

Matched GaAs SPDT Switch

5 - 2000 MHz

SW-233/236

V2.00

Features

- Low Insertion Loss, 1.0 dB Typical
- Fast Switching Speed, 20 ns Typical
- Ultra Low DC Power Consumption, 0.12mA Typical
- Integral TTL (SW-233) or CMOS (SW-236) Driver
- MIL-STD-883 Screening Available

Guaranteed Specifications¹ (-55°C to +85°C)

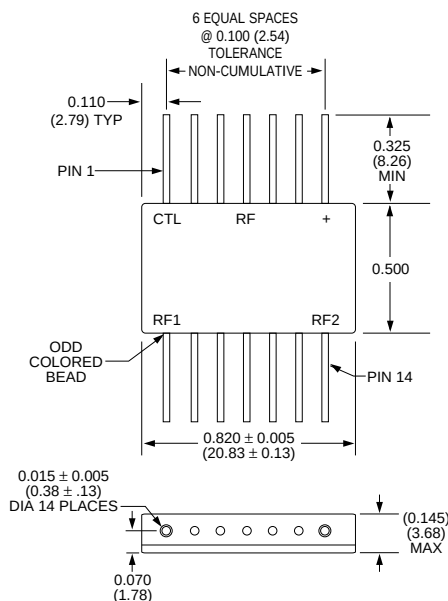
Frequency Range	5-2000 MHz	
Insertion Loss	5-2000 MHz	1.5 dB Max
	5-1000 MHz	1.2 dB Max
	5- 500 MHz	1.1 dB Max
VSWR	5-2000 MHz	1.9:1 Max
	5-1000 MHz	1.5:1 Max
	5- 500 MHz	1.4:1 Max
Isolation	5-2000 MHz	40 dB Min
	5-1000 MHz	45 dB Min
	5- 500 MHz	53 dB Min

Operating Characteristics

Impedance	50 Ohms Nominal	
Switching Characteristics	SW-233 (TTL)	SW-236 (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)	100 mV	70 mV Typ
Input Power for 1 dB Compression		
Model #s	SW-233	SW-236
500-2000 MHz	+27	+33
50 MHz	+21	+26
		dBm Typ
Intermodulation Intercept Pt. (for two-tone input power up to +13 dBm)		
Intercept Points	IP ₂	IP ₃
500-2000 MHz	+68	+46
50 MHz	+60	+40
		dBm Typ
Bias Power		
SW-233	+5 VDC @ 0.12 mA Typ, 1mA Max	
SW-236	+5 to +8 VDC @ 0.12 to 40 mA Typ, 1mA Max	
Control Voltages		
V _{in} Low (0)	0.0 to 1.5V @ 1 μA Max	
V _{in} High (1)	3.5 to 5.0V @ 1 μA Max	

1. 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



Weight (Approx): 0.14 Ounces 4 Grams

Dimensions in () are in mm.
Unless Otherwise Noted: .xxx = ± 0.010 (.xx = ± 0.25)
.xx = ± .002 (.x = 0.5)

Ordering Information

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

Specifications Subject to Change Without Notice.

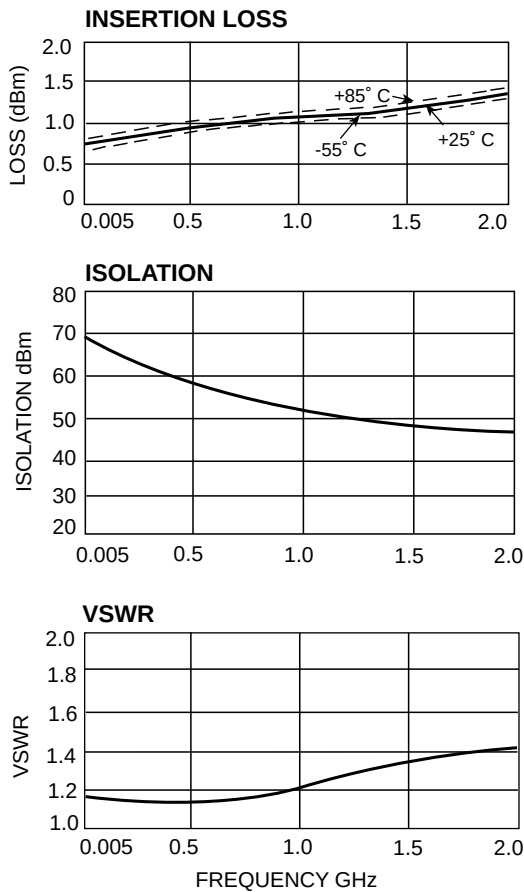
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Typical Performance



Truth Table

Control Input	Condition of Switch	
"1" = Logic High TTL (SW-233) CMOS (SW-236)	RF Common to Each RF Port	
	RF 1	RF 2
0	ON	OFF
1	OFF	ON

Schematic

