

TECHNICAL DATA
DATA SHEET 842, REV. A

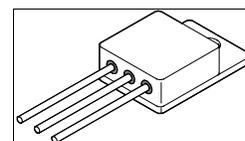
HERMETIC POWER SCHOTTKY RECTIFIER Low Forward Voltage Drop (200 V, 15 A)

Applications:

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

Features:

- Soft Reverse Recovery at Low and High Temperature
- 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:

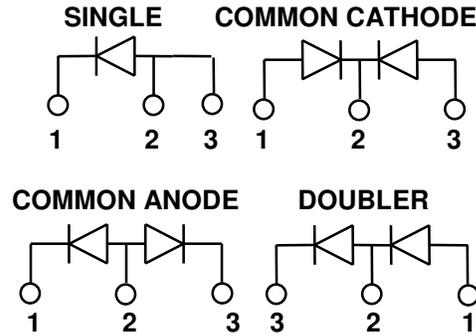
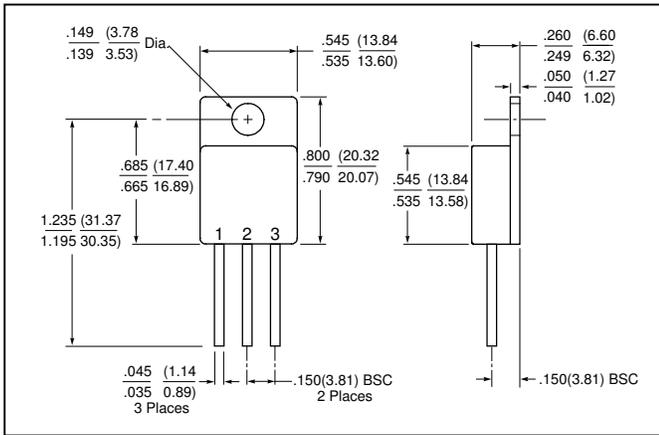
Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	200	V
Max. Average Forward Current (whole device)	$I_{F(AV)}$	50% duty cycle @ $T_C = 100^\circ\text{C}$, rectangular wave form (Single & Doubler versions)	7.5	A
Max. Average Forward Current (whole device)	$I_{F(AV)}$	50% duty cycle @ $T_C = 100^\circ\text{C}$, rectangular wave form (Common Cathode & Common Anode versions)	15	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	75	A
Non-Repetitive Avalanche Energy (per leg)	E_{AS}	$T_J = 25^\circ\text{C}$, $I_{AS} = 0.5\text{ A}$ $L = 60\text{ mH}$	7.5	mJ
Repetitive Avalanche Current (per leg)	I_{AR}	I_{AS} decay linearly to 0 in 1 μs f limited by T_J max $V_A = 1.5V_R$	0.5	A
Max. Junction Temperature	T_J	-	-65 to +200	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-65 to +200	$^\circ\text{C}$

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)	V_{F1}	@ 7.5 A, Pulse, $T_J = 25^\circ\text{C}$	1.01	V
	V_{F2}	@ 7.5 A, Pulse, $T_J = 125^\circ\text{C}$	0.88	V
Max. Reverse Current (per leg)	I_{R1}	@ $V_R = 200\text{V}$, Pulse, $T_J = 25^\circ\text{C}$	0.18	mA
	I_{R2}	@ $V_R = 200\text{V}$, Pulse, $T_J = 125^\circ\text{C}$	4.0	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$, $V_{SIG} = 50\text{mV}$ (p-p)	150	pF
Maximum Thermal Resis. (per leg)	$R_{\theta JC}$	-	2.73	$^\circ\text{C/W}$
Max. Reverse Recovery Time	t_{rr}	$I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{RM} = 0.25\text{ A}$, $T_J = 25^\circ\text{C}$	25	nsec

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Mechanical Dimensions: In Inches / mm



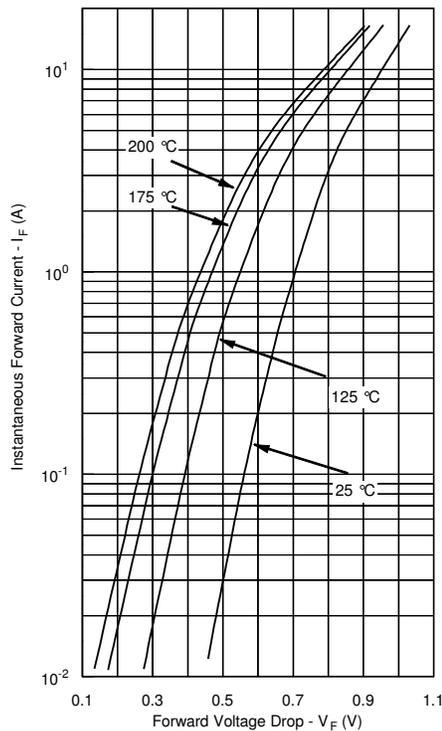
TO-254

PINOUT TABLE

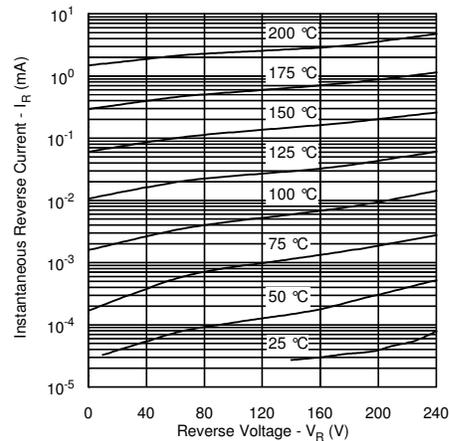
TYPE	PIN 1	PIN 2	PIN 3
SINGLE RECTIFIER	CATHODE	ANODE	ANODE
DUAL RECTIFIER, COMMON CATHODE (P)	ANODE 1	COMMON CATHODE	ANODE 2
DUAL RECTIFIER, COMMON ANODE (N)	CATHODE 1	COMMON ANODE	CATHODE 2
DUAL RECTIFIER, DOUBLER (D)	ANODE	ANODE/CATHODE	CATHODE

Note: The V_f curves shown are for the un-packaged die only.

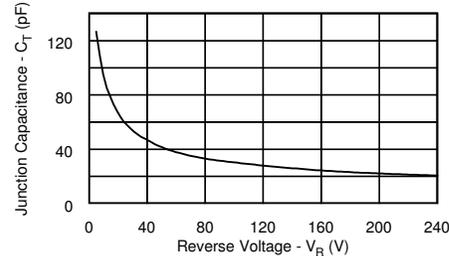
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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