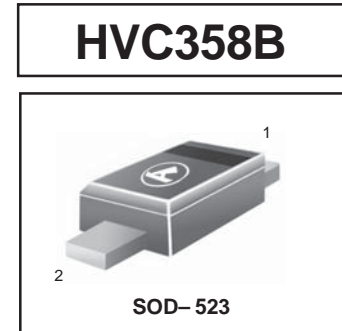


# Variable Capacitance Diode for VCO

## 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	$T_{\text{stg}}$	- 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	$\Omega$	$V_R = 1\text{V}, f = 470\text{ MHz}$

HVC358B

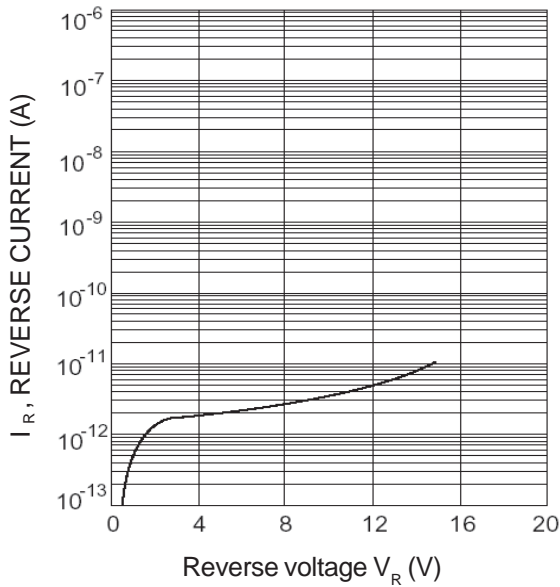


Fig.1 Reverse current Vs. Reverse voltage

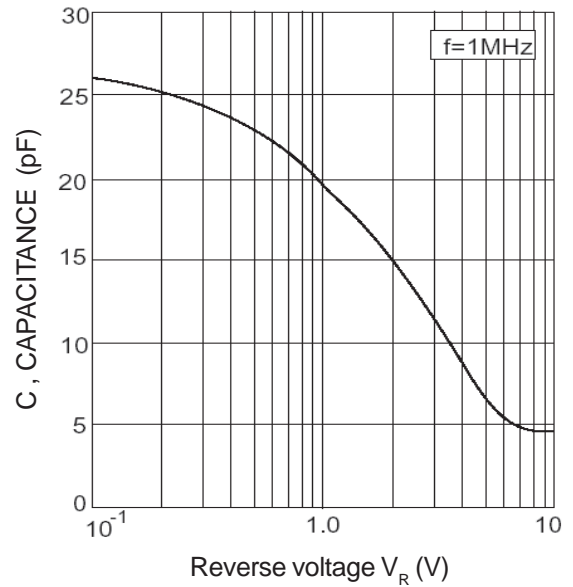


Fig.2 Capacitance Vs. Reverse voltage

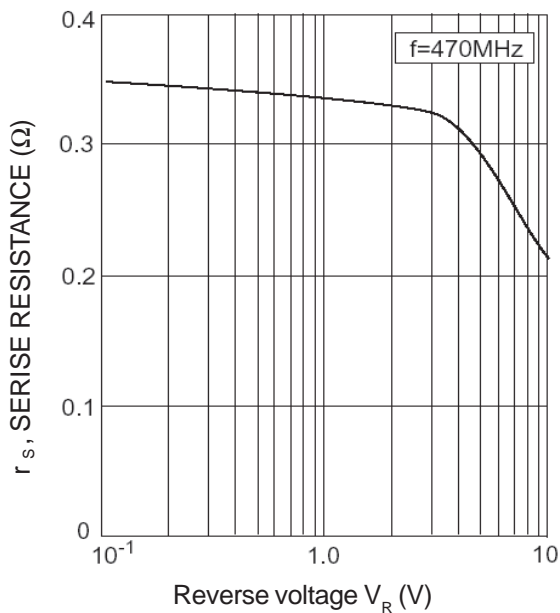


Fig.3 Series resistance Vs. Reverse voltage

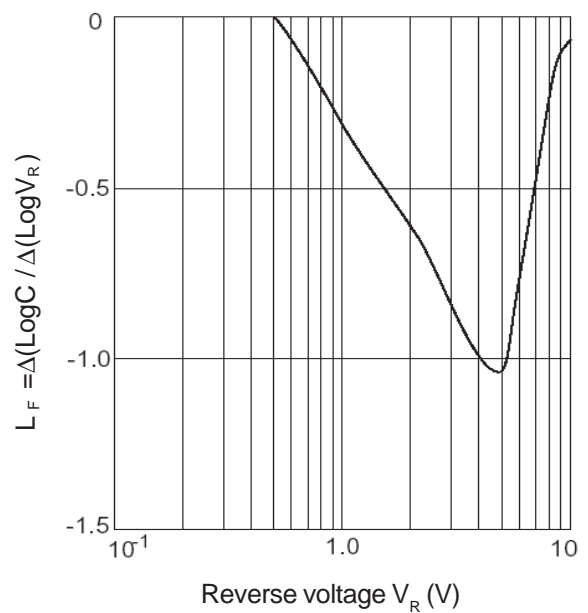


Fig.4 Linearity factor Vs. Reverse voltage