



**TEST REPORT**  
**ON**  
**8.4 TO 10.2 GHz**  
**SINGLE POLE SINGLE THROW**  
**TERMINATED SWITCH MODULE**

**AMC MODEL No:**  
**SWN-2183-1AT**  
**OPTION 103, 220**

**Serial Numbers: MS11105**

**DESIGNED**  
**BY**  
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**TESTED**  
**BY**  
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**REPORTED**  
**BY**  
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**SEPTEMBER 30, 2004**

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**ISO9001 : 1994 CERTIFIED**

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## SINGLE POLE SINGLE THROW ABSORPTIVE SWITCH MODULE AMC MODEL No: SWN-2183-1AT OPTION 103, 220

### FEATURES:

- **8.4 TO 10.2 GHz FREQUENCY RANGE**
- **DESIGNED FOR APPLICATIONS WHERE CONTROL SIGNALS ARE CARRIED BY LONG AND NOISY TRANSMISSION LINES**
- **DIFFERENTIAL LINE RECEIVER INTERFACE CAPABILITY**

### SPECIFICATIONS:

- FREQUENCY : 8.4 TO 10.2 GHz
- INSERTION LOSS : 3.0 dB MAXIMUM
- VIDEO TRANSIENTS : 50 mV P-P @ 20 MHz BW
- RF POWER : +10 dBm CW MAXIMUM
- VSWR : 2.0:1
- ISOLATION : 80 dB MINIMUM
- SPEED : RISE TIME: 10 nSEC MAXIMUM (10% TO 90% RF)  
: FALL TIME: 10 nSEC MAXIMUM (90% TO 10% RF)  
: DELAY ON: 50 nSEC MAXIMUM (50% TTL TO 90% RF)  
: DELAY OFF: 50 nSEC MAXIMUM (50% TTL TO 90% RF)
- DC POWER SUPPLY : +5VDC @ 90 mA MAXIMUM  
: -12VDC @ 75 mA MAXIMUM
- CONTROL : DIFFERENTIAL LINE RECEIVER, PAIRS (RI+, RI-),  
: COMPATIBLE TO ST506, ST412, ESPI, AND RS-422 LOGIC  
: FAMILIES (100 Ω INPUT IMPEDENCE)
- CONNECTORS : RF INPUT / OUTPUT: SMA FEMALE  
: POWER: SOLDER PIN  
: CONTROL: SOLDER PIN
- SIZE : 1.00" x 1.00" x 0.50"

## PRODUCT FEATURE

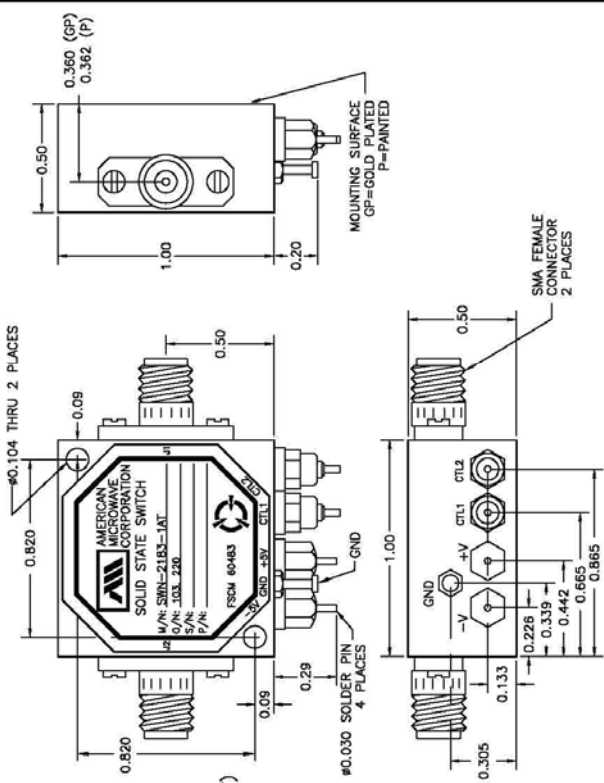
REV.	DESCRIPTION	DATE	APPROVED
1	ORIGINAL RELEASE, JOB#108170E-2	9/28/04	

