

Zener diode

Features

1. Low leakage
2. High reliability

Applications

Voltage stabilization

Construction

Silicon epitaxial planar



Absolute Maximum Ratings

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

Parameter	Test Conditions	Type	Symbol	Value	Unit
Power dissipation	$R_{thJA} \leq 300\text{K/W}$		P_V	500	mW
Junction temperature			T_j	175	$^{\circ}\text{C}$
Storage temperature range			T_{stg}	-65~+175	$^{\circ}\text{C}$

Maximum Thermal Resistance

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

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on PC board 50mm×50mm×1.6mm	R_{thJA}	500	K/W

Electrical Characteristics

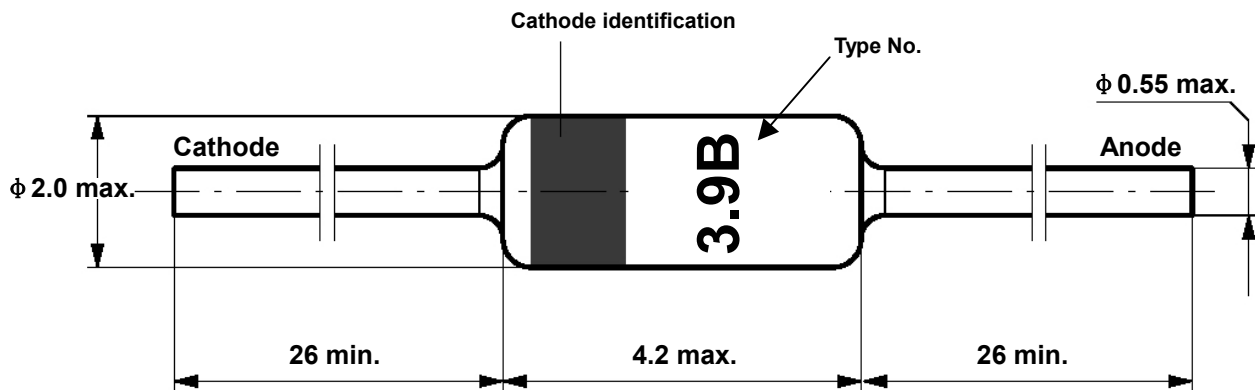
T_j=25°C

Type	Zener voltage				Operating resistance		Rising operating resistance		Reverse current	
	Rank	V _z (V)		I _z (mA)	Z _{zt} (Ω)		Z _{zk} (Ω)		I _R (μA)	
		Min.	Max.		Max.	I _z (mA)	Max.	I _z (mA)	Max.	V _R (V)
Z 2.0	A	1.88	2.10	20	140	20	2000	1	120	0.5
	B	2.02	2.20							
Z 2.2	A	2.12	2.30	20	120	20	2000	1	120	0.7
	B	2.22	2.41							
Z 2.4	A	2.33	2.52	20	100	20	2000	1	120	1.0
	B	2.43	2.63							
Z 2.7	A	2.54	2.75	20	100	20	1000	1	120	1.0
	B	2.69	2.91							
Z 3.0	A	2.85	3.07	20	80	20	1000	1	50	1.0
	B	3.01	3.22							
Z 3.3	A	3.16	3.38	20	70	20	1000	1	20	1.0
	B	3.32	3.53							
Z 3.6	A	3.46	3.69	20	60	20	1000	1	10	1.0
	B	3.60	3.84							
Z 3.9	A	3.74	4.01	20	50	20	1000	1	5	1.0
	B	3.89	4.16							
Z 4.3	A	4.04	4.29	20	40	20	1000	1	5	1.0
	B	4.17	4.43							
	C	4.30	4.57							
Z 4.7	A	4.44	4.68	20	25	20	900	1	5	1.0
	B	4.55	4.80							
	C	4.68	4.93							
Z 5.1	A	4.81	5.07	20	20	20	800	1	5	1.5
	B	4.94	5.20							
	C	5.09	5.37							
Z 5.6	A	5.28	5.55	20	13	20	500	1	5	2.5
	B	5.45	5.73							
	C	5.61	5.91							
Z 6.2	A	5.78	6.09	20	10	20	300	1	5	3.0
	B	5.96	6.27							
	C	6.12	6.44							
Z 6.8	A	6.29	6.63	20	8	20	150	0.5	2	3.5
	B	6.49	6.83							
	C	6.66	7.01							
Z 7.5	A	6.85	7.22	20	8	20	120	0.5	0.5	4.0
	B	7.07	7.45							
	C	7.29	7.67							
Z 8.2	A	7.53	7.92	20	8	20	120	0.5	0.5	5.0
	B	7.78	8.19							
	C	8.03	8.45							
Z 9.1	A	8.29	8.73	20	8	20	120	0.5	0.5	6.0
	B	8.57	9.01							
	C	8.83	9.30							

