

GaAs DPDT Switch

DC - 2 GHz

SW-355

V 2.00

Features

- Fast Switching Speed, 10 ns Typical
- Ultra Low DC Power Consumption
- Low Insertion Loss

Guaranteed Specifications¹

	(-55°C to +85°C)	
Frequency Range	DC - 2.0 GHz	
Insertion Loss	DC - 2.0 GHz	1.3 dB Max
	DC - 1.0 GHz	1.0 dB Max
	DC - 0.5 GHz	0.9 dB Max
	DC - 0.05 GHz	0.8 dB Max
VSWR	DC - 2.0 GHz	2.0:1 Max
	DC - 1.0 GHz	1.7:1 Max
	DC - 0.5 GHz	1.5:1 Max
	DC - 0.05 GHz	1.3:1 Max
Isolation ²	DC - 2.0 GHz	23 dB Min
	DC - 1.0 GHz	27 dB Min
	DC - 0.5 GHz	35 dB Min
	DC - 0.05 GHz	40 dB Min

Operating Characteristics

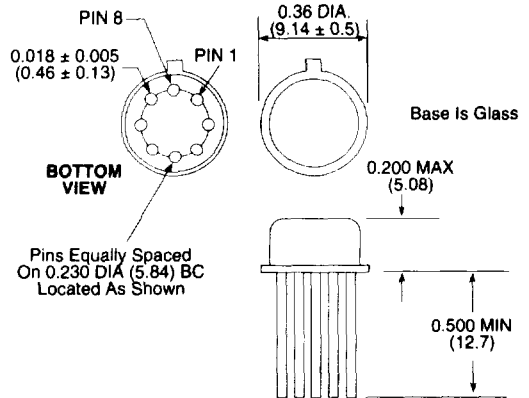
Impedance	50 Ohms Nominal	
Switching Characteristics		
T_{rise}, T_{fall} (10% to 90%)	10 ns Typ	
T_{on}, T_{off} (50% CTL to 90%/10% RF)	12 ns Typ	
Transients (In-Band)	100 mV Typ	
Input Power for 1 dB Compression		
0.5 - 2.0 GHz	+27 dBm Typ	
0.05 GHz	+21 dBm Typ	
Intermodulation Intercept Pt. (for two-tone input power up to +5 dBm)		
Intercept Points	IP_2	IP_3
0.5 - 2.0 GHz	+68	+46
0.05 GHz	+62	+40
Control Voltages (Complementary Logic)		
Vin Low	0 to -0.2 V @ 20 μ A Max	
Vin High	-5 V @ 10 μ A Typ to -8 V @ 300 μ A Max	

1. All specifications apply with 50 ohm impedance connected to all RF ports with 0 and -5 Vdc control voltages.
2. Isolation is measured from RF2 to RF1.
3. Contact the factory for standard or custom screening requirements.

Ordering Information

Part Number	Package
SW-355 PIN	TO-5-3

TO-5-3

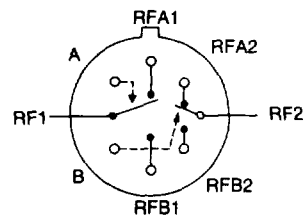


WEIGHT (APPROX.): 0.025 OUNCES 0.7 GRAMS

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)



Truth Table

Control Input		Condition of RF path			
A	B	RF1-RFA1	RF1-RFB1	RF2-RFA2	RF2-RFB2
High	Low	OFF	ON	OFF	ON
Low	High	ON	OFF	ON	OFF

Specifications Subject to Change Without Notice.

15-150

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Fax (800) 618-8883

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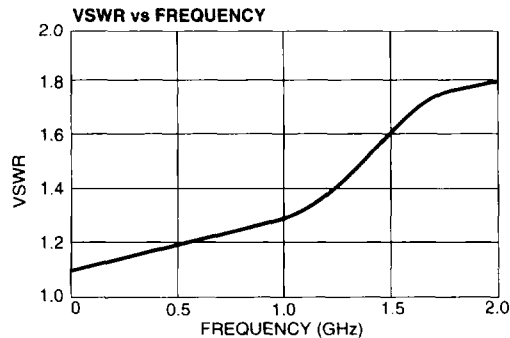
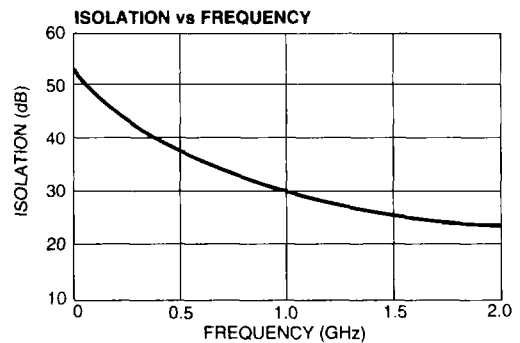
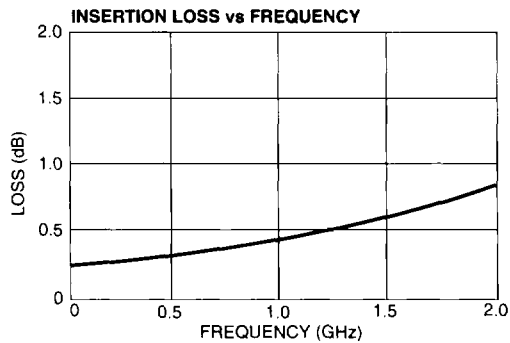
Europe: Tel. +44 (1344) 869 595
Fax +44 (1344) 300 020

Absolute Maximum Ratings¹

Parameter	Absolute Maximum
Max. Input Power	
0.05 GHz	+27 dBm
0.5–2.0 GHz	+34 dBm
Control Voltage	+5 V, –8.5 V
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.

Typical Performance @ +25°C



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