TECHNICAL DATA
DATA SHEET 4097, REV. A

POWER SCHOTTKY RECTIFIER
Low Reverse Leakage

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**

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 Common Cathode (N)/Common Anode(P)	150	A
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form Doubler (D)	120	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine wave (per leg)	1650	A
Non-Repetitive Avalanche Energy	E_{AS}	T_J = 25 °C, I_{AS} = 1.3 A, L = 40mH (per leg)	27	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	1.3	A
Thermal Resistance	R_{thJC}	Per Package	0.2	°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}	@ 120A, Pulse, T_J = 25 °C (per leg) measured at the leads	0.95	V
	V_{F2}	@ 120A, Pulse, T_J = 125 °C (per leg) measured at the leads	0.79	V
Max. Reverse Current	I_{R1}	@V_R = 200V, Pulse, T_J = 25 °C (per leg)	0.6	mA
	I_{R2}	@V_R = 200V, Pulse, T_J = 125 °C (per leg)	6.0	mA
Max. Junction Capacitance	C_T	@V_R = 5 V, T_C = 25 °C f_{SIG} = 1 MHz, V_{SIG} = 50mV (p-p) (per leg)	1800	pF

Due to the nature of the 200V Schottky devices, some degradation in t_{rr} performance at high temperatures should be expected, unlike conventional lower voltage Schottkys.

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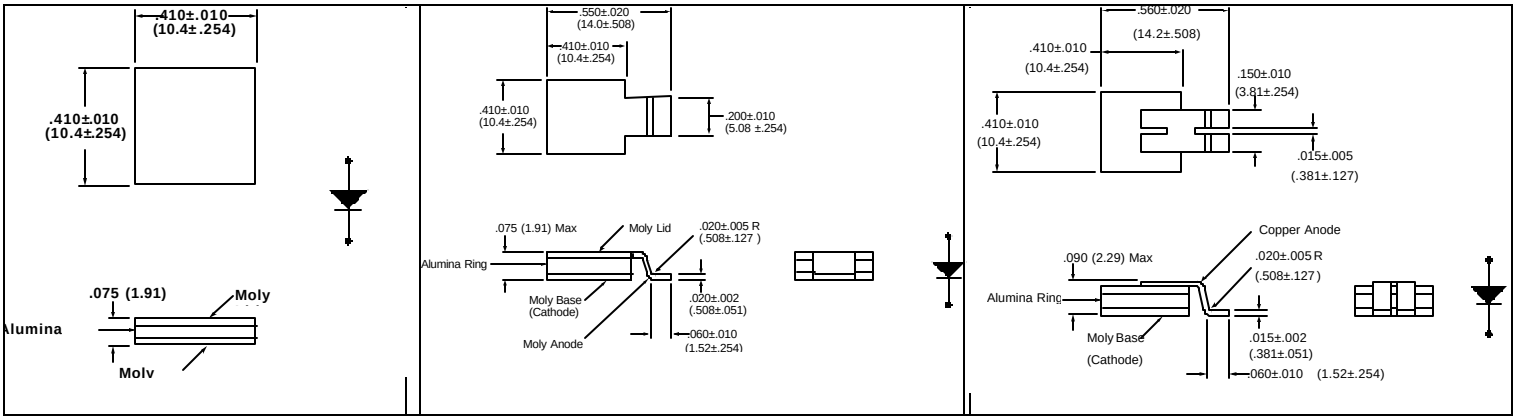
Mechanical Dimensions: in inches / mm

