

Silicon Diode

FESF16BT

Fast Efficient Rectifier

100V / 16A

DATASHEET

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OEM – General Semiconductor

Source: General Semiconductor Databook 1998

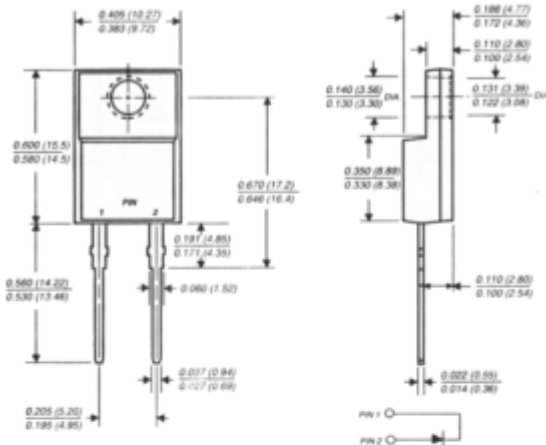
NEW PRODUCT NEW PRODUCT NEW PRODUCT

FESF16AT THRU FESF16JT

FAST EFFICIENT PLASTIC RECTIFIER

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

ITO-220AC



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated chip junction
- ◆ Low power loss
- ◆ Low forward voltage, high current capa
- ◆ High surge current capability
- ◆ Superfast recovery time, for high efficiency
- ◆ High temperature soldering guaranteed: 250°C, 0.25" (6.35mm) from case for 10 seconds



MECHANICAL DATA

Case: JEDEC ITO-220 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	FESF 16AT	FESF 16BT	FESF 16CT	FESF 16DT	FESF 16FT	FESF 16GT	FESF 16HT	FESF 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) at T _C =100°C	I _{FSM}	250.0								Amps
Maximum instantaneous forward voltage at 16A	V _F	0.975		1.3		1.5				Volts
Maximum DC reverse current at rated DC blocking voltage	I _R	T _C =25°C		10.0		T _C =100°C		500.0		µA
Maximum reverse recovery time (NOTE 1)	t _{rr}	35.0		50.0						ns
Typical junction capacitance (NOTE 2)	C _J	175.0		145.0						pF
Typical thermal resistance (NOTE 3)	R _{θJC}	3.0								°C/W
Operating and storage temperature range	T _J , T _{STG}	-65 to +150								°C

NOTES:

- (1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, t_{rr}=0.25A
- (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 FESF16AT THRU FESF16JT

FIG. 1 - FORWARD CURRENT DERATING CURVE

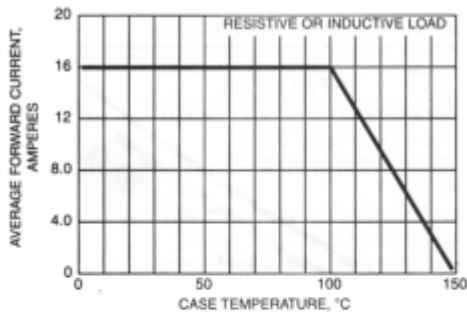


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

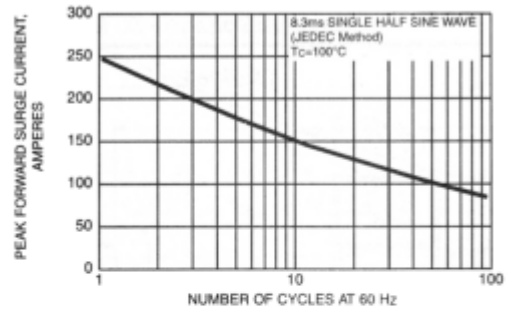


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

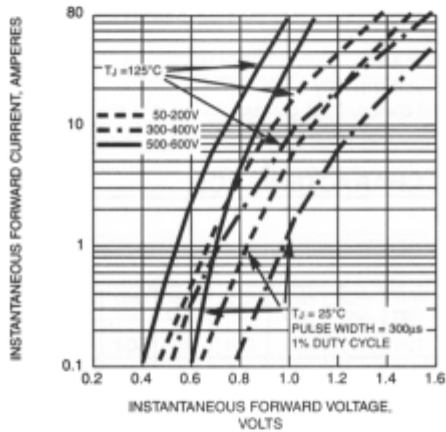


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

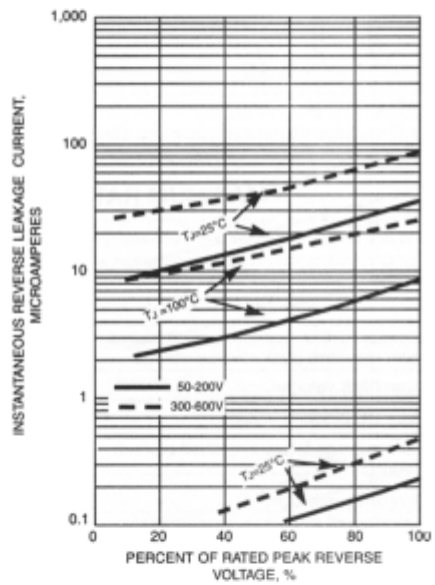


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

