

GaAs SPDT Switch DC - 3.0 GHz

Rev. V2

Features

- Low Insertion Loss: 0.4 dB @ 2.4 GHz
- Moderate Isolation: 27 dB @ 2.4 GHz
- Low Power Consumption: 5 μ A @ +3.0 V
- Lead-Free SC-70 (SOT-363) Package
- 100% Matte Tin Plating over Copper
- Halogen-Free "Green" Mold Compound
- RoHS* Compliant and 260°C Reflow Compatible

Description

M/A-COM's MASWSS0136 is a GaAs PHEMT MMIC SPDT switch in a lead-free SC-70 (SOT-363) surface mount plastic package. The MASWSS0136 is ideally suited for applications where very small size and low cost are required.

Typical applications are transmit / receive (Tx / Rx) switching in linear systems such as WLAN 802.11b/g. Other applications include 1.9 GHz and 2.4 GHz DECT and linear systems operating up to 3.0 GHz.

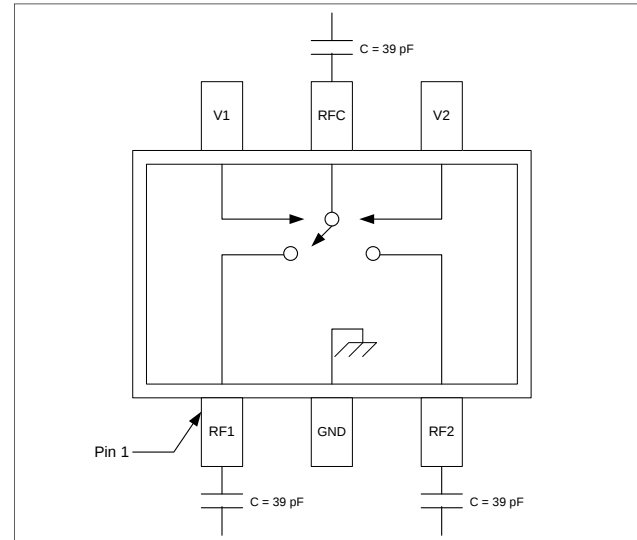
The MASWSS0136 is fabricated using a 0.5 micron gate length GaAs PHEMT process. The process features full passivation for performance and reliability.

Ordering Information¹

Part Number	Package
MASWSS0136	Bulk packaging
MASWSS0136TR-3000	3000 piece reel
MASWSS0136SMB	Sample Board

1. Reference Application Note M513 for reel size information.

Functional Schematic



Pin Configuration

Pin No.	Pin Name	Description
1	RF1	RF Port 1
2	GND	Ground
3	RF2	RF Port 2
4	V2	Control 2
5	RFC	RF Input
6	V1	Control 1

Absolute Maximum Ratings^{2,3}

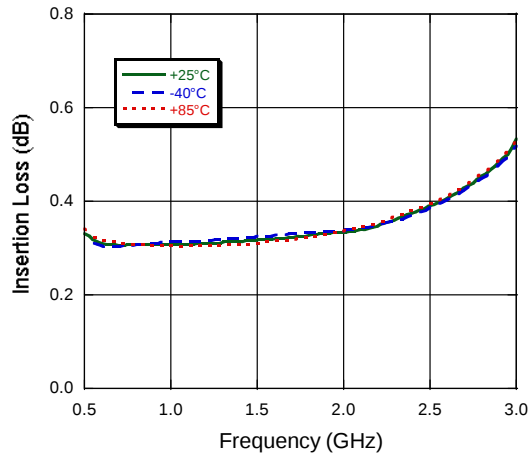
Parameter	Absolute Maximum
Input Power (0.5 - 3.0 GHz) 3 V Control	+30 dBm
Voltage	-8.5 V $\leq$ Vc $\leq$ +8.5 V
Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to +150°C

2. Exceeding any one or combination of these limits may cause permanent damage to this device.
3. M/A-COM does not recommend sustained operation near these survivability limits.

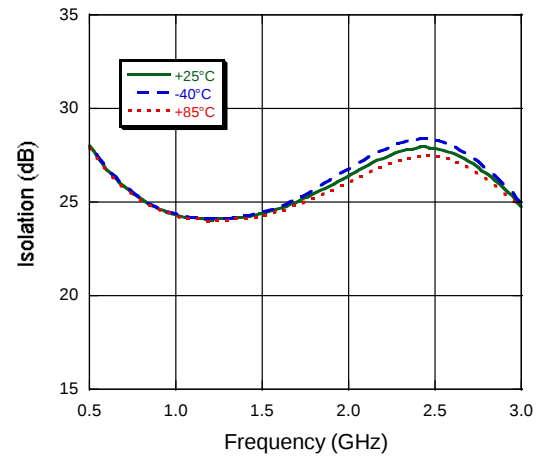
* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

Typical Performance Curves

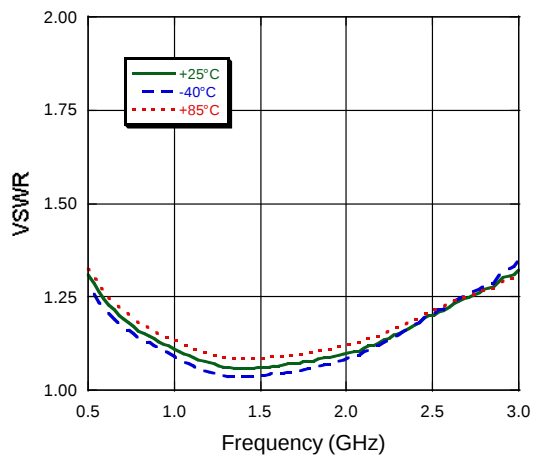
Insertion Loss



Isolation



VSWR



EVM vs. Pout @ 2.5 GHz

