

TECHNICAL DATA
DATA SHEET 6090, REV -

HERMETIC ULTRA FAST SOFT RECOVERY RECTIFIER

Features:

- Low forward voltage drop
- Low power loss, high efficiency
- Very high surge capacity
- Soft reverse recovery at low and high temperature
- Trr guaranteed lower than 40 nsec
- Electrically / mechanically stable during and after packaging

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	300	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form, $T_C = 65\text{ }^\circ\text{C}$	25	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 msec, sine pulse	300	A
Thermal Impedance	Z_{TH}	$T_C = 25\text{ }^\circ\text{C}$	1.3	$^\circ\text{C} / \text{W}$
Max. Junction Temperature	T_J	-	- 65 to + 150	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	- 65 to + 150	$^\circ\text{C}$

Electrical Characteristics:

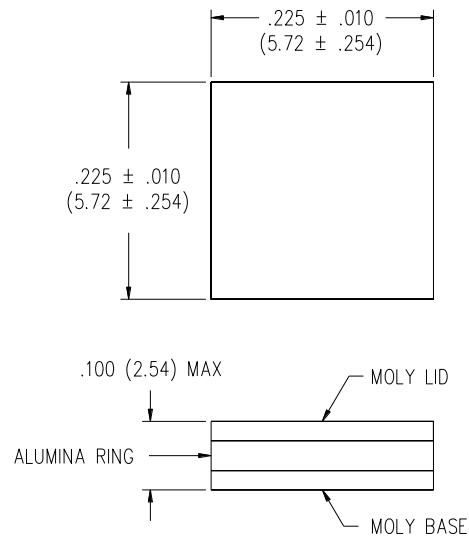
Characteristics	Symbol	Condition	Typ.	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 10A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.92	0.99	V
		@ 25A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	1.02	1.12	
	V_{F2}	@ 10A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	-	0.92	V
		@ 25A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	-	1.05	
Max. Reverse Current	I_{R1}	@ $V_R = 300\text{V}$, Pulse, $T_J = 25\text{ }^\circ\text{C}$	2	30	μA
	I_{R2}	@ $V_R = 300\text{V}$, Pulse, $T_J = 125\text{ }^\circ\text{C}$	-	500	μA
Reverse Recovery Time	t_{RR}	$I_F = 0.5\text{A}$; $I_R = 1.0\text{A}$, $I_{RM} = 0.25\text{A}$ $T_J = 25\text{ }^\circ\text{C}$	35	40	nsec
Max. Junction Capacitance	C_T	@ $V_R = 10\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$, $I_{SIG} = 100\text{mV (p-p)}$	400	-	pF

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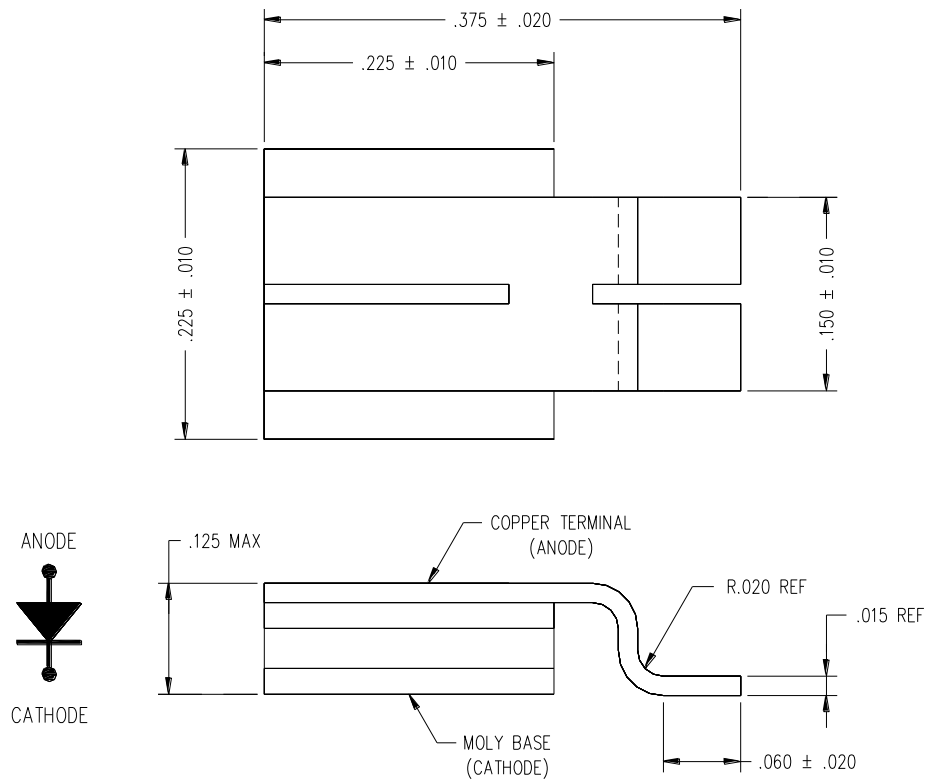
MECHANICAL DIMENSIONS: In Inches / mm

*Dimensions shown are with solder dipping.

SHD-1 HIGH PROFILE



SHD-1B HIGH PROFILE



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PART ORDERING INFORMATION:

SHD376914BXX X

↓
Part Number

Screening Level (blank is no screening):

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

QCI (blank is no QCI):

Suffix	Inspection in Accordance with:
blank	No QCI
Q	MIL-PRF-19500 QCI

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