

RKV653KL

Variable Capacitance Diode for Digital audio

REJ03G1357-0100
Rev.1.00
Jul 03, 2006

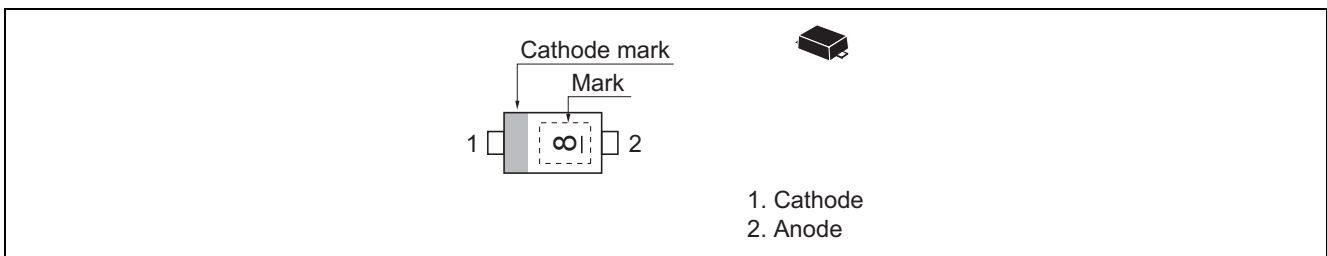
Features

- Most suitable for terrestrial digital TV broadcasts capable Mobile phones.
- High capacitance ratio. ($n = 2.40$ to 3.05)
- Low series resistance. ($r_s = 1.8 \Omega$ max)
- Extremely small Flat Lead Package (EFP) is suitable for surface mount design.

Ordering Information

| Type No. | Laser Mark | Package Name | Package Code |
|----------|------------|--------------|--------------|
| RKV653KL | 8 | EFP | PXSF0002ZA-A |

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Value | Unit |
|----------------------|-----------|-------------|------|
| Reverse voltage | V_R | 10 | 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 | $V_R = 10\text{ V}$ |
| | I_{R2} | — | — | 100 | | $V_R = 10\text{ V}, T_a = 60^\circ\text{C}$ |
| Capacitance | C_1 | 2.60 | — | 2.90 | pF | $V_R = 1\text{ V}, f = 1\text{ MHz}$ |
| | C_3 | 0.97 | — | 1.08 | | $V_R = 3\text{ V}, f = 1\text{ MHz}$ |
| Capacitance ratio | n | 2.40 | — | 3.05 | — | C_1/C_3 |
| Series resistance | r_s | — | — | 1.8 | Ω | $V_R = 1\text{ V}, f = 470\text{ MHz}$ |

Note: For EFP 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 Characteristic

