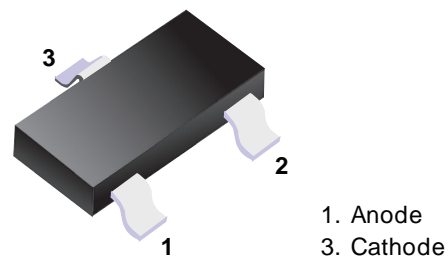
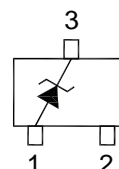


ZENER DIODE

This series of Zener diodes is offered in the convenient, surface mount plastic SOT-23 package. These devices are designed to provide voltage regulation with minimum space requirement. They are well suited for applications such as cellular phones, hand held portables, and high density PC boards.



■ Simplified outline(SOT-23)



Features

- Planar Die Construction
- 300mW Power Dissipation
- Ideally Suited for Automated Assembly Processes

Maximum Ratings (T_a=25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Forward Voltage at I _F = 10 mA	V _F	0.9	V
Power Dissipation *	P _D	300	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _s	-65 to + 150	°C
Thermal Resistance Junction to Ambient Air *	R _{thA}	417	°C/W

*Device mounted on FR-4 PC board with recommended pad layout,



BZX84C2V4 ~ BZX84C43

Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless otherwise noted, $V_F < 0.9\text{ V}$ at $I_F = 10\text{ mA}$)

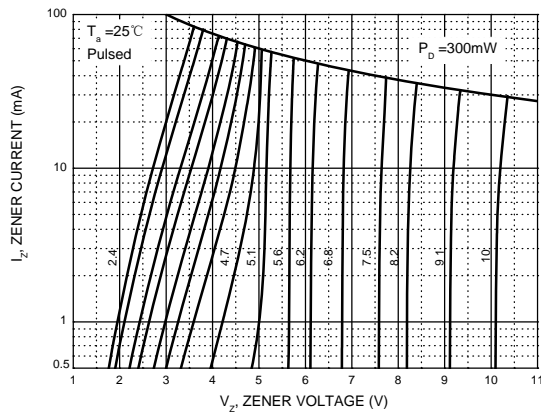
Type Number	Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current		Temperature Coefficient of Zener voltage @ $I_{ZT}=5\text{mA}$ mV/°C	
		$V_Z@I_{ZT}$			I_{ZT}	$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	I_{ZK}	I_R	V_R	Min	Max
		Nom(V)	Min(V)	Max(V)	(mA)	(Ω)	(mA)	(μA)	(V)			
BZX84C2V4	Z11	2.4	2.20	2.60	5	100	600	1.0	50	1.0	-3.5	0
BZX84C2V7	Z12	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0
BZX84C3V0	Z13	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0
BZX84C3V3	Z14	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0
BZX84C3V6	Z15	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0
BZX84C3V9	Z16	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0
BZX84C4V3	Z17	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0
BZX84C4V7	Z1	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2
BZX84C5V1	Z2	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2
BZX84C5V6	Z3	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5
BZX84C6V2	Z4	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7
BZX84C6V8	Z5	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5
BZX84C7V5	Z6	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3
BZX84C8V2	Z7	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2
BZX84C9V1	Z8	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0
BZX84C10	Z9	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0
BZX84C11	Y1•	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0
BZX84C12	Y2•	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0
BZX84C13	Y3	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0
BZX84C15	Y4	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0
BZX84C16	Y5	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0
BZX84C18	Y6•	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0
BZX84C20	Y7	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0
BZX84C22	Y8	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0
BZX84C24	Y9	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0
BZX84C27	Y10	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3
BZX84C30	Y11•	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4
BZX84C33	Y12	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4
BZX84C36	Y13	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4
BZX84C39	Y14	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2
BZX84C43	Y15	43	40.0	46.0	2	100	700	1	0.1	32	10	12



