

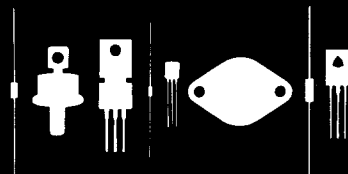
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145 Adams Avenue  
Hauppauge, New York 11788



1N3909 THRU 1N3913

SILICON FAST RECOVERY  
POWER RECTIFIER

JEDEC DO-5 CASE

DESCRIPTION

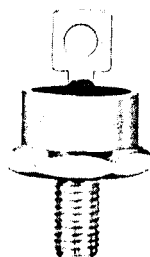
The CENTRAL SEMICONDUCTOR 1N3909 Series types are stud mounted Silicon Power Rectifiers designed for DC Power Supply, inverter applications where fast recovery times are needed.

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

|   | SYMBOL         | 1N3909 | 1N3910 | 1N3911      | 1N3912 | 1N3913 | UNIT                        |
|---|----------------|--------|--------|-------------|--------|--------|-----------------------------|
| Peak Repetitive Reverse Voltage                                 | $V_{RRM}$      | 50     | 100    | 200         | 300    | 400    | V                           |
| Non-Rep Peak Reverse Voltage                                    | $V_{RSM}$      | 75     | 150    | 250         | 350    | 450    | V                           |
| RMS Reverse Voltage   | $V_{R(RMS)}$   | 35     | 70     | 140         | 210    | 280    | V                           |
| Average Rectifier Forward Current ( $T_C=100^{\circ}\text{C}$ ) | $I_O$          |        |        | 30          |        |        | A                           |
| Peak Non-Rep Surge Current Operating and Storage                | $I_{FSM}$      |        |        | 300         |        |        | A                           |
| Junction Temperature  | $T_J, T_{stg}$ |        |        | -65 TO +175 |        |        | $^{\circ}\text{C}$          |
| Thermal Resistance  | $\theta_{JC}$  |        |        | 1.2         |        |        | $^{\circ}\text{C}/\text{W}$ |

ELECTRICAL CHARACTERISTICS ( $T_C=25^{\circ}\text{C}$  unless otherwise noted)

| SYMBOL        | TEST CONDITIONS                                   | MIN | MAX | UNIT          |
|---------------|---|-----|-----|---------------|
| $I_R$         | $V_R$ =Rated $V_{RRM}$                            |     | 25  | $\mu\text{A}$ |
| $I_R$         | $V_R$ =Rated $V_{RRM}, T_C=100^{\circ}\text{C}$   |     | 1.0 | mA            |
| $V_F$         | $I_F=30\text{A}$                                  |     | 1.4 | V             |
| $V_F$         | $I_F=93\text{A}, T_J=150^{\circ}\text{C}$         |     | 1.5 | V             |
| $t_{rr}$      | $I_F=1.0\text{A}, V_R=30\text{V}$                 |     | 200 | ns            |
| $t_{rr}$      | $I_{FM}=36\text{A}, di/dt=25\text{A}/\mu\text{s}$ |     | 400 | ns            |
| $I_{RM(REC)}$ | $I_F=1.0\text{A}, V_R=30\text{V}$                 |     | 2.0 | A             |



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