

GaAs Matched SP6T Switch DC - 2 GHz

Rev. V4

Features

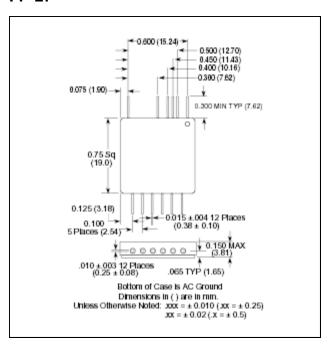
- Low DC Power Consumption
- Integral CMOS Decoder/Driver

Absolute Maximum Ratings¹

Parameter	Absolute Maximum
Max Input Power 0.05 GHz 0.5-2.0 GHz ²	+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.
- When the RF input power is applied to the terminated port, the absolute maximum is +32 dBm.

FP-27



Guaranteed Specifications^{1,2} from -55°C to +85°C

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

^{1.} All specifications apply with 50 ohm impedance connected to all RF ports, with -5 and +5 VDC bias voltages.

 $^{2. \ \ \}mbox{Contact the factory for standard or custom screening requirements}.$

India Tel: +91.80.4155721
China Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.

SW-284-PIN



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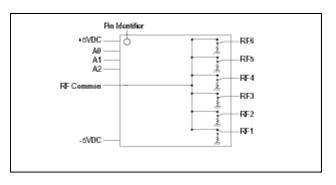
Operating Characteristics

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	A 1	Α0	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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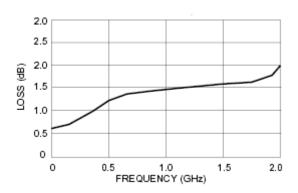


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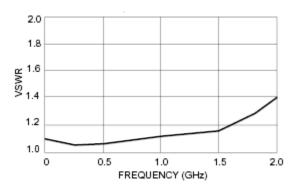
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Typical Performance

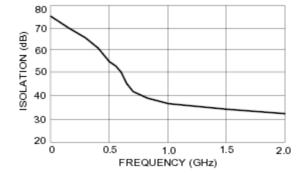
Insertion Loss vs. Frequency



VSWR vs. Frequency



Isolation vs. Frequency



Ordering Information

Part Number	Package
SW-284 PIN	Flatpack

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