# SW-124-PIN

#### SP4T RF Switch, 10 - 1000 MHz

#### Features

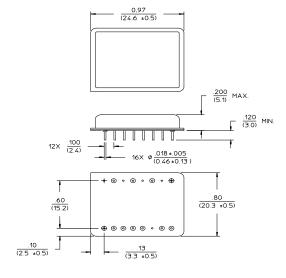
- Low Loss: 0.6 dB Typical
- High Isolation: 60 dB Typical
- Integral TTL Driver
- Hermetic Package
- 50 Ohm Nominal Impedance
- MIL-STD-883 Screening Available

#### Description



Rev. V3

#### **Functional Block Diagram**



Dimensions in () are in mm Unless Otherwise Noted: XXX =  $\pm 0.010$  (XX =  $\pm 0.25$ ) XX =  $\pm 0.02$  (X =  $\pm 0.5$ ) 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: $T_A = -55^{\circ}C$ to $+85^{\circ}C^{-1}$

Parameter	Test Conditions	Frequency	Units	Min	Тур	Max
Insertion Loss	_	10 - 1000 MHz 10 - 500 MHz	dB dB		_	1.4 1.0
VSWR	_	10 - 1000 MHz 10 - 500 MHz	Ratio Ratio		_	1.5:1 1.2:1
Isolation	_	10 - 1000 MHz 10 - 500 MHz 10 - 100 mhZ	dB dB dB	40 50 60	 	
Ton Toff Transients	In-band		μS μS mV	 	2.0 1.0 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 ± 5% @ 25 mA Max	_	mW	_	450	—

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

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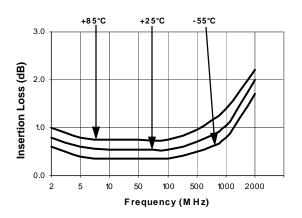
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#### **Typical Performance Curves**

#### Insertion Loss

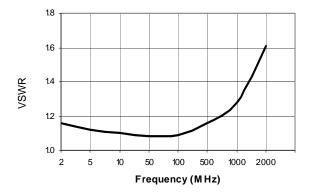


100 80 Isolation (dB) 60 40 20 2 10 50 100 500 1000 2000 5 Frequency (MHz)

Isolation

#### VSWR

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