

HVM27WK

Variable Capacitance Diode for FM tuner

HITACHI

ADE-208-060C (Z)

Rev. 3

Apl. 1993

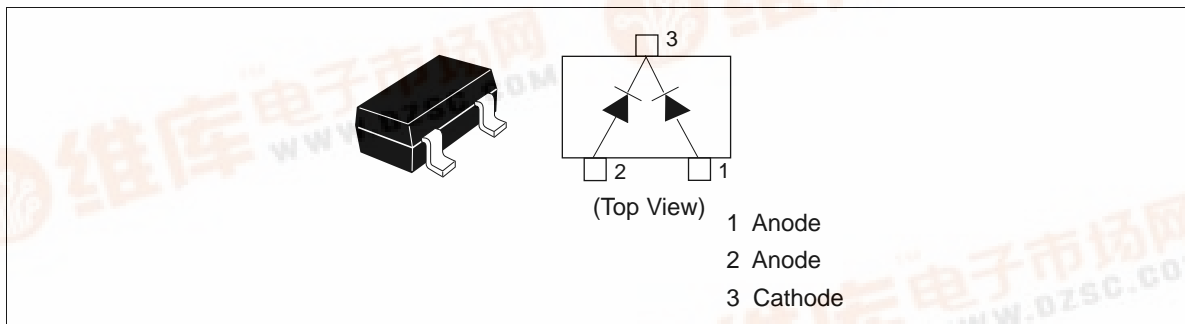
Features

- High capacitance ratio to wide tuning band width. ($C_1/C_2 = 1.8\text{min}$)
- Low series resistance.
- MPAK package is suitable for high density surface mounting and high speed assembly.

Ordering Information

Type No.	Laser Mark	Package Code
HVM27WK	T5	MPAK

Pin Arrangement



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Item	Symbol	Value	Unit
Reverse voltage	V_R	20	V
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

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Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse voltage	V_R	20	—	—	V	$I_R = 10\mu\text{A}$
Reverse current	I_R	—	—	50	nA	$V_R = 15\text{V}$
Capacitance	C_1	52.0	—	62.0	pF	$V_R = 1\text{V}, f = 1\text{MHz}$
	C_2	43.0	—	48.1		$V_R = 2\text{V}, f = 1\text{MHz}$
	C_8	24.0	—	28.0		$V_R = 8\text{V}, f = 1\text{MHz}$
Capacitance ratio	n_1	1.80	—	—	—	C_1/C_8
	n_2	1.70	—	—	—	C_2/C_8
Series resistance	r_s	—	—	0.4	Ω	$V_R = 2\text{V}, f = 100\text{MHz}$
Matching error	$\Delta C/C^{*1}$	—	—	3.0	%	$V_R = 1 \text{ to } 8\text{V}$

- Notes: 1. A set of HVM27WK is of uniform C-V characteristics.
 Measure max. value and min. value of capacitance at each bias point of $V_R = 1\text{V}$ through 8V .
 Calculate Matching Error, $\Delta C/C = \frac{(C_{\text{max}} - C_{\text{min}})}{C_{\text{min}}} \times 100 (\%)$
2. Each group shall uniform a multiple of 4 diodes.

