ADE-208-371(Z)

HVU365
Variable Capacitance Diode for VCXO

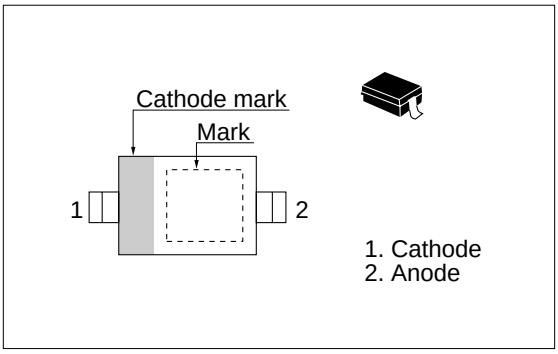
HITACHI

Rev. 0
Jun. 1995

Features

- High capacitance ratio and good C-V linearity.
- To be usable at low voltage.
- Ultra small Resin Package (URP) is suitable for surface mount design.

Outline



Ordering Information

Type No.	Laser Mark	Package Code
HVU365	V6	URP

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 = 10 V
	I_{R2}	—	—	100		V_R = 10 V , Ta = 60 °C
Capacitance	C_1	27.05	—	28.55	pF	V_R = 1 V , f = 1 MHz
	C_4	6.05	—	7.55		V_R = 4 V , f = 1 MHz
Capacitance ratio	n	3.0	—	—	—	C_1 / C_4
Series resistance	r_s	—	—	1.5	Ω	V_R = 4 V , f = 100MHz
ESD-Capability	—	80	—	—	V	*C=200pF, Both forward and reverse direction 1 pulse.

* Failure criterion ; $I_R \geq$ 20nA at V_R = 10 V

HVU365

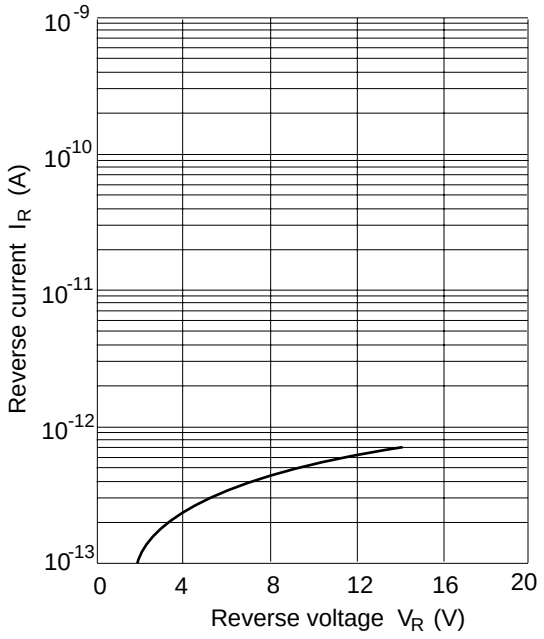


Fig.1 Reverse current Vs. Reverse voltage

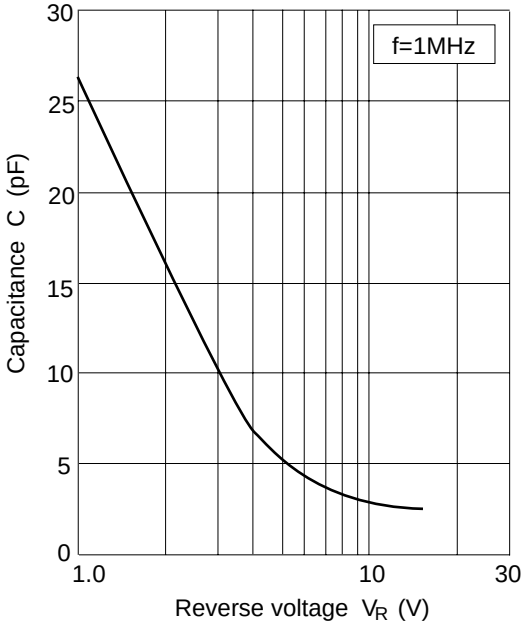
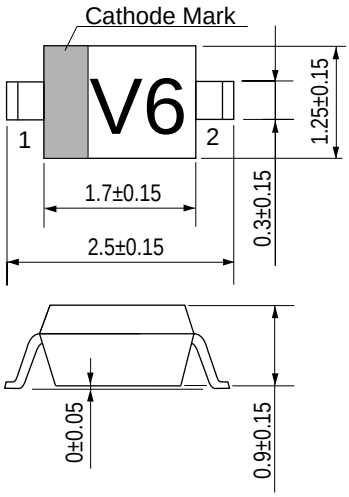


