

TECHNICAL DATA  
DATA SHEET 6096, REV A

## HERMETIC POWER SCHOTTKY RECTIFIER

### Applications:

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

### Features:

- Low Power Loss, High Efficiency
- High Surge Capacity
- Hermetic TO-258 package
- Add C for ceramic seal – SHDC1245F5P

### Maximum Ratings:

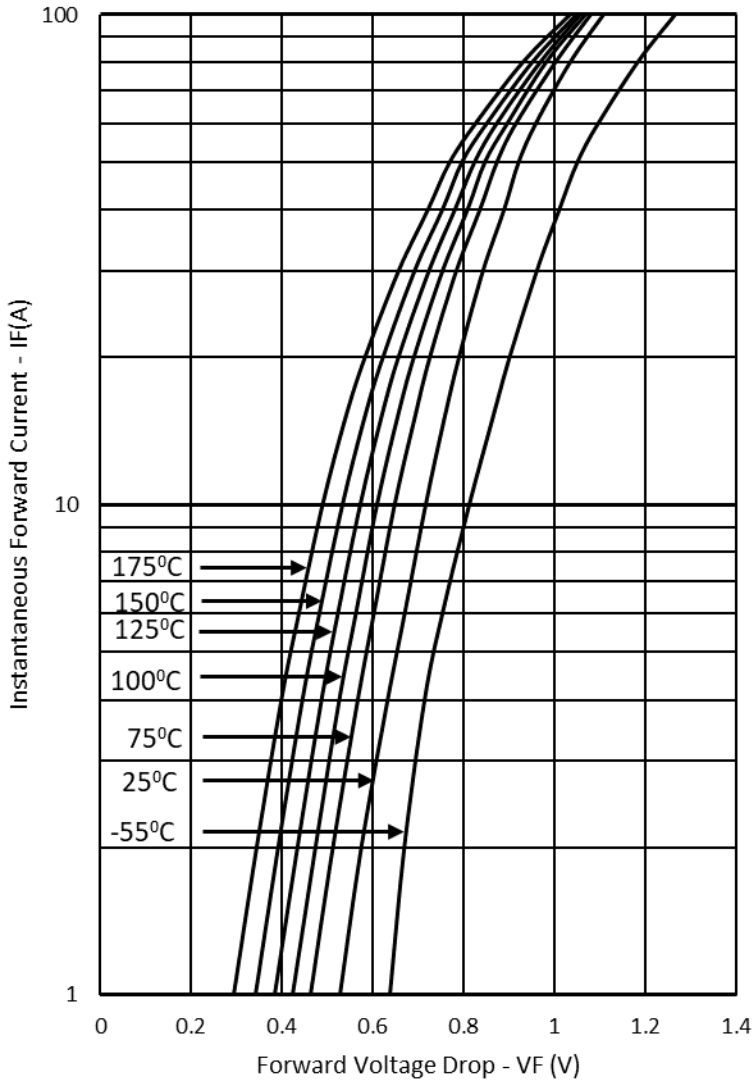
Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	150	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form (Single/Doubler)	45	A
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form (Common Cathode/Common Anode)	45	A
Max. Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine wave (per leg)	200	A
Max. Thermal Resistance	$R_{\theta JC}$	Per leg	1.15	°C/W
Max. Junction Temperature	$T_J$	-	-65 to +175	°C
Max. Storage Temperature	$T_{stg}$	-	-65 to +175	°C

### Electrical Characteristics:

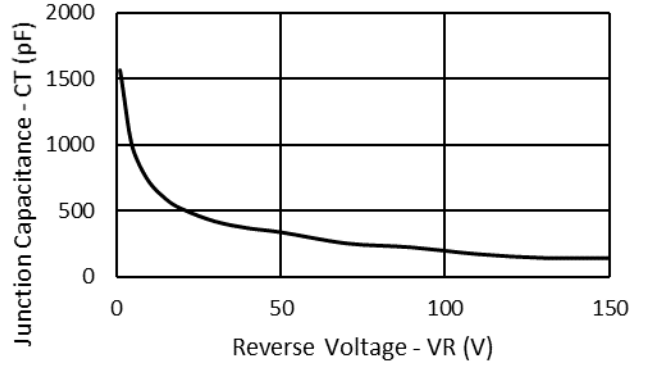
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	$V_{F1}$	@ 45A, Pulse, $T_J = 25\text{ °C}$ (per leg)	1.14	V
	$V_{F2}$	@ 45A, Pulse, $T_J = 125\text{ °C}$ (per leg)	1.06	V
Max. Reverse Current	$I_{R1}$	@ $V_R = 150\text{V}$ , Pulse, $T_J = 25\text{ °C}$ (per leg)	0.4	mA
	$I_{R2}$	@ $V_R = 150\text{V}$ , Pulse, $T_J = 125\text{ °C}$ (per leg)	10	mA
Max. Junction Capacitance	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25\text{ °C}$ $f_{SIG} = 1\text{MHz}$ , $V_{SIG} = 50\text{mV}$ (p-p) (per leg)	1200	pF

