

## VARIABLE CAPACITANCE DIODE

### FEATURES

- Very Small URD Surface Mount Package
- Very Low Series Resistance
- Large Capacitance Ratio (A = 2.2 minimum)
- Excellent Linearity (CV Curve)
- Very Small Capacitance Deviation at Tape/Reel

### APPLICATIONS

- UHF Communications Equipment
- Voltage Controlled Oscillator
- 900 MHz Communications Systems

### DESCRIPTION

The KV1845K is a variable capacitance diode designed for UHF applications.

The KV1845K is available in a very small URD Surface Mount Package.


### CLASSIFICATION

(Unit: pF)

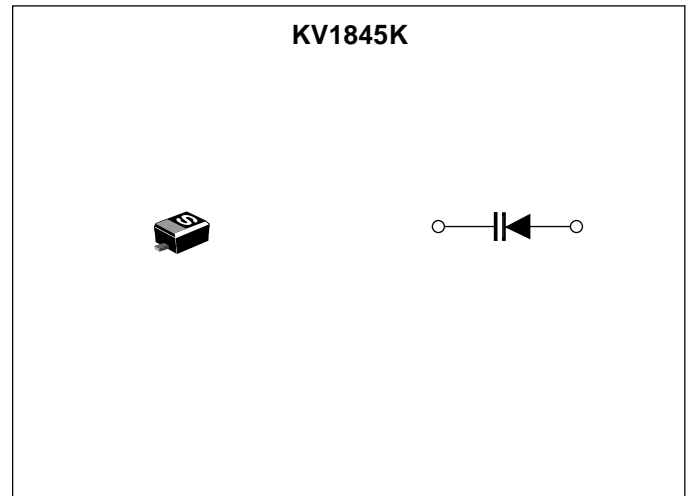
C		RANK		
		1	2	3
C <sub>1</sub>	MIN	9.45	9.80	10.75
	MAX	10.05	11.00	11.35

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

KV1845K    
 └────────── Tape/Reel Code

TAPE/REEL CODE  
 TR: Tape Right



# KV1845K

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## ABSOLUTE MAXIMUM RATINGS

Reverse Voltage ..... 15 V      Storage Temperature Range ..... -55 to +150 °C  
Forward Current ..... 7 mA      Operating Temperature Range ..... -55 to +85 °C  
Power Dissipation ..... 25 mW

