

SOT-23 Formed SMD Package

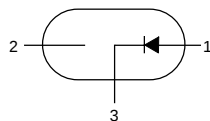
CMBZ52XX series

SILICON PLANAR ZENER DIODES

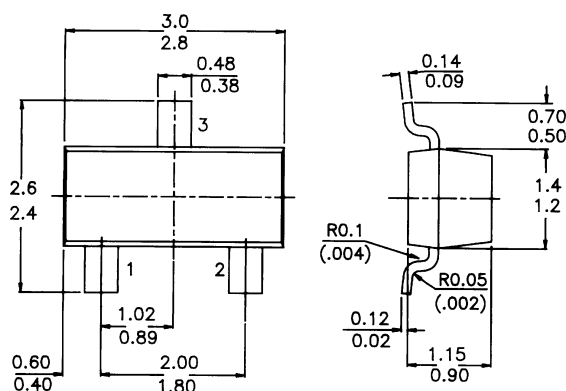
General purpose zener diodes

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°C

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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

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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

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