

Matched GaAs SPST Switch

DC-2000 MHz

SW-341, SW-342

V 2.00

Features

- Low Insertion Loss
- Ultra Low DC Power Consumption
- Fast Switching Speed

Guaranteed Specifications¹ (From -55°C to +85°C)

Frequency Range		DC - 2.0 GHz	
Model Number		SW-341	SW-342
Insertion Loss	DC - 2.0 GHz	0.7 dB Max	0.9 dB Max
	DC - 1.0 GHz	0.6 dB Max	0.7 dB Max
	DC - 0.5 GHz	0.5 dB Max	0.6 dB Max
VSWR On	DC - 2.0 GHz	1.5:1 Max	1.7:1 Max
	DC - 1.0 GHz	1.3:1 Max	1.3:1 Max
	DC - 0.5 GHz	1.2:1 Max	1.2:1 Max
VSWR Off	DC - 2.0 GHz	1.6:1 Max	1.7:1 Max
	DC - 1.0 GHz	1.5:1 Max	1.3:1 Max
	DC - 0.5 GHz	1.5:1 Max	1.2:1 Max
Isolation	DC - 2.0 GHz	40 dB Min	30 dB Min
	DC - 1.0 GHz	50 dB Min	35 dB Min
	DC - 0.5 GHz	55 dB Min	42 dB Min

Operating Characteristics

Impedance		50 Ohms Nominal	
Switching Characteristics			
Trise, Tfall (10% to 90% RF, 90% to 10% RF)		3 ns Typ	
Ton, Toff (50% CTL to 90%/10% RF)		10 ns Typ	
Transients (In-Band)		20 mV Typ	
Input Power for 1 dB Compression			
0.5-2 GHz	+26	dBm Typ	
0.05 GHz	+23	dBm Typ	
Intermodulation Intercept Point (for two-tone input power up to +5 dBm)			
Intercept Points	IP2	IP3	
0.5-2 GHz	75	50	dBm Typ
0.05 GHz	67	48	dBm Typ
Control Voltages			
Vin Low	0 to -0.2 V @ 20 µA Max		
Vin High	5 V @ 25 µA Typ to -8 V @ 300 µA Max		

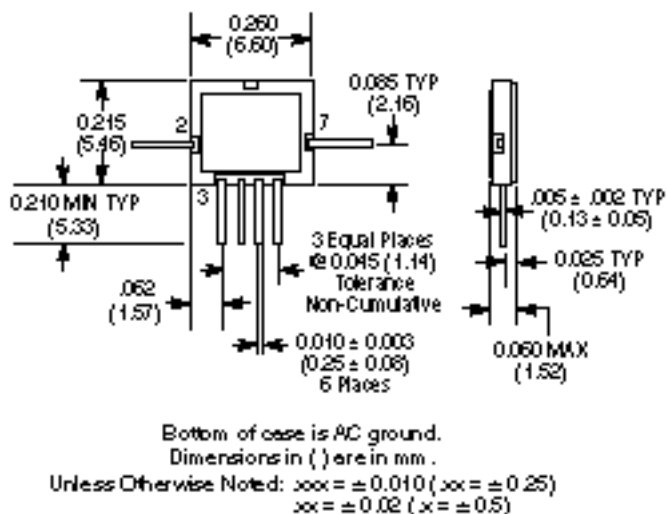
1. All specifications apply when operated with control voltages of 0 and -5 VDC and 50 ohm impedance at all RF ports.

2. Contact the factory for standard or custom screening requirements.

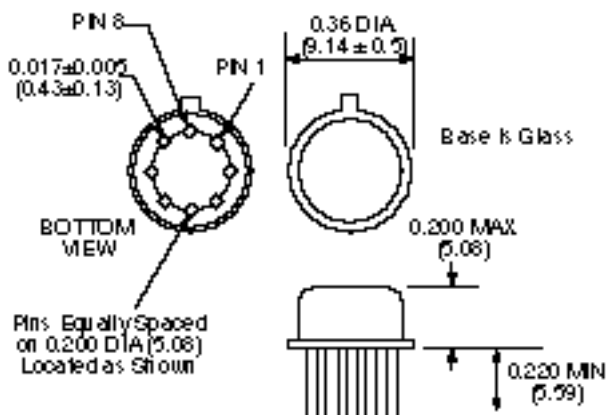
Ordering Information

Part No.	Package
SW-341	Ceramic
SW-342	TO-5-4

SW-341 (CR-2 w/o Pin 1)



SW-342 (TO-5-4)



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)

Absolute Maximum Ratings¹

Parameter	Absolute Maximum
Max. Input Power ²	
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.

