

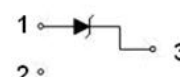
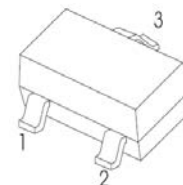
PRIMARY CHARACTERISTICS	
P_D	300mW
V_Z	2.4V~51V
I_{ZT}	Please refer to the specification
$T_{J,Max}$	150°C

FEATURES	
●	Planar Die Construction
●	300mW Power Dissipation
●	Zener Voltages from 2.4V - 51V
●	Ultra-Small Surface Mount Package
●	Power Dissipation
●	Moisture Sensitivity Level 1

SOT-23 PACKAGE

Marking Code : Please refer to the specification

Ex : BZX84C2V4, W1 or Z11



MECHANICAL DATA	
●	Case : Molded plastic,SOT-23
●	Polarity : As Above Marked
●	Terminals :Plated terminals, solderable per MIL-STD-750,Method 2026
●	Epoxy : UL94-V0 rated flame retardant

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	$^{\circ}\text{C}$

Notes: 1. Valid provided that device terminals are kept at ambient temperature.

2. Tested with pulses, period=5ms,pulse width =300 μs .

3. $f = 1\text{kHz}$.

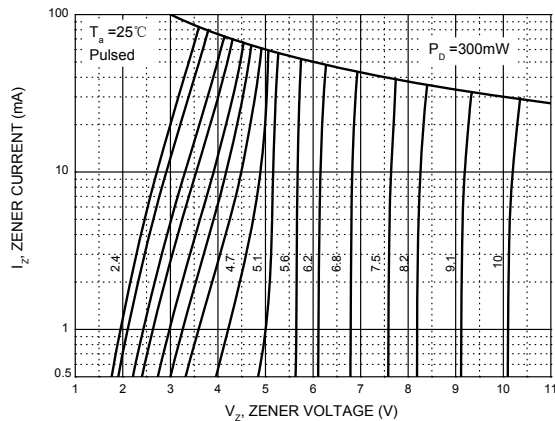
Part No.	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Marking Code	Case
	V _Z @ I _{ZT}			Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R @ V _R			
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V		
BZX84C2V4	2.4	2.2	2.6	100	5.0	600	1.0	50	1.0	W1/Z11	SOT-23
BZX84C2V7	2.7	2.5	2.9	100	5.0	600	1.0	20	1.0	W2/Z12	SOT-23
BZX84C3	3.0	2.8	3.2	95	5.0	600	1.0	10	1.0	W3/Z13	SOT-23
BZX84C3V3	3.3	3.1	3.5	95	5.0	600	1.0	5.0	1.0	W4/Z14	SOT-23
BZX84C3V6	3.6	3.4	3.8	90	5.0	600	1.0	5.0	1.0	W5/Z15	SOT-23
BZX84C3V9	3.9	3.7	4.1	90	5.0	600	1.0	3.0	1.0	W6/Z16	SOT-23
BZX84C4V3	4.3	4.0	4.6	90	5.0	600	1.0	3.0	1.0	W7/Z17	SOT-23
BZX84C4V7	4.7	4.4	5.0	80	5.0	500	1.0	3.0	2.0	Z1	SOT-23
BZX84C5V1	5.1	4.8	5.4	60	5.0	480	1.0	2.0	2.0	Z2	SOT-23
BZX84C5V6	5.6	5.2	6.0	40	5.0	400	1.0	1.0	2.0	WA/Z3	SOT-23
BZX84C6V2	6.2	5.8	6.6	10	5.0	150	1.0	3.0	4.0	WB/Z4	SOT-23
BZX84C6V8	6.8	6.4	7.2	15	5.0	80	1.0	2.0	4.0	WC/Z5	SOT-23
BZX84C7V5	7.5	7.0	7.9	15	5.0	80	1.0	1.0	5.0	WD/Z6	SOT-23
BZX84C8V2	8.2	7.7	8.7	15	5.0	80	1.0	0.7	5.0	WE/Z7	SOT-23
BZX84C9V1	9.1	8.5	9.6	15	5.0	100	1.0	0.5	6.0	WF/Z8	SOT-23
BZX84C10	10.0	9.4	10.6	20	5.0	150	1.0	0.2	7.0	WG/Z9	SOT-23
BZX84C11	11.0	10.4	11.6	20	5.0	150	1.0	0.1	8.0	WH/Y1	SOT-23
BZX84C12	12.0	11.4	12.7	25	5.0	150	1.0	0.1	8.0	WI/Y2	SOT-23
BZX84C13	13.0	12.4	14.1	30	5.0	170	1.0	0.1	8.0	WK/Y3	SOT-23
BZX84C15	15.0	13.8	15.6	30	5.0	200	1.0	0.1	10.5	WL/Y4	SOT-23
BZX84C16	16.0	15.3	17.1	40	5.0	200	1.0	0.1	11.2	WM/Y5	SOT-23
BZX84C18	18.0	16.8	19.1	45	5.0	225	1.0	0.1	12.6	WN/Y6	SOT-23
BZX84C20	20.0	18.8	21.2	55	5.0	225	1.0	0.1	14.0	WO/Y7	SOT-23
BZX84C22	22.0	20.8	23.3	55	5.0	250	1.0	0.1	15.4	WP/Y8	SOT-23
BZX84C24	24.0	22.8	25.6	70	5.0	250	1.0	0.1	16.8	WR/Y9	SOT-23
BZX84C27	27.0	25.1	28.9	80	2.0	300	1.0	0.1	18.9	WS/Y10	SOT-23
BZX84C30	30.0	28.0	32.0	80	2.0	300	1.0	0.1	21.0	WT/Y11	SOT-23
BZX84C33	33.0	31.0	35.0	80	2.0	325	1.0	0.1	23.1	WU/Y12	SOT-23
BZX84C36	36.0	34.0	38.0	90	2.0	350	1.0	0.1	25.2	WW/Y13	SOT-23
BZX84C39	39.0	37.0	41.0	130	2.0	350	1.0	0.1	27.3	WX/Y14	SOT-23
BZX84C43	43.0	40.0	46.0	150	2.0	375	1.0	0.1	32.0	WY/Y15	SOT-23
BZX84C47	47.0	44.0	50.0	170	2.0	375	1.0	0.1	32.9	WZ/Y16	SOT-23
BZX84C51	51.0	48.0	54.0	180	2.0	400	1.0	0.1	35.7	XA/Y17	SOT-23

