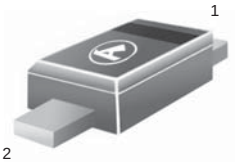
Variable Capacitance Diode for VCO

HVC362

FEATURES

- High capacitance ratio. (n =3.0.min)
- Good C-V linearity.
- Ultra small Flat Package (UFP) is suitable for surface mount design.



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DEVICE MARKING

HVC362 = V2

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C)

Item	Symbol	Value	Unit
Reversevoltage	V_R	15	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 = 10V
	I_{R2}	–	–	100		V_R = 10V, T_A = 60°C
Capacitance	C_1	41.6	–	49.9	pF	V_R = 1V, f = 1 MHz
	C_4	10.1	–	14.8		V_R = 4V, f = 1 MHz
Capacitance ratio	n	3.0	–	–	–	C_1/ C_4
Series resistance	r_s	–	–	2.0	Ω	V_R=4V, f = 100 MHz
ESD-Capability*1	–	80	–	–	V	*C =200pF ,Both forward and reverse direction 1 pulse.

Notes 1. Failure criterion ; $I_R \geq$ 20nA at V_R =10 V

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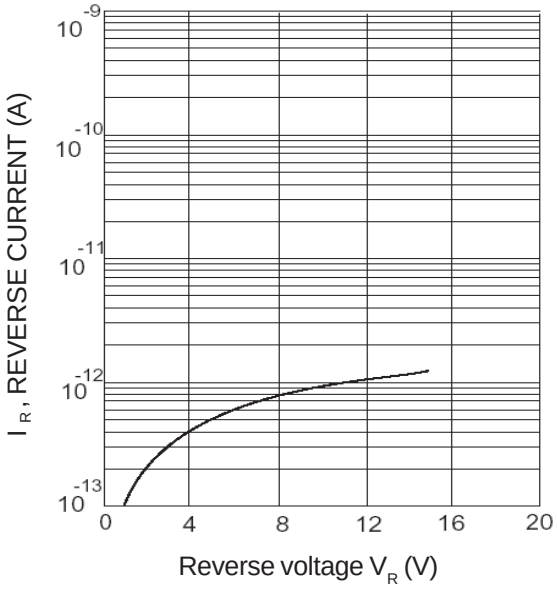

Fig.1 Reverse current Vs. Reverse voltage

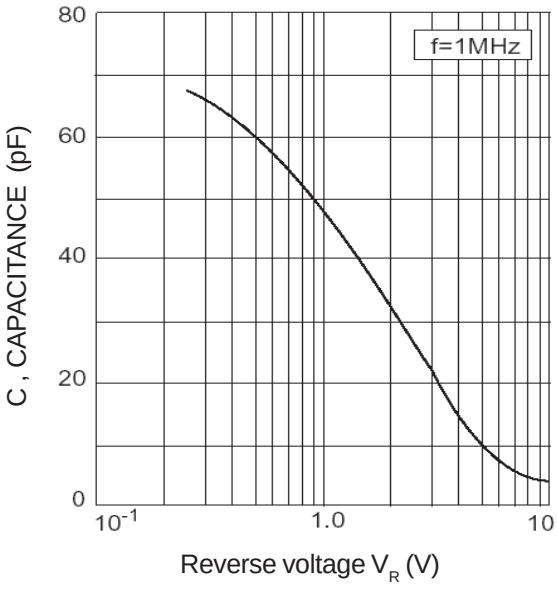

Fig.2 Capacitance Vs. Reverse voltage

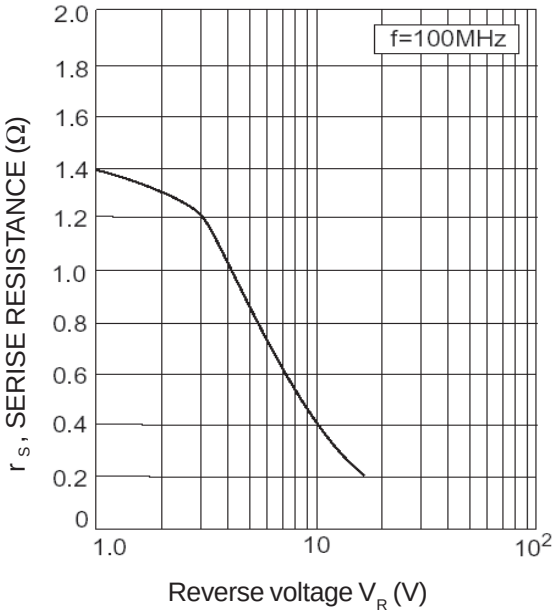

Fig.3 Series resistance Vs. Reverse voltage

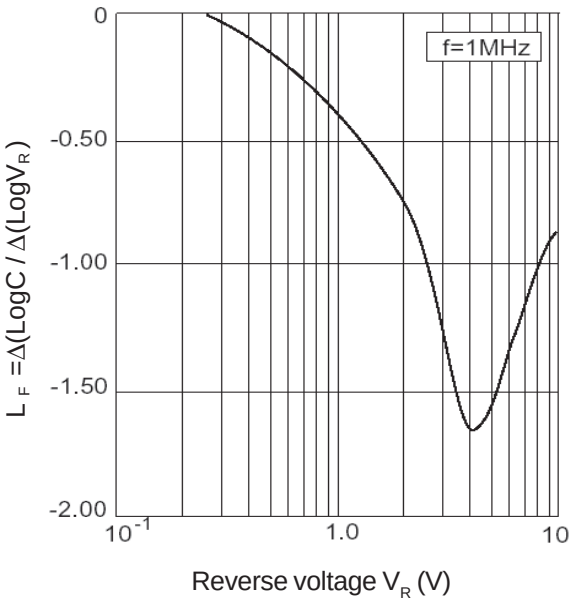

Fig.4 Linearity factor Vs. Reverse voltage