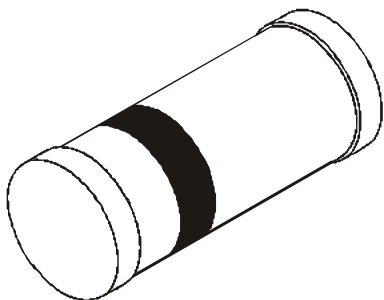


SILICON ZENER DIODES

CLL5230A - CLL5261A



SOD-80C

Hermetically Sealed Glass Silicon Zener Diodes

SOD-80C Zener Diodes

CLL5230A to CLL5261A, 500mW Hermetically Sealed, Glass Silicon Zener Diodes

Maximum Ratings

Ratings	Symbol	Value	Unit
DC Power Dissipation @ $T_A \leq 50^\circ\text{C}$ Derate above $T_A = 50^\circ\text{C}$	P_D	500 3.3	mW mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	$T_J - T_{stg}$	- 65 to + 200	$^\circ\text{C}$

Electrical Characteristics

$T_A = 25^\circ\text{C}$ Unless otherwise noted Based on dc measurements at thermal equilibrium; case temperature maintained at $30 \pm 2^\circ\text{C}$. $V_F = 1.1$ max @ $I_F = 200$ mA for all types.

Type No. (Note 1)	Nominal Zener Voltage V _Z @ I _{ZT} Volts (Note 2)	Test Current I _{ZT} mA (Note 2)	Max Zener Impedance		Max Reverse Leakage Current				Max Zener Voltage Temperature Coeff. (A and B Suffix only) θ VZ (%/°C)
			A and B Suffix only		A and B Suffix only		Non-Suffix		
			Z _{ZT} @ I _{ZT} Ohms	Z _{ZK} @ I _{ZK} = 0.25 mA Ohms	I _R μA	@ V _R Volts	I _R @ V _R Used for Suffix A μA		
						A	B		
CLL5230A	4.7	20	19	1900	5.0	1.9	2.0	50	± 0.030
CLL5231A	5.1	20	17	1600	5.0	1.9	2.0	50	± 0.030
CLL5232A	5.6	20	11	1600	5.0	2.9	3.0	50	+ 0.038
CLL5233A	6.0	20	7	1600	5.0	3.3	3.5	50	+ 0.038
CLL5234A	6.2	20	7	1000	5.0	3.8	4.0	50	+ 0.045
CLL5235A	6.8	20	5	750	3.0	4.8	5.0	30	+ 0.050
CLL5236A	7.5	20	6	500	3.0	5.7	6.0	30	+ 0.058
CLL5237A	8.2	20	8	500	3.0	6.2	6.5	30	+ 0.062
CLL5238A	8.7	20	8	600	3.0	6.2	6.5	30	+ 0.065
CLL5239A	9.1	20	10	600	3.0	6.7	7.0	30	+ 0.068
CLL5240A	10.0	20	17	600	3.0	7.6	8.0	30	+ 0.075
CLL5241A	11.0	20	22	600	2.0	8.0	8.4	30	+ 0.076
CLL5242A	12.0	20	30	600	1.0	8.7	9.1	10	+ 0.077
CLL5243A	13.0	9.5	13	600	0.5	9.4	9.9	10	+ 0.079
CLL5244A	14.0	9.0	15	600	0.1	9.5	10.0	10	+ 0.082
CLL5245A	15.0	8.5	16	600	0.1	10.5	11.0	10	+ 0.082
CLL5246A	16.0	7.8	17	600	0.1	11.4	12.0	10	+ 0.083
CLL5247A	17.0	7.4	19	600	0.1	12.4	13.0	10	+ 0.084

Electrical Characteristics

$T_A = 25^\circ\text{C}$ Unless otherwise noted Based on dc measurements at thermal equilibrium; case temperature maintained at $30 \pm 2^\circ\text{C}$. $V_F = 1.1$ max @ $I_F = 200$ mA for all types.

