

**CMPZDA2V4 THRU CMPZDA47V**

**SURFACE MOUNT  
DUAL, COMMON ANODE  
SILICON ZENER DIODES  
2.4 VOLTS THRU 47 VOLTS  
350mW**


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

The CENTRAL SEMICONDUCTOR CMPZDA2V4 Series silicon dual zener diode is a high quality voltage regulator, connected in a common anode configuration, for use in industrial, commercial, entertainment and computer applications.

**MARKING CODE: SEE MARKING CODES ON  
ELECTRICAL CHARACTERISTICS TABLE**
**SOT-23 CASE****MAXIMUM RATINGS:** ( $T_A=25^{\circ}\text{C}$ )

Power Dissipation

Operating and Storage Junction Temperature

Thermal Resistance

**SYMBOL** $P_D$  $T_J, T_{stg}$  $\Theta_{JA}$ 

350

-65 to +175

429

**UNITS**

mW

 $^{\circ}\text{C}$  $^{\circ}\text{C/W}$ **ELECTRICAL CHARACTERISTICS:** ( $T_A=25^{\circ}\text{C}$ )  $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$  (for all types)

| TYPE      | ZENER VOLTAGE<br>$V_Z @ I_{ZT}$ |      | TEST CURRENT | MAXIMUM ZENER IMPEDANCE |                   |     | MAXIMUM REVERSE CURRENT |      | MAXIMUM ZENER CURRENT | MAXIMUM ZENER VOLTAGE TEMP. COEFF. | MARKING CODE |
|-----------|---------------------------------|------|--------------|-------------------------|-------------------|-----|-------------------------|------|-----------------------|------------------------------------|--------------|
|           | MIN                             | MAX  | $I_{ZT}$     | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ |     | $I_R @ V_R$             |      | $I_{ZM}$              | $\Theta V_Z$                       |              |
|           | V                               | V    | mA           | $\Omega$                | $\Omega$          | mA  | $\mu\text{A}$           | V    | mA                    | % / $^{\circ}\text{C}$             |              |
| CMPZDA2V4 | 2.2                             | 2.6  | 5.0          | 100                     | 600               | 1.0 | 50                      | 1.0  | 63                    | -0.06                              | WW3          |
| CMPZDA2V7 | 2.5                             | 2.9  | 5.0          | 100                     | 600               | 1.0 | 20                      | 1.0  | 57                    | -0.06                              | WW4          |
| CMPZDA3V0 | 2.8                             | 3.2  | 5.0          | 95                      | 600               | 1.0 | 10                      | 1.0  | 54                    | -0.06                              | WW5          |
| CMPZDA3V3 | 3.1                             | 3.5  | 5.0          | 95                      | 600               | 1.0 | 5.0                     | 1.0  | 47                    | -0.06                              | WW6          |
| CMPZDA3V6 | 3.4                             | 3.8  | 5.0          | 95                      | 600               | 1.0 | 2.0                     | 1.0  | 45                    | -0.06                              | WW7          |
| CMPZDA3V9 | 3.7                             | 4.1  | 5.0          | 90                      | 600               | 1.0 | 2.0                     | 1.0  | 43                    | -0.06                              | WW8          |
| CMPZDA4V3 | 4.0                             | 4.6  | 5.0          | 90                      | 600               | 1.0 | 1.0                     | 1.0  | 40                    | -0.05                              | WW9          |
| CMPZDA4V7 | 4.4                             | 5.0  | 5.0          | 80                      | 500               | 1.0 | 3.0                     | 2.0  | 38                    | -0.03                              | ZZ1          |
| CMPZDA5V1 | 4.8                             | 5.4  | 5.0          | 60                      | 480               | 1.0 | 2.0                     | 2.0  | 35                    | 0.02                               | ZZ2          |
| CMPZDA5V6 | 5.2                             | 6.0  | 5.0          | 40                      | 400               | 1.0 | 1.0                     | 2.0  | 32                    | 0.03                               | ZZ3          |
| CMPZDA6V2 | 5.8                             | 6.6  | 5.0          | 10                      | 150               | 1.0 | 3.0                     | 4.0  | 28                    | 0.04                               | ZZ4          |
| CMPZDA6V8 | 6.5                             | 7.2  | 5.0          | 15                      | 80                | 1.0 | 2.0                     | 4.0  | 25                    | 0.05                               | ZZ5          |
| CMPZDA7V5 | 7.0                             | 7.9  | 5.0          | 15                      | 80                | 1.0 | 1.0                     | 5.0  | 23                    | 0.05                               | ZZ6          |
| CMPZDA8V2 | 7.7                             | 8.7  | 5.0          | 15                      | 80                | 1.0 | 0.7                     | 5.0  | 21                    | 0.06                               | ZZ7          |
| CMPZDA9V1 | 8.5                             | 9.6  | 5.0          | 15                      | 100               | 1.0 | 0.5                     | 6.0  | 18                    | 0.06                               | ZZ8          |
| CMPZDA10V | 9.4                             | 10.6 | 5.0          | 20                      | 150               | 1.0 | 0.2                     | 7.0  | 16                    | 0.07                               | ZZ9          |
| CMPZDA11V | 10.4                            | 11.6 | 5.0          | 20                      | 150               | 1.0 | 0.1                     | 8.0  | 15                    | 0.07                               | YY1          |
| CMPZDA12V | 11.4                            | 12.7 | 5.0          | 25                      | 150               | 1.0 | 0.1                     | 8.0  | 13                    | 0.07                               | YY2          |
| CMPZDA13V | 12.4                            | 14.1 | 5.0          | 30                      | 170               | 1.0 | 0.1                     | 8.0  | 12                    | 0.08                               | YY3          |
| CMPZDA15V | 13.8                            | 15.6 | 5.0          | 30                      | 200               | 1.0 | 0.05                    | 10.5 | 11                    | 0.08                               | YY4          |
| CMPZDA16V | 15.3                            | 17.1 | 5.0          | 40                      | 200               | 1.0 | 0.05                    | 11.2 | 10                    | 0.08                               | YY5          |
| CMPZDA18V | 16.8                            | 19.1 | 5.0          | 45                      | 225               | 1.0 | 0.05                    | 12.6 | 9.2                   | 0.08                               | YY6          |
| CMPZDA20V | 18.8                            | 21.2 | 5.0          | 55                      | 225               | 1.0 | 0.05                    | 14.0 | 8.3                   | 0.08                               | YY7          |
| CMPZDA22V | 20.8                            | 23.3 | 5.0          | 55                      | 250               | 1.0 | 0.05                    | 15.4 | 7.6                   | 0.09                               | YY8          |

