

Connectorized SPDT GaAs Switch, DC - 2 GHz

V 4.00

SW-229

Features

- Integrated TTL Driver
- Ultra Low DC Power Consumption
- MIL-STD-883 Screening Available

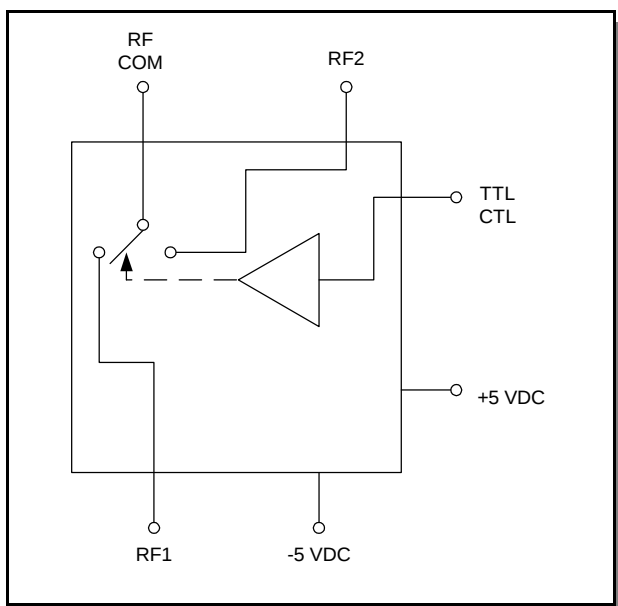
Description

M/A-COM's SW-229 is a connectorized SPDT switch that features ultralow power consumption. SW-229 operates from DC to 2 GHz, which makes it suitable for wideband applications. This switch is packaged in a metal housing with SMA connectors. Due to the internal driver selection transients are 25 mV typical. This switch is ideal for commercial applications that need to be developed quickly.

