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

Impedance		50 Ohms Nominal
Switching Characteristics		
t_{ON}, t_{OFF}		60 nS Typ
t_{RISE}, t_{FALL}		50 nS Typ
Transients (In-Band)		300 mV Typ
Input Power for 1 dB Compression	10-2000 MHz	+4 dBm Typ
	200-2000 MHz	+25 dBm Typ
Intermodulation Intercept Point (for two-tone input power up to +5 dBm)		
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
Bias Power		+5 to +15 VDC @ 20 mA Max (150 mW Typical)

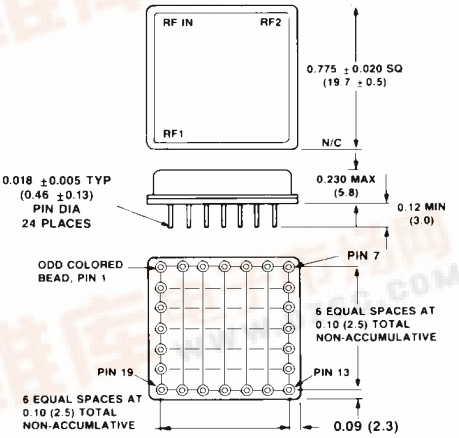
Environmental
MIL-STD-883 screening available.

*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							

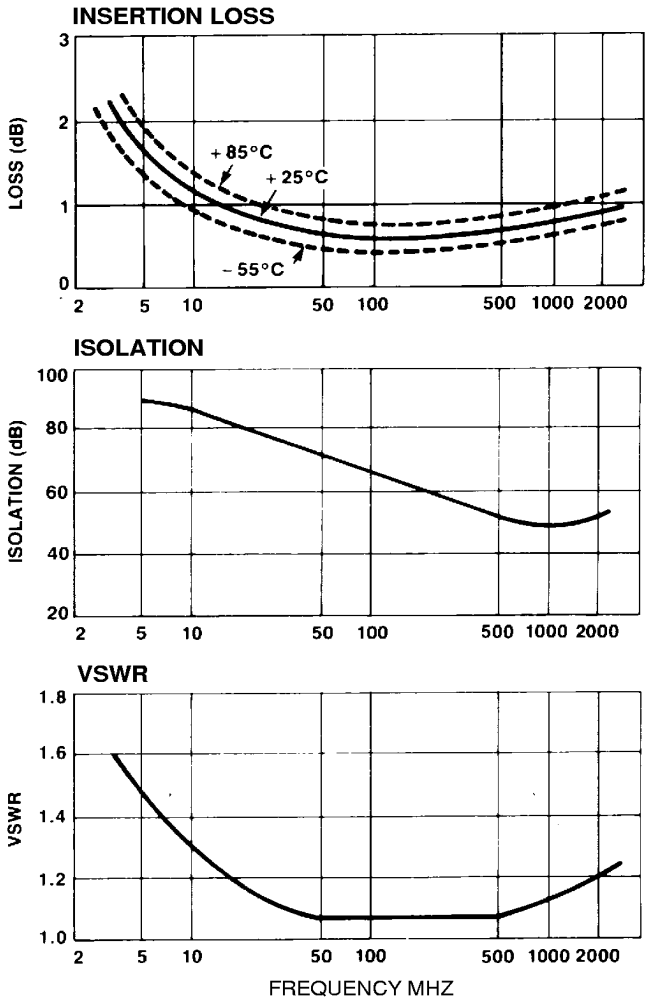
Truth Table

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

North America: Tel. (800) 366-2266 Fax (800) 618-8883 ■ Asia/Pacific: Tel. +81 (03) 3226-1671 Fax +81 (03) 3226-1451 ■ Europe: Tel. +44 (1344) 869 595 Fax +44 (1344) 300 020

Typical Performance



North America: Tel. (800) 366-2266 Fax (800) 618-8883 ■ Asia/Pacific: Tel. +81 (03) 3226-1671 Fax +81 (03) 3226-1451 ■ Europe: Tel. +44 (1344) 869 595 Fax +44 (1344) 300 020