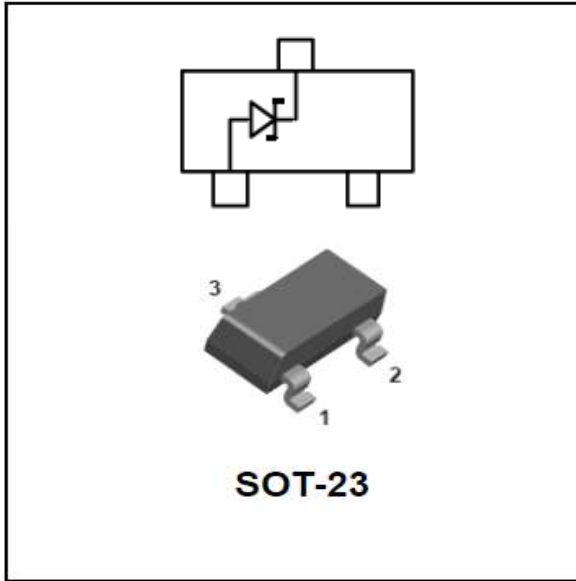


ZENER DIODE SOT-23 Plastic-Encapsulate Diode



FEATURES

- 350mW power dissipation rating.
- Zener Voltage from 2.4V to 47V.
- Ideally suited for automatic insertion.

■Limiting Values (Absolute Maximum Rating, $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Characteristic	Symbol	Value	Units
Maximum Forward Voltage@ $I_F=10\text{mA}$	V_F	0.9	V
Power Dissipation*	P_D	350	mW
Peak Forward Surge Current**	I_{FSM}	2.0	A
Thermal Resistance***	R_{thJA}	357	$^{\circ}\text{C}/\text{W}$
Operation Temperature	T_J	-55~+150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}\text{C}$

*Mounted on 5.0mm²(.013mm thick) land areas.

**Measured on 8.3ms, single half sine-wave

***Valid provided the terminals are kept at ambient temperature.

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BZX84C2V4-BZX84C47	F2	Approximate 0.008	3000	30000	120000	7" reel



BZX84C2V4 THRU BZX84C47

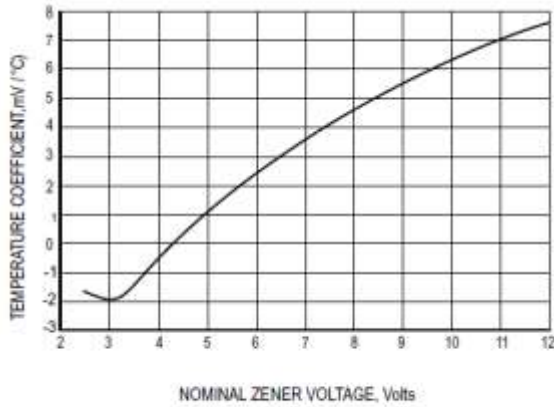
■Electrical Characteristics (T_a=25°C Unless otherwise specified)

