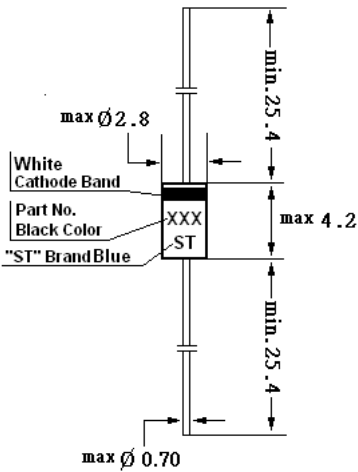


ZPY3V9 THRU ZPY82

ZENER DIODES

Features

- 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 12 standard. Smaller voltage tolerances are available upon request.

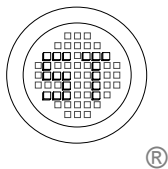


Glass Case JEDEC DO-41
Dimensions in mm

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	1.3 ¹⁾	W
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	130 ¹⁾	$^\circ\text{C/W}$
Junction Temperature	T_J	175	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +175	$^\circ\text{C}$

¹⁾ Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.



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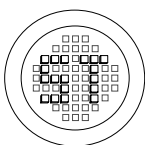
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Characteristics at $T_a = 25^\circ\text{C}$

Type	Zener Voltage at I_{ZT} $V_Z(V)^{2)}$		Dynamic Resistance at I_{ZT} $f = 1\text{ KHz}$ $r_{zj}(\Omega)$	Temp. Coeff. of Zener Voltage at I_{ZT} $\alpha V_Z(10^{-4}/^\circ\text{C})$		Test Current $I_{ZT}(mA)$	Reverse Voltage at $I_R = 0.5\ \mu A$ $V_R(V)$	Admissible Zener Current at $T_a = 25^\circ\text{C}$ $I_Z(mA)^{1)}$
	Min.	Max.	Max.	Min.	Max.			
ZPY3V9	3.7	4.1	< 7	-7	2	100	-	290
ZPY4V3	4	4.6	< 7	-7	3	100	-	260
ZPY4V7	4.4	5	< 7	-7	4	100	-	235
ZPY5V1	4.8	5.4	< 5	-6	5	100	> 0.7	215
ZPY5V6	5.2	6	< 2	-3	5	100	> 1.5	193
ZPY6V2	5.8	6.6	< 2	-1	6	100	> 2	183
ZPY6V8	6.4	7.2	< 2	0	7	100	> 3	157
ZPY7V5	7	7.9	< 2	0	7	100	> 5	143
ZPY8V2	7.7	8.7	< 2	3	8	100	> 6	127
ZPY9V1	8.5	9.6	< 4	3	8	50	> 7	117
ZPY10	9.41	10.6	< 4	5	9	50	> 7.5	105
ZPY11	10.4	11.6	< 7	5	10	50	> 8.5	94
ZPY12	11.4	12.7	< 7	5	10	50	> 9	85
ZPY13	12.4	14.1	< 9	5	10	50	> 10	78
ZPY15	13.8	15.8	< 9	5	10	50	> 11	70
ZPY16	15.3	17.1	< 10	7	11	25	> 12	63
ZPY18	16.8	19.1	< 11	7	11	25	> 14	57
ZPY20	18.8	21.2	< 12	7	11	25	> 15	52
ZPY22	20.8	23.3	< 13	7	11	25	> 17	48
ZPY24	22.8	25.6	< 14	7	12	25	> 18	42
ZPY27	25.1	28.9	< 15	7	12	25	> 20	38
ZPY30	28	32	< 20	7	12	25	> 22.5	35
ZPY33	31	35	< 20	7	12	25	> 25	31
ZPY36	34	38	< 60	7	12	10	> 27	29
ZPY39	37	41	< 60	8	12	10	> 29	26
ZPY43	40	46	< 80	8	13	10	> 32	24
ZPY47	44	50	< 80	8	13	10	> 35	22
ZPY51	48	54	< 100	8	13	10	> 38	20
ZPY56	52	60	< 100	8	13	10	> 42	18
ZPY62	58	66	< 130	8	13	10	> 47	16
ZPY68	64	72	< 130	8	13	10	> 51	14
ZPY75	70	79	< 160	8	13	10	> 56	13
ZPY82	77	88	< 160	8	13	10	> 61	12

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

²⁾ Tested with pulses $t_p = 20\text{ ms}$.



