

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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# HZU6.8Z

Silicon Epitaxial Planar Zener Diode for Surge Absorb

**RENESAS**

ADE-208-777A (Z)

Rev.1  
Nov. 2001

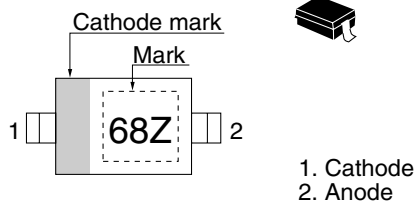
## Features

- Low capacitance ( $C=25\text{pF}$  max) and can protect ESD of signal line.
- Ultra small Resin Package (URP) is suitable for surface mount design.

## Ordering Information

Type No.	Laser Mark	Package Code
HZU6.8Z	68Z	URP

## Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	Pd *	200	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

Note: See Fig.2.

## Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Zener voltage	V <sub>z</sub>	6.47	—	7.00	V	I <sub>z</sub> = 5 mA, 40 ms pulse
Reverse current	I <sub>R</sub>	—	—	2	μA	V <sub>R</sub> = 3.5 V
Capacitance	C	—	—	25	pF	V <sub>R</sub> = 0 V, f = 1 MHz
Dynamic resistance	r <sub>d</sub>	—	—	30	Ω	I <sub>z</sub> = 5 mA
ESD-Capability *	—	20	—	—	kV	C = 150 pF, R = 330 Ω, Both forward and reverse direction 10 pulse

Note: Failure criterion ; I<sub>R</sub> > 2 μA at V<sub>R</sub> = 3.5 V.

Main Characteristic

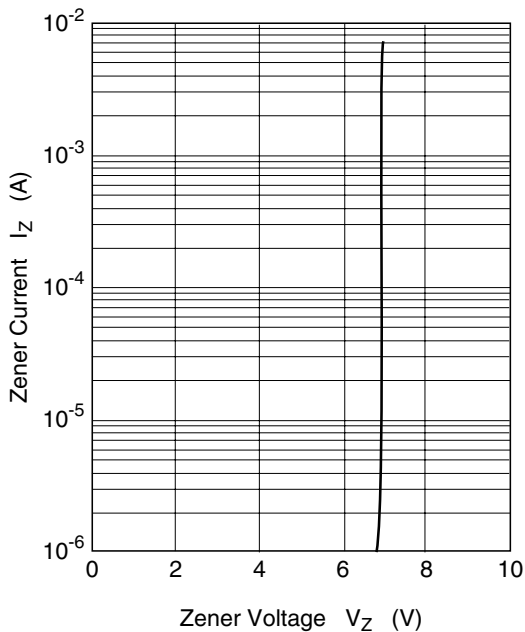


Fig.1 Zener current vs. Zener voltage

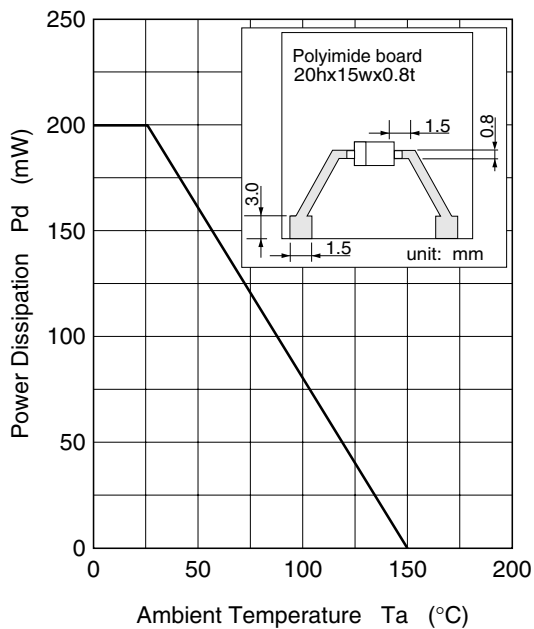


Fig.2 Power Dissipation vs. Ambient Temperature

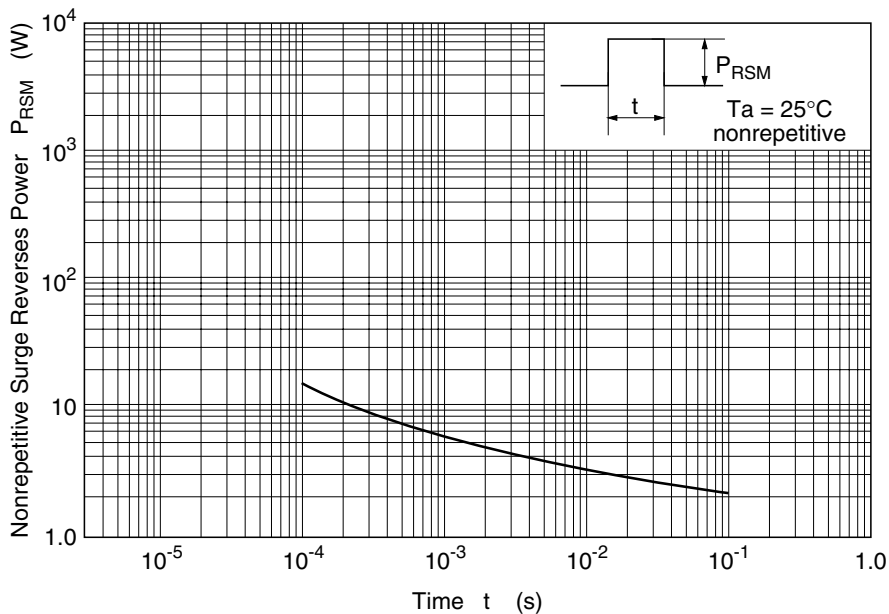


Fig.3 Surge Reverse Power Ratings

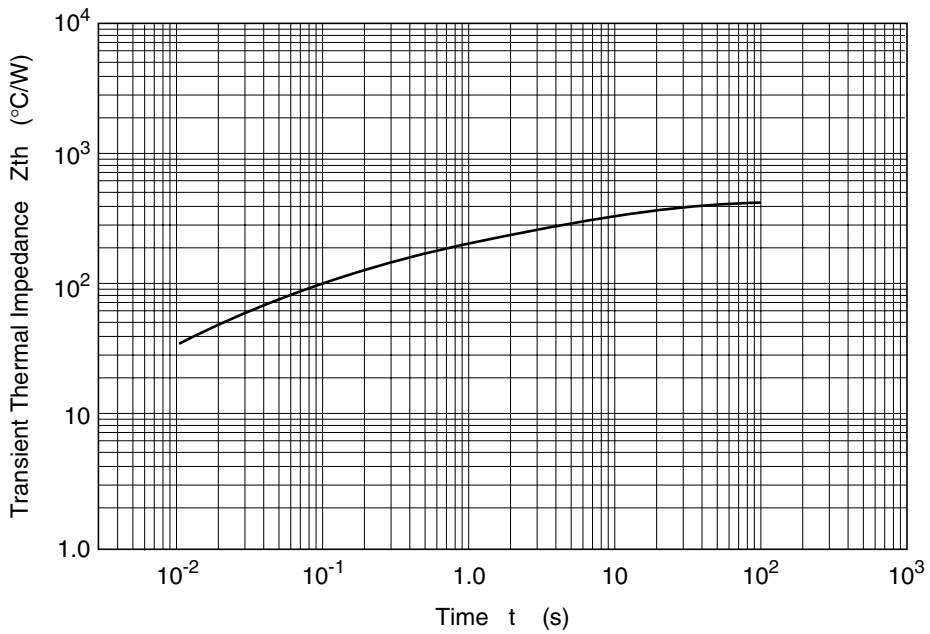
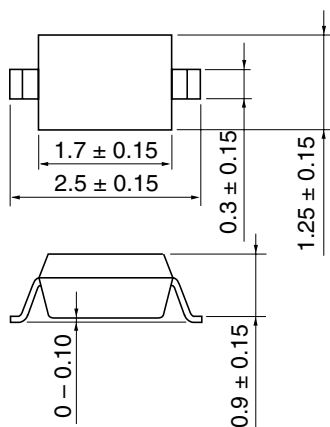


Fig.4 Transient Thermal Impedance

Package Dimensions

As of July, 2001  
Unit: mm



Hitachi Code	URP
JEDEC	—
JEITA	—
Mass (reference value)	0.004 g

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Colophon 5.0



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