

To all our customers

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

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Keep safety first in your circuit designs!

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# HZM6.8ZMWA

Silicon Planar Zener Diode for Surge Absorb

**RENESAS**

ADE-208-822A (Z)

Rev.1  
Nov. 2001

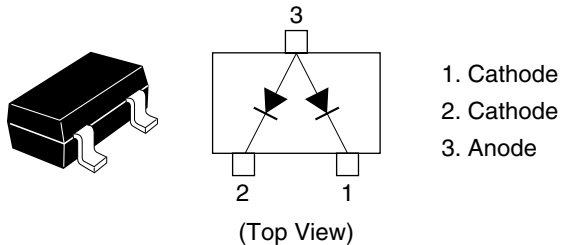
## Features

- HZM6.8ZMWA has two devices in a monolithic, and can absorb surge.
- Low capacitance ( $C = 25 \text{ pF max}$ ) and can protect ESD of signal line.
- MPAK Package is suitable for high density surface mounting and high speed assembly.

## Ordering Information

Type No.	Laser Mark	Package Code
HZM6.8ZMWA	68N	MPAK

## 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: Two device total, See Fig.2.

## Electrical Characteristics\*<sup>1</sup>

(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 * <sup>2</sup> * <sup>3</sup>	—	20	—	—	kV	C = 150 pF, R = 330 Ω, Both forward and reverse direction 10 pulse

Notes: 1. Per one device.

