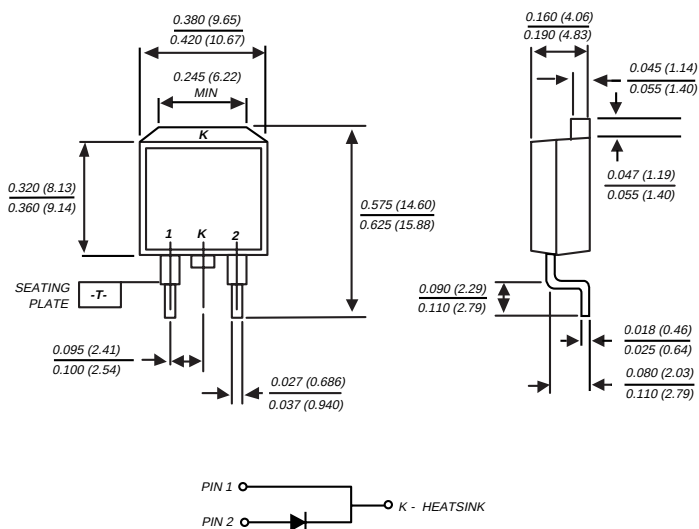


# NSB8AT THRU NSB8MT

## GLASS PASSIVATED GENERAL PURPOSE PLASTIC RECTIFIER

*Reverse Voltage - 50 to 1000 Volts      Forward Current - 8.0 Amperes*

### TO-263AA



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ High forward current capability
- ◆ High surge current capability
- ◆ Low forward voltage drop
- ◆ Glass passivated chip junction
- ◆ High temperature soldering in accordance with CECC 802 / Reflow guaranteed



### MECHANICAL DATA

**Case:** JEDEC TO-263AA molded plastic body

**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026

**Polarity:** As marked

**Mounting Position:** Any

**Weight:** 0.08 ounce, 2.24 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

|                                                                                                             | SYMBOLS                           | NSB8<br>AT    | NSB8<br>BT | NSB8<br>DT | NSB8<br>GT | NSB8<br>JT | NSB8<br>KT | NSB8<br>MT | UNITS |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|------------|------------|------------|------------|------------|------------|-------|
| Maximum repetitive peak reverse voltage                                                                     | V <sub>RRM</sub>                  | 50            | 100        | 200        | 400        | 600        | 800        | 1000       | Volts |
| Maximum RMS voltage                                                                                         | V <sub>RMS</sub>                  | 35            | 70         | 140        | 280        | 420        | 560        | 700        | Volts |
| Maximum DC blocking voltage                                                                                 | V <sub>DC</sub>                   | 50            | 100        | 200        | 400        | 600        | 800        | 1000       | Volts |
| Maximum average forward rectified current at T <sub>C</sub> =100°C                                          | I <sub>(AV)</sub>                 | 8.0           |            |            |            |            |            |            | Amps  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)      | I <sub>FSM</sub>                  | 175.0         |            |            |            |            |            |            | Amps  |
| Maximum instantaneous forward voltage at 8.0A                                                               | V <sub>F</sub>                    | 1.1           |            |            |            |            |            |            | Volts |
| Maximum DC reverse current<br>at rated DC blocking voltage<br>T <sub>C</sub> =25°C<br>T <sub>C</sub> =100°C | I <sub>R</sub>                    | 10.0<br>100.0 |            |            |            |            |            |            | μA    |
| Typical junction capacitance (NOTE 1)                                                                       | C <sub>J</sub>                    | 55.0          |            |            |            |            |            |            | pF    |
| Typical thermal resistance (NOTE 2)                                                                         | R <sub>θJC</sub>                  | 3.0           |            |            |            |            |            |            | °C/W  |
| Operating junction and storage temperature range                                                            | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150   |            |            |            |            |            |            | °C    |

