

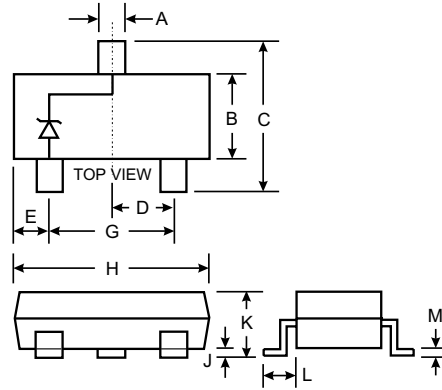


SOT-23 Plastic-Encapsulate Diode

BZX84C2V4 - BZX84C51

Features

- Planar Die Construction
- 350mW Power Dissipation
- Zener Voltages from 2.4V - 51V
- Ideally Suited for Automated Assembly Processes



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.19	1.40
C	2.10	2.50
D	0.89	1.05
E	0.45	0.61
G	1.78	2.05
H	2.65	3.05
J	0.013	0.15
K	0.89	1.10
L	0.45	0.61
M	0.076	0.178
All Dimensions in mm		

MAKING see table on page 2 the first code

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation (Note 1)	P_d	350	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	357	K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	$^\circ\text{C}$

- Notes:
1. Valid provided that device terminals are kept at ambient temperature.
 2. Tested with pulses, 300 μs pulse width, period = 5ms.
 3. $f = 1\text{KHz}$.

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Type Number	Marking Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current		Typical Temperature Coefficient @ I _{ZT} mV/°C	
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}		I _R	V _R	Min	Max
		Nom (V)	Min (V)	Max (V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)		
BZX84C2V4	Z11/KZB	2.4	2.2	2.6	5.0	100	600	1.0	50	1.0	-3.5	0
BZX84C2V7	Z12/KZC	2.7	2.5	2.9	5.0	100	600	1.0	20	1.0	-3.5	0
BZX84C3V0	Z13/KZD	3.0	2.8	3.2	5.0	95	600	1.0	10	1.0	-3.5	0
BZX84C3V3	Z14/KZE	3.3	3.1	3.5	5.0	95	600	1.0	5.0	1.0	-3.5	0
BZX84C3V6	Z15/KZF	3.6	3.4	3.8	5.0	90	600	1.0	5.0	1.0	-3.5	0
BZX84C3V9	Z16/KZG	3.9	3.7	4.1	5.0	90	600	1.0	3.0	1.0	-3.5	0
BZX84C4V3	Z17/KZH	4.3	4.0	4.6	5.0	90	600	1.0	3.0	1.0	-3.5	0
BZX84C4V7	Z1/KZ1	4.7	4.4	5.0	5.0	80	500	1.0	3.0	2.0	-3.5	0.2
BZX84C5V1	Z2/KZ2	5.1	4.8	5.4	5.0	60	480	1.0	2.0	2.0	-2.7	1.2
BZX84C5V6	Z3/KZ3	5.6	5.2	6.0	5.0	40	400	1.0	1.0	2.0	-2.0	2.5
BZX84C6V2	Z4/KZ4	6.2	5.8	6.6	5.0	10	150	1.0	3.0	4.0	0.4	3.7
BZX84C6V8	Z5/KZ5	6.8	6.4	7.2	5.0	15	80	1.0	2.0	4.0	1.2	4.5
BZX84C7V5	Z6/KZ6	7.5	7.0	7.9	5.0	15	80	1.0	1.0	5.0	2.5	5.3
BZX84C8V2	Z7/KZ7	8.2	7.7	8.7	5.0	15	80	1.0	0.7	5.0	3.2	6.2
BZX84C9V1	Z8/KZ8	9.1	8.5	9.6	5.0	15	100	1.0	0.5	6.0	3.8	7.0
BZX84C10	Z9/KZ9/8Q	10	9.4	10.6	5.0	20	150	1.0	0.2	7.0	4.5	8.0
BZX84C11	Y1/KY1	11	10.4	11.6	5.0	20	150	1.0	0.1	8.0	5.4	9.0
BZX84C12	Y2/KY2	12	11.4	12.7	5.0	25	150	1.0	0.1	8.0	6.0	10.0
BZX84C13	Y3/KY3	13	12.4	14.1	5.0	30	170	1.0	0.1	8.0	7.0	11.0
BZX84C15	Y4/KY4	15	13.8	15.6	5.0	30	200	1.0	0.1	10.5	9.2	13.0
BZX84C16	Y5/KY5	16	15.3	17.1	5.0	40	200	1.0	0.1	11.2	10.4	14.0
BZX84C18	Y6/KY6	18	16.8	19.1	5.0	45	225	1.0	0.1	12.6	12.4	16.0
BZX84C20	Y7/KY7	20	18.8	21.2	5.0	55	225	1.0	0.1	14.0	14.4	18.0
BZX84C22	Y8/KY8	22	20.8	23.3	5.0	55	250	1.0	0.1	15.4	16.4	20.0
BZX84C24	Y9/KY9	24	22.8	25.6	5.0	70	250	1.0	0.1	16.8	18.4	22.0
BZX84C27	Y10/KYA	27	25.1	28.9	2.0	80	300	0.5	0.1	18.9	21.4	25.3
BZX84C30	Y11/KYB	30	28.0	32.0	2.0	80	300	0.5	0.1	21.0	24.4	29.4
BZX84C33	Y12/KYC	33	31.0	35.0	2.0	80	325	0.5	0.1	23.1	27.4	33.4
BZX84C36	Y13/KYD	36	34.0	38.0	2.0	90	350	0.5	0.1	25.2	30.4	37.4
BZX84C39	Y14/KYE	39	37.0	41.0	2.0	130	350	0.5	0.1	27.3	33.4	41.2
BZX84C43	Y15/KYF	43	40.0	46.0	2.0	150	375	0.5	0.1	30.1	10.0	12.0
BZX84C47	Y16/KYG	47	44.0	50.0	2.0	170	375	0.5	0.1	32.9	10.0	12.0
BZX84C51	Y17/KYH	51	48.0	54.0	2.0	180	400	0.5	0.1	35.7	10.0	12.0

