3	D3	24B	(51)	01	KMR06A K0206A KMR06S 45 24B 47 25B 49 26B	MASTER RESET - FANOUT
XA208	TQ2	C1	18A	KMR06S	00 =		MONITOR REG BIT 06-SET
XA208	TQ2	C1	19A	(38)	01	KMR06R K0106A 40 19A 42 20A	
XA446	TQ2	A4	07B	KMR060	00 =		IOM ADD BIT 0 TO DATA LINE
XA446	TQ2	A4	05B	(15)	01	JMTSAB4 JMTSBB4 11 05B 13 06B	
XA209	TT3	E1	30A	KMR07R	00 =		MONITOR REG BIT 07-RESET
XA209	TT3	E1	31A	(64)	01	TMRUMB4 KMR07S K0207A 66 31A 68 32A 70 33A	MASTER RESET - FANOUT
XA122	TT3	C2	15B	KMR07S	00 =		
XA122	TT3	C2	14B	(31)	01	K0107A KMR07R TK070A 29 14B 30 15A 34 16A	
XA307	TT3	B1	11A	KMR08R	00 =		MONITOR REG BIT 08-RESET
XA307	TT3	B1	12A	(20)	01	TMRUMB4 K0208A KMR08S 22 12A 24 13A 26 14A	MASTER RESET - FANOUT
XA306	TT3	B1	11A	KMR08S	00 =		MONITOR REG BIT 08-SET
XA306	TT3	B1	12A	(20)	01	KMR08R K0108A TK080A 22 12A 24 13A 26 14A	
XA307	TT3	B2	09B	KMR09R	00 =		MONITOR REG BIT 09-RESET
XA307	TT3	B2	09A	(19)	01	K0209A TMRUMB4 KMR09S 14 09A 17 08B 18 10A	
XA306	TT3	B2	09B	KMR09S	00 =		MONITOR REG BIT 09-SET
XA306	TT3	B2	09A	(19)	01	K0109A TK090A KMR09R 14 09A 17 08B 18 10A	
XA307	TT3	B3	13B	KMR10R	00 =		MONITOR REG BIT 10-RESET
XA307	TT3	B3	10B	(27)	01	TMRUMB4 KMR10S K0210A 21 10B 23 11B 25 12B	MASTER RESET - FANOUT
XA306	TT3	B3	13B	KMR10S	00 =		MONITOR REG BIT 10-SET
XA306	TT3	B3	10B	(27)	01	TK100A K0110A KMR10R 21 10B 23 11B 25 12B	
XA307	TT3	C1	17A	KMR11R	00 =		MONITOR REG BIT 11-RESET
XA307	TT3	C1	18A	(36)	01	TMRUMB4 K0211A KMR11S 38 18A 40 19A 42 20A	MASTER RESET - FANOUT

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
 UNIT ASSEMBLY NO. 149019 REV G INDEX KMR11S

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CONNECTOR	TEST POINT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERMINATOR	FACTOR	COMMENT
XA306	TT3	C1	17A	KMR11S	00 =		MONITOR REG BIT 11-SET
XA306	TT3	C1	18A	(36)	01	KMR11R K0111A TK110A 38 18A 40 19A 42 20A	
XA307	TT3	C2	15B	KMR12R	00 =		MONITOR REG BIT 12-RESET
XA307	TT3	C2	14B	(31)	01	K0212A KMR12S TMRUMB4 29 14B 30 15A 34 16A	
XA306	TT3	C2	15B	KMR12S	00 =		MONITOR REG BIT 12-SET
XA306	TT3	C2	14B	(31)	01	TK120A K0112A KMR12R 29 14B 30 15A 34 16A	
XA307	TT3	C3	19B	KMR13R	00 =		MONITOR REG BIT 13-RESET
XA307	TT3	C3	16B	(39)	01	TMRUMB4 KMR13S K0213A 33 16B 35 17B 37 18B	MASTER RESET - FANOUT
XA306	TT3	C3	19B	KMR13S	00 =		MONITOR REG BIT 13-SET
XA306	TT3	C3	16B	(39)	01	KMR13R TK130A K0113A 33 16B 35 17B 37 18B	
XA307	TT3	D1	23A	KMR14R	00 =		MONITOR REG BIT 14-RESET
XA307	TT3	D1	24A	(50)	01	TMRUMB4 K0214A KMR14S 52 24A 54 25A 56 26A	MASTER RESET - FANOUT
XA306	TT3	D1	23A	KMR14S	00 =		MONITOR REG BIT 14-SET
XA306	TT3	D1	24A	(50)	01	RTCT0A KMR14R K0114A 52 24A 54 25A 56 26A	
XA307	TT3	D2	23B	KMR15R	00 =		MONITOR REG BIT 15-RESET
XA307	TT3	D2	22B	(43)	01	K0215A TMRUMB4 KMR15S 41 22B 46 21A 48 22A	
XA306	TT3	D2	23B	KMR15S	00 =		MONITOR REG BIT 15-SET
XA306	TT3	D2	22B	(43)	01	TK150A K0115A KMR15R 41 22B 46 21A 48 22A	
XA209	TT3	E2	29B	KMR16R	00 =		MONITOR REG BIT 16-RESET
XA209	TT3	E2	28B	(55)	01	KMR16S K0216A TMRUMB4 53 28B 60 28A 62 29A	
XA122	TT3	C3	19B	KMR16S	00 =		
XA122	TT3	C3	16B	(39)	01	K0116A KMR16R TK160A 33 16B 35 17B 37 18B	
XA209	TT3	E3	33B	KMR17R	00 =		MONITOR REG BIT 17-RESET
XA209	TT3	E3	30B	(63)	01	TMRUMB4 K0217A KMR17S 57 30B 59 31B 61 32B	MASTER RESET - FANOUT

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LOGIC

 TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA210	TQ2	F1	37B	KMR17S	00	*		MONITOR REG BIT 17-SET
XA210	TQ2	F1	38B	(75)	01	*	KMR17R K0117A 77 38B 79 39B	
XA209	TT3	F1	36B	KMR18R	00	*		MONITOR REG BIT 18-RESET
XA209	TT3	F1	37B	(73)	01	*	TMRUMB4 KMR18S K0218A 75 37B 77 38B 79 39B	MASTER RESET - FANOUT
XA210	TQ2	F2	34A	KMR18S	00	=		MONITOR REG BIT 18-SET
XA210	TQ2	F2	36A	(72)	01	=	KMR18R K0118A 71 36A 73 36B	
XA209	TT3	F2	35B	KMR19R	00	=		MONITOR REG BIT 19-RESET
XA209	TT3	F2	34B	(74)	01	=	KMR19S TMRUMB4 K0219A 65 34B 71 36A 72 34A	
XA210	TQ2	F3	35A	KMR19S	00	=		MONITOR REG BIT 19-SET
XA210	TQ2	F3	34B	(69)	01	=	K0119A KMR19R 65 34B 74 35B	
XA209	TT3	F3	39A	KMR20R	00	=		MONITOR REG BIT 20-RESET
XA209	TT3	F3	35A	(80)	01	=	TMRUMB4 K0220A KMR20S 69 35A 76 37A 78 38A	MASTER RESET - FANOUT
XA210	TQ2	F4	39A	KMR20S	00	=		MONITOR REG BIT 20-SET
XA210	TQ2	F4	37A	(80)	01	=	K0120A KMR20R 76 37A 78 38A	
XA309	TT3	E2	29B	KMR21R	00	=		MONITOR REG BIT 21-RESET
XA309	TT3	E2	28B	(55)	01	=	TMRUMB4 KMR21S K0221A 53 28B 60 28A 62 29A	MASTER RESET - FANOUT
XA308	TD4	E1	31B	KMR21S	00	=		MONITOR REG BIT 21-SET
XA308	TD4	E1	32B	(59)	01	=	TK211A KMR21R K0121A SPIO23 61 32B 66 31A 68 32A 70 33A	
XA309	TT3	E3	33B	KMR22R	00	=		MONITOR REG BIT 22-RESET
XA309	TT3	E3	30B	(63)	01	=	KMR22S TMRUMB4 K0222A 57 30B 59 31B 61 32B	
XA308	TD4	E2	30B	KMR22S	00	=		MONITOR REG BIT 22-SET
XA308	TD4	E2	29B	(57)	01	=	TK221A KMR22R SP1023 K0122A 55 29B 60 28A 62 29A 64 30A	
XA309	TT3	F1	36B	KMR23R	00	=		MONITOR REG BIT 23-RESET
XA309	TT3	F1	37B	(73)	01	=	K0223A TMRUMB4 KMR23S 75 37B 77 38B 79 39B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR		COMMENT
XA308	TD4	F1	37A	KMR23S	00	=			MONITOR REG BIT 23-SET
XA308	TD4	F1	37B	(76)	01		KMR23R TK231A KO123A SPI023 75 37B 77 38B 78 38A 79 39B		
XA309	TT3	F2	35B	KMR24R	00	=			MONITOR REG BIT 24-RESET
XA309	TT3	F2	34B	(74)	01		TMRUMB4 KO224A KMR24S 65 34B 71 36A 72 34A		MASTER RESET - FANOUT
XA308	TD4	F2	35A	KMR24S	00	=			MONITOR REG BIT 24-SET
XA308	TD4	F2	36A	(69)	01		KMR24R TK241A KO124A SPI023 71 36A 72 34A 73 36B 74 35B		
XA307	TT3	D3	27B	KMR25R	00	=			MONITOR REG BIT 25-RESET
XA307	TT3	D3	24B	(51)	01		TMRUMB4 KMR25S KO225A 45 24B 47 25B 49 26B		MASTER RESET - FANOUT
XA306	TT3	D3	27B	KMR25S	00	=			MONITOR REG BIT 25-SET
XA306	TT3	D3	24B	(51)	01		KO125A TK250A KMR25R 45 24B 47 25B 49 26B		
XA307	TT3	E1	30A	KMR26R	00	=			MONITOR REG BIT 26-RESET
XA307	TT3	E1	31A	(64)	01		TMRUMB4 KO226A KMR26S 66 31A 68 32A 70 33A		MASTER RESET - FANOUT
XA306	TT3	E1	30A	KMR26S	00	=			MONITOR REG BIT 26-SET
XA306	TT3	E1	31A	(64)	01		KMR26R KO126A TK260A 66 31A 68 32A 70 33A		
XA307	TT3	E2	29B	KMR27R	00	=			MONITOR REG BIT 27-RESET
XA307	TT3	E2	28B	(55)	01		KO227A TMRUMB4 KMR27S 53 28B 60 28A 62 29A		
XA306	TT3	E2	29B	KMR27S	00	=			MONITOR REG BIT 27-SET
XA306	TT3	E2	28B	(55)	01		KO127A TK270A KMR27R 53 28B 60 28A 62 29A		
XA307	TT3	E3	33B	KMR28R	00	=			MONITOR REG BIT 28-RESET
XA307	TT3	E3	30B	(63)	01		TMRUMB4 KMR28S KO228A 57 30B 59 31B 61 32B		MASTER RESET - FANOUT
XA306	TT3	E3	33B	KMR28S	00	=			MONITOR REG BIT 28-SET
XA306	TT3	E3	30B	(63)	01		TK280A KO128A KMR28R 57 30B 59 31B 61 32B		
XA307	TT3	F1	36B	KMR29R	00	=			MONITOR REG BIT 29-RESET
XA307	TT3	F1	37B	(73)	01		KO229A TMRUMB4 KMR29S 75 37B 77 38B 79 39B		

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA306	TT3	F1	36B		KMR29S	00	=		MONITOR REG BIT 29-SET
XA306	TT3	F1	37B		(73)	01		KMR29R TK290A K0129A 75 37B 77 38B 79 39B	
XA307	TT3	F2	35B		KMR30R	00	=		MONITOR REG BIT 30-RESET
XA307	TT3	F2	34B		(74)	01		K0230A KMR30S THRUMB4 65 34B 71 36A 72 34A	
XA306	TT3	F2	35B		KMR30S	00	=		MONITOR REG BIT 30-SET
XA306	TT3	F2	34B		(74)	01		K0130A TK300A KMR30R 65 34B 71 36A 72 34A	
XA307	TT3	F3	39A		KMR31R	00	=		MONITOR REG BIT 31-RESET
XA307	TT3	F3	35A		(80)	01		THRUMB4 KMR31S K0231A 69 35A 76 37A 78 38A	MASTER RESET - FANOUT
XA306	TT3	F3	39A		KMR31S	00	=		MONITOR REG BIT 31-SET
XA306	TT3	F3	35A		(80)	01		TK310A K0131A KMR31R 69 35A 76 37A 78 38A	
					KPRGTB	00	=		
XA117	DCF	D7	33A		()	01		KPRGTDX 61 33A	
XA119	DCF	D7	33A		()	02	+	LPRGTDX 61 33A	ID PROG TIMEOUT DI
XA117	DCF	D7	33A		KPRGTDX	00	=		KPRGTB BUSS
XA117	DCF	D7	36A		(61)	01		KGNDCA 72 36A	
XA117	DCF	D8	34A		KPRGTOX	00	=		
XA117	DCF	D8	35A		(68)	01		KMR15S 70 35A	
XA213	THI	B5	10B		KSMALA	00	=		SYSTEM MALFUNCTION-A
XA213	THI	B5	11B		(19)	01		KSMALO 21 11B	
XA308	TD4	D1	25B		KSMALO	00	=		SYSTEM MALFUNCTION-O
XA308	TD4	D1	26B		(47)	01		KCMALA KMR15R SPI023 KMR09R 49 26B 52 24A 54 25A 56 26A	
XA207	TQ2	F4	39A		KSRSTA	00	=		(START TEST SW)(REQUEST)
XA207	TQ2	F4	37A		(80)	01		KSWSTS RSWRQQ 76 37A 78 38A	
XA443	TQ2	E2	28A		KSWB1R	00	=		BOOTSTRAP SW RST
XA443	TQ2	E2	29A		(60)	01		KSWB1S WKBS0A 62 29A 64 30A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019
FILE IDENT T39BIUX2

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA446	TQ2	D2	21A	KSWB1S	00	=		
XA446	TQ2	D2	22A	(46)	01		KSWB1R WKBSCA 48 22A 50 23A	BOOTSTRAP SWCH SET
XA440	TQ2	E1	31A	KSWRSR	00	=		
XA440	TQ2	E1	32A	(66)	01		WRSTC04 KSWRSS 68 32A 70 33A	
XA438	TQ2	F2	34A	KSWRSS	00	=		
XA438	TQ2	F2	36A	(72)	01		WRSTCA4 KSWRSR 71 36A 73 36B	RESTART SW
XA210	TQ2	C4	19B	KSWSTR	00	=		
XA210	TQ2	C4	17B	(39)	01		WKST0A KSWSTS 35 17B 37 18B	START TEST SWITCH-RESET
XA208	TQ2	C4	19B	KSWSTS	00	=		
XA208	TQ2	C4	17B	(39)	01		WKSTCA KSWSTR 35 17B 37 18B	START TEST SWITCH-SET
				KSYSMB	00	=		
XA117	DCF	D5	38B	()	01		KSYSMDX 80 38B	
XA119	DCF	D5	38B	()	02	+	LSYSMDX 80 38B	
XA117	DCF	D5	38B	KSYSMDX	00	=		
XA117	DCF	D5	36A	(80)	01		KGNDCA 72 36A	KSYSMB BUSS
XA208	TQ2	C3	16B	KSYSMO	00	=		
XA208	TQ2	C3	14B	(33)	01		KMR01R KMR02R 29 14B 31 15B	
XA117	DCF	D6	38A	KSYSMOX	00	=		
XA117	DCF	D6	37A	(76)	01		KSYSMO 74 37A	
				KSYSTB	00	=		
XA117	DCF	D3	37B	()	01		KSYSTDX 78 37B	
XA119	DCF	D3	37B	()	02	+	LSYSTDX 78 37B	
XA117	DCF	D3	37B	KSYSTDX	00	=		
XA117	DCF	D3	36A	(78)	01		KGNDCA 72 36A	KSYSTB BUSS

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DEFINITION	FACTOR	COMMENT
XA117	DCF	D4	36B	KSYSTOX	00	≠		
XA117	DCF	D4	35B	(75)	01		KMRO5S 73 35B	
XA213	THI	D1	25A	KWML10	00	=		MAINT SWITCH LSD-1
XA213	THI	D1	26A	(54)	01		WKML1A 52 26A	
XA213	THI	D2	23A	KWML20	00	=		MAINT SWITCH LSD-2
XA213	THI	D2	24A	(49)	01		WKML2A 47 24A	
XA213	THI	D3	21A	KWML40	00	=		MAINT SWITCH LSD-4
XA213	THI	D3	22A	(48)	01		WKML4A 50 22A	
XA213	THI	D5	24B	KWMM10	00	=		MAINT SWITCH MSD-1
XA213	THI	D5	25B	(43)	01		WKMM1A 45 25B	
XA205	THI	D6	26B	KWMM20	00	=		MAINT SWITCH MSD-2
XA205	THI	D6	27B	(53)	01		WKMM2A 51 27B	
XA213	THI	B3	09A	KWMM40	00	=		MAINT SWITCH MSD-4
XA213	THI	B3	10A	(18)	01		WKMM4A 20 10A	
XA335	TQ2	A4	07B	KOR110	00	=		
XA335	TQ2	A4	05B	(15)	01		SPI027 T0FS1A 11 05B 13 06B	
XA335	TQ2	B4	13B	KOR120	00	=		
XA335	TQ2	B4	11B	(27)	01		SPI027 T0FS1A 23 11B 25 12B	
XA335	TQ2	C4	19B	KOR130	00	=		
XA335	TQ2	C4	17B	(39)	01		SPI027 T0FS1A 35 17B 37 18B	
XA225	TQ2	B4	13B	KOR210	00	=		
XA225	TQ2	B4	11B	(27)	01		SPI017 T0FS2A 23 11B 25 12B	
XA225	TQ2	B3	10B	KOR220	00	=		
XA225	TQ2	B3	08B	(21)	01		SPI017 T0FS2A 17 08B 19 09B	

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149019-860
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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA225	TQ2	C2	15A	KOR230	00	=		
XA225	TQ2	C2	16A	(30)	01		SPT017 TOFS2A 34 16A 36 17A	
XA212	TQ2	A1	05A	K0100A	00	=		(OFR 01)(DATA BIT)
XA212	TQ2	A1	06A	(06)	01		KOR110 TD00C0 08 06A 10 07A	OFR ADDRESS 01 - FANO UT
XA212	TQ2	A3	04B	K0101A	00	=		(OFR 01)(DATA BIT 01)
XA212	TQ2	A3	02A	(09)	01		KOR110 TD01C0 03 02A 07 03A	OFR ADDRESS 01 - FANO UT
XA212	TQ2	B1	12A	K0102A	00	=		(OFR 01)(DATA BIT 02)
XA212	TQ2	B1	13A	(22)	01		KOR120 TD02C0 24 13A 26 14A	OFR ADDRESS 01 - FANO UT
XA212	TQ2	B3	10B	K0103A	00	=		(OFR 01)(DATA BIT 03)
XA212	TQ2	B3	08B	(21)	01		KOR110 TD03C0 17 08B 19 09B	OFR ADDRESS 01 - FANO UT
XA212	TQ2	C1	18A	K0104A	00	=		(OFR 01)(DATA BIT 04)
XA212	TQ2	C1	19A	(38)	01		KOR120 TD04C0 40 19A 42 20A	OFR ADDRESS 01 - FANO UT
XA212	TQ2	C3	16B	K0105A	00	=		(OFR 01)(DATA BIT 05)
XA212	TQ2	C3	14B	(33)	01		KOR120 TD05C0 29 14B 31 15B	OFR ADDRESS 01 - FANO UT
XA212	TQ2	D1	24A	K0106A	00	=		(OFR 01)(DATA BIT 06)
XA212	TQ2	D1	25A	(52)	01		KOR130 TD06C0 54 25A 56 26A	OFR ADDRESS 01 - FANO UT
XA212	TQ2	D3	24B	K0107A	00	=		(OFR 01)(DATA BIT 07)
XA212	TQ2	D3	22B	(45)	01		KOR120 TD07C0 41 22B 43 23B	OFR ADDRESS 01 - FANO UT
XA212	TQ2	E1	31A	K0108A	00	=		(OFR 01)(DATA BIT 08)
XA212	TQ2	E1	32A	(66)	01		KOR130 TD08C0 68 32A 70 33A	OFR ADDRESS 01 - FANO UT
XA212	TQ2	E3	30B	K0109A	00	=		(OFR 01)(DATA BIT 09)
XA212	TQ2	E3	28B	(57)	01		KOR130 TD09C0 53 28B 55 29B	OFR ADDRESS 01 - FANO UT
XA212	TQ2	F1	37B	K0110A	00	=		(OFR 01)(DATA BIT 10)
XA212	TQ2	F1	38B	(75)	01		KOR130 TD10C0 77 38B 79 39B	OFR ADDRESS 01 - FANO UT

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA212	TQ2	F3	35A		K0111A	00	=	(OFR 01) (DATA BIT 11)	
XA212	TQ2	F3	34B		(69)	01		KOR130 TD11C0 65 34B 74 35B	OFR ADDRESS 01 - FANOUT
XA211	TQ2	A1	05A		K0112A	00	=	(OFR 01) (DATA BIT 12)	
XA211	TQ2	A1	06A		(06)	01		KOR110 TD12C0 08 06A 10 07A	OFR ADDRESS 01 - FANOUT
XA211	TQ2	A3	04B		K0113A	00	=	(OFR 01) (DATA BIT 13)	
XA211	TQ2	A3	02A		(09)	01		KOR110 TD13C0 03 02A 07 03A	OFR ADDRESS 01 - FANOUT
XA211	TQ2	B1	12A		K0114A	00	=	(OFR 01) (DATA BIT 14)	
XA211	TQ2	B1	13A		(22)	01		KOR120 TD14B0 24 13A 26 14A	OFR ADDRESS 01 - FANOUT
XA211	TQ2	B3	10B		K0115A	00	=	(OFR 01) (DATA BIT 15)	
XA211	TQ2	B3	08B		(21)	01		KOR110 TD15B0 17 08B 19 09B	OFR ADDRESS 01 - FANOUT
XA211	TQ2	C1	18A		K0116A	00	=	(OFR 01) (DATA BIT 16)	
XA211	TQ2	C1	19A		(38)	01		KOR120 TD16C0 40 19A 42 20A	OFR ADDRESS 01 - FANOUT
XA211	TQ2	C3	16B		K0117A	00	=	(OFR 01) (DATA BIT 17)	
XA211	TQ2	C3	14B		(33)	01		KOR120 TD17C0 29 14B 31 15B	OFR ADDRESS 01 - FANOUT
XA211	TQ2	D1	24A		K0118A	00	=	(OFR 01) (DATA BIT 18)	
XA211	TQ2	D1	25A		(52)	01		KOR130 TD18C0 54 25A 56 26A	OFR ADDRESS 01 - FANOUT
XA211	TQ2	D3	24B		K0119A	00	=	(OFR 01) (DATA BIT 19)	
XA211	TQ2	D3	22B		(45)	01		KOR120 TD19C0 41 22B 43 23B	OFR ADDRESS 01 - FANOUT
XA211	TQ2	E1	31A		K0120A	00	=	(OFR 01) (DATA BIT 20)	
XA211	TQ2	E1	32A		(66)	01		KOR130 TD20C0 68 32A 70 33A	OFR ADDRESS 01 - FANOUT
XA211	TQ2	E3	30B		K0121A	00	=	(OFR 01) (DATA BIT 21)	
XA211	TQ2	E3	28B		(57)	01		KOR130 TD21C0 53 28B 55 29B	OFR ADDRESS 01 - FANOUT
XA211	TQ2	F1	37B		K0122A	00	=	(OFR 01) (DATA BIT 22)	
XA211	TQ2	F1	38B		(75)	01		KOR130 TD22C0 77 38B 79 39B	OFR ADDRESS 01 - FANOUT

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UNIT ASSEMBLY NO. 149019
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DEFS	FACTOR	COMMENT
XA211	TQ2	F3	35A	K0123A	00 =			(OFR 01) (DATA BIT 23)
XA211	TQ2	F3	34B	(69)	01		K0R130 TD23C0 65 34B 74 35B	OFR ADDRESS 01 - FAND UT
XA210	TQ2	A1	05A	K0124A	00 =			(OFR 01) (DATA BIT 24)
XA210	TQ2	A1	06A	(06)	01		K0R110 TD24C0 08 06A 10 07A	OFR ADDRESS 01 - FAND UT
XA210	TQ2	A3	04B	K0125A	00 =			(OFR 01) (DATA BIT 25)
XA210	TQ2	A3	02A	(09)	01		K0R110 TD25C0 03 02A 07 03A	OFR ADDRESS 01 - FAND UT
XA210	TQ2	B1	12A	K0126A	00 =			(OFR 01) (DATA BIT 26)
XA210	TQ2	B1	13A	(22)	01		K0R120 TD26C0 24 13A 26 14A	OFR ADDRESS 01 - FAND UT
XA210	TQ2	B3	10B	K0127A	00 =			(OFR 01) (DATA BIT 27)
XA210	TQ2	B3	08B	(21)	01		K0R110 TD27C0 17 08B 19 09B	OFR ADDRESS 01 - FAND UT
XA208	TQ2	B1	12A	K0128A	00 =			(OFR 01) (DATA BIT 28)
XA208	TQ2	B1	13A	(22)	01		K0R110 TD28C0 24 13A 26 14A	OFR ADDRESS 01 - FAND UT
XA208	TQ2	B3	10B	K0129A	00 =			(OFR 01) (DATA BIT 29)
XA208	TQ2	B3	08B	(21)	01		K0R110 TD29C0 17 08B 19 09B	OFR ADDRESS 01 - FAND UT
XA210	TQ2	D1	24A	K0130A	00 =			(OFR 01) (DATA BIT 30)
XA210	TQ2	D1	25A	(52)	01		K0R130 TD30C0 54 25A 56 26A	OFR ADDRESS 01 - FAND UT
XA210	TQ2	D3	24B	K0131A	00 =			(OFR 01) (DATA BIT 31)
XA210	TQ2	D3	22B	(45)	01		K0R120 TD31C0 41 22B 43 23B	OFR ADDRESS 01 - FAND UT
XA212	TQ2	A2	02B	K0200A	00 =			(OFR 02) (DATA BIT 00)
XA212	TQ2	A2	04A	(01)	01		TD00C0 KOR210 04 04A 05 03B	
XA212	TQ2	A4	07B	K0201A	00 =			(OFR 02) (DATA BIT 01)
XA212	TQ2	A4	05B	(15)	01		TD01C0 KOR210 11 05B 13 06B	
XA212	TQ2	B2	09A	K0202A	00 =			(OFR 02) (DATA BIT 02)
XA212	TQ2	B2	10A	(14)	01		TD02C0 KOR210 18 10A 20 11A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA212	TQ2	B4	13B	K0203A	00	=		(OFR 02) (DATA BIT 03)
XA212	TQ2	B4	11B	(27)	01		TD03C0 KOR220 23 11B 25 12B	
XA212	TQ2	C2	15A	K0204A	00	=		(OFR 02) (DATA BIT 04)
XA212	TQ2	C2	16A	(30)	01		TD04C0 KOR220 34 16A 36 17A	
XA212	TQ2	C4	19B	K0205A	00	=		(OFR 02) (DATA BIT 05)
XA212	TQ2	C4	17B	(39)	01		TD05C0 KOR220 35 17B 37 18B	
XA212	TQ2	D2	21A	K0206A	00	=		(OFR 02) (DATA BIT 06)
XA212	TQ2	D2	22A	(46)	01		TD06C0 KOR230 48 22A 50 23A	
XA212	TQ2	D4	27B	K0207A	00	=		(OFR 02) (DATA BIT 07)
XA212	TQ2	D4	25B	(51)	01		TD07C0 KOR230 47 25B 49 26B	
XA212	TQ2	E2	28A	K0208A	00	=		(OFR 02) (DATA BIT 08)
XA212	TQ2	E2	29A	(60)	01		TD08C0 KOR230 62 29A 64 30A	
XA212	TQ2	E4	33B	K0209A	00	=		(OFR 02) (DATA BIT 09)
XA212	TQ2	E4	31B	(63)	01		TD09C0 KOR230 59 31B 61 32B	
XA212	TQ2	F2	34A	K0210A	00	=		(OFR 02) (DATA BIT 10)
XA212	TQ2	F2	36A	(72)	01		TD10C0 KOR230 71 36A 73 36B	
XA212	TQ2	F4	39A	K0211A	00	=		(OFR 02) (DATA BIT 11)
XA212	TQ2	F4	37A	(80)	01		TD11C0 KOR230 76 37A 78 38A	
XA211	TQ2	A2	02B	K0212A	00	=		(OFR 02) (DATA BIT 12)
XA211	TQ2	A2	04A	(01)	01		TD12C0 KOR210 04 04A 05 03B	
XA211	TQ2	A4	07B	K0213A	00	=		(OFR 02) (DATA BIT 13)
XA211	TQ2	A4	05B	(15)	01		TD13C0 KOR210 11 05B 13 06B	
XA211	TQ2	B2	09A	K0214A	00	=		(OFR 02) (DATA BIT 14)
XA211	TQ2	B2	10A	(14)	01		TD14B0 KOR210 18 10A 20 11A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA211	TQ2	B4	13B	K0215A	00	=		(OFR 02) (DATA BIT 15)
XA211	TQ2	B4	11B	(27)	01		TD15BQ KOR220 23 11B 25 12B	
XA211	TQ2	C2	15A	K0216A	00	=		(OFR 02) (DATA BIT 16)
XA211	TQ2	C2	16A	(30)	01		TD16C0 KOR220 34 16A 36 17A	
XA211	TQ2	C4	19B	K0217A	00	=		(OFR 02) (DATA BIT 17)
XA211	TQ2	C4	17B	(39)	01		TD17C0 KOR220 35 17B 37 18B	
XA211	TQ2	D2	21A	K0218A	00	=		(OFR 02) (DATA BIT 18)
XA211	TQ2	D2	22A	(46)	01		TD18C0 KOR220 48 22A 50 23A	
XA211	TQ2	D4	27B	K0219A	00	=		(OFR 02) (DATA BIT 19)
XA211	TQ2	D4	25B	(51)	01		TD19C0 KOR220 47 25B 49 26B	
XA211	TQ2	E2	28A	K0220A	00	=		(OFR 02) (DATA BIT 20)
XA211	TQ2	E2	29A	(60)	01		TD20C0 KOR230 62 29A 64 30A	
XA211	TQ2	E4	33B	K0221A	00	=		(OFR 02) (DATA BIT 21)
XA211	TQ2	E4	31B	(63)	01		TD21C0 KOR230 59 31B 61 32B	
XA211	TQ2	F2	34A	K0222A	00	=		(OFR 02) (DATA BIT 22)
XA211	TQ2	F2	36A	(72)	01		TD22C0 KOR230 71 36A 73 36B	
XA211	TQ2	F4	39A	K0223A	00	=		(OFR 02) (DATA BIT 23)
XA211	TQ2	F4	37A	(80)	01		TD23C0 KOR230 76 37A 78 38A	
XA210	TQ2	A2	02B	K0224A	00	=		(OFR 02) (DATA BIT 24)
XA210	TQ2	A2	04A	(01)	01		TD24C0 KOR210 04 04A 05 03B	
XA210	TQ2	A4	07B	K0225A	00	=		(OFR 02) (DATA BIT 25)
XA210	TQ2	A4	05B	(15)	01		TD25C0 KOR210 11 05B 13 06B	
XA210	TQ2	B2	09A	K0226A	00	=		(OFR 02) (DATA BIT 26)
XA210	TQ2	B2	10A	(14)	01		TD26C0 KOR210 18 10A 20 11A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
XA210	TQ2	B4	13B	K0227A	00	=		(OER 02) (DATA BIT 27)
XA210	TQ2	B4	11B	(27)	01		TD27C0 KOR220 23 11B 25 12B	
XA208	TQ2	B2	09A	K0228A	00	=		(OER 02) (DATA BIT 28)
XA208	TQ2	B2	10A	(14)	01		TD28C0 KOR210 18 10A 20 11A	
XA208	TQ2	B4	13B	K0229A	00	=		(OER 02) (DATA BIT 29)
XA208	TQ2	B4	11B	(27)	01		TD29C0 KOR210 23 11B 25 12B	
XA210	TQ2	D2	21A	K0230A	00	=		(OER 02) (DATA BIT 30)
XA210	TQ2	D2	22A	(46)	01		TD30C0 KOR220 48 22A 50 23A	
XA210	TQ2	D4	27B	K0231A	00	=		(OER 02) (DATA BIT 31)
XA210	TQ2	D4	25B	(51)	01		TD31C0 KOR220 47 25B 49 26B	
XA119	DCF	D1	32B	LCMPMDX	00	=		KCMPMB BUSS
XA119	DCF	D1	36A	(65)	01		WKLTSA 72 36A	
XA119	DCF	D2	33B	LCMPMOX	00	=		
XA119	DCF	D2	34B	(69)	01		SPI009 71 34B	
XA119	DCF	C7	25A	LDVBLDX	00	=		KDVBLB BUSS
XA119	DCF	C7	29A	(43)	01		WKLTSA 52 29A	
XA119	DCF	C8	26A	LDVBLOX	00	=		
XA119	DCF	C8	28A	(48)	01		SPI004 50 28A	
XA118	DCF	B7	10A	LDVC1DX	00	=		KDVC1B BUSS
XA118	DCF	B7	13A	(23)	01		WKLTSA 36 13A	
XA118	DCF	B8	11A	LDVC10X	00	=		
XA118	DCF	B8	12A	(30)	01		SPI004 34 12A	
XA118	DCF	B5	16A	LDVC2DX	00	=		KDVC2B BUSS
XA118	DCF	B5	13A	(41)	01		WKLTSA 36 13A	

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CONNECTOR	DCP SET	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA118	DCF	B6	15A	LDVC20X	00	H		
XA118	DCF	B6	14A	(40)	01		SPI003 38 14A	
XA118	DCF	B3	15B	LDVC4DX	00	=		
XA118	DCF	B3	13A	(37)	01		WKL TSA 36 13A	KDVC4B BUSS
XA118	DCF	B4	14B	LDVC40X	00	=		
XA118	DCF	B4	13B	(35)	01		SPI002 33 13B	
XA119	DCF	B3	15B	LI0CTDX	00	=		
XA119	DCF	B3	13A	(37)	01		WKL TSA 36 13A	KI0CTB BUSS
XA119	DCF	B4	14B	LI0CT0X	00	=		
XA119	DCF	B4	13B	(35)	01		SPI002 33 13B	
XA118	DCF	B1	10B	LI0C1DX	00	=		
XA118	DCF	B1	13A	(27)	01		WKL TSA 36 13A	KI0C1B BUSS
XA118	DCF	B2	11B	LI0C10X	00	=		
XA118	DCF	B2	12B	(29)	01		SPI009 31 12B	
XA119	DCF	B7	10A	LI0C2DX	00	=		
XA119	DCF	B7	13A	(23)	01		WKL TSA 36 13A	KI0C2B BUSS
XA119	DCF	B8	11A	LI0C20X	00	=		
XA119	DCF	B8	12A	(30)	01		SPI004 34 12A	
XA119	DCF	B5	16A	LI0C4DX	00	=		
XA119	DCF	B5	13A	(41)	01		WKL TSA 36 13A	KI0C4B BUSS
XA119	DCF	B6	15A	LI0C40X	00	=		
XA119	DCF	B6	14A	(40)	01		SPI003 38 14A	
XA119	DCF	C5	31B	LI0C8DX	00	=		
XA119	DCF	C5	29A	(60)	01		WKL TSA 52 29A	KI0C8B BUSS

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA119	DCF	C6	31A	LI0C80X	00 =			
XA119	DCF	C6	30A	(57)	01	SPI003 54 30A		
XA119	DCF	B1	10B	LI0PRDX	00 =		KI0PRB	BUSS
XA119	DCF	B1	13A	(27)	01	WKL TSA 36 13A		
XA119	DCF	B2	11B	LI0PROX	00 =			
XA119	DCF	B2	12B	(29)	01	SPI009 31 12B		
XA119	DCF	A7	02A	LI0T0DX	00 =		KI0T0B	BUSS
XA119	DCF	A7	05A	(01)	01	WKL TSA 06 05A		
XA119	DCF	A8	03A	LI0T00X	00 =			
XA119	DCF	A8	04A	(03)	01	SPI004 04 04A		
XA119	DCF	A5	08B	LMCPRDX	00 =		KMCPRB	BUSS
XA119	DCF	A5	05A	(14)	01	WKL TSA 06 05A		
XA119	DCF	A6	07A	LMCPROX	00 =			
XA119	DCF	A6	06A	(10)	01	SPI003 08 06A		
XA118	DCF	D5	38B	LME1DX	00 =		KME1B	BUSS
XA118	DCF	D5	36A	(80)	01	WKL TSA 72 36A		
XA118	DCF	D6	38A	LME10X	00 =			
XA118	DCF	D6	37A	(76)	01	SPI003 74 37A		
XA118	DCF	D3	37B	LME2DX	00 =		KME2B	BUSS
XA118	DCF	D3	36A	(78)	01	WKL TSA 72 36A		
XA118	DCF	D4	36B	LME20X	00 =			
XA118	DCF	D4	35B	(75)	01	SPI002 73 35B		
XA118	DCF	D1	32B	LME4DX	00 =		KME4B	BUSS
XA118	DCF	D1	36A	(65)	01	WKL TSA 72 36A		

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA118	DCF	D2	33B		LMEA40X	00	=		
XA118	DCF	D2	34B		(69)	01		SPI009 71 34B	
XA119	DCF	A3	07B		LMEPRDX	00	=		
XA119	DCF	A3	05A		(17)	01		WKL TSA 06 05A	KMEPRB BUSS
XA119	DCF	A4	06B		LMEPROX	00	=		
XA119	DCF	A4	05B		(15)	01		SPI002 13 05B	
XA119	DCF	A1	02B		LMETODX	00	=		
XA119	DCF	A1	05A		(07)	01		WKL TSA 06 05A	KMETOB BUSS
XA119	DCF	A2	03B		LMET00X	00	=		
XA119	DCF	A2	04B		(09)	01		SPI009 11 04B	
XA118	DCF	D7	33A		LMITODX	00	=		
XA118	DCF	D7	36A		(61)	01		WKL TSA 72 36A	KMITOB BUSS
XA118	DCF	D8	34A		LMIT00X	00	=		
XA118	DCF	D8	35A		(68)	01		SPI004 70 35A	
XA119	DCF	D7	33A		LPRGTDX	00	=		
XA119	DCF	D7	36A		(61)	01		WKL TSA 72 36A	KPRGTB BUSS
XA119	DCF	D8	34A		LPRGTOX	00	=		
XA119	DCF	D8	35A		(68)	01		SPI004 70 35A	
XA119	DCF	D5	38B		LSYSMDX	00	=		
XA119	DCF	D5	36A		(80)	01		WKL TSA 72 36A	KSYSMB BUSS
XA119	DCF	D6	38A		LSYSMOX	00	=		
XA119	DCF	D6	37A		(76)	01		SPI003 74 37A	
XA119	DCF	D3	37B		LSYSTDX	00	=		
XA119	DCF	D3	36A		(78)	01		WKL TSA 72 36A	KSYSTB BUSS

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	REMARKS	FACTOR	COMMENT
XA406	THI	A2	04A	RENMSA	00	=		SWITCH ENBLE + MASTER RESET-
XA406	THI	A2	05A	(08)	01		RENMS0 06 05A	
XA443	TQ2	D2	21A	RENMS0	00	=		SWITCH ENBLE + MASTER RESET-
XA443	TQ2	D2	22A	(46)	01		RENWA RTCCLB 48 22A 50 23A	
XA406	THI	A3	03A	RENMOA	00	=		RTC 0 ENABLE + MASTER RESET-
XA406	THI	A3	02A	(03)	01		RENMOO 04 02A	
XA443	TQ2	D3	24B	RENMOO	00	=		RTC 0 ENABLE + MASTER RESET-
XA443	TQ2	D3	22B	(45)	01		RENROA RTCCLB 41 22B 43 23B	
XA406	THI	A4	02B	RENMI1A	00	=		RTC 1 ENABLE + MASTER RESET-
XA406	THI	A4	03B	(01)	01		RENMI0 05 03B	
XA443	TQ2	D4	27B	RENMI0	00	=		RTC 1 ENABLE + MASTER RESET-
XA443	TQ2	D4	25B	(51)	01		RTCCLB RENRIA 47 25B 49 26B	MASTER RESET - FANOUT
XA406	THI	A5	04B	REN2A	00	=		RTC 2 ENABLE + MASTER RESET-
XA406	THI	A5	05B	(07)	01		REN20 09 05B	
XA443	TQ2	E1	31A	REN20	00	=		RTC 2 ENABLE + MASTER RESET-
XA443	TQ2	E1	32A	(66)	01		RTCCLB REN2A 68 32A 70 33A	MASTER RESET - FANOUT
XA407	TQ2	D1	24A	RENROA	00	=		(ENABLE)(CH SEL 0)(INFO LN 3
XA407	TQ2	D1	25A	(52)	01		RENS00 TDL3A0 54 25A 56 26A	
XA415	TQ2	D4	27B	RENRIA	00	=		(ENABLE)(CH SEL 0)(INFO LN 4
XA415	TQ2	D4	25B	(51)	01		RENS00 TDL4A0 47 25B 49 26B	
XA407	TQ2	D3	24B	REN2A	00	=		(ENABLE)(CH SEL 0)(INFO LN 5
XA407	TQ2	D3	22B	(45)	01		TDL5A0 RE NS00 41 22B 43 23B	
XA407	TQ2	D4	27B	RENWA	00	=		(ENABLE)(CH SEL 0)(INFO LN 2
XA407	TQ2	D4	25B	(51)	01		TDL2A0 RE NS00 47 25B 49 26B	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA407	TQ2	E1	31A	RENS0A	00	=	(ENABLE) (CH SEL 0)-A	
XA407	TQ2	E1	32A	(166)	01		TENBBQ TCSCCO 68 32A 70 33A	
XA406	THI	E1	32A	RENS00	00	=	(ENABLE) (CH SEL 0)-0	
XA406	THI	E1	33A	(166)	01		RENS0A 64 33A	
XA436	TT3	F3	39A	RINDAA	00	=	INDICATOR LINE TO IOC	
XA436	TT3	F3	35A	(180)	01		TDL2A0 KSWSTS RENS00 69 35A 76 37A 78 38A	
XA407	TQ2	E2	28A	RINS0A	00	=	(INTERROGATE) (CH SEL 0)-A	
XA407	TQ2	E2	29A	(160)	01		TCSCCO TINGAO 62 29A 64 30A	
XA406	THI	E3	28A	RINS00	00	=	(INTERROGATE) (CH SEL 0)-0	
XA406	THI	E3	29A	(160)	01		RINS0A 62 29A	
XA444	TS8	C1	17B	RRQST0	00	=		
XA444	TS8	C1	15A	(135)	01		RSWRQP RTRQOP RTRQIP RTRQ2P SPI037 SPI039 SPI038 SPI026 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	
XA442	TDD	LI	38B	RSWRQI	00	=		
XA442	TDD	LI		()	01		SPI038 77 38B	
XA442	TDD	LN	39B	RSWRQN	00	=		
XA442	TDD	LN		()	01		KSWSTS 79 39B	
XA442	TDD	LP	37A	RSWRQP	00	=	SWITCH REQUEST-PRESET	
XA442	TDD	LP	37B	(176)	01		RENMSA 75 37B	
XA442	TDD	LQ	38A	RSWRQQ	00	=	SWITCH REQUEST-PRESET	
XA442	TDD	LQ	39A	(178)	01		SPI039 80 39A	
XA406	THI	B3	09A	RTCC1B	00	=		
XA406	THI	B3		()	01		RTCC1A 18 09A	
XA406	THI	B5	10B	()	02	+	RTCC2A 19 10B	
XA406	THI	B2	11A	()	03	+	RTCC3A 25 11A	
XA406	THI	B6	12B	()	04	+	RTCC4A 26 12B	

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149019-860
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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA406	THI	B3	09A	RTCC1A	00	H		
XA406	THI	B3	10A	(18)	01		TRCMRO 20 10A	RTCCLB BUSS
XA406	THI	B5	10B	RTCC2A	00	=		
XA406	THI	B5	11B	(19)	01		TRCMRO 21 11B	RTCCLB BUSS
XA406	THI	B2	11A	RTCC3A	00	=		
XA406	THI	B2	12A	(25)	01		TRCMRO 23 12A	RTCCLB BUSS
XA406	THI	B6	12B	RTCC4A	00	=		
XA406	THI	B6	13B	(26)	01		TRCMRO 27 13B	RTCCLB BUSS
XA446	TQ2	F4	39A	RTC10R	00	=		
XA446	TQ2	F4	37A	(80)	01		RTCNIP RTCIOS 76 37A 78 38A	RTC 0 INHIBIT-RESET
XA407	TQ2	A1	05A	RTC10S	00	=		
XA407	TQ2	A1	06A	(06)	01		RTC10R RTCCLB 08 06A 10 07A	RTC 0 INHIBIT-SET
XA445	TT3	F2	35B	RTCL0A	00	=		
XA445	TT3	F2	34B	(74)	01		RTC10R RTCNIP RTCNOP 65 34B 71 36A 72 34A	(RTC 0)(MASTER RESET *)-A
XA406	THI	A1	06A	RTCL00	00	=		
XA406	THI	A1	07A	(13)	01		RTCL0A 11 07A	(RTC 0)(MASTER RESET *)-0
XA407	TQ2	E3	30B	RTCL1A	00	=		
XA407	TQ2	E3	28B	(57)	01		RTCNIP RTCNOQ 53 28B 55 29B	RTC 1-A
XA406	THI	E4	28B	RTCL10	00	=		
XA406	THI	E4	29B	(56)	01		RTCL1A 55 29B	RTC 1-0
XA407	TQ2	E4	33B	RTCL2A	00	=		
XA407	TQ2	E4	31B	(63)	01		RTCNOQ RTCN1Q 59 31B 61 32B	RTC 2-A
XA406	THI	E5	30B	RTCL20	00	=		
XA406	THI	E5	31B	(57)	01		RTCL2A 59 31B	RTC 2-0

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
				RTCNOI	00 =			
XA442	TDD	MI	36A	()	01		RTCNIQ 71 36A	
				RTCNON	00 =			
XA442	TDD	MN	34A	()	01		RTCQ2A 72 34A	
XA442	TDD	MP	35A	RTCNOP	00 =			RTC 0-PRESET
XA442	TDD	MP	36B	(69)	01		RTCCLB 73 36B	MASTER RESET - FANOUT
XA442	TDD	MQ	35B	RTCNOQ	00 =			RTC 0-PRESET
XA442	TDD	MQ	34B	(74)	01		SPI037 65 34B	
				RTCNI1	00 =			
XA405	TDD	BI	03B	()	01		RTCNOP 05 03B	
				RTCNI1N	00 =			
XA405	TDD	BN	02B	()	01		RTCQ2A 01 02B	
XA405	TDD	BP	04B	RTCNI1P	00 =			RTC 1-PRESET
XA405	TDD	BP	04A	(09)	01		RTCCLB 04 04A	MASTER RESET - FANOUT
XA405	TDD	BQ	03A	RTCNI1Q	00 =			RTC 1-PRESET
XA405	TDD	BQ	02A	(07)	01		SPI030 03 02A	
				RTCNI2I	00 =			
XA405	TDD	CI	13A	()	01		RTCQ2A 24 13A	
				RTCNI2N	00 =			
XA405	TDD	CN	14A	()	01		RTCTE0 26 14A	
XA405	TDD	CP	11B	RTCNI2P	00 =			RTC 2-PRESET
XA405	TDD	CP	12A	(23)	01		RTCCLB 22 12A	MASTER RESET - FANOUT
XA405	TDD	CQ	12B	RTCNI2Q	00 =			RTC 2-PRESET
XA405	TDD	CQ	13B	(25)	01		SPI031 27 13B	

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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA405	TDD DI 10A		RTCN3I ()	00 = 01	RTCQ3A 18 10A	
XA405	TDD DN 09A		RTCN3N ()	00 = 01	RTCQ4A 14 09A	
XA405	TDD DP 10B		RTCN3P ()	00 = 01		RTC 3-PRERESET
XA405	TDD DP 11A		(21)	01	RYCCLB 20 11A	MASTER RESET - FANOUT
XA405	TDD DQ 09B		RTCN3Q ()	00 = 01	SPI030 17 08B	
XA405	TDD EI 19A		RTCN4I ()	00 = 01	RTCQ4A 40 19A	
XA405	TDD EN 20A		RTCN4N ()	00 = 01	RTCQ5A 42 20A	
XA405	TDD EP 17B		RTCN4P ()	00 = 01		RTC 4-PRERESET
XA405	TDD EP 18A		(35)	01	RYCCLB 38 18A	MASTER RESET - FANOUT
XA405	TDD EQ 18B		RTCN4Q ()	00 = 01	SPI031 39 19B	
XA405	TDD HI 22A		RTCN5I ()	00 = 01	RTCQ5A 48 22A	
XA405	TDD HN 21A		RTCN5N ()	00 = 01	RTCQ6A 46 21A	
XA405	TDD HP 24B		RTCN5P ()	00 = 01		RTC 7-PRERESET
XA405	TDD HP 23A		(45)	01	RYCCLB 50 23A	MASTER RESET - FANOUT
XA405	TDD HQ 23B		RTCN5Q ()	00 = 01	SPI030 41 22B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG- NATOR	FACTOR	COMMENT
XA405	TDD	KI	29A	RTCN6I ()	00 = 01		RTCQ6A 62 29A	
XA405	TDD	KN	28A	RTCN6N ()	00 = 01		RTCQ7A 60 28A	
XA405	TDD	KP	30B	RTCN6P (57)	00 = 01		RTCCLB 64 30A	RTC 9-PRERESET MASTER RESET - FANOUT
XA405	TDD	KQ	29B	RTCN6Q (55)	00 = 01		SPI030 53 28B	
XA405	TDD	GI	25A	RTCN7I ()	00 = 01		RTCQ7A 54 25A	
XA405	TDD	GN	26A	RTCN7N ()	00 = 01		RTCQ8A 56 26A	
XA405	TDD	GP	25B	RTCN7P (47)	00 = 01		RTCCLB 52 24A	RTC 6-PRERESET MASTER RESET - FANOUT
XA405	TDD	GQ	26B	RTCN7Q (49)	00 = 01		SPI032 51 27B	
XA405	TDD	JI	32A	RTCN8I ()	00 = 01		RTCQ8A 68 32A	
XA405	TDD	JN	33A	RTCN8N ()	00 = 01		RTCQ9A 70 33A	
XA405	TDD	JP	31B	RTCN8P (59)	00 = 01		RTCCLB 66 31A	RTC 8-PRERESET MASTER RESET - FANOUT
XA405	TDD	JQ	32B	RTCN8Q (61)	00 = 01		SPI032 63 33B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA405	TDD	FI	16A	RTC9I ()	00 01	=	RTCQ9A 34 16A	
XA405	TDD	FN	15A	RTC9N ()	00 01	=	RCK01J 30 15A	
XA405	TDD	FP	16B	RTC9P (33)	00 01	=	RTCCLB 36 17A	RTC 5-PRESET MASTER RESET - FANOUT
XA405	TDD	FQ	15B	RTC9Q (31)	00 01	=	SPI030 29 14B	
XA406	THI	C1	19A	RTCQ2A (40)	00 01	=	RTC2Q 38 20A	RTC 2-A
XA406	THI	C3	15A	RTCQ3A (34)	00 01	=	RTC3Q 36 16A	RTC 3-A
XA406	THI	C4	14B	RTCQ4A (30)	00 01	=	RTC4Q 29 15B	RTC 4-A
XA406	THI	C5	16B	RTCQ5A (31)	00 01	=	RTC5Q 33 17B	RTC 5-A
XA406	THI	C2	17A	RTCQ6A (37)	00 01	=	RTC6Q 35 18A	RTC 6-A
XA406	THI	C6	18B	RTCQ7A (42)	00 01	=	RTC7Q 39 19B	RTC 7-A
XA406	THI	D1	25A	RTCQ8A (54)	00 01	=	RTC8Q 52 26A	RTC 8-A
XA406	THI	D3	21A	RTCQ9A (48)	00 01	=	RTC9Q 50 22A	RTC 9-A

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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA414	TT3	E2 29B	RTCTEA	00 =			(8 KHZ CLOCK)(CTS INHIBIT)-A
XA414	TT3	E2 28B	(55)	01		TBSTOP URTCIB4 RTCN3P 53 28B 60 28A 62 29A	
XA406	THI	A6 06B	RTCTEO	00 =			(8 KHZ CLOCK)(CTS INHIBIT)-D
XA406	THI	A6 07B	(10)	01		RTCCTEA 15 07B	
XA406	THI	B1 13A	RTCTOA	00 =			RTC TIMEOUT-A
XA406	THI	B1 14A	(24)	01		RTCT00 22 14A	
XA441	TD4	F1 37A	RTCT00	00 =			RTC TIMEOUT TO IOC
XA441	TD4	F1 37B	(76)	01		SPI038 RTT02A RTT00A RTT01A 75 37B 77 38B 78 38A 79 39B	
XA443	TQ2	C4 19B	RTCT10	00 =			
XA443	TQ2	C4 17B	(39)	01		TS21BP RTCTOA 35 17B 37 18B	
XA445	TT3	E1 30A	RTENOR	00 =			RTC 0 ENABLE-RESET
XA445	TT3	E1 31A	(64)	01		RD320A RTCCLB RTENOS 66 31A 68 32A 70 33A	
XA446	TQ2	E2 28A	RTENOS	00 =			RTC 0 ENABLE-SET
XA446	TQ2	E2 29A	(60)	01		RD316A RTENOR 62 29A 64 30A	
XA445	TT3	E2 29B	RTEN1R	00 =			RTC 1 ENABLE-RESET
XA445	TT3	E2 28B	(55)	01		RTCCLB RD321A RTEN1S 53 28B 60 28A 62 29A	MASTER RESET - FANOUT
XA446	TQ2	E3 30B	RTEN1S	00 =			RTC 1 ENABLE-SET
XA446	TQ2	E3 28B	(57)	01		RTEN1R RD317A 53 28B 55 29B	
XA445	TT3	E3 33B	RTEN2R	00 =			RTC 2 ENABLE-RESET
XA445	TT3	E3 30B	(63)	01		RTCCLB RTEN2S RD322A 57 30B 59 31B 61 32B	MASTER RESET - FANOUT
XA446	TQ2	E4 33B	RTEN2S	00 =			RTC 2 ENABLE-SET
XA446	TQ2	E4 31B	(63)	01		RTEN2R RD318A 59 31B 61 32B	
			RTRQOI	00 =			
XA442	TDD	JI 32A	()	01		RTENOS 68 32A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA442	TDD	JN	33A	RTRQON ()	00	#	RTCL00 70 33A	
XA442	TDD	JP	31B	RTRQOP (59)	00	=		RTC 0 REQUEST-PRERESET
XA442	TDD	JP	31A		01		RENMOA 66 31A	
XA442	TDD	JQ	32B	RTRQOQ (61)	00	=		RTC 0 REQUEST-PRERESET
XA442	TDD	JQ	33B		01		SPI038 63 33B	
XA442	TDD	KI	29A	RTRQII ()	00	=		
XA442	TDD	KI			01		RTENIS 62 29A	
XA442	TDD	KN	28A	RTRQIN ()	00	=		
XA442	TDD	KN			01		RTCL10 60 28A	
XA442	TDD	KP	30B	RTRQIP (57)	00	=		RTC 1 REQUEST-PRERESET
XA442	TDD	KP	30A		01		RENMI1 64 30A	
XA442	TDD	KQ	29B	RTRQIQ (55)	00	=		RTC 1 REQUEST-PRERESET
XA442	TDD	KQ	28B		01		SPI039 53 28B	
XA405	TDD	AI	06A	RTRQ2I ()	00	=		
XA405	TDD	AI			01		RTEN2S 08 06A	
XA405	TDD	AN	07A	RTRQ2N ()	00	=		
XA405	TDD	AN			01		RTCL20 10 07A	
XA405	TDD	AP	05B	RTRQ2P (11)	00	=		RTC 2 REQUEST-PRERESET
XA405	TDD	AP	05A		01		RENH2A 06 05A	
XA405	TDD	AQ	06B	RTRQ2Q (13)	00	=		RTC 2 REQUEST-PRERESET
XA405	TDD	AQ	07B		01		SPI031 15 07B	
XA445	TT3	DI	23A	RTT00A (50)	00	=		RTC 0 TIMEOUT
XA445	TT3	DI	24A		01		RTCNOP RTRQOQ RTCNIQ 52 24A 54 25A 56 26A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA445	TT3	D2	23B		RTT01A	00	=		RTC 1 TIMEOUT
XA445	TT3	D2	22B		(43)	01		RTRQIQ RTCNIP RTCNOP 41 22B 46 21A 48 22A	
XA445	TT3	D3	27B		RTT02A	00	=		RTC 2 TIMEOUT
XA445	TT3	D3	24B		(51)	01		RTCNOQ RTCNIP RTRQ2Q 45 24B 47 25B 49 26B	
XA248	TD4	C1	17B		TACKA0	00	=		ACK FOR CPU CMDS
XA248	TD4	C1	18B		(35)	01		TS008A TS007A TS22FA TS298P 37 18B 38 18A 40 19A 42 20A	
XA320	TQ2	E3	30B		TACP0A	00	=		PAGE 0
XA320	TQ2	E3	28B		(57)	01		TC198P TC188P 53 28B 55 29B	
XA310	THI	E5	30B		TACP00	00	=		PAGE 0
XA310	THI	E5	31B		(57)	01		TACP0A 59 31B	
XA320	TQ2	E4	33B		TACP1A	00	=		PAGE 1
XA320	TQ2	E4	31B		(63)	01		TC188P TC198Q 59 31B 61 32B	
XA310	THI	E6	32B		TACP10	00	=		PAGE 1
XA310	THI	E6	33B		(68)	01		TACP1A 65 33B	
XA320	TQ2	F4	39A		TACP2A	00	=		PAGE 2
XA320	TQ2	F4	37A		(80)	01		TC198P TC188Q 76 37A 78 38A	
XA310	THI	F1	38B		TACP20	00	=		PAGE 2
XA310	THI	F1	39B		(80)	01		TACP2A 79 39B	
XA314	TQ2	A4	07B		TACP3A	00	=		PAGE 3
XA314	TQ2	A4	05B		(15)	01		SPI024 TUI710 11 05B 13 06B	
XA310	THI	F2	36B		TACP30	00	=		PAGE 3
XA310	THI	F2	37B		(71)	01		TACP3A 73 37B	
XA320	TQ2	A4	07B		TACX0A	00	=		X LINE 0
XA320	TQ2	A4	05B		(15)	01		TC148P TC158P 11 05B 13 06B	

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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
XA313	TLD	A1 05A	TACX0D	00 =			X0 LINE DRIVER MEM CHIP
XA313	TLD	A1 06A	(06)	01		TACX0A SPI023 08 06A 10 07A	
XA320	TQ2	B1 12A	TACX1A	00 =			X LINE 1
XA320	TQ2	B1 13A	(22)	01		TC158Q TC148P 24 13A 26 14A	
XA313	TLD	A2 02B	TACX1D	00 =			X1 LINE DRIVER MEM CHIP
XA313	TLD	A2 04A	(01)	01		TACX1A SPI023 04 04A 05 03B	
XA320	TQ2	B2 09A	TACX2A	00 =			X LINE 2
XA320	TQ2	B2 10A	(14)	01		TC148Q TC158P 18 10A 20 11A	
XA313	TLD	A3 04B	TACX2D	00 =			X2 LINE DRIVER MEM CHIP
XA313	TLD	A3 02A	(09)	01		SPI023 TACX2A 03 02A 07 03A	
XA320	TQ2	B3 10B	TACX3A	00 =			X LINE 3
XA320	TQ2	B3 08B	(21)	01		TC148Q TC158Q 17 08B 19 09B	
XA313	TLD	A4 07B	TACX3D	00 =			X3 LINE DRIVER MEM CHIP
XA313	TLD	A4 05B	(15)	01		SPI023 TACX3A 11 05B 13 06B	
XA313	TLD	B1 12A	TACX4D	00 =			X4 LINE DRIVER MEM CHIP
XA313	TLD	B1 13A	(22)	01		SPI023 TACX0A 24 13A 26 14A	
XA313	TLD	B2 09A	TACX5D	00 =			X5 LINE DRIVER MEM CHIP
XA313	TLD	B2 10A	(14)	01		SPI023 TACX1A 18 10A 20 11A	
XA313	TLD	B3 10B	TACX6D	00 =			X6 LINE DRIVER MEM CHIP
XA313	TLD	B3 08B	(21)	01		TACX2A SPI023 17 08B 19 09B	
XA313	TLD	B4 13B	TACX7D	00 =			X7 LINE DRIVER MEM CHIP
XA313	TLD	B4 11B	(27)	01		TACX3A SPI023 23 11B 25 12B	
XA320	TQ2	B4 13B	TACY0A	00 =			Y LINE 0
XA320	TQ2	B4 11B	(27)	01		TC178P TC168P 23 11B 25 12B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA313	TLD	C1	18A	TACY0D	00	#		Y0 LINE DRIVER MEM CHIP
XA313	YLD	C1	19A	(38)	01		TACY0A SPI023 40 19A 42 20A	
XA320	TQ2	C1	18A	TACY1A	00	#		Y LINE 1
XA320	YQ2	C1	19A	(38)	01		TC16BP TC17BQ 40 19A 42 20A	
XA313	TLD	C2	15A	TACY1D	00	#		Y1 LINE DRIVER MEM CHIP
XA313	YLD	C2	16A	(30)	01		TACY1A SPI023 34 16A 36 17A	
XA320	TQ2	C2	15A	TACY2A	00	#		Y LINE 2
XA320	YQ2	C2	16A	(30)	01		TC16BQ TC17BP 34 16A 36 17A	
XA313	TLD	C3	16B	TACY2D	00	#		Y2 LINE DRIVER MEM CHIP
XA313	YLD	C3	14B	(33)	01		SPI023 TACY2A 29 14B 31 15B	
XA320	TQ2	C3	16B	TACY3A	00	#		Y LINE 3
XA320	YQ2	C3	14B	(33)	01		TC17BQ TC16BQ 29 14B 31 15B	
XA313	TLD	C4	19B	TACY3D	00	#		Y3 LINE DRIVER MEM CHIP
XA313	YLD	C4	17B	(39)	01		SPI023 TACY3A 35 17B 37 18B	
XA313	TLD	D1	24A	TACY4D	00	#		Y4 LINE DRIVER MEM CHIP
XA313	YLD	D1	25A	(52)	01		SPI023 TACY0A 54 25A 56 26A	
XA313	TLD	D2	21A	TACY5D	00	#		Y5 LINE DRIVER MEM CHIP
XA313	YLD	D2	22A	(46)	01		SPI023 TACY1A 48 22A 50 23A	
XA313	TLD	D3	24B	TACY6D	00	#		Y6 LINE DRIVER MEM CHIP
XA313	YLD	D3	22B	(45)	01		TACY2A SPI023 41 22B 43 23B	
XA313	TLD	D4	27B	TACY7D	00	#		Y7 LINE DRIVER MEM CHIP
XA313	YLD	D4	25B	(51)	01		TACY3A SPI023 47 25B 49 26B	
XA312	MEM	AV	04B	TAC00V1	00	#		
XA312	MEM	AV	03A	(09)	01		TAW400 07 03A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA312	MEM	AW	05B	TAC00W1	00	=		
XA312	MEM	AW	06B	(11)	01		TAW000 13 06B	
				TAC00X	00	=		
XA312	MEM	AX	05A	()	01		TACX0D TACX3D TACX2D TACX1D 06 05A 08 06A 10 07A 15 07B	
				TAC00Y	00	=		
XA312	MEM	AY	04A	()	01		TACY0D TACY3D TACY2D TACY1D 04 04A 05 03B 01 02B 03 02A	
XA311	MEM	AV	04B	TAC01V1	00	=		
XA311	MEM	AV	03A	(09)	01		TAW410 07 03A	PAGE 0 BIT 1 WRITE 0
XA311	MEM	AW	05B	TAC01W1	00	=		
XA311	MEM	AW	06B	(11)	01		TAW010 13 06B	
				TAC01X	00	=		
XA311	MEM	AX	05A	()	01		TACX2D TACX1D TACX0D TACX3D 06 05A 08 06A 10 07A 15 07B	
				TAC01Y	00	=		
XA311	MEM	AY	04A	()	01		TACY1D TACY2D TACY0D TACY3D 04 04A 05 03B 01 02B 03 02A	
XA312	MEM	BV	16B	TAC10V1	00	=		
XA312	MEM	BV	15B	(33)	01		TAW500 31 15B	
XA312	MEM	BW	17B	TAC10W1	00	=		
XA312	MEM	BW	18B	(35)	01		TAW100 37 18B	
				TAC10X	00	=		
XA312	MEM	BX	18A	()	01		TACX3D TACX1D TACX2D TACX0D 38 18A 40 19A 42 20A 39 19B	
				TAC10Y	00	=		
XA312	MEM	BY	17A	()	01		TACY2D TACY1D TACY3D TACY0D 36 17A 34 16A 30 15A 29 14B	
XA311	MEM	BV	16B	TAC11V1	00	=		
XA311	MEM	BV	15B	(33)	01		TAW510 31 15B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA311	MEM	BW	17B	TAC11W1	00	=		
XA311	MEM	BW	18B	(35)	01		TAW110 37 18B	
				TAC11X	00	=		
XA311	MEM	BX	18A	()	01		TACX0D TACX1D TACX2D TACX3D 38 18A 40 19A 42 20A 39 19B	
				TAC11Y	00	=		
XA311	MEM	BY	17A	()	01		TACY0D TACY3D TACY1D TACY2D 36 17A 34 16A 30 15A 29 14B	
XA312	MEM	CV	24B	TAC20V1	00	=		
XA312	MEM	CV	23B	(45)	01		TAW600 43 23B	PAGE 2 BIT 0 WRITE 0
XA312	MEM	CW	25B	TAC20W1	00	=		
XA312	MEM	CW	26B	(47)	01		TAW200 49 26B	
				TAC20X	00	=		
XA312	MEM	CX	24A	()	01		TACX5D TACX6D TACX7D TACX4D 52 24A 54 25A 56 26A 51 27B	
				TAC20Y	00	=		
XA312	MEM	CY	23A	()	01		TACY5D TACY6D TACY7D TACY4D 50 23A 48 22A 46 21A 41 22B	
XA311	MEM	CV	24B	TAC21V1	00	=		
XA311	MEM	CV	23B	(45)	01		TAW610 43 23B	PAGE 2 BIT 1 WRITE 0
XA311	MEM	CW	25B	TAC21W1	00	=		
XA311	MEM	CW	26B	(47)	01		TAW210 49 26B	
				TAC21X	00	=		
XA311	MEM	CX	24A	()	01		TACX4D TACX5D TACX6D TACX7D 52 24A 54 25A 56 26A 51 27B	
				TAC21Y	00	=		
XA311	MEM	CY	23A	()	01		TACY4D TACY6D TACY7D TACY5D 50 23A 48 22A 46 21A 41 22B	
XA312	MEM	DV	35A	TAC30V1	00	=		
XA312	MEM	DV	35B	(69)	01		TAW700 74 35B	PAGE 3 BIT 0 WRITE 0

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA312	MEM	DW	37A	TAC30W1	00	=		
XA312	MEM	DW	38A	(76)	01		TAW300 78 38A	
				TAC30X	00	=		
XA312	MEM	DX	37B	()	01		TACX7D TACX6D TACX5D TACX4D 75 37B 77 38B 79 39B 80 39A	
				TAC30Y	00	=		
XA312	MEM	DY	36B	()	01		TACY7D TACY4D TACY5D TACY6D 73 36B 71 36A 72 34A 65 34B	
XA311	MEM	DV	35A	TAC31V1	00	=		PAGE 3 BIT 1 WRITE 0
XA311	MEM	DV	35B	(69)	01		TAW710 74 35B	
XA311	MEM	DW	37A	TAC31W1	00	=		
XA311	MEM	DW	38A	(76)	01		TAW310 78 38A	
				TAC31X	00	=		
XA311	MEM	DX	37B	()	01		TACX6D TACX4D TACX7D TACX5D 75 37B 77 38B 79 39B 80 39A	
				TAC31Y	00	=		
XA311	MEM	DY	36B	()	01		TACY5D TACY7D TACY4D TACY6D 73 36B 71 36A 72 34A 65 34B	
				TADABI	00	=		
XA217	TDD	LI	38B	()	01		TADA10 77 38B	
				TADABN	00	=		
XA217	TDD	LN	39B	()	01		TADACA 79 39B	ADDRESS ACK HOLD F/F CLK IN
XA217	TDD	LP	37A	TADABP	00	=		MASTER RESET MO
XA217	TDD	LP	37B	(76)	01		TMO0BP 75 37B	
XA217	TDD	LQ	38A	TADABQ	00	=		
XA217	TDD	LQ	39A	(78)	01		SPI015 80 39A	
				TADACA	00	=		ADD ACK.CLK
XA326	TQ2	BI	12A	(22)	01		TADA2A YSN2CTX 24 13A 26 14A	
XA326	TQ2	BI	13A					

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DEFINITION	FACTOR	COMMENT
XA213	THI	A2	04A	TADA10	00	=		
XA213	THI	A2	05A	(08)	01		TADABQ 06 05A	ADD ACK NOT
XA350	TQ2	C1	18A	TADA2A	00	=		
XA350	TQ2	C1	19A	(38)	01		TKAMBQ TM2M6A 40 19A 42 20A	S22-IITR1+ITR21
XA317	TDD	JI	32A	TADCAI	00	=		
XA317	TDD	JI	32A	()	01		TM00AA 68 32A	
XA317	TDD	JN	33A	TADCAN	00	=		
XA317	TDD	JN	33A	()	01		TM01BP 70 33A	
XA317	TDD	JP	31B	TADCAP	00	=		
XA317	TDD	JP	31A	(59)	01		TADABP 66 31A	
XA317	TDD	JQ	32B	TADCAQ	00	=		
XA317	TDD	JQ	33B	(61)	01		SPI024 63 33B	PRESET INPUT SPARE
XA418	DCF	C1	25B	TADCSDX	00	=		
XA418	DCF	C1	29A	(46)	01		TM00BQ 52 29A	YADCCB4 BUSS
XA418	DCF	C2	26B	TADCSOX	00	=		
XA418	DCF	C2	27B	(47)	01		TADCAQ 49 27B	
XA435	TD4	D2	24B	TAR120	00	=		
XA435	TD4	D2	23B	(45)	01		TR6WAA TR9WAA TR7WAA TR5WAA 43 23B 46 21A 48 22A 50 23A	REQ IOX4+5+6+7
XA435	TD4	E1	31B	TAR220	00	=		
XA435	TD4	E1	32B	(59)	01		TR3WAA TR9WAA TR4WAA TR7WAA 61 32B 66 31A 68 32A 70 33A	REG IOX 2+3+6+7
XA435	TD4	E2	30B	TAR320	00	=		
XA435	TD4	E2	29B	(57)	01		TR9WAA TR4WAA TROWAA TR6WAA 55 29B 60 28A 62 29A 64 30A	REG IOX1+3+5+7
XA435	TD4	F1	37A	TAR520	00	=		
XA435	TD4	F1	37B	(76)	01		TR2WAA TR6WAA TR3WAA TR7WAA 75 37B 77 38B 78 38A 79 39B	DEV ADD 2+3+6+7

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA437	TD4	E2	30B	TAR620	00	=		DEV ADD 1+3+5+7
XA437	TD4	E2	29B	(57)	01		TR3WAA .TRIWAA TR5WAA TR7WAA 55 29B 60 28A 62 29A 64 30A	
				TAVEBI	00	=		
XA217	TDD	KI	29A	()	01		TAVE00 62 29A	
				TAVEBN	00	=		
XA217	TDD	KN	28A	()	01		TKBAAB 60 28A	
XA217	TDD	KP	30B	TAVEBP	00	=		PRERESET ACC VIL
XA217	TDD	KP	30A	(57)	01		SPI016 64 30A	
XA217	TDD	KQ	29B	TAVEBQ	00	=		PRESET ACC VIL
XA217	TDD	KQ	28B	(55)	01		TAVERA 53 28B	
XA108	TT3	D2	23B	TAVERA	00	=		
XA108	TT3	D2	22B	(43)	01		TAVERO TBS12A TINDBP 41 22B 46 21A 48 22A	
XA215	TS8	F1	37A	TAVERO	00	=		ACCESS VIOLATION
XA215	TS8	F1	36A	(76)	01		TAVW3A TAVW1A TAVROA TAVR1A TAVWOA TAVR3A TAVR2A TAVW2A 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	
XA310	THI	D2	23A	TAVE00	00	=		SET TAVEB
XA310	THI	D2	24A	(49)	01		TAVE1A 47 24A	
XA309	TT3	A1	04A	TAVE1A	00	=		TAVEB SET, LEAVE SET
XA309	TT3	A1	05A	(04)	01		TS19IA TAVEBQ TS00BP 06 05A 08 06A 10 07A	
XA309	TT3	A2	03A	TAVROA	00	=		READ ACC VIL PAGE 0
XA309	TT3	A2	02B	(07)	01		TACP00 TAC00VI TS05C0 01 02B 03 02A 05 03B	
XA309	TT3	A3	07B	TAVR1A	00	=		READ ACC VIL PAGE1
XA309	TT3	A3	04B	(15)	01		TAC10V1 TACP10 TS05C0 09 04B 11 05B 13 06B	
XA309	TT3	B1	11A	TAVR2A	00	=		READ ACC VIL PAGE2
XA309	TT3	B1	12A	(20)	01		TAC20V1 TACP20 TS05C0 22 12A 24 13A 26 14A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA309	TT3	B2	09B	TAVR3A	00	=		READ ACC VII PAGE3
XA309	TT3	B2	09A	(19)	01		TS05C0 TAC30V1 TACP30 14 09A 17 08B 18 10A	
XA309	TT3	B3	13B	TAVW0A	00	=		WRITE ACC VII PAGE0
XA309	TT3	B3	10B	(27)	01		TACP00 TAC01V1 TS13C0 21 10B 23 11B 25 12B	
XA309	TT3	C1	17A	TAVW1A	00	=		WRITE ACC VII PAGE1
XA309	TT3	C1	18A	(36)	01		TACP10 TAC11V1 TS13C0 38 18A 40 19A 42 20A	
XA309	TT3	C2	15B	TAVW2A	00	=		WRITE ACC VII PAGE2
XA309	TT3	C2	14B	(31)	01		TACP20 TAC21V1 TS13C0 29 14B 30 15A 34 16A	
XA309	TT3	C3	19B	TAVW3A	00	=		WRITE ACC VII PAGE3
XA309	TT3	C3	16B	(39)	01		TACP30 TS13C0 TAC31V1 33 16B 35 17B 37 18B	
XA327	TT3	F3	39A	TAWPOA	00	=		WRITE CONTROL PAGE0
XA327	TT3	F3	35A	(80)	01		TS29F0 TKAACB SPI024 69 35A 76 37A 78 38A	
XA324	THI	E5	30B	TAWP00	00	=		WRITE CONTROL PAGE0
XA324	THI	E5	31B	(57)	01		TAWPOA 59 31B	
XA324	THI	E2	30A	TAWP10	00	=		WRITE CONTROL PAGE1
XA324	THI	E2	31A	(63)	01		TAWPOA 61 31A	
XA324	THI	F6	38A	TAWP20	00	=		WRITE CONTROL PAGE2
XA324	THI	F6	39A	(77)	01		TAWPOA 75 39A	
XA324	THI	F1	38B	TAWP30	00	=		WRITE CONTROL PAGE3
XA324	THI	F1	39B	(80)	01		TAWPOA 79 39B	
XA316	TQ2	A1	05A	TAW00A	00	=		WRITE1 BIT 0 PAGE0
XA316	TQ2	A1	06A	(06)	01		TC248Q TAWP00 08 06A 10 07A	
XA310	THI	A1	06A	TAW000	00	=		WRITE1 BIT0 PAGE0
XA310	THI	A1	07A	(13)	01		TAW00A 11 07A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
XA316	TQ2	A3	04B	TAW01A	00 =			WRITE1 BIT1 PAGE0
XA316	TQ2	A3	02A	(09)	01		TAWP00 TC25BQ 03 02A 07 03A	
XA310	THI	A3	03A	TAW010	00 =			WRITE1 BIT1 PAGE0
XA310	THI	A3	02A	(03)	01		TAW01A 04 02A	
XA316	TQ2	B1	12A	TAW10A	00 =			WRITE1 BIT0 PAGE1
XA316	TQ2	B1	13A	(22)	01		TC26BQ TAWP10 24 13A 26 14A	
XA310	THI	B1	13A	TAW100	00 =			WRITE1 BIT0 PAGE1
XA310	THI	B1	14A	(24)	01		TAW10A 22 14A	
XA316	TQ2	B3	10B	TAW11A	00 =			WRITE1 BIT1 PAGE1
XA316	TQ2	B3	08B	(21)	01		TAWP10 TC27BQ 17 08B 19 09B	
XA310	THI	B3	09A	TAW110	00 =			WRITE1 BIT1 PAGE1
XA310	THI	B3	10A	(18)	01		TAW11A 20 10A	
XA316	TQ2	C1	18A	TAW20A	00 =			WRITE1 BIT0 PAGE2
XA316	TQ2	C1	19A	(38)	01		TC28BQ TAWP20 40 19A 42 20A	
XA310	THI	C1	19A	TAW200	00 =			WRITE1 BIT0 PAGE2
XA310	THI	C1	20A	(40)	01		TAW20A 38 20A	
XA316	TQ2	C3	16B	TAW21A	00 =			WRITE1 BIT1 PAGE2
XA316	TQ2	C3	14B	(33)	01		TC29BQ TAWP20 29 14B 31 15B	
XA310	THI	C3	15A	TAW210	00 =			WRITE1 BIT1 PAGE2
XA310	THI	C3	16A	(34)	01		TAW21A 36 16A	
XA316	TQ2	D1	24A	TAW30A	00 =			WRITE1 BIT0 PAGE3
XA316	TQ2	D1	25A	(52)	01		TC30BQ TAWP30 54 25A 56 26A	
XA310	THI	D1	25A	TAW300	00 =			WRITE1 BIT0 PAGE3
XA310	THI	D1	26A	(54)	01		TAW30A 52 26A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
XA316	TQ2	D3	24B	TAW31A	00	=		WRITE1 BIT1 PAGE3
XA316	TQ2	D3	22B	(45)	01		TAWP30 TC31BQ 41 22B 43 23B	
XA310	THI	D4	22B	TAW310	00	=		WRITE1 BIT1 PAGE3
XA310	YHI	D4	23B	(46)	01		TAW31A 41 23B	
XA316	TQ2	A2	02B	TAW40A	00	=		WRITE0 BIT0 PAGE0
XA316	TQ2	A2	04A	(01)	01		TC24BP TAWP00 04 04A 05 03B	
XA310	THI	A2	04A	TAW400	00	=		WRITE0 BIT0 PAGE0
XA310	YHI	A2	05A	(08)	01		TAW40A 06 05A	
XA316	TQ2	A4	07B	TAW41A	00	=		WRITE0 BIT1 PAGE0
XA316	TQ2	A4	05B	(15)	01		TC25BP TAWP00 11 05B 13 06B	
XA310	THI	A4	02B	TAW410	00	=		WRITE0 BIT1 PAGE0
XA310	YHI	A4	03B	(01)	01		TAW41A 05 03B	
XA316	TQ2	B2	09A	TAW50A	00	=		WRITE0 BIT0 PAGE1
XA316	TQ2	B2	10A	(14)	01		TC26BP TAWP10 18 10A 20 11A	
XA310	THI	B2	11A	TAW500	00	=		WRITE0 BIT0 PAGE1
XA310	YHI	B2	12A	(25)	01		TAW50A 23 12A	
XA316	TQ2	B4	13B	TAW51A	00	=		WRITE0 BIT1 PAGE1
XA316	TQ2	B4	11B	(27)	01		TAWP10 TC27BP 23 11B 25 12B	
XA310	THI	B4	08B	TAW510	00	=		WRITE0 BIT1 PAGE1
XA310	YHI	B4	09B	(14)	01		TAW51A 17 09B	
XA316	TQ2	C2	15A	TAW60A	00	=		WRITE0 BIT0 PAGE2
XA316	TQ2	C2	16A	(30)	01		TC28BP TAWP20 34 16A 36 17A	
XA310	THI	C2	17A	TAW600	00	=		WRITE0 BIT0 PAGE2
XA310	YHI	C2	18A	(37)	01		TAW60A 35 18A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA316	TQ2	C4	19B	TAW61A	00	=		WRITEO BIT1 PAGE2
XA316	TQ2	C4	17B	(39)	01		TC298P TAWP20 35 17B 37 18B	
XA310	THI	C4	14B	TAW610	00	=		WRITEO BIT1 PAGE2
XA310	THI	C4	15B	(30)	01		TAW61A 29 15B	
XA316	TQ2	D2	21A	TAW70A	00	=		WRITEO BIT0 PAGE3
XA316	TQ2	D2	22A	(46)	01		TC308P TAWP30 48 22A 50 23A	
XA310	THI	D3	21A	TAW700	00	=		WRITEO BIT0 PAGE3
XA310	THI	D3	22A	(48)	01		TAW70A 50 22A	
XA316	TQ2	D4	27B	TAW71A	00	=		WRITEO BIT1 PAGE3
XA316	TQ2	D4	25B	(51)	01		TC318P TAWP30 47 25B 49 26B	
XA310	THI	D5	24B	TAW710	00	=		WRITEO BIT1 PAGE3
XA310	THI	D5	25B	(43)	01		TAW71A 45 25B	
XA442	TDD	AI	06A	TA00BI	00	=		
				()	01		TA00IO 08 06A	
XA442	TDD	AN	07A	TA00BN	00	=		
				()	01		YKA03A 10 07A	
XA442	TDD	AP	05B	TA00BP	00	=		ADD REG 0 PRERESET
XA442	TDD	AP	05A	(11)	01		YSIABA 06 05A	
XA442	TDD	AQ	06B	TA00BQ	00	=		ADD REG 0 PRESET
XA442	TDD	AQ	07B	(13)	01		SPI038 15 07B	
XA439	THI	B6	12B	TA00CA	00	=		ADD REG 0 UNLOAD-A
XA439	THI	B6	13B	(26)	01		TA00BQ 27 13B	
XA428	THI	E1	32A	TA00C0	00	=		ADD REG 0 UNLOAD-0
XA428	THI	E1	33A	(66)	01		TA00BP 64 33A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG. PREFIX	FACTOR	COMMENT
XA427	TLD	C1	18A	TA00SD	00	=		JDB00B4 BUSS
XA427	TLD	C1	19A	(38)	01		TA00C0 TTSAMO 40 19A 42 20A	
XA436	TT3	C3	19B	TA0010	00	=		SET ADD REG 0 FF
XA436	TT3	C3	16B	(39)	01		TA004A TA002A SPI036 33 16B 35 17B 37 18B	
XA440	TQ2	C1	18A	TA002A	00	=		AUCT TO BIT 0 ADD REG
XA440	TQ2	C1	19A	(38)	01		TXAUC0 TR8WAO 40 19A 42 20A	
XA440	TQ2	C2	15A	TA004A	00	=		ADD OF CMD TO ADD REG
XA440	TQ2	C2	16A	(30)	01		TCB250 TCPD40 34 16A 36 17A	
				TA01B1	00	=		
XA442	TDD	BI	03B	()	01		TA0110 05 03B	
				TA01BN	00	=		
XA442	TDD	BN	02B	()	01		TKA03A 01 02B	
XA442	TDD	BP	04B	TA01BP	00	=		ADD REG 1 PRERESET
XA442	TDD	BP	04A	(09)	01		TS1ABA 04 04A	
XA442	TDD	BQ	03A	TA01BQ	00	=		ADD REG 1 PRESET
XA442	TDD	BQ	02A	(07)	01		SPI039 03 02A	
XA428	THI	E3	28A	TA01C0	00	=		ADD REG 1 UNLOAD=0
XA428	THI	E3	29A	(60)	01		TA01BP 62 29A	
XA427	TLD	C2	15A	TA01SD	00	=		JDB01B4 BUSS
XA427	TLD	C2	16A	(30)	01		TA01C0 TTSAMO 34 16A 36 17A	
XA436	TT3	D1	23A	TA0110	00	=		SET ADD REG 1 FF
XA436	TT3	D1	24A	(50)	01		TA014A TA013A TA012A 52 24A 54 25A 56 26A	
XA414	TT3	A2	03A	TA012A	00	=		AUCT TO BIT 1 ADD REG
XA414	TT3	A2	02B	(07)	01		TAR120 TXAUC0 TR8WAA 01 02B 03 02A 05 03B	

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG. FACTOR	FACTOR	COMMENT
XA414	TT3	A3	07B	TA013A	00	=		IOM REG ADD TO REG
XA414	TT3	A3	04B	(15)	01		XMSSD0 TR8WA0 TXAUC0 09 04B 11 05B 13 06B	
XA440	TQ2	D1	24A	TA014A	00	=		ADD OF CMD TO ADD REG
XA440	TQ2	D1	25A	(52)	01		TCPD40 TCB260 54 25A 56 26A	
XA442	TDD	CI	13A	TA02BI	00	=		
				()	01		TA0210 24 13A	
XA442	TDD	CN	14A	TA02BN	00	=		
				()	01		TKA03A 26 14A	
XA442	TDD	CP	11B	TA02BP	00	=		ADD REG 2 PRERESET
XA442	TDD	CP	12A	(23)	01		TS1ABA 22 12A	
XA442	TDD	CQ	12B	TA02BQ	00	=		ADD REG 2 PRESET
XA442	TDD	CQ	13B	(25)	01		SPI038 27 13B	
XA428	THI	E4	28B	TA02C0	00	=		ADD REG 2 UNLOAD-0
XA428	THI	E4	29B	(56)	01		TA02BP 55 29B	
XA427	TLD	C3	16B	TA02SD	00	=		JDB02B4 BUSS
XA427	TLD	C3	14B	(33)	01		TA02C0 TTSAMO 29 14B 31 15B	
XA436	TT3	D2	23B	TA0210	00	=		SET ADD REG 2 FF
XA436	TT3	D2	22B	(43)	01		TA024A TA022A TA023A 41 22B 46 21A 48 22A	
XA414	TT3	B1	11A	TA022A	00	=		AUCT TO ADD REG
XA414	TT3	B1	12A	(20)	01		TXAUC0 TAR220 TR8WAA 22 12A 24 13A 26 14A	
XA414	TT3	B2	09B	TA023A	00	=		IOM REG ADD TO REG
XA414	TT3	B2	09A	(19)	01		XMSSD0 TR8WA0 TXAUC0 14 09A 17 08B 18 10A	
XA440	TQ2	D4	27B	TA024A	00	=		ADD OF CMD TO ADD REG
XA440	TQ2	D4	25B	(51)	01		TCB270 TCPD40 47 25B 49 26B	

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
 UNIT ASSEMBLY NO. 149019 REV G INDEX TA03BI
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA442	TDD	DI	10A	TA03BI ()	00 = 01		TA0310 18 10A	
XA442	TDD	DN	09A	TA03BN ()	00 = 01		TKA03A 14 09A	
XA442	TDD	DP	10B	TA03BP (21)	00 = 01			ADD REG 3 PRERESET
XA442	TDD	DP	11A				TS2ABA 20 11A	
XA442	TDD	DQ	09B	TA03BQ (19)	00 = 01			ADD REG 3 PRESET
XA442	TDD	DQ	08B				SPI039 17 08B	
XA428	THI	E5	30B	TA03C0 (57)	00 = 01			ADD REG 3 UNLOAD=0
XA428	THI	E5	31B				TA03BP 59 31B	
XA427	TLD	C4	19B	TA03SD (39)	00 = 01			JDB03B4 BUSS
XA427	TLD	C4	17B				TA03C0 TTSAM0 35 17B 37 18B	
XA436	TT3	D3	27B	TA0310 (51)	00 = 01			SET ADD REG 3 FF
XA436	TT3	D3	24B				TA034A TA033A TA032A 45 24B 47 25B 49 26B	
XA414	TT3	B3	13B	TA032A (27)	00 = 01			AUCT TO BIT 3 ADD REG
XA414	TT3	B3	10B				TAR320 TXAUC0 TR8WAA 21 10B 23 11B 25 12B	
XA414	TT3	C1	17A	TA033A (36)	00 = 01			IQM REG. ADD TO REG
XA414	TT3	C1	18A				XMLSD0 TR8WAO TXAUC0 38 18A 40 19A 42 20A	
XA440	TQ2	E3	30B	TA034A (57)	00 = 01			ADD OF CMD TO ADD REG
XA440	TQ2	E3	28B				TCB280 TCPD40 53 28B 55 29B	
XA442	TDD	EI	19A	TA04BI ()	00 = 01		TA0410 40 19A	
XA442	TDD	EN	20A	TA04BN ()	00 = 01		TKA46A 42 20A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA442	TDD	EP	17B	TA04BP	00	=		ADD REG 4 PRERESET
XA442	TDD	EP	18A	(35)	01		TS2ABA 38 18A	
XA442	TDD	EQ	18B	TA04BQ	00	=		ADD REG 4 PRESET
XA442	TDD	EQ	19B	(37)	01		SPI038 39 19B	
XA428	THI	E2	30A	TA04C0	00	=		ADD REG 4 UNLOAD-0
XA428	THI	E2	31A	(63)	01		TA04BP 61 31A	
XA427	TLD	D1	24A	TA04SD	00	=		JDB04B4 BUSS
XA427	TLD	D1	25A	(52)	01		TA04C0 TTSAM0 54 25A 56 26A	
XA436	TT3	E1	30A	TA0410	00	=		SET ADD REG 4 FF
XA436	TT3	E1	31A	(64)	01		TA044A TA042A SPI036 66 31A 68 32A 70 33A	
XA440	TQ2	E4	33B	TA042A	00	=		AUCT TO BIT 4 ADD REG
XA440	TQ2	E4	31B	(63)	01		TA0450 TS3M00 59 31B 61 32B	
XA440	TQ2	F2	34A	TA044A	00	=		ADD OF CMD TO ADD REG
XA440	TQ2	F2	36A	(72)	01		TCPD40 TCB290 71 36A 73 36B	
XA441	TD4	A2	04B	TA0450	00	=		DEV ADD 4+5+6+7
XA441	TD4	A2	02B	(09)	01		TR5WAA TR6WAA TR4WAA TR7WAA 01 02B 04 04A 05 03B 07 03A	
XA442	TDD	FI	16A	TA05BI	00	=		
				()	01		TA05I0 34 16A	
XA442	TDD	FN	15A	TA05BN	00	=		
				()	01		TKA46A 30 15A	
XA442	TDD	FP	16B	TA05BP	00	=		ADD REG 5 PRERESET
XA442	TDD	FP	17A	(33)	01		TS2ABA 36 17A	
XA442	TDD	FQ	15B	TA05BQ	00	=		ADD REG 5 PRESET
XA442	TDD	FQ	14B	(31)	01		SPI039 29 14B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA428	THI	E6	32B	TA05C0	00	=		
XA428	THI	E6	33B	(68)	01		TA05BP 65 33B	ADD REG 5 UNLOAD-0
XA427	TLD	D2	21A	TA05SD	00	=		
XA427	TLD	D2	22A	(46)	01		TTSAMO TA05C0 48 22A 50 23A	JDB05B4 BUSS
XA436	TT3	E2	29B	TA0510	00	=		
XA436	TT3	E2	28B	(55)	01		TA052A TA054A SPI036 53 28B 60 28A 62 29A	SET ADD REG 5 FF
XA438	TQ2	F1	37B	TA052A	00	=		
XA438	TQ2	F1	38B	(75)	01		TAR520 TS3M00 77 38B 79 39B	AUCT TO BIT 5 ADD REG
XA438	TQ2	F3	35A	TA054A	00	=		
XA438	TQ2	F3	34B	(69)	01		TCB300 TCPD40 65 34B 74 35B	ADD OF CMD TO ADD REG
				TA06BI	00	=		
XA442	TDD	GI	25A	()	01		TA0610 54 25A	
				TA06BN	00	=		
XA442	TDD	GN	26A	()	01		TKA46A 56 26A	
XA442	TDD	GP	25B	TA06BP	00	=		
XA442	TDD	GP	24A	(47)	01		TS2ABA 52 24A	ADD REG 6 PRESET
XA442	TDD	GQ	26B	TA06BQ	00	=		
XA442	TDD	GQ	27B	(49)	01		SPI038 51 27B	ADD REG 6 PRESET
XA428	THI	F5	36A	TA06C0	00	=		
XA428	THI	F5	37A	(78)	01		TA06BP 76 37A	ADD REG 6 UNLOAD-0
XA427	TLD	D3	24B	TA06SD	00	=		
XA427	TLD	D3	22B	(45)	01		TTSAMO TA06C0 41 22B 43 23B	JDB06B4 BUSS
XA436	TT3	E3	33B	TA0610	00	=		
XA436	TT3	E3	30B	(63)	01		TA062A TA064A SPI036 57 30B 59 31B 61 32B	SET ADD REG 6 FF

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA438	TQ2	F4	39A		TA062A	00	=		AUCT TO BIT 6 ADD REG
XA438	TQ2	F4	37A		(80)	01		TAR620 TS3M00 76 37A 78 38A	
XA440	TQ2	F4	39A		TA064A	00	=		ADD OF CMD TO ADD REG
XA440	TQ2	F4	37A		(80)	01		TCB310 TCPD40 76 37A 78 38A	
XA150	TT3	B1	11A		TBB1AA	00	=		BYTE1
XA150	TT3	B1	12A		(20)	01		TBC2C0 TBC4BP TBC3BP 22 12A 24 13A 26 14A	
XA139	THI	A3	03A		TBB1A0	00	=		BYTE 1
XA139	THI	A3	02A		(03)	01		TBB1AA 04 02A	
XA149	TQ2	E2	28A		TBB120	00	=		BYTE 1+2 BOOTSTRAP
XA149	TQ2	E2	29A		(60)	01		TBB1AA TBB2AA 62 29A 64 30A	
XA150	TT3	B2	09B		TBB2AA	00	=		BYTE 2
XA150	TT3	B2	09A		(19)	01		TBC3BQ TBC2BP TBC4BP 14 09A 17 08B 18 10A	
XA139	THI	A4	02B		TBB2A0	00	=		BYTE 2
XA139	THI	A4	03B		(01)	01		TBB2AA 05 03B	
XA150	TT3	B3	13B		TBB3AA	00	=		BYTE 3
XA150	TT3	B3	10B		(27)	01		TBC4BP TBC2C0 TBC3BQ 21 10B 23 11B 25 12B	
XA139	THI	A5	04B		TBB3A0	00	=		BYTE 3
XA139	THI	A5	05B		(07)	01		TBB3AA 09 05B	
XA150	TT3	C1	17A		TBB4AA	00	=		BYTE 4
XA150	TT3	C1	18A		(36)	01		TBC2BP TBC3BP TBC4C0 38 18A 40 19A 42 20A	
XA139	THI	A6	06B		TBB4A0	00	=		BYTE 4
XA139	THI	A6	07B		(10)	01		TBB4AA 15 07B	
XA150	TT3	C2	15B		TBB5AA	00	=		BYTE 5
XA150	TT3	C2	14B		(31)	01		TBC3BP TBC4C0 TBC2C0 29 14B 30 15A 34 16A	

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	REGIS. FACTOR	FACTOR	COMMENT
XA139	THI	B1	13A	TBB5A0	00	=		BYTE 5
XA139	THI	B1	14A	(24)	01		TBB5AA 22 14A	
XA150	TT3	C3	19B	TBB6AA	00	=		BYTE 6
XA150	TT3	C3	16B	(39)	01		TBC38Q TBC2BP TBC4C0 33 16B 35 17B 37 18B	
XA139	THI	B2	11A	TBB6A0	00	=		BYTE 6
XA139	THI	B2	12A	(25)	01		TBB6AA 23 12A	
XA150	TT3	D1	23A	TBB7AA	00	=		BYTE 7 COUNT-A BYTE 2,3,4
XA150	TT3	D1	24A	(50)	01		TBC2BQ TBC3BQ TBC4BQ 52 24A 54 25A 56 26A	
XA139	THI	B3	09A	TBB7A0	00	=		BYTE 7 COUNT-0
XA139	THI	B3	10A	(18)	01		TBB7AA 20 10A	
XA150	TT3	D2	23B	TBCRSA	00	=		BYTE COUNTER RESET PULSE
XA150	TT3	D2	22B	(43)	01		TPS10A TIZCKO TBST1A 41 22B 46 21A 48 22A	
XA151	TDD	KI	29A	TBC18I	00	=		
				()	01		TBD100 62 29A	
XA151	TDD	KN	28A	TBC18N	00	=		
				()	01		TBK10A 60 28A	
XA151	TDD	KP	30B	TBC18P	00	=		BYTE COUNTER FF 1 RESET
XA151	TDD	KP	30A	(57)	01		TBCRSA 64 30A	
XA151	TDD	KQ	29B	TBC18Q	00	=		BYTE COUNTER FF 1 SET
XA151	TDD	KQ	28B	(55)	01		TPS10A 53 28B	
XA139	THI	E3	28A	TBC1C0	00	=		BYTE 1 OVERLOAD
XA139	THI	E3	29A	(60)	01		TBC18P 62 29A	
XA413	TLD	F1	37B	TBC1SD	00	=		JDB27B4 BUSS 1 TO DATA
XA413	TLD	F1	38B	(75)	01		TBC1C0 TTSDMO 77 38B 79 39B	BUSS FOR CTS DISPLAY

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA151	TDD	LI	38B	TBC2BI ()	00 01	=	TBD200 77 38B	
XA151	TDD	LN	39B	TBC2BN ()	00 01	=	TBK20A 79 39B	
XA151	TDD	LP	37A	TBC2BP (76)	00 01	=	TBCRSA 75 37B	BYTE COUNTER-2 FF RESET
XA151	TDD	LQ	38A	TBC2BQ (78)	00 01	=	TPS20A 80 39A	BYTE COUNTER -2 FF-SET
XA139	THI	E2	30A	TBC2C0 (63)	00 01	=	TBC2BP 61 31A	BYTE COUNTER 2 UNLOAD=0
XA413	TLD	F2	34A	TBC2SD (72)	00 01	=	TBC2C0 TTSDMO 71 36A 73 36B	JDB28B4 BUSS 2 TO DATA BUSS FOR CTS DISPLAY
XA151	TDD	MI	36A	TBC3BI ()	00 01	=	TBD300 71 36A	
XA151	TDD	MN	34A	TBC3BN ()	00 01	=	TBK20A 72 34A	
XA151	TDD	MP	35A	TBC3BP (69)	00 01	=	TBCRSA 73 36B	BYTE COUNTER 3 FF RESET
XA151	TDD	MQ	35B	TBC3BQ (74)	00 01	=	TPS20A 65 34B	BYTE COUNTER 3 FF SET
XA413	TLD	F3	35A	TBC3SD (69)	00 01	=	TBC3BQ TTSDMO 65 34B 74 35B	JDB29B4 BUSS 3 TO DATA BUSS FOR CTS DISPLAY
XA148	TDD	MI	36A	TBC4BI ()	00 01	=	TBD400 71 36A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA148	TDD	MN	34A	TBC4BN ()	00	=	TBK20A 72 34A	
XA148	TDD	MP	35A	TBC4BP (69)	00	=		BYTE COUNTER-4 FF RESET
XA148	TDD	MP	36B		01		TBCRSA 73 36B	
XA148	TDD	MQ	35B	TBC4BQ (74)	00	=		BYTE COUNTER-4 FF SET
XA148	TDD	MQ	34B		01		TPS20A 65 34B	
XA139	THI	E1	32A	TBC4CO (66)	00	=		BYTE COUNTER 4 UNLOAD-0
XA139	THI	E1	33A		01		TBC4BP 64 33A	
XA413	TLD	F4	39A	TBC4SD (80)	00	=		JDB30B4 BUSS 4 TO DATA
XA413	TLD	F4	37A		01		TBC4CO TTSDMO 76 37A 78 38A	BUSS FOR CTS DISPLAY
XA150	TT3	F1	36B	TBDIGA (73)	00	=		FAN OUT CONTROL FOR CHECK
XA150	TT3	F1	37B		01		TBST10 TBB120 TS14C0 75 37B 77 38B 79 39B	
XA149	TQ2	E3	30B	TBD100 (57)	00	=		BC 1 ORED DATA IN-0
XA149	TQ2	E3	28B		01		TBD12A TI10BP 53 28B 55 29B	
XA136	TD4	C1	17B	TBD12A (35)	00	=		LATCH/RESET CONTROL
XA136	TD4	C1	18B		01		TBC1C0 TBD13A SPI011 TBST1P 37 18B 38 18A 40 19A 42 20A	
XA149	TQ2	E4	33B	TBD13A (63)	00	=		BC 1 RESET I2.BYTE 2*
XA149	TQ2	E4	31B		01		TBC2BP TI20C0 59 31B 61 32B	
XA147	TS8	B1	11B	TBD14A (23)	00	=		BC 1 RESET I3.C1.C2.CMD*.STR
XA147	TS8	B1	09A		01		TXC1BQ TBC1C0 TCMDBP TI30BQ TCOSAB SPI013 SPI010 TXC2BQ 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	
XA150	TT3	D3	27B	TBD15A (51)	00	=		BC 1 RESET BOOTSTR 1=C1. S13
XA150	TT3	D3	24B		01		TS13BQ TBC1BQ TBST10 45 24B 47 25B 49 26B	
XA137	TT3	B2	09B	TBD200 (19)	00	=		BC-2 ORED DATA IN
XA137	TT3	B2	09A		01		TBD21A TBD22A TBD23A 14 09A 17 08B 18 10A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	MARK FACTOR	FACTOR	COMMENT
XA149	TQ2	F1	37B	TBD21A	00	=		I1.C1*.BYTE 1
XA149	TQ2	F1	38B	(75)	01		TBC1BQ TI1C10 77 38B 79 39B	
XA149	TQ2	F2	34A	TBD22A	00	=		BOOTSTRAP 1.2.BYTE 2*
XA149	TQ2	F2	36A	(72)	01		TBS7C0 TBC2BP 71 36A 73 36B	
XA136	TD4	C2	16B	TBD23A	00	=		LATCH/RESET CONTROL
XA136	TD4	C2	15A	(33)	01		TBD26A TBD25A TBD27A TBC2BQ 30 15A 31 15B 34 16A 36 17A	
XA137	TT3	B1	11A	TBD24A	00	=		BOOTSTRAP 1- BYTE 7.S03
XA137	TT3	B1	12A	(20)	01		TS02C0 TBB7A0 TBS110 22 12A 24 13A 26 14A	BOOTSTRAP 1-BYTE 7.S02
XA149	TQ2	F3	35A	TBD25A	00	=		I2-BYTE 3*
XA149	TQ2	F3	34B	(59)	01		TI20C0 TBC3BP 65 34B 74 35B	
XA149	TQ2	F4	39A	TBD26A	00	=		BOOTSTRAP 1.2 . BYTE 2
XA149	TQ2	F4	37A	(80)	01		TBS7C0 TBC2BQ 76 37A 78 38A	
XA149	TQ2	A1	05A	TBD27A	00	=		PRESET MO INPUT
XA149	TQ2	A1	06A	(06)	01		TBS110 TBB7A0 08 06A 10 07A	
XA137	TT3	A2	03A	TBD300	00	=		BC-3 ORED DATA IN
XA137	TT3	A2	02B	(07)	01		TBD31A TBD32A TBD33A 01 02B 03 02A 05 03B	
XA146	TQ2	A1	05A	TBD31A	00	=		I1.C1*.BYTE 2
XA146	TQ2	A1	06A	(06)	01		TBC2BQ TI1C10 08 06A 10 07A	
XA145	TT3	A1	04A	TBD32A	00	=		BOOTSTRAP 1.2 .BYTE 2.3*
XA145	TT3	A1	05A	(04)	01		TBC3BP TBS7C0 TBC2BQ 06 05A 08 06A 10 07A	
XA136	TD4	B1	11B	TBD33A	00	=		LATCH/RESET CONTROL
XA136	TD4	B1	12A	(23)	01		TBD27A TBD34A TBD35A TBC3BQ 22 12A 24 13A 25 12B 26 14A	
XA146	TQ2	A2	02B	TBD34A	00	=		I2.BYTE 4*
XA146	TQ2	A2	04A	(01)	01		TBC4BP TI20C0 04 04A 05 03B	

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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA145	TT3	A2 03A	TBD35A	00 =		BOOTSTRAP 1,2, BYTE 2,3
XA145	TT3	A2 02B	(07)	01	TB57C0 TBC2BQ TB83A0 01 02B 03 02A 05 03B	
XA137	TT3	B3 13B	TBD400	00 =		BC-4 ORED DATA IN
XA137	TT3	B3 10B	(27)	01	TBD41A TBD43A TBD35A 21 10B 23 11B 25 12B	
XA146	TQ2	A3 04B	TBD41A	00 =		I0.C1*. BYTE 3
XA146	TQ2	A3 02A	(09)	01	TI1C10 TBC3BQ 03 02A 07 03A	
XA145	TT3	A3 07B	TBD43A	00 =		LATCH/RESET CONTROL
XA145	TT3	A3 04B	(15)	01	TBD27A TBC4BQ TBD44A 09 04B 11 05B 13 06B	
XA146	TQ2	A4 07B	TBD44A	00 =		I2. BYTE 4
XA146	TQ2	A4 05B	(15)	01	TBC4BQ TI20C0 11 05B 13 06B	
XA305	TD4	F2 35A	TBHLTA	00 =		COMP* S1 BURST, NO MEMT. 0
XA305	TD4	F2 36A	(69)	01	TS01L0 TMRUCA4 TS01C0 TMT0BP 71 36A 72 34A 73 36B 74 35B	
XA139	THI	D6 26B	TBK10A	00 =		CLOCK INPUT-A
XA139	THI	D6 27B	(53)	01	TBK100 51 27B	
XA136	TD4	B2 10B	TBK100	00 =		CLOCK INPUT-0
XA136	TD4	B2 09A	(21)	01	SPI011 TBK13A TBK12A TBK14A 14 09A 18 10A 19 09B 20 11A	
XA146	TQ2	B2 09A	TBK12A	00 =		I2. SHIFT PULSE
XA146	TQ2	B2 10A	(14)	01	TTESPO TI20BQ 18 10A 20 11A	
XA146	TQ2	B3 10B	TBK13A	00 =		I1. ORED INFORMATION LINES
XA146	TQ2	B3 08B	(21)	01	TI10C0 TXC7B0 17 08B 19 09B	
XA146	TQ2	B4 13B	TBK14A	00 =		STATE S13 . BOOTSTRAP .SHIFT
XA146	TQ2	B4 11B	(27)	01	TBST2Q TS00A0 23 11B 25 12B	
XA139	THI	D5 24B	TBK20A	00 =		BC-2 CLOCK-A
XA139	THI	D5 25B	(43)	01	TBK200 45 25B	

