

DESCRIPTION

This series of surface mount diodes are specifically design for high volume surface mount applications. The GigaMite design is optimized for improved electrical and thermal performance over standard plastic package technology. The result is higher frequency coverage and better power handling than comparable plastic packages. Product parameters have been optimized for broadband switching, attenuator and limiter applications.

The package parasitics provide smooth non-resonant functionality through 5 GHz. Microsemi utilizes high quality dielectric materials resulting in low loss and broadband performance.

This series of devices meets RoHS requirements per EU Directive 2002/95/EC.

APPLICATIONS

Microsemi Lowell offers a variety of PIN diodes in the GigaMite package style. These products are well suited for microwave switching and attenuator applications. They are ideal for WLAN and WIMAX applications.

The GML4701 devices are designed for economical high performance receiver protection through 5 GHz.

**ABSOLUTE MAXIMUM RATINGS AT 25° C
(UNLESS OTHERWISE SPECIFIED)**

| Rating | Symbol | Value | Unit |
|--|-----------|-------------|------|
| Maximum Leakage Current @80% of Rated V_B | | | |
| GMP42XX | I_R | 500 | nA |
| GML4701 | I_R | 100 | nA |
| Storage Temperature | T_{STG} | -55 to +125 | °C |
| Operating Temperature | T_{OP} | -55 to +125 | °C |

IMPORTANT:

Specifications are subject to change.

For the most current data, consult our website: www.MICROSEMI.com



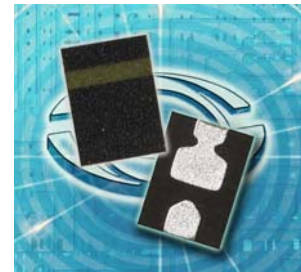
These devices are ESD sensitive and must be handled using ESD precautions.

KEY FEATURES

- Low Parasitics
 $L_P = 0.5$ nH Typical
 $C_P = 0.07$ pF Typical
- Surface Mount design
- Broadband Performance Through 5 GHz
- Available on Tape & Reel for Automated Pick & Place Assembly
- Small, SOD 323 Size Footprint
- RoHS Compliant ¹

APPLICATIONS/BENEFITS

- Antenna Switching for WIMAX and WLAN
- Economical RF and Microwave Switching
- Attenuators
- Limiters
- Broadband Performance



¹ These devices are supplied with a matte tin finish suitable for RoHS compliant assembly.

Surface Mount PIN Diodes
DEVICE ELECTRICAL PARAMETERS @ 25°C (unless otherwise specified)

| Model Number | V_B (V) $I_R=10\mu A$ (Min) | C_T (pF) ¹ $V_R=10V$ (Max) | C_T (pF) ¹ $V_R=50V$ (Max) | R_S (Ω) ² $I_F=1mA$ (Typ) | R_S (Ω) ² $I_F=20mA$ (Max) | R_S (Ω) ² $I_F=100mA$ (Max) | T_L (nS) (Typ) | Θ (°C/W) (Typ) THERMAL IMPEDANCE |
|--------------|-------------------------------------|---|---|---|--|---|---------------------|---|
| GMP4201-GM1 | 75 | 0.18 | - | 2.3 | 1.2 | - | 100 | 50 |
| GMP4202-GM1 | 75 | 0.28 | - | 1.8 | 1.0 | - | 150 | 50 |
| GMP4211-GM1 | 100 | 0.18 | - | 5.5 | 2.4 | - | 250 | 50 |
| GMP4212-GM1 | 100 | 0.28 | - | 4.2 | 1.8 | - | 300 | 40 |
| GMP4215-GM1 | 100 | 0.60 | - | 1.0 | 0.5 | - | 400 | 40 |
| GMP4235-GM1 | 250 | 0.60 | - | 2.5 | 0.8 | - | 500 | 35 |
| GMP4232-GM1 | 300 | - | 0.35 | 2.5 | - | 1.4 | 1000 | 25 |

Surface Mount Limiter Diodes
DEVICE ELECTRICAL PARAMETERS @ 25°C (unless otherwise specified)

| Model Number | V_B (V) $I_R=10\mu A$ (Min) | C_T (pF) ¹ $V_R=10V$ (Max) | R_S (Ω) ³ $I_F=10mA$ (Max) | P_{IN} (dBm) Peak Power (1 μS PW) | P_{OUT} (dBm) Leakage Power (Typ) | P_T (dBm) Threshold (Typ) | Θ (°C/W) THERMAL IMPEDANCE (Typ) |
|--------------|-------------------------------------|---|--|--|---|-----------------------------------|--|
| GML4701-GM1 | 20 | 0.40 | 2.5 | +50 | +22 | +10 | 70 |

Notes

1. Capacitance is measured at $f = 1$ MHz.
2. Series Resistance R_S is measured at $f=100$ MHz
3. Series Resistance R_S is measured at $f=1$ GHz

PACKAGE STYLE GM1
