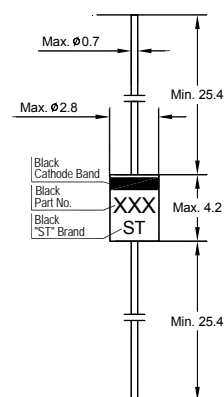


**Silicon Planar Power Zener Diodes**

**ZPY3B9...ZPYB75**

**Features**

- For use in stabilizing and clipping circuits with high power rating.
- The Zener voltage tolerances  $\pm 2\%$ .



Glass Case DO-41  
Dimensions in mm

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

Parameter	Symbol	Value	Unit
Power Dissipation	$P_{tot}$	1.3 <sup>1)</sup>	W
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 175	$^\circ\text{C}$

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

## Silicon Planar Power Zener Diodes

## ZPY3B9...ZPYB75

 Characteristics at  $T_a = 25\text{ }^\circ\text{C}$  ( $V_F = 1.2\text{ V}$  at  $I_F = 200\text{ mA}$ )

Type	Zener Voltage <sup>2)</sup>			Dynamic Resistance		Reverse Voltage		Admissible Zener Current <sup>1)</sup>
	$V_{ZT}$		at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$V_R$	at $I_R$	$I_{ZM}$
	Min. (V)	Max. (V)	(mA)	Max. ( $\Omega$ )	(mA)	Min. (V)	( $\mu\text{A}$ )	(mA)
ZPY3B9	3.82	3.98	100	7	100	-	-	290
ZPY4B3	4.21	4.39	100	7	100	-	-	260
ZPY4B7	4.61	4.79	100	7	100	-	-	235
ZPY5B1	5	5.2	100	5	100	0.7	0.5	215
ZPY5B6	5.49	5.71	100	2	100	1.5	0.5	193
ZPY6B2	6.08	6.32	100	2	100	2	0.5	183
ZPY6B8	6.66	6.94	100	2	100	3	0.5	157
ZPY7B5	7.35	7.65	100	2	100	5	0.5	143
ZPY8B2	8.04	8.36	100	2	100	6	0.5	127
ZPY9B1	8.92	9.28	50	4	50	7	0.5	117
ZPYB10	9.8	10.2	50	4	50	7.5	0.5	105
ZPYB11	10.78	11.22	50	7	50	8.5	0.5	94
ZPYB12	11.76	12.24	50	7	50	9	0.5	85
ZPYB13	12.74	13.26	50	9	50	10	0.5	78
ZPYB15	14.7	15.3	50	9	50	11	0.5	70
ZPYB16	15.68	16.32	25	10	25	12	0.5	63
ZPYB18	17.64	18.36	25	11	25	14	0.5	57
ZPYB20	19.6	20.4	25	12	25	15	0.5	52
ZPYB22	21.56	22.44	25	13	25	17	0.5	48
ZPYB24	23.52	24.48	25	14	25	18	0.5	42
ZPYB27	26.46	27.54	25	15	25	20	0.5	38
ZPYB30	29.4	30.6	25	20	25	22.5	0.5	35
ZPYB33	32.34	33.66	25	20	25	25	0.5	31
ZPYB36	35.28	36.72	10	60	10	27	0.5	29
ZPYB39	38.22	39.78	10	60	10	29	0.5	26
ZPYB43	42.14	43.86	10	80	10	32	0.5	24
ZPYB47	46.06	47.94	10	80	10	35	0.5	22
ZPYB51	49.98	52.02	10	100	10	38	0.5	20
ZPYB56	54.88	57.12	10	100	10	42	0.5	18
ZPYB62	60.76	63.24	10	130	10	47	0.5	16
ZPYB68	66.64	69.36	10	130	10	51	0.5	14
ZPYB75	73.5	76.5	10	160	10	56	0.5	13

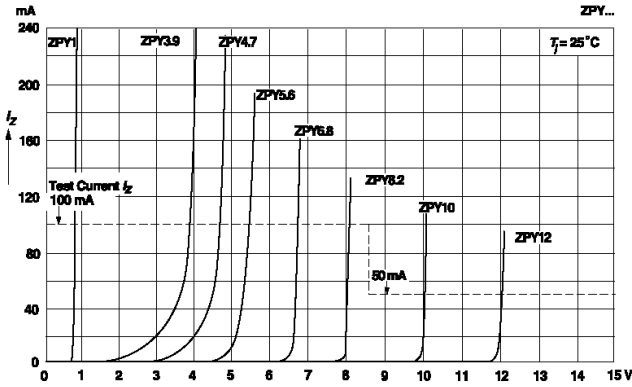
<sup>1)</sup> Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

<sup>2)</sup> Tested with pulses  $t_p = 20\text{ ms}$ .

