

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}	-	45	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
Maximun Thermal Resistance (Single)	$R_{\theta JC}$	-	6.35	$^{\circ}\text{C/W}$
Maximun Thermal Resistance (Common Cathode, Common Anode, Doubler)	$R_{\theta JC}$	-	3.17	$^{\circ}\text{C/W}$
Max. Junction Temperature	T_J	-	-65 to +175	$^{\circ}\text{C}$
Max. Storage Temperature	T_{stg}	-	-65 to +175	$^{\circ}\text{C}$

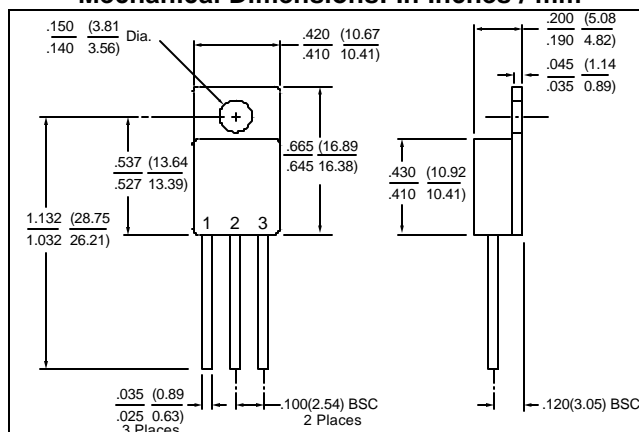
Electrical Characteristics Per Leg:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 3 A, Pulse, $T_J = 25^{\circ}\text{C}$	0.74	V
	V_{F2}	@ 3 A, Pulse, $T_J = 125^{\circ}\text{C}$	0.67	V
Max. Reverse Current	I_{R1}	@ $V_R = 45\text{ V}$, Pulse, $T_J = 25^{\circ}\text{C}$	0.08	mA
	I_{R2}	@ $V_R = 45\text{ V}$, Pulse, $T_J = 125^{\circ}\text{C}$	3	mA
Max. Junction Capacitance	C_T	@ $V_R = 5\text{ V}$, $T_C = 25^{\circ}\text{C}$ $f_{SIG} = 1\text{ MHz}$, $V_{SIG} = 50\text{ mV (p-p)}$	160	pF

SENSITRON

TECHNICAL DATA
DATASHEET 4748, REV. A

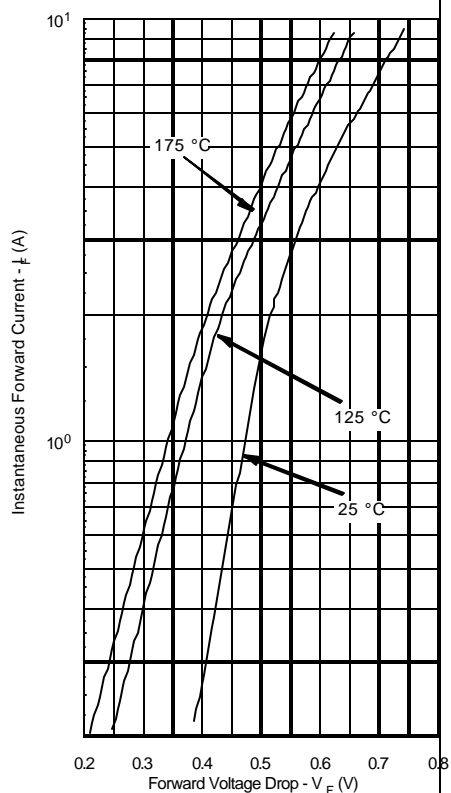
Mechanical Dimensions: In Inches / mm



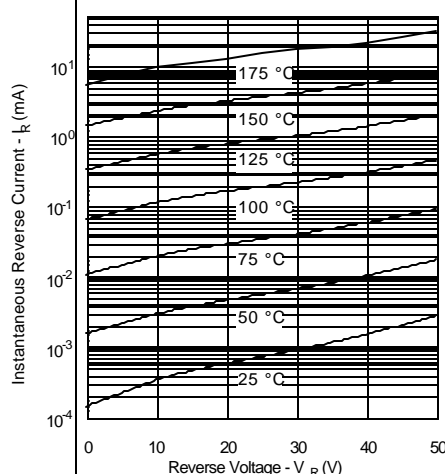
TO-257

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

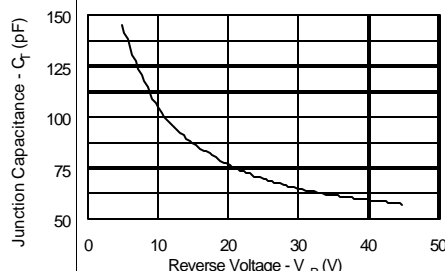
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



Note: VF characteristics are for unpackaged die only.

TECHNICAL DATA

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