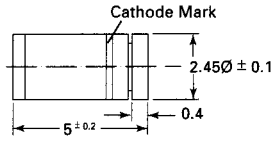
ZMY 1 ... ZMY 100 (1W)

Silicon Planar Power Zener Diodes
for use in stabilizing and clipping circuits with high power rating. The Zener voltages are graded according to the international E 24 standard. Smaller voltage tolerances on request.

These diodes are delivered taped.
Details see "Taping".



Glass case MELF

Weight approx. 0.25g
Dimensions in mm

Absolute Maximum Ratings (T_a = 25°C)

	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Power Dissipation at T_{amb} = 25 °C	P_{tot}	1[1)]	W
Junction Temperature	T_j	+175	°C
Storage Temperature Range	T_s	-55 to + 175	°C
[1)] Valid provided that electrodes are kept at ambient temperature			

Characteristics at T_{amb} = 25 °C

	Symbol	Min.	Typ.	Max.	Unit
Thermal Resistance Junction to Ambient Air	R_{thA}	-	-	170[1)]	K/W
[1)] Valid provided that electrodes are kept at ambient temperature					

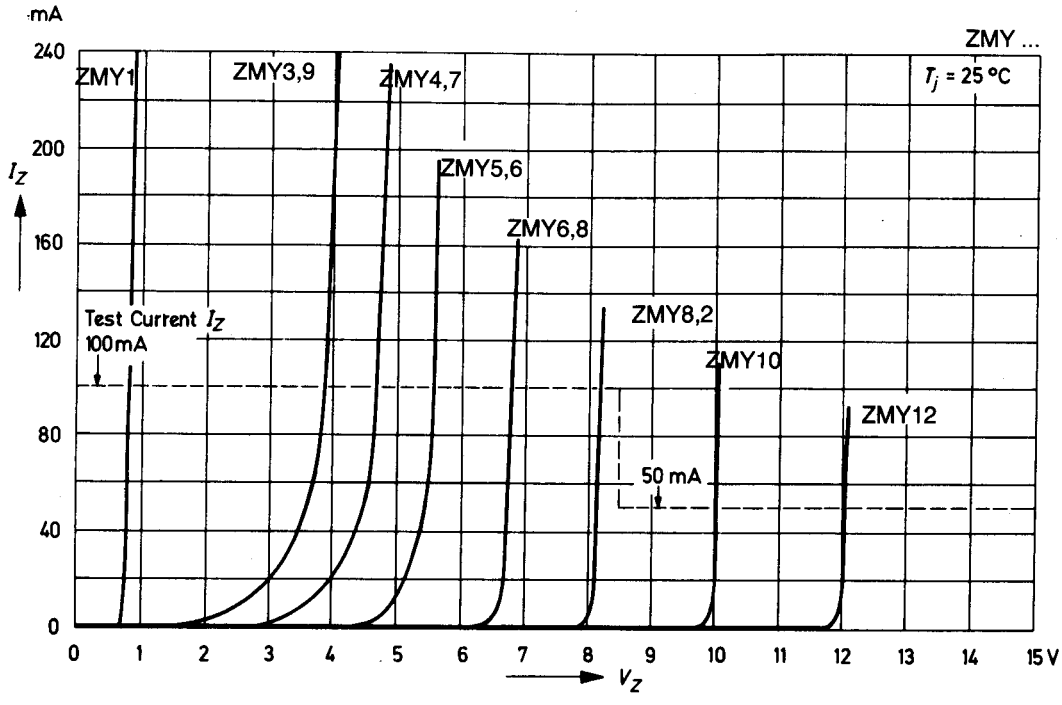
ZMY 1 ... ZMY 100 (1W)

Type	Zener voltage [2] at I_{ZT} V_Z V	Dynamic resistance at I_{ZT} f = 1 kHz r_{zj} Ω	Temp. coeff. of Zener volt. at I_{ZT} $\alpha_{VZ}10^{-4}$ /K	Test current I_{ZT} mA	Reverse voltage at I_R = 0.5 µA V_R V	Admissible Zener current [1] at T_{amb} = 25 °C I_Z mA
ZMY1[3]	0.65 ... 0.75	6.5 (<8)	-26 ... -23	5	-	406
ZMY3,9	3.7 ... 4.1	4 (<7)	-7 ... +2	1000	-	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
ZMY 6,2	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

