



**THE DATASHEET OF  
CMDZ5244B TR PBFREE**



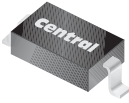
**CMDZ5221B THRU CMDZ5261B**

**SURFACE MOUNT  
SILICON ZENER DIODE  
2.4 VOLTS THRU 47 VOLTS  
250mW, 5% TOLERANCE**



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

**SUPERmini™**



**SOD-323 CASE**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMDZ5221B Series Silicon Zener Diode is a high quality voltage regulator, manufactured in a super-mini surface mount package, designed 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 Temperature  
Thermal Resistance

**SYMBOL**

P<sub>D</sub>  
T<sub>J</sub>, T<sub>stg</sub>  
Θ<sub>JA</sub>

**UNITS**

mW  
°C  
°C/W

**ELECTRICAL CHARACTERISTICS:** (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 I <sub>ZT</sub>	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER VOLTAGE TEMPERATURE COEFFICIENT ΘV <sub>Z</sub>	MARKING CODE
	MIN	NOM	MAX		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>R</sub> @ V <sub>R</sub>			
	V	V	V	mA	Ω	Ω	mA	μA	V	%/°C	
CMDZ5221B	2.280	2.4	2.520	20	30	1200	0.25	100	1.0	-0.085	X1
CMDZ5222B	2.375	2.5	2.625	20	30	1250	0.25	100	1.0	-0.085	X2
CMDZ5223B	2.565	2.7	2.835	20	30	1300	0.25	75	1.0	-0.080	X3
CMDZ5224B	2.660	2.8	2.940	20	30	1400	0.25	75	1.0	-0.080	X4
CMDZ5225B	2.850	3.0	3.150	20	29	1600	0.25	50	1.0	-0.075	X5
CMDZ5226B	3.135	3.3	3.465	20	28	1600	0.25	25	1.0	-0.070	X6
CMDZ5227B	3.420	3.6	3.780	20	24	1700	0.25	15	1.0	-0.065	X7
CMDZ5228B	3.705	3.9	4.095	20	23	1900	0.25	10	1.0	-0.060	X8
CMDZ5229B	4.085	4.3	4.515	20	22	2000	0.25	5.0	1.0	±0.055	X9
CMDZ5230B	4.465	4.7	4.935	20	19	1900	0.25	5.0	2.0	±0.030	XA
CMDZ5231B	4.845	5.1	5.355	20	17	1600	0.25	5.0	2.0	±0.030	XB
CMDZ5232B	5.320	5.6	5.880	20	11	1600	0.25	5.0	3.0	+0.038	XC
CMDZ5233B	5.700	6.0	6.300	20	7.0	1600	0.25	5.0	3.5	+0.038	XD
CMDZ5234B	5.890	6.2	6.510	20	7.0	1000	0.25	5.0	4.0	+0.045	XE
CMDZ5235B	6.460	6.8	7.140	20	5.0	750	0.25	3.0	5.0	+0.050	XF
CMDZ5236B	7.125	7.5	7.875	20	6.0	500	0.25	3.0	6.0	+0.058	XG
CMDZ5237B	7.790	8.2	8.610	20	8.0	500	0.25	3.0	6.5	+0.062	XH
CMDZ5238B	8.265	8.7	9.135	20	8.0	600	0.25	3.0	6.5	+0.065	XJ
CMDZ5239B	8.645	9.1	9.555	20	10	600	0.25	3.0	7.0	+0.068	XK
CMDZ5240B	9.500	10	10.50	20	17	600	0.25	3.0	8.0	+0.075	XL
CMDZ5241B	10.45	11	11.55	20	22	600	0.25	2.0	8.4	+0.076	XN
CMDZ5242B	11.40	12	12.60	20	30	600	0.25	1.0	9.1	+0.077	XO

