

HVB387BWK

Variable Capacitance Diode for VCO

HITACHI

ADE-208-1174A (Z)

Rev. 1

Apr. 2001

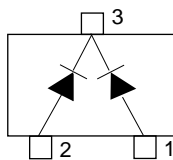
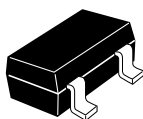
Features

- Low capacitance and to be usable at GHz.
- High capacitance ratio. ($n = 1.8 \text{ min}$)
- Low series resistance. ($r_s = 1.2 \Omega \text{ max}$)
- CMPAK package is suitable for high density surface mounting and high speed assembly.

Ordering Information

Type No.	Laser Mark	Package Code
HVB387BWK	V5	CMPAK

Pin Arrangement



(Top View)

1. Anode
2. Anode
3. Cathode

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 current	I_{R1}	—	—	10	nA	$V_R = 15\text{ V}$
	I_{R2}	—	—	100		$V_R = 15\text{ V}$, $T_a = 60^\circ\text{C}$
Capacitance	C_1	4.50	—	5.00	pF	$V_R = 1\text{ V}$, $f = 1\text{ MHz}$
	C_3	1.85	—	2.80		$V_R = 3\text{ V}$, $f = 1\text{ MHz}$
Capacitance ratio	n	1.8	—	2.6	—	C_1 / C_3
Series resistance	r_s	—	—	1.2	Ω	$V_R = 1\text{ V}$, $f = 470\text{ MHz}$

Main Characteristic

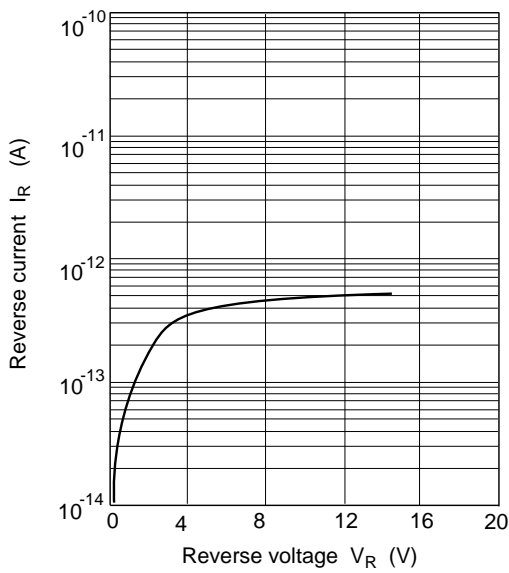


Fig.1 Reverse current vs. Reverse voltage

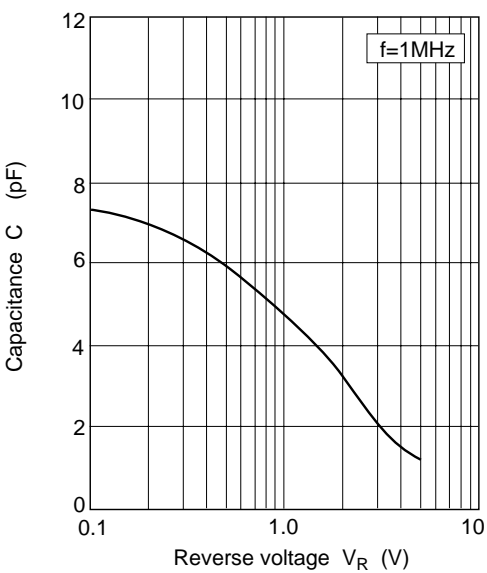


Fig.2 Capacitance vs. Reverse voltage

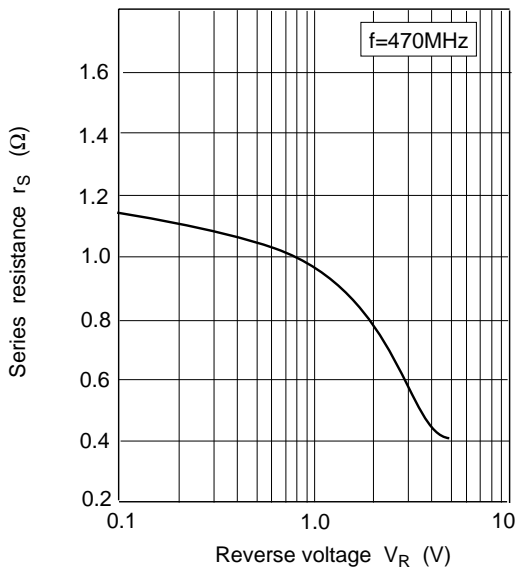


Fig.3 Series resistance vs. Reverse voltage

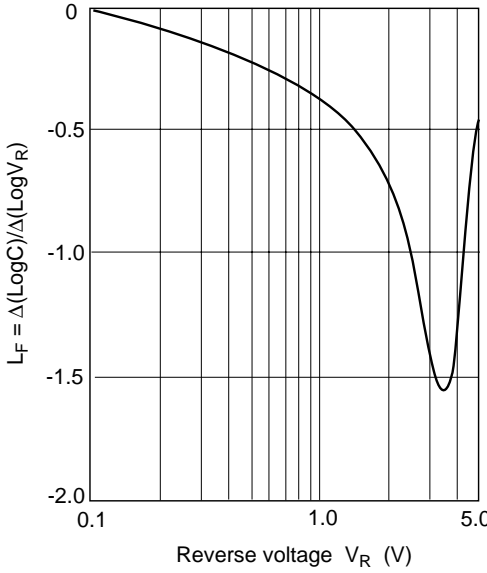
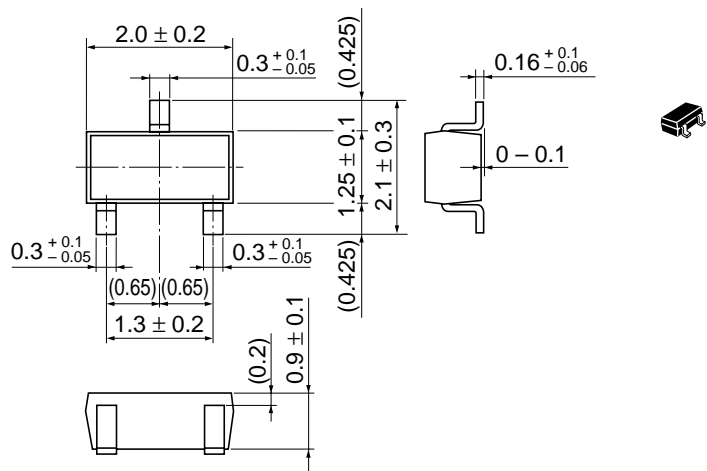


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions

As of January, 2001
Unit: mm



Hitachi Code	CMPAK
JEDEC	—
EIAJ	Conforms
Mass (reference value)	0.006 g

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