

HVC376B

Variable Capacitance Diode for VCO

REJ03G0091-0200

Rev.2.00

Sep 05, 2005

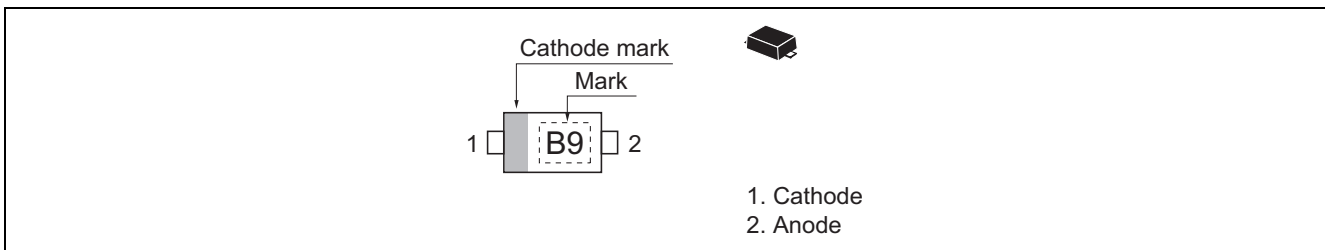
Features

- High capacitance ratio ($n = 4.30$ min) and good C-V linearity.
- High Q circuit can be composed due to low series resistance. ($r_s = 0.8 \Omega$ max)
- To be usable at low voltage.
- Ultra small Flat Lead Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Name	Package Code (Previous Code)
HVC376B	B9	UFP	PWSF0002ZA-A (UFP)

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	15	V
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-55 to +125	°C

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_{R1}	—	—	10	nA	$V_R = 10\text{ V}$
	I_{R2}	—	—	100		$V_R = 10\text{ V}, T_a = 60^\circ\text{C}$
Capacitance	$C_{0.2}$	39.5	—	44.5	pF	$V_R = 0.2\text{ V}, f = 1\text{ MHz}$
	C_1	25.0	—	28.5		$V_R = 1\text{ V}, f = 1\text{ MHz}$
	$C_{2.3}$	8.75	—	12.05		$V_R = 2.3\text{ V}, f = 1\text{ MHz}$
	C_4	4.80	—	6.80		$V_R = 4\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	n_1	4.30	—	—	—	C_1/C_4
	n_2	3.55	—	—	—	$C_{0.2}/C_{2.3}$
Series resistance	r_s	—	—	0.8	Ω	$V_R = 1\text{ V}, f = 470\text{ MHz}$

