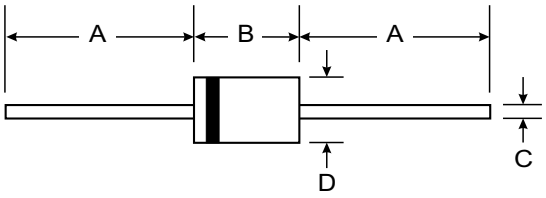
ZPY1 - ZPY100

SILICON PLANAR POWER ZENER DIODE

Features

- 1.3 W Power Dissipation
- Reliable Glass Package
- Planar Die Construction
- 0.7V - 100V Nominal Zener Voltages Plus ZPY1 Stabistor



Mechanical Data

- Case: Glass, DO-41
- Leads: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 0.35 grams (approx.)

DO-41		
Dim	**Min**	**Max**
A	25.4	—
B	4.1	5.2
C	0.71	0.86
D	2.0	2.7
All Dimensions in mm		

Maximum Ratings 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Zener Current (see Table on Page 2)	—	—	—
Power Dissipation (Note 1)	P_d	1.3	W
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	135	K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +200	°C

Note: 1. Valid provided that leads are kept at ambient temperature at a distance of 10mm from case.

Electrical Characteristics

25°C unless otherwise specified

Type Number	Zener Voltage Range (Note 2)	Test Current	Maximum Zener Impedance	Typical Temperature Coefficient	Minimum Reverse Voltage @ I_R = 0.5µA	Maximum Zener Current (Note 1)
	$V_{Z\ @\ I_{ZT}}$	IZT	Z_{ZT} @ I_{ZT}	@ TC	VR	I_{ZM}
	Volts	mA	Ohms	%/°C	Volts	mA
ZPY1 (Note 3)	0.65-0.75	5.0	8	-0.24	—	580
ZPY3.9	3.7-4.1	100	7	-0.025	—	290
ZPY4.3	4.0-4.6	100	7	-0.020	—	260
ZPY4.7	4.4-5.0	100	7	-0.015	—	235
ZPY5.1	4.8-5.4	100	5	-0.005	0.7	215
ZPY5.6	5.2-6.0	100	2	+0.010	1.5	193
ZPY6.2	5.8-6.6	100	2	+0.025	2	183
ZPY6.8	6.4-7.2	100	2	+0.035	3	157
ZPY7.5	7.0-7.9	100	2	+0.035	5	143
ZPY8.2	7.7-8.7	100	2	+0.055	6	127
ZPY9.1	8.5-9.6	50	4	+0.055	7	117
ZPY10	9.4-10.6	50	4	+0.070	7.5	105
ZPY11	10.4-11.6	50	7	+0.075	8.5	94
ZPY12	11.4-12.7	50	7	+0.075	9.0	85
ZPY13	12.4-14.1	50	9	+0.075	10	78
ZPY15	13.8-15.8	50	9	+0.075	11	70
ZPY16	15.3-17.1	25	10	+0.090	12	63
ZPY18	16.8-19.1	25	11	+0.090	14	57
ZPY20	18.8-21.2	25	12	+0.090	15	52
ZPY22	20.8-23.3	25	13	+0.090	17	48
ZPY24	22.8-25.6	25	14	+0.095	18	42
ZPY27	25.1-28.9	25	15	+0.095	20	38
ZPY30	28-32	25	20	+0.095	22.5	35
ZPY33	31-35	25	20	+0.095	25	31
ZPY36	34-38	10	60	+0.095	27	29
ZPY39	37-41	10	60	+0.100	29	26
ZPY43	40-46	10	80	+0.105	32	24
ZPY47	44-50	10	80	+0.105	35	22
ZPY51	48-54	10	100	+0.105	38	20
ZPY56	52-60	10	100	+0.105	42	18
ZPY62	58-66	10	130	+0.105	47	16
ZPY68	64-72	10	130	+0.105	51	14
ZPY75	70-79	10	160	+0.105	56	13
ZPY82	77-88	10	160	+0.105	61	12
ZPY91	85-96	5.0	250	+0.110	68	11
ZPY100	94-106	5.0	250	+0.110	75	10

Notes:
1. Valid provided that leads are kept at ambient temperature at a distance of 10mm from case.
2. Tested with pulses tp = 20ma.
3. The ZPY1 is a silicon diode operated in forward direction. Hence, the index of all parameters and maximum ratings should be “F” instead of “Z.” Connect the cathode terminal to the negative pole.

