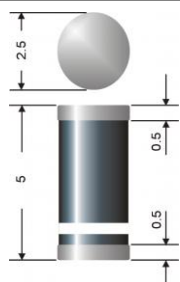


# SMZ 1 ... SMZ 200 (2W)



Surface mount diode

## Zener silicon diodes

### SMZ 1 ... SMZ 200 (2W)

**Maximum Power Dissipation: 2 W**

**Nominal Z-voltage: 1 to 200 V**

### Features

- Max. solder temperature: 260°C
- Plastic material has UL classification 94V-0
- Standard Zener voltage tolerance is graded to the international E 24 (5%) standard. Other voltage tolerances and higher Zener voltages on request.

### Mechanical Data

- Plastic case: Melf / DO-213AB
- Weight approx.: 0,12 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 5000 pieces per reel

1) Mounted on P.C. board with 50 mm<sup>2</sup> copper pads at each terminal  
 Tested with pulses  
 The SMZ1 is a diode operated in forward. Hence, the index of all parameters should be "F" instead of "Z".  
 The cathode, indicated by a white ring is to be connected to the negative pole.

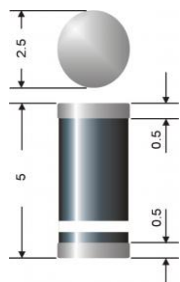
Absolute Maximum Ratings		T <sub>s</sub> = 25 °C, unless otherwise specified	
Symbol	Conditions	Values	Units
P <sub>tot</sub>	Power dissipation, T <sub>A</sub> = 50 °C <sup>1)</sup>	2	W
P <sub>ZSM</sub>	Non repetitive peak power dissipation, t < 10 ms	60	V
R <sub>thA</sub>	Max. thermal resistance junction to ambient <sup>1)</sup>	45	K/W
R <sub>thT</sub>	Max. thermal resistance junction to case	10	K/W
T <sub>j</sub>	Operating junction temperature	- 50 ... + 150	°C
T <sub>s</sub>	Storage temperature	- 50 ... + 175	°C

Type	Zener Voltage V <sub>Z</sub> @I <sub>ZT</sub>		Test curr. I <sub>ZT</sub>	Dyn. Resistance			Temp. Coeffiz. of V <sub>Z</sub> 10 <sup>-4</sup> °C	Reverse curr.		Z curr. T <sub>A</sub> = 50 °C i <sub>Zmax</sub> mA
	V <sub>Zmin</sub> V	V <sub>Zmax</sub> V		Z <sub>ZT</sub> @I <sub>ZT</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>	I <sub>ZK</sub> mA		I <sub>R</sub> µA	V <sub>R</sub> V	
SMZ 1 <sup>3)</sup>	0,71	0,82	100	0,5 (<1)			- 26 ... - 16	1	-	1200
SMZ 6,2	5,8	6,6	100	1 (<2)			- 1 ... + 6	1	>1,5	303
SMZ 6,8	6,4	7,2	100	1 (<2)			0 ... + 7	1	>2	278
SMZ 7,5	7	7,9	100	1 (<2)			0 ... + 7	1	> 2	253
SMZ 8,2	7,7	8,7	100	1 (<2)			+ 3 ... + 8	1	>3,5	230
SMZ 9,1	8,5	9,6	50	2 (<4)			+ 3 ... + 8	1	>3,5	208
SMZ 10	9,4	10,6	50	2 (<4)			+ 5 ... + 9	1	> 5	189
SMZ 11	10,4	11,6	50	4 (<7)			+ 5 ... + 10	1	> 5	172
SMZ 12	11,4	12,7	50	4 (<7)			+ 5 ... + 10	1	> 7	157
SMZ 13	12,4	14,1	50	5 (<10)			+ 5 ... + 10	1	> 7	142
SMZ 15	13,8	15,6	50	5 (<10)			+ 5 ... + 10	1	> 10	128
SMZ 16	15,3	17,1	25	6 (<15)			+ 6 ... + 11	1	> 10	117
SMZ 18	16,8	19,1	25	6 (<15)			+ 6 ... + 11	1	> 10	105
SMZ 20	18,8	21,2	25	6 (<15)			+ 6 ... + 11	1	> 10	94
SMZ 22	20,8	23,3	25	6 (<15)			+ 6 ... + 11	1	> 12	86
SMZ 24	22,8	25,6	25	7 (<15)			+ 6 ... + 11	1	> 12	78
SMZ 27	25,8	28,9	25	7 (<15)			+ 6 ... + 11	1	> 14	69
SMZ 30	28	32	25	8 (<15)			+ 6 ... + 11	1	> 14	63
SMZ 33	31	35	25	8 (<15)			+ 6 ... + 11	1	> 17	57
SMZ 36	34	38	10	16 (<40)			+ 6 ... + 11	1	> 17	53
SMZ 39	37	41	10	20 (<40)			+ 6 ... + 11	1	> 20	49
SMZ 43	40	46	10	24 (<45)			+ 7 ... + 12	1	> 20	43
SMZ 47	44	50	10	24 (<45)			+ 7 ... + 12	1	> 24	40
SMZ 51	48	54	10	25 (<60)			+ 7 ... + 12	1	> 24	37
SMZ 56	52	60	10	25 (<60)			+ 7 ... + 12	1	> 28	33
SMZ 62	58	66	10	25 (<80)			+ 8 ... + 13	1	> 28	30
SMZ 68	64	72	10	25 (<80)			+ 8 ... + 13	1	> 34	28
SMZ 75	70	79	10	30 (<100)			+ 8 ... + 13	1	> 34	25
SMZ 82	77	88	10	30 (<100)			+ 8 ... + 13	1	> 41	23
SMZ 91	85	96	5	40 (<200)			+ 9 ... + 13	1	> 41	21
SMZ 100	94	106	5	60 (<200)			+ 9 ... + 13	1	> 50	19
SMZ 110	104	116	5	80 (<250)			+ 9 ... + 13	1	> 50	17
SMZ 120	114	127	5	80 (<250)			+ 9 ... + 13	1	> 60	16
SMZ 130	124	141	5	90 (<300)			+ 9 ... + 13	1	> 60	14

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Type	Zener Voltage $V_Z @ I_{ZT}$		Test curr. $I_{ZT}$ mA	Dyn. Resistance			Temp. Coeffiz. of $V_Z$ $10^{-4}$ °C	Reverse curr.		Z curr. $T_A = 50$ °C $i_{Zmax}$ mA
	$V_{Zmin}$	$V_{Zmax}$		$Z_{ZT} @$	$Z_{ZK} @$	$I_{ZK}$		$I_R$	$V_R$	
	V	V		$I_{ZT}$	$I_{ZK}$	mA		µA	V	
SMZ 150	138	156	5	100(<300)			+ 9 ... + 13	1	> 75	13
SMZ 160	153	171	5	110(<350)			+ 9 ... + 13	1	> 75	12
SMZ 180	168	191	5	120(<350)			+ 9 ... + 13	1	> 90	10
SMZ 200	188	212	5	150(<350)			+ 9 ... + 13	1	> 90	9

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Surface mount diode

Type	Zener Voltage $V_Z@I_{ZT}$		Test curr. $I_{ZT}$	Dyn. Resistance			Temp. Coeffiz. of $V_Z$  $10^{-4}$  $^{\circ}\text{C}$	Reverse curr.		Z curr. $T_A = 50$ $^{\circ}\text{C}$  $i_{Zmax}$
	$V_{Zmin}$	$V_{Zmax}$		$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	$I_{ZK}$		$I_R$	$V_R$	
	V	V	mA			mA	$^{\circ}\text{C}$	$\mu\text{A}$	V	mA

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