

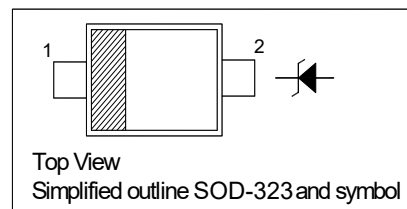
Silicon Planar Zener Diodes

Features

- Total power dissipation: max. 300 mW
- Zener Voltage Tolerance: $\pm 2\%$
- AEC-Q101 Qualified
- Halogen and Antimony Free(HAF), RoHS compliant

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	300	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{Stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient ¹⁾	$R_{\theta\text{JA}}$	417	$^\circ\text{C/W}$

¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Characteristics at $T_a = 25^\circ\text{C}$ ($V_F = 0.9\text{ V Max. at } I_F = 10\text{ mA}$)

Type	Marking Code	Zener Voltage Range ¹⁾			Dynamic Impedance ²⁾		Reverse Leakage Current	
		V_{ZT}		I_{ZT}	$Z_{ZT} (\text{Max.})$	at I_{ZT}	$I_R (\text{Max.})$	at V_R
		Min.(V)	Max.(V)	mA	Ω	mA	μA	V
MM3Z2V2BQ-V	MF	2.1	2.4	5	100	5	120	0.7
MM3Z2V4BQ-V	7C	2.3	2.65	5	100	5	120	1
MM3Z2V7BQ-V	7D	2.65	2.95	5	110	5	120	1
MM3Z3V0BQ-V	7E	2.95	3.25	5	120	5	50	1
MM3Z3V3BQ-V	7F	3.25	3.55	5	120	5	20	1
MM3Z3V6BQ-V	7H	3.6	3.845	5	100	5	10	1
MM3Z3V9BQ-V	7J	3.89	4.16	5	100	5	5	1
MM3Z4V3BQ-V	7K	4.17	4.43	5	100	5	5	1
MM3Z4V7BQ-V	7M	4.55	4.75	5	100	5	2	1
MM3Z5V1BQ-V	7N	4.98	5.2	5	80	5	2	1.5
MM3Z5V6BQ-V	7P	5.49	5.73	5	60	5	1	2.5
MM3Z6V2BQ-V	7R	6.06	6.33	5	60	5	1	3
MM3Z6V8BQ-V	7X	6.65	6.93	5	40	5	0.5	3.5
MM3Z7V5BQ-V	7Y	7.28	7.6	5	30	5	0.5	4
MM3Z8V2BQ-V	7Z	8.02	8.36	5	30	5	0.5	5
MM3Z9V1BQ-V	8A	8.85	9.23	5	30	5	0.5	6
MM3Z10BQ-V	8B	9.77	10.21	5	30	5	0.1	7
MM3Z11BQ-V	8C	10.76	11.22	5	30	5	0.1	8
MM3Z12BQ-V	8D	11.74	12.24	5	30	5	0.1	9
MM3Z13BQ-V	8E	12.91	13.49	5	37	5	0.1	10
MM3Z15BQ-V	8F	14.34	14.98	5	42	5	0.1	11
MM3Z16BQ-V	8H	15.85	16.51	5	50	5	0.1	12
MM3Z18BQ-V	8J	17.56	18.35	5	65	5	0.1	13
MM3Z20BQ-V	8K	19.52	20.39	5	85	5	0.1	15
MM3Z22BQ-V	8M	21.54	22.47	5	100	5	0.1	17
MM3Z24BQ-V	8N	23.72	24.78	5	120	5	0.1	19
MM3Z27BQ-V	8P	26.19	27.53	5	150	5	0.1	21
MM3Z30BQ-V	8R	29.19	30.69	5	200	5	0.1	23
MM3Z33BQ-V	8X	32.15	33.79	5	250	5	0.1	25
MM3Z36BQ-V	8Y	35.07	36.87	5	300	5	0.1	27
MM3Z39BQ-V	8Z	37	41	5	100	5	2	30

¹⁾ V_Z is tested with pulses (20 ms).

²⁾ Z_{ZT} is measured at I_Z by given a very small A.C. current signal.