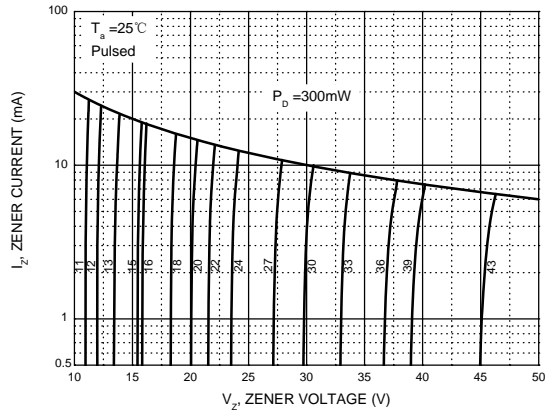
BZX84C2V4 ~ BZX84C43

Ratings and Characteristics Curves

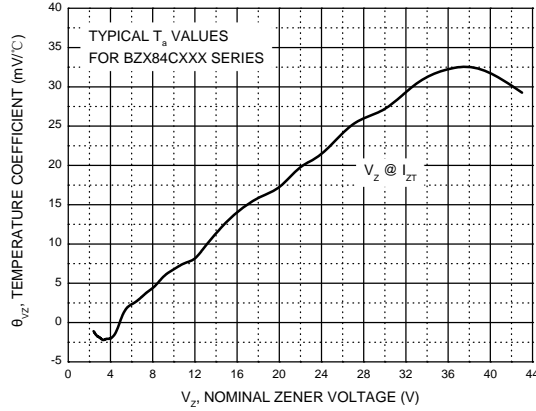
Zener Characteristics (V_z Up to 10 V)



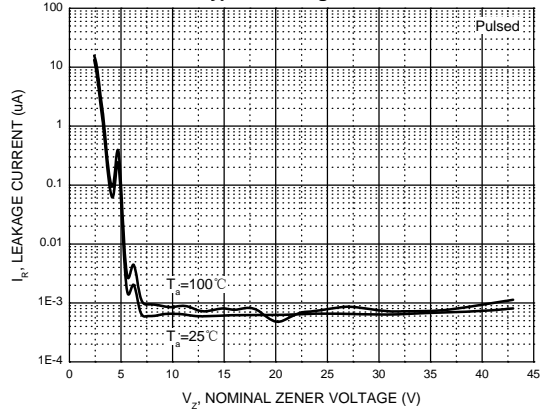
Zener Characteristics (11 V to 43 V)



