

Silicon Diode

FEP6BT

Fast Efficient Rectifier

100V / 6A

DATASHEET

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OEM – General Semiconductor

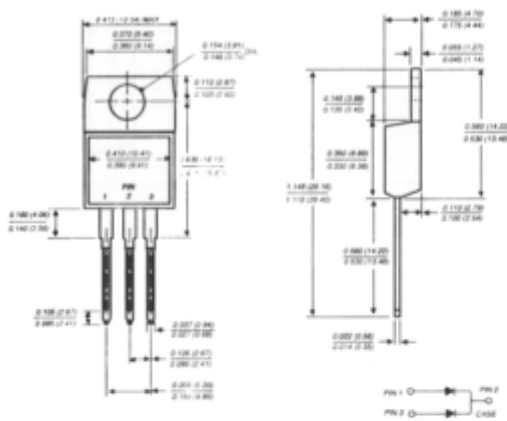
Source: General Semiconductor Databook 1998

FEP6AT THRU FEP6DT

FAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 200 Volts Forward Current - 6.0 Amperes

TO-220AB



Dimensions are in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Dual rectifier construction, positive center-tap
- ◆ Glass passivated chip junctions
- ◆ Superfast recovery times for high efficiency
- ◆ Low power loss
- ◆ Low forward voltage, high current capability
- ◆ For use in low voltage, high frequency inverters, free wheeling and polarity protection applications
- ◆ 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 lead solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Mounting Torque: 5 in. - lb. max.

Weight: 0.08 ounce, 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| | SYMBOLS | FEP6AT | FEP6BT | FEP6CT | FEP6DT | UNITS |
|--|-----------------------------------|-------------|--------|--------|--------|-------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 100 | 150 | 200 | Volts |
| Maximum RMS voltage | V _{RMS} | 35 | 70 | 105 | 140 | Volts |
| Maximum DC blocking voltage | V _{DC} | 50 | 100 | 150 | 200 | Volts |
| Maximum average forward rectified current at T _C =100° | I _(AV) | 6.0 | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 100.0 | | | | Amps |
| Maximum instantaneous forward voltage per leg at 3.0A | V _F | 0.975 | | | | Volts |
| Maximum DC reverse current | I _R | 5.0 | | | | μA |
| at rated DC blocking voltage | | 50.0 | | | | |
| Maximum reverse recovery time per leg (NOTE 1) | t _{rr} | 35.0 | | | | ns |
| Typical thermal resistance (NOTE 2) | R _{θJA} | 20.0 | | | | °C/W |
| (NOTE 3) | R _{θJC} | 3.6 | | | | |
| Typical junction capacitance per leg (NOTE 4) | C _J | 28.0 | | | | pF |
| Operating junction and storage temperature range | T _J , T _{STG} | -55 to +150 | | | | °C |

NOTES:

- (1) Reverse recovery test conditions: I_r=0.5A, I_f=1.0A, I_{sm}=0.25A
- (2) Thermal resistance from junction to ambient in free air, no heatsink
- (3) Thermal resistance from junction to case per leg mounted on heatsink
- (4) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

RATINGS AND CHARACTERISTIC CURVES FEP6AT THRU FEP6DT

