

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		$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_R @ V_R$	$V_R$		
	V	V	V						mA	
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

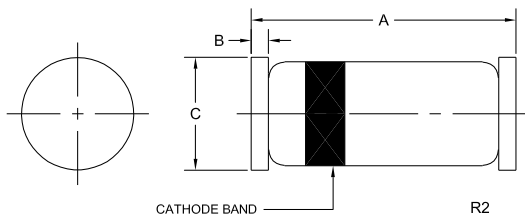
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ELECTRICAL CHARACTERISTICS - Continued: ( $T_A=25^\circ\text{C}$ )  $V_F=1.25\text{V MAX @ } I_F=200\text{mA}$  (for all types)

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



SYMBOL	DIMENSIONS			
	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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### 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

#### Corporate Headquarters & Customer Support Team

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Main Fax: (631) 435-1824  
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[www.centrasemi.com](http://www.centrasemi.com)

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**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

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For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centrasemi.com/terms](http://www.centrasemi.com/terms)

# Product End of Life Notification

<b>PDN ID:</b>	PDN01084
<b>Notification Date:</b>	5/31/18
<b>Last Buy Date:</b>	11/30/18
<b>Last Shipment Date</b>	5/31/19

Summary: All extreme low and high voltage Zener diodes in the SOD-80 package are discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Management Process. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

<u>Central Part Number</u>	<u>Replacement</u>
CLL5225B BK	N/A
CLL5225B TR	N/A
CLL5226B BK	N/A
CLL5226B TR	N/A
CLL5226C BK	N/A
CLL5226C TR	N/A
CLL5227B BK	N/A
CLL5227B TR	N/A
CLL5228B BK	N/A
CLL5228B TR	N/A
CLL5229B BK	N/A
CLL5229B TR	N/A
CLL5229D BK	N/A
CLL5230-3 TR	N/A
CLL5230B BK	N/A
CLL5230B TR	N/A
CLL5230C BK	N/A
CLL5230C TR	N/A
CLL5231B BK	N/A
CLL5231B TR	N/A
CLL5231C BK	N/A
CLL5231C TR	N/A
CLL5232B BK	N/A
CLL5232B TR	N/A
CLL5232D BK	N/A
CLL5232D TR	N/A
CLL5233B BK	N/A
CLL5233B TR	N/A
CLL5234B BK	N/A
CLL5234B TR	N/A
CLL5234C TR	N/A
CLL5234D BK	N/A
CLL5234D TR	N/A
CLL5235B BK	N/A
CLL5235B TR	N/A
CLL5262B BK	N/A
CLL5262B TR	N/A

\*\*\* CONTINUED \*\*\*

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.



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\*\*\* CONTINUED FROM PRIOR PAGE \*\*\*

<u>Central Part Number</u>	<u>Replacement</u>
CLL5263B BK	N/A
CLL5263B TR	N/A
CLL5264B TR	N/A
CLL5265B TR	N/A
CLL5265C TR	N/A
CLL5266B TR	N/A
CLL5267B TR	N/A

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to [engineering@centrasemi.com](mailto:engineering@centrasemi.com).

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[3SMAJ5946B-TP](#) [3SMAJ5950B-TP](#) [3SMBJ5920B-TP](#) [3SMBJ5925B-TP](#) [TDZTR24](#) [441774C](#) [MMSZ4678-TP](#) [MMSZ5232BQ-13-F](#)  
[BZG04-36](#) [BZG05C9V1-HE3-TR](#) [HZM30NBTR-E](#) [UDZTE-175.1B](#) [3SMAJ5945B-TP](#) [3SMAJ5947B-TP](#) [3SMBJ5941B-TP](#) [DL4746A-TP](#)  
[RKZ18B2KK#R1](#) [RKZ10B2KL#R1](#) [RKZ6.8B2KL#R1](#) [RKZ8.2B2KL#R1](#) [DZ2S240M0L](#) [SMAZ27-TP](#) [SMBZ5920B-E3/52](#) [ZMM3.0](#)  
[RD16UM-T1-A](#) [RD39S-T1-A](#) [RD9.1S-T1-A](#) [RD10S-T1-A](#) [RD20S-T1-A](#) [RD2.2S-T1-A](#) [RD2.7UM-T1-A](#) [HZM24NB1TL-E](#)