ADE-208-234A(Z)

HVU363A
Variable Capacitance Diode for TV tuner

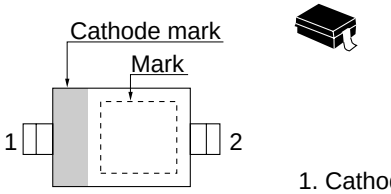
HITACHI

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



1. Cathode
2. Anode

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.

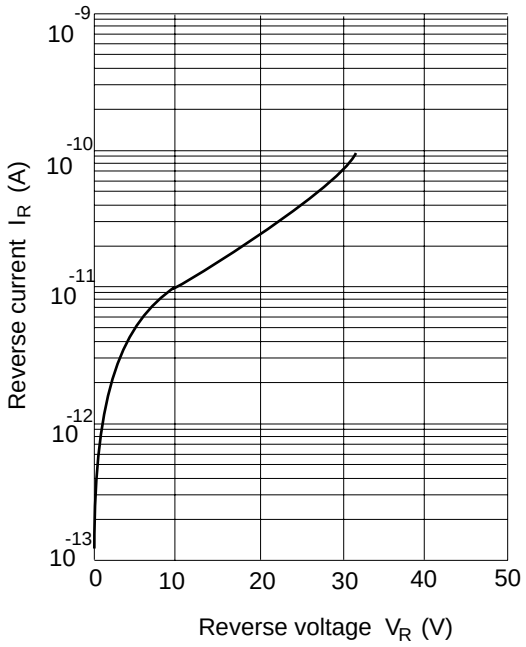


Fig.1 Reverse current Vs. Reverse voltage

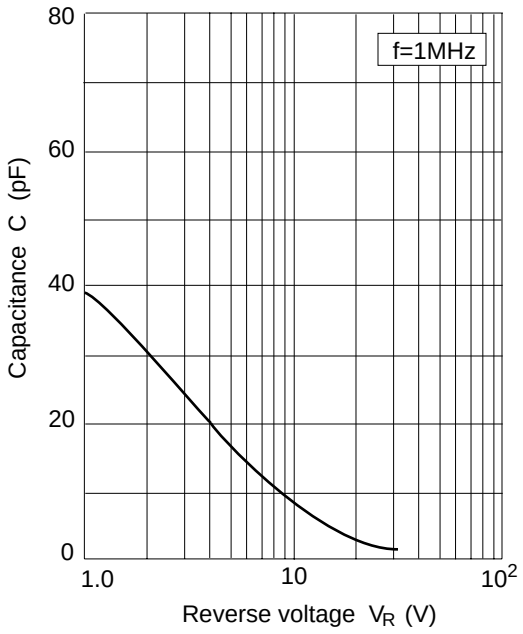


Fig.2 Capacitance Vs. Reverse voltage

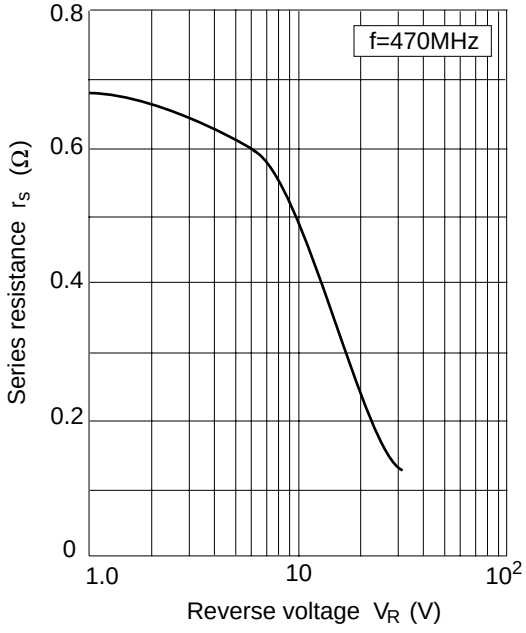


Fig.3 Series resistance Vs. Reverse voltage

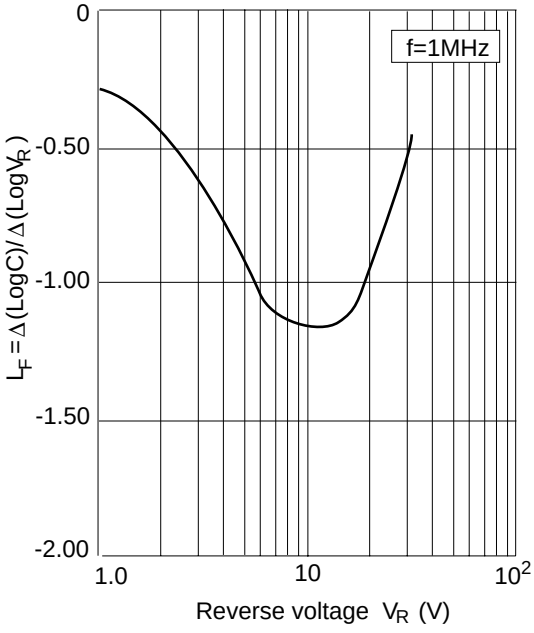
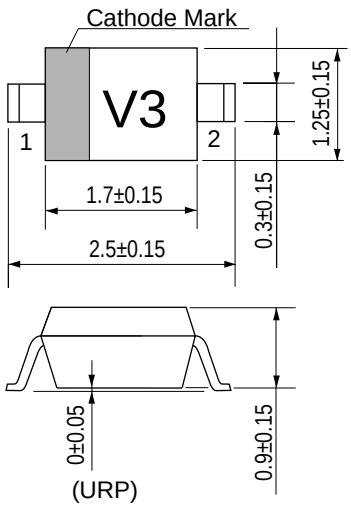


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit: mm



1 Cathode
2 Anode

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