

## DESCRIPTION

AMC MODEL SWN-2182-1A IS A SPST REFLECTIVE PIN-DIODE SWITCH/MODULATOR WITH A FREQUENCY RANGE OF 0.5 TO 18.0 GHz

## SPECIFICATIONS

- FREQUENCY RANGE ..... 0.5 TO 18 GHz
- INSERTION LOSS ..... 2.0dB MAX
- ISOLATION ..... 30dB MIN
- VSWR ..... 1.9:1
- RISE/FALL TIME ..... 10nS MAX
- DC POWER (NO LOAD)
  - +V ..... +5VDC @ 100mA
  - V ..... -5VDC @ 45mA
- POWER HANDLING ..... 2 WATTS AVERAGE, 10 WATTS PEAK, 1usec MAX, PW
- CONTROL IMPEDANCE ..... TTL COMPATIBLE, TWO LOAD.  
(A LOAD IS 1.6mA SINK CURRENT AND 40uA SOURCE CURRENT.)
- CONTROL LOGIC ..... LOGIC "0" (-0.3 TO +0.7 VOLTS FOR SWITCH OFF.)  
LOGIC "1" (+2.5 TO +5.0 VOLTS FOR SWITCH ON.)

### AVAILABLE OPTIONS:

- 001 ..... TWO SMA MALE RF CONNECTORS
- 002 ..... ONE SMA MALE AND ONE SMA FEMALE CONNECTORS
- 003 ..... SMC CONTROL CONNECTOR (SOLDER TYPE IS STANDARD)
- 004 ..... ±15 VOLT POWER SUPPLY REQUIREMENT
- 005 ..... 50 OHMS CONTROL IMPEDENCE
- 006 ..... CANNON MULTIPIN MDM9SSP
- 007 ..... INVERTED LOGIC
- 008 ..... EXTENDED FREQUENCY TO 100MHZ
- 010 ..... 50 nSEC MAX SWITCHING SPEED (5 WATTS CW MAX)
- 012 ..... 2 nSEC MAX SWITCHING SPEED (100MW CW MAX)
- 013 ..... -12 VDC POWER SUPPLY REQUIREMENT (+5V, -5V IS STANDARD)
- 103 ..... INTEGRAL VIDEO FILTERS  
2-18 GHz INSERTION LOSS INCREASE OF 0.75 dB MAX
- HS ..... HIGH SPEED VERSION - 20nSEC DELAY
- AT ..... OFF ARM TERMINATION

