

# Matched GaAs SPST Switch 5 - 3000 MHz

## SW-215/216

V2.00

### Features

- Low Insertion Loss, 1.0 dB Typical
- Fast Switching Speed, 20 ns Typical
- Ultra Low DC Power Consumption, 0.07mA Typical
- Integral TTL (SW-215) or CMOS (SW-216) Driver

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

Frequency Range	5-3000 MHz	
Insertion Loss	5-3000 MHz	2.9 dB Min
	5-2000 MHz	1.5 dB Min
	5-1000 MHz	1.2 dB Min
	5-500 MHz	1.1 dB Min
VSWR	5-3000 MHz	2.0:1 Max
	5-2000 MHz	1.9:1 Max
	5-1000 MHz	1.4:1 Max
	5-500 MHz	1.25:1 Max
Isolation	5-3000 MHz	27 dB Min
	5-2000 MHz	45 dB Min
	5-1000 MHz	55 dB Min
	5-500 MHz	60 dB Min

### Operating Characteristics

Impedance	50 Ohms Nominal		
Switching Characteristics	SW-215 (TTL)	SW-216 (CMOS)	
	$t_{RISE}, t_{FALL}$	7 ns Typ	20 ns Typ
$t_{ON}, t_{OFF}$ (50% CTL to 90/10% RF)	20ns Typ	40 ns Typ	
Transients (In-Band)	70 mV Typ	35 mV Typ	
Input Power for 1 dB Compression	Model #'s	SW-215	SW-216
	500-4000 MHz	+27	+33
	50 MHz	+21	+26
Intermodulation Intercept Pt. (for two-tone input power up to +13 dBm)			
Intercept Points	IP <sub>2</sub>	IP <sub>3</sub>	
500-4000 MHz	+68	+46	dBm Typ
50 MHz	+60	+40	dBm Typ
Bias Power			
SW-215	+5 VDC @ 0.07 mA Typ, 1 mA Max		
SW-216	+5 to +8 VDC @ 0.07 to 0.22 mA Typ, 1 mA Max		

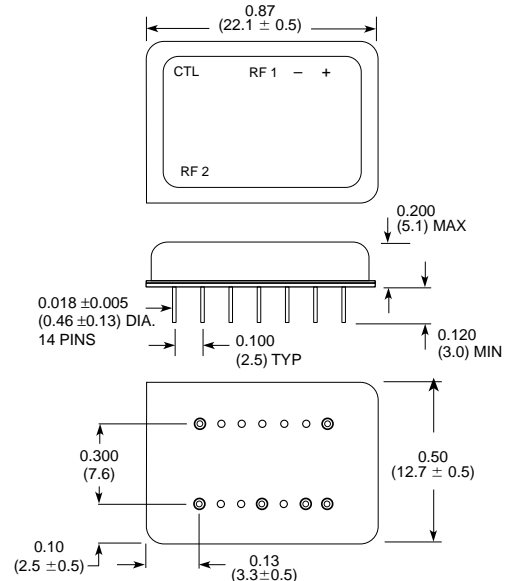
Environmental  
MIL-STD-883 screening available.

\* All specifications apply when operated with bias voltages of +5 VDC (SW-215) or +8 VDC (SW-216) and 50 ohm impedance at all RF ports.

### Ordering Information

Model No.	Package
SW-215 PIN	Dual Inline
SW-216 PIN	Dual Inline

### DI-1



Dimensions in ( ) are in mm.

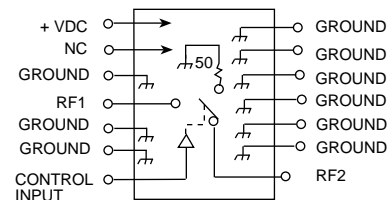
Unless Otherwise Noted: .xxx = ±0.010 (.xx = ±0.25)  
.xx = ±0.02 (.x = ±0.5)

WEIGHT (APPROX): 0.14 OUNCES 4 GRAMS

### Truth Table

Control Input	Condition of Switch
"1" = Logic High TTL (SW-215) CMOS (SW-216)	RF 1 to RF 2
1	ON
0	OFF

### Schematic



Specifications Subject to Change Without Notice.

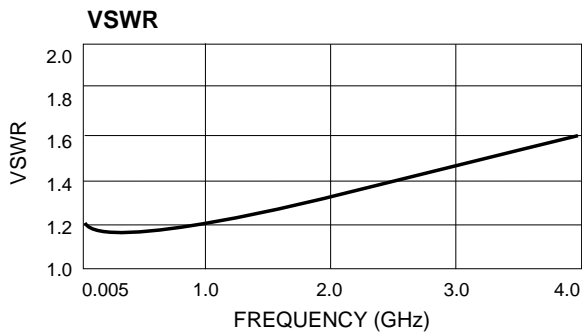
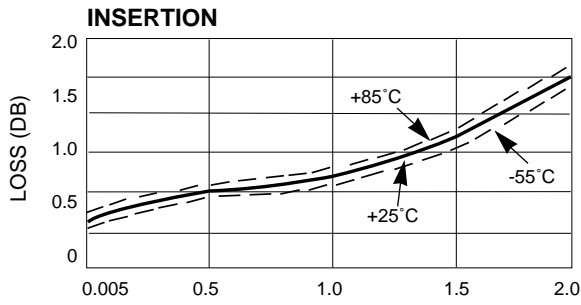
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Typical Performance



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