

SURFACE MOUNT RECTIFIERS

REVERSE VOLTAGE: 50 - 1000 V
FORWARD CURRENT: 2.0 A

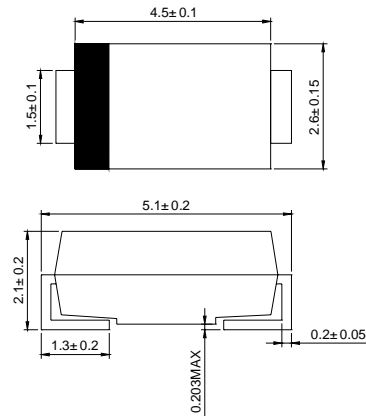
FEATURES

- ◇ Plastic package has underwriters laboratories flammability classification 94V-0
- ◇ For surface mount applications
- ◇ Glass passivated chip junctions
- ◇ Low profile package
- ◇ Easy pick and place
- ◇ Ultrafast recovery times for high efficiency
- ◇ Low forward voltage, low power loss
- ◇ Built-in strain relief, ideal for automated placement
- ◇ High temperature soldering:
250°C/10 seconds on terminals

MECHANICAL DATA

- ◇ Case: JEDEC DO-214AC, molded plastic body over passivated chip
- ◇ Terminals: Solder plated, solderable per MIL-STD-750, method 2026
- ◇ Polarity: Color band denotes cathode end
- ◇ Weight: 0.002 ounces, 0.064 gram

DO-214AC(SMA)



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

| | | US2AA | US2BA | US2DA | US2GA | US2JA | US2KA | US2MA | UNITS |
|---|-----------------|--------------|-------|-------|-------|-------|-------|-------|--------------------|
| Device marking code | | US2AA | US2BA | US2DA | US2GA | US2JA | US2KA | US2MA | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RWS} | 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 @ $T_L=90^\circ\text{C}$ | $I_{F(AV)}$ | 2.0 | | | | | | | A |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 50 | | | | | | | A |
| Maximum instantaneous forward voltage at 2A | V_F | 1.0 | | | | 1.7 | | | V |
| Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$ | I_R | 10 | | | | 350 | | | μA |
| Maximum reverse recovery time at $I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{tr}=0.25\text{A}$ | t_{rr} | 50 | | | | 75 | | | ns |
| Typical junction capacitance at 4.0V, 1MHz | C_J | 50 | | | | 30 | | | pF |
| Maximum thermal resistance (NOTE1) | $R_{\theta JA}$ | 50 | | | | | | | $^\circ\text{C/W}$ |
| | $R_{\theta JL}$ | 18 | | | | | | | |
| Operating temperature range | T_J | -55-----+150 | | | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55-----+150 | | | | | | | $^\circ\text{C}$ |

