

Variable Capacitance Diode for Electronic Tuning

HVU202A

FEATURES

- Low series resistance and good C-V linearity.
- Suitable for compact ET tuner.
- Ultra small Resin Package (URP) is suitable for surface mount design.



SOD-323



DEVICEMARKING

HVU202A = Q

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V _R	34	V
Junction temperature	T _j	125	°C
Storage temperature	T _{stg}	– 55 to +125	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I _{R1}	–	–	10	nA	V _R = 32V
	I _{R2}	–	–	100		V _R = 32V, T _A = 60°C
Capacitance	C ₂	14.11	–	16.47	pF	V _R = 2V, f = 1 MHz
	C ₂₅	2.06	–	2.35		V _R = 25V, f = 1 MHz
Capacitance ratio	n	6.2	–	–	–	C ₂ / C ₂₅
Series resistance	r _s	–	–	0.57	Ω	V _R = 5V, f = 470 MHz
Matching error	ΔC/C*1	–	–	2.0	%	V _R = 2 to 25V, f = 1 MHz

Note: *1. C.C system (Continuous Connected tapping system) enable to make any 10 pcs of ΔC/C continuous in a reel , expect extension to another group.

Calculate Matching Error,

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

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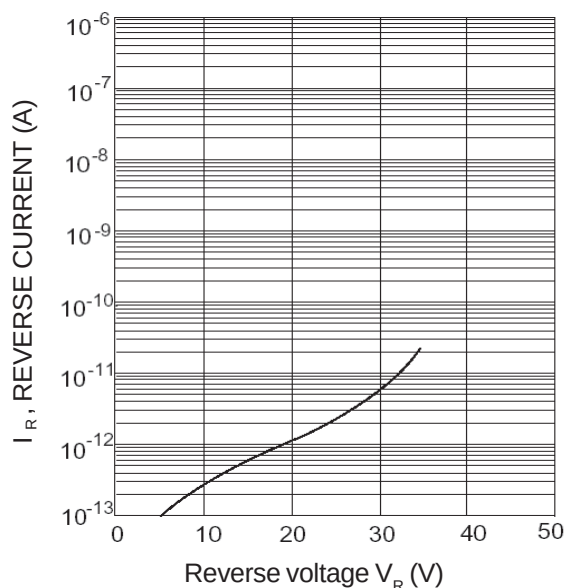


Fig.1 Reverse current Vs. Reverse voltage

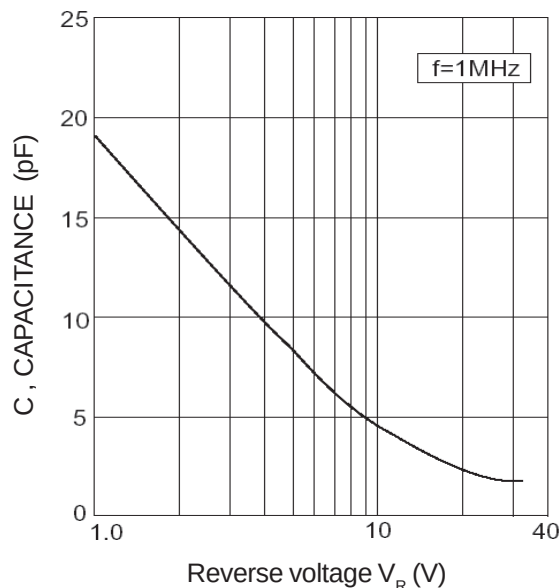


Fig.2 Capacitance Vs. Reverse voltage

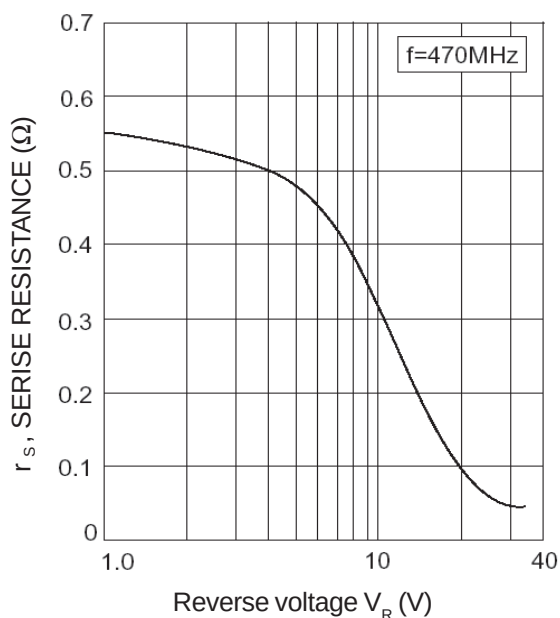


Fig.3 Series resistance Vs. Reverse voltage

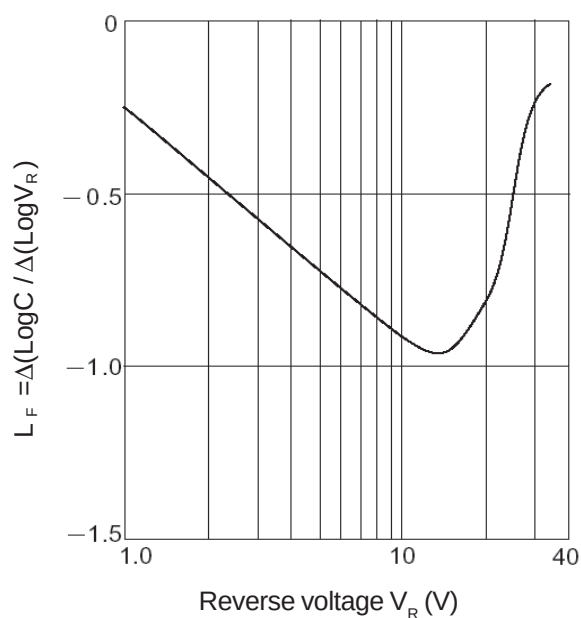


Fig.4 Linearity factor Vs. Reverse voltage