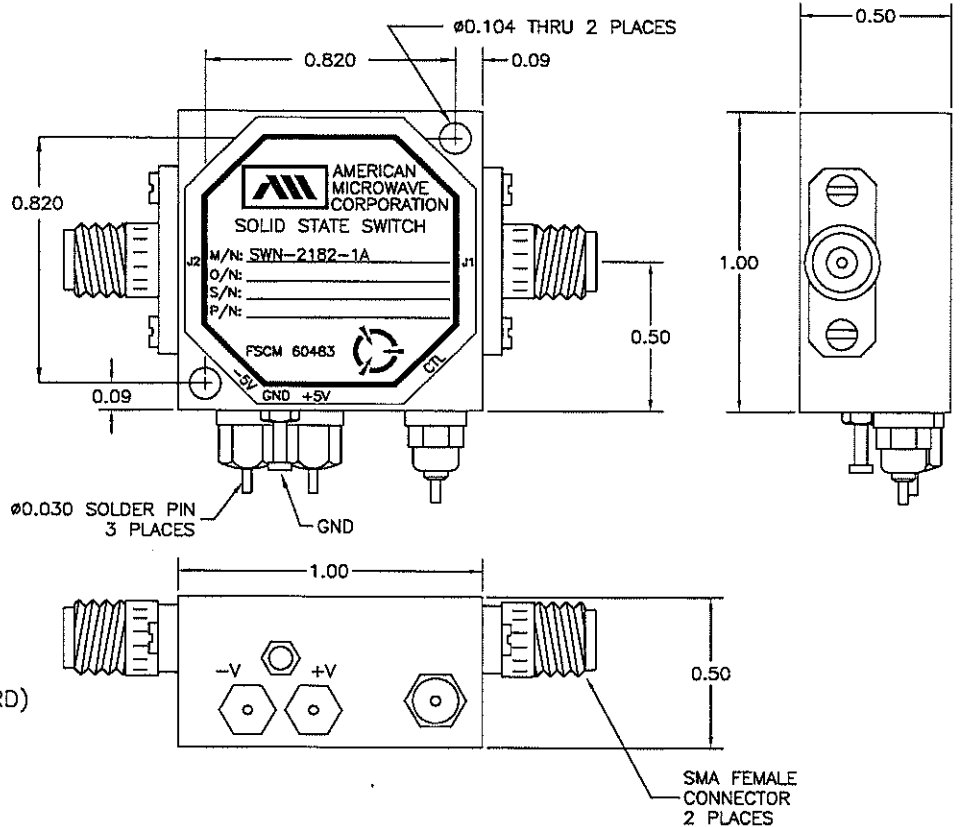
## ENVIRONMENTAL RATINGS

- TEMPERATURE ..... -65°C TO +85°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

ALL DIMENSIONS ARE IN INCHES  
TOLERANCES:  
X.XX ±0.020  
X.XXX ±0.010

ZONE		REV.	DESCRIPTION	DATE	APPROVED
		-	ORIGINAL RELEASE	5/13/08	<i>[Signature]</i>



## AMERICAN MICROWAVE CORPORATION

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ISO 9001:2000 CERTIFIED

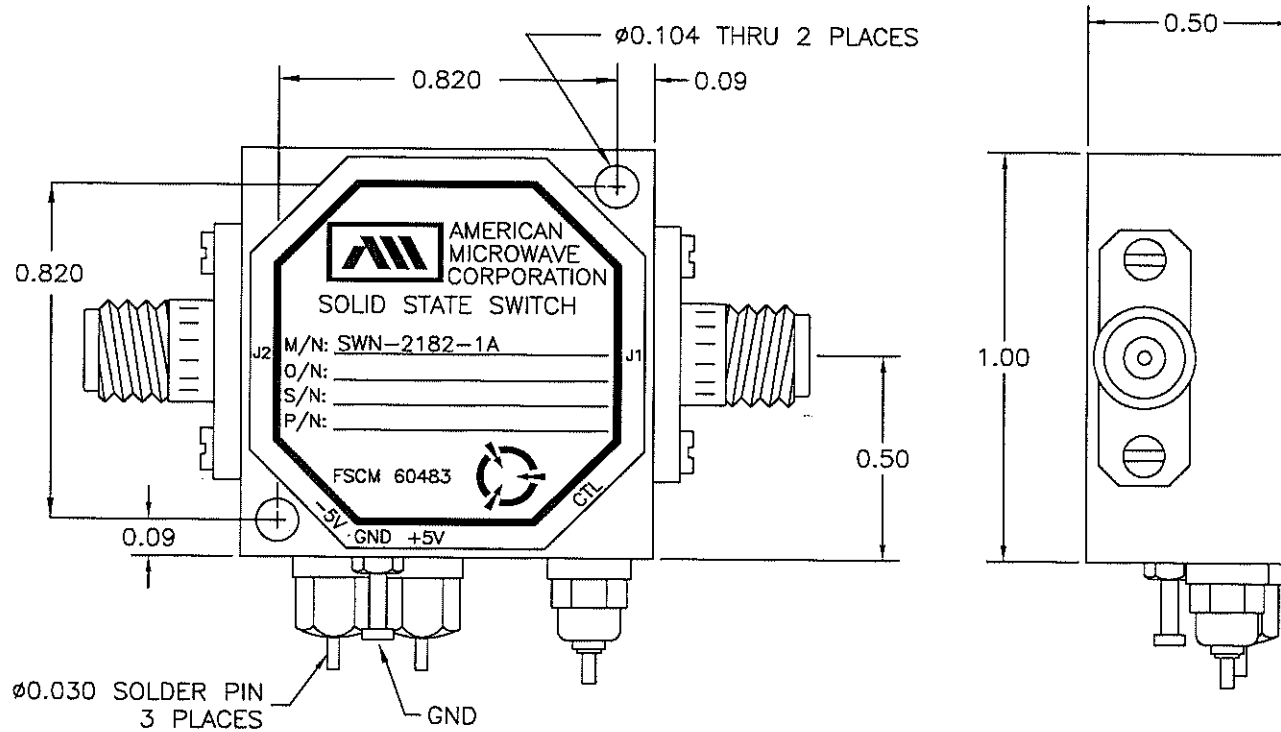


APPROVALS		DATE	TITLE		
DRAWN <i>MBB</i>		05/13/08	PRODUCT FEATURE SWN-2182-1A		
REDRAWN			0.5 TO 18.0 GHz SPST REFLECTIVE PIN-DIODE SWITCH		
ISSUED <i>[Signature]</i>		5/13/08	SIZE A	FSCM NO. 60483	DWG NO. 100-7782
			SCALE N:S	SHEET 1 OF 4	

