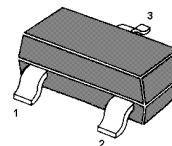


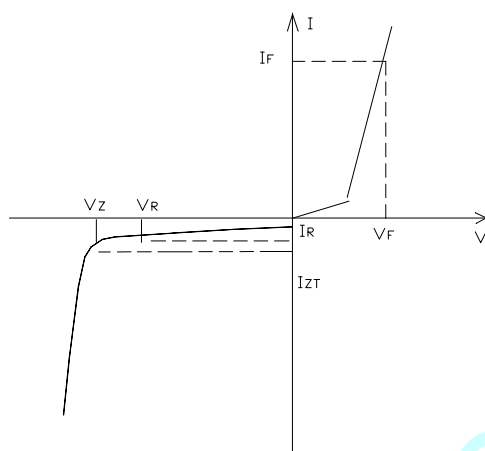
## BZX84C... Series SILICON PLANAR ZENER DIODES

### Features

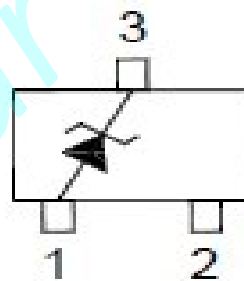
- Zener breakdown voltage range - 2.0 V to 75 V
- Package designed for optimal automated board assembly
- Small package size for high density applications



1. Cathode 2. Cathode 3. Anode  
SOT-23 Plastic Package



Zener Voltage Regulator



### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Power Dissipation	$P_D$	300	mW
Thermal Resistance, Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction and Storage Temperature Range	$T_j, T_s$	- 65 to + 150	$^\circ\text{C}$

<sup>1)</sup> Alumina = 0.4 X 0.3 X 0.024 in, 99.5% alumina

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 10\text{ mA}$	$V_F$	0.9	V

**Electrical Characteristics** (  $T_a = 25\text{ }^\circ\text{C}$  unless otherwise noted)

Type	Marking Code	Zener Voltage Range <sup>1)</sup>				Dynamic Impedance				Reverse Leakage Current	
		$V_{ZT}$			at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$I_R$	at $V_R$
		Nom. (V)	Min. (V)	Max. (V)	(mA)	Max. ( $\Omega$ )	(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	2.4	2.2	2.6	5	100	5	600	1	50	1
BZX84C2V7	D8	2.7	2.5	2.9	5	100	5	600	1	20	1
BZX84C3V0	E8	3	2.8	3.2	5	95	5	600	1	10	1
BZX84C3V3	F8	3.3	3.1	3.5	5	95	5	600	1	5	1
BZX84C3V6	H8	3.6	3.4	3.8	5	90	5	600	1	5	1
BZX84C3V9	J8	3.9	3.7	4.1	5	90	5	600	1	3	1
BZX84C4V3	K8	4.3	4	4.6	5	90	5	600	1	3	1
BZX84C4V7	M8	4.7	4.4	5	5	80	5	500	1	3	2
BZX84C5V1	N8	5.1	4.8	5.4	5	60	5	480	1	2	2
BZX84C5V6	P8	5.6	5.2	6	5	40	5	400	1	1	2
BZX84C6V2	R8	6.2	5.8	6.6	5	10	5	150	1	3	4
BZX84C6V8	X8	6.8	6.4	7.2	5	15	5	80	1	2	4
BZX84C7V5	Y8	7.5	7	7.9	5	15	5	80	1	1	5
BZX84C8V2	Z8	8.2	7.7	8.7	5	15	5	80	1	0.7	5
BZX84C9V1	A9	9.1	8.5	9.6	5	15	5	100	1	0.5	6
BZX84C10	B9	10	9.4	10.6	5	20	5	150	1	0.2	7
BZX84C11	C9	11	10.4	11.6	5	20	5	150	1	0.1	8
BZX84C12	D9	12	11.4	12.7	5	25	5	150	1	0.1	8
BZX84C13	E9	13	12.4	14.1	5	30	5	170	1	0.1	8
BZX84C15	F9	15	13.8	15.6	5	30	5	200	1	0.05	10.5
BZX84C16	H9	16	15.3	17.1	5	40	5	200	1	0.05	11.2
BZX84C18	J9	18	16.8	19.1	5	45	5	225	1	0.05	12.6
BZX84C20	K9	20	18.8	21.2	5	55	5	225	1	0.05	14
BZX84C22	M9	22	20.8	23.3	5	55	5	250	1	0.05	15.4
BZX84C24	N9	24	22.8	25.6	5	70	5	250	1	0.05	16.8
BZX84C27	P9	27	25.1	28.9	2	80	2	300	0.5	0.05	18.9
BZX84C30	R9	30	28	32	2	80	2	300	0.5	0.05	21
BZX84C33	X9	33	31	35	2	80	2	325	0.5	0.05	23.1
BZX84C36	Y9	36	34	38	2	90	2	350	0.5	0.05	25.2
BZX84C39	Z9	39	37	41	2	130	2	350	0.5	0.05	27.3
BZX84C43	A0	43	40	46	2	150	2	375	0.5	0.05	30.1
BZX84C47	B0	47	44	50	2	170	2	375	0.5	0.05	32.9
BZX84C51	C0	51	48	54	2	180	2	400	0.5	0.05	35.7
BZX84C56	D0	56	52	60	2	200	2	425	0.5	0.05	39.2
BZX84C62	E0	62	58	66	2	215	2	450	0.5	0.05	43.4
BZX84C68	F0	68	64	72	2	240	2	475	0.5	0.05	47.6
BZX84C75	H0	75	70	79	2	255	2	500	0.5	0.05	52.5

