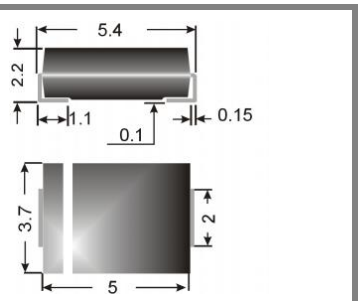
Z2 SMB 1 ... Z2 SMB 200 (2W)



Surface mount diode

Zener silicon diodes

Z2 SMB 1 ... Z2 SMB 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: SMB / DO-214AA
- Weight approx.: 0,1 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 3000 pieces per reel

1) Mounted on P.C. board with 50 mm^2 copper pads at each terminalTested with pulsesThe Z2SMB1 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_s = 25 °C, unless otherwise specified

Symbol	Conditions	Values	Units
P_{tot}	Power dissipation, T_A = 50 °C 1)	2	W
P_{ZSM}	Non repetitive peak power dissipation, t < 10 ms	40	V
R_{thA}	Max. thermal resistance junction to ambient 1)	60	K/W
R_{thT}	Max. thermal resistance junction to case	15	K/W
T_j	Operating junction temperature	- 50 ... + 150	°C
T_s	Storage temperature	- 50 ... + 150	°C

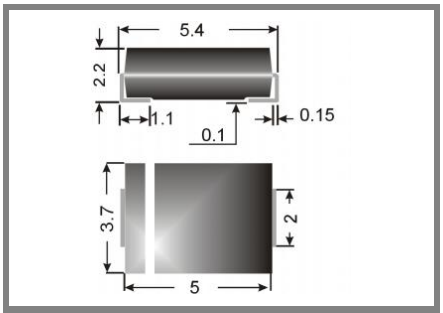
Type	Zener Voltage V_Z@I_{ZT}		Test curr. I_{ZT}	Dyn. Resistance			Temp. Coeffiz. of V_z	Reverse curr.		Z curr. T_A = 50 °C
	V_{Zmin}	V_{Zmax}		Z_{ZT}@ I_{ZT}	Z_{ZK}@ I_{ZK}	I_{ZK}	10^{-4}	I_R	V_R	i_{Zmax}
	V	V	mA			mA	°C	µA	V	mA
Z2SMB1[3])	0,71	0,82	100	0,5 (<1)			- 26 ... - 16		-	1200
Z2SMB4,7	4,4	5	100	4 (<7)			- 7 ... + 4		-	400
Z2SMB5,1	4,8	5,4	100	2 (<5)			- 6 ... + 5		-	370
Z2SMB5,6	5,2	6	100	1 (<3)			- 3 ... + 5	3	>0,5	333
Z2SMB6,2	5,8	6,6	100	1 (<2)			- 1 ... + 6	1	>1,5	303
Z2SMB6,8	6,4	7,2	100	1 (<2)			0 ... + 7	1	> 2	278
Z2SMB7,5	7	7,9	100	1 (<2)			0 ... + 7	1	> 2	253
Z2SMB8,2	7,7	8,7	100	1 (<2)			+ 3 ... + 8	1	> 3.5	230
Z2SMB9,1	8,5	9,6	50	2 (<4)			+ 3 ... + 8	1	> 3.5	208
Z2SMB10	9,4	10,6	50	2 (<4)			+ 5 ... + 9	1	> 5	189
Z2SMB11	10,4	11,6	50	4 (<7)			+ 5 ... + 10	1	> 5	172
Z2SMB12	11,4	12,7	50	4 (<7)			+ 5 ... + 10	1	> 7	157
Z2SMB13	12,4	14,1	50	5 (<10)			+ 5 ... + 10	1	> 7	142
Z2SMB15	13,8	15,6	50	5 (<10)			+ 5 ... + 10	1	> 10	128
Z2SMB16	15,3	17,1	25	6 (<15)			+ 6 ... + 11	1	> 10	117
Z2SMB18	16,8	19,1	25	6 (<15)			+ 6 ... + 11	1	> 10	105
Z2SMB20	18,8	21,2	25	6 (<15)			+ 6 ... + 11	1	> 10	94
Z2SMB22	20,8	23,3	25	6 (<15)			+ 6 ... + 11	1	> 12	86
Z2SMB24	22,8	25,6	25	7 (<15)			+ 6 ... + 11	1	> 12	78
Z2SMB27	25,1	28,9	25	7 (<15)			+ 6 ... + 11	1	> 14	69
Z2SMB30	28	32	25	8 (<15)			+ 6 ... + 11	1	> 14	63
Z2SMB33	31	35	25	8 (<15)			+ 6 ... + 11	1	> 17	57
Z2SMB36	34	38	10	16 (<40)			+ 6 ... + 11	1	> 17	53
Z2SMB39	37	41	10	20 (<40)			+ 6 ... + 11	1	> 20	49
Z2SMB43	40	46	10	24 (<45)			+ 7 ... + 12	1	> 20	43
Z2SMB47	44	50	10	24 (<45)			+ 7 ... + 12	1	> 24	40
Z2SMB51	48	54	10	25 (<60)			+ 7 ... + 12	1	> 24	37
Z2SMB56	52	60	10	25 (<60)			+ 7 ... + 12	1	> 28	33
Z2SMB62	58	66	10	25 (<80)			+ 8 ... + 13	1	> 28	30
Z2SMB68	64	72	10	25 (<80)			+ 8 ... + 13	1	> 34	28
Z2SMB75	70	79	10	30 (<100)			+ 8 ... + 13	1	> 34	25
Z2SMB82	77	88	10	30 (<100)			+ 8 ... + 13	1	> 41	23
Z2SMB91	85	96	5	40 (<200)			+ 9 ... + 13	1	> 41	21
Z2SMB100	94	106	5	60 (<200)			+ 9 ... + 13	1	> 50	19
Z2SMB110	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}	Dyn. Resistance			Temp. Coeffiz. of V_z	Reverse curr.		Z curr. T_A = 50 °C
	V_{Zmin}	V_{Zmax}		$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	I_{ZK}	10^{-4}	I_R	V_R	i_{Zmax}
	V	V	mA			mA	°C	µA	V	mA
Z2SMB120	114	127	5	80 (<250)			+ 9 ... + 13	1	> 60	16
Z2SMB130	124	141	5	90 (<300)			+ 9 ... + 13	1	> 60	14
Z2SMB150	138	156	5	100(<300)			+ 9 ... + 13	1	> 75	13

