/ Descriptions

SOD-123

Zener Diode in a SOD-123 Plastic Package.

/ Features

500mW , AEC-Q101

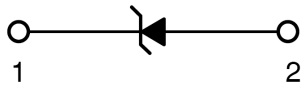
500mW power dissipation, medium current, automated assembly processes, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

/ Applications

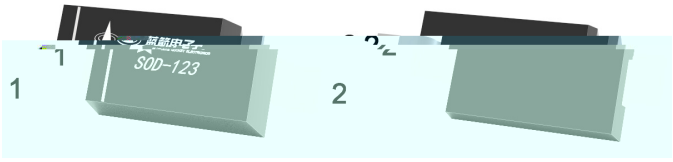
2.4V-39V

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

/ Equivalent Circuit



/ Pinning



PIN1:Cathode PIN2:Anode

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

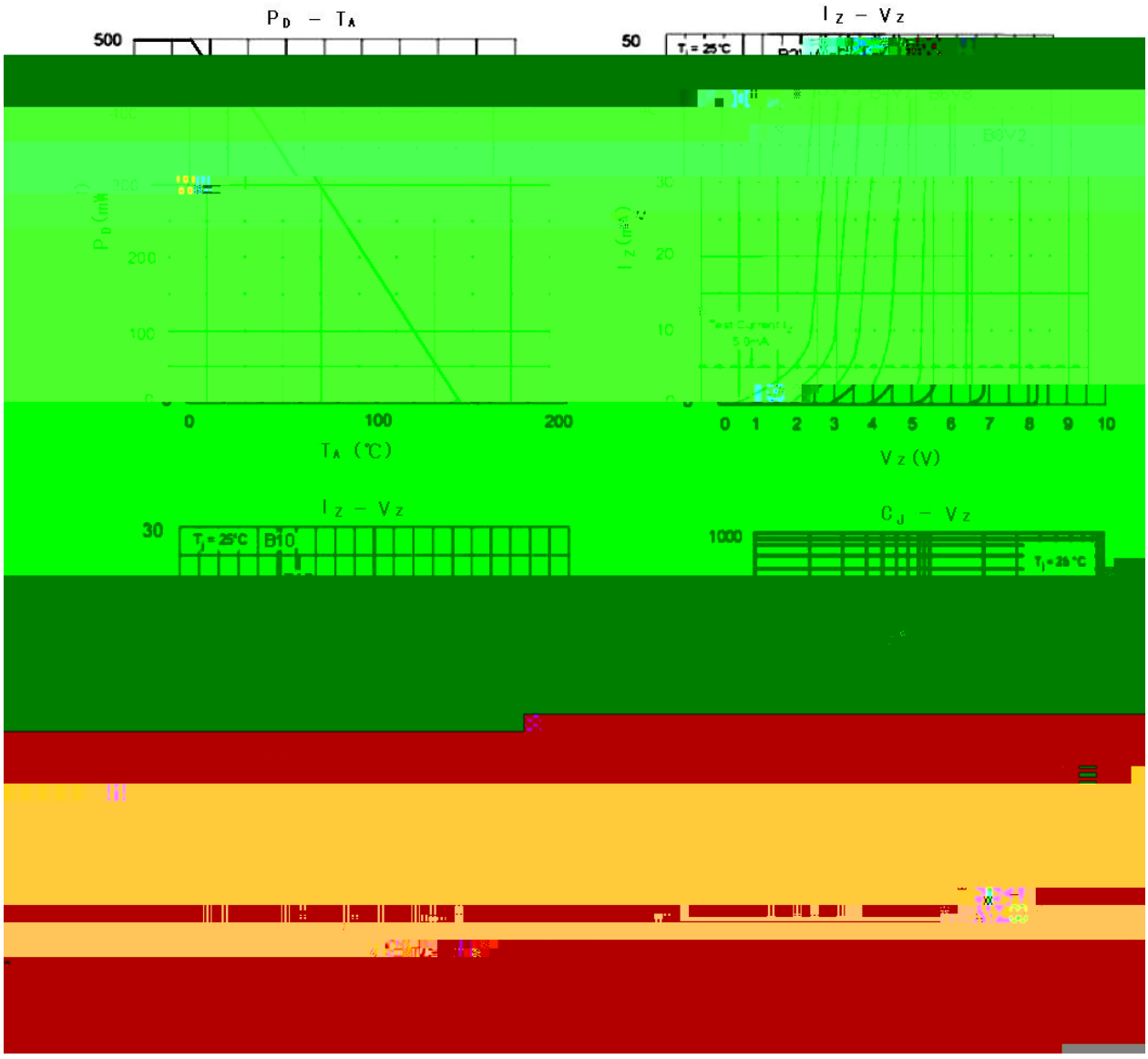
Parameter	Symbol	Rating	Unit
Forward Voltage (Note 2) I_F=10mA	V_F	0.9	V
Power Dissipation(Note 1)	P_D	500	mW
Typical Thermal Resistance Junction to Ambient(Note 1)	$R_{\theta JA}$	305	℃/W
Junction and Storage Temperature Range	T_j,T_{stg}	-65 150	℃

/ Electrical Characteristics(Ta=25)

