

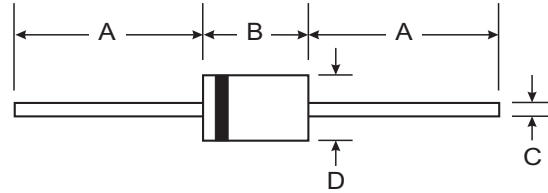


# ZPD1 - ZPD51

## SILICON PLANAR ZENER DIODE

### Features

- Planar Die Construction
- Hermetically Sealed Glass Case
- 0.7V - 51V Nominal Zener Voltages



### Mechanical Data

- Case: Glass, DO-35
- Leads: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 0.13 grams (approx.)

DO-35		
Dim	Min	Max
A	25.4	—
B	—	4.57
C	—	0.53
D	—	1.9
All Dimensions in mm		

### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Zener Current (see Table on Page 2)	—	—	—
Power Dissipation (Note 2)	$P_d$	500	mW
Thermal Resistance, Junction to Ambient Air (Note 2)	$R_{\theta JA}$	300	K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-55 to +175	$^\circ\text{C}$

- Notes:
1. Tested with pulses,  $t_p = 20\text{ms}$ .
  2. Valid provided that leads at a distance of 8mm from body are kept at ambient temperature.

**Electrical Characteristics (continued)** @ T<sub>A</sub> = 25°C unless otherwise specified

Type Number	Zener Voltage Range (Note 1)	Maximum Zener Impedance		Typical Temperature Coefficient	Min. Reverse Voltage @ I <sub>R</sub> = 0.1μA	Max. Zener Current (Note 2)	
	@ I <sub>T</sub> = 5mA	Z <sub>ZT</sub> @ I <sub>ZT</sub> = 5mA	Z <sub>ZK</sub> @ I <sub>ZK</sub> = 1.0mA	T <sub>C</sub>	V <sub>R</sub>	@ T <sub>A</sub> = 25°C	@ T <sub>A</sub> = 45°C
	Volts	Ohms	Ohms	%V <sub>Z</sub> /°C	Volts	I <sub>ZM</sub> mA	I <sub>ZM</sub> mA
ZPD1(Note 3)	0.7-0.8	8	50	-0.255	—	340	280
ZPD2.7	2.5-2.9	83	500	-0.065	—	160	135
ZPD3.0	2.8-3.2	95	500	-0.060	—	140	117
ZPD3.3	3.1-3.5	95	500	-0.055	—	130	109
ZPD3.6	3.4-3.8	95	500	-0.055	—	120	101
ZPD3.9	3.7-4.1	95	500	-0.050	—	110	92
ZPD4.3	4.0-4.6	95	500	-0.035	—	100	85
ZPD4.7	4.4-5.0	78	500	-0.015	—	90	76
ZPD5.1	4.8-5.4	60	480	+0.005	0.8	80	67
ZPD5.6	5.2-6.0	40	400	+0.020	1.0	70	59
ZPD6.2	5.8-6.6	10	200	+0.030	2.0	64	54
ZPD6.8	6.4-7.2	8	150	+0.045	3.0	58	49
ZPD7.5	7.0-7.9	7	50	+0.050	5.0	53	44
ZPD8.2	7.7-8.7	7	50	+0.055	6.0	47	40
ZPD9.1	8.5-9.6	10	50	+0.065	7.0	43	36
ZPD10	9.4-10.6	15	70	+0.065	7.5	40	33
ZPD11	10.4-11.6	20	70	+0.070	8.5	36	30
ZPD12	11.4-12.7	20	90	+0.075	9.0	32	28
ZPD13	12.4-14.1	25	110	+0.080	10	29	25
ZPD15	13.8-15.6	30	110	+0.080	11	27	23
ZPD16	15.3-17.1	40	170	+0.090	12	24	20
ZPD18	16.8-19.1	50	170	+0.090	14	21	18
ZPD20	18.8-21.2	50	220	+0.090	15	20	17
ZPD22	20.8-23.3	55	220	+0.090	17	18	16
ZPD24	22.8-25.6	80	220	+0.090	18	16	13
ZPD27	25.1-28.9	80	250	+0.090	20	14	12
ZPD30	28-32	80	250	+0.090	22.5	13	10
ZPD33	31-35	80	250	+0.090	25	12	9
ZPD36	34-38	90	250	+0.090	27	11	9
ZPD39	37-41	90	300	+0.110	29	10	8
ZPD43	40-46	100	700	+0.110	32	9.2	7
ZPD47	44-50	100	750	+0.110	35	8.5	6
ZPD51	48-54	100	750	+0.110	38	7.8	6

- Notes:
1. Tested with pulses t<sub>p</sub> = 20 ms.
  2. Valid provided that leads at a distance of 8mm from body are kept at ambient temperature.
  3. The ZPD1 is a silicon diode with operation in forward direction. Hence, the index of all parameters should be "F" instead of "Z". Connect the cathode electrode to the negative pole.

