

## VARIABLE CAPACITANCE DIODE

### FEATURES

- Very Small SRD Surface Mount Package
- Very Low Operating Voltage (1 to 4 V)
- Large Capacitance Ratio ( $A = 3.4$ )
- Excellent Linearity (CV Curve)
- Very Small Capacitance Deviation at Tape/Reel
- Very Low Series Resistance

### DESCRIPTION

The KV1832C is a variable capacitance diode designed for UHF applications.

The KV1832C is available in a very small SRD Surface Mount Package.


### CLASSIFICATION

Unit: pF

C \ RANK		1A	2A	3A	4A	5A
C <sub>2</sub>	MIN	8.5	9.05	9.75	10.55	11.25
	MAX	9.15	9.85	10.65	11.35	11.90

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.

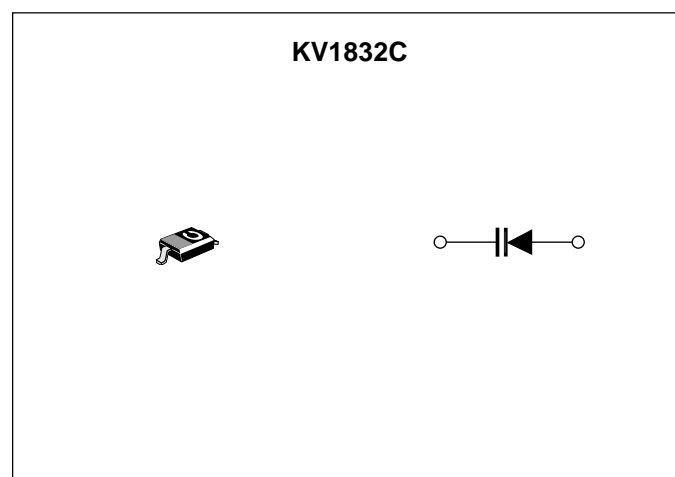
### ORDERING INFORMATION

KV1832C  Tape/Reel Code

TAPE/REEL CODE  
TR: Tape Right

### APPLICATIONS

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



**ABSOLUTE MAXIMUM RATINGS**

Reverse Voltage ..... 28 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**

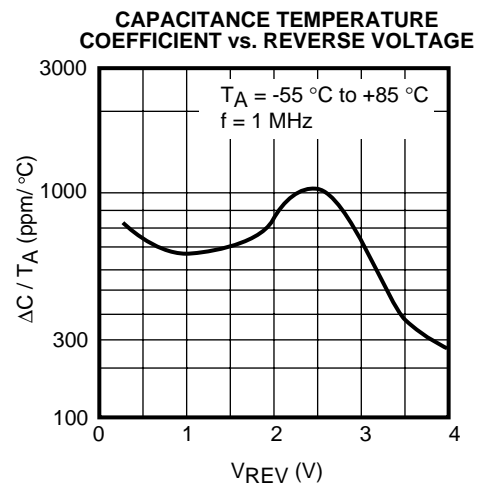
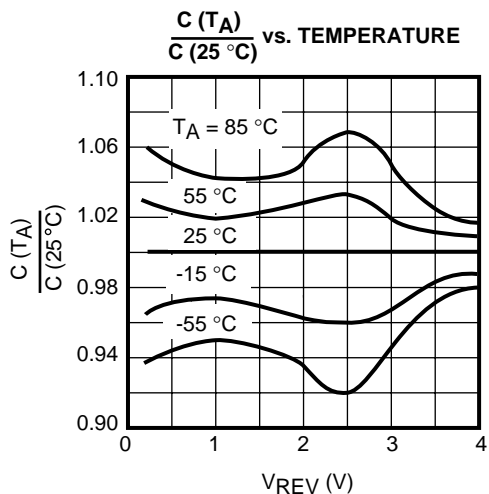
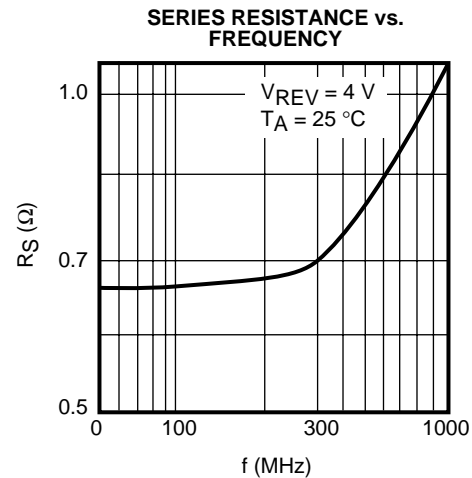
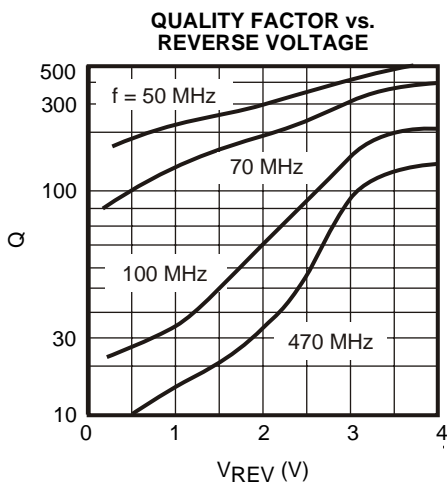
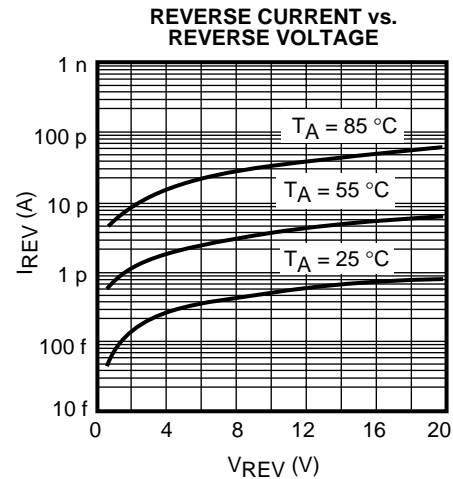
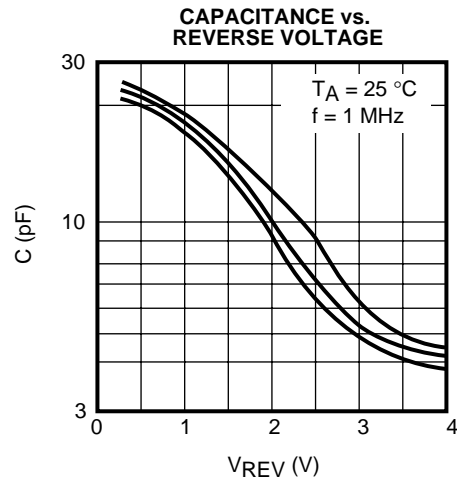
Test conditions:  $T_A = 25\text{ °C}$

