Zener Diode in SOD-323

Primary characteristics			
Parameter	**Symbol**	**Value**	**Unit**
Power dissipation	P_D	350	mW
Storage temperature range	T_{STG}	-55~+125	°C

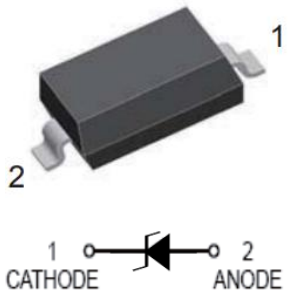
Features

- Low Zener impedance,
- High stability and high reliability.

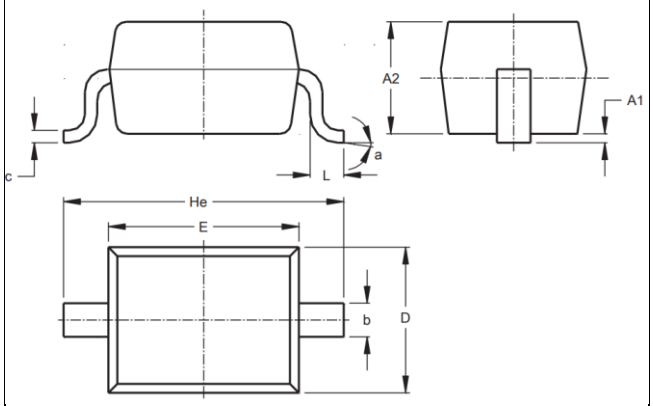
Mechanical Data

- SOD-3232 case: lead free, RoHS compliant, halogen free,
- Molding compound flammability rating: UL 94 V-0,
- High temperature soldering guaranteed: 260°C/10 sec. at terminals.

Pin configuration



Case dimensions



SOD-323

Unit		A1	A2	b	c	D	E	He	L	A
mm	Min.	-	0.8	0.25	0.1	1.2	1.6	2.3	0.2	0°
	Max.	0.1	1.1	0.35	0.15	1.4	1.8	2.7	0.4	8°
	Typ.	0.05	0.95	0.3	0.11	1.3	1.7	2.5	0.3	-

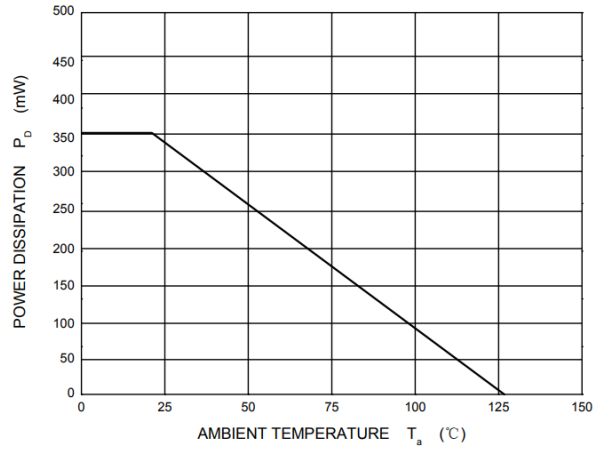
Absolute maximum ratings (T_a = 25°C unless otherwise specified)			
Parameter	**Symbol**	**Value**	**Unit**
Forward voltage* (I_F=10mA)	V_F	900	mV
Power dissipation**	P_D	350	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	340	°C/W
Junction temperature	T_J	125	°C
Storage temperature	T_{STG}	-55~+125	°C

Note:
*Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm^2.
**Short duration test pulse used to minimize self-heating effect.