**MECHANICAL OUTLINE**

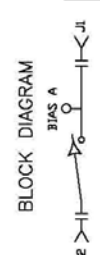
**DESCRIPTION:**  
 AMC MODEL SWN-2183-1AT OPTION 103, 220 IS AN ABSORPTIVE BROAD BAND SPST SWITCH MODULE WITH INTEGRAL DRIVER AND DIFFERENTIAL LINE RECEIVER INTERFACE CAPABILITY FOR APPLICATIONS WHERE CONTROL SIGNALS ARE CARRIED BY LONG AND NOISY TRANSMISSION LINES.

**SPECIFICATIONS:**

- FREQUENCY: 8.4 GHz TO 10.2 GHz
- INSERTION LOSS: 3.0 dB MAXIMUM
- VIDEO TRANSIENTS: 50 mV P-P @ 20 MHz BW
- RF POWER: +10 dBm CW MAXIMUM
- VSWR: 2.0:1
- ISOLATION: 80 dB MINIMUM
- SPEED:
  - RISE TIME: 10 nSEC MAXIMUM (10% TO 90% RF)
  - FALL TIME: 10 nSEC MAXIMUM (90% TO 10% RF)
  - DELAY ON: 50 nSEC MAXIMUM (50% TTL TO 90% RF)
  - DELAY OFF: 50 nSEC MAXIMUM (50% TTL TO 10% RF)
- DC POWER SUPPLY: +5VDC @ 90 mA MAXIMUM  
 -12VDC @ 75 mA MAXIMUM
- CONTROL: DIFFERENTIAL LINE RECEIVER, PAIRS (RI+, RI-), COMPATIBLE TO ST506, ST412, ESPI, AND RS-422 LOGIC FAMILIES (100 OHM INPUT IMPEDENCE).
- CONNECTORS: RF INPUT/OUTPUT: SMA FEMALE  
 POWER: SOLDER PIN  
 CONTROL: SOLDER PIN
- SIZE: 1.00" x 1.00" x 0.50"



