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April 1st, 2010
Renesas Electronics Corporation

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

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Not recommended
for new design

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RKP202KN

Silicon Epitaxial Trench Pin Diode for Antenna Switching

REJ03G1312-0100

Rev.1.00

Dec 16, 2005

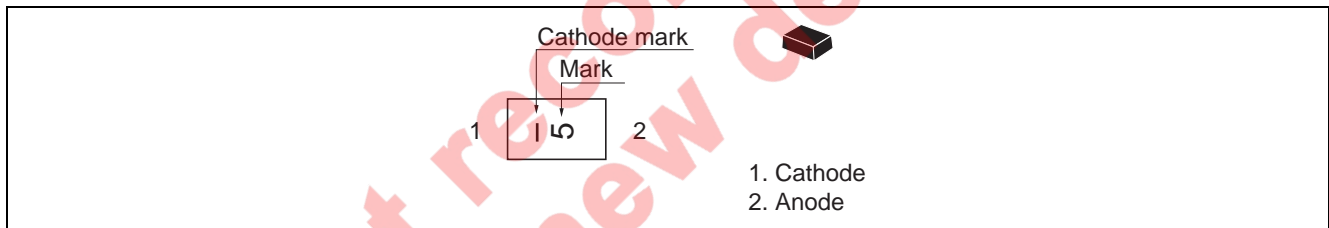
Features

- Adopting the trench structure improves low capacitance. ($C = 0.43 \text{ pF max}$)
- Low forward resistance. ($r_f = 1.80 \Omega \text{ max}$)
- Low operation current.
- Ultra small leadless Package (0805type; the use of an undersurface electrode structure) for use in compact and products.

Ordering Information

| Type No. | Laser Mark | Package Name | Package Code (Previous Code) |
|----------|------------|--------------|------------------------------|
| RKP202KN | 5 | MP8 | PXSN0002ZA-A |

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Value | Unit |
|----------------------|-----------|-------------|------|
| Reverse voltage | V_R | 30 | V |
| Forward current | I_F | 100 | mA |
| Power dissipation | P_d | 100 | mW |
| Junction temperature | T_j | 125 | °C |
| Storage temperature | T_{stg} | -55 to +125 | °C |

Electrical Characteristics

(Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test Condition |
|--------------------|--------|-----|-----|------|----------|--|
| Reverse current | I_R | — | — | 100 | nA | $V_R = 30\text{ V}$ |
| Forward voltage | V_F | — | — | 0.90 | V | $I_F = 2\text{ mA}$ |
| Capacitance | C | — | — | 0.43 | pF | $V_R = 1\text{ V}, f = 1\text{ MHz}$ |
| Forward resistance | r_f | — | — | 1.80 | Ω | $I_F = 2\text{ mA}, f = 100\text{ MHz}$ |
| ESD-Capability *1 | — | 100 | — | — | V | C = 200 pF, R = 0 Ω , Both forward and reverse direction 1 pulse. |