R8 (3-February 2010)

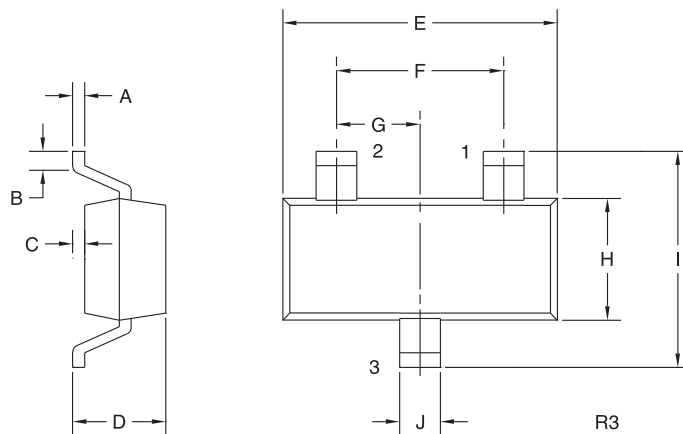
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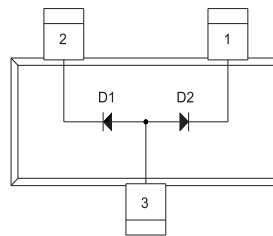
**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^\circ\text{C}$ )  $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$  (for all types)

| TYPE      | ZENER VOLTAGE<br>$V_Z @ I_{ZT}$ |      | TEST CURRENT<br>$I_{ZT}$ | MAXIMUM ZENER IMPEDANCE |                   |     | MAXIMUM REVERSE CURRENT |      | MAXIMUM ZENER CURRENT<br>$I_{ZM}$ | MAXIMUM ZENER VOLTAGE TEMP. COEFF.<br>$\Theta V_Z$ | MARKING CODE |
|-----------|---------------------------------|------|--------------------------|-------------------------|-------------------|-----|-------------------------|------|-----------------------------------|----------------------------------------------------|--------------|
|           | MIN                             | MAX  |                          | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ |     | $I_R @ V_R$             |      |                                   |                                                    |              |
|           | V                               | V    |                          | $\Omega$                | $\Omega$          | mA  | $\mu\text{A}$           | V    |                                   | % / $^\circ\text{C}$                               |              |
| CMPZDA24V | 22.8                            | 25.6 | 5.0                      | 70                      | 250               | 1.0 | 0.05                    | 16.8 | 7.0                               | 0.09                                               | YY9          |
| CMPZDA27V | 25.1                            | 28.9 | 2.0                      | 80                      | 300               | 0.5 | 0.05                    | 18.9 | 6.2                               | 0.09                                               | W10          |
| CMPZDA30V | 28.0                            | 32.0 | 2.0                      | 80                      | 300               | 0.5 | 0.05                    | 21.0 | 5.6                               | 0.09                                               | W11          |
| CMPZDA33V | 31.0                            | 35.0 | 2.0                      | 80                      | 325               | 0.5 | 0.05                    | 23.1 | 5.0                               | 0.09                                               | W12          |
| CMPZDA36V | 34.0                            | 38.0 | 2.0                      | 90                      | 350               | 0.5 | 0.05                    | 25.2 | 4.6                               | 0.09                                               | W13          |
| CMPZDA39V | 37.0                            | 41.0 | 2.0                      | 130                     | 350               | 0.5 | 0.05                    | 27.3 | 4.3                               | 0.09                                               | W14          |
| CMPZDA43V | 40.0                            | 46.0 | 2.0                      | 150                     | 375               | 0.5 | 0.05                    | 30.1 | 3.9                               | 0.10                                               | W15          |
| CMPZDA47V | 44.0                            | 50.0 | 2.0                      | 170                     | 375               | 0.5 | 0.05                    | 32.9 | 3.5                               | 0.10                                               | W16          |

**SOT-23 CASE - MECHANICAL OUTLINE**

| SYMBOL | DIMENSIONS |             | MIN  | MAX  |
|--------|------------|-------------|------|------|
|        | INCHES     | MILLIMETERS |      |      |
| 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) Cathode D2
- 2) Cathode D1
- 3) Anode D1, D2

**MARKING CODE:**

**SEE MARKING CODES ON ELECTRICAL CHARACTERISTICS TABLE**

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