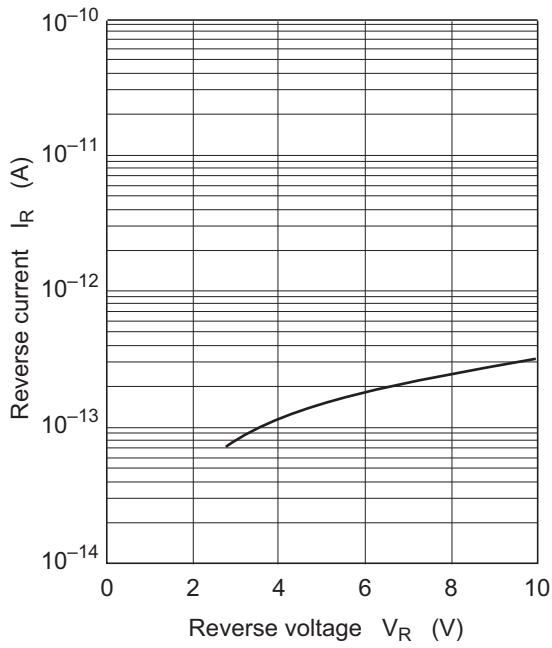


Fig.1 Reverse current vs. Reverse voltage

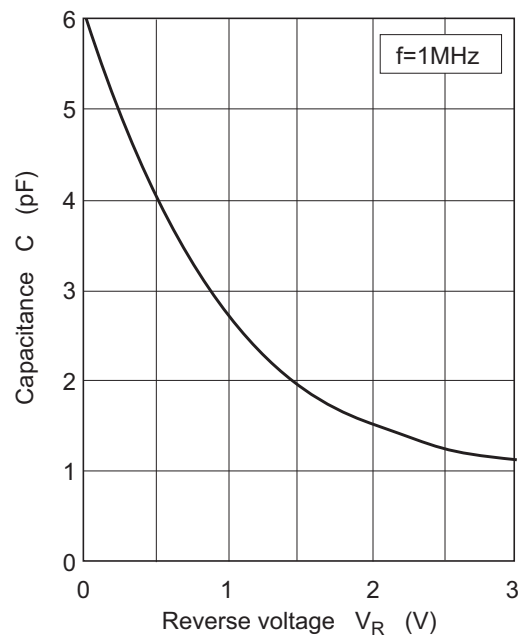


Fig.2 Capacitance vs. Reverse voltage

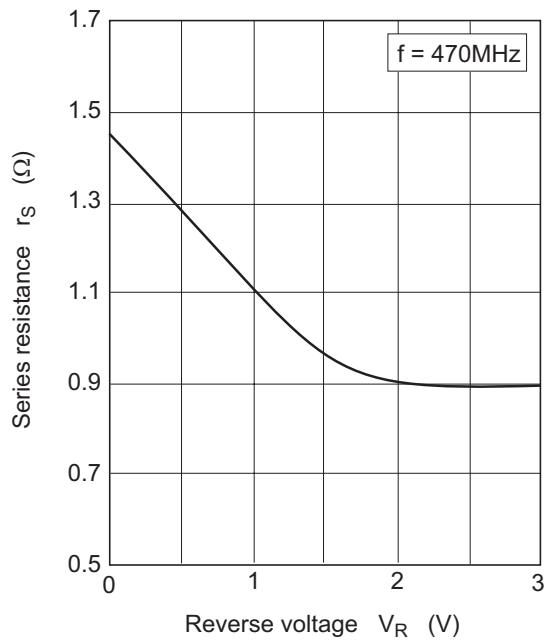
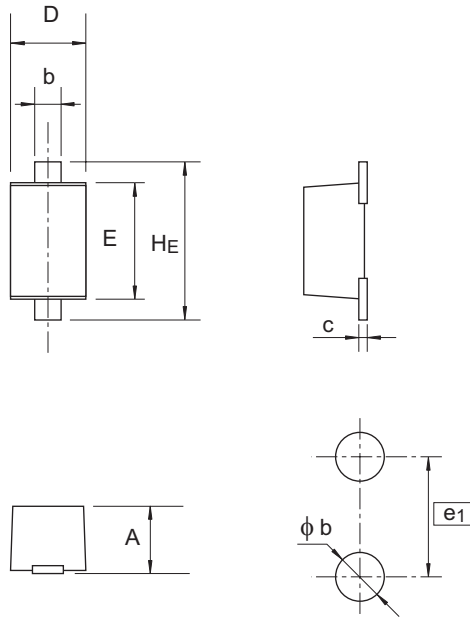


Fig.3 Series resistance vs. Reverse voltage

Package Dimensions

| | | | | |
|--------------|--------------------|--------------|---------------|------------|
| Package Name | JEITA Package Code | RENESAS Code | Previous Code | MASS[Typ.] |
| EFP | — | PXSF0002ZA-A | EFP / EFPV | 0.0007g |



Pattern of terminal position areas

| Reference Symbol | Dimension in Millimeters | | |
|------------------|--------------------------|------|------|
| | Min | Nom | Max |
| A | 0.44 | 0.47 | 0.50 |
| b | 0.25 | 0.30 | 0.35 |
| c | 0.08 | 0.13 | 0.18 |
| D | 0.55 | 0.60 | 0.65 |
| E | 0.75 | 0.80 | 0.85 |
| H_E | 0.95 | 1.00 | 1.05 |
| ϕb | — | 0.40 | — |
| e_1 | — | 1.00 | — |

Keep safety first in your circuit designs!

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