To our customers,

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Renesas Electronics website: http://www.renesas.com

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (http://www.renesas.com)

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

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# HZM7.5FA

## Silicon Epitaxial Planar Zener Diode for Surge Absorb

ADE-208-616B (Z)

Rev.2
Nov. 2002



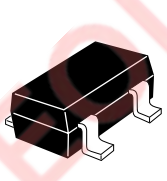
### Features

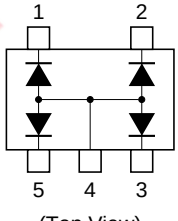
- HZM7.5FA has four devices, and can absorb surge.
- MPAK-5 Package is suitable for high density surface mounting and high speed assembly.

### Ordering Information

| Type No. | Laser Mark | Package Code |
|---|---|---|
| HZM7.5FA | 75A | MPAK-5 |

### Pin Arrangement






(Top View)

1. Cathode
2. Cathode
3. Cathode
4. Anode
5. Cathode

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

## Electrical Characteristics *[1]

(Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test Condition |
|---|---|---|---|---|---|---|
| Zener voltage | $V_Z$ | 7.06 | — | 7.84 | V | $I_Z$ = 5 mA, 40 ms pulse |
| Reverse current | $I_R$ | — | — | 2 | µA | $V_R$ = 4 V |
| Capacitance | C | — | — | 125 | pF | $V_R$ = 0 V, f = 1 MHz |
| Dynamic resistance | $r_d$ | — | — | 30 | Ω | $I_Z$ = 5 mA |
| ESD-Capability *[2] | — | 30 | — | — | kV | C = 150 pF, R = 330 Ω, Both forward and reverse direction 10 pulse |

Notes: 1. Per one device.
2. Failure criterion ; $I_R$ > 2 µA at $V_R$ = 4 V.

