



TEST REPORT
ON
1 - 200 MHz
SINGLE POLE
SINGLE THROW
RADIO FREQUENCY
TRANSMISSION SWITCH

AMC MODEL No:
SWN-2184-1DR-61253-1M200M

Serial Number: 1MS205123

DESIGNED
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TESTED
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REPORTED
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March 4, 2004

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ISO9001 : 1994 CERTIFIED

AKG *img* *JEM*
RA *DRH* *JDT*
WES *SK* *LC*

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SINGLE POLE, SINGLE THROW RADIO FREQUENCY TRANSMISSION SWITCH AMC MODEL No: SWN-2184-1DR-61253-1M200M

FEATURES:

- **1 TO 200 MHz FREQUENCY RANGE**
- **3.5 dB MAXIMUM INSERTION LOSS**
- **80 dB MINIMUM ISOLATION**

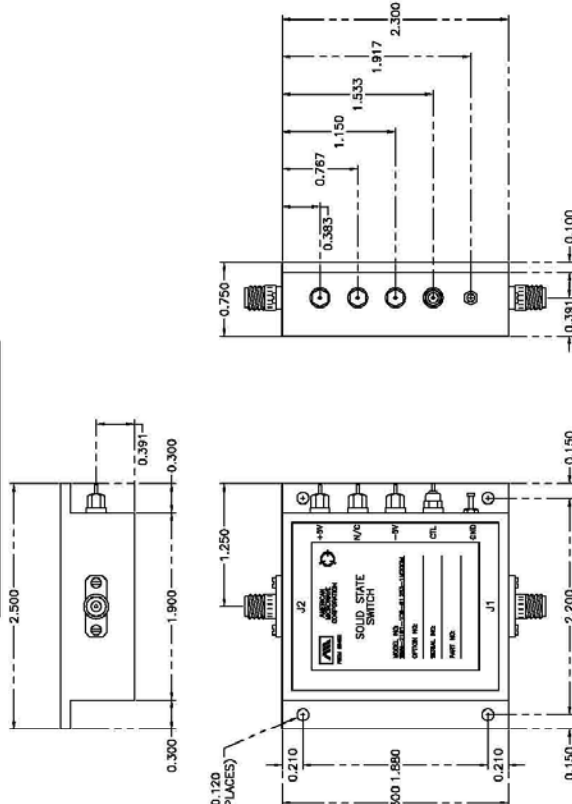
SPECIFICATIONS:

- **FREQUENCY** : 1 TO 200 MHz
- **INSERTION LOSS**
 - 1.0 – 10.0 MHz : 2.5 dB MAXIMUM
 - 10.0 – 50.0 MHz : 3.0 dB MAXIMUM
 - 50.0 – 200 MHz : 3.5 dB MAXIMUM
- **ISOLATION**
 - 1.0 – 50.0 MHz : 95 dB MINIMUM
 - 50.0 – 200 MHz : 80 dB MINIMUM
- **VSWR**
 - 1.0 – 10.0 MHz : ON = 1.5:1, OFF = NS
 - 10.0 – 50.0 MHz : ON = 1.3:1, OFF = NS
 - 50.0 – 200 MHz : ON = 1.5:1, OFF = NS
- **RF INPUT POWER** : +7 dBm
- **POWER SUPPLY**
 - : +5 VDC @ 80 mA MAXIMUM
 - : -5 VDC @ 60 mA MAXIMUM
- **CONNECTORS**
 - RF INPUT / OUTPUT : SMA FEMALE
 - POWER AND CONTROLS : SOLDER PIN
 - SIZE : 2.50" X 2.30" X 0.75"
- **SWITCHING TIME** : 80 nSEC
- **TTL LOGIC** : "1" = SWITCH OFF, "0" = SWITCH ON

PRODUCT FEATURE

ZONE	REV.	DESCRIPTION	DATE	APPROVED
		ORIGINAL RELEASE JOB# 121218E	02/14/02	
A		CHANGED SPECIFICATIONS	02/14/02	
B		SEE ECN #04-089	5/24/08	

MECHANICAL OUTLINE



NOTES:

- 1) DIMENSIONS ARE IN INCHES
 X.XX ±0.020
 X.XXX ±0.010
- 2) TOLERANCES:

