



UDZS2.0B Series Zener Voltage Regulators

200 mW SOD-323 Surface Mount

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.

Specification Features:

- High demand voltage range (3.6V-36V)
- Steady State Power Rating of 200 mW



Cathode

Anode



SOD323

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Parameter	Symbol	Limits	Unit
Power dissipation	P	200	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	635	°C/W
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	–55 to +150	°C
Operating temperature	T _{opr}	–55 to +150	°C



ELECTRICAL CHARACTERISTICS (Ta=25°C)

Device	Device Marking	Zener voltage			Operating resistance		Rising operating resistance		Reverse current	
		V _Z (V)			Z _Z (Ω)		Z _{Zk} (Ω)		I _R (μA)	
		Min.	Max.	I _Z (mA)	Max.	I _Z (mA)	Max.	I _Z (mA)	Max.	V _R (V)
UDZS2.0B	02	2.020	2.200	5	100	5	1000	0.5	120	0.5
UDZS2.2B	12	2.220	2.410	5	100	5	1000	0.5	120	0.7
UDZS2.4B	22	2.430	2.630	5	100	5	1000	0.5	100	1.0
UDZS2.7B	32	2.690	2.910	5	110	5	1000	0.5	100	1.0
UDZS3.0B	42	3.010	3.220	5	120	5	1000	0.5	50	1.0
UDZS3.3B	52	3.320	3.530	5	120	5	1000	0.5	20	1.0
UDZS3.6B	62	3.600	3.845	5	100	5	1000	1.0	10	1.0
UDZS3.9B	72	3.890	4.160	5	100	5	1000	1.0	5	1.0
UDZS4.3B	82	4.170	4.430	5	100	5	1000	1.0	5	1.0
UDZS4.7B	92	4.550	4.750	5	100	5	800	0.5	2	1.0
UDZS5.1B	A2	4.980	5.200	5	80	5	500	0.5	2	1.5
UDZS5.6B	C2	5.490	5.730	5	60	5	200	0.5	1	2.5
UDZS6.2B	E2	6.060	6.330	5	60	5	100	0.5	1	3.0
UDZS6.8B	F2	6.650	6.930	5	40	5	60	0.5	0.5	3.5
UDZS7.5B	H2	7.280	7.600	5	30	5	60	0.5	0.5	4.0
UDZS8.2B	J2	8.020	8.360	5	30	5	60	0.5	0.5	5.0
UDZS9.1B	L2	8.850	9.230	5	30	5	60	0.5	0.5	6.0
UDZS10B	05	9.770	10.210	5	30	5	60	0.5	0.1	7.0
UDZS11B	15	10.760	11.220	5	30	5	60	0.5	0.1	8.0
UDZS12B	25	11.740	12.240	5	30	5	80	0.5	0.1	9.0
UDZS13B	35	12.910	13.490	5	37	5	80	0.5	0.1	10.0
UDZS15B	45	14.340	15.360	5	42	5	80	0.5	0.1	11.0
UDZS16B	55	15.850	16.510	5	50	5	80	0.5	0.1	12.0
UDZS18B	65	17.560	18.350	5	65	5	80	0.5	0.1	13.0
UDZS20B	75	19.520	20.390	5	85	5	100	0.5	0.1	15.0
UDZS22B	85	21.540	22.470	5	100	5	100	0.5	0.1	17.0
UDZS24B	95	23.720	24.780	5	120	5	120	0.5	0.1	19.0
UDZS27B	A5	26.190	27.530	5	150	5	150	0.5	0.1	21.0
UDZS30B	C5	29.190	30.690	5	200	5	200	0.5	0.1	23.0
UDZS33B	E5	32.150	33.790	5	250	5	250	0.5	0.1	25.0
UDZS36B	F5	35.070	36.870	5	300	5	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 CHARACTERISTIC CURVES (Ta=25°C)

