

## BZX84C...Series

### Silicon Planar Zener Diodes

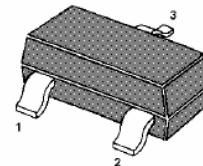
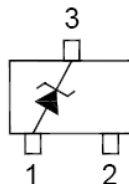
#### FEATURES

Zener breakdown voltage range - 2.0 V to 75 V

Package designed for optimal automated board assembly

Small package size for high density applications

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.



1. Anode 3. Cathode  
SOT-23 Plastic Package

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

#### Absolute Maximum Ratings (Ta = 25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P <sub>D</sub>	350	mW
Thermal Resistance, Junction to Ambient <sup>1)</sup>	R <sub>θJA</sub>	417	°C/W
Junction and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	- 65 to + 150	°C

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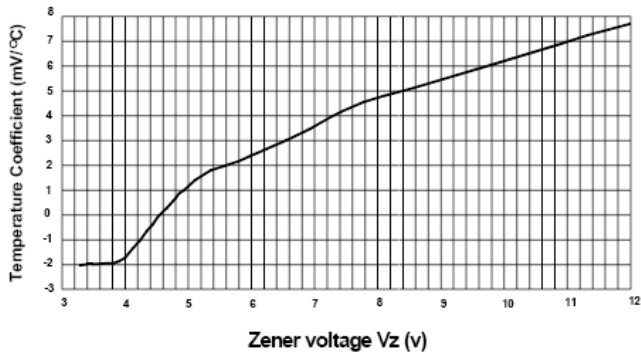
Electrical Characteristics (  $T_a = 25^\circ\text{C}$  unless otherwise noted,  $V_F < 0.9\text{ V}$  at  $I_F = 10\text{ mA}$ )

Type	Marking Code (Code 1 or Code 2)		Zener Voltage Range <sup>1)</sup>				Dynamic Impedance		Reverse Current	
			$V_{ZT}$			at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$I_R$	at $V_R$
	Code 1	Code 2	Nom.(V)	Min.(V)	Max.(V)	(mA)	Max.( $\Omega$ )	( mA )	Max. ( $\mu\text{A}$ )	(V)
BZX84C2V0	A8	-	2	1.8	2.15	5	100	5	120	0.5
BZX84C2V2	B8	-	2.2	2.08	2.33	5	100	5	120	0.7
BZX84C2V4	C8	Z11	2.4	2.2	2.6	5	100	5	50	1
BZX84C2V7	D8	Z12	2.7	2.5	2.9	5	100	5	20	1
BZX84C3V0	E8	Z13	3	2.8	3.2	5	95	5	10	1
BZX84C3V3	F8	Z14	3.3	3.1	3.5	5	95	5	5	1
BZX84C3V6	H8	Z15	3.6	3.4	3.8	5	90	5	5	1
BZX84C3V9	J8	Z16	3.9	3.7	4.1	5	90	5	3	1
BZX84C4V3	K8	Z17	4.3	4	4.6	5	90	5	3	1
BZX84C4V7	M8	Z1	4.7	4.4	5	5	80	5	3	2
BZX84C5V1	N8	Z2	5.1	4.8	5.4	5	60	5	2	2
BZX84C5V6	P8	Z3	5.6	5.2	6	5	40	5	1	2
BZX84C6V2	R8	Z4	6.2	5.8	6.6	5	10	5	3	4
BZX84C6V8	X8	Z5	6.8	6.4	7.2	5	15	5	2	4
BZX84C7V5	Y8	Z6	7.5	7	7.9	5	15	5	1	5
BZX84C8V2	Z8	Z7	8.2	7.7	8.7	5	15	5	0.7	5
BZX84C9V1	A9	Z8	9.1	8.5	9.6	5	15	5	0.5	6
BZX84C10	B9	Z9	10	9.4	10.6	5	20	5	0.2	7
BZX84C11	C9	Y1	11	10.4	11.6	5	20	5	0.1	8
BZX84C12	D9	Y2	12	11.4	12.7	5	25	5	0.1	8
BZX84C13	E9	Y3	13	12.4	14.1	5	30	5	0.1	8
BZX84C15	F9	Y4	15	13.8	15.6	5	30	5	0.05	10.5
BZX84C16	H9	Y5	16	15.3	17.1	5	40	5	0.05	11.2
BZX84C18	J9	Y6	18	16.8	19.1	5	45	5	0.05	12.6
BZX84C20	K9	Y7	20	18.8	21.2	5	55	5	0.05	14
BZX84C22	M9	Y8	22	20.8	23.3	5	55	5	0.05	15.4
BZX84C24	N9	Y9	24	22.8	25.6	5	70	5	0.05	16.8
BZX84C27	P9	Y10	27	25.1	28.9	2	80	2	0.05	18.9
BZX84C30	R9	Y11	30	28	32	2	80	2	0.05	21
BZX84C33	X9	Y12	33	31	35	2	80	2	0.05	23.1
BZX84C36	Y9	Y143	36	34	38	2	90	2	0.05	25.2
BZX84C39	Z9	Y14	39	37	41	2	130	2	0.05	27.3
BZX84C43	A0	Y15	43	40	46	2	150	2	0.05	30.1
BZX84C47	B0	Y16	47	44	50	2	170	2	0.05	32.9
BZX84C51	C0	Y17	51	48	54	2	180	2	0.05	35.7
BZX84C56	D0	Y18	56	52	60	2	200	2	0.05	39.2
BZX84C62	E0	Y19	62	58	66	2	215	2	0.05	43.4
BZX84C68	F0	Y20	68	64	72	2	240	2	0.05	47.6
BZX84C75	H0	Y21	75	70	79	2	255	2	0.05	52.5

