CURRENT 2.0 Ampere
VOLTAGE RANG 50 to 1000 Volts

# US2AB THRU US2MB

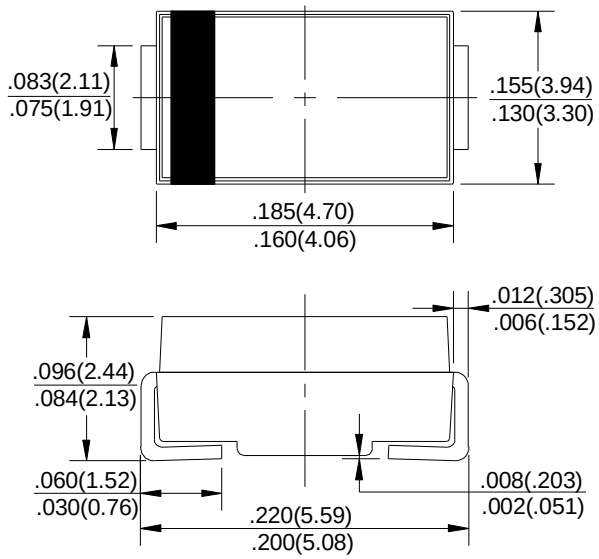
## FEATURES

- Plastic package has UL flammability Classification 94V-0
- Glass Passivated chip junction
- Built in strain relief
- Fast switching speed for high efficiency
- High temperature soldering guaranteed: 250 /10 seconds

## MECHANICAL DATA

- Case: JEDED DO-214AA transfer molded plastic
- Terminals: Solder plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.003 ounce, 0.093 gram

DO-214AA (SMB)




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

## MAXIMUM RATINGS & THERMAL CHARACTERISTICS

| PARAMETELS | SYMBOLS | US2A | US2B | US2D | US2G | US2J | US2K | US2M | UNIT |
|---|---|---|---|---|---|---|---|---|---|
| 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 $T_L$=105 (NOTE 1) | $I_{(AV)}$ | 2.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 50 | | | | | | | Amps |
| Maximum lnstantaneous Forward Voltage at 2.0A | $V_F$ | 1.0 | | | 1.3 | 1.7 | | | Volts |
| Maximum DC Reverse Current At rated DC blocking voltage at $T_A$=25 | $I_R$ | 5.0 | | | | | | | UA |
| $T_A$=125 | | 100 | | | | | | | |
| Maximum Reverse Recovery Time Test conditions $I_F$=0.5A, $I_R$=1.0A, $I_{RR}$=0.25A | $t_{rr}$ | 50 | | | 100 | | | | nS |
| Typical Junstion Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V) | $C_J$ | 50 | | | 30 | | | | pF |
| Typical Thermal Resistance (NOTE 1) | $R_{\theta JA}$ | 75 | | | | | | | /W |
| | $R_{\theta JL}$ | 17 | | | | | | | |
| Operating Junction Temperature | $T_J$ | (-55 to +150) | | | | | | | |
| Storage Tempetature Rang | $T_{STG}$ | (-55 to +150) | | | | | | | |

