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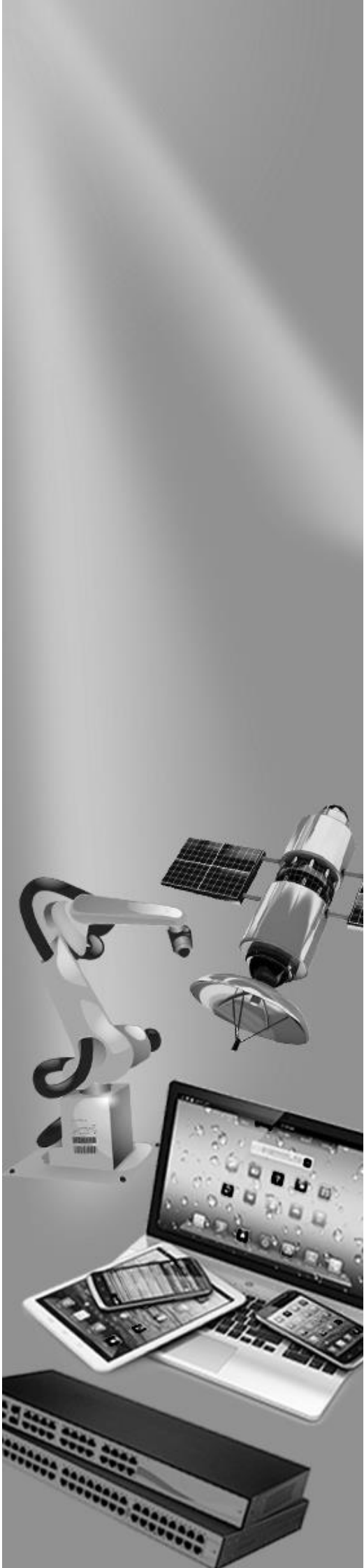
DATA SHEET

ZENER DIODES
GENERAL VOLTAGE REGULATION

BZX84CXX SERIES

RoHS compliant & Halogen free

Product specification– November 24, 2023 V.0



制修订履历表

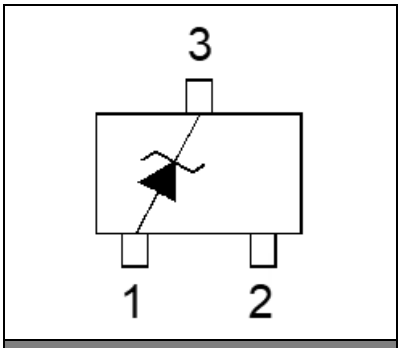
版本	页码	日期	制修订内容	核准	审核	制修订人
V0	1-7	2022-11-02	新制订	吴其杰	林永大	史园园

类别	签收日期	执行日期	主管签名确认
外发回签栏			

Zener Diodes

Description

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.



Pin Configuration

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
- Halogen and Antimony Free(HAF), RoHS compliant

Absolute Maximum Ratings (Ta = 25℃)

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	350	mW
Junction and Storage Temperature Range	T_j, T_{stg}	- 65 to + 150	℃

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient 1)	$R_{\theta JA}$	357	℃/W

NOTE:

1) Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Electrical Characteristics Ta = 25℃ (VF = 0.9 V Max. at IF = 10 mA)

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

[1] Tested with pulses tp = 20ms.

