

**CMPZ4678C THRU CMPZ4717C**

**SURFACE MOUNT  
LOW LEVEL SILICON ZENER DIODE  
350mW, 1.8 THRU 43 VOLT  
2% TOLERANCE**

**SOT-23 CASE**[www.centrasemi.com](http://www.centrasemi.com)**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPZ4678C series silicon Zener diode is a high quality voltage regulator designed for applications requiring an extremely low operating current and low leakage.

**MARKING CODES: CONSULT FACTORY****MAXIMUM RATINGS:** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

Power Dissipation

Operating and Storage Temperature

**SYMBOL** $P_D$  $T_J, T_{stg}$ 

350

-65 to +150

**UNITS**

mW

 $^{\circ}\text{C}$ **ELECTRICAL CHARACTERISTICS:** ( $T_A=25^{\circ}\text{C}$ )  $V_F=1.5\text{V MAX @ } I_F=100\text{mA}$  (for all types)

| TYPE      | ZENER VOLTAGE  |          |          | TEST<br>CURRENT | MAXIMUM<br>REVERSE<br>CURRENT |     | MAXIMUM<br>ZENER<br>CURRENT |
|-----------|----------------|----------|----------|-----------------|-------------------------------|-----|-----------------------------|
|           | $V_Z @ I_{ZT}$ |          |          | $I_{ZT}$        | $I_R$<br>@<br>$V_R$           |     |                             |
|           | MIN<br>V       | NOM<br>V | MAX<br>V | $\mu A$         | $\mu A$                       | V   | mA                          |
| CMPZ4678C | 1.764          | 1.8      | 1.836    | 50              | 7.5                           | 1.0 | 120.0                       |
| CMPZ4679C | 1.960          | 2.0      | 2.040    | 50              | 5.0                           | 1.0 | 110.0                       |
| CMPZ4680C | 2.156          | 2.2      | 2.244    | 50              | 4.0                           | 1.0 | 100.0                       |
| CMPZ4681C | 2.352          | 2.4      | 2.448    | 50              | 2.0                           | 1.0 | 95.0                        |
| CMPZ4682C | 2.646          | 2.7      | 2.754    | 50              | 1.0                           | 1.0 | 90.0                        |
| CMPZ4683C | 2.940          | 3.0      | 3.060    | 50              | 0.8                           | 1.0 | 85.0                        |
| CMPZ4684C | 3.234          | 3.3      | 3.366    | 50              | 7.5                           | 1.5 | 80.0                        |
| CMPZ4685C | 3.528          | 3.6      | 3.672    | 50              | 7.5                           | 2.0 | 75.0                        |
| CMPZ4686C | 3.822          | 3.9      | 3.978    | 50              | 5.0                           | 2.0 | 70.0                        |
| CMPZ4687C | 4.214          | 4.3      | 4.386    | 50              | 4.0                           | 2.0 | 65.0                        |
| CMPZ4688C | 4.606          | 4.7      | 4.794    | 50              | 10                            | 3.0 | 60.0                        |
| CMPZ4689C | 4.998          | 5.1      | 5.202    | 50              | 10                            | 3.0 | 55.0                        |
| CMPZ4690C | 5.488          | 5.6      | 5.712    | 50              | 10                            | 4.0 | 50.0                        |
| CMPZ4691C | 6.076          | 6.2      | 6.324    | 50              | 10                            | 5.0 | 45.0                        |
| CMPZ4692C | 6.664          | 6.8      | 6.936    | 50              | 10                            | 5.1 | 35.0                        |
| CMPZ4693C | 7.350          | 7.5      | 7.650    | 50              | 10                            | 5.7 | 31.8                        |
| CMPZ4694C | 8.036          | 8.2      | 8.364    | 50              | 1.0                           | 6.2 | 29.0                        |
| CMPZ4695C | 8.526          | 8.7      | 8.874    | 50              | 1.0                           | 6.6 | 27.4                        |
| CMPZ4696C | 8.918          | 9.1      | 9.282    | 50              | 1.0                           | 6.9 | 26.2                        |
| CMPZ4697C | 9.800          | 10       | 10.20    | 50              | 1.0                           | 7.6 | 24.8                        |
| CMPZ4698C | 10.78          | 11       | 11.22    | 50              | 0.05                          | 8.4 | 21.6                        |

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**CMPZ4678C THRU CMPZ4717C**

