GaAs Transfer Switch
DC - 3 GHz

SW-283

V3.00

Features

- Small Ceramic Package, 0.250" Sq
- Fast Switching Speed, 4 ns Typical
- Ultra Low DC Power Consumption

Guaranteed Specifications* (From -55°C to +85°C)

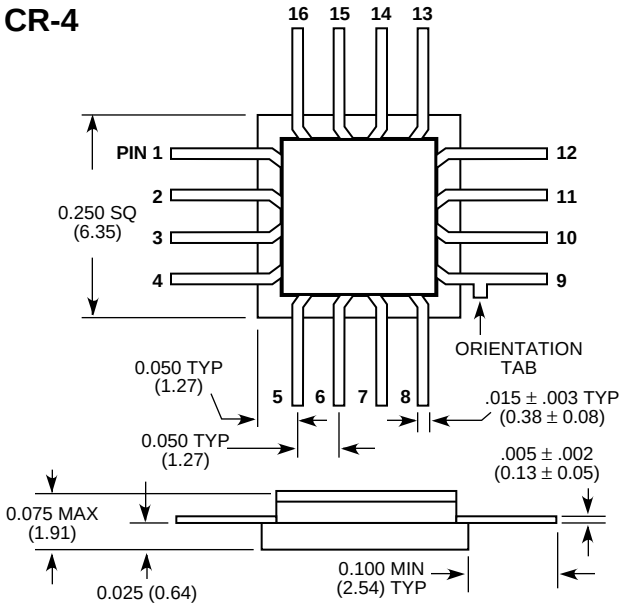
Frequency Range		DC - 3 GHz
Insertion Loss	DC-3 GHz	2.1 dB Max
	DC-2 GHz	1.8 dB Max
	DC-1 GHz	1.3 dB Max
	DC-0.5 GHz	1.0 dB Max
VSWR	DC-3 GHz	1.9:1 Max
	DC-2 GHz	1.7:1 Max
	DC-1 GHz	1.3:1 Max
	DC-0.5 GHz	1.25:1 Max
Isolation	DC-3 GHz	20 dB Min
	DC-2 GHz	25 dB Min
	DC-1 GHz	40 dB Min
	DC-0.5 GHz	45 dB Min

Operating Characteristics

Impedance			50 Ohms Nominal
Switching Characteristics†			
t_{rise}, t_{fall} (10/90% or 90/10% RF)			2 ns Typ
t_{on}, t_{off} (50% control to 90/10% RF)			4 ns Typ
Transients (In-Band)			30 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 +5 dBm)			
Intercept Points	IP_2	IP_3	
0.5-3 GHz	+68	+50	dBm Typ
0.05 GHz	+62	+45	dBm Typ
Control Voltages (Complementary Logic)			
V_{IN} Low			0 to -0.2V @ 5 µA Max
V_{IN} Hi			-5V @ 10 µA Typ to -8V @ 200 µA Max
Environmental MIL-STD-883 screening available.			

* 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.

CR-4



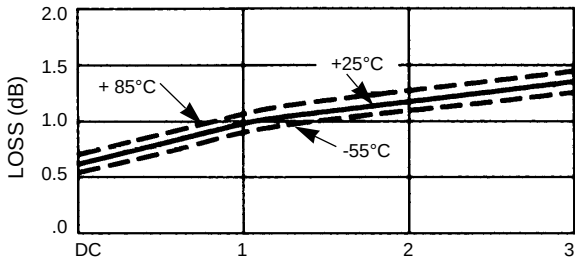
Bottom of case is AC ground.
Dimensions in ( ) are in mm.
Unless Otherwise Noted: .xxx = ±0.010 (.xx = ±0.25)
.xx = ±0.02 (.x = ±0.5)

Ordering Information

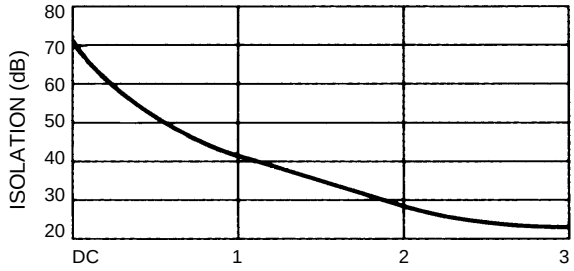
Model No.	Package
SW-283 PIN	Ceramic

Typical Performance

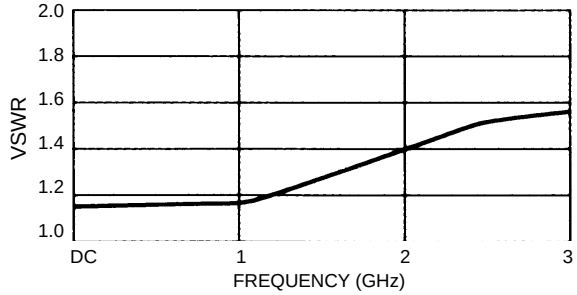
INSERTION LOSS



ISOLATION



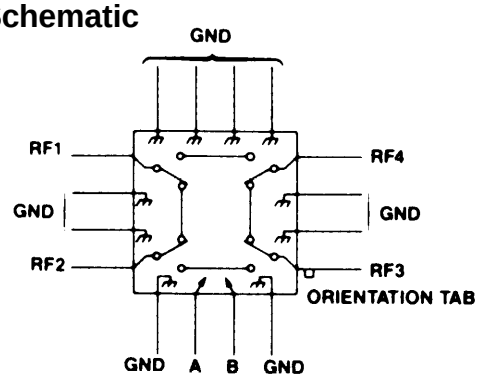
VSWR



Truth Table

Control Input		Condition of Switch			
A	B	RF1-RF2	RF2-RF3	RF1-RF4	RF3-RF4
Hi	Low	OFF	ON	ON	OFF
Low	Hi	ON	OFF	OFF	ON

Schematic



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