**DESCRIPTION**

AMC MODEL SWN-2182-1A IS A SPST REFLECTIVE PIN-DIODE SWITCH/MODULATOR WITH A FREQUENCY RANGE OF 0.5 TO 18.0 GHz

**MECHANICAL OUTLINE**



ALL DIMENSIONS ARE IN INCHES  
 TOLERANCES:  
 X.XX ±0.020  
 X.XXX ±0.010

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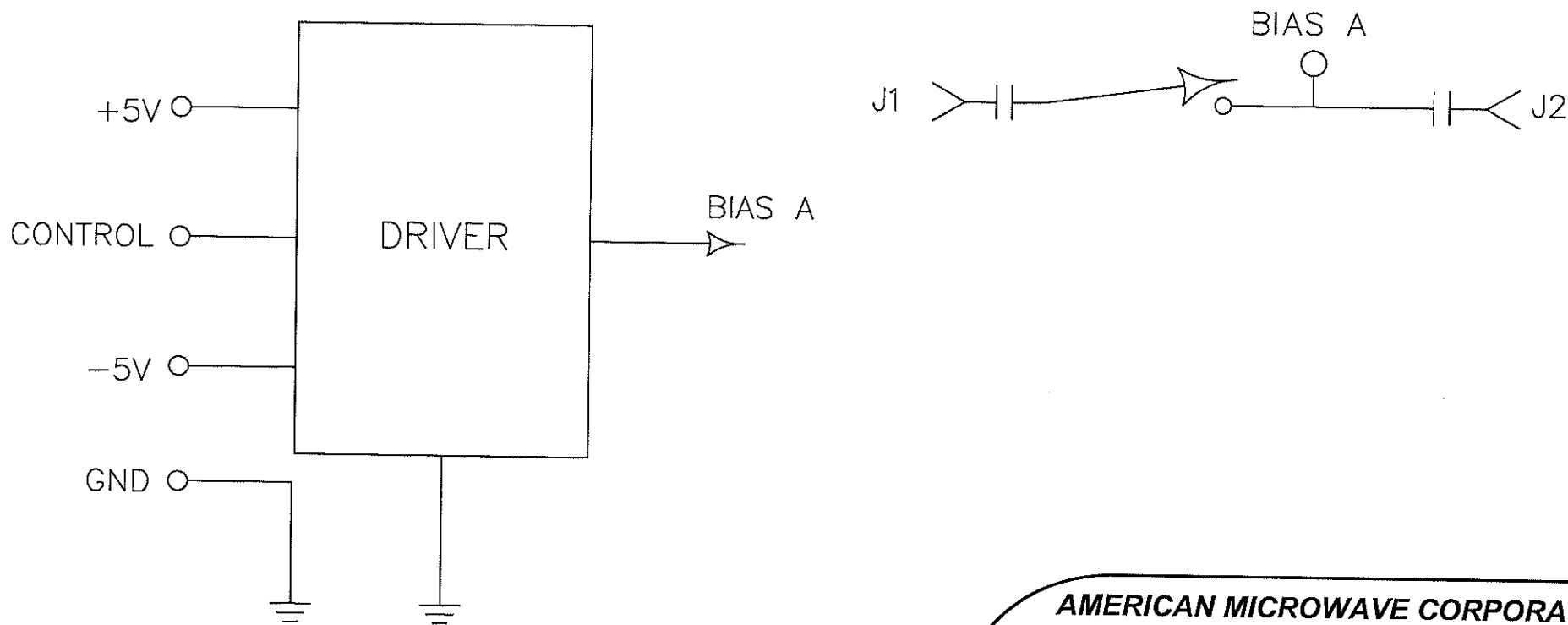