Notes: 1. Failure criterion ; $I_R > 100\text{ nA}$ at $V_R = 30\text{ V}$

2. Please do not use the soldering iron due to avoid high stress to the MP8 package.

Not recommended for new designs

Main Characteristic

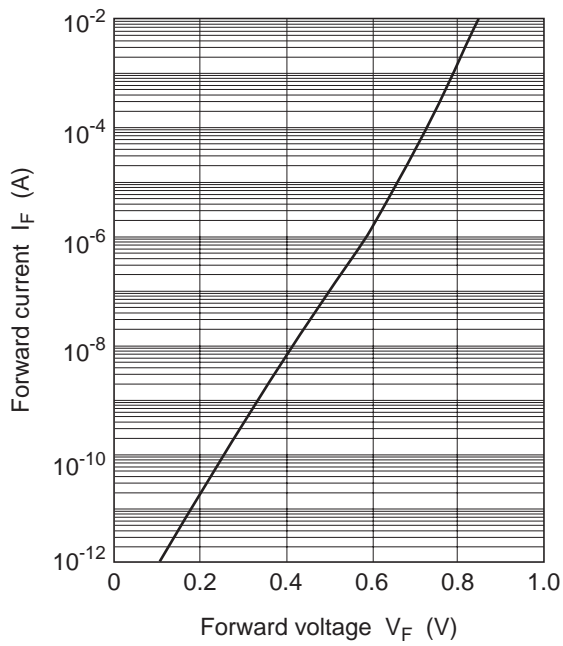


Fig.1 Forward current vs. Forward voltage

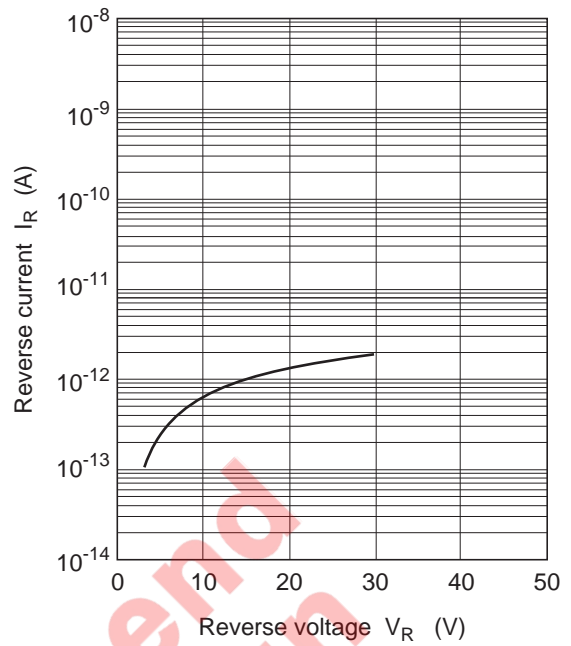