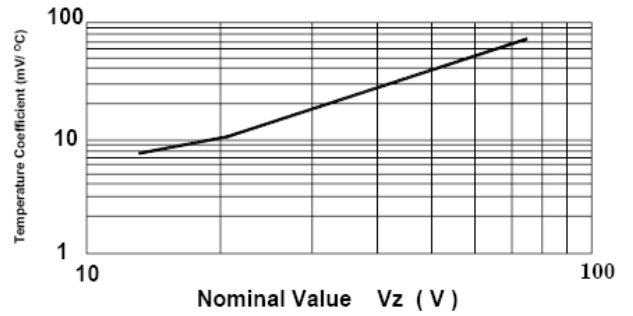
<sup>1)</sup> Tested with pulses  $t_p = 20\text{ ms}$ .

RATINGS AND CHARACTERISTIC CURVES BZX84C...Series

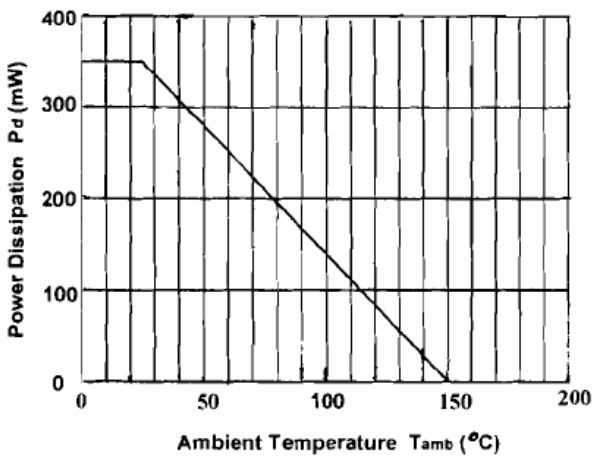
Temperature Coefficient



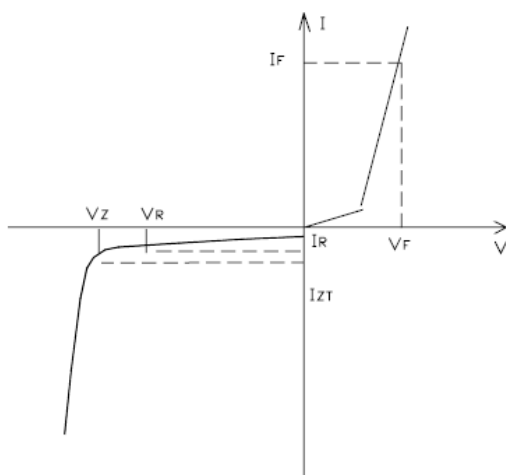
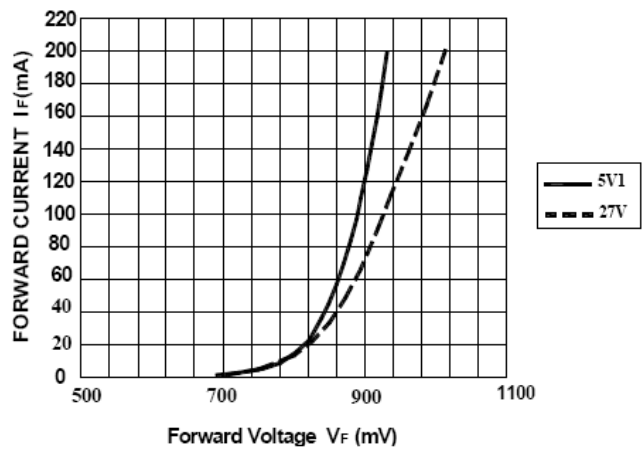
Temperature Coefficient



Power Derating Curve



Typical Forward Voltage



Zener Voltage Regulator