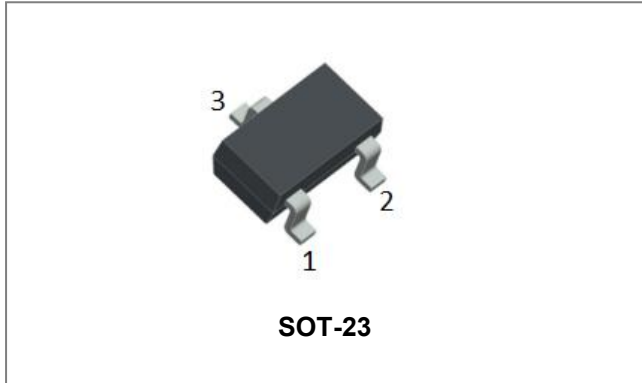


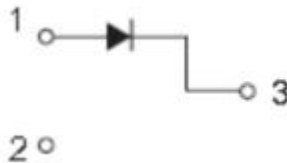
BZX84C2V4-BZX84C51 ZENER DIODE



Features

- Planar Die Construction
- 350mW Power Dissipation
- 2.4V- 51V Nominal Zener Voltage
- 5% Standard Vz Tolerance
- Designed for Surface Mount Application
- Plastic Material — UL Recognition Flammability Classification 94V-O
- “-A” is an AEC-Q101 qualified device
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Schematic & Pin Configuration



Mechanical Characteristics

- Case: SOT-23, Molded Plastic
- Terminals: Plated leads Solderable per MIL-STD-750, Method 2026
- Mounting Position: Any
- Weight: 0.008g

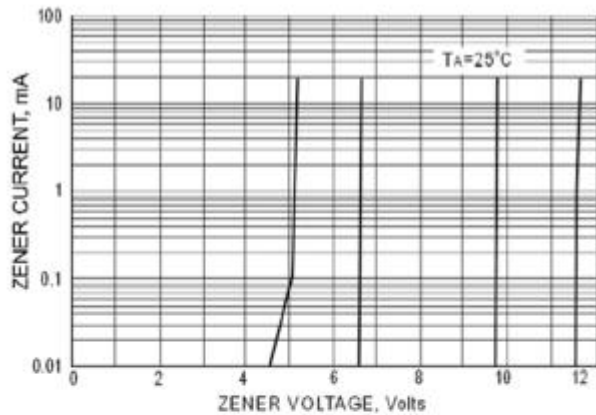
Maximum Ratings@ $T_A=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Value	Units
Power Dissipation	P_D	350	mW
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ\text{C}$

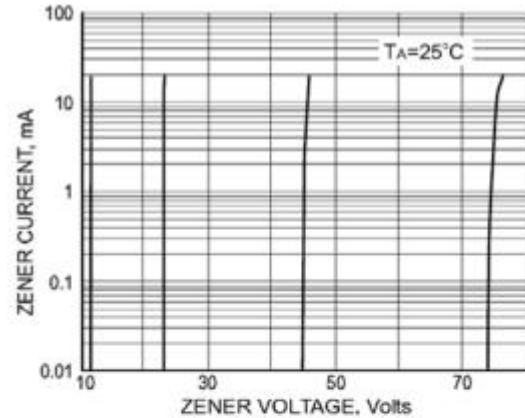
Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Device	Marking Code	Zener Voltage			Max. Zener Impedance				Max. Reverse Leakage Current	
		$V_{ZT} @ I_{ZT}^{*1}$			$Z_{ZT} @ I_{ZT}$	I_{ZT}	$Z_{ZK} @ I_{ZK}$	I_{ZK}	$I_R @ V_R$	
		Nom(V)	Min(V)	Max(V)	(Ω)	mA	(Ω)	mA	(μA)	V
BZX84C2V4	Z11	2.4	2.28	2.52	100	5	600	1	50	1
BZX84C2V7	Z12	2.7	2.5	2.9	100	5	600	1	20	1
BZX84C3V0	Z13	3	2.8	3.2	95	5	600	1	10	1
BZX84C3V3	Z14	3.3	3.1	3.5	95	5	600	1	5	1
BZX84C3V6	Z15	3.6	3.4	3.8	90	5	600	1	5	1
BZX84C3V9	Z16	3.9	3.7	4.1	90	5	600	1	3	1
BZX84C4V3	Z17	4.3	4	4.6	90	5	600	1	3	1
BZX84C4V7	Z1	4.7	4.4	5	80	5	500	1	3	2
BZX84C5V1	Z2	5.1	4.8	5.4	60	5	480	1	2	2
BZX84C5V6	Z3	5.6	5.2	6	40	5	400	1	1	2
BZX84C6V2	Z4	6.2	5.8	6.6	10	5	150	1	3	4
BZX84C6V8	Z5	6.8	6.4	7.2	15	5	80	1	2	4
BZX84C7V5	Z6	7.5	7	7.9	15	5	80	1	1	5
BZX84C8V2	Z7	8.2	7.7	8.7	15	5	80	1	0.7	5
BZX84C9V1	Z8	9.1	8.5	9.6	15	5	100	1	0.5	6
BZX84C10	Z9	10	9.4	10.6	20	5	150	1	0.2	7
BZX84C11	Y1	11	10.4	11.6	20	5	150	1	0.1	8
BZX84C12	Y2	12	11.4	12.7	25	5	150	1	0.1	8
BZX84C13	Y3	13	12.4	14.1	30	5	170	1	0.1	8
BZX84C15	Y4	15	13.8	15.6	30	5	200	1	0.1	10.5
BZX84C16	Y5	16	15.3	17.1	40	5	200	1	0.1	11.2
BZX84C18	Y6	18	16.8	19.1	45	5	225	1	0.1	12.6
BZX84C20	Y7	20	18.8	21.2	55	5	225	1	0.1	14
BZX84C22	Y8	22	20.8	23.3	55	5	250	1	0.1	15.4
BZX84C24	Y9	24	22.8	25.6	70	5	250	1	0.1	16.8
BZX84C27	Y10	27	25.1	28.9	80	2	300	1	0.1	18.9
BZX84C30	Y11	30	28	32	80	2	300	1	0.1	21
BZX84C33	Y12	33	31	35	80	2	325	1	0.1	23.1
BZX84C36	Y13	36	34	38	90	2	350	1	0.1	25.2
BZX84C39	Y14	39	37	41	130	2	350	1	0.1	27.3
BZX84C43	Y15	43	40.85	45.15	150	2	375	1	0.1	30.1
BZX84C47	Y16	47	44.65	49.35	170	3	375	1	0.1	32.9
BZX84C51	Y17	51	48.45	53.55	100	4	400	1	0.1	35.7

