
HVU363A

Variable Capacitance Diode for TV tuner

HITACHI

ADE-208-234B(Z)

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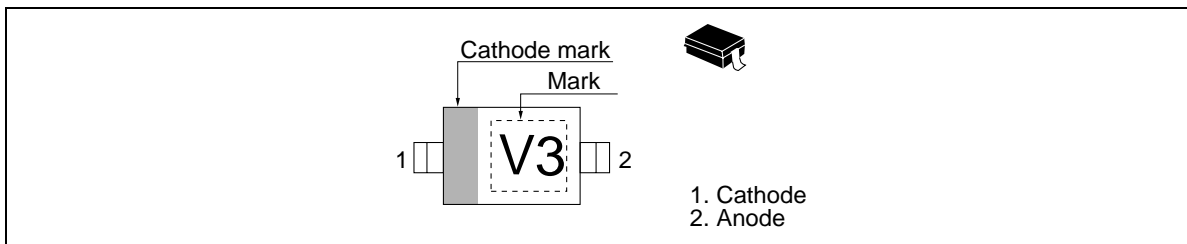
Features

- 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



HVU363A

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	Tj	125	°C
Storage temperature	Tstg	-55 to +125	°C

Notes 1. RL=10kΩ

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		$V_R = 30V, Ta = 60^\circ C$
Capacitance	C_1	34.65	—	42.35	pF	$V_R = 1V, f = 1 MHz$
	C_{28}	2.361	—	2.754		$V_R = 28V, f = 1 MHz$
Capacitance ratio	n	13.5	15.0	—	—	C_1 / C_{28}
Series resistance	r_s	—	—	0.75	Ω	$C=14pF, f = 470 MHz$
Matching error	$\Delta C/C^{*1}$	—	—	2.0	%	$V_R = 1 to 28V, f = 1 MHz$
Linearity factor ^{*2}	—	—	-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 , $f = 1 MHz$.(Reference Value)

