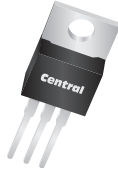


CS220-8B
 CS220-8D
 CS220-8M
 CS220-8N

**SILICON CONTROLLED RECTIFIERS
 8.0 AMP, 200 THRU 800 VOLT**



TO-220 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CS220-8B series types are epoxy molded SCRs designed for sensing circuit and control system applications.

MARKING: FULL PART NUMBER

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

| | SYMBOL | CS220 | | | | UNITS |
|--|--------------------|-------|-------------|-----|-----|---------------------------|
| | | -8B | -8D | -8M | -8N | |
| Peak Repetitive Off-State Voltage | V_{DRM}, V_{RRM} | 200 | 400 | 600 | 800 | V |
| RMS On-State Current ($T_C=90^\circ\text{C}$) | $I_T(\text{RMS})$ | | 8.0 | | | A |
| Peak One Cycle Surge Current, $t=10\text{ms}$ | I_{TSM} | | 60 | | | A |
| I^2t Value for Fusing, $t=10\text{ms}$ | I^2t | | 18 | | | A^2s |
| Peak Gate Power Dissipation, $t_p=10\mu\text{s}$ | P_{GM} | | 40 | | | W |
| Average Gate Power Dissipation | $P_{G(AV)}$ | | 1.0 | | | W |
| Peak Forward Gate Current, $t_p=10\mu\text{s}$ | I_{FGM} | | 4.0 | | | A |
| Peak Forward Gate Voltage, $t_p=10\mu\text{s}$ | V_{FGM} | | 16 | | | V |
| Peak Reverse Gate Voltage, $t_p=10\mu\text{s}$ | V_{RGM} | | 5.0 | | | V |
| Critical Rate of Rise of On-State Current | di/dt | | 50 | | | $\text{A}/\mu\text{s}$ |
| Operating Junction Temperature | T_J | | -40 to +125 | | | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | | -40 to +150 | | | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | | 60 | | | $^\circ\text{C}/\text{W}$ |
| Thermal Resistance | θ_{JC} | | 2.5 | | | $^\circ\text{C}/\text{W}$ |

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

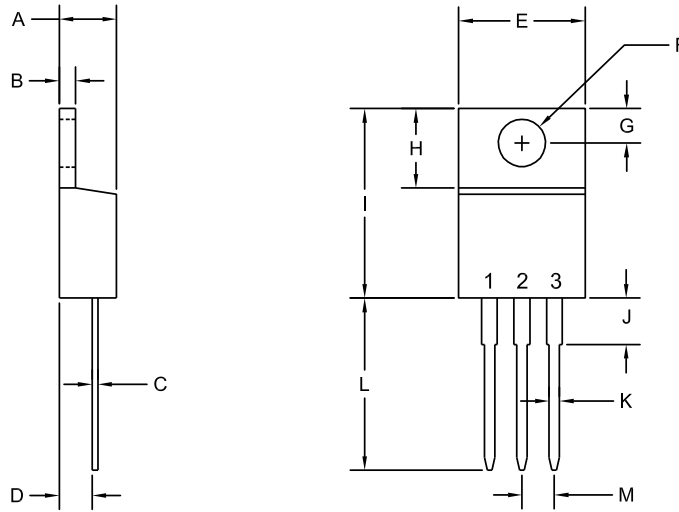
| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|--------------------|---|-----|-----|-----|------------------------|
| I_{DRM}, I_{RRM} | Rated V_{DRM}, V_{RRM} | | | 10 | μA |
| I_{DRM}, I_{RRM} | Rated $V_{DRM}, V_{RRM}, T_C=125^\circ\text{C}$ | | | 2.0 | mA |
| I_{GT} | $V_D=12\text{V}, R_L=10\Omega$ | | 3.0 | 15 | mA |
| I_H | $I_T=100\text{mA}$ | | 7.3 | 20 | mA |
| V_{GT} | $V_D=12\text{V}, R_L=10\Omega$ | | 0.9 | 1.5 | V |
| V_{TM} | $I_{TM}=16\text{A}, t_p=380\mu\text{s}$ | | 1.3 | 1.8 | V |
| dv/dt | $V_D=\frac{2}{3}\text{Rated } V_{DRM}, T_C=125^\circ\text{C}$ | 200 | | | $\text{V}/\mu\text{s}$ |

CS220-8B
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SILICON CONTROLLED RECTIFIERS
8.0 AMP, 200 THRU 800 VOLT

TO-220 CASE - MECHANICAL OUTLINE



R2

LEAD CODE:

- 1) Cathode
 - 2) Anode
 - 3) Gate
- Tab is common to pin 2

MARKING:

FULL PART NUMBER

| SYMBOL | INCHES | | MILLIMETERS | |
|---------|--------|-------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.170 | 0.190 | 4.31 | 4.82 |
| B | 0.045 | 0.055 | 1.15 | 1.39 |
| C | 0.013 | 0.026 | 0.33 | 0.65 |
| D | 0.083 | 0.107 | 2.10 | 2.72 |
| E | 0.394 | 0.417 | 10.01 | 10.60 |
| F (DIA) | 0.140 | 0.157 | 3.55 | 4.00 |
| G | 0.100 | 0.118 | 2.54 | 3.00 |
| H | 0.230 | 0.270 | 5.85 | 6.85 |
| I | 0.560 | 0.625 | 14.23 | 15.87 |
| J | - | 0.250 | - | 6.35 |
| K | 0.025 | 0.038 | 0.64 | 0.96 |
| L | 0.500 | 0.579 | 12.70 | 14.70 |
| M | 0.090 | 0.110 | 2.29 | 2.79 |

