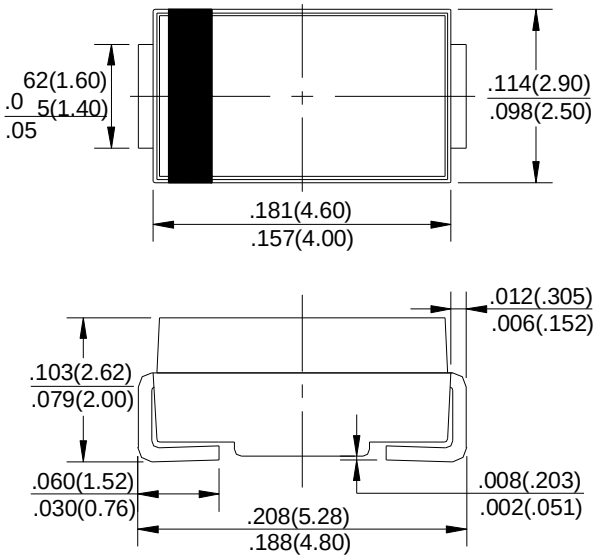
CURRENT 3.0 Ampere
VOLTAGE RANG 50 to 1000 Volts

# US3AA THRU US3MA

## DO-214AC (SMA)




Dimensions in inches and (millimeters)

## FEATURES

- Plastic package has underwrites laboratory 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-214AC transfer molded plastic

- Terminals: Solder plated, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.002 ounce, 0.063 gram

## 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%.

| | SYMBOLS | US3A | US3B | US3D | US3G | US3J | US3K | US3M | 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) | $I_{(AV)}$ | 3.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 100 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 3.0A | $V_F$ | 1.0 | | | 1.3 | 1.7 | | | Volts |
| Maximum DC Reverse Current at rated DC Blocking Voltage at $T_A$ = 25 | $I_R$ | 10 | | | | | | | UA |
| Maximum DC Reverse Current at rated DC Blocking Voltage at $T_A$ = 125 | $I_R$ | 200 | | | | | | | UA |
| Maximum Reverse Recovery Time Test conditions $I_F$ =0.5A, $I_R$ =1.0A, $I_{RR}$ =0.25A | $t_{rr}$ | 50 | | | | 100 | | | nS |
| Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V) | $C_J$ | 80 | | | | 50 | | | pF |
| Typical Thermal Resistance (Note 1) | $R_{\theta JA}$ | 55 | | | | | | | /W |
| Typical Thermal Resistance (Note 1) | $R_{\theta JL}$ | 17 | | | | | | | /W |
| Operating Junction Temperature | $T_J$ | (-55 to +150) | | | | | | | |
| Storage Temperature Range | $T_{STG}$ | (-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.

