

TECHNICAL DATA
DATA SHEET 4007, REV. A

HERMETIC SCHOTTKY RECTIFIER

Very Low Forward Voltage Drop

Features:

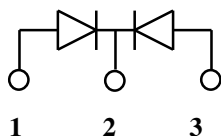
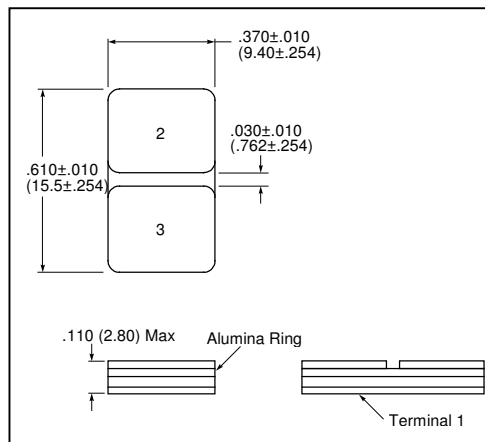
- Soft Reverse Recovery at Low and High Temperature
- Very Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- High Surge Capacity
- Guard Ring for Enhanced Durability and Long Term Reliability
- Guaranteed Reverse Avalanche Characteristics

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)	15	A
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form (Common Cathode)	30	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}	$T_J = 25\text{ }^{\circ}\text{C}$, $I_{AS} = 3.0\text{ A}$, $L = 4.4\text{ mH}$ (per leg)	20	mJ
Repetitive Avalanche Current	I_{AR}	I_{AS} decay linearly to 0 in $1\text{ }\mu\text{s}$ f limited by T_J max $V_A=1.5V_R$	3.0	A
Maximum Thermal Resistance	$R_{\theta JC}$	(Single) (Common Cathode)	1.21 0.61	$^{\circ}\text{C/W}$
Max. Junction Temperature	T_J	-	-65 to +175	$^{\circ}\text{C}$
Max. Storage Temperature	T_{stg}	-	-65 to +175	$^{\circ}\text{C}$

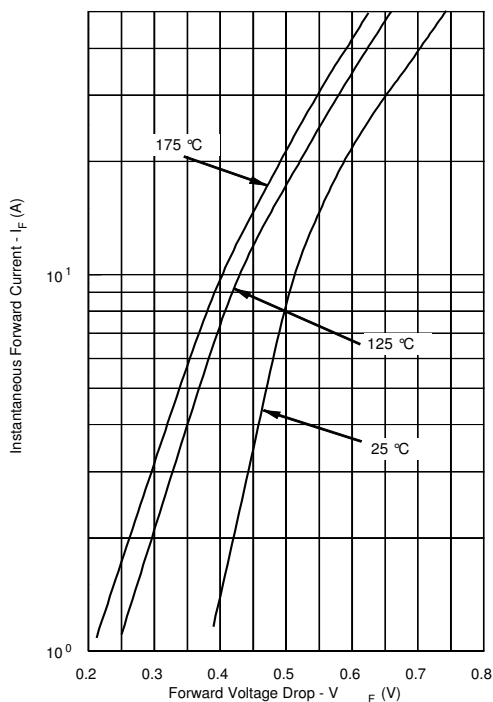
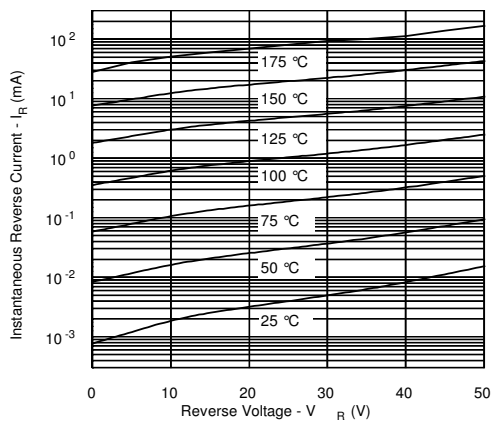
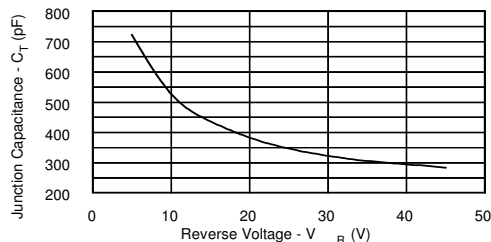
Electrical Characteristics

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)	V_{F1}	@ 15A, Pulse, $T_J = 25\text{ }^{\circ}\text{C}$	0.73	V
	V_{F2}	@ 15A, Pulse, $T_J = 125\text{ }^{\circ}\text{C}$	0.66	V
Max. Reverse Current (per leg)	I_{R1}	@ $V_R = 45\text{ V}$, Pulse, $T_J = 25\text{ }^{\circ}\text{C}$	2.0	mA
	I_{R2}	@ $V_R = 45\text{ V}$, Pulse, $T_J = 125\text{ }^{\circ}\text{C}$	15	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)	800	pF

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MECHANICAL DIMENSIONS: In Inches / mm

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
DUAL RECTIFIER, COMMON CATHODE (P)	COMMON CATHODE	ANODE	ANODE

Note: The V_f curves shown are for the SD125SB45 unpackaged die only.

Typical Forward Characteristics

Typical Reverse Characteristics

Typical Junction Capacitance


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