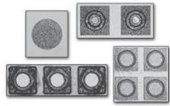


MPN7420-C12 Datasheet

www.digi-electronics.com



DiGi Electronics Part Number	MPN7420-C12-DG
Manufacturer	MACOM Technology Solutions
Manufacturer Product Number	MPN7420-C12
Description	DIODE,PIN,CHIP, C12
Detailed Description	RF Diode PIN - Single 400V Die

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This model MPN7420-C12 is available at DiGi Electronics.

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Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

MPN7420-C12

Series:

-

Diode Type:

PIN - Single

Capacitance @ Vr, F:

0.08pF @ 50V, 100MHz

Operating Temperature:

175°C (TJ)

Supplier Device Package:

Die

Manufacturer:

MACOM Technology Solutions

Product Status:

Active

Voltage - Peak Reverse (Max):

400V

Resistance @ If, F:

1.5Ohm @ 100mA, 100MHz

Package / Case:

Die

Base Product Number:

MPN7420

Environmental & Export classification

Moisture Sensitivity Level (MSL):

1 (Unlimited)

HTSUS:

8541.10.0070

ECCN:

EAR99

High Power Silicon PIN Diodes



Silicon PIN Diode Chips

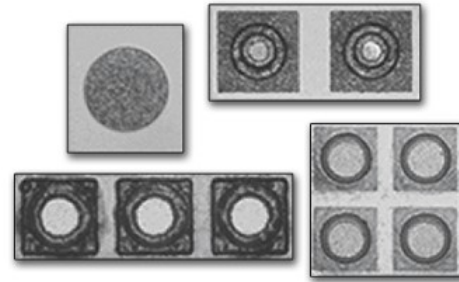
Rev. V3

Features

- Voltage Breakdown up to 1000 V
- Passivated Mesa Construction
- Screening Available per MIL-PRF-19500 / 38534

Description

These silicon PIN diodes feature fully passivated mesa designs with tri-metallization for reliable operation under the most demanding conditions.



Electrical Specifications: $T_A = +25^\circ\text{C}$ (unless otherwise specified)

Part #	Breakdown Voltage V_B $I_R = 10 \mu\text{A}$	Series Resistance R_S $I_F = 100 \text{ mA}$ (100 MHz)	Junction Capacitance C_J $V_R = 50 \text{ V}$	Minority Carrier Lifetime $I_F = 10 \text{ mA}$ $I_R = 6 \text{ mA}$ 50% recovery	Theta	I-Region Width	Contact Diameter	Chip Size
	V	Ω	pF	ns	$^\circ\text{C/W}$	μm	mils	Mils (sq.)
	Min.	Max.	Max.	Nom.	Max.	Nominal		
MPN7330	300	0.5	0.40	500	10	30	10	15
MPN7360	600	0.4	1.00	2500	7	70	20	37
MPN7370	700	0.3	2.30	5000	5	70	40	64
MPN7380	800	0.5	0.60	2500	7	80	24	37
MPN7420	400	1.5	0.08	1000	30	100	5	15
MPN7453A-C12*	300	1.0	0.15	700	20	60	5	15
MPN7453B	400	0.9	0.20	2500	20	60	8	20
MPN7453C	300	0.7	0.25	1000	15	60	8	20
MPN73100-C32**	1000	1.0	0.30	3000	10	90	17	27

- * - C12 Die Thickness = 6 - 9 mils.
- ** - C32 Die Thickness = 13.5 mils.

High Power Silicon PIN Diodes



Silicon PIN Diode Chips

Rev. V3

Absolute Maximum Ratings^{1,2}

Parameter	Absolute Maximum
Power Dissipation (P _{DISS})	$P_{DISS} = \frac{175^{\circ}\text{C} - T_c}{\text{Thermal Resistance } \theta_{jc}}$
Reverse Voltage	Rated V _{BR}
Junction Temperature	+175°C
Storage Temperature	-65°C to +200°C

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

Handling Procedures

Please observe the following precautions to avoid damage:

Static Sensitivity

These electronic devices are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

Figure 1.

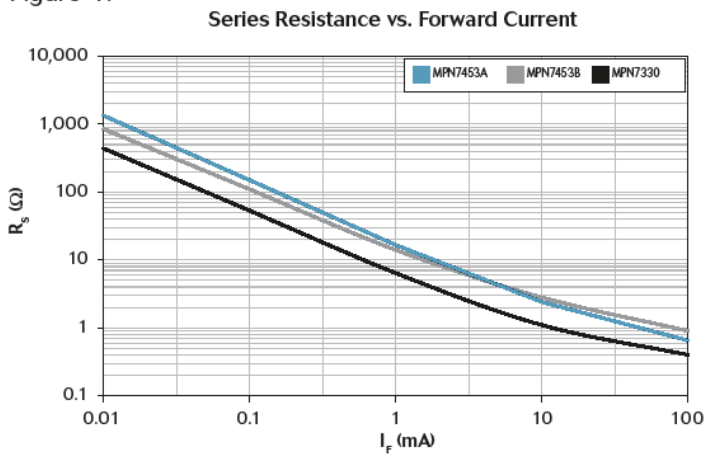


Figure 2.

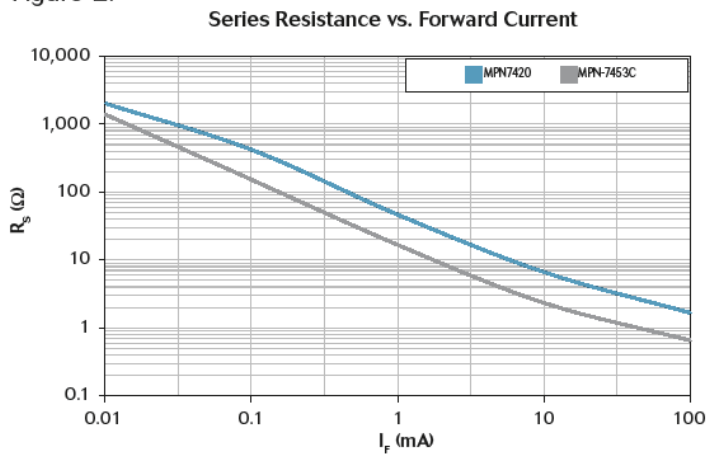
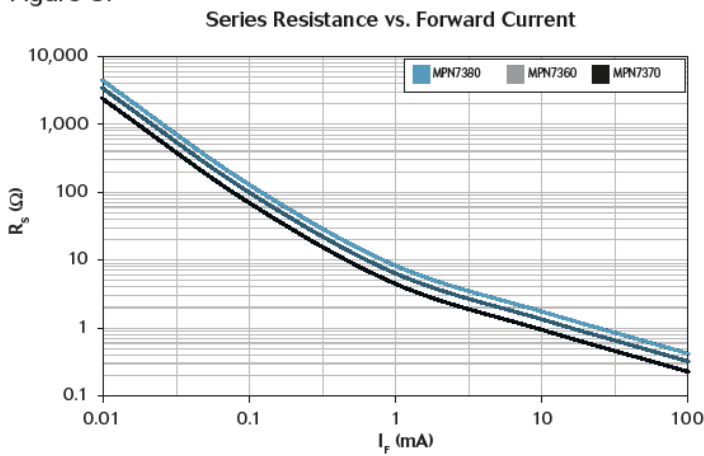


Figure 3.



High Power Silicon PIN Diodes



Silicon PIN Diode Chips

Rev. V3

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