SENSITRON SEMICONDUCTOR

1N5615DUS

FAST RECOVERY RECTIFIER

TECHNICAL DATA
DATASHEET 5457, PRELIMINARY DATA, REV. C

Fast Recovery Rectifier
Dual Die Fault Tolerant Design

DESCRIPTION:

This voidless hermetically sealed fast recovery rectifier diode is manufactured on a MIL-PRF-19500 JANS qualified production line and is targeted for space, commercial aircraft, military aircraft, down hole, shipboard and other high reliability or extreme environment applications.

FEATURES / BENEFITS

- ✓ Dual die design for fault tolerance
- ✓ Hermetic, non-cavity glass package
- ✓ Category I Metallurgically bonded
- ✓ Hot solder dipped finish
- ✓ SJ/SX/SV/SS screening available per equivalent flow of JAN/JX/JXV/JANS

MAXIMUM RATINGS

- ✓ Operating and Storage Temperature: -65°C to +175°C
- ✓ Solder temperature: 260 °C for 10s (max)
- ✓ Thermal Resistance: 20 °C (junction to endcap)
- ✓ Forward surge current: 12.5A @ 8.3 ms half-sine

ELECTRICAL CHARACTERISTICS

VBR @50uA	PEAK INVERSE VOLTAGE	AVG. RECTIFIED CURRENT @T_A		AVG. RECTIFIED CURRENT @T_{EC}	MAXIMUM REVERSE CURRENT @ PIV		MAX. PEAK FORWARD VOLTAGE (PULSED)		PEAK 1 CYCLE SURGE CURRENT[1]	MAXIMUM REVERSE RECOVERY TIME trr I_F=0.5A I_{RM}=1A $I_{R(REC)}$=0.25A	Cp V_R=1 2V 1MHz	THERM RES $R_{\theta JC}$ d=0
		Amps		Amps	μAmps							
V	V	55°C	100°C	55°C	25°C	125°C	V	A	Amps	nsec	pF	°C/W
>440	400	0.5	0.4	2.4	0.5	55	>1.6 <3.2	3	15	150	30	20

Note 1: T_A=55°C, superposed on I_O=0.5A, f =60Hz, 8.3ms surge

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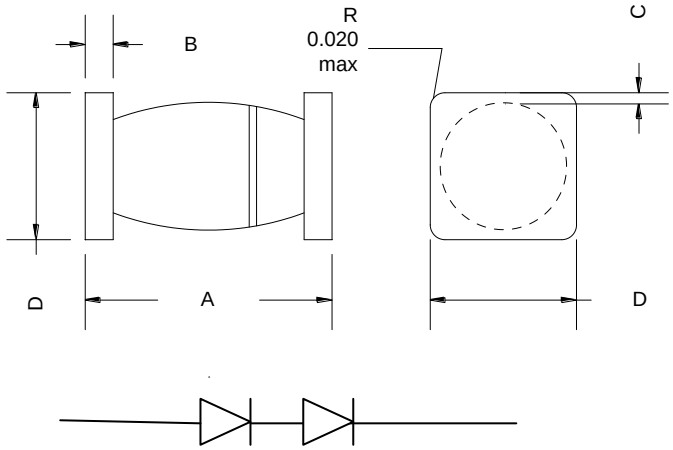
PACKAGE DIMENSIONS (inches/mm)

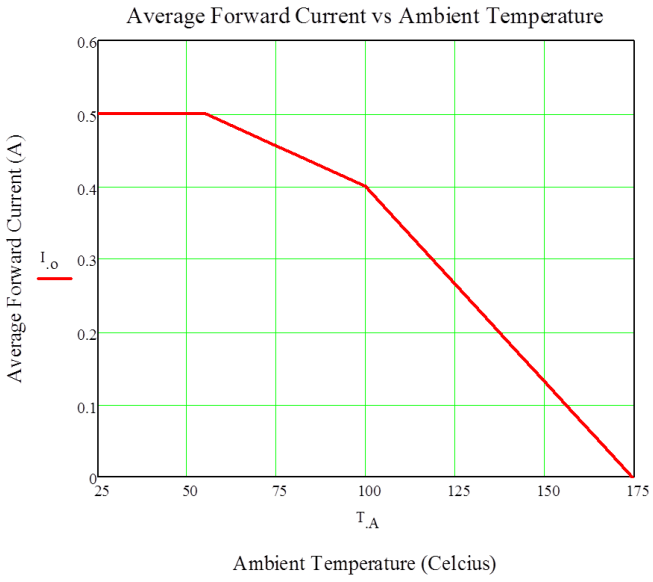


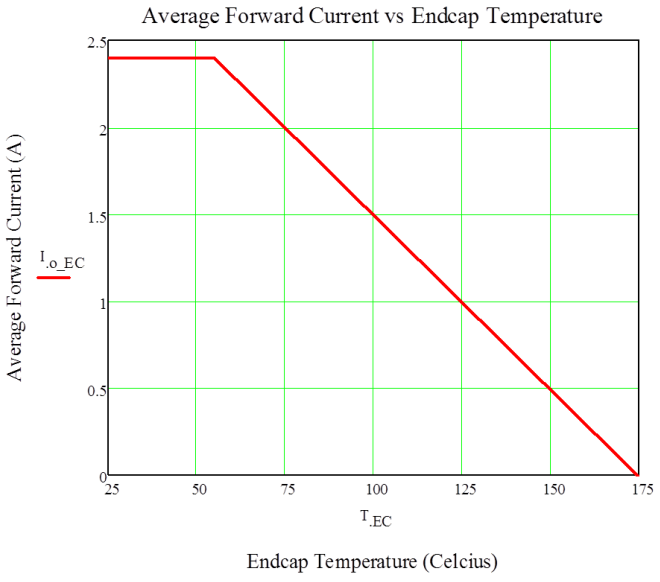
Note: Cathode of device is indicated by a dark band marked on body

Package Style	Dimensions – Inch /Millimeters			
	A	B	C	D
MELF-1	0.185/0.215	0.019/0.028	0.003 min	0.091/0.103
	4.70/5.46	0.48/0.71	0.08 min	2.31/2.62

Termination Finish: Endcap Material: Copper with Tin/Lead Hot Solder Dipped finish.

Derating Curves:





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PART ORDERING INFORMATION

The following part numbers can be purchased in surface mount devices and screened and tested to the military screening flow. The parts are marked in accordance with the testing performed, example:

Sensitron Screening Level	*Part Number-- Surface Mount Package	Screening In according with Sensitron Specification
1N	1N5615DUS	Unscreened
SJ	SJ5615DUS	7700-4093
SX	SX5615DUS	7700-4093
SV	SV5615DUS	7700-4093
SS	SS5615DUS	7700-4091

**Parts can also be ordered Tape & Reel*

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