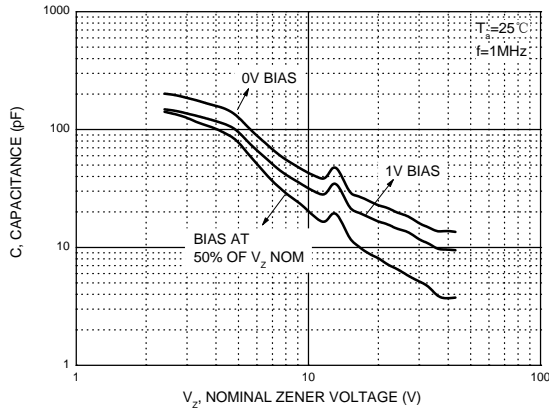
Temperature Coefficients



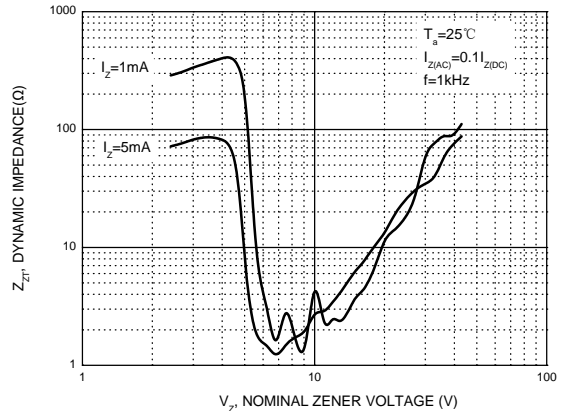
Typical Leakage Current



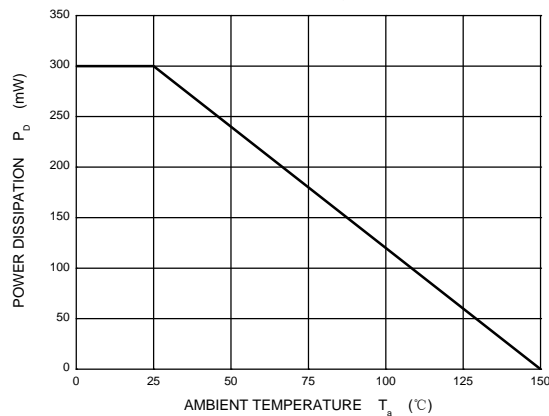
Typical Capacitance



Effect of Zener Voltage on Zener Impedance

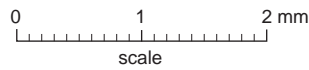
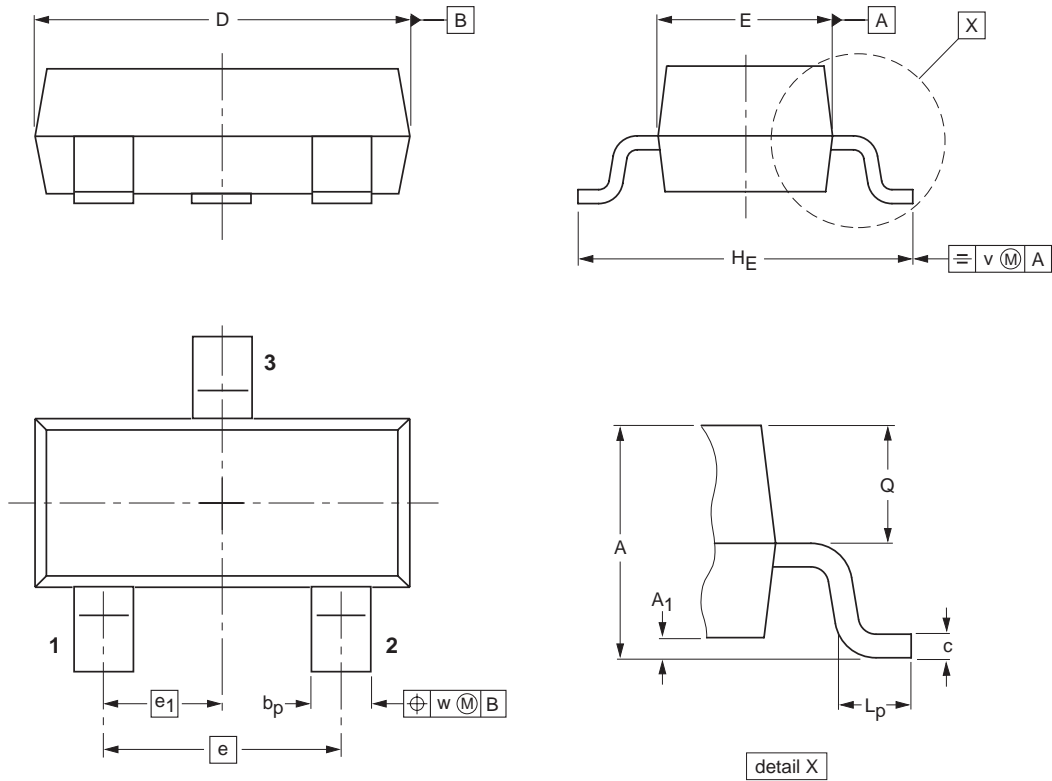


Power Derating Curve



SOT-23 Package Outline Dimensions

■ SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1