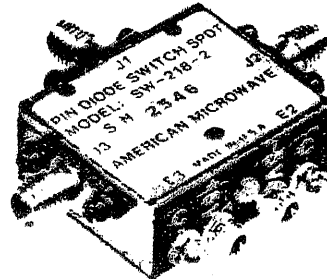


**AMERICAN Microwave Corporation**

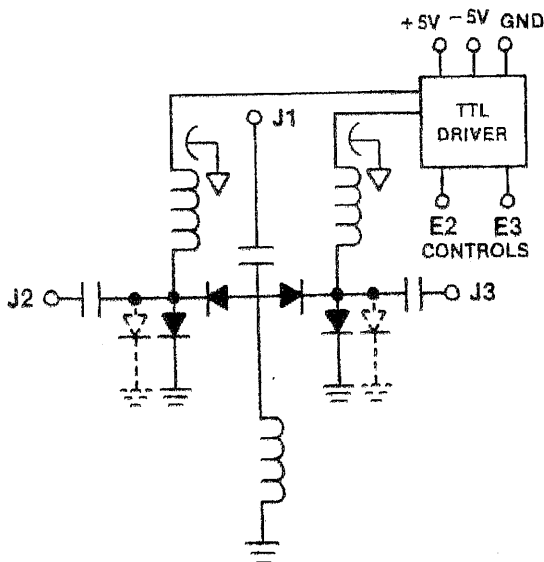
**BROADBAND PIN SWITCH SPDT  
WITH INTEGRAL DRIVER  
SW-218-2A  
0.3 To 18 GHz**



**FEATURES**

- 0.3 to 18 GHz Frequency Range
- Low Insertion Loss
- Small Size
- Light Weight
- Rugged Chip and Microstrip Construction
- Integral TTL Compatible Driver

**FUNCTIONAL SCHEMATIC**



12/89

**SPECIFICATIONS**

- Frequency Range: 0.3 to 18 GHz
- Insertion Loss: 2.5 dB, Max.
- Isolation: 55 dB, Min.
- VSWR: 2.0 to 1
- Rise/Fall Time: 50 ns Max.
- Power Handling: +20 dBm, CW, Max.
- Operating Temp.: -65° C to +85° C
- DC Power: +5V DC @ 65 mA, Max.  
-5V DC @ 50 mA, Max.

**DESCRIPTION**

The SW-218-2A is a SPDT Pin Switch intended for wide band switching applications in commercial and military environments. It has an instantaneous frequency coverage from 0.3 to 18 GHz and features all solid state chip diode and microstrip construction for rugged, reliable operation. Hybrid driver circuitry features reverse voltage and over-voltage protection.

7311G GROVE ROAD, FREDERICK, MARYLAND 21701 (301) 662-4700

**STANDARD UNIT**

<b>FREQUENCY (GHz)</b>	<u>0.3</u>	<u>2.0</u>	<u>4.0</u>	<u>8.0</u>	<u>12.4</u>	<u>18.0</u>
<b>MAX. INSERTION LOSS (dB)</b>	1.2	1.2	1.3	1.3	2.0	2.5
<b>MIN. ISOLATION (dB)</b>	85	80	75	70	65	55
<b>MAX. VSWR</b>	1.7	1.5	1.5	2.0	2.0	2.0

**OPTION 001**

<b>FREQUENCY (GHz)</b>	<u>0.3</u>	<u>2.0</u>	<u>4.0</u>	<u>8.0</u>	<u>12.0</u>	<u>18.0</u>
<b>MAX. INSERTION LOSS (dB)</b>	1.2	1.2	1.0	0.9	1.7	2.3
<b>MIN. ISOLATION (dB)</b>	50	45	45	40	35	30
<b>MAX. VSWR</b>	1.7	1.5	1.5	1.9	2.0	2.0

**HUMIDITY, SHOCK, ETC., PER MIL-STD 202C**

**OPTIONS:**

- 001 35 dB MIN ISOLATION
- 002 INDEPENDENT CONTROLS
- 003 SMA MALE CONNECTORS
- 004 + 15 VOLT SUPPLY
- 005 REVERSE LOGIC
- 006 - 15 VOLT SUPPLY
- 007 10 NS, MAX SWITCHING SPEED
- 008 EXTEND FREQUENCY TO 100 MHz
- 009 30 NS, MAX DELAY
- 010 - 12 VOLT SUPPLY

