

# New Jersey Semi-Conductor Products, Inc.

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**2,000 V - 15,000 V Rectifiers**  
**50 mA - 420 mA Forward Current**  
**30 ns - 50 ns Recovery Time**

**X20FF3 - X150FF3**  
**X20FF5 - X150FF5**

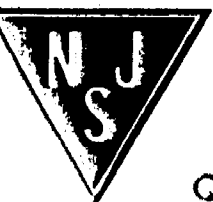
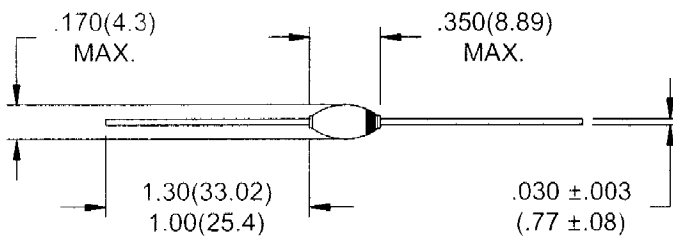
AXIAL LEADED  
 HERMETICALLY SEALED



## ELECTRICAL CHARACTERISTICS AND MAXIMUM RATINGS

| Part Number | Working Reverse Voltage<br>(V <sub>rw</sub> ) | Average Rectified Current<br>(I <sub>o</sub> ) |          | Reverse Current @ V <sub>rw</sub><br>(I <sub>r</sub> ) |       | Forward Voltage<br>(V <sub>f</sub> ) |       | 1 Cycle Surge Current<br>(I <sub>fsm</sub> )<br>t <sub>p</sub> =8.3ms | Repetitive Surge Current<br>(I <sub>frm</sub> ) | Reverse Recovery Time<br>(3)<br>(T <sub>rr</sub> ) | Thermal Impedance<br>θ <sub>J-L</sub> |        |        | Junction Cap.<br>@50VDC<br>@ 1kHz<br>(C <sub>j</sub> ) |      |
|-------------|---|--|----------|--|-------|--------------------------------------|-------|---|---|--|---------------------------------------|--------|--------|--|------|
|             |   | 55°C(1)  | 100°C(2) | 25°C   | 100°C | 25°C                                 |       | 25°C  | 25°C  | 25°C   | 25°C                                  | L=.000 | L=.125 | L=.250   | 25°C |
|             |   | Volts  | mA       | mA   | µA    | µA                                   | Volts | mA  | Amps  | Amps   | ns                                    | °C/W   | °C/W   | °C/W   | pF   |
| X20FF3      | 2000  | 420  | 210      | 1.0  | 20    | 7.5                                  | 420   | 16.0  | 3.0   | 30   | 5                                     | 12     | 21.5   | 4.0  |      |
| X50FF3      | 5000  | 150  | 75       | 1.0  | 20    | 12.5                                 | 150   | 10.0  | 1.0   | 30   | 5                                     | 12     | 21.5   | 3.0  |      |
| X100FF3     | 10000   | 80   | 40       | 1.0  | 20    | 25.0                                 | 80    | 2.0   | 0.5   | 30   | 5                                     | 12     | 21.5   | 2.0  |      |
| X150FF3     | 15000   | 50   | 25       | 1.0  | 20    | 37.5                                 | 50    | 1.6   | 0.3   | 30   | 5                                     | 12     | 21.5   | 2.0  |      |
| X20FF5      | 2000  | 420  | 210      | 1.0  | 20    | 7.5                                  | 420   | 16.0  | 3.0   | 50   | 5                                     | 12     | 21.5   | 4.0  |      |
| X50FF5      | 5000  | 150  | 75       | 1.0  | 20    | 12.5                                 | 150   | 10.0  | 1.0   | 50   | 5                                     | 12     | 21.5   | 3.0  |      |
| X100FF5     | 10000   | 80   | 40       | 1.0  | 20    | 25.0                                 | 80    | 2.0   | 0.5   | 50   | 5                                     | 12     | 21.5   | 2.0  |      |
| X150FF5     | 15000   | 50   | 25       | 1.0  | 20    | 37.5                                 | 50    | 1.6   | 0.3   | 50   | 5                                     | 12     | 21.5   | 2.0  |      |

(1)TL=-55°C L=0.375" (2)TL=100°C L=0.375" (3)I<sub>f</sub>=125mA, I<sub>r</sub>=250mA, I<sub>rr</sub>=63mA • Op.Temp. = -65°C to +175°C Stg.Temp. = -65°C to +200°C



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**Quality Semi-Conductors**