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

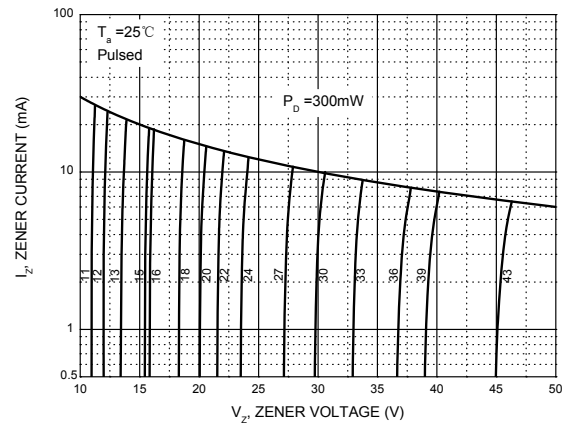


ELECTRICAL CHARACTERISTICS

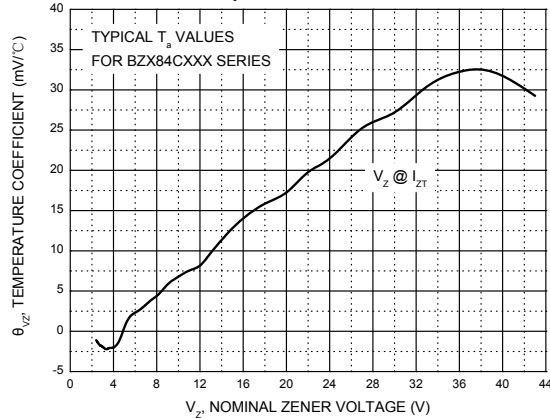
Zener Characteristics (V_z Up to 10 V)