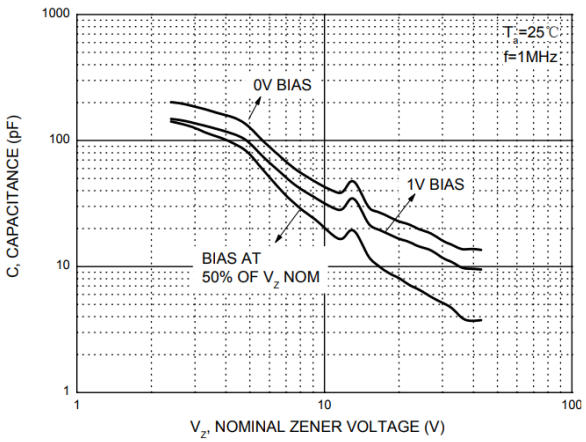
Electrical characteristics (T_a = 25°C unless otherwise specified)										
Part number	Marking code	Zener voltage range			Dynamic impedance				Reverse leakage current	
		V_{znom} [V]	V_{ZT} [V]	at I_{ZT} [mA]	Max. Z_{ZT} [Ω]	at I_{ZT} [mA]	Max. Z_{ZK} [Ω]	at I_{ZK} [mA]	Max. I_R [μA]	at V_R [V]
BZT52B2V4S	2WX	2.4	2.35~2.45	5	100	5	600	1	50	1
BZT52B2V7S	2W1	2.7	2.65~2.75	5	100	5	600	1	20	1
BZT52B3V0S	2W2	3.0	2.94~3.06	5	95	5	600	1	10	1
BZT52B3V3S	2W3	3.3	3.23~3.37	5	95	5	600	1	5	1
BZT52B3V6S	2W4	3.6	3.53~3.67	5	90	5	600	1	5	1
BZT52B3V9S	2W5	3.9	3.82~3.98	5	90	5	600	1	3	1
BZT52B4V3S	2W6	4.3	4.21~4.39	5	90	5	600	1	3	1
BZT52B4V7S	2W7	4.7	4.61~4.79	5	80	5	500	1	3	2
BZT52B5V1S	2W8	5.1	5.00~5.20	5	60	5	480	1	2	2
BZT52B5V6S	2W9	5.6	5.49~5.71	5	40	5	400	1	1	2
BZT52B6V2S	2WA	6.2	6.08~6.32	5	10	5	150	1	3	4
BZT52B6V8S	2WB	6.8	6.66~6.94	5	15	5	80	1	2	4
BZT52B7V5S	2WC	7.5	7.35~7.65	5	15	5	80	1	1	5
BZT52B8V2S	2WD	8.2	8.04~8.36	5	15	5	80	1	0.7	5
BZT52B9V1S	2WE	9.1	8.92~9.28	5	15	5	100	1	0.5	6
BZT52B10S	2WF	10	9.8~10.2	5	20	5	150	1	0.2	7
BZT52B11S	2WG	11	10.8~11.2	5	20	5	150	1	0.1	8
BZT52B12S	2WH	12	11.8~12.4	5	25	5	150	1	0.1	8
BZT52B13S	2WI	13	12.7~13.3	5	30	5	170	1	0.1	8
BZT52B15S	2WJ	15	14.7~15.3	5	30	5	200	1	0.1	10.5
BZT52B16S	2WK	16	15.7~16.3	5	40	5	200	1	0.1	11.2
BZT52B18S	2WL	18	17.6~18.4	5	45	5	225	1	0.1	12.6
BZT52B20S	2WM	20	19.6~20.4	5	55	5	225	1	0.1	14
BZT52B22S	2WN	22	21.6~22.4	5	55	5	250	1	0.1	15.4
BZT52B24S	2WO	24	23.5~24.5	5	70	5	250	1	0.1	16.8
BZT52B27S	2WP	27	26.5~27.5	2	80	2	300	0.5	0.1	18.9
BZT52B30S	2WQ	30	29.4~30.6	2	80	2	300	0.5	0.1	21
BZT52B33S	2WR	33	32.3~33.7	2	80	2	325	0.5	0.1	23.1
BZT52B36S	2WS	36	35.3~36.7	2	90	2	350	0.5	0.1	25.2
BZT52B39S	2WT	39	38.2~39.8	2	130	2	350	0.5	0.1	27.3
BZT52B43S	2WU	43	42.1~43.9	2.5	130	2	500	1	2	33
BZTB2B47S	2WV	47	46.1~47.9	2.5	150	2	500	1	2	36
BZT52B51S	2X1	51	50.0~52.0	2.5	180	2	500	1	1	39
BZT52B56S	2X2	56	54.9~57.1	2.5	180	2	500	1	1	43
BZT52B62S	2X3	62	60.8~63.2	2.5	200	2	500	1	0.2	47
BZT52B68S	2X4	68	66.6~69.4	2.5	250	2	500	1	0.2	52
BZT52B75S	2X5	75	73.5~76.5	2.5	300	2	500	1	0.2	57

Typical characteristics (T_a = 25°C unless otherwise specified)

