

Silicon Planar Zener Diodes

FEATURES

- ◆ Total power dissipation: Max. 300mW.
- ◆ Wide zener reverse voltage range 2.0V to 75V.
- ◆ Small plastic package suitable for surface mounted design.
- ◆ Tolerance approximately $\pm 2\%$

MECHANICAL DATA

- ◆ Case: SOD-323
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 5.48mg / 0.00019oz

Absolute Maximum Ratings And Characteristics (Ta=25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	300	mW
Forward Voltage at $I_F=10mA$	V_F	0.9	V
Typical thermal resistance junction to ambient ⁽¹⁾	$R_{\theta JA}$	417	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 ~ +150	°C

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.

Fig.1 Maximum Continuous Power Derating

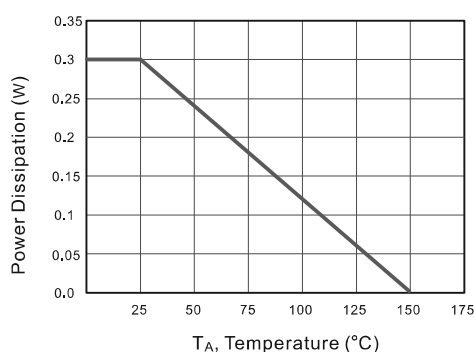
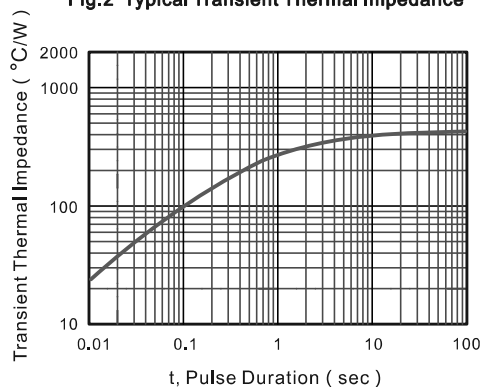


Fig.2 Typical Transient Thermal Impedance



Characteristics at Ta=25°C

Type Number	Marking	Zener Voltage Range ⁽¹⁾			I _{ZT}	Dynamic Impedance	Reverse Current	
		V _{ZT} (at I _{ZT})				Z _{ZT} (at I _{ZT})	I _R	at V _R
		Min (V)	Nom (V)	Max (V)	(mA)	Max (Ω)	Max (μA)	(V)
MM3Z2V0BW	0B	1.96	2.0	2.04	5	100	120	0.5
MM3Z2V2BW	0C	2.16	2.2	2.24	5	100	120	0.7
MM3Z2V4BW	C1	2.35	2.4	2.45	5	100	120	1
MM3Z2V7BW	D1	2.65	2.7	2.75	5	110	120	1
MM3Z3V0BW	E1	2.94	3.0	3.06	5	120	50	1
MM3Z3V3BW	F1	3.23	3.3	3.37	5	130	20	1
MM3Z3V6BW	H1	3.53	3.6	3.67	5	130	10	1
MM3Z3V9BW	J1	3.82	3.9	3.98	5	130	5	1
MM3Z4V3BW	K1	4.21	4.3	4.39	5	130	5	1
MM3Z4V7BW	M1	4.61	4.7	4.79	5	130	2	1
MM3Z5V1BW	N1	5	5.1	5.2	5	130	2	1.5
MM3Z5V6BW	P1	5.49	5.6	5.71	5	80	1	2.5
MM3Z6V2BW	R1	6.08	6.2	6.32	5	50	1	3
MM3Z6V8BW	X1	6.66	6.8	6.94	5	30	0.5	3.5
MM3Z7V5BW	Y1	7.35	7.5	7.65	5	30	0.5	4
MM3Z8V2BW	Z1	8.04	8.2	8.36	5	30	0.5	5
MM3Z9V1BW	A2	8.92	9.1	9.28	5	30	0.5	6
MM3Z10BW	B2	9.8	10	10.2	5	30	0.1	7
MM3Z11BW	C2	10.78	11	11.22	5	30	0.1	8
MM3Z12BW	D2	11.76	12	12.24	5	35	0.1	9
MM3Z13BW	E2	12.74	13	13.26	5	35	0.1	10
MM3Z15BW	F2	14.7	15	15.3	5	40	0.1	11
MM3Z16BW	H2	15.68	16	16.32	5	40	0.1	12
MM3Z18BW	J2	17.64	18	18.36	5	45	0.1	13
MM3Z20BW	K2	19.6	20	20.4	5	50	0.1	15
MM3Z22BW	M2	21.56	22	22.44	5	55	0.1	17
MM3Z24BW	N2	23.52	24	24.48	5	60	0.1	19
MM3Z27BW	P2	26.46	27	27.54	2	70	0.1	21
MM3Z30BW	R2	29.4	30	30.60	2	80	0.1	23
MM3Z33BW	X2	32.34	33	33.66	2	80	0.1	25
MM3Z36BW	Y2	35.28	36	36.72	2	90	0.1	27
MM3Z39BW	Z2	38.22	39	39.78	2	100	0.1	30
MM3Z43BW	A3	42.14	43	43.86	2	130	0.1	33
MM3Z47BW	B3	46.06	47	47.94	2	150	0.1	36
MM3Z51BW	C3	49.98	51	52.02	2	180	0.1	39
MM3Z56BW	D3	54.88	56	57.12	2	200	0.1	43
MM3Z62BW	E3	60.76	62	63.24	2	215	0.1	47
MM3Z68BW	F3	66.64	68	69.36	2	240	0.1	52
MM3Z75BW	H3	73.5	75	76.5	2	265	0.1	56

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

Ordering information

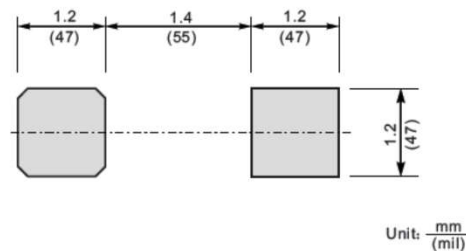
Package	Packing Description	Packing Quantity
SOD-323	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

SOD-323

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
C	0.08	0.15	3.1	5.9
D	1.2	1.4	47	55
E	1.4	1.8	63	70
E1	2.55	2.75	100	108
b	0.25	0.4	9.8	16
L1	0.2	0.45	7.9	16
A1	-	0.2	-	8
∠	9°			

The recommended mounting pad size



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