

**GaAs Matched SP6T Switch  
DC - 2 GHz**

**SW-284-PIN  
V4**

**Features**

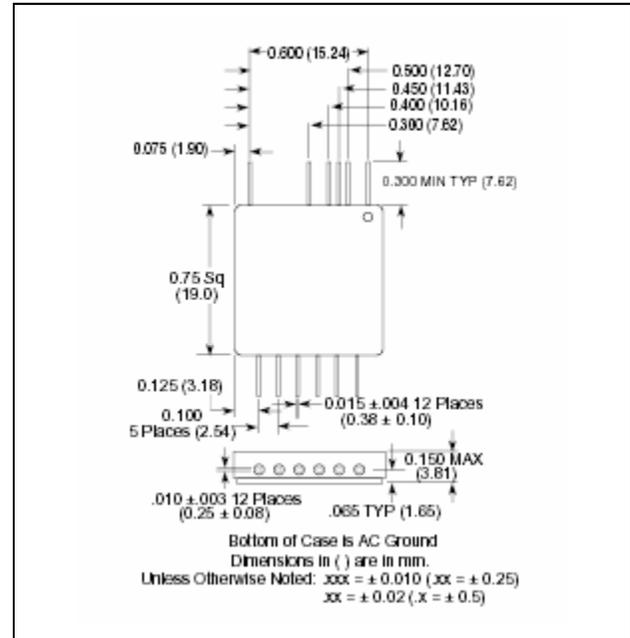
- Low DC Power Consumption
- Integral CMOS Decoder/Driver

**Absolute Maximum Ratings<sup>1</sup>**

Parameter	Absolute Maximum
Max Input Power 0.05 GHz 0.5-2.0 GHz <sup>2</sup>	+27 dBm +34 dBm
Bias Voltage +5V Supply -5V Supply	-0.5 to + 7V -7V to +0.5
Control Voltage	-0.5 to VCC +0.5V
Operating Temperature	-55°C to +125°C
Storage Temperature	-65°C to +150°C

1. Operation of this device above any one of these parameters may cause permanent damage.
2. When the RF input power is applied to the terminated port, the absolute maximum is +32 dBm.

**FP-27**



**Guaranteed Specifications<sup>1,2</sup> from -55°C to +85°C**

Frequency Range		DC - 2.0 GHz
Insertion Loss	DC - 2.0 GHz	2.8 dB Max
	DC - 1.0 GHz	2.0 dB Max
VSWR (RF Common)	DC - 2.0 GHz	.9:1 Max
	DC - 1.0 GHz	1.3:1 Max
VSWR (RF1-RF6 On)	DC - 2.0 GHz	1.7:1 Max
	DC - 1.0 GHz	1.3:1 Max
VSWR (RF1-RF6 Terminated)	DC - 2.0 GHz	1.3:1 Max
	DC - 1.0 GHz	1.3:1 Max
Isolation	DC - 2.0 GHz	28 dB Max
	DC - 1.0 GHz	33 dB Max

1. All specifications apply with 50 ohm impedance connected to all RF ports, with -5 and +5 VDC bias voltages.
2. Contact the factory for standard or custom screening requirements.

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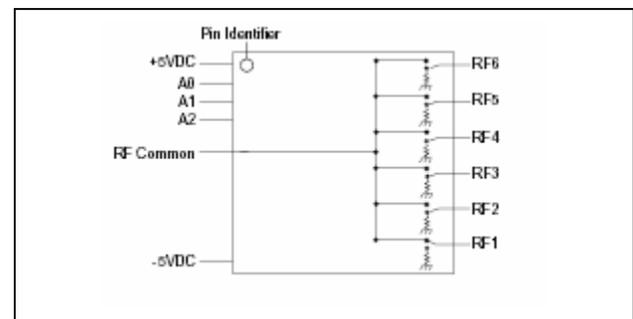
**Operating Characteristics**

Impedance	50 Ohms Nominal		
Switching Characteristics Trise, Tfall (10% to 90% RF) Ton, Toff (50% CTL to 90% / 10% RF) Transients (In-Band)	3.0 ns Typ 180 ns Typ 150 mV Typ		
Input Power for 1 dB Compression 0.5-2.0 GHz 0.05 GHz	23 dBm Typ 21 dBm Typ		
Intermodulation Intercept Point (for two-tone input power up to +5 dBm)			
Intercept Points	IP2	IP3	
0.5-2.0 GHz 0.05 GHz	+60 +53	+45 +35	dBm Typ dBm Typ
Bias Power	-5 VDC @ 2 mA Max +5 VDC @ 1 mA Max		
Control Voltages Vin Low (0) Vin Hi (1)	0.0 to 1.5V @ 1 μA Max 3.5 to 5.0V @ 1 μA Max		

**Truth Table**

Control Input			Condition of Switch
A2	A1	A0	RF Common to
0	0	1	RF1
0	1	0	RF2
0	1	1	RF3
1	0	0	RF4
1	0	1	RF5
1	1	0	RF6

**Functional Schematic (Top View)**

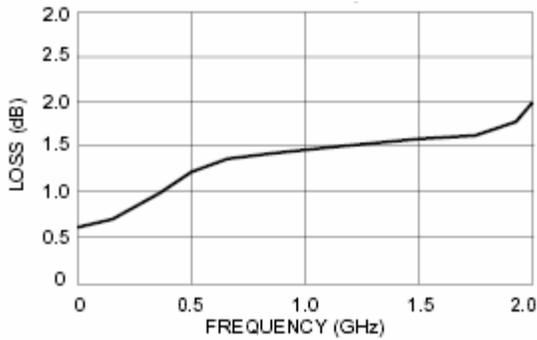


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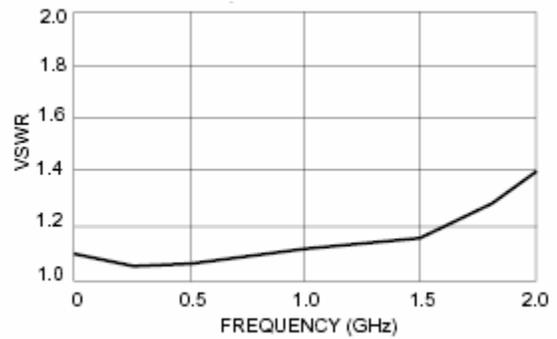
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**Typical Performance**

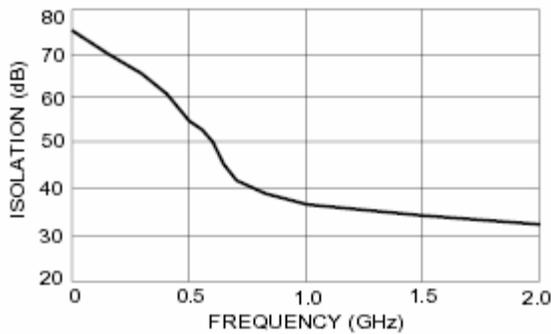
*Insertion Loss vs. Frequency*



*VSWR vs. Frequency*



*Isolation vs. Frequency*



**Ordering Information**

Part Number	Package
SW-284 PIN	Flatpack