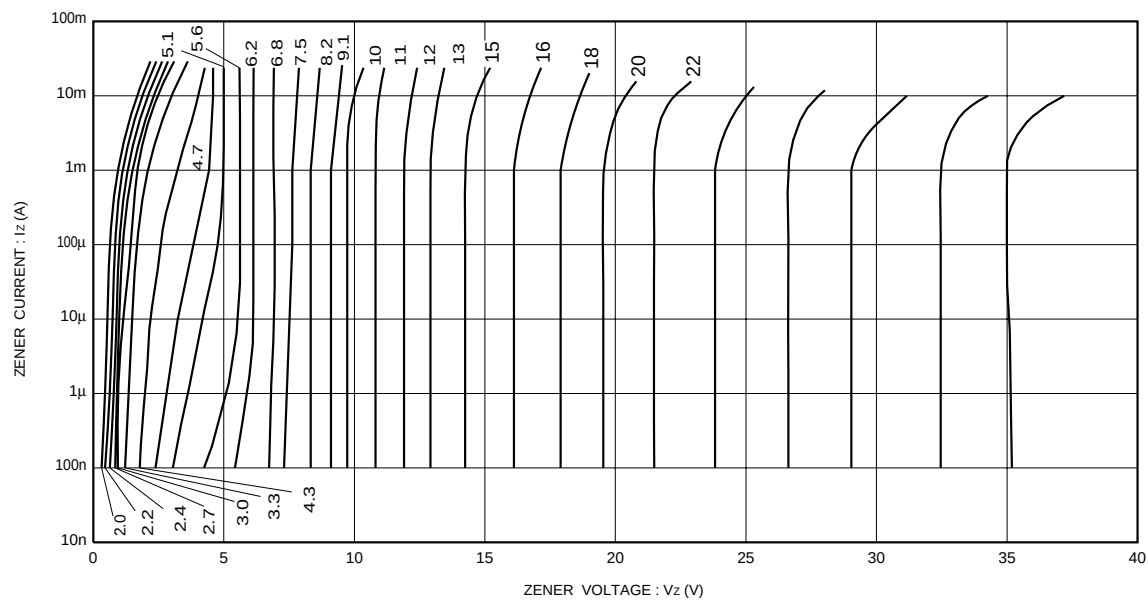


Fig.1 Zener voltage characteristics

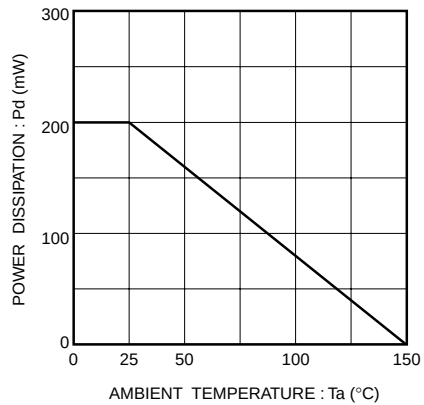


Fig.2 Derating curve

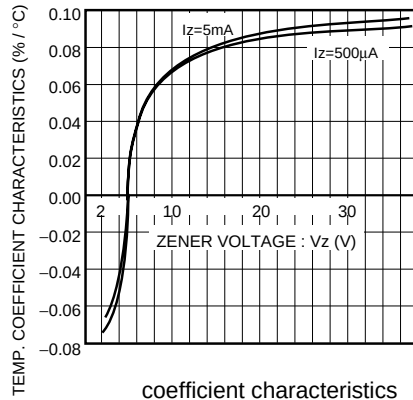


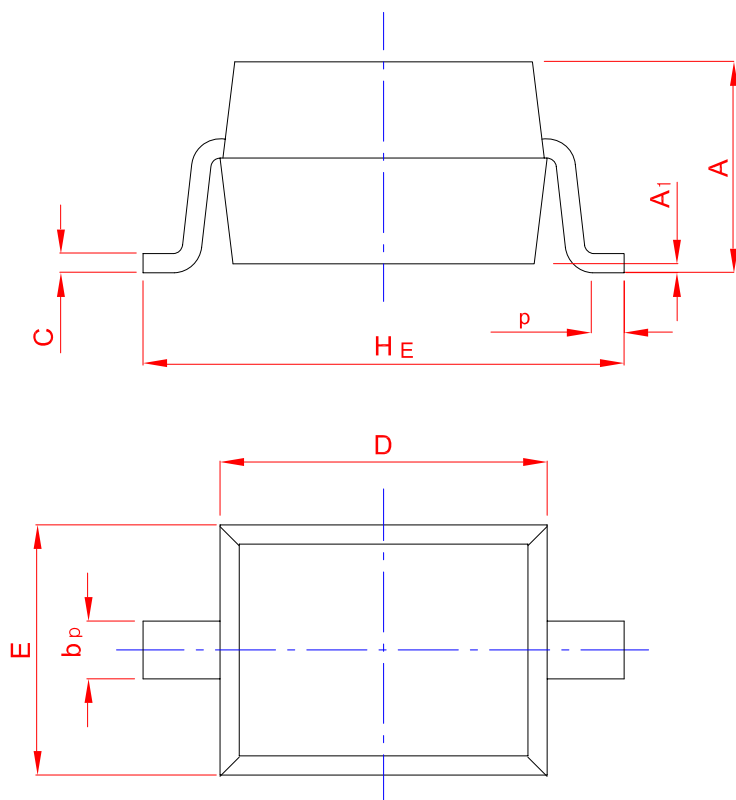
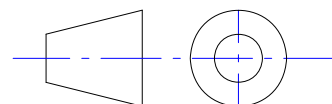
Fig.3 Zener voltage-temp.



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	b _p	C	D	E	H _E	A ₁	L _p
mm	1.00 0.80	0.40 0.25	0.15 0.10	1.80 1.60	1.35 1.15	2.80 2.30	0.10 0.01	0.50 0.20