
HVR100

Variable Capacitance Diode for AM tuner

HITACHI

ADE-208-079E (Z)

Rev. 5
Dec. 1998

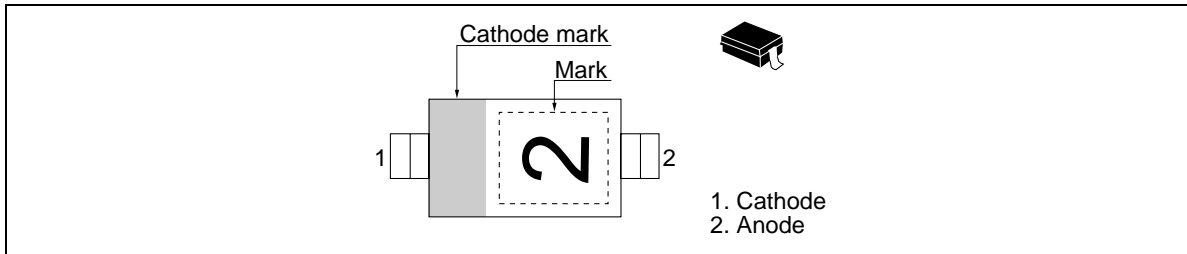
Features

- High capacitance ratio. ($n = 16.0$ min)
- High figure of merit. ($Q = 200$ min)
- To be usable at low voltage.
- Small Resin Package (SRP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVR100	2	SRP

Outline



HVR100

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 voltage	V _R	15	—	—	V	I _R = 10μA
Reverse current	I _R	—	—	100	nA	V _R = 9V
Capacitance	C ₁	421.5	—	524.6	pF	V _R = 1V, f = 1 MHz
	C ₃	182.0	—	275.7		V _R = 3V, f = 1 MHz
	C ₅	73.2	—	121.4		V _R = 5V, f = 1 MHz
	C ₆	42.2	—	72.2		V _R = 6V, f = 1 MHz
	C ₇	26.2	—	41.6		V _R = 7V, f = 1 MHz
	C ₈	20.4	—	28.2		V _R = 8V, f = 1 MHz
Capacitance ratio	n	16	—	—	—	C ₁ / C ₈
Figure of merit	Q	200	—	—	—	C = 450pF, f = 1 MHz
Matching error	ΔC/C ¹	—	—	3.0	%	V _R = 1 to 8V
ESD-Capability ¹	—	80	—	—	V	C=200pF, Both forward and reverse direction 1 pulse.

Notes 1. C.C system (Continuous Connected taping system) enable to make any 10 pcs of ΔC/C continuous in a reel, expect extention to another group.
Calculate Matching Error,

$$\Delta C/C = \frac{(C_{max} - C_{min})}{C_{min}} \times 100 (\%)$$

Notes 2. Failure criterion ; IR ≥ 100nA at VR = 9 V

Main Characteristic

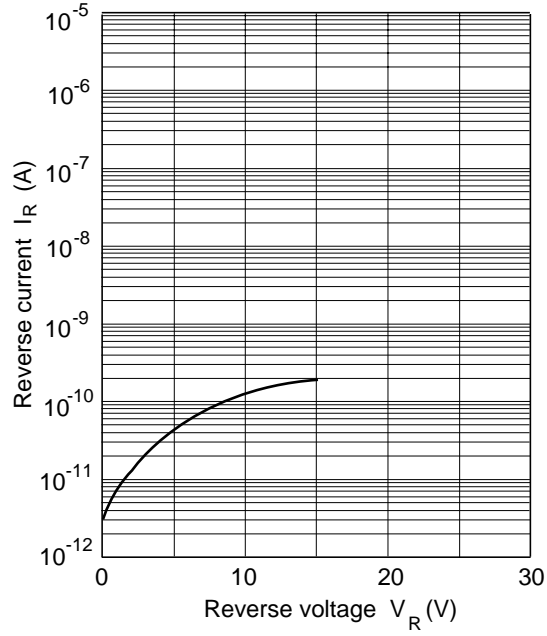


Fig.1 Reverse current Vs. Reverse voltage

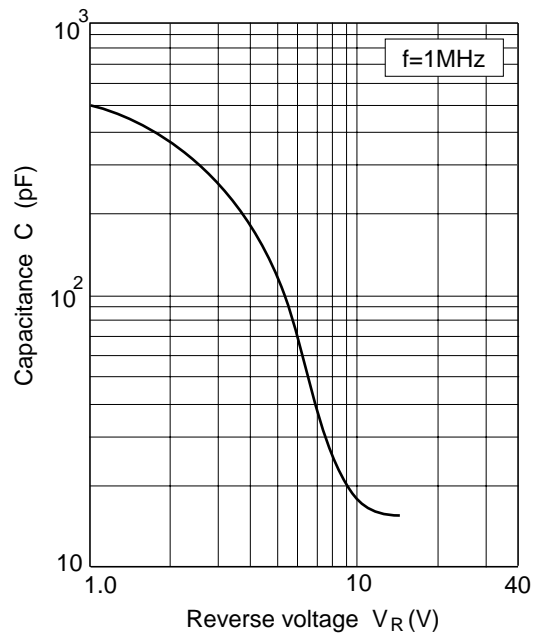
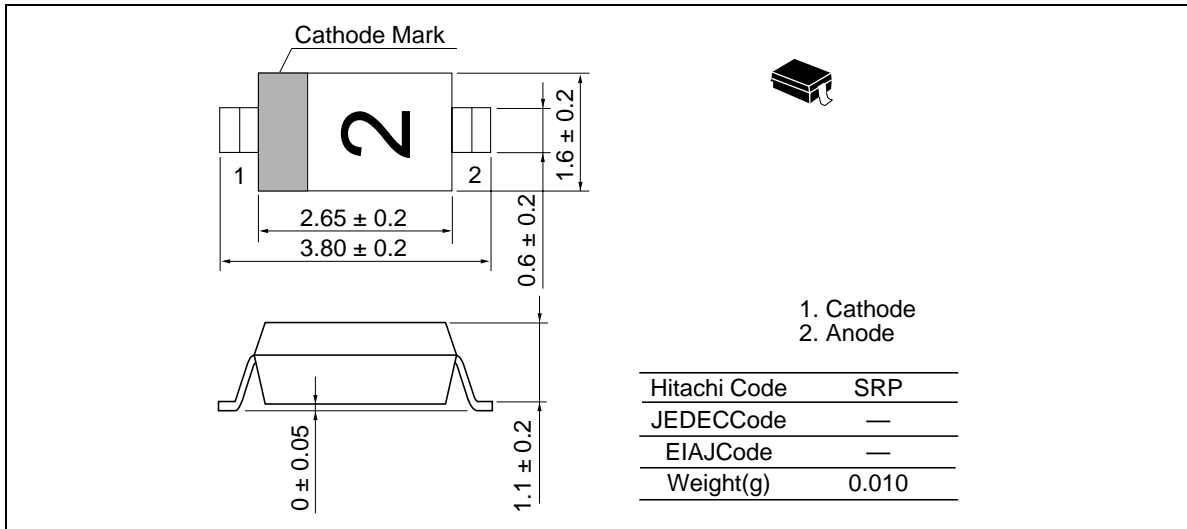


Fig.2 Capacitance Vs. Reverse voltage

HVR100

Package Dimensions

Unit : mm



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