

GaAs SPDT Switch

5 - 3000 MHz

SW-238

V2.00

Features

- Low Insertion Loss, 0.8 dB Typical
- Fast Switching Speed, 20 ns Typical
- Ultra Low DC Power Consumption, 0.07mA Typical
- CMOS Driver

Guaranteed Specifications*

(From -55°C to +85°C)

Frequency Range	5-3000 MHz	
Insertion Loss	5-3000 MHz	1.5 dB Max
	5-2000 MHz	1.2 dB Max
	5-1000 MHz	1.0 dB Max
	5- 500 MHz	0.9 dB Max
VSWR	5-3000 MHz	1.8:1 Max
	5-2000 MHz	1.6:1 Max
	5-1000 MHz	1.4:1 Max
	5- 500 MHz	1.25:1 Max
Isolation	5-3000 MHz	22 dB Min
	5-2000 MHz	30 dB Min
	5-1000 MHz	40 dB Min
	5- 500 MHz	50 dB Min

Operating Characteristics

Impedance 50 Ohms Nominal

Switching Characteristics

t_{RISE}, t_{FALL}	20 ns Typ
t_{ON}, t_{OFF} (50% CTL to 90/10% RF)	40 ns Typ
Transients (In-Band)	35 mV Typ

Input Power for 1 dB Compression

500-3000 MHz	+ 33 dBm Typ
50 MHz	+ 26 dBm Typ

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

Intercept Points	IP ₂	IP ₃	
500-3000 MHz	+ 68	+ 46	dBm Typ
50 MHz	+ 60	+ 40	dBm Typ

Bias Power

+ 5 to + 8 VDC @ 0.07 to 0.22 mA Typ, 1 mA Max

Environmental

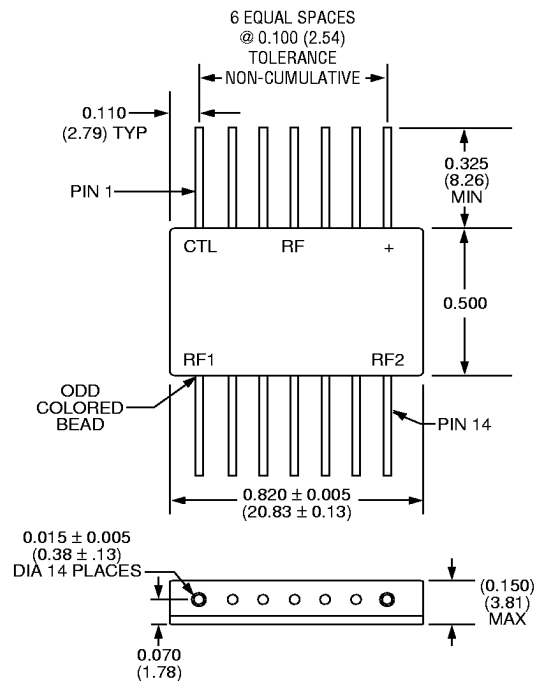
MIL-STD-883 screening available.

*All specifications apply when operated with bias voltage of +8 VDC and 50 ohms impedance at all RF ports.

Ordering Information

Part No.	Package
SW-238 PIN	Flatpack

FP-16



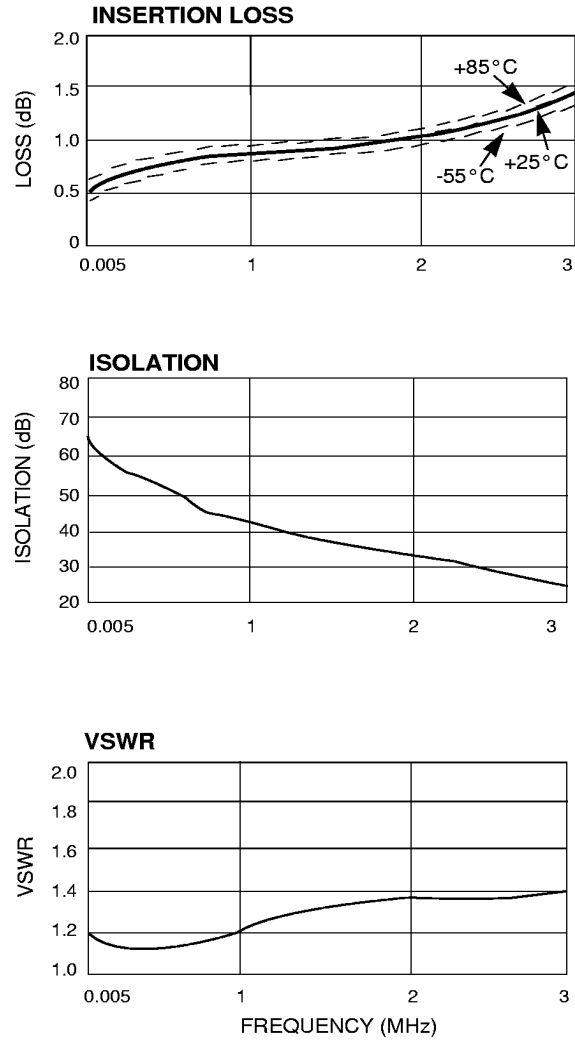
Dimensions in () are in mm.
Unless Otherwise Noted: .xxx = ± 0.010 (.xx = ± 0.25)
.xx = ± 0.02 (.x = ± 0.5)
WEIGHT (APPROX.): 0.14 OUNCES 4 GRAMS

M/A-COM, Inc.

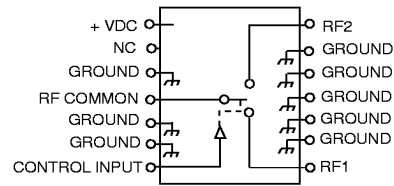
Specifications Subject to Change Without Notice.

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Typical Performance



Schematic



Truth Table

Control Input	Condition of Switch	
"1" = Logic High CMOS	RF Common To Each RF Port	
0	RF1	RF2
	ON	OFF
1	OFF	ON

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