BZX84C43 - BZX84C51

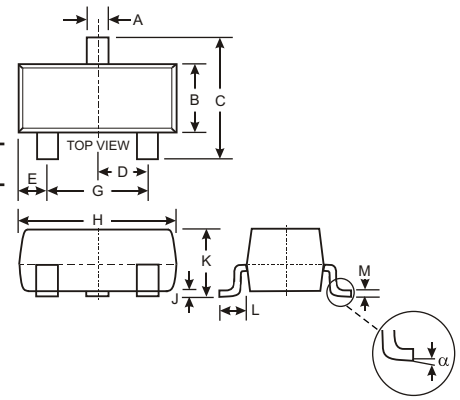
350mW SURFACE MOUNT ZENER DIODE

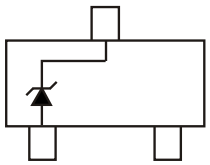
Features

- 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)





TOP VIEW

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 C unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @ I_F = 10mA	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	C/W
Thermal Resistance, Junction to Ambient Air (Note 2)	R_{JA}	357	C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	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 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}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}		I_R	V_R	Min	Max
		Nom (V)	Min (V)	Max (V)	(mA)	( )	( )	(mA)	(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: 4. f = 1KHz.
5. Short duration test pulse used to minimize self-heating effect.

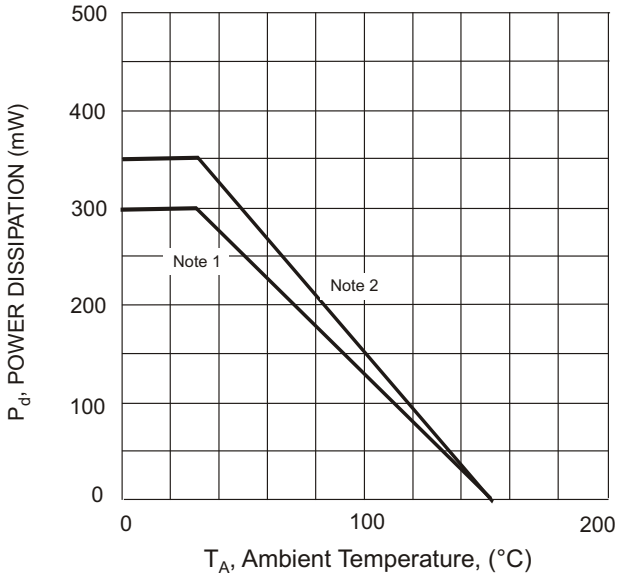


Fig. 1 Power Derating Curve

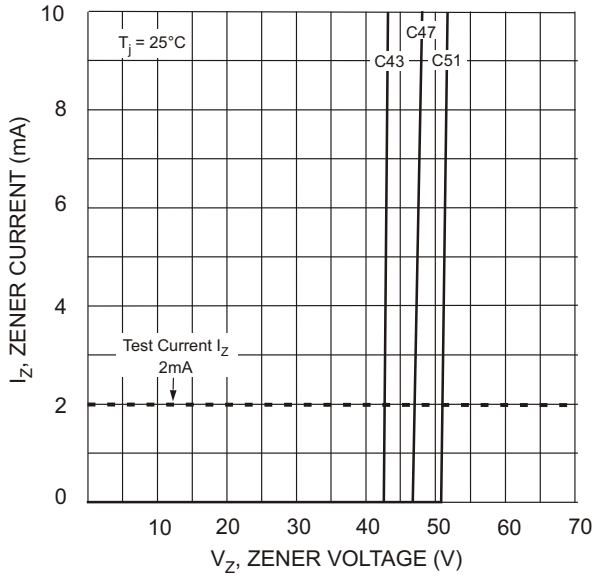


Fig. 2 Zener Breakdown Characteristics

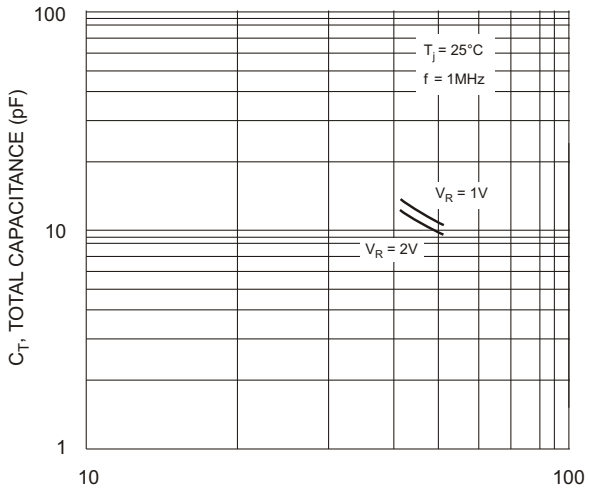


Fig. 3 Total Capacitance vs Nominal Zener Voltage

Ordering Information (Note 6)

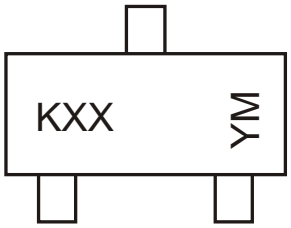
Device	Packaging	Shipping
(Type Number)-7-F	SOT-23	3000/Tape & Reel

* 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)

Figure A



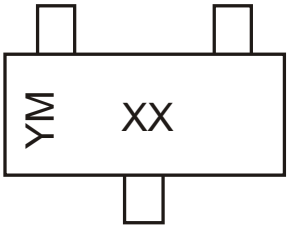
KXX = Product Type Marking Code (See Page 2)
YM = Date Code Marking
Y = Year ex: T = 2006
M = Month ex: 9 = September

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

Figure B



XX = Product Type Marking Code (See Page 2)
YM = Date Code Marking
Y = Year ex: T = 2006
M = Month ex: 9 = September

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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