

# FEP16AT THRU FEP16JT

## FAST EFFICIENT PLASTIC RECTIFIER

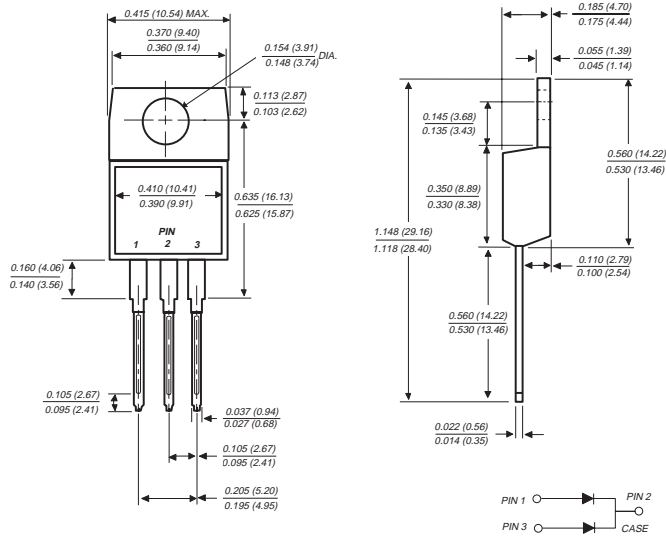
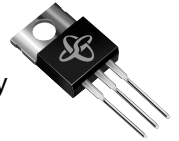
Reverse Voltage - 50 to 600 Volts

Forward Current - 16.0 Amperes

### TO-220AB

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Dual rectifier construction, positive centertap
- ◆ Glass passivated chip junctions
- ◆ Low power loss
- ◆ Low forward voltage, high current capability
- ◆ High surge current capability
- ◆ Superfast recovery times for high efficiency
- ◆ High temperature soldering guaranteed: 250°C, 0.16" (4.06mm) from case for 10 seconds



Dimensions are in inches and (millimeters)

### MECHANICAL DATA

**Case:** JEDEC TO-220AB molded plastic body over passivated chips

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

**Polarity:** As marked

**Mounting Position:** Any

**Mounting Torque:** 5 in. - lbs. max.

**Weight:** 0.08 ounce, 2.24 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

|  | SYMBOLS                              | FEP 16AT    | FEP 16BT | FEP 16CT | FEP 16DT | FEP 16FT | FEP 16GT | FEP 16HT | FEP 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 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) | I <sub>FSM</sub>                     | 200.0       |          |          |          |          |          |          |          | Amps  |      |
| Maximum instantaneous forward voltage per leg at 8.0A  | V <sub>F</sub>                       | 0.95        |          |          | 1.3      |          | 1.5      |          |          | Volts |      |
| Maximum DC reverse current at rated DC blocking voltage per leg  | I <sub>R</sub>                       | 10.0        |          |          | 500.0    |          |          |          |          | μA    |      |
| Maximum reverse recovery time (NOTE 1) per leg   | t <sub>rr</sub>                      | 35.0        |          |          | 50.0     |          |          |          |          | ns    |      |
| Typical junction capacitance per leg (NOTE 2)  | C <sub>J</sub>                       | 85.0        |          |          |          |          | 60.0     |          |          |       | pF   |
| Typical thermal resistance (NOTE 3)  | R <sub>θJA</sub><br>R <sub>θJC</sub> | 15.0        |          |          |          |          | 2.2      |          |          |       | °C/W |
| Operating junction and storage temperature range   | T <sub>J</sub> , T <sub>STG</sub>    | -55 to +150 |          |          |          |          |          |          |          | °C    |      |

#### NOTES:

(1) Reverse recovery test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(3) Thermal resistance from junction to ambient and from junction to case per leg mounted on heatsink

