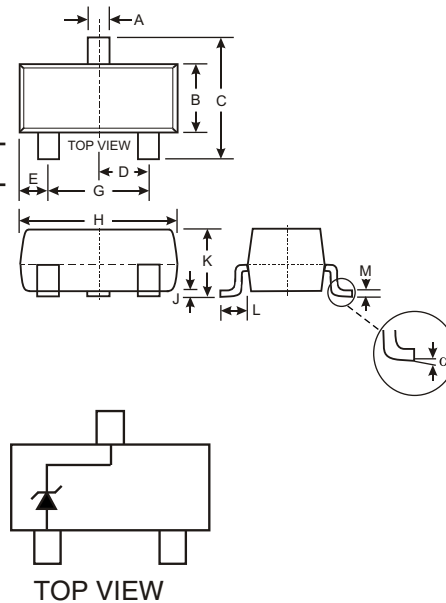


Features

Planar Die Construction
 350mW Power Dissipation
 Zener Voltages from 43V - 51V
 Ideally Suited for Automated Assembly Processes
Lead Free/RoHS Compliant (Note 3)

Mechanical Data

Case: SOT-23
 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). Please see Ordering Information, Note 7, on Page 3
 Polarity: See Diagram
 Marking: Type Code and Date Code, See Page 3
 Type Code: See Table on Page 2
 Weight: 0.008 grams (approximate)



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
	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	300	mW
Power Dissipation (Note 2)	P_d	350	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R_{JA}	417	$^\circ\text{C/W}$
Thermal Resistance, Junction to Ambient Air (Note 2)	R_{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>.
 2. Valid provided the terminals are kept at ambient temperature.
 3. No purposefully added lead.

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

Type Number	Type Code	Zener Voltage Range (Note 5)				Maximum Zener Impedance (Note 4)			Maximum Reverse Current (Note 5)		Typical Temperature Coefficient @ I_{ZT} mV/°C	
		V_Z @ I_{ZT}			I_{ZT} (mA)	Z_{ZT} @ I_{ZT} ()	Z_{ZK} @ I_{ZK} () (mA)		I_R (A)	V_R (V)	Min	Max
		Nom (V)	Min (V)	Max (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: 4. $f = 1\text{KHz}$.
5. Short duration test pulse used to minimize self-heating effect.

