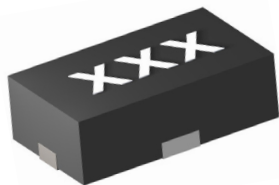


MEST²G-050-80

PIN DIODE SWITCH ELEMENT



2615
(Plastic Molded DFN)



Description

A broadband medium power switch element in a 2.6 X 1.5 mm DFN package. This device is Electrical Series with Thermal to Ground (EST2G). This device is designed for wireless infrastructure applications and test instruments. It is also suited for other applications from 45 MHz up to 1.5 GHz.

Features

- Supports up to 50 watts power
- Low insertion loss typical 0.1 dB up to 1.5 GHz
- High Isolation typical 19 dB typical at 0.5 GHz

Maximum Ratings

| RATING | LIMITS | UNITS |
|---------------|-----------------------------|-------|
| V_R | 500 | V |
| I_F | 300 | mA |
| θ_{JC} | 6 | °C/W |
| T_J | +175 | °C |
| T_{STG} | -65 to +150 | °C |
| T_{MTG} | +260 °C per JEDEC STD-J-20C | |

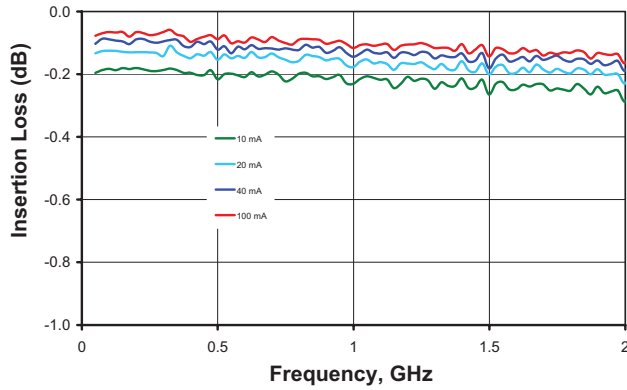
Electrical Characteristics, $T_c = +25\text{ °C}$

| SYMBOL | TEST CONDITIONS | | | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|----------|---------------------------|----------------------|-----------------------|---------|---------|---------|-------|
| V_{BR} | $I_R = 10\ \mu\text{A}$ | | | 500 | – | – | V |
| R_S | $I_F = 100\ \text{mA}$ | | | – | 0.5 | 0.7 | Ohms |
| τ | $I_F = 10\ \text{mA}$ | $I_R = 6\ \text{mA}$ | 10% / 90% | – | 2200 | – | ns |
| Cj | $V_r = 50\ \text{volts}$ | | $F = 1.0\ \text{MHz}$ | – | 0.28 | 0.35 | pF |
| I_L | $I_F = 100\ \text{mA}$ | | $F = 1.5\ \text{GHz}$ | – | 0.1 | 0.2 | dB |
| IRL | $I_F = 100\ \text{mA}$ | | $F = 1.5\ \text{GHz}$ | 20 | 25 | – | dB |
| I_{So} | $V_R = -10\ \text{Volts}$ | | $F = 0.5\ \text{GHz}$ | 17 | 19 | – | dB |
| | | | $F < 1.5\ \text{GHz}$ | 9 | 11 | – | dB |

