

CMOZ2V4 THRU CMOZ43V

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

**ULTRAmi™**



**SOD-523 CASE**

**Central™**  
**Semiconductor Corp.**

**DESCRIPTION:**

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

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

**ABSOLUTE MAXIMUM RATINGS:**

Power Dissipation ( $T_A=50^\circ\text{C}$ )  
Power Dissipation ( $T_A=25^\circ\text{C}$ )  
Power Dissipation ( $T_A=25^\circ\text{C}$ )  
Operating and Storage Temperature  
Thermal Resistance ( $P_D=300\text{ mW}$ )

**SYMBOL**

$P_D$   
 $P_D$   
 $P_D$   
 $T_J, T_{stg}$   
 $\theta_{JA}$

**UNIT**

mW (Note 1)  
mW (Note 2)  
mW (Note 3)  
 $^\circ\text{C}$   
 $^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$ ),  $V_F=0.9\text{ MAX @ }I_F=10\text{mA}$  FOR ALL TYPES.

TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT	MAXIMUM ZENER IMPEDANCE	MAXIMUM REVERSE CURRENT		MARKING CODE
	MIN	NOM	MAX	$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$I_R @ V_R$		
	VOLTS	VOLTS	VOLTS	mA	$\Omega$	$\mu\text{A}$	VOLTS	
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

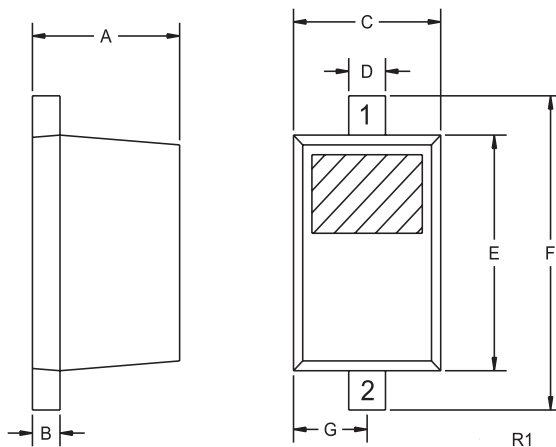
Notes: (1) Ceramic or aluminum core PC Board with copper mounting pad area of 4.0 mm<sup>2</sup>  
(2) FR-4 Epoxy PC Board with copper mounting pad area of 4.0 mm<sup>2</sup>  
(3) FR-4 Epoxy PC Board with copper mounting pad area of 1.4 mm<sup>2</sup>

R3 (11-November 2004)

**ELECTRICAL CHARACTERISTICS (CONTINUED):**

TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT	MAXIMUM ZENER IMPEDANCE	MAXIMUM REVERSE CURRENT		MARKING CODE
	MIN	NOM	MAX	$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$I_R @ V_R$		
	VOLTS	VOLTS	VOLTS	mA	$\Omega$	$\mu A$	VOLTS	
CMOZ10V	9.50	10	10.50	5.0	20	0.2	7.0	H6
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	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.020	0.031	0.50	0.80
B	0.004	0.008	0.10	0.20
C	0.028	0.035	0.70	0.90
D	0.008	0.011	0.20	0.28
E	0.039	0.055	1.00	1.40
F	0.055	0.071	1.40	1.80
G	0.016		0.40	

SOD-523 (REV: R1)

**LEAD CODE:**

- 1) CATHODE
- 2) ANODE

R3 (11-November 2004)