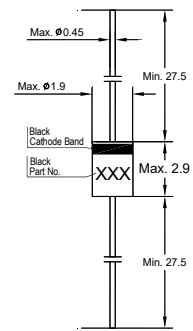


BC Series

Silicon Epitaxial Planar Zener Diodes



Glass Case DO-34
Dimensions in mm

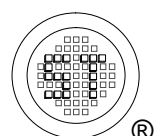
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation ¹⁾	P_{tot}	500	mW
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 175	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta\text{JA}}$	300	$^\circ\text{C/W}$

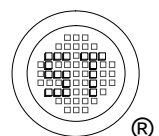
¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.



BC Series

Characteristics at $T_a = 25^\circ\text{C}$ ($V_F = 1\text{ V Max. at } I_F = 100\text{ mA}$)

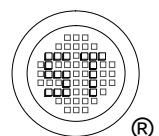
Type	Zener Voltage ¹⁾			Maximum Dynamic Resistance		Maximum Standing Dynamic Resistance		Maximum Reverse Leakage Current	
	Min. (V)	Max. (V)	at I_{ZT} (mA)	Z_{ZT} (Ω)	at I_{ZT} (mA)	Z_{ZK} (Ω)	at I_{ZK} (mA)	I_R (μA)	at V_R (V)
2V2BC	2.09	2.41	20	120	20	2000	1	120	0.7
2V2BCA	2.12	2.3	20	120	20	2000	1	120	0.7
2V2BCB	2.22	2.41	20	120	20	2000	1	120	0.7
2V4BC	2.3	2.64	20	100	20	2000	1	120	1
2V4BCA	2.33	2.52	20	100	20	2000	1	120	1
2V4BCB	2.43	2.63	20	100	20	2000	1	120	1
2V7BC	2.5	2.9	20	100	20	1000	1	100	1
2V7BCA	2.54	2.75	20	100	20	1000	1	100	1
2V7BCB	2.69	2.91	20	100	20	1000	1	100	1
3V0BC	2.8	3.2	20	80	20	1000	1	50	1
3V0BCA	2.85	3.07	20	80	20	1000	1	50	1
3V0BCB	3.01	3.22	20	80	20	1000	1	50	1
3V3BC	3.1	3.5	20	70	20	1000	1	20	1
3V3BCA	3.16	3.38	20	70	20	1000	1	20	1
3V3BCB	3.32	3.53	20	70	20	1000	1	20	1
3V6BC	3.4	3.8	20	60	20	1000	1	10	1
3V6BCA	3.47	3.68	20	60	20	1000	1	10	1
3V6BCB	3.62	3.83	20	60	20	1000	1	10	1
3V9BC	3.7	4.1	20	50	20	1000	1	5	1
3V9BCA	3.77	3.98	20	50	20	1000	1	5	1
3V9BCB	3.92	4.14	20	50	20	1000	1	5	1
4V3BC	4	4.5	20	40	20	1000	1	5	1
4V3BCA	4.05	4.26	20	40	20	1000	1	5	1
4V3BCB	4.2	4.4	20	40	20	1000	1	5	1
4V3BCC	4.34	4.53	20	40	20	1000	1	5	1
4V7BC	4.4	4.9	20	25	20	900	1	5	1
4V7BCA	4.47	4.65	20	25	20	900	1	5	1
4V7BCB	4.59	4.77	20	25	20	900	1	5	1
4V7BCC	4.71	4.91	20	25	20	900	1	5	1
5V1BC	4.8	5.4	20	20	20	800	1	5	1.5
5V1BCA	4.85	5.03	20	20	20	800	1	5	1.5
5V1BCB	4.97	5.18	20	20	20	800	1	5	1.5
5V1BCC	5.12	5.35	20	20	20	800	1	5	1.5
5V6BC	5.3	6	20	13	20	500	1	5	2.5
5V6BCA	5.29	5.52	20	13	20	500	1	5	2.5
5V6BCB	5.46	5.7	20	13	20	500	1	5	2.5
5V6BCC	5.64	5.88	20	13	20	500	1	5	2.5
6V2BC	5.8	6.6	20	10	20	300	1	5	3
6V2BCA	5.81	6.06	20	10	20	300	1	5	3
6V2BCB	5.99	6.24	20	10	20	300	1	5	3
6V2BCC	6.16	6.4	20	10	20	300	1	5	3
6V8BC	6.4	7.2	20	8	20	150	0.5	2	3.5
6V8BCA	6.32	6.59	20	8	20	150	0.5	2	3.5
6V8BCB	6.52	6.79	20	8	20	150	0.5	2	3.5
6V8BCC	6.7	6.97	20	8	20	150	0.5	2	3.5
7V5BC	7	7.9	20	8	20	120	0.5	0.5	4
7V5BCA	6.88	7.19	20	8	20	120	0.5	0.5	4
7V5BCB	7.11	7.41	20	8	20	120	0.5	0.5	4
7V5BCC	7.33	7.64	20	8	20	120	0.5	0.5	4