**Notes:**
1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with 0.3×0.3″ (8.0 × 8.0mm) copper pad areas.

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# US2AB THRU US2MB

## RATING AND CHRACTERISTIC CURVES US2A Thru US2M

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

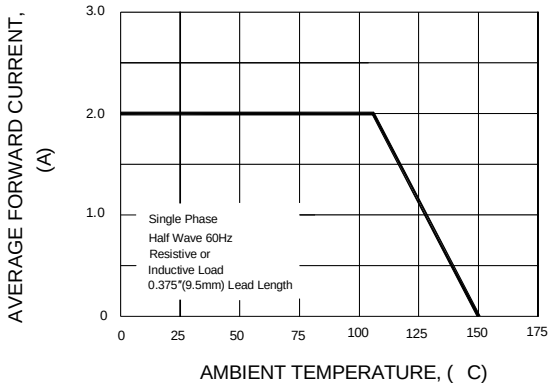



FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

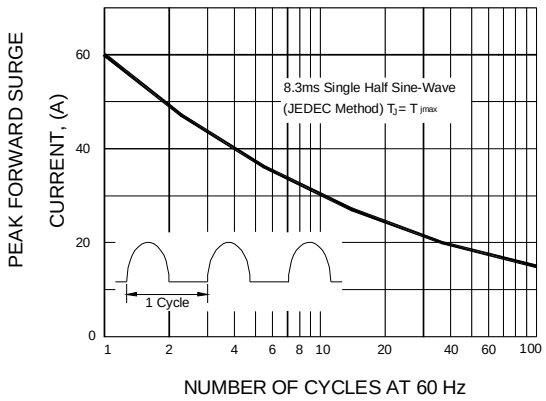



FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

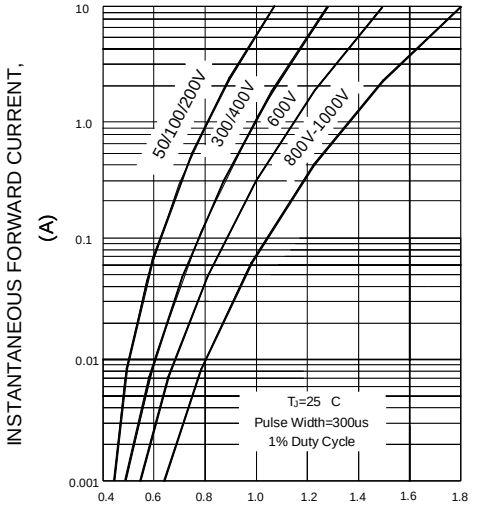



FIG.4-TYPICAL REVERSE CHARACTERISTICS

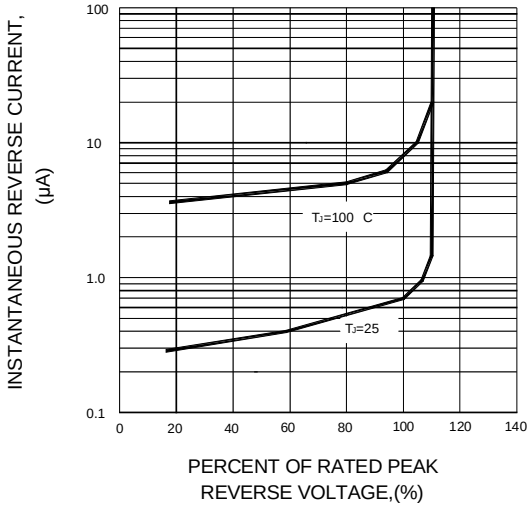
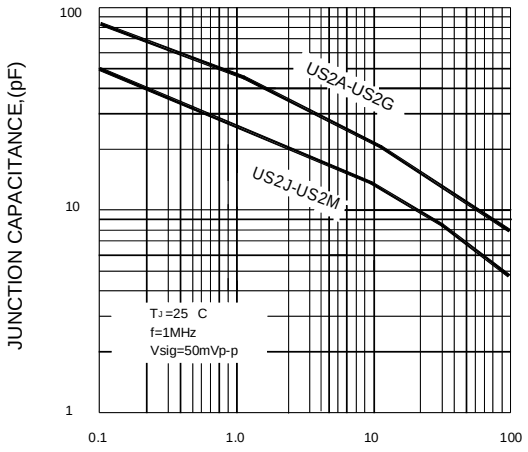
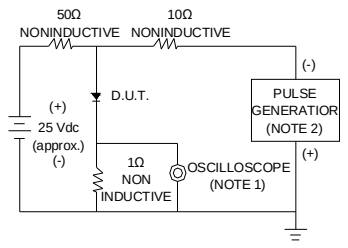
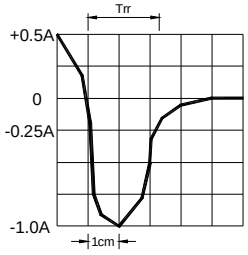



FIG.5-TYPICAL JUNCTION CAPACITANCE




F1G.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC




SET TIME BASE FOR 50/100ns/cm

NOTES : 1.Rise Time=7ns max. Input Impedance= 1 magohm. 22pF
2.Rise time=10ns max. Source Impedance= 50 ohms