

### VARIABLE CAPACITANCE DIODE

#### FEATURES

- Very Small URD Surface Mount Package
- Very Low Series Resistance
- Large Capacitance Ratio (A = 2.21 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 KV1843E is a variable capacitance diode designed for UHF applications.

The KV1843E is available in a very small URD Surface Mount Package.

#### ORDERING INFORMATION

KV1843E    
Tape/Reel Code

TAPE/REEL CODE  
TR: Tape Right

KV1843E



# KV1843E

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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

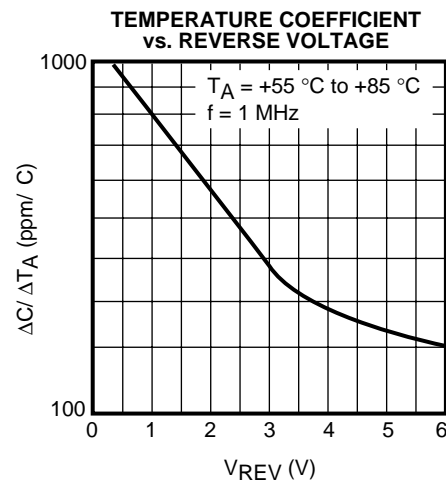
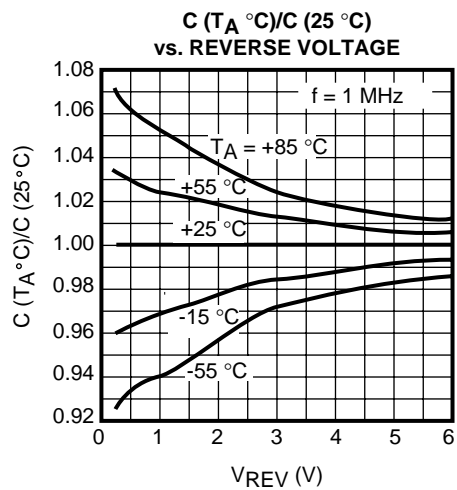
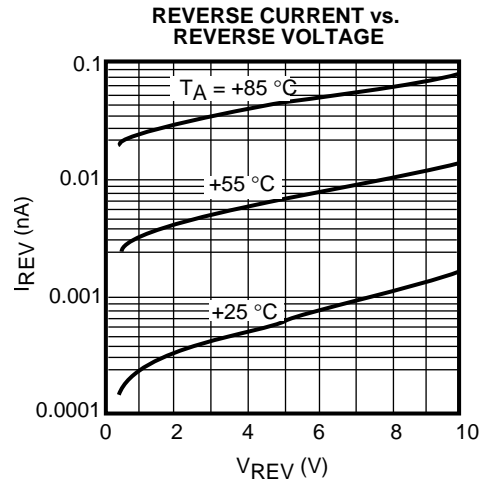
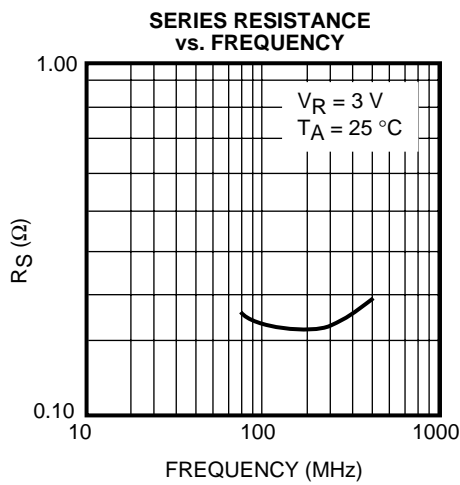
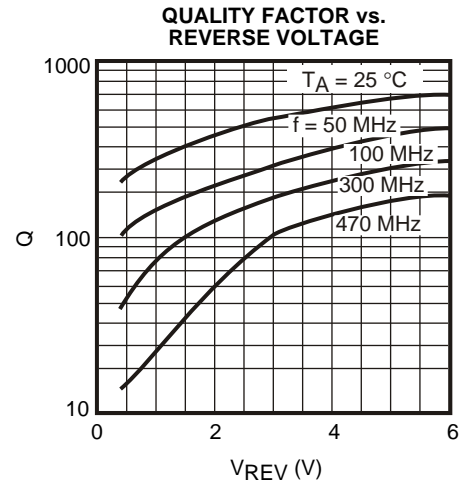
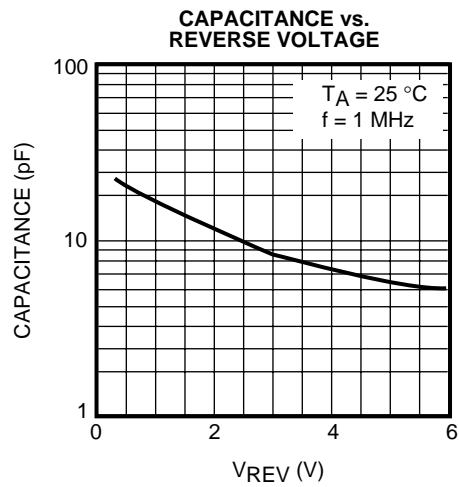
Test conditions:  $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$V_{REV}$	Reverse Voltage	$I_{REV} = 1\ \mu\text{A}$	12.0			V
$I_{REV}$	Reverse Current	$V_{REV} = 10\ \text{V}$			5.00	nA
$C_1$	Diode Capacitance 1	$V_{REV} = 1\ \text{V}, f = 1\ \text{MHz}$	17.09	18.14	19.20	pF
$C_4$	Diode Capacitance 4	$V_{REV} = 4\ \text{V}, f = 1\ \text{MHz}$	6.63	7.30	7.96	pF
$R_S$	Series Resistance	$C = 8\ \text{pF}, f = 470\ \text{MHz}$		0.35	0.40	$\Omega$
A	Capacitance Ratio	$C_1 / C_4$	2.21			

