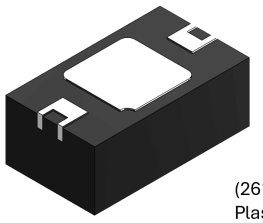
Pin Diode Switch Element

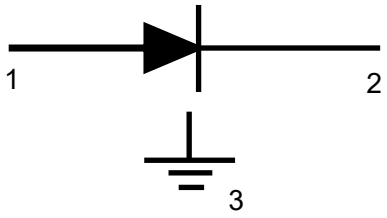
MEST2G-020-15-2
Rev. V2

Features

- Supports up to 20 W Input Power
- Isolation: 14 dB up to 2.7 GHz
- RoHS* Compliant



(2615)
Plastic Molded DFN



Applications

- Wireless Infrastructure
- Test Instruments

Description

The MEST2G-020-15-2 is a broadband medium power switch element in a 2.6 x 1.5 mm DFN package. This device is electrical series and thermal direct to ground (EST2G). This device is designed for wireless infrastructure applications and test instruments. It is also suited for other applications from 100 MHz up to 6 GHz.

Electrical Specifications: T_C = +25°C

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Breakdown Voltage (V_{BR})	I_R = 10 µA	V	150	—	—
Lifetime (t)	I_F = 10 mA, I_R = 6 mA, 10% / 90%	ns	—	120	—
Series Resistance (R_S)	I_F = 100 mA, 50 MHz	Ω	—	1.2	—
Junction Capacitance (C_J)	V_R = -10 V, 1 MHz	pF	—	0.08	—
Insertion Loss (IL)	I_F = 50 mA, 2.7 GHz I_F = 50 mA, <6 GHz	dB	—	0.2 0.3	0.3 —
Input Return Loss (RL)	I_F = 50 mA, 2.7 GHz I_F = 50 mA, <6 GHz	dB	16 11	20 —	—
Isolation (ISO)	V_R = -10 V, 2.7 GHz V_R = -10 V, < 6 GHz	dB	12 6	14 8	—

Ordering Information

Part Number	Package
MEST2G-020-15-2	bulk

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

Absolute Maximum Ratings[1,2]

Parameter	Absolute Maximum
Breakdown Voltage (V_R)	150 V
Forward Current (I_F)	100 mA
Theta (θ_{JC})	50°C/W
Junction Temperature (T_J)	175°C
Storage Temperature (T_{STG})	-65°C to +150°C
Mounting Temperature (T_{MTG})	+260°C per JEDEC STD-J-20C

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

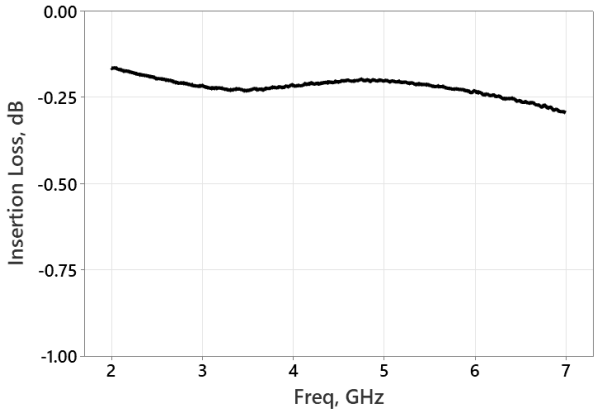
Handling Procedures

Please observe the following precautions to avoid damage:

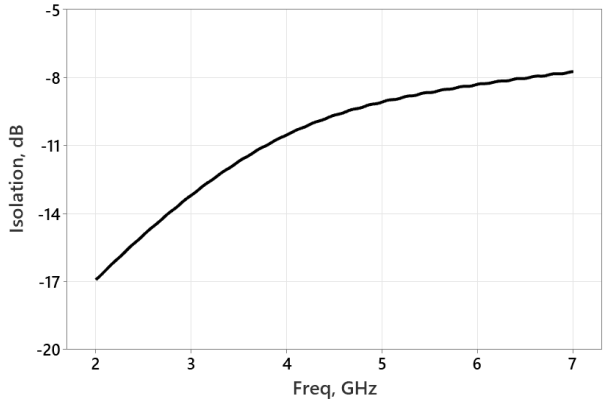
Static Sensitivity

These electronic devices are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

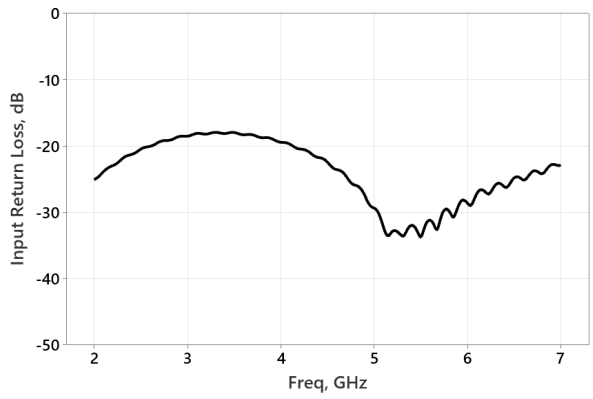
Insertion Loss, 50 mA



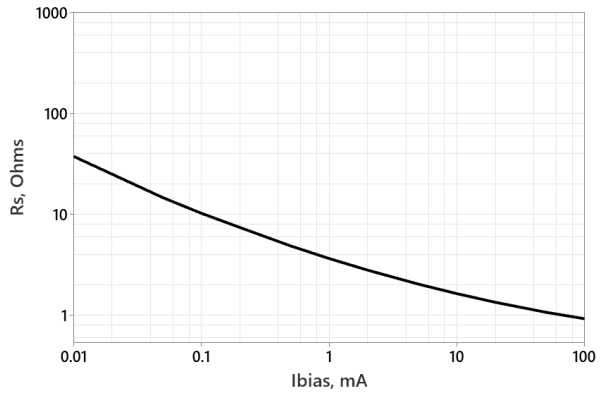
Isolation, -10 V



Return Loss, 50 mA



Series Resistance vs Current



Package Outline