

VOLTAGE RANGE: 50 - 1000V

CURRENT: 3.0 A

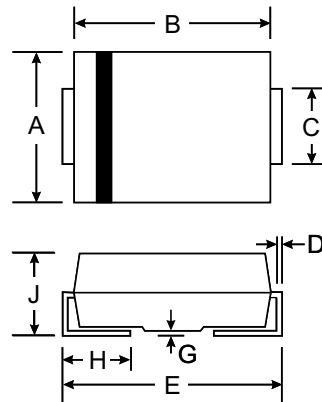


Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Low Power Loss
- Ultra-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: SMB/DO-214AA, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.093 grams (approx.)



| SMB(DO-214AA) | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 3.30 | 3.94 |
| B | 4.06 | 4.70 |
| C | 1.91 | 2.21 |
| D | 0.15 | 0.31 |
| E | 5.00 | 5.59 |
| G | 0.10 | 0.20 |
| H | 0.76 | 1.52 |
| J | 2.00 | 2.62 |
| All Dimensions in mm | | |



Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

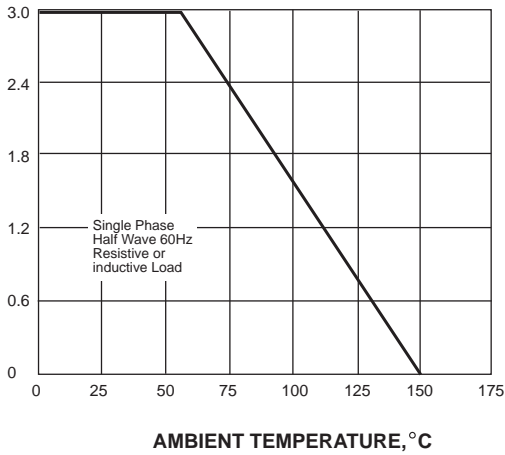
| Characteristic | Symbol | US3AB | US3BB | US3DB | US3GB | US3JB | US3KB | US3MB | Unit |
|--|-----------------------------------|--------------|-------|-------|-------|-------|-------|-------|------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| 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 0.375" (9.5mm) lead length at T _A =55°C | I _(AV) | 3.0 | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 100.0 | | | | | | | A |
| Maximum instantaneous forward voltage at 3.0A | V _F | 1.0 | | 1.30 | | 1.70 | | V | |
| Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C | I _R | 5.0 250.0 | | | | | | | μA |
| Maximum reverse recovery time (NOTE 1) | t _{rr} | 50 | | | | 75 | | | ns |
| Typical junction capacitance (NOTE 2) | C _J | 75 | | | | | | | pF |
| Typical thermal resistance | R _{θJL} | 15.0 | | | | | | | °C/W |
| Operating junction and storage temperature range | T _J , T _{stg} | -65 to +150 | | | | | | | °C |

Note: 1. Reverse recovery condition I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES US3AB THRU US3MB

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

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

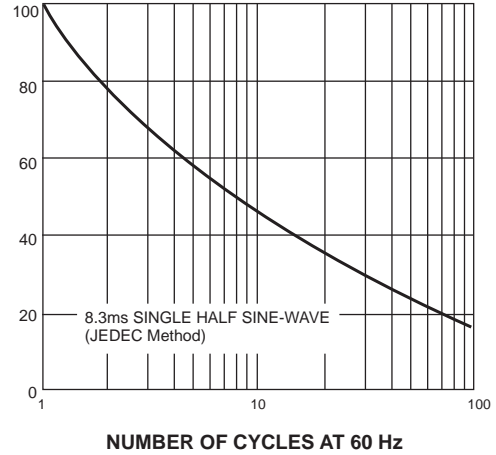
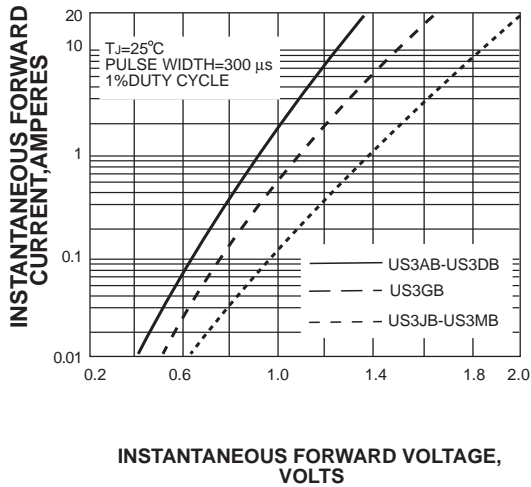


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

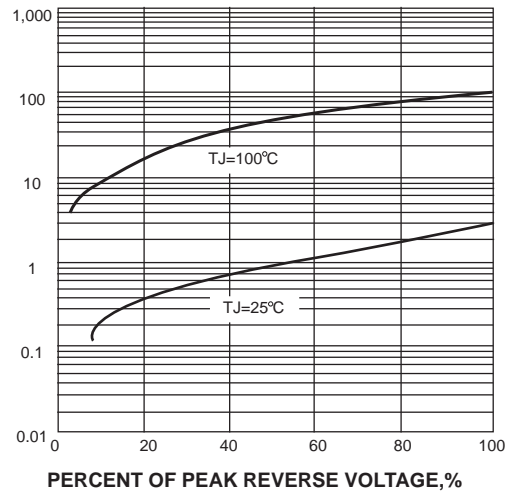
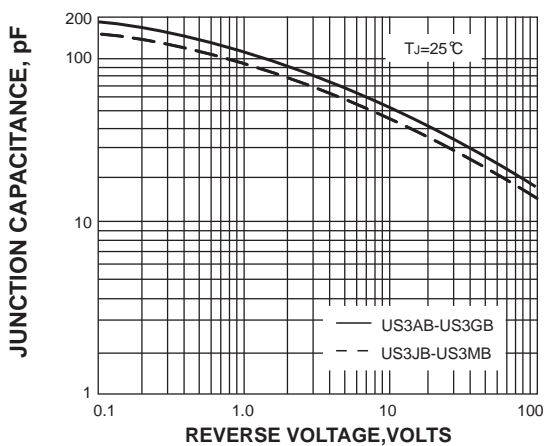
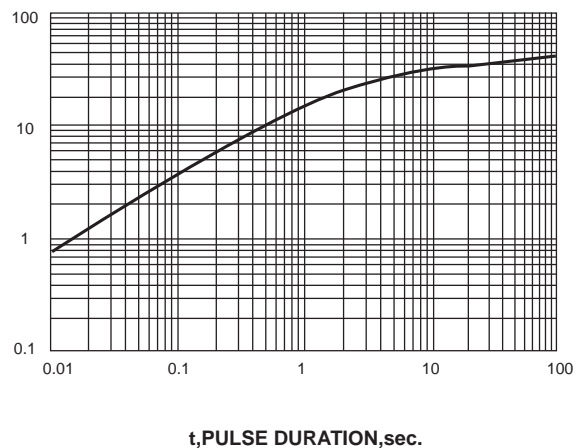


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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