

Matched GaAs SPDT Switch 5-2000 MHz

SW-233/236

V 2.01

Features

- Low Insertion Loss, 1.0 dB Typical
- Fast Switching Speed, 20 ns Typical
- Ultra Low DC Power Consumption, 0.12 mA Typical
- Integral TTL (SW-233) or CMOS (SW-236) Driver

Guaranteed Specifications *

(From -55°C to +85°C)

Frequency Range	5-2000 MHz	
Insertion Loss	5-2000 MHz	1.5 dB Max
	5-1000 MHz	1.2 dB Max
	5- 500 MHz	1.1 dB Max
VSWR	5-2000 MHz	1.9:1 Max
	5-1000 MHz	1.5:1 Max
	5- 500 MHz	1.4:1 Max
Isolation	5-2000 MHz	40 dB Min
	5-1000 MHz	45 dB Min
	5- 500 MHz	53 dB Min

Operating Characteristics

Impedance	50 Ohms Nominal	
Switching Characteristics	SW-233	SW-236
	(TTL)	(CMOS)
Trise, Tfall	7 ns	20 ns Typ
Ton, Toff (50% CTL to 90/10% RF)	20 ns	40 ns Typ
Transients (In-Band)	100 mV	70 mV Typ

Input Power for 1 dB Compression

Model #'s	SW-233	SW-236	
500-2000 MHz	+27	+33	dBm Typ
50 MHz	+21	+26	dBm Typ

Intermodulation Intercept Point

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

Intercept Points	IP ₂	IP ₃	
500-2000 MHz	+68	+46	dBm Typ
50MHz	+60	+40	dBm Typ

Bias Power

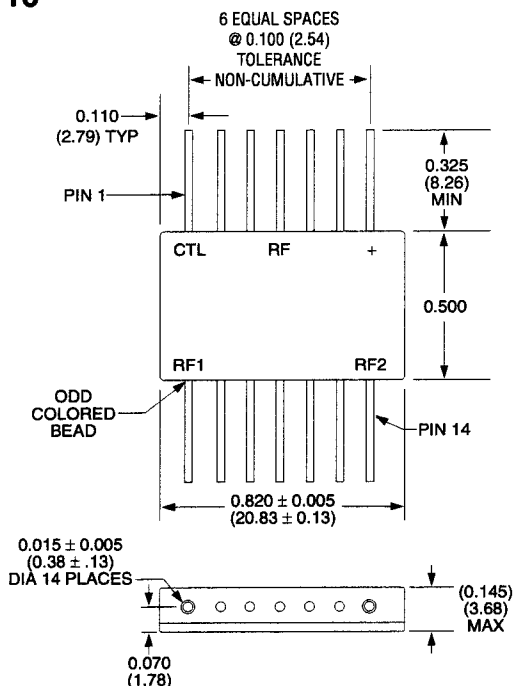
SW-233	+5 VDC @ 0.12 mA Typ, 1 mA Max
SW-236	+5 to +8 VDC @ 0.12 to 0.40 mA Typ, 1 mA Max

Environmental

See Appendix for MIL-STD-883 screening option.

- * All specifications apply when operated with bias voltages of +5 VDC (SW-233) or +8 VDC (SW-236) and 50 ohm impedance at all RF ports.

FP-16



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

Ordering Information

Model No.	Package
SW-233 PIN	Flatpack
SW-236 PIN	Flatpack

Specifications Subject to Change Without Notice.

15-98

M/A-COM, Inc.

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

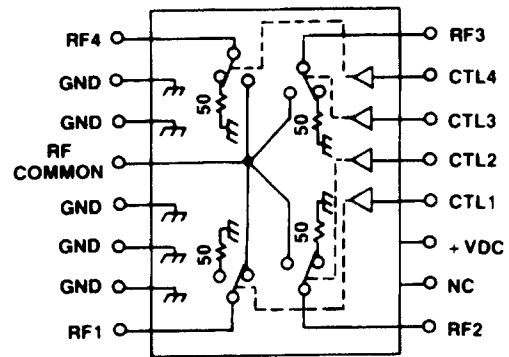
Asia/Pacific: Tel. +81 (03) 3226-1671
Fax +81 (03) 3226-1451

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

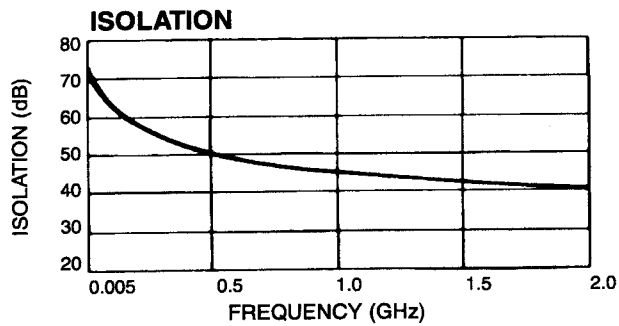
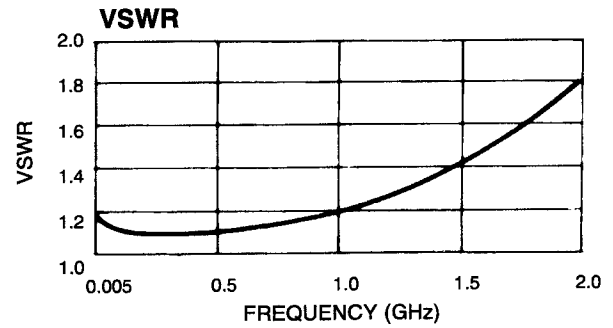
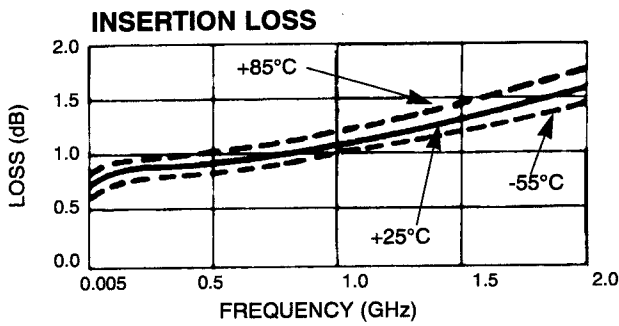
Truth Table

Control Input				Condition of Switch			
"1" = Logic High TTL(SW-261)/CMOS(SW-264)				RF Common To Each RF PORT			
CTL1	CTL2	CTL3	CTL4	RF1	RF2	RF3	RF4
1	0	0	0	ON	OFF	OFF	OFF
0	1	0	0	OFF	ON	OFF	OFF
0	0	1	0	OFF	OFF	ON	OFF
0	0	0	1	OFF	OFF	OFF	ON

Schematic



Typical Performance



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