

GaAs PIN Diodes

Rev. V1

Features

- Nanosecond Switching Speed with Low-Cost TTL Logic
- Low Series Resistance
- No Reverse Bias Required for Low Loss
- RoHS* Compliant

Description

The MGPN GaAs PIN Diodes are a series of GaAs PIN diodes suitable for high frequency, >26 GHz, switch and high speed modulation applications.



C01A

C12

Available Chip Packages

Electrical Characteristics, $T_C = +25^\circ\text{C}$

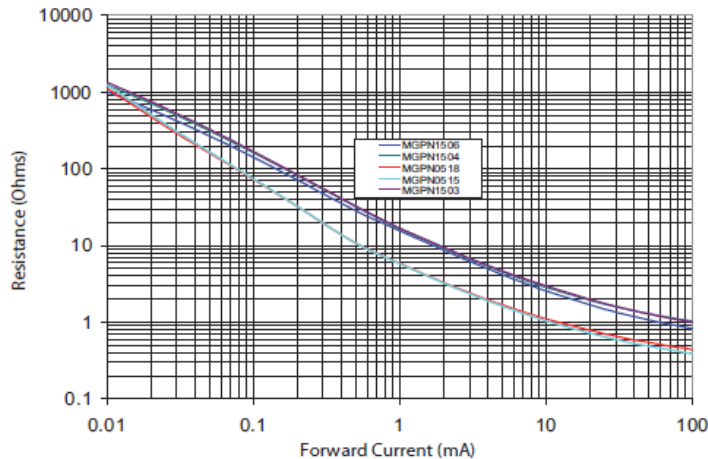
Parameters	V_{BR}		V_F	C_J		R_S		T_L	
Units	V		mV	pF		Ohms		ns	
Test Condition	$I_R = 10 \mu\text{A}$		$I_F = 10 \text{ mA}$	$V_R = 10 \text{ V}, F = 1 \text{ MHz}$		$I_F = 20 \text{ mA}, F = 1 \text{ GHz}$		$I_F = 10 \text{ mA } I_R = 6 \text{ mA}$	
	Min.	Typ.	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.
MGPN0515-C12	50	68	1300	0.13	0.15	0.85	1.0	6	9
MGPN0518-C12	50	68	1300	0.16	0.18	0.75	1.0	6	9
MGPN1506-C12	150	205	1300	0.05	0.06	1.6	2.0	15	20
MGPN1504-C01A	150	205	1350	0.036	0.04	2.0	3.0	8	10
MGPN1503-C01A	150	205	1350	0.027	0.03	2.0	3.0	8	10

Absolute Maximum Ratings

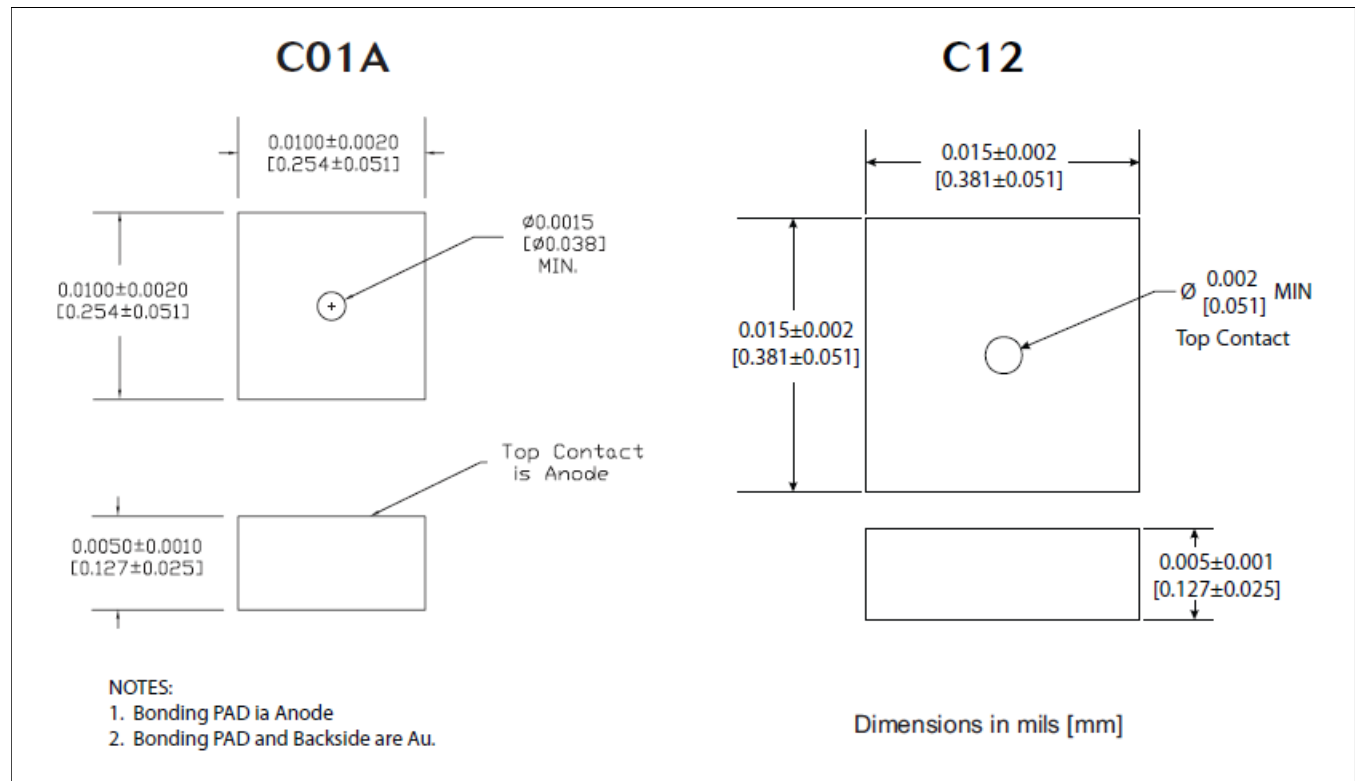
Rating	Limits
V_R	V_{br}
I_F	150 mA
Θ_{JC}	225°C/W
P_{DISS}	400 mW de-rated to zero at 150°C
T_J	175°C
T_{STG}	-65°C to +200°C
$T_{die \text{ attach}}$	<320°C per 5 sec
Electrostatic Discharge (ESD)	Class 0 (Human Body Model)

* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

Series Resistance vs. Bias Current @ 25°C, 500 MHz



DIE Outline



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