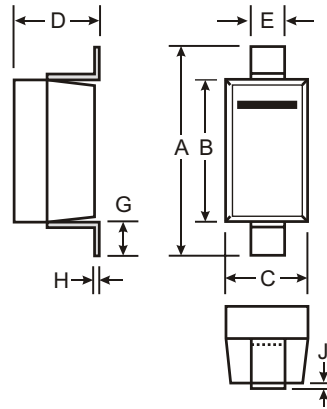


### Features

- 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<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P <sub>d</sub>	410	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R <sub>θJA</sub>	305	°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150	°C

### Electrical Characteristics @ T<sub>A</sub> = 25°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 <sub>ZTC</sub> mV/°C		Test Current I <sub>ZTC</sub> mA
		V <sub>Z</sub> @ I <sub>ZT</sub>			I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub>	@ V <sub>R</sub>	Min	Max	
		Nom (V)	Min (V)	Max (V)	mA	Ω	mA	μA	V	Min	Max		
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:
1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>.
  2. Short duration test pulse used to minimize self-heating effect.
  3. When provided, otherwise, parts are provided with date code only, and type number identifications appears on reel only.
  4. f = 1kHz.

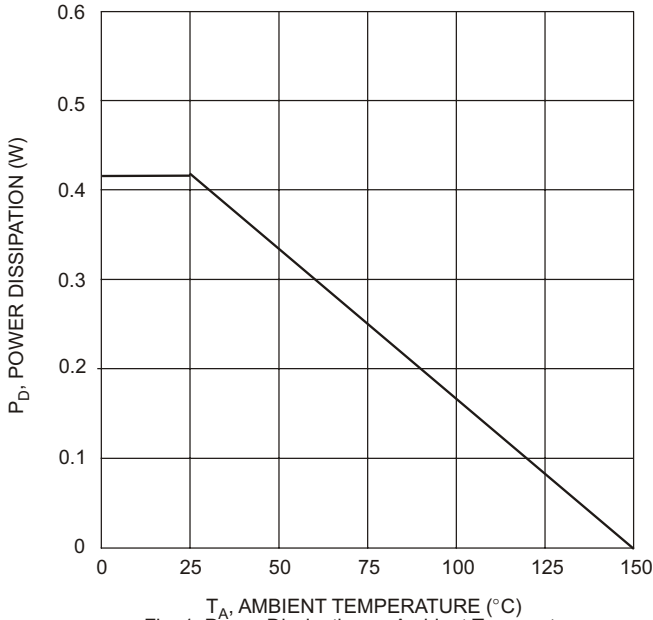


Fig. 1 Power Dissipation vs Ambient Temperature

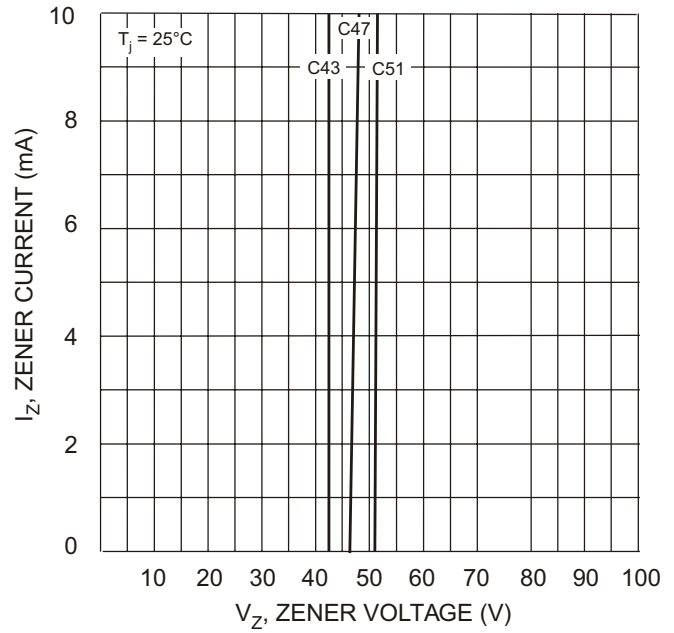


Fig. 2 Zener Breakdown Characteristics

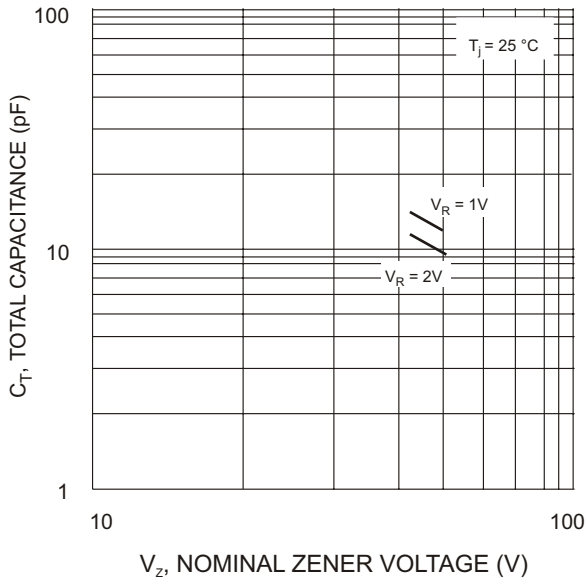


Fig. 3 Total Capacitance vs Nominal Zener Voltage

## 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		