

Zener Voltage Regulators
200mW Surface Mount Zener Diodes

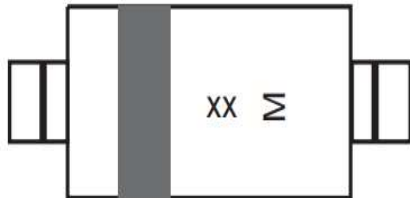
This series of Zener diodes is packaged in a SOD-323 surface mount package that has a power dissipation of 200 mW. They are designed to provide voltage regulation protection and are especially attractive in situations where space is at a premium. They are well suited for applications such as cellular phones, hand held portables, and high density PC boards.

Features

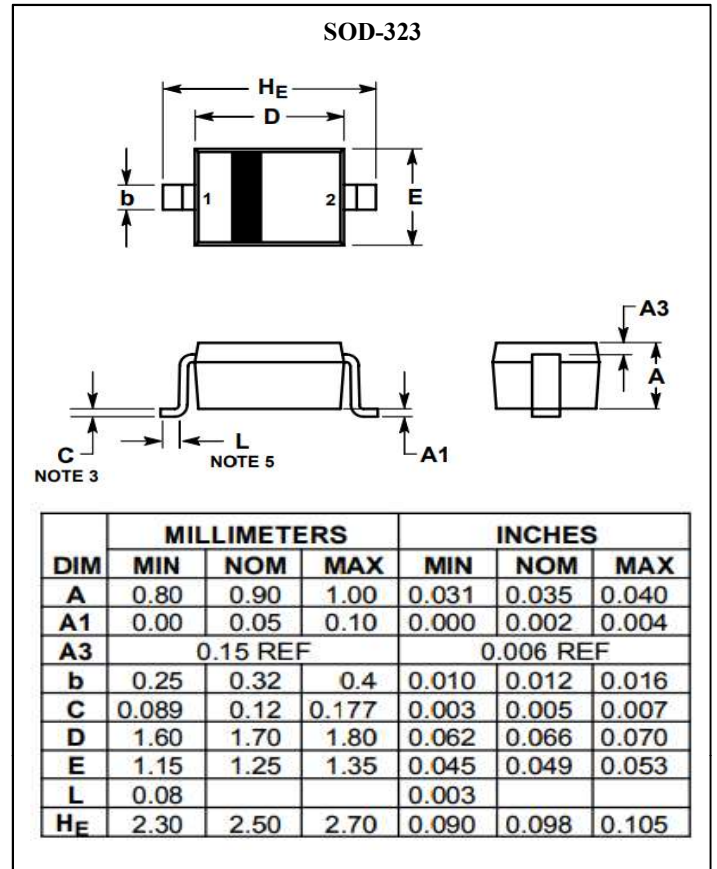
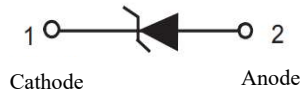
- Standard Zener Breakdown Voltage Range – 2.4 V to 36 V
- Steady State Power Rating of 200 mW
- Small Body Outline Dimensions: 0.067" x 0.049" (1.7 mm x 1.25 mm)
- Low Body Height: 0.035" (0.9 mm)
- Package Weight: 4.507mg/unit
- ESD Rating of Class 3 per Human Body Model
- Pb-Free package is available.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.
- We declare that the material of product compliance with RoHS requirements

Mechanical Data

- Case : Void-free, transfer-molded plastic
- Finish : All external surface corrosion resistant
- Maximum Case Temperature for Soldering Purposes : 260°C for 10 Seconds
- Polarity : Cathode indicated by polarity band
- Flammability Rating : UL 94 V-0
- Mounting Position : Any

Marking


XX = Specific Device Code
M = Date Code


Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Rated Value	Unit	Remark
Power Dissipation	P _D	200	mW	
Thermal resistance Junction to Ambient	R _{th(j-a)}	635	°C/W	
Operating Junction Temperature Range	T _J	-55 to +150	°C	
Storage Temperature Range	T _{STG}	-55 to +150	°C	