Fig.2 Capacitance Vs. Reverse voltage

Package Dimensions

Unit: mm



1 Cathode
2 Anode

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

ADE-208-372(Z)

HVU367
Variable Capacitance Diode for VCO

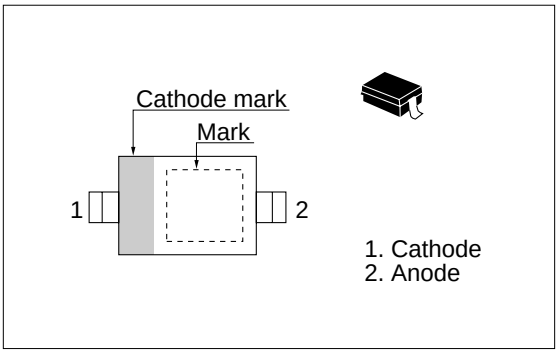
HITACHI

Rev. 0
Jun. 1995

Features

- Low series resistance. (r_s=0.4Ω max)
- Ultra small Resin Package (URP) is suitable for surface mount design.

Outline



Ordering Information

Type No.	Laser Mark	Package Code
HVU367	V7	URP

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	10	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 = 10 V
	I_{R2}	—	—	100		V_R = 10 V , Ta = 60 °C
Capacitance	$C_{0.5}$	—	19	—	pF	V_R = 0.5 V , f = 1 MHz
	C_1	14.9	—	16.4		V_R = 1 V , f = 1 MHz
	C_2	—	11.6	—		V_R = 2 V , f = 1 MHz
	$C_{2.5}$	—	10.5	—		V_R = 2.5 V , f = 1 MHz
	C_4	6.7	—	8.2		V_R = 4 V , f = 1 MHz
Capacitance ratio	n_1	—	1.8	—	—	$C_{0.5}$ / $C_{2.5}$
	n_2	1.3	—	—	—	C_1 / C_2
	n_3	1.8	—	—	—	C_1 / C_4
Series resistance	r_s	—	—	0.4	Ω	V_R = 1 V , f = 470MHz

