

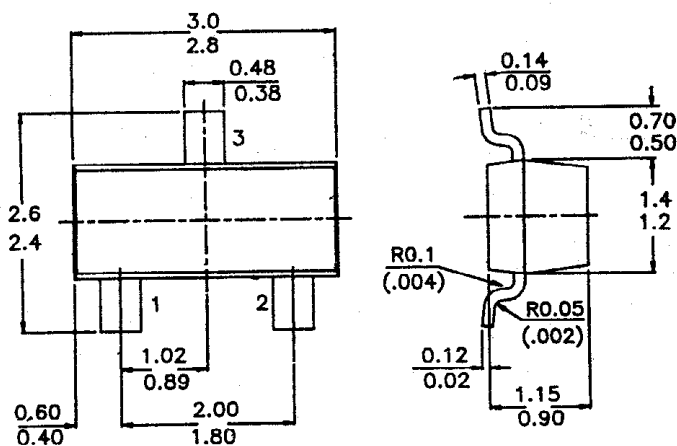
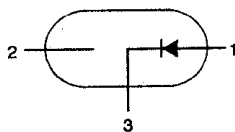
## SMBZ5230 THRU SMBZ5257

SILICON PLANAR ZENER DIODES, 500mW, SOT-23 PACKAGE

### PACKAGE OUTLINE DETAILS ALL DIMENSIONS IN mm

**Pin configuration**

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



**Marking**

SMBZ5230B = 8E	SMBZ5239B = 8P	SMBZ5248B = 8Y	SMBZ5257B = 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 $T_{amb} = 25\text{ °C}$	$P_{tot}$	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 $T_{\text{amb}} = 25^\circ\text{C}^*$	$P_{\text{tot}}$	max.	300 mW
Total power dissipation up to $T_{\text{amb}} = 25^\circ\text{C}^{**}$	$P_{\text{tot}}$	max.	225 mW
Storage temperature	$T_{\text{stg}}$	-55 to -150	$^\circ\text{C}$
Junction temperature	$T_j$	max.	150 $^\circ\text{C}$

### THERMAL RESISTANCE

From junction to ambient	$R_{\text{th j-a}}$	417	$^\circ\text{C/W}$
From junction to ambient	$R_{\text{th j-a}}$	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)
SMBZ-5230B	4.7	20	1900	19	5.0	2.0
SMBZ-5231B	5.1	20	1600	17	5.0	2.0
SMBZ-5232B	5.6	20	1600	11	5.0	3.0
SMBZ-5233B	6.0	20	1600	7.0	5.0	3.5
SMBZ-5234B	6.2	20	1000	7.0	5.0	4.0
SMBZ-5235B	6.8	20	750	5.0	3.0	5.0
SMBZ-5236B	7.5	20	500	6.0	3.0	6.0
SMBZ-5237B	8.2	20	500	8.0	3.0	6.5
SMBZ-5238B	8.7	20	600	8.0	3.0	6.5
SMBZ-5239B	9.1	20	600	10	3.0	7.0
SMBZ-5240B	10	20	600	17	3.0	8.0
SMBZ-5241B	11	20	600	22	2.0	8.4
SMBZ-5242B	12	20	600	30	1.0	9.1
SMBZ-5243B	13	9.5	600	13	0.5	9.9
SMBZ-5244B	14	9.0	600	15	0.1	10
SMBZ-5245B	15	8.5	600	16	0.1	11
SMBZ-5246B	16	7.8	600	17	0.1	12
SMBZ-5247B	17	7.4	600	19	0.1	13
SMBZ-5248B	18	7.0	600	21	0.1	14
SMBZ-5249B	19	6.6	600	23	0.1	14
SMBZ-5250B	20	6.2	600	25	0.1	15
SMBZ-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 $I_R$ $\mu\text{A}$ max	@ $V_R$ (V)
SMBZ-5252B	24	5.2	600	33	0.1	18
SMBZ-5253B	25	5.0	600	35	0.1	19
SMBZ-5254B	27	4.6	600	41	0.1	21
SMBZ-5255B	28	4.5	600	44	0.1	21
SMBZ-5256B	30	4.2	600	49	0.1	23
SMBZ-5257B	33	3.8	700	58	0.1	25