

# 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

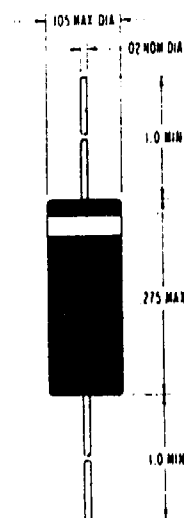
## 1N3595

The 1N3595 is a high conductance extremely low leakage planar diode. Specified maximum values for voltage drop capacitance and leakage current mean flexibility in designing circuits which require large numbers of diodes. In those applications where reverse current is a critical design parameter, the inherent qualities of the Fairchild process eliminates the problem of leakage degradation.

### MAXIMUM RATINGS (25°C) (Note 1)

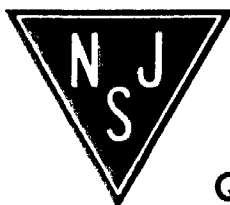
|                  |  |                 |
|------------------|--|-----------------|
| WIV              | Working Inverse Voltage                                | 125 V           |
| $I_o$            | Average rectified current                              | 150 mA          |
| $I_f$            | Forward current steady state d.c.                      | 225 mA          |
| $I_{fr}$         | Recurrent peak forward current                         | 450 mA          |
| $I_{fs}$ (surge) | Peak forward surge current pulse width of 1 second     | 500 mA          |
| $I_{fs}$ (surge) | Peak forward surge current pulse width of 1 $\mu$ Sec. | 4000 mA         |
| P                | Power dissipation                                      | 500 mW          |
| 1/ $\theta$      | Power derating factor                                  | 4 mW/°C         |
| $T_A$            | Operating temperature                                  | -65°C to +150°C |
| $T_{stg}$        | Storage temperature, ambient                           | -65°C to +175°C |

### PHYSICAL DIMENSIONS



### ELECTRICAL SPECIFICATIONS (25°C unless otherwise noted)

| Symbol   | Characteristic          | Min. | Max. | Units     | Test Conditions     |
|----------|-------------------------|------|------|-----------|---------------------|
| $V_{f1}$ | Forward Voltage         | .83  | 1.00 | Vdc       | $I_f = 200$ mA      |
| $V_{f2}$ | Forward Voltage         | .79  | .92  | Vdc       | $I_f = 100$ mA      |
| $V_{f3}$ | Forward Voltage         | .74  | .88  | Vdc       | $I_f = 50$ mA       |
| $V_{f4}$ | Forward Voltage         | .65  | .80  | Vdc       | $I_f = 10$ mA       |
| $V_{f5}$ | Forward Voltage         | .60  | .75  | Vdc       | $I_f = 5$ mA        |
| $V_{f6}$ | Forward Voltage         | .52  | .68  | Vdc       | $I_f = 1$ mA        |
| $I_{r1}$ | Reverse Current         |      | 1.0  | nA        | $V_R = 125$ V       |
| $I_{r2}$ | Reverse Current (125°C) |      | 300  | nA        | $V_R = 30$ V        |
| $I_{r3}$ | Reverse Current (125°C) |      | 500  | nA        | $V_R = 125$ V       |
| $I_{r4}$ | Reverse Current (150°C) |      | 3.0  | $\mu$ A   | $V_R = 125$ V       |
| $t_r$    | Reverse Recovery Time   |      | 3.0  | $\mu$ Sec | See Table III       |
| C        | Capacitance [Note 3]    |      | 8.0  | pf        | $V_R = 0$ V         |
| BV       | Breakdown Voltage       | 150  |      | Vdc       | $I_R = 100$ $\mu$ A |



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**