

**SOT-23 Formed SMD Package**

**CMBZ52XX series**

**SILICON PLANAR ZENER DIODES**

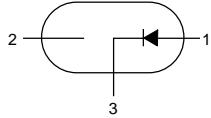
*General purpose zener diodes*

**Pin configuration**

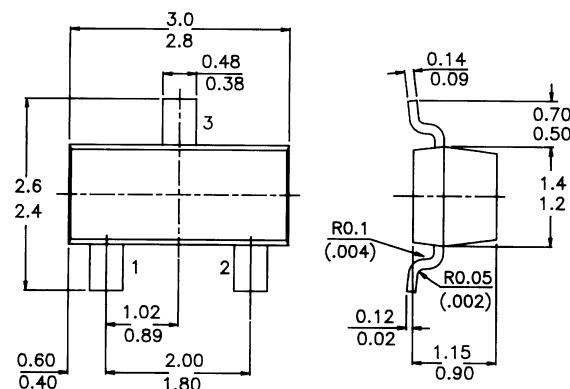
1 = ANODE

2 = NC

3 = CATHODE



**PACKAGE OUTLINE DETAILS**  
*ALL DIMENSIONS IN mm*



**Marking**

*CMBZ5230B = 8E*

*31B = 8F*

*32B = 8G*

*33B = 8H*

*34B = 8J*

*35B = 8K*

*36B = 8L*

*37B = 8M*

*38B = 8N*

*CMBZ5239B = 8P*

*40B = 8Q*

*41B = 8R*

*42B = 8S*

*43B = 8T*

*44B = 8U*

*45B = 8V*

*46B = 8W*

*47B = 8X*

*CMBZ5248B = 8Y*

*49B = 8Z*

*50B = 81A*

*51B = 81B*

*52B = 81C*

*53B = 81D*

*54B = 81E*

*55B = 81F*

*56B = 81G*

*CMBZ5257B = 81H*

*V<sub>Z</sub> nom. 4.7 to 33 V*

*±5 %*

*P<sub>tot</sub> max. 300 mW*

*T<sub>j</sub> max. 150 °C*

**ABSOLUTE MAXIMUM RATINGS**

*Working voltage range*

*V<sub>Z</sub> nom. 4.7 to 33 V*

*Working voltage tolerance*

*±5 %*

*Total power dissipation up to T<sub>amb</sub> = 25 °C*

*P<sub>tot</sub> max. 300 mW*

*Junction temperature*

*T<sub>j</sub> max. 150 °C*

## CMBZ52XX series

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

*Limiting values*

Total power dissipation up to $T_{amb} = 25^\circ\text{C}$ *	$P_{tot}$	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 $^\circ\text{C}/\text{W}$
From junction to ambient	$R_{th\ j-a}$	556 $^\circ\text{C}/\text{W}$

**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	$\oplus V_R$ (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  $\times$  10 mm  $\times$  0.7 mm

\*\* Device mounted on an FR5 printed circuit board

## CMBZ52XX series

Device	Zener Voltage $V_Z$ ( $\pm 5\%$ )	Test Current $I_{ZT}$ Nominal	$Z_{ZK}$ $I_Z=0.25mA$ 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

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).

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