

HVU306A

Variable Capacitance Diode for VHF tuner

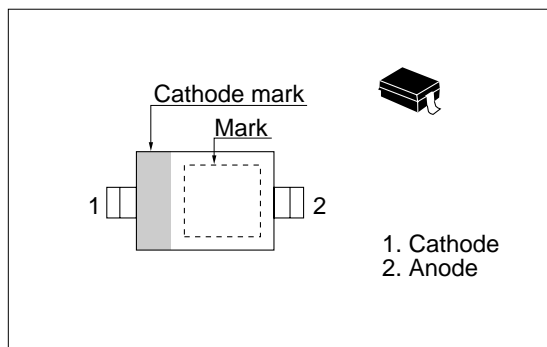
HITACHI

Rev. 4
Nov. 1994

Features

- High capacitance ratio. (n=11.0min)
- Low series resistance and good C-V linearity.
- Ultra small Resin Package (URP) is suitable for surface mount design.

Outline



Ordering Information

Type No.	Laser Mark	Package Code
HVU306A	3	URP

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V _R	32	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 = 30 V
	I _{R2}	—	—	100		V _R = 30 V, Ta = 60 °C
Capacitance	C ₂	29.3	—	34.2	pF	V _R = 2 V, f = 1 MHz
	C ₂₅	2.57	—	2.92		V _R = 25 V, f = 1 MHz
	ΔC/C*	—	—	2.0		%
Capacitance ratio	n	11.0	—	—	—	C ₂ / C ₂₅
Series resistance	r _s	—	—	0.75	Ω	V _R = 5 V, f = 470 MHz

* A set of HVU306A is of uniform C-V characteristics. Measure max. value and min. value of capacitance. Calculate Matching Error, $\Delta C/C = \frac{(C_{max} - C_{min})}{C_{min}} \times 100 (\%)$

** Each group shall uniform a multiple of 4 diodes.

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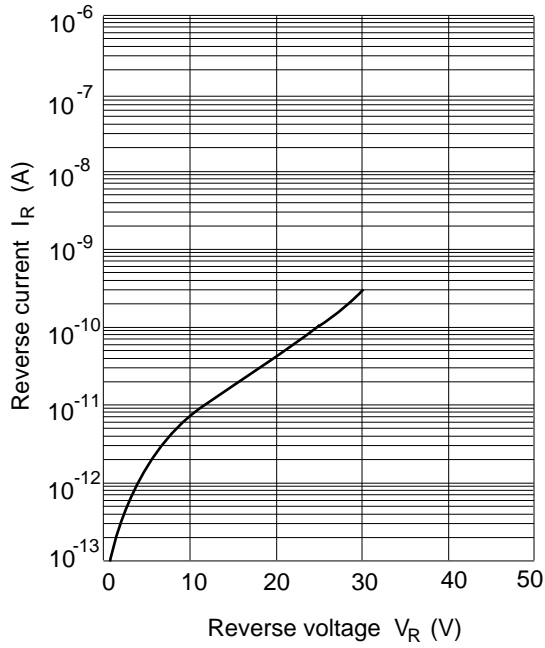


Fig.1 Reverse current Vs. Reverse voltage

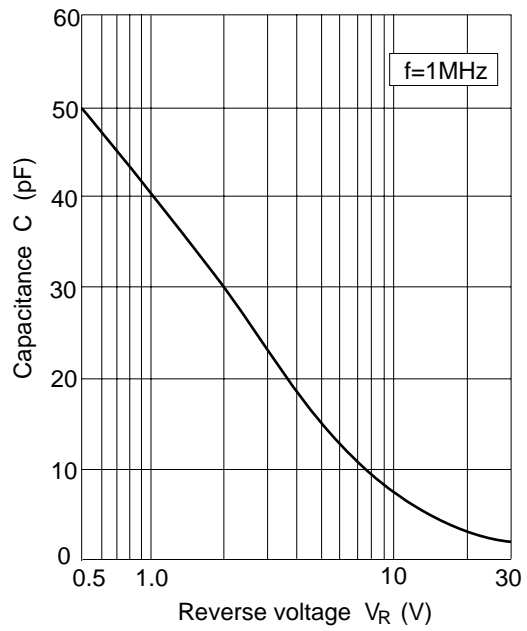


Fig.2 Capacitance Vs. Reverse voltage

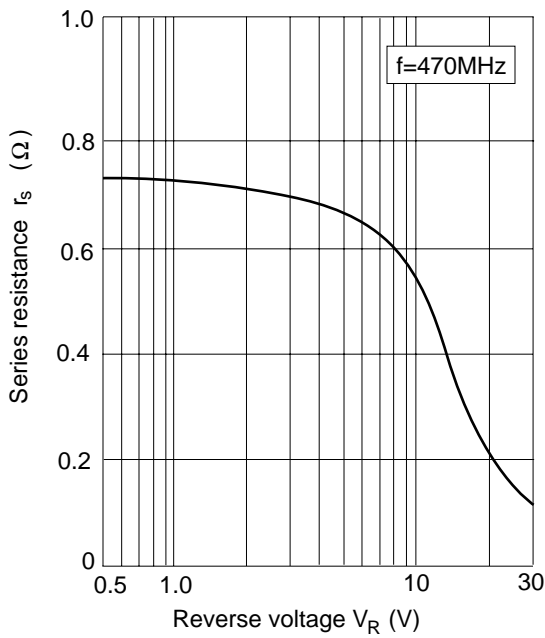


Fig.3 Series resistance Vs. Reverse voltage

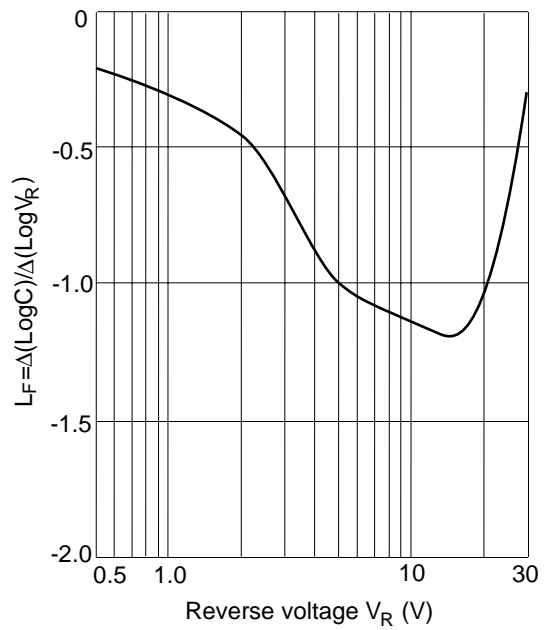


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit: mm

