HVM27WK

Variable Capacitance Diode for FM tuner

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

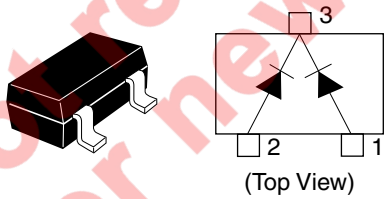
Features

- 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



(Top View)

1. Anode
2. Anode
3. Cathode

Absolute Maximum Ratings *[1]

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	20	V
Junction temperature	Tj	125	°C
Storage temperature	Tstg	–55 to +125	°C

Note: 1. Per one device.

Electrical Characteristics *[3]

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse voltage	V_R	20	—	—	V	I_R = 10 μA
Reverse current	I_R	—	—	50	nA	V_R = 15 V
Capacitance	C_1	52.0	—	62.0	pF	V_R = 1 V, f = 1 MHz
	C_2	43.0	—	48.1		V_R = 2 V, f = 1 MHz
	C_8	24.0	—	28.0		V_R = 8 V, f = 1 MHz
Capacitance ratio	n_1	1.8	—	—	—	C_1/C_8
	n_2	1.7	—	—		C_2/C_8
Series resistance	r_s	—	—	0.4	Ω	V_R = 2 V, f = 100 MHz
Matching error	ΔC/C *[1]	—	—	3.0	%	V_R = 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_R = 1 V through 8 V.
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

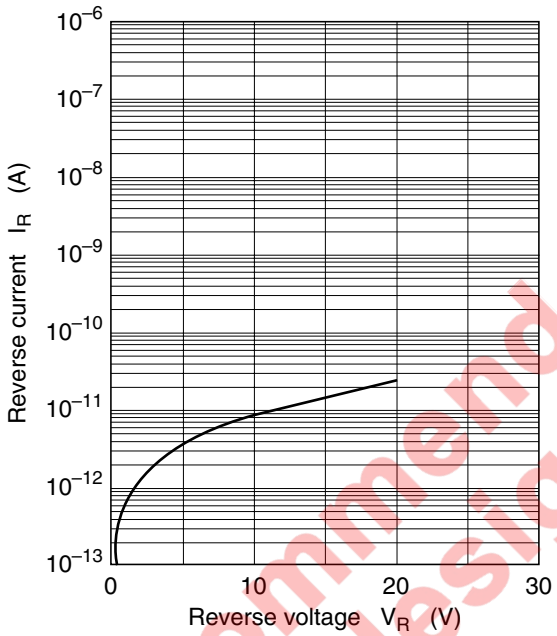


Fig.1 Reverse current vs. Reverse voltage

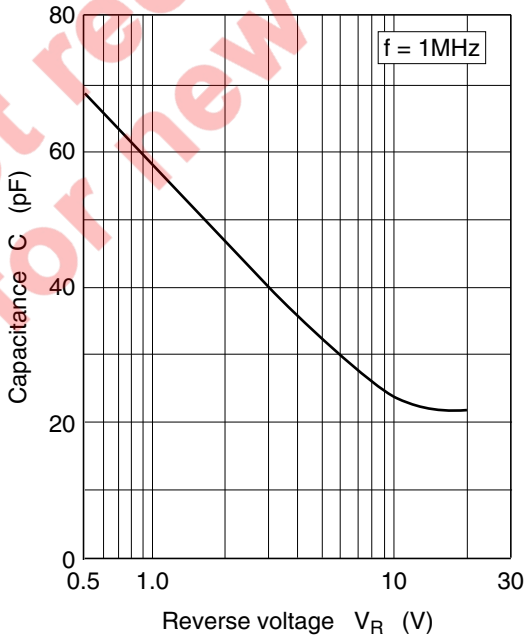
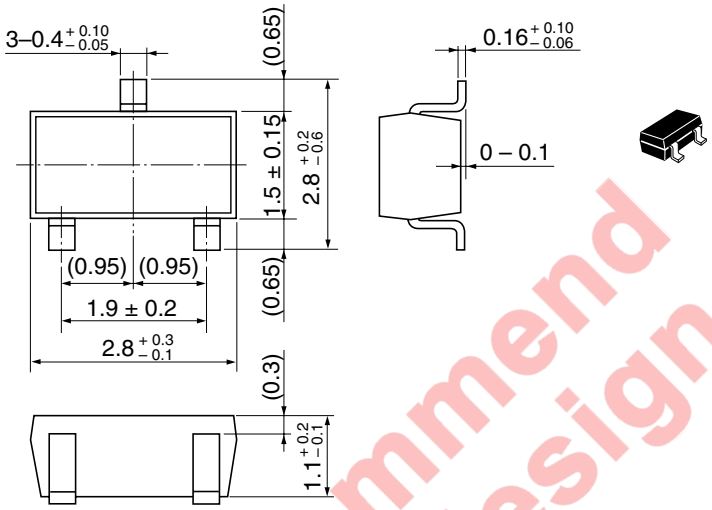


Fig.2 Capacitance vs. Reverse voltage

Package Dimensions

As of January, 2003
Unit: mm



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

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Colophon 1.0