

**CMOZ2V4 THRU CMOZ43V**

**SURFACE MOUNT  
SILICON ZENER DIODE  
2.4 VOLTS THRU 43 VOLTS  
5% TOLERANCE**



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

**ULTRAmimi™**



**SOD-523 CASE**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMOZ2V4 Series Zener Diode is a high quality voltage regulator in an epoxy-molded ULTRAmimi™ package, designed for applications requiring low leakage.

**MARKING CODE: SEE MARKING CODE ON ELECTRICAL CHARACTERISTICS TABLE**

MAXIMUM RATINGS: (T <sub>A</sub> =25°C unless otherwise noted)	SYMBOL		UNITS
Power Dissipation (Note 1) (T <sub>A</sub> =50°C)	P <sub>D</sub>	350	mW
Power Dissipation (Note 2)	P <sub>D</sub>	300	mW
Power Dissipation (Note 3)	P <sub>D</sub>	250	mW
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C
Thermal Resistance (P <sub>D</sub> =300mW)	θ <sub>JA</sub>	417	°C/W

**ELECTRICAL CHARACTERISTICS: (T<sub>A</sub>=25°C), V<sub>F</sub>=0.9 MAX @ I<sub>F</sub>=10mA (for all types)**

TYPE	ZENER VOLTAGE V <sub>Z</sub> @ I <sub>ZT</sub>			TEST CURRENT I <sub>ZT</sub> mA	MAXIMUM ZENER IMPEDANCE Z <sub>ZT</sub> @ I <sub>ZT</sub> Ω	MAXIMUM REVERSE CURRENT I <sub>R</sub> @ V <sub>R</sub>		MARKING CODE
	MIN V	NOM V	MAX V			μA	V	
CMOZ2V4	2.28	2.4	2.52	5.0	100	25	1.0	F1
CMOZ2V6	2.47	2.6	2.73	5.0	100	25	1.0	F1A
CMOZ2V7	2.57	2.7	2.84	5.0	100	10	1.0	F2
CMOZ3V0	2.85	3.0	3.15	5.0	95	5.0	1.0	F3
CMOZ3V3	3.14	3.3	3.47	5.0	95	2.0	1.0	F4
CMOZ3V6	3.42	3.6	3.78	5.0	90	2.0	1.0	F5
CMOZ3V9	3.71	3.9	4.10	5.0	90	2.0	1.0	F6
CMOZ4V3	4.09	4.3	4.52	5.0	90	1.0	1.0	F7
CMOZ4V7	4.47	4.7	4.94	5.0	80	3.0	2.0	F8
CMOZ5V1	4.85	5.1	5.36	5.0	60	2.0	2.0	F9
CMOZ5V6	5.32	5.6	5.88	5.0	40	1.0	2.0	F0
CMOZ6V2	5.89	6.2	6.51	5.0	10	3.0	4.0	H1
CMOZ6V8	6.46	6.8	7.14	5.0	15	2.0	4.0	H2
CMOZ7V5	7.12	7.5	7.88	5.0	15	1.0	5.0	H3
CMOZ8V2	7.79	8.2	8.61	5.0	15	0.7	5.0	H4
CMOZ9V1	8.65	9.1	9.56	5.0	15	0.5	6.0	H5
CMOZ10V	9.50	10	10.50	5.0	20	0.2	7.0	H6

Notes: (1) Ceramic or aluminum core PC Board with copper mounting pad area of 4.0mm<sup>2</sup>  
 (2) FR-4 Epoxy PC Board with copper mounting pad area of 4.0mm<sup>2</sup>  
 (3) FR-4 Epoxy PC Board with copper mounting pad area of 1.4mm<sup>2</sup>

R6 (15-April 2011)

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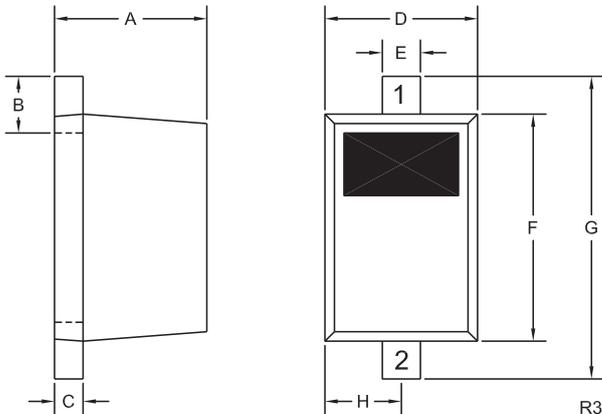
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5% TOLERANCE**



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

TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT $I_{ZT}$ mA	MAXIMUM ZENER IMPEDANCE $Z_{ZT} @ I_{ZT}$ $\Omega$	MAXIMUM REVERSE CURRENT $I_R @ V_R$		MARKING CODE
	MIN V	NOM V	MAX V			$\mu\text{A}$	V	
CMOZ11V	10.45	11	11.55	5.0	20	0.1	8.0	H7
CMOZ12V	11.40	12	12.60	5.0	25	0.1	8.0	H8
CMOZ13V	12.35	13	13.65	5.0	30	0.1	8.0	H9
CMOZ15V	14.25	15	15.75	5.0	30	0.05	10.5	H0
CMOZ16V	15.20	16	16.80	5.0	40	0.05	11.2	J1
CMOZ18V	17.10	18	18.90	5.0	45	0.05	12.6	J2
CMOZ20V	19.00	20	21.00	5.0	55	0.05	14.0	J3
CMOZ22V	20.90	22	23.10	5.0	55	0.05	15.4	J4
CMOZ24V	22.80	24	25.20	5.0	70	0.05	16.8	J5
CMOZ27V	25.65	27	28.35	5.0	80	0.05	18.9	J6
CMOZ30V	28.50	30	31.50	5.0	80	0.05	21.0	J7
CMOZ33V	31.35	33	34.65	5.0	80	0.05	23.1	J8
CMOZ36V	34.20	36	37.80	5.0	90	0.05	25.2	J9
CMOZ39V	37.05	39	40.95	5.0	130	0.05	27.3	J0
CMOZ43V	40.85	43	45.15	5.0	150	0.05	30.1	K1

**SOD-523 CASE - MECHANICAL OUTLINE**



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.020	0.031	0.50	0.80
B	0.008	0.016	0.20	0.40
C	0.002	0.008	0.05	0.20
D	0.028	0.035	0.70	0.90
E	0.008	0.014	0.20	0.35
F	0.039	0.055	1.00	1.40
G	0.055	0.071	1.40	1.80
H	0.016		0.40	

SOD-523 (REV: R3)

**LEAD CODE:**

- 1) Cathode
- 2) Anode

R6 (15-April 2011)

## 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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