1N4728A THRU 1N4764A

Zener Diode

Zener Voltage 3.3 to 100 V
Power Dissipation 1.0 Watts

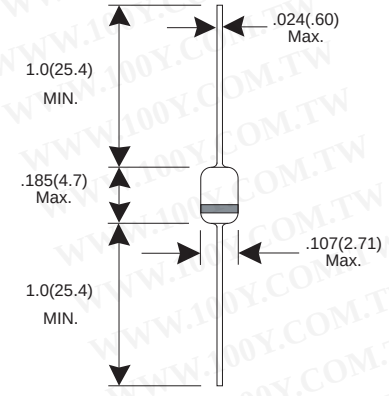
Features

- ✶ For surface mounted applications
- ✶ 1.0 W power dissipation
- ✶ Ideally suited for automated assembly processes

Mechanical Data

- ✶ Case: Molded plastic DO-41
- ✶ Epoxy: UL 94V-0 rate flame retardant
- ✶ Terminals: Solderable per MIL-STD-202 method 208
- ✶ Polarity: cathode band
- ✶ Mounting position: Any
- ✶ Weight: 0.13 gram

DO-41



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

	SYMBOL	VALUE	UNIT
Maximum Forward Voltage Drop at IF=10mA	V_F	1.2	V
Power Dissipation (Note 1)	P_D	1.0	mW
Thermal Resistane Junction to Ambient Air	R_{thJA}	170	K/mW
Operating junction and Storage Temperature Range	T_J	-55 to +150	°C

NOTES : (1) Mounted on 5.0mm^2(.013mm thick) land areas.
(2) Measurd on 8.3ms, single half-sine wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

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Part No.	Electrical Characteristics (Ta=25°C)							Surge
	Vz	IZT	ZZT	ZZK	IZK	I_R Max. @V_R		Current
	(V)	(mA)	(Ohm)	(Ohm)	(mA)	(uA)	V_R(V)	(mA)
1N4728A	3.3	76	10	400	1.0	100	1.0	1380
1N4729A	3.6	69	10	400	1.0	100	1.0	1260
1N4730A	3.9	64	9	400	1.0	50	1.0	1190
1N4731A	4.3	58	9	400	1.0	10	1.0	1070
1N4732A	4.7	53	8	500	1.0	10	1.0	970
1N4733A	5.1	49	7	550	1.0	10	1.0	890
1N4734A	5.6	45	5	600	1.0	10	2.0	810
1N4735A	6.2	41	2	700	1.0	10	3.0	730
1N4736A	6.8	37	4	700	1.0	10	4.0	660
1N4737A	7.5	34	4	700	0.5	10	5.0	605
1N4738A	8.2	31	5	700	0.5	10	6.0	550
1N4739A	9.1	28	5	700	0.5	10	7.0	500
1N4740A	10	25	7	700	0.5	10	7.6	454
1N4741A	11	23	8	700	0.5	5	8.4	414
1N4742A	12	21	9	700	0.5	5	9.1	380
1N4743A	13	19	10	700	0.5	5	9.9	344
1N4744A	15	17	14	700	0.5	5	11.4	304
1N4745A	16	15.5	16	700	0.25	5	12.2	285
1N4746A	18	14.0	20	750	0.25	5	13.7	250
1N4747A	20	12.5	22	750	0.25	5	15.2	225
1N4748A	22	11.5	23	750	0.25	5	16.7	205
1N4749A	24	10.5	25	750	0.25	5	18.2	190
1N4750A	27	9.5	35	750	0.25	5	20.6	170
1N4751A	30	8.5	40	1000	0.25	5	22.8	150
1N4752A	33	7.5	45	1000	0.25	5	25.1	135
1N4753A	36	7.0	50	1000	0.25	5	27.4	125
1N4754A	39	6.5	60	1000	0.25	5	29.7	115
1N4755A	43	6.0	70	1500	0.25	5	32.7	110
1N4756A	47	5.5	80	1500	0.25	5	35.8	95
1N4757A	51	5.0	95	1500	0.25	5	38.8	90
1N4758A	56	4.5	110	2000	0.25	5	42.6	80
1N4759A	62	4.0	125	2000	0.25	5	47.1	70
1N4760A	68	3.7	150	2000	0.25	5	51.7	65
1N4761A	75	3.3	175	2000	0.25	5	56.0	60
1N4762A	82	3.0	200	3000	0.25	5	62.2	55
1N4763A	91	2.8	250	3000	0.25	5	69.2	50
1N4764A	100	2.5	350	3000	0.25	5	76.0	45

The type number listed have zener voltage min/max limits as shown and have a standard tolerance on the nominal zener voltage 5%

