

HVD327C

REJ03G0218-0300
Rev.3.00
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Variable Capacitance Diode for VHF tuner

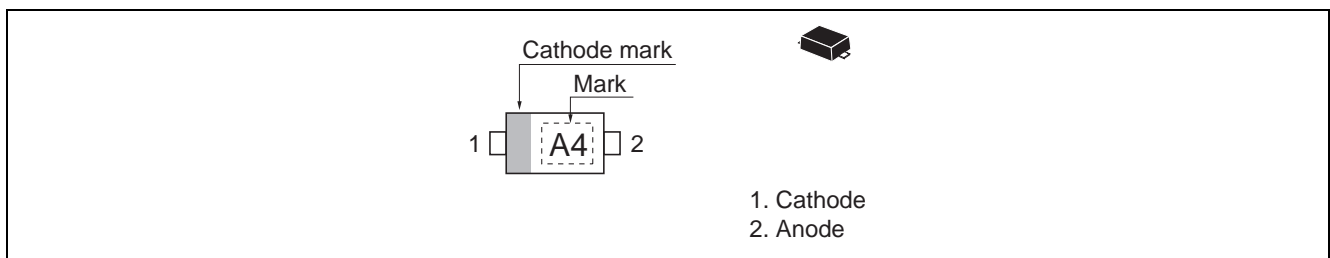
Features

- Low voltage type (tuning voltage 1 to 10V), it is suitable for ET without DC/DC converter.
- High capacitance ratio (n = 11.0 min).
- Low series resistance and good C-V linearity.
- Super small Flat Lead Package (SFP) is suitable for surface mount design.

Ordering Information

| Part No | Laser Mark | Package Name | Package Code | Taping Abbreviation (Quantity) |
|-------------|------------|--------------|--------------|--------------------------------|
| HVD327C KRU | A4 | SFP | PUSF0002ZB-A | KRU (8,000pcs / reel) |

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Value | Unit |
|----------------------|------------------|-------------|------|
| Reverse voltage | V _R | 15 | V |
| 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 _{R1} | — | — | 10 | nA | V _R = 10 V |
| | I _{R2} | — | — | 100 | | V _R = 10 V, Ta = 60°C |
| Capacitance | C ₁ | 30.5 | — | 33.5 | pF | V _R = 1 V, f = 1 MHz |
| | C ₁₀ | 2.6 | — | 2.9 | | V _R = 10 V, f = 1 MHz |
| Capacitance ratio | n | 11.0 | — | — | — | C ₁ /C ₁₀ |
| Series resistance | r _s | — | — | 0.8 | Ω | V _R = 5 V, f = 470 MHz |
| Matching error | ΔC/C *1 | — | — | 2.0 | % | V _R = 1 to 10 V, f = 1 MHz |

Notes: 1. C.C system (Continuous Connected taping system) enable to make any 10 pcs of ΔC/C continuous in a reel, expect extention to another group.

Calculate Matching Error,

$$\Delta C/C = \frac{(C_{\max} - C_{\min})}{C_{\min}} \times 100 (\%)$$

2. For SFP package, the material of lead is exposed for cutting plane. There for, soldering nature of lead tip part is considered as unquestioned. Please kindly consider soldering nature.

