

SILICON SCHOTTKY RECTIFIER

Ultra Low Reverse Leakage

175°C Operating Temperature

Applications:

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

Features:

- Ultra low Reverse Leakage Current
- 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}	-	30	V
Max. Average Forward Current	$I_{F(AV)}$	Maximum DC Output Current (@ $T_C=100^\circ\text{C}$) (Single, Doubler)	3.0	A
Max. Average Forward Current	$I_{F(AV)}$	Maximum DC Output Current (@ $T_C=100^\circ\text{C}$) (Common Cathode, Common Anode)	6.0	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine wave	55	A
Maximum Thermal Resistance (Per leg)	$R_{\theta JC}$	-	11.9	$^\circ\text{C}/\text{W}$
Max. Junction Temperature	T_J	-	-65 to +175	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-65 to +175	$^\circ\text{C}$

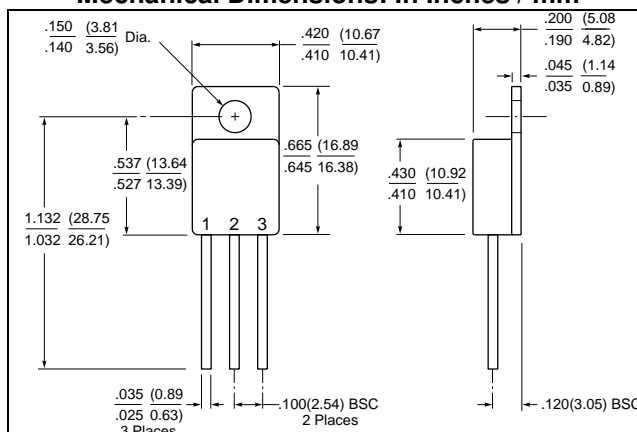
Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 3A, Pulse, $T_J = 25^\circ\text{C}$	0.59	V
	V_{F2}	@ 3A, Pulse, $T_J = 125^\circ\text{C}$	0.49	V
Max. Reverse Current	I_{R1}	@ $V_R = 30\text{V}$, Pulse, $T_J = 25^\circ\text{C}$	0.4	mA
	I_{R2}	@ $V_R = 30\text{V}$, Pulse, $T_J = 125^\circ\text{C}$	20	mA
Max. Junction Capacitance	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)	220	pF

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DATASHEET 4745, REV. B

Mechanical Dimensions: In Inches / mm

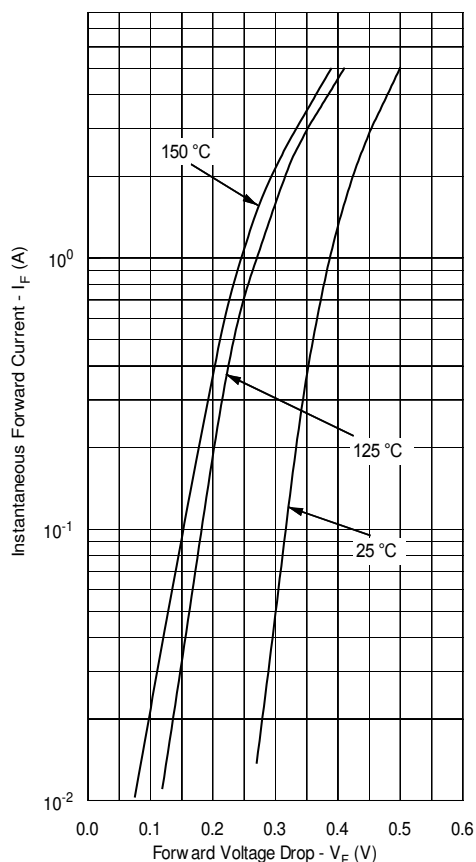


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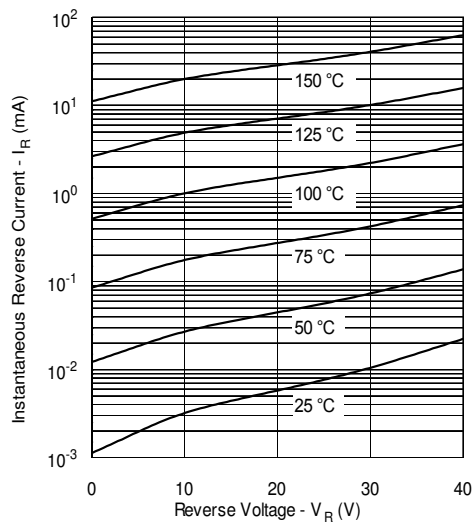
DEVICE TYPE	PIN 1	PIN 2	PIN 3
SINGLE RECTIFIER	CATHODE	ANODE	ANODE
COMMON CATHODE (P)	ANODE 1	COMMON CATHODE	ANODE 2
COMMON ANODE (N)	CATHODE 1	COMMON ANODE	CATHODE 2
DOUBLER (D)	ANODE	CATHODE / ANODE	CATHODE

Note: Vf characteristics are for unpackaged die only.

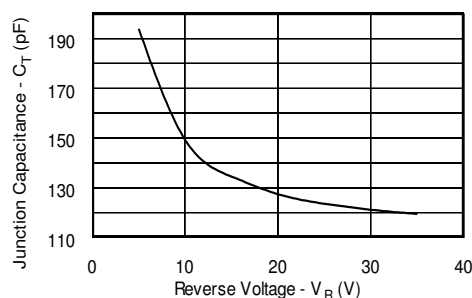
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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