

# HZM5.6ZFA

Silicon Epitaxial Planar Zener Diode for Surge Absorb

# HITACHI

ADE-208-796 (Z)  
Rev 0  
May. 1999

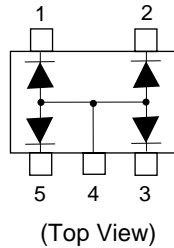
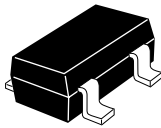
## Features

- HZM5.6ZFA has four devices, and can absorb external + and -surge.
- Low capacitance ( $C=8.5\text{pF}$  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 Code |
|-----------|------------|--------------|
| HZM5.6ZFA | 56Z        | MPAK-5       |

## Outline



- 1 Cathode
- 2 Cathode
- 3 Cathode
- 4 Anode
- 5 Cathode

**Absolute Maximum Ratings (Ta = 25°C)**

| Item                 | Symbol          | Value       | Unit |
|----------------------|-----------------|-------------|------|
| Power dissipation    | Pd <sup>1</sup> | 200         | mW   |
| Junction temperature | Tj              | 150         | °C   |
| Storage temperature  | Tstg            | -55 to +150 | °C   |

Note 1. Four device total, See Fig.2.

**Electrical Characteristics (Ta = 25°C) <sup>\*1</sup>**

| Item                        | Symbol         | Min  | Typ | Max  | Unit | Test Condition  |
|-----------------------------|----------------|------|-----|------|------|---|
| Zener voltage               | V <sub>Z</sub> | 5.31 | —   | 5.92 | V    | I <sub>Z</sub> = 5 mA, 40ms pulse                                 |
| Reverse current             | I <sub>R</sub> | —    | —   | 0.5  | μA   | V <sub>R</sub> = 2.5V   |
| Capacitance                 | C              | —    | 8.0 | 8.5  | pF   | V <sub>R</sub> = 0V, f = 1 MHz                                    |
| Dynamic resistance          | r <sub>d</sub> | —    | —   | 80   | Ω    | I <sub>Z</sub> = 5 mA   |
| ESD-Capability <sup>2</sup> | —              | 8    | —   | —    | kV   | C = 150pF, R = 330 Ω, Both forward and reverse direction 10 pulse |

Notes 1. Per one device.

