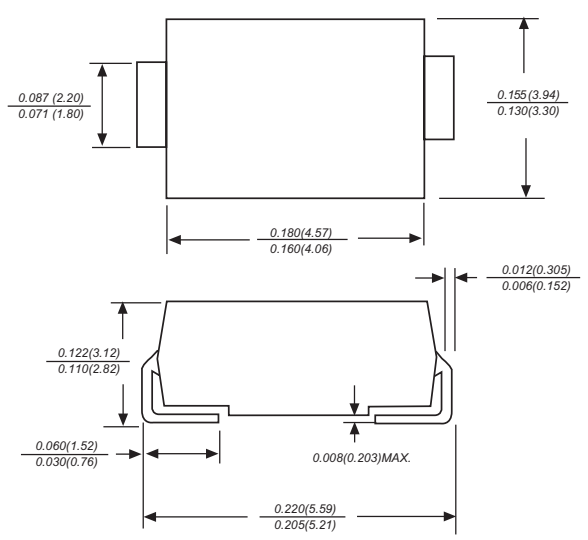


III. Fast / Ultra Fast / Super Fast Recovery Rectifier

2.0A Surface Mount Ultra Fast Recovery Rectifier

US2A~US2M

(Package: SMB (DO-214AA))

| | |
|---|--|
| <p>FEATURES</p> <ul style="list-style-type: none"> • The plastic package carries Underwriters Laboratory Flammability Classification 94V-0 • For surface mounted applications • Ultra fast switching for high efficiency • Low reverse leakage • Built-in strain relief, ideal for automated placement • High forward surge current capability • High temperature soldering guaranteed : 250 /10 seconds at terminals <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : JEDEC DO-214AA molded plastic body • Terminals : Solder plated, solderable per MIL-STD-750, Method 2026 • Polarity : Color band denotes cathode end • Mounting Position : Any • Weight : 0.090 grams |  <p>Case: SMB Dimensions in inches and (millimeters)</p> |
|---|--|

Ratings & Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

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

| Characteristics | Symbol | US2A | US2B | US2D | US2G | US2J | US2K | US2M | Units |
|--|----------------|-------------|------|------|------|------|------|------|---------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward rectified current at $T_L = 110$ | I_O | 2.0 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 50.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 2.0A | V_F | 1.0 | | 1.3 | | 1.7 | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage | I_R | | | 5.0 | | | | | μA |
| Maximum reverse recovery time (Note 1) | T_{rr} | 50 | | | | 75 | | | ns |
| Typical junction capacitance (Note 2) | C_j | 20.0 | | | | | | | PF |
| Typical thermal resistance (Note 3) | R_{th-JA} | 50.0 | | | | | | | / W |
| Operating junction and storage temperature range | T_j, T_{stg} | -65 to +150 | | | | | | | |

Note :

1. Reverse recovery conditions: $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts DC
3. P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

Ratings and Characteristic Curves of US2A~US2M

