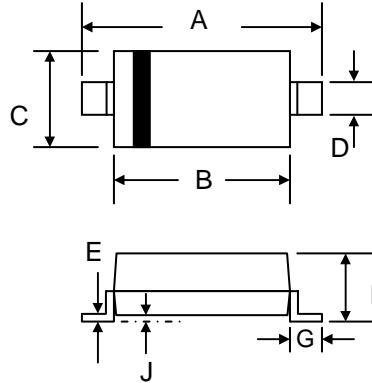


200mW SURFACE MOUNT ZENER DIODE

Features

- Planar Die Construction
- 200mW Power Dissipation
- 2.4 – 51V Nominal Zener Voltage
- 5% Standard Vz Tolerance
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-O



SOD-323		
Dim	Min	Max
A	2.30	2.75
B	1.60	1.80
C	1.15	1.35
D	0.25	0.40
E	0.09	0.18
G	0.20	0.40
H	0.80	1.00
J	—	0.12
All Dimensions in mm		

Mechanical Data

- Case: SOD-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.004 grams (approx.)
- Marking: Device Code, See Page 2
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 5**

Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at $T_A = 25^\circ\text{C}$ (Note 1)	P_d	200	mW
Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V
Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	$^\circ\text{C}$

Note: 1. Valid provided that device terminals are kept at ambient temperature.

Electrical Characteristics @_{T_A}=25°C unless otherwise specified

Type Number (Note 1)	Device Marking Code (Note 2)		Zener Voltage Range (Note 3)			Maximum Zener Impedance (Note 4)				Max Reverse Leakage Current		Temp. Coefficient of Zener Voltage @ I _{ZT} mV / °C	
			V _Z @ I _{ZT}			Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R	@ V _R	Min	Max
	TW	CN	Nom (V)	Min (V)	Max (V)	(Ω)	(mA)	(Ω)	(mA)	(μA)	(V)		
BZT52C2V4S	W1	WX	2.4	2.2	2.6	100	5.0	600	1.0	50	1.0	-3.5	0
BZT52C2V7S	W2	W1	2.7	2.5	2.9	100	5.0	600	1.0	20	1.0	-3.5	0
BZT52C3S	W3	W2	3.0	2.8	3.2	95	5.0	600	1.0	10	1.0	-3.5	0
BZT52C3V3S	W4	W3	3.3	3.1	3.5	95	5.0	600	1.0	5.0	1.0	-3.5	0
BZT52C3V6S	W5	W4	3.6	3.4	3.8	90	5.0	600	1.0	5.0	1.0	-3.5	0
BZT52C3V9S	W6	W5	3.9	3.7	4.1	90	5.0	600	1.0	3.0	1.0	-3.5	0
BZT52C4V3S	W7	W6	4.3	4.0	4.6	90	5.0	600	1.0	3.0	1.0	-3.5	0
BZT52C4V7S	W8	W7	4.7	4.4	5.0	80	5.0	500	1.0	3.0	2.0	-3.5	0.2
BZT52C5V1S	W9	W8	5.1	4.8	5.4	60	5.0	480	1.0	2.0	2.0	-2.7	1.2
BZT52C5V6S	WA	W9	5.6	5.2	6.0	40	5.0	400	1.0	1.0	2.0	-2.0	2.5
BZT52C6V2S	WB	WA	6.2	5.8	6.6	10	5.0	150	1.0	3.0	4.0	0.4	3.7
BZT52C6V8S	WC	WB	6.8	6.4	7.2	15	5.0	80	1.0	2.0	4.0	1.2	4.5
BZT52C7V5S	WD	WC	7.5	7.0	7.9	15	5.0	80	1.0	1.0	5.0	2.5	5.3
BZT52C8V2S	WE	WD	8.2	7.7	8.7	15	5.0	80	1.0	0.7	5.0	3.2	6.2
BZT52C9V1S	WF	WE	9.1	8.5	9.6	15	5.0	100	1.0	0.5	6.0	3.8	7.0
BZT52C10S	WG	WF	10	9.4	10.6	20	5.0	150	1.0	0.2	7.0	4.5	8.0
BZT52C11S	WH	WG	11	10.4	11.6	20	5.0	150	1.0	0.1	8.0	5.4	9.0
BZT52C12S	WI	WH	12	11.4	12.7	25	5.0	150	1.0	0.1	8.0	6.0	10.0
BZT52C13S	WK	WI	13	12.4	14.1	30	5.0	170	1.0	0.1	8.0	7.0	11.0
BZT52C15S	WL	WJ	15	13.8	15.6	30	5.0	200	1.0	0.1	10.5	9.2	13.0
BZT52C16S	WM	WK	16	15.3	17.1	40	5.0	200	1.0	0.1	11.2	10.4	14.0
BZT52C18S	WN	WL	18	16.8	19.1	45	5.0	225	1.0	0.1	12.6	12.4	16.0
BZT52C20S	WO	WM	20	18.8	21.2	55	5.0	225	1.0	0.1	14.0	14.4	18.0
BZT52C22S	WP	WN	22	20.8	23.3	55	5.0	250	1.0	0.1	15.4	16.4	20.0
BZT52C24S	WR	WO	24	22.8	25.6	70	5.0	250	1.0	0.1	16.8	18.4	22.0
BZT52C27S	WS	WP	27	25.1	28.9	80	2.0	300	0.5	0.1	18.9	21.4	25.3
BZT52C30S	WT	WQ	30	28.0	32.0	80	2.0	300	0.5	0.1	21.0	24.4	29.4
BZT52C33S	WU	WR	33	31.0	35.0	80	2.0	325	0.5	0.1	23.1	27.4	33.4
BZT52C36S	WW	WS	36	34.0	38.0	90	2.0	350	0.5	0.1	25.2	30.4	37.4
BZT52C39S	WX	WT	39	37.0	41.0	130	2.0	350	0.5	0.1	27.3	33.4	41.2
BZT52C43S	WY	WU	43	40.0	46.0	100	5.0	700	1.0	0.1	32.0	10.0	12.0
BZT52C47S	WZ	WV	47	44.0	50.0	100	5.0	750	1.0	0.1	35.0	10.0	12.0
BZT52C51S	XA	WW	51	48.0	54.0	100	5.0	750	1.0	0.1	38.0	10.0	12.0

