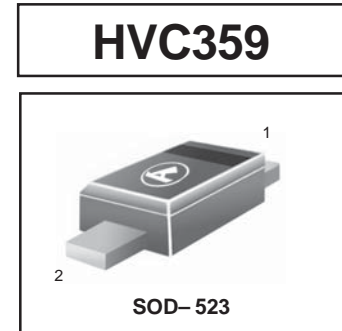


# Variable Capacitance Diode for VCXO

## FEATURES

- High capacitance ratio and good C-V linearity.
- To be usable at low voltage.
- Ultra small Flat Package (UFP) is suitable for surface mount design.



## DEVICE MARKING

HVC359 = S

## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub>	15	V
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature	T <sub>stg</sub>	- 55 to +125	°C

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I <sub>R1</sub>	-	-	10	nA	V <sub>R</sub> = 10V
	I <sub>R2</sub>	-	-	100		V <sub>R</sub> = 10V, T <sub>A</sub> = 60°C
Capacitance	C <sub>1</sub>	24.8	-	29.8	pF	V <sub>R</sub> = 1V, f = 1 MHz
	C <sub>4</sub>	6.0	-	8.3		V <sub>R</sub> = 4V, f = 1 MHz
Capacitance ratio	n	3.0	-	-	-	C <sub>1</sub> / C <sub>4</sub>
Series resistance	r <sub>s</sub>	-	-	1.5	Ω	V <sub>R</sub> = 4V, f = 100 MHz
ESD-Capability <sup>1</sup>	-	80	-	-	V	C = 200pF , Both forward and reverse direction 1 pulse.

Notes 1. Failure criterion ; I<sub>R</sub> ≥ 20nA at V<sub>R</sub> = 10 V

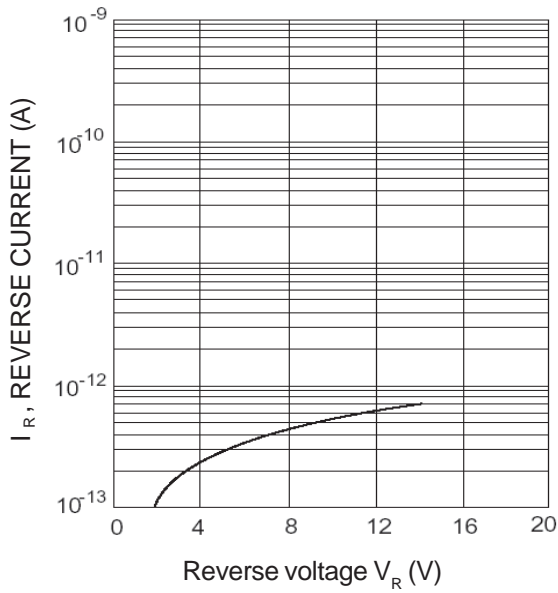
**HVC359**


Fig.1 Reverse current Vs. Reverse voltage

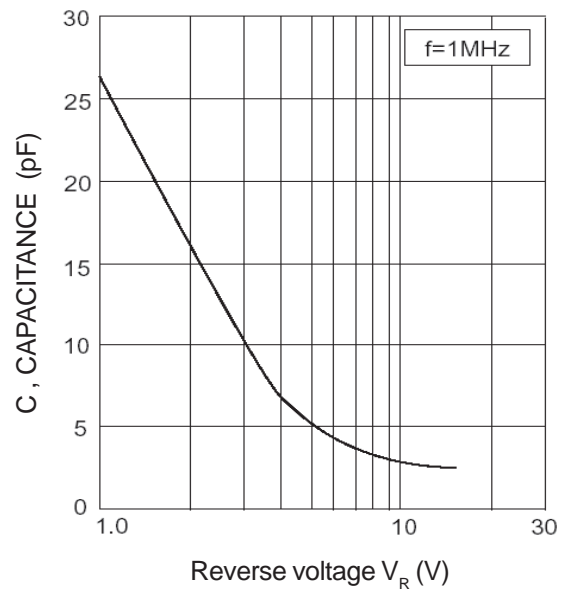


Fig.2 Capacitance Vs. Reverse voltage