

FE6A THRU FE6D

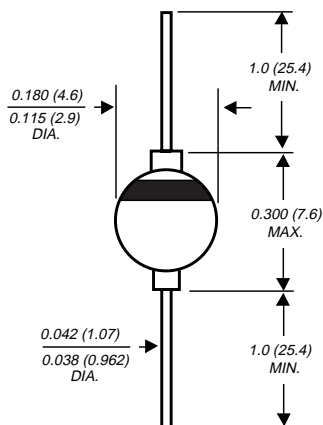
GLASS PASSIVATED FAST EFFICIENT RECTIFIER

Reverse Voltage - 50 to 200 Volts

Forward Current - 6.0 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	FE6A	FE6B	FE6C	FE6D	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 0.375" (9.5mm) lead length at $T_L=55^\circ\text{C}$	$I_{(AV)}$	6.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	135.0				Amps
Maximum instantaneous forward voltage at 6.0A	V_F	0.975				Volts
Maximum DC reverse current at rated DC blocking voltage	I_R	5.0 50.0				μA
		$T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$				
Maximum reverse recovery time (NOTE 1)	t_{rr}	35.0				ns
Typical junction capacitance (NOTE 2)	C_J	100.0				pF
Typical thermal resistance (NOTE 3, 4)	$R_{\theta JA}$ $R_{\theta JL}$	55.0 18.0				$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175				$^\circ\text{C}$

NOTES:

(1) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

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

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

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

RATINGS AND CHARACTERISTIC CURVES FE6A THRU FE6D

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

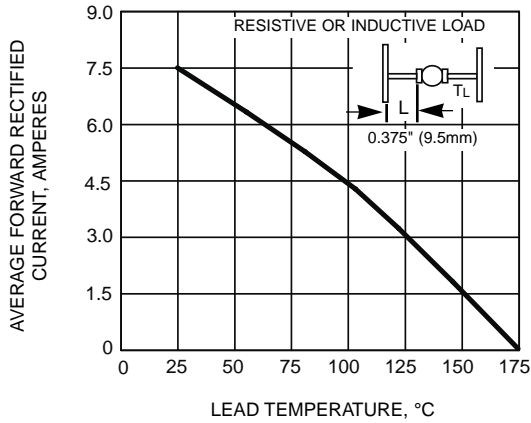


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

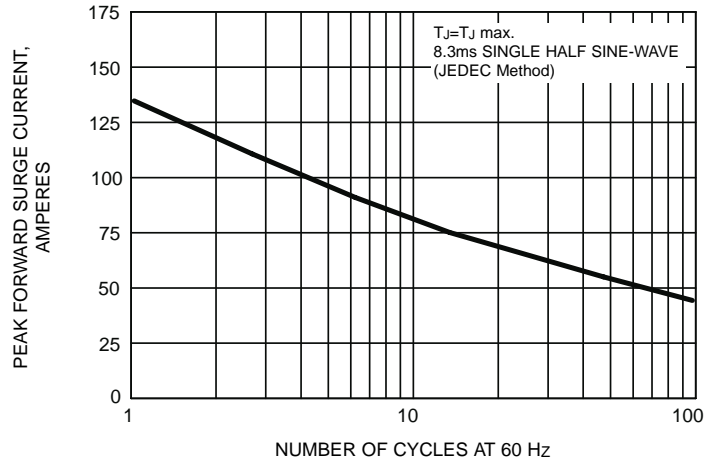


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

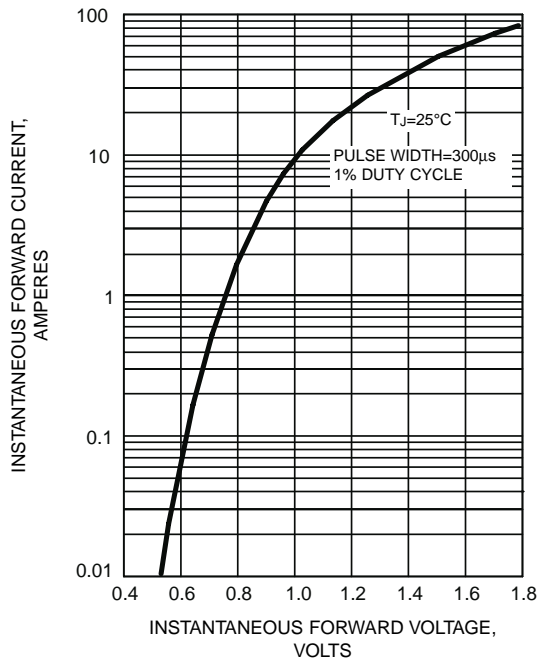


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

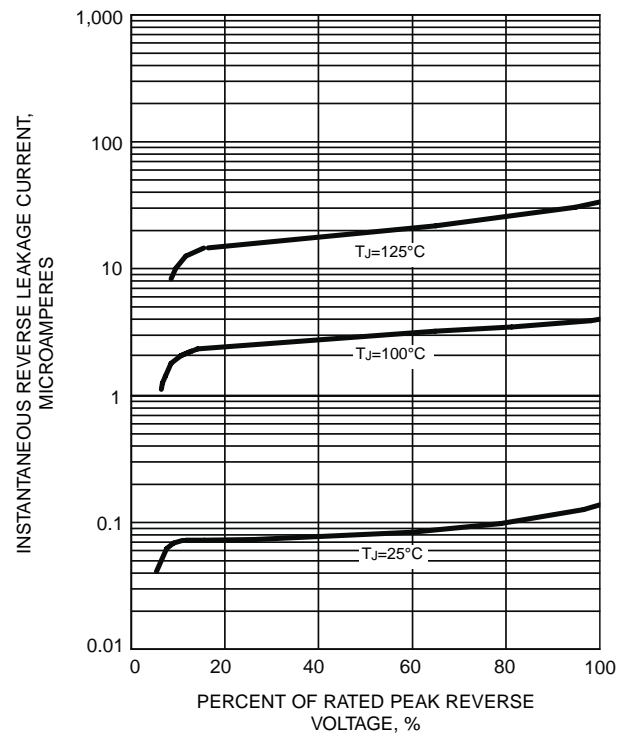


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

