

1N4728A through 1N4753A

Silicon Epitaxial Planar Zener Diodes

for Stabilized Power Supply

HITACHI

Preliminary

Rev. 0

Aug. 1993

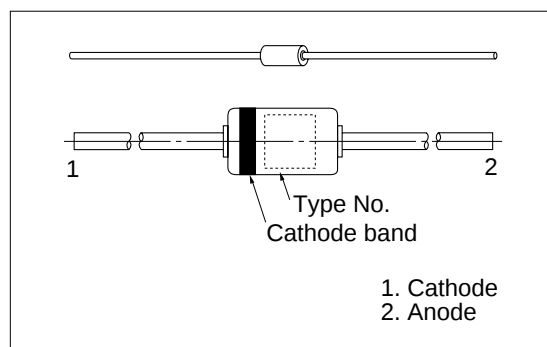
Features

- Glass package DO-41 structure ensures high reliability.
- Wide spectrum from 3.3V through 36V of zener voltage provide flexible application.

Ordering Information

Type No.	Mark	Package Code
1N4728A through 1N4753A	Type No.	DO-41

Outline



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	P_d	1.0	W
Surge power dissipation	$P_d(\text{surge})^*$	12	W
Junction temperature	T_j	175	°C
Storage temperature	T_{stg}	-55 to +175	°C

* $P_W=10\text{ms}$

Electrical Characteristics (Ta = 25°C)

	V_Z (V) *		I_R (μA)		Z_{ZT} (Ω)		Z_{ZK} (Ω)	
	$I_Z(\text{mA})$	Test Condition	Max	Test Condition	Max	Test Condition	Max	Test Condition
				$V_R(\text{V})$		$I_{ZT}(\text{mA})$		$I_{ZK}(\text{mA})$
1N4728A	3.3 $\pm$ 5(%)	76	100	1.0	10	76	400	1.0
1N4729A	3.6 $\pm$ 5(%)	69	100	1.0	10	69	400	1.0
1N4730A	3.9 $\pm$ 5(%)	64	50	1.0	9	64	400	1.0
1N4731A	4.3 $\pm$ 5(%)	58	10	1.0	9	58	400	1.0
1N4732A	4.7 $\pm$ 5(%)	53	10	1.0	8	53	500	1.0

* Tested with DC.

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	V _Z (V) *		I _R (μA)		Z _{ZT} (Ω)		Z _{ZK} (Ω)	
	Test Condition		Test Condition		Test Condition		Test Condition	
	I _Z (mA)		Max	V _R (V)	Max	I _{ZT} (mA)	Max	I _{ZK} (mA)
1N4733A	5.1±5(%)	49	10	1.0	7	49	550	1.0
1N4734A	5.6±5(%)	45	10	2.0	5	45	600	1.0
1N4735A	6.2±5(%)	41	10	3.0	2	41	700	1.0
1N4736A	6.8±5(%)	37	10	4.0	3.5	37	700	1.0
1N4737A	7.5±5(%)	34	10	5.0	4	34	700	0.5
1N4738A	8.2±5(%)	31	10	6.0	4.5	31	700	0.5
1N4739A	9.1±5(%)	28	10	7.0	5	28	700	0.5
1N4740A	10 ±5(%)	25	10	7.6	7	25	700	0.25
1N4741A	11 ±5(%)	23	5	8.4	8	23	700	0.25
1N4742A	12 ±5(%)	21	5	9.1	9	21	700	0.25
1N4743A	13 ±5(%)	19	5	9.9	10	19	700	0.25
1N4744A	15 ±5(%)	17	5	11.4	14	17	700	0.25
1N4745A	16 ±5(%)	15.5	5	12.2	16	15.5	700	0.25
1N4746A	18 ±5(%)	14.0	5	13.7	20	14.0	750	0.25
1N4747A	20 ±5(%)	12.5	5	15.2	22	12.5	750	0.25
1N4748A	22 ±5(%)	11.5	5	16.7	23	11.5	750	0.25
1N4749A	24 ±5(%)	10.5	5	18.2	25	10.5	750	0.25
1N4750A	27 ±5(%)	9.5	5	20.6	35	9.5	750	0.25
1N4751A	30 ±5(%)	8.5	5	22.8	40	8.5	1000	0.25
1N4752A	33 ±5(%)	7.5	5	25.1	45	7.5	1000	0.25
1N4753A	36 ±5(%)	7.0	5	27.4	50	7.0	1000	0.25

* Tested with DC.

