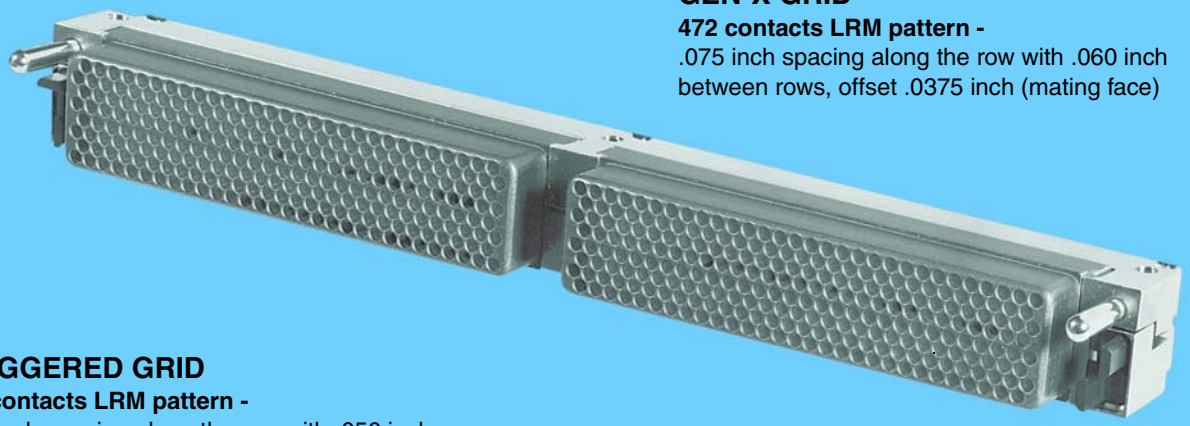
Amphenol® LRM Surface Mount Connectors Designer's Guide

L-2081-2

High Density Interconnect System with MIL-C-55302 type Bristle® Brush® contacts available in three patterns.

GEN-X GRID
472 contacts LRM pattern -
.075 inch spacing along the row with .060 inch between rows, offset .0375 inch (mating face)



STAGGERED GRID
360 contacts LRM pattern -
.100 inch spacing along the row with .050 inch between rows, offset .050 inch (mating face)

CHEVRON GRID
300 contacts LRM pattern -
.075 inch spacing along the row with .075 inch between rows, offset .025 inch (mating face)

This document contains the most common LRM drawings for designer's reference only.
Contact Amphenol for verification of the latest drawing versions.

Amphenol

This publication provides an engineering drawing package for use as a designer's guide to LRM surface mount connectors.

CAUTION - It is important that the designer check with Amphenol LRM product representatives for the most current drawings, as these drawings included here may become out-dated. The drawings are to be used as reference only, and all final product ordering information should be verified with Amphenol.

Please contact Amphenol Aerospace at the address listed below:

Amphenol Corporation
Amphenol Aerospace
40 – 60 Delaware Avenue
Sidney, New York 13838-1395
Telephone: 607-563-5342 (New Products Development Group)
Fax: 607-563-5157

Publication L-2104, "Amphenol® LRM Surface Mount Connectors Reference Guide", gives general product data on LRM surface mount connectors, and should be used in conjunction with this publication for additional information.

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GEN-X Grid Pattern (472 contacts)

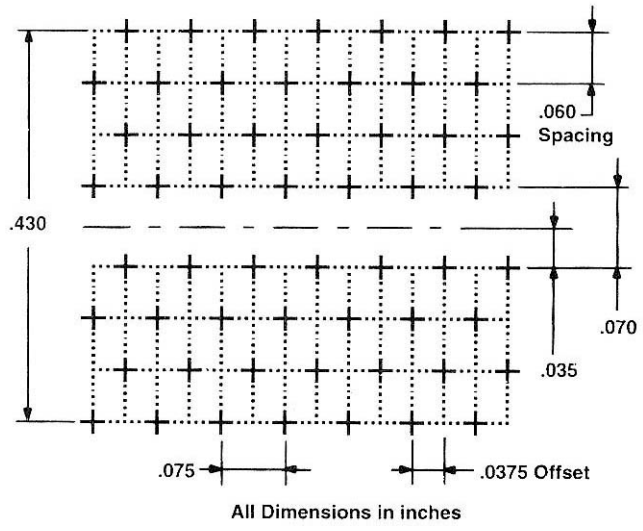
Drawing Package for
Double Bay
Module Connectors

Including how to order part numbers.

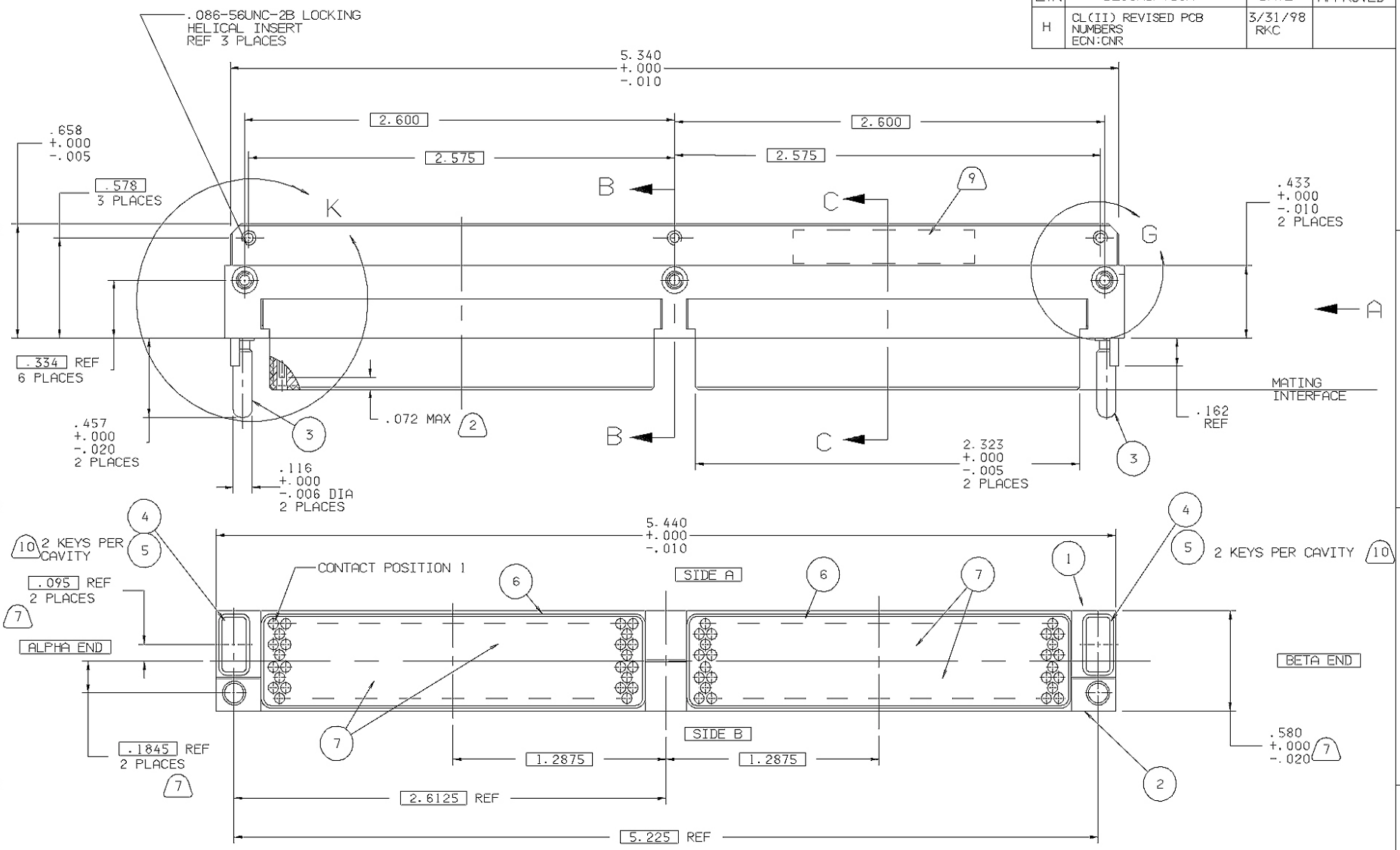
The LRM GEN-X 472 contact pattern allows for surface mount leads on a .035 inch center line.

The following diagram shows the contact pattern of the GEN-X grid LRM Connector, .075 inch spacing along the row with .060 inch between rows, offset .0375 inch (mating face).

GEN-X



LTR	DESCRIPTION	DATE	APPROVED
H	CL(II) REVISED PCB NUMBERS ECN:CNR	3/31/98 RKC	



(FOR REPLACEMENT COMPONENT PART NUMBERS, SEE SHEET 6)

F/N	QTY	PART NUMBER	DESCRIPTION	NOTES

UNLESS OTHERWISE SPECIFIED
LINEAR DIMENSIONS ARE IN INCHES.
TOLERANCES:
.XXXX = +/-.0005
.XXX = +/-.010
.XX = +/-.05
.X = +/-.1
ANGLES = +/-2°
NOTE REF. (XX)
OTHER STANDARDS PER 9-3800 AND DOD-D-1000
THIRD ANGLE PROJECTION

SPECIFICATIONS	APPROVALS	DATE
MATERIAL SPEC. N/A	PREPARED R. CHAPMAN	8/11/98
	CHECKED	
	MATERIAL	
PROCESS SPEC. 9-3895 9-3856-5	APPROVED	
	COMPANY	

AMPHENOL CORPORATION
AMPHENOL AEROSPACE OPERATIONS
SIDNEY, NEW YORK

CONNECTOR, ELECTRICAL, MODULE, U BRUSH CONTACT, LRM STAGGERED GRID 472 B3, SURFACE MT TERM.

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507603-100/199	H

SCALE: X/1 | REF:10-507142-XXX | SHEET 1 OF 9

SEE SHEET 6

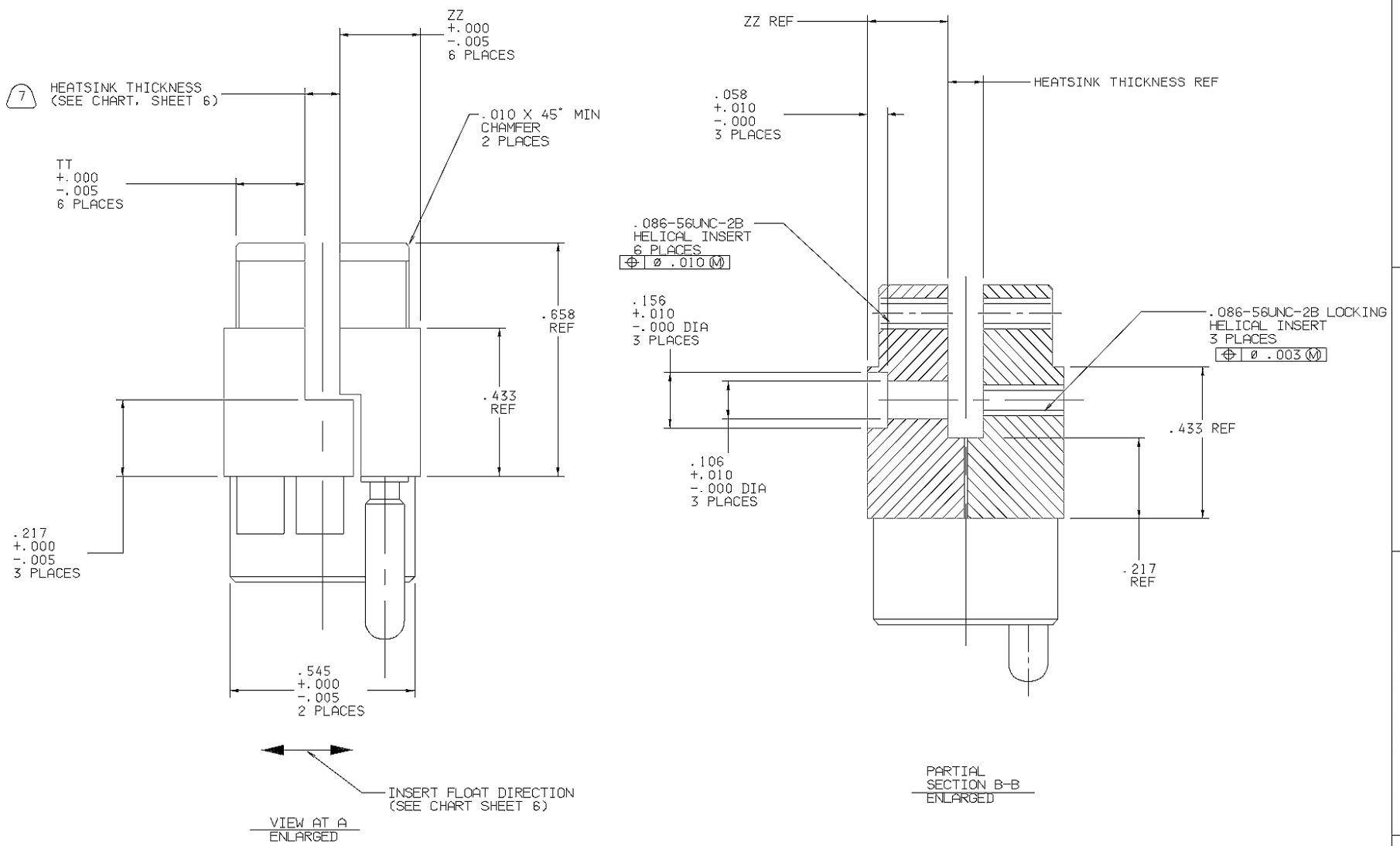
NOTES:

THE USE OF THIS DOCUMENT IS UNLIMITED. HOWEVER, DOCUMENTS REFERENCED HEREON MAY CONTAIN LIMITED RIGHTS DATA.

COMPANY ID: X	CODED: X	N/A
INTERNAL: X	LOT NO: X	N/A
DATE CODE: 9-3895	SEE DRAW: X	
STAMPING DATA		NEXT ASSEMBLY

FAMCODES | DATA3: SMWDNR | CICS: 2657

10-507603-100/199



SEE SHEET 6

NOTES:

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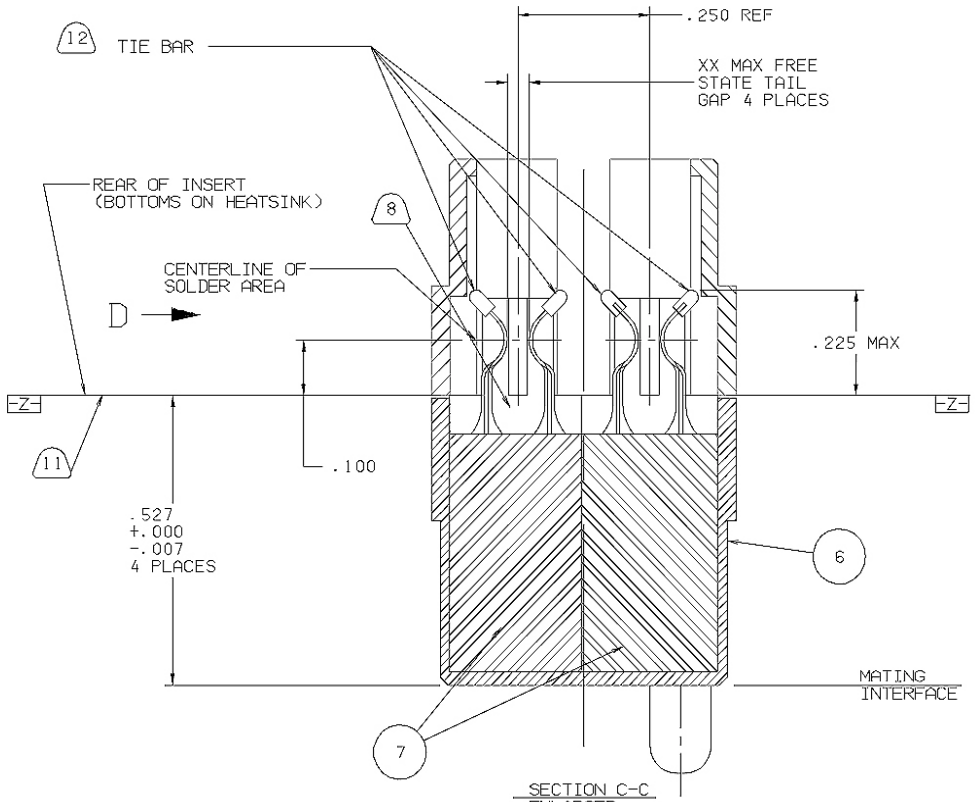
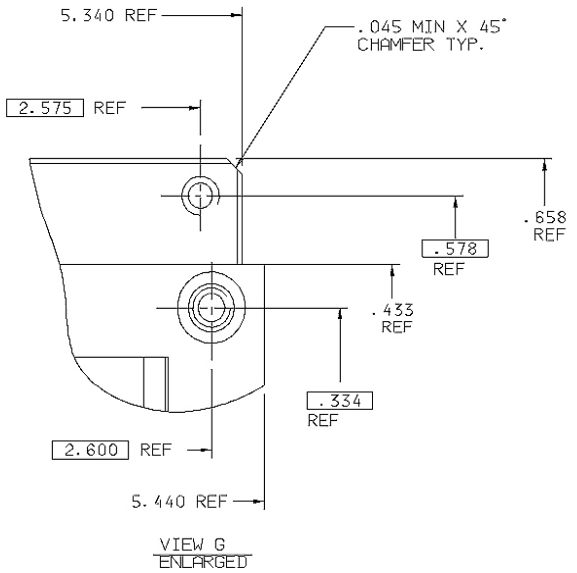
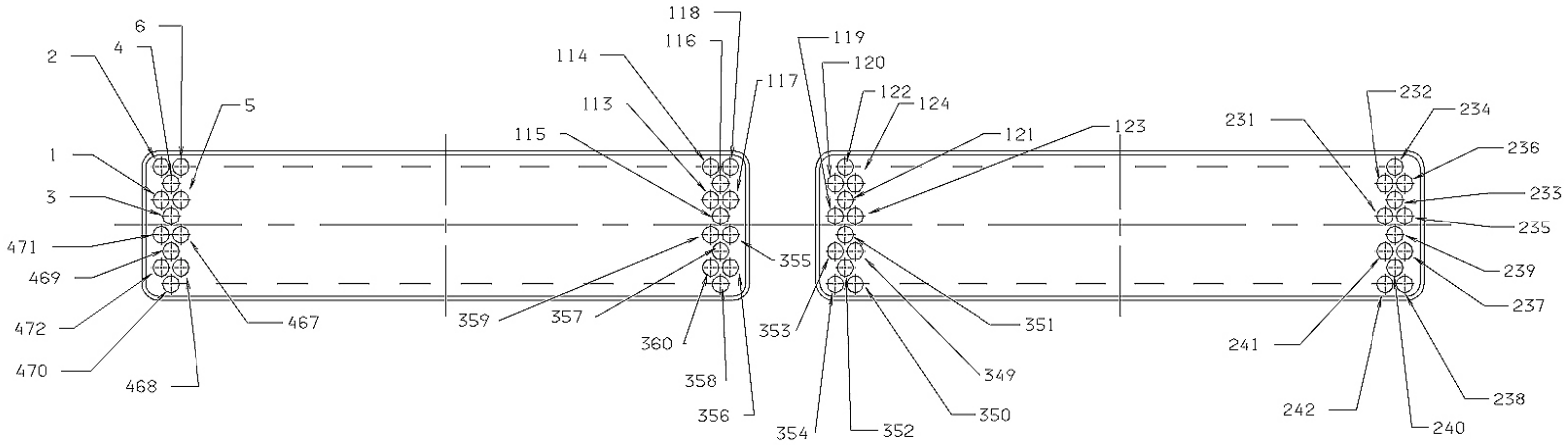
SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507603-100/199	H
SCALE:	REF:	SHEET 2 OF 9	

10-507603-100/199







SEE SHEET 6

NOTES:

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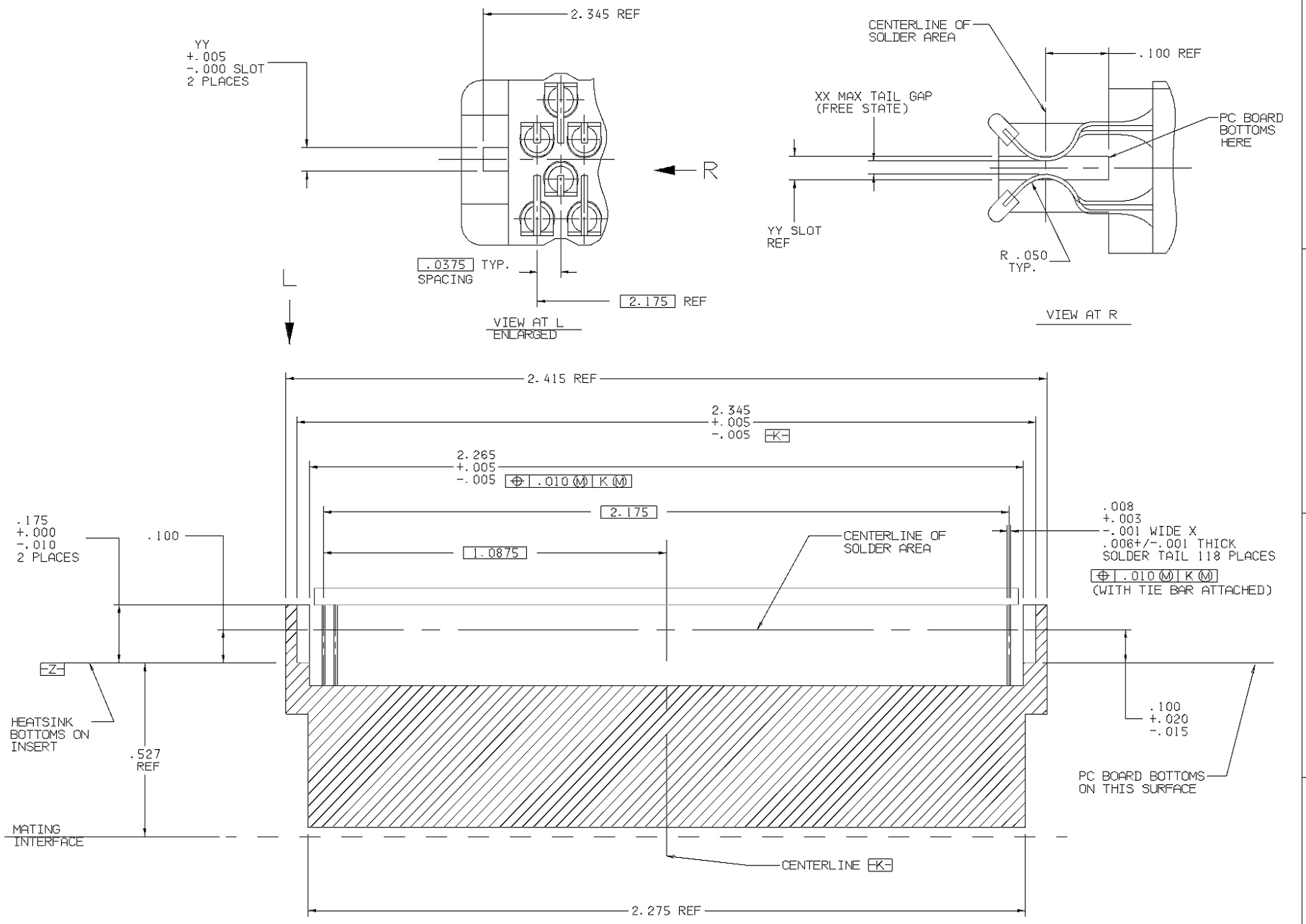
INSERT ARRANGEMENT CONTACT IDENTIFICATION

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507603-100/199	H
SCALE:	REF:		SHEET 3 OF 9

