

# SW-224-PIN / SW-225-PIN



GaAs SPDT Switch,  
DC - 2 GHz

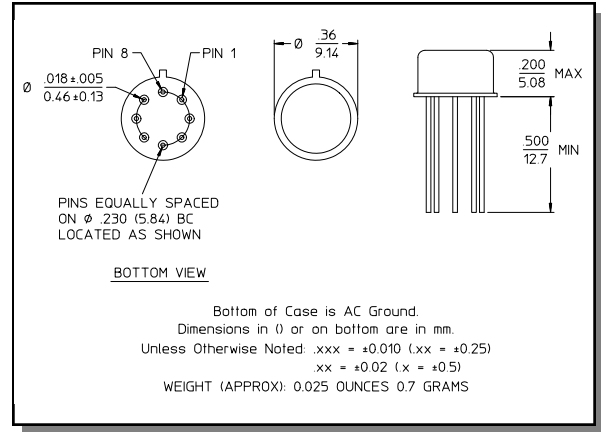
Rev. V3

## Features

- Low Insertion Loss, 0.5 dB Typical
- Integral TTL Driver
- Low DC Power Consumption
- 50 Ohm Nominal Impedance
- MIL-STD-883 screening available

## Description

### TO-5-3 (SW-224)



## Ordering Information

Part Number	Package
SW-224-PIN	TO-5-3
SW-225-PIN	FP-13

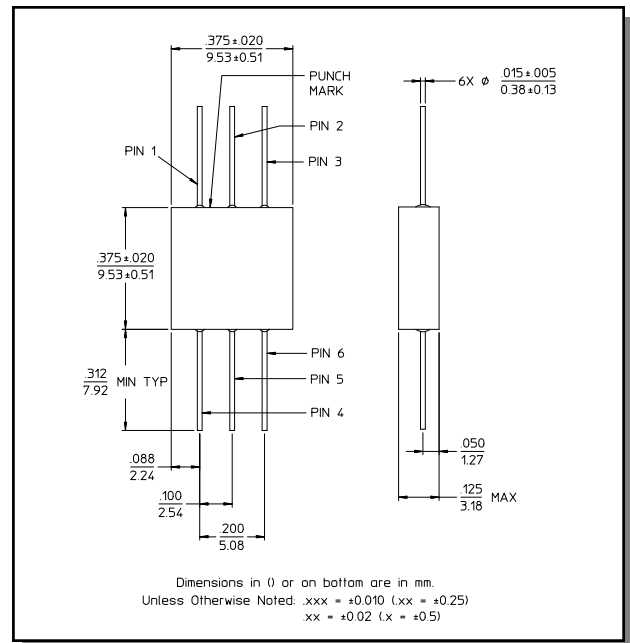
Note: Reference Application Note M513 for reel size information.

Note: Die quantity varies.

## Truth Table

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

### FP-13 (SW-225)



\* 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	—	DC - 2 GHz	dB	0.8	—	—
		DC - 1 GHz	dB	0.7	—	—
		DC - 0.5 GHz	dB	0.7	—	—
VSWR	—	DC - 2 GHz	Ratio	—	—	1.5:1
		DC - 1 GHz	Ratio	—	—	1.25:1
		DC - 0.5 GHz	Ratio	—	—	1.15:1
Isolation	—	DC - 2 GHz	dB	30	—	—
		DC - 1 GHz	dB	35	—	—
		DC - 0.5 GHz	dB	40	—	—
IP <sub>2</sub>	For two tone input power up to +13 dBm	0.5 - 2 GHz	dBm	—	+68	—
		0.05 GHz	dBm	—	+62	—
IP <sub>3</sub>	For two tone input power up to +13 dBm	0.5 - 2 GHz	dBm	—	+46	—
		0.05 GHz	dBm	—	+40	—
Trise, Tfall Ton, Toff Transients	50% CTL to 90/10% RF In-band	—	nS	—	10	—
		—	nS	—	150	—
		—	mV	—	15	—
1 dB Compression	Input Power	0.5 - 2 GHz	dBm	—	+27	—
		0.05 GHz	dBm	—	+21	—
Bias Power	+5 VDC -5 VDC	—	mA	—	—	1
		—	mA	—	—	1

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

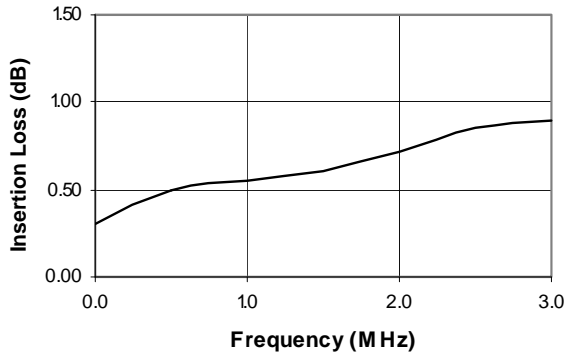
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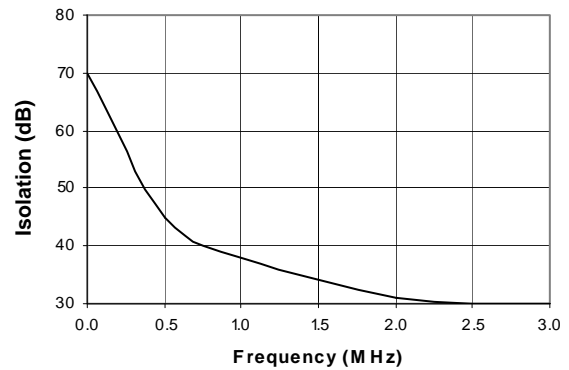
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## Typical Performance Curves

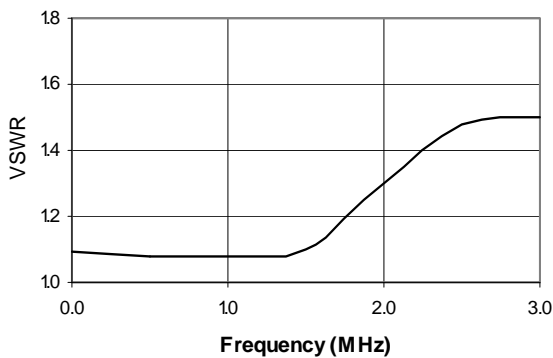
**Insertion Loss**



**Isolation**



**VSWR**



## Pin Configuration

