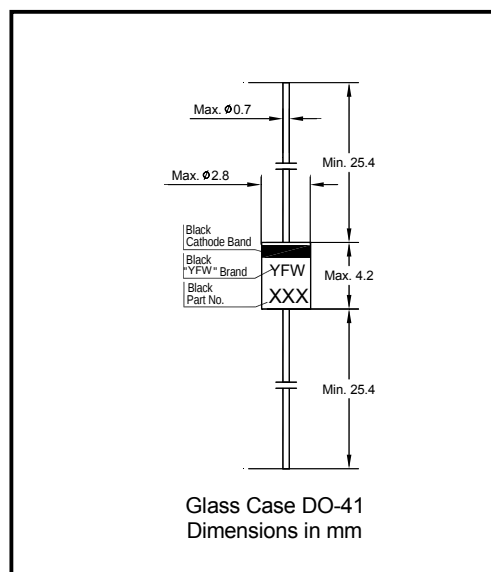


SILICON PLANAR POWER ZENER DIODES

For use in stabilizing and clipping circuits with high power rating.



Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	1 ¹⁾	W
Junction Temperature	T_j	200	°C
Storage Temperature Range	T_s	-65 to +200	°C

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

Characteristics at Ta=25°C

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	R_{thA}	170 ¹⁾	K/W
Forward Voltage at IF=200mA	V_F	1.2	V

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

1W ZENER DIODES/DO-41(GLASS)

TYPE	Zener Voltage Range ³⁾⁵⁾			Maximum Zener Impedance ¹⁾			Maximum Reverse Leakage Current		Maximum Surge Current ⁴⁾	Maximum Regulator Current ²⁾
	V _{znom}	V _Z	I _{ZT}	I _{ZT}	Z _{ZK}	I _{ZK}	I _{RM}	V _R	@I _a =25°C	
	V	V	mA	Ω	Ω	mA	μA	V	mA	
1N4727A	3	2.85..3.15	83	10	400	1.0	150	1	1375	275
1N4728A	3.3	3.13..3.47	76	10	400	1.0	150	1	1375	275
1N4729A	3.6	3.42..3.78	69	10	400	1.0	100	1	1260	252
1N4730A	3.9	3.7..4.1	64	9	400	1.0	100	1	1190	234
1N4731A	4.3	4.08..4.52	58	9	400	1.0	50	1	1070	217
1N4732A	4.7	4.46..4.94	53	8	500	1.0	10	1	970	193
1N4733A	5.1	4.84..5.36	49	7	550	1.0	10	1	890	178
1N4734A	5.6	5.32..5.88	45	5	600	1.0	10	2	810	162
1N4735A	6.2	5.89..6.51	41	2	700	1.0	10	3	730	146
1N4736A	6.8	6.46..7.14	37	3.5	700	1.0	10	4	660	133
1N4737A	7.5	7.12..7.88	34	4	700	0.5	10	5	605	121
1N4738A	8.2	7.79..8.61	31	4.5	700	0.5	10	6	550	110
1N4739A	9.1	8.64..9.56	28	5	700	0.5	10	7	500	100
1N4740A	10	9.5..10.5	25	7	700	0.25	10	7.6	454	91
1N4741A	11	10.45..11.55	23	8	700	0.25	5	8.4	414	83
1N4742A	12	11.4..12.6	21	9	700	0.25	5	9.1	380	76
1N4743A	13	12.35..13.65	19	10	700	0.25	5	9.9	344	69
1N4744A	15	14.25..15.75	17	14	700	0.25	5	11.4	304	61
1N4745A	16	15.2..16.8	15.5	16	700	0.25	5	12.2	285	57
1N4746A	18	17.1..18.9	14	20	750	0.25	5	13.7	250	50
1N4747A	20	19..21	12.5	22	750	0.25	5	15.2	225	45
1N4748A	22	20.9..23.1	11.5	23	750	0.25	5	16.7	205	41
1N4749A	24	22.8..25.2	10.5	25	750	0.25	5	18.2	190	38
1N4750A	27	25.65..28.35	9.5	35	750	0.25	5	20.6	170	34
1N4751A	30	28.5..31.5	8.5	40	1000	0.25	5	22.8	150	30
1N4752A	33	31.35..34.65	7.5	45	1000	0.25	5	25.1	135	27
1N4753A	36	34.2..37.8	7.0	50	1000	0.25	5	27.4	125	25
1N4754A	39	37.05..40.95	6.5	60	1000	0.25	5	29.7	115	23
1N4755A	43	40.85..45.15	6.0	70	1500	0.25	5	32.7	110	22
1N4756A	47	44.65..49.35	5.5	80	1500	0.25	5	35.8	95	19
1N4757A	51	48.45..53.55	5.0	95	1500	0.25	5	38.8	90	18
1N4758A	56	53.2..58.8	4.5	110	2000	0.25	5	42.6	80	16
1N4759A	62	58.9..65.1	4.0	125	2000	0.25	5	47.1	70	14
1N4760A	68	64.6..71.4	3.7	150	2000	0.25	5	51.7	65	13
1N4761A	75	71.25..78.75	3.3	175	2000	0.25	5	56.0	60	12
1N4762A	82	77.9..86.1	3.0	200	3000	0.25	5	62.2	55	11
1N4763A	91	86.45..95.55	2.8	250	3000	0.25	5	69.2	50	10
1N4764A	100	95..105	2.5	350	3000	0.25	5	76.0	45	9