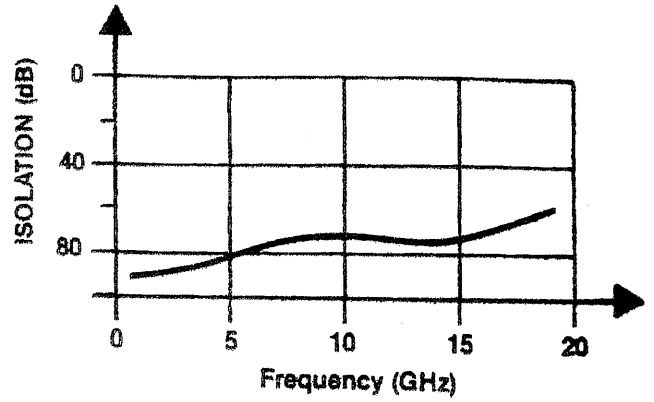
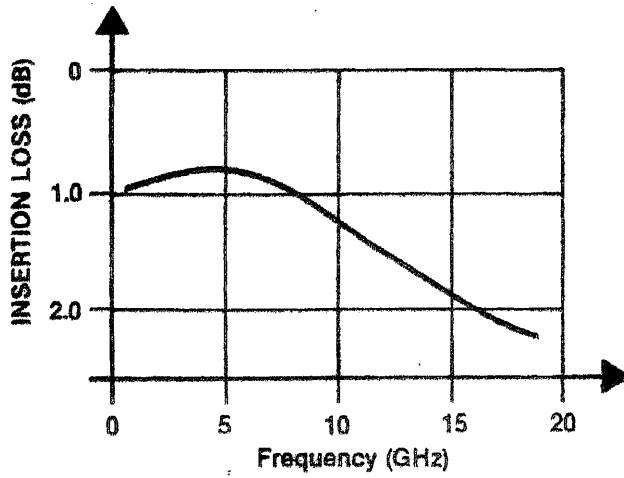
**NOTES:**

- 1. Switching Speeds are:  
10%-90% RF and 90%-10% RF
- 2. TTL Logic - Option 002  
"1" - RF On  
"2" - RF Off

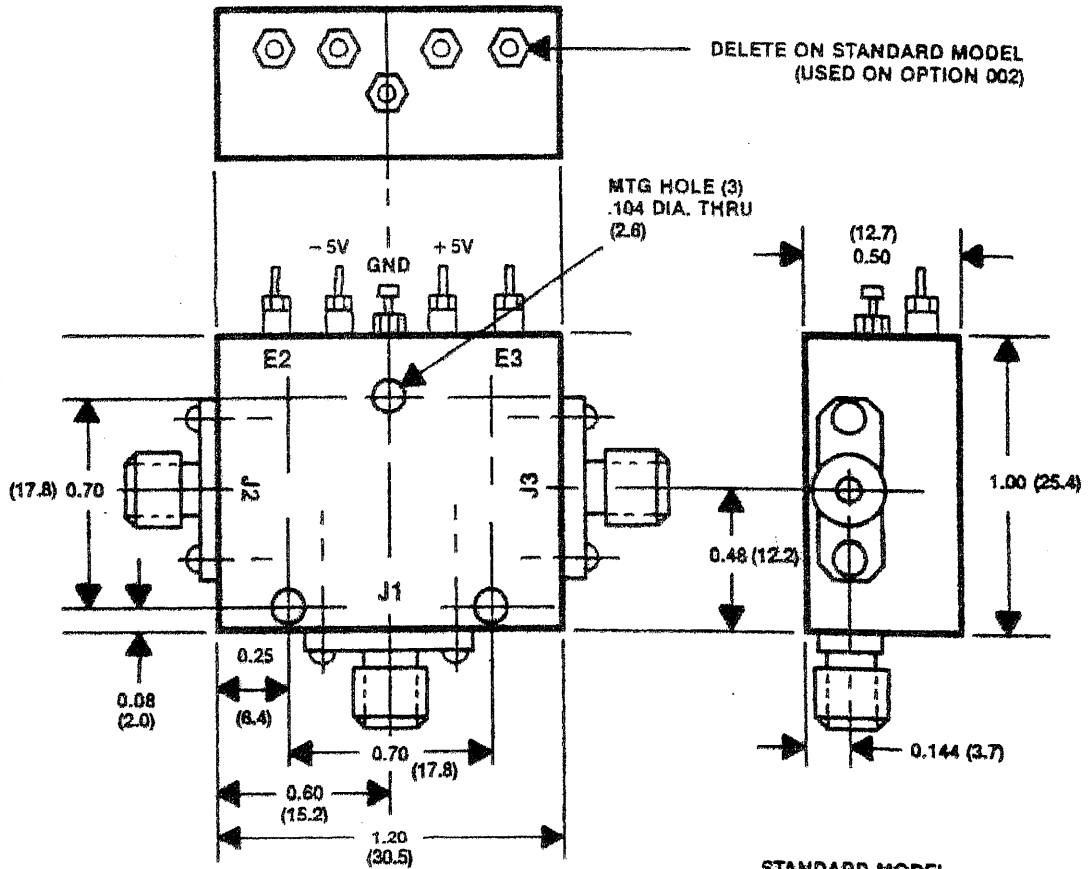
**ENVIRONMENTAL RATINGS**

- Operating Temperature - 65° C to 110° C
- Non-Operating Temperature - 65° C to 125° C
- Humidity MIL-STD-202F, METHOD 103B
- Shock MIL-STD-202F, METHOD 213B
- Vibration MIL-STD-202F, METHOD 204D
- Altitude MIL-STD-202F, METHOD 105C
- Temp Cycling MIL-STD-202F, METHOD 107D

## TYPICAL PERFORMANCE



## MECHANICAL DATA



### STANDARD MODEL TRUTH TABLE

Logic	RF On	RF Off
0	J1-J2	J1-J3
1	J1-J3	J1-J2

DIMENSIONS: INCHES (MILLIMETERS)