SHD124222
SHD124222P
SHD124222N
SHD124222D

TECHNICAL DATA
DATA SHEET 4681, REV. -

HERMETIC POWER SCHOTTKY RECTIFIER
Very Low Forward Voltage

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 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}	-	45	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)	200	A
Max. Thermal Resistance	$R_{\theta JC}$	(Single)	1.45	°C/W
Max. Thermal Resistance	$R_{\theta JC}$	(Common Cathode/Common Anode/Doubler) (per leg)	0.72	°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}	@ 15A, Pulse, T_J = 25 °C (per leg)	0.73	V
	V_{F2}	@ 15A, Pulse, T_J = 125 °C (per leg)	0.66	V
Max. Reverse Current	I_{R1}	@V_R = 45V, Pulse, T_J = 25 °C (per leg)	0.4	µA
	I_{R2}	@V_R = 45V, Pulse, T_J = 125 °C (per leg)	15	mA
Max. Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz, V_{SIG} = 50mV (p-p) (per leg)	800	pF

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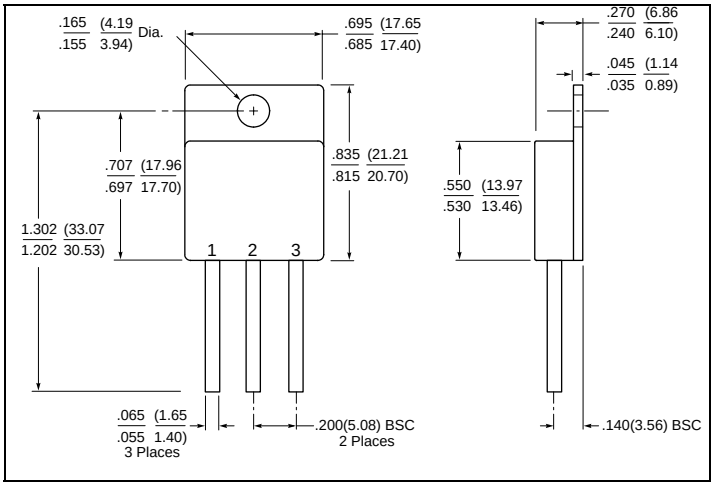
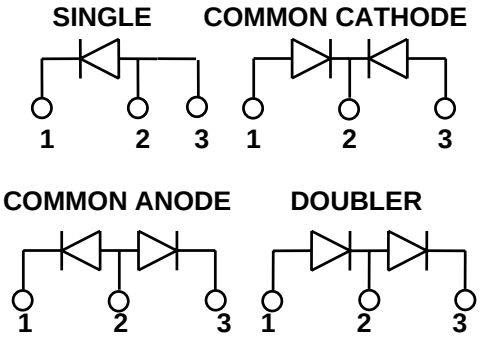
Mechanical Dimensions: In Inches / mm





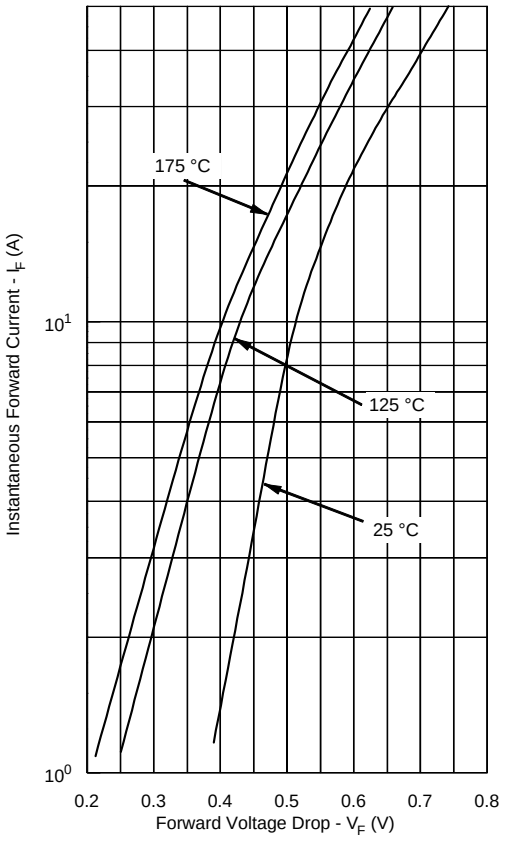
TO-258

PINOUT TABLE

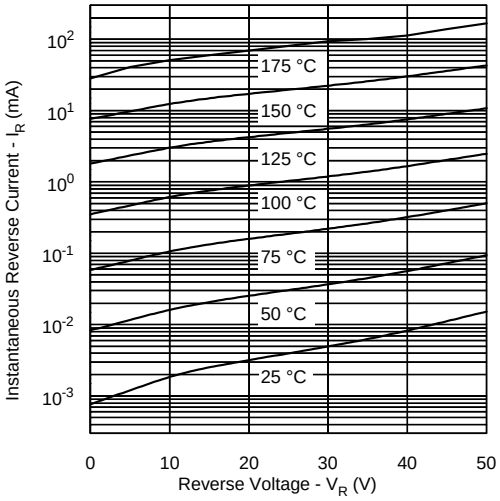
TYPE	PIN 1	PIN 2	PIN 3
SINGLE RECTIFIER	CATHODE	ANODE	ANODE
DUAL RECTIFIER, COMMON CATHODE (P)	ANODE 1	COMMON CATHODE	ANODE 2
DUAL RECTIFIER, COMMON ANODE (N)	CATHODE 1	COMMON ANODE	CATHODE 2
DUAL RECTIFIER, DOUBLER (D)	ANODE	CATHODE/ANODE	CATHODE

Note: The V_f curves shown are for the SD125SB45 un-packaged die only.

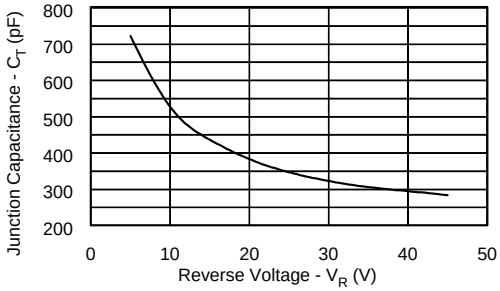
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



TECHNICAL DATA

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