BRBZT52BXXXSQ

Rev.B Jan.-2024

DATA SHEET

/ Descriptions

SOD-323 ṂṂէ Ꮍя͡ ǁ Ꮑ

Zener Diode in a SOD-323 Plastic Package.

/ Features

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200mW power dissipation, medium current, automated assembly processes, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

/ Applications

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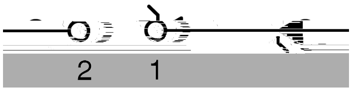
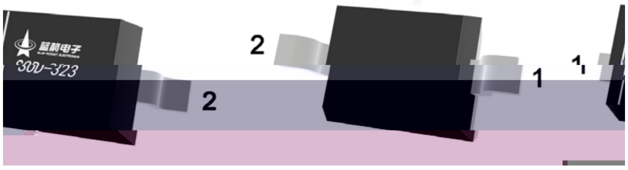
2.4V to 39V wide zener voltage range applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1:Cathode PIN2:Anode

/ Marking

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See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

v ˝Ω Parameter	ɣ N Symbol	˝Ω Ө Rating	D Ȟ Unit
Forward Voltage (Note 2) I_F=10mA	V_F	0.9	V
Power Dissipation(Note 1)	P_D	200	mW
Typical Thermal Resistance Junction to Ambient(Note 1)	R_{JA}	625	/W
Junction and Storage Temperature Range	T_j,T_{stg}	-65 150	

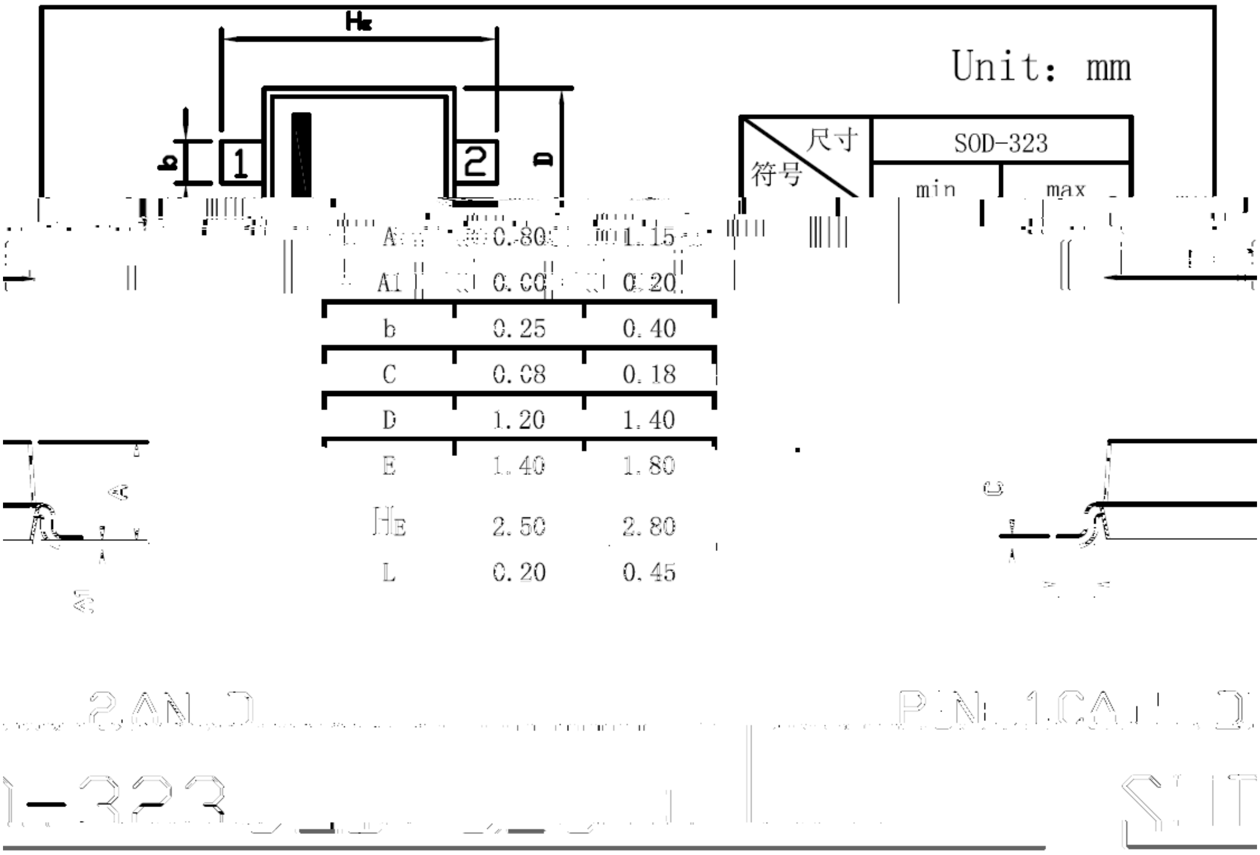
/ Electrical Characteristics(Ta=25)