- Note: 1. Type numbers listed have standard tolerance on the nominal zener voltage of ±5%.
2. TW: Marking code for Taiwan plant. CN: Marking code for China plant.
3. Measured with pulses t_p = 5ms.
4. f = 1KHz

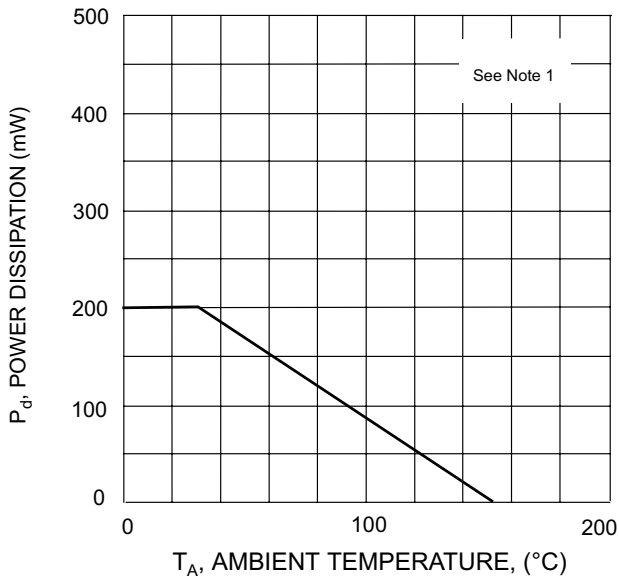


Fig. 1 Power Derating Curve

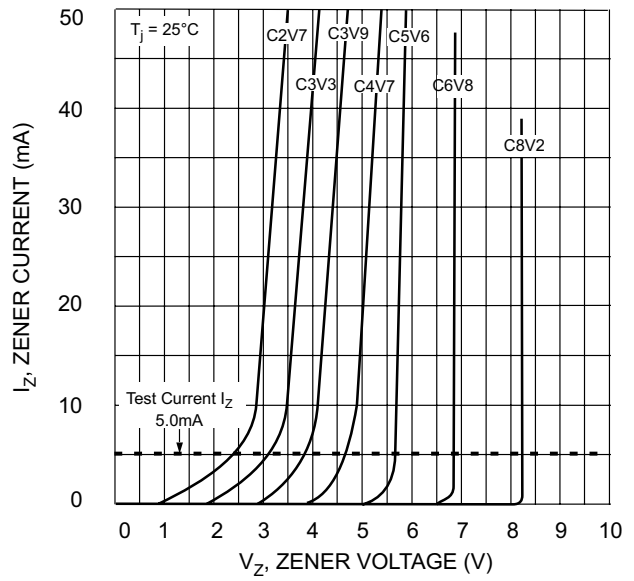


Fig. 2 Zener Breakdown Characteristics

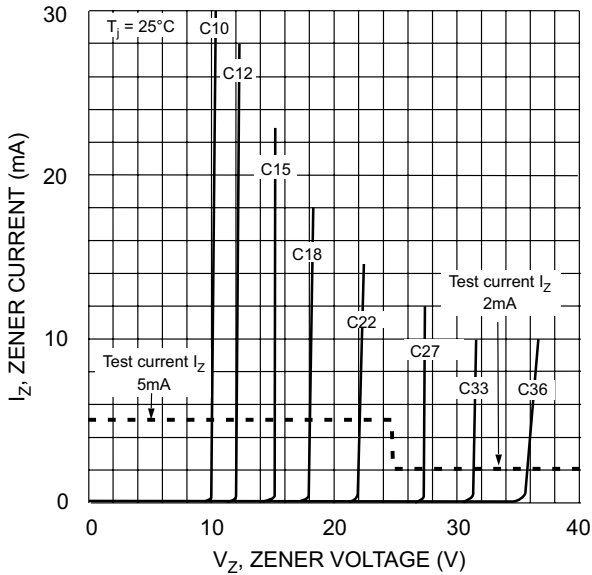


Fig. 3 Zener Breakdown Characteristics

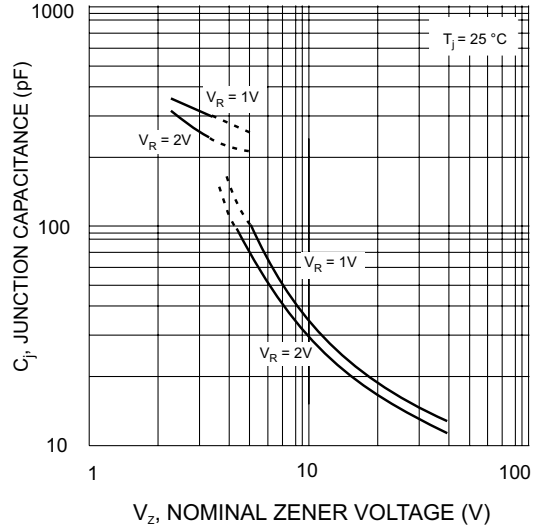


