GaAs SPDT Switch
DC-2 GHz

SW-201/203

V 2.00

Features

- Fast Switching Speed, 6 ns Typical
- Ultra Low DC Power Consumption
- Low Loss (SW-201), Terminated (SW-203)

Guaranteed Specifications *

(From -55°C to +85°C)

Frequency Range				DC-2 GHz
Model Number		**SW-201 (L)**	**SW-203 (T)**	
Insertion Loss	DC-2 GHz	0.9	1.5	dB Max
	DC-1 GHz	0.8	1.1	dB Max
	DC-0.5 GHz	0.7	0.9	dB Max
VSWR	DC-2 GHz	1.5:1	2.0:1	Max
	DC-1 GHz	1.3:1	1.3:1	Max
	DC-0.5 GHz	1.2:1	1.2:1	Max
Isolation	DC-2 GHz	30	38	dB Min
	DC-1 GHz	38	45	dB Min
	DC-0.5 GHz	45	50	dB Min

Operating Characteristics

Impedance			50 Ohms Nominal
Switching Characteristics†			
Trise, Tfall			3 ns Typ
Ton, Toff (50% CTL to 90/10% RF)			6 ns Typ
Transients (In-Band) SW-203			30 mV Typ
Transients (In-Band) SW-201			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 (SW-201/203)		0 to -0.2V @ 20 µA Max	
V_{IN} HI (SW-201)		-5V @ 50 µA Typ to -8V @ 300 µA Max	
V_{IN} Hi (SW-203)		-5V @ 110 µA Typ to -8V @ 600 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.

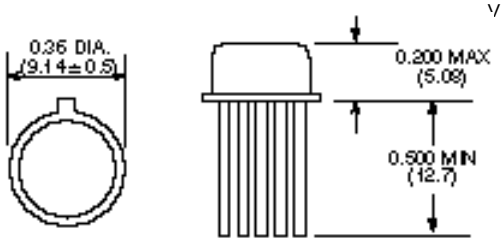
† Faster switching speed can be achieved with enhanced driver waveform.

**For the SW-201, when an RF output is "OFF" it is shorted to case ground.

Ordering Information

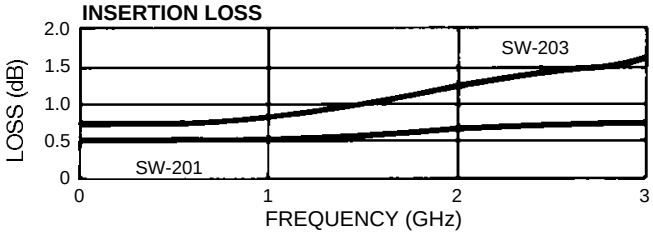
Model No.	Package
SW-201 PIN	TO-5-3
SW-203 PIN	TO-5-3

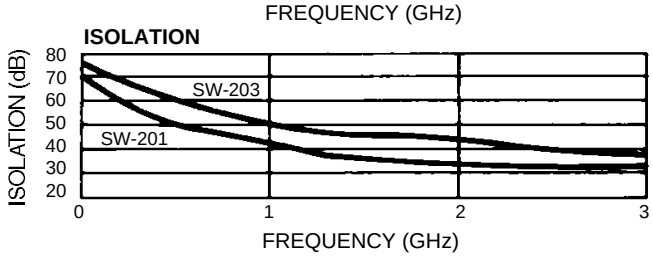
TO-5-3

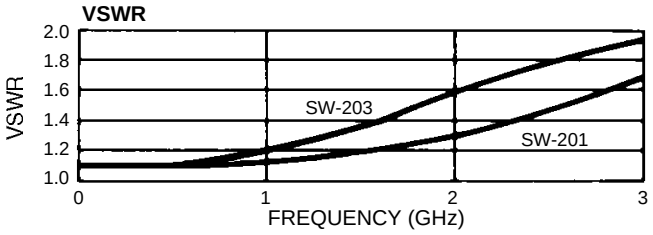


Dimensions in ( ) are in mm.
See Appendix for complete physical dimensions.

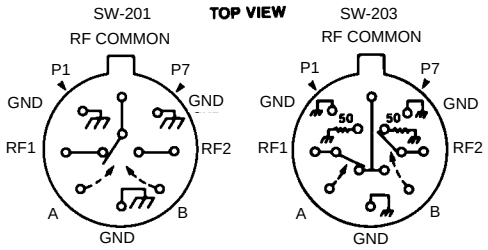
Typical Performance







Pin Configuration



Truth Table**

Control Input		Condition of Switch	
		RF Common To Each RF Port	
A	B	RF1	RF2
Hi	Low	ON	ON
Low	Hi	OFF	ON