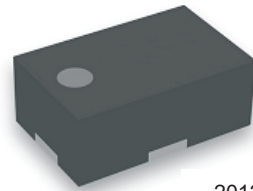


### Features

- Supports up to 40 W Power
- Low Insertion Loss:
  - 0.2 dB to 2.7 GHz
  - 0.4 dB to 10.0 GHz
- High Isolation:
  - 30 dB to 10.0 GHz
- RoHS\* Compliant



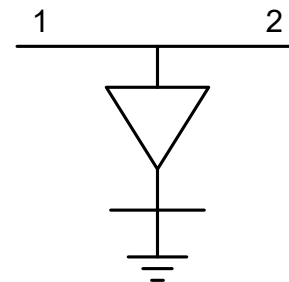
2012

### Description

A broadband, high linearity, medium power shunt switch element in a 1.9 x 1.1 mm DFN package.

This device is designed for wireless telecommunications infrastructure and test instrument applications. It is also suited for other applications in 0.05 ~ 10 GHz.

### Pin Out / Schematic



### Ordering Information

Part Number	Package
MSWSHB-020-30	500 piece reel

### Electrical Specifications: $T_A = +25^\circ\text{C}$

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Breakdown Voltage ( $V_B$ )	$I_R = 10 \mu\text{A}$	V	200	—	—
Insertion Loss ( $I_L$ )	$V_R = 10 \text{ V}, <2.7 \text{ GHz}$ $V_R = 10 \text{ V}, <10.0 \text{ GHz}$	dB	—	0.08 0.40	0.2 0.5
Isolation ( $I_{SO}$ )	$I_F = 20 \text{ mA}, <2.7 \text{ GHz}$ $I_F = 20 \text{ mA}, <10.0 \text{ GHz}$	dB	33 28	40 32	—
Input / Output Return Loss	$V_R = 10 \text{ V}, <2.7 \text{ GHz}$ $V_R = 10 \text{ V}, <10.0 \text{ GHz}$	dB	25 15	28 20	—
Minority Carrier Lifetime ( $T_L$ )	$I_F = 10 \text{ mA}, I_R = 6 \text{ mA}, @ 50\%$	ns	—	4000	—

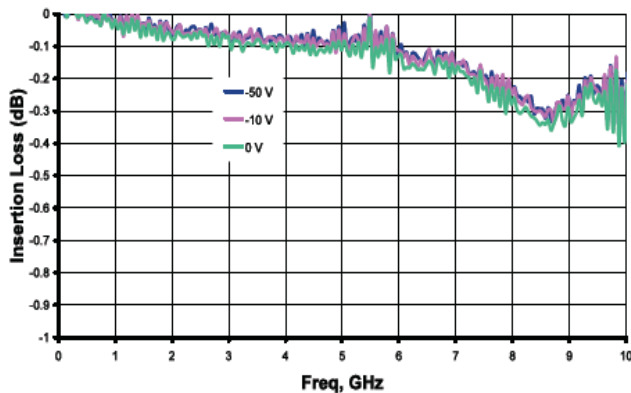
\* Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

### Absolute Maximum Ratings

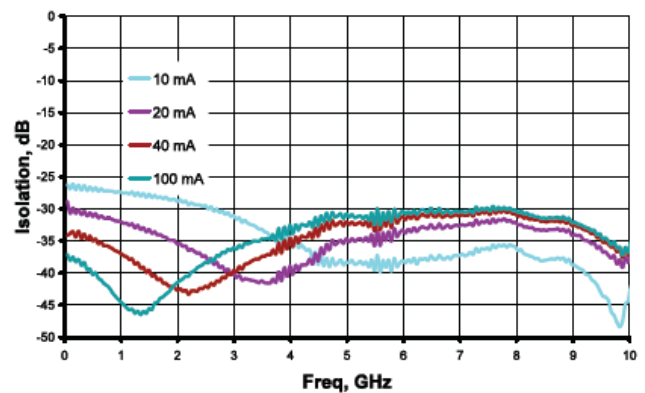
Parameter	Absolute Maximum
Breakdown Voltage	200 V
Forward Current	200 mA
Thermal Resistance	15°C/W
Junction Temperature	+175°C
Storage Temperature	-65°C to +150°C
Assembly Temperature	+260°C Per JEDEC STD-J-20C