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CONNECTOR	FILE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA136	TD4	A2	Q4B	TBK200	00	=		BC-2 CLOCK-0- I2.SHIFT+I1.IN
XA136	TD4	A2	Q2B	(09)	01		TBK12A TBK13A TBD24A SPI011 01 02B 04 04A 05 03B 07 03A	
XA146	TQ2	C2	15A	TBLDAA	00	=		MODE = ZERO*.XFER CONTROL -A
XA146	TQ2	C2	16A	(30)	01		YMDZAA TKWXAO 34 16A 36 17A	
XA139	THI	D4	22B	TBLDAA	00	=		MODE=0*.XFER CONTROL-0
XA139	THI	D4	23B	(46)	01		TBLDAA 41 23B	
XA137	TT3	C1	17A	TBLD1A	00	=		BLOCK LENGTH DECR GRP-1
XA137	TT3	C1	18A	(35)	01		TBLZ30 TBLZ20 TBLZ40 38 18A 40 19A 42 20A	
XA139	THI	D3	21A	TBLD10	00	=		GRP 1 PRE GRP 2,3,4=0 DEC-0
XA139	THI	D3	22A	(48)	01		TBLD1A 50 22A	
XA138	TQ2	C1	18A	TBLD2A	00	=		BLOCK LENGTH DECR GRP-2
XA138	TQ2	C1	19A	(38)	01		TBLZ40 TBLZ30 40 19A 42 20A	
XA139	THI	D2	23A	TBLD20	00	=		GRP 2 PRE GRP 3,4=0 DEC-0
XA139	THI	D2	24A	(49)	01		TBLD2A 47 24A	
XA144	TD4	A1	05B	TBLEZA	00	=		EXT BL =0
XA144	TD4	A1	05A	(11)	01		TBLEOP TBLE3P TBLE2P TBLE1P 06 05A 08 06A 10 07A 13 06B	
XA139	THI	C1	19A	TBLEZO	00	=		EXT BL = 0
XA139	THI	C1	20A	(40)	01		TBLEZA 38 20A	
XA148	TDD	CI	13A	TBLEOI	00	=		
				()	01		TBL0AO 24 13A	
XA148	TDD	CN	14A	TBLEON	00	=		
				()	01		YKBLEA 26 14A	
XA148	TDD	CP	11B	TBLEOP	00	=		MASTER RESET TBLEO
XA148	TDD	CP	12A	(23)	01		YMRUAA4 22 12A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	LOGIC FACTOR	FACTOR	COMMENT
XA148	TDD	CQ	12B	TBLE0Q	00	=		
XA148	TDD	CQ	13B	(25)	01		TBLPOA 27 13B	PRESET TBLE0
				TBLE1I	00	=		
XA148	TDD	DI	10A	()	01		TBL1A0 18 10A	
				TBLE1N	00	=		
XA148	TDD	DN	09A	()	01		TKBLEA 14 09A	
XA148	TDD	DP	10B	TBLE1P	00	=		
XA148	TDD	DP	11A	(21)	01		TMRUAA4 20 11A	MASTER RESET TBLE1
XA148	TDD	DQ	09B	TBLE1Q	00	=		
XA148	TDD	DQ	08B	(19)	01		TBLPIA 17 08B	PRESET TBLE1
				TBLE2I	00	=		
XA148	TDD	EI	19A	()	01		TBL2A0 40 19A	
				TBLE2N	00	=		
XA148	TDD	EN	20A	()	01		TKBLEA 42 20A	
XA148	TDD	EP	17B	TBLE2P	00	=		
XA148	TDD	EP	18A	(35)	01		TMRUAA4 38 18A	MASTER RESET TBLE2
XA148	TDD	EQ	18B	TBLE2Q	00	=		
XA148	TDD	EQ	19B	(37)	01		TBLP2A 39 19B	PRESET TBLE2
				TBLE3I	00	=		
XA148	TDD	FI	16A	()	01		TBL3A0 34 16A	
				TBLE3N	00	=		
XA148	TDD	FN	15A	()	01		TKBLEA 30 15A	
XA148	TDD	FP	16B	TBLE3P	00	=		
XA148	TDD	FP	17A	(33)	01		TMRUAA4 36 17A	MASTER RESET TBLE3

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
XA148	TDD	FQ	15B	TBLE3Q	00	=		PRESET TBLE3
XA148	TDD	FQ	14B	(31)	01		TBLP3A 29 14B	
XA138	TQ2	B1	12A	TBLM1A	00	=		GRP 1 BL DECREMENT
XA138	TQ2	B1	13A	(22)	01		TBLD40 TBLD10 24 13A 26 14A	
XA139	THI	B4	08B	TBLM10	00	=		GRP 1 BL DECREMENT-0
XA139	THI	B4	09B	(14)	01		TBLM1A 17 09B	
XA138	TQ2	B2	09A	TBLM2A	00	=		GRP 2 BL DECREMENT-A
XA138	TQ2	B2	10A	(14)	01		TBLD40 TBLD20 18 10A 20 11A	
XA139	THI	B5	10B	TBLM20	00	=		GRP 2 BL DECREMENT-0
XA139	THI	B5	11B	(19)	01		TBLM2A 21 11B	
XA138	TQ2	B3	10B	TBLM3A	00	=		GRP 3 BL DECREMENT
XA138	TQ2	B3	08B	(21)	01		TBLD40 TBLZ40 17 08B 19 09B	
XA139	THI	B6	12B	TBLM30	00	=		GRP 3 BL DECREMENT-0
XA139	THI	B6	13B	(26)	01		TBLM3A 27 13B	
XA340	TT3	B1	11A	TBLP0A	00	=		TE TO TBLE MSB
XA340	TT3	B1	12A	(20)	01		TBB7A0 TCBCA0 TE24C0 22 12A 24 13A 26 14A	
XA340	TT3	B2	09B	TBLP1A	00	=		TE TO TBLE 2ND MSB
XA340	TT3	B2	09A	(19)	01		TE25C0 TCBCA0 TBB7A0 14 09A 17 08B 18 10A	
XA340	TT3	B3	13B	TBLP2A	00	=		TE TO TBLE 2ND LSB
XA340	TT3	B3	10B	(27)	01		TBB7A0 TCBCA0 TE26C0 21 10B 23 11B 25 12B	
XA340	TT3	C1	17A	TBLP3A	00	=		TE TO TBLE LSB
XA340	TT3	C1	18A	(36)	01		TE27C0 TCBCA0 TBB7A0 38 18A 40 19A 42 20A	
XA350	TQ2	E2	28A	TBLRCA	00	=		(RTC=0, BL=0)-*
XA350	TQ2	E2	29A	(60)	01		TBLZ40 TRTC00 62 29A 64 30A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG- NATOR	FACTOR	COMMENT
XA350	TQ2	D3	24B	TBLTAA	00	=		MODE = ZERO XFER CONTROL
XA350	TQ2	D3	22B	(45)	01		TMDZAO TKWXBO 41 22B 43 23B	
XA350	TQ2	D4	27B	TBLT1A	00	=		XFER CONT GRP 1 GRP 4.3.2=0*
XA350	TQ2	D4	25B	(51)	01		TKWXBO TBLD1A 47 25B 49 26B	
XA350	TQ2	E3	30B	TBLT2A	00	=		XFER CONT GRP 2 GRP 4.3=0*
XA350	TQ2	E3	28B	(57)	01		TKWXBO TBLD2A 53 28B 55 29B	
XA350	TQ2	E4	33B	TBLT3A	00	=		XFER CONT GRP 3 GRP 4=0*
XA350	TQ2	E4	31B	(63)	01		TKWXBO TBLZ4A 59 31B 61 32B	
XA140	TQ2	D1	24A	TBLX10	00	=		XFER CONT GRP 1 PRE=0** M=0
XA140	TQ2	D1	25A	(52)	01		TBLT1A TBLTAA 54 25A 56 26A	
XA140	TQ2	D2	21A	TBLX20	00	=		XFER CONT GRP 2 PRE=0** M=0
XA140	TQ2	D2	22A	(46)	01		TBLTAA TBLT2A 48 22A 50 23A	
XA140	TQ2	D3	24B	TBLX30	00	=		XFER CONT GRP 3 PRE=0** M=0
XA140	TQ2	D3	22B	(45)	01		TBLTAA TBLT3A 41 22B 43 23B	
XA139	THI	D1	25A	TBLX40	00	=		GRP 4 XFER CONT=MODE=0
XA139	THI	D1	26A	(54)	01		TBLTAA 52 26A	
XA144	TD4	B1	11B	TBLZAA	00	=		BLOCK LENGTH ZERO DECODE=A
XA144	TD4	B1	12A	(23)	01		TBLZ50 TBLZ10 TBLZ30 TBLZ20 22 12A 24 13A 25 12B 26 14A	
XA139	THI	C5	16B	TBLZAO	00	=		BLOCK LENGTH ZERO DECODE=0
XA139	THI	C5	17B	(31)	01		TBLZAA 33 17B	
XA328	TQ2	A4	07B	TBLZ1A	00	=		GROUP 1 BL FIELD=0=A
XA328	TQ2	A4	05B	(15)	01		TC00BP TC01BP 11 05B 13 06B	
XA324	THI	A1	06A	TBLZ10	00	=		GROUP 1 BL FIELD=0=0
XA324	THI	A1	07A	(13)	01		TBLZ1A 11 07A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA327	TT3	A2	03A	TBLZ2A	00 =			
XA327	TT3	A2	02B	(07)	01		TC048P TC028P TC038P 01 02B 03 02A 05 03B	GROUP 2 BL FIELD=0 -A
XA324	THI	A4	02B	TBLZ20	00 =			
XA324	THI	A4	03B	(01)	01		TBLZ2A 05 03B	GROUP 2 BL FIELD=0-0
XA327	TT3	C3	19B	TBLZ3A	00 =			
XA327	TT3	C3	16B	(39)	01		TC058P TC078P TC068P 33 16B 35 17B 37 18B	GROUP 3 BL FIELD=0 -A
XA324	THI	C3	15A	TBLZ30	00 =			
XA324	THI	C3	16A	(34)	01		TBLZ3A 36 16A	GROUP 3 BL FIELD=0-0
XA327	TT3	E1	30A	TBLZ4A	00 =			
XA327	TT3	E1	31A	(64)	01		TC088P TC098P TC108P 66 31A 68 32A 70 33A	GROUP 4 BL FIELD =0 -A
XA324	THI	D6	26B	TBLZ40	00 =			
XA324	THI	D6	27B	(53)	01		TBLZ4A 51 27B	GROUP 4 BL FIELD=0-0
XA327	TT3	E2	29B	TBLZ5A	00 =			
XA327	TT3	E2	28B	(55)	01		TC088P TC098P TC108P 53 28B 60 28A 62 29A	GROUP 4 BL FIELD=1 - A
XA324	THI	E3	28A	TBLZ50	00 =			
XA324	THI	E3	29A	(60)	01		TBLZ5A 62 29A	GROUP 4 BL FIELD=1 - 0
XA139	THI	C3	15A	TBL0A0	00 =			
XA139	THI	C3	16A	(34)	01		TBL01A 36 16A	SET TBLE0
XA138	TQ2	C2	15A	TBL01A	00 =			
XA138	TQ2	C2	16A	(30)	01		TBL03A TBLE0Q 34 16A 36 17A	TBLE0 SET REMAIN SET
XA137	TT3	C2	15B	TBL03A	00 =			
XA137	TT3	C2	14B	(31)	01		TBLE3P TBLE2P TBLE1P 29 14B 30 15A 34 16A	INHIBIT SETTING TBLE0
XA140	TQ2	C2	15A	TBL1A0	00 =			
XA140	TQ2	C2	16A	(30)	01		TBL12A TBL11A 34 16A 36 17A	SET TBLE0

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERN	DESIGNATOR	FACTOR	COMMENT
XA144	TD4	A2	04B	TBL11A	00	=		BL EXT COUNT 4
XA144	TD4	A2	02B	(09)	01		TBLE2P TBLE3P TBLE0Q TBLE1P 01 02B 04 04A 05 03B 07 03A	
XA138	TQ2	C3	16B	TBL12A	00	=		BLE1 SET LEAVE SET
XA138	TQ2	C3	14B	(33)	01		TBLE1Q TBL13A 29 14B 31 15B	
XA140	TQ2	C3	16B	TBL13A	00	=		INHIBIT BLE1 FROM SETTING
XA140	TQ2	C3	14B	(33)	01		TBLE2P TBLE3P 29 14B 31 15B	
XA146	TQ2	C3	16B	TBL2A0	00	=		SET TBLE2
XA146	TQ2	C3	14B	(33)	01		TBL22A TBL21A 29 14B 31 15B	
XA141	TQ2	C4	19B	TBL21A	00	=		BLE2 SET REMAIN SET1
XA141	TQ2	C4	17B	(39)	01		TBLE3Q TBLE2Q 35 17B 37 18B	
XA145	TT3	B2	09B	TBL22A	00	=		BL EXT COUNT 4+8+12
XA145	TT3	B2	09A	(19)	01		SPI012 TBLE3P TBLE2P 14 09A 17 08B 18 10A	
XA139	THI	C4	14B	TBL3A0	00	=		SET TBLE3
XA139	YHI	C4	15B	(30)	01		TBLE3Q 29 15B	
XA141	TQ2	D2	21A	TBMAAA	00	=		1ST M3 FF NOT M3
XA141	TQ2	D2	22A	(46)	01		TBMAAO TBST2P 48 22A 50 23A	
XA138	TQ2	B4	13B	TBMAAO	00	=		SET BASE MEM ACC FF
XA138	TQ2	B4	11B	(27)	01		TPQRSA TKTSOA 23 11B 25 12B	
XA151	TDD	CI	13A	TBMACI	00	=		
XA151	TDD	CI	13A	()	01		SPI013 24 13A	
XA151	TDD	CN	14A	TBMACN	00	=		
XA151	TDD	CN	14A	()	01		SPI014 26 14A	
XA151	TDD	CP	11B	TBMACP	00	=		
XA151	TDD	CP	12A	(23)	01		TMO0BP 22 12A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA151	TDD	CQ	12B	TBMACQ	00	=		BASE MEMORY ACCESS FF
XA151	TDD	CQ	13B	(25)	01		TBMAAA 27 13B	
XA142	TQ2	E4	33B	TBRCAA	00	=		BURST.NO COMPARE
XA142	TQ2	E4	31B	(63)	01		TBRSUO TCOMPA 59 31B 61 32B	
XA146	TQ2	C4	19B	TBRCPO	00	=		BRST*.IO+ COMPARE.S01
XA146	TQ2	C4	17B	(39)	01		TBRIOA TERIAA 35 17B 37 18B	
XA146	TQ2	D1	24A	TBRINA	00	=		ENTER BURST, BURST LINE AND
XA146	TQ2	D1	25A	(52)	01		TINDAO TBRSAOX 54 25A 56 26A	
XA206	TT3	A2	03A	TBRIOA	00	=		BRST * AND IO
XA206	TT3	A2	02B	(07)	01		SPI013 TXCOBQ TBR SUA 01 02B 03 02A 05 03B	
XA146	TQ2	D2	21A	TBRRAO	00	=		BURST REQ. IO + BURST*
XA146	TQ2	D2	22A	(46)	01		TBRROA TBRSUO 48 22A 50 23A	
XA146	TQ2	B1	12A	TBRREA	00	=		RESET BURST
XA146	TQ2	B1	13A	(22)	01		TBRREO SPI012 24 13A 26 14A	
XA142	TQ2	E2	28A	TBRREO	00	=		RESET BURST WITH FOR AND PRE-
XA142	TQ2	E2	29A	(60)	01		TBRRSA TEOBBP 62 29A 64 30A	SENT RESET
XA151	TDD	E1	19A	TBRRFI	00	=		
XA151	TDD	E1	19A	()	01		SPI013 40 19A	
XA151	TDD	EN	20A	TBRRFN	00	=		
XA151	TDD	EN	20A	()	01		SPI014 42 20A	
XA151	TDD	EP	17B	TBRRFN	00	=		BURST REQ F/F RESET
XA151	TDD	EP	18A	(35)	01		TBRR2A 38 18A	
XA151	TDD	EQ	18B	TBRRFQ	00	=		BURST REQUEST F/F SET
XA151	TDD	EQ	19B	(37)	01		TBRRIA 39 19B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA144	TD4	B2	10B	TBRRSA	00	=		BURST RESET CONTROL M4 STROB
XA144	TD4	B2	09A	(21)	01		TS1070 TKAAB TMO4BQ TSN1BQ 14 09A 18 10A 19 09B 20 11A	
XA149	TQ2	A4	07B	TBRR0A	00	=		BURST REQ .IO
XA149	TQ2	A4	05B	(15)	01		TBRRFQ TIA2A0 11 05B 13 06B	
XA146	TQ2	D4	27B	TBRR1A	00	=		SET TERM BURST REQ BURST MOD
XA146	TQ2	D4	25B	(51)	01		TBRSU0 TBRSAOX 47 25B 49 26B	
XA146	TQ2	E1	31A	TBRR2A	00	=		RESET TERM BURST REQ F/F
XA146	TQ2	E1	32A	(66)	01		SPI012 TBRR20 68 32A 70 33A	
XA145	TT3	B3	13B	TBRR20	00	=		SO7 + BURST* + MASTER RESET
XA145	TT3	B3	10B	(27)	01		TMRUBA4 TS07BP TBRSU0 21 10B 23 11B 25 12B	
XA416	DCF	B3	15B	TBRSAOX4	00	=		
XA416	DCF	B3	13A	(37)	01		SPI032 36 13A	
XA416	DCF	B4	14B	TBRSAOX	00	=		EXT BURST REC
XA416	DCF	B4	13B	(35)	01		SPI026 33 13B	
				TBRSTI	00	=		
XA148	TDD	J1	32A	()	01		TPGNDA 68 32A	
				TBRSTN	00	=		
XA148	TDD	JN	33A	()	01		TMRUAA4 70 33A	
XA148	TDD	JP	31B	TBRSTP	00	=		RESET BURST
XA148	TDD	JP	31A	(59)	01		TBRREA 66 31A	
XA148	TDD	JQ	32B	TBRSTQ	00	=		SET BURST MODE
XA148	TDD	JQ	33B	(61)	01		TBRINA 63 33B	
XA141	TQ2	F2	34A	TBR SUA	00	=		BURST MODE-A UNLOAD
XA141	TQ2	F2	36A	(72)	01		TBRSTQ SPI012 71 36A 73 36B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA139	THI	C6	18B	TBRSUO	00	=		BURST MODE -0 UNLOAD
XA139	THI	C6	19B	(42)	01		TBRSTP 39 19B	
XA440	TQ2	A2	02B	TBSTS0	00	=		WRITE CONTROL PAGE2
XA440	TQ2	A2	04A	(01)	01		TBST2A KSWB1R 04 04A 05 03B	
XA433	TDD	A1	06A	TBST0I	00	=		
XA433	TDD	A1	06A	()	01		SPI036 08 06A	
XA433	TDD	AN	07A	TBSTON	00	=		
XA433	TDD	AN	07A	()	01		KSWB1R 10 07A	
XA433	TDD	AP	05B	TBSTOP	00	=		BOOTSTRAP SWITCH DICT RST
XA433	TDD	AP	05A	(11)	01		TMR77A 06 05A	
XA433	TDD	AQ	06B	TBSTOQ	00	=		BOOTSTRAP SWITCH DICT SET
XA433	TDD	AQ	07B	(13)	01		SPI035 15 07B	
XA213	THI	E2	30A	TBST1A	00	=		BOOTSTRAP 1 UNLOAD-A
XA213	THI	E2	31A	(63)	01		TBST1Q 61 31A	
XA113	TDD	BI	03B	TBST1I	00	=		
XA113	TDD	BI	03B	()	01		TBT100 05 03B	
XA113	TDD	BN	02B	TBST1N	00	=		
XA113	TDD	BN	02B	()	01		TKBAAB 01 02B	
XA113	TDD	BP	04B	TBST1P	00	=		MASTER RESET BOOTSTRAP1
XA113	TDD	BP	04A	(09)	01		TMRUAA4 04 04A	
XA113	TDD	BQ	03A	TBST1Q	00	=		PRESET INPUT BOOTSTRAP1
XA113	TDD	BQ	02A	(07)	01		SPI005 03 02A	
XA207	TQ2	C3	16B	TBST10	00	=		BOOTSTRAP 1 OVERLOAD
XA207	TQ2	C3	14B	(33)	01		TBST1P SPI013 29 14B 31 15B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	REF ID	FACTOR	COMMENT
XA207	TQ2	D1	24A	TBST2A	00	=		
XA207	TQ2	D1	25A	(52)	01		SPI015 TBST2Q 54 25A 56 26A	BOOTSTRAP 2 -A UNLOAD
XA113	TDD	CI	13A	TBST2I	00	=		
XA113	TDD	CI	13A	()	01		TBT200 24 13A	
XA113	TDD	CN	14A	TBST2N	00	=		
XA113	TDD	CN	14A	()	01		TKBAAB 26 14A	
XA113	TDD	CP	11B	TBST2P	00	=		
XA113	TDD	CP	12A	(23)	01		TMRUAA4 22 12A	PRERESET BOOTSTRAP 2
XA113	TDD	CQ	12B	TBST2Q	00	=		
XA113	TDD	CQ	13B	(25)	01		SPI001 27 13B	PRESET BOOTSTRAP 2
XA207	TQ2	C4	19B	TBST20	00	=		
XA207	TQ2	C4	17B	(39)	01		TBST2P SPI013 35 17B 37 18B	BOOTSTRAP 2 -0 UNLOAD
XA425	TD4	C1	17B	TBSX10	00	=		
XA425	TD4	C1	18B	(35)	01		WKB11A WKB13A WKB15A WKB17A 37 18B 38 18A 40 19A 42 20A	BOOTSTRAP CH 11/13/15/17
XA425	TD4	C2	16B	TBSX20	00	=		
XA425	TD4	C2	15A	(33)	01		WKB12A WKB13A WKB16A WKB17A 30 15A 31 15B 34 16A 36 17A	BOOTSTRAP CH 12/13/16/17
XA425	TD4	D1	25B	TBSX40	00	=		
XA425	TD4	D1	26B	(47)	01		WKB14A WKB15A WKB16A WKB17A 49 26B 52 24A 54 25A 56 26A	BOOTSTRAP CH 14/15/16/17
XA423	TQ2	E2	28A	TBS02A	00	=		
XA423	TQ2	E2	29A	(60)	01		TS02BQ TBST2Q 62 29A 64 30A	INHIBIT NON-SLCTD BSTP-A
XA426	THI	E4	28B	TBS020	00	=		
XA426	THI	E4	29B	(56)	01		TBS02A 55 29B	INHIBIT NON-SLCTD BSTP-0
XA423	TQ2	D3	24B	TBS29A	00	=		
XA423	TQ2	D3	22B	(45)	01		TBSX40 TI3110 41 22B 43 23B	BSTP CHNL BIT 4 TO DATA 29

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UNIT ASSEMBLY NO. 149019
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA423	TQ2	D4	27B	TBS30A	00	=		BSTP CH4 TO DATA 30
XA423	TQ2	D4	25B	(51)	01		TBSX20 T13110 47 25B 49 26B	
XA423	TQ2	E1	31A	TBS31A	00	=		BSTP CHNL BIT 1 TO DATA 31
XA423	TQ2	E1	32A	(66)	01		TBSX10 T13110 68 32A 70 33A	BSTP CHNL BIT 1 TO DATA 31
XA112	TQ2	A1	05A	TBS7CA	00	=		BOOTSTRAP 1 AND 2
XA112	TQ2	A1	06A	(06)	01		TBST1Q T1208P 08 06A 10 07A	
XA213	THI	E5	30B	TBS7CO	00	=		BOOTSTRAP 1 AND 2
XA213	THI	E5	31B	(57)	01		TBS7CA 59 31B	
XA112	TQ2	A3	04B	TBT100	00	=		BOOTSTRAP1 SELECTED
XA112	TQ2	A3	02A	(09)	01		TBT12A TBT11A 03 02A 07 03A	
XA207	TQ2	D2	21A	TBT11A	00	=		BOOTSTRAP1 NOT BYTE 7 AND S03
XA207	TQ2	D2	22A	(46)	01		TBT13A TBST1Q 48 22A 50 23A	
XA144	TD4	C1	17B	TBT12A	00	=		SET BOOTSTRAP1
XA144	TD4	C1	18B	(35)	01		TS00BQ T1AZAO TBSTOQ TBST2A 37 18B 38 18A 40 19A 42 20A	
XA138	TQ2	E2	28A	TBT120	00	=		LITE DIAGNOSTIC PANEL
XA138	TQ2	E2	29A	(60)	01		TBT12A SPI011 62 29A 64 30A	
XA115	TQ2	F1	37B	TBT13A	00	=		STROBE CLOCK-A
XA115	TQ2	F1	38B	(75)	01		TS0300 TBB7AO 77 38B 79 39B	
XA109	TQ2	E1	31A	TBT200	00	=		SET BOOTSTRAP2
XA109	TQ2	E1	32A	(66)	01		TBT21A T1311A 68 32A 70 33A	
XA207	TQ2	D3	24B	TBT21A	00	=		BOOTSTRAP2 ON LEVE ON
XA207	TQ2	D3	22B	(45)	01		TS77AA TBST2Q 41 22B 43 23B	RESET BOOTSTRAP
XA140	TQ2	C1	18A	TBYCAA	00	=		S14-M3-MEM PE*-A
XA140	TQ2	C1	19A	(38)	01		TS14BQ TCD160 40 19A 42 20A	

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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA245	THI	E3 28A	TBYCA0	00	=		
XA245	THI	E3 29A	(60)	01		TBYCAA 62 29A	
XA137	TT3	C3 19B	TBY1CA	00	=		BYTE 1 COMPARE BOOTSTRAP
XA137	TT3	C3 16B	(39)	01		TBB1A0 TCBS10 TCBCA0 33 16B 35 17B 37 18B	
XA142	TQ2	B4 13B	TBY1C0	00	=		BYTE 1 COMPARE-BOOTSTRAP
XA142	TQ2	B4 11B	(27)	01		SPI012 TBY1CA 23 11B 25 12B	
XA137	TT3	D1 23A	TBY2CA	00	=		BYTE 2 COMPARE BOOTSTRAP
XA137	TT3	D1 24A	(50)	01		TCBS20 TCBCA0 TBB2A0 52 24A 54 25A 56 26A	
XA140	TQ2	B3 10B	TBY2C0	00	=		BYTE 2 COMPARE BOOTSTRAP
XA140	TQ2	B3 08B	(21)	01		SPI011 TBY2CA 17 08B 19 09B	
XA137	TT3	D2 23B	TBZZIA	00	=		BOOTSTRAP 1*.2
XA137	TT3	D2 22B	(43)	01		TBST20 TBST1A SPI011 41 22B 46 21A 48 22A	
XA141	TQ2	B2 09A	TBZZIO	00	=		BIS 1* . BIS 2
XA141	TQ2	B2 10A	(14)	01		TBZZIA SPI011 18 10A 20 11A	
XA146	TQ2	E3 30B	TB1XAA	00	=		BYTE 1 TRANSFER CONTROL
XA146	TQ2	E3 28B	(57)	01		TB1XA0 SPI012 53 28B 55 29B	
XA145	TT3	C2 15B	TB1XA0	00	=		BYTE 1 TRANSFER CONTROL
XA145	TT3	C2 14B	(31)	01		TB1X1A TBDIGA TB1X2A 29 14B 30 15A 34 16A	
XA319	TT3	B2 09B	TB1X1A	00	=		BYTE 1 CONT.S14.M3.BYTE 1
XA319	TT3	B2 09A	(19)	01		TBYCA0 TC13BP TC31BP 14 09A 17 08B 18 10A	
XA137	TT3	D3 27B	TB1X2A	00	=		BTSP 1.2 .TE SHIF. BYTE 3
XA137	TT3	D3 24B	(51)	01		TBB3A0 TBS7C0 TS14C0 45 24B 47 25B 49 26B	
XA145	TT3	C3 19B	TB135A	00	=		BURST. S13*.S05*
XA145	TT3	C3 16B	(39)	01		TBRSTQ TS13BP TS05BP 33 16B 35 17B 37 18B	

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
 UNIT ASSEMBLY NO. 149019 REV G INDEX TB2XAA
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XAI41	TQ2	B1	12A	TB2XAA	00	=		BYTE 2 TRANSFER CONTROL
XAI41	TQ2	B1	13A	(22)	01		TB2XA0 SPI011 24 13A 26 14A	
XAI45	TT3	D1	23A	TB2XA0	00	=		BYTE 2 TE00-07 TO TD08-15
XAI45	TT3	D1	24A	(50)	01		TB2X1A TB2X2A TBDIGA 52 24A 54 25A 56 26A	
XA319	TT3	C1	17A	TB2X1A	00	=		BYTE 2 CONT S14.M3.BYTE 2
XA319	TT3	C1	18A	(36)	01		TC31BP TBVCA0 TC13C0 38 18A 40 19A 42 20A	
XAI37	TT3	E1	30A	TB2X2A	00	=		BTSP 1.2 .TE SHIFT.BYTE 4
XAI37	TT3	E1	31A	(64)	01		TB84A0 TB57C0 TS14C0 66 31A 68 32A 70 33A	
XAI46	TQ2	E4	33B	TB3XAA	00	=		BYTE 3 TRANSFER CONTROL
XAI46	TQ2	E4	31B	(63)	01		TB3XA0 SPI012 59 31B 61 32B	
XAI45	TT3	D2	23B	TB3XA0	00	=		BYTE 3 TE00-07 TO TD16-23
XAI45	TT3	D2	22B	(43)	01		TB3X1A TB3X2A TBDIGA 41 22B 46 21A 48 22A	
XA319	TT3	B3	13B	TB3X1A	00	=		BYTE 3 CONT S14.M3.BYTE 3
XA319	TT3	B3	10B	(27)	01		TC13BP TC31BQ TBVCA0 21 10B 23 11B 25 12B	
XAI37	TT3	E2	29B	TB3X2A	00	=		BTSP 1.2 .TE SHIFT.BYTE 5
XAI37	TT3	E2	28B	(55)	01		TB57C0 TB55A0 TS14C0 53 28B 60 28A 62 29A	
XAI46	TQ2	F1	37B	TB4XAA	00	=		BYTE 4 TRANSFER CONTROL
XAI46	TQ2	F1	38B	(75)	01		SPI012 TB4XA0 77 38B 79 39B	
XAI44	TD4	C2	16B	TB4XA0	00	=		BYTE 4 TE00-07 TO TD24-31
XAI44	TD4	C2	15A	(33)	01		TC014A TB4X1A TBDIGA TB4X2A 30 15A 31 15B 34 16A 36 17A	
XA319	TT3	C2	15B	TB4X1A	00	=		BYTE 4 CONT S14.M3.BYTE 4
XA319	TT3	C2	14B	(31)	01		TBVCA0 TC13C0 TC31BQ 29 14B 30 15A 34 16A	
XAI22	TT3	D2	23B	TB4X2A	00	=		BTSP 1.2 .TE SHIFT .BYTE 6
XAI22	TT3	D2	22B	(43)	01		TB57C0 TB66A0 TS14C0 41 22B 46 21A 48 22A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	SERIAL FACTOR	FACTOR	COMMENT
XA314	TQ2	B4	13B	TCAC1A	00	=		TC CARRY GP1 FOR BITS 14-16-
XA314	TQ2	B4	11B	(27)	01		TC14BQ TUI410 23 11B 25 12B	
XA320	TQ2	E1	31A	TCAC2A	00	=		TC CARRY GP2 FOR BITS 17-19-
XA320	TQ2	E1	32A	(66)	01		TU1710 TC17BQ 68 32A 70 33A	
XA310	THI	E1	32A	TCAC20	00	=		TC CARRY GP2 FOR BITS 17-19-
XA310	THI	E1	33A	(66)	01		TCAC2A 64 33A	
XA320	TQ2	E2	28A	TCAC3A	00	=		TC CARRY GP3 FOR BITS 20-22-
XA320	TQ2	E2	29A	(60)	01		TU2010 TC20BQ 62 29A 64 30A	
XA310	THI	E2	30A	TCAC30	00	=		TC CARRY GP3 FOR BITS 20-22-
XA310	THI	E2	31A	(63)	01		TCAC3A 61 31A	
XA315	TT3	D2	23B	TCAC4A	00	=		TC CARRY GP4 FOR BITS 23-25-
XA315	TT3	D2	22B	(43)	01		TC23BQ TC24BQ TC25BQ 41 22B 46 21A 48 22A	
XA310	THI	E3	28A	TCAC40	00	=		TC CARRY GP4 FOR BITS 23-25-
XA310	THI	E3	29A	(60)	01		TCAC4A 62 29A	
XA315	TT3	D3	27B	TCAC5A	00	=		TC CARRY GP5 FOR BITS 26-28-
XA315	TT3	D3	24B	(51)	01		TC27BQ TC28BQ TC26BQ 45 24B 47 25B 49 26B	
XA310	THI	E4	28B	TCAC50	00	=		TC CARRY GP5 FOR BITS 26-28-
XA310	THI	E4	29B	(56)	01		TCAC5A 55 29B	
XA332	TQ2	F1	37B	TCAC60	00	=		TC XFER CONT FOR BITS 29-31
XA332	TQ2	F1	38B	(75)	01		TCAC8A TCAC7A 77 38B 79 39B	
XA323	TD4	C1	17B	TCAC7A	00	=		TC CARRY GP6 FOR BITS 29-31
XA323	TD4	C1	18B	(35)	01		TC29BQ TC30BQ TC11BQ TC31C0 37 18B 38 18A 40 19A 42 20A	
XA327	TT3	D3	27B	TCAC8A	00	=		TC CARRY GP6 FOR BITS 29-31
XA327	TT3	D3	24B	(51)	01		TC30BQ TC11BP TC29BQ 45 24B 47 25B 49 26B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA216	TS8	F1	37A	TCAI1A	00	=		CARRY GROUPS 2-6-A
XA216	TS8	F1	36A	(76)	01		TCAC50 TCAC60 SPT016 SPT014 SPT015 TCAC30 TCAC20 TCAC40 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	
XA220	THI	E6	32B	TCAI10	00	=		CARRY GROUPS 2-6-0
XA220	THI	E6	33B	(68)	01		TCAI1A 65 33B	
XA308	TD4	A1	05B	TCAI2A	00	=		CARRY GROUPS 3-6-A
XA308	TD4	A1	05A	(11)	01		TCAC50 TCAC40 TCAC60 TCAC30 06 05A 08 06A 10 07A 13 06B	
XA220	THI	E5	30B	TCAI20	00	=		CARRY GROUPS 3-6-0
XA220	THI	E5	31B	(57)	01		TCAI2A 59 31B	
XA315	TT3	A1	04A	TCAI3A	00	=		CARRY GROUPS 4-6-A
XA315	TT3	A1	05A	(04)	01		TCAC60 TCAC50 TCAC40 06 05A 08 06A 10 07A	
XA220	THI	F4	34A	TCAI30	00	=		CARRY GROUPS 4-6-0
XA220	THI	F4	35A	(72)	01		TCAI3A 74 35A	
XA218	TQ2	F3	35A	TCAI4A	00	=		CARRY GROUPS 5-6-A
XA218	TQ2	F3	34B	(69)	01		TCAC50 TCAC60 65 34B 74 35B	
XA220	THI	F5	36A	TCAI40	00	=		CARRY GROUPS 5-6-0
XA220	THI	F5	37A	(78)	01		TCAI4A 76 37A	
XA220	THI	F6	38A	TCAI5A	00	=		CARRY GROUP 6-A
XA220	THI	F6	39A	(77)	01		TCAC60 75 39A	
XA323	TD4	C2	16B	TCAM1A	00	=		CA MODIFY FOR GROUP 1 TD1416
XA323	TD4	C2	15A	(33)	01		TCAC1A TCAI10 TC13C0 TKWXAO 30 15A 31 15B 34 16A 36 17A	
XA324	THI	C5	16B	TCAM10	00	=		CA MODIFY GRP 1-0
XA324	THI	C5	17B	(31)	01		TCAM1A 33 17B	
XA308	TD4	A2	04B	TCAM2A	00	=		CA MODIFY FOR GROUP 2 TD1719
XA308	TD4	A2	02B	(09)	01		TKWXAO TCAC2A TCAI20 TC13C0 01 02B 04 04A 05 03B 07 03A	

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA218	TQ2	E2	28A	TCAT3A	00	=		
XA218	TQ2	E2	29A	(60)	01		TKWXB0 TCAT3A 62 29A 64 30A	XFER CA TO TD2022 NO CARRY
XA219	TQ2	F4	39A	TCAT4A	00	=		
XA219	TQ2	F4	37A	(80)	01		TKWXB0 TCAT4A 76 37A 78 38A	XFER CA TO TD2325 NO CARRY
XA218	TQ2	E3	30B	TCAT5A	00	=		
XA218	TQ2	E3	28B	(57)	01		TKWXB0 TCAT5A 53 28B 55 29B	XFER CA TO TD2628 NO CARRY
XA315	TT3	A2	03A	TCAX10	00	=		
XA315	TT3	A2	02B	(07)	01		TCATCA TDAXAA TCAT1A 01 02B 03 02A 05 03B	XFER CONTROL TC1416 TD1416
XA315	TT3	A3	07B	TCAX20	00	=		
XA315	TT3	A3	04B	(15)	01		TCAT2A TDAXAA TCATCA 09 04B 11 05B 13 06B	XFER CONTROL TC1719 TD 1719
XA315	TT3	B1	11A	TCAX30	00	=		
XA315	TT3	B1	12A	(20)	01		TCAT3A TCATCA TDAXAA 22 12A 24 13A 26 14A	XFER CONTROL TC2022 TD2022
XA315	TT3	B2	09B	TCAX40	00	=		
XA315	TT3	B2	09A	(19)	01		TCAT4A TDAXAA TCATCA 14 09A 17 08B 18 10A	XFER CONTROL TC2325 TD2325
XA315	TT3	B3	13B	TCAX50	00	=		
XA315	TT3	B3	10B	(27)	01		TCATCA TDAXAA TCAT5A 21 10B 23 11B 25 12B	XFER CONTROL TC2628 TD2628
XA218	TQ2	F4	39A	TCAX60	00	=		
XA218	TQ2	F4	37A	(80)	01		TDAXAA TCATCA 76 37A 78 38A	XFER CONTROL TC2931 TD2931
XA146	TQ2	F2	34A	TCBCAA	00	=		
XA146	TQ2	F2	36A	(72)	01		TS02A0 TBS7C0 71 36A 73 36B	BYTE COUNTER PULSE-BOOTSTRAP
XA140	TQ2	A4	07B	TCBCA0	00	=		
XA140	TQ2	A4	05B	(15)	01		SPI011 TCBCAA 11 05B 13 06B	BOOTSTRAP SHIFT PULSE =0
XA333	TS8	A1	05B	TCBS1A	00	=		
XA333	TS8	A1	02B	(11)	01		TE27BP TE24BP TE31BQ TE25BP TE26BQ TE30BQ TE29BQ TE28BQ 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	BOOTSTRAP BYTE 1 COMPARE

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DEFINITION	FACTOR	COMMENT
XA342	THI	B5	10B	TCBS10	00	=		BOOTSTRAP COMPARE BYTE 1 -0
XA342	THI	B5	11B	(19)	01		TCBS1A 21 11B	
XA333	TS8	B1	11B	TCBS2A	00	=		BOOTSTRAP BYTE 2 CHECK SUM
XA333	TS8	B1	09A	(23)	01		TE27BQ TE30BP TE31BP TE28BP TE26BP TE29BP TE25BQ TE24BQ 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	
XA342	THI	B2	11A	TCBS20	00	=		BOOTSTRAP COMPARE BYTE 2-0
XA342	THI	B2	12A	(25)	01		TCBS2A 23 12A	
XA125	THI	A1	06A	TCB000	00	=		BIT 00 CPU BUS RCVR
XA125	THI	A1	07A	(13)	01		JDB00B4 11 07A	CPU BUSS BIT 0
XA125	THI	A2	04A	TCB010	00	=		BIT 01 CPU BUS RCVR
XA125	THI	A2	05A	(08)	01		JDB01B4 06 05A	CPU BUSS BIT 1
XA125	THI	A3	03A	TCB020	00	=		BIT 02 CPU BUS RCVR
XA125	THI	A3	02A	(03)	01		JDB02B4 04 02A	CPU BUSS BIT 2
XA125	THI	A4	02B	TCB030	00	=		BIT 03 CPU BUS RCVR
XA125	THI	A4	03B	(01)	01		JDB03B4 05 03B	CPU BUSS BIT 3
XA125	THI	A5	04B	TCB040	00	=		BIT 04 CPU BUS RCVR
XA125	THI	A5	05B	(07)	01		JDB04B4 09 05B	CPU BUSS BIT 4
XA125	THI	A6	06B	TCB050	00	=		BIT 05 CPU BUS RCVR
XA125	THI	A6	07B	(10)	01		JDB05B4 15 07B	CPU BUSS BIT 5
XA125	THI	B1	13A	TCB060	00	=		BIT 06 CPU BUS RCVR
XA125	THI	B1	14A	(24)	01		JDB06B4 22 14A	CPU BUSS BIT 6
XA125	THI	B2	11A	TCB070	00	=		BIT 07 CPU BUS RCVR
XA125	THI	B2	12A	(25)	01		JDB07B4 23 12A	CPU BUSS BIT 7
XA125	THI	B3	09A	TCB080	00	=		BIT 08 CPU BUS RCVR
XA125	THI	B3	10A	(18)	01		JDB08B4 20 10A	CPU BUSS BIT 8

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA125	THI	B4	08B	TCB090	00 =			BIT 09 CPU BUS RCVR
XA125	THI	B4	09B	(14)	01	JDB09B4 17 09B		CPU BUSS BIT 9
XA125	THI	B5	10B	TCB100	00 =			BIT 10 CPU BUS RCVR
XA125	THI	B5	11B	(19)	01	JDB10B4 21 11B		CPU BUSS BIT 10
XA125	THI	B6	12B	TCB110	00 =			BIT 11 CPU BUS RCVR
XA125	THI	B6	13B	(26)	01	JDB11B4 27 13B		CPU BUSS BIT 11
XA125	THI	C1	19A	TCB120	00 =			BIT 12 CPU BUS RCVR
XA125	THI	C1	20A	(40)	01	JDB12B4 38 20A		CPU BUSS BIT 12
XA125	THI	C2	17A	TCB130	00 =			BIT 13 CPU BUS RCVR
XA125	THI	C2	18A	(37)	01	JDB13B4 35 18A		CPU BUSS BIT 13
XA125	THI	C3	15A	TCB140	00 =			BIT 14 CPU BUS RCVR
XA125	THI	C3	16A	(34)	01	JDB14B4 36 16A		CPU BUSS BIT 14
XA125	THI	C4	14B	TCB150	00 =			BIT 15 CPU BUS RCVR
XA125	THI	C4	15B	(30)	01	JDB15B4 29 15B		CPU BUSS BIT 15
XA125	THI	C5	16B	TCB160	00 =			BIT 16 CPU BUS RCVR
XA125	THI	C5	17B	(31)	01	JDB16B4 33 17B		CPU BUSS BIT 16
XA125	THI	C6	18B	TCB170	00 =			BIT 17 CPU BUS RCVR
XA125	THI	C6	19B	(42)	01	JDB17B4 39 19B		CPU BUSS BIT 17
XA125	THI	D1	25A	TCB180	00 =			BIT 18 CPU BUS RCVR
XA125	THI	D1	26A	(54)	01	JDB18B4 52 26A		CPU BUSS BIT 18
XA125	THI	D2	23A	TCB190	00 =			BIT 19 CPU BUS RCVR
XA125	THI	D2	24A	(49)	01	JDB19B4 47 24A		CPU BUSS BIT 19
XA125	THI	D3	21A	TCB200	00 =			BIT 20 CPU BUS RCVR
XA125	THI	D3	22A	(48)	01	JDB20B4 50 22A		CPU BUSS BIT 20

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA125	THI	D4	22B	TCB210	00	=		BIT 21 CPU BUS RCVR
XA125	YHI	D4	23B	(46)	01		JDB21B4 41 23B	CPU BUSS BIT 21
XA125	THI	D5	24B	TCB220	00	=		BIT 22 CPU BUS RCVR
XA125	YHI	D5	25B	(43)	01		JDB22B4 45 25B	CPU BUSS BIT 22
XA125	THI	D6	26B	TCB230	00	=		BIT 23 CPU BUS RCVR
XA125	YHI	D6	27B	(53)	01		JDB23B4 51 27B	CPU BUSS BIT 23
XA125	THI	E1	32A	TCB240	00	=		BIT 24 CPU BUS RCVR
XA125	YHI	E1	33A	(66)	01		JDB24B4 64 33A	CPU BUSS BIT 24
XA125	THI	E2	30A	TCB250	00	=		BIT 25 CPU BUS RCVR
XA125	YHI	E2	31A	(63)	01		JDB25B4 61 31A	CPU BUSS BIT 25
XA125	THI	E3	28A	TCB260	00	=		BIT 26 CPU BUS RCVR
XA125	YHI	E3	29A	(60)	01		JDB26B4 62 29A	CPU BUSS BIT 26
XA414	TT3	F1	36B	TCB270	00	=		
XA125	YHI	E4	29B	(73)	01		SPI009 55 29B	CPU BUSS BIT 27
XA124	TQ2	D4	27B	TCB280	00	=		BIT 28 CPU BUS RCVR + ADD EQ
XA124	TQ2	D4	25B	(51)	01		JDB28B4 TI311A 47 25B 49 26B	CPU BUSS BIT 28
XA407	TQ2	F1	37B	TCB290	00	=		BIT 29 CPU BUS RCVR
XA407	TQ2	F1	38B	(75)	01		JDB29B4 TBS29A 77 38B 79 39B	CPU BUSS BIT 29
XA407	TQ2	F2	34A	TCB300	00	=		BIT 30 CPU BUS RCVR
XA407	TQ2	F2	36A	(72)	01		JDB30B4 TBS30A 71 36A 73 36B	
XA124	TQ2	D3	24B	TCB310	00	=		BIT 31 CPU BUS RCVR + MTU
XA124	TQ2	D3	22B	(45)	01		TBS31A JDB31B4 41 22B 43 23B	
XA346	TQ2	F3	35A	TCCCAA	00	=		COMPUTER CONT TO TE ITR 2-52
XA346	TQ2	F3	34B	(69)	01		TITR20 TS22BQ 65 34B 74 35B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND QR	EQUATION	TERM	RESISTOR	FACTOR	COMMENT
XA328	TQ2	B1	12A	TCCKAA	00	=		CLK INPUT TC00-15-A
XA328	TQ2	B1	13A	(22)	01		YKAACB YCD180 24 13A 26 14A	
XA328	TQ2	D1	24A	TCCKBA	00	=		CLK INPUT TC00-15 UNLOAD-A
XA328	TQ2	D1	25A	(52)	01		YKAACB YCD180 54 25A 56 26A	
XA326	TQ2	D1	24A	TCCKCA	00	=		CLK INPUT TC00-15 UNLOAD-A
XA326	TQ2	D1	25A	(52)	01		YCD180 YKAACB 54 25A 56 26A	
XA320	TQ2	A1	05A	TCCK1A	00	=		CLK INPUT TC16-23-A
XA320	TQ2	A1	06A	(06)	01		YCD2A0 YKAABB 08 06A 10 07A	
XA320	TQ2	D1	24A	TCCK2A	00	=		CLK INPUT TC16-23 UNLOAD-A
XA320	TQ2	D1	25A	(52)	01		YKAABB YCD2A0 54 25A 56 26A	
XA314	TQ2	F3	35A	TCCK3A	00	=		CLK INPUT TC24-31
XA314	TQ2	F3	34B	(69)	01		YKAABB YCD3A0 65 34B 74 35B	
XA314	TQ2	F4	39A	TCCK4A	00	=		CLK INPUT TC24-31 UNLOAD
XA314	TQ2	F4	37A	(80)	01		YCD3A0 YKAABB 76 37A 78 38A	
XA140	TQ2	F2	34A	TCDENA	00	=		COMMAND + ENABLE
XA140	TQ2	F2	36A	(72)	01		SPI011 YCDENO 71 36A 73 36B	
XA141	TQ2	F1	37B	TCDENO	00	=		COMMAND + ENABLE
XA141	TQ2	F1	38B	(75)	01		TCMDBP YENBBP 77 38B 79 39B	
XA334	TS8	E1	31B	YCD180	00	=		TD0031 TO TC0031 XFER CONT-0
XA334	TS8	E1	29B	(59)	01		YS28FA SPI025 SPI027 YCD13A YCD11A YCD12A YCD14A SPI028 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	
XA245	TH1	A3	03A	YCD11A	00	=		S4+S2 IBST1 (BYTE1+2)
XA245	TH1	A3	02A	(03)	01		YCD110 04 02A	
XA246	TQ2	A3	04B	YCD110	00	=		S04 + S02.BTSTP 1. BYTE1+2
XA246	TQ2	A3	02A	(09)	01		YS04BP YCD15A 03 02A 07 03A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA246	TQ2	E3	30B	TCD12A	00	=		S08.MEMORY PARITY*
XA246	TQ2	E3	28B	(57)	01		TS08BQ TPEN2A 53 28B 55 29B	
XA246	TQ2	E4	33B	TCD13A	00	=		S16.MEMORY PE*.M03
XA246	TQ2	E4	31B	(63)	01		TCD160 TS16BQ 59 31B 61 32B	
XA246	TQ2	F1	37B	TCD14A	00	=		S18.MEMORY PE*.M03
XA246	TQ2	F1	38B	(75)	01		TCD160 TS18BQ 77 38B 79 39B	
XA351	TT3	E2	29B	TCD15A	00	=		S02.BOOTSTRAP 1. BYTE 1+2
XA351	TT3	E2	28B	(55)	01		TS02C0 TBB120 TBST10 53 28B 60 28A 62 29A	
XA351	TT3	A1	04A	TCD16A	00	=		MEM PE*.M3
XA351	TT3	A1	05A	(04)	01		TMS3BP TMO3C0 TPEN2A 06 05A 08 06A 10 07A	
XA245	THI	D6	26B	TCD160	00	=		MEM PE*.M3
XA245	THI	D6	27B	(53)	01		TCD16A 51 27B	
XA245	THI	E2	30A	TCD170	00	=		
XA245	THI	E2	31A	(63)	01		TCD16A 61 31A	
XA250	TS8	B1	11B	TCD2A0	00	=		TD0031-TC0031+TD1631-TE0031
XA250	TS8	B1	09A	(23)	01		TCD13A TCD11A TCD12A TS28BP SPI022 SPI020 SPI021 TCD14A 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	
XA116	TQ2	D2	21A	TCD23A	00	=		
XA116	TQ2	D2	22A	(46)	01		TS16BQ TSTR10 48 22A 50 23A	
XA116	TQ2	D4	27B	TCD24A	00	=		
XA116	TQ2	D4	25B	(51)	01		TSTR10 TS18BQ 47 25B 49 26B	
XA250	TS8	C1	17B	TCD3A0	00	=		TD2431-TC2431 XFER CONT-0
XA250	TS8	C1	15A	(35)	01		TCD31A SPI021 TCD11A TCD13A SPI022 TS28BP TCD14A TCD12A 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	
XA246	TQ2	F2	34A	TCD31A	00	=		S22(0FR0+0FR1+0FR2+DEV3)
XA246	TQ2	F2	36A	(72)	01		TCD320 TS22BQ 71 36A 73 36B	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA248	TD4	C2	16B	TCD320	00	=		
XA248	TD4	C2	15A	(33)	01		YSA3BA YSA2BA YSA1BA TSA0BA 30 15A 31 15B 34 16A 36 17A	OFR0+OFR1+OFR2+DEV3
XA443	TQ2	A2	02B	TCENIA	00	=		
XA443	TQ2	A2	04A	(01)	01		TCDENO SPI03B 04 04A 05 03B	(COMMAND + ENABLE)IOM* REG
XA439	THI	C3	15A	TCENIO	00	=		
XA439	THI	C3	16A	(34)	01		TCENIA 36 16A	(COMMAND + ENABLE)IOM* REG
XA420	DCF	D7	33A	TCMDADX4	00	=		
XA420	DCF	D7	36A	(61)	01		TEGNDA 72 36A	EXT COMMAND
XA420	DCF	D8	34A	TCMDA0X	00	=		
XA420	DCF	D8	35A	(68)	01		TCMDBQ 70 35A	
				TCMDBI	00	=		
XA238	TDD	J1	32A	()	01		TCMD40 68 32A	
				TCMDBN	00	=		
XA238	TDD	JN	33A	()	01		TKBAAB 70 33A	
XA238	TDD	JP	31B	TCMDBP	00	=		
XA238	TDD	JP	31A	(59)	01		YENBIA 66 31A	COMMAND F/F RESET
XA238	TDD	JQ	32B	TCMDBQ	00	=		
XA238	TDD	JQ	33B	(61)	01		SPI019 63 33B	COMMAND F/F SET
XA426	THI	E2	30A	TCMDCA	00	=		
XA426	THI	E2	31A	(63)	01		TCMDBQ 61 31A	
XA114	TS8	E1	31B	TCMD40	00	=		
XA114	TS8	E1	29B	(59)	01		TI313A TES3AA TI311A TCMDBP TS1ABA TS231A TI314A SPI001 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	ORED DATA
XA136	TD4	F1	37A	TCMP2A	00	=		
XA136	TD4	F1	37B	(76)	01		TCM420 TCM320 TCM120 TCM220 75 37B 77 38B 78 38A 79 39B	ALL BYTES COMPARE WORD 1 TC

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XAI35	THI	F1	38B	TCMP20	00	=		ALL BYTES COMPARE WD1 TC-0
XAI35	THI	F1	39B	(80)	01		TCMP2A 79 39B	
XAI36	TD4	F2	35A	TCMP4A	00	=		ALL BYTES COMPARE WORD 2 TC
XAI36	TD4	F2	36A	(69)	01		TCM340 TCM240 TCM440 TCM140 71 36A 72 34A 73 36B 74 35B	
XAI35	THI	F2	36B	TCMP40	00	=		ALL BYTES COMPARE WORD 2 TC-
XAI35	THI	F2	37B	(71)	01		TCMP4A 73 37B	
XAI34	TT3	F1	36B	TCMW2A	00	=		STATE 3.BYTE 1. BOOTSTRAP 1
XAI34	TT3	F1	37B	(73)	01		TBB1A0 TS03C0 TBST10 75 37B 77 38B 79 39B	
XAI35	THI	E6	32B	TCMW20	00	=		S03.BYTE 2. BOOTSTRAP 1-0
XAI35	THI	E6	33B	(68)	01		TCMW2A 65 33B	
XAI34	TT3	F2	35B	TCMW4A	00	=		STATE 3.BYTE 2. BSTRAP 1
XAI34	TT3	F2	34B	(74)	01		TBST10 TBB2A0 TS03C0 65 34B 71 36A 72 34A	
XAI35	THI	F3	34B	TCMW40	00	=		S03.BYTE 3. BOOTSTRAP 1-0
XAI35	THI	F3	35B	(70)	01		TCMW4A 69 35B	
XA227	TS8	F1	37A	TCM12A	00	=		BYTE 1 OF WD 1 BITSP COMPARE
XA227	TS8	F1	36A	(76)	01		TC05BQ TC00BP TC01BP TC06BQ TC03BP TC04BQ TC07BQ TC02BQ 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	
XA324	THI	A2	04A	TCM120	00	=		BY 1 WD1 OF BITSP COMPARE
XA324	THI	A2	05A	(08)	01		TCM12A 06 05A	
XA322	TS8	A1	05B	TCM14A	00	=		BYTE 1 OF WD 2 BITSP COMPARE
XA322	TS8	A1	02B	(11)	01		TC03BQ TC06BP TC07BP TC04BP TC02BP TC05BP TC00BQ TC01BQ 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	
XA324	THI	A3	03A	TCM140	00	=		BY 1 WD2 OF BITSP COMPARE
XA324	THI	A3	02A	(03)	01		TCM14A 04 02A	
XA322	TS8	B1	11B	TCM22A	00	=		BYTE 2 OF WD 1 BITSP COMPARE
XA322	TS8	B1	09A	(23)	01		TC13BQ TC14BQ TC08CA TC10BQ TC09BP TC15C0 TC12BQ TC11CA 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	

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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA324	THI	B1 13A	TCM220	00 =			
XA324	THI	B1 14A	(24)	01		TCM22A 22 14A	BY 2 WD1 OF BTSTP COMPARE
XA322	TS8	C1 17B	TCM24A	00 =			
XA322	TS8	C1 15A	(35)	01		TC098Q TC108P TC08C0 TC118Q TC13CA TC128P TC158P TC148P 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	BYTE 2 OF WD 2 BTSTP COMPARE
XA324	THI	C1 19A	TCM240	00 =			
XA324	THI	C1 20A	(40)	01		TCM24A 38 20A	BY 2 WD2 OF BTSTP COMPARE
XA322	TS8	D1 25B	TCM32A	00 =			
XA322	TS8	D1 23B	(47)	01		TC238Q TC188Q TC198P TC218Q TC178P TC228Q TC168P TC208Q 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	BYTE 3 OF WD 1 BTSTP COMPARE
XA324	THI	D1 25A	TCM320	00 =			
XA324	THI	D1 26A	(54)	01		TCM32A 52 26A	BY 3 WD1 OF BTSTP COMPARE
XA322	TS8	E1 31B	TCM34A	00 =			
XA322	TS8	E1 29B	(59)	01		TC228P TC238P TC16C0 TC208P TC188P TC198Q TC178Q TC218P 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	BYTE 3 OF WD 2 BTSTP COMPARE
XA324	THI	E1 32A	TCM340	00 =			
XA324	THI	E1 33A	(66)	01		TCM34A 64 33A	BY 3 WD2 OF BTSTP COMPARE
XA322	TS8	F1 37A	TCM42A	00 =			
XA322	TS8	F1 36A	(76)	01		TC298Q TC268Q TC308Q TC248P TC258P TC288Q TC31C0 TC278P 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	BYTE 4 OF WD 1 BTSTP COMPARE
XA324	THI	F5 36A	TCM420	00 =			
XA324	THI	F5 37A	(78)	01		TCM42A 76 37A	BY 4 WD1 OF BTSTP COMPARE
XA221	TS8	F1 37A	TCM44A	00 =			
XA221	TS8	F1 36A	(76)	01		TC268P TC298P TC308P TC278Q TC31CA TC248Q TC258Q TC288P 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	BYTE 4 OF WD 2 BTSTP COMPARE
XA220	THI	F3 34B	TCM440	00 =			
XA220	THI	F3 35B	(70)	01		TCM44A 69 35B	BY 4 WD2 OF BTSTP COMPARE
XA225	TQ2	C1 18A	TCPCAA	00 =			
XA225	TQ2	C1 19A	(38)	01		TCPDA0 TS248P 40 19A 42 20A	

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CONNECTOR	CIRCUIT GROUP	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA134	TT3	D1	23A	TCPDAO	00 =			
XA134	TT3	D1	24A	(50)	01		TS22BP TCPD2A TCPD3A 52 24A 54 25A 56 26A	DATA BUS TO TD REG CONT
XA134	TT3	D2	23B	TCPD80	00 =			
XA134	TT3	D2	22B	(43)	01		TS22BP TCPD3A TCPD2A 41 22B 46 21A 48 22A	DATA BUSS TO TD REG
XA134	TT3	D3	27B	TCPDC0	00 =			
XA134	TT3	D3	24B	(51)	01		TS22BP TCPD2A TCPD3A 45 24B 47 25B 49 26B	DATA BUSS TO TD REG
XA134	TT3	E1	30A	TCPDD0	00 =			
XA134	TT3	E1	31A	(64)	01		TS22BP TCPD3A TCPD2A 66 31A 68 32A 70 33A	DATA BUSS TO TD REG
XA136	TD4	E1	31B	TCPD1A	00 =			
XA136	TD4	E1	32B	(59)	01		TR02BS TBRSTP TXCOBQ TS01BQ 61 32B 66 31A 68 32A 70 33A	DB TO TD CONTROL S1 REQ 2 TO
XA342	THI	D4	22B	TCPD10	00 =			
XA342	THI	D4	23B	(46)	01		TCPD1A 41 23B	SEL S01
XA246	TQ2	F3	35A	TCPD2A	00 =			
XA246	TQ2	F3	34B	(69)	01		TS23C0 TOFRA0 65 34B 74 35B	DB TO TD CONTROL S23 TOER
XA246	TQ2	F4	39A	TCPD3A	00 =			
XA246	TQ2	F4	37A	(80)	01		TOFRA0 TS27BQ 76 37A 78 38A	DB TO TD CONTROL S27 TOER
XA245	THI	F6	38A	TCPD4A	00 =			
XA245	THI	F6	39A	(77)	01		TCPD40 75 39A	BTSP 12* + CPU REQ S01
XA149	TQ2	E1	31A	TCPD40	00 =			
XA149	TQ2	E1	32A	(66)	01		TI311A TCPD6A 68 32A 70 33A	BTSP 12* + CPU REQ S01
XA338	TQ2	F2	34A	TCPD5A	00 =			
XA338	TQ2	F2	36A	(72)	01		TCPD10 TM04BQ 71 36A 73 36B	
XA338	TQ2	E1	31A	TCPD6A	00 =			
XA338	TQ2	E1	32A	(66)	01		TCPD10 TM04BP 68 32A 70 33A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	REQ OR PART OR	FACTOR	COMMENT
XA441	TD4	B1	11B	TCSCCA	00	=		CH. SEL CCC
XA441	TD4	B1	12A	(23)	01		TA01BP TA02BP TA03BP TA00CA 22 12A 24 13A 25 12B 26 14A	
XA439	TH1	C4	14B	TCSCCO	00	=		CH SEL CCC
XA439	TH1	C4	15B	(30)	01		TCSCCA 29 15B	
XA416	DCF	A5	08B	TCSMADX4	00	=		EXT SLC IOM
XA416	DCF	A5	05A	(14)	01		TDGNDA 06 05A	
XA416	DCF	A6	07A	TCSMAOX	00	=		
XA416	DCF	A6	06A	(10)	01		YCSXMA 08 06A	
XA443	TQ2	A3	04B	TCSROA	00	=		CH SEL IOM . REQ IOM
XA443	TQ2	A3	02A	(09)	01		YCSXMA TR8WAO 03 02A 07 03A	
XA443	TQ2	A4	07B	TCSR1A	00	=		CH. SEL 1 AND REQ IOX 1
XA443	TQ2	A4	05B	(15)	01		YCS1AO TR00BS 11 05B 13 06B	
XA443	TQ2	B1	12A	TCSR2A	00	=		CH SEL 2 . REQ IOX 2
XA443	TQ2	B1	13A	(22)	01		TR3WAO TC52AO 24 13A 26 14A	
XA443	TQ2	B2	09A	TCSR3A	00	=		CH. SEL 3 . REQ IOX 3
XA443	TQ2	B2	10A	(14)	01		YCS3AO TR4WAO 18 10A 20 11A	
XA443	TQ2	B3	10B	TCSR4A	00	=		CH. SEL 4 . REQ IOX 4
XA443	TQ2	B3	08B	(21)	01		TR5WAO YCS4AO 17 08B 19 09B	
XA443	TQ2	B4	13B	TCSR5A	00	=		CH. SEL 5 . REQ IOX 5
XA443	TQ2	B4	11B	(27)	01		YCS5AO TR6WAO 23 11B 25 12B	
XA443	TQ2	C1	18A	TCSR6A	00	=		CH. SEL 6 . REQ IOX 6
XA443	TQ2	C1	19A	(38)	01		TR7WAO YCS6AO 40 19A 42 20A	
XA443	TQ2	C2	15A	TCSR7A	00	=		CH. SEL 7 . REQ IOX 7
XA443	TQ2	C2	16A	(30)	01		YCS7AO TR9WAO 34 16A 36 17A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	RESISTOR	FACTOR	COMMENT
XA441	TD4	B2	10B	TCS1AA	00	=		
XA441	TD4	B2	09A	(21)	01		TA01BP TA02BP TA03BQ SPI036 14 09A 18 10A 19 09B 20 11A	CH SEL IDX 1
XA417	DCF	C5	31B	TCS1ADX4	00	=		
XA417	DCF	C5	29A	(60)	01		YDGNDA 52 29A	EXT CHANNEL SELECT # 1 EXT CHANNEL SELECT # 1
XA428	THI	C6	18B	TCS1A0	00	=		
XA428	THI	C6	19B	(42)	01		TCS1AA 39 19B	CH SEL IDX 1
XA417	DCF	C6	31A	TCS1A0X	00	=		
XA417	DCF	C6	30A	(57)	01		TCS1A0 54 30A	
XA441	TD4	C1	17B	TCS2AA	00	=		
XA441	TD4	C1	18B	(35)	01		TA02BQ TA01BP TA03BP SPI036 37 18B 38 18A 40 19A 42 20A	CHANNEL SELECT IDX 2
XA417	DCF	C7	25A	TCS2ADX4	00	=		
XA417	DCF	C7	29A	(43)	01		YDGNDA 52 29A	EXT CHANNEL SELECT # 2
XA428	THI	D1	25A	TCS2A0	00	=		
XA428	THI	D1	26A	(54)	01		TCS2AA 52 26A	CH SEL IDX 2
XA417	DCF	C8	26A	TCS2A0X	00	=		
XA417	DCF	C8	28A	(48)	01		TCS2A0 50 28A	
XA441	TD4	C2	16B	TCS3AA	00	=		
XA441	TD4	C2	15A	(33)	01		TA03BQ TA02BQ TA01BP SPI036 30 15A 31 15B 34 16A 36 17A	CH. SEL IDX 3
XA417	DCF	D1	32B	TCS3ADX4	00	=		
XA417	DCF	D1	36A	(65)	01		YDGNDA 72 36A	EXT CHANNEL SELECT # 3
XA428	THI	D3	21A	TCS3A0	00	=		
XA428	THI	D3	22A	(48)	01		TCS3AA 50 22A	CH SEL IDX 3
XA417	DCF	D2	33B	TCS3A0X	00	=		
XA417	DCF	D2	34B	(69)	01		TCS3A0 71 34B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DEFINITION	FACTOR	COMMENT
XA441	TD4	D1	25B	TCS4AA	00	=		CH SEL IOX 4
XA441	TD4	D1	26B	(47)	01		TA03BP TA02BP TA01BQ SPI036 49 26B 52 24A 54 25A 56 26A	
XA417	DCF	D3	37B	TCS4ADX4	00	=		EXT CHANNEL SELECT # 4
XA417	DCF	D3	36A	(78)	01		TDGND 72 36A	
XA428	THI	D4	22B	TCS4A0	00	=		CH SEL IOX 4
XA428	THI	D4	23B	(46)	01		TCS4AA 41 23B	
XA417	DCF	D4	36B	TCS4A0X	00	=		
XA417	DCF	D4	35B	(75)	01		TCS4A0 73 35B	
XA441	TD4	D2	24B	TCS5AA	00	=		CH SEL IOX 5
XA441	TD4	D2	23B	(45)	01		TA03BQ TA01BQ TA02BP SPI038 43 23B 46 21A 48 22A 50 23A	
XA417	DCF	D5	38B	TCS5ADX4	00	=		EXT CHANNEL SELECT # 5
XA417	DCF	D5	36A	(80)	01		TDGND 72 36A	
XA428	THI	D5	24B	TCS5A0	00	=		CH SEL IOX 5
XA428	THI	D5	25B	(43)	01		TCS5AA 45 25B	
XA417	DCF	D6	38A	TCS5A0X	00	=		
XA417	DCF	D6	37A	(76)	01		TCS5A0 74 37A	
XA441	TD4	E1	31B	TCS6AA	00	=		CH SEL IOX 6
XA441	TD4	E1	32B	(59)	01		TA03BP TA02BQ TA01BQ SPI038 61 32B 66 31A 68 32A 70 33A	
XA417	DCF	D7	33A	TCS6ADX4	00	=		EXT CHANNEL SELECT # 6
XA417	DCF	D7	36A	(61)	01		TDGND 72 36A	
XA428	THI	D2	23A	TCS6A0	00	=		CH SEL IOX 6
XA428	THI	D2	24A	(49)	01		TCS6AA 47 24A	
XA417	DCF	D8	34A	TCS6A0X	00	=		
XA417	DCF	D8	35A	(68)	01		TCS6A0 70 35A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA441	TD4	E2	30B	TCS7AA	00	=		
XA441	TD4	E2	29B	(57)	01	=	TA02BQ TA03BQ TA01BQ SPI038 55 29B 60 28A 62 29A 64 30A	CH SEL TOX 7
XA416	DCF	A1	02B	TCS7ADX4	00	=		
XA416	DCF	A1	05A	(07)	01	=	TDGND4 06 05A	EXT CHANNEL SELECT # 7
XA428	THI	D6	26B	TCS7A0	00	=		
XA428	THI	D6	27B	(53)	01	=	TCS7AA 51 27B	CH SEL TOX 7
XA416	DCF	A2	03B	TCS7A0X	00	=		
XA416	DCF	A2	04B	(09)	01	=	TCS7A0 11 04B	
XA443	TQ2	C3	16B	TCOMPA	00	=		
XA443	TQ2	C3	14B	(33)	01	=	TCOMPO SPI038 29 14B 31 15B	CHAN SEL + REG COMPARE-A
XA444	TS8	A1	05B	TCOMPO	00	=		
XA444	TS8	A1	02B	(11)	01	=	TCSR5A TCSR2A TCSR4A TCSR1A TCSR3A TCSR0A TCSR7A TCSR6A 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	CH. SEL AND REG COMPARE
XA142	TQ2	F1	37B	TCOSAA	00	=		
XA142	TQ2	F1	38B	(75)	01	=	SPI012 TCK08J 77 38B 79 39B	REAL TIME CLOCK 16 MHZ -A
				TCOSAB	00	=		
XA116	TQ2	E2	28A	()	01	=	TCOSB0 60 28A	
XA116	TQ2	E1	31A	()	02	+	TCOSA0 66 31A	
XA116	TQ2	E1	31A	TCOSA0	00	=		TCOSAB BUSS
XA116	TQ2	E1	32A	(66)	01	=	TCK08K SPI009 68 32A 70 33A	
XA116	TQ2	E2	28A	TCOSB0	00	=		TCOSAB BUSS
XA116	TQ2	E2	29A	(60)	01	=	TCK08K SPI009 62 29A 64 30A	
				TCO08I	00	=		
XA329	TDD	A1	06A	()	01	=	TC0010 08 06A	
				TCO08N	00	=		
XA329	TDD	AN	07A	()	01	=	TCCKAA 10 07A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA329	TDD	AP	05B	TC00BP	00	=		CONTROL REG BIT 00 RESET
XA329	TDD	AP	05A	(11)	01		SPI024 06 05A	
XA329	TDD	AQ	06B	TC00BQ	00	=		CONTROL REG BIT 00 SET
XA329	TDD	AQ	07B	(13)	01		SPI025 15 07B	
XA351	TT3	C2	15B	TC0010	00	=		
XA351	TT3	C2	14B	(31)	01		TD00BP TCST6A TCST5A 29 14B 30 15A 34 16A	
				TC01BI	00	=		
XA329	TDD	BI	03B	()	01		TD01BQ 05 03B	
				TC01BN	00	=		
XA329	TDD	BN	02B	()	01		TCCKAA 01 02B	
XA329	TDD	BP	04B	TC01BP	00	=		CONTROL REG BIT 01 RESET
XA329	TDD	BP	04A	(09)	01		SPI025 04 04A	
XA329	TDD	BQ	03A	TC01BQ	00	=		CONTROL REG BIT 01 SET
XA329	TDD	BQ	02A	(07)	01		TCD14A 03 02A	
				TC02BI	00	=		
XA329	TDD	CI	13A	()	01		TD02BQ 24 13A	
				TC02BN	00	=		
XA329	TDD	CN	14A	()	01		TCCKAA 26 14A	
XA329	TDD	CP	11B	TC02BP	00	=		CONTROL REG BIT 02 RESET
XA329	TDD	CP	12A	(23)	01		SPI024 22 12A	
XA329	TDD	CQ	12B	TC02BQ	00	=		CONTROL REG BIT 02 SET
XA329	TDD	CQ	13B	(25)	01		SPI025 27 13B	
				TC03BI	00	=		
XA329	TDD	DI	10A	()	01		TD03BQ 18 10A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA329	TDD	DN	09A	TC03BN ()	00	=	TCCKAA 14 09A	
XA329	TDD	DP	10B	TC03BP	00	=		CONTROL REG BIT 03 RESET
XA329	TDD	DP	11A	(21)	01	=	SP1020 20 11A	
XA329	TDD	DQ	09B	TC03BQ	00	=		CONTROL REG BIT 03 SET
XA329	TDD	DQ	08B	(19)	01	=	TI311A 17 08B	
XA329	TDD	EI	19A	TC04BI ()	00	=	TD04BQ 40 19A	
XA329	TDD	EN	20A	TC04BN ()	00	=	TCCKAA 42 20A	
XA329	TDD	EP	17B	TC04BP	00	=		CONTROL REG BIT 04 RESET
XA329	TDD	EP	18A	(35)	01	=	SP1024 38 18A	
XA329	TDD	EQ	18B	TC04BQ	00	=		CONTROL REG BIT 04 SET
XA329	TDD	EQ	19B	(37)	01	=	SP1025 39 19B	
XA329	TDD	FI	16A	TC05BI ()	00	=	TD05BQ 34 16A	
XA329	TDD	FN	15A	TC05BN ()	00	=	TCCKBA 30 15A	
XA329	TDD	FP	16B	TC05BP	00	=		CONTROL REG BIT 05 RESET
XA329	TDD	FP	17A	(33)	01	=	SP1020 36 17A	
XA329	TDD	FQ	15B	TC05BQ	00	=		CONTROL REG BIT 05 SET
XA329	TDD	FQ	14B	(31)	01	=	SP1026 29 14B	
XA329	TDD	GI	25A	TC06BI ()	00	=	TD06BQ 54 25A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA329	TDD	GN	26A	TC06BN ()	00	=		
					01	=	TCCKBA 56 26A	
XA329	TDD	GP	25B	TC06BP ()	00	=		
XA329	TDD	GP	24A	(47)	01	=	SPI027 52 24A	CONTROL REG BIT 06 RESET
XA329	TDD	GQ	26B	TC06BQ ()	00	=		
XA329	TDD	GQ	27B	(49)	01	=	SPI025 51 27B	CONTROL REG BIT 06 SET
XA329	TDD	HI	22A	TC07BI ()	00	=		
					01	=	TD07BQ 48 22A	
XA329	TDD	HN	21A	TC07BN ()	00	=		
					01	=	TCCKBA 46 21A	
XA329	TDD	HP	24B	TC07BP ()	00	=		
XA329	TDD	HP	23A	(45)	01	=	SPI020 50 23A	CONTROL REG BIT 07 RESET
XA329	TDD	HQ	23B	TC07BQ ()	00	=		
XA329	TDD	HQ	22B	(43)	01	=	SPI026 41 22B	CONTROL REG BIT 07 SET
XA329	TDD	JI	32A	TC08BI ()	00	=		
					01	=	TC08I0 68 32A	
XA329	TDD	JN	33A	TC08BN ()	00	=		
					01	=	TCCKBA 70 33A	
XA329	TDD	JP	31B	TC08BP ()	00	=		
XA329	TDD	JP	31A	(59)	01	=	SPI027 66 31A	CONTROL REG BIT 08 RESET
XA329	TDD	JQ	32B	TC08BQ ()	00	=		
XA329	TDD	JQ	33B	(61)	01	=	SPI025 63 33B	CONTROL REG BIT 08 SET
XA324	THI	D5	24B	TC08CA ()	00	=		
XA324	YHI	D5	25B	(43)	01	=	TC08BQ 45 25B	TC REG BIT 8- A UNLOAD

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
XA324	THI	E4	28B	TC08CO	00	N		
XA324	THI	E4	29B	(156)	01		TC08BP 55 29B	TC REG BIT 8 -Q UNLOAD
XA332	TQ2	F3	35A	TC0810	00	=		
XA332	TQ2	F3	34B	(169)	01		TD08BP TCD13A 65 34B 74 35B	
XA329	TDD	KI	29A	TC09BI	00	=		
XA329	TDD	KI	29A	()	01		TD09BQ 62 29A	
XA329	TDD	KN	28A	TC09BN	00	=		
XA329	TDD	KN	28A	()	01		TCCKBA 60 28A	
XA329	TDD	KP	30B	TC09BP	00	=		CONTROL REG BIT 09 RESET
XA329	TDD	KP	30A	(157)	01		SPI025 64 30A	
XA329	TDD	KQ	29B	TC09BQ	00	=		CONTROL REG BIT 09 SET
XA329	TDD	KQ	28B	(155)	01		SPI020 53 28B	
XA329	TDD	LI	38B	TC10BI	00	=		
XA329	TDD	LI	38B	()	01		TD10BQ 77 38B	
XA329	TDD	LN	39B	TC10BN	00	=		
XA329	TDD	LN	39B	()	01		TCCKCA 79 39B	
XA329	TDD	LP	37A	TC10BP	00	=		CONTROL REG BIT 10 RESET
XA329	TDD	LP	37B	(176)	01		SPI027 75 37B	
XA329	TDD	LQ	38A	TC10BQ	00	=		CONTROL REG BIT 10 SET
XA329	TDD	LQ	39A	(178)	01		SPI025 80 39A	
XA329	TDD	MI	36A	TC11BI	00	=		
XA329	TDD	MI	36A	()	01		TD11BQ 71 36A	
XA329	TDD	MN	34A	TC11BN	00	=		
XA329	TDD	MN	34A	()	01		TCCKCA 72 34A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA329	TDD	MP	35A	TC11BP	00	=		RESET FOR CPU COMMAND
XA329	TDD	MP	36B	(69)	01		TCPDIA 73 36B	
XA329	TDD	MQ	35B	TC11BQ	00	=		CONTROL REG BIT 11 SET
XA329	TDD	MQ	34B	(74)	01		SPI020 65 34B	
XA324	THI	F2	36B	TC11CA	00	=		TC REG BIT 11-A UNLOAD
XA324	THI	F2	37B	(71)	01		TC11BQ 73 37B	
XA324	THI	F3	34B	TC11CO	00	=		TC REG BIT 11-0 UNLOAD
XA324	THI	F3	35B	(70)	01		TC11BP 69 35B	
				TC12BI	00	=		
XA321	TDD	AI	06A	()	01		TD12BQ 08 06A	
				TC12BN	00	=		
XA321	TDD	AN	07A	()	01		TCCRCA 10 07A	
XA321	TDD	AP	05B	TC12BP	00	=		CONTROL REG BIT 12 RESET
XA321	TDD	AP	05A	(11)	01		SPI024 06 05A	
XA321	TDD	AQ	06B	TC12BQ	00	=		CONTROL REG BIT 12 SET
XA321	TDD	AQ	07B	(13)	01		SPI025 15 07B	
				TC13BI	00	=		
XA321	TDD	BI	03B	()	01		TD13BQ 05 03B	
				TC13BN	00	=		
XA321	TDD	BN	02B	()	01		TCCRCA 01 02B	
XA321	TDD	BP	04B	TC13BP	00	=		CONTROL REG BIT 13 RESET
XA321	TDD	BP	04A	(09)	01		SPI020 04 04A	
XA321	TDD	BQ	03A	TC13BQ	00	=		CONTROL REG BIT 13 SET
XA321	TDD	BQ	02A	(07)	01		SPI004 03 02A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG- NATOR	FACTOR	COMMENT
XA324	THI	C4	14B	TC13CA	00	=		
XA324	THI	C4	15B	(30)	01		TC13BQ 29 15B	TC REG BIT 13-A UNLOAD
XA324	THI	C2	17A	TC13C0	00	=		
XA324	THI	C2	18A	(37)	01		TC13BP 35 18A	TC REG BIT 13-0 UNLOAD
XA321	TDD	CI	13A	()	01		TC1400 24 13A	
XA321	TDD	CN	14A	()	01		TC14BN TCCKCA 26 14A	
XA321	TDD	CP	11B	TC14BP	00	=		CONTROL REG BIT 14 RESET
XA321	TDD	CP	12A	(23)	01		SPI024 22 12A	
XA321	TDD	CQ	12B	TC14BQ	00	=		CONTROL REG BIT 14 SET
XA321	TDD	CQ	13B	(25)	01		SPI025 27 13B	
XA320	TQ2	A3	04B	TC1400	00	=		CONTROL REG BIT 14 ORED DATA
XA320	TQ2	A3	02A	(09)	01		TC141A TC142A 03 02A 07 03A	
XA225	TQ2	A1	05A	TC141A	00	=		OFRO BANK ADD TO TC
XA225	TQ2	A1	06A	(06)	01		TD16BQ TS28F0 08 06A 10 07A	
XA327	TT3	A3	07B	TC142A	00	=		TD14 TO TC14 XFER
XA327	TT3	A3	04B	(15)	01		TD14BQ TCD1B0 TS28BP 09 04B 11 05B 13 06B	
XA321	TDD	DI	10A	()	01		TC15BI TC1500 18 10A	
XA321	TDD	DN	09A	()	01		TC15BN TCCKCA 14 09A	
XA321	TDD	DP	10B	TC15BP	00	=		CONTROL REG BIT 15 RESET
XA321	TDD	DP	11A	(21)	01		SPI020 20 11A	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERN	DESIGNATOR	FACTOR	COMMENT
XA321	TDD	DQ	09B	TC158Q	00	=		
XA321	TDD	DQ	08B	(19)	01		SPI004 17 08B	CONTROL REG BIT 15 SET
XA310	THI	B6	12B	TC15C0	00	=		
XA310	THI	B6	13B	(26)	01		TC158P 27 13B	TC BIT 15 UNLOAD
XA314	TQ2	C1	18A	TC1500	00	=		
XA314	TQ2	C1	19A	(38)	01		TC152A TC151A 40 19A 42 20A	CONTROL REG BIT 15 ORED DATA
XA225	TQ2	A2	02B	TC151A	00	=		
XA225	TQ2	A2	04A	(01)	01		TD17BQ TS28BQ 04 04A 05 03B	QERO BANK ADD TO TC
XA315	TT3	C1	17A	TC152A	00	=		
XA315	TT3	C1	18A	(36)	01		TC01B0 TS28BP TD15BQ 38 18A 40 19A 42 20A	TD15 TO TC15 XFER
XA321	TDD	EI	19A	TC168I	00	=		
				()	01		TC1600 40 19A	
XA321	TDD	EN	20A	TC168N	00	=		
				()	01		TCCK1A 42 20A	
XA321	TDD	EP	17B	TC168P	00	=		
XA321	TDD	EP	18A	(35)	01		SPI024 38 18A	CONTROL REG BIT 16 RESET
XA321	TDD	EQ	18B	TC168Q	00	=		
XA321	TDD	EQ	19B	(37)	01		SPI025 39 19B	CONTROL REG BIT 16 SET
XA310	THI	C6	18B	TC16C0	00	=		
XA310	THI	C6	19B	(42)	01		TC166P 39 19B	TC BIT 16 UNLOAD
XA320	TQ2	D3	24B	TC1600	00	=		
XA320	TQ2	D3	22B	(45)	01		TC161A TC162A 41 22B 43 23B	CONTROL REG BIT 16 ORED DATA
XA230	TQ2	B2	09A	TC161A	00	=		
XA230	TQ2	B2	10A	(14)	01		TS28F0 TD18BQ 18 10A 20 11A	QERO BANK ADD TO TC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA315	TT3	C2	15B	TC162A	00	=		
XA315	TT3	C2	14B	(31)	01	=	TS28BP TCD2A0 TD16BQ 29 14B 30 15A 34 16A	TD16 TO TC16 XFER
				TC178I	00	=		
XA321	TDD	FI	16A	()	01	=	TC1700 34 16A	
				TC178N	00	=		
XA321	TDD	FN	15A	()	01	=	TCCKIA 30 15A	
XA321	TDD	FP	16B	TC178P	00	=		CONTROL REG BIT 17 RESET
XA321	TDD	FP	17A	(33)	01	=	SPI020 36 17A	
XA321	TDD	FQ	15B	TC178Q	00	=		CONTROL REG BIT 17 SET
XA321	TDD	FQ	14B	(31)	01	=	SPI004 29 14B	
XA320	TQ2	D4	27B	TC1700	00	=		CONTROL REG BIT 17 ORED DATA
XA320	TQ2	D4	25B	(51)	01	=	TC171A TC172A 47 25B 49 26B	
XA230	TQ2	F2	34A	TC171A	00	=		OFRO BANK ADD TO TC
XA230	TQ2	F2	36A	(72)	01	=	TD198Q TS28F0 71 36A 73 36B	
XA315	TT3	C3	19B	TC172A	00	=		TD17 TO TC17 XFER
XA315	TT3	C3	16B	(39)	01	=	TCD2A0 TS28BP TD17BQ 33 16B 35 17B 37 18B	
				TC188I	00	=		
XA321	TDD	GI	25A	()	01	=	TD18C0 54 25A	
				TC188N	00	=		
XA321	TDD	GN	26A	()	01	=	TCCKIA 56 26A	
XA321	TDD	GP	25B	TC188P	00	=		CONTROL REG BIT 18 RESET
XA321	TDD	GP	24A	(47)	01	=	SPI024 52 24A	
XA321	TDD	GQ	26B	TC188Q	00	=		CONTROL REG BIT 18 SET
XA321	TDD	GQ	27B	(49)	01	=	SPI025 51 27B	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	LOGIC	FACTOR	COMMENT
XA321	TDD	HI	22A	TC19BI ()	00 = 01		TD19BQ 48 22A	
XA321	TDD	HN	21A	TC19BN ()	00 = 01		TCCK1A 46 21A	
XA321	TDD	HP	24B	TC19BP (45)	00 = 01		SPI020 50 23A	CONTROL REG BIT 19 RESET
XA321	TDD	HQ	23B	TC19BQ (43)	00 = 01		SPI026 41 22B	CONTROL REG BIT 19 SET
XA321	TDD	JI	32A	TC20BI ()	00 = 01		TD20BQ 68 32A	
XA321	TDD	JN	33A	TC20BN ()	00 = 01		TCCK2A 70 33A	
XA321	TDD	JP	31B	TC20BP (59)	00 = 01		SPI024 66 31A	CONTROL REG BIT 20 RESET
XA321	TDD	JQ	32B	TC20BQ (61)	00 = 01		SPI025 63 33B	CONTROL REG BIT 20 SET
XA321	TDD	KI	29A	TC21BI ()	00 = 01		TD21BQ 62 29A	
XA321	TDD	KN	28A	TC21BN ()	00 = 01		TCCK2A 60 28A	
XA321	TDD	KP	30B	TC21BP (57)	00 = 01		SPI020 64 30A	CONTROL REG BIT 21 RESET
XA321	TDD	KQ	29B	TC21BQ (55)	00 = 01		SPI026 53 28B	CONTROL REG BIT 21 SET

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA321	TDD	LI	38B	TC22BI ()	00 = 01		TD22BQ 77 38B	
XA321	TDD	LN	39B	TC22BN ()	00 = 01		TCCK2A 79 39B	
XA321	TDD	LP	37A	TC22BP (76)	00 = 01		SP1024 75 37B	CONTROL REG BIT 22 RESET
XA321	TDD	LQ	38A	TC22BQ (78)	00 = 01		SP1025 80 39A	CONTROL REG BIT 22 SET
XA321	TDD	MI	36A	TC23BI ()	00 = 01		TD23BQ 71 36A	
XA321	TDD	MN	34A	TC23BN ()	00 = 01		TCCK2A 72 34A	
XA321	TDD	MP	35A	TC23BP (69)	00 = 01		SP1020 73 36B	CONTROL REG BIT 23 RESET
XA321	TDD	MQ	35B	TC23BQ (74)	00 = 01		SP1026 65 34B	CONTROL REG BIT 23 SET
XA317	TDD	AI	06A	TC24BI ()	00 = 01		TD24BQ 08 06A	
XA317	TDD	AN	07A	TC24BN ()	00 = 01		TCCK3A 10 07A	
XA317	TDD	AP	05B	TC24BP (11)	00 = 01		SP1024 06 05A	CONTROL REG BIT 24 RESET
XA317	TDD	AQ	06B	TC24BQ (13)	00 = 01		SP1025 15 07B	CONTROL REG BIT 24 SET

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG- NATION	FACTOR	COMMENT
XA317	TDD	BI	03B	TC25BI ()	00 = 01		TD25BQ 05 03B	
XA317	TDD	BN	02B	TC25BN ()	00 = 01		TCCK3A 01 02B	
XA317	TDD	BP	04B	TC25BP (09)	00 = 01		SPI020 04 04A	CONTROL REG BIT 25 RESET
XA317	TDD	BQ	03A	TC25BQ (07)	00 = 01		SPI004 03 02A	CONTROL REG BIT 25 SET
XA317	TDD	CI	13A	TC26BI ()	00 = 01		TD26BQ 24 13A	
XA317	TDD	CN	14A	TC26BN ()	00 = 01		TCCK3A 26 14A	
XA317	TDD	CP	11B	TC26BP (23)	00 = 01		SPI024 22 12A	CONTROL REG BIT 26 RESET
XA317	TDD	CQ	12B	TC26BQ (25)	00 = 01		SPI025 27 13B	CONTROL REG BIT 26 SET
XA317	TDD	DI	10A	TC27BI ()	00 = 01		TD27BQ 18 10A	
XA317	TDD	DN	09A	TC27BN ()	00 = 01		TCCK3A 14 09A	
XA317	TDD	DP	10B	TC27BP (21)	00 = 01		SPI020 20 11A	CONTROL REG BIT 27 RESET
XA317	TDD	DQ	09B	TC27BQ (19)	00 = 01		SPI004 17 08B	CONTROL REG BIT 27 SET

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA317	TDD	EI	19A	TC28BI ()	00	=	TD28BQ 40 19A	
XA317	TDD	EN	20A	TC28BN ()	00	=	TCCK4A 42 20A	
XA317	TDD	EP	17B	TC28BP (35)	00	=		CONTROL REG BIT 28 RESET
XA317	TDD	EP	18A		01		SP1024 38 18A	
XA317	TDD	EQ	18B	TC28BQ (37)	00	=		CONTROL REG BIT 28 SET
XA317	TDD	EQ	19B		01		SP1025 39 19B	
XA317	TDD	FI	16A	TC29BI ()	00	=	TD29BQ 34 16A	
XA317	TDD	FN	15A	TC29BN ()	00	=	TCCK4A 30 15A	
XA317	TDD	FP	16B	TC29BP (33)	00	=		CONTROL REG BIT 29 RESET
XA317	TDD	FP	17A		01		SP1020 36 17A	
XA317	TDD	FQ	15B	TC29BQ (31)	00	=		CONTROL REG BIT 29 SET
XA317	TDD	FQ	14B		01		SP1004 29 14B	
XA317	TDD	GI	25A	TC30BI ()	00	=	TD30BQ 54 25A	
XA317	TDD	GN	26A	TC30BN ()	00	=	TCCK4A 56 26A	
XA317	TDD	GP	25B	TC30BP (47)	00	=		CONTROL REG BIT 30 RESET
XA317	TDD	GP	24A		01		SP1024 52 24A	
XA317	TDD	GQ	26B	TC30BQ (49)	00	=		CONTROL REG BIT 30 SET
XA317	TDD	GQ	27B		01		SP1025 51 27B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
				TC31BI	00 =			
XA317	YDD	HI	22A	()	01		TD31BQ 48 22A	
				TC31BN	00 =			
XA317	YDD	HN	21A	()	01		TCCK4A 46 21A	
XA317	TDD	HP	24B	TC31BP	00 =			CONTROL REG BIT 31 RESET
XA317	YDD	HP	23A	(45)	01		SPI020 50 23A	
XA317	TDD	HQ	23B	TC31BQ	00 =			CONTROL REG BIT 31 SET
XA317	YDD	HQ	22B	(43)	01		SPI004 41 22B	
XA213	THI	E3	28A	TC31CA	00 =			TC BIT 31* UNLOAD
XA213	THI	E3	29A	(60)	01		TC31BQ 62 29A	
XA213	THI	E4	28B	TC31CO	00 =			TC31 UNLOAD-0
XA213	THI	E4	29B	(56)	01		TC31BP 55 29B	
XA346	TQ2	E3	30B	TDACA0	00 =			STATE S5+S13 PART OF DATA AD
XA346	TQ2	E3	28B	(57)	01		TS05BP TS13BP 53 28B 55 29B	
XA246	TQ2	E1	31A	TDAXAA	00 =			XFER CONTROL DATA ADDRESS-TD
XA246	TQ2	E1	32A	(66)	01		TDACA0 TMO1BQ 68 32A 70 33A	
XA213	THI	A5	04B	TDAXA0	00 =			XFER CONTROL FOR CA TO TD RE
XA213	THI	A5	05B	(07)	01		TDAXAA 09 05B	
XA332	TQ2	F2	34A	TDAXBA	00 =			XFER CONTROL DATA ADDRESS-UI
XA332	TQ2	F2	36A	(72)	01		TDACA0 TMO1BQ 71 36A 73 36B	
XA434	TT3	C3	19B	TDA0BA	00 =			ADD 0
XA434	TT3	C3	16B	(39)	01		TA06BP TA05BP TA04BP 33 16B 35 17B 37 18B	
XA439	THI	C2	17A	TDA0B0	00 =			ADD 0
XA439	THI	C2	18A	(37)	01		TDA0BA 35 18A	

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19

CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA434	TT3	D1 23A	TDA18A	00 =			ADD 1
XA434	TT3	D1 24A	(50)	01		YA068Q YA058P YA048P 52 24A 54 25A 56 26A	
XA439	THI	C6 18B	TDA180	00 =			ADD 1
XA439	THI	C6 19B	(42)	01		TDA18A 39 19B	
XA434	TT3	D2 23B	TDA28A	00 =			ADD 2
XA434	TT3	D2 22B	(43)	01		YA068P YA058Q YA048P 41 22B 46 21A 48 22A	
XA439	THI	D1 25A	TDA280	00 =			ADD 2
XA439	THI	D1 26A	(54)	01		TDA28A 52 26A	
XA434	TT3	D3 27B	TDA38A	00 =			ADD 3
XA434	TT3	D3 24B	(51)	01		YA048P YA068Q YA058Q 45 24B 47 25B 49 26B	
XA439	THI	D3 21A	TDA380	00 =			ADD 3
XA439	THI	D3 22A	(48)	01		TDA38A 50 22A	
XA434	TT3	E1 30A	TDA48A	00 =			ADD 4
XA434	TT3	E1 31A	(64)	01		YA048Q YA058P YA068P 66 31A 68 32A 70 33A	
XA439	THI	D4 22B	TDA480	00 =			ADD 4
XA439	THI	D4 23B	(46)	01		TDA48A 41 23B	
XA434	TT3	E2 29B	TDA58A	00 =			ADD 5
XA434	TT3	E2 28B	(55)	01		YA068Q YA048Q YA058P 53 28B 60 28A 62 29A	
XA439	THI	D5 24B	TDA580	00 =			ADD 5
XA439	THI	D5 25B	(43)	01		TDA58A 45 25B	
XA434	TT3	E3 33B	TDA68A	00 =			ADD 6
XA434	TT3	E3 30B	(63)	01		YA058Q YA068P YA048Q 57 30B 59 31B 61 32B	
XA439	THI	D2 23A	TDA680	00 =			ADD 6
XA439	THI	D2 24A	(49)	01		TDA68A 47 24A	

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LOGIC

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CONNECTOR	TERMINAL TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA434	TY3	F1	36B	TDA7BA	00 =		
XA434	TY3	F1	37B	(73)	01	TA05BQ TA06BQ TA04BQ 75 37B 77 38B 79 39B	ADD 7
XA439	THI	D6	26B	TDA7B0	00 =		
XA439	YHI	D6	27B	(53)	01	TDA7BA 51 27B	ADD 7
XA426	THI	D5	24B	TDCBAA	00 =		
XA426	YHI	D5	25B	(43)	01	TDCBA0 45 25B	TD TO MEM BUS ENABLE
XA423	TQ2	E3	30B	TDCBA0	00 =		
XA423	TQ2	E3	28B	(57)	01	TMO2CA TMO4BP 53 28B 55 29B	
XA247	TS8	B1	11B	TDC010	00 =		
XA247	YS8	B1	09A	(23)	01	TDAXBA TKWXAA TPQRSA SPI019 TCPCAA TWBXAA TB1XAA TKTSOA 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	CLOCK CONTROL TO BITS 0-7
XA230	TQ2	A2	02B	TDC07A	00 =		
XA230	TQ2	A2	04A	(01)	01	TDC010 TKAACB 04 04A 05 03B	CLOCK FOR TO BITS 0-7-A
XA230	TQ2	D2	21A	TDC17A	00 =		
XA230	TQ2	D2	22A	(46)	01	TKAACB TDC010 48 22A 50 23A	CLK FOR TO BITS
XA440	TQ2	A3	04B	TDC41A	00 =		
XA440	TQ2	A3	02A	(09)	01	TDC420 TKAABB 03 02A 07 03A	CLOCK INPUT TO24-31-A
XA334	TS8	A1	05B	TDC420	00 =		
XA334	YS8	A1	02B	(11)	01	TKTSOA TKWXAA TPQRSA TCPCAA TWDXAA TB4XAA SPI027 TDAXAA 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	CLOCK INPUT TO24-31-0
XA346	TQ2	F2	34A	TDC51A	00 =		
XA346	TQ2	F2	36A	(72)	01	TKAAAB TDC420 71 36A 73 36B	CLOCK INPUT TO24-31 A UNLOAD
XA334	TS8	B1	11B	TDC610	00 =		
XA334	YS8	B1	09A	(23)	01	TCPCAA TKWXAA TWDXAA TB3XAA TDAXBA SPI027 TKTSOA TPQRSA 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	TD CLOCK CONTROL BITS 16-17
XA334	TS8	C1	17B	TDC620	00 =		
XA334	YS8	C1	15A	(35)	01	TCPCAA TKWXAA TWDXAA SPI027 TB3XAA TDAXAA TKTSOA TPQRSA 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	CLOCK CONT TO BITS 18-23-0

DRAWING NUMBER 149019-860 LOGIC UNIT ASSEMBLY NO. 149019 REV G INDEX TDC67A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA230	TQ2	C1	18A	TDC67A	00	=		CLOCK FOR TD BITS 16-17-A
XA230	TQ2	C1	19A	(38)	01		TKAACB TDC610 40 19A 42 20A	
XA334	TS8	D1	25B	TDC820	00	=		TD CLOCK CONTROL BITS 14,15
XA334	TS8	D1	23B	(47)	01		SPI027 T82XAA TWDXAA TPQSA TKWXAA TCPCAA TKTSOA TDAXBA 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	
XA231	TQ2	E2	28A	TDC83A	00	=		CLOCK FOR TD BITS 18-23-A
XA231	TQ2	E2	29A	(60)	01		TKAACB TDC620 62 29A 64 30A	
XA230	TQ2	C2	15A	TDC84A	00	=		CLOCK FOR TD BITS 14,15-A
XA230	TQ2	C2	16A	(30)	01		TKAACB TDC820 34 16A 36 17A	
XA230	TQ2	D1	24A	TDC85A	00	=		CLOCK FOR TD BITS 8-13-A
XA230	TQ2	D1	25A	(52)	01		TDC820 TKAACB 54 25A 56 26A	
XA415	TQ2	A2	02B	TDDISA	00	=		
XA415	TQ2	A2	04A	(01)	01		TDDISO SPI032 04 04A 05 03B	
XA306	TT3	A1	04A	TDDISO	00	=		(CPU1+CPU2+IO)DDI
XA306	TT3	A1	05A	(04)	01		JDDI1A1 JDDI2A1 ZDDISA1 06 05A 08 06A 10 07A	
XA142	TQ2	C1	18A	TDEBS0	00	=		DEC + BOOTSTRAP 2
XA142	TQ2	C1	19A	(38)	01		TBST2A TDECAA 40 19A 42 20A	
XA141	TQ2	B4	13B	TDECAA	00	=		DEC COMMAND FROM CPD
XA141	TQ2	B4	11B	(27)	01		SPI012 TDECA0 23 11B 25 12B	
XA142	TQ2	B3	10B	TDECA0	00	=		DEC COMMAND
XA142	TQ2	B3	08B	(21)	01		SPI012 JDECAD4 17 08B 19 09B	
XA206	TT3	E3	33B	TDEV3A	00	=		
XA206	TT3	E3	30B	(63)	01		TS380 TDECA0 TS28B0 57 30B 59 31B 61 32B	
XA146	TQ2	E2	28A	TDEOF0	00	=		DEV + BIST.S24 + OFR
XA146	TQ2	E2	29A	(60)	01		TLUCAA TDFRAA 62 29A 64 30A	

DRAWING NUMBER 149019-860 LOGIC UNIT ASSEMBLY NO. 149019 REV G INDEX TDGNA
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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA428	THI A1	06A	TDGND A	00 =		
XA428	THI A1	07A	(13)	01	SPI034 11 07A	
XA145	TT3 F1	36B	TDIGBR	00 =		
XA145	TT3 F1	37B	(73)	01	TDIGBS TM400A TMRUBA4 75 37B 77 38B 79 39B	
XA144	TD4 F1	37A	TDIGBS	00 =		
XA144	TD4 F1	37B	(76)	01	SPI010 SPI012 TDIGBR TBD24A 75 37B 77 38B 78 38A 79 39B	
XA124	TQ2 D2	21A	TDIG6A	00 =		MEMORY CYCLE OKAY
XA124	TQ2 D2	22A	(46)	01	TDIGBR TBZZ10 48 22A 50 23A	
XA125	THI F1	38B	TDIG60	00 =		MEM CYCLE OKAY
XA125	THI F1	39B	(80)	01	TDIG6A 79 39B	
XA116	TQ2 F2	34A	TDIPAA	00 =		INPUT PARITY LINE -A
XA116	TQ2 F2	36A	(72)	01	TDIPAO TI10BQ 71 36A 73 36B	
XA418	DCF A1	02B	TDIPADX4	00 =		EXT DATA INPUT REC PARITY
XA418	DCF A1	05A	(07)	01	TER1AA 06 05A	
XA434	TT3 B1	11A	TDIPAO	00 =		PARITY LINE
XA434	TT3 B1	12A	(20)	01	TDIPXA TDIPBB4 XIIPAA 22 12A 24 13A 26 14A	PARITY BIT INPUT BUS
XA418	DCF A2	03B	TDIPAOX	00 =		
XA418	DCF A2	04B	(09)	01	TEGND A 11 04B	
XA439	THI C1	19A	TDIPBA	00 =		(COMMAND + ENABLE) IOM REG
XA439	THI C1	20A	(40)	01	TDIPAO 38 20A	
			TDIPBB4	00 =		
XA521	DCF C1	25B	()	01	XAOPADX 46 25B	IOC INPUT DATA LINE PARITY
XA527	DCF C1	25B	()	02 +	XBOPADX 46 25B	IOC INPUT DATA LINE PARITY
XA534	DCF C1	25B	()	03 +	XCOPADX 46 25B	IOC INPUT DATA LINE PARITY
XA540	DCF C1	25B	()	04 +	XDOPADX 46 25B	IOC INPUT DATA LINE PARITY
XA547	DCF C1	25B	()	05 +	XEOPADX 46 25B	IOC INPUT DATA LINE PARITY

DRAWING NUMBER 149019-860 LOGIC UNIT ASSEMBLY NO. 149019 REV G INDEX TDIPXA
 UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 117

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM NO	DESIG- NATOR	FACTOR	COMMENT
XA426	THI	A1	06A	TDIPXA	00	=		
XA426	THI	A1	07A	(13)	01		TDIPA0X 11 07A	
XA439	THI	E5	30B	TDIOAA	00	=		
XA439	THI	E5	31B	(57)	01		TDIOA0 59 31B	
XA418	DCF	A3	07B	TDIOADX4	00	=		
XA418	DCF	A3	05A	(17)	01		TERIAA 06 05A	
XA425	TD4	A1	05B	TDIOA0	00	=		
XA425	TD4	A1	05A	(11)	01		TDIOXA TDIOB84 XIIOAA XIIIOBA 06 05A 08 06A 10 07A 13 06B	INF LINE 0 BIT 0 INPUT BUS
XA418	DCF	A4	06B	TDIOA0X	00	=		
XA418	DCF	A4	05B	(15)	01		TEGNDA 13 05B	EXT DATA INPUT REC LINE 0
				TDIOB84	00	=		
XA522	DCF	A1	02B	()	01		XAO0ADX 07 02B	IOC INPUT DATA LINE 0
XA521	DCF	A1	02B	()	02	+	XAO0BDX 07 02B	DEV REQ 0 TO IOC
XA528	DCF	A1	02B	()	03	+	XBO0ADX 07 02B	IOC INPUT DATA LINE 0
XA527	DCF	A1	02B	()	04	+	XBO0BDX 07 02B	DEV REQ 0 TO IOC
XA535	DCF	A1	02B	()	05	+	XCO0ADX 07 02B	IOC INPUT DATA LINE 0
XA534	DCF	A1	02B	()	06	+	XCO0BDX 07 02B	DEV REQ 0 TO IOC
XA541	DCF	A1	02B	()	07	+	XDO0ADX 07 02B	IOC INPUT DATA LINE 0
XA540	DCF	A1	02B	()	08	+	XDO0BDX 07 02B	DEV REQ 0 TO IOC
XA548	DCF	A1	02B	()	09	+	XEO0ADX 07 02B	IOC INPUT DATA LINE 0
XA547	DCF	A1	02B	()	10	+	XEO0BDX 07 02B	DEV REQ 0 TO IOC
XA426	THI	A2	04A	TDIOXA	00	=		
XA426	THI	A2	05A	(08)	01		TDIOA0X 06 05A	
XA406	THI	D5	24B	TDI1AA	00	=		
XA406	THI	D5	25B	(43)	01		TDI1A0 45 25B	

