



Low Cost GaAs SPDT Switch

0.5 - 3 GHz

SW-374

V1.00

Features

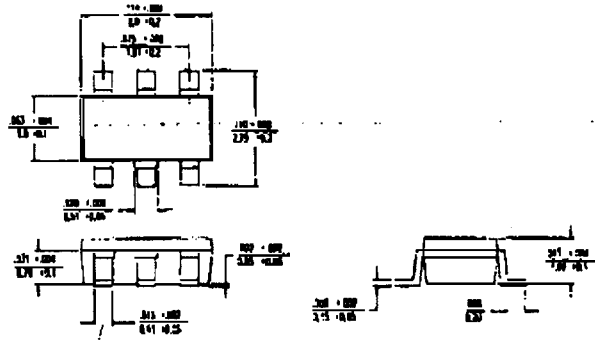
- Low Cost Plastic SOT-26 Package
- Low Insertion Loss: 1 dB @ 900 MHz
- Low Power Consumption: 10µA @ +5V
- Single Supply Voltage +3 to +5V
- Single Positive Control Logic

Description

The M/A-COM SW-374 is a GaAs monolithic switch in a low cost SOT-26 surface mount plastic package. The SW-374 is ideally suited for applications where very low power consumption, low intermodulation products, very small size and low cost are required. Typical applications include switching for radio and cellular equipment, wireless LAN's, 900 MHz ISM band and other RF control circuits.

The SW-374 is fabricated using a mature 1 micron gate length GaAs MESFET process. The process features full passivation for increased performance and reliability.

SOT-26



Ordering Information

Part Number	Package
SW374 PIN	SOT-26 Plastic Package
SW374TR	Forward Tape and Reel *
SW374RTR	Reverse Tape and Reel *

* If specific reel size is required, consult factory for part number assignment.

Electrical Specifications¹: T_A = +25 °C

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Insertion Loss	0.5 - 3 GHz	dB		1.1	
Isolation	0.5 - 1 GHz	dB		23	
	1 - 3 GHz	dB		16	
VSWR	0.5 - 3 GHz			2:1	
1dB Compression	Input Power (3V Control)	0.9 GHz	dBm	26	
	Input Power (5V Control)	0.9 GHz	dBm	31	
Trise, Tfall	10% to 90% RF, 90% to 10% RF	nS		170	
Ton, Toff	50% Control to 90% RF, Control to 10% RF	nS		290	
Transients	In-Band	mV		140	
Input IP2	2-Tone, 5 MHz spacing, +10 dBm (+13 dBm total)	0.9 GHz	dBm	79	
Input IP3	2-Tone, 5 MHz spacing, +10 dBm (+13 dBm total)	0.9 GHz	dBm	49	

1. All measurements at 1 GHz in a 50-Ω system with a 5V control unless otherwise specified. Loss varies at 0.003 dB/°C

Specifications Subject to Change Without Notice.

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SW-374

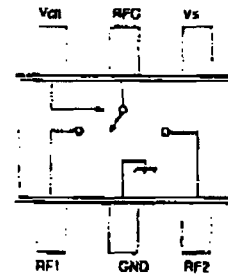
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Phone #	Phone #
Fax # 4001	Fax #

Absolute Maximum Ratings ¹

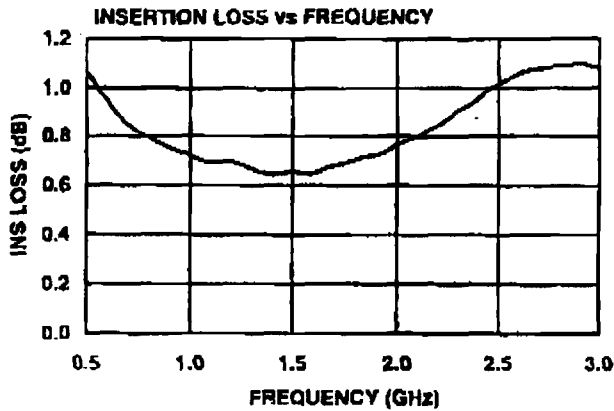
Parameter	Absolute Maximum
Input Power	+34 dBm
Operating Voltage	+8.5 volts
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-65 °C to +150 °C

1. Exceeding any one or combination of these limits may cause permanent damage.

Functional Schematic



Typical Performance

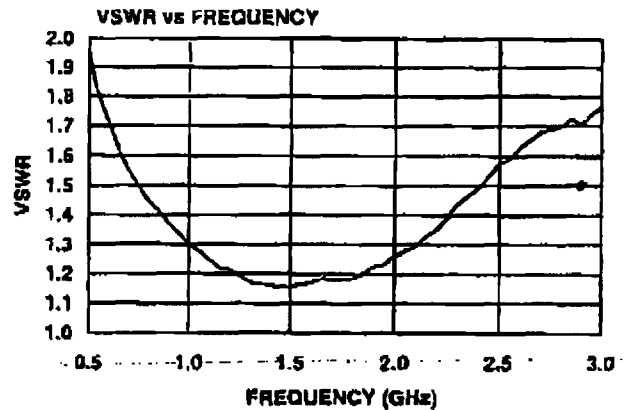
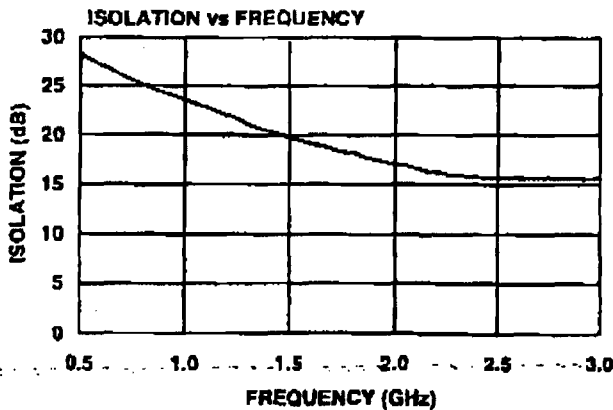


Truth Table

Vctl	RFC-RF1	RFC-RF2
0	on	off
1	off	on

"0" = 0 ± 0.2V

"1" = Vs ± 0.2V where Vs = +3 to +5Vdc



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