

# Matched GaAs SPDT Switch

## 5 - 3000 MHz

**SW-205/206**

V2.00

### Features

- High Isolation, 50 dB Typical
- Fast Switching Speed
- Low DC Power Consumption
- Integral TTL (SW-205) or CMOS (SW-206) Driver
- MIL-STD-883 Screening Available

### Guaranteed Specifications\*

(From -55°C to +85°C)

Frequency Range	5-3000 MHz	
Insertion Loss	5-3000 MHz	2.6 dB Max
	5-2000 MHz	2.1 dB Max
	5-1000 MHz	1.6 dB Max
VSWR	5-3000 MHz	2.5:1 Max
	5-2000 MHz	2.0:1 Max
	5-1000 MHz	1.5:1 Max
Isolation	5-3000 MHz	35 dB Min
	5-2000 MHz	40 dB Min
	5-1000 MHz	45 dB Min

### Operating Characteristics

Impedance	50 Ohms Nominal	
Switching Characteristics	SW-205 (TTL)	SW-206 (CMOS)
t <sub>RISE</sub> , t <sub>FALL</sub>	7 ns	20 ns Typ
t <sub>ON</sub> , t <sub>OFF</sub> (50% CTL to 90/10% RF)	20 ns	40 ns Typ
Transients (In-Band)	70 mV	35 mV Typ

### Input Power for 1 dB Compression

Model #'s	SW-205	SW-206	
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)

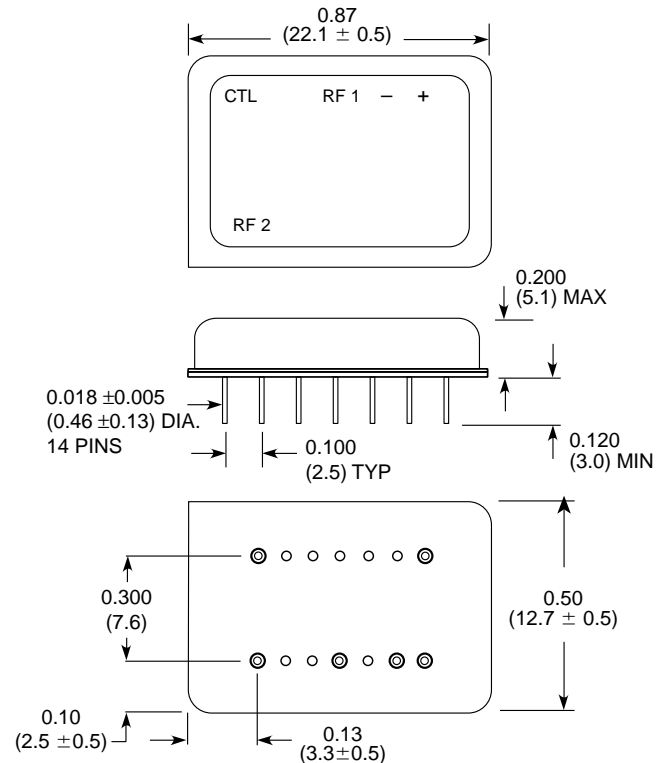
Intercept Points	IP <sub>2</sub>	IP <sub>3</sub>	
0.5-4 GHz	+68	+46	dBm Typ
0.05 GHz	+62	+40	dBm Typ

### Bias Power

SW-205	+5 VDC @ 1 mA Max
SW-206	+5 to +8 VDC @ 0.150 to 0.400 mA Typ, 1 mA Max

\* All specifications apply when operated with bias voltages of +5 VDC (SW-205) or +8 VDC (SW-206) and 50 ohm impedance at all RF ports.

### DI-1



(Positive Voltage Only)

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

### Ordering Information

Part Number	Package
SW-205 PIN	Dual Inline
SW-206 PIN	Dual Inline

Specifications Subject to Change Without Notice.

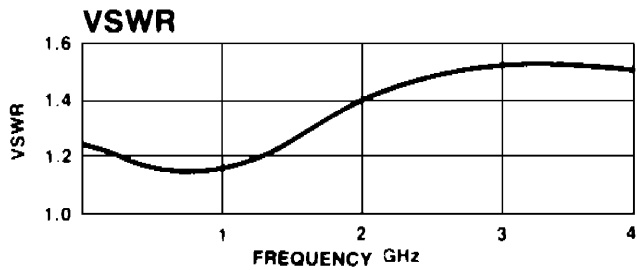
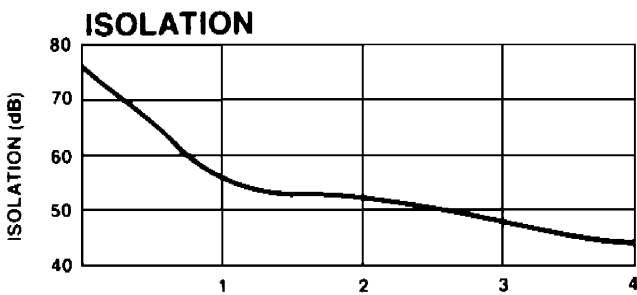
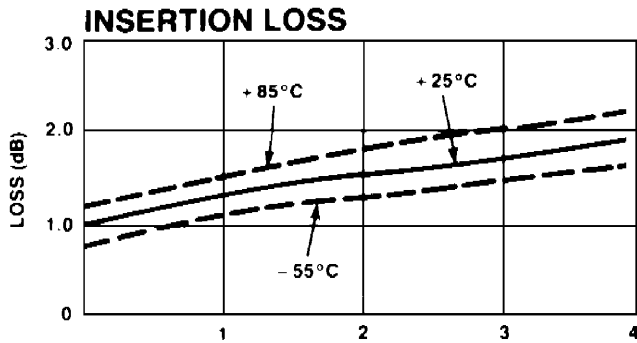
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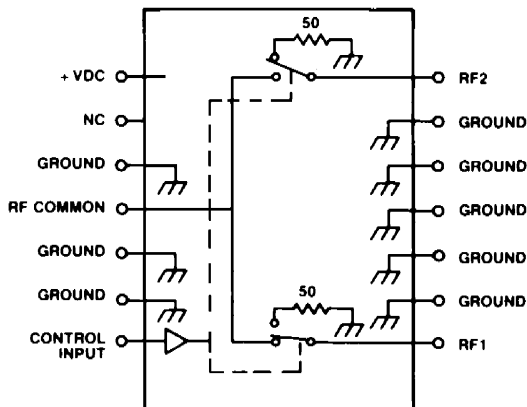
Typical Performance



Truth Table

Control Input	Condition of Switch	
"1" = Logic High	RF Common to Each RF Port	
TTL (SW-205)/CMOS (SW-206)	RF1	RF2
0	ON	OFF
1	OFF	ON

Schematic



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