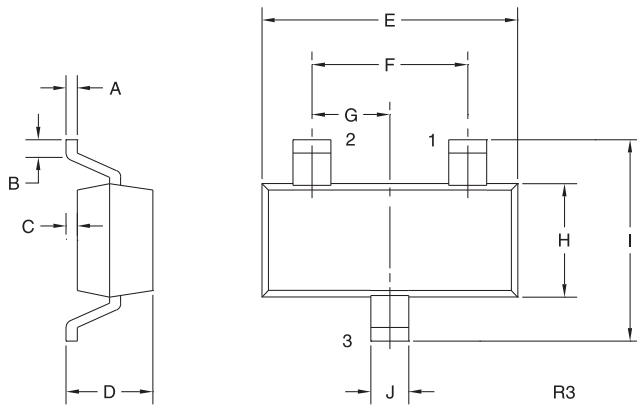
**SURFACE MOUNT  
LOW LEVEL SILICON ZENER DIODE  
350mW, 1.8 THRU 43 VOLT  
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**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^\circ\text{C}$ )  $V_F=1.5\text{V MAX @ } I_F=100\text{mA}$  (for all types)

| TYPE      | ZENER VOLTAGE  |          |          | TEST<br>CURRENT | MAXIMUM<br>REVERSE<br>CURRENT |      | MAXIMUM<br>ZENER<br>CURRENT |
|-----------|----------------|----------|----------|-----------------|-------------------------------|------|-----------------------------|
|           | $V_Z @ I_{ZT}$ |          |          | $I_{ZT}$        | $I_R$ @ $V_R$                 |      |                             |
|           | MIN<br>V       | NOM<br>V | MAX<br>V | $\mu A$         | $\mu A$                       | V    | mA                          |
| CMPZ4699C | 11.76          | 12       | 12.24    | 50              | 0.05                          | 9.1  | 20.4                        |
| CMPZ4700C | 12.74          | 13       | 13.26    | 50              | 0.05                          | 9.8  | 19.0                        |
| CMPZ4701C | 13.72          | 14       | 14.28    | 50              | 0.05                          | 10.6 | 17.5                        |
| CMPZ4702C | 14.70          | 15       | 15.30    | 50              | 0.05                          | 11.4 | 16.3                        |
| CMPZ4703C | 15.68          | 16       | 16.32    | 50              | 0.05                          | 12.1 | 15.4                        |
| CMPZ4704C | 16.66          | 17       | 17.34    | 50              | 0.05                          | 12.9 | 14.5                        |
| CMPZ4705C | 17.64          | 18       | 18.36    | 50              | 0.05                          | 13.6 | 13.2                        |
| CMPZ4706C | 18.62          | 19       | 19.38    | 50              | 0.05                          | 14.4 | 12.5                        |
| CMPZ4707C | 19.60          | 20       | 20.40    | 50              | 0.01                          | 15.2 | 11.9                        |
| CMPZ4708C | 21.56          | 22       | 22.44    | 50              | 0.01                          | 16.7 | 10.8                        |
| CMPZ4709C | 23.52          | 24       | 24.48    | 50              | 0.01                          | 18.2 | 9.9                         |
| CMPZ4710C | 24.50          | 25       | 25.50    | 50              | 0.01                          | 19.0 | 9.5                         |
| CMPZ4711C | 26.46          | 27       | 27.54    | 50              | 0.01                          | 20.4 | 8.8                         |
| CMPZ4712C | 27.44          | 28       | 28.56    | 50              | 0.01                          | 21.2 | 8.5                         |
| CMPZ4713C | 29.40          | 30       | 30.60    | 50              | 0.01                          | 22.8 | 7.9                         |
| CMPZ4714C | 32.34          | 33       | 33.66    | 50              | 0.01                          | 25.0 | 7.2                         |
| CMPZ4715C | 35.28          | 36       | 36.72    | 50              | 0.01                          | 27.3 | 6.6                         |
| CMPZ4716C | 38.22          | 39       | 39.78    | 50              | 0.01                          | 29.6 | 6.1                         |
| CMPZ4717C | 42.14          | 43       | 43.86    | 50              | 0.01                          | 32.6 | 5.5                         |

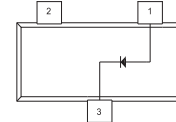
**SOT-23 CASE - MECHANICAL OUTLINE**



| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| A      | 0.003  | 0.007 | 0.08        | 0.18 |
| B      | 0.006  | -     | 0.15        | -    |
| C      | -      | 0.005 | -           | 0.13 |
| D      | 0.035  | 0.043 | 0.89        | 1.09 |
| E      | 0.110  | 0.120 | 2.80        | 3.05 |
| F      | 0.075  | -     | 1.90        | -    |
| G      | 0.037  | -     | 0.95        | -    |
| H      | 0.047  | 0.055 | 1.19        | 1.40 |
| I      | 0.083  | 0.098 | 2.10        | 2.49 |
| J      | 0.014  | 0.020 | 0.35        | 0.50 |

SOT-23 (REV: R3)

**LEAD CODE:**  
1) Anode  
2) No Connection  
3) Cathode



R0 (3-February 2015)

## 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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