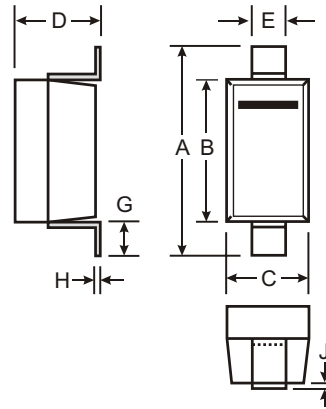


Features

- Planar Die Construction
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes

Mechanical Data

- Case: SOD-123, Plastic
- UL Flammability Classification Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Date Code and Marking Code or Date Code only, See Sheet 3
- Weight: 0.01 grams (approx.)
- Ordering Information: See Sheet 3



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.55 Typical	
G	0.25	—
H	0.15 Typical	
J	—	0.10
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)		Typical Temperature Coefficient @ I _{ZTC} mV/°C		Test Current I _{ZTC}
		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	Min	Max	mA	
BZT52C43	WU/WY	43	40.0	46.0	5	100	700	1.0	0.1	32	10.0	12.0	5
BZT52C47	WV/WZ	47	44.0	50.0	5	100	750	1.0	0.1	35	10.0	12.0	5
BZT52C51	WW/X1	51	48.0	54.0	5	100	750	1.0	0.1	38	10.0	12.0	5

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

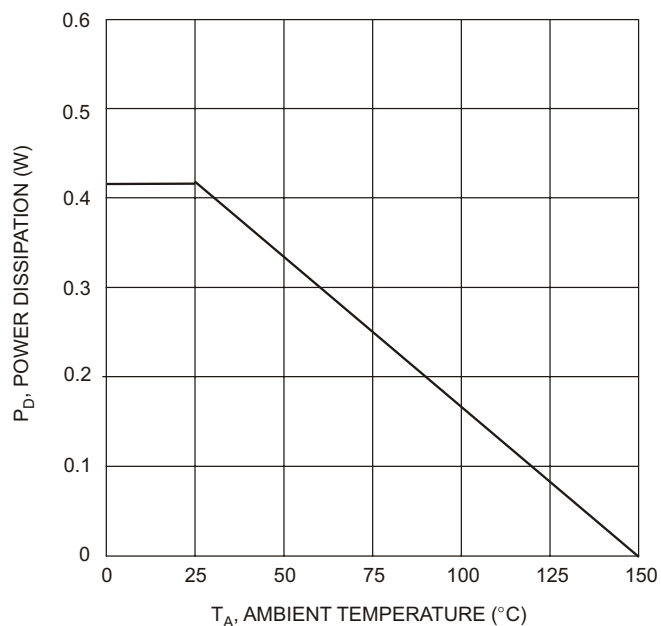


Fig. 1 Power Dissipation vs Ambient Temperature

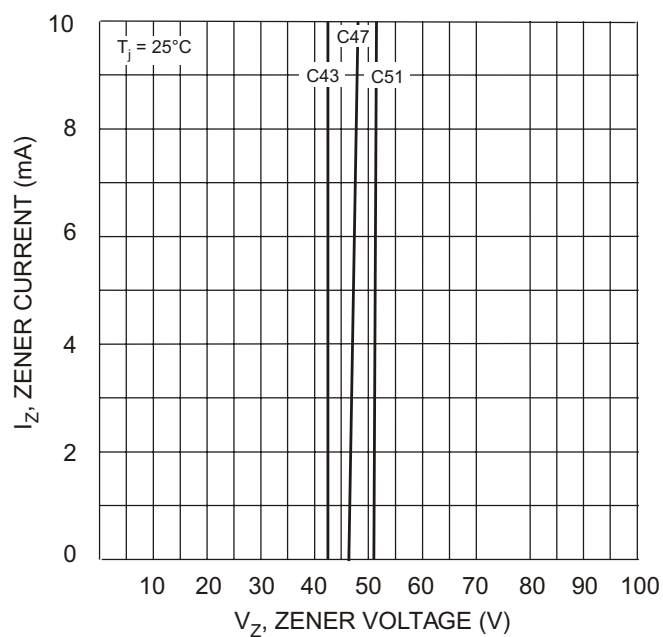


Fig. 2 Zener Breakdown Characteristics

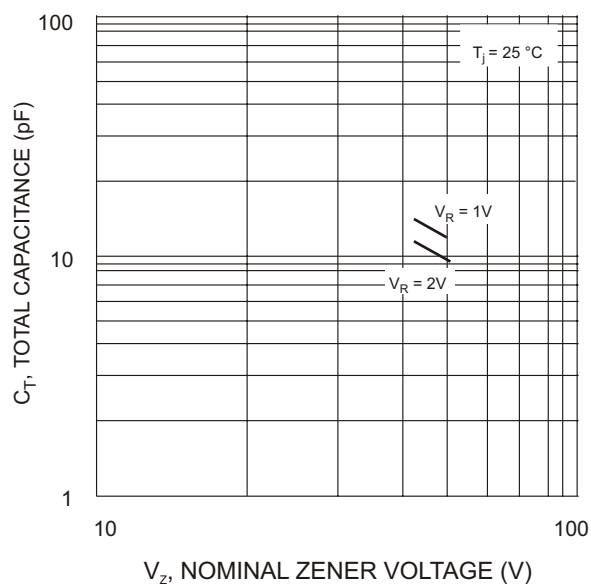


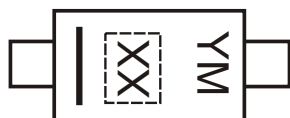
Fig. 3 Total Capacitance vs Nominal Zener Voltage

Ordering Information (Note 5)

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

Notes: 5. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.
6. Replace "XX" with the nominal Zener breakdown voltage; i.e. Part number for 43V device would be BZT52C43-7.

Marking Information for Parts marked WY, WZ or X1



XX = Product Type Marking Code (See Page 2)
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, WV or WW



XX = Product Type Marking Code (See Page 2)
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
Code	J	K	L	M	N	O	P

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