

# RKZ16TKG

Silicon Planar Zener Diode for Bi-directional Surge Absorption

R07DS0152EJ0100  
Rev.1.00  
Sep 21, 2010

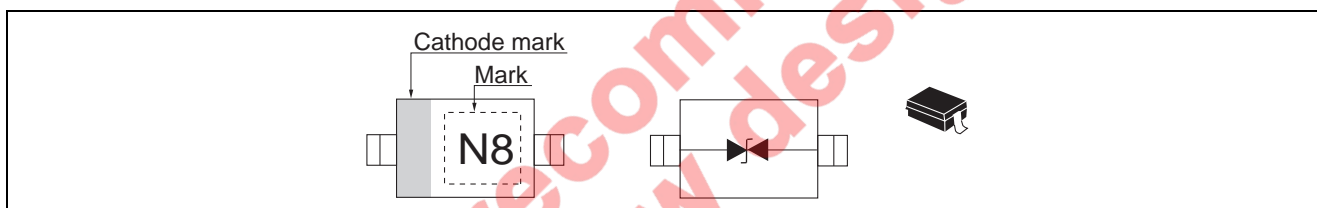
## Features

- This product is for a Bi-directional zener diode so its possible to use for Bi-directional surge absorption.
- High ESD resistance (guarantee of 30 kV, compliant with the IEC 61000-4-2 standard)
- Suitable for protecting CAN bus lines.
- Support for specifications of automobiles.
- Ultra small Resin Package (URP) is suitable for compact and high-density surface mount design.

## Ordering Information

| Part No    | Laser Mark | Package Name | Package Code | Taping Abbreviation (Quantity) |
|------------|------------|--------------|--------------|--------------------------------|
| RKZ16TKG P | N8         | URP          | PTSP0002ZA-A | P (3,000pcs / reel)            |

## 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   |

## Electrical Characteristics

(Ta = 25°C)

| Item              | Symbol         | Min  | Typ | Max  | Unit | Test Condition   |
|-------------------|----------------|------|-----|------|------|--|
| Zener voltage     | V <sub>Z</sub> | 14.5 | —   | 17.5 | V    | I <sub>Z</sub> = 1 mA, 40 ms pulse                                 |
| Reverse current   | I <sub>R</sub> | —    | —   | 0.1  | μA   | V <sub>R</sub> = 12 V  |
| Capacitance       | C              | —    | —   | 30   | pF   | V <sub>R</sub> = 0 V, f = 1 MHz                                    |
| ESD-Capability *1 | —              | 30   | —   | —    | kV   | C = 150 pF, R = 330 Ω, Both forward and reverse direction 10 pulse |

Note: 1. Failure criterion ; I<sub>R</sub> > 0.1 μA at V<sub>R</sub> = 12 V. (Both direction)

Not recommended for new design

Main Characteristics

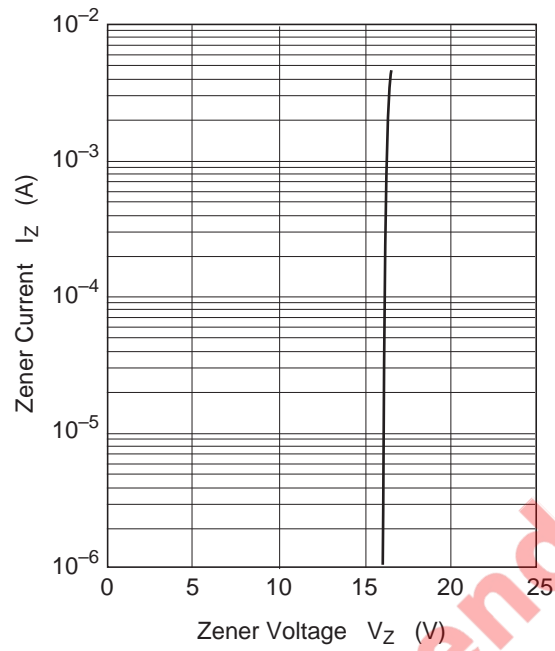


Fig.1 Zener current vs. Zener voltage

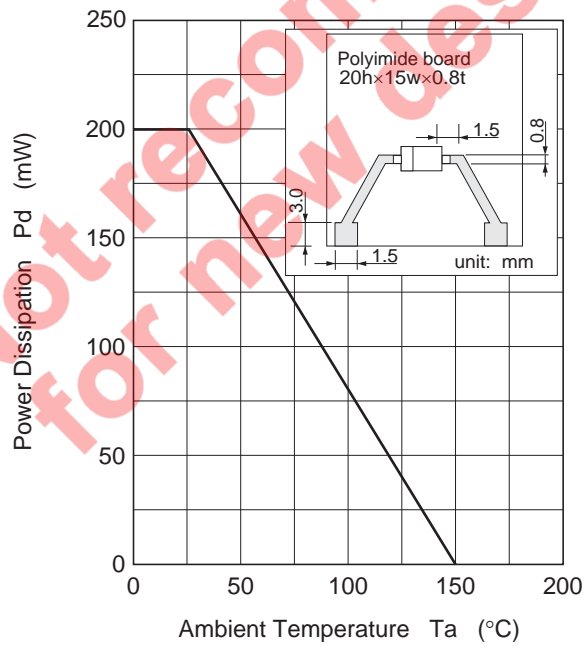
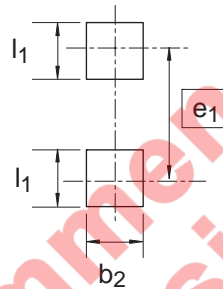
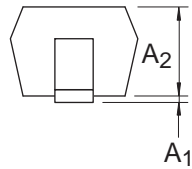
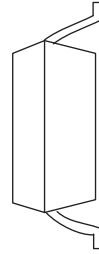
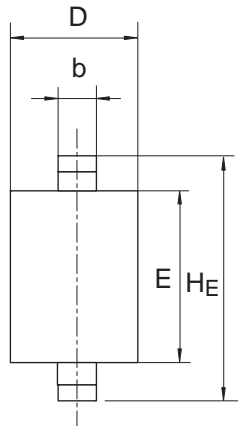


Fig.2 Power Dissipation vs. Ambient Temperature

Package Dimensions

|              |                    |              |               |            |
|--------------|--------------------|--------------|---------------|------------|
| Package Name | JEITA Package Code | RENESAS Code | Previous Code | MASS[Typ.] |
| URP          | SC-76A             | PTSP0002ZA-A | URP / URPV    | 0.004g     |



Pattern of terminal position areas

| Reference Symbol | Dimension in Millimeters |      |      |
|------------------|--------------------------|------|------|
|                  | Min                      | Nom  | Max  |
| A <sub>1</sub>   | 0                        | -    | 0.1  |
| A <sub>2</sub>   | 0.75                     | 0.90 | 1.05 |
| b                | 0.15                     | 0.30 | 0.45 |
| D                | 1.10                     | 1.25 | 1.40 |
| E                | 1.55                     | 1.70 | 1.85 |
| H <sub>E</sub>   | 2.35                     | 2.50 | 2.65 |
| b <sub>2</sub>   | -                        | 0.80 | -    |
| e <sub>1</sub>   | -                        | 2.30 | -    |
| l <sub>1</sub>   | -                        | 0.80 | -    |

Not recommended for new design

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