



# DATA SHEET

SEMICONDUCTOR

UDZSxxB Series

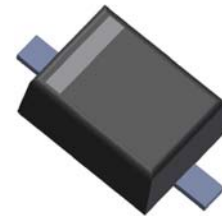
## 200mW SOD-323 SURFACE MOUNT Small Outline Flat Lead Plastic Package Zener Voltage Regulators



### Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	200	mW
$T_{STG}$	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
$T_{OPR}$	Operating Temperature Range	-65 to +150	$^\circ\text{C}$

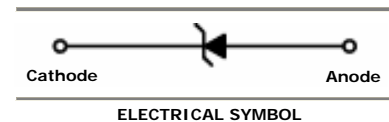
These ratings are limiting values above which the serviceability of the diode may be impaired.



SOD-323 Flat Lead

### Specification Features:

- Zener Voltage Range Selection, 2.0V to 36V
- Flat Lead SOD-323 Small Outline Plastic Package
- Surface Device Type Mounting
- Moisture Sensitivity Level 1
- Clip Bonding Construction, Good Thermal Capability
- Pb Free Version and RoHS Compliant
- Matte Tin(Sn) Lead Finish with Nickel(Ni) Underplate
- Band Indicates Cathode



### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)		$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ ) Max	$I_{ZK}$ (mA)	$Z_{ZK} @ I_{ZK}$ ( $\Omega$ ) Max	$I_R @ V_R$ ( $\mu\text{A}$ ) Max	$V_R$ (Volts)
		Min	Max						
UDZS2V0B	D+	2.02	2.20	5	100	0.5	1000	120	0.5
UDZS2V2B	D -	2.22	2.41	5	100	0.5	1000	120	0.7
UDZS2V4B	D=	2.43	2.63	5	100	0.5	1000	120	1
UDZS2V7B	D ≡	2.69	2.91	5	110	0.5	1000	100	1
UDZS3V0B	D>	3.01	3.22	5	120	0.5	1000	50	1
UDZS3V3B	D<	3.32	3.53	5	120	0.5	1000	20	1
UDZS3V6B	D0	3.60	3.85	5	90	1	600	4.5	1
UDZS3V9B	D1	3.89	4.16	5	90	1	600	2.7	1
UDZS4V3B	D2	4.17	4.43	5	90	1	600	2.7	1
UDZS4V7B	D3	4.55	4.75	5	80	1	500	2.7	2
UDZS5V1B	D4	4.98	5.20	5	60	1	500	1.8	2
UDZS5V6B	D5	5.49	5.73	5	40	1	300	0.9	2
UDZS6V2B	D6	6.06	6.33	5	40	1	150	2.7	4
UDZS6V8B	D7	6.65	6.93	5	30	1	75	1.8	4
UDZS7V5B	D8	7.28	7.60	5	30	1	75	0.9	5
UDZS8V2B	D9	8.02	8.36	5	30	1	75	0.63	5
UDZS9V1B	DA	8.85	9.23	5	30	1	90	0.45	6
UDZS10VB	DB	9.77	10.21	5	20	1	150	0.18	7
UDZS11VB	DC	10.76	11.22	5	20	1	150	0.09	8
UDZS12VB	DE	11.74	12.24	5	20	1	150	0.09	8
UDZS13VB	DF	12.91	13.49	5	40	1	160	0.09	8
UDZS15VB	DG	14.34	14.98	5	40	1	190	0.045	10.5
UDZS16VB	DH	15.85	16.51	5	40	1	190	0.045	11.2
UDZS18VB	DJ	17.56	18.35	5	50	1	220	0.045	12.6
UDZS20VB	DK	19.52	20.39	5	60	1	220	0.045	14.0

# UDZSxxB Series

## Electrical Characteristics

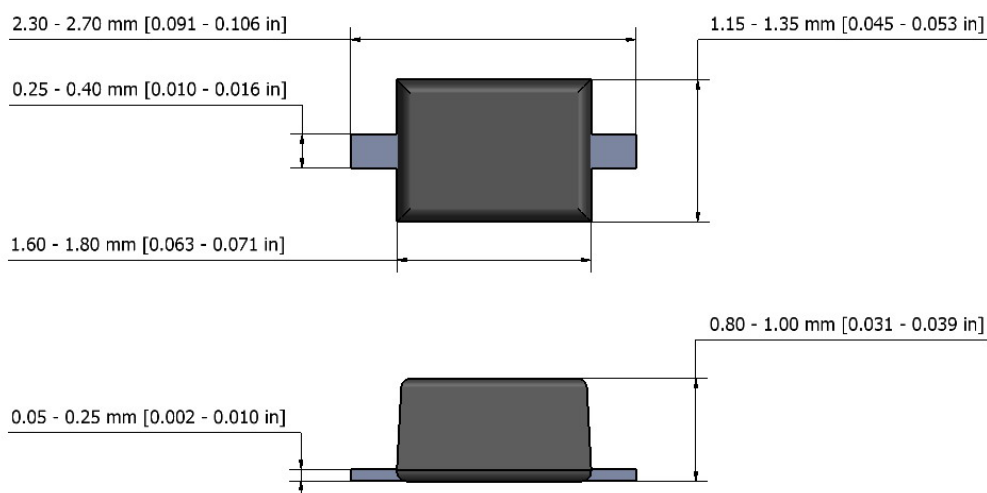
$T_A = 25^\circ\text{C}$  unless otherwise noted

Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)		$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ ) Max	$I_{ZK}$ (mA)	$Z_{ZK} @ I_{ZK}$ ( $\Omega$ ) Max	$I_R @ V_R$ ( $\mu\text{A}$ ) Max	$V_R$ (Volts)
		Min	Max						
UDZS22VB	DL	21.54	22.47	5	80	1	240	0.045	15.4
UDZS24VB	DM	23.72	24.78	5	80	1	240	0.045	16.8
UDZS27VB	DN	26.19	27.53	5	100	0.5	300	0.045	18.9
UDZS30VB	DP	29.19	30.69	5	100	0.5	300	0.045	21.0
UDZS33VB	DR	32.15	33.79	5	100	0.5	310	0.045	23.0
UDZS36VB	DS	35.07	36.87	5	100	0.5	330	0.045	25.2

### Notes:

1. The Zener Voltage ( $V_Z$ ) is tested under pulse condition of 40mS.
2. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest YEASHIN representative.
3. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed to  $I_{ZT}$  or  $I_{ZK}$ .

## SOD-323 Package Outline



NOTE: The above package outline is similar to JEITA SC-90.

# DEVICE CHARACTERISTICS

## UDZSxxB Series

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

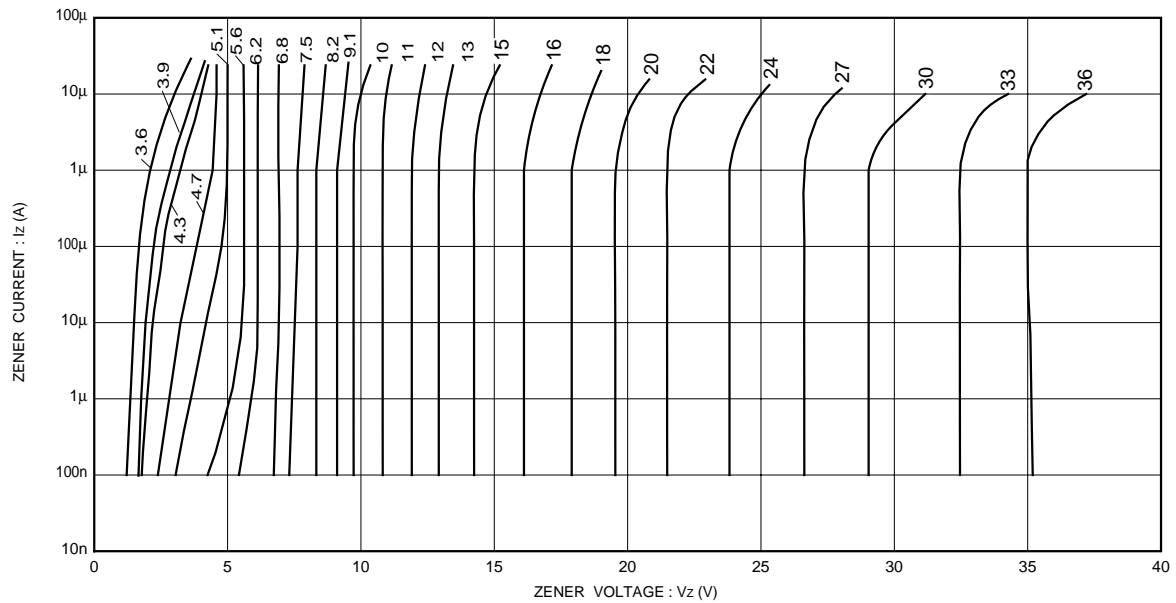


Fig.1 Zener voltage characteristics

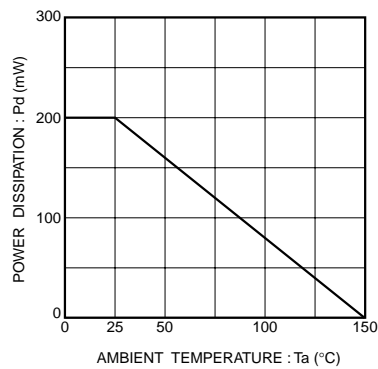


Fig.2 Derating curve

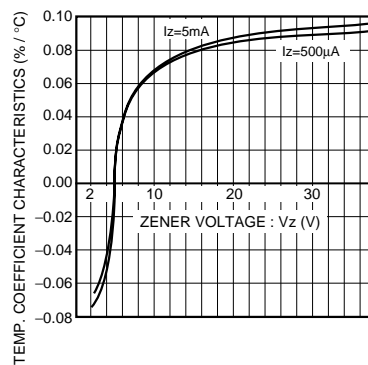


Fig.3 Zener voltage-temp. coefficient characteristics

### ●Makeup of the part number

- Please follow the part number designation when the order is placed.
- Fill in from the left, leaving any extra boxes empty on the right.
- Please refer packing specification about packing form.