SHD125246
SHD125246P
SHD125246N
SHD125246D

TECHNICAL DATA
DATA SHEET 922, REV. A

HERMETIC POWER SCHOTTKY RECTIFIER
Very Low Forward Voltage Drop

Applications:

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

Features:

- **Soft Reverse Recovery at Low and High Temperature**
- **Very Low Forward Voltage Drop**
- **Low Reverse Leakage Current**
- **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 (single, doubler)	15	A
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form (common cathode, common anode)	30	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine wave (per leg)	150	A
Non-Repetitive Avalanche Energy	E_{AS}	T_J = 25 °C, I_{AS} = 0.6 A, L = 40mH	11.4	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	0.6	A
Thermal Resistance (per leg)	$R_{\theta JC}$	(common cathode, common anode, doubler)	0.72	°C/W
Thermal Resistance (per leg)	$R_{\theta JC}$	(single rectifier)	1.45	°C/W
Max. Junction Temperature	T_J	-	-65 to +200	°C
Max. Storage Temperature	T_{stg}	-	-65 to +175	°C

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)	V_{F1}	@ 15A, Pulse, T_J = 25 °C	1.01	V
	V_{F2}	@ 15A, Pulse, T_J = 125 °C	0.85	V
Max. Reverse Current (per leg)	I_{R1}	@V_R = 200V, Pulse, T_J = 25 °C	0.35	mA
	I_{R2}	@V_R = 200V, Pulse, T_J = 125 °C	8.0	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz, V_{SIG} = 50mV (p-p)	300	pF
Max. Reverse Recovery Time	t_{rr}	I_F = 0.5 A, I_R = 1.0 A, I_{RM} = 0.25 A, T_J = 25 °C	33	nsec

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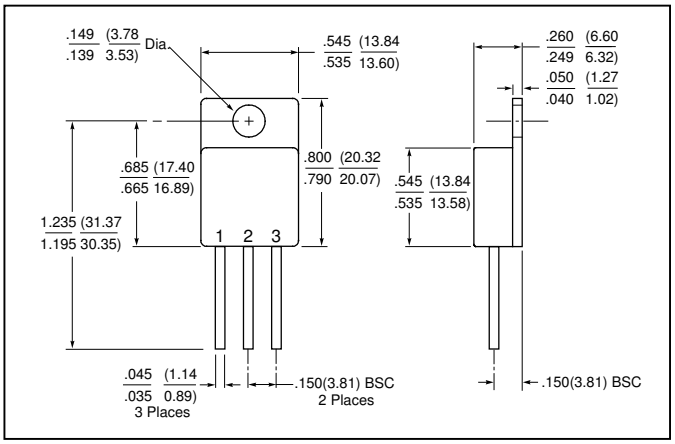
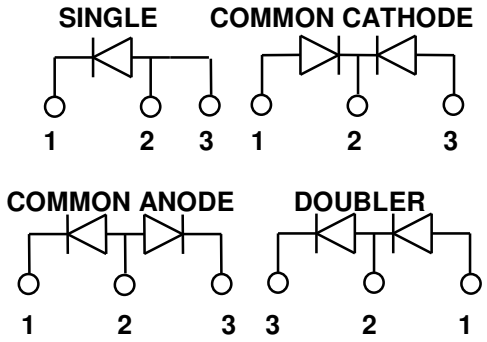
Mechanical Dimensions: In Inches / mm





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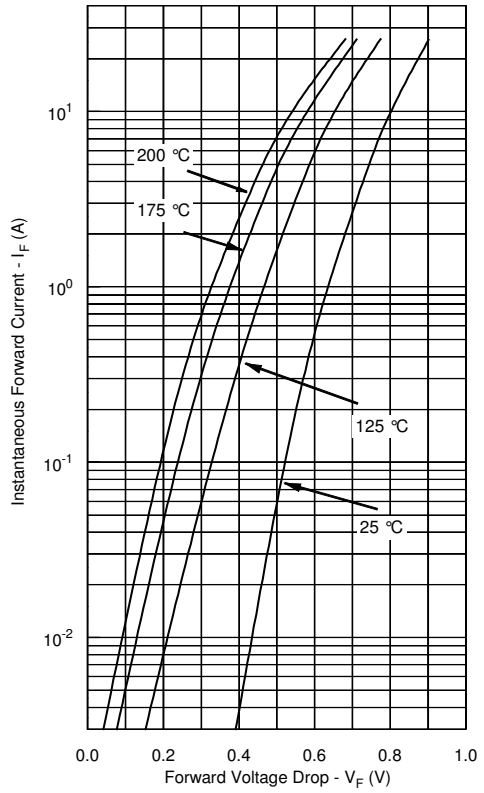
PINOUT TABLE

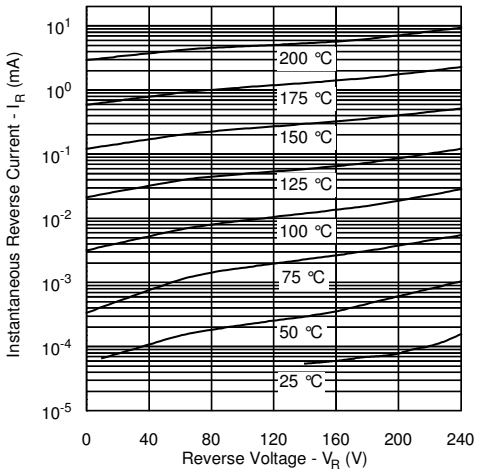
TYPE	PIN 1	PIN 2	PIN 3
SINGLE RECTIFIER	CATHODE	ANODE	ANODE
DUAL RECTIFIER, COMMON CATHODE (P)	ANODE 1	COMMON CATHODE	ANODE 2
DUAL RECTIFIER, COMMON ANODE (N)	CATHODE 1	COMMON ANODE	CATHODE 2
DUAL RECTIFIER, DOUBLER (D)	ANODE	ANODE/CATHODE	CATHODE

Curves shown are for bare die only.

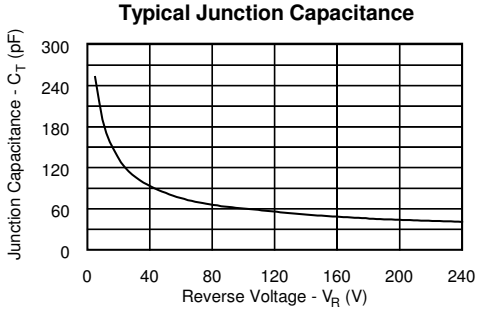
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



TECHNICAL DATA

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