THE DATASHEET OF

CMPZ5249BTR

CMPZ5221B THRU CMPZ5267B

SURFACE MOUNT
SILICON ZENER DIODE
350mW, 5% TOLERANCE

SOT-23 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPZ5221B Series silicon zener diode is a high quality voltage regulator for use in industrial, commercial, entertainment and computer applications. Higher voltage devices are available on special order.

MARKING CODE: SEE MARKING CODES ON ELECTRICAL CHARACTERISTICS TABLE

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Power Dissipation	P_D	350	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C

Note: V_Z Tolerance “B” suffix = ±5%, V_Z Tolerance “C” suffix = ±2%, V_Z Tolerance “D” suffix = ±1%

ELECTRICAL CHARACTERISTICS: (T_A=25°C) V_F=0.9V MAX @ I_F=10mA (for all types)

TYPE	ZENER VOLTAGE V_Z @ I_{ZT}			TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAX. TEMP. COEFF.	MARK. CODE
	MIN	NOM	MAX	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}		I_R @ V_R		ΘV_Z	
	V	V	V	mA	Ω	Ω	mA	μA	V	% /°C	
CMPZ5221B	2.280	2.4	2.520	20	30	1200	0.25	100	1.0	-0.085	18A
CMPZ5222B	2.375	2.5	2.625	20	30	1250	0.25	100	1.0	-0.085	18B
CMPZ5223B	2.565	2.7	2.835	20	30	1300	0.25	75	1.0	-0.080	18C
CMPZ5224B	2.660	2.8	2.940	20	30	1400	0.25	75	1.0	-0.080	18D
CMPZ5225B	2.850	3.0	3.150	20	29	1600	0.25	50	1.0	-0.075	18E
CMPZ5226B	3.135	3.3	3.465	20	28	1600	0.25	25	1.0	-0.070	C8A
CMPZ5227B	3.420	3.6	3.780	20	24	1700	0.25	15	1.0	-0.065	C8B
CMPZ5228B	3.705	3.9	4.095	20	23	1900	0.25	10	1.0	-0.060	C8C
CMPZ5229B	4.085	4.3	4.515	20	22	2000	0.25	5.0	1.0	±0.055	C8D
CMPZ5230B	4.465	4.7	4.935	20	19	1900	0.25	5.0	2.0	±0.030	C8E
CMPZ5231B	4.845	5.1	5.335	20	17	1600	0.25	5.0	2.0	±0.030	C8F
CMPZ5232B	5.320	5.6	5.880	20	11	1600	0.25	5.0	3.0	+0.038	C8G
CMPZ5233B	5.700	6.0	6.300	20	7.0	1600	0.25	5.0	3.5	+0.038	C8H
CMPZ5234B	5.890	6.2	6.510	20	7.0	1000	0.25	5.0	4.0	+0.045	C8J
CMPZ5235B	6.460	6.8	7.140	20	5.0	750	0.25	3.0	5.0	+0.050	C8K
CMPZ5236B	7.125	7.5	7.875	20	6.0	500	0.25	3.0	6.0	+0.058	C8L
CMPZ5237B	7.790	8.2	8.610	20	8.0	500	0.25	3.0	6.5	+0.062	C8M
CMPZ5238B	8.265	8.7	9.135	20	8.0	600	0.25	3.0	6.5	+0.065	C8N
CMPZ5239B	8.645	9.1	9.555	20	10	600	0.25	3.0	7.0	+0.068	C8P
CMPZ5240B	9.500	10	10.50	20	17	600	0.25	3.0	8.0	+0.075	C8Q
CMPZ5241B	10.45	11	11.55	20	22	600	0.25	2.0	8.4	+0.076	C8R
CMPZ5242B	11.40	12	12.60	20	30	600	0.25	1.0	9.1	+0.077	C8S
CMPZ5243B	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9	+0.079	C8T
CMPZ5244B	13.30	14	14.70	9.0	15	600	0.25	0.1	10	+0.082	C8U