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	V	V	mA			mA	°C	µA	V	mA
Z2SMB160	153	171	5	110(<350)			+ 9 ... + 13	1	> 75	12
Z2SMB180	168	191	5	120(<350)			+ 9 ... + 13	1	> 90	10
Z2SMB200	188	212	5	150(<350)			+ 9 ... + 13	1	> 90	9

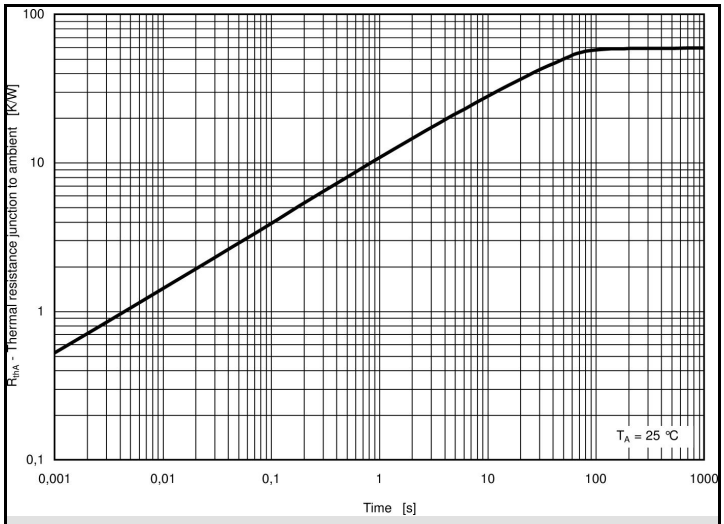


Fig. 1, Typical Transient Thermal Impedance

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