

## ZMY3.9C - ZMY100C

$V_Z$  : 3.9 to 100V

$P_D$  : 1W

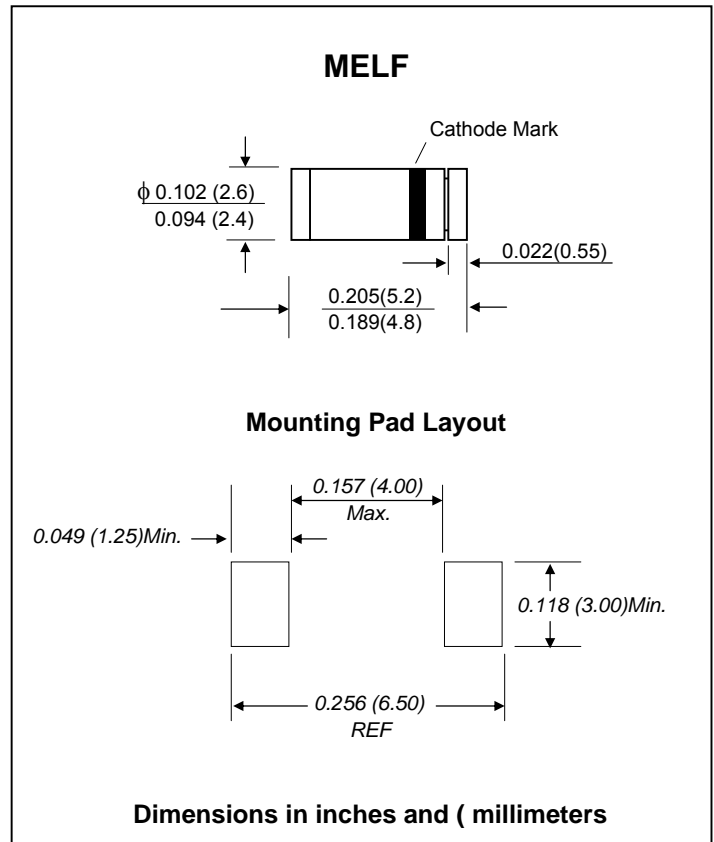
### FEATURES :

- 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 <sup>(1)</sup>	W
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	170 <sup>(1)</sup>	°C/W
Thermal Resistance Junction to Case (Typ.)	$R_{\theta JC}$	60	°C/W
Junction temperature	$T_J$	-65 to + 175	°C
Storage temperature range	$T_S$	-65 to + 175	°C