RATINGS AND CHARACTERISTIC CURVES 1N4728A THRU 1N4764A

FIG 1. POWER TEMPERATURE DERATING CURVE

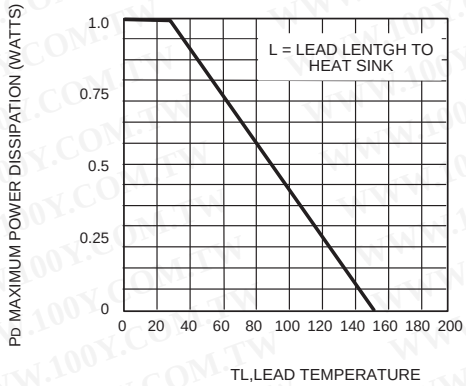
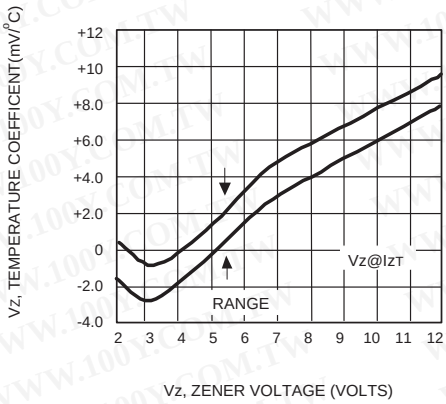


FIG 2. TEMPERATURE COEFFICIENTS
(-55°C TO +150°C TEMPERAYURE RANGE; 90% OF THE UNIT SARE IN THE RANGES INDICATED.)



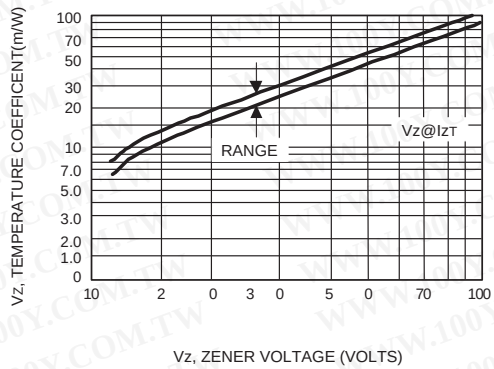


FIG 3. TYPICAL THERMAL RESISTANCE VERSUS LEAD LENGTH

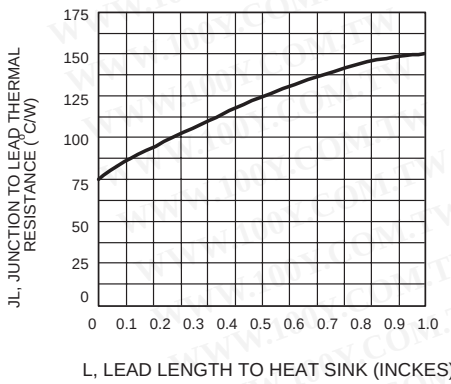


FIG 4. EFFECT OF ZENER CURRENT

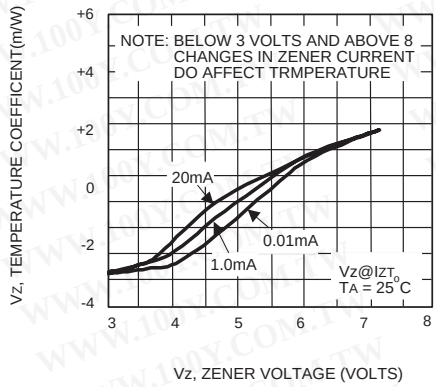


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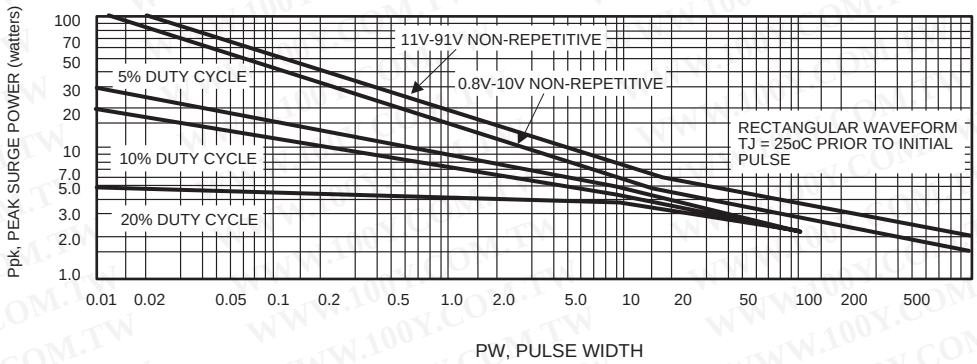
FIG 5. MAXIMUM SURGE POWER



This graphr epresents 90 percentile date point
For worse-case design characteristics, multiply surge power by 2/3

