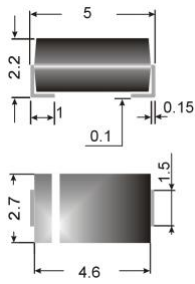


# Z2 SMA 1 ... Z2 SMA 200 (2W)



Surface mount diode

Absolute Maximum Ratings		$T_s = 25\text{ }^\circ\text{C}$ , unless otherwise specified	
Symbol	Conditions	Values	Units
$P_{\text{tot}}$	Power dissipation, $T_A = 50\text{ }^\circ\text{C}^1)$	2	W
$P_{\text{ZSM}}$	Non repetitive peak power dissipation, $t < 10\text{ ms}$	40	V
$R_{\text{thA}}$	Max. thermal resistance junction to ambient <sup>1)</sup>	70	K/W
$R_{\text{thT}}$	Max. thermal resistance junction to case	30	K/W
$T_j$	Operating junction temperature	- 50 ... + 150	$^\circ\text{C}$
$T_s$	Storage temperature	- 50 ... + 150	$^\circ\text{C}$

## Zener silicon diodes

### Z2 SMA 1 ... Z2 SMA 200

**Maximum Power Dissipation: 2 W**

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

### Features

- Max. solder temperature:  $260\text{ }^\circ\text{C}$
- 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

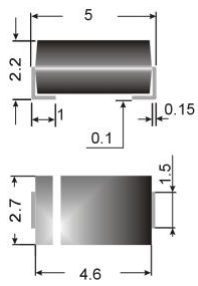
<sup>1)</sup> Mounted on P.C. board with  $50\text{ mm}^2$  copper pads at each terminal Tested with pulses The Z2SMA 1 is a diode operated in forward. Hence, the index of all parameters should be "F" instead of "Z". The cathode, indicated by a white ring is to be connected to the negative pole.

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. $T_A = 50\text{ }^\circ\text{C}$ $i_{Zmax}$ mA
	$V_{Zmin}$ V	$V_{Zmax}$ V		$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	$I_{ZK}$ mA		$I_R$ $\mu\text{A}$	$V_R$ V	
Z2SMA1 <sup>3)</sup>	0,71	0,82	100	0,5 (<1)			- 26 ... - 16		-	1200
Z2SMA4,7	4,4	5	100	4 (<7)			- 7 ... + 4	10	> 0,7	200
Z2SMA5,1	4,8	5,4	100	2 (<5)			- 6 ... + 5	10	> 0,7	185
Z2SMA5,6	5,2	6	100	1 (<3)			- 3 ... + 5	3	>0,5	333
Z2SMA6,2	5,8	6,6	100	1 (<2)			- 1 ... + 6	1	>1,5	303
Z2SMA6,8	6,4	7,2	100	1 (<2)			0 ... + 7	1	> 2	278
Z2SMA7,5	7	7,9	100	1 (<2)			0 ... + 7	1	> 2	253
Z2SMA8,2	7,7	8,7	100	1 (<2)			+ 3 ... + 8	1	> 3,5	230
Z2SMA9,1	8,5	9,6	50	2 (<4)			+ 3 ... + 8	1	> 3,5	208
Z2SMA10	9,4	10,6	50	2 (<4)			+ 5 ... + 9	1	> 5	189
Z2SMA11	10,4	11,6	50	4 (<7)			+ 5 ... + 10	1	> 5	172
Z2SMA12	11,4	12,7	50	4 (<7)			+ 5 ... + 10	1	> 7	157
Z2SMA13	12,4	14,1	50	5 (<10)			+ 5 ... + 10	1	> 7	142
Z2SMA15	13,8	15,6	50	5 (<10)			+ 5 ... + 10	1	> 10	128
Z2SMA16	15,3	17,1	25	6 (<15)			+ 6 ... + 11	1	> 10	117
Z2SMA18	16,8	19,1	25	6 (<15)			+ 6 ... + 11	1	> 10	105
Z2SMA20	18,8	21,2	25	6 (<15)			+ 6 ... + 11	1	> 10	94
Z2SMA22	20,8	23,3	25	6 (<15)			+ 6 ... + 11	1	> 12	86
Z2SMA24	22,8	25,6	25	7 (<15)			+ 6 ... + 11	1	> 12	78
Z2SMA27	25,1	28,9	25	7 (<15)			+ 6 ... + 11	1	> 14	69
Z2SMA30	28	32	25	8 (<15)			+ 6 ... + 11	1	> 14	63
Z2SMA33	31	35	25	8 (<15)			+ 6 ... + 11	1	> 17	57
Z2SMA36	34	38	10	16 (<40)			+ 6 ... + 11	1	> 17	53
Z2SMA39	37	41	10	20 (<40)			+ 6 ... + 11	1	> 20	49
Z2SMA43	40	46	10	24 (<45)			+ 7 ... + 12	1	> 20	43
Z2SMA47	44	50	10	24 (<45)			+ 7 ... + 12	1	> 24	40
Z2SMA51	48	54	10	25 (<60)			+ 7 ... + 12	1	> 24	37
Z2SMA56	52	60	10	25 (<60)			+ 7 ... + 12	1	> 28	33
Z2SMA62	58	66	10	25 (<80)			+ 8 ... + 13	1	> 28	30
Z2SMA68	64	72	10	25 (<80)			+ 8 ... + 13	1	> 34	28
Z2SMA75	70	79	10	30 (<100)			+ 8 ... + 13	1	> 34	25
Z2SMA82	77	88	10	30 (<100)			+ 8 ... + 13	1	> 41	23
Z2SMA91	85	96	5	40 (<200)			+ 9 ... + 13	1	> 41	21
Z2SMA100	94	106	5	60 (<200)			+ 9 ... + 13	1	> 50	19
Z2SMA110	104	116	5	80 (<250)			+ 9 ... + 13	1	> 50	17

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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	
Z2SMA120	114	127	5	80 (<250)			+ 9 ... + 13	1	> 60	16
Z2SMA130	124	141	5	90 (<300)			+ 9 ... + 13	1	> 60	14
Z2SMA150	138	156	5	100(<300)			+ 9 ... + 13	1	> 75	13

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Surface mount diode

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	$V_{Zmin}$	$V_{Zmax}$		$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	$I_{ZK}$		$I_R$	$V_R$	
	V	V				mA		µA	V	
Z2SMA160	153	171	5	110(<350)			+ 9 ... + 13	1	> 75	12
Z2SMA180	168	191	5	120(<350)			+ 9 ... + 13	1	> 90	10
Z2SMA200	188	212	5	150(<350)			+ 9 ... + 13	1	> 90	9

## Zener silicon diodes

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**Maximum Power  
Dissipation: 2 W**

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

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1) Mounted on P.C. board with 50 mm<sup>2</sup> copper pads at each terminal  
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