

GaAs Solid State Relay

DC-2 GHz

SW-368

V 2.00

Features

- High IP2 and IP3 at Low Frequencies
- High Compression Point at Low Frequencies
- Low Insertion Loss

Guaranteed Specifications¹

(From -55°C to +65°C)

Frequency Range		DC - 2.0 GHz		
		RF2-RF1	RF1-RFA1 / RF2-RFA2	
Insertion Loss	DC - 2.0 GHz	1.3 dB	1.0 dB	Max
	DC - 1.0 GHz	1.0 dB	0.7 dB	Max
	DC - 0.5 GHz	0.8 dB	0.5 dB	Max
VSWR (On State) Input/Output	DC - 2.0 GHz	1.9:1	1.9:1	Max
	DC - 1.0 GHz	1.4:1	1.4:1	Max
	DC - 0.5 GHz	1.2:1	1.2:1	Max
Isolation	DC - 2.0 GHz	20 dB	10 dB	Min
	DC - 1.0 GHz	25 dB	15 dB	Min
	DC - 0.5 GHz	30 dB	20 dB	Min

Operating Characteristics

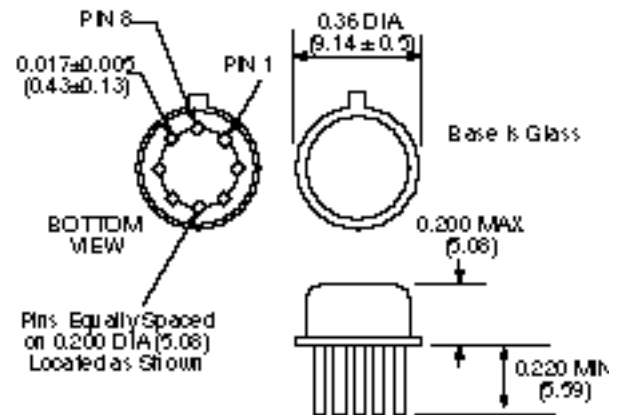
Impedance	50 Ohms Nominal		
Switching Characteristics			
Trise (10% to 90% RF)	27 μs	Typ	
Tfall (90% to 10% RF)	22 ns	Typ	
Ton (50% CTL-90% RF)	29 μs	Typ	
Toff (50% CTL-10% RF)	25 ns	Typ	
Transients (In-Band)	63 mV	Typ	
Input Power for 1 dB Compression			
0.5 to 2.0 GHz	30 dBm	Typ	
0.005 - 0.05 GHz	28 dBm	Typ	
Intermodulation Intercept point (for two-tone input power up to +5 dBm)			
Intercept Points			
0.5 to 2.0 GHz	IP2	IP3	
	+68	+40	dBm Typ
0.005 - 0.05 GHz	+80	+47	dBm Typ
Control Voltage (Complementary Logic)			
Vin Low	-5 to -5V @ 200 μA Max		
Vin High	+3 to +5V @ 100 μA Max		

1. All specifications apply with 50 ohm impedance connected to all RF ports with +5 and -5 V control voltage.
2. Above reference insertion loss.
3. Contact the factory for standard or custom screening requirements.

Ordering Information

Model No.	Package
SW-368 PIN	TO-5-4

TO-5-4



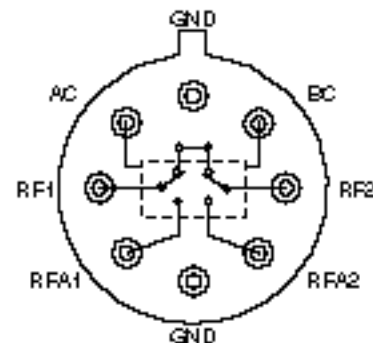
WEIGHT (APPROX.): 0.025 OUNCES 0.7 GRAMS

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)

Functional Schematic (top view)



Truth Table

Control Input		Condition of Switch		
AC	BC	RF1-RF2	RF1-RFA1	RF2-RFA2
-5	+5	OFF	ON	ON
+5	-5	ON	OFF	OFF

Absolute Maximum Ratings

Parameter	Absolute Maximum
Max. Input Power	+34 dBm
Control Voltage	+5.5 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

