

## VARIABLE CAPACITANCE DIODE

### FEATURES

- Very Small UFD Surface Mount Package
- Very Low Operating Voltage (1 to 8 V)
- Large Capacitance Ratio ( $A = 7.4$ )
- Excellent Linearity (CV Curve)
- Very Small Capacitance Deviation at Tape/Reel

### APPLICATIONS

- Communications Equipment
- Multi-Channel Cordless Telephone
- Voltage Controlled Oscillator
- UHF Wireless Communication Systems

### DESCRIPTION

The KV1812K is a variable capacitance diode designed for UHF applications.

The KV1812K is available in a very small UFD Surface Mount Package.

### CLASSIFICATION

(Unit: pF)

RANK		1	2	3
C	MIN	14.50	15.36	16.34
	MAX	15.66	16.64	17.50

Note: Rank is determined after testing and marked on the reel. All the diodes on a reel have the same rank, but rank can not be specified when ordering.

### ORDERING INFORMATION

KV1812K



Tape/Reel Code

TAPE/REEL CODE  
TR: Tape Right

KV1812K



# KV1812K

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## ABSOLUTE MAXIMUM RATINGS

Reverse Voltage ..... 25 V  
Forward Current ..... 10 mA  
Power Dissipation ..... 50 mW

Storage Temperature Range ..... -55 to +150 °C  
Operating Temperature Range ..... -55 to +85 °C

## ELECTRICAL CHARACTERISTICS

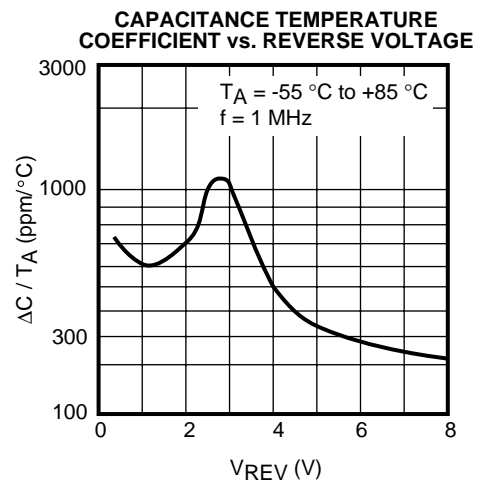
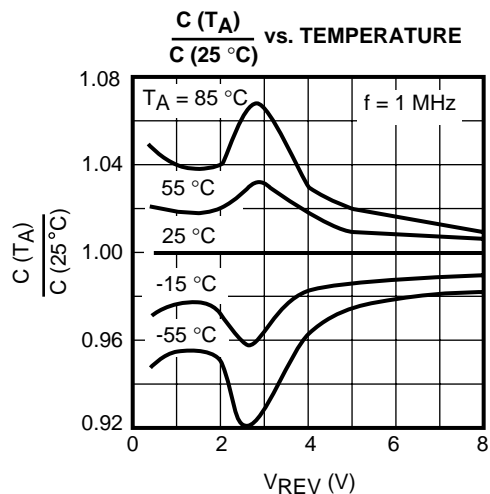
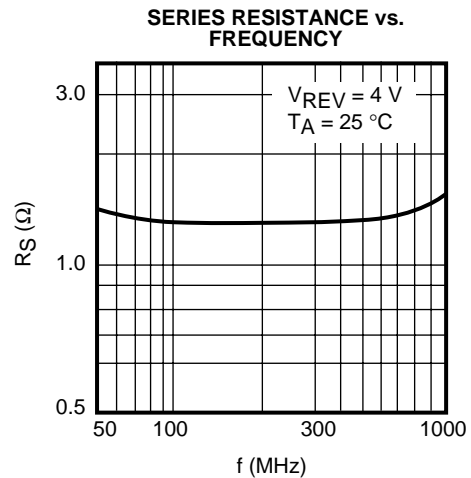
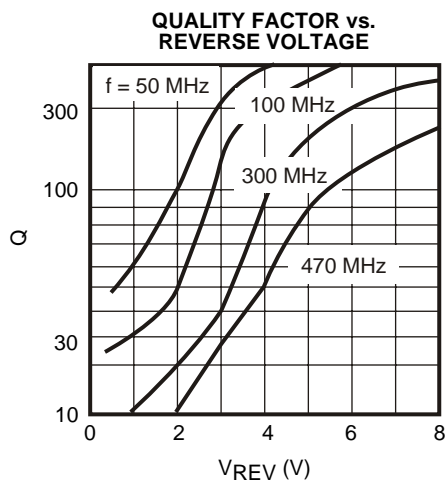
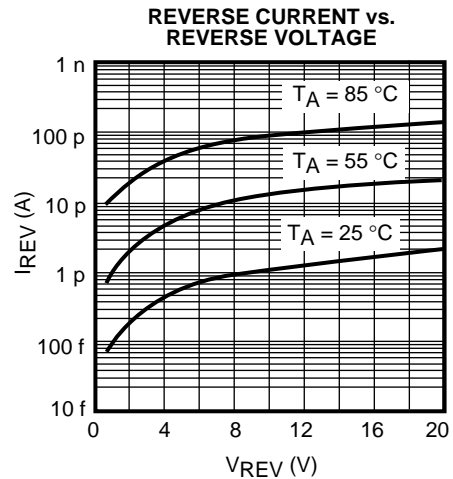
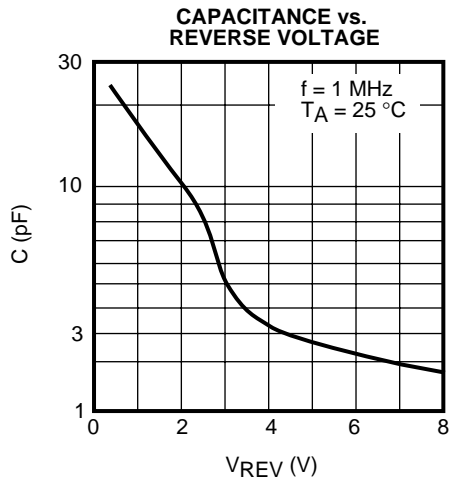
Test conditions:  $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$V_{REV}$	Reverse Voltage	$I_{REV} = 10\text{ }\mu\text{A}$	20			V
$I_{REV}$	Reverse Current	$V_{REV} = 16\text{ V}$			5.0	nA
$C_1$	Diode Capacitance 1	$V_{REV} = 1\text{ V}$ , $f = 1\text{ MHz}$	14.50		17.50	pF
$C_8$	Diode Capacitance 8	$V_{REV} = 8\text{ V}$ , $f = 1\text{ MHz}$	1.64		2.24	pF
$R_S$	Series Resistance	$C = 6\text{ pF}$ , $f = 470\text{ MHz}$			2.10	$\Omega$
A	Capacitance Ratio	$C_1 / C_8$	7.4			

Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms,  $\pm 5\text{ mVrms}$ ).

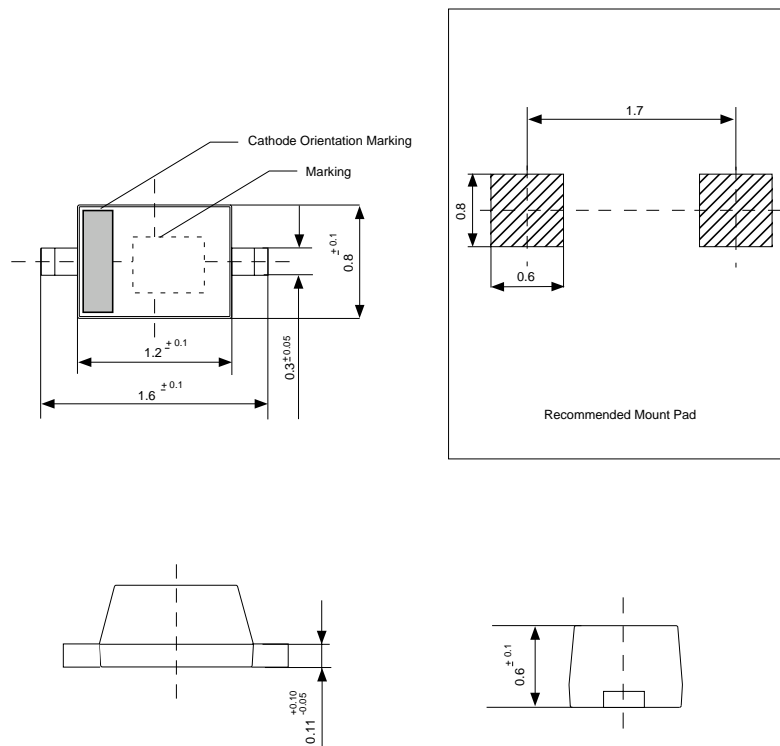
Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

## TYPICAL PERFORMANCE CHARACTERISTICS



## PACKAGE OUTLINE

## UFD



Dimensions are shown in millimeters  
Tolerance:  $x.x = \pm 0.2$  mm (unless otherwise specified)

## Marking Information

Product Code G



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