# <u>SENSITRON</u> SEMICONDUCTOR

TECHNICAL DATA DATA SHEET 4799, 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 <sub>RWM</sub>	-	45	V
Max. Average Forward Current	I <sub>F(AV)</sub>	50% duty cycle, rectangular wave form (Single)	30	A
Max. Peak One Cycle Non- Repetitive Surge Current	I <sub>FSM</sub>	8.3 ms, half Sine wave (per leg)	100	A
Non-Repetitive Avalanche Energy	E <sub>AS</sub>	T <sub>J</sub> = 25 °C, I <sub>AS</sub> = 3.0 A, L = 4.4 mH (per leg)	20	mJ
Repetitive Avalanche Current	I <sub>AR</sub>	$I_{AS}$ decay linearly to 0 in 1 µs f limited by $T_J$ max $V_A$ =1.5 $V_R$	3.0	A
Maximum Thermal Resistance	$R_{ ext{ heta}JC}$	Single	1.60	°C/W
Max. Junction Temperature	$T_{J}$	-	-65 to +150	°C
Max. Storage Temperature	T <sub>stg</sub>	-	-65 to +150	°C

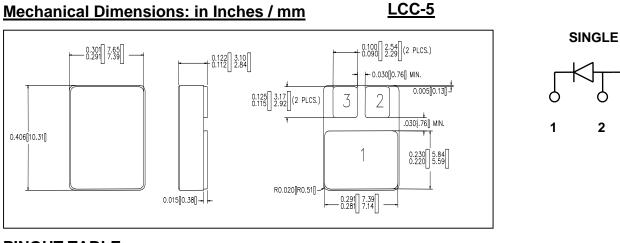
## **Electrical Characteristics**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V <sub>F1</sub>	@ 30A, Pulse, T <sub>J</sub> = 25 °C	0.71	V
(per leg)	V <sub>F2</sub>	@ 30A, Pulse, T <sub>J</sub> = 125 °C	0.66	V
Max. Reverse Current	I <sub>R1</sub>	$@V_R = 45V$ , Pulse,	0.1	mA
(per leg)		T <sub>J</sub> = 25 °C		
	I <sub>R2</sub>	$@V_R = 45V$ , Pulse,	20	mA
		T <sub>J</sub> = 125 °C		
Max. Junction Capacitance	CT	@V <sub>R</sub> = 5V, T <sub>C</sub> = 25 °C	1300	pF
(per leg)		f <sub>SIG</sub> = 1MHz,		
		$V_{SIG} = 50 mV (p-p)$		

# **SENSITRON** SEMICONDUCTOR

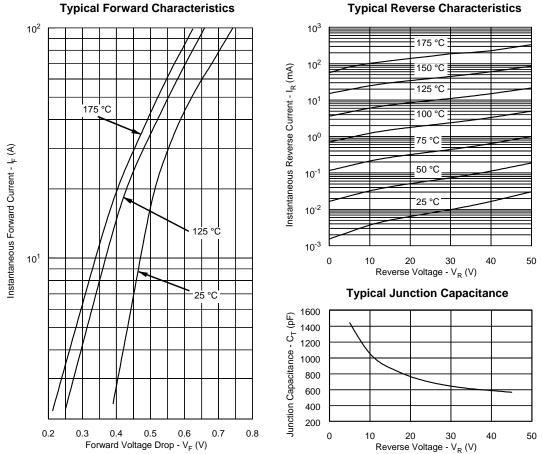
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#### **PINOUT TABLE DEVICE TYPE** PIN 1 PIN 2 PIN 3 CATHODE SINGLE RECTIFIER ANODE ANODE

Note: The V<sub>f</sub> curves shown are for the SD175SB45 unpackaged die only.



• 221 WEST INDUSTRY COURT • DEER PARK, NY 11729-4681 • PHONE (631) 586-7600 • FAX (631) 242-9798 • World Wide Web - http://www.sensitron.com • E-Mail - sales@sensitron.com •

#### **Typical Reverse Characteristics**



### **TECHNICAL DATA**

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