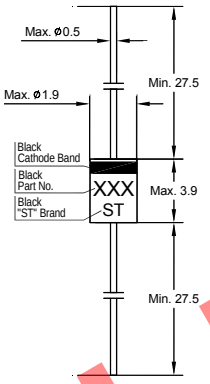
HS Series

Silicon Epitaxial Planar Zener Diodes



Glass Case DO-35
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_{stg}	- 55 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
Forward Voltage at I_F = 100 mA	V_F	1	V

[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]			Dynamic Resistance		Reverse Leakage Current	
	V_Z		at I_{ZT}	Z_{ZT}	at I_{ZT}	I_R	at V_R
	Min. (V)	Max. (V)	(mA)	Max. (Ω)	(mA)	Max. (µA)	(V)
2V0HS	1.88	2.2	5	100	5	120	0.5
2V0HSA	1.88	2.1	5	100	5	120	0.5
2V0HSB	2.02	2.2	5	100	5	120	0.5
2V2HS	2.12	2.41	5	100	5	120	0.7
2V2HSA	2.12	2.3	5	100	5	120	0.7
2V2HSB	2.22	2.41	5	100	5	120	0.7
2V4HS	2.33	2.63	5	100	5	120	1
2V4HSA	2.33	2.52	5	100	5	120	1
2V4HSB	2.43	2.63	5	100	5	120	1
2V7HS	2.54	2.91	5	110	5	100	1
2V7HSA	2.54	2.75	5	110	5	100	1
2V7HSB	2.69	2.91	5	110	5	100	1
3V0HS	2.85	3.22	5	120	5	50	1
3V0HSA	2.85	3.07	5	120	5	50	1
3V0HSB	3.01	3.22	5	120	5	50	1
3V3HS	3.16	3.53	5	120	5	20	1
3V3HSA	3.16	3.38	5	120	5	20	1
3V3HSB	3.32	3.53	5	120	5	20	1
3V6HS	3.47	3.83	5	120	5	10	1
3V6HSA	3.47	3.68	5	120	5	10	1
3V6HSB	3.62	3.83	5	120	5	10	1
3V9HS	3.77	4.14	5	120	5	5	1
3V9HSA	3.77	3.98	5	120	5	5	1
3V9HSB	3.92	4.14	5	120	5	5	1
4V3HS	4.05	4.53	5	120	5	5	1
4V3HSA	4.05	4.26	5	120	5	5	1
4V3HSB	4.2	4.4	5	120	5	5	1
4V3HSC	4.34	4.53	5	120	5	5	1
4V7HS	4.47	4.91	5	100	5	5	1
4V7HSA	4.47	4.65	5	100	5	5	1
4V7HSB	4.59	4.77	5	100	5	5	1
4V7HSC	4.71	4.91	5	100	5	5	1
5V1HS	4.85	5.35	5	70	5	5	1.5
5V1HSA	4.85	5.03	5	70	5	5	1.5
5V1HSB	4.97	5.18	5	70	5	5	1.5
5V1HSC	5.12	5.35	5	70	5	5	1.5
5V6HS	5.29	5.88	5	40	5	5	2.5
5V6HSA	5.29	5.52	5	40	5	5	2.5
5V6HSB	5.46	5.7	5	40	5	5	2.5
5V6HSC	5.64	5.88	5	40	5	5	2.5

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Type	Zener Voltage [1]			Dynamic Resistance		Reverse Leakage Current	
	V_Z		at I_{ZT}	Z_{ZT}	at I_{ZT}	I_R	at V_R
	Min. (V)	Max. (V)	(mA)	Max. (Ω)	(mA)	Max. (µA)	(V)
6V2HS	5.81	6.4	5	30	5	5	3
6V2HSA	5.81	6.06	5	30	5	5	3
6V2HSB	5.99	6.24	5	30	5	5	3
6V2HSC	6.16	6.4	5	30	5	5	3
6V8HS	6.32	6.97	5	25	5	2	3.5
6V8HSA	6.32	6.59	5	25	5	2	3.5
6V8HSB	6.52	6.79	5	25	5	2	3.5
6V8HSC	6.7	6.97	5	25	5	2	3.5
7V5HS	6.88	7.64	5	25	5	0.5	4
7V5HSA	6.88	7.19	5	25	5	0.5	4
7V5HSB	7.11	7.41	5	25	5	0.5	4
7V5HSC	7.33	7.64	5	25	5	0.5	4
8V2HS	7.56	8.41	5	20	5	0.5	5
8V2HSA	7.56	7.9	5	20	5	0.5	5
8V2HSB	7.82	8.15	5	20	5	0.5	5
8V2HSC	8.07	8.41	5	20	5	0.5	5
9V1HS	8.33	9.29	5	20	5	0.5	6
9V1HSA	8.33	8.7	5	20	5	0.5	6
9V1HSB	8.61	8.99	5	20	5	0.5	6
9V1HSC	8.89	9.29	5	20	5	0.5	6
10HS	9.19	10.3	5	20	5	0.2	7
10HSA	9.19	9.59	5	20	5	0.2	7
10HSB	9.48	9.9	5	20	5	0.2	7
10HSC	9.82	10.3	5	20	5	0.2	7
11HS	10.18	11.26	5	20	5	0.2	8
11HSA	10.18	10.63	5	20	5	0.2	8
11HSB	10.5	10.95	5	20	5	0.2	8
11HSC	10.82	11.26	5	20	5	0.2	8
12HS	11.13	12.3	5	25	5	0.2	9
12HSA	11.13	11.63	5	25	5	0.2	9
12HSB	11.5	11.92	5	25	5	0.2	9
12HSC	11.8	12.3	5	25	5	0.2	9
13HS	12.18	13.62	5	25	5	0.2	10
13HSA	12.18	12.71	5	25	5	0.2	10
13HSB	12.59	13.16	5	25	5	0.2	10
13HSC	13.03	13.62	5	25	5	0.2	10
15HS	13.48	15.02	5	25	5	0.2	11
15HSA	13.48	14.09	5	25	5	0.2	11
15HSB	13.95	14.56	5	25	5	0.2	11
15HSC	14.42	15.02	5	25	5	0.2	11

