

# Zener diode

## UDZ Series

### ●Applications

Constant voltage control

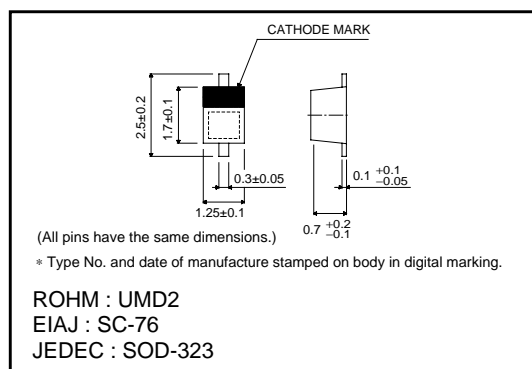
### ●Features

- 1) Compact, 2-pin mini-mold type for high-density mounting. (UMD2)
- 2) Compatible with chip mounter for automated production.
- 3) High reliability

### ●Construction

Silicon epitaxial planar

### ●External dimensions (Units : mm)



### ●Absolute maximum ratings (Ta=25°C)

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

### ●Markings (Type No.)

Product name	Type No.	Product name	Type No.	Product name	Type No.
UDZ 2.0B	0 2	UDZ 5.6B	C 2	UDZ 16B	5 5
UDZ 2.2B	1 2	UDZ 6.2B	E 2	UDZ 18B	6 5
UDZ 2.4B	2 2	UDZ 6.8B	F 2	UDZ 20B	7 5
UDZ 2.7B	3 2	UDZ 7.5B	H 2	UDZ 22B	8 5
UDZ 3.0B	4 2	UDZ 8.2B	J 2	UDZ 24B	9 5
UDZ 3.3B	5 2	UDZ 9.1B	L 2	UDZ 27B	A 5
UDZ 3.6B	6 2	UDZ 10B	0 5	UDZ 30B	C 5
UDZ 3.9B	7 2	UDZ 11B	1 5	UDZ 33B	E 5
UDZ 4.3B	8 2	UDZ 12B	2 5	UDZ 36B	F 5
UDZ 4.7B	9 2	UDZ 13B	3 5	—	—
UDZ 5.1B	A 2	UDZ 15B	4 5	—	—

(Ex.) UDZ 2.0B



## Diodes

## ●Electrical characteristics (Ta=25°C)

Type	Zener voltage subdivision			Operating resistance		Rising operating resistance		Reverse current	
	V <sub>Z</sub> (V)			Z <sub>Z</sub> (Ω)	I <sub>Z</sub> (mA)	Z <sub>Zk</sub> (Ω)	I <sub>Z</sub> (mA)	I <sub>R</sub> (μA)	V <sub>R</sub> (V)
	Min.	Max.	I <sub>Z</sub> (mA)	Max.	I <sub>Z</sub> (mA)	Max.	I <sub>Z</sub> (mA)	Max.	
UDZ 2.0B	2.020	2.200	5	100	5	1000	0.5	120	0.5
UDZ 2.2B	2.220	2.410	5	100	5	1000	0.5	120	0.7
UDZ 2.4B	2.430	2.630	5	100	5	1000	0.5	120	1.0
UDZ 2.7B	2.690	2.910	5	110	5	1000	0.5	100	1.0
UDZ 3.0B	3.010	3.220	5	120	5	1000	0.5	50	1.0
UDZ 3.3B	3.320	3.530	5	120	5	1000	0.5	20	1.0
UDZ 3.6B	3.600	3.845	5	100	5	1000	1.0	10	1.0
UDZ 3.9B	3.890	4.160	5	100	5	1000	1.0	5	1.0
UDZ 4.3B	4.170	4.430	5	100	5	1000	1.0	5	1.0
UDZ 4.7B	4.550	4.750	5	100	5	800	0.5	2	1.0
UDZ 5.1B	4.980	5.200	5	80	5	500	0.5	2	1.5
UDZ 5.6B	5.490	5.730	5	60	5	200	0.5	1	2.5
UDZ 6.2B	6.060	6.330	5	60	5	100	0.5	1	3.0
UDZ 6.8B	6.650	6.930	5	40	5	60	0.5	0.5	3.5
UDZ 7.5B	7.280	7.600	5	30	5	60	0.5	0.5	4.0
UDZ 8.2B	8.020	8.360	5	30	5	60	0.5	0.5	5.0
UDZ 9.1B	8.850	9.230	5	30	5	60	0.5	0.5	6.0
UDZ 10B	9.770	10.210	5	30	5	60	0.5	0.1	7.0
UDZ 11B	10.760	11.220	5	30	5	60	0.5	0.1	8.0
UDZ 12B	11.740	12.240	5	30	5	80	0.5	0.1	9.0
UDZ 13B	12.910	13.490	5	37	5	80	0.5	0.1	10.0
UDZ 15B	14.340	14.980	5	42	5	80	0.5	0.1	11.0
UDZ 16B	15.850	16.510	5	50	5	80	0.5	0.1	12.0
UDZ 18B	17.560	18.350	5	65	5	80	0.5	0.1	13.0
UDZ 20B	19.520	20.390	5	85	5	100	0.5	0.1	15.0
UDZ 22B	21.540	22.470	5	100	5	100	0.5	0.1	17.0
UDZ 24B	23.720	24.780	5	120	5	120	0.5	0.1	19.0
UDZ 27B	26.190	27.530	5	150	5	150	0.5	0.1	21.0
UDZ 30B	29.190	30.690	5	200	5	200	0.5	0.1	23.0
UDZ 33B	32.150	33.790	5	250	5	250	0.5	0.1	25.0
UDZ 36B	35.070	36.870	5	300	5	300	0.5	0.1	27.0

