GaAs SPST Switch
DC-3 GHz

SW-211/213

- Fast Switching Speed, 6ns Typical
- Ultra Low DC Power Consumption
- Low Loss (SW-211), Terminated (SW-213)

Guaranteed Specifications*

(From −55°C to +85°C)

Frequency Range				DC-3 GHz
Model Number		**SW-211**	**SW-213**	
Insertion Loss	DC-2 GHz	0.9	1.2	dB Max
	DC-1 GHz	0.8	1.0	dB Max
	DC-0.5 GHz	0.7	0.9	dB Max
VSWR	DC-2 GHz	1.6:1	1.6:1	Max
	DC-1 GHz	1.4:1	1.5:1	Max
	DC-0.5 GHz	1.2:1	1.3:1	Max
Isolation	DC-2 GHz	27	38	dB Min
	DC-1 GHz	35	45	dB Min
	DC-0.5 GHz	43	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 90/10% RF)			6 ns Typ
Transients (In-Band) SW-213			30 mV Typ
Transients (In-Band) SW-211			10 mV Typ
Input Power for 1 dB Compression			
Control Voltages (Vdc)	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

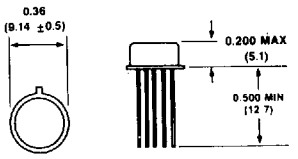
†Faster switching speed can be achieved with enhanced driver waveform

**For the "Off" switch condition of the SW-211 only, RF1 is an open circuit and RF2 is shorted to case ground

Ordering Information

Model No.	Package
SW-211 PIN	TO-5-3
SW-213 PIN	TO-5-3

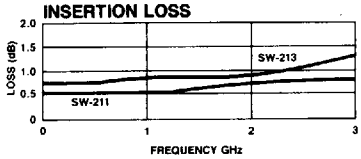
TO-5-3

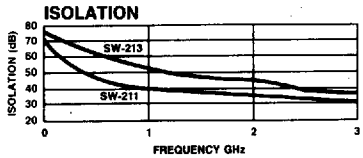


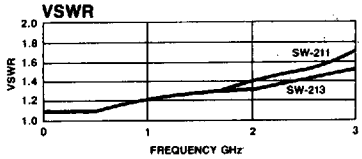
Dimensions in ( ) are in mm.

See Appendix for complete physical dimensions.

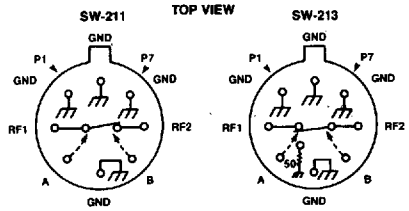
Typical Performance







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.