



GMP4201 - GML4701

GigaMite™

Surface Mount PIN & Limiter Diodes

GENERAL 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.

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

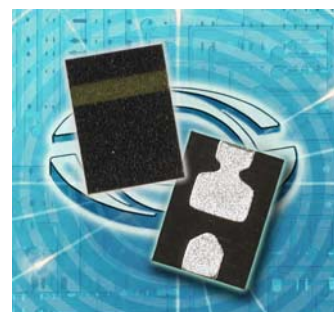
APPLICATION/BENEFITS

- 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.

ABSOLUTE MAXIMUM RATINGS @ 25°C

Rating	Symbol	Value	Unit
Operating Temperature	T _{OP}	-55 to +125	°C
Storage Temperature	T _{STG}	-55 to +125	°C
Maximum Leakage Current @80% of Rated V _B			
GMP42XX	I _R	500	nA
GML4701	I _R	100	nA



For the most current data, consult MICROSEMI's website: www.MICROSEMI.com
Specifications are subject to change, consult the factory at (978) 442-5600 for the latest information.

Revised
5/1/2013



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Model Number	V _B (V) I _R =10μA (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) THERMAL IMPEDANCE (Typ)
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
GMP4232-GM1	300	-	0.35	2.5	-	1.4	1000	25
GMP4235-GM1	250	0.60	-	2.5	0.8	-	500	35
GMP4236-GM1	500	-	0.60	6.0	-	.60	2500	35

DEVICE ELECTRICAL PARAMETERS AT 25°C

Model Number	V _B (V) I _R =10μA (Min)	C _T (pF) ¹ V _R =10V (Max)	R _S (Ω) ³ I _F =10mA (Max)	P _{IN} (dBm) Peak Power (1uS 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

Surface Mount Limiter Diodes

Notes

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

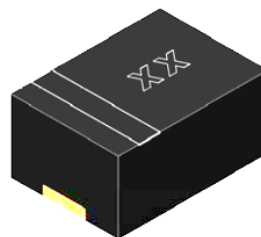
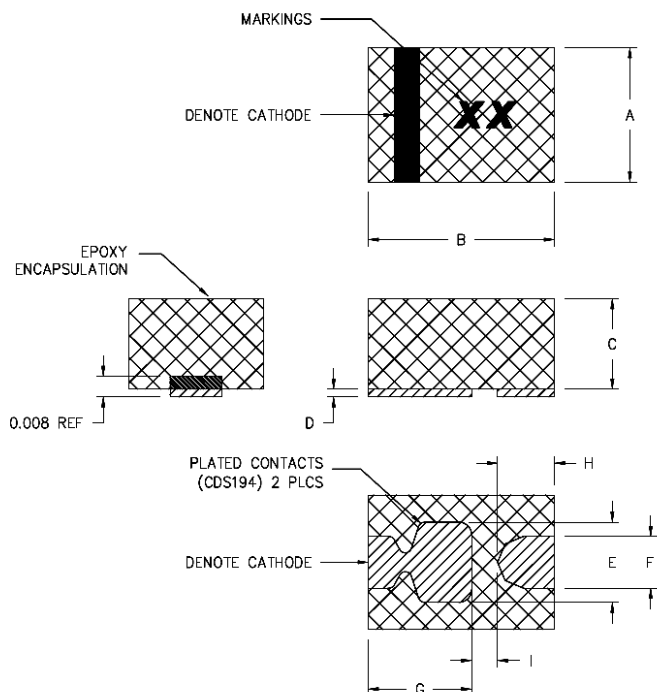
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PACKAGE STYLE GM1



DIM	INCHES			MM		
	MIN	TYP	MAX	MIN	TYP	MAX
A	0.047	0.052	0.057	1.194	1.321	1.448
B	0.067	0.072	0.077	1.702	1.829	1.956
C	0.030	0.035	0.040	0.762	0.889	1.016
D	—	—	0.003	—	—	0.076
E	0.028	0.031	0.034	0.711	0.787	0.864
F	0.017	0.020	0.023	0.432	0.508	0.584
G	0.035	0.040	0.045	0.889	1.016	1.143
H	0.017	0.022	0.027	0.432	0.559	0.686
I	—	0.010	—	—	0.254	—

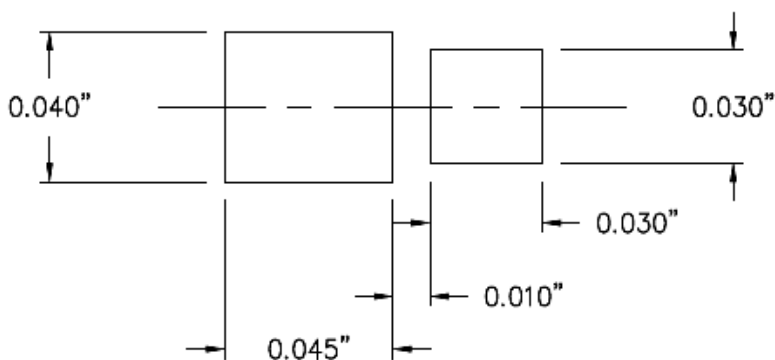
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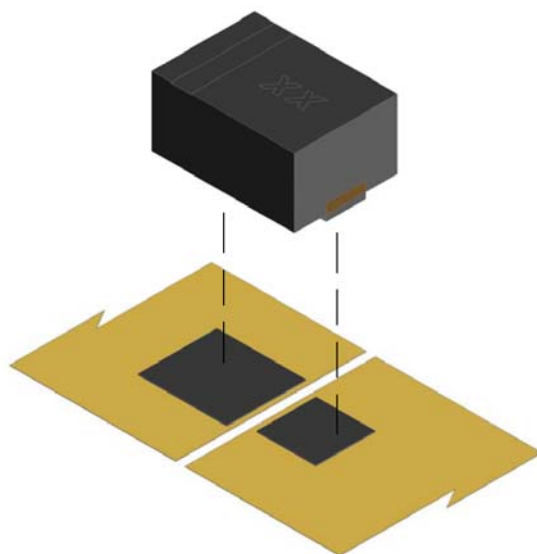


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SUGGESTED SOLDER PAD LAYOUT



SUGGESTED SOLDER
PAD LAYOUT



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