

# GaAs Matched SP6T Switch

## DC - 2 GHz

# SW-284

V3.00

### Features

- Low DC Power Consumption
- Integral CMOS Decoder/Driver

### Guaranteed Specifications<sup>1</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 Min
	DC - 1.0 GHz	33 dB Min

### Operating Characteristics

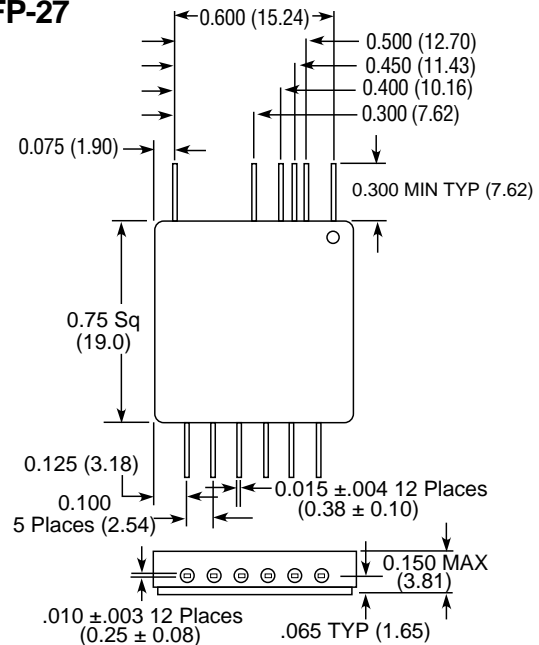
Impedance	50 Ohms Nominal		
Switching Characteristics	Trise, Tfall (10% to 90% RF)	3.0 ns Typ	
	Ton, Toff (50% CTL to 90%/10% RF)	180 ns Typ	
	Transients (In-Band)	150 mV Typ	
	Input Power for 1 dB Compression	23 dBm Typ	
Intermodulation Intercept Point (for two-tone input power up to +5 dBm)	0.5 - 2.0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

### Ordering Information

Model No.	Package
SW-284 PIN	Flatpack

### FP-27

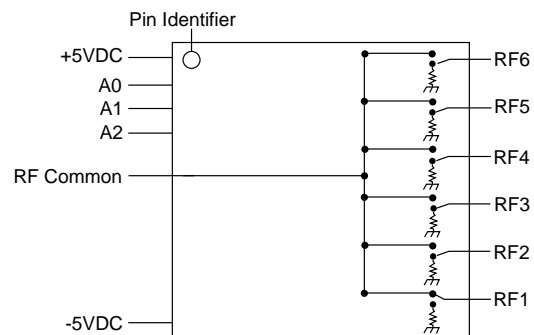


Bottom of Case is AC Ground

Dimensions in ( ) are in mm.

Unless Otherwise Noted: .xxx = ± 0.010 (.xx = ± 0.25)  
.xx = ± 0.02 (.x = ± 0.5)

### Functional Schematic (Top View)



Specifications Subject to Change Without Notice.

**M/A-COM, Inc.**

North America: Tel. (800) 366-2266  
Fax (800) 618-8883

■ Asia/Pacific: Tel. +81 (03) 3226-1671  
Fax +81 (03) 3226-1451

■ Europe: Tel. +44 (1344) 869 595  
Fax +44 (1344) 300 020

**Absolute Maximum Ratings**

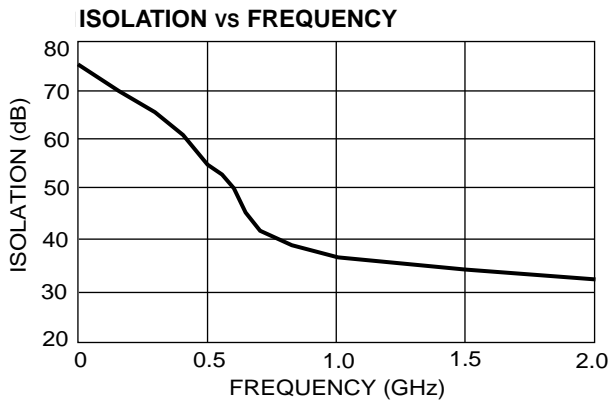
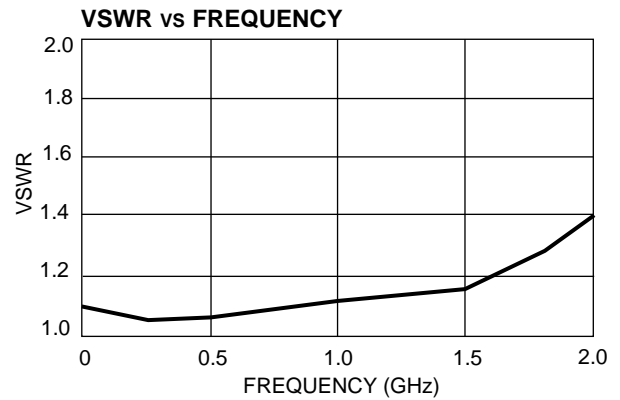
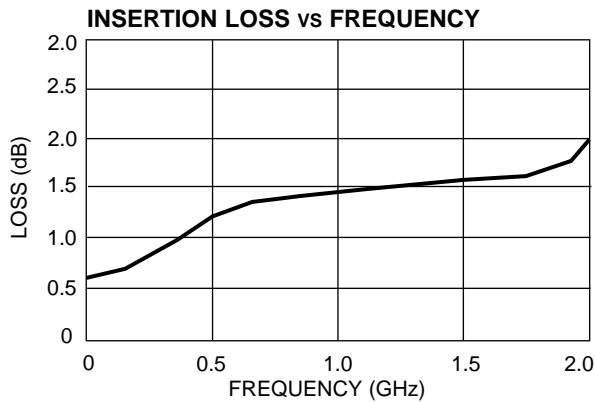
Parameter	Absolute Maximum <sup>1</sup>
Max. Input Power 0.05 GHz 0.5 – 2.0 GHz <sup>2</sup>	+27 dBm +34 dBm
Bias Voltage +5V Supply -5V Supply	-0.5 to +7V -7V to +0.5V
Control Voltage	-0.5 to VCC + 0.5V
Operating Temperature	-55°C to +125°C
Storage Temperature	-65°C to +150°C

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.

**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

**Typical Performance**



Specifications Subject to Change Without Notice.