

SS52-SS520

Surface Mount Schottky Barrier Rectifiers

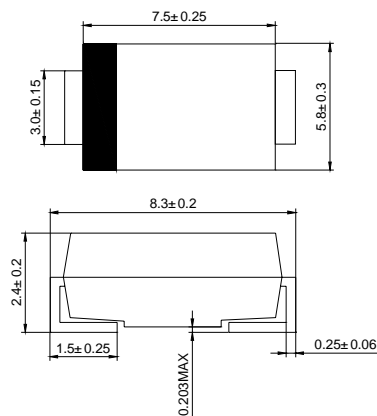
REVERSE VOLTAGE: 20 --- 200 V
CURRENT: 5.0 A



SMC

Features

- Plastic package has Underwriters Laborator Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal silicon junction, majority carrier conduction
- High surge capability
- High current capability, low forward voltage drop
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 250°C/10 seconds at terminals



Dimensions in millimeters

Mechanical Data

- Case: JEDEC SMC, molded plastic over passivated chip
- Polarity: Color band denotes cathode end
- Weight: 0.007 ounces, 0.21 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

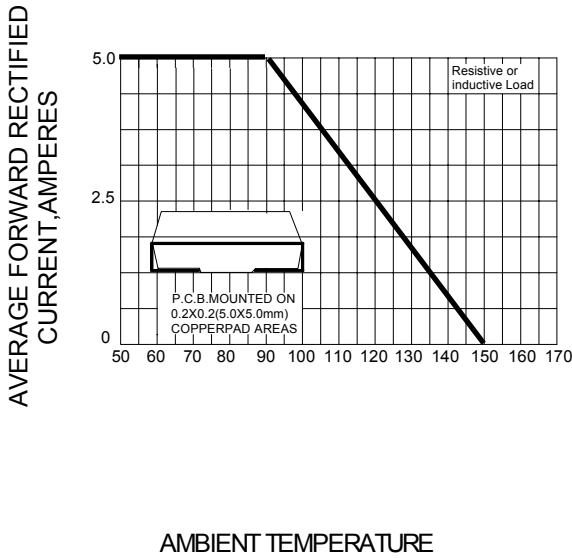
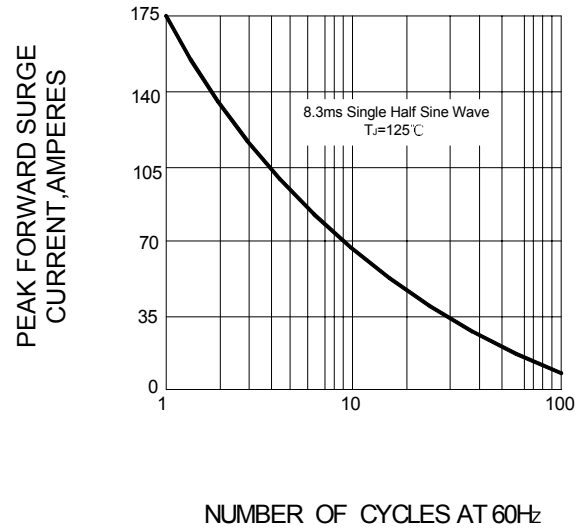
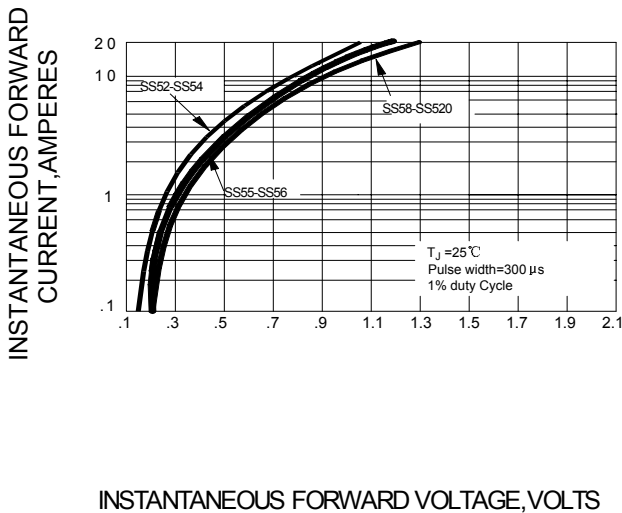
Ratings at 25°C ambient temperature unless otherwise specified

| | | SS52 | SS53 | SS54 | SS55 | SS56 | SS58 | SS59 | SS510 | SS520 | UNITS |
|--|------------|--------------|------|------|------|------|------|------|-------|-------|-------|
| Maximum recurrent peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | 200 | V |
| Maximum RMS voltage | V_{RWS} | 14 | 21 | 28 | 35 | 42 | 56 | 63 | 70 | 140 | V |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | 200 | V |
| Maximum average forward rectified current at T_L (SEE FIG. 1) (NOTE 2) | $I_{(AV)}$ | 5.0 | | | | | | | | | A |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 175 | | | | | | | | | A |
| Maximum instantaneous forward voltage at 5.0A (NOTE 1) | V_F | 0.55 | | | 0.70 | | 0.85 | | | | V |
| Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage (NOTE 1) @ $T_A=100^\circ\text{C}$ | I_R | 0.5 | | | | | | | | | mA |
| | | 20 | | | | | | 10 | | | |
| Typical thermal resistance (NOTE 2) | R_{JA} | 55 | | | | | | | | | °C/W |
| | R_{JL} | 17 | | | | | | | | | |
| Operating junction temperature range | T_J | -55 --- +150 | | | | | | | | | °C |
| Storage temperature range | T_{STG} | -55 --- +150 | | | | | | | | | °C |

NOTE: 1. Pulse test: 300 μs pulse width, 1% duty cycle

2. P.C.B. mounted with 0.55" x 0.55" (14.0 x 14.0 mm²) copper pad areas

Ratings AND Characteristic Curves

FIG.1 – FORWARD DERATING CURVE

FIG.2– PEAK FORWARD SURGE CURRENT

FIG.3 – TYPICAL FORWARD CHARACTERISTICS

FIG.4 – TYPICAL REVERSE CHARACTERISTICS
