New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

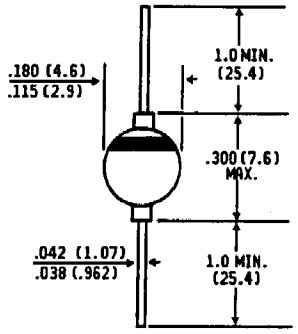
TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

FE5A THRU FE5D

GLASS PASSIVATED FAST EFFICIENT RECTIFIER

***Voltage** - 50 to 200 Volts **Current** - 5.0 Amperes*

FEATURES



Dimensions in inches and (millimeters)

- Glass passivated cavity-free junction
- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Capable of meeting environmental standards of MIL-S-19500
- Hermetically sealed
- Low Leakage
- High surge capability
- High temperature metallurgically bonded, no compression contacts
- High temperature soldering guaranteed 350°C/10 seconds/.375", (9.5mm) lead length at 5 lbs., (2.3kg) tension

**Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 of 1976; brazed-lead assembly to Patent No. 3,930,306 of 1976 and glass composition by Patent No. 3,752,701 of 1973*

MECHANICAL DATA

Case: Unitized glass hermetically sealed

Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Color band denotes cathode

Mounting Position: Any

Weight: 0.037 ounce, 1.04 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Resistive or inductive load.
For capacitive load, derate current by 20%.

	SYMBOLS	FE5A	FE5B	FE5C	FE5D	UNITS
Maximum Recurrent 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 .375", (9.5mm) Lead Lengths at T_L = 55°C	$I_{(AV)}$	5.0				Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T_A = 55°C	I_{FSM}	135.0				Amps
Maximum Instantaneous Forward Voltage at 5.0A	V_F	0.95				Volts
Maximum DC Reverse Current T_A = 25°C at Rated DC Blocking Voltage T_A = 150°C	I_R	5.0 50.0				µA
Maximum Reverse Recovery Time (Note 1) T_J = 25°C	T_{RR}	35.0				Ns
Typical Junction Capacitance (Note 2)	C_J	100.0				pf
Typical Thermal Resistance (Note 3)	RΘJL	20				°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175				°C

NOTES:
1. **Reverse Recovery Test Conditions : I_F = 0.5A, I_R = 1.0A, recover to 0.25A.**
2. **Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC}.**
3. **Thermal Resistance from Junction to Lead at .375" (9.5mm) Lead Lengths, P.C. Board Mounted.**

Quality Semi-Conductors