

SENSITRON

SEMICONDUCTOR

TECHNICAL DATA
DATA SHEET 4202, REV. -

HERMETIC FAST RECOVERY RECTIFIER HIGH VOLTAGE

Features:

- Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- Very High Surge Capacity
- Very suitable for medium frequency applications (upto 10 kHz)
- Soft Reverse Recovery at Low and High Temperature
- Trr guaranteed lower than 2.5 μ sec
- Electrically / Mechanically Stable during and after Packaging

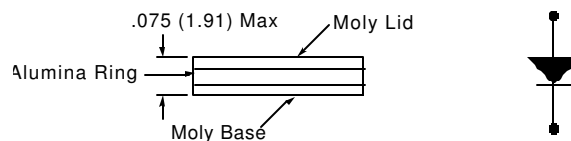
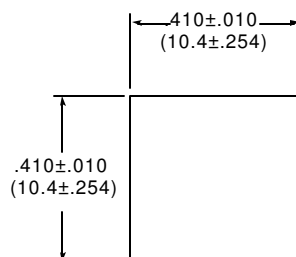
Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	1100	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form, $T_C = 65^\circ\text{C}$	80	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 msec, sine pulse	720	A
Thermal Impedance	Z_{TH}	$T_C = 25^\circ\text{C}$	0.5	$^\circ\text{C} / \text{W}$
Max. Junction Temperature	T_J	-	- 40 to + 165	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	- 55 to + 175	$^\circ\text{C}$

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 80A, Pulse, $T_J = 25^\circ\text{C}$	1.25	1.4	V
	V_{F2}	@ 80A, Pulse, $T_J = 125^\circ\text{C}$	-	1.25	V
Max. Reverse Current	I_{R1}	@ $V_R = 1000\text{V}$, Pulse, $T_J = 25^\circ\text{C}$	1.5	5.0	μA
	I_{R2}	@ $V_R = 1000\text{V}$, Pulse, $T_J = 125^\circ\text{C}$	-	15	mA
Reverse Recovery Time	T_{RR}	$I_F = 40\text{A}$; $di/dt = 25\text{A} / \mu\text{sec}$; $V_R = 100\text{V}$; $T_J = 25^\circ\text{C}$	1.6	2.1	μsec
Reverse Recovery Current	I_{RM}	$I_F = 40\text{A}$; $di/dt = 25\text{A} / \mu\text{sec}$; $V_R = 100\text{V}$; $T_J = 25^\circ\text{C}$	27	40	A
Max. Junction Capacitance	C_T	@ $V_R = 0\text{V}$, $T_C = 25^\circ\text{C}$; $f_{SIG} = 1\text{MHz}$; $I_{SIG} = 100\text{mV (p-p)}$	650	-	pF

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