HERMETIC THIN DIODE
Fast Recovery Rectifier

DESCRIPTION:

Electrically Equivalent to 1N5418 and may be screened in line with MIL-PRF-19500/411 (see notes)

This low profile, hermetically sealed, fast recovery 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: 27°C/W (junction to lead)
- ✓ Scope Display on 100% of parts

ELECTRICAL CHARACTERISTICS

MAX. RATINGS / ELECTRICAL CHARACTERISTICS All ratings are at T_A = 25°C unless otherwise specified.

RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Peak Inverse Voltage (PIV)	I_R = 50µA I_R = 50µA, T_A = -55°C	-	-	400 400	V dc
Average DC Output Current (I_O)*	T_A = +55°C T_A = +100°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, 400V DC	-	-	80	A (pk.)
Operating and Storage Temp. (T_{OP} & T_{STG})	-	-65	-	+175	°C
Maximum Forward Voltage (V_F)	I_F = 1.5A I_F = 9A I_F = 0.5A, T_A = -55°C	0.5 0.6 0.5	-	1.2 1.5 1.4	Volts
Maximum Instantaneous Reverse Current at PIV (I_R)	T_A = 25° C T_A = 100° C	-	-	1 20	µA
Reverse Recovery Time (t_{RR})	I_f = 0.5A, I_r = 1.0A, I_{rr} = 0.25A	-	-	150	nsec
Capacitance (C)	V_R = 4V dc, 100KHz ≤ f ≤ 1MHz	-	-	165	pF
Thermal Resistance (θ_{JL})	Junction to Lead d = 0.375”			27	°C/W

Note * - Derate linearly at 22mA/°C from 55°C ≤ T_A ≤ 100°C; at 26.7mA/°C from 100°C ≤ T_A ≤ 175°C
Due to low profile package, Breakdown voltage test cannot be performed. Instead, additional leakage current is done at 440V with a 50µA limit.
In addition, scope display test is not performed since this test requires testing over the breakdown voltage.

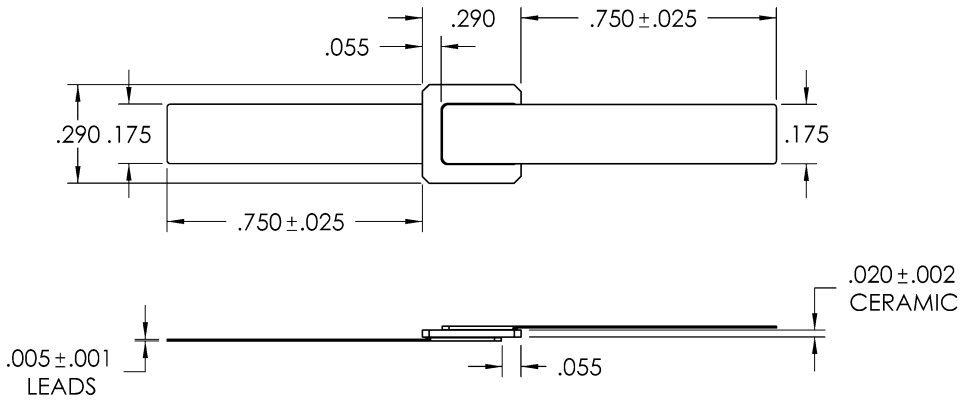
SHDT373013

3A HERMETIC THIN DIODE FAST RECOVERY

SENSITRON SEMICONDUCTOR

TECHNICAL DATA
DATA SHEET 6052, Rev. -

PACKAGE DIMENSIONS (inches/mm)



PKG: TFP-1

PART ORDERING INFORMATION

SHDT373013 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