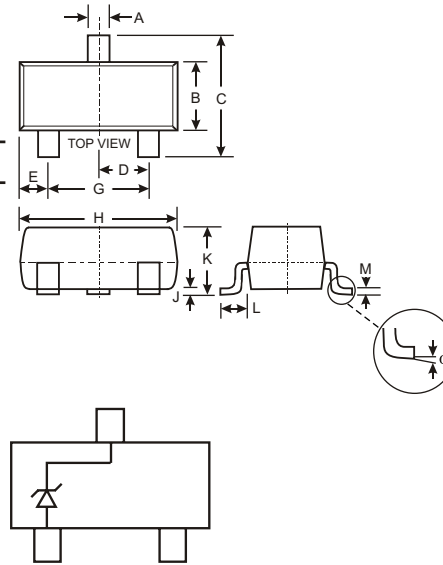


### Features

- Planar Die Construction
- 350mW Power Dissipation
- Zener Voltages from 43V - 51V
- Ideally Suited for Automated Assembly Processes

### Mechanical Data

- Case: SOT-23, Molded Plastic
- Case material - UL Flammability Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: Marking Code (See Table on Page 2)
- Weight: 0.008 grams (approx.)



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
$\alpha$	0°	8°
All Dimensions in mm		

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

Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 10\text{mA}$	$V_F$	0.9	V
Power Dissipation (Note 1)	$P_d$	350	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150	$^\circ\text{C}$

Notes: 1. Device mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.

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

Type Number	Marking Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current (Note 2)		Typical Temperature Coefficient @ $I_{ZT}$ mV/ $^\circ\text{C}$	
		$V_Z$ @ $I_{ZT}$			$I_{ZT}$	$Z_{ZT}$ @ $I_{ZT}$	$Z_{ZK}$ @ $I_{ZK}$		$I_R$	$V_R$	Min	Max
		Nom (V)	Min (V)	Max (V)	(mA)	( $\Omega$ )	( $\Omega$ )	(mA)	( $\mu\text{A}$ )	(V)		
BZX84C43	Y15/KYF	43	40.0	46.0	2.0	150	375	0.5	0.1	30.1	10.0	12.0
BZX84C47	Y16/KYG	47	44.0	50.0	2.0	170	375	0.5	0.1	32.9	10.0	12.0
BZX84C51	Y17/KYH	51	48.0	54.0	2.0	180	400	0.5	0.1	35.7	10.0	12.0

Notes: 2. Short duration test pulse used to minimize self-heating effect.  
3.  $f = 1\text{KHz}$ .

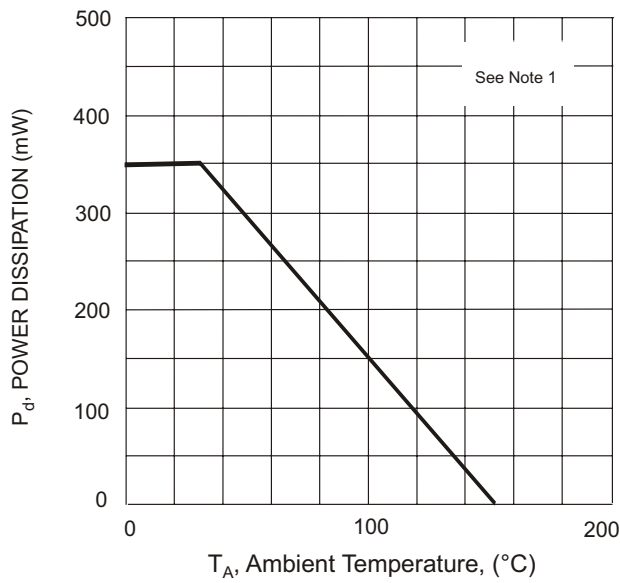


Fig. 1 Power Derating Curve

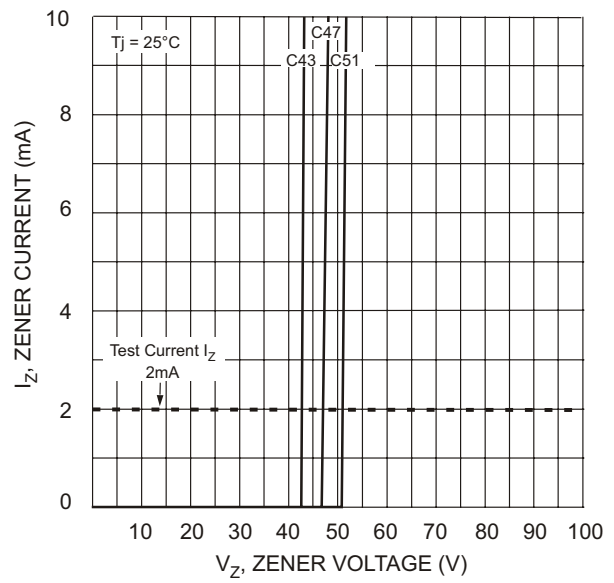


Fig. 2 Zener Breakdown Characteristics

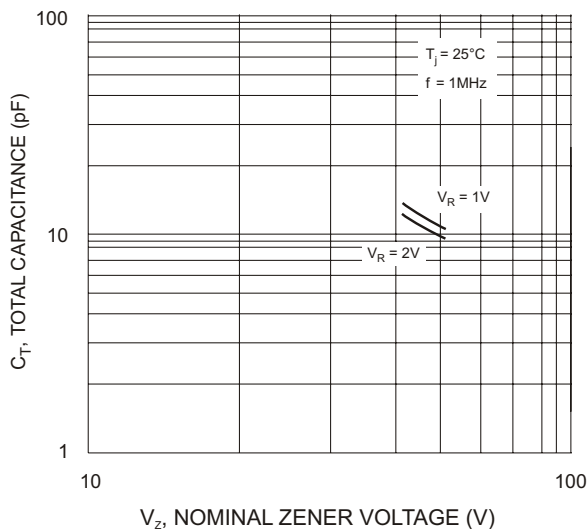


Fig. 3 Total Capacitance vs Nominal Zener Voltage

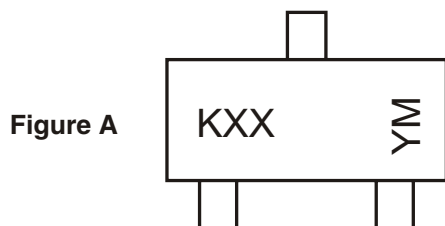
**Ordering Information** (Note 4)

Device	Packaging	Shipping
(Type Number)-7*	SOT-23	3000/Tape & Reel

\* Add "-7" to the appropriate type number in Table 1 (on Page 2). Example: 43V Zener = BZX84C43-7.

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information (This part may be marked as Figure A or B Below)**



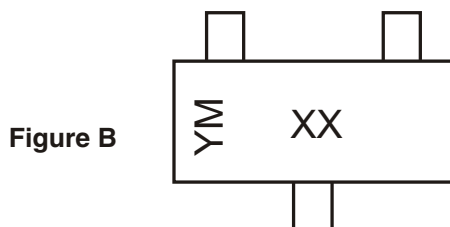
KXX = Product Type Marking Code (See Page 2)  
 YM = Date Code Marking  
 Y = Year ex: N = 2002  
 M = Month ex: 9 = September

Date Code Key

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Code	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



XX = Product Type Marking Code (See Page 2)  
 YM = Date Code Marking  
 Y = Year ex: N = 2001  
 M = Month ex: 9 = September

Date Code Key

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Code	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