

Silicon Diode

FEP6AT

Fast Efficient Rectifier

50V / 6A

DATASHEET

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OEM – General Semiconductor

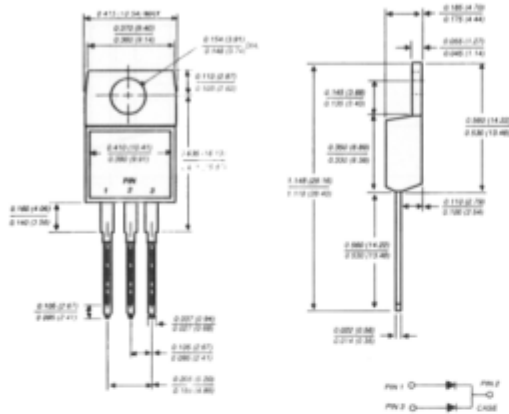
Source: General Semiconductor Databook 1998

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 at rated DC blocking voltage	I _R	5.0 50.0				μA
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_s=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