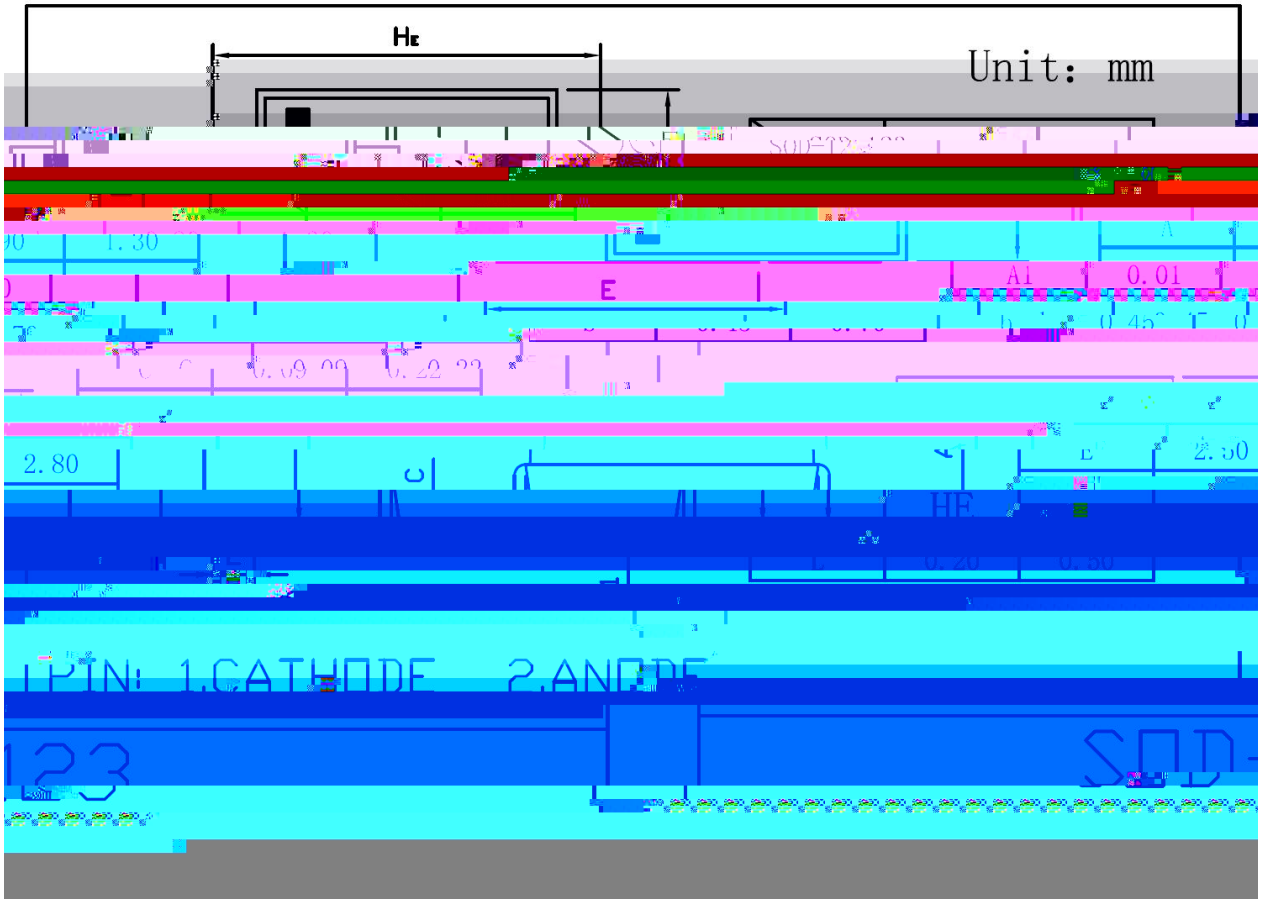
Type Number	Mark-ing Code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current	
		V_z @I_{ZT}			I_{ZT}	Z_{ZT} @I_{ZT}	Z_{ZK} @I_{ZK}	I_{ZK}	I_R	@V_R
		Nom (V)	Min (V)	Max (V)	mA	Ω		mA	μA	V
BRBZT52B2V4Q	Q0Z	2.4	2.35	2.45	5	94	564	1	45	1
BRBZT52B2V7Q	Q1Z	2.7	2.65	2.75	5	94	564	1	18	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

BRBZT52BXXXQ

/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions

Q

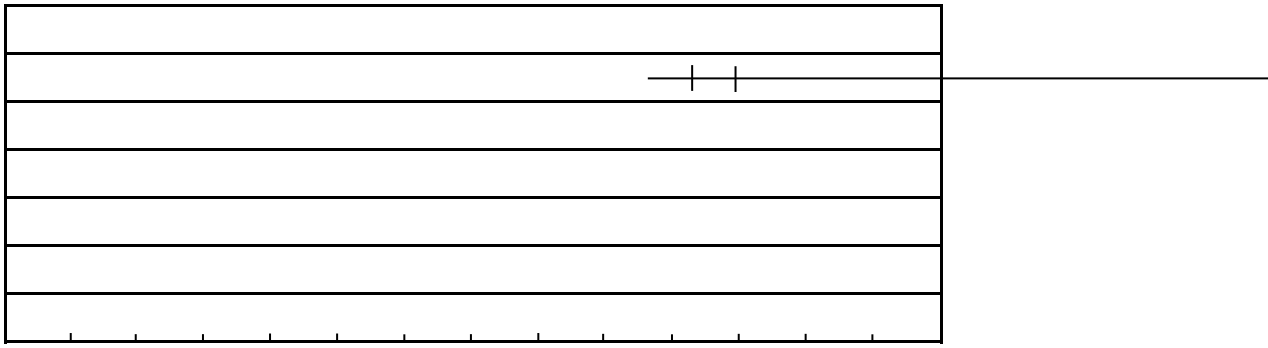
0Z

Note:

Q: Automobile halogen-free product Code

0Z: Product Type Code

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



Note:

1	150 200 60 120sec;	1.Preheating:150~200 , Time:60~120sec.
2	255±5 5±0.5sec;	2.Peak Temp.:255±5 , Duration:5±0.5sec.
3	2 10 /sec.	3.Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension		(unit mm³)
SOD-123	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices