

# HZB6.8MWA

Silicon Planar Zener Diode for Surge Absorb

# HITACHI

ADE-208-971A (Z)

Rev.1  
Nov. 2001

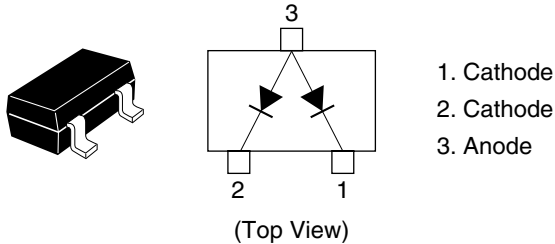
## Features

- HZB6.8MWA has two devices in a monolithic, and can absorb surge.
- CMPAK package is suitable for high density surface mounting.

## Ordering Information

Type No.	Laser Mark	Package Code
HZB6.8MWA	68M	CMPAK

## 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	—	—	130	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>	—	30	—	—	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

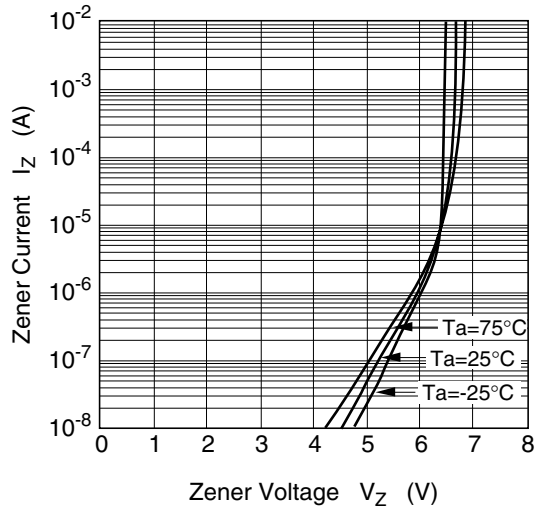


Fig.1 Zener current vs. Zener voltage

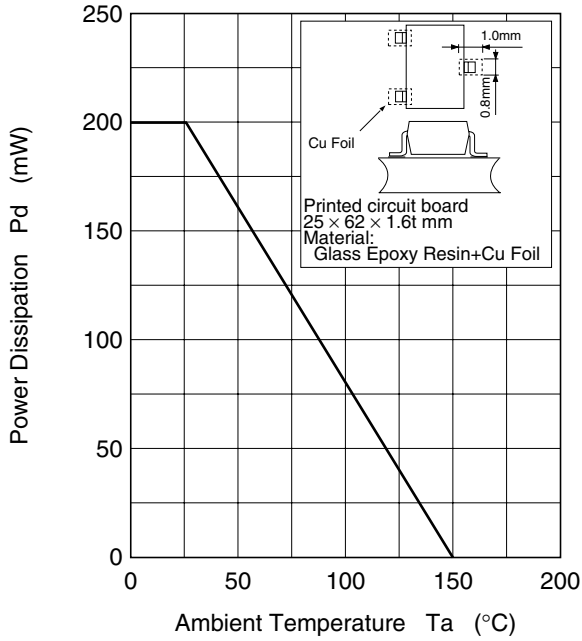


Fig.2 Power Dissipation vs. Ambient Temperature



**Disclaimer**

1. Hitachi neither warrants nor grants licenses of any rights of Hitachi's or any third party's patent, copyright, trademark, or other intellectual property rights for information contained in this document. Hitachi bears no responsibility for problems that may arise with third party's rights, including intellectual property rights, in connection with use of the information contained in this document.
2. Products and product specifications may be subject to change without notice. Confirm that you have received the latest product standards or specifications before final design, purchase or use.
3. Hitachi makes every attempt to ensure that its products are of high quality and reliability. However, contact Hitachi's sales office before using the product in an application that demands especially high quality and reliability or where its failure or malfunction may directly threaten human life or cause risk of bodily injury, such as aerospace, aeronautics, nuclear power, combustion control, transportation, traffic, safety equipment or medical equipment for life support.
4. Design your application so that the product is used within the ranges guaranteed by Hitachi particularly for maximum rating, operating supply voltage range, heat radiation characteristics, installation conditions and other characteristics. Hitachi bears no responsibility for failure or damage when used beyond the guaranteed ranges. Even within the guaranteed ranges, consider normally foreseeable failure rates or failure modes in semiconductor devices and employ systemic measures such as fail-safes, so that the equipment incorporating Hitachi product does not cause bodily injury, fire or other consequential damage due to operation of the Hitachi product.
5. This product is not designed to be radiation resistant.
6. No one is permitted to reproduce or duplicate, in any form, the whole or part of this document without written approval from Hitachi.
7. Contact Hitachi's sales office for any questions regarding this document or Hitachi semiconductor products.

**Sales Offices**

**HITACHI**

**Hitachi, Ltd.**

Semiconductor & Integrated Circuits  
 Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan  
 Tel: (03) 3270-2111 Fax: (03) 3270-5109

URL <http://www.hitachisemiconductor.com/>

**For further information write to:**

Hitachi Semiconductor (America) Inc.  
 179 East Tasman Drive  
 San Jose, CA 95134  
 Tel: <1>(408) 433-1990  
 Fax: <1>(408) 433-0223

Hitachi Europe Ltd.  
 Electronic Components Group  
 Whitebrook Park  
 Lower Cookham Road  
 Maidenhead  
 Berkshire SL6 8YA, United Kingdom  
 Tel: <44> (1628) 585000  
 Fax: <44> (1628) 585200

Hitachi Asia Ltd.  
 Hitachi Tower  
 16 Collyer Quay #20-00  
 Singapore 049318  
 Tel: <65>-538-6533/538-8577  
 Fax: <65>-538-6933/538-3877  
 URL: <http://semiconductor.hitachi.com.sg>

Hitachi Asia (Hong Kong) Ltd.  
 Group III (Electronic Components)  
 7/F., North Tower  
 World Finance Centre,  
 Harbour City, Canton Road  
 Tsim Sha Tsui, Kowloon Hong Kong  
 Tel: <852>-(2)-735-9218  
 Fax: <852>-(2)-730-0281  
 URL: <http://semiconductor.hitachi.com.hk>

Hitachi Europe GmbH  
 Electronic Components Group  
 Dornacher Straße 3  
 D-85622 Feldkirchen  
 Postfach 201, D-85619 Feldkirchen  
 Germany  
 Tel: <49> (89) 9 9180-0  
 Fax: <49> (89) 9 29 30 00

Hitachi Asia Ltd.  
 (Taipei Branch Office)  
 4/F, No. 167, Tun Hwa North Road  
 Hung-Kuo Building  
 Taipei (105), Taiwan  
 Tel: <886>-(2)-2718-3666  
 Fax: <886>-(2)-2718-8180  
 Telex: 23222 HAS-TP  
 URL: <http://www.hitachi.com.tw>

Copyright © Hitachi, Ltd., 2001. All rights reserved. Printed in Japan.  
 Colophon 5.0