

ZMY3.9 - ZMY100

V_Z : 3.9 to 100V

P_D : 1W

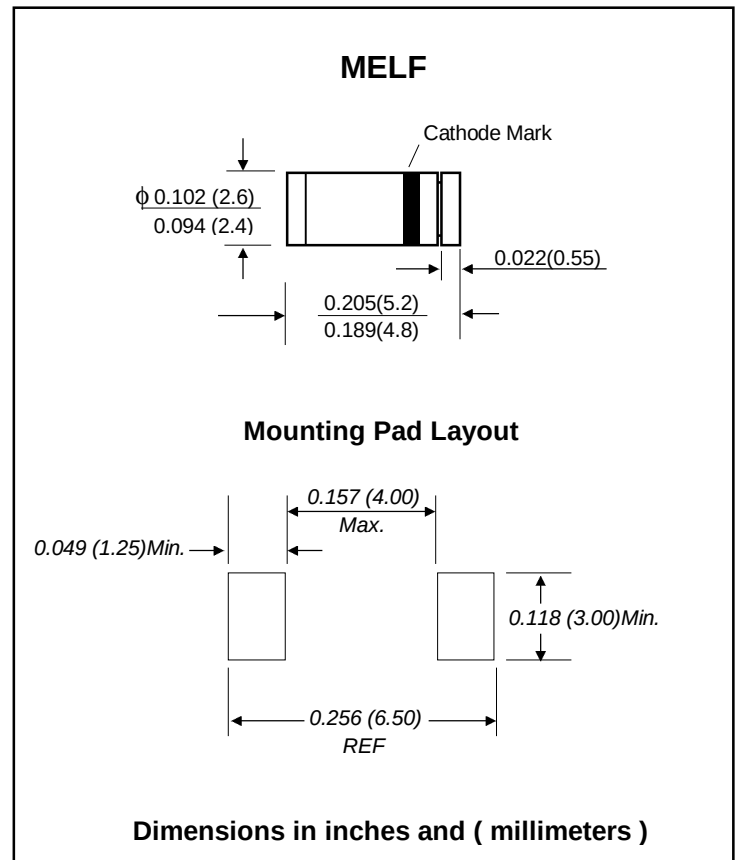
FEATURES :

- Silicon planar power zener diodes
- For use in stabilizing and clipping circuits with higher power rating.
- These diodes are also available in the DO-41 case with the type designation ZPY3.6... ZPY100.
- Pb / RoHS Free

MECHANICAL DATA :

- * Case : MELF Glass Case
- * Weight : 0.25 g (approx.)

ZENER DIODES



Maximum Ratings and Thermal Characteristics (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Power Dissipation	P_D	1 ⁽¹⁾	W
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	170 ⁽¹⁾	°C/W
Thermal Resistance Junction to Case (Typ.)	$R_{\theta JC}$	60	°C/W
Junction temperature	T_J	175	°C
Storage temperature range	T_S	-65 to + 175	°C

