

To all our customers

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Renesas Technology Corp.  
Customer Support Dept.  
April 1, 2003

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# 1N4728A through 1N4753A

Silicon Epitaxial Planar Zener Diodes for Stabilized Power Supply

# RENESAS

ADE-208-136C (Z)

Rev.3  
Sep. 2000

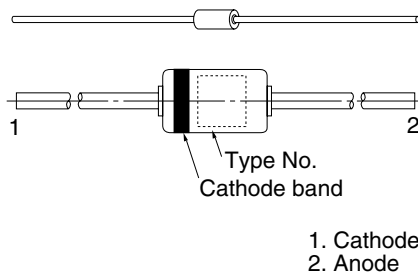
## Features

- 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

## Pin Arrangement



## Absolute Maximum Ratings

( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Value	Unit
Power dissipation	$P_d$ *1	1.0	W
Junction temperature	$T_j$	200	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-65 to +200	$^\circ\text{C}$

Note: 1. See Fig.3

# 1N4728A through 1N4753A

## Electrical Characteristics

(Ta = 25°C)

Type No.	$V_z$ (V) * <sup>1</sup>		$I_R$ (μA)		$Z_{zT}$ (Ω)		$Z_{zK}$ (Ω)		$I_{RSM}$ (mA)* <sup>2</sup>
	Max	Test Condition	Max	Test Condition	Max	Test Condition	Max	Test Condition	Max
		$I_z$ (mA)		$V_R$ (V)		$I_{zT}$ (mA)		$I_{zK}$ (mA)	
1N4728A	3.3 ± 5 (%)	76	100	1.0	10	76	400	1.0	1380
1N4729A	3.6 ± 5 (%)	69	100	1.0	10	69	400	1.0	1260
1N4730A	3.9 ± 5 (%)	64	50	1.0	9	64	400	1.0	1190
1N4731A	4.3 ± 5 (%)	58	10	1.0	9	58	400	1.0	1070
1N4732A	4.7 ± 5 (%)	53	10	1.0	8	53	500	1.0	970
1N4733A	5.1 ± 5 (%)	49	10	1.0	7	49	550	1.0	890
1N4734A	5.6 ± 5 (%)	45	10	2.0	5	45	600	1.0	810
1N4735A	6.2 ± 5 (%)	41	10	3.0	2	41	700	1.0	730
1N4736A	6.8 ± 5 (%)	37	10	4.0	3.5	37	700	1.0	660
1N4737A	7.5 ± 5 (%)	34	10	5.0	4	34	700	0.5	605
1N4738A	8.2 ± 5 (%)	31	10	6.0	4.5	31	700	0.5	550
1N4739A	9.1 ± 5 (%)	28	10	7.0	5	28	700	0.5	500
1N4740A	10 ± 5 (%)	25	10	7.6	7	25	700	0.25	454
1N4741A	11 ± 5 (%)	23	5	8.4	8	23	700	0.25	414
1N4742A	12 ± 5 (%)	21	5	9.1	9	21	700	0.25	380
1N4743A	13 ± 5 (%)	19	5	9.9	10	19	700	0.25	344
1N4744A	15 ± 5 (%)	17	5	11.4	14	17	700	0.25	304
1N4745A	16 ± 5 (%)	15.5	5	12.2	16	15.5	750	0.25	285
1N4746A	18 ± 5 (%)	14.0	5	13.7	20	14.0	750	0.25	250
1N4747A	20 ± 5 (%)	12.5	5	15.2	22	12.5	750	0.25	225
1N4748A	22 ± 5 (%)	11.5	5	16.7	23	11.5	750	0.25	205
1N4749A	24 ± 5 (%)	10.5	5	18.2	25	10.5	750	0.25	190
1N4750A	27 ± 5 (%)	9.5	5	20.6	35	9.5	750	0.25	170
1N4751A	30 ± 5 (%)	8.5	5	22.8	40	8.5	1000	0.25	150
1N4752A	33 ± 5 (%)	7.5	5	25.1	45	7.5	1000	0.25	135
1N4753A	36 ± 5 (%)	7.0	5	27.4	50	7.0	1000	0.25	125

