

SOT-23 Formed SMD Package

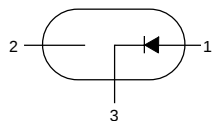
CMBZ52XX series

SILICON PLANAR ZENER DIODES

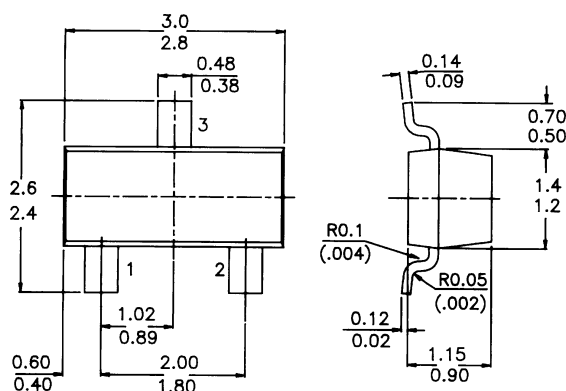
General purpose zener diodes

Pin configuration

- 1 = ANODE
2 = NC
3 = CATHODE



PACKAGE OUTLINE DETAILS ALL DIMENSIONS IN mm



Marking

CMBZ5230B = 8E	CMBZ5239B = 8P	CMBZ5248B = 8Y	CMBZ5257B = 81H
31B = 8F	40B = 8Q	49B = 8Z	
32B = 8G	41B = 8R	50B = 81A	
33B = 8H	42B = 8S	51B = 81B	
34B = 8J	43B = 8T	52B = 81C	
35B = 8K	44B = 8U	53B = 81D	
36B = 8L	45B = 8V	54B = 81E	
37B = 8M	46B = 8W	55B = 81F	
38B = 8N	47B = 8X	56B = 81G	

ABSOLUTE MAXIMUM RATINGS

Working voltage range
Working voltage tolerance
Total power dissipation up to $T_{amb} = 25^{\circ}\text{C}$
Junction temperature

V_Z	nom.	4.7 to 33 V
		$\pm 5\%$
P_{tot}	max.	300 mW
T_j	max.	150 $^{\circ}\text{C}$

CMBZ52XX series

RATINGS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Limiting values

Total power dissipation up to $T_{amb} = 25^\circ\text{C}^*$	P_{tot}	max.	300 mW
Total power dissipation up to $T_{amb} = 25^\circ\text{C}^{**}$	P_{tot}	max.	225 mW
Storage temperature	T_{stg}	-55 to -150	$^\circ\text{C}$
Junction temperature	T_j	max.	150 $^\circ\text{C}$

THERMAL RESISTANCE

From junction to ambient	$R_{th\ j-a}$	417 $^\circ\text{C/W}$
From junction to ambient	$R_{th\ j-a}$	556 $^\circ\text{C/W}$

CHARACTERISTICS

$T_j = 25^\circ\text{C}$ unless otherwise specified

$V_F = 0.9\text{V}$ Max. @ $I_F = 10\text{ mA}$

Device	Zener Voltage $V_Z (\pm 5\%)$ Nominal	Test Current I_{ZT} mA	Z_{ZK} $I_Z=0.25\text{mA}$ ohm max	Z_{ZT} $I_Z = I_{ZT}$ @10% Mod ohm max	Max I_R uA max	@ V_R (V)
CMBZ-5230B	4.7	20	1900	19	5.0	2.0
CMBZ-5231B	5.1	20	1600	17	5.0	2.0
CMBZ-5232B	5.6	20	1600	11	5.0	3.0
CMBZ-5233B	6.0	20	1600	7.0	5.0	3.5
CMBZ-5234B	6.2	20	1000	7.0	5.0	4.0
CMBZ-5235B	6.8	20	750	5.0	3.0	5.0
CMBZ-5236B	7.5	20	500	6.0	3.0	6.0
CMBZ-5237B	8.2	20	500	8.0	3.0	6.5
CMBZ-5238B	8.7	20	600	8.0	3.0	6.5
CMBZ-5239B	9.1	20	600	10	3.0	7.0
CMBZ-5240B	10	20	600	17	3.0	8.0
CMBZ-5241B	11	20	600	22	2.0	8.4
CMBZ-5242B	12	20	600	30	1.0	9.1
CMBZ-5243B	13	9.5	600	13	0.5	9.9
CMBZ-5244B	14	9.0	600	15	0.1	10
CMBZ-5245B	15	8.5	600	16	0.1	11
CMBZ-5246B	16	7.8	600	17	0.1	12
CMBZ-5247B	17	7.4	600	19	0.1	13
CMBZ-5248B	18	7.0	600	21	0.1	14
CMBZ-5249B	19	6.6	600	23	0.1	14
CMBZ-5250B	20	6.2	600	25	0.1	15
CMBZ-5251B	22	5.6	600	29	0.1	17

* Device mounted on a ceramic alumina of 8 mm × 10 mm × 0.7 mm

** Device mounted on an FR5 printed circuit board

CMBZ52XX series

Device	Zener Voltage $V_Z (\pm 5\%)$ Nominal	Test Current I_{ZT} mA	Z_{ZK} $I_Z = 0.25 \text{ mA}$ ohm max	Z_{ZT} $I_Z = I_{ZT}$ @10% Mod ohm max	Max I_R uA max	@ V_R (V)
CMBZ-5252B	24	5.2	600	33	0.1	18
CMBZ-5253B	25	5.0	600	35	0.1	19
CMBZ-5254B	27	4.6	600	41	0.1	21
CMBZ-5255B	28	4.5	600	44	0.1	21
CMBZ-5256B	30	4.2	600	49	0.1	23
CMBZ-5257B	33	3.8	700	58	0.1	25

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete 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 on the CDIL Web Site/ CD is 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).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



CDIL is a registered Trademark of
Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-579 6150 Fax + 91-11-579 9569, 579 5290
e-mail sales@cdil.com www.cdil.com