- Notes:
1. Valid provided that device terminals are kept at ambient temperature.
 2. Tested with pulses, 300μs pulse width, period = 5ms.
 3. f = 1KHz.

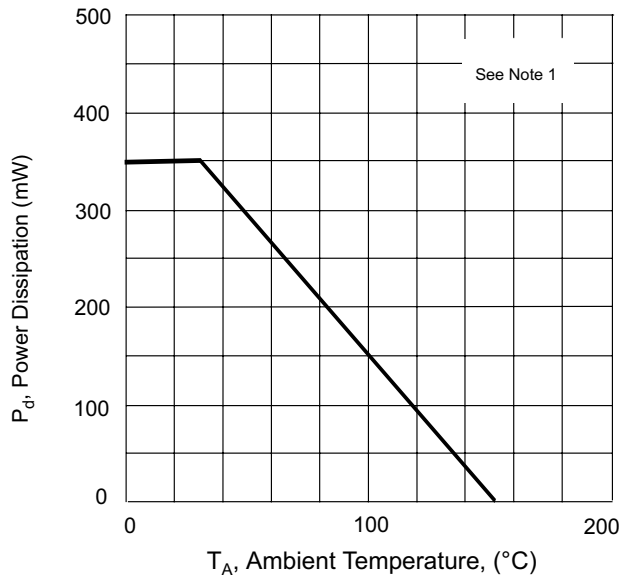


Fig. 1 Power Derating Curve

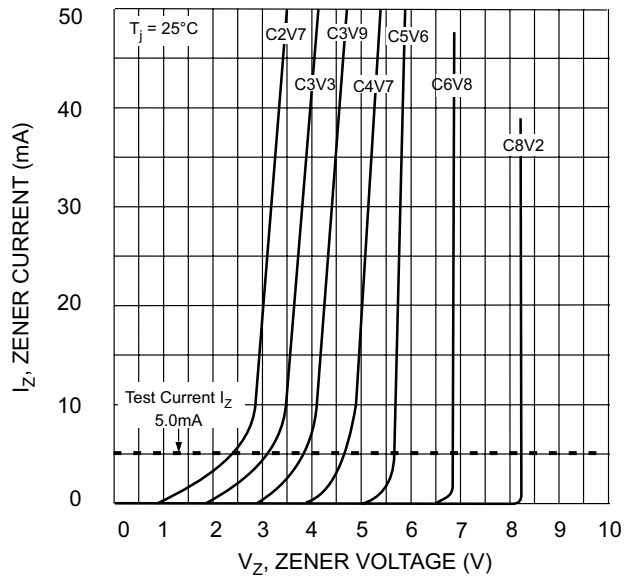