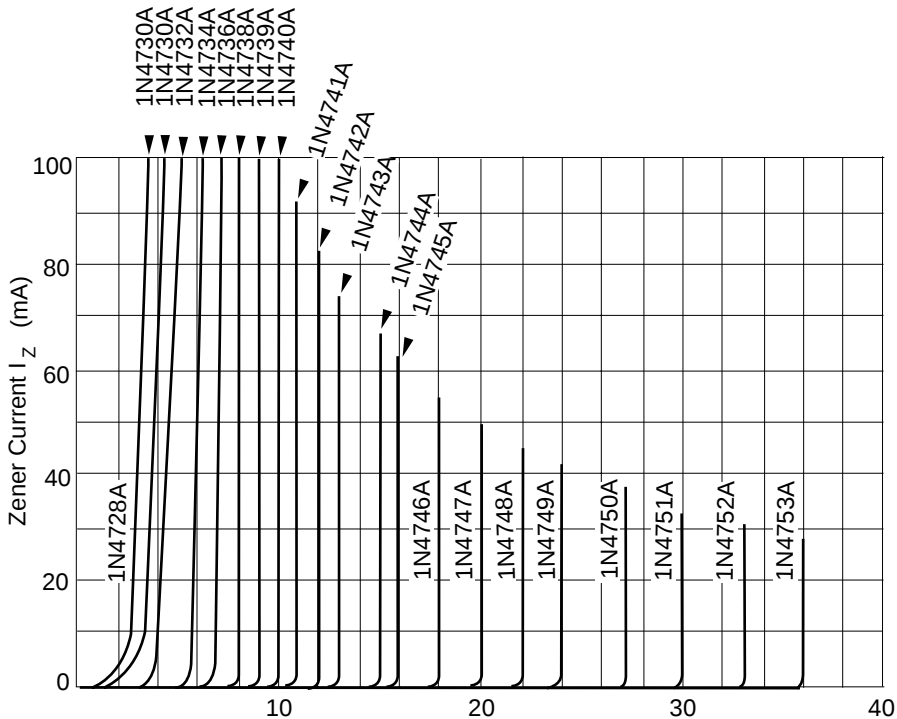


Fig.1 Zener current Vs. Zener voltage

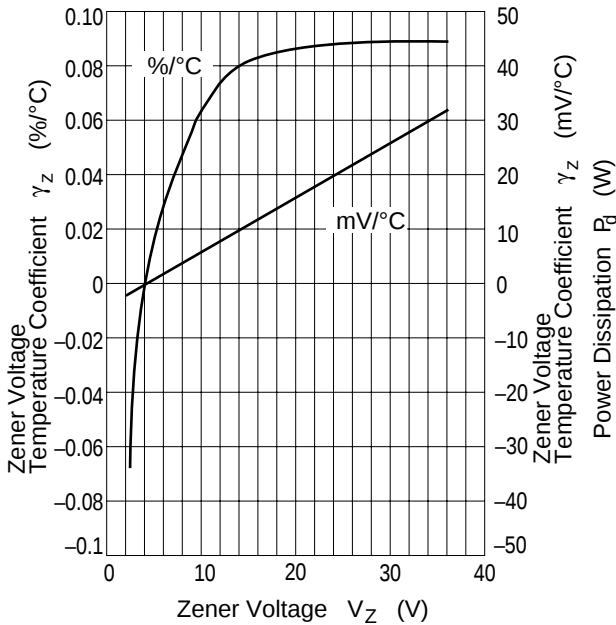


Fig.2 Temperature Coefficient Vs. Zener voltage

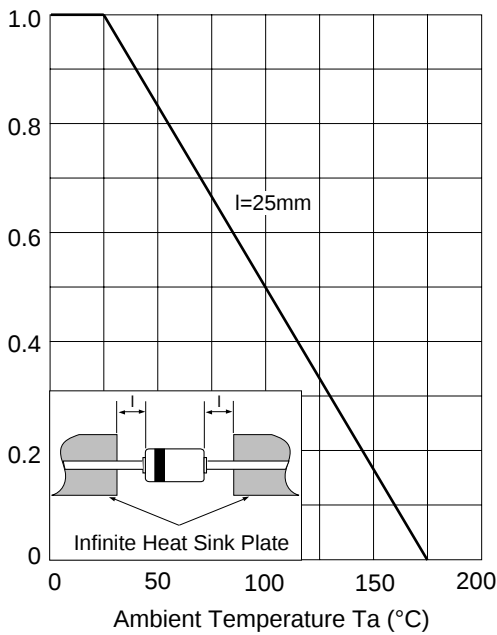


Fig.3 Power Dissipation Vs. Ambient Temperature

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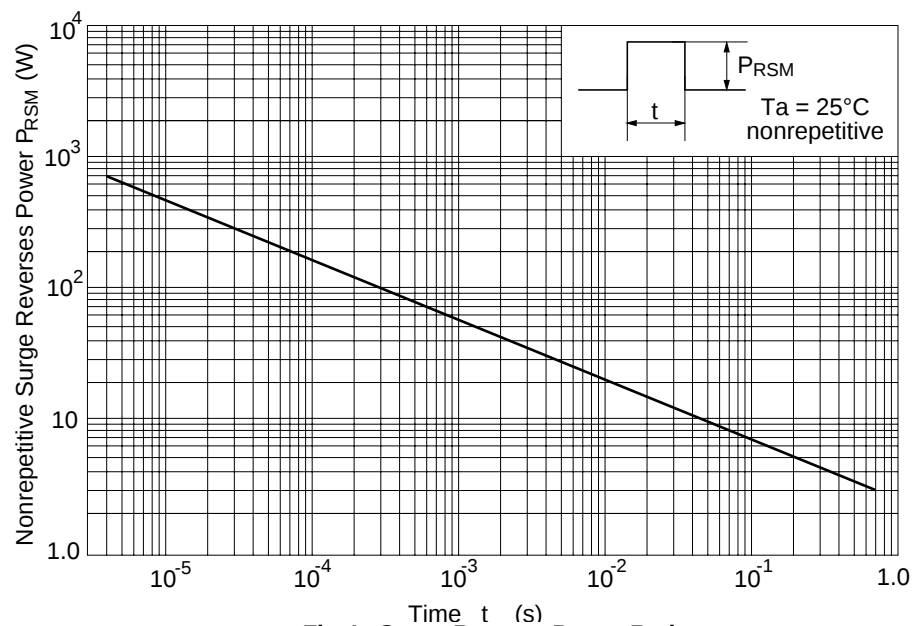


Fig.4 Surge Reverse Power Ratings