## ELECTRICAL CHARACTERISTICS

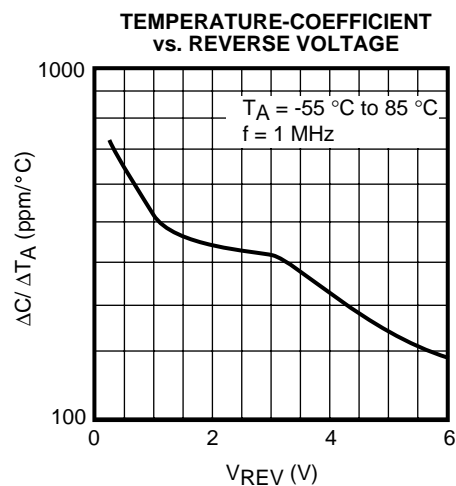
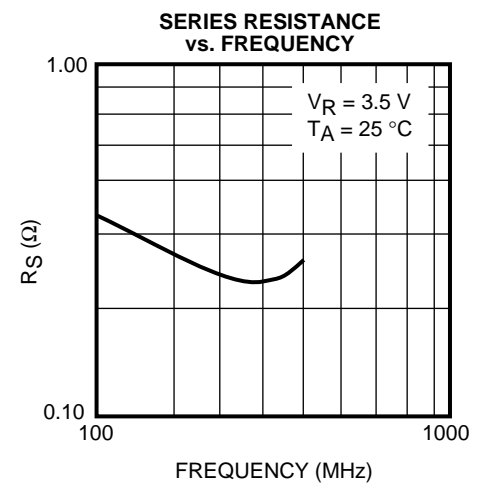
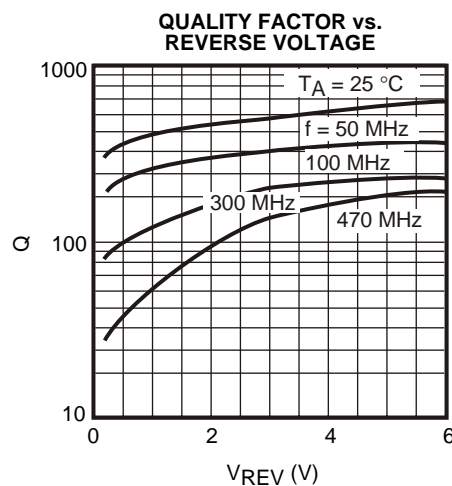
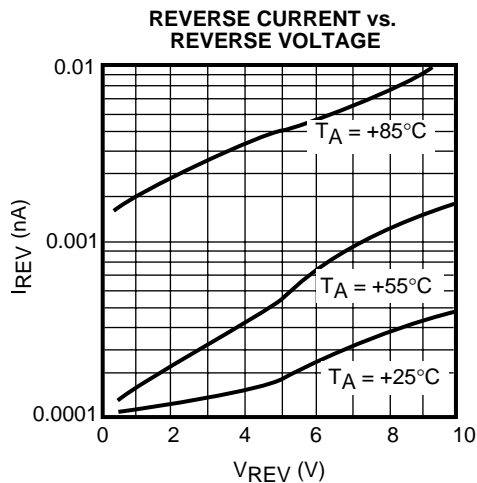
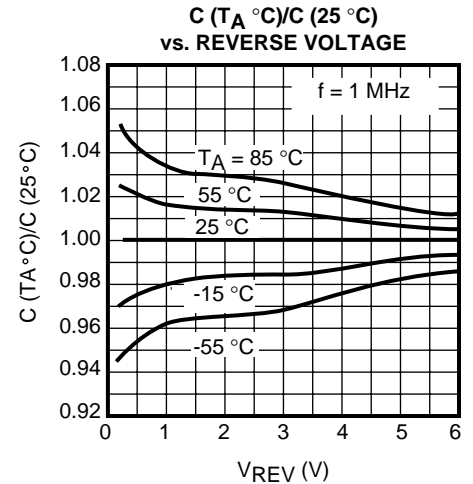
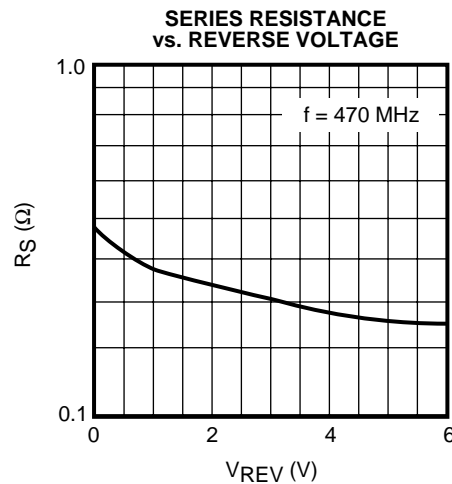
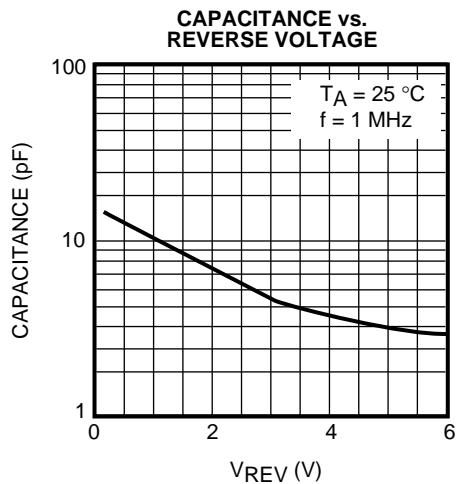
Test conditions:  $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$V_{REV}$	Reverse Voltage	$I_{REV} = 1\ \mu\text{A}$	10			V
$I_{REV}$	Reverse Current	$V_{REV} = 10\ \text{V}$			5.00	nA
$C_1$	Diode Capacitance 1	$V_{REV} = 1\ \text{V}, f = 1\ \text{MHz}$	9.45	10.40	11.35	pF
$C_4$	Diode Capacitance 4	$V_{REV} = 4\ \text{V}, f = 1\ \text{MHz}$	4.15	4.67	5.19	pF
$R_S$	Series Resistance	$C = 5\ \text{pF}, f = 470\ \text{MHz}$		0.25	0.30	$\Omega$
A	Capacitance Ratio	$C_1 / C_4$	2.20			