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Characteristics at T_a = 25 °C

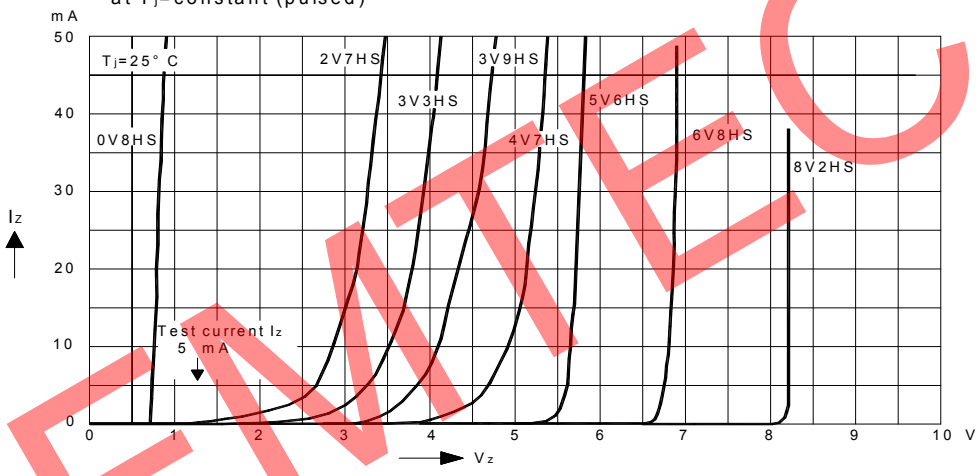
Type	Zener Voltage [1]			Dynamic Resistance		Reverse Leakage Current	
	V_Z		at I_{ZT}	Z_{ZT}	at I_{ZT}	I_R	at V_R
	Min. (V)	Max. (V)	(mA)	Max. (Ω)	(mA)	Max. (µA)	(V)
16HS	14.87	16.5	5	25	5	0.2	12
16HSA	14.87	15.5	5	25	5	0.2	12
16HSB	15.33	15.96	5	25	5	0.2	12
16HSC	15.79	16.5	5	25	5	0.2	12
18HS	16.34	18.30	5	30	5	0.2	13
18HSA	16.34	17.06	5	30	5	0.2	13
18HSB	16.9	17.67	5	30	5	0.2	13
18HSC	17.51	18.3	5	30	5	0.2	13
20HS	18.14	20.45	5	30	5	0.2	15
20HSA	18.14	18.96	5	30	5	0.2	15
20HSB	18.8	19.68	5	30	5	0.2	15
20HSC	19.52	20.45	5	30	5	0.2	15
22HS	20.23	22.61	5	30	5	0.2	17
22HSA	20.23	21.08	5	30	5	0.2	17
22HSB	20.76	21.65	5	30	5	0.2	17
22HSC	21.22	22.09	5	30	5	0.2	17
22HSD	21.68	22.61	5	30	5	0.2	17
24HS	22.26	24.81	5	35	5	0.2	19
24HSA	22.26	23.12	5	35	5	0.2	19
24HSB	22.75	23.73	5	35	5	0.2	19
24HSC	23.29	24.27	5	35	5	0.2	19
24HSD	23.81	24.81	5	35	5	0.2	19
27HS	24.26	27.64	5	45	5	0.2	21
27HSA	24.26	25.52	5	45	5	0.2	21
27HSB	24.97	26.26	5	45	5	0.2	21
27HSC	25.63	26.95	5	45	5	0.2	21
27HSD	26.29	27.64	5	45	5	0.2	21
30HS	26.99	30.51	5	55	5	0.2	23
30HSA	26.99	28.39	5	55	5	0.2	23
30HSB	27.7	29.13	5	55	5	0.2	23
30HSC	28.36	29.82	5	55	5	0.2	23
30HSD	29.02	30.51	5	55	5	0.2	23
33HS	29.68	33.11	5	65	5	0.2	25
33HSA	29.68	31.22	5	65	5	0.2	25
33HSB	30.32	31.88	5	65	5	0.2	25
33HSC	30.9	32.5	5	65	5	0.2	25
33HSD	31.49	33.11	5	65	5	0.2	25
36HS	32.14	35.77	5	75	5	0.2	27
36HSA	32.14	33.79	5	75	5	0.2	27
36HSB	32.79	34.49	5	75	5	0.2	27

Characteristics at T_a = 25 °C

Type	Zener Voltage [1]			Dynamic Resistance		Reverse Leakage Current	
	V_Z		at I_{ZT}	Z_{ZT}	at I_{ZT}	I_R	at V_R
	Min. (V)	Max. (V)	(mA)	Max. (Ω)	(mA)	Max. (µA)	(V)
36HSC	33.4	35.13	5	75	5	0.2	27
36HSD	34.01	35.77	5	75	5	0.2	27
39HS	34.68	38.52	5	85	5	0.2	30
39HSA	34.68	36.47	5	85	5	0.2	30
39HSB	35.36	37.19	5	85	5	0.2	30
39HSC	36	37.85	5	85	5	0.2	30
39HSD	36.63	38.52	5	85	5	0.2	30

[1] Tested with pulse tp = 20 ms

Breakdown Characteristics
at T_j=constant (pulsed)



Breakdown Characteristics
at T_j=constant (pulsed)