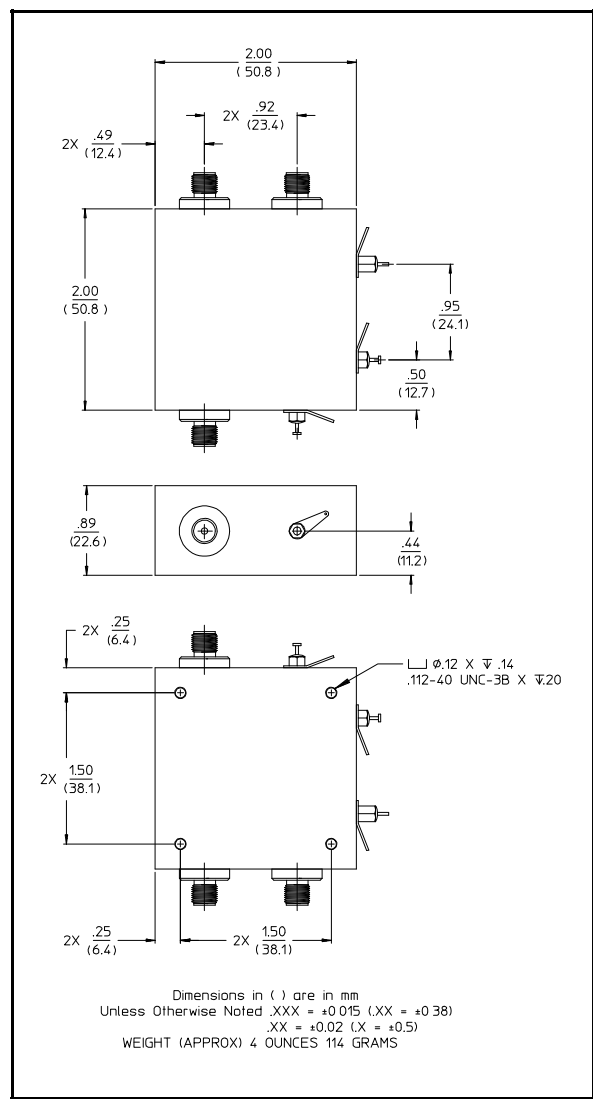
Truth Table

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

Schematic



C-34



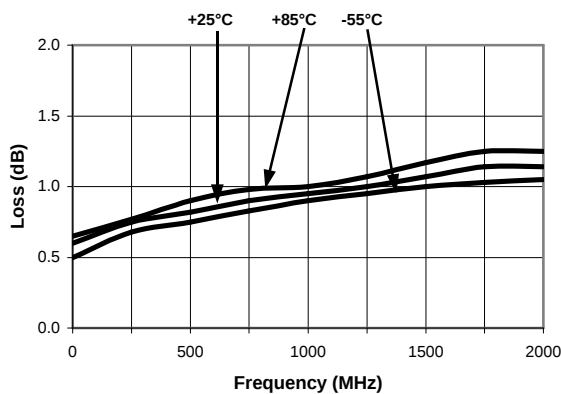
Electrical Specifications¹: $T_A = 25^\circ\text{C}$

Parameter	Test Conditions	Frequency	Units	Min.	Typ.	Max.
Insertion Loss		DC - 2 GHz	dB	—	—	1.5
		DC - 1 GHz	dB	—	—	1.2
		DC - 0.5 GHz	dB	—	—	0.9
VSWR		DC - 2 GHz	Ratio	—	—	2.0:1
		DC - 1 GHz	Ratio	—	—	1.5:1
		DC - 0.5 GHz	Ratio	—	—	1.2:1
Isolation		DC - 2 GHz	dB	25	—	—
		DC - 1 GHz	dB	35	—	—
		DC - 0.5 GHz	dB	40	—	—
Switching Speed	Trise	DC - 2 GHz	nS	—	20	—
	Tfall	DC - 2 GHz	nS	—	45	—
	Ton (50% CTL to 90% RF)	DC - 2 GHz	nS	—	150	—
	Toff (50% CTL to 10% RF)	DC - 2 GHz	nS	—	175	—
	Transients (In-Band)	DC - 2 GHz	mV	—	25	—
1 dB Compression	Input Power	0.5 - 2 GHz	dBm	—	27	—
		0.05 GHz	dBm	—	21	—
IP ₂	+13 dBm Input Power	0.5 - 2 GHz	dBm	—	68	—
		0.05 GHz	dBm	—	62	—
IP ₃	+13 dBm Input Power	0.5 - 2 GHz	dBm	—	46	—
		0.05 GHz	dBm	—	40	—
Bias Current	+5 VDC	—	mA	—	—	1
	-5 VDC	—	mA	—	—	1

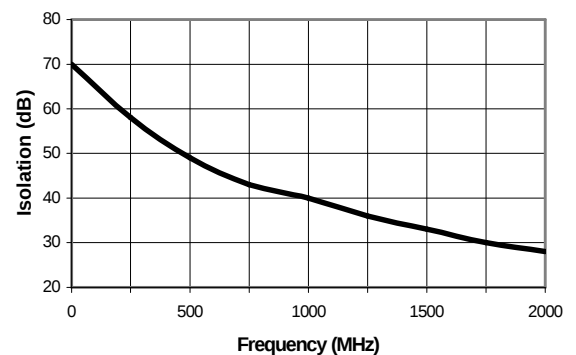
1. All specifications apply with 50 Ohm impedance to all RF ports with TTL control voltages.

Typical Performance Curves

Insertion Loss



Isolation



Specifications subject to change without notice.

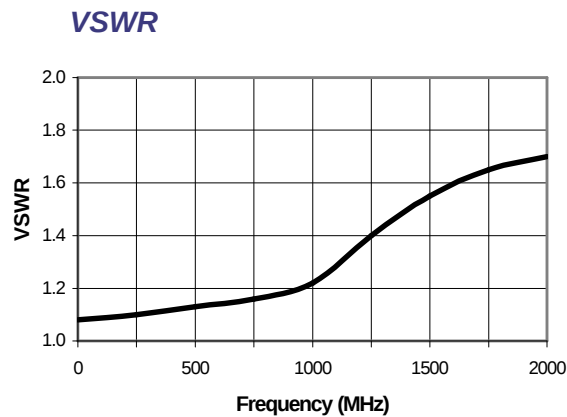
■ North America: Tel. (800) 366-2266
 ■ Asia/Pacific: Tel.+81-44-844-8296, Fax +81-44-844-8298
 ■ Europe: Tel. +44 (1344) 869 595, Fax+44 (1344) 300 020

Visit www.macom.com for additional data sheets and product information.

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Typical Performance Curves



Ordering Information

Part Number	Package
SW-229 SMA	C-34

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