

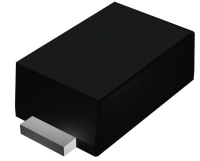
# MM1Z2B4 thru MM1ZB75

Zener Diodes

Vz Range: 2.4V to 75V Power Dissipation: 500mW

## Features

- Power Dissipation: 500mW
- Zener Voltage Tolerance:  $\pm 2\%$



SOD-123FL

## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Power Dissipation, T <sub>L</sub> =75°C <sup>1</sup>	P <sub>D</sub>	500	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C
Thermal Resistance, Junction to Ambient <sup>2</sup>	R <sub>θJA</sub>	340	°C/W
Thermal Resistance, Junction to Lead <sup>1</sup>	R <sub>θJL</sub>	150	°C/W

Notes:

1. FR-4 PCB=89\*38mm.
2. Mounted on an FR-4 PCB 38\*38\*1.6mm with single-sided Cu pad areas 25mm<sup>2</sup>(>70μm thick).

## Electrical Characteristics (T<sub>A</sub>=25°C, V<sub>F</sub><0.9V at I<sub>F</sub>=10mA)

Type	Marking	Zener Voltage Range <sup>1</sup>				Dynamic Resistance		Reverse Current	
		V <sub>ZT</sub>			@ I <sub>ZT</sub>	Z <sub>ZT</sub>	@ I <sub>ZT</sub>	I <sub>R</sub>	@ V <sub>R</sub>
		Min.(V)	Nom.(V)	Max.(V)	(mA)	Max. (Ω)	(mA)	Max(μA)	(V)
MM1Z2B4	5Y1	2.352	2.4	2.448	5	100	5	120	1
MM1Z2B7	5Z1	2.646	2.7	2.754	5	110	5	120	1
MM1Z3B0	6A1	2.94	3	3.06	5	120	5	50	1
MM1Z3B3	6B1	3.234	3.3	3.366	5	130	5	20	1
MM1Z3B6	6C1	3.528	3.6	3.672	5	130	5	10	1
MM1Z3B9	6D1	3.822	3.9	3.978	5	130	5	5	1
MM1Z4B3	6E1	4.214	4.3	4.386	5	130	5	5	1
MM1Z4B7	6F1	4.606	4.7	4.794	5	130	5	2	1
MM1Z5B1	6G1	4.998	5.1	5.202	5	130	5	2	1.5
MM1Z5B6	6H1	5.488	5.6	5.712	5	80	5	1	2.5
MM1Z6B2	6J1	6.076	6.2	6.324	5	50	5	1	3
MM1Z6B8	6K1	6.664	6.8	6.936	5	30	5	0.5	3.5
MM1Z7B5	6L1	7.35	7.5	7.65	5	30	5	0.5	4
MM1Z8B2	6M1	8.036	8.2	8.364	5	30	5	0.5	5
MM1Z9B1	6N1	8.918	9.1	9.282	5	30	5	0.5	6
MM1ZB10	6P1	9.8	10	10.2	5	30	5	0.1	7
MM1ZB11	6Q1	10.78	11	11.22	5	30	5	0.1	8
MM1ZB12	6R1	11.76	12	12.24	5	35	5	0.1	9
MM1ZB13	6S1	12.74	13	13.26	5	35	5	0.1	10
MM1ZB15	6T1	14.7	15	15.3	5	40	5	0.1	11
MM1ZB16	6U1	15.68	16	16.32	5	40	5	0.1	12
MM1ZB18	6W1	17.64	18	18.36	5	45	5	0.1	13
MM1ZB20	6X1	19.6	20	20.4	5	50	5	0.1	15
MM1ZB22	6Y1	21.56	22	22.44	5	55	5	0.1	17
MM1ZB24	6Z1	23.52	24	24.48	5	60	5	0.1	19
MM1ZB27	7A1	26.46	27	27.54	5	70	2	0.1	21
MM1ZB30	7B1	29.4	30	30.6	5	80	2	0.1	23
MM1ZB33	7C1	32.34	33	33.66	5	80	2	0.1	25
MM1ZB36	7D1	35.28	36	36.72	5	90	2	0.1	27
MM1ZB39	7E1	38.22	39	39.78	2.5	100	2	2	30
MM1ZB43	7F1	42.14	43	43.86	2.5	130	2	2	33
MM1ZB47	7G1	46.06	47	47.94	2.5	150	2	2	36
MM1ZB51	7H1	49.98	51	52.02	2.5	180	2	1	39
MM1ZB56	7J1	54.88	56	57.12	2.5	180	2	1	43
MM1ZB62	7K1	60.76	62	63.24	2.5	200	2	0.2	47
MM1ZB68	7L1	66.64	68	69.36	2.5	250	2	0.2	52
MM1ZB75	7M1	73.5	75	76.5	2.5	300	2	0.2	57

Note:

