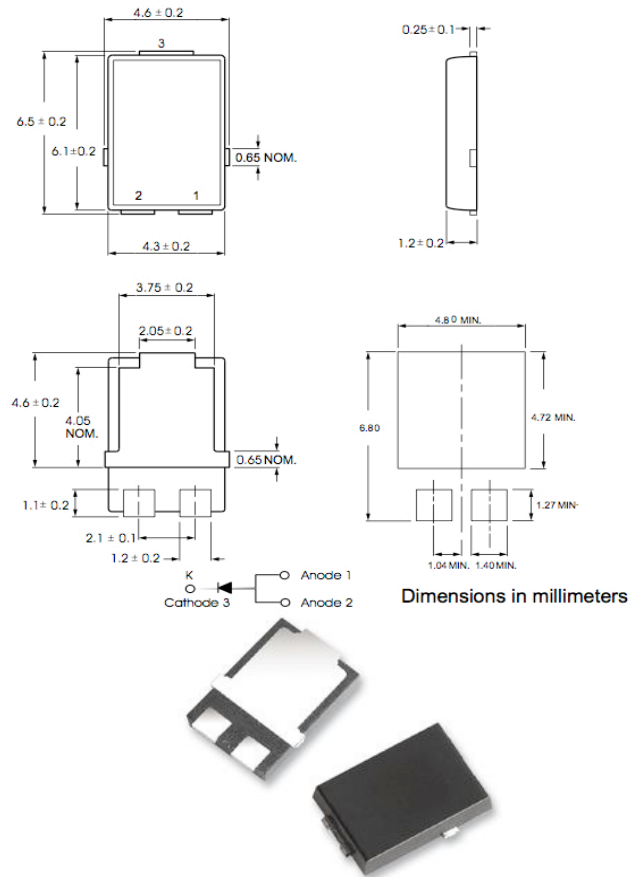


High Current Density Surface Mount Schottky Rectifier SS15P50

FEATURES

- Very low profile - typical height of 1.1 mm
- Ideal for automated placement
- Low forward voltage drop, low power losses
- High efficiency
- Low thermal resistance
- Meets MSL level 1, per J-STD-020
- Solder dip 260 °C max. 10 s, per JESD 22-A111
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



MECHANICAL DATA

Case: Conform to JEDEC TO-277A

Molding compound meets UL 94 V-0 flammability

Maximum Ratings (Tc=25°C unless otherwise noted)

| Parameter | Symbol | SS15P50 | Unit |
|--------------------------------------------------------------------------------------------------------|--------|-------------|------|
| Maximum repetitive peak reverse voltage | VRRM | 50 | V |
| Working peak reverse voltage | VRWM | 35 | V |
| Maximum DC blocking voltage | VDC | 50 | V |
| Maximum average forward rectified current Total device | IF(AV) | 15 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | IFSM | 300 | A |
| Non-repetitive avalanche energy at 25 °C IAS = 2 A per diode | EAS | 20 | m'J |
| Operating junction temperature range | TJ | -55 to +150 | °C |
| Storage temperature range | TSTG | -55 to +150 | °C |

Note:

- (1) Mounted on 30 mm x 30 mm Al P.C.B. with 50 mm x 25 mm x 100 mm fin heat sink
- (2) Free air, mounted on recommended copper pad area

Electrical characteristics ($T_c=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Value | | Unit |
|--------------------------------------------------------------------------------------------------------------------------------|--------|--------------|------|---------------------|
| | | Typical | Max | |
| Instantaneous forward voltage at $I_F=15\text{A}$, $T_j=25^\circ\text{C}$ at $I_F=15\text{A}$, $T_j=125^\circ\text{C}$ | V_F | 0.53 0.50 | 0.56 | V |
| Maximum reverse current $T_j=25^\circ\text{C}$ | I_R | 300 | | μA |
| at working peak reverse voltage $T_j=125^\circ\text{C}$ | | 50 | | $\text{m}'\text{A}$ |

Thermal characteristics ($T_c=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|----------------------------|-----------------|-------|---------------------------|
| Typical thermal resistance | $R_{\theta JA}$ | 60 | $^\circ\text{C}/\text{W}$ |
| | R_{thjc} | 3 | |

Notes:

- (1) Pulse test: 300 μs pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width ≤ 40 ms