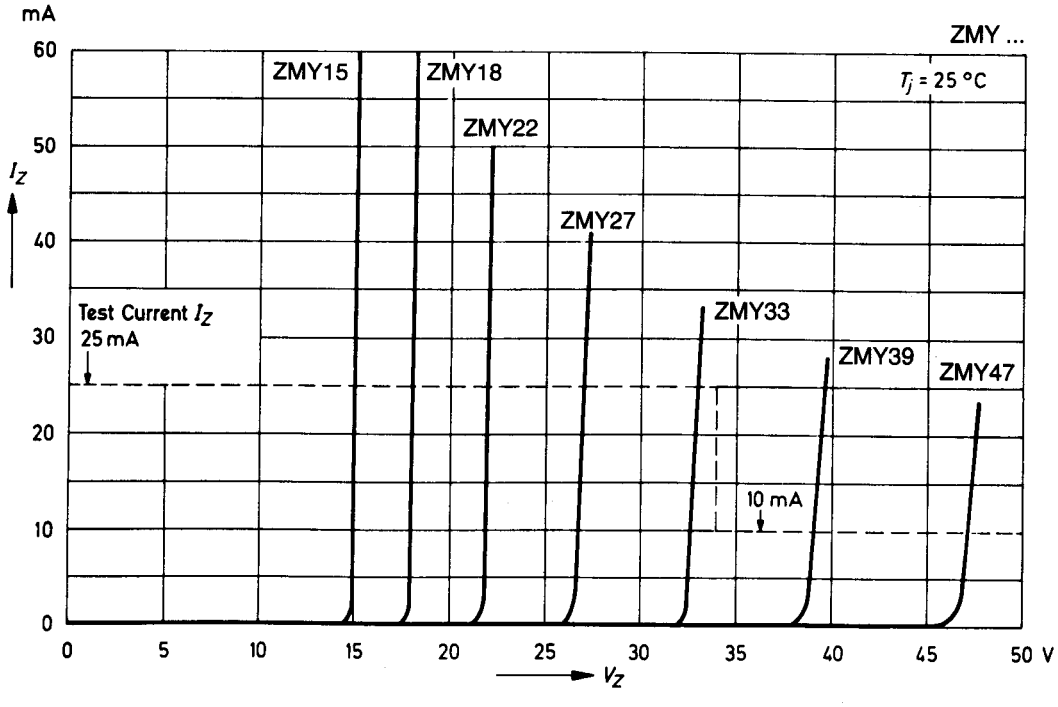
1) Valid provided that electrodes are kept at ambient temperature.
2) Tested with pulses tp = 20 ms.
3) The ZMY1 is a silicon diode operated in forward direction. Hence, the index of all characteristics and maximum ratings should be "F" instead of "Z". Connect the cathode terminal to the negative pole.

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

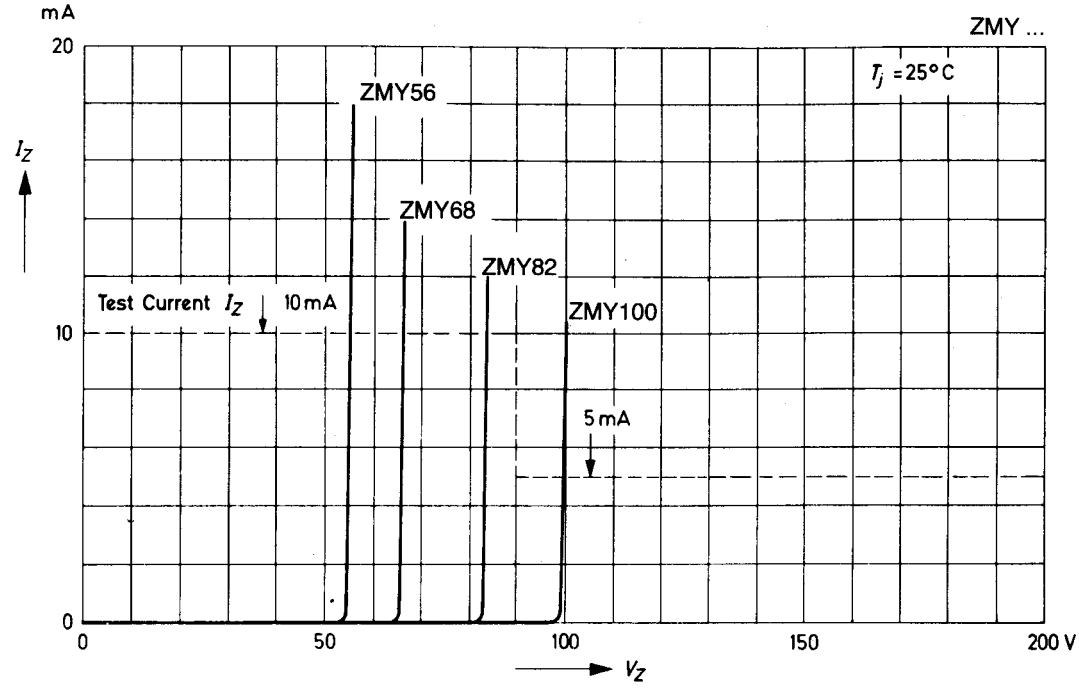
Breakdown characteristics
T_j = constant (pulsed)



