

TECHNICAL DATA  
DATA SHEET 4090, REV.-

## HERMETIC POWER SCHOTTKY RECTIFIER Very Low Forward Voltage Drop

**Applications:**

- Switching Power Supply • Converters • Free-Wheeling Diodes • Polarity Protection Diode

**Features:**

- Soft Reverse Recovery at Low and High Temperature
- Very Low Forward Voltage Drop
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- High Surge Capacity
- Guard Ring for Enhanced Durability and Long Term Reliability
- Guaranteed Reverse Avalanche Characteristics

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	200	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	35	A
Max. Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine wave (per leg)	200	A
Non-Repetitive Avalanche Energy	$E_{AS}$	$T_J = 25\text{ }^\circ\text{C}$ , $I_{AS} = 0.6\text{ A}$ , $L = 40\text{mH}$	11.4	mJ
Repetitive Avalanche Current	$I_{AR}$	$I_{AS}$ decay linearly to 0 in $1\text{ }\mu\text{s}$ $f$ limited by $T_J$ max $V_A = 1.5V_R$	0.6	A
Thermal Resistance (per leg)	$R_{\theta JC}$	(common cathode, common anode, doubler)	0.72	$^\circ\text{C/W}$
Thermal Resistance (per leg)	$R_{\theta JC}$	(single rectifier)	1.45	$^\circ\text{C/W}$
Max. Junction Temperature	$T_J$	-	-65 to +200	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-65 to +175	$^\circ\text{C}$

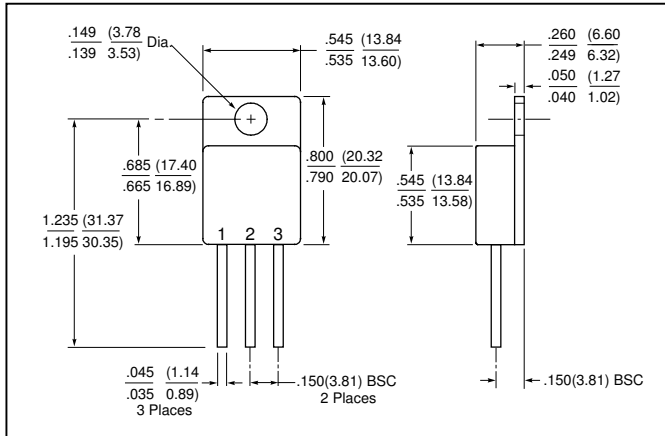
**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)	$V_{F1}$	@ 15A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	1.01	V
	$V_{F2}$	@ 15A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.85	V
Max. Reverse Current (per leg)	$I_{R1}$	@ $V_R = 200\text{V}$ , Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.35	mA
	$I_{R2}$	@ $V_R = 200\text{V}$ , Pulse, $T_J = 125\text{ }^\circ\text{C}$	8.0	mA
Max. Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ , $V_{SIG} = 50\text{mV}$ (p-p)	300	pF
Max. Reverse Recovery Time	$t_{rr}$	$I_F = 0.5\text{ A}$ , $I_R = 1.0\text{ A}$ , $I_{RM} = 0.25\text{ A}$ , $T_J = 25\text{ }^\circ\text{C}$	33	nsec

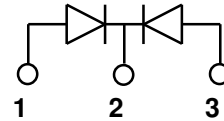
SENSITRON

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Mechanical Dimensions: In Inches / mm



COMMON CATHODE



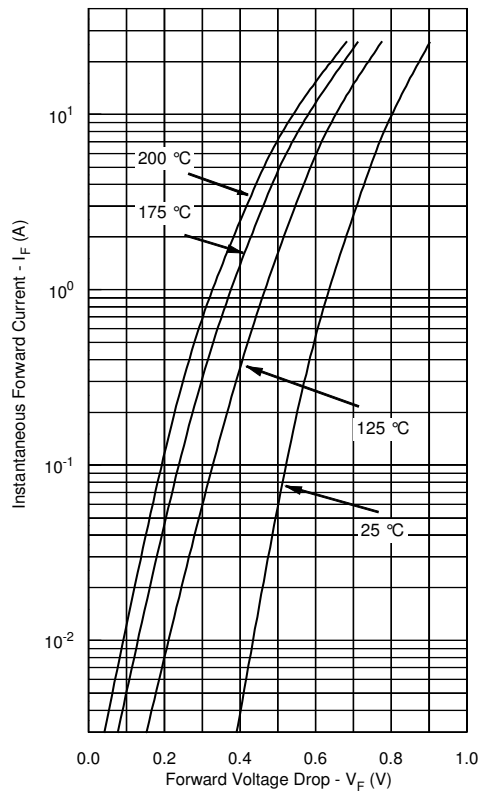
TO-254

PINOUT TABLE

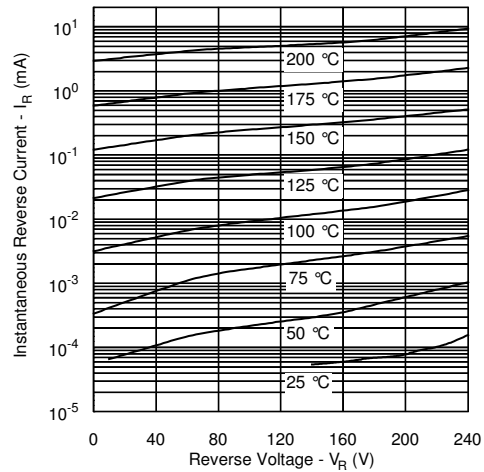
TYPE	PIN 1	PIN 2	PIN 3
DUAL RECTIFIER, COMMON CATHODE	ANODE 1	COMMON CATHODE	ANODE 2

Curves shown are for bare die only

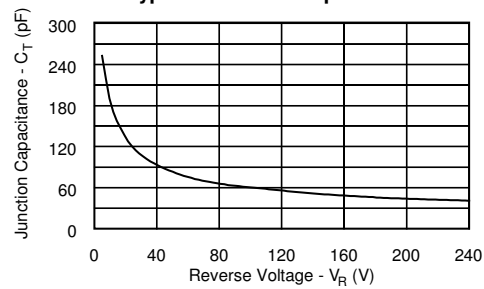
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



**TECHNICAL DATA**

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