1. The Zener voltage (V<sub>Z</sub>) is measured 40 ms after power is supplied.

2. The operating resistances (Z<sub>Z</sub>, Z<sub>Zk</sub>) are measured by superimposing a minute alternating current on the regulated current (I<sub>Z</sub>).

Diodes

●Electrical characteristic curves (Ta=25°C)

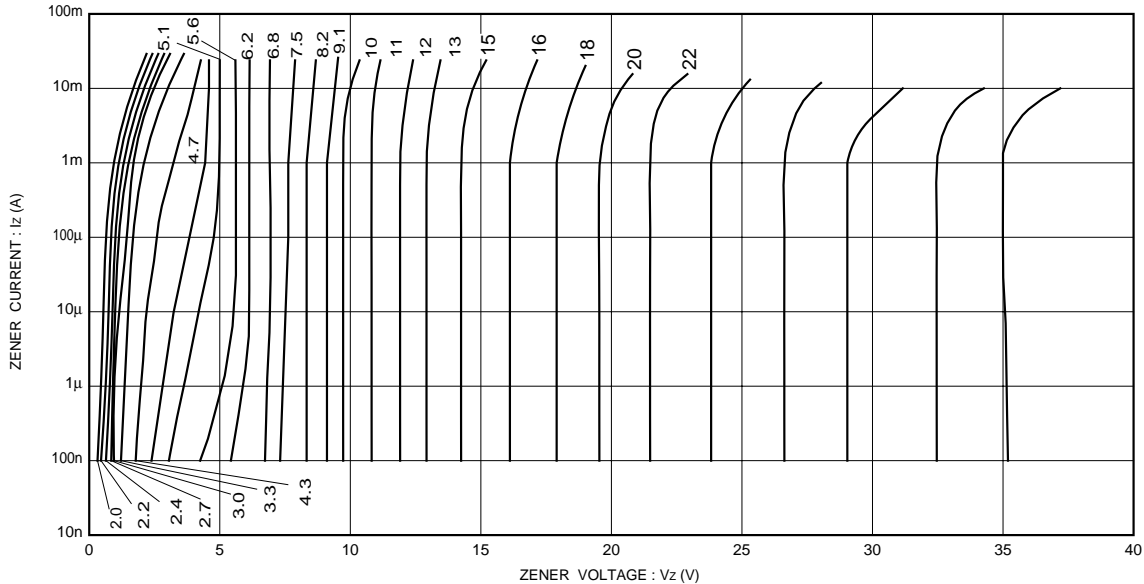


Fig.1 Zener voltage characteristics

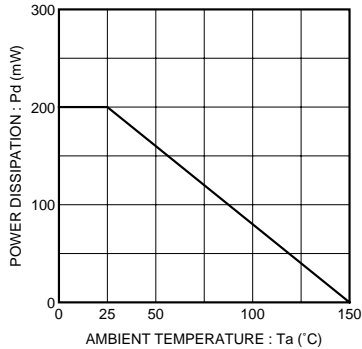


Fig.2 Derating curve

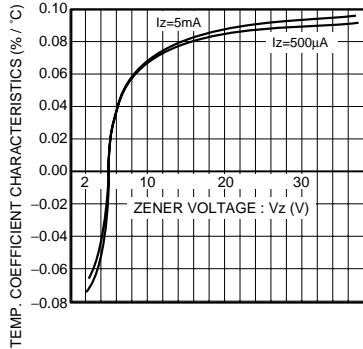


Fig.3 Zener voltage - temp. coefficient characteristics