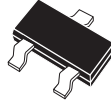


**CMPZ4678  
 THRU  
 CMPZ4717  
 SURFACE MOUNT  
 350mW LOW LEVEL  
 SILICON ZENER DIODE  
 5% TOLERANCE**



**SOT-23 CASE**

# Central<sup>TM</sup>

## Semiconductor Corp.

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPZ4678 Series silicon zener diode is a high quality voltage regulator designed for applications requiring an extremely low operating current and low leakage.

**MARKING CODE: CONSULT FACTORY**

- *Pb-free plating available upon request.*

|  |                |             |                  |
|--|----------------|-------------|------------------|
| <b>MAXIMUM RATINGS:</b> ( $T_A=25^\circ\text{C}$ unless otherwise noted) | <b>SYMBOL</b>  |             | <b>UNITS</b>     |
| Power Dissipation  | $P_D$          | 350         | mW               |
| Operating and Storage Temperature  | $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$ |

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

| TYPE NO.  | NOMINAL ZENER VOLTAGE<br>$V_Z @ I_{ZT}$ | TEST CURRENT<br>$I_{ZT}$ | MAXIMUM REVERSE LEAKAGE CURRENT |                | MAXIMUM VOLTAGE CHANGE**<br>$\Delta V_Z$ | MAXIMUM ZENER CURRENT<br>$I_{ZM}$ |
|-----------|---|--------------------------|---------------------------------|----------------|--|-----------------------------------|
|           | (V)                                     | ( $\mu\text{A}$ )        | $I_R$<br>( $\mu\text{A}$ )      | @ $V_R$<br>(V) | (V)                                      | (mA)                              |
| CMPZ4678  | 1.8                                     | 50                       | 7.5                             | 1.0            | 0.70                                     | 120.0                             |
| CMPZ4679* | 2.0                                     | 50                       | 5.0                             | 1.0            | 0.70                                     | 110.0                             |
| CMPZ4680* | 2.2                                     | 50                       | 4.0                             | 1.0            | 0.75                                     | 100.0                             |
| CMPZ4681* | 2.4                                     | 50                       | 2.0                             | 1.0            | 0.80                                     | 95.0                              |
| CMPZ4682  | 2.7                                     | 50                       | 1.0                             | 1.0            | 0.85                                     | 90.0                              |
| CMPZ4683  | 3.0                                     | 50                       | 0.8                             | 1.0            | 0.90                                     | 85.0                              |
| CMPZ4684  | 3.3                                     | 50                       | 7.5                             | 1.5            | 0.95                                     | 80.0                              |
| CMPZ4685  | 3.6                                     | 50                       | 7.5                             | 2.0            | 0.95                                     | 75.0                              |
| CMPZ4686  | 3.9                                     | 50                       | 5.0                             | 2.0            | 0.97                                     | 70.0                              |
| CMPZ4687  | 4.3                                     | 50                       | 4.0                             | 2.0            | 0.99                                     | 65.0                              |
| CMPZ4688  | 4.7                                     | 50                       | 10                              | 3.0            | 0.99                                     | 60.0                              |
| CMPZ4689  | 5.1                                     | 50                       | 10                              | 3.0            | 0.97                                     | 55.0                              |
| CMPZ4690  | 5.6                                     | 50                       | 10                              | 4.0            | 0.96                                     | 50.0                              |
| CMPZ4691  | 6.2                                     | 50                       | 10                              | 5.0            | 0.95                                     | 45.0                              |
| CMPZ4692  | 6.8                                     | 50                       | 10                              | 5.1            | 0.90                                     | 35.0                              |
| CMPZ4693  | 7.5                                     | 50                       | 10                              | 5.7            | 0.75                                     | 31.8                              |
| CMPZ4694  | 8.2                                     | 50                       | 1.0                             | 6.2            | 0.50                                     | 29.0                              |
| CMPZ4695  | 8.7                                     | 50                       | 1.0                             | 6.6            | 0.10                                     | 27.4                              |
| CMPZ4696  | 9.1                                     | 50                       | 1.0                             | 6.9            | 0.08                                     | 26.2                              |
| CMPZ4697  | 10                                      | 50                       | 1.0                             | 7.6            | 0.10                                     | 24.8                              |
| CMPZ4698  | 11                                      | 50                       | 0.05                            | 8.4            | 0.11                                     | 21.6                              |

\* Available on special order only, please consult factory. \*\* $\Delta V_Z = V_Z @ 100\mu\text{A}$  MINUS  $V_Z @ 10\mu\text{A}$ .

