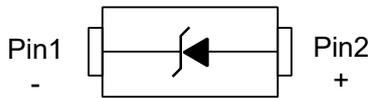


## Feature

- Constant Voltage control
- Wide Voltage Range Selection 2.4V to 75V
- SOD323 GW Thin SMD package
- RoHS compliant / Halogen Free / Green EMC
- Matte Tin (Sn) Lead Finish
- Pb Free Solder
- Lead Thickness Includes Solder Plating



**SOD-323(Top View)**



**Circuit Diagram**



**Marking (Top View)**

Notes:  
XXX= Device code, see table on page2 the marking code

## Electrical characteristics ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Units
Power Dissipation	$P_d$	200	mW
Forward Voltage @ $I_F=10\text{mA}$	$V_F$	0.9	V
Regulator Current	$I_{ZM}$	$P_D/V_Z$	mA
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 ~ +150	$^{\circ}\text{C}$

# Zener Voltage Regulators

## Maximum Ratings and Thermal Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Device	Marking	Zener Voltage Range <sup>2)</sup>				Maximum Zener Impedance <sup>3)</sup>			Reverse Current	
		$V_Z$			$I_{ZT}$	$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	$I_{ZK}$	$I_R$	$V_R$
		Nom(V)	Min(V)	Max(V)	mA	$\Omega$	mA	$\mu\text{A}$	V	
PZ3D2V4HA	2WX	2.4	2.35	2.45	5	100	600	1	50	1
PZ3D2V7HA	2W1	2.7	2.65	2.75	5	100	600	1	20	1
PZ3D3V0HA	2W2	3	2.94	3.06	5	95	600	1	10	1
PZ3D3V3HA	2W3	3.3	3.23	3.37	5	95	600	1	5	1
PZ3D3V6HA	2W4	3.6	3.53	3.67	5	90	600	1	5	1
PZ3D3V9HA	2W5	3.9	3.82	3.98	5	90	600	1	3	1
PZ3D4V3HA	2W6	4.3	4.21	4.39	5	90	600	1	3	1
PZ3D4V7HA	2W7	4.7	4.61	4.79	5	80	500	1	3	2
PZ3D5V1HA	2W8	5.1	5	5.2	5	60	480	1	2	2
PZ3D5V6HA	2W9	5.6	5.49	5.71	5	40	400	1	1	2
PZ3D6V2HA	2WA	6.2	6.08	6.32	5	10	150	1	3	4
PZ3D6V8HA	2WB	6.8	6.66	6.94	5	15	80	1	2	4
PZ3D7V5HA	2WC	7.5	7.35	7.65	5	15	80	1	1	5
PZ3D8V2HA	2WD	8.2	8.04	8.36	5	15	80	1	0.7	5
PZ3D9V1HA	2WE	9.1	8.92	9.28	5	15	100	1	0.5	6
PZ3D10HA	2WF	10	9.8	10.2	5	20	150	1	0.2	7
PZ3D11HA	2WG	11	10.78	11.22	5	20	150	1	0.1	8
PZ3D12HA	2WH	12	11.76	12.24	5	25	150	1	0.1	8
PZ3D13HA	2WI	13	12.74	13.26	5	30	170	1	0.1	8
PZ3D14HA	2WY	14	13.72	14.28	5	25	110	1	0.1	10.5
PZ3D15HA	2WJ	15	14.7	15.3	5	30	200	1	0.1	10.5
PZ3D16HA	2WK	16	15.68	16.32	5	40	200	1	0.1	11.2
PZ3D18HA	2WL	18	17.64	18.36	5	45	225	1	0.1	12.6
PZ3D20HA	2WM	20	19.6	20.4	5	55	225	1	0.1	14
PZ3D22HA	2WN	22	21.56	22.44	5	55	250	1	0.1	15.4
PZ3D24HA	2WO	24	23.52	24.48	5	70	250	1	0.1	16.8
PZ3D27HA	2WP	27	26.46	27.54	2	80	300	0.5	0.1	18.9
PZ3D30HA	2WQ	30	29.4	30.6	2	80	300	0.5	0.1	21
PZ3D33HA	2WR	33	32.34	33.66	2	80	325	0.5	0.1	23.1
PZ3D36HA	2WS	36	35.28	36.72	2	90	350	0.5	0.1	25.2
PZ3D39HA	2WT	39	38.22	39.78	2	130	350	0.5	0.1	27.3
PZ3D43HA	2WU	43	42.14	43.86	2	130	350	0.5	0.1	29.4
PZ3D47HA	2WV	47	45.83	48.17	2	170	1000	0.25	0.1	36
PZ3D51HA	2X1	51	49.73	52.27	2	180	1300	0.25	0.1	39
PZ3D56HA	2X2	56	54.6	57.4	2	200	1400	0.25	0.1	43
PZ3D62HA	2X3	62	60.45	63.55	2	225	1400	0.25	0.1	47
PZ3D68HA	2X4	68	66.3	69.7	2	240	1600	0.25	0.1	52
PZ3D75HA	2X5	75	73.13	76.87	2	265	1700	0.25	0.1	56