DRAWING NUMBER 149019-860 LOGIC UNIT ASSEMBLY NO. 149019 REV G INDEX TDI1ADX4
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA418	DCF	A5	08B	TDI1ADX4	00	=		
XA418	DCF	A5	05A	(14)	01		TERIAA 06 05A	
XA425	TD4	A2	04B	TDI1A0	00	=		INE LINE 1
XA425	TD4	A2	02B	(09)	01		TDI1XA TDI18B4 XIII1AA XII1BA 01 02B 04 04A 05 03B 07 03A	
XA418	DCF	A6	07A	TDI1A0X	00	=		EXT DATA INPUT REC LINE 1
XA418	DCF	A6	06A	(10)	01		TEGND 08 06A	
				TDI18B4	00	=		
XA522	DCF	A3	07B	()	01		XA01ADX 17 07B	IOC INPUT DATA LINE 1
XA521	DCF	A3	07B	()	02	+	XA01BDX 17 07B	DEV REQ 1 TO IOC
XA528	DCF	A3	07B	()	03	+	XB01ADX 17 07B	IOC INPUT DATA LINE 1
XA527	DCF	A3	07B	()	04	+	XB01BDX 17 07B	DEV REQ 1 TO IOC
XA535	DCF	A3	07B	()	05	+	XC01ADX 17 07B	IOC INPUT DATA LINE 1
XA534	DCF	A3	07B	()	06	+	XC01BDX 17 07B	DEV REQ 1 TO IOC
XA541	DCF	A3	07B	()	07	+	XD01ADX 17 07B	IOC INPUT DATA LINE 1
XA540	DCF	A3	07B	()	08	+	XD01BDX 17 07B	DEV REQ 1 TO IOC
XA548	DCF	A3	07B	()	09	+	XE01ADX 17 07B	IOC INPUT DATA LINE 1
XA547	DCF	A3	07B	()	10	+	XE01BDX 17 07B	DEV REQ 1 TO IOC
XA426	THI	A3	03A	TDI1XA	00	=		
XA426	THI	A3	02A	(03)	01		TDI1A0X 04 02A	
XA439	THI	E6	32B	TDI2AA	00	=		
XA439	THI	E6	33B	(68)	01		TDI2A0 65 33B	
XA416	DCF	B5	16A	TDI2ADX4	00	=		
XA416	DCF	B5	13A	(41)	01		SPI032 36 13A	
XA424	TSB	A1	05B	TDI2A0	00	=		INE LINE 2 + CCC SWITCH
XA424	TSB	A1	02B	(11)	01		TDI2XA TDI28B4 XII2AA XII2BA RDI2AA SPI033 SPI028 SPI032 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA416	DCF	B6	15A	TDI2A0X	00	=		
XA416	DCF	B6	14A	(40)	01		SPI006 38 14A	EXT DATA INPUT REC LINE 2
				TDI2BB4	00	=		
XA522	DCF	A5	08B	()	01		XA02ADX 14 08B	IOC INPUT DATA LINE 2
XA521	DCF	A5	08B	()	02	+	XA02BDX 14 08B	DEV REQ 2 TO IOC
XA528	DCF	A5	08B	()	03	+	XB02ADX 14 08B	IOC INPUT DATA LINE 2
XA527	DCF	A5	08B	()	04	+	XB02BDX 14 08B	DEV REQ 2 TO IOC
XA535	DCF	A5	08B	()	05	+	XC02ADX 14 08B	IOC INPUT DATA LINE 2
XA534	DCF	A5	08B	()	06	+	XC02BDX 14 08B	DEV REQ 2 TO IOC
XA541	DCF	A5	08B	()	07	+	XD02ADX 14 08B	IOC INPUT DATA LINE 2
XA540	DCF	A5	08B	()	08	+	XD02BDX 14 08B	DEV REQ 2 TO IOC
XA548	DCF	A5	08B	()	09	+	XE02ADX 14 08B	IOC INPUT DATA LINE 2
XA547	DCF	A5	08B	()	10	+	XE02BDX 14 08B	DEV REQ 2 TO IOC
XA426	THI	A4	02B	TDI2XA	00	=		
XA426	THI	A4	03B	(01)	01		TDI2A0X 05 03B	
XA406	THI	E2	30A	TDI3AA	00	=		
XA406	THI	E2	31A	(63)	01		TDI3A0 61 31A	
XA420	DCF	C1	25B	TDI3ADX4	00	=		
XA420	DCF	C1	29A	(46)	01		TEGND 52 29A	
XA424	TS8	B1	11B	TDI3A0	00	=		INF LINE 3 + RTC 0
XA424	TS8	B1	09A	(23)	01		TDI3XA TDI3BB4 XII3AA XII3BA ROI3AA SPI028 SPI033 SPI034 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	BIT 3 INPUT BUS
XA420	DCF	C2	26B	TDI3A0X	00	=		EXT DATA INPUT REC LINE 3
XA420	DCF	C2	27B	(47)	01		T0GND 49 27B	
				TDI3BB4	00	=		
XA522	DCF	A7	02A	()	01		XA03ADX 01 02A	IOC INPUT DATA LINE 3
XA521	DCF	A7	02A	()	02	+	XA03BDX 01 02A	DEV REQ 3 TO IOC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA528	DCF	A7	02A	()	03	+	XB03ADX 01 02A	IOC INPUT DATA LINE 3
XA527	DCF	A7	02A	()	04	+	XB03BDX 01 02A	DEV REQ 3 TO IOC
XA535	DCF	A7	02A	()	05	+	XC03ADX 01 02A	IOC INPUT DATA LINE 3
XA534	DCF	A7	02A	()	06	+	XC03BDX 01 02A	DEV REQ 3 TO IOC
XA541	DCF	A7	02A	()	07	+	XD03ADX 01 02A	IOC INPUT DATA LINE 3
XA540	DCF	A7	02A	()	08	+	XD03BDX 01 02A	DEV REQ 3 TO IOC
XA548	DCF	A7	02A	()	09	+	XE03ADX 01 02A	IOC INPUT DATA LINE 3
XA547	DCF	A7	02A	()	10	+	XE03BDX 01 02A	DEV REQ 3 TO IOC
XA426	THI	A5	04B	TDI3XA	00	=		
XA426	THI	A5	05B	(07)	01		TDI3A0X 09 05B	
XA406	THI	E6	32B	TDI4AA	00	=		
XA406	THI	E6	33B	(68)	01		TDI4A0 65 33B	
XA418	DCF	B3	15B	TDI4ADX4	00	=		
XA418	DCF	B3	13A	(37)	01		TBMACP 36 13A	
XA424	TS8	C1	17B	TDI4A0	00	=		
XA424	TS8	C1	15A	(35)	01		TDI4XA TDI48B4 XII4AA XII4BA RDI4AA SPI028 SPI034 SPI033 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	INF LINE 4 + RTC 1 BIT 4 INPUT BUS
XA418	DCF	B4	14B	TDI4A0X	00	=		
XA418	DCF	B4	13B	(35)	01		TEGND 33 13B	EXT DATA INPUT REC LINE 4
XA522	DCF	B1	10B	TDI48B4 ()	00	=		
XA522	DCF	B1	10B	()	01		XA04ADX 27 10B	IOC INPUT DATA LINE 4
XA521	DCF	B1	10B	()	02	+	XA04BDX	DEV REQ 4 TO IOC
XA528	DCF	B1	10B	()	03	+	27 10B XB04ADX	IOC INPUT DATA LINE 4
XA527	DCF	B1	10B	()	04	+	27 10B XB04BDX	DEV REQ 4 TO IOC
XA535	DCF	B1	10B	()	05	+	27 10B XC04ADX	IOC INPUT DATA LINE 4
XA534	DCF	B1	10B	()	06	+	27 10B XC04BDX	DEV REQ 4 TO IOC
XA541	DCF	B1	10B	()	07	+	27 10B XD04ADX	IOC INPUT DATA LINE 4
							27 10B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA540	DCF	B1	10B	()	08	+	XD04BDX 27 10B	DEV REQ 4 TO IOC
XA548	DCF	B1	10B	()	09	+	XE04ADX 27 10B	IOC INPUT DATA LINE 4
XA547	DCF	B1	10B	()	10	+	XE04BDX 27 10B	DEV REQ 4 TO IOC
XA426	THI	A6	06B	TDI4XA	00	=		
XA426	THI	A6	07B	(10)	01		TDI4A0X 15 07B	
XA406	THI	F3	34B	TDI5AA	00	=		
XA406	THI	F3	35B	(70)	01		TDI5A0 69 35B	
XA418	DCF	B5	16A	TDI5ADX4	00	=		
XA418	DCF	B5	13A	(41)	01		TBMACP 36 13A	
XA424	TSB	D1	25B	TDI5A0	00	=		
XA424	TSB	D1	23B	(47)	01		TDI5XA TDI5BB4 XII5AA XII5BA RDI5AA SPI028 SPI034 SPI033 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	INF LINE 5 + RTC 2
XA418	DCF	B6	15A	TDI5A0X	00	=		
XA418	DCF	B6	14A	(40)	01		TEGNDA 38 14A	EXT DATA INPUT REC LINE 5
XA522	DCF	B3	15B	TDI5BB4	00	=		
XA522	DCF	B3	15B	()	01		XA05ADX 37 15B	IOC INPUT DATA LINE 5
XA521	DCF	B3	15B	()	02	+	XA05BDX 37 15B	DEV REQ 5 TO IOC
XA528	DCF	B3	15B	()	03	+	XB05ADX 37 15B	IOC INPUT DATA LINE 5
XA527	DCF	B3	15B	()	04	+	XB05BDX 37 15B	DEV REQ 5 TO IOC
XA535	DCF	B3	15B	()	05	+	XC05ADX 37 15B	IOC INPUT DATA LINE 5
XA534	DCF	B3	15B	()	06	+	XC05BDX 37 15B	DEV REQ 5 TO IOC
XA541	DCF	B3	15B	()	07	+	XD05ADX 37 15B	IOC INPUT DATA LINE 5
XA540	DCF	B3	15B	()	08	+	XD05BDX 37 15B	DEV REQ 5 TO IOC
XA548	DCF	B3	15B	()	09	+	XE05ADX 37 15B	IOC INPUT DATA LINE 5
XA547	DCF	B3	15B	()	10	+	XE05BDX 37 15B	DEV REQ 5 TO IOC

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CONNECTOR	PLATE TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIG- NATION	FACTOR	COMMENT
XA426	THI	B1	13A	TDI5XA	00 =		
XA426	THI	B1	14A	(24)	01	TDI5A0X 22 14A	
XA406	THI	F4	34A	TDI6AA	00 =		
XA406	THI	F4	35A	(72)	01	TDI6A0 74 35A	
XA418	DCF	B7	10A	TDI6ADX4	00 =		
XA418	DCF	B7	13A	(23)	01	TBMACP 36 13A	
XA425	TD4	B1	11B	TDI6A0	00 =		
XA425	TD4	B1	12A	(23)	01	TDI6XA TDI6BB4 XII6AA XII6BA 22 12A 24 13A 25 12B 26 14A	INF LINE 6 BIT 6 INPUT BUS
XA418	DCF	B8	11A	TDI6A0X	00 =		
XA418	DCF	B8	12A	(30)	01	TEGNDA 34 12A	EXT DATA INPUT REC LINE 6
				TDI6BB4	00 =		
XA522	DCF	B5	16A	()	01	XA06ADX 41 16A	IOC INPUT DATA LINE 6
XA521	DCF	B5	16A	()	02 +	XA06BDX 41 16A	DEV REQ 6 TO IOC
XA528	DCF	B5	16A	()	03 +	XB06ADX 41 16A	IOC INPUT DATA LINE 6
XA527	DCF	B5	16A	()	04 +	XB06BDX 41 16A	DEV REQ 6 TO IOC
XA535	DCF	B5	16A	()	05 +	XC06ADX 41 16A	IOC INPUT DATA LINE 6
XA534	DCF	B5	16A	()	06 +	XC06BDX 41 16A	DEV REQ 6 TO IOC
XA541	DCF	B5	16A	()	07 +	XD06ADX 41 16A	IOC INPUT DATA LINE 6
XA540	DCF	B5	16A	()	08 +	XD06BDX 41 16A	DEV REQ 6 TO IOC
XA548	DCF	B5	16A	()	09 +	XE06ADX 41 16A	IOC INPUT DATA LINE 6
XA547	DCF	B5	16A	()	10 +	XE06BDX 41 16A	DEV REQ 6 TO IOC
XA426	THI	B2	11A	TDI6XA	00 =		
XA426	THI	B2	12A	(25)	01	TDI6A0X 23 12A	
XA406	THI	F6	38A	TDI7AA	00 =		
XA406	THI	F6	39A	(77)	01	TDI7A0 75 39A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM. DESIGNATOR	FACTOR	COMMENT
XA420	DCF	C3	30B	TDI7ADX4	00		
XA420	DCF	C3	29A	(55)	01	TEGND4 52 29A	
XA425	TD4	B2	10B	TDI7A0	00		INF LINE 7
XA425	TD4	B2	09A	(21)	01	TDI7XA TDI7BB4 XII7AA XII7BA 14 09A 18 10A 19 09B 20 11A	BIT 7 INPUT BUS
XA420	DCF	C4	29B	TDI7A0X	00		EXT DATA INPUT REC LINE 7
XA420	DCF	C4	28B	(56)	01	TDCND4 51 28B	
				TDI7BB4	00		
XA522	DCF	B7	10A	()	01	XA07ADX 23 10A	IOC INPUT DATA LINE 7
XA521	DCF	B7	10A	()	02	XA07BDX 23 10A	DEV REQ 7 TO IOC
XA528	DCF	B7	10A	()	03	XB07ADX 23 10A	IOC INPUT DATA LINE 7
XA527	DCF	B7	10A	()	04	XB07BDX 23 10A	DEV REQ 7 TO IOC
XA535	DCF	B7	10A	()	05	XC07ADX 23 10A	IOC INPUT DATA LINE 7
XA534	DCF	B7	10A	()	06	XC07BDX 23 10A	DEV REQ 7 TO IOC
XA541	DCF	B7	10A	()	07	XD07ADX 23 10A	IOC INPUT DATA LINE 7
XA540	DCF	B7	10A	()	08	XD07BDX 23 10A	DEV REQ 7 TO IOC
XA548	DCF	B7	10A	()	09	XE07ADX 23 10A	IOC INPUT DATA LINE 7
XA547	DCF	B7	10A	()	10	XE07BDX 23 10A	DEV REQ 7 TO IOC
XA426	THI	B3	09A	TDI7XA	00		
XA426	THI	B3	10A	(18)	01	TDI7A0X 20 10A	
XA122	TT3	F1	36B	TDLI1A	00		DIGNOSTIC FAIL INHI
XA122	TT3	F1	37B	(73)	01	TBY1CA TCBCA0 TBB1A0 75 37B 77 38B 79 39B	
XA122	TT3	F3	39A	TDLI2A	00		DIGNOSTIC FAIL INHI
XA122	TT3	F3	35A	(80)	01	TCBCA0 TBY2CA TBB2A0 69 35A 76 37A 78 38A	
XA142	TQ2	F3	35A	TDLI3A	00		DIGNOSTIC FAIL INHIBIT AT SO
XA142	TQ2	F3	34B	(69)	01	TCMN20 TCM2A 65 34B 74 35B	

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CONNECTOR	TEST POINT	GROUP	TEST POINTS AND OR	EQUATION	TERM	TEST POINT	FACTOR	COMMENT
XA142	TQ2	F4	39A	TDLI4A	00	=		
XA142	TQ2	F4	37A	(80)	01		TCMW40 TCMP4A 76 37A 78 38A	DIGNOSTIC FAIL INHIBIT AT SO
XA108	TT3	A1	04A	TDLI5A	00	=		
XA108	TT3	A1	05A	(04)	01		TS09BQ TBST20 TCMP4A 06 05A 08 06A 10 07A	DIGNOSTIC FAIL INHIBIT I/O
XA208	TQ2	A2	02B	TDLPAA	00	=		
XA208	TQ2	A2	04A	(01)	01		TP007A TDOPAA 04 04A 05 03B	PARITY TO PARITY DRIVER
XA428	THI	A3	03A	TDLPAO	00	=		
XA428	THI	A3	02A	(03)	01		TDLPAO 04 02A	
XA443	TQ2	D1	24A	TDLOAO	00	=		
XA443	TQ2	D1	25A	(52)	01		TDLO3A TDLO1A 54 25A 56 26A	OR'D DATA LINE 0
XA446	TQ2	A1	05A	TDLO1A	00	=		
XA446	TQ2	A1	06A	(06)	01		TDA0B0 TCENIO 08 06A 10 07A	IOM* ADD 0 TO INF LINES
XA208	TQ2	E1	31A	TDLO3A	00	=		
XA208	TQ2	E1	32A	(66)	01		TE00BQ TI23B0 68 32A 70 33A	TE00 TO DATA LINES
XA445	TT3	A1	04A	TDLIA0	00	=		
XA445	TT3	A1	05A	(04)	01		TDL13A SPI038 TDL11A 06 05A 08 06A 10 07A	OR'D DATA LINE 1
XA446	TQ2	A3	04B	TDL11A	00	=		
XA446	TQ2	A3	02A	(09)	01		TCENIO TDA1B0 03 02A 07 03A	IOM* ADD 1 TO INF LINES
XA208	TQ2	E2	28A	TDL13A	00	=		
XA208	TQ2	E2	29A	(60)	01		TE01BQ TI23B0 62 29A 64 30A	TE01 TO DATA LINES
XA445	TT3	A2	03A	TDL2A0	00	=		
XA445	TT3	A2	02B	(07)	01		TDL21A SPI038 TDL23A 01 02B 03 02A 05 03B	OR'D DATA LINE 2
XA446	TQ2	B1	12A	TDL21A	00	=		
XA446	TQ2	B1	13A	(22)	01		TDA2B0 TCENIO 24 13A 26 14A	IOM* ADD 2 TO INF LINES

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA208	TQ2	E3	30B	TDL23A	00 =		TE02 TO DATA LINES
XA208	TQ2	E3	28B	(57)	01	TE02BQ TI23B0 53 28B 55 29B	
XA445	TT3	A3	07B	TDL3A0	00 =		OR'D DATA LINE 3
XA445	TT3	A3	04B	(15)	01	TDL33A TDL31A SPI038 09 04B 11 05B 13 06B	
XA446	TQ2	B3	10B	TDL31A	00 =		IOM* ADD 3 TO INF LINES
XA446	TQ2	B3	08B	(21)	01	TCEN10 TDA3B0 17 08B 19 09B	
XA208	TQ2	E4	33B	TDL33A	00 =		TE03 TO DATA LINES
XA208	TQ2	E4	31B	(63)	01	TE03BQ TI23B0 59 31B 61 32B	
XA445	TT3	B1	11A	TDL4A0	00 =		OR'D DATA LINE 4
XA445	TT3	B1	12A	(20)	01	TDL41A SPI038 TDL43A 22 12A 24 13A 26 14A	
XA446	TQ2	C1	18A	TDL41A	00 =		IOM* ADD 4 TO INF LINES
XA446	TQ2	C1	19A	(38)	01	TCEN10 TDA4B0 40 19A 42 20A	
XA208	TQ2	F1	37B	TDL43A	00 =		TE04 TO DATA LINES
XA208	TQ2	F1	38B	(75)	01	TE04BQ TI23B0 77 38B 79 39B	
XA445	TT3	B2	09B	TDL5A0	00 =		OR'D DATA LINE 5
XA445	TT3	B2	09A	(19)	01	SPI038 TDL51A TDL53A 14 09A 17 08B 18 10A	
XA446	TQ2	C3	16B	TDL51A	00 =		IOM* ADD 5 TO INF LINES
XA446	TQ2	C3	14B	(33)	01	TCEN10 TDA5B0 29 14B 31 15B	
XA207	TQ2	F1	37B	TDL53A	00 =		TE05 TO DATA LINES
XA207	TQ2	F1	38B	(75)	01	TE05BQ TI23B0 77 38B 79 39B	
XA445	TT3	B3	13B	TDL6A0	00 =		OR'D DATA LINE 6
XA445	TT3	B3	10B	(27)	01	TDL63A SPI038 TDL61A 21 10B 23 11B 25 12B	
XA446	TQ2	D1	24A	TDL61A	00 =		IOM* ADD 6 TO INF LINES
XA446	TQ2	D1	25A	(52)	01	TDA6B0 TCEN10 54 25A 56 26A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA208	TQ2	F3	35A	TDL63A	00	=		TE06 TO DATA LINES
XA208	TQ2	F3	34B	(69)	01		TE06BQ TI23B0 65 34B 74 35B	
XA407	TQ2	C1	18A	TDL7A0	00	=		OR'D DATA LINE 7
XA407	TQ2	C1	19A	(38)	01		TDL73A TDL71A 40 19A 42 20A	
XA446	TQ2	A2	02B	TDL71A	00	=		IOM* ADD 7 TO INF LINES
XA446	TQ2	A2	04A	(01)	01		TCEN10 TDA7B0 04 04A 05 03B	
XA208	TQ2	F4	39A	TDL73A	00	=		TE07 TO DATA LINES
XA208	TQ2	F4	37A	(80)	01		TE07BQ TI23B0 76 37A 78 38A	
XA325	TD4	D2	24B	TDPO2A	00	=		PAR REG SEL TC02 TO TD29 NPL
XA325	TD4	D2	23B	(45)	01		TS11BQ TC02BQ TMO1C0 TC08BP 43 23B 46 21A 48 22A 50 23A	
XA325	TD4	E1	31B	TDPO3A	00	=		PAR REG SEL TC03 TO TD30 NPL
XA325	TD4	E1	32B	(59)	01		TS11BQ TC03BQ TC08BP TMO1C0 61 32B 66 31A 68 32A 70 33A	
XA325	TD4	E2	30B	TDP10A	00	=		PAR REG SEL TC10 TO TD29 EPL
XA325	TD4	E2	29B	(57)	01		TMO1C0 TS11BQ TC10BQ TC08BQ 55 29B 60 28A 62 29A 64 30A	
XA325	TD4	F1	37A	TDP11A	00	=		PAR REG SEL TC11 TO TD30 EPL
XA325	TD4	F1	37B	(76)	01		TS11BQ TMO1C0 TC11C0 TC08BQ 75 37B 77 38B 78 38A 79 39B	
XA323	TD4	D1	25B	TDQ06A	00	=		Q REG SEC TC06 TO TD24 (EPL)
XA323	TD4	D1	26B	(47)	01		TMO1C0 TC08BP TC06BQ TQRSA0 49 26B 52 24A 54 25A 56 26A	
XA323	TD4	D2	24B	TDQ07A	00	=		Q REG SEC TC07 TO TD25 (EPL)
XA323	TD4	D2	23B	(45)	01		TQRSA0 TMO1C0 TC07BQ TC08BP 43 23B 46 21A 48 22A 50 23A	
XA323	TD4	E1	31B	TDQ14A	00	=		Q REG SEL TC14 TO TD24 (NPL)
XA323	TD4	E1	32B	(59)	01		TC14BQ TMO1C0 TC08BQ TQRSA0 61 32B 66 31A 68 32A 70 33A	
XA323	TD4	E2	30B	TDQ15A	00	=		Q REG SEL TC15 TO TD25 (NPL)
XA323	TD4	E2	29B	(57)	01		TMO1C0 TC08BQ TC15BQ TQRSA0 55 29B 60 28A 62 29A 64 30A	

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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA125	THI F2	36B	TDRSBA	00	=		
XA125	THI F2	37B	(71)	01		TDRS10 73 37B	TD RESET
XA125	THI F3	34B	TDRSCA	00	=		
XA125	THI F3	35B	(70)	01		TDRS10 69 35B	TD RESET UNLOAD
XA125	THI F4	34A	TDRSDA	00	=		
XA125	THI F4	35A	(72)	01		TDRS10 74 35A	TD RESET UNLOAD
XA125	THI F5	36A	TDRSEA	00	=		
XA125	THI F5	37A	(78)	01		TDRS10 76 37A	TD RESET UNLOAD
XA125	THI F6	38A	TDRSFA	00	=		
XA125	THI F6	39A	(77)	01		TDRS10 75 39A	TD RESET UNLOAD
XA325	TD4 C2	16B	TDRS1A	00	=		
XA325	TD4 C2	15A	(33)	01		TADABQ TSN2AA TM02BQ TD005A 30 15A 31 15B 34 16A 36 17A	M2.TADA.SYNC2*.NOT CLWRT
XA124	TQ2 D1	24A	TDRS10	00	=		
XA124	TQ2 D1	25A	(52)	01		TDRS1A TMRUBA4 54 25A 56 26A	TD RESET MASTER + M2.TADA.
XA226	THI A1	06A	TDS00A	00	=		
XA226	THI A1	07A	(13)	01		TDS000 11 07A	PRESET INPUT TD BIT 00-A
XA128	TS8 A1	05B	TDS000	00	=		
XA128	TS8 A1	02B	(11)	01		TPRO1A TQ000A TP000A SPI010 SPI011 TD00SA TCST1A TPSTFA 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	PRESET INPUT TD BIT 00-0
XA226	THI A2	04A	TDS01A	00	=		
XA226	THI A2	05A	(08)	01		TDS010 06 05A	PRESET TD BIT 01-A
XA128	TS8 B1	11B	TDS010	00	=		
XA128	TS8 B1	09A	(23)	01		TD01SA TCD24A TQ010A SPI011 TP011A TP010A SPI010 TPSTIA 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	PRESET TD BIT 01-0
XA226	THI B1	13A	TDS02A	00	=		
XA226	THI B1	14A	(24)	01		TDS020 22 14A	PRESET TD BIT 02-A

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA129	TD4	A1	05B	TDS020	00	=		PRESET TO BIT 02-0
XA129	TD4	A1	05A	(11)	01		TD02SA TP020A TQ020A TP021A 06 05A 08 06A 10 07A 13 06B	
XA226	THI	B2	11A	TDS03A	00	=		PRESET TO BIT 03-A
XA226	THI	B2	12A	(25)	01		TDS030 23 12A	
XA129	TD4	A2	04B	TDS030	00	=		PRESET TO BIT 03-0
XA129	TD4	A2	02B	(09)	01		TD03SA TQ030A TP031A TP030A 01 02B 04 04A 05 03B 07 03A	
XA226	THI	C1	19A	TDS04A	00	=		PRESET TO BIT 04-A
XA226	YHI	C1	20A	(40)	01		TDS040 38 20A	
XA129	TD4	B1	11B	TDS040	00	=		PRESET TO BIT 04-0
XA129	TD4	B1	12A	(23)	01		TP041A TQ040A TD04SA TP040A 22 12A 24 13A 25 12B 26 14A	
XA226	THI	C2	17A	TDS05A	00	=		PRESET TO BIT 05-A
XA226	THI	C2	18A	(37)	01		TDS050 35 18A	
XA129	TD4	B2	10B	TDS050	00	=		PRESET TO BIT 05-0
XA129	TD4	B2	09A	(21)	01		TD05SA TQ050A TP051A TP050A 14 09A 18 10A 19 09B 20 11A	
XA226	THI	D1	25A	TDS06A	00	=		PRESET TO BIT 06-A
XA226	YHI	D1	26A	(54)	01		TDS060 52 26A	
XA129	TD4	C1	17B	TDS060	00	=		PRESET TO BIT 06-0
XA129	TD4	C1	18B	(35)	01		TP061A TQ060A TP060A TD06SA 37 18B 38 18A 40 19A 42 20A	
XA226	THI	D2	23A	TDS07A	00	=		PRESET TO BIT 07-A
XA226	YHI	D2	24A	(49)	01		TDS070 47 24A	
XA129	TD4	C2	16B	TDS070	00	=		PRESET TO BIT 07-0
XA129	TD4	C2	15A	(33)	01		TD07SA TQ070A TP070A TP071A 30 15A 31 15B 34 16A 36 17A	
XA226	THI	E1	32A	TDS08A	00	=		PRESET TO BIT 08-A
XA226	YHI	E1	33A	(66)	01		TDS080 64 33A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG- NATION	FACTOR	COMMENT
XA128	TS8	C1	17B	TDS080	00	=		PRESET TO BIT 08-0
XA128	TS8	C1	15A	(35)	01		TD08SA TP081A TCD23A TPSTEA TP080A SPI011 SPI010 TQ080A 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	
XA226	THI	E2	30A	TDS09A	00	=		PRESET TO BIT 08-0
XA226	THI	E2	31A	(63)	01		TDS090 61 31A	
XA128	TS8	D1	25B	TDS090	00	=		PRESET TO BIT 09-0
XA128	TS8	D1	23B	(47)	01		TP090A TD09SA TQ090A TTWPCA SPI011 SPI003 SPI010 TP091A 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	
XA226	THI	F1	38B	TDS10A	00	=		PRESET TO BIT 10-A
XA226	THI	F1	39B	(80)	01		TDS100 79 39B	
XA129	TD4	D1	25B	TDS100	00	=		PRESET TO BIT 10-0
XA129	TD4	D1	26B	(47)	01		TD10SA TP101A TQ100A TP100A 49 26B 52 24A 54 25A 56 26A	
XA226	THI	F2	36B	TDS11A	00	=		PRESET TO BIT 11-A
XA226	THI	F2	37B	(71)	01		TDS110 73 37B	
XA129	TD4	D2	24B	TDS110	00	=		PRESET TO BIT 11-0
XA129	TD4	D2	23B	(45)	01		TD11SA TP110A TQ110A TP111A 43 23B 46 21A 48 22A 50 23A	
XA220	THI	A1	06A	TDS12A	00	=		PRESET TO BIT 12-A
XA220	THI	A1	07A	(13)	01		TDS120 11 07A	
XA129	TD4	E1	31B	TDS120	00	=		PRESET TO BIT 12-0
XA129	TD4	E1	32B	(59)	01		TP120A TD12SA TP121A TQ120A 61 32B 66 31A 68 32A 70 33A	
XA220	THI	A2	04A	TDS13A	00	=		PRESET TO BIT 13-A
XA220	THI	A2	05A	(08)	01		TDS130 06 05A	
XA129	TD4	E2	30B	TDS130	00	=		PRESET TO BIT 13-0
XA129	TD4	E2	29B	(57)	01		TD13SA TQ130A TP130A TP131A 55 29B 60 28A 62 29A 64 30A	
XA220	THI	B1	13A	TDS14A	00	=		PRESET TO BIT 14-A
XA220	THI	B1	14A	(24)	01		TDS140 22 14A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA129	TD4	F1	37A	TDS140	00	=		PRESET TO BIT 14-0
XA129	TD4	F1	37B	(76)	01		TQ140A TP141A TD14SA TP140A 75 37B 77 38B 78 38A 79 39B	
XA220	THI	B2	11A	TDS15A	00	=		PRESET TO BIT 15-A
XA220	THI	B2	12A	(25)	01		TDS150 23 12A	
XA129	TD4	F2	35A	TDS150	00	=		PRESET TO BIT 15-0
XA129	TD4	F2	36A	(69)	01		TQ150A TD15SA TP150A TP151A 71 36A 72 34A 73 36B 74 35B	
XA220	THI	C1	19A	TDS16A	00	=		PRESET INPUT TO BIT 16-A
XA220	THI	C1	20A	(40)	01		TDS160 38 20A	
XA124	TQ2	A1	05A	TDS160	00	=		PRESET INPUT TO BIT 16-0
XA124	TQ2	A1	06A	(06)	01		TD16SA TQ160A 08 06A 10 07A	
XA220	THI	C2	17A	TDS17A	00	=		PRESET INPUT TO BIT 17-A
XA220	THI	C2	18A	(37)	01		TDS170 35 18A	
XA124	TQ2	A2	02B	TDS170	00	=		PRESET INPUT TO BIT 17-0
XA124	TQ2	A2	04A	(01)	01		TD17SA TQ170A 04 04A 05 03B	
XA220	THI	D1	25A	TDS18A	00	=		PRESET INPUT TO BIT 18-A
XA220	THI	D1	26A	(54)	01		TDS180 52 26A	
XA124	TQ2	A3	04B	TDS180	00	=		PRESET INPUT TO BIT 18-0
XA124	TQ2	A3	02A	(09)	01		TQ180A TD18SA 03 02A 07 03A	
XA220	THI	D2	23A	TDS19A	00	=		PRESET INPUT TO BIT 19-A
XA220	THI	D2	24A	(49)	01		TDS190 47 24A	
XA124	TQ2	A4	07B	TDS190	00	=		PRESET INPUT TO BIT 19-0
XA124	TQ2	A4	05B	(15)	01		TQ190A TD19SA 11 05B 13 06B	
XA220	THI	E1	32A	TDS20A	00	=		PRESET INPUT TO BIT 20-A
XA220	THI	E1	33A	(66)	01		TDS200 64 33A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA108	TT3	C1	17A	TDS200	00	=		PRESET INPUT TO BIT 20-0
XA108	TT3	C1	18A	(36)	01		TD20SA SPI001 TQ200A 38 18A 40 19A 42 20A	
XA220	THI	E2	30A	TDS21A	00	=		PRESET INPUT TO BIT 21-A
XA220	THI	E2	31A	(63)	01		TDS210 61 31A	
XA108	TT3	C2	15B	TDS210	00	=		PRESET INPUT TO BIT 21-0
XA108	TT3	C2	14B	(31)	01		SPI001 TD21SA TQ210A 29 14B 30 15A 34 16A	
XA220	THI	F1	38B	TDS22A	00	=		PRESET INPUT TO BIT 22-A
XA220	THI	F1	39B	(80)	01		TDS220 79 39B	
XA124	TQ2	B1	12A	TDS220	00	=		PRESET INPUT TO BIT 22-0
XA124	TQ2	B1	13A	(22)	01		TD22SA TQ220A 24 13A 26 14A	
XA220	THI	F2	36B	TDS23A	00	=		PRESET INPUT TO BIT 23-A
XA220	THI	F2	37B	(71)	01		TDS230 73 37B	
XA124	TQ2	B2	09A	TDS230	00	=		PRESET INPUT TO BIT 23-0
XA124	TQ2	B2	10A	(14)	01		TD23SA TQ230A 18 10A 20 11A	
XA220	THI	A3	03A	TDS24A	00	=		PRESET INPUT TO BIT 24-A
XA220	THI	A3	02A	(03)	01		TDS240 04 02A	
XA124	TQ2	B3	10B	TDS240	00	=		PRESET INPUT TO BIT 24-0
XA124	TQ2	B3	08B	(21)	01		TQ240A TD24SA 17 08B 19 09B	
XA220	THI	A4	02B	TDS25A	00	=		PRESET INPUT TO BIT 25-A
XA220	THI	A4	03B	(01)	01		TDS250 05 03B	
XA124	TQ2	B4	13B	TDS250	00	=		PRESET INPUT TO BIT 25-0
XA124	TQ2	B4	11B	(27)	01		TQ250A TD25SA 23 11B 25 12B	
XA220	THI	B3	09A	TDS26A	00	=		PRESET INPUT TO BIT 26-A
XA220	THI	B3	10A	(18)	01		TDS260 20 10A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA124	TQ2	C1	18A	TDS260	00	=		PRESET INPUT TO BIT 26-0
XA124	TQ2	C1	19A	(38)	01		TD26SA TQ260A 40 19A 42 20A	
XA220	THI	B4	08B	TDS27A	00	=		PRESET INPUT TO BIT 27-A
XA220	THI	B4	09B	(14)	01		TDS270 17 09B	
XA124	TQ2	C2	15A	TDS270	00	=		PRESET INPUT TO BIT 27-0
XA124	TQ2	C2	16A	(30)	01		TD27SA TQ270A 34 16A 36 17A	
XA220	THI	C3	15A	TDS28A	00	=		PRESET INPUT TO BIT 28-A
XA220	THI	C3	16A	(34)	01		TDS280 36 16A	
XA124	TQ2	C3	16B	TDS280	00	=		PRESET INPUT TO 28-0
XA124	TQ2	C3	14B	(33)	01		TQ280A TD28SA 29 14B 31 15B	
XA220	THI	C4	14B	TDS29A	00	=		PRESET INPUT TO BIT 29-A
XA220	THI	C4	15B	(30)	01		TDS290 29 15B	
XA124	TQ2	C4	19B	TDS290	00	=		PRESET INPUT TO 29-0
XA124	TQ2	C4	17B	(39)	01		TQ290A TD29SA 35 17B 37 18B	
XA220	THI	D3	21A	TDS30A	00	=		PRESET INPUT TO BIT 30-A
XA220	THI	D3	22A	(48)	01		TDS300 50 22A	
XA109	TQ2	D1	24A	TDS300	00	=		PRESET INPUT TO 30-0
XA109	TQ2	D1	25A	(52)	01		TD30SA TQ300A 54 25A 56 26A	
XA220	THI	D4	22B	TDS31A	00	=		PRESET INPUT TO BIT 31-A
XA220	THI	D4	23B	(46)	01		TDS310 41 23B	
XA109	TQ2	D3	24B	TDS310	00	=		PRESET INPUT TO 31-0
XA109	TQ2	D3	22B	(45)	01		TD31SA TQ310A 41 22B 43 23B	
XA139	THI	C2	17A	TDOPAA	00	=		
XA139	THI	C2	18A	(37)	01		TDOPAO 35 18A	

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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM	REG. FACTOR	FACTOR	COMMENT
XA417	DCF	C1 25B	TDOPADX4	00 =			
XA417	DCF	C1 29A	(46)	01		YDGNDA 52 29A	EXT DATA OUTPUT PARITY
XA141	TQ2	C2 15A	TDOPAO	00 =			
XA141	TQ2	C2 16A	(30)	01		YXCAZA YCDENA 34 16A 36 17A	
XA417	DCF	C2 26B	TDOPA0X	00 =			
XA417	DCF	C2 27B	(47)	01		YDLPAO 49 27B	
XA417	DCF	A1 02B	TD00ADX4	00 =			
XA417	DCF	A1 05A	(07)	01		YDGNDA 06 05A	EXT DATA OUTPUT LINE 0
XA417	DCF	A2 03B	TD00A0X	00 =			
XA417	DCF	A2 04B	(09)	01		YDLOAO 11 04B	
XA229	TDD	AI 06A	TD00BI	00 =			
XA229	TDD	AI 06A	()	01		YD0000 08 06A	
XA229	TDD	AN 07A	TD00BN	00 =			
XA229	TDD	AN 07A	()	01		YDC07A 10 07A	
XA229	TDD	AP 05B	TD00BP	00 =			
XA229	TDD	AP 05A	(11)	01		YDRSCA 06 05A	TD REG BIT 00 RESET
XA229	TDD	AQ 06B	TD00BQ	00 =			
XA229	TDD	AQ 07B	(13)	01		YDS00A 15 07B	TD REG BIT 00 SET
XA127	TLD	E1 31A	TD00CD	00 =			
XA127	TLD	E1 32A	(66)	01		YD00BQ YDDM00 68 32A 70 33A	JDB00B4 BUSS
XA226	THI	A3 03A	TD00C0	00 =			
XA226	THI	A3 02A	(03)	01		YD00BP 04 02A	TD BIT 0 OVERLOAD
XA422	TQ2	A1 05A	TD00SA	00 =			
XA422	TQ2	A1 06A	(06)	01		YMDCA0 YD00SOX 08 06A 10 07A	MEMORY DATA INPUT TO TD00

DRAWING NUMBER 149019-860 LOGIC UNIT ASSEMBLY NO. 149019 REV G INDEX TD00SDX
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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA419	DCF	A1 02B	TD00SDX	00 =		
XA419	DCF	A1 05A	(07)	01	TDCBAA 06 05A	YI00CB4 BUSS
XA419	DCF	A2 03B	TD00SOX	00 =		
XA419	DCF	A2 04B	(09)	01	TD00BQ 11 04B	
XA228	TS8	A1 05B	TD0000	00 =		TD REG BIT 00 ORED DATA
XA228	TS8	A1 02B	(11)	01	TD002A TD007A TD003A TD006A SPI018 TD004A SPI017 TD001A 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	
XA326	TQ2	A2 02B	TD001A	00 =		XFER TC00 TO TD00 BL XFER
XA326	TQ2	A2 04A	(01)	01	TBLX10 TCO0BQ 04 04A 05 03B	
XA328	TQ2	A3 04B	TD002A	00 =		UPDATE TC00 TO TD00 BL DCRMN
XA328	TQ2	A3 02A	(09)	01	TBLM10 TU00A0 03 02A 07 03A	
XA240	TQ2	F4 39A	TD003A	00 =		BYTE 1 XFER BIT TE00 TO TD00
XA240	TQ2	F4 37A	(80)	01	TE00BQ TWBXA0 76 37A 78 38A	
XA124	TQ2	E1 31A	TD004A	00 =		DATA BUS XFER BIT 00 TO TD00
XA124	TQ2	E1 32A	(66)	01	TCPDA0 TCB000 68 32A 70 33A	
XA346	TQ2	E1 31A	TD005A	00 =		
XA346	TQ2	E1 32A	(66)	01	T00050 SPI031 68 32A 70 33A	
XA350	TQ2	C2 15A	TD0050	00 =		MEMORY MODE INPUT BIT 0
XA350	TQ2	C2 16A	(30)	01	TS13WA TSB17A 34 16A 36 17A	
XA237	TQ2	A1 05A	TD006A	00 =		TE TO TD BYTE MODE
XA237	TQ2	A1 06A	(06)	01	TB1XA0 TE24C0 08 06A 10 07A	
XA328	TQ2	C3 16B	TD007A	00 =		SET INPUT FOR MEMORY MODE
XA328	TQ2	C3 14B	(33)	01	TD0050 TM01C0 29 14B 31 15B	
XA417	DCF	A3 07B	TD01ADX4	00 =		EXT DATA OUTPUT LINE 1
XA417	DCF	A3 05A	(17)	01	TDGND A 06 05A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA417	DCF	A4	06B	TD01A0X	00 =		
XA417	DCF	A4	05B	(15)	01	YDL1A0 13 05B	
				TD01BI	00 =		
XA229	TDD	BI	03B	()	01	YD0100 05 03B	
				TD01BN	00 =		
XA229	TDD	BN	02B	()	01	YDC07A 01 02B	
XA229	TDD	BP	04B	TD01BP	00 =		TD REG BIT 01 RESET
XA229	TDD	BP	04A	(09)	01	YDRSCA 04 04A	
XA229	TDD	BQ	03A	TD01BQ	00 =		TD REG BIT 01 SET
XA229	TDD	BQ	02A	(07)	01	YDS01A 03 02A	
XA127	TLD	E2	28A	TD01CD	00 =		JDB01B4 BUSS
XA127	TLD	E2	29A	(60)	01	YD01BQ YDM00 62 29A 64 30A	
XA226	THI	A4	02B	TD01CO	00 =		TD BIT 1 UNLOAD
XA226	THI	A4	03B	(01)	01	YD01BP 05 03B	
XA422	TQ2	A2	02B	TD01SA	00 =		MEMORY DATA INPUT TO TD01
XA422	TQ2	A2	04A	(01)	01	YMDCA0 TD01SOX 04 04A 05 03B	
XA419	DCF	A3	07B	TD01SDX	00 =		YI01CB4 BUSS BIT 01
XA419	DCF	A3	05A	(17)	01	YDCBAA 06 05A	
XA419	DCF	A4	06B	TD01SOX	00 =		
XA419	DCF	A4	05B	(15)	01	YD01BQ 13 05B	
XA227	TS8	A1	05B	TD0100	00 =		TD REG BIT 01 ORED DATA
XA227	TS8	A1	02B	(11)	01	YD013A TD012A SPI017 SPI018 TD015A TD016A TD014A TD011A 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	
XA326	TQ2	B2	09A	TD011A	00 =		XFER TC01 TO TD01 BI XFER
XA326	TQ2	B2	10A	(14)	01	YD01BQ YBLX10 18 10A 20 11A	

DRAWING NUMBER 149019-860 LOGIC UNIT ASSEMBLY NO. 149019 REV G INDEX TD012A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA326	TQ2	B3	10B	TD012A	00	=		
XA326	TQ2	B3	08B	(21)	01		TBLM10 TC018P 17 08B 19 09B	UPDATE TC01 TO TD01 BL DCRMN
XA240	TQ2	F3	35A	TD013A	00	=		
XA240	TQ2	F3	34B	(69)	01		TE018Q TWBXAO 65 34B 74 35B	BYTE 1 XFER BIT TE01 TO TD01
XA124	TQ2	E2	28A	TD014A	00	=		
XA124	TQ2	E2	29A	(60)	01		TCPDAO TC8010 62 29A 64 30A	DATA BUS XFER BIT 01 TO TD01
XA109	TQ2	A1	05A	TD015A	00	=		
XA109	TQ2	A1	06A	(06)	01		TD0150 TM01C0 08 06A 10 07A	SET INPUT FOR MEMOR
XA114	TS8	F1	37A	TD0150	00	=		
XA114	TS8	F1	36A	(76)	01		TS118P TQRSAA SPI004 SPI003 SPI001 TS138P SPI002 TKTSBA 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	MEMORY MODE INPUT BIT 1
XA234	TQ2	A2	02B	TD016A	00	=		
XA234	TQ2	A2	04A	(01)	01		TBIXAO TE25C0 04 04A 05 03B	TE TO TD BYTE MODE
XA417	DCF	A5	08B	TD02ADX4	00	=		
XA417	DCF	A5	05A	(14)	01		TDGND A 06 05A	EXT DATA OUTPUT LINE 2
XA417	DCF	A6	07A	TD02A0X	00	=		
XA417	DCF	A6	06A	(10)	01		TDL2A0 08 06A	
XA229	TDD	CI	13A	TD02BI	00	=		
				()	01		TD0200 24 13A	
XA229	TDD	CN	14A	TD02BN	00	=		
				()	01		TDC07A 26 14A	
XA229	TDD	CP	11B	TD02BP	00	=		
XA229	TDD	CP	12A	(23)	01		TDRSBA 22 12A	TD REG BIT 02 RESET
XA229	TDD	CQ	12B	TD02BQ	00	=		
XA229	TDD	CQ	13B	(25)	01		TDS02A 27 13B	TD REG BIT 02 SET

DRAWING NUMBER 149019-860 LOGIC UNIT ASSEMBLY NO. 149019 REV G INDEX TD02CD
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA127	TLD	E3	30B	TD02CD	00	=		JDB02B4 BUSS
XA127	TLD	E3	28B	(57)	01		YD000 YD02BQ 53 28B 55 29B	
XA226	THI	B3	09A	TD02C0	00	=		TO BIT 2 UNLOAD
XA226	THI	B3	10A	(18)	01		YD02BP 20 10A	
XA422	TQ2	A3	04B	TD02SA	00	=		MEMORY DATA INPUT TO TD02
XA422	TQ2	A3	02A	(09)	01		YMDCA0 YD02SOX 03 02A 07 03A	
XA419	DCF	A5	08B	TD02SDX	00	=		YI02CB4 BUSS BIT 02
XA419	DCF	A5	05A	(14)	01		YDCBAA 06 05A	
XA419	DCF	A6	07A	TD02SOX	00	=		
XA419	DCF	A6	06A	(10)	01		YD02BQ 08 06A	
XA228	TS8	B1	11B	TD0200	00	=		TO REG BIT 02 QRD DATA
XA228	TS8	B1	09A	(23)	01		YD023A YD021A SPI018 SPI017 TD026A TD025A TD024A TD022A 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	
XA328	TQ2	B4	13B	TD021A	00	=		XFER TC02 TO TD02 BL XFER
XA328	TQ2	B4	11B	(27)	01		YCO2BQ YBLX20 23 11B 25 12B	
XA315	TT3	E1	30A	TD022A	00	=		UPDATE TC02 TO TD02 BL DCRMN
XA315	TT3	E1	31A	(64)	01		YBLM20 YU0220 YU021A 66 31A 68 32A 70 33A	
XA240	TQ2	F2	34A	TD023A	00	=		BYTE 1 XFER BIT TE02 TO TD02
XA240	TQ2	F2	36A	(72)	01		YWBXA0 YE02BQ 71 36A 73 36B	
XA124	TQ2	E3	30B	TD024A	00	=		DATA BUS XFER BIT 02 TO TD02
XA124	TQ2	E3	28B	(57)	01		YCB020 YCPDA0 53 28B 55 29B	
XA135	THI	F5	36A	TD025A	00	=		SET INPUT FOR MEMORY ENC-A
XA135	THI	F5	37A	(78)	01		YD0250 76 37A	
XA134	TT3	F3	39A	TD0250	00	=		MEMORY ENABLE CORE BIT=1
XA134	TT3	F3	35A	(80)	01		YKTS0A YPQRSA TD027A 69 35A 76 37A 78 38A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA235	TQ2	A4	07B	TD026A	00	=		
XA235	TQ2	A4	05B	(15)	01		TB1XA0 TE26C0 11 05B 13 06B	TE TO TD BYTE MODE
XA423	TQ2	C2	15A	TD027A	00	=		
XA423	TQ2	C2	16A	(30)	01		TDAXA0 TD028A 34 16A 36 17A	XER CN DATA ADD AND MCMU BKO
XA426	THI	D3	21A	TD028A	00	=		
XA426	THI	D3	22A	(48)	01		TD0280 50 22A	MCMU BKO*-A
XA425	TD4	E2	30B	TD0280	00	=		
XA425	TD4	E2	29B	(57)	01		KMR17R KMR18R KMR19R KMR20R 55 29B 60 28A 62 29A 64 30A	MCMU BKO*-0
XA417	DCF	A7	02A	TD03ADX4	00	=		
XA417	DCF	A7	05A	(01)	01		TDGND4 06 05A	EXT DATA OUTPUT LINE 3
XA417	DCF	A8	03A	TD03A0X	00	=		
XA417	DCF	A8	04A	(03)	01		TDL3A0 04 04A	
				TD03BI	00	=		
XA229	TDD	DI	10A	()	01		TD0300 18 10A	
				TD03BN	00	=		
XA229	TDD	DN	09A	()	01		TDC07A 14 09A	
XA229	TDD	DP	10B	TD03BP	00	=		
XA229	TDD	DP	11A	(21)	01		TDRSEA 20 11A	TD REG BIT 03 RESET
XA229	TDD	DQ	09B	TD03BQ	00	=		
XA229	TDD	DQ	08B	(19)	01		TDS03A 17 08B	TD REG BIT 03 SET
XA127	TLD	E4	33B	TD03CD	00	=		
XA127	TLD	E4	31B	(63)	01		TTDM00 TD03BQ 59 31B 61 32B	JDB03B4 BUSS
XA226	THI	B4	08B	TD03C0	00	=		
XA226	THI	B4	09B	(14)	01		TD03BP 17 09B	TD BIT 3 UNLOAD

DRAWING NUMBER 149019-860 LOGIC UNIT ASSEMBLY NO. 149019 REV G INDEX TD03SA
 UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 139

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA422	TQ2	A4	07B	TD03SA	00	=		MEMORY DATA INPUT TO TD03
XA422	TQ2	A4	05B	(15)	01		TMDCA0 TD03SOX 11 05B 13 06B	
XA419	DCF	A7	02A	TD03SDX	00	=		Y103CB4 BUSS BIT 03
XA419	DCF	A7	05A	(01)	01		TDCBAA 06 05A	
XA419	DCF	A8	03A	TD03SOX	00	=		
XA419	DCF	A8	04A	(03)	01		TD038Q 04 04A	
XA227	TS8	B1	11B	TD0300	00	=		TD REG BIT 03 ORED DATA
XA227	TS8	B1	09A	(23)	01		TD032A TD031A TD033A SPI017 TD036A TD034A SPI016 SPI018 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	
XA326	TQ2	B4	13B	TD031A	00	=		XFER TC03 TO TD03 BL XFER
XA326	TQ2	B4	11B	(27)	01		TBLX20 TC038Q 23 11B 25 12B	
XA326	TQ2	C1	18A	TD032A	00	=		UPDATE TC03 TO TD03 BL DGRMN
XA326	TQ2	C1	19A	(38)	01		TU03A0 TBLM20 40 19A 42 20A	
XA240	TQ2	F1	37B	TD033A	00	=		BYTE 1 XFER BIT TE03 TO TD03
XA240	TQ2	F1	38B	(75)	01		TWBXA0 TE038Q 77 38B 79 39B	
XA124	TQ2	E4	33B	TD034A	00	=		DATA BUS XFER BIT 03 TO TD03
XA124	TQ2	E4	31B	(63)	01		TCB030 TCFDA0 59 31B 61 32B	
XA237	TQ2	B2	09A	TD036A	00	=		TE TO TD BYTE MODE
XA237	TQ2	B2	10A	(14)	01		TE27C0 TBIXA0 18 10A 20 11A	
XA417	DCF	B1	10B	TD04ADX4	00	=		EXT DATA OUTPUT LINE 4
XA417	DCF	B1	13A	(27)	01		TGND4 36 13A	
XA417	DCF	B2	11B	TD04A0X	00	=		
XA417	DCF	B2	12B	(29)	01		TDL4A0 31 12B	
XA229	TDD	E1	19A	TD04BI	00	=		
				()	01		TD0400 40 19A	

DRAWING NUMBER 149019-860 LOGIC UNIT ASSEMBLY NO. 149019 REV G INDEX TD04BN
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
				TD04BN	00 =		
XA229	TDD	EN	20A	()	01	TDC07A 42 20A	
XA229	TDD	EP	17B	TD04BP	00 =		TD REG BIT 04 RESET
XA229	TDD	EP	18A	(35)	01	TDRSEA 38 18A	
XA229	TDD	EQ	18B	TD04BQ	00 =		TD REG BIT 04 SET
XA229	TDD	EQ	19B	(37)	01	TDS04A 39 19B	
XA127	TLD	F1	37B	TD04CD	00 =		JDR04B4 BUSS
XA127	TLD	F1	38B	(75)	01	TD04BQ TDM00 77 38B 79 39B	
XA226	THI	C3	15A	TD04C0	00 =		TD BIT 4 UNLOAD
XA226	THI	C3	16A	(34)	01	TD04BP 36 16A	
XA422	TQ2	B1	12A	TD04SA	00 =		MEMORY DATA INPUT TO TD04
XA422	TQ2	B1	13A	(22)	01	TMDCA0 TD04S0X 24 13A 26 14A	
XA419	DCF	B1	10B	TD04SDX	00 =		YI04CB4 BUSS BIT 04
XA419	DCF	B1	13A	(27)	01	TDCBAA 36 13A	
XA419	DCF	B2	11B	TD04S0X	00 =		
XA419	DCF	B2	12B	(29)	01	TD04BQ 31 12B	
XA228	TS8	C1	17B	TD0400	00 =		TD REG BIT 04 ORED DATA
XA228	TS8	C1	15A	(35)	01	TD041A TD043A SPI018 SPI017 SPI016 TD046A TD044A TD042A 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	
XA224	TQ2	D3	24B	TD041A	00 =		XFER TC04 TO TD04 BL XFER
XA224	TQ2	D3	22B	(45)	01	TC04BQ TBLX20 41 22B 43 23B	
XA326	TQ2	C2	15A	TD042A	00 =		UPDATE TC04 TO TD04 BL DCRMN
XA326	TQ2	C2	16A	(30)	01	TBLM20 TC04BP 34 16A 36 17A	
XA240	TQ2	E4	33B	TD043A	00 =		BYTE 1 XFER BIT TE04 TO TD04
XA240	TQ2	E4	31B	(63)	01	TE04BQ TWSXAO 59 31B 61 32B	

DRAWING NUMBER 149019-860 LOGIC UNIT ASSEMBLY NO. 149019 REV G INDEX TD044A
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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA124	TQ2	F1 37B	TD044A	00 =		
XA124	TQ2	F1 38B	(75)	01	TCB040 TCPDA0 77 38B 79 39B	DATA BUS XFER BIT 04 TO TD04
XA234	TQ2	B3 10B	TD046A	00 =		
XA234	TQ2	B3 08B	(21)	01	TB1XA0 TE28C0 17 08B 19 09B	TE TO TD BYTE MODE
XA417	DCF	B3 15B	TD05ADX4	00 =		
XA417	DCF	B3 13A	(37)	01	TDGND4 36 13A	EXT DATA OUTPUT LINE 5
XA417	DCF	B4 14B	TD05AOX	00 =		
XA417	DCF	B4 13B	(35)	01	TDL5A0 33 13B	
			TD05BI	00 =		
XA229	TDD	FI 16A	()	01	TD0500 34 16A	
			TD05BN	00 =		
XA229	TDD	FN 15A	()	01	TDC07A 30 15A	
XA229	TDD	FP 16B	TD05BP	00 =		TD REG BIT 05 RESET
XA229	TDD	FP 17A	(33)	01	TDRSEA 36 17A	
XA229	TDD	FQ 15B	TD05BQ	00 =		TD REG BIT 05 SET
XA229	TDD	FQ 14B	(31)	01	TDS05A 29 14B	
XA127	TLD	F2 34A	TD05CD	00 =		JDB05B4 BUSS
XA127	TLD	F2 36A	(72)	01	TTDM00 TD05BQ 71 36A 73 36B	
XA226	THI	C4 14B	TD05C0	00 =		TD BIT 5 UNLOAD
XA226	THI	C4 15B	(30)	01	TD05BP 29 15B	
XA422	TQ2	B2 09A	TD05SA	00 =		MEMORY DATA INPUT TO TD05
XA422	TQ2	B2 10A	(14)	01	TMDCA0 TD05SOX 18 10A 20 11A	
XA419	DCF	B3 15B	TD05SDX	00 =		YI05CB4 BUSS
XA419	DCF	B3 13A	(37)	01	TDCBAA 36 13A	

DRAWING NUMBER 149019-860 LOGIC UNIT ASSEMBLY NO. 149019 REV G INDEX TD05S0X
 UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 142

CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA124	TQ2	F1 37B	TD044A	00 =		
XA124	TQ2	F1 38B	(75)	01	TCB040 TCPDA0 77 38B 79 39B	DATA BUS XFER BIT 04 TO TD04
XA234	TQ2	B3 10B	TD046A	00 =		
XA234	TQ2	B3 08B	(21)	01	TB1XA0 TE28C0 17 08B 19 09B	TE TO TD BYTE MODE
XA417	DCF	B3 15B	TD05ADX4	00 =		
XA417	DCF	B3 13A	(37)	01	TDGND4 36 13A	EXT DATA OUTPUT LINE 5
XA417	DCF	B4 14B	TD05AOX	00 =		
XA417	DCF	B4 13B	(35)	01	TDL5A0 33 13B	
			TD05BI	00 =		
XA229	TDD	FI 16A	()	01	TD0500 34 16A	
			TD05BN	00 =		
XA229	TDD	FN 15A	()	01	TDC07A 30 15A	
XA229	TDD	FP 16B	TD05BP	00 =		TD REG BIT 05 RESET
XA229	TDD	FP 17A	(33)	01	TDRSEA 36 17A	
XA229	TDD	FQ 15B	TD05BQ	00 =		TD REG BIT 05 SET
XA229	TDD	FQ 14B	(31)	01	TDS05A 29 14B	
XA127	TLD	F2 34A	TD05CD	00 =		JDB05B4 BUSS
XA127	TLD	F2 36A	(72)	01	TTDM00 TD05BQ 71 36A 73 36B	
XA226	THI	C4 14B	TD05CO	00 =		TD BIT 5 UNLOAD
XA226	THI	C4 15B	(30)	01	TD05BP 29 15B	
XA422	TQ2	B2 09A	TD05SA	00 =		MEMORY DATA INPUT TO TD05
XA422	TQ2	B2 10A	(14)	01	TMDCA0 TD05S0X 18 10A 20 11A	
XA419	DCF	B3 15B	TD05SDX	00 =		YI05CB4 BUSS
XA419	DCF	B3 13A	(37)	01	TDCBAA 36 13A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD06BQ
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 143

CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM. DESIGNATION	FACTOR	COMMENT
XA229	TDD	GQ 26B	TD06BQ	00 =		TD REG BIT 06 SET
XA229	TDD	GQ 27B	(49)	01	YDS06A 51 27B	
XA127	TLD	F3 35A	TD06CD	00 =		JDB06B4 BUSS
XA127	TLD	F3 34B	(59)	01	YTDH00 TD06BQ 65 34B 74 35B	
XA226	THI	D3 21A	TD06C0	00 =		TD BIT 6 UNLOAD
XA226	THI	D3 22A	(48)	01	TD06BP 50 22A	
XA422	TQ2	B3 10B	TD06SA	00 =		MEMORY DATA INPUT TO TD06
XA422	TQ2	B3 08B	(21)	01	YMDCA0 TD06S0X 17 08B 19 09B	
XA419	DCF	B5 16A	TD06SDX	00 =		YI06CB4 BUSS BIT 06
XA419	DCF	B5 13A	(41)	01	YDCBAA 36 13A	
XA419	DCF	B6 15A	TD06S0X	00 =		
XA419	DCF	B6 14A	(40)	01	YD06BQ 38 14A	
XA228	TS8	D1 25B	TD0600	00 =		TD REG BIT 06 QRED DATA
XA228	TS8	D1 23B	(47)	01	YD061A TD063A SPI016 SPI018 SPI017 TD066A TD064A TD062A 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	
XA328	TQ2	D2 21A	TD061A	00 =		XFER TC06 TO TD06 BI XFER
XA328	TQ2	D2 22A	(46)	01	TC06BQ TBLX30 48 22A 50 23A	
XA224	TQ2	E4 33B	TD062A	00 =		UPDATE TC06 TO TD06 BI DCRMV
XA224	TQ2	E4 31B	(63)	01	TU06A0 TBLM30 59 31B 61 32B	
XA240	TQ2	E2 28A	TD063A	00 =		BYTE 1 XFER BIT TE06 TO TD06
XA240	TQ2	E2 29A	(60)	01	YWBXAO TE06BQ 62 29A 64 30A	
XA124	TQ2	F3 35A	TD064A	00 =		DATA BUS XFER BIT06 TO TD06
XA124	TQ2	F3 34B	(69)	01	YCB060 TCPDAO 65 34B 74 35B	
XA237	TQ2	C4 19B	TD066A	00 =		TE TO TD BYTE MODE
XA237	TQ2	C4 17B	(39)	01	TE30C0 TBIXAO 35 17B 37 18B	

DRAWING NUMBER 149019-860 LOGIC UNIT ASSEMBLY NO. 149019 REV G INDEX TD07ADX4
 UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 144

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA417	DCF	B7	10A		TD07ADX4	00	=		EXT DATA OUTPUT LINE 7
XA417	DCF	B7	13A		(23)	01		TDGNOA 36 13A	
XA417	DCF	B8	11A		TD07A0X	00	=		
XA417	DCF	B8	12A		(30)	01		TDL7A0 34 12A	
					TD07BI	00	=		
XA229	TDD	HI	22A		()	01		TD0700 48 22A	
					TD07BN	00	=		
XA229	TDD	HN	21A		()	01		TDC17A 46 21A	
XA229	TDD	HP	24B		TD07BP	00	=		TD REG BIT 07 RESET
XA229	TDD	HP	23A		(45)	01		TDRSEA 50 23A	
XA229	TDD	HQ	23B		TD07BQ	00	=		TD REG BIT 07 SET
XA229	TDD	HQ	22B		(43)	01		TDS07A 41 22B	
XA127	TLD	F4	39A		TD07CD	00	=		JDB07B4 BUSS
XA127	TLD	F4	37A		(80)	01		TTDM10 TD07BQ 76 37A 78 38A	
XA226	THI	D4	22B		TD07CO	00	=		TD BIT 7 UNLOAD
XA226	THI	D4	23B		(46)	01		TD07BP 41 23B	
XA422	TQ2	B4	13B		TD07SA	00	=		MEMORY DATA INPUT TO TD07
XA422	TQ2	B4	11B		(27)	01		TMDCA0 TD07SOX 23 11B 25 12B	
XA419	DCF	B7	10A		TD07SDX	00	=		YI07CB4 BUSS BIT 07
XA419	DCF	B7	13A		(23)	01		TDCBAA 36 13A	
XA419	DCF	B8	11A		TD07SOX	00	=		
XA419	DCF	B8	12A		(30)	01		TD07BQ 34 12A	
XA227	TS8	D1	25B		TD0700	00	=		TD REG BIT 07 ORED DATA
XA227	TS8	D1	23B		(47)	01		TD073A TD076A SPI016 SPI018 SPI017 TD074A TD071A TD072A 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD071A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 145

CONNECTOR	TEST POINT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA328	TQ2	D3	24B	TD071A	00	=		
XA328	TQ2	D3	22B	(45)	01		TBLX30 TC07BQ 41 22B 43 23B	XFER TC07 TO TD07 BL XFER
XA328	TQ2	D4	27B	TD072A	00	=		
XA328	TQ2	D4	25B	(51)	01		TBLM30 TC07BP 47 25B 49 26B	UPDATE TC07 TO TD07 BI DCRMN
XA240	TQ2	E1	31A	TD073A	00	=		
XA240	TQ2	E1	32A	(66)	01		TWBXA0 TE07BQ 68 32A 70 33A	BYTE 1 XFER BIT TE07 TO TD07
XA124	TQ2	F4	39A	TD074A	00	=		
XA124	TQ2	F4	37A	(80)	01		TCB070 TCPDA0 76 37A 78 38A	DATA BUS XFER BIT07 TO TD07
XA237	TQ2	D4	27B	TD076A	00	=		
XA237	TQ2	D4	25B	(51)	01		TB1XA0 TE31C0 47 25B 49 26B	TE TO TD BYTE MODE
				TD088I	00	=		
XA229	TDD	J1	32A	()	01		TD0800 68 32A	
				TD088N	00	=		
XA229	TDD	JN	33A	()	01		TDC85A 70 33A	
XA229	TDD	JP	31B	TD088P	00	=		
XA229	TDD	JP	31A	(59)	01		TDRSEA 66 31A	TD REG BIT 08 RESET
XA229	TDD	JQ	32B	TD088Q	00	=		
XA229	TDD	JQ	33B	(61)	01		TDS08A 63 33B	TD REG BIT 08 SET
XA126	TLD	A1	05A	TD08CD	00	=		
XA126	TLD	A1	06A	(06)	01		TTDM10 TD08BQ 08 06A 10 07A	JDB08B4 BUSS
XA226	THI	E3	28A	TD08C0	00	=		
XA226	THI	E3	29A	(60)	01		TD08BP 62 29A	TD BIT 8 UNLOAD
XA422	TQ2	C1	18A	TD08SA	00	=		
XA422	TQ2	C1	19A	(38)	01		TMDCA0 TD08SOX 40 19A 42 20A	MEMORY DATA INPUT TO TD08

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD08SDX
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 146

CONNECTOR	INPUT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG- NATION	FACTOR	COMMENT
XA419	DCF	C1	25B	TD08SDX	00	=		
XA419	DCF	CI	29A	(46)	01		TDCBAA 52 29A	YI08CB4 BUSS BIT 08
XA419	DCF	C2	26B	TD08SOX	00	=		
XA419	DCF	C2	27B	(47)	01		TD088Q 49 27B	
XA228	TS8	E1	31B	TD0800	00	=		TD REG BIT 08 ORED DATA
XA228	TS8	E1	29B	(59)	01		TD081A SPI016 SPI017 SPI018 TD083A TD086A TD084A TD082A 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	
XA328	TQ2	E1	31A	TD081A	00	=		XFER TC08 TO TD08 BI XFER
XA328	TQ2	E1	32A	(66)	01		TBLX40 TC088Q 68 32A 70 33A	
XA206	TT3	D3	27B	TD082A	00	=		UPDATE TC08 TO TD08 BI DCRM
XA206	TT3	D3	24B	(51)	01		TU0820 TU081A TBLDAO 45 24B 47 25B 49 26B	
XA240	TQ2	D4	27B	TD083A	00	=		BYTE 2 XFER BIT TE08 TO TD08
XA240	TQ2	D4	25B	(51)	01		TE088Q TWDXAO 47 25B 49 26B	
XA123	TQ2	A1	05A	TD084A	00	=		DATA BUS XFER BIT 08 TO TD08
XA123	TQ2	A1	06A	(06)	01		TCPDAO TCB080 08 06A 10 07A	
XA235	TQ2	A1	05A	TD086A	00	=		INPUT BYTE 2 TE00 TO TD08
XA235	TQ2	A1	06A	(06)	01		TB2XAO TE24C0 08 06A 10 07A	
				TD098I	00	=		
XA229	TDD	KI	29A	()	01		TD0900 62 29A	
				TD098N	00	=		
XA229	TDD	KN	28A	()	01		TDC85A 60 28A	
XA229	TDD	KP	30B	TD098P	00	=		TD REG BIT 09 RESET
XA229	TDD	KP	30A	(57)	01		TDRSEA 64 30A	
XA229	TDD	KQ	29B	TD098Q	00	=		TD REG BIT 09 SET
XA229	TDD	KQ	28B	(55)	01		TDS09A 53 28B	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD09CD
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 147

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA126	TLD	A2	02B	TD09CD	00	=		
XA126	TLD	A2	04A	(01)	01		TD09BQ TTDMI0 04 04A 05 03B	JDB09B4 BUSS
XA226	THI	E4	28B	TD09C0	00	=		
XA226	THI	E4	29B	(56)	01		TD09BP 55 29B	TD BIT 9 UNLOAD
XA422	TQ2	C2	15A	TD09SA	00	=		
XA422	TQ2	C2	16A	(30)	01		TMDCA0 TD09SOX 34 16A 36 17A	MEMORY DATA INPUT TO TD09
XA419	DCF	C3	30B	TD09SDX	00	=		
XA419	DCF	C3	29A	(55)	01		YDCBAA 52 29A	YI09CB4 BUSS BIT 09
XA419	DCF	C4	29B	TD09SOX	00	=		
XA419	DCF	C4	28B	(56)	01		TD09BQ 51 28B	
XA227	TS8	E1	31B	TD0900	00	=		
XA227	TS8	E1	29B	(59)	01		TD092A SPI018 SPI016 SPI017 TD096A TD093A TD094A TD091A 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	TD REG BIT 09 QRED DATA
XA328	TQ2	E4	33B	TD091A	00	=		
XA328	TQ2	E4	31B	(63)	01		TBLX40 TC09BQ 59 31B 61 32B	XFER TC09 TO TD09 BL XFER
XA230	TQ2	F4	39A	TD092A	00	=		
XA230	TQ2	F4	37A	(80)	01		TU09A0 TBL0A0 76 37A 78 38A	UPDATE TC09 TO TD09 BL DCRMN
XA240	TQ2	D3	24B	TD093A	00	=		
XA240	TQ2	D3	22B	(45)	01		TE09BQ TMOXA0 41 22B 43 23B	BYTE 2 XFER BIT TE09 TO TD09
XA123	TQ2	A2	02B	TD094A	00	=		
XA123	TQ2	A2	04A	(01)	01		TCB090 TCPDB0 04 04A 05 03B	DATA BUS XFER BIT 09 TO TD09
XA237	TQ2	A3	04B	TD096A	00	=		
XA237	TQ2	A3	02A	(09)	01		TB2XA0 TE25C0 03 02A 07 03A	INPUT BYTE 2 TE01 TO TD09
XA229	TDD	L1	38B	TD10BI	00	=		
XA229	TDD	L1		()	01		TDI000 77 38B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD10BN
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 148

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM DESIGN NATOR	FACTOR	COMMENT
			AND	OR				
XA229	TDD	LN	39B		TD10BN ()	00 = 01	TDC85A 79 39B	
XA229	TDD	LP	37A		TD10BP (76)	00 = 01	TDRSDA 75 37B	TD REG BIT 10 RESET
XA229	TDD	LQ	38A		TD10BQ (78)	00 = 01	TDS10A 80 39A	TD REG BIT 10 SET
XA126	TLD	A3	04B		TD10CD (09)	00 = 01	TTDM10 TD10BQ 03 02A 07 03A	JOB10B4 BUSS
XA226	THI	F3	34B		TD10C0 (70)	00 = 01	TD10BP 69 35B	TD BIT 10 UNLOAD
XA422	TQ2	C3	16B		TD10SA (33)	00 = 01	TMDCAO TD10SOX 29 14B 31 15B	MEMORY DATA INPUT TO TD10
XA419	DCF	C5	31B		TD10SDX (60)	00 = 01	TDCBAA 52 29A	Y110CR4 BUSS
XA419	DCF	C6	31A		TD10SOX (57)	00 = 01	TD10BQ 54 30A	
XA228	TS8	F1	37A		TD1000 (76)	00 = 01	TD101A TD102A TD107A SPI018 SPI017 TD103A TD106A TD104A 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	TD REG BIT 10 ORED DATA
XA328	TQ2	F1	37B		TD101A (75)	00 = 01	TC10BQ TBLX40 77 38B 79 39B	XFER TC10 TO TD10 BI XFER
XA326	TQ2	F1	37B		TD102A (75)	00 = 01	TC10BP TBLDAO 77 38B 79 39B	UPDATE TC10 TO TD10 BI DCRMN
XA240	TQ2	D2	21A		TD103A (46)	00 = 01	TWDXA0 TE10BQ 48 22A 50 23A	BYTE 2 XFER BIT TE10 TO TD10

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD104A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 149

CONNECTOR	GROUP TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG- NATOR	FACTOR	COMMENT
XA123	TQ2	A3	04B	TD104A	00	=		
XA123	TQ2	A3	02A	(09)	01		YCPDB0 YCB100 03 02A 07 03A	DATA BUS XFER BIT 10 TO TD10
XA234	TQ2	A4	07B	TD106A	00	=		
XA234	TQ2	A4	05B	(15)	01		YE26C0 YB2XA0 11 05B 13 06B	INPUT BYTE 2 TE02 TO TD10
XA423	TQ2	C3	16B	TD107A	00	=		
XA423	TQ2	C3	14B	(33)	01		KMR17S YDAXA0 29 14B 31 15B	XFR KMR17 TO TD10
XA229	TDD	MI	36A	TD118I	00	=		
XA229	TDD	MI	36A	()	01		YD1100 71 36A	
XA229	TDD	MN	34A	TD118N	00	=		
XA229	TDD	MN	34A	()	01		YDCB5A 72 34A	
XA229	TDD	MP	35A	TD118P	00	=		
XA229	TDD	MP	36B	(69)	01		YDRSDA 73 36B	TD REG BIT 11 RESET
XA229	TDD	MQ	35B	TD118Q	00	=		
XA229	TDD	MQ	34B	(74)	01		YDS11A 65 34B	TD REG BIT 11 SET
XA126	TLD	A4	07B	TD11CD	00	=		
XA126	TLD	A4	05B	(15)	01		YDMD10 YDI1BQ 11 05B 13 06B	JDB11B4 BUSS
XA226	THI	F4	34A	TD11C0	00	=		
XA226	THI	F4	35A	(72)	01		YDI1BP 74 35A	TD BIT 11 UNLOAD
XA422	TQ2	C4	19B	TD11SA	00	=		
XA422	TQ2	C4	17B	(39)	01		YMDCB0 YDI1SOX 35 17B 37 18B	MEMORY DATA INPUT TO TD11
XA419	DCF	C7	25A	TD11SDX	00	=		
XA419	DCF	C7	29A	(43)	01		YDCBAA 52 29A	YI11CB4 BUSS
XA419	DCF	C8	26A	TD11SOX	00	=		
XA419	DCF	C8	28A	(48)	01		YDI1BQ 50 28A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD1100
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 150

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIG- NATOR	FACTOR	COMMENT
XA424	TS8	E1	31B	TD1100	00 =		TD REG BIT 11 QRED DATA
XA424	TS8	E1	29B	(59)	01	TD111A TD113A TD116A TD114A TD117A SPI033 SPI034 SPI028 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	
XA328	TQ2	F4	39A	TD111A	00 =		XFER TC10 TO TD10 MODE XFER
XA328	TQ2	F4	37A	(80)	01	TC11C0 TMFTA0 76 37A 78 38A	
XA240	TQ2	D1	24A	TD113A	00 =		BYTE 2 XFER BIT TE11 TO TD11
XA240	TQ2	D1	25A	(52)	01	TWDXAO TE11BQ 54 25A 56 26A	
XA123	TQ2	A4	07B	TD114A	00 =		DATA BUS XFER BIT 11 TO TD11
XA123	TQ2	A4	05B	(15)	01	TCB110 TCPDB0 11 05B 13 06B	
XA235	TQ2	B2	09A	TD116A	00 =		INPUT BYTE 2 TE03 TO TD11
XA235	TQ2	B2	10A	(14)	01	TE27C0 TB2XAO 18 10A 20 11A	
XA423	TQ2	C4	19B	TD117A	00 =		XFER KMR18 TO TD11
XA423	TQ2	C4	17B	(39)	01	KMR18 TDAXAO 35 17B 37 18B	
				TD128I	00 =		
XA223	TDD	AI	06A	()	01	TD1200 08 06A	
				TD128N	00 =		
XA223	TDD	AN	07A	()	01	TDC85A 10 07A	
XA223	TDD	AP	05B	TD128P	00 =		TD REG BIT 12 RESET
XA223	TDD	AP	05A	(11)	01	TDRSDA 06 05A	
XA223	TDD	AQ	06B	TD128Q	00 =		TD REG BIT 12 SET
XA223	TDD	AQ	07B	(13)	01	TDS12A 15 07B	
XA126	TLD	B1	12A	TD12CD	00 =		IDB1284 BUSS
XA126	TLD	B1	13A	(22)	01	TTDM10 TD12BQ 24 13A 26 14A	
XA226	THI	A5	04B	TD12C0	00 =		TD BIT 12 UNLOAD
XA226	YHI	A5	05B	(07)	01	TD128P 09 05B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD12SA
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 151

CONNECTOR	TEST POINT	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA422	TQ2	D1	24A	TD12SA	00 =		
XA422	TQ2	D1	25A	(52)	01	YD12C80 YD12S0X 54 25A 56 26A	MEMORY DATA INPUT TO TD 12
XA419	DCF	D1	32B	TD12SDX	00 =		
XA419	DCF	D1	36A	(65)	01	YDCBAA 72 36A	YI12CB4 BUSS
XA419	DCF	D2	33B	TD12S0X	00 =		
XA419	DCF	D2	34B	(69)	01	YD12C0 71 34B	
XA424	TS8	F1	37A	TD1200	00 =		
XA424	TS8	F1	36A	(76)	01	YD121A YD123A YD124A TD126A TD127A SPI034 SPI028 SPI033 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	TD REG BIT 12 ORED DATA
XA219	TQ2	F2	34A	TD121A	00 =		
XA219	TQ2	F2	36A	(72)	01	YHFTA0 YC12BQ 71 36A 73 36B	XFER IC12 TO TD12 MODE XFER
XA240	TQ2	C4	19B	TD123A	00 =		
XA240	TQ2	C4	17B	(39)	01	YE12BQ YWDXA0 35 17B 37 18B	BYTE 2 XFER BIT TE12 TO TD12
XA123	TQ2	B1	12A	TD124A	00 =		
XA123	TQ2	B1	13A	(22)	01	YCB120 YCP0B0 24 13A 26 14A	DATA BUS XFER BIT 12 TO TD12
XA237	TQ2	B4	13B	TD126A	00 =		
XA237	TQ2	B4	11B	(27)	01	YB2XA0 YE28C0 23 11B 25 12B	INPUT BYTE 3 TE04 TO TD12
XA423	TQ2	D1	24A	TD127A	00 =		
XA423	TQ2	D1	25A	(52)	01	KMR19S YDAXA0 54 25A 56 26A	XFR KMR17 TO TD12
				TD138I	00 =		
XA223	TDD	B1	03B	()	01	YD1300 05 03B	
				TD138N	00 =		
XA223	TDD	BN	02B	()	01	YDC85A 01 02B	
XA223	TDD	BP	04B	TD138P	00 =		
XA223	TDD	BP	04A	(09)	01	YDRSDA 04 04A	TD REG BIT 13 RESET

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD13BQ
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 152

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA223	TDD	BQ	03A	TD13BQ	00	=		TD REG BIT 13 SET
XA223	TDD	BQ	02A	(07)	01		TD513A 03 02A	
XA126	TLD	B2	09A	TD13CD	00	=		JDB13B4 BUSS
XA126	TLD	B2	10A	(14)	01		TTDM10 TD13BQ 18 10A 20 11A	
XA226	THI	A6	06B	TD13C0	00	=		TD BIT 13 UNLOAD
XA226	THI	A6	07B	(10)	01		TD13BP 15 07B	
XA422	TQ2	D2	21A	TD13SA	00	=		MEMORY DATA INPUT TO TD13
XA422	TQ2	D2	22A	(46)	01		TMDCB0 TD13SOX 48 22A 50 23A	
XA419	DCF	D3	37B	TD13SDX	00	=		YI13CB4 BUSS BIT 13
XA419	DCF	D3	36A	(78)	01		TDCBAA 72 36A	
XA419	DCF	D4	36B	TD13SOX	00	=		
XA419	DCF	D4	35B	(75)	01		TD13BQ 73 35B	
XA222	TS8	A1	05B	TD1300	00	=		TD REG BIT 13 ORED DATA
XA222	TS8	A1	02B	(11)	01		TD131A TD133A TD136A TD137A SPI018 TD134A SPI017 TD132A 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	
XA327	TT3	D1	23A	TD131A	00	=		XFER TC13 TO TD13 MODE XFER
XA327	TT3	D1	24A	(50)	01		TC13BQ TC11BP TMFTA0 52 24A 54 25A 56 26A	
XA327	TT3	D2	23B	TD132A	00	=		UPDATE TC13 TO TD13 BYTE TOG
XA327	TT3	D2	22B	(43)	01		TC11BQ TC13BP TMFTA0 41 22B 46 21A 48 22A	
XA240	TQ2	C3	16B	TD133A	00	=		BYTE 2 XFER BIT TE13 TO TD13
XA240	TQ2	C3	14B	(33)	01		TWDXA0 TE13BQ 29 14B 31 15B	
XA123	TQ2	B2	09A	TD134A	00	=		DATA BUS XFER BIT 13 TO TD13
XA123	TQ2	B2	10A	(14)	01		TCB130 TCPDB0 18 10A 20 11A	
XA237	TQ2	C2	15A	TD136A	00	=		INPUT BYTE 2 TE05 TO TD13
XA237	TQ2	C2	16A	(30)	01		TE29C0 TB2XA0 34 16A 36 17A	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD137A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 153

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	RESISTOR	FACTOR	COMMENT
XA423	TQ2	D2	21A	TD137A	00	=		
XA423	TQ2	D2	22A	(46)	01		KMR20S. TDAXAO 48 22A 50 23A	XFER KMR20 TO TD13
				TD148I	00	=		
XA223	TDD	CI	13A	()	01		YDI400 24 13A	
				TD148N	00	=		
XA223	TDD	CN	14A	()	01		YDC84A 26 14A	
XA223	TDD	CP	11B	TD148P	00	=		TD REG BIT 14 RESET
XA223	TDD	CP	12A	(23)	01		YDRSDA 22 12A	
XA223	TDD	CQ	12B	TD148Q	00	=		TD REG BIT 14 SET
XA223	TDD	CQ	13B	(25)	01		YDS14A 27 13B	
XA126	TLD	B3	10B	TD14CD	00	=		JDB14B4 BUSS
XA126	TLD	B3	08B	(21)	01		YDI48Q YIDM20 17 08B 19 09B	
XA226	THI	B5	10B	TD14C0	00	=		TD REGISTER BIT 14 UNLOAD-0
XA226	THI	B5	11B	(19)	01		YDI48P 21 11B	
XA422	TQ2	D3	24B	TD14SA	00	=		MEMORY DATA INPUT TO TD14
XA422	TQ2	D3	22B	(45)	01		YMDCB0 YDI450X 41 22B 43 23B	
XA419	DCF	D5	38B	TD14SDX	00	=		YI14CB4 BUSS
XA419	DCF	D5	36A	(80)	01		YDCBAA 72 36A	
XA419	DCF	D6	38A	TD14S0X	00	=		
XA419	DCF	D6	37A	(76)	01		YDI48Q 74 37A	
XA222	TS8	B1	11B	TD1400	00	=		TD REG BIT 14 ORED DATA
XA222	TS8	B1	09A	(23)	01		YDI41A YDI42A TD143A SPI017 SPI018 TD144A TD147A TD146A 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	
XA314	TQ2	B1	12A	TD141A	00	=		XFER IC14 TO TD14 CA XFER
XA314	TQ2	B1	13A	(22)	01		YCAX10 YCI48Q 24 13A 26 14A	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD142A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 154

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA314	TQ2	B2	09A	TD142A	00 =			
XA314	TQ2	B2	10A	(14)	01	TU14A0 TCAM10 18 10A 20 11A	UPDATE TC14 TO TD14 CA INCRE	
XA240	TQ2	C2	15A	TD143A	00 =			
XA240	TQ2	C2	16A	(30)	01	TE148Q TWDXA0 34 16A 36 17A	BYTE 2 XFER BIT TE14 TO TD14	
XA123	TQ2	B3	10B	TD144A	00 =			
XA123	TQ2	B3	08B	(21)	01	TCPD80 TCB140 17 08B 19 09B	DATA BUS XFER BIT 14 TO TD14	
XA235	TQ2	C4	19B	TD146A	00 =			
XA235	TQ2	C4	17B	(39)	01	TE30C0 TB2XA0 35 17B 37 18B	INPUT BYTE 2 TE06 TO TD14	
XA208	TQ2	A1	05A	TD147A	00 =			
XA208	TQ2	A1	06A	(06)	01	TC148Q TDAXA0 08 06A 10 07A	CA FIELD TO TD FOR DATA ADD	
				TD15BI	00 =			
XA223	TDD	DI	10A	()	01	TD1500 18 10A		
				TD15BN	00 =			
XA223	TDD	DN	09A	()	01	TDC84A 14 09A		
XA223	TDD	DP	10B	TD158P	00 =			
XA223	TDD	DP	11A	(21)	01	TDRSDA 20 11A	TD REG BIT 15 RESET	
XA223	TDD	DQ	09B	TD158Q	00 =			
XA223	TDD	DQ	08B	(19)	01	TDS15A 17 08B	TD REG BIT 15 SET	
XA126	TLD	B4	13B	TD15CD	00 =			
XA126	TLD	B4	11B	(27)	01	TTDM20 TD15BQ 23 11B 25 12B	JDB1584 BUSS	
XA226	THI	B6	12B	TD15C0	00 =			
XA226	THI	B6	13B	(26)	01	TD158P 27 13B	TD REGISTER BIT 15 UNLOAD=0	
XA422	TQ2	D4	27B	TD15SA	00 =			
XA422	TQ2	D4	25B	(51)	01	TMDC80 TD15SOX 47 25B 49 26B	MEMORY DATA INPUT TO TD15	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD15SDX
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 155

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	RESIG. FACTOR	FACTOR	COMMENT
XA419	DCF	D7	33A	TD15SDX	00	=		
XA419	DCF	D7	36A	(61)	01		YDCBAA 72 36A	BUSS
XA419	DCF	D8	34A	TD15SOX	00	=		
XA419	DCF	D8	35A	(68)	01		YD15C0 70 35A	
XA221	TS8	A1	05B	TD1500	00	=		TD REG BIT 15 ORED DATA
XA221	TS8	A1	02B	(11)	01		TD152A TD153A TD156A SPI015 SPI014 TD154A TD157A TD151A 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	
XA218	TQ2	A4	07B	TD151A	00	=		XFER TC15 TO TD15 CA XFER
XA218	TQ2	A4	05B	(15)	01		TC15BQ TCAX10 11 05B 13 06B	
XA218	TQ2	E4	33B	TD152A	00	=		UPDATE TC15 TO TD15 CA INCRE
XA218	TQ2	E4	31B	(63)	01		TCAM10 TUI5A0 59 31B 61 32B	
XA240	TQ2	C1	18A	TD153A	00	=		BYTE 2 XFER BIT TE15 TO TD15
XA240	TQ2	C1	19A	(38)	01		TE15BQ TWDXA0 40 19A 42 20A	
XA123	TQ2	B4	13B	TD154A	00	=		DATA BUS XFER BIT 15 TO TD15
XA123	TQ2	B4	11B	(27)	01		TCPDB0 TCBI50 23 11B 25 12B	
XA237	TQ2	E1	31A	TD156A	00	=		INPUT BYTE 2 TE07 TO TD15
XA237	TQ2	E1	32A	(66)	01		TE31C0 TB2XA0 68 32A 70 33A	
XA218	TQ2	A3	04B	TD157A	00	=		CA FIELD TO TD FOR DATA ADD
XA218	TQ2	A3	02A	(09)	01		TDAXA0 TC15BQ 03 02A 07 03A	
				TD16BI	00	=		
XA223	TDD	E1	19A	()	01		YD1600 40 19A	
				TD16BN	00	=		
XA223	TDD	EN	20A	()	01		YDC67A 42 20A	
XA223	TDD	EP	17B	TD16BP	00	=		TD REG BIT 16 RESET
XA223	TDD	EP	18A	(35)	01		YDRSBA 38 18A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD16BQ
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 156

CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA223	TDD	EQ 18B	TD168Q	00 =		TD REG BIT 16 SET
XA223	TDD	EQ 19B	(37)	01	TDS16A 39 19B	
XA126	TLD	C1 18A	TD16CD	00 =		JDB16B4 BUSS
XA126	TLD	C1 19A	(38)	01	TTDM20 TD168Q 40 19A 42 20A	
XA226	THI	C5 16B	TD16C0	00 =		TD REGISTER BIT 16 UNLOAD-0
XA226	THI	C5 17B	(31)	01	TD168P 33 17B	
XA422	TQ2	E1 31A	TD16SA	00 =		MEMORY DATA INPUT TO TD16
XA422	TQ2	E1 32A	(66)	01	TMDCB0 TD16S0X 68 32A 70 33A	
XA416	DCF	C1 25B	TD16SDX	00 =		YII6CB4 BUSS
XA416	DCF	C1 29A	(46)	01	TDCBAA 52 29A	
XA416	DCF	C2 26B	TD16S0X	00 =		
XA416	DCF	C2 27B	(47)	01	TD16C0 49 27B	
XA222	TS8	C1 17B	TD1600	00 =		TD REG BIT 16 ORED DATA
XA222	TS8	C1 15A	(35)	01	TD161A SPI017 SPI016 SPI018 TD163A TD164A TD166A TD162A 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	
XA218	TQ2	C4 19B	TD161A	00 =		XFER TC16 TO TD16 CA XFER
XA218	TQ2	C4 17B	(39)	01	TCAX10 TC168Q 35 17B 37 18B	
XA218	TQ2	C3 16B	TD162A	00 =		UPDATE TC16 TO TD16 CA INCRE
XA218	TQ2	C3 14B	(33)	01	TC168P TCAM10 29 14B 31 15B	
XA240	TQ2	B4 13B	TD163A	00 =		BYTE 3 XFER BIT TE16 TO TD16
XA240	TQ2	B4 11B	(27)	01	TE168Q TWDXA0 23 11B 25 12B	
XA123	TQ2	C1 18A	TD164A	00 =		DATA BUS XFER BIT 16 TO TD16
XA123	TQ2	C1 19A	(38)	01	TCB160 TCPD80 40 19A 42 20A	
XA234	TQ2	A1 05A	TD166A	00 =		INPUT BYTE 3 TE00 TO TD16
XA234	TQ2	A1 06A	(06)	01	TB3XA0 TE24C0 08 06A 10 07A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD17BI
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA223	TDD	FI	16A	TD17BI ()	00 =			
					01		TD1700 34 16A	
XA223	TDD	FN	15A	TD17BN ()	00 =			
					01		TDC67A 30 15A	
XA223	TDD	FP	16B	TD17BP (33)	00 =			TD REG BIT 17 RESET
XA223	TDD	FP	17A		01		YDRSBA 36 17A	
XA223	TDD	FQ	15B	TD17BQ (31)	00 =			TD REG BIT 17 SET
XA223	TDD	FQ	14B		01		YDS17A 29 14B	
XA126	TLD	C2	15A	TD17CD (30)	00 =			JDB17B4 BUSS
XA126	TLD	C2	16A		01		YD17BQ YDM20 34 16A 36 17A	
XA226	THI	C6	18B	TD17CO (42)	00 =			TD REGISTER BIT 17 UNLOAD-0
XA226	THI	C6	19B		01		YD17BP 39 19B	
XA422	TQ2	E2	28A	TD17SA (60)	00 =			MEMORY DATA INPUT TO TD17
XA422	TQ2	E2	29A		01		YMDCB0 YDI7S0X 62 29A 64 30A	
XA416	DCF	C3	30B	TD17SDX (55)	00 =			YI17CB4 BUSS
XA416	DCF	C3	29A		01		YDCBAA 52 29A	
XA416	DCF	C4	29B	TD17S0X (56)	00 =			
XA416	DCF	C4	28B		01		YD17CO 51 28B	
XA221	TS8	B1	11B	TD1700 (23)	00 =			TD REG BIT 17 ORED DATA
XA221	TS8	B1	09A		01		SPI015 SPI016 YD173A SPI014 TD176A TD174A TD171A TD172A 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	
XA218	TQ2	B3	10B	TD171A (21)	00 =			XFER TC17 TO TD17 CA XFER
XA218	TQ2	B3	08B		01		YCAC20 YCI7B0 17 08B 19 09B	
XA218	TQ2	B4	13B	TD172A (27)	00 =			UPDATE TC17 TO TD17 CA INCRE
XA218	TQ2	B4	11B		01		YCAM20 YUI7A0 23 11B 25 12B	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD173A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 158

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA240	TQ2	B3	10B	TD173A	00	#		
XA240	TQ2	B3	08B	(21)	01		TWDXC0 TE17BQ 17 08B 19 09B	BYTE 3 XFER BIT TE17 TO TD17
XA123	TQ2	C2	15A	TD174A	00	=		
XA123	TQ2	C2	16A	(30)	01		TCPOB0 TCB170 34 16A 36 17A	DATA BUS XFER BIT 17 TO TD17
XA235	TQ2	A3	04B	TD176A	00	=		
XA235	TQ2	A3	02A	(09)	01		TE25C0 TB3XAO 03 02A 07 03A	INPUT BYTE 3 TE01 TO TD17
XA223	TDD	GI	25A	TD188I	00	=		
XA223	TDD	GI	25A	()	01		TD1800 54 25A	
XA223	TDD	GN	26A	TD188N	00	=		
XA223	TDD	GN	26A	()	01		TDC83A 56 26A	
XA223	TDD	GP	25B	TD188P	00	=		
XA223	TDD	GP	24A	(47)	01		TDRSBA 52 24A	TD REG BIT 18 RESET
XA223	TDD	GQ	26B	TD188Q	00	=		
XA223	TDD	GQ	27B	(49)	01		TDS18A 51 27B	TD REG BIT 18 SET
XA126	TLD	C3	16B	TD18CD	00	=		
XA126	TLD	C3	14B	(33)	01		TTDM20 TD18BQ 29 14B 31 15B	IDB18B4 BUSS
XA226	THI	D5	24B	TD18C0	00	=		
XA226	THI	D5	25B	(43)	01		TD188P 45 25B	TD REGISTER BIT 18 UNLOAD=0
XA422	TQ2	E3	30B	TD18SA	00	=		
XA422	TQ2	E3	28B	(57)	01		TMDCB0 TD18SOX 53 28B 55 29B	MEMORY DATA INPUT TO TD18
XA416	DCF	C5	31B	TD18SDX	00	=		
XA416	DCF	C5	29A	(60)	01		TDCBAA 52 29A	YI18CB4 BUSS BIT 18
XA416	DCF	C6	31A	TD18SOX	00	=		
XA416	DCF	C6	30A	(57)	01		TD18C0 54 30A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD1800
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 159

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA222	TS8	D1	25B	TD1800	00 =		
XA222	TS8	D1	23B	(47)	01	TD181A TD182A SPI018 SPI017 TD186A TD183A TD184A SPI016 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	TD REG BIT 18 ORED DATA
XA314	TQ2	E1	31A	TD181A	00 =		
XA314	TQ2	E1	32A	(66)	01	TCAX20 TC188Q 68 32A 70 33A	XFER TC18 TO TD18 CA XFER
XA314	TQ2	E2	28A	TD182A	00 =		
XA314	TQ2	E2	29A	(60)	01	TCAM20 TUI8A0 62 29A 64 30A	UPDATE TC18 TO TD18 CA INCRE
XA240	TQ2	B2	09A	TD183A	00 =		
XA240	TQ2	B2	10A	(14)	01	TWDXC0 YE188Q 18 10A 20 11A	BYTE 3 XFER BIT TE18 TO TD18
XA123	TQ2	C3	16B	TD184A	00 =		
XA123	TQ2	C3	14B	(33)	01	TCPDB0 TCB180 29 14B 31 15B	DATA BUS XFER BIT 18 TO TD18
XA237	TQ2	B1	12A	TD186A	00 =		
XA237	TQ2	B1	13A	(22)	01	TB3XA0 YE26C0 24 13A 26 14A	INPUT BYTE 3 TE02 TO TD18
XA223	TDD	HI	22A	TD198I	00 =		
				()	01	TD1900 48 22A	
XA223	TDD	HN	21A	TD198N	00 =		
				()	01	TDC83A 46 21A	
XA223	TDD	HP	24B	TD198P	00 =		
XA223	TDD	HP	23A	(45)	01	TDRSBA 50 23A	TD REG BIT 19 RESET
XA223	TDD	HQ	23B	TD198Q	00 =		
XA223	TDD	HQ	22B	(43)	01	TDS19A 41 22B	TD REG BIT 19 SET
XA126	TLD	C4	19B	TD19CD	00 =		
XA126	TLD	C4	17B	(39)	01	TIDM20 TDI98Q 35 17B 37 18B	JDB1984 BUSS
XA226	THI	D6	26B	TD19C0	00 =		
XA226	THI	D6	27B	(53)	01	TD198P 51 27B	TD REGISTER BIT 19 UNLOAD-0

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD19SA
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 160

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	REF ID	FACTOR	COMMENT
XA422	TQ2	E4	33B	TD19SA	00 =			MEMORY DATA INPUT TO TD19
XA422	TQ2	E4	31B	(63)	01		YMDC80 TD19SOX 59 31B 61 32B	
XA416	DCF	C7	25A	TD19SDX	00 =			YI19CB4 BUSS
XA416	DCF	C7	29A	(43)	01		TDCBAA 52 29A	
XA416	DCF	C8	26A	TD19SOX	00 =			
XA416	DCF	C8	28A	(48)	01		TD19C0 50 28A	
XA221	TS8	C1	17B	TD1900	00 =			TD REG BIT 19 QRED DATA
XA221	TS8	C1	15A	(35)	01		TD192A TD191A SPI014 SPI015 TD196A TD193A SPI016 TD194A 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	
XA314	TQ2	E3	30B	TD191A	00 =			XFER TC19 TO TD19 CA XFER
XA314	TQ2	E3	28B	(57)	01		TCAX20 TC19BQ 53 28B 55 29B	
XA314	TQ2	E4	33B	TD192A	00 =			UPDATE TC19 TO TD19 CA INCR
XA314	TQ2	E4	31B	(63)	01		TCAM20 TC19BP 59 31B 61 32B	
XA240	TQ2	B1	12A	TD193A	00 =			BYTE 3 XFER BIT 1E19 TO TD19
XA240	TQ2	B1	13A	(22)	01		TE19BQ TWDXC0 24 13A 26 14A	
XA123	TQ2	C4	19B	TD194A	00 =			DATA BUS XFER BIT 19 TO TD19
XA123	TQ2	C4	17B	(39)	01		TCB190 TPCDC0 35 17B 37 18B	
XA234	TQ2	B2	09A	TD196A	00 =			INPUT BYTE 3 TE03 TO TD19
XA234	TQ2	B2	10A	(14)	01		TE27C0 TB3XAO 18 10A 20 11A	
XA223	TDD	J1	32A	TD20B1	00 =			
XA223	TDD	J1		()	01		TD2000 68 32A	
XA223	TDD	JN	33A	TD20BN	00 =			
XA223	TDD	JN		()	01		TDC83A 70 33A	
XA223	TDD	JP	31B	TD20BP	00 =			
XA223	TDD	JP	31A	(59)	01		TDRSBA 66 31A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD20BQ
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA223	TDD	JQ	32B	TD208Q	00 =		TD REG BIT 20 SET
XA223	TDD	JQ	33B	(61)	01	TD520A 63 33B	
XA126	TLD	D1	24A	TD20CD	00 =		JDB20B4 BUSS
XA126	TLD	DI	25A	(52)	01	TD20BQ TD20M20 54 25A 56 26A	
XA226	THI	E5	30B	TD20C0	00 =		TD REGISTER BIT 20 UNLOAD-0
XA226	THI	E5	31B	(57)	01	TD20BP 59 31B	
XA422	TQ2	F1	37B	TD20SA	00 =		MEMORY DATA INPUT TO TD20
XA422	TQ2	F1	38B	(75)	01	YMDCB0 TD20SOX 77 38B 79 39B	
XA416	DCF	D1	32B	TD20SDX	00 =		YI20CB4 BUSS
XA416	DCF	DI	36A	(65)	01	YDCBAA 72 36A	
XA416	DCF	D2	33B	TD20SOX	00 =		
XA416	DCF	D2	34B	(69)	01	TD20C0 71 34B	
XA222	TS8	E1	31B	TD2000	00 =		TD REG BIT 20 ORED DATA
XA222	TS8	E1	29B	(59)	01	TS224A TD208A TD206A TD203A TD204A TD207A TD202A TD201A 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	
XA214	TQ2	E1	31A	TD201A	00 =		XFER TC20 TO TD20 CA XFER
XA214	TQ2	E1	32A	(66)	01	TCAX30 TC20BQ 68 32A 70 33A	
XA214	TQ2	E2	28A	TD202A	00 =		UPDATE TC20 TO TD20 CA INCRE
XA214	TQ2	E2	29A	(60)	01	TD20A0 TCAX30 62 29A 64 30A	
XA240	TQ2	A4	07B	TD203A	00 =		BYTE 3 XFER BIT TE20 TO TD20
XA240	TQ2	A4	05B	(15)	01	TWDXB0 TE20BQ 11 05B 13 06B	
XA123	TQ2	D1	24A	TD204A	00 =		DATA BUS XFER BIT 20 TO TD20
XA123	TQ2	DI	25A	(52)	01	TCPDC0 TCB200 54 25A 56 26A	
XA235	TQ2	B4	13B	TD206A	00 =		INPUT BYTE 3 TE04 TO TD20
XA235	TQ2	B4	11B	(27)	01	TE28C0 TB3XA0 23 11B 25 12B	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD207A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	REG. PREFIX	FACTOR	COMMENT
XA109	TQ2	A2	02B	TD207A	00 =			
XA109	TQ2	A2	04A	(01)	01		TA00BQ TKTSAO 04 04A 05 03B	DEV ADD TO TD FOR KH/TW SEL
XA219	TQ2	E1	31A	TD208A	00 =			
XA219	TQ2	E1	32A	(66)	01		TQRS00 TQSC20 68 32A 70 33A	Q REG SEL TD20-A
XA223	TDD	K1	29A	TD218I	00 =			
XA223	TDD	K1	29A	()	01		TD2100 62 29A	
XA223	TDD	KN	28A	TD218N	00 =			
XA223	TDD	KN	28A	()	01		TDC83A 60 28A	
XA223	TDD	KP	30B	TD218P	00 =			
XA223	TDD	KP	30A	(57)	01		TDRSBA 64 30A	TD REG BIT 21 RESET
XA223	TDD	KQ	29B	TD218Q	00 =			
XA223	TDD	KQ	28B	(55)	01		TDS21A 53 28B	TD REG BIT 21 SET
XA126	TLD	D2	21A	TD21CD	00 =			
XA126	TLD	D2	22A	(46)	01		TD21BQ TTDM30 48 22A 50 23A	JDB21B4 BUSS
XA226	THI	E6	32B	TD21C0	00 =			
XA226	THI	E6	33B	(68)	01		TD21BP 65 33B	TD REGISTER BIT 21 UNLOAD=0
XA422	TQ2	F2	34A	TD21SA	00 =			
XA422	TQ2	F2	36A	(72)	01		TMDCB0 TD21S0X 71 36A 73 36B	MEMORY DATA INPUT TO TD21
XA416	DCF	D3	37B	TD21SDX	00 =			
XA416	DCF	D3	36A	(78)	01		TDCBAA 72 36A	YI21C84 BUSS BIT 21
XA416	DCF	D4	36B	TD21S0X	00 =			
XA416	DCF	D4	35B	(75)	01		TD21C0 73 35B	
XA221	TS8	D1	25B	TD2100	00 =			
XA221	TS8	D1	23B	(47)	01		TD212A TD218A TD216A TD213A TD214A TD217A TS224A TD211A 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	TD REG BIT 21 ORED DATA

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD211A
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CONNECTOR	REGIST TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	REGIS NATOR	FACTOR	COMMENT
XA214	TQ2	E3	30B	TD211A	00	N		
XA214	TQ2	E3	28B	(57)	01		TCAX30 TC21BQ 53 28B 55 29B	XFER TC21 TO TD21 CA XFER
XA214	TQ2	E4	33B	TD212A	00	=		
XA214	TQ2	E4	31B	(63)	01		TCAM30 TU21A0 59 31B 61 32B	UPDATE TC21 TO TD21 CA INCRE
XA240	TQ2	A3	04B	TD213A	00	=		
XA240	TQ2	A3	02A	(09)	01		TWDX80 TE21BQ 03 02A 07 03A	BYTE 3 XFER BIT TE21 TO TD21
XA123	TQ2	D2	21A	TD214A	00	=		
XA123	TQ2	D2	22A	(46)	01		TCPC00 TCB210 48 22A 50 23A	DATA BUS XFER BIT 21 TO TD21
XA235	TQ2	C2	15A	TD216A	00	=		
XA235	TQ2	C2	16A	(30)	01		TE29C0 TB3XA0 34 16A 36 17A	INPUT BYTE 3 TE05 TO TD21
XA109	TQ2	A3	04B	TD217A	00	=		
XA109	TQ2	A3	02A	(09)	01		TKTSA0 TA01BQ 03 02A 07 03A	DEV ADD TO TD FOR KW/TW SEL
XA219	TQ2	E2	28A	TD218A	00	=		
XA219	TQ2	E2	29A	(60)	01		TQRS10 TQSC20 62 29A 64 30A	Q REG SEL TD21-A
				TD228I	00	=		
XA223	TDD	LI	38B	()	01		TD2200 77 38B	
				TD228N	00	=		
XA223	TDD	LN	39B	()	01		TDC83A 79 39B	
XA223	TDD	LP	37A	TD228P	00	=		
XA223	TDD	LP	37B	(76)	01		TDRSCA 75 37B	TD REG BIT 22 RESET
XA223	TDD	LQ	38A	TD228Q	00	=		
XA223	TDD	LQ	39A	(78)	01		TDS22A 80 39A	TD REG BIT 22 SET
XA126	TLD	D3	24B	TD22CD	00	=		
XA126	TLD	D3	22B	(45)	01		TTDM30 TD228Q 41 22B 43 23B	JDB2284 BUSS