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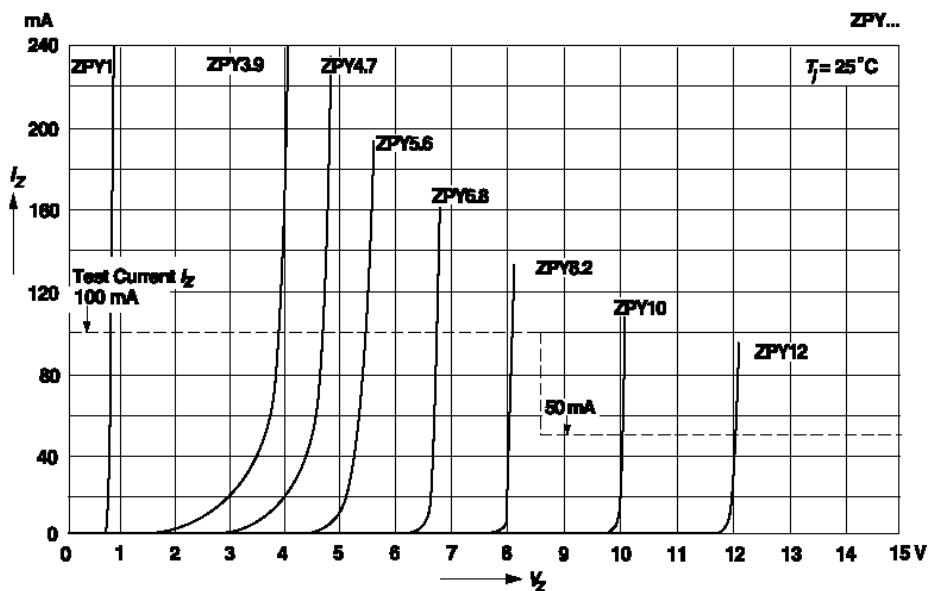
ISO 9001:2000
Certificate No. 0506098

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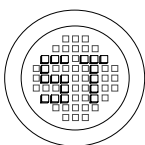
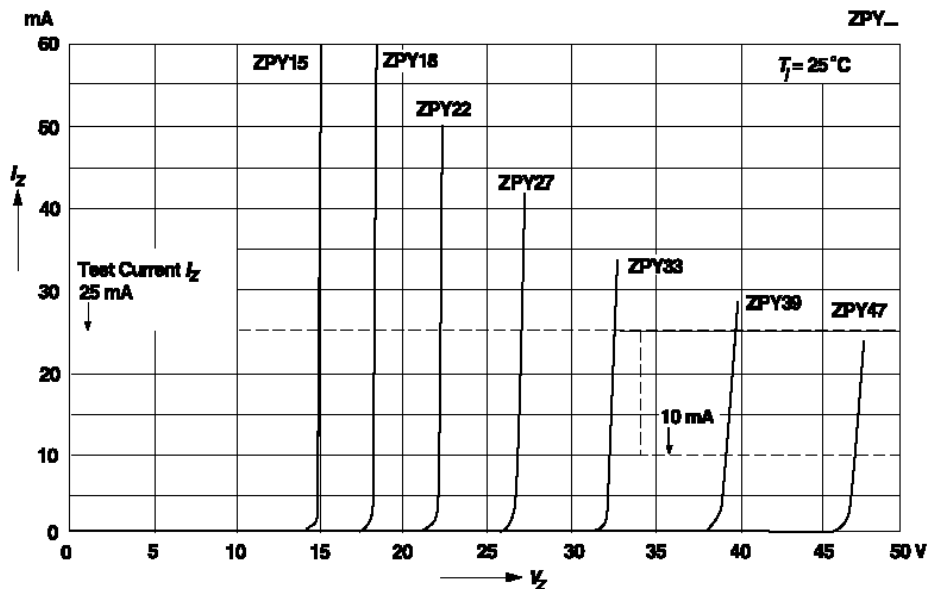
Breakdown characteristics