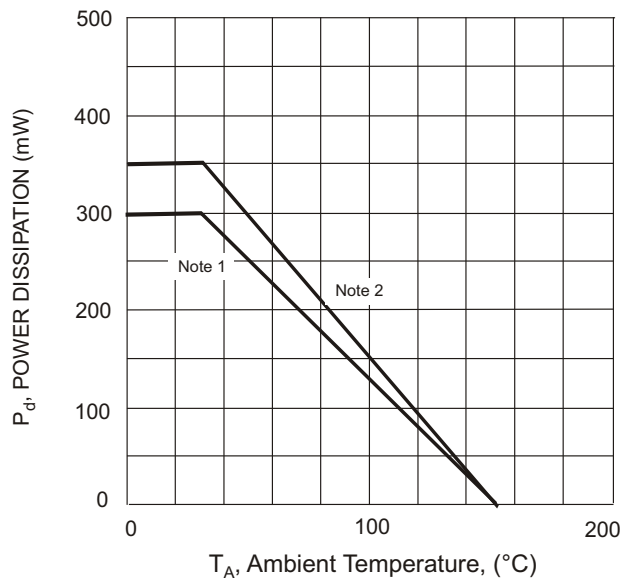


Fig. 1 Power Derating Curve

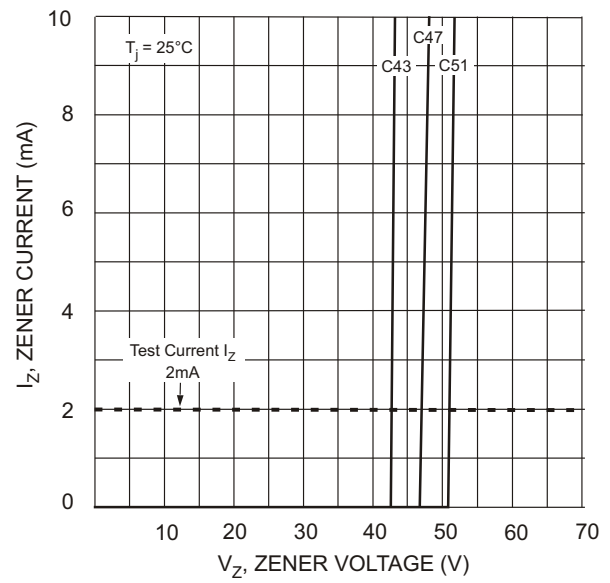


Fig. 2 Zener Breakdown Characteristics

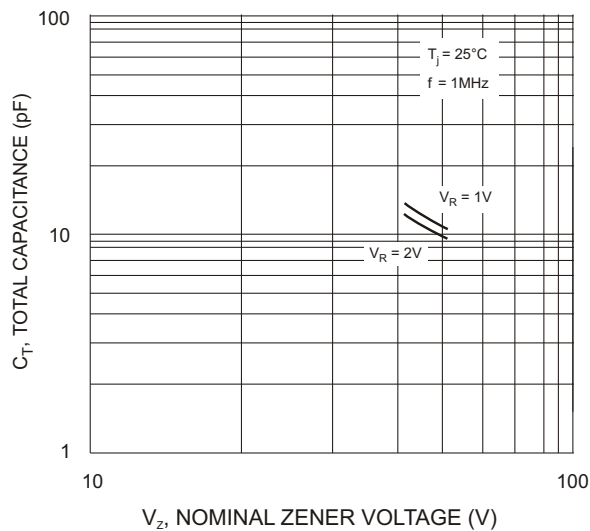


Fig. 3 Total Capacitance vs Nominal Zener Voltage

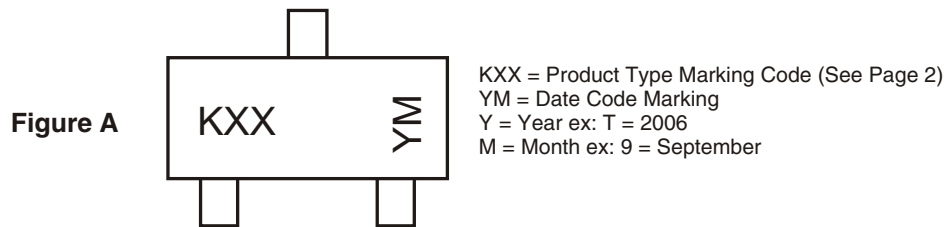
Ordering Information (Note 6)

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

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

Notes: 6. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

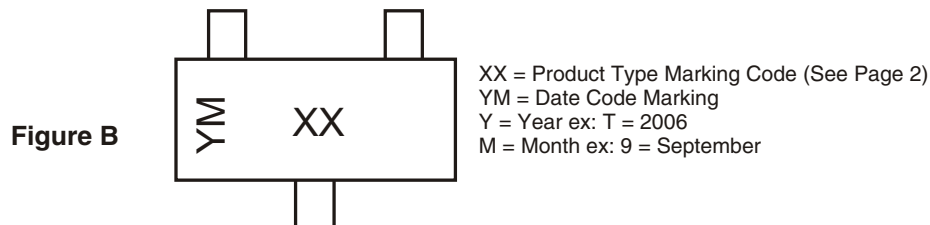
Marking Information (This part may be marked as Figure A or B Below)



Date Code Key

Year	2006	2007	2008	2009	2010	2011	2012
Code	T	U	V	W	X	Y	Z

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



Date Code Key

Year	2006	2007	2008	2009	2010	2011	2012
Code	M	N	P	R	S	T	U

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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