MM1Z2V0B~MM1Z39B

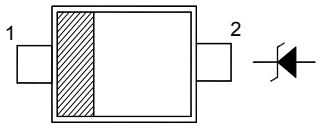
Silicon Planar Zener Diodes

Features

- Total power dissipation: max. 500 mW
- Small plastic package suitable for surface mounted design
- High reliability

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SOD-123 and symbol

Absolute Maximum Ratings (T_a = 25℃ unless otherwise specified)

Parameter		Symbol	Value	Unit
Power Dissipation	T_L = 75℃ [1]	P_{tot}	500	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	- 55 to + 150	℃

Characteristics at T_a = 25 ℃ (unless otherwise specified)

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient [2]	$R_{\theta JA}$	340	℃/W
Thermal Resistance Junction to Lead [2]	$R_{\theta JL}$	150	℃/W
Forward Voltage at I_F = 10 mA	V_F	0.9	V

[1] FR−4 PCB = 89 * 38 mm.

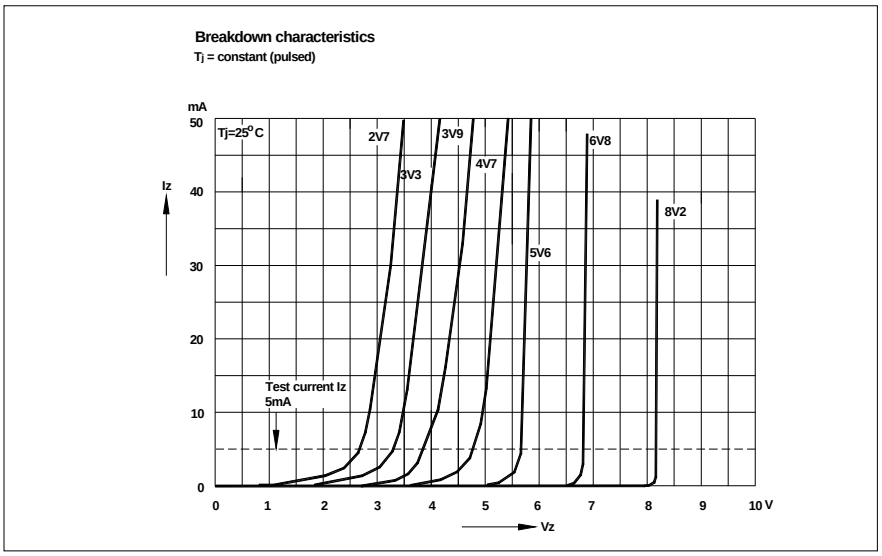
[2] Mounted on an FR-4 PCB 38 * 38 * 1.6 mm with single-sided Cu pad areas 25mm^2(>70 µm thick).

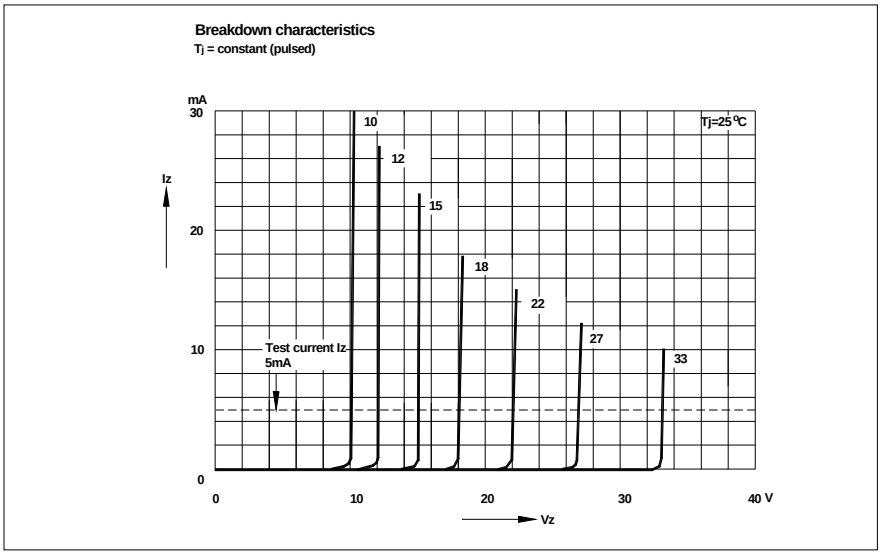
Dated: 12/03/2021 Rev: 04

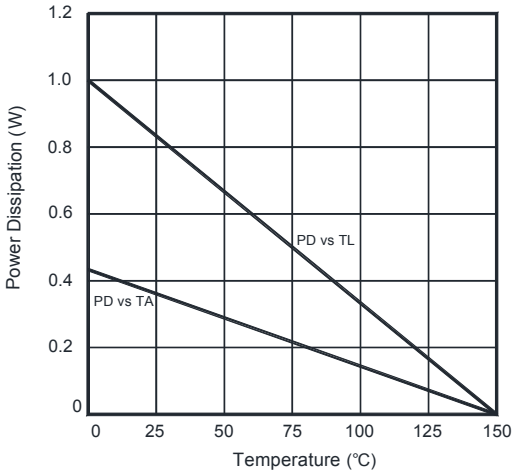
Characteristics at T_a = 25 °C unless otherwise specified

