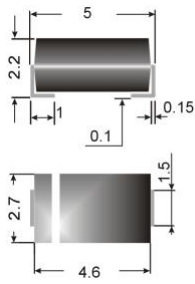


# Z1 SMA 1 ... Z1 SMA 100 (1W)



Surface mount diode

## Zener silicon diodes

### Z1 SMA 1 ... Z1 SMA 100 (1W)

**Maximum Power Dissipation: 1 W**

**Nominal Z-voltage: 1 to 100 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

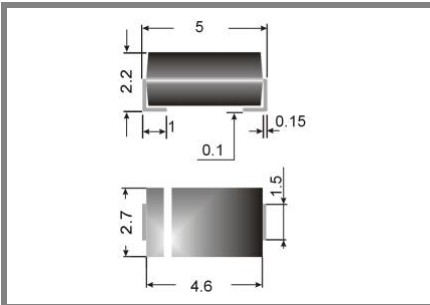
- Plastic case: SMA / DO-214AC
- Weight approx.: 0,07 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 7500 pieces per reel

<sup>1)</sup> Mounted on P.C. board with 25 mm<sup>2</sup> copper pads at each terminal  
 Tested with pulses  
 The Z1SMA1 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>	1	W
P <sub>ZSM</sub>	Non repetitive peak power dissipation, t < 10 ms		V
R <sub>thA</sub>	Max. thermal resistance junction to ambient <sup>1)</sup>	70	K/W
R <sub>thT</sub>	Max. thermal resistance junction to case	30	K/W
T <sub>j</sub>	Operating junction temperature	- 50 ... + 150	°C
T <sub>s</sub>	Storage temperature	- 50 ... + 150	°C

Type	Zener Voltage V <sub>Z</sub> @I <sub>ZT</sub>		Test curr. I <sub>ZT</sub> mA	Dyn. Resistance Z <sub>ZT</sub> @ I <sub>ZT</sub>	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				I <sub>R</sub> µA	V <sub>R</sub> V	
Z1SMA1	0,71	0,82	5	6,5 (<8)	- 26 ... - 23		-	500
Z1SMA6,2	5,8	6,6	5	4,8 (<11)	- 6 ... - 1	1	>1,5	152
Z1SMA6,8	6,4	7,2	5	4,5 (<10)	- 5 ... + 2	1	> 2	139
Z1SMA7,5	7	7,9	5	4 (<9)	- 3 ... + 4	1	> 2	127
Z1SMA8,2	7,7	8,7	5	4,5 (<10)	- 2 ... + 6	1	> 3,5	115
Z1SMA9,1	8,5	9,6	5	4,8 (<11)	- 1 ... + 7	1	>3,5	104
Z1SMA10	9,4	10,6	5	5,2 (<15)	+ 2 ... + 7	1	>7,5	94
Z1SMA11	10,4	11,6	5	6 (<20)	+ 3 ... + 7	1	>8,5	86
Z1SMA12	11,4	12,7	5	7 (<20)	+ 4 ... + 7	1	> 9	79
Z1SMA13	12,4	14,1	5	9 (<25)	+ 5 ... + 8	1	> 10	71
Z1SMA15	13,8	15,6	5	11 (<30)	+ 5 ... + 8	1	> 11	64
Z1SMA16	15,3	17,1	5	13 (<40)	+ 5 ... + 9	1	> 12	58
Z1SMA18	16,8	19,1	5	18 (<50)	+ 6 ... + 9	1	> 14	52
Z1SMA20	18,8	21,2	5	20 (<50)	+ 7 ... + 9	1	> 15	47
Z1SMA22	20,8	23,3	5	25 (<55)	+ 7 ... + 9	1	> 17	43
Z1SMA24	22,8	25,6	5	28 (<80)	+ 7 ... + 9,5	1	> 18	39
Z1SMA27	25,1	28,9	5	30 (<80)	+ 8 ... + 9,5	1	> 20	35
Z1SMA30	28	32	5	35 (<80)	+ 8 ... + 9,5	1	>22,5	31
Z1SMA33	31	35	5	40 (<80)	+ 8 ... + 10	1	> 25	29
Z1SMA36	34	38	5	40 (<90)	+ 8 ... + 10	1	> 27	26
Z1SMA39	37	41	5	50 (<90)	+ 8 ... + 10	1	> 29	24
Z1SMA43	40	46	5	60 (<100)	+ 8 ... + 10	1	> 32	22
Z1SMA47	44	50	5	70 (<100)	+ 8 ... + 10	1	> 35	20
Z1SMA51	48	54	5	70 (<100)	+ 8 ... + 10	1	> 38	19
Z1SMA56	52	60	5	70 (<100)	+ 9 ... + 11	1	> 42	17
Z1SMA62	58	66	5	80 (<110)	+ 9 ... + 11	1	> 47	15
Z1SMA68	64	72	5	90 (<140)	+ 9 ... + 12	1	> 51	14
Z1SMA75	70	79	5	95 (<150)	+ 9 ... + 12	1	> 56	13
Z1SMA82	77	88	5	100(<170)	+ 9 ... + 12	1	> 62	11
Z1SMA91	85	96	5	130(<200)	+ 10 ... + 12	1	> 68	10
Z1SMA100	94	106	5	200(<300)	+ 10 ... + 12	1	> 75	9

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

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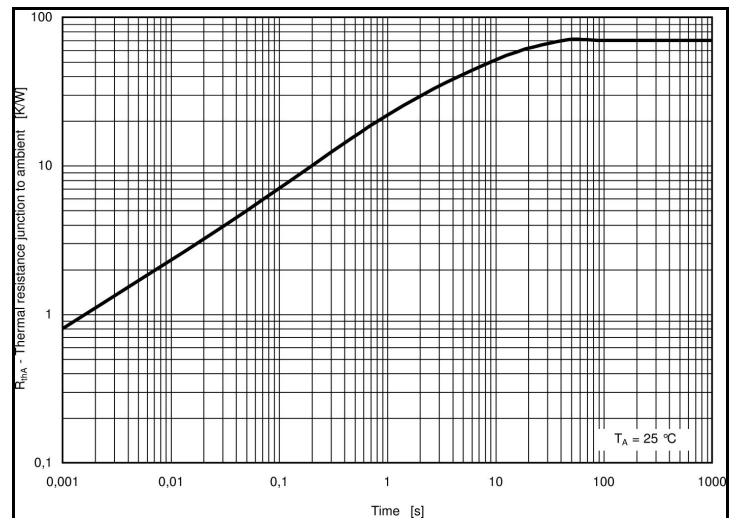


Fig. 1, Typical Transient Thermal Impedance junction to ambient