

## 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 KV1845E is a variable capacitance diode designed for UHF applications.

The KV1845E is available in a very small URD Surface Mount Package.

### CLASSIFICATION

(Unit: pF)

RANK		1	2	3
C	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

KV1845E



Tape/Reel Code

TAPE/REEL CODE  
TR: Tape Right

KV1845E



# KV1845E

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## ABSOLUTE MAXIMUM RATINGS

Reverse Voltage ..... 15 V  
Forward Current ..... 7 mA  
Power Dissipation ..... 25 mW

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

## ELECTRICAL CHARACTERISTICS

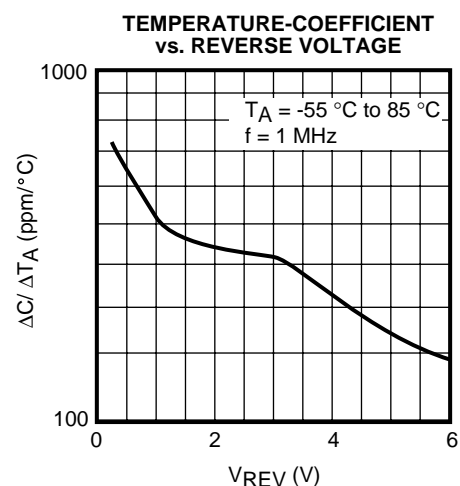
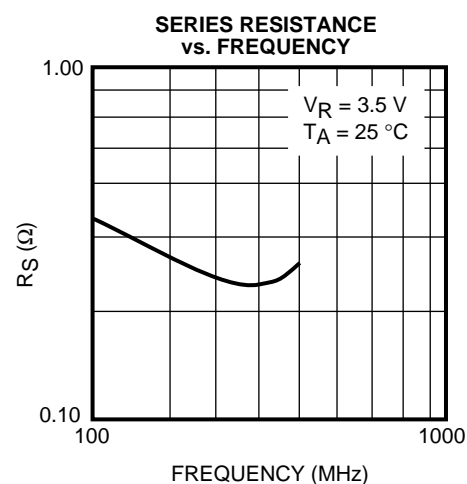
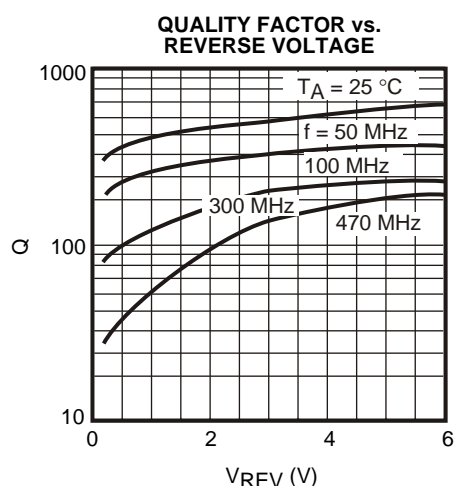
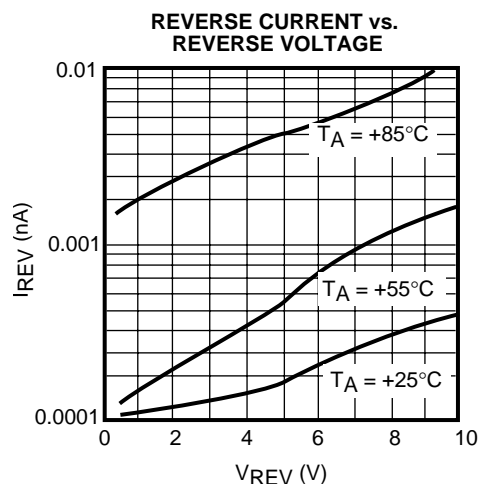
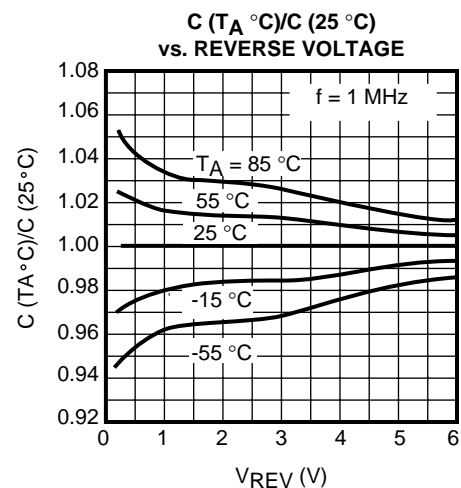
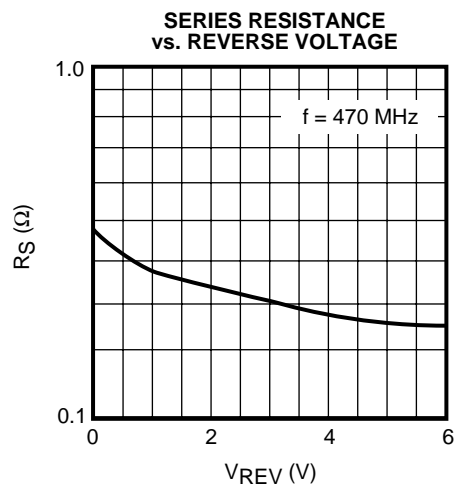
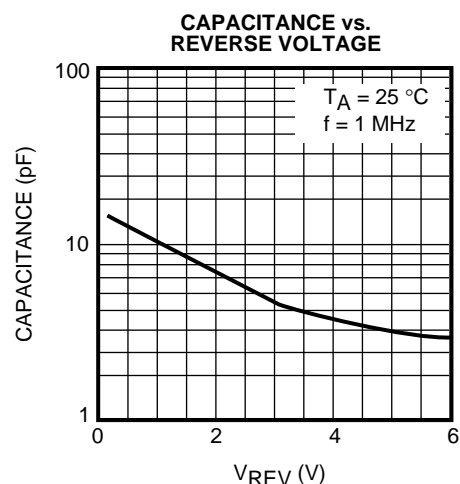
Test conditions:  $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$V_{REV}$	Reverse Voltage	$I_{REV} = 1\text{ }\mu\text{A}$	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,  $\pm 5\text{ mVrms}$ ).

