

To all our customers

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

Cautions

Keep safety first in your circuit designs!

1. Renesas Technology Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage.

Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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HZT33

Monolithic IC Zener Diode for Temperature Compensation

RENESAS

ADE-208-135D (Z)

Rev.4
Apr. 2002

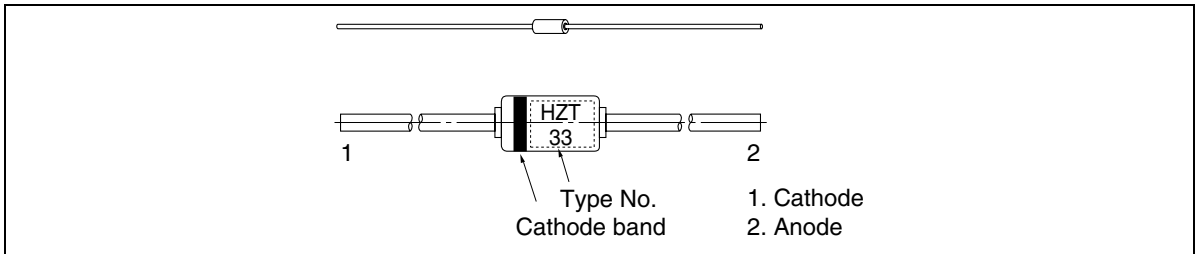
Features

- Lower temperature coefficient of the reference voltage.
- Lower dynamic resistance.
- High reliability with glass seal.

Ordering Information

Type No.	Mark	Package Code
HZT33	Type No.	DO-35

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	Pd *	200	mW
Operation temperature	Topr	-20 to +75	°C
Storage temperature	Tstg	-40 to +175	°C

Note: Value at Ta = 75°C.

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Zener Voltage	V _z	31.0	—	35.0	V	I _z = 5 mA
Dynamic resistance	r _d	—	—	25.0	Ω	I _z = 5 mA, f = 1 KHz
Temperature coefficient	γ _z	—	1.0 * ¹	—	mV/°C	* ² I _z = 5 mA Ta = -20 to 25 to 75°C

Notes: 1. Type Value of γ_z: 1.0 mV/°C

2. Definition of γ_z

γ_z based on Ta = + 25°C and the temperature coefficient with each temperature.
(Range of operation temperature)

Main Characteristic

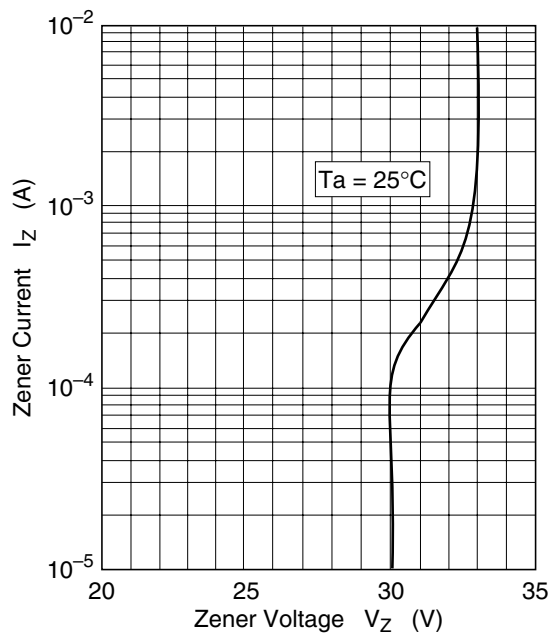


Fig.1 Zener current vs. Zener voltage

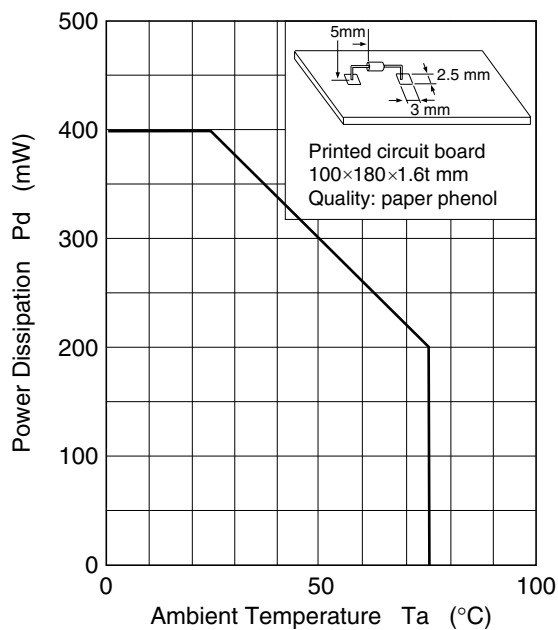
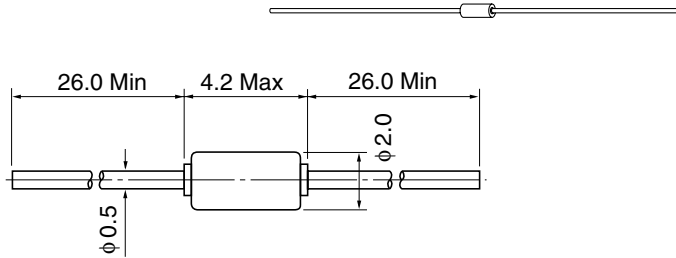


Fig.2 Power Dissipation vs. Ambient Temperature

Package Dimensions

As of January, 2002

Unit: mm



Hitachi Code	DO-35
JEDEC	Conforms
JEITA	Conforms
Mass (reference value)	0.13 g

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