Main Characteristic

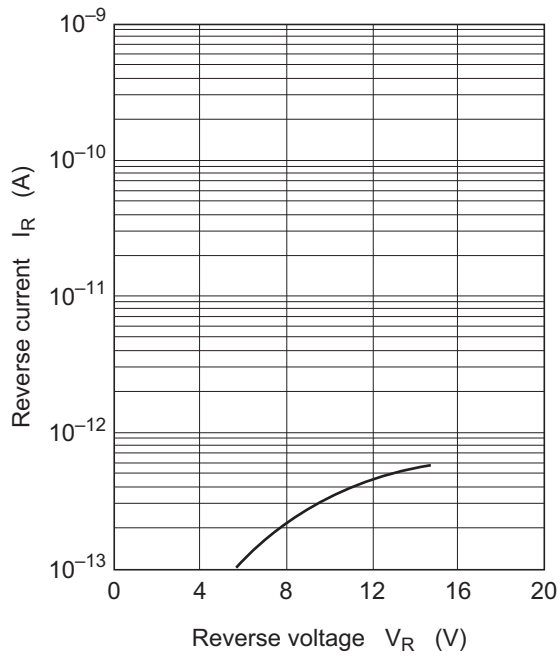


Fig.1 Reverse current vs. Reverse voltage

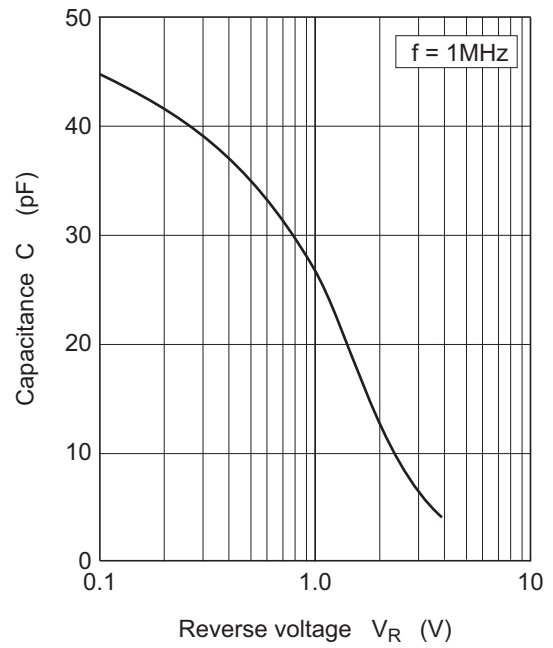


Fig.2 Capacitance vs. Reverse voltage

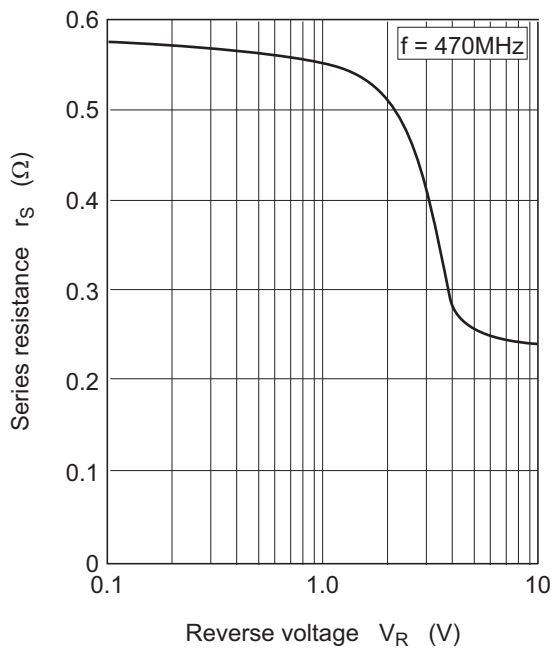
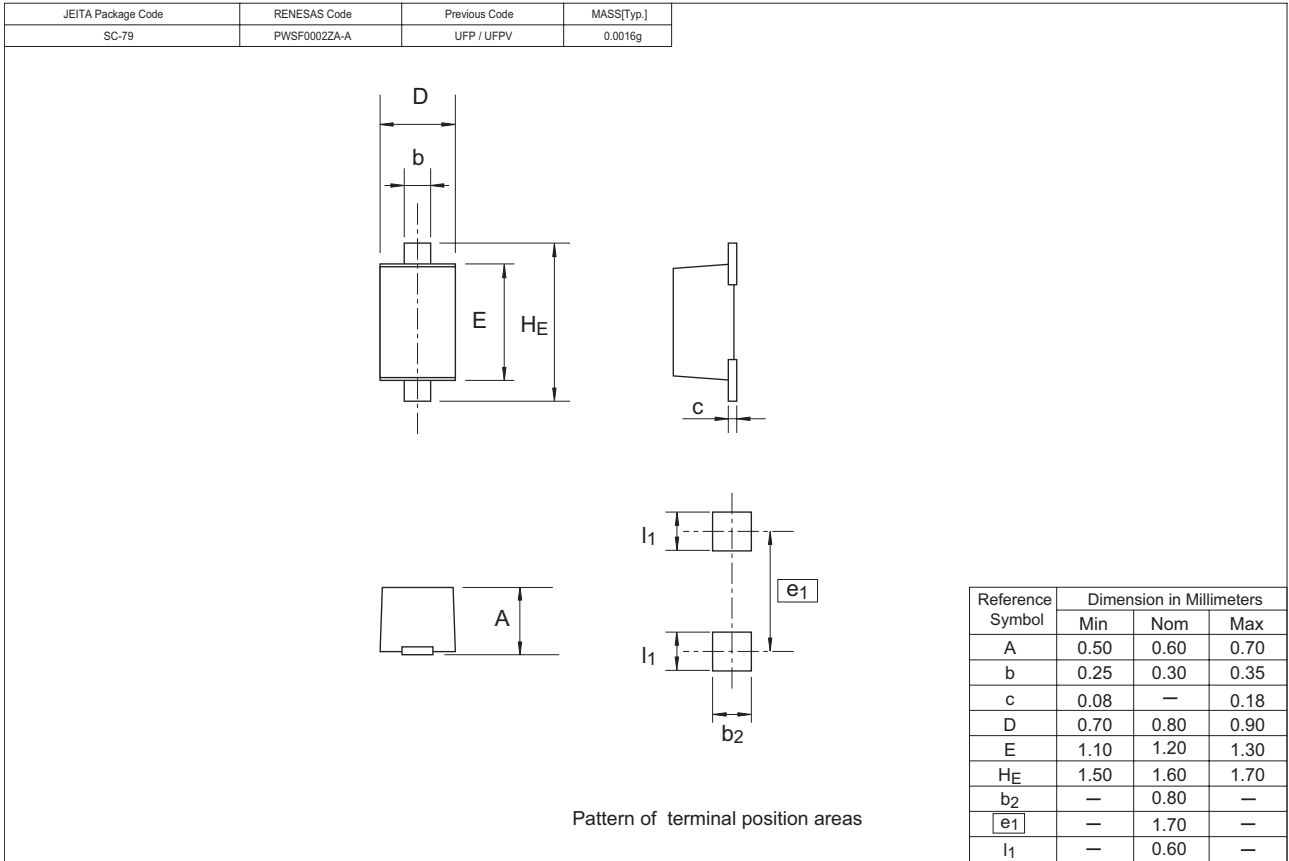


Fig.3 Series resistance vs. Reverse voltage

Package Dimensions



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