**BLOCK DIAGRAM**



**ENVIRONMENTAL RATINGS**

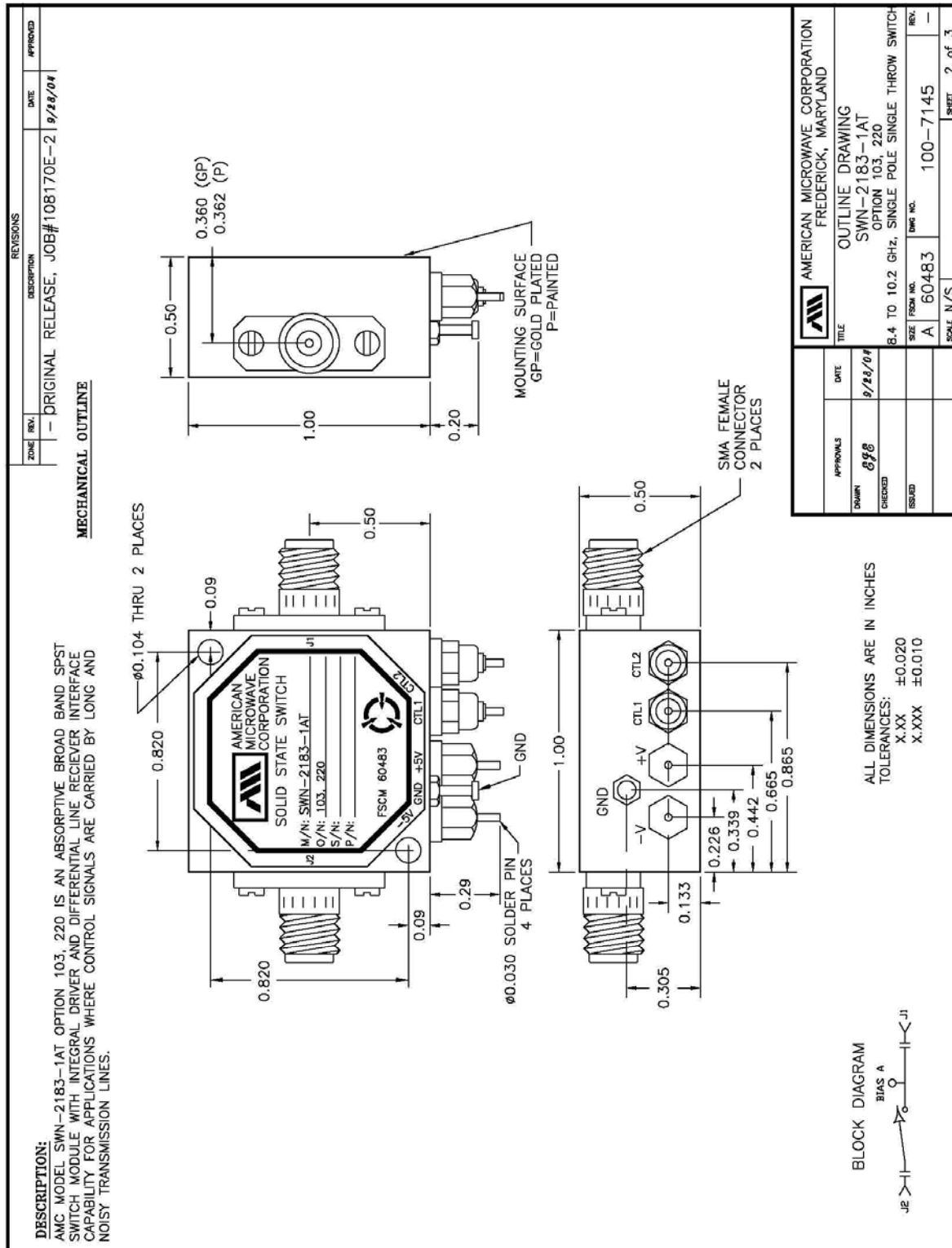
- TEMPERATURE: -0°C TO +50°C (OPERATING)  
 -65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