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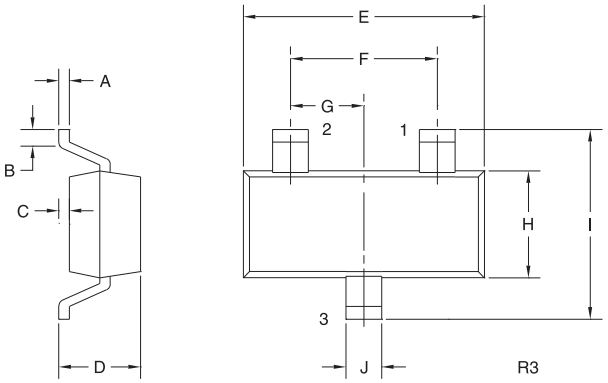
ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C) V_F=0.9V MAX @ I_F=10mA (for all types)

TYPE	ZENER VOLTAGE V_Z @ I_{ZT}			TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAX. TEMP. COEFF.	MARK. CODE
	MIN	NOM	MAX	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZT} @ I_{ZK}		I_R @ V_R		ΘV_Z	
	V	V	V	mA	Ω	Ω	mA	μA	V	% /°C	
CMPZ5245B	14.25	15	15.75	8.5	16	600	0.25	0.1	11	+0.082	C8V
CMPZ5246B	15.20	16	16.80	7.8	17	600	0.25	0.1	12	+0.083	C8W
CMPZ5247B	16.15	17	17.85	7.4	19	600	0.25	0.1	13	+0.084	C8X
CMPZ5248B	17.10	18	18.90	7.0	21	600	0.25	0.1	14	+0.085	C8Y
CMPZ5249B	18.05	19	19.95	6.6	23	600	0.25	0.1	14	+0.086	C8Z
CMPZ5250B	19.00	20	21.00	6.2	25	600	0.25	0.1	15	+0.086	81A
CMPZ5251B	20.90	22	23.10	5.6	29	600	0.25	0.1	17	+0.087	81B
CMPZ5252B	22.80	24	25.20	5.2	33	600	0.25	0.1	18	+0.088	81C
CMPZ5253B	23.75	25	26.25	5.0	35	600	0.25	0.1	19	+0.089	81D
CMPZ5254B	25.65	27	28.35	4.6	41	600	0.25	0.1	21	+0.090	81E
CMPZ5255B	26.60	28	29.40	4.5	44	600	0.25	0.1	21	+0.091	81F
CMPZ5256B	28.50	30	31.50	4.2	49	600	0.25	0.1	23	+0.091	81G
CMPZ5257B	31.35	33	34.65	3.8	58	700	0.25	0.1	25	+0.092	81H
CMPZ5258B	34.20	36	37.80	3.4	70	700	0.25	0.1	27	+0.093	81J
CMPZ5259B	37.05	39	40.95	3.2	80	800	0.25	0.1	30	+0.094	81K
CMPZ5260B	40.85	43	45.15	3.0	93	900	0.25	0.1	33	+0.095	81L
CMPZ5261B	44.65	47	49.35	2.7	105	1000	0.25	0.1	36	+0.095	81M
CMPZ5262B	48.45	51	53.55	2.5	125	1100	0.25	0.1	39	+0.096	81N
CMPZ5263B	53.20	56	58.80	2.2	150	1300	0.25	0.1	43	+0.096	81P
CMPZ5264B	57.00	60	63.00	2.1	170	1400	0.25	0.1	46	+0.097	81Q
CMPZ5265B	58.90	62	65.10	2.0	185	1400	0.25	0.1	47	+0.097	81R
CMPZ5266B	64.60	68	71.40	1.8	230	1600	0.25	0.1	52	+0.097	81S
CMPZ5267B	71.25	75	78.75	1.7	270	1700	0.25	0.1	56	+0.098	81T

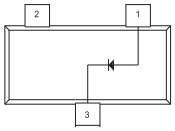
SOT-23 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

LEAD CODE:
1) Anode
2) No Connection
3) Cathode



R10 (3-February 2010)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

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

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd 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

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).

CONTACT US

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- Shortage Management
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