Type No. (Note 1)	Nominal Zener Voltage V _Z @ I _{ZT} Volts (Note 2)	Test Current I _{ZT} mA (Note 2)	Max Zener Impedance A and B Suffix only		Max Reverse Leakage Current				Max Zener Voltage Temperature Coeff. (A and B Suffix only) θ VZ (%/°C)
					A and B Suffix only		Non-Suffix		
			Z _{ZT} @ I _{ZT} Ohms	Z _{ZK} @ I _{ZK} = 0.25 mA Ohms	I _R μA	@ V _R Volts	I _R @ V _R Used for Suffix A μA		
			A	B					
CLL5248A	18.0	7.0	21	600	0.1	13.3	14.0	10	+ 0.085
CLL5249A	19.0	6.6	23	600	0.1	13.3	14.0	10	+ 0.086
CLL5250A	20.0	6.2	25	600	0.1	14.3	15.0	10	+ 0.086
CLL5251A	22.0	5.6	29	600	0.1	16.2	17.0	10	+ 0.087
CLL5252A	24.0	5.2	33	600	0.1	17.1	18.0	10	+ 0.088
CLL5253A	25.0	5.0	35	600	0.1	18.1	19.0	10	+ 0.089
CLL5254A	27.0	4.6	41	600	0.1	20.0	21.0	10	+ 0.090
CLL5255A	28.0	4.5	44	600	0.1	20.0	21.0	10	+ 0.091
CLL5256A	30.0	4.2	49	600	0.1	22.0	23.0	10	+ 0.091
CLL5257A	33.0	3.8	58	700	0.1	24.0	25.0	10	+ 0.092
CLL5258A	36.0	3.4	70	700	0.1	26.0	27.0	10	+ 0.093
CLL5259A	39.0	3.2	80	800	0.1	29.0	30.0	10	+ 0.094
CLL5260A	43.0	3.0	93	900	0.1	31.0	33.0	10	+ 0.095
CLL5261A	47.0	2.7	105	1000	0.1	34.0	36.0	10	+0.095

Polarity : Cathode indicated by colour band.

Note 1 : Suffix A for $\pm 10\%$ tolerance; Suffix B for $\pm 5\%$ tolerance.

Note 2 : Pulse test : $20\text{ms} \leq t_p \leq 50\text{ms}$.

CLL5230ARev290001

SOD - 80C
Mini MELF (LL-34)

Technical drawing of a 180 mm (7 inch) diameter reel. The drawing includes three views: a side view, a top view, and a cross-sectional view.

Side View: Shows the reel's profile. The central hub has a diameter of $\phi 1.40$ mm. The cathode band has a width of ± 0.025 mm. The reel's total width is 3.50 ± 0.20 mm. The cathode band's thickness is ± 0.04 mm. The reel's diameter is $\phi 1.50$ mm. The cathode band's width is ± 0.05 mm. The reel's length is 0.35 mm.

Top View: Shows the reel's circular face. The diameter is 180 mm. The central hole has a diameter of 4.5 mm. The hole's position is defined by a 120° angle and a distance of 3.5 mm from the center. The hole's diameter is ± 0.5 mm. The hole's length is 1.5 mm. The hole's width is 0.35 mm. The hole's depth is 0.35 mm. The hole's position is also defined by a 120° angle and a distance of 4.5 mm from the center.

Cross-sectional View: Shows the reel's thickness. The total thickness is 12.9 mm. The cathode band's width is 12.5 mm. The cathode band's thickness is 53.5 mm. The cathode band's width is 8.4 mm. The cathode band's thickness is 2.0 mm. The cathode band's width is 1.4 mm.

Identification Label: Part Number, Date Code, Quantity.

Reel ϕ 180 mm (7")
No. of Device 2,500

All Dimensions are in mm

Technical drawing of a cable reel with dimensions and labels. The drawing shows a side view of the reel with a cable wound around it. Key dimensions and labels include:

- De-reeling direction:** Indicated by an arrow pointing left.
- MAX:** Maximum dimensions for the cable thickness and the reel width.
- Dimensions:**
 - Reel width: 2.5
 - Cable thickness: ± 0.2
 - Reel height: 4.0
 - Reel diameter: ± 0.105
 - Reel diameter: 3.50
 - Reel diameter: 1.65
 - Reel diameter: 5.25
 - Reel diameter: 8.00
 - Reel diameter: ± 0.3
 - Reel diameter: 1.85
 - Reel diameter: 2.05
 - Reel diameter: 1.95
 - Reel diameter: 4.1
 - Reel diameter: 3.9
 - Reel diameter: 3.9
 - Reel diameter: 4.1
 - Reel diameter: 1.6
 - Reel diameter: 1.4

1. Maximum of 0.5% of the total number of components per reel may be missing-exclusively at the beginning and at the end of the reel.
2. A maximum of three consecutive components may be missing, provided this gap is followed by six consecutive components.



Packing Detail

CLL5230ARev290001

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Customer Notes

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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