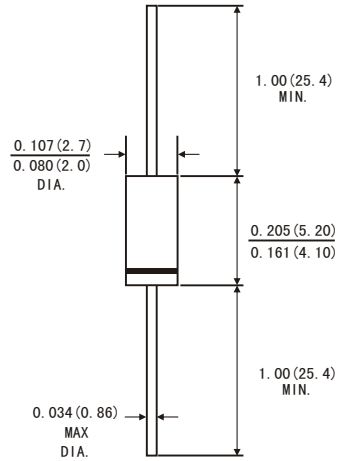
1N4727 THRU 1N4764

1W SILICON PLANAR ZENER DIODES

FEATURES

- Silicon planar power zener diode
  For use in stabilizing and clipping circuits with high power rating.
- Standard Zener voltage tolerance is ±10%.
  Add suffix "A" for±5% tolerance and suffix"B"for±2%tolerance.
- Other tolerance is available upon request.
- High temperature soldering guaranteed:260℃/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

DO-41(GLASS)



Dimensions in inches and (millimeters)

MECHANICAL DATA

- *Case*: DO-41 glass case
- *Weight*: Approx. 0.35 gram

ABSOLUTE MAXIMUM RATINGS(LIMITING VALUES) (T_A=25℃)

	Symbols	*Value*	*Units*
Zener current see table "Characteristics"			
Power dissipation at T_A=25℃	P_{tot}	1[1)]	W
Junction temperature	T_J	200	℃
Storage temperature range	T_{STG}	-65 to+200	℃
1) Valid provided that a distance of 8mm from case is kept at ambient temperature			

ELECTRICAL CHARACTERISTICS (T_A=25℃)

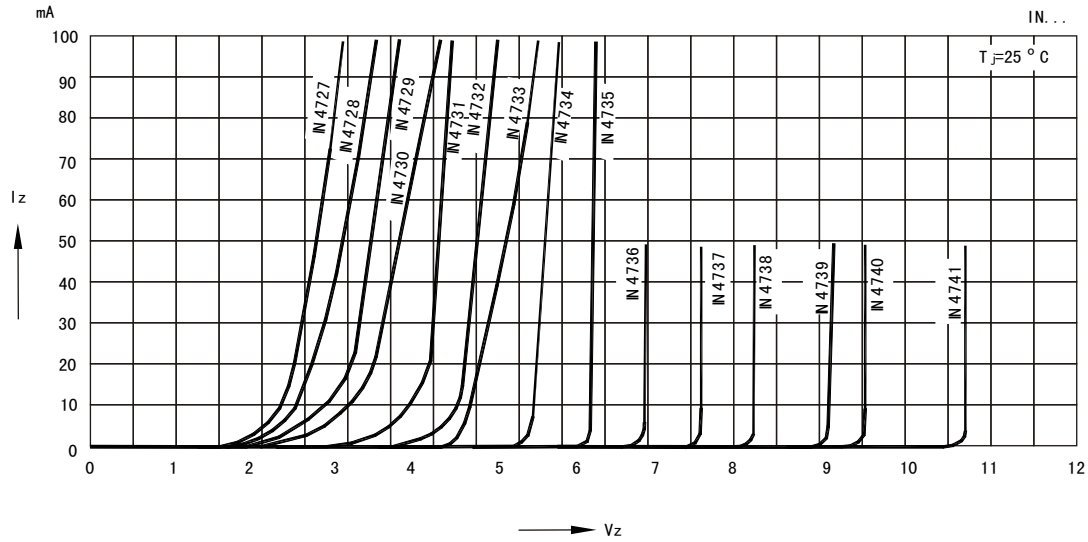
	Symbols	*Min*	*Typ*	*Max*	*Units*
Thermal resistance junction to ambient	$R_{\theta JA}$			170[1)]	K/W
Forward voltage at I_F=200mA	V_F			1.2	V
1) Valid provided that a distance of 8mm from case is kept at ambient temperature.					

