To our customers,

# Old Company Name in Catalogs and Other Documents

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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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# HVB14S

## Silicon Epitaxial Planar PIN Diode for High Frequency Attenuator

REJ03G0438-0200
(Previous: ADE-208-484A)
Rev.2.00
Dec 15, 2004

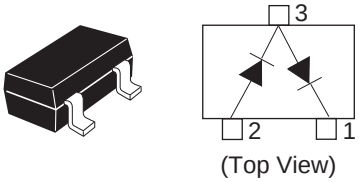
### Features

- Low forward resistance. (rf = 7.0 Ω max)
- Low capacitance. (C = 0.25 pF typ)
- CMPAK package is suitable for high density surface mounting and high speed assembly.

### Ordering Information

| Type No. | Laser Mark | Package Code |
|---|---|---|
| HVB14S | H6 | CMPAK |

### Pin Arrangement




(Top View)

1. Cathode
2. Anode
3. Cathode
   Anode

## Absolute Maximum Ratings *[1]

(Ta = 25°C)

| Item | Symbol | Value | Unit |
|---|---|---|---|
| Reverse voltage | $V_R$ | 50 | V |
| Forward current | $I_F$ | 50 | mA |
| Power dissipation | Pd | 100 | mW |
| Junction temperature | Tj | 125 | °C |
| Storage temperature | Tstg | −55 to +125 | °C |

Note: 1. Absolute maximum ratings are described each unit separately.

## Electrical Characteristics

(Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test Condition |
|---|---|---|---|---|---|---|
| Reverse current | $I_R$ | — | — | 100 | nA | $V_R$ = 50 V |
| Forward voltage | $V_F$ | — | — | 1.0 | V | $I_F$ = 50 mA |
| Capacitance | C | — | 0.25 | — | pF | $V_R$ = 50 V, f = 1 MHz |
| Forward resistance | $r_f$ | — | — | 7 | Ω | $I_F$ = 10 mA, f = 100 MHz |
| ESD-Capability *[1] | — | 200 | — | — | V | C = 200 pF, R = 0 Ω, Both forward and reverse direction 1 pulse. |

Notes: 1. Per one device.
2. Failure criterion; $I_R \geq 200$ nA at $V_R$ = 50 V

