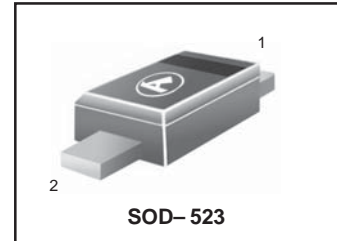


# Variable Capacitance Diode for TV Tuner

## HVC308A



### FEATURES

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



### 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	$T_{\text{stg}}$	- 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	$V_R = 30\text{V}$
	$I_{R2}$	-	-	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	$\Omega$	$V_R = 5\text{V}, f = 470\text{ MHz}$

HVC308A

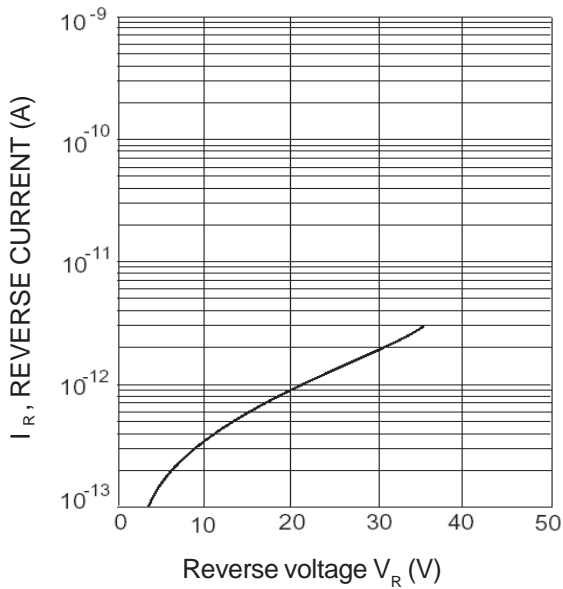


Fig.1 Reverse current Vs. Reverse voltage

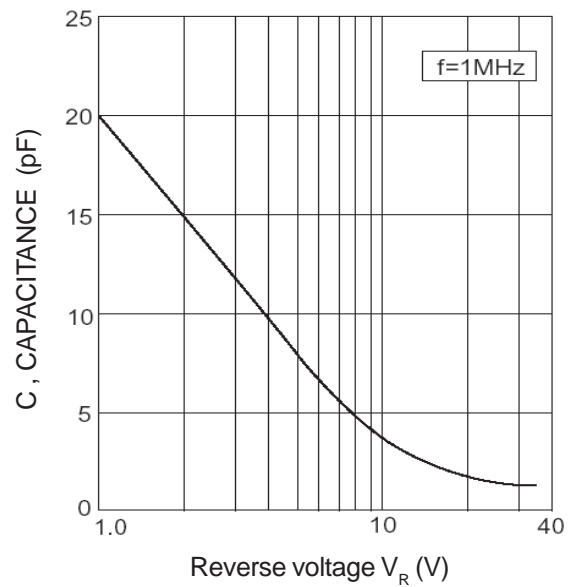


Fig.2 Capacitance Vs. Reverse voltage

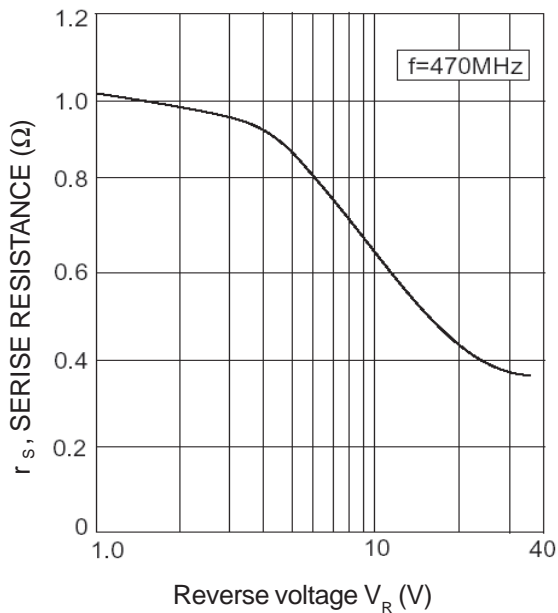


Fig.3 Series resistance Vs. Reverse voltage

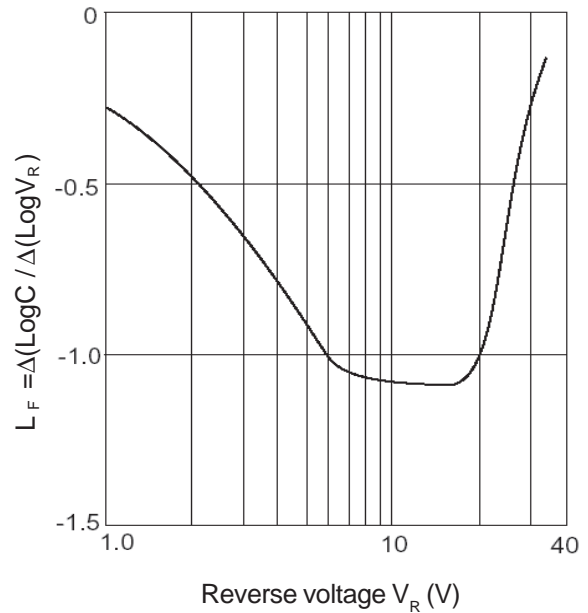


Fig.4 Linearity factor Vs. Reverse voltage