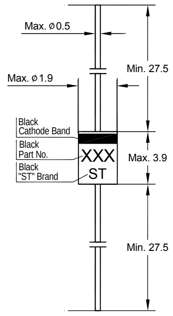
HZ Series

Silicon Epitaxial Planar Zener Diodes

for stabilized power supply



Glass Case DO-35
Dimensions in mm

Features

- Low leakage, low zener impedance and maximum power dissipation of 500 mW are ideally suited for stabilized power supply, etc.
- Wide spectrum from 1.8 V through 38 V of zener voltage provide flexible application.

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	500	mW
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_{stg}	- 55 to + 175	°C

Characteristics at T_a = 25 °C (V_F = 1 V Max. at I_F = 100 mA)

Type	Zener Voltage [1]			Reverse Leakage Current		Dynamic Resistance	
	V_Z		at I_{ZT}	I_R	at V_R	Z_{ZT}	at I_{ZT}
	Min. (V)	Max. (V)	(mA)	Max. (μA)	(V)	Max. (Ω)	(mA)
HZ2A3	1.8	2	5	25	0.5	100	5
HZ2B1	1.9	2.1	5	5	0.5	100	5
HZ2B2	2	2.2	5	5	0.5	100	5
HZ2B3	2.1	2.3	5	5	0.5	100	5
HZ2C1	2.2	2.4	5	5	0.5	100	5
HZ2C2	2.3	2.5	5	5	0.5	100	5
HZ2C3	2.4	2.6	5	5	0.5	100	5
HZ3A1	2.5	2.7	5	5	0.5	100	5
HZ3A2	2.6	2.8	5	5	0.5	100	5
HZ3A3	2.7	2.9	5	5	0.5	100	5
HZ3B1	2.8	3	5	5	0.5	100	5
HZ3B2	2.9	3.1	5	5	0.5	100	5
HZ3B3	3	3.2	5	5	0.5	100	5
HZ3C1	3.1	3.3	5	5	0.5	100	5
HZ3C2	3.2	3.4	5	5	0.5	100	5
HZ3C3	3.3	3.5	5	5	0.5	100	5
HZ4A1	3.4	3.6	5	5	1	100	5
HZ4A2	3.5	3.7	5	5	1	100	5
HZ4A3	3.6	3.8	5	5	1	100	5
HZ4B1	3.7	3.9	5	5	1	100	5
HZ4B2	3.8	4	5	5	1	100	5
HZ4B3	3.9	4.1	5	5	1	100	5
HZ4C1	4	4.2	5	5	1	100	5
HZ4C2	4.1	4.3	5	5	1	100	5

Characteristics at T_a = 25 °C (V_F = 1 V Max. at I_F = 100 mA)