BC Series

Characteristics at $T_a = 25^\circ\text{C}$ ($V_F = 1\text{ V Max. at } I_F = 100\text{ mA}$)

Type	Zener Voltage ¹⁾			Maximum Dynamic Resistance		Maximum Standing Dynamic Resistance		Maximum Reverse Leakage Current	
	Min. (V)	Max. (V)	at I_{ZT} (mA)	Z_{ZT} (Ω)	at I_{ZT} (mA)	Z_{ZK} (Ω)	at I_{ZK} (mA)	I_R (μA)	at V_R (V)
8V2BC	7.7	8.7	20	8	20	120	0.5	0.5	5
8V2BCA	7.56	7.9	20	8	20	120	0.5	0.5	5
8V2BCB	7.82	8.15	20	8	20	120	0.5	0.5	5
8V2BCC	8.07	8.41	20	8	20	120	0.5	0.5	5
9V1BC	8.5	9.6	20	8	20	120	0.5	0.5	6
9V1BCA	8.33	8.7	20	8	20	120	0.5	0.5	6
9V1BCB	8.61	8.99	20	8	20	120	0.5	0.5	6
9V1BCC	8.89	9.29	20	8	20	120	0.5	0.5	6
10BC	9.4	10.9	20	8	20	120	0.5	0.2	7
10BCA	9.19	9.59	20	8	20	120	0.5	0.2	7
10BCB	9.48	9.9	20	8	20	120	0.5	0.2	7
10BCC	9.82	10.3	20	8	20	120	0.5	0.2	7
11BC	10.4	11.6	10	10	10	120	0.5	0.2	8
11BCA	10.18	10.63	10	10	10	120	0.5	0.2	8
11BCB	10.5	10.95	10	10	10	120	0.5	0.2	8
11BCC	10.82	11.26	10	10	10	120	0.5	0.2	8
12BC	11.4	12.6	10	12	10	110	0.5	0.2	9
12BCA	11.13	11.63	10	12	10	110	0.5	0.2	9
12BCB	11.5	11.92	10	12	10	110	0.5	0.2	9
12BCC	11.8	12.3	10	12	10	110	0.5	0.2	9
13BC	12.4	14.1	10	14	10	110	0.5	0.2	10
13BCA	12.18	12.71	10	14	10	110	0.5	0.2	10
13BCB	12.59	13.16	10	14	10	110	0.5	0.2	10
13BCC	13.03	13.62	10	14	10	110	0.5	0.2	10
15BC	13.8	15.6	10	16	10	110	0.5	0.2	11
15BCA	13.48	14.09	10	16	10	110	0.5	0.2	11
15BCB	13.95	14.56	10	16	10	110	0.5	0.2	11
15BCC	14.42	15.02	10	16	10	110	0.5	0.2	11
16BC	15.3	17.1	10	18	10	150	0.5	0.2	12
16BCA	14.87	15.5	10	18	10	150	0.5	0.2	12
16BCB	15.33	15.96	10	18	10	150	0.5	0.2	12
16BCC	15.79	16.5	10	18	10	150	0.5	0.2	12
18BC	16.8	19.1	10	23	10	150	0.5	0.2	13
18BCA	16.34	17.06	10	23	10	150	0.5	0.2	13
18BCB	16.9	17.67	10	23	10	150	0.5	0.2	13
18BCC	17.51	18.3	10	23	10	150	0.5	0.2	13
20BC	18.8	21.6	10	28	10	200	0.5	0.2	15
20BCA	18.11	18.92	10	28	10	200	0.5	0.2	15
20BCB	18.73	19.57	10	28	10	200	0.5	0.2	15
20BCC	19.38	20.22	10	28	10	200	0.5	0.2	15
20BCD	19.88	20.72	10	28	10	200	0.5	0.2	15
22BC	20.8	23.3	5	30	5	200	0.5	0.2	17
22BCA	20.23	21.08	5	30	5	200	0.5	0.2	17
22BCB	20.76	21.65	5	30	5	200	0.5	0.2	17
22BCC	21.22	22.09	5	30	5	200	0.5	0.2	17
22BCD	21.68	22.61	5	30	5	200	0.5	0.2	17

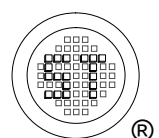


BC Series

Characteristics at $T_a = 25^\circ\text{C}$ ($V_F = 1\text{ V Max. at } I_F = 100\text{ mA}$)

