Surface Mount Plastic PIN Diodes



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Features

- Surface Mount Packages
- RoHS Compliant
- 260°C Reflow Compatibility
- Low Loss, High Isolation Switching Diodes
- Tape and Reel Packaging

Description and Applications

M/A-COM Technology Solutions offers these silicon PIN diodes in a low cost, surface mount plastic package for use as a switch or attenuator. These diodes are offered with 100% matte Sn plating on and are RoHS compliant devices. These PIN diodes feature optimized I-region lengths which results in low resistance, low capacitance device for various microwave control circuit applications.

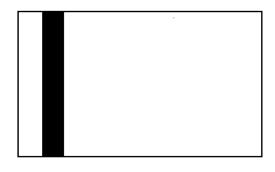
The MADP-010631-13920T offers the lowest series resistance and the best performance as a low loss series or high isolation shunt switch.

The MADP-010630-13920T offers the lowest capacitance and highest isolation when used as a series or series-shunt switch through 3GHz.

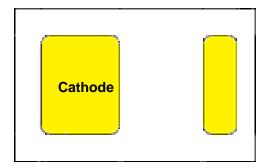
Absolute Maximum Ratings T_{AMB} = 25°C (unless otherwise specified)

Parameter	Absolute Maxi- mum		
Forward Current	150mA		
Reverse Voltage	-100V		
Operating Temperature	-65°C to +125°C		
Storage Temperature	-65°C to +150°C		
Junction Temperature	+175°C		
Mounting Temperature	+260°C for 30 secs.		

Package Style 1392







• North America Tel: 800.366.2266 / Fax: 978.366.2266

- Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298
 Visit www.macom.com for additional data sheets and product information.

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Electrical Specifications @ T_{AMBIENT} = 25°C

RoHS Compliant Part Number	Maximum Incident Power	Reverse Voltage ¹ (V)	Total Capacitance ² Max. (pF)		Nominal Characteristics	
				R _s @ 10 mA ³ Max. (Ohms)	Carrier Lifetime ⁴ (μs)	I-Region Thickness (mils)
MADP-010630-13920T	40W	100	0.35 @ 20V	1.5	0.2	0.4
MADP-010631-13920T	25W	100	1.00 @ 20V	0.5	0.2	0.4

The reverse current will not exceed 10 μ A at the reverse voltage rating. 1.

2. Total capacitance is measured at 1 MHz at the indicated voltage.

3. Series resistance is measured at the specified current and a frequency of 100 MHz.

4. Nominal minority carrier lifetime is measured at $I_F = 10 \text{ mA}$, $I_R = 6 \text{ mA}$, 90% recovery.

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Mounting Pad Configuration

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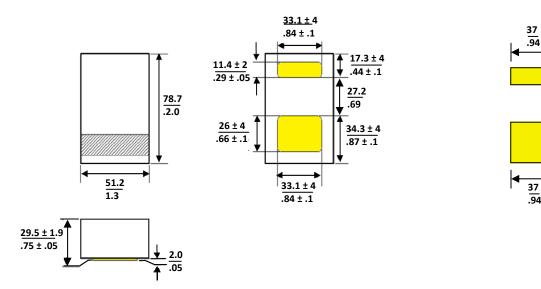
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30

.76

39

.99



All dimensions are in mils / millimeters

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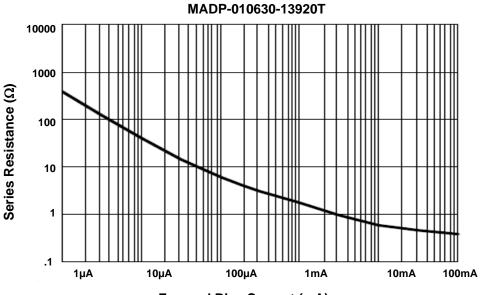
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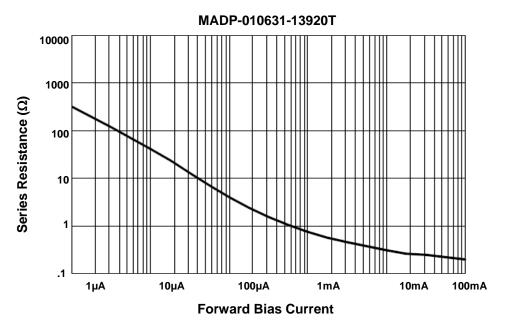
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Forward Bias Current (mA)