Type	Zener Voltage [1]			Reverse Leakage Current		Dynamic Resistance	
	V_Z		at I_{ZT}	I_R	at V_R	Z_{ZT}	at I_{ZT}
	Min. (V)	Max. (V)	(mA)	Max. (µA)	(V)	Max. (Ω)	(mA)
HZ4C3	4.2	4.4	5	5	1	100	5
HZ5A1	4.3	4.5	5	5	1.5	100	5
HZ5A2	4.4	4.6	5	5	1.5	100	5
HZ5A3	4.5	4.7	5	5	1.5	100	5
HZ5B1	4.6	4.8	5	5	1.5	100	5
HZ5B2	4.7	4.9	5	5	1.5	100	5
HZ5B3	4.8	5	5	5	1.5	100	5
HZ5C1	4.9	5.1	5	5	1.5	100	5
HZ5C2	5	5.2	5	5	1.5	100	5
HZ5C3	5.1	5.3	5	5	1.5	100	5
HZ6A1	5.2	5.5	5	5	2	40	5
HZ6A2	5.3	5.6	5	5	2	40	5
HZ6A3	5.4	5.7	5	5	2	40	5
HZ6B1	5.5	5.8	5	5	2	40	5
HZ6B2	5.6	5.9	5	5	2	40	5
HZ6B3	5.7	6	5	5	2	40	5
HZ6C1	5.8	6.1	5	5	2	40	5
HZ6C2	6	6.3	5	5	2	40	5
HZ6C3	6.1	6.4	5	5	2	40	5
HZ7A1	6.3	6.6	5	1	3.5	15	5
HZ7A2	6.4	6.7	5	1	3.5	15	5
HZ7A3	6.6	6.9	5	1	3.5	15	5
HZ7B1	6.7	7	5	1	3.5	15	5
HZ7B2	6.9	7.2	5	1	3.5	15	5
HZ7B3	7	7.3	5	1	3.5	15	5
HZ7C1	7.2	7.6	5	1	3.5	15	5
HZ7C2	7.3	7.7	5	1	3.5	15	5
HZ7C3	7.5	7.9	5	1	3.5	15	5
HZ9A1	7.7	8.1	5	1	5	20	5
HZ9A2	7.9	8.3	5	1	5	20	5
HZ9A3	8.1	8.5	5	1	5	20	5
HZ9B1	8.3	8.7	5	1	5	20	5
HZ9B2	8.5	8.9	5	1	5	20	5
HZ9B3	8.7	9.1	5	1	5	20	5
HZ9C1	8.9	9.3	5	1	5	20	5
HZ9C2	9.1	9.5	5	1	5	20	5
HZ9C3	9.3	9.7	5	1	5	20	5
HZ11A1	9.5	9.9	5	1	7.5	25	5
HZ11A2	9.7	10.1	5	1	7.5	25	5
HZ11A3	9.9	10.3	5	1	7.5	25	5
HZ11B1	10.2	10.6	5	1	7.5	25	5
HZ11B2	10.4	10.8	5	1	7.5	25	5
HZ11B3	10.7	11.1	5	1	7.5	25	5
HZ11C1	10.9	11.3	5	1	7.5	25	5
HZ11C2	11.1	11.6	5	1	7.5	25	5
HZ11C3	11.4	11.9	5	1	7.5	25	5

Characteristics at T_a = 25 °C (V_F = 1 V Max. at I_F = 100 mA)

Type	Zener Voltage [1)]			Reverse Leakage Current		Dynamic Resistance	
	V_Z		at I_{ZT}	I_R	at V_R	Z_{ZT}	at I_{ZT}
	Min. (V)	Max. (V)	(mA)	Max. (μA)	(V)	Max. (Ω)	(mA)
HZ12A1	11.6	12.1	5	1	9.5	35	5
HZ12A2	11.9	12.4	5	1	9.5	35	5
HZ12A3	12.2	12.7	5	1	9.5	35	5
HZ12B1	12.4	12.9	5	1	9.5	35	5
HZ12B2	12.6	13.1	5	1	9.5	35	5
HZ12B3	12.9	13.4	5	1	9.5	35	5
HZ12C1	13.2	13.7	5	1	9.5	35	5
HZ12C2	13.5	14	5	1	9.5	35	5
HZ12C3	13.8	14.3	5	1	9.5	35	5
HZ15-1	14.1	14.7	5	1	11	40	5
HZ15-2	14.5	15.1	5	1	11	40	5
HZ15-3	14.9	15.5	5	1	11	40	5
HZ16-1	15.3	15.9	5	1	12	45	5
HZ16-2	15.7	16.5	5	1	12	45	5
HZ16-3	16.3	17.1	5	1	12	45	5
HZ18-1	16.9	17.7	5	1	13	55	5
HZ18-2	17.5	18.3	5	1	13	55	5
HZ18-3	18.1	19	5	1	13	55	5
HZ20-1	18.8	19.7	2	1	15	60	2
HZ20-2	19.5	20.4	2	1	15	60	2
HZ20-3	20.2	21.1	2	1	15	60	2
HZ22-1	20.9	21.9	2	1	17	65	2
HZ22-2	21.6	22.6	2	1	17	65	2
HZ22-3	22.3	23.3	2	1	17	65	2
HZ24-1	22.9	24	2	1	19	70	2
HZ24-2	23.6	24.7	2	1	19	70	2
HZ24-3	24.3	25.5	2	1	19	70	2
HZ27-1	25.2	26.6	2	1	21	80	2
HZ27-2	26.2	27.6	2	1	21	80	2
HZ27-3	27.2	28.6	2	1	21	80	2
HZ30-1	28.2	29.6	2	1	23	100	2
HZ30-2	29.2	30.6	2	1	23	100	2
HZ30-3	30.2	31.6	2	1	23	100	2
HZ33-1	31.2	32.6	2	1	25	120	2
HZ33-2	32.2	33.6	2	1	25	120	2
HZ33-3	33.2	34.6	2	1	25	120	2
HZ36-1	34.2	35.7	2	1	27	140	2
HZ36-2	35.3	36.8	2	1	27	140	2
HZ36-3	36.4	38	2	1	27	140	2

