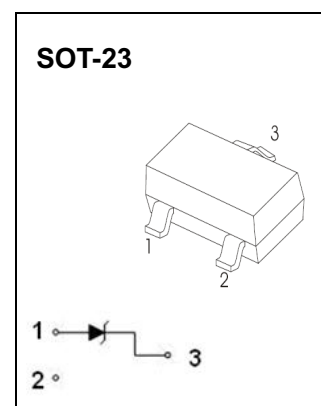


ZENER DIODE

FEATURES

- Planar Die Construction
- 300mW Power Dissipation
- Zener Voltages from 2.2V - 75V
- Ultra-Small Surface Mount Package Power Dissipation
- AEC-Q101 qualified (Automotive grade with suffix "Q".)
- Exsemi technology

Maximum Ratings($T_a=25^\circ\text{C}$ unless otherwise specified)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation(Note 1)	P_d	300	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$ unless otherwise noted)

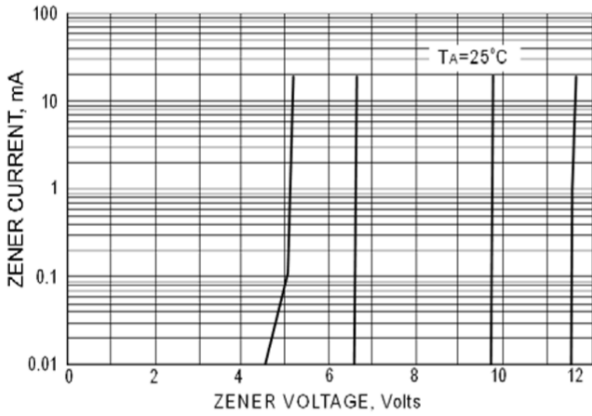
Part Number	Marking	Nominal Zener Voltage			Max. Zener Impedance				Max.Reverse Leakage Current	
		$V_z(\text{V}) @ I_{zT}^{*1}$			$Z_{zT} @ I_{zT}$		$Z_{zK} @ I_{zK}$		$I_R @ V_R$	
		Nom.	Min.	Max.	Ohm	mA	Ohm	mA	μA	V
BZX84C2V2	Z10/B8	2.2	2.08	2.33	100	5	600	1	120	0.7
BZX84C2V4	Z11/W1	2.4	2.20	2.60	100	5	600	1	50	1.0
BZX84C2V7	Z12/W2	2.7	2.5	2.9	100	5	600	1	20	1.0
BZX84C3V0	Z13/W3	3	2.8	3.2	95	5	600	1	10	1.0
BZX84C3V3	Z14/W4	3.3	3.1	3.5	95	5	600	1	5	1.0
BZX84C3V6	Z15/W5	3.6	3.4	3.8	90	5	600	1	5	1.0
BZX84C3V9	Z16/W6	3.9	3.7	4.1	90	5	600	1	3	1.0
BZX84C4V3	Z17/W7	4.3	4	4.6	90	5	600	1	3	1.0

