

# SPDT RF Switch

## 10 - 2000 MHz

SW-118

V2.00

### Features

- Integral Driver, TTL
- Low Loss – 0.6 dB Typical
- High Isolation – 50 dB Typical
- Fast Switching Speed – 50 nSec Typical

### Guaranteed Specifications\* (From -55°C to +85°C)

Frequency Range	10-2000 MHz	
Insertion Loss	10-2000 MHz	1.6 dB Max
	20-2000 MHz	1.1 dB Max
	50-1000 MHz	1.0 dB Max
VSWR	10-2000 MHz	1.5:1 Max
	20-1000 MHz	1.3:1 Max
Isolation	10-2000 MHz	35 dB Min
	10-800 MHz	40 dB Min
	10-300 MHz	50 dB Min
Amplitude Balance	± 0.2 dB	
Phase Balance	10-2000 MHz	± 8°
	10-1000 MHz	± 4°
	10-100 MHz	± 1°

### Operating Characteristics

<b>Impedance</b>	50 Ohms Nominal	
<b>Switching Characteristics</b>		
t <sub>ON</sub> , t <sub>OFF</sub>		60 nS Typ
t <sub>RISE</sub> , t <sub>FALL</sub>		50 nS Typ
Transients (In-Band)		300 mV Typ
<b>Input Power</b>	10-2000 MHz	+ 4 dBm Typ
<b>for 1 dB Compression</b>	200-2000 MHz	+ 25 dBm Typ
<b>Intermodulation Intercept Point (for two-tone input power up to + 5 dBm)</b>		
Second Order	(10-2000 MHz)	+ 42 dBm Typ
	(50-2000 MHz)	+ 65 dBm Typ
Third Order	(10-2000 MHz)	+ 16 dBm Typ
	(50-2000 MHz)	+ 35 dBm Typ
<b>Bias Power</b>	+ 5 to + 15 VDC @ 20 mA Max (150 mW Typical)	

### Environmental

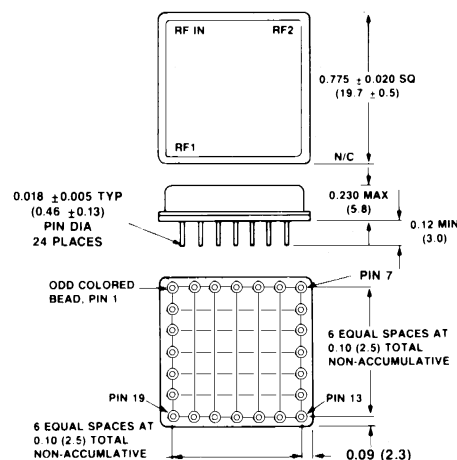
MIL-STD-883 screening available.

\*All specifications apply when operated with bias voltage of ±15 VDC and 50 ohm impedance at all ports

### Ordering Information

Model No.	Package
SW-118 PIN	Dual Inline

### DI-4



Dimension in ( ) are in mm.  
 Unless Otherwise Noted: .xxx = ±0.010 (.xx = ±0.25)  
 .xx = ±0.02 (.x = ±0.5)  
 WEIGHT (APPROX.): 0.21 OUNCES 6 GRAMS

	RF IN	RF 1	RF 2	RF 3	RF 4	+V	CTL
SW-118	19	1	13	N/A	N/A	3	4
PINS UNMARKED ARE GROUND							

### Truth Table

CONTROL INPUT	CONDITION OF SWITCH RF PATH	
	RF-IN TO RF1	RF-IN TO RF2
LOGIC HIGH	OFF	ON
LOGIC LOW	ON	OFF

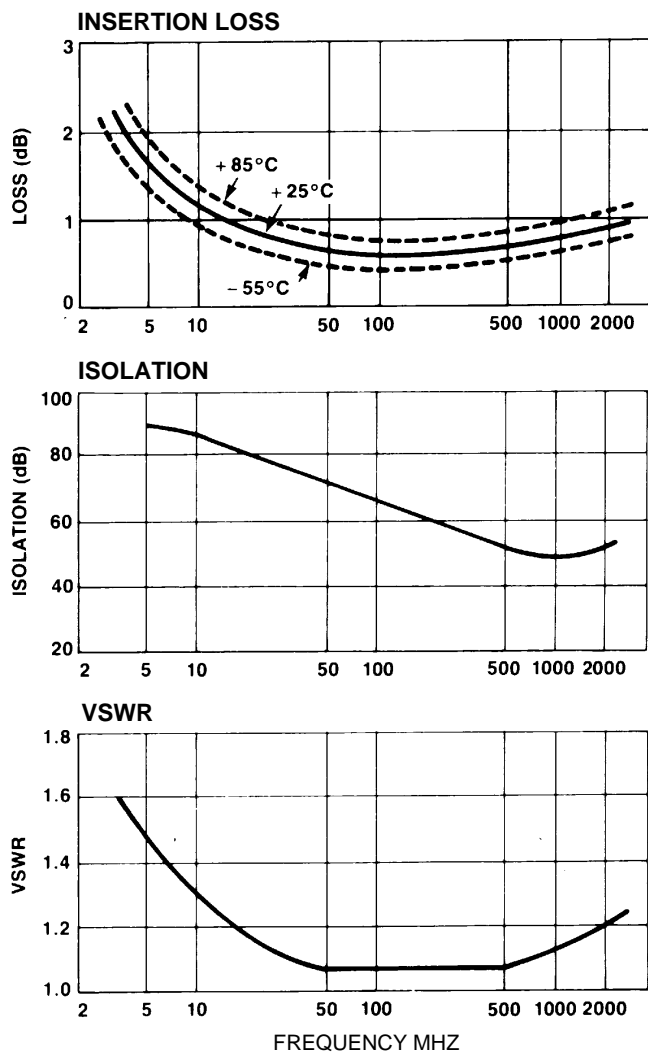
Control logic is CMOS or open collector TTL with external pull up to +V

Specifications Subject to Change Without Notice.

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## Typical Performance



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