

# Zener diode

## UDZS9.1B

#### Applications

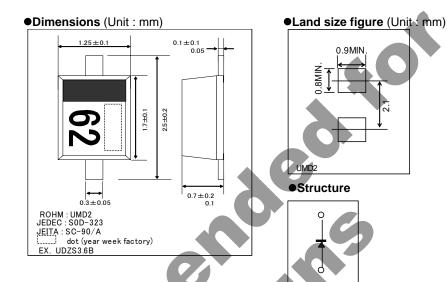
Constant voltage control

#### ● Features

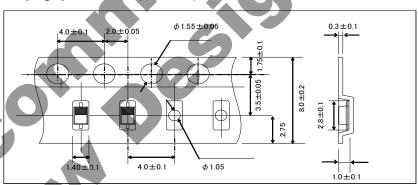
- 1) Compact, 2-pin mini-mold type for high-density mounting. (UMD2)
- 2) High reliability.
- 3) Can be mounted automatically, using chip mounter.

### **●**Construction

Silicon epitaxial planar



## • Taping specifications (Unit : mm)



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

Parameter	Symbol	Limits	Unit
Power dissipation	P	200	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C
Operating temperature	Topr	-55 to +150	°C

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

	Symbol								
TYP.	Zener voltage : Vz(V) Operating resistance : Zz(Ω		Rising operataing resistance : Zz(Ω)		Reverse current : IR(uA)				
	MIN.	MAX.	Iz(mA)	MAX.	Iz(mA)	MAX.	Iz(mA)	MAX.	VR(V)
UDZS 3.6B	3.600	3.845	5.0	100	5.0	1000	1.0	10.0	1.0
UDZS 3.9B	3.890	4.160	5.0	100	5.0	1000	1.0	5.0	1.0
UDZS 4.3B	4.170	4.430	5.0	100	5.0	1000	1.0	5.0	1.0
UDZS 4.7B	4.550	4.750	5.0	100	5.0	800	0.5	2.0	1.0
UDZS 5.1B	4.980	5.200	5.0	80	5.0	500	0.5	2.0	1.5
UDZS 5.6B	5.490	5.730	5.0	60	5.0	200	0.5	1.0	2.5
UDZS 6.2B	6.060	6.330	5.0	60	5.0	100	0.5	1.0	3.0
UDZS 6.8B	6.650	6.930	5.0	40	5.0	60	0.5	0.5	3.5
UDZS 7.5B	7.280	7.600	5.0	30	5.0	60	0.5	0.5	4.0
UDZS 8.2B	8.020	8.360	5.0	30	5.0	60	0.5	0.5	5.0
UDZS 9.1B	8.850	9.230	5.0	30	5.0	60	0.5	0.5	6.0
UDZS 10B	9.770	10.210	5.0	30	5.0	60	0.5	0.1	7.0
UDZS 11B	10.760	11.220	5.0	30	5.0	60	0.5	0.1	8.0
UDZS 12B	11.740	12.240	5.0	30	5.0	80	0.5	0.1	9.0
UDZS 13B	12.910	13.490	5.0	37	5.0	80	0.5	0.1	10.0
UDZS 15B	14.340	14.980	5.0	42	5.0	80	0.5	0.1	11.0
UDZS 16B	15.850	16.510	5.0	50	5.0	80	0.5	0.1	12.0
UDZS 18B	17.560	18.350	5.0	65	5.0	80	0.5	0.1	13.0
UDZS 20B	19.520	20.390	5.0	85	5.0	100	0.5	0.1	15.0
UDZS 22B	21.540	22.470	5.0	100	5.0	100	0.5	0.1	17.0
UDZS 24B	23.720	24.780	5.0	120	5.0	120	0.5	0.1	19.0
UDZS 27B	26.190	27.530	5.0	150	5.0	150	0.5	0.1	21.0
UDZS 30B	29.190	30.690	5.0	200	5.0	200	0.5	0.1	23.0
UDZS 33B	32.150	33.790	5.0	250	5.0	250	0.5	0.1	25.0
UDZS 36B	35.070	36.870	5.0	300	5.0	300	0.5	0.1	27.0

<sup>(1 )</sup>The zener voltage(Vz) is measured 40ms after power is supplied.

■Type No.

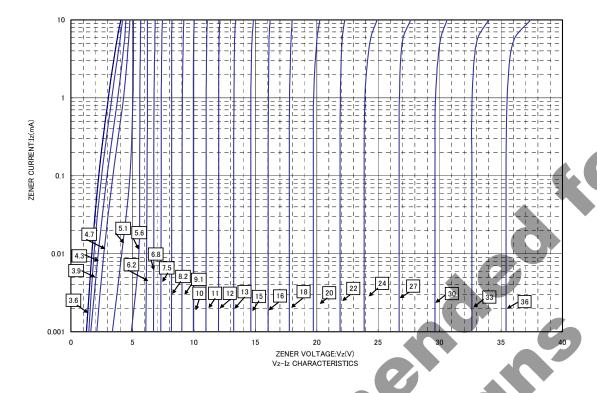
TYPE	TYPE NO. TYPE		TYPE NO.	
UDZS 3.6B	62	UDZS 12B	25	
UDZS 3.9B	72	UDZS 13B	35	
UDZS 4.3B	82	UDZS 15B	45	
UDZS 4.7B	92	UDZS 16B	55	
UDZS 5.1B	A2	UDZS 18B	65	
UDZS 5.6B	C2	UDZS 20B	75	
UDZS 6.2B	E2	UDZS 22B	85	
UDZS 6.8B	F2	UDZS 24B	95	
UDZS 7.5B	H2	UDZS 27B	A5	
UDZS 8.2B	J2	UDZS 30B	C5	
UDZS 9.1B	L2	UDZS 33B	E5	
UDZS 10B	05	UDZS 36B	F5	
UDZS 11B	15			

