HVR100

Variable Capacitance Diode for AM tuner

HITACHI

ADE-208-079E (Z)
Rev 5
Dec. 1998

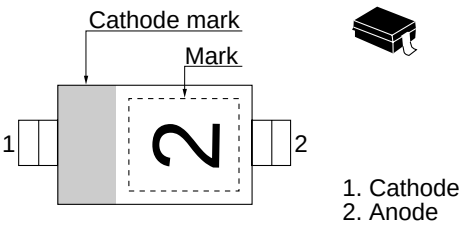
Features

- 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



1. Cathode
2. Anode

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Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	15	V
Junction temperature	Tj	125	°C
Storage temperature	Tstg	-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,

$$\Delta C/C = \frac{(Cmax-Cmin)}{Cmin} \times 100\ (\%)$$

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

Main Characteristic

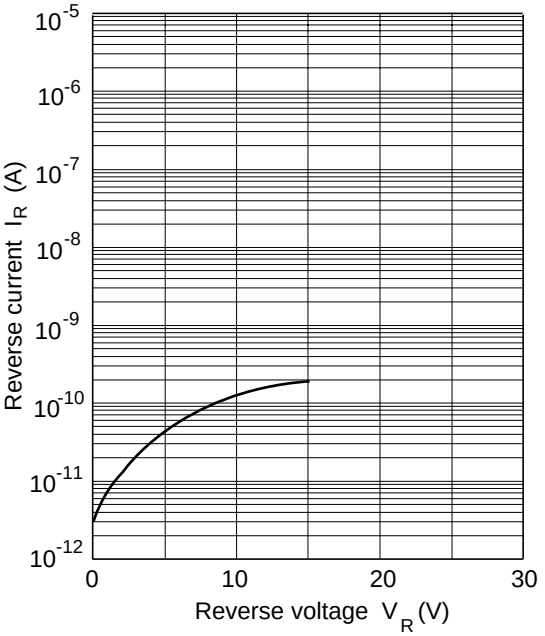


Fig.1 Reverse current Vs. Reverse voltage

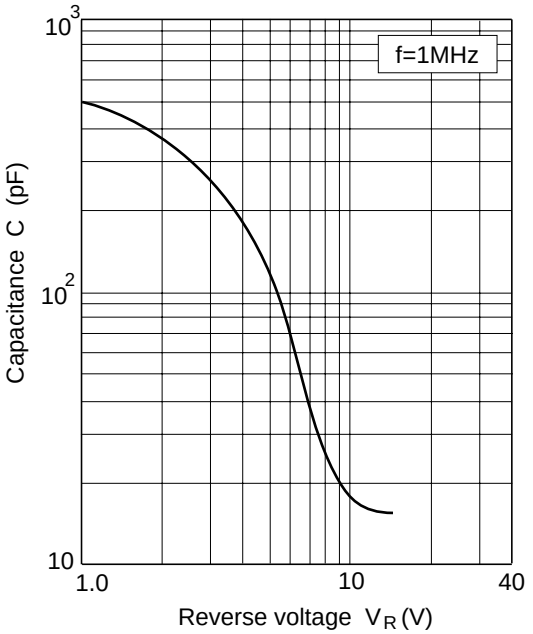
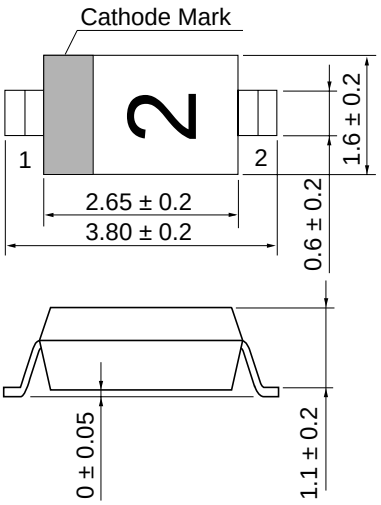


Fig.2 Capacitance Vs. Reverse voltage

Package Dimensions

Unit : mm



1. Cathode
2. Anode

Hitachi Code	*SRP*
JEDECCode	—
EIAJCode	—
Weight(g)	0.010

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