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

## Typical Characteristics

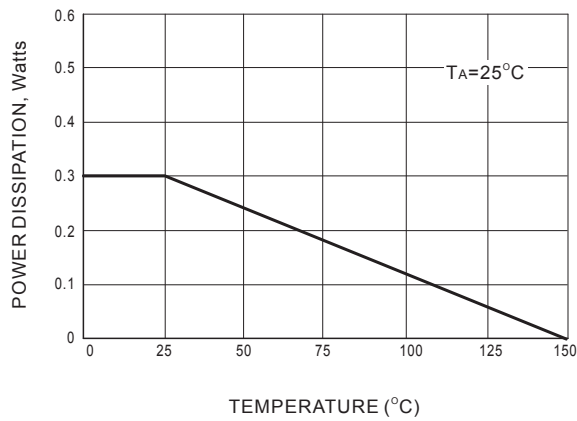


Fig.1 STEADY STATE POWER DERATING

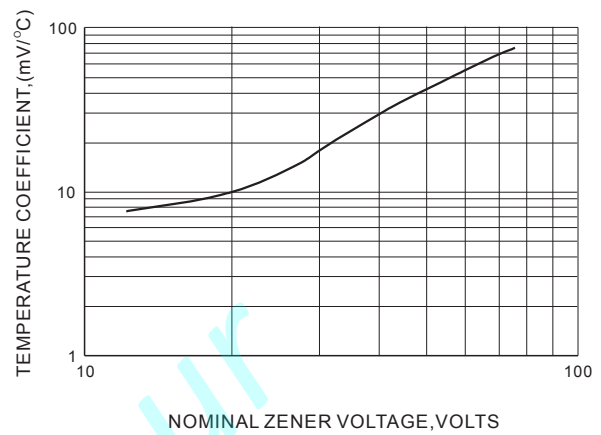


Fig.2 TEMPERATURE COEFFICIENTS

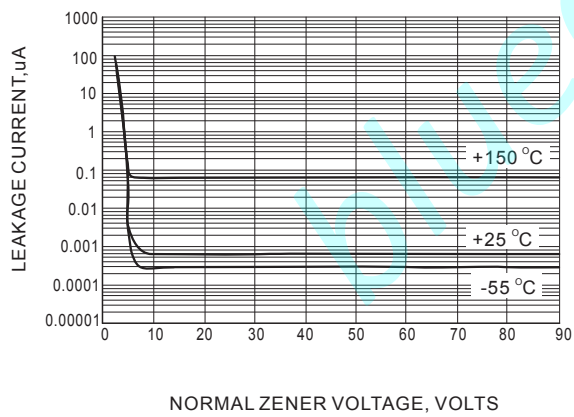


