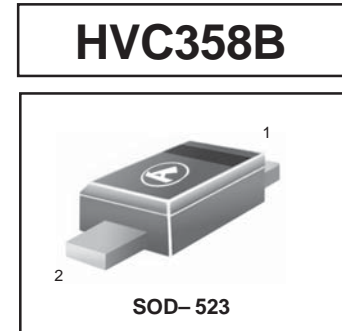


Variable Capacitance Diode for VCO

FEATURES

- High capacitance ratio. ($n = 2.20$.min)
- Low series resistance. ($r_s = 0.4\Omega$ max)
- Good C-V linearity.
- Ultra small Flat Package (UFP) is suitable for surface mount design.



DEVICE MARKING

HVC358B = B2

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	$^\circ\text{C}$

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	19.5	-	21.0	pF	$V_R = 1\text{V}, f = 1\text{ MHz}$
	C_4	8.00	-	9.30		$V_R = 4\text{V}, f = 1\text{ MHz}$
Capacitance ratio	n	2.20	-	-	-	C_1 / C_4
Series resistance	r_s	-	-	0.4	Ω	$V_R = 1\text{V}, f = 470\text{ MHz}$

HVC358B

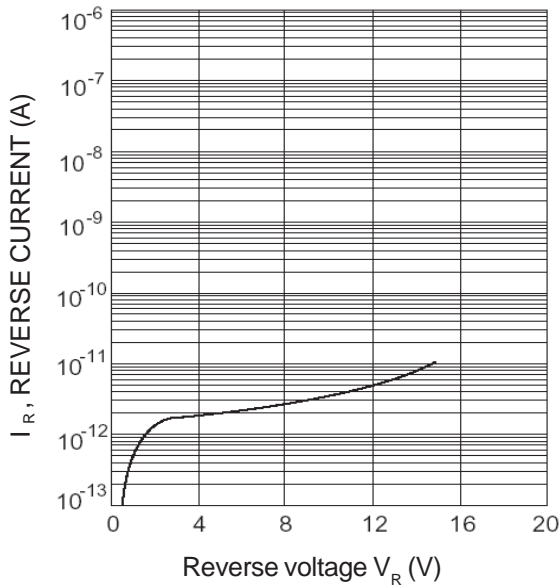


Fig.1 Reverse current Vs. Reverse voltage

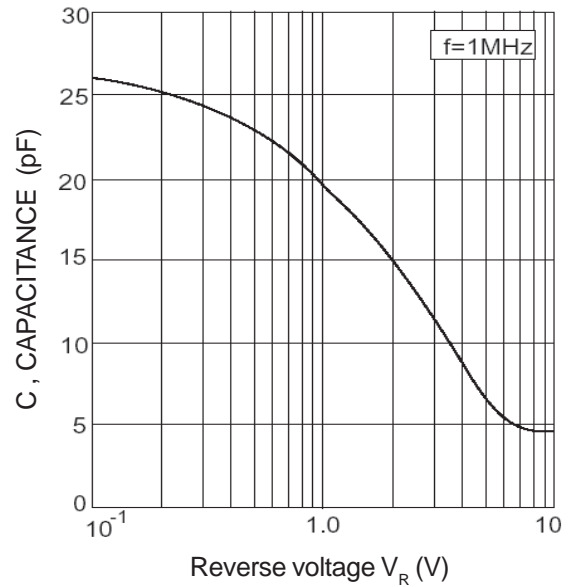


Fig.2 Capacitance Vs. Reverse voltage

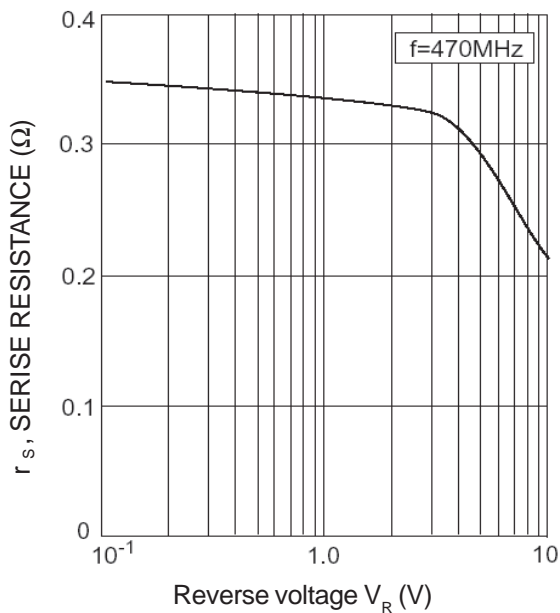


Fig.3 Series resistance Vs. Reverse voltage

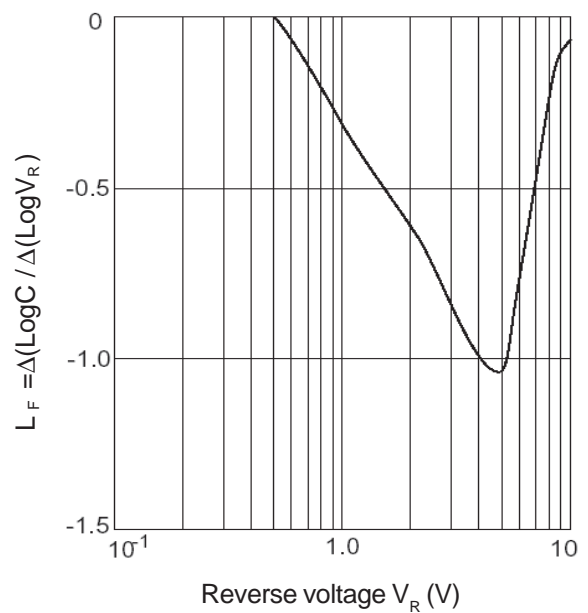


Fig.4 Linearity factor Vs. Reverse voltage