

# HVB27WK

Variable Capacitance Diode for FM tuner

# HITACHI

ADE-208-594 (Z)

Rev 0

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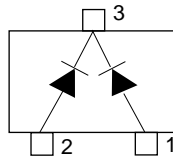
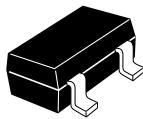
## Features

- High capacitance ratio.
- Low series resistance.(rs=0.4 max)
- Good linearity of C-V curve.
- To be usable at low voltagee.
- CMPAK package is suitable for high density surface mounting and high speed assembly.

## Ordering Information

Type No.	Laser Mark	Package Code
HVB27WK	T5	CMPAK

## Outline



(Top View)

- 1 Anode
- 2 Anode
- 3 Cathode

# HVB27WK

## Absolute Maximum Ratings (Ta = 25°C) \*1

Item	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub>	15	V
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature	T <sub>stg</sub>	-55 to +125	°C

Notes: 1. Per one device.

## Electrical Characteristics (Ta = 25°C) \*3

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I <sub>R1</sub>	—	—	10	nA	V <sub>R</sub> = 9V
	I <sub>R2</sub>	—	—	100		V <sub>R</sub> = 9V, Ta = 60°C
Capacitance	C <sub>1</sub>	52.0	—	62.0	pF	V <sub>R</sub> = 1V, f = 1 MHz
	C <sub>2</sub>	43.0	—	48.0		V <sub>R</sub> = 2V, f = 1 MHz
	C <sub>8</sub>	24.0	—	28.0		V <sub>R</sub> = 8V, f = 1 MHz
Capacitance ratio	n <sub>1</sub>	1.80	—	—	—	C <sub>1</sub> /C <sub>8</sub>
	n <sub>2</sub>	1.70	—	—	—	C <sub>2</sub> /C <sub>8</sub>
Series resistance	r <sub>s</sub>	—	—	0.40	Ω	V <sub>R</sub> = 2V, f = 100MHz
Matching error	ΔC/C*1	—	—	3.0	%	V <sub>R</sub> = 1 to 8V, f = 1 MHz

Notes: 1. A set of HVB27WK is of uniform C-V characteristics.

Measure max. value and min. value of capacitance at each bias point of V<sub>R</sub> = 1V through 8V.

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

2. Each group shall uniform a multiple of 4 diodes.
3. Per one device.

Main Characteristic

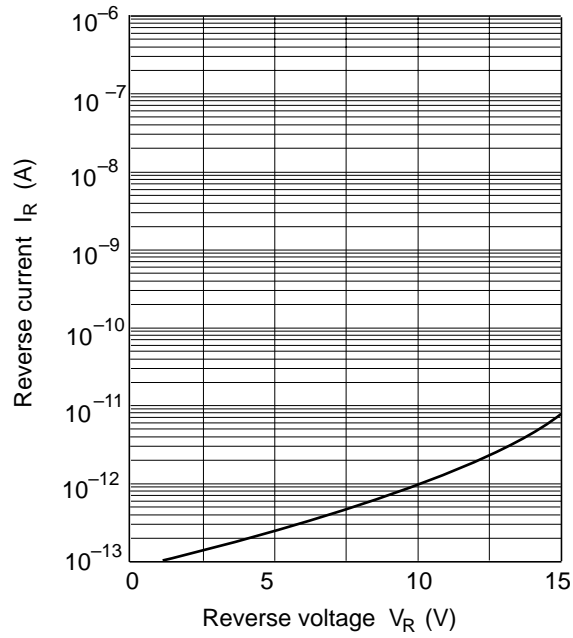


Fig.1 Reverse current Vs. Reverse voltage

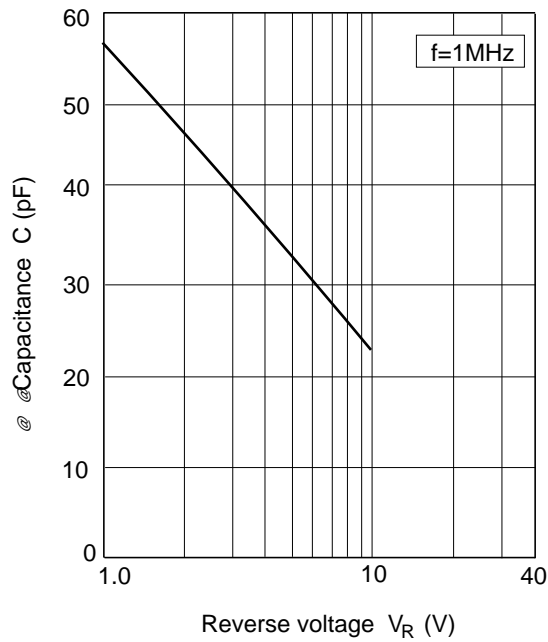
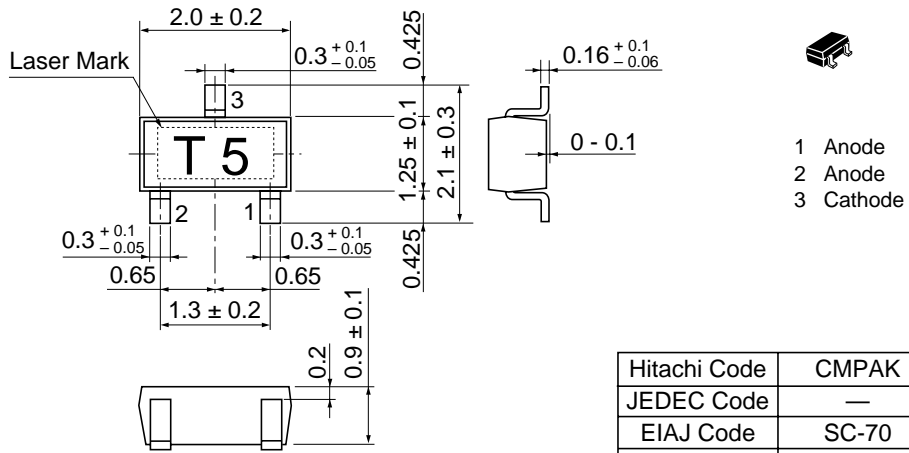


Fig.2 Capacitance Vs. Reverse voltage

## Package Dimensions

Unit : mm



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