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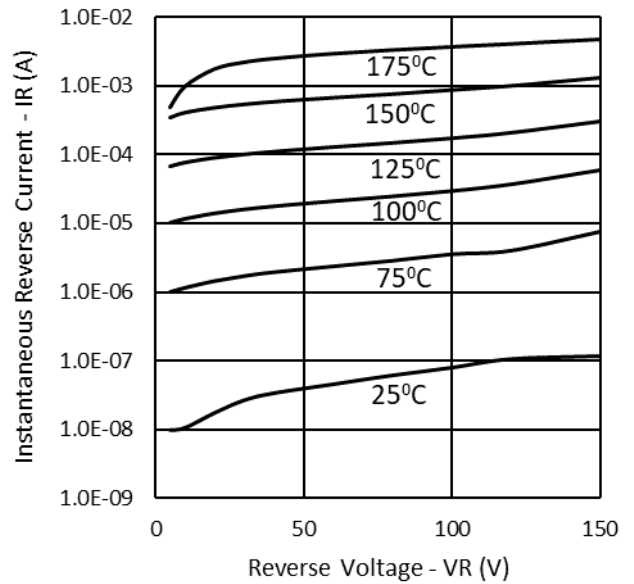
Typical Forward Characteristics



Typical Junction Capacitance

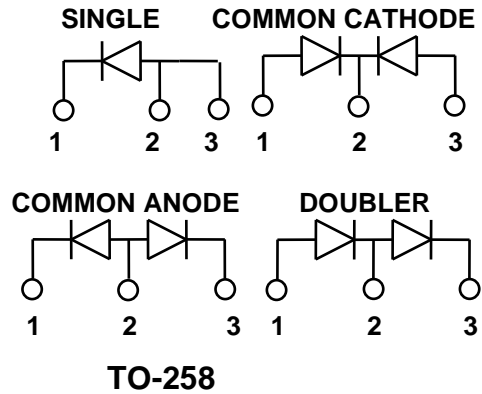
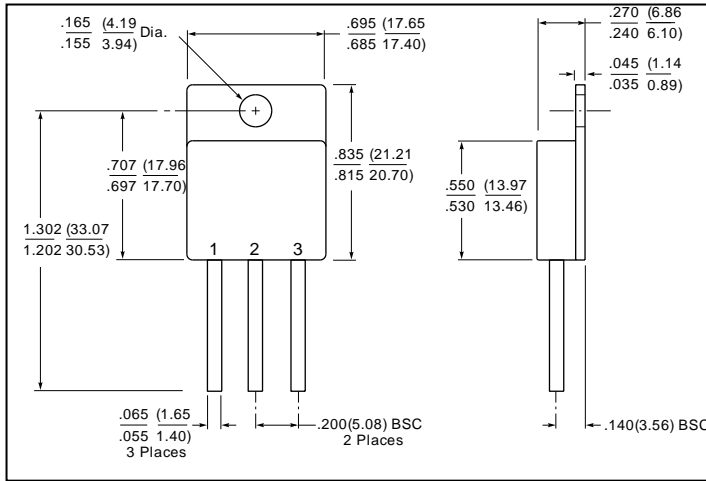


Typical Reverse Characteristics



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**Mechanical Dimensions: In Inches / mm**



**PINOUT TABLE**

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

**PART ORDERING INFORMATION:**

**SHD**X**1245F5**X XX X



**Screening Level (blank is no screening):**

Suffix	Screened in Accordance with:
blank	No screening level
S	MIL-PRF-19500, TXV Level
SS	MIL-PRF-19500, S Level

**QCI (blank is no QCI):**

Suffix	Inspection in Accordance with:
blank	No QCI
Q	MIL-PRF-19500 QCI

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