NOTE: 1.P.C.B.mounted on 0.2X0.2"(5.0X5.0mm)copper pad area

FIG.1 – FORWARD CURRENT DERATING CURVE

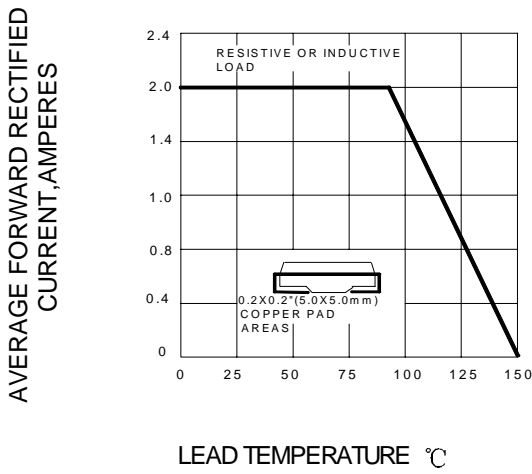


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

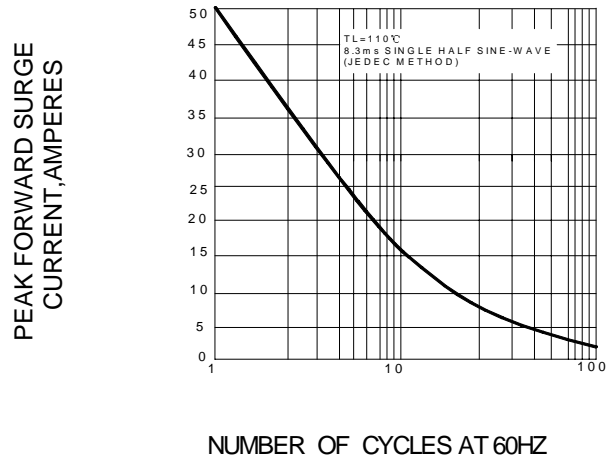


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

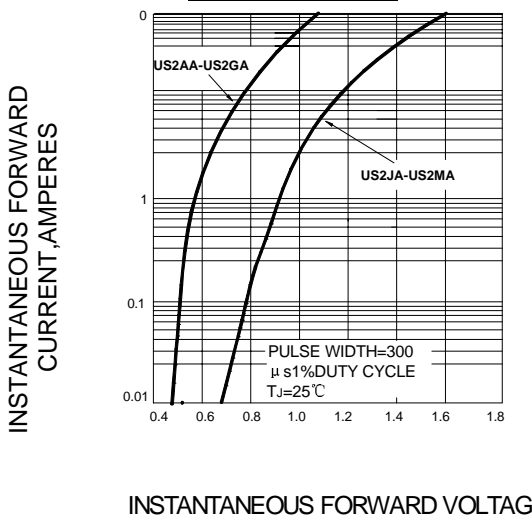


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

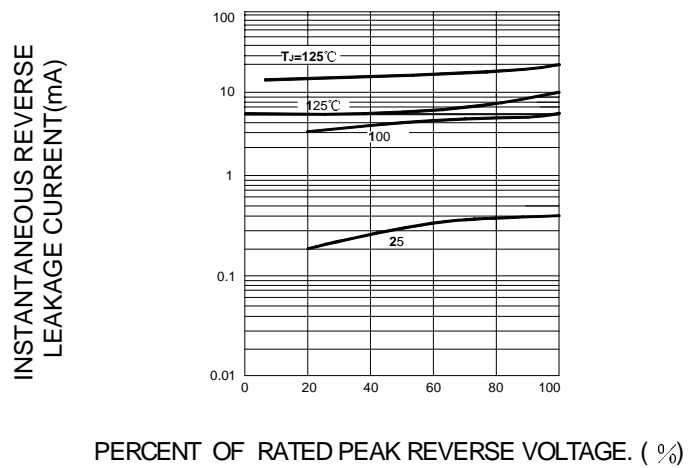


FIG.5 – TYPICAL JUNCTION CAPACITANCE

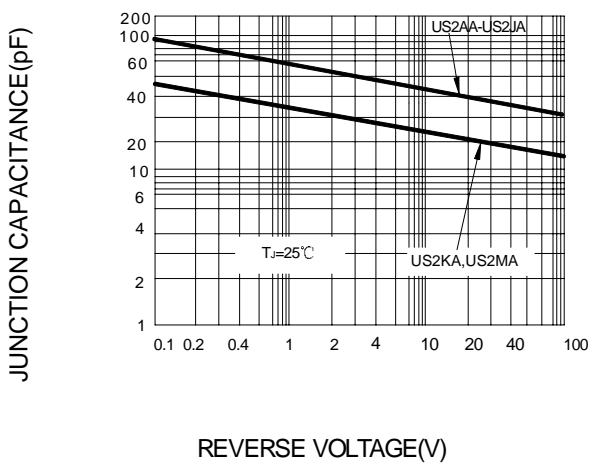


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE

