ADE-208-035B(Z)

HVU316
Variable Capacitance Diode for BS/CS tuner

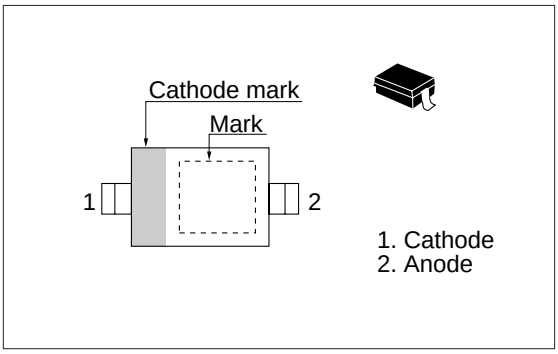
HITACHI

Rev. 3
Dec. 1993

Features

- High capacitance ratio. (n=9.0min)
- Low series resistance. (r_s=1.2Ωmax)
- Ultra small Resin Package (URP) is suitable for surface mount design.

Outline



Ordering Information

Type No.	Laser Mark	Package Code
HVU316	N	URP

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	30	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 = 30 V
	I_{R2}	—	—	100		V_R = 30 V , Ta = 60 °C
Capacitance	C_1	5.16	—	7.22	pF	V_R = 1 V , f = 1 MHz
	C_{25}	0.48	—	0.76		V_R = 25 V , f = 1 MHz
Capacitance ratio	n	9.0	—	—	—	C_1 / C_{25}
Series resistance	r_s	—	—	1.2	Ω	V_R = 5 V , f = 470 MHz
Matching error	ΔC/C*	—	—	6.0	%	V_R = 1~25V

* A set of HVU316 is of uniform C-V characteristics.
Measure max. value and min. value of capacitance at each bias point of V_R=1V through 25V.
Calculate Matching Error, $\Delta C/C = \frac{(Cmax-Cmin)}{Cmin} \times 100$ (%)

** Each group shall uniform a multiple of 4 diodes.

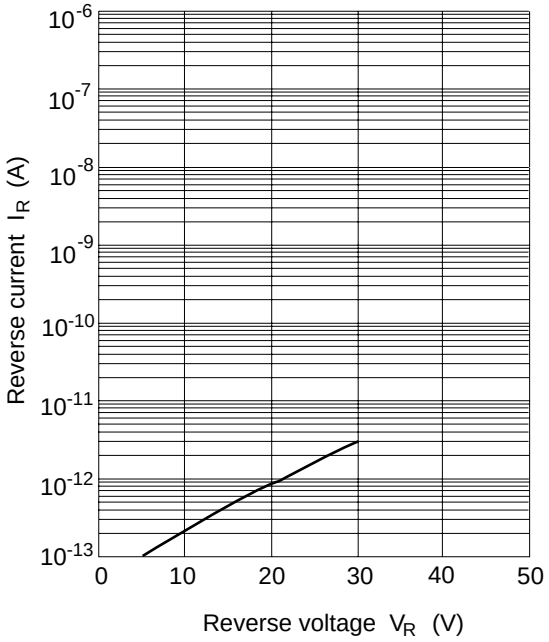


Fig.1 Reverse current Vs. Reverse voltage

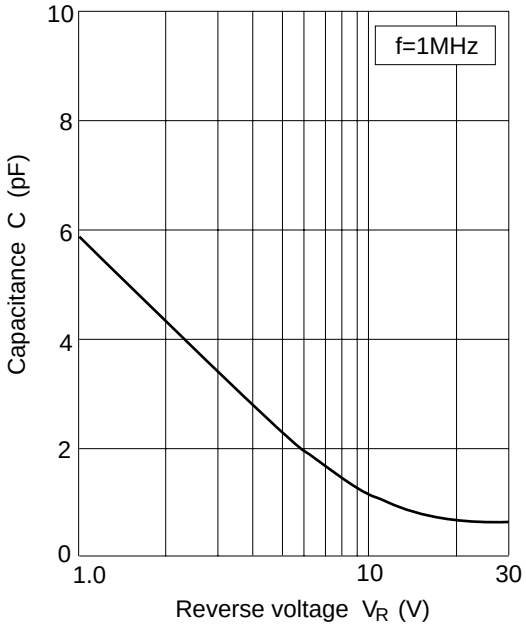


Fig.2 Capacitance Vs. Reverse voltage

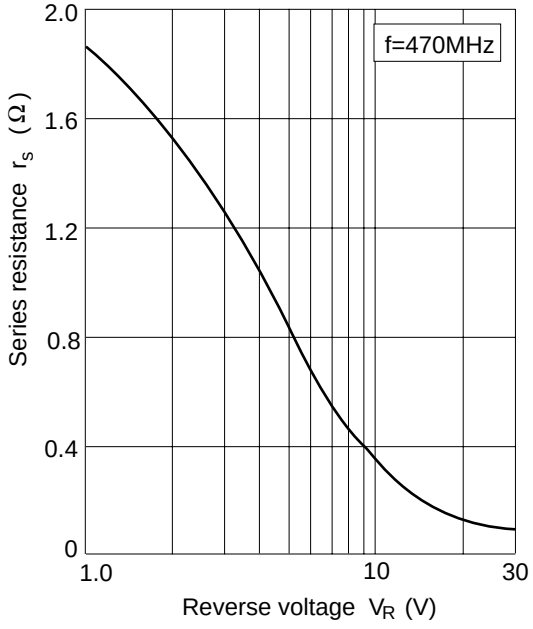


Fig.3 Series resistance Vs. Reverse voltage

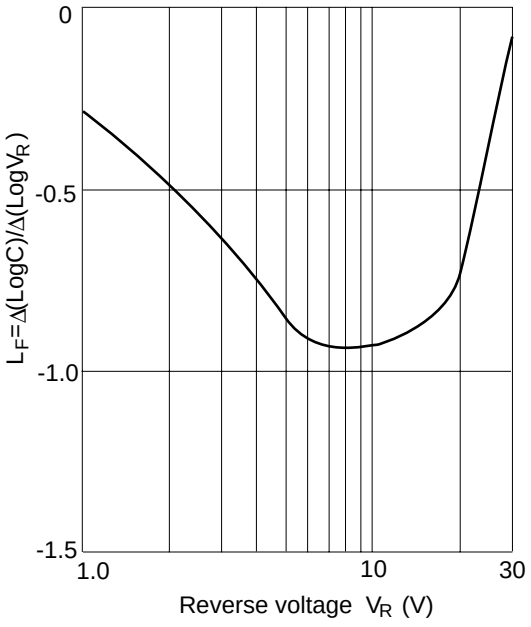
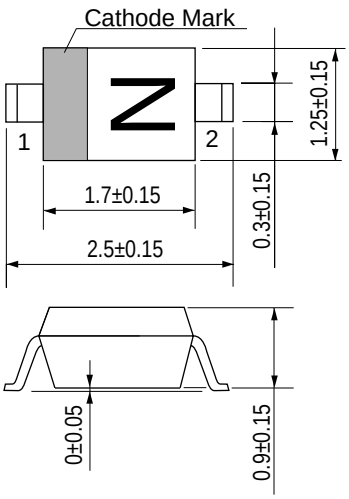


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit: mm



1 Cathode
2 Anode

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