

RKV502KJ

Variable Capacitance Diode for VHF tuner

REJ03G1284-0100
Rev.1.00
Oct 13, 2005

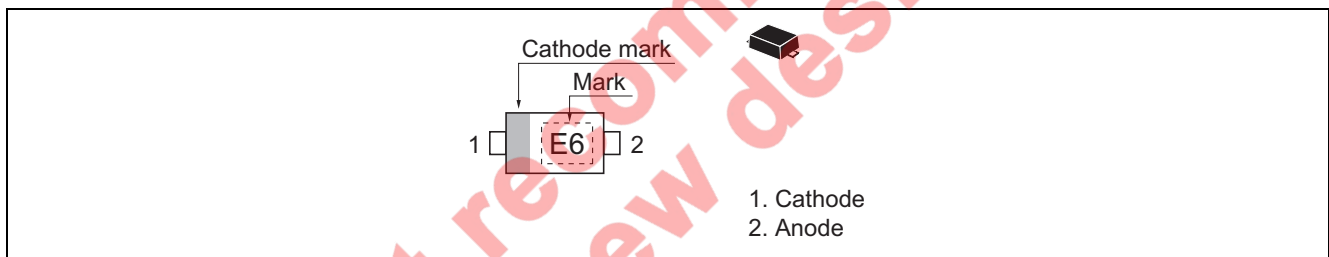
Features

- High capacitance ratio ($n = 14.5$ min) and suitable for wide band tuner.
- Low series resistance and good C-V linearity.
- Ultra small Flat Lead Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Name	Package Code (Previous Code)
RKV502KJ	E6	UFP	PWSF0002ZA-A (UFP)

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak Reverse voltage	V _{RM} *	35	V
Reverse voltage	V _R	34	V
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

Note: R_L = 10 kΩ

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I _{R1}	—	—	10	nA	V _R = 32 V
	I _{R2}	—	—	100		V _R = 32 V, Ta = 60°C
Capacitance	C ₂	41.5	—	47.0	pF	V _R = 2 V, f = 1 MHz
	C ₂₅	2.60	—	3.00		V _R = 25 V, f = 1 MHz
Capacitance ratio	n	14.5	—	—	—	C ₂ / C ₂₅
Series resistance	r _s	—	—	1.1	Ω	V _R = 5 V, f = 470 MHz
Matching error	ΔC/C *1	—	—	1.8	%	V _R = 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 extension to another group.