Fig. 2 Zener Breakdown Characteristics

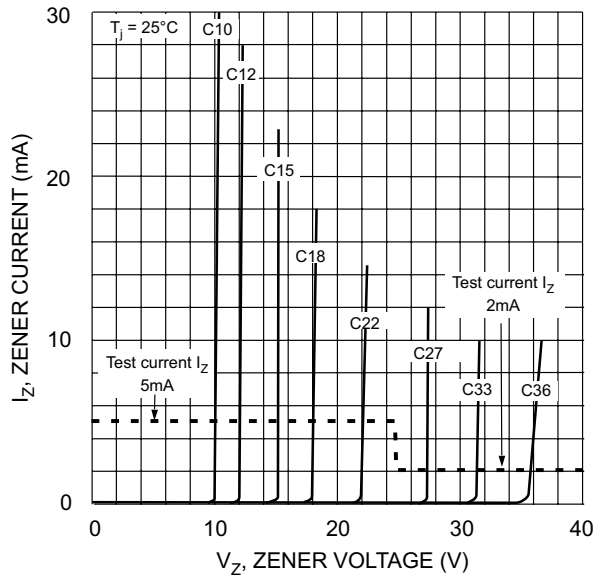


Fig. 3 Zener Breakdown Characteristics

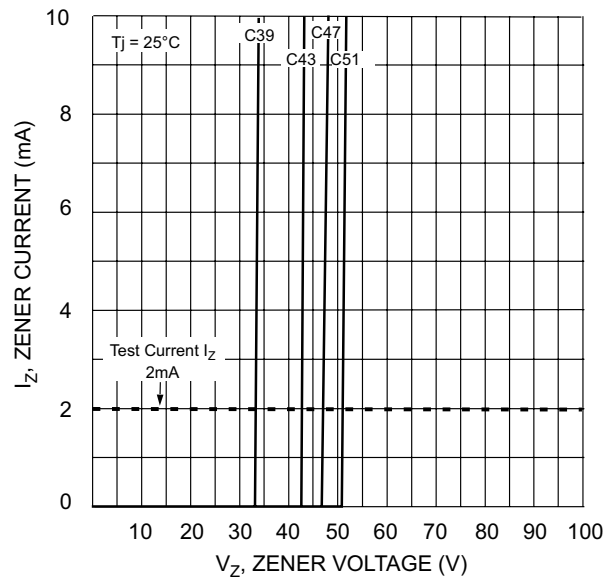


Fig. 4 Zener Breakdown Characteristics

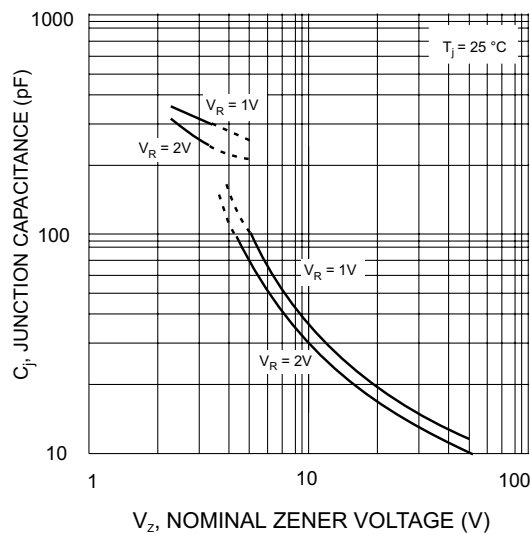


Fig. 5 Junction Capacitance vs Nominal Zener Voltage