Type	Nominal Zener Voltage[1]	Test Current	Maximum Zener Impedance [2]			Maximum reverse leakage current		Surge current [3]	Maximum regulator Current [4]
	at I_{ZT} V_Z V	I_{ZT} mA	at I_{ZT} Z_{ZT} Ω	Z_{ZK} Ω	at I_{ZK} mA	I_R μA	at V_R V	at $T_{A=25℃}$ IR mA	IZM mA
1N4727	3	83	10	400	1	150	1	1,375	275
1N4728	3.3	76	10	400	1	150	1	1,375	275
1N4729	3.6	69	10	400	1	100	1	1,260	252
1N4730	3.9	64	9	400	1	100	1	1,190	234
1N4731	4.3	58	9	400	1	50	1	1,070	217
1N4732	4.7	53	8	500	1	10	1	970	193
1N4733	5.1	49	7	550	1	10	1	890	178
1N4734	5.6	45	5	600	1	10	2	810	162
1N4735	6.2	41	2	700	1	10	3	730	146
1N4736	6.8	37	3.5	700	1	10	4	660	133
1N4737	7.5	34	4	700	0.5	10	5	605	121
1N4738	8.2	31	4.5	700	0.5	10	6	550	110
1N4739	9.1	28	5	700	0.5	10	7	500	100
1N4740	10	25	7	700	0.25	10	7.6	454	91
1N4741	11	23	8	700	0.25	5	8.4	414	83
1N4742	12	21	9	700	0.25	5	9.1	380	76
1N4743	13	19	10	700	0.25	5	9.9	344	69
1N4744	15	17	14	700	0.25	5	11.4	304	61
1N4745	16	15.5	16	700	0.25	5	12.2	285	57
1N4746	18	14	20	750	0.25	5	13.7	250	50
1N4747	20	12.5	22	750	0.25	5	15.2	225	45
1N4748	22	11.5	23	750	0.25	5	16.7	205	41
1N4749	24	10.5	25	750	0.25	5	18.2	190	38
1N4750	27	9.5	35	750	0.25	5	20.6	170	34
1N4751	30	8.5	40	1,000	0.25	5	22.8	150	30
1N4752	33	7.5	45	1,000	0.25	5	25.1	135	27
1N4753	36	7	50	1,000	0.25	5	27.4	125	25
1N4754	39	6.5	60	1,000	0.25	5	29.7	115	23
1N4755	43	6	70	1,500	0.25	5	32.7	110	22
1N4756	47	5.5	80	1,500	0.25	5	35.8	95	19
1N4757	51	5	95	1,500	0.25	5	38.8	90	18
1N4758	56	4.5	110	2,000	0.25	5	42.6	80	16
1N4759	62	4	125	2,000	0.25	5	47.1	70	14
1N4760	68	3.7	150	2,000	0.25	5	51.7	65	13
1N4761	75	3.3	175	2,000	0.25	5	56	60	12
1N4762	82	3	200	3,000	0.25	5	62.2	55	11
1N4763	91	2.8	250	3,000	0.25	5	69.2	50	10
1N4764	100	2.5	350	3,000	0.25	5	76	45	9

Notes: 1) The Zener impedance is derived from the 1KHz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} 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 electrodes at a distance of 10mm 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 ½ square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current Izt.
5) Tested with pulses tp=20ms.

Breakdowm characteristics

Tj=constant(pulsed)



