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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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HZT33

Monolithic IC Zener Diode for Temperature Compensation

REJ03G1220-0500
(Previous: ADE-208-135D)
Rev.5.00
Jun 23, 2005

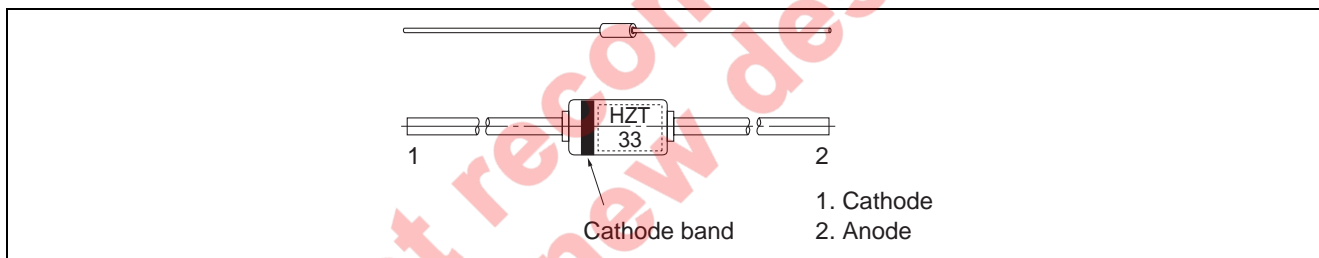
Features

- Lower temperature coefficient of the reference voltage.
- Lower dynamic resistance.
- High reliability with glass seal.

Ordering Information

| Type No. | Cathode band | Mark | Package Name | Package Code (Previous Code) |
|----------|--------------|-------|--------------|---------------------------------|
| HZT33 | Navy Blue | HZT33 | DO-35 | GRZZ0002ZB-A (DO-35) |

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Value | Unit |
|-----------------------|--------|-------------|------|
| Power dissipation | Pd * | 200 | mW |
| Operation temperature | Topr | -20 to +75 | °C |
| Storage temperature | Tstg | -40 to +175 | °C |

Note: Value at Ta = 75°C.

Electrical Characteristics

(Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|----------------|------|--------------------|------|-------|--|
| Zener Voltage | V _Z | 31.0 | — | 35.0 | V | I _Z = 5 mA |
| Dynamic resistance | r _d | — | — | 25.0 | Ω | I _Z = 5 mA, f = 1 KHz |
| Temperature coefficient | γ _Z | — | 1.0 * ¹ | — | mV/°C | * ² I _Z = 5 mA Ta = -20 to +25 to +75°C |

Notes: 1. Type Value of γ_Z : 1.0 mV/°C2. Definition of γ_Zγ_Z based on Ta = + 25°C and the temperature coefficient with each temperature.

(Range of operation temperature)

