GaAs SPDT Switch with Integral Driver
0.7–2.0 GHz

NEW July '93 **SW-329**

Features

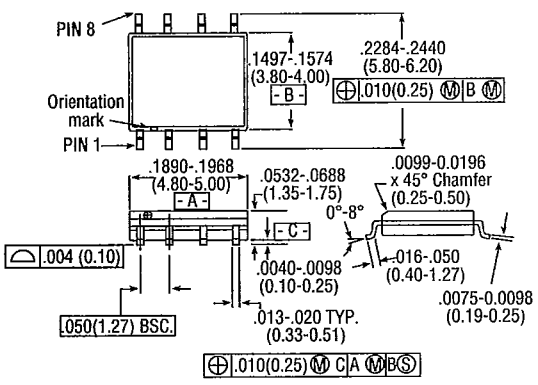
- +5 Volt TTL Compatible Driver[1]
- Matched
- Low Power Consumption, 62 mW Total Current
- Tape and Reel Packaging Available[2]

Description

M/A-COM's SW-329 is a GaAs MMIC matched SPDT switch in a low cost SOIC 8-LD surface mount plastic package.Typical applications include switch matrices and filter banks in systems such as: radio and cellular equipment, PCM, GPS, fiber optic modules, and other battery powered radio equipment.

The SW-329 is fabricated with a GaAs MMIC. The process features a mature 1 micron process and full chip passivation for increased performance and reliability.

SO-8



8- Lead SOP outline dimensions
Narrow body .150
(All dimensions per JEDEC No. MS-012-AA, Issue C)
Dimensions in ( ) are in mm.

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

Electrical Specifications, T_A = 25°C

Parameter	Test Conditions[1]		Unit	Min.	Typ.	Max
Insertion Loss		0.7 – 1.0 GHz 1.0 – 2.0 GHz	dB dB		0.7 0.8	0.8 1.0
Isolation		0.7 – 1.0 GHz 1.0 – 2.0 GHz	dB dB	37 32	45 35	
VSWR		0.7 – 2.0 GHz			1.4:1	1.6:1
Trise, Tfall Ton, Toff Transients	10% to 90% RF, 90% to 10% RF 50% Control to 90% RF, 50% Control to 10% RF In Band		nS µS mV		100 1.5 12	
One dB Compression Point	Input Power	0.7 – 2.0 GHz	dBm		28	
3rd Order Intercept	(for two-tone input power up to +5 dBm)	0.7 – 2.0 GHz	dBm		40	
Harmonic Distortion	+23 dBm Input	0.7 – 2.0 GHz	dBc		-70	

1. Operating voltage tolerances (+5 ± 0.25, -5 ± 0.25), operating temperature range: 0–70°C.
2. Refer to "Tape and Reel Packaging" Section, or contact factory.

Ordering Information

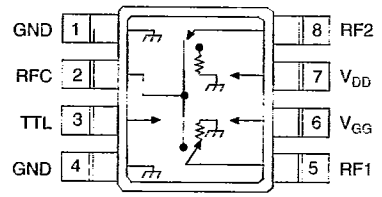
Model No.	Package
SW-329 PIN	SOIC 8 Lead
SW-329TR	Forward Tape & Reel
SW-329RTR	Reverse Tape & Reel

Revised 12/93.
Specifications Subject to Change Without Notice

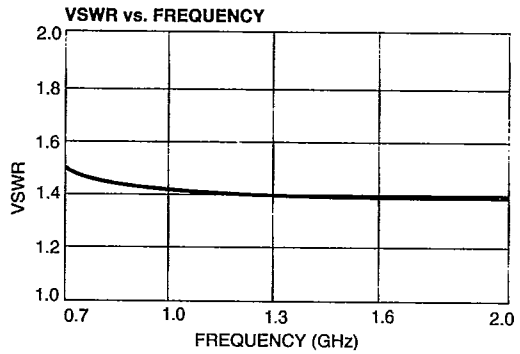
Absolute Maximum Ratings

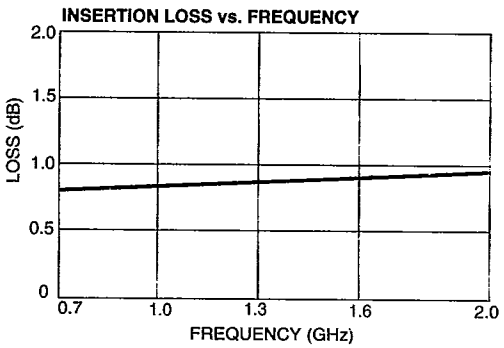
Parameter	Absolute Maximum
Max. Input Power	+33 dBm
Supply Voltage (V_{DD})	+7 volts
(V_{GG})	-7 volts
Operating Temperature	0°C to 70°C
Storage Temperature	-65°C to 150°C

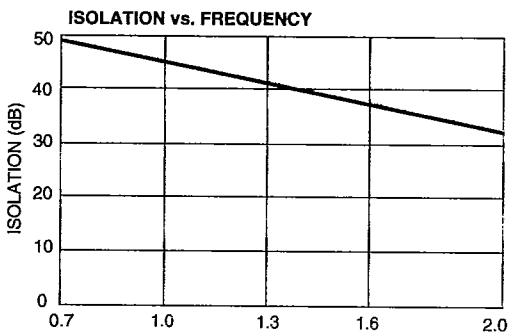
Functional Schematic



Typical Performance







Pin Configuration

Pin No.	Description
1	GND
2	RF COMMON
3	TTL INPUT
4	GND
5	RF1
6	V_{GG}
7	V_{DD}
8	RF2

Truth Table

TTL	RFC-RF2	RFC-RF1
1	Insertion Loss	Isolation
0	Isolation	Insertion Loss

LOGIC 0 = 0 to +1 Vdc
LOGIC 1 = +4 to +5 Vdc
VDD = +5.0 ± 0.25 V
VGG = -5.0 ± 0.25 V

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