

CLL5221B THRU CLL5267B

**SURFACE MOUNT SILICON  
ZENER DIODES  
500mW, 2.4 THRU 75 VOLT**



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CLL5221B series silicon Zener diodes are highly reliable voltage regulators designed for use in industrial, commercial, entertainment, and computer applications.

**MARKING: CATHODE BAND**



**SOD-80 CASE**

**MAXIMUM RATINGS:**

Power Dissipation ( $T_A=50^\circ\text{C}$ )  
 Operating and Storage Temperature  
 $V_Z$  Tolerance: Part number with Tolerance "B"  
 $V_Z$  Tolerance: Part number with Tolerance "C"  
 $V_Z$  Tolerance: Part number with Tolerance "D"

**SYMBOL**

$P_D$  500  
 $T_J, T_{stg}$  -65 to +200  
 $V_Z$  Tolerance: Part number with Tolerance "B"  $\pm 5$   
 $V_Z$  Tolerance: Part number with Tolerance "C"  $\pm 2$   
 $V_Z$  Tolerance: Part number with Tolerance "D"  $\pm 1$

**UNIT**

mW  
 $^\circ\text{C}$   
 %  
 %  
 %

**ELECTRICAL CHARACTERISTICS: ( $T_A=25^\circ\text{C}$ )  $V_F=1.25\text{V MAX @ } I_F=200\text{mA}$  (for all types)**

TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT $I_{ZT}$	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER VOLTAGE TEMPERATURE COEFFICIENT $\theta V_Z$
	MIN	NOM	MAX		$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$			
	V	V	V		mA	$\Omega$	$\Omega$	$\mu\text{A}$	V	
CLL5221B	2.280	2.4	2.520	20	30	1200	0.25	100	1.0	-0.085
CLL5222B	2.375	2.5	2.625	20	30	1250	0.25	100	1.0	-0.085
CLL5223B	2.565	2.7	2.835	20	30	1300	0.25	75	1.0	-0.080
CLL5224B	2.660	2.8	2.940	20	30	1400	0.25	75	1.0	-0.080
CLL5225B	2.850	3.0	3.150	20	29	1600	0.25	50	1.0	-0.075
CLL5226B	3.135	3.3	3.465	20	28	1600	0.25	25	1.0	-0.070
CLL5227B	3.420	3.6	3.780	20	24	1700	0.25	15	1.0	-0.065
CLL5228B	3.705	3.9	4.095	20	23	1900	0.25	10	1.0	-0.060
CLL5229B	4.085	4.3	4.515	20	22	2000	0.25	5.0	1.0	$\pm 0.055$
CLL5230B	4.465	4.7	4.935	20	19	1900	0.25	5.0	2.0	$\pm 0.030$
CLL5231B	4.845	5.1	5.355	20	17	1600	0.25	5.0	2.0	$\pm 0.030$
CLL5232B	5.320	5.6	5.880	20	11	1600	0.25	5.0	3.0	+0.038
CLL5233B	5.700	6.0	6.300	20	7.0	1600	0.25	5.0	3.5	+0.038
CLL5234B	5.890	6.2	6.510	20	7.0	1000	0.25	5.0	4.0	+0.045
CLL5235B	6.460	6.8	7.140	20	5.0	750	0.25	3.0	5.0	+0.050
CLL5236B	7.125	7.5	7.875	20	6.0	500	0.25	3.0	6.0	+0.058
CLL5237B	7.790	8.2	8.610	20	8.0	500	0.25	3.0	6.5	+0.062
CLL5238B	8.265	8.7	9.135	20	8.0	600	0.25	3.0	6.5	+0.065
CLL5239B	8.645	9.1	9.555	20	10	600	0.25	3.0	7.0	+0.068
CLL5240B	9.500	10	10.50	20	17	600	0.25	3.0	8.0	+0.075
CLL5241B	10.45	11	11.55	20	22	600	0.25	2.0	8.4	+0.076
CLL5242B	11.40	12	12.60	20	30	600	0.25	1.0	9.1	+0.077
CLL5243B	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9	+0.079
CLL5244B	13.30	14	14.70	9.0	15	600	0.25	0.1	10	+0.082
CLL5245B	14.25	15	15.75	8.5	16	600	0.25	0.1	11	+0.082

