

ADE-208-003A(Z)

# HVU358 Variable Capacitance Diode for VCO

## HITACHI

Preliminary  
Rev. 1  
Feb. 1993

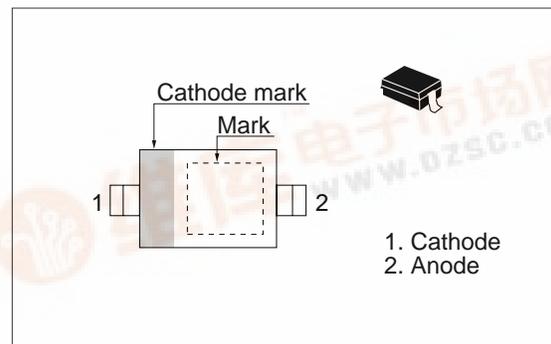
### Features

- Low series resistance. ( $r_s=0.4\Omega$  max)
- High capacitance ratio. ( $n=2.0$  min at  $C_1/C_4$ )
- Good linearity of C-V curve.
- Ultra small Resin Package (URP) is suitable for surface mount design.

### Ordering Information

Type No.	Laser Mark	Package Code
HVU358	R	URP

### Outline



### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Value	Unit
Reverse voltage	$V_R$	15	V
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	$I_{R1}$	—	—	10	nA	$V_R = 15\text{ V}$
	$I_{R2}$	—	—	100		$V_R = 15\text{ V}, T_a = 60^\circ\text{C}$
Capacitance	$C_1$	19.0	—	21.0	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
	$C_4$	8.5	—	10.0		$V_R = 4\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	$n$	2.0	—	—	—	$C_1 / C_4$
Series resistance	$r_s$	—	—	0.40	$\Omega$	$V_R = 1\text{ V}, f = 470\text{ MHz}$

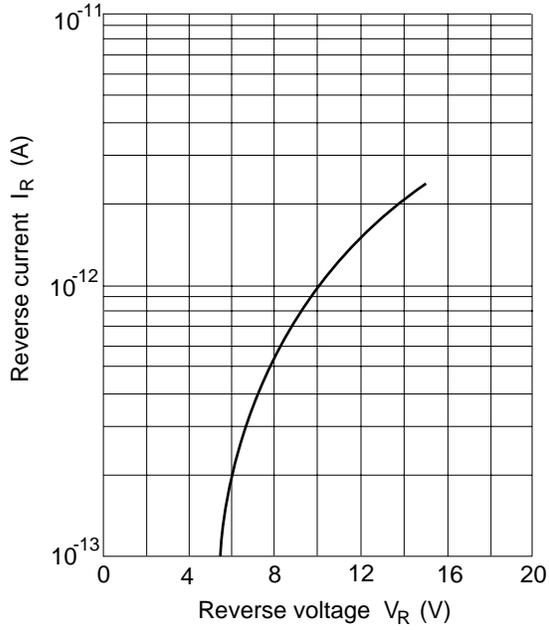


Fig.1 Reverse current Vs. Reverse voltage

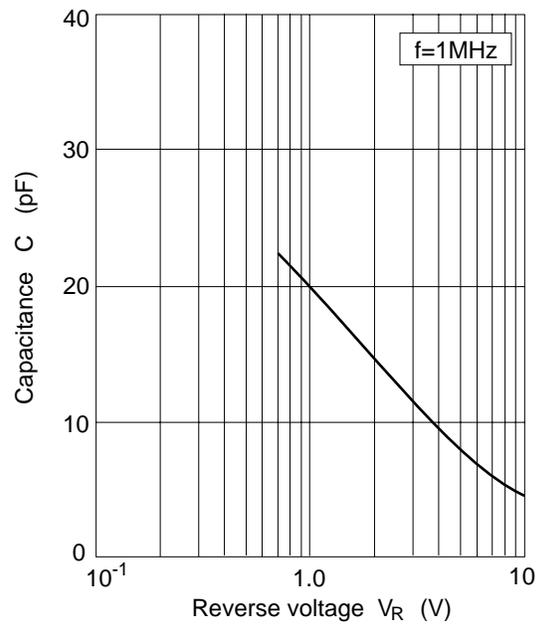


Fig.2 Capacitance Vs. Reverse voltage

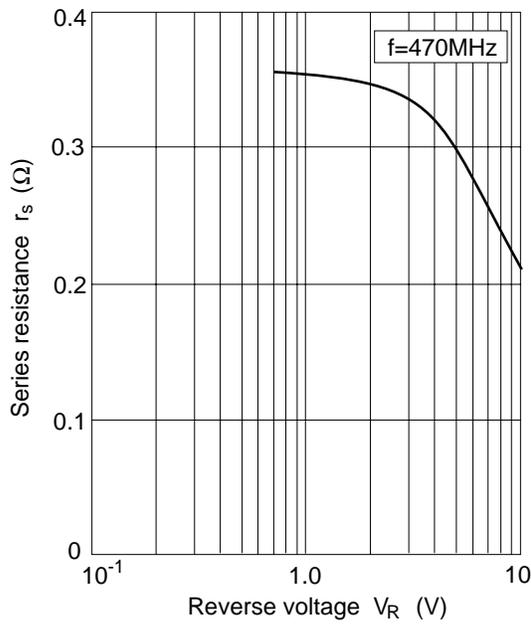


Fig.3 Series resistance Vs. Reverse voltage

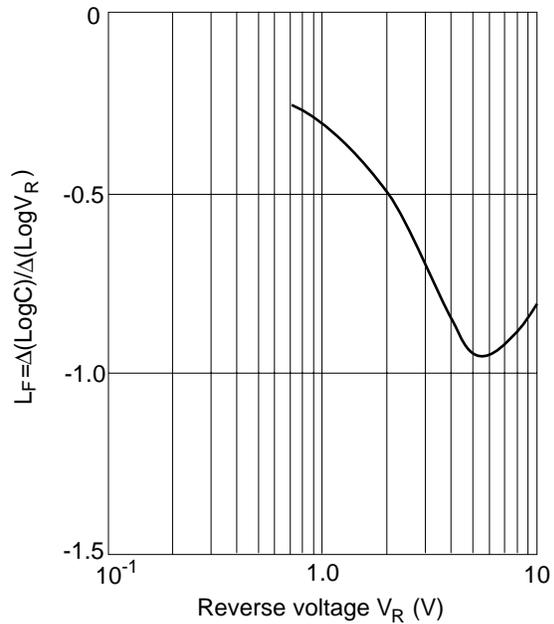
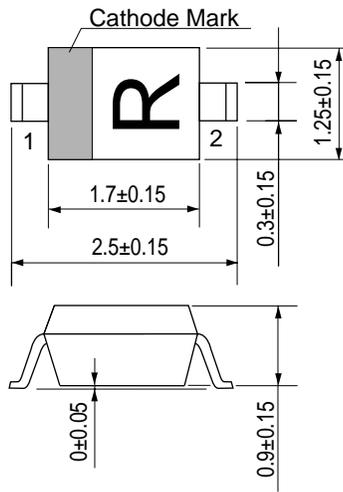


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit: mm



- 1 Cathode
- 2 Anode

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