DESCRIPTION

AMC MODEL SWN-2184-1DR-61253-1M200M IS A 1.0 TO 200.0 MHZ SINGLE POLE SINGLE THROW RADIO FREQUENCY TRANSMISSION SWITCH

SPECIFICATIONS

- FREQUENCY RANGE 1 MHz - 200 MHz
- INSERTION LOSS 2.5 dB MAXIMUM
 10.0 - 50.0 MHz 3.0 dB MAXIMUM
 50.0 - 200 MHz 3.5 dB MAXIMUM
- ISOLATION 95 dB MINIMUM
 10.0 - 50.0 MHz 95 dB MINIMUM
 50.0 - 200 MHz 80 dB MINIMUM
- VSWR ON = 1.5:1, OFF = NS
 10.0 - 50.0 MHz ON = 1.3:1, OFF = NS
 50.0 - 200 MHz ON = 1.5:1, OFF = NS
- RF INPUT POWER +7 dBm
 10.0 - 50.0 MHz +7 dBm
 50.0 - 200 MHz +13 dBm

NOTE: RF INPUT LEVELS ARE FOR LESS THAN 1 dB COMPRESSION ("ON" CONDITION) AND LESS THAN 3dB DEGRADATION IN ISOLATION ("OFF" CONDITION) AT LEVELS 3 dB BELOW THOSE SHOWN


- POWER SUPPLY +5 ±0.2VDC @ 80mA MAXIMUM
 -5 ±0.2VDC @ 60mA MAXIMUM
- CONNECTORS SMA FEMALE
- RF INPUT/OUTPUT SOLDER PIN
- POWER AND CONTROLS SIZE 2.50" x 2.30" x 0.75"
- SWITCHING TIME 80 nSEC
- LOGIC "1" SWITCH OFF
- LOGIC "0" SWITCH ON

ENVIRONMENTAL RATINGS

- TEMPERATURE -55°C TO +125°C (OPERATING)
 -65°C TO +125°C (STORAGE)
- HUMIDITY MIL-STD-202F, METHOD 103B COND. B
- SHOCK MIL-STD-202F, METHOD 213B COND. B
- VIBRATION MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE MIL-STD-202F, METHOD 107D COND. A

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE
 NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

BLOCK DIAGRAM



REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
		ORIGINAL RELEASE JOB# 121218E	02/14/02	
A		CHANGED SPECIFICATIONS	02/14/02	
B		SEE ECN #04-089	5/24/08	

