

# HC Series SILICON PLANAR ZENER DIODE

Silicon Planar zener Diodes



Glass case JEDEC DO-35

Dimensions in mm

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

	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Power Dissipation at $T_{amb} = 25\text{ }^\circ\text{C}$	$P_{tot}$	500 <sup>1)</sup>	mW
Junction Temperature	$P_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-55 to + 175	$^\circ\text{C}$

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

### Characteristics at $T_j = 25\text{ }^\circ\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
Thermal Resistance Junction to Ambient Air	$R_{thA}$	-	-	0.3 <sup>1)</sup>	K/mW
Forward Voltage at $I_F = 100\text{ mA}$	$V_F$	-	-	1	V

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



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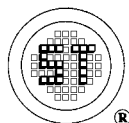
# HC Series SILICON PLANAR ZENER DIODE

Characteristics at  $T_j = 25^\circ\text{C}$

TYPE	Zener Voltage			Dynamic Resistance		Reverse Leakage Current ( $I_R$ at $V_R$ )	
	Min. (V)	Max (V)	$I_{ZT}$ (mA)	Ohm at $I_{ZT}$	$I_{ZT}$ (mA)	$I_R$ (uA) Max.	$V_R$ (V)
DO-35							
2.2 HC	2.09	2.41	20	120	20	120	0.7
2.2 HCA	2.12	2.30					
2.2 HCB	2.22	2.41					
2.4 HC	2.30	2.64	20	120	20	120	1
2.4 HCA	2.33	2.52					
2.4 HCB	2.43	2.63					
2.7 HC	2.50	2.90	20	100	20	100	1
2.7 HCA	2.54	2.75					
2.7 HCB	2.69	2.91					
3.0 HC	2.80	3.20	20	80	20	50	1
3.0 HCA	2.85	3.07					
3.0 HCB	3.01	3.22					
3.3 HC	3.10	3.50	20	70	20	20	1
3.3 HCA	3.16	3.38					
3.3 HCB	3.32	3.53					
3.6 HC	3.40	3.80	20	60	20	10	1
3.6 HCA	3.47	3.68					
3.6 HCB	3.62	3.83					
3.9 HC	3.70	4.10	20	50	20	5	1
3.9 HCA	3.77	3.98					
3.9 HCB	3.92	4.14					
4.3 HC	4.00	4.50	20	40	20	5	1
4.3 HCA	4.05	4.26					
4.3 HCB	4.20	4.40					
4.3 HCC	4.34	4.53					
4.7 HC	4.40	4.90	20	25	20	5	1
4.7 HCA	4.47	4.65					
4.7 HCB	4.59	4.77					
4.7 HCC	4.71	4.91					
5.1 HC	4.80	5.40	20	20	20	5	1.5
5.1 HCA	4.85	5.03					
5.1 HCB	4.97	5.18					
5.1 HCC	5.12	5.35					
5.6 HC	5.30	6.00	20	13	20	5	2.5
5.6 HCA	5.29	5.52					
5.6 HCB	5.46	5.70					
5.6 HCC	5.64	5.88					
6.2 HC	5.80	6.60	20	10	20	5	3
6.2 HCA	5.81	6.06					
6.2 HCB	5.99	6.24					
6.2 HCC	6.16	6.40					
6.8 HC	6.40	7.20	20	8	20	2	3.5
6.8 HCA	6.32	6.59					
6.8 HCB	6.52	6.79					
6.8 HCC	6.70	6.97					

1) Tested with pulse  $t_p = 40$  ms.

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



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# HC Series SILICON PLANAR ZENER DIODE

Characteristics at  $T_j = 25\text{ }^\circ\text{C}$

TYPE	Zener Voltage			Dynamic Resistance		Reverse Leakage Current ( $I_R$ at $V_R$ )	
	Min. (V)	Max (V)	$I_{ZT}$ (mV)	Ohm at $I_{ZT}$	$I_{ZT}$ (mA)	$I_R$ (uA) Max.	$V_R$ (V)
DO-35							
7.5 HC	7.00	7.90	20	8	20	0.5	4
7.5 HCA	6.88	7.19					
7.5 HCB	7.11	7.41					
7.5 HCC	7.33	7.64					
8.2 HC	7.70	8.70	20	8	20	0.5	5
8.2 HCA	7.56	7.90					
8.2 HCB	7.82	8.15					
8.2 HCC	8.07	8.41					
9.1 HC	8.50	9.60	20	8	20	0.5	6
9.1 HCA	8.33	8.70					
9.1 HCB	8.61	8.99					
9.1 HCC	8.89	9.29					
10 HC	9.40	10.90	20	8	20	0.2	7
10 HCA	9.19	9.59					
10 HCB	9.48	9.90					
10 HCC	9.82	10.30					
11 HC	10.40	11.60	10	10	10	0.2	8
11 HCA	10.18	10.63					
11 HCB	10.50	10.95					
11 HCC	10.82	11.26					
12 HC	11.40	12.60	10	12	10	0.2	9
12 HCA	11.13	11.63					
12 HCB	11.50	11.92					
12 HCC	11.80	12.30					
13 HC	12.40	14.10	10	14	10	0.2	10
13 HCA	12.18	12.71					
13 HCB	12.59	13.16					
13 HCC	13.03	13.62					
15 HC	13.80	15.60	10	16	10	0.2	11
15 HCA	13.48	14.09					
15 HCB	13.95	14.56					
15 HCC	14.42	15.52					
16 HC	15.30	17.10	10	18	10	0.2	12
16 HCA	14.87	15.50					
16 HCB	15.33	15.96					
16 HCC	15.79	16.50					
18 HC	16.80	19.10	10	23	10	0.2	13
18 HCA	16.34	17.06					
18 HCB	16.90	17.67					
18 HCC	17.51	18.30					
20 HC	18.80	21.60	10	28	10	0.2	15
20 HCA	18.11	18.92					
20 HCB	18.73	19.57					
20 HCC	19.38	20.22					
20 HCD	19.88	20.72					

1) Tested with pulse  $t_p = 40$  ms.

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



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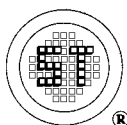
# HC Series SILICON PLANAR ZENER DIODE

Characteristics at  $T_j = 25^\circ\text{C}$

TYPE	Zener Voltage			Dynamic Resistance		Reverse Leakage Current ( $I_R$ at $V_R$ )	
	Min. (V)	Max (V)	$I_{ZT}$ (mA)	Ohm at $I_{ZT}$	$I_{ZT}$ (mA)	$I_R$ (uA) Max.	$V_R$ (V)
DO-35							
22 HC	20.80	23.30	5	30	5	0.2	17
22 HCA	20.23	21.08					
22 HCB	20.76	21.65					
22 HCC	21.22	22.09					
22 HCD	21.68	22.61					
24 HC	22.80	25.60	5	35	5	0.2	19
24 HCA	22.26	23.12					
24 HCB	22.75	23.73					
24 HCC	23.29	24.27					
24 HCD	23.81	24.81					
27 HC	25.10	28.90	5	45	5	0.2	21
27 HCA	24.26	25.52					
27 HCB	24.97	26.26					
27 HCC	25.63	26.95					
27 HCD	26.29	27.64					
30 HC	28.00	32.00	5	55	5	0.2	23
30 HCA	26.99	28.39					
30 HCB	27.70	29.13					
30 HCC	28.36	29.82					
30 HCD	29.02	30.51					
33 HC	31.00	35.00	5	65	5	0.2	25
33 HCA	29.68	31.22					
33 HCB	30.32	31.88					
33 HCC	30.90	32.50					
33 HCD	31.49	33.11					

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