

## 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](http://www.MICROSEMI.com)



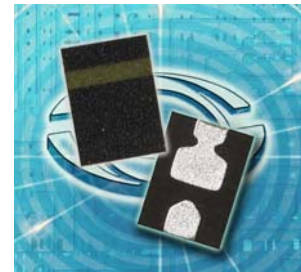
These devices are ESD sensitive and must be handled using ESD precautions.

## 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 <sup>1</sup>

## APPLICATIONS/BENEFITS

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



<sup>1</sup> 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) <sup>1</sup> $V_R=10V$ (Max)	$C_T$ (pF) <sup>1</sup> $V_R=50V$ (Max)	$R_S$ ( $\Omega$ ) <sup>2</sup> $I_F=1mA$ (Typ)	$R_S$ ( $\Omega$ ) <sup>2</sup> $I_F=20mA$ (Max)	$R_S$ ( $\Omega$ ) <sup>2</sup> $I_F=100mA$ (Max)	$T_L$ (nS) (Typ)	$\Theta$ (°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) <sup>1</sup> $V_R=10V$ (Max)	$R_S$ ( $\Omega$ ) <sup>3</sup> $I_F=10mA$ (Max)	$P_{IN}$ (dBm) Peak Power (1 $\mu S$ PW)	$P_{OUT}$ (dBm) Leakage Power (Typ)	$P_T$ (dBm) Threshold (Typ)	$\Theta$ (°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**
