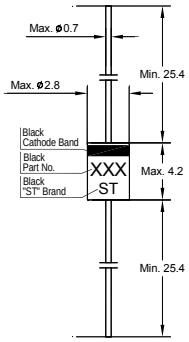
ZPY3V9…ZPY75

Silicon Planar Power Zener Diodes



Glass Case DO-41
Dimensions in mm

Features

- Silicon planar power Zener diodes
- For use in stabilizing and clipping circuits with high power rating.

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Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	1.3 [1)]	W
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_{stg}	- 55 to + 175	°C

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

Characteristics at T_a = 25 °C (V_F = 1.2 V at I_F = 200 mA)

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

[1] Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.
[2] Tested with pulses tp = 20 ms.

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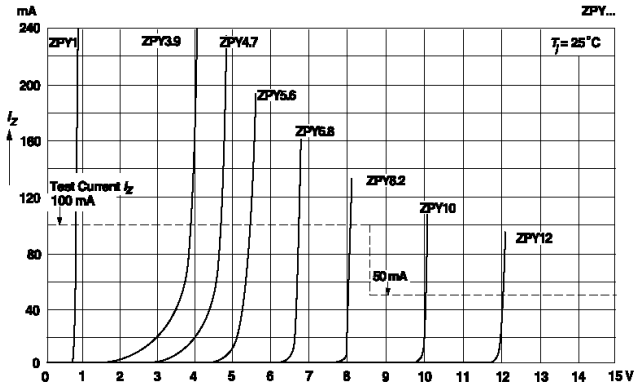
Breakdown characteristics

T_j = constant (pulsed)



Breakdown characteristics

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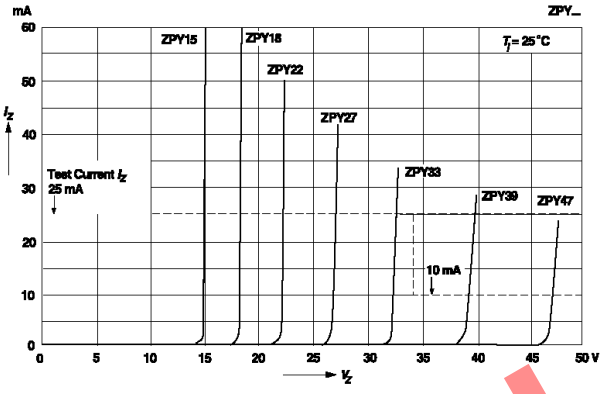

Breakdown characteristics

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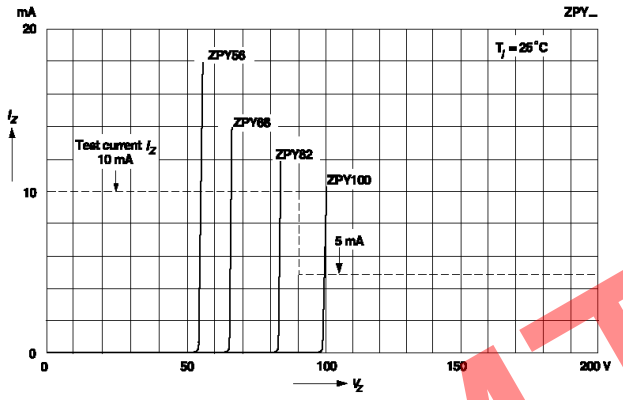
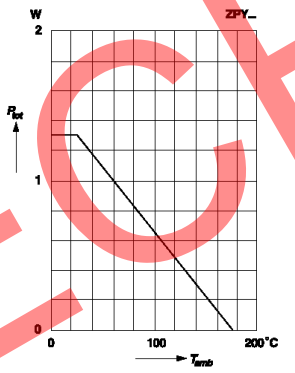


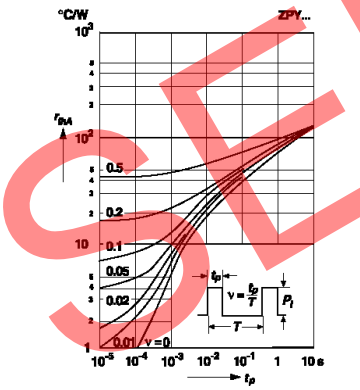
Admissible power dissipation versus ambient temperature

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

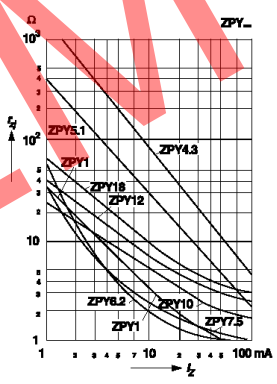


Pulse thermal resistance versus pulse duration

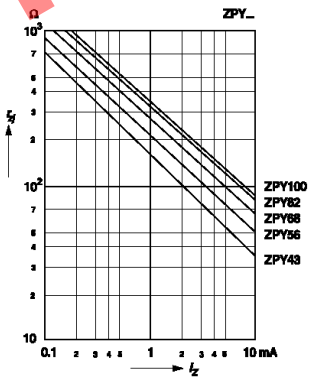
Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case



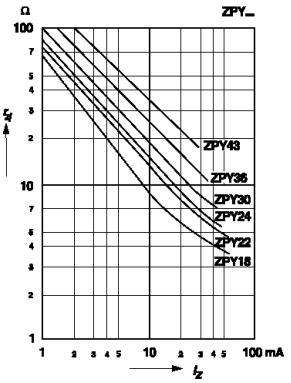
Dynamic resistance versus Zener current



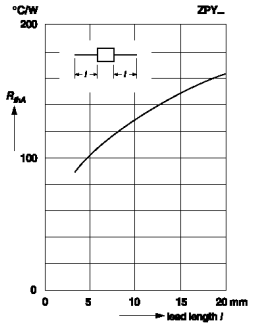
Dynamic resistance versus Zener current



Dynamic resistance versus Zener current



Thermal resistance versus lead length



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