

HVU316

Variable Capacitance Diode for BS/CS tuner

HITACHI

ADE-208-035C (Z)
Rev 4
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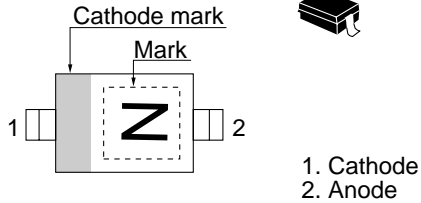
Features

- High capacitance ratio ($n=9.0\text{min}$)
- Low series resistance. ($r_s=1.2\Omega\text{max}$)
- Ultra small Resin Package (URP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVU316	N	URP

Outline



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	30	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	$V_R = 30V$
	I_{R2}	—	—	100		$V_R = 30V, T_a = 60°C$
Capacitance	C_1	5.16	—	7.22	pF	$V_R = 1V, f = 1MHz$
	C_{25}	0.48	—	0.76		$V_R = 25V, f = 1MHz$
Capacitance ratio	n	9.0	—	—	—	C_1/C_{25}
Series resistance	r_s	—	—	1.2	Ω	$V_R = 5V, f = 470MHz$
Matching error	$\Delta C/C^{*1}$	—	—	6.0	%	$V_R = 1 \text{ to } 25V, f = 1 \text{ MHz}$

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

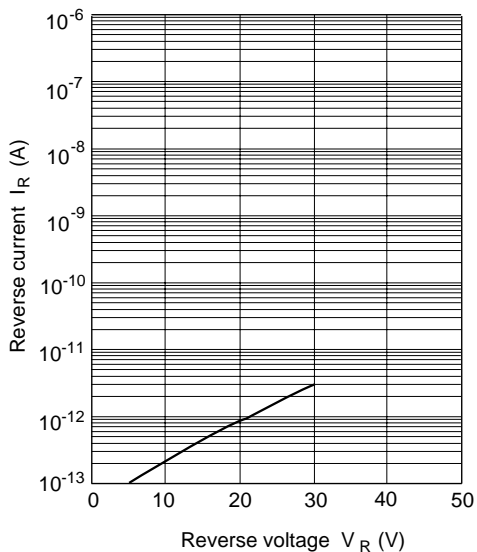


Fig.1 Reverse current Vs. Reverse voltage

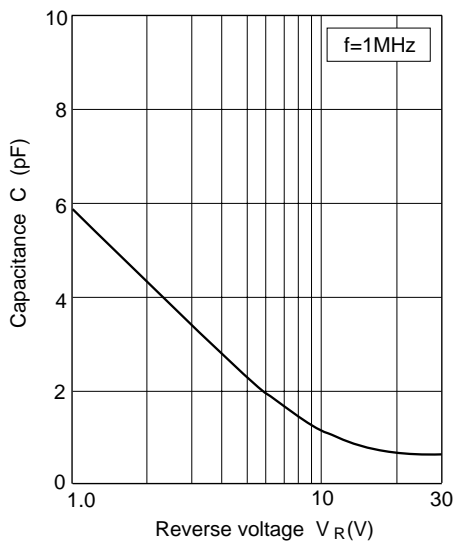


Fig.2 Capacitance Vs. Reverse voltage

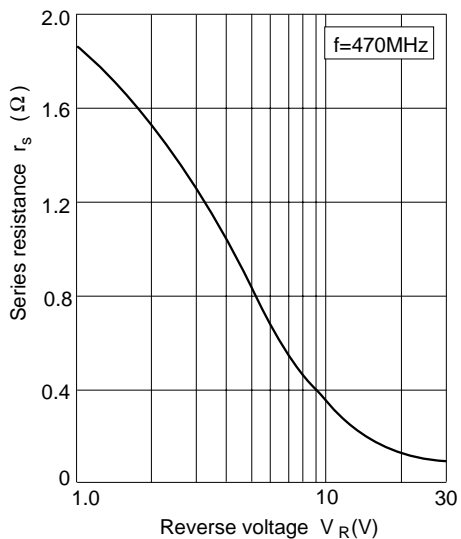


Fig.3 Series resistance Vs. Reverse voltage

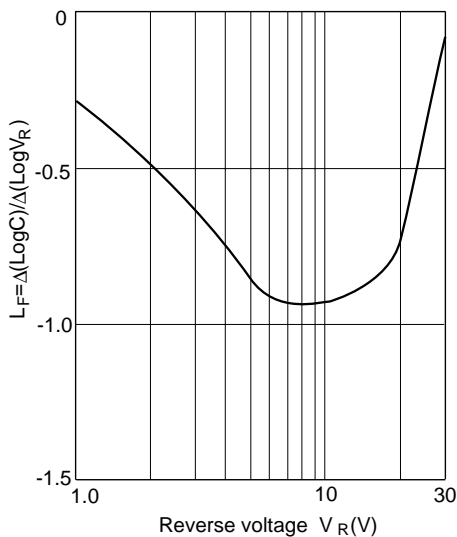
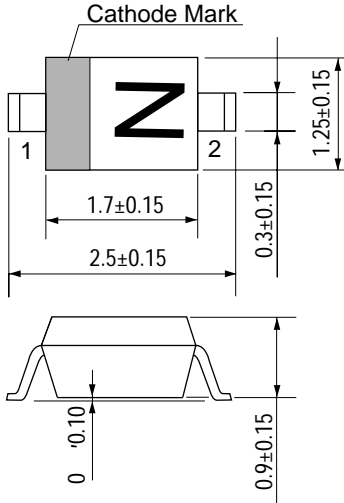


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit : mm



- 1. Cathode
- 2. Anode

Hitachi Code	<i>URP</i>
JEDECCode	—
EIAJCode	—
Weight(g)	0.004

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