Type Number	Marking Code	Nominal Zener Voltage			Maximum Zener Impedance				Min Reverse Leakage Current	
		V _Z (V)@ I _{ZT}			Z _{ZT} @I _{ZT}		Z _{Zk} @I _{Zk}		I _R @ V _R	
		Min.	Typ.	Max.	Ω	mA	Ω	mA	uA	V
BZX84C2V4	Z11	2.28	2.4	2.52	100	5	600	1	50	1
BZX84C2V7	Z12	2.5	2.7	2.9	100	5	600	1	20	1
BZX84C3V0	Z13	2.8	3.0	3.2	95	5	600	1	10	1
BZX84C3V3	Z14	3.1	3.3	3.5	95	5	600	1	5	1
BZX84C3V6	Z15	3.4	3.6	3.8	90	5	600	1	5	1
BZX84C3V9	Z16	3.7	3.9	4.1	90	5	600	1	3	1
BZX84C4V3	Z17	4.0	4.3	4.6	90	5	600	1	3	1
BZX84C4V7	Z1	4.4	4.7	5.0	80	5	500	1	3	2
BZX84C5V1	Z2	4.8	5.1	5.4	60	5	480	1	2	2
BZX84C5V6	Z3	5.2	5.6	6.0	40	5	400	1	1	2
BZX84C6V2	Z4	5.8	6.2	6.6	10	5	150	1	3	4
BZX84C6V8	Z5	6.4	6.8	7.2	15	5	80	1	2	4
BZX84C7V5	Z6	7.0	7.5	7.9	15	5	80	1	1	5
BZX84C8V2	Z7	7.7	8.2	8.7	15	5	80	1	0.7	5
BZX84C9V1	Z8	8.5	9.1	9.6	15	5	100	1	0.5	6
BZX84C10	Z9	9.4	10	10.6	20	5	150	1	0.2	7
BZX84C11	Y1 .	10.4	11	11.6	20	5	150	1	0.1	8
BZX84C12	Y2 .	11.4	12	12.7	25	5	150	1	0.1	8
BZX84C13	Y3	12.4	13	14.1	30	5	170	1	0.1	8
BZX84C15	Y4	13.8	15	15.6	30	5	200	1	0.1	10.5
BZX84C16	Y5	15.3	16	17.1	40	5	200	1	0.1	11.2
BZX84C18	Y6 .	16.8	18	19.1	45	5	225	1	0.1	12.6
BZX84C20	Y7	18.8	20	21.2	55	5	225	1	0.1	14
BZX84C22	Y8	20.8	22	23.3	55	5	250	1	0.1	15.4
BZX84C24	Y9	22.8	24	25.6	70	5	250	1	0.1	16.8
BZX84C27	Y10	25.1	27	28.9	80	2	300	1	0.1	18.9
BZX84C30	Y11 .	28	30	32	80	2	300	1	0.1	21.0
BZX84C33	Y12	31	33	35	80	2	325	1	0.1	23.1
BZX84C36	Y13	34	36	38	90	2	350	1	0.1	25.2
BZX84C39	Y14	37	39	41	130	2	350	1	0.1	27.3
BZX84C43	Y15	40.85	43	45.15	150	5	375	1	0.1	30.1
BZX84C47	Y16	44.65	47	49.35	170	5	375	1	0.1	32.9

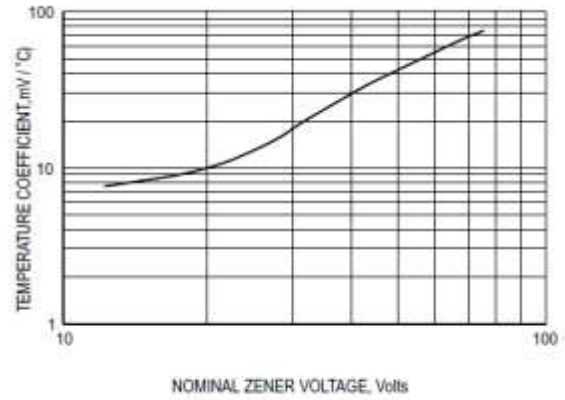


BZX84C2V4 THRU BZX84C47

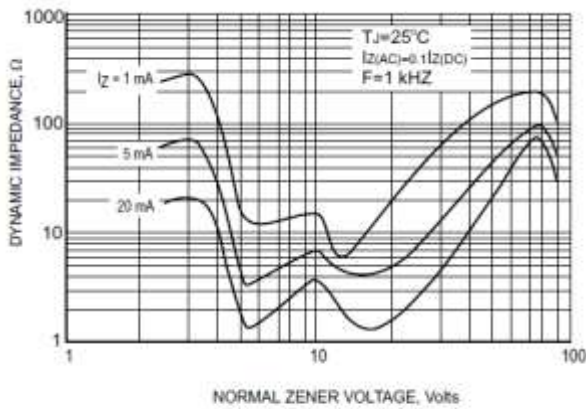
■ Characteristics(Typical)