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

3. Between cathode and anode.

Main Characteristic

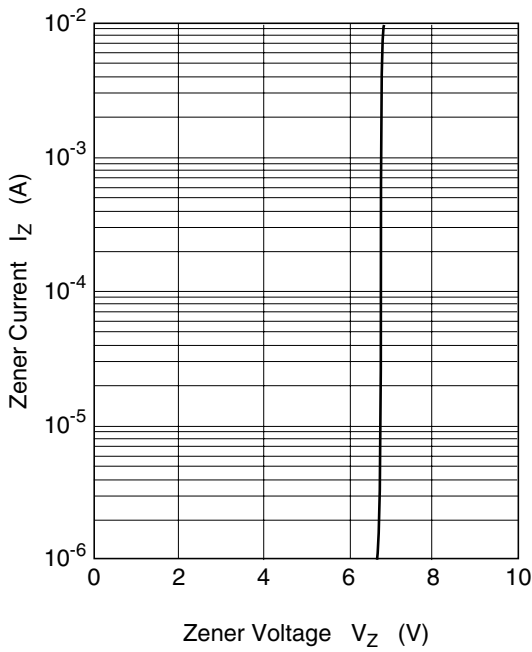


Fig.1 Zener current vs. Zener voltage

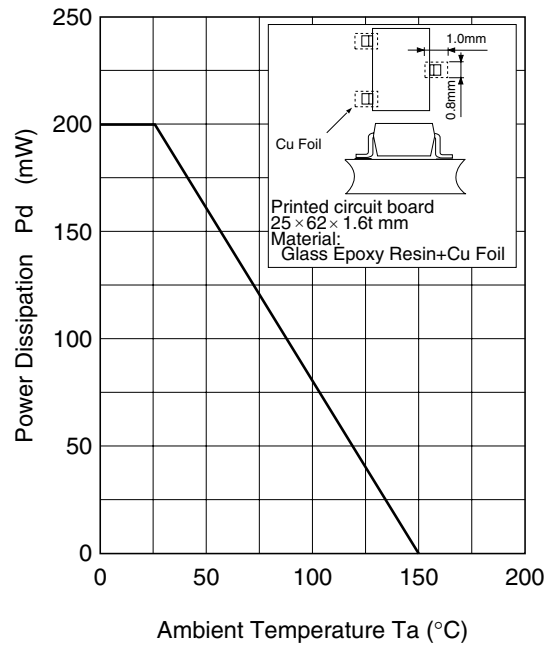


Fig.2 Power Dissipation vs. Ambient Temperature

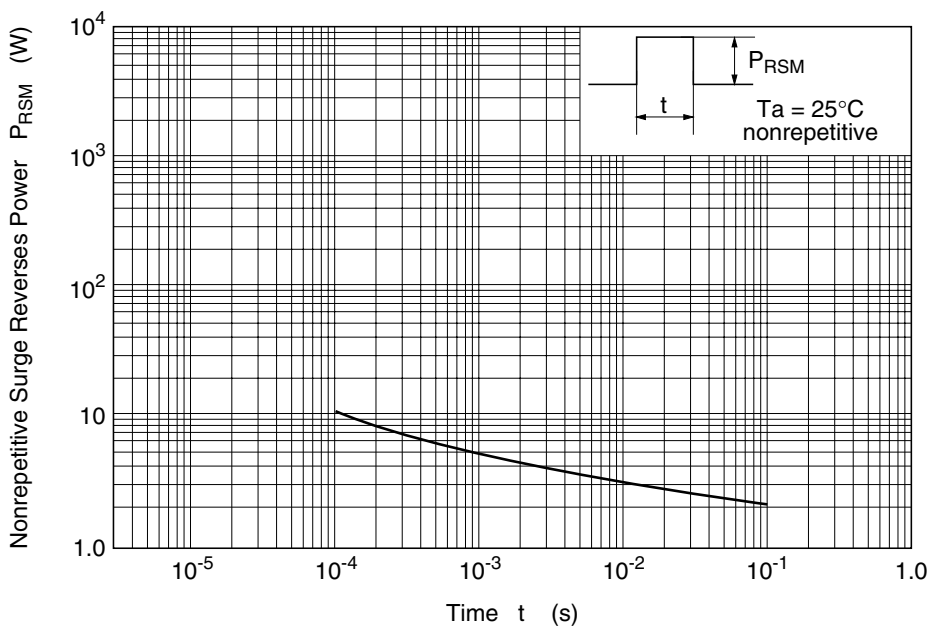


Fig.3 Surge Reverse Power Ratings

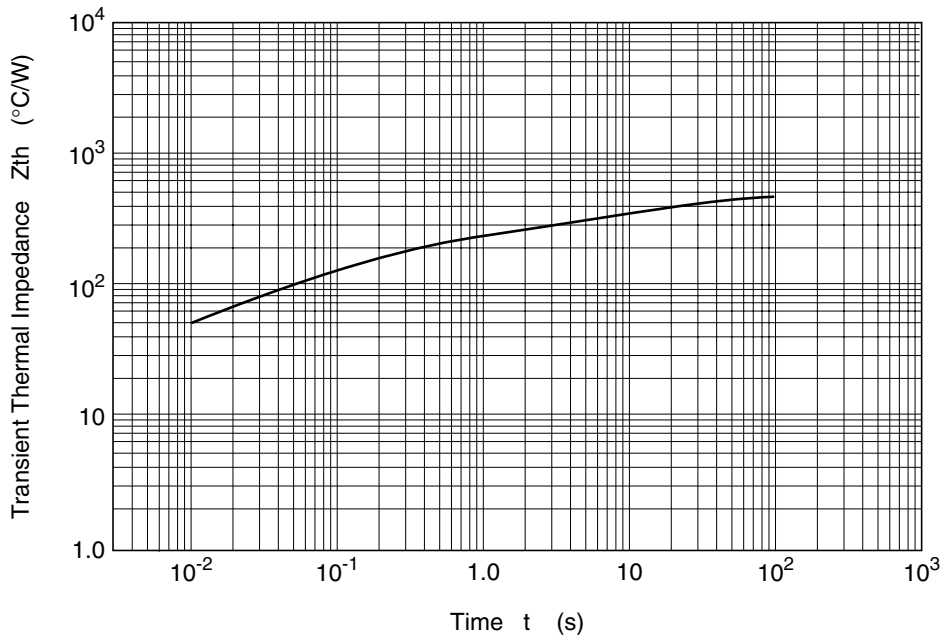
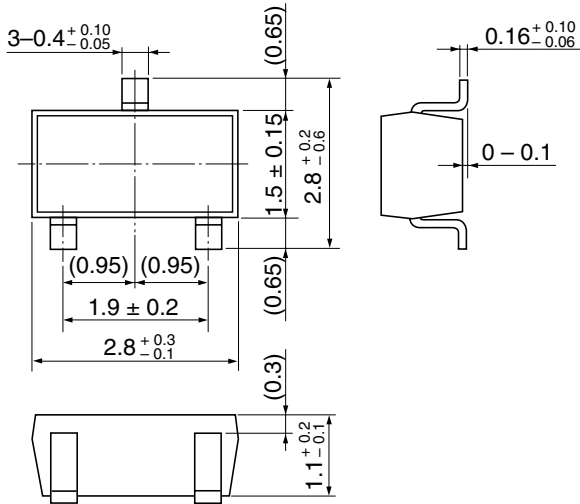


Fig.4 Transient Thermal Impedance

Package Dimensions

As of July, 2001  
Unit: mm



Hitachi Code	MPAK
JEDEC	—
JEITA	Conforms
Mass (reference value)	0.011 g

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