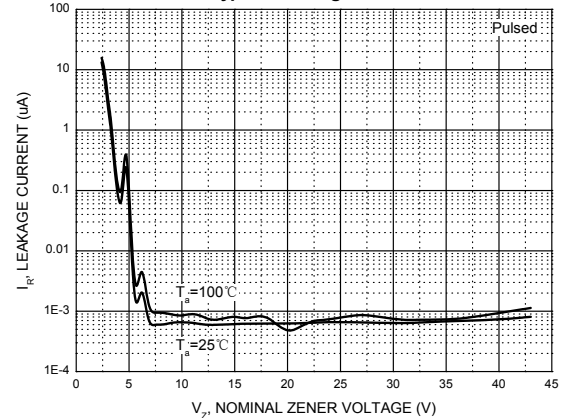
Zener Characteristics (11 V to 43 V)



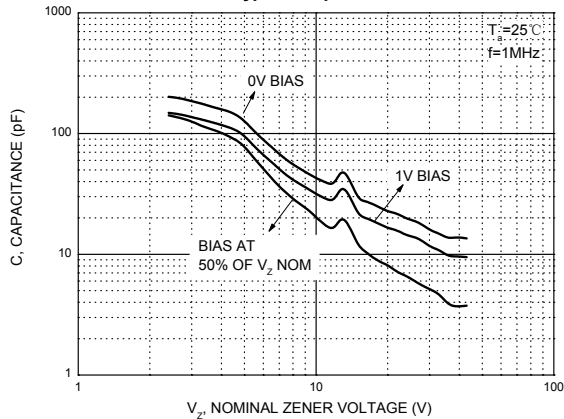
Temperature Coefficients



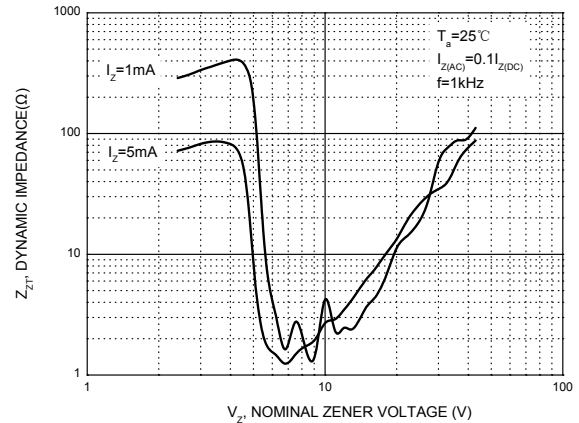
Typical Leakage Current



