

**SPDT RF Switch,  
20 - 2000 MHz**

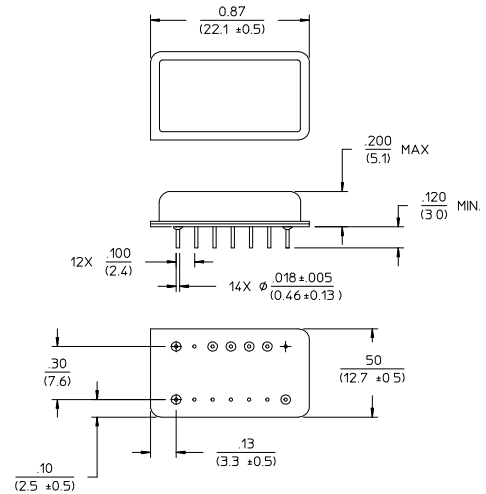
**SW-112-PIN  
V3**

**Features**

- Ultra Broadband
- High Isolation: 70 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 = ±0.010 (XX = ±0.25)  
.XX = ±0.02 (X = ±0.5)  
WEIGHT (APPROX): 0.14 OUNCES 4 GRAMS

**Ordering Information**

Part Number	Package
SW-112-PIN	DI-1

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

**Truth Table**

TTL Control Input "1" = TTL Logic High	Condition of Switch RF Common to Each RF Port	
	RF1	RF2
0	On	Off
1	Off	On

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

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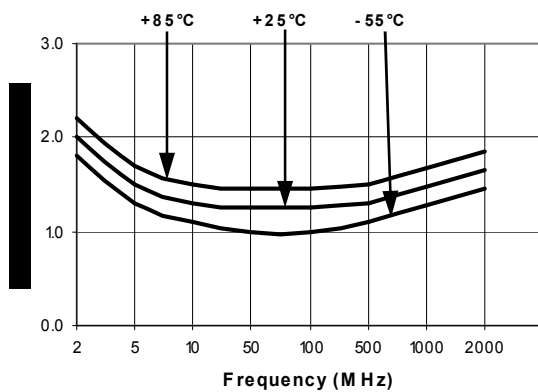
**Electrical Specifications:  $T_A = -55^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  <sup>1</sup>**

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss	—	20 - 2000 MHz	dB	—	—	2.2
		20 - 1000 MHz	dB	—	—	2.0
		20 - 500 MHz	dB	—	—	1.8
VSWR	—	20 - 2000 MHz	Ratio	—	—	1.5:1
		20 - 1000 MHz	Ratio	—	—	1.2:1
Isolation	—	20 - 2000 MHz	dB	50	—	—
		20 - 1000 MHz	dB	60	—	—
		20 - 500 MHz	dB	70	—	—
Ton Toff Transients	In-band	—	$\mu\text{S}$	—	2.0	—
		—	$\mu\text{S}$	—	1.0	—
		—	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 @ 35 mA Max -5 VDC $\pm$ 5% @ 35 mA Max	—	mW	—	500	—

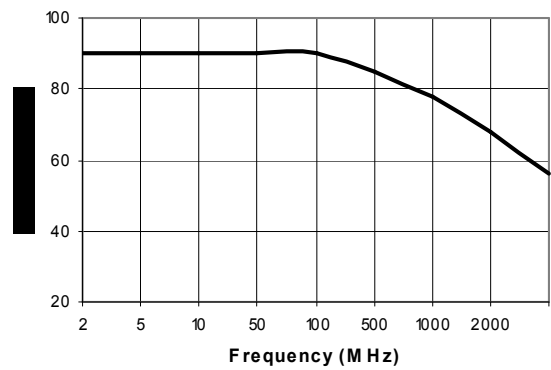
1. All specifications apply when operated with bias voltages of +12 VDC and -5 VDC ( $\pm$  5%) and 50 ohm impedance at all RF ports.

**Typical Performance Curves**

**Insertion Loss**



**Isolation**



**VSWR**

