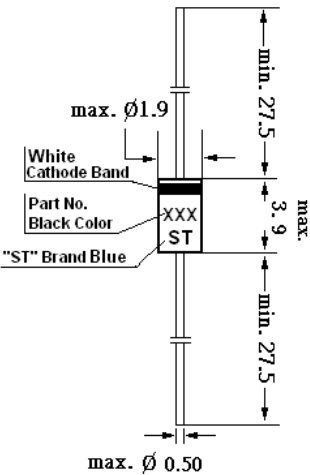


ZPD1...ZPD75

SILICON PLANAR ZENER DIODES



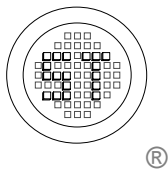
Glass case JEDEC DO-35
Dimensions in mm

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

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	500 ¹⁾	mW
Junction Temperature	T_j	175	$^{\circ}\text{C}$
Storage Temperature Range	T_s	-55 to +175	$^{\circ}\text{C}$
¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case			

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

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	R_{thA}	0.3 ¹⁾	K/mW
¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case			



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ZPD1...ZPD75

Characteristics ($T_a = 25^\circ\text{C}$ unless otherwise noted)

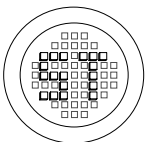
Type	Zener Voltage Range ¹⁾			Dynamic Resistance			Temp. coeff. of Zener Volt. at $I_Z = 5\text{ mA}$ $\alpha_{VZ} 10^{-4}/\text{K}$	Reverse Voltage at $I_R = 100\text{ nA}$ $V_R(\text{V})$	Admissible Zener Current ²⁾	
	V_{Znom} V	I_{ZT} mA	for V_{ZT} V	r_{ZJT} Ω	r_{ZJK} at Ω	I_{ZK} mA			at $T_{amb}=45^\circ\text{C}$ $I_Z(\text{mA})$	at $T_{amb}=25^\circ\text{C}$ $I_Z(\text{mA})$
ZPD1V0 ³⁾	-	5	0.7...0.8	< 8	< 50	1	-26...-23	-	280	340
ZPD2V7	2.7	5	2.5...2.9	< 83	< 500	1	-9...-4	-	135	160
ZPD3V0	3.0	5	2.8...3.2	< 95	< 500	1	-9...-3	-	117	140
ZPD3V3	3.3	5	3.1...3.5	< 95	< 500	1	-8...-3	-	109	130
ZPD3V6	3.6	5	3.4...3.8	< 95	< 500	1	-8...-3	-	101	120
ZPD3V9	3.9	5	3.7...4.1	< 95	< 500	1	-7...-3	-	92	110
ZPD4V3	4.3	5	4.0...4.6	< 95	< 500	1	-6...-1	-	85	100
ZPD4V7	4.7	5	4.4...5.0	< 78	< 500	1	-5...+2	-	76	90
ZPD5V1	5.1	5	4.8...5.4	< 60	< 480	1	-3...+4	> 0.8	67	80
ZPD5V6	5.6	5	5.2...6.0	< 40	< 400	1	-2...+6	> 1	59	70
ZPD6V2	6.2	5	5.8...6.6	< 10	< 200	1	-1...+7	> 2	54	64
ZPD6V8	6.8	5	6.4...7.2	< 8	< 150	1	+2...+7	> 3	49	58
ZPD7V5	7.5	5	7.0...7.9	< 7	< 50	1	+3...+7	> 5	44	53
ZPD8V2	8.2	5	7.7...8.7	< 7	< 50	1	+4...+7	> 6	40	47
ZPD9V1	9.1	5	8.5...9.6	< 10	< 50	1	+5...+8	> 7	36	43
ZPD10	10	5	9.4...10.6	< 15	< 70	1	+5...+8	> 7.5	33	40
ZPD11	11	5	10.4...11.6	< 20	< 70	1	+5...+9	> 8.5	30	36
ZPD12	12	5	11.4...12.7	< 20	< 90	1	+6...+9	> 9	28	32
ZPD13	13	5	12.4...14.1	< 25	< 110	1	+7...+9	> 10	25	29
ZPD15	15	5	13.8...15.6	< 30	< 110	1	+7...+9	> 11	23	27
ZPD16	16	5	15.3...17.1	< 40	< 170	1	+8...+9.5	> 12	20	24
ZPD18	18	5	16.8...19.1	< 50	< 170	1	+8...+9.5	> 14	18	21
ZPD20	20	5	18.8...21.2	< 50	< 220	1	+8...+10	> 15	17	20
ZPD22	22	5	20.8...23.3	< 55	< 220	1	+8...+10	> 17	16	18
ZPD24	24	5	22.8...25.6	< 80	< 220	1	+8...+10	> 18	13	16
ZPD27	27	5	25.1...28.9	< 80	< 250	1	+8...+10	> 20	12	14
ZPD30	30	5	28...32	< 80	< 250	1	+8...+10	> 22.5	10	13
ZPD33	33	5	31...35	< 80	< 250	1	+8...+10	> 25	9	12
ZPD36	36	5	34...38	< 90	< 250	1	+8...+10	> 27	9	11
ZPD39	39	5	37...41	< 90	< 300	1	+10...+12	> 29	8	10
ZPD43	43	5	40...46	< 100	< 700	1	+10...+12	> 32	7	9.2
ZPD47	47	5	44...50	< 100	< 750	1	+10...+12	> 35	6	8.5
ZPD51	51	5	48...54	< 100	< 750	1	+10...+12	> 38	6	7.8
ZPD56	56	2.5	52...60	< 135	< 1000	0.5	Typ.+10 ⁴⁾	> 42	5.2	7.1
ZPD62	62	2.5	58...66	< 150	< 1000	0.5	Typ.+10 ⁴⁾	> 47	4.8	6.4
ZPD68	68	2.5	64...72	< 200	< 1000	0.5	Typ.+10 ⁴⁾	> 51	4.1	5.8
ZPD75	75	2.5	70...79	< 250	< 1500	0.5	Typ.+10 ⁴⁾	> 55	3.9	5.3

