

CMSZDA2V4 THRU CMSZDA47V

SURFACE MOUNT
DUAL, COMMON ANODE
SILICON ZENER DIODES
275mW, 2.4 THRU 47 VOLTS



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SUPERmini™



SOT-323 CASE

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)

Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

P_D 275
T_J, T_{stg} -65 to +150
θ_{JA} 455

UNITS

mW
°C
°C/W

ELECTRICAL CHARACTERISTICS PER DIODE: (T_A=25°C) V_F=0.9V MAX @ I_F=10mA (for all types)

| TYPE | 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 | NOM | MAX | I _{ZT} | Z _{ZT} @ I _{ZT} | | I _R @ V _R | | I _{ZM} | θV _Z | | |
| | V | V | V | mA | Ω | Ω | mA | μA | V | mA | % / °C | |
| CMSZDA2V4 | 2.2 | 2.4 | 2.6 | 5.0 | 100 | 600 | 1.0 | 50 | 1.0 | 63 | -0.06 | W3W |
| CMSZDA2V7 | 2.5 | 2.7 | 2.9 | 5.0 | 100 | 600 | 1.0 | 20 | 1.0 | 57 | -0.06 | W4W |
| CMSZDA3V0 | 2.8 | 3.0 | 3.2 | 5.0 | 95 | 600 | 1.0 | 10 | 1.0 | 54 | -0.06 | W5W |
| CMSZDA3V3 | 3.1 | 3.3 | 3.5 | 5.0 | 95 | 600 | 1.0 | 5.0 | 1.0 | 47 | -0.06 | W6W |
| CMSZDA3V6 | 3.4 | 3.6 | 3.8 | 5.0 | 95 | 600 | 1.0 | 2.0 | 1.0 | 45 | -0.06 | W7W |
| CMSZDA3V9 | 3.7 | 3.9 | 4.1 | 5.0 | 90 | 600 | 1.0 | 2.0 | 1.0 | 43 | -0.06 | W8W |
| CMSZDA4V3 | 4.0 | 4.3 | 4.6 | 5.0 | 90 | 600 | 1.0 | 1.0 | 1.0 | 40 | -0.05 | W9W |
| CMSZDA4V7 | 4.4 | 4.7 | 5.0 | 5.0 | 80 | 500 | 1.0 | 3.0 | 2.0 | 38 | -0.03 | Z1Z |
| CMSZDA5V1 | 4.8 | 5.1 | 5.4 | 5.0 | 60 | 480 | 1.0 | 2.0 | 2.0 | 35 | 0.02 | Z2Z |
| CMSZDA5V6 | 5.2 | 5.6 | 6.0 | 5.0 | 40 | 400 | 1.0 | 1.0 | 2.0 | 32 | 0.03 | Z3Z |
| CMSZDA6V2 | 5.8 | 6.2 | 6.6 | 5.0 | 10 | 150 | 1.0 | 3.0 | 4.0 | 28 | 0.04 | Z4Z |
| CMSZDA6V8 | 6.5 | 6.8 | 7.2 | 5.0 | 15 | 80 | 1.0 | 2.0 | 4.0 | 25 | 0.05 | Z5Z |
| CMSZDA7V5 | 7.0 | 7.5 | 7.9 | 5.0 | 15 | 80 | 1.0 | 1.0 | 5.0 | 23 | 0.05 | Z6Z |
| CMSZDA8V2 | 7.7 | 8.2 | 8.7 | 5.0 | 15 | 80 | 1.0 | 0.7 | 5.0 | 21 | 0.06 | Z7Z |
| CMSZDA9V1 | 8.5 | 9.1 | 9.6 | 5.0 | 15 | 100 | 1.0 | 0.5 | 6.0 | 18 | 0.06 | Z8Z |
| CMSZDA10V | 9.4 | 10 | 10.6 | 5.0 | 20 | 150 | 1.0 | 0.2 | 7.0 | 16 | 0.07 | Z9Z |
| CMSZDA11V | 10.4 | 11 | 11.6 | 5.0 | 20 | 150 | 1.0 | 0.1 | 8.0 | 15 | 0.07 | Y1Y |
| CMSZDA12V | 11.4 | 12 | 12.7 | 5.0 | 25 | 150 | 1.0 | 0.1 | 8.0 | 13 | 0.07 | Y2Y |
| CMSZDA13V | 12.4 | 13 | 14.1 | 5.0 | 30 | 170 | 1.0 | 0.1 | 8.0 | 12 | 0.08 | Y3Y |
| CMSZDA15V | 13.8 | 15 | 15.6 | 5.0 | 30 | 200 | 1.0 | 0.05 | 10.5 | 11 | 0.08 | Y4Y |
| CMSZDA16V | 15.3 | 16 | 17.1 | 5.0 | 40 | 200 | 1.0 | 0.05 | 11.2 | 10 | 0.08 | Y5Y |