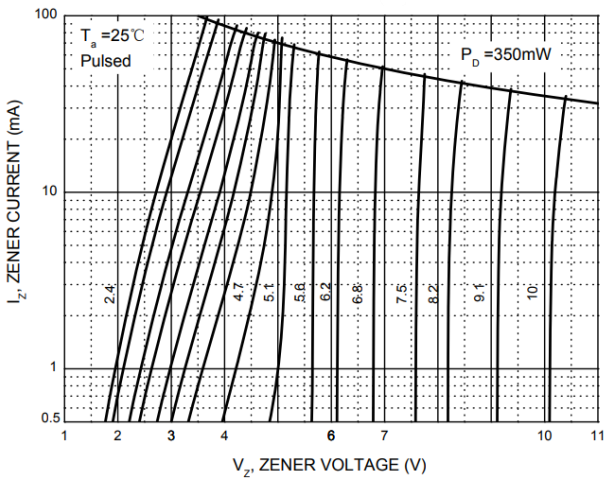
Power derating curve



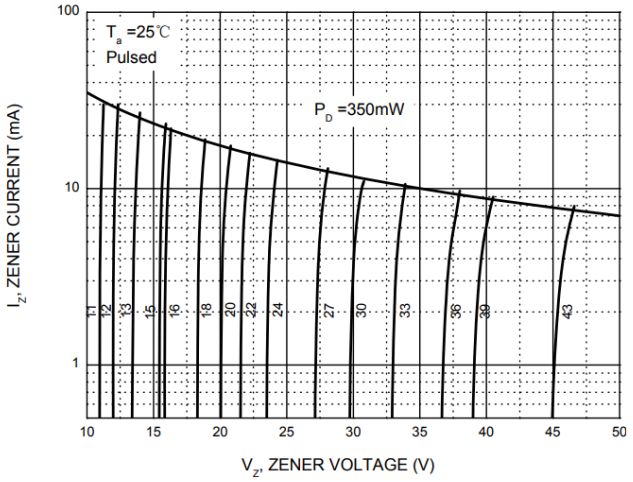
Typical capacitance



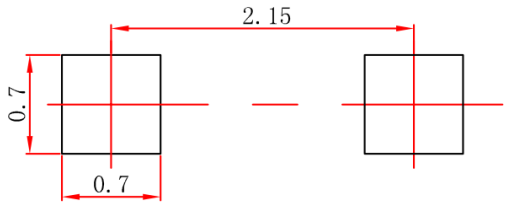
Zener characteristic (V_Z up to 10V)



Zener characteristic (11V to 43V)



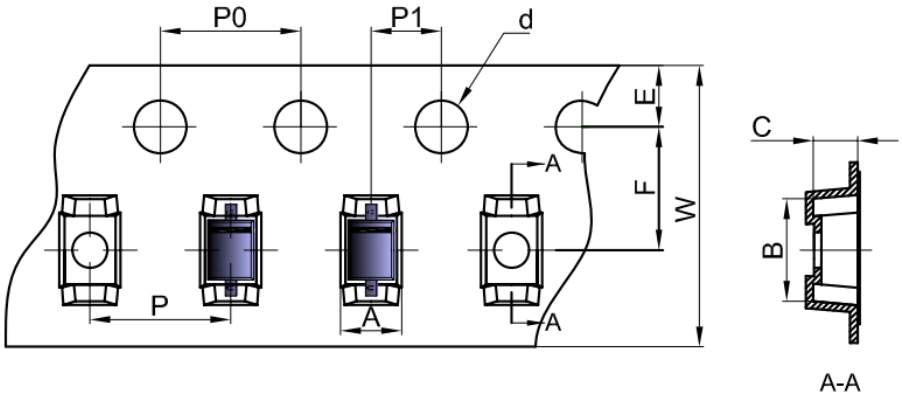
Suggested soldering pad layout



SOD-323

Note:
Dimensions in milimeters.

Package information



Dimensions in milimeters.

Type	A	B	C	d	E	F	P0	P	P1	W
SOD-323	1.46	2.9	1.25	Ø1.5	1.75	3.5	4.0	4.0	2.0	8.0
Tolerance	±0.05	±0.05	±0.05	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	+0.3/-0.1

Ordering information

Part Number	Package	Shipping Quantity	Dimensions
BZT52B2V4S-BZT52B75S	SOD-323	**3000 pcs / reel**	---

Disclaimer

Akyga semi reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Akyga semi or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on Akyga semi data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Akyga semi does not assume any liability arising out of the application or use of any product or circuit. Akyga semi products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Akyga semi. Customers using or selling Akyga semi components for use in such applications do so at their own risk and shall agree to fully indemnify Akyga semi and its subsidiaries harmless against all claims, damages and expenditures.