10-507603-100/199

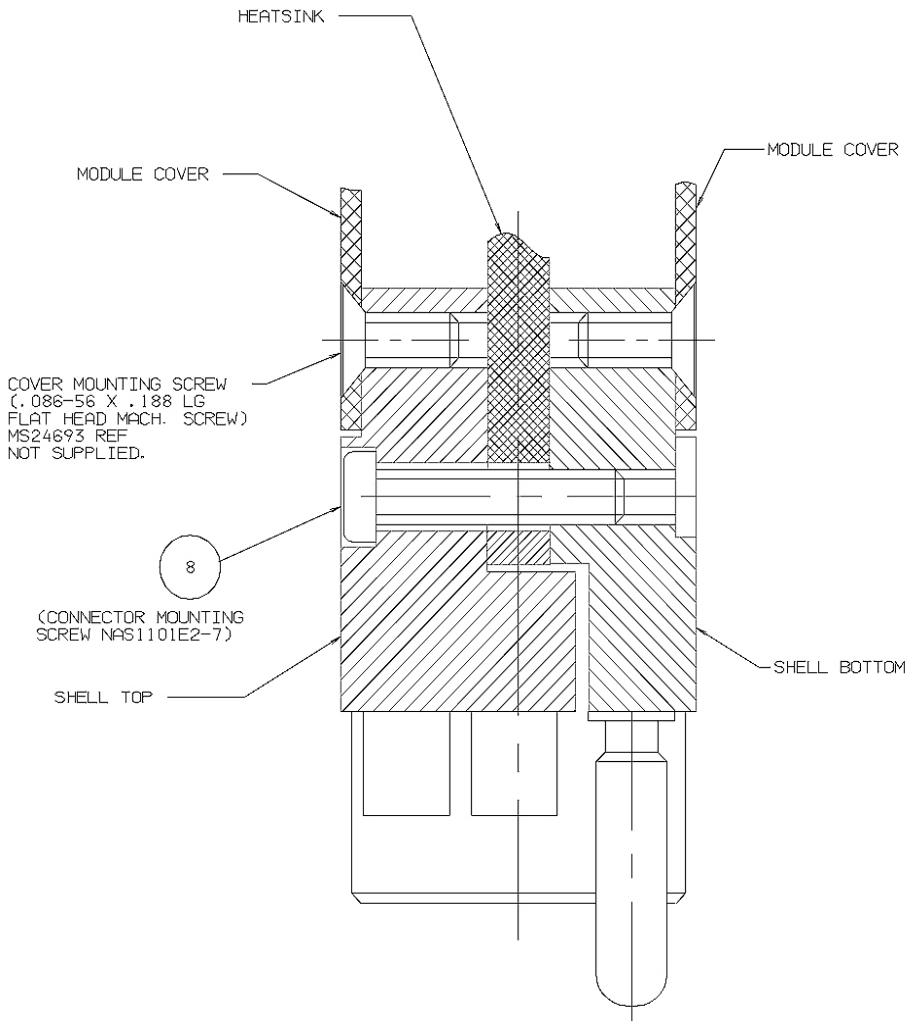


SEE SHEET 6

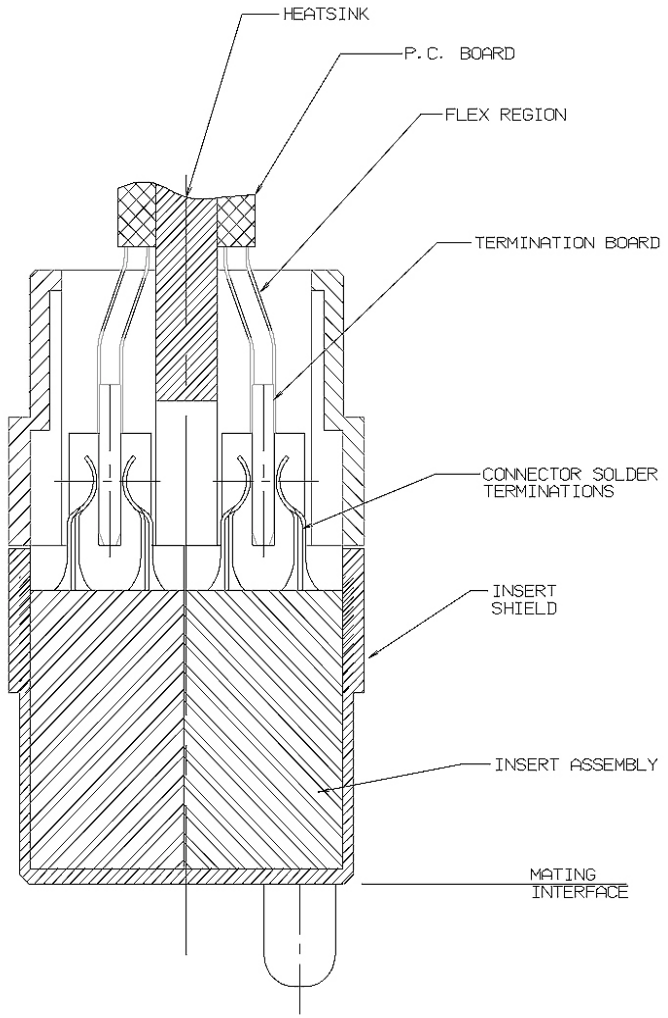
NOTES:

INSERT ASSEMBLY (F/N 7)
INTERFACE DIMENSIONS

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507603-100/199	H
SCALE:	REF:		SHEET 4 OF 9



VIEW OF CONNECTOR ATTACHEMENT METHOD
(SECTION THRU SHELL END MOUNT)



VIEW OF CONNECTOR TERMINATION METHOD
(SECTION THRU INSERT ASSEMBLY)
COVERS REMOVED

SEES SHEET 6

NOTES:

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507603-100/199	H
SCALE:	REF:		SHEET 5 OF 9

10-507603-100/199

CONNECTOR PART NUMBER (TO COMPLETE P/N SEE SUFFIX CHART)

10-507603-1( )( )

HEATSINK THICKNESS

TERMINATION STYLE

SHELL ASSEMBLY PART NUMBER (TO COMPLETE SEE SUFFIX CHART)

10-507972-11( ) F/N 1

10-507972-12( ) F/N 2

HEATSINK THICKNESS

INSERT ASSEMBLY PART NUMBER (TO COMPLETE SEE SUFFIX CHART)

10-507985-1( ) F/N 7

TERMINATION STYLE

PART NUMBER SUFFIX CHART

HEATSINK THICKNESS		ZZ	TT	TERMINATION STYLE/BOARD THICKNESS RANGE		XX	YY
SUFFIX	DESCRIPTION			SUFFIX	DESCRIPTION		
1	.100+/-.003	.2385	.2045	1	STRADDLE MOUNT /.027-.035 BOARD	.025	.036
2	.075+/-.003	.2510	.217	2	TBD	TBD	
3	.062+/-.003	.2575	.2235	3	TBD	TBD	
4	N/A	N/A	N/A	4	TBD	TBD	
5	.050+/-.003	.2635	.2295	5	TBD	TBD	
6	.070+/-.003	.2535	.2195	6	TBD	TBD	
7				7	TBD	TBD	
8				8			
9				9			
0	NONE	N/A		0	NONE		
A				A			

CONNECTOR INSERT FLOAT CHART

HEATSINK THICKNESS		LATERAL DISPLACEMENT	
SUFFIX	THICKNESS	MIN	MAX
1	.100+/-.003	+/-.006	+/-.028
2	.075+/-.003	+/-.010	+/-.028
3	.062+/-.003	+/-.010	+/-.028
4	N/A	N/A	N/A
5	.050+/-.003	+/-.010	+/-.028
6	.070+/-.003	+/-.010	+/-.028
7	TBD		

REPLACEMENT COMPONENT PART NUMBERS

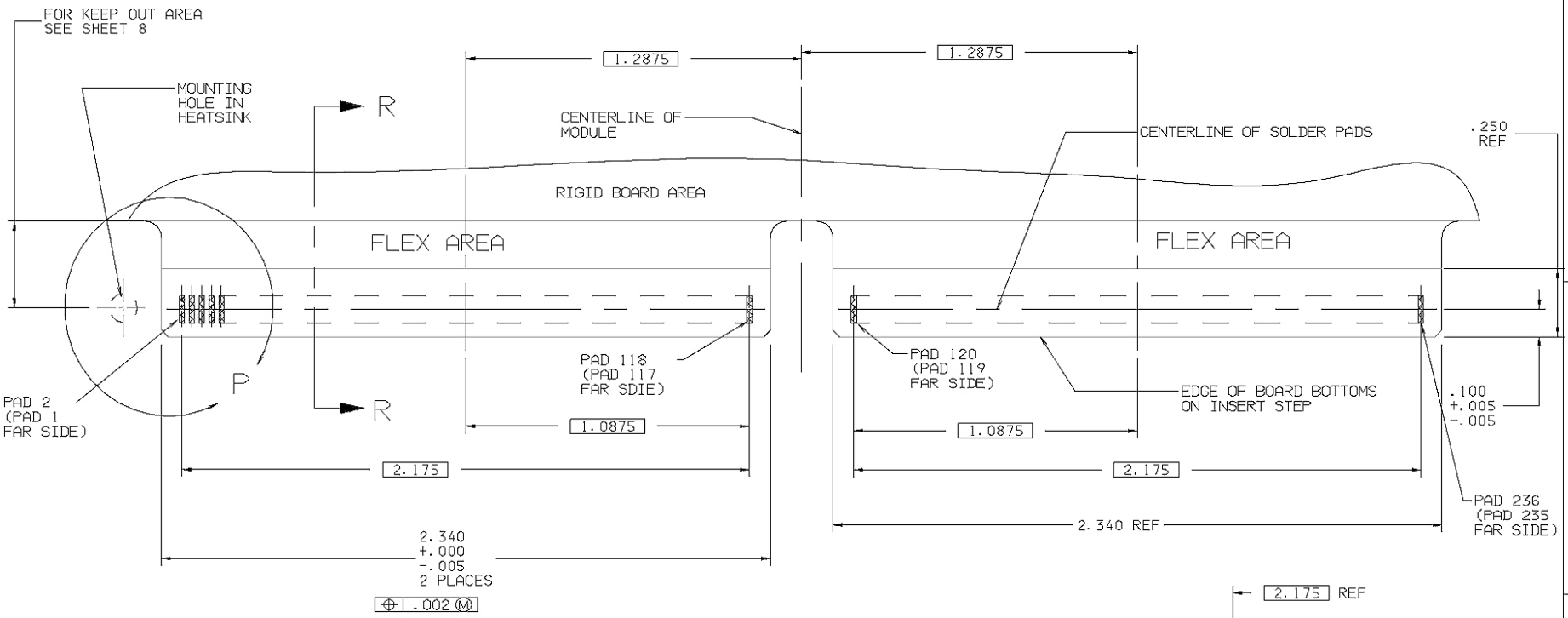
F/N	QTY	PART NUMBER	DESCRIPTION
1	1	SEE COLUMN	SHELL TOP
2	1	SEE COLUMN	SHELL BOTTOM
3	2	10-507906-5	GUIDE PIN
4	2	10-507929-3	RETAINING RING
5	4	10-507903-3	POLARIZATION KEY
6	2	10-507986-12	INSERT SHIELD
7	4	SEE COLUMN	INSERT ASSEMBLY
8	3	10-507905-15	MOUNTING SCREW
9	--	10-507931-2	REPLACEMENT KEY KIT (100 PCS EACH OF F/N 5 & 6)

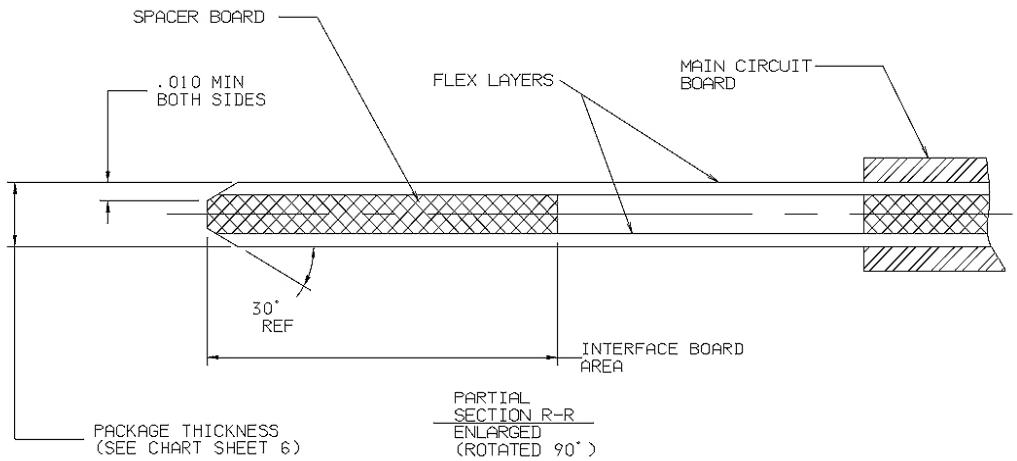
NOTES:

7. INDICATED DIMENSIONS ARE APPLICABLE ONLY WHEN ASSEMBLED TO THE APPROPIATE HEATSINK SHOWN IN CHART.
6. FOR APPROPIATE HEATSINK THICKNESS, SEE COLUMN.
5. BRUSH CONTACT TERMINATION FINISH IS Sn60 OR Sn63 SOLDER DIPPED.
4. FOR MATING BACKPLANE CONNECTOR ASSEMBLY, SEE DRAWING 10-507702-100/199.
3. PARTS ARE SHOWN ASSEMBLED. THESE PARTS WILL BE SHIPPED UNASSEMBLED (SEE SHEET 9).
2. INDICATED DIMENSION IS TO POINT OF ELECTRICAL ENGAGEMENT.
1. FOR SUGGESTED HEATSINK SEE SHEET 8. FOR BOARD LAYOUT SEE SHEET 7.

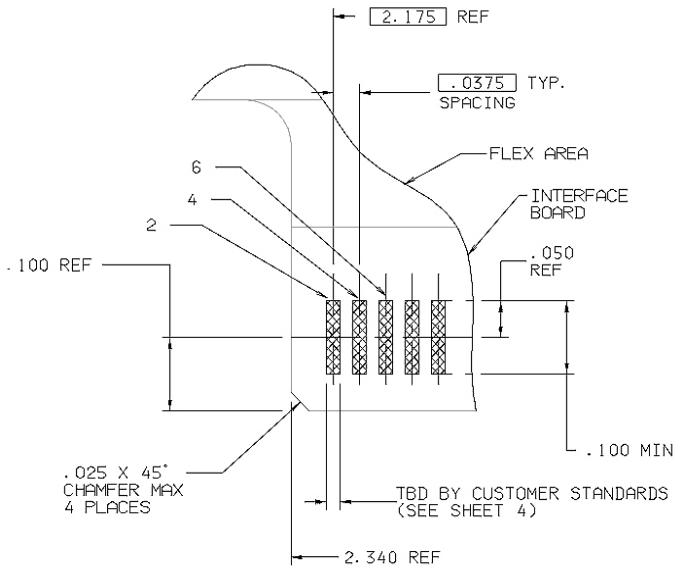
12. TIE BARS MUST BE REMOVED.
11. INDICATED SURFACE OF INSERTS BOTTOM ON INDICATED EDGE OF HEATSINK.
10. A TOTAL OF 4 KEYS AND 2 RETAINING RINGS ARE REQUIRED TO COMPLETE THE ASSEMBLY. RETAINING RINGS ARE NOT REUSABLE AND MUST BE REPLACED WHEN REKEYING CONNECTOR.
9. BLACK INK STAMP "AMPHENOL" 77820 PART NUMBER AND DATE CODE ON INDICATED SURFACES PER 9-3856-5. DATE CODE PER 9-3895. CHARACTERS TO BE .062+/-.020 HIGH. ADDITIONAL INFORMATION MAYBE REQUESTED BY PURCHASE ORDER.
8. REAR SURFACE OF INSERTS ARE SEALED IN BRUSH CONTACT AREA ONLY CONTACTS ARE NOT REMOVABLE.

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507603-100/199	H
SCALE:	REF:	SHEET 6 OF 9	





PARTIAL
SECTION R-R
ENLARGED
(ROTATED 90°)



VIEW P
ENLARGED

SEE SHEET 6

NOTES:

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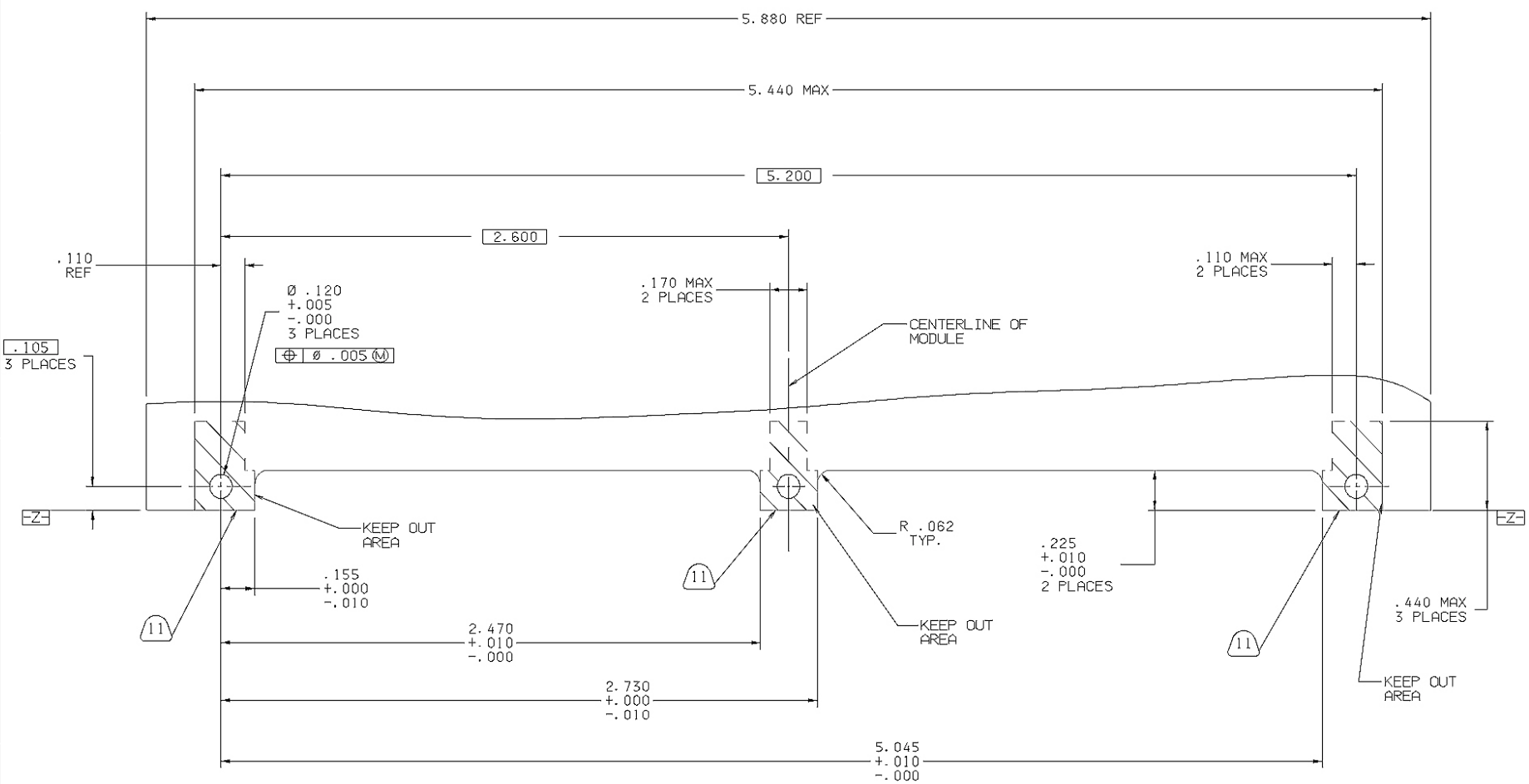
SUGGESTED PC BOARD INTEFACE DIMENSIONS

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507603-100/199	H
SCALE:	REF:		SHEET 7 OF 9

10-507603-100/199

6



* HEATSINK THICKNESS IN DESIGNATED KEEP OUT AREAS MUST BE EQUAL TO THE DIMENSION INDICATED BY THE HEATSINK SUFFIX IN PART NUMBER.

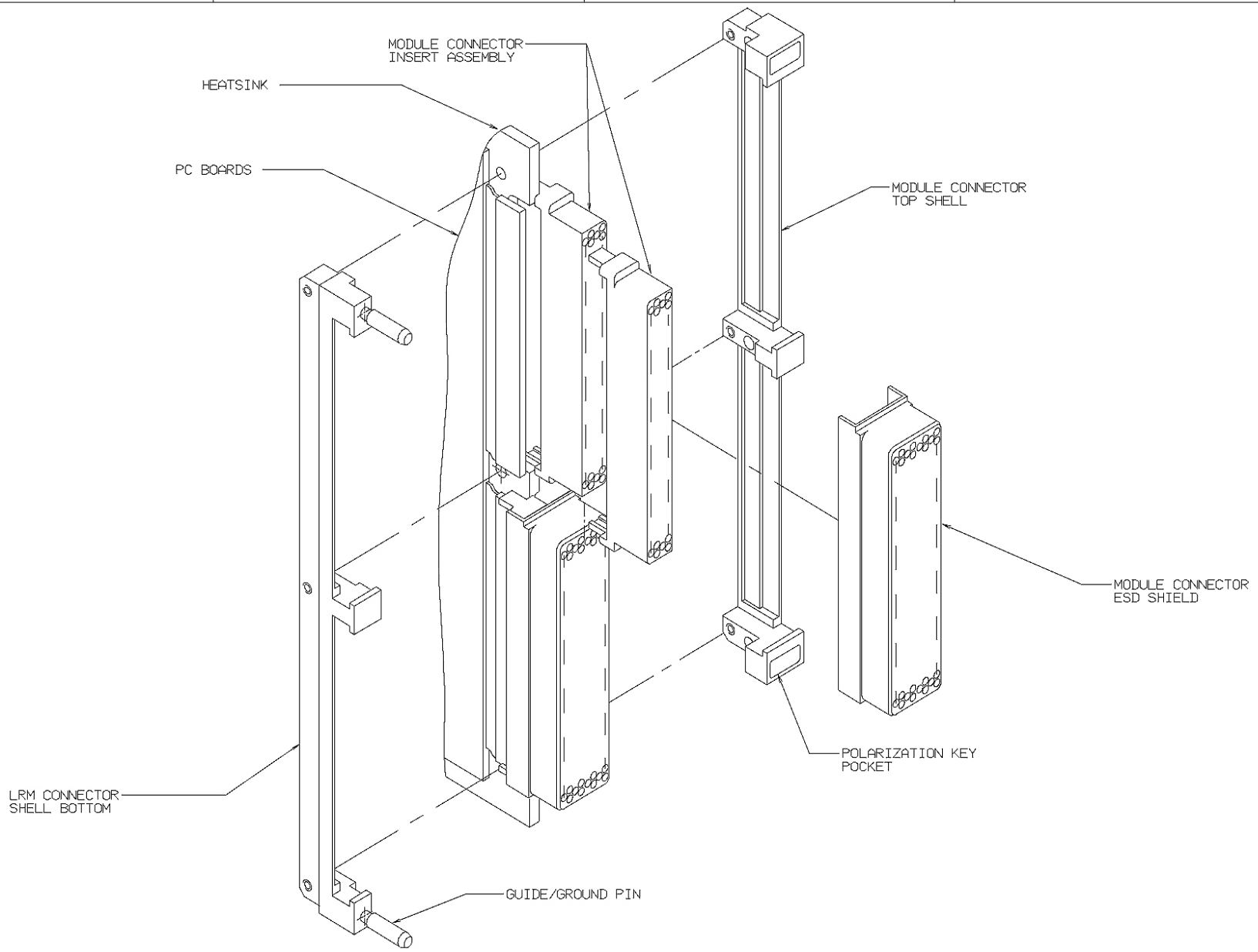
SUGGESTED HEATSINK INTERFACE DIMENSIONS

SEE SHEET 6

NOTES:

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507603-100/199	H
SCALE:	REF:		SHEET 8 OF 9

10-507603-100/199



SEE SHEET 6

NOTES:

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MODULE/CONNECTOR ASSEMBLY EXPLODED VIEW

(MODULE COVERS REMOVED)

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507603-100/199	H
SCALE:	REF:	SHEET 9 OF 9	

10-507603-100/199

GEN-X Grid Pattern (472 contacts)

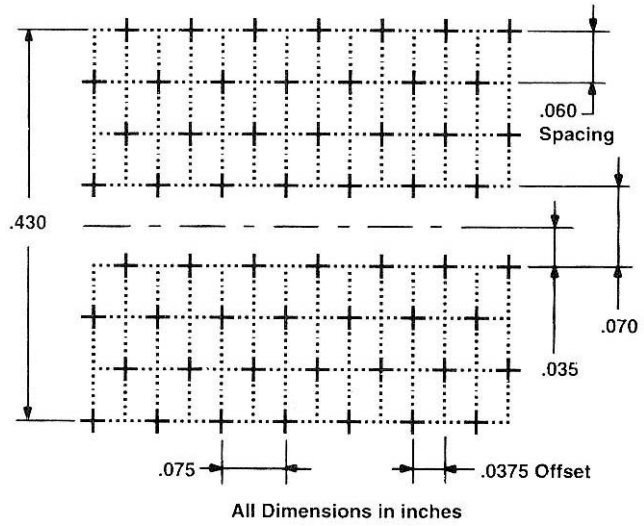
Drawing Package for
Double Bay
Backplane Connectors

Including how to order part numbers.