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD22CO
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA226	THI	F5	36A	TD22C0	00	=		TO REGISTER BIT 22 UNLOAD-0
XA226	THI	F5	37A	(78)	01		TD22BP 76 37A	
XA422	TQ2	F3	35A	TD22SA	00	=		MEMORY DATA INPUT TO TD22
XA422	TQ2	F3	34B	(69)	01		TMDCC0 TD22SOX 65 34B 74 35B	
XA416	DCF	D5	38B	TD22SDX	00	=		YI22CB4 BUSS BIT 22
XA416	DCF	D5	36A	(80)	01		TDCBAA 72 36A	
XA416	DCF	D6	38A	TD22SOX	00	=		
XA416	DCF	D6	37A	(76)	01		TD22C0 74 37A	
XA222	TS8	F1	37A	TD2200	00	=		TO REG BIT 22 ORED DATA
XA222	TS8	F1	36A	(76)	01		SPI017 TD226A TD223A TD224A TD228A TD227A TD222A TD221A 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	
XA214	TQ2	F1	37B	TD221A	00	=		XFER TC22 TO TD22 CA XFER
XA214	TQ2	F1	38B	(75)	01		TCAX30 TC22BQ 77 38B 79 39B	
XA214	TQ2	F2	34A	TD222A	00	=		UPDATE TC22 TO TD22 CA INCR
XA214	TQ2	F2	36A	(72)	01		TC22BP TCAM30 71 36A 73 36B	
XA240	TQ2	A2	02B	TD223A	00	=		BYTE 3 XFER BIT TE22 TO TD22
XA240	TQ2	A2	04A	(01)	01		TE22BQ TWDXB0 04 04A 05 03B	
XA123	TQ2	D3	24B	TD224A	00	=		DATA BUS XFER BIT 22 TO TD22
XA123	TQ2	D3	22B	(45)	01		TCPC00 TC8220 41 22B 43 23B	
XA237	TQ2	D1	24A	TD226A	00	=		INPUT BYTE 3 TE06 TO TD22
XA237	TQ2	D1	25A	(52)	01		TB3XAO TE30C0 54 25A 56 26A	
XA109	TQ2	A4	07B	TD227A	00	=		
XA109	TQ2	A4	05B	(15)	01		TKTSA0 TAO2BQ 11 05B 13 06B	
XA219	TQ2	E3	30B	TD228A	00	=		Q REG SEL TD22-A
XA219	TQ2	E3	28B	(57)	01		TQSC20 TQRS20 53 28B 55 29B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

LOGIC

UNIT ASSEMBLY NO. 149019
FILE IDENT T39BIUX2

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESCR ANALOG	FACTOR	COMMENT
XA223	TDD	MI	36A	TD238I ()	00 = 01	TD2300 71 36A	
XA223	TDD	MN	34A	TD238N ()	00 = 01	TD2383A 72 34A	
XA223	TDD	MP	35A	TD238P (69)	00 = 01	TD238P 73 36B	TD REG BIT 23 RESET
XA223	TDD	MQ	35B	TD238Q (74)	00 = 01	TD238Q 65 34B	TD REG BIT 23 SET
XA126	TLD	D4	27B	TD23CD (51)	00 = 01	TD238Q TD2380 47 25B 49 26B	JDB2384 BUSS
XA226	THI	F6	38A	TD23C0 (77)	00 = 01	TD238P 75 39A	TD BIT 23 UNLOAD
XA422	TQ2	F4	39A	TD23SA (80)	00 = 01	TD238Q TD2380X 76 37A 78 38A	MEMORY DATA INPUT TO TD23
XA416	DCF	D7	33A	TD23SDX (61)	00 = 01	TD238Q 72 36A	YI23C84 BUSS BIT 23
XA416	DCF	D8	34A	TD23S0X (68)	00 = 01	TD238Q 70 35A	
XA221	TS8	E1	31B	TD2300 (59)	00 = 01	TD238A SPI015 TD236A TD233A TD234A TD237A TD231A TD232A 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	TD REG BIT 23 ORED DATA
XA214	TQ2	F3	35A	TD231A (69)	00 = 01	TD238Q TD2380 65 34B 74 35B	XFER TC23 TO TD23 CA XFER
XA214	TQ2	F4	39A	TD232A (80)	00 = 01	TD238Q TD2380 76 37A 78 38A	UPDATE TC23 TO TD23 CA INCRE

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD233A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA240	TQ2	A1	05A	TD233A	00 =		BYTE 3 XFER BIT IE23 TO ID23
XA240	TQ2	A1	06A	(06)	01	TE238Q TWDXB0 08 06A 10 07A	
XA123	TQ2	D4	27B	TD234A	00 =		DATA BUS XFER BIT 23 TO ID23
XA123	TQ2	D4	25B	(51)	01	TCPDC0 TCB230 47 25B 49 26B	
XA237	TQ2	E2	28A	TD236A	00 =		INPUT BYTE 3 IE07 TO ID23
XA237	TQ2	E2	29A	(60)	01	TE31C0 TB3XA0 62 29A 64 30A	
XA109	TQ2	B1	12A	TD237A	00 =		DEV ADD TO ID FOR KW/TW SEL
XA109	TQ2	B1	13A	(22)	01	TA03BQ TKTSA0 24 13A 26 14A	
XA219	TQ2	E4	33B	TD238A	00 =		Q REG SEL ID23-A
XA219	TQ2	E4	31B	(63)	01	TQSC20 TQRS30 59 31B 61 32B	
				TD248I	00 =		
XA217	TDD	A1	06A	()	01	TD2400 08 06A	
				TD248N	00 =		
XA217	TDD	AN	07A	()	01	TDC41A 10 07A	
XA217	TDD	AP	05B	TD248P	00 =		TD REG BIT 24 RESET
XA217	TDD	AP	05A	(11)	01	TDRSCA 06 05A	
XA217	TDD	AQ	06B	TD248Q	00 =		TD REG BIT 24 SET
XA217	TDD	AQ	07B	(13)	01	TDS24A 15 07B	
XA126	TLD	E1	31A	TD24CD	00 =		JDB24B4 BUSS
XA126	TLD	E1	32A	(66)	01	TD24BQ TTD30 68 32A 70 33A	
XA220	THI	A5	04B	TD24C0	00 =		TD BIT 24 UNLOAD
XA220	THI	A5	05B	(07)	01	TD24BP 09 05B	
XA423	TQ2	A1	05A	TD24SA	00 =		MEMORY DATA INPUT TO ID24
XA423	TQ2	A1	06A	(06)	01	TMDCC0 TD24S0X 08 06A 10 07A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD24SDX
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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA420	DCF	A1 02B	TD24SDX	00	=		
XA420	DCF	A1 05A	(07)	01		YI24CB4	BUSS BIT 24
						TDCBAA 06 05A	
XA420	DCF	A2 03B	TD24SOX	00	=		
XA420	DCF	A2 04B	(09)	01		TD24BQ 11 04B	
XA216	TS8	A1 05B	TD2400	00	=		TD REG BIT 24 ORED DATA
XA216	TS8	A1 02B	(11)	01		TD248A SPI015 TD242A TD243A TD246A TD244A TD247A TD241A 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	
XA214	TQ2	A1 05A	TD241A	00	=		XFER TC24 TO TD24 CA XFER
XA214	TQ2	A1 06A	(06)	01		YC24BQ TCAX40 08 06A 10 07A	
XA214	TQ2	A2 02B	TD242A	00	=		UPDATE TC24 TO TD24 CA INCRE
XA214	TQ2	A2 04A	(01)	01		TU24A0 TCAM40 04 04A 05 03B	
XA237	TQ2	A2 02B	TD243A	00	=		BYTE 4 XFER BIT TE24 TO TD24
XA237	TQ2	A2 04A	(01)	01		TWDXB0 TE24BQ 04 04A 05 03B	
XA123	TQ2	E1 31A	TD244A	00	=		DATA BUS XFER BIT 24 TO TD24
XA123	TQ2	E1 32A	(66)	01		YCPDC0 YCB240 68 32A 70 33A	
XA235	TQ2	A2 02B	TD246A	00	=		INPUT BYTE 4 TE00 TO TD24
XA235	TQ2	A2 04A	(01)	01		YE24C0 YB4XA0 04 04A 05 03B	
XA109	TQ2	B2 09A	TD247A	00	=		KEYWORD/TER WORD SEL TD24
XA109	TQ2	B2 10A	(14)	01		YA04BQ YKTSAO 18 10A 20 11A	
XA220	THI	E4 28B	TD248A	00	=		Q REG SEL TC 06/14 TO TD24-A
XA220	THI	E4 29B	(56)	01		TD2480 55 29B	
XA224	TQ2	D4 27B	TD2480	00	=		Q REG SEL TC06/14 TO TD24-0
XA224	TQ2	D4 25B	(51)	01		TDQ06A TDQ14A 47 25B 49 26B	
XA217	TDD	BI 03B	TD258I	00	=		
			()	01		TD2500 05 03B	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD25BN
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CONNECTOR	INLET PLUG	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIG- NATION	FACTOR	COMMENT
XA217	TDD	BN	02B	TD25BN ()	00 = 01	TDC41A 01 02B	
XA217	TDD	BP	04B	TD25BP (09)	00 = 01		TD REG BIT 25 RESET
XA217	TDD	BQ	03A	TD25BQ (07)	00 = 01	TDRSCA 04 04A	
XA217	TDD	BQ	02A	TD25BQ (07)	00 = 01	TD525A 03 02A	TD REG BIT 25 SET
XA126	TLD	E2	28A	TD25CD (60)	00 = 01	TD258Q TDM30 62 29A 64 30A	JDB25B4 BUSS
XA220	THI	A6	06B	TD25C0 (10)	00 = 01	TD258P 15 07B	TD BIT 25 UNLOAD
XA423	TQ2	A2	02B	TD25SA (01)	00 = 01	TMDCC0 TD25SOX 04 04A 05 03B	MEMORY DATA INPUT TO TD25
XA420	DCF	A3	07B	TD25SDX (17)	00 = 01	YI25CB4 06 05A	BUSS BIT 25
XA420	DCF	A4	06B	TD25SOX (15)	00 = 01	TD258Q 13 05B	
XA215	TS8	A1	05B	TD2500 (11)	00 = 01		TD REG BIT 25 ORED DATA
XA214	TQ2	A3	04B	TD251A (09)	00 = 01	TD258A TD257A TD256A TD253A SPI015 TD254A TD251A TD252A 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	XFER TC25 TO TD25 CA XFER
XA214	TQ2	A4	07B	TD252A (15)	00 = 01	TCAX40 TC258Q 03 02A 07 03A	UPDATE TC25 TO TD25 CA INCRE
XA234	TQ2	A3	04B	TD253A (09)	00 = 01	TCAM40 TC258P 11 05B 13 06B	BYTE 4 XFER BIT TE25 TO TD25
XA234	TQ2	A3	02A	TD253A (09)	00 = 01	TWDX80 TE258Q 03 02A 07 03A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD254A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA123	TQ2	E2	28A	TD254A	00	=		DATA BUS XFER BIT 25 TO TD25
XA123	TQ2	E2	29A	(60)	01		TCPC00 YCB250 62 29A 64 30A	
XA237	TQ2	A4	07B	TD256A	00	=		INPUT BYTE 4 TE01 TO TD25
XA237	TQ2	A4	05B	(15)	01		TE25C0 YB4XA0 11 05B 13 06B	
XA210	TQ2	E1	31A	TD257A	00	=		KW/TW SEL CONSTANT
XA210	TQ2	E1	32A	(66)	01		TKTSA0 YA05BQ 68 32A 70 33A	
XA220	THI	E3	28A	TD258A	00	=		Q REG SEL TC 07/15 TO TD25-A
XA220	THI	E3	29A	(60)	01		TD2580 62 29A	
XA224	TQ2	E3	30B	TD2580	00	=		Q REG SEL TC07/15 TO TD25-0
XA224	TQ2	E3	28B	(57)	01		TDQ07A TDQ15A 53 28B 55 29B	
XA217	TDD	CI	13A	TD268I	00	=		
XA217	TDD	CI	13A	()	01		TD2600 24 13A	
XA217	TDD	CN	14A	TD268N	00	=		
XA217	TDD	CN	14A	()	01		TD2600 26 14A	
XA217	TDD	CP	11B	TD268P	00	=		TD REG BIT 26 RESET
XA217	TDD	CP	12A	(23)	01		TDRSCA 22 12A	
XA217	TDD	CQ	12B	TD268Q	00	=		TD REG BIT 26 SET
XA217	TDD	CQ	13B	(25)	01		TD26A 27 13B	
XA126	TLD	E3	30B	TD26CD	00	=		JDB26B4 BUSS
XA126	TLD	E3	28B	(57)	01		TDM30 TD26BQ 53 28B 55 29B	
XA220	THI	B5	10B	TD26C0	00	=		TD BIT 26 UNLOAD
XA220	THI	B5	11B	(19)	01		TD268P 21 11B	
XA423	TQ2	A3	04B	TD26SA	00	=		MEMORY DATA INPUT TO TD26
XA423	TQ2	A3	02A	(09)	01		YMDCC0 TD26SOX 03 02A 07 03A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIG- NATION	FACTOR	COMMENT
			AND	OR					
XA420	DCF	A5	08B		TD26SDX	00	=		
XA420	DCF	A5	05A		(14)	01		YI26CB4	BUSS BIT 26
								TOCBAA 06 05A	
XA420	DCF	A6	07A		TD26SOX	00	=		
XA420	DCF	A6	06A		(10)	01		TD26BQ 08 06A	
XA216	TSB	B1	11B		TD2600	00	=		TD REG BIT 26 ORED DATA
XA216	TSB	B1	09A		(23)	01		TD266A TD263A TD261A SPT015 TD268A TD264A TD267A TD262A 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	
XA214	TQ2	B1	12A		TD261A	00	=		XFER TC26 TO TD26 CA XFER
XA214	TQ2	B1	13A		(22)	01		TCAX50 TC26BQ 24 13A 26 14A	
XA214	TQ2	B2	09A		TD262A	00	=		UPDATE TC26 TO TD26 CA INCR
XA214	TQ2	B2	10A		(14)	01		TU26A0 TCAM50 18 10A 20 11A	
XA234	TQ2	B1	12A		TD263A	00	=		BYTE 4 XFER BIT TE26 TO TD26
XA234	TQ2	B1	13A		(22)	01		TE26BQ TWDXB0 24 13A 26 14A	
XA123	TQ2	E3	30B		TD264A	00	=		DATA BUS XFER BIT 26 TO TD26
XA123	TQ2	E3	28B		(57)	01		TCB260 TPCDC0 53 28B 55 29B	
XA235	TQ2	B1	12A		TD266A	00	=		INPUT BYTE 4 TE02 TO TD26
XA235	TQ2	B1	13A		(22)	01		TB4XA0 TE26C0 24 13A 26 14A	
XA213	THI	C1	19A		TD267A	00	=		KW/TW SEL CONSTANT TD25
XA213	THI	C1	20A		(40)	01		TKYSA0 38 20A	
XA135	THI	E5	30B		TD268A	00	=		Q REG/PAR REG CONSTANT TD26-
XA135	THI	E5	31B		(57)	01		TD2680 59 31B	
XA133	TQ2	E2	28A		TD2680	00	=		Q REG/PAR REG CONSTANT TD26-
XA133	TQ2	E2	29A		(60)	01		TQSC2A TPSCAA 62 29A 64 30A	
XA217	TDD	DI	10A		TD27BI	00	=		
					()	01		TD2700 18 10A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD27BN
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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA217	TDD	DN 09A	TD27BN ()	00 = 01	TDC41A 14 09A	
XA217	TDD	DP 10B	TD27BP (21)	00 = 01	TDRSFA 20 11A	TD REG BIT 27 RESET
XA217	TDD	DQ 09B	TD27BQ (19)	00 = 01	TDS27A 17 08B	TD REG BIT 27 SET
XA126	TLD	E4 33B	TD27CD (63)	00 = 01	TTDM30 TD27BQ 59 31B 61 32B	JDB27B4 BUSS
XA220	THI	B6 12B	TD27CO (26)	00 = 01	TD27BP 27 13B	TD BIT 27 UNLOAD
XA423	TQ2	A4 07B	TD27SA (15)	00 = 01	TMDCC0 TD27SOX 11 05B 13 06B	MEMORY DATA INPUT TO TD27
XA420	DCF	A7 02A	TD27SDX (01)	00 = 01	TDCBAA 06 05A	YI27CB4 BUSS BIT 27
XA420	DCF	A8 03A	TD27SOX (03)	00 = 01	TD27BQ 04 04A	
XA215	TS8	B1 11B	TD2700 (23)	00 = 01	SPI015 TD273A TD276A TD267A TD278A TD274A TD271A TD272A 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	TD REG BIT 27 ORED DATA
XA214	TQ2	B3 10B	TD271A (21)	00 = 01	TCAX50 TC27BQ 17 08B 19 09B	XFER TC27 TO TD27 CA XFER
XA214	TQ2	B4 13B	TD272A (27)	00 = 01	TCAM50 TU27A0 23 11B 25 12B	UPDATE TC27 TO TD27 CA INCRE
XA237	TQ2	B3 10B	TD273A (21)	00 = 01	TWDX80 TE27BQ 17 08B 19 09B	BYTE 4 XFER BIT TE27 TO TD27

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD274A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 172

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA123	TQ2	E4	33B	TD274A	00	=		DATA BUS XFER BIT 27 TO TD27
XA123	TQ2	E4	31B	(63)	01		TCB270 TCPDC0 59 31B 61 32B	
XA235	TQ2	B3	10B	TD276A	00	=		INPUT BYTE 4, TE03 TO TD27
XA235	TQ2	B3	08B	(21)	01		TB4XA0 TE27C0 17 08B 19 09B	
XA135	THI	E4	28B	TD278A	00	=		Q REG/PAR REG CONSTANT TD27-
XA135	THI	E4	29B	(56)	01		TD2780 55 29B	
XA133	TQ2	E3	30B	TD2780	00	=		Q REG/PAR REG CONSTANT TD27-
XA133	TQ2	E3	28B	(57)	01		TPSCAA TQSC2A 53 28B 55 29B	
				TD288I	00	=		
XA217	TDD	E1	19A	()	01		TD2800 40 19A	
				TD288N	00	=		
XA217	TDD	EN	20A	()	01		TD41A 42 20A	
XA217	TDD	EP	17B	TD288P	00	=		TD REG BIT 28 RESET
XA217	TDD	EP	18A	(35)	01		TDRSFA 38 18A	
XA217	TDD	EQ	18B	TD288Q	00	=		TD REG BIT 28 SET
XA217	TDD	EQ	19B	(37)	01		YDS28A 39 19B	
XA126	TLD	F1	37B	TD28CD	00	=		JDB2884 BUSS
XA126	TLD	F1	38B	(75)	01		YD288Q TDM40 77 38B 79 39B	
XA220	THI	C5	16B	TD28C0	00	=		TD BIT 28 UNLOAD
XA220	THI	C5	17B	(31)	01		YD288P 33 17B	
XA423	TQ2	B1	12A	TD285A	00	=		MEMORY DATA INPUT TO TD28
XA423	TQ2	B1	13A	(22)	01		YMDCC0 TD285OX 24 13A 26 14A	
XA420	DCF	B1	10B	TD285OX	00	=		YI28CB4 BUSS BIT 28
XA420	DCF	B1	13A	(27)	01		YDCBAA 36 13A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD28SOX
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CONNECTOR	PCB TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA420	DCF	B2	11B	TD28SOX	00	=		
XA420	DCF	B2	12B	(29)	01		TD28BQ 31 12B	
XA216	TS8	C1	17B	TD2800	00	=		TD REG BIT 28 OREG DATA
XA216	TS8	C1	15A	(35)	01		TD286A SPI015 TD283A TD284A TD282A TD267A TD288A TD281A 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	
XA214	TQ2	C1	18A	TD281A	00	=		XFER TC28 TO TD28 CA XFER
XA214	TQ2	C1	19A	(38)	01		TCAX50 TC28BQ 40 19A 42 20A	
XA214	TQ2	C2	15A	TD282A	00	=		UPDATE TC28 TO TD28 CA INCRE
XA214	TQ2	C2	16A	(30)	01		TC28BP TCAM50 34 16A 36 17A	
XA234	TQ2	B4	13B	TD283A	00	=		BYTE 4 XFER BIT TE28 TO TD28
XA234	TQ2	B4	11B	(27)	01		TWDX80 TE28BQ 23 11B 25 12B	
XA123	TQ2	F1	37B	TD284A	00	=		DATA BUS XFER BIT 28 TO TD28
XA123	TQ2	F1	38B	(75)	01		TCB280 TCPDC0 77 38B 79 39B	
XA237	TQ2	C1	18A	TD286A	00	=		INPUT BYTE 4 TE04 TO TD28
XA237	TQ2	C1	19A	(38)	01		TB4XA0 TE28C0 40 19A 42 20A	
XA213	THI	B1	13A	TD288A	00	=		PAR REG CONSTANT TD28-A
XA213	THI	B1	14A	(24)	01		TD2880 22 14A	
XA135	THI	E3	28A	TD2880	00	=		PAR REG SELECTION CONSTANT-0
XA135	THI	E3	29A	(60)	01		TPSCAA 62 29A	
XA217	TDD	FI	16A	TD298I	00	=		
XA217	TDD	FN	15A	()	01		TD2900 34 16A	
XA217	TDD	FN	15A	TD298N	00	=		
XA217	TDD	FP	16B	()	01		TD294IA 30 15A	
XA217	TDD	FP	17A	TD298P	00	=		TD REG BIT 29 RESET
XA217	TDD	FP	17A	(33)	01		TDRSFA 36 17A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD29BQ
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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA217	TDD	FQ 15B	TD298Q	00 =			TD REG BIT 29 SET
XA217	TDD	FQ 14B	(31)	01		TDS29A 29 14B	
XA126	TLD	F2 34A	TD29CD	00 =			IDB29B4 BUSS
XA126	TLD	F2 36A	(72)	01		TD298Q TDM40 71 36A 73 36B	
XA220	THI	C6 18B	TD29C0	00 =			TD BIT 29 UNLOAD
XA220	THI	C6 19B	(42)	01		TD298P 39 19B	
XA423	TQ2	B2 09A	TD29SA	00 =			MEMORY DATA INPUT TO TD29
XA423	TQ2	B2 10A	(14)	01		YMDCC0 TD29S0X 18 10A 20 11A	
XA420	DCF	B3 15B	TD29SDX	00 =			YI29CB4 BUSS BIT 29
XA420	DCF	B3 13A	(37)	01		TDCBAA 36 13A	
XA420	DCF	B4 14B	TD29S0X	00 =			
XA420	DCF	B4 13B	(35)	01		TD298Q 33 13B	
XA215	TS8	C1 17B	TD2900	00 =			TD REG BIT 29 ORED DATA
XA215	TS8	C1 15A	(35)	01		TD292A TD293A TD296A TD298A SPI015 TD297A TD294A TD291A 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	
XA214	TQ2	C3 16B	TD291A	00 =			XFER TC29 TO TD29 CA XFER
XA214	TQ2	C3 14B	(33)	01		TCAX60 TC298Q 29 14B 31 15B	
XA214	TQ2	C4 19B	TD292A	00 =			UPDATE TC29 TO TD29 CA INCR
XA214	TQ2	C4 17B	(39)	01		TCAM60 TU29A0 35 17B 37 18B	
XA237	TQ2	C3 16B	TD293A	00 =			BYTE 4 XFER BIT TE29 TO TD29
XA237	TQ2	C3 14B	(33)	01		TE298Q TWDXC0 29 14B 31 15B	
XA123	TQ2	F2 34A	TD294A	00 =			DATA BUS XFER BIT 29 TO TD29
XA123	TQ2	F2 36A	(72)	01		YCP000 TCB290 71 36A 73 36B	
XA235	TQ2	C3 16B	TD296A	00 =			INPUT BYTE 4 TE05 TO TD29
XA235	TQ2	C3 14B	(33)	01		TB4XA0 TE29C0 29 14B 31 15B	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD297A
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CONNECTOR	TEST POINT	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA109	TQ2	B3	10B	TD297A	00 =		ER WORD SEL SET TD
XA109	TQ2	B3	08B	(21)	01	TKTSAO YA06BQ 17 08B 19 09B	
XA213	THI	A6	06B	TD298A	00 =		PAR REG SEL TC10/02 TO TD29
XA213	THI	A6	07B	(10)	01	TD2980 15 07B	
XA208	TQ2	A3	04B	TD2980	00 =		PAR REG SEL TC02/10 TO TD29-
XA208	TQ2	A3	02A	(09)	01	YDP02A YDP10A 03 02A 07 03A	
				TD308I	00 =		
XA217	TDD	G1	25A	()	01	TD3000 54 25A	
				TD308N	00 =		
XA217	TDD	GN	26A	()	01	YDC51A 56 26A	
XA217	TDD	GP	25B	TD308P	00 =		TD REG BIT 30 RESET
XA217	TDD	GP	24A	(47)	01	YDRSFA 52 24A	
XA217	TDD	GQ	26B	TD308Q	00 =		TD REG BIT 30 SET
XA217	TDD	GQ	27B	(49)	01	YDS30A 51 27B	
XA126	TLD	F3	35A	TD30CD	00 =		JDB30B4 BUSS
XA126	TLD	F3	34B	(69)	01	YTD40 TD30BQ 65 34B 74 35B	
XA220	THI	D5	24B	TD30C0	00 =		TD BIT 30 UNLOAD
XA220	THI	D5	25B	(43)	01	TD30BP 45 25B	
XA423	TQ2	B3	10B	TD30SA	00 =		MEMORY DATA INPUT TO TD30
XA423	TQ2	B3	08B	(21)	01	YMDCC0 YD30S0X 17 08B 19 09B	
XA420	DCF	B5	16A	TD30SDX	00 =		YI30CB4 BUSS BIT 30
XA420	DCF	B5	13A	(41)	01	YDCBAA 36 13A	
XA420	DCF	B6	15A	TD30S0X	00 =		
XA420	DCF	B6	14A	(40)	01	TD30BQ 38 14A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD3000
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA216	TSB	D1	25B	TD3000	00 =		TD REG BIT 30 ORED DATA
XA216	TSB	D1	23B	(47)	01	TD307A TD306A TD302A TD303A TD308A TD304A SPI015 TD301A 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	
XA214	TQ2	D1	24A	TD301A	00 =		XFER TC30 TO TD30 CA XFER
XA214	TQ2	D1	25A	(52)	01	TC30BQ TCAX60 54 25A 56 26A	
XA218	TQ2	D3	24B	TD302A	00 =		UPDATE TC30 TO TD30 CA INCRE
XA218	TQ2	D3	22B	(45)	01	TU30A0 TCAM60 41 22B 43 23B	
XA237	TQ2	D2	21A	TD303A	00 =		BYTE 4 XFER BIT TE03 TO TD30
XA237	TQ2	D2	22A	(46)	01	TWDXC0 TE30BQ 48 22A 50 23A	
XA123	TQ2	F3	35A	TD304A	00 =		DATA BUS XFER BIT 30 TO TD30
XA123	TQ2	F3	34B	(69)	01	TCB300 TCPDD0 65 34B 74 35B	
XA237	TQ2	D3	24B	TD306A	00 =		INPUT BYTE 4 TE06 TO TD30
XA237	TQ2	D3	22B	(45)	01	TE30C0 TB4XA0 41 22B 43 23B	
XA134	TT3	E2	29B	TD307A	00 =		TER WORD SEL SET TD29
XA134	TT3	E2	28B	(55)	01	TBRSUA TS038P TKTSA0 53 28B 60 28A 62 29A	
XA135	THI	F4	34A	TD308A	00 =		PAR REG SEL TC10/03 TO TD30
XA135	THI	F4	35A	(72)	01	TD3080 74 35A	
XA134	TT3	E3	33B	TD3080	00 =		PAR REG SEL TC03/11+0 REG SE
XA134	TT3	E3	30B	(63)	01	TQSC2A TDP03A TDP11A 57 30B 59 31B 61 32B	
				TD318I	00 =		
XA217	TDD	HI	22A	()	01	TD3100 48 22A	
				TD318N	00 =		
XA217	TDD	HN	21A	()	01	TDC51A 46 21A	
XA217	TDD	HP	24B	TD318P	00 =		TD REG BIT 31 RESET
XA217	TDD	HP	23A	(45)	01	TDRSFA 50 23A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD31BQ
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CONNECTOR	PLATE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA217	TDD	HQ	23B	TD31BQ	00	=		TD REG BIT 31 SET
XA217	TDD	HQ	22B	(43)	01		YDS31A 41 22B	
XA220	THI	D6	26B	TD31C0	00	=		TD BIT 31 UNLOAD
XA220	THI	D6	27B	(53)	01		YD31BP 51 27B	
XA423	TQ2	B4	13B	TD31SA	00	=		MEMORY DATA INPUT TO TD31
XA423	TQ2	B4	11B	(27)	01		YMDCC0 YD31SOX 23 11B 25 12B	
XA420	DCF	B7	10A	TD31SDX	00	=		YI31CB4 BUSS BIT 31
XA420	DCF	B7	13A	(23)	01		YDCBAA 36 13A	
XA420	DCF	B8	11A	TD31SOX	00	=		
XA420	DCF	B8	12A	(30)	01		YD31BQ 34 12A	
XA215	TS8	D1	25B	TD3100	00	=		TD REG BIT 31 ORED DATA
XA215	TS8	D1	23B	(47)	01		YD316A YD313A SPI003 SPI014 SPI015 TD314A TD311A TD312A 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	
XA214	TQ2	D2	21A	TD311A	00	=		XFER TC31 TO TD31 CA XFER
XA214	TQ2	D2	22A	(46)	01		YCAX60 YC31BQ 48 22A 50 23A	
XA319	TT3	E3	33B	TD312A	00	=		UPDATE TC31 TO TD31 CA INCRE
XA319	TT3	E3	30B	(63)	01		YC31BP YCAM60 YC11BQ 57 30B 59 31B 61 32B	
XA237	TQ2	E3	30B	TD313A	00	=		BYTE 4 XFER BIT TE31 TO TD31
XA237	TQ2	E3	28B	(57)	01		YE31BQ YWDXC0 53 28B 55 29B	
XA123	TQ2	F4	39A	TD314A	00	=		DATA BUS XFER BIT 31 TO TD31
XA123	TQ2	F4	37A	(80)	01		YCB310 YCPDD0 76 37A 78 38A	
XA237	TQ2	E4	33B	TD316A	00	=		INPUT BYTE 4 TE07 TO TD31
XA237	TQ2	E4	31B	(63)	01		YB4XA0 YE31C0 59 31B 61 32B	
XA217	TDD	JI	32A	TD32BI	00	=		
XA217	TDD	JI		()	01		SP1015 68 32A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TD32BN
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UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

LOGIC

UNIT ASSEMBLY NO. 149019
FILE IDENT T39BIUX2

REV. G INDEX TD32BN
DATE 09-03-82 PAGE 178

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA217	TDD	JN	33A	TD32BN ()	00 = 01	SPI014 70 33A		
XA217	TDD	JP	31B	TD32BP (59)	00 = 01	TDRSDA 66 31A		PRERESET MEMORY PARITY ERROR
XA217	TDD	JQ	32B	TD32BQ (61)	00 = 01	TD32SA 63 33B		PRESET MEMORY PARITY BIT FF
XA423	TQ2	C1	18A	TD32SA (38)	00 = 01	YMDCC0 TD32S0X 40 19A 42 20A		MEMORY PARITY BIT
XA418	DCF	D1	32B	TD32SDX (65)	00 = 01	YMO4BP 72 36A		YIOPCB4 BUSS
XA418	DCF	D2	33B	TD32S0X (69)	00 = 01	YMPB80 71 34B		MEM DAT D/R PARITY
XA414	TT3	F1	37B	TEB270 ()	00 = 01	JDB27B4 SPI032 75 37B 77 38B		
XA237	TQ2	F1	37B	TECKAA (75)	00 = 01	TECK10 SPI017 77 38B 79 39B		TE 08-31 CLOCK UNLOAD
XA237	TQ2	F2	34A	TECKBA (72)	00 = 01	SPI017 TECK10 71 36A 73 36B		TE 08-31 CLOCK UNLOAD
XA237	TQ2	F3	35A	TECKCA (69)	00 = 01	SPI017 TECK10 65 34B 74 35B		TE 08-31 CLOCK UNLOAD-A
XA237	TQ2	F4	39A	TECKDA (80)	00 = 01	SPI017 TECK10 76 37A 78 38A		TE 08-31 CLOCK UNLOAD-A
XA239	TQ2	F1	37B	TECK1A (75)	00 = 01	SPI019 TECK10 77 38B 79 39B		CLOCK INPUT

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TECK10
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA236	TD4	E1	31B	TECK10	00	=		CLOCK INPUT BITS -00-07-0
XA236	TD4	E1	32B	(59)	01		TS228P TYESPA TWTCAA TS248P 61 32B 66 31A 68 32A 70 33A	
XA239	TQ2	F2	34A	TECK2A	00	=		CLOCK INPUT BIT 06-A
XA239	TQ2	F2	36A	(72)	01		TECK10 SPI019 71 36A 73 36B	
XA109	TQ2	B4	13B	TED0AA	00	=		DATA BIT 0.II
XA109	TQ2	B4	11B	(27)	01		TD10A0 TII0C0 23 11B 25 12B	
XA109	TQ2	C1	18A	TED1AA	00	=		DATA BIT 1.II
XA109	TQ2	C1	19A	(38)	01		TD11A0 TII0C0 40 19A 42 20A	
XA138	TQ2	C4	19B	TED2AA	00	=		S14.M3.MEM PF*-0
XA138	TQ2	C4	17B	(39)	01		TDI2A0 TII0C0 35 17B 37 18B	
XA109	TQ2	C3	16B	TED3AA	00	=		DATA BIT 3.II
XA109	TQ2	C3	14B	(33)	01		TII0C0 TDI3A0 29 14B 31 15B	
XA109	TQ2	C4	19B	TED4AA	00	=		DATA BIT 4.II
XA109	TQ2	C4	17B	(39)	01		TII0C0 TDI4A0 35 17B 37 18B	
XA109	TQ2	D4	27B	TED5AA	00	=		DATA BIT 5.II
XA109	TQ2	D4	25B	(51)	01		TII0C0 TDI5A0 47 25B 49 26B	
XA109	TQ2	E4	33B	TED6AA	00	=		DATA BIT 6.II
XA109	TQ2	E4	31B	(63)	01		TII0C0 TDI6A0 59 31B 61 32B	
XA208	TQ2	A4	07B	TED7AA	00	=		DATA BIT 7.II
XA208	TQ2	A4	05B	(15)	01		TII0C0 TDI7A0 11 05B 13 06B	
XA428	THI	A4	02B	TEGND A	00	=		
XA428	THI	A4	03B	(01)	01		SPI034 05 03B	
XA420	DCF	D5	38B	TENAADX4	00	=		EXT ENABLE
XA420	DCF	D5	36A	(80)	01		TEGND A 72 36A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA420	DCF	D6	38A	TENAAOX	00 =		
XA420	DCF	D6	37A	(76)	01	TENACO 74 37A	
XA415	TQ2	A1	05A	TENACA	00 =		I/O ENABLE
XA415	TQ2	A1	06A	(06)	01	YBRSTP YENBBQ 08 06A 10 07A	
XA426	THI	E1	32A	TENACO	00 =		
XA426	THI	E1	33A	(66)	01	TENACA 64 33A	
				TENBBI	00 =		
XA238	TDD	K1	29A	()	01	TENB40 62 29A	
				TENBBN	00 =		
XA238	TDD	KN	28A	()	01	TKBAAB 60 28A	
XA238	TDD	KP	30B	TENBBP	00 =		ENABLE F/F RESET
XA238	TDD	KP	30A	(57)	01	TENB1A 64 30A	
XA238	TDD	KQ	29B	TENBBQ	00 =		ENABLE F/F-SET
XA238	TDD	KQ	28B	(55)	01	TS3EBP 53 28B	
XA139	THI	F6	38A	TENB1A	00 =		CLOCK IN ENABLE -A
XA139	THI	F6	39A	(77)	01	TENB10 75 39A	
XA141	TQ2	E4	33B	TENB10	00 =		CLOCK IN ENABLE -D
XA141	TQ2	E4	31B	(63)	01	TENB2A TMRUAA4 59 31B 61 32B	
XA136	TD4	D2	24B	TENB2A	00 =		OSC.COUNT#4
XA136	TD4	D2	23B	(45)	01	TXC3BQ TCO5AB TXC1BP SPI011 43 23B 46 21A 48 22A 50 23A	
XA137	TT3	F1	36B	TENB40	00 =		DATA INPUT-ORED
XA137	TT3	F1	37B	(73)	01	TI311A TENBBP TSIABA 75 37B 77 38B 79 39B	
XA342	THI	C2	17A	TERSAA	00 =		RESET INPUT
XA342	THI	C2	18A	(37)	01	TERSAO 35 18A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	PLUG TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA250	TS8	F1	37A	TERSAO	00	=		S4+S8+S10+S12+S14+S16+S18
XA250	TS8	F1	36A	(76)	01		TI232A TS20BP TER4AA TS073A TS163A TER5AA SPI028 SPI030 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	
XA428	THI	B1	13A	TERSBA	00	=		
XA428	THI	B1	14A	(24)	01		TERSAO 22 14A	
XA108	TT3	A2	03A	TER1AA	00	=		TE0031 RESET S1.BRST.COMP
XA108	TT3	A2	02B	(07)	01		TBR5U0 TCOMPO TS01BQ 01 02B 03 02A 05 03B	
XA128	TS8	E1	31B	TER4AA	00	=		TE0007 RESET C=1*2.3 BYTE 4*
XA128	TS8	E1	29B	(59)	01		TXC1BP TBC4BP SPI010 SPI011 TI10BQ TXC2BQ TER6AA TXC3BQ 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	
XA141	TQ2	C3	16B	TER5AA	00	=		
XA141	TQ2	C3	14B	(33)	01		TS2100 TS00BP 29 14B 31 15B	
XA112	TQ2	A2	02B	TER6AA	00	=		
XA112	TQ2	A2	04A	(01)	01		TBC2BQ TBC3BQ 04 04A 05 03B	
XA205	THI	A3	03A	TES1AA	00	=		
XA205	THI	A3	02A	(03)	01		TES1AO 04 02A	
XA112	TQ2	B2	09A	TES1AO	00	=		
XA112	TQ2	B2	10A	(14)	01		TES11A TES12A 18 10A 20 11A	
XA208	TQ2	D3	24B	TES11A	00	=		S16.EQB. -PRESET TE 0.1.6
XA208	TQ2	D3	22B	(45)	01		TS16BQ TE08AO 41 22B 43 23B	
XA108	TT3	B1	11A	TES12A	00	=		I2*.EQB.CLK- PRESET TE 0.1.6
XA108	TT3	B1	12A	(20)	01		TI20BP TE08AO TKAABB 22 12A 24 13A 26 14A	
XA108	TT3	B2	09B	TES2AA	00	=		I2*.STOP BURST.CLK-PRESET TE
XA108	TT3	B2	09A	(19)	01		TI20BP TST8RQ TKAABB 14 09A 17 08B 18 10A	
XA205	THI	A4	02B	TES3AA	00	=		PRESET TE 0.1.7 -A
XA205	THI	A4	03B	(01)	01		TES3AO 05 03B	

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TES3A0
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA112	TQ2	B3	10B	TES3A0	00 =		PRESET TE 0,1,7-0
XA112	TQ2	B3	08B	(21)	01	TES32A TS21BP 17 08B 19 09B	
XA108	TT3	B3	13B	TES32A	00 =		S16-COMPUTER END,PARITY*
XA108	TT3	B3	10B	(27)	01	TS16BQ TD17BQ YCD170 21 10B 23 11B 25 12B	
XA112	TQ2	B4	13B	TES4AA	00 =		PRESET TE 00,01 DEC+OFR+ITR
XA112	TQ2	B4	11B	(27)	01	TS23BQ SPI001 23 11B 25 12B	
XA205	THI	A5	04B	TES4A0	00 =		STATE S23,IO -0
XA205	THI	A5	05B	(07)	01	TES4AA 09 05B	
XA112	TQ2	C1	18A	TES5AA	00 =		PRESET TE 03 DEC COMMAND
XA112	TQ2	C1	19A	(38)	01	TES4A0 TDEBS0 40 19A 42 20A	
XA112	TQ2	C2	15A	TES6AA	00 =		PRESET TE 04 OFR COMMAND
XA112	TQ2	C2	16A	(30)	01	TES4A0 TDFRA0 34 16A 36 17A	
XA112	TQ2	C3	16B	TES7AA	00 =		PRESET TE 05 ITR COMMAND
XA112	TQ2	C3	14B	(33)	01	TES4A0 TITRA0 29 14B 31 15B	
XA305	TD4	A1	05B	TE0BA0	00 =		SET EOB F/F
XA305	TD4	A1	05A	(11)	01	TS78SA SPI021 TS77AA TE0B1A 06 05A 08 06A 10 07A 13 06B	
XA113	TDD	DI	10A	TE0BBI	00 =		
XA113	TDD	DI	10A	()	01	TE0BA0 18 10A	
XA113	TDD	DN	09A	TE0BBN	00 =		
XA113	TDD	DN	09A	()	01	TKBAAB 14 09A	
XA113	TDD	DP	10B	TE0BBP	00 =		
XA113	TDD	DP	11A	(21)	01	TMRUAA4 20 11A	
XA113	TDD	DQ	09B	TE0BBQ	00 =		PRESET INPUT EOB
XA113	TDD	DQ	08B	(19)	01	TE0B2A 17 08B	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA304	TQ2	F3	35A	TE0B1A	00 =		
XA304	TQ2	F3	34B	(69)	01	TE0BBQ TI30BP 65 34B 74 35B	EQB NOT I3
XA325	TD4	B2	10B	TE0B2A	00 =		
XA325	TD4	B2	09A	(21)	01	TS16BQ TCD170 TD17BP TBLZAO 14 09A 18 10A 19 09B 20 11A	S16 NO STOP CODE TO BE SENT
				TE0PBI	00 =		
XA339	TDD	CI	13A	()	01	TPGNDA 24 13A	
				TE0PBN	00 =		
XA339	TDD	CN	14A	()	01	TTESPA 26 14A	
XA339	TDD	CP	11B	TE0PBP	00 =		
XA339	TDD	CP	12A	(23)	01	TI231A 22 12A	PRERESET INPUT PARITY
XA339	TDD	CQ	12B	TE0PBQ	00 =		
XA339	TDD	CQ	13B	(25)	01	TDIPAA 27 13B	INPUT PARITY LINE FF
				TE00BI	00 =		
XA143	TDD	MI	36A	()	01	TE0010 71 36A	
				TE00BN	00 =		
XA143	TDD	MN	34A	()	01	TECK1A 72 34A	
XA143	TDD	MP	35A	TE00BP	00 =		
XA143	TDD	MP	36B	(69)	01	TERSAA 73 36B	BIT 00 I/O REG RESET
XA143	TDD	MQ	35B	TE00BQ	00 =		
XA143	TDD	MQ	34B	(74)	01	TE004A 65 34B	BIT 00 I/O REG SET
XA243	TS8	A1	05B	TE0010	00 =		
XA243	TS8	A1	02B	(11)	01	TF005A TF003A TF008A TF006A TF007A TF004A TF002A TF001A 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	OR'ED DATA INPUT BIT 00-0
XA245	THI	A2	04A	TE004A	00 =		
XA245	THI	A2	05A	(08)	01	TE0040 06 05A	SET INPUT BIT 00-A

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA243	TSB	C1	17B	TE0210	00	=		ORED DATA INPUT BIT 02-0
XA243	TSB	C1	15A	(35)	01		TF025A TF021A TF026A TF022A TF028A TF024A TF027A TF023A 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	
XA245	THI	B1	13A	TE024A	00	=		SET INPUT BIT 02-A
XA245	THI	B1	14A	(24)	01		TE0240 22 14A	
XA246	TQ2	B1	12A	TE0240	00	=		SET INPUT BIT 02-0
XA246	TQ2	B1	13A	(22)	01		TES2AA TED2AA 24 13A 26 14A	
XA244	TDD	DI	10A	TE038I	00	=		
				()	01		TE0310 18 10A	
XA244	TDD	DN	09A	TE038N	00	=		
				()	01		TECK1A 14 09A	
XA244	TDD	DP	10B	TE038P	00	=		BIT 03 I/O REG RESET
XA244	TDD	DP	11A	(21)	01		TERSAA 20 11A	
XA244	TDD	DQ	09B	TE038Q	00	=		BIT 03 I/O REG SET
XA244	TDD	DQ	08B	(19)	01		TE034A 17 08B	
XA243	TSB	D1	25B	TE0310	00	=		ORED DATA INPUT BIT 03-0
XA243	TSB	D1	23B	(47)	01		TF035A TF032A TF031A TF038A TF036A TF033A TF037A TF034A 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	
XA245	THI	B4	08B	TE034A	00	=		SET INPUT BIT 03-A
XA245	THI	B4	09B	(14)	01		TE0340 17 09B	
XA246	TQ2	B4	13B	TE0340	00	=		SET INPUT BIT 03-0
XA246	TQ2	B4	11B	(27)	01		TES5AA TED3AA 23 11B 25 12B	
XA244	TDD	EI	19A	TE048I	00	=		
				()	01		TE0410 40 19A	
XA244	TDD	EN	20A	TE048N	00	=		
				()	01		TECK1A 42 20A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	TEST POINT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	RESISTOR	FACTOR	COMMENT
XA244	TDD	EP	17B	TE04BP	00	=		
XA244	TDD	EP	18A	(35)	01		TERSBA 38 18A	BIT 04 I/O REG RESET
XA244	TDD	EQ	18B	TE04BQ	00	=		
XA244	TDD	EQ	19B	(37)	01		TE044A 39 19B	BIT 04 I/O REG SET
XA243	TS8	E1	31B	TE0410	00	=		
XA243	TS8	E1	29B	(59)	01		TF047A TF043A TF046A TF041A TF042A TF048A TF045A TF044A 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	ORED DATA INPUT BIT 04-0
XA245	THI	C1	19A	TE044A	00	=		
XA245	THI	C1	20A	(40)	01		TE0440 38 20A	SET INPUT BIT 04-A
XA246	TQ2	C1	18A	TE0440	00	=		
XA246	TQ2	C1	19A	(38)	01		TE044A TES6AA 40 19A 42 20A	SET INPUT BIT 04-0
XA244	TDD	FI	16A	TE058I	00	=		
XA244	TDD	FI	16A	()	01		TE0510 34 16A	
XA244	TDD	FN	15A	TE058N	00	=		
XA244	TDD	FN	15A	()	01		TECKIA 30 15A	
XA244	TDD	FP	16B	TE05BP	00	=		
XA244	TDD	FP	17A	(33)	01		TERSBA 36 17A	BIT 05 I/O REG RESET
XA244	TDD	FQ	15B	TE05BQ	00	=		
XA244	TDD	FQ	14B	(31)	01		TE054A 29 14B	BIT 05 I/O REG SET
XA243	TS8	F1	37A	TE0510	00	=		
XA243	TS8	F1	36A	(76)	01		TF051A TF057A TF052A TF056A TF053A TF058A TF055A TF054A 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	ORED DATA INPUT BIT 05-0
XA245	THI	C4	14B	TE054A	00	=		
XA245	THI	C4	15B	(30)	01		TE0540 29 15B	SET INPUT BIT 05-A
XA246	TQ2	C4	19B	TE0540	00	=		
XA246	TQ2	C4	17B	(39)	01		TES7AA TED5AA 35 17B 37 18B	SET INPUT BIT 05-0

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
				TE06BI	00 =		
XA244	TDD	GI	25A	()	01	TE0610 54 25A	
				TE06BN	00 =		
XA244	TDD	GN	26A	()	01	TECK2A 56 26A	
XA244	TDD	GP	25B	TE06BP	00 =		BIT 06 I/O REG RESET
XA244	TDD	GP	24A	(47)	01	TERSBA 52 24A	
XA244	TDD	GQ	26B	TE06BQ	00 =		BIT 06 I/O REG SET
XA244	TDD	GQ	27B	(49)	01	TE064A 51 27B	
XA247	TS8	DI	25B	TE0610	00 =		ORED DATA INPUT BIT 06-0
XA247	TS8	DI	23B	(47)	01	TF061A TF062A TF063A TF067A TF064A TF068A TF065A TF066A 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	
XA245	THI	DI	25A	TE064A	00 =		SET INPUT BIT 06-A
XA245	THI	DI	26A	(54)	01	TE0640 52 26A	
XA246	TQ2	DI	24A	TE0640	00 =		SET INPUT BIT 06-0
XA246	TQ2	DI	25A	(52)	01	TED6AA TES1AA 54 25A 56 26A	
				TE07BI	00 =		
XA244	TDD	HI	22A	()	01	TE0710 48 22A	
				TE07BN	00 =		
XA244	TDD	HN	21A	()	01	TECK2A 46 21A	
XA244	TDD	HP	24B	TE07BP	00 =		BIT 07 I/O REG RESET
XA244	TDD	HP	23A	(45)	01	TERSBA 50 23A	
XA244	TDD	HQ	23B	TE07BQ	00 =		BIT 07 I/O REG SET
XA244	TDD	HQ	22B	(43)	01	TE074A 41 22B	
XA247	TS8	C1	17B	TE0710	00 =		ORED DATA INPUT BIT 07-0
XA247	TS8	C1	15A	(35)	01	TF076A TF074A TF073A TF072A TF078A TF075A TF071A TF077A 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	SENS. RATOR	FACTOR	COMMENT
			AND	OR					
XA245	THI	D5	24B		TE074A	00	=		SET INPUT BIT 07-A
XA245	THI	D5	25B		(43)	01		TE0740 45 25B	
XA246	TQ2	D4	27B		TE0740	00	=		SET INPUT BIT 07-0
XA246	TQ2	D4	25B		(51)	01		TES3AA TED7AA 47 25B 49 26B	
					TE08BI	00	=		
XA244	TDD	J1	32A		()	01		TE0810 68 32A	
					TE08BN	00	=		
XA244	TDD	JN	33A		()	01		TECKDA 70 33A	
XA244	TDD	JP	31B		TE08BP	00	=		
XA244	TDD	JP	31A		(59)	01		SPI019 66 31A	
XA244	TDD	JQ	32B		TE08BQ	00	=		BIT 08 I/O REG SET
XA244	TDD	JQ	33B		(61)	01		SPI018 63 33B	
XA248	TD4	E1	31B		TE0810	00	=		ORED DATA INPUT BIT 08-0
XA248	TD4	E1	32B		(59)	01		TF088A TF081A TF082A TF083A 61 32B 66 31A 68 32A 70 33A	
					TE09BI	00	=		
XA244	TDD	K1	29A		()	01		TE0910 62 29A	
					TE09BN	00	=		
XA244	TDD	KN	28A		()	01		TECKDA 60 28A	
XA244	TDD	KP	30B		TE09BP	00	=		
XA244	TDD	KP	30A		(57)	01		SPI016 64 30A	
XA244	TDD	KQ	29B		TE09BQ	00	=		BIT 09 I/O REG SET
XA244	TDD	KQ	28B		(55)	01		SPI004 53 28B	
XA248	TD4	E2	30B		TE0910	00	=		ORED DATA INPUT BIT 09-0
XA248	TD4	E2	29B		(57)	01		TF098A TF092A TF091A TF093A 55 29B 60 28A 62 29A 64 30A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	GROUP	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG. FACTOR	FACTOR	COMMENT
XA244	TDD	LI	38B	TE10BI ()	00 = 01		TE1010 77 38B	
XA244	TDD	LN	39B	TE10BN ()	00 = 01		TECKDA 79 39B	
XA244	TDD	LP	37A	TE10BP (76)	00 = 01		SPI019 75 37B	
XA244	TDD	LQ	38A	TE10BQ (78)	00 = 01		SPI018 80 39A	BIT 10 I/O REG SET
XA248	TD4	F1	37A	TE1010 (76)	00 = 01		TF103A TF101A TF108A TF102A 75 37B 77 38B 78 38A 79 39B	ORED DATA INPUT BIT 10-0
XA251	YDD	LI	38B	TE11BI ()	00 = 01		TE1110 77 38B	
XA251	YDD	LN	39B	TE11BN ()	00 = 01		TECKCA 79 39B	
XA251	TDD	LP	37A	TE11BP (76)	00 = 01		SPI021 75 37B	
XA251	TDD	LQ	38A	TE11BQ (78)	00 = 01		SPI022 80 39A	BIT 11 I/O REG SET
XA248	TD4	F2	35A	TE1110 (69)	00 = 01		TF118A TF112A TF111A TF113A 71 36A 72 34A 73 36B 74 35B	ORED DATA INPUT BIT 11-0
XA242	TDD	MI	36A	TE12BI ()	00 = 01		TE1210 71 36A	
XA242	YDD	MN	34A	TE12BN ()	00 = 01		TECKCA 72 34A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TE12BP
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA242	TDD	MP	35A	TE128P	00	H		
XA242	TDD	MP	36B	(69)	01		SPI016 73 36B	
XA242	TDD	HQ	35B	TE128Q	00	=		BIT 12 I/O REG SET
XA242	TDD	HQ	34B	(74)	01		SPI004 65 34B	
XA241	TD4	F2	35A	TE1210	00	=		ORED DATA INPUT BIT 12-0
XA241	TD4	F2	36A	(69)	01		TF128A TF121A TF122A TF123A 71 36A 72 34A 73 36B 74 35B	
				TE138I	00	=		
XA242	TDD	LI	38B	()	01		TE1310 77 38B	
				TE138N	00	=		
XA242	TDD	LN	39B	()	01		TECKCA 79 39B	
XA242	TDD	LP	37A	TE138P	00	=		
XA242	TDD	LP	37B	(76)	01		SPI019 75 37B	
XA242	TDD	LQ	38A	TE138Q	00	=		BIT 13 I/O REG SET
XA242	TDD	LQ	39A	(78)	01		SPI018 80 39A	
XA241	TD4	F1	37A	TE1310	00	=		ORED DATA INPUT BIT 13-0
XA241	TD4	F1	37B	(76)	01		TF138A TF132A TF131A TF133A 75 37B 77 38B 78 38A 79 39B	
				TE148I	00	=		
XA242	TDD	KI	29A	()	01		TEI410 62 29A	
				TE148N	00	=		
XA242	TDD	KN	28A	()	01		TECKCA 60 28A	
XA242	TDD	KP	30B	TE148P	00	=		
XA242	TDD	KP	30A	(57)	01		SPI016 64 30A	
XA242	TDD	KQ	29B	TE148Q	00	=		BIT 14 I/O REG SET
XA242	TDD	KQ	28B	(55)	01		SPI004 53 28B	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TE1410
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 191

CONNECTOR	ORIG. TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM.	DESIG. INATOR	FACTOR	COMMENT
XA241	TD4	E2	30B	TE1410	00	=		ORED DATA INPUT BIT 14-0
XA241	TD4	E2	29B	(57)	01	=	TF141A 55 29B TF142A 60 28A TF148A 62 29A TF143A 64 30A	
				TE158I	00	=		
XA242	TDD	JI	32A	()	01	=	TE1510 68 32A	
				TE158N	00	=		
XA242	TDD	JN	33A	()	01	=	TECKCA 70 33A	
XA242	TDD	JP	31B	TE158P	00	=		
XA242	TDD	JP	31A	(59)	01	=	SPI019 66 31A	
XA242	TDD	JQ	32B	TE158Q	00	=		BIT 15 I/O REG SET
XA242	TDD	JQ	33B	(61)	01	=	SPI018 63 33B	
XA241	TD4	E1	31B	TE1510	00	=		ORED DATA INPUT BIT 15-0
XA241	TD4	E1	32B	(59)	01	=	TF151A 61 32B TF153A 66 31A TF158A 68 32A TF152A 70 33A	
				TE168I	00	=		
XA242	TDD	HI	22A	()	01	=	TE1610 48 22A	
				TE168N	00	=		
XA242	TDD	HN	21A	()	01	=	TECKCA 46 21A	
XA242	TDD	HP	24B	TE168P	00	=		
XA242	TDD	HP	23A	(45)	01	=	SPI016 50 23A	
XA242	TDD	HQ	23B	TE168Q	00	=		BIT 16 I/O REG SET
XA242	TDD	HQ	22B	(43)	01	=	SPI004 41 22B	
XA241	TD4	D2	24B	TE1610	00	=		ORED DATA INPUT BIT 16-0
XA241	TD4	D2	23B	(45)	01	=	TF161A 43 23B TF162A 46 21A TF168A 48 22A TF163A 50 23A	
				TE178I	00	=		
XA242	TDD	GI	25A	()	01	=	TE1710 54 25A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TE17BN
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	REG. FACTOR	FACTOR	COMMENT
			AND	OR					
XA242	TDD	GN	26A		TE17BN ()	00	#	TECKCA 56 26A	
XA242	TDD	GP	25B		TE17BP	00	=		
XA242	TDD	GP	24A		(47)	01		SPI019 52 24A	
XA242	TDD	GQ	26B		TE178Q	00	=		BIT 17 I/O REG SET
XA242	TDD	GQ	27B		(49)	01		SPI018 51 27B	
XA241	TD4	D1	25B		TE1710	00	=		ORED DATA INPUT BIT 17-0
XA241	TD4	D1	26B		(47)	01		YF171A YF178A YF173A YF172A 49 26B 52 24A 54 25A 56 26A	
XA242	TDD	FI	16A		TE188I	00	=	YE1810 34 16A	
XA242	TDD	FN	15A		TE188N	00	=	TECKBA 30 15A	
XA242	TDD	FP	16B		TE188P	00	=		
XA242	TDD	FP	17A		(33)	01		SPI016 36 17A	
XA242	TDD	FQ	15B		TE188Q	00	=		BIT 18 I/O REG SET
XA242	TDD	FQ	14B		(31)	01		SPI004 29 14B	
XA241	TD4	C2	16B		TE1810	00	=		ORED DATA INPUT BIT 18-0
XA241	TD4	C2	15A		(33)	01		YF181A YF182A YF188A YF183A 30 15A 31 15B 34 16A 36 17A	
XA242	TDD	EI	19A		TE198I	00	=	YE1910 40 19A	
XA242	TDD	EN	20A		TE198N	00	=	TECKBA 42 20A	
XA242	TDD	EP	17B		TE198P	00	=		
XA242	TDD	EP	18A		(35)	01		SPI019 38 18A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TE19BQ
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA242	TDD	EQ	18B	TE19BQ	00 =		BIT 19 I/O REG SET
XA242	TDD	EQ	19B	(37)	01	SPI018 39 19B	
XA241	TD4	C1	17B	TE1910	00 =		ORED DATA INPUT BIT 19-0
XA241	TD4	C1	18B	(35)	01	TF192A TF191A TF198A TF193A 37 18B 38 18A 40 19A 42 20A	
				TE20BI	00 =		
XA242	TDD	DI	10A	()	01	TE2010 18 10A	
				TE20BN	00 =		
XA242	TDD	DN	09A	()	01	TECKBA 14 09A	
XA242	TDD	DP	10B	TE20BP	00 =		
XA242	TDD	DP	11A	(21)	01	SPI016 20 11A	
XA242	TDD	DQ	09B	TE20BQ	00 =		BIT 20 I/O REG SET
XA242	TDD	DQ	08B	(19)	01	SPI004 17 08B	
XA241	TD4	B2	10B	TE2010	00 =		ORED DATA INPUT BIT 20-0
XA241	TD4	B2	09A	(21)	01	TF208A TF201A TF202A TF203A 14 09A 18 10A 19 09B 20 11A	
				TE21BI	00 =		
XA242	TDD	CI	13A	()	01	TE2110 24 13A	
				TE21BN	00 =		
XA242	TDD	CN	14A	()	01	TECKBA 26 14A	
XA242	TDD	CP	11B	TE21BP	00 =		
XA242	TDD	CP	12A	(23)	01	SPI019 22 12A	
XA242	TDD	CQ	12B	TE21BQ	00 =		BIT 21 I/O REG SET
XA242	TDD	CQ	13B	(25)	01	SPI018 27 13B	
XA241	TD4	B1	11B	TE2110	00 =		ORED DATA INPUT BIT 21-0
XA241	TD4	B1	12A	(23)	01	TF218A TF212A TF211A TF213A 22 12A 24 13A 25 12B 26 14A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TE22BI
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CONNECTOR	GROUP TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM NATOR	DESIG NATOR	FACTOR	COMMENT
				TE22BI	00 =			
XA242	TDD	BI	03B	()	01		YE2210 05 03B	
				TE22BN	00 =			
XA242	TDD	BN	02B	()	01		YECKBA 01 02B	
XA242	TDD	BP	04B	TE22BP	00 =			
XA242	TDD	BP	04A	(09)	01		SPI016 04 04A	
XA242	TDD	BQ	03A	TE22BQ	00 =			BIT 22 I/O REG SET
XA242	TDD	BQ	02A	(07)	01		SPI004 03 02A	
XA241	TD4	A2	04B	TE2210	00 =			ORED DATA INPUT BIT 22-0
XA241	TD4	A2	02B	(09)	01		YF223A YF228A YF222A YF221A 01 02B 04 04A 05 03B 07 03A	
				TE23BI	00 =			
XA242	TDD	A1	06A	()	01		YE2310 08 06A	
				TE23BN	00 =			
XA242	TDD	AN	07A	()	01		YECKBA 10 07A	
XA242	TDD	AP	05B	TE23BP	00 =			
XA242	TDD	AP	05A	(11)	01		SPI019 06 05A	
XA242	TDD	AQ	06B	TE23BQ	00 =			BIT 23 I/O REG SET
XA242	TDD	AQ	07B	(13)	01		SPI018 15 07B	
XA241	TD4	A1	05B	TE2310	00 =			ORED DATA INPUT BIT 23-0
XA241	TD4	A1	05A	(11)	01		YF233A YF231A YF238A YF232A 06 05A 08 06A 10 07A 13 06B	
				TE24BI	00 =			
XA238	TDD	A1	06A	()	01		YE2410 08 06A	
				TE24BN	00 =			
XA238	TDD	AN	07A	()	01		YECKBA 10 07A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TE24BP
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CONNECTOR	GROUP TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG- NATOR	FACTOR	COMMENT
XA238	TDD	AP	05B	TE24BP	00	=		
XA238	TDD	AP	05A	(11)	01		SPI017 06 05A	BIT 24 I/O REG RESET
XA238	TDD	AQ	06B	TE24BQ	00	=		
XA238	TDD	AQ	07B	(13)	01		SPI018 15 07B	BIT 24 I/O REG SET
XA342	THI	A2	04A	TE24C0	00	=		
XA342	THI	A2	05A	(08)	01		TE24BP 06 05A	TE BIT 24 UNLOAD
XA236	TD4	A1	05B	TE2410	00	=		
XA236	TD4	A1	05A	(11)	01		TF248A TF241A TF242A TF243A 06 05A 08 06A 10 07A 13 06B	ORED DATA INPUT BIT 24-0
XA238	TDD	BI	03B	TE25BI	00	=		
				()	01		TE2510 05 03B	
XA238	TDD	BN	02B	TE25BN	00	=		
				()	01		TECKAA 01 02B	
XA238	TDD	BP	04B	TE25BP	00	=		
XA238	TDD	BP	04A	(09)	01		SPI016 04 04A	BIT 25 I/O REG RESET
XA238	TDD	BQ	03A	TE25BQ	00	=		
XA238	TDD	BQ	02A	(07)	01		SPI004 03 02A	BIT 25 I/O REG SET
XA342	THI	A3	03A	TE25C0	00	=		
XA342	THI	A3	02A	(03)	01		TE25BP 04 02A	TE BIT 25 UNLOAD
XA236	TD4	A2	04B	TE2510	00	=		
XA236	TD4	A2	02B	(09)	01		TF258A TF252A TF253A TF251A 01 02B 04 04A 05 03B 07 03A	ORED DATA INPUT BIT 25-0
XA238	TDD	CI	13A	TE26BI	00	=		
				()	01		TE2610 24 13A	
XA238	TDD	CN	14A	TE26BN	00	=		
				()	01		TECKAA 26 14A	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TE26BP
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA238	TDD	CP	11B	TE26BP	00 =		BIT 26 I/O REG RESET
XA238	TDD	CP	12A	(23)	01	SPI017 22 12A	
XA238	TDD	CQ	12B	TE26BQ	00 =		BIT 26 I/O REG SET
XA238	TDD	CQ	13B	(25)	01	SPI018 27 13B	
XA342	THI	A4	02B	TE26C0	00 =		TE BIT 26 UNLOAD
XA342	THI	A4	03B	(01)	01	TE26BP 05 03B	
XA236	TD4	B1	11B	TE2610	00 =		ORED DATA INPUT BIT 26-0
XA236	TD4	B1	12A	(23)	01	TF268A TF261A TF262A TF263A 22 12A 24 13A 25 12B 26 14A	
				TE278I	00 =		
XA238	TDD	DI	10A	()	01	TE2710 18 10A	
				TE278N	00 =		
XA238	TDD	DN	09A	()	01	TECKAA 14 09A	
XA238	TDD	DP	10B	TE278P	00 =		BIT 27 I/O REG RESET
XA238	TDD	DP	11A	(21)	01	SPI016 20 11A	
XA238	TDD	DQ	09B	TE278Q	00 =		BIT 27 I/O REG SET
XA238	TDD	DQ	08B	(19)	01	SPI004 17 08B	
XA342	THI	A5	04B	TE27C0	00 =		TE BIT 27 UNLOAD
XA342	THI	A5	05B	(07)	01	TE278P 09 05B	
XA236	TD4	B2	10B	TE2710	00 =		ORED DATA INPUT BIT 27-0
XA236	TD4	B2	09A	(21)	01	TF278A TF272A TF273A TF271A 14 09A 18 10A 19 09B 20 11A	
				TE288I	00 =		
XA238	TDD	E1	19A	()	01	TE2810 40 19A	
				TE288N	00 =		
XA238	TDD	EN	20A	()	01	TECKAA 42 20A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TE28BP
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CONNECTOR	CIRCUIT POINT	GROUP	TEST POINTS		EQUATION	TERM	LOGIC NATOR	FACTOR	COMMENT
			AND	OR					
XA238	TDD	EP	17B		TE288P	00	=		
XA238	TDD	EP	18A		(35)	01		SPI019 38 18A	BIT 28 I/O REG RESET
XA238	TDD	EQ	18B		TE288Q	00	=		
XA238	TDD	EQ	19B		(37)	01		SPI018 39 19B	BIT 28 I/O REG SET
XA342	THI	A6	06B		TE28C0	00	=		
XA342	THI	A6	07B		(10)	01		TE288P 15 07B	TE BIT 28 UNLOAD
XA236	TD4	C1	17B		TE2810	00	=		
XA236	TD4	C1	18B		(35)	01		TF288A TF281A TF282A TF283A 37 18B 38 18A 40 19A 42 20A	ORED DATA INPUT BIT 28-0
					TE298I	00	=		
XA238	TDD	FI	16A		()	01		TE2910 34 16A	
					TE298N	00	=		
XA238	TDD	FN	15A		()	01		TECKAA 30 15A	
XA238	TDD	FP	16B		TE298P	00	=		
XA238	TDD	FP	17A		(33)	01		SPI016 36 17A	BIT 29 I/O REG RESET
XA238	TDD	FQ	15B		TE298Q	00	=		
XA238	TDD	FQ	14B		(31)	01		SPI004 29 14B	BIT 29 I/O REG SET
XA342	THI	B1	13A		TE29C0	00	=		
XA342	THI	B1	14A		(24)	01		TE298P 22 14A	TE BIT 29 UNLOAD
XA236	TD4	C2	16B		TE2910	00	=		
XA236	TD4	C2	15A		(33)	01		TF292A TF291A TF293A TF298A 30 15A 31 15B 34 16A 36 17A	ORED DATA INPUT BIT 29-0
					TE308I	00	=		
XA238	TDD	GI	25A		()	01		TE3010 54 25A	
					TE308N	00	=		
XA238	TDD	GN	26A		()	01		TECKAA 56 26A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TE30BP
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA238	TDD	GP	25B	TE30BP	00	=		
XA238	TDD	GP	24A	(47)	01		SPI019 52 24A	BIT 30 I/O REG RESET
XA238	TDD	GQ	26B	TE30BQ	00	=		
XA238	TDD	GQ	27B	(49)	01		SPI01B 51 27B	BIT 30 I/O REG SET
XA342	THI	B3	09A	TE30C0	00	=		
XA342	THI	B3	10A	(18)	01		TE30BP 20 10A	TE BIT 30 UNLOAD
XA236	TD4	D1	25B	TE3010	00	=		
XA236	TD4	D1	26B	(47)	01		TF301A TF302A TF308A TF303A 49 26B 52 24A 54 25A 56 26A	ORED DATA INPUT BIT 30-0
				TE31BI	00	=		
XA238	TDD	HI	22A	()	01		TE3110 48 22A	
				TE31BN	00	=		
XA238	TDD	HN	21A	()	01		TECKAA 46 21A	
XA238	TDD	HP	24B	TE31BP	00	=		
XA238	TDD	HP	23A	(45)	01		SPI016 50 23A	BIT 31 I/O REG RESET
XA238	TDD	HQ	23B	TE31BQ	00	=		
XA238	TDD	HQ	22B	(43)	01		SPI004 41 22B	BIT 31 I/O REG SET
XA342	THI	B4	08B	TE31C0	00	=		
XA342	THI	B4	09B	(14)	01		TE31BP 17 09B	TE BIT 31 UNLOAD
XA236	TD4	D2	24B	TE3110	00	=		
XA236	TD4	D2	23B	(45)	01		TF312A TF311A TF318A TF313A 43 23B 46 21A 48 22A 50 23A	ORED DATA INPUT BIT 31-0
XA446	TQ2	D4	27B	TFIOAR	00	=		
XA446	TQ2	D4	25B	(51)	01		YSS12A YFIOAS 47 25B 49 26B	CLK ADD REG 0-3 A POLARITY
XA440	TQ2	C3	16B	TFIOAS	00	=		
XA440	TQ2	C3	14B	(33)	01		TFIOAS TFIOAR 29 14B 31 15B	RESET/RESTART CONTROL

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TE10CA
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DEFINITION	FACTOR	COMMENT
XA438	TQ2	A1	05A	TFIOCA	00 =		
XA438	TQ2	A1	06A	(06)	01 =	TFIOAS TS00BQ 08 06A 10 07A	INH REST TO I/OIDL
XA446	TQ2	C2	15A	TFIOCR	00 =		
XA446	TQ2	C2	16A	(30)	01 =	TSS11A TFIOCS 34 16A 36 17A	
XA445	TT3	C1	17A	TFIOCS	00 =		
XA445	TT3	C1	18A	(36)	01 =	TFIOUA TFIOA TFIOCR 38 18A 40 19A 42 20A	CPU STP R/C CONTRL
XA426	THI	E6	32B	TFIOCO	00 =		
XA426	THI	E6	33B	(68)	01 =	TFIOCA 65 33B	
XA446	TQ2	C4	19B	TFIORA	00 =		
XA446	TQ2	C4	17B	(39)	01 =	TFIOAS TFIOA 35 17B 37 18B	I/O RESET
XA439	THI	C5	16B	TFIOSA	00 =		
XA439	THI	C5	17B	(31)	01 =	TFIOSO 33 17B	
XA425	TD4	D2	24B	TFIOSO	00 =		
XA425	TD4	D2	23B	(45)	01 =	TDDISA JMRSAB4 YPRFCB4 KSWRSR 43 23B 46 21A 48 22A 50 23A	RESET COND PRESENT
XA440	TQ2	A4	07B	TFIOTA	00 =		
XA440	TQ2	A4	05B	(15)	01 =	TFIOCO JPWFSB4 11 05B 13 06B	CPU STOP CONT SMC
XA437	TD4	F1	37A	TFIOUA	00 =		
XA437	TD4	F1	37B	(76)	01 =	TFIOTA TFIOA TFIOCO ZDDRI 75 37B 77 38B 78 38A 79 39B	
XA234	TQ2	C1	18A	TF001A	00 =		
XA234	TQ2	C1	19A	(38)	01 =	KIR11B KMROOS 40 19A 42 20A	{ ITR 01 } (MONITOR REG BIT 00) ITR ADDRESS 01 - FAN0 UT
XA234	TQ2	C2	15A	TF002A	00 =		
XA234	TQ2	C2	16A	(30)	01 =	KIR21B SPI017 34 16A 36 17A	{ ITR 02 } (SPARE) ITR ADDRESS 02 - FAN0 UT
XA231	TQ2	A1	05A	TF003A	00 =		
XA231	TQ2	A1	06A	(06)	01 =	TWTD0A TD00BQ 08 06A 10 07A	T000 TO T000 WORD XFER

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TF004A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA231	TQ2	A2	02B	TF004A	00	=		
XA231	TQ2	A2	04A	(01)	01		YD008Q YMUUA0 04 04A 05 03B	TD00 TO TE00 GATE
XA231	TQ2	E1	31A	TF005A	00	=		
XA231	TQ2	E1	32A	(166)	01		YMLA0 YD088Q 68 32A 70 33A	TD08 TO TE00 GATE
XA225	TQ2	C3	16B	TF006A	00	=		
XA225	TQ2	C3	14B	(33)	01		YD168Q YLUGA0 29 14B 31 15B	TD16 TO TE00 GATE
XA219	TQ2	A1	05A	TF007A	00	=		
XA219	TQ2	A1	06A	(06)	01		YMLLA0 YD248Q 08 06A 10 07A	TD24 TO TE00 GATE
XA239	TQ2	A4	07B	TF008A	00	=		
XA239	TQ2	A4	05B	(15)	01		YTESA0 YE088Q 11 05B 13 06B	TE08 TO TE00 SHIFT
XA234	TQ2	C3	16B	TF011A	00	=		
XA234	TQ2	C3	14B	(33)	01		KMK01S KIR11B 29 14B 31 15B	(ITR 01)(MONITOR REG BIT 01)
XA234	TQ2	C4	19B	TF012A	00	=		
XA234	TQ2	C4	17B	(39)	01		KIR21B SPI017 35 17B 37 18B	(ITR 02)(SPARE) ITR ADDRESS 02 - FANOUT
XA230	TQ2	A3	04B	TF013A	00	=		
XA230	TQ2	A3	02A	(09)	01		YWTDA0 YD018Q 03 02A 07 03A	TD01 TO TE01 WORD XFER
XA230	TQ2	A4	07B	TF014A	00	=		
XA230	TQ2	A4	05B	(15)	01		YD018Q YMUUA0 11 05B 13 06B	TD01 TO TE01 GATE
XA230	TQ2	E3	30B	TF015A	00	=		
XA230	TQ2	E3	28B	(57)	01		YD098Q YMLA0 53 28B 55 29B	TD09 TO TE01 GATE
XA225	TQ2	C4	19B	TF016A	00	=		
XA225	TQ2	C4	17B	(39)	01		YLUGA0 YD17C0 35 17B 37 18B	TD17 TO TE01 GATE
XA219	TQ2	A2	02B	TF017A	00	=		
XA219	TQ2	A2	04A	(01)	01		YMLLA0 YD258Q 04 04A 05 03B	TD25 TO TE01 GATE

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TF018A
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CONNECTOR	TEST POINT	GROUP	TEST POINTS AND/OR	EQUATION	TERM	REG. NATOR	FACTOR	COMMENT
XA239	TQ2	A3	04B	TF018A	00	=		
XA239	TQ2	A3	02A	(09)	01		TTESAO TE09BQ 03 02A 07 03A	TE09 TO TE01 SHIFT
XA234	TQ2	D1	24A	TF021A	00	=		(ITR 01) (MONITOR REG BIT 02)
XA234	TQ2	D1	25A	(52)	01		KIR11B KMR02S 54 25A 56 26A	ITR ADDRESS 01 - FANOUT
XA234	TQ2	D2	21A	TF022A	00	=		(ITR 02) (SPARE)
XA234	TQ2	D2	22A	(46)	01		SPI017 KIR21B 48 22A 50 23A	
XA231	TQ2	B1	12A	TF023A	00	=		TD02 TO TE02 WORD XFER
XA231	TQ2	B1	13A	(22)	01		TWTDAO TD02BQ 24 13A 26 14A	
XA231	TQ2	B2	09A	TF024A	00	=		TD02 TO TE02 GATE
XA231	TQ2	B2	10A	(14)	01		TMUUAO TD02BQ 18 10A 20 11A	
XA231	TQ2	F1	37B	TF025A	00	=		TD10 TO TE02 GATE
XA231	TQ2	F1	38B	(75)	01		TMULAO TD10BQ 77 38B 79 39B	
XA225	TQ2	D1	24A	TF026A	00	=		TD18 TO TE02 GATE
XA225	TQ2	D1	25A	(52)	01		TLUGAO TD18BQ 54 25A 56 26A	
XA219	TQ2	B1	12A	TF027A	00	=		TD26 TO TE02 GATE
XA219	TQ2	B1	13A	(22)	01		TMLLAO TD26BQ 24 13A 26 14A	
XA239	TQ2	A2	02B	TF028A	00	=		TE10 TO TE02 SHIFT
XA239	TQ2	A2	04A	(01)	01		TE10BQ TTESAO 04 04A 05 03B	
XA234	TQ2	D3	24B	TF031A	00	=		(ITR 01) (MONITOR REG BIT 03)
XA234	TQ2	D3	22B	(45)	01		KMR03S KIR11B 41 22B 43 23B	
XA234	TQ2	D4	27B	TF032A	00	=		(ITR 02) (SPARE)
XA234	TQ2	D4	25B	(51)	01		KIR21B KGNDDA 47 25B 49 26B	ITR ADDRESS 02 - FANOUT
XA230	TQ2	B3	10B	TF033A	00	=		TD03 TO TE03 WORD XFER
XA230	TQ2	B3	08B	(21)	01		TWTDAO TD03BQ 17 08B 19 09B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TF034A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA230	TQ2	B4	13B	TF034A	00 =		
XA230	TQ2	B4	11B	(27)	01	YMUUA0 YD03BQ 23 11B 25 12B	TD03 TO TE03 GATE
XA230	TQ2	E4	33B	TF035A	00 =		
XA230	TQ2	E4	31B	(63)	01	YMLA0 YD11BQ 59 31B 61 32B	TD11 TO TE03 GATE
XA225	TQ2	D2	21A	TF036A	00 =		
XA225	TQ2	D2	22A	(46)	01	YLUGA0 YD19BQ 48 22A 50 23A	TD19 TO TE03 GATE
XA219	TQ2	B2	09A	TF037A	00 =		
XA219	TQ2	B2	10A	(14)	01	YMLLA0 YD27BQ 18 10A 20 11A	TD27 TO TE03 GATE
XA239	TQ2	A1	05A	TF038A	00 =		
XA239	TQ2	A1	06A	(06)	01	YEL1BQ YTESA0 08 06A 10 07A	TE11 TO TE03 SHIFT
XA234	TQ2	E1	31A	TF041A	00 =		
XA234	TQ2	E1	32A	(66)	01	KMR04S KIR11B 68 32A 70 33A	(ITR 01) (MONITOR REG 0 I I 04)
XA234	TQ2	E2	28A	TF042A	00 =		
XA234	TQ2	E2	29A	(60)	01	KYR21B KGNDDA 62 29A 64 30A	(ITR 02) (SPARE) ITR ADDRESS 02 - FAND UT
XA231	TQ2	C1	18A	TF043A	00 =		
XA231	TQ2	C1	19A	(38)	01	YWTDA0 YD04BQ 40 19A 42 20A	TD04 TO TE04 WORD XFER
XA231	TQ2	C2	15A	TF044A	00 =		
XA231	TQ2	C2	16A	(30)	01	YD04BQ YMUUA0 34 16A 36 17A	TD04 TO TE04 GATE
XA224	TQ2	A3	04B	TF045A	00 =		
XA224	TQ2	A3	02A	(09)	01	YD12BQ YMLA0 03 02A 07 03A	TD12 TO TE04 GATE
XA225	TQ2	E1	31A	TF046A	00 =		
XA225	TQ2	E1	32A	(66)	01	YLUGA0 YD20BQ 68 32A 70 33A	TD20 TO TE04 GATE
XA219	TQ2	C1	18A	TF047A	00 =		
XA219	TQ2	C1	19A	(38)	01	YMLLA0 YD28BQ 40 19A 42 20A	TD28 TO TE04 GATE

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TF048A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA239	TQ2	B4	13B	TF048A	00 =		
XA239	TQ2	B4	11B	(27)	01	TTESAO TE12BQ 23 11B 25 12B	TE12 TO TE04 SHIFT
XA234	TQ2	E3	30B	TF051A	00 =		
XA234	TQ2	E3	28B	(57)	01	KIR11B KMR05S 53 28B 55 29B	(ITR 01)(MONITOR REG BIT 05) ITR ADDRESS 01 - FANOUT
XA234	TQ2	E4	33B	TF052A	00 =		
XA234	TQ2	E4	31B	(63)	01	KIR21B KGNDCA 59 31B 61 32B	(ITR 02)(SPARE1) ITR ADDRESS 02 - FANOUT
XA230	TQ2	C3	16B	TF053A	00 =		
XA230	TQ2	C3	14B	(33)	01	TD05BQ TWTDA0 29 14B 31 15B	TD05 TO TE05 WORD XFER
XA230	TQ2	C4	19B	TF054A	00 =		
XA230	TQ2	C4	17B	(39)	01	TD05BQ TMJUAO 35 17B 37 18B	TD05 TO TE05 GATE
XA225	TQ2	A3	04B	TF055A	00 =		
XA225	TQ2	A3	02A	(09)	01	TMULAO TD13BQ 03 02A 07 03A	TD13 TO TE05 GATE
XA225	TQ2	E2	28A	TF056A	00 =		
XA225	TQ2	E2	29A	(60)	01	TLUGAO TD21BQ 62 29A 64 30A	TD21 TO TE05 GATE
XA219	TQ2	C2	15A	TF057A	00 =		
XA219	TQ2	C2	16A	(30)	01	TMLLAO TD29BQ 34 16A 36 17A	TD29 TO TE05 GATE
XA239	TQ2	B3	10B	TF058A	00 =		
XA239	TQ2	B3	08B	(21)	01	TTESAO TE13BQ 17 08B 19 09B	TE13 TO TE05 SHIFT
XA234	TQ2	F1	37B	TF061A	00 =		
XA234	TQ2	F1	38B	(75)	01	KIR11B KMR06S 77 38B 79 39B	(ITR 01)(MONITOR REG BIT 06) ITR ADDRESS 01 - FANOUT
XA234	TQ2	F2	34A	TF062A	00 =		
XA234	TQ2	F2	36A	(72)	01	KGNDCA KIR21B 71 36A 73 36B	(ITR 02)UPDR CPU-1
XA231	TQ2	D1	24A	TF063A	00 =		
XA231	TQ2	D1	25A	(52)	01	TD06BQ TWTDA0 54 25A 56 26A	TD06 TO TE06 WORD XFER

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TF064A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA231	TQ2	D2	21A	TF064A	00	=		
XA231	TQ2	D2	22A	(46)	01		TD06BQ TMUUAO 48 22A 50 23A	TD06 TO TE06 GATE
XA225	TQ2	B1	12A	TF065A	00	=		
XA225	TQ2	B1	13A	(22)	01		TD14BQ TMULA0 24 13A 26 14A	TD14 TO TE06 GATE
XA225	TQ2	F1	37B	TF066A	00	=		
XA225	TQ2	F1	38B	(75)	01		TD22BQ TLUGA0 77 38B 79 39B	TD22 TO TE06 GATE
XA219	TQ2	D1	24A	TF067A	00	=		
XA219	TQ2	D1	25A	(52)	01		TD30BQ TMLLA0 54 25A 56 26A	TD30 TO TE06 GATE
XA239	TQ2	B2	09A	TF068A	00	=		
XA239	TQ2	B2	10A	(14)	01		TE14BQ TTESA0 18 10A 20 11A	TE14 TO TE06 SHIFT
XA234	TQ2	F3	35A	TF071A	00	=		
XA234	TQ2	F3	34B	(69)	01		KMRO7S KIR11B 65 34B 74 35B	(ITR 01)(MONITOR REG BIT 07)
XA234	TQ2	F4	39A	TF072A	00	=		
XA234	TQ2	F4	37A	(80)	01		KIR21B KGN0DA 76 37A 78 38A	(ITR 02)(SPARE) ITR ADDRESS 02 - FANOUT
XA230	TQ2	D3	24B	TF073A	00	=		
XA230	TQ2	D3	22B	(45)	01		TWYDA0 TD07BQ 41 22B 43 23B	TD07 TO TE07 WORD XFER
XA230	TQ2	D4	27B	TF074A	00	=		
XA230	TQ2	D4	25B	(51)	01		TMUUA0 TD07BQ 47 25B 49 26B	TD07 TO TE07 GATE
XA224	TQ2	B3	10B	TF075A	00	=		
XA224	TQ2	B3	08B	(21)	01		TMULA0 TD15BQ 17 08B 19 09B	TD15 TO TE07 GATE
XA225	TQ2	F2	34A	TF076A	00	=		
XA225	TQ2	F2	36A	(72)	01		TLUGA0 TD23BQ 71 36A 73 36B	TD23 TO TE07 GATE
XA219	TQ2	D2	21A	TF077A	00	=		
XA219	TQ2	D2	22A	(46)	01		TMLLA0 TD31BQ 48 22A 50 23A	TD31 TO TE07 GATE

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TF078A
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CONNECTOR	CRUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA239	TQ2	B1	12A	TF078A	00	=		
XA239	TQ2	B1	13A	(22)	01		TE15BQ TTESAO 24 13A 26 14A	TE15 TO TE07 SHIFT
XA233	TQ2	A1	05A	TF081A	00	=		(ITR 01) (MONITOR REG BIT 08)
XA233	TQ2	A1	06A	(06)	01		KIR11B KMR08S 08 06A 10 07A	ITR ADDRESS 01 - FANOUT
XA233	TQ2	A2	02B	TF082A	00	=		(ITR 02) (SPARE)
XA233	TQ2	A2	04A	(01)	01		KIR21B KGNDDA 04 04A 05 03B	ITR ADDRESS 02 - FANOUT
XA230	TQ2	E1	31A	TF083A	00	=		TD08 TO TE08 WORD XFER
XA230	TQ2	E1	32A	(66)	01		TD08BQ TWT080 68 32A 70 33A	
XA239	TQ2	C4	19B	TF088A	00	=		TE16 TO TE08 SHIFT
XA239	TQ2	C4	17B	(39)	01		TE16BQ TTESB0 35 17B 37 18B	
XA233	TQ2	A3	04B	TF091A	00	=		(ITR 01) (MONITOR REG BIT 09)
XA233	TQ2	A3	02A	(09)	01		KMR09S KIR11B 03 02A 07 03A	
XA233	TQ2	A4	07B	TF092A	00	=		(ITR 02) (SPARE)
XA233	TQ2	A4	05B	(15)	01		KIR21B KGNDDA 11 05B 13 06B	ITR ADDRESS 02 - FANOUT
XA230	TQ2	E2	28A	TF093A	00	=		TD09 TO TE09 WORD XFER
XA230	TQ2	E2	29A	(60)	01		TWT080 TD09BQ 62 29A 64 30A	
XA239	TQ2	C3	16B	TF098A	00	=		TE17 TO TE09 SHIFT
XA239	TQ2	C3	14B	(33)	01		TTESB0 TE17BQ 29 14B 31 15B	
XA233	TQ2	B1	12A	TF101A	00	=		(ITR 01) (MONITOR REG BIT 10)
XA233	TQ2	B1	13A	(22)	01		KMR10S KIR11B 24 13A 26 14A	
XA233	TQ2	B2	09A	TF102A	00	=		(ITR 02) (SPARE)
XA233	TQ2	B2	10A	(14)	01		WR10LA KIR21B 18 10A 20 11A	
XA231	TQ2	F2	34A	TF103A	00	=		TD10 TO TE10 WORD XFER
XA231	TQ2	F2	36A	(72)	01		TD10BQ TWT080 71 36A 73 36B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TF10BA
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM DESIG- NATOR	FACTOR	COMMENT
			AND	OR				
XA239	TQ2	C2	15A		TF108A	00 =		
XA239	TQ2	C2	16A		(30)	01	TTESB0 YE18BQ 34 16A 36 17A	TE18 TO TE10 SHIFT
XA233	TQ2	B3	10B		TF111A	00 =		(ITR 01) (MONITOR REG BIT 11)
XA233	TQ2	B3	08B		(21)	01	KIR11B KMRI1S 17 08B 19 09B	ITR ADDRESS 01 - FANOUT
XA233	TQ2	B4	13B		TF112A	00 =		(ITR 02) (SPARE)
XA233	TQ2	B4	11B		(27)	01	KIR21B WR20LA 23 11B 25 12B	ITR ADDRESS 02 - FANOUT
XA230	TQ2	F1	37B		TF113A	00 =		TD11 TO TE11 WORD XFER
XA230	TQ2	F1	38B		(75)	01	TD11BQ TWTDB0 77 38B 79 39B	
XA239	TQ2	C1	18A		TF118A	00 =		TE19 TO TE11 SHIFT
XA239	TQ2	C1	19A		(38)	01	TTESB0 YE19BQ 40 19A 42 20A	
XA233	TQ2	C1	18A		TF121A	00 =		(ITR 01) (MONITOR REG BIT 12)
XA233	TQ2	C1	19A		(38)	01	KMRI2S KIR11B 40 19A 42 20A	
XA233	TQ2	C2	15A		TF122A	00 =		(ITR 02) (SPARE)
XA233	TQ2	C2	16A		(30)	01	KIR21B WR30LA 34 16A 36 17A	ITR ADDRESS 02 - FANOUT
XA224	TQ2	A4	07B		TF123A	00 =		TD12 TO TE12 WORD XFER
XA224	TQ2	A4	05B		(15)	01	TWTDB0 TD12BQ 11 05B 13 06B	
XA239	TQ2	D4	27B		TF128A	00 =		TE20 TO TE12 SHIFT
XA239	TQ2	D4	25B		(51)	01	YE20BQ TTESB0 47 25B 49 26B	
XA233	TQ2	C3	16B		TF131A	00 =		(ITR 01) (MONITOR REG BIT 13)
XA233	TQ2	C3	14B		(33)	01	KIR11B KMRI3S 29 14B 31 15B	ITR ADDRESS 01 - FANOUT
XA233	TQ2	C4	19B		TF132A	00 =		(ITR 02) (SPARE)
XA233	TQ2	C4	17B		(39)	01	KIR21B WR00LA 35 17B 37 18B	ITR ADDRESS 02 - FANOUT
XA225	TQ2	A4	07B		TF133A	00 =		TD13 TO TE13 WORD XFER
XA225	TQ2	A4	05B		(15)	01	TWTDB0 TD13BQ 11 05B 13 06B	

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 UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
 UNIT ASSEMBLY NO. 149019 REV G INDEX TF138A
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CONNECTOR	CAGE TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM NO.	REGIS- TRATION	FACTOR	COMMENT
XA239	TQ2	D3	24B	TF138A	00	=		TE21 TO TE13 SHIFT
XA239	TQ2	D3	22B	(45)	01		TE21BQ TTESB0 41 22B 43 23B	
XA233	TQ2	D1	24A	TF141A	00	=		(ITR 01) (MONITOR REG BIT 14)
XA233	TQ2	D1	25A	(52)	01		KIR11B KMR14S 54 25A 56 26A	ITR ADDRESS 01 - FANOUT
XA233	TQ2	D2	21A	TF142A	00	=		(ITR 02) (SPARE)
XA233	TQ2	D2	22A	(46)	01		KIR21B KGNDDA 48 22A 50 23A	ITR ADDRESS 02 - FANOUT
XA225	TQ2	B2	09A	TF143A	00	=		TD14 TO TE14 WORD XFER
XA225	TQ2	B2	10A	(14)	01		TD14BQ TWTDB0 18 10A 20 11A	
XA239	TQ2	D2	21A	TF148A	00	=		TE22 TO TE14 SHIFT
XA239	TQ2	D2	22A	(46)	01		TTESB0 TE22BQ 48 22A 50 23A	
XA233	TQ2	D3	24B	TF151A	00	=		(ITR 01) (MONITOR REG BIT 15)
XA233	TQ2	D3	22B	(45)	01		KMR15S KIR11B 41 22B 43 23B	
XA218	TQ2	F1	37B	TF152A	00	=		
XA218	TQ2	F1	38B	(75)	01		KIR21B SPI015 77 38B 79 39B	
XA224	TQ2	B4	13B	TF153A	00	=		TD15 TO TE15 WORD XFER
XA224	TQ2	B4	11B	(27)	01		TD15BQ TWTDB0 23 11B 25 12B	
XA239	TQ2	D1	24A	TF158A	00	=		TE23 TO TE15 SHIFT
XA239	TQ2	D1	25A	(52)	01		TTESB0 TE23BQ 54 25A 56 26A	
XA233	TQ2	E1	31A	TF161A	00	=		(ITR 01) (MONITOR REG BIT 16)
XA233	TQ2	E1	32A	(66)	01		KMR16S KIR11B 68 32A 70 33A	
XA233	TQ2	E2	28A	TF162A	00	=		(ITR 02) (MAINT SW MSD-6C)
XA233	TQ2	E2	29A	(60)	01		KIR21B KWMM40 62 29A 64 30A	ITR ADDRESS 02 - FANOUT
XA224	TQ2	C3	16B	TF163A	00	=		TD16 TO TE16 WORD XFER
XA224	TQ2	C3	14B	(33)	01		TD16BQ TWTDC0 29 14B 31 15B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX 2TF168A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	RESISTOR	FACTOR	COMMENT
XA239	TQ2	E4	33B	TF168A	00	=		TE24 TO TE16 SHIFT
XA239	TQ2	E4	31B	(63)	01		YE24BQ YTESCO 59 31B 61 32B	
XA233	TQ2	E3	30B	TF171A	00	=		(ITR 01) (MONITOR REG BIT 17)
XA233	TQ2	E3	28B	(57)	01		KIR11B KMR17S 53 28B 55 29B	ITR ADDRESS 01 - FANOUT
XA233	TQ2	E4	33B	TF172A	00	=		(ITR 02) (MAINT SW MSD-2)
XA233	TQ2	E4	31B	(63)	01		KWMM20 KIR21B 59 31B 61 32B	
XA224	TQ2	C4	19B	TF173A	00	=		TD17 TO TE17 WORD XFER
XA224	TQ2	C4	17B	(39)	01		TWTDCC YDI7C0 35 17B 37 18B	
XA239	TQ2	E3	30B	TF178A	00	=		TE25 TO TE17 SHIFT
XA239	TQ2	E3	28B	(57)	01		YE25BQ YTESCO 53 28B 55 29B	
XA233	TQ2	F1	37B	TF181A	00	=		(ITR 01) (MONITOR REG BIT 18)
XA233	TQ2	F1	38B	(75)	01		KIR11B KMR18S 77 38B 79 39B	ITR ADDRESS 01 - FANOUT
XA233	TQ2	F2	34A	TF182A	00	=		(ITR 02) (MAINT SW MSD-1)
XA233	TQ2	F2	36A	(72)	01		KIR21B KWMM10 71 36A 73 36B	ITR ADDRESS 02 - FANOUT
XA224	TQ2	D1	24A	TF183A	00	=		TD18 TO TE18 WORD XFER
XA224	TQ2	D1	25A	(52)	01		TWTDCC YDI8BQ 54 25A 56 26A	
XA239	TQ2	E2	28A	TF188A	00	=		TE26 TO TE18 SHIFT
XA239	TQ2	E2	29A	(60)	01		YTESCO YE26BQ 62 29A 64 30A	
XA233	TQ2	F3	35A	TF191A	00	=		(ITR 01) (MONITOR REG BIT 19)
XA233	TQ2	F3	34B	(69)	01		KMR19S KIR11B 65 34B 74 35B	
XA233	TQ2	F4	39A	TF192A	00	=		(ITR 02) (MAINT SW MSD-4)
XA233	TQ2	F4	37A	(80)	01		KWML40 KIR21B 76 37A 78 38A	
XA224	TQ2	D2	21A	TF193A	00	=		TD19 TO TE19 WORD XFER
XA224	TQ2	D2	22A	(46)	01		TWTDCC YDI9BQ 48 22A 50 23A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA239	TQ2	E1	31A	TF198A	00	=		
XA239	TQ2	E1	32A	(66)	01		TTESCO TE27BQ 68 32A 70 33A	TE27 TO TE19 SHIFT
XA232	TQ2	A1	05A	TF201A	00	=		(ITR 01) (MONITOR REG BIT 20)
XA232	TQ2	A1	06A	(06)	01		KMR20S KIR11B 08 06A 10 07A	
XA232	TQ2	A2	02B	TF202A	00	=		(ITR 02) (MAINT SW LSD-2)
XA232	TQ2	A2	04A	(01)	01		KWML20 KIR21B 04 04A 05 03B	
XA224	TQ2	E1	31A	TF203A	00	=		ID20 TO TE20 WORD XFER
XA224	TQ2	E1	32A	(66)	01		TWTDCO TD20BQ 68 32A 70 33A	
XA235	TQ2	D1	24A	TF208A	00	=		TE28 TO TE20 SHIFT
XA235	TQ2	D1	25A	(52)	01		TE28BQ TTESCO 54 25A 56 26A	
XA232	TQ2	A3	04B	TF211A	00	=		(ITR 01) (MONITOR REG BIT 21)
XA232	TQ2	A3	02A	(09)	01		KIR11B KMR21S 03 02A 07 03A	ITR ADDRESS 01 - FANOUT
XA232	TQ2	A4	07B	TF212A	00	=		(ITR 02) (MAINT SW LSD-1)
XA232	TQ2	A4	05B	(15)	01		KIR21B KWML10 11 05B 13 06B	ITR ADDRESS 02 - FANOUT
XA224	TQ2	E2	28A	TF213A	00	=		ID21 TO TE21 WORD XFER
XA224	TQ2	E2	29A	(60)	01		TWTDCO TD21BQ 62 29A 64 30A	
XA235	TQ2	D2	21A	TF218A	00	=		TE29 TO TE21 SHIFT
XA235	TQ2	D2	22A	(46)	01		TE29BQ TTESCO 48 22A 50 23A	
XA232	TQ2	B1	12A	TF221A	00	=		(ITR 01) (MONITOR REG BIT 22)
XA232	TQ2	B1	13A	(22)	01		KMR22S KIR11B 24 13A 26 14A	
XA232	TQ2	B2	09A	TF222A	00	=		(ITR 02) (BASE MEMORY-4)
XA232	TQ2	B2	10A	(14)	01		KGNDCA KIR21B 18 10A 20 11A	GROUND - FANOUT
XA224	TQ2	F1	37B	TF223A	00	=		ID22 TO TE22 WORD XFER
XA224	TQ2	F1	38B	(75)	01		TD22BQ TWTDCO 77 38B 79 39B	

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA235	TQ2	D3	24B	TF228A	00	=		TE30 TO TE22 SHIFT
XA235	TQ2	D3	22B	(45)	01		TTESCO YE30BQ 41 22B 43 23B	
XA232	TQ2	B3	10B	TF231A	00	=		(ITR 01)(MONITOR REG BIT 23)
XA232	TQ2	B3	08B	(21)	01		KMR23S KIR11B 17 08B 19 09B	
XA232	TQ2	B4	13B	TF232A	00	=		(ITR 02)(BASE MEMORY-2)
XA232	TQ2	B4	11B	(27)	01		KGNDCA KIR21B 23 11B 25 12B	GROUND - FANOUT
XA224	TQ2	F2	34A	TF233A	00	=		TD23 TO TE23 WORD XFER
XA224	TQ2	F2	36A	(72)	01		TWTD00 TD23BQ 71 36A 73 36B	
XA235	TQ2	D4	27B	TF238A	00	=		TE31 TO TE23 SHIFT
XA235	TQ2	D4	25B	(51)	01		TTESCO YE31BQ 47 25B 49 26B	
XA232	TQ2	C1	18A	TF241A	00	=		(ITR 01)(MONITOR REG BIT 24)
XA232	TQ2	C1	19A	(38)	01		KMR24S KIR11B 40 19A 42 20A	
XA232	TQ2	C2	15A	TF242A	00	=		(ITR 02)(BASE MEMORY-1)
XA232	TQ2	C2	16A	(30)	01		KIR21B KGNDCA 34 16A 36 17A	ITR ADDRESS 02 - FANOUT
XA218	TQ2	A1	05A	TF243A	00	=		TD24 TO TE24 WORD XFER
XA218	TQ2	A1	06A	(06)	01		TWTD00 TD24BQ 08 06A 10 07A	
XA235	TQ2	E1	31A	TF248A	00	=		TE00 TO TE24 SHIFT
XA235	TQ2	E1	32A	(66)	01		TE00BQ TTES00 68 32A 70 33A	
XA232	TQ2	C3	16B	TF251A	00	=		(ITR 01)(MONITOR REG BIT 25)
XA232	TQ2	C3	14B	(33)	01		KIR11B KMR25S 29 14B 31 15B	ITR ADDRESS 01 - FANOUT
XA232	TQ2	C4	19B	TF252A	00	=		(ITR 02)(ACC ADDRESS MSB)
XA232	TQ2	C4	17B	(39)	01		KIR21B KGNDCA 35 17B 37 18B	ITR ADDRESS 02 - FANOUT
XA218	TQ2	A2	02B	TF253A	00	=		TD25 TO TE25 WORD XFER
XA218	TQ2	A2	04A	(01)	01		TWTD00 TD25BQ 04 04A 05 03B	

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LOGIC

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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA235	TQ2	E2 28A	TF258A	00 =		
XA235	TQ2	E2 29A	(60)	01	TE01BQ TTESD0 62 29A 64 30A	TE01 TO TE25 SHIFT
XA232	TQ2	D1 24A	TF261A	00 =		(ITR 01) (MONITOR REG BIT 26)
XA232	TQ2	D1 25A	(52)	01	KIR11B KMR26S 54 25A 56 26A	ITR ADDRESS 01 - FANOUT
XA232	TQ2	D2 21A	TF262A	00 =		(ITR 02) (UNUSED BIT 26)
XA232	TQ2	D2 22A	(46)	01	KIR21B SPI017 48 22A 50 23A	ITR ADDRESS 02 - FANOUT
XA218	TQ2	B1 12A	TF263A	00 =		TD26 TO TE26 WORD XFER
XA218	TQ2	B1 13A	(22)	01	TWTDD0 TD26BQ 24 13A 26 14A	
XA235	TQ2	E3 30B	TF268A	00 =		TE02 TO TE26 SHIFT
XA235	TQ2	E3 28B	(57)	01	TTESD0 TE02BQ 53 28B 55 29B	
XA232	TQ2	D3 24B	TF271A	00 =		(ITR 01) (MONITOR REG BIT 27)
XA232	TQ2	D3 22B	(45)	01	KMR27S KIR11B 41 22B 43 23B	
XA232	TQ2	D4 27B	TF272A	00 =		(ITR 02) (UNUSED BIT 27)
XA232	TQ2	D4 25B	(51)	01	SPI017 KIR21B 47 25B 49 26B	
XA218	TQ2	B2 09A	TF273A	00 =		TD27 TO TE27 WORD XFER
XA218	TQ2	B2 10A	(14)	01	TWTDD0 TD27BQ 18 10A 20 11A	
XA235	TQ2	E4 33B	TF278A	00 =		TE03 TO TE27 SHIFT
XA235	TQ2	E4 31B	(63)	01	TTESD0 TE03BQ 59 31B 61 32B	
XA232	TQ2	E1 31A	TF281A	00 =		(ITR 01) (MONITOR REG BIT 28)
XA232	TQ2	E1 32A	(66)	01	KIR11B KMR28S 68 32A 70 33A	ITR ADDRESS 01 - FANOUT
XA232	TQ2	E2 28A	TF282A	00 =		(ITR 02) (UNUSED BIT 28)
XA232	TQ2	E2 29A	(60)	01	KIR21B SPI017 62 29A 64 30A	ITR ADDRESS 02 - FANOUT
XA218	TQ2	C1 18A	TF283A	00 =		TD28 TO TE28 WORD XFER
XA218	TQ2	C1 19A	(38)	01	TWTDD0 TD28BQ 40 19A 42 20A	