¹⁾The Zener Impedance is derived from the 60HZ AC voltage which results when an AC current having RMS value equal to 10% of the Zener Current(I_{ZT} or I_{ZK}) is superimposed on I_Z or I_{ZK}. Zener Impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

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

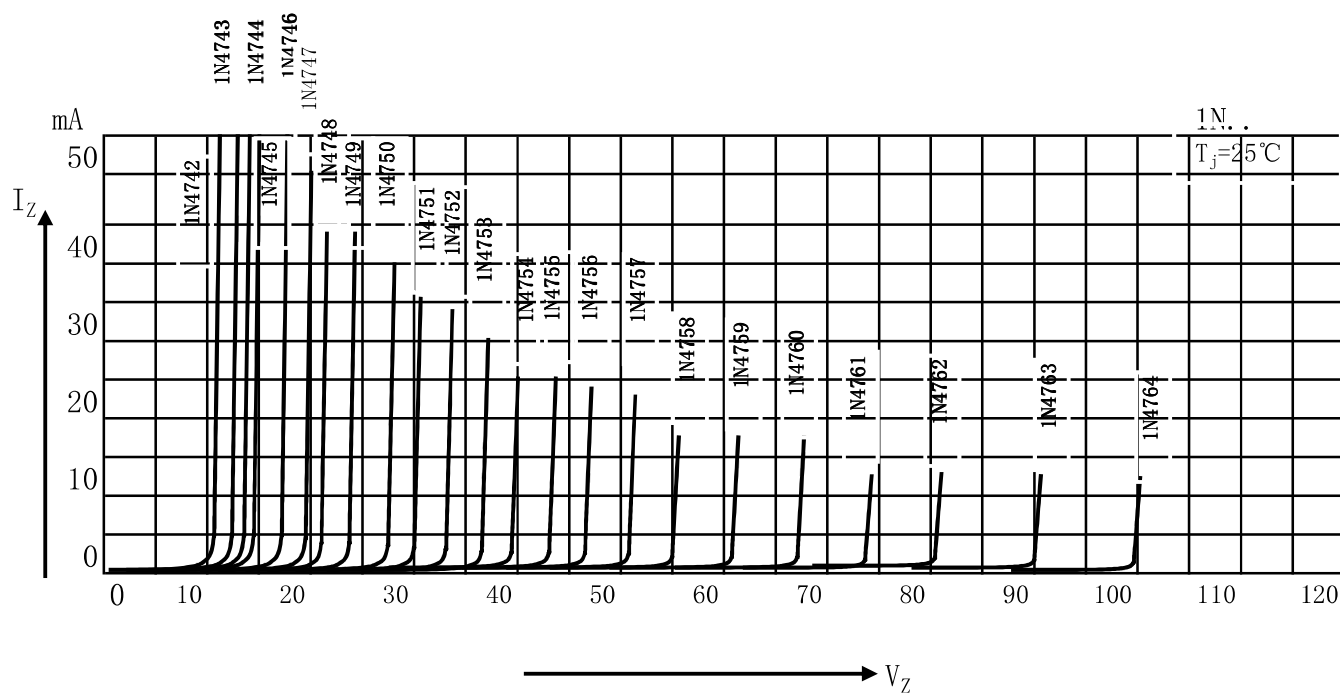
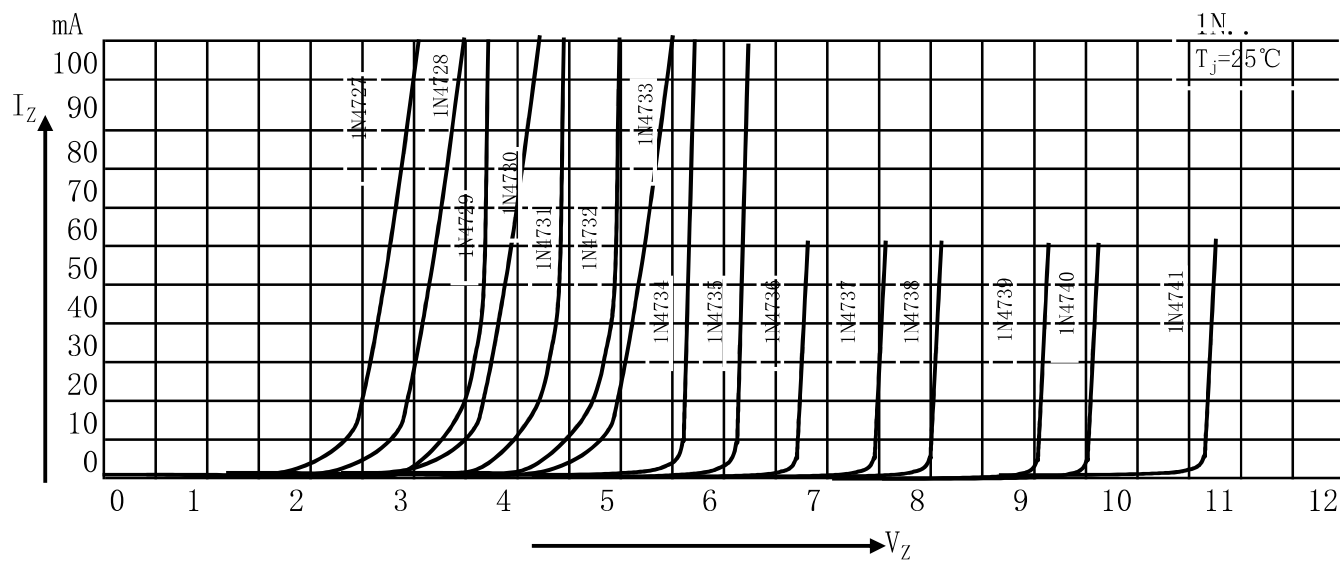
³⁾Measured under thermal equilibrium and DC test conditions.

⁴⁾The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/20 second duration superimposed on the test current I_{ZT}.

⁵⁾Tested with pulses tp=20ms.