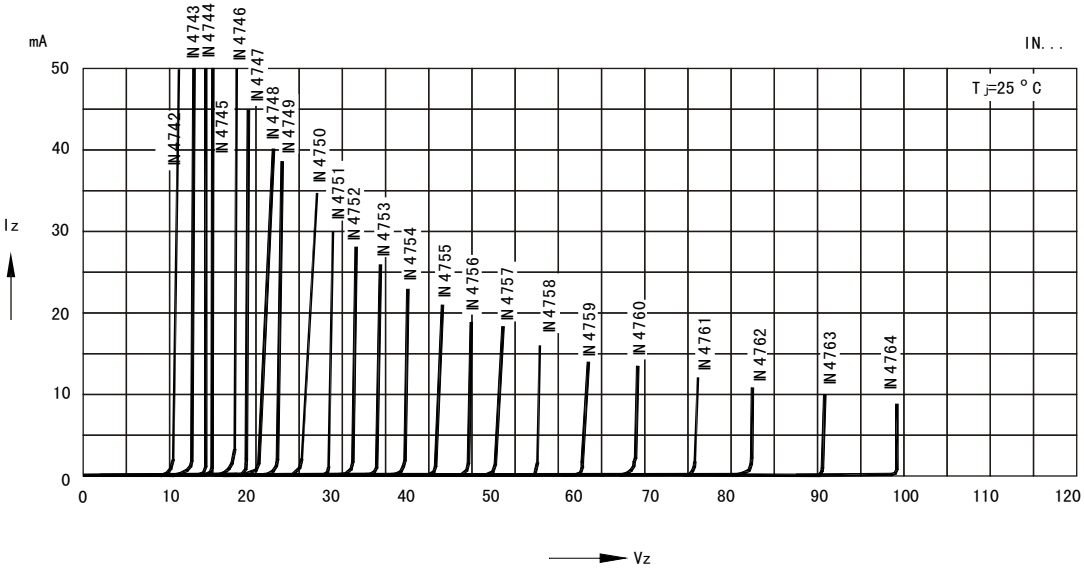


FIG.1-POWER DISSIPATION VS AMBIENT TEMPERATURE

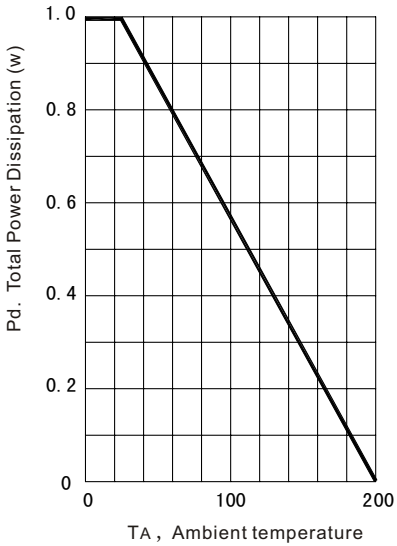


FIG.2-TYPICAL THERMAL RESISTANCE VS LEAD LENGTH

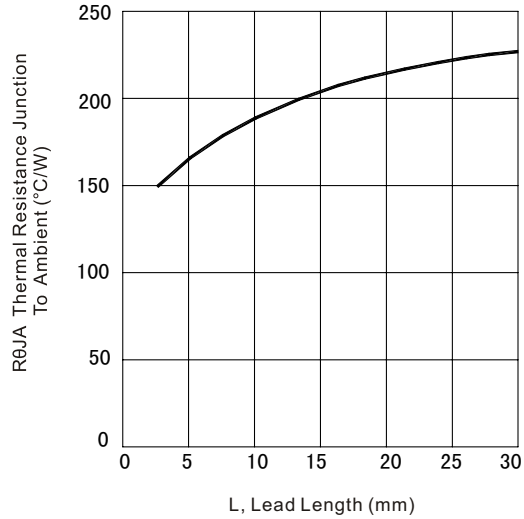


FIG.3-JUNCTION CAPACITANCE VS ZENER VOLTAGE

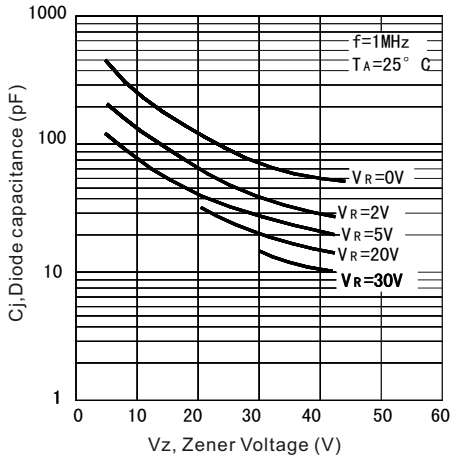


FIG.4-TYPICAL ZENER IMPEDANCE VS ZENER VOLTAGE