

Silicon Diode

FEP16DT

Fast Efficient Rectifier

200V / 16A

DATASHEET

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OEM – General Semiconductor

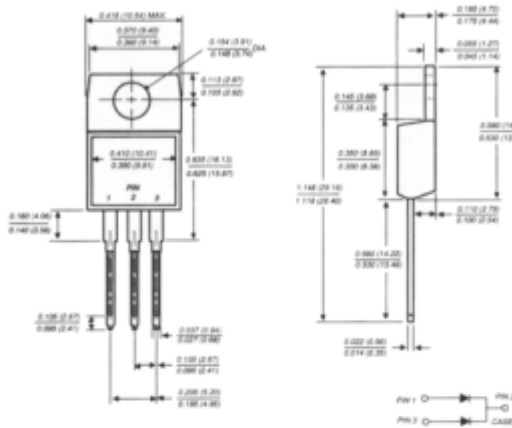
Source: General Semiconductor Databook 1998

FEP16AT THRU FEP16JT

FAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 16.0 Amperes

TO-220AB



Dimensions are in inches and (millimeters)

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



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 _{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 500 | 600 | Volts |
| Maximum RMS voltage | V _{RMS} | 35 | 70 | 105 | 140 | 210 | 280 | 350 | 420 | Volts |
| Maximum DC blocking voltage | V _{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 500 | 600 | Volts |
| Maximum average forward rectified current at T _C =100°C | I _(AV) | 16.0 | | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 200.0 | | | | | | | | Amps |
| Maximum instantaneous forward voltage per leg at 8.0A | V _F | 0.95 | | 1.3 | | | 1.5 | | Volts | |
| Maximum DC reverse current at rated DC blocking voltage per leg | I _R | T _C =25°C | | 10.0 | | | T _C =100°C | | 500.0 | µA |
| Maximum reverse recovery time (NOTE 1) per leg | t _{rr} | 35.0 | | | 50.0 | | | ns | | |
| Typical junction capacitance per leg (NOTE 2) | C _J | 85.0 | | | | | 60.0 | | pF | |
| Typical thermal resistance (NOTE 3) | R _{θJA} R _{θJC} | 15.0 | | | | | 2.2 | | °C/W | |
| Operating junction and storage temperature range | T _J , T _{STG} | -55 to +150 | | | | | | | | °C |

NOTES:

- (1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_V=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

