

SMT -Type Zener Diode

Features

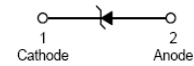
- Large selection of zener voltages: 2V ~ 75V
- Tight voltage tolerance : $\pm 2\%$ for B-series
- Ultra low-profile package well suited for automated assembly
- MSL Class 1 compatible
- Halogen free
- Qualified to AEC-Q101 standards for high reliability



SOD-323

Applications

- General voltage regulation
- Mobile & handheld systems



Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward Voltage @ $I_F=10\text{mA}$	V_F	0.9	V
Power Dissipation	P_D	400	mW
Thermal Resistance (Junction-to-Ambient)	$R_{\theta JA}$	313	$^\circ\text{C/W}$
Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^\circ\text{C}$

Note:

Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated and standard footprint

Electrical Characteristics (T _A = 25 °C unless otherwise noted)												
Part Number	Marking Code	Zener Voltage V _Z (V)			I _{ZT} @ (mA)	Maximum Zener Impedance			Temperature Coefficient @ I _{ZT} T _C (mV/°C)		Maximum Reverse Current I _R (uA)	@ VR (V)
		Min	Typ	Max		Z _{ZT} (Ω) @ I _{ZT}	Z _{ZK} (Ω)	@ I _{ZK} (mA)	Min.	Max.		
TMM3Z2V0S	V0S	1.96	2.00	2.04	5	100	1000	0.5	-3.5	0.0	120.000	0.5
TMM3Z2V2S	V2S	2.16	2.20	2.24	5	100	1000	0.5	-3.5	0.0	120.000	0.7
TMM3Z2V4S	V4S	2.35	2.40	2.45	5	94	564	1.0	-3.5	0.0	45.000	1.0
TMM3Z2V7S	V7S	2.65	2.70	2.75	5	94	564	1.0	-3.5	0.0	18.000	1.0
TMM3Z3V0S	3V0	2.94	3.00	3.06	5	89	564	1.0	-3.5	0.0	9.000	1.0
TMM3Z3V3S	T5	3.23	3.30	3.37	5	89	564	1.0	-3.5	0.0	4.500	1.0
TMM3Z3V6S	3V6	3.53	3.60	3.67	5	84	564	1.0	-3.5	0.0	4.500	1.0
TMM3Z3V9S	T7	3.82	3.90	3.98	5	84	564	1.0	-3.5	0.0	2.700	1.0
TMM3Z4V3S	T8	4.21	4.30	4.39	5	84	564	1.0	-3.5	0.0	2.700	1.0
TMM3Z4V7S	T9	4.61	4.70	4.79	5	75	564	1.0	-3.5	0.2	2.700	2.0
TMM3Z5V1S	TA	5.00	5.10	5.20	5	56	470	1.0	-2.7	1.2	1.800	2.0
TMM3Z5V6S	TC	5.49	5.60	5.71	5	37	451	1.0	-2.0	2.5	0.900	2.0
TMM3Z6V2S	TE	6.08	6.20	6.32	5	9	376	1.0	0.4	3.7	2.700	4.0
TMM3Z6V8S	TF	6.66	6.80	6.94	5	14	141	1.0	1.2	4.5	1.800	4.0
TMM3Z7V5S	TG	7.35	7.50	7.65	5	14	75	1.0	2.5	5.3	0.900	5.0
TMM3Z8V2S	TH	8.04	8.20	8.36	5	14	75	1.0	3.2	6.2	0.630	5.0
TMM3Z9V1S	TK	8.92	9.10	9.28	5	14	94	1.0	3.8	7.0	0.450	6.0
TMM3Z10S	WB	9.80	10.00	10.20	5	18	141	1.0	4.5	8.0	0.180	7.0
TMM3Z11S	11S	10.78	11.00	11.22	5	18	141	1.0	5.4	9.0	0.090	8.0
TMM3Z12S	TN	11.76	12.00	12.24	5	23	141	1.0	6.0	10.0	0.090	8.0
TMM3Z13S	13S	12.74	13.00	13.26	5	28	160	1.0	7.0	11.0	0.090	8.0
TMM3Z15S	WF	14.70	15.00	15.30	5	28	188	1.0	9.2	13.0	0.045	10.5
TMM3Z16S	TU	15.68	16.00	16.32	5	37	188	1.0	10.4	14.0	0.045	11.2
TMM3Z18S	TW	17.64	18.00	18.36	5	42	212	1.0	12.4	16.0	0.045	12.6
TMM3Z20S	20S	19.60	20.00	20.40	5	51	212	1.0	14.4	18.0	0.045	14.0
TMM3Z22S	22S	21.56	22.00	22.44	5	51	235	1.0	16.4	20.0	0.045	15.4
TMM3Z24S	24S	23.52	24.00	24.48	5	65	235	1.0	18.4	22.0	0.045	16.8
TMM3Z27S	27S	26.46	27.00	27.54	2	75	282	0.5	21.4	25.3	0.045	18.9
TMM3Z30S	30S	29.40	30.00	30.60	2	75	282	0.5	24.4	29.4	0.045	21.0
TMM3Z33S	33S	32.34	33.00	33.66	2	75	306	0.5	27.4	33.4	0.045	23.0
TMM3Z36S	36S	35.28	36.00	36.72	2	84	329	0.5	30.4	37.4	0.045	25.2
TMM3Z39S	39S	38.22	39.00	39.78	2	122	329	0.5	33.4	41.2	0.045	27.3
TMM3Z43S	43S	42.14	43.00	43.86	2	141	353	0.5	37.6	46.6	0.045	30.1
TMM3Z47S	47S	46.06	47.00	47.94	2	160	353	0.5	42.0	51.8	0.045	33.0
TMM3Z51S	51S	49.98	51.00	52.02	2	169	376	0.5	46.6	57.2	0.045	35.7
TMM3Z56S	56S	54.88	56.00	57.12	2	200	400	0.5	52.2	63.8	0.045	39.2
TMM3Z62S	62S	60.76	62.00	63.24	2	215	423	0.5	58.8	71.6	0.045	43.4
TMM3Z68S	68S	66.64	68.00	69.36	2	240	447	0.5	65.6	79.8	0.045	47.6
TMM3Z75S	75S	73.50	75.00	76.50	2	255	470	0.5	73.4	88.6	0.045	52.5

