

TECHNICAL DATA
DATA SHEET 4686, REV. -**HERMETIC POWER SCHOTTKY RECTIFIER**
Very Low Forward Voltage**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 Power Loss, High Efficiency
- High Surge Capacity
- Guard Ring for Enhanced Durability and Long Term Reliability
- Guaranteed Reverse Avalanche Characteristics

Maximum Ratings:

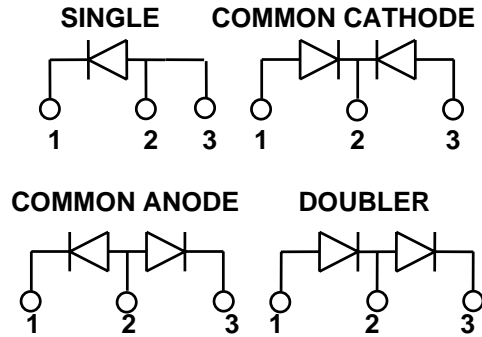
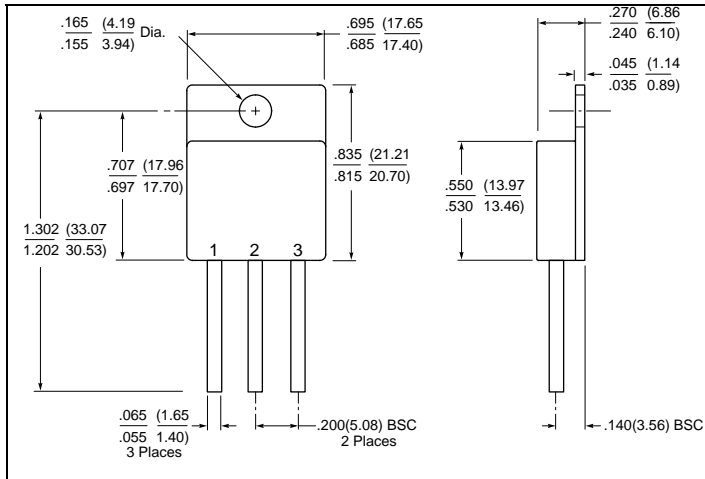
Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	45	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form (Single/Doubler)	30	A
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form (Common Cathode/Common Anode)	45	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine wave (per leg)	200	A
Max. Thermal Resistance	$R_{\theta JC}$	(Single)	0.77	°C/W
Max. Thermal Resistance	$R_{\theta JC}$	(Common Cathode/Common Anode/Doubler) (per leg)	0.39	°C/W
Max. Junction Temperature	T_J	-	-65 to +150	°C
Max. Storage Temperature	T_{stg}	-	-65 to +150	°C

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 30A, Pulse, $T_J = 25\text{ °C}$ (per leg)	0.73	V
	V_{F2}	@ 30A, Pulse, $T_J = 125\text{ °C}$ (per leg)	0.68	V
Max. Reverse Current	I_{R1}	@ $V_R = 45V$, Pulse, $T_J = 25\text{ °C}$ (per leg)	3	mA
	I_{R2}	@ $V_R = 45V$, Pulse, $T_J = 125\text{ °C}$ (per leg)	140	mA
Max. Junction Capacitance	C_T	@ $V_R = 5V$, $T_C = 25\text{ °C}$ $f_{SIG} = 1MHz$, $V_{SIG} = 50mV$ (p-p) (per leg)	1600	pF

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Mechanical Dimensions: In Inches / mm



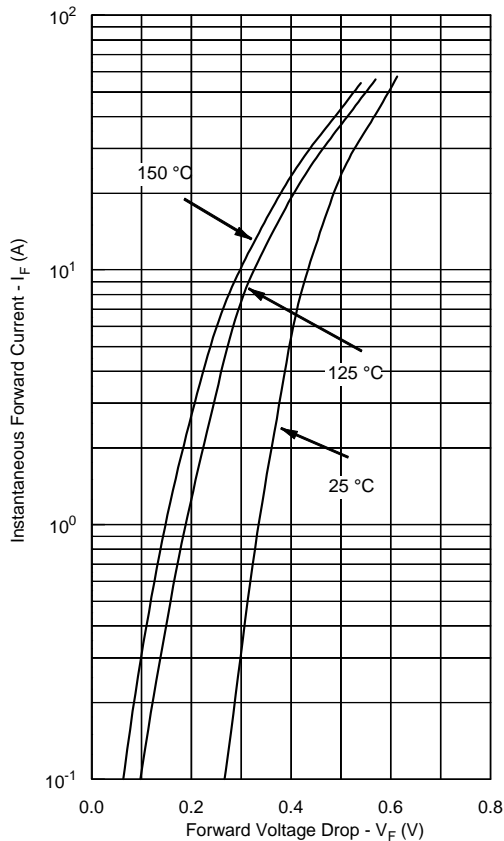
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PINOUT TABLE

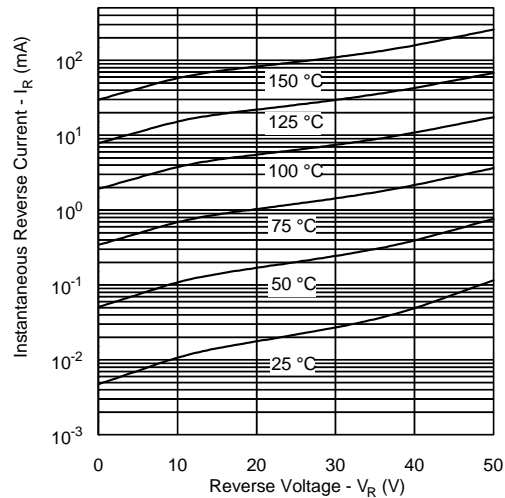
TYPE	PIN 1	PIN 2	PIN 3
SINGLE RECTIFIER	CATHODE	ANODE	ANODE
DUAL RECTIFIER, COMMON CATHODE (P)	ANODE 1	COMMON CATHODE	ANODE 2
DUAL RECTIFIER, COMMON ANODE (N)	CATHODE 1	COMMON ANODE	CATHODE 2
DUAL RECTIFIER, DOUBLER (D)	ANODE	CATHODE/ANODE	CATHODE

Note: The V_f curves shown are for the SD175SA45 un-packaged die only.

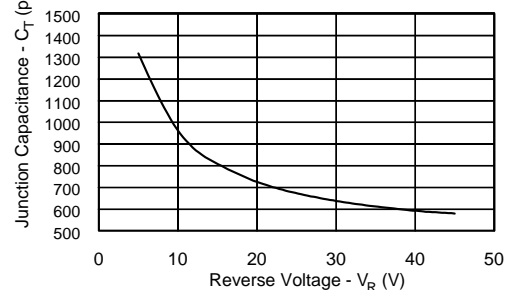
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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