

New Product

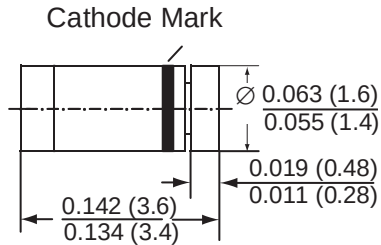
GLZ Series

Zener Diodes

V_Z Range 3.3 to 39V

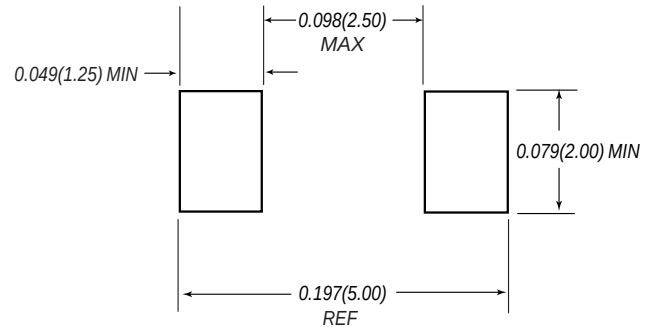
Power Dissipation 500mW

MiniMELF (SOD-80C)



Dimensions in inches and (millimeters)

Mounting Pad Layout



Mechanical Data

Case: MiniMELF Glass Case (SOD-80C)

Weight: approx. 0.05g

Packaging codes/options:

D1/10K per 13" reel (8mm tape), 20K/box

D2/2.5K per 7" reel (8mm tape), 20K/box

Features

- Silicon Planar Zener Diodes
- In MiniMELF case especially for automatic insertion
- The Zener voltages are graded according to voltage bands instead of by tolerance.
- Low Zener impedance and low leakage current
- Popular in Asian designs

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Power Dissipation (see fig. 1)	P _D	500 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air	R _{θJA}	300 ⁽¹⁾	°C/W
Junction temperature	T _J	175	°C
Storage temperature range	T _S	-55 to +175	°C

Note:

(1) Valid provided that electrodes are kept at ambient temperature.

Type	Zener Voltage				Dynamic Resistance ⁽³⁾				Reverse Leakage Current	
	Rank	V _Z (V) at I _{ZT}			Z _Z (Ω) at I _{ZT}		Z _{ZK} (Ω) at I _{ZK}		I _R (μA)	
		Min	Max	I _{ZT} (mA)	Max	I _Z (mA)	Max	I _{ZK} (mA)	Max.	V _R (V)
GLZ3.3	A B	3.160 3.320	3.380 3.530	20	70	20	1000	1	20	1.0
GLZ3.6	A B	3.455 3.600	3.695 3.845	20	60	20	1000	1	10	1.0
GLZ3.9	A B	3.74 3.89	4.01 4.16	20	50	20	1000	1	5	1.0
GLZ4.3	A B C	4.04 4.17 4.30	4.29 4.43 4.57	20	40	20	1000	1	5	1.0
GLZ4.7	A B C	4.44 4.55 4.68	4.68 4.80 4.93	20	25	20	900	1	5	1.0
GLZ5.1	A B C	4.81 4.94 5.09	5.07 5.20 5.37	20	20	20	800	1	5	1.5
GLZ5.6	A B C	5.28 5.45 5.61	5.55 5.73 5.91	20	13	20	500	1	5	2.5
GLZ6.2	A B C	5.78 5.96 6.12	6.09 6.27 6.44	20	10	20	300	1	5	3.0
GLZ6.8	A B C	6.29 6.49 6.66	6.63 6.83 7.01	20	8	20	150	0.5	2	3.5
GLZ7.5	A B C	6.85 7.07 7.29	7.22 7.45 7.67	20	8	20	120	0.5	0.5	4.0
GLZ8.2	A B C	7.53 7.78 8.03	7.92 8.19 8.45	20	8	20	120	0.5	0.5	5.0
GLZ9.1	A B C	8.29 8.57 8.83	8.73 9.01 9.30	20	8	20	120	0.5	0.5	6.0
GLZ10	A B C D	9.12 9.41 9.70 9.94	9.59 9.90 10.20 10.44	20	8	20	120	0.5	0.2	7.0
GLZ11	A B C	10.18 10.50 10.82	10.71 11.05 11.38	10	10	10	120	0.5	0.2	8.0
GLZ12	A B C	11.13 11.44 11.74	11.71 12.03 12.35	10	12	10	110	0.5	0.2	9.0

