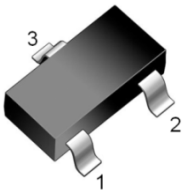
DISTRIBUTEUR : JBG-METAFIX

Hottech Semiconductor

BZX84C2V4 - 43

ZENER DIODES

FEATURES

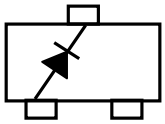


SOT-23

- Planar Die Construction.
- 350mW Power Dissipation
- Zener Voltages From 2.4V - 43V
- 5% Standard Vz Tolerance
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-O

MECHANICAL DATA

- Case: SOT-23, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.008 grams (approx.)



Maximum Ratings (TA=25 °C unless otherwise noted)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ I_F = 10mA	V_F	0.9	V
Power Dissipation(Note 1)	P_D	350	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta J}$	357	°C /W
Operating and Storage Temperature Range	T_j,T_{ST}	-65~ +150	°C

Notes: 1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm2

2. Short duration test pulse used to minimize self-heating effect

3. f=1KHZ

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Type Number	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current		Temperature Coefficent of Zener voltage @ I_{ZT} =5mA mV/°C	
	V_Z@I_{ZT}			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	I_{ZK}	I_R	V_R		
	Nom(V)	Min(V)	Max(V)	(mA)	(Ω)		(mA)	(μA)	(V)	Min	Max
BZX84C2V4	2.4	2.2	2.6	5	100	600	1.0	50	1.0	-3.5	0
BZX84C2V7	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0
BZX84C3V0	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0
BZX84C3V3	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0
BZX84C3V6	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0
BZX84C3V9	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0
BZX84C4V3	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0
BZX84C4V7	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2
BZX84C5V1	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2
BZX84C5V6	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5
BZX84C6V2	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7
BZX84C6V8	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5
BZX84C7V5	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3
BZX84C8V2	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2
BZX84C9V1	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0
BZX84C10	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0
BZX84C11	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0
BZX84C12	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0
BZX84C13	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0
BZX84C15	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0
BZX84C16	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0
BZX84C18	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0
BZX84C20	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0
BZX84C22	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0
BZX84C24	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0
BZX84C27	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3
BZX84C30	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4
BZX84C33	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4
BZX84C36	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4
BZX84C39	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2
BZX84C43	43	40.0	46.0	2	100	700	1.0	0.1	32.0	10.0	12.0

