

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Small UFD 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 KV1835K is a variable capacitance diode designed for UHF applications.

The KV1835K is available in a very small UFD Surface Mount Package.


CLASSIFICATION

(Unit: pF)

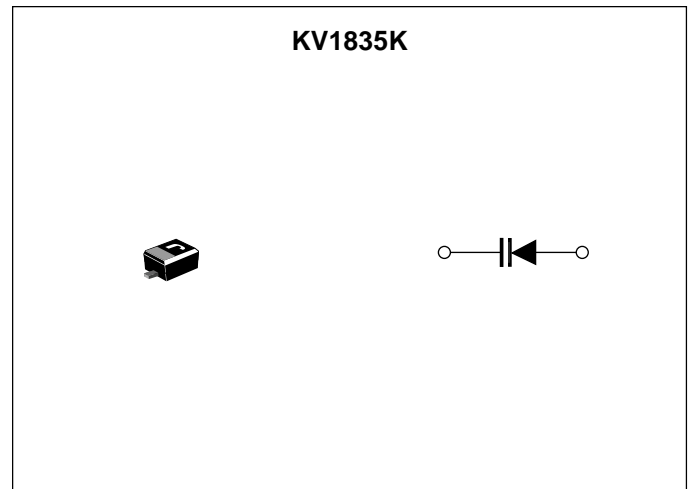
C		RANK		
		1	2	3
C ₂	MIN	11.8	12.3	13.0
	MAX	12.6	13.3	13.8

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

KV1