[1)] Tested with pulses tp = 20 ms.

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Fig.1- Zener current versus zener voltage

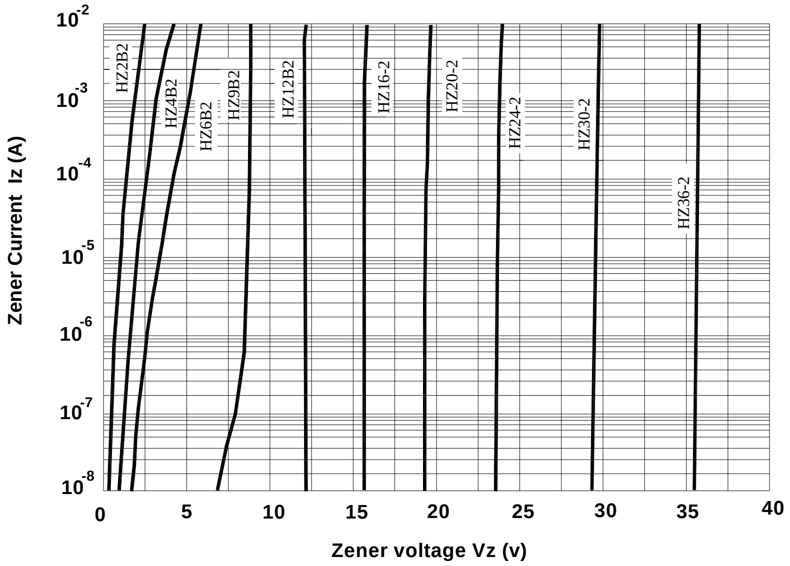

Fig.2 Temperature Coefficient Vs. Zener voltage

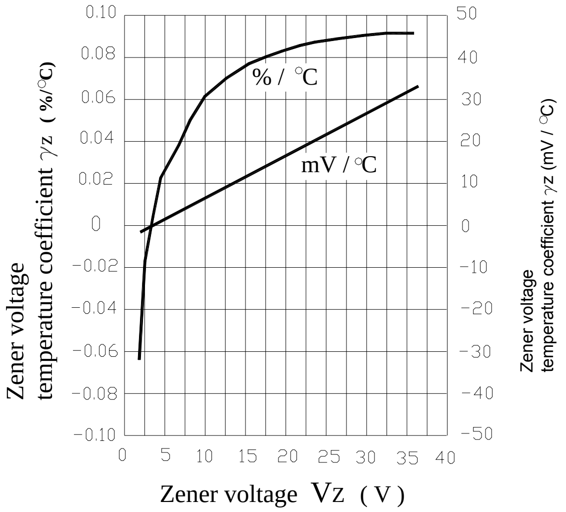

Fig. 3 Power dissipation Vs. Ambient temperature