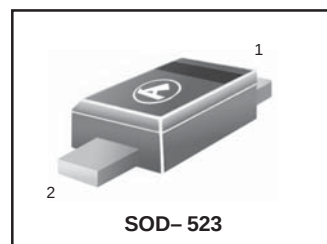


Variable Capacitance Diode for VCO

FEATURES

- Low capacitance and to be usable at GHz.
- High capacitance ratio. ($n = 2.3 \text{ min}$)
- Low series resistance. ($r_s = 0.5 \Omega \text{ max}$)
- Ultra small Flat Package (UFP) is suitable for surface mount design.

HVC369B



DEVICE MARKING

HVC369B = B3

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

Item	Symbol	Value	Unit
Reverse voltage	V_R	15	V
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	- 55 to +125	$^\circ\text{C}$

Notes 1. $R_L = 10\text{k}\Omega$

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

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_{R1}	—	—	10	nA	$V_R = 15\text{V}$
	I_{R2}	—	—	100		$V_R = 15\text{V}, T_A = 60^\circ\text{C}$
Capacitance	C_1	4.65	—	5.15	pF	$V_R = 1\text{V}, f = 1 \text{ MHz}$
	C_4	1.85	—	2.15		$V_R = 4\text{V}, f = 1 \text{ MHz}$
Capacitance ratio	n	2.3	—	—	—	C_1 / C_4
Series resistance	r_s	—	—	0.5	Ω	$V_R = 1\text{V}, f = 470 \text{ MHz}$

HVC369B

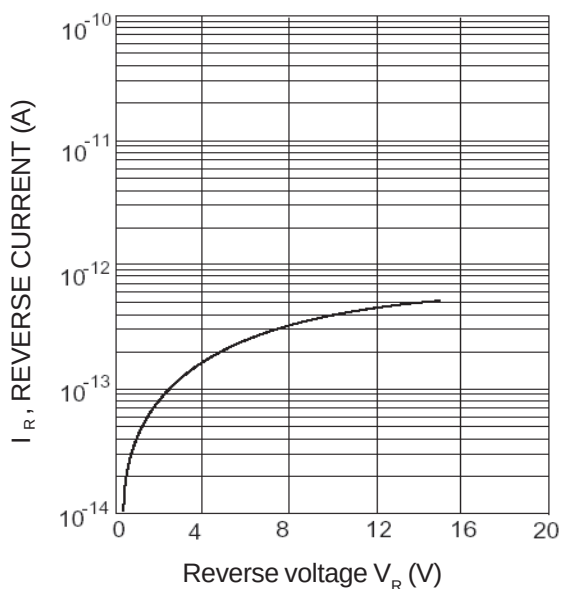


Fig.1 Reverse current Vs. Reverse voltage

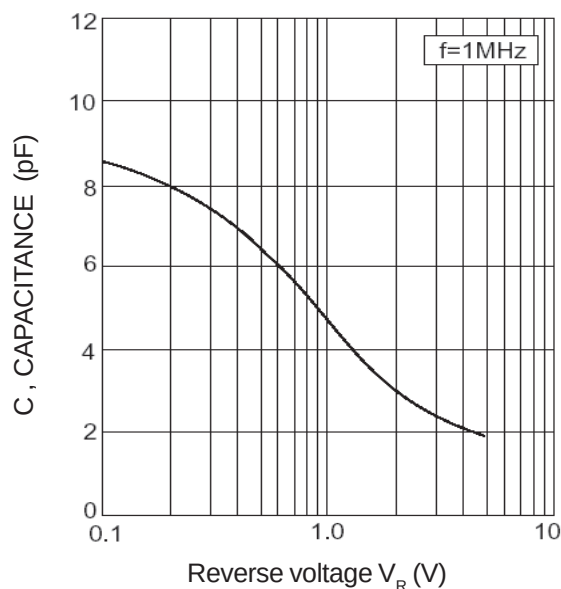


Fig.2 Capacitance Vs. Reverse voltage

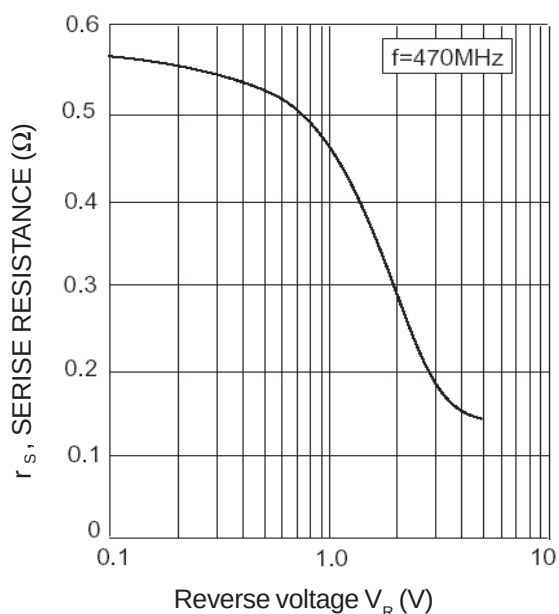


Fig.3 Series resistance Vs. Reverse voltage

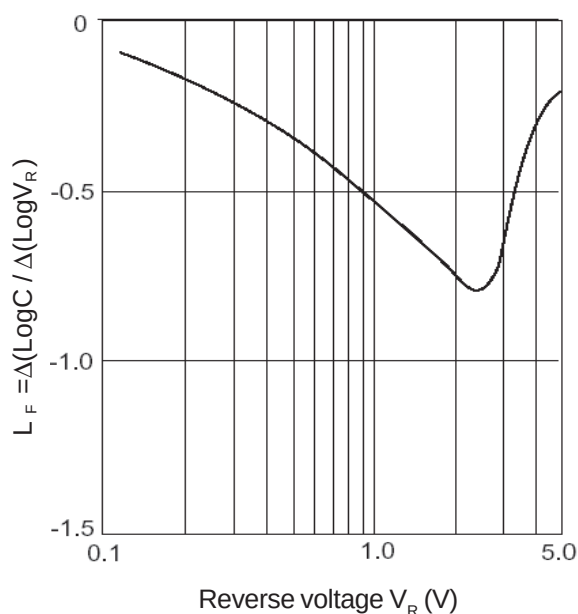


Fig.4 Linearity factor Vs. Reverse voltage