## Main Characteristic

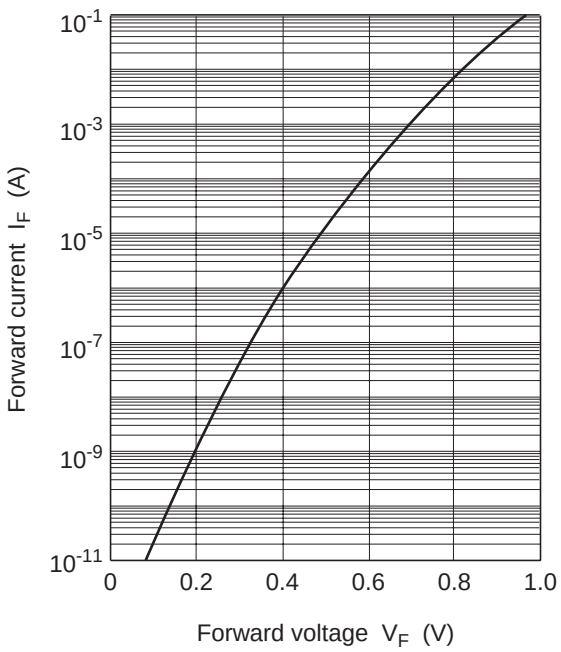



Fig.1 Forward current vs. Forward voltage

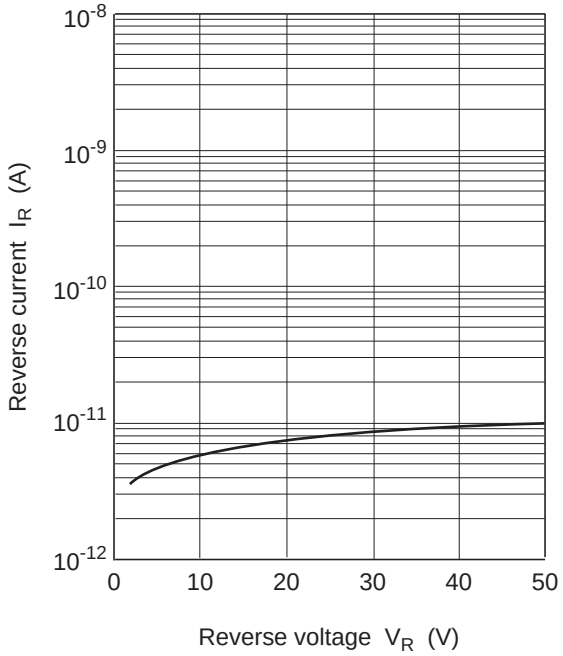



Fig.2 Reverse current vs. Reverse voltage

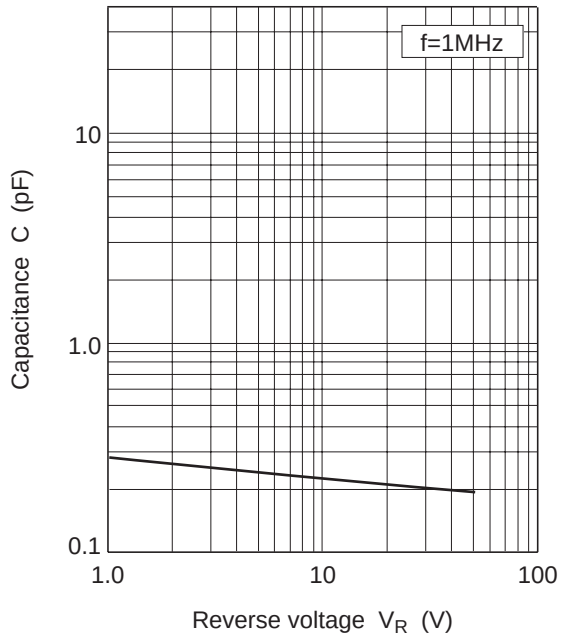



Fig.3 Capacitance vs. Reverse voltage

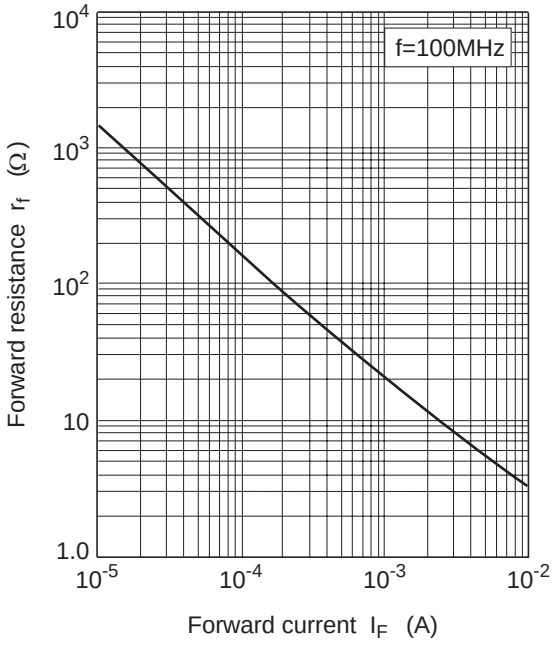
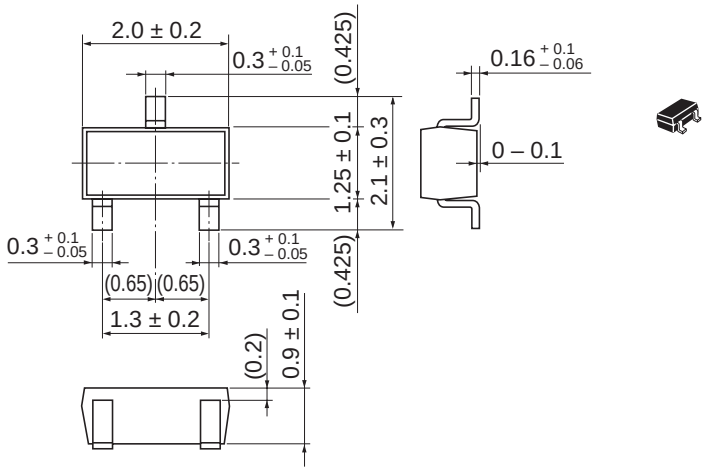



Fig.4 Forward resistance vs. Forward current

## Package Dimensions

As of January, 2003

Unit: mm




| | |
|---|---|
| Package Code | CMPAK |
| JEDEC | — |
| JEITA | Conforms |
| Mass (reference value) | 0.006 g |

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