



SMZ1-SMZ200

Surface mount Silicon-Zener Diodes

V_Z : 1 - 200 Volts

P_D : 2 Watts

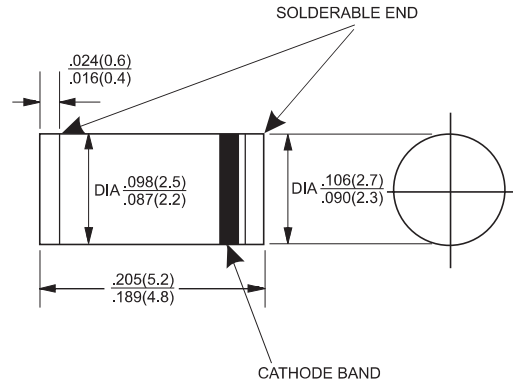
MELF

Features

- ✧ Complete Voltage Range 1 to 200 Volts
- ✧ High peak reverse power dissipation
- ✧ High reliability
- ✧ Low leakage current
- ✧ **Pb / RoHS Free**

Mechanical Data

- ✧ Case : MELF Molded plastic
- ✧ Epoxy : UL94V-O rate flame retardant
- ✧ Lead : Lead formed for Surface mount
- ✧ Polarity : Color band denotes cathode end
- ✧ Mounting position : Any
- ✧ Weight : 0.1296 grams



Dimensions in inches and (millimeters)

MAXIMUM RATINGS

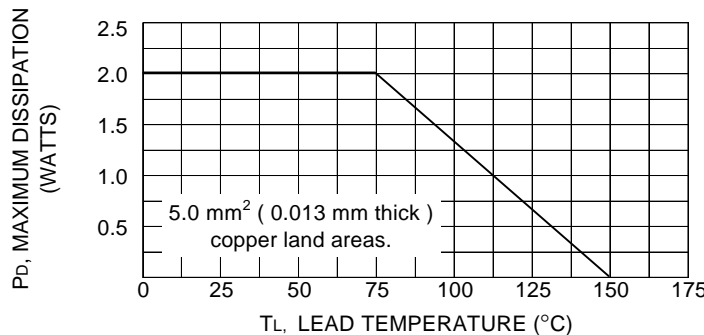
Rating at 25 °C ambient temperature unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation at T _L = 75 °C (Note1)	P _D	2.0	W
Maximum Forward Voltage at I _F = 200 mA	V _F	1.2	V
Junction Temperature Range	T _J	- 50 to + 150	°C
Storage Temperature Range	T _s	- 50 to + 175	°C

Note :

(1) T_L = Lead temperature at 5.0 mm² (0.013 mm thick) copper land areas.

Fig. 1 POWER TEMPERATURE DERATING CURVE



ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type	Zener voltage ²⁾		Test cur. I_{Ztest} [mA]	Dyn. resistance $I_{Ztest} / 1 \text{ kHz}$ r_{zj} [Ω]	Temp. Coeffiz. of Z-voltage α_{VZ} [$10^{-4} / ^\circ\text{C}$]	Reverse volt. $I_R = 1 \mu\text{A}$ V_R [V]	Z-current ¹⁾ $T_A = 50^\circ\text{C}$ I_{Zmax} [mA]
	V_{zmin} [V]	V_{zmax}					
SMZ 1 ³⁾	0.71	0.82	100	0.5 (<1)	-26...-16	-	1000
SMZ 3.9	3.7	4.1	100	4 (<7)	-7...+2	-	488
SMZ 4.3	4.0	4.6	100	4 (<7)	-7...+3	-	435
SMZ 4.7	4.4	5.0	100	4 (<7)	-7...+4	-	400
SMZ 5.1	4.8	5.4	100	2 (<5)	-6...+5	-	370
SMZ 5.6	5.2	6.0	100	1 (<3)	-3...+5	> 1.5	333
SMZ 6.2	5.8	6.6	100	1 (<2)	-1...+6	> 1.5	303
SMZ 6.8	6.4	7.2	100	1 (<2)	0...+7	> 2	278
SMZ 7.5	7.0	7.9	100	1 (<2)	0...+7	> 2	253
SMZ 8.2	7.7	8.7	100	1 (<2)	+3...+8	> 3.5	230
SMZ 9.1	8.5	9.6	50	2 (<4)	+3...+8	> 3.5	208
SMZ 10	9.4	10.6	50	2 (<4)	+5...+9	> 5	189
SMZ 11	10.4	11.6	50	4 (<7)	+5...+10	> 5	172
SMZ 12	11.4	12.7	50	4 (<7)	+5...+10	> 7	157
SMZ 13	12.4	14.1	50	5 (<10)	+5...+10	> 7	142
SMZ 15	13.8	15.6	50	5 (<10)	+5...+10	> 10	128
SMZ 16	15.3	17.1	25	6 (<15)	+6...+11	> 10	117
SMZ 18	16.8	19.1	25	6 (<15)	+6...+11	> 10	105
SMZ 20	18.8	21.2	25	6 (<15)	+6...+11	> 10	94
SMZ 22	20.8	23.3	25	6 (<15)	+6...+11	> 12	86
SMZ 24	22.8	25.6	25	7 (<15)	+6...+11	> 12	78
SMZ 27	25.1	28.9	25	7 (<15)	+6...+11	> 14	69
SMZ 30	28	32	25	8 (<15)	+6...+11	> 14	63
SMZ 33	31	35	25	8 (<15)	+6...+11	> 17	57
SMZ 36	34	38	10	16 (<40)	+6...+11	> 17	53
SMZ 39	37	41	10	20 (<40)	+6...+11	> 20	49
SMZ 43	40	46	10	24 (<45)	+7...+12	> 20	43
SMZ 47	44	50	10	24 (<45)	+7...+12	> 24	40
SMZ 51	48	54	10	25 (<60)	+7...+12	> 24	37
SMZ 56	52	60	10	25 (<60)	+7...+12	> 28	33
SMZ 62	58	66	10	25 (<80)	+8...+13	> 28	30
SMZ 68	64	72	10	25 (<80)	+8...+13	> 34	28
SMZ 75	70	79	10	30 (<100)	+8...+13	> 34	25
SMZ 82	77	88	10	30 (<100)	+8...+13	> 41	23
SMZ 91	85	96	5	40 (<200)	+9...+13	> 41	21
SMZ 100	94	106	5	60 (<200)	+9...+13	> 50	19
SMZ 110	104	116	5	80 (<250)	+9...+13	> 50	17
SMZ 120	114	127	5	80 (<250)	+9...+13	> 60	16
SMZ 130	124	141	5	90 (<300)	+9...+13	> 60	14
SMZ 150	138	156	5	100 (<300)	+9...+13	> 75	13
SMZ 160	153	171	5	110 (<350)	+9...+13	> 75	12
SMZ 180	168	191	5	120 (<350)	+9...+13	> 90	10
SMZ 200	188	212	5	150 (<350)	+9...+13	> 90	9