Electrical Characteristics ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Device	Device Marking	Zener Voltage (Note 3 and 4)			Zener Impedance (Note 5)			Leakage Current	
		V _Z (Volts)		@I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}		I _R @ V _R	
		Min	Max	mA	Ω	Ω	mA	uA	Volts
LUDZS2.4BT1G	22	2.43	2.63	5.0	100	1000	0.5	100	1.0
LUDZS2.7BT1G	32	2.69	2.91	5.0	110	1000	0.5	100	1.0
LUDZS3.0BT1G	42	3.01	3.22	5.0	120	1000	0.5	50	1.0
LUDZS3.3BT1G	52	3.32	3.53	5.0	120	1000	0.5	20	1.0
LUDZS3.6BT1G	62	3.60	3.85	5.0	100	1000	1.0	10	1.0
LUDZS3.9BT1G	72	3.89	4.16	5.0	100	1000	1.0	5.0	1.0
LUDZS4.3BT1G	82	4.17	4.43	5.0	100	1000	1.0	5.0	1.0
LUDZS4.7BT1G	92	4.55	4.75	5.0	100	800	0.5	2.0	1.0
LUDZS5.1BT1G	A2	4.98	5.20	5.0	80	500	0.5	2.0	1.5
LUDZS5.6BT1G	C2	5.49	5.73	5.0	60	200	0.5	1.0	2.5
LUDZS6.2BT1G	E2	6.06	6.33	5.0	60	100	0.5	1.0	3.0
LUDZS6.8BT1G	F2	6.65	6.93	5.0	40	60	0.5	0.5	3.5
LUDZS7.5BT1G	H2	7.28	7.60	5.0	30	60	0.5	0.5	4.0
LUDZS8.2BT1G	J2	8.02	8.36	5.0	30	60	0.5	0.5	5.0
LUDZS9.1BT1G	L2	8.85	9.23	5.0	30	60	0.5	0.5	6.0
LUDZS10BT1G	05	9.77	10.21	5.0	30	60	0.5	0.1	7.0
LUDZS11BT1G	15	10.76	11.22	5.0	30	60	0.5	0.1	8.0
LUDZS12BT1G	25	11.74	12.24	5.0	30	80	0.5	0.1	9.0
LUDZS13BT1G	35	12.91	13.49	5.0	37	80	0.5	0.1	10.0
LUDZS15BT1G	45	14.34	14.98	5.0	42	80	0.5	0.1	11.0
LUDZS16BT1G	55	15.85	16.51	5.0	50	80	0.5	0.1	12.0
LUDZS18BT1G	65	17.56	18.35	5.0	65	80	0.5	0.1	13.0
LUDZS20BT1G	75	19.52	20.39	5.0	85	100	0.5	0.1	15.0
LUDZS22BT1G	85	21.54	22.47	5.0	100	100	0.5	0.1	17.0
LUDZS24BT1G	95	23.72	24.78	5.0	120	120	0.5	0.1	19.0
LUDZS27BT1G	A5	26.19	27.53	5.0	150	150	0.5	0.1	21.0
LUDZS30BT1G	C5	29.19	30.69	5.0	200	200	0.5	0.1	23.0
LUDZS33BT1G	E5	32.15	33.79	5.0	250	250	0.5	0.1	25.0
LUDZS36BT1G	F5	35.07	36.87	5.0	300	300	0.5	0.1	27.0

Notes) 1. The Zener voltage (V_Z) is measured 40ms after power is supplied.

2. The operating resistances (Z_Z, Z_{ZK}) are measured by superimposing a minute alternating current on the regulated current (I_Z).