ELECTRICAL CHARACTERISTICS $T_a=25^{\circ}\text{C}$ unless otherwise specified

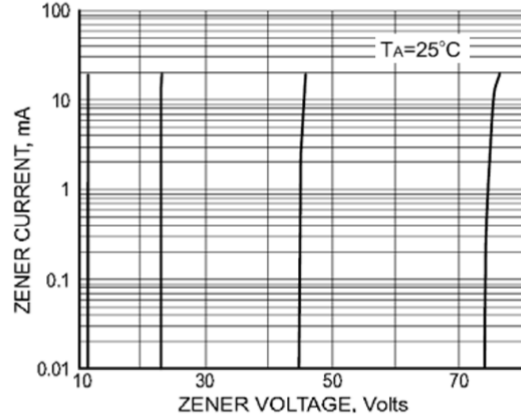
BZX84C4V7	Z1/W8	4.7	4.4	5	80	5	500	1	3	2.0
BZX84C5V1	Z2/W9	5.1	4.8	5.4	60	5	480	1	2	2.0
BZX84C5V6	Z3/WA	5.6	5.2	6	40	5	400	1	1	2.0
BZX84C6V2	Z4/WB	6.2	5.8	6.6	10	5	150	1	3	4.0
BZX84C6V8	Z5/WC	6.8	6.4	7.2	15	5	80	1	2	4.0
BZX84C7V5	Z6/WD	7.5	7	7.9	15	5	80	1	1	5.0
BZX84C8V2	Z7/WE	8.2	7.7	8.7	15	5	80	1	0.7	5.0
BZX84C9V1	Z8/WF	9.1	8.5	9.6	15	5	100	1	0.5	6.0
BZX84C10	Z9/WG	10	9.4	10.6	20	5	150	1	0.2	7.0
BZX84C11	Y1/WH	11	10.4	11.6	20	5	150	1	0.1	8.0
BZX84C12	Y2/WI	12	11.4	12.7	25	5	150	1	0.1	8.0
BZX84C13	Y3/WK	13	12.4	14.1	30	5	170	1	0.1	8.0
BZX84C15	Y4/WL	15	13.8	15.6	30	5	200	1	0.1	10.5
BZX84C16	Y5/WM	16	15.3	17.1	40	5	200	1	0.1	11.2
BZX84C18	Y6/WN	18	16.8	19.1	45	5	225	1	0.1	12.6
BZX84C20	Y7/WO	20	18.8	21.2	55	5	225	1	0.1	14.0
BZX84C22	Y8/WP	22	20.8	23.3	55	5	250	1	0.1	15.4
BZX84C24	Y9/WR	24	22.8	25.6	70	5	250	1	0.1	16.8
BZX84C27	Y10/WS	27	25.1	28.9	80	2	300	1	0.1	18.9
BZX84C30	Y11/WT	30	28	32	80	2	300	1	0.1	21.0
BZX84C33	Y12/WU	33	31	35	80	2	325	1	0.1	23.1
BZX84C36	Y13/WW	36	34	38	90	2	350	1	0.1	25.2
BZX84C39	Y14/WX	39	37	41	130	2	350	1	0.1	27.3
BZX84C43	Y15/WY	43	40.85	45.15	150	5	375	1	0.1	30.10
BZX84C47	Y16/WZ	47	44.65	49.35	170	5	375	1	0.1	32.90
BZX84C51	Y17/XA	51	48.45	53.55	100	5	400	1	0.1	35.70
BZX84C62	Y19	62	58.0	66.0	215	2	450	0.5	0.05	43.40
BZX84C68	Y20	68	64.60	71.40	240	2	1600	0.25	0.1	52
BZX84C75	Y21	75	71.25	78.75	265	2	1700	0.25	0.1	56

- Notes: 1. Valid provided that device terminals are kept at ambient temperature.
2. Tested with pulses, period=5ms,pulse width =300 μ s.
3. f = 1kHz.

