

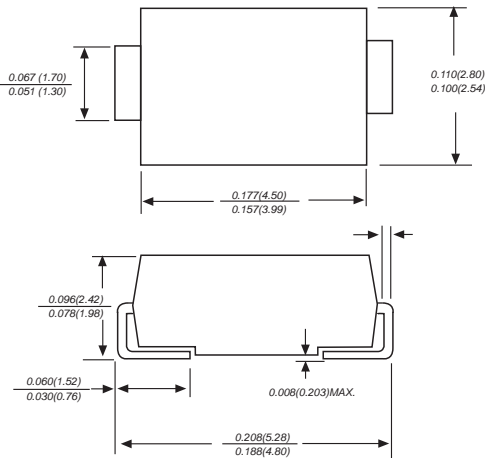


US2A THRU US2M

SURFACE MOUNT ULTRA FAST RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 2.0 Amperes

SMA/DO-214AC



Dimensions in inches and (millimeters)

FEATURES

- ◆ 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°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic body
Terminals: leads solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.002 ounce, 0.07 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| MDD Catalog Number | SYMBOLS | 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 $T_L=75^\circ\text{C}$ | $I_{(AV)}$ | 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 | | 1.4 | 1.7 | | | Volts | |
| Maximum DC reverse current at rated DC blocking voltage | I_R | $T_A=25^\circ\text{C}$ | | 5.0 | | | $T_A=125^\circ\text{C}$ | | μA |
| Maximum reverse recovery time (NOTE 1) | t_{rr} | 50 | | | 75 | | | ns | |
| Typical junction capacitance (NOTE 2) | C_J | 28.0 | | | | | | | pF |
| Typical thermal resistance (NOTE 3) | $R_{\theta JA}$ | 20.0 | | | | | | | $^\circ\text{C}/\text{W}$ |
| Operating junction and storage temperature range | T_J, T_{STG} | -50 to +150 | | | | | | | $^\circ\text{C}$ |

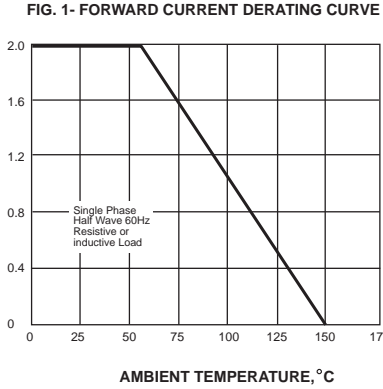
Note: 1. Reverse recovery condition $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas



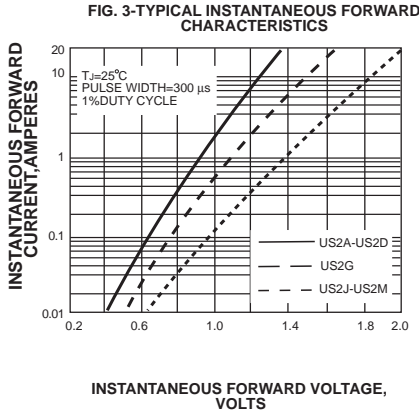
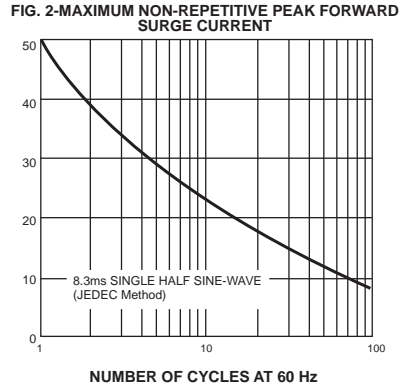
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RATINGS AND CHARACTERISTIC CURVES US2A THRU US2M

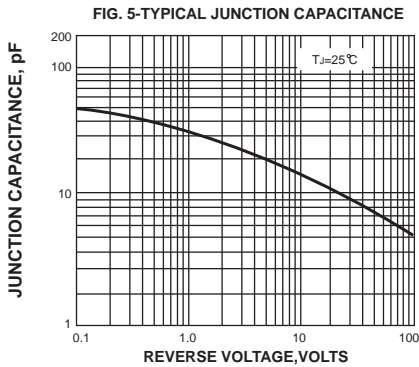
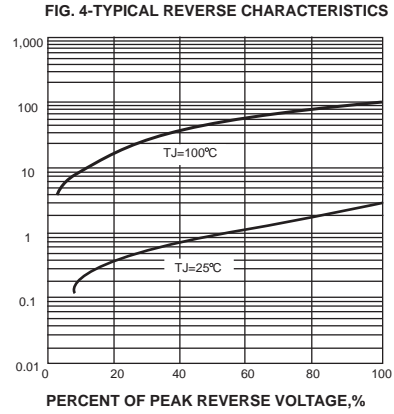
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES



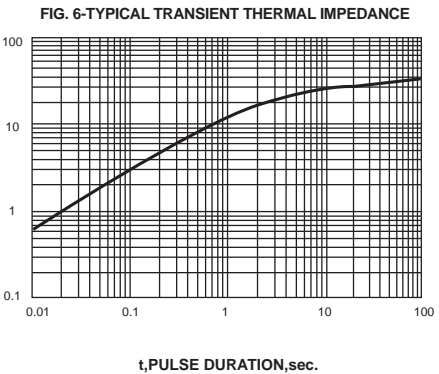
PEAK FORWARD SURGE CURRENT, AMPERES



INSTANTANEOUS REVERSE CURRENT, MICROAMPERES



TRANSIENT THERMAL IMPEDANCE, °C/W



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考!)



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