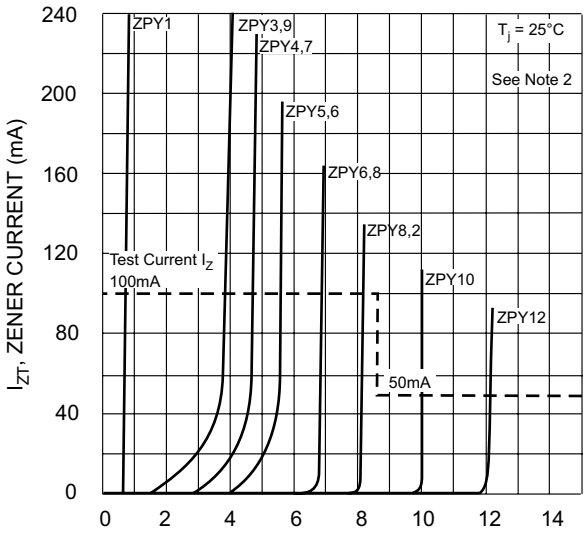


Fig. 1, Zener Breakdown Characteristics

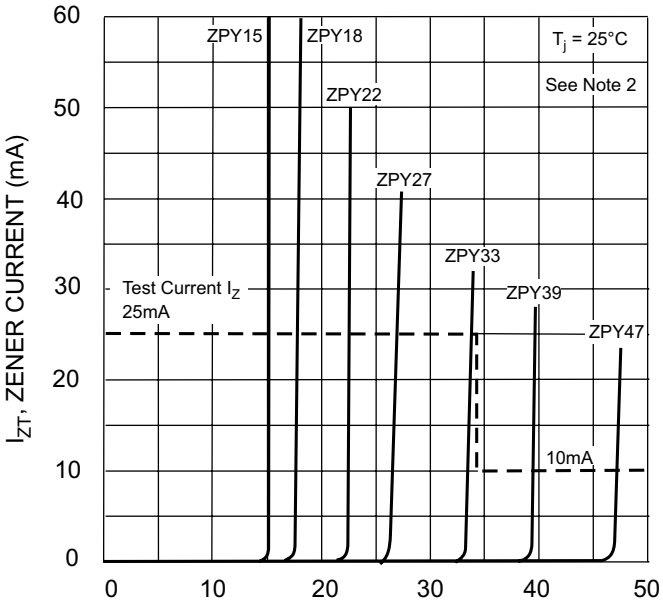


Fig. 2, Zener Breakdown Characteristics

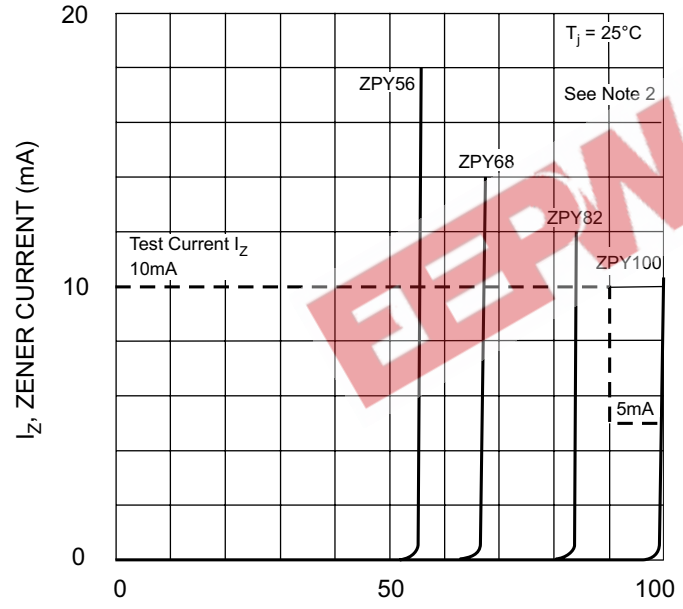


Fig. 3, Zener Breakdown Characteristics

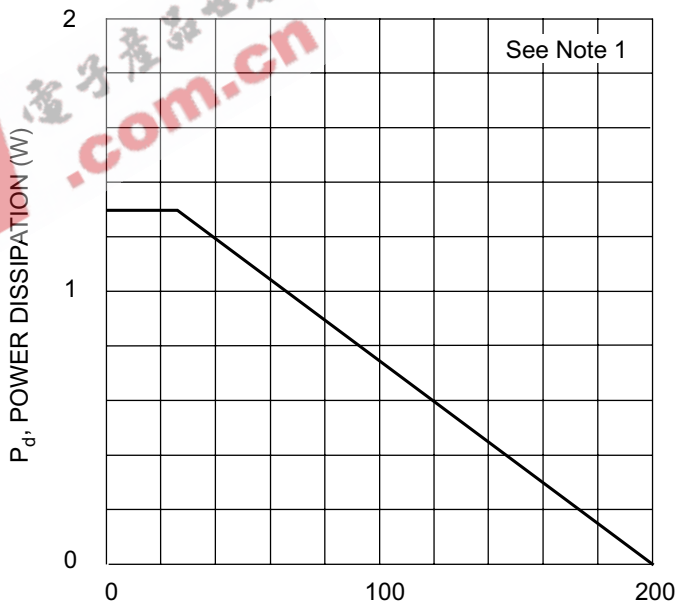


Fig. 4, Power Derating Curve

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