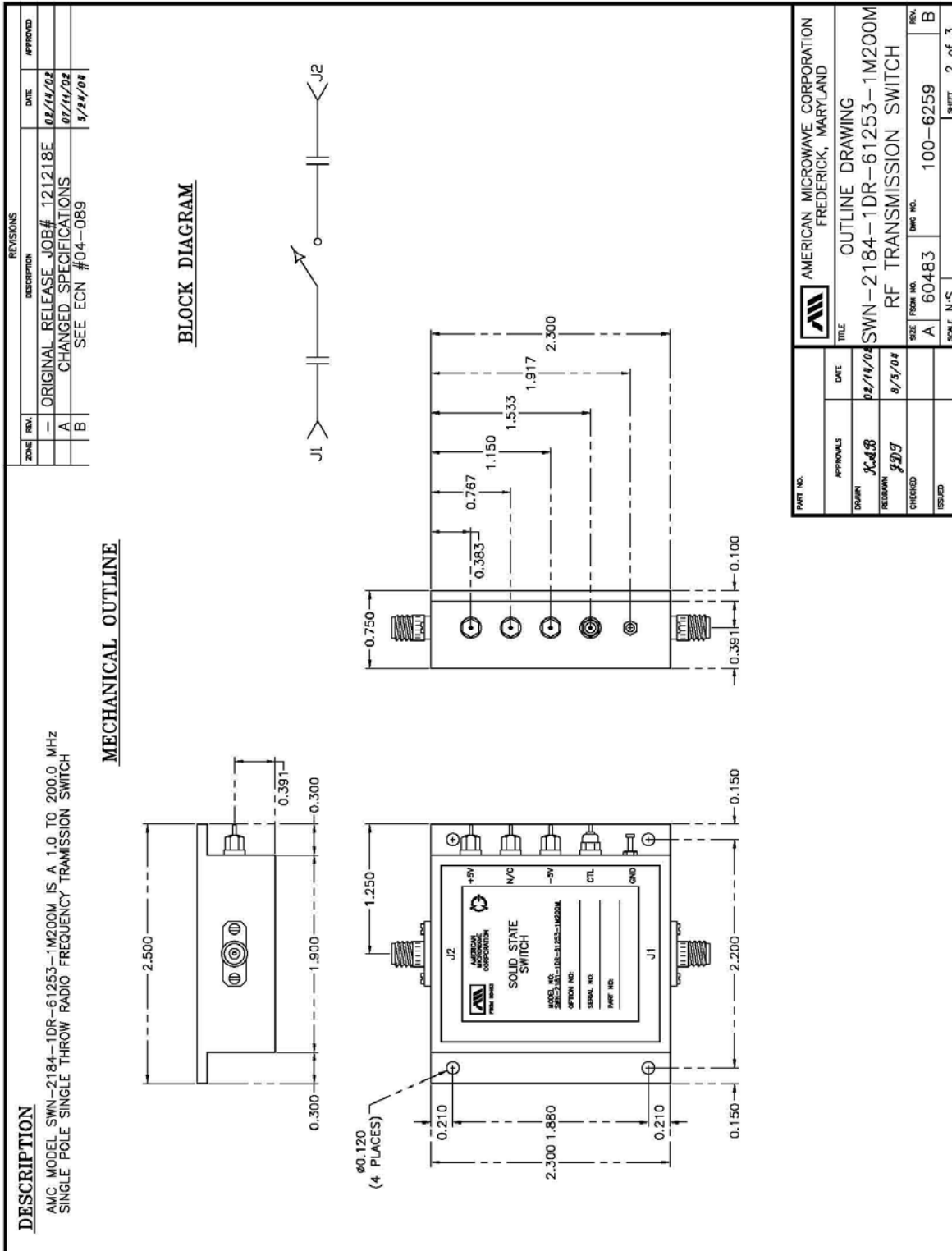
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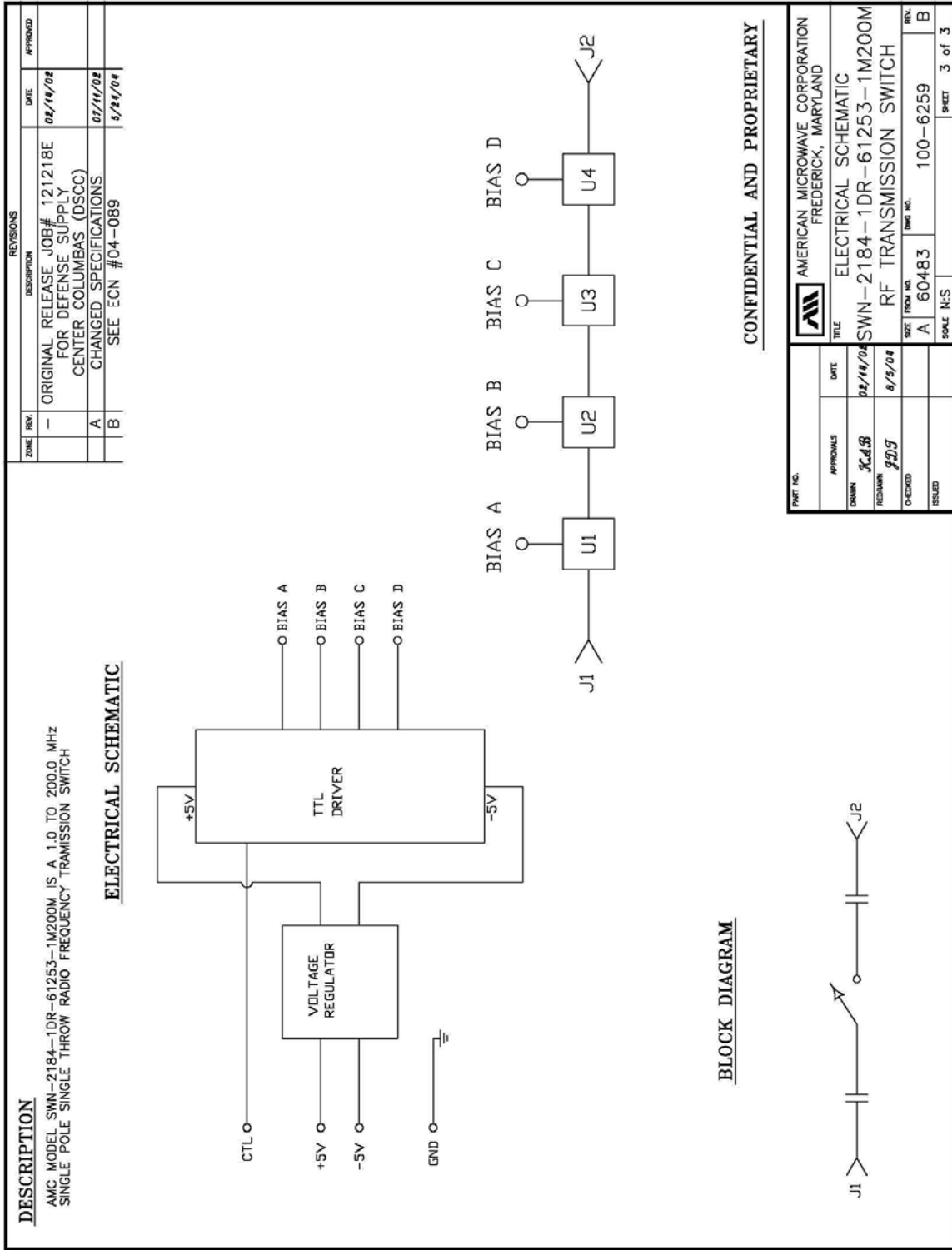
PRODUCT FEATURE
 SWN-2184-1DR-61253-1M200M
 RF TRANSMISSION SWITCH

