**CMSZDA2V4**
**THRU**
**CMSZDA47V**

**SURFACE MOUNT**
**DUAL, SILICON ZENER DIODE**
**2.4 VOLTS THRU 47 VOLTS**
**275mW**

SUPERmini™



**SOT-323 CASE**

Central™
Semiconductor Corp.

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMSZDA2V4 Series silicon dual zener diode is a highly 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**

**MAXIMUM RATINGS:** ($T_A$=25°C)

| | SYMBOL | | UNITS |
|---|---|---|---|
| Power Dissipation | $P_D$ | 275 | mW |
| Operating and Storage Temperature | $T_J$, $T_{stg}$ | -65 TO +150 | °C |
| Thermal Resistance | $\Theta_{JA}$ | 455 | °C/W |

**ELECTRICAL CHARACTERISTICS PER DIODE:** ($T_A$=25°C) $V_F$=0.9V MAX @ $I_F$=10mA FOR ALL TYPES.

| TYPE NO. | ZENER VOLTAGE $V_Z$ @ $I_{ZT}$ | | TEST CURRENT | MAXIMUM ZENER IMPEDANCE | | | MAXIMUM REVERSE CURRENT | | MAXIMUM ZENER CURRENT | MAXIMUM ZENER VOLTAGE TEMP. COEFF. | MARKING CODE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MIN | MAX | $I_{ZT}$ | $Z_{ZT}$ @ $I_{ZT}$ | $Z_{ZK}$ @ $I_{ZK}$ | | $I_R$ @ $V_R$ | | $I_{ZM}$ | $\Theta V_Z$ | |
| | VOLTS | VOLTS | mA | Ω | Ω | mA | μA | VOLTS | mA | % / °C | |
| CMSZDA2V4 | 2.2 | 2.6 | 5.0 | 100 | 600 | 1.0 | 50 | 1.0 | 63 | -0.06 | W3W |
| CMSZDA2V7 | 2.5 | 2.9 | 5.0 | 100 | 600 | 1.0 | 20 | 1.0 | 57 | -0.06 | W4W |
| CMSZDA3V0 | 2.8 | 3.2 | 5.0 | 95 | 600 | 1.0 | 10 | 1.0 | 54 | -0.06 | W5W |
| CMSZDA3V3 | 3.1 | 3.5 | 5.0 | 95 | 600 | 1.0 | 5.0 | 1.0 | 47 | -0.06 | W6W |
| CMSZDA3V6 | 3.4 | 3.8 | 5.0 | 95 | 600 | 1.0 | 2.0 | 1.0 | 45 | -0.06 | W7W |
| CMSZDA3V9 | 3.7 | 4.1 | 5.0 | 90 | 600 | 1.0 | 2.0 | 1.0 | 43 | -0.06 | W8W |
| CMSZDA4V3 | 4.0 | 4.6 | 5.0 | 90 | 600 | 1.0 | 1.0 | 1.0 | 40 | -0.05 | W9W |
| CMSZDA4V7 | 4.4 | 5.0 | 5.0 | 80 | 500 | 1.0 | 3.0 | 2.0 | 38 | -0.03 | Z1Z |
| CMSZDA5V1 | 4.8 | 5.4 | 5.0 | 60 | 480 | 1.0 | 2.0 | 2.0 | 35 | 0.02 | Z2Z |
| CMSZDA5V6 | 5.2 | 6.0 | 5.0 | 40 | 400 | 1.0 | 1.0 | 2.0 | 32 | 0.03 | Z3Z |
| CMSZDA6V2 | 5.8 | 6.6 | 5.0 | 10 | 150 | 1.0 | 3.0 | 4.0 | 28 | 0.04 | Z4Z |
| CMSZDA6V8 | 6.5 | 7.2 | 5.0 | 15 | 80 | 1.0 | 2.0 | 4.0 | 25 | 0.05 | Z5Z |
| CMSZDA7V5 | 7.0 | 7.9 | 5.0 | 15 | 80 | 1.0 | 1.0 | 5.0 | 23 | 0.05 | Z6Z |
| CMSZDA8V2 | 7.7 | 8.7 | 5.0 | 15 | 80 | 1.0 | 0.7 | 5.0 | 21 | 0.06 | Z7Z |
| CMSZDA9V1 | 8.5 | 9.6 | 5.0 | 15 | 100 | 1.0 | 0.5 | 6.0 | 18 | 0.06 | Z8Z |
| CMSZDA10V | 9.4 | 10.6 | 5.0 | 20 | 150 | 1.0 | 0.2 | 7.0 | 16 | 0.07 | Z9Z |
| CMSZDA11V | 10.4 | 11.6 | 5.0 | 20 | 150 | 1.0 | 0.1 | 8.0 | 15 | 0.07 | Y1Y |
| CMSZDA12V | 11.4 | 12.7 | 5.0 | 25 | 150 | 1.0 | 0.1 | 8.0 | 13 | 0.07 | Y2Y |
| CMSZDA13V | 12.4 | 14.1 | 5.0 | 30 | 170 | 1.0 | 0.1 | 8.0 | 12 | 0.08 | Y3Y |
| CMSZDA15V | 13.8 | 15.6 | 5.0 | 30 | 200 | 1.0 | 0.05 | 10.5 | 11 | 0.08 | Y4Y |
| CMSZDA16V | 15.3 | 17.1 | 5.0 | 40 | 200 | 1.0 | 0.05 | 11.2 | 10 | 0.08 | Y5Y |

