

# BRBZT52BXXXQ

Rev.B Jan.-2024

## 5 é / Descriptions

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Zener Diode in a SOD-123 Plastic Package.

## α<sup>a</sup> / Features

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500mW power dissipation, medium current, automated assembly processes, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

## Đ ÷ / Applications

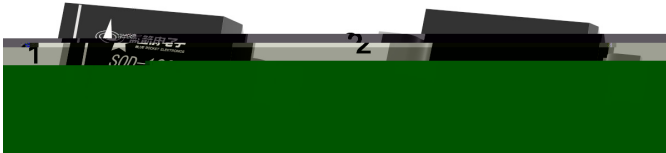
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2.4V to 39V wide zener voltage range applications, Meet the stringent requirements of automotive applications.

## Ã W ] Ô . / Equivalent Circuit



## • Ū - æ / Pinning



PIN1:Cathode

PIN2:Anode

## , M V / Marking

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See Marking Instructions.

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## Table 1 / Absolute Maximum Ratings(Ta=25 ; )

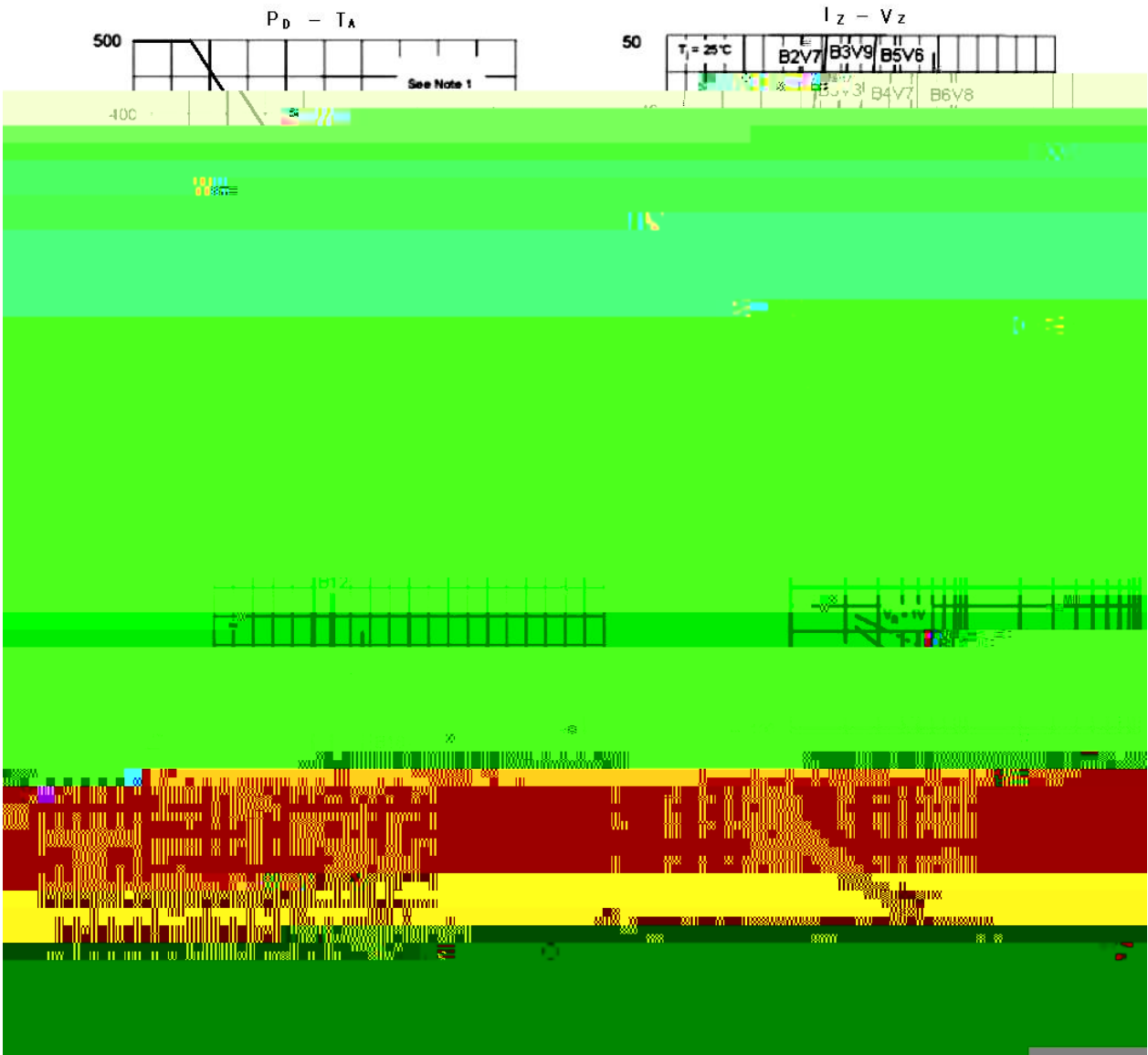
@ f Parameter	... Z Symbol	f › Rating	% y Unit
Forward Voltage (Note 2) IF=10mA	V <sub>F</sub>	0.9	V
Power Dissipation(Note 1)	P <sub>D</sub>	500	mW
Typical Thermal Resistance Junction to Ambient(Note 1)	R <sub>JA</sub>	305	/W
Junction and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-65 150	