¹⁾ Tested with pulses $t_p = 20\text{ ms}$.

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

³⁾ 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.

⁴⁾ at $I_Z = 2.5\text{ mA}$



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ISO/TS 16949 : 2002
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Certificate No. 7116



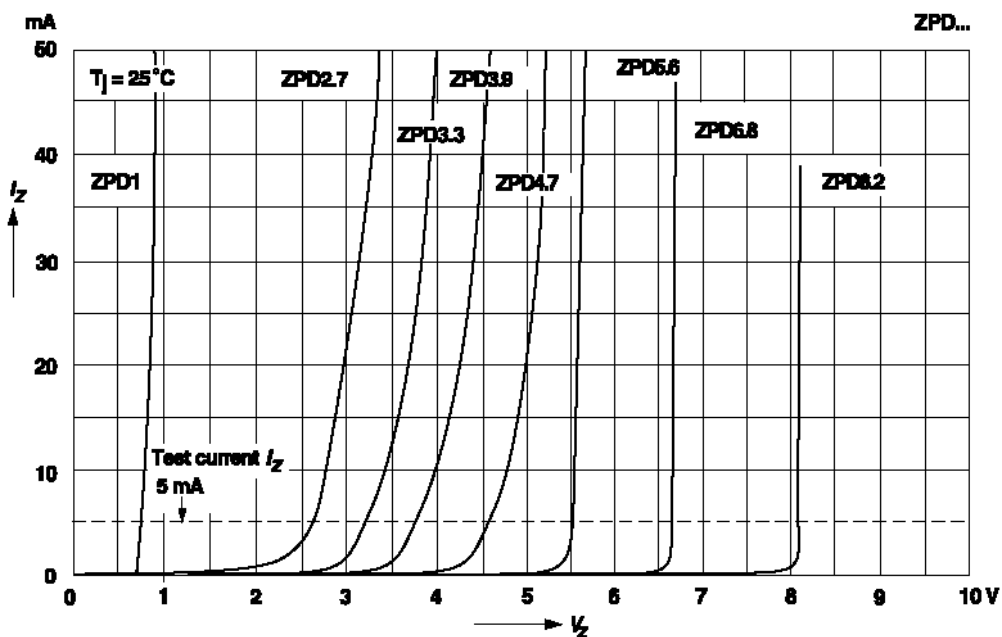
ISO 9001:2000
Certificate No. 0506098

Dated : 07/05/2006

ZPD1...ZPD75

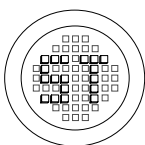
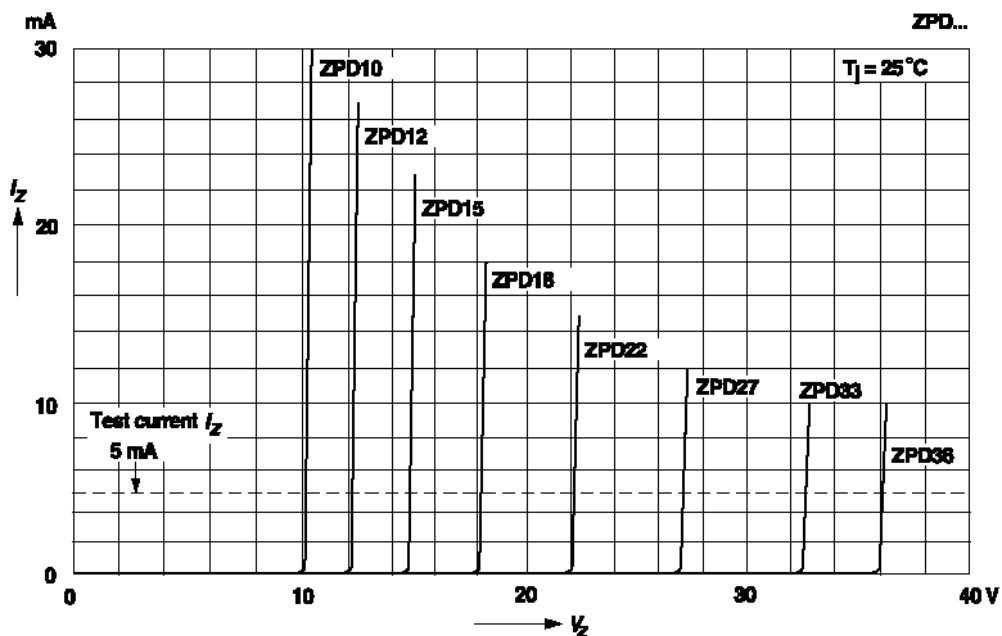
Breakdown characteristics