CMSZDA2V4 THRU CMSZDA47V

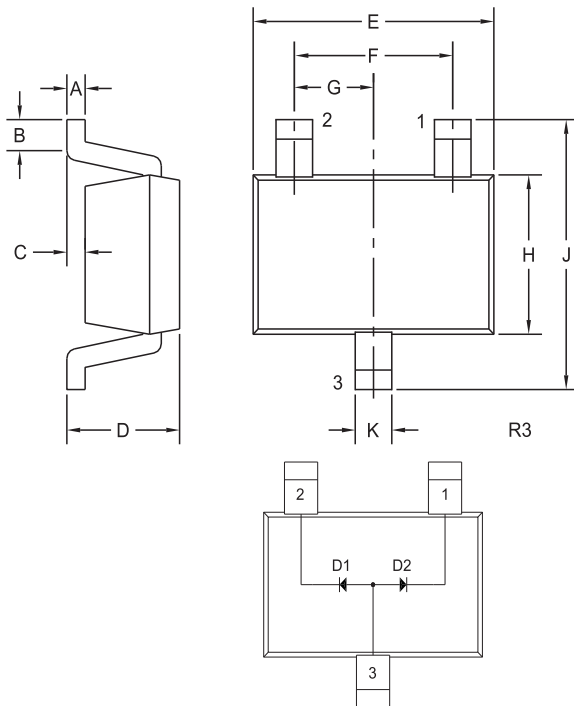
**SURFACE MOUNT
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ELECTRICAL CHARACTERISTICS PER DIODE - Continued: ($T_A=25^\circ\text{C}$) $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$ (for all types)

| TYPE | ZENER VOLTAGE $V_Z @ I_{ZT}$ | | | TEST CURRENT I_{ZT} | MAXIMUM ZENER IMPEDANCE | | | MAXIMUM REVERSE CURRENT | | MAXIMUM ZENER CURRENT I_{ZM} | MAXIMUM ZENER VOLTAGE TEMP. COEFF. θ_{VZ} | MARKING CODE |
|-----------|---------------------------------|-----|------|--------------------------|-------------------------|-------------------|-------------|-------------------------|------|-----------------------------------|---|--------------|
| | MIN | NOM | MAX | | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | $I_R @ V_R$ | | | | | |
| | V | V | V | | mA | Ω | Ω | μA | V | | | |
| CMSZDA18V | 16.8 | 18 | 19.1 | 5.0 | 45 | 225 | 1.0 | 0.05 | 12.6 | 9.2 | 0.08 | Y6Y |
| CMSZDA20V | 18.8 | 20 | 21.2 | 5.0 | 55 | 225 | 1.0 | 0.05 | 14 | 8.3 | 0.08 | Y7Y |
| CMSZDA22V | 20.8 | 22 | 23.3 | 5.0 | 55 | 250 | 1.0 | 0.05 | 15.4 | 7.6 | 0.09 | Y8Y |
| CMSZDA24V | 22.8 | 24 | 25.6 | 5.0 | 70 | 250 | 1.0 | 0.05 | 16.8 | 7.0 | 0.09 | Y9Y |
| CMSZDA27V | 25.1 | 27 | 28.9 | 2.0 | 80 | 300 | 0.5 | 0.05 | 18.9 | 6.2 | 0.09 | 10W |
| CMSZDA30V | 28 | 30 | 32 | 2.0 | 80 | 300 | 0.5 | 0.05 | 21 | 5.6 | 0.09 | 11W |
| CMSZDA33V | 31 | 33 | 35 | 2.0 | 80 | 325 | 0.5 | 0.05 | 23.1 | 5.0 | 0.09 | 12W |
| CMSZDA36V | 34 | 36 | 38 | 2.0 | 90 | 350 | 0.5 | 0.05 | 25.2 | 4.6 | 0.09 | 13W |
| CMSZDA39V | 37 | 39 | 41 | 2.0 | 130 | 350 | 0.5 | 0.05 | 27.3 | 4.3 | 0.09 | 14W |
| CMSZDA43V | 40 | 43 | 46 | 2.0 | 150 | 375 | 0.5 | 0.05 | 30.1 | 3.9 | 0.10 | 15W |
| CMSZDA47V | 44 | 47 | 50 | 2.0 | 170 | 375 | 0.5 | 0.05 | 32.9 | 3.5 | 0.10 | 16W |

SOT-323 CASE - MECHANICAL OUTLINE



| SYMBOL | INCHES | | MILLIMETERS | |
|--------|--------|-------|-------------|------|
| | 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

R5 (9-February 2010)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

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).

CONTACT US

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