



KV1841E

## VARIABLE CAPACITANCE DIODE

### FEATURES

- Very Small URD Surface Mount Package
- Very Low Series Resistance
- Large Capacitance Ratio ( $A = 2.35$ )
- 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 KV1841E is a variable capacitance diode designed for UHF applications.

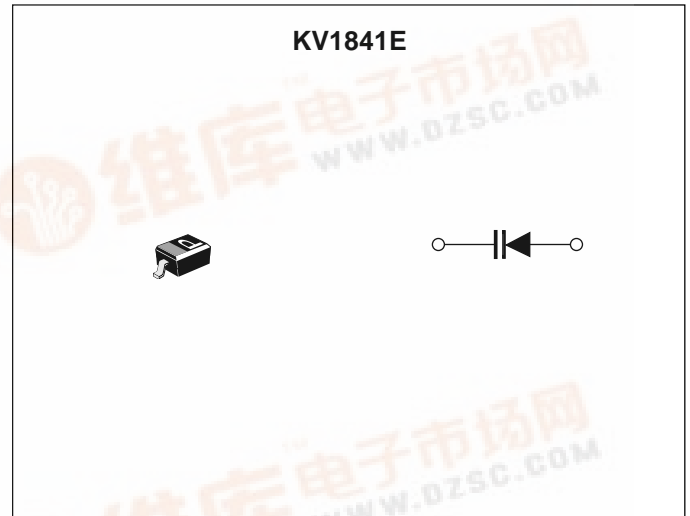
The KV1841E is available in a very small URD Surface Mount Package.

### CLASSIFICATION


(Unit: pF)

C		RANK			
		1	2	3	4
C <sub>2</sub>	MIN	13.50	13.93	14.35	14.78
	MAX	14.23	14.65	15.08	15.50

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

KV1841E    
 Tape/Reel Code

TAPE/REEL CODE  
TR: Tape Right



# KV1841E

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## ABSOLUTE MAXIMUM RATINGS

Reverse Voltage ..... 18 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

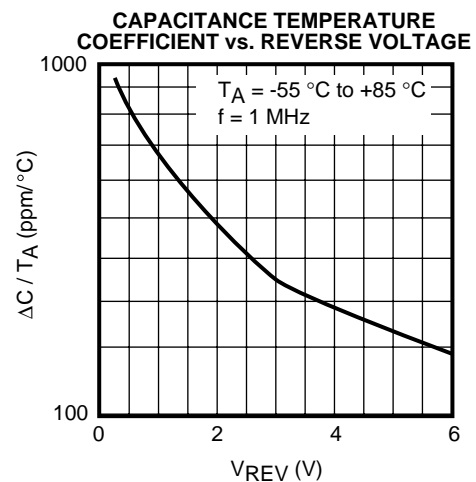
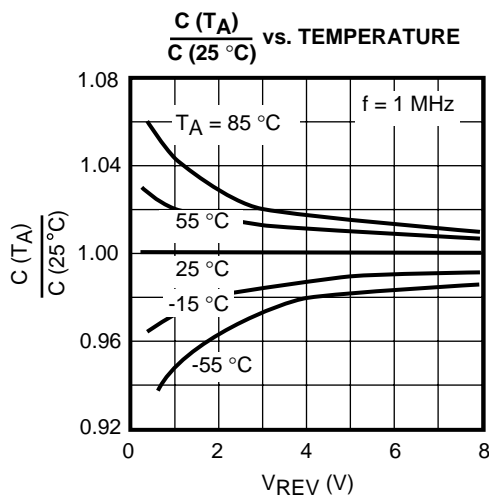
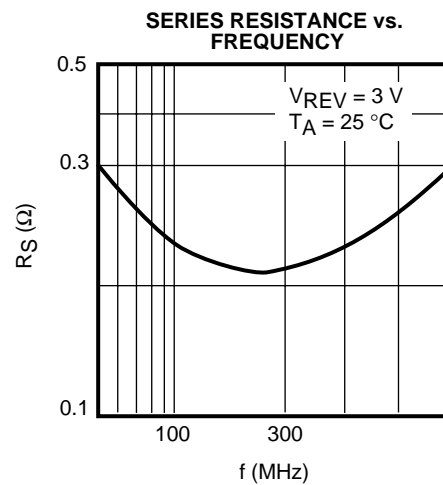
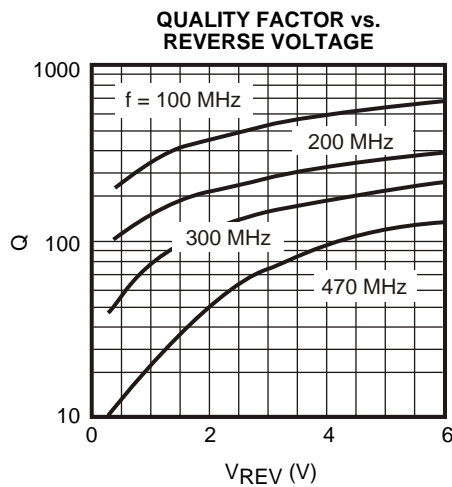
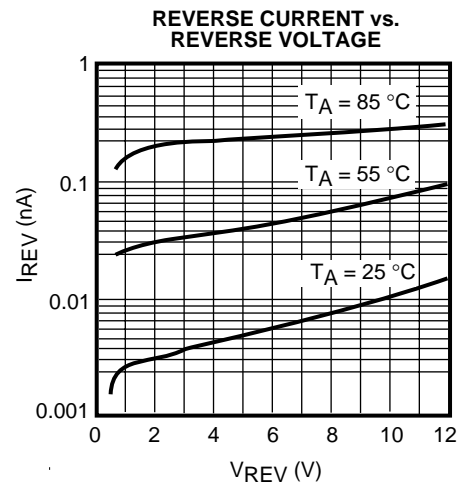
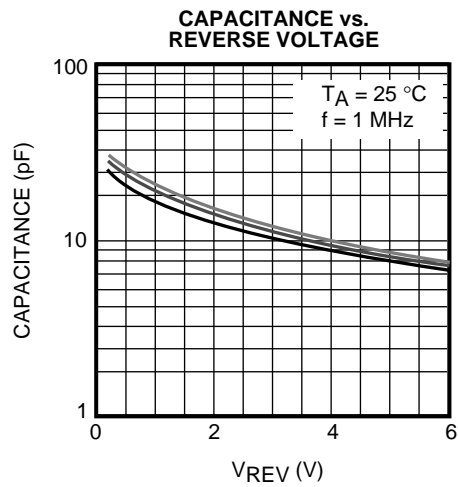
Test conditions:  $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$V_{REV}$	Reverse Voltage	$I_{REV} = 1\ \mu\text{A}$	12			V
$I_{REV}$	Reverse Current	$V_{REV} = 10\ \text{V}, f = 1\ \text{MHz}$			5.0	nA
$C_2$	Diode Capacitance 2	$V_{REV} = 2\ \text{V}, f = 1\ \text{MHz}$	13.5	14.5	15.5	pF
$C_6$	Diode Capacitance 6	$V_{REV} = 6\ \text{V}, f = 1\ \text{MHz}$	6.8	7.5	8.3	pF
$R_S$	Series Resistance	$C = 11\ \text{pF}, f = 470\ \text{MHz}$			0.30	$\Omega$
A	Capacitance Ratio	$C_1 / C_6$	2.35			

