

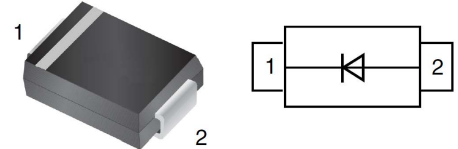
Schottky Barrier Rectifier in DO-214AC/SMA

Features

- Schottky barrier diodes
- Low forward voltage drop
- High Junction Temperature

Mechanical Data

- **Case:** DO-214AC/SMA (plastic package).
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals



Applications

For use in low voltage, high frequency inverters, free wheeling, and polarity protection application

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

| Parameter | Symbol | SK38A | SK39A | SK310A | SK315A | SK320A | Unit |
|--|----------------|---------------|-------|--------|--------|--------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 80 | 90 | 100 | 150 | 200 | V |
| Maximum RMS voltage | V_{RMS} | 56 | 21 | 70 | 104 | 140 | V |
| Maximum DC blocking voltage | V_{DC} | 80 | 90 | 100 | 150 | 200 | V |
| Maximum average forward rectified current | $I_{F(AV)}$ | 3.0 | | | | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I_{FSM} | 100 | | | | | A |
| Operating junction and storage temperature range | T_J, T_{STG} | - 55 to + 150 | | | | | °C |

Electrical Characteristics

($T_A = 25\text{ °C}$ unless otherwise specified)

| Parameter | Test Conditions | Symbol | SK38A | SK39A | SK310A | SK315A | SK320A | Unit |
|---|----------------------------|--------|-------|-------|--------|--------|--------|------|
| Maximum instantaneous forward voltage | $I_F=3A, T_A=25\text{ °C}$ | V_F | 0.85 | | | 0.95 | | V |
| Maximum DC reverse current at rated DC blocking voltage | $T_A=25\text{ °C}$ | I_R | 0.50 | | | | | mA |
| | $T_A=125\text{ °C}$ | | 20 | | | | | |
| Typical junction capacitance | 4.0 V, 1 MHz | C_J | 250 | | | | | pF |

Thermal Characteristics

| Parameter | Symbol | SK38A | SK39A | SK310A | SK315A | SK320A | Unit |
|---|-----------------|-------|-------|--------|--------|--------|------|
| Typical thermal resistance ⁽¹⁾ | $R_{\theta JA}$ | 77 | | | | | °C/W |
| | $R_{\theta JC}$ | 40 | | | | | |
| | $R_{\theta JI}$ | 18 | | | | | |

Note1: Thermal resistance from junction to lead, mounted on PCB with 5.0x5.0mm copper pads

Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

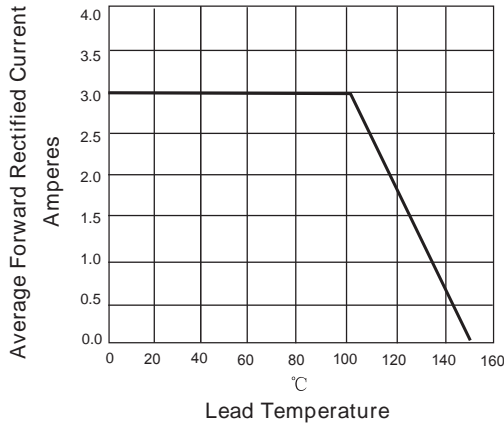


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

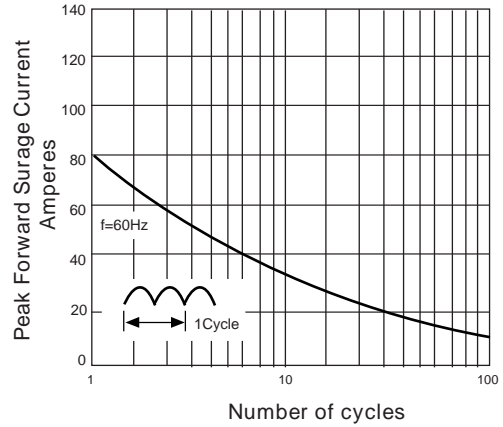


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

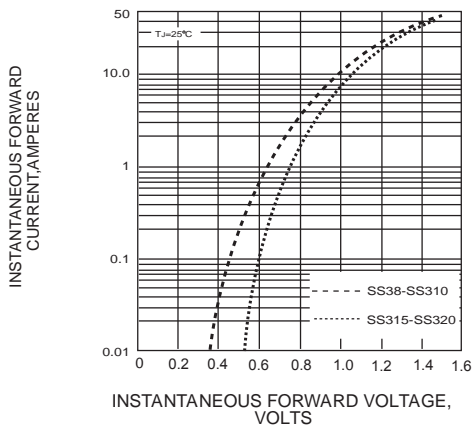
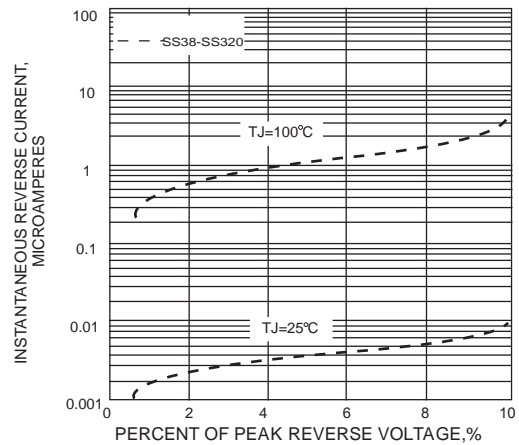
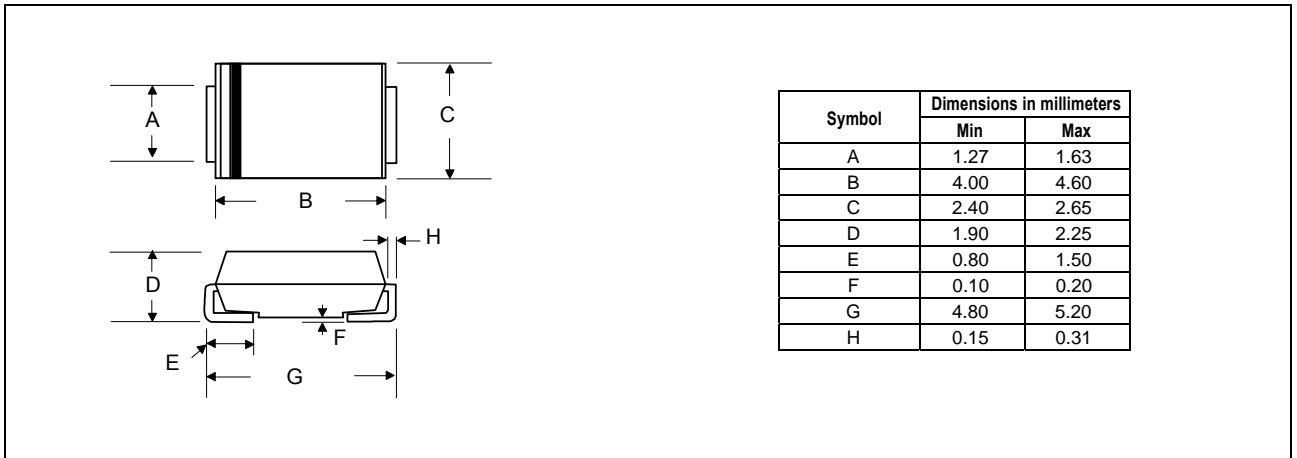


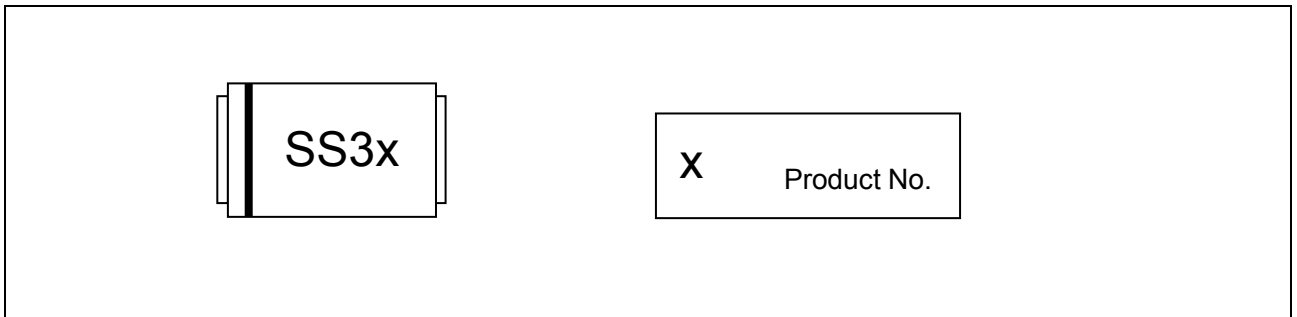
FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Package Dimensions



Marking



Ordering information

| Order code | Package | Packaging option | Base quantity | Packaging specification |
|-------------------|--------------|------------------|----------------|-------------------------|
| SK38A Thru SK320A | DO-214AC/SMA | Tape and reel | 5000pcs / reel | EIA STD RS-481 |

Revision history

| Date | Revision | Changes |
|-------------|----------|-----------------|
| 23-May-2020 | 1.0 | Initial release |

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