

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 $\pm 2\%$

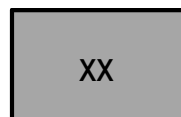
VOLTAGE RANGE

2.0 to 75 Volts

300mW



SOD-323



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

(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.

Electrical Characteristics

Type	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)
MM3Z2V0B	0B	1.96	2.0	2.04	5	100	120	0.5
MM3Z2V2B	0C	2.16	2.2	2.24	5	100	120	0.7
MM3Z2V4B	C1	2.35	2.4	2.45	5	100	120	1
MM3Z2V7B	D1	2.65	2.7	2.75	5	110	120	1
MM3Z3V0B	E1	2.94	3.0	3.06	5	120	50	1
MM3Z3V3B	F1	3.23	3.3	3.37	5	130	20	1
MM3Z3V6B	H1	3.53	3.6	3.67	5	130	10	1
MM3Z3V9B	J1	3.82	3.9	3.98	5	130	5	1
MM3Z4V3B	K1	4.21	4.3	4.39	5	130	5	1
MM3Z4V7B	M1	4.61	4.7	4.79	5	130	2	1
MM3Z5V1B	N1	5	5.1	5.2	5	130	2	1.5
MM3Z5V6B	P1	5.49	5.6	5.71	5	80	1	2.5
MM3Z6V2B	R1	6.08	6.2	6.32	5	50	1	3
MM3Z6V8B	X1	6.66	6.8	6.94	5	30	0.5	3.5
MM3Z7V5B	Y1	7.35	7.5	7.65	5	30	0.5	4
MM3Z8V2B	Z1	8.04	8.2	8.36	5	30	0.5	5
MM3Z9V1B	A2	8.92	9.1	9.28	5	30	0.5	6
MM3Z10B	B2	9.8	10	10.2	5	30	0.1	7
MM3Z11B	C2	10.78	11	11.22	5	30	0.1	8
MM3Z12B	D2	11.76	12	12.24	5	35	0.1	9
MM3Z13B	E2	12.74	13	13.26	5	35	0.1	10
MM3Z15B	F2	14.7	15	15.3	5	40	0.1	11
MM3Z16B	H2	15.68	16	16.32	5	40	0.1	12
MM3Z18B	J2	17.64	18	18.36	5	45	0.1	13
MM3Z20B	K2	19.6	20	20.4	5	50	0.1	15
MM3Z22B	M2	21.56	22	22.44	5	55	0.1	17
MM3Z24B	N2	23.52	24	24.48	5	60	0.1	19
MM3Z27B	P2	26.46	27	27.54	2	70	0.1	21
MM3Z30B	R2	29.4	30	30.60	2	80	0.1	23
MM3Z33B	X2	32.34	33	33.66	2	80	0.1	25
MM3Z36B	Y2	35.28	36	36.72	2	90	0.1	27
MM3Z39B	Z2	38.22	39	39.78	2	100	0.1	30
MM3Z43B	A3	42.14	43	43.86	2	130	0.1	33
MM3Z47B	B3	46.06	47	47.94	2	150	0.1	36
MM3Z51B	C3	49.98	51	52.02	2	180	0.1	39
MM3Z56B	D3	54.88	56	57.12	2	200	0.1	43
MM3Z62B	E3	60.76	62	63.24	2	215	0.1	47
MM3Z68B	F3	66.64	68	69.36	2	240	0.1	52
MM3Z75B	H3	73.5	75	76.5	2	265	0.1	56

