

### Surface Mount Zener Diodes

 Lead(Pb)-Free

#### Features:

- \* Non-wire bonding structure improves
- \* High demand voltage range (2.0V-36V)

#### Mechanical Data:

- \* Case : SOD-323 Molded plastic.
- \* Terminals : Solder able per MIL-STD-202, Method208.
- \* Polarity : Cathode Indicated by Polarity Band.
- \* Marking : Marking Code(See Table on Page.2)
- \* Weigh : 0.004grams(approx).

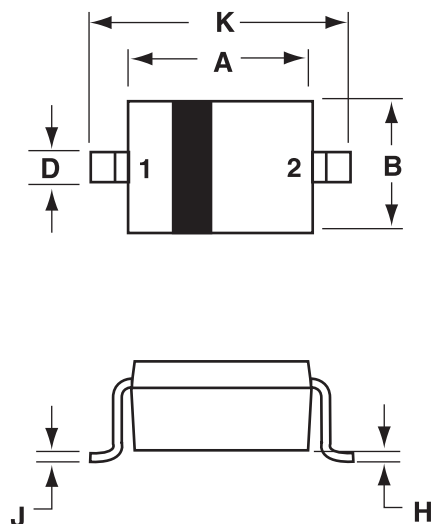
**SMALL SIGNAL  
ZENER DIODES  
200m WATTS**



**SOD-323**

### SOD-323 Outline Dimensions

Unit:mm



Dim	MILLMETERS	
	Min	Max
A	1.60	1.80
B	1.15	1.35
C	0.80	1.00
D	0.25	0.40
E	0.15REF	
H	0.00	0.10
J	0.089	0.177
K	2.30	2.70

**PIN 1.CATHODE  
2.ANODE**

**ABSOLUTE MAXIMUM RATINGS (Ta=25°C)**

Parameter	Symbol	Limits	Unit
Power dissipation	P <sub>D</sub>	200	mW
Junction temperature	T <sub>J</sub>	125	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C
Operating temperature	T <sub>opr</sub>	-55 to +150	°C

**DEVICE MARKING CODE**

Device	Marking	Device	Marking	Device	Marking
UDZS2.0B	02	UDZS5.6B	C2	UDZS16B	55
UDZS2.2B	12	UDZS6.2B	E2	UDZS18B	65
UDZS2.4B	22	UDZS6.8B	F2	UDZS20B	75
UDZS2.7B	32	UDZS7.5B	H2	UDZS22B	85
UDZS3.0B	42	UDZS8.2B	J2	UDZS24B	95
UDZS3.3B	52	UDZS9.1B	L2	UDZS27B	A5
UDZS3.6B	62	UDZS10B	05	UDZS30B	C5
UDZS3.9B	72	UDZS11B	15	UDZS33B	E5
UDZS4.3B	82	UDZS12B	25	UDZS36B	F5
UDZS4.7B	92	UDZS13B	35		
UDZS5.1B	A2	UDZS15B	45		

ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ )

Device	Zener voltage			Operating resistance		Rising operating resistance		Reverse current	
	$V_z(\text{V})$			$Z_z(\Omega)$		$Z_{zk}(\Omega)$		$I_R(\mu\text{A})$	
	Min.	Max.	$I_z$ (mA)	Max.	$I_z$ (mA)	Max.	$I_z$ (mA)	Max.	$V_R$ (V)
UDZS2.0B	2.020	2.200	5	100	5	1000	0.5	120	0.5
UDZS2.2B	2.220	2.410	5	100	5	1000	0.5	120	0.7
UDZS2.4B	2.430	2.630	5	100	5	1000	0.5	100	1.0
UDZS2.7B	2.690	2.910	5	110	5	1000	0.5	100	1.0
UDZS3.0B	3.010	3.220	5	120	5	1000	0.5	50	1.0
UDZS3.3B	3.320	3.530	5	120	5	1000	0.5	20	1.0
UDZS3.6B	3.600	3.845	5	100	5	1000	1.0	10	1.0
UDZS3.9B	3.890	4.160	5	100	5	1000	1.0	5	1.0
UDZS4.3B	4.170	4.430	5	100	5	1000	1.0	5	1.0
UDZS4.7B	4.550	4.750	5	100	5	800	0.5	2	1.0
UDZS5.1B	4.980	5.200	5	80	5	500	0.5	2	1.5
UDZS5.6B	5.490	5.730	5	60	5	200	0.5	1	2.5
UDZS6.2B	6.060	6.330	5	60	5	100	0.5	1	3.0
UDZS6.8B	6.650	6.930	5	40	5	60	0.5	0.5	3.5
UDZS7.5B	7.280	7.600	5	30	5	60	0.5	0.5	4.0
UDZS8.2B	8.020	8.360	5	30	5	60	0.5	0.5	5.0
UDZS9.1B	8.850	9.230	5	30	5	60	0.5	0.5	6.0
UDZS10B	9.770	10.210	5	30	5	60	0.5	0.1	7.0
UDZS11B	10.760	11.220	5	30	5	60	0.5	0.1	8.0
UDZS12B	11.740	12.240	5	30	5	80	0.5	0.1	9.0
UDZS13B	12.910	13.490	5	37	5	80	0.5	0.1	10.0
UDZS15B	14.340	14.980	5	42	5	80	0.5	0.1	11.0
UDZS16B	15.850	16.510	5	50	5	80	0.5	0.1	12.0
UDZS18B	17.560	18.350	5	65	5	80	0.5	0.1	13.0
UDZS20B	19.520	20.390	5	85	5	100	0.5	0.1	15.0
UDZS22B	21.540	22.470	5	100	5	100	0.5	0.1	17.0
UDZS24B	23.720	24.780	5	120	5	120	0.5	0.1	19.0
UDZS27B	26.190	27.530	5	150	5	150	0.5	0.1	21.0
UDZS30B	29.190	30.690	5	200	5	200	0.5	0.1	23.0
UDZS33B	32.150	33.790	5	250	5	250	0.5	0.1	25.0
UDZS36B	35.070	36.870	5	300	5	300	0.5	0.1	27.0

