

HERMETIC THIN DIODE Schottky Rectifier

DESCRIPTION:

This low profile, hermetically sealed, schottky rectifier diode is manufactured on a MIL-PRF-19500 JANS qualified line and is designed for space solar array applications. The silver plated flat leads are designed for ease in welding to solar array PCBs.

FEATURES / BENEFITS:

- ✓ Silver plated flat leads
- ✓ Hermetic, cavity ceramic package
- ✓ JANS Equivalent screening and QCI available

MAXIMUM RATINGS:

- ✓ Operating & Storage Temperature: -55°C to +150°C
- ✓ **Extended Temperature Range: -195°C to 150°C (Temperature Shock)**
- ✓ Thermal Resistance: 22°C/W (junction to lead)

ELECTRICAL CHARACTERISTICS

MAX. RATINGS / ELECTRICAL CHARACTERISTICS All ratings are at $T_A = 25^\circ\text{C}$ unless otherwise specified.

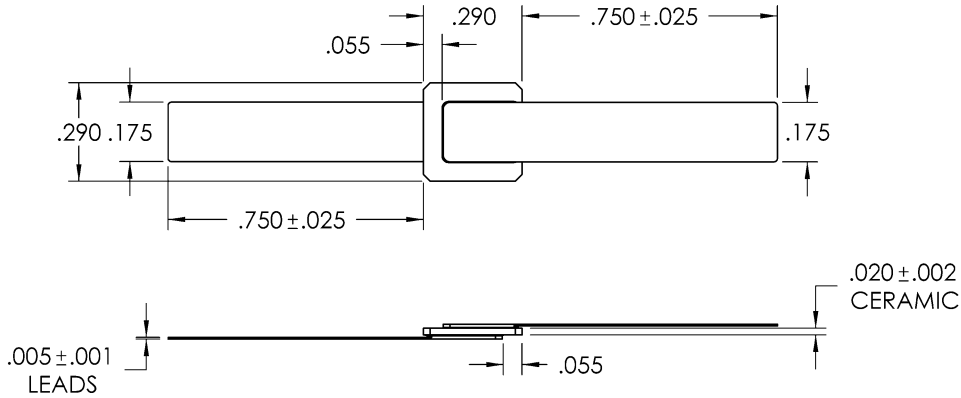
RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Peak Inverse Voltage (PIV)	-	-	-	20	V dc
Average DC Output Current (I_o)	$T_A = +55^\circ\text{C}$	-	-	3	A
Peak Single Cycle Surge Current (I_{fsm})	$t_p = 8.3$ ms Single Half Cycle Sine Wave, Superimposed on Rated Load	-	-	40	A (pk.)
Operating and Storage Temp. (T_{op} & T_{stg})	-	-55	-	+150	°C
Maximum Forward Voltage (V_f)	$I_f = 3A$ (300 μsec pulse, duty cycle < 2%) $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	-	0.56 0.51	0.59 0.54	Volts
Maximum Instantaneous Reverse Current At Rated (PIV)	$T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	-	0.1 8	0.3 14	mA
Max. Junction Capacitance (C_T)	@ $V_R = 5V$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$, $V_{SIG} = 50\text{mV}$	-	-	160	pF
Thermal Resistance (θ_{JL})	Junction to Lead $d = 0.375''$			22	°C/W

SENSITRON SEMICONDUCTOR

SHDT173012
**3A HERMETIC THIN
SCHOTTKY DIODE**

TECHNICAL DATA
DATA SHEET 5548 Preliminary

PACKAGE DIMENSIONS (inches/mm)



TFP-1, THIN PACKAGE

PART ORDERING INFORMATION

SHDT173012 XX X

Screening Level (blank is no screening):

Suffix	Screened in Accordance with:
blank	No screening level
SX	MIL-PRF-19500, TX Level per DS2044
SS	MIL-PRF-19500, S Level per DS2044

QCI (blank is no QCI):

Suffix	Inspection
blank	No QCI
Q	MIL-PRF-19500 QCI per DS2044

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