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CONNECTOR	CPU/OUT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIG NATOR	FACTOR	COMMENT
XA235	TQ2	F1	37B	TF288A	00		TE04 TO TE28 SHIFT
XA235	TQ2	F1	38B	(75)	01	YTESD0 TE04BQ 77 38B 79 39B	
XA232	TQ2	E3	30B	TF291A	00		(ITR 01)(MONITOR REG BIT 29)
XA232	TQ2	E3	28B	(57)	01	KIRIIB KMR29S 53 28B 55 29B	ITR ADDRESS 01 - FANOUT
XA232	TQ2	E4	33B	TF292A	00		(ITR02)BSTP SLCT DCD4
XA232	TQ2	E4	31B	(63)	01	KIR2IB TBSX40 59 31B 61 32B	ITR ADDRESS 02 - FANOUT
XA218	TQ2	C2	15A	TF293A	00		T029 TO TE29 WORD XFER
XA218	TQ2	C2	16A	(30)	01	TWTDD0 TD29BQ 34 16A 36 17A	
XA235	TQ2	F2	34A	TF298A	00		TE05 TO TE29 SHIFT
XA235	TQ2	F2	36A	(72)	01	YTESD0 TE05BQ 71 36A 73 36B	
XA232	TQ2	F1	37B	TF301A	00		(ITR 01)(MONITOR REG BIT 30)
XA232	TQ2	F1	38B	(75)	01	KIRIIB KMR30S 77 38B 79 39B	ITR ADDRESS 01 - FANOUT
XA232	TQ2	F2	34A	TF302A	00		(ITR02)BSTP SLCT DCD2
XA232	TQ2	F2	36A	(72)	01	KIR2IB TBSX20 71 36A 73 36B	ITR ADDRESS 02 - FANOUT
XA218	TQ2	D1	24A	TF303A	00		T030 TO TE30 WORD XFER
XA218	TQ2	D1	25A	(52)	01	TD30BQ TWTDD0 54 25A 56 26A	
XA235	TQ2	F3	35A	TF308A	00		TE06 TO TE30 SHIFT
XA235	TQ2	F3	34B	(69)	01	TE06BQ YTESD0 65 34B 74 35B	
XA232	TQ2	F3	35A	TF311A	00		(ITR 01)(MONITOR REG BIT 31)
XA232	TQ2	F3	34B	(69)	01	KMR3IS KIRIIB 65 34B 74 35B	
XA232	TQ2	F4	39A	TF312A	00		(ITR02)BSTP SLCT DCD1
XA232	TQ2	F4	37A	(80)	01	TBSX10 KIR2IB 76 37A 78 38A	
XA218	TQ2	D2	21A	TF313A	00		T031 TO TE31 WORD XFER
XA218	TQ2	D2	22A	(46)	01	TWTDD0 TD31BQ 48 22A 50 23A	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA235	TQ2	F4	39A	TF318A	00	=		TE07 TO TE31 SHIFT
XA235	TQ2	F4	37A	(80)	01		TE07BQ TTESDO 76 37A 78 38A	
XA108	TT3	C3	19B	TIAZAA	00	=		STATE IO I1*,I2*,I3*-A
XA108	TT3	C3	18B	(39)	01		TI208P TI308P TI108P 33 16B 35 17B 37 18B	
XA205	THI	A1	06A	TIAZAO	00	=		STATE IO I1*,I2*,I3*-0
XA205	THI	A1	07A	(13)	01		TIAZAA 11 07A	
XA205	THI	A6	06B	TIAZBO	00	=		I ZERO-STATE UNLOAD-0
XA205	THI	A6	07B	(10)	01		TIAZAA 15 07B	
XA426	THI	F1	38B	TICPEA	00	=		CTS INH PARITY ERR
XA426	THI	F1	39B	(80)	01		UICPEO 79 39B	
XA205	THI	B1	13A	TICRTA	00	=		IOC RESET
XA205	THI	B1	14A	(24)	01		UICRTO 22 14A	
XA426	THI	F2	36B	TICSCA	00	=		CTS RD IOU STAT REG
XA426	THI	F2	37B	(71)	01		UICSCO 73 37B	
XA213	THI	B6	12B	TICSMA	00	=		
XA213	THI	B6	13B	(26)	01		UICSMO 27 13B	
XA406	THI	B4	08B	TICTAA	00	=		
XA406	THI	B4	09B	(14)	01		UICTAO 17 09B	
XA342	THI	C5	16B	TICTDA	00	=		CTS READ TO REG
XA342	THI	C5	17B	(31)	01		UICTDO 33 17B	
XA142	TQ2	B2	09A	TILPEA	00	=		CONTROLLED CLOCK CTR-1
XA142	TQ2	B2	10A	(14)	01		TBST20 TIPEBQ 18 10A 20 11A	
XA145	TT3	F2	35B	TILOBR	00	=		I/O STATE INHIBIT - START IF
XA145	TT3	F2	34B	(74)	01		TIOIHA TS77AA TILOBS 65 34B 71 36A 72 34A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA432	TS8	F1	37A	TILOBS	00	=		I/O STATE INHIBIT - POWER
XA432	TS8	F1	36A	(76)	01		TILOBR TILPEA TFIORA SPI036 TMPWAA TDL15A KSWB1R SPI028 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	
XA142	TQ2	E3	30B	TINDAA	00	=		INDICATOR BOOTSTRAP INHIBIT
XA142	TQ2	E3	28B	(57)	01		TINDAO TBZ2IA 53 28B 55 29B	
XA416	DCF	B1	10B	TINDADX4	00	=		
XA416	DCF	B1	13A	(27)	01		SPI032 36 13A	
XA425	TD4	E1	31B	TINDAO	00	=		INDICATOR LINE
XA425	TD4	E1	32B	(59)	01		TINDXA RINDAA TINDBB4 XIINAA 61 32B 66 31A 68 32A 70 33A	*
XA416	DCF	B2	11B	TINDA0X	00	=		EXT INDICATOR REC
XA416	DCF	B2	12B	(29)	01		SPI033 31 12B	
				TINDBB4	00	=		
XA521	DCF	C3	30B	()	01		XAINADX 55 30B	DEV INDICATOR TO IOC
XA527	DCF	C3	30B	()	02	+	XBINADX 55 30B	DEV INDICATOR TO IOC
XA534	DCF	C3	30B	()	03	+	XCINADX 55 30B	DEV INDICATOR TO IOC
XA540	DCF	C3	30B	()	04	+	XDINADX 55 30B	DEV INDICATOR TO IOC
XA547	DCF	C3	30B	()	05	+	XEINADX 55 30B	DEV INDICATOR TO IOC
				TINDBI	00	=		
XA238	TDD	L1	38B	()	01		TINDBS 77 38B	
				TINDBN	00	=		
XA238	TDD	LN	39B	()	01		TKBAAB 79 39B	
XA238	TDD	LP	37A	TINDBP	00	=		RESET IND. S00+S17+S26
XA238	TDD	LP	37B	(76)	01		TBRFP 75 37B	
XA238	TDD	LQ	38A	TINDBQ	00	=		INDICATOR RECEIVED
XA238	TDD	LQ	39A	(78)	01		SPI019 80 39A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA140	TQ2	F3	35A		TINDBR	00	=		CLOCK . ORED DATA
XA140	TQ2	F3	34B		(69)	01		TINDBS TS176A 65 34B 74 35B	
XA138	TQ2	E3	30B		TINDBS	00	=		CMD CLOCK-0-CLK+C1.C2.T3.OS*
XA138	TQ2	E3	28B		(57)	01		TINDBR TINDAA 53 28B 55 29B	
XA139	THI	F2	36B		TINDCA	00	=		INDICATOR E/F UNLOAD-A
XA139	THI	F2	37B		(71)	01		TINDBQ 73 37B	
					TINDCI	00	=		
XA405	TDD	MI	36A		()	01		TXCOBQ 71 36A	
					TINDCN	00	=		
XA405	TDD	MN	34A		()	01		TKBAAB 72 34A	
XA405	TDD	MP	35A		TINDCP	00	=		
XA405	TDD	MP	36B		(69)	01		TINDDA 73 36B	
XA405	TDD	MQ	35B		TINDCQ	00	=		
XA405	TDD	MQ	34B		(74)	01		SPI030 65 34B	
XA338	TQ2	A4	07B		TINDDA	00	=		
XA338	TQ2	A4	05B		(15)	01		TINDAO TINDBP 11 05B 13 06B	
XA426	THI	E3	28A		TINDXA	00	=		
XA426	THI	E3	29A		(60)	01		TINDAOX 62 29A	
XA205	THI	E2	30A		TINFIA	00	=		ORED INFO LINES P-7 -A
XA205	THI	E2	31A		(63)	01		TINFIO 61 31A	
XA304	TQ2	A1	05A		TINFIO	00	=		ORED INFO LINES P-7 = 0
XA304	TQ2	A1	06A		(06)	01		TDIPBA TINFIA 08 06A 10 07A	PARITY BIT INPUT BUS
XA205	THI	E1	32A		TINF1A	00	=		ORED INFORMATION LINES 0-7-A
XA205	THI	E1	33A		(66)	01		TINFIO 64 33A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM #	DESIGNATOR	FACTOR	COMMENT
XA444	TS8	B1	11B	TINF10	00	#		ORED INFORMATION LINES 0-7-0
XA444	TS8	B1	09A	(23)	01		TDIOAA TDIIAA TDIZAA TDI3AA TDI4AA TDI5AA TDI6AA TDI7AA 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	BIT 4 INPUT BUS
XA406	THI	F1	38B	TINGAO	00	=		
XA406	THI	F1	39B	(80)	01		TINTADX4 79 39B	
XA112	TQ2	F1	37B	TINHAA	00	=		
XA112	TQ2	F1	38B	(75)	01		TINHAA SPI002 77 38B 79 39B	
XA210	TQ2	E3	30B	TINHAA	00	=		
XA210	TQ2	E3	28B	(57)	01		TMRUMB4 TQFSZA 53 28B 55 29B	
XA206	TT3	F2	35B	TINIRA	00	=		
XA206	TT3	F2	34B	(74)	01		TINDBQ TIIRAA TS13BP 65 34B 71 36A 72 34A	
XA305	TD4	D2	24B	TINITO	00	=		IND.ITR**I/O T.O.*MEM T.O.&AG
XA305	TD4	D2	23B	(45)	01		TAVEBP TMTOBP TITHRP TINIRA 43 23B 46 21A 48 22A 50 23A	
XA304	TQ2	A4	07B	TINPTO	00	=		INPUT WORD+BYTE REC'D
XA304	TQ2	A4	05B	(15)	01		TI120A TIWRDA 11 05B 13 06B	
XA416	DCF	A3	07B	TINTADX4	00	=		INTERROGATE EXT
XA416	DCF	A3	05A	(17)	01		TQGNDA 06 05A	
XA416	DCF	A4	06B	TINTAOX	00	=		
XA416	DCF	A4	05B	(15)	01		TINTRO 13 05B	
XA426	THI	B4	08B	TINTCA	00	=		
XA426	THI	B4	09B	(14)	01		TINTRO 17 09B	
XA434	TT3	F3	39A	TINTRA	00	=		SQ2 AND BURST NOT
XA434	TT3	F3	35A	(80)	01		TBRSUA TSO2BQ TINTSA 69 35A 76 37A 78 38A	
XA205	THI	D2	23A	TINTRO	00	=		INTERROGATE GATE SQ2.BURST-0
XA205	THI	D2	24A	(49)	01		TINTRA 47 24A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA304	TQ2	F4	39A	TINTSA	00	=		
XA304	TQ2	F4	37A	(80)	01		TREQB0 TINTADX4 76 37A 78 38A	
XA304	TQ2	B2	09A	TIPEBA	00	=		STATE 16 +21 CLK
XA304	TQ2	B2	10A	(14)	01		TKAABB TS2160 18 10A 20 11A	
				TIPEBI	00	=		
XA113	TDD	E1	19A	()	01		KGNDCA 40 19A	
				TIPEBN	00	=		
XA113	TDD	EN	20A	()	01		TS092A 42 20A	
XA113	TDD	EP	17B	TIPEBP	00	=		RESET PARITY ERROR EE
XA113	TDD	EP	18A	(35)	01		TIPEBA 38 18A	
XA113	TDD	EQ	18B	TIPEBQ	00	=		PARITY ERROR SET PE EE
XA113	TDD	EQ	19B	(37)	01		TIPESA 39 19B	
XA305	TD4	A2	04B	TIPESA	00	=		INPUT PARITY ERROR SET GATE
XA305	TD4	A2	02B	(09)	01		TIPE00 TTESPO TICPEA TII0BQ 01 02B 04 04A 05 03B 07 03A	
XA112	TQ2	C4	19B	TIPE00	00	=		INPUT PARITY ERROR
XA112	TQ2	C4	17B	(39)	01		TPEOPA TPEPOA 35 17B 37 18B	
XA205	THI	B5	10B	TITCAA	00	=		RESET I/O TIMER CONTROL
XA205	THI	B5	11B	(19)	01		TITCA0 21 11B	
XA330	TS8	A1	05B	TITCA0	00	=		RESET I/O TIMER CONTROL COND
XA330	TS8	A1	02B	(11)	01		TBD15A TS6BRA TS2INA TS13IA TS20BP TITDAA TS071A TS4NIA 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	
				TITCOI	00	=		
XA151	TDD	J1	32A	()	01		TITC1Q 68 32A	
				TITCON	00	=		
XA151	TDD	JN	33A	()	01		RTCQ9A 70 33A	

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 UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
 UNIT ASSEMBLY NO. 149019 REV G INDEX TITCOP
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA151	TDD	JP	31B		TITCOP	00			PRERESET I/O TIMER
XA151	TDD	JP	31A		(59)	01	YIIMQ 66 31A		
XA151	TDD	JQ	32B		TITC0Q	00	=		PRESET
XA151	TDD	JQ	33B		(61)	01	SPI013 63 33B		
XA148	TDD	LI	38B		TITC1I	00	=		
					()	01	TITC2Q 77 38B		
XA148	TDD	LN	39B		TITC1N	00	=		
					()	01	RTCQ9A 79 39B		
XA148	TDD	LP	37A		TITC1P	00	=		I/O TIMER BIT 2. PRERESET
XA148	TDD	LP	37B		(76)	01	YIIMQ 75 37B		
XA148	TDD	LQ	38A		TITC1Q	00	=		PRESET
XA148	TDD	LQ	39A		(78)	01	SPI013 80 39A		
XA143	TDD	LI	38B		TITC2I	00	=		
					()	01	TITCOP 77 38B		
XA143	TDD	LN	39B		TITC2N	00	=		
					()	01	RTCQ9A 79 39B		
XA143	TDD	LP	37A		TITC2P	00	=		I/O TIMER LSB, PRERESET
XA143	TDD	LP	37B		(76)	01	YIIMQ 75 37B		
XA143	TDD	LQ	38A		TITC2Q	00	=		I/O TIMER LSB.PRESET
XA143	TDD	LQ	39A		(78)	01	SPI012 80 39A		
XA206	TT3	F1	36B		TITDAA	00	=		
XA206	TT3	F1	37B		(73)	01	TS24BP TS25BP TINDBQ 75 37B 77 38B 79 39B		
XA244	TDD	AI	06A		TITIMI	00	=		
					()	01	TITII0 08 06A		

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM NATOR	SEMI- NATOR	FACTOR	COMMENT
				TITIMN ()	00 = 01			
XA244	TDD	AN	07A				TKBACB 10 07A	
XA244	TDD	AP	05B	TITIMP (11)	00 = 01		TMRTA 06 05A	
XA244	TDD	AQ	06B	TITIMQ (13)	00 = 01			PRESET INPUT
XA244	TDD	AQ	07B				SPI019 15 07B	
XA330	TS8	D1	25B	TITI10 (47)	00 = 01			SET CONDITIONS, ENABLE I/O TI
XA330	TS8	D1	23B				TS2NIA TS3M3A TS19BP SPI025 SPI020 TS248P TITI2A SPI027 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	
XA304	TQ2	B3	10B	TITI2A (21)	00 = 01			TIMER CONTROL SET, NO RESET
XA304	TQ2	B3	08B				TITIMQ TITCAA 17 08B 19 09B	
				TITMRI ()	00 = 01			
XAI43	TDD	KI	29A				TITF00 62 29A	
				TITMRN ()	00 = 01			
XAI43	TDD	KN	28A				TKBACB 60 28A	
XAI43	TDD	KP	30B	TITMRP (57)	00 = 01			I/O TIME OUT RESET 500
XAI43	TDD	KP	30A				TS00BP 64 30A	
XAI43	TDD	KQ	29B	TITMRQ (55)	00 = 01			I/O TIME OUT F.F.
XAI43	TDD	KQ	28B				SPI010 53 28B	
XA205	THI	B6	12B	TITRAA (26)	00 = 01			ITR CMD
XA205	THI	B6	13B				TITRA0 27 13B	
XA213	THI	D4	22B	TITRA0 (46)	00 = 01			ITR CMD
XA213	THI	D4	23B				JITRAD4 41 23B	ITR CMD
XA206	TT3	C1	17A	TITRC0 (36)	00 = 01			ITR(IND+ADD01+ADD02)
XA206	TT3	C1	18A				TITRIA TITR2A TITRIA 38 18A 40 19A 42 20A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM. RESISTANCE	RESISTOR VALUE	FACTOR	COMMENT
XA122	TT3	E3	33B	TITRIA	00	=		
XA122	TT3	E3	30B	(63)	01		YINDCQ YINDBQ YITRAO 57 30B 59 31B 61 32B	
XA304	TQ2	C1	18A	TITRIA	00	=		ITR ADD01
XA304	TQ2	C1	19A	(38)	01		YSA1B0 YITRAO 40 19A 42 20A	
XA205	THI	F5	36A	TITR10	00	=		ITR ADD01
XA205	THI	F5	37A	(78)	01		YITRIA 76 37A	
XA304	TQ2	C2	15A	TITR2A	00	=		ITR ADD02
XA304	TQ2	C2	16A	(30)	01		YITRAO YSA2B0 34 16A 36 17A	
XA205	THI	F1	38B	TITR20	00	=		ITR ADD02
XA205	THI	F1	39B	(80)	01		YITR2A 79 39B	
XA144	TD4	F2	35A	YITTOA	00	=		I/O TIME OUT 6 MICRO SECONDS
XA144	TD4	F2	36A	(69)	01		YITIMQ YITC1P YITC0Q YITC2P 71 36A 72 34A 73 36B 74 35B	
XA115	TQ2	F4	39A	YITTO0	00	=		LATCH/RESET CONTROL
XA115	TQ2	F4	37A	(80)	01		YITTOA YITMRP 76 37A 78 38A	
XA304	TQ2	C3	16B	TITONA	00	=		INDICATOR*.TIME OUT-*
XA304	TQ2	C3	14B	(33)	01		YINITO SPIO21 29 14B 31 15B	
XA332	TQ2	F4	39A	YIWRDA	00	=		INPUT WORD REC'D
XA332	TQ2	F4	37A	(80)	01		YCIICA YBC4BQ 76 37A 78 38A	
XA246	TQ2	E2	28A	YIZCKA	00	=		SWITCH + MR CLOCK -A
XA246	TQ2	E2	29A	(60)	01		YIAZB0 YKAAAB 62 29A 64 30A	
XA139	THI	F1	38B	YIZCK0	00	=		CMD CLOCK -A
XA139	THI	F1	39B	(80)	01		YIZCKA 79 39B	
XA305	TD4	E1	31B	YIOIHA	00	=		I/O RESET SIGNAL-COMMAND.ENA
XA305	TD4	E1	32B	(59)	01		SPIO22 YCMDBQ TENBBQ SPIO23 61 32B 66 31A 68 32A 70 33A	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	REGIS. MOTOR	FACTOR	COMMENT
XA205	THI	F3	34B	TIOSAA	00	=		MASTER RESET + BOOTSTRAP2
XA205	THI	F3	35B	(70)	01		TIOSAO 69 35B	
XA304	TQ2	D1	24A	TIOSAO	00	=		MASTER RESET + BOOTSTRAP 2
XA304	TQ2	D1	25A	(52)	01		TIOIHA TBST2P 54 25A 56 26A	
XA304	TQ2	D2	21A	TIIC1A	00	=		STATE I1.C1*-A
XA304	TQ2	D2	22A	(46)	01		TI10BQ TBST1A 48 22A 50 23A	
XA205	THI	F4	34A	TIIC10	00	=		STATE I1.C1*-0
XA205	THI	F4	35A	(72)	01		TIIC1A 74 35A	
				TI10B1	00	=		
XA113	TDD	FI	16A	()	01		TI1100 34 16A	
				TI10BN	00	=		
XA113	TDD	FN	15A	()	01		TKBAAB 30 15A	
XA113	TDD	FP	16B	TI10BP	00	=		STATE I1 (INPUT)-E/E-RESET
XA113	TDD	FP	17A	(33)	01		TI126A 36 17A	
XA113	TDD	FQ	15B	TI10BQ	00	=		STATE I1 (INPUT)-E/E-SET
XA113	TDD	FQ	14B	(31)	01		TS3EBP 29 14B	
XA230	TQ2	B1	12A	TI10CA	00	=		INPUT-ENABLE-A
XA230	TQ2	B1	13A	(22)	01		TEN88P TI10BQ 24 13A 26 14A	
XA112	TQ2	D2	21A	TI10C0	00	=		INPUT.ENABLE *-0
XA112	TQ2	D2	22A	(46)	01		SPI001 TI10CA 48 22A 50 23A	
XA413	TLD	C3	16B	TI10SD	00	=		JDB07B4 BUSS DATA
XA413	TLD	C3	14B	(33)	01		TI10BQ TTSDM0 29 14B 31 15B	BUSS FOR CTS DISPLAY
XA206	TT3	A1	04A	TI1100	00	=		STATE I1-ORED DATA IN
XA206	TT3	A1	05A	(04)	01		TRDYADX4 TI112A TI111A 06 05A 08 06A 10 07A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA304	TQ2	D3 24B	T1111A	00 =			STATE S24. ITR
XA304	TQ2	D3 22B	(45)	01		T11RA0 TS24BQ 41 22B 43 23B	
XA330	TS8	E1 31B	T1112A	00 =			LATCH/RESET CONTROL-I1
XA330	TS8	E1 29B	(59)	01		TS00AA T110BQ T1121A TWD1AA TS07BP TS20BP TS15BP TBD15A 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	
XA116	TQ2	F1 37B	T112A0	00 =			STATE I1 + I2
XA116	TQ2	F1 38B	(75)	01		T120CA T110CA 77 38B 79 39B	
XA236	TD4	F1 37A	T1120A	00 =			BYTE INPUT COMPLETE RESET I1
XA236	TD4	F1 37B	(76)	01		TC11BQ TBC1BQ TS13BQ TINDCA 75 37B 77 38B 78 38A 79 39B	
XA147	TS8	E1 31B	T1121A	00 =			OUTPUT STATE .BRST*IND*-RESE
XA147	TS8	E1 29B	(59)	01		TPEMIA TS06BQ SPI010 SPI003 TBC1BP SPI013 SPI004 TINDCA 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	
XA304	TQ2	E1 31A	T11250	00 =			BURST + BOOTSTRAP 2
XA304	TQ2	E1 32A	(66)	01		TBST2A TMO1BP 68 32A 70 33A	
XA133	TQ2	E1 31A	T1126A	00 =			
XA133	TQ2	E1 32A	(66)	01		T11260 68 32A	
XA138	TQ2	D4 27B	T11260	00 =			
XA138	TQ2	D4 25B	(51)	01		TS21BP TMRUAA4 47 25B 49 26B	
XA112	TQ2	D1 24A	T1131A	00 =			ADD ACKNOWLEDGE.S03
XA112	TQ2	D1 25A	(52)	01		TS03BQ T11250 54 25A 56 26A	
XA109	TQ2	E3 30B	T11310	00 =			(I1+I2).COUNT=0
XA109	TQ2	E3 28B	(57)	01		SPI001 T1131A 53 28B 55 29B	
			T120BI	00 =			
XA113	TDU	G1 25A	()	01		T12100 54 25A	
			T120BN	00 =			
XA113	TDU	GN 26A	()	01		TKBAAB 56 26A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA113	TDD	GP	25B	TI20BP	00	=		STATE I2 (OUTPUT) FF RESET
XA113	TDD	GP	24A	(47)	01		TI231A 52 24A	
XA113	TDD	GQ	26B	TI20BQ	00	=		STATE I2 (OUTPUT)-FF SET
XA113	TDD	GQ	27B	(49)	01		SPI001 51 27B	
XA205	THI	C5	16B	TI20CA	00	=		STATE I2 F/F UNLOAD-A
XA205	THI	C5	17B	(31)	01		TI20BQ 33 17B	
XA205	THI	C2	17A	TI20C0	00	=		STATE I2 F/F UNLOAD-0
XA205	THI	C2	18A	(37)	01		TI20BP 35 18A	
XA413	TLD	C4	19B	TI20SD	00	=		JDB08B4 BUSS DATA
XA413	TLD	C4	17B	(39)	01		TI20BQ TTSDM0 35 17B 37 18B	BUSS FOR CTS DISPLAY
XA305	TD4	B1	11B	TI2100	00	=		STATE I2 ORED DATA INPUT
XA305	TD4	B1	12A	(23)	01		TI211A TPS12A TI212A TI20CA 22 12A 24 13A 25 12B 26 14A	
XA330	TS8	F1	37A	TI211A	00	=		STATE S6 NO INPUT, NO MEMORY
XA330	TS8	F1	36A	(76)	01		SPI028 SPI025 TS06BQ TINDBP TPEM2A TBC1BP TBRRAO SPI027 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	
XA206	TT3	C2	15B	TI212A	00	=		STATE S25.0ER
XA206	TT3	C2	14B	(31)	01		TS24BQ TOFRA0 TIAZAO 29 14B 30 15A 34 16A	
XA206	TT3	C3	19B	TI213A	00	=		STATE S25.DEV.I0
XA206	TT3	C3	16B	(39)	01		TCM0BQ TENBBQ TXC7B0 33 16B 35 17B 37 18B	
XA305	TD4	B2	10B	TI22XA	00	=		S24 SHIFT PULSE
XA305	TD4	B2	09A	(21)	01		TK00BQ TI30BP TS23BQ TXC2BQ 14 09A 18 10A 19 09B 20 11A	
XA304	TQ2	E3	30B	TI23B0	00	=		I2 + I3 BYTE 1
XA304	TQ2	E3	28B	(57)	01		TI20BP TI3B1A 53 28B 55 29B	
XA122	TT3	E2	29B	TI23E0	00	=		
XA122	TT3	E2	28B	(55)	01		TENBBP TI30BP TI20CA 53 28B 60 28A 62 29A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIG- NATOR	FACTOR	COMMENT
			AND	OR					
XA114	TS8	A1	05B		TI23XA	00		I3 ENABLE PULSE	
XA114	TS8	A1	02B		(11)	01	YXC1BP YXC3BQ TI30BQ TCOSAB YXC2BQ SPI003 SPI002 SPI001 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B		
XA304	TQ2	E2	28A		TI23X0	00		I3 ENABLE PULSE	
XA304	TQ2	E2	29A		(60)	01	SPI021 TI23XA 62 29A 64 30A		
XA112	TQ2	D3	24B		TI231A	00		RESET- MASTER +C2*.C3.BYTE 1	
XA112	TQ2	D3	22B		(45)	01	SPI001 TI2310 41 22B 43 23B		
XA304	TQ2	E4	33B		TI2310	00		MASTER RST+C2*.C3.BYTE 1*-0	
XA304	TQ2	E4	31B		(63)	01	IMRUAA4 TI232A 59 31B 61 32B		
XA305	TD4	C1	17B		TI232A	00		C2*.C3.BYTE 1*.OSC-A	
XA305	TD4	C1	18B		(35)	01	TBC1BP YXC2BP YXC3BQ TCOSAB 37 18B 38 18A 40 19A 42 20A		
XA112	TQ2	D4	27B		TI3B1A	00		I3 AND BYTE 1 F.F.	
XA112	TQ2	D4	25B		(51)	01	TBC1BQ TI30BQ 47 25B 49 26B		
					TI30B1	00			
XA113	TDD	H1	22A		()	01	TI3100 48 22A		
					TI30B1	00			
XA113	TDD	H1	21A		()	01	TKBAAB 46 21A		
XA113	TDD	HP	24B		TI30BP	00		STATE I3 (COMMAND)-FF RESET	
XA113	TDD	HP	23A		(45)	01	TI321A 50 23A		
XA113	TDD	HQ	23B		TI30BQ	00		STATE I3 (COMMAND)-FF SET	
XA113	TDD	HQ	22B		(43)	01	SPI002 41 22B		
XA413	TLD	D1	24A		TI30SD	00		JDB09B4 BUSS DATA	
XA413	TLD	D1	25A		(52)	01	TI30BQ TISDM0 54 25A 56 26A	BUSS FOR CTS DISPLAY	
XA114	TS8	B1	11B		TI3100	00		STATE I3 ORED DATA IN-0	
XA114	TS8	B1	09A		(23)	01	TES3AA TS231A TI314A TI313A TS1ABA TI311A TI30BP SPI001 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A		

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA112	TQ2	E1	31A		TI311A	00	=		BOOTSTRAP 1-BOOTSTRAP 2*
XA112	TQ2	E1	32A		(66)	01		TBST1Q TBST2A 68 32A 70 33A	
XA426	THI	D4	22B		TI3110	00	=		BSTP CHNL BIT 2 TO DATA 30
XA426	THI	D4	23B		(46)	01		TI311A 41 23B	
XA112	TQ2	E3	30B		TI313A	00	=		S03 (ADD ACK+BTSP)
XA112	TQ2	E3	28B		(57)	01		TSTBRQ TI20CA 53 28B 55 29B	
XA112	TQ2	E4	33B		TI314A	00	=		STATE I2*, EOB COMMAND
XA112	TQ2	E4	31B		(63)	01		TI20CA TE08BQ 59 31B 61 32B	
XA304	TQ2	F1	37B		TI321A	00	=		RESET- MR+CMD*-C=0, OSC=A
XA304	TQ2	F1	38B		(75)	01		SPI021 TI3210 77 38B 79 39B	
XA108	TI3	A3	07B		TI3210	00	=		TE0031 RESET SL CPU REQ CLK-
XA108	TI3	A3	04B		(15)	01		TI213A TBD14A TMRUAA4 09 04B 11 05B 13 06B	
XA415	TQ2	A3	04B		TI333A	00	=		IOM ADRS & SW IOM ON LINE
XA415	TQ2	A3	02A		(09)	01		KWML10 TI3110 03 02A 07 03A	
					TKAAA8	00	=		
XA335	TQ2	A1	05A		()	01		TK1AA0 06 05A	
XA335	TQ2	B1	12A		()	02	+	TK2AA0 22 12A	
XA335	TQ2	C1	18A		()	03	+	TK3AA0 38 18A	
XA335	TQ2	D1	24A		()	04	+	TK4AA0 52 24A	
					TKAABB	00	=		
XA335	TQ2	A2	02B		()	01		TK1AB0 01 02B	
XA335	TQ2	B2	09A		()	02	+	TK2AB0 14 09A	
XA335	TQ2	C2	15A		()	03	+	TK3AB0 30 15A	
XA335	TQ2	D2	21A		()	04	+	TK4AB0 46 21A	

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UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TKAACB
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
				TKAACB	00	=		
XA335	TQ2	A3	04B	()	01		TKIACO 09 04B	
XA335	TQ2	B3	10B	()	02	+	TK2ACO 21 10B	
XA335	TQ2	C3	16B	()	03	+	TK3ACO 33 16B	
XA335	TQ2	D3	24B	()	04	+	TK4ACO 45 24B	
				TKABAB	00	=		
XA335	TQ2	E1	31A	()	01		TK1DAO 66 31A	
XA335	TQ2	E2	28A	()	02	+	TK2DAO 60 28A	
XA335	TQ2	E4	33B	()	04	+	TK4DAO 63 33B	
				TKACAB	00	=		
XA338	TQ2	E2	28A	()	01		TK2DAA 60 28A	
XA338	TQ2	E3	30B	()	03	+	TK3DAA 57 30B	
XA338	TQ2	E4	33B	()	04	+	TK4DAA 63 33B	
XA141	TQ2	F4	39A	TKADAA	00	=		CLK .ADD ACK
XA141	TQ2	F4	37A	(80)	01		TKADAO SPI012 76 37A 78 38A	
XA239	TQ2	F4	39A	TKADAO	00	=		BYTE XFER CLOCK.S24(DEC+TBST
XA239	TQ2	F4	37A	(80)	01		TADABP TH00AA 76 37A 78 38A	
				TKAMBI	00	=		
XA113	TDD	MI	36A	()	01		TKAMSO 71 36A	
				TKAMBN	00	=		
XA113	TDD	MN	34A	()	01		YSN2CTX 72 34A	
XA113	TDD	MP	35A	TKAMBP	00	=		
XA113	TDD	MP	36B	(69)	01		TH00AA 73 36B	
XA113	TDD	MQ	35B	TKAMBQ	00	=		
XA113	TDD	MQ	34B	(74)	01		SPI003 65 34B	

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 UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
 UNIT ASSEMBLY NO. 149019 REV G INDEX TKAMSO
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
			AND	OR					
XA115	TQ2	F3	35A		TKAMSO	00	=		OSC . DRED DATA IN
XA115	TQ2	F3	34B		(69)	01		TADABP TM2M6A 65 34B 74 35B	
XA116	TQ2	A2	02B		TKA03A	00	=		
XA116	TQ2	A2	04A		(01)	01		TKC030 TKAABB 04 04A 05 03B	
XA116	TQ2	A3	04B		TKA46A	00	=		
XA116	TQ2	A3	02A		(09)	01		TKAABB TKC460 03 02A 07 03A	
					TKBAAB	00	=		
XA338	TQ2	A1	05A		()	01		TK1AAA 06 05A	
XA338	TQ2	B1	12A		()	02	+	TK2AAA 22 12A	
XA338	TQ2	C1	18A		()	03	+	TK3AAA 38 18A	
XA338	TQ2	D1	24A		()	04	+	TK4AAA 52 24A	
					TKBABB	00	=		
XA338	TQ2	A2	02B		()	01		TK1ABA 01 02B	
XA338	TQ2	B2	09A		()	02	+	TK2ABA 14 09A	
XA338	TQ2	C2	15A		()	03	+	TK3ABA 30 15A	
XA338	TQ2	D2	21A		()	04	+	TK4ABA 46 21A	
					TKBACB	00	=		
XA338	TQ2	A3	04B		()	01		TK1ACA 09 04B	
XA338	TQ2	B3	10B		()	02	+	TK2ACA 21 10B	
XA338	TQ2	C3	16B		()	03	+	TK3ACA 33 16B	
XA338	TQ2	D3	24B		()	04	+	TK4ACA 45 24B	
XA122	TT3	A1	04A		TKBLEA	00	=		CLK FOR TBLE REG BL=0 AND
XA122	TT3	A1	05A		(04)	01		T507BQ TBLEZA TBLZAO 06 05A 08 06A 10 07A	
XA122	TT3	A2	03A		TKC030	00	=		CONT CLK ADD REG 0-3
XA122	TT3	A2	02B		(07)	01		TXAUCA TCPD4A SPI009 01 02B 03 02A 05 03B	

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
 UNIT ASSEMBLY NO. 149019 REV G INDEX TKC460
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA115	TQ2	A1	05A	TKC460	00	=		CONT CLK, ADD REG 4-6
XA115	TQ2	A1	06A	(06)	01		YS3M0A TCPD4A 08 06A 10 07A	
XA116	TQ2	B2	09A	TKDAA0	00	=		CONT DEV ADD TO MONITOR REG
XA116	TQ2	B2	10A	(14)	01		YS211A TK080A 18 10A 20 11A	
XA339	TDD	B1	03B	TKICBI	00	=		
				()	01		UICSMO 05 03B	
XA339	TDD	BN	02B	TKICBN	00	=		
				()	01		TK000A 01 02B	
XA339	TDD	BP	04B	TKICBP	00	=		IOC STEP MODE CONTROL FF
XA339	TDD	BP	04A	(09)	01		TKICIA 04 04A	
XA339	TDD	BQ	03A	TKICBQ	00	=		
XA339	TDD	BQ	02A	(07)	01		YS23BP 03 02A	
XA340	TT3	A1	04A	TKIC1A	00	=		STOP IOC CLK
XA340	TT3	A1	05A	(04)	01		TK00BQ YS23BP TK01BQ 06 05A 08 06A 10 07A	
XA116	TQ2	B1	12A	TKMBCA	00	=		CONT MEM BANK ADD TO MONIT R
XA116	TQ2	B1	13A	(22)	01		TKMEBO YS2110 24 13A 26 14A	
XA205	THI	D1	25A	TKMBCO	00	=		CONT MEM BANK ADD TO MONIT R
XA205	THI	D1	26A	(54)	01		TKMBCA 52 26A	
XA206	TT3	A3	07B	TKMEBO	00	=		MEM ERROR PE OR TIME OUT
XA206	TT3	A3	04B	(15)	01		YPEDMP YAVEBP YMTDWR 09 04B 11 05B 13 06B	
XA149	TQ2	B2	09A	TKM1BA	00	=		M1 AND CLK
XA149	TQ2	B2	10A	(14)	01		YH01BQ YKAAAB 18 10A 20 11A	
XA139	THI	A2	04A	TKRC2A	00	=		MEM TIME OUT COUNTER CLK
XA139	THI	A2	05A	(08)	01		RTCNTQ 06 05A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TKTSAO
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA324	THI	F4	34A	TKTSAO	00	=		
XA324	THI	F4	35A	(72)	01		TKTSOA 74 35A	KW/TW SELECT-ADD CO
XA205	THI	D4	22B	TKTSBA	00	=		
XA205	THI	D4	23B	(46)	01		TKTSBO 41 23B	S1, BRST+S3+S20+S17+S15+S7-A
XA330	TS8	C1	17B	TKTSBO	00	=		
XA330	TS8	C1	15A	(35)	01		TS07BP SPI027 TS17BP TS03BP TBHLTA TS15BP TS20BP SPI025 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	KW/TW SELECT-ADD CONT UL-D
XA115	TQ2	B2	09A	TKTSOA	00	=		
XA115	TQ2	B2	10A	(14)	01		TM01BQ TKTSBO 18 10A 20 11A	KW/TW SELECT-ADD CONT TERM-A
XA115	TQ2	B3	10B	TKWXAA	00	=		
XA115	TQ2	B3	08B	(21)	01		SPI001 TKWXAO 17 08B 19 09B	KEYWORD XFER CONTROL-A
XA122	TT3	A3	07B	TKWXAO	00	=		
XA122	TT3	A3	04B	(15)	01		TM05BP TKWX2A TKWX1A 09 04B 11 05B 13 06B	KEYWORD TRANSFER CONTROL
XA122	TT3	B1	11A	TKWXBO	00	=		
XA122	TT3	B1	12A	(20)	01		TM05BP TKWX2A TKWX1A 22 12A 24 13A 26 14A	KEYWORD XFER CONTROL-D UNL DA
XA114	TS8	C1	17B	TKWX1A	00	=		
XA114	TS8	C1	15A	(35)	01		TS13BP TMS3BQ TS05BP SPI003 SPI001 TM02BQ SPI002 TBRSTQ 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	KEYWORD XFER CONT ACK BRST
XA115	TQ2	B4	13B	TKWX2A	00	=		
XA115	TQ2	B4	11B	(27)	01		TS02C0 TBZZIO 23 11B 25 12B	KEYWORD XFER CONT BTSP *2.S01
XA238	TDD	MI	36A	TK00B1	00	=		
XA238	TDD	MI		()	01		TK01BP 71 36A	
XA238	TDD	MN	34A	TK00BN	00	=		
XA238	TDD	MN		()	01		TOSCAO 72 34A	
XA238	TDD	MP	35A	TK00BP	00	=		
XA238	TDD	MP	36B	(69)	01		TK000A 73 36B	CTS READ TAREG

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TKOQBQ
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA238	TDD	MQ	35B	TK00BQ	00	=		IOC CLK GENERATOR BIT
XA238	TDD	MQ	34B	(174)	01		SPI018 65 34B	
XA341	TQ2	A1	05A	TK000A	00	=		IOC IN STATE STEP - STEP
XA341	TQ2	A1	06A	(106)	01		UICSM0 UICSS0 08 06A 10 07A	
XA339	TDD	AI	06A	TK018I	00	=		
				()	01		TK010A 08 06A	
XA339	TDD	AN	07A	TK018N	00	=		
				()	01		T0SCG0 10 07A	
XA339	TDD	AP	05B	TK018P	00	=		IOC CLK GEN BIT 2
XA339	TDD	AP	05A	(111)	01		SPI029 06 05A	
XA339	TDD	AQ	06B	TK018Q	00	=		
XA339	TDD	AQ	07B	(113)	01		TK011A 15 07B	
XA341	TQ2	A2	02B	TK010A	00	=		SET CLK GEN BIT 2
XA341	TQ2	A2	04A	(101)	01		TK018Q TK00BP 04 04A 05 03B	
XA341	TQ2	A3	04B	TK011A	00	=		STEP MODE . IOC CONTROL FF
XA341	TQ2	A3	02A	(109)	01		TKICBP UICSM0 03 02A 07 03A	
XA433	TDD	CI	13A	TK078I	00	=		
				()	01		TS203A 24 13A	
XA433	TDD	CN	14A	TK078N	00	=		
				()	01		TKBAAB 26 14A	
XA433	TDD	CP	11B	TK078P	00	=		
XA433	TDD	CP	12A	(123)	01		SPI028 22 12A	
XA433	TDD	CQ	12B	TK078Q	00	=		
XA433	TDD	CQ	13B	(125)	01		THRUMB4 27 13B	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TK070A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG- NATOR	FACTOR	COMMENT
XA115	TQ2	C1	18A	TK070A	00	=		
XA115	TQ2	C1	19A	(38)	01		(S0+S21) INPIT PE TK07BP TMINHP 40 19A 42 20A	
XA137	TT3	A3	07B	TK080A	00	=		
XA137	TT3	A3	04B	(15)	01		TK0810 TIPEBQ TMINHP 09 04B 11 05B 13 06B	
XA116	TQ2	A1	05A	TK0810	00	=		
XA116	TQ2	A1	06A	(06)	01		TBST2A SPI001 08 06A 10 07A	
XA319	TT3	F2	35B	TK090A	00	=		
XA319	TT3	F2	34B	(74)	01		TS2110 TITMRQ TK091A 65 34B 71 36A 72 34A	
XA213	THI	C4	14B	TK091A	00	=		
XA213	THI	C4	15B	(30)	01		TK0910 29 15B	
XA214	TQ2	D3	24B	TK0910	00	=		
XA214	TQ2	D3	22B	(45)	01		TAVEBP TRTCOA 41 22B 43 23B	
XA338	TQ2	A1	05A	TK1AAA	00	=		
XA338	TQ2	A1	06A	(06)	01		TKABAB SPI029 08 06A 10 07A	TKBAAB BUSS
XA335	TQ2	A1	05A	TK1AA0	00	=		
XA335	TQ2	A1	06A	(06)	01		TKACAB SPI027 08 06A 10 07A	TKAAAB BUSS
XA338	TQ2	A2	02B	TK1ABA	00	=		
XA338	TQ2	A2	04A	(01)	01		TKABAB SPI029 04 04A 05 03B	TKBABB BUSS
XA335	TQ2	A2	02B	TK1AB0	00	=		
XA335	TQ2	A2	04A	(01)	01		TKACAB SPI027 04 04A 05 03B	TKAABB BUSS
XA338	TQ2	A3	04B	TK1ACA	00	=		
XA338	TQ2	A3	02A	(09)	01		TKABAB SPI029 03 02A 07 03A	TKBACB BUSS
XA335	TQ2	A3	04B	TK1AC0	00	=		
XA335	TQ2	A3	02A	(09)	01		TKACAB SPI027 03 02A 07 03A	TKAACB BUSS

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TK1DAO
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIG- NATOR	FACTOR	COMMENT
			AND	OR					
XA239	TQ2	D3	24B		TF138A	00	H		TE21 TO TE13 SHIFT
XA239	TQ2	D3	22B		(45)	01		TE21BQ TTESB0 41 22B 43 23B	
XA233	TQ2	D1	24A		TF141A	00	H		(ITR 01)(MONITOR REG BIT 14)
XA233	TQ2	D1	25A		(52)	01		KIR11B KMR14S 54 25A 56 26A	ITR ADDRESS 01 - FAN0 UT
XA233	TQ2	D2	21A		TF142A	00	=		(ITR 02)(SPARE)
XA233	TQ2	D2	22A		(46)	01		KIR21B KGNDDA 48 22A 50 23A	ITR ADDRESS 02 - FAN0 UT
XA225	TQ2	B2	09A		TF143A	00	=		TD14 TO TE14 WORD XEER
XA225	TQ2	B2	10A		(14)	01		TD14BQ TWTDB0 18 10A 20 11A	
XA239	TQ2	D2	21A		TF148A	00	=		TE22 TO TE14 SHIFT
XA239	TQ2	D2	22A		(46)	01		TTESB0 TE22BQ 48 22A 50 23A	
XA233	TQ2	D3	24B		TF151A	00	=		(ITR 01)(MONITOR REG BIT 15)
XA233	TQ2	D3	22B		(45)	01		KMR15S KIR11B 41 22B 43 23B	
XA218	TQ2	F1	37B		TF152A	00	=		
XA218	TQ2	F1	38B		(75)	01		KIR21B SPI015 77 38B 79 39B	
XA224	TQ2	B4	13B		TF153A	00	=		TD15 TO TE15 WORD XEER
XA224	TQ2	B4	11B		(27)	01		TD15BQ TWTDB0 23 11B 25 12B	
XA239	TQ2	D1	24A		TF158A	00	=		TE23 TO TE15 SHIFT
XA239	TQ2	D1	25A		(52)	01		TTESB0 TE23BQ 54 25A 56 26A	
XA233	TQ2	E1	31A		TF161A	00	=		(ITR 01)(MONITOR REG BIT 16)
XA233	TQ2	E1	32A		(66)	01		KMR16S KIR11B 68 32A 70 33A	
XA233	TQ2	E2	28A		TF162A	00	=		(ITR 02)(MAINT SW MSD-6C)
XA233	TQ2	E2	29A		(60)	01		KIR21B KWMM40 62 29A 64 30A	ITR ADDRESS 02 - FAN0 UT
XA224	TQ2	C3	16B		TF163A	00	=		TD16 TO TE16 WORD XEER
XA224	TQ2	C3	14B		(33)	01		TD16BQ TWTDC0 29 14B 31 15B	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA335	TQ2	B3	10B	TK2AC0	00	=		TKAACB BUSS
XA335	TQ2	B3	08B	(21)	01		TKACAB SPI027 17 08B 19 09B	
XA338	TQ2	E2	28A	TK2DAA	00	=		TKACAB BUSS
XA338	TQ2	E2	29A	(60)	01		TK01BP SPI029 62 29A 64 30A	
XA335	TQ2	E2	28A	TK2DA0	00	=		TKABAB BUSS
XA335	TQ2	E2	29A	(60)	01		TK01BQ SPI029 62 29A 64 30A	
XA332	TQ2	E1	31A	TK211A	00	=		TC TO KM MEM BANK ADD MSB
XA332	TQ2	E1	32A	(66)	01		KMR17S TKMBC0 68 32A 70 33A	
XA332	TQ2	E2	28A	TK221A	00	=		TC TO KM MEM BANK ADD 2ND MS
XA332	TQ2	E2	29A	(60)	01		KMR18S TKMBC0 62 29A 64 30A	
XA332	TQ2	E3	30B	TK231A	00	=		TC TO KM MEM BANK ADD 2ND LS
XA332	TQ2	E3	28B	(57)	01		KMR19S TKMBC0 53 28B 55 29B	
XA332	TQ2	E4	33B	TK241A	00	=		TC TO KM MEM BANK ADD LSB
XA332	TQ2	E4	31B	(63)	01		TKMBC0 KMR20S 59 31B 61 32B	
XA207	TQ2	A1	05A	TK250A	00	=		TA TO KM DEV ADD MSB
XA207	TQ2	A1	06A	(06)	01		TKDAA0 TA00BQ 08 06A 10 07A	
XA207	TQ2	A2	02B	TK260A	00	=		TA TO KM DEV ADD 2ND MSB
XA207	TQ2	A2	04A	(01)	01		TKDAA0 TA01BQ 04 04A 05 03B	
XA207	TQ2	A3	04B	TK270A	00	=		TA TO KM DEV ADD 3RD MSB
XA207	TQ2	A3	02A	(09)	01		TKDAA0 TA02BQ 03 02A 07 03A	
XA207	TQ2	A4	07B	TK280A	00	=		TA TO KM DEV ADD
XA207	TQ2	A4	05B	(15)	01		TA03BQ TKDAA0 11 05B 13 06B	
XA207	TQ2	B1	12A	TK290A	00	=		TA TO KM DEV ADD 3RD LSB
XA207	TQ2	B1	13A	(22)	01		TA04BQ TKDAA0 24 13A 26 14A	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA338	TQ2	C1	18A	TK3AAA	00	=		
XA338	TQ2	C1	19A	(38)	01		TKABAB SPI029 40 19A 42 20A	TKBAAB BUSS
XA335	TQ2	C1	18A	TK3AA0	00	=		
XA335	TQ2	C1	19A	(38)	01		TKACAB SPI027 40 19A 42 20A	TKAAAB BUSS
XA338	TQ2	C2	15A	TK3ABA	00	=		
XA338	TQ2	C2	16A	(30)	01		TKABAB SPI029 34 16A 36 17A	TKBABB BUSS
XA335	TQ2	C2	15A	TK3AB0	00	=		
XA335	TQ2	C2	16A	(30)	01		TKACAB SPI027 34 16A 36 17A	TKAABB BUSS
XA338	TQ2	C3	16B	TK3ACA	00	=		
XA338	TQ2	C3	14B	(33)	01		TKABAB SPI029 29 14B 31 15B	TKBACB BUSS
XA335	TQ2	C3	16B	TK3AC0	00	=		
XA335	TQ2	C3	14B	(33)	01		TKACAB SPI027 29 14B 31 15B	TKAACB BUSS
XA338	TQ2	E3	30B	TK3DAA	00	=		
XA338	TQ2	E3	28B	(57)	01		TK0IBP SPI029 53 28B 55 29B	TKACAB BUSS
XA207	TQ2	B2	09A	TK300A	00	=		
XA207	TQ2	B2	10A	(14)	01		TKDAA0 TA05BQ 18 10A 20 11A	TA TO KM DEV ADD 2ND LSB
XA207	TQ2	B3	10B	TK310A	00	=		
XA207	TQ2	B3	08B	(21)	01		TA06BQ TKDAA0 17 08B 19 09B	TA TO KM DEV ADD LSB
XA338	TQ2	D1	24A	TK4AAA	00	=		
XA338	TQ2	D1	25A	(52)	01		TKABAB SPI029 54 25A 56 26A	TKBAAB BUSS
XA335	TQ2	D1	24A	TK4AA0	00	=		
XA335	TQ2	D1	25A	(52)	01		TKACAB SPI027 54 25A 56 26A	TKAAAB BUSS
XA338	TQ2	D2	21A	TK4ABA	00	=		
XA338	TQ2	D2	22A	(46)	01		TKABAB SPI029 48 22A 50 23A	TKBABB BUSS

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LOGIC

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CONNECTOR	TEST POINT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA335	TQ2	D2	21A	TK4AB0	00	=		
XA335	TQ2	D2	22A	(46)	01		TKACAB SPI027 48 22A 50 23A	TKAABB BUSS
XA338	TQ2	D3	24B	TK4ACA	00	=		
XA338	TQ2	D3	22B	(45)	01		TKABAB SPI029 41 22B 43 23B	TKBACB BUSS
XA335	TQ2	D3	24B	TK4AC0	00	=		
XA335	TQ2	D3	22B	(45)	01		TKACAB SPI027 41 22B 43 23B	TKAACB BUSS
XA338	TQ2	E4	33B	TK4DAA	00	=		
XA338	TQ2	E4	31B	(63)	01		TK018P SPI029 59 31B 61 32B	TKACAB BUSS
XA335	TQ2	E4	33B	TK4DA0	00	=		
XA335	TQ2	E4	31B	(63)	01		TK018Q SPI029 59 31B 61 32B	TKABAB BUSS
XA350	TQ2	C4	19B	TLUCAA	00	=		
XA350	TQ2	C4	17B	(39)	01		TDEBS0 TS24BQ 35 17B 37 18B	DEC + BOOTSTRAP S24
XA224	TQ2	F4	39A	TLUGA0	00	=		
XA224	TQ2	F4	37A	(80)	01		TLUCAA TMLUAA 76 37A 78 38A	TD16-23 TO TE00-07 CONTROL-0
				TMC1BI	00	=		
XA143	TDD	DI	10A	()	01		TMC110 18 10A	
				TMC1BN	00	=		
XA143	TDD	DN	09A	()	01		TCOSAA 14 09A	
XA143	TDD	DP	10B	TMC1BP	00	=		
XA143	TDD	DP	11A	(21)	01		TM4SNO 20 11A	RESET.ADD ACK.CLK
XA143	TDD	DQ	09B	TMC1BQ	00	=		
XA143	TDD	DQ	08B	(19)	01		SPI010 17 08B	
XA142	TQ2	A1	05A	TMC11A	00	=		
XA142	TQ2	A1	06A	(06)	01		TM4SNO TMC1BP 08 06A 10 07A	TMC1* (M4 + TMNS0)

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA140	TQ2	A1	05A	TMC110	00	=		
XA140	TQ2	A1	06A	(06)	01		SPI011 TMC11A 08 06A 10 07A	TMC1*(M4+ TMNSO)
XA145	TT3	E2	29B	TMC12A	00	=		
XA145	TT3	E2	28B	(55)	01		TMC2BP TM4SN0 TMC1BQ 53 28B 60 28A 62 29A	MEM COUNT 1. M02
XA145	TT3	E3	33B	TMC13A	00	=		
XA145	TT3	E3	30B	(63)	01		TMC2BP TM04BQ TMC1BQ 57 30B 59 31B 61 32B	MEM COUNT 1. M04
				TMC2BI	00	=		
XA143	TDD	E1	19A	()	01		TMC210 40 19A	
				TMC2BN	00	=		
XA143	TDD	EN	20A	()	01		TC0SAA 42 20A	
XA143	TDD	EP	17B	TMC2BP	00	=		
XA143	TDD	EP	18A	(35)	01		TM4SN0 38 18A	RESET ADD ACK,CLK
XA143	TDD	EQ	18B	TMC2BQ	00	=		
XA143	TDD	EQ	19B	(37)	01		SPI012 39 19B	PRESET INPUT
XA141	TQ2	A2	02B	TMC210	00	=		
XA141	TQ2	A2	04A	(01)	01		TMC1BP TMC22A 04 04A 05 03B	TMC1 + TMC1*.2
XA142	TQ2	A3	04B	TMC22A	00	=		
XA142	TQ2	A3	02A	(09)	01		TMC1BP TMC2BQ 03 02A 07 03A	TMC2 REMAIN SET COUNT = 1*2
XA145	TT3	F3	39A	TMC3AA	00	=		
XA145	TT3	F3	35A	(80)	01		TMC1BQ TMC2BQ TC0SAB 69 35A 76 37A 78 38A	COUNT 3 DSC.*
XA141	TQ2	F3	35A	TMC3A0	00	=		
XA141	TQ2	F3	34B	(69)	01		THRUAA4 TMC3AA 65 34B 74 35B	COUNT 1-2-DSC-0
XA135	THI	D3	21A	TMC4AA	00	=		
XA135	THI	D3	22A	(48)	01		TMC3A0 50 22A	SET INPUT FOR MEMORY MODE

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LOGIC

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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA137	TT3	F3 39A	TMDAAA	00	=		ALARM MODE D REG
XA137	TT3	F3 35A	(80)	01		TC13CA TC11CA TC12BQ 69 35A 76 37A 78 38A	
XA139	THI	F3 34B	TMDAAO	00	=		ALARM MODE D REG
XA139	THI	F3 35B	(70)	01		TMDAAA 69 35B	
XA207	TQ2	B4 13B	TMDCAA	00	=		MEMORY ADD ACK SYNC 2-A
XA207	TQ2	B4 11B	(27)	01		TADABQ YSN2CTX 23 11B 25 12B	
XA407	TQ2	C2 15A	TMDCAO	00	=		MEMORY ADD ACKNOWLEDGE SYN 2
XA407	TQ2	C2 16A	(30)	01		SPI032 TMDCAA 34 16A 36 17A	
XA407	TQ2	C3 16B	TMDCBO	00	=		MEM ADD ACK SYNC 2=0 UNLOAD
XA407	TQ2	C3 14B	(33)	01		SPI032 TMDCAA 29 14B 31 15B	
XA407	TQ2	C4 19B	TMDCCO	00	=		MEM ADD ACK SYNC 2=0 UNLOAD
XA407	TQ2	C4 17B	(39)	01		TMDCAA SPI032 35 17B 37 18B	
XA206	TT3	B2 09B	TMDSAA	00	=		DATA STROBE M2 CLK*
XA206	TT3	B2 09A	(19)	01		TMS3BQ TM2M6A TM02CO 14 09A 17 08B 18 10A	
XA137	TT3	F2 35B	TMDZAA	00	=		INACTIVE MODE D REG
XA137	TT3	F2 34B	(74)	01		TC12BP TC13CA TC11CA 65 34B 71 36A 72 34A	
XA139	THI	F4 34A	TMDZAO	00	=		MODE ZERO DECODE=0
XA139	THI	F4 35A	(72)	01		TMDZAA 74 35A	
XA142	TQ2	B1 12A	TMFTAA	00	=		MODE FIELD TRANSFER=*
XA142	TQ2	B1 13A	(22)	01		TBLRCA TKWXAO 24 13A 26 14A	
XA141	TQ2	B3 10B	TMFTAO	00	=		MODE FIELD TRANSFER=0
XA141	TQ2	B3 08B	(21)	01		SPI012 TMFTAA 17 08B 19 09B	
XA418	DCF	B1 10B	TMHLCDX	00	=		YHLCCB4 BUSS DRIVER
XA418	DCF	B1 13A	(27)	01		TDGND 36 13A	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
				TMHLCI	00 =			
XA251	TDD	CI	13A	()	01	KGNDDA 24 13A		
				TMHLCN	00 =			
XA251	TDD	CN	14A	()	01	YMRUBA4 26 14A		
XA251	TDD	CP	11B	TMHLCP	00 =			
XA251	TDD	CP	12A	(23)	01	YMRSA 22 12A		
XA251	TDD	CQ	12B	TMHLCQ	00 =			MEM HOLD FF - SET
XA251	TDD	CQ	13B	(25)	01	YMHSTA 27 13B		
XA418	DCF	B2	11B	TMHLCOX	00 =			
XA418	DCF	B2	12B	(29)	01	TMHLCQ 31 12B		
XA315	TT3	E2	29B	TMHRSA	00 =			RESET MEM HOLD
XA315	TT3	E2	28B	(55)	01	TBMACQ YSN2CTX TADA8P 53 28B 60 28A 62 29A		
XA304	TQ2	C4	19B	TMHSTA	00 =			
XA304	TQ2	C4	17B	(39)	01	TMHSTO TBMACQ 35 17B 37 18B		
XA334	TS8	F1	37A	TMHSTO	00 =			SET MEM HOLD FF
XA334	TS8	F1	36A	(76)	01	SPI027 TMHS4A SPI024 SPI025 TMHS2A TCD24A TS10BP TES32A 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B		
XA414	TT3	E1	30A	TMHS2A	00 =			KW RESTORE - LEAVING BURST
XA414	TT3	E1	31A	(64)	01	TS03BP TBMACQ TBRSTQ 66 31A 68 32A 70 33A		
XA351	TT3	E3	33B	TMHS4A	00 =			COMPUTER TERMINATE
XA351	TT3	E3	30B	(63)	01	TRC170 TP2M2A TS08BQ 57 30B 59 31B 61 32B		
				TMINHI	00 =			
XA113	TDD	AI	06A	()	01	SPI001 08 06A		
				TMINHN	00 =			
XA113	TDD	AN	07A	()	01	TS21BP 10 07A		

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LOGIC

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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA113	TDD	AP 05B	TMINHP	00 =		
XA113	TDD	AP 05A	(11)	01	TINHAA 06 05A	
XA113	TDD	AQ 06B	TMINHQ	00 =		
XA113	TDD	AQ 07B	(13)	01	SPI004 15 07B	
XA323	TD4	A1 05B	TMLLAA	00 =		TD24-31 TO TE00-07 CONTROL-A
XA323	TD4	A1 05A	(11)	01	TC11C0 TS0720 TC13C0 TC31BQ 06 05A 08 06A 10 07A 13 06B	
XA324	THI	A5 04B	TMLLAA	00 =		TD24-31 TO TE00-07 CONTROL-0
XA324	THI	A5 05B	(07)	01	TMLLAA 09 05B	
XA323	TD4	A2 04B	TMLUAA	00 =		TD16-23 TO TE00-07 CONTROL-A
XA323	TD4	A2 02B	(09)	01	TC11C0 TS0720 TC13CA TC31BQ 01 02B 04 04A 05 03B 07 03A	
XA420	DCF	C7 25A	TMMICDX	00 =		YMMICB BUSS
XA420	DCF	C7 29A	(43)	01	TEGNDA 52 29A	
XA420	DCF	C8 26A	TMMICOX	00 =		
XA420	DCF	C8 28A	(48)	01	TMRUM0 50 28A	
XA115	TQ2	C3 16B	TMPBB0	00 =		CONTROL WHICH PARITY GOES TO
XA115	TQ2	C3 14B	(33)	01	TMPB2A TMPB1A 29 14B 31 15B	
XA304	TQ2	F2 34A	TMPB1A	00 =		PE P BIT TO BUSS BASE MEM ER
XA304	TQ2	F2 36A	(72)	01	TD32BQ TPERBQ 71 36A 73 36B	
XA206	TT3	B3 13B	TMPB2A	00 =		PARITY D REG TO BUSS
XA206	TT3	B3 10B	(27)	01	TPERBP T3100A T0031A 21 10B 23 11B 25 12B	
XA205	THI	D5 24B	TMPEIA	00 =		CTS PE INH + BOOTSTRAP-A
XA205	THI	D5 25B	(43)	01	TMPEI0 45 25B	
XA115	TQ2	C4 19B	TMPEI0	00 =		CTS PE INH + BOOTSTRAP-0
XA115	TQ2	C4 17B	(39)	01	JMPEI04 TMPE2A 35 17B 37 18B	PARITY ERROR INHIBIT MEM

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	TEST POINT	FACTOR	COMMENT
XA116	TQ2	B3	10B	TMPE2A	00	=		
XA116	TQ2	B3	08B	(21)	01		TBST20 TS08BP 17 08B 19 09B	
XA423	TQ2	F1	37B	TMPWAA	00	=		(MEMORY+CPU PWR FAILURE) (SQ)
XA423	TQ2	F1	38B	(75)	01		TFIOAS TS0010 77 38B 79 39B	(CPU#1)
XA115	TQ2	D1	24A	TMRCAA	00	=		MONITER REG TO IE ITR 1.S22
XA115	TQ2	D1	25A	(52)	01		TS22BQ TITR10 54 25A 56 26A	
XA115	TQ2	D2	21A	TMRITA	00	=		MASTER RESET + I/O T.O.
XA115	TQ2	D2	22A	(46)	01		SPI001 TMRITO 48 22A 50 23A	
XA122	TT3	B2	09B	TMRITO	00	=		MASTER RESET + I/O T.O. +
XA122	TT3	B2	09A	(19)	01		TS176A TITMRP TICSMA 14 09A 17 08B 18 10A	
XA115	TQ2	D3	24B	TMRHTA	00	=		MASTER RESET + MEM T.O.
XA115	TQ2	D3	22B	(45)	01		TMRHTO SPI001 41 22B 43 23B	
XA122	TT3	B3	13B	TMRMTO	00	=		MASTER RESET + MEM T.O. +
XA122	TT3	B3	10B	(27)	01		TS00AA TICSMA TMT0BP 21 10B 23 11B 25 12B	
XA421	ACF	A1	05A	TMRRAD4	00	=		IOU RESET = DDI + RESTART
XA421	ACF	A1	03A	(11)	01		ZDDDR1 TFIORA 07 03A 09 04A	
XA420	DCF	D1	32B	TMRSDDX	00	=		IOM ON LINE
XA420	DCF	D1	36A	(65)	01		TEGNDA 72 36A	
XA420	DCF	D2	33B	TMRSDOX	00	=		
XA420	DCF	D2	34B	(69)	01		TBT120 71 34B	
XA510	ACF	A1	05A	TMRUAD4	00	=		IOU RESET
XA510	ACF	A1	03A	(11)	01		TMRRAD1 SPI300 07 03A 09 04A	
XA510	ACF	A2	06B	TMRUBD4	00	=		IOU RESET
XA510	ACF	A2	08B	(10)	01		TMRRAD1 SPI300 19 08B 15 07B	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA510	ACF	A3	02A	TMRUCD4	00 =		
XA510	ACF	A3	05B	(03)	01	TMRRAD1 SPI300 08 05B 05 04B	TOU RESET
XA511	ACF	A2	06B	TMRUDD4	00 =		
XA511	ACF	A2	08B	(10)	01	TMRRAD1 SPI300 19 08B 15 07B	TOU RESET
XA138	TQ2	E1	31A	TMRUM0	00 =		
XA138	TQ2	E1	32A	(66)	01	TBT12A TMRUCA4 68 32A 70 33A	
XA310	THI	A6	06B	TMR77A	00 =		
XA310	THI	A6	07B	(10)	01	TMR770 15 07B	S77 + MASTER RESET
XA207	TQ2	E3	30B	TMR770	00 =		
XA207	TQ2	E3	28B	(57)	01	TMRUAA4 TS77AA 53 28B 55 29B	S77 + MASTER RESET
				TMSNOI	00 =		
XA143	TDD	FI	16A	()	01	TM00BP 34 16A	
				TMSNON	00 =		
XA143	TDD	FN	15A	()	01	TM02BQ 30 15A	
XA143	TDD	FP	16B	TMSNOP	00 =		
XA143	TDD	FP	17A	(33)	01	TKADAA 36 17A	RESET, ADD, ACK, CLK
XA143	TDD	FQ	15B	TMSNOQ	00 =		
XA143	TDD	FQ	14B	(31)	01	SPI010 29 14B	
				TMS3BI	00 =		
XA143	TDD	GI	25A	()	01	TMS3D0 54 25A	
				TMS3BN	00 =		
XA143	TDD	GN	26A	()	01	TKBACB 56 26A	
XA143	TDD	GP	25B	TMS3BP	00 =		
XA143	TDD	GP	24A	(47)	01	SPI012 52 24A	PRERESET

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
				TMTc2I	00	#		
XA151	TDD	BI	03B	()	01	#	TMTc3Q 05 03B	
				TMTc2N	00	#		
XA151	TDD	BN	02B	()	01	#	TKRC2A 01 02B	
XA151	TDD	BP	04B	TMTc2P	00	#		MASTER RESET MEM TIME OUT CO
XA151	TDD	BP	04A	(09)	01	#	TMTIMQ 04 04A	
XA151	TDD	BQ	03A	TMTc2Q	00	#		
XA151	TDD	BQ	02A	(07)	01	#	SPI014 03 02A	
				TMTc3I	00	#		
XA148	TDD	BI	03B	()	01	#	TMTcOP 05 03B	
				TMTc3N	00	#		
XA148	TDD	BN	02B	()	01	#	TKRC2A 01 02B	
XA148	TDD	BP	04B	TMTc3P	00	#		MASTER RESET, MEM TIME OUT C
XA148	TDD	BP	04A	(09)	01	#	TMTIMQ 04 04A	
XA148	TDD	BQ	03A	TMTc3Q	00	#		
XA148	TDD	BQ	02A	(07)	01	#	SPI010 03 02A	
XA233	TQ2	D4	27B	TMTDWA	00	#		
XA233	TQ2	D4	25B	(51)	01	#	TS5130 TMT0BQ 47 25B 49 26B	
XA116	TQ2	A4	07B	TMTDWR	00	#		
XA116	TQ2	A4	05B	(15)	01	#	TMTDWS TS00BP 11 05B 13 06B	
XA115	TQ2	A4	07B	TMTDWS	00	#		CONT MEM BANK ADD TO MONITOR
XA115	TQ2	A4	05B	(15)	01	#	TMTDWA TMTDWR 11 05B 13 06B	
XA141	TQ2	C1	18A	TMTENA	00	#		S08+S10+S12+S14+S
XA141	TQ2	C1	19A	(38)	01	#	TM01BQ TKAAAB 40 19A 42 20A	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
				TMTIMI	00	#		
XA251	TDD	AI	06A	()	01		TMTI1A 08 06A	
				TMTIMN	00	#		
XA251	TDD	AN	07A	()	01		YSN2CTX 10 07A	
XA251	TDD	AP	05B		00	=		
XA251	TDD	AP	05A	(11)	01		TMRMTA 06 05A	
XA251	TDD	AQ	06B		00	=		PRESET-COUNT 3.OSC*.M02
XA251	TDD	AQ	07B	(13)	01		TMYENA 15 07B	
XA245	THI	A4	02B		00	=		DATA INPUT TO MEMORY TIMER F
XA245	THI	A4	03B	(01)	01		TMTI10 05 03B	
XA150	TT3	F3	39A		00	=		S13.WORD IN + BRUST.S13*.S5*
XA150	TT3	F3	35A	(80)	01		TS13WA TBI35A TADABP 69 35A 76 37A 78 38A	
XA446	TQ2	B2	09A		00	=		RESET CPU
XA446	TQ2	B2	10A	(14)	01		TFI0C0 TFI0CS 18 10A 20 11A	
XA248	T04	B2	10B		00	=		MEMORY TIME OUT
XA248	T04	B2	09A	(21)	01		TMT0AA TMT0AQ TMT0AP TMT0AQ 14 09A 18 10A 19 09B 20 11A	
				TMT0BI	00	=		
XA251	TDD	B1	03B	()	01		SP1021 05 03B	
				TMT0BN	00	=		
XA251	TDD	BN	02B	()	01		SP1022 01 02B	
XA251	TDD	BP	04B		00	=		RESET MEM TIME OUT IN S00
XA251	TDD	BP	04A	(09)	01		TS00AA 04 04A	
XA251	TDD	BQ	03A		00	=		SET MEM T.O.
XA251	TDD	BQ	02A	(07)	01		TMT0AA 03 02A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TMULAA
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA323	TD4	B1	11B	TMULAA	00	=		
XA323	TD4	B1	12A	(23)	01		TC13C0 TC0720 TC11C0 TC31BP 22 12A 24 13A 25 12B 26 14A	TD08-15 TO TE00-07 CONTROL-A
XA324	THI	A6	06B	TMULAO	00	=		
XA324	THI	A6	07B	(10)	01		TMULAA 15 07B	TD08-15 TO TE00-07 CONTROL-0
XA323	TD4	B2	10B	TMUUA	00	=		
XA323	TD4	B2	09A	(21)	01		TC11C0 TC31BP TC13CA TS0720 14 09A 18 10A 19 09B 20 11A	XFER CONTROL TD00-07-TE00-07
XA324	THI	B2	11A	TMUUA	00	=		
XA324	THI	B2	12A	(25)	01		TMUUA 23 12A	TD00-07-TE00-07-0
XA146	TQ2	D3	24B	TMOBLO	00	=		
XA146	TQ2	D3	22B	(45)	01		TMOBSA TBLZAO 41 22B 43 23B	MO BOOTSTRAP + BL IS NOT 1
XA149	TQ2	A3	04B	TMOBSA	00	=		
XA149	TQ2	A3	02A	(09)	01		TBLEZA TBST2Q 03 02A 07 03A	BL EXT#0 BOOTSTRAP
XA147	TS8	C1	17B	TMOSCO	00	=		
XA147	TS8	C1	15A	(35)	01		SPI004 SPI010 SPI003 TMRUBA4 SPI013 TM355A TMOS1A TM00BP 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	MO SELECTION CONTROL
XA116	TQ2	C2	15A	TMOS1A	00	=		
XA116	TQ2	C2	16A	(30)	01		TMT0BQ TS21C0 34 16A 36 17A	
XA443	TQ2	E3	30B	TM00AA	00	=		
XA443	TQ2	E3	28B	(57)	01		SPI039 TM00BQ 53 28B 55 29B	
				TM00BI	00	=		
XA148	TDD	GI	25A	()	01		TMOSCO 54 25A	
				TM00BN	00	=		
XA148	TDD	GN	26A	()	01		TKBACB 56 26A	
XA148	TDD	GP	25B	TM00BP	00	=		
XA148	TDD	GP	24A	(47)	01		TM01BP 52 24A	RESET MOO WHEN M1

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TM00BQ
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA148	TDD	GQ	26B	TM00BQ	00	=		SELECT M0 PRESET INPUT
XA148	TDD	GQ	27B	(49)	01		TM4DSA 51 27B	
XA245	THI	A6	06B	TM00C0	00	=		STATE M0 UNLOAD=0
XA245	THI	A6	07B	(10)	01		TM00BP 15 07B	
XA413	TLD	D2	21A	TM00SD	00	=		JDB20B4 BUSS 0 DATA
XA413	TLD	D2	22A	(46)	01		TM00C0 TTSCMO 48 22A 50 23A	BUSS FOR CTS DISPLAY
XA149	TQ2	A2	02B	TM01AA	00	=		SEL M1
XA149	TQ2	A2	04A	(01)	01		TM00C0 TM0110 .04 04A 05 03B	
XA443	TQ2	E4	33B	TM01A0	00	=		
XA443	TQ2	E4	31B	(63)	01		TM01BP SPI039 59 31B 61 32B	
XA149	TQ2	B1	12A	TM01BA	00	=		SEL M1
XA149	TQ2	B1	13A	(22)	01		TM0120 TM00C0 24 13A 26 14A	
				TM01BI	00	=		
XA151	TDD	O1	10A	()	01		TM0130 18 10A	
				TM01BN	00	=		
XA151	TDD	DN	09A	()	01		TKBACB 14 09A	
XA151	TDD	DP	10B	TM01BP	00	=		M01 PRESET, POWER UP
XA151	TDD	DP	11A	(21)	01		TM00AA4 20 11A	
XA151	TDD	DQ	09B	TM01BQ	00	=		M01 PRESET
XA151	TDD	DQ	08B	(19)	01		SPI003 17 08B	
XA245	THI	B2	11A	TM01C0	00	=		STATE M1 UNLOAD=0
XA245	THI	B2	12A	(25)	01		TM01BP 23 12A	
XA413	TLD	D3	24B	TM01SD	00	=		JDB21B4 BUSS 0 DATA
XA413	TLD	D3	22B	(45)	01		TM01A0 TTSCMO 41 22B 43 23B	BUSS FOR CTS DISPLAY

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TM0110
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA250	TS8	A1	05B	TM0110	00 =			OR'D SELECT M1 CONTROL
XA250	TS8	A1	02B	(11)	01		TS7B2A TS131A TS9Q1A TS5AVA TS153A TSTB1A TS161A TS3MOA 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	
XA150	TT3	F2	35B	TM0120	00 =			OR'D SELECT M1 CONTROL
XA150	TT3	F2	34B	(74)	01		TS17BP TS7B5A TS18BP 65 34B 71 36A 72 34A	
XA140	TQ2	E1	31A	TM0130	00 =			SEL M1, DATA IN
XA140	TQ2	E1	32A	(66)	01		TM01BA TM01AA 68 32A 70 33A	
				TM02BI	00 =			
XA148	TDD	HI	22A	()	01		TM01BQ 48 22A	
				TM02BN	00 =			
XA148	TDD	HN	21A	()	01		TKM1BA 46 21A	
XA148	TDD	HP	24B	TM02BP	00 =			RESET M2, M3+M6+ MEM. TIME 0
XA148	TDD	HP	23A	(45)	01		TM02PA 50 23A	
XA148	TDD	HQ	23B	TM02BQ	00 =			
XA148	TDD	HQ	22B	(43)	01		SPI013 41 22B	
XA245	THI	B5	10B	TM02CA	00 =			STATE M02 UNLOAD-A
XA245	THI	B5	11B	(19)	01		TM02BQ 21 11B	
XA245	THI	B6	12B	TM02CO	00 =			M2 OVERLOAD
XA245	THI	B6	13B	(26)	01		TM02BP 27 13B	
XA245	THI	B3	09A	TM02PA	00 =			M3 + M6 + MEM. TIME OUT+POWE
XA245	THI	B3	10A	(18)	01		TM3M60 20 10A	
XA413	TLD	D4	27B	TM02SD	00 =			JDB22B4 BUSS 0 DATA
XA413	TLD	D4	25B	(51)	01		TM02CO TTSCMO 47 25B 49 26B	BUSS FOR CTS DISPLAY
				TM03BI	00 =			
XA151	TDD	FI	16A	()	01		TM0310 34 16A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TM03BN
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	SECTION	FACTOR	COMMENT
				TM03BN	00	II		
XA151	TDD	FN	15A	()	01		TKBACB 30 15A	
XA151	TDD	FP	16B	TM03BP	00	=		CLR M03, MASTER RESET
XA151	TDD	FP	17A	(33)	01		TMRUAA4 36 17A	
XA151	TDD	FQ	15B	TM03BQ	00	=		PRESET M03, DATA STROBE M2.
XA151	TDD	FQ	14B	(31)	01		TMDSAA 29 14B	
XA245	THI	C2	17A	TM03CA	00	=		STATE M3 F/F UNLOAD-A
XA245	THI	C2	18A	(37)	01		TM03BQ 35 18A	
XA245	THI	C3	15A	TM03C0	00	=		STATE M3 F/F UNLOAD-0
XA245	THI	C3	16A	(34)	01		TM03BP 36 16A	
XA139	THI	F5	36A	TM03D0	00	=		STATE M3 UNLOAD-0
XA139	THI	F5	37A	(78)	01		TM03BP 76 37A	
XA413	TLD	E1	31A	TM03SD	00	=		JOB23B4 BUSS 0 DATA
XA413	TLD	E1	32A	(66)	01		TM03D0 TTSCM0 68 32A 70 33A	BUSS FOR CTS DISPLAY
XA139	THI	E6	32B	TM0310	00	=		M03 ON, LEAVE ON
XA139	THI	E6	33B	(68)	01		TM032A 65 33B	
XA149	TQ2	B3	10B	TM032A	00	=		M03 ON, LEAVE ON
XA149	TQ2	B3	08B	(21)	01		TM03BQ TMS3BQ 17 08B 19 09B	
				TM048I	00	=		
XA151	TDD	GI	25A	()	01		TM0410 54 25A	
				TM048N	00	=		
XA151	TDD	GN	26A	()	01		TKBACB 56 26A	
XA151	TDD	GP	25B	TM04BP	00	=		MASTER RESET M4
XA151	TDD	GP	24A	(47)	01		TMRUAA4 52 24A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TM04BQ
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA151	TDD	GQ	26B	TM048Q	00 =		
XA151	TDD	GQ	27B	(49)	01	SPI013 51 27B	
XA413	TLD	E2	28A	TM04SD	00 =		
XA413	TLD	E2	29A	(60)	01	TM048Q TTSCM0 62 29A 64 30A	JDB24B4 BUSS 0 DATA BUSS FOR CTS DISPLAY
XA122	TT3	E1	30A	TM0410	00 =		
XA122	TT3	E1	31A	(64)	01	TM400A TM06BP TM3NPA 66 31A 68 32A 70 33A	
				TM05BI	00 =		
XA151	TDD	HI	22A	()	01	TM0510 48 22A	
				TM05BN	00 =		
XA151	TDD	HN	21A	()	01	TKBACB 46 21A	
XA151	TDD	HP	24B	TM05BP	00 =		MASTER RESET CLR MS
XA151	TDD	HP	23A	(45)	01	TMRUAA4 50 23A	
XA151	TDD	HQ	23B	TM05BQ	00 =		
XA151	TDD	HQ	22B	(43)	01	SPI014 41 22B	
XA413	TLD	E3	30B	TM05SD	00 =		
XA413	TLD	E3	28B	(57)	01	TM05BQ TTSCM0 53 28B 55 29B	JDB25B4 BUSS 0 DATA BUSS FOR CTS DISPLAY
XA149	TQ2	C1	18A	TM051A	00 =		
XA149	TQ2	C1	19A	(38)	01	TS04BQ TCD160 40 19A 42 20A	M3, S04, NO MEM P.E.
XA139	THI	E5	30B	TM0510	00 =		
XA139	THI	E5	31B	(57)	01	TM051A 59 31B	M3, S04, NO MEM P.E.
				TM06BI	00 =		
XA143	TDD	JI	32A	()	01	TM0610 68 32A	
				TM06BN	00 =		
XA143	TDD	JN	33A	()	01	TKBACB 70 33A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TM3T0A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG. FACTOR	FACTOR	COMMENT
XA146	TQ2	C1	18A	TM3T0A	00	=		
XA146	TQ2	C1	19A	(38)	01		TM06BP TM3M60 40 19A 42 20A	M3 OR MEM I.O.
XA149	TQ2	D2	21A	TM4DSA	00	=		
XA149	TQ2	D2	22A	(48)	01		TMC3A0 TM04BQ 48 22A 50 23A	M4 AND DATA STROBE
XA149	TQ2	D3	24B	TM4SND	00	=		
XA149	TQ2	D3	22B	(45)	01		TMSNOP TM400A 41 22B 43 23B	M4 + MEM SYNC FF
XA115	TQ2	C2	15A	TM400A	00	=		
XA115	TQ2	C2	16A	(30)	01		TM04BQ TMO0BP 34 16A 36 17A	I/O TIME OUT - S21
XA149	TQ2	D4	27B	TM5BR0	00	=		
XA149	TQ2	D4	25B	(51)	01		TM05BP TBR5UA 47 25B 49 26B	M5 OR BURST
XA122	TT3	D3	27B	TM6PEA	00	=		
XA122	TT3	D3	24B	(51)	01		TS04BP TS8210 TCD170 45 24B 47 25B 49 26B	
XA150	TT3	E2	29B	TM6SCA	00	=		
XA150	TT3	E2	28B	(55)	01		TM02C0 TM2M60 TMS3BQ 53 28B 60 28A 62 29A	SELECT M6 FROM M2
XA150	TT3	E3	33B	TNIABA	00	=		
XA150	TT3	E3	30B	(63)	01		TBST1P TAVEBP TINDBP 57 30B 59 31B 61 32B	NOT IND. NOT ACC VIOL. NOT BTS
XA139	THI	E4	28B	TNIAB0	00	=		
XA139	THI	E4	29B	(56)	01		TNIABA 55 29B	NOT IND. NOT ACC VIOL. NOT BTS
XA142	TQ2	C4	19B	TNOIOA	00	=		
XA142	TQ2	C4	17B	(39)	01		TXCOBP TBR5UA 35 17B 37 18B	NORMAL. NOT I O
XA208	TQ2	D4	27B	TPEBA0	00	=		
XA208	TQ2	D4	25B	(51)	01		TPEB2A TPEB1A 47 25B 49 26B	SET PARITY ERROR BASE MEMORY
XA317	TDD	LI	38B	TPEBMI	00	=		
				()	01		TPEBA0 77 38B	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019
FILE IDENT T39BIUX2
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA148	TDD	GQ	26B	TM00BQ	00	=		SELECT M0 PRESET INPUT
XA148	TDD	GQ	27B	(49)	01		TM40SA 51 27B	
XA245	THI	A6	06B	TM00C0	00	=		STATE M0 UNLOAD=0
XA245	THI	A6	07B	(10)	01		TM00BP 15 07B	
XA413	TLD	D2	21A	TM00SD	00	=		JDB20B4 BUSS 0 DATA
XA413	TLD	D2	22A	(46)	01		TM00C0 TTSCMO 48 22A 50 23A	BUSS FOR CTS DISPLAY
XA149	TQ2	A2	02B	TM01AA	00	=		SEL M1
XA149	TQ2	A2	04A	(01)	01		TM00C0 TM0110 .04 04A 05 03B	
XA443	TQ2	E4	33B	TM01A0	00	=		
XA443	TQ2	E4	31B	(63)	01		TM01BP SPI039 59 31B 61 32B	
XA149	TQ2	B1	12A	TM01BA	00	=		SEL M1
XA149	TQ2	B1	13A	(22)	01		TM0120 TM00C0 24 13A 26 14A	
XA151	TDD	01	10A	TM01BI	00	=		
				()	01		TM0130 18 10A	
XA151	TDD	0N	09A	TM01BN	00	=		
				()	01		TKBACB 14 09A	
XA151	TDD	DP	10B	TM01BP	00	=		M01 PRERESET, POWER UP
XA151	TDD	DP	11A	(21)	01		TM00AA4 20 11A	
XA151	TDD	DQ	09B	TM01BQ	00	=		M01 PRESET
XA151	TDD	DQ	08B	(19)	01		SPI003 17 08B	
XA245	THI	B2	11A	TM01C0	00	=		STATE M1 UNLOAD=0
XA245	THI	B2	12A	(25)	01		TM01BP 23 12A	
XA413	TLD	D3	24B	TM01SD	00	=		JDB21B4 BUSS 0 DATA
XA413	TLD	D3	22B	(45)	01		TM01A0 TTSCMO 41 22B 43 23B	BUSS FOR CTS DISPLAY

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TPED1A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA207	TQ2	F2	34A	TPED1A	00	=		DATA PE SET FF
XA207	TQ2	F2	36A	(72)	01		TS1460 TPEM10 71 36A 73 36B	
XA207	TQ2	E4	33B	TPED2A	00	=		PE FF SET LEAVE SET TO 500
XA207	TQ2	E4	31B	(63)	01		TPEDMQ TS00BP 59 31B 61 32B	
XA325	TD4	F2	35A	TPEMAA	00	=		BITS 0-31 EVEN PARITY BIT
XA325	TD4	F2	36A	(69)	01		TMPEIA TD32BP T3100A T0031A 71 36A 72 34A 73 36B 74 35B	
XA315	TT3	E3	33B	TPEMBA	00	=		BITS 0-31 ODD PARITY BIT
XA315	TT3	E3	30B	(63)	01		TMPEIA TD32BQ T03P10 57 30B 59 31B 61 32B	
XA138	TQ2	D1	24A	TPEM1A	00	=		PARITY ERROR
XA138	TQ2	D1	25A	(52)	01		TM03D0 TPEM10 54 25A 56 26A	
XA208	TQ2	D2	21A	TPEM10	00	=		PARITY ERROR
XA208	TQ2	D2	22A	(46)	01		TPEMBA TPEMAA 48 22A 50 23A	
XA138	TQ2	D2	21A	TPEM2A	00	=		PARITY ERROR
XA138	TQ2	D2	22A	(46)	01		TM03D0 TPEM10 48 22A 50 23A	
XA138	TQ2	D3	24B	TPEM3A	00	=		PE UNLOAD
XA138	TQ2	D3	22B	(45)	01		TM03D0 TPEM10 41 22B 43 23B	
XA213	THI	B4	08B	TPEM30	00	=		CIS STATE STEP
XA213	THI	B4	09B	(14)	01		TPEM3A 17 09B	
XA340	TT3	E1	30A	TPEPOA	00	=		PARITY ERROR 0-7 EVEN P BIT
XA340	TT3	E1	31A	(64)	01		TE0PBP TPE07A TPE70A 66 31A 68 32A 70 33A	
XA113	TDD	LI	38B	TPERBI	00	=		
XA113	TDD	LI	38B	()	01		SPI001 77 38B	
XA113	TDD	LN	39B	TPERBN	00	=		
XA113	TDD	LN	39B	()	01		SPI002 79 39B	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
 UNIT ASSEMBLY NO. 149019 REV G INDEX TPERBP
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA113	TDD	LP	37A	TPERBP	00	=		
XA113	TDD	LP	37B	(76)	01		TM00AA 75 37B	
XA113	TDD	LQ	38A	TPERBQ	00	=		
XA113	TDD	LQ	39A	(78)	01		TM3NPA 80 39A	
XA140	TQ2	D4	27B	TPETK0	00	=		BASE MEM PE
XA140	TQ2	D4	25B	(51)	01		TPEH1A TPE8MP 47 25B 49 26B	
XA239	TQ2	F3	35A	TPE0PA	00	=		PARITY ERROR, 0-7 ODD P BIT
XA239	TQ2	F3	34B	(69)	01		TP0070 TE0PBQ 65 34B 74 35B	
XA246	TQ2	A1	05A	TPE01A	00	=		PARITY 0-1
XA246	TQ2	A1	06A	(06)	01		TE00BQ TE01BQ 08 06A 10 07A	
XA340	TT3	C3	19B	TPE03A	00	=		PARITY 0-1 EVEN, 2-3 ODD
XA340	TT3	C3	16B	(39)	01		TPE23A TPE32A TP0010 33 16B 35 17B 37 18B	
XA343	TT3	D1	23A	TPE07A	00	=		PARITY 0-3 ODD, 4-7 EVEN
XA343	TT3	D1	24A	(50)	01		TPE74A TP0030 TPE47A 52 24A 54 25A 56 26A	
XA246	TQ2	A2	02B	TPE10A	00	=		PARITY 0*.1*
XA246	TQ2	A2	04A	(01)	01		TE01BP TE00BP 04 04A 05 03B	
XA246	TQ2	B2	09A	TPE23A	00	=		PARITY 2.3
XA246	TQ2	B2	10A	(14)	01		TE02BQ TE03BQ 18 10A 20 11A	
XA340	TT3	D1	23A	TPE30A	00	=		PARITY 0-1 ODD, 2-3 EVEN
XA340	TT3	D1	24A	(50)	01		TP0230 TPE10A TPE01A 52 24A 54 25A 56 26A	
XA246	TQ2	B3	10B	TPE32A	00	=		PARITY 2*.3*
XA246	TQ2	B3	08B	(21)	01		TE03BP TE02BP 17 08B 19 09B	
XA246	TQ2	C2	15A	TPE45A	00	=		PARITY 4.5
XA246	TQ2	C2	16A	(30)	01		TE04BQ TE05BQ 34 16A 36 17A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA340	TT3	D2	23B		TPE47A	00	=		PARITY 4-5 EVEN, 6-7 ODD
XA340	TT3	D2	22B		(43)	01		TP0450 TPE67A TPE76A 41 22B 46 21A 48 22A	
XA246	TQ2	C3	16B		TPE54A	00	=		PARITY 4*, 5*
XA246	TQ2	C3	14B		(33)	01		TE05BP TE04BP 29 14B 31 15B	
XA246	TQ2	D2	21A		TPE67A	00	=		PARITY 6, 7
XA246	TQ2	D2	22A		(46)	01		TE066Q TE07BQ 48 22A 50 23A	
XA343	TT3	D2	23B		TPE70A	00	=		PARITY 0-3 EVEN, 4-7 ODD
XA343	TT3	D2	22B		(43)	01		TP0470 TPE30A TPE03A 41 22B 46 21A 48 22A	
XA340	TT3	D3	27B		TPE74A	00	=		PARITY 4-5 ODD, 6-7 EVEN
XA340	TT3	D3	24B		(51)	01		TPE45A TPE54A TP0670 45 24B 47 25B 49 26B	
XA246	TQ2	D3	24B		TPE76A	00	=		PARITY 6*, 7*
XA246	TQ2	D3	22B		(45)	01		TE07BP TE06BP 41 22B 43 23B	
XA342	THI	C3	15A		TPGNDA	00	=		GROUND
XA342	THI	C3	16A		(34)	01		SPI031 36 16A	
XA136	TD4	A1	05B		TPNC1A	00	=		NPI CONTROL, PE*, S12, CLK-A
XA136	TD4	A1	05A		(11)	01		TPEM1A TC08BP TS12BQ TKAACB 06 05A 08 06A 10 07A 13 06B	
XA135	THI	C2	17A		TPNC10	00	=		NPI CONTROL, PE*, S12, CLK-D
XA135	THI	C2	18A		(37)	01		TPNC1A 35 18A	
XA332	TQ2	C4	19B		TPN01A	00	=		TC06*, 07*-A
XA332	TQ2	C4	17B		(39)	01		TC06BP TC07BP 35 17B 37 18B	
XA135	THI	A6	06B		TPN010	00	=		TC06*, 07*-D
XA135	THI	A6	07B		(10)	01		TPN01A 15 07B	
XA332	TQ2	D1	24A		TPN02A	00	=		TC06*, 07*-A
XA332	TQ2	D1	25A		(52)	01		TC07BQ TC06BP 54 25A 56 26A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TPN400
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 257

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA135	THI	C1	19A	TPN400	00	=		TC04.05.NPL CONTROL-0
XA135	YHI	C1	20A	(40)	01		TPN40A 38 20A	
XA135	THI	E2	30A	TPQRSA	00	=		Q REG/PAR REG CONTROL TERM-A
XA135	YHI	E2	31A	(63)	01		TPQRSO 61 31A	
XA133	TQ2	E4	33B	TPQRSO	00	=		Q REG/PAR REG CONTROL TERM-0
XA133	TQ2	E4	31B	(63)	01		TQSC2A TPSCAA 59 31B 61 32B	
XA133	TQ2	D4	27B	TPR01A	00	=		PAR EPL BIT 00 POST
XA133	TQ2	D4	25B	(51)	01		TPR01O TPR10O 47 25B 49 26B	
XA135	THI	C3	15A	TPR01O	00	=		TC14*.15*-0
XA135	YHI	C3	16A	(34)	01		TACX0A 36 16A	
XA135	THI	C4	14B	TPR02O	00	=		TC14*.15-0
XA135	YHI	C4	15B	(30)	01		TACX1A 29 15B	
XA135	THI	C5	16B	TPR03O	00	=		TC14.15*-0
XA135	YHI	C5	17B	(31)	01		TACX2A 33 17B	
XA135	THI	C6	18B	TPR04O	00	=		TC14.15-0
XA135	YHI	C6	19B	(42)	01		TACX3A 39 19B	
XA319	TT3	A1	04A	TPR10A	00	=		TC12*.13* EPL CONTROL-A
XA319	YI3	A1	05A	(04)	01		TPEC1O TC13BP TC12BP 06 05A 08 06A 10 07A	
XA324	THI	B3	09A	TPR10O	00	=		TC12*.13* EPL CONTROL-0
XA324	YHI	B3	10A	(18)	01		TPR10A 20 10A	
XA319	TT3	A2	03A	TPR20A	00	=		TC12*.13.EPL CONTROL-A
XA319	YI3	A2	02B	(07)	01		TC13BQ TPEC1O TC12BP 01 02B 03 02A 05 03B	
XA324	THI	B4	08B	TPR20O	00	=		TC12*.13.EPL CONTROL-0
XA324	YHI	B4	09B	(14)	01		TPR20A 17 09B	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TPR30A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 258

CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA319	TT3	A3 07B	TPR30A	00 =		TC12.13* EPL CONTROL-A
XA319	TT3	A3 04B	(15)	01	TPEC10 TC12BQ TC13BP 09 04B 11 05B 13 06B	
XA324	THI	B5 10B	TPR300	00 =		TC12.13* EPL CONTROL-0
XA324	THI	B5 11B	(19)	01	TPR30A 21 11B	
XA319	TT3	B1 11A	TPR40A	00 =		TC12.13 EPL CONTROL-A
XA319	TT3	B1 12A	(20)	01	TC12BQ TC13BQ TPEC10 22 12A 24 13A 26 14A	
XA324	THI	B6 12B	TPR400	00 =		TC12.13 EPL CONTROL-0
XA324	THI	B6 13B	(26)	01	TPR40A 27 13B	
XA350	TQ2	C3 16B	TPSCAA	00 =		PAR REG SELECT CONSTANT
XA350	TQ2	C3 14B	(33)	01	TMO1BQ TS11BQ 29 14B 31 15B	
XA133	TQ2	F2 34A	TPSTEA	00 =		POST E BIT IF INPUT PAR ERRO
XA133	TQ2	F2 36A	(72)	01	TYPEBQ TYWPCO 71 36A 73 36B	
XA133	TQ2	F3 35A	TPSTFA	00 =		POST F BIT IF BL=0
XA133	TQ2	F3 34B	(69)	01	TBLZAO TYWPCO 65 34B 74 35B	
XA133	TQ2	F4 39A	TPSTIA	00 =		POST I BIT IF INDICATOR
XA133	TQ2	F4 37A	(80)	01	TYWPCO TYNDBQ 76 37A 78 38A	
XA141	TQ2	E2 28A	TPS10A	00 =		BYTE COUNT 1 SET INPUT
XA141	TQ2	E2 29A	(60)	01	TPS100 SPT012 62 29A 64 30A	
XA137	TT3	E3 33B	TPS100	00 =		BYTE COUNT 1 SET INPUT-0
XA137	TT3	E3 30B	(63)	01	TPS11A TPS13A TPS12A 57 30B 59 31B 61 32B	
XA142	TQ2	D3 24B	TPS11A	00 =		STATE 7, T2
XA142	TQ2	D3 22B	(45)	01	YS07BQ YXC120 41 22B 43 23B	
XA351	TT3	F3 39A	TPS12A	00 =		QFR + DEV +800TSTRAP 2 +S24
XA351	TT3	F3 35A	(80)	01	YIAZAO YDEOFO TS24BQ 69 35A 76 37A 78 38A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TPS13A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM REGIS. NATOR	=	FACTOR	COMMENT
			AND	OR					
XA142	TQ2	E1	31A		TPS13A	00	=		I3-STATE 23 SHIFT PULSE
XA142	TQ2	E1	32A		(66)	01		TI23X0 TI30BQ 68 32A 70 33A	
XA142	TQ2	D4	27B		TPS20A	00	=		BYTE COUNT 2 SET INPUT=A
XA142	TQ2	D4	25B		(51)	01		SPI012 TPS200 47 25B 49 26B	
XA141	TQ2	E3	30B		TPS200	00	=		BYTE COUNT 2 SET INPUT=0
XA141	TQ2	E3	28B		(57)	01		TPS21A TI212A 53 28B 55 29B	
XA327	TT3	F2	35B		TPS21A	00	=		STATE 7, I2, WORD MODE
XA327	TT3	F2	34B		(74)	01		TC11BP TS07BQ TXC120 65 34B 71 36A 72 34A	
XA414	TT3	D2	23B		TPUSAA	00	=		START CONTROL REG. CLK.
XA414	TT3	D2	22B		(43)	01		TFI05A TSS1AA TK01BP 41 22B 46 21A 48 22A	(UPPER CPU START LOGIC)
XA131	TQ2	A1	05A		TP000A	00	=		PAR NPI BIT 00 POST
XA131	TQ2	A1	06A		(06)	01		TPN100 TPN010 08 06A 10 07A	
XA341	TQ2	B1	12A		TP0010	00	=		PARITY 0-1 EVEN
XA341	TQ2	B1	13A		(22)	01		TPE10A TPE01A 24 13A 26 14A	
XA341	TQ2	C1	18A		TP0030	00	=		PARITY 0-3 ODD
XA341	TQ2	C1	19A		(38)	01		TPE30A TPE03A 40 19A 42 20A	
XA426	THI	F3	34B		TP007A	00	=		
XA426	THI	F3	35B		(70)	01		TP0070 69 35B	
XA341	TQ2	C3	16B		TP0070	00	=		PARITY 0-7 ODD
XA341	TQ2	C3	14B		(33)	01		TPE70A TPE07A 29 14B 31 15B	
XA131	TQ2	A2	02B		TP010A	00	=		PAR NPI BIT 01 POST
XA131	TQ2	A2	04A		(01)	01		TPN020 TPN100 04 04A 05 03B	
XA131	TQ2	A3	04B		TP011A	00	=		PAR EPI BIT 01 POST
XA131	TQ2	A3	02A		(09)	01		TPR020 TPR100 03 02A 07 03A	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TP020A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA131	TQ2	A4	07B	TP020A	00	=		PAR NPL BIT 02 POST
XA131	TQ2	A4	05B	(15)	01		TPN100 TPN030 11 05B 13 06B	
XA131	TQ2	B1	12A	TP021A	00	=		PAR EPL BIT 02 POST
XA131	TQ2	B1	13A	(22)	01		TPR030 TPR100 24 13A 26 14A	
XA341	TQ2	B2	09A	TP0230	00	=		EVEN PARITY 2-3
XA341	TQ2	B2	10A	(14)	01		TPE32A TPE23A 18 10A 20 11A	
XA131	TQ2	B2	09A	TP030A	00	=		PAR NPL BIT 03 POST
XA131	TQ2	B2	10A	(14)	01		TPN040 TPN100 18 10A 20 11A	
XA131	TQ2	B3	10B	TP031A	00	=		PAR EPL BIT 03 POST
XA131	TQ2	B3	08B	(21)	01		TPR100 TPR040 17 08B 19 09B	
XA131	TQ2	B4	13B	TP040A	00	=		PAR NPL BIT 04 POST
XA131	TQ2	B4	11B	(27)	01		TPN010 TPN200 23 11B 25 12B	
XA131	TQ2	C1	18A	TP041A	00	=		PAR EPL BIT 04 POST
XA131	TQ2	C1	19A	(38)	01		TPR010 TPR200 40 19A 42 20A	
XA341	TQ2	B3	10B	TP0450	00	=		PARITY 4-5 EVEN
XA341	TQ2	B3	08B	(21)	01		TPE54A TPE45A 17 08B 19 09B	
XA341	TQ2	C2	15A	TP0470	00	=		PARITY 4-7 ODD
XA341	TQ2	C2	16A	(30)	01		TPE47A TPE74A 34 16A 36 17A	
XA131	TQ2	C2	15A	TP050A	00	=		PAR NPL BIT 05 POST
XA131	TQ2	C2	16A	(30)	01		TPN020 TPN200 34 16A 36 17A	
XA131	TQ2	C3	16B	TP051A	00	=		PAR EPL BIT 05 POST
XA131	TQ2	C3	14B	(33)	01		TPR200 TPR020 29 14B 31 15B	
XA131	TQ2	C4	19B	TP060A	00	=		PAR NPL BIT 06 POST
XA131	TQ2	C4	17B	(39)	01		TPN030 TPN200 35 17B 37 18B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TP061A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
XA131	TQ2	D1	24A	TP061A	00	=		PAR EPI BIT 06 POST
XA131	TQ2	D1	25A	(52)	01		TPR030 TPR200 54 25A 56 26A	
XA341	TQ2	B4	13B	TP0670	00	=		PARITY 6-7 EVEN
XA341	TQ2	B4	11B	(27)	01		TPE76A TPE67A 23 11B 25 12B	
XA131	TQ2	D2	21A	TP070A	00	=		PAR NPL BIT 07 POST
XA131	TQ2	D2	22A	(46)	01		TPN040 TPN200 48 22A 50 23A	
XA131	TQ2	D3	24B	TP071A	00	=		PAR EPI BIT 07 POST
XA131	TQ2	D3	22B	(45)	01		TPR040 TPR200 41 22B 43 23B	
XA131	TQ2	D4	27B	TP080A	00	=		PAR NPL BIT 08 POST
XA131	TQ2	D4	25B	(51)	01		TPN010 TPN300 47 25B 49 26B	
XA131	TQ2	E1	31A	TP081A	00	=		PAR EPI BIT 08 POST
XA131	TQ2	E1	32A	(66)	01		TPR300 TPR010 68 32A 70 33A	
XA131	TQ2	E2	28A	TP090A	00	=		PAR NPL BIT 09 POST
XA131	TQ2	E2	29A	(60)	01		TPN300 TPN020 62 29A 64 30A	
XA131	TQ2	E3	30B	TP091A	00	=		PAR EPI BIT 09 POST
XA131	TQ2	E3	28B	(57)	01		TPR020 TPR300 53 28B 55 29B	
XA131	TQ2	E4	33B	TP100A	00	=		PAR NPL BIT 10 POST
XA131	TQ2	E4	31B	(63)	01		TPN030 TPN300 59 31B 61 32B	
XA131	TQ2	F1	37B	TP101A	00	=		PAR EPI BIT 10 POST
XA131	TQ2	F1	38B	(75)	01		TPR300 TPR030 77 38B 79 39B	
XA131	TQ2	F2	34A	TP110A	00	=		PAR NPL BIT 11 POST
XA131	TQ2	F2	36A	(72)	01		TPN300 TPN040 71 36A 73 36B	
XA131	TQ2	F3	35A	TP111A	00	=		PAR EPI BIT 11 POST
XA131	TQ2	F3	34B	(69)	01		TPR040 TPR300 65 34B 74 35B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TP120A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 262

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA131	TQ2	F4	39A	TP120A	00	=		PAR NPL BIT 12 POST
XA131	TQ2	F4	37A	(80)	01		YPN010 YPN400 76 37A 78 38A	
XA132	TQ2	A1	05A	TP121A	00	=		PAR EPL BIT 12 POST
XA132	TQ2	A1	06A	(06)	01		YPR010 YPR400 08 06A 10 07A	
XA132	TQ2	A2	02B	TP130A	00	=		PAR NPL BIT 13 POST
XA132	TQ2	A2	04A	(01)	01		YPN020 YPN400 04 04A 05 03B	
XA132	TQ2	A3	04B	TP131A	00	=		PAR EPL BIT 13 POST
XA132	TQ2	A3	02A	(09)	01		YPR400 YPR020 03 02A 07 03A	
XA132	TQ2	A4	07B	TP140A	00	=		PAR NPL BIT 14 POST
XA132	TQ2	A4	05B	(15)	01		YPN400 YPN030 11 05B 13 06B	
XA132	TQ2	B1	12A	TP141A	00	=		PAR EPL BIT 14 POST
XA132	TQ2	B1	13A	(22)	01		YPR030 YPR400 24 13A 26 14A	
XA132	TQ2	B2	09A	TP150A	00	=		PAR NPL BIT 15 POST
XA132	TQ2	B2	10A	(14)	01		YPN040 YPN400 18 10A 20 11A	
XA132	TQ2	B3	10B	TP151A	00	=		PAR EPL BIT 15 POST
XA132	TQ2	B3	08B	(21)	01		YPR400 YPR040 17 08B 19 09B	
XA309	TT3	D1	23A	TQBD0A	00	=		Q BIT POST 00-A
XA309	TT3	D1	24A	(50)	01		TC21BP TC22BP TC23BP 52 24A 54 25A 56 26A	
XA213	THI	E6	32B	TQBD00	00	=		Q BIT POST PARTIAL 00-0
XA213	THI	E6	33B	(68)	01		TQBD0A 65 33B	
XA309	TT3	D2	23B	TQBD1A	00	=		Q BIT POST 01-A
XA309	TT3	D2	22B	(43)	01		TC23BQ TC21BP TC22BP 41 22B 46 21A 48 22A	
XA213	THI	F1	38B	TQBD10	00	=		Q BIT POST PARTIAL 01-0
XA213	THI	F1	39B	(80)	01		TQBD1A 79 39B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TQBD2A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG. FACTOR	FACTOR	COMMENT
XA309	TT3	D3	27B	TQBD2A	00	=		Q BIT POST 02-A
XA309	TT3	D3	24B	(51)	01		TC21BP TC23BP TC22BQ 45 24B 47 25B 49 26B	
XA213	THI	F2	36B	TQBD20	00	=		Q BIT POST PARTIAL 02-0
XA213	THI	F2	37B	(71)	01		TQBD2A 73 37B	
XA309	TT3	E1	30A	TQBD3A	00	=		Q BIT POST 03-A
XA309	TT3	E1	31A	(64)	01		TC23BQ TC22BQ TC21BP 66 31A 68 32A 70 33A	
XA213	THI	F3	34B	TQBD30	00	=		Q BIT POST PARTIAL 03-0
XA213	THI	F3	35B	(70)	01		TQBD3A 69 35B	
XA315	TT3	F2	35B	TQBD4A	00	=		Q BIT POST 04-A
XA315	TT3	F2	34B	(74)	01		TC21BQ TC22BP TC23BP 65 34B 71 36A 72 34A	
XA213	THI	F4	34A	TQBD40	00	=		Q BIT POST PARTIAL 04-0
XA213	THI	F4	35A	(72)	01		TQBD4A 74 35A	
XA315	TT3	F3	39A	TQBD5A	00	=		Q BIT POST 05-A
XA315	TT3	F3	35A	(80)	01		TC22BP TC23BQ TC21BQ 69 35A 76 37A 78 38A	
XA213	THI	F5	36A	TQBD50	00	=		Q BIT POST PARTIAL 05-0
XA213	THI	F5	37A	(78)	01		TQBD5A 76 37A	
XA314	TQ2	F1	37B	TQBD6A	00	=		Q BIT POST 06-A
XA314	TQ2	F1	38B	(75)	01		TC23BP TU2010 77 38B 79 39B	
XA213	THI	F6	38A	TQBD60	00	=		Q BIT POST PARTIAL 06-0
XA213	THI	F6	39A	(77)	01		TQBD6A 75 39A	
XA314	TQ2	F2	34A	TQBD7A	00	=		Q BIT POST 07-A
XA314	TQ2	F2	36A	(72)	01		TU2010 TC23BQ 71 36A 73 36B	
XA310	THI	F6	38A	TQBD70	00	=		Q BIT POST PARTIAL 07-0
XA310	THI	F6	39A	(77)	01		TQBD7A 75 39A	

