

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<sub>A</sub>=25°C)

Power Dissipation  
Operating and Storage Junction Temperature  
Thermal Resistance

SYMBOL

P<sub>D</sub> 275  
T<sub>J</sub>, T<sub>stg</sub> -65 to +150  
θ<sub>JA</sub> 455

UNITS

mW  
°C  
°C/W

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

TYPE	ZENER VOLTAGE V <sub>Z</sub> @ I <sub>ZT</sub>			TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER CURRENT	MAXIMUM ZENER VOLTAGE TEMP. COEFF.	MARKING CODE
	MIN	NOM	MAX	I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub> @ V <sub>R</sub>	I <sub>ZM</sub>	θV <sub>Z</sub>	
	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

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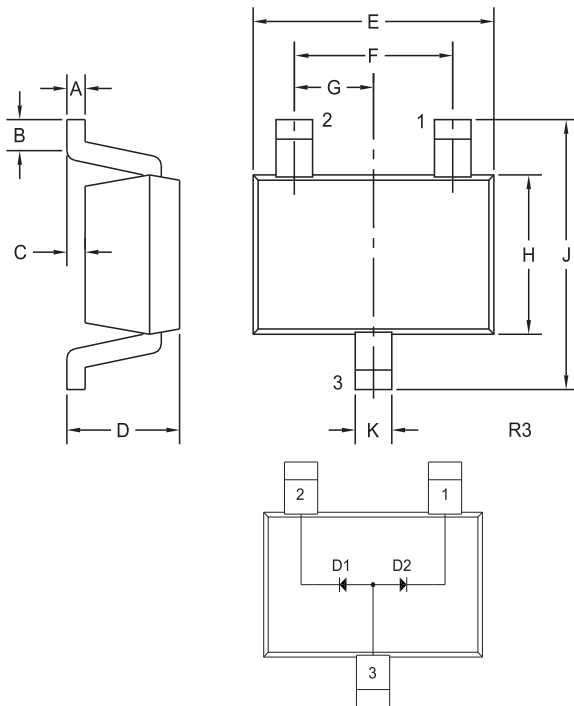
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**ELECTRICAL CHARACTERISTICS PER DIODE - Continued:** ( $T_A=25^\circ\text{C}$ )  $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$  (for all types)

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. $\theta_{VZ}$	MARKING CODE
	MIN	NOM	MAX		$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$					
	V	V	V		$\Omega$	$\Omega$	$\mu\text{A}$					
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	DIMENSIONS			
	INCHES		MILLIMETERS	
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)