

New Jersey Semi-Conductor Products, Inc.

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U.S.A.

1N3889A THRU 1N3893A
1N3889RA THRU 1N3893RA

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DESCRIPTION
MEDIUM CURRENT.

FAST RECOVERY.

ADD (R) FOR REVERSE.

FAST RECOVERY
SILICON POWER RECTIFIER
12 AMPS 50 THRU 400 VOLTS

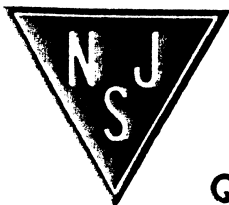
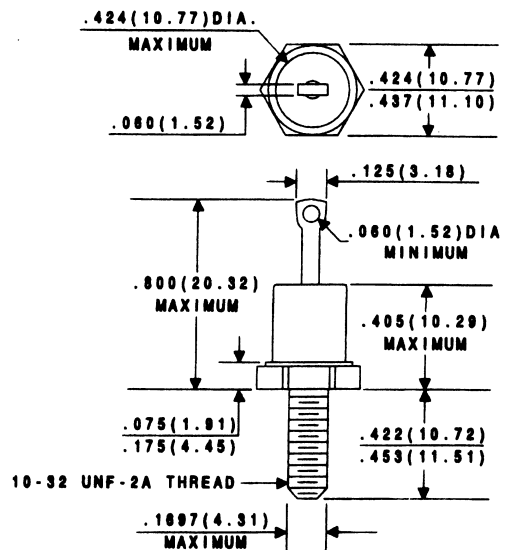
JEDEC DO-4 CASE

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

| | SYMBOL | 1N 3889A | 1N 3890A | 1N 3891A | 1N 3892A | 1N 3893A | UNIT |
|---|-------------------|-------------|-------------|-------------|-------------|-------------|---------------------------|
| Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 300 | 400 | V |
| Non-Repetitive Peak Reverse Voltage | V_{RSM} | 75 | 150 | 250 | 350 | 450 | V |
| RMS Reverse Voltage | $V_R(\text{RMS})$ | 35 | 70 | 140 | 210 | 280 | V |
| Average Forward Current ($T_C=150^\circ$) | I_O | | | | 12 | | A |
| Peak Surge Current | I_{FSM} | | | | 300 | | A |
| Operating and Storage Junction Temperature | T_J, T_{STG} | | | | -65 to +175 | | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JC} | | | | 1.75 | | $^\circ\text{C}/\text{W}$ |

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

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNIT |
|----------|--|-----|-----|---------------|
| V_F | $I_F=12\text{A}$ | | 1.1 | V |
| V_F | $I_F=38\text{A}, T_C=150^\circ\text{C}$ | | 1.2 | V |
| I_R | $V_R=\text{Rated } V_{RRM}$ | | 25 | μA |
| I_R | $V_R=\text{Rated } V_{RRM}, T_C=100^\circ\text{C}$ | | 3.0 | mA |
| I_{RM} | $V_R=30\text{V}, I_F=1.0\text{A}$ | | 5.0 | A |
| t_{rr} | $V_R=30\text{V}, I_F=1.0\text{A}$ | | 200 | ns |
| t_{rr} | $I_{FM}=40\text{A}, di/dt=25\text{A}/\mu\text{s}$ | | 300 | ns |



Quality Semi-Conductors