# US3A THRU US3M

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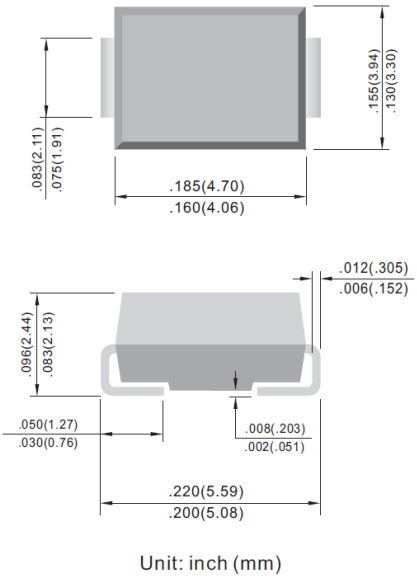
## 3.0Amp Ultra Fast Surface Mount Rectifiers

### General description
3.0Amp Ultra Fast Surface Mount Rectifiers

**FEATURES**
- The plastic package carries Underwriters Laboratory
- Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated Junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed
  250 C/10 seconds at terminals

**MECHANICAL DATA**
- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: 0.0035 ounce, 0.098 grams

### SMB/DO214AA




Unit: inch (mm)

### Absolute Maximum Ratings(Ta=25℃ unless otherwise specified)

| Parameter | Symbols | US3A | US3B | US3D | US3G | US3J | US3K | US3M | Units |
|---|---|---|---|---|---|---|---|---|---|
| Marking Code | Mark | US3A | US3B | US3D | US3G | US3J | US3K | US3M | N/A |
| 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 | $I_{F(AV)}$ | 3 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | $I_{FSM}$ | 100 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 1 A | $V_F$ | 1.0 | | | 1.4 | 1.7 | | | V |
| Maximum DC Reverse Current $T_a$ = 25 °C<br>at Rated DC Blocking Voltage $T_a$ =100 °C | $I_R$ | 5<br>500 | | | | | | | μA |
| Maximum Reverse Recovery Time(Note 1) TJ=25°C | Trr | 50 | | | | 75 | | | nS |
| Typical Junction Capacitance (Note 2) | $C_j$ | 65 | | | | | | | pF |
| Maximum Thermal Resistance(Note 3) RθJA | $R_{\theta JA}$ | 85 | | | | | | | °C/W |
| Operating and Storage Temperature Range | $T_j$, $T_{stg}$ | -55 ~ +150 | | | | | | | °C |

NOTES: 1. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, Irr=0.25A
2. Measured at 1 MHz and applied Vr = 4.0 volts.

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## Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

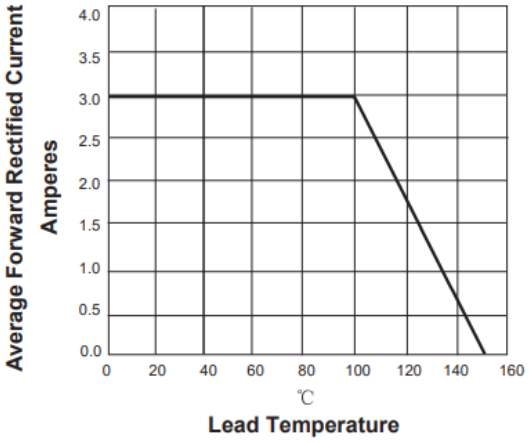



FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

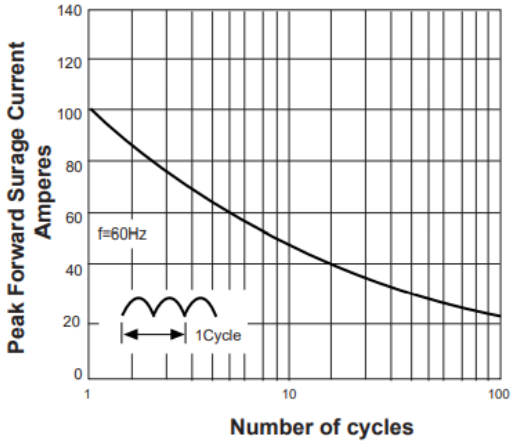



FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

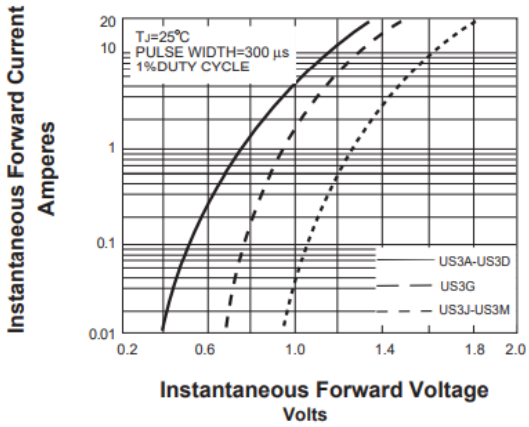
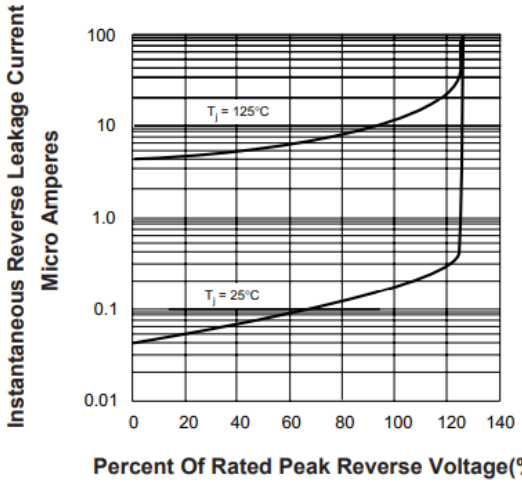



FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



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