Type	Zener voltage				Operating resistance		Rising operating resistance		Reverse current	
	Rank	Vz (V)		Iz (mA)	Zzt (Ω)		Zzk (Ω)		IR (μA)	
		Min.	Max.		Max.	Iz (mA)	Max.	Iz (mA)	Max.	VR (V)
Z 10	A	9.12	9.59	20	8	20	120	0.5	0.2	7.0
	B	9.41	9.90							
	C	9.70	10.20							
	D	9.94	10.44							
Z 11	A	10.18	10.71	10	10	10	120	0.5	0.2	8.0
	B	10.50	11.05							
	C	10.82	11.38							
Z 12	A	11.13	11.71	10	12	10	110	0.5	0.2	9.0
	B	11.44	12.03							
	C	11.74	12.35							
Z 13	A	12.11	12.75	10	14	10	110	0.5	0.2	10
	B	12.55	13.21							
	C	12.99	13.66							
Z 15	A	13.44	14.13	10	16	10	110	0.5	0.2	11
	B	13.89	14.62							
	C	14.35	15.09							
Z 16	A	14.80	15.57	10	18	10	150	0.5	0.2	12
	B	15.25	16.04							
	C	15.69	16.51							
Z 18	A	16.22	17.06	10	23	10	150	0.5	0.2	13
	B	16.82	17.70							
	C	17.42	18.33							
Z 20	A	18.20	18.96	10	28	10	200	0.5	0.2	15
	B	18.63	19.59							
	C	19.23	20.22							
	D	19.72	20.72							
Z 22	A	20.15	21.20	5	30	5	200	0.5	0.2	17
	B	20.64	21.71							
	C	21.08	22.17							
	D	21.52	22.63							
Z 24	A	22.05	23.18	5	35	5	200	0.5	0.2	19
	B	22.61	23.77							
	C	23.12	24.13							
	D	23.63	24.85							
Z 27	A	24.26	25.52	5	45	5	250	0.5	0.2	21
	B	24.97	26.26							
	C	25.63	26.95							
	D	26.29	27.64							
Z 30	A	26.99	28.39	5	55	5	250	0.5	0.2	23
	B	27.70	29.13							
	C	28.36	29.82							
	D	29.02	30.51							

Type	Zener voltage				Operating resistance		Rising operating resistance		Reverse current	
	Rank	Vz (V)		Iz (mA)	Zzt (Ω)		Zzk (Ω)		IR (μA)	
		Min.	Max.		Max.	Iz (mA)	Max.	Iz (mA)	Max.	VR (V)
Z 33	A	29.68	31.22	5	65	5	250	0.5	0.2	25
	B	30.32	31.88							
	C	30.90	32.50							
	D	31.49	33.11							
Z 36	A	32.14	33.79	5	75	5	250	0.5	0.2	27
	B	32.79	34.49							
	C	33.40	35.13							
	D	34.01	35.77							
Z 39	A	34.68	36.47	5	85	5	250	0.5	0.2	30
	B	35.36	37.19							
	C	36.00	37.85							
	D	36.63	38.52							

Dimensions in mm



Standard Glass Case
JEDEC DO 35

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