Electrical Characteristics Curves (Ta=25°C unless otherwise noted)

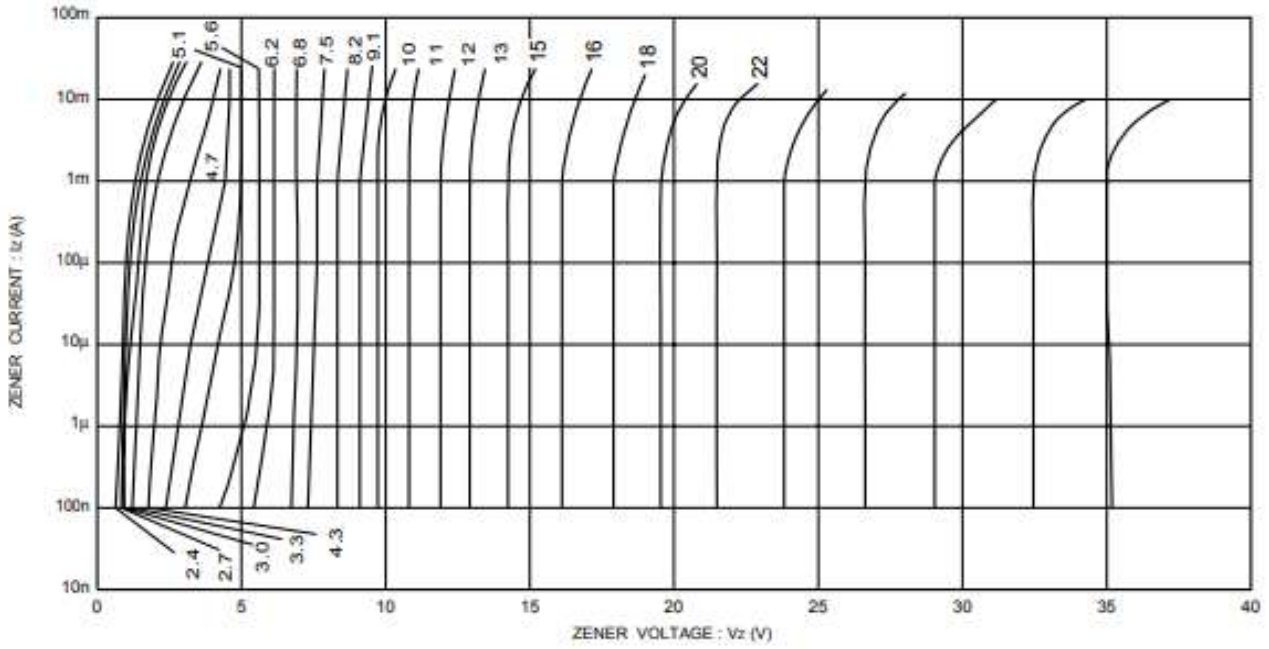


Fig.1 Zener voltage characteristics

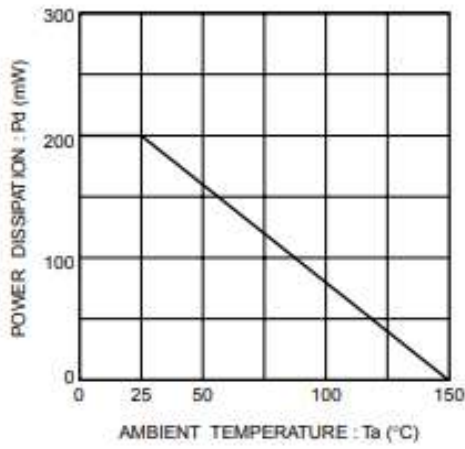


Fig.2 Derating curve

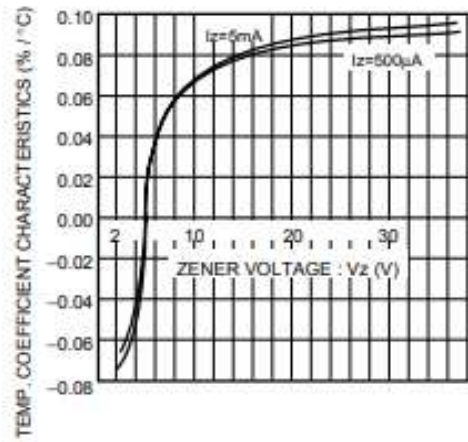


Fig.3 Zener voltage-temp. coefficient characteristics