

## 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	$^\circ\text{C}$

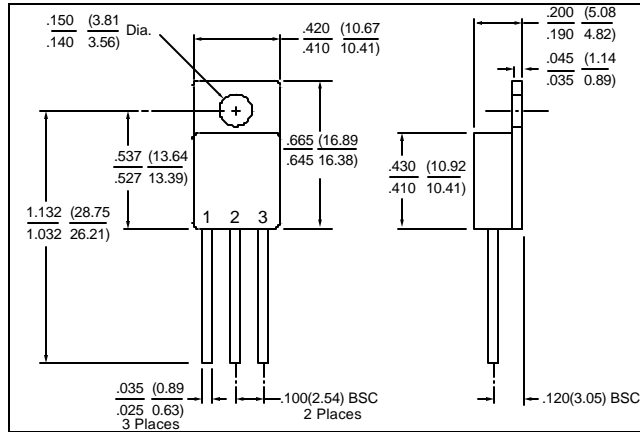
#### Electrical Characteristics Per Leg:

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

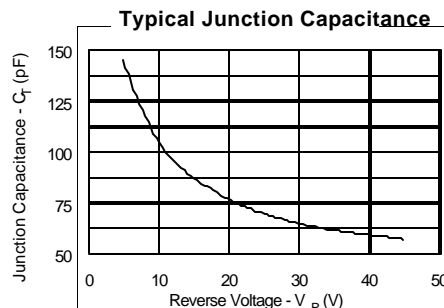
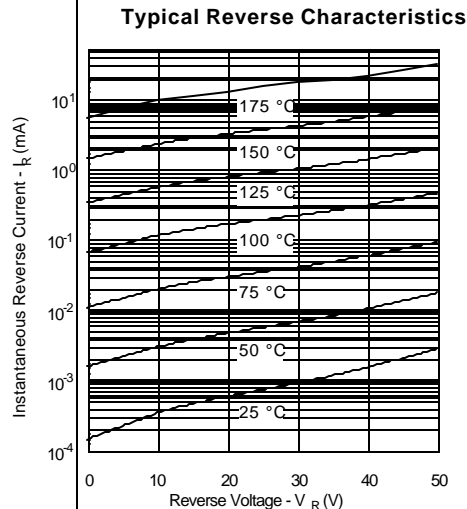
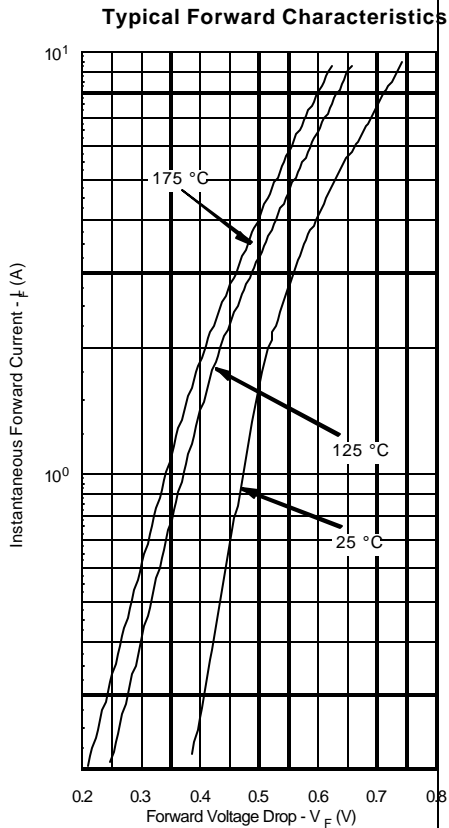
TECHNICAL DATA  
 DATASHEET 4748, REV. A

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



Note: V<sub>f</sub> characteristics are for unpackaged die only.

**TECHNICAL DATA**

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