Fig.2 Reverse current vs. Reverse voltage

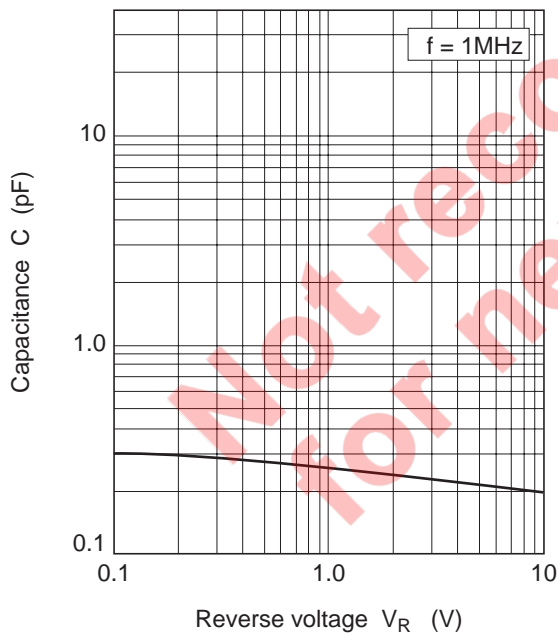


Fig.3 Capacitance vs. Reverse voltage

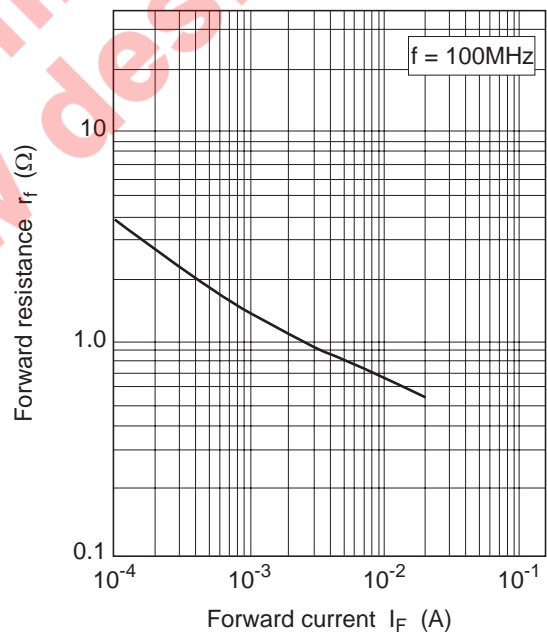
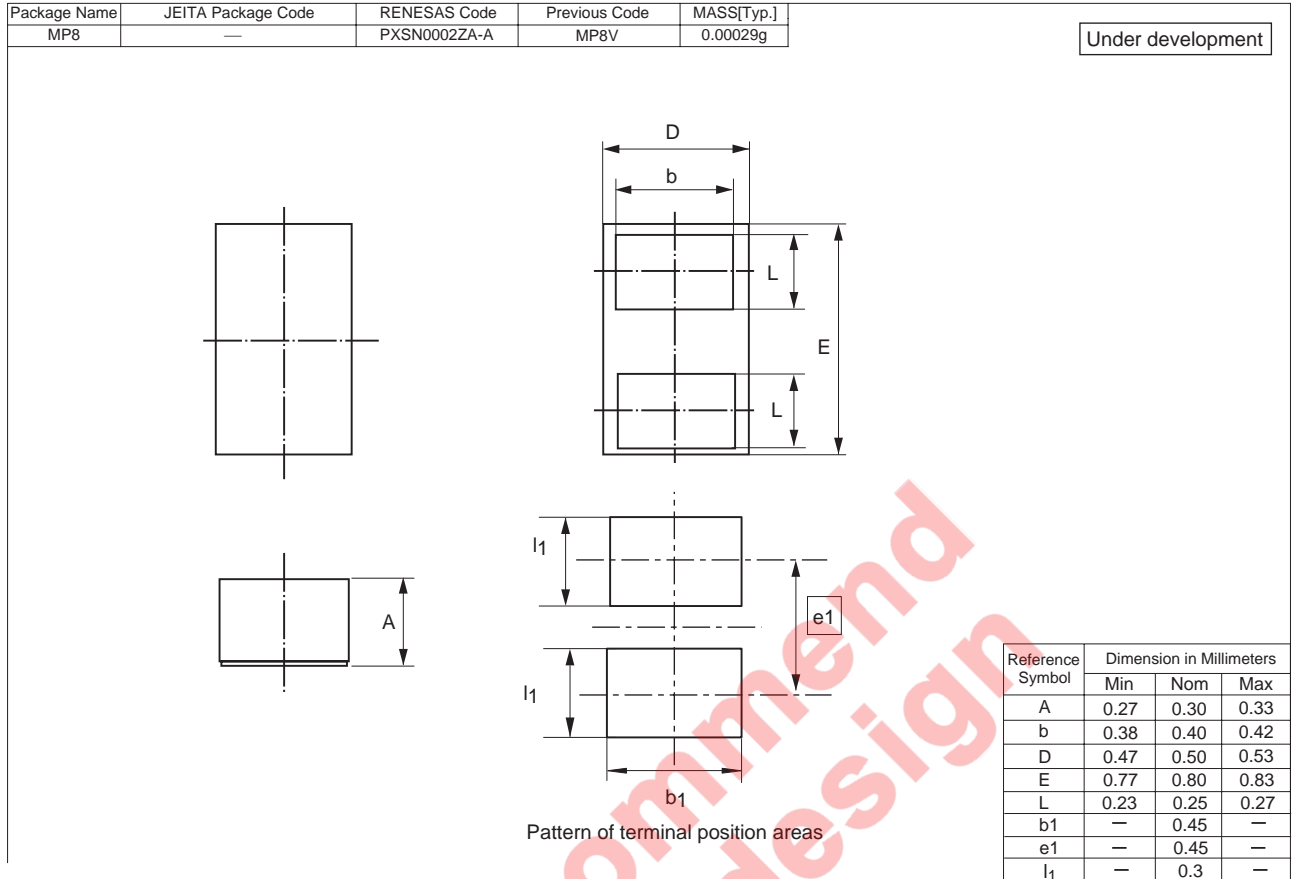


Fig.4 Forward resistance vs. Forward current

Package Dimensions



Not recommended for new design

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