

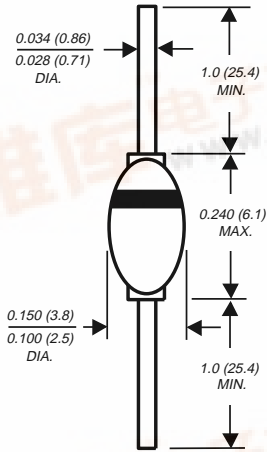
# FE1A THRU FE1D

## GLASS PASSIVATED FAST EFFICIENT RECTIFIER

Reverse Voltage - 50 to 200 Volts Forward Current - 1.0 Ampere

**PATENTED\***

DO-204AP



Dimensions in inches and (millimeters)

\* Brazed lead assembly is covered by Patent No. 3,390,306

### 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:** JEDEC DO-204AP solid glass body

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

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.02 ounce, 0.56 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	FE1A	FE1B	FE1C	FE1D	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 $T_A=75^\circ\text{C}$	$I_{(AV)}$	1.0				Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0				Amps
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.95				Volts
Maximum DC reverse current at rated DC blocking voltage	$I_R$	2.0 50.0				$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	35.0				ns
Typical junction capacitance (NOTE 2)	$C_J$	45.0				pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$ $R_{\theta JL}$	65.0 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:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$   $I_{rr}=0.25\text{A}$

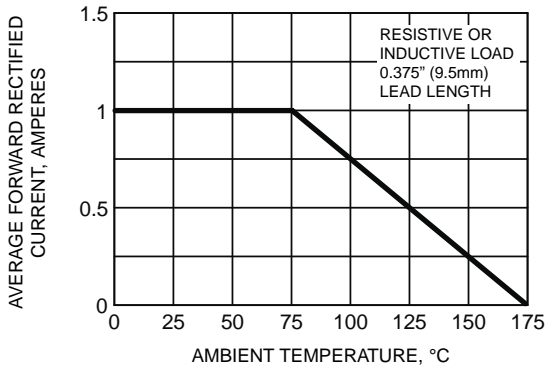
Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

Thermal resistance from junction to ambient and/or lead, 0.375" (9.5mm) lead length mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads

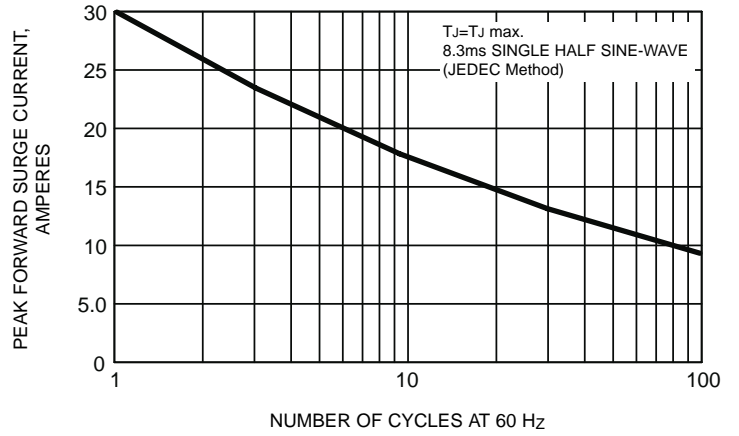


# RATINGS AND CHARACTERISTIC CURVES FE1A THRU FE1D

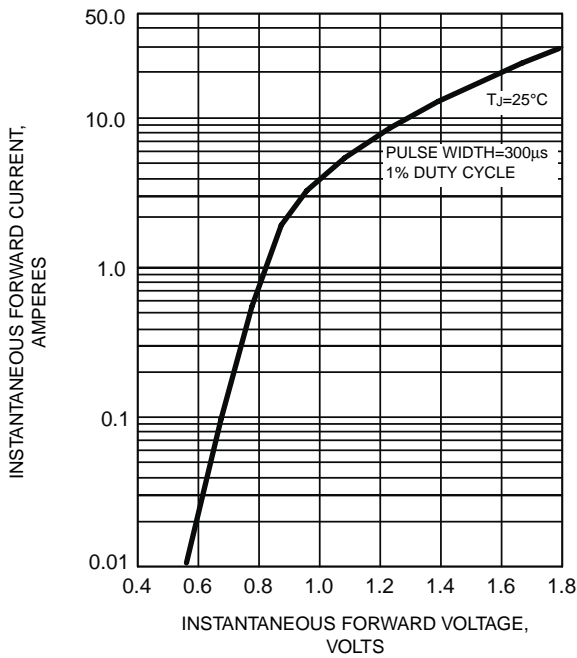
**FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE**



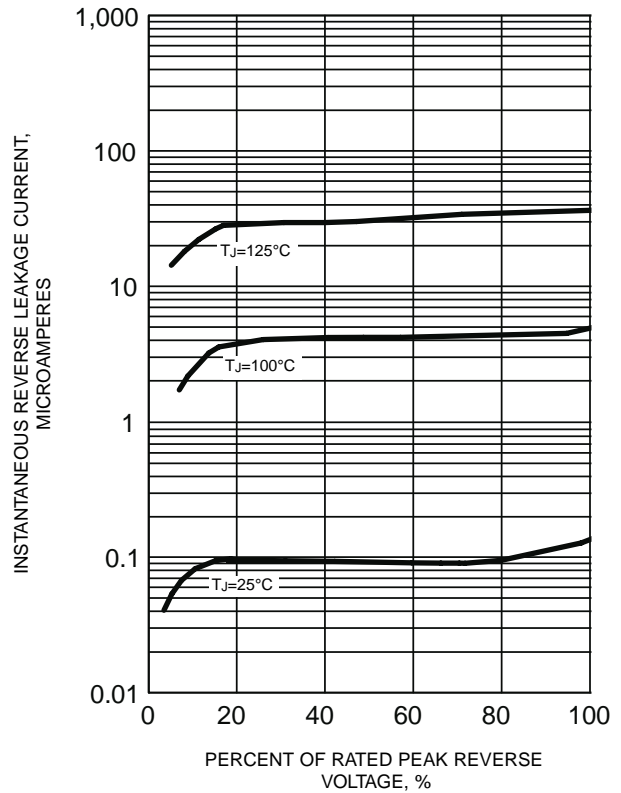
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



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



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



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