Notes: 1. Tested with DC

2. t = 1/120 sec reverse direction 1pulse

Main Characteristic

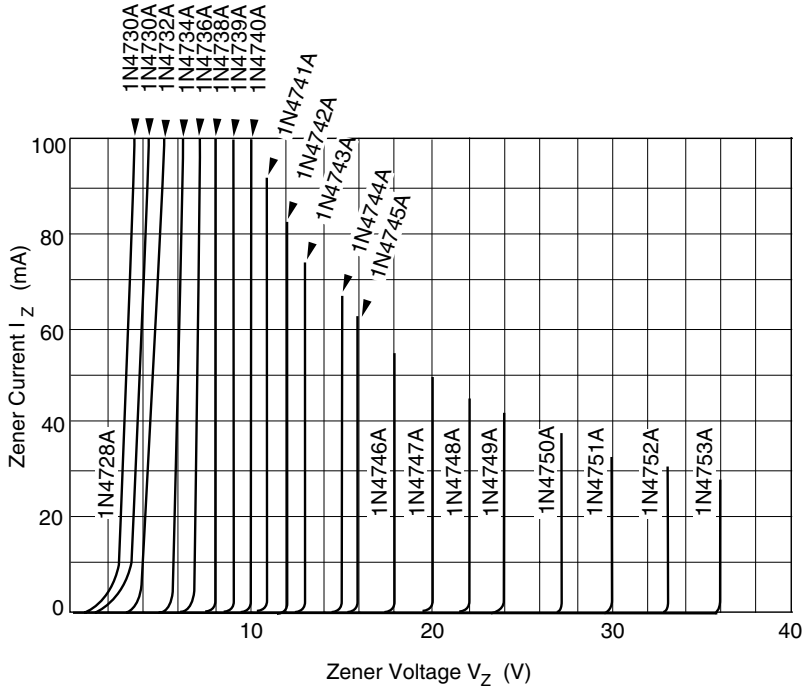


Fig.1 Zener current Vs. Zener voltage

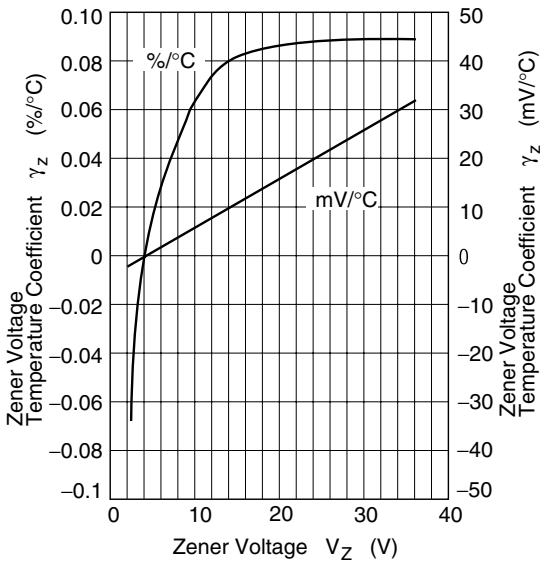


Fig.2 Temperature Coefficient Vs. Zener voltage

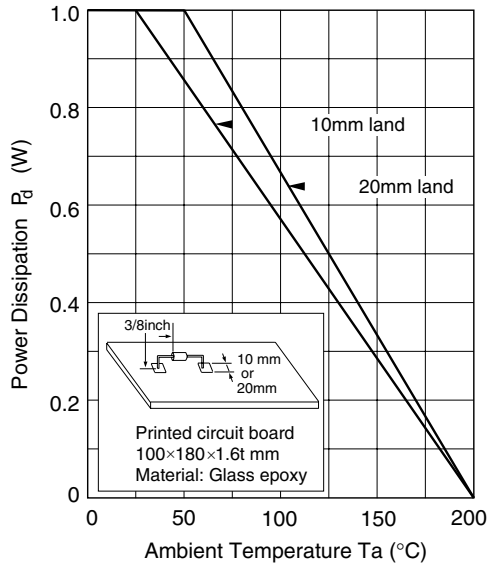


Fig.3 Power Dissipation Vs. Ambient Temperature