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

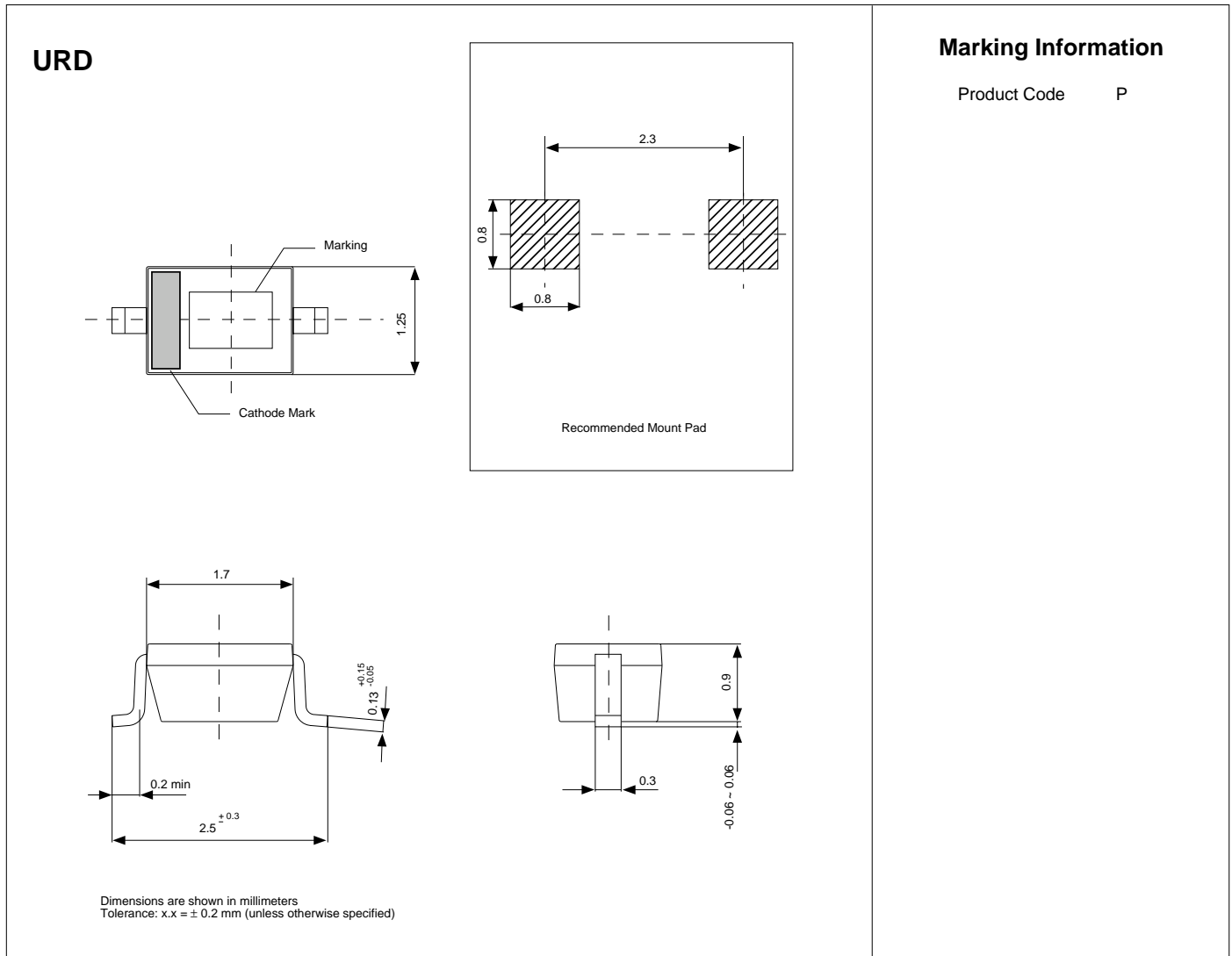
Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

## TYPICAL PERFORMANCE CHARACTERISTICS



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## PACKAGE OUTLINE



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