Electrical Characteristics Curves

Fig 1. Forward Characteristics Curve

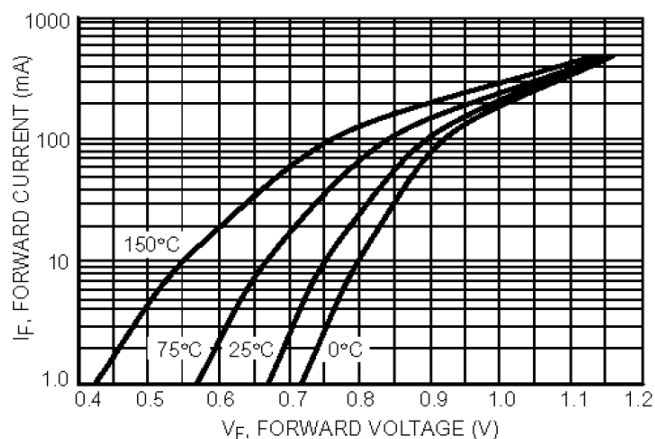


Fig 2. Zener Characteristics Curve

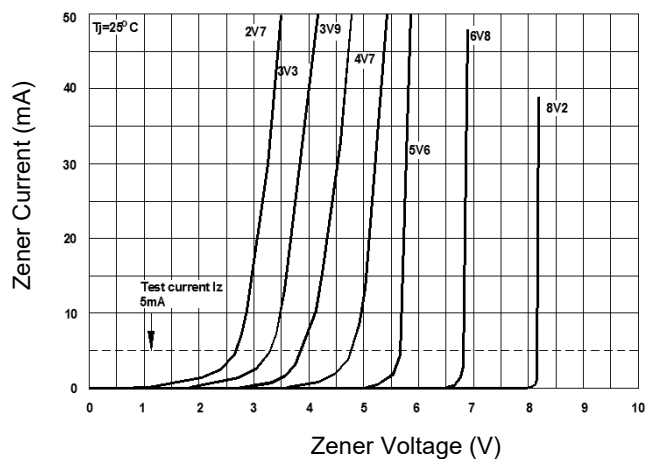


Fig 3. Zener Characteristics Curve

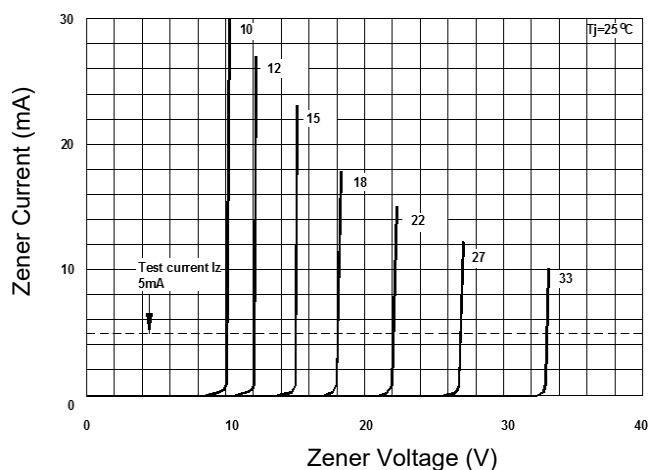
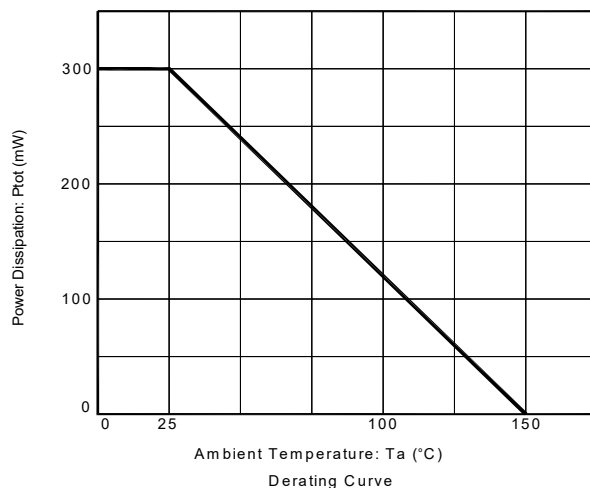


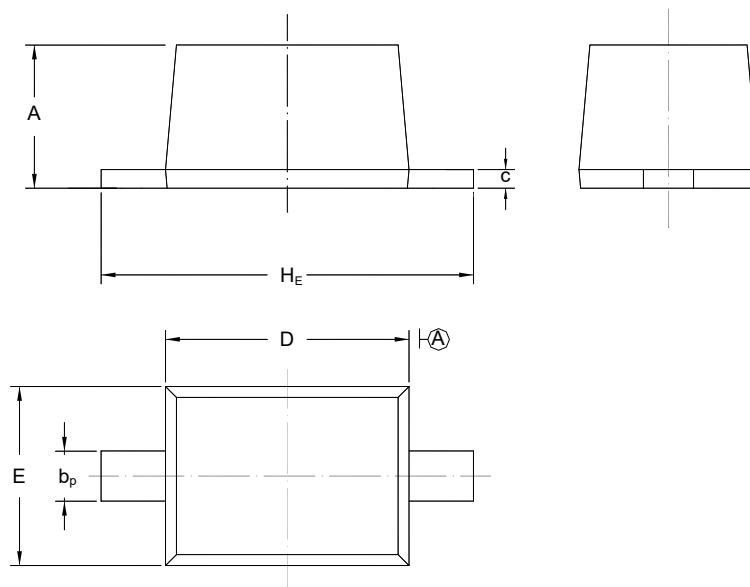
Fig 4. Power Derating Curve



PACKAGE OUTLINE

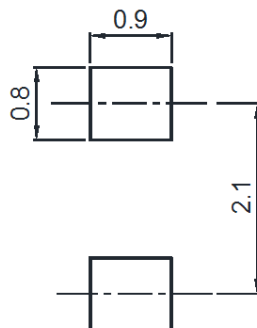
Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	b _p	C	D	E	H _E
mm	1.10 0.80	0.40 0.25	0.15 0.10	1.80 1.60	1.35 1.15	2.80 2.30

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000