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Typical Characteristics

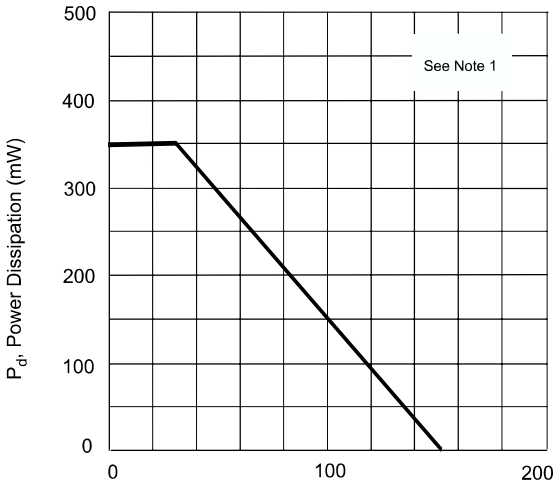

Fig. 1 Power Derating Curve

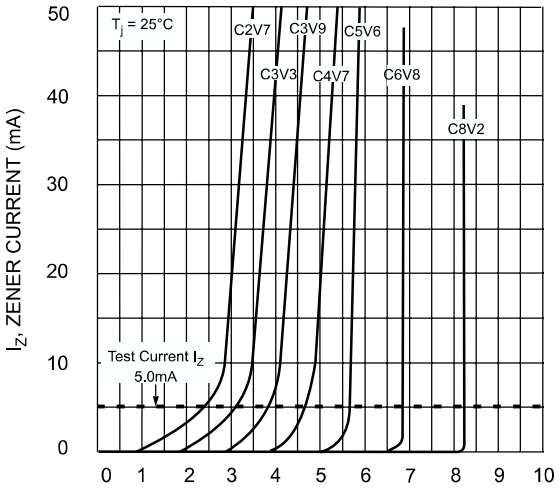

Fig. 2 Zener Breakdown Characteristics

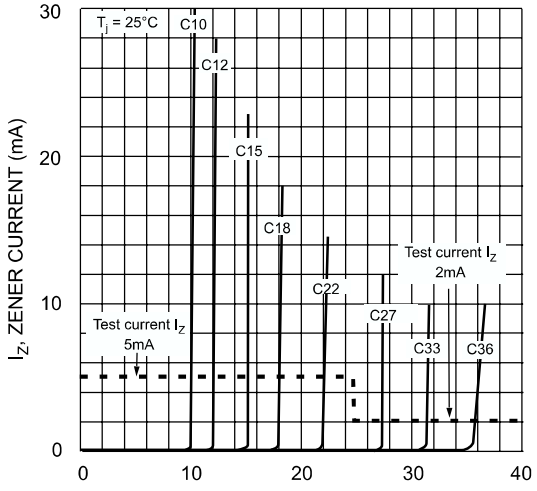

Fig. 3 Zener Breakdown Characteristics

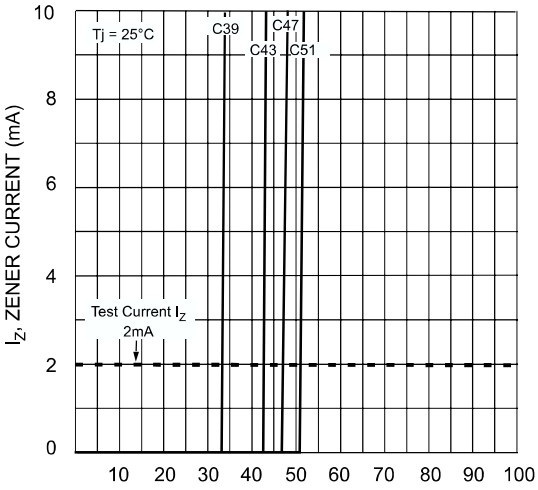

Fig. 4 Zener Breakdown Characteristics

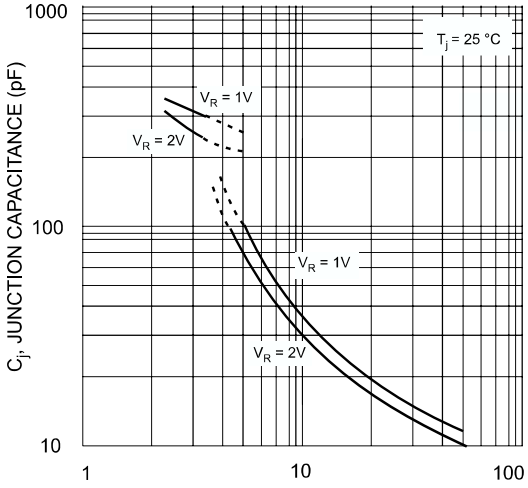

Fig. 5 Junction Capacitance vs Nominal Zener Voltage

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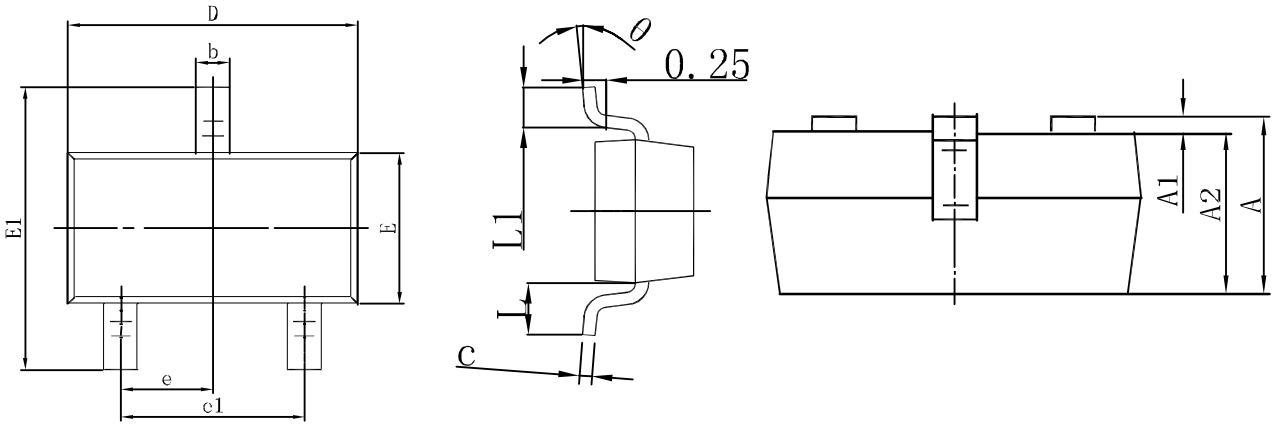
SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