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

RATING AND CHARACTERISTIC CURVES

Fig.1 Maximum Continuous Power Derating

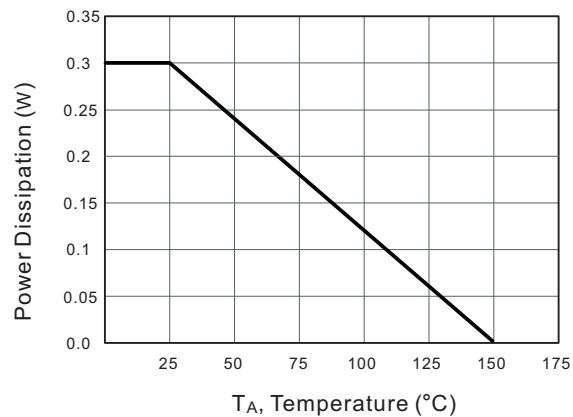
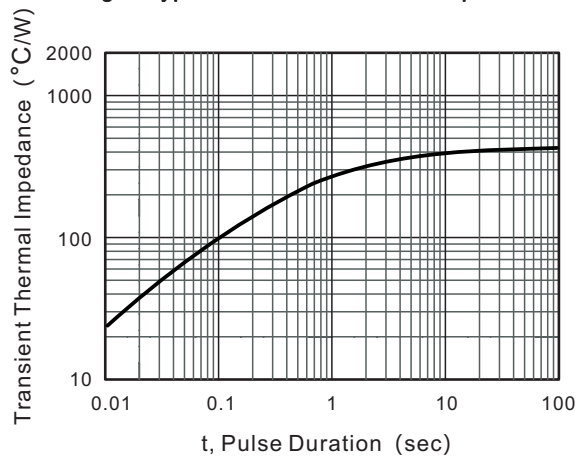
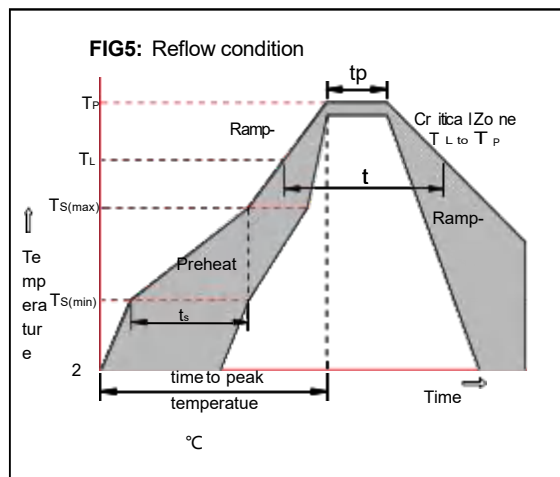


Fig.2 Typical Transient Thermal Impedance



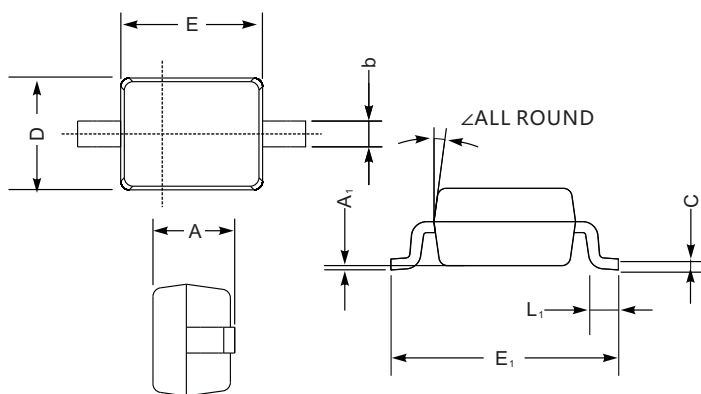
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217 °C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_P)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C



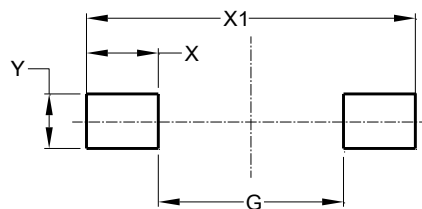
Package Dimensions & Suggested Pad Layout

SOD323



SOD-323 mechanical data

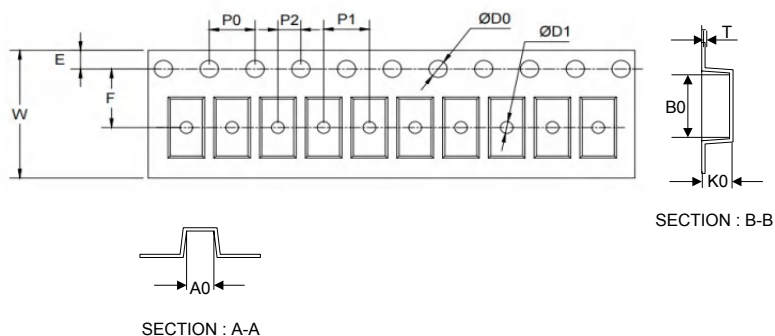
UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	



Dimensions	Value (in mm)
G	1.40
X	1.20
X1	3.80
Y	1.00

Tape & reel specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	4.00±0.20
P2	2.00±0.20
D0	1.55±0.20
D1	1.00±0.20
E	1.55±0.25
F	3.60±0.20
W	8.00±0.20
A0	2.00±0.20
B0	3.25±0.20
K0	1.35±0.20
T	0.23±0.10
D2	177.0±5.0
D3	55Min.
D4	R24.6±2.0
G	R82.0±2.0
I	13.0±2.0
W1	10.20±3.0

Quantity: 3000PCS

7" Reel

