# RENESAS

## HZM6.8ZMFA

Silicon Planar Zener Diode for Surge Absorb

REJ03G1211-0300 (Previous: ADE-208-783B) Rev.3.00 Jun 14, 2005

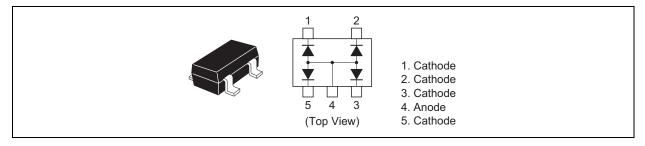
### Features

- HZM6.8ZMFA has four devices in a monolithic, and can absorb surge.
- Low capacitance (C = 25 pF max) and can protect ESD of signal line.
- MPAK-5 Package is suitable for high density surface mounting and high speed assembly.

### **Ordering Information**

Type No.	Laser Mark	Package Name	Package Code (Previous Code)
HZM6.8ZMFA	68N	MPAK-5	PLSP0005ZC-A (MPAK-5)

### **Pin Arrangement**





### **Absolute Maximum Ratings**

(Ta = 25°C)

Symbol	Value	Unit
Pd *	200	mW
Tj	150	°C
Tstg	-55 to +150	°C
	Pd * Tj	Pd *         200           Tj         150

Note: Four device total, See Fig.2.

## Electrical Characteristics \*1

 $(Ta = 25^{\circ}C)$ 

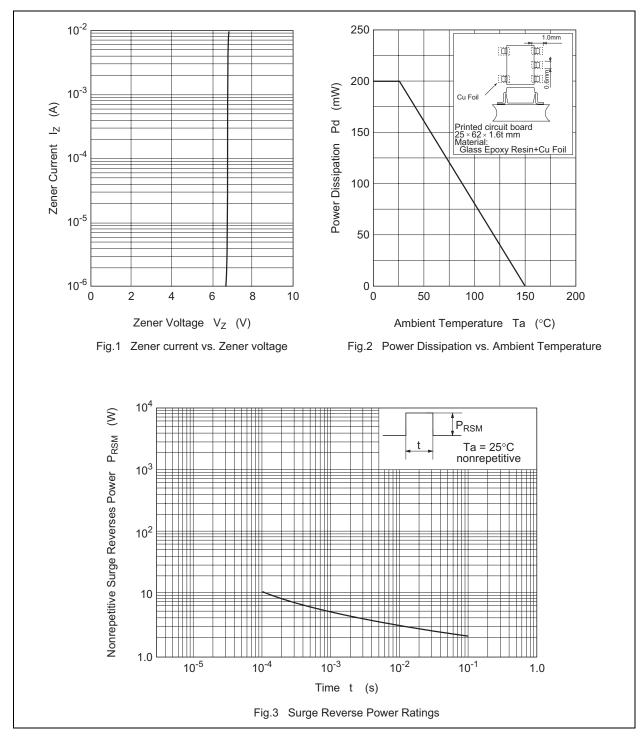
Item	Symbol	Min	Тур	Max	Unit	Test Condition
Zener voltage	Vz	6.47	_	7.00	V	I <sub>Z</sub> = 5 mA, 40 ms pulse
Reverse current	I <sub>R</sub>	_	_	2	μA	V <sub>R</sub> = 3.5 V
Capacitance	С	_	_	25	pF	V <sub>R</sub> =0 V, f = 1 MHz
Dynamic resistance	r <sub>d</sub>	_	_	30	Ω	I <sub>Z</sub> = 5 mA
ESD-Capability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