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

ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type	Zener Voltage ⁽¹⁾ at I_{ZT} V_Z (V)		Dynamic Resistance at I_{ZT} , $f = 1\text{kHz}$ r_{zj} (Ω)	Temp. Coeff. Of Zener Voltage at I_{ZT} a_{VZ} ($10^{-4}/^\circ\text{C}$)		Test Current I_{ZT} (mA)	Reverse Voltage at $I_R = 0.5\text{mA}$ V_R V_R (V)	Asmissible Zener Current ⁽²⁾ I_Z (mA)
	min.	max.		min.	max.			
ZMY3.9	3.7	4.1	4(<7)	-7	2	100	-	203
ZMY4.3	4.0	4.6	4(<7)	-7	3	100	-	182
ZMY4.7	4.4	5.0	4(<7)	-7	4	100	-	165
ZMY5.1	4.8	5.4	2(<5)	-6	5	100	>0.7	150
ZMY5.6	5.2	6.0	1(<2)	-3	5	100	>1.5	135
ZMY6.2	5.8	6.6	1(<2)	-1	6	100	>2.0	128
ZMY6.8	6.4	7.2	1(<2)	0	7	100	>3.0	110
ZMY7.5	7.0	7.9	1(<2)	0	7	100	>5.0	100
ZMY8.2	7.7	8.7	1(<2)	3	8	100	>6.0	89
ZMY9.1	8.5	9.6	2(<4)	3	8	50	>7.0	82
ZMY10	9.4	10.6	2(<4)	5	9	50	>7.5	74
ZMY11	10.4	11.6	3(<7)	5	10	50	>8.5	66
ZMY12	11.4	12.7	3(<7)	5	10	50	>9.0	60
ZMY13	12.4	14.1	4(<9)	5	10	50	>10	55
ZMY15	13.8	15.8	4(<9)	5	10	50	>11	49
ZMY16	15.3	17.1	5(<10)	7	11	25	>12	44
ZMY18	16.8	19.1	5(<11)	7	11	25	>14	40
ZMY20	18.8	21.2	6(<12)	7	11	25	>15	36
ZMY22	20.8	23.3	7(<13)	7	11	25	>17	34
ZMY24	22.8	25.6	8(<14)	7	12	25	>18	29
ZMY27	25.1	28.9	9(<15)	7	12	25	>20	27
ZMY30	28	32	10(<20)	7	12	25	>22.5	25
ZMY33	31	35	11(<20)	7	12	25	>25	22
ZMY36	34	38	25(<60)	7	12	10	>27	20
ZMY39	37	41	30(<60)	8	12	10	>29	18
ZMY43	40	46	35(<80)	8	13	10	>32	17
ZMY47	44	50	40(<80)	8	13	10	>35	15
ZMY51	48	54	45(<100)	8	13	10	>38	14
ZMY56	52	60	50(<100)	8	13	10	>42	13
ZMY62	58	66	60(<130)	8	13	10	>47	11
ZMY68	64	72	65(<130)	8	13	10	>51	10
ZMY75	70	79	70(<160)	8	13	10	>56	9
ZMY82	77	88	80(<160)	8	13	10	>61	8
ZMY91	85	96	120(<250)	9	13	5	>68	7.5
ZMY100	94	106	130(<250)	9	13	5	>75	7

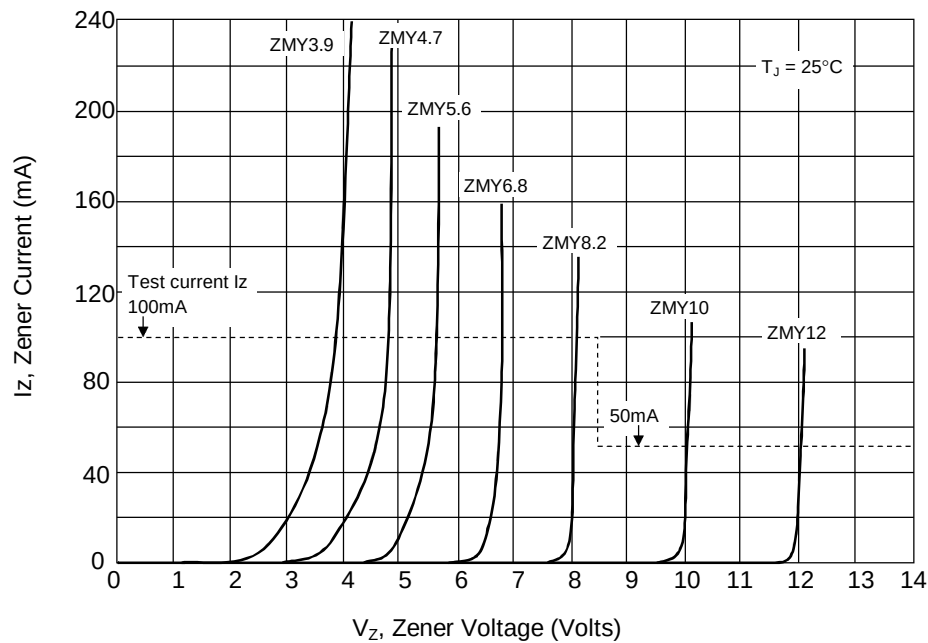
Notes: (1) Tested with pulses $t_p = 5\text{ms}$

