

**SP4T RF Switch,  
10 - 2000 MHz**

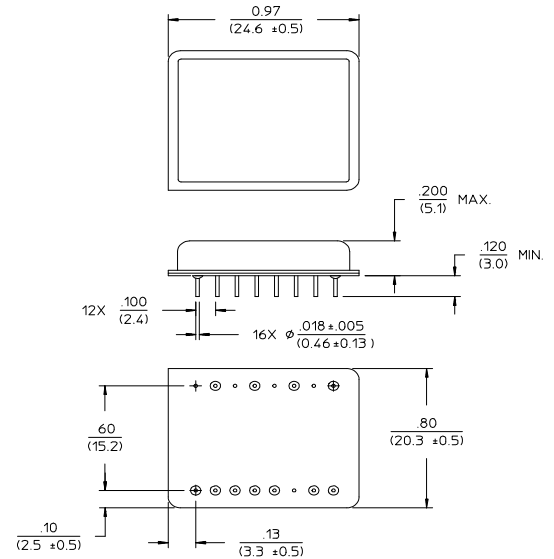
**SW-114-PIN  
V3**

**Features**

- Ultra Broadband
- High Isolation: 60 dB Typical
- Integral TTL Driver
- Hermetic Package
- 50 Ohm Nominal Impedance
- MIL-STD-883 Screening Available

**Description**

**Functional Block Diagram**



Dimensions in () are in mm  
Unless Otherwise Noted: .XXX = ±0.10 (XX = ±0.25)  
.XX = ±0.02 (X = ±0.5)  
WEIGHT (APPROX): 0.28 OUNCES 8 GRAMS

**Ordering Information**

Part Number	Package
SW-114-PIN	DI-2

Note: Reference Application Note M513 for reel size information.  
Note: Die quantity varies.

**Truth Table**

TTL Control Inputs "1" = TTL Logic High				Condition of Switch RF Common to each RF Port			
1	2	3	4	RF1	RF2	RF3	RF4
1	0	0	0	On	Off	Off	Off
0	1	0	0	Off	On	Off	Off
0	0	1	0	Off	Off	On	Off
0	0	0	1	Off	Off	Off	On

\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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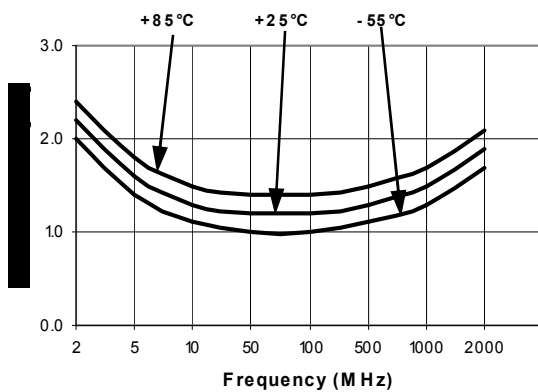
**Electrical Specifications:  $T_A = -55^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  <sup>1</sup>**

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss	—	10 - 2000 MHz	dB	—	—	2.8
		10 - 1000 MHz	dB	—	—	2.1
		10 - 500 MHz	dB	—	—	1.8
VSWR	—	10 - 2000 MHz	Ratio	—	—	1.8:1
		10 - 1000 MHz	Ratio	—	—	1.2:1
Isolation	—	10 - 2000 MHz	dB	35	—	—
		10 - 1000 MHz	dB	45	—	—
		10 - 500 MHz	dB	60	—	—
Ton	In-band	—	$\mu\text{S}$	—	2.0	—
Toff		—	$\mu\text{S}$	—	1.0	—
Transients		—	mV	—	40	—
1 dB Compression	Input Power	—	dBm	—	+13	—
IP <sub>2</sub>	For two tone input power up to +5 dBm	—	dBm	—	+60	—
IP <sub>3</sub>	For two tone input power up to +5 dBm	—	dBm	—	+30	—
Bias Power	+9 to +15 VDC @ 50 mA Max -5 VDC $\pm$ 5% @ 35 mA Max	—	mW	—	550	—

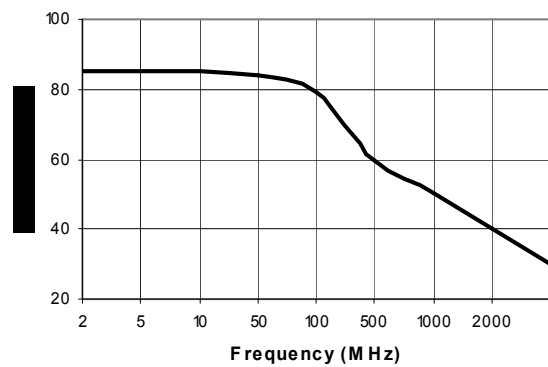
1. All specifications apply when operated with bias voltages of +12 VDC and -5 VDC ( $\pm$  5%) and 50 ohm impedance at all RF ports.

**Typical Performance Curves**

**Insertion Loss**



**Isolation**



**VSWR**