CMDZ5221B THRU CMDZ5261B

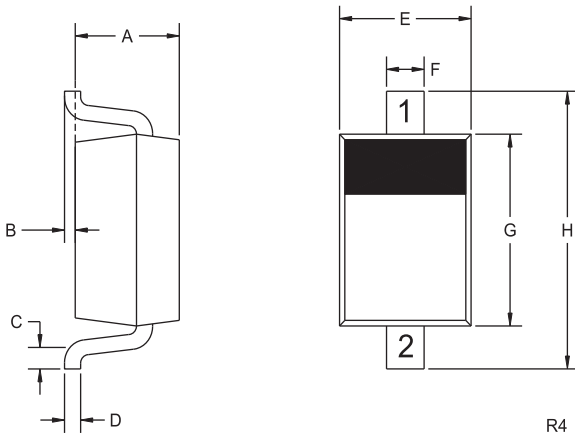
SURFACE MOUNT  
SILICON ZENER DIODE  
2.4 VOLTS THRU 47 VOLTS  
250mW, 5% TOLERANCE



ELECTRICAL CHARACTERISTICS - 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	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER VOLTAGE TEMPERATURE COEFFICIENT	MARKING CODE
	MIN	NOM	MAX	$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$	$\theta_{VZ}$			
	V	V	V	mA	$\Omega$	$\Omega$	$\mu\text{A}$	V	%/ $^\circ\text{C}$		
CMDZ5243B	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9	+0.079	XP
CMDZ5244B	13.30	14	14.70	9.0	15	600	0.25	0.1	10	+0.082	XQ
CMDZ5245B	14.25	15	15.75	8.5	16	600	0.25	0.1	11	+0.082	XR
CMDZ5246B	15.20	16	16.80	7.8	17	600	0.25	0.1	12	+0.083	XS
CMDZ5247B	16.15	17	17.85	7.4	19	600	0.25	0.1	13	+0.084	XT
CMDZ5248B	17.10	18	18.90	7.0	21	600	0.25	0.1	14	+0.085	XU
CMDZ5249B	18.05	19	19.95	6.6	23	600	0.25	0.1	14	+0.086	XV
CMDZ5250B	19.00	20	21.00	6.2	25	600	0.25	0.1	15	+0.086	XX
CMDZ5251B	20.90	22	23.10	5.6	29	600	0.25	0.1	17	+0.087	XY
CMDZ5252B	22.80	24	25.20	5.2	33	600	0.25	0.1	18	+0.088	XZ
CMDZ5253B	23.75	25	26.25	5.0	35	600	0.25	0.1	19	+0.089	Y1
CMDZ5254B	25.65	27	28.35	4.6	41	600	0.25	0.1	21	+0.090	Y2
CMDZ5255B	26.60	28	29.40	4.5	44	600	0.25	0.1	21	+0.091	Y3
CMDZ5256B	28.50	30	31.50	4.2	49	600	0.25	0.1	23	+0.091	Y4
CMDZ5257B	31.35	33	34.65	3.8	58	700	0.25	0.1	25	+0.092	Y5
CMDZ5258B	34.20	36	37.80	3.4	70	700	0.25	0.1	27	+0.093	Y6
CMDZ5259B	37.05	39	40.95	3.2	80	800	0.25	0.1	30	+0.094	Y7
CMDZ5260B	40.85	43	45.15	3.0	93	900	0.25	0.1	33	+0.095	Y8
CMDZ5261B	44.65	47	49.35	2.7	105	1000	0.25	0.1	36	+0.095	Y9

SOD-323 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
A	0.031	0.039	0.80	1.00
B	0.000	0.004	0.00	0.10
C	0.008	-	0.20	-
D	0.004	0.007	0.11	0.19
E	0.045	0.053	1.15	1.35
F	-	0.014	-	0.35
G	0.063	0.071	1.60	1.80
H	0.094	0.102	2.40	2.60

SOD-323 (REV: R4)

LEAD CODE:

- 1) CATHODE
- 2) ANODE

R4

R4 (8-January 2010)

## 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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### 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).

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### CONTACT US

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