

Technical Data
Data Sheet 506, Rev.-

SILICON SCHOTTKY RECTIFIER DIE

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 Power Loss, High Efficiency
- High Surge Capacity
- Guard Ring for Enhanced Durability and Long Term Reliability
- Guaranteed Reverse Avalanche Characteristics
- Electrically / Mechanically Stable during and after Packaging

Maximum Ratings⁽¹⁾:

| Characteristics | Symbol | Condition | Max. | Units |
|--|-------------|--|-------------|--------------------|
| Peak Inverse Voltage | V_{RWM} | - | 30 | V |
| Max. Average Forward Current | $I_{F(AV)}$ | 50% duty cycle, rectangular wave form | 60 | A |
| Max. Peak One Cycle Non-Repetitive Surge Current | I_{FSM} | 8.3 ms, half Sine wave ⁽¹⁾ | 860 | A |
| Non-Repetitive Avalanche Energy | E_{AS} | $T_J = 25\text{ }^{\circ}\text{C}$, $I_{AS} = 12\text{ A}$, $L = 0.75\text{ mH}$ | 54 | mJ |
| Repetitive Avalanche Current | I_{AR} | I_{AS} decay linearly to 0 in 1 μs f limited by T_J max $V_A = 1.5V_R$ | 12 | A |
| Max. Junction Temperature | T_J | - | -65 to +150 | $^{\circ}\text{C}$ |
| Max. Storage Temperature | T_{stg} | - | -65 to +150 | $^{\circ}\text{C}$ |

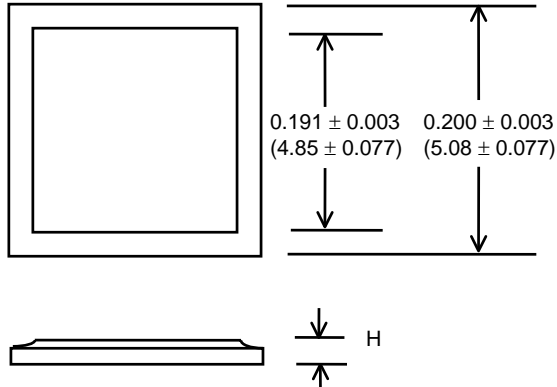
Electrical Characteristics⁽¹⁾:

| Characteristics | Symbol | Condition | Max. | Units |
|---------------------------|----------|---|------|-------|
| Max. Forward Voltage Drop | V_{F1} | @ 60A, Pulse, $T_J = 25\text{ }^{\circ}\text{C}$ | 0.53 | V |
| | V_{F2} | @ 60A, Pulse, $T_J = 125\text{ }^{\circ}\text{C}$ | 0.43 | V |
| Max. Reverse Current | I_{R1} | @ $V_R = 30\text{ V}$, Pulse, $T_J = 25\text{ }^{\circ}\text{C}$ | 6 | mA |
| | I_{R2} | @ $V_R = 30\text{ V}$, Pulse, $T_J = 125\text{ }^{\circ}\text{C}$ | 300 | mA |
| Max. Junction Capacitance | C_T | @ $V_R = 5\text{ V}$, $T_C = 25\text{ }^{\circ}\text{C}$ $f_{SIG} = 1\text{ MHz}$, $V_{SIG} = 50\text{ mV (p-p)}$ | 3300 | pF |

(1) in SHD package

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Mechanical Dimensions: In Inches / mm



Bottom side metalization Ag - 30 kÅ minimum.