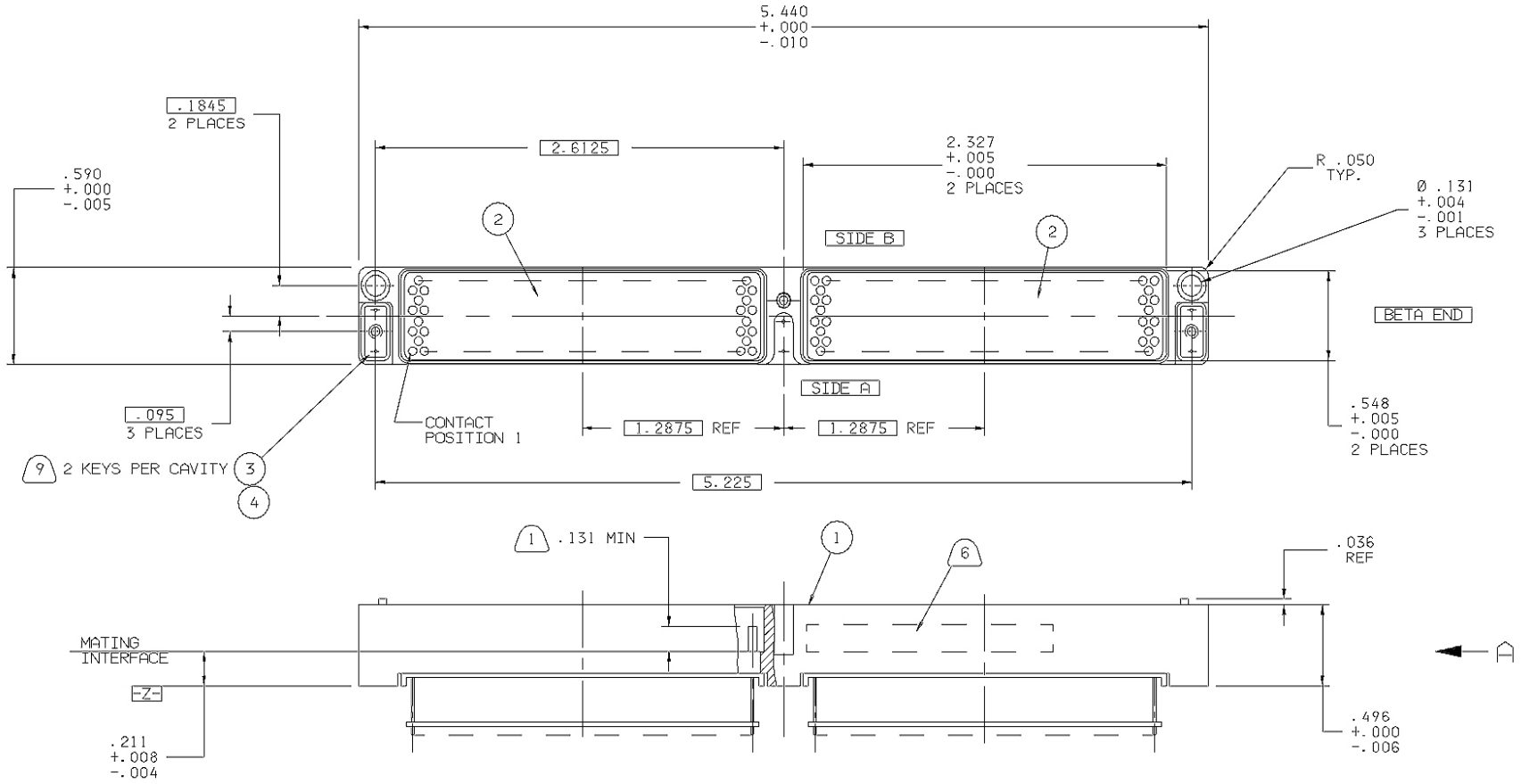
The LRM GEN-X 472 contact pattern allows for surface mount leads on a .035 inch center line.

The following diagram shows the contact pattern of the GEN-X grid LRM Connector, .075 inch spacing along the row with .060 inch between rows, offset .0375 inch (mating face).

GEN-X



LTR	DESCRIPTION	DATE	APPROVED
D	CL(II) REVISED DRAWING ECN:CNR	11/5/97 RKC	



(FOR TERMINATION DATA, SEE SHEET 2)

(FOR REPLACEMENT COMPONENT PART NUMBERS, SEE SHEET 3)

F/N	QTY	PART NUMBER	DESCRIPTION	NOTES

SEE SHEET 3

NOTES:

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COMPANY ID: X	CODED: X	N/A
INTERNAL: X	LOT NO: X	N/A
DATE CODE: 9-3895	SEE DRAW: X	
STAMPING DATA		NEXT ASSEMBLY

UNLESS OTHERWISE SPECIFIED
LINEAR DIMENSIONS ARE IN INCHES.
TOLERANCES:
.XXXX = +/-.0005
.XXX = +/-.010
.XX = +/-.03
.X = +/-.1
ANGLES = +/-2°
NOTE REF. (XX)
OTHER STANDARDS PER 9-3800 AND DOD-D-1000
THIRD ANGLE PROJECTION

SPECIFICATIONS	APPROVALS	DATE
MATERIAL SPEC. N/A	R. CHAPMAN	6/20/96
PROCESS SPEC. 9-3895 9-3856-5		

AMPHENOL CORPORATION
AMPHENOL AEROSPACE OPERATIONS
SIDNEY, NEW YORK

CONNECTOR, ELECTRICAL, BACKPLANE,U BRUSH CONTACT, LRM STAGGERED GRID, 472 B3

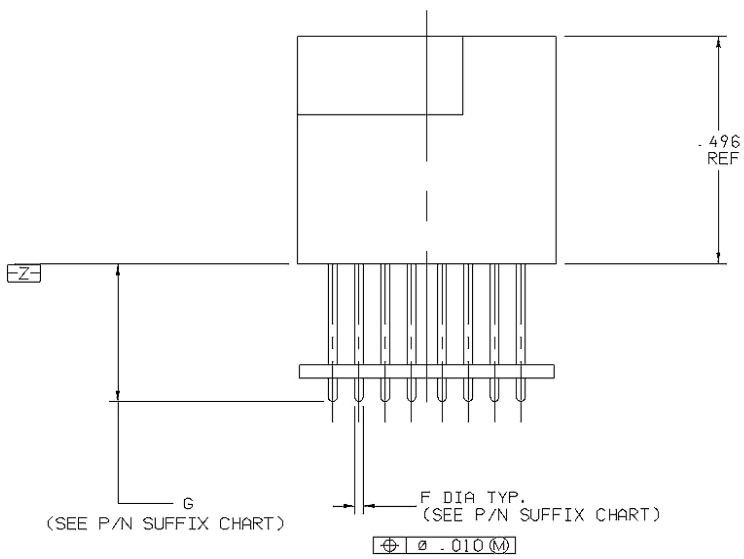
SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507702-100/199	D

SCALE: X/1 | REF: | SHEET 1 OF 4

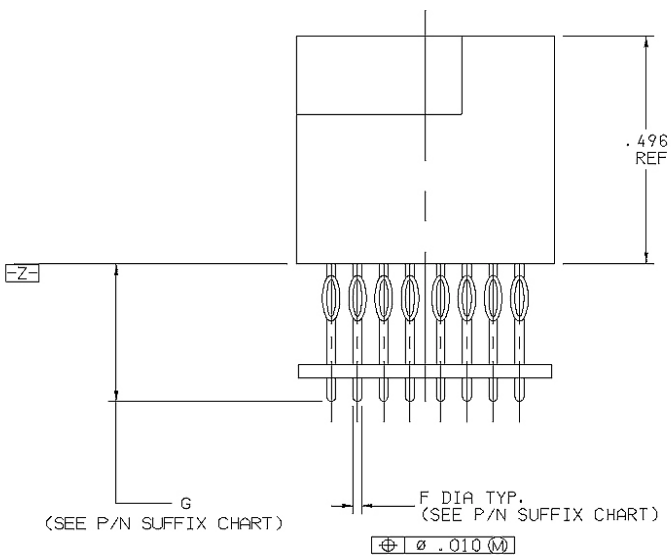
FAMCODES DATA3: SMWDNR | CICS: 2657

10-507702-100/199

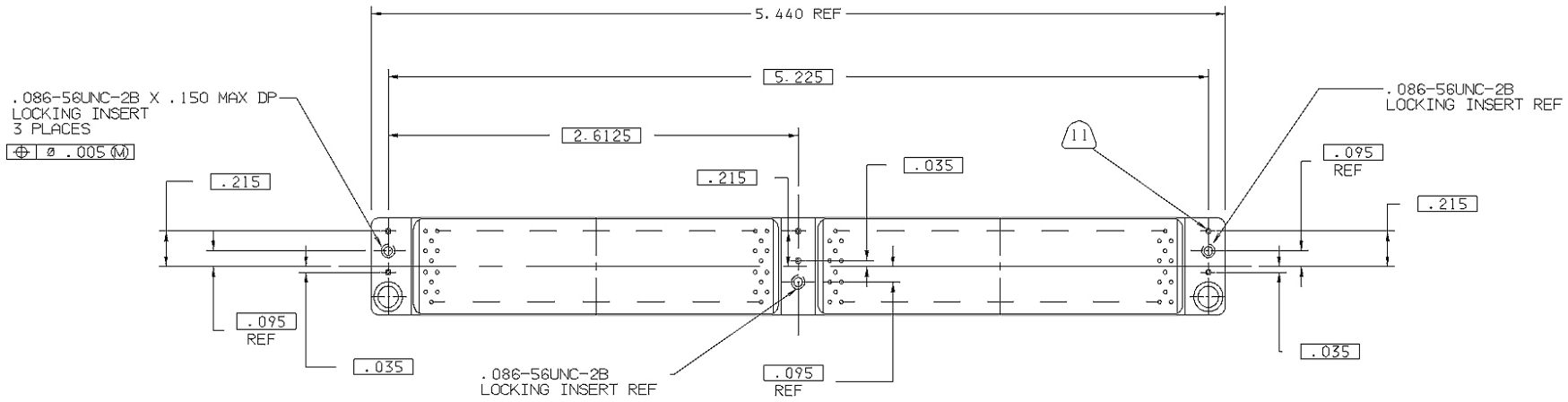
SUGGESTED PTH DIMENSIONS FOR COMPLIANT CONTACTS	
DRILLED HOLE	.0282-.0296
COPPER UNDERPLATING THICKNESS	.0010-.0020
TIN/LEAD PLATING THICKNESS	.0003-.0006
FINISHED PTH DIAMETER	.023-.027



VIEW AT A ENLARGED
(SOLDER TAIL TERMIANTION)



VIEW AT A ENLARGED
(COMPLIANT SOLDERLESS WRAP TERMINATIONS)



VIEW AT B

SEE SHEET 3

NOTES:

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507702-100/199	D
SCALE:	REF:	SHEET 2 OF 4	

10-507702-100/199

CONNECTOR PART NUMBER (TO COMPLETE P/N SEE SUFFIX CHART)

10-507702-1( )( )

TERMINATION STYLE
TERMINATION STICKOUT

INSERT ASSEMBLY PART NUMBER (TO COMPLETE P/N SEE SUFFIX CHART)

10-507989-1( )( )

TERMINATION STYLE
TERMINATION STICKOUT

PART NUMBER SUFFIX CHART

TERMINATION STYLE		TERMINATION STICKOUT	
SUFFIX	DESCRIPTION (DIM "F")	SUFFIX	DESCRIPTION (DIM "G")
1	.021+/.002 DIA PCB TAIL	1	.150+/-.020 (PCB)
2	.016+/-.002 DIA PCB TAIL	2	.200+/-.020 (PCB)
3	.012+/-.002 DIA PCB TAIL	3	.250+/-.020 (PCB)
4	N/A	4	.300+/-.020 (PCB)
5	COMPLIANT	5	.350+/-.020 (PCB)
6	TBD	6	.400+/-.020 (PCB)
7		7	.185+/-.020 (PCB)
8		8	.450+/-.020 (PCB)
9		9	.500+/-.020 (PCB)
0	NONE N/A	A	NA
A		B	NA
		C	.157+/-.020 (COMPLT., NO WRAP)
		D	.217+/-.020 (COMPLT., 1 WRAP)
		E	.317+/-.020 (COMPLT., 2 WRAP)
		F	.417+/-.020 (COMPLT., 3 WRAP)

REPLACEMENT COMPONENT PART NUMBERS

F/N	QTY	PART NUMBER	DESCRIPTION	NOTES
1	1	10-507988-11	SHELL ASSEMBLY	
2	2	SEE COLUMN	INSERT ASSEMBLY	
3	4	10-507903-3	POLARIZATION KEY	2
4	2	10-507929-3	RETAINING RING	2
5	6	10-507912-1	COMPLIANT PINS	2
6	AR	10-507931-1	REPLACEMENT KEY KIT (100 PCS EACH F/N 3 & 4)	10
7	AR	10-507818-12	COMPLIANT CONTACT (NO WRAP)	10
8	AR	10-507818-22	COMPLIANT CONTACT (1 WRAP)	10
9	AR	10-507818-32	COMPLIANT CONTACT (2 WRAP)	10
10	AR	10-507818-42	COMPLIANT CONTACT (3 WRAP)	10

NOTES:

5. BRUSH CONTACTS WITH PCB TAIL TERMINATIONS ARE NOT REMOVABLE. THE REAR OF THE INSERT IS SEALED. COMPLAINT CONTACTS ARE REMOVABLE FROM THE FRONT.

4. CONTACT TERMINATION FINISH:
   PCB TERMINATION FINISH IS 60/40 TIN/LEAD SOLDER DIPPED.

   COMPLIANT TERMINATION FINISH IS GOLD PLATE PER MIL-G-45204, TYPE II, .000050 MIN THK OVER .000050 MIN THK NICKEL.

3. FOR MATING MODULE CONNECTOR ASSEMBLY, SEE DRAWING 10-507602-100/199.

2. INDICATED PARTS ARE SHOWN ASSEMBLED. THESE PARTS WILL BE SHIPPED UNASSEMBLED.

1. INDICATED DIMENSIONB IS TO POINT OF ELECTRICAL ENGAGEMENT.

11. REF HOLES (6 PLACES) ARE FOR GROUNDING THE SHELL TO THE BACKPLANE USING INCLUDED DOUBLE ENDED COMPLIANT PINS F/N 5. WHEN GROUNDING IS REQUIRED TRANSFER THE 6 HOLE LOCATIONS TO THE BACKPLANE LAYOUT AND SPECIFY A FINISHED HOLE SIZE OF .040+/-.003 DIA.

10. INDICATED ITEMS ARE REPAIR OR REPLACEMENT COMPONENT PART NUMBERS.

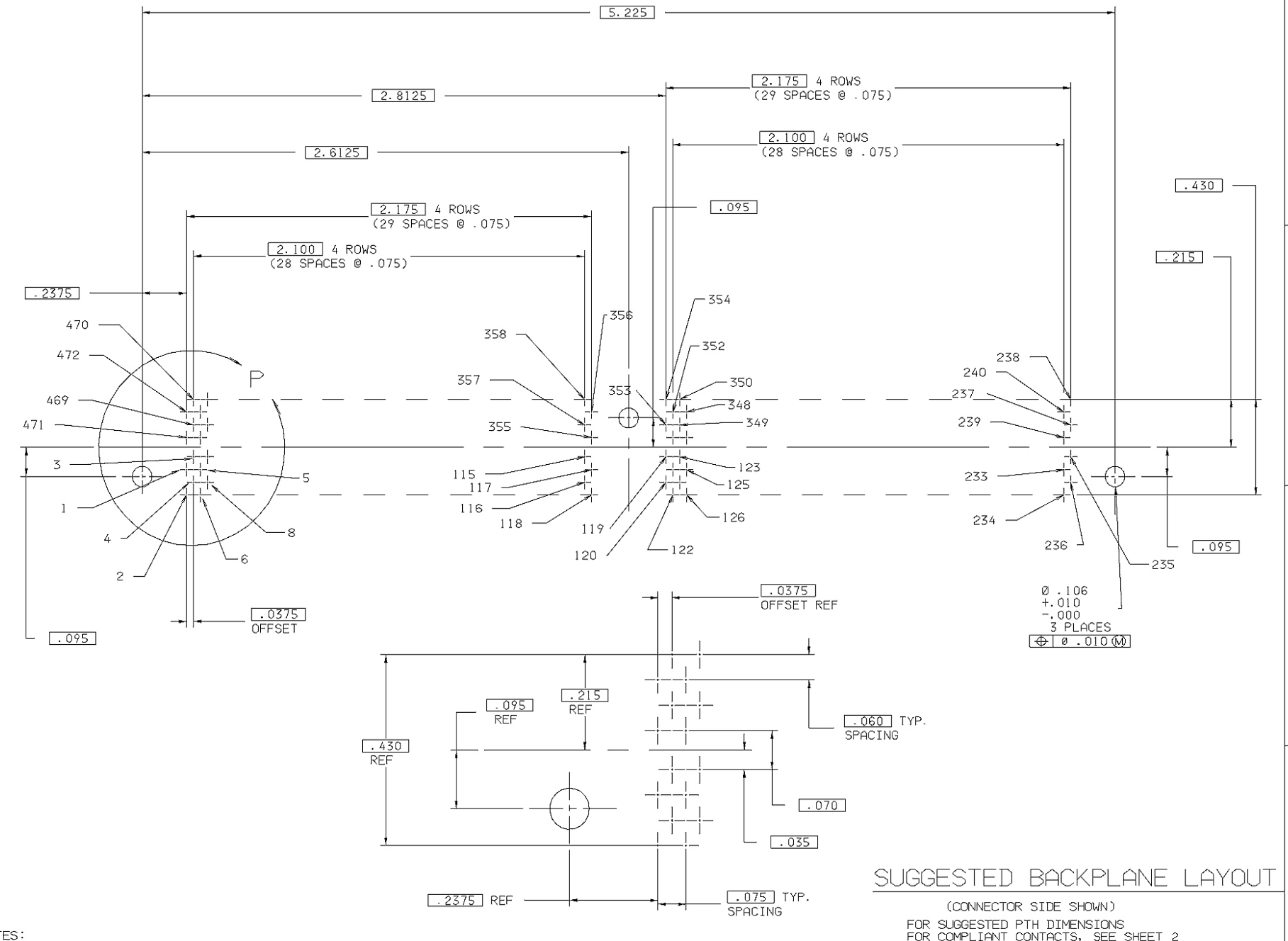
9. A TOTAL OF 4 KEYS AND 2 RETAINING RINGS ARE REQUIRED TO COMPLETE THE ASSEMBLY. RETAINING RINGS ARE NOT REUSABLE AND MUST BE REPLACED WHEN REKEYING CONNECTOR.

8. COMPLIANT TERMINATION WRAP NUMBERS ASSUME A .125 INCH THICK BACKPLANE.

7. INDICATED POSITIONAL TOLERANCE ID FOR PCB TERMINATION ONLY. THIS TOLERANCE APPLIES WHEN BOTTOM OF INDICATED ORGANIZER IS WITHIN .020 INCH OF TAIL END.

6. BLACK INK STAMP "AMPHENOL" 77820, PART NUMBER AND DATE CODE ON INDICATED SURFACE PER 9-3856-5. DATE CODE PER 9-3895. CHARACTERS TO BE .062+/-.020 HIGH. ADDITIONAL INFORMATION MAYBE REQUESTED BY PURCHASE ORDER.

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507702-100/199	D
SCALE:	REF:		SHEET 3 OF 4



SUGGESTED BACKPLANE LAYOUT

(CONNECTOR SIDE SHOWN)

FOR SUGGESTED PTH DIMENSIONS
FOR COMPLIANT CONTACTS, SEE SHEET 2

NOTES:

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SIZE	PSCN NO.	DOCUMENT NO.	REV.
C	77820	10-507702-100/199	D
SCALE:	REF:	SHEET 4 OF 4	

10-507702-100/199

Staggered Grid Pattern (Digital)

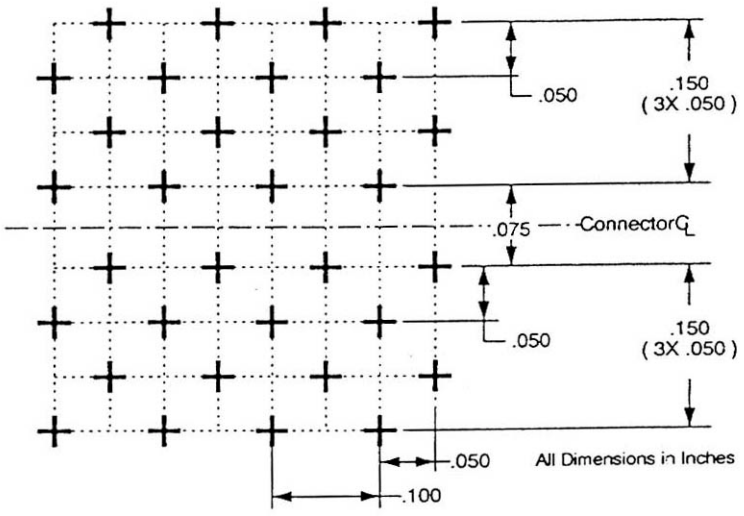
Drawing Package for Single, Double and 3-Bay **Module Connectors**

Including how to order part numbers.

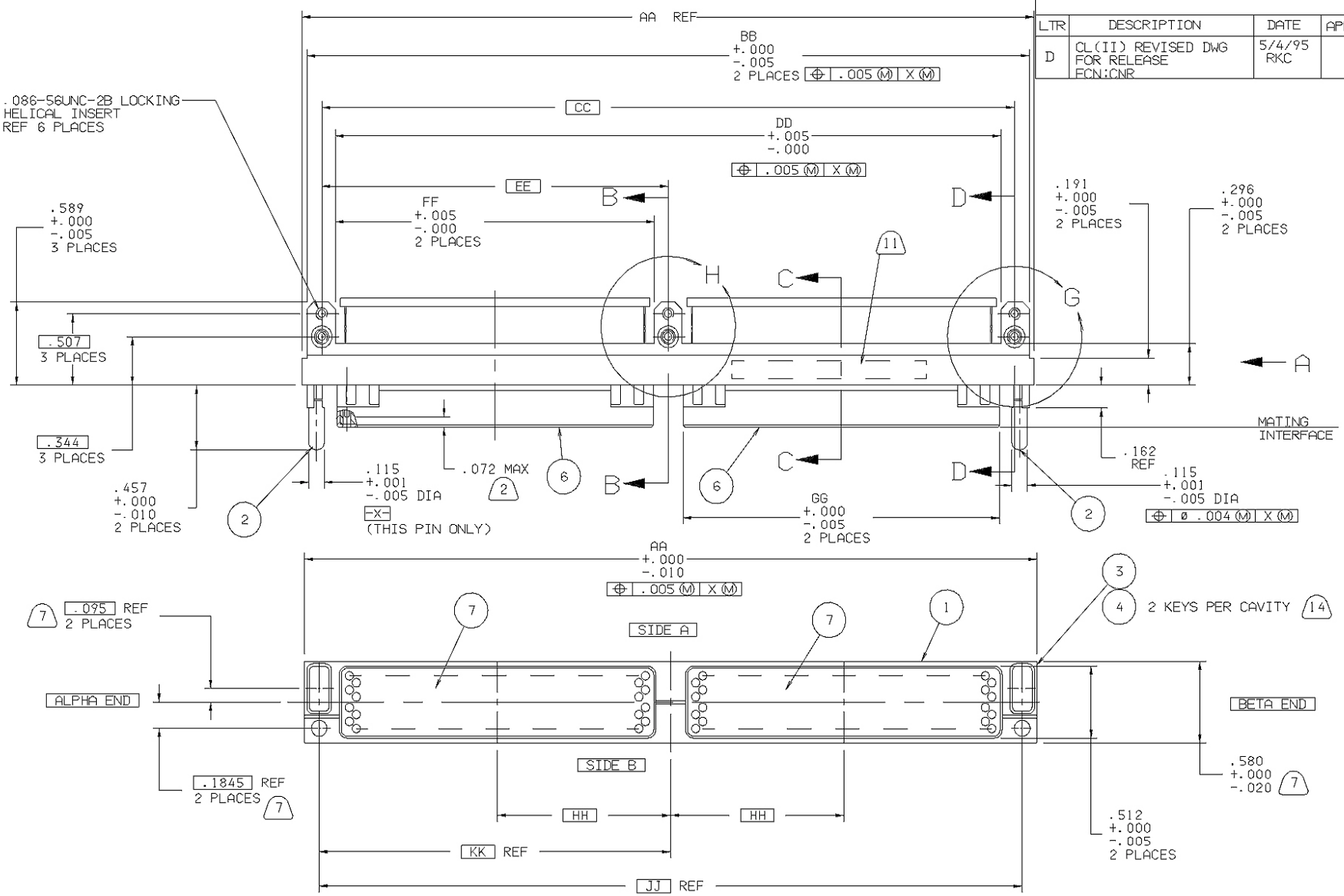
The LRM Staggered pattern allows for surface mount leads on a .025 inch center line.