## Main Characteristic

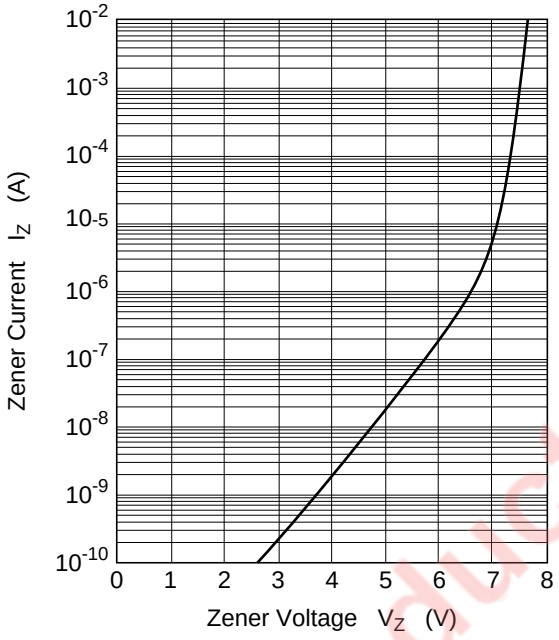



Fig.1 Zener current vs. Zener voltage

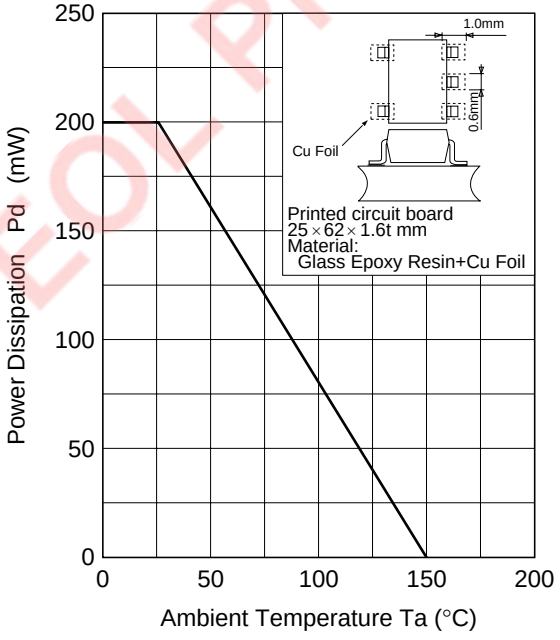



Fig.2 Power Dissipation vs. Ambient Temperature

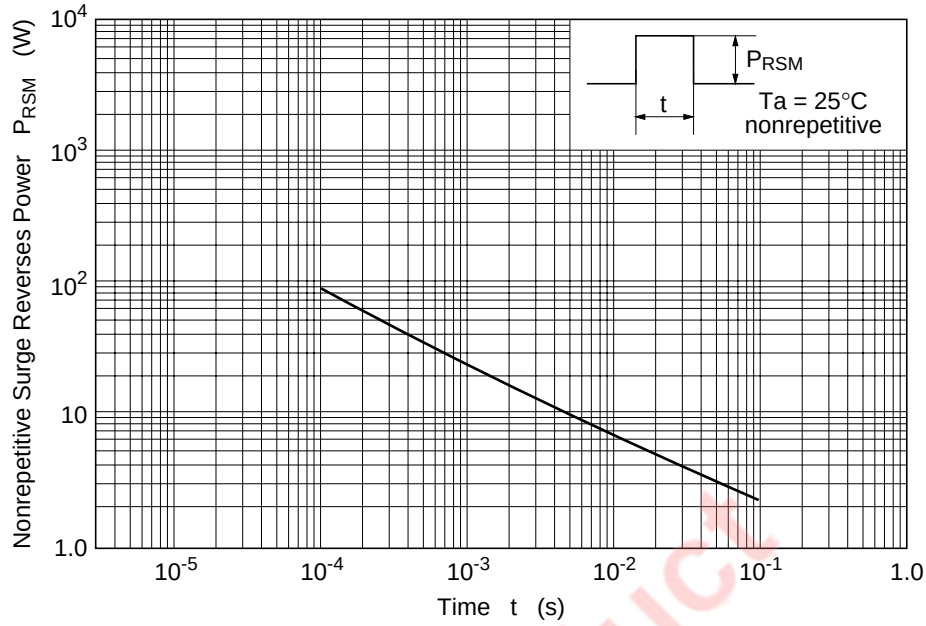



Fig.3 Surge Reverse Power Ratings

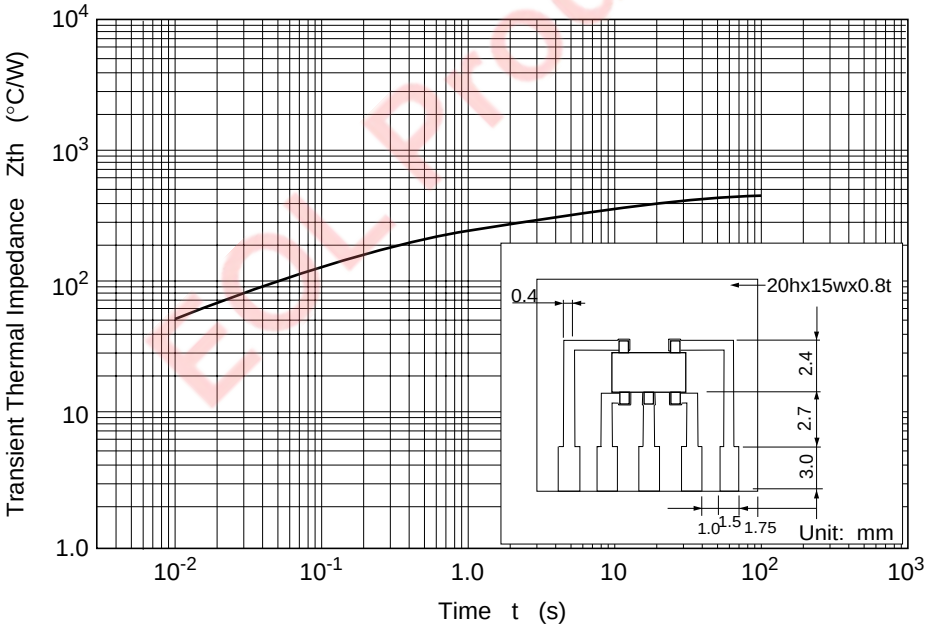
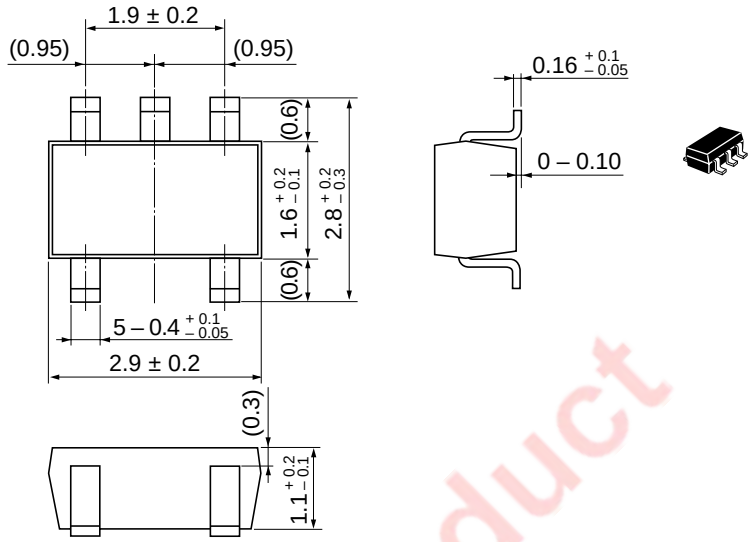



Fig.4 Transient Thermal Impedance

## Package Dimensions

As of July, 2002

Unit: mm




| | |
|---|---|
| Hitachi Code | MPAK-5 |
| JEDEC | — |
| JEITA | — |
| Mass (reference value) | 0.013 g |

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