



SOD-123 Plastic-Encapsulate Diodes

BZT52C5V1H

ZENER DIODE

FEATURES

- Planar Die Construction
- General purpose, Medium current
- Ideally suited for automated assembly processes
- Available in Lead free version

APPLICATION

- Mobile Phone

MARKING: H8



Solid dot = Green molding compound device, if none, the normal device

MAXIMUM RATINGS(Operating temperature range applies unless otherwise specified)

Symbol	Parameter	Value	Unit
P_D	Power Dissipation(Note 1)	500	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	250	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

ELECTRICAL CHARACTERISTICS($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Zener Voltage Range (Note 2)	V_Z	$I_{ZT}=5\text{mA}$	5.1		5.5	V
Maximum Zener Impedance(Note 3)	Z_{ZT}	$I_{ZT}=5\text{mA}$			50	Ω
	Z_{ZK}	$I_{ZK}=1\text{mA}$			450	
Maximum Reverse Current (Note 2)	I_R	$V_R=2\text{V}$			2	μA
		$V_R=4.2\text{V}$			50	μA
Forward Voltage (Note 2)	V_F	$I_F = 10\text{mA}$			0.9	V

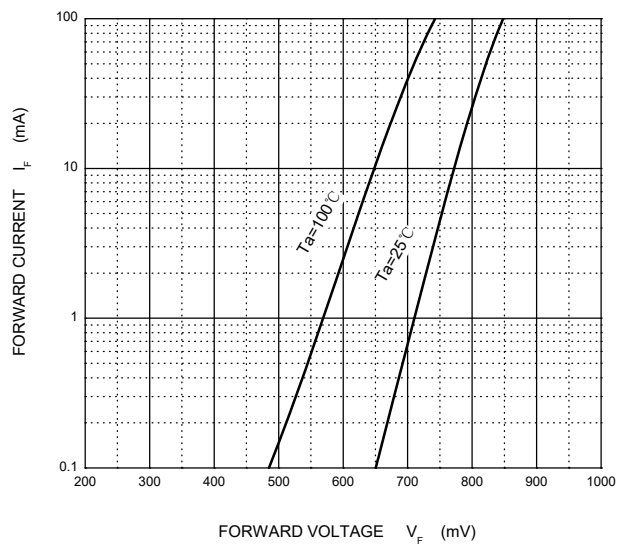
Notes: 1. Device mounted on a 1 in.² ceramic PCB which spread 2 ounces of copper.