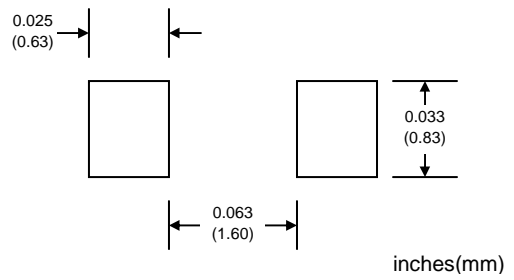
Fig. 4 Junction Capacitance vs Nominal Zener Voltage

MARKING INFORMATION



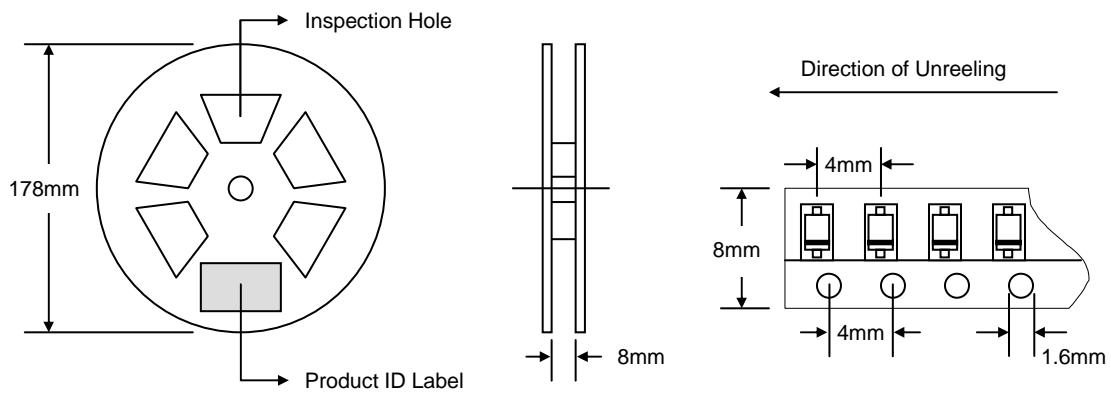
Cathode = Polarity Band
xx = Device Code, See Page 2

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	7.0

Note: 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
BZT52CxxS-T1	SOD-323	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, BZT52C2V4S-T1-LF.**

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