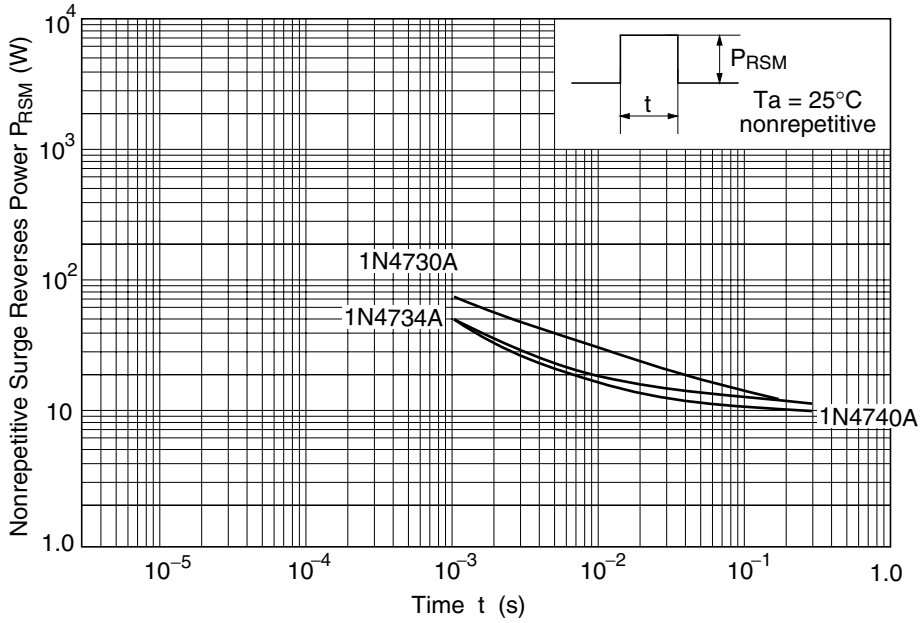


Fig.4 Surge Reverse Power Ratings

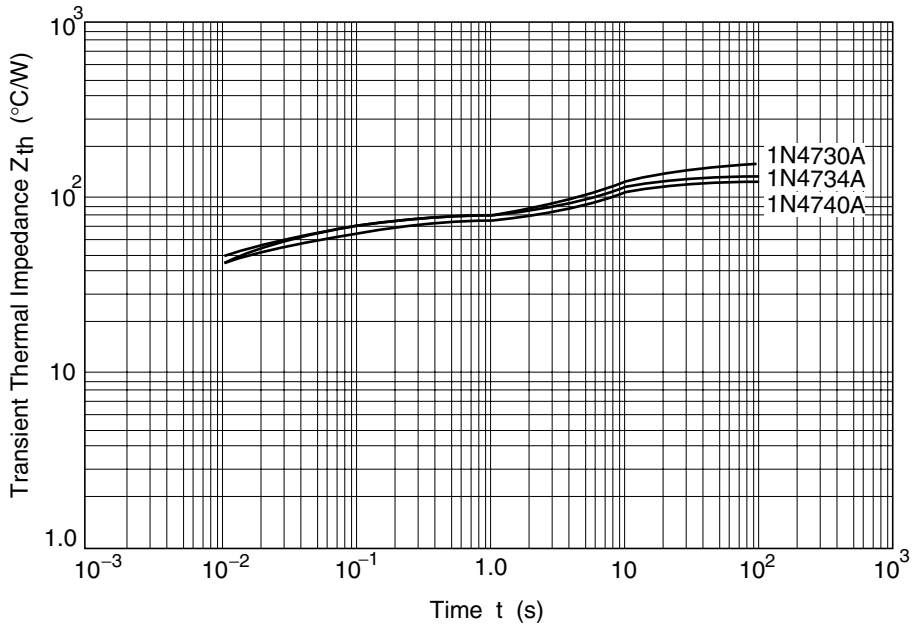
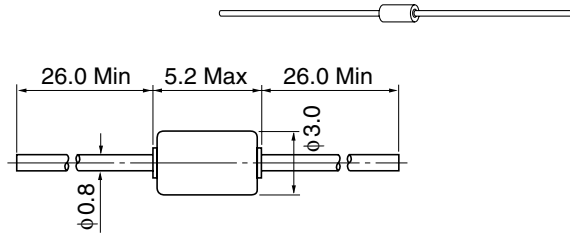


Fig.5 Transient Thermal Impedance

## Package Dimensions

Unit: mm



Hitachi Code	DO-41
JEDEC	Conforms
EIAJ	Conforms
Mass (reference value)	0.38 g

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