$T_j = \text{constant (pulsed)}$



Breakdown characteristics

$T_j = \text{constant (pulsed)}$



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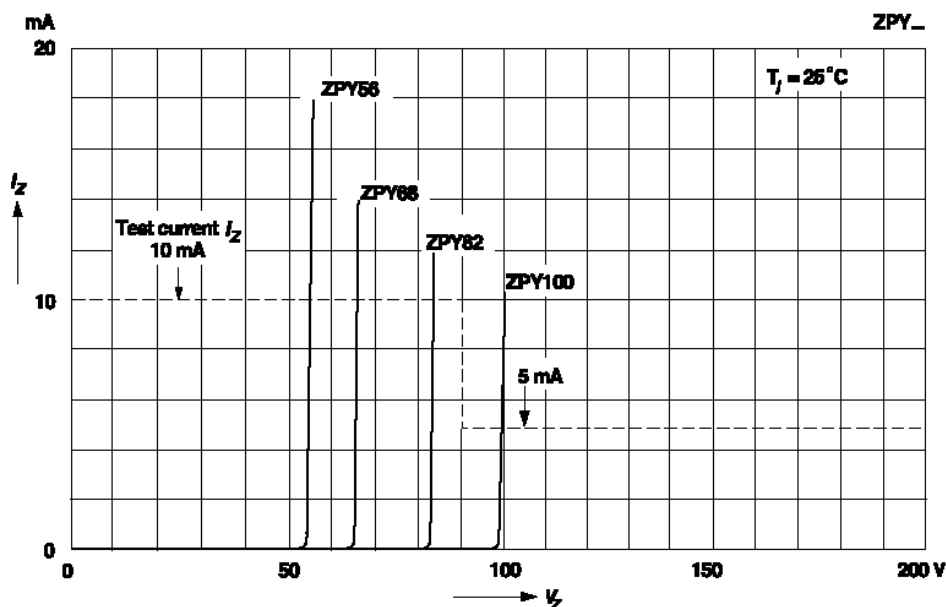
ISO 9001:2000
Certificate No. 0506098

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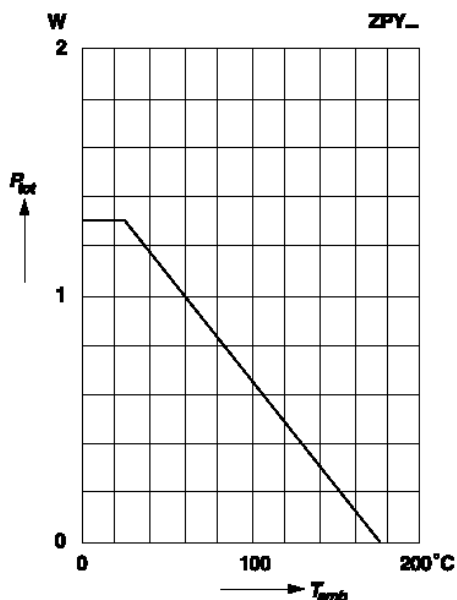
Breakdown characteristics

$T_j = \text{constant (pulse)}$



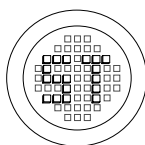
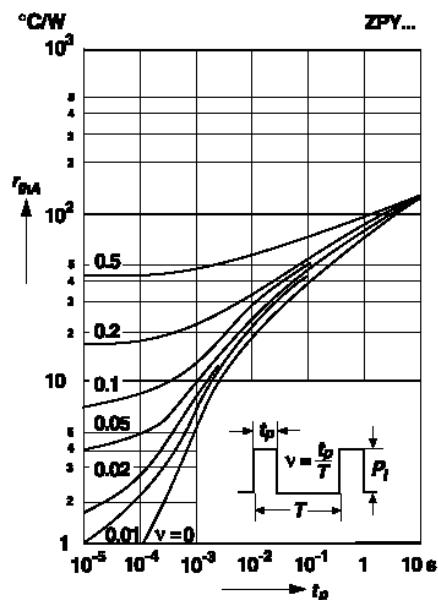
Admissible power dissipation versus ambient temperature

Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case



Pulse thermal resistance versus pulse duration

Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case



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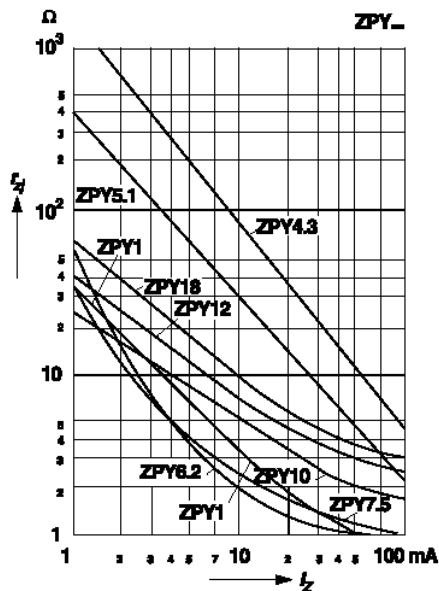


ISO 9001:2000
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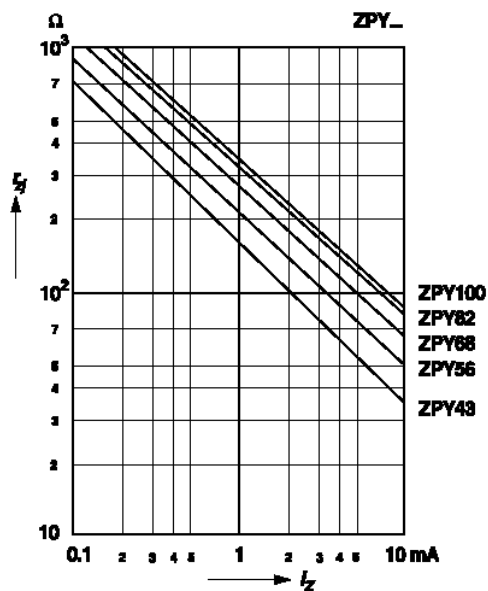
Dated : 05/05/2006

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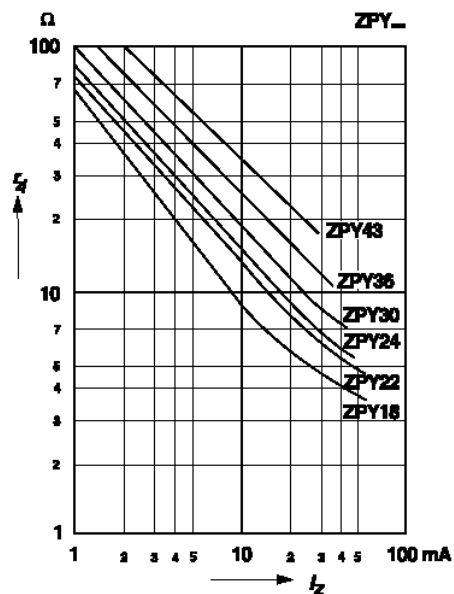
Dynamic resistance
versus Zener current



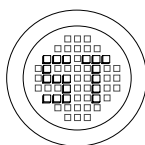
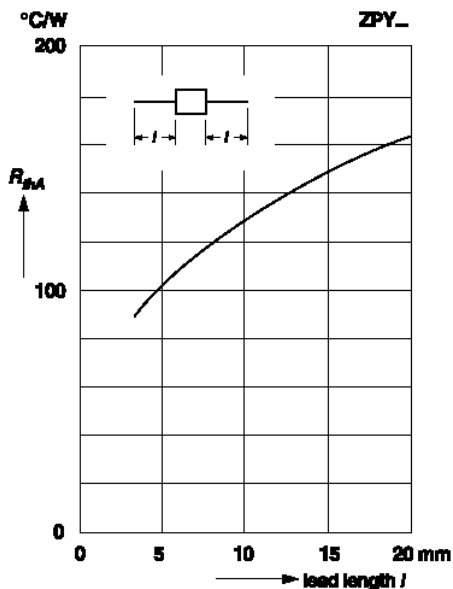
Dynamic resistance
versus Zener current



Dynamic resistance
versus Zener current



Thermal resistance
versus lead length



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