MA4P202,303,504,505,506 & 604

Packaged PIN Diodes - ODS-255 Case Style

M/A-COM Products
Rev. V3

Features

- High Power PIN Diodes
- Fast Speed PIN Diodes
- Voltage Ratings to 1000 Volts
- Long Carrier Lifetime Designs
- High Reliability for Space/Military Applications

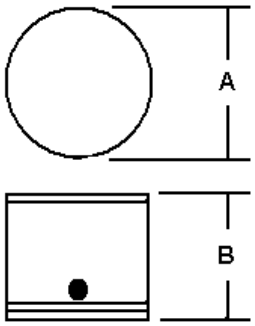
Description and Applications

MA-COM's product line of packaged PIN diodes represents a comprehensive combination of PIN diode electrical characteristics and package outlines. This union of semiconductor and packaging technology gives considerable design flexibility to the PIN diode circuit designer. The fast switching speed PIN diodes utilize thin I-region silicon dioxide passivated chips that incorporate careful control of semiconductor processing. These diodes achieve consistent performance in control circuit applications. The packaged CERMACHIP PIN diodes employ MA-COM's unique hard glass passivated, hermetically sealed PIN diode chip. The packaged CERMACHIP PIN diodes are designed for use in high power and high RF voltage applications. The PIN diode chips are bonded into hermetically sealed ceramic or glass packages that are designed for high volume, close tolerance utilization. Packages are available which are suitable for mounting in a variety of microwave and RF circuit media. The packaged silicon PIN diode series has high inherent reliability and is capable of meeting stringent environmental tests. These diodes may be ordered with testing to selected reliability levels.

Absolute Maximum Ratings[1] @ T_A = +25 °C (unless otherwise specified)

Parameter	Absolution Max.
Voltage	Voltage Rating
Operating Temperature	- 65°C to +175°C
Storage Temperature	-65°C to +200°C
Max Power Dissipation	Pdiss = $\frac{\text{T (max Operating)-25C}}{\text{Thermal Resistance}}$

1. Operation of this device above any one of these parameters may cause permanent damage.



Dimension	INCHES		MM	
A	0.077	0.083	1.96	2.11
B	0.054	0.063	1.37	1.6

Electrical Specifications T_A= +25 C

Part Number	Minimum Reverse Voltage $V_{R\ @-10\mu A}$ (V_{DC})	Maximum Junction Capacitance (pF) $Cj_{\ @\ VR}$ 1 MHz (pF)	Maximum Series Resistance (Ω)	Nominal Characteristics	
				Carrier Lifetime T_L	I Region Thickness (µm)
MA4P202-255	100	0.05 @10V	2.5 @ 10mA	200nsec	19
MA4P303-255	200	0.15 @ 10V	1.5 @ 10mA	300nsec	20
MA4P504-255	500	0.20 @ 100V	0.60 @ 100mA	1usec	50
MA4P505-255	500	0.35 @ 100V	0.45 @ 100mA	2 usec	50
MA4P506-255	500	0.70 @ 100V	0.30 @ 100mA	3usec	50
MA4P604-255	1000	0.30 @ 100V	1.00 @ 100mA	3usec	90

ADVANCED: Data Sheets contain information regarding a product MA-COM Technical Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.
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