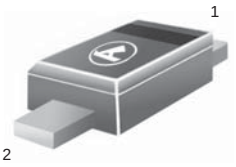
Variable Capacitance Diode for Tuner

HVC317B

FEATURES

- High capacitance ratio. (n =13.0 min)
- Ultra small Flat Package (UFP) is suitable for surface mount design.



SOD– 523



DEVICE MARKING

HVC317B = A5

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C)

Item	Symbol	Value	Unit
Reversevoltage	V_R	35	V
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	– 55 to +125	°C

Notes 1.R_L=10kΩ

ELECTRICAL CHARACTERISTICS (T_A = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_{R1}	–	–	10	nA	V_R = 30V
	I_{R2}	–	–	100		V_R = 30V, T_A = 60°C
Capacitance	C_1	9.00	–	11.5	pF	V_R = 1V, f = 1 MHz
	C_{25}	0.60	–	0.80		V_R = 25V, f = 1 MHz
Capacitance ratio	n	13.0	–	–	–	C_1/ C_{25}
Series resistance	r_s	–	–	1.6	Ω	V_R=5V, f = 470 MHz
Matching error	ΔC/C * 1	–	–	6.0	%	V_R = 1 to 25V , 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,

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

HVC317B

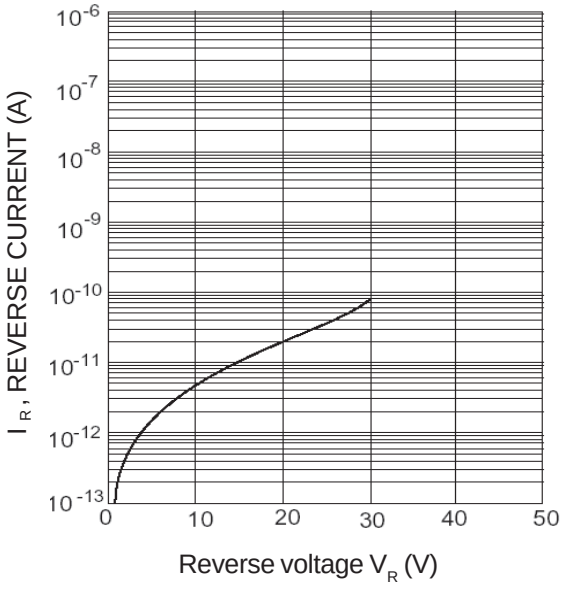


Fig.1 Reverse current Vs. Reverse voltage

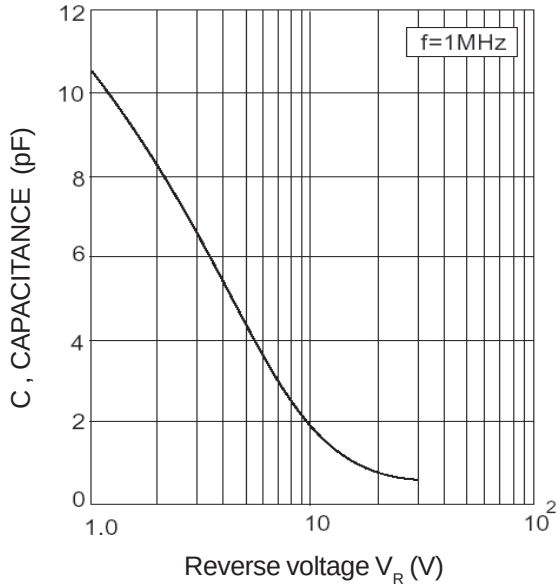


Fig.2 Capacitance Vs. Reverse voltage

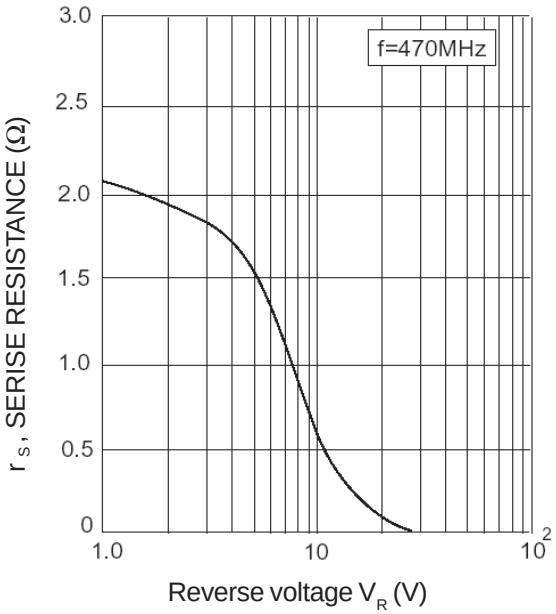


Fig.3 Series resistance Vs. Reverse voltage

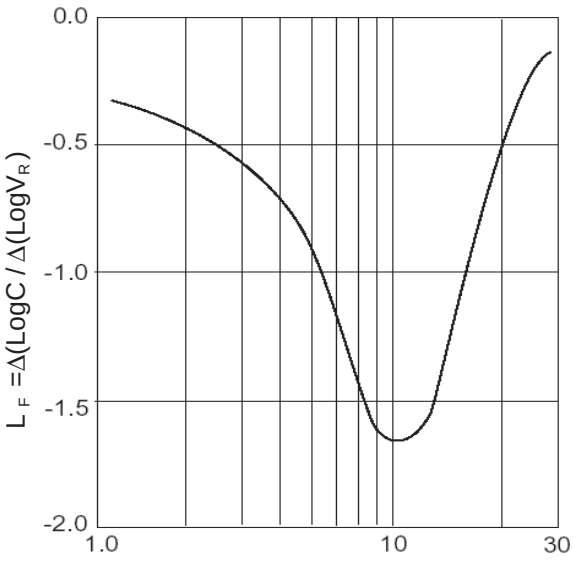


Fig.4 Linearity factor Vs. Reverse voltage