

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

www.centrasemi.com

CS55B
CS55D

SILICON CONTROLLED RECTIFIER
0.8 AMPS, 200 AND 400 VOLTS

TO-92 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CS55B series type are epoxy molded silicon controlled rectifiers designed for applications requiring a low gate sensitivity.

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

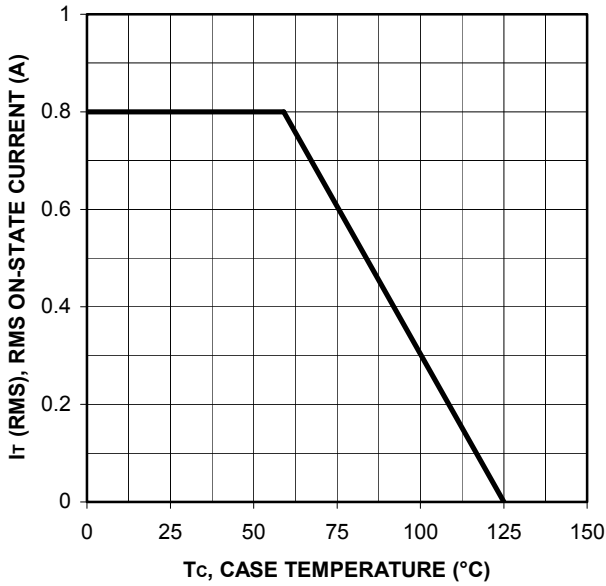
| | SYMBOL | CS55B | CS55D | UNITS |
|---|-------------------------------------|-------------|-------|------------------|
| Peak Repetitive Off-State Voltage | V _{DRM} , V _{RRM} | 200 | 400 | V |
| RMS On-State Current (T _C =60°C) | I _{T(RMS)} | 0.8 | | A |
| Peak One Cycle Surge (t=10ms) | I _{TSM} | 10 | | A |
| I ² t Value for Fusing (t=10ms) | I ² t | 0.24 | | A ² s |
| Peak Gate Power (tp=10μs) | P _{GM} | 2.0 | | W |
| Average Gate Power Dissipation | P _{G(AV)} | 0.1 | | W |
| Peak Gate Current (tp=10μs) | I _{GM} | 1.0 | | A |
| Peak Gate Voltage (tp=10μs) | V _{GM} | 8.0 | | V |
| Storage Temperature | T _{stg} | -40 to +125 | | °C |
| Junction Temperature | T _J | -40 to +125 | | °C |
| Thermal Resistance | θ _{JA} | 200 | | °C/W |
| Thermal Resistance | θ _{JC} | 100 | | °C/W |

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

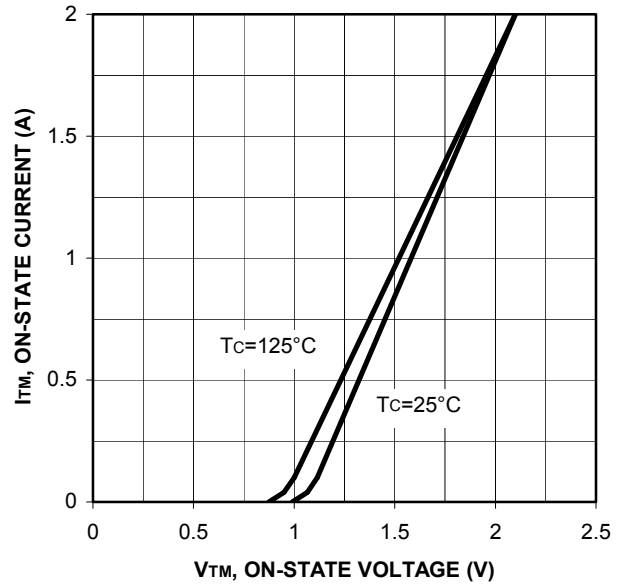
| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|-------------------------------------|---|-----|-----|------|-------|
| I _{DRM} , I _{RRM} | Rated V _{DRM} , V _{RRM} , R _{GK} =1KΩ | | | 1.00 | μA |
| I _{DRM} , I _{RRM} | Rated V _{DRM} , V _{RRM} , R _{GK} =1KΩ, T _C =125°C | | 100 | | μA |
| I _{GT} | V _D =12V | | | 200 | μA |
| I _H | R _{GK} =1KΩ | | | 5.00 | mA |
| V _{GT} | V _D =12V | | | 0.8 | V |
| V _{TM} | I _{TM} =1.0A | | | 1.70 | V |
| dv/dt | V _D =.67 x V _{DRM} , R _{GK} =1KΩ, T _C =125°C | 25 | | | V/μs |

(SEE REVERSE SIDE)

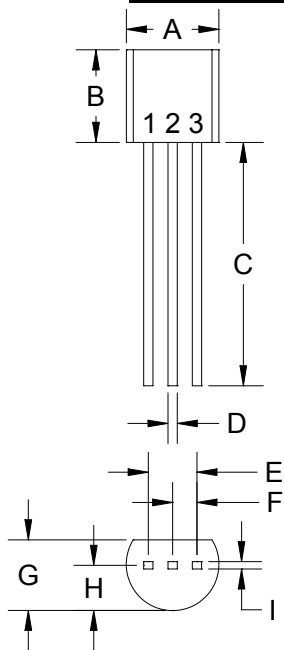
RMS ON-STATE CURRENT vs. CASE TEMPERATURE



MAXIMUM ON-STATE CHARACTERISTICS



TO-92 PACKAGE - MECHANICAL OUTLINE



| SYMBOL | 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)

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

R1

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