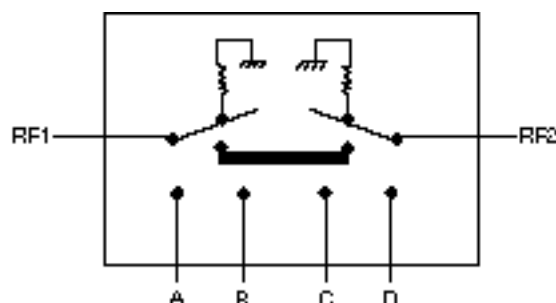
2. When the RFinut power is applied to the terminated port, the absolute maximum is +31 dBm.

Truth Table

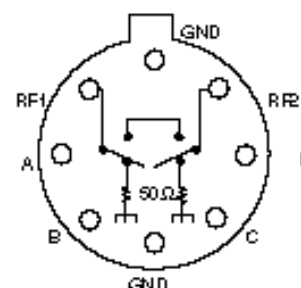
Control Inputs				Condition of Switch
A	B	C	D	RF1-RF2
High	Low	Low	High	On
Low	High	High	Low	Off

Functional Schematics (Top View)

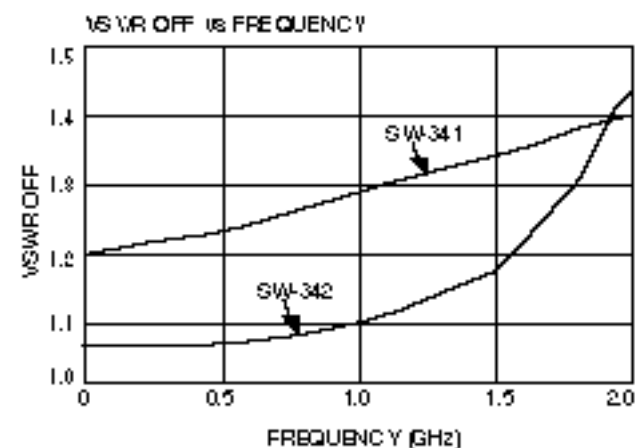
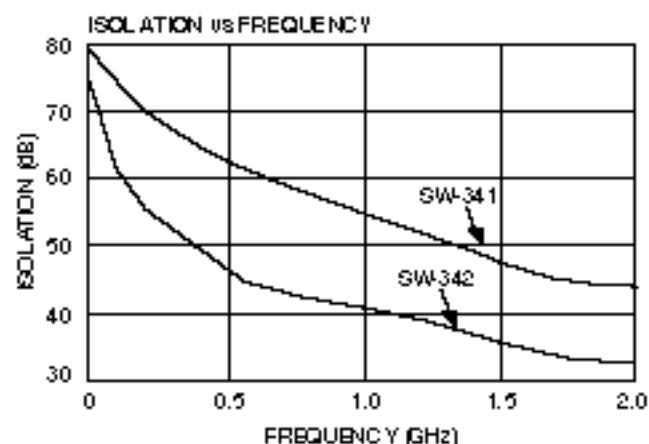
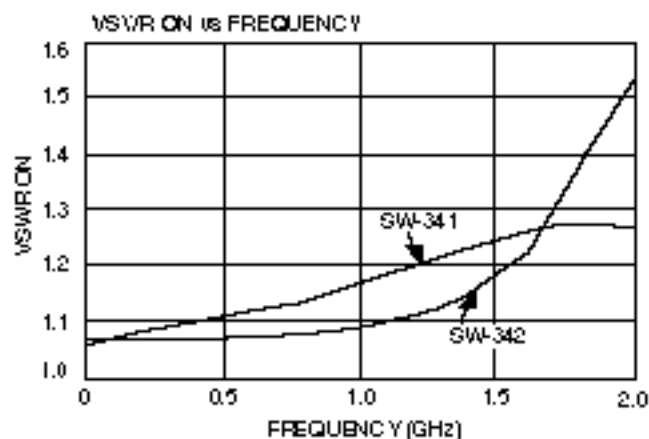
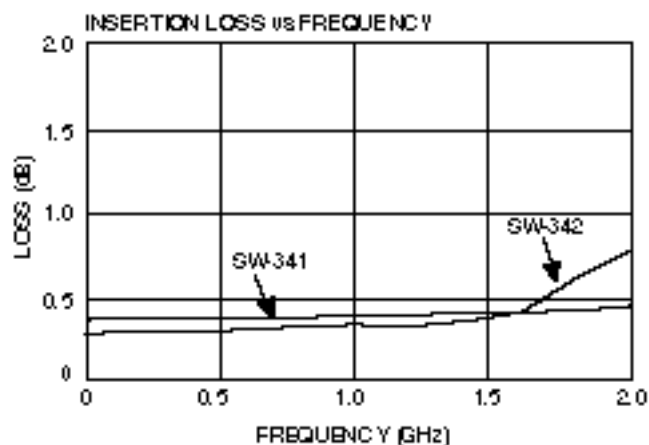
SW-341



SW-342



Typical Performance



Specifications Subject to Change Without Notice.

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