2. Failure criterion ; IR > 0.5μA at VR = 2.5V.

Main Characteristic

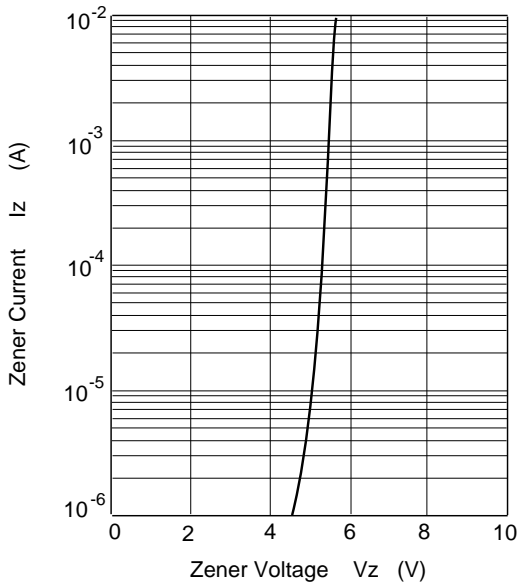


Fig.1 Zener current Vs. Zener voltage

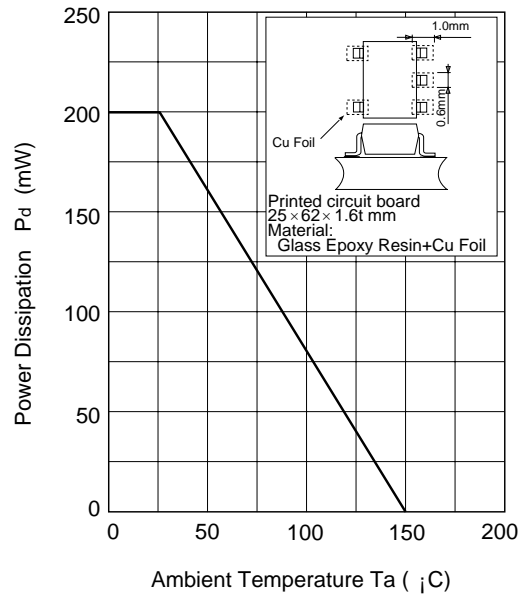


Fig.2 Power Dissipation Vs. Ambient Temperature

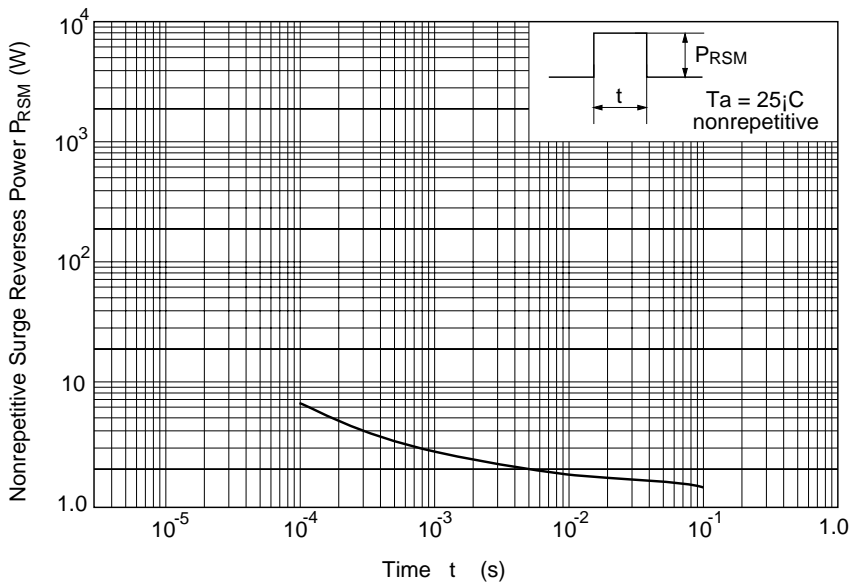


Fig.3 Surge Reverse Power Ratings

**Main Characteristic**

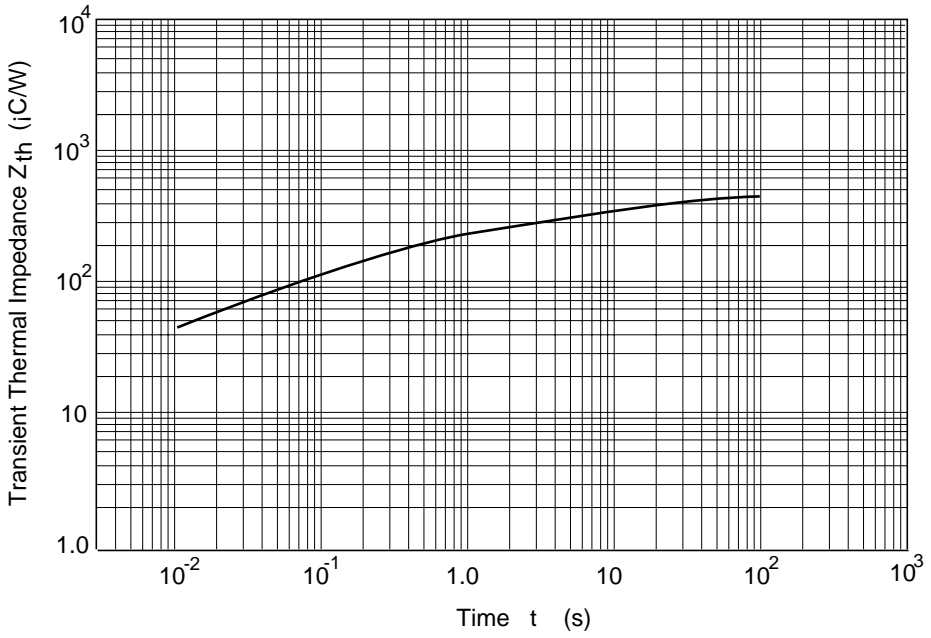
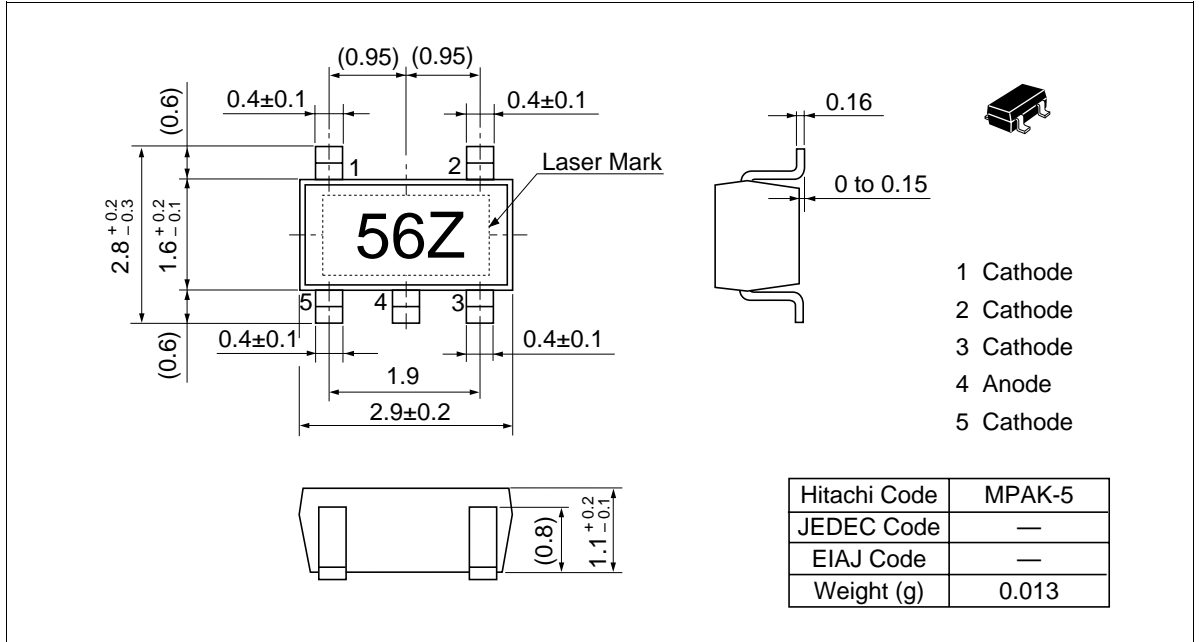


Fig.4 Transient Thermal Impedance

Package Dimensions

Unit : mm



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