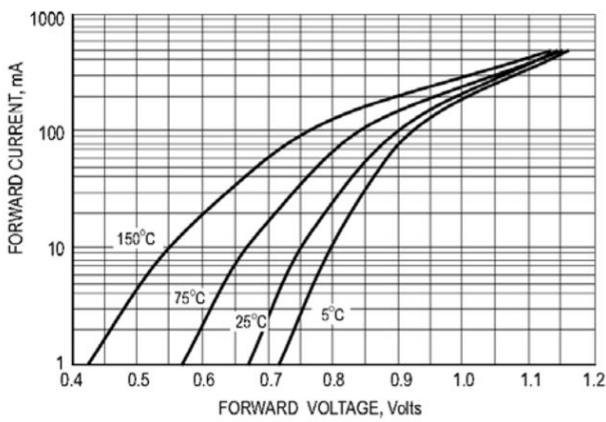
Typical Characteristics



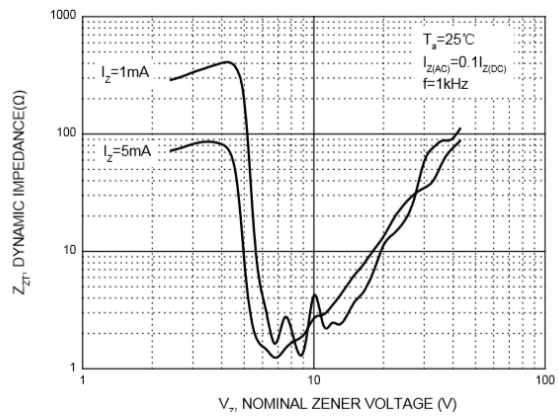
ZENER BREAKDOWN CHARACTERISTIC



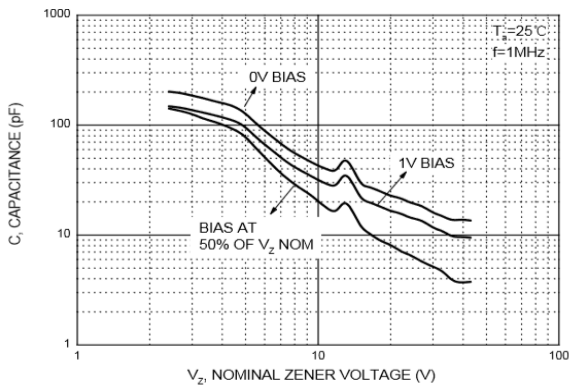
ZENER BREAKDOWN CHARACTERISTICS



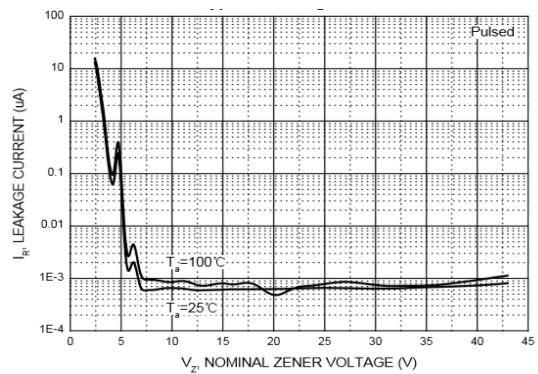
TYPICAL FORWARD VOLTAGE



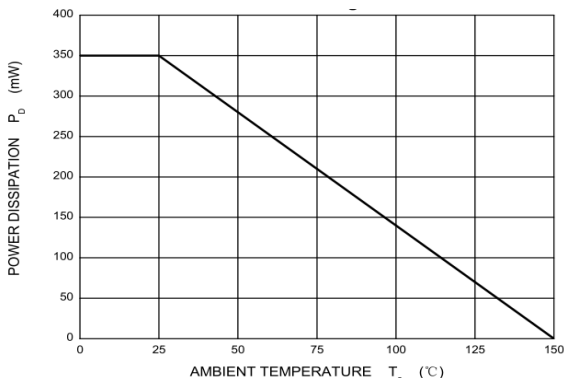
Effect of Zener Voltage on Zener Impedance



Typical Capacitance

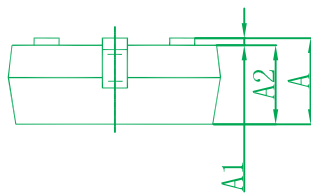
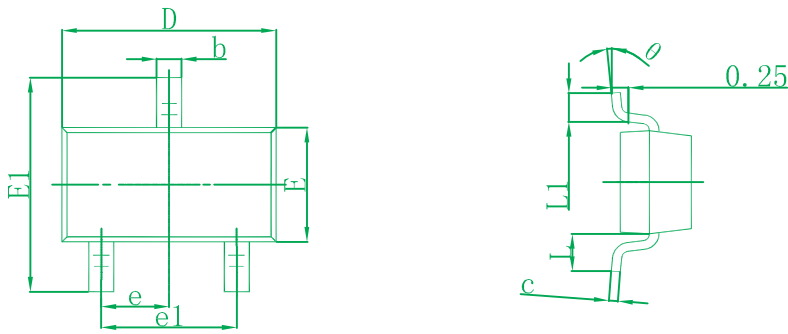


Typical Leakage Current



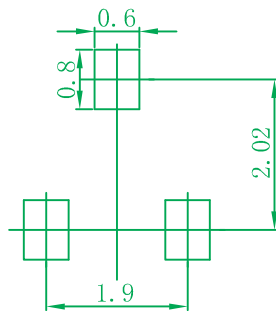
POWER DISSIPATION VS. AMBIENT TEMP

SOT-23 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.150	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.050	0.110	0.120
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: ±0.05mm.
 3. The pad layout is for reference purposes only.

Ordering information

Device	Package	Shipping
BZX84C Series	SOT-23	3000/Tape&Reel(7inches)