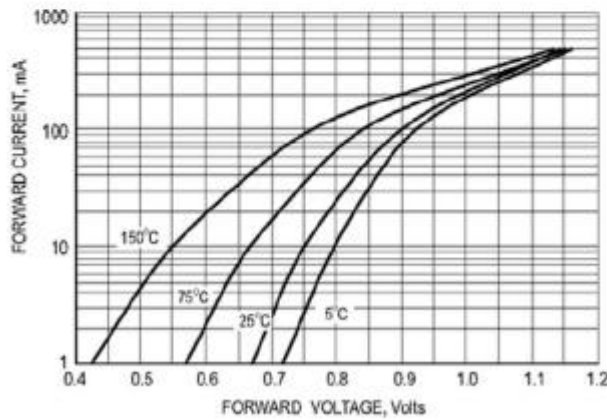
Ratings and Characteristics Curves



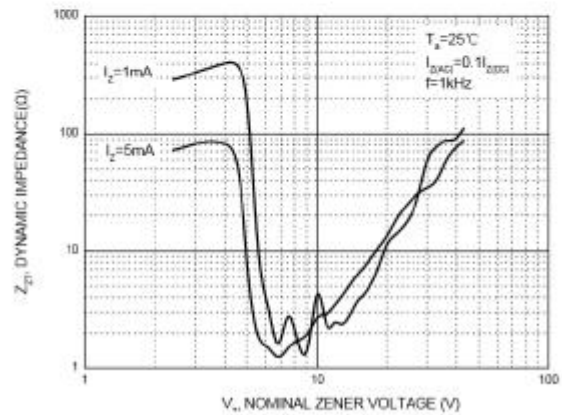
ZENER BREAKDOWN CHARACTERISTIC



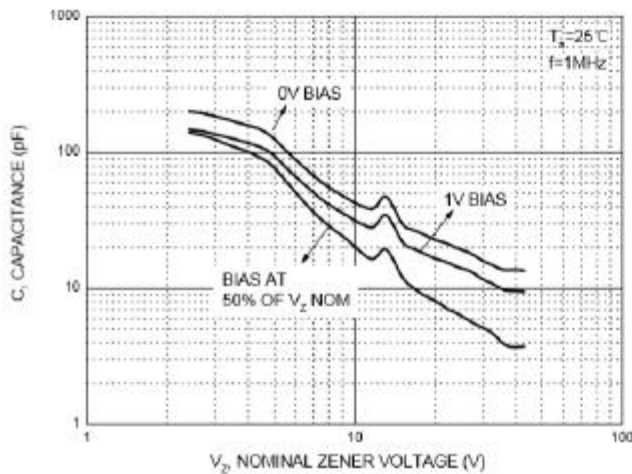
ZENER BREAKDOWN CHARACTERISTICS



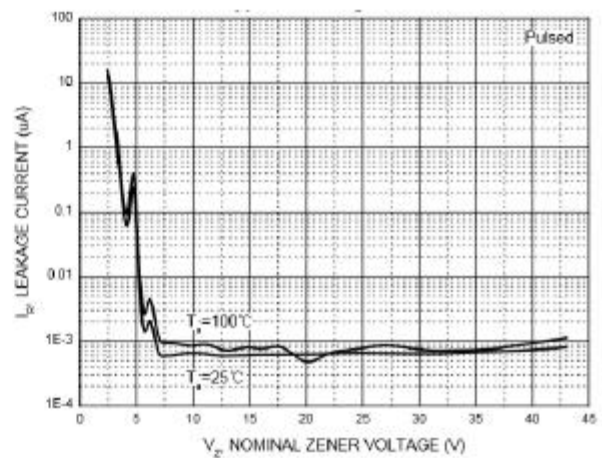
TYPICAL FORWARD VOLTAGE



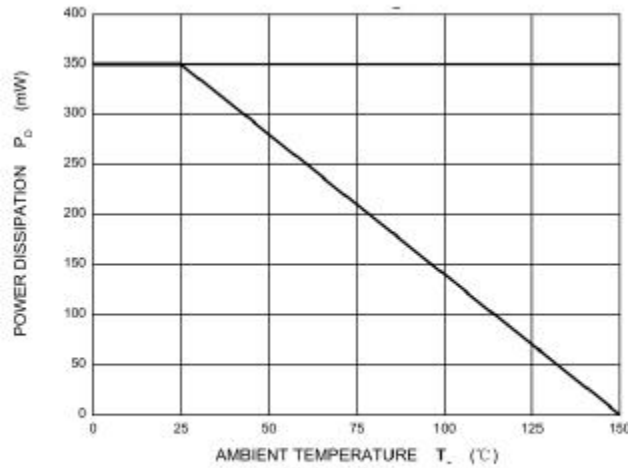
Effect of Zener Voltage on Zener Impedance



Typical Capacitance



Typical Leakage Current



POWER DISSIPATION VS. AMBIENT TEMP

Ordering Information

Device	Package	Shipping
BZX84C2V4- BZX84C51	SOT-23	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

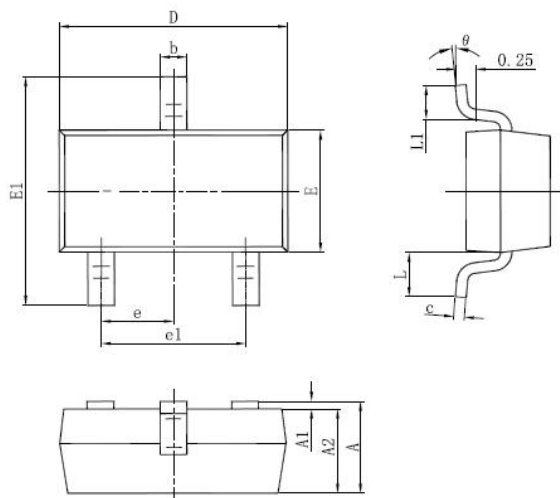
Marking Diagram



Z11 = Marking Code

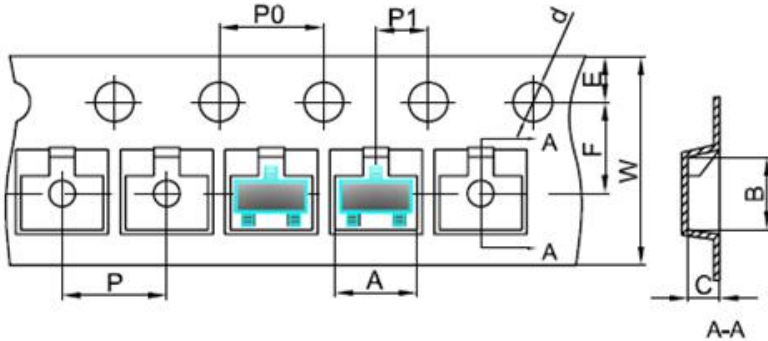
Note: If date code is before 2016 year, please contact with factory about marking.

Mechanical Dimensions SOT-23



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	0.890	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.076	0.170	0.003	0.007
D	2.650	3.050	0.104	0.120
E	1.190	1.400	0.047	0.055
E1	2.100	2.550	0.083	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.780	2.050	0.070	0.081
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Carrier Tape Specification SOT-23



SYMBOL	Millimeters	
	Min.	Max.
A	3.05	3.25
B	2.67	2.87
C	1.12	1.32
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

DISCLAIMER:

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC Diode Solutions sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall SMC Diode Solutions be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC Diode Solution assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall SMC Diode Solutions be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC Diode Solutions.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..