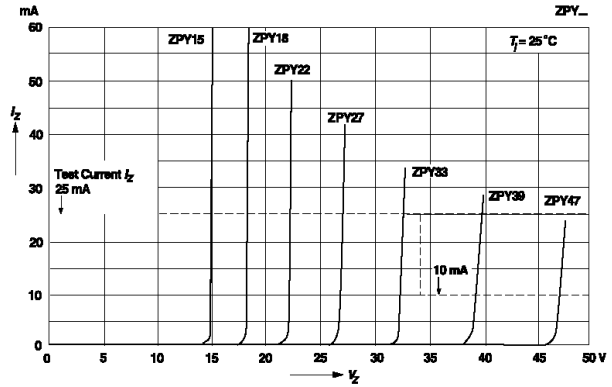
Silicon Planar Power Zener Diodes

ZPY3B9...ZPYB75

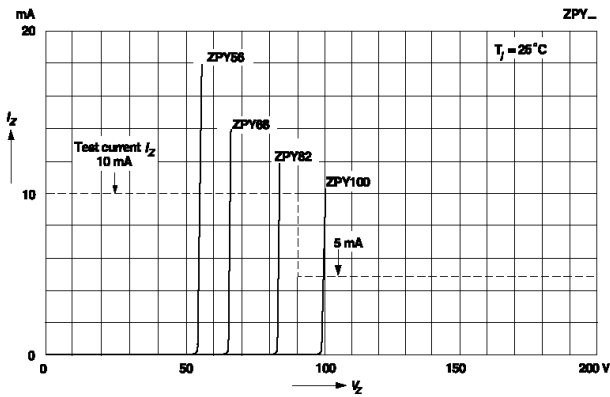
Breakdown characteristics  
T<sub>J</sub> = constant (pulsed)



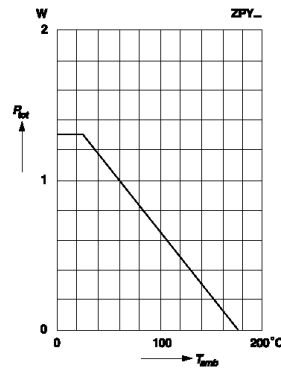
Breakdown characteristics  
T<sub>J</sub> = constant (pulsed)



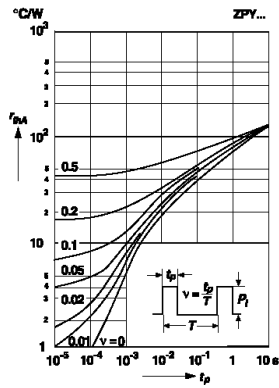
Breakdown characteristics  
T<sub>J</sub> = constant (pulsed)



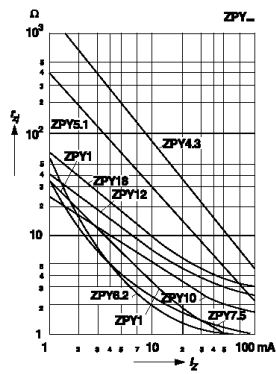
Admissible power dissipation  
versus ambient temperature  
Valid provided that leads are kept at ambient temperature  
at a distance of 10 mm from case



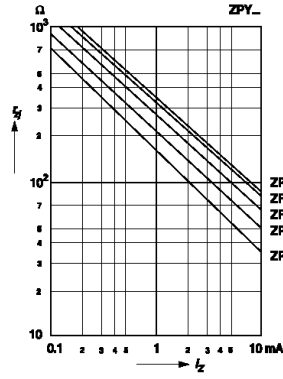
Pulse thermal resistance  
versus pulse duration  
Valid provided that leads are kept  
at ambient temperature at a distance of 10 mm from case



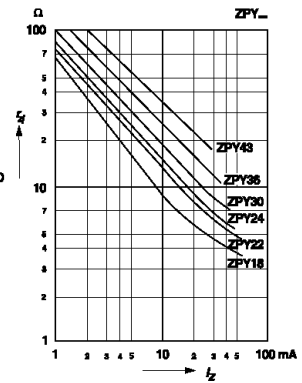
Dynamic resistance  
versus Zener current



Dynamic resistance  
versus Zener current



Dynamic resistance  
versus Zener current



Thermal resistance  
versus lead length

