

2N5060 THRU 2N5064

SILICON CONTROLLED RECTIFIER  
0.8 AMP, 30 THRU 200 VOLTS



TO-92 CASE

**Central**<sup>TM</sup>  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N5060 series types are epoxy molded Silicon Controlled Rectifiers designed for control systems and sensing circuit applications.

**MARKING CODE: FULL PART NUMBER**

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

|  | SYMBOL             | 2N5060 | 2N5061 | 2N5062      | 2N5063 | 2N5064 | UNITS            |
|--|--------------------|--------|--------|-------------|--------|--------|------------------|
| Peak Repetitive Off-State Voltage                    | $V_{DRM}, V_{RRM}$ | 30     | 60     | 100         | 150    | 200    | V                |
| RMS On-State Current ( $T_C=60^\circ\text{C}$ )      | $I_{T(RMS)}$       |        |        | 0.8         |        |        | A                |
| Peak One Cycle Surge                                 | $I_{TSM}$          |        |        | 10          |        |        | A                |
| Peak Forward Gate Current ( $t_p=20\mu\text{s}$ )    | $I_{GM}$           |        |        | 1.0         |        |        | A                |
| Peak Reverse Gate Voltage                            | $V_{GM}$           |        |        | 5.0         |        |        | V                |
| Peak Gate Power Dissipation                          | $P_{GM}$           |        |        | 2.0         |        |        | W                |
| Average Gate Power Dissipation ( $t=20\mu\text{s}$ ) | $P_G (AV)$         |        |        | 0.1         |        |        | W                |
| Storage Temperature                                  | $T_{stg}$          |        |        | -40 to +150 |        |        | $^\circ\text{C}$ |
| Junction Temperature                                 | $T_J$              |        |        | -40 to +125 |        |        | $^\circ\text{C}$ |

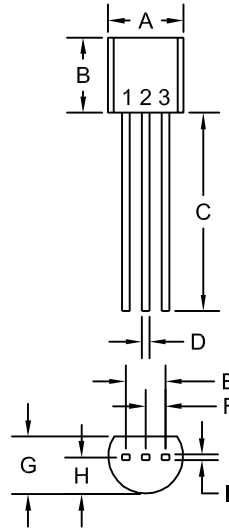
**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

| SYMBOL             | TEST CONDITIONS  | MIN | TYP | MAX | UNITS            |
|--------------------|--|-----|-----|-----|------------------|
| $I_{DRM}, I_{RRM}$ | Rated $V_{DRM}, V_{RRM}, R_{GK}=1\text{K}\Omega$                                 |     |     | 1.0 | $\mu\text{A}$    |
| $I_{DRM}, I_{RRM}$ | Rated $V_{DRM}, V_{RRM}, T_C=125^\circ\text{C}, R_{GK}=1\text{K}\Omega$          |     |     | 50  | $\mu\text{A}$    |
| $I_{GT}$           | $V_D=7.0\text{V}, R_L=100\Omega, R_{GK}=1\text{K}\Omega$                         |     |     | 200 | $\mu\text{A}$    |
| $I_{GT}$           | $V_D=7.0\text{V}, R_L=100\Omega, R_{GK}=1\text{K}\Omega, T_C=-65^\circ\text{C}$  |     |     | 350 | $\mu\text{A}$    |
| $I_H$              | $R_{GK}=1\text{K}\Omega$   |     |     | 5.0 | mA               |
| $I_H$              | $R_{GK}=1\text{K}\Omega, T_C=-65^\circ\text{C}$                                  |     |     | 10  | mA               |
| $V_{GT}$           | $V_D=7.0\text{V}, R_L=100\Omega$   |     |     | 0.8 | V                |
| $V_{GT}$           | $V_D=7.0\text{V}, R_L=100\Omega, T_C=-65^\circ\text{C}$                          |     |     | 1.2 | V                |
| $V_{GT}$           | $V_D=7.0\text{V}, R_L=100\Omega, T_C=125^\circ\text{C}$                          | 0.1 |     |     | V                |
| $V_{TM}$           | $I_{TM}=1.2\text{A}$   |     |     | 1.7 | V                |
| dv/dt              | $V_D=0.67\text{V} \times V_{DRM}, T_C=125^\circ\text{C}, R_{GK}=1\text{K}\Omega$ |     | 30  |     | V/ $\mu\text{s}$ |
| $t_q$              | $V_D=0.67\text{V} \times V_{DRM}, T_C=125^\circ\text{C}, R_{GK}=1\text{K}\Omega$ |     |     | 200 | $\mu\text{s}$    |

R4 (25-August 2004)

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**TO-92 CASE - MECHANICAL OUTLINE**



R1

**LEAD CODE:**

- 1) CATHODE
- 2) GATE
- 3) ANODE

**MARKING CODE:**

**FULL PART NUMBER**

| SYMBOL  | DIMENSIONS |       |             |      |
|---------|------------|-------|-------------|------|
|         | INCHES     |       | MILLIMETERS |      |
|         | MIN        | MAX   | MIN         | MAX  |
| A (DIA) | 0.175      | 0.205 | 4.45        | 5.21 |
| B       | 0.170      | 0.210 | 4.32        | 5.33 |
| C       | 0.500      | -     | 12.70       | -    |
| D       | 0.016      | 0.022 | 0.41        | 0.56 |
| E       | 0.100      |       | 2.54        |      |
| F       | 0.050      |       | 1.27        |      |
| G       | 0.125      | 0.165 | 3.18        | 4.19 |
| H       | 0.080      | 0.105 | 2.03        | 2.67 |
| I       | 0.015      |       | 0.38        |      |

TO-92 (REV: R1)