SIZE FROM NO. A 60483 DIM. NO. 100-6259 REV. B
 SCALE N:S SHEET 1 of 3

OUTLINE DRAWING



ELECTRICAL SCHEMATIC



FINAL TEST DATA

FINAL TEST DATA SHEET

FOR

AMC MODEL No:
SWN-2184-1DR-61253-1M200M

Serial Number: 1MS205123



FINAL TEST DATA
SERIAL NUMBER: 1MS205123

FORMS: 264-SW-DTA



AMERICAN MICROWAVE CORPORATION
 7311-G GROVE RD., FREDERICK MD. 21704
 TEL: 301-662-4700 FAX: 301-662-4938

DATE: 11/12/02

FINAL TEST DATA
 ON
 MICROWAVE SWITCH

CUSTOMER: DSCC
 JOB NO: 12121BE
 MODEL NO: SWN-2184-1DR-61253-1M200M
 SERIAL NO: 1MS205123
 CURRENT DRAW: + 5 VDC @ 3 mA; - 5 VDC @ 5 mA

TECHNICIAN: R. M. Jell
 OPTION NO: _____
 SPECIFICATION: _____
 FREQUENCY RANGE: 1.0 - 200.0 MHz

INSERTION LOSS (WORST CASE)	RETURN LOSS (WORST CASE)					
	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1 - J2 1.46 dB @ 1 - 10 MHz	17.64	dB: 1.30 : 1	17.64	dB: 1.30 : 1	/	dB: 1. / : 1
J1 - J2 1.65 dB @ 10 - 50 MHz	17.68	dB: 1.30 : 1	17.69	dB: 1.30 : 1	/	dB: 1. / : 1
J1 - J2 2.04 dB @ 50 - 200 MHz	18.85	dB: 1.26 : 1	18.84	dB: 1.26 : 1	/	dB: 1. / : 1
dB @ MHz	dB: 1.	: 1	dB: 1.	: 1	dB: 1.	: 1
dB @ MHz	dB: 1.	: 1	dB: 1.	: 1	dB: 1.	: 1
dB @ MHz	dB: 1.	: 1	dB: 1.	: 1	dB: 1.	: 1
dB @ MHz	dB: 1.	: 1	dB: 1.	: 1	dB: 1.	: 1
dB @ MHz	dB: 1.	: 1	dB: 1.	: 1	dB: 1.	: 1
dB @ MHz	dB: 1.	: 1	dB: 1.	: 1	dB: 1.	: 1
dB @ MHz	dB: 1.	: 1	dB: 1.	: 1	dB: 1.	: 1
dB @ MHz	dB: 1.	: 1	dB: 1.	: 1	dB: 1.	: 1
ISOLATION	SWITCHING SPEED					
	DELAY ON	RISE TIME	DELAY OFF	FALLTIME		
J1 - J2 95 dB @ 1 - 10 MHz	13 nS	3 nS	18 nS	2 nS		
J1 - J2 72 dB @ 10 - 50 MHz	nS	nS	nS	nS		
J1 - J2 90 dB @ 50 - 200 MHz	nS	nS	nS	nS		
dB @ MHz	nS	nS	nS	nS		
dB @ MHz	nS	nS	nS	nS		
dB @ MHz	nS	nS	nS	nS		
dB @ MHz	nS	nS	nS	nS		
dB @ MHz	nS	nS	nS	nS		
dB @ MHz	nS	nS	nS	nS		
dB @ MHz	nS	nS	nS	nS		

NOTE: Any additional test data on back

TESTED ON: Agilent E5071B

QA/QC APPROVAL: _____

DATED: 11/14/02