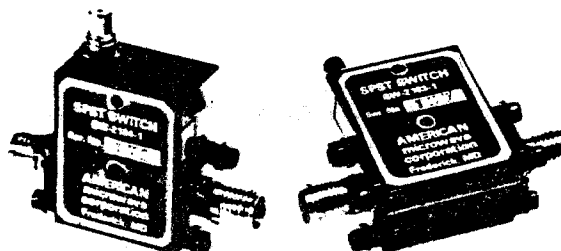


## SERIES SW-218 WIDEBAND SPST PIN DIODE SWITCHES



### FEATURES

- 0.3 to 18 GHz Frequency Range
- Low Insertion Loss
- Up to 85 dB Isolation
- High Speed - 10 nsec
- Small Size
- Light Weight
- Rugged Chip and Microstrip Construction

### SPECIFICATIONS

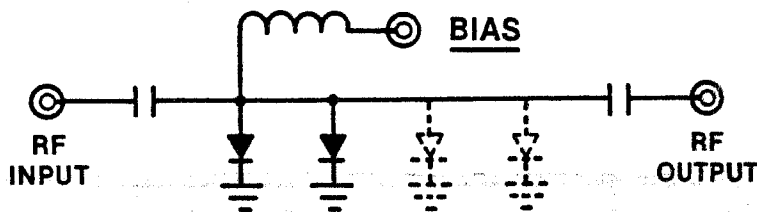
- Temperature -  
Operating:  $-65^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$   
Non-operating:  $-65^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Humidity, Shock, Etc. -  
Per MIL-STD 202F

### DESCRIPTION

The series SW-218 switches are broadband, high speed, low loss SPST switches. They are available in three models that operate over the 0.3 to 18 GHz band and are usable to 22 GHz. Each features rugged integrated circuit assemblies of chip PIN diodes on a microstrip transmission line and proprietary wideband bias decoupling circuitry.

Switching is accomplished by applying positive current to the bias terminal which biases the diodes to low resistance and the switch OFF. A negative voltage applied to the bias terminal biases the diodes to a high resistance and the switch ON.

### FUNCTIONAL SCHEMATIC



10/89

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

# SPECIFICATIONS

MODEL NO.	CHARACTERISTICS	FREQUENCY (GHz)						SWITCHING SPEED ON-to-OFF and OFF-to-ON	POWER HANDLING CAPABILITY		BIAS REQUIREMENTS	
		0.3 to 1.0	1.0 to 2.0	2.0 to 4.0	4.0 to 8.0	8.0 to 12.4	12.4 to 18.0		AVG (WATTS)	Peak 1 $\mu$ sec, max, pw (WATTS)	Rated Insertion Loss	Rated Isolation
SW-2182-1	Min Isolation (dB)	30	40	45	45	45	45	10 ns	2	10	-10v	+35ma
	Max Ins Loss (dB)	1.0	1.0	1.0	1.1	1.6	2.0					
	Max VSWR (ON Pos)	1.3	1.3	1.4	1.6	1.9	1.9					
SW-2183-1	Min Isolation (dB)	40	60	70	70	70	70	10	2	10	-10v	+35ma
	Max Ins Loss (dB)	1.0	1.0	1.1	1.4	1.8	2.3					
	Max VSWR (ON Pos)	1.4	1.4	1.4	1.6	1.9	1.9					
SW-2184-1	Min Isolation (dB)	45	70	85	85	85	80	10	2	10	-10v	+35ma
	Max Ins Loss (dB)	1.0	1.0	1.2	1.5	2.0	2.5					
	Max VSWR (ON Pos)	1.4	1.4	1.4	1.6	1.9	1.9					

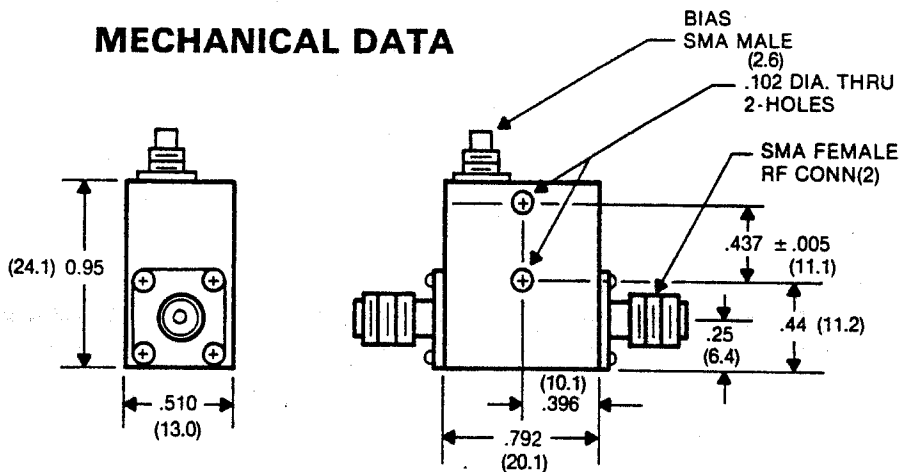
## AVAILABLE OPTIONS

Option No.	Description
001	Two SMA Male RF Connectors
002	One SMA Male and One SMA Female RF Connector
003	Solder Type Control Terminals
008	Extend Frequency to 100 MHz
010	100 ns, Max Switching Speed (5w, cw, max)
012	2 ns, Max Switching Speed (100mw, cw, max)
103	Integral Video Filters (2-18 GHz Frequency Band)

## 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

## MECHANICAL DATA



DIMENSIONS: INCHES (MILLIMETERS)