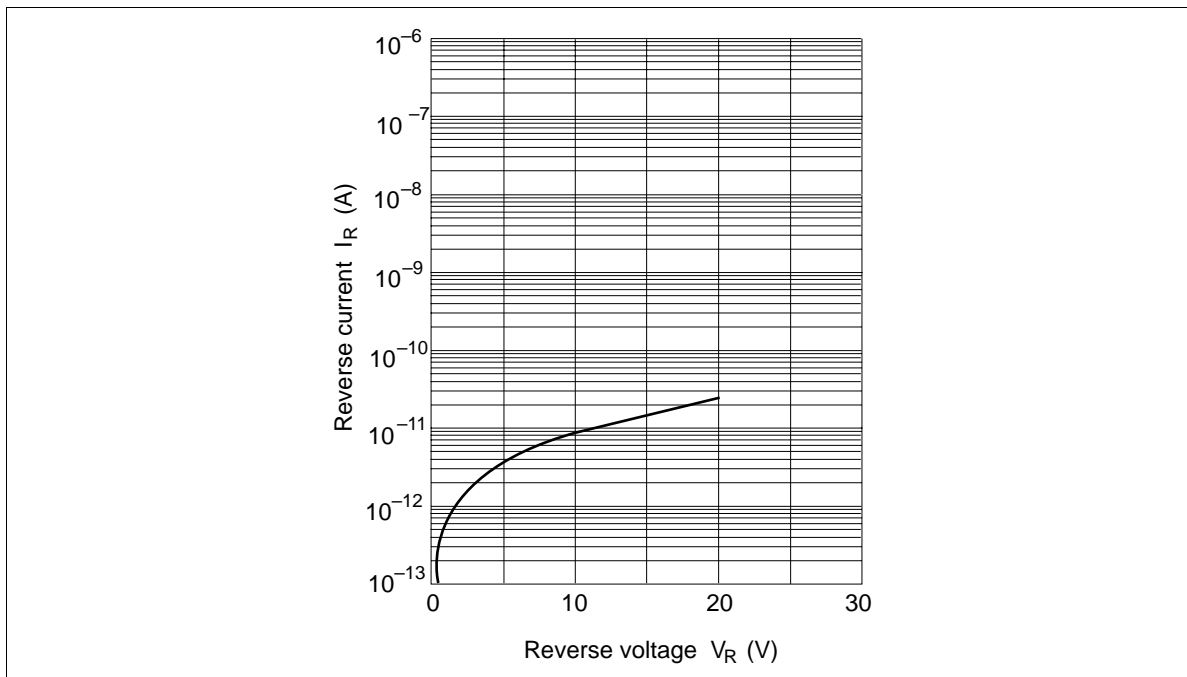


Fig.1 Reverse current Vs. Reverse voltage

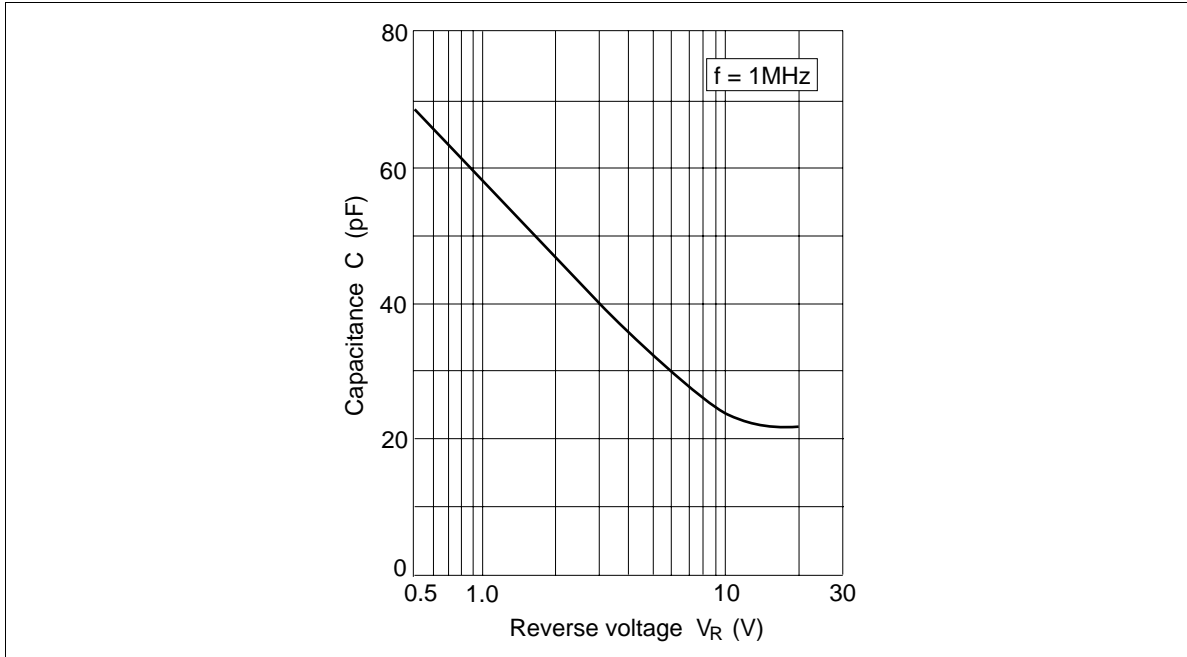
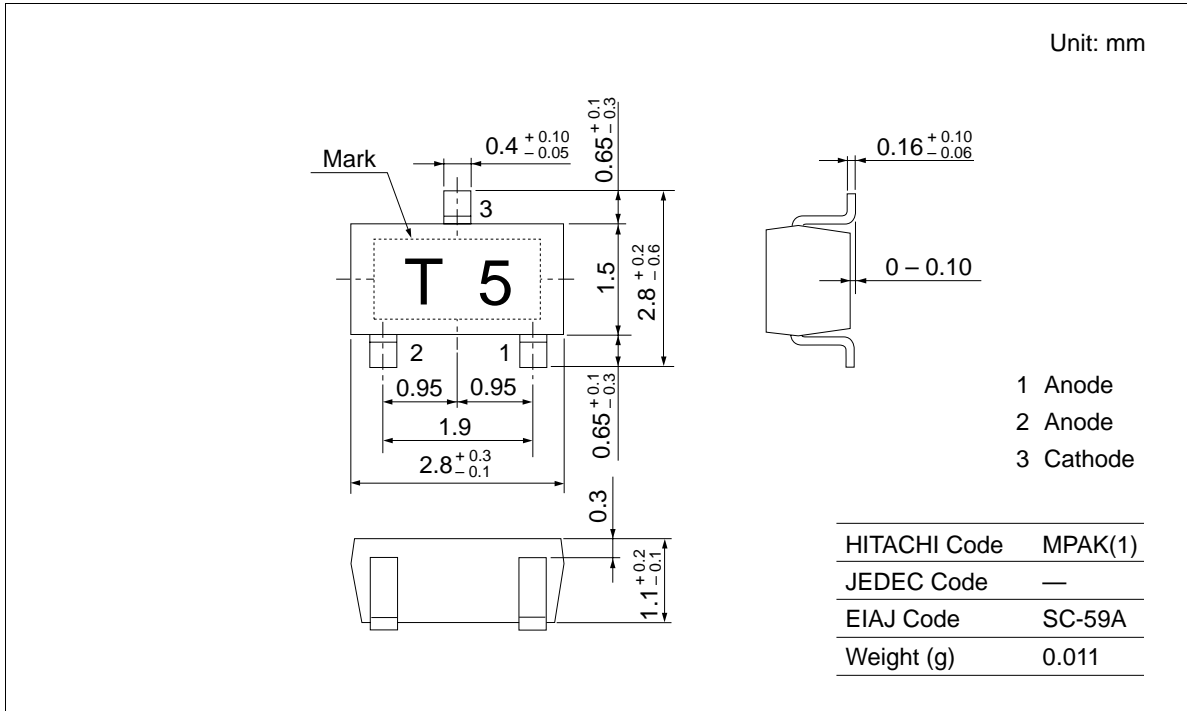


Fig.2 Capacitance Vs. Reverse voltage

HVM27WK

Package Dimensions



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