

# Connectorized SPDT GaAs Switch, DC - 2 GHz

SW-229

## Features

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

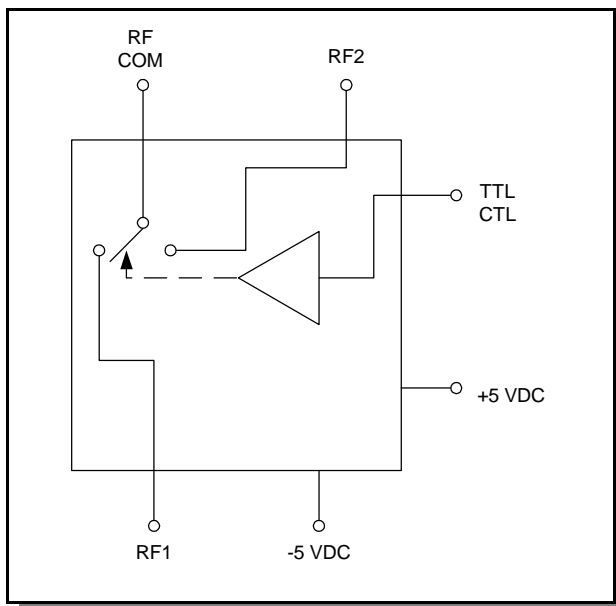
## Description

M/A-COMs 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.

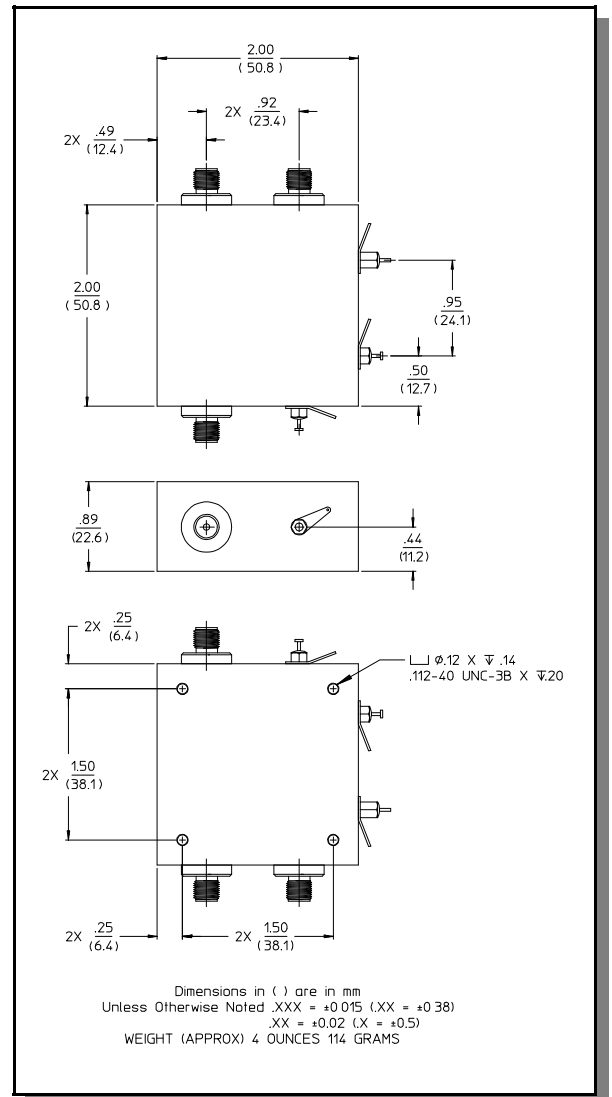
## Truth Table

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

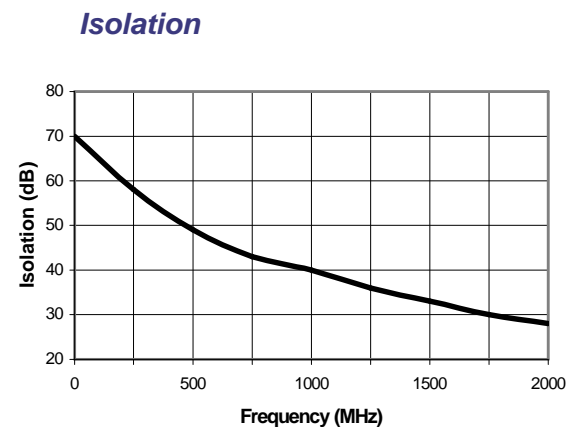
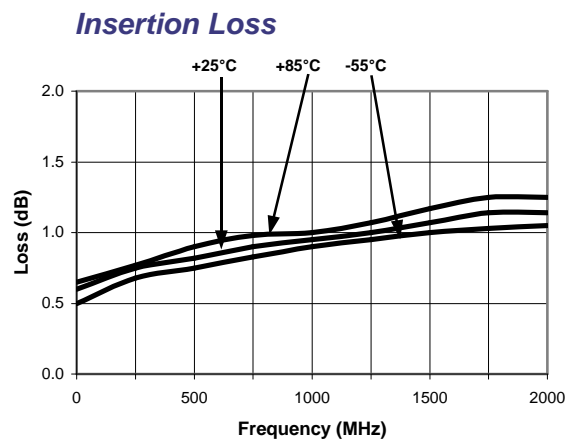


Electrical Specifications<sup>1</sup>: T<sub>A</sub> = 25°C

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 <sub>2</sub>	+13 dBm Input Power	0.5 - 2 GHz	dBm	—	68	—
		0.05 GHz	dBm	—	62	—
IP <sub>3</sub>	+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



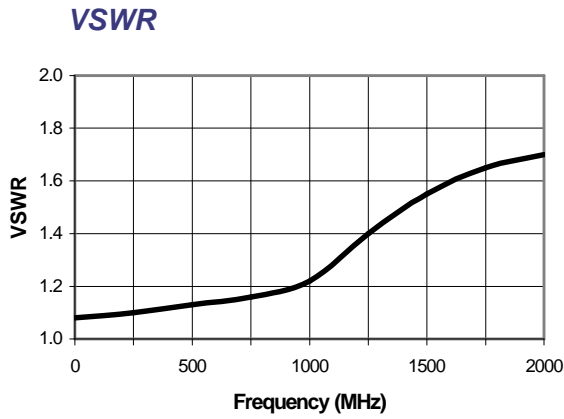
Specifications subject to change without notice.

- 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](http://www.macom.com) for additional data sheets and product information.



Typical Performance Curves



Ordering Information

Part Number	Package
SW-229 SMA	C-34

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](http://www.macom.com) for additional data sheets and product information.

