

TECHNICAL DATA
 DATA SHEET 4653, REV. C

HERMETIC SCHOTTKY RECTIFIER

Low Forward Voltage Drop

Features:

- Soft Reverse Recovery at Low and High Temperature
- 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 per leg	V_{RWM}	-	100	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form - Common Cathode / Anode - Single / Doubler	15 7.5	A A
Max. Peak One Cycle Non-Repetitive Surge Current per leg	I_{FSM}	8.3 ms, half Sine wave	140	A
Non-Repetitive Avalanche Energy per leg	E_{AS}	$T_J = 25\text{ }^\circ\text{C}$, $I_{AS} = 3.0\text{ A}$, $L = 4.4\text{ mH}$	20	mJ
Repetitive Avalanche Current per leg	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	$R_{\theta JC}$	- Common Cathode / Anode - Single / Doubler	1.3 2.5	$^\circ\text{C/W}$
Max. Junction Temperature	T_J	-	-65 to +175	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-65 to +175	$^\circ\text{C}$

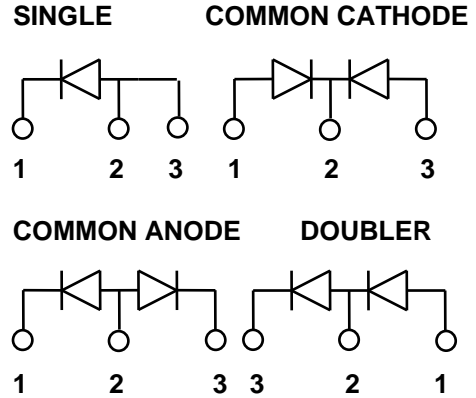
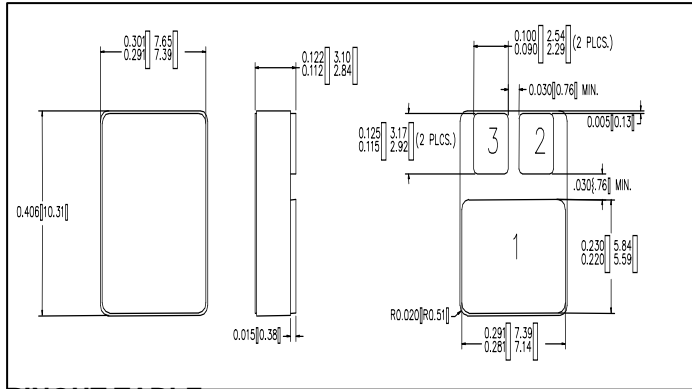
Electrical Characteristics

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)	V_{F1}	@ 7.5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.90	V
	V_{F2}	@ 7.5A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.74	V
Max. Reverse Current (per leg)	I_{R1}	@ $V_R = 100\text{V}$, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.05	mA
	I_{R2}	@ $V_R = 100\text{V}$, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.5	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$, $V_{SIG} = 50\text{mV (p-p)}$	250	pF

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Mechanical Dimensions: in Inches / mm

LCC-5

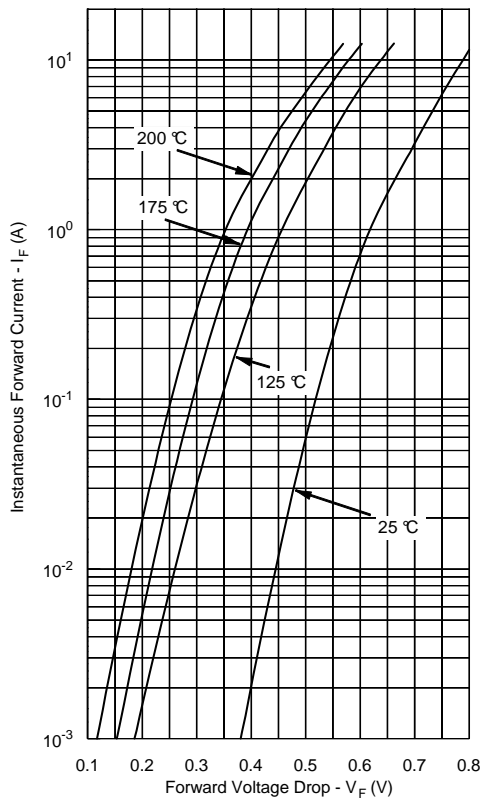


PINOUT TABLE

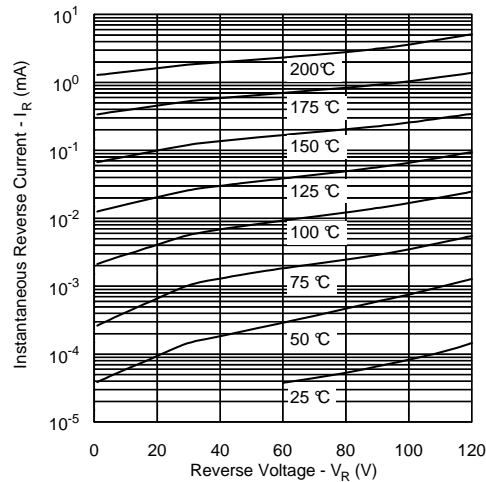
DEVICE TYPE	PIN 1	PIN 2	PIN 3
SINGLE RECTIFIER	CATHODE	ANODE	ANODE
DUAL RECTIFIER, COMMON CATHODE (P)	ANODE 1	COMMON CATHODE	ANODE 2
DUAL RECTIFIER, COMMON ANODE (N)	CATHODE 1	COMMON ANODE	CATHODE 2
DUAL RECTIFIER, DOUBLER (D)	ANODE	ANODE/CATHODE	CATHODE

Note: The V_f curves shown are for the SD90SC100 unpackaged die only.

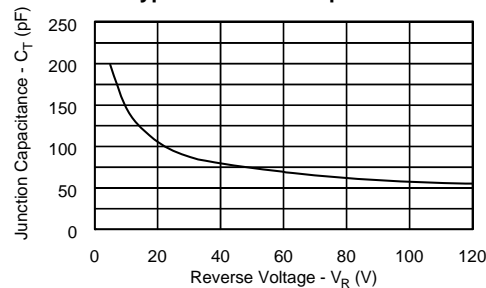
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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