

# HVU355

## Variable Capacitance Diode for VCO

# HITACHI

Preliminary  
Rev. 1  
May. 1993

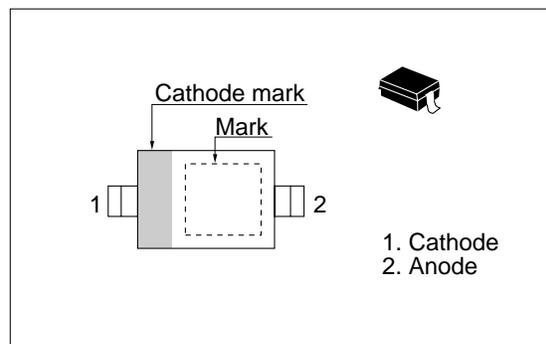
### Features

- Low series resistance. ( $r_s=0.6\Omega$  max)
- Ultra small Resin Package (URP) is suitable for surface mount design.

### Ordering Information

Type No.	Laser Mark	Package Code
HVU355	U	URP

### Outline



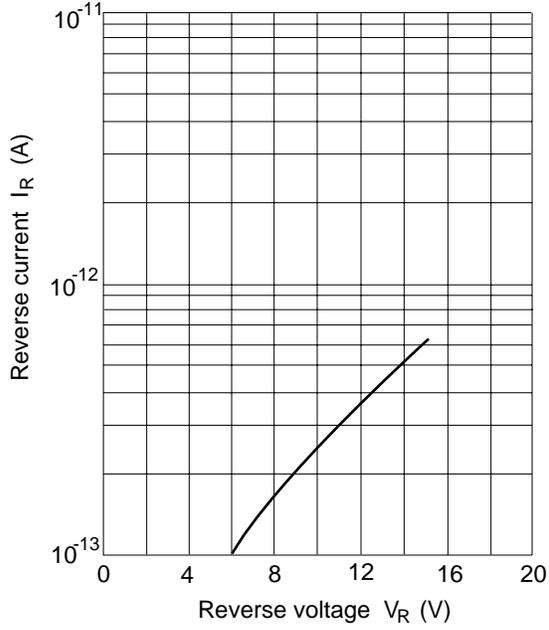
### Absolute Maximum Ratings (Ta = 25°C)

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

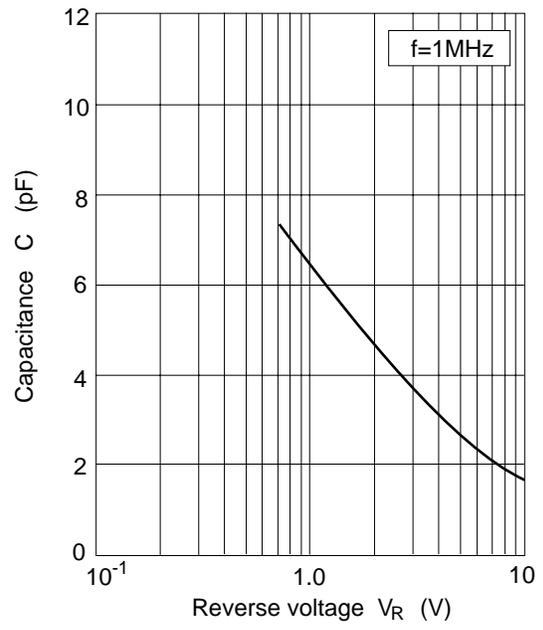
### Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	$I_{R1}$	—	—	10	nA	$V_R = 15\text{ V}$
	$I_{R2}$	—	—	100		$V_R = 15\text{ V}, T_a = 60\text{ °C}$
Capacitance	$C_1$	6.40	—	7.40	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
	$C_4$	2.75	—	3.25		$V_R = 4\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	n	2.0	—	—	—	$C_1 / C_4$
Series resistance	$r_s$	—	—	0.6	$\Omega$	$V_R = 1\text{ V}, f = 470\text{ MHz}$

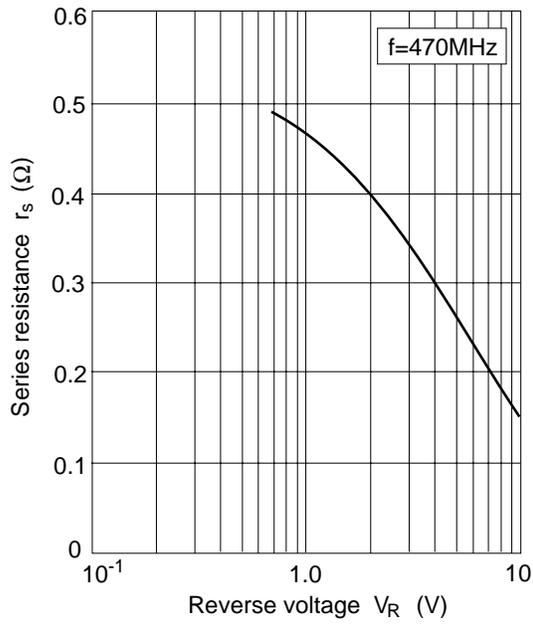
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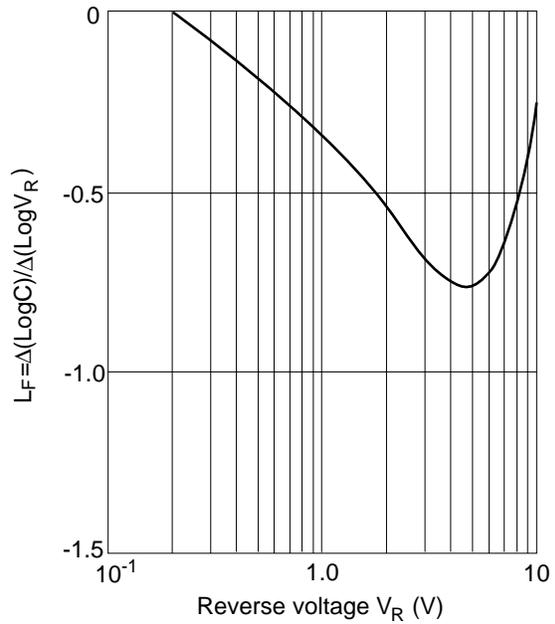
**Fig.1 Reverse current  $I_R$  Vs. Reverse voltage**



**Fig.2 Capacitance  $C$  Vs. Reverse voltage**



**Fig.3 Series resistance  $r_s$  Vs. Reverse voltage**



**Fig.4 Linearity factor  $L_F$  Vs. Reverse voltage**

### Package Dimensions

Unit: mm