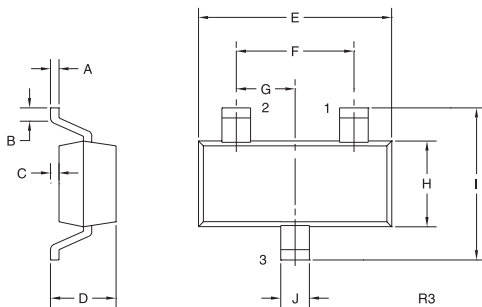
**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^\circ\text{C}$ )  $V_F=1.5\text{V MAX @ } I_F=100\text{mA}$  (for all types)

| TYPE NO.  | NOMINAL ZENER VOLTAGE $V_Z @ I_{ZT}$ | TEST CURRENT $I_{ZT}$ | MAXIMUM REVERSE LEAKAGE CURRENT |             | MAXIMUM VOLTAGE CHANGE** $\Delta V_Z$ | MAXIMUM ZENER CURRENT $I_{ZM}$ |
|-----------|--------------------------------------|-----------------------|---------------------------------|-------------|---------------------------------------|--------------------------------|
|           | (V)                                  | ( $\mu\text{A}$ )     | $I_R$ ( $\mu\text{A}$ )         | @ $V_R$ (V) | (V)                                   | (mA)                           |
| CMPZ4699  | 12                                   | 50                    | 0.05                            | 9.1         | 0.12                                  | 20.4                           |
| CMPZ4700  | 13                                   | 50                    | 0.05                            | 9.8         | 0.13                                  | 19.0                           |
| CMPZ4701  | 14                                   | 50                    | 0.05                            | 10.6        | 0.14                                  | 17.5                           |
| CMPZ4702  | 15                                   | 50                    | 0.05                            | 11.4        | 0.15                                  | 16.3                           |
| CMPZ4703  | 16                                   | 50                    | 0.05                            | 12.1        | 0.16                                  | 15.4                           |
| CMPZ4704  | 17                                   | 50                    | 0.05                            | 12.9        | 0.17                                  | 14.5                           |
| CMPZ4705  | 18                                   | 50                    | 0.05                            | 13.6        | 0.18                                  | 13.2                           |
| CMPZ4706  | 19                                   | 50                    | 0.05                            | 14.4        | 0.19                                  | 12.5                           |
| CMPZ4707  | 20                                   | 50                    | 0.01                            | 15.2        | 0.20                                  | 11.9                           |
| CMPZ4708  | 22                                   | 50                    | 0.01                            | 16.7        | 0.22                                  | 10.8                           |
| CMPZ4709  | 24                                   | 50                    | 0.01                            | 18.2        | 0.24                                  | 9.9                            |
| CMPZ4710  | 25                                   | 50                    | 0.01                            | 19.0        | 0.25                                  | 9.5                            |
| CMPZ4711  | 27                                   | 50                    | 0.01                            | 20.4        | 0.27                                  | 8.8                            |
| CMPZ4712  | 28                                   | 50                    | 0.01                            | 21.2        | 0.28                                  | 8.5                            |
| CMPZ4713  | 30                                   | 50                    | 0.01                            | 22.8        | 0.30                                  | 7.9                            |
| CMPZ4714  | 33                                   | 50                    | 0.01                            | 25.0        | 0.33                                  | 7.2                            |
| CMPZ4715  | 36                                   | 50                    | 0.01                            | 27.3        | 0.36                                  | 6.6                            |
| CMPZ4716* | 39                                   | 50                    | 0.01                            | 29.6        | 0.39                                  | 6.1                            |
| CMPZ4717* | 43                                   | 50                    | 0.01                            | 32.6        | 0.43                                  | 5.5                            |

\* Available on special order only, please consult factory.

\*\* $\Delta V_Z = V_Z @ 100\mu\text{A}$  MINUS  $V_Z @ 10\mu\text{A}$ .

### SOT-23 CASE - MECHANICAL OUTLINE

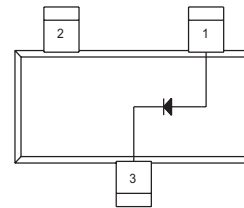


**MARKING CODE:  
CONSULT FACTORY**

| SYMBOL | DIMENSIONS |       |             |      |
|--------|------------|-------|-------------|------|
|        | 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)

### PIN CONFIGURATION



#### LEAD CODE:

- 1) ANODE
- 2) NO CONNECTION
- 3) CATHODE

R7 (17-APRIL 2008)