2. Short duration test pulse used to minimize self-heating effect.

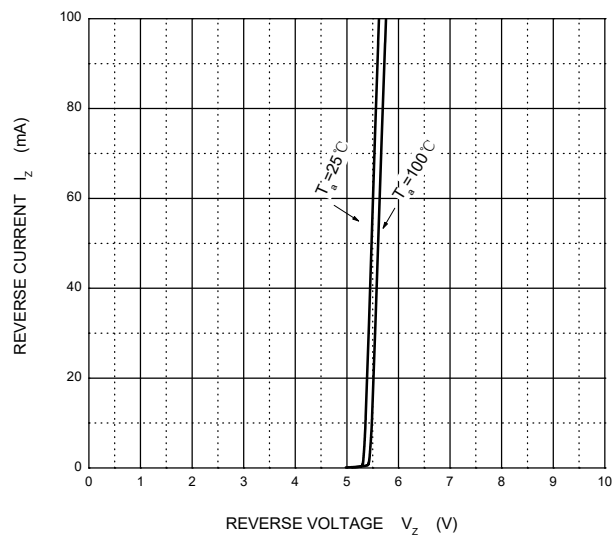
3. $f=1\text{kHz}$

ELECTRICAL CHARACTERISTICS

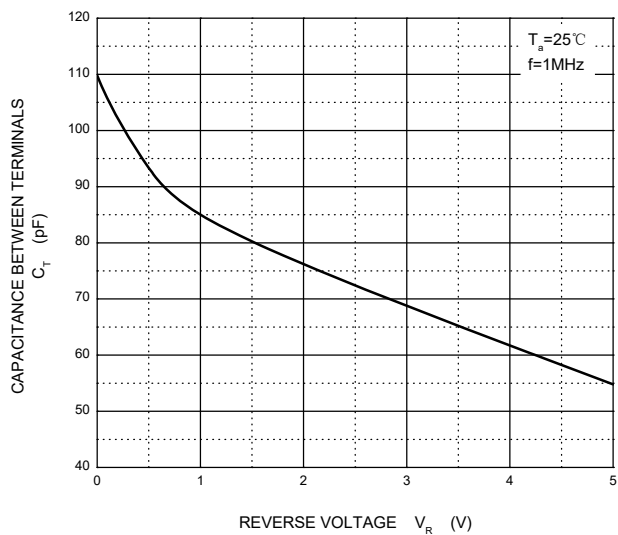
Forward Characteristics



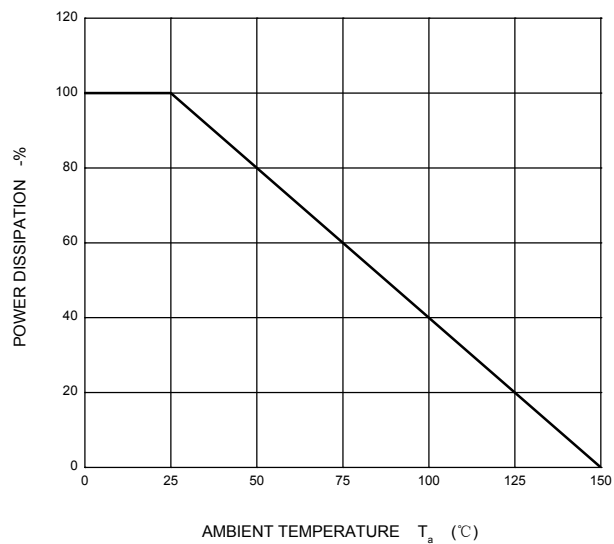
Reverse Characteristics



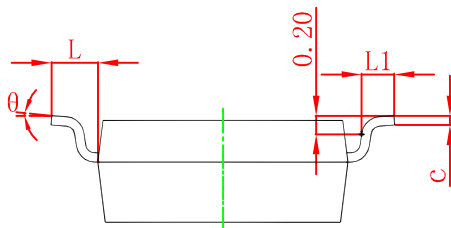
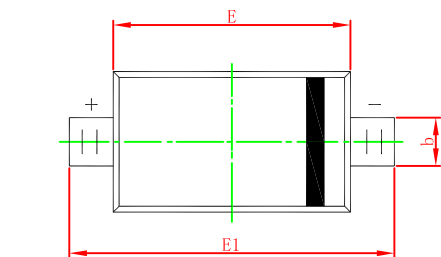
Capacitance Characteristics



Power Derating Curve



SOD-123 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

SOD-123 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

SOD-123 Embossed Carrier Tape



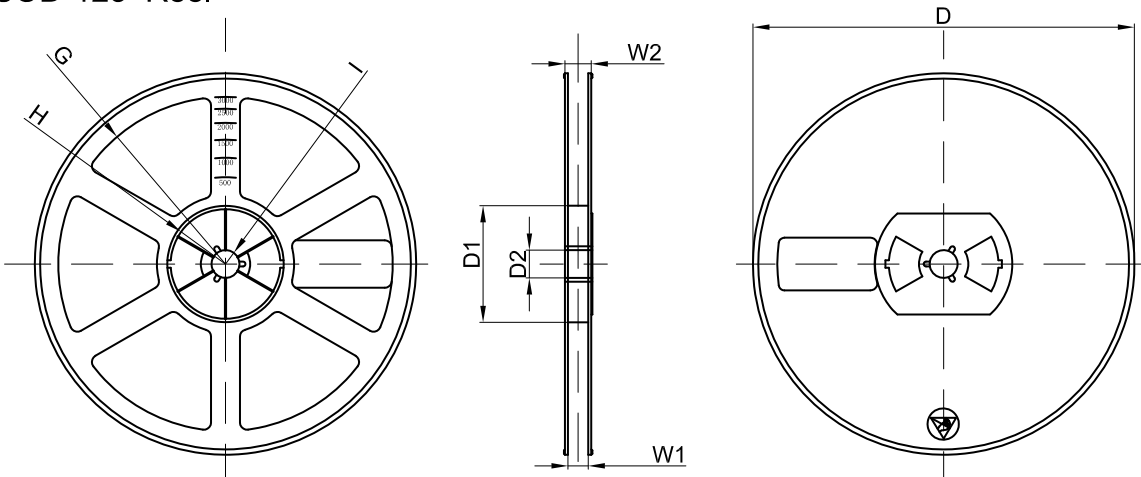
Packaging Description:
SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOD-123	1.85	3.95	1.57	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOD-123 Tape Leader and Trailer



SOD-123 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	