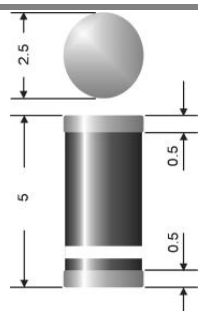


# SMZ 1 ... SMZ 200 (2W)



Surface mount diode

## Zener silicon diodes

### SMZ 1...SMZ 200

**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

2) Tested with pulses

3) 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		$T_A = 25\text{ }^\circ\text{C}$ , unless otherwise specified	
Symbol	Conditions	Values	Units
$P_{\text{tot}}$	Power dissipation, $T_A = 50\text{ }^\circ\text{C}$ <sup>1)</sup>	2	W
$P_{\text{ZSM}}$	Non repetitive peak power dissipation, $t < 10\text{ ms}$	60	W
$R_{\text{thA}}$	Max. thermal resistance junction to ambient	45	K/W
$R_{\text{thT}}$	Max. thermal resistance junction to terminal	10	K/W
$T_j$	Operating junction temperature	- 50 ... + 150	°C
$T_s$	Storage temperature	- 50 ... + 175	°C

Type	Zener Voltage <sup>2)</sup> $V_Z@I_{ZT}$		Test curr. $I_{ZT}$ mA	Dyn. Resistance $Z_{ZT}@I_{ZT}$ $\Omega$	Temp. Coeffiz. of $V_Z$ $a_{VZ}$ $10^{-4}/^\circ\text{C}$			Z-curr. <sup>1)</sup> $T_A = 50\text{ }^\circ\text{C}$ $I_{Z\text{max}}$ mA
	$V_{Z\text{min}}$ V	$V_{Z\text{max}}$ V				$I_R$ $\mu\text{A}$	$V_R$ V	
SMZ 1 <sup>3)</sup>	0,71	0,82	100	0,5 (<1)	- 26 ... - 16		-	1000
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
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