

TECHNICAL DATA
DATA SHEET 654, REV. C

HERMETIC POWER SCHOTTKY RECTIFIER
Very Low Forward Voltage Drop
Ultra Low Reverse Leakage
200°C Operating Temperature

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
- Ultra Low Reverse Leakage
- Low Power Loss, High Efficiency
- High Surge Capacity
- Guard Ring for Enhanced Durability and Long Term Reliability
- Guaranteed Reverse Avalanche Characteristics
- Out Performs 100 Volt Ultrafast Rectifiers

Maximum Ratings:

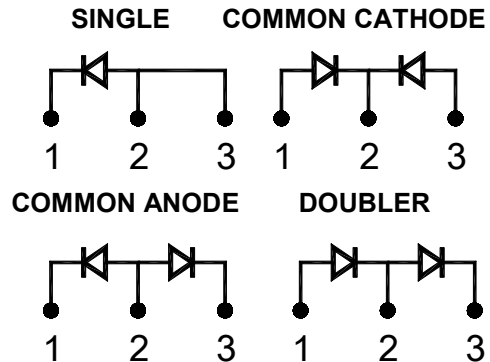
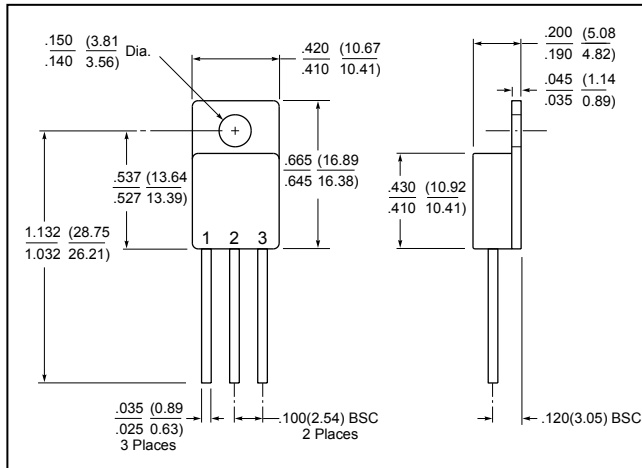
Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	100	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	15	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine wave	75	A
Non-Repetitive Avalanche Energy	E_{AS}	$T_J = 25\text{ }^\circ\text{C}$, $I_{AS} = 0.53\text{ A}$, $L = 56\text{ mH}$	8.0	mJ
Repetitive Avalanche Current	I_{AR}	I_{AS} decay linearly to 0 in $1\text{ }\mu\text{s}$ f limited by T_J max $V_A=1.5V_R$	0.53	A
Max. Thermal Resistance	$R_{\theta JC}$	(per leg)	2.82	$^\circ\text{C/W}$
Max. Junction Temperature	T_J	-	-65 to +175	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-65 to +175	$^\circ\text{C}$

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 15A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ (per leg)	0.93	V
	V_{F2}	@ 15A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ (per leg)	0.77	V
Max. Reverse Current	I_{R1}	@ $V_R = 100\text{V}$, Pulse, $T_J = 25\text{ }^\circ\text{C}$ (per leg)	0.35	mA
	I_{R2}	@ $V_R = 100\text{V}$, Pulse, $T_J = 125\text{ }^\circ\text{C}$ (per leg)	8.0	mA
Max. Junction Capacitance	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) (per leg)	600	pF

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Mechanical Dimensions: In Inches / mm



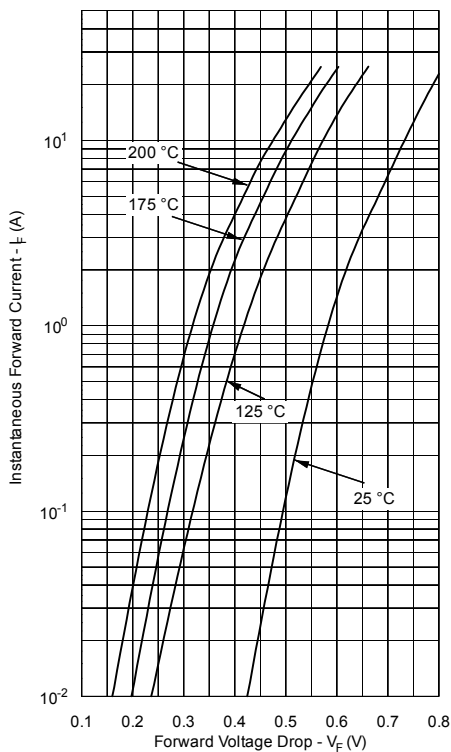
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PINOUT TABLE

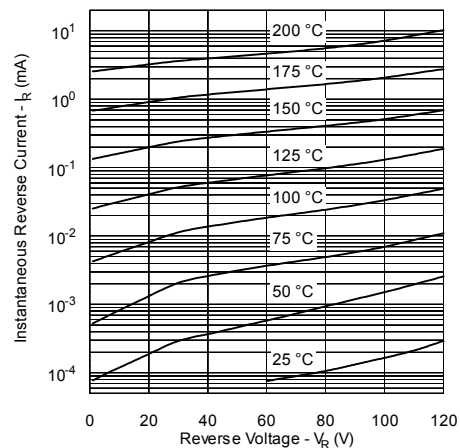
TYPE	PIN 1	PIN 2	PIN 3
SINGLE RECTIFIER	CATHODE	ANODE	ANODE
DUAL RECTIFIER, COMMON CATHODE (P)	ANODE 1	COMMON CATHODE	ANODE 2
DUAL RECTIFIER, COMMON ANODE (N)	CATHODE 1	COMMON ANODE	CATHODE 2
DUAL RECTIFIER, DOUBLER (D)	ANODE	ANODE/CATHODE	CATHODE

Note: The V_f curves shown are for the SD125SC200 unpackaged die only.

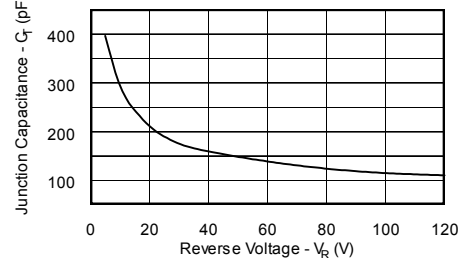
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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