Fig.3 TYPICAL LEAKAGE CURRENT

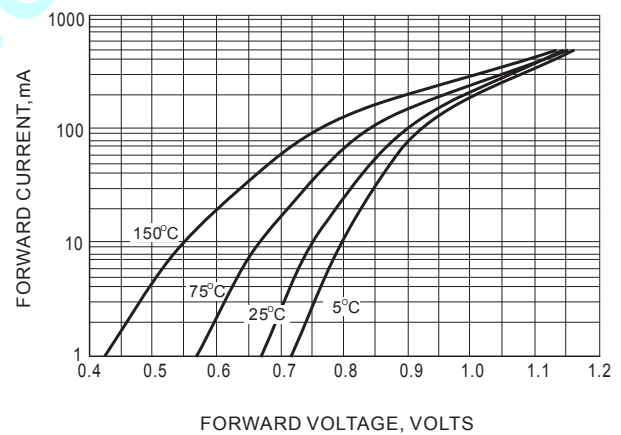
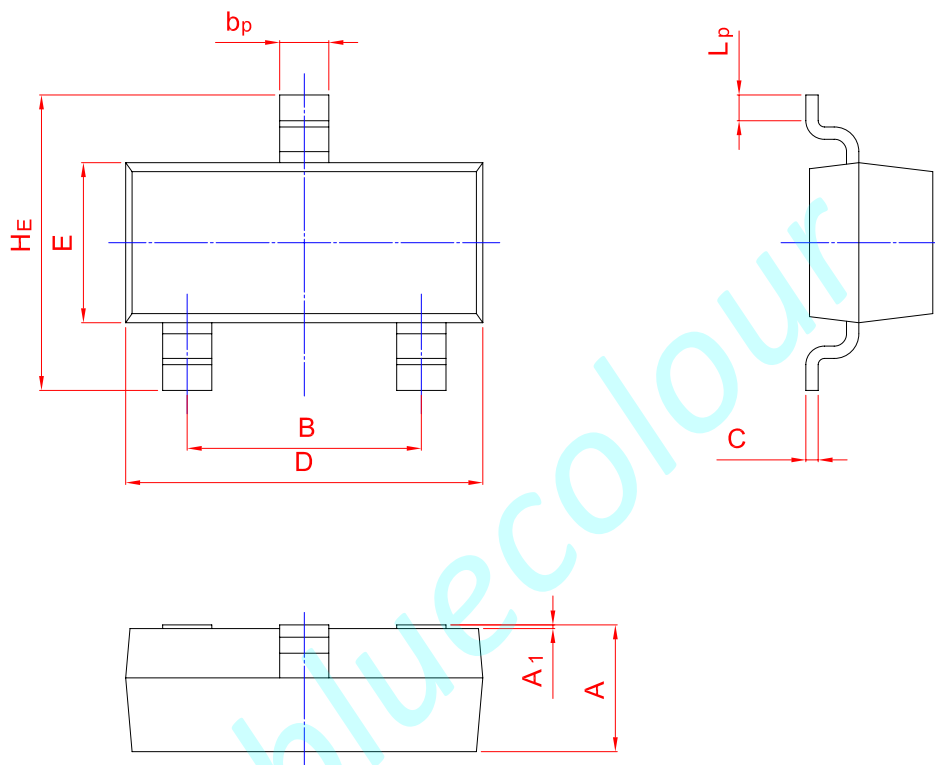
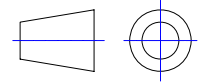


Fig.4 TYPICAL FORWARD VOLTAGE

## PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20