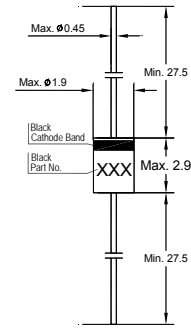


# BC Series

## Silicon Epitaxial Planar Zener Diodes



Glass Case DO-34  
Dimensions in mm

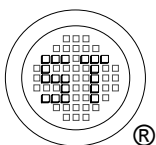
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

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

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

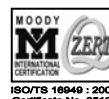
### Characteristics at $T_a = 25^\circ\text{C}$ ( $V_F = 1\text{ V Max. at } I_F = 100\text{ mA}$ )

Type	Zener Voltage <sup>1)</sup>			Maximum Dynamic Resistance		Maximum Standing Dynamic Resistance		Maximum Reverse Leakage Current	
	Min. (V)	Max. (V)	at $I_{ZT}$ (mA)	$Z_{ZT}$ ( $\Omega$ )	at $I_{ZT}$ (mA)	$Z_{ZK}$ ( $\Omega$ )	at $I_{ZK}$ (mA)	$I_R$ ( $\mu\text{A}$ )	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



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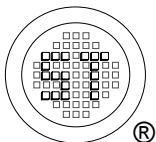
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# BC Series

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

Type	Zener Voltage <sup>1)</sup>			Maximum Dynamic Resistance		Maximum Standing Dynamic Resistance		Maximum Reverse Leakage Current	
	Min. (V)	Max. (V)	at $I_{ZT}$ (mA)	$Z_{ZT}$ ( $\Omega$ )	at $I_{ZT}$ (mA)	$Z_{ZK}$ ( $\Omega$ )	at $I_{ZK}$ (mA)	$I_R$ ( $\mu\text{A}$ )	at $V_R$ (V)
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
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



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ISO/TS 18949:2002  
Certificate No. 08103



ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 0808098



BS-OHSAS 18001:2007  
Certificate No. 7116



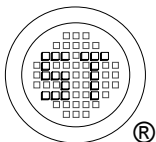
IECQ QC 080000  
Certificate No. PC0809881

# BC Series

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

Type	Zener Voltage <sup>1)</sup>			Maximum Dynamic Resistance		Maximum Standing Dynamic Resistance		Maximum Reverse Leakage Current	
	Min. (V)	Max. (V)	at $I_{ZT}$ (mA)	$Z_{ZT}$ ( $\Omega$ )	at $I_{ZT}$ (mA)	$Z_{ZK}$ ( $\Omega$ )	at $I_{ZK}$ (mA)	$I_R$ ( $\mu\text{A}$ )	at $V_R$ (V)
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
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

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



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