### Typical Performance Curves

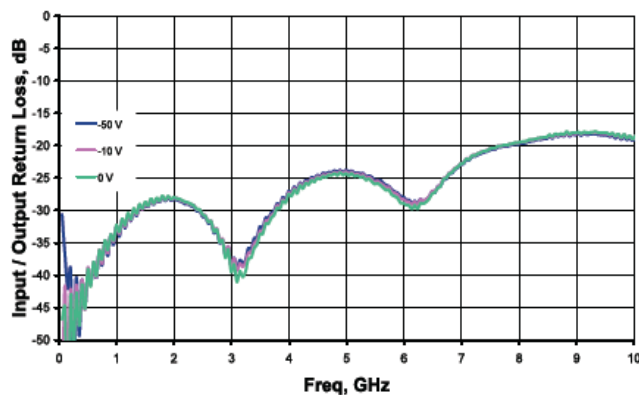
**Insertion Loss**



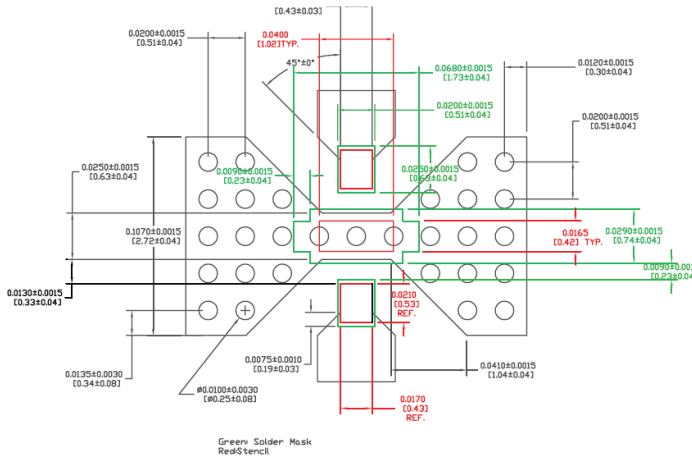
**Isolation**



**Input Return Loss**



### Printed Circuit Board Layout

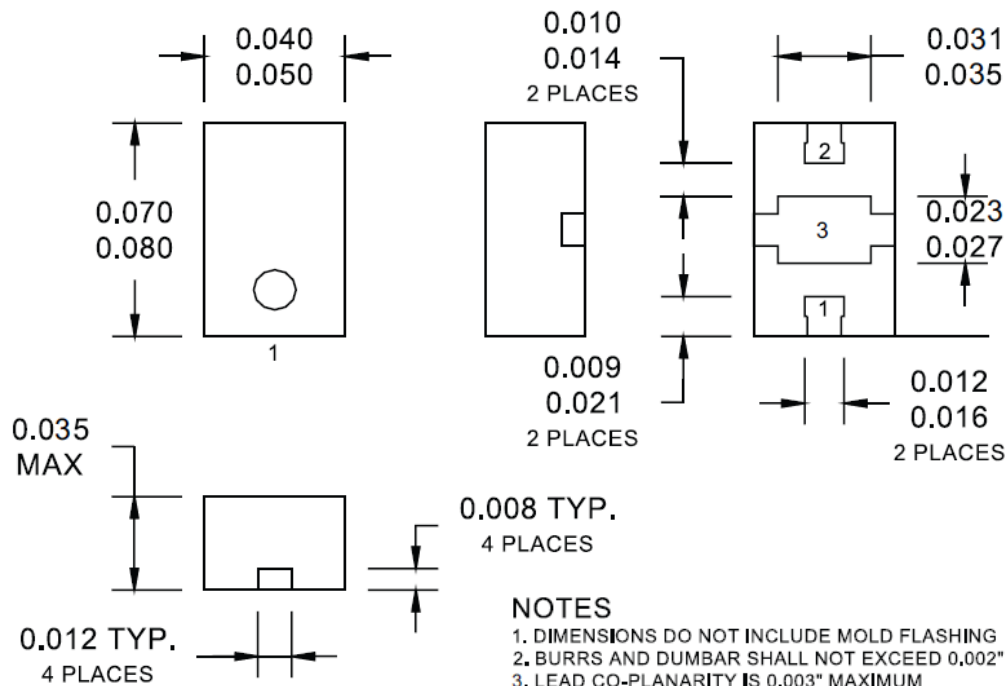


NOTE: If possible, use copper filled vias underneath pin 3 for better thermals; otherwise, use vias that are plated through, filled and plated over.

Solder mask should provide a 60 um clearance between copper pad and soldermask. Rounded pkg pads should have matching rounded solder mask openings.

Use circles or squares for the thermal land stencil such that only get 50% to 80% solder paste coverage.

### Outline (2012)



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