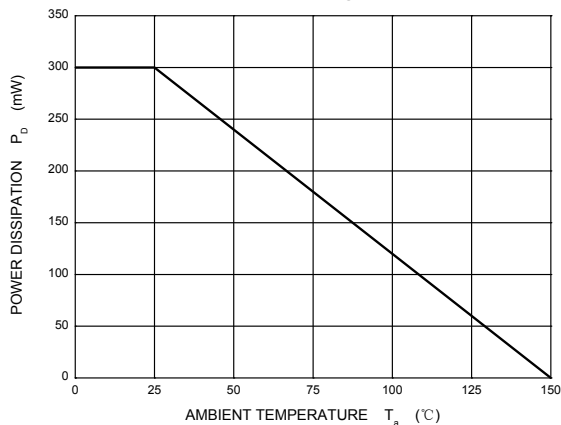
Typical Capacitance



Effect of Zener Voltage on Zener Impedance



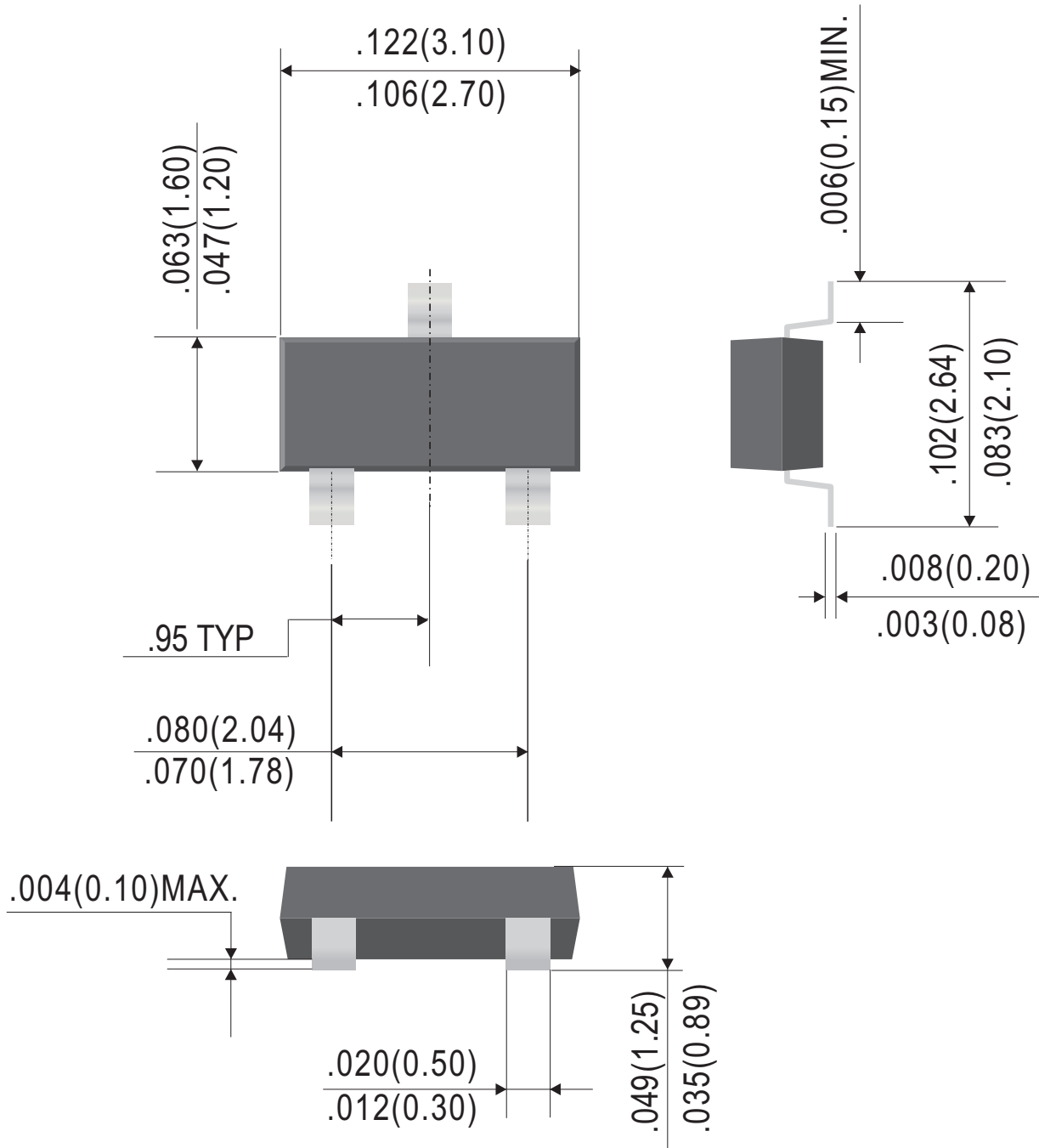
Power Derating Curve





Outline Drawing

SOT-23



Dimensions in inches and (millimeters)

