

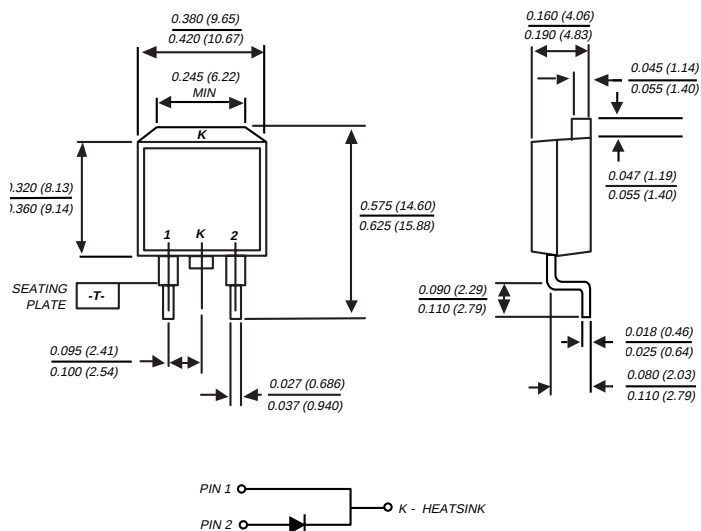
# FESB16AT THRU FESB16JT

## FAST EFFICIENT PLASTIC RECTIFIER

**Reverse Voltage - 50 to 600 Volts**

**Forward Current - 16.0 Amperes**

### TO-263AB



### FEATURES

- ♦ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ♦ Glass passivated chip junction
- ♦ Low power loss
- ♦ Low forward voltage, high current capability
- ♦ High surge current capability
- ♦ Superfast recovery time, for high efficiency
- ♦ High temperature soldering in accordance with CECC 802 / Reflow guaranteed



### MECHANICAL DATA

**Case:** JEDEC TO-263AB molded plastic body over passivated chips

**Terminals:** Plated lead 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                           | FESB<br>16AT  | FESB<br>16BT | FESB<br>16CT | FESB<br>16DT | FESB<br>16FT | FESB<br>16GT | FESB<br>16HT | FESB<br>16JT | UNITS |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|
| Maximum repetitive peak reverse voltage                                                                                         | V <sub>RRM</sub>                  | 50            | 100          | 150          | 200          | 300          | 400          | 500          | 600          | Volts |
| Maximum RMS voltage                                                                                                             | V <sub>RMS</sub>                  | 35            | 70           | 105          | 140          | 210          | 280          | 350          | 420          | Volts |
| Maximum DC blocking voltage                                                                                                     | V <sub>DC</sub>                   | 50            | 100          | 150          | 200          | 300          | 400          | 500          | 600          | Volts |
| Maximum average forward rectified current<br>at T <sub>C</sub> =100°C                                                           | I <sub>(AV)</sub>                 | 16.0          |              |              |              |              |              |              |              | Amps  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed<br>on rated load (JEDEC Method) at T <sub>C</sub> =100°C | I <sub>FSM</sub>                  | 250.0         |              |              |              |              |              |              |              | Amps  |
| Maximum instantaneous forward voltage at 16A                                                                                    | V <sub>F</sub>                    | 0.975         |              |              |              | 1.3          |              | 1.5          |              | Volts |
| Maximum DC reverse current<br>at rated DC blocking voltage                                                                      | I <sub>R</sub>                    | 10.0<br>500.0 |              |              |              |              |              |              |              | μA    |
| Maximum reverse recovery time (NOTE1)                                                                                           | t <sub>rr</sub>                   | 35.0          |              |              |              | 50.0         |              |              |              | ns    |
| Typical junction capacitance (NOTE 2)                                                                                           | C <sub>J</sub>                    | 175.0         |              |              |              |              |              | 145.0        |              | pF    |
| Typical thermal resistance (NOTE 3)                                                                                             | R <sub>θJC</sub>                  | 1.2           |              |              |              |              |              |              |              | °C/W  |
| Operating and storage temperature range                                                                                         | T <sub>J</sub> , T <sub>STG</sub> | -65 to +150   |              |              |              |              |              |              |              | °C    |

#### NOTES:

- (1) Reverse recovery test conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to case

