

SOT-23 Formed SMD Package

CMBZ52XX series

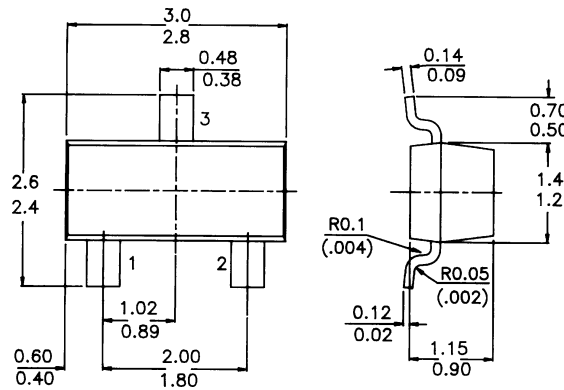
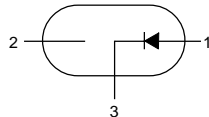
SILICON PLANAR ZENER DIODES

General purpose zener diodes

PACKAGE OUTLINE DETAILS
ALL DIMENSIONS IN mm

Pin configuration

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



Marking

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

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

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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}	<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

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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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