#### Note :

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



## ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

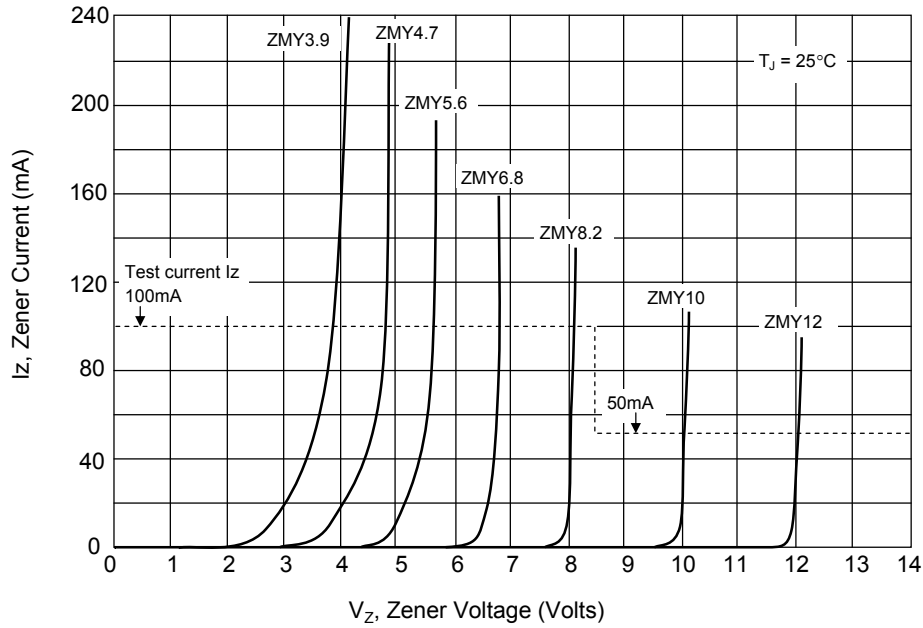
Type	Zener Voltage <sup>(1)</sup> at I <sub>ZT</sub> V <sub>Z</sub> (V)		Dynamic Resistance at I <sub>ZT</sub> , f = 1kHz r <sub>Zj</sub> (Ω)	Temp. Coeff. Of Zener Voltage at I <sub>ZT</sub> α <sub>VZ</sub> (10 <sup>-4</sup> /°C)		Test Current I <sub>ZT</sub> (mA)	Reverse Voltage at I <sub>R</sub> = 0.5μA V <sub>R</sub> V <sub>R</sub> (V)	Asmissible Zener Current <sup>(2)</sup> I <sub>Z</sub> (mA)
	min.	max.		min.	max.			
ZMY3.9C	3.82	3.97	4(<7)	-7	2	100	-	203
ZMY4.3C	4.21	4.38	4(<7)	-7	3	100	-	182
ZMY4.7C	4.60	4.79	4(<7)	-7	4	100	-	165
ZMY5.1C	4.99	52.02	2(<5)	-6	5	100	>0.7	150
ZMY5.6C	5.48	5.71	1(<2)	-3	5	100	>1.5	135
ZMY6.2C	6.07	6.32	1(<2)	-1	6	100	>2.0	128
ZMY6.8C	6.66	6.93	1(<2)	0	7	100	>3.0	110
ZMY7.5C	7.35	7.65	1(<2)	0	7	100	>5.0	100
ZMY8.2C	8.03	8.36	1(<2)	3	8	100	>6.0	89
ZMY9.1C	8.91	9.28	2(<4)	3	8	50	>7.0	82
ZMY10C	9.80	10.20	2(<4)	5	9	50	>7.5	74
ZMY11C	10.78	1.22	3(<7)	5	10	50	>8.5	66
ZMY12C	11.76	12.24	3(<7)	5	10	50	>9.0	60
ZMY13C	12.74	13.26	4(<9)	5	10	50	>10	55
ZMY15C	14.70	15.30	4(<9)	5	10	50	>11	49
ZMY16C	15.68	16.32	5(<10)	7	11	25	>12	44
ZMY18C	17.64	18.36	5(<11)	7	11	25	>14	40
ZMY20C	19.60	20.40	6(<12)	7	11	25	>15	36
ZMY22C	21.56	22.44	7(<13)	7	11	25	>17	34
ZMY24C	23.52	24.48	8(<14)	7	12	25	>18	29
ZMY27C	26.46	27.54	9(<15)	7	12	25	>20	27
ZMY30C	29.40	30.60	10(<20)	7	12	25	>22.5	25
ZMY33C	32.34	33.66	11(<20)	7	12	25	>25	22
ZMY36C	35.28	36.72	25(<60)	7	12	10	>27	20
ZMY39C	38.22	39.78	30(<60)	8	12	10	>29	18
ZMY43C	42.14	43.86	35(<80)	8	13	10	>32	17
ZMY47C	46.06	47.94	40(<80)	8	13	10	>35	15
ZMY51C	49.98	52.02	45(<100)	8	13	10	>38	14
ZMY56C	54.08	57.12	50(<100)	8	13	10	>42	13
ZMY62C	60.76	63.24	60(<130)	8	13	10	>47	11
ZMY68C	66.64	69.36	65(<130)	8	13	10	>51	10
ZMY75C	73.50	76.50	70(<160)	8	13	10	>56	9
ZMY82C	80.36	83.64	80(<160)	8	13	10	>61	8
ZMY91C	89.18	92.82	120(<250)	9	13	5	>68	7.5
ZMY100C	98.00	102.00	130(<250)	9	13	5	>75	7