Notes: 1. Per one device

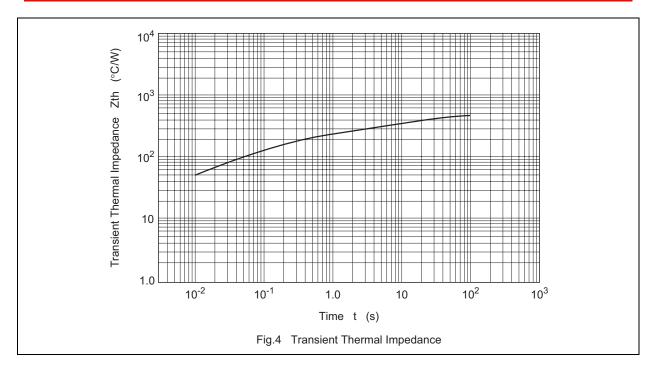
2. Failure criterion ;  $I_R>2~\mu A$  at  $V_R$  = 3.5 V.



### **Main Characteristic**

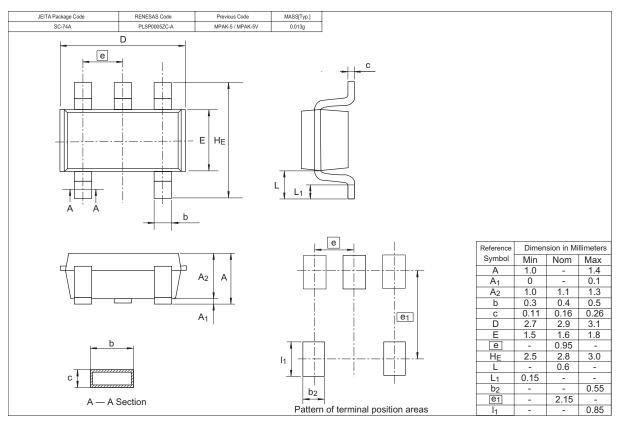








### **Package Dimensions**





### RenesasTechnology Corp. Sales Strategic Planning Div. Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan

Keep safety first in your circuit designs! 1. Renesas Technology Corp. 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.

- (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.
  Notes regarding these materials
  1. These materials are intended as a reference to assist our customers in the selection of the Renesas Technology Corp. product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Renesas Technology Corp. or a third party.
  2. Renesas Technology Corp. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.
  3. All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Renesas Technology Corp. or an authorized Renesas Technology Corp. product distributor for the latest product information before purchasing a product listed herein.
  The information described here may contain technical inaccuracies or typographical errors.
  Renesas Technology Corp. Sumes no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors.
  Please also pay attention to information opublished by Renesas Technology Corp. by various means, including the Renesas Technology Corp. Assumes no responsibility for any damage, a final decision on the applicability of the information and al dystem before making a final decision on the applicability or the information and product. Renesas Technology Corp. Semiconductor home page (http://www.renesas.com).
  When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, please be sure to evaluate all information as a total system before making a final decision on the app
- use. 6. The prior written approval of Renesas Technology Corp. is necessary to reprint or reproduce in whole or in part these materials. 7. If these products or technologies are subject to the Japanese export control restrictions, they must be exported under a license from the Japanese government and cannot be imported into a country other than the approved destination. Any diversion or reexport contrary to the export control laws and regulations of Japan and/or the country of destination is prohibited. 8. Please contact Renesas Technology Corp. for further details on these materials or the products contained therein.



### **RENESAS SALES OFFICES**

Refer to "http://www.renesas.com/en/network" for the latest and detailed information.

Renesas Technology America, Inc. 450 Holger Way, San Jose, CA 95134-1368, U.S.A Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K. Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology Hong Kong Ltd. 7th Floor, North Tower, World Finance Centre, Harbour City, 1 Canton Road, Tsimshatsui, Kowloon, Hong Kong Tel: <852> 2265-6688, Fax: <852> 2730-6071

Renesas Technology Taiwan Co., Ltd. 10th Floor, No.99, Fushing North Road, Taipei, Taiwan Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology (Shanghai) Co., Ltd. Unit2607 Ruijing Building, No.205 Maoming Road (S), Shanghai 200020, China Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

Renesas Technology Singapore Pte. Ltd. 1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632 Tel: <65> 6213-0200, Fax: <65> 6278-8001

http://www.renesas.com