

# Matched GaAs SP3T Switch

## 5 - 2000 MHz

SW-241

V2.00

### Features

- Low Insertion Loss, 1.0 dB Typical
- Fast Switching Speed, 20 ns Typical
- Ultra Low DC Power Consumption, 0.22mA Typical
- Integral TTL Driver

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

Frequency Range	5-2000 MHz	
Insertion Loss	5-2000 MHz	2.5 dB Max
	5-1000 MHz	1.7 dB Max
	5-500 MHz	1.4 dB Max
VSWR	5-2000 MHz	2.0:1 Max
	5-1000 MHz	1.6:1 Max
	5-500 MHz	1.4:1 Max
Isolation	5-2000 MHz	35 dB Min
	5-1000 MHz	45 dB Min
	5-500 MHz	55 dB Min

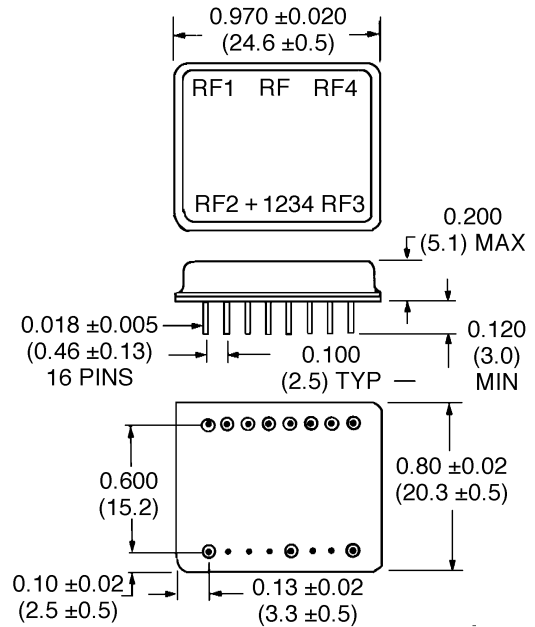
### Operating Characteristics

Impedance	50 Ohms Nominal	
Switching Characteristics	(TTL)	
$t_{RISE}, t_{FALL}$	7 ns	
$t_{ON}, t_{OFF}$ (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 Pt. (for two-tone input power up to +13 dBm)		
Intercept Points	IP <sub>2</sub>	IP <sub>3</sub>
500-2000 MHz	+68	+46
50 MHz	+60	+40
	dBm Typ	
Bias Power	+5 VDC @ 0.22 mA typ mA Max	

Environmental  
MIL-STD-883 screening available.

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

### DI-5

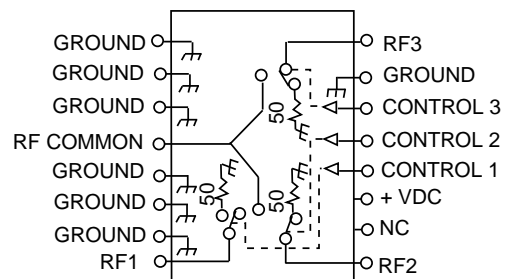


Unless Otherwise Noted: .xxx = ± 0.010 (.xx = ± 0.25)  
 .xx = ± 0.02 (.x = ± 0.5)  
 WEIGHT (APPROX.): 0.26 OUNCES 73 GRAMS

### Truth Table

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

### Schematic



Specifications Subject to Change Without Notice.

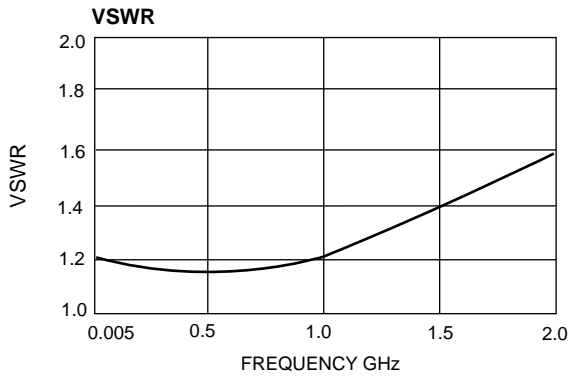
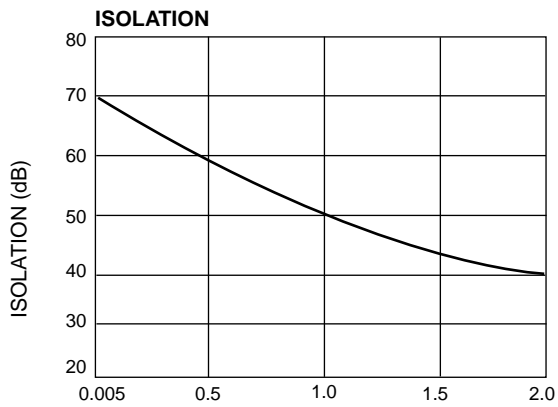
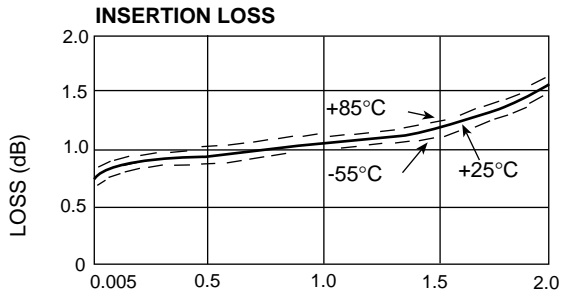
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Typical Performance



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