Calculate Matching Error,

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

2. For UFP 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.

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Main Characteristic

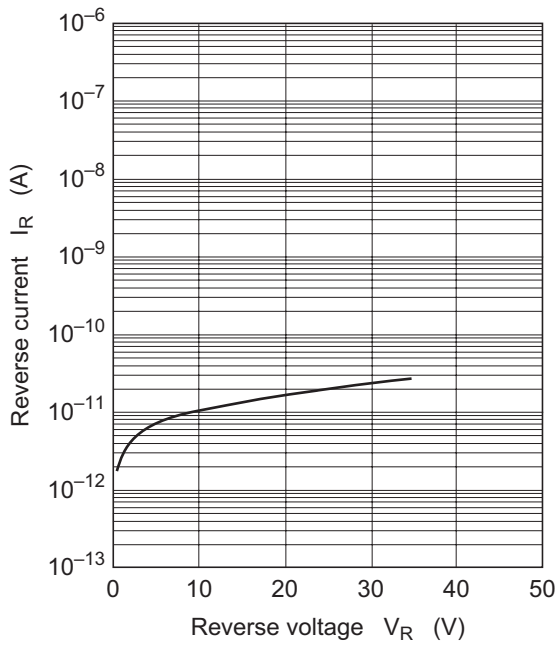


Fig.1 Reverse current vs. Reverse voltage

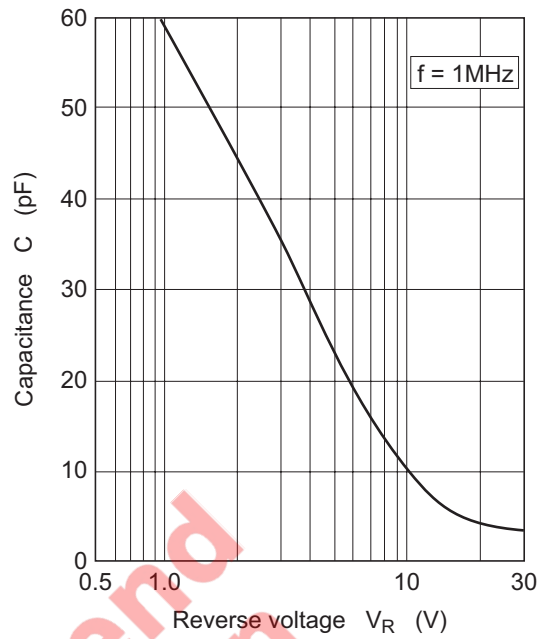


Fig.2 Capacitance vs. Reverse voltage

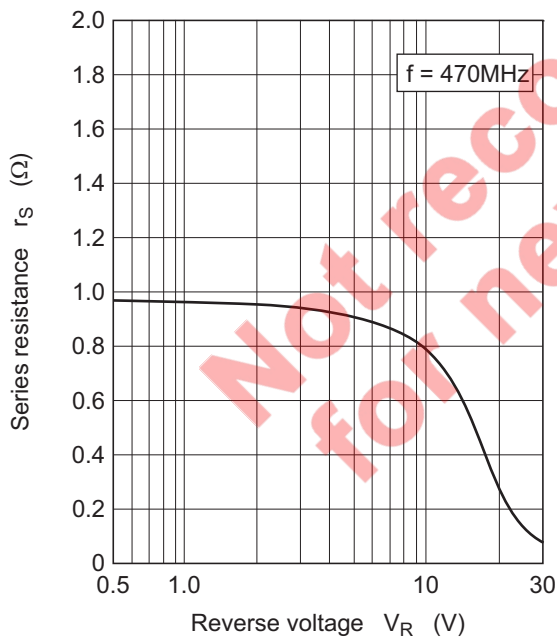


Fig.3 Series resistance vs. Reverse voltage

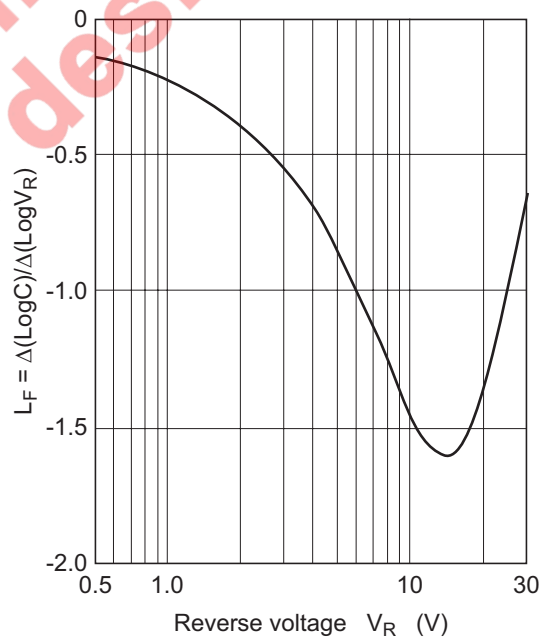
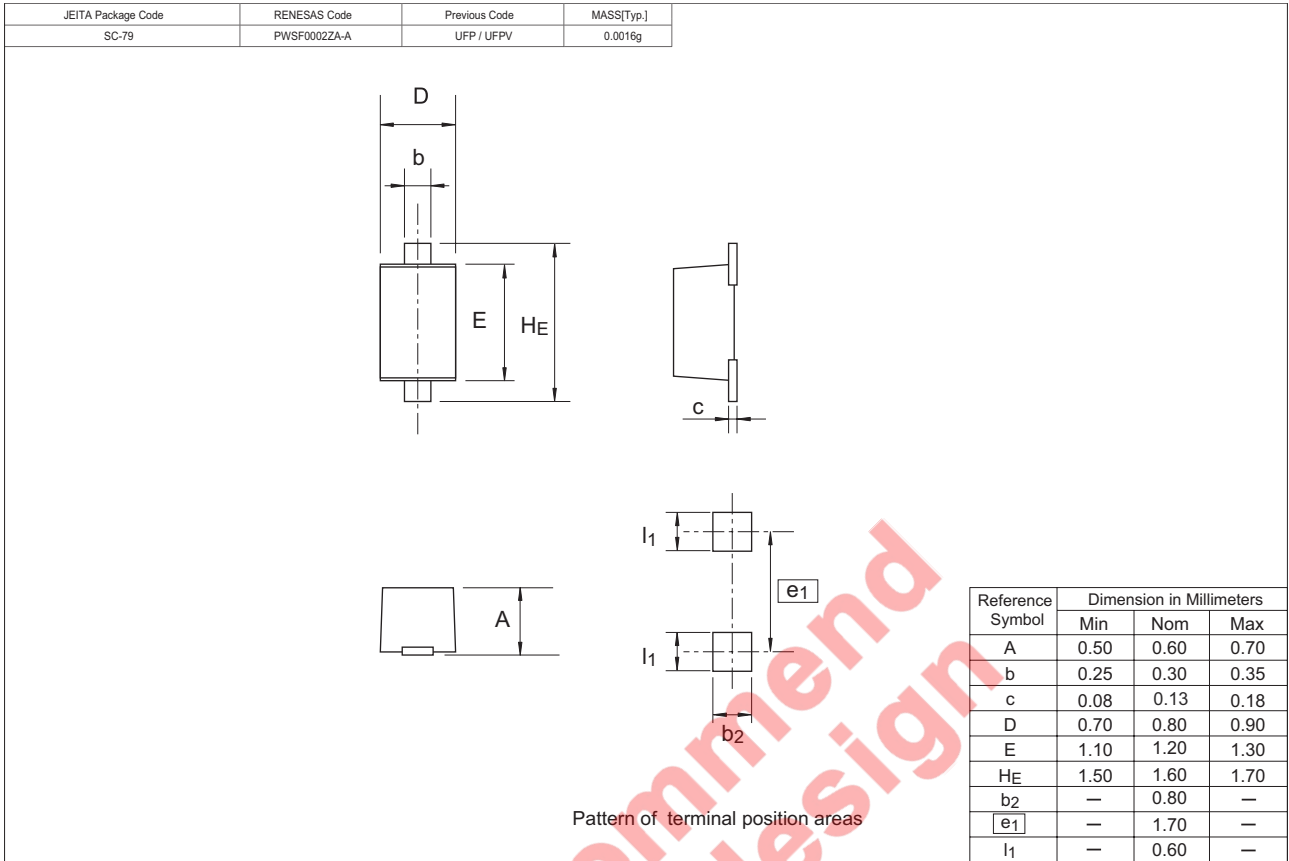


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions



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