## Table 2 / Electrical Characteristics(Ta=25 ; )

Type Number	Marking Code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current	
		V <sub>Z</sub> @I <sub>ZT</sub>			I <sub>ZT</sub>	Z <sub>KT</sub> @I <sub>ZT</sub>	Z <sub>ZK</sub> @I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub>	@V <sub>R</sub>
		Nom (V)	Min (V)	Max (V)	mA			mA	A	V
BRBZT52B2V4Q	Q0Z	2.4	2.35	2.45	5	94	564	1	45	1
BRBZT52B2V7Q	Q1Z	2.7	2.65	2.75	5	94	564	1	18	1
BRBZT52B3V0Q	Q2Z	3.0	2.94	3.06	5	89	564	1	9	1
BRBZT52B3V3Q	Q3Z	3.3	3.23	3.37	5	89	564	1	4.5	1
BRBZT52B3V6Q	Q4Z	3.6	3.53	3.67	5	84	564	1	4.5	1
BRBZT52B3V9Q	Q5Z	3.9	3.82	3.96	5	84	564	1	2.7	1
BRBZT52B4V3Q	Q6Z	4.3	4.21	4.39	5	84	564	1	2.7	1
BRBZT52B4V7Q	Q7Z	4.7	4.61	4.79	5	75	564	1	2.7	2
BRBZT52B5V1Q	Q8Z	5.1	5.00	5.20	5	56	470	1	1.8	2
BRBZT52B5V6Q	Q9Z	5.6	5.49	5.71	5	27	451	1	0.9	2
BRBZT52B6V2Q	QAZ	6.2	6.08	6.32	5	9	376	1	2.7	4
BRBZT52B6V8Q	QBZ	6.8	6.66	6.94	5	14	141	1	1.8	4
BRBZT52B7V5Q	QCZ	7.5	7.35	7.65	5	14	75	1	0.9	5
BRBZT52B8V2Q	QDZ	8.2	8.04	8.36	5	14	75	1	0.63	5
BRBZT52B9V1Q	QEZ	9.1	8.92	9.28	5	14	94	1	0.45	6
BRBZT52B10Q	QFZ	10	9.80	10.20	5	18	141	1	0.18	7
BRBZT52B11Q	QGZ	11	10.78	11.22	5	18	141	1	0.09	8