Type	Marking Code	Zener Voltage Range [1]			Dynamic Impedance		Reverse Current	
		V_{ZT}		at I_{ZT}	Z_{ZT}	at I_{ZT}	I_R	at V_R
		Min. (V)	Max. (V)	(mA)	Max. (Ω)	(mA)	Max. (μA)	(V)
MM1Z2V0B	9A	1.85	2.2	5	100	5	120	0.5
MM1Z2V2B	9B	2.1	2.4	5	100	5	120	0.7
MM1Z2V4B	9C	2.3	2.65	5	100	5	120	1
MM1Z2V7B	9D	2.65	2.95	5	110	5	120	1
MM1Z3V0B	9E	2.95	3.25	5	120	5	50	1
MM1Z3V3B	9F	3.25	3.55	5	120	5	20	1
MM1Z3V6B	9H	3.6	3.845	5	100	5	10	1
MM1Z3V9B	9J	3.89	4.16	5	100	5	5	1
MM1Z4V3B	9K	4.17	4.43	5	100	5	5	1
MM1Z4V7B	9M	4.55	4.75	5	100	5	2	1
MM1Z5V1B	9N	4.98	5.2	5	80	5	2	1.5
MM1Z5V6B	9P	5.49	5.73	5	60	5	1	2.5
MM1Z6V2B	9R	6.06	6.33	5	60	5	1	3
MM1Z6V8B	9X	6.65	6.93	5	40	5	0.5	3.5
MM1Z7V5B	9Y	7.28	7.6	5	30	5	0.5	4
MM1Z8V2B	9Z	8.02	8.36	5	30	5	0.5	5
MM1Z9V1B	0A	8.85	9.23	5	30	5	0.5	6
MM1Z10B	0B	9.77	10.21	5	30	5	0.1	7
MM1Z11B	0C	10.76	11.22	5	30	5	0.1	8
MM1Z12B	0D	11.74	12.24	5	30	5	0.1	9
MM1Z13B	0E	12.91	13.49	5	37	5	0.1	10
MM1Z14B	0G	13.75	14.62	5	37	5	0.1	11
MM1Z15B	0F	14.34	14.98	5	42	5	0.1	11
MM1Z16B	0H	15.85	16.51	5	50	5	0.1	12
MM1Z18B	0J	17.56	18.35	5	65	5	0.1	13
MM1Z20B	0K	19.52	20.39	5	85	5	0.1	15
MM1Z22B	0M	21.54	22.47	5	100	5	0.1	17
MM1Z24B	0N	23.72	24.78	5	120	5	0.1	19
MM1Z27B	0P	26.19	27.53	5	150	5	0.1	21
MM1Z30B	0R	29.19	30.69	5	200	5	0.1	23
MM1Z33B	0X	32.15	33.79	5	250	5	0.1	25
MM1Z36B	0Y	35.07	36.87	5	300	5	0.1	27
MM1Z39B	0Z	37	41	5	100	5	2	30

[1] V_{ZT} is tested with pulses (20 ms).

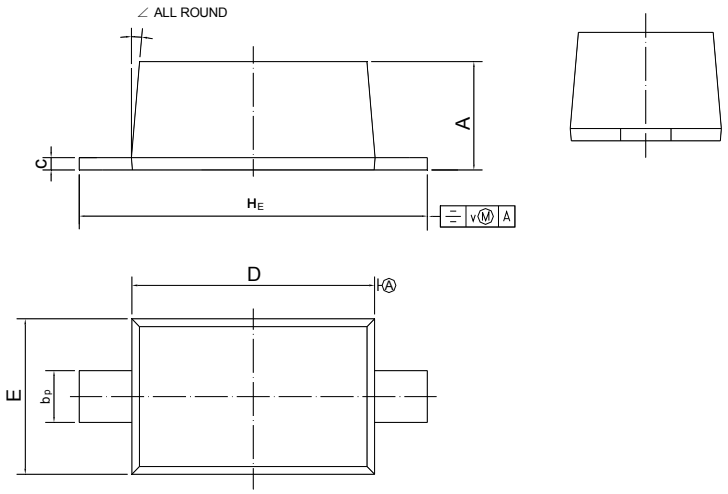

Breakdown characteristics
Tj = constant (pulsed)
mA
Tj=25°C
2V7
3V3
3V9
4V7
5V6
6V8
8V2
Iz
Test current Iz
5mA
Vz


Breakdown characteristics
Tj = constant (pulsed)
mA
Tj=25°C
10
12
15
18
22
27
33
Iz
Test current Iz
5mA
Vz


Power Dissipation (W)
PD vs TL
PD vs TA
Temperature (°C)

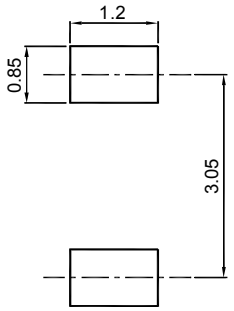
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads SOD-123



UNIT	A	b_p	c	D	E	H_E	v	∠
mm	1.15 1.05	0.6 0.5	0.135 0.100	2.7 2.6	1.65 1.55	3.85 3.55	0.2	5°

Recommended Soldering Footprint

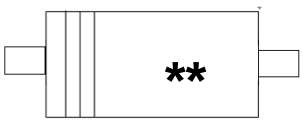


Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	(inch)	mm	(inch)	
SOD-123	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" III " = Cathode line
" ** " = Part No.
Font type: Arial



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