**Central™**
**Semiconductor Corp.**

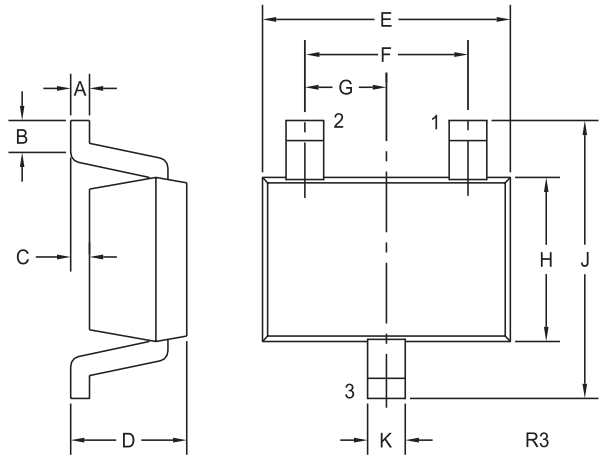
**CMSZDA2V4**
**THRU**
**CMSZDA47V**

**SURFACE MOUNT**
**DUAL, SILICON ZENER DIODE**
**2.4 VOLTS THRU 47 VOLTS**
**275mW**

**ELECTRICAL CHARACTERISTICS PER DIODE (Continued)**

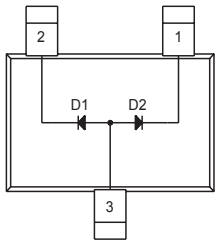
| TYPE NO. | ZENER VOLTAGE $V_Z$ @ $I_{ZT}$ | | TEST CURRENT | MAXIMUM ZENER IMPEDANCE | | | MAXIMUM REVERSE CURRENT | | MAXIMUM ZENER CURRENT | MAXIMUM ZENER VOLTAGE TEMP. COEFF. | MARKING CODE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MIN | MAX | $I_{ZT}$ | $Z_{ZT}$ @ $I_{ZT}$ | $Z_{ZK}$ @ $I_{ZK}$ | | $I_R$ @ $V_R$ | | $I_{ZM}$ | $\Theta V_Z$ | |
| | VOLTS | VOLTS | mA | Ω | Ω | mA | μA | VOLTS | mA | % / °C | |
| **CMSZDA18V** | 16.8 | 19.1 | 5.0 | 45 | 225 | 1.0 | 0.05 | 12.6 | 9.2 | 0.08 | Y6Y |
| **CMSZDA20V** | 18.8 | 21.2 | 5.0 | 55 | 225 | 1.0 | 0.05 | 14.0 | 8.3 | 0.08 | Y7Y |
| **CMSZDA22V** | 20.8 | 23.3 | 5.0 | 55 | 250 | 1.0 | 0.05 | 15.4 | 7.6 | 0.09 | Y8Y |
| **CMSZDA24V** | 22.8 | 25.6 | 5.0 | 70 | 250 | 1.0 | 0.05 | 16.8 | 7.0 | 0.09 | Y9Y |
| **CMSZDA27V** | 25.1 | 28.9 | 2.0 | 80 | 300 | 0.5 | 0.05 | 18.9 | 6.2 | 0.09 | 10W |
| **CMSZDA30V** | 28.0 | 32.0 | 2.0 | 80 | 300 | 0.5 | 0.05 | 21.0 | 5.6 | 0.09 | 11W |
| **CMSZDA33V** | 31.0 | 35.0 | 2.0 | 80 | 325 | 0.5 | 0.05 | 23.1 | 5.0 | 0.09 | 12W |
| **CMSZDA36V** | 34.0 | 38.0 | 2.0 | 90 | 350 | 0.5 | 0.05 | 25.2 | 4.6 | 0.09 | 13W |
| **CMSZDA39V** | 37.0 | 41.0 | 2.0 | 130 | 350 | 0.5 | 0.05 | 27.3 | 4.3 | 0.09 | 14W |
| **CMSZDA43V** | 40.0 | 46.0 | 2.0 | 150 | 375 | 0.5 | 0.05 | 30.1 | 3.9 | 0.10 | 15W |
| **CMSZDA47V** | 44.0 | 50.0 | 2.0 | 170 | 375 | 0.5 | 0.05 | 32.9 | 3.5 | 0.10 | 16W |

**SOT-323 CASE - MECHANICAL OUTLINE**




| DIMENSIONS | | | | |
|---|---|---|---|---|
| | INCHES | | MILLIMETERS | |
| SYMBOL | MIN | MAX | MIN | MAX |
| A | 0.002 | 0.008 | 0.05 | 0.20 |
| B | 0.004 | - | 0.10 | - |
| C | - | 0.004 | - | 0.10 |
| D | 0.031 | 0.043 | 0.80 | 1.10 |
| E | 0.071 | 0.087 | 1.80 | 2.20 |
| F | 0.051 | | 1.30 | |
| G | 0.026 | | 0.65 | |
| H | 0.045 | 0.053 | 1.15 | 1.35 |
| J | 0.079 | 0.087 | 2.00 | 2.20 |
| K | 0.008 | 0.016 | 0.20 | 0.40 |

SOT-323 (REV: R3)




**LEAD CODE:**
1) Cathode D2
2) Cathode D1
3) Anode D1, D2

**MARKING CODE: See Marking Codes on Electrical Characteristics table.**

R4 (4-January 2004)