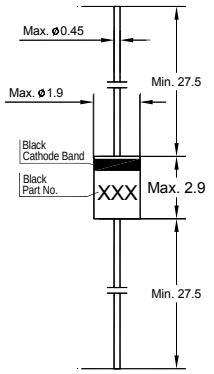
BS Series

SILICON PLANAR ZENER DIODES



Glass Case DO-34
Dimensions in mm

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	500 [1)]	mW
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_S	- 65 to + 175	°C
[1)] Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.			

Characteristics at T_a = 25 °C

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	R_{thA}	0.3 [1)]	K/mW
[1)] Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.			

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Characteristics at T_a = 25 °C

Type	Zener Voltage [1]			Maximum Dynamic Resistance		Reverse Leakage Current [2] (I_R at V_R)	
	Min. (V)	Max. (V)	I_{ZT} (mA)	(Ω) at I_{ZT}	I_{ZT} (mA)	I_R (μA) Max.	V_R (V)
2V0BS	1.88	2.2	5	100	5	120	0.5
2V0BSA	1.88	2.1					
2V0BSB	2.02	2.2					
2V2BS	2.12	2.41	5	100	5	120	0.7
2V2BSA	2.12	2.3					
2V2BSB	2.22	2.41					
2V4BS	2.33	2.63	5	100	5	120	1
2V4BSA	2.33	2.52					
2V4BSB	2.43	2.63					
2V7BS	2.54	2.91	5	110	5	100	1
2V7BSA	2.54	2.75					
2V7BSB	2.69	2.91					
3V0BS	2.85	3.22	5	120	5	50	1
3V0BSA	2.85	3.07					
3V0BSB	3.01	3.22					
3V3BS	3.16	3.53	5	120	5	20	1
3V3BSA	3.16	3.38					
3V3BSB	3.32	3.53					
3V6BS	3.47	3.83	5	120	5	10	1
3V6BSA	3.47	3.68					
3V6BSB	3.62	3.83					
3V9BS	3.77	4.14	5	120	5	5	1
3V9BSA	3.77	3.98					
3V9BSB	3.92	4.14					
4V3BS	4.05	4.53	5	120	5	5	1
4V3BSA	4.05	4.26					
4V3BSB	4.2	4.4					
4V3BSC	4.34	4.53					
4V7BS	4.47	4.91	5	100	5	5	1
4V7BSA	4.47	4.65					
4V7BSB	4.59	4.77					
4V7BSC	4.71	4.91					
5V1BS	4.85	5.35	5	70	5	5	1.5
5V1BSA	4.85	5.03					
5V1BSB	4.97	5.18					
5V1BSC	5.12	5.35					

[1] Tested with pulse tp = 20 ms.

[2] Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

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Characteristics at T_a = 25 °C

Type	Zener Voltage [1]			Maximum Dynamic Resistance		Reverse Leakage Current [2] (I_R at V_R)	
	Min. (V)	Max. (V)	I_{ZT} (mA)	(Ω) at I_{ZT}	I_{ZT} (mA)	I_R (μA) Max.	V_R (V)
5V6BS	5.29	5.88	5	40	5	5	2.5
5V6BSA	5.29	5.52					
5V6BSB	5.46	5.7					
5V6BSC	5.64	5.88					
6V2BS	5.81	6.4	5	30	5	5	3
6V2BSA	5.81	6.06					
6V2BSB	5.99	6.24					
6V2BSC	6.16	6.4					
6V8BS	6.32	6.97	5	25	5	2	3.5
6V8BSA	6.32	6.59					
6V8BSB	6.52	6.79					
6V8BSC	6.70	6.97					
7V5BS	6.88	7.64	5	25	5	0.5	4
7V5BSA	6.88	7.19					
7V5BSB	7.11	7.41					
7V5BSC	7.33	7.64					
8V2BS	7.56	8.41	5	20	5	0.5	5
8V2BSA	7.56	7.9					
8V2BSB	7.82	8.15					
8V2BSC	8.07	8.41					
9V1BS	8.33	9.29	5	20	5	0.5	6
9V1BSA	8.33	8.7					
9V1BSB	8.61	8.99					
9V1BSC	8.89	9.29					
10BS	9.19	10.3	5	20	5	0.2	7
10BSA	9.19	9.59					
10BSB	9.48	9.9					
10BSC	9.82	10.3					

[1] Tested with pulse tp = 20 ms.