**Notes:**

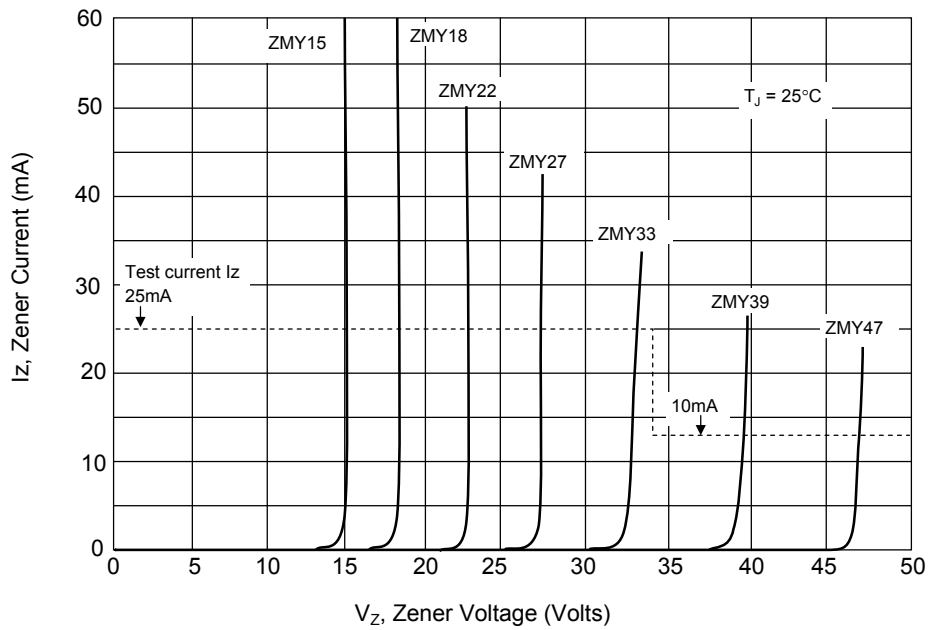
- (1) Tested with pulses tp = 5ms
- (2) Standard Zener voltage tolerance is ± 2% tolerance.

**RATING AND CHARACTERISTIC CURVES (ZMY3.9C ~ ZMY100C)**

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



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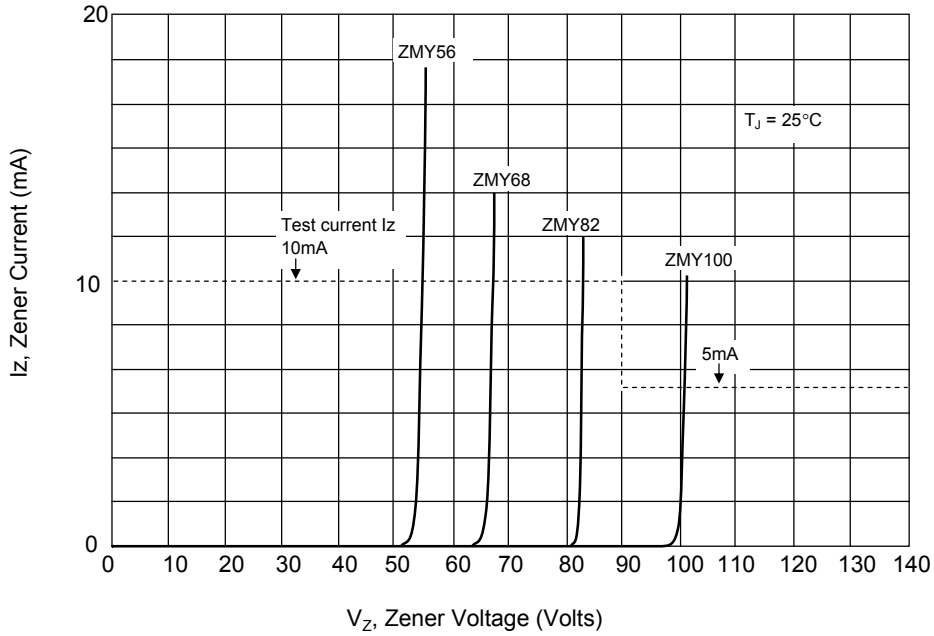




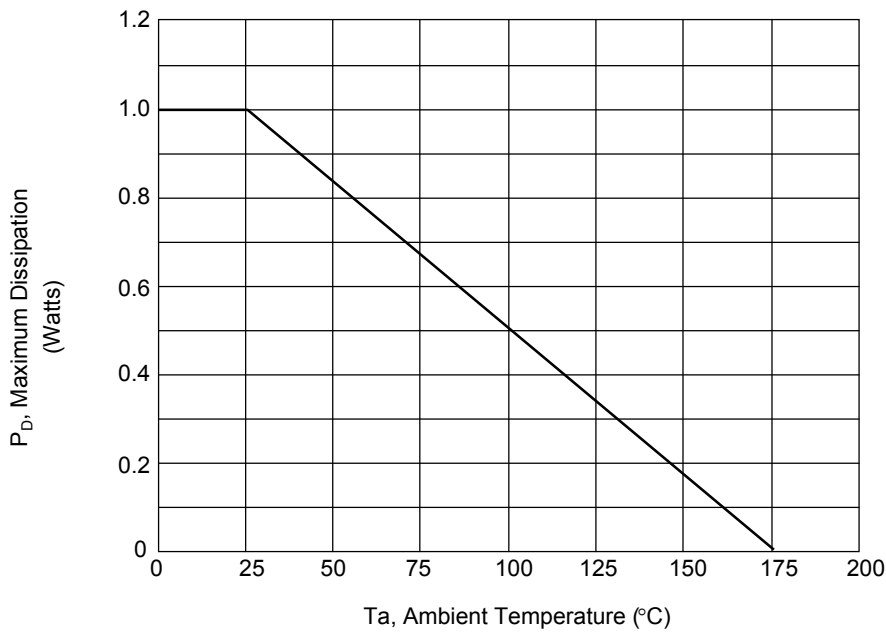
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#### Breakdown Characteristics