(2) Valid provided that electrodes are kept at ambient temperature

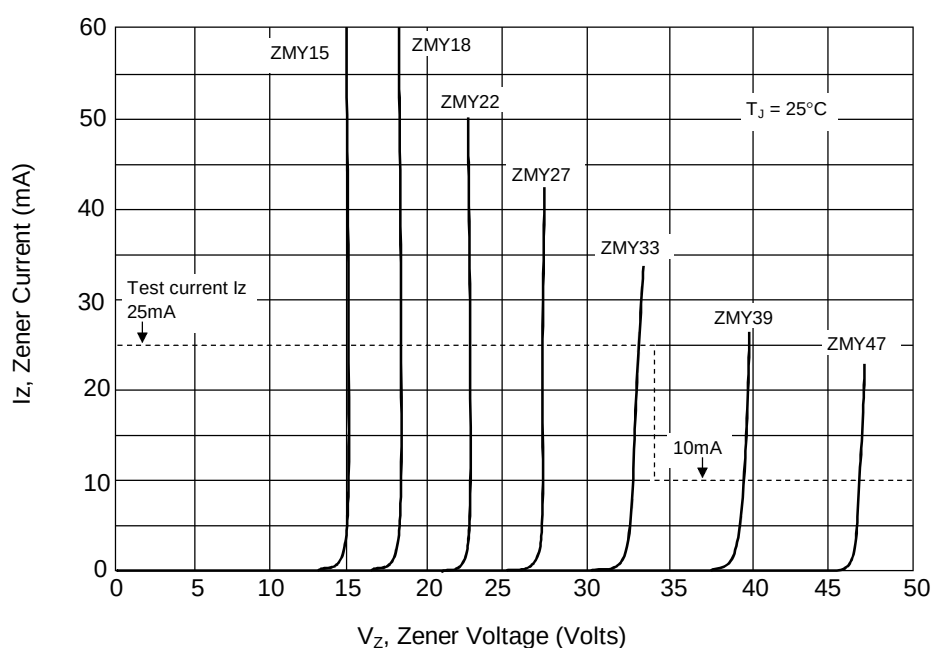
For devices in glass case MELF with higher Zener voltage but same power dissipation see types ZMU100 ... ZMU180

RATING AND CHARACTERISTIC CURVES (ZMY3.9 ~ ZMY100)

Breakdown Characteristics
 $T_J = \text{Constant (Pulsed)}$

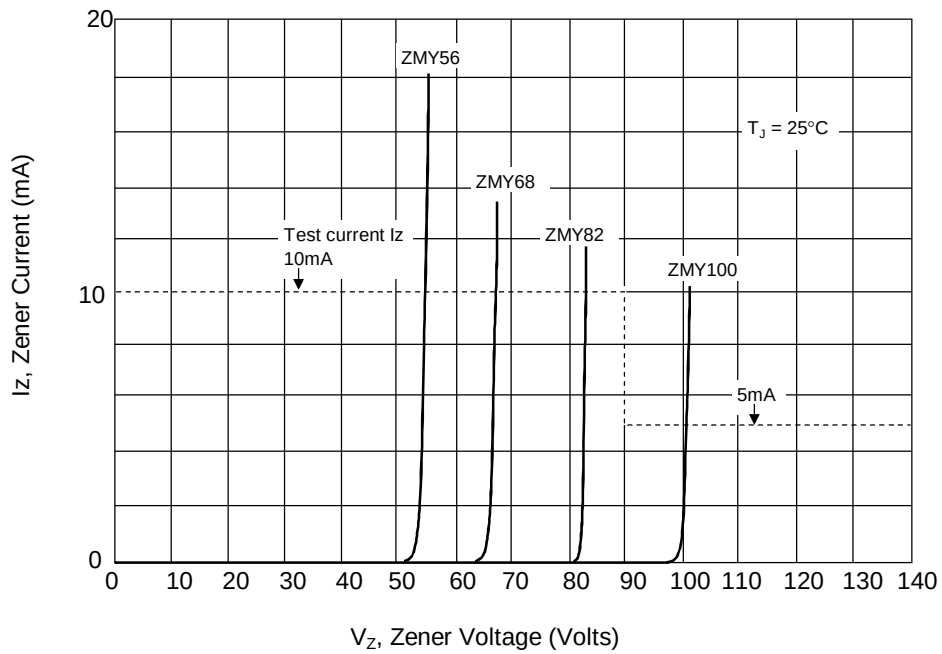


Breakdown Characteristics
 $T_J = \text{Constant (Pulsed)}$



RATING AND CHARACTERISTIC CURVES (ZMY3.9 ~ ZMY100)

Breakdown Characteristics
 $T_J = \text{Constant (Pulsed)}$



Power Temperature Derating Curve

