



KV1835E

## VARIABLE CAPACITANCE DIODE

### FEATURES

- Very Small URD Surface Mount Package
- Very Low Operating Voltage (1 to 4 V)
- Large Capacitance Ratio ( $A = 2.8$  minimum)
- Excellent Linearity (CV Curve)
- Very Small Capacitance Deviation at Tape/Reel
- Very Low Series Resistance

### APPLICATIONS

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

### DESCRIPTION

The KV1835E is a variable capacitance diode designed for UHF applications.

The KV1835E is available in a very small URD Surface Mount Package.

### CLASSIFICATION

(Unit: pF)

RANK		1	2	3
C	MIN	11.8	12.3	13.0
	MAX	12.6	13.3	13.8

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

KV1835E



Tape/Reel Code

TAPE/REEL CODE  
TR: Tape Right

KV1835E



# KV1835E

## ABSOLUTE MAXIMUM RATINGS

Reverse Voltage ..... 28 V      Storage Temperature Range ..... -55 to +150 °C  
Forward Current ..... 10 mA      Operating Temperature Range ..... -55 to +85 °C  
Power Dissipation ..... 50 mW

## ELECTRICAL CHARACTERISTICS

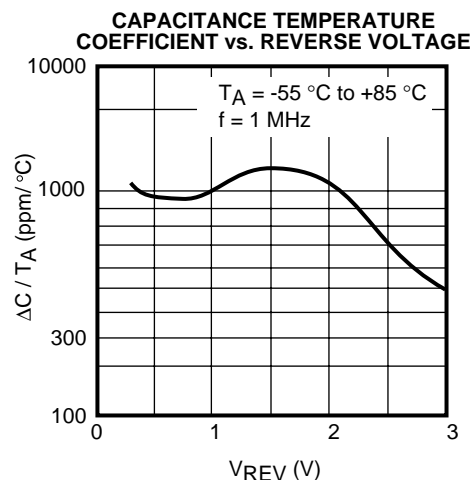
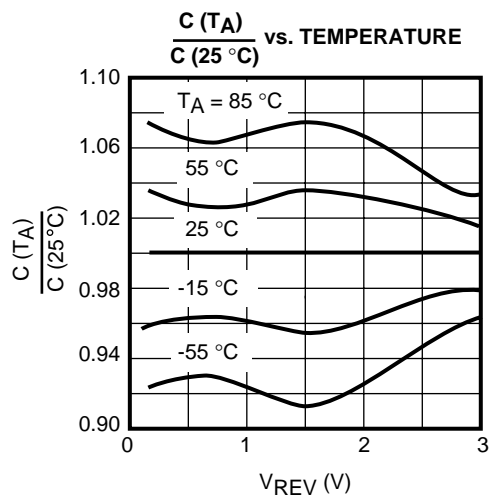
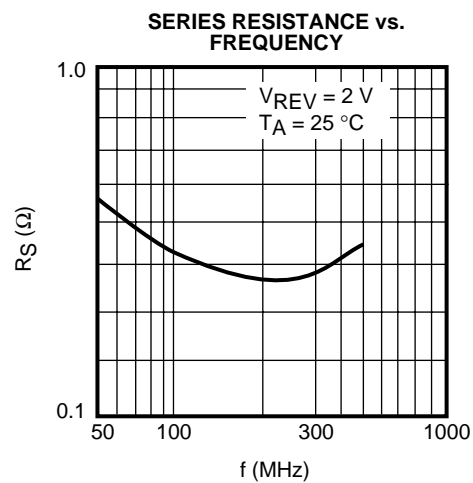
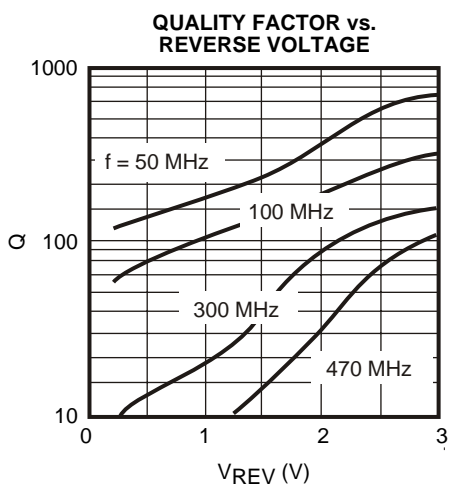
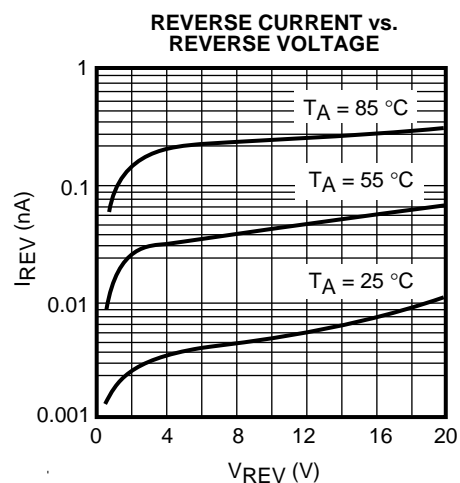
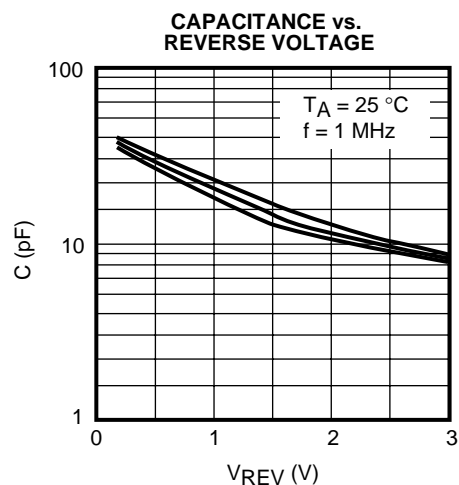
Test conditions:  $T_A = 25\text{ °C}$