Type Number	Mark-ing Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current	
		V_Z @I_{ZT}			I_{ZT}	Z_{ZT} @I_{ZT}	Z_{ZK} @I_{ZK}	I_{ZK}	I_R	@V_R
		Nom (V)	Min (V)	Max (V)	mA			mA	A	V
BRBZT52B2V4SQ	Q0Z	2.4	2.35	2.45	5	94	564	1	45	1
BRBZT52B2V7SQ	Q1Z	2.7	2.65	2.75	5	94	564	1	18	1
BRBZT52B3V0SQ	Q2Z	3.0	2.94	3.06	5	89	564	1	9	1
BRBZT52B3V3SQ	Q3Z	3.3	3.23	3.37	5	89	564	1	4.5	1
BRBZT52B3V6SQ	Q4Z	3.6	3.53	3.67	5	84	564	1	4.5	1
BRBZT52B3V9SQ	Q5Z	3.9	3.82	3.96	5	84	564	1	2.7	1
BRBZT52B4V3SQ	Q6Z	4.3	4.21	4.39	5	84	564	1	2.7	1
BRBZT52B4V7SQ	Q7Z	4.7	4.61	4.79	5	75	564	1	2.7	2
BRBZT52B5V1SQ	Q8Z	5.1	5.00	5.20	5	56	470	1	1.8	2
BRBZT52B5V6SQ	Q9Z	5.6	5.49	5.71	5	27	451	1	0.9	2
BRBZT52B6V2SQ	QAZ	6.2	6.08	6.32	5	9	376	1	2.7	4
BRBZT52B6V8SQ	QBZ	6.8	6.66	6.94	5	14	141	1	1.8	4
BRBZT52B7V5SQ	QCZ	7.5	7.35	7.65	5	14	75	1	0.9	5
BRBZT52B8V2SQ	QDZ	8.2	8.04	8.36	5	14	75	1	0.63	5
BRBZT52B9V1SQ	QEZ	9.1	8.92	9.28	5	14	94	1	0.45	6
BRBZT52B10SQ	QFZ	10	9.80	10.20	5	18	141	1	0.18	7
BRBZT52B11SQ	QGZ	11	10.78	11.22	5	18	141	1	0.09	8

Notes:

1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm^2.
2. Short duration test pulse used to minimize self-heating effect.
3. f = 1kHz.

/ Package Dimensions



Unit: mm

符号 \ 尺寸	SOD-323 min	SOD-323 max
A	0.80	1.15
A1	0.00	0.20
b	0.25	0.40
C	0.08	0.18
D	1.20	1.40
E	1.40	1.80
H_E	2.50	2.80
L	0.20	0.45

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)

ب ˝ χ	Note:
1 ỉ ♬ □ ỷ 150 Ḱ 200 ł ı `H ڗ 60 Ḱ 120sec;	1.Preheating:150~200 ł , Time:60~120sec.
2 Ś Ӫ □ ỷ 255 ° 5 ł ı `H ڗ ʿY ʎ ꞕ 5 ° 0.5sec;	2.Peak Temp.:255 ° 5 ł , Duration:5 ° 0.5sec.
3 ì ˙ Ɣ ˛ ɔ ه ỷ ꞕ 2 Ḱ 10 ł /sec.	3. Cooling Speed: 2~10 ł /sec.

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