The following diagram shows the contact pattern of the staggered grid LRM Connector, .100 inch spacing along the row with .050 inch between rows, offset .050 inch (mating face).

STAGGERED



LTR	DESCRIPTION	DATE	APPROVED
D	CL(II) REVISED DWG FOR RELEASE FCN:CNR	5/4/95 RKC	



DOUBLE BAY CONNECTORS
INSERT ARRANGEMENT SUFFIXS 5-8
(SUFFIX 8 SHOWN)

FOR CONTACT IDENTIFICATION ILLUSTRATION SEE SHEET 12

(FOR REPLACEMENT COMPONENTS PART NUMBERS SEE SHEET 8)

SEE SHEET 8

NOTES:

THE USE OF THIS DOCUMENT IS UNLIMITED. HOWEVER, DOCUMENTS REFERENCED HEREON MAY CONTAIN LIMITED RIGHTS DATA.

F/N	QTY	PART NUMBER	DESCRIPTION	NOTES

UNLESS OTHERWISE SPECIFIED
LINEAR DIMENSIONS ARE IN INCHES.
TOLERANCES:
.XXXX = +/-.0005
.XXX = +/-.010
.XX = +/-.05
.X = +/-.1
ANGLES = +/-2°
NOTE REF. XX
OTHER STANDARDS PER 9-3800 AND DOD-D-1000
THIRD ANGLE PROJECTION

SPECIFICATIONS	APPROVALS	DATE
MATERIAL SPEC. N/A	CHAPMAN	1/19/94
PROCESS SPEC. 9-3895 9-3856-5		

AMPHENOL CORPORATION
BENDIX CONNECTOR OPERATIONS
SIDNEY, NEW YORK

CONNECTOR, ELECTRICAL, MODULE, U
BRUSH CONTACT, LRM
STAGGERED GRID

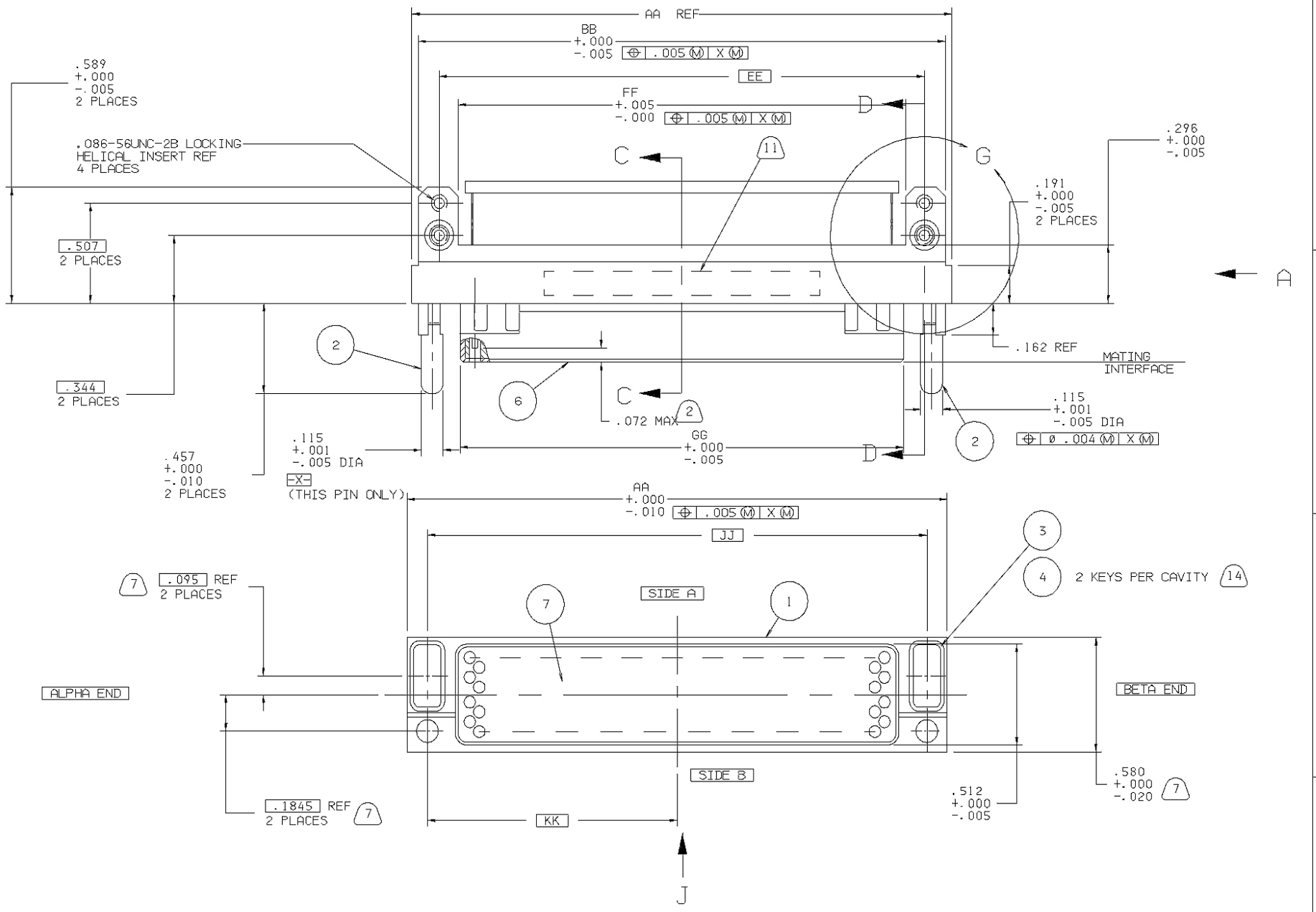
SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D

SCALE: 2/1 | REF: | SHEET 1 OF 14

COMPANY ID: X	CODED: X
INTERNAL: X	LOT NO: X
DATE CODE: 9-3895	SEE DRAW: X
STAMPING DATA	N/A
N/A	NEXT ASSEMBLY

FAMCODES | DATA3: SMWDNR | CICS: 2671

10-507142-100/999



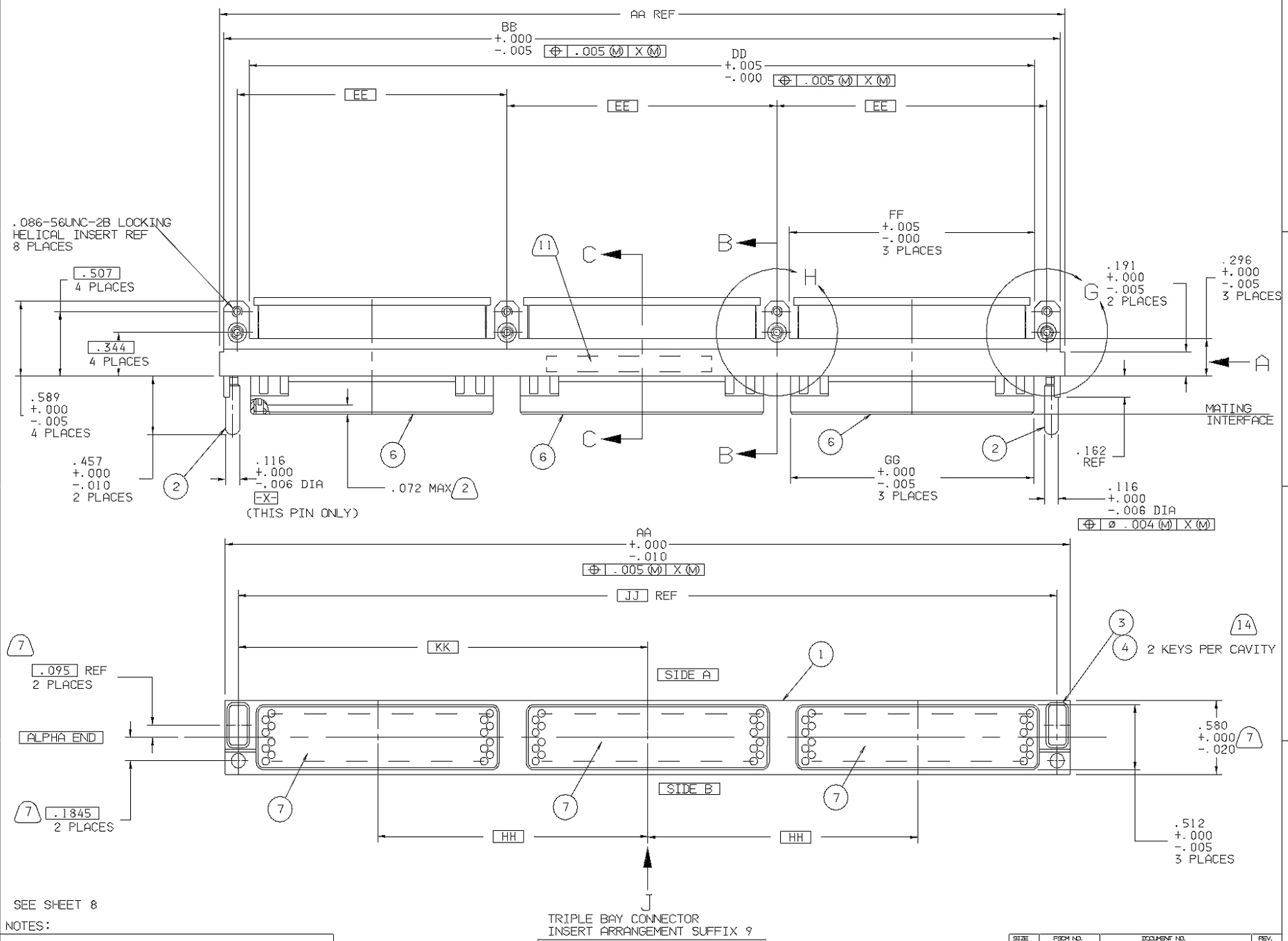
SINGLE BAY CONNECTORS
INSERT ARRANGEMENT SUFFIXS 1-4
(SUFFIX 4 SHOWN)

SEE SHEET 8

NOTES:

FOR CONTACT IDENTIFICATION ILLUSTRATION SEE SHEET 13

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:		SHEET 2 OF 14



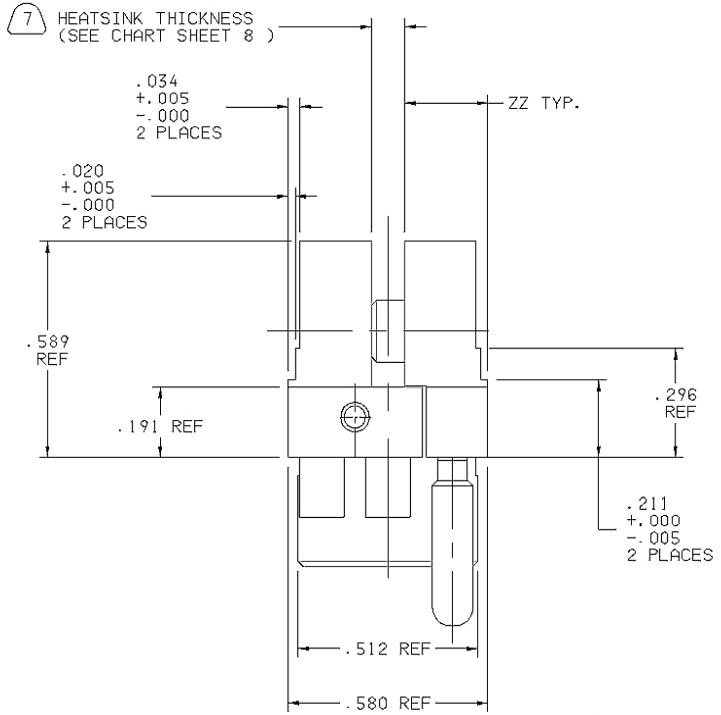
NOTES:

THE USE OF THIS DOCUMENT IS UNLIMITED. HOWEVER, DOCUMENTS REFERENCED HEREON MAY CONTAIN LIMITED RIGHTS DATA.

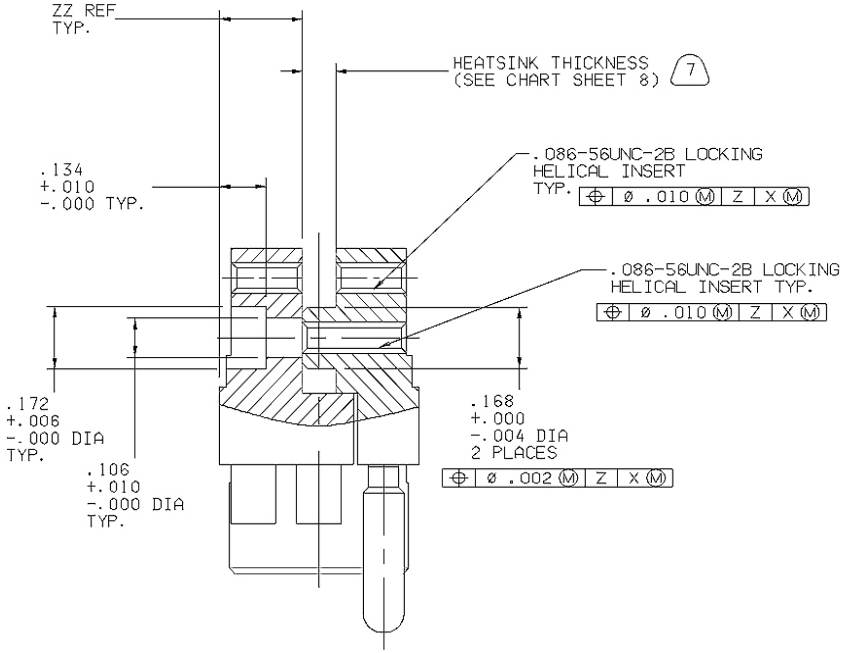
FOR CONTACT IDENTIFICATION ILLUSTRATION SEE SHEET 14

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:		SHEET 3 OF 14

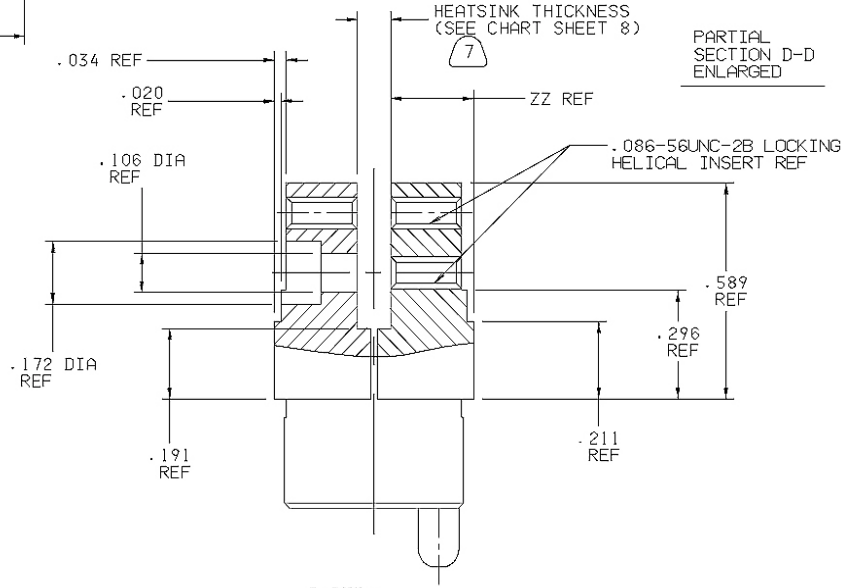
10-507142-100/999



VIEW AT A ENLARGED



PARTIAL SECTION D-D ENLARGED



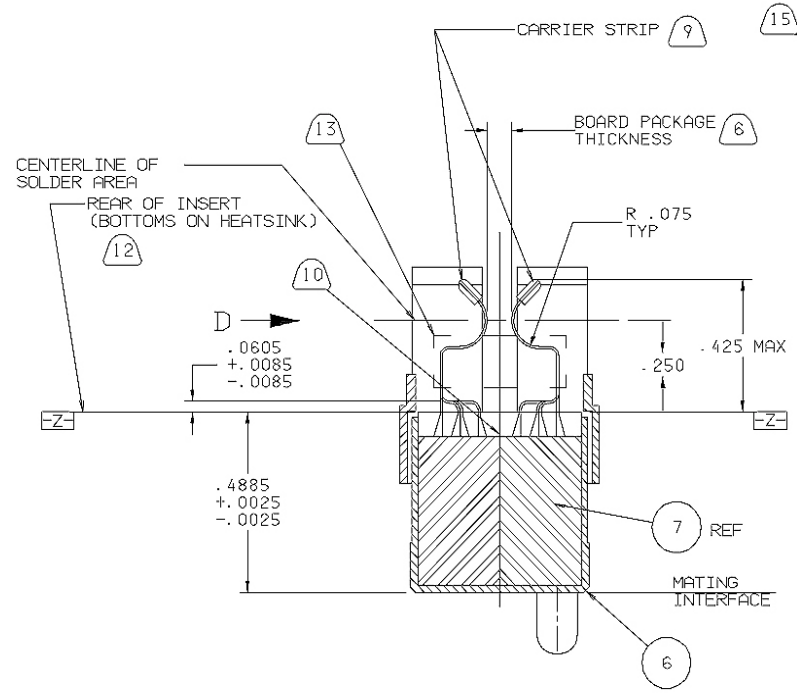
PARTIAL SECTION B-B ENLARGED

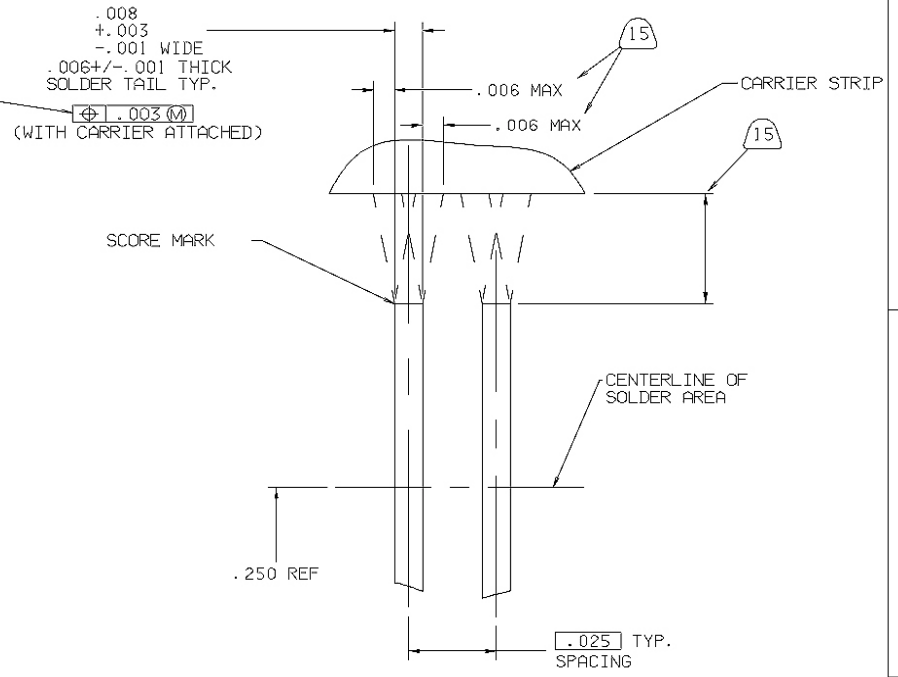
SEE SHEET X

NOTES:

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:		SHEET 4 OF 14

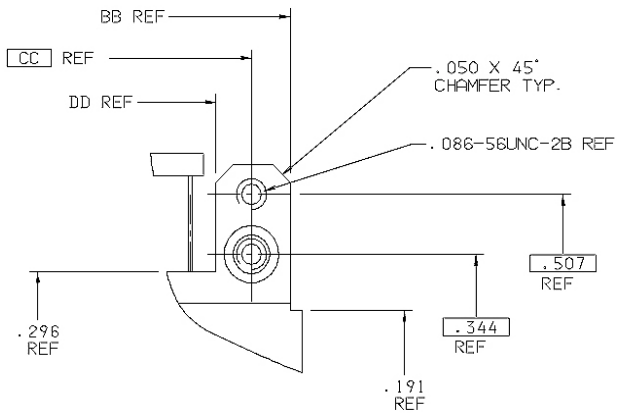
10-507142-100/999

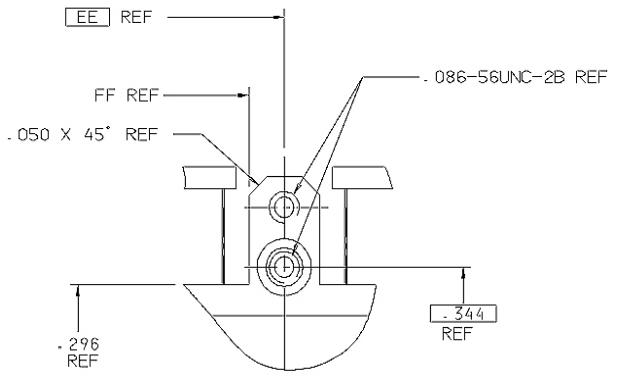




VIEW AT D
ENLARGED
SOLDER TAIL ONLY

SECTION C-C
ENLARGED





VIEW H
ENLARGED

SEE SHEET 8

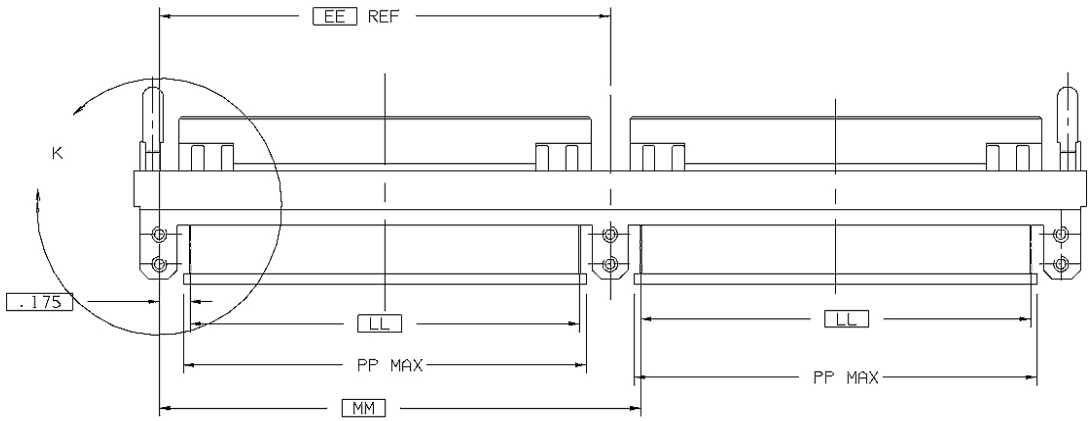
NOTES:

THE USE OF THIS DOCUMENT IS UNLIMITED. HOWEVER, DOCUMENTS REFERENCED HEREON MAY CONTAIN LIMITED RIGHTS DATA.