# RATINGS AND CHARACTERISTICS CURVES FESB16AT THRU FESB16JT

FIG. 1 - FORWARD CURRENT DERATING CURVE

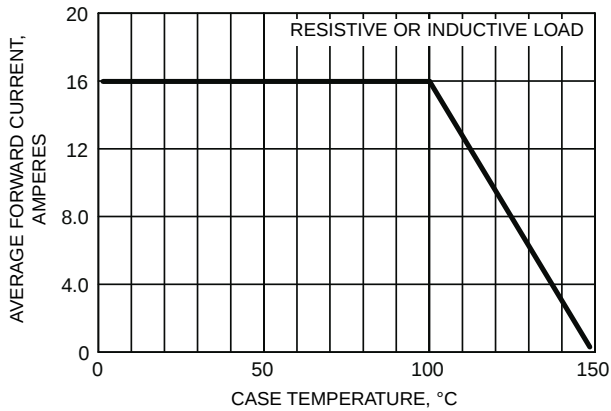


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

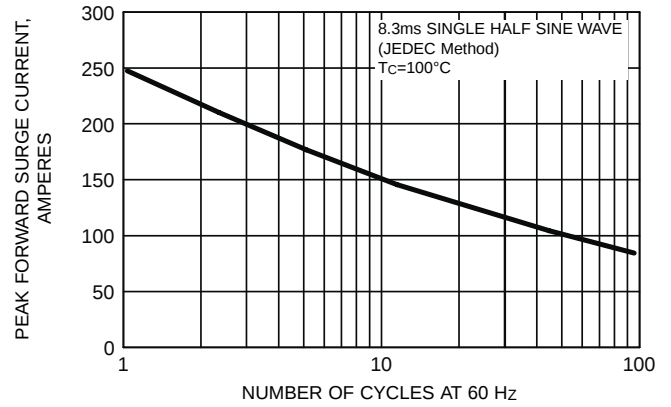


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

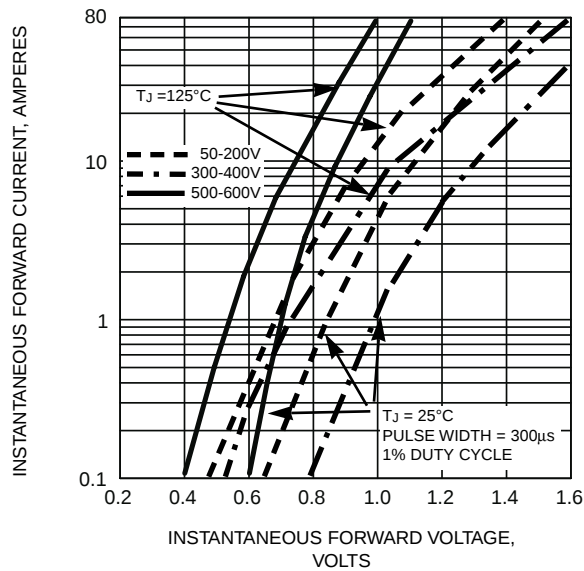


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

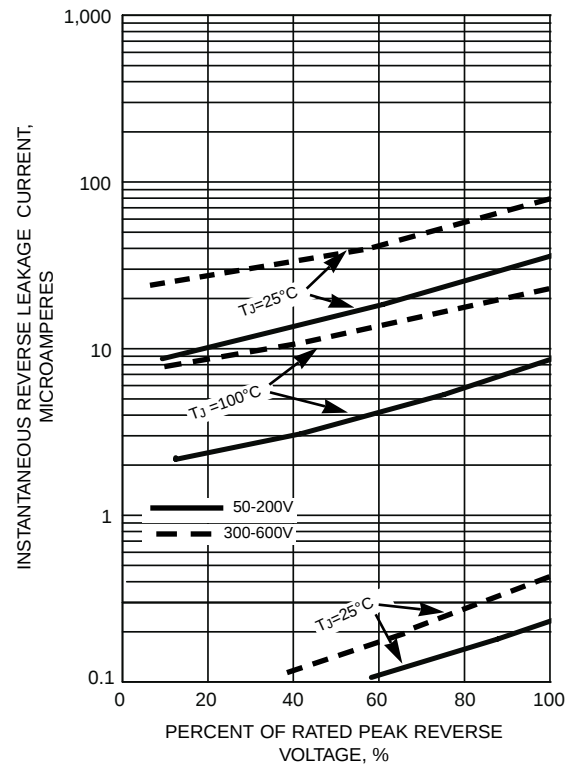


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