Main Characteristics

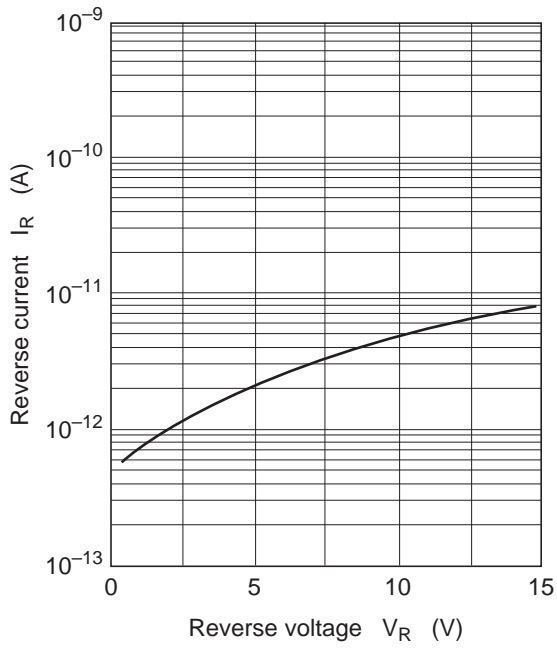


Fig.1 Reverse current vs. Reverse voltage

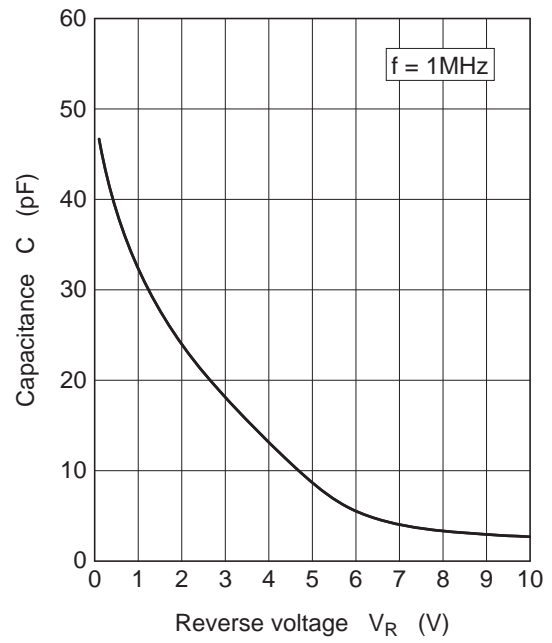


Fig.2 Capacitance vs. Reverse voltage

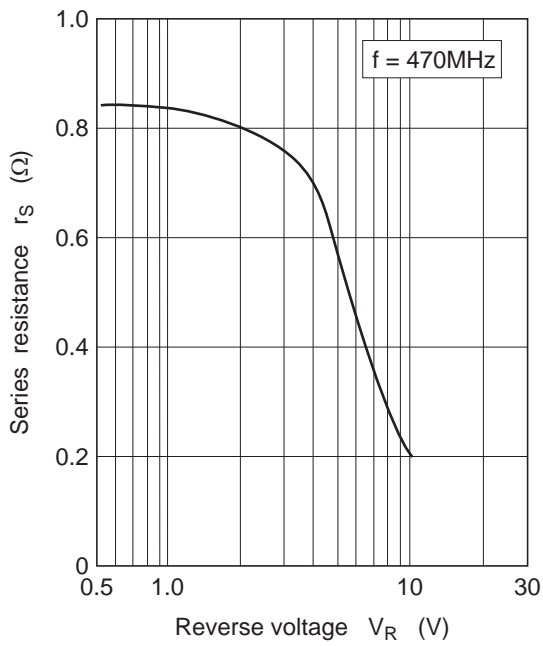
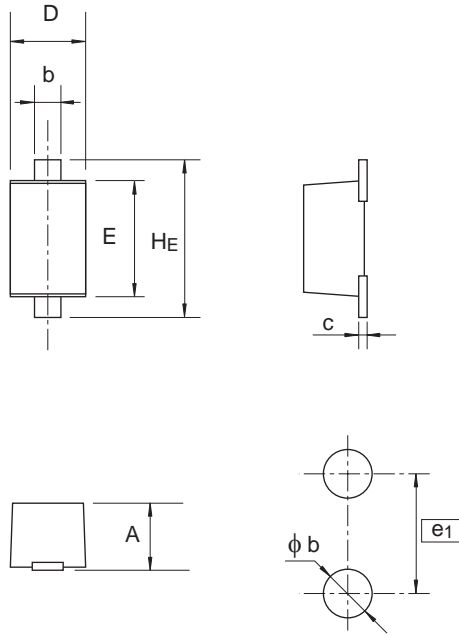


Fig.3 Series resistance vs. Reverse voltage

Package Dimensions

| | | | | |
|--------------|--------------------|--------------|---------------|------------|
| Package Name | JEITA Package Code | RENESAS Code | Previous Code | MASS[Typ.] |
| SFP | — | PUSF0002ZB-A | SFP / SFPV | 0.0010g |



Pattern of terminal position areas

| Reference Symbol | Dimension in Millimeters | | |
|------------------|--------------------------|------|------|
| | Min | Nom | Max |
| A | 0.50 | — | 0.55 |
| b | 0.25 | 0.30 | 0.35 |
| c | 0.08 | 0.13 | 0.18 |
| D | 0.55 | 0.60 | 0.65 |
| E | 0.90 | 1.00 | 1.10 |
| H_E | 1.30 | 1.40 | 1.50 |
| ϕb | — | 0.50 | — |
| e_1 | — | 1.40 | — |

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