Ratings and Characteristics Curves

(@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

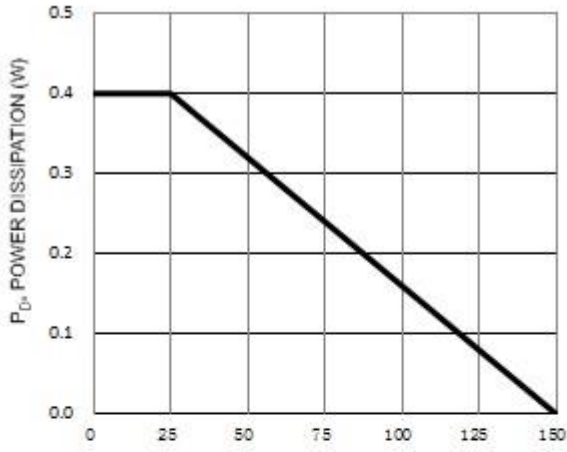


Fig. 1 Power Derating Curve

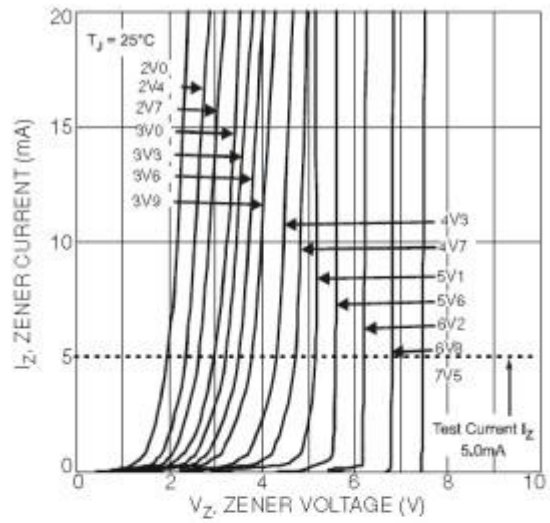


Fig. 2 Typical Zener Breakdown Characteristics

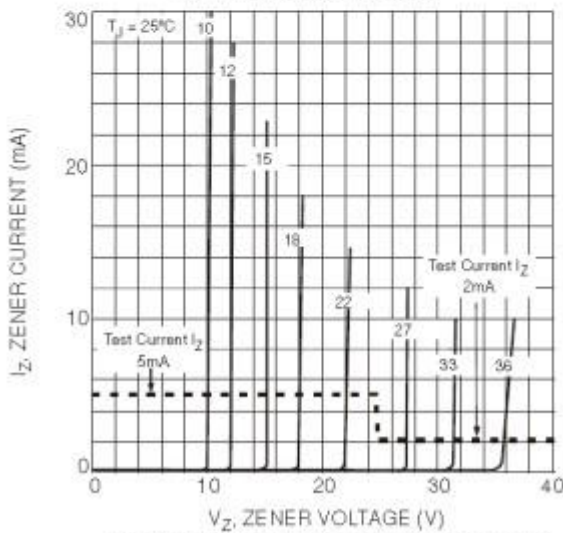


Fig. 3 Typical Zener Breakdown Characteristics

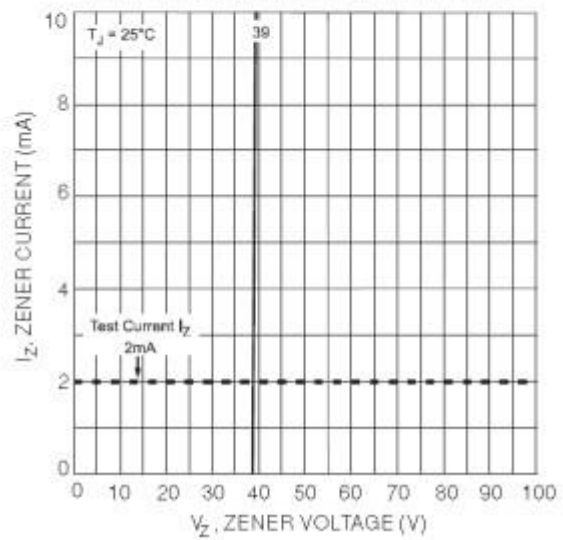


Fig. 4 Typical Zener Breakdown Characteristics

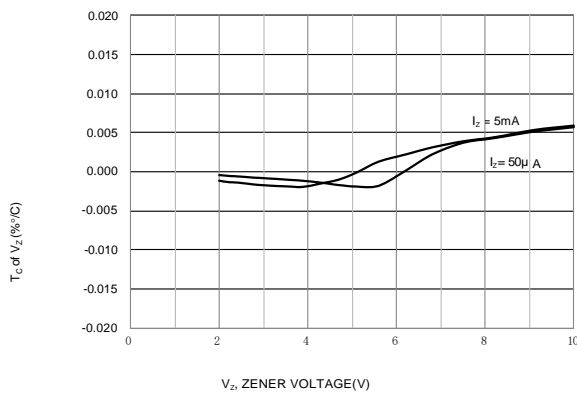


