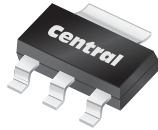


CZR1-04

**SURFACE MOUNT SILICON  
HIGH VOLTAGE RECTIFIER**



**SOT-223 CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZR1-04 is a general purpose silicon rectifier designed for applications requiring high voltage capability.

**MARKING CODE: FULL PART NUMBER**

**MAXIMUM RATINGS:** ( $T_A=25^{\circ}\text{C}$ )

Reverse Voltage  
Peak Reverse Voltage  
Average Forward Current  
Peak Forward Surge Current,  $t=10\text{ms}$   
Operating and Storage Junction Temperature  
Power Dissipation  
Thermal Resistance

**SYMBOL**

$V_R$  400  
 $V_{RM}$  400  
 $I_O$  1.0  
 $I_{FSM}$  10  
 $T_J, T_{stg}$  -65 to +150  
 $P_D$  2.0  
 $\theta_{JA}$  62.5

**UNITS**

V  
V  
A  
A  
 $^{\circ}\text{C}$   
W  
 $^{\circ}\text{C/W}$

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

| SYMBOL   | TEST CONDITIONS                                          | MIN | TYP | MAX | UNITS         |
|----------|----------------------------------------------------------|-----|-----|-----|---------------|
| $I_R$    | $V_R=400\text{V}$                                        |     |     | 1.0 | $\mu\text{A}$ |
| $I_R$    | $V_R=400\text{V}, T_A=150^{\circ}\text{C}$               |     |     | 50  | $\mu\text{A}$ |
| $BV_R$   | $I_R=100\mu\text{A}$                                     | 400 |     |     | V             |
| $V_F$    | $I_F=1.0\text{A}$                                        |     |     | 1.2 | V             |
| $V_F$    | $I_F=2.0\text{A}$                                        |     |     | 1.5 | V             |
| $t_{rr}$ | $I_F=200\text{mA}, I_R=200\text{mA}, I_{rr}=20\text{mA}$ |     | 1.0 |     | $\mu\text{s}$ |
| $C_J$    | $V_R=0, f=1.0\text{MHz}$                                 |     | 26  |     | pF            |

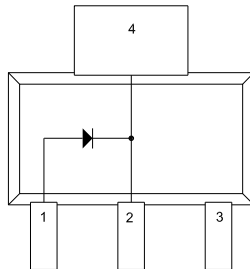
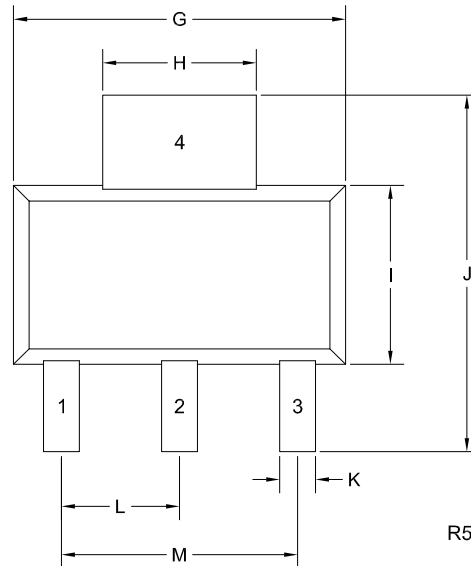
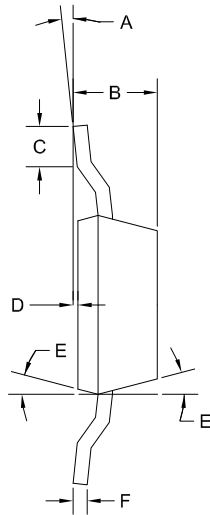
R7 (7-May 2019)

CZR1-04

SURFACE MOUNT SILICON  
HIGH VOLTAGE RECTIFIER



SOT-223 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Anode
  - 2) Cathode
  - 3) No Connection
  - 4) Cathode
- Pin 2 and Pin 4 are common.

MARKING: FULL PART NUMBER

| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| A      | 0°     | 10°   | 0°          | 10°  |
| B      | 0.059  | 0.071 | 1.50        | 1.80 |
| C      | 0.018  | ---   | 0.45        | ---  |
| D      | 0.000  | 0.004 | 0.00        | 0.10 |
| E      | 10°    |       | 10°         |      |
| F      | 0.009  | 0.014 | 0.23        | 0.35 |
| G      | 0.248  | 0.270 | 6.30        | 6.85 |
| H      | 0.114  | 0.122 | 2.90        | 3.10 |
| I      | 0.130  | 0.146 | 3.30        | 3.70 |
| J      | 0.264  | 0.287 | 6.70        | 7.30 |
| K      | 0.024  | 0.033 | 0.60        | 0.85 |
| L      | 0.091  |       | 2.30        |      |
| M      | 0.181  |       | 4.60        |      |

SOT-223 (REV: R5)

R7 (7-May 2019)

[www.centalsemi.com](http://www.centalsemi.com)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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