

Variable Capacitance Diode for TV Tuner

HVC308A

FEATURES

- Low series resistance. ($r_s=0.95\Omega\text{max}$)
- Ultra small Flat Package (UFP) is suitable for surface mount design.



SOD-523



DEVICE MARKING

HVC308A = V

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

Item	Symbol	Value	Unit
Reverse voltage	V_R	35	V
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	– 55 to +125	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_{R1}	–	–	10	nA	$V_R = 30\text{V}$
	I_{R2}	–	–	100		$V_R = 30\text{V}, T_A = 60^\circ\text{C}$
Capacitance	C_2	13.7	–	15.9	pF	$V_R = 2\text{V}, f = 1\text{ MHz}$
	C_{20}	1.65	–	2.06		$V_R = 20\text{V}, f = 1\text{ MHz}$
Capacitance ratio	n	7.12	–	–	–	C_2 / C_{20}
Series resistance	r_s	–	–	0.95	Ω	$V_R = 5\text{V}, f = 470\text{ MHz}$

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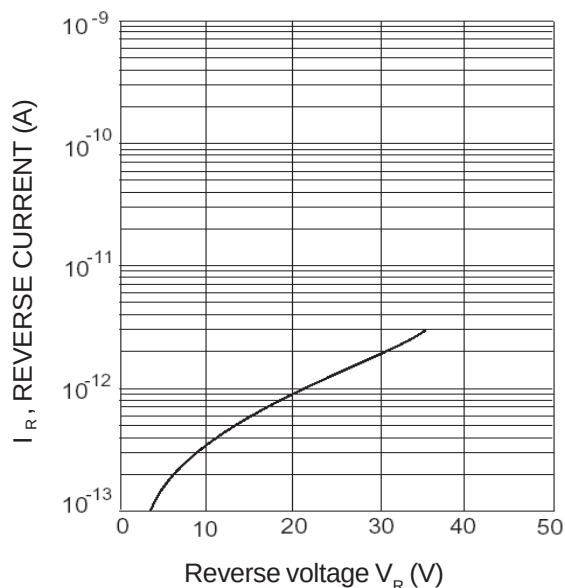


Fig.1 Reverse current Vs. Reverse voltage

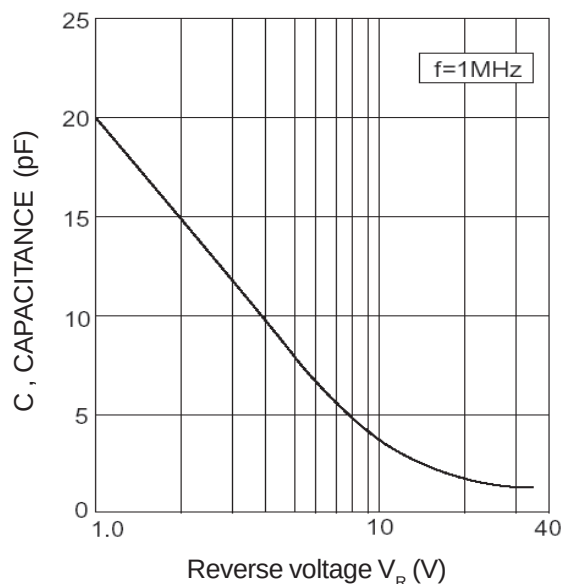


Fig.2 Capacitance Vs. Reverse voltage

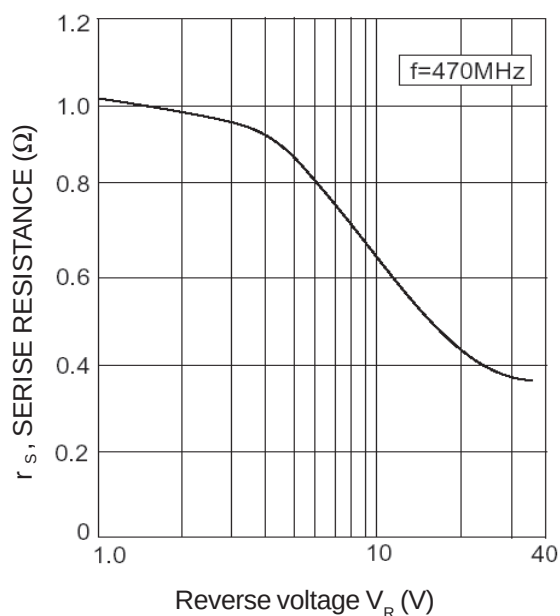


Fig.3 Series resistance Vs. Reverse voltage

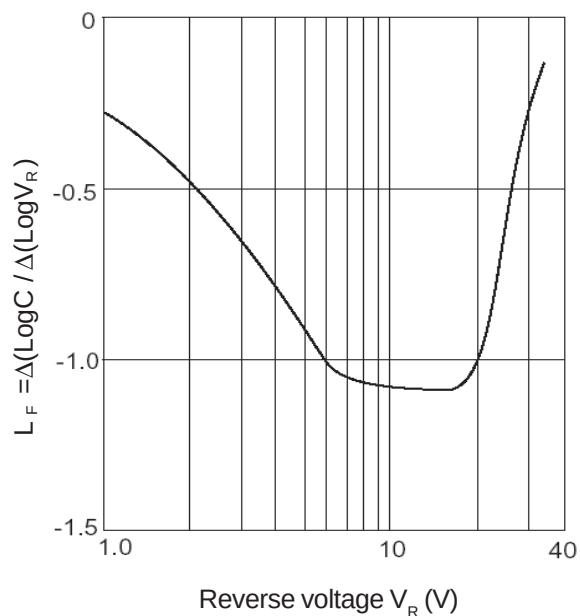


Fig.4 Linearity factor Vs. Reverse voltage