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Broadband, Mesa Beam Lead PIN Diodes

Features

- Fast Switching Speed
- Low Capacitance
- Low Resistance
- Rugged Construction
- RoHS* Compliant

Description

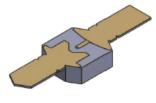
The MPN1xxx-12 Series beam lead PIN diodes features a unique glass and beam construction which allows for mechanical strength and stability during assembly. They are designed for low resistance, low capacitance and fast switching time.

The mesa beam lead PINs are suitable for microstrip or stripline circuits and for circuits requiring high isolation from series mounted diodes as in broadband multi-throw switches, phase shifters, attenuators, limiters and modulators.

| | Voltage Breakdown (V _B) | Junction Capacitance (C _J) | Series Resistance (R _S) | | Lifetime (T _L) | Switching Time (T _S) |
|-------------|---|--|--|--------------|--|-------------------------------------|
| Part Number | 10 µA | -10 V, 1 MHz | 10 mA, 1 GHz | 50 mA, 1 GHz | l _F = 10 mA, l _R = 6 mA | 20% - 80% |
| | V | pF | Ω | | ns | ns |
| | (Min.) | (Max.) | (Max.) | (Max.) | (Тур.) | (Max.) |
| MPN1000-12 | 100 | 0.020 | 6.5 | 4.0 | 80 | 5 |
| MPN1001-12 | 100 | 0.027 | 6.0 | 3.5 | 80 | 5 |
| MPN1002-12 | 100 | 0.030 | 5.5 | 3.2 | 80 | 5 |
| MPN1003-12 | 100 | 0.035 | 5.0 | 2.9 | 80 | 5 |
| MPN1004-12 | 100 | 0.040 | 5.0 | 2.7 | 80 | 5 |
| MPN1005-12 | 100 | 0.048 | 5.0 | 2.5 | 80 | 5 |
| MPN1006-12 | 100 | 0.055 | 4.0 | 2.3 | 80 | 5 |
| MPN1007-12 | 100 | 0.065 | 4.0 | 2.1 | 80 | 5 |
| MPN1100-12 | 50 | 0.025 | 6.0 | 3.7 | 50 | 3 |
| MPN1101-12 | 50 | 0.030 | 5.0 | 3.5 | 50 | 3 |
| MPN1102-12 | 50 | 0.040 | 4.5 | 2.9 | 50 | 3 |
| MPN1103-12 | 50 | 0.060 | 4.0 | 2.5 | 50 | 3 |

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Electrical Specifications: T_A = +25°C



Beam Lead Chip

MACOM

Rev. V2

MPN1xxx-12 Series

Broadband, Mesa Beam Lead PIN Diodes

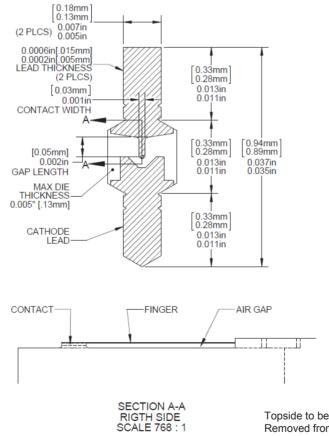


Rev. V2

Absolute Maximum Ratings^{1,2}

| Parameter | Absolute Maximum | | |
|-----------------------|------------------|--|--|
| DC Power Dissipation | 250 mW | | |
| Operating Temperature | -55°C to +150°C | | |
| Storage Temperature | -65°C to +200°C | | |
| Typical Lead Strength | 6 grams | | |

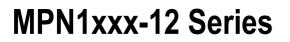
Outline Drawing (CS12)



Topside to be protected with polyimide coating. Removed from visual reference.

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Broadband, Mesa Beam Lead PIN Diodes



Rev. V2

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