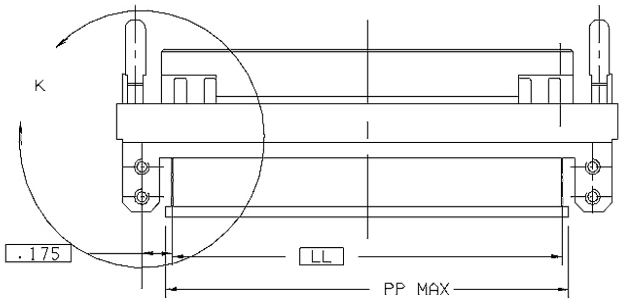
VIEW G
ENLARGED

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:	SHEET 5 OF 14	

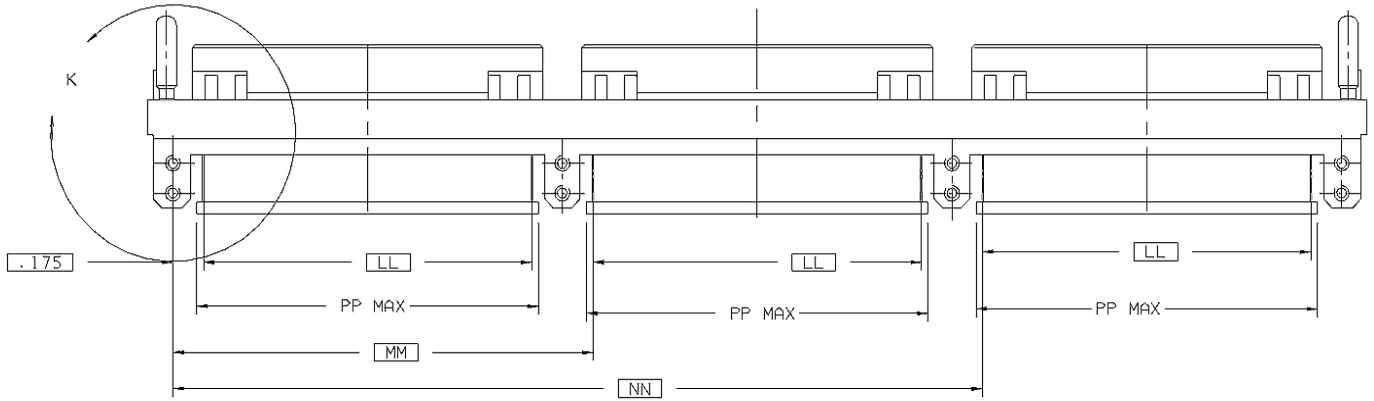
10-507142-100/999



DOUBLE BAY CONNECTOR (ARRANGEMENT SUFFIXS 5-8)



SINGLE BAY CONNECTOR (ARRANGEMENT SUFFIXS 1-4)



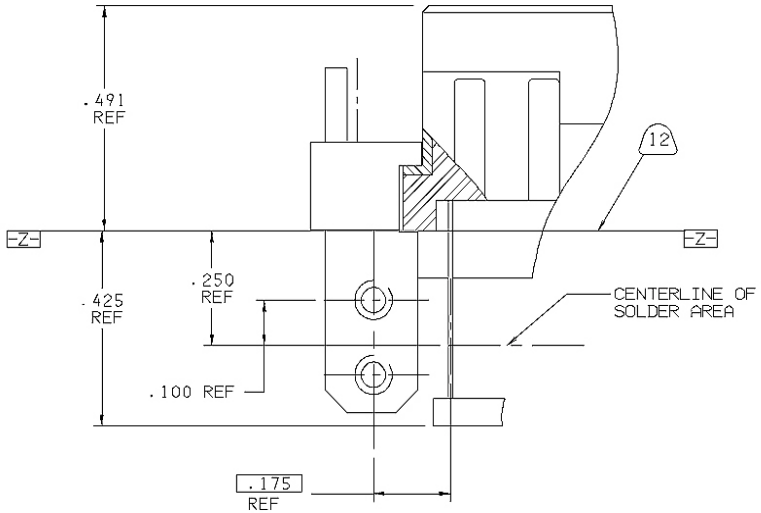
SEE SHEET 8

NOTES:

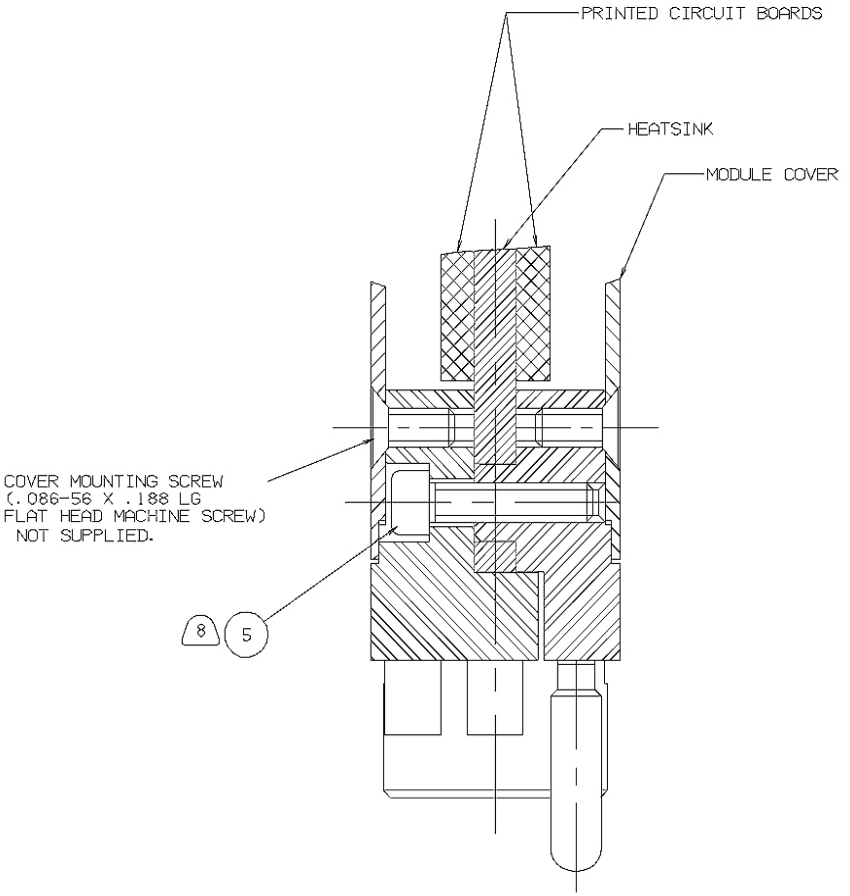
TRIPE BAY CONNECTOR (ARRANGEMENT SUFFIX 9)

VIEW AT J

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:	SHEET 6 OF 14	



VIEW K
ENLARGED
(SHELL HALF REMOVED)



VIEW OF CONNECTOR ATTACHEMENT METHOD
(SECTION THRU END MOUNTING TAB)

SEE SHEET 8

NOTES:

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:	SHEET 7 OF 14	

10-507142-100/999

CONNECTOR PART NUMBER (TO COMPLETE P/N SEE SUFFIX CHART)

10-507142-( )( )( )

INSERT ARRANGEMENT
HEATSINK THICKNESS
TERMINATION STYLE

SOLDER FIXTURE PART NUMBER (TO COMPLETE SEE SUFFIX CHART)

10-507952-( )( )

ARRANGEMENT SUFFIX
HEATSINK THICKNESS

REPLACEMENT COMPONENT PART NUMBERS

F/N	QTY	PART NUMBER	DESCRIPTION
1	1	SEE COLUMN	SHELL ASSEMBLY
2	2	10-507906-2	GUIDE PIN
3	2	10-507929-1	RETAINING RING
4	4	10-507903-3	POLARIZATION KEY
5	AR	10-507905-12	MOUNTING SCREW
6	AR	SEE COLUMN	INSERT SHIELD
7	AR	SEE COLUMN	INSERT ASSEMBLY
8	--	SEE COLUMN	SOLDER FIXTURE
9	--	10-507930-1	CARRIER REMOVAL
10	--	10-507931-2	REPLACEMENT KEY KIT (100 PCS EACH OF F/N 3 & 4)

PART NUMBER SUFFIX CHART

INSERT ARRANGEMENT		HEATSINK THICKNESS		ZZ +.0025 -.0025	TERMINATION STYLE/PACKAGE THICKNESS	
SUFFIX	DESCRIPTION	SUFFIX	DESCRIPTION		SUFFIX	DESCRIPTION
1	80 DIGITAL (SINGLE BAY)	1	.125+/-.005	.2225	1	SURFACE MOUNT / .090-.130 PACKAGE
2	108 DIGITAL (SINGLE BAY)	2	.100+/-.005	.235	2	SURFACE MOUNT / .130-.190 PACKAGE
3	152 DIGITAL (SINGLE BAY)	3	.075+/-.005	.2475	3	SURFACE MOUNT / .190-.250 PACKAGE
4	180 DIGITAL (SINGLE BAY)	4	.062+/-.005	.254	4	SURFACE MOUNT / .060-.100 PACKAGE
5	160 DIGITAL (DOUBLE BAY)	5	.035+/-.005	.2675	5	SURFACE MOUNT / .100-.160 PACKAGE
6	216 DIGITAL (DOUBLE BAY)	6	TBD	TBD	6	SURFACE MOUNT / .160-.220 PACKAGE
7	304 DIGITAL (DOUBLE BAY)	7			7	TBD
8	360 DIGITAL (DOUBLE BAY)	8			8	
9	456 DIGITAL (TRIPLE BAY)	9			9	
0	NONE	0	NONE	N/A	0	NONE
A	TBD	A			A	

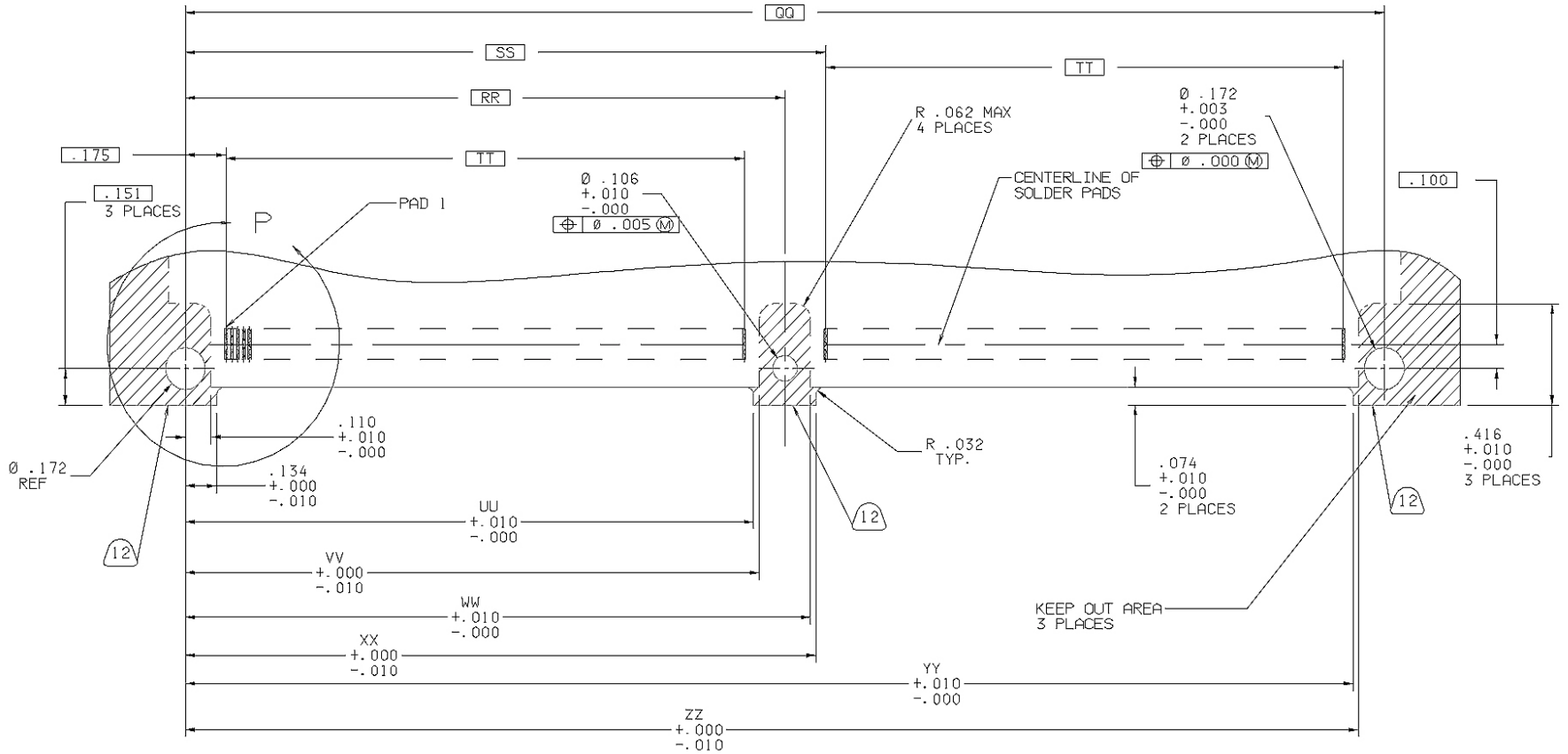
CONNECTOR PART NUMBER	AA	BB	CC	DD	EE	FF	GG	HH	JJ	KK	LL	MM	NN	PP	SHELL ASSEMBLY ADD H/S SUFFIX TO COMPLETE)	INSERT SHIELD	INSERT ASSEMBLY (ADD TERM. SUFFIX TO COMPLETE)
10-507142-1XX	1.615	1.547	N/A	N/A	1.325	1.123	1.103	N/A	1.400	.700	.975	N/A	N/A	1.050	10-507956-1( )	10-507910-102	10-507958-80( )
10-507142-2XX	1.965	1.897	N/A	N/A	1.675	1.473	1.453	N/A	1.750	.875	1.325	N/A	N/A	1.400	10-507956-2( )	10-507910-152	10-507958-10( )
10-507142-3XX	2.515	2.447	N/A	N/A	2.225	2.023	2.003	N/A	2.300	1.150	1.875	N/A	N/A	1.950	10-507956-3( )	10-507910-92	10-507958-15( )
10-507142-4XX	2.865	2.797	N/A	N/A	2.575	2.373	2.353	N/A	2.650	1.325	2.225	N/A	N/A	2.300	10-507956-4( )	10-507910-42	10-507958-18( )
10-507142-5XX	2.940	2.872	2.650	2.448	1.325	1.123	1.103	.6625	2.725	1.3625	.975	1.500	N/A	1.050	10-507956-5( )	10-507910-102	10-507958-80( )
10-507142-6XX	3.640	3.572	3.350	3.148	1.675	1.473	1.453	.8375	3.425	1.7125	1.325	1.850	N/A	1.400	10-507956-6( )	10-507910-152	10-507958-10( )
10-507142-7XX	4.740	4.672	4.450	4.248	2.225	2.023	2.003	1.1125	4.525	2.2625	1.875	2.400	N/A	1.950	10-507956-7( )	10-507910-92	10-507958-15( )
10-507142-8XX	5.440	5.372	5.150	4.948	2.575	2.373	2.353	1.2875	5.225	2.6125	2.225	2.750	N/A	2.300	10-507956-8( )	10-507910-42	10-507958-18( )
10-507142-9XX	6.965	6.897	N/A	6.473	2.225	2.023	2.003	2.225	6.750	3.375	1.875	2.400	4.625	1.950	10-507956-9( )	10-507910-92	10-507958-15( )

9. CONDUCTIVE CARRIER STRIPS MUST BE REMOVED. NON-CONDUCTIVE CARRIER STRIPS ARE NOT SCORED AND MAYBE LEFT IN PLACE.
8. THE CONNECTOR IS ATTACHED USING SUPPLIED MOUNTING SCREWS. SEE SHEET 7.
7. INDICATED DIMENSIONS ARE APPLICABLE ONLY WHEN ASSEMBLED TO THE APPROPIATE HEATSINK THICKNESS SHOWN IN CHART.
6. FOR APPROPIATE PCB/HEATSINK PACKAGE THICKNESS, SEE COLUMN.
5. BRUSH CONTACT TERMINATION FINISH IS Sn60 OR Sn63 SOLDERED DIPPED.
4. FOR MATING BACKPLANE CONNECTOR ASSEMBLY, SEE DRAWING 10-507143-100/999.
3. INDICATED PARTS ARE SHOWN ASSEMBLED. THESE PARTS WILL BE SHIPPED UNASSEMBLED.
2. INDICATED DIMENSION IS TO POINT OF ELECTRICAL ENGAGEMENT.
1. FOR SUGGESTED HEATSINK/BOARD LAYOUT SEE SHEETS 9, 10, & 11.

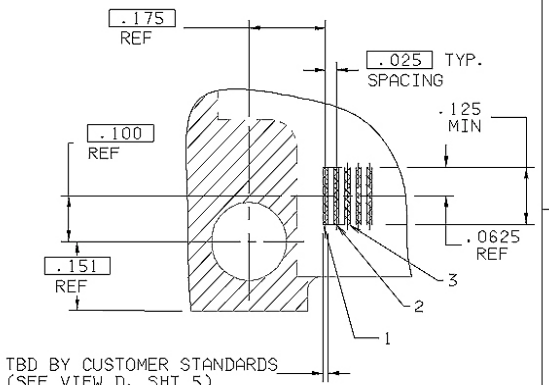
15. INDICATED GEOMETRIC TOLERANCE APPLIES BETWEEN THE BACK OF THE INSERT AND THE SCORE MARK ONLY. BETWEEN THE SCORE MARK AND THE CARRIER STRIP, THE POSITION OF THE LEADS MAY NOT VARY MORE THAN .006 INCHES FROM THE ACTUAL POSITION OF THE LEAD BELOW THE SCORE MARK.
14. A TOTAL OF 4 KEYS AND 2 RETAINING RINGS ARE REQUIRED TO COMPLETE THE ASSEMBLY. RETAINING RINGS ARE NOT REMOVABLE AND MUST BE REPLACED WHEN REKEYING CONNECTOR.
13. CONFIGURATION OF SOLDER TAILS VARIES WITH PACKAGE THICKNESS.
12. INDICATED SURFACE OF INSERTS BOTTOM ON INDICATED EDGE OF HEATSINK.
11. BLACK INK STAMP "BENDIX 77820 PART NUMBER AND DATE CODE ON INDICATED SURFACE PER 9-3856-5. DATE CODE PER 9-3895. CHARACTERS TO BE .062+/-.020 HIGH. ADDITIONAL INFORMATION MAYBE REQUESTED BY PURCHASE ORDER.
10. REAR SURFACE OF INSERTS ARE SEALED IN BRUSH CONTACT AREA ONLY. CONTACT ARE NOT REMOVABLE.

NOTES:

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:		SHEET 8 OF 14



CONNECTOR PART NUMBER	QQ	RR	SS	TT	UU	VV	WW	XX	YY	ZZ
10-507142-5XX	2.650	1.325	1.500	.975	1.191	1.215	1.435	1.459	3.766	3.790
10-507142-6XX	3.350	1.675	1.850	1.325	1.541	1.565	1.785	1.809	4.116	4.140
10-507142-7XX	4.450	2.225	2.400	1.875	2.091	2.115	2.335	2.359	4.316	4.340
10-507142-8XX	5.150	2.575	2.750	2.225	2.441	2.465	2.685	2.709	5.016	5.040



VIEW P
ENLARGED

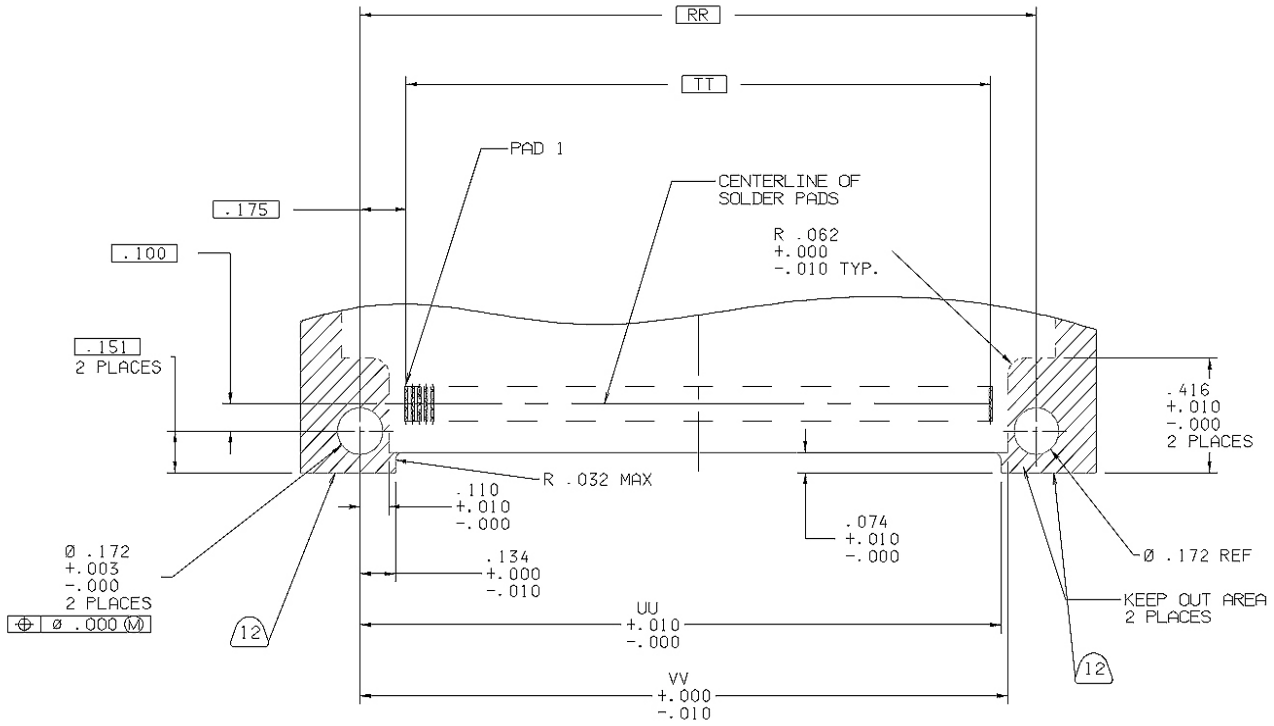
SEE SHEET 8

NOTES:

DOUBLE BAY CONNECTOR PC BOARD/HEATSINK INTERFACE DIMENSIONS

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:		SHEET 9 OF 14

10-507142-100/999



CONNECTOR PART NUMBER	RR	TT	UU	VV
10-507142-1XX	1.325	.975	1.191	1.215
10-507142-2XX	1.675	1.325	1.541	1.565
10-507142-3XX	2.225	1.875	2.091	2.115
10-507142-4XX	2.575	2.225	2.441	2.465

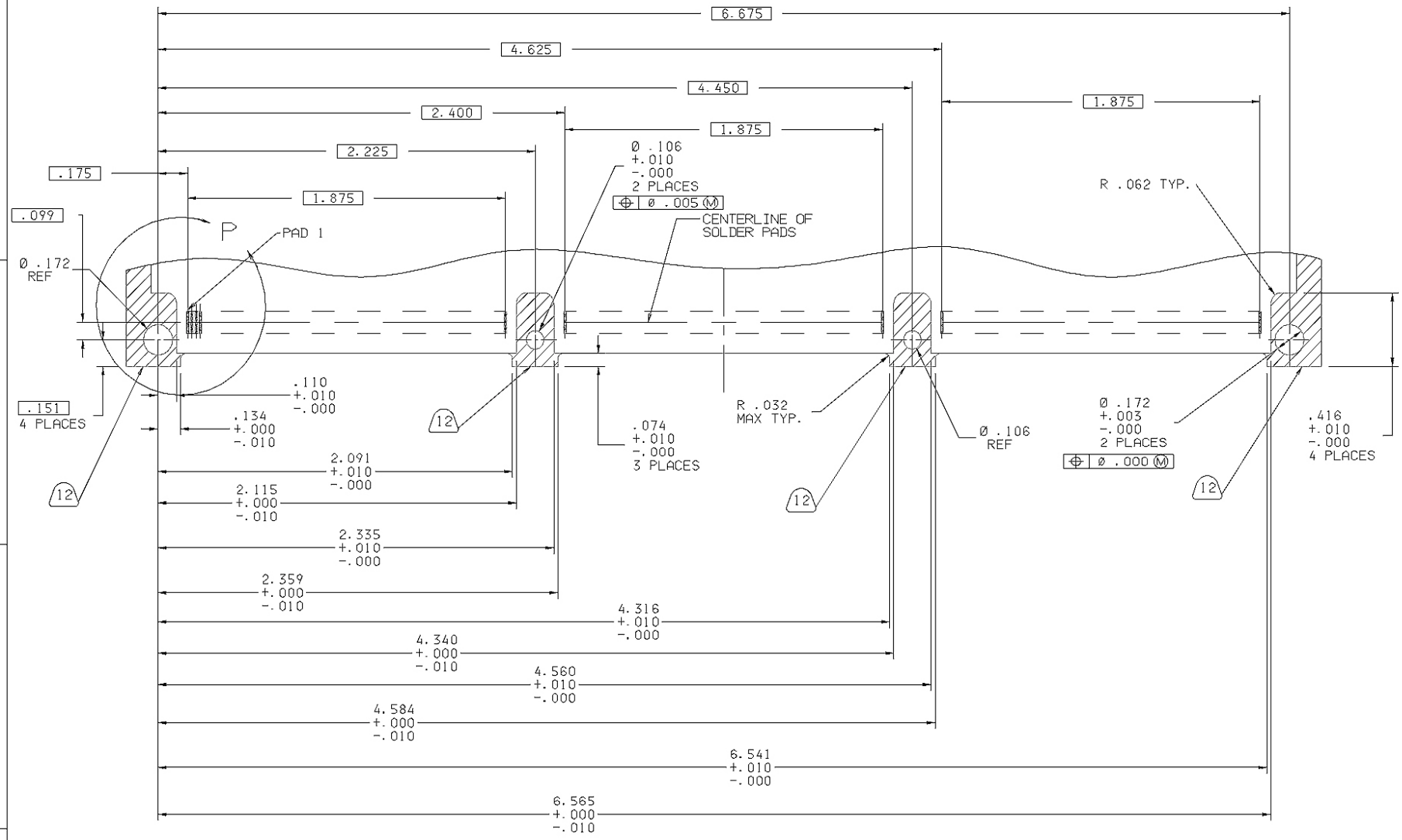
(SEE SHEET 9 FOR VIEW P)