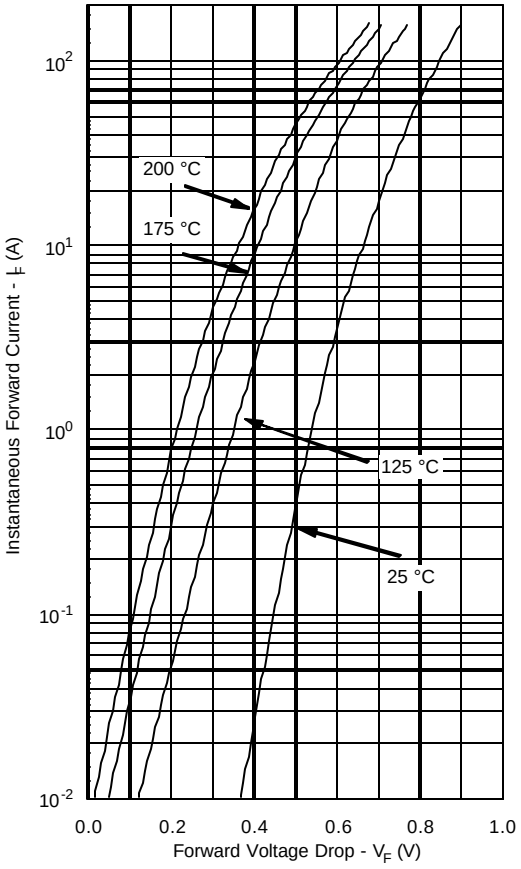


SHD-3

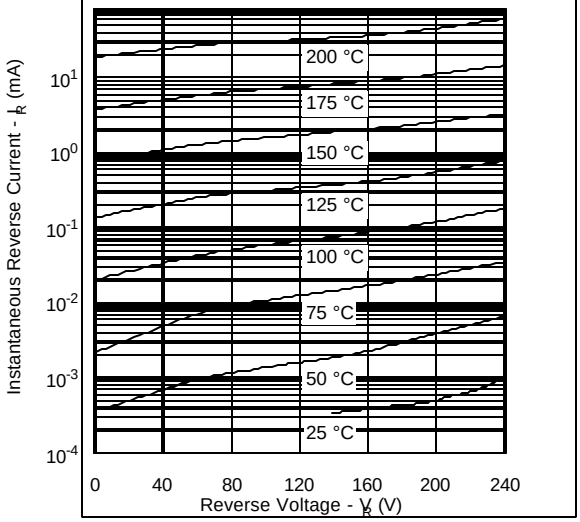
SHD-3A

SHD-3B

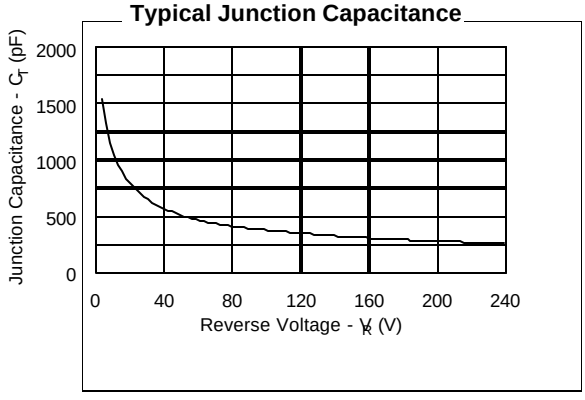
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



Vf Curves shown are for die only.

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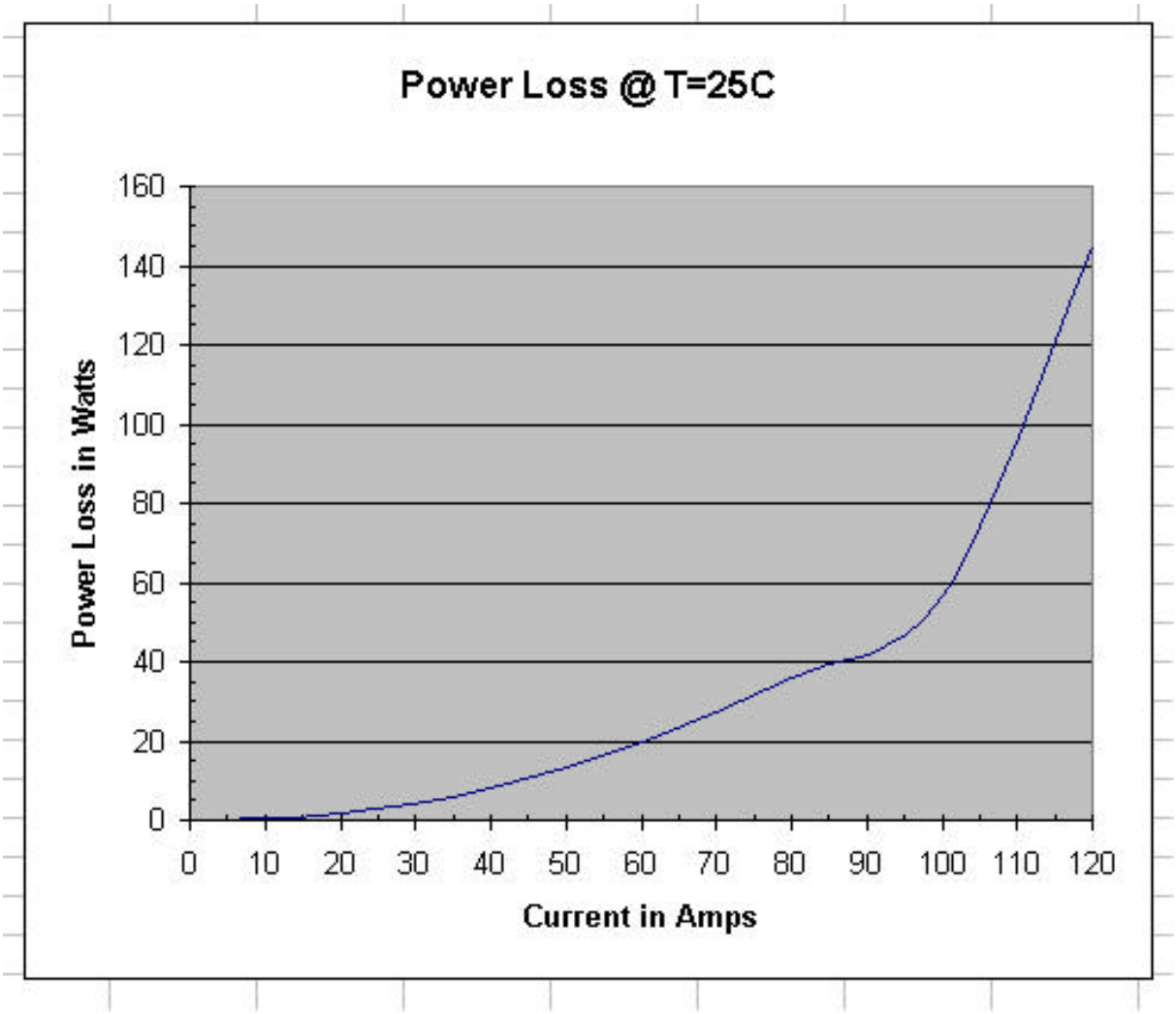

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