# Zener Voltage Regulators

## Typical Characteristics

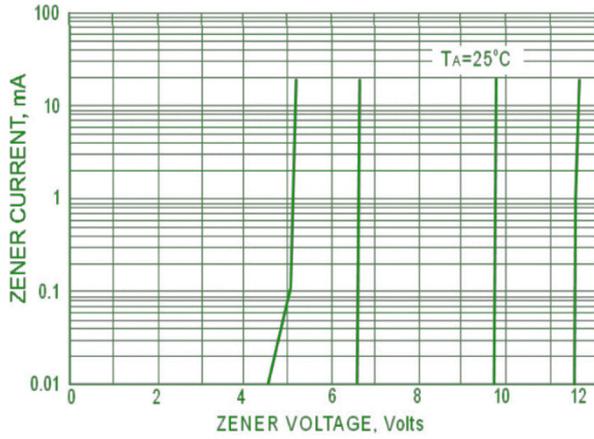


Fig. 1 - Zener Breakdown Characteristic

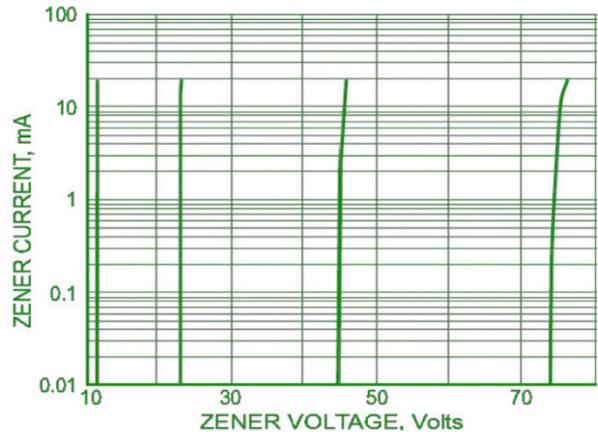


Fig. 2 - Zener Breakdown Characteristics

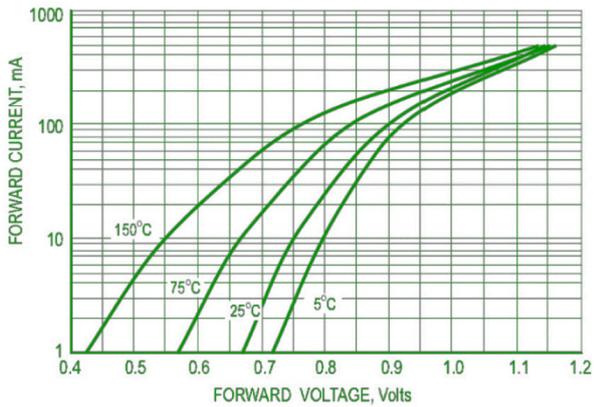


Fig. 3 - Forward Voltage

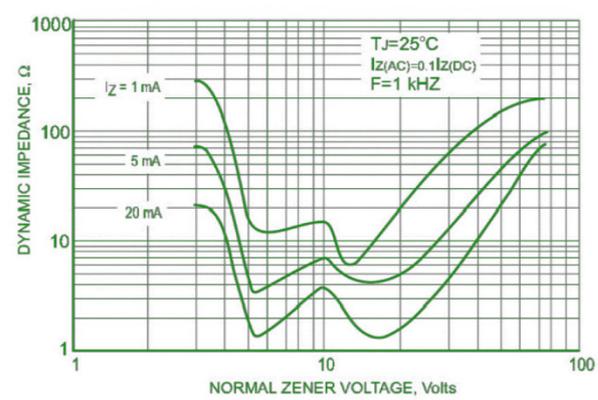


Fig. 4 - Effect of Zener Voltage on Zener Impedance

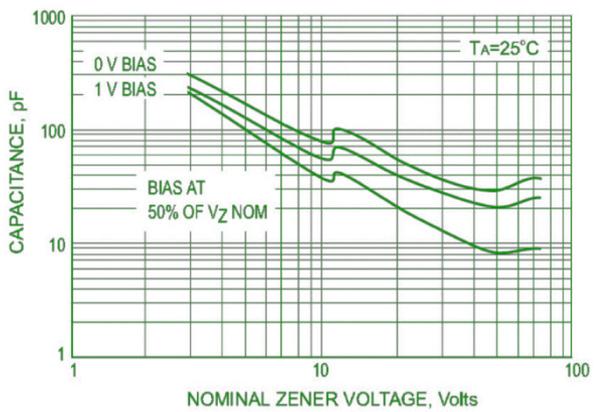


Fig. 5 - Typical Capacitance

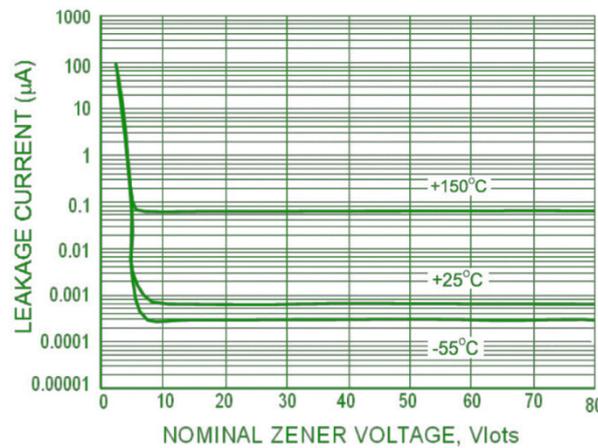


Fig. 6 - Typical Leakage Current