SEE SHEET 8

NOTES:

SINGLE BAY CONNECTOR PC BOARD/HEATSINK INTERFACE DIMENSIONS

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:	SHEET 10 OF 14	



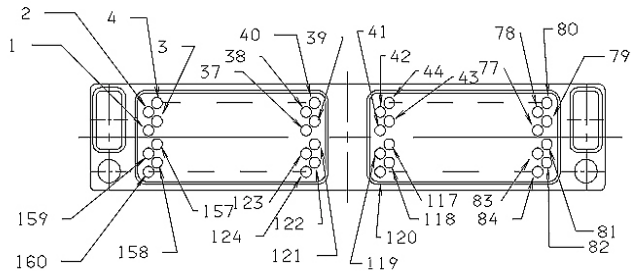
(SEE SHEET 9 FOR VIEW P)

SEE SHEET 8

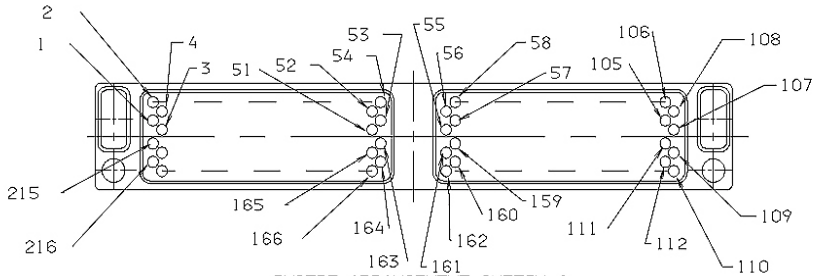
NOTES:

TRIPLE BAY CONNECTOR PC BOARD/HEATSINK INTERFACE DIMENSIONS

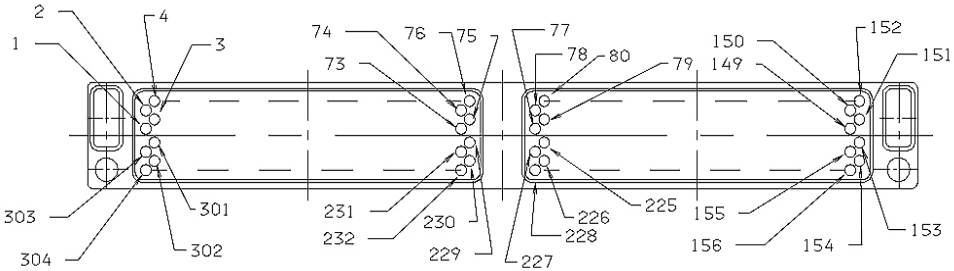
SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:	SHEET 11 OF 14	



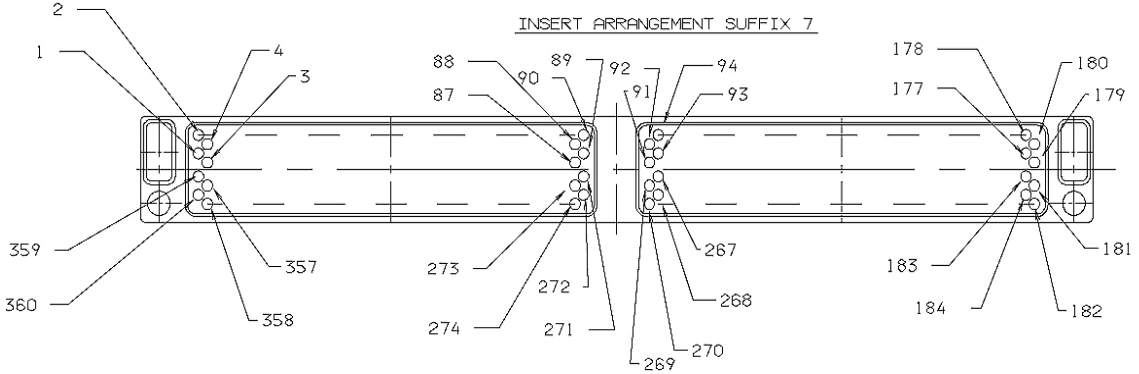
INSERT ARRANGEMENT SUFFIX 5



INSERT ARRANGEMENT SUFFIX 6



INSERT ARRANGEMENT SUFFIX 7



INSERT ARRANGEMENT SUFFIX 8

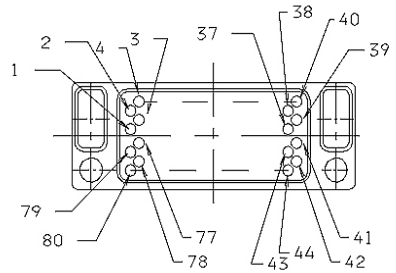
SEE SHEET 8

NOTES:

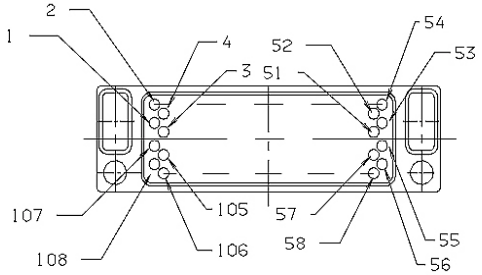
THE USE OF THIS DOCUMENT IS UNLIMITED. HOWEVER, DOCUMENTS REFERENCED HEREON MAY CONTAIN LIMITED RIGHTS DATA.

DOUBLE BAY CONNECTOR CONTACT LOCATION ILLUSTRATION (SUFFIXS 5-8)

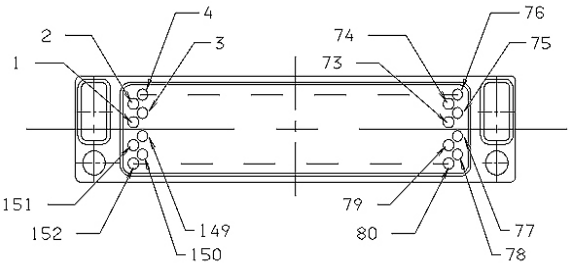
SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:	SHEET 12 OF 14	



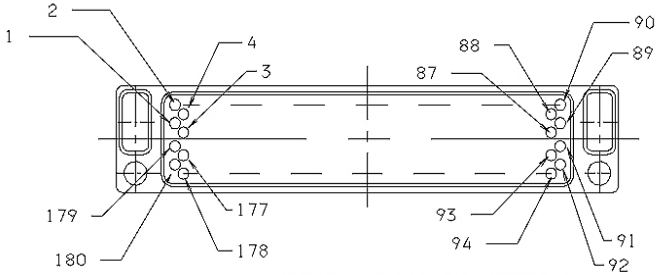
INSERT ARRANGEMENT SUFFIX 1



INSERT ARRANGEMENT SUFFIX 2



INSERT ARRANGEMENT SUFFIX 3



INSERT ARRANGEMENT SUFFIX 4

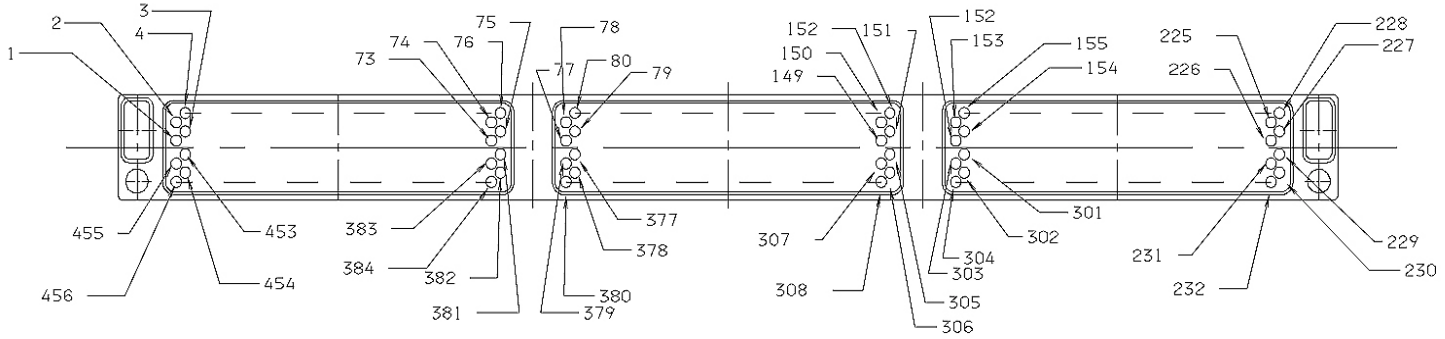
SEE SHEET 8

NOTES:

SINGLE BAY CONNECTOR CONTACT IDENTIFICATION ILLUSTRATION (S U F F I X S 1 - 4)

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:	SHEET 13 OF 14	

10-507142-100/999



INSERT ARRANGEMENT SUFFIX 9

SEE SHEET 8

NOTES:

TRIPLE BAY CONNECTOR CONTACT LOCATION ILLUSTRATION (SUFFIX 9)

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507142-100/999	D
SCALE:	REF:	SHEET 14 OF 14	

10-507142-100/999

Staggered Grid Pattern (Digital)

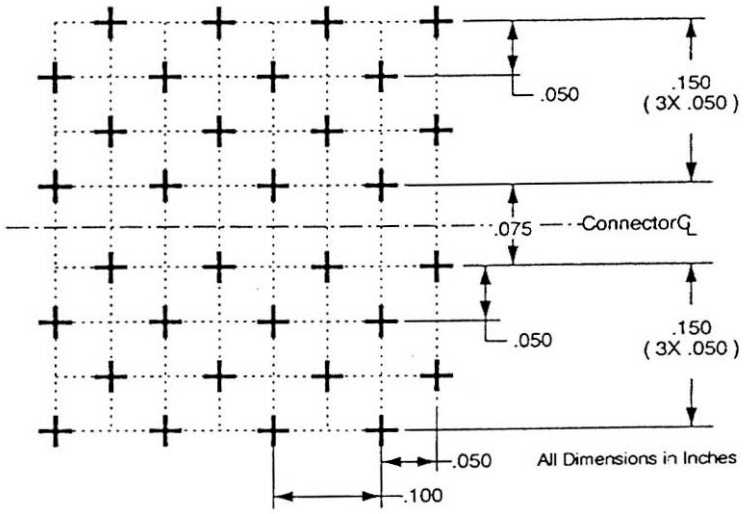
Drawing Package for
Single, Double and 3-Bay
Backplane Connectors

Including how to order part numbers.

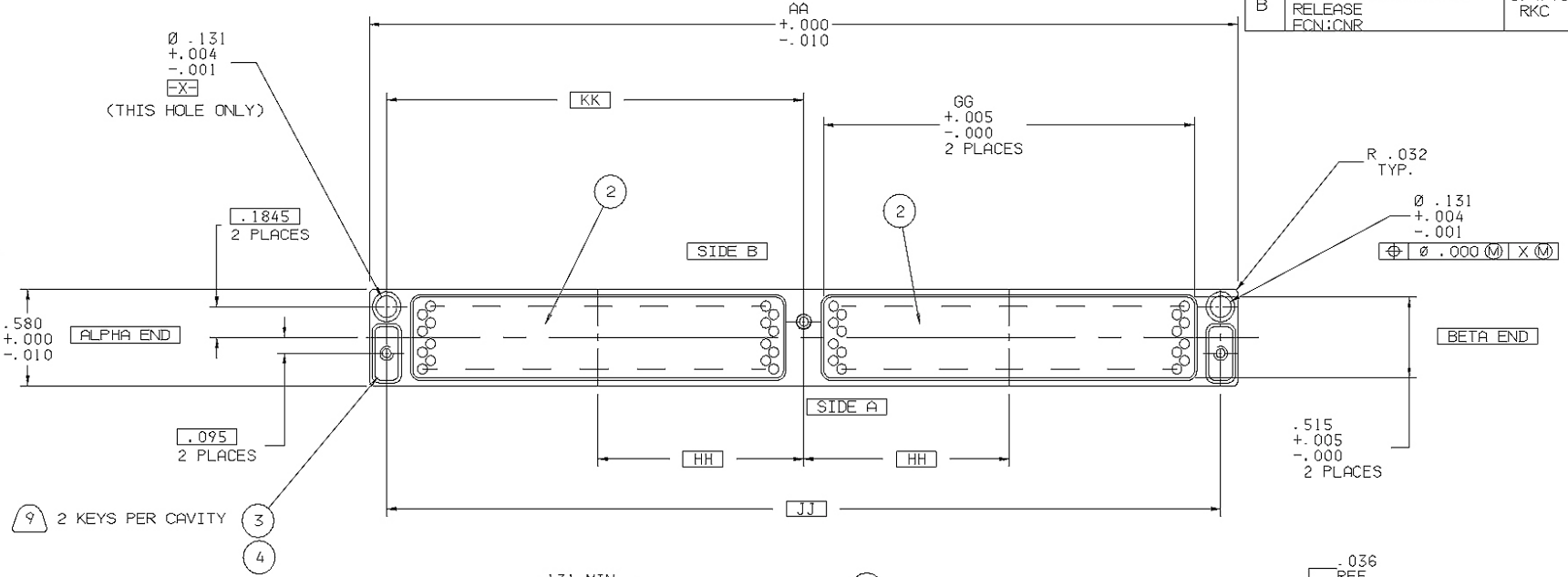
The LRM Staggered pattern allows for surface mount leads on a .025 inch center line.

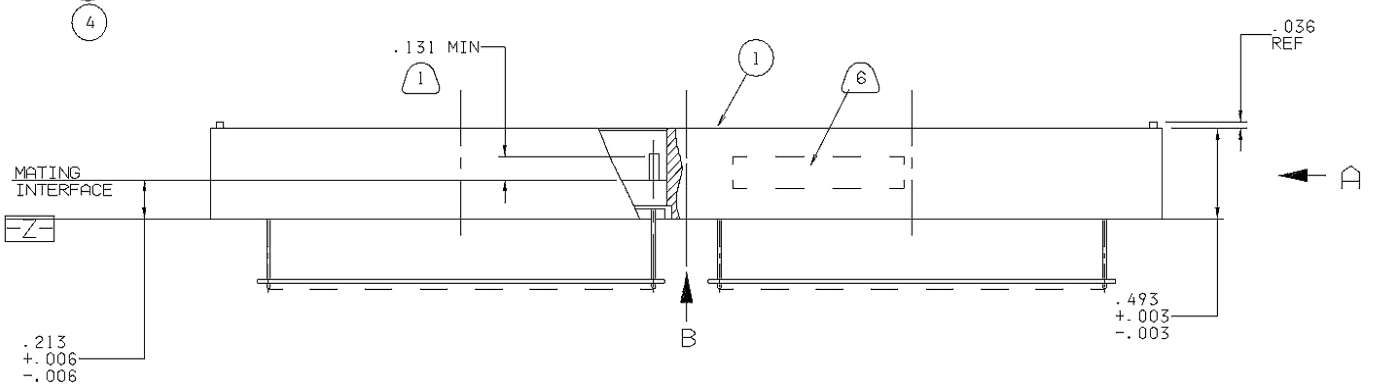
The following diagram shows the contact pattern of the staggered grid LRM Connector, .100 inch spacing along the row with .050 inch between rows, offset .050 inch (mating face).

STAGGERED



LTR	DESCRIPTION	DATE	APPROVED
B	CL(II) REVISED FOR RELEASE ECN:CNR	5/4/95 RKC	





(FOR TERMINATION DATA, SEE SHEET 4)

DOUBLE BAY CONNECTORS
INSRT ARRANGEMENT SUFFIXS 5-8
(SUFFIX 8 SHOWN)

FOR CONTACT IDENTIFICATION ILLUSTRATION SEE SHEET 8

(FOR REPLACEMENT COMPONENT PART NUMBERS, SEE SHEET 7)

F/N	QTY	PART NUMBER	DESCRIPTION	NOTES

UNLESS OTHERWISE SPECIFIED
LINEAR DIMENSIONS ARE IN INCHES.
TOLERANCES:
.XXXX = +/-.0005
.XXX = +/-.010
.XX = +/-.05
.X = +/-.1
ANGLES = +/-2°
NOTE REF. XX
OTHER STANDARDS PER 9-3800 AND DOD-D-1000 THIRD ANGLE PROJECTION

SPECIFICATIONS	APPROVALS	DATE
MATERIAL SPEC. N/A	DRAWN CHAPMAN	1/21/94
	CHECKED	
	ENGINEER	
PROCESS SPEC. 9-3895 9-3858-5	APPROVED	
	QUALITY	

AMPHENOL CORPORATION
BENDIX CONNECTOR OPERATIONS
SIDNEY, NEW YORK

CONNECTOR, ELECTRICAL, BACKPLANE,U BRUSH CONTACT, LRM STAGGERED GRID

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507143-100/999	B

SCALE: X/1 | REF: | SHEET 1 OF 10

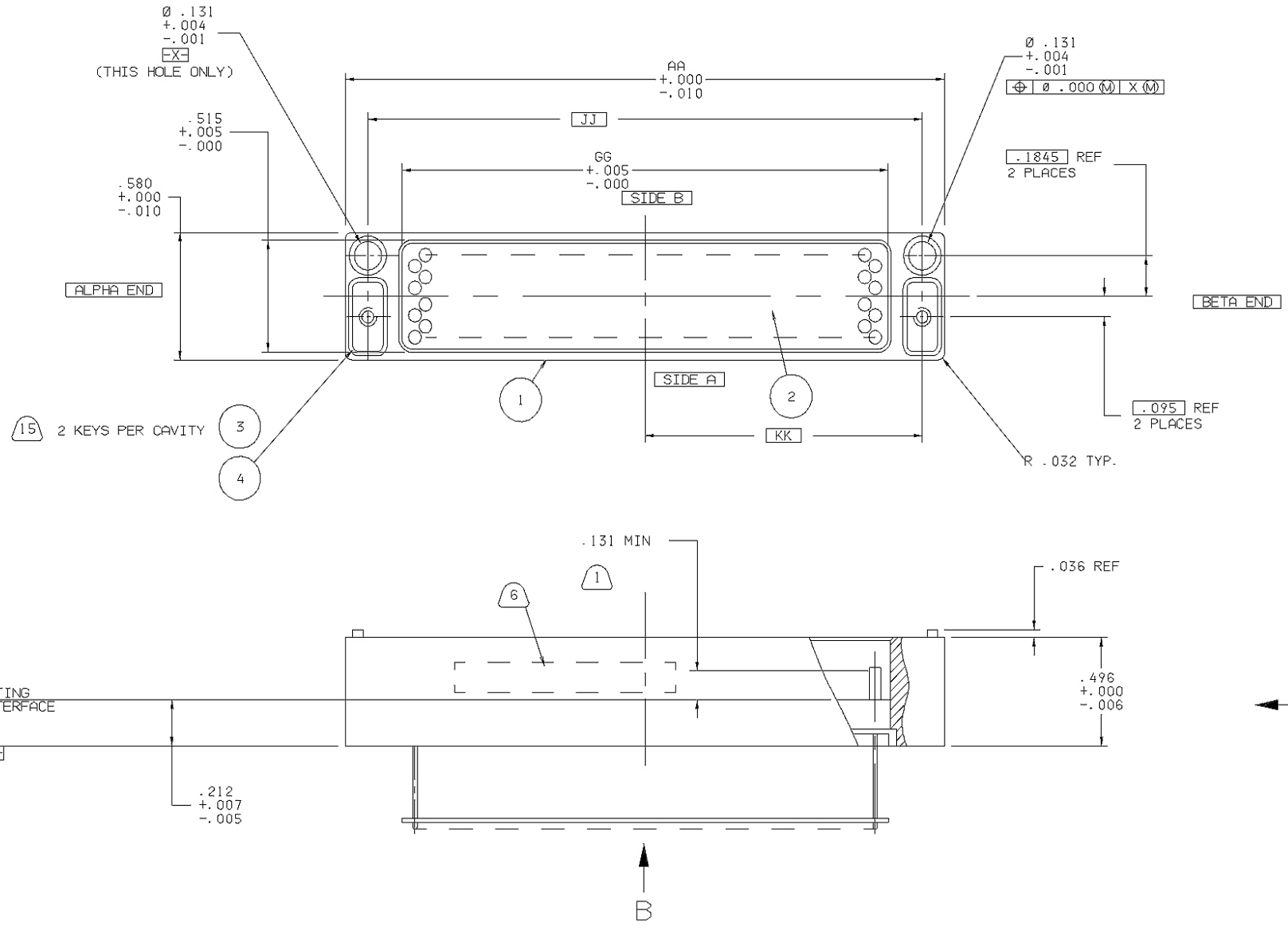
SEE SHEET 7.

NOTES:

COMPANY ID: X	CODED: X	N/A
INTERNAL: X	LOT NO: X	N/A
DATE CODE: 9-3895	SEE DRAW: X	
STAMPING DATA		NEXT ASSEMBLY

FAMCODES | DATA3: SMWDNR | CICS: 2671

10-507143-100/999



(FOR TERMINATION DATA, SEE SHEET 5)

SEE SHEET 7.

NOTES:

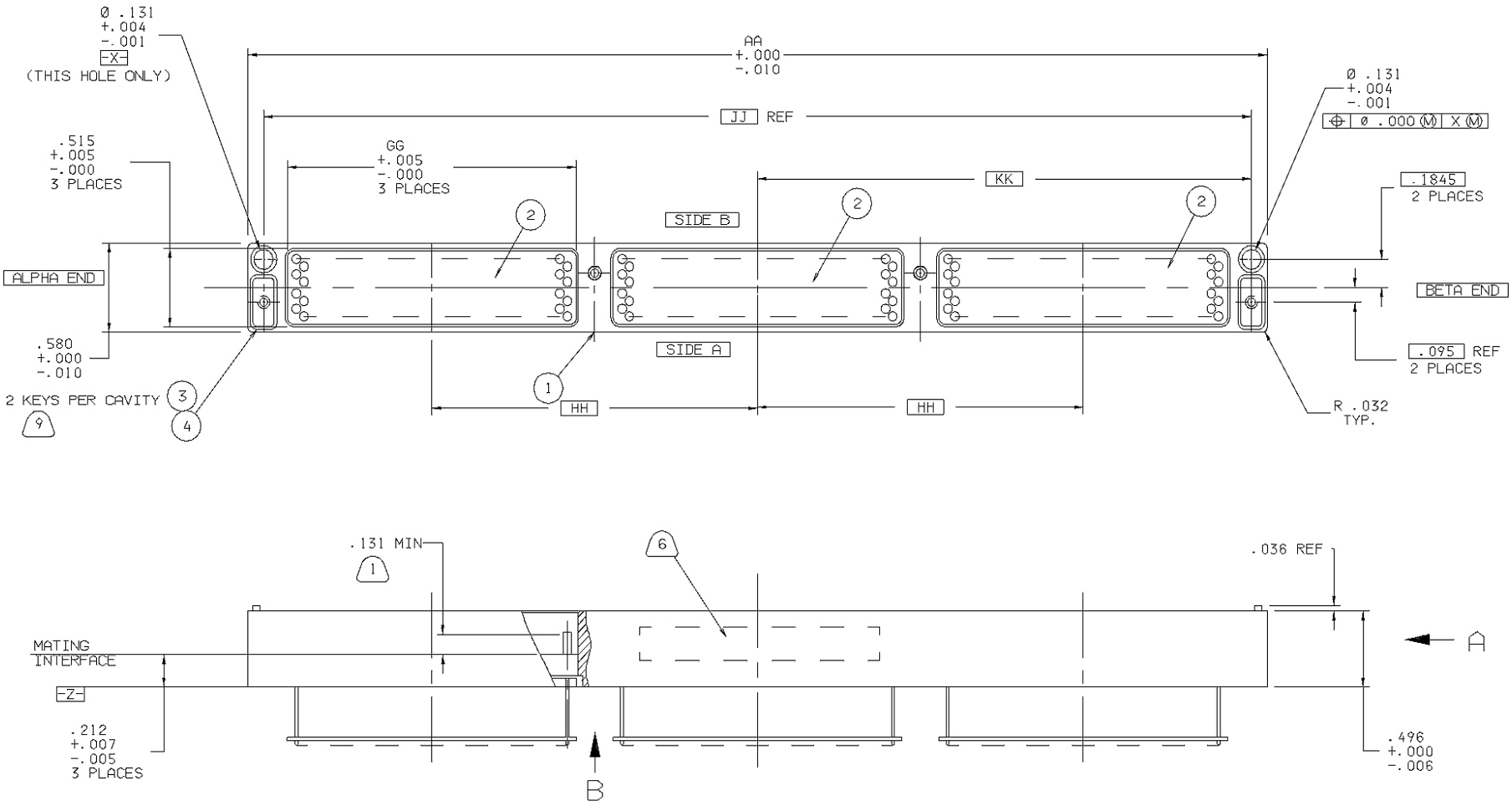
THE USE OF THIS DOCUMENT IS UNLIMITED. HOWEVER, DOCUMENTS REFERENCED HEREON MAY CONTAIN LIMITED RIGHTS DATA.

