Electronix EXPRESS
A division of RSR Electronics, Inc.
1-800-972-2225 | www.elexp.com | electron@elexp.com

DESCRIPTION

The CENTRAL SEMICONDUCTOR C103 Series types are Epoxy Molded Silicon Controlled Rectifiers designed for control systems and sensing circuit applications.

MAXIMUM RATINGS ($T_C$=25°C unless otherwise noted)

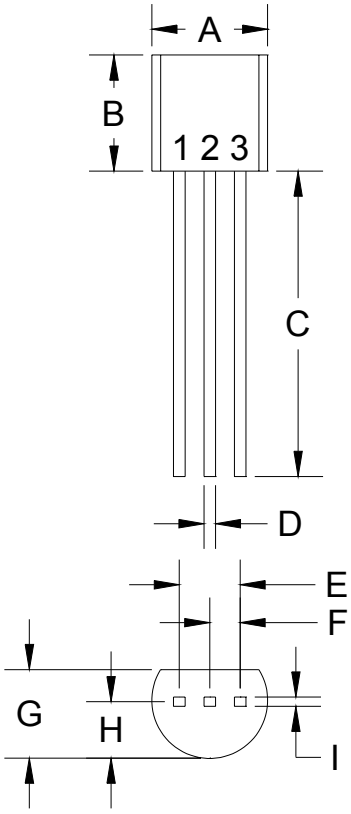
| | SYMBOL | C103Y | C103YY | C103A | C103B | UNITS |
|---|---|---|---|---|---|---|
| Peak Repetitive Off-State Voltage | $V_{DRM}$, $V_{RRM}$ | 30 | 60 | 100 | 200 | V |
| RMS On-State Current ($T_C$=60°C) | $I_{T(RMS)}$ | | 0.8 | | | A |
| Peak One Cycle Surge | $I_{TSM}$ | | 8.0 | | | A |
| Peak Forward Gate Current | $I_{GM}$ | | 0.5 | | | A |
| Peak Reverse Gate Voltage | $V_{GM}$ | | 8.0 | | | V |
| Peak Gate Power Dissipation (tp=8.3ms) | $P_{GM}$ | | 1.0 | | | W |
| Average Gate Power Dissipation | $P_{G(AV)}$ | | 0.01 | | | W |
| Storage Temperature | $T_{stg}$ | | -65 to +150 | | | °C |
| Junction Temperature | $T_J$ | | -65 to +125 | | | °C |

ELECTRICAL CHARACTERISTICS ($T_C$=25°C unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|---|---|---|---|---|---|
| $I_{DRM}$, $I_{RRM}$ | Rated $V_{DRM}$, $V_{RRM}$, $R_{GK}$=1KΩ | | | 1.0 | μA |
| $I_{DRM}$, $I_{RRM}$ | Rated $V_{DRM}$, $V_{RRM}$, $T_C$=125°C, $R_{GK}$=1KΩ | | | 50 | μA |
| $I_{GT}$ | $V_D$=6.0V, $R_L$=100Ω, $R_{GK}$=1KΩ | | | 200 | μA |
| $I_{GT}$ | $V_D$=6.0V, $R_L$=100Ω, $R_{GK}$=1KΩ, $T_C$=-65°C | | | 500 | μA |
| $I_H$ | $R_{GK}$=1KΩ | | | 5.0 | mA |
| $I_H$ | $R_{GK}$=1KΩ, $T_C$=-65°C | | | 10 | mA |
| $V_{GT}$ | $V_D$=6.0V, $R_L$=100Ω | | | 0.8 | V |
| $V_{GT}$ | $V_D$=6.0V, $R_L$=100Ω, $T_C$=-65°C | | | 1.0 | V |
| $V_{GT}$ | $V_D$=6.0V, $R_L$=1KΩ, $T_C$=125°C | 0.1 | | | V |
| $V_{TM}$ | $I_{TM}$=1.0A | | | 1.5 | V |
| dv/dt | $V_D$=$V_{DRM}$, $T_C$=125°C, $R_{GK}$=1KΩ | | 20 | | V/μs |

(SEE REVERSE SIDE)

# TO-92 PACKAGE - MECHANICAL OUTLINE




R1

| DIMENSIONS | | | | |
|---|---|---|---|---|
| | INCHES | | MILLIMETERS | |
| SYMBOL | 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)

Lead Code: 1) Anode
2) Gate
3) Cathode