APPROVALS		DATE	TITLE		
DRAWN <i>MJB</i>		05/13/08	PRODUCT FEATURE SWN-2182-1A		
REDRAWN			0.5 TO 18.0 GHz SPST REFLECTIVE PIN-DIODE SWITCH		
ISSUED	<i>[Signature]</i>	<i>[Signature]</i>	SIZE	FSCM NO.	DWG NO.
			A	60483	100-7782
SCALE N:S			SHEET		2 OF 4

**DESCRIPTION**

AMC MODEL SWN-2182-1A IS A SPST REFLECTIVE PIN-DIODE SWITCH/MODULATOR WITH A FREQUENCY RANGE OF 0.5 TO 18.0 GHz

**FUNCTIONAL BLOCK DIAGRAM**



**CONFIDENTIAL AND PROPRIETARY**

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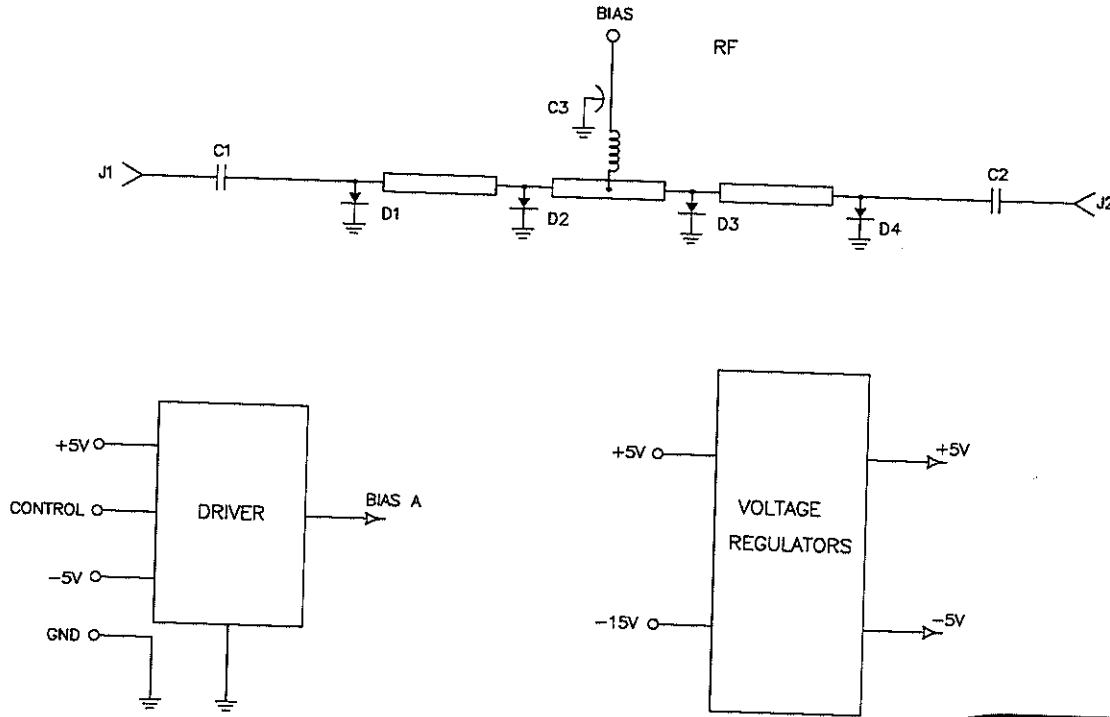


APPROVALS		DATE		TITLE			
DRAWN		DATE		PRODUCT FEATURE			
<i>MEB</i>		05/13/08		SWN-2182-1A			
REDRAWN		DATE		SIZE	FSCM NO.	DWG NO.	REV.
ISSUED		DATE		A	60483	100-7782	-
SCALE N:S				SHEET		3 OF 4	

**DESCRIPTION**

AMC MODEL SWN-2182-1A IS A SPST REFLECTIVE PIN-DIODE SWITCH/MODULATOR WITH A FREQUENCY RANGE OF 0.5 TO 18.0 GHz

**FUNCTIONAL SCHEMATIC DIAGRAM**



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APPROVALS		DATE	TITLE	
DRAWN			PRODUCT FEATURE	
REDRAWN			SWN-2182-1A	
ISSUED			0.5 TO 18.0 GHz SPST REFLECTIVE PIN-DIODE SWITCH	REV.
			SIZE FSCM NO.	DWG NO.
			A 60483	100-7782
			SCALE N:S	SHEET 4 OF 4