GaAs SPDT Switch
DC-4 GHz

SW-226/227/228

V 2.01

Features

- Miniature Ceramic Package
- Terminated (SE-226), High Isolation (SW-227), Low Loss (SW-228)
- Fast Switching Speed, 6 ns Typical
- Ultra Low DC Power Consumption

Guaranteed Specifications *

(From -55°C to +85°C)

Frequency Range					DC-4 GHz
Model Number		**SW-226**	**SW-227**	**SW-228**	
Insertion Loss	DC-4 GHz	1.5	1.4	1.0	dB Max
	DC-2 GHz	1.2	1.1	0.8	dB Max
	DC-1 GHz	1.0	1.0	0.7	dB Max
	DC-0.5 GHz	0.9	0.9	0.7	dB Max
VSWR	DC-4 GHz	2.3:1	2.0:1	1.9:1	Max
	DC-2 GHz	1.6:1	1.6:1	1.3:1	Max
	DC-1 GHz	1.4:1	1.4:1	1.2:1	Max
	DC-0.5 GHz	1.2:1	1.2:1	1.2:1	Max
Isolation	DC-4 GHz	25	35	22	dB Min
	DC-2 GHz	40	40	32	dB Min
	DC-2 GHz	48	50	42	dB Min
	DC-0.5 GHz	53	55	50	dB Min

Operating Characteristics

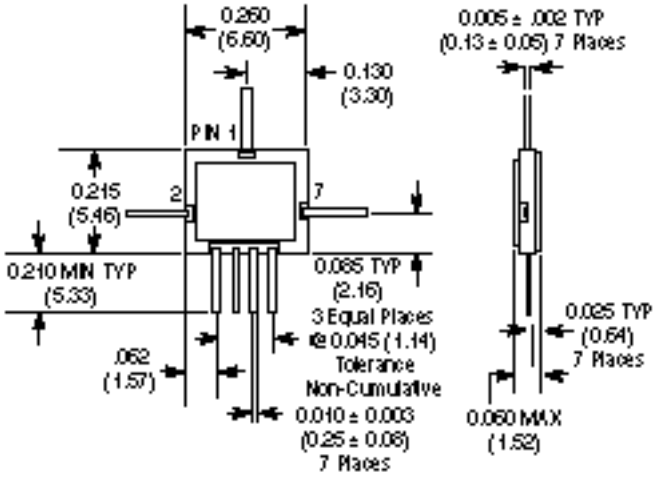
Impedance			50 Ohms Nominal
Switching Characteristics†			
Trise, Tfall			3 ns Typ
Ton, Toff (50% CTL to 90/10% RF)			6 ns Typ
Transients (In-Band) SW-226/227			30 mV Typ
Transients (In-Band) SW-228			10 mV Typ
Input Power for 1 dB Compression			
Control Voltages (Vdc)	0/-5	0/-8	
0.5-4 GHz	+27	+33	dBm 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 - 4 GHz	+68	+46	dBm Typ
0.05 GHz	+62	+40	dBm Typ
Control Voltages (Complementary Logic)			
V_{IN} Low (SW-226/227/228)			0 to -0.2V @ 20 µA Max
V_{IN} Hi (SW-226/227)			-5V @ 110 µA Typ to -8V @ 600 µA Max
V_{IN} Hi (228)			-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 enhaned driver waveform.

** For the SW-227 and SW-228 only, when an RF output is 'OFF' it is shorted to case ground.

CR-2



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)

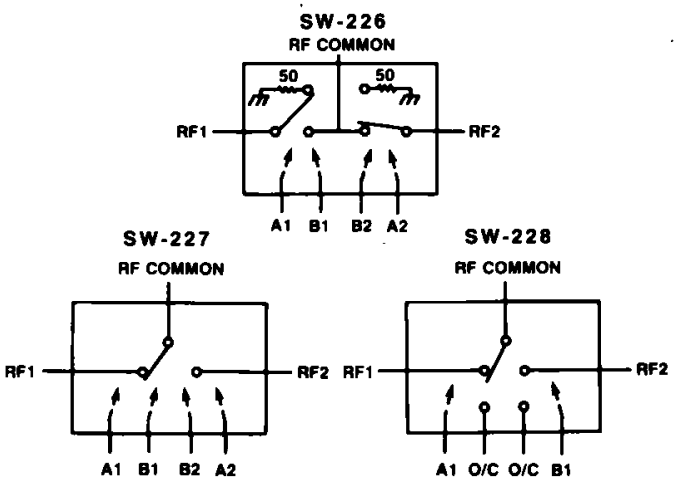
Ordering Information

Model No.	Package
SW-226 PIN	Ceramic
SW-227 PIN	Ceramic
SW-228 PIN	Ceramic

Truth Table**

Control Input					Condition of Switch	
					RF Common To Each RF PORT	
	A1	B1	A2	B2	RF1	RF2
SW-226/227	HI	LO	LO	HI	ON	OFF
	LO	HI	HI	LO	OFF	ON
SW-228	HI	LO	NC	NC	ON	OFF
	LO	HI	NC	NC	OFF	ON

Pin Configuration



Typical Performance