FIG 6. EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

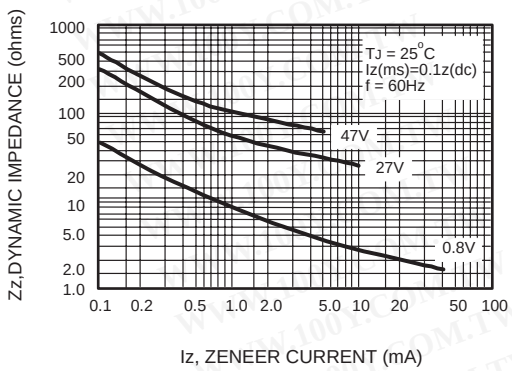


FIG 7. EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

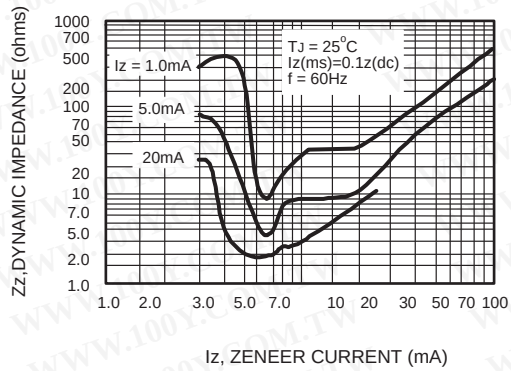


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FIG 8.TYPICAL LEAKAGE CURRENT

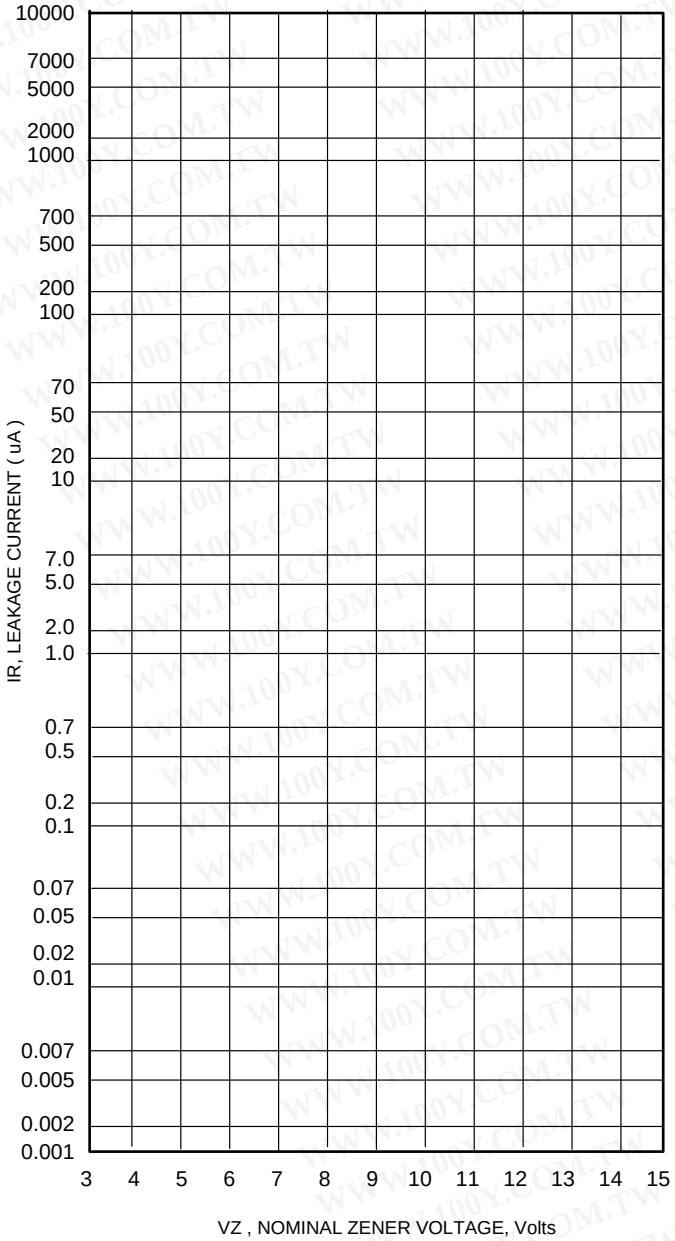

FIG 9.TYPICAL CAPACITANCE VERSUS Vz

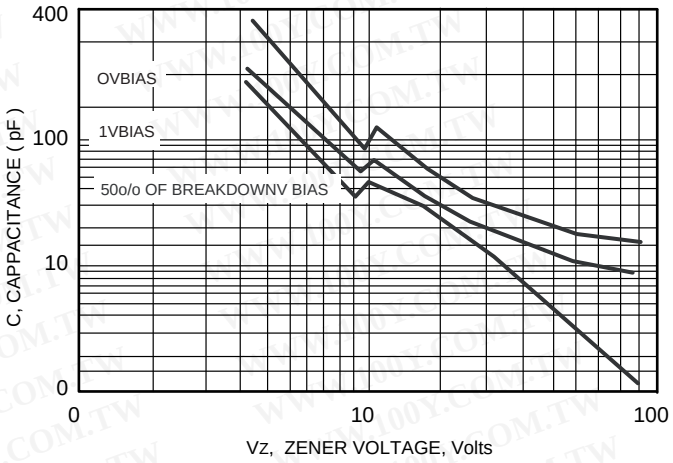

FIG 10. TYPICAL FORWARD CHARACTERISTICS