

## HVM27WK

Variable Capacitance Diode for FM tuner

REJ03G0101-0400Z  
(Previous: ADE-208-060C)  
Rev.4.00  
Sep.29.2003

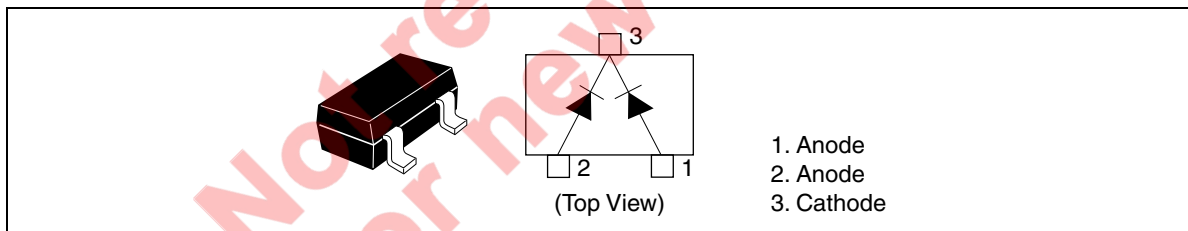
### Features

- 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.	Laser Mark	Package Code
HVM27WK	T5	MPAK

### Pin Arrangement



## HVM27WK

### Absolute Maximum Ratings \*<sup>1</sup>

(T<sub>a</sub> = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub>	20	V
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature	T <sub>stg</sub>	-55 to +125	°C

Note: 1. Per one device.

### Electrical Characteristics \*<sup>3</sup>

(T<sub>a</sub> = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse voltage	V <sub>R</sub>	20	—	—	V	I <sub>R</sub> = 10 μA
Reverse current	I <sub>R</sub>	—	—	50	nA	V <sub>R</sub> = 15 V
Capacitance	C <sub>1</sub>	52.0	—	62.0	pF	V <sub>R</sub> = 1 V, f = 1 MHz
	C <sub>2</sub>	43.0	—	48.1		V <sub>R</sub> = 2 V, f = 1 MHz
	C <sub>8</sub>	24.0	—	28.0		V <sub>R</sub> = 8 V, f = 1 MHz
Capacitance ratio	n <sub>1</sub>	1.8	—	—	—	C <sub>1</sub> /C <sub>8</sub>
	n <sub>2</sub>	1.7	—	—	—	C <sub>2</sub> /C <sub>8</sub>
Series resistance	r <sub>s</sub>	—	—	0.4	Ω	V <sub>R</sub> = 2 V, f = 100 MHz
Matching error	ΔC/C * <sup>1</sup>	—	—	3.0	%	V <sub>R</sub> = 1 to 8 V, f = 1 MHz

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<sub>R</sub> = 1 V through 8 V.  
Calculate Matching Error,

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

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

### Main Characteristic

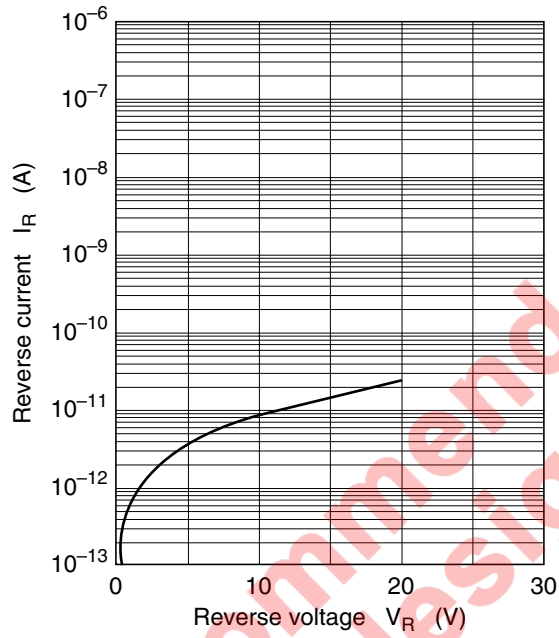


Fig.1 Reverse current vs. Reverse voltage

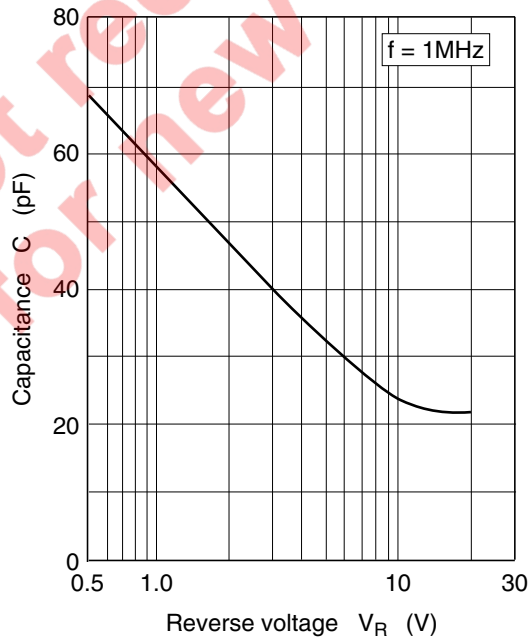
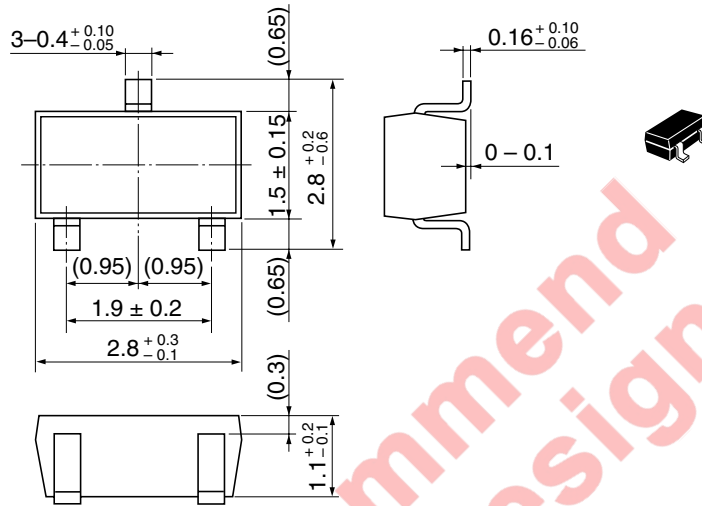


Fig.2 Capacitance vs. Reverse voltage

Package Dimensions

As of January, 2003  
Unit: mm



Package Code	MPAK
JEDEC	—
JEITA	Conforms
Mass (reference value)	0.011 g

Not recommend for new design

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