HVU367

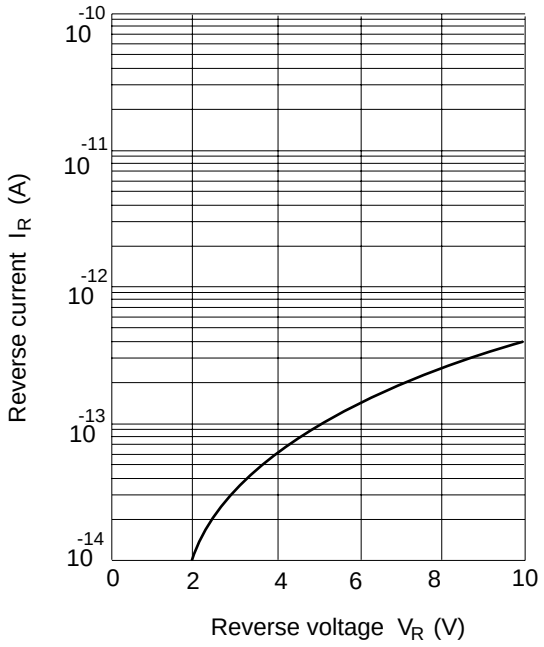


Fig.1 Reverse current Vs. Reverse voltage

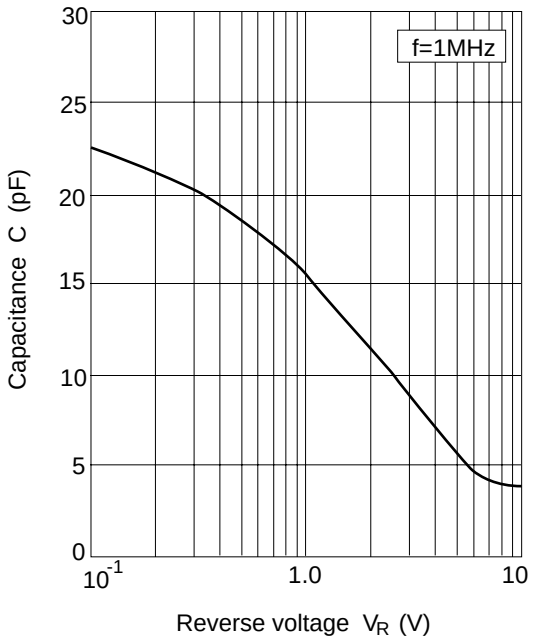


Fig.2 Capacitance Vs. Reverse voltage

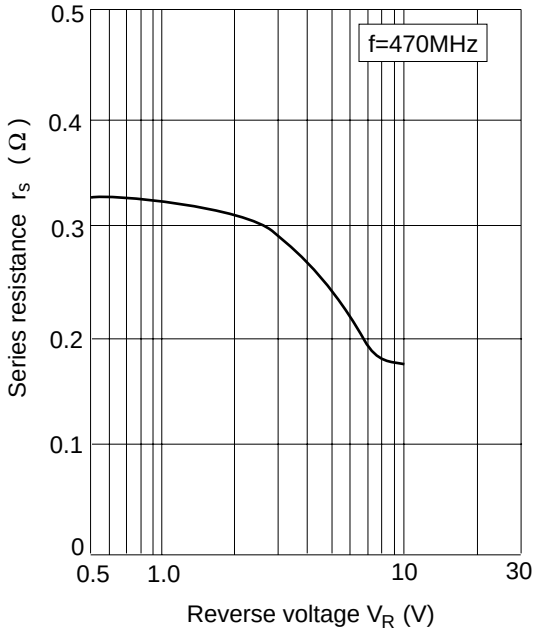


Fig.3 Series resistance Vs. Reverse voltage

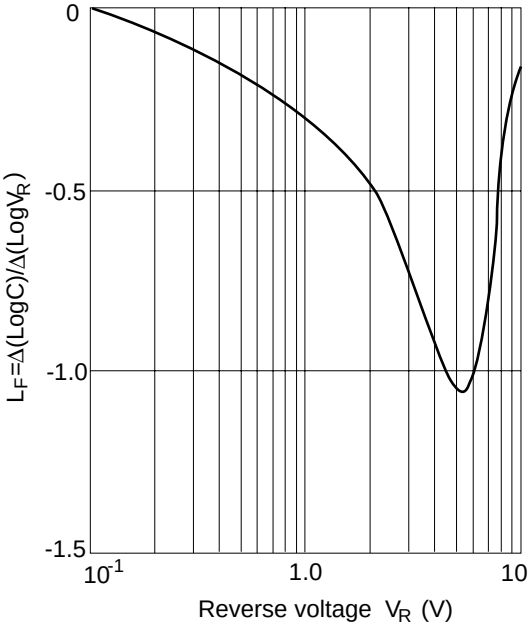
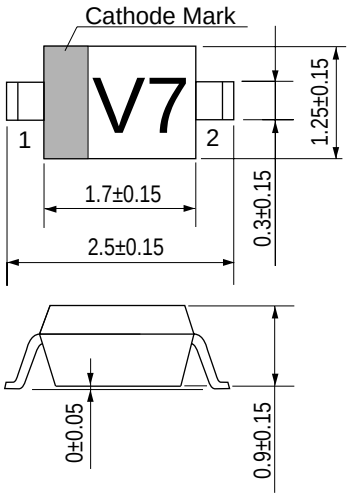


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit: mm



1 Cathode
2 Anode

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