



TEST REPORT

ON

0.1 TO 1.65 GHz

**SINGLE POLE SINGLE THROW
TERMINATED SWITCH MODULE**

**AMC MODEL No:
SWN-2183-1AT-250
OPTION 100M2, A18**

Serial Numbers: 1MS90217 THRU 1MS90220

**DESIGNED
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**TESTED
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**REPORTED
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ISO9001 : 2000 CERTIFIED

Handwritten signatures and initials:
JRH, LC, PA, JDT, JEM, MOB, ESU, AW, and others.

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SINGLE POLE SINGLE THROW TERMINATED SWITCH MODULE

AMC MODEL No: SWN-2183-1AT-250 OPTIONS 100M2, A18

FEATURES:

- **0.1 TO 1.65 GHz FREQUENCY RANGE**
- **2.0 dB LOW INSERTION LOSS**
- **80 dB HIGH ISOLATION**

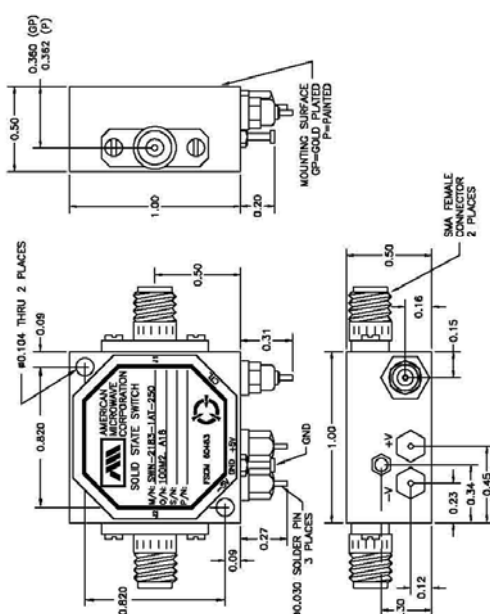
SPECIFICATIONS:

- | | |
|-------------------|---|
| ● FREQUENCY | : 0.1 TO 1.65 GHz |
| ● INSERTION LOSS | : 2.0 dB MAXIMUM |
| ● ISOLATION | : 80 dB MINIMUM |
| ● VSWR | : 2.0:1 |
| ● SPEED | : DELAY ON: 1 uSEC MAXIMUM (50% TTL TO 90% RF)
: DELAY OFF: 1 uSEC MAXIMUM (50% TTL TO 90% RF) |
| ● DC POWER SUPPLY | : +5 VDC @ 100 mA MAXIMUM
: -15 VDC @ 75 mA MAXIMUM |
| ● CONTROL | : TTL LOGIC "0" = ON, "1" = OFF |
| ● RF POWER INPUT | : +10 dBm CW MAXIMUM @ 0.1 GHz TO 1.65 GHz |
| ● RF CONNECTORS | : SMA FEMALE |
| ● SIZE | : 1.00" (L) x 1.00" (W) x 0.50" (H) |
| ● WEIGHT | : 1.5 OUNCE TYPICAL |

PRODUCT FEATURE

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	—	ORIGINAL RELEASE, JOB# 901009E	10/30/03	

MECHANICAL OUTLINE

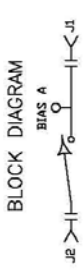


DESCRIPTION:
 AMC MODEL NUMBER SWN-2183-1AT-250 OPTION 100M2, A18 IS A SINGLE POLE SINGLE THROW TERMINATED SWITCH MODULE WITH LOW INSERTION LOSS, VERY HIGH ISOLATION, DESIGNED FOR 0.1 GHz TO 1.65 GHz FREQUENCY RANGE.

SPECIFICATIONS:

- FREQUENCY: 0.1 GHz TO 1.65 GHz
- INSERTION LOSS: 2.0 dB MAXIMUM
- ISOLATION: 80 dB MINIMUM
- VSWR: 2.0:1
- SPEED: DELAY ON: 1 USEC MAXIMUM (50% TTL TO 90% RF)
 DELAY OFF: 1 USEC MAXIMUM (50% TTL TO 10 % RF)
- DC POWER SUPPLY: +5VDC @ 100 mA MAXIMUM
 -15VDC @ 75 mA MAXIMUM
- CONTROL: TTL LOGIC "0"=ON "1"=OFF
- WEIGHT: 1.5 OUNCES TYPICAL
- RF POWER INPUT: +10 dBm CW MAXIMUM @ 0.1 GHz TO 1.65 GHz
- RF CONNECTORS: SMA FEMALE
- SIZE: 1.00" (L) x 1.00" (W) x 0.50" (H)
- WEIGHT: 1.5 OUNCE TYPICAL