# RATINGS AND CHARACTERISTICS CURVES FEP16AT THRU FEP16JT

FIG. 1 - FORWARD CURRENT DERATING CURVE

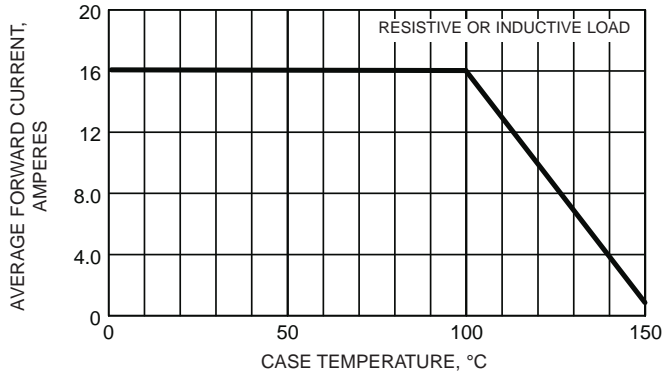


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

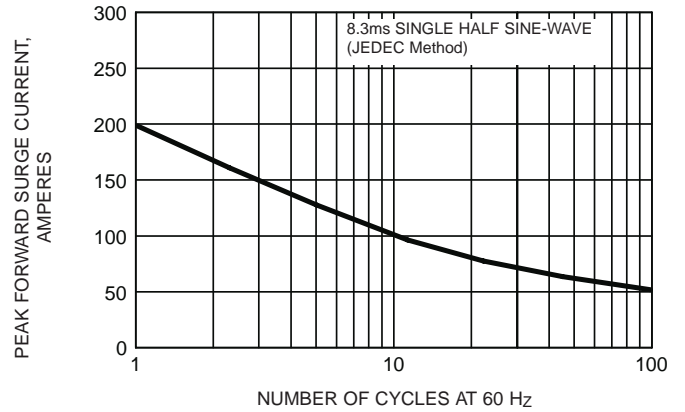


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

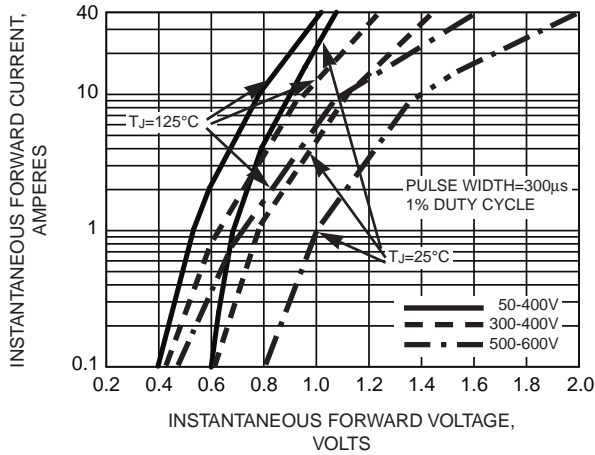


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

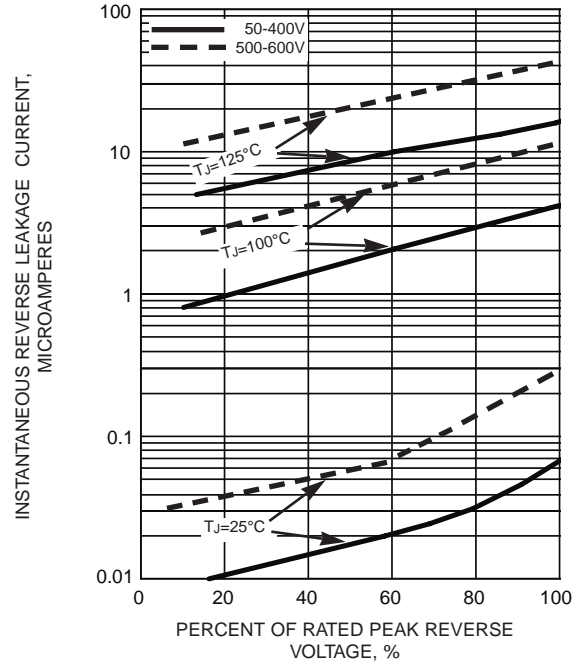


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