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



Breakdown characteristics

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



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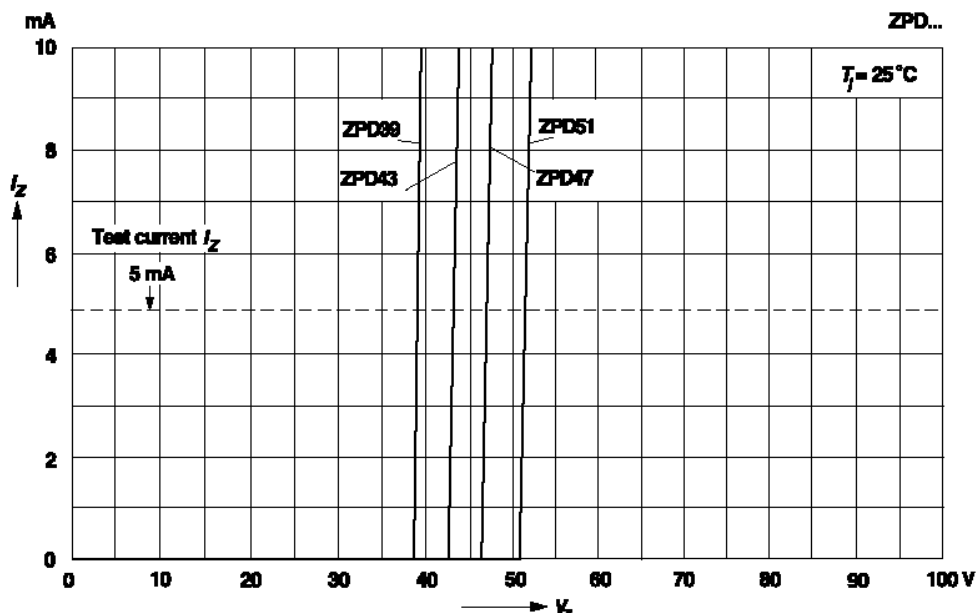


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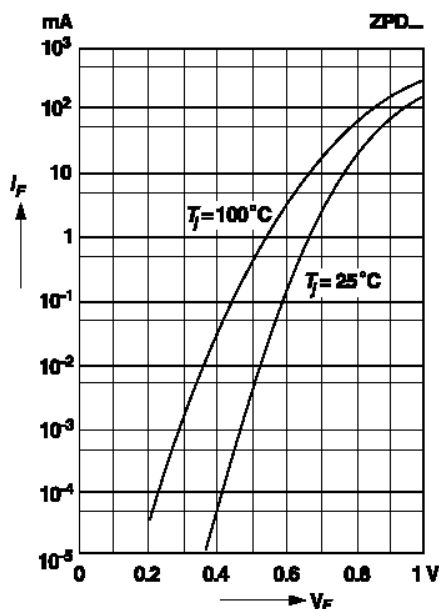
Dated : 07/05/2006

Breakdown characteristics

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

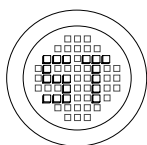
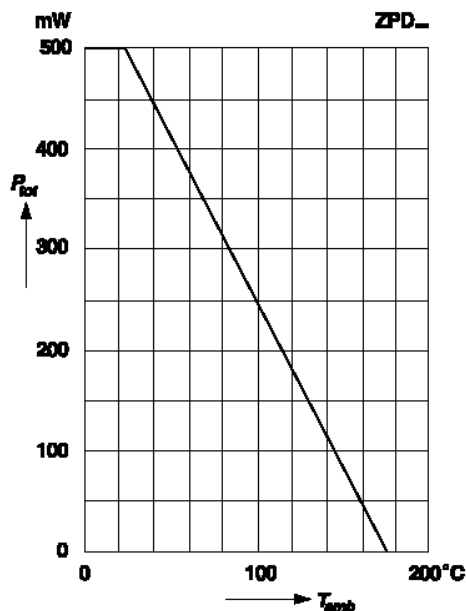


Forward characteristics



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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