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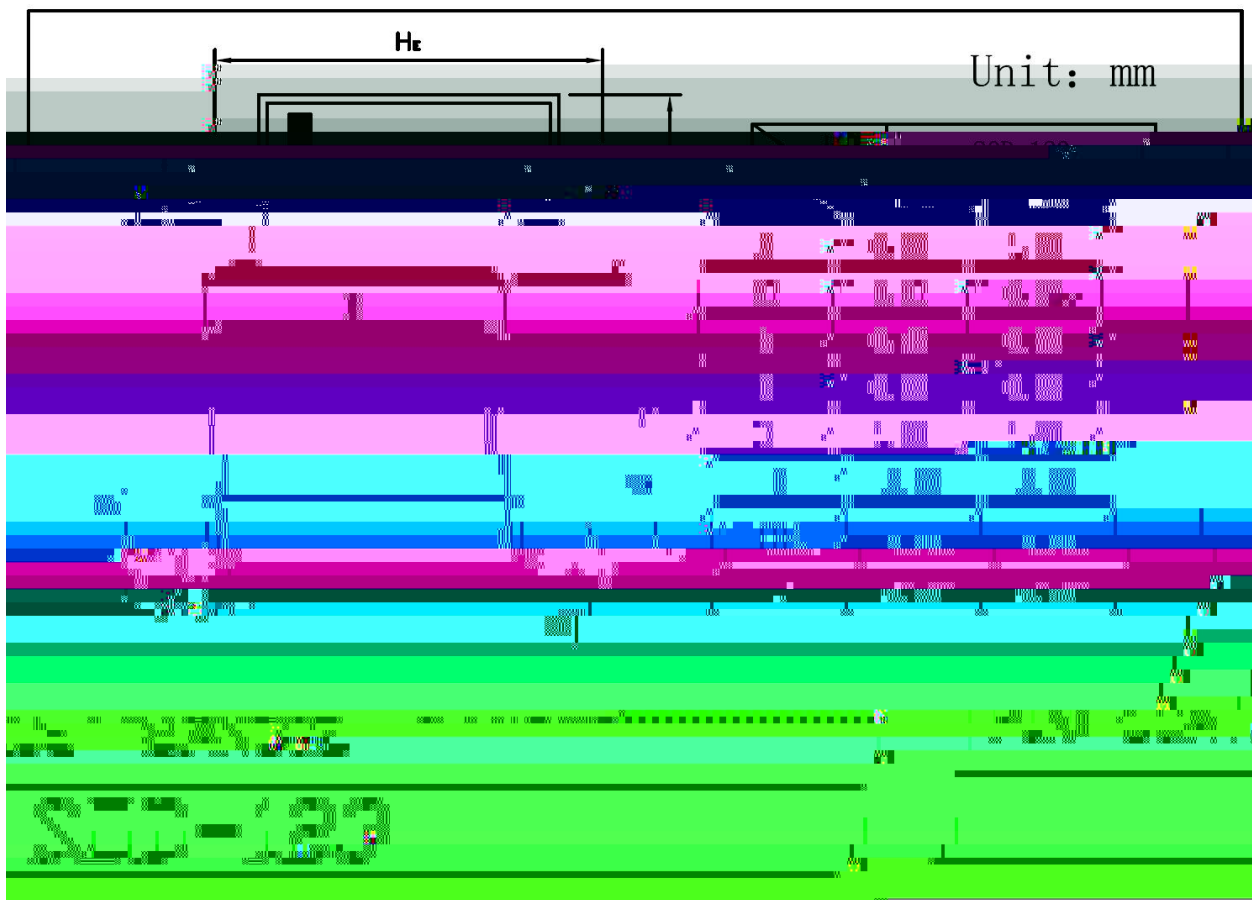
Electrical Characteristic Curve



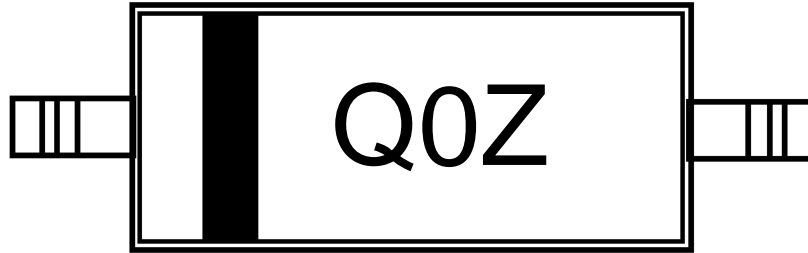
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## Ø ≡ ) φ / Package Dimensions



, M y f / Marking Instructions



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Note:

Q: Automobile halogen-free product Code

0Z: Product Type Code

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Note:

- 1. Preheating: 150~200 - , Time: 60~120sec.
- 2. Peak Temp.: 255 r5 - , Duration: 5 r0.5sec.
- 3. Cooling Speed: 2~10 - /sec.

## ÂD /Cã p ~ » ] / Resistance to Soldering Heat Test Conditions

“† y 260 r5 - ž • y 10 r1 sec. Temp.: 260 r5 - Time: 10 r1 sec

## G P á / Packaging SPEC.

2 & x / REEL

Package Type 7>û ~ E	Units ;>û :H					Dimension ;>û p . (unit /mm <sup>3</sup> )		
	Units/Reel / --	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box	Outer Boxç
SOD-123	3,000	10	30,000	6	180,000	7 s x8	180x120x180	390x385x205

## „Đ y f / Notices