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

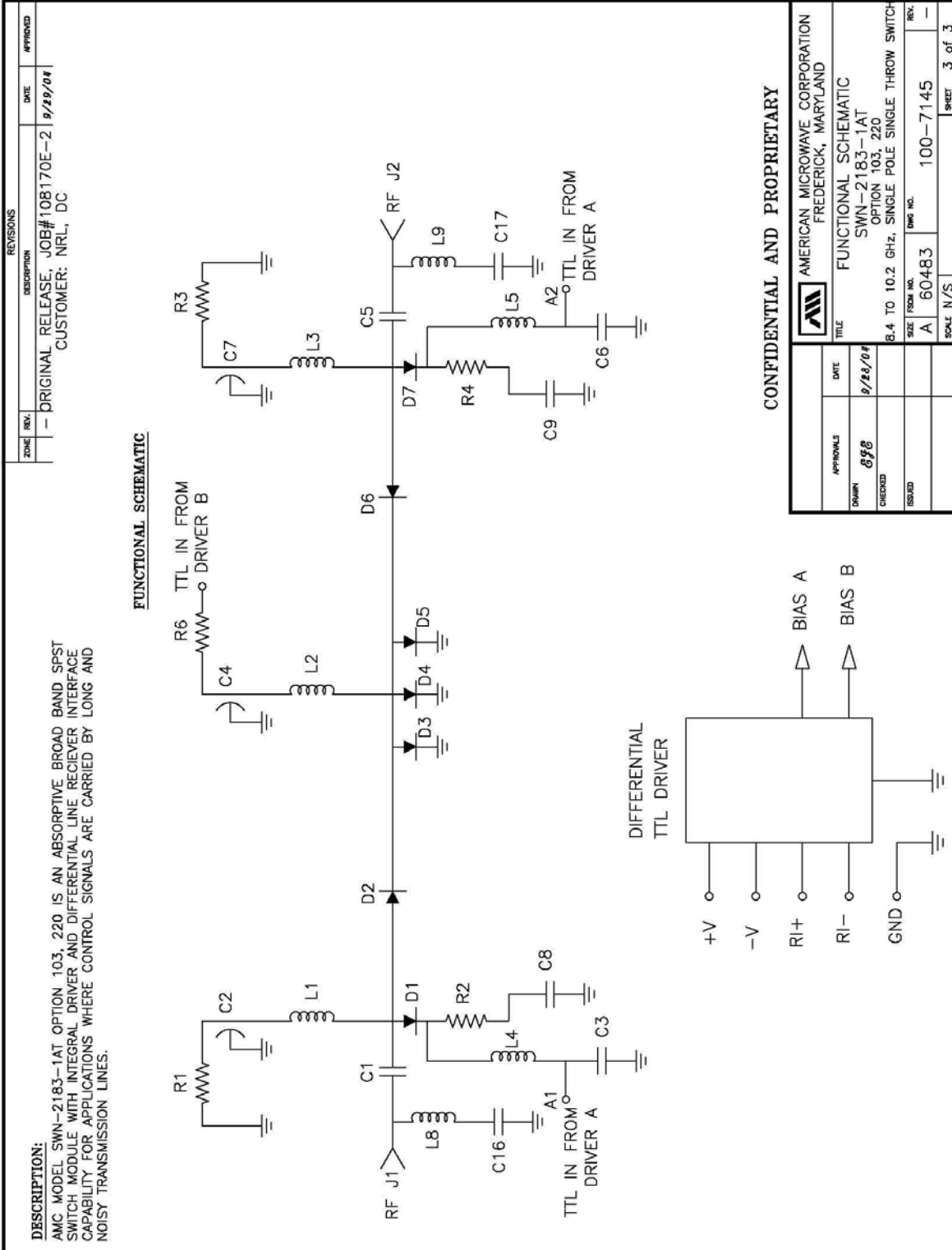
APPROVALS	DATE	TITLE	REV.
898	9/28/04	PRODUCT FEATURE SWN-2183-1AT OPTION 103, 220	1

AMERICAN MICROWAVE CORPORATION FREDERICK, MARYLAND	PRODUCT FEATURE SWN-2183-1AT OPTION 103, 220	REV. NO. 100-7145	SHEET 1 OF 3

**OUTLINE DRAWING**



**FUNCTIONAL SCHEMATIC**



**FINAL TEST DATA**

AMC MODEL NO: SWN-2183-1AT OPTIONS 103, 220, SERIAL NUMBER: MS11105



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FORM: SW-01/0791

DATED: 11/26/91

**MICROWAVE SWITCH FINAL TEST DATA**

JOB NO: 108170E-2 MODEL NO: SW-2183-1AT SERIAL NO: MS11105  
 CUSTOMER: NRL TECHNICIAN: S FREMONT  
 SPECIFICATION: \_\_\_\_\_ FREQUENCY RANGE: 8.4 - 10.2 GHz

VSWR			
INSERTION LOSS	INPUT	OUTPUT ON	OUTPUT OFF
J1-J2 -1.6 dB	-12.5	-15.8	N/A

SWITCHING SPEED				
ISOLATION	DELAY ON	RISE TIME	DELAY OFF	FALL TIME
> 95 dB	28 nS	4 nS	30 nS	7 nS

NOTE: Any additional Test Data write on Back page.

Tested By: JK  
 QA/QC By: \_\_\_\_\_  
 DATED: \_\_\_\_\_