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 UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
 UNIT ASSEMBLY NO. 149019 REV G INDEX TQBPAA
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA134	TT3	B2	09B	TQBPAA	00	=		Q REG BIT POST CONTROL-A
XA134	TT3	B2	09A	(19)	01		TKAACB TC0160 TS10BQ 14 09A 17 08B 18 10A	
XA135	THI	A5	04B	TQBPA0	00	=		Q REG BIT POST CONTROL-0
XA135	THI	A5	05B	(07)	01		TQBPA0 09 05B	
XA134	TT3	A1	04A	TQBY1A	00	=		Q REG BYTE 1.CONTROL-A
XA134	TT3	A1	05A	(04)	01		TC208P TC198P TQBPAA 06 05A 08 06A 10 07A	
XA135	THI	A1	06A	TQBY10	00	=		Q REG BYTE 1.CONTROL-0
XA135	THI	A1	07A	(13)	01		TQBY1A 11 07A	
XA134	TT3	A2	03A	TQBY2A	00	=		Q REG BYTE 2.CONTROL-A
XA134	TT3	A2	02B	(07)	01		TC208Q TC198P TQBPAA 01 02B 03 02A 05 03B	
XA135	THI	A2	04A	TQBY20	00	=		Q REG BYTE 2.CONTROL-0
XA135	THI	A2	05A	(08)	01		TQBY2A 06 05A	
XA134	TT3	A3	07B	TQBY3A	00	=		Q REG BYTE 3.CONTROL-A
XA134	TT3	A3	04B	(15)	01		TQBPAA TC198Q TC208P 09 04B 11 05B 13 06B	
XA135	THI	A3	03A	TQBY30	00	=		Q REG BYTE 3.CONTROL-0
XA135	THI	A3	02A	(03)	01		TQBY3A 04 02A	
XA134	TT3	B1	11A	TQBY4A	00	=		Q REG BYTE 4.CONTROL-A
XA134	TT3	B1	12A	(20)	01		TQBPAA TC208Q TC198Q 22 12A 24 13A 26 14A	
XA135	THI	A4	02B	TQBY40	00	=		Q REG BYTE 4.CONTROL-0
XA135	THI	A4	03B	(01)	01		TQBY4A 05 03B	
XA328	TQ2	E2	28A	TQES0A	00	=		EPL Q SEL BIT 20
XA328	TQ2	E2	29A	(60)	01		TC10BQ TC08C0 62 29A 64 30A	
XA328	TQ2	E3	30B	TQES1A	00	=		EPL Q SEL BIT 21
XA328	TQ2	E3	28B	(57)	01		TC11BQ TC08C0 53 28B 55 29B	

DRAWING NUMBER
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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TQES2A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA328	TQ2	F2	34A	TQES2A	00	=		EPL Q SEL BIT 22
XA328	TQ2	F2	36A	(72)	01		TC08C0 TC128Q 71 36A 73 36B	
XA328	TQ2	F3	35A	TQES3A	00	=		EPL Q SEL BIT 23
XA328	TQ2	F3	34B	(69)	01		TC138Q TC08C0 65 34B 74 35B	
XA332	TQ2	B1	12A	TQNS0A	00	=		NPL Q SEL BIT 20
XA332	TQ2	B1	13A	(22)	01		TC08CA TC02BQ 24 13A 26 14A	
XA332	TQ2	B2	09A	TQNS1A	00	=		NPL Q SEL BIT 21
XA332	TQ2	B2	10A	(14)	01		TC08CA TC03BQ 18 10A 20 11A	
XA332	TQ2	C1	18A	TQNS2A	00	=		NPL Q SEL BIT 22
XA332	TQ2	C1	19A	(38)	01		TC048Q TC08CA 40 19A 42 20A	
XA332	TQ2	C2	15A	TQNS3A	00	=		NPL Q SEL BIT 23
XA332	TQ2	C2	16A	(30)	01		TC08CA TC05BQ 34 16A 36 17A	
XA245	THI	E1	32A	TQRSAA	00	=		S9+S16+S18-A
XA245	THI	E1	33A	(66)	01		TQRSAO 64 33A	
XA351	TT3	D3	27B	TQRS AO	00	=		S9+S16+S18=0
XA351	TT3	D3	24B	(51)	01		TS098P TS168P TS188P 45 24B 47 25B 49 26B	
XA326	TQ2	C3	16B	TQRS00	00	=		Q SEL NPL + EPL BIT 20
XA326	TQ2	C3	14B	(33)	01		TQNS0A TQES0A 29 14B 31 15B	
XA326	TQ2	C4	19B	TQRS10	00	=		Q SEL NPL + EPL BIT 21
XA326	TQ2	C4	17B	(39)	01		TQNS1A TQES1A 35 17B 37 18B	
XA326	TQ2	E1	31A	TQRS20	00	=		Q SEL NPL + EPL BIT 22
XA326	TQ2	E1	32A	(66)	01		TQES2A TQNS2A 68 32A 70 33A	
XA326	TQ2	E2	28A	TQRS30	00	=		Q SEL NPL + EPL BIT 23
XA326	TQ2	E2	29A	(60)	01		TQES3A TQNS3A 62 29A 64 30A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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DRAWING NUMBER 149019-860
UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

LOGIC

UNIT ASSEMBLY NO. 149019
FILE IDENT T39BIUX2

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA350	TQ2	B4	13B	TQSC2A	00	=		Q REG SEL CONTROL-A
XA350	TQ2	B4	11B	(27)	01		TQSA0 TMO1BQ 23 11B 25 12B	
XA245	TH1	E6	32B	TQSC20	00	=		Q REG SEL CONTROL-0
XA245	TH1	E6	33B	(68)	01		TQSC2A 65 33B	
XA132	TQ2	B4	13B	TQ000A	00	=		POST BIT 00 IN Q REG
XA132	TQ2	B4	11B	(27)	01		TQBY10 TQBD00 23 11B 25 12B	
XA132	TQ2	C1	18A	TQ010A	00	=		POST BIT 01 IN Q REG
XA132	TQ2	C1	19A	(38)	01		TQBD10 TQBY10 40 19A 42 20A	
XA132	TQ2	C2	15A	TQ020A	00	=		POST BIT 02 IN Q REG
XA132	TQ2	C2	16A	(30)	01		TQBD20 TQBY10 34 16A 36 17A	
XA132	TQ2	C3	16B	TQ030A	00	=		POST BIT 03 IN Q REG
XA132	TQ2	C3	14B	(33)	01		TQBY10 TQBD30 29 14B 31 15B	
XA132	TQ2	C4	19B	TQ040A	00	=		POST BIT 04 IN Q REG
XA132	TQ2	C4	17B	(39)	01		TQBY10 TQBD40 35 17B 37 18B	
XA132	TQ2	D1	24A	TQ050A	00	=		POST BIT 05 IN Q REG
XA132	TQ2	D1	25A	(52)	01		TQBD50 TQBY10 54 25A 56 26A	
XA132	TQ2	D2	21A	TQ060A	00	=		POST BIT 06 IN Q REG
XA132	TQ2	D2	22A	(46)	01		TQBD60 TQBY10 48 22A 50 23A	
XA132	TQ2	D3	24B	TQ070A	00	=		POST BIT 07 IN Q REG
XA132	TQ2	D3	22B	(45)	01		TQBY10 TQBD70 41 22B 43 23B	
XA132	TQ2	D4	27B	TQ080A	00	=		POST BIT 08 IN Q REG
XA132	TQ2	D4	25B	(51)	01		TQBD00 TQBY20 47 25B 49 26B	
XA132	TQ2	E1	31A	TQ090A	00	=		POST BIT 09 IN Q REG
XA132	TQ2	E1	32A	(66)	01		TQBY20 TQBD10 68 32A 70 33A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TQ100A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	SERIAL FACTOR	FACTOR	COMMENT
			AND	OR					
XA132	TQ2	E2	28A		TQ100A	00	=		POST BIT 10 IN Q REG
XA132	TQ2	E2	29A		(60)	01		TQBY20 TQBD20 62 29A 64 30A	
XA132	TQ2	E3	30B		TQ110A	00	=		POST BIT 11 IN Q REG
XA132	TQ2	E3	28B		(57)	01		TQBD30 TQBY20 53 28B 55 29B	
XA132	TQ2	E4	33B		TQ120A	00	=		POST BIT 12 IN Q REG
XA132	TQ2	E4	31B		(63)	01		TQBD40 TQBY20 59 31B 61 32B	
XA132	TQ2	F1	37B		TQ130A	00	=		POST BIT 13 IN Q REG
XA132	TQ2	F1	38B		(75)	01		TQBD50 TQBY20 77 38B 79 39B	
XA132	TQ2	F2	34A		TQ140A	00	=		POST BIT 14 IN Q REG
XA132	TQ2	F2	36A		(72)	01		TQBY20 TQBD60 71 36A 73 36B	
XA132	TQ2	F3	35A		TQ150A	00	=		POST BIT 15 IN Q REG
XA132	TQ2	F3	34B		(69)	01		TQBD70 TQBY20 65 34B 74 35B	
XA132	TQ2	F4	39A		TQ160A	00	=		POST BIT 16 IN Q REG
XA132	TQ2	F4	37A		(80)	01		TQBD00 TQBY30 76 37A 78 38A	
XA133	TQ2	A1	05A		TQ170A	00	=		POST BIT 17 IN Q REG
XA133	TQ2	A1	06A		(06)	01		TQBD10 TQBY30 08 06A 10 07A	
XA133	TQ2	A2	02B		TQ180A	00	=		POST BIT 18 IN Q REG
XA133	TQ2	A2	04A		(01)	01		TQBD20 TQBY30 04 04A 05 03B	
XA133	TQ2	A3	04B		TQ190A	00	=		POST BIT 19 IN Q REG
XA133	TQ2	A3	02A		(09)	01		TQBY30 TQBD30 03 02A 07 03A	
XA133	TQ2	A4	07B		TQ200A	00	=		POST BIT 20 IN Q REG
XA133	TQ2	A4	05B		(15)	01		TQBY30 TQBD40 11 05B 13 06B	
XA133	TQ2	B1	12A		TQ210A	00	=		POST BIT 21 IN Q REG
XA133	TQ2	B1	13A		(22)	01		TQBD50 TQBY30 24 13A 26 14A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TQ220A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM. DESIGNATION	REMARKS	FACTOR	COMMENT
XA133	TQ2	B2	09A	TQ220A	00	=		POST BIT 22 IN Q REG
XA133	TQ2	B2	10A	(14)	01		TQBD60 TQBY30 18 10A 20 11A	
XA133	TQ2	B3	10B	TQ230A	00	=		POST BIT 23 IN Q REG
XA133	TQ2	B3	08B	(21)	01		TQBY30 TQBD70 17 08B 19 09B	
XA133	TQ2	B4	13B	TQ240A	00	=		POST BIT 24 IN Q REG
XA133	TQ2	B4	11B	(27)	01		TQBD00 TQBY40 23 11B 25 12B	
XA133	TQ2	C1	18A	TQ250A	00	=		POST BIT 25 IN Q REG
XA133	TQ2	C1	19A	(38)	01		TQBY40 TQBD10 40 19A 42 20A	
XA133	TQ2	C2	15A	TQ260A	00	=		POST BIT 26 IN Q REG
XA133	TQ2	C2	16A	(30)	01		TQBY40 TQBD20 34 16A 36 17A	
XA133	TQ2	C3	16B	TQ270A	00	=		POST BIT 27 IN Q REG
XA133	TQ2	C3	14B	(33)	01		TQBD30 TQBY40 29 14B 31 15B	
XA133	TQ2	C4	19B	TQ280A	00	=		POST BIT 28 IN Q REG
XA133	TQ2	C4	17B	(39)	01		TQBD40 TQBY40 35 17B 37 18B	
XA133	TQ2	D1	24A	TQ290A	00	=		POST BIT 29 IN Q REG
XA133	TQ2	D1	25A	(52)	01		TQBD50 TQBY40 54 25A 56 26A	
XA133	TQ2	D2	21A	TQ300A	00	=		POST BIT 30 IN Q REG
XA133	TQ2	D2	22A	(46)	01		TQBY40 TQBD60 48 22A 50 23A	
XA133	TQ2	D3	24B	TQ310A	00	=		POST BIT 31 IN Q REG
XA133	TQ2	D3	22B	(45)	01		TQBD70 TQBY40 41 22B 43 23B	
XA438	TQ2	A2	02B	TRBMOA	00	=		SET REQ BURST MODE CHAN 1
XA438	TQ2	A2	04A	(01)	01		TSOBR0 TCSXMA 04 04A 05 03B	
XA438	TQ2	A3	04B	TRBMAA	00	=		SET REQ BURST MODE CHAN 0
XA438	TQ2	A3	02A	(09)	01		TCSIA0 TSOBR0 03 02A 07 03A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TRBM2A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA438	TQ2	A4	07B		TRBM2A	00	=		SET REQ BURST MODE CHAN 2
XA438	TQ2	A4	05B		(15)	01		TCS2A0 TSOBRO 11 05B 13 06B	
XA438	TQ2	B1	12A		TRBM3A	00	=		SET REQ BURST MODE CHAN 3
XA438	TQ2	B1	13A		(22)	01		TSOBRO TCS3A0 24 13A 26 14A	
XA438	TQ2	B2	09A		TRBM4A	00	=		SET REQ BURST MODE CHAN 4
XA438	TQ2	B2	10A		(14)	01		TSOBRO TCS4A0 18 10A 20 11A	
XA438	TQ2	B3	10B		TRBM5A	00	=		SET REQ BURST MODE CHAN 5
XA438	TQ2	B3	08B		(21)	01		TSOBRO TCS5A0 17 08B 19 09B	
XA438	TQ2	B4	13B		TRBM6A	00	=		SET REQ BURST MODE CHAN 6
XA438	TQ2	B4	11B		(27)	01		TCS6A0 TSOBRO 23 11B 25 12B	
XA431	TQ2	E1	31A		TRBM7A	00	=		SET REQ BURST MODE CHAN 7
XA431	TQ2	E1	32A		(66)	01		TCS7A0 TSOBRO 68 32A 70 33A	
XA440	TQ2	A1	05A		TRCCCA	00	=		
XA440	TQ2	A1	06A		(06)	01		TS00A0 RRQST0 08 06A 10 07A	
XA308	TD4	D2	24B		TRCMRO	00	=		
XA308	TD4	D2	23B		(45)	01		RTCT0A TK150A TIOIHA JBSTAD4 43 23B 46 21A 48 22A 50 23A	
XA136	TD4	E2	30B		TRCPUA	00	=		DSC-C=1,2,13
XA136	TD4	E2	29B		(57)	01		SPI011 TPEDMP TS00A0 TRCPU0 55 29B 60 28A 62 29A 64 30A	
XA122	TT3	C1	17A		TRCPU0	00	=		CPU REQ
XA122	TT3	C1	18A		(36)	01		TOFRAA TITRAA TDECAA 38 18A 40 19A 42 20A	
XA206	TT3	F3	39A		TRCR1A	00	=		
XA206	TT3	F3	35A		(80)	01		TS1T30 TINTADX4 SPI013 69 35A 76 37A 78 38A	
XA415	TQ2	A4	07B		TRCR2A	00	=		CLR TR00 BOOTSTRAPE CH10*
XA415	TQ2	A4	05B		(15)	01		TS1T30 TINTADX4 11 05B 13 06B	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM REFERENCE	DEFINITION	FACTOR	COMMENT
XA415	TQ2	E1	31A	TRC00A	00	=		
XA415	TQ2	E1	32A	(66)	01		TBS020 WKB10A 68 32A 70 33A	CLR TR00 BST CH10*
XA415	TQ2	E2	28A	TRC01A	00	=		
XA415	TQ2	E2	29A	(60)	01		TBS020 WKB11A 62 29A 64 30A	CLR TR01 BST CH11*
XA415	TQ2	E3	30B	TRC02A	00	=		
XA415	TQ2	E3	28B	(57)	01		TBS020 WKB12A 53 28B 55 29B	CLR TR02 BST CH12*
XA415	TQ2	E4	33B	TRC03A	00	=		
XA415	TQ2	E4	31B	(63)	01		TBS020 WKB13A 59 31B 61 32B	CLR TR03 BST CH13*
XA415	TQ2	F1	37B	TRC04A	00	=		
XA415	TQ2	F1	38B	(75)	01		TBS020 WKB14A 77 38B 79 39B	CLR TR04 BST CH14*
XA415	TQ2	F2	34A	TRC05A	00	=		
XA415	TQ2	F2	36A	(72)	01		TBS020 WKB15A 71 36A 73 36B	CLR TR05 BST CH15*
XA415	TQ2	F3	35A	TRC06A	00	=		
XA415	TQ2	F3	34B	(69)	01		TBS020 WKB16A 65 34B 74 35B	CLR TR06 BST CH16*
XA415	TQ2	F4	39A	TRC07A	00	=		
XA415	TQ2	F4	37A	(80)	01		TBS020 WKB17A 76 37A 78 38A	CLR TR07 BST CH17*
XA219	TQ2	F3	35A	TRC160	00	=		
XA219	TQ2	F3	34B	(69)	01		TRTCOA YC168P 65 34B 74 35B	REAL TIME CLK 0 + C BIT
XA304	TQ2	A3	04B	TRC170	00	=		
XA304	TQ2	A3	02A	(09)	01		TRTCOA YD168P 03 02A 07 03A	
XA431	TQ2	E2	28A	TRDA0A	00	=		
XA431	TQ2	E2	29A	(60)	01		YD10A0 YS02A0 62 29A 64 30A	REQ. DEVICE 0
XA431	TQ2	E3	30B	TRDA1A	00	=		
XA431	TQ2	E3	28B	(57)	01		YS02A0 YD11A0 53 28B 55 29B	REQ. DEVICE 1

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TRDA2A
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CONNECTOR	CIRCUIT IDENT	GROUP	TEST POINTS		EQUATION	TERM. DESIGNATOR	FACTOR	COMMENT
			AND	OR				
XA431	TQ2	E4	33B		TRDA2A	00 =		REQ. DEVICE 2
XA431	TQ2	E4	31B		(63)	01	TDI2A0 TS02A0 59 31B 61 32B	
XA431	TQ2	F1	37B		TRDA3A	00 =		REQ. DEVICE 3
XA431	TQ2	F1	38B		(75)	01	TS02A0 TDI3A0 77 38B 79 39B	
XA431	TQ2	F2	34A		TRDA4A	00 =		REQ. DEVICE 4
XA431	TQ2	F2	36A		(72)	01	TDI4A0 TS02A0 71 36A 73 36B	
XA431	TQ2	F3	35A		TRDA5A	00 =		REQ. DEVICE 5
XA431	TQ2	F3	34B		(69)	01	TS02A0 TDI5A0 65 34B 74 35B	
XA431	TQ2	F4	39A		TRDA6A	00 =		REQ. DEVICE 6
XA431	TQ2	F4	37A		(80)	01	TS02A0 TDI6A0 76 37A 78 38A	
XA438	TQ2	E1	31A		TRDA7A	00 =		REQ. DEVICE 7
XA438	TQ2	E1	32A		(66)	01	TDI7A0 TS02A0 68 32A 70 33A	
XA418	DCF	A7	02A		TRDYADX4	00 =		EXT READY
XA418	DCF	A7	05A		(01)	01	TER1AA 06 05A	
XA418	DCF	A8	03A		TRDYAOX	00 =		
XA418	DCF	A8	04A		(03)	01	TC12BQ 04 04A	
XA205	THI	E3	28A		TREQBA	00 =		OR'D REQ REG
XA205	THI	E3	29A		(60)	01	TREQB0 62 29A	
XA435	TD4	D1	25B		TREQB0	00 =		OR'D REQ REG
XA435	TD4	D1	26B		(47)	01	TRO9BR TRGP3A TRGP1A TRGP2A 49 26B 52 24A 54 25A 56 26A	
XA439	THI	A3	03A		TRGP1A	00 =		REQ GRP 1-A
XA439	THI	A3	02A		(03)	01	TRGP10 04 02A	
XA435	TD4	A2	04B		TRGP10	00 =		REQ GRP 1-0
XA435	TD4	A2	02B		(09)	01	TRO0BR TRO1BR TRO3BR TRO2BR 01 02B 04 04A 05 03B 07 03A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TRGP2A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA439	THI	A4	02B	TRGP2A	00	=		REQ GRP 2-A
XA439	THI	A4	03B	(01)	01		TRGP20 05 03B	
XA436	TT3	A1	04A	TRGP20	00	=		REQ GRP 2-0
XA436	TT3	A1	05A	(04)	01		TR05BR TR04BR TR06BR 06 05A 08 06A 10 07A	
XA439	THI	A5	04B	TRGP3A	00	=		REQ GRP 3-A
XA439	THI	A5	05B	(07)	01		TRGP30 09 05B	
XA438	TQ2	E2	28A	TRGP30	00	=		REQ GRP 3-0
XA438	TQ2	E2	29A	(60)	01		TR07BR TR08BR 62 29A 64 30A	
XA115	TQ2	E1	31A	TRQBRO	00	=		INF + BURST
XA115	TQ2	E1	32A	(66)	01		TRBSUA TRQBA 68 32A 70 33A	
XA327	TT3	C1	17A	TRQ0AA	00	=		REQ 01 STATE 0
XA327	TT3	C1	18A	(36)	01		TS00AO TRQ0AO WR00LA 38 18A 40 19A 42 20A	
XA432	TS8	E1	31B	TRQ0AO	00	=		REQ 0
XA432	TS8	E1	29B	(59)	01		XAIRCD4 XBIRCD4 XCIRCD4 XDIRCD4 XEIRCD4 XFIRCD4 XGIRCD4 XHIRCD4 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	REQUEST 0 IOM
XA414	TT3	C2	15B	TRQ1AA	00	=		REQ 1 STATE 0
XA414	TT3	C2	14B	(31)	01		TS00AO TRQ1AO WR10LA 29 14B 30 15A 34 16A	REQUEST 0 IOM
XA418	DCF	C3	30B	TRQ1ADX4	00	=		
XA418	DCF	C3	29A	(55)	01		TMO0BQ 52 29A	
XA415	TQ2	C1	18A	TRQ1AO	00	=		REQ 1
XA415	TQ2	C1	19A	(38)	01		TRQ1XA TRQ1BB4 40 19A 42 20A	REQ 1
XA418	DCF	C4	29B	TRQ1AOX	00	=		EXT REQ 1 REC
XA418	DCF	C4	28B	(56)	01		TEGNDX 51 28B	
XA522	DCF	C1	25B	TRQ1BB4	00	=		IOE REQ TO IOC
XA522	DCF	C1	()	()	01		XAREADX 46 25B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA434	TT3	B2	09B	TRQ4AA	00 =		REQ 4 STATE 0
XA434	TT3	B2	09A	(19)	01	YS00A0 TRQ4A0 WR40LA 14 09A 17 08B 18 10A	*
XA420	DCF	C5	31B	TRQ4ADX4	00 =		
XA420	DCF	C5	29A	(60)	01	YEGNDA 52 29A	
XA415	TQ2	C4	19B	TRQ4A0	00 =		REQ 4
XA415	TQ2	C4	17B	(39)	01	TRQ4XA TRQ48B4 35 17B 37 18B	REQ 4
XA420	DCF	C6	31A	TRQ4A0X	00 =		EXT REQ 4 REC
XA420	DCF	C6	30A	(57)	01	YDGNDA 54 30A	
				TRQ48B4	00 =		
XA535	DCF	C1	25B	()	01	XCREADX 46 25B	IOE REQ TO IOC
XA426	THI	C4	14B	TRQ4XA	00 =		
XA426	THI	C4	15B	(30)	01	TRQ4A0X 29 15B	
XA434	TT3	B3	13B	TRQ5AA	00 =		REQ 5 STATE 0
XA434	TT3	B3	10B	(27)	01	YS00A0 TRQ5A0 WR50LA 21 10B 23 11B 25 12B	*
XA418	DCF	D3	37B	TRQ5ADX4	00 =		
XA418	DCF	D3	36A	(78)	01	YMO4BP 72 36A	
XA415	TQ2	D1	24A	TRQ5A0	00 =		REQ 5
XA415	TQ2	D1	25A	(52)	01	TRQ5XA TRQ58B4 54 25A 56 26A	REQ 5
XA418	DCF	D4	36B	TRQ5A0X	00 =		EXT REQ 5 REC
XA418	DCF	D4	35B	(75)	01	YEGNDA 73 35B	
				TRQ58B4	00 =		
XA541	DCF	C1	25B	()	01	XDREADX 46 25B	IOE REQ TO IOC
XA426	THI	C5	16B	TRQ5XA	00 =		
XA426	THI	C5	17B	(31)	01	TRQ5A0X 33 17B	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERN	TEST POINTS AND/OR	FACTOR	COMMENT
XA436	TT3	A2	03A	TRQ6AA	00 =			REQ 6 STATE 0
XA436	TT3	A2	02B	(07)	01		TRQ6A0 TS00A0 WR 60LA 01 02B 03 02A 05 03B	*
XA418	DCF	D5	38B	TRQ6ADX4	00 =			
XA418	DCF	D5	36A	(80)	01		TM04BP 72 36A	
XA415	TQ2	D2	21A	TRQ6A0	00 =			REQ 6
XA415	TQ2	D2	22A	(46)	01		TRQ6XA TRQ6BB4 48 22A 50 23A	REQ 6
XA418	DCF	D6	38A	TRQ6A0X	00 =			EXT REQ 6 REC
XA418	DCF	D6	37A	(76)	01		TEGNDA 74 37A	
				TRQ6BB4	00 =			
XA548	DCF	C1	25B	()	01		XEREADX 46 25B	IOE REQ TO IOC
XA426	THI	C6	18B	TRQ6XA	00 =			
XA426	THI	C6	19B	(42)	01		TRQ6A0X 39 19B	
XA445	TT3	C3	19B	TRQ7AA	00 =			REQ 7 STATE 0
XA445	TT3	C3	16B	(39)	01		TRQ7A0 TS00A0 WR 70LA 33 16B 35 17B 37 18B	*
XA418	DCF	D7	33A	TRQ7ADX4	00 =			
XA418	DCF	D7	36A	(61)	01		TM04BP 72 36A	
XA415	TQ2	D3	24B	TRQ7A0	00 =			REQ 7
XA415	TQ2	D3	22B	(45)	01		TRQ7XA SPI032 41 22B 43 23B	REQ 7
XA418	DCF	D8	34A	TRQ7A0X	00 =			EXT REQ 7 REC
XA418	DCF	D8	35A	(68)	01		TEGNDA 70 35A	
XA426	THI	D1	25A	TRQ7XA	00 =			
XA426	THI	D1	26A	(54)	01		TRQ7A0X 52 26A	
XA115	TQ2	E2	28A	TRT00A	00 =			REAL TIME CLOCK
XA115	TQ2	E2	29A	(60)	01		TDA3B0 TCSCCO 62 29A 64 30A	REQ 7

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA205	THI	E4	28B	TRTC00	00	=		REAL TIME CLOCK ZERO -0
XA205	THI	E4	29B	(56)	01		TRTC0A 55 29B	
XA343	TT3	C2	15B	TROWAA	00	=		
XA343	TT3	C2	14B	(31)	01		TRO1BR TRO0BS TRO2BR 29 14B 30 15A 34 16A	
XA437	TD4	A1	05B	TRO0BR	00	=		REQ REG 1ST PRIORITY RESET-0
XA437	TD4	A1	05A	(11)	01		TRC00A TRO0BS TRCRIA TIOIHA 06 05A 08 06A 10 07A 13 06B	
XA435	TD4	A1	05B	TRO0BS	00	=		REQ REG 1ST PRIORITY SET-0
XA435	TD4	A1	05A	(11)	01		TRDA0A TRQ1AA TRO0BR TRBM1A 06 05A 08 06A 10 07A 13 06B	
XA413	TLD	A1	05A	TRO0SD	00	=		JDB10B4 BUSS TO DATA
XA413	TLD	A1	05A	(08)	01		TRO0BS TTSBMO 08 06A 10 07A	BUSS FOR CTS DISPLAY
XA437	TD4	A2	04B	TRO1BR	00	=		REQ REG 2ND PRIORITY RESET-0
XA437	TD4	A2	02B	(09)	01		TRCRIA TIOIHA TRO1BS TRC01A 01 02B 04 04A 05 03B 07 03A	
XA434	TT3	A1	04A	TRO1BS	00	=		REQ REG 2ND PRIORITY SET-0
XA434	TT3	A1	05A	(04)	01		TRDA1A TRO1BR TRCCCA 06 05A 08 06A 10 07A	
XA413	TLD	A2	02B	TRO1SD	00	=		JDB11B4 BUSS TO DATA
XA413	TLD	A2	04A	(01)	01		TRO1BS TTSBMO 04 04A 05 03B	BUSS FOR CTS DISPLAY
XA412	TD4	A1	05B	TRO2BR	00	=		REQ REG 3RD PRIORITY RESET-0
XA412	TD4	A1	05A	(11)	01		TRO2BS TRCRIA TIOIHA TRC02A 06 05A 08 06A 10 07A 13 06B	
XA434	TT3	A2	03A	TRO2BS	00	=		REQ REG 3RD PRIORITY SET-0
XA434	TT3	A2	02B	(07)	01		TRDA2A TRO2BR TRCPUA 01 02B 03 02A 05 03B	
XA413	TLD	A3	04B	TRO2SD	00	=		JDB12B4 BUSS TO DATA
XA413	TLD	A3	02A	(09)	01		TRO2BS TTSBMO 03 02A 07 03A	BUSS FOR CTS DISPLAY
XA412	TD4	A2	04B	TRO3BR	00	=		REQ REG 4TH PRIORITY RESET-0
XA412	TD4	A2	02B	(09)	01		TIOIHA TRCRIA TRO3BS TRC03A 01 02B 04 04A 05 03B 07 03A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA435	TD4	B1	11B	TR03BS	00	=		REQ REG 4TH PRIORITY SET-0
XA435	TD4	B1	12A	(23)	01		TRDA3A TRQ2AA TR03BR TRBM2A 22 12A 24 13A 25 12B 26 14A	
XA413	TLD	A4	07B	TR03SD	00	=		JDB1384 BUSS TO DATA
XA413	TLD	A4	05B	(15)	01		TR03BS TTSBMO 11 05B 13 06B	BUSS FOR CTS DISPLAY
XA412	TD4	B1	11B	TR04BR	00	=		REQ REG 5TH PRIORITY RESET-0
XA412	TD4	B1	12A	(23)	01		TR04BS TRCR1A TIOIHA TRC04A 22 12A 24 13A 25 12B 26 14A	
XA435	TD4	B2	10B	TR04BS	00	=		REQ REG 5TH PRIORITY SET-0
XA435	TD4	B2	09A	(21)	01		TRBM3A TRDA4A TR04BR TRQ3AA 14 09A 18 10A 19 09B 20 11A	
XA413	TLD	B1	12A	TR04SD	00	=		JDB1484 BUSS TO DATA
XA413	TLD	B1	13A	(22)	01		TR04BS TTSBMO 24 13A 26 14A	BUSS FOR CTS DISPLAY
XA412	TD4	B2	10B	TR05BR	00	=		REQ REG 6TH PRIORITY RESET-0
XA412	TD4	B2	09A	(21)	01		TIOIHA TRCR1A TR05BS TRC05A 14 09A 18 10A 19 09B 20 11A	
XA435	TD4	C1	17B	TR05BS	00	=		REQ REG 6TH PRIORITY SET-0
XA435	TD4	C1	18B	(35)	01		TRDA5A TRQ4AA TR05BR TRBM4A 37 18B 38 18A 40 19A 42 20A	
XA413	TLD	B2	09A	TR05SD	00	=		JDB1584 BUSS TO DATA
XA413	TLD	B2	10A	(14)	01		TR05BS TTSBMO 18 10A 20 11A	BUSS FOR CTS DISPLAY
XA412	TD4	C1	17B	TR06BR	00	=		REQ REG 7TH PRIORITY RESET-0
XA412	TD4	C1	18B	(35)	01		TR06BS TRCR1A TIOIHA TRC06A 37 18B 38 18A 40 19A 42 20A	
XA435	TD4	C2	16B	TR06BS	00	=		REQ REG 7TH PRIORITY SET-0
XA435	TD4	C2	15A	(33)	01		TRDA6A TRQ5AA TR06BR TRBM5A 30 15A 31 15B 34 16A 36 17A	
XA413	TLD	B3	10B	TR06SD	00	=		JDB1684 BUSS TO DATA
XA413	TLD	B3	08B	(21)	01		TR06BS TTSBMO 17 08B 19 09B	BUSS FOR CTS DISPLAY
XA412	TD4	C2	16B	TR07BR	00	=		REQ REG 8TH PRIORITY RESET-0
XA412	TD4	C2	15A	(33)	01		TIOIHA TRCR1A TR07BS TRC07A 30 15A 31 15B 34 16A 36 17A	

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CPC TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG	FACTOR	COMMENT
XA437	TD4	B1	11B	TR07BS	00	=		
XA437	TD4	B1	12A	(23)	01		TRDA7A TRBM6A TRQ6AA TR07BR 22 12A 24 13A 25 12B 26 14A	REQ REG 8TH PRIORITY SET-0
XA413	TLD	B4	13B	TR07SD	00	=		
XA413	TLD	B4	11B	(27)	01		TR07BS TTSMO 23 11B 25 12B	JDB17B4 BUSS TO DATA BUSS FOR CTS DISPLAY
XA434	TT3	C1	17A	TR08BR	00	=		
XA434	TT3	C1	18A	(36)	01		TR08BS TRCRIA TTOSAA 38 18A 40 19A 42 20A	REQ REG 9TH PRIORITY RESET-0
XA436	TT3	C1	17A	TR08BS	00	=		
XA436	TT3	C1	18A	(36)	01		TR08BR TRQ0AA TRBMOA 38 18A 40 19A 42 20A	REQ REG 9TH PRIORITY SET-0
XA413	TLD	C1	18A	TR08SD	00	=		
XA413	TLD	C1	19A	(38)	01		TR08BS TTSDMO 40 19A 42 20A	JDB18B4 BUSS TO DATA BUSS FOR CTS DISPLAY
XA434	TT3	C2	15B	TR09BR	00	=		
XA434	TT3	C2	14B	(31)	01		TTOSAA TR09BS TRCRIA 29 14B 30 15A 34 16A	REQ REG 10TH PRIORITY RESET-
XA436	TT3	C2	15B	TR09BS	00	=		
XA436	TT3	C2	14B	(31)	01		TRBM7A TRQ7AA TR09BR 29 14B 30 15A 34 16A	REQ REG 10TH PRIORITY SET-0
XA413	TLD	C2	15A	TR09SD	00	=		
XA413	TLD	C2	16A	(30)	01		TR09BS TTSCMO 34 16A 36 17A	JDB19B4 BUSS TO DATA BUSS FOR CTS DISPLAY
XA438	TQ2	E3	30B	TR1WAA	00	=		
XA438	TQ2	E3	28B	(57)	01		TR01BS TR00BR 53 28B 55 29B	CCC + DEV ADD 1 WIN AUCT
XA436	TT3	B1	11A	TR2WAA	00	=		
XA436	TT3	B1	12A	(20)	01		TR00BR TR02BS TR01BR 22 12A 24 13A 26 14A	CPU + DEV ADD 2 WIN AUCT
XA441	TD4	A1	05B	TR3WAA	00	=		
XA441	TD4	A1	05A	(11)	01		TR02BR TR00BR TR01BR TR03BS 06 05A 08 06A 10 07A 13 06B	IOX 2 + DEV ADD 3 WIN AUCT
XA439	THI	A1	06A	TR3WAO	00	=		
XA439	THI	A1	07A	(13)	01		TR3WAA 11 07A	IOX 2 + DEV ADD 3 WIN AUCT

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA140	TQ2	C4	19B	TSA0BA	00	=		SPECIAL ADD.00-A
XA140	TQ2	C4	17B	(39)	01		TDA0B0 TCSCC0 35 17B 37 18B	
XA142	TQ2	C2	15A	TSA0B0	00	=		SPECIAL ADD.00-0
XA142	TQ2	C2	16A	(30)	01		TSA0BA SPI012 34 16A 36 17A	
XA140	TQ2	A3	04B	TSA1BA	00	=		SPECIAL ADD.01-A
XA140	TQ2	A3	02A	(09)	01		TCSCC0 TDA1B0 03 02A 07 03A	
XA141	TQ2	D4	27B	TSA1B0	00	=		SPECIAL ADD.01-0
XA141	TQ2	D4	25B	(51)	01		TSA1BA SPI012 47 25B 49 26B	OPR COMMAND
XA141	TQ2	D1	24A	TSA2BA	00	=		SPECIAL ADD.02-A
XA141	TQ2	D1	25A	(52)	01		TCSCC0 TDA2B0 54 25A 56 26A	
XA149	TQ2	B4	13B	TSA2B0	00	=		SPECIAL ADD.02-0
XA149	TQ2	B4	11B	(27)	01		SPI013 TSA2BA 23 11B 25 12B	
XA112	TQ2	A4	07B	TSA3BA	00	=		SPECIAL ADD.03-A
XA112	TQ2	A4	05B	(15)	01		TDA3B0 TCSCC0 11 05B 13 06B	
XA205	THI	C6	18B	TSA3B0	00	=		SPECIAL ADD.03-0
XA205	THI	C6	19B	(42)	01		TSA3BA 39 19B	
XA115	TQ2	E3	30B	TSB17A	00	=		S1+S7+S15+S17+S20.BRST-A
XA115	TQ2	E3	28B	(57)	01		TSI070 TBR5U0 53 28B 55 29B	
XA113	TDD	J1	32A	TSN1BI	00	=		
XA113	TDD	J1	32A	()	01		TSN1I0 68 32A	
XA113	TDD	JN	33A	TSN1BN	00	=		
XA113	TDD	JN	33A	()	01		TC0SAA 70 33A	
XA113	TDD	JP	31B	TSN1BP	00	=		PRESET
XA113	TDD	JP	31A	(59)	01		TMC4AA 66 31A	

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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA113	TDD	JQ 32B	TSN18Q	00 =		PRESET INPUT
XA113	TDD	JQ 33B	(61)	01	SP1001 63 33B	
XA206	TT3	D1 23A	TSN110	00 =		SET MEM SYNC 1
XA206	TT3	D1 24A	(50)	01	TMC13A TMC12A TSN1BP 52 24A 54 25A 56 26A	
XA213	THI	E1 32A	TSN2AA	00 =		MEM SYNC 2
XA213	THI	E1 33A	(66)	01	YSN2CTX 64 33A	
XA405	TDD	LI 38B	TSSGAI	00 =		
			()	01	TSSGCP 77 38B	
XA405	TDD	LN 39B	TSSGAN	00 =		
			()	01	TPUSAA 79 39B	
XA405	TDD	LP 37A	TSSGAP	00 =		
XA405	TDD	LP 37B	(76)	01	TFI05A 75 37B	
XA405	TDD	LQ 38A	TSSGAQ	00 =		LSB START CONT REG
XA405	TDD	LQ 39A	(78)	01	SPI032 80 39A	
XA442	TDD	HI 22A	TSSGBI	00 =		
			()	01	TSSGAQ 48 22A	
XA442	TDD	HN 21A	TSSGBN	00 =		
			()	01	TPUSAA 46 21A	
XA442	TDD	HP 24B	TSSGBP	00 =		
XA442	TDD	HP 23A	(45)	01	TFI05A 50 23A	
XA442	TDD	HQ 23B	TSSGBQ	00 =		
XA442	TDD	HQ 22B	(43)	01	SPI039 41 22B	
XA433	TDD	BI 03B	TSSGCI	00 =		
			()	01	TSSGBQ 05 03B	

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CONNECTOR	INPUT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIG- NATOR	FACTOR	COMMENT
				TSSGCN	00 =		
XA433	TDD	BN	02B	()	01	TPUSAA 01 02B	
XA433	TDD	BP	04B	TSSGCP	00 =		
XA433	TDD	BP	04A	(09)	01	TFIOSA 04 04A	
XA433	TDD	BQ	03A	TSSGCQ	00 =		MSB START CONTROL REG.
XA433	TDD	BQ	02A	(07)	01	SPI02B 03 02A	
XA412	TD4	D1	25B	TSS1AA	00 =		INHIBIT START CONTROL REG
XA412	TD4	D1	26B	(47)	01	TFIOUA TSSGCP YSSGBP TSSGAP 49 26B 52 24A 54 25A 56 26A	
XA439	THI	E1	32A	TSS100	00 =		START TO CPU
XA439	THI	E1	33A	(66)	01	TSIABA 64 33A	
XA436	TT3	F1	36B	TSS11A	00 =		180 N SEC START TO CPU
XA436	TT3	F1	37B	(73)	01	TSSGCQ YSSGBQ YSSGAP 75 37B 77 38B 79 39B	
XA445	TT3	C2	15B	TSS12A	00 =		CLEAR STOP/ CONTROL F/F
XA445	TT3	C2	14B	(31)	01	TSSGCQ YSSGBQ YSSGAQ 29 14B 30 15A 34 16A	
XA417	DCF	C3	30B	TSTBADX4	00 =		I/O STROBE EXT
XA417	DCF	C3	29A	(55)	01	TDGNDA 52 29A	
XA417	DCF	C4	29B	TSTBAOX	00 =		
XA417	DCF	C4	28B	(56)	01	TSTRBQ 51 28B	
XA426	THI	B5	10B	TSTBCA	00 =		
XA426	THI	B5	11B	(19)	01	TSTRBQ 21 11B	
				TSTBRI	00 =		
XA148	TDD	K1	29A	()	01	TSTBRO 62 29A	
				TSTBRN	00 =		
XA148	TDD	KN	28A	()	01	TKBACB 60 28A	

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA148	TDD	KP	30B	TSTBRP	00	=		
XA148	TDD	KP	30A	(57)	01		SPI013 64 30A	
XA148	TDD	KQ	29B	TSTBRQ	00	=		PRESET STOP BURST FF
XA148	TDD	KQ	28B	(55)	01		SPI010 53 28B	
XA122	TT3	D1	23A	TSTBRO	00	=		SET STOP BURST
XA122	TT3	D1	24A	(50)	01		TSTB1A TSTB2A TSTB3A 52 24A 54 25A 56 26A	
XA305	TD4	C2	16B	TSTB1A	00	=		NO COMPARE IN BURST SET STOP
XA305	TD4	C2	15A	(33)	01		TCOMP A TSO1C0 TMO0BQ TBRSU0 30 15A 31 15B 34 16A 36 17A	
XA206	TT3	D2	23B	TSTB2A	00	=		ERROR IN BURST SEND STOP BUR
XA206	TT3	D2	22B	(43)	01		TMO0BQ TBRSU0 TS15BQ 41 22B 46 21A 48 22A	
XA115	TQ2	E4	33B	TSTB3A	00	=		STOP BURST FF ON LEAVE ON
XA115	TQ2	E4	31B	(63)	01		TSTBRQ TI20BQ 59 31B 61 32B	
				TSTRBI	00	=		
XA113	TDD	KI	29A	()	01		TPGNDA 62 29A	
				TSTRBN	00	=		
XA113	TDD	KN	28A	()	01		TMRUAA4 60 28A	
XA113	TDD	KP	30B	TSTRBP	00	=		STROBE F/F-RESET
XA113	TDD	KP	30A	(57)	01		TSTR2A 64 30A	
XA113	TDD	KQ	29B	TSTRBQ	00	=		STROBE F/F-SET
XA113	TDD	KQ	28B	(55)	01		TSTR9A 53 28B	
XA115	TQ2	A2	02B	TSTR1A	00	=		
XA115	TQ2	A2	04A	(01)	01		TKAABB TCD170 04 04A 05 03B	
XA112	TQ2	F3	35A	TSTR10	00	=		STROBE CLOCK=0
XA112	TQ2	F3	34B	(69)	01		TSTR1A SPI001 65 34B 74 35B	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA115	TQ2	F2	34A	TSTR2A	00	=		OSC*.C1.C2
XA115	TQ2	F2	36A	(72)	01		YSTR80 TC05AB 71 36A 73 36B	
XA116	TQ2	F4	39A	TSTR8A	00	=		COUNTER#1.2
XA116	TQ2	F4	37A	(80)	01		YXC28Q YXC18Q 76 37A 78 38A	
XA205	THI	E5	30B	TSTR80	00	=		BYTE COUNT 1.2- 0
XA205	THI	E5	31B	(57)	01		YSTR8A 59 31B	
XA206	TT3	B1	11A	TSTR9A	00	=		I1+I2+I3
XA206	TT3	B1	12A	(20)	01		YXC18Q TI23E0 YXC28P 22 12A 24 13A 26 14A	
XA116	TQ2	F3	35A	TSOBRA	00	=		SO.BRST*-A
XA116	TQ2	F3	34B	(69)	01		TBRSTQ TS00BQ 65 34B 74 35B	
XA446	TQ2	E1	31A	TSOBRO	00	=		SO.BRST*-0
XA446	TQ2	E1	32A	(66)	01		SPI040 TSOBRA 68 32A 70 33A	
XA341	TQ2	D2	21A	TS00AA	00	=		
XA341	TQ2	D2	22A	(46)	01		TS00BQ SPI031 48 22A 50 23A	
XA342	THI	C4	14B	TS00A0	00	=		STATE SO UNLOAD-0
XA342	THI	C4	15B	(30)	01		TS00BP 29 15B	
XA339	TDD	D1	10A	TS00BI	00	=		
XA339	TDD	D1	10A	()	01		TS00I0 18 10A	
XA339	TDD	DN	09A	TS00BN	00	=		
XA339	TDD	DN	09A	()	01		TKBABB 14 09A	
XA339	TDD	DP	10B	TS00BP	00	=		PRERESET S00
XA339	TDD	DP	11A	(21)	01		TS0ICA 20 11A	
XA339	TDD	DQ	09B	TS00BQ	00	=		MASTER RESET SELECT S00
XA339	TDD	DQ	08B	(19)	01		YMRUBA4 17 08B	

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 UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA348	TLD	A1	05A	TS00SD	00	=		
XA348	TLD	A1	06A	(06)	01		TTSM00 TS00BQ 08 06A 10 07A	JDR00B4 BUSS
XA350	TQ2	A2	02B	TS001A	00	=		STATE S03 + S04
XA350	TQ2	A2	04A	(01)	01		TS0010 TS00AA 04 04A 05 03B	
XA344	TS8	A1	05B	TS0010	00	=		SELECT S00 CONDITIONS
XA344	TS8	A1	02B	(11)	01		TS008A TS007A TS004A TS003A TS005A TS006A TS009A TS002A 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	
XA342	THI	D2	23A	TS002A	00	=		S9 + S12 + S13 + S29 INPUTS
XA342	THI	D2	24A	(49)	01		TS0020 47 24A	
XA344	TS8	B1	11B	TS0020	00	=		STATE S9 + S12 + S29 + S13A
XA344	TS8	B1	09A	(23)	01		TS218P TS77AA TS12PA SPI030 TS010A TS298P SPI031 TS09NA 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	
XA341	TQ2	A4	07B	TS003A	00	=		S7(MO. BOOTSTRAP + BI IS NOT
XA341	TQ2	A4	05B	(15)	01		TS07BQ TM0BL0 11 05B 13 06B	
XA333	TS8	F1	37A	TS004A	00	=		NORMAL WORD INPUT, NO ERRORS
XA333	TS8	F1	38A	(76)	01		TM06BQ TBLZAA TAVEBP TS13CO TI108P TIPEBP TC11CA TIN0BP 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	
XA345	TD4	A1	05B	TS005A	00	=		BYTE INPUT
XA345	TD4	A1	05A	(11)	01		TIPEBP TM3BS0 TS14BQ TBLZAA 06 05A 08 06A 10 07A 13 06B	
XA325	TD4	C1	17B	TS006A	00	=		INPUT NORMAL GO TO IDLE
XA325	TD4	C1	18B	(35)	01		TCD170 TBLZAA TD17BP TS16BQ 37 18B 38 18A 40 19A 42 20A	
XA341	TQ2	C4	19B	TS007A	00	=		S25(I/O T.O. + IND. ITR*)
XA341	TQ2	C4	17B	(39)	01		TS25BQ TINIT0 35 17B 37 18B	
XA341	TQ2	D1	24A	TS008A	00	=		S26(0ER0+0ER1+0ER2+DEV)*
XA341	TQ2	D1	25A	(52)	01		TS26BQ TOFRDA 54 25A 56 26A	
XA340	TT3	A3	07B	TS009A	00	=		TE 08-31 CLOCK-A
XA340	TT3	A3	04B	(15)	01		TI311A TS012A TS00BQ 09 04B 11 05B 13 06B	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA339	TDD	EI	19A	TS01BI ()	00 =			
					01	TS0120 40 19A		
XA339	TDD	EN	20A	TS01BN ()	00 =			
					01	TKBABB 42 20A		
XA339	TDD	EP	17B	TS01BP (35)	00 =			MASTER RESET S01
XA339	TDD	EP	18A		01	YMRUAA4 38 18A		
XA339	TDD	EQ	18B	TS01BQ (37)	00 =			BURST COM NOT REM S01
XA339	TDD	EQ	19B		01	YBHLTA 39 19B		
XA342	THI	C1	19A	TS01CA (40)	00 =			TE0731 RESET UNLOAD
XA342	THI	C1	20A		01	YS01BQ 38 20A		
XA342	THI	D3	21A	TS01CO (48)	00 =			S01 UNLOAD
XA342	THI	D3	22A		01	YS01BP 50 22A		
XA140	TQ2	B4	13B	TS01LO (27)	00 =			S01:LATCH BURST COMP* NOR IC*
XA140	TQ2	B4	11B		01	YN010A YBRCAA 23 11B 25 12B		
XA348	TLD	C1	18A	TS01SD (38)	00 =			JDB01B4 BUSS
XA348	TLD	C1	19A		01	YYSM00 YS01BQ 40 19A 42 20A		
XA341	TQ2	D3	24B	TS010A (45)	00 =			S15 . BYS2 GO TO S00
XA341	TQ2	D3	22B		01	YBST20 YS15BQ 41 22B 43 23B		
XA345	TD4	C1	17B	TS012A (35)	00 =			REQ. XFER TO S01 IF NO I/O
XA345	TD4	C1	18B		01	YIL08R YICRTA YREQB0 YS00BQ 37 18B 38 18A 40 19A 42 20A		
XA335	TQ2	F4	39A	TS0120 (80)	00 =			
XA335	TQ2	F4	37A		01	YS012A YCPD5A 76 37A 78 38A		
XA342	THI	D5	24B	TS02A0 (43)	00 =			STATE S2 UNLOAD-0
XA342	THI	D5	25B		01	YS02BP 45 25B		

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
				TS02BI	00	=		
XA339	TDD	FI	16A	()	01		TS0230 34 16A	
				TS02BN	00	=		
XA339	TDD	FN	15A	()	01		TKBABB 30 15A	
XA339	TDD	FP	16B		00	=		MASTER RESET
XA339	TDD	FP	17A	(33)	01		TMRUAA 4 36 17A	
XA339	TDD	FQ	15B		00	=		PRESET S02
XA339	TDD	FQ	14B	(31)	01		SPI029 29 14B	
XA342	THI	D6	26B		00	=		STATE S02 E/E UNLOAD=0
XA342	THI	D6	27B	(53)	01		TS02BP 51 27B	
XA348	TLD	C2	15A		00	=		JDB02B4 BUSS
XA348	TLD	C2	16A	(30)	01		TTSM00 TS02BQ 34 16A 36 17A	
XA150	TT3	A1	04A		00	=		S02. NO SELECT S03 C
XA150	TT3	A1	05A	(04)	01		TS02BQ TS031A TITMRP 06 05A 08 06A 10 07A	
XA340	TT3	E3	33B		00	=		NORMAL REQUEST NOT CPU IO
XA340	TT3	E3	30B	(63)	01		TRO2BR SPI031 TXAUC0 57 30B 59 31B 61 32B	
XA341	TQ2	D4	27B		00	=		SEL S02
XA341	TQ2	D4	25B	(51)	01		TS021A TS022A 47 25B 49 26B	
				TS03BI	00	=		
XA339	TDD	GI	25A	()	01		TS0300 54 25A	
				TS03BN	00	=		
XA339	TDD	GN	26A	()	01		TKBABB 56 26A	
XA339	TDD	GP	25B		00	=		MASTER RESET S03
XA339	TDD	GP	24A	(47)	01		TMRUAA 4 52 24A	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	LOGIC	FACTOR	COMMENT
XA339	TDD	GQ	26B	TS03BQ	00	=		PRESET
XA339	TDD	GQ	27B	(49)	01		SPI031 51 27B	
XA342	THI	E1	32A	TS03C0	00	=		STATE S03 F/F UNLOAD=0
XA342	THI	E1	33A	(66)	01		TS03BP 64 33A	
XA348	TLD	D1	24A	TS03SD	00	=		JDB03B4 BUSS
XA348	TLD	D1	25A	(52)	01		TS03C0 TTSM00 54 25A 56 26A	
XA341	TQ2	E1	31A	TS0300	00	=		SEL S03
XA341	TQ2	E1	32A	(66)	01		TS031A TS032A 68 32A 70 33A	
XA345	TD4	E1	31B	TS031A	00	=		S02(LINE + BURST)
XA345	TD4	E1	32B	(59)	01		TROBR0 TDLI2A TOL11A TS02BQ 61 32B 66 31A 68 32A 70 33A	
XA325	TD4	B1	11B	TS032A	00	=		SEL S03, S03 NO XFF
XA325	TD4	B1	12A	(23)	01		TS03M3A TS03BQ TMT0BP TS131A 22 12A 24 13A 25 12B 26 14A	
XA339	TDD	HI	22A	TS04BI	00	=		
XA339	TDD	HI	()	()	01		TS0410 48 22A	
XA339	TDD	HN	21A	TS04BN	00	=		
XA339	TDD	HN	()	()	01		TKBABB 46 21A	
XA339	TDD	HP	24B	TS04BP	00	=		MASTER RESET S04
XA339	TDD	HP	23A	(45)	01		TMRUAA4 50 23A	
XA339	TDD	HQ	23B	TS04BQ	00	=		PRESET S04
XA339	TDD	HQ	22B	(43)	01		SPI030 41 22B	
XA342	THI	E2	30A	TS04C0	00	=		STATE S04 F/F UNLOAD=0
XA342	THI	E2	31A	(63)	01		TS04BP 61 31A	
XA348	TLD	D2	21A	TS04SD	00	=		JDB04B4 BUSS
XA348	TLD	D2	22A	(46)	01		TTSM00 TS04BQ 48 22A 50 23A	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA341	TQ2	E2	28A	TS0410	00 =		S03(M3 + BURST + BOOTSTRAP)
XA341	TQ2	E2	29A	(60)	01	TS3M3A TS042A 62 29A 64 30A	
XA346	TQ2	E2	28A	TS042A	00 =		S04 NO XFER
XA346	TQ2	E2	29A	(60)	01	TS4XFA TS048Q 62 29A 64 30A	
XA339	TDD	JI	32A	TS05BI	00 =		
				()	01	TS0500 68 32A	
XA339	TDD	JN	33A	TS05BN	00 =		
				()	01	TKBABB 70 33A	
XA339	TDD	JP	31B	TS05BP	00 =		MASTER RESET S05
XA339	TDD	JP	31A	(59)	01	TMRUAA4 66 31A	
XA339	TDD	JQ	32B	TS05BQ	00 =		PRESET S05
XA339	TDD	JQ	33B	(61)	01	SPI031 63 33B	
XA342	THI	E3	28A	TS05C0	00 =		STATE S05 F/F UNLOAD=0
XA342	THI	E3	29A	(60)	01	TS05BP 62 29A	
XA348	TLD	E1	31A	TS05SD	00 =		IDB05B4 BUSS
XA348	TLD	E1	32A	(66)	01	TS05BQ TTSM30 68 32A 70 33A	
XA341	TQ2	E3	30B	TS0500	00 =		SEL S05 CONDITIONS
XA341	TQ2	E3	28B	(57)	01	TS051A TS052A 53 28B 55 29B	
XA230	TQ2	A1	05A	TS051A	00 =		OUTPUT NORMAL
XA230	TQ2	A1	06A	(06)	01	TS4M50 TD12BP 08 06A 10 07A	
XA327	TT3	C2	15B	TS052A	00 =		S05 NO XFER CONDITIONS
XA327	TT3	C2	14B	(31)	01	TM3T0A TAVERA TS05BQ 29 14B 30 15A 34 16A	
XA339	TDD	KI	29A	TS06BI	00 =		
				()	01	TS0600 62 29A	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
				TS06BN	00	=		
XA339	TDD	KN	28A	()	01		TKBABB 60 28A	
XA339	TDD	KP	30B		00	=		MASTER RESET S06
XA339	TDD	KP	30A	(57)	01		YMRUAA4 64 30A	
XA339	TDD	KQ	29B		00	=		PRESET S06
XA339	TDD	KQ	28B	(55)	01		SPI030 53 28B	
XA342	THI	E4	28B		00	=		STATE S06 F/F UNLOAD-0
XA342	THI	E4	29B	(56)	01		TS06BP 55 29B	
XA348	TLD	E2	28A		00	=		JDB06B4 BUSS
XA348	TLD	E2	29A	(60)	01		YFSM30 TS06C0 62 29A 64 30A	
XA341	TQ2	E4	33B		00	=		SEL S06 CONDITIONS
XA341	TQ2	E4	31B	(63)	01		YMS5A TS061A 59 31B 61 32B	
XA345	TD4	E2	30B		00	=		S06 NO XFER CONDITIONS
XA345	TD4	E2	29B	(57)	01		YBRSTQ TS06C0 YBRROA TITONA 55 29B 60 28A 62 29A 64 30A	
				TS07BI	00	=		
XA339	TDD	LI	38B	()	01		TS0700 77 38B	
				TS07BN	00	=		
XA339	TDD	LN	39B	()	01		TKBABB 79 39B	
XA339	TDD	LP	37A		00	=		MASTER RESET S07
XA339	TDD	LP	37B	(76)	01		YMRUAA4 75 37B	
XA339	TDD	LQ	38A		00	=		PRESET S07
XA339	TDD	LQ	39A	(78)	01		SPI031 80 39A	
XA342	THI	E5	30B		00	=		STATE S07 F/F UNLOAD-0
XA342	THI	E5	31B	(57)	01		TS07BP 59 31B	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA348	TLD	F1	37B	TS07SD	00 =		
XA348	TLD	F1	38B	(75)	01	TS07C0 TTSM00 77 38B 79 39B	JDB07B4 BUSS
XA344	TS8	C1	17B	TS0700	00 =		
XA344	TS8	C1	15A	(35)	01	TS071A TS074A TS073A SPI031 TS075A SPI028 TS072A SPI030 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	SPI S07 CONDITIONS
XA345	TD4	F1	37A	TS071A	00 =		
XA345	TD4	F1	37B	(76)	01	TM5BRO TINDCA TMDAAO TS04C0 75 37B 77 38B 78 38A 79 39B	ALARM MODE AND IND
XA333	TS8	C1	17B	TS072A	00 =		
XA333	TS8	C1	15A	(35)	01	TPEM2A TBRAO TS06BQ TINDCA SPI025 SPI028 TBC1BP SPI027 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	OUTPUT NO ERROR
XA342	THI	E6	32B	TS0720	00 =		
XA342	THI	E6	33B	(68)	01	TS072A 65 33B	OUTPUT NO ERROR -0
XA345	TD4	F2	35A	TS073A	00 =		
XA345	TD4	F2	36A	(69)	01	TIPBP TS14BQ TCD160 TBLZAO 71 36A 72 34A 73 36B 74 35B	BL=1 NO PE BYTE INPUT
XA333	TS8	E1	31B	TS074A	00 =		
XA333	TS8	E1	29B	(59)	01	TC11CA T110BP TM06BQ TBST1P TBLZAO TINDCA TS13C0 TPEBP 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	BL=1 NO PE WORD INPUT
XA345	TD4	C2	16B	TS075A	00 =		
XA345	TD4	C2	15A	(33)	01	TS07C0 TM0BSA TM3T0A TBLZAO 30 15A 31 15B 34 16A 36 17A	S07 MD XFER CONDITIONS
XA339	TDD	MI	36A	TS08BI	00 =		
XA339	TDD	MI	36A	()	01	TS0800 71 36A	
XA339	TDD	MN	34A	TS08BN	00 =		
XA339	TDD	MN	34A	()	01	TKBABB 72 34A	
XA339	TDD	MP	35A	TS08BP	00 =		
XA339	TDD	MP	36B	(69)	01	TMRUBA4 73 36B	MASTER RESET S08
XA339	TDD	MQ	35B	TS08BQ	00 =		
XA339	TDD	MQ	34B	(74)	01	SPI030 65 34B	PRESET S08

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM. IDENT.	TERMINAL IDENT.	FACTOR	COMMENT
XA348	TLD	F2	34A	TS08SD	00	=		JDB08B4 BUSS
XA348	TLD	F2	36A	(72)	01		YYSM00 YS08BQ 71 36A 73 36B	
XA342	THI	F1	38B	TS0800	00	=		SEL S08
XA342	THI	F1	39B	(80)	01		YH3S7A 79 39B	
XA347	TDD	A1	06A	TS09BI	00	=		
XA347	TDD	A1	06A	()	01		YS0900 08 06A	
XA347	TDD	AN	07A	TS09BN	00	=		
XA347	TDD	AN	07A	()	01		TKBABB 10 07A	
XA347	TDD	AP	05B	TS09BP	00	=		MASTER RESET S09
XA347	TDD	AP	05A	(11)	01		YMRUBA4 06 05A	
XA347	TDD	AQ	06B	TS09BQ	00	=		PRESET S09
XA347	TDD	AQ	07B	(13)	01		SP1031 15 07B	
XA340	TT3	F1	36B	TS09NA	00	=		S9-NOT CH.END. NOT RTC 0
XA340	TT3	F1	37B	(73)	01		YS09BQ TC16BP TRTCOA 75 37B 77 38B 79 39B	
XA348	TLD	B1	12A	TS09SD	00	=		JDB09B4 BUSS
XA348	TLD	B1	13A	(22)	01		YYSM10 YS09BQ 24 13A 26 14A	
XA343	TT3	A1	04A	TS0900	00	=		SEL S09 CONDITIONS
XA343	TT3	A1	05A	(04)	01		YS093A YS091A YS092A 06 05A 08 06A 10 07A	
XA346	TQ2	A1	05A	TS091A	00	=		S08 AND NO PE
XA346	TQ2	A1	06A	(06)	01		YPEM1A YS08BQ 08 06A 10 07A	
XA349	TD4	B2	10B	TS092A	00	=		S03+S04, C#0, 10
XA349	TD4	B2	09A	(21)	01		YD17BP YBLZA0 TC0170 TS16BQ 14 09A 18 10A 19 09B 20 11A	
XA345	TD4	A2	04B	TS093A	00	=		S09 NO XFER
XA345	TD4	A2	02B	(09)	01		YH3Y0A YRC160 TS09BQ TC18BQ 01 02B 04 04A 05 03B 07 03A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA414	TT3	E3	33B	TS1ABA	00	=		MASTER RESET TO DEVICES
XA414	TT3	E3	30B	(63)	01		TSSGCQ TSSGBP TSSGAP 57 30B 59 31B 61 32B	
XA341	TQ2	F1	37B	TS1T30	00	=		STATE S01 OR S03
XA341	TQ2	F1	38B	(75)	01		TS001A TS02BP 77 38B 79 39B	
				TS10B1	00	=		
XA347	TDD	BI	03B	()	01		TS1000 05 03B	
				TS10BN	00	=		
XA347	TDD	BN	02B	()	01		TKBABB 01 02B	
XA347	TDD	BP	04B	TS10BP	00	=		MASTER RESET S10
XA347	TDD	BP	04A	(09)	01		TMRUBA4 04 04A	
XA347	TDD	BQ	03A	TS10BQ	00	=		PRESET S10
XA347	TDD	BQ	02A	(07)	01		SPI030 03 02A	
XA348	TLD	B2	09A	TS10SD	00	=		JDB10B4 BUSS
XA348	TLD	B2	10A	(14)	01		TSM10 TS10BQ 18 10A 20 11A	
XA343	TT3	A2	03A	TS1000	00	=		SEL S10
XA343	TT3	A2	02B	(07)	01		TS102A TS101A TS9M3A 01 02B 03 02A 05 03B	
XA340	TT3	F2	35B	TS101A	00	=		S16, NO PE
XA340	TT3	F2	34B	(74)	01		TS16C0 TM03D0 TMS3BQ 65 34B 71 36A 72 34A	
XA325	TD4	D1	25B	TS102A	00	=		S18, NO PE
XA325	TD4	D1	26B	(47)	01		TS18BQ TMS3BQ TM03D0 SPI024 49 26B 52 24A 54 25A 56 26A	
XA344	TS8	D1	25B	TS1070	00	=		S1+S7+S15+S20+S17
XA344	TS8	D1	23B	(47)	01		TS07BP SPI028 SPI030 TS20BP TS17BP TS15BP SPI031 TS01BP 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	
				TS11B1	00	=		
XA347	TDD	CI	13A	()	01		TS1100 24 13A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	TEST POINT	FACTOR	COMMENT
				TS11BN	00 =			
XA347	TDD	CN	14A	()	01		TKBABB 26 14A	
XA347	TDD	CP	11B	TS11BP	00 =			MASTER RESET S11
XA347	TDD	CP	12A	(23)	01		TMRUBA4 22 12A	
XA347	TDD	CQ	12B	TS11BQ	00 =			PRESET S11
XA347	TDD	CQ	13B	(25)	01		SPI03I 27 13B	
XA346	TQ2	A2	02B	TS11MA	00 =			S11 AND M3
XA346	TQ2	A2	04A	(01)	01		YS11BQ YM03C0 04 04A 05 03B	
XA348	TLD	A3	04B	TS11SD	00 =			JDB1184 BUSS
XA348	TLD	A3	02A	(09)	01		YYSM10 YS11BQ 03 02A 07 03A	
XA344	TS8	E1	31B	TS1100	00 =			SEL S11 CONDITIONS
XA344	TS8	E1	29B	(59)	01		SPI03I SPI030 SPI028 TS115A TS114A TS112A TS113A TS111A 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	
XA340	TT3	F3	39A	TS111A	00 =			S10 . PE* . M3
XA340	TT3	F3	35A	(80)	01		YM03BQ YS10BQ YPEM3A 69 35A 76 37A 78 38A	
XA345	TD4	B1	11B	TS112A	00 =			CH. END NO Q ACCESS S9.
XA345	TD4	B1	12A	(23)	01		YBS12A YCI8BP YS09BQ YRC160 22 12A 24 13A 25 12B 26 14A	
XA248	TD4	D2	24B	TS113A	00 =			P BIT.NO Q ACCESS.NO PE .S16
XA248	TD4	D2	23B	(45)	01		YDI8PB YS16C0 YDI7BQ YCD170 43 23B 46 21A 48 22A 50 23A	
XA343	TT3	A3	07B	TS114A	00 =			NO Q .NO PE S18
XA343	TT3	A3	04B	(15)	01		YDI8BP YCD170 YS18BQ 09 04B 11 05B 13 06B	
XA346	TQ2	A3	04B	TS115A	00 =			S11.NOT M3
XA346	TQ2	A3	02A	(09)	01		YS11BQ YM3Y0A 03 02A 07 03A	
				TS128I	00 =			
XA347	TDD	D1	10A	()	01		YS1200 18 10A	

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LOGIC

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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			TS12BN	00 =			
XA347	TDD DN	09A	()	01	TKBABB 14 09A		
XA347	TDD DP	10B	TS12BP	00 =		MASTER RESET S12	
XA347	TDD DP	11A	(21)	01	TMRUBA4 20 11A		
XA347	TDD DQ	09B	TS12BQ	00 =		PRESET S12	
XA347	TDD DQ	08B	(19)	01	SPI030 17 08B		
XA341	TQ2 F2	34A	TS12PA	00 =		S12 AND NO PE	
XA341	TQ2 F2	36A	(72)	01	TPEM2A TS12BQ 71 36A 73 36B		
XA348	TLD A4	07B	TS12SD	00 =		JDR12B4 BUSS	
XA348	TLD A4	05B	(15)	01	TFSM10 TS12BQ 11 05B 13 06B		
XA342	THI F2	36B	TS1200	00 =		SEL S12 CONDITIONS	
XA342	THI F2	37B	(71)	01	TS11MA 73 37B		
			TS13BI	00 =			
XA347	TDD EI	19A	()	01	TS1300 40 19A		
			TS13BN	00 =			
XA347	TDD EN	20A	()	01	TKBABB 42 20A		
XA347	TDD EP	17B	TS13BP	00 =		MASTER RESET S13	
XA347	TDD EP	18A	(35)	01	TMRUBA4 38 18A		
XA347	TDD EQ	18B	TS13BQ	00 =		PRESET S13	
XA347	TDD EQ	19B	(37)	01	SPI031 39 19B		
XA342	THI F3	34B	TS13CO	00 =		STATE S13 E/E UNLOAD=0	
XA342	THI F3	35B	(70)	01	TS13BP 69 35B		
XA343	TT3 B1	11A	TS131A	00 =		S13 AND INPUT REC'D	
XA343	TT3 B1	12A	(20)	01	TS13BQ TNIABO TINPTO 22 12A 24 13A 26 14A		

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19

CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERN	REGIS. NATON	FACTOR	COMMENT
XA348	TLD B3	10B	TS13SD	00	=		JDB13B4 BUSS
XA348	TLD B3	08B	(21)	01		YYSM10 YS13C0 17 08B 19 09B	
XA332	TQ2 D4	27B	TS13WA	00	=		S13.WORD MODE
XA332	TQ2 D4	25B	(51)	01		YS13C0 YC11CA 47 25B 49 26B	
XA345	TD4 D1	25B	TS1300	00	=		SEL S13 CONDITIONS
XA345	TD4 D1	26B	(47)	01		YS134A YS131A YS132A YS133A 49 26B 52 24A 54 25A 56 26A	
XA349	TD4 A1	05B	TS131A	00	=		S03.BOOTSTRAP 1
XA349	TD4 A1	05A	(11)	01		YB5Y1Q YDLI4A YDLI3A YS03BQ 06 05A 08 06A 10 07A 13 06B	
XA343	TT3 B2	09B	TS132A	00	=		BOOTSTRAP AFTER FIRST 7 BYTE
XA343	TT3 B2	09A	(19)	01		YS04BQ YB5Y2Q YB5Y1P 14 09A 17 08B 18 10A	
XA340	TT3 C2	15B	TS133A	00	=		TE0731 RESET GATE-0
XA340	TT3 C2	14B	(31)	01		YMDAAA YDI2BQ YS4M50 29 14B 30 15A 34 16A	
XA344	TS8 F1	37A	TS134A	00	=		S13 NO XFER CONDITIONS
XA344	TS8 F1	36A	(76)	01		YBD15A YS171A YS14MA YS15EA YS13C0 YS074A YS004A YITONA 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	
			TS14BI	00	=		
XA347	TDD F1	16A	()	01		YS1400 34 16A	
			TS14BN	00	=		
XA347	TDD FN	15A	()	01		YKBABB 30 15A	
XA347	TDD FP	16B	TS148P	00	=		MASTER RESET S14
XA347	TDD FP	17A	(33)	01		YHRUBA4 36 17A	
XA347	TDD FQ	15B	TS148Q	00	=		PRESET S14
XA347	TDD FQ	14B	(31)	01		YSPI030 29 14B	
XA342	THI F4	34A	TS14C0	00	=		S14 UNLOAD
XA342	THI F4	35A	(72)	01		YS148P 74 35A	

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TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	GROUP TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TCRM	DESIG- NATOR	FACTOR	COMMENT
XA351	TT3	F2	35B	TS14EA	00	=		
XA351	TT3	F2	34B	(74)	01		T1PEBQ TS14BQ TPEM1A 65 34B 71 36A 72 34A	S14 INPUT PE NO MEM PE
XA327	TT3	F1	36B	TS14MA	00	=		
XA327	TT3	F1	37B	(73)	01		TM03C0 TC11B0 TS13B0 75 37B 77 38B 79 39B	S13 BYTE MODE M3-A
XA348	TLD	B4	13B	TS14SD	00	=		
XA348	TLD	B4	11B	(27)	01		TTSM10 TS14BQ 23 11B 25 12B	JDB14B4 BUSS
XA346	TQ2	A4	07B	TS1400	00	=		
XA346	TQ2	A4	05B	(15)	01		TBD15A TS14MA 11 05B 13 06B	SEL S14 S13 BYTE M3
XA346	TQ2	B1	12A	TS1460	00	=		
XA346	TQ2	B1	13A	(22)	01		TS14BP TS06BP 24 13A 26 14A	NOT USED
XA347	TDD	GI	25A	TS15BI	00	=		
				()	01		TS1500 54 25A	
XA347	TDD	GN	26A	TS15BN	00	=		
				()	01		TKBABB 56 26A	
XA347	TDD	GP	25B	TS15BP	00	=		
XA347	TDD	GP	24A	(47)	01		TMRUBA4 52 24A	MASTER RESET S15
XA347	TDD	GQ	26B	TS15BQ	00	=		
XA347	TDD	GQ	27B	(49)	01		SP1031 51 27B	PRESET S15
XA333	TS8	D1	25B	TS15EA	00	=		
XA333	TS8	D1	23B	(47)	01		TBSTIP TINOBP TS13C0 SPI025 TM06BQ T1PEBQ SPI027 TC11CA 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	IF I/O PE GO TO S15-A
XA348	TLD	C3	16B	TS15SD	00	=		
XA348	TLD	C3	14B	(33)	01		TS15BQ TTSM10 29 14B 31 15B	JDB15B4 BUSS
XA343	TT3	B3	13B	TS1500	00	=		
XA343	TT3	B3	10B	(27)	01		TS151A TS14EA TS15EA 21 10B 23 11B 25 12B	SEL S15

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA346	TQ2	B2	09A	TS151A	00 =		
XA346	TQ2	B2	10A	(14)	01	TS158Q YH3TOA 18 10A 20 11A	S15.NOT M3+MEM TIMEOUT
XA343	TT3	C1	17A	TS1520	00 =		
XA343	TT3	C1	18A	(36)	01	TS208P TS158P TS118P 38 18A 40 19A 42 20A	S11 + S15 + S20
XA346	TQ2	B3	10B	TS153A	00 =		
XA346	TQ2	B3	08B	(21)	01	TS1520 YBST2P 17 08B 19 09B	S11+S15+S20 AND BOOTSTRAP*
XA347	TDD	HI	22A	TS168I	00 =		
				()	01	TS1600 48 22A	
XA347	TDD	HN	21A	TS168N	00 =		
				()	01	YKBABB 46 21A	
XA347	TDD	HP	24B	TS168P	00 =		
XA347	TDD	HP	23A	(45)	01	YMRUBA4 50 23A	MASTER RESET S16
XA347	TDD	HQ	23B	TS168Q	00 =		
XA347	TDD	HQ	22B	(43)	01	SPI030 41 22B	PRESET S16
XA342	THI	F5	36A	TS16C0	00 =		
XA342	THI	F5	37A	(78)	01	TS168P 76 37A	STATE S16 F/F UNLOAD=0
XA348	TLD	C4	19B	TS16SD	00 =		
XA348	TLD	C4	17B	(39)	01	YTSM10 TS16C0 35 17B 37 18B	JDB1684 BUSS
XA346	TQ2	B4	13B	TS1600	00 =		
XA346	TQ2	B4	11B	(27)	01	TS162A TS163A 23 11B 25 12B	SEL S16 CONDITIONS
XA327	TT3	B3	13B	TS161A	00 =		
XA327	TT3	B3	10B	(27)	01	YDI88Q YS16C0 YD178Q 21 10B 23 11B 25 12B	S16 AND P BIT AND Q
XA247	TS8	E1	31B	TS162A	00 =		
XA247	TS8	E1	29B	(59)	01	TS16C0 TS211A TS113A YS006A TS101A TS213A SPT019 TS092A 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	S16 AND NO XFER CONDITIONS

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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7	TDD	KN	28A	()	01	TKBABB 60 28A		
7	TDD	KP	30B	TS18BP	00 =		MASTER RESET S18	
7	TDD	KP	30A	(57)	01	TMRUBA4 64 30A		
7	TDD	KQ	29B	TS18BQ	00 =		PRESET S18	
7	TDD	KQ	28B	(55)	01	SPI030 53 28B		
8	TLD	D4	27B	TS18SD	00 =		JDB18B4 BUSS	
8	TLD	D4	25B	(51)	01	TTSB30 TS18BQ 47 25B 49 26B		
6	TQ2	C2	15A	TS1800	00 =		SEL S18 CONDITIONS	
6	TQ2	C2	16A	(30)	01	TS181A TS182A 34 16A 36 17A		
0	TT3	E2	29B	TS181A	00 =		S17.M3.BRST*	
0	TT3	E2	28B	(55)	01	TMO3C0 TS17BQ TBRSTP 53 28B 60 28A 62 29A		
5	TD4	D2	24B	TS182A	00 =		S18 NO XFER	
5	TD4	D2	23B	(45)	01	TS114A TS210A TS18BQ TS102A 43 23B 46 21A 48 22A 50 23A		
				TS19BI	00 =			
7	TDD	LI	38B	()	01	TS1900 77 38B		
				TS19BN	00 =			
7	TDD	LN	39B	()	01	TKBABB 79 39B		
7	TDD	LP	37A	TS19BP	00 =		MASTER RESET S19	
7	TDD	LP	37B	(76)	01	TMRUBA4 75 37B		
7	TDD	LQ	38A	TS19BQ	00 =		PRESET S19	
7	TDD	LQ	39A	(78)	01	SPI031 80 39A		
6	TQ2	C3	16B	TS19IA	00 =		S19 AND IND	
6	TQ2	C3	14B	(33)	01	TS19BQ TINDBQ 29 14B 31 15B		

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TS195D
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CONNECTOR	CIRCUIT TYPE	GRD	POINTS AND/OR	EQUATION	TERI	DESH NATC	FACTOR	COMMENT
A348	TLD	E3	30B	TS19SD	00	=		
A348	TLD	E3	28B	(57)	01	=	TTSM00 TS19BQ 53 28B 55 29B	JDB1984 BUSS
A343	TT3	D3	27B	TS1900	00	=		
A343	TT3	D3	24B	(51)	01	=	TS192A TS191A TAVERA 45 24B 47 25B 49 26B	SEL S19
A349	TD4	D1	25B	TS191A	00	=		
A349	TD4	D1	26B	(47)	01	=	TM5BR0 TS04C0 TMDZAO TINDCA 49 26B 52 24A 54 25A 56 26A	INACTIVE MODE NO IND
A319	TT3	F1	36B	TS192A	00	=		
A319	TT3	F1	37B	(73)	01	=	TS19BQ TINDCA TITMRP 75 37B 77 38B 79 39B	WRITE CONTROL PAGE1
A414	TT3	D3	27B	TS2ABA	00	=		
A414	TT3	D3	24B	(51)	01	=	TSSGCQ TSSGBP TSSGAP 45 24B 47 25B 49 26B	MASTER RESET TO DEVICES
A346	TQ2	C4	19B	TS2INA	00	=		
A346	TQ2	C4	17B	(39)	01	=	TINF10 TS02BQ 35 17B 37 18B	SQ2. DR'D INF.
A346	TQ2	D1	24A	TS2NIA	00	=		
A346	TQ2	D1	25A	(52)	01	=	TS02BQ TINF1A 54 25A 56 26A	
A347	TDD	M1	36A	TS20BI	00	=		
A347	TDD	M1	34A	()	01	=	TS2000 71 36A	
A347	TDD	MN	34A	TS20BN	00	=		
A347	TDD	MN	34A	()	01	=	TK8ABB 72 34A	
A347	TDD	MP	35A	TS20BP	00	=		
A347	TDD	MP	36B	(69)	01	=	TMRUBA4 73 36B	MASTER RESET S20
A347	TDD	MQ	35B	TS20BQ	00	=		
A347	TDD	MQ	34B	(74)	01	=	TS204A 65 34B	PRESET S20
A348	TLD	E4	33B	TS20SD	00	=		
A348	TLD	E4	31B	(63)	01	=	TTSM20 TS20BQ 59 31B 61 32B	JDB2084 BUSS

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA305	TD4	E2	30B	TS2000	00	=		S03(BURST + BOOTSTRAP)
XA305	TD4	E2	29B	(57)	01		SPI023 TS203A TS202A TS201A 55 29B 60 28A 62 29A 64 30A	
XA349	TD4	E1	31B	TS201A	00	=		(S2+S6+S13+S19) TIME PUT NO
XA349	TD4	E1	32B	(59)	01		TS2610 TBRRFP TINDCA TITMR0 61 32B 66 31A 68 32A 70 33A	
XA349	TD4	E2	30B	TS202A	00	=		MEM PARITY ERROR
XA349	TD4	E2	29B	(57)	01		TPEM10 TMS3BP TM03C0 TS4620 55 29B 60 28A 62 29A 64 30A	
XA351	TT3	E1	30A	TS203A	00	=		OUTPUT MODE DATA REC'D
XA351	TT3	E1	31A	(64)	01		TINDCA TBC1BQ TS06BQ 66 31A 68 32A 70 33A	
XA146	TQ2	F4	39A	TS204A	00	=		S02, NO XFER
XA146	TQ2	F4	37A	(80)	01		TS20BQ TM02PA 76 37A 78 38A	
XA251	TDD	D1	10A	TS21BI	00	=		
XA251	TDD	D1	10A	()	01		TS2100 18 10A	
XA251	TDD	UN	09A	TS21BN	00	=		
XA251	TDD	UN	09A	()	01		TKBACB 14 09A	
XA251	TDD	DP	10B	TS21BP	00	=		MASTER RESET S21
XA251	TDD	DP	11A	(21)	01		TMRUBA4 20 11A	
XA251	TDD	DQ	09B	TS21BQ	00	=		PRESET S21
XA251	TDD	DQ	08B	(19)	01		SPI020 17 08B	
XA245	THI	F1	38B	TS21C0	00	=		STATE S21 F/F UNLOAD-0
XA245	THI	F1	39B	(80)	01		TS21BP 79 39B	
XA112	TQ2	F2	34A	TS21IA	00	=		
XA112	TQ2	F2	36A	(72)	01		TS21BQ TMINHP 71 36A 73 36B	
XA115	TQ2	A3	04B	TS21I0	00	=		
XA115	TQ2	A3	02A	(09)	01		TS21IA SPI002 03 02A 07 03A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TS21SD
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CONNECTOR	CIRCUIT TYPE	GROUP	POINTS AND/OR	EQUATION	TERM	ORIGIN	FACTOR	COMMENT
XA348	TLD	F3	35A	TS21SD	00 =			
XA348	TLD	F3	34B	(69)	01		TTSM20 TS21BQ 65 34B 74 35B	JDB21B4 BUSS
XA205	THI	C4	14B	TS210A	00 =			
XA205	THI	C4	15B	(30)	01		TS2100 29 15B	
XA351	TT3	D1	23A	TS2100	00 =			
XA351	TT3	D1	24A	(50)	01		TS212A TS213A TS211A 52 24A 54 25A 56 26A	SFL S21
XA343	TT3	E2	29B	TS211A	00 =			
XA343	TT3	E2	28B	(55)	01		SPI031 TS2140 TS201A 53 28B 60 28A 62 29A	MEM TIME OUT
XA343	TT3	E3	33B	TS212A	00 =			
XA343	TT3	E3	30B	(63)	01		TS20BQ TBRSTP TM03C0 57 30B 59 31B 61 32B	S20.M3 BURST NOT
XA349	TD4	A2	04B	TS213A	00 =			
XA349	TD4	A2	02B	(09)	01		TM03C0 TS8160 TMS3BP TP0M10 01 02B 04 04A 05 03B 07 03A	(S8+S16+S18) PF BASE MEM
XA350	TQ2	F1	37B	TS214A	00 =			
XA350	TQ2	F1	38B	(75)	01		TS21BP TMT0BQ 77 38B 79 39B	MEMORY T.O. NOT S21
XA245	THI	A1	06A	TS2140	00 =			
XA245	THI	A1	07A	(13)	01		TS214A 11 07A	MEMORY TIME OUT-0
XA346	TQ2	D2	21A	TS2160	00 =			
XA346	TQ2	D2	22A	(46)	01		TS17BP TS00AA 48 22A 50 23A	STATE 0 + 21
				TS22BI	00 =			
XA251	TDD	EI	19A	()	01		TS2200 40 19A	
				TS22BN	00 =			
XA251	TDD	EN	20A	()	01		TKBACB 42 20A	
XA251	TDD	EP	17B	TS22BP	00 =			
XA251	TDD	EP	18A	(35)	01		THRUBA4 38 18A	MASTER RESET S22

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TS22BQ
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CONNECTOR	INPUT	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA251	TDD	EQ	18B	TS228Q	00	=		PRESET INPUT S22
XA251	TDD	EQ	19B	(37)	01		SPI021 39 19B	
XA350	TQ2	A3	04B	TS22FA	00	=		S22 AND OFRO
XA350	TQ2	A3	02A	(09)	01		YS22BQ YOFRA0 03 02A 07 03A	
XA348	TLD	F4	39A	TS22SD	00	=		JDB2284 BUSS
XA348	TLD	F4	37A	(80)	01		YYSM20 YS22BQ 76 37A 78 38A	
XA350	TQ2	A1	05A	TS2200	00	=		SEL S22
XA350	TQ2	A1	06A	(06)	01		YCPD4A YS223A 08 06A 10 07A	
XA248	TD4	A1	05B	TS223A	00	=		MEM COUNT 3.0SC*.M02
XA248	TD4	A1	05A	(11)	01		YCD31A YS22BQ YS231A SPI019 06 05A 08 06A 10 07A 13 06B	
XA304	TQ2	B4	13B	TS224A	00	=		PRESET BOOTSTRAP DEV CMD BYTE
XA304	TQ2	B4	11B	(27)	01		YS22BQ YBST10 23 11B 25 12B	
XA251	TDD	FI	16A	TS238I	00	=		
XA251	TDD	FN	15A	()	01		YS2300 34 16A	
XA251	TDD	FP	16B	TS238N	00	=		
XA251	TDD	FP	17A	()	01		YKBACB 30 15A	
XA251	TDD	FQ	15B	TS238P	00	=		MASTER RESET S23
XA251	TDD	FQ	14B	(33)	01		YS233A 36 17A	
XA251	TDD	FQ	15B	TS238Q	00	=		PRESET INPUT
XA251	TDD	FQ	14B	(31)	01		SPI022 29 14B	
XA245	THI	D2	23A	TS23C0	00	=		
XA245	THI	D2	24A	(49)	01		YS238P 47 24A	
XA249	TLD	B2	09A	TS23SD	00	=		JDB2384 BUSS
XA249	TLD	B2	10A	(14)	01		YYSM20 YS23BQ 18 10A 20 11A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TS2300
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA350	TQ2	A4	07B	TS2300	00	=		
XA350	TQ2	A4	05B	(15)	01		TS23BP TS231A 11 05B 13 06B	SEL S23
XA247	TS8	F1	37A	TS231A	00	=		S22 AND NOT SPECIAL CMD ID
XA247	TS8	F1	36A	(76)	01		TXCOBQ TS22BQ TSA39A TSA28A TSA18A TIAZA0 TSA0BA SPI019 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	
XA245	THI	F2	36B	TS233A	00	=		RESET S23
XA245	THI	F2	37B	(71)	01		TS2330 73 37B	
XA350	TQ2	B1	12A	TS2330	00	=		RESET S23
XA350	TQ2	B1	13A	(22)	01		TMRUBA4 TS248P 24 13A 26 14A	
				TS248I	00	=		
XA251	TDD	GI	25A	()	01		TPGND 54 25A	
				TS248N	00	=		
XA251	TDD	GN	26A	()	01		TKBACB 56 26A	
XA251	TDD	GP	25B	TS248P	00	=		MASTER RESET S24
XA251	TDD	GP	24A	(47)	01		TMRUBA4 52 24A	
XA251	TDD	GQ	26B	TS248Q	00	=		PRESET S24
XA251	TDD	GQ	27B	(49)	01		TI22XA 51 27B	
XA249	TLD	B3	10B	TS24SD	00	=		JDB2484 BUSS
XA249	TLD	B3	08B	(21)	01		TTSM20 TS248Q 17 08B 19 09B	
				TS258I	00	=		
XA251	TDD	HI	22A	()	01		TS2500 48 22A	
				TS258N	00	=		
XA251	TDD	HN	21A	()	01		TKBACB 46 21A	
XA251	TDD	HP	24B	TS258P	00	=		MASTER RESET S25
XA251	TDD	HP	23A	(45)	01		TMRUBA4 50 23A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TS25BQ
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CONNECTOR	CRCU TYPE	GRD	TEST POINTS AND/OR	EQUATION	TERM	DESIG NATION	FACTOR	COMMENT
XA251	TDD	HQ	23B	TS25BQ	00 =			PRESET INPUT S25
XA251	TDD	HQ	22B	(43)	01	SPI021 41 22B		
XA249	TLD	B4	13B	TS25SD	00 =			JDB25B4 BUSS
XA249	TLD	B4	11B	(27)	01	YS25BQ YISM20 23 11B 25 12B		
XA349	TD4	B1	11B	TS2500	00 =			SEL S25
XA349	TD4	B1	12A	(23)	01	YCD31A YCCCAA TS24BP TS251A 22 12A 24 13A 25 12B 26 14A		
XA236	TD4	F2	35A	TS251A	00 =			WORD INPUT COMPLETE RESET II
XA236	TD4	F2	36A	(69)	01	YS261A YS25BQ YS007A TS262A 71 36A 72 34A 73 36B 74 35B		
				TS268I	00 =			
XA251	TDD	J1	32A	()	01	YS2600 68 32A		
				TS268N	00 =			
XA251	TDD	JN	33A	()	01	YKBACB 70 33A		
XA251	TDD	JP	31B	TS268P	00 =			MASTER RESET S26
XA251	TDD	JP	31A	(59)	01	YMRUBA4 66 31A		
XA251	TDD	JQ	32B	TS268Q	00 =			PRESET INPUT S26
XA251	TDD	JQ	33B	(61)	01	SPI021 63 33B		
XA249	TLD	C1	18A	TS26SD	00 =			JDB26B4 BUSS
XA249	TLD	C1	19A	(38)	01	YISM20 YS26BQ 40 19A 42 20A		
XA350	TQ2	B2	09A	TS2600	00 =			SEL S26
XA350	TQ2	B2	10A	(14)	01	YS261A TS262A 18 10A 20 11A		
XA346	TQ2	D3	24B	TS261A	00 =			S25, ITR (IND+ADD01+ADD02)
XA346	TQ2	D3	22B	(45)	01	YITRC0 YS25BQ 41 22B 43 23B		
XA345	TD4	B2	10B	TS2610	00 =			S2 + S6 + S13 + S19
XA345	TD4	B2	09A	(21)	01	YS13BP YS06BP TS19BP TS02BP 14 09A 18 10A 19 09B 20 11A		

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TS262A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA335	TQ2	F2	34A	TS262A	00 =		
XA335	TQ2	F2	36A	(72)	01	TS25BQ TCD320 71 36A 73 36B	
				TS27BI	00 =		
XA251	TDD	KI	29A	()	01	TS2700 62 29A	
				TS27BN	00 =		
XA251	TDD	KN	28A	()	01	TKBACB 60 28A	
XA251	TDD	KP	30B	TS27BP	00 =		
XA251	TDD	KP	30A	(57)	01	TMRUBA4 64 30A	
XA251	TDD	KQ	29B	TS27BQ	00 =		
XA251	TDD	KQ	28B	(55)	01	SPI022 53 28B	PRESET S27
XA249	TLD	C2	15A	TS27SD	00 =		
XA249	TLD	C2	16A	(30)	01	TTSM30 TS27BQ 34 16A 36 17A	IDB27B4 BUSS
XA245	THI	F3	34B	TS2700	00 =		
XA245	THI	F3	35B	(70)	01	TS271A 69 35B	SEL S27
XA350	TQ2	F2	34A	TS271A	00 =		
XA350	TQ2	F2	36A	(72)	01	TS26BQ TOFRD0 71 36A 73 36B	S26 AND SPEC DER + DEV CMD
				TS28BI	00 =		
XA244	TDD	MI	36A	()	01	TS27BQ 71 36A	
				TS28BN	00 =		
XA244	TDD	MN	34A	()	01	TKBACB 72 34A	
XA244	TDD	MP	35A	TS28BP	00 =		
XA244	TDD	MP	36B	(69)	01	TMRUBA4 73 36B	MASTER RESET S28
XA244	TDD	MQ	35B	TS28BQ	00 =		
XA244	TDD	MQ	34B	(74)	01	SPI016 65 34B	PRESET INPUT S28

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TS28FA
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CONNECTOR	TEST POINT FILE	GROUP	TEST POINTS		EQUATION	TERM	DESIGN RATIO	FACTOR	COMMENT
			AND	OR					
XA350	TQ2	F3	35A		TS28FA	00	=	S28 AND OFRO	
XA350	TQ2	F3	34B		(69)	01		YOFRAO TS28BQ 65 34B 74 35B	
XA245	THI	F4	34A		TS28F0	00	=	S28 AND OFRO	
XA245	THI	F4	35A		(72)	01		TS28FA 74 35A	
XA249	TLD	C3	16B		TS28SD	00	=	JDB28B4 BUSS	
XA249	TLD	C3	14B		(33)	01		YTSM30 TS28BQ 29 14B 31 15B	
					TS29BI	00	=		
XA251	TDD	MI	36A		()	01		TS28BQ 71 36A	
					TS29BN	00	=		
XA251	TDD	MN	34A		()	01		YKBACB 72 34A	
XA251	TDD	MP	35A		TS29BP	00	=	MASTER RESET S29	
XA251	TDD	MP	36B		(69)	01		YMRUBA4 73 36B	
XA251	TDD	MQ	35B		TS29BQ	00	=	PRESET INPUT S29	
XA251	TDD	MQ	34B		(74)	01		SPI020 65 34B	
XA350	TQ2	F4	39A		TS29FA	00	=	S29 AND OFRO	
XA350	TQ2	F4	37A		(80)	01		YOFROO TS29BQ 76 37A 78 38A	
XA245	THI	F5	36A		TS29F0	00	=	S29 AND OFRO	
XA245	THI	F5	37A		(78)	01		TS29FA 76 37A	
XA249	TLD	C4	19B		TS29SD	00	=	JDB29B4 BUSS	
XA249	TLD	C4	17B		(39)	01		YTSM30 TS29BQ 35 17B 37 18B	
					TS3EBI	00	=		
XA317	TDD	KI	29A		()	01		YENBBP 62 29A	
					TS3EBN	00	=		
XA317	TDD	KN	28A		()	01		YI1310 60 28A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TS3EBP
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA317	TDD	KP	30B	TS3EBP	00	=		
XA317	TDD	KP	30A	(57)	01		TS1RBP 64 30A	STATE 3 ADD ACK + BTSTP EF
XA317	TDD	KQ	29B	TS3EBQ	00	=		
XA317	TDD	KQ	28B	(55)	01		SPI025 53 28B	NOT USED
XA349	TD4	F1	37A	TS3M0A	00	=		
XA349	TD4	F1	37B	(76)	01		TBRSTP TS03C0 TM00BQ TBST2P 75 37B 77 38B 78 38A 79 39B	S03.M00 AND NOT BURST
XA245	THI	E5	30B	TS3M00	00	=		
XA245	THI	E5	31B	(57)	01		TS3M0A 59 31B	S0.M0.BURST*-0
XA350	TQ2	E1	31A	TS3M3A	00	=		
XA350	TQ2	E1	32A	(66)	01		TS03C0 TM3B80 68 32A 70 33A	S03I M3 + BURST + BOOTSTRAP1
XA349	TD4	F2	35A	TS4M5A	00	=		
XA349	TD4	F2	36A	(69)	01		TMDZAA TIND8P TS04BQ TM5BR0 71 36A 72 34A 73 36B 74 35B	S04-TND*.ACTIVE (BURST+M5)
XA245	THI	E4	28B	TS4M50	00	=		
XA245	THI	E4	29B	(56)	01		TS4M5A 55 29B	S04.TND*.ACTIVE (BURST+M5)
XA343	IT3	F1	36B	TS4NIA	00	=		
XA343	IT3	F1	37B	(73)	01		TS04BQ T012BP TBRSTP 75 37B 77 38B 79 39B	S4.NOT INPUT .NOT BURST
XA205	THI	E6	32B	TS4XFA	00	=		
XA205	THI	E6	33B	(68)	01		TS4XFO 65 33B	
XA305	TD4	F1	37A	TS4XFO	00	=		
XA305	TD4	F1	37B	(76)	01		TBZZIA TBR SUA TM05BP TS202A 75 37B 77 38B 78 38A 79 39B	
XA349	TD4	C1	17B	TS4610	00	=		
XA349	TD4	C1	18B	(35)	01		TS463A TS06BP TM05BP TS19BP 37 18B 38 18A 40 19A 42 20A	S4 +S6 + S13 + S19
XA250	TS8	E1	31B	TS4620	00	=		
XA250	TS8	E1	29B	(59)	01		TS10BP TS06BP SPI022 SPI021 SPI020 TS14BP TS12BP TS04BP 55 29B 60 28A 61 32B 62 29A 64 30A 66 31A 68 32A 70 33A	S4+S6+S10+S12+S14

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TS463A
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CONNECTOR	CAGE TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIG- NATION	FACTOR	COMMENT
XA350	TQ2	D2	21A	TS463A	00 =		
XA350	TQ2	D2	22A	(45)	01	TS138Q YM00C0 48 22A 50 23A	
XA346	TQ2	D4	27B	TS5AVA	00 =		S05 NOT ACCESS VIOLATION
XA346	TQ2	D4	25B	(51)	01	YAVEBP TS058Q 47 25B 49 26B	
XA115	TQ2	B1	12A	TS5130	00 =		MEM ERROR PE OR ACC VIL
XA115	TQ2	B1	13A	(22)	01	TS138P TS058P 24 13A 26 14A	
XA346	TQ2	F1	37B	TS68RA	00 =		S06(BURST REQ .IQ + BURST*)
XA346	TQ2	F1	38B	(75)	01	TS068Q YBRRAO 77 38B 79 39B	
XA349	TD4	C2	16B	TS78SA	00 =		S7 BOOTSTRAP.MO.BI=0
XA349	TD4	C2	15A	(33)	01	TM00BQ YBL2AO TBST2P TS07BQ 30 15A 31 15B 34 16A 36 17A	
XA343	TT3	F2	35B	TS7BZA	00 =		S7.BL=0 NOT BOOTSTRAP
XA343	TT3	F2	34B	(74)	01	TBST20 YBLE20 TS07BQ 65 34B 71 36A 72 34A	
XA343	TT3	F3	39A	TS77AA	00 =		SET LEVEL 77
XA343	TT3	F3	35A	(80)	01	YCMP40 TS098Q YBST20 69 35A 76 37A 78 38A	
XA428	THI	B2	11A	TS77A0	00 =		
XA428	THI	B2	12A	(25)	01	TS77AA 23 12A	
XA351	TT3	F1	36B	TS8160	00 =		S8 + S16 + S18
XA351	TT3	F1	37B	(73)	01	TS08BP TS188P TS168P 75 37B 77 38B 79 39B	
XA250	TS8	D1	25B	TS8210	00 =		S08 + S10 + S12 + S14 + S16 + S18
XA250	TS8	D1	23B	(47)	01	TS08BP TS168P TS188P TS128P TS148P TS048P TS218P TS108P 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	
XA350	TQ2	B3	10B	TS9M3A	00 =		S9 AND M3
XA350	TQ2	B3	08B	(21)	01	TM03C0 TS098Q 17 08B 19 09B	
XA248	TD4	D1	25B	TS9Q1A	00 =		S9.Q BIT=1(RTC0 + C BIT)
XA248	TD4	D1	26B	(47)	01	YC188Q TS098Q TBST2A TRC160 49 26B 52 24A 54 25A 56 26A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TTDM00
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA351	TT3	A2	03A	TTDM00	00 =		D REG TO CPU BUSS
XA351	TT3	A2	02B	(07)	01	SPI031 JITRSD4 TICTOA 01 02B 03 02A 05 03B	
XA351	TT3	A3	07B	TTDM10	00 =		D REG TO CPU BUSS
XA351	TT3	A3	04B	(15)	01	JITRSD4 TICTDA SPI031 09 04B 11 05B 13 06B	
XA351	TT3	B1	11A	TTDM20	00 =		D REG TO CPU BUSS
XA351	TT3	B1	12A	(20)	01	TICTDA JITRSD4 SPI031 22 12A 24 13A 26 14A	TD TO CPU BUSS
XA351	TT3	B2	09B	TTDM30	00 =		D REG TO CPU BUSS
XA351	TT3	B2	09A	(19)	01	JITRSD4 TICTDA SPI031 14 09A 17 08B 18 10A	
XA351	TT3	B3	13B	TTDM40	00 =		D REG TO CPU BUSS
XA351	TT3	B3	10B	(27)	01	TICTDA JITRSD4 SPI031 21 10B 23 11B 25 12B	TD TO CPU BUSS
XA133	TQ2	F1	37B	TTESAA	00 =		TE REGISTER SHIFT CONTROL-A
XA133	TQ2	F1	38B	(75)	01	TXC7B0 TI12A0 77 38B 79 39B	
XA135	THI	D2	23A	TTESAO	00 =		TE REGISTER SHIFT CONTROL-0
XA135	THI	D2	24A	(49)	01	TTESAA 47 24A	
XA135	THI	D6	26B	TTESB0	00 =		TE REG SHIFT CONTROL UNLOAD-
XA135	THI	D6	27B	(53)	01	TTESAA 51 27B	
XA135	THI	E1	32A	TTESCO	00 =		TE REG SHIFT CONTROL UNLOAD-
XA135	THI	E1	33A	(66)	01	TTESAA 64 33A	
XA213	THI	A4	02B	TTESDO	00 =		TE REG SHIFT CONTROL UNLOAD-
XA213	THI	A4	03B	(01)	01	TTESAA 05 03B	
XA137	TT3	A1	04A	TTESPA	00 =		SHIFT PULSE-A
XA137	TT3	A1	05A	(04)	01	TXC7B0 TCOSAB TI12A0 06 05A 08 06A 10 07A	
XA135	THI	D4	22B	TTESPO	00 =		SHIFT PULSE-0
XA135	THI	D4	23B	(46)	01	TTESPA 41 23B	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TSAM0
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA310	THI	F3	34B	TTSAMO	00 =		A REG TO CPU BUSS FOR CTS
XA310	THI	F3	35B	(70)	01	TICTAA 69 35B	TA TO CPU BUSS
XA415	TQ2	B1	12A	TTSBMO	00 =		CONTROL TERM DATA BUSS LOAD
XA415	TQ2	B1	13A	(22)	01	TICTAA SPI032 24 13A 26 14A	FOR TR REGISTER
XA415	TQ2	B2	09A	TTSCMO	00 =		CONTROL TERM DATA BUSS LOAD
XA415	TQ2	B2	10A	(14)	01	TICTAA SPI032 18 10A 20 11A	FOR M COUNTER
XA415	TQ2	B3	10B	TTSDMO	00 =		CONTROL TERM DATA BUSS LOAD
XA415	TQ2	B3	08B	(21)	01	TICTAA SPI032 17 08B 19 09B	FOR BYTE COUNTER AND I STATE
XA245	THI	C5	16B	TTSM00	00 =		S REG TO CPU BUSS FOR CTS
XA245	THI	C5	17B	(31)	01	TICSCA 33 17B	STATE COUNTER TO CPU BUSS
XA245	THI	C6	18B	TTSM10	00 =		S REG TO CPU BUSS FOR CTS
XA245	THI	C6	19B	(42)	01	TICSCA 39 19B	STATE COUNTER TO CPU BUSS
XA245	THI	D3	21A	TTSM20	00 =		S REG TO CPU BUSS FOR CTS
XA245	THI	D3	22A	(48)	01	TICSCA 50 22A	STATE COUNTER TO CPU BUSS
XA245	THI	D4	22B	TTSM30	00 =		S REG TO MEM BUSS FOR CTS
XA245	THI	D4	23B	(45)	01	TICSCA 41 23B	STATE COUNTER TO CPU BUSS
XA136	TD4	D1	25B	TTWPCA	00 =		TERMINATE WORD POST CONTROL
XA136	TD4	D1	26B	(47)	01	TS2IBQ TMT0BP TCD160 TKAAAB 49 26B 52 24A 54 25A 56 26A	
XA135	THI	D5	24B	TTWPC0	00 =		TER. WORD POST CONTROL-0
XA135	THI	D5	25B	(43)	01	TTWPCA 45 25B	
XA326	TQ2	A1	05A	TU00A0	00 =		BL UPDATE TC00.01+00*.01*
XA326	TQ2	A1	06A	(06)	01	TU003A TU004A 08 06A 10 07A	
XA328	TQ2	A1	05A	TU003A	00 =		BL UPDATE TC00.01
XA328	TQ2	A1	06A	(06)	01	TC01BQ TC00BQ 08 06A 10 07A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TU004A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM. DESIGNATION	FACTOR	COMMENT
XA328	TQ2	A2	02B	TU004A	00 =		
XA328	TQ2	A2	04A	(01)	01	TC018P TC00BP 04 04A 05 03B	BL UPDATE TC00*.01*
XA327	TT3	A1	04A	TU021A	00 =		
XA327	TT3	A1	05A	(04)	01	TC028Q TC048P TC03BP 06 05A 08 06A 10 07A	BL UPDATE TC04*.03*.02-A
XA328	TQ2	B3	10B	TU0220	00 =		
XA328	TQ2	B3	08B	(21)	01	TC028P TBL22A 17 08B 19 09B	BL UPDATE TC04*.03*.02**02
XA328	TQ2	C2	15A	TU03A0	00 =		
XA328	TQ2	C2	16A	(30)	01	TU034A TU033A 34 16A 36 17A	BL UPDATE TC03.04+03*.04*
XA332	TQ2	B3	10B	TU033A	00 =		
XA332	TQ2	B3	08B	(21)	01	TC038Q TC048Q 17 08B 19 09B	BL UPDATE TC03.04
XA332	TQ2	B4	13B	TU034A	00 =		
XA332	TQ2	B4	11B	(27)	01	TC048P TC038P 23 11B 25 12B	BL UPDATE TC03*.04*
XA319	TT3	E1	30A	TU051A	00 =		
XA319	TT3	E1	31A	(64)	01	TC058Q TC078P TC06BP 66 31A 68 32A 70 33A	BL UPDATE TC07*.06*.05 -A
XA332	TQ2	C3	16B	TU0520	00 =		
XA332	TQ2	C3	14B	(33)	01	TC058P TBL23A 29 14B 31 15B	BL UPDATE TC07*.06*.05** 05
XA219	TQ2	F1	37B	TU06A0	00 =		
XA219	TQ2	F1	38B	(75)	01	TU063A TU064A 77 38B 79 39B	BL UPDATE TC06.07+06*.07*
XA326	TQ2	D3	24B	TU063A	00 =		
XA326	TQ2	D3	22B	(45)	01	TC078Q TC068Q 41 22B 43 23B	BL UPDATE TC06.07
XA326	TQ2	D2	21A	TU064A	00 =		
XA326	TQ2	D2	22A	(46)	01	TC078P TC068P 48 22A 50 23A	BL UPDATE TC06*.07*
XA327	TT3	E3	33B	TU081A	00 =		
XA327	TT3	E3	30B	(63)	01	TC098P TC08C0 TC10BP 57 30B 59 31B 61 32B	BL UPDATE TC10*.09*.08