Type	Zener Voltage ¹⁾			Maximum Dynamic Resistance		Maximum Standing Dynamic Resistance		Maximum Reverse Leakage Current	
	Min. (V)	Max. (V)	at I_{ZT} (mA)	Z_{ZT} (Ω)	at I_{ZT} (mA)	Z_{ZK} (Ω)	at I_{ZK} (mA)	I_R (μA)	at V_R (V)
24BC	22.8	25.6	5	35	5	200	0.5	0.2	19
24BCA	22.26	23.12	5	35	5	200	0.5	0.2	19
24BCB	22.75	23.73	5	35	5	200	0.5	0.2	19
24BCC	23.29	24.27	5	35	5	200	0.5	0.2	19
24BCD	23.81	24.81	5	35	5	200	0.5	0.2	19
27BC	25.1	28.9	5	45	5	250	0.5	0.2	21
27BCA	24.26	25.52	5	45	5	250	0.5	0.2	21
27BCB	24.97	26.26	5	45	5	250	0.5	0.2	21
27BCC	25.63	26.95	5	45	5	250	0.5	0.2	21
27BCD	26.29	27.64	5	45	5	250	0.5	0.2	21
30BC	28	32	5	55	5	250	0.5	0.2	23
30BCA	26.99	28.39	5	55	5	250	0.5	0.2	23
30BCB	27.7	29.13	5	55	5	250	0.5	0.2	23
30BCC	28.36	29.82	5	55	5	250	0.5	0.2	23
30BCD	29.02	30.51	5	55	5	250	0.5	0.2	23
33BC	31	35	5	65	5	250	0.5	0.2	25
33BCA	29.68	31.22	5	65	5	250	0.5	0.2	25
33BCB	30.32	31.88	5	65	5	250	0.5	0.2	25
33BCC	30.9	32.5	5	65	5	250	0.5	0.2	25
33BCD	31.49	33.11	5	65	5	250	0.5	0.2	25

¹⁾ Tested with pulse $t_p = 20\text{ ms}$



BC Series

Electrical Characteristics Curves

Fig 1. Zener Characteristics Curve

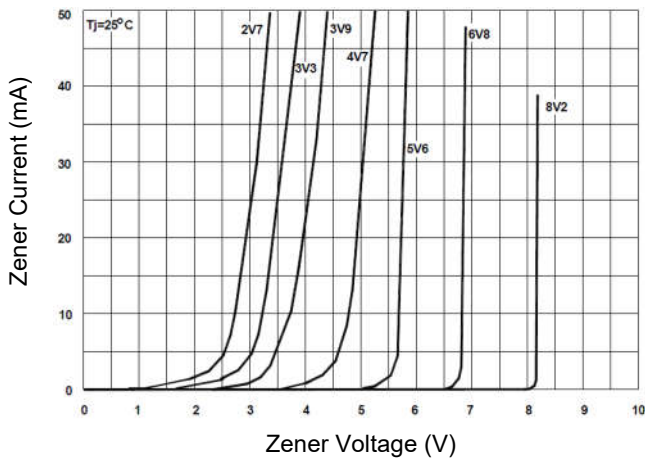


Fig 2. Zener Characteristics Curve

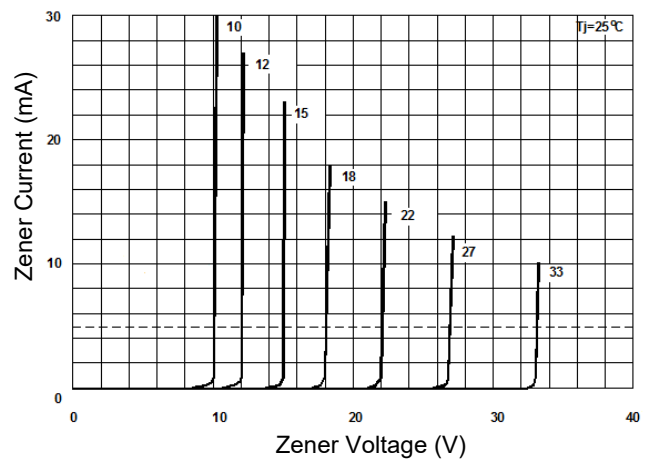
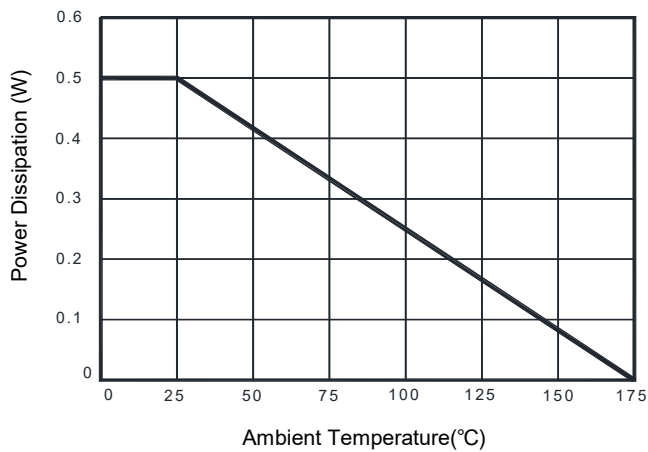


Fig 3. Power Derating Curve



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