

# SW-124-PIN



SP4T RF Switch,  
10 - 1000 MHz

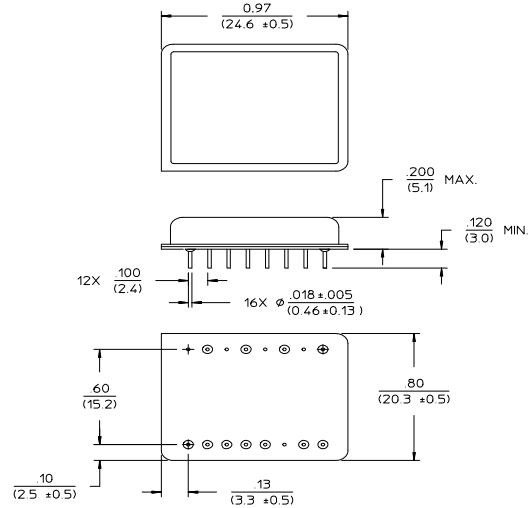
Rev. V3

## Features

- Low Loss: 0.6 dB Typical
- 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 = ±0.010 (XX = ±0.25)  
XX = ±0.02 (X = ±0.5)  
WEIGHT (APPROX): 0.28 OUNCES 8 GRAMS

## Ordering Information

Part Number	Package
SW-124-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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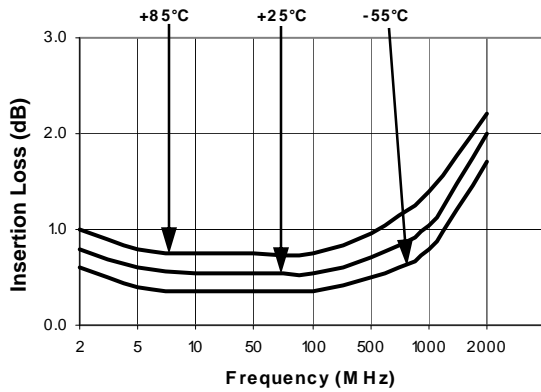
## Electrical Specifications: $T_A = -55^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ <sup>1</sup>

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Insertion Loss	—	10 - 1000 MHz	dB	—	—	1.4
		10 - 500 MHz	dB	—	—	1.0
VSWR	—	10 - 1000 MHz	Ratio	—	—	1.5:1
		10 - 500 MHz	Ratio	—	—	1.2:1
Isolation	—	10 - 1000 MHz	dB	40	—	—
		10 - 500 MHz	dB	50	—	—
		10 - 100 MHz	dB	60	—	—
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 @ 50 mA Max -5 VDC $\pm$ 5% @ 25 mA Max	—	mW	—	450	—

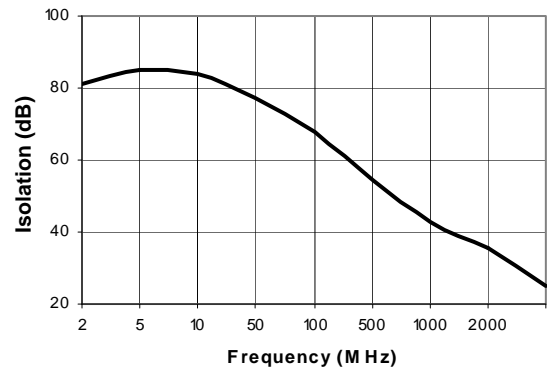
1. All specifications apply when operated with bias voltages of +12 VDC and -5 VDC ( $\pm$  5%) and 50 ohm impedance at all RF ports.

## Typical Performance Curves

**Insertion Loss**



**Isolation**



**VSWR**