#### NOTES:

(1) Measured at 1.0 MHz and applied reversed voltage of 4.0 Volts

(2) Thermal resistance from junction to case mounted on heatsink

# RATINGS AND CHARACTERISTIC CURVES NSB8AT THRU NSB8MT

FIG. 1 - FORWARD CURRENT DERATING CURVE

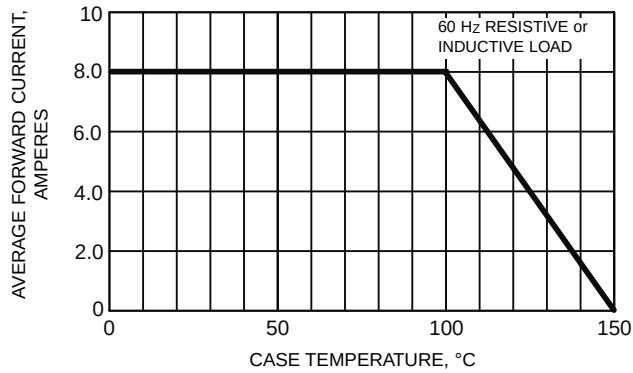


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

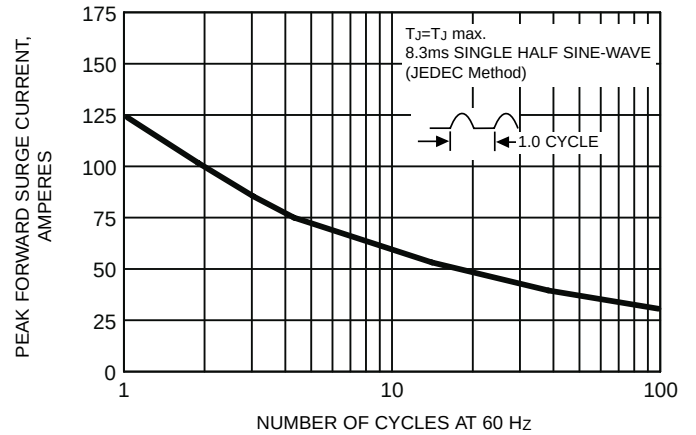


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

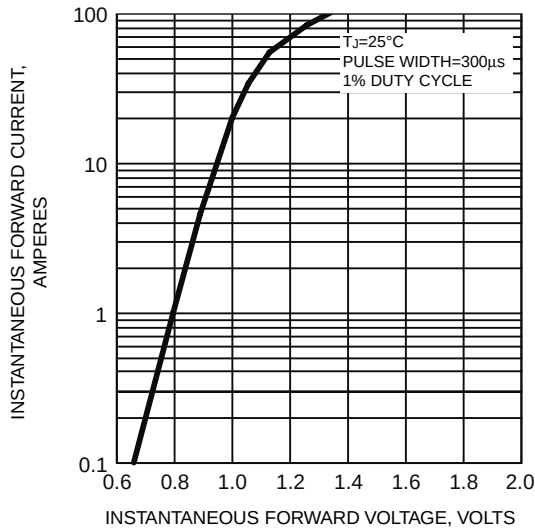


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

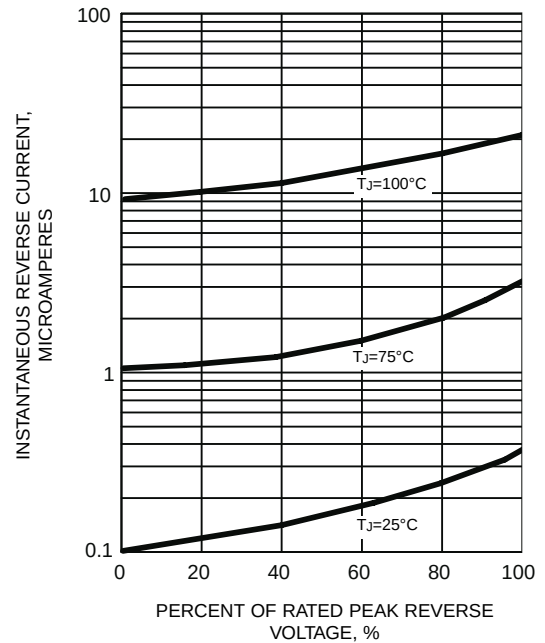


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

