

High Current Density Surface Mount Schottky Barrier Rectifiers

SSS10P30~60

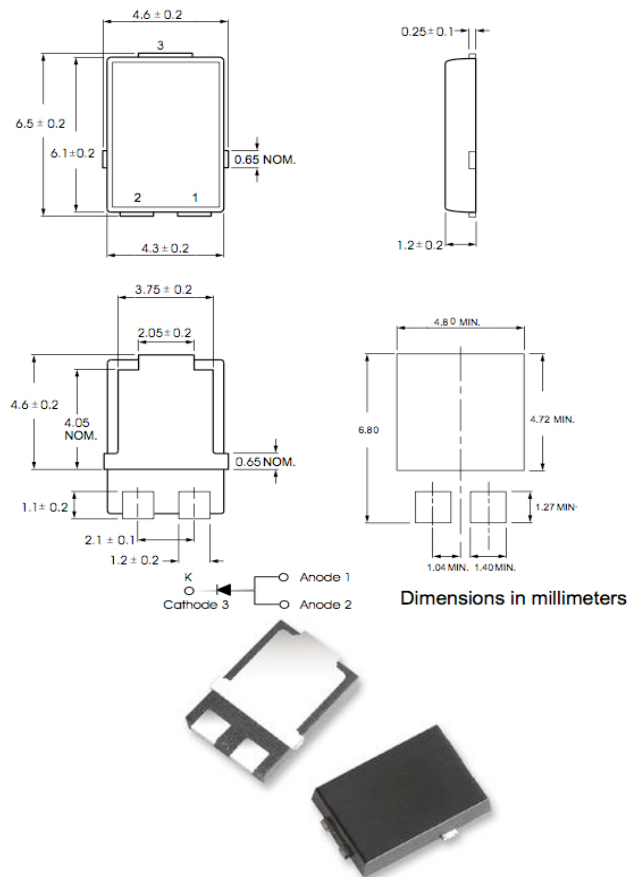
FEATURES

- 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 JEDEC 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 AND ELECTRICAL CHARACTERISTICS

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

| Parameter | Symbol | SS10P30 | SS10P40 | SS10P45 | SS10P60 | Unit |
|-----------------------------------------------------------------------------------------------------------|--------------------|-------------|---------|---------|---------|------|
| Maximum repetitive peak reverse voltage | VRRM | 30 | 40 | 45 | 60 | V |
| Working peak reverse voltage | VRWM | 30 | 40 | 45 | 60 | V |
| Maximum DC blocking voltage | VDC | 30 | 40 | 45 | 60 | V |
| Maximum average forward rectified current Total device | I _{F(AV)} | 10 | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 300 | | | | A |
| Non-repetitive avalanche energy at 25 °C IAS = 2 A per diode | EAS | 20 | | | | m'J |
| Operating junction temperature range | T _J | -55 to +150 | | | | °C |
| Storage temperature range | T _{STG} | -55 to +150 | | | | °C |

Electrical characteristics (Tc=25°C unless otherwise noted)

| Parameter | Symbol | Value | | | | Unit |
|------------------------------------------------|--------|-------|------|------|------|------|
| Maximum instantaneous at IF=10A, Tj=25°C | VF | 0.51 | 0.51 | 0.51 | 0.63 | V |
| at IF=5A, Tj=25°C | | 0.45 | 0.45 | 0.45 | 0.65 | |
| forward voltage per leg at IF=10A, Tj=125°C | | 0.43 | 0.43 | 0.43 | 0.53 | |
| Maximum reverse current per leg Tj=25°C | IR | 300 | | | | u'A |
| at working peak reverse voltage Tj=125°C | | 50 | | | | m'A |

Thermal characteristics (Tc=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|----------------------------|--------|-------|------|
| Typical thermal resistance | RθJA | 60 | °C/W |
| | Rthjc | 3 | |

Notes:

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