

HVM27WK

Variable Capacitance Diode for FM tuner

HITACHI

Preliminary
Rev. 3
Apr. 1993

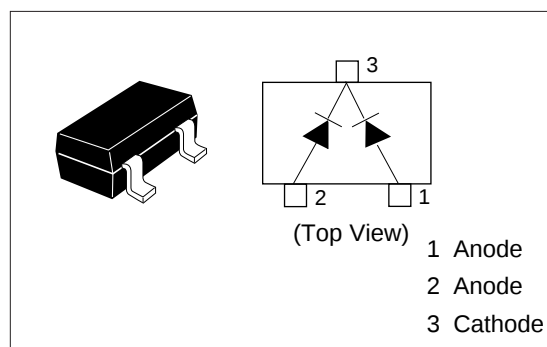
Features

- High capacitance ratio to wide tuning band width. ($C_1/C_8=1.8$ min)
- Low series resistance.
- MPAK package is suitable for high density surface mounting and high speed assembly.

Ordering Information

Type No.	Mark	Package Code
HVM27WK	T 5	MPAK

Pin Arrangement



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

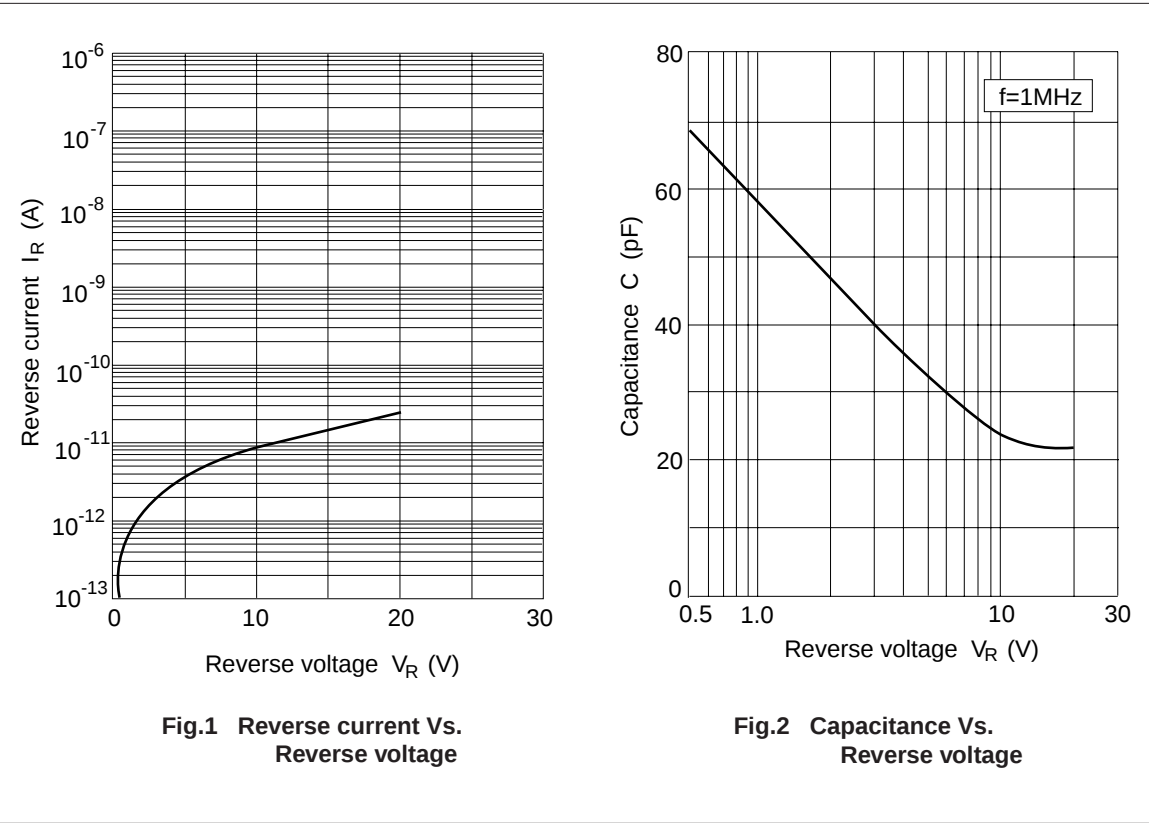
Item	Symbol	Value	Unit
Reverse voltage	V_R	20	V
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

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	$\Delta C/C^*$	—	—	3.0	%	$V_R = 1\sim 8 \text{ V}$

* 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, $\Delta C/C = \frac{(C_{\text{max}} - C_{\text{min}})}{C_{\text{min}}} \times 100 (\%)$

** Each group shall uniform a multiple of 4 diodes.



Package Dimensions

Unit: mm