Electrical Characteristic Curves

Figure 1. Power Derating Curve

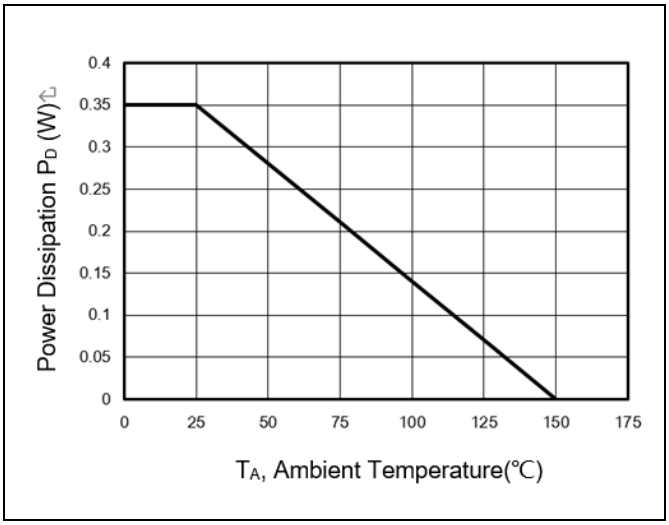


Figure 2. Forward Characteristics Curve

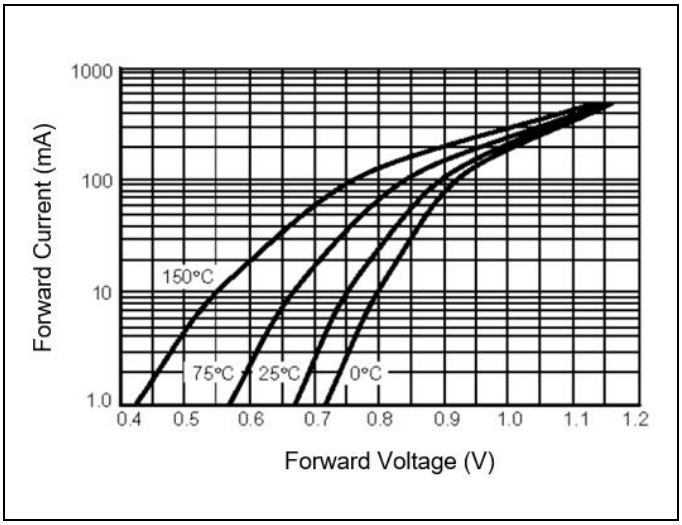


Figure 3. Zener Characteristics Curve

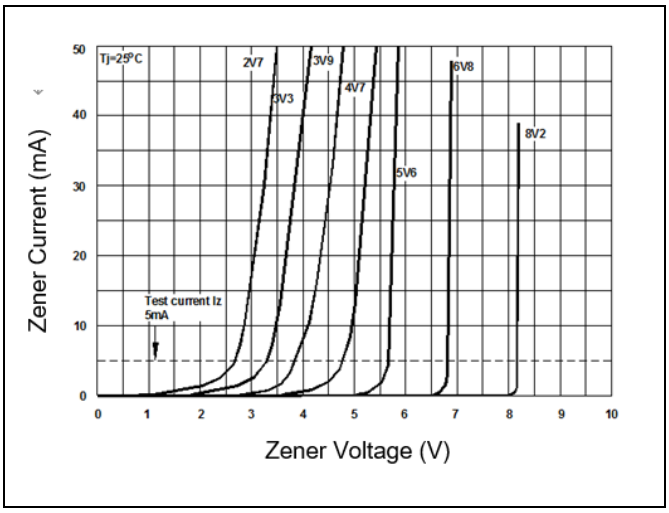
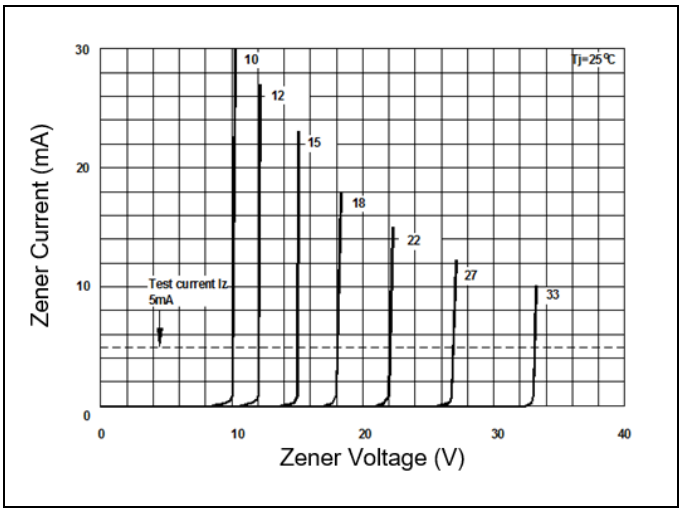
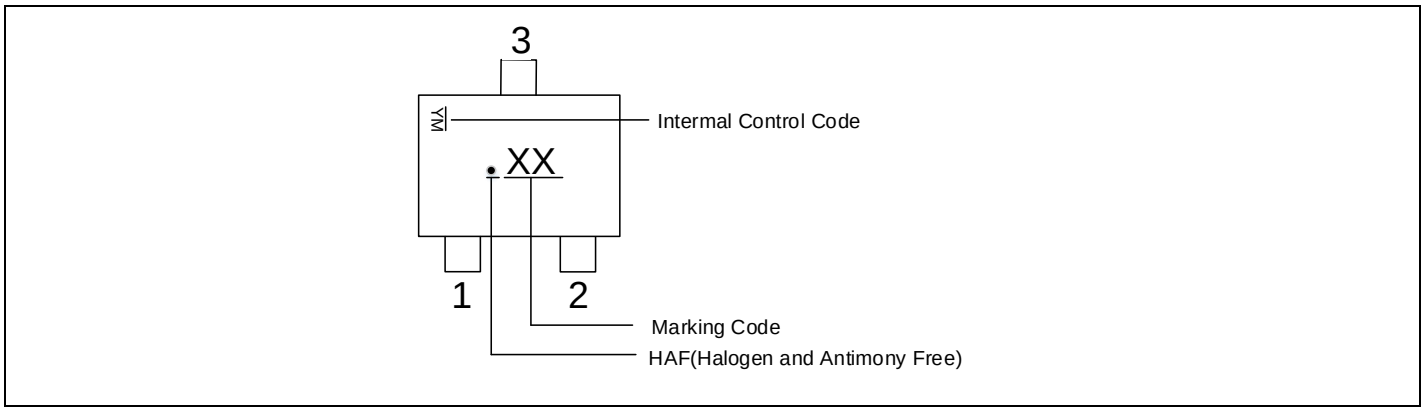