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

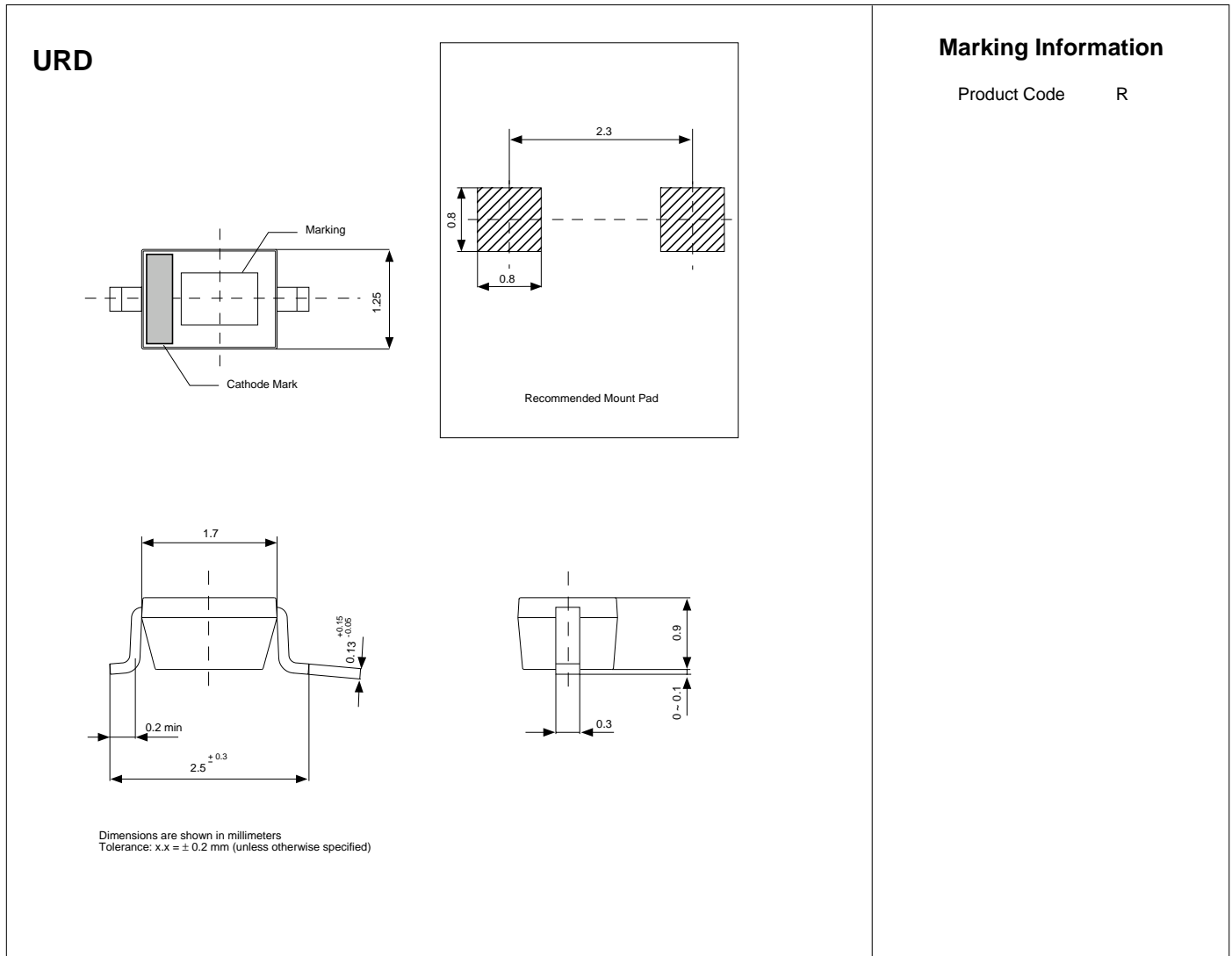
Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

TYPICAL PERFORMANCE CHARACTERISTICS



# KV1843E

## PACKAGE OUTLINE



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