

# RKV5000DKK

Variable Capacitance Diode for UHF/VHF tuner

REJ03G0401-0100  
Rev.1.00  
Oct 14, 2004

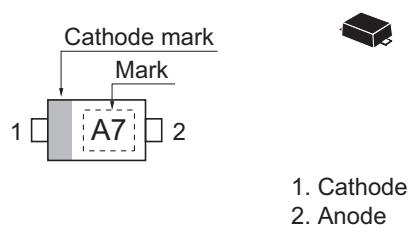
## Features

- Low series resistance and good C-V linearity.
- Super small Flat Package (SFP) is suitable for surface mount design.

## Ordering Information

Type No.	Laser Mark	Package Code
RKV5000DKK	A7	SFP

## Pin Arrangement



**Absolute Maximum Ratings**

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V <sub>RM</sub> * <sup>1</sup>	35	V
Reverse voltage	V <sub>R</sub>	34	V
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

Note: 1. R<sub>L</sub> = 10 kΩ**Electrical Characteristics**

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I <sub>R1</sub>	—	—	10	nA	V <sub>R</sub> = 32 V
	I <sub>R2</sub>	—	—	100		V <sub>R</sub> = 32 V, Ta = 60°C
Capacitance	C <sub>2</sub>	14.15	—	15.75	pF	V <sub>R</sub> = 2 V, f = 1 MHz
	C <sub>25</sub>	1.89	—	2.18		V <sub>R</sub> = 25 V, f = 1 MHz
Capacitance ratio	n	6.3	—	—	—	C <sub>2</sub> / C <sub>25</sub>
Series resistance	r <sub>s</sub>	—	—	0.57	Ω	V <sub>R</sub> = 5 V, f = 470 MHz
Matching error	ΔC/C * <sup>1</sup>	—	—	1.8	%	V <sub>R</sub> = 2 to 25 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. Please do not use the soldering iron due to avoid high stress to the SFP package.
3. 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