Rev.E



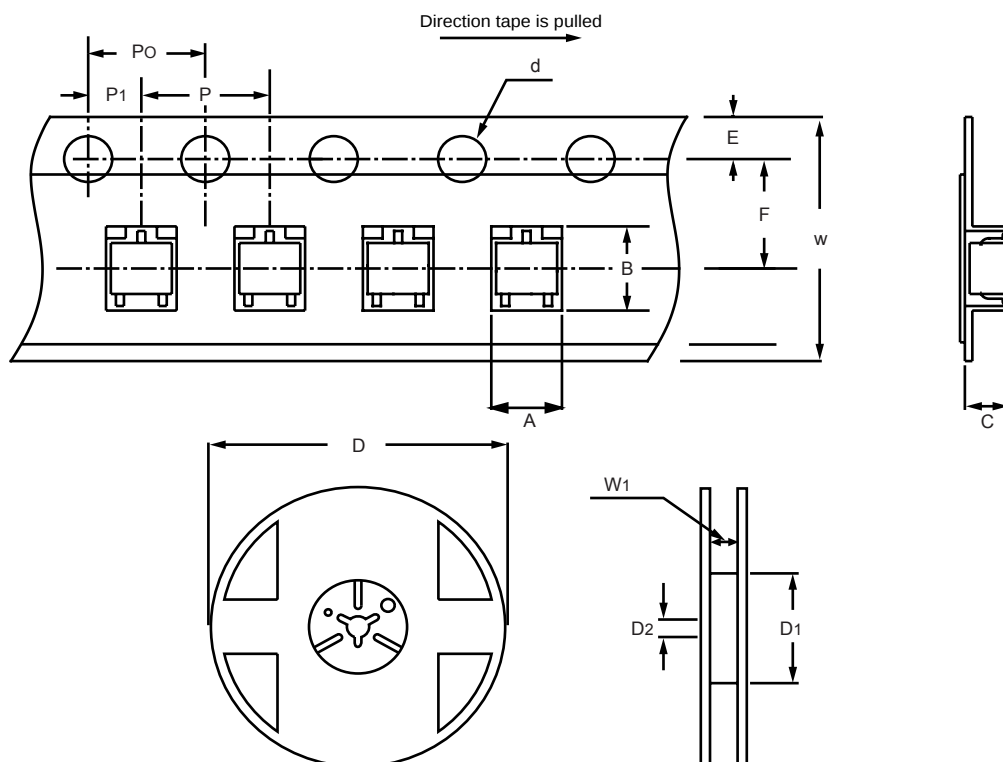
Suggested Soldering Pad Layout	SOT-23
0.0435 (1.10) 0.0435 (1.10) 0.0355 (0.90) 0.0315 (0.80)	
Dimensions in inches and (millimeters) RevA	



Reel Taping Sepecification - Surface Mount Device/SOT-23

Reel Packing

PACKAGE	PER REEL EA	REEL DIA (m/m)	BOX SIZE (m/m)	PER BOX EA	CARTION (m/m)	PER CARTION EA	GROSS WEIGHT (Kg)
SOT-23	3,000	178	192*195*136	30,000	440*410*410	360,000	15.0



ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Carrier width	A	3.1±0.1	0.122±0.004
Carrier length	B	2.85±0.1	0.112±0.004
Carrier depth	C	1.40±0.1	0.055±0.004
Sprocket hole	d	1.5 + 0.1/-0	0.059 + 0.004/-0
Reel outside diameter	D	180 + 0/-3	7.083 + 0/-0.118
Reel inner diameter	D1	60 + 1/-0	2.361 + 0.039/-0
Feed hole diameter	D2	13±0.2	0.512±0.008
Sprocket hole position	E	1.75±0.1	0.069±0.004
Punch hole position	F	3.5±0.05	0.138±0.002
Punch hole pitch	P	4.0±0.1	0.157±0.004
Sprocket hole pitch	P0	4.0±0.1	0.157±0.004
Embossment center	P1	2.0±0.05	0.079±0.002
Tape width	W	8.0±0.2	0.315±0.008
Reel width	W1	9.0±0.3	0.354±0.012

NOTE: 1.Devices are packed in accordance with EIAJ stand ETX-7001 and specifications listed above.

2.Available on 7 inch (3,000 c.t.) or 13 inch (10,000 c.t.) diameter reels.

Ordering Information:

Device PN	Packing
Part Number -T ⁽¹⁾ G ⁽²⁾ -WS	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

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