

TECHNICAL DATA
DATA SHEET 5117, REV. A.3

SCHOTTKY RECTIFIER 175°C Operating Temperature

Applications:

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

Features:

- Soft reverse recovery at low and high temperature
- 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 150 Volt ultrafast rectifiers
- For ceramic seals use part number prefix SHDC

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)	7.5	A
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form (Common Cathode, Common Anode)	15	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine wave pulsed (per leg)	75	A
Max. Thermal Resistance	$R_{\theta JC}$	(per leg)	5.37	°C/W
Max. Junction Temperature	T_J	-	-55 to +175	°C
Max. Storage Temperature	T_{stg}	-	-65 to +175	°C

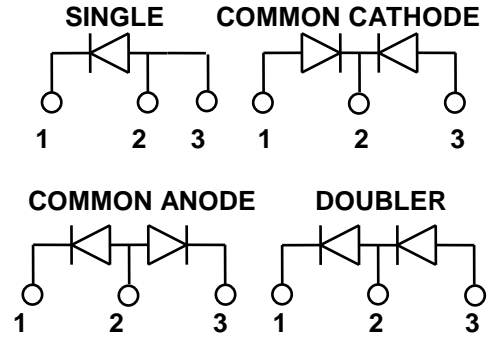
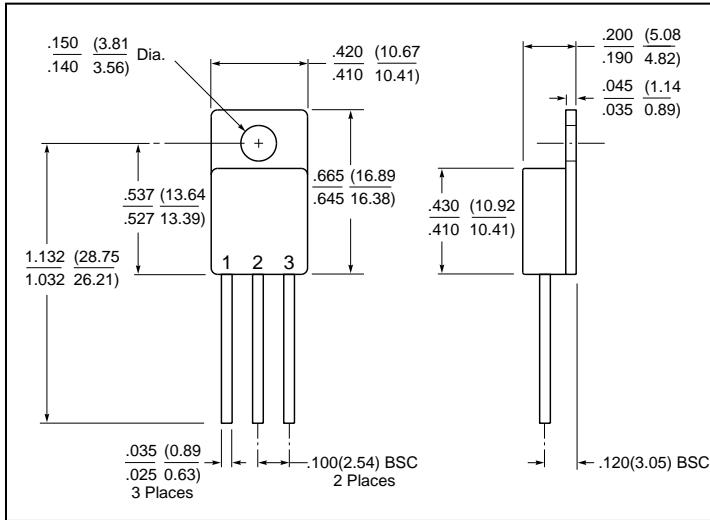
Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 7.5A, Pulse, $T_J = 25\text{ °C}$ (per leg)	0.95	V
	V_{F2}	@ 7.5A, Pulse, $T_J = 125\text{ °C}$ (per leg)	0.86	V
Max. Reverse Current	I_{R1}	@ $V_R = 150V$, Pulse, $T_J = 25\text{ °C}$ (per leg)	0.25	mA
	I_{R2}	@ $V_R = 150V$, Pulse, $T_J = 125\text{ °C}$ (per leg)	4.0	mA
Max. Junction Capacitance	C_T	@ $V_R = 10V$, $T_C = 25\text{ °C}$ $f_{SIG} = 1MHz$, $V_{SIG} = 50mV$ (p-p) (per leg)	250	pF

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Mechanical Dimensions: In Inches / mm



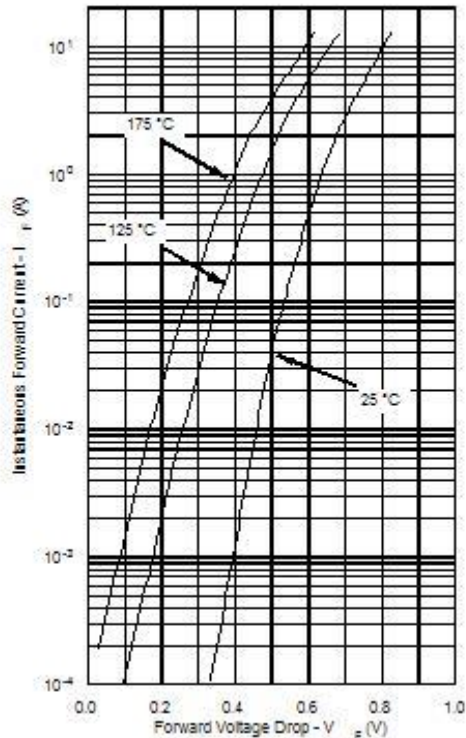
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PINOUT TABLE

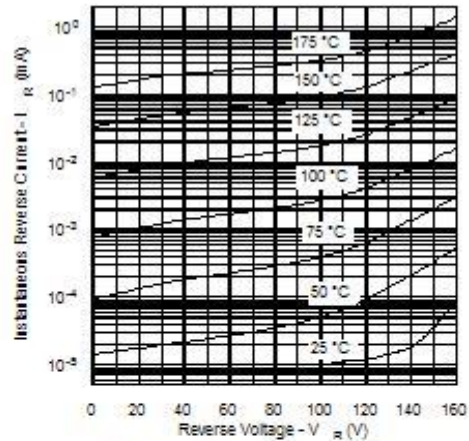
TYPE	PIN 1	PIN 2	PIN 3
SINGLE RECTIFIER	CATHODE	ANODE	ANODE
DUAL RECTIFIER, COMMON CATHODE (P)	ANODE 1	COMMON CATHODE	ANODE 2
DUAL RECTIFIER, COMMON ANODE (N)	CATHODE 1	COMMON ANODE	CATHODE 2
DUAL RECTIFIER, DOUBLER (D)	ANODE	ANODE/CATHODE	CATHODE

Note: The V_f curves shown are for the SD090SC150 unpackaged die only.

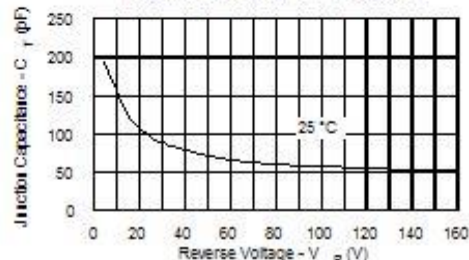
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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PART ORDERING INFORMATION:

SHD126145 XX X

Part Number

Screening Level (blank is no screening):

Suffix	Screened in Accordance with:
blank	No screening level
SX*	MIL-PRF-19500, TX Level
SV*	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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