TECHNICAL DATA
DATA SHEET 310, REV. B

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 200 Volt Ultrafast Rectifiers**

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	200	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	7.5	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine wave (1)	140	A
Non-Repetitive Avalanche Energy	E_{AS}	T_J = 25 °C, I_{AS} = 0.23A, L = 130 mH	7.7	mJ
Repetitive Avalanche Current	I_{AR}	I_{AS} decay linearly to 0 in 1 µs f limited by T_J max V_A=1.5V_R	0.4	A
Max. Junction Temperature	T_J	-	-65 to +200	°C
Max. Storage Temperature	T_{stg}	-	-65 to +200	°C

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 3A, Pulse, T_J = 25 °C	0.92	V
	V_{F2}	@ 3A, Pulse, T_J = 125 °C	0.76	V
Max. Reverse Current	I_{R1}	@V_R = 100V, Pulse, T_J = 25 °C	.05	mA
	I_{R2}	@V_R = 100V, Pulse, T_J = 125 °C	0.5	mA
Max. Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz, V_{SIG} = 50mV (p-p)	150	pF
Max. Reverse Recovery Time	t_{rr}	I_F = 0.5A, I_R = 1.0A, I_{RM} = 0.25 A, T_J = 25°C	12	nsec
Max. Thermal Resistance (per leg)	$R_{\theta JC}$	-	5.37	°C/W

(1) in SHD package

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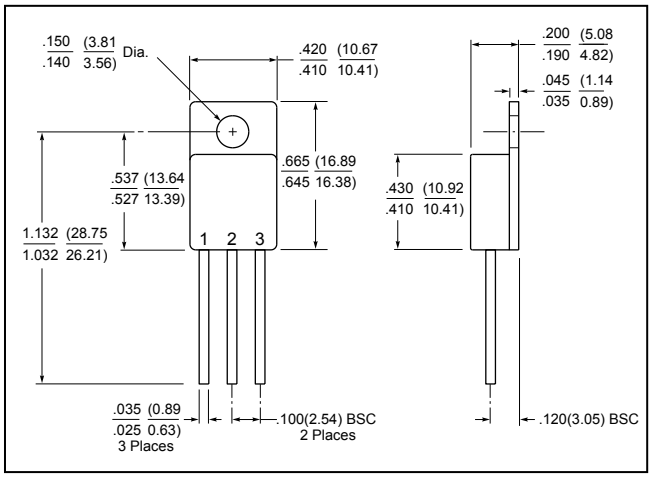
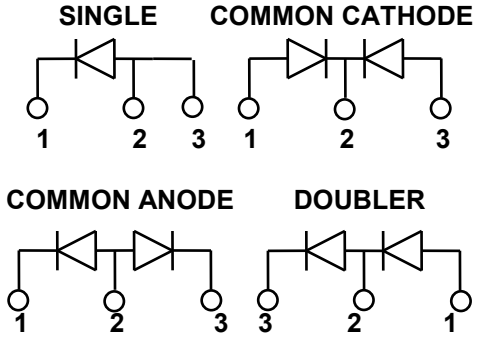
Mechanical Dimensions: In Inches / mm





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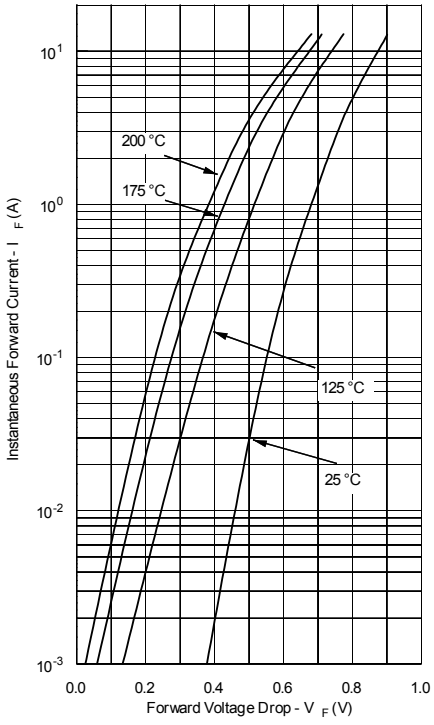
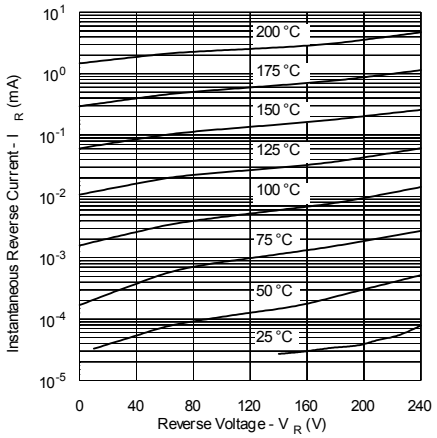
PINOUT TABLE

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

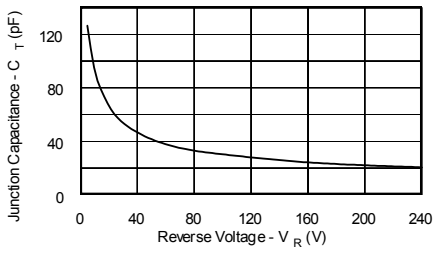
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



Note: The V_f curves shown are for the SD090SCU200 unpackaged die only.

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