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

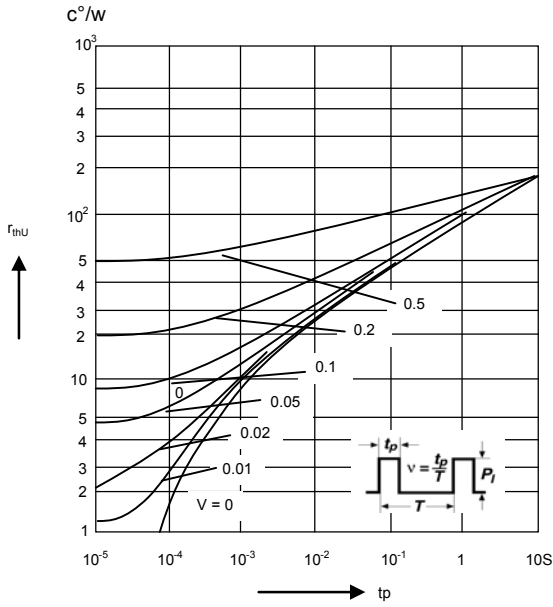


#### Power Temperature Derating Curve

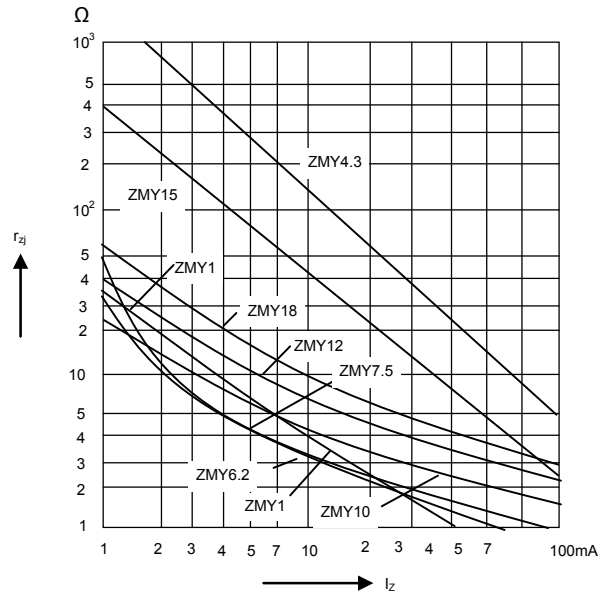


## RATING AND CHARACTERISTIC CURVES (ZMY3.9C ~ ZMY100C)

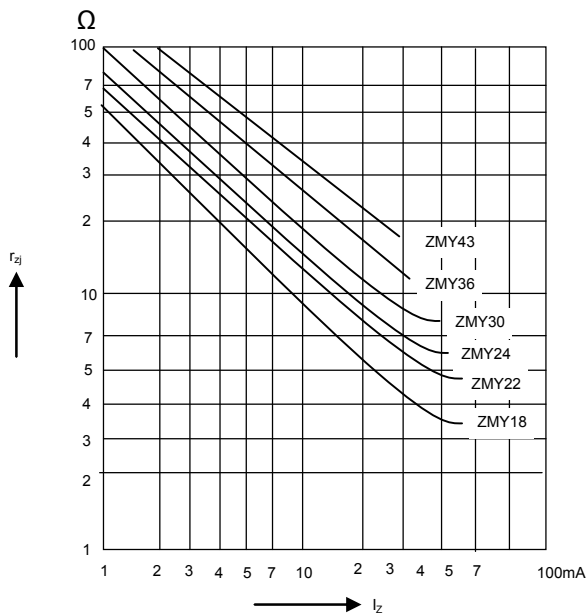
**FIG.1 - PULSE THERMAL RESISTANCE VERSUS PULSE DURATION**



**FIG.2 - DYNAMIC RESISTANCE VERSUS ZENER CURRENT**



**FIG.3 - DYNAMIC RESISTANCE VERSUS ZENER CURRENT**



**FIG.4 - DYNAMIC RESISTANCE VERSUS ZENER CURRENT**