Breakdown characteristics

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



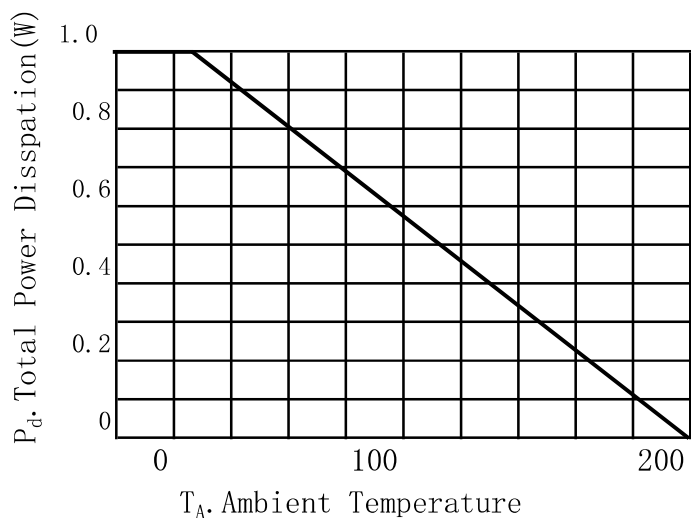


Fig.1 Power Dissipation vs Ambient Temperature

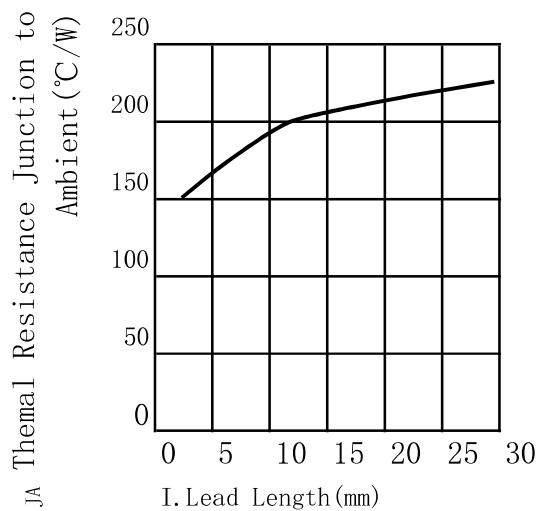


Fig.2 Typical Thermal Resistance vs Lead Length

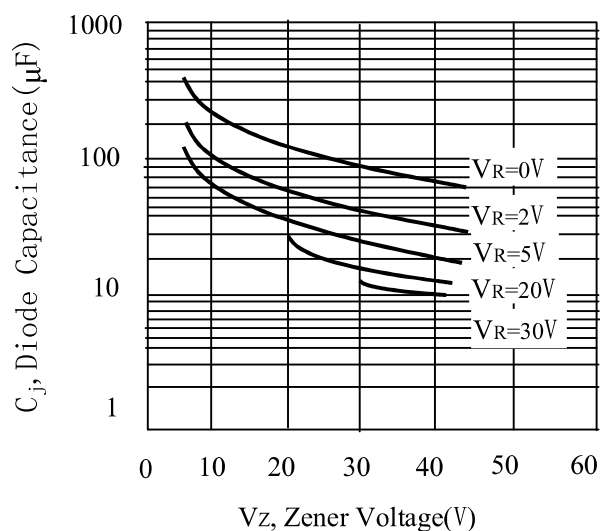


Fig.3 Junction Capacitance vs V_z , Zener Voltage

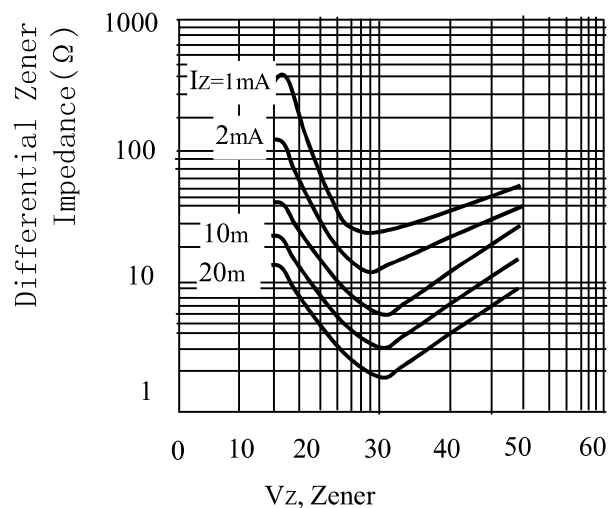
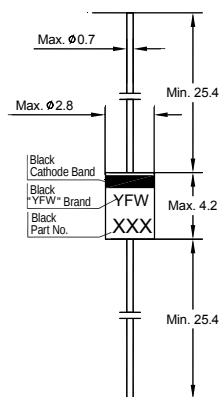


Fig.4 Typical Zener Impedance vs

Package Outline DO-41



Glass Case DO-41
Dimensions in mm

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
DO-41	BOX	2,500/5000	EIA-481-1

Disclaimer

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