

Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junctions
- Ultrafast reverse recovery time
- Low switching losses, high efficiency
- High forward surge capability
- High temperature soldering:
260°C/10 seconds at terminals



RoHS
COMPLIANT



DO-214AB (SMC)

Mechanical Date

- **Case:** JEDEC DO-214AB molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end

Major Ratings and Characteristics

| | |
|--------------------|-----------------------|
| $I_{F(AV)}$ | 2.0 A |
| V_{RRM} | 50 V to 1000 V |
| I_{FSM} | 50 A |
| t_{rr} | 50 nS , 75 nS |
| V_F | 1.0 V , 1.3 V , 1.7 V |
| $T_j \text{ max.}$ | 150 °C |

Maximum Ratings & Thermal Characteristics

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

| Items | Symbol | US2A | US2B | US2D | US2G | US2J | US2K | US2M | UNIT |
|--|-----------------|-------------|------|------|------|------|------|------|-------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current | $I_{F(AV)}$ | 2.0 | | | | | | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I_{FSM} | 50 | | | | | | | A |
| Thermal resistance from junction to lead ⁽¹⁾ | $R_{\theta JL}$ | 25 | | | | | | | °C/ W |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | | | | | | | °C |

Note 1: Mounted on P.C.B. with 0.28 x 0.28" (7.0 x 7.0mm) copper pad areas.

Electrical Characteristics ($T_A = 25\text{ °C}$ unless otherwise noted)

| Items | Test conditions | Symbol | US2A~US2D | US2G | US2J~US2M | UNIT |
|-------------------------------|--|----------|-----------------------|------|-----------|------|
| Instantaneous forward voltage | $I_F = 2.0\text{ A}^{(2)}$ | V_F | 1.0 | 1.3 | 1.7 | V |
| Reverse current | $V_R = V_{DC}$ | I_R | $T_J = 25\text{ °C}$ | | | μA |
| | | | $T_J = 125\text{ °C}$ | | | |
| Reverse recovery time | $I_F = 0.5\text{ A}, I_R = 1.0\text{ A}, I_{rr} = 0.25\text{ A}$ | t_{rr} | 50 | | 75 | nS |
| Typical junction capacitance | 4.0 V , 1MHz | C_J | 15 | | | pF |

Note 2: Pulse test: 300μs pulse width, 1% duty cycle.

Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

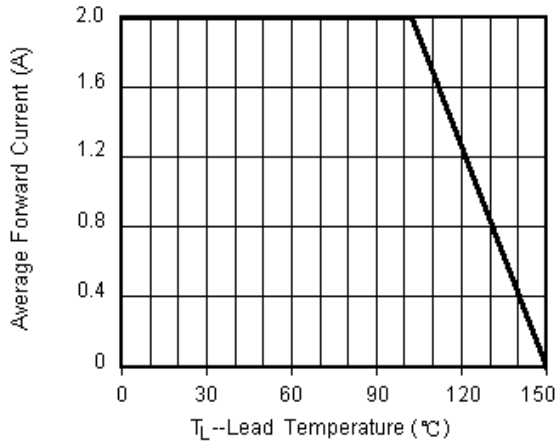


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

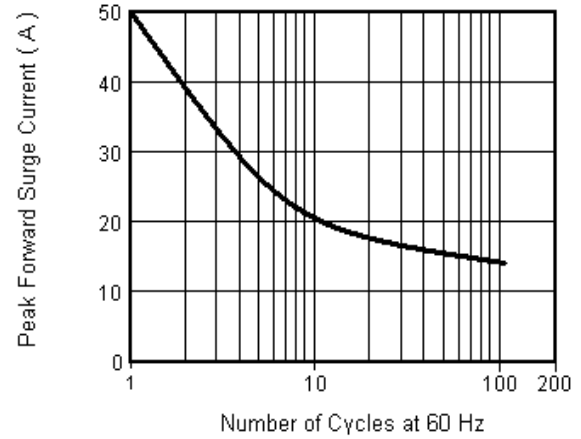


Fig.3 Typical Instantaneous Forward Characteristics

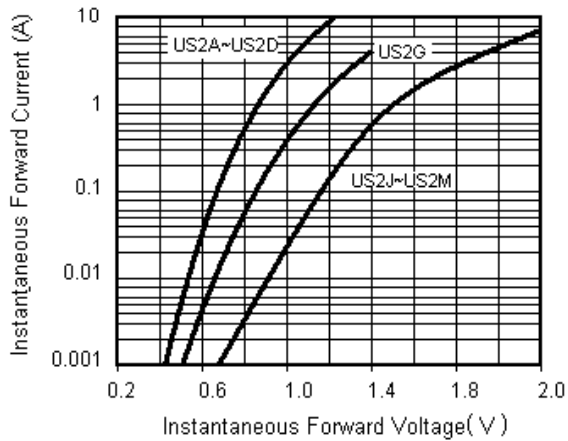
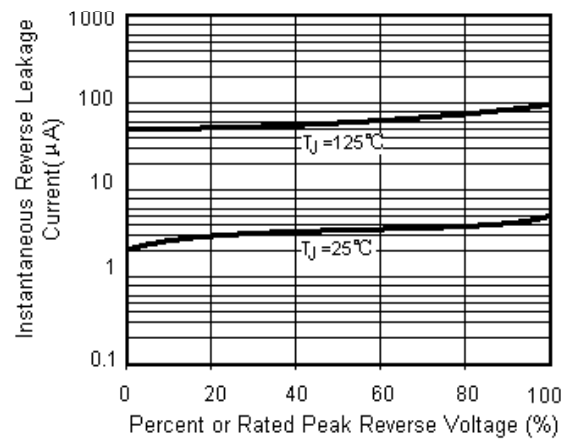


Fig.4 Typical Reverse Leakage Characteristics



Package Outline