TO-220 (REV: R2)

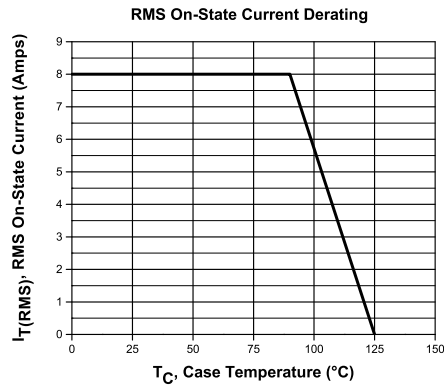
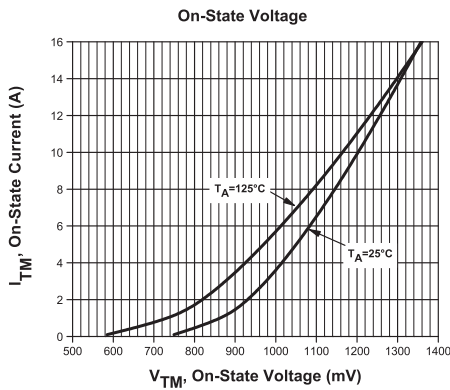
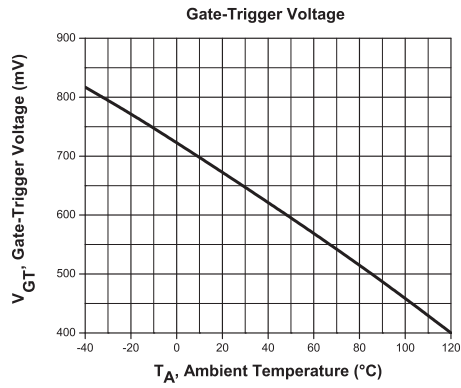
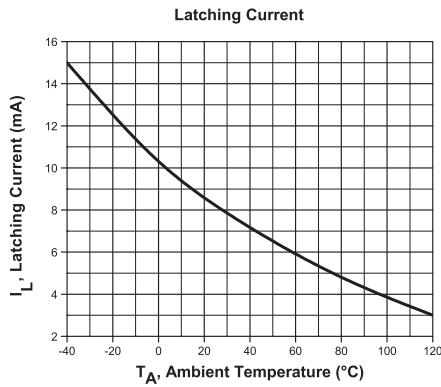
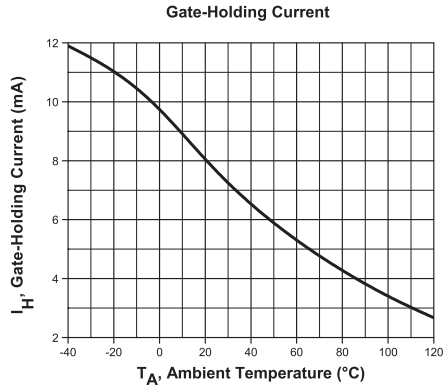
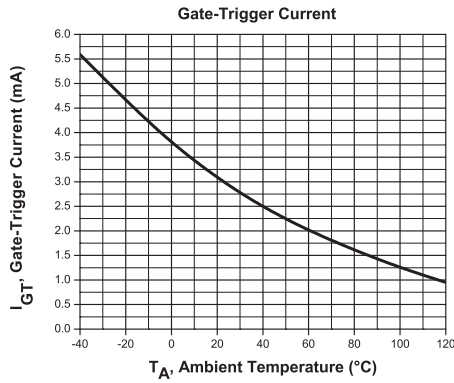
R4 (24-October 2013)

CS220-8B
 CS220-8D
 CS220-8M
 CS220-8N



SILICON CONTROLLED RECTIFIERS
 8.0 AMP, 200 THRU 800 VOLT

TYPICAL ELECTRICAL CHARACTERISTICS



R4 (24-October 2013)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centalsemi.com

Worldwide Field Representatives:
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Product End of Life Notification

| | |
|---------------------------|----------|
| PDN ID: | PDN01051 |
| Notification Date: | 8/24/16 |
| Last Buy Date: | 2/24/17 |
| Last Shipment Date | 8/24/17 |

Summary: The CS220 series of Silicon Controlled Rectifiers in the TO-220 case is discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by various manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's Product Management Process. Any replacement product will be noted below. The effective date for placing the last purchase order will be six(6) months from the date of this notice and twelve(12) months from the notice date for final shipments; this may be extended if inventory is available.

| <u>Central Part Number</u> | <u>Replacement</u> |
|----------------------------|--------------------|
| CS220-10B | N/A |
| CS220-10D | N/A |
| CS220-10M | N/A |
| CS220-10N | N/A |
| CS220-12B | N/A |
| CS220-12D | N/A |
| CS220-12M | N/A |
| CS220-12N | N/A |
| CS220-12P | N/A |
| CS220-16B | N/A |
| CS220-16D | N/A |
| CS220-16M | N/A |
| CS220-16N | N/A |
| CS220-16P | N/A |
| CS220-25B | N/A |
| CS220-25D | N/A |
| CS220-25M | N/A |
| CS220-25N | N/A |
| CS220-25P | N/A |
| CS220-25PB | N/A |
| CS220-35M | N/A |
| CS220-35N | N/A |
| CS220-8B | N/A |
| CS220-8D | N/A |
| CS220-8F | N/A |
| CS220-8M | N/A |
| CS220-8N | N/A |

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to engineering@centralsemi.com.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.