TECHNICAL DATA DATA SHEET 331, REV. A

# ULTRA LOW REVERSE LEAKAGE POWER SCHOTTKY RECTIFIER Very Low Voltage Drop

DESCRIPTION: 200 VOLT, 7.5 AMP, POWER SCHOTTKY RECTIFIER IN A HERMETIC SHD-1 OR -1B PACKAGE.

## **MAXIMUM RATINGS**

ALL RATINGS ARE @ T<sub>C</sub> = 25 °C UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MAX.	UNITS
PEAK INVERSE VOLTAGE	PIV	200	Volts
MAXIMUM DC OUTPUT CURRENT (With Cathode Maintained @ T <sub>C</sub> =100 <sup>O</sup> C)	Io	7.5	Amps
MAXIMUM NONREPETITIVE FORWARD SURGE CURRENT	I <sub>FSM</sub>	140	Amps
(t = 8.3ms, Sine)			
MAXIMUM JUNCTION CAPACITANCE (V <sub>r</sub> =5V) (per leg)	C <sub>T</sub>	150	pF
MAXIMUM THERMAL RESISTANCE (Junction to Mounting Surface, Cathode)	$R\theta_{JC}$	1.7	°C/W
MAXIMUM OPERATING TEMPERATURE RANGE	Тор	-65 to + 200	°C
MAXIMUM STORAGE TEMPERATURE RANGE	Tstg	-65 to + 175	°C

## **ELECTRICAL CHARACTERISTICS**

CHARACTERISTIC				
MAXIMUM FORWARD VOLTAGE DROP,	, Pulsed (I <sub>f</sub> = 7.5 Amps)			
	T <sub>J</sub> = 25 °C	$V_{f}$	0.92	Volts
	T <sub>J</sub> = 125 °C	- 1	0.76	
MAXIMUM REVERSE CURRENT (Ir @ 2	200V PIV)			
	T <sub>J</sub> = 25 °C	l <sub>r</sub>	0.008	mA
	T <sub>J</sub> = 125 °C		0.5	
REVERSE RECOVERY TIME		t <sub>rr</sub>	12	ns

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10<sup>-3</sup>

0.0

0.2

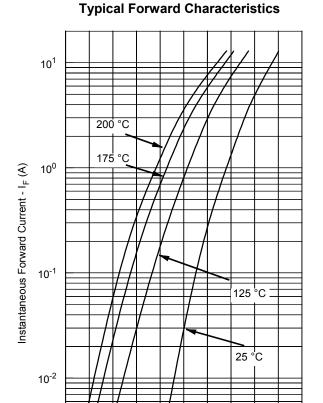
0.4

0.6

Forward Voltage Drop -  $V_F(V)$ 

0.8

1.0



# Typical Reverse Characteristics 200 °C 175 °C 150 °C 100 °C 75 °C

25 °C

160

200

240

120

Reverse Voltage - V<sub>R</sub> (V)

10<sup>1</sup>

10<sup>0</sup>

10<sup>-1</sup>

10<sup>-2</sup>

10<sup>-3</sup>

10<sup>-4</sup>

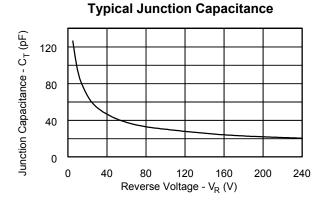
10<sup>-5</sup>

0

40

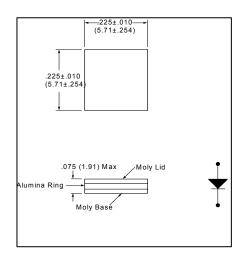
80

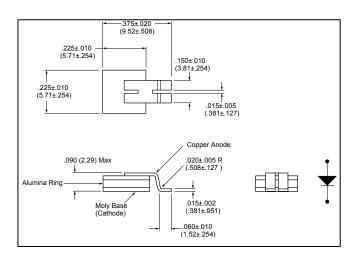
Instantaneous Reverse Current - I<sub>R</sub> (mA)



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## **MECHANICAL DIMENSIONS: In Inches / mm**





SHD-1 SHD-1B

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