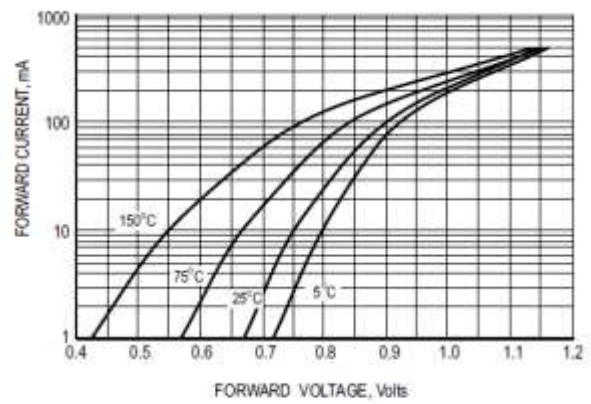
TYPICAL REVERSE CURRENT



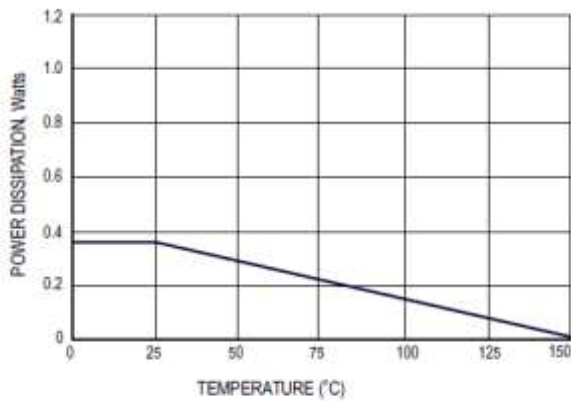
TEMPERATURE COEFFICIENTS



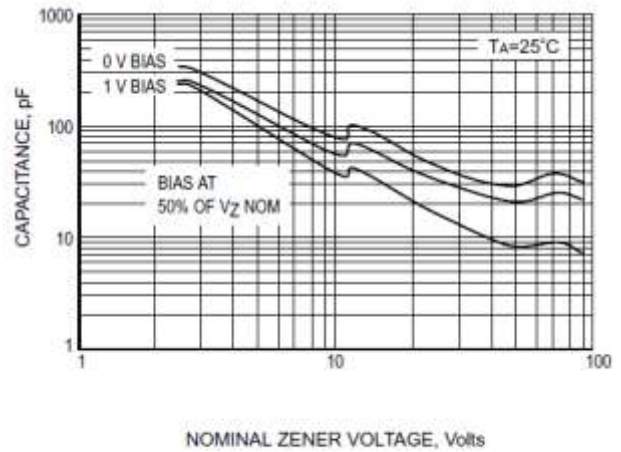
EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE



