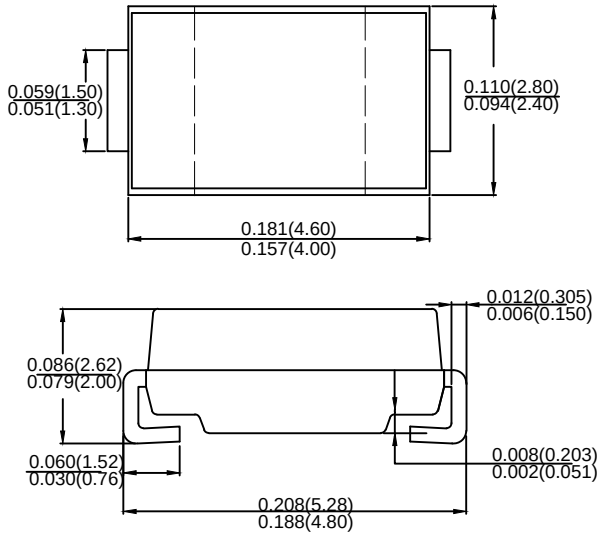
# US1AU THRU US1MU

**1.0AMP ULTRA FAST RECOVERY SILICON RECTIFIER**

## Features

- Low Power Loss, High Efficiency
- Ideally Suited for Automatic Assembly
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V- 0

**SMA/DO-214AC**




Dimensions in inches and (millimeters)

## Mechanical Data

- Case: Moeded plastic SMA
- Terminals: Plated leads solderable per MIL-STD-750,Method 2026 guaranteed
- Polarity: Color band dentes cathode end
- Mounting Position: Any
- Making: Type Number

## Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified

Single phase,half wave,60Hz,resistive or inductive load

For capacitive load derate current by 20%

| Type Number | SYMBOL | US1AU | US1BU | US1DU | US1GU | US1JU | US1KU | US1MU | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent 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 |
| Average Rectified Output Current @$T_A$ =75℃ | $I_O$ | 1.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 35 | | | | | | | A |
| Forward Voltage @IF=1.0A | $V_{FM}$ | 1.0 | | | 1.3 | 1.7 | | | V |
| Peak Reverse Current @$T_A$ =25℃ | $I_R$ | 5.0 | | | | | | | uA |
| At Rated DC Blocking Voltage @$T_A$ =100℃ | | 100 | | | | | | | |
| Maximum Reverse Recovery Time (Note 1) | Trr | 50 | | | | 75 | | | ns |
| Typical Junction Capacitance (Note 2) | $C_J$ | 17 | | | | | | | pF |
| Typical Thermal Resistance Junction to Ambient (Note 3) | $R_{\theta JA}$ | 30 | | | | | | | ℃/W |
| Operating Temperature Range | $T_J$ | -55 to+150 | | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | | ℃ |

Note: 1.Reverse Recovery Test Conditions:IF=0.5A,IR=1.0A,IRR=0.25A.

2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

3. 8.0MM²（.013mm Thick) Land Areas.

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FIG.1MAXIMUM AVERAGE FORWARD CURRENT DERATING

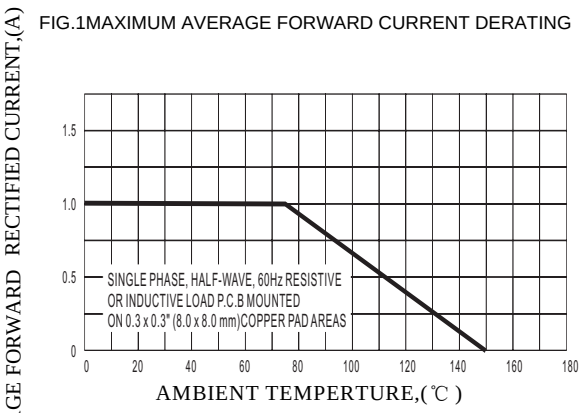


FIG.2TYPICAL FORWARD CHARACTERISTICS

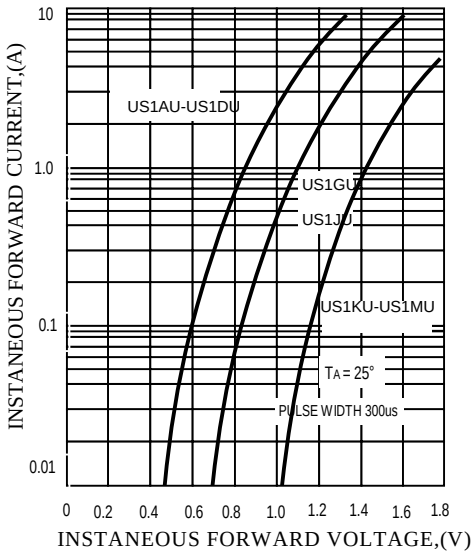


FIG.3MAXIMUM NON-REPEITIVE SURGE CURRENT

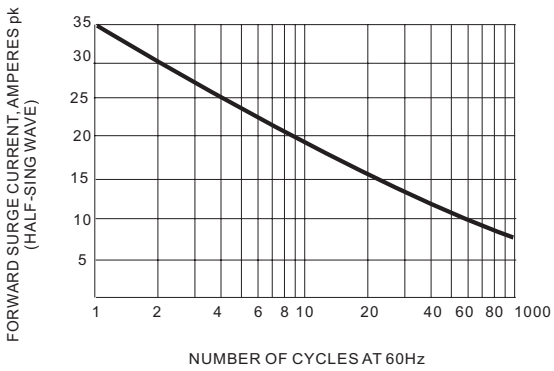


FIG.4TYPICAL JUNCTION CAPACITANCE

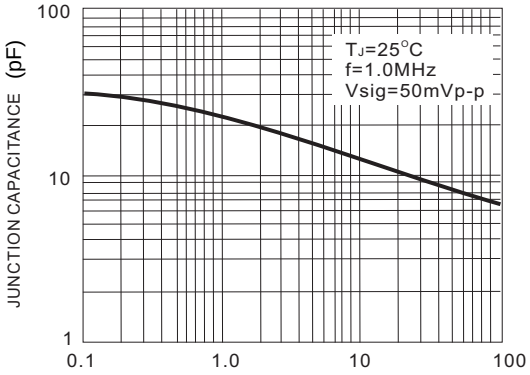


FIG.5TYPICAL REVERSE CHRACTERISTICS