BLOCK DIAGRAM



ENVIRONMENTAL RATINGS:

- TEMPERATURE: -0°C TO +50°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: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

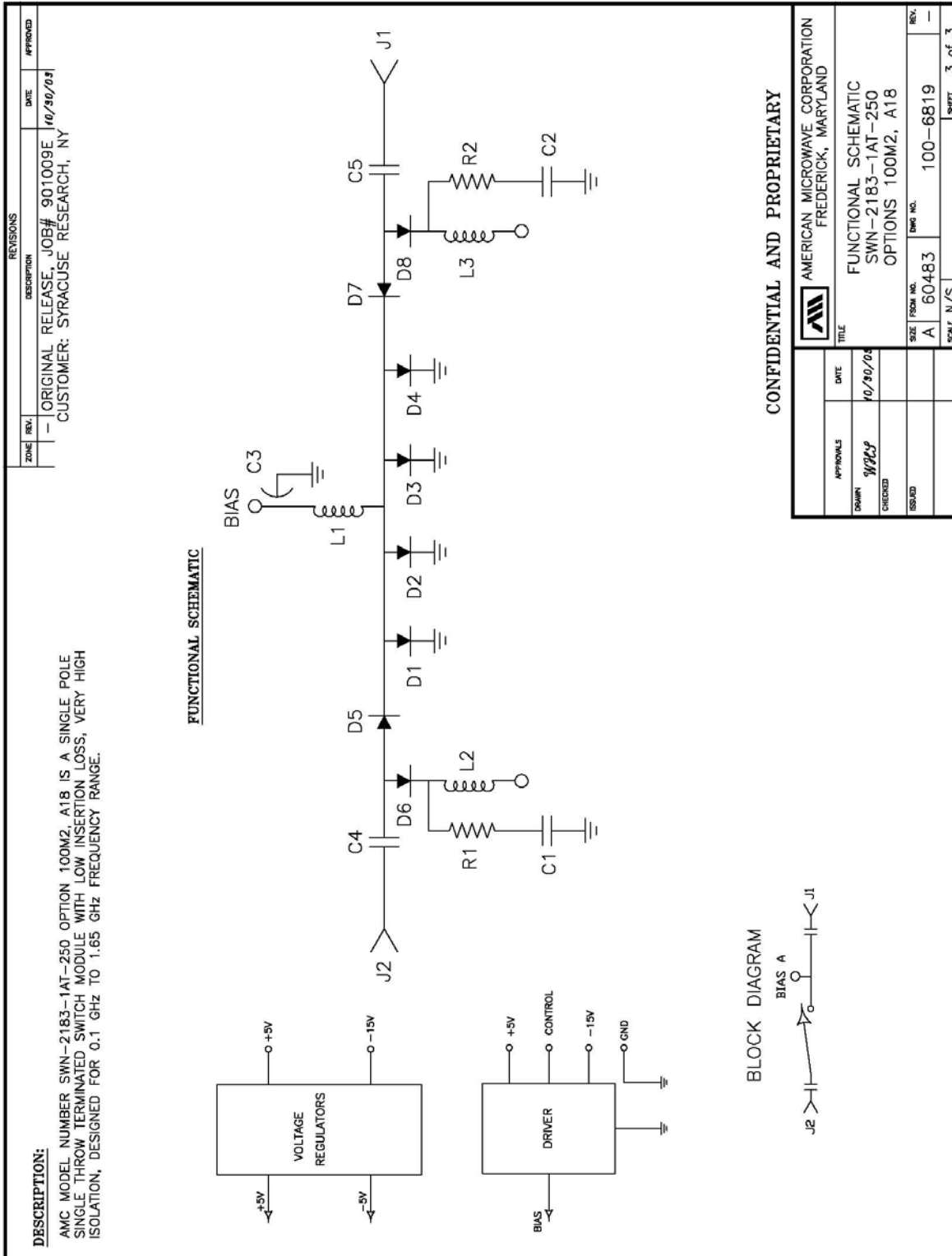
APPROVALS		DATE	TITLE
DRAWN	WBJ	10/30/03	PRODUCT FEATURE
CHECKED			SWN-2183-1AT-250
ESD/C			OPTIONS 100M2, A18

SIZE	FORM NO.	DWG NO.	REV.
A	60483	100-6819	—
SCALE			SHEET 1 of 3

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AMERICAN MICROWAVE CORPORATION
 FREDERICK, MARYLAND

FUNCTIONAL SCHEMATIC



FINAL TEST DATA

FINAL TEST DATA SHEETS

FOR

AMC MODEL NUMBER

SWN-2183-1AT-250
OPTION 100M2, A18

Serial Numbers:

1MS90217 THRU 1MS90220

FINAL TEST DATA

AMC MODEL NO: SWN-2183-1AT-250 OPTIONS 100M2, A18, SERIAL NUMBER: 1MS90217

FORM: SW-01/0698



DATE: 3-17-99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 901009E MODEL NO: SWN-2183-1AT-250 SERIAL NO: 1MS90217
 CUSTOMER: Syracuse Research Corp. TECHNICIAN: R. Butler
 SPECIFICATION: 100M2, A18 (option(s)) FREQUENCY RANGE: 0.1 - 1.65 GHz
+5VDC @ 35 mA
-15VDC @ 30 mA

RETURN LOSS						
INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2 1.84 dB	20.27 (ON)	1.21 =	21.00	1.19 =	21.52	1.18 =
	21.95 (OFF)	1.17 =				

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J1-J2 > 80 dB @ 1.65 GHz	66 ns	—	46 ns	—

NOTE: Any additional Test Data on Back

Tested on: 8757A/8350B

TEST: CHW E #29
 QA/QC: Q3
 DATE: MAR 17 1999

FINAL TEST DATA

AMC MODEL NO: SWN-2183-1AT-250 OPTIONS 100M2, A18, SERIAL NUMBER: 1MS90218

FORM: SW-01/0698



DATE: 3-17-99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 901009E MODEL NO: SWN-2183-1AT-250 SERIAL NO: 1MS90218
 CUSTOMER: Syracuse Research Corp. TECHNICIAN: R. Butler
 SPECIFICATION: 100M2, A18 (option(s)) FREQUENCY RANGE: 0.1 - 1.65 GHz
+5VDC @ 35 mA
-15VDC @ 30 mA

RETURN LOSS						
INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2 1.84 dB	20.26 (ON)	1.21 = 1	20.98	1.19 = 1	20.44	1.21 = 1
	21.88 (OFF)	1.17 = 1				

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J1-J2 > 80 dB @ 1.65 GHz	26 ns	—	80 ns	—

NOTE: Any additional Test Data on Back

Tested on: 8757A/8350B

TEST: CS E #29
 QA/QC: Q3
 DATE: MAR 17 1999

FINAL TEST DATA

AMC MODEL NO: SWN-2183-1AT-250 OPTIONS 100M2, A18, SERIAL NUMBER: 1MS90219

FORM: SW-01/0698



DATE: 3-17-99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 901009E MODEL NO: SWN-2183-1AT-250 SERIAL NO: 1MS90219

CUSTOMER: Syracuse Research Corp. TECHNICIAN: R. Butler

SPECIFICATION: 100M2, A18 (option(s)) FREQUENCY RANGE: 0.1 - 1.65 GHz

+5VDC @ 35 mA
 -15VDC @ 30 mA

RETURN LOSS						
INSERTION LOSS	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2 1.71 dB	15.63 (ON)	1.39 = 1	15.27	1.41 = 1	14.56	1.46 = 1
	26.76 (OFF)	1.109 = 1				

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J1-J2 > 80 dB @ 1.65 GHz	44 ns	—	46 ns	—

NOTE: Any additional Test Data on Back

Tested On: 8757A/8350B

TEST : 03 E #29
 QA/QC : 03
 DATE : MAR 17 1999

FINAL TEST DATA

AMC MODEL NO: SWN-2183-1AT-250 OPTIONS 100M2, A18, SERIAL NUMBER: 1MS90220

FORM: SW-01/0698



DATE: 3-17-99

MICROWAVE SWITCH FINAL TEST DATA

JOB NO: 901009E MODEL NO: SWN-2183-1AT-250 SERIAL NO: 1MS90220
 CUSTOMER: Syracuse Research Corp. TECHNICIAN: R. Butler
 SPECIFICATION: 100M2, A18 (option(s)) FREQUENCY RANGE: 0.1 - 1.65 GHz
+5VDC @ 35 mA
-15VDC @ 30 mA

INSERTION LOSS	RETURN LOSS					
	INPUT dB	INPUT VSWR	OUTPUT ON dB	OUTPUT ON VSWR	OUTPUT OFF dB	OUTPUT OFF VSWR
J1-J2 1.89 dB	20.10 (ON)	1.21 = 1	21.08	1.19 = 1	20.55	1.20 = 1
	21.79 (OFF)	1.17 = 1				

ISOLATION	SWITCHING SPEED			
	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
J1-J2 > 80 dB @ 1.65 GHz	68 ns	—	46 ns	—

NOTE: Any additional Test Data on Back

Tested on: 8757A/8350B

TEST: 03 E #29
 QA/QC: 03
 DATE: MAR 17 1999