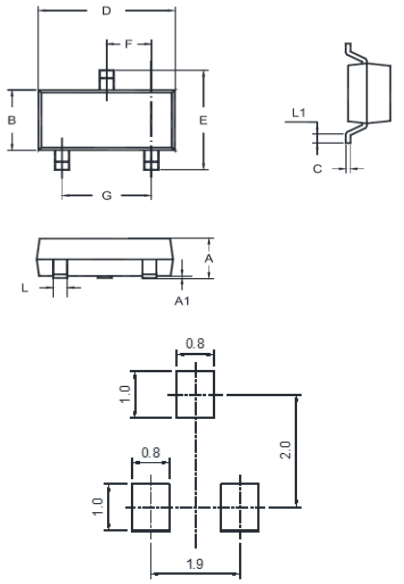
Figure 4. Zener Characteristics Curve



Marking Code



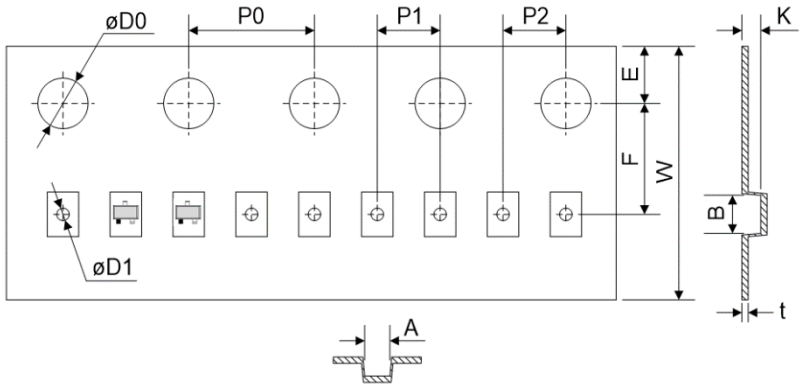
Dimensions (SOT-23)



Symbol	Dimension（mm）			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.89	1.20	0.035	0.047
A1	0.01	0.10	0.001	0.004
B	1.20	1.40	0.047	0.055
C	0.08	0.19	0.003	0.007
D	2.80	3.04	0.110	0.120
E	2.20	2.60	0.087	0.102
F	0.89	1.02	0.035	0.040
G	1.78	2.04	0.070	0.080
L	0.37	0.51	0.015	0.020
L1	0.20	--	0.008	--

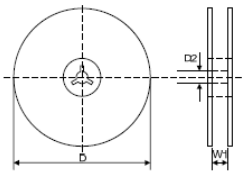
Packaging

Tape



Symbol	Dimension(mm)
W	8.30max.
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
D0	Φ1.50 + 0.10
D1	Φ1.30max.
E	1.75±0.10
F	3.50±0.05
A	3.15±0.10
B	2.77±0.10
K	1.25±0.05
t	0.25max.

Reel



D	Φ178max.
D2	Φ13±0.50
W1	8.40+1.50
Quantity: 3000PCS	

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