HVC322B

Variable Capacitance Diode for ET tuner

HITACHI

ADE-208-725(Z)
Rev 0
Dec. 1998

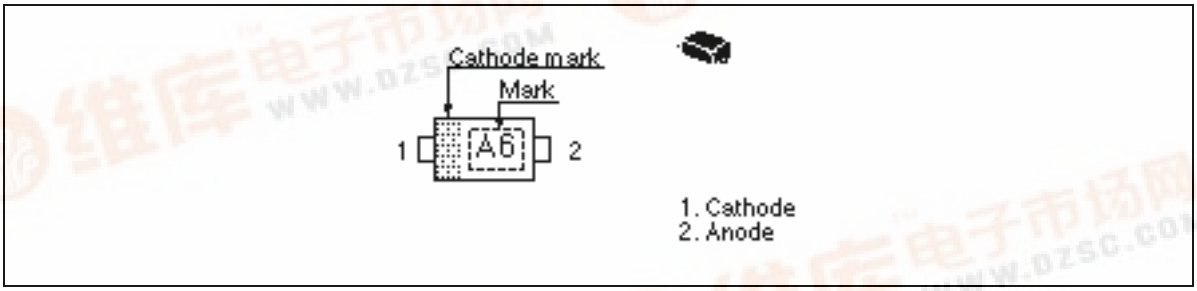
Features

- Low matching error. (ÆC/C =2.0%max)
- High capacitance ratio. (n =6.22min)
- Low series resistance. (rs=0.65½max)
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC322B	A6	UFP

Outline



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}*[1]	35	V
Reverse voltage	V_R	34	V
Junction temperature	Tj	125	°C
Storage temperature	Tstg	–55 to +125	°C

Note 1. RL=4.7K½

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_{R1}	—	—	10	nA	V_R = 32V
	I_{R2}	—	—	100		V_R = 32V, Ta= 60°C
Capacitance	C_2	14.22	—	15.473	pF	V_R = 2V, f = 1MHz
	C_{10}	5.2	—	6.0		V_R = 10V, f = 1MHz
	C_{17}	2.8	—	3.3		V_R = 17V, f = 1MHz
	C_{25}	2.132	—	2.290		V_R = 25V, f = 1MHz
Capacitance ratio	n_1	6.22	—	—	—	C_2/C_{25}
	n_2	1.70	—	1.96	—	C_{10}/C_{17}
	n_3	1.04	—	—	—	C_{25}/C_{28}
Series resistance	r_S	—	—	0.65	½	V_R = 5V, f = 470MHz
Matching error	ÆC/C*[1]	—	—	2.0	%	V_R = 2 to 25V, f = 1 MHz

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

$$\Delta C/C = \frac{(Cmax - Cmin)}{Cmin} \times 100\ (\%)$$

Main Characteristic

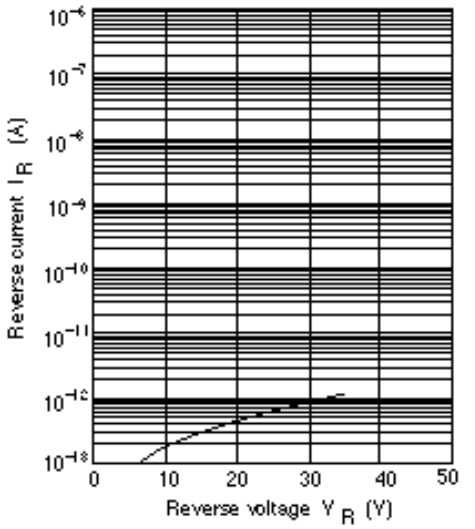


Fig.1 Reverse current Vs. Reverse voltage

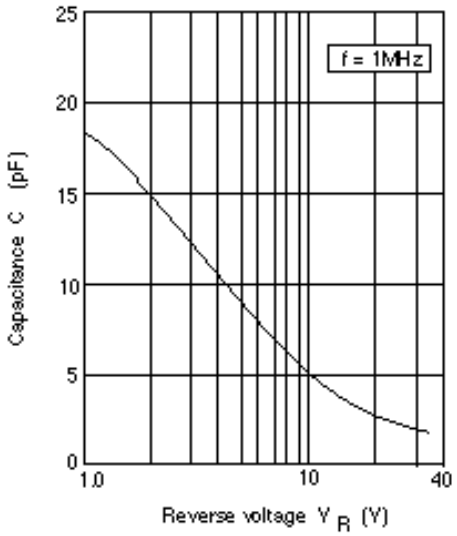


Fig.2 Capacitance Vs. Reverse voltage

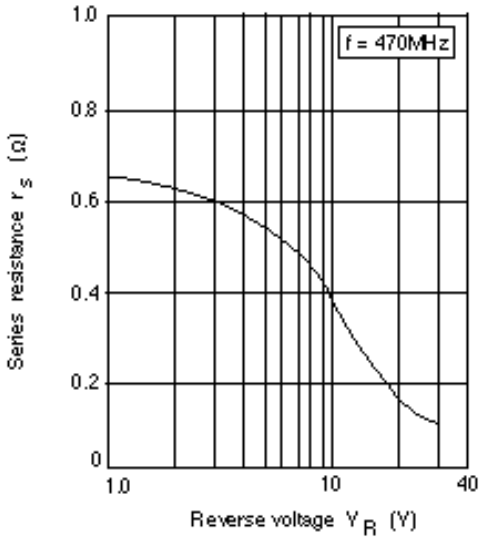


Fig.3 Series resistance Vs. Reverse voltage

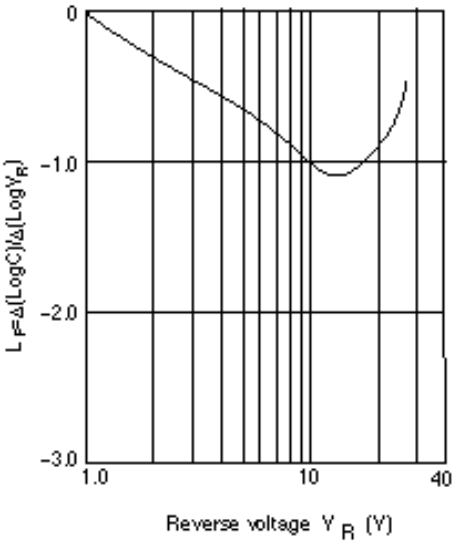
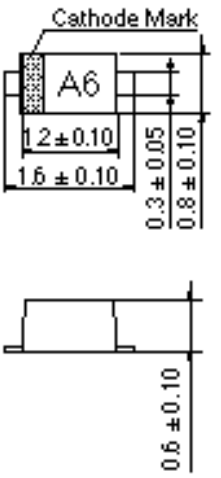


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit : mm



1 Cathode
2 Anode

HITACHI Code	UFP
JEDEC Code	—
EIAJ Code	SC-79
Weight (g)	0.0016

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