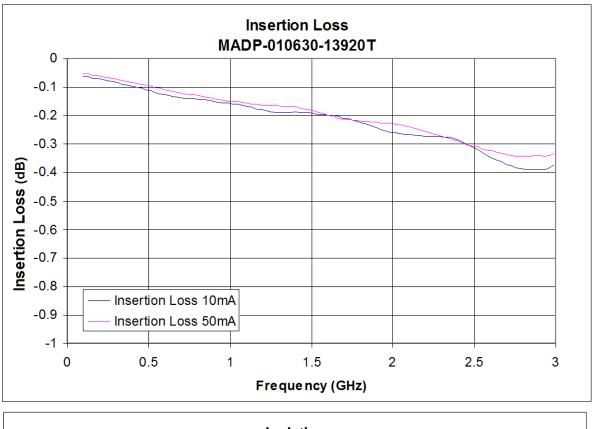
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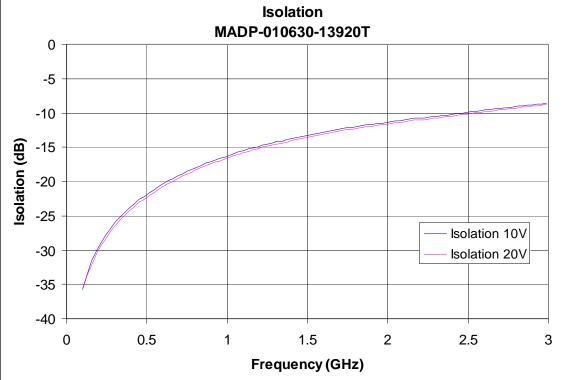
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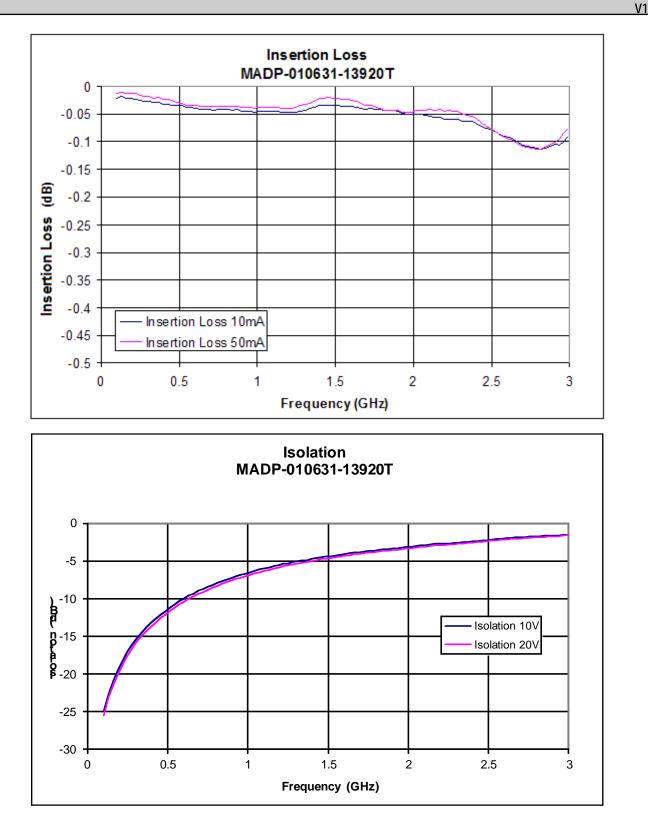
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