

Matched GaAs SP4T Switch

5 - 2000 MHz

SW-254

V2.00

Features

- Low Insertion Loss, 1.0 dB Typical
- Fast Switching Speed, 20 ns Typical
- Ultra Low DC Power Consumption, 0.3 mA Typical
- Integral TTL Driver

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

Frequency Range	5-2000 MHz	5-2000 MHz
Insertion Loss	5-2000 MHz	2.1 dB Max
	5-1000 MHz	1.6 dB Max
	5-500 MHz	1.4 dB Max
VSWR	5-2000 MHz	2.3:1 Max
	5-1000 MHz	1.8:1 Max
	5-500 MHz	1.4:1 Max
Isolation	5-2000 MHz	35 dB Min
	5-1000 MHz	36 dB Min
	5-500 MHz	42 dB Min

Operating Characteristics

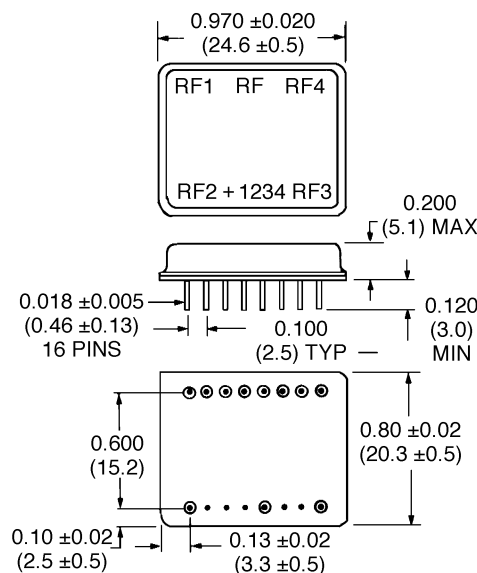
Impedance	50 Ohms Nominal		
Switching Characteristics			
Trise, Tfall	7 ns		
Ton, Toff (50% CTL to 90/10% RF)	20 ns		
Transients (In-Band)	80 mV		
Input Power for 1 dB Compression			
500-2000 MHz	+27 dBm Typ		
50 MHz	+21 dBm Typ		
Intermodulation Intercept Point (for two-tone input power up to +13 dBm)			
Intercept Points	IP ₂	IP ₃	
500-2000 MHz	+68	+46	dBm Typ
50 MHz	+60	+40	dBm Typ
Bias Power	+5 VDC @ 0.30 mA Typ, 1 mA Max		
Environmental			
MIL-STD-883 screening available.			

* All specifications apply when operated with bias voltage of +5 VDC and 50 ohm impedance at all RF ports.

Truth Table

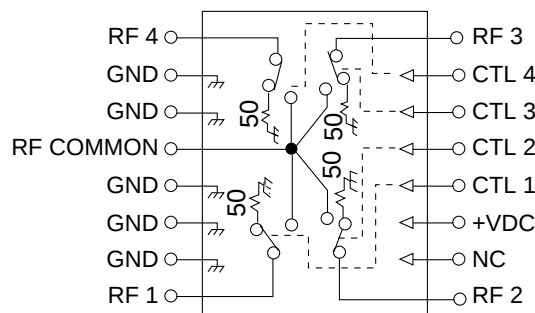
Control Input				Condition of Switch			
"1" = Logic High TTL				RF Common To Each RF Port			
CTL1	CTL2	CTL3	CTL4	RF1	RF2	RF3	RF4
1	0	0	0	ON	OFF	OFF	OFF
0	1	0	0	OFF	ON	OFF	OFF
0	0	1	0	OFF	OFF	ON	OFF
0	0	0	1	OFF	OFF	OFF	ON

DI-5



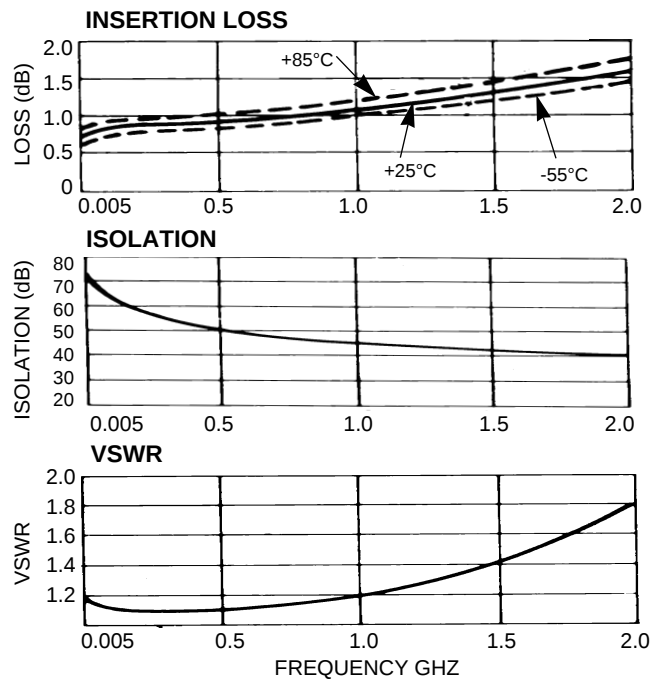
Dimensions in () are in mm.
Unless Otherwise Noted: .xxx = ±0.010 (.xx = ±0.25)
.xx = ±0.02 (.x = ±0.5)
WEIGHT (APPROX.): 0.26 OUNCES 73 GRAMS

Schematic



Ordering Information

Model No.	Package
SW-254 PIN	Dual Inline

Typical Performance

Specifications Subject to Change Without Notice.