

# Zener diode

## UDZ Series

### ●Applications

Constant voltage control

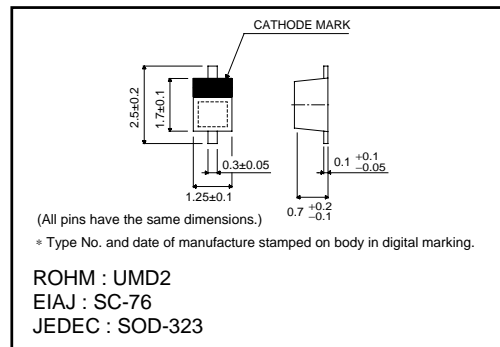
### ●Features

- 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	
	Vz(V)			Zz	Iz	Zzk	Iz	IR	VR
	Min.	Max.	Iz (mA)	(Ω) Max.		(Ω) Max.		(μA) 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 (Vz) is measured 40 ms after power is supplied.

2. The operating resistances (Zz, Zzk) are measured by superimposing a minute alternating current on the regulated current (Iz).

Diodes

●Electrical characteristic curves (Ta=25°C)

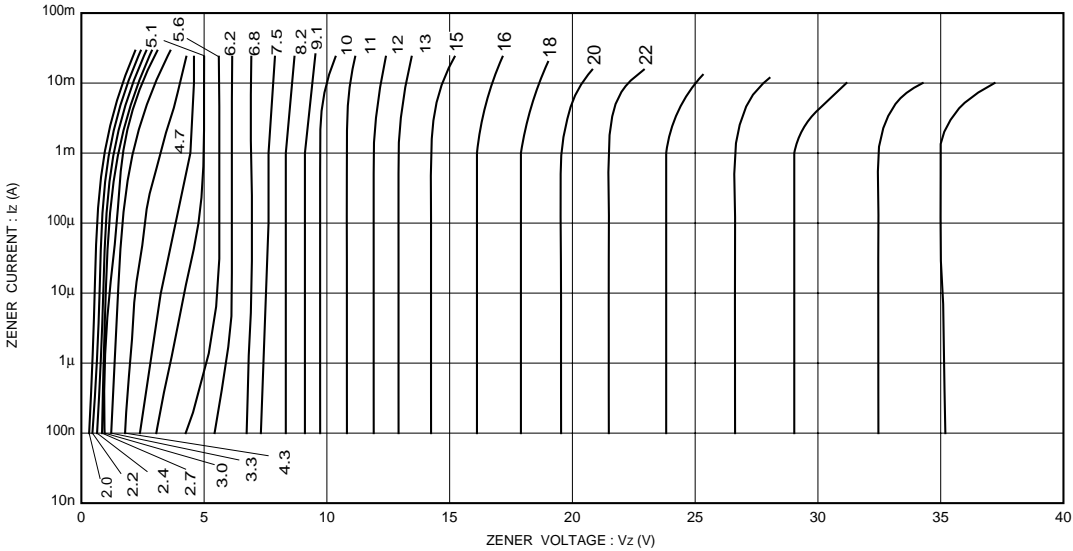


Fig.1 Zener voltage characteristics

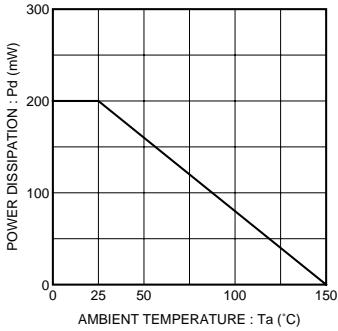


Fig.2 Derating curve

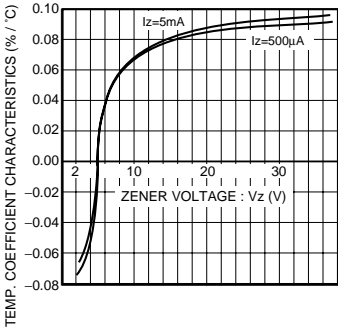


Fig.3 Zener voltage - temp. coefficient characteristics