

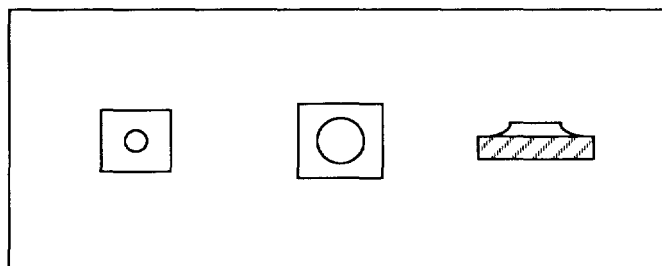
PIN DIODE CHIPS HIGH POWER SWITCH & ATTENUATOR



metelics
CORPORATION

FEATURES

- High Voltage Breakdown to 800 Volts
- Glass Passivation
- Low R_S , C_j Mesa Construction



MAXIMUM RATINGS

Power Dissipation

$$P_{Diss} = \frac{175^{\circ}\text{C} - T_{\text{ambient}}}{\text{Thermal Resistance}}$$

Operating Temperature -65°C to $+175^{\circ}\text{C}$

Storage Temperature -65°C to $+200^{\circ}\text{C}$

Voltage V_{BR} Rating

DESCRIPTION

These Metelics high power silicon mesa PIN chips are constructed with a glass passivation for high voltage, high power requirements demanding good reliability and resistance to moisture and other environmental factors. They can be used for high power switching, phase shifter and attenuator applications. These chips can also be supplied in several package styles or on metal carriers.

ELECTRICAL SPECIFICATIONS AT 25°C

Model	Breakdown Voltage V_{BR} (V)	Capacitance C_j (pF)	Series Resistance R_S (ohms)	Minority Carrier Lifetime (μsec)	I-Region Width (μm)	Contact Diameter (mils)	Thermal Resistance ($^{\circ}\text{C/W}$) (Note 2)	Chip Size (mils) (Note 3)
(Note 1)	MIN	MAX	MAX	TYP	TYP	MIN	MAX	± 2 mils
MPN-7453A	300	.15	1.0	0.7	60	8	20	20 x 20
MPN-7453B	400	.20	0.9	2.5	60	8	20	20 x 20
MPN-7453C	300	.25	0.7	1.0	60	8	15	20 x 20
MPN-7420	400	.08	1.5	1.0	100	5	30	15 x 15
MPN-7330	300	.40	0.5	0.5	30	10	10	25 x 25
MPN-7360	600	1.0	0.4	2.5	70	20	7	37 x 37
MPN-7370	700	2.3	0.3	5.0	70	40	5	64 x 64
MPN-7380	800	0.6	0.5	2.5	80	24	7	37 x 37
Test Condition	$I_R = 10 \mu\text{A}$	$V_R = 50 \text{ V}$ $F = 1 \text{ MHz}$	$I_F = 100 \text{ mA}$ $F = 100 \text{ MHz}$	$I_F = 10 \text{ mA}$ $I_R = 6 \text{ mA}$				

Notes:

1. These PIN chips are available in some package styles or on metal carriers. The part number would be MPN-XXXX-(package code)
2. Tested on SAGE DAE-100B.
3. Chip thickness is 4 to 8 mils.

TYPICAL CHARACTERISTICS