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Type	Zener Voltage				Dynamic Resistance ⁽³⁾				Reverse Leakage Current	
	Rank	V _Z (V) at I _{ZT}			Z _Z (Ω) at I _{ZT}		Z _{ZK} (Ω) at I _{ZK}		I _R (μA)	
		Min	Max	I _{ZT} (mA)	Max	I _Z (mA)	Max	I _{ZK} (mA)	Max.	V _R (V)
GLZ13	A	12.11	12.75	10	14	10	110	0.5	0.2	10
	B	12.55	13.21							
	C	12.99	13.66							
GLZ15	A	13.44	14.13	10	16	10	110	0.5	0.2	11
	B	13.89	14.62							
	C	14.35	15.09							
GLZ16	A	14.80	15.57	10	18	10	150	0.5	0.2	12
	B	15.25	16.04							
	C	15.69	16.51							
GLZ18	A	16.22	17.06	10	23	10	150	0.5	0.2	13
	B	16.82	17.70							
	C	17.42	18.33							
GLZ20	A	18.02	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							
GLZ22	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							
GLZ24	A	22.05	23.18	5	35	5	200	0.5	0.2	19
	B	22.61	23.77							
	C	23.12	24.31							
	D	23.63	24.85							
GLZ27	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							
GLZ30	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							
GLZ33	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							
GLZ36	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							
GLZ39	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							

Notes: (1) The Zener voltage is measured 40ms after power is supplied.
(2) Specify Zener voltage rank (A, B, C, or D) when ordering parts
(3) Dynamic Zener resistance is measured with f = 1kHz

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Power Derating Curve

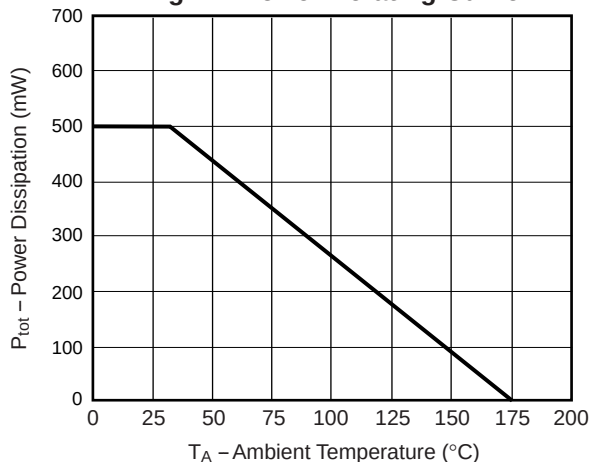


Fig. 2 – Typical Breakdown Characteristics

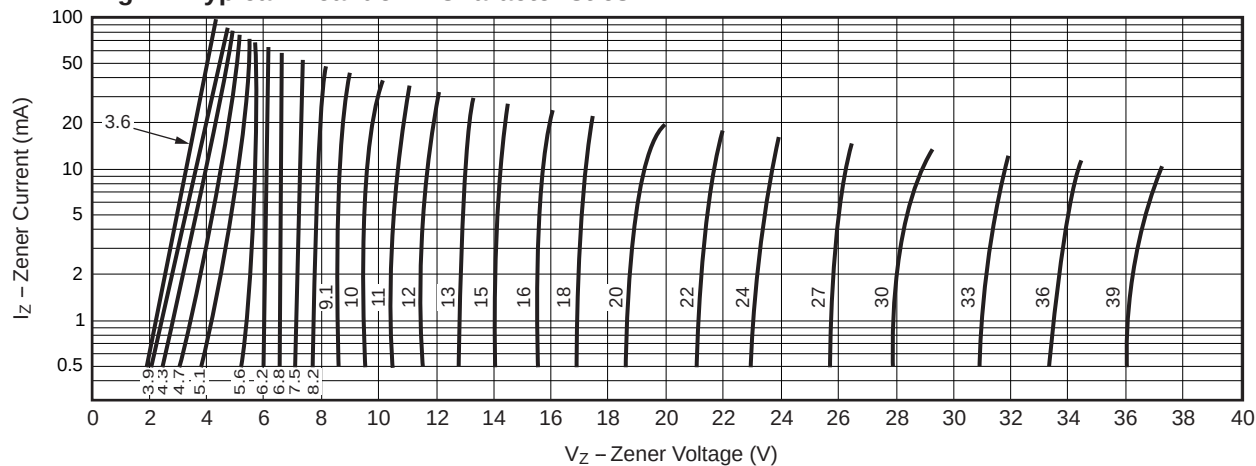


Fig. 3 – Typical R_Z vs. I_Z

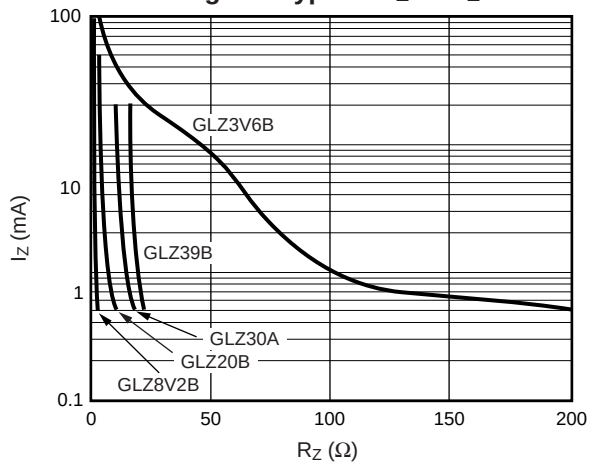


Fig. 4 – Typical Forward Characteristics