CURRENT 3.0 Ampere
VOLTAGE RANG 50 to 1000 Volts

# US3AA THRU US3MA

## RATING AND CHRACTERISTIC CURVES US3A Thru US3M

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

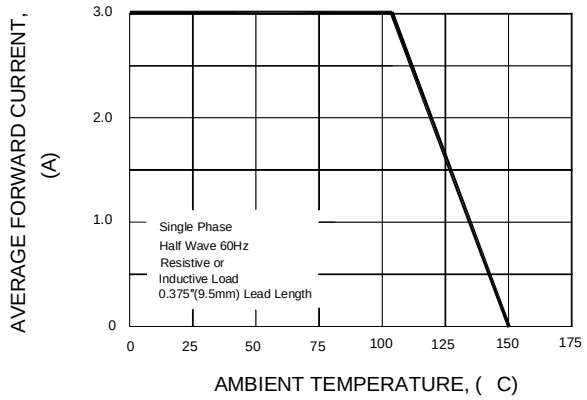



FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

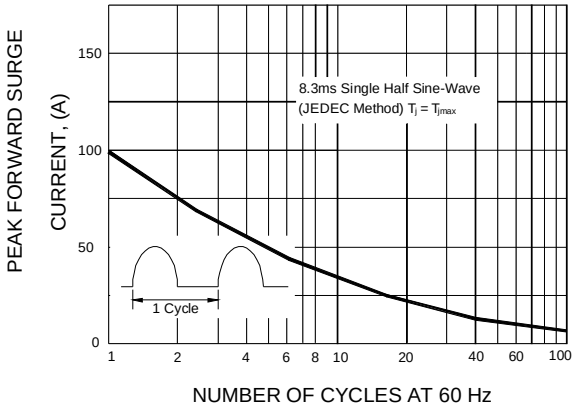



FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

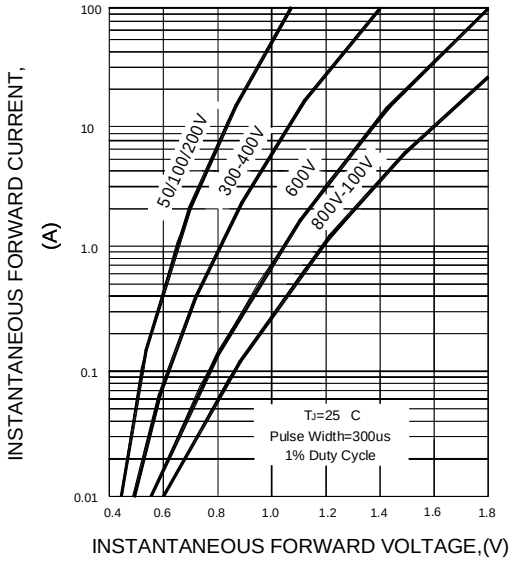



FIG.4-TYPICAL REVERSE CHARACTERISTICS

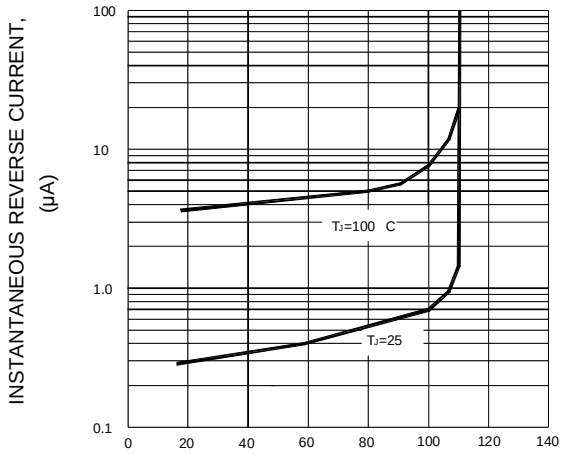
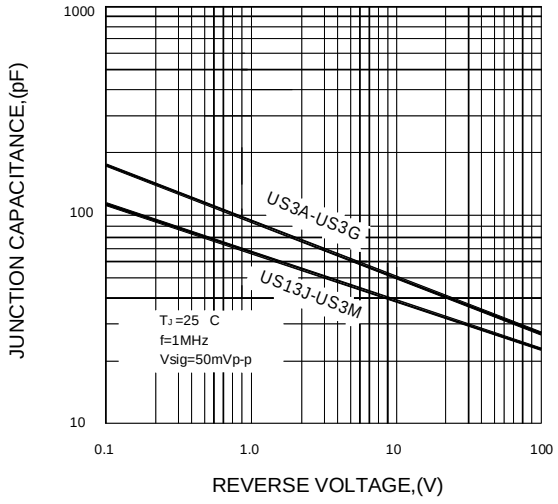
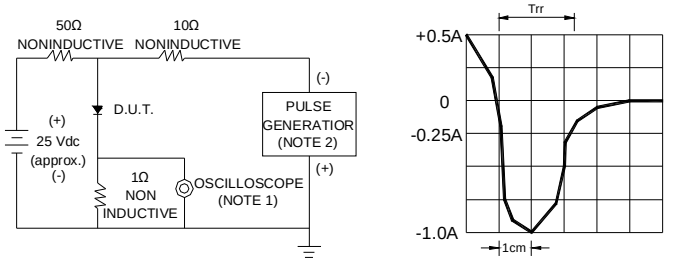



FIG.5-TYPICAL JUNCTION CAPACITANCE




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




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

SET TIME BASE FOR 50/100ns/cm