1. V<sub>Z</sub> is tested with pulses (20 ms).

## Electrical Characteristic Curve

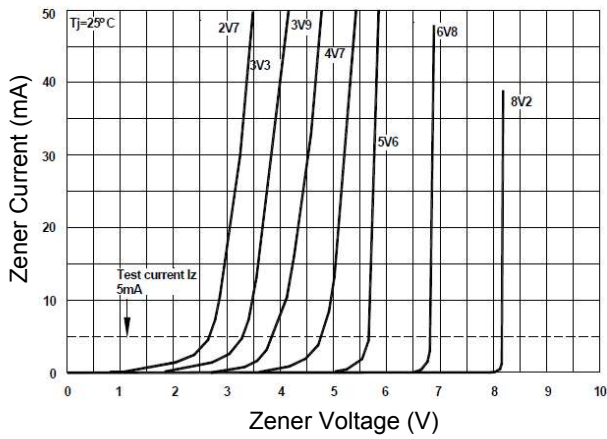


Figure 1. Zener Characteristics Curve

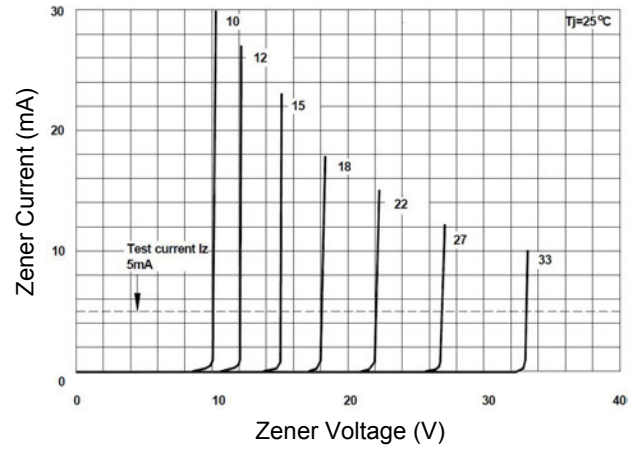


Figure 2. Zener Characteristics Curve

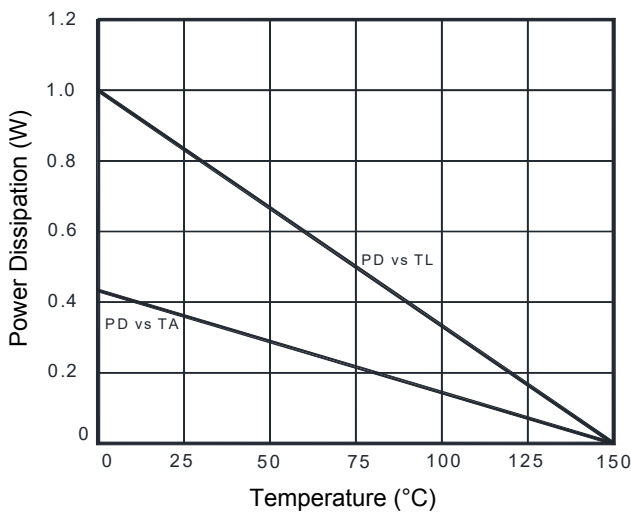
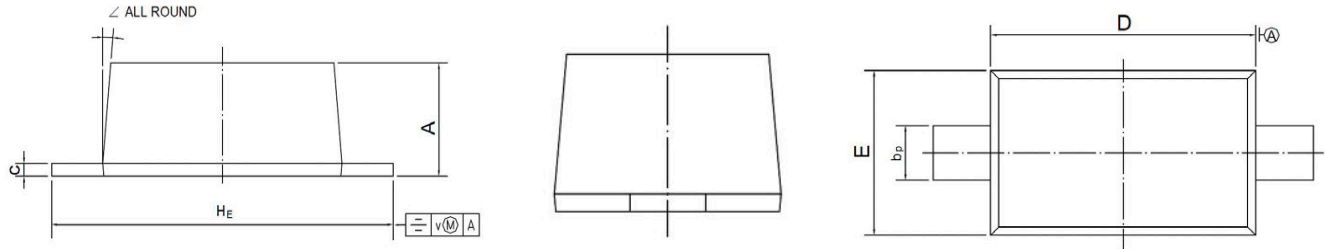


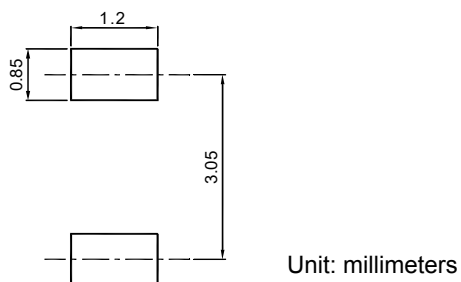
Figure 3. Power Derating Curve

## Package Outline Dimensions (SOD-123FL)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.150	0.041	0.045
b <sub>p</sub>	0.500	0.600	0.020	0.024
c	0.100	0.135	0.004	0.005
D	2.600	2.700	0.102	0.106
E	1.550	1.650	0.061	0.065
H <sub>E</sub>	3.550	3.850	0.140	0.152
v	0.200		0.008	
∠	5°		5°	

## Recommended Pad Layout



## Order Information

Device	Package	Marking	Quantity	HSF Status
MM1ZBxx	SOD-123FL	See Table	3,000pcs / Reel	RoHS Compliant