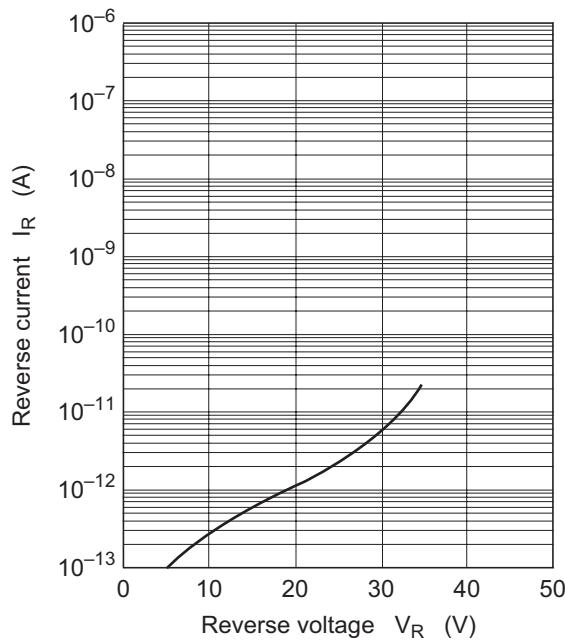


Fig.1 Reverse current vs. Reverse voltage

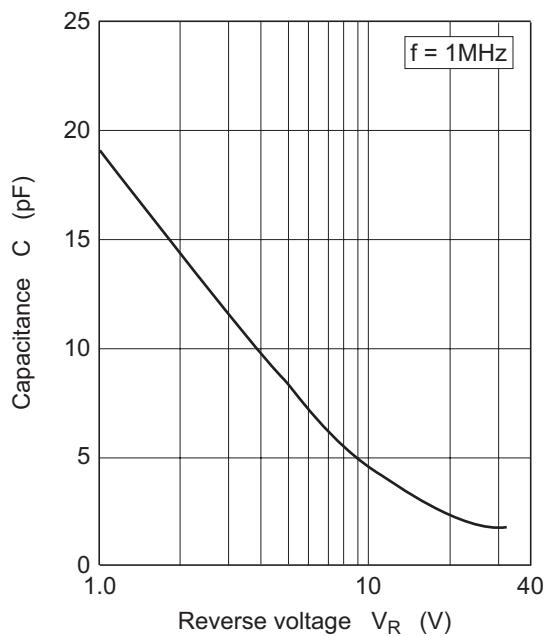


Fig.2 Capacitance vs. Reverse voltage

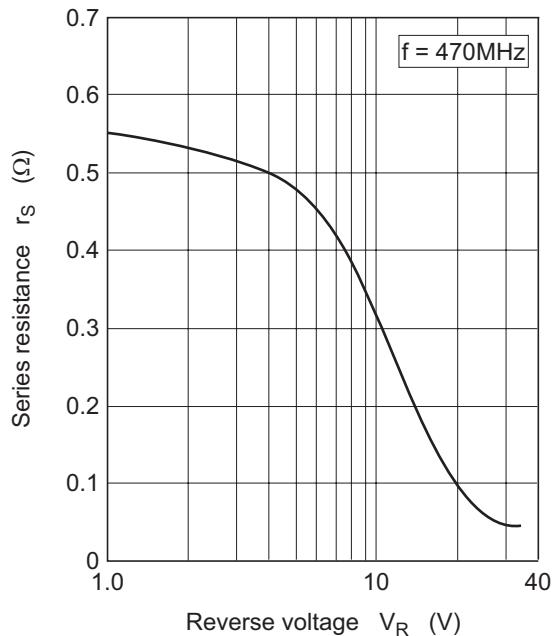


Fig.3 Series resistance vs. Reverse voltage

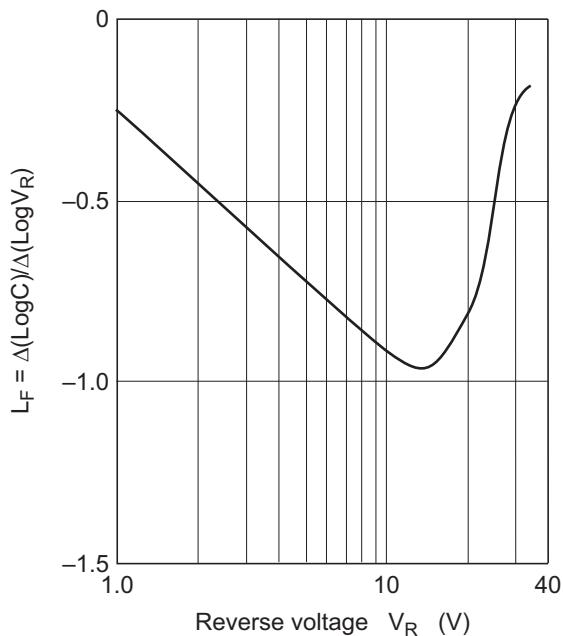
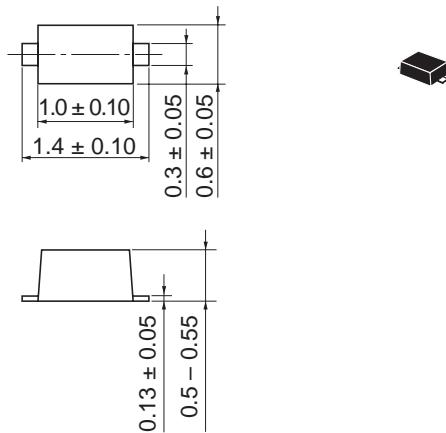


Fig.4 Linearity factor vs. Reverse voltage

## Package Dimensions

As of January, 2003  
Unit: mm



Package Code	SFP
JEDEC	—
JEITA	—
Mass (reference value)	0.0010 g

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