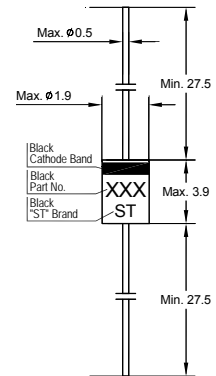


# ZPD1...ZPD75

## SILICON PLANAR ZENER DIODES



Glass Case DO-35  
Dimensions in mm

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

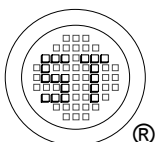
Parameter	Symbol	Value	Unit
Power Dissipation	$P_{\text{tot}}$	500 <sup>1)</sup>	mW
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_s$	- 55 to + 175	$^\circ\text{C}$

<sup>1)</sup> Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

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

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	$R_{\text{thA}}$	0.3 <sup>1)</sup>	K/mW

<sup>1)</sup> Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.



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ISO 14001:2004 Certificate No. 7116  
ISO 9001:2000 Certificate No. 0506098

Dated : 23/06/2007

# ZPD1...ZPD75

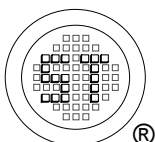
## Characteristics (T<sub>a</sub> = 25 °C unless otherwise noted)

Type	Zener Voltage Range <sup>1)</sup>			Max. Dynamic Resistance			Min. Reverse Voltage at I <sub>R</sub> = 100 nA V <sub>R</sub> (V)	Admissible Zener Current <sup>2)</sup>	
	V <sub>Znom</sub> V	I <sub>ZT</sub> for mA	V <sub>ZT</sub> V	r <sub>ZJT</sub> Ω	r <sub>ZJK</sub> Ω	at I <sub>ZK</sub> mA		at T <sub>a</sub> = 45 °C I <sub>Z</sub> (mA)	at T <sub>a</sub> = 25 °C I <sub>Z</sub> (mA)
ZPD1 <sup>3)</sup>	-	5	0.7...0.8	8	50	1	-	280	340
ZPD2V7	2.7	5	2.5...2.9	83	500	1	-	135	160
ZPD3V0	3.0	5	2.8...3.2	95	500	1	-	117	140
ZPD3V3	3.3	5	3.1...3.5	95	500	1	-	109	130
ZPD3V6	3.6	5	3.4...3.8	95	500	1	-	101	120
ZPD3V9	3.9	5	3.7...4.1	95	500	1	-	92	110
ZPD4V3	4.3	5	4...4.6	95	500	1	-	85	100
ZPD4V7	4.7	5	4.4...5	78	500	1	-	76	90
ZPD5V1	5.1	5	4.8...5.4	60	480	1	0.8	67	80
ZPD5V6	5.6	5	5.2...6	40	400	1	1	59	70
ZPD6V2	6.2	5	5.8...6.6	10	200	1	2	54	64
ZPD6V8	6.8	5	6.4...7.2	8	150	1	3	49	58
ZPD7V5	7.5	5	7...7.9	7	50	1	5	44	53
ZPD8V2	8.2	5	7.7...8.7	7	50	1	6	40	47
ZPD9V1	9.1	5	8.5...9.6	10	50	1	7	36	43
ZPD10	10	5	9.4...10.6	15	70	1	7.5	33	40
ZPD11	11	5	10.4...11.6	20	70	1	8.5	30	36
ZPD12	12	5	11.4...12.7	20	90	1	9	28	32
ZPD13	13	5	12.4...14.1	25	110	1	10	25	29
ZPD15	15	5	13.8...15.6	30	110	1	11	23	27
ZPD16	16	5	15.3...17.1	40	170	1	12	20	24
ZPD18	18	5	16.8...19.1	50	170	1	14	18	21
ZPD20	20	5	18.8...21.2	50	220	1	15	17	20
ZPD22	22	5	20.8...23.3	55	220	1	17	16	18
ZPD24	24	5	22.8...25.6	80	220	1	18	13	16
ZPD27	27	5	25.1...28.9	80	250	1	20	12	14
ZPD30	30	5	28...32	80	250	1	22.5	10	13
ZPD33	33	5	31...35	80	250	1	25	9	12
ZPD36	36	5	34...38	90	250	1	27	9	11
ZPD39	39	5	37...41	90	300	1	29	8	10
ZPD43	43	5	40...46	100	700	1	32	7	9.2
ZPD47	47	5	44...50	100	750	1	35	6	8.5
ZPD51	51	5	48...54	100	750	1	38	6	7.8
ZPD56	56	2.5	52...60	135	1000	0.5	42	5.2	7.1
ZPD62	62	2.5	58...66	150	1000	0.5	47	4.8	6.4
ZPD68	68	2.5	64...72	200	1000	0.5	51	4.1	5.8
ZPD75	75	2.5	70...79	250	1500	0.5	55	3.9	5.3

<sup>1)</sup> Tested with pulses t<sub>p</sub> = 20 ms.