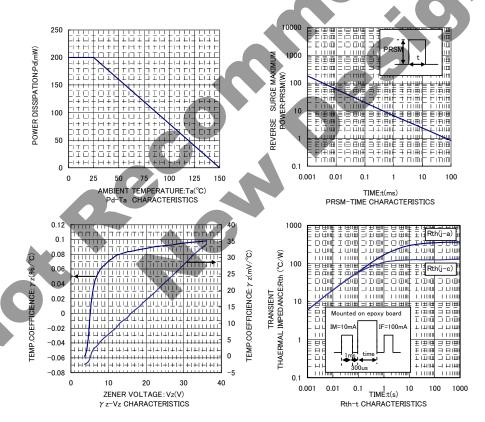
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<sup>(2 )</sup>The operating resistances(Zz,Zzk) are measured by superimposing a minute alternating current on the regulated current(Iz)

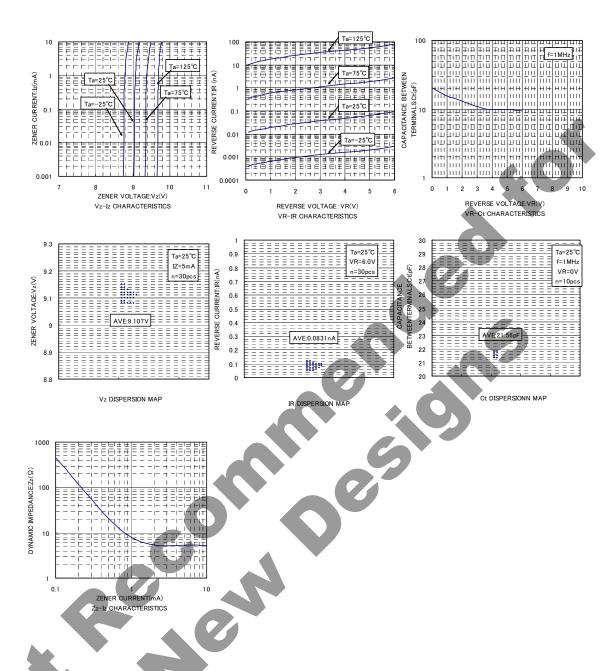
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## ●Electrical characteristic curves (Ta=25°C)





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CLASSIV	— CLASSⅢ	CLASSⅢ	CLASSII

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  - [e] Use of our Products in proximity to heat-producing components, plastic cords, or other flammable items
  - [f] Sealing or coating our Products with resin or other coating materials
  - [g] Use of our Products without cleaning residue of flux (even if you use no-clean type fluxes, cleaning residue of flux is recommended); or Washing our Products by using water or water-soluble cleaning agents for cleaning residue after soldering
  - [h] Use of the Products in places subject to dew condensation
- 4. The Products are not subject to radiation-proof design.
- Please verify and confirm characteristics of the final or mounted products in using the Products.
- In particular, if a transient load (a large amount of load applied in a short period of time, such as pulse, is applied, confirmation of performance characteristics after on-board mounting is strongly recommended. Avoid applying power exceeding normal rated power, exceeding the power rating under steady-state loading condition may negatively affect product performance and reliability.
- De-rate Power Dissipation (Pd) depending on Ambient temperature (Ta). When used in sealed area, confirm the actual ambient temperature.
- Confirm that operation temperature is within the specified range described in the product specification.
- ROHM shall not be in any way responsible or liable for failure induced under deviant condition from what is defined in this document.

#### Precaution for Mounting / Circuit board design

- When a highly active halogenous (chlorine, bromine, etc.) flux is used, the residue of flux may negatively affect product performance and reliability.
- In principle, the reflow soldering method must be used on a surface-mount products, the flow soldering method must be used on a through hole mount products. If the flow soldering method is preferred on a surface-mount products, please consult with the ROHM representative in advance.

For details, please refer to ROHM Mounting specification

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#### **Precaution for Electrostatic**

This Product is electrostatic sensitive product, which may be damaged due to electrostatic discharge. Please take proper caution in your manufacturing process and storage so that voltage exceeding the Products maximum rating will not be applied to Products. Please take special care under dry condition (e.g. Grounding of human body / equipment / solder iron, isolation from charged objects, setting of lonizer, friction prevention and temperature / humidity control).

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  - [d] the Products are exposed to high Electrostatic
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- 3. Store / transport cartons in the correct direction, which is indicated on a carton with a symbol. Otherwise bent leads may occur due to excessive stress applied when dropping of a carton.
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