

# Silicon Diode

## **FESF16CT**

Fast Efficient Rectifier

150V / 16A

# DATASHEET

from

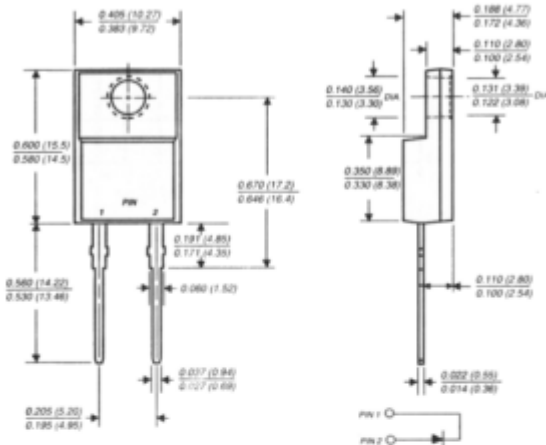
[www.web-bcs.com](http://www.web-bcs.com)

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**

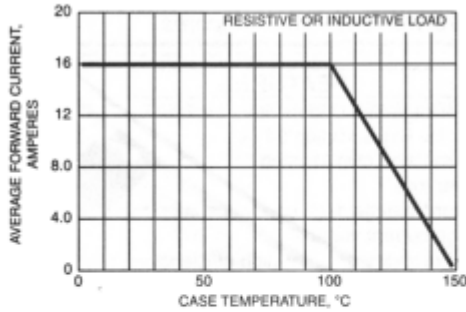
Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	FESF 16AT	FESF 16BT	FESF 16CT	FESF 16DT	FESF 16FT	FESF 16GT	FESF 16HT	FESF 16JT	UNITS
Maximum repetitive peak reverse voltage	V <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 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T <sub>C</sub> =100°C	I <sub>FSM</sub>	250.0								Amps
Maximum instantaneous forward voltage at 16A	V <sub>F</sub>	0.975		1.3		1.5				Volts
Maximum DC reverse current at rated DC blocking voltage	I <sub>R</sub>	T <sub>C</sub> =25°C		10.0		T <sub>C</sub> =100°C		500.0		µA
Maximum reverse recovery time (NOTE 1)	t <sub>rr</sub>	35.0		50.0						ns
Typical junction capacitance (NOTE 2)	C <sub>J</sub>	175.0		145.0						pF
Typical thermal resistance (NOTE 3)	R <sub>θJC</sub>	3.0								°C/W
Operating and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150								°C

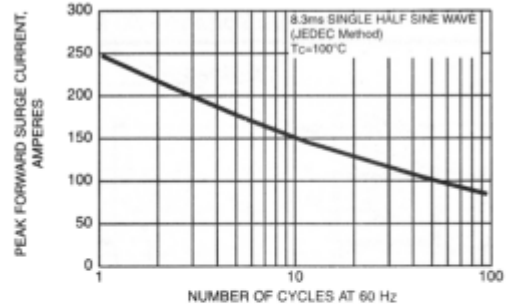
**NOTES:**  
 (1) Reverse recovery test conditions: I<sub>F</sub>=0.5A, I<sub>N</sub>=1.0A, I<sub>rr</sub>=0.25A  
 (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts  
 (3) Thermal resistance from junction to case

**RATINGS AND CHARACTERISTICS CURVES FESF16AT THRU FESF16JT**

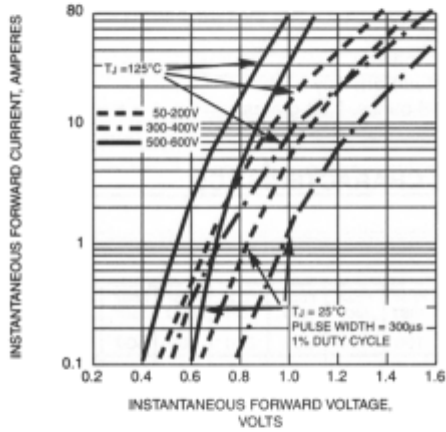
**FIG. 1 - FORWARD CURRENT DERATING CURVE**



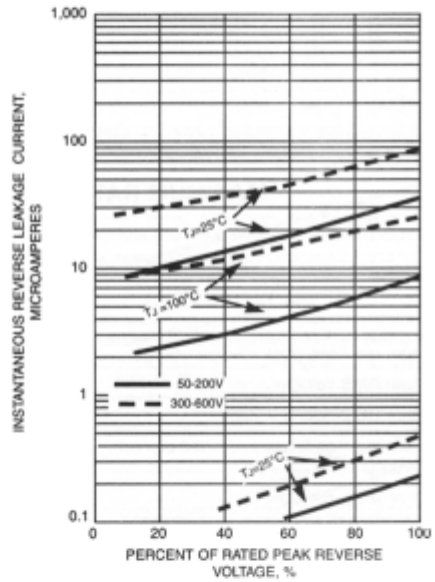
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 3 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

