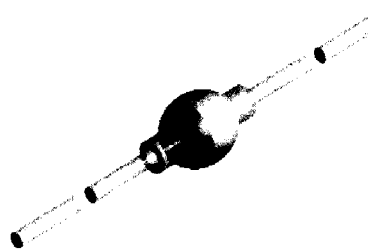


## FE3A to FE3D

### Ultra Fast Sinterglass Diode

#### Features

- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Superfast recovery time for high efficiency
- Low forward voltage, high current capability
- Hermetically sealed package
- Low leakage current
- High surge current capability



#### Mechanical Data

**Case:** Sintered glass case, G4

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

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 1040 mg

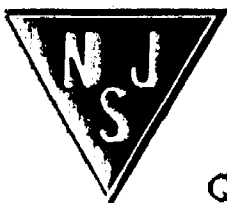
#### Parts Table

Part	Type differentiation	Package
FE3A	$V_{RRM} = 50 \text{ V}$	G4
FE3B	$V_{RRM} = 100 \text{ V}$	G4
FE3C	$V_{RRM} = 150 \text{ V}$	G4
FE3D	$V_{RRM} = 200 \text{ V}$	G4

#### Absolute Maximum Ratings

$T_{amb} = 25 \text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Part	Symbol	Value	Unit
Reverse voltage = Repetitive peak reverse voltage	see electrical characteristics	FE3A	$V_R = V_{RRM}$	50	V
	see electrical characteristics	FE3B	$V_R = V_{RRM}$	100	V
	see electrical characteristics	FE3C	$V_R = V_{RRM}$	150	V
	see electrical characteristics	FE3D	$V_R = V_{RRM}$	200	V
Maximum average forward rectified current	0.375" (9.5 mm) lead length at $T_{amb} = 75 \text{ }^{\circ}\text{C}$		$I_{FAV}$	3.0	A
Peak forward surge current	8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		$I_{FSM}$	125	A
Operating junction and storage temperature range			$T_J$	-55 to +	$^{\circ}\text{C}$
			$T_{STG}$	175	



# FE3A to FE3D

## Maximum Thermal Resistance

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Symbol	Value	Unit
Typical thermal resistance <sup>1), 2)</sup>	$R_{\theta JA}$	55	K/W
	$R_{\theta JL}$	20	K/W

<sup>1)</sup> Thermal resistance from junction to ambient and/or lead, 0.375" (9.5 mm) lead length mounted on P.C.B. with 0.5 x 0.5 (12 x 12 mm) copper pads.

<sup>2)</sup> Thermal resistance from junction to lead at 0.375" (9.5 mm) lead length with both leads attached to heatsinks

## Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Typ.	Max	Unit
Maximum instantaneous forward voltage	$I_F = 3.0\text{ A}$	$V_F$		0.95	V
Maximum reverse current	$V_R = V_{RRM}$ ; $T_{amb} = 25\text{ }^{\circ}\text{C}$	$I_R$		5.0	$\mu\text{A}$
	$V_R = V_{RRM}$ ; $T_{amb} = 100\text{ }^{\circ}\text{C}$	$I_R$		50	$\mu\text{A}$
Maximum reverse recovery time	$I_F = 0.5\text{ A}$ ; $I_R = 1.0\text{ A}$ ; $I_{rr} = 0.25\text{ A}$	$t_{rr}$		35	ns
Typical junction capacitance	$V_R = 4\text{ V}$ ; $f = 1\text{ MHz}$	$C_J$	100		pF

## Typical Characteristics ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

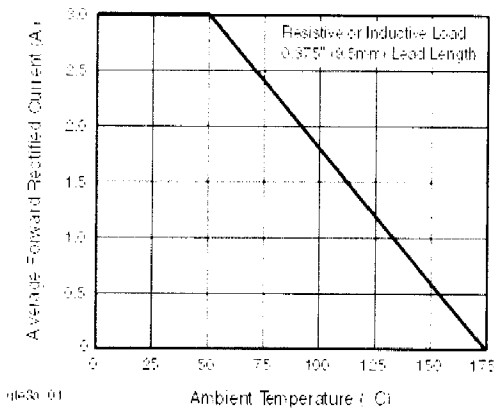


Figure 1. Maximum Forward Current Derating Curve

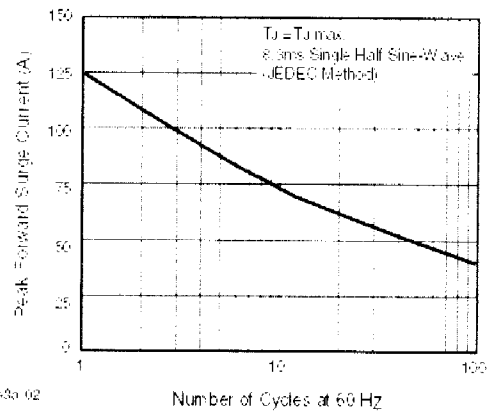


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

# FE3A to FE3D

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## Package Dimensions in Inches (mm)