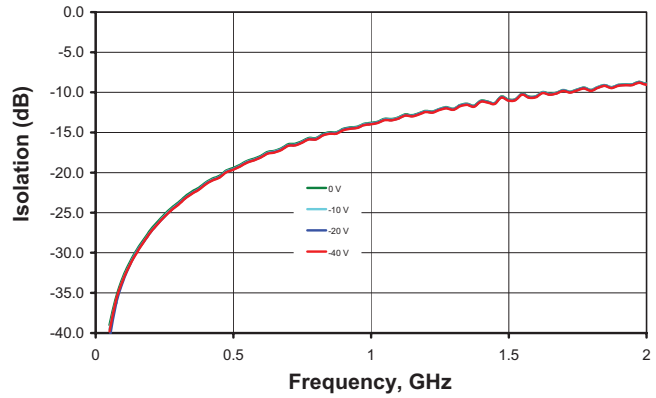


Typical RF Performance at TA = 25 °C, Zo = 50 Ω, -10 dBm Small Signal

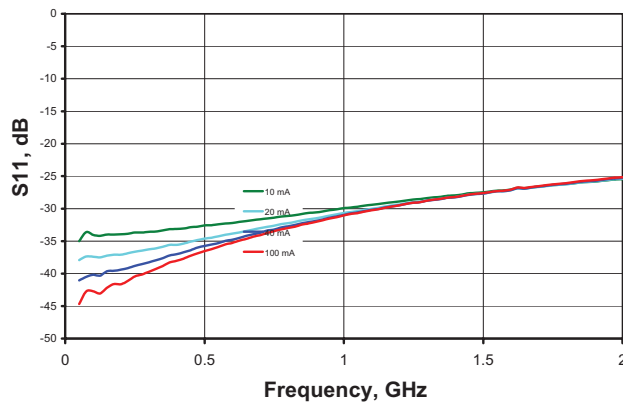
Insertion Loss



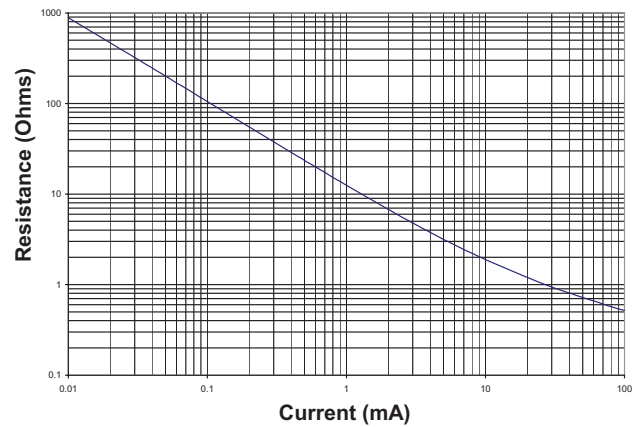
Isolation



Input / Output Return Loss



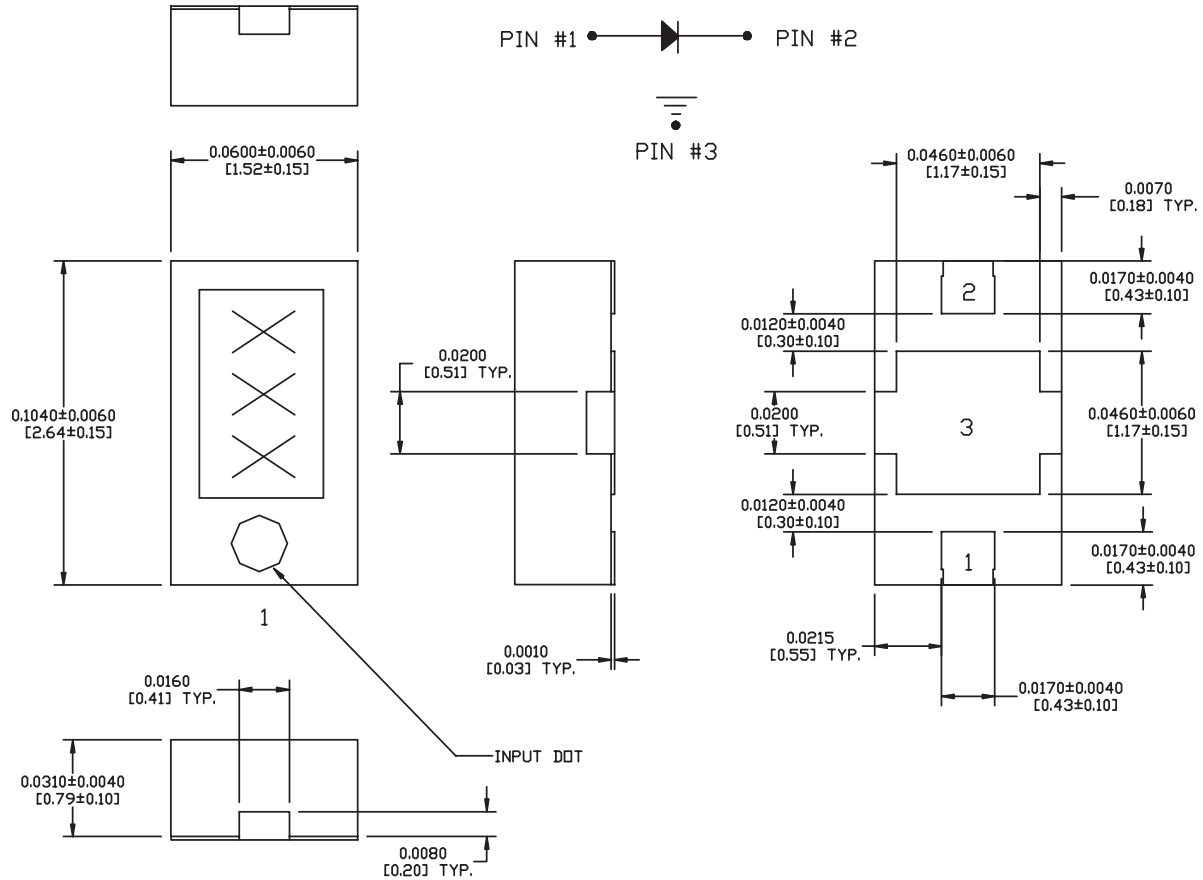
Series Resistance vs Current 500 MHz



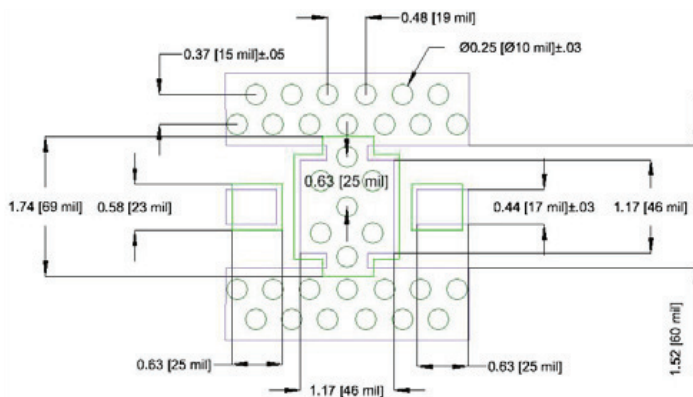
MEST²G-050-80



Package Outline

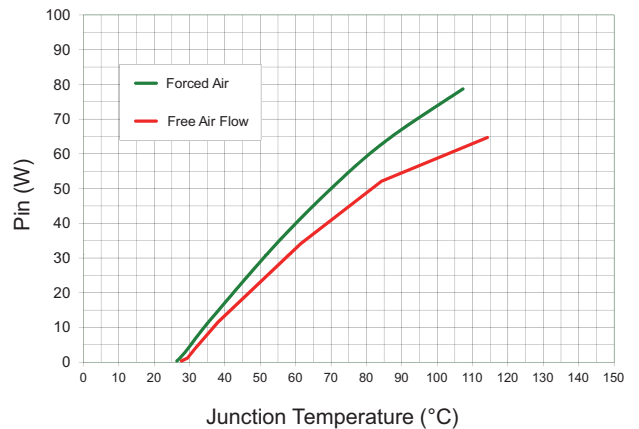


Printed Circuit Board Layout



- UNLESS OTHERWISE SPECIFIED:
1. TOLERANCE ±0.10mm
 2. SOLDERMASK TO EXTEND 3 MILS BEYOND METAL TRACE
 3. VIAS UNDER PKG FILLED WITH COPPER OR SOLDERMASK
 4. USE CIRCLES OR SQUARES FOR THERMAL LAND STENCIL SUCH THAT ONLY GET 50 TO 80% SOLDER PASTE COVERAGE

Junction Temperature vs Power 20 mil Board Mounted on Heat Sink 25°C Ambient, 1.3 GHz



Aeroflex / Metelics Inc.

Aeroflex Microelectronic Solutions
975 Stewart Drive
Sunnyvale, CA 94085
TEL: 408-737-8181

54 Grenier Field Road
Londonderry, NH 03053
TEL: 603-641-3800

Sales

888-641-SEMI (7364)
metelics-sales@aeroflex.com

www.aeroflex.com/Microwave www.aeroflex.com/Metelics

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Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.