ADE-208-234A(Z)

HVU363A
Variable Capacitance Diode for TV tuner

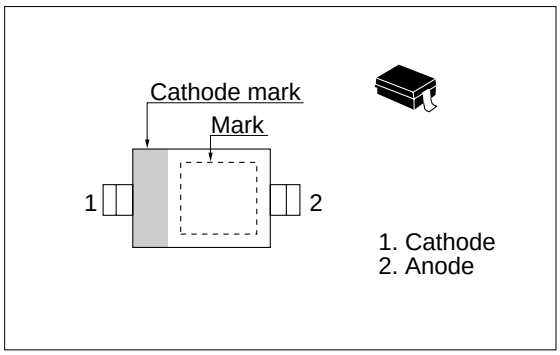
HITACHI

Rev. 1
Nov. 1994

Features

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

Outline



Ordering Information

Type No.	Laser Mark	Package Code
HVU363A	V3	URP

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}*	35	V
Reverse voltage	V_R	32	V
Junction temperature	Tj	125	°C
Storage temperature	Tstg	-55 to +125	°C

* R_L=10kΩ

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_{R1}	—	—	10	nA	V_R = 30 V
	I_{R2}	—	—	100		V_R = 30 V , Ta = 60 °C
Capacitance	C_1	34.65	—	42.35	pF	V_R = 1 V , f = 1 MHz
	C_{28}	2.361	—	2.754		V_R = 28V , f = 1 MHz
	ΔC/C*	—	—	2.0	%	C_1 , C_{28}
Capacitance ratio	n	13.5	15.0	—	—	C_1 / C_{28}
Series resistance	r_s	—	—	0.75	Ω	C = 14 P_F , f = 470 MHz

* A set of HVU363A is of uniform C-V characteristics.
Measure max. value and min. value of capacitance .
Calculate Matching Error,

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

** Each group shall uniform a multiple of 4 diodes.

HVU363A

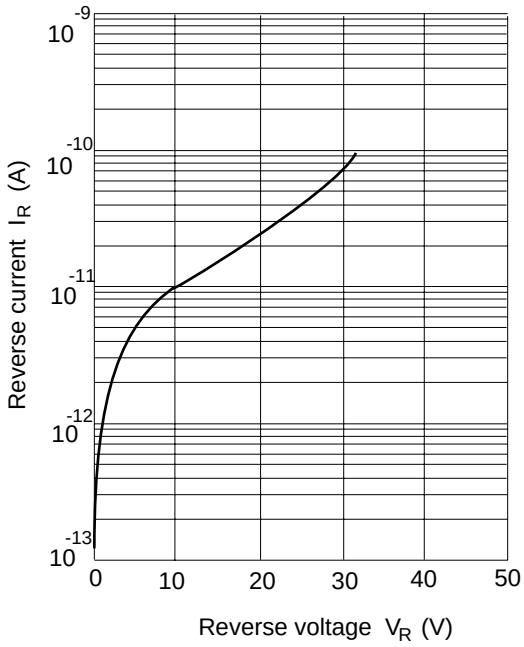


Fig.1 Reverse current Vs. Reverse voltage

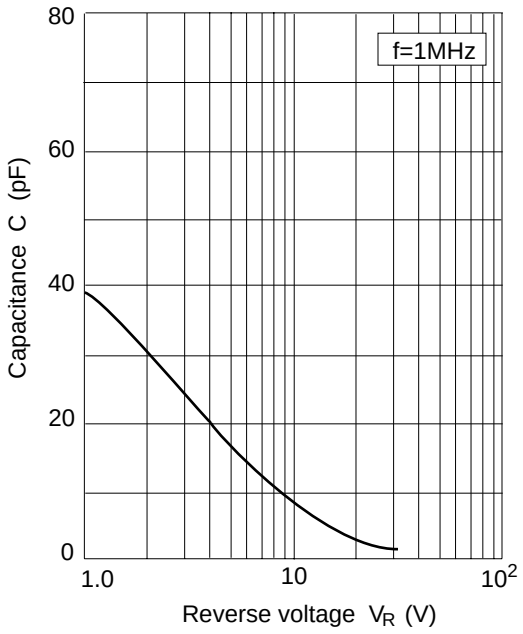


Fig.2 Capacitance Vs. Reverse voltage

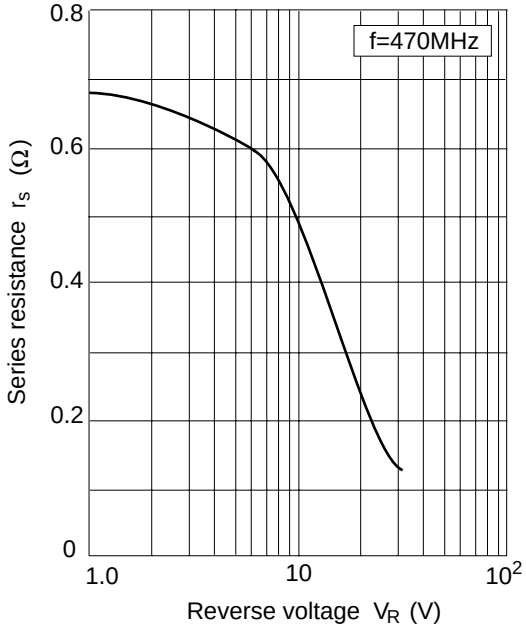


Fig.3 Series resistance Vs. Reverse voltage

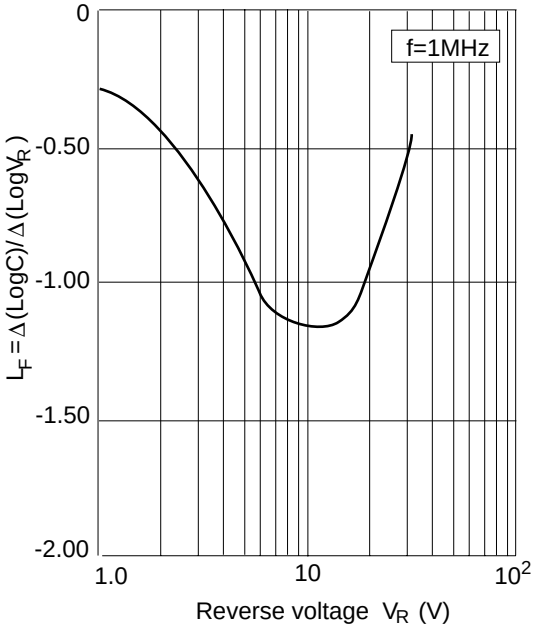
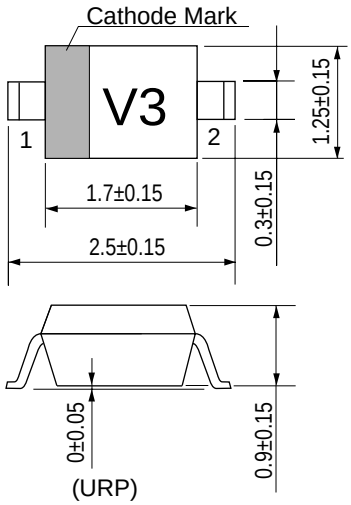


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit: mm



1 Cathode
2 Anode

HITACHI Code	URP
JEDEC Code	—
EIAJ Code	—
Weight (g)	0.004