

HVC321B

Variable Capacitance Diode for ET tuner

HITACHI

ADE-208-845(Z)

Rev 0

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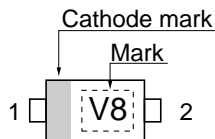
Features

- Low voltage type (tuning voltage 1 to 10V), it is suitable for ET without DC/DC converter.
- High capacitance ratio. ($n = 10.5$ min)
- Low series resistance. ($r_s = 1.0 \Omega$ max) and good C-V linearity.
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC321B	V8	UFP

Outline



1. Cathode
2. Anode

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	$V_R = 15V$
	I_{R2}	—	—	100		$V_R = 15V, T_a = 60°C$
Capacitance	C_1	29.0	—	33.0	pF	$V_R = 1V, f = 1MHz$
	C_{10}	2.55	—	2.90		$V_R = 10V, f = 1MHz$
Capacitance ratio	n	10.5	—	—	—	C_1/C_{10}
Series resistance	r_s	—	—	1.0	Ω	$V_R = 5V, f = 470MHz$
Matching error	$\Delta C/C^{*1}$	—	—	2.0	%	$V_R = 1 \text{ to } 10V, f = 1 \text{ MHz}$

Note 1. C.C system (Continuous Connected taping system) enable to make any 10 pcs of $\Delta C/C$ continuous in a reel , expect extention to another group.
Calculate Matching Error,

$$\Delta C/C = \frac{(C_{max} - C_{min})}{C_{min}} \times 100 (\%)$$

Main Characteristic

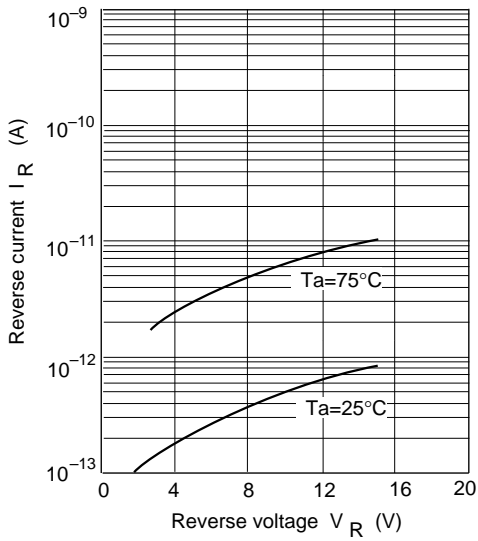


Fig.1 Reverse current Vs. Reverse voltage

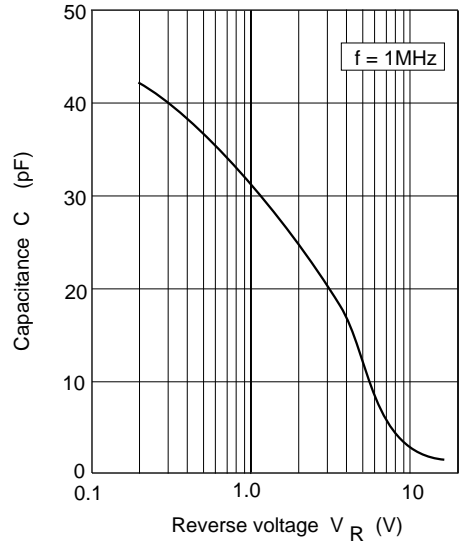


Fig.2 Capacitance Vs. Reverse voltage

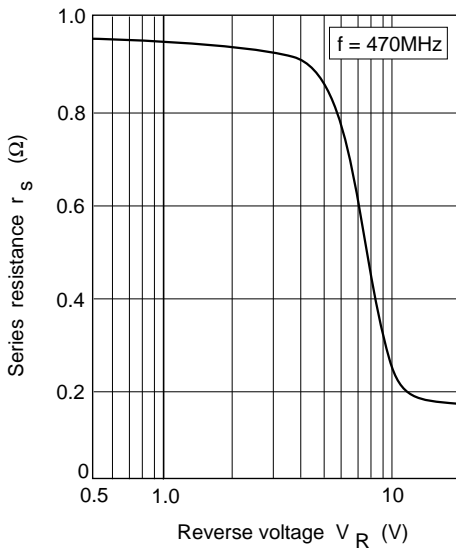
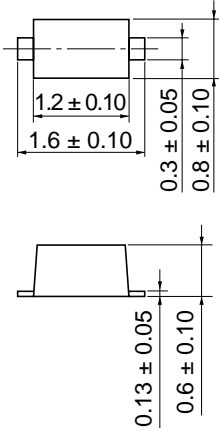


Fig.3 Series resistance Vs. Reverse voltage

Package Dimensions

Unit: mm



Hitachi Code	UFP
JEDEC	—
EIAJ	Conforms
Mass	0.0016 g

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