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	$V_{REV} = 1\text{ V}$ , $f = 1\text{ MHz}$	15.40	16.60	17.90	pF
$C_2$	Diode Capacitance 2	$V_{REV} = 2\text{ V}$ , $f = 1\text{ MHz}$	8.50	10.20	11.90	pF
$C_4$	Diode Capacitance 4	$V_{REV} = 4\text{ V}$ , $f = 1\text{ MHz}$	3.60	4.30	5.05	pF
$R_S$	Series Resistance	$C = 7\text{ pF}$ , $f = 470\text{ MHz}$			0.7	$\Omega$
A	Capacitance Ratio	$C_1 / C_4$	3.40			

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

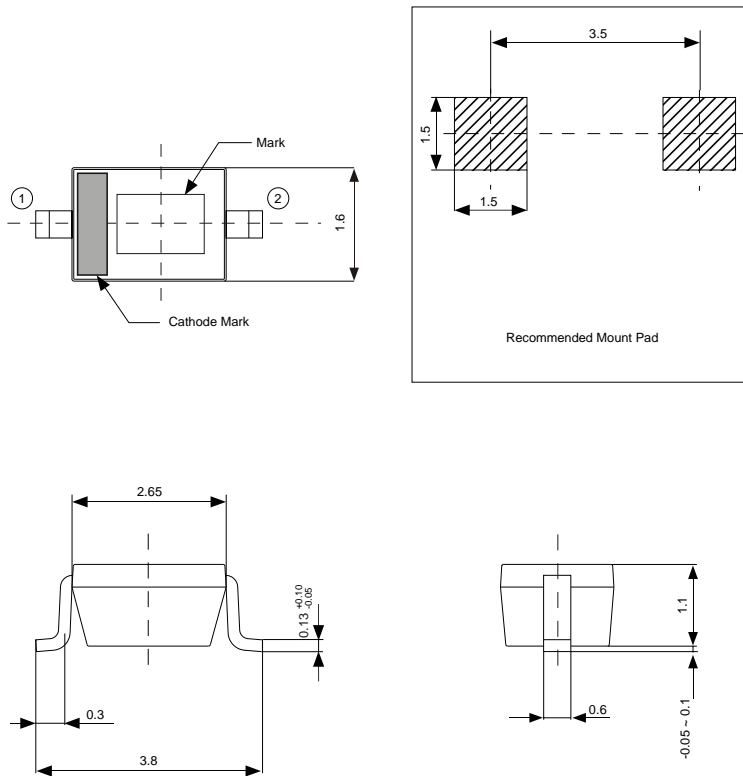
Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

## TYPICAL PERFORMANCE CHARACTERISTICS



## PACKAGE OUTLINE

## SRD



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

## Marking Information

Product Code C



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