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TU0820
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA326	TQ2	D4	27B	TU0820	00 =		BL UPDATE TC10*.09*.08** 08
XA326	TQ2	D4	25B	(51)	01	TC08CA TBLZ4A 47 25B 49 26B	
XA224	TQ2	F3	35A	TU09A0	00 =		BL UPDATE TC09.10+09*.10*
XA224	TQ2	F3	34B	(69)	01	TU093A TU094A 65 34B 74 35B	
XA326	TQ2	E3	30B	TU093A	00 =		BL UPDATE TC09.10
XA326	TQ2	E3	28B	(57)	01	TC09BQ TC10BQ 53 28B 55 29B	
XA326	TQ2	E4	33B	TU094A	00 =		BL UPDATE TC09*.10*
XA326	TQ2	E4	31B	(63)	01	TC09BP TC10BP 59 31B 61 32B	
XA320	TQ2	C4	19B	TU14A0	00 =		UPDATE CA 14 IF 14+15.16-0
XA320	TQ2	C4	17B	(39)	01	TU141A TC14BP 35 17B 37 18B	
XA314	TQ2	B3	10B	TU141A	00 =		UPDATE CA 14 IF 15.16
XA314	TQ2	B3	08B	(21)	01	TC16BQ TC15BQ 17 08B 19 09B	
XA310	THI	B5	10B	TU1410	00 =		TC15.TC16 -0
XA310	THI	B5	11B	(19)	01	TU141A 21 11B	
XA316	TQ2	E1	31A	TU15A0	00 =		UPDATE CA 15 IF 1516**+15*16
XA316	TQ2	E1	32A	(66)	01	TU152A TU151A 68 32A 70 33A	
XA314	TQ2	C2	15A	TU151A	00 =		UPDATE CA 15 IF 15*16
XA314	TQ2	C2	16A	(30)	01	TC16BQ TC15BP 34 16A 36 17A	
XA314	TQ2	C3	16B	TU152A	00 =		UPDATE CA 15 IF 15.16*
XA314	TQ2	C3	14B	(33)	01	TC15BQ TC16BP 29 14B 31 15B	
XA316	TQ2	E2	28A	TU17A0	00 =		UPDATE CA 17 IF 17+18.19
XA316	TQ2	E2	29A	(60)	01	TU171A TC17BP 62 29A 64 30A	
XA314	TQ2	C4	19B	TU171A	00 =		UPDATE CA 17 IF 18.19
XA314	TQ2	C4	17B	(39)	01	TC19BQ TC18BQ 35 17B 37 18B	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TU1710
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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA310	THI	C5 16B	TU1710	00 =		
XA310	THI	C5 17B	(31)	01	TU171A 33 17B	TC18,TC19 -0
XA316	TQ2	E3 30B	TU18A0	00 =		
XA316	TQ2	E3 28B	(57)	01	TU182A TU181A 53 28B 55 29B	UPDATE CA18 IF 19.18**19*.18
XA314	TQ2	D1 24A	TU181A	00 =		
XA314	TQ2	D1 25A	(52)	01	TC198Q TC188P 54 25A 56 26A	UPDATE CA18 IF 19.18*
XA320	TQ2	D2 21A	TU182A	00 =		
XA320	TQ2	D2 22A	(46)	01	TC188Q TC198P 48 22A 50 23A	UPDATE CA 18 IF 19*.18
XA316	TQ2	E4 33B	TU20A0	00 =		
XA316	TQ2	E4 31B	(63)	01	TC208P TU201A 59 31B 61 32B	UPDATE CA20 IF 20 + 21.22
XA320	TQ2	F3 35A	TU201A	00 =		
XA320	TQ2	F3 34B	(69)	01	TC228Q TC218Q 65 34B 74 35B	UPDATE CA20 IF 21.22
XA310	THI	D6 26B	TU2010	00 =		
XA310	THI	D6 27B	(53)	01	TU201A 51 27B	TC21,TC22-0
XA316	TQ2	F1 37B	TU21A0	00 =		
XA316	TQ2	F1 38B	(75)	01	TU211A TU212A 77 38B 79 39B	UPDATE CA21 IF 21*22+21.22*
XA320	TQ2	F1 37B	TU211A	00 =		
XA320	TQ2	F1 38B	(75)	01	TC228Q TC218P 77 38B 79 39B	UPDATE CA21 IF 21*22
XA320	TQ2	F2 34A	TU212A	00 =		
XA320	TQ2	F2 36A	(72)	01	TC228P TC218Q 71 36A 73 36B	UPDATE CA21 IF 21.22*
XA316	TQ2	F2 34A	TU23A0	00 =		
XA316	TQ2	F2 36A	(72)	01	TC238P TU231A 71 36A 73 36B	UPDATE CA23 IF 23+24.25
XA314	TQ2	A1 05A	TU231A	00 =		
XA314	TQ2	A1 06A	(06)	01	TC258Q TC248Q 08 06A 10 07A	UPDATE CA23 IF 24.25

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TU24A0
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA316	TQ2	F3	35A	TU24A0	00	=		
XA316	TQ2	F3	34B	(69)	01		TU241A TU242A 65 34B 74 35B	UPDATE CA24 IF 25.24** 25*.2
XA314	TQ2	A2	02B	TU241A	00	=		
XA314	TQ2	A2	04A	(01)	01		TC258Q TC248P 04 04A 05 03B	UPDATE CA24 IF 25.24*
XA314	TQ2	A3	04B	TU242A	00	=		
XA314	TQ2	A3	02A	(09)	01		TC258P TC248Q 03 02A 07 03A	UPDATE CA24 IF 25*.24
XA316	TQ2	F4	39A	TU26A0	00	=		
XA316	TQ2	F4	37A	(80)	01		TC268P TU261A 76 37A 78 38A	UPDATE CA26 IF 26+27.28
XA314	TQ2	D2	21A	TU261A	00	=		
XA314	TQ2	D2	22A	(46)	01		TC278Q TC288Q 48 22A 50 23A	UPDATE CA26 IF 27.28
XA218	TQ2	F2	34A	TU27A0	00	=		
XA218	TQ2	F2	36A	(72)	01		TU272A TU271A 71 36A 73 36B	UPDATE CA27 IF 27*.28+27.28*
XA314	TQ2	D3	24B	TU271A	00	=		
XA314	TQ2	D3	22B	(45)	01		TC288Q TC278P 41 22B 43 23B	UPDATE CA27 IF 28.27*
XA314	TQ2	D4	27B	TU272A	00	=		
XA314	TQ2	D4	25B	(51)	01		TC288P TC278Q 47 25B 49 26B	UPDATE CA27 IF 27.28*
XA308	TD4	C2	16B	TU29A0	00	=		
XA308	TD4	C2	15A	(33)	01		TU293A TU291A TU294A TU292A 30 15A 31 15B 34 16A 36 17A	UPDATE CA29 IF 30.29**+29.31*
XA319	TT3	D1	23A	TU291A	00	=		
XA319	TT3	D1	24A	(50)	01		TC308P TC11CA TC298Q 52 24A 54 25A 56 26A	UPDATE CA29 IF 29.30*.BY 2
XA319	TT3	D2	23B	TU292A	00	=		
XA319	TT3	D2	22B	(43)	01		TC11CA TC308Q TC298P 41 22B 46 21A 48 22A	UPDATE CA29 IF 29*.30.BY 2
XA326	TQ2	F2	34A	TU293A	00	=		
XA326	TQ2	F2	36A	(72)	01		TC11CO TC298Q 71 36A 73 36B	UPDATE CA29 IF 29. BY 1

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TU294A
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UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

LOGIC

UNIT ASSEMBLY NO. 149019
FILE IDENT T39BIUX2

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA319	TT3	D3	27B	TU294A	00	=		UPDATE CA29 IF 30.31.BY 1
XA319	TT3	D3	24B	(51)	01		TC11C0 TC30BQ TC31C0 45 24B 47 25B 49 26B	
XA315	TT3	D1	23A	TU30A0	00	=		UPDATE CA30 IF 30.INC.BY 2
XA315	TT3	D1	24A	(50)	01		TU301A TU302A TU303A 52 24A 54 25A 56 26A	
XA326	TQ2	F3	35A	TU301A	00	=		UPDATE CA30 IF 30.INC BY 2
XA326	TQ2	F3	34B	(69)	01		TC30BP TC11BP 65 34B 74 35B	
XA309	TT3	F3	39A	TU302A	00	=		UPDATE CA30 IF 30.31*.BY 1
XA309	TT3	F3	35A	(80)	01		TC30BP TC11C0 TC31C0 69 35A 76 37A 78 38A	
XA327	TT3	B2	09B	TU303A	00	=		UPDATE CA30 IF 30*.31.BY 1
XA327	TT3	B2	09A	(19)	01		TC30BQ TC11C0 TC31BP 14 09A 17 08B 18 10A	
XA139	THI	A1	06A	TWBXAA	00	=		TD XFER CONTROL-A TE07-TD07
XA139	THI	A1	07A	(13)	01		TWBXAO 11 07A	
XA138	TQ2	A2	02B	TWBXAO	00	=		TE TO TD XFER BITS 00-07-0
XA138	TQ2	A2	04A	(01)	01		TWD1AA TS261A 04 04A 05 03B	
XA135	THI	F6	38A	TWDXAA	00	=		WORD XFER CONTROL TE TO TD-A
XA135	THI	F6	39A	(77)	01		TWDXAO 75 39A	
XA138	TQ2	A1	05A	TWDXAO	00	=		WORD XFER CONTROL TE TO TD-0
XA138	TQ2	A1	06A	(06)	01		TWD1AA TS261A 08 06A 10 07A	
XA138	TQ2	A3	04B	TWDXBO	00	=		TD XFER CONTROL-UNLOAD TE-TD
XA138	TQ2	A3	02A	(09)	01		TWD1AA TS261A 03 02A 07 03A	
XA138	TQ2	A4	07B	TWDXCO	00	=		TD XFER CONTROL-UNLOAD TE-TD
XA138	TQ2	A4	05B	(15)	01		TS261A TWD1AA 11 05B 13 06B	
XA323	TD4	F2	35A	TWD1AA	00	=		WRITE DATA WORD TE TO TD
XA323	TD4	F2	36A	(69)	01		TS138Q TC11BP TM02BQ TMS3BQ 71 36A 72 34A 73 36B 74 35B	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TWTCAA
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA138	TQ2	F4	39A	TWTCAA	00	=		WORD XFER CLK(S24.OFR+WORDQU
XA138	TQ2	F4	37A	(80)	01		TKAAAB TWG10 76 37A 78 38A	
XA138	TQ2	F3	35A	TWTDA0	00	=		WORD XFER TD-TE OFR+WORD MOD
XA138	TQ2	F3	34B	(69)	01		TWTOFA TWMOA 65 34B 74 35B	
XA138	TQ2	F2	34A	TWTDB0	00	=		TD TO TE WORD XFER UNLOAD-0
XA138	TQ2	F2	36A	(72)	01		TWTOFA TWMOA 71 36A 73 36B	
XA138	TQ2	F1	37B	TWTDC0	00	=		TD TO TE WORD XFER UNLOAD-0
XA138	TQ2	F1	38B	(75)	01		TWTOFA TWMOA 77 38B 79 39B	
XA138	TQ2	E4	33B	TWTDD0	00	=		TD TO TE WORD XFER UNLOAD-0
XA138	TQ2	E4	31B	(63)	01		TWMOA TWTOFA 59 31B 61 32B	
XA140	TQ2	F4	39A	TWTG10	00	=		S24.OFR + WORD MODE OUT
XA140	TQ2	F4	37A	(80)	01		TS072A TWBXAA 76 37A 78 38A	
XA326	TQ2	F4	39A	TWTMOA	00	=		WORD TRANSFER MODE OUT TD-TE
XA326	TQ2	F4	37A	(80)	01		TCIIBP TS0720 76 37A 78 38A	
XA350	TQ2	D1	24A	TWTOFA	00	=		WORD TRANSFER OFR.S24 TD-TE
XA350	TQ2	D1	25A	(52)	01		Y0FRA0 TS24BQ 54 25A 56 26A	
XA351	TT3	C1	17A	TXAUCA	00	=		XFER AUCTION TO ADD REG S01
XA351	TT3	C1	18A	(36)	01		SPI031 TS01BQ TBRCP0 38 18A 40 19A 42 20A	
XA310	TH1	F4	34A	TXAUCO	00	=		XFER AUCTION TO ADD REG
XA310	TH1	F4	35A	(72)	01		TXAUCA 74 35A	
XA145	TT3	D3	27B	TXCAZA	00	=		C1*.C2*.C3* (COUNT = 0)
XA145	TT3	D3	24B	(51)	01		TXC1BP TXC2BP TXC3BP 45 24B 47 25B 49 26B	
XA140	TQ2	A2	02B	TXCAZO	00	=		COUNT = ZERO
XA140	TQ2	A2	04A	(01)	01		TXCAZA SPI011 04 04A 05 03B	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TXC0BI
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XAI43	TDD	HI	22A	TXCOBI ()	00 = 01		TXCAZO 48 22A	
XAI43	TDD	HN	21A	TXCOBN ()	00 = 01		TKBACB 46 21A	
XAI43	TDD	HP	24B	TXCOBP (45)	00 = 01		TXC10A 50 23A	CLOCKED COUNT#ZERO
XAI43	TDD	HQ	23B	TXCOBQ (43)	00 = 01		SPI003 41 22B	CLOCKED COUNT#ZERO
XAI43	TDD	AI	06A	TXC1BI ()	00 = 01		TXC100 08 06A	
XAI43	TDD	AN	07A	TXC1BN ()	00 = 01		TCOSAA 10 07A	
XAI43	TDD	AP	05B	TXC1BP (11)	00 = 01		TMRUBA4 06 05A	I/O COUNTER 1-RESET
XAI43	TDD	AQ	06B	TXC1BQ (13)	00 = 01		SPI012 15 07B	I/O COUNTER 1-SET
XAI42	TQ2	F2	34A	TXC10A (72)	00 = 01		TXC100 SPI012 71 36A 73 36B	REAL TIME CLOCK 16 MHZ-0
XAI47	TS8	D1	25B	TXC100 (47)	00 = 01		TXC13A TXC11A TXC16A SPI010 SPI013 SPI011 TXC15A TXC14A 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	ORED DATA IN
XAI44	TD4	D1	25B	TXC11A (47)	00 = 01		TXC2BP TXC3BQ TXC1BP TI30BQ 49 26B 52 24A 54 25A 56 26A	I3.C1#C2#.C3
XAI41	TQ2	A1	05A	TXC12A (06)	00 = 01		TI20BQ TXCAZO 08 06A 10 07A	I2.COUNTER = 0

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TXC120
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
XA342	THI	B6	12B	TXC120	00	=		COUNT #ZERO.I2-0
XA342	THI	B6	13B	(26)	01		TXC12A 27 13B	
XA128	TS8	F1	37A	TXC13A	00	=		I2.C1*.C2*.C3.BYTE = 1
XA128	TS8	F1	36A	(76)	01		SPI003 SPI011 SPI010 TBC18Q TXC28P TXC38Q TXC18P TI208Q 71 36A 72 34A 73 36B 74 35B 75 37B 77 38B 78 38A 79 39B	
XA144	TD4	D2	24B	TXC14A	00	=		INFORMATION.I1.C1.C2*
XA144	TD4	D2	23B	(45)	01		SPI012 TXC28P TI108Q TINFIO 43 23B 46 21A 48 22A 50 23A	
XA142	TQ2	A2	02B	TXC15A	00	=		C1*(COMMAND + ENABLE)
XA142	TQ2	A2	04A	(01)	01		YCDENO TXC28P 04 04A 05 03B	
XA142	TQ2	C3	16B	TXC16A	00	=		RTC OSC.SET LOGIC
XA142	TQ2	C3	14B	(33)	01		TXC18Q TXC38P 29 14B 31 15B	
				TXC28I	00	=		
XA143	TDD	B1	03B	()	01		TXC200 05 03B	
				TXC28N	00	=		
XA143	TDD	BN	02B	()	01		YCD5AA 01 02B	
XA143	TDD	BP	04B	TXC28P	00	=		I/O COUNTER 2-RESET
XA143	TDD	BP	04A	(09)	01		YMRUBA4 04 04A	
XA143	TDD	BQ	03A	TXC28Q	00	=		I/O COUNTER 2-SET
XA143	TDD	BQ	02A	(07)	01		SPI010 03 02A	
XA146	TQ2	F3	35A	TXC2C0	00	=		BYTE COUNTER 2 -UNLOAD -0
XA146	TQ2	F3	34B	(69)	01		TXC28P SPI013 65 34B 74 35B	
XA140	TQ2	B1	12A	TXC20A	00	=		COUNT ONE.(I1+I2+I3)
XA140	TQ2	B1	13A	(22)	01		TXC18Q SPI011 24 13A 26 14A	
XA142	TQ2	A4	07B	TXC200	00	=		ORED DATA INPUT-(I1+I2+I3)C1
XA142	TQ2	A4	05B	(15)	01		SPI012 TXC20A 11 05B 13 06B	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TXC3BI
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 321

CONNECTOR	UNIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XAI43	TDD	CI	13A	TXC38I ()	00 = 01	TXC300 24 13A	
XAI43	TDD	CN	14A	TXC38N ()	00 = 01	TXK30A 26 14A	
XAI43	TDD	CP	11B	TXC38P (23)	00 = 01	TMRUBA4 22 12A	I/O COUNTER 3-RESET
XAI43	TDD	CQ	12B	TXC38Q (25)	00 = 01	SPI012 27 13B	I/O COUNTER 3-SET
XAI41	TQ2	A3	04B	TXC30A (09)	00 = 01	SPI011 TXC2C0 03 02A 07 03A	COUNT 2 (I1+I2+I3)
XAI40	TQ2	B2	09A	TXC300 (14)	00 = 01	TXC12A TXC30A 18 10A 20 11A	ORED DATA IN (I1+I2+I3)C2
XAI45	TT3	E1	30A	TXC78A (64)	00 = 01	TXC38Q TXC18Q TXC2C0 66 31A 68 32A 70 33A	COUNT = 7- A
XAI41	TQ2	A4	07B	TXC780 (15)	00 = 01	SPI011 TXC78A 11 05B 13 06B	COUNT = 7 -D
XAI42	TQ2	D2	21A	TXK30A (46)	00 = 01	SPI012 TC05AB 48 22A 50 23A	COUNTER 3 CLK I1+I2+I3, RTC 0
XAI40	TQ2	F1	37B	TOFRAA (75)	00 = 01	SPI011 TOFRB0 77 38B 79 39B	OPR CMD
XAI41	TQ2	D3	24B	TOFRA0 (45)	00 = 01	SPI012 JOFRAD4 41 22B 43 23B	OPR CMD
XA443	TQ2	F3	35A	TOFRB0 (69)	00 = 01	JOFRAD4 SPI039 65 34B 74 35B	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX TOFRDA
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 322

CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA141	TQ2	E1 31A	TOFRDA	00 =		SPEC OFR + DEV CMD-A
XA141	TQ2	E1 32A	(66)	01	YOFRDO SPI012 68 32A 70 33A	
XA144	TD4	E2 30B	TOFRDO	00 =		SPECIAL OFR + A DEV COMMAND
XA144	TD4	E2 29B	(57)	01	YOFR2A YOFR1A TOFR0A TDECAA 55 29B 60 28A 62 29A 64 30A	
XA140	TQ2	E2 28A	TOFR0A	00 =		OFR TO ADDRESS ZERO-A
XA140	TQ2	E2 29A	(60)	01	YOFR80 TSA080 62 29A 64 30A	
XA230	TQ2	F3 35A	TOFR00	00 =		OFR TO ADDRESS ZERO-0
XA230	TQ2	F3 34B	(69)	01	YOFR0A SPI017 65 34B 74 35B	
XA140	TQ2	E3 30B	TOFR1A	00 =		OFR ADD 01-S28
XA140	TQ2	E3 28B	(57)	01	TSA180 YOFR80 53 28B 55 29B	
XA140	TQ2	E4 33B	TOFR2A	00 =		OFR ADD 02-S28
XA140	TQ2	E4 31B	(63)	01	YOFR80 TSA280 59 31B 61 32B	
XA340	TT3	A2 03A	TOFS1A	00 =		IOC STEP MODE .STEP BUTTON*.
XA340	TT3	A2 02B	(07)	01	TSA180 YOFR80 TS288Q 01 02B 03 02A 05 03B	
XA319	TT3	F3 39A	TOFS2A	00 =		WRITE CONTROL PAGE3
XA319	TT3	F3 35A	(80)	01	TSA280 YOFR80 TS288Q 69 35A 76 37A 78 38A	
XA231	TQ2	A3 04B	T0001A	00 =		PARITY 0.1
XA231	TQ2	A3 02A	(09)	01	T000BQ T001BQ 03 02A 07 03A	
XA110	TT3	A1 04A	T0003A	00 =		0.1 EVEN 2.3 ODD 0-3 ODD
XA110	TT3	A1 05A	(04)	01	T010P0 T0302A T0203A 06 05A 08 06A 10 07A	
XA209	TT3	B1 11A	T0007A	00 =		0-3 ODD 4-7 EVEN ODD PART
XA209	TT3	B1 12A	(20)	01	T003P0 T0704A T0407A 22 12A 24 13A 26 14A	
XA110	TT3	F2 35B	T0015A	00 =		0-7 ODD 8-15 EVEN ODD PART
XA110	TT3	F2 34B	(74)	01	T0815A T007P0 T1508A 65 34B 71 36A 72 34A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX T003P0
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 323

CONNECTOR	GROUP TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM REG. MATOR	FACTOR	COMMENT
XA111	TQ2	E1	31A	T003P0	00 =		ODD PARITY 0-3
XA111	TQ2	E1	32A	(66)	01	T0300A T0003A 68 32A 70 33A	
XA110	TT3	F1	36B	T0031A	00 =		0-15 ODD 16-31 EVEN ODD PAR
XA110	TT3	F1	37B	(73)	01	T015P0 T3116A T1631A 75 37B 77 38B 79 39B	
XA109	TQ2	F1	37B	T007P0	00 =		ODD PARITY 0-7
XA109	TQ2	F1	38B	(75)	01	T0007A T0700A 77 38B 79 39B	
XA111	TQ2	A1	05A	T010P0	00 =		EVEN PARITY 0-1
XA111	TQ2	A1	06A	(06)	01	T0001A T0100A 08 06A 10 07A	
XA231	TQ2	A4	07B	T0100A	00 =		PARITY 0-1*
XA231	TQ2	A4	05B	(15)	01	T0018P T0008P 11 05B 13 06B	
XA111	TQ2	B2	09A	T011P0	00 =		EVEN PARITY 10-11
XA111	TQ2	B2	10A	(14)	01	T1110A T1011A 18 10A 20 11A	
XA112	TQ2	B1	12A	T015P0	00 =		ODD PARITY 0-15
XA112	TQ2	B1	13A	(22)	01	T0015A T1500A 24 13A 26 14A	
XA231	TQ2	B3	10B	T0203A	00 =		PARITY 2-3
XA231	TQ2	B3	08B	(21)	01	T0028Q T0038Q 17 08B 19 09B	
XA111	TQ2	C3	16B	T021P0	00 =		EVEN PARITY 20-21
XA111	TQ2	C3	14B	(33)	01	T2120A T2021A 29 14B 31 15B	
XA111	TQ2	F2	34A	T023P0	00 =		ODD PARITY 20-23
XA111	TQ2	F2	36A	(72)	01	T2023A T2320A 71 36A 73 36B	
XA112	TQ2	F4	39A	T03P10	00 =		ODD PARITY 0-31
XA112	TQ2	F4	37A	(80)	01	T3100A T0031A 76 37A 78 38A	
XA110	TT3	A2	03A	T0300A	00 =		2,3 EVEN 0-1 ODD 0-3 ODD
XA110	TT3	A2	02B	(07)	01	T0001A T0100A T203P0 01 02B 03 02A 05 03B	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX T0302A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 324

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA231	TQ2	B4	13B	T0302A	00 =		PARITY 2*.3*
XA231	TQ2	B4	11B	(27)	01	TD03BP TD02BP 23 11B 25 12B	
XA111	TQ2	D4	27B	T031P0	00 =		EVEN PARITY 30-31
XA111	TQ2	D4	25B	(51)	01	T3130A T3031A 47 25B 49 26B	
XA231	TQ2	C3	16B	T0405A	00 =		PARITY 4-5
XA231	TQ2	C3	14B	(33)	01	TD04BQ TD05BQ 29 14B 31 15B	
XA110	TT3	A3	07B	T0407A	00 =		4.5 EVEN 6.7 ODD 4-6 ODD
XA110	TT3	A3	04B	(15)	01	T405P0 T0607A T0706A 09 04B 11 05B 13 06B	
XA231	TQ2	C4	19B	T0504A	00 =		PARITY 4*.5*
XA231	TQ2	C4	17B	(39)	01	TD05BP TD04BP 35 17B 37 18B	
XA231	TQ2	D3	24B	T0607A	00 =		PARITY 6-7
XA231	TQ2	D3	22B	(45)	01	TD06BQ TD07BQ 41 22B 43 23B	
XA209	TT3	B2	09B	T0700A	00 =		0-3 EVEN 4-7 ODD ODD PARITY
XA209	TT3	B2	09A	(19)	01	T407P0 T0003A T0300A 14 09A 17 08B 18 10A	
XA110	TT3	B1	11A	T0704A	00 =		6.7 EVEN 4-5 ODD 4-6 ODD
XA110	TT3	B1	12A	(20)	01	T607P0 T0405A T0504A 22 12A 24 13A 26 14A	
XA231	TQ2	D4	27B	T0706A	00 =		PARITY 6*.7*
XA231	TQ2	D4	25B	(51)	01	TD07BP TD06BP 47 25B 49 26B	
XA231	TQ2	E3	30B	T0809A	00 =		PARITY 8-9
XA231	TQ2	E3	28B	(57)	01	TD09BQ TD08BQ 53 28B 55 29B	
XA110	TT3	B2	09B	T0811A	00 =		8.9 EVEN 10.11 ODD 8-11
XA110	TT3	B2	09A	(19)	01	T1011A T1110A T809P0 14 09A 17 08B 18 10A	
XA209	TT3	B3	13B	T0815A	00 =		8-11 ODD 12-15 EVEN ODD PA
XA209	TT3	B3	10B	(27)	01	T1215A T1512A T811P0 21 10B 23 11B 25 12B	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX T0908A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 325

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM. DESIGNATOR	FACTOR	COMMENT
XA231	TQ2	E4	33B	T0908A	00 =		
XA231	TQ2	E4	31B	(63)	01	TD098P TD088P 59 31B 61 32B	PARITY 8*.9*
XA231	TQ2	F3	35A	T1011A	00 =		
XA231	TQ2	F3	34B	(69)	01	TD108Q TD118Q 65 34B 74 35B	PARITY 10.11
XA110	TT3	B3	13B	T1108A	00 =		
XA110	TT3	B3	10B	(27)	01	T011P0 T0908A T0809A 21 10B 23 11B 25 12B	10.11 EVEN 8.9 ODD ODD PAR
XA231	TQ2	F4	39A	T1110A	00 =		
XA231	TQ2	F4	37A	(80)	01	TD118P TD108P 76 37A 78 38A	PARITY 10*.11*
XA224	TQ2	A2	02B	T1213A	00 =		
XA224	TQ2	A2	04A	(01)	01	TD128Q TD138Q 04 04A 05 03B	PARITY 12.13
XA110	TT3	C1	17A	T1215A	00 =		
XA110	TT3	C1	18A	(36)	01	T213P0 T1514A T1415A 38 18A 40 19A 42 20A	12.13 EVEN 14.15 ODD ODD
XA224	TQ2	A1	05A	T1312A	00 =		
XA224	TQ2	A1	06A	(06)	01	TD128P TD138P 08 06A 10 07A	PARITY 12*.13*
XA224	TQ2	B1	12A	T1415A	00 =		
XA224	TQ2	B1	13A	(22)	01	TD15C0 TD14C0 24 13A 26 14A	PARITY 14-15
XA110	TT3	F3	39A	T1500A	00 =		
XA110	TT3	F3	35A	(80)	01	T815P0 T0007A T0700A 69 35A 76 37A 78 38A	0-7 EVEN 8-15 ODD ODD PART
XA209	TT3	C1	17A	T1508A	00 =		
XA209	TT3	C1	18A	(36)	01	T215P0 T1108A T0811A 38 18A 40 19A 42 20A	8-11 EVEN 12-15 ODD ODD PA
XA110	TT3	C2	15B	T1512A	00 =		
XA110	TT3	C2	14B	(31)	01	T415P0 T1312A T1213A 29 14B 30 15A 34 16A	12.13 ODD 14.15 EVEN ODD
XA224	TQ2	B2	09A	T1514A	00 =		
XA224	TQ2	B2	10A	(14)	01	TD158P TD148P 18 10A 20 11A	PARITY 14*.15*

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX T1617A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 326

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA224	TQ2	C2	15A		T1617A	00	#		PARITY 16.17
XA224	TQ2	C2	16A		(30)	01		TD16C0 TD17C0 34 16A 36 17A	
XA110	TT3	C3	19B		T1619A	00	=		16.17 EVEN 18.19 ODD ODD
XA110	TT3	C3	16B		(39)	01		T1819A T1918A T617P0 33 16B 35 17B 37 18B	
XA209	TT3	C2	15B		T1623A	00	=		16-19 ODD 20-23 EVEN ODD P
XA209	TT3	C2	14B		(31)	01		T619P0 T2023A T2320A 29 14B 30 15A 34 16A	
XA108	TT3	E1	30A		T1631A	00	=		16-23 ODD 24-31 EVEN ODD P
XA108	TT3	E1	31A		(64)	01		T2431A T3124A T623P0 66 31A 68 32A 70 33A	
XA224	TQ2	C1	18A		T1716A	00	=		PARITY 16*.17*
XA224	TQ2	C1	19A		(38)	01		TD16BP TD17BP 40 19A 42 20A	
XA225	TQ2	D4	27B		T1819A	00	=		PARITY 18.19
XA225	TQ2	D4	25B		(51)	01		TD19BQ TD18C0 47 25B 49 26B	
XA110	TT3	D1	23A		T1916A	00	=		16.17 ODD 18.19 EVEN ODD
XA110	TT3	D1	24A		(50)	01		T819P0 T1617A T1716A 52 24A 54 25A 56 26A	
XA225	TQ2	D3	24B		T1918A	00	=		PARITY 18*.19*
XA225	TQ2	D3	22B		(45)	01		TD18BP TD19BP 41 22B 43 23B	
XA225	TQ2	E4	33B		T2021A	00	=		PARITY 20.21
XA225	TQ2	E4	31B		(63)	01		TD21BQ TD20BQ 59 31B 61 32B	
XA110	TT3	D2	23B		T2023A	00	=		20.21 EVEN 22.23 ODD ODD PA
XA110	TT3	D2	22B		(43)	01		T021P0 T2223A T2322A 41 22B 46 21A 48 22A	
XA111	TQ2	A2	02B		T203P0	00	=		ODD PARITY 2.3
XA111	TQ2	A2	04A		(01)	01		T0302A T0203A 04 04A 05 03B	
XA225	TQ2	E3	30B		T2120A	00	=		PARITY 20*.21*
XA225	TQ2	E3	28B		(57)	01		TD20BP TD21BP 53 28B 55 29B	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX T213P0
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 327

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA111	TQ2	B3	10B	T213P0	00 =		
XA111	TQ2	B3	08B	(21)	01	T1312A T1213A 17 08B 19 09B	EVEN PARITY 12-13
XA111	TQ2	E4	33B	T215P0	00 =		
XA111	TQ2	E4	31B	(63)	01	T1512A T1215A 59 31B 61 32B	ODD PARITY 12-15
XA225	TQ2	F4	39A	T2223A	00 =		
XA225	TQ2	F4	37A	(80)	01	TD238Q TD228Q 76 37A 78 38A	PARITY 22,23
XA111	TQ2	C4	19B	T223P0	00 =		
XA111	TQ2	C4	17B	(39)	01	T2322A T2223A 35 17B 37 18B	EVEN PARITY 22-23
XA209	TT3	C3	19B	T2316A	00 =		
XA209	TT3	C3	16B	(39)	01	T1619A T1916A T023P0 33 16B 35 17B 37 18B	16-19 ODD 20-23 EVEN ODD P
XA110	TT3	D3	27B	T2320A	00 =		
XA110	TT3	D3	24B	(51)	01	T2021A T2120A T223P0 45 24B 47 25B 49 26B	20,21 ODD 22,23 EVEN ODD P
XA225	TQ2	F3	35A	T2322A	00 =		
XA225	TQ2	F3	34B	(69)	01	TD228P TD238P 65 34B 74 35B	PARITY 2*,23*
XA219	TQ2	A3	04B	T2425A	00 =		
XA219	TQ2	A3	02A	(09)	01	TD258Q TD248Q 03 02A 07 03A	PARITY 24,25
XA110	TT3	E1	30A	T2427A	00 =		
XA110	TT3	E1	31A	(64)	01	T425P0 T2627A T2726A 66 31A 68 32A 70 33A	24,25 EVEN 26,27 ODD ODD P
XA209	TT3	D1	23A	T2431A	00 =		
XA209	TT3	D1	24A	(50)	01	T427P0 T3128A T2831A 52 24A 54 25A 56 26A	24,27 ODD 28-31 EVEN ODD P
XA219	TQ2	A4	07B	T2524A	00 =		
XA219	TQ2	A4	05B	(15)	01	TD248P TD258P 11 05B 13 06B	PARITY 24*,25*
XA219	TQ2	B3	10B	T2627A	00 =		
XA219	TQ2	B3	08B	(21)	01	TD278Q TD268Q 17 08B 19 09B	PARITY 26,27

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX T2724A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 328

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA110	TT3	E2	29B	T2724A	00	=		
XA110	TT3	E2	28B	(55)	01		T627P0 T2425A T2524A 53 28B 60 28A 62 29A	24.25 ODD 26.27 EVEN ODD P
XA219	TQ2	B4	13B	T2726A	00	=		
XA219	TQ2	B4	11B	(27)	01		T0268P T0278P 23 11B 25 12B	PARITY 26*.27*
XA219	TQ2	C3	16B	T2829A	00	=		
XA219	TQ2	C3	14B	(33)	01		T0298Q T0288Q 29 14B 31 15B	PARITY 28.29
XA110	TT3	E3	33B	T2831A	00	=		
XA110	TT3	E3	30B	(63)	01		T3130A T3031A T829P0 57 30B 59 31B 61 32B	29.29 EVEN 30.31 ODD ODD P
XA219	TQ2	C4	19B	T2928A	00	=		
XA219	TQ2	C4	17B	(39)	01		T0288P T0298P 35 17B 37 18B	PARITY 28*.29*
XA219	TQ2	D3	24B	T3031A	00	=		
XA219	TQ2	D3	22B	(45)	01		T0318Q T0308Q 41 22B 43 23B	PARITY 30.31
XA108	TT3	D1	23A	T3100A	00	=		
XA108	TT3	D1	24A	(50)	01		T1500A T0015A T631P0 52 24A 54 25A 56 26A	0-15 EVEN 16-31 ODD ODD PA
XA108	TT3	E2	29B	T3116A	00	=		
XA108	TT3	E2	28B	(55)	01		T1623A T2316A T431P0 53 28B 60 28A 62 29A	16-23 EVEN 24-31 ODD ODD P
XA209	TT3	D2	23B	T3124A	00	=		
XA209	TT3	D2	22B	(43)	01		T831P0 T2427A T2724A 41 22B 46 21A 48 22A	24-27 EVEN 28-31 ODD ODD P
XA108	TT3	E3	33B	T3128A	00	=		
XA108	TT3	E3	30B	(63)	01		T2928A T2829A T031P0 57 30B 59 31B 61 32B	28.29 ODD 30-31 EVEN ODD P
XA219	TQ2	D4	27B	T3130A	00	=		
XA219	TQ2	D4	25B	(51)	01		T0308P T0318P 47 25B 49 26B	PARITY 30*.31*
XA111	TQ2	A3	04B	T405P0	00	=		
XA111	TQ2	A3	02A	(09)	01		T0504A T0405A 03 02A 07 03A	PARITY 4-5 EVEN

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX T407P0
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 329

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA111	TQ2	E2	28A	T407P0	00	=		
XA111	TQ2	E2	29A	(60)	01		T0407A T0704A 62 29A 64 30A	ODD PARITY 4-7
XA111	TQ2	B4	13B	T415P0	00	=		
XA111	TQ2	B4	11B	(27)	01		T1514A T1415A 23 11B 25 12B	EVEN PARITY 14-15
XA111	TQ2	D1	24A	T425P0	00	=		
XA111	TQ2	D1	25A	(52)	01		T2524A T2425A 54 25A 56 26A	EVEN PARITY 24-25
XA111	TQ2	F3	35A	T427P0	00	=		
XA111	TQ2	F3	34B	(69)	01		T2427A T2724A 65 34B 74 35B	ODD PARITY 24-27
XA109	TQ2	F4	39A	T431P0	00	=		
XA109	TQ2	F4	37A	(80)	01		T3124A T2431A 76 37A 78 38A	ODD PARITY 24-31
XA111	TQ2	A4	07B	T607P0	00	=		
XA111	TQ2	A4	05B	(15)	01		T0607A T0706A 11 05B 13 06B	EVEN PARITY 6-7
XA111	TQ2	C1	18A	T617P0	00	=		
XA111	TQ2	C1	19A	(38)	01		T1617A T1716A 40 19A 42 20A	EVEN PARITY 16-17
XA111	TQ2	F1	37B	T619P0	00	=		
XA111	TQ2	F1	38B	(75)	01		T1619A T1916A 77 38B 79 39B	ODD PARITY 16-19
XA109	TQ2	F3	35A	T623P0	00	=		
XA109	TQ2	F3	34B	(69)	01		T1623A T2316A 65 34B 74 35B	ODD PARITY 16-23
XA111	TQ2	D2	21A	T627P0	00	=		
XA111	TQ2	D2	22A	(46)	01		T2627A T2726A 48 22A 50 23A	EVEN PARITY 26-27
XA109	TQ2	E2	28A	T631P0	00	=		
XA109	TQ2	E2	29A	(60)	01		T3116A T1631A 62 29A 64 30A	ODD PARITY 16-31
XA111	TQ2	B1	12A	T809P0	00	=		
XA111	TQ2	B1	13A	(22)	01		T0908A T0809A 24 13A 26 14A	EVEN PARITY 8-9

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	PLATE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA111	TQ2	E3	30B	T811P0	00 =		
XA111	TQ2	E3	28B	(57)	01	Y1108A Y0811A 53 28B 55 29B	ODD PARITY 8-11
XA109	TQ2	F2	34A	T815P0	00 =		
XA109	TQ2	F2	36A	(72)	01	Y1508A Y0815A 71 36A 73 36B	ODD PARITY 8-15
XA111	TQ2	C2	15A	T819P0	00 =		
XA111	TQ2	C2	16A	(30)	01	Y1819A Y1918A 34 16A 36 17A	EVEN PARITY 18-19
XA111	TQ2	D3	24B	T829P0	00 =		
XA111	TQ2	D3	22B	(45)	01	Y2928A Y2829A 41 22B 43 23B	EVEN PARITY 28,29
XA111	TQ2	F4	39A	T831P0	00 =		
XA111	TQ2	F4	37A	(80)	01	Y2831A Y3128A 76 37A 78 38A	ODD PARITY 28-31
XA428	THI	B3	09A	UICPE0	00 =		
XA428	THI	B3	10A	(18)	01	UICPEB4 20 10A	CTS INH PARITY ERR
XA428	THI	F2	36B	UICRTO	00 =		
XA428	THI	F2	37B	(71)	01	UICRTB4 73 37B	CTS RD IOU STAT REC
XA428	THI	C5	16B	UICSCO	00 =		
XA428	THI	C5	17B	(31)	01	UICSCB4 33 17B	
XA428	THI	C1	19A	UICSMO	00 =		
XA428	THI	C1	20A	(40)	01	UICSMB4 38 20A	CTS IOC STEP MODE
XA428	THI	B6	12B	UICSSO	00 =		
XA428	THI	B6	13B	(26)	01	UICSSB4 27 13B	CTS STEP MODE PULS
XA428	THI	F1	38B	UICTAO	00 =		
XA428	THI	F1	39B	(80)	01	UICTAB4 79 39B	CTS READ TA REC
XA428	THI	F6	38A	UICTDO	00 =		
XA428	THI	F6	39A	(77)	01	UICTDB4 75 39A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XACMA0
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA524	TQ2	F1	37B	XACMA0	00	=		DEV COMMAND
XA524	TQ2	F1	38B	(75)	01		XAMRDA XACSCA 77 38B 79 39B	
XA522	DCF	D5	38B	XACMCDX	00	=		XACMDB4 BUSS
XA522	DCF	D5	36A	(80)	01		XASTBA 72 36A	
XA522	DCF	D6	38A	XACMC0X	00	=		
XA522	DCF	D6	37A	(76)	01		XACMA0 74 37A	
				XACMDB4	00	=		
XA522	DCF	D5	38B	()	01		XACMCDX 80 38B	DEV COMMAND LINE
XA525	THI	E6	32B	XACMDO	00	=		TOC COMMAND
XA525	THI	E6	33B	(68)	01		TCMDCA 65 33B	
XA523	TT3	F1	36B	XACSCA	00	=		
XA523	TT3	F1	37B	(73)	01		XAICSO XAICRO XACMDO 75 37B 77 38B 79 39B	
XA523	TT3	D3	27B	XACSDA	00	=		CH SEL INTER*
XA523	TT3	D3	24B	(51)	01		XAICSO XAICRO XAINTA 45 24B 47 25B 49 26B	
XA523	TT3	E2	29B	XACSEA	00	=		CH SEL ENABLE
XA523	TT3	E2	28B	(55)	01		XAICSO XAICRO XAENBO 53 28B 60 28A 62 29A	
XA525	THI	D3	21A	XACSE0	00	=		
XA525	THI	D3	22A	(48)	01		XACSEA 50 22A	
XA523	TT3	F2	35B	XACSSIA	00	=		CH SEL INTER
XA523	TT3	F2	34B	(74)	01		XAICSO XAICRO XAINTO 65 34B 71 36A 72 34A	
XA523	TT3	E1	30A	XACSSA	00	=		CH SEL STROBE
XA523	TT3	E1	31A	(64)	01		XAICSO XAICRO XASTBO 66 31A 68 32A 70 33A	
XA524	TQ2	E4	33B	XAENAO	00	=		DEV ENABLE
XA524	TQ2	E4	31B	(63)	01		XACSEA XAMRDA 59 31B 61 32B	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA525	THI	E5	30B	XAENB0	00 =		
XA525	THI	E5	31B	(57)	01	TENACA 59 31B	IOC ENABLE
XA522	DCF	D7	33A	XAENCDX	00 =		
XA522	DCF	D7	36A	(61)	01	XASTBA 72 36A	XAENDB4 BUSS
XA522	DCF	D8	34A	XAENCOX	00 =		
XA522	DCF	D8	35A	(68)	01	XAENAO 70 35A	
				XAENDB4	00 =		
XA522	DCF	D7	33A	()	01	XAENCDX 61 33A	DEV ENABLE LINE
XA525	THI	B5	10B	XAGNDA	00 =		
XA525	THI	B5	11B	(19)	01	SPI301 21 11B	
XA525	THI	E2	30A	XAICRO	00 =		
XA525	THI	E2	31A	(63)	01	TCSXMA 61 31A	IOE ADRS
XA525	THI	E1	32A	XAICSO	00 =		
XA525	THI	E1	33A	(66)	01	TCSIAA 64 33A	IOC CH SEL
XA521	DCF	C3	30B	XAINADX	00 =		
XA521	DCF	C3	29A	(55)	01	XACSDA 52 29A	TINDBB4 BUSS
XA521	DCF	C4	29B	XAINAOX	00 =		
XA521	DCF	C4	28B	(56)	01	XAINCOX 51 28B	
XA522	DCF	D3	37B	XAINCDX	00 =		
XA522	DCF	D3	36A	(78)	01	XASTBA 72 36A	XAINDB4 BUSS
XA522	DCF	D4	36B	XAINCOX	00 =		
XA522	DCF	D4	35B	(75)	01	XAGNDA 73 35B	DEV INDICATOR REC
				XAINDB4	00 =		
XA522	DCF	D3	37B	()	01	XAINCDX 78 37B	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIG- NATOR	FACTOR	COMMENT
XA524	TQ2	E3	30B	XAINTA	00 =		
XA524	TQ2	E3	28B	(57)	01	XAINTO SPI042 53 28B 55 29B	
XA525	THI	E3	28A	XAINTO	00 =		TTC INTERROGATE
XA525	THI	E3	29A	(60)	01	TINTCA 62 29A	
XA439	THI	E4	28B	XAIRCO	00 =		
XA439	THI	E4	29B	(56)	01	XAIRCD4 55 29B	
XA524	TQ2	F2	34A	XAMRCA	00 =		ENB_CMD_STB
XA524	TQ2	F2	36A	(72)	01	XAMRDO XASTBO 71 36A 73 36B	
XA523	TT3	E3	33B	XAMRDA	00 =		DEV RESET
XA523	TT3	E3	30B	(63)	01	XAENBO XACMDO SPI042 57 30B 59 31B 61 32B	
XA525	THI	D4	22B	XAMRDO	00 =		
XA525	THI	D4	23B	(46)	01	XAMRDA 41 23B	
XA522	DCF	C1	25B	XAREADX	00 =		TRQ18B4 BUSS
XA522	DCF	C1	29A	(46)	01	XAGNDA 52 29A	
XA522	DCF	C2	26B	XAREAOX	00 =		
XA522	DCF	C2	27B	(47)	01	XARECO 49 27B	
XA523	TT3	C3	19B	XARECO	00 =		DEV_OR_D_REQ
XA523	TT3	C3	16B	(39)	01	XARE1A XARE2A XARE3A 33 16B 35 17B 37 18B	
XA525	THI	B6	12B	XARE1A	00 =		
XA525	THI	B6	13B	(26)	01	XARE1O 27 13B	
XA523	TT3	A3	07B	XARE1O	00 =		DEV_REQ_0+1+2
XA523	TT3	A3	04B	(15)	01	XAR00A XAR10A XAR20A 09 04B 11 05B 13 06B	
XA525	THI	C5	16B	XARE2A	00 =		
XA525	THI	C5	17B	(31)	01	XARE2O 33 17B	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA523	TT3	B3	13B	XARE20	00	=		
XA523	TT3	B3	10B	(27)	01		XAR30A XAR40A XAR50A 21 10B 23 11B 25 12B	DEV REQ 3+4+5
XA525	THI	C6	18B	XARE3A	00	=		
XA525	THI	C6	19B	(42)	01		XARE30 39 19B	
XA524	TQ2	E1	31A	XARE30	00	=		
XA524	TQ2	E1	32A	(66)	01		XAR60R XAR70R 68 32A 70 33A	DEV REQ 6+7
XA525	THI	A1	06A	XAROCA	00	=		
XA525	THI	A1	07A	(13)	01		XAROCOX 11 07A	
XA520	DCF	C3	30B	XAROCDX	00	=		
XA520	DCF	C3	29A	(55)	01		XACSSA 52 29A	XAR0DB4 BUSS
XA520	DCF	C4	29B	XAROCOX	00	=		
XA520	DCF	C4	28B	(56)	01		XAGNDA 51 28B	DEV REQ REC 0
				XAR0DB4	00	=		
XA520	DCF	C3	30B	()	01		XAROCDX 55 30B	
XA524	TQ2	A3	04B	XARORA	00	=		
XA524	TQ2	A3	02A	(09)	01		XAROCOX XACSE0 03 02A 07 03A	
XA525	THI	A3	03A	XAR00A	00	=		
XA525	THI	A3	02A	(03)	01		XAR00S 04 02A	
XA523	TT3	A1	04A	XAR00R	00	=		
XA523	TT3	A1	05A	(04)	01		XAR00S XARORA XAMRCA 06 05A 08 06A 10 07A	
XA524	TQ2	A1	05A	XAR00S	00	=		
XA524	TQ2	A1	06A	(06)	01		XAROCA XAR00R 08 06A 10 07A	DEV REQ 0
XA525	THI	A2	04A	XAR1CA	00	=		
XA525	THI	A2	05A	(08)	01		XAR1COX 06 05A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA520	DCF	C5	31B	XAR1CDX	00 =		
XA520	DCF	C5	29A	(60)	01	XACSSA 52 29A	XAR1DB4 BUSS
XA520	DCF	C6	31A	XAR1COX	00 =		
XA520	DCF	C6	30A	(57)	01	XAGNDA 54 30A	
				XAR1DB4	00 =		
XA520	DCF	C5	31B	()	01	XAR1COX 60 31B	
XA524	TQ2	A4	07B	XAR1RA	00 =		
XA524	TQ2	A4	05B	(15)	01	XA01COX XACSE0 11 05B 13 06B	
XA525	THI	A4	02B	XAR10A	00 =		
XA525	THI	A4	03B	(01)	01	XAR10S 05 03B	
XA523	TT3	A2	03A	XAR10R	00 =		
XA523	TT3	A2	02B	(07)	01	XAR10S XAR1RA XAMRCA 01 02B 03 02A 05 03B	
XA524	TQ2	A2	02B	XAR10S	00 =		DEV REQ 1
XA524	TQ2	A2	04A	(01)	01	XAR1CA XAR10R 04 04A 05 03B	
XA525	THI	B1	13A	XAR2CA	00 =		
XA525	THI	B1	14A	(24)	01	XAR2COX 22 14A	
XA520	DCF	C7	25A	XAR2CDX	00 =		XAR2DB4 BUSS
XA520	DCF	C7	29A	(43)	01	XACSSA 52 29A	
XA520	DCF	C8	26A	XAR2COX	00 =		DEV REQ REC 2
XA520	DCF	C8	28A	(48)	01	XAGNDA 50 28A	
				XAR2DB4	00 =		
XA520	DCF	C7	25A	()	01	XAR2CDX 43 25A	
XA524	TQ2	B3	10B	XAR2RA	00 =		
XA524	TQ2	B3	08B	(21)	01	XA02COX XACSE0 17 08B 19 09B	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA525	THI	B3	09A	XAR20A	00 =		
XA525	THI	B3	10A	(18)	01	XAR20S 20 10A	
XA523	TT3	B1	11A	XAR20R	00 =		
XA523	TT3	B1	12A	(20)	01	XAR20S XAR2RA XAMRCA 22 12A 24 13A 26 14A	
XA524	TQ2	B1	12A	XAR20S	00 =		DEV REQ 2
XA524	TQ2	B1	13A	(22)	01	XAR2CA XAR20R 24 13A 26 14A	
XA525	THI	B2	11A	XAR3CA	00 =		
XA525	THI	B2	12A	(25)	01	XAR3COX 23 12A	
XA520	DCF	D1	32B	XAR3CDX	00 =		XAR3DB4 BUSS
XA520	DCF	D1	36A	(65)	01	SPI301 72 36A	
XA520	DCF	D2	33B	XAR3COX	00 =		DEV REQ REC 3
XA520	DCF	D2	34B	(69)	01	SPI309 71 34B	
				XAR3DB4	00 =		
XA520	DCF	D1	32B	()	01	XAR3COX 65 32B	
XA524	TQ2	B4	13B	XAR3RA	00 =		
XA524	TQ2	B4	11B	(27)	01	XA03COX XACSE0 23 11B 25 12B	
XA525	THI	B4	08B	XAR30A	00 =		
XA525	THI	B4	09B	(14)	01	XAR30S 17 09B	
XA523	TT3	B2	09B	XAR30R	00 =		
XA523	TT3	B2	09A	(19)	01	XAR30S XAR3RA XAMRCA 14 09A 17 08B 18 10A	
XA524	TQ2	B2	09A	XAR30S	00 =		DEV REQ 3
XA524	TQ2	B2	10A	(14)	01	XAR3CA XAR30R 18 10A 20 11A	
XA525	THI	C1	19A	XAR4CA	00 =		
XA525	THI	C1	20A	(40)	01	XAR4COX 38 20A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	INPUT GROUP	GROUP	TEST POINTS AND OR	EQUATION	TERM OR DESIGN NOTE	FACTOR	COMMENT
XA520	DCF	D3	37B	XAR4CDX	00 =		
XA520	DCF	D3	36A	(78)	01	SPI301 72 36A	XAR4DB4 BUSS
XA520	DCF	D4	36B	XAR4COX	00 =		
XA520	DCF	D4	35B	(75)	01	SPI309 73 35B	DEV REQ REC 4
XA520	DCF	D3	37B	XAR4DB4	00 =		
XA520	DCF	D3		()	01	XAR4CDX 78 37B	
XA524	TQ2	C3	16B	XAR4RA	00 =		
XA524	TQ2	C3	14B	(33)	01	XA04COX XACSEO 29 14B 31 15B	
XA525	THI	C3	15A	XAR40A	00 =		
XA525	THI	C3	16A	(34)	01	XAR40S 36 16A	
XA523	TT3	C1	17A	XAR40R	00 =		
XA523	TT3	C1	18A	(36)	01	XAR40S XAR4RA XAMRCA 38 18A 40 19A 42 20A	
XA524	TQ2	C1	18A	XAR40S	00 =		
XA524	TQ2	C1	19A	(38)	01	XAR4CA XAR40R 40 19A 42 20A	DEV REQ 4
XA525	THI	C2	17A	XAR5CA	00 =		
XA525	THI	C2	18A	(37)	01	XAR5COX 35 18A	
XA520	DCF	D5	38B	XAR5CDX	00 =		
XA520	DCF	D5	36A	(80)	01	SPI301 72 36A	XAR5DB4 BUSS
XA520	DCF	D6	38A	XAR5COX	00 =		
XA520	DCF	D6	37A	(76)	01	SPI309 74 37A	DEV REQ REC 5
XA520	DCF	D5	38B	XAR5DB4	00 =		
XA520	DCF	D5		()	01	XAR5CDX 80 38B	
XA524	TQ2	C4	19B	XAR5RA	00 =		
XA524	TQ2	C4	17B	(39)	01	XA05COX XACSEO 35 17B 37 18B	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA525	THI	C4	14B	XAR50A	00 =		
XA525	THI	C4	15B	(30)	01	XAR50S 29 15B	
XA523	TT3	C2	15B	XAR50R	00 =		
XA523	TT3	C2	14B	(31)	01	XAR50S XAR5RA XAMRCA 29 14B 30 15A 34 16A	
XA524	TQ2	C2	15A	XAR50S	00 =		DEV REQ 5
XA524	TQ2	C2	16A	(30)	01	XAR5CA XAR50R 34 16A 36 17A	
XA525	THI	D1	25A	XAR6CA	00 =		
XA525	THI	D1	26A	(54)	01	XAR6COX 52 26A	
XA520	DCF	D7	33A	XAR6CDX	00 =		XAR6DB4 BUSS
XA520	DCF	D7	36A	(61)	01	SPI301 72 36A	
XA520	DCF	D8	34A	XAR6COX	00 =		DEV REQ REC 6
XA520	DCF	D8	35A	(68)	01	SPI309 70 35A	
XA520	DCF	D7	33A	XAR6DB4	00 =		
XA520	DCF	D7	33A	()	01	XAR6CDX 61 33A	
XA524	TQ2	D3	24B	XAR6RA	00 =		
XA524	TQ2	D3	22B	(45)	01	XA06COX XACSEO 41 22B 43 23B	
XA523	TT3	D1	23A	XAR60R	00 =		
XA523	TT3	D1	24A	(50)	01	XAR60S XAR6RA XAMRCA 52 24A 54 25A 56 26A	
XA524	TQ2	D1	24A	XAR60S	00 =		DEV REQ 6
XA524	TQ2	D1	25A	(52)	01	XAR6CA XAR60R 54 25A 56 26A	
XA525	THI	D2	23A	XAR7CA	00 =		
XA525	THI	D2	24A	(49)	01	XAR7COX 47 24A	
XA522	DCF	D1	32B	XAR7CDX	00 =		XAR7DB4 BUSS
XA522	DCF	D1	35A	(65)	01	XASTBA 72 36A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XAR7C0X
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CONNECTOR	UNIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	RESISTOR	FACTOR	COMMENT
XA522	DCF	D2	33B	XAR7C0X	00 =			
XA522	DCF	D2	34B	(69)	01		XAGNDA 71 34B	DEV REQ REC 7
				XAR7DB4	00 =			
XA522	DCF	D1	32B	()	01		XAR7CDX 65 32B	
XA524	TQ2	D4	27B	XAR7RA	00 =			
XA524	TQ2	D4	25B	(51)	01		XA07C0X XACSE0 47 25B 49 26B	
XA523	TT3	D2	23B	XAR7OR	00 =			
XA523	TT3	D2	22B	(43)	01		XAR7OS XAR7RA XAMRCA 41 22B 46 21A 48 22A	
XA524	TQ2	D2	21A	XAR7OS	00 =			DEV REQ 7
XA524	TQ2	D2	22A	(46)	01		XAR7CA XAR7OR 48 22A 50 23A	
XA524	TQ2	E2	28A	XASTBA	00 =			
XA524	TQ2	E2	29A	(60)	01		SPI042 XASTB0 62 29A 64 30A	
XA525	THI	E4	28B	XASTB0	00 =			IDC STROBE
XA525	THI	E4	29B	(56)	01		TSTBCA 55 29B	
XA521	DCF	C1	25B	XAOPADX	00 =			TDIPB4 BUSS
XA521	DCF	C1	29A	(46)	01		XACSDA 52 29A	
XA521	DCF	C2	26B	XAOPA0X	00 =			
XA521	DCF	C2	27B	(47)	01		XAOPCOX 49 27B	
XA520	DCF	C1	25B	XAOPCDX	00 =			XAOPDB4 BUSS
XA520	DCF	C1	29A	(46)	01		XACSSA 52 29A	
XA520	DCF	C2	26B	XAOPCOX	00 =			
XA520	DCF	C2	27B	(47)	01		TDLPA0 49 27B	
				XAOPDB4	00 =			
XA520	DCF	C1	25B	()	01		XAOPCDX 46 25B	DEV DATA LINE PARITY

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XA00ADX
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CONNECTOR	INPUT GROUP	GROUP	TEST POINTS AND OR	EQUATION	TERM TEST POINT	FACTOR	COMMENT
XA522	DCF	A1	02B	XA00ADX	00 =		
XA522	DCF	A1	05A	(07)	01	XACSDA 06 05A	TDI08B4 BUSS
XA522	DCF	A2	03B	XA00A0X	00 =		
XA522	DCF	A2	04B	(09)	01	XA00COX 11 04B	
XA521	DCF	A1	02B	XA00BDX	00 =		
XA521	DCF	A1	05A	(07)	01	XACSLA 06 05A	TDI08B4 BUSS
XA521	DCF	A2	03B	XA00BOX	00 =		
XA521	DCF	A2	04B	(09)	01	XAR00S 11 04B	
XA520	DCF	A1	02B	XA00CDX	00 =		
XA520	DCF	A1	05A	(07)	01	XACSSA 06 05A	XA00DB4 BUSS
XA520	DCF	A2	03B	XA00COX	00 =		
XA520	DCF	A2	04B	(09)	01	TDLOAO 11 04B	
				XA00DB4	00 =		
XA520	DCF	A1	02B	()	01	XA00CDX 07 02B	DEV DATA LINE 0
XA522	DCF	A3	07B	XA01ADX	00 =		
XA522	DCF	A3	05A	(17)	01	XACSDA 06 05A	TDI18B4 BUSS
XA522	DCF	A4	06B	XA01A0X	00 =		
XA522	DCF	A4	05B	(15)	01	XA01COX 13 05B	
XA521	DCF	A3	07B	XA01BDX	00 =		
XA521	DCF	A3	05A	(17)	01	XACSLA 06 05A	TDI18B4 BUSS
XA521	DCF	A4	06B	XA01B0X	00 =		
XA521	DCF	A4	05B	(15)	01	XAR10S 13 05B	
XA520	DCF	A3	07B	XA01CDX	00 =		
XA520	DCF	A3	05A	(17)	01	XACSSA 06 05A	XA01DB4 BUSS

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XA01C0X
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA520	DCF	A4	06B	XA01C0X	00 =		
XA520	DCF	A4	05B	(15)	01	TDL1A0 13 05B	
				XA01DB4	00 =		
XA520	DCF	A3	07B	()	01	XA01C0X 17 07B	DEV DATA LINE 1
XA522	DCF	A5	08B	XA02ADX	00 =		
XA522	DCF	A5	05A	(14)	01	XACSDA 06 05A	TDI2884 BUSS
XA522	DCF	A6	07A	XA02A0X	00 =		
XA522	DCF	A6	06A	(10)	01	XA02C0X 08 06A	
XA521	DCF	A5	08B	XA02BDX	00 =		
XA521	DCF	A5	05A	(14)	01	XAC5IA 06 05A	TDI2884 BUSS
XA521	DCF	A6	07A	XA02B0X	00 =		
XA521	DCF	A6	06A	(10)	01	XAR20S 08 06A	
XA520	DCF	A5	08B	XA02CDX	00 =		
XA520	DCF	A5	05A	(14)	01	XACSSA 06 05A	XA02DB4 BUSS
XA520	DCF	A6	07A	XA02C0X	00 =		
XA520	DCF	A6	06A	(10)	01	TDL2A0 08 06A	
				XA02DB4	00 =		
XA520	DCF	A5	08B	()	01	XA02CDX 14 08B	DEV DATA LINE 2
XA522	DCF	A7	02A	XA03ADX	00 =		
XA522	DCF	A7	05A	(01)	01	XACSDA 06 05A	TDI3884 BUSS
XA522	DCF	A8	03A	XA03A0X	00 =		
XA522	DCF	A8	04A	(03)	01	XA03C0X 04 04A	
XA521	DCF	A7	02A	XA03BDX	00 =		
XA521	DCF	A7	05A	(01)	01	XAC5IA 06 05A	TDI3884 BUSS

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XA03B0X
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA521	DCF	A8	03A	XA03B0X	00 =		
XA521	DCF	A8	04A	(03)	01	XAR30S 04 04A	
XA520	DCF	A7	02A	XA03CDX	00 =		
XA520	DCF	A7	05A	(01)	01	XACSSA 06 05A	XA03DB4 BUSS
XA520	DCF	A8	03A	XA03C0X	00 =		
XA520	DCF	A8	04A	(03)	01	TDL3A0 04 04A	
				XA03DB4	00 =		
XA520	DCF	A7	02A	()	01	XA03CDX 01 02A	DEV DATA LINE 3
XA522	DCF	B1	10B	XA04ADX	00 =		
XA522	DCF	B1	13A	(27)	01	XACSDA 36 13A	TDI48B4 BUSS
XA522	DCF	B2	11B	XA04A0X	00 =		
XA522	DCF	B2	12B	(29)	01	XA04C0X 31 12B	
XA521	DCF	B1	10B	XA04BDX	00 =		
XA521	DCF	B1	13A	(27)	01	XACSYA 36 13A	TDI48B4 BUSS
XA521	DCF	B2	11B	XA04B0X	00 =		
XA521	DCF	B2	12B	(29)	01	XAR40S 31 12B	
XA520	DCF	B1	10B	XA04CDX	00 =		
XA520	DCF	B1	13A	(27)	01	XACSSA 36 13A	XA04DB4 BUSS
XA520	DCF	B2	11B	XA04C0X	00 =		
XA520	DCF	B2	12B	(29)	01	TDL4A0 31 12B	
				XA04DB4	00 =		
XA520	DCF	B1	10B	()	01	XA04CDX 27 10B	DEV DATA LINE 4
XA522	DCF	B3	15B	XA05ADX	00 =		
XA522	DCF	B3	13A	(37)	01	XACSDA 36 13A	TDI58B4 BUSS

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA522	DCF	B4	14B	XA05A0X	00 =		
XA522	DCF	B4	13B	(35)	01	XA05C0X 33 13B	
XA521	DCF	B3	15B	XA05BDX	00 =		
XA521	DCF	B3	13A	(37)	01	XACSTIA 36 13A	TDI5BB4 BUSS
XA521	DCF	B4	14B	XA05B0X	00 =		
XA521	DCF	B4	13B	(35)	01	XAR50S 33 13B	
XA520	DCF	B3	15B	XA05CDX	00 =		
XA520	DCF	B3	13A	(37)	01	XACSSA 36 13A	XA05DB4 BUSS
XA520	DCF	B4	14B	XA05C0X	00 =		
XA520	DCF	B4	13B	(35)	01	TDL5A0 33 13B	
XA520	DCF	B3	15B	XA05DB4	00 =		
XA520	DCF	B3	15B	()	01	XA05CDX 37 15B	DEV DATA LINE 5
XA522	DCF	B5	16A	XA06ADX	00 =		
XA522	DCF	B5	13A	(41)	01	XACSDA 36 13A	TDI6BB4 BUSS
XA522	DCF	B6	15A	XA06A0X	00 =		
XA522	DCF	B6	14A	(40)	01	XA06C0X 38 14A	
XA521	DCF	B5	16A	XA06BDX	00 =		
XA521	DCF	B5	13A	(41)	01	XACSTIA 36 13A	TDI6BB4 BUSS
XA521	DCF	B6	15A	XA06B0X	00 =		
XA521	DCF	B6	14A	(40)	01	XAR60S 38 14A	
XA520	DCF	B5	16A	XA06CDX	00 =		
XA520	DCF	B5	13A	(41)	01	XACSSA 36 13A	XA06DB4 BUSS
XA520	DCF	B6	15A	XA06C0X	00 =		
XA520	DCF	B6	14A	(40)	01	TDL6A0 38 14A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA520	DCF	B5	16A	XA06DB4 ()	00 =			
					01		XA06CDX 41 16A	DEV DATA LINE 6
XA522	DCF	B7	10A	XA07ADX (23)	00 =			
XA522	DCF	B7	13A		01		XACSDA 36 13A	TDI78B4 BUSS
XA522	DCF	B8	11A	XA07A0X (30)	00 =			
XA522	DCF	B8	12A		01		XA07COX 34 12A	
XA521	DCF	B7	10A	XA07BDX (23)	00 =			
XA521	DCF	B7	13A		01		XACSYA 36 13A	TDI78B4 BUSS
XA521	DCF	B8	11A	XA07BOX (30)	00 =			
XA521	DCF	B8	12A		01		XAR70S 34 12A	
XA520	DCF	B7	10A	XA07CDX (23)	00 =			
XA520	DCF	B7	13A		01		XACSSA 36 13A	XA07DB4 BUSS
XA520	DCF	B8	11A	XA07COX (30)	00 =			
XA520	DCF	B8	12A		01		TOL7A0 34 12A	
				XA07DB4 ()	00 =			
XA520	DCF	B7	10A		01		XA07CDX 23 10A	DEV DATA LINE 7
XA530	TQ2	F1	37B	XBCMA0 (75)	00 =			
XA530	TQ2	F1	38B		01		XBMRDA XBCSCA 77 38B 79 39B	DEV COMMAND
XA528	DCF	D5	38B	XBCMCDX (80)	00 =			
XA528	DCF	D5	36A		01		XBSTBA 72 36A	XBCMDB4 BUSS
XA528	DCF	D6	38A	XBCMCOX (75)	00 =			
XA528	DCF	D6	37A		01		XBCMA0 74 37A	
				XBCMDB4 ()	00 =			
XA528	DCF	D5	38B		01		XBCMCDX 80 38B	DEV COMMAND LINE

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA531	THI	E6	32B	XBCMD0	00 =		IOC COMMAND
XA531	THI	E6	33B	(68)	01	TCMDCA 65 33B	
XA529	TT3	F1	36B	XBCSCA	00 =		CH_SEL_COMMAND
XA529	TT3	F1	37B	(73)	01	XBICSO XBICRO XBCMD0 75 37B 77 38B 79 39B	
XA529	TT3	D3	27B	XBCSDA	00 =		CH_SEL_INTER*
XA529	TT3	D3	24B	(51)	01	XBICSO XBICRO XBINTA 45 24B 47 25B 49 26B	
XA529	TT3	E2	29B	XBCSEA	00 =		CH_SEL_ENABLE
XA529	TT3	E2	28B	(55)	01	XBICSO XBICRO XBENB0 53 28B 60 28A 62 29A	
XA531	THI	D3	21A	XBCSEO	00 =		
XA531	THI	D3	22A	(48)	01	XBCSEA 50 22A	
XA529	TT3	F2	35B	XBCSIA	00 =		CH_SEL_INTER
XA529	TT3	F2	34B	(74)	01	XBICSO XBICRO XBINTO 65 34B 71 36A 72 34A	
XA529	TT3	E1	30A	XBCSSA	00 =		CH_SEL_STROBE
XA529	TT3	E1	31A	(64)	01	XBICSO XBICRO XBSTB0 66 31A 68 32A 70 33A	
XA530	TQ2	E4	33B	XBENAD	00 =		DEV_ENABLE
XA530	TQ2	E4	31B	(63)	01	XBCSEA XBMRDA 59 31B 61 32B	
XA531	THI	E5	30B	XBENB0	00 =		IOC_ENABLE
XA531	THI	E5	31B	(57)	01	TENACA 59 31B	
XA528	DCF	D7	33A	XBENC0X	00 =		XBENDB4 BUSS
XA528	DCF	D7	36A	(61)	01	XBSTBA 72 36A	
XA528	DCF	D8	34A	XBENC0X	00 =		
XA528	DCF	D8	35A	(68)	01	XBENAO 70 35A	
				XBENDB4	00 =		
XA528	DCF	D7	33A	()	01	XBENC0X 61 33A	DEV_ENABLE_LINE

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XBGND A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
XA531	THI	B5	10B	XBGND A	00	=		
XA531	THI	B5	11B	(19)	01		SPI301 21 11B	
XA531	THI	E2	30A	XBICRO	00	=		IOE ADRS
XA531	THI	E2	31A	(63)	01		TCSXMA 61 31A	
XA531	THI	E1	32A	XBICSO	00	=		IOC CH.SEL
XA531	THI	E1	33A	(66)	01		TCS2AA 64 33A	
XA527	DCF	C3	30B	XBINADX	00	=		TINDBB4 BUSS
XA527	DCF	C3	29A	(55)	01		XBCSDA 52 29A	
XA527	DCF	C4	29B	XBINAOX	00	=		
XA527	DCF	C4	28B	(56)	01		XB INCOX 51 28B	
XA528	DCF	D3	37B	XB INCDX	00	=		XB INDB4 BUSS
XA528	DCF	D3	36A	(78)	01		XBSTBA 72 36A	
XA528	DCF	D4	36B	XB INCOX	00	=		DEV INDICATOR REC.
XA528	DCF	D4	35B	(75)	01		XBGND A 73 35B	
				XB INDB4	00	=		
XA528	DCF	D3	37B	()	01		XB INCDX 78 37B	
XA530	TQ2	E3	30B	XBINTA	00	=		
XA530	TQ2	E3	28B	(57)	01		XBINTO SPI043 53 28B 55 29B	
XA531	THI	E3	28A	XBINTO	00	=		IOC INTERROGATE
XA531	THI	E3	29A	(60)	01		TINTCA 62 29A	
XA439	THI	F1	38B	XBIRCO	00	=		
XA439	THI	F1	39B	(80)	01		XBIRCD4 79 39B	
XA530	TQ2	F2	34A	XBMRCA	00	=		ENB.CMD.STB.
XA530	TQ2	F2	36A	(72)	01		XBMRDO XBSTBO 71 36A 73 36B	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA529	TT3	E3	33B	XBMRDA	00	=		
XA529	TT3	E3	30B	(63)	01		XBENBO XBCMD0 SP I043 57 30B 59 31B 61 32B	DEV RESET
XA531	THI	D4	22B	XBMRD0	00	=		
XA531	THI	D4	23B	(46)	01		XBMRDA 41 23B	
XA528	DCF	C1	25B	XBREADX	00	=		
XA528	DCF	C1	29A	(46)	01		XBGNDA 52 29A	TRQ2884 BUSS
XA528	DCF	C2	26B	XBREA0X	00	=		
XA528	DCF	C2	27B	(47)	01		XBRECO 49 27B	
XA529	TT3	C3	19B	XBRECO	00	=		
XA529	TT3	C3	16B	(39)	01		XBRE1A XBRE2A XBRE3A 33 16B 35 17B 37 18B	DEV OR D REQ
XA531	THI	B6	12B	XBRE1A	00	=		
XA531	THI	B6	13B	(26)	01		XBRE10 27 13B	
XA529	TT3	A3	07B	XBRE10	00	=		
XA529	TT3	A3	04B	(15)	01		XBR00A XBR10A XBR20A 09 04B 11 05B 13 06B	DEV REQ 0+1+2
XA531	THI	C5	16B	XBRE2A	00	=		
XA531	THI	C5	17B	(31)	01		XBRE20 33 17B	
XA529	TT3	B3	13B	XBRE20	00	=		
XA529	TT3	B3	10B	(27)	01		XBR30A XBR40A XBR50A 21 10B 23 11B 25 12B	DEV REQ 3+4+5
XA531	THI	C6	18B	XBRE3A	00	=		
XA531	THI	C6	19B	(42)	01		XBRE30 39 19B	
XA530	TQ2	E1	31A	XBRE30	00	=		
XA530	TQ2	E1	32A	(66)	01		XBR60R XBR70R 68 32A 70 33A	DEV REQ 6+7
XA531	THI	A1	06A	XBROCA	00	=		
XA531	THI	A1	07A	(13)	01		XBROCOX 11 07A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA526	DCF	C3	30B	XBR0CDX	00	=		
XA526	DCF	C3	29A	(55)	01		XBCSSA 52 29A	XBR0DB4 BUSS
XA526	DCF	C4	29B	XBR0COX	00	=		
XA526	DCF	C4	28B	(56)	01		XBGND A 51 28B	DEV REQ REC. 0
				XBR0DB4	00	=		
XA526	DCF	C3	30B	()	01		XBR0CDX 55 30B	
XA530	TQ2	A3	04B	XBR0RA	00	=		
XA530	TQ2	A3	02A	(09)	01		XB00COX XBCSE0 03 02A 07 03A	
XA531	THI	A3	03A	XBR00A	00	=		
XA531	THI	A3	02A	(03)	01		XBR00S 04 02A	
XA529	TT3	A1	04A	XBR00R	00	=		
XA529	TT3	A1	05A	(04)	01		XBR00S XBR0RA XBMRCA 06 05A 08 06A 10 07A	
XA530	TQ2	A1	05A	XBR00S	00	=		DEV REQ 0
XA530	TQ2	A1	06A	(06)	01		XBR0CA XBR00R 08 06A 10 07A	
XA531	THI	A2	04A	XBR1CA	00	=		
XA531	THI	A2	05A	(08)	01		XBR1COX 06 05A	
XA526	DCF	C5	31B	XBR1COX	00	=		
XA526	DCF	C5	29A	(60)	01		XBCSSA 52 29A	XBR1DB4 BUSS
XA526	DCF	C6	31A	XBR1COX	00	=		
XA526	DCF	C6	30A	(57)	01		XBGND A 54 30A	DEV REQ REC. 1
				XBR1DB4	00	=		
XA526	DCF	C5	31B	()	01		XBR1CDX 60 31B	
XA530	TQ2	A4	07B	XBR1RA	00	=		
XA530	TQ2	A4	05B	(15)	01		XB01COX XBCSE0 11 05B 13 06B	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XBR10A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA531	THI	A4	02B	XBR10A	00 =		
XA531	THI	A4	03B	(01)	01	XBR10S 05 03B	
XA529	TT3	A2	03A	XBR10R	00 =		
XA529	TT3	A2	02B	(07)	01	XBR10S XBR1RA XBMRC 01 02B 03 02A 05 03B	
XA530	TQ2	A2	02B	XBR10S	00 =		
XA530	TQ2	A2	04A	(01)	01	XBR1CA XBR10R 04 04A 05 03B	DEV REQ 1
XA531	THI	B1	13A	XBR2CA	00 =		
XA531	THI	B1	14A	(24)	01	XBR2COX 22 14A	
XA526	DCF	C7	25A	XBR2CDX	00 =		
XA526	DCF	C7	29A	(43)	01	XBCSSA 52 29A	XBR2DB4 BUSS
XA526	DCF	C8	26A	XBR2COX	00 =		
XA526	DCF	C8	28A	(48)	01	XBGNDA 50 28A	DEV REQ REC. 2
XA526	DCF	C7	25A	XBR2DB4	00 =		
XA526	DCF	C7	25A	()	01	XBR2CDX 43 25A	
XA530	TQ2	B3	10B	XBR2RA	00 =		
XA530	TQ2	B3	08B	(21)	01	XB02COX XBCSE0 17 08B 19 09B	
XA531	THI	B3	09A	XBR20A	00 =		
XA531	THI	B3	10A	(18)	01	XBR20S 20 10A	
XA529	TT3	B1	11A	XBR20R	00 =		
XA529	TT3	B1	12A	(20)	01	XBR20S XBR2RA XBMRC 22 12A 24 13A 26 14A	
XA530	TQ2	B1	12A	XBR20S	00 =		
XA530	TQ2	B1	13A	(22)	01	XBR2CA XBR20R 24 13A 26 14A	DEV REQ 2
XA531	THI	B2	11A	XBR3CA	00 =		
XA531	THI	B2	12A	(25)	01	XBR3COX 23 12A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XBR3CDX
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 350

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA526	DCF	D1	32B	XBR3CDX	00 =		
XA526	DCF	D1	36A	(65)	01	SPI301 72 36A	XBR3DB4 BUSS
XA526	DCF	D2	33B	XBR3COX	00 =		
XA526	DCF	D2	34B	(69)	01	SPI309 71 34B	DEV REQ REC. 3
XA526	DCF	D1	32B	XBR3DB4	00 =		
XA526	DCF	D1	32B	()	01	XBR3CDX 65 32B	
XA530	TQ2	B4	13B	XBR3RA	00 =		
XA530	TQ2	B4	11B	(27)	01	XB03COX XBCSE0 23 11B 25 12B	
XA531	THI	B4	08B	XBR30A	00 =		
XA531	THI	B4	09B	(14)	01	XBR30S 17 09B	
XA529	TT3	B2	09B	XBR30R	00 =		
XA529	TT3	B2	09A	(19)	01	XBR30S XBR3RA XBMRC A 14 09A 17 08B 18 10A	DEV REQ 3
XA530	TQ2	B2	09A	XBR30S	00 =		
XA530	TQ2	B2	10A	(14)	01	XBR3CA XBR30R 18 10A 20 11A	
XA531	THI	C1	19A	XBR4CA	00 =		
XA531	THI	C1	20A	(40)	01	XBR4COX 38 20A	
XA526	DCF	D3	37B	XBR4CDX	00 =		
XA526	DCF	D3	36A	(78)	01	SPI301 72 36A	XBR4DB4 BUSS
XA526	DCF	D4	36B	XBR4COX	00 =		
XA526	DCF	D4	35B	(75)	01	SPI309 73 35B	DEV REQ REC. 4
XA526	DCF	D3	37B	XBR4DB4	00 =		
XA526	DCF	D3	37B	()	01	XBR4CDX 78 37B	
XA530	TQ2	C3	16B	XBR4RA	00 =		
XA530	TQ2	C3	14B	(33)	01	XB04COX XBCSE0 29 14B 31 15B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XBR40A
FILE IDENT T39BIUX2 DATE 09-03-82 PAGE 351

CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA531	THI	C3	15A	XBR40A	00	=		
XA531	THI	C3	16A	(34)	01		XBR40S 36 16A	
XA529	TT3	C1	17A	XBR40R	00	=		
XA529	TT3	C1	18A	(36)	01		XBR40S XBR4RA XBMRC 38 18A 40 19A 42 20A	
XA530	TQ2	C1	18A	XBR40S	00	=		DEV REQ 4
XA530	TQ2	C1	19A	(38)	01		XBR4CA XBR4OR 40 19A 42 20A	
XA531	THI	C2	17A	XBR5CA	00	=		
XA531	THI	C2	18A	(37)	01		XBR5C0X 35 18A	
XA526	DCF	D5	38B	XBR5CDX	00	=		XBR5DB4 BUSS
XA526	DCF	D5	36A	(80)	01		SPI301 72 36A	
XA526	DCF	D6	38A	XBR5C0X	00	=		DEV REQ REC. 5
XA526	DCF	D6	37A	(76)	01		SPI309 74 37A	
				XBR5DB4	00	=		
XA526	DCF	D5	38B	()	01		XBR5CDX 80 38B	
XA530	TQ2	C4	19B	XBR5RA	00	=		
XA530	TQ2	C4	17B	(39)	01		XB05C0X XBCSE0 35 17B 37 18B	
XA531	THI	C4	14B	XBR50A	00	=		
XA531	THI	C4	15B	(30)	01		XBR50S 29 15B	
XA529	TT3	C2	15B	XBR50R	00	=		
XA529	TT3	C2	14B	(31)	01		XBR50S XBR5RA XBMRC 29 14B 30 15A 34 16A	
XA530	TQ2	C2	15A	XBR50S	00	=		DEV REQ 5
XA530	TQ2	C2	16A	(30)	01		XBR5CA XBR5OR 34 16A 36 17A	
XA531	THI	D1	25A	XBR6CA	00	=		
XA531	THI	D1	26A	(54)	01		XBR6C0X 52 26A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XBR6CDX
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA526	DCF	D7	33A	XBR6CDX	00	H		
XA526	DCF	D7	36A	(61)	01		XBR6DB4 BUSS	
							SPI301 72 36A	
XA526	DCF	D8	34A	XBR6COX	00	=		DEV REQ REC. 6
XA526	DCF	D8	35A	(68)	01		SPI309 70 35A	
				XBR6DB4	00	=		
XA526	DCF	D7	33A	()	01		XBR6CDX 61 33A	
XA530	TQ2	D3	24B	XBR6RA	00	=		
XA530	TQ2	D3	22B	(45)	01		XB06COX XBCSE0 41 22B 43 23B	
XA529	TT3	D1	23A	XBR60R	00	=		
XA529	TT3	D1	24A	(50)	01		XBR60S XBR6RA XBRCA 52 24A 54 25A 56 26A	
XA530	TQ2	D1	24A	XBR60S	00	=		DEV REQ 6
XA530	TQ2	D1	25A	(52)	01		XBR6CA XBR60R 54 25A 56 26A	
XA531	THI	D2	23A	XBR7CA	00	=		
XA531	THI	D2	24A	(49)	01		XBR7COX 47 24A	
XA528	DCF	D1	32B	XBR7CDX	00	=		XBR7DB4 BUSS
XA528	DCF	D1	36A	(65)	01		XBSTBA 72 36A	
XA528	DCF	D2	33B	XBR7COX	00	=		DEV REQ REC. 7
XA528	DCF	D2	34B	(69)	01		XBGND 71 34B	
				XBR7DB4	00	=		
XA528	DCF	D1	32B	()	01		XBR7CDX 65 32B	
XA530	TQ2	D4	27B	XBR7RA	00	=		
XA530	TQ2	D4	25B	(51)	01		XB07COX XBCSE0 47 25B 49 26B	
XA529	TT3	D2	23B	XBR70R	00	=		
XA529	TT3	D2	22B	(43)	01		XBR70S XBR7RA XBRCA 41 22B 46 21A 48 22A	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XBR70S
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA530	TQ2	D2	21A	XBR70S	00 =			
XA530	TQ2	D2	22A	(46)	01	XBR7CA XBR7OR 48 22A 50 23A	DEV REQ 7	
XA530	TQ2	E2	28A	XBSTBA	00 =			
XA530	TQ2	E2	29A	(60)	01	SPI043 XBSTB0 62 29A 64 30A		
XA531	THI	E4	28B	XBSTB0	00 =			
XA531	THI	E4	29B	(56)	01	YSTBCA 55 29B	IOC STROBE	
XA527	DCF	C1	25B	XBOPADX	00 =			
XA527	DCF	C1	29A	(46)	01	XBCSDA 52 29A	TDIPBB4 BUSS	
XA527	DCF	C2	26B	XBOPA0X	00 =			
XA527	DCF	C2	27B	(47)	01	XBOPCOX 49 27B		
XA526	DCF	C1	25B	XBOPCDX	00 =			
XA526	DCF	C1	29A	(46)	01	XBCSSA 52 29A	XBOPDB4 BUSS	
XA526	DCF	C2	26B	XBOPCOX	00 =			
XA526	DCF	C2	27B	(47)	01	TOLPA0 49 27B		
				XBOPDB4	00 =			
XA526	DCF	C1	25B	()	01	XBOPCDX 46 25B	DEV DATA LINE PART	
XA528	DCF	A1	02B	XB00ADX	00 =			
XA528	DCF	A1	05A	(07)	01	XBCSDA 06 05A	TDI0BB4 BUSS	
XA528	DCF	A2	03B	XB00A0X	00 =			
XA528	DCF	A2	04B	(09)	01	XB00C0X 11 04B		
XA527	DCF	A1	02B	XB00BDX	00 =			
XA527	DCF	A1	05A	(07)	01	XBCSIA 06 05A	TDI0BB4 BUSS	
XA527	DCF	A2	03B	XB00B0X	00 =			
XA527	DCF	A2	04B	(09)	01	XBROOS 11 04B		

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XB00CDX
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA526	DCF	A1	02B	XB00CDX	00	=		
XA526	DCF	A1	05A	(07)	01		XB00DB4	BUSS
							XBCSSA 06 05A	
XA526	DCF	A2	03B	XB00COX	00	=		
XA526	DCF	A2	04B	(09)	01		TDL0A0 11 04B	
				XB00DB4	00	=		
XA526	DCF	A1	02B	()	01		XB00CDX 07 02B	DEV DATA LINE 0
XA528	DCF	A3	07B	XB01ADX	00	=		
XA528	DCF	A3	05A	(17)	01		TDI1B84	BUSS
							XBCSDA 06 05A	
XA528	DCF	A4	06B	XB01A0X	00	=		
XA528	DCF	A4	05B	(15)	01		XB01COX 13 05B	
XA527	DCF	A3	07B	XB01BDX	00	=		
XA527	DCF	A3	05A	(17)	01		TDI1B84	BUSS
							XBCSIA 06 05A	
XA527	DCF	A4	06B	XB01B0X	00	=		
XA527	DCF	A4	05B	(15)	01		XBR10S 13 05B	
XA526	DCF	A3	07B	XB01CDX	00	=		
XA526	DCF	A3	05A	(17)	01		XB01DB4	BUSS
							XBCSSA 06 05A	
XA526	DCF	A4	06B	XB01COX	00	=		
XA526	DCF	A4	05B	(15)	01		TDL1A0 13 05B	
				XB01DB4	00	=		
XA526	DCF	A3	07B	()	01		XB01CDX 17 07B	DEV DATA LINE 1
XA528	DCF	A5	08B	XB02ADX	00	=		
XA528	DCF	A5	05A	(14)	01		TDI2B84	BUSS
							XBCSDA 06 05A	
XA528	DCF	A6	07A	XB02A0X	00	=		
XA528	DCF	A6	06A	(10)	01		XB02COX 08 06A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XB02BDX
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA527	DCF	A5	08B	XB02BDX	00 =		
XA527	DCF	A5	05A	(14)	01	XBCSIA 06 05A	TDI2B84 BUSS
XA527	DCF	A6	07A	XB02B0X	00 =		
XA527	DCF	A6	06A	(10)	01	XBR20S 08 06A	
XA526	DCF	A5	08B	XB02CDX	00 =		
XA526	DCF	A5	05A	(14)	01	XBCSSA 06 05A	XB02D84 BUSS
XA526	DCF	A6	07A	XB02COX	00 =		
XA526	DCF	A6	06A	(10)	01	TDL2A0 08 06A	
				XB02D84	00 =		
XA526	DCF	A5	08B	()	01	XB02CDX 14 08B	DEV DATA LINE 2
XA528	DCF	A7	02A	XB03ADX	00 =		
XA528	DCF	A7	05A	(01)	01	XBCSDA 06 05A	TDI3B84 BUSS
XA528	DCF	A8	03A	XB03A0X	00 =		
XA528	DCF	A8	04A	(03)	01	XB03COX 04 04A	
XA527	DCF	A7	02A	XB03BDX	00 =		
XA527	DCF	A7	05A	(01)	01	XBCSIA 06 05A	TDI3B84 BUSS
XA527	DCF	A8	03A	XB03B0X	00 =		
XA527	DCF	A8	04A	(03)	01	XBR30S 04 04A	
XA526	DCF	A7	02A	XB03CDX	00 =		
XA526	DCF	A7	05A	(01)	01	XBCSSA 06 05A	XB03D84 BUSS
XA526	DCF	A8	03A	XB03COX	00 =		
XA526	DCF	A8	04A	(03)	01	TDL3A0 04 04A	
				XB03D84	00 =		
XA526	DCF	A7	02A	()	01	XB03CDX 01 02A	DEV DATA LINE 3

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XB04ADX
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CONNECTOR	DC/AC TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG- NATION	FACTOR	COMMENT
XA528	DCF	B1	10B	XB04ADX	00	=		
XA528	DCF	B1	13A	(27)	01		TDI48B4	BUSS
							XBCSDA 36 13A	
XA528	DCF	B2	11B	XB04A0X	00	=		
XA528	DCF	B2	12B	(29)	01			
							XB04C0X 31 12B	
XA527	DCF	B1	10B	XB04B0X	00	=		
XA527	DCF	B1	13A	(27)	01		TDI48B4	BUSS
							XBCSIA 36 13A	
XA527	DCF	B2	11B	XB04B0X	00	=		
XA527	DCF	B2	12B	(29)	01			
							XBR40S 31 12B	
XA526	DCF	B1	10B	XB04C0X	00	=		
XA526	DCF	B1	13A	(27)	01		XB04DB4	BUSS
							XBCSSA 36 13A	
XA526	DCF	B2	11B	XB04C0X	00	=		
XA526	DCF	B2	12B	(29)	01			
							TDL4A0 31 12B	
				XB04DB4	00	=		
XA526	DCF	B1	10B	()	01			
							XB04CDX 27 10B	DEV DATA LINE 4
XA528	DCF	B3	15B	XB05ADX	00	=		
XA528	DCF	B3	13A	(37)	01		TDI58B4	BUSS
							XBCSDA 36 13A	
XA528	DCF	B4	14B	XB05A0X	00	=		
XA528	DCF	B4	13B	(35)	01			
							XB05C0X 33 13B	
XA527	DCF	B3	15B	XB05B0X	00	=		
XA527	DCF	B3	13A	(37)	01		TDI58B4	BUSS
							XBCSIA 36 13A	
XA527	DCF	B4	14B	XB05B0X	00	=		
XA527	DCF	B4	13B	(35)	01			
							XBR50S 33 13B	
XA526	DCF	B3	15B	XB05C0X	00	=		
XA526	DCF	B3	13A	(37)	01		XB05DB4	BUSS
							XBCSSA 36 13A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XB05C0X
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CONNECTOR	TEST POINT	GROUP	TEST POINTS AND OR	EQUATION	TERM	RESISTOR VALUE	FACTOR	COMMENT
XA526	DCF	B4	14B	XB05COX (35)	00	=		
XA526	DCF	B4	13B		01		TDL5A0 33 13B	
				XB05DB4	00	=		
XA526	DCF	B3	15B	()	01		XB05CDX 37 15B	DEV DATA LINE 5
XA528	DCF	B5	16A	XB06ADX (41)	00	=		
XA528	DCF	B5	13A		01		XBCSDA 36 13A	TDI6BB4 BUSS
XA528	DCF	B6	15A	XB06A0X (40)	00	=		
XA528	DCF	B6	14A		01		XB06COX 38 14A	
XA527	DCF	B5	16A	XB06BDX (41)	00	=		
XA527	DCF	B5	13A		01		XBCSIA 36 13A	TDI6BB4 BUSS
XA527	DCF	B6	15A	XB06B0X (40)	00	=		
XA527	DCF	B6	14A		01		XBR60S 38 14A	
XA526	DCF	B5	16A	XB06CDX (41)	00	=		
XA526	DCF	B5	13A		01		XBCSSA 36 13A	XB06DB4 BUSS
XA526	DCF	B6	15A	XB06COX (40)	00	=		
XA526	DCF	B6	14A		01		TDL6A0 38 14A	
				XB06DB4	00	=		
XA526	DCF	B5	16A	()	01		XB06CDX 41 16A	DEV DATA LINE 6
XA528	DCF	B7	10A	XB07ADX (23)	00	=		
XA528	DCF	B7	13A		01		XBCSDA 36 13A	TDI7BB4 BUSS
XA528	DCF	B8	11A	XB07A0X (30)	00	=		
XA528	DCF	B8	12A		01		XB07COX 34 12A	
XA527	DCF	B7	10A	XB07BDX (23)	00	=		
XA527	DCF	B7	13A		01		XBCSIA 36 13A	TDI7BB4 BUSS

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XB07B0X
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA527	DCF	B8	11A	XB07BOX	00 =		
XA527	DCF	B8	12A	(30)	01	XBR70S 34 12A	
XA526	DCF	B7	10A	XB07CDX	00 =		XB07DB4 BUSS
XA526	DCF	B7	13A	(23)	01	XBCSSA 36 13A	
XA526	DCF	B8	11A	XB07COX	00 =		
XA526	DCF	B8	12A	(30)	01	YDL7A0 34 12A	
				XB07DB4	00 =		
XA526	DCF	B7	10A	()	01	XB07CDX 23 10A	DEV DATA LINE 7
XA537	TQ2	F1	37B	XCCMA0	00 =		DEV COMMAND
XA537	TQ2	F1	38B	(75)	01	XCMRDA XCCSCA 77 38B 79 39B	
XA535	DCF	D5	38B	XCCMCDX	00 =		XCCMDB4 BUSS
XA535	DCF	D5	36A	(80)	01	XCSTBA 72 36A	
XA535	DCF	D6	38A	XCCMCOX	00 =		
XA535	DCF	D6	37A	(76)	01	XCCMA0 74 37A	
				XCCMDB4	00 =		
XA535	DCF	D5	38B	()	01	XCCMCDX 80 38B	DEV COMMAND LINE
XA538	THI	E6	32B	XCCMDO	00 =		IOC COMMAND
XA538	THI	E6	33B	(68)	01	TCMDCA 65 33B	
XA536	TT3	F1	36B	XCCSCA	00 =		CH.SEL.COMMAND
XA536	TT3	F1	37B	(73)	01	XCICSO XCICRO XCCMDO 75 37B 77 38B 79 39B	
XA536	TT3	D3	27B	XCCSDA	00 =		CH.SEL.INTER*
XA536	TT3	D3	24B	(51)	01	XCICSO XCICRO XCINTA 45 24B 47 25B 49 26B	
XA536	TT3	E2	29B	XCCSEA	00 =		CH.SEL.ENABLE
XA536	TT3	E2	28B	(55)	01	XCICSO XCICRO XCENBO 53 28B 60 28A 62 29A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA538	THI	D3	21A	XCCSE0	00 =		
XA538	THI	D3	22A	(48)	01	XCCSEA 50 22A	
XA536	TT3	F2	35B	XCCSIA	00 =		CH_SEL_INTER
XA536	TT3	F2	34B	(74)	01	XCICSO XCICRO XCINTO 65 34B 71 36A 72 34A	
XA536	TT3	E1	30A	XCCSSA	00 =		CH_SEL_STROBE
XA536	TT3	E1	31A	(64)	01	XCICSO XCICRO XCSTBO 66 31A 68 32A 70 33A	
XA537	TQ2	E4	33B	XCENAO	00 =		DEV_ENABLE
XA537	TQ2	E4	31B	(63)	01	XCCSEA XCMRDA 59 31B 61 32B	
XA538	THI	E5	30B	XCENB0	00 =		IOC_ENABLE
XA538	THI	E5	31B	(57)	01	TENACA 59 31B	
XA535	DCF	D7	33A	XCENCDX	00 =		XCENDB4 BUSS
XA535	DCF	D7	36A	(61)	01	XCSTBA 72 36A	
XA535	DCF	D8	34A	XCENCOX	00 =		
XA535	DCF	D8	35A	(68)	01	XCENAO 70 35A	
				XCENDB4	00 =		
XA535	DCF	D7	33A	()	01	XCENCDX 61 33A	DEV_ENABLE_LINE
XA538	THI	B5	10B	XCGNDA	00 =		
XA538	THI	B5	11B	(19)	01	SPI301 21 11B	
XA538	THI	E2	30A	XCICRO	00 =		IOE_ADDR
XA538	THI	E2	31A	(63)	01	TC SXMA 61 31A	
XA538	THI	E1	32A	XCICSO	00 =		IOC_CH_SEL
XA538	THI	E1	33A	(66)	01	TCS4AA 64 33A	
XA534	DCF	C3	30B	XCINADX	00 =		TINDB4 BUSS
XA534	DCF	C3	29A	(55)	01	XCCSDA 52 29A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	TEST POINT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	RESISTOR VALUE	FACTOR	COMMENT
XA534	DCF	C4	29B	XCINAOX	00	=		
XA534	DCF	C4	28B	(56)	01		XCINCOX 51 28B	
XA535	DCF	D3	37B	XCINCDX	00	=		XCINDB4 BUSS
XA535	DCF	D3	36A	(78)	01		XCSTBA 72 36A	
XA535	DCF	D4	36B	XCINCOX	00	=		DEV INDICATOR REC.
XA535	DCF	D4	35B	(75)	01		XCGNDA 73 35B	
XA535	DCF	D3	37B	XCINDB4	00	=		
XA535	DCF	D3	37B	()	01		XCINCDX 78 37B	
XA537	TQ2	E3	30B	XCINTA	00	=		
XA537	TQ2	E3	28B	(57)	01		XCINTO SPI043 53 28B 55 29B	
XA538	THI	E3	28A	XCINTO	00	=		IOC INTERROGATE
XA538	THI	E3	29A	(60)	01		TINYCA 62 29A	
XA439	THI	F2	36B	XCIRCO	00	=		
XA439	THI	F2	37B	(71)	01		XCIRCD4 73 37B	
XA537	TQ2	F2	34A	XCMRCA	00	=		ENB_CMD_STB.
XA537	TQ2	F2	36A	(72)	01		XCMRDO XCSTBO 71 36A 73 36B	
XA536	TT3	E3	33B	XCMRDA	00	=		DEV RESET
XA536	TT3	E3	30B	(63)	01		XCENBO XCCMDO SPI043 57 30B 59 31B 61 32B	
XA538	THI	D4	22B	XCMRDO	00	=		
XA538	THI	D4	23B	(46)	01		XCMRDA 41 23B	
XA535	DCF	C1	25B	XCREADX	00	=		TRQ4BB4 BUSS
XA535	DCF	C1	29A	(46)	01		XCGNDA 52 29A	
XA535	DCF	C2	26B	XCREAOX	00	=		
XA535	DCF	C2	27B	(47)	01		XCRECO 49 27B	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA536	TT3	C3 19B	XCRECO	00	=		DEV OR D REQ
XA536	TT3	C3 16B	(39)	01		XCRE1A XCRE2A XCRE3A 33 16B 35 17B 37 18B	
XA538	THI	B6 12B	XCRE1A	00	=		
XA538	THI	B6 13B	(26)	01		XCRE10 27 13B	
XA536	TT3	A3 07B	XCRE10	00	=		DEV REQ 0+1+2
XA536	TT3	A3 04B	(15)	01		XCR00A XCR10A XCR20A 09 04B 11 05B 13 06B	
XA538	THI	C5 16B	XCRE2A	00	=		
XA538	THI	C5 17B	(31)	01		XCRE20 33 17B	
XA536	TT3	B3 13B	XCRE20	00	=		DEV REQ 3+4+5
XA536	TT3	B3 10B	(27)	01		XCR30A XCR40A XCR50A 21 10B 23 11B 25 12B	
XA538	THI	C6 18B	XCRE3A	00	=		
XA538	THI	C6 19B	(42)	01		XCRE30 39 19B	
XA537	TQ2	E1 31A	XCRE30	00	=		DEV REQ 6+7
XA537	TQ2	E1 32A	(66)	01		XCR60R XCR70R 68 32A 70 33A	
XA538	THI	A1 06A	XCR0CA	00	=		
XA538	THI	A1 07A	(13)	01		XCR0COX 11 07A	
XA533	DCF	C3 30B	XCR0CDX	00	=		XCR0DB4 BUSS
XA533	DCF	C3 29A	(55)	01		XCCSSA 52 29A	
XA533	DCF	C4 29B	XCR0COX	00	=		DEV REQ REC. 0
XA533	DCF	C4 28B	(56)	01		XCGNDA 51 28B	
XA533	DCF	C3 30B	XCR0DB4	00	=		
XA533	DCF	C3 30B	()	01		XCR0CDX 55 30B	
XA537	TQ2	A3 04B	XCR0RA	00	=		
XA537	TQ2	A3 02A	(09)	01		XCR0COX XCCSE0 03 02A 07 03A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CONNECTOR TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA538	THI	A3	03A	XCR00A	00	=		
XA538	THI	A3	02A	(03)	01		XCR00S 04 02A	
XA536	TT3	A1	04A	XCR00R	00	=		
XA536	TT3	A1	05A	(04)	01		XCR00S XCR0RA XCMRCA 06 05A 08 06A 10 07A	
XA537	TQ2	A1	05A	XCR00S	00	=		DEV REQ 0
XA537	TQ2	A1	06A	(06)	01		XCR0CA XCR0OR 08 06A 10 07A	
XA538	THI	A2	04A	XCR1CA	00	=		
XA538	THI	A2	05A	(08)	01		XCR1COX 06 05A	
XA533	DCF	C5	31B	XCR1CDX	00	=		XCR1DB4 BUSS
XA533	DCF	C5	29A	(60)	01		XCCSSA 52 29A	
XA533	DCF	C6	31A	XCR1COX	00	=		DEV REQ REC. 1
XA533	DCF	C6	30A	(57)	01		XCGNDA 54 30A	
XA533	DCF	C5	31B	XCR1DB4	00	=		
XA533	DCF	C5	31B	()	01		XCR1CDX 60 31B	
XA537	TQ2	A4	07B	XCR1RA	00	=		
XA537	TQ2	A4	05B	(15)	01		XCO1COX XCCSE0 11 05B 13 06B	
XA538	THI	A4	02B	XCR10A	00	=		
XA538	THI	A4	03B	(01)	01		XCR10S 05 03B	
XA536	TT3	A2	03A	XCR10R	00	=		
XA536	TT3	A2	02B	(07)	01		XCR10S XCR1RA XCMRCA 01 02B 03 02A 05 03B	
XA537	TQ2	A2	02B	XCR10S	00	=		DEV REQ 1
XA537	TQ2	A2	04A	(01)	01		XCR1CA XCR10R 04 04A 05 03B	
XA538	THI	B1	13A	XCR2CA	00	=		
XA538	THI	B1	14A	(24)	01		XCR2COX 22 14A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	SYMBOL TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA533	DCF	C7	25A	XCR2CDX	00 =			
XA533	DCF	C7	29A	(43)	01		XCCSSA 52 29A	XCR2DB4 BUSS
XA533	DCF	C8	26A	XCR2COX	00 =			DEV REQ REC. 2
XA533	DCF	C8	28A	(48)	01		XCGNDA 50 28A	
XA533	DCF	C7	25A	XCR2DB4	00 =			
XA533	DCF	C7	25A	()	01		XCR2CDX 43 25A	
XA537	TQ2	B3	10B	XCR2RA	00 =			
XA537	TQ2	B3	08B	(21)	01		XC02COX XCCSEO 17 08B 19 09B	
XA538	THI	B3	09A	XCR20A	00 =			
XA538	THI	B3	10A	(18)	01		XCR20S 20 10A	
XA536	TT3	B1	11A	XCR20R	00 =			
XA536	TT3	B1	12A	(20)	01		XCR20S XCR2RA XCMRCA 22 12A 24 13A 26 14A	
XA537	TQ2	B1	12A	XCR20S	00 =			DEV REQ 2
XA537	TQ2	B1	13A	(22)	01		XCR2CA XCR20R 24 13A 26 14A	
XA538	THI	B2	11A	XCR3CA	00 =			
XA538	THI	B2	12A	(25)	01		XCR3COX 23 12A	
XA533	DCF	D1	32B	XCR3CDX	00 =			XCR3DB4 BUSS
XA533	DCF	D1	36A	(65)	01		SPI301 72 36A	
XA533	DCF	D2	33B	XCR3COX	00 =			DEV REQ REC. 3
XA533	DCF	D2	34B	(69)	01		SPI309 71 34B	
XA533	DCF	D1	32B	XCR3DB4	00 =			
XA533	DCF	D1	32B	()	01		XCR3CDX 65 32B	
XA537	TQ2	B4	13B	XCR3RA	00 =			
XA537	TQ2	B4	11B	(27)	01		XC03COX XCCSEO 23 11B 25 12B	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA538	THI	B4	08B	XCR30A	00	=		
XA538	THI	B4	09B	(14)	01		XCR30S 17 09B	
XA536	TT3	B2	09B	XCR30R	00	=		
XA536	TT3	B2	09A	(19)	01		XCR30S XCR3RA XCMRCA 14 09A 17 08B 18 10A	
XA537	TQ2	B2	09A	XCR30S	00	=		DEV REQ 3
XA537	TQ2	B2	10A	(14)	01		XCR3CA XCR30R 18 10A 20 11A	
XA538	THI	C1	19A	XCR4CA	00	=		
XA538	THI	C1	20A	(40)	01		XCR4C0X 38 20A	
XA533	DCF	D3	37B	XCR4CDX	00	=		XCR4DB4 BUSS
XA533	DCF	D3	36A	(78)	01		SP1301 72 36A	
XA533	DCF	D4	36B	XCR4C0X	00	=		DEV REQ REC. 4
XA533	DCF	D4	35B	(75)	01		SP1309 73 35B	
				XCR4DB4	00	=		
XA533	DCF	D3	37B	()	01		XCR4CDX 78 37B	
XA537	TQ2	C3	16B	XCR4RA	00	=		
XA537	TQ2	C3	14B	(33)	01		XCR4C0X XCR4SE0 29 14B 31 15B	
XA538	THI	C3	15A	XCR40A	00	=		
XA538	THI	C3	16A	(34)	01		XCR40S 36 16A	
XA536	TT3	C1	17A	XCR40R	00	=		
XA536	TT3	C1	18A	(36)	01		XCR40S XCR4RA XCMRCA 38 18A 40 19A 42 20A	
XA537	TQ2	C1	18A	XCR40S	00	=		DEV REQ 4
XA537	TQ2	C1	19A	(38)	01		XCR4CA XCR40R 40 19A 42 20A	
XA538	THI	C2	17A	XCR5CA	00	=		
XA538	THI	C2	18A	(37)	01		XCR5C0X 35 18A	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA533	DCF	D5	38B	XCR5CDX	00	=		
XA533	DCF	D5	36A	(80)	01		SPI301 72 36A	XCR5DB4 BUSS
XA533	DCF	D6	38A	XCR5COX	00	=		
XA533	DCF	D6	37A	(76)	01		SPI309 74 37A	DEV REQ REC. 5
				XCR5DB4	00	=		
XA533	DCF	D5	38B	()	01		XCR5CDX 80 38B	
XA537	TQ2	C4	19B	XCR5RA	00	=		
XA537	TQ2	C4	17B	(39)	01		XC05COX XCCSE0 35 17B 37 18B	
XA538	THI	C4	14B	XCR50A	00	=		
XA538	THI	C4	15B	(30)	01		XCR50S 29 15B	
XA536	TT3	C2	15B	XCR50R	00	=		
XA536	TT3	C2	14B	(31)	01		XCR50S XCR5RA XCMRCA 29 14B 30 15A 34 16A	
XA537	TQ2	C2	15A	XCR50S	00	=		DEV REQ 5
XA537	TQ2	C2	16A	(30)	01		XCR5CA XCR50R 34 16A 36 17A	
XA538	THI	D1	25A	XCR6CA	00	=		
XA538	THI	D1	26A	(54)	01		XCR6COX 52 26A	
XA533	DCF	D7	33A	XCR6CDX	00	=		
XA533	DCF	D7	36A	(61)	01		SPI301 72 36A	XCR6DB4 BUSS
XA533	DCF	D8	34A	XCR6COX	00	=		
XA533	DCF	D8	35A	(68)	01		SPI309 70 35A	DEV REQ REC. 6
				XCR6DB4	00	=		
XA533	DCF	D7	31A	()	01		XCR6CDX 61 31A	
XA537	TQ2	D3	24B	XCR6RA	00	=		
XA537	TQ2	D3	22B	(45)	01		XC06COX XCCSE0 41 22B 43 23B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
XA536	TT3	D1	23A	XCR60R	00	=		
XA536	TT3	D1	24A	(50)	01		XCR60S XCR6RA XCMRCA 52 24A 54 25A 56 26A	
XA537	TQ2	D1	24A	XCR60S	00	=		DEV REQ 6
XA537	TQ2	D1	25A	(52)	01		XCR6CA XCR60R 54 25A 56 26A	
XA538	THI	D2	23A	XCR7CA	00	=		
XA538	THI	D2	24A	(49)	01		XCR7C0X 47 24A	
XA535	DCF	D1	32B	XCR7CDX	00	=		XCR7DB4 BUSS
XA535	DCF	D1	36A	(65)	01		XCSTBA 72 36A	
XA535	DCF	D2	33B	XCR7C0X	00	=		DEV REQ REC. 7
XA535	DCF	D2	34B	(69)	01		XCGNDA 71 34B	
XA535	DCF	D1	32B	XCR7DB4	00	=		
XA535	DCF	D1	32B	()	01		XCR7CDX 65 32B	
XA537	TQ2	D4	27B	XCR7RA	00	=		
XA537	TQ2	D4	25B	(51)	01		XCR7C0X XCCSE0 47 25B 49 26B	
XA536	TT3	D2	23B	XCR70R	00	=		
XA536	TT3	D2	22B	(43)	01		XCR70S XCR7RA XCMRCA 41 22B 46 21A 48 22A	
XA537	TQ2	D2	21A	XCR70S	00	=		DEV REQ 7
XA537	TQ2	D2	22A	(46)	01		XCR7CA XCR70R 48 22A 50 23A	
XA537	TQ2	E2	28A	XCSTBA	00	=		
XA537	TQ2	E2	29A	(60)	01		SPI043 XCSTB0 62 29A 64 30A	
XA538	THI	E4	28B	XCSTB0	00	=		IOC STROBE
XA538	THI	E4	29B	(56)	01		YSTBCA 55 29B	
XA534	DCF	C1	25B	XCOPADX	00	=		TDIP8B4 BUSS
XA534	DCF	C1	29A	(46)	01		XCCSDA 52 29A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	WIRE TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG- NATOR	FACTOR	COMMENT
XA534	DCF	C2	26B	XC0PA0X	00	=		
XA534	DCF	C2	27B	(47)	01		XCOPCOX 49 27B	
XA533	DCF	C1	25B	XCOPCDX	00	=		
XA533	DCF	C1	29A	(46)	01		XCCSSA 52 29A	
XA533	DCF	C2	26B	XCOPCOX	00	=		
XA533	DCF	C2	27B	(47)	01		TDLPA0 49 27B	
				XCOPDB4	00	=		
XA533	DCF	C1	25B	()	01		XCOPCDX 46 25B	DEV DATA LINE PART
XA535	DCF	A1	02B	XC00ADX	00	=		
XA535	DCF	A1	05A	(07)	01		XCCSDA 06 05A	
XA535	DCF	A2	03B	XC00A0X	00	=		
XA535	DCF	A2	04B	(09)	01		XC00COX 11 04B	
XA534	DCF	A1	02B	XC00BDX	00	=		
XA534	DCF	A1	05A	(07)	01		XCCSIA 06 05A	
XA534	DCF	A2	03B	XC00B0X	00	=		
XA534	DCF	A2	04B	(09)	01		XCR00S 11 04B	
XA533	DCF	A1	02B	XC00CDX	00	=		
XA533	DCF	A1	05A	(07)	01		XCCSSA 06 05A	
XA533	DCF	A2	03B	XC00C0X	00	=		
XA533	DCF	A2	04B	(09)	01		TDLOA0 11 04B	
				XC00DB4	00	=		
XA533	DCF	A1	02B	()	01		XC00CDX 07 02B	DEV DATA LINE 0
XA535	DCF	A3	07B	XC01ADX	00	=		
XA535	DCF	A3	05A	(17)	01		XCCSDA 06 05A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA535	DCF	A4	06B	XC01A0X	00 =		
XA535	DCF	A4	05B	(15)	01	XC01C0X 13 05B	
XA534	DCF	A3	07B	XC01BDX	00 =		
XA534	DCF	A3	05A	(17)	01	XCCSIA 06 05A	TDI1BB4 BUSS
XA534	DCF	A4	06B	XC01B0X	00 =		
XA534	DCF	A4	05B	(15)	01	XCR10S 13 05B	
XA533	DCF	A3	07B	XC01CDX	00 =		
XA533	DCF	A3	05A	(17)	01	XCCSSA 06 05A	XC01DB4 BUSS
XA533	DCF	A4	06B	XC01C0X	00 =		
XA533	DCF	A4	05B	(15)	01	TDL1A0 13 05B	
				XC01DB4	00 =		
XA533	DCF	A3	07B	()	01	XCOICDX 17 07B	DEV DATA LINE 1
XA535	DCF	A5	08B	XC02ADX	00 =		
XA535	DCF	A5	05A	(14)	01	XCCSDA 06 05A	TDI2BB4 BUSS
XA535	DCF	A6	07A	XC02A0X	00 =		
XA535	DCF	A6	06A	(10)	01	XC02C0X 08 06A	
XA534	DCF	A5	08B	XC02BDX	00 =		
XA534	DCF	A5	05A	(14)	01	XCCSIA 06 05A	TDI2BB4 BUSS
XA534	DCF	A6	07A	XC02B0X	00 =		
XA534	DCF	A6	06A	(10)	01	XCR20S 08 06A	
XA533	DCF	A5	08B	XC02C0X	00 =		
XA533	DCF	A5	05A	(14)	01	XCCSSA 06 05A	XC02DB4 BUSS
XA533	DCF	A6	07A	XC02C0X	00 =		
XA533	DCF	A6	06A	(10)	01	TDL2A0 08 06A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA533	DCF	A5	08B	XC02DB4 ()	00 = 01		XC02CDX 14 08B	DEV DATA LINE 2
XA535	DCF	A7	02A	XC03ADX (01)	00 = 01			TDI38B4 BUSS
XA535	DCF	A7	05A				XCCSDA 06 05A	
XA535	DCF	A8	03A	XC03A0X (03)	00 = 01		XC03C0X 04 04A	
XA535	DCF	A8	04A					
XA534	DCF	A7	02A	XC03BDX (01)	00 = 01			TDI38B4 BUSS
XA534	DCF	A7	05A				XCCSIA 06 05A	
XA534	DCF	A8	03A	XC03B0X (03)	00 = 01		XCR30S 04 04A	
XA534	DCF	A8	04A					
XA533	DCF	A7	02A	XC03CDX (01)	00 = 01			XC03DB4 BUSS
XA533	DCF	A7	05A				XCCSSA 06 05A	
XA533	DCF	A8	03A	XC03C0X (03)	00 = 01		TDL3A0 04 04A	
XA533	DCF	A8	04A					
XA533	DCF	A7	02A	XC03DB4 ()	00 = 01		XC03CDX 01 02A	DEV DATA LINE 3
XA535	DCF	B1	10B	XC04ADX (27)	00 = 01			TDI48B4 BUSS
XA535	DCF	B1	13A				XCCSDA 36 13A	
XA535	DCF	B2	11B	XC04A0X (29)	00 = 01		XC04C0X 31 12B	
XA535	DCF	B2	12B					
XA534	DCF	B1	10B	XC04BDX (27)	00 = 01			TDI48B4 BUSS
XA534	DCF	B1	13A				XCCSIA 36 13A	
XA534	DCF	B2	11B	XC04B0X (29)	00 = 01		XCR40S 31 12B	
XA534	DCF	B2	12B					