Note 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 ( $T_A=25^\circ\text{C}$ )

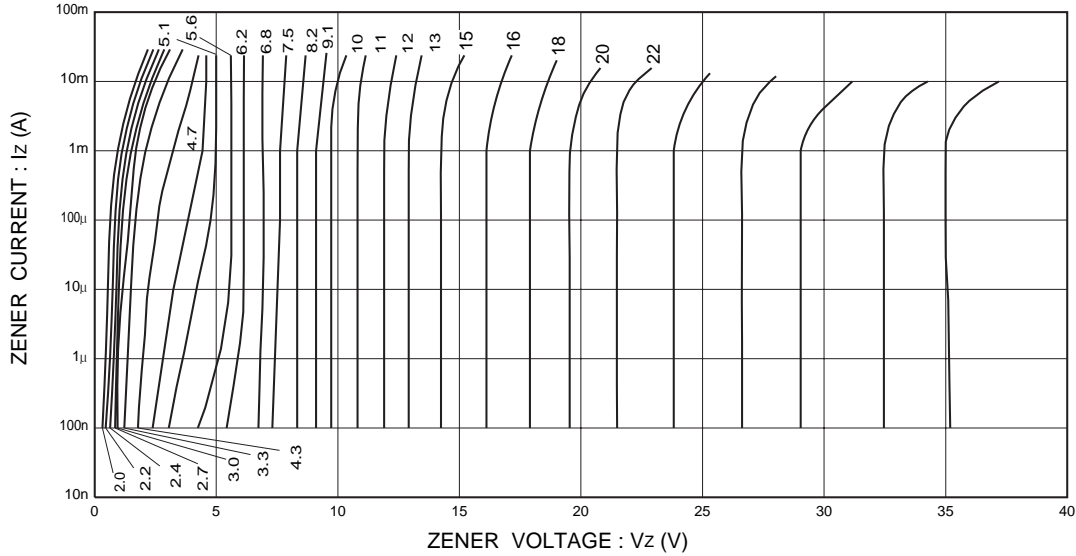


Fig.1 Zener voltage characteristics

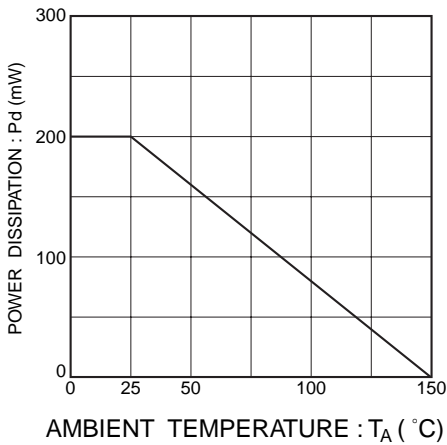


Fig.2 Derating curve

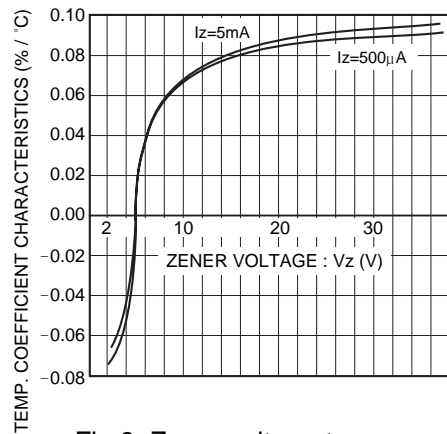


Fig.3 Zener voltage-temp. coefficient characteristics

