

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} t_{ON} , t_{OFF} (50% CTL to 90/10% RF) Transients (In-Band) | 7 ns Typ 20ns Typ 70 mV Typ | 20 ns Typ 40 ns Typ 35 mV Typ |
| Input Power for 1 dB Compression Model #'s | SW-215 | SW-216 | |
| | 500-4000 MHz 50 MHz | +27 +26 | +33 +26 dBm Typ dBm Typ |
| Intermodulation Intercept Pt. (for two-tone input power up to +13 dBm) | Intercept Points | IP ₂ | IP ₃ |
| | 500-4000 MHz 50 MHz | +68 +60 | +46 +40 dBm Typ 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 | |

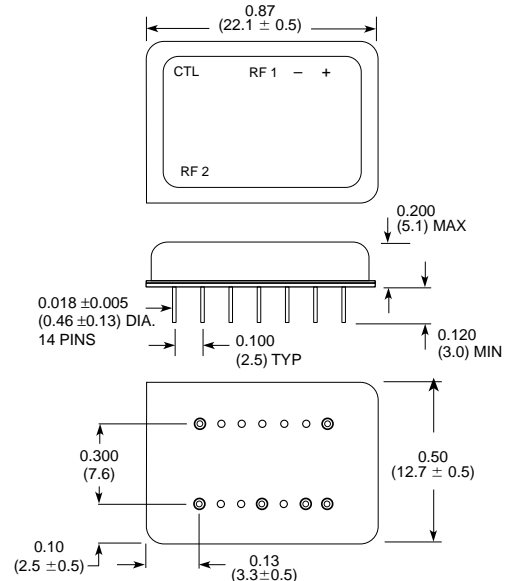
Environmental
MIL-STD-883 screening available.

* 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.

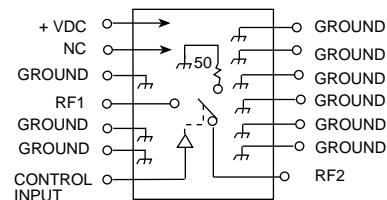
Unless Otherwise Noted: .xxx = ±0.010 (.xx = ±0.25)
.xx = ±0.02 (.x = ±0.5)

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.

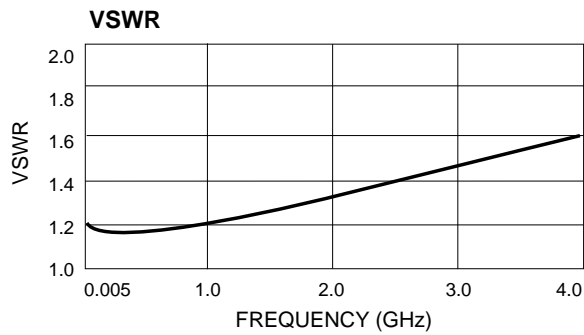
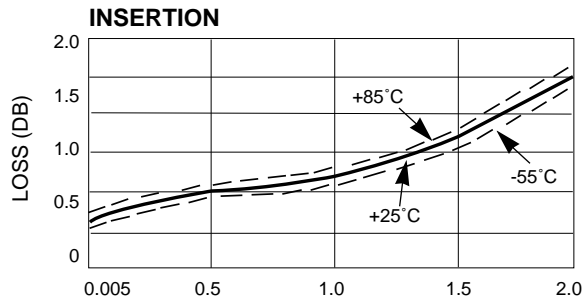
M/A-COM, Inc.

North America: Tel. (800) 366-2266
Fax (800) 618-8883

■ Asia/Pacific: Tel. +81 (03) 3226-1671
Fax +81 (03) 3226-1451

■ Europe: Tel. +44 (1344) 869 595
Fax +44 (1344) 300 020

Typical Performance



Specifications Subject to Change Without Notice.