SINGLE BAY CONNECTORS
INSERT ARRANGEMENTS 1-4
(SUFFIX 4 SHOWN)

FOR CONTACT IDENTIFICATION ILLUSTRATION SEE SHEET 9

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507143-100/999	B
SCALE:	REF:	SHEET 2 OF 10	

10-507143-100/999



(FOR TERMINATION DATA, SHEET 6)

SEE SHEET 7

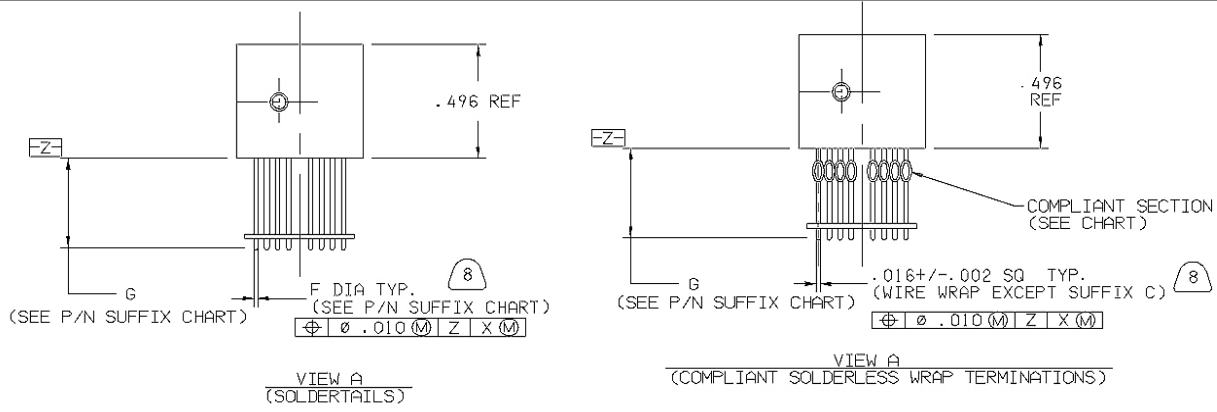
NOTES:

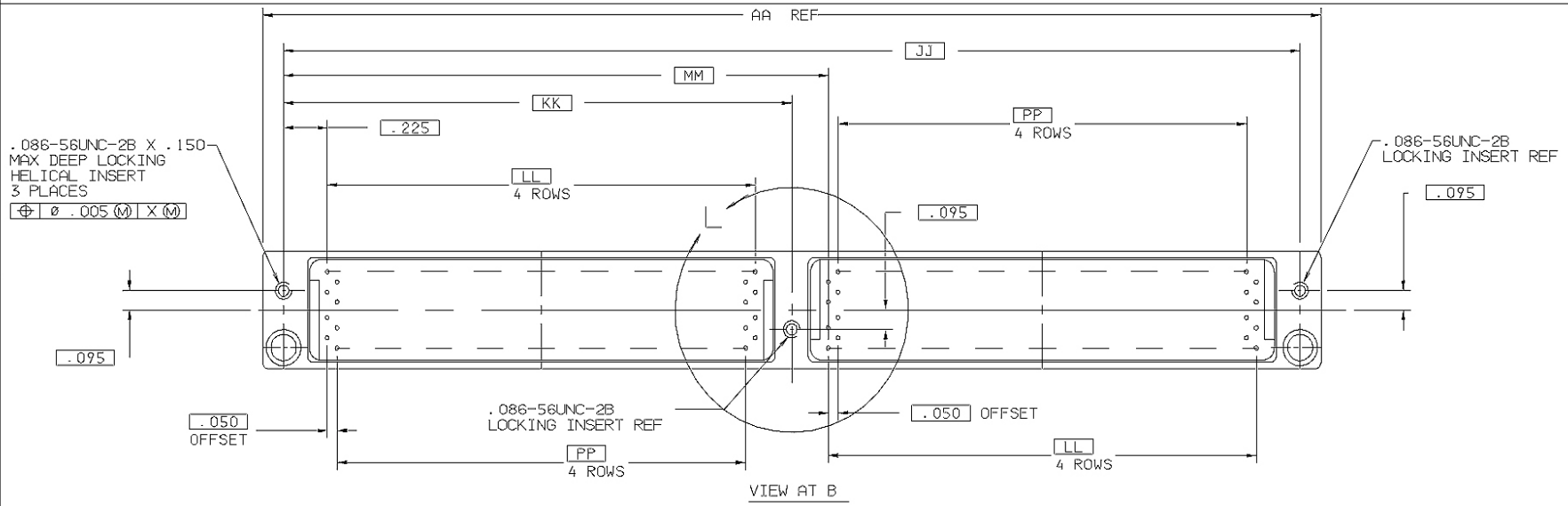
TRIPLE BAY CONNECTORS
INSERT ARRANGEMENT SUFFIX 9

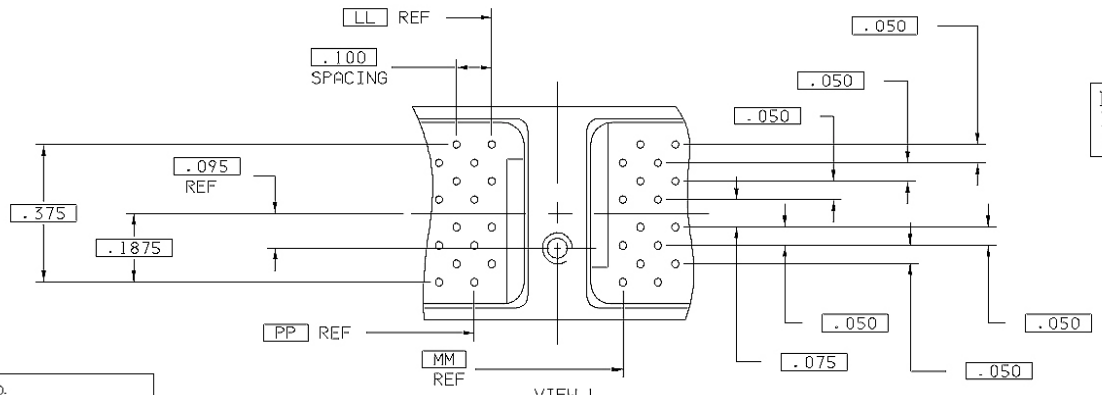
FOR CONTACT IDENTIFICATION ILLUSTRATION SEE SHEET 10

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507143-100/999	B
SCALE:	REF:		SHEET 3 OF 10

SUGGESTED PTH DIMENSIONS FOR COMPLIANT CONTACTS	
DRILLED HOLE	.0282-.0296
COPPER UNDERPLATING THICKNESS	.0010-.0020
TIN/LEAD PLATING THICKNESS	.0003-.0006
FINISHED PTH DIAMETER	.023-.027







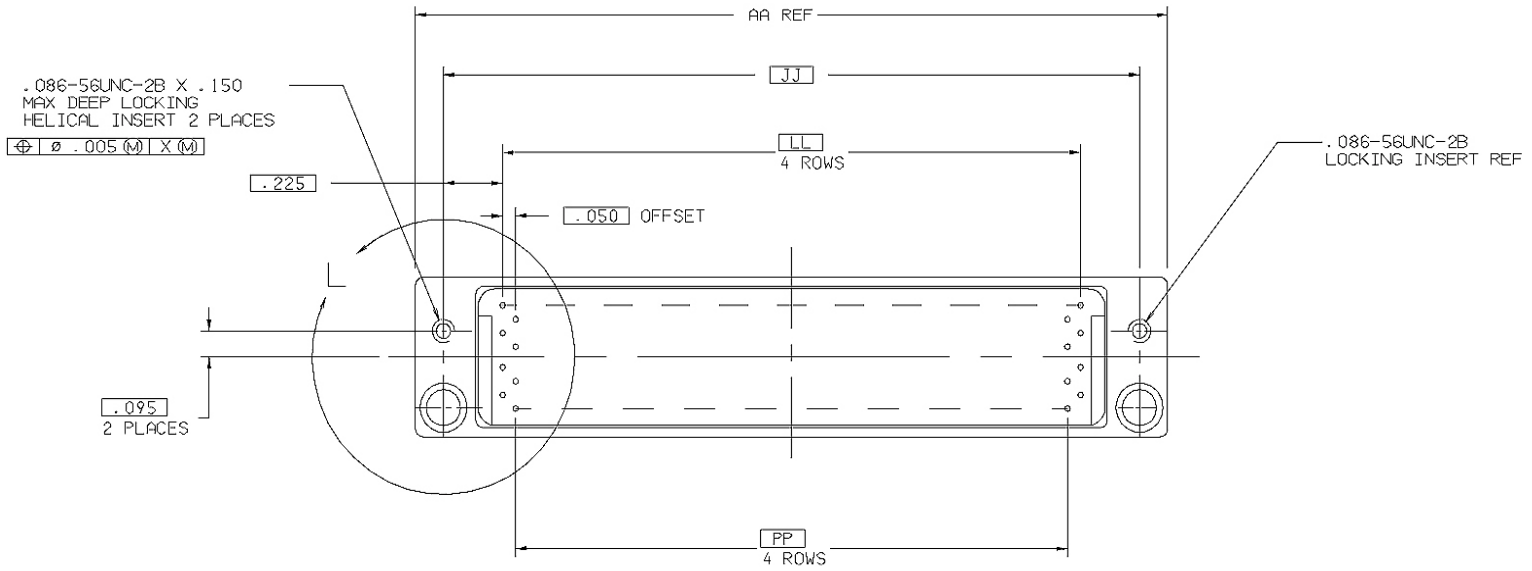
DOUBLE BAY CONNECTORS
INSERT ARRANGEMENT SUFFIXS 5-8
(SUFFIX 8 SHOWN)

SEE SHEET 7

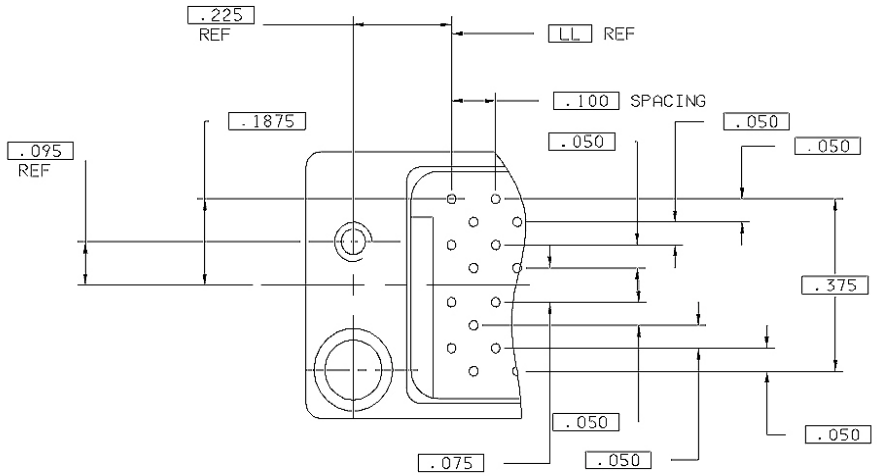
NOTES:

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507143-100/999	B
SCALE:	REF:	SHEET 4 OF 10	

10-507143-100/999



VIEW B



VIEW L
ENLARGED

SEE SHEET 7

NOTES:

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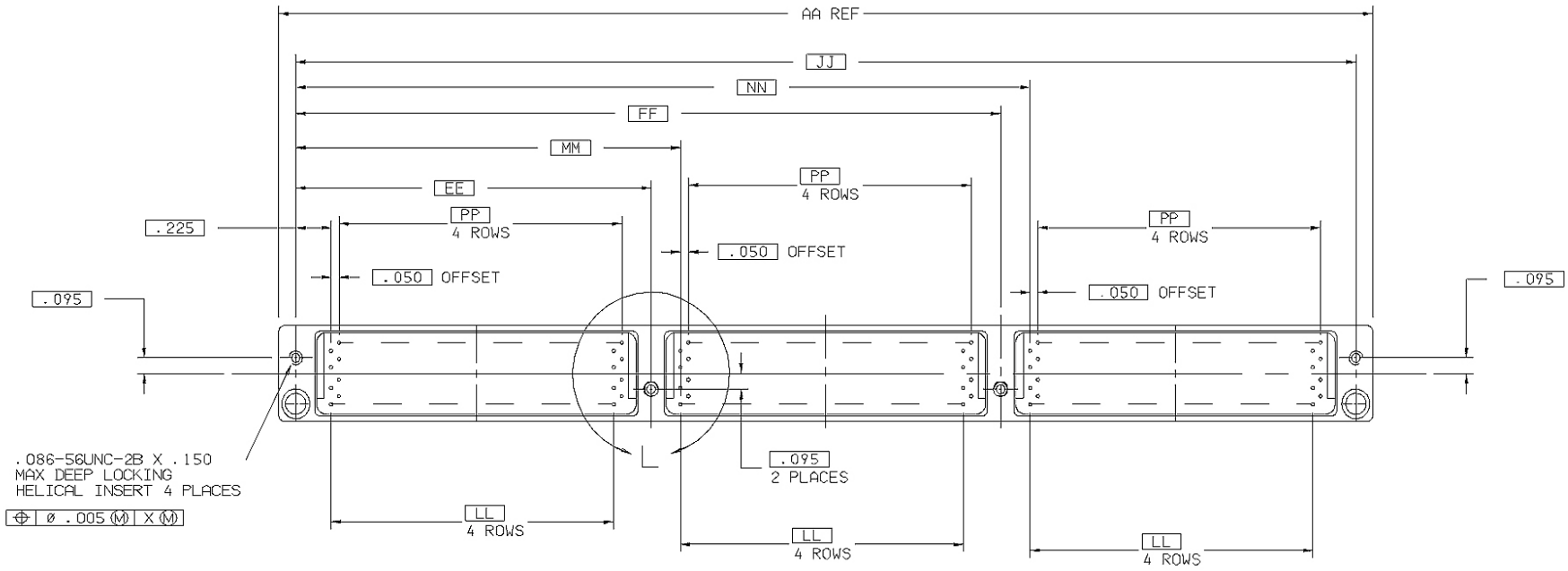
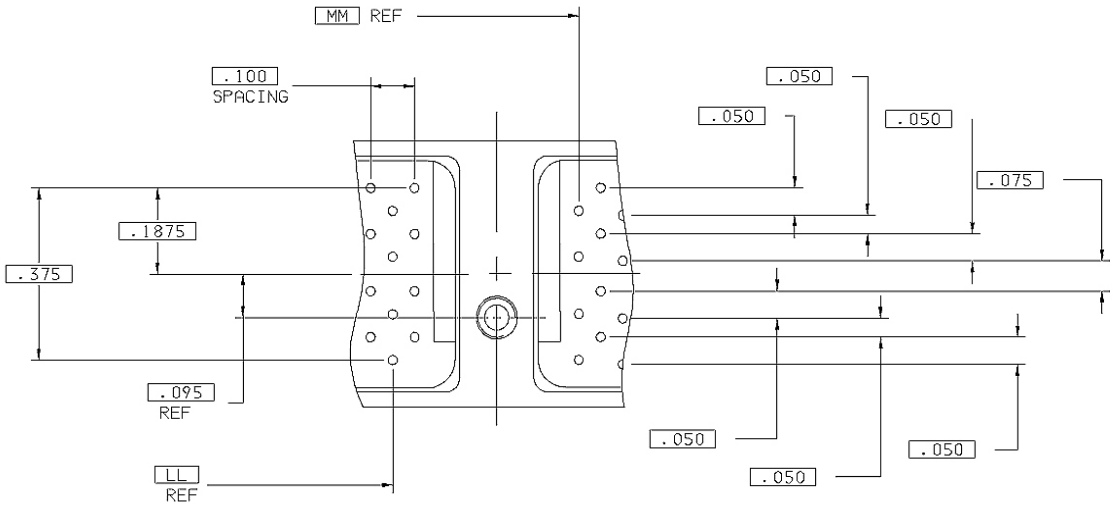
SINGLE BAY CONNECTORS
INSERT ARRANGEMENT SUFFIXS 1-4
(SUFFIX 4 SHOWN)

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507143-100/999	B
SCALE:	REF:	SHEET 5 OF 10	

10-507143-100/999



VIEW AT B



VIEW L
ENLARGED

SEE SHEET 7

NOTES:

THE USE OF THIS DOCUMENT IS UNLIMITED. HOWEVER, DOCUMENTS REFERENCED HEREON MAY CONTAIN LIMITED RIGHTS DATA.

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507143-100/999	B
SCALE:	REF:	SHEET 6 OF 10	

10-507143-100/999

CONNECTOR PART NUMBER (TO COMPLETE P/N SEE SUFFIX CHART)

10-507143-( )( )( )

INSERT ARRANGEMENT
TERMINATION STYLE
TERMINATION STICKOUT

PART NUMBER SUFFIX CHART

INSERT ARRANGEMENT		TERMINATION STYLE		TERMINATION STICKOUT	
SUFFIX	DESCRIPTION	SUFFIX	DESCRIPTION (DIM "F")	SUFFIX	DESCRIPTION (DIM "G")
1	80 DIGITAL (SINGLE BAY)	1	.021+/.002 DIA PCB TAIL	1	.150+/-.020 (PCB)
2	108 DIGITAL (SINGLE BAY)	2	.016+/-.002 DIA PCB TAIL	2	.200+/-.020 (PCB)
3	152 DIGITAL (SINGLE BAY)	3	.012+/-.002 DIA PCB TAIL	3	.250+/-.020 (PCB)
4	180 DIGITAL (SINGLE BAY)	4	N/A	4	.300+/-.020 (PCB)
5	160 DIGITAL (DOUBLE BAY)	5	COMPLIANT	5	.350+/-.020 (PCB)
6	216 DIGITAL (DOUBLE BAY)	6	TBD	6	.400+/-.020 (PCB)
7	304 DIGITAL (DOUBLE BAY)	7		7	.185+/-.020 (PCB)
8	360 DIGITAL (DOUBLE BAY)	8		8	TBD
9	456 DIGITAL (TRIPLE BAY)	9		9	TBD
0	NONE	0	NONE N/A	A	NA
A	TBD	A		B	NA
				C	.157+/-.020 (COMPLT., NO WRAP)
				D	.217+/-.020 (COMPLT., 1 WRAP)
				E	.317+/-.020 (COMPLT., 2 WRAP)
				F	.417+/-.020 (COMPLT., 3 WRAP)

REPLACEMENT COMPONENT PART NUMBERS

F/N	QTY	PART NUMBER	DESCRIPTION	NOTES
1	1	SEE COLUMN	SHELL ASSEMBLY	
2	AR	SEE COLUMN	INSERT ASSEMBLY	
3	4	10-507903-3	POLARIZATION KEY	2
4	2	10-507929-1	RETAINING RING	2
5	AR	10-507931-1	REPLACEMENT KEY KIT (100 PCS EACH F/N 3 & 4)	10
6	AR	10-507818-12	COMPLIANT CONTACT (NO WRAP)	10
7	AR	10-507818-22	COMPLIANT CONTACT (1 WRAP)	10
8	AR	10-507818-32	COMPLIANT CONTACT (2 WRAP)	10
9	AR	10-507818-42	COMPLIANT CONTACT (3 WRAP)	10

CONNECTOR PART NUMBER	AA	EE	FF	GG	HH	JJ	KK	LL	MM	NN	PP	SHELL ASSEMBLY	INSERT ASSEMBLY (TO COMPLETE ADD TERM. SUFFIXS)
10-507143-1XX	1.615	NA	NA	1.107	N/A	1.400	.700	.900	NA	NA	.900	10-507945-11	10-507959-1( )( )
10-507143-2XX	1.965	NA	NA	1.457	N/A	1.750	.875	1.300	NA	NA	1.200	10-507945-21	10-507959-2( )( )
10-507143-3XX	2.515	NA	NA	2.008	N/A	2.300	1.150	1.800	NA	NA	1.800	10-507945-31	10-507959-3( )( )
10-507143-4XX	2.865	NA	NA	2.357	N/A	2.650	1.325	2.200	NA	NA	2.100	10-507945-41	10-507959-4( )( )
10-507143-5XX	2.940	NA	NA	1.107	.6625	2.725	1.3625	.900	1.550	NA	.900	10-507945-51	10-507959-1( )( )
10-507143-6XX	3.640	NA	NA	1.457	.8375	3.425	1.7125	1.300	1.900	NA	1.200	10-507945-61	10-507959-2( )( )
10-507143-7XX	4.740	NA	NA	2.008	1.1125	4.525	2.2625	1.800	2.450	NA	1.800	10-507945-71	10-507959-3( )( )
10-507143-8XX	5.440	NA	NA	2.357	1.2875	5.225	2.6125	2.200	2.800	NA	2.100	10-507945-81	10-507959-4( )( )
10-507143-9XX	6.965	2.2625	4.4875	2.008	2.225	6.750	3.375	1.800	2.450	4.675	1.800	10-507945-91	10-507959-3( )( )

TERMINATION STYLE — TERMINATION STICKOUT

5. BRUSH CONTACTS WITH PCB TAIL TERMINATIONS ARE NOT REMOVABLE. THE REAR OF THE INSERT IS SEALED. COMPLAINT CONTACTS ARE REMOVABLE FROM THE FRONT.

4. CONTACT TERMINATION FINISH:
   PCB TERMINATION FINISH IS 60/40 TIN/LEAD SOLDER DIPPED.

   COMPLIANT TERMINATION FINISH IS GOLD PLATE PER MIL-G-45204, TYPE II, .000050 MIN THK OVER .000050 MIN THK NICKEL.

3. FOR MATING MODULE CONNECTOR ASSEMBLY, SEE DRAWING 10-507142-100/999.

2. INDICATED PARTS ARE SHOWN ASSEMBLED. THESE PARTS WILL BE SHIPPED UNASSEMBLED.

1. INDICATED DIMENSIONB IS TO POINT OF ELECTRICAL ENGAGEMENT.

NOTES:

10. INDICATED ITEMS ARE REPAIR OR REPLACEMENT COMPONENT PART NUMBERS.

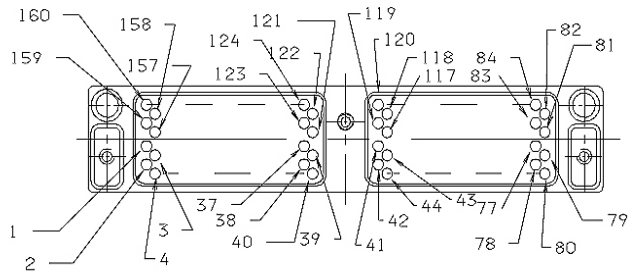
9. A TOTAL OF 4 KEYS AND 2 RETAINING RINGS ARE REQUIRED TO COMPLETE THE ASSEMBLY. RETAINING RINGS ARE NOT REUSABLE AND MUST BE REPLACED WHEN REKEYING CONNECTOR.