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
$C_{0.5}$	Diode Capacitance 0.5	$V_{REV} = 0.5\text{ V}$ , $f = 1\text{ MHz}$	36.5		42.5	pF
$C_2$	Diode Capacitance 2	$V_{REV} = 2\text{ V}$ , $f = 1\text{ MHz}$	11.8		13.8	pF
$R_S$	Series Resistance	$V_{REV} = 1.5\text{ V}$ , $f = 100\text{ MHz}$			0.6	$\Omega$
A	Capacitance Ratio	$C_{0.5} / C_2$	2.8			

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.

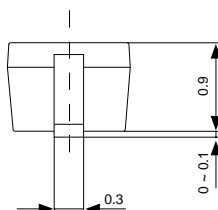
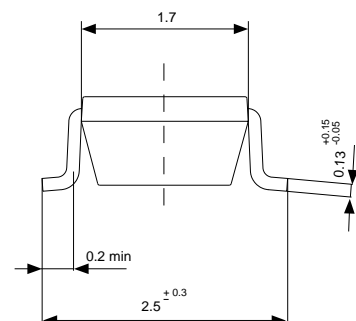
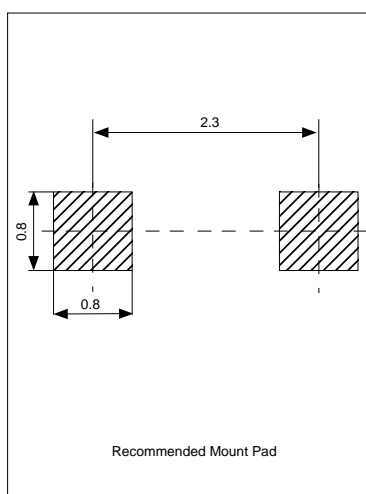
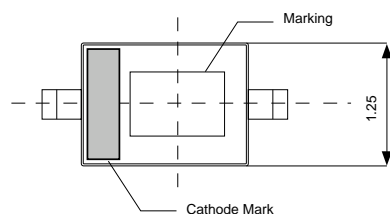
## TYPICAL PERFORMANCE CHARACTERISTICS



# KV1835E

## PACKAGE OUTLINE

### URD



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

### Marking Information

Product Code J



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