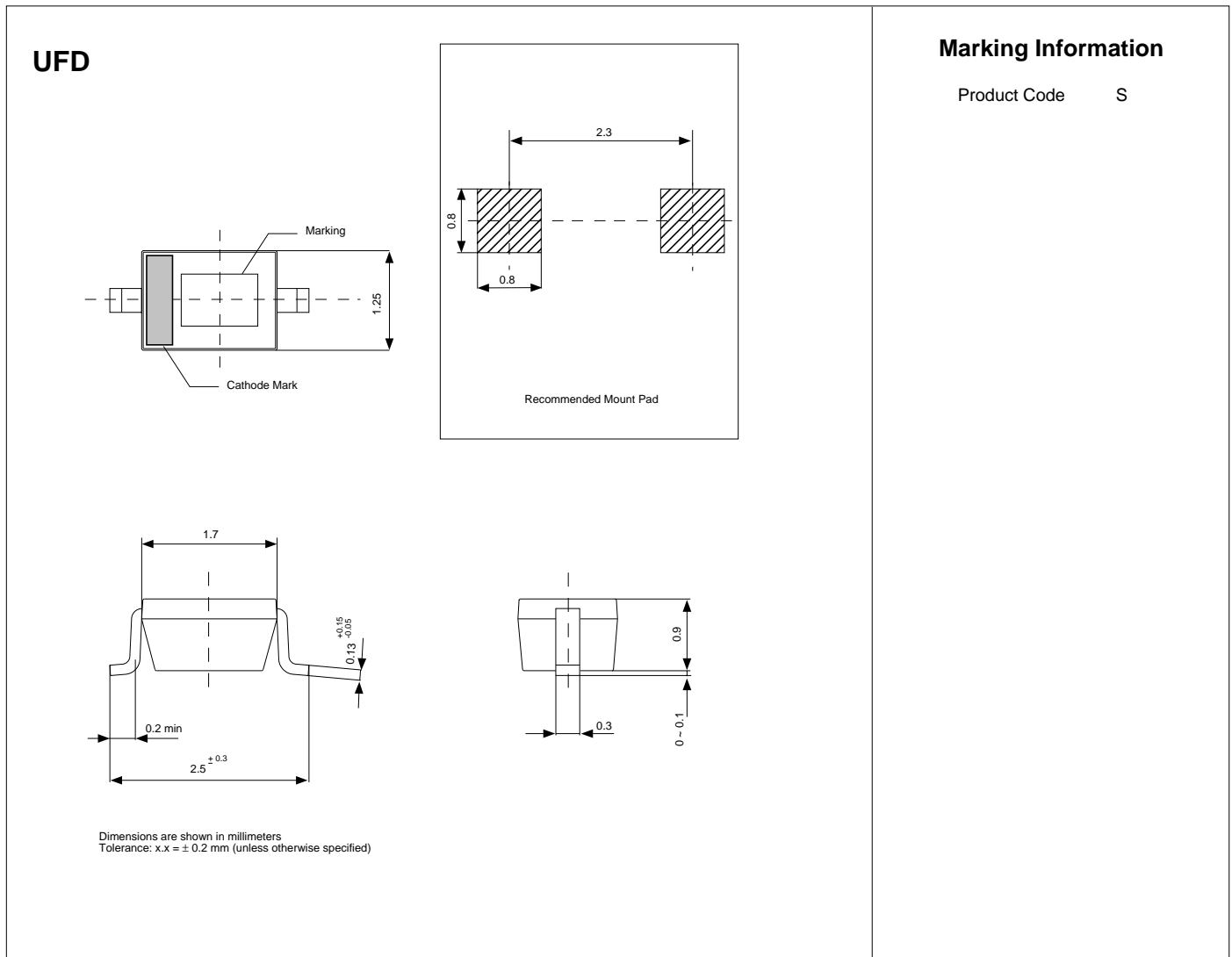
Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms,  $\pm 5\ \text{mVrms}$ ).

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

## TYPICAL PERFORMANCE CHARACTERISTICS



## PACKAGE OUTLINE



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