

SOT-23 Formed SMD Package

CMBZ52XX series

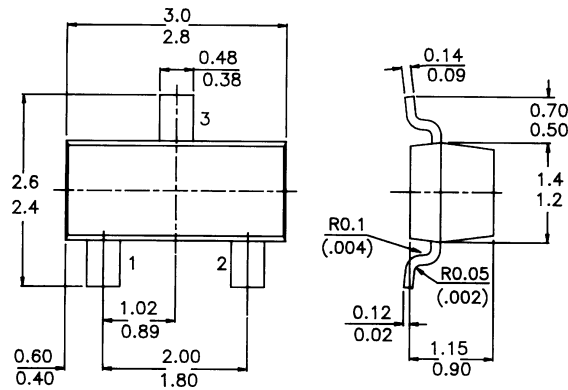
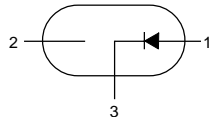
SILICON PLANAR ZENER DIODES

General purpose zener diodes

PACKAGE OUTLINE DETAILS  
ALL DIMENSIONS IN mm

Pin configuration

- 1 = ANODE
- 2 = NC
- 3 = CATHODE



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	$V_Z$	nom. 4.7 to 33 V
Working voltage tolerance		±5 %
Total power dissipation up to $T_{amb} = 25\text{ }^\circ\text{C}$	$P_{tot}$	max. 300 mW
Junction temperature	$T_j$	max. 150 °C

## CMBZ52XX series

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

*Limiting values*

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

**THERMAL RESISTANCE**

From junction to ambient	$R_{th\ j-a}$	<i>417 °C/W</i>
From junction to ambient	$R_{th\ j-a}$	<i>556 °C/W</i>

**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	$Z_{ZK}$ $I_Z=0.25mA$ ohm max	$Z_{ZT}$ $I_Z = I_{ZT}$ @10% Mod ohm max	Max $I_R$ uA max	@ $V_R$ (V)
<i>CMBZ-5252B</i>	24	5.2	600	33	0.1	18
<i>CMBZ-5253B</i>	25	5.0	600	35	0.1	19
<i>CMBZ-5254B</i>	27	4.6	600	41	0.1	21
<i>CMBZ-5255B</i>	28	4.5	600	44	0.1	21
<i>CMBZ-5256B</i>	30	4.2	600	49	0.1	23
<i>CMBZ-5257B</i>	33	3.8	700	58	0.1	25

### Disclaimer

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