

FE5A THRU FE5D

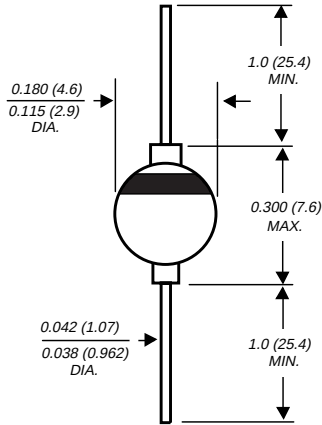
GLASS PASSIVATED FAST EFFICIENT RECTIFIER

Reverse Voltage - 50 to 200 Volts

Forward Current - 5.0 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
- ♦ Super fast 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: 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	FE5A	FE5B	FE5C	FE5D	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 $T_L=55^\circ\text{C}$	$I_{(AV)}$	5.0				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 5.0A	V_F	0.95				Volts
Maximum DC reverse current at rated DC blocking voltage	I_R	5.0 50.0				μA
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 20.0				$^\circ\text{C/W}$
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 V_{DC}
- (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 FE5A THRU FE5D

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

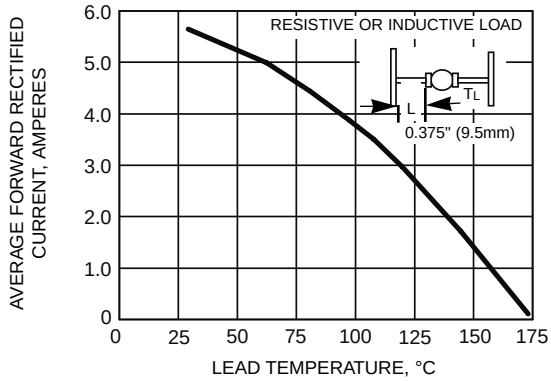


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

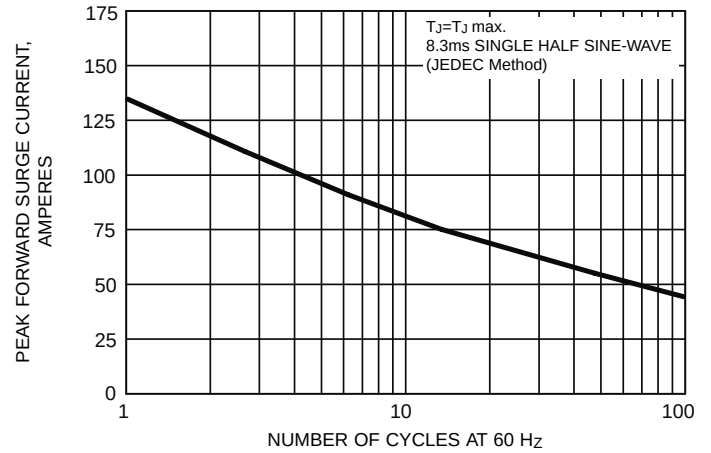


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

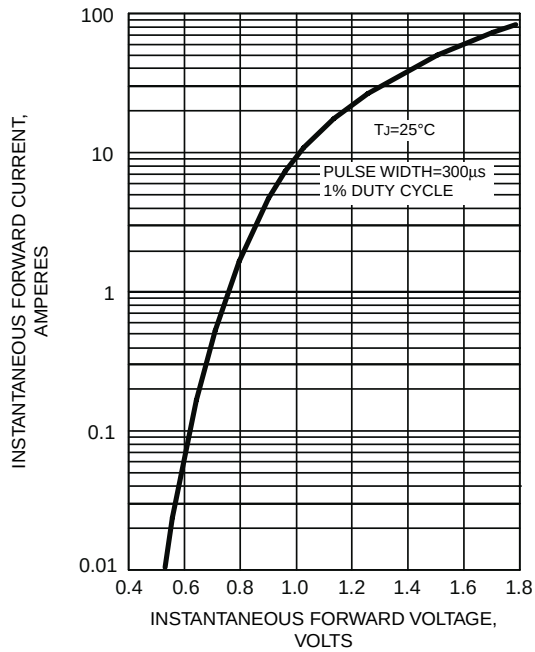


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

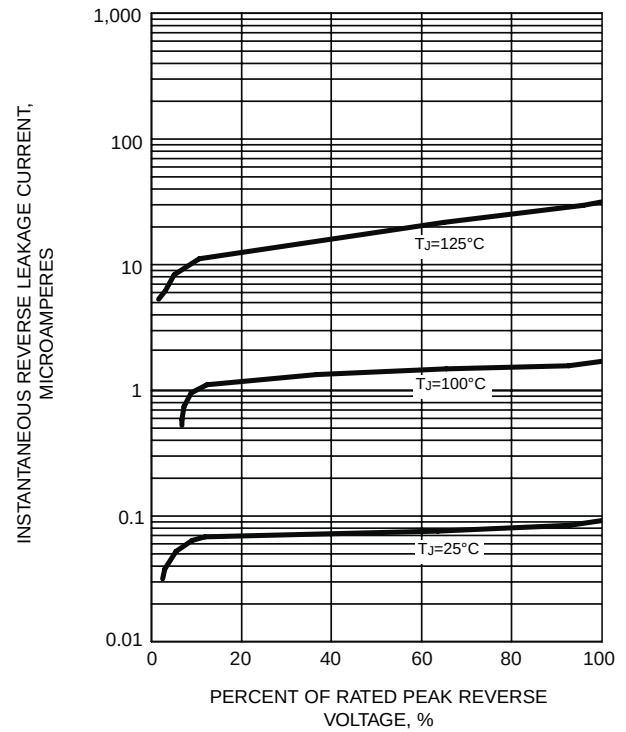


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