8. COMPLIANT TERMINATION WRAP NUMBERS ASSUME A .125 INCH THICK BACKPLANE.

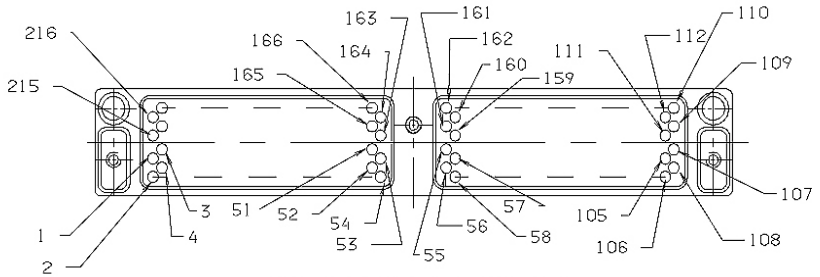
7. INDICATED POSITIONAL TOLERANCE ID FOR PCB TERMINATION ONLY. THIS TOLERANCE APPLIES WHEN BOTTOM OF INDICATED ORGANIZER IS WITHIN .020 INCH OF TAIL END.

6. BLACK INK STAMP "BENDIX" 77820, PART NUMBER AND DATE CODE ON INDICATED SURFACE PER 9-3856-5. DATE CODE PER 9-3895. CHARACTERS TO BE .062+/-.020 HIGH. ADDITIONAL INFORMATION MAYBE REQUESTED BY PURCHASE ORDER.

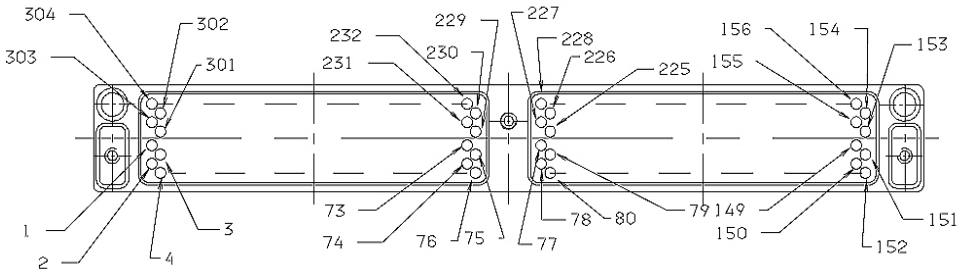
SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507143-100/999	B
SCALE:	REF:	SHEET 7 OF 10	



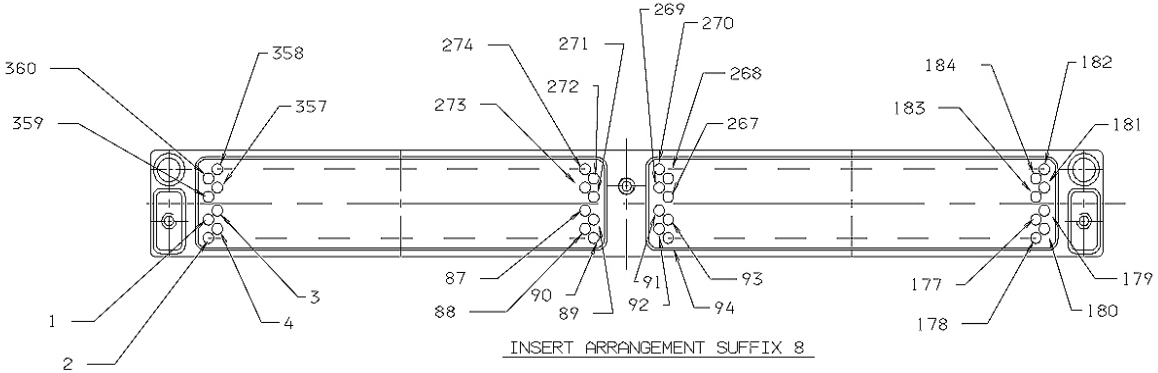
INSERT ARRANGEMENT SUFFIX 5



INSERT ARRANGEMENT SUFFIX 6



INSERT ARRANGEMENT SUFFIX 7



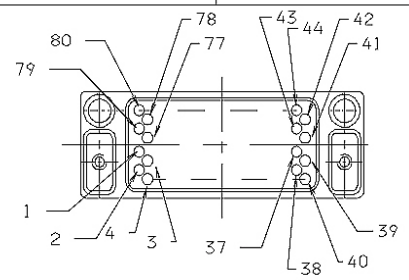
INSERT ARRANGEMENT SUFFIX 8

SEE SHEET 7

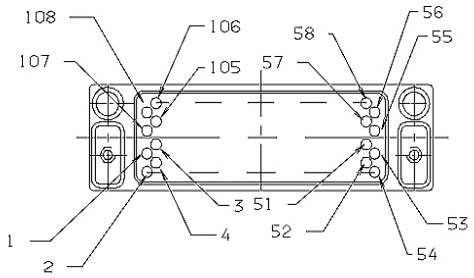
NOTES:

DOUBLE BAY CONNECTOR CONTACT LOCATION ILLUSTRATION (SUFFIXS 5-8)

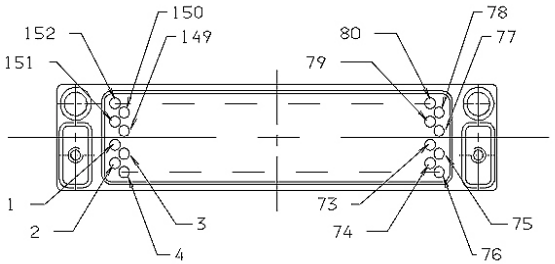
SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507143-100/999	B
SCALE:	REF:	SHEET 8 OF 10	



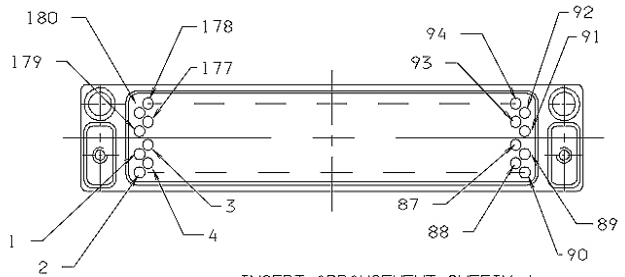
INSERT ARRANGEMENT SUFFIX 1



INSERT ARRANGEMENT SUFFIX 2



INSERT ARRANGEMENT SUFFIX 3



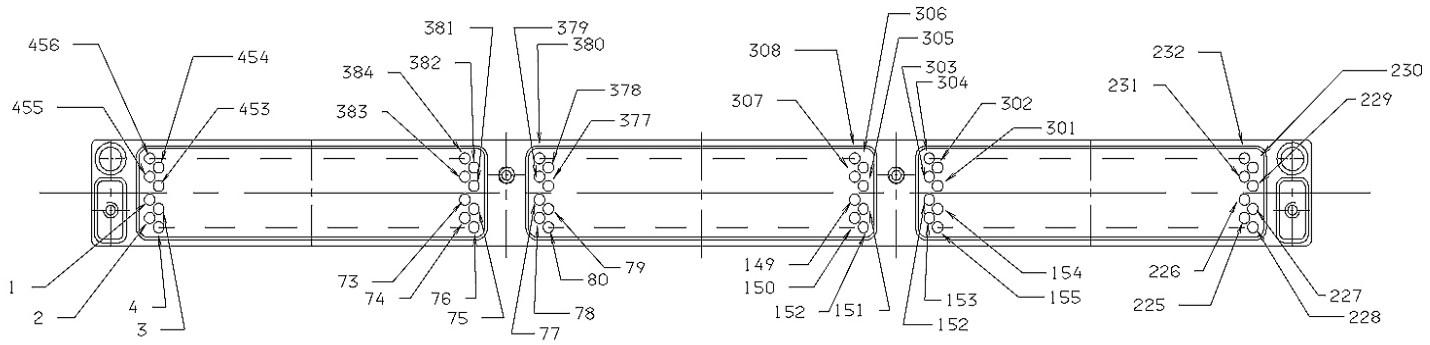
INSERT ARRANGEMENT SUFFIX 4

SEE SHEET 7

NOTES:

SINGLE BAY CONNECTOR CONTACT IDENTIFICATION ILLUSTRATION (S U F F I X S 1 - 4)

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507143-100/999	B
SCALE:	REF:	SHEET 9 OF 10	



INSERT ARRANGEMENT SUFFIX 9

SEE SHEET 7

NOTES:

TRIPLE BAY CONNECTOR CONTACT LOCATION ILLUSTRATION (SUFFIX 9)

SIZE	FSCM NO.	DOCUMENT NO.	REV.
C	77820	10-507143-100/999	B
SCALE:	REF:	SHEET 10 OF 10	

10-507143-100/999

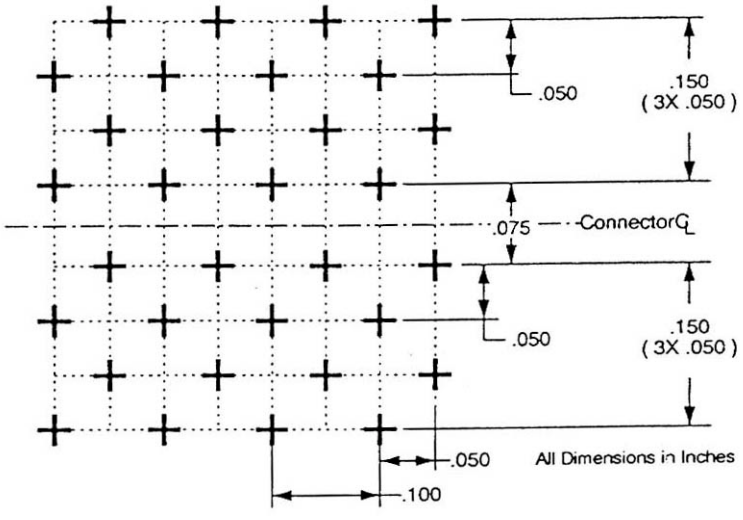
Staggered Grid Pattern
Hybrid Insert Illustrations

Including how to order part numbers.

The LRM Staggered pattern allows for surface mount leads on a .025 inch center line.

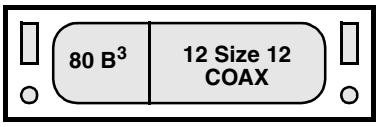
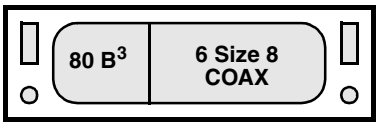
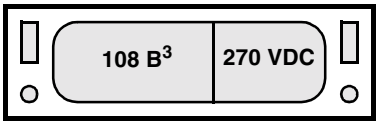
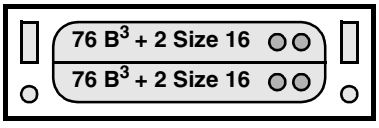
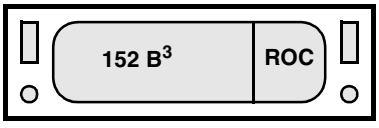
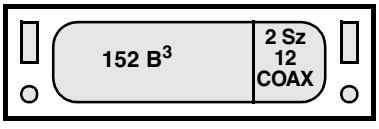
The following diagram shows the contact pattern of the staggered grid LRM Connector, .100 inch spacing along the row with .050 inch between rows, offset .050 inch (mating face).

STAGGERED



Staggered Grid, 360 Contacts
LRM Connectors
typical arrangements, how to order

SINGLE BAY HYBRID ARRANGEMENTS

MODULE	BACKPLANE	
10-507184-1**	10-507186-1**	
10-507184-2**	10-507186-2**	
10-507184-3**	10-507186-3**	
10-507184-4**	10-507186-4**	
10-507184-5**	10-507186-5**	
10-507184-6**	10-507186-6**	
10-507184-7**	10-507186-7**	

Replace ** in desired part number with heat sink and total board package thickness indicators from MODULE suffix chart (pg. 15).

Replace ** in desired part number with termination style and termination stick-out indicators from BACKPLANE suffix chart (pg. 15).

KEY

ROC = "Reliable Optical Connector" (Not supplied with connector. Available from AT&T)

B^3 = Digital contacts (i.e. standard brush)

Size 16 cavities will accept:
Fiber optic contacts M29504/1, /2, /14 & /15, or shielded contacts M39029/79 & /80. (Note: these contacts are not supplied with connector and are available from Hughes).

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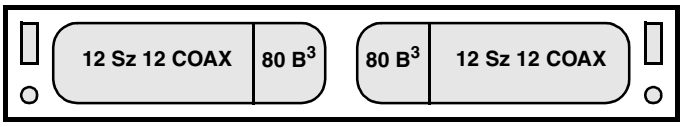
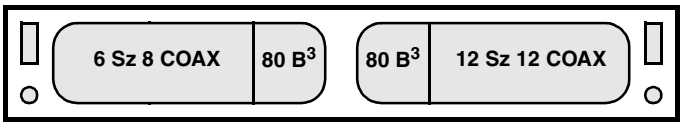
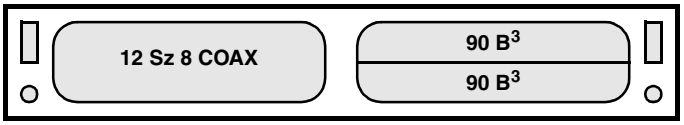
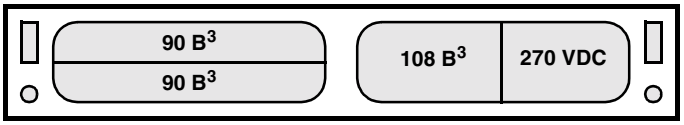
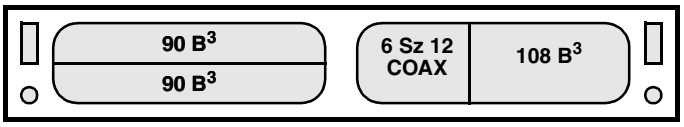
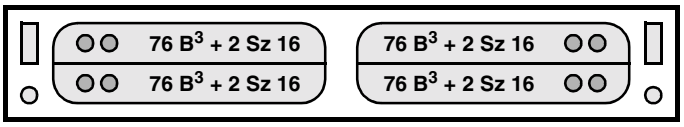
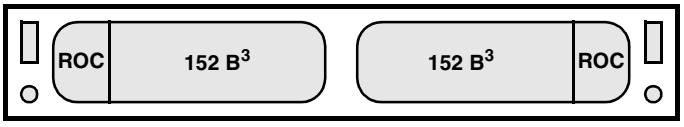
270 VDC power insert supplied with 2 size 22D MIL-C-38999, Series II power contacts.

Staggered Grid, 360 Contacts
LRM Connectors
typical arrangements, how to order

DOUBLE BAY HYBRID ARRANGEMENTS

MODULE	BACKPLANE	
10-507185-A**	10-507187-A**	
10-507185-B**	10-507187-B**	
10-507185-C**	10-507187-C**	
10-507185-D**	10-507187-D**	
10-507185-E**	10-507187-E**	
10-507185-F**	10-507187-F**	
10-507185-G**	10-507187-G**	

Replace ** in desired part number with heat sink and total board package thickness indicators from MODULE suffix chart (pg. 47).

Replace ** in desired part number with termination style and termination stick-out indicators from BACKPLANE suffix chart (pg. 47).

KEY

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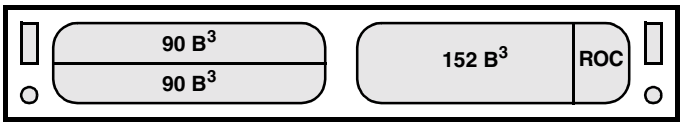
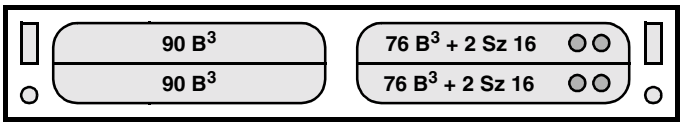
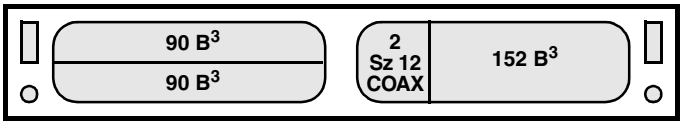
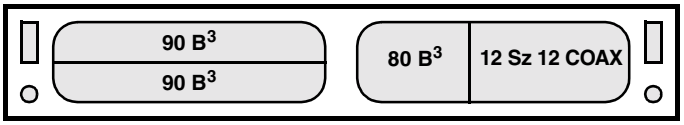
Staggered Grid, 360 Contacts
LRM Connectors
typical arrangements, how to order

DOUBLE BAY HYBRID ARRANGEMENTS, CONT.

MODULE	BACKPLANE	
10-507185-H**	10-507187-H**	
10-507185-J**	10-507187-J**	
10-507185-K**	10-507187-K**	
10-507185-L**	10-507187-L**	

Replace ** in desired part number with heat sink and total board package thickness indicators from MODULE suffix chart (pg. 47).

Replace ** in desired part number with termination style and termination stick-out indicators from BACKPLANE suffix chart (pg. 47).

KEY

ROC = "Reliable Optical Connector" (Not supplied with connector. Available from AT&T)

B^3 = Digital contacts (i.e. standard brush)

Size 16 cavities will accept:
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270 VDC power insert supplied with 2 size 22D MIL-C-38999, Series II power contacts.

LRM Hybrid Connectors
part number suffixes

The following charts identify the part number suffixes to be used when ordering Hybrid LRM Connectors. (Refer to preceding pages of Hybrid Arrangements and also to the Staggered Grid drawing packages in this document).

HYBRID MODULE SUFFIX CHARTS

HEATSINK THICKNESS

Suffix	Description
1	.125 ± .005
2	.100 ± .005
3	.075 ± .005
4	.062 ± .005
5	.035 ± .005

TOTAL BOARD PACKAGE THICKNESS

Suffix	Description
1	Surface Mount / .090 – .130 Package
2	Surface Mount / .130 – .190 Package
3	Surface Mount / .190 – .250 Package
4	Surface Mount / .060 – .100 Package
5	Surface Mount / .100 – .160 Package
6	Surface Mount / .160 – .220 Package

HYBRID BACKPLANE SUFFIX CHARTS

TERMINATION STYLE

Suffix	Description - Dimension “F” (See Staggered Grid Drawings)
1	.021 ± .002 Dia. PCB Tail
2	.016 ± .002 Dia. PCB Tail
3	.012 ± .002 Dia. PCB Tail
4	N/A
5	Compliant

TERMINATION STICKOUT

Suffix	Description - Dimension “G” (See Staggered Grid Drawings)
1	.150 ± .020 (PCB)
2	.200 ± .020 (PCB)
3	.250 ± .020 (PCB)
4	.300 ± .020 (PCB)
5	.350 ± .020 (PCB)
6	.400 ± .020 (PCB)
7	.185 ± .020 (PCB)
8	.450 ± .020 (PCB)
9	.500 ± .020 (PCB)
C	.157 ± .020 (Compliant, No Wrap)
D	.217 ± .020 (Compliant, 1 Wrap)
E	.317 ± .020 (Compliant, 2 Wrap)
F	.417 ± .020 (Compliant, 3 Wrap)

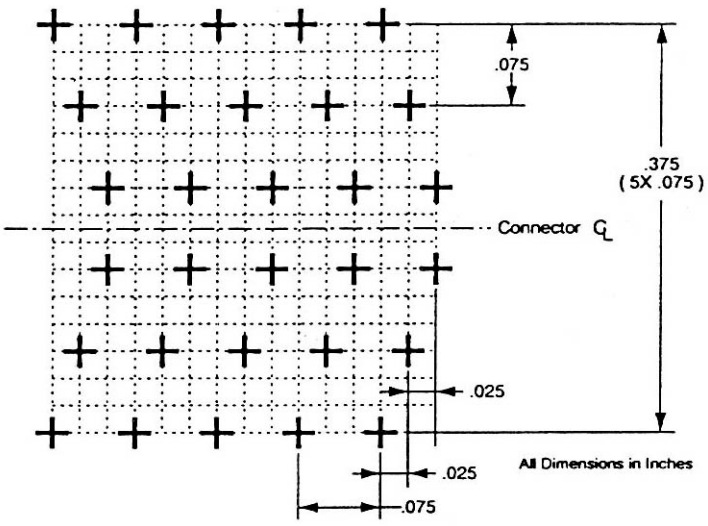
Chevron Pattern
LRM Connectors

Insert arrangements

The LRM Chevron pattern allows for surface mount leads on a .025 inch center line.

The following diagram shows the contact pattern of the chevron grid LRM Connector, .075 inch spacing along the row with .075 inch between rows, offset .025 inch (mating face).

CHEVRON

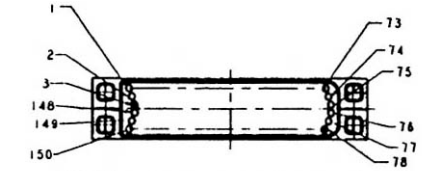


Chevron Grid LRM Connectors
insert arrangements

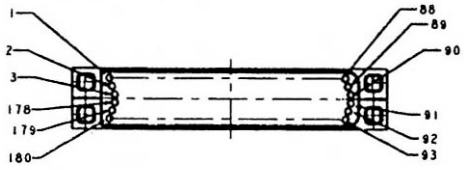
TO ORDER CHEVRON GRID LRM CONNECTORS:

Consult Amphenol, Sidney, NY for availability and part number ordering procedure.

Single Bay Connector
Contact Identification

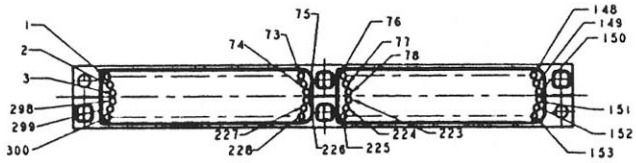


INSERT ARRANGEMENT SUFFIX 1

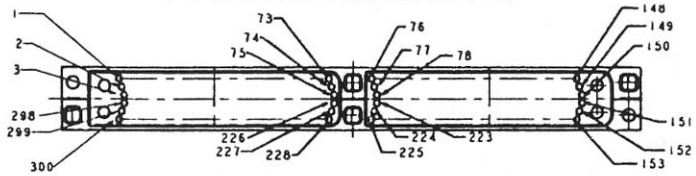


INSERT ARRANGEMENT SUFFIX 2

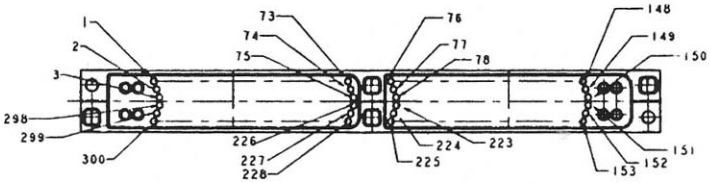
Double Bay Connector
Contact Identification



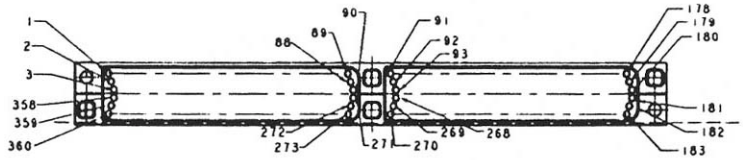
INSERT ARRANGEMENT SUFFIX 3



INSERT ARRANGEMENT SUFFIX 4

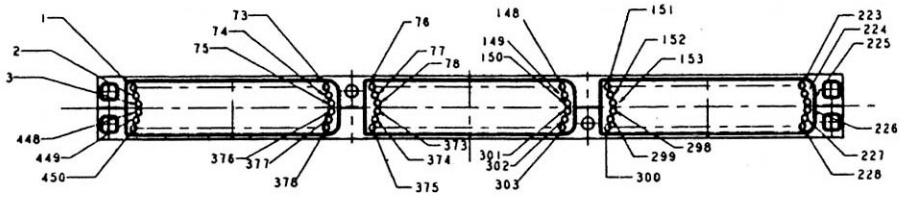


INSERT ARRANGEMENT SUFFIX 5

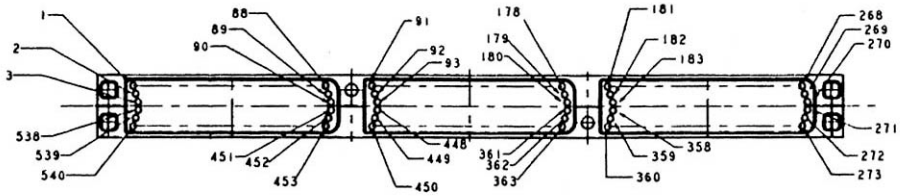


INSERT ARRANGEMENT SUFFIX 6

Triple Bay Connector
Contact Identification



INSERT ARRANGEMENT SUFFIX 7



INSERT ARRANGEMENT SUFFIX 8

Front of module connector shown. Backplane will be mirror image.