<sup>2)</sup> Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

<sup>3)</sup> The ZPD1 is a silicon diode operated in forward direction. Hence, the subscript of all parameter should be "F" instead of "Z". Connect the cathode terminal to the negative pole.



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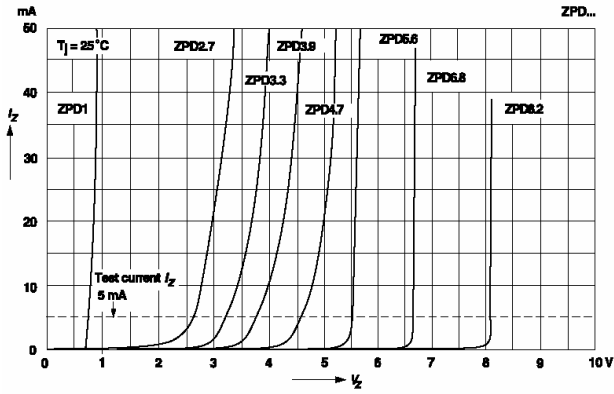
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 ISO 14001:2004 Certificate No. 7116  
 ISO 9001:2000 Certificate No. 0506098

Dated : 23/06/2007

# ZPD1...ZPD75

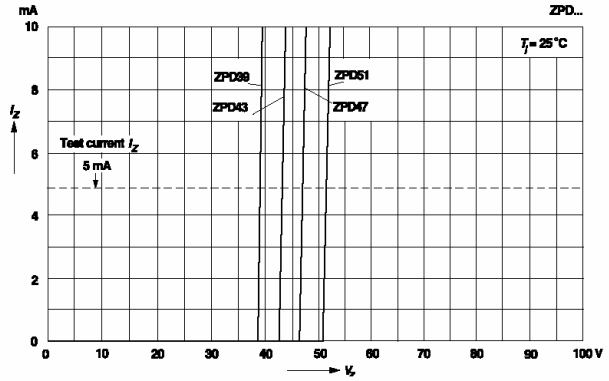
Breakdown characteristics

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



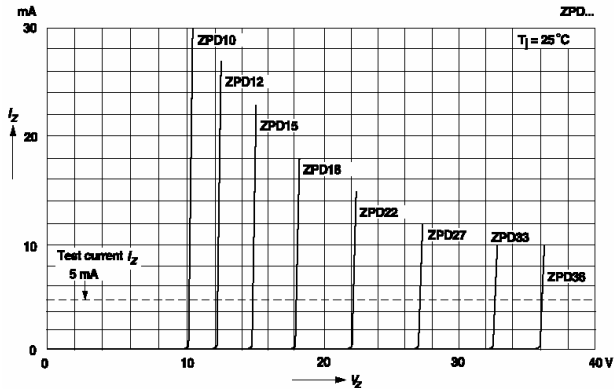
Breakdown characteristics

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

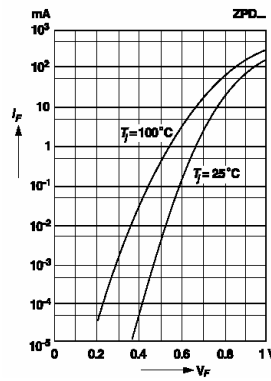


Breakdown characteristics

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



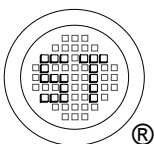
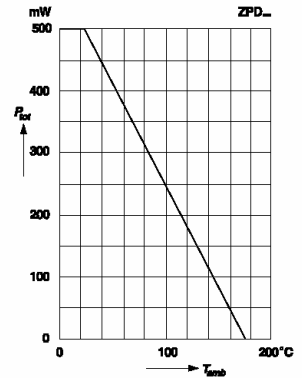
Forward characteristics



Admissible power dissipation

versus ambient temperature

Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature



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