Main Characteristic

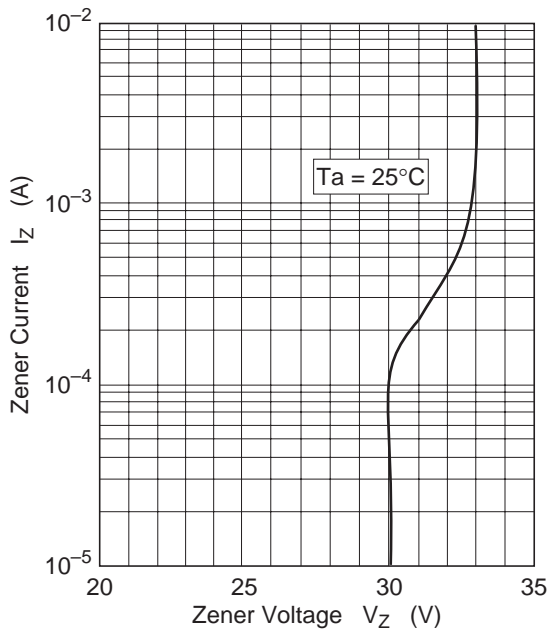


Fig.1 Zener current vs. Zener voltage

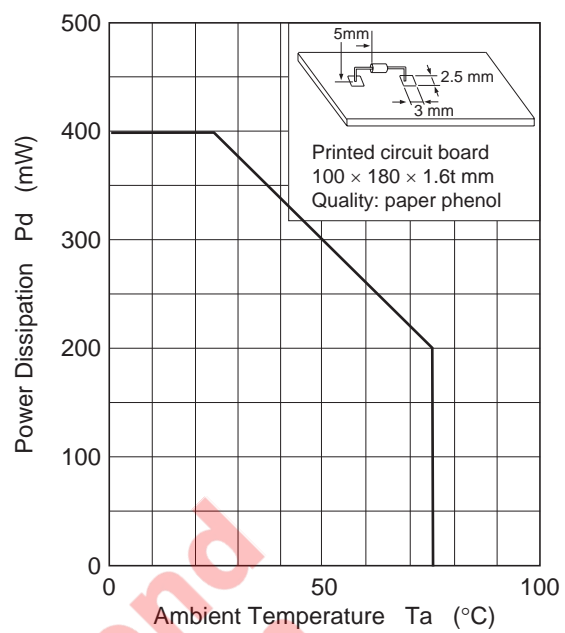
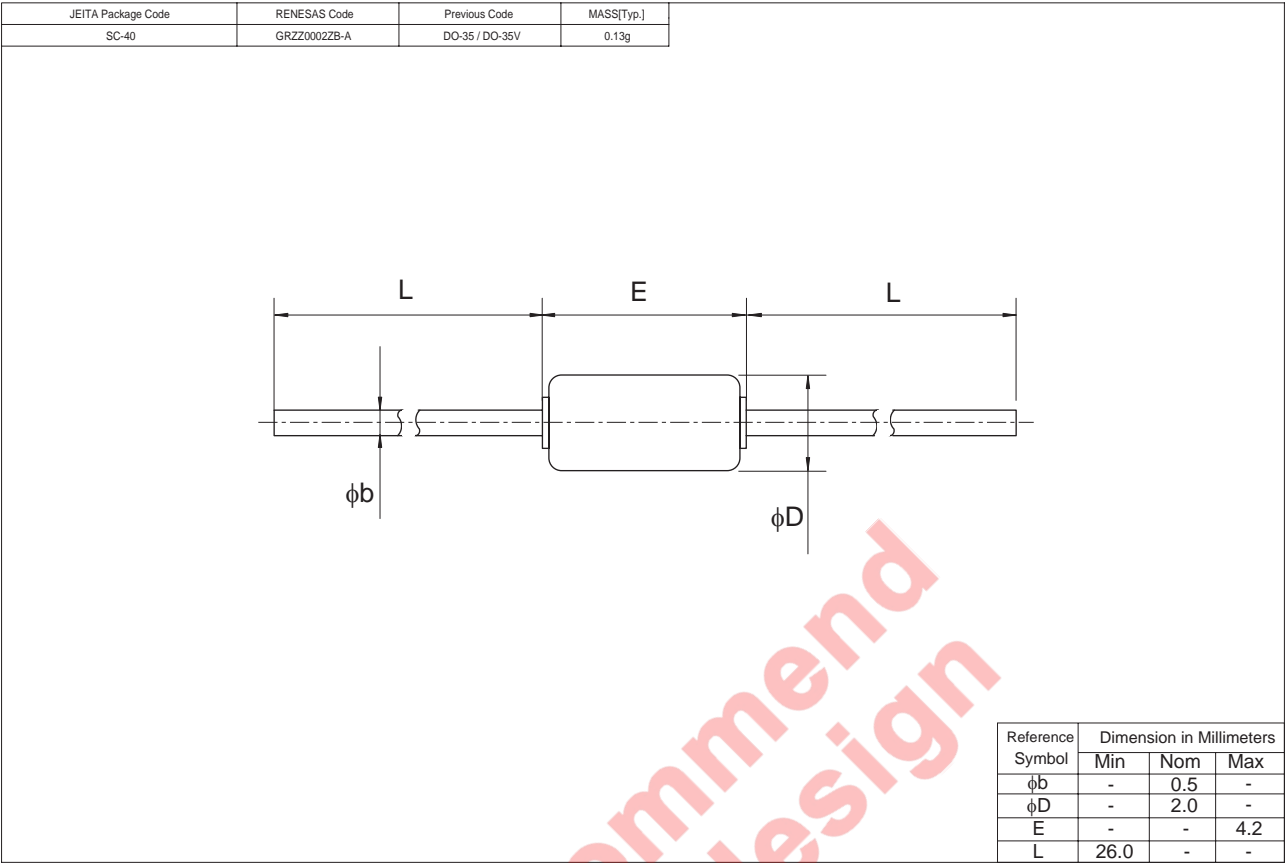


Fig.2 Power Dissipation vs. Ambient Temperature

Package Dimensions



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