

US3A THRU US3M

3.0 AMP SURFACE MOUNT HIGH EFFICIENCY RECTIFIERS



FEATURES

- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * Fast switching speed

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Metallurgically bonded construction
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.093 grams

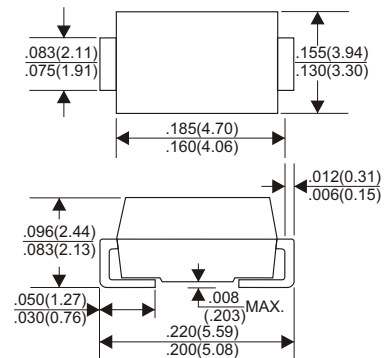
VOLTAGE RANGE

50 to 1000 Volts

CURRENT

3.0 Ampere

DO-214AA(SMB)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| TYPE NUMBER | US3A | US3B | US3D | US3E | US3G | US3J | US3K | US3M | UNITS |
|---|------------|------|------|------|------|------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current at Ta=55°C | 3.0 | | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 100 | | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 3.0A | 1.0 | | 1.3 | | 1.85 | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | 10 | | | | 200 | | | | μA |
| Maximum Reverse Recovery Time (Note 1) | 50 | | | | 75 | | | | nS |
| Typical Junction Capacitance (Note 2) | 75 | | | | | | | | pF |
| Operating and Storage Temperature Range Tj, Tstg | -65 — +150 | | | | | | | | °C |

NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES (US3A THRU US3M)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

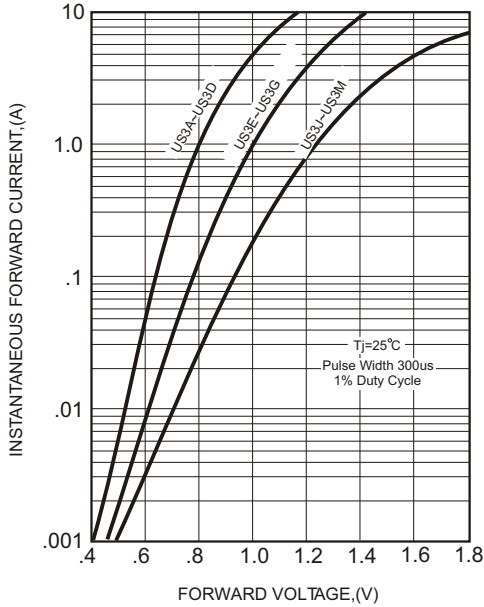


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

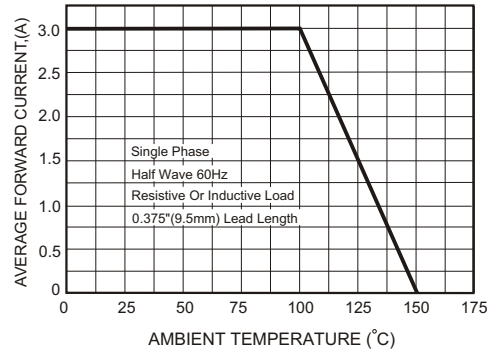
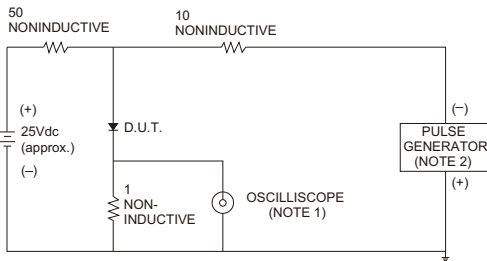


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

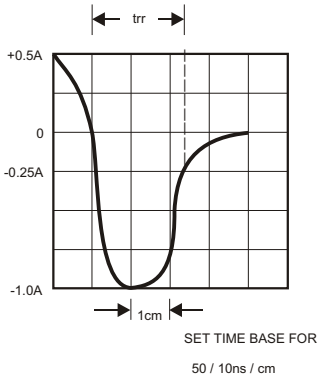


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

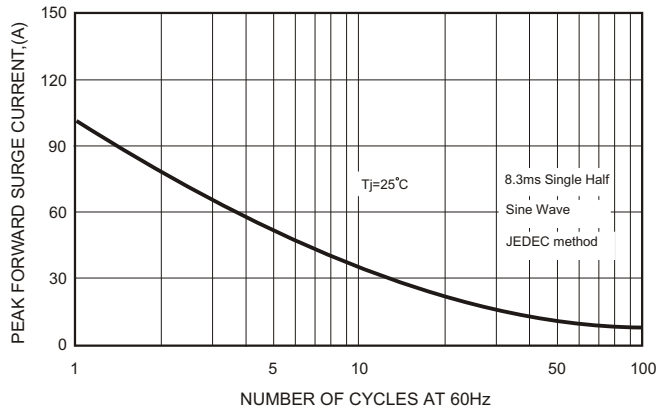


FIG.5-TYPICAL JUNCTION CAPACITANCE

