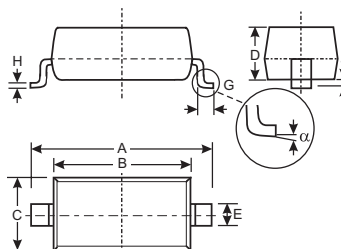


Features

- Planar Die Construction
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- Lead Free/RoHS Compliant (Note 5)**

Mechanical Data

- Case: SOD-123
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe)
- Polarity: Cathode Band
- Marking: Date Code and Marking Code or Date Code only, See Page 3
- Ordering Information: See Page 2
- Weight: 0.01 grams (approximate)



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.45	0.65
	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
α	0°	8°
All Dimensions in mm		

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

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_d	410	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	305	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Type Number	Marking Code (Note 3)	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 4)			Maximum Reverse Current (Note 2)	
		$V_Z @ I_{ZT}$			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
BZT52C43	WU/WU	43	40.0	46.0	5	100	700	1.0	0.1	32
BZT52C47	WV/WZ	47	44.0	50.0	5	100	750	1.0	0.1	35
BZT52C51	WW/X1	51	48.0	54.0	5	100	750	1.0	0.1	38

- Notes:
- Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².
 - Short duration test pulse used to minimize self-heating effect.
 - When provided, otherwise, parts are provided with date code only, and type number identifications appears on reel only.
 - $f = 1\text{kHz}$.
 - No purposefully added lead.

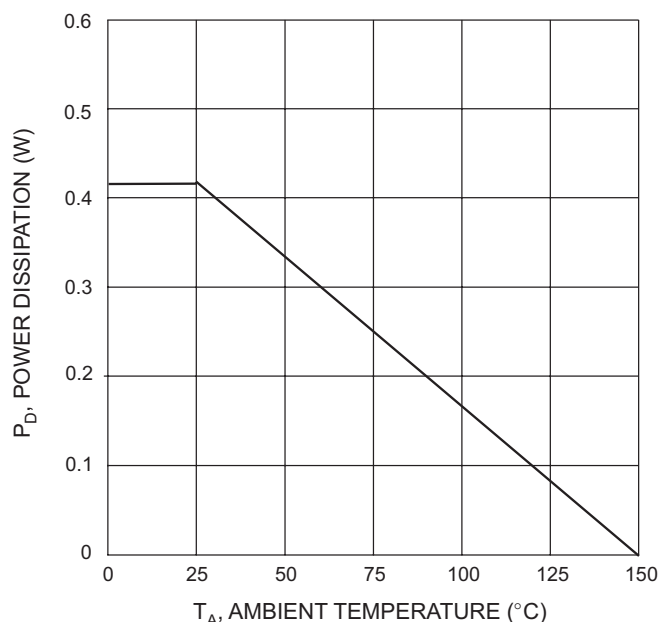


Fig. 1 Power Dissipation vs. Ambient Temperature

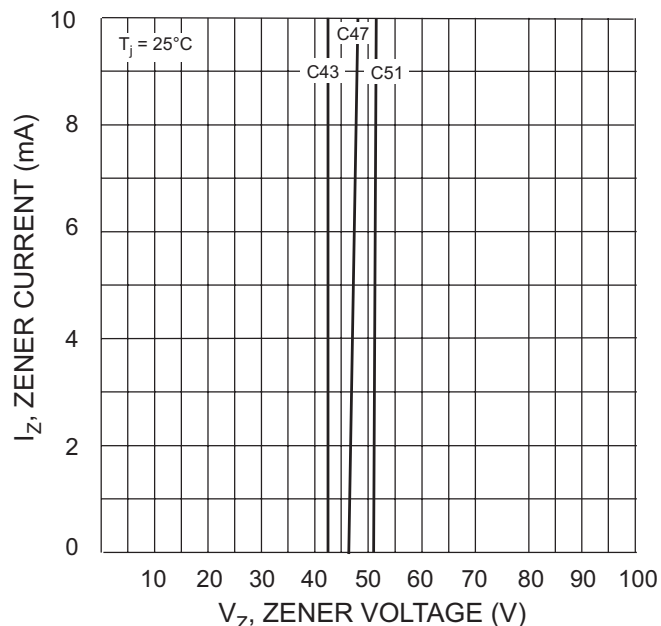


Fig. 2 Zener Breakdown Characteristics

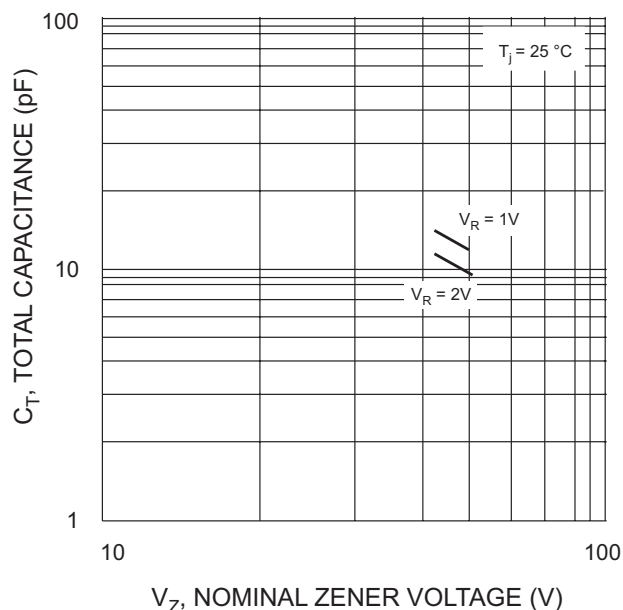


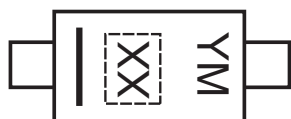
Fig. 3 Total Capacitance vs. Nominal Zener Voltage

Ordering Information (Note 6 and 7)

Device	Packaging	Shipping
BZT52CXX-7-F (Note 6)	SOD-123	3000/Tape & Reel

- Notes: 6. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.
7. Replace "XX" with the nominal Zener breakdown voltage; i.e. Part number for 43V device would be BZT52C43-7-F.

Marking Information for Parts marked WY, WZ or X1



XX = Product Type Marking Code (See Page 1)
 YM = Date Code Marking
 Y = Year (ex: P = 2002)
 M = Month (ex: 9 = September)

Date Code Key

Year	2000			2001			2002			2003			2004		
Code	M			N			P			R			S		

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Marking Information for Parts marked WU, WU, WV or WW



XX = Product Type Marking Code (See Page 1)
 YM = Date Code Marking
 Y = Year (ex: N = 2002)
 M = Month (ex: 9 = September)

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Code	J	K	L	M	N	P	R	S	T	U	V	W

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

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