CLL5221B THRU CLL5267B

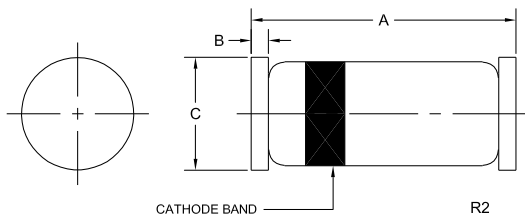
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ELECTRICAL CHARACTERISTICS - Continued: ( $T_A=25^\circ\text{C}$ )  $V_F=1.25\text{V MAX @ } I_F=200\text{mA}$  (for all types)

TYPE	ZENER VOLTAGE $V_Z @ I_{ZT}$			TEST CURRENT	MAXIMUM ZENER IMPEDANCE			MAXIMUM REVERSE CURRENT		MAXIMUM ZENER VOLTAGE TEMPERATURE COEFFICIENT
	MIN	NOM	MAX	$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$			$\Theta V_Z$
	V	V	V	mA	$\Omega$	$\Omega$ mA	$\mu\text{A}$	V	%/°C	
CLL5246B	15.20	16	16.80	7.8	17	600 0.25	0.1	12	+0.083	
CLL5247B	16.15	17	17.85	7.4	19	600 0.25	0.1	13	+0.084	
CLL5248B	17.10	18	18.90	7.0	21	600 0.25	0.1	14	+0.085	
CLL5249B	18.05	19	19.95	6.6	23	600 0.25	0.1	14	+0.086	
CLL5250B	19.00	20	21.00	6.2	25	600 0.25	0.1	15	+0.086	
CLL5251B	20.90	22	23.10	5.6	29	600 0.25	0.1	17	+0.087	
CLL5252B	22.80	24	25.20	5.2	33	600 0.25	0.1	18	+0.088	
CLL5253B	23.75	25	26.25	5.0	35	600 0.25	0.1	19	+0.089	
CLL5254B	25.65	27	28.35	4.6	41	600 0.25	0.1	21	+0.090	
CLL5255B	26.60	28	29.40	4.5	44	600 0.25	0.1	21	+0.091	
CLL5256B	28.50	30	31.50	4.2	49	600 0.25	0.1	23	+0.091	
CLL5257B	31.35	33	34.65	3.8	58	700 0.25	0.1	25	+0.092	
CLL5258B	34.20	36	37.80	3.4	70	700 0.25	0.1	27	+0.093	
CLL5259B	37.05	39	40.95	3.2	80	800 0.25	0.1	30	+0.094	
CLL5260B	40.85	43	45.15	3.0	93	900 0.25	0.1	33	+0.095	
CLL5261B	44.65	47	49.35	2.7	105	100 0.25	0.1	36	+0.095	
CLL5262B	48.45	51	53.55	2.5	125	1100 0.25	0.1	39	+0.096	
CLL5263B	53.20	56	58.80	2.2	150	1300 0.25	0.1	43	+0.096	
CLL5264B	57.00	60	63.00	2.1	170	1400 0.25	0.1	46	+0.097	
CLL5265B	58.90	62	65.10	2.0	185	1400 0.25	0.1	47	+0.097	
CLL5266B	64.60	68	71.40	1.8	230	1600 0.25	0.1	52	+0.097	
CLL5267B	71.25	75	78.75	1.7	270	1700 0.25	0.1	56	+0.098	

SOD-80 CASE - MECHANICAL OUTLINE



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.130	0.146	3.30	3.71
B	0.014		0.35	
C (DIA)	0.049	0.067	1.25	1.70

SOD-80 (REV:R2)

MARKING: CATHODE BAND

R7 (9-September 2013)

## 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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### CONTACT US

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