[2] Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

Characteristics at T_a = 25 °C

Type	Zener Voltage [1]			Maximum Dynamic Resistance		Reverse Leakage Current [2] (I_R at V_R)	
	Min. (V)	Max. (V)	I_{ZT} (mA)	(Ω) at I_{ZT}	I_{ZT} (mA)	I_R (µA) Max.	V_R (V)
11BS	10.18	11.26	5	20	5	0.2	8
11BSA	10.18	10.63					
11BSB	10.5	10.95					
11BSC	10.82	11.26					
12BS	11.13	12.3	5	25	5	0.2	9
12BSA	11.13	11.63					
12BSB	11.5	11.92					
12BSC	11.8	12.3					
13BS	12.18	13.62	5	25	5	0.2	10
13BSA	12.18	12.71					
13BSB	12.59	13.16					
13BSC	13.03	13.62					
15BS	13.48	15.02	5	25	5	0.2	11
15BSA	13.48	14.09					
15BSB	13.95	14.56					
15BSC	14.42	15.02					
16BS	14.87	16.5	5	25	5	0.2	12
16BSA	14.87	15.5					
16BSB	15.33	15.96					
16BSC	15.79	16.5					
18BS	16.34	18.3	5	30	5	0.2	13
18BSA	16.34	17.06					
18BSB	16.9	17.67					
18BSC	17.51	18.3					
20BS	18.14	20.45	5	30	5	0.2	15
20BSA	18.14	18.96					
20BSB	18.8	19.68					
20BSC	19.52	20.45					
22BS	20.23	22.61	5	30	5	0.2	17
22BSA	20.23	21.08					
22BSB	20.76	21.65					
22BSC	21.22	22.09					
22BSD	21.68	22.61					
24BS	22.26	24.81	5	35	5	0.2	19
24BSA	22.26	23.12					
24BSB	22.75	23.73					
24BSC	23.29	24.27					
24BSD	23.81	24.81					

[1] Tested with pulse tp = 20 ms.

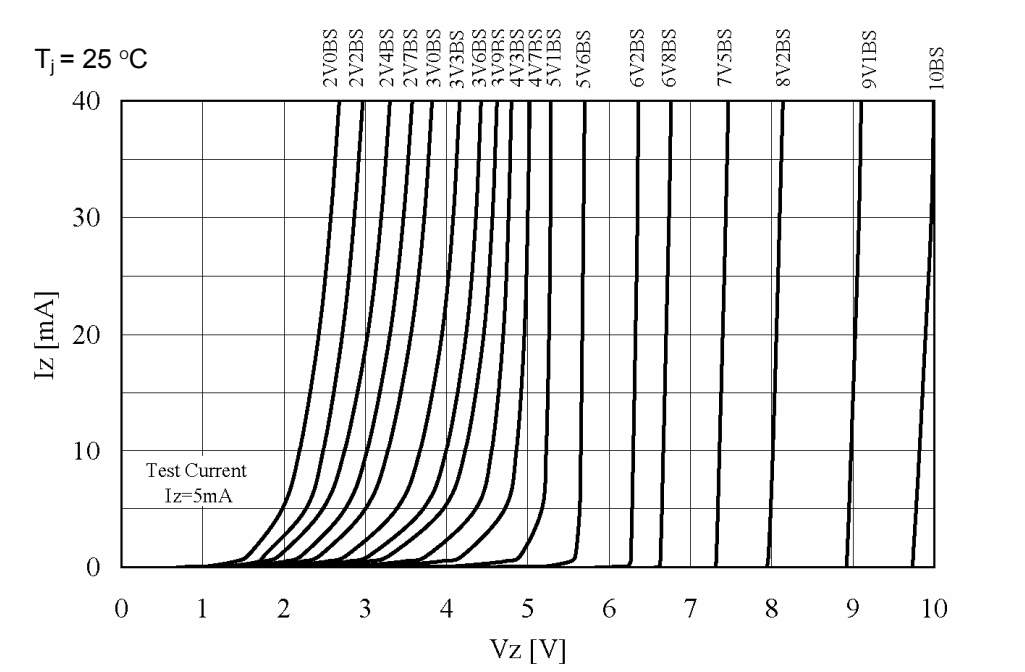
[2] Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