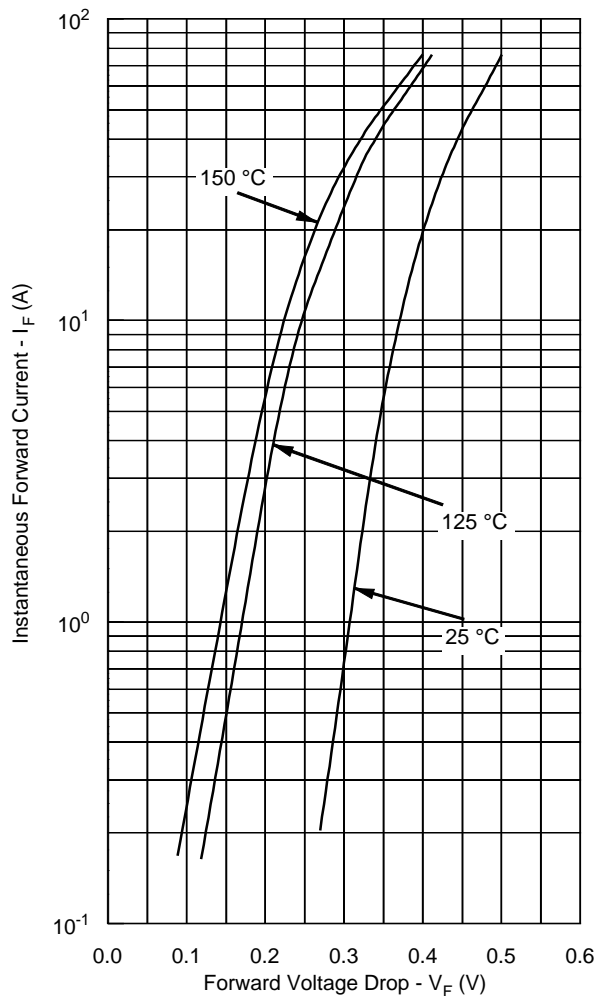
Top side metalization Al - 25 kÅ minimum
or Ag - 30 kÅ minimum.

Bottom side is cathode, top side is anode.

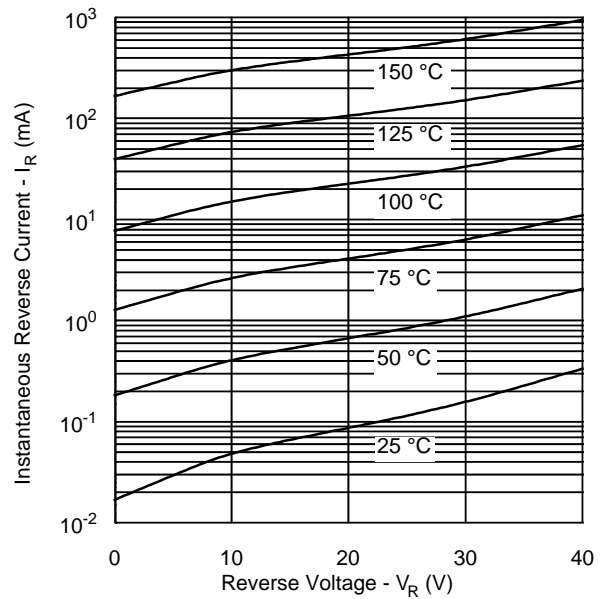
Dimension H = 0.0105 ± 0.001 (0.27 ± 0.026) for Al top;

Dimension H = 0.0155 ± 0.001 (0.39 ± 0.026) for Ag top.

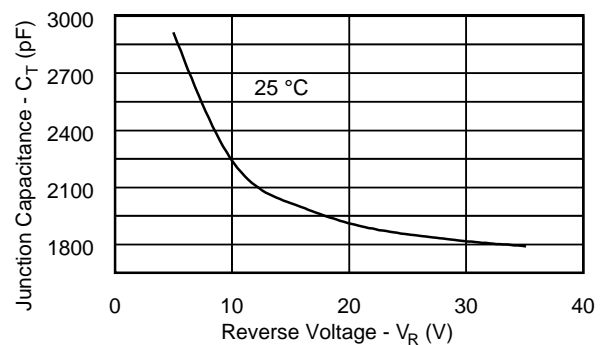
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



TECHNICAL DATA

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