

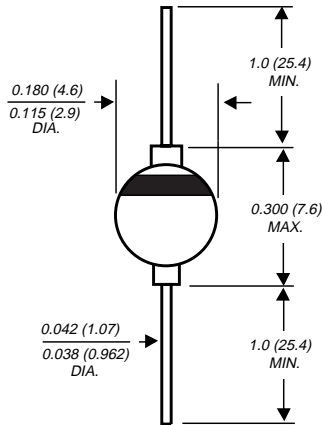
# FE3A THRU FE3D

## GLASS PASSIVATED FAST EFFICIENT RECTIFIER

Reverse Voltage - 50 to 200 Volts      Forward Current - 3.0 Amperes

**PATENTED \***

### Case Style G4



Dimensions in inches and (millimeters)

\* Brazed-lead assembly is covered by Patent No. 3,930,306

### FEATURES

- ◆ High temperature metallurgically bonded construction
- ◆ Glass passivated cavity-free junction
- ◆ Superfast recovery time for high efficiency
- ◆ Low forward voltage, high current capability
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ Hermetically sealed package
- ◆ Low leakage current
- ◆ High surge current capability
- ◆ High temperature soldering guaranteed:  
350°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension



### MECHANICAL DATA

**Case:** Solid glass body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.037 ounce, 1.04 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	FE3A	FE3B	FE3C	FE3D	UNITS
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	150	200	Volts
Maximum RMS voltage	V <sub>RMS</sub>	35	70	105	140	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	150	200	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T <sub>A</sub> =55°C	I <sub>(AV)</sub>	3.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	125.0				Amps
Maximum instantaneous forward voltage at 3.0A	V <sub>F</sub>	0.95				Volts
Maximum DC reverse current at rated DC blocking voltage	I <sub>R</sub>	5.0 50.0				μA
		T <sub>A</sub> =25°C T <sub>A</sub> =100°C				
Maximum reverse recovery time (NOTE 1)	t <sub>rr</sub>	35.0				ns
Typical junction capacitance (NOTE 2)	C <sub>J</sub>	100.0				pF
Typical thermal resistance (NOTE 3, 4)	R <sub>θJA</sub> R <sub>θJL</sub>	55.0 20.0				°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175				°C

#### NOTES:

(1) Reverse recovery test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A

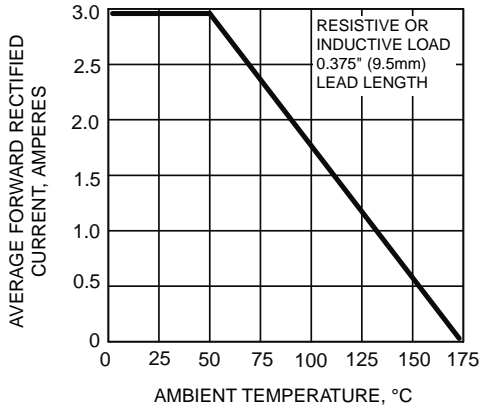
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length mounted on P.C.B.

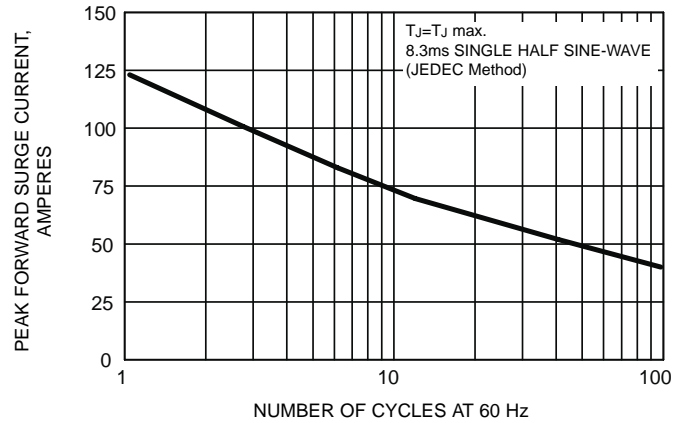
(4) Thermal resistance from junction to lead at 0.375" (9.5mm) lead length with both leads attached to heatsinks

# RATINGS AND CHARACTERISTIC CURVES FE3A THRU FE3D

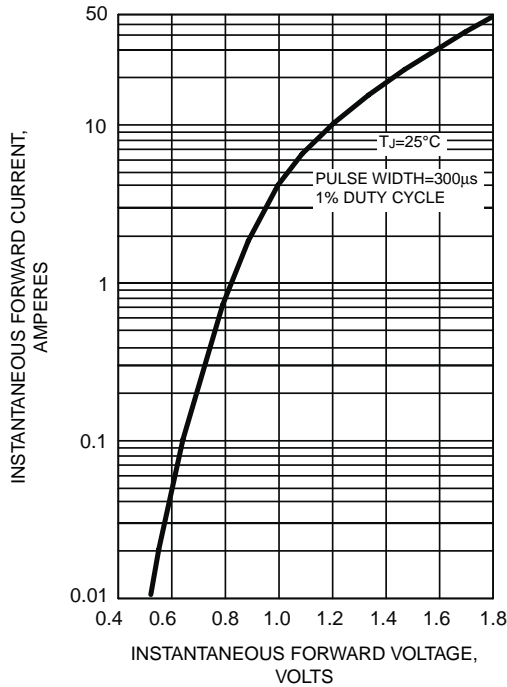
**FIG. 1 - MAXIMUM FORWARD CURRENT DERATING**



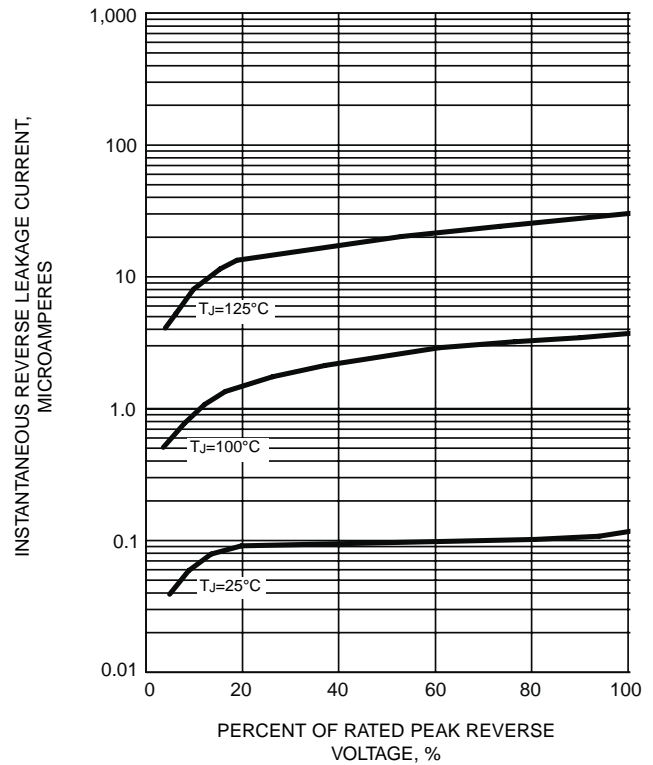
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