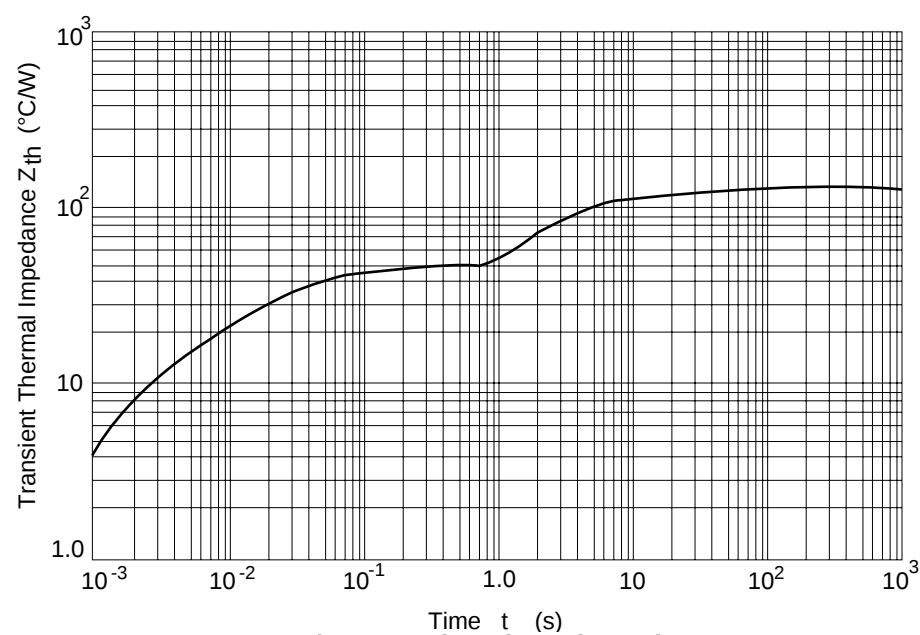
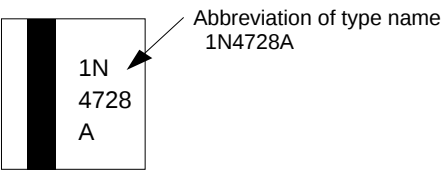
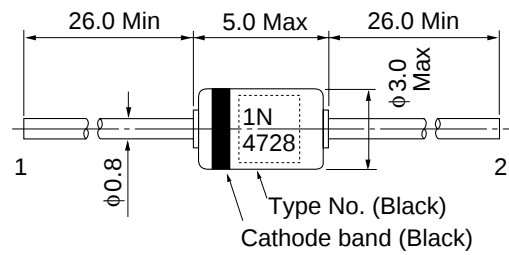


Fig.5 Transient Thermal Impedance

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Package Dimensions

Unit: mm



- 1 Cathode
- 2 Anode

HITACHI Code	DO-41
JEDEC Code	DO-41
EIAJ Code	SC-47
Weight (g)	0.38

Expanded drawing of marking