TYPICAL FORWARD VOLTAGE



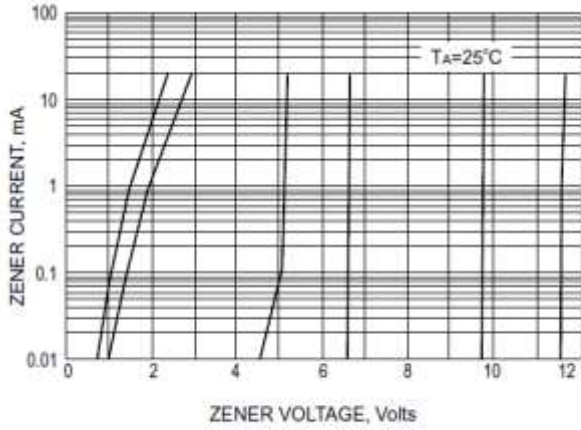
STEADY STATE POWER DERATING



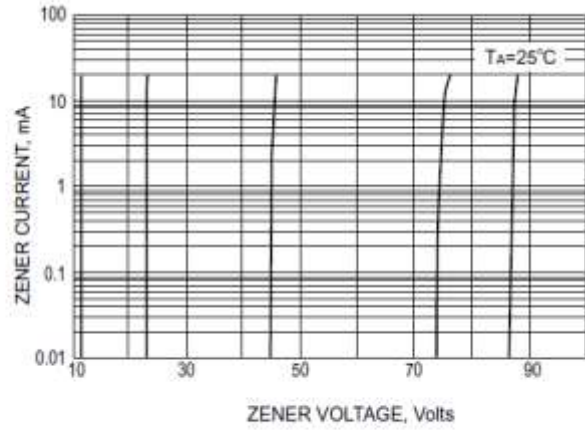
TYPICAL CAPACITANCE



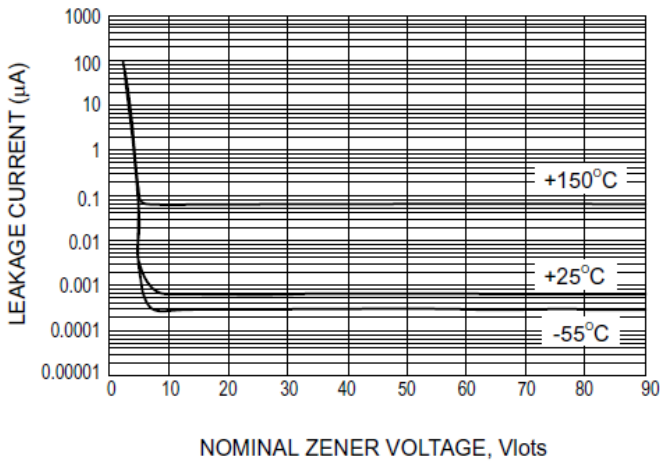
BZX84C2V4 THRU BZX84C47



ZENER VOLTAGE V.S. ZENER CURRENT



ZENER VOLTAGE V.S. ZENER CURRENT

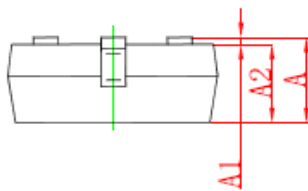
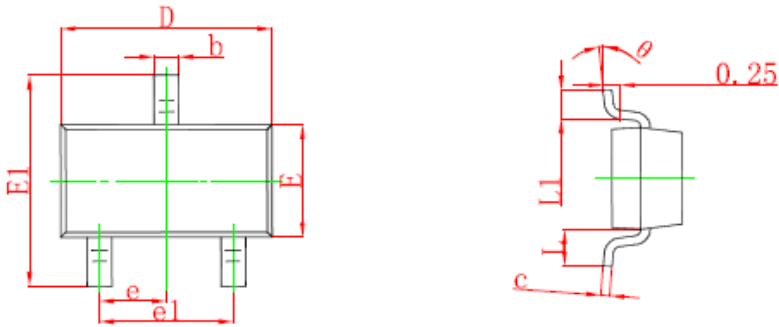


TYPICAL LEAKGE CURRENT



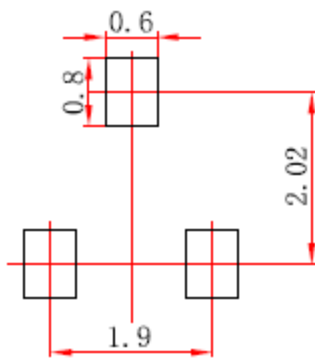
BZX84C2V4 THRU BZX84C47

■SOT-23 Package Outline Dimensions



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	1.050	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	3.000	0.110	0.118
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: $\pm 0.05\text{mm}$.

3. The pad layout is for reference purposes only.



BZX84C2V4 THRU BZX84C47

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