

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 | SW-206 |
| | (TTL) | (CMOS) |
| t _{RISE} , t _{FALL} | 7 ns | 20 ns Typ |
| t _{ON} , t _{OFF} (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)

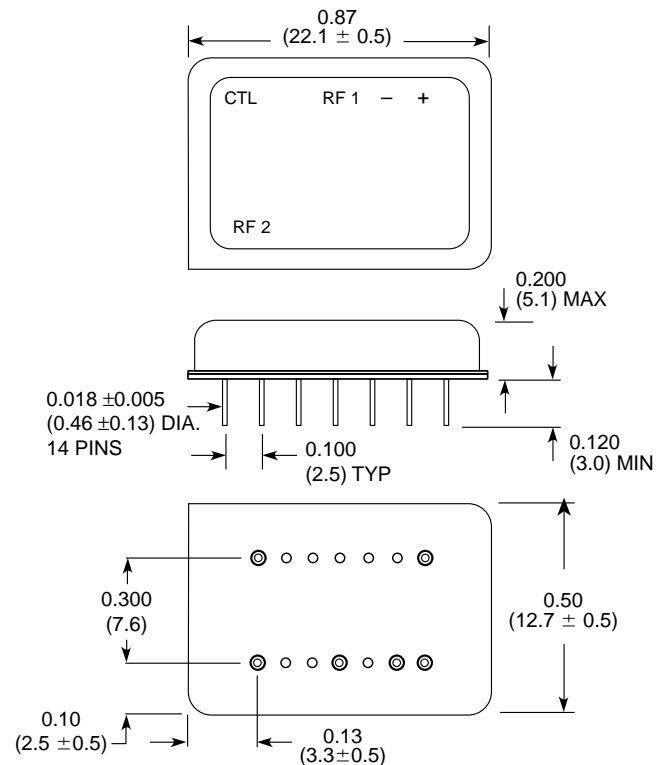
| Intercept Points | IP ₂ | IP ₃ | |
|------------------|-----------------|-----------------|---------|
| 0.5-4 GHz | +68 | +46 | dBm Typ |
| 0.05 GHz | +62 | +40 | dBm Typ |

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.

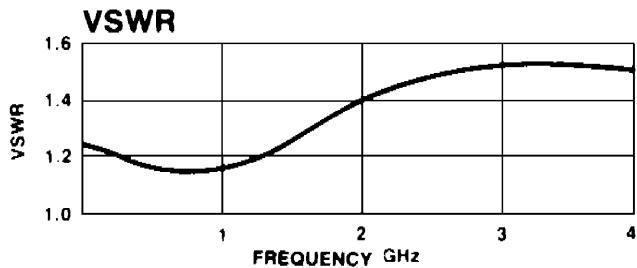
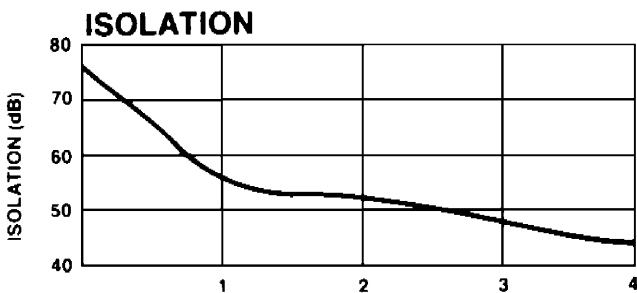
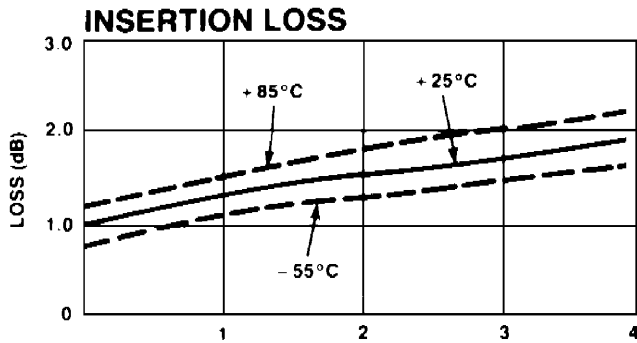
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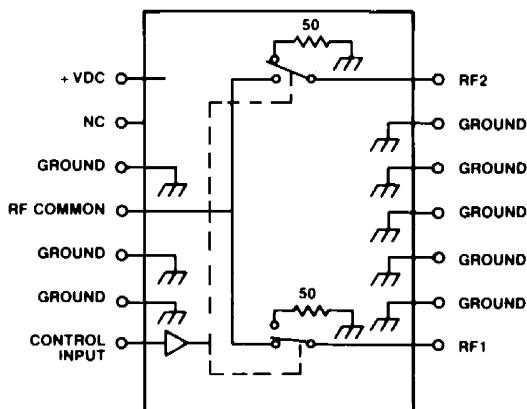
Typical Performance



Truth Table

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

Schematic



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