Fig. 5 Typical Temperature Coefficient of Zener Voltage

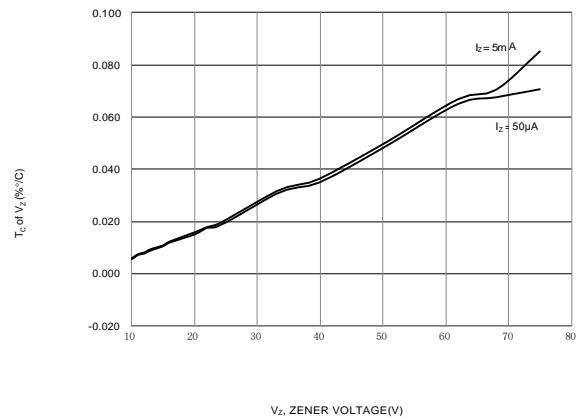
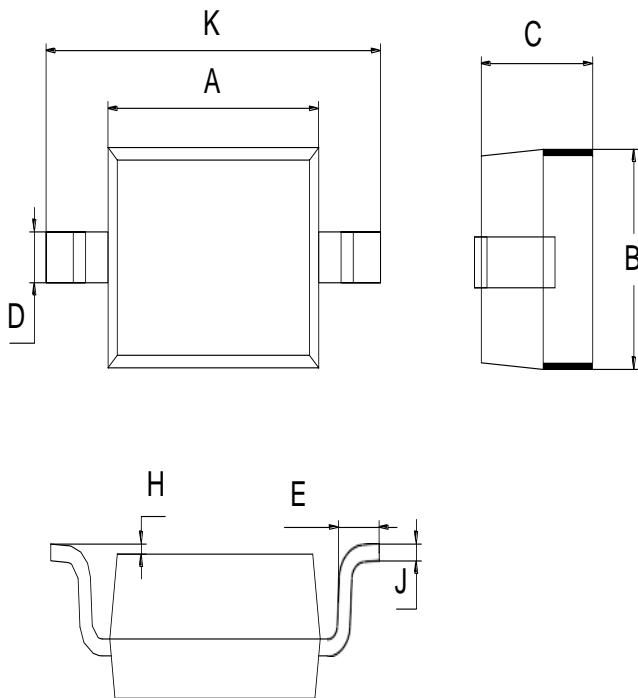


Fig. 6 Typical Temperature Coefficient of Zener Voltage

Package Outline Dimensions

millimeters



SOD-323		
Dimension	Min.	Max.
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

Revision History

Document Version	Date of release	Discription of changes
Rev.A	2020.03.04	First issue

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