# Zener Voltage Regulators

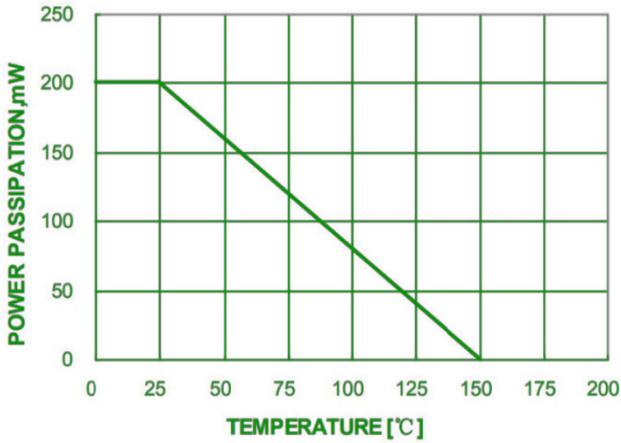
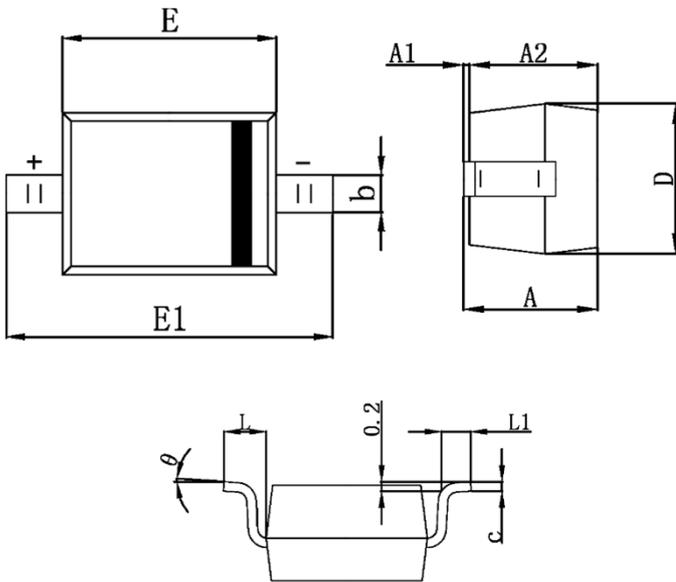
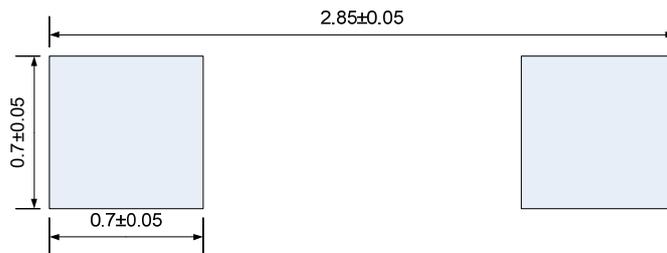


Fig. 7 - Power Dissipation vs Ambient Temp.

## Product Dimension (SOD-323)



Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	-	1.000	-	0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 Ref.		0.019 Ref.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°



Suggested PCB Layout

Unit: mm



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