To all our customers

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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

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HVB27WK

Variable Capacitance Diode for FM tuner

ADE-208-594 (Z)

Rev. 0
Apr. 1998

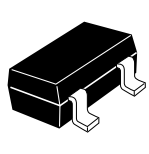
Features

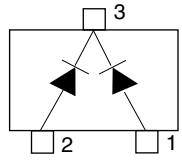
- High capacitance ratio.
- Low series resistance.(rs=0.4Ω max)
- Good linearity of C-V curve.
- To be usable at low voltage.
- CMPAK package is suitable for high density surface mounting and high speed assembly.

Ordering Information

Type No.	Laser Mark	Package Code
HVB27WK	T5	CMPAK

Pin Arrangement





(Top View)

1 Anode
2 Anode
3 Cathode

Absolute Maximum Ratings [*1]

(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

Notes: 1. Per one device.

Electrical Characteristics [*3]

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_{R1}	—	—	10	nA	V_R =9V
	I_{R2}	—	—	100		V_R =9V, Ta = 60°C
Capacitance	C_1	52.0	—	62.0	pF	V_R = 1V, f = 1 MHz
	C_2	43.0	—	48.0		V_R = 2V, f = 1 MHz
	C_8	24.0	—	28.0		V_R = 8V, f = 1 MHz
Capacitance ratio	n_1	1.80	—	—	—	C_1/ C_8
	n_2	1.70	—	—		C_2/ C_8
Series resistance	r_s	—	—	0.40	Ω	V_R = 2V, f = 100MHz
Matching error	$\Delta C/C$*[1]	—	—	3.0	%	V_R = 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_R = 1V through 8V.
Calculate Matching Error, $\Delta C/C = \frac{(Cmax - Cmin)}{Cmin} \times 100$ (%)

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

Main Characteristic

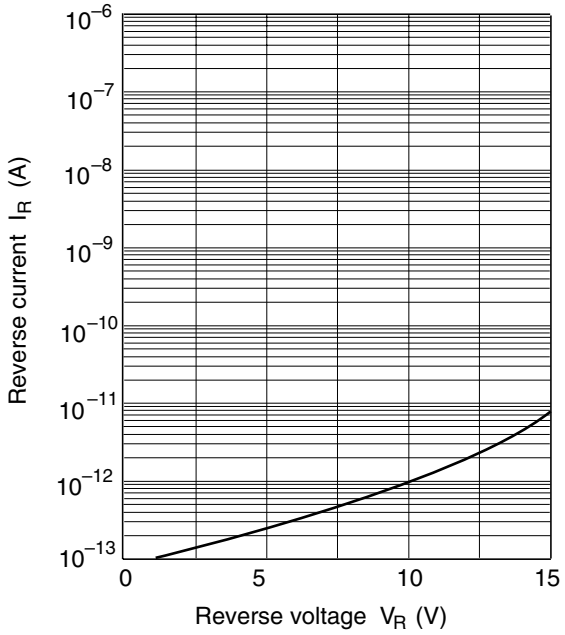


Fig.1 Reverse current Vs. Reverse voltage

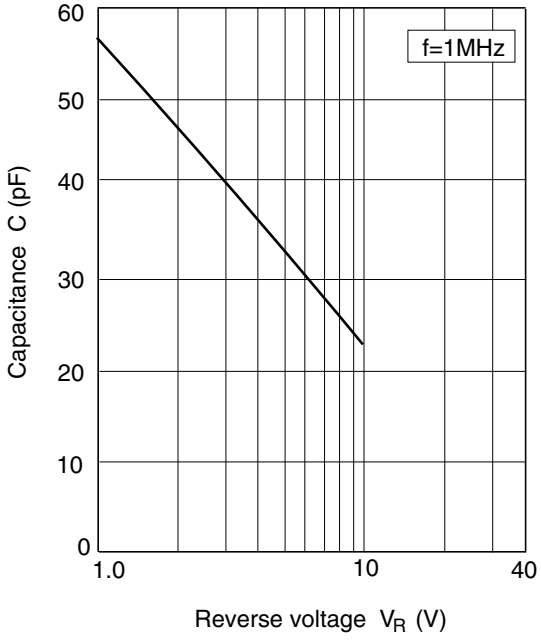
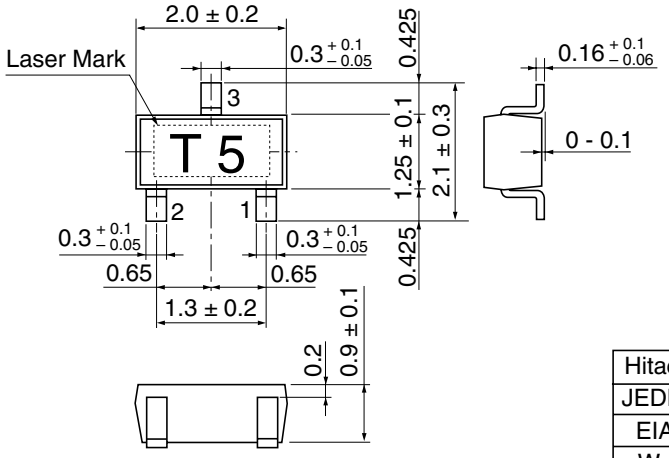


Fig.2 Capacitance Vs. Reverse voltage

Package Dimensions

Unit : mm



1 Anode
2 Anode
3 Cathode

Hitachi Code	CMPAK
JEDEC Code	—
EIAJ Code	SC-70
Weight (g)	0.006

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