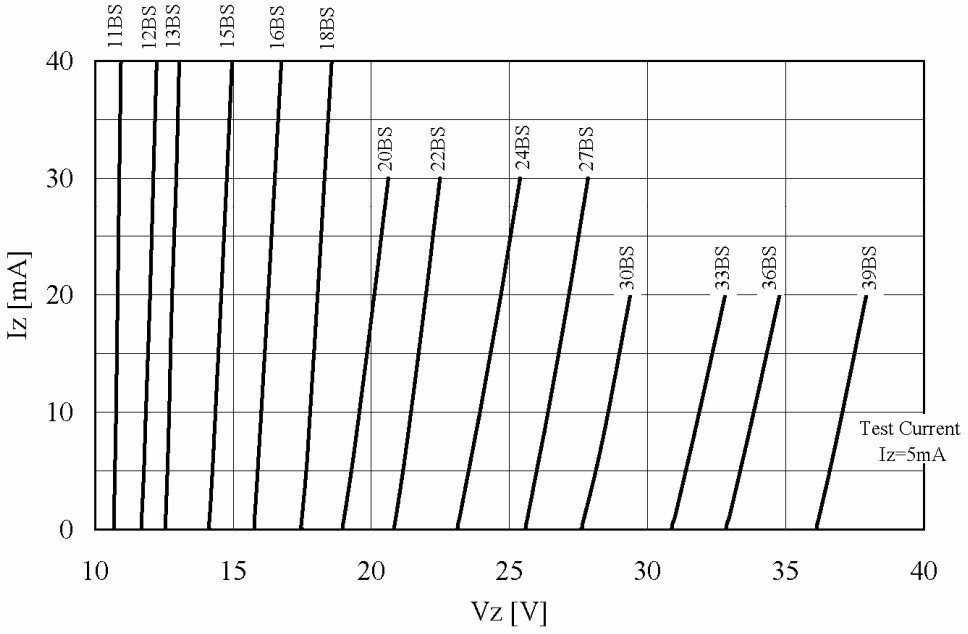
Characteristics at T_a = 25 °C

Type	Zener Voltage [1]			Maximum Dynamic Resistance		Reverse Leakage Current [2] (I_R at V_R)	
	Min. (V)	Max. (V)	I_{ZT} (mA)	(Ω) at I_{ZT}	I_{ZT} (mA)	I_R (μA) Max.	V_R (V)
27BS	24.26	27.64	5	45	5	0.2	21
27BSA	24.26	25.52					
27BSB	24.97	26.26					
27BSC	25.63	26.95					
27BSD	26.29	27.64					
30BS	26.99	30.51	5	55	5	0.2	23
30BSA	26.99	28.39					
30BSB	27.7	29.13					
30BSC	28.36	29.82					
30BSD	29.02	30.51					
33BS	29.68	33.11	5	65	5	0.2	25
33BSA	29.68	31.22					
33BSB	30.32	31.88					
33BSC	30.9	32.5					
33BSD	31.49	33.11					
36BS	32.14	35.77	5	75	5	0.2	27
36BSA	32.14	33.79					
36BSB	32.79	34.49					
36BSC	33.4	35.13					
36BSD	34.01	35.77					
39BS	34.68	38.52	5	85	5	0.2	30
39BSA	34.68	36.47					
39BSB	35.36	37.19					
39BSC	36	37.85					
39BSD	36.63	38.52					

[1] Tested with pulse tp = 20 ms.

[2] Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.


T_j = 25 °C
2V0BS
2V2BS
2V4BS
2V7BS
3V0BS
3V3BS
3V6BS
3V9BS
4V3BS
4V7BS
5V1BS
5V6BS
6V2BS
6V8BS
7V5BS
8V2BS
9V1BS
10BS
Test Current
Iz=5mA
Iz [mA]
Vz [V]


11BS
12BS
13BS
15BS
16BS
18BS
20BS
22BS
24BS
27BS
30BS
33BS
36BS
39BS
Test Current
Iz=5mA
Iz [mA]
Vz [V]