



GaAs SPST Switch

DC-3 GHz

SW-212/214

- Fast Switching Speed, 6ns Typical
- Ultra Low DC Power Consumption
- Low Loss (SW-212), Terminated (SW-214)

Guaranteed Specifications*

(From -55°C to +85°C)

Frequency Range		DC-3 GHz		
Model Number		SW-212	SW-214	
Insertion Loss	DC-3 GHz	1.0	1.3	dB Max
	DC-2 GHz	0.9	1.2	dB Max
	DC-1 GHz	0.7	0.9	dB Max
	DC-0.5 GHz	0.7	0.9	dB Max
VSWR	DC-3 GHz	1.8:1	2.0:1	Max
	DC-2 GHz	1.5:1	1.7:1	Max
	DC-1 GHz	1.3:1	1.3:1	Max
	DC-0.5 GHz	1.2:1	1.3:1	Max
Isolation	DC-3 GHz	20	25	dB Min
	DC-2 GHz	22	38	dB Min
	DC-1 GHz	32	45	dB Min
	DC-0.5 GHz	40	50	dB Min

Operating Characteristics

Impedance 50 Ohms Nominal

Switching Characteristics†

t _{RISE} , t _{FALL}	3 ns Typ
t _{ON} , t _{OFF} (50% CTL to 90/100% RF)	6 ns Typ
Transients (In-Band) SW-214	30 mV Typ
Transients (In-Band) SW-212	10 mV Typ

Input Power for 1 dB Compression

Control Voltages (V _{dc})	0/-5	0/-8	
0.5-3 GHz	+27	+33	dBm Typ
0.05 GHz	+21	+26	dBm Typ

Intermodulation Intercept Point (for two-tone input power up to +13 dBm)

Intercept Points	IP ₂	IP ₃	
0.5-3 GHz	+68	+46	dBm Typ
0.05 GHz	+62	+40	dBm Typ

Control Voltages (Complementary Logic)

V _{IN} Low	0 to -0.2V @ 20 μA Max
V _{IN} Hi	-5V @ 50 μA Typ to -8V @ 300 μA Max

Environmental

See Appendix for MIL-STD-883 screening option.

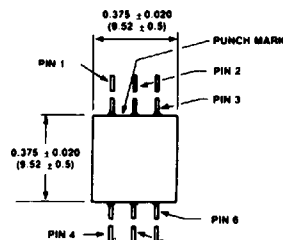
*All specifications apply with 50 ohm impedance connected to all RF ports with 0 and -5 VDC control voltages.

†Faster switching speed can be achieved with enhanced driver waveform.

**For the "Off" switch condition of the SW-212 only, RF1 is an open circuit and RF2 is shorted to case ground.

Ordering Information

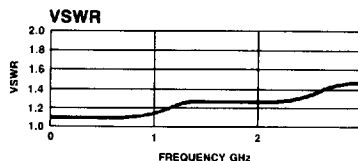
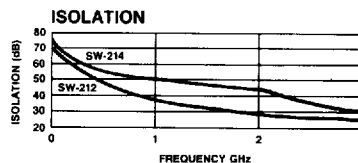
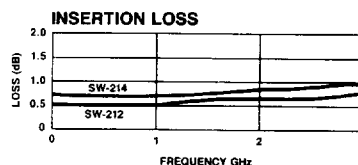
Model No.		Package
SW-212	PIN	Flatpack
SW-214	PIN	Flatpack

FP-13


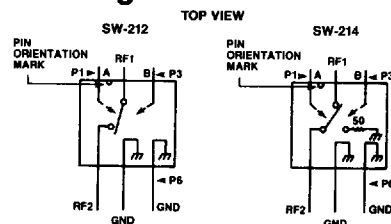
Dimensions in () are in mm.

See Appendix for complete physical dimensions.

Typical Performance



Pin Configuration



Truth Table**

Control Input		Condition Of Switch
A	B	RF1 to RF2
Hi	Low	ON
Low	Hi	OFF

Specifications Subject to Change Without Notice.