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XC04CDX
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CONNECTOR	ORIGIN TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA533	DCF	B1	10B	XC04CDX	00	=		
XA533	DCF	B1	13A	(27)	01		XCCSSA 36 13A	XC04DB4 BUSS
XA533	DCF	B2	11B	XC04COX	00	=		
XA533	DCF	B2	12B	(29)	01		TDL4A0 31 12B	
				XC04DB4	00	=		
XA533	DCF	B1	10B	()	01		XC04CDX 27 10B	DEV DATA LINE 4
XA535	DCF	B3	15B	XC05ADX	00	=		
XA535	DCF	B3	13A	(37)	01		XCCSDA 36 13A	TDI58B4 BUSS
XA535	DCF	B4	14B	XC05A0X	00	=		
XA535	DCF	B4	13B	(35)	01		XC05COX 33 13B	
XA534	DCF	B3	15B	XC05BDX	00	=		
XA534	DCF	B3	13A	(37)	01		XCCSIA 36 13A	TDI58B4 BUSS
XA534	DCF	B4	14B	XC05BOX	00	=		
XA534	DCF	B4	13B	(35)	01		XCR50S 33 13B	
XA533	DCF	B3	15B	XC05CDX	00	=		
XA533	DCF	B3	13A	(37)	01		XCCSSA 36 13A	XC05DB4 BUSS
XA533	DCF	B4	14B	XC05COX	00	=		
XA533	DCF	B4	13B	(35)	01		TDL5A0 33 13B	
				XC05DB4	00	=		
XA533	DCF	B3	15B	()	01		XC05CDX 37 15B	DEV DATA LINE 5
XA535	DCF	B5	16A	XC06ADX	00	=		
XA535	DCF	B5	13A	(41)	01		XCCSDA 36 13A	TDI68B4 BUSS
XA535	DCF	B6	15A	XC06A0X	00	=		
XA535	DCF	B6	14A	(40)	01		XC06COX 38 14A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA534	DCF	B5	16A	XC06BDX	00	=		
XA534	DCF	B5	13A	(41)	01		XCCSIA 36 13A	TDI68B4 BUSS
XA534	DCF	B6	15A	XC06BOX	00	=		
XA534	DCF	B6	14A	(40)	01		XCR60S 38 14A	
XA533	DCF	B5	16A	XC06CDX	00	=		
XA533	DCF	B5	13A	(41)	01		XCCSSA 36 13A	XC06DB4 BUSS
XA533	DCF	B6	15A	XC06COX	00	=		
XA533	DCF	B6	14A	(40)	01		TDL6A0 38 14A	
				XC06DB4	00	=		
XA533	DCF	B5	16A	()	01		XC06CDX 41 16A	DEV DATA LINE 6
XA535	DCF	B7	10A	XC07ADX	00	=		
XA535	DCF	B7	13A	(23)	01		XCCSDA 36 13A	TDI78B4 BUSS
XA535	DCF	B8	11A	XC07A0X	00	=		
XA535	DCF	B8	12A	(30)	01		XC07C0X 34 12A	
XA534	DCF	B7	10A	XC07BDX	00	=		
XA534	DCF	B7	13A	(23)	01		XCCSIA 36 13A	TDI78B4 BUSS
XA534	DCF	B8	11A	XC07BOX	00	=		
XA534	DCF	B8	12A	(30)	01		XCR70S 34 12A	
XA533	DCF	B7	10A	XC07CDX	00	=		
XA533	DCF	B7	13A	(23)	01		XCCSSA 36 13A	XC07DB4 BUSS
XA533	DCF	B8	11A	XC07C0X	00	=		
XA533	DCF	B8	12A	(30)	01		TDL7A0 34 12A	
				XC07DB4	00	=		
XA533	DCF	B7	10A	()	01		XC07CDX 23 10A	DEV DATA LINE 7

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA543	TQ2	F1	37B	XDCMA0	00	=		
XA543	TQ2	F1	38B	(75)	01		XDMRDA XDCSCA 77 38B 79 39B	DEV COMMAND
XA541	DCF	D5	38B	XDCMCDX	00	=		
XA541	DCF	D5	36A	(80)	01		XDSTBA 72 36A	XDCMDB4 BUSS
XA541	DCF	D6	38A	XDCMCOX	00	=		
XA541	DCF	D6	37A	(76)	01		XDCMA0 74 37A	
XA541	DCF	D5	38B	XDCMDB4	00	=		
XA541	DCF	D5	38B	()	01		XDCMCDX 80 38B	DEV COMMAND LINE
XA544	THI	E6	32B	XDCMDO	00	=		
XA544	THI	E6	33B	(68)	01		TCHMCA 65 33B	IOC COMMAND
XA542	TT3	F1	36B	XDCSCA	00	=		
XA542	TT3	F1	37B	(73)	01		XDICSO XDICRO XDCMDO 75 37B 77 38B 79 39B	CH.SEL.COMMAND
XA542	TT3	D3	27B	XDCSDA	00	=		
XA542	TT3	D3	24B	(51)	01		XDICSO XDICRO XDINTA 45 24B 47 25B 49 26B	CH.SEL.INTER*
XA542	TT3	E2	29B	XDCSEA	00	=		
XA542	TT3	E2	28B	(55)	01		XDICSO XDICRO XDENB0 53 28B 60 28A 62 29A	CH.SEL.ENABLE
XA544	THI	D3	21A	XDCSEO	00	=		
XA544	THI	D3	22A	(48)	01		XDCSEA 50 22A	
XA542	TT3	F2	35B	XDCSIA	00	=		
XA542	TT3	F2	34B	(74)	01		XDICSO XDICRO XDINTD 65 34B 71 36A 72 34A	CH.SEL.INTER
XA542	TT3	E1	30A	XDCSSA	00	=		
XA542	TT3	E1	31A	(64)	01		XDICSO XDICRO XDSTB0 66 31A 68 32A 70 33A	CH.SEL.STROBE
XA543	TQ2	E4	33B	XDENA0	00	=		
XA543	TQ2	E4	31B	(63)	01		XDCSEA XDMRDA 59 31B 61 32B	DEV ENABLE

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XDENB0
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA544	THI	E5	30B	XDENB0	00	=		
XA544	THI	E5	31B	(57)	01	=	TENACA 59 31B	IOC ENABLE
XA541	DCF	D7	33A	XDENCX	00	=		
XA541	DCF	D7	36A	(61)	01	=	XDSTBA 72 36A	XDENDB4 BUSS
XA541	DCF	D8	34A	XDENCX	00	=		
XA541	DCF	D8	35A	(68)	01	=	XDENAO 70 35A	
XA541	DCF	D7	33A	XDENDB4	00	=		
XA541	DCF	D7	33A	()	01	=	XDENCX 61 33A	DEV ENABLE LINE
XA544	THI	B5	10B	XDGND	00	=		
XA544	THI	B5	11B	(19)	01	=	SPI301 21 11B	
XA544	THI	E2	30A	XDICRO	00	=		
XA544	THI	E2	31A	(63)	01	=	TC SXMA 61 31A	IOE ADRS
XA544	THI	E1	32A	XDICSO	00	=		
XA544	THI	E1	33A	(66)	01	=	TC S5AA 64 33A	IOC CH SEL
XA540	DCF	C3	30B	XDINAD	00	=		
XA540	DCF	C3	29A	(55)	01	=	XDCSDA 52 29A	TINDB4 BUSS
XA540	DCF	C4	29B	XDINAOX	00	=		
XA540	DCF	C4	28B	(56)	01	=	XDINCOX 51 28B	
XA541	DCF	D3	37B	XDINCD	00	=		
XA541	DCF	D3	36A	(78)	01	=	XDSTBA 72 36A	XDINDB4 BUSS
XA541	DCF	D4	36B	XDINCOX	00	=		
XA541	DCF	D4	35B	(75)	01	=	XDGND 73 35B	DEV INDICATOR REC
XA541	DCF	D3	37B	XDINDB4	00	=		
XA541	DCF	D3	37B	()	01	=	XDINCDX 78 37B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XCINTA
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG-FACTOR	FACTOR	COMMENT
XA543	TQ2	E3	30B	XDINTA	00	=		
XA543	TQ2	E3	28B	(57)	01		XDINTO SPI044 53 28B 55 29B	
XA544	THI	E3	28A	XDINTO	00	=		IOC INTERROGATE
XA544	THI	E3	29A	(60)	01		YINTCA 62 29A	
XA439	THI	F3	34B	XDIRCO	00	=		
XA439	THI	F3	35B	(70)	01		XDIRCO4 69 35B	
XA543	TQ2	F2	34A	XDMRCA	00	=		ENB.CMD.STB.
XA543	TQ2	F2	36A	(72)	01		XDMRDO XDSTBO 71 36A 73 36B	
XA542	TT3	E3	33B	XDMRDA	00	=		DEV RESET
XA542	TT3	E3	30B	(63)	01		XDENBO XDCMDO SPI044 57 30B 59 31B 61 32B	
XA544	THI	D4	22B	XDMRDO	00	=		
XA544	THI	D4	23B	(46)	01		XDMRDA 41 23B	
XA541	DCF	C1	25B	XDREADX	00	=		TRO5BB4 BUSS
XA541	DCF	C1	29A	(46)	01		XDGND4 52 29A	
XA541	DCF	C2	26B	XDREA0X	00	=		
XA541	DCF	C2	27B	(47)	01		XDRECO 49 27B	
XA542	TT3	C3	19B	XDRECO	00	=		DEV OR D REQ
XA542	TT3	C3	16B	(39)	01		XDRE1A XDRE2A XDRE3A 33 16B 35 17B 37 18B	
XA544	THI	B6	12B	XDRE1A	00	=		
XA544	THI	B6	13B	(26)	01		XDRE1O 27 13B	
XA542	TT3	A3	07B	XDRE1O	00	=		DEV REQ 0+1+2
XA542	TT3	A3	04B	(15)	01		XDR00A XDR10A XDR20A 09 04B 11 05B 13 06B	
XA544	THI	C5	16B	XDRE2A	00	=		
XA544	THI	C5	17B	(31)	01		XDRE2O 33 17B	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG- NATOR	FACTOR	COMMENT
XA542	TT3	B3	13B	XDRE20	00	=		DEV REQ 3+4+5
XA542	TT3	B3	10B	(27)	01		XDR30A XDR40A XDR50A 21 10B 23 11B 25 12B	
XA544	THI	C6	18B	XDRE3A	00	=		
XA544	THI	C6	19B	(42)	01		XDRE30 39 19B	
XA543	TQ2	E1	31A	XDRE30	00	=		DEV REQ 6+7
XA543	TQ2	E1	32A	(66)	01		XDR60R XDR70R 68 32A 70 33A	
XA544	THI	A1	06A	XDR0CA	00	=		
XA544	THI	A1	07A	(13)	01		XDR0COX 11 07A	
XA539	DCF	C3	30B	XDR0CDX	00	=		XDR0DB4 BUSS
XA539	DCF	C3	29A	(55)	01		XDCSSA 52 29A	
XA539	DCF	C4	29B	XDR0COX	00	=		DEV REQ REC. 0
XA539	DCF	C4	28B	(56)	01		XDGNDA 51 28B	
XA539	DCF	C3	30B	XDR0DB4	00	=		
XA539	DCF	C3		()	01		XDR0CDX 55 30B	
XA543	TQ2	A3	04B	XDR0RA	00	=		
XA543	TQ2	A3	02A	(09)	01		XD00COX XDCSE0 03 02A 07 03A	
XA544	THI	A3	03A	XDR00A	00	=		
XA544	THI	A3	02A	(03)	01		XDR00S 04 02A	
XA542	TT3	A1	04A	XDR00R	00	=		
XA542	TT3	A1	05A	(04)	01		XDR00S XDR0RA XDMRCA 06 05A 08 06A 10 07A	
XA543	TQ2	A1	05A	XDR00S	00	=		DEV REQ 0
XA543	TQ2	A1	06A	(06)	01		XDR0CA XDR00R 08 06A 10 07A	
XA544	THI	A2	04A	XDR1CA	00	=		
XA544	THI	A2	05A	(08)	01		XDR1COX 06 05A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA539	DCF	C5	31B	XDR1CDX	00	=		
XA539	DCF	C5	29A	(60)	01		XDCSSA 52 29A	XDR1DB4 BUSS
XA539	DCF	C6	31A	XDR1COX	00	=		DEV REQ REC. 1
XA539	DCF	C6	30A	(57)	01		XDGND 54 30A	
				XDR1DB4	00	=		
XA539	DCF	C5	31B	()	01		XDR1CDX 60 31B	
XA543	TQ2	A4	07B	XDR1RA	00	=		
XA543	TQ2	A4	05B	(15)	01		XDR1COX XDCSE0 11 05B 13 06B	
XA544	THI	A4	02B	XDR10A	00	=		
XA544	THI	A4	03B	(01)	01		XDR10S 05 03B	
XA542	TT3	A2	03A	XDR10R	00	=		
XA542	TT3	A2	02B	(07)	01		XDR10S XDR1RA XDMRCA 01 02B 03 02A 05 03B	
XA543	TQ2	A2	02B	XDR10S	00	=		DEV REQ 1
XA543	TQ2	A2	04A	(01)	01		XDR1CA XDR10R 04 04A 05 03B	
XA544	THI	B1	13A	XDR2CA	00	=		
XA544	THI	B1	14A	(24)	01		XDR2COX 22 14A	
XA539	DCF	C7	25A	XDR2CDX	00	=		XDR2DB4 BUSS
XA539	DCF	C7	29A	(43)	01		XDCSSA 52 29A	
XA539	DCF	C8	26A	XDR2COX	00	=		DEV REQ REC. 2
XA539	DCF	C8	28A	(48)	01		XDGND 50 28A	
				XDR2DB4	00	=		
XA539	DCF	C7	25A	()	01		XDR2CDX 43 25A	
XA543	TQ2	B3	10B	XDR2RA	00	=		
XA543	TQ2	B3	08B	(21)	01		XDR2COX XDCSE0 17 08B 19 09B	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA544	THI	B3	09A	XDR20A	00	=		
XA544	THI	B3	10A	(18)	01		XDR20S 20 10A	
XA542	TT3	B1	11A	XDR20R	00	=		
XA542	TT3	B1	12A	(20)	01		XDR20S XDR2RA XDMRCA 22 12A 24 13A 26 14A	
XA543	TQ2	B1	12A	XDR20S	00	=		DEV REQ 2
XA543	TQ2	B1	13A	(22)	01		XDR2CA XDR2OR 24 13A 26 14A	
XA544	THI	B2	11A	XDR3CA	00	=		
XA544	THI	B2	12A	(25)	01		XDR3COX 23 12A	
XA539	DCF	D1	32B	XDR3CDX	00	=		XDR3DB4 BUSS
XA539	DCF	D1	36A	(65)	01		SPI301 72 36A	
XA539	DCF	D2	33B	XDR3COX	00	=		DEV REQ REC. 3
XA539	DCF	D2	34B	(69)	01		SPI309 71 34B	
XA539	DCF	D1	32B	XDR3DB4	00	=		
XA539	DCF	D1	32B	()	01		XDR3CDX 65 32B	
XA543	TQ2	B4	13B	XDR3RA	00	=		
XA543	TQ2	B4	11B	(27)	01		XD03COX XDCSE0 23 11B 25 12B	
XA544	THI	B4	08B	XDR30A	00	=		
XA544	THI	B4	09B	(14)	01		XDR30S 17 09B	
XA542	TT3	B2	09B	XDR30R	00	=		
XA542	TT3	B2	09A	(19)	01		XDR30S XDR3RA XDMRCA 14 09A 17 08B 18 10A	
XA543	TQ2	B2	09A	XDR30S	00	=		DEV REQ 3
XA543	TQ2	B2	10A	(14)	01		XDR3CA XDR30R 18 10A 20 11A	
XA544	THI	C1	19A	XDR4CA	00	=		
XA544	THI	C1	20A	(40)	01		XDR4COX 38 20A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XDR4CDX
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
			AND	OR					
XA539	DCF	D3	37B		XDR4CDX	00	=		
XA539	DCF	D3	36A		(78)	01		SPI301 72 36A	XDR4DB4 BUSS
XA539	DCF	D4	36B		XDR4COX	00	=		
XA539	DCF	D4	35B		(75)	01		SPI309 73 35B	DEV REQ REC. 4
					XDR4DB4	00	=		
XA539	DCF	D3	37B		()	01		XDR4CDX 78 37B	
XA543	TQ2	C3	16B		XDR4RA	00	=		
XA543	TQ2	C3	14B		(33)	01		XD04C0X XDCSE0 29 14B 31 15B	
XA544	THI	C3	15A		XDR40A	00	=		
XA544	THI	C3	16A		(34)	01		XDR40S 36 16A	
XA542	TT3	C1	17A		XDR40R	00	=		
XA542	TT3	C1	18A		(36)	01		XDR40S XDR4RA XDMRCA 38 18A 40 19A 42 20A	
XA543	TQ2	C1	18A		XDR40S	00	=		
XA543	TQ2	C1	19A		(38)	01		XDR4CA XDR40R 40 19A 42 20A	DEV REQ 4
XA544	THI	C2	17A		XDR5CA	00	=		
XA544	THI	C2	18A		(37)	01		XDR5COX 35 18A	
XA539	DCF	D5	38B		XDR5CDX	00	=		
XA539	DCF	D5	36A		(80)	01		SPI301 72 36A	XDR5DB4 BUSS
XA539	DCF	D6	38A		XDR5COX	00	=		
XA539	DCF	D6	37A		(76)	01		SPI309 74 37A	DEV REQ REC. 5
					XDR5DB4	00	=		
XA539	DCF	D5	38B		()	01		XDR5CDX 80 38B	
XA543	TQ2	C4	19B		XDR5RA	00	=		
XA543	TQ2	C4	17B		(39)	01		XD05C0X XDCSE0 35 17B 37 18B	

DRAWING NUMBER 149019-860
 UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
 UNIT ASSEMBLY NO. 149019 REV G INDEX XDR4CDX
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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM	REG. FACTOR	FACTOR	COMMENT
XA539	DCF	D3 37B	XDR4CDX	00	=		
XA539	DCF	D3 36A	(78)	01		SPI301 72 36A	XDR4DB4 BUSS
XA539	DCF	D4 36B	XDR4COX	00	=		
XA539	DCF	D4 35B	(75)	01		SPI309 73 35B	DEV REQ REC. 4
XA539	DCF	D3 37B	XDR4DB4	00	=		
XA539	DCF	D3 37B	()	01		XDR4CDX 78 37B	
XA543	TQ2	C3 16B	XDR4RA	00	=		
XA543	TQ2	C3 14B	(33)	01		XD04COX XDCSE0 29 14B 31 15B	
XA544	THI	C3 15A	XDR40A	00	=		
XA544	THI	C3 16A	(34)	01		XDR40S 36 16A	
XA542	TT3	C1 17A	XDR40R	00	=		
XA542	TT3	C1 18A	(36)	01		XDR40S XDR4RA XDMRCA 38 18A 40 19A 42 20A	
XA543	TQ2	C1 18A	XDR40S	00	=		
XA543	TQ2	C1 19A	(38)	01		XDR4CA XDR40R 40 19A 42 20A	DEV REQ 4
XA544	THI	C2 17A	XDR5CA	00	=		
XA544	THI	C2 18A	(37)	01		XDR5COX 35 18A	
XA539	DCF	D5 38B	XDR5CDX	00	=		
XA539	DCF	D5 36A	(80)	01		SPI301 72 36A	XDR5DB4 BUSS
XA539	DCF	D6 38A	XDR5COX	00	=		
XA539	DCF	D6 37A	(76)	01		SPI309 74 37A	DEV REQ REC. 5
XA539	DCF	D5 38B	XDR5DB4	00	=		
XA539	DCF	D5 38B	()	01		XDR5CDX 80 38B	
XA543	TQ2	C4 19B	XDR5RA	00	=		
XA543	TQ2	C4 17B	(39)	01		XD05COX XDCSE0 35 17B 37 18B	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XDR50A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA544	THI	C4	14B	XDR50A	00 =			
XA544	THI	C4	15B	(30)	01		XDR50S 29 15B	
XA542	TT3	C2	15B	XDR50R	00 =			
XA542	TT3	C2	14B	(31)	01		XDR50S XDR5RA XDMRCA 29 14B 30 15A 34 16A	
XA543	TQ2	C2	15A	XDR50S	00 =			DEV REQ 5
XA543	TQ2	C2	16A	(30)	01		XDR5CA XDR50R 34 16A 36 17A	
XA544	THI	D1	25A	XDR6CA	00 =			
XA544	THI	D1	26A	(54)	01		XDR6C0X 52 26A	
XA539	DCF	D7	33A	XDR6CDX	00 =			XDR6DB4 BUSS
XA539	DCF	D7	36A	(61)	01		SPI301 72 36A	
XA539	DCF	D8	34A	XDR6C0X	00 =			DEV REQ REC. 6
XA539	DCF	D8	35A	(68)	01		SPI309 70 35A	
XA539	DCF	D7	33A	XDR6DB4	00 =			
XA539	DCF	D7	33A	()	01		XDR6CDX 61 33A	
XA543	TQ2	D3	24B	XDR6RA	00 =			
XA543	TQ2	D3	22B	(45)	01		XD06C0X XDCSE0 41 22B 43 23B	
XA542	TT3	D1	23A	XDR60R	00 =			
XA542	TT3	D1	24A	(50)	01		XDR60S XDR6RA XDMRCA 52 24A 54 25A 56 26A	
XA543	TQ2	D1	24A	XDR60S	00 =			DEV REQ 6
XA543	TQ2	D1	25A	(52)	01		XDR6CA XDR60R 54 25A 56 26A	
XA544	THI	D2	23A	XDR7CA	00 =			
XA544	THI	D2	24A	(49)	01		XDR7C0X 47 24A	
XA541	DCF	D1	32B	XDR7CDX	00 =			XDR7DB4 BUSS
XA541	DCF	D1	36A	(65)	01		XDSTBA 72 36A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	DCP TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	BASIC NATOR	FACTOR	COMMENT
XA541	DCF	D2	33B	XDR7C0X	00	=		
XA541	DCF	D2	34B	(69)	01		XDCGDA 71 34B	DEV REQ REC. 7
				XDR7DB4	00	=		
XA541	DCF	D1	32B	()	01		XDR7CDX 65 32B	
XA543	TQ2	D4	27B	XDR7RA	00	=		
XA543	TQ2	D4	25B	(51)	01		XD07C0X XDC5E0 47 25B 49 26B	
XA542	TT3	D2	23B	XDR7OR	00	=		
XA542	TT3	D2	22B	(43)	01		XDR7OS XDR7RA XDMRCA 41 22B 46 21A 48 22A	
XA543	TQ2	D2	21A	XDR7OS	00	=		DEV REQ 7
XA543	TQ2	D2	22A	(46)	01		XDR7CA XDR7OR 48 22A 50 23A	
XA543	TQ2	E2	28A	XDSTBA	00	=		
XA543	TQ2	E2	29A	(60)	01		SPI044 XDSTB0 62 29A 64 30A	
XA544	THI	E4	28B	XDSTB0	00	=		IOC STROBE
XA544	THI	E4	29B	(56)	01		TSTBCA 55 29B	
XA540	DCF	C1	25B	XDOPADX	00	=		TDIPBB4 BUSS
XA540	DCF	C1	29A	(46)	01		XDCSDA 52 29A	
XA540	DCF	C2	26B	XDOPA0X	00	=		
XA540	DCF	C2	27B	(47)	01		XDOPC0X 49 27B	
XA539	DCF	C1	25B	XDOPCDX	00	=		XDOPDB4 BUSS
XA539	DCF	C1	29A	(46)	01		XDCSSA 52 29A	
XA539	DCF	C2	26B	XDOPC0X	00	=		
XA539	DCF	C2	27B	(47)	01		TDLPA0 49 27B	
				XDOPDB4	00	=		
XA539	DCF	C1	25B	()	01		XDOPCDX 46 25B	DEV DATA LINE PARI

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XD000ADX
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	REF ID	FACTOR	COMMENT
XA541	DCF	A1	02B	XD00ADX	00	=		
XA541	DCF	A1	05A	(07)	01		XDCSDA 06 05A	TDI08B4 BUSS
XA541	DCF	A2	03B	XD00A0X	00	=		
XA541	DCF	A2	04B	(09)	01		XD00COX 11 04B	
XA540	DCF	A1	02B	XD00BDX	00	=		
XA540	DCF	A1	05A	(07)	01		XDCSIA 06 05A	TDI08B4 BUSS
XA540	DCF	A2	03B	XD0080X	00	=		
XA540	DCF	A2	04B	(09)	01		XDROOS 11 04B	
XA539	DCF	A1	02B	XD00CDX	00	=		
XA539	DCF	A1	05A	(07)	01		XDCSSA 06 05A	XD008B4 BUSS
XA539	DCF	A2	03B	XD00COX	00	=		
XA539	DCF	A2	04B	(09)	01		TDLOAD 11 04B	
XA539	DCF	A1	02B	XD008B4	00	=		
XA539	DCF	A1	02B	()	01		XD00CDX 07 02B	DEV DATA LINE 0
XA541	DCF	A3	07B	XD01ADX	00	=		
XA541	DCF	A3	05A	(17)	01		XDCSDA 06 05A	TDI18B4 BUSS
XA541	DCF	A4	06B	XD01A0X	00	=		
XA541	DCF	A4	05B	(15)	01		XD01COX 13 05B	
XA540	DCF	A3	07B	XD018DX	00	=		
XA540	DCF	A3	05A	(17)	01		XDCSIA 06 05A	TDI18B4 BUSS
XA540	DCF	A4	06B	XD0180X	00	=		
XA540	DCF	A4	05B	(15)	01		XDR10S 13 05B	
XA539	DCF	A3	07B	XD01CDX	00	=		
XA539	DCF	A3	05A	(17)	01		XDCSSA 06 05A	XD018B4 BUSS

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA539	DCF	A4	06B	XD01C0X	00	=		
XA539	DCF	A4	05B	(15)	01		TDL1A0 13 05B	
				XD01DB4	00	=		
XA539	DCF	A3	07B	()	01		XD01CDX 17 07B	DEV DATA LINE 1
XA541	DCF	A5	08B	XD02ADX	00	=		
XA541	DCF	A5	05A	(14)	01		XDCSDA 06 05A	TDI28B4 BUSS
XA541	DCF	A6	07A	XD02A0X	00	=		
XA541	DCF	A6	06A	(10)	01		XD02C0X 08 06A	
XA540	DCF	A5	08B	XD02B0X	00	=		
XA540	DCF	A5	05A	(14)	01		XDCSIA 06 05A	TDI28B4 BUSS
XA540	DCF	A6	07A	XD02B0X	00	=		
XA540	DCF	A6	06A	(10)	01		XDR20S 08 06A	
XA539	DCF	A5	08B	XD02CDX	00	=		
XA539	DCF	A5	05A	(14)	01		XDCSSA 06 05A	XD02DB4 BUSS
XA539	DCF	A6	07A	XD02C0X	00	=		
XA539	DCF	A6	05A	(10)	01		TDL2A0 08 06A	
				XD02DB4	00	=		
XA539	DCF	A5	08B	()	01		XD02CDX 14 08B	DEV DATA LINE 2
XA541	DCF	A7	02A	XD03ADX	00	=		
XA541	DCF	A7	05A	(01)	01		XDCSDA 06 05A	TDI38B4 BUSS
XA541	DCF	A8	03A	XD03A0X	00	=		
XA541	DCF	A8	04A	(03)	01		XD03C0X 04 04A	
XA540	DCF	A7	02A	XD03B0X	00	=		
XA540	DCF	A7	05A	(01)	01		XDCSIA 06 05A	TDI38B4 BUSS

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XD03B0X
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA540	DCF	A8	03A	XD03B0X	00	=		
XA540	DCF	A8	04A	(03)	01		XDR30S 04 04A	
XA539	DCF	A7	02A	XD03CDX	00	=		
XA539	DCF	A7	05A	(01)	01		XDCSSA 06 05A	X003DB4 BUSS
XA539	DCF	A8	03A	XD03COX	00	=		
XA539	DCF	A8	04A	(03)	01		TDL3A0 04 04A	
				XD03DB4	00	=		
XA539	DCF	A7	02A	()	01		XD03CDX 01 02A	DEV DATA LINE 3
XA541	DCF	B1	10B	XD04ADX	00	=		
XA541	DCF	B1	13A	(27)	01		XDCSDA 36 13A	T014BB4 BUSS
XA541	DCF	B2	11B	XD04A0X	00	=		
XA541	DCF	B2	12B	(29)	01		XD04COX 31 12B	
XA540	DCF	B1	10B	XD04BDX	00	=		
XA540	DCF	B1	13A	(27)	01		XDCSIA 36 13A	T014BB4 BUSS
XA540	DCF	B2	11B	XD04B0X	00	=		
XA540	DCF	B2	12B	(29)	01		XDR40S 31 12B	
XA539	DCF	B1	10B	XD04CDX	00	=		
XA539	DCF	B1	13A	(27)	01		XDCSSA 36 13A	X004DB4 BUSS
XA539	DCF	B2	11B	XD04COX	00	=		
XA539	DCF	B2	12B	(29)	01		TDL4A0 31 12B	DEV DATA LINE 4
				XD04DB4	00	=		
XA539	DCF	B1	10B	()	01		XD04CDX 27 10B	
XA541	DCF	B3	15B	XD05ADX	00	=		
XA541	DCF	B3	13A	(37)	01		XDCSDA 36 13A	T015BB4 BUSS

DRAWING NUMBER
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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/EE154 CPU/TO 31W2-2T-122-19
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CONNECTOR	DCP TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DEFIN FACTOR	FACTOR	COMMENT
XA541	DCF	B4	14B	XD05A0X	00 =			
XA541	DCF	B4	13B	(35)	01		XD05C0X 33 13B	
XA540	DCF	B3	15B	XD05BDX	00 =			
XA540	DCF	B3	13A	(37)	01		XDCSIA 36 13A	TDI58B4 BUSS
XA540	DCF	B4	14B	XD05B0X	00 =			
XA540	DCF	B4	13B	(35)	01		XDR50S 33 13B	
XA539	DCF	B3	15B	XD05CDX	00 =			
XA539	DCF	B3	13A	(37)	01		XDCSSA 36 13A	XD05DB4 BUSS
XA539	DCF	B4	14B	XD05C0X	00 =			
XA539	DCF	B4	13B	(35)	01		TDL5A0 33 13B	
				XD05DB4	00 =			
XA539	DCF	B3	15B	()	01		XD05CDX 37 15B	DEV DATA LINE 5
XA541	DCF	B5	16A	XD06ADX	00 =			
XA541	DCF	B5	13A	(41)	01		XDCSDA 36 13A	TDI68B4 BUSS
XA541	DCF	B6	15A	XD06A0X	00 =			
XA541	DCF	B6	14A	(40)	01		XD06C0X 38 14A	
XA540	DCF	B5	16A	XD06BDX	00 =			
XA540	DCF	B5	13A	(41)	01		XDCSIA 36 13A	TDI68B4 BUSS
XA540	DCF	B6	15A	XD06B0X	00 =			
XA540	DCF	B6	14A	(40)	01		XDR60S 38 14A	
XA539	DCF	B5	16A	XD06CDX	00 =			
XA539	DCF	B5	13A	(41)	01		XDCSSA 36 13A	XD06DB4 BUSS
XA539	DCF	B6	15A	XD06C0X	00 =			
XA539	DCF	B6	14A	(40)	01		TDL6A0 38 14A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA539	DCF	B5	16A	XD06DB4 ()	00 = 01		XD06CDX 41 16A	DEV DATA LINE 6
XA541	DCF	B7	10A	XD07ADX (23)	00 = 01		TDI78B4 BUSS	
XA541	DCF	B7	13A				XDCSDA 36 13A	
XA541	DCF	B8	11A	XD07A0X (30)	00 = 01		XD07COX 34 12A	
XA540	DCF	B7	10A	XD07B0X (23)	00 = 01		TDI78B4 BUSS	
XA540	DCF	B7	13A				XDCSIA 36 13A	
XA540	DCF	B8	11A	XD07B0X (30)	00 = 01		XDR70S 34 12A	
XA540	DCF	B8	12A					
XA539	DCF	B7	10A	XD07CDX (23)	00 = 01		XD07DB4 BUSS	
XA539	DCF	B7	13A				XDCSSA 36 13A	
XA539	DCF	B8	11A	XD07COX (30)	00 = 01		TDL7A0 34 12A	
XA539	DCF	B8	12A					
XA539	DCF	B7	10A	XD07DB4 ()	00 = 01		XD07CDX 23 10A	DEV DATA LINE 7
XA550	TQ2	F1	37B	XECMA0 (75)	00 = 01		DEV COMMAND	
XA550	TQ2	F1	38B				XEMRDA XECSCA 77 38B 79 39B	
XA548	DCF	D5	38B	XECMCDX (80)	00 = 01		XECMDB4 BUSS	
XA548	DCF	D5	36A				XESTBA 72 36A	
XA548	DCF	D6	38A	XECMCOX (76)	00 = 01		XECMA0 74 37A	
XA548	DCF	D6	37A					
XA548	DCF	D5	38B	XECMDB4 ()	00 = 01		XECMCDX 80 38B	DEV COMMAND LINE

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA551	THI E6	32B	XECMD0	00 =			IOC COMMAND
XA551	THI E6	33B	(68)	01		YCMDCA 65 33B	
XA549	TT3 F1	36B	XECSCA	00 =			CH.SEL.COMMAND
XA549	TT3 F1	37B	(73)	01		XEICSO XEICRO XECMD0 75 37B 77 38B 79 39B	
XA549	TT3 D3	27B	XECSDA	00 =			CH.SEL.INTER*
XA549	TT3 D3	24B	(51)	01		XEICSO XEICRO XEINTA 45 24B 47 25B 49 26B	
XA549	TT3 E2	29B	XECSEA	00 =			CH.SEL.ENABLE
XA549	TT3 E2	28B	(55)	01		XEICSO XEICRO XEENBO 53 28B 60 28A 62 29A	
XA551	THI D3	21A	XECSE0	00 =			
XA551	THI D3	22A	(48)	01		XECSEA 50 22A	
XA549	TT3 F2	35B	XEC5IA	00 =			CH.SEL.INTER
XA549	TT3 F2	34B	(74)	01		XEICSO XEICRO XEINT0 65 34B 71 36A 72 34A	
XA549	TT3 E1	30A	XECSSA	00 =			CH.SEL.STROBE
XA549	TT3 E1	31A	(64)	01		XEICSO XEICRO XESTB0 66 31A 68 32A 70 33A	
XA550	TQ2 E4	33B	XEENAO	00 =			DEV ENABLE
XA550	TQ2 E4	31B	(63)	01		XECSEA XEMRDA 59 31B 61 32B	
XA551	THI E5	30B	XEENBO	00 =			IOC ENABLE
XA551	THI E5	31B	(57)	01		YENACA 59 31B	
XA548	DCF D7	33A	XEENC0X	00 =			XEENDB4 BUSS
XA548	DCF D7	36A	(61)	01		XESTBA 72 36A	
XA548	DCF D8	34A	XEENCOX	00 =			
XA548	DCF D8	35A	(68)	01		XEENAO 70 35A	
XA548	DCF D7	33A	XEENDB4	00 =			
XA548	DCF D7	33A	()	01		XEENC0X 61 33A	DEV ENABLE LINE

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XEGNDA
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM.	DESIGNATOR	FACTOR	COMMENT
XA551	THI	B5	10B	XEGNDA	00	=		
XA551	THI	B5	11B	(19)	01		SPI301 21 11B	
XA551	THI	E2	30A	XEICRO	00	=		IOE_ADDR
XA551	THI	E2	31A	(63)	01		TCSXMA 61 31A	
XA551	THI	E1	32A	XEICSO	00	=		IOC_CH_SEL
XA551	THI	E1	33A	(66)	01		TCS6AA 64 33A	
XA547	DCF	C3	30B	XEINADX	00	=		TINDBB4 BUSS
XA547	DCF	C3	29A	(55)	01		XECSDA 52 29A	
XA547	DCF	C4	29B	XEINA0X	00	=		
XA547	DCF	C4	28B	(56)	01		XEINCOX 51 28B	
XA548	DCF	D3	37B	XEINCDX	00	=		XEINDB4 BUSS
XA548	DCF	D3	36A	(78)	01		XESTBA 72 36A	
XA548	DCF	D4	36B	XEINCOX	00	=		DEV INDICATOR REC.
XA548	DCF	D4	35B	(75)	01		XEGNDA 73 35B	
				XEINDB4	00	=		
XA548	DCF	D3	37B	()	01		XEINCDX 78 37B	
XA550	TQ2	E3	30B	XEINTA	00	=		
XA550	TQ2	E3	28B	(57)	01		XEINTO SPI044 53 28B 55 29B	
XA551	THI	E3	28A	XEINTO	00	=		IOC INTERROGATE
XA551	THI	E3	29A	(60)	01		TINTCA 62 29A	
XA439	THI	F4	34A	XEIRCO	00	=		
XA439	THI	F4	35A	(72)	01		XEIRCD4 74 35A	
XA550	TQ2	F2	34A	XEMRCA	00	=		ENB_CMD_STR.
XA550	TQ2	F2	36A	(72)	01		XEMRDO XESTB0 71 36A 73 36B	

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 UNIT ASSEMBLY NAME CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
 UNIT ASSEMBLY NO. 149019 REV G INDEX XEMRDA
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CONNECTOR	CAGE TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIG- NATOR	FACTOR	COMMENT
XA549	TT3	E3	33B	XEMRDA	00	=		
XA549	TT3	E3	30B	(63)	01		XEENB0 XECMDO SPI044 57 30B 59 31B 61 32B	DEV RESET
XA551	THI	D4	22B	XEMRDO	00	=		
XA551	THI	D4	23B	(46)	01		XEMRDA 41 23B	
XA548	DCF	C1	25B	XEREADX	00	=		
XA548	DCF	C1	29A	(46)	01		XEGNDA 52 29A	TRQ6BB4 BUSS
XA548	DCF	C2	26B	XEREA0X	00	=		
XA548	DCF	C2	27B	(47)	01		XERECO 49 27B	
XA549	TT3	C3	19B	XERECO	00	=		
XA549	TT3	C3	16B	(39)	01		XERE1A XERE2A XERE3A 33 16B 35 17B 37 18B	DEV OR D REQ
XA551	THI	B6	12B	XERE1A	00	=		
XA551	THI	B6	13B	(26)	01		XERE10 27 13B	
XA549	TT3	A3	07B	XERE10	00	=		
XA549	TT3	A3	04B	(15)	01		XER00A XER10A XER20A 09 04B 11 05B 13 06B	DEV REQ 0+1+2
XA551	THI	C5	16B	XERE2A	00	=		
XA551	THI	C5	17B	(31)	01		XERE20 33 17B	
XA549	TT3	B3	13B	XERE20	00	=		
XA549	TT3	B3	10B	(27)	01		XER30A XER40A XER50A 21 10B 23 11B 25 12B	DEV REQ 3+4+5
XA551	THI	C6	18B	XERE3A	00	=		
XA551	THI	C6	19B	(42)	01		XERE30 39 19B	
XA550	TQ2	E1	31A	XERE30	00	=		
XA550	TQ2	E1	32A	(66)	01		XER60R XER70R 68 32A 70 33A	DEV REQ 6+7
XA551	THI	A1	06A	XEROCA	00	=		
XA551	THI	A1	07A	(13)	01		XEROC0X 11 07A	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XER0CDX
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA546	DCF	C3	30B	XER0CDX	00	=		
XA546	DCF	C3	29A	(55)	01		XECSSA 52 29A	XER0DB4 BUSS
XA546	DCF	C4	29B	XER0C0X	00	=		
XA546	DCF	C4	28B	(56)	01		XEGNDA 51 28B	DEV REQ REC. 0
				XER0DB4	00	=		
XA546	DCF	C3	30B	()	01		XER0CDX 55 30B	
XA550	TQ2	A3	04B	XER0RA	00	=		
XA550	TQ2	A3	02A	(09)	01		XE00C0X XECSE0 03 02A 07 03A	
XA551	THI	A3	03A	XER00A	00	=		
XA551	THI	A3	02A	(03)	01		XER00S 04 02A	
XA549	TT3	A1	04A	XER00R	00	=		
XA549	TT3	A1	05A	(04)	01		XER00S XER0RA XEMRCA 06 05A 08 06A 10 07A	
XA550	TQ2	A1	05A	XER00S	00	=		DEV REQ 0
XA550	TQ2	A1	06A	(06)	01		XER0CA XER00R 08 06A 10 07A	
XA551	THI	A2	04A	XER1CA	00	=		
XA551	THI	A2	05A	(08)	01		XER1C0X 06 05A	
XA546	DCF	C5	31B	XER1CDX	00	=		
XA546	DCF	C5	29A	(60)	01		XECSSA 52 29A	XER1DB4 BUSS
XA546	DCF	C6	31A	XER1C0X	00	=		DEV REQ REC. 1
XA546	DCF	C6	30A	(57)	01		XEGNDA 54 30A	
				XER1DB4	00	=		
XA546	DCF	C5	31B	()	01		XER1CDX 60 31B	
XA550	TQ2	A4	07B	XER1RA	00	=		
XA550	TQ2	A4	05B	(15)	01		XE01C0X XECSE0 11 05B 13 06B	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XER10A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA551	THI	A4	02B	XER10A	00 =		
XA551	THI	A4	03B	(01)	01 =	XER10S 05 03B	
XA549	TT3	A2	03A	XER10R	00 =		
XA549	TT3	A2	02B	(07)	01 =	XER10S XER1RA XEMRCA 01 02B 03 02A 05 03B	
XA550	TQ2	A2	02B	XER10S	00 =		DEV REQ 1
XA550	TQ2	A2	04A	(01)	01 =	XERICA XER10R 04 04A 05 03B	
XA551	THI	B1	13A	XER2CA	00 =		
XA551	THI	B1	14A	(24)	01 =	XER2COX 22 14A	
XA546	DCF	C7	25A	XER2CDX	00 =		XER2DB4 BUSS
XA546	DCF	C7	29A	(43)	01 =	XECSSA 52 29A	
XA546	DCF	C8	26A	XER2COX	00 =		DEV REQ REC. 2
XA546	DCF	C8	28A	(48)	01 =	XEGNDA 50 28A	
XA546	DCF	C7	25A	XER2DB4	00 =		
XA546	DCF	C7	25A	()	01 =	XER2CDX 43 25A	
XA550	TQ2	B3	10B	XER2RA	00 =		
XA550	TQ2	B3	08B	(21)	01 =	XE02COX XECSEO 17 08B 19 09B	
XA551	THI	B3	09A	XER20A	00 =		
XA551	THI	B3	10A	(18)	01 =	XER20S 20 10A	
XA549	TT3	B1	11A	XER20R	00 =		
XA549	TT3	B1	12A	(20)	01 =	XER20S XER2RA XEMRCA 22 12A 24 13A 26 14A	
XA550	TQ2	B1	12A	XER20S	00 =		DEV REQ 2
XA550	TQ2	B1	13A	(22)	01 =	XER2CA XER20R 24 13A 26 14A	
XA551	THI	B2	11A	XER3CA	00 =		
XA551	THI	B2	12A	(25)	01 =	XER3COX 23 12A	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XER3CDX
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA546	DCF	D1	32B	XER3CDX	00 =		
XA546	DCF	D1	36A	(65)	01	SPI301 72 36A	XER3DB4 BUSS
XA546	DCF	D2	33B	XER3COX	00 =		
XA546	DCF	D2	34B	(69)	01	SPI309 71 34B	DEV REQ REC. 3
XA546	DCF	D1	32B	()	01	XER3CDX 65 32B	
XA550	TQ2	B4	13B	XER3RA	00 =		
XA550	TQ2	B4	11B	(27)	01	XE03COX XECSE0 23 11B 25 12B	
XA551	THI	B4	08B	XER30A	00 =		
XA551	THI	B4	09B	(14)	01	XER30S 17 09B	
XA549	TT3	B2	09B	XER30R	00 =		
XA549	TT3	B2	09A	(19)	01	XER30S XER3RA XEMRCA 14 09A 17 08B 18 10A	
XA550	TQ2	B2	09A	XER30S	00 =		DEV REQ 3
XA550	TQ2	B2	10A	(14)	01	XER3CA XER30R 18 10A 20 11A	
XA551	THI	C1	19A	XER4CA	00 =		
XA551	THI	C1	20A	(40)	01	XER4COX 38 20A	
XA546	DCF	D3	37B	XER4CDX	00 =		
XA546	DCF	D3	36A	(78)	01	SPI301 72 36A	XER4DB4 BUSS
XA546	DCF	D4	36B	XER4COX	00 =		
XA546	DCF	D4	35B	(75)	01	SPI309 73 35B	DEV REQ REC. 4
XA546	DCF	D3	37B	()	01	XER4CDX 78 37B	
XA550	TQ2	C3	16B	XER4RA	00 =		
XA550	TQ2	C3	14B	(33)	01	XE04COX XECSE0 29 14B 31 15B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XER40A
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS		EQUATION	TERM	DESIG- NATOR	FACTOR	COMMENT
			AND	OR					
XA551	THI	C3	15A		XER40A	00	=		
XA551	THI	C3	16A		(34)	01		XER40S 36 16A	
XA549	TT3	C1	17A		XER40R	00	=		
XA549	TT3	C1	18A		(36)	01		XER40S XER4RA XEMRCA 38 18A 40 19A 42 20A	
XA550	TQ2	C1	18A		XER40S	00	=		DEV REQ 4
XA550	TQ2	C1	19A		(38)	01		XER4CA XER40R 40 19A 42 20A	
XA551	THI	C2	17A		XER5CA	00	=		
XA551	THI	C2	18A		(37)	01		XER5COX 35 18A	
XA546	DCF	D5	38B		XER5CDX	00	=		XER5DB4 BUSS
XA546	DCF	D5	36A		(80)	01		SPI301 72 36A	
XA546	DCF	D6	38A		XER5COX	00	=		DEV REQ REC. 5
XA546	DCF	D6	37A		(76)	01		SPI309 74 37A	
XA546	DCF	D5	38B		XER5DB4	00	=		
XA546	DCF	D5	38B		()	01		XER5CDX 80 38B	
XA550	TQ2	C4	19B		XER5RA	00	=		
XA550	TQ2	C4	17B		(39)	01		XE05COX XECSE0 35 17B 37 18B	
XA551	THI	C4	14B		XER50A	00	=		
XA551	THI	C4	15B		(30)	01		XER50S 29 15B	
XA549	TT3	C2	15B		XER50R	00	=		
XA549	TT3	C2	14B		(31)	01		XER50S XER5RA XEMRCA 29 14B 30 15A 34 16A	
XA550	TQ2	C2	15A		XER50S	00	=		DEV REQ 5
XA550	TQ2	C2	16A		(30)	01		XER5CA XER50R 34 16A 36 17A	
XA551	THI	D1	25A		XER6CA	00	=		
XA551	THI	D1	26A		(54)	01		XER6COX 52 26A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XER6CDX
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA546	DCF	D7	33A	XER6CDX	00 =		
XA546	DCF	D7	36A	(61)	01	SPI301 72 36A	XER6DB4 BUSS
XA546	DCF	D8	34A	XER6COX	00 =		DEV REQ REC. 6
XA546	DCF	D8	35A	(68)	01	SPI309 70 35A	
XA546	DCF	D7	33A	XER6DB4	00 =		
XA546	DCF	D7	33A	()	01	XER6CDX 61 33A	
XA550	TQ2	D3	24B	XER6RA	00 =		
XA550	TQ2	D3	22B	(45)	01	XE06COX XECSE0 41 22B 43 23B	
XA549	TT3	D1	23A	XER60R	00 =		
XA549	TT3	D1	24A	(50)	01	XER60S XER6RA XEMRCA 52 24A 54 25A 56 26A	
XA550	TQ2	D1	24A	XER60S	00 =		DEV REQ 6
XA550	TQ2	D1	25A	(52)	01	XER6CA XER60R 54 25A 56 26A	
XA551	THI	D2	23A	XER7CA	00 =		
XA551	THI	D2	24A	(49)	01	XER7COX 47 24A	
XA548	DCF	D1	32B	XER7CDX	00 =		XER7DB4 BUSS
XA548	DCF	D1	36A	(65)	01	XESTBA 72 36A	
XA548	DCF	D2	33B	XER7COX	00 =		DEV REQ REC. 7
XA548	DCF	D2	34B	(69)	01	XEGNDA 71 34B	
XA548	DCF	D1	32B	XER7DB4	00 =		
XA548	DCF	D1	32B	()	01	XER7CDX 65 32B	
XA550	TQ2	D4	27B	XER7RA	00 =		
XA550	TQ2	D4	25B	(51)	01	XE07COX XECSE0 47 25B 49 26B	
XA549	TT3	D2	23B	XER70R	00 =		
XA549	TT3	D2	22B	(43)	01	XER70S XER7RA XEMRCA 41 22B 46 21A 48 22A	

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XER70S
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA550	TQ2	D2	21A	XER70S	00	=		DEV REQ 7
XA550	TQ2	D2	22A	(46)	01		XER7CA XER7OR 48 22A 50 23A	
XA550	TQ2	E2	28A	XESTBA	00	=		
XA550	TQ2	E2	29A	(60)	01		SPI044 XESTB0 62 29A 64 30A	
XA551	THI	E4	28B	XESTB0	00	=		IOC STROBE
XA551	THI	E4	29B	(56)	01		TSTBCA 55 29B	
XA547	DCF	C1	25B	XEOPADX	00	=		TDIPBB4 BUSS
XA547	DCF	C1	29A	(46)	01		XECSDA 52 29A	
XA547	DCF	C2	26B	XEOPA0X	00	=		
XA547	DCF	C2	27B	(47)	01		XEOPCOX 49 27B	
XA546	DCF	C1	25B	XEOPCOX	00	=		XEOPDB4 BUSS
XA546	DCF	C1	29A	(46)	01		XECSSA 52 29A	
XA546	DCF	C2	26B	XEOPCOX	00	=		
XA546	DCF	C2	27B	(47)	01		TDLPA0 49 27B	
				XEOPDB4	00	=		
XA546	DCF	C1	25B	()	01		XEOPCOX 46 25B	DEV DATA LINE PART
XA548	DCF	A1	02B	XE00ADX	00	=		TDI0BB4 BUSS
XA548	DCF	A1	05A	(07)	01		XECSDA 06 05A	
XA548	DCF	A2	03B	XE00A0X	00	=		
XA548	DCF	A2	04B	(09)	01		XE00COX 11 04B	
XA547	DCF	A1	02B	XE00BDX	00	=		TDI0BB4 BUSS
XA547	DCF	A1	05A	(07)	01		XEC5IA 06 05A	
XA547	DCF	A2	03B	XE00B0X	00	=		
XA547	DCF	A2	04B	(09)	01		XER00S 11 04B	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019 REV G INDEX XED00CDX
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA546	DCF	A1	02B	XE00CDX	00	=		
XA546	DCF	A1	05A	(07)	01		XECSSA 06 05A	XE00DB4 BUSS
XA546	DCF	A2	03B	XE00COX	00	=		
XA546	DCF	A2	04B	(09)	01		TDLOAO 11 04B	
				XE00DB4	00	=		
XA546	DCF	A1	02B	()	01		XE00CDX 07 02B	DEV DATA LINE 0
XA548	DCF	A3	07B	XE01ADX	00	=		
XA548	DCF	A3	05A	(17)	01		XECSDA 06 05A	TD11BB4 BUSS
XA548	DCF	A4	06B	XE01AOX	00	=		
XA548	DCF	A4	05B	(15)	01		XE01COX 13 05B	
XA547	DCF	A3	07B	XE01BDX	00	=		
XA547	DCF	A3	05A	(17)	01		XECSDA 06 05A	TD11BB4 BUSS
XA547	DCF	A4	06B	XE01BOX	00	=		
XA547	DCF	A4	05B	(15)	01		XER10S 13 05B	
XA546	DCF	A3	07B	XE01CDX	00	=		
XA546	DCF	A3	05A	(17)	01		XECSSA 06 05A	XE01DB4 BUSS
XA546	DCF	A4	06B	XE01COX	00	=		
XA546	DCF	A4	05B	(15)	01		TDL1AO 13 05B	
				XE01DB4	00	=		
XA546	DCF	A3	07B	()	01		XE01CDX 17 07B	DEV DATA LINE 1
XA548	DCF	A5	08B	XE02ADX	00	=		
XA548	DCF	A5	05A	(14)	01		XECSDA 06 05A	TD12BB4 BUSS
XA548	DCF	A6	07A	XE02AOX	00	=		
XA548	DCF	A6	06A	(10)	01		XE02COX 08 06A	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA547	DCF	A5	08B	XE02BDX	00	=		
XA547	DCF	A5	05A	(14)	01		XEC5IA 06 05A	TDI28B4 BUSS
XA547	DCF	A6	07A	XE02BOX	00	=		
XA547	DCF	A6	06A	(10)	01		XER20S 08 06A	
XA546	DCF	A5	08B	XE02CDX	00	=		
XA546	DCF	A5	05A	(14)	01		XEC5SA 06 05A	XE02DB4 BUSS
XA546	DCF	A6	07A	XE02COX	00	=		
XA546	DCF	A6	06A	(10)	01		TDL2A0 08 06A	
				XE02DB4	00	=		
XA546	DCF	A5	08B	()	01		XE02CDX 14 08B	DEV DATA LINE 2
XA548	DCF	A7	02A	XE03ADX	00	=		
XA548	DCF	A7	05A	(01)	01		XEC5DA 06 05A	TDI38B4 BUSS
XA548	DCF	A8	03A	XE03A0X	00	=		
XA548	DCF	A8	04A	(03)	01		XE03COX 04 04A	
XA547	DCF	A7	02A	XE03BDX	00	=		
XA547	DCF	A7	05A	(01)	01		XEC5IA 06 05A	TDI38B4 BUSS
XA547	DCF	A8	03A	XE03BOX	00	=		
XA547	DCF	A8	04A	(03)	01		XER30S 04 04A	
XA546	DCF	A7	02A	XE03CDX	00	=		
XA546	DCF	A7	05A	(01)	01		XEC5SA 06 05A	XE03DB4 BUSS
XA546	DCF	A8	03A	XE03COX	00	=		
XA546	DCF	A8	04A	(03)	01		TDL3A0 04 04A	
				XE03DB4	00	=		
XA546	DCF	A7	02A	()	01		XE03CDX 01 02A	DEV DATA LINE 3

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA548	DCF	B1	10B	XE04ADX	00	=		
XA548	DCF	B1	13A	(27)	01		TDI48B4	BUSS
							XECSDA 36 13A	
XA548	DCF	B2	11B	XE04A0X	00	=		
XA548	DCF	B2	12B	(29)	01			
							XE04C0X 31 12B	
XA547	DCF	B1	10B	XE048DX	00	=		
XA547	DCF	B1	13A	(27)	01		TDI48B4	BUSS
							XECSTIA 36 13A	
XA547	DCF	B2	11B	XE0480X	00	=		
XA547	DCF	B2	12B	(29)	01			
							XER40S 31 12B	
XA546	DCF	B1	10B	XE04CDX	00	=		
XA546	DCF	B1	13A	(27)	01		XE048B4	BUSS
							XECSSA 36 13A	
XA546	DCF	B2	11B	XE04C0X	00	=		
XA546	DCF	B2	12B	(29)	01			
							TDL4A0 31 12B	
XA546	DCF	B1	10B	XE048B4	00	=		
				()	01			
							XE04CDX 27 10B	DEV DATA LINE 4
XA548	DCF	B3	15B	XE05ADX	00	=		
XA548	DCF	B3	13A	(37)	01		TDI58B4	BUSS
							XECSDA 36 13A	
XA548	DCF	B4	14B	XE05A0X	00	=		
XA548	DCF	B4	13B	(35)	01			
							XE05C0X 33 13B	
XA547	DCF	B3	15B	XE058DX	00	=		
XA547	DCF	B3	13A	(37)	01		TDI58B4	BUSS
							XECSTIA 36 13A	
XA547	DCF	B4	14B	XE0580X	00	=		
XA547	DCF	B4	13B	(35)	01			
							XER50S 33 13B	
XA546	DCF	B3	15B	XE05CDX	00	=		
XA546	DCF	B3	13A	(37)	01		XE058B4	BUSS
							XECSSA 36 13A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA546	DCF	B4	14B	XE05C0X	00	=		
XA546	DCF	B4	13B	(35)	01		TDL5A0 33 13B	
				XE05DB4	00	=		
XA546	DCF	B3	15B	()	01		XE05CDX 37 15B	DEV DATA LINE 5
XA548	DCF	B5	16A	XE06ADX	00	=		
XA548	DCF	B5	13A	(41)	01		XECSDA 36 13A	TDI68B4 BUSS
XA548	DCF	B6	15A	XE06A0X	00	=		
XA548	DCF	B6	14A	(40)	01		XE06C0X 38 14A	
XA547	DCF	B5	16A	XE06BDX	00	=		
XA547	DCF	B5	13A	(41)	01		XEC5IA 36 13A	TDI68B4 BUSS
XA547	DCF	B6	15A	XE06B0X	00	=		
XA547	DCF	B6	14A	(40)	01		XER60S 38 14A	
XA546	DCF	B5	16A	XE06CDX	00	=		
XA546	DCF	B5	13A	(41)	01		XECSSA 36 13A	XE06DB4 BUSS
XA546	DCF	B6	15A	XE06C0X	00	=		
XA546	DCF	B6	14A	(40)	01		TDL6A0 38 14A	
				XE06DB4	00	=		
XA546	DCF	B5	16A	()	01		XE06CDX 41 16A	DEV DATA LINE 6
XA548	DCF	B7	10A	XE07ADX	00	=		
XA548	DCF	B7	13A	(23)	01		XECSDA 36 13A	TDI78B4 BUSS
XA548	DCF	B8	11A	XE07A0X	00	=		
XA548	DCF	B8	12A	(30)	01		XE07C0X 34 12A	
XA547	DCF	B7	10A	XE07BDX	00	=		
XA547	DCF	B7	13A	(23)	01		XEC5IA 36 13A	TDI78B4 BUSS

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA547	DCF	B8	11A	XE07BOX	00	=		
XA547	DCF	B8	12A	(30)	01		XER705 34 12A	
XA546	DCF	B7	10A	XE07CDX	00	=		
XA546	DCF	B7	13A	(23)	01		XECSSA 36 13A	XE07DB4 BUSS
XA546	DCF	B8	11A	XE07COX	00	=		
XA546	DCF	B8	12A	(30)	01		TDL7A0 34 12A	
XA546	DCF	B7	10A	XE07DB4	00	=		
XA546	DCF	B7	10A	()	01		XE07CDX 23 10A	DEV DATA LINE 7
XA439	THI	F5	36A	XFIRCO	00	=		
XA439	THI	F5	37A	(78)	01		XFIRCD4 76 37A	
XA439	THI	F6	38A	XGIRCO	00	=		
XA439	THI	F6	39A	(77)	01		XGIRCD4 75 39A	
XA406	THI	D2	23A	XHIRCO	00	=		
XA406	THI	D2	24A	(49)	01		XHIRCD4 47 24A	
XA514	ACF	D3	38B	XICMCTX	00	=		
XA514	ACF	D3	36B	(73)	01		SPI040 71 36B	
XA514	ACF	D1		XICMDGX	00	=		
XA514	ACF	D1	06A	(59)	01		XISTB0 YMMICB 13 06A 17 07A	
XA514	ACF	D2		XICMDHX	00	=		
XA514	ACF	D2	18A	(57)	01		XICSA0 37 18A	
XA518	THI	E6	32B	XICMDO	00	=		
XA518	THI	E6	33B	(68)	01		TCMDCA 65 33B	IOC COMMAND
XA517	TQ2	F1	37B	XICSA0	00	=		
XA517	TQ2	F1	38B	(75)	01		XIMRDA XICSCA 77 38B 79 39B	DEV COMMAND

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LOGIC

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CONNECTOR	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA516	TT3	F1 36B	XICSCA	00 =			CH.SEL.COMMAND
XA516	TT3	F1 37B	(73)	01	XIICSO XIICRO XICM00 75 37B 77 38B 79 39B		
XA516	TT3	D3 27B	XICSDA	00 =			CH.SEL.INTER*
XA516	TT3	D3 24B	(51)	01	XIICSO XIICRO XIINTA 45 24B 47 25B 49 26B		
XA518	THI	F1 38B	XICSD0	00 =			
XA518	THI	F1 39B	(80)	01	XICSDA 79 39B		
XA516	TT3	E2 29B	XICSEA	00 =			CH.SEL.ENABLE
XA516	TT3	E2 28B	(55)	01	XIICSO XIICRO XIENB0 53 28B 60 28A 62 29A		
XA518	THI	D3 21A	XICSE0	00 =			
XA518	THI	D3 22A	(48)	01	XICSEA 50 22A		
XA516	TT3	F2 35B	XICSLA	00 =			CH.SEL.INTER
XA516	TT3	F2 34B	(74)	01	XIICSO XIICRO XIINT0 65 34B 71 36A 72 34A		
XA518	THI	D5 24B	XICSL0	00 =			
XA518	THI	D5 25B	(43)	01	XICSLA 45 25B		
XA516	TT3	E1 30A	XICSSA	00 =			CH.SEL.STROBE
XA516	TT3	E1 31A	(64)	01	XIICSO XIICRO XIISTB0 66 31A 68 32A 70 33A		
XA518	THI	A5 04B	XICSS0	00 =			
XA518	THI	A5 05B	(07)	01	XICSSA 09 05B		
			XIDUMZ	00 =			
XA503	EXT		()	01	XI00DGX XI00DHX XIR0DGX XIR0DHX XIOPDGX 04 03 20 19 02		
XA503	EXT		()	02 +	XI01DGX XI01DHX XIR1DGX XIR1DHX XIENDGX 06 05 22 21 36		
XA503	EXT		()	03 +	XI02DGX XI02DHX XIR2DGX XIR2DHX XICMDGX 08 07 24 23 38		
XA503	EXT		()	04 +	XI03DGX XI03DHX XIR3DGX XIR3DHX XIINDGX 10 09 26 25 40		
XA503	EXT		()	05 +	XI04DGX XI04DHX XIR4DGX XIR4DHX XIOPDHX 12 11 28 27 01		
XA503	EXT		()	06 +	XI05DGX XI05DHX XIR5DGX XIR5DHX XIENDHX 14 13 30 29 35		
XA503	EXT		()	07 +	XI06DGX XI06DHX XIR6DGX XIR6DHX XICMDHX 16 15 32 31 37		

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LOGIC

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CONNECTOR	TEST POINT	GROUP	TEST POINTS AND OR	EQUATION	TERM	RELATION	FACTOR	COMMENT
XA503	EXT			()	08	+	XI07DGX XI07DHX XIR7DGX XIR7DHX XIINDHX 18 17 34 33 39	
XA517	TQ2	E4	33B	XIENA0	00	=		DEV ENABLE
XA517	TQ2	E4	31B	(63)	01		XICSEA XIMRDA 59 31B 61 32B	
XA518	THI	E5	30B	XIENB0	00	=		IOC ENABLE
XA518	THI	E5	31B	(57)	01		TENACA 59 31B	
XA514	ACF	E3	38A	XIENCTX	00	=		
XA514	ACF	E3	36A	(72)	01		SPI040 68 36A	
XA514	ACF	E1		XIENDGX	00	=		
XA514	ACF	E1	06A	(51)	01		XISTB0 YMMICB 13 06A 17 07A	
XA514	ACF	E2		XIENDHX	00	=		
XA514	ACF	E2	23A	(49)	01		XIENA0 43 23A	
XA518	THI	B5	10B	XIGNDA	00	=		
XA518	THI	B5	11B	(19)	01		SPI301 21 11B	
XA518	THI	E2	30A	XIICR0	00	=		IOE ADRS
XA518	THI	E2	31A	(63)	01		TCSXMA 61 31A	
XA518	THI	E1	32A	XIICS0	00	=		IOC INDICATOR
XA518	THI	E1	33A	(66)	01		TCS3AA 64 33A	
XA515	TQ2	C2	15A	XIINAA	00	=		IOX INDICATOR TO IOC
XA515	TQ2	C2	16A	(30)	01		XICSD0 XIINCTX 34 16A 36 17A	
XA514	ACF	C3	32A	XIINCTX	00	=		
XA514	ACF	C3	34A	(65)	01		SPI040 64 34A	
XA514	ACF	C1		XIINDGX	00	=		
XA514	ACF	C1	06A	(23)	01		XISTB0 YMMICB 13 06A 17 07A	
XA514	ACF	C2		XIINDHX	00	=		
XA514	ACF	C2	20A	(25)	01		XIGNDA 39 20A	

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LOGIC

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CONNECTOR	FUNCTION TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA517	TQ2	E3	30B	XIINTA	00	=		
XA517	TQ2	E3	28B	(57)	01		XIINTO SPI042 53 28B 55 29B	
XA518	THI	E3	28A	XIINTO	00	=		IOC INTERROGATE
XA518	THI	E3	29A	(60)	01		TIINTCA 62 29A	
XA515	TQ2	C1	18A	XIIPAA	00	=		IOC INPUT PARITY
XA515	TQ2	C1	19A	(38)	01		XICSDO XIOPCTX 40 19A 42 20A	
XA515	TQ2	A1	05A	XII0AA	00	=		IOC INPUT DATA LINE 0
XA515	TQ2	A1	06A	(06)	01		XICSDO XI00CTX 08 06A 10 07A	
XA515	TQ2	D1	24A	XII0BA	00	=		
XA515	TQ2	D1	25A	(52)	01		XICSDO XIR00S 54 25A 56 26A	
XA515	TQ2	A2	02B	XII1AA	00	=		IOC INPUT DATA LINE 1
XA515	TQ2	A2	04A	(01)	01		XICSDO XI01CTX 04 04A 05 03B	
XA515	TQ2	D2	21A	XII1BA	00	=		DEV REQ 1 TO IOC
XA515	TQ2	D2	22A	(46)	01		XICSDO XIR10S 48 22A 50 23A	
XA515	TQ2	A3	04B	XII2AA	00	=		IOC INPUT DATA LINE 2
XA515	TQ2	A3	02A	(09)	01		XICSDO XI02CTX 03 02A 07 03A	
XA515	TQ2	D3	24B	XII2BA	00	=		DEV REQ 2 TO IOC
XA515	TQ2	D3	22B	(45)	01		XICSDO XIR20S 41 22B 43 23B	
XA515	TQ2	A4	07B	XII3AA	00	=		IOC INPUT DATA LINE 3
XA515	TQ2	A4	05B	(15)	01		XICSDO XI03CTX 11 05B 13 06B	
XA515	TQ2	D4	27B	XII3BA	00	=		DEV REQ 3 TO IOC
XA515	TQ2	D4	25B	(51)	01		XICSDO XIR30S 47 25B 49 26B	
XA515	TQ2	B1	12A	XII4AA	00	=		IOC INPUT DATA LINE 4
XA515	TQ2	B1	13A	(22)	01		XICSDO XI04CTX 24 13A 26 14A	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA515	TQ2	E1	31A	XII4BA	00	=		
XA515	TQ2	E1	32A	(66)	01		XICSI0 XIR40S 68 32A 70 33A	DEV REQ 4 TO IOC
XA515	TQ2	B2	09A	XII5AA	00	=		
XA515	TQ2	B2	10A	(14)	01		XICSDO XI05CTX 18 10A 20 11A	IOC INPUT DATA LINE 5
XA515	TQ2	E2	28A	XII5BA	00	=		
XA515	TQ2	E2	29A	(60)	01		XICSI0 XIR50S 62 29A 64 30A	DEV REQ 5 TO IOC
XA515	TQ2	B3	10B	XII6AA	00	=		
XA515	TQ2	B3	08B	(21)	01		XICSDO XI06CTX 17 08B 19 09B	IOC INPUT DATA LINE 6
XA515	TQ2	E3	30B	XII6BA	00	=		
XA515	TQ2	E3	28B	(57)	01		XICSI0 XIR60S 53 28B 55 29B	DEV REQ 6 TO IOC
XA515	TQ2	B4	13B	XII7AA	00	=		
XA515	TQ2	B4	11B	(27)	01		XICSDO XI07CTX 23 11B 25 12B	IOC INPUT DATA LINE 7
XA515	TQ2	E4	33B	XII7BA	00	=		
XA515	TQ2	E4	31B	(63)	01		XICSI0 XIR70S 59 31B 61 32B	DEV REQ 7 TO IOC
XA517	TQ2	F2	34A	XIMRCA	00	=		
XA517	TQ2	F2	36A	(72)	01		XIMRDO XISTB0 71 36A 73 36B	ENB CMD STB
XA516	TT3	E3	33B	XIMRDA	00	=		
XA516	TT3	E3	30B	(63)	01		XISTB0 XIENB0 XICMDO 57 30B 59 31B 61 32B	DEV RESET
XA518	THI	D4	22B	XIMRDO	00	=		
XA518	THI	D4	23B	(46)	01		XIMRDA 41 23B	
XA516	TT3	C3	19B	XIRECO	00	=		
XA516	TT3	C3	16B	(39)	01		XIRE1A XIRE2A XIRE3A 33 16B 35 17B 37 18B	DEV OR D REQ
XA518	THI	B6	12B	XIRE1A	00	=		
XA518	THI	B6	13B	(26)	01		XIRE10 27 13B	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA516	TT3	A3	07B	XIRE10	00 =		DEV REQ 0+1+2
XA516	TT3	A3	04B	(15)	01	XIROOA XIR10A XIR20A 09 04B 11 05B 13 06B	
XA518	THI	C5	16B	XIRE2A	00 =		
XA518	THI	C5	17B	(31)	01	XIRE20 33 17B	
XA516	TT3	B3	13B	XIRE20	00 =		DEV REQ 3+4+5
XA516	TT3	B3	10B	(27)	01	XIR30A XIR40A XIR50A 21 10B 23 11B 25 12B	
XA518	THI	C6	18B	XIRE3A	00 =		
XA518	THI	C6	19B	(42)	01	XIRE30 39 19B	
XA517	TQ2	E1	31A	XIRE30	00 =		DEV REQ 6+7
XA517	TQ2	E1	32A	(66)	01	XIR60R XIR70R 68 32A 70 33A	
XA518	THI	D6	26B	XIRQ3A	00 =		
XA518	THI	D6	27B	(53)	01	XIREC0 51 27B	
XA518	THI	A1	06A	XIROCA	00 =		
XA518	THI	A1	07A	(13)	01	XIROCTX 11 07A	
XA512	ACF	C3	32A	XIROCTX	00 =		
XA512	ACF	C3	34A	(65)	01	SPI040 64 34A	
XA512	ACF	C1		XIRODGX	00 =		
XA512	ACF	C1	06A	(23)	01	XICSS0 YMMICB 13 06A 17 07A	
XA512	ACF	C2		XIRODHX	00 =		
XA512	ACF	C2	20A	(25)	01	XIGNDA 39 20A	
XA517	TQ2	A3	04B	XIRORA	00 =		
XA517	TQ2	A3	02A	(09)	01	XI00CTX XICSE0 03 02A 07 03A	
XA518	THI	A3	03A	XIROOA	00 =		
XA518	THI	A3	02A	(03)	01	XIROOS 04 02A	

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LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATION	FACTOR	COMMENT
XA516	TT3	A1	04A	XIR00R	00	=		
XA516	TT3	A1	05A	(04)	01		XIROOS XIRORA XIMRCA 06 05A 08 06A 10 07A	
XA517	TQ2	A1	05A	XIR00S	00	=		DEV REQ 0
XA517	TQ2	A1	06A	(06)	01		XIROCA XIR00R 08 06A 10 07A	
XA518	THI	A2	04A	XIR1CA	00	=		
XA518	THI	A2	05A	(08)	01		XIR1CTX 06 05A	
XA512	ACF	D3	38B	XIR1CTX	00	=		
XA512	ACF	D3	36B	(73)	01		SPI040 71 36B	
XA512	ACF	D1		XIR1DGX	00	=		
XA512	ACF	D1	06A	(59)	01		XICSSO YMMICB 13 06A 17 07A	
XA512	ACF	D2		XIR1DHX	00	=		
XA512	ACF	D2	18A	(57)	01		XIGNDA 37 18A	
XA517	TQ2	A4	07B	XIR1RA	00	=		
XA517	TQ2	A4	05B	(15)	01		XI01CTX XICSE0 11 05B 13 06B	
XA518	THI	A4	02B	XIR10A	00	=		
XA518	THI	A4	03B	(01)	01		XIR10S 05 03B	
XA516	TT3	A2	03A	XIR10R	00	=		
XA516	TT3	A2	02B	(07)	01		XIR10S XIR1RA XIMRCA 01 02B 03 02A 05 03B	
XA517	TQ2	A2	02B	XIR10S	00	=		DEV REQ 1
XA517	TQ2	A2	04A	(01)	01		XIR1CA XIR10R 04 04A 05 03B	
XA518	THI	B1	13A	XIR2CA	00	=		
XA518	THI	B1	14A	(24)	01		XIR2CTX 22 14A	
XA512	ACF	E3	38A	XIR2CTX	00	=		
XA512	ACF	E3	36A	(72)	01		SPI040 68 36A	

DRAWING NUMBER
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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA512	ACF	E1		XIR2DGX	00	=		
XA512	ACF	E1	06A	(51)	01		XIC550 YMICB 13 06A 17 07A	
XA512	ACF	E2		XIR2DHX	00	=		
XA512	ACF	E2	23A	(49)	01		XIGNDA 43 23A	
XA517	TQ2	B3	10B	XIR2RA	00	=		
XA517	TQ2	B3	08B	(21)	01		XI02CTX XIC5E0 17 08B 19 09B	
XA518	THI	B3	09A	XIR20A	00	=		
XA518	THI	B3	10A	(18)	01		XIR20S 20 10A	
XA516	TT3	B1	11A	XIR20R	00	=		
XA516	TT3	B1	12A	(20)	01		XIR20S XIR2RA XIMRCA 22 12A 24 13A 26 14A	
XA517	TQ2	B1	12A	XIR20S	00	=		
XA517	TQ2	B1	13A	(22)	01		XIR2CA XIR20R 24 13A 26 14A	DEV REQ 2
XA518	THI	B2	11A	XIR3CA	00	=		
XA518	THI	B2	12A	(25)	01		XIR3CTX 23 12A	
XA513	ACF	B3	35B	XIR3CTX	00	=		
XA513	ACF	B3	34B	(69)	01		SPI040 66 34B	
XA513	ACF	B1		XIR3DGX	00	=		
XA513	ACF	B1	06A	(31)	01		SPI301 YMICB 13 06A 17 07A	
XA513	ACF	B2		XIR3DHX	00	=		
XA513	ACF	B2	22A	(29)	01		XIGNDA 41 22A	
XA517	TQ2	B4	13B	XIR3RA	00	=		
XA517	TQ2	B4	11B	(27)	01		XI03CTX XIC5E0 23 11B 25 12B	
XA518	THI	B4	08B	XIR30A	00	=		
XA518	THI	B4	09B	(14)	01		XIR30S 17 09B	

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	GROUP	TEST POINTS AND OR	EQUATION	TERM DEFIC	FACTOR	COMMENT
XA516	TT3	B2 09B	XIR30R	00 =		
XA516	TT3	B2 09A	(19)	01	XIR30S XIR3RA XIMRCA 14 09A 17 08B 18 10A	
XA517	TQ2	B2 09A	XIR30S	00 =		DEV REQ 3
XA517	TQ2	B2 10A	(14)	01	XIR3CA XIR30R 18 10A 20 11A	
XA518	THI	C1 19A	XIR4CA	00 =		
XA518	THI	C1 20A	(40)	01	XIR4CTX 38 20A	
XA513	ACF	C3 32A	XIR4CTX	00 =		
XA513	ACF	C3 34A	(65)	01	SPI040 64 34A	
XA513	ACF	C1	XIR4DGX	00 =		
XA513	ACF	C1 06A	(23)	01	SPI301 YMICB 13 06A 17 07A	
XA513	ACF	C2	XIR4DHX	00 =		
XA513	ACF	C2 20A	(25)	01	XIGNDA 39 20A	
XA517	TQ2	C3 16B	XIR4RA	00 =		
XA517	TQ2	C3 14B	(33)	01	XI04CTX XICSE0 29 14B 31 15B	
XA518	THI	C3 15A	XIR40A	00 =		
XA518	THI	C3 16A	(34)	01	XIR40S 36 16A	
XA516	TT3	C1 17A	XIR40R	00 =		
XA516	TT3	C1 18A	(36)	01	XIR40S XIR4RA XIMRCA 38 18A 40 19A 42 20A	
XA517	TQ2	C1 18A	XIR40S	00 =		DEV REQ 4
XA517	TQ2	C1 19A	(38)	01	XIR4CA XIR40R 40 19A 42 20A	
XA518	THI	C2 17A	XIR5CA	00 =		
XA518	THI	C2 18A	(37)	01	XIR5CTX 35 18A	
XA513	ACF	D3 38B	XIR5CTX	00 =		
XA513	ACF	D3 36B	(73)	01	SPI040 71 36B	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA513	ACF	D1		XIR5DGX	00	=		
XA513	ACF	D1	06A	(59)	01		SPI301 YMMICB 13 06A 17 07A	
XA513	ACF	D2		XIR5DHX	00	=		
XA513	ACF	D2	18A	(57)	01		XIGNDA 37 18A	
XA517	TQ2	C4	19B	XIR5RA	00	=		
XA517	TQ2	C4	17B	(39)	01		XI05CTX XICSEO 35 17B 37 18B	
XA518	THI	C4	14B	XIR50A	00	=		
XA518	THI	C4	15B	(30)	01		XIR50S 29 15B	
XA516	TT3	C2	15B	XIR50R	00	=		
XA516	TT3	C2	14B	(31)	01		XIR50S XIR5RA XIMRCA 29 14B 30 15A 34 16A	
XA517	TQ2	C2	15A	XIR50S	00	=		DEV REQ 5
XA517	TQ2	C2	16A	(30)	01		XIR5CA XIR50R 34 16A 36 17A	
XA518	THI	D1	25A	XIR6CA	00	=		
XA518	THI	D1	26A	(54)	01		XIR6CTX 52 26A	
XA513	ACF	E3	38A	XIR6CTX	00	=		
XA513	ACF	E3	36A	(72)	01		SPI040 68 36A	
XA513	ACF	E1		XIR6DGX	00	=		
XA513	ACF	E1	06A	(51)	01		SPI301 YMMICB 13 06A 17 07A	
XA513	ACF	E2		XIR6DHX	00	=		
XA513	ACF	E2	23A	(49)	01		XIGNDA 43 23A	
XA517	TQ2	D3	24B	XIR6RA	00	=		
XA517	TQ2	D3	22B	(45)	01		XI06CTX XICSEO 41 22B 43 23B	
XA516	TT3	D1	23A	XIR60R	00	=		
XA516	TT3	D1	24A	(50)	01		XIR60S XIR6RA XIMRCA 52 24A 54 25A 56 26A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATION	FACTOR	COMMENT
XA517	TQ2	D1	24A	XIR60S	00 =		
XA517	TQ2	D1	25A	(52)	01	XIR6CA XIR6OR 54 25A 56 26A	DEV REQ 6
XA518	THI	D2	23A	XIR7CA	00 =		
XA518	THI	D2	24A	(49)	01	XIR7CTX 47 24A	
XA514	ACF	B3	35B	XIR7CTX	00 =		
XA514	ACF	B3	34B	(69)	01	SPI040 66 34B	
XA514	ACF	B1		XIR7DGX	00 =		
XA514	ACF	B1	06A	(31)	01	XISTB0 YMMICB 13 06A 17 07A	
XA514	ACF	B2		XIR7DHX	00 =		
XA514	ACF	B2	22A	(29)	01	XIGNDA 41 22A	
XA517	TQ2	D4	27B	XIR7RA	00 =		
XA517	TQ2	D4	25B	(51)	01	XI07CTX XICSE0 47 25B 49 26B	
XA516	TT3	D2	23B	XIR7OR	00 =		
XA516	TT3	D2	22B	(43)	01	XIR70S XIR7RA XIMRCA 41 22B 46 21A 48 22A	
XA517	TQ2	D2	21A	XIR70S	00 =		
XA517	TQ2	D2	22A	(46)	01	XIR7CA XIR7OR 48 22A 50 23A	DEV REQ 7
XA518	THI	E4	28B	XISTB0	00 =		
XA518	THI	E4	29B	(56)	01	TSTBCA 55 29B	IOC STROBE
XA512	ACF	B3	35B	XIOPCTX	00 =		
XA512	ACF	B3	34B	(69)	01	SPI040 66 34B	
XA512	ACF	B1		XIOPDGX	00 =		
XA512	ACF	B1	06A	(31)	01	XICSS0 YMMICB 13 06A 17 07A	
XA512	ACF	B2		XIOPDHX	00 =		
XA512	ACF	B2	22A	(29)	01	TDLPA0 41 22A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	TEST POINTS AND/OR	GROUP	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA510	ACF B3 35B		XI00CTX	00	=		
XA510	ACF B3 34B		(69)	01		SPI040 66 34B	
XA510	ACF B1		XI00DGX	00	=		
XA510	ACF B1 06A		(31)	01		XICSS0 YMMICB 13 06A 17 07A	
XA510	ACF B2		XI00DHX	00	=		
XA510	ACF B2 22A		(29)	01		TDL0A0 41 22A	
XA510	ACF C3 32A		XI01CTX	00	=		
XA510	ACF C3 34A		(65)	01		SPI040 64 34A	
XA510	ACF C1		XI01DGX	00	=		
XA510	ACF C1 06A		(23)	01		XICSS0 YMMICB 13 06A 17 07A	
XA510	ACF C2		XI01DHX	00	=		
XA510	ACF C2 20A		(25)	01		TDL1A0 39 20A	
XA510	ACF D3 38B		XI02CTX	00	=		
XA510	ACF D3 36B		(73)	01		SPI040 71 36B	
XA510	ACF D1		XI02DGX	00	=		
XA510	ACF D1 06A		(59)	01		XICSS0 YMMICB 13 06A 17 07A	
XA510	ACF D2		XI02DHX	00	=		
XA510	ACF D2 18A		(57)	01		TDL2A0 37 18A	
XA510	ACF E3 38A		XI03CTX	00	=		
XA510	ACF E3 36A		(72)	01		SPI040 68 36A	
XA510	ACF E1		XI03DGX	00	=		
XA510	ACF E1 06A		(51)	01		XICSS0 YMMICB 13 06A 17 07A	
XA510	ACF E2		XI03DHX	00	=		
XA510	ACF E2 23A		(49)	01		TDL3A0 43 23A	

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LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND OR	EQUATION	TERM	DESIG-NATOR	FACTOR	COMMENT
XA511	ACF	B3	35B	XI04CTX	00	=		
XA511	ACF	B3	34B	(69)	01		SPI040 66 34B	
XA511	ACF	B1		XI04DGX	00	=		
XA511	ACF	B1	06A	(31)	01		XICSS0 YMMICB 13 06A 17 07A	
XA511	ACF	B2		XI04DHX	00	=		
XA511	ACF	B2	22A	(29)	01		TDL4A0 41 22A	
XA511	ACF	C3	32A	XI05CTX	00	=		
XA511	ACF	C3	34A	(65)	01		SPI040 64 34A	
XA511	ACF	C1		XI05DGX	00	=		
XA511	ACF	C1	06A	(23)	01		XICSS0 YMMICB 13 06A 17 07A	
XA511	ACF	C2		XI05DHX	00	=		
XA511	ACF	C2	20A	(25)	01		TDL5A0 39 20A	
XA511	ACF	D3	38B	XI06CTX	00	=		
XA511	ACF	D3	36B	(73)	01		SPI040 71 36B	
XA511	ACF	D1		XI06DGX	00	=		
XA511	ACF	D1	06A	(59)	01		XICSS0 YMMICB 13 06A 17 07A	
XA511	ACF	D2		XI06DHX	00	=		
XA511	ACF	D2	18A	(57)	01		TDL6A0 37 18A	
XA511	ACF	E3	38A	XI07CTX	00	=		
XA511	ACF	E3	36A	(72)	01		SPI040 68 36A	
XA511	ACF	E1		XI07DGX	00	=		
XA511	ACF	E1	06A	(51)	01		XICSS0 YMMICB 13 06A 17 07A	
XA511	ACF	E2		XI07DHX	00	=		
XA511	ACF	E2	23A	(49)	01		TDL7A0 43 23A	

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNINATOR	FACTOR	COMMENT
XA437	TD4	D1	25B	XMLSD0	00 =		
XA437	TD4	D1	26B	(47)	01	XMR1WA XMR3WA XMR5WA XMR7WA 49 26B 52 24A 54 25A 56 26A	
XA437	TD4	E1	31B	XMMSD0	00 =		
XA437	TD4	E1	32B	(59)	01	XMR4WA XMR5WA XMR6WA XMR7WA 61 32B 66 31A 68 32A 70 33A	
XA431	TQ2	A1	05A	XMR0SA	00 =		
XA431	TQ2	A1	06A	(06)	01	XAIRCO XS00A0 08 06A 10 07A	
XA431	TQ2	C1	18A	XMR00R	00 =		
XA431	TQ2	C1	19A	(38)	01	XMR00S TRCR2A 40 19A 42 20A	
XA438	TQ2	C1	18A	XMR00S	00 =		
XA438	TQ2	C1	19A	(38)	01	XMR00R XMR0SA 40 19A 42 20A	
XA431	TQ2	C2	15A	XMR01R	00 =		
XA431	TQ2	C2	16A	(30)	01	XMR01S TRCR2A 34 16A 36 17A	
XA438	TQ2	C3	16B	XMR01S	00 =		
XA438	TQ2	C3	14B	(33)	01	XMR01R XMR1SA 29 14B 31 15B	
XA431	TQ2	C3	16B	XMR02R	00 =		
XA431	TQ2	C3	14B	(33)	01	XMR02S TRCR2A 29 14B 31 15B	
XA438	TQ2	C4	19B	XMR02S	00 =		
XA438	TQ2	C4	17B	(39)	01	XMR02R XMR2SA 35 17B 37 18B	
XA431	TQ2	C4	19B	XMR03R	00 =		
XA431	TQ2	C4	17B	(39)	01	XMR03S TRCR2A 35 17B 37 18B	
XA438	TQ2	C2	15A	XMR03S	00 =		
XA438	TQ2	C2	16A	(30)	01	XMR03R XMR3SA 34 16A 36 17A	
XA431	TQ2	D1	24A	XMR04R	00 =		
XA431	TQ2	D1	25A	(52)	01	XMR04S TRCR2A 54 25A 56 26A	

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149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA438	TQ2	D2	21A	XMR04S	00	=		
XA438	TQ2	D2	22A	(46)	01		XMR04R XMR4SA 48 22A 50 23A	
XA431	TQ2	D2	21A	XMR05R	00	=		
XA431	TQ2	D2	22A	(46)	01		XMR05S TRCR2A 48 22A 50 23A	
XA438	TQ2	D3	24B	XMR05S	00	=		
XA438	TQ2	D3	22B	(45)	01		XMR05R XMR5SA 41 22B 43 23B	
XA431	TQ2	D3	24B	XMR06R	00	=		
XA431	TQ2	D3	22B	(45)	01		XMR06S TRCR2A 41 22B 43 23B	
XA438	TQ2	D4	27B	XMR06S	00	=		
XA438	TQ2	D4	25B	(51)	01		XMR06R XMR6SA 47 25B 49 26B	
XA431	TQ2	D4	27B	XMR07R	00	=		
XA431	TQ2	D4	25B	(51)	01		XMR07S TRCR2A 47 25B 49 26B	
XA438	TQ2	D1	24A	XMR07S	00	=		
XA438	TQ2	D1	25A	(52)	01		XMR07R XMR7SA 54 25A 56 26A	
XA431	TQ2	A2	02B	XMR1SA	00	=		
XA431	TQ2	A2	04A	(01)	01		XBIRCO XS00A0 04 04A 05 03B	
XA407	TQ2	F3	35A	XMR1WA	00	=		
XA407	TQ2	F3	34B	(69)	01		XMR00R XMR01S 65 34B 74 35B	
XA431	TQ2	A3	04B	XMR2SA	00	=		
XA431	TQ2	A3	02A	(09)	01		XCIRCO XS00A0 03 02A 07 03A	
XA434	TT3	F2	35B	XMR2WA	00	=		
XA434	TT3	F2	34B	(74)	01		XMR00R XMR01R XMR02S 65 34B 71 36A 72 34A	
XA431	TQ2	A4	07B	XMR3SA	00	=		
XA431	TQ2	A4	05B	(15)	01		XDIRCO XS00A0 11 05B 13 06B	

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CARD CAGE ASSY, I/O UNIT

LOGIC

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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM	DESIGNATOR	FACTOR	COMMENT
XA435	TD4	F2	35A	XMR3WA	00	=		
XA435	TD4	F2	36A	(69)	01		XMR00R XMR01R XMR02R XMR03S 71 36A 72 34A 73 36B 74 35B	
XA431	TQ2	B1	12A	XMR4SA	00	=		
XA431	TQ2	B1	13A	(22)	01		XEIRCO XS00A0 24 13A 26 14A	
XA432	TS8	D1	25B	XMR4WA	00	=		
XA432	TS8	D1	23B	(47)	01		XMR00R XMR01R XMR02R XMR03R XMR04S SPI028 SPI036 SPI035 43 23B 46 21A 48 22A 49 26B 50 23A 52 24A 54 25A 56 26A	
XA431	TQ2	B2	09A	XMR5SA	00	=		
XA431	TQ2	B2	10A	(14)	01		XFIRCO XS00A0 18 10A 20 11A	
XA432	TS8	C1	17B	XMR5WA	00	=		
XA432	TS8	C1	15A	(35)	01		XMR00R XMR01R XMR02R XMR03R XMR04R XMR05S SPI035 SPI036 30 15A 31 15B 34 16A 36 17A 37 18B 38 18A 40 19A 42 20A	
XA431	TQ2	B3	10B	XMR6SA	00	=		
XA431	TQ2	B3	08B	(21)	01		XGIRCO XS00A0 17 08B 19 09B	
XA432	TS8	B1	11B	XMR6WA	00	=		
XA432	TS8	B1	09A	(23)	01		XMR00R XMR01R XMR02R XMR03R XMR04R XMR05R XMR06S SPI036 14 09A 18 10A 19 09B 20 11A 22 12A 24 13A 25 12B 26 14A	
XA431	TQ2	B4	13B	XMR7SA	00	=		
XA431	TQ2	B4	11B	(27)	01		XHIRCO XS00A0 23 11B 25 12B	
XA432	TS8	A1	05B	XMR7WA	00	=		
XA432	TS8	A1	02B	(11)	01		XMR00R XMR01R XMR02R XMR03R XMR04R XMR05R XMR06R XMR07S 01 02B 04 04A 05 03B 06 05A 07 03A 08 06A 10 07A 13 06B	
XA437	TD4	D2	24B	XMSSD0	00	=		
XA437	TD4	D2	23B	(45)	01		XMR2WA XMR3WA XMR6WA XMR7WA 43 23B 46 21A 48 22A 50 23A	
XA406	THI	D4	22B	XS00A0	00	=		
XA406	THI	D4	23B	(46)	01		TS00AA 41 23B	
XA418	DCF	C1	25B	YADCCB4	00	=		
XA418	DCF	C1	25B	()	01		YADCSDX 46 25B	MEM ADRS CONT DRV

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CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS ANCL OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA418	DCF	B1	10B	YHLCCB4 ()	00 = 01	TMHLC0X 27 10B	MEM HOLD CONT DRV.
XA418	DCF	D1	32B	YIOPCB4 ()	00 = 01	TD32SDX 65 32B	
XA419	DCF	A1	02B	YI00CB4 ()	00 = 01	TD00SDX 07 02B	MEM DATA D/R BIT00
XA419	DCF	A3	07B	YI01CB4 ()	00 = 01	TD01SDX 17 07B	MEM DATA D/R BIT01
XA419	DCF	A5	08B	YI02CB4 ()	00 = 01	TD02SDX 14 08B	MEM DATA D/R BIT02
XA419	DCF	A7	02A	YI03CB4 ()	00 = 01	TD03SDX 01 02A	MEM DATA D/R BIT03
XA419	DCF	B1	10B	YI04CB4 ()	00 = 01	TD04SDX 27 10B	MEM DATA D/R BIT04
XA419	DCF	B3	15B	YI05CB4 ()	00 = 01	TD05SDX 37 15B	MEM DATA D/R BIT05
XA419	DCF	B5	16A	YI06CB4 ()	00 = 01	TD06SDX 41 16A	MEM DATA D/R BIT06
XA419	DCF	B7	10A	YI07CB4 ()	00 = 01	TD07SDX 23 10A	MEM DATA D/R BIT07
XA419	DCF	C1	25B	YI08CB4 ()	00 = 01	TD08SDX 46 25B	MEM DATA D/R BIT08
XA419	DCF	C3	30B	YI09CB4 ()	00 = 01	TD09SDX 55 30B	MEM DATA D/R BIT09

DRAWING NUMBER
UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019
FILE IDENT T39BIUX2
REV G
DATE 09-03-82
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA419	DCF	C5	31B	YI10CB4 ()	00 = 01	TD10SDX 60 31B	MEM DATA D/R BIT10
XA419	DCF	C7	25A	YI11CB4 ()	00 = 01	TD11SDX 43 25A	MEM DATA D/R BIT11
XA419	DCF	D1	32B	YI12CB4 ()	00 = 01	TD12SDX 65 32B	MEM DATA D/R BIT12
XA419	DCF	D3	37B	YI13CB4 ()	00 = 01	TD13SDX 78 37B	MEM DATA D/R BIT13
XA419	DCF	D5	38B	YI14CB4 ()	00 = 01	TD14SDX 80 38B	MEM DATA D/R BIT14
XA419	DCF	D7	33A	YI15CB4 ()	00 = 01	TD15SDX 61 33A	MEM DATA D/R BIT15
XA416	DCF	C1	25B	YI16CB4 ()	00 = 01	TD16SDX 46 25B	MEM DATA D/R BIT16
XA416	DCF	C3	30B	YI17CB4 ()	00 = 01	TD17SDX 55 30B	MEM DATA D/R BIT17
XA416	DCF	C5	31B	YI18CB4 ()	00 = 01	TD18SDX 60 31B	MEM DATA D/R BIT18
XA416	DCF	C7	25A	YI19CB4 ()	00 = 01	TD19SDX 43 25A	MEM DATA D/R BIT19
XA416	DCF	D1	32B	YI20CB4 ()	00 = 01	TD20SDX 65 32B	MEM DATA D/R BIT20
XA416	DCF	D3	37B	YI21CB4 ()	00 = 01	TD21SDX 78 37B	MEM DATA D/R BIT21

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UNIT ASSEMBLY NAME

149019-860
CARD CAGE ASSY, I/O UNIT

LOGIC

TM 11-5895-856-34-19/EE640-CA-MMI-190/E154 CPU/TO 31W2-2T-122-19
UNIT ASSEMBLY NO. 149019
FILE IDENT T39BIUX2
REV G
DATE 09-03-82
INDEX YI22CB4
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CONNECTOR	CIRCUIT TYPE	GROUP	TEST POINTS AND/OR	EQUATION	TERM DESIGNATOR	FACTOR	COMMENT
XA416	DCF	D5	38B	YI22CB4 ()	00 = 01	TD22SDX 80 38B	MEM DATA D/R BIT22
XA416	DCF	D7	33A	YI23CB4 ()	00 = 01	TD23SDX 61 33A	MEM DATA D/R BIT23
XA420	DCF	A1	02B	YI24CB4 ()	00 = 01	TD24SDX 07 02B	MEM DATA D/R BIT24
XA420	DCF	A3	07B	YI25CB4 ()	00 = 01	TD25SDX 17 07B	MEM DATA D/R BIT25
XA420	DCF	A5	08B	YI26CB4 ()	00 = 01	TD26SDX 14 08B	MEM DATA D/R BIT26
XA420	DCF	A7	02A	YI27CB4 ()	00 = 01	TD27SDX 01 02A	MEM DATA D/R BIT27
XA420	DCF	B1	10B	YI28CB4 ()	00 = 01	TD28SDX 27 10B	MEM DATA D/R BIT28
XA420	DCF	B3	15B	YI29CB4 ()	00 = 01	TD29SDX 37 15B	MEM DATA D/R BIT29
XA420	DCF	B5	16A	YI30CB4 ()	00 = 01	TD30SDX 41 16A	MEM DATA D/R BIT30
XA420	DCF	B7	10A	YI31CB4 ()	00 = 01	TD31SDX 23 10A	MEM DATA D/R BIT31
XA420	DCF	C7	25A	YMMICB ()	00 = 01	TMMICDX 43 25A	
XA420	DCF	D1	32B	YMRSDB ()	00 = 01	TMRSDDX 65 32B	

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