

HVU358

Variable Capacitance Diode for VCO

HITACHI

Preliminary
Rev. 1
Feb. 1993

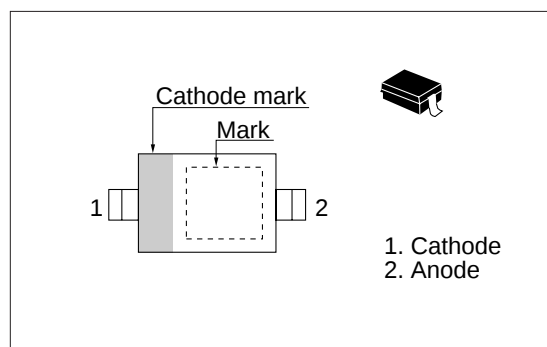
Features

- 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	Ω	$V_R = 1\text{ V}$, $f = 470\text{ MHz}$

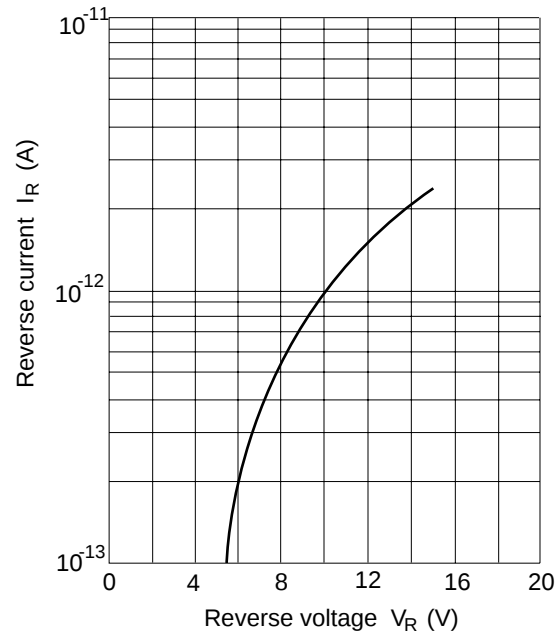


Fig.1 Reverse current Vs. Reverse voltage

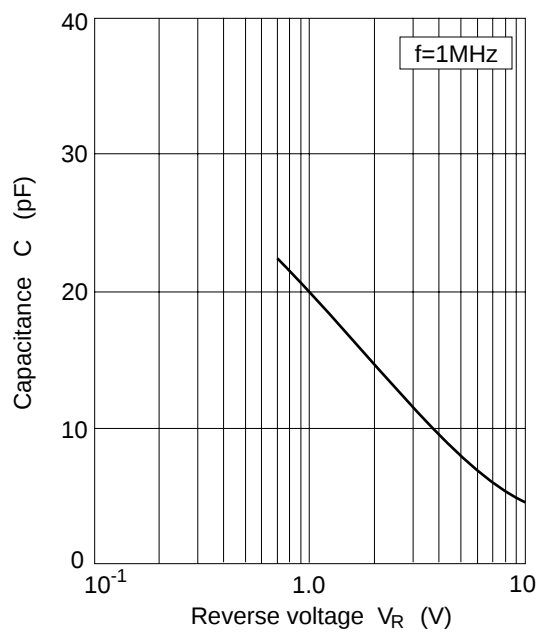


Fig.2 Capacitance Vs. Reverse voltage

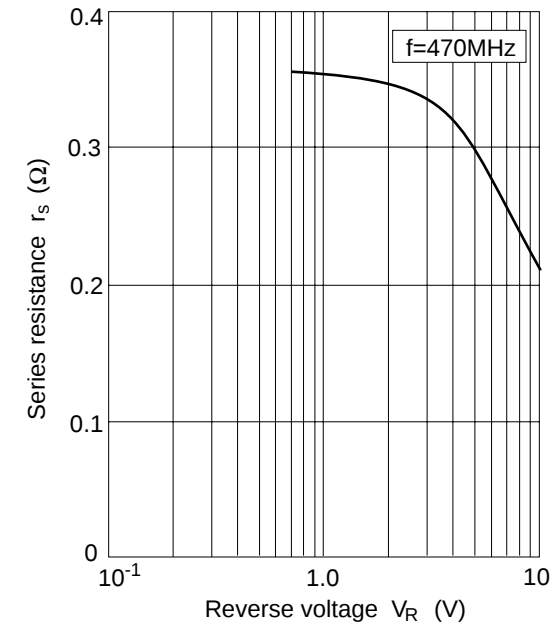


Fig.3 Series resistance Vs. Reverse voltage

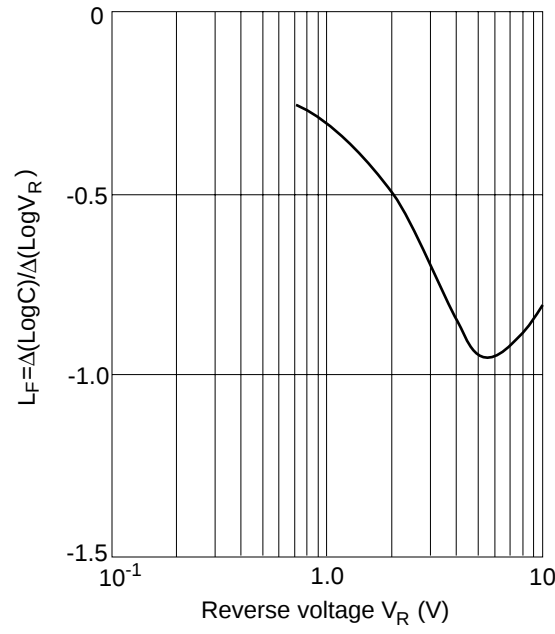
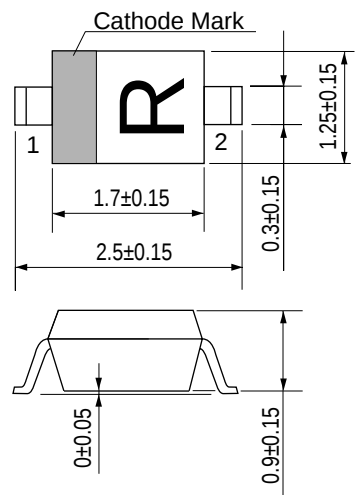


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit: mm



- 1 Cathode
- 2 Anode

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