Characteristics Curve

Fig. 1 - Forward Current Derating Curve

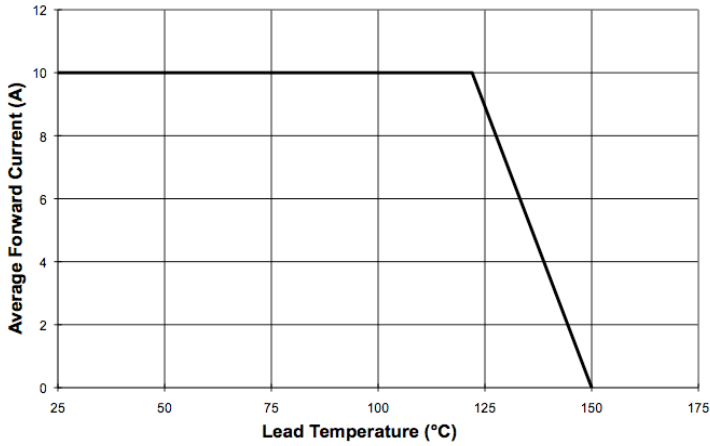


Fig. 2 - Max Non-Repetitive Peak Forward Surge Current

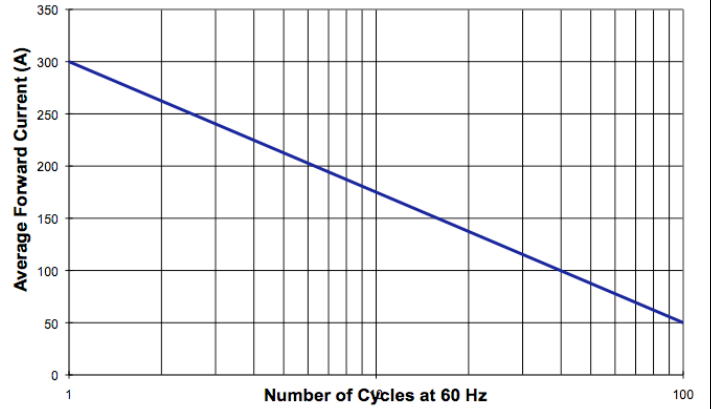


Fig. 3 - Typical Instantaneous Forward Characteristics

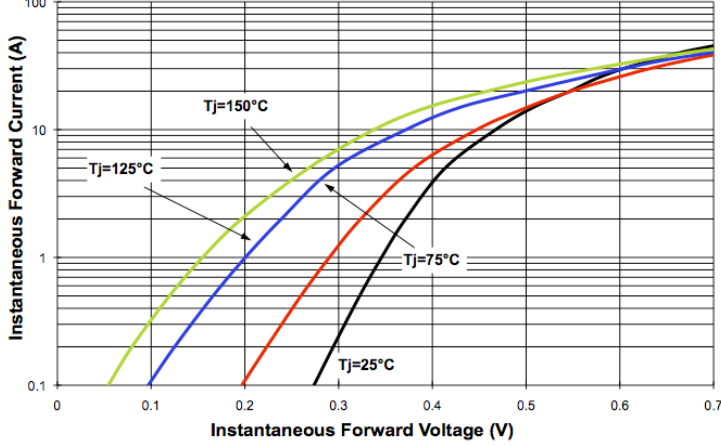


Fig. 4 - Typical Reverse Characteristics

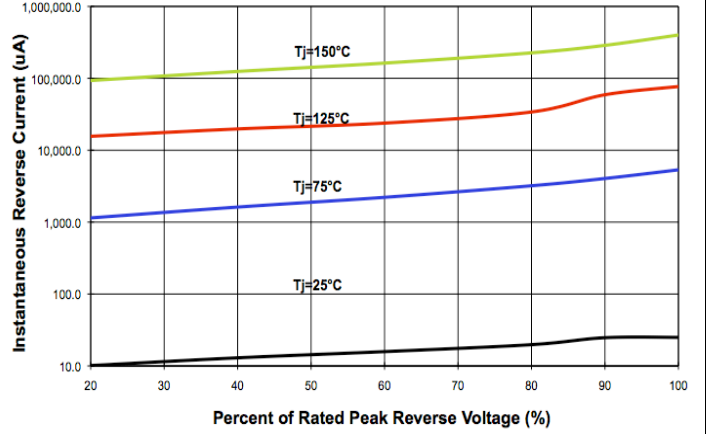


Fig. 5 - Typical Junction Capacitance

