

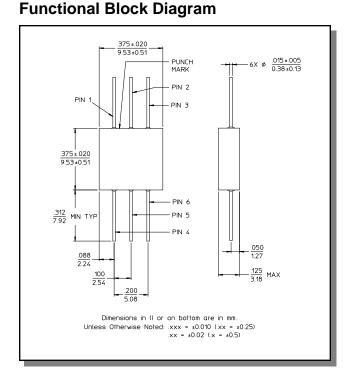
GaAs SPST Switch, DC - 3 GHz

Rev. V3

### **Features**

- Fast Switching Speed: 6 nS Typical
- Ultra Low DC Power Consumption
- Terminated
- 50 Ohm Nominal Impedance
- MIL-STD-883 screening available

### **Description**



### **Ordering Information**

Part Number	Package		
SW-214-PIN	FP-13		

Note: Reference Application Note M513 for reel size

information.

Note: Die quantity varies.

### **Truth Table**

Control Input		Condition of Switch		
Α	В	RF1 to RF2		
Hi	Lo	On		
Lo	Hi	Off		

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

<sup>•</sup> India Tel: +91.80.4155721

# **SW-214-PIN**



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## Electrical Specifications: $T_A = 25^{\circ}C^{1,2,3}$

Parameter	Test Conditions	Frequency	Units	Min	Тур	Max
Insertion Loss	_	DC - 3 GHz DC - 2 GHz DC - 1 GHz DC - 0.5 GHz	dB dB dB dB	_ _ _ _	_ _ _	1.3 1.2 0.9 0.9
Isolation	_	DC - 3 GHz DC - 2 GHz DC - 1 GHz DC - 0.5 GHz	dB dB dB dB	25 38 45 50	_ _ _ _	_ _ _
VSWR	_	DC - 3 GHz DC - 2 GHz DC - 1 GHz DC - 0.5 GHz	Ratio Ratio Ratio Ratio	_ _ _ _	_ _ _	2.0:1 1.7:1 1.3:1 1.3:1
Trise, Tfall Ton, Toff Transients	50% CTL to 90/10% RF In-Band	_ _ _	nS nS mV	_ _ _	3 6 30	
1 dB Compression	Control Voltage 0/-5 VDC Control Voltage 0/-8 VDC	0.5 - 3 GHz 0.05 GHz 0.5 - 3 GHz 0.05 GHz	dBm dBm dBm dBm	_ _ _ _	+27 +21 +33 +26	_ _ _
IP <sub>2</sub>	For two-tone Input power up to +13 dBm	0.5 - 3 GHz 0.05 GHz	dBm dBm	_	+68 +62	_
IP <sub>3</sub>	For two-tone Input power up to +13 dBm	0.5 - 3 GHz 0.05 GHz	dBm dBm	_	+46 +40	_
Control Voltages	V <sub>IN</sub> Low: 0 to –0.2V V <sub>IN</sub> High: -5V @ 50 μA Typ to –8V		_	_	_	20 μA 300 μA

<sup>1.</sup> All specifications apply with 50 ohm impedance connected to all RF ports with 0 and -5 VDC control voltages.

<sup>2.</sup> Faster switching speed can be achieved with enhanced driver waveform.

<sup>•</sup> India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588 Visit www.macomtech.com for additional data sheets and product information.

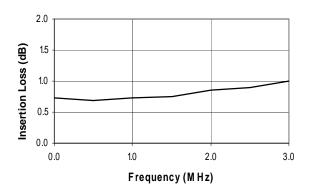


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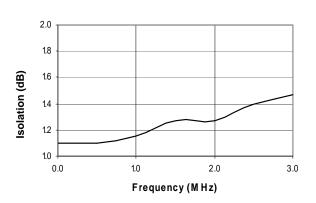
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### **Typical Performance Curves**

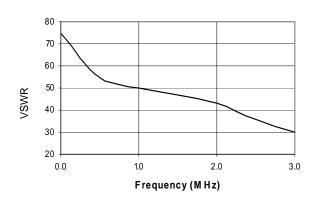
#### Insertion Loss



#### Isolation



#### **VSWR**



### **Pin Configuration**

