

## HERMETIC THIN DIODE General Purpose Rectifier

### DESCRIPTION:

Electrically Equivalent to 1N5552 and may be screened in line with MIL-PRF-19500/420

This low profile, hermetically sealed, general purpose rectifier diode is manufactured using a JANS qualified wafer fab 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: -65°C to +175°C
- ✓ Thermal Resistance: 22°C/W (junction to lead)
- ✓ Scope Display on 100% of parts

### 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)	$I_R = 50\mu\text{A}$ $I_R = 50\mu\text{A}, T_A = -55^\circ\text{C}$	-	-	660 600	V dc
Average DC Output Current ( $I_o$ )*	$T_A = +55^\circ\text{C}$ $T_A = +100^\circ\text{C}$	-	-	3 2	A
Peak Single Cycle Surge Current ( $I_{FSM}$ )	$t_p = 8.3$ ms Single Half Cycle Sine Wave, superimposed on 2A dc, 600V DC	-	-	100	A (pk.)
Operating and Storage Temp. ( $T_{OP}$ & $T_{STG}$ )	-	-65	-	+175	°C
Maximum Forward Voltage ( $V_F$ )	$I_F = 1.5\text{A}$ $I_F = 9\text{A}$ $I_F = 9\text{A}, T_A = 125^\circ\text{C}$ $I_F = 1.5\text{A}, T_A = -55^\circ\text{C}$ $I_F = 9\text{A}, T_A = -55^\circ\text{C}$	0.5 0.6 - 0.5 -	-	1.0 1.2 1.2 1.2 1.5	Volts
Maximum Instantaneous Reverse Current at PIV ( $I_R$ )	$T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	-	-	1 60	$\mu\text{A}$
Reverse Recovery Time ( $t_{RR}$ )	$I_f = 0.5\text{A}, I_r = 1.0\text{A}, I_{rr} = 0.25\text{A}$	-	-	2.0	$\mu\text{s}$
Thermal Resistance ( $\theta_{JL}$ )	Junction to Lead $d = 0.375''$			22	°C/W

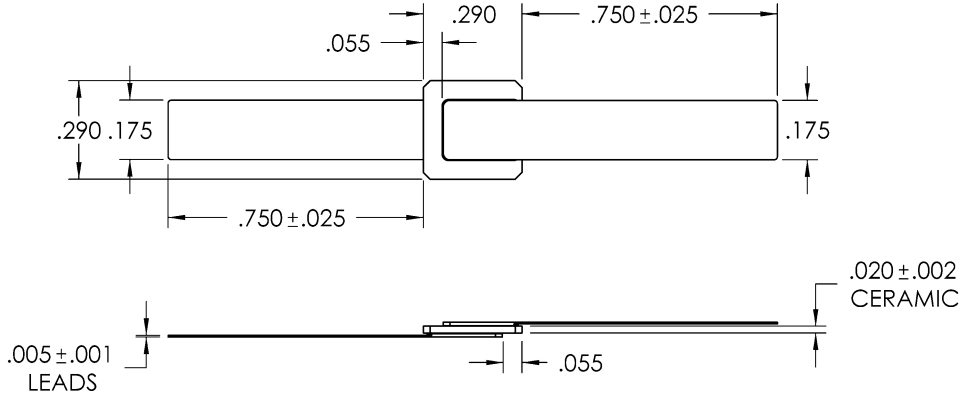
Note \* - Derate linearly at 22mA/°C from  $55^\circ\text{C} \leq T_A \leq 100^\circ\text{C}$ ; at 26.7mA/°C from  $100^\circ\text{C} \leq T_A \leq 175^\circ\text{C}$

# **SENSITRON** **SEMICONDUCTOR**

**SHDT373010**  
**3A HERMETIC THIN DIODE**  
**GENERAL PURPOSE**

**TECHNICAL DATA**  
**DATA SHEET 5551 Rev. A.1**

## **PACKAGE DIMENSIONS (inches/mm)**



**PKG: TFP-1**

## **PART ORDERING INFORMATION**

**SHDT373010 XX X**

**Screening Level (blank is no screening):**

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

**QCI (blank is no QCI):**

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

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