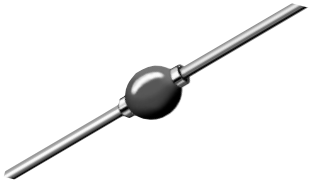
GENERAL SEMICONDUCTOR®

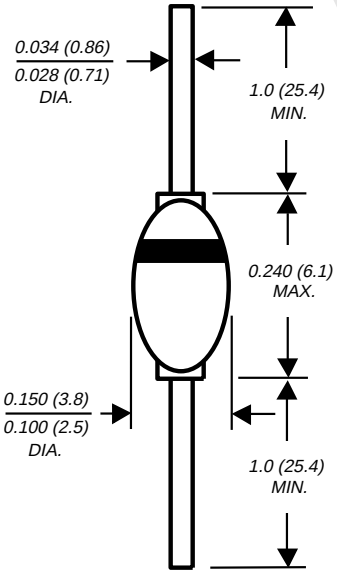
FE2A thru FE2D

Glass Passivated Ultrafast Rectifier

Reverse Voltage 50 to 200V
Forward Current 2.0A



DO-204AP



Dimensions in inches and (millimeters)

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

Patented*

Features

- High temperature metallurgically bonded construction
- Cavity-free glass passivated 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: 0.002 ounce, 0.56 gram

Maximum Ratings and Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	FE2A	FE2B	FE2C	FE2D	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_L=75°C	$I_{F(AV)}$	2.0				A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50				A
Typical thermal resistance (NOTE 1, 2)	$R_{\Theta JA}$ $R_{\Theta JL}$	60 20				°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175				°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

	SYMBOLS	FE1A	FE1B	FE1C	FE1D	UNITS
Maximum instantaneous forward voltage at 2.0A	V_F	0.95				V
Maximum DC reverse current T_A=25°C at rated DC blocking voltage T_A=100°C	I_R	2.0 50				µA
Maximum reverse recovery time at I_F=0.5A, I_R=1.0A, I_{rr}=0.25A	t_{rr}	35				ns
Typical junction capacitance at 4V, 1MHz	C_J	45				pF

NOTES:
(1) Thermal resistance from junction to ambient 0.375" (9.5mm) lead length mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads.
(2) Thermal resistance from junction to lead at 0.375" (9.5mm) lead length with both leads attached to heatsinks

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Ratings and Characteristic Curves (TA=25°C unless otherwise noted.)

Fig. 1 – Maximum Forward Current Derating Curve

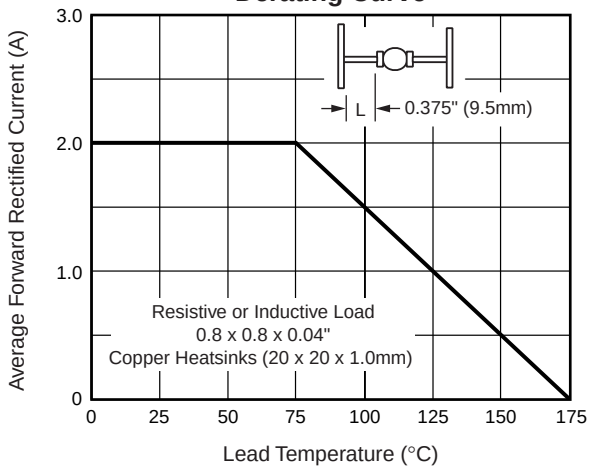

Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

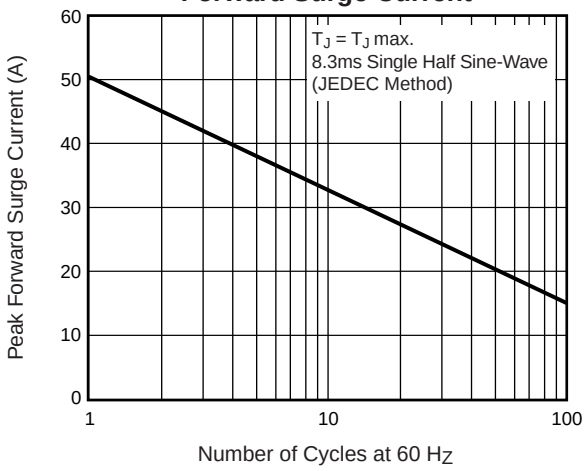

Fig. 3 – Typical Instantaneous Forward Characteristics

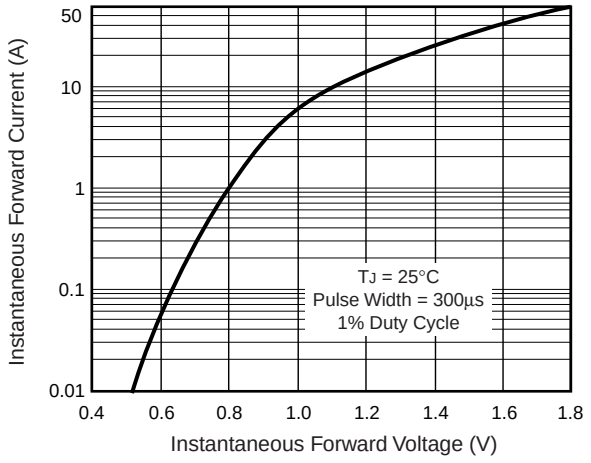

Fig. 4 – Typical Reverse Leakage Characteristics

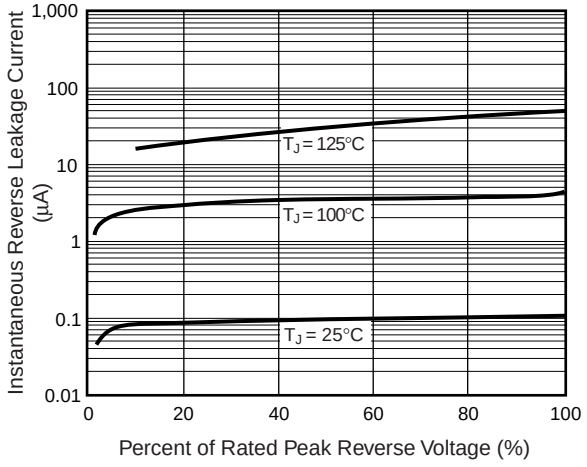

Fig. 5 – Typical Junction Capacitance