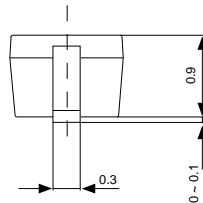
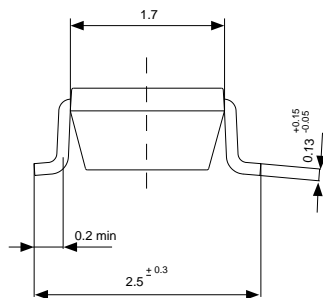
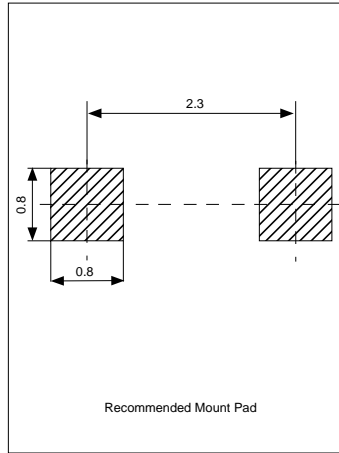
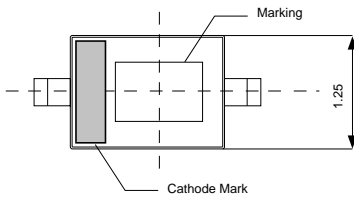
Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

## TYPICAL PERFORMANCE CHARACTERISTICS



## PACKAGE OUTLINE

### URD



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

### Marking Information

Product Code S



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