Main Characteristic

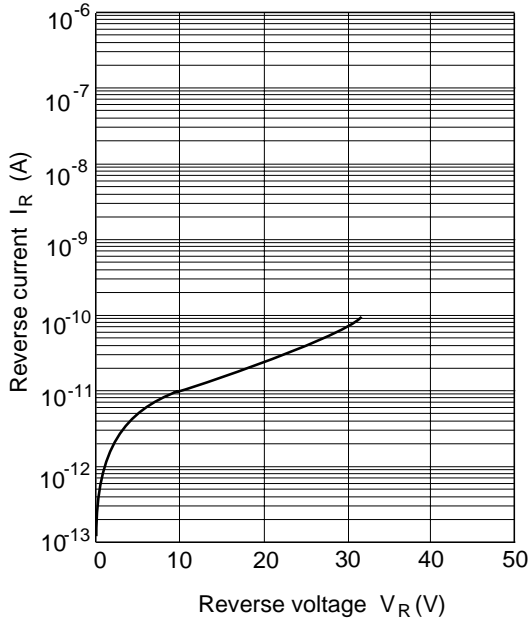


Fig.1 Reverse current Vs. Reverse voltage

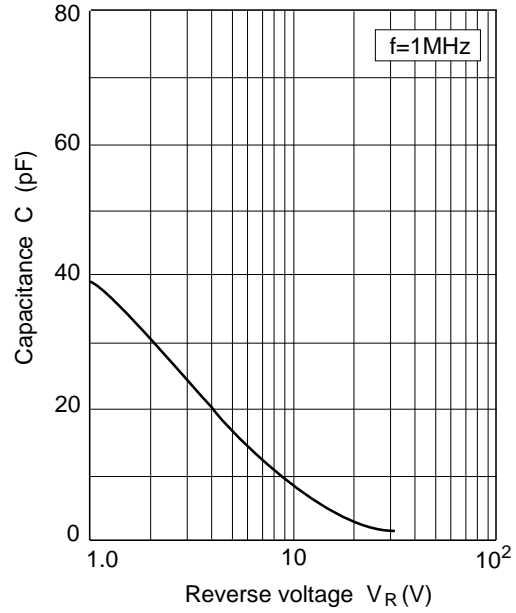


Fig.2 Capacitance Vs. Reverse voltage

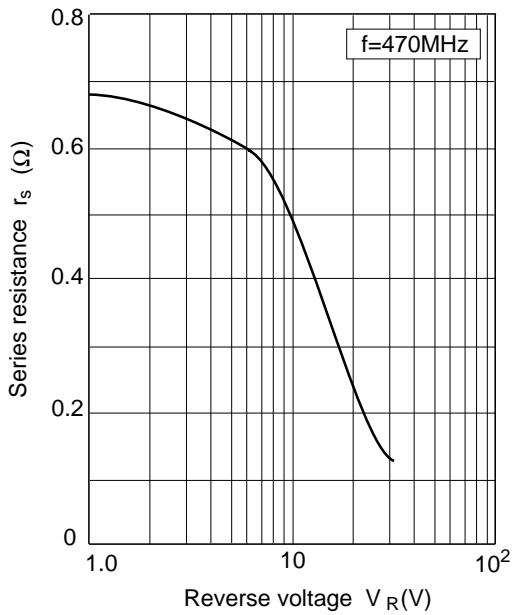


Fig.3 Series resistance Vs. Reverse voltage

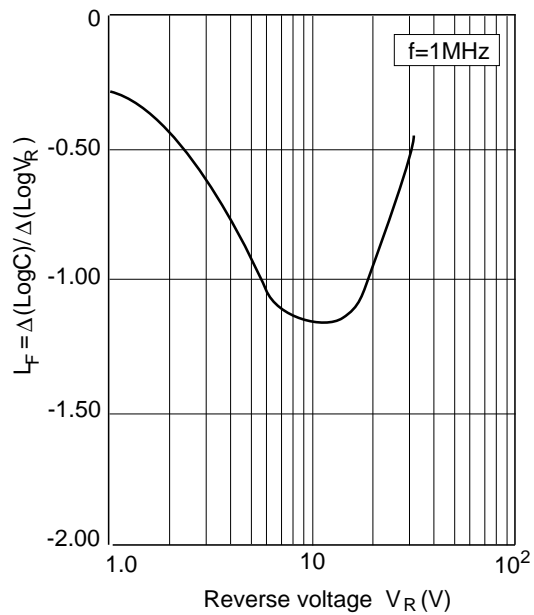
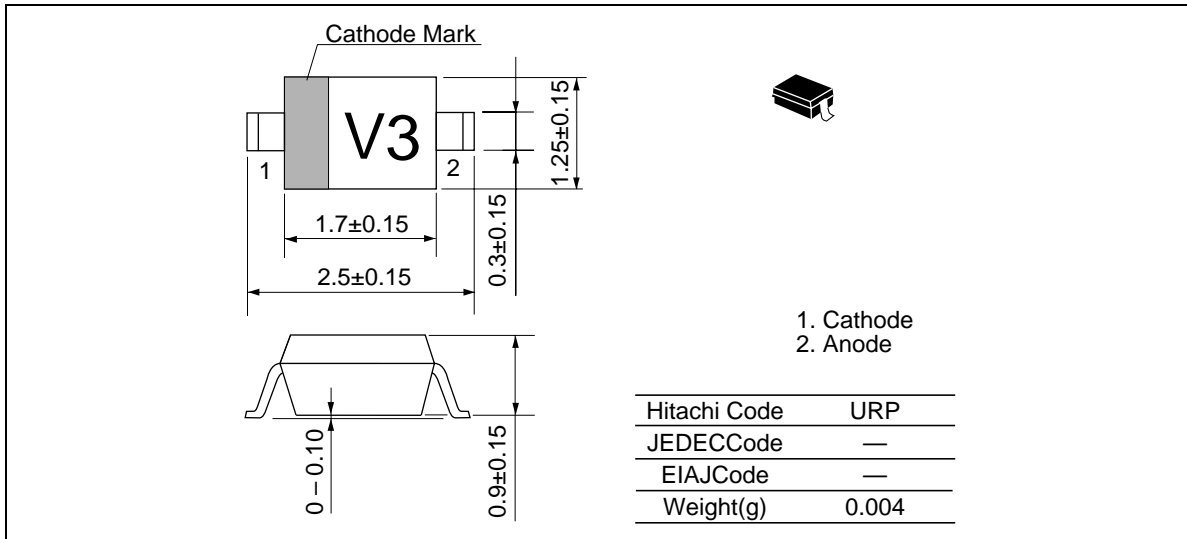


Fig.4 Linearity factor Vs. Reverse voltage

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Package Dimensions

Unit : mm



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