

HVU363A

Variable Capacitance Diode for TV tuner

HITACHI

ADE-208-234B(Z)
Rev 2
Nov. 1998

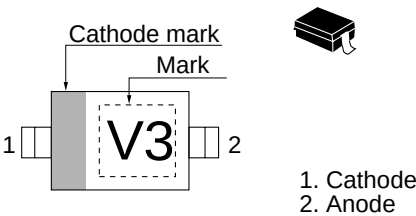
Features

- High capacitance ratio.(n=15.0Typ)
- Low series resistance ($r_s=0.75\Omega_{max}$) and good C-V linearity.
- Ultra small Resin Package (URP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVU363A	V3	URP

Outline



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}^{*1}	35	V
Reverse voltage	V_R	32	V
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-55 to +125	°C

Notes 1. $R_L=10k\Omega$

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse voltage	V_R	32	—	—	V	$I_R = 1\mu A$
Reverse current	I_{R1}	—	—	10	nA	$V_R = 30V$
	I_{R2}	—	—	100		$V_R = 30V, T_a = 60^\circ C$
Capacitance	C_1	34.65	—	42.35	pF	$V_R = 1V, f = 1\text{ MHz}$
	C_{28}	2.361	—	2.754		$V_R = 28V, f = 1\text{ MHz}$
Capacitance ratio	n	13.5	15.0	—	—	C_1 / C_{28}
Series resistance	r_s	—	—	0.75	Ω	$C=14pF, f = 470\text{ MHz}$
Matching error	$\Delta C/C^{*1}$	—	—	2.0	%	$V_R = 1\sim 28V, f = 1\text{ MHz}$
Linealty factor ^{*2}	$\Delta\backslash$	—	-1.2	—	—	$\Delta\log C / \Delta\log V$

Notes 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,

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

Notes 2. Calculate LF ($\Delta\log C / \Delta\log V$) at $V_R = 1$ through $28V, f = 1\text{ MHz}$.(Reference Value)

Main Characteristic

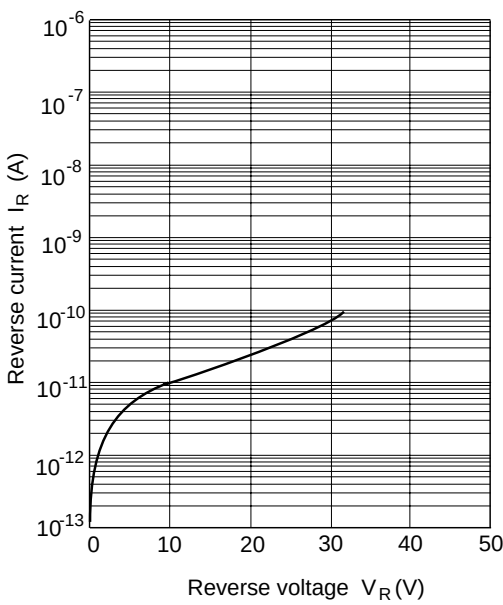


Fig.1 Reverse current Vs. Reverse voltage

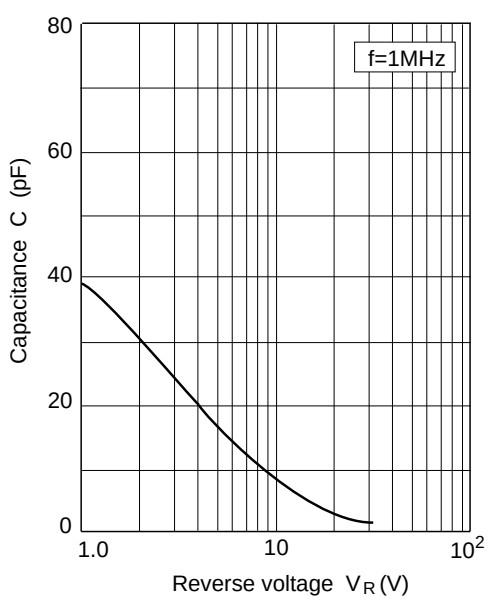


Fig.2 Capacitance Vs. Reverse voltage

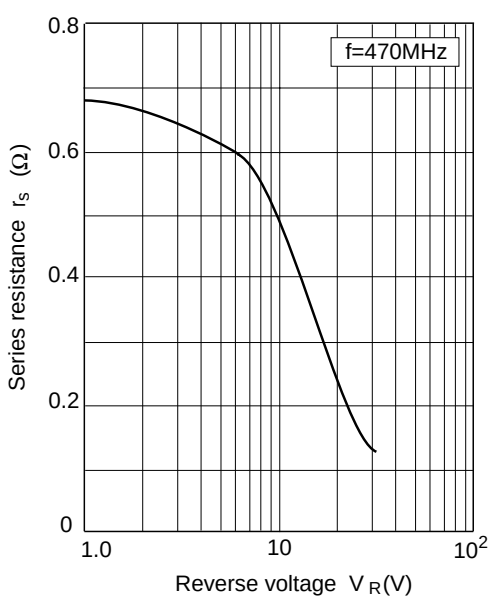


Fig.3 Series resistance Vs. Reverse voltage

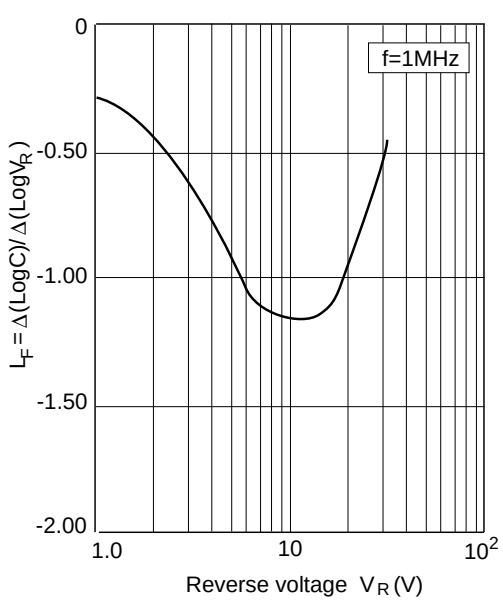
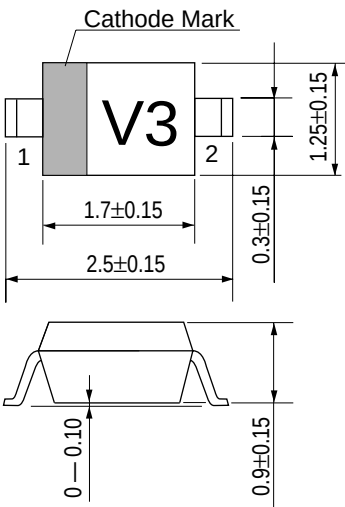


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit : mm



- 1. Cathode
- 2. Anode

Hitachi Code	URP
JEDECCode	—
EIAJCode	—
Weight(g)	0.004

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