

TECHNICAL DATA
DATA SHEET 898, REV. A

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
- 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:

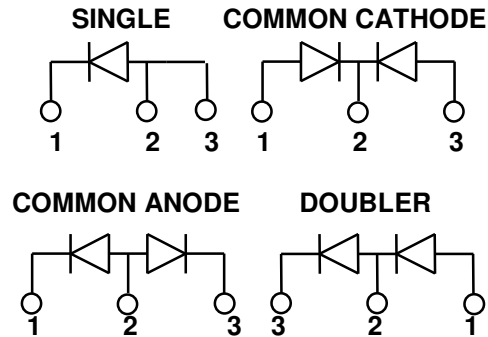
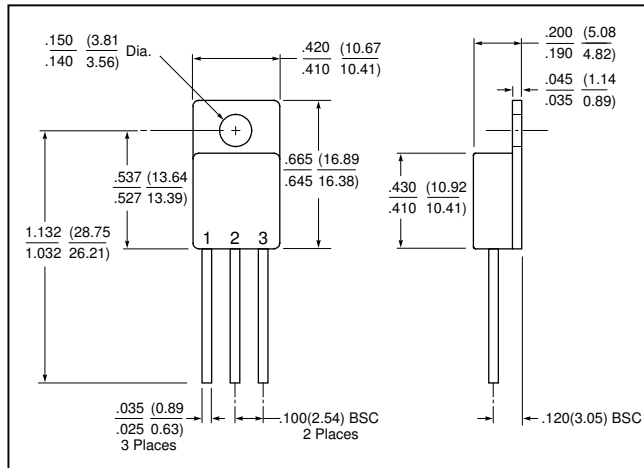
| Characteristics | Symbol | Condition | Max. | Units |
|--|-----------------|---|-------------|-------|
| Peak Inverse Voltage | V_{RWM} | - | 45 | V |
| Max. Average Forward Current | $I_{F(AV)}$ | 50% duty cycle, rectangular wave form (Single/Doubler) | 15 | A |
| Max. Average Forward Current | $I_{F(AV)}$ | 50% duty cycle, rectangular wave form (Common Cathode/Common Anode) | 16 | A |
| Max. Peak One Cycle Non-Repetitive Surge Current | I_{FSM} | 8.3 ms, half Sine wave (per leg) | 75 | 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 +150 | °C |
| Max. Storage Temperature | T_{stg} | - | -65 to +150 | °C |

Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|---------------------------|----------|---|------|---------|
| Max. Forward Voltage Drop | V_{F1} | @ 15A, Pulse, $T_J = 25\text{ °C}$ (per leg) | 0.65 | V |
| | V_{F2} | @ 15A, Pulse, $T_J = 125\text{ °C}$ (per leg) | 0.60 | V |
| Max. Reverse Current | I_{R1} | @ $V_R = 45V$, Pulse, $T_J = 25\text{ °C}$ (per leg) | 1.5 | μA |
| | I_{R2} | @ $V_R = 45V$, Pulse, $T_J = 125\text{ °C}$ (per leg) | 70 | mA |
| Max. Junction Capacitance | C_T | @ $V_R = 5V$, $T_C = 25\text{ °C}$ $f_{SIG} = 1MHz$, $V_{SIG} = 50mV$ (p-p) (per leg) | 800 | pF |

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Mechanical Dimensions: In Inches / mm



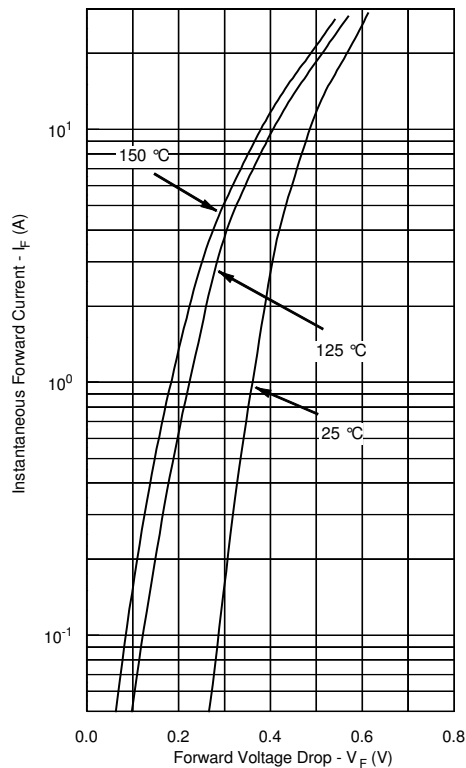
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PINOUT TABLE

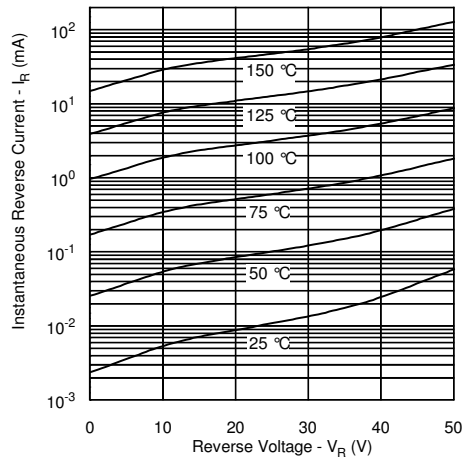
| TYPE | PIN 1 | PIN 2 | PIN 3 |
|------------------------------------|-----------|----------------|-----------|
| SINGLE RECTIFIER | CATHODE | ANODE | ANODE |
| DUAL RECTIFIER, COMMON CATHODE (P) | ANODE 1 | COMMON CATHODE | ANODE 2 |
| DUAL RECTIFIER, COMMON ANODE (N) | CATHODE 1 | COMMON ANODE | CATHODE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

Note: The V_i curves shown are for the SD125SA45 un-packaged die only.

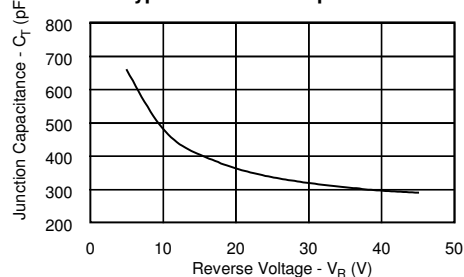
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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