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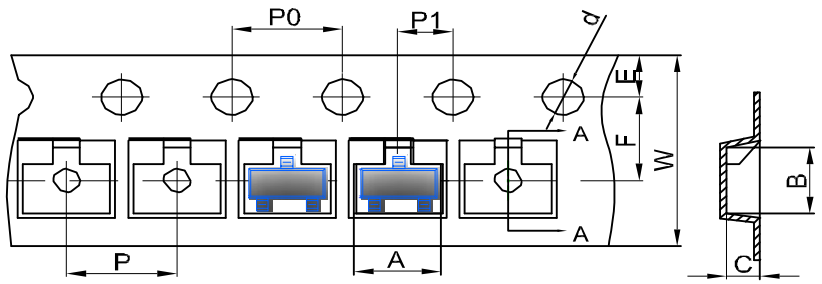
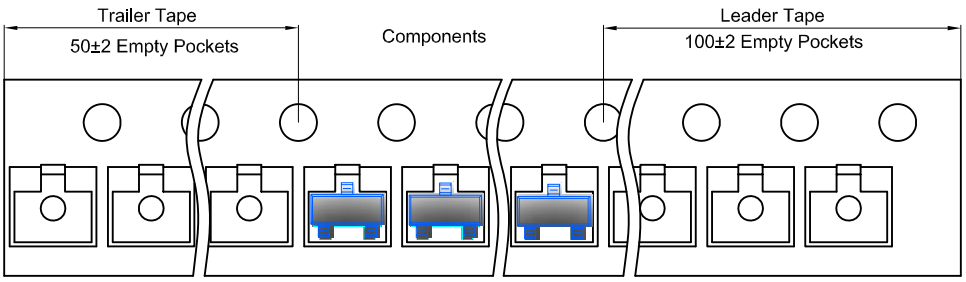
SOT-23 Embossed Carrier Tape

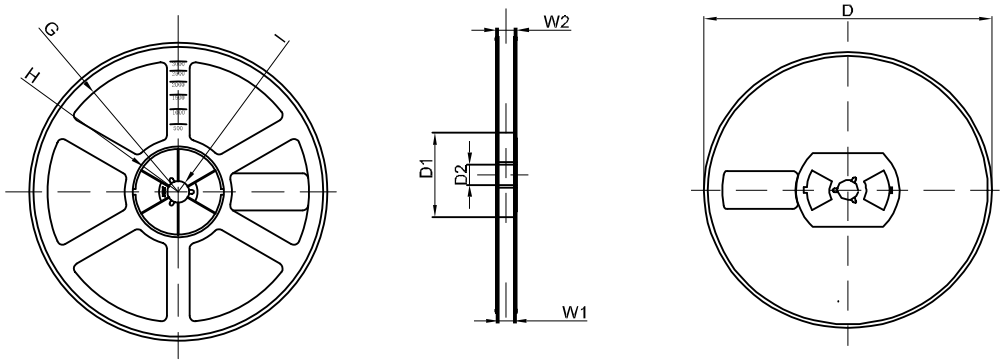


	DIMENSIONS ARE IN MILLIMETER								
TYPE	A	B	C	d	E	F	P0	P	P1
SOT-23	3.15	2.77	1.22	φ1.50	1.75	3.50	4.00	4.00	2.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SOT-23 Tape Leader and Traller



SOT-23 Reel



	DIMENSIONS ARE IN MILLIMETER							
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	φ178	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1