

# 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

1N5415  
1N5416  
1N5417  
1N5418  
1N5419  
1N5420

FAST RECOVERY  
GLASS PASSIVATED RECTIFIER  
3.0 AMPS, 50 THRU 600 VOLTS  
GPR-3A CASE\*

## DESCRIPTION

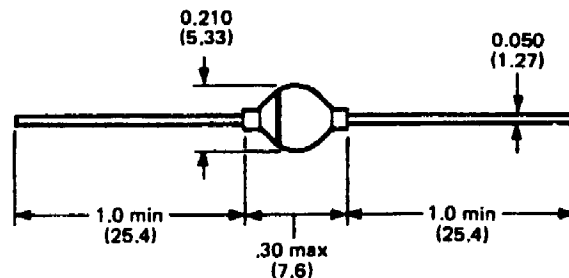
1N5415 series types are silicon rectifiers mounted in a hermetically sealed, glass passivated package designed for general purpose applications where fast reverse recovery times and high reliability are required.

MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$  unless otherwise noted)

|  | SYMBOL            | 1N5415 | 1N5416 | 1N5417 | 1N5418      | 1N5419 | 1N5420 | UNI              |
|--|-------------------|--------|--------|--------|-------------|--------|--------|------------------|
| Peak Repetitive Reverse Voltage                    | $V_{RRM}$         | 50     | 100    | 200    | 400         | 500    | 600    | V                |
| DC Blocking Voltage                                | $V_R$             | 50     | 100    | 200    | 400         | 500    | 600    | V                |
| RMS Reverse Voltage                                | $V_R(\text{RMS})$ | 35     | 70     | 140    | 280         | 350    | 420    | V                |
| Average Forward Current ( $T_A=55^\circ\text{C}$ ) | $I_O$             |        |        |        | 3.0         |        |        | A                |
| Peak Forward Surge Current                         | $I_{FSM}$         |        |        |        | 80          |        |        | A                |
| Operating and Storage Junction Temperature         | $T_J, T_{STG}$    |        |        |        | -65 TO +200 |        |        | $^\circ\text{C}$ |

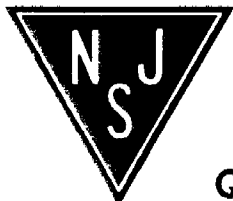
## ELECTRICAL CHARACTERISTICS

| SYMBOL   | TEST CONDITIONS  | 1N5415 | 1N5416 | 1N5417 | 1N5418 | 1N5419 | 1N5420 | UNI           |
|----------|--|--------|--------|--------|--------|--------|--------|---------------|
| $I_R$    | $V_R$ =Rated $V_{RRM}$                                     | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | $\mu\text{A}$ |
| $I_R$    | $V_R$ =Rated $V_{RRM}$ , $T_A=100^\circ\text{C}$           | 20     | 20     | 20     | 20     | 20     | 20     | $\mu\text{A}$ |
| $I_R$    | $V_R$ =Rated $V_{RRM}$ , $T_A=175^\circ\text{C}$           | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | mA            |
| $V_F$    | $I_F=3.0\text{A}$  | 1.1    | 1.1    | 1.1    | 1.1    | 1.1    | 1.1    | V             |
| $V_F$    | $I_F=9.0\text{A}$  | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | V             |
| $BV_R$   | $I_R=50\mu\text{A}$  | 55     | 110    | 220    | 440    | 550    | 660    | V             |
| C        | $V_R=12\text{V}$ , $f=1.0\text{MHz}$                       | 200    | 175    | 150    | 120    | 110    | 100    | pF            |
| $t_{rr}$ | $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ ,<br>Recov. to 0.25A | 150    | 150    | 150    | 150    | 250    | 400    | ns            |



DIMENSIONS IN INCHES (MILLIMETERS)

NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.



Quality Semi-Conductors