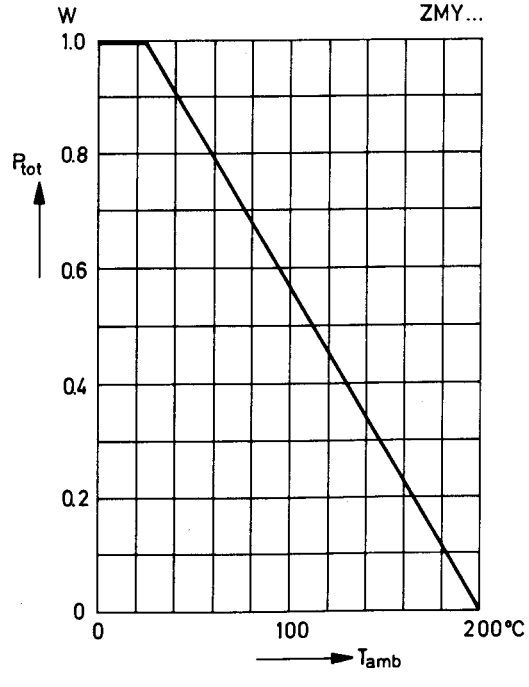
Breakdown characteristics
T_j = constant (pulsed)



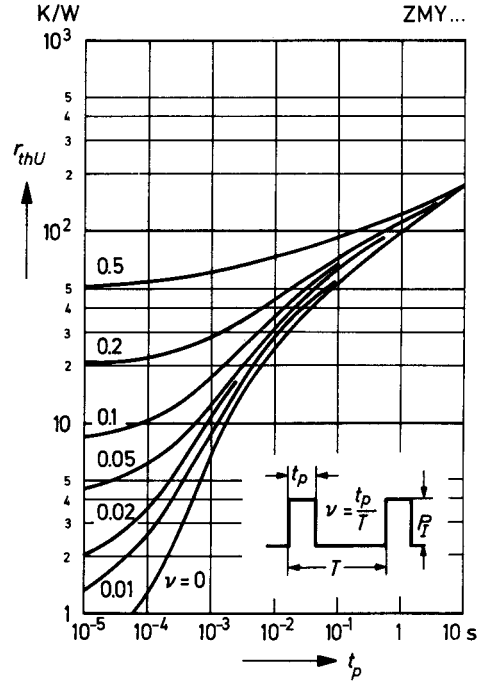
Breakdown characteristics
T_j = constant (pulsed)



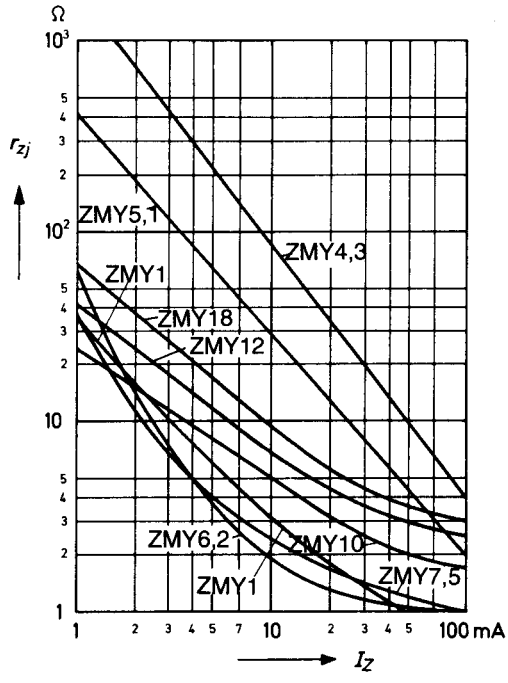
Admissible power dissipation versus ambient temperature
Valid provided that electrodes are kept at ambient temperature



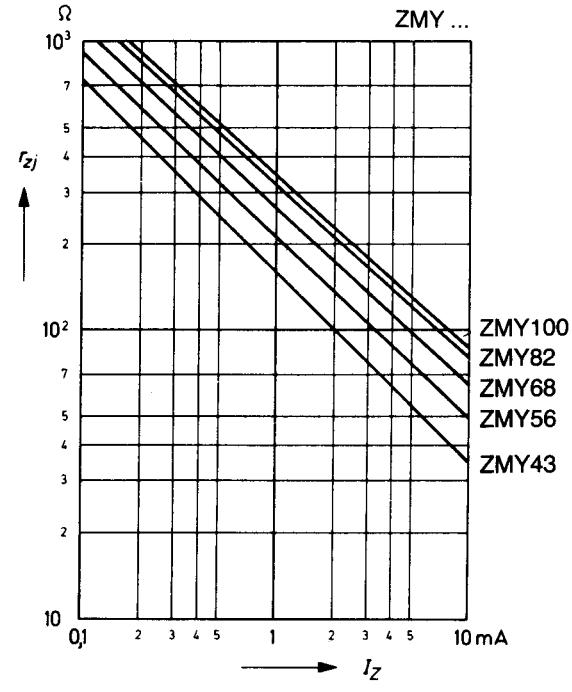
Pulse thermal resistance versus pulse duration
Valid provided that electrodes are kept at ambient temperature



Dynamic resistance versus Zener current



Dynamic resistance versus Zener current



Dynamic resistance versus Zener current

