



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	SW 216
	(TTL)	(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	dBm Typ
50 MHz	+21	+26	dBm Typ

Intermodulation Intercept Pt.
(for two-tone input power up to +13 dBm)

Intercept Points	IP ₂	IP ₃	
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

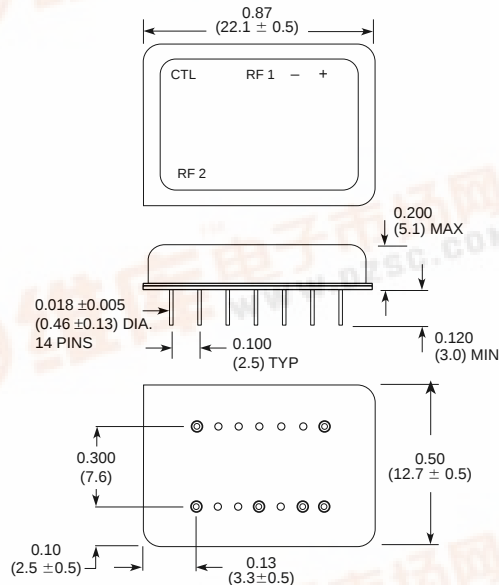
Environmental
MIL-STD-883 screening available.

* 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)

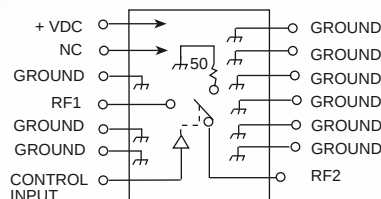
.xx = ±0.02 (.x = ±0.5)

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



Typical Performance

