

TECHNICAL DATA DATA SHEET 4083, REV. -

# HERMETIC POWER SCHOTTKY RECTIFIER Ultra Low Reverse Leakage 200°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
- Out Performs 100 Volt Ultrafast Rectifiers
- Available with Ceramic Seals

# **Maximum Ratings:**

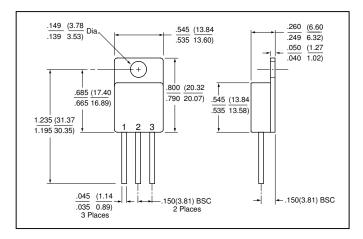
Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	100	<b>V</b>
Max. Average Forward	I <sub>F(AV)</sub>	50% duty cycle, rectangular	30	Α
Current	, ,	wave form		
Max. Peak One Cycle Non-	I <sub>FSM</sub>	8.3 ms, half Sine wave	200	Α
Repetitive Surge Current				
Max. Junction Temperature	$T_J$	-	-65 to +200	°C
Max. Storage Temperature	T <sub>stg</sub>	-	-65 to +175	°C
Max. Thermal Resistance	$R_{ heta JC}$	-	0.77	°C/W

## **Electrical Characteristics:**

Characteristics	<b>Symbol</b>	Condition	Max.	Units
Max. Forward Voltage Drop	$V_{F1}$	@ 30A, Pulse, T <sub>J</sub> = 25 °C	1.01	V
	$V_{F2}$	@ 30A, Pulse, T <sub>J</sub> = 125 °C	0.85	V
Max. Reverse Current	I <sub>R1</sub>	@V <sub>R</sub> = 100V, Pulse,	0.20	mA
		$T_J = 25  ^{\circ}C$		
	I <sub>R2</sub>	@V <sub>R</sub> = 100V, Pulse,	2.0	mA
		T <sub>J</sub> = 125 °C		
Max. Junction Capacitance	C <sub>T</sub>	$@V_R = 5V, T_C = 25  ^{\circ}C$	1000	рF
		$f_{SIG} = 1MHz,$		
		$V_{SIG} = 50 \text{mV (p-p)}$		

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#### **MECHANICAL DIMENSIONS: In Inches / mm**





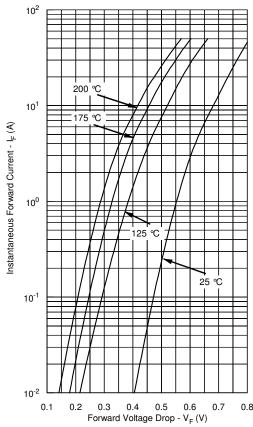
TO-254

# **PINOUT TABLE**

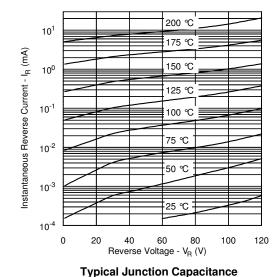
DEVICE TYPE	PIN 1	PIN 2	PIN 3
SCHOTTKY RECTIFIER IN	CATHODE	ANODE	ANODE
A TO-254 PACKAGE			

Curves are given for unpackaged die.

# **Typical Forward Characteristics**



#### **Typical Reverse Characteristics**



#### 900 Junction Capacitance - C<sub>T</sub> (pF) 800 700 600 500 400 300 200 100 0 20 40 60 80 100 120

Reverse Voltage - V<sub>R</sub> (V)



#### **TECHNICAL DATA**

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