

CMSZDA2V4  
THRU  
CMSZDA47V

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

**SUPER**mini™



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:** ( $T_A=25^\circ\text{C}$ )

Power Dissipation

Operating and Storage Temperature

Thermal Resistance

**SYMBOL**

$P_D$

275

**UNITS**

mW

$T_J, T_{stg}$

-65 TO +150

$^\circ\text{C}$

$\Theta_{JA}$

455

$^\circ\text{C/W}$

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

TYPE NO.	ZENER VOLTAGE		TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER CURRENT	MAXIMUM ZENER VOLTAGE TEMP. COEFF.	MARKING CODE
	$V_Z @ I_{ZT}$			$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$					
	MIN	MAX	$I_{ZT}$			$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$			
	VOLTS	VOLTS	mA	$\Omega$	$\Omega$	mA	$\mu\text{A}$	VOLTS	mA	% / $^\circ\text{C}$	
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

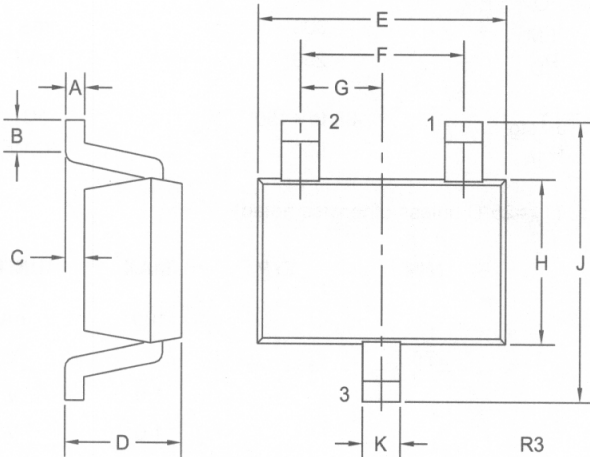
For Typical Electrical Characteristic Data for Zener Voltages 2.2V thru 6.2V and for 6.8V thru 44V, please see Process CPZ18 & CPZ19 on pages 888 & 889, respectively.

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275mW**

**ELECTRICAL CHARACTERISTICS PER DIODE (Continued)**

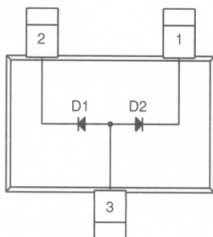
TYPE NO.	ZENER VOLTAGE		TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER CURRENT	MAXIMUM ZENER VOLTAGE TEMP. COEFF.	MARKING CODE
	$V_Z @ I_{ZT}$			$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$				
	MIN	MAX	$I_{ZT}$		$\Omega$	$\Omega$	mA	$\mu A$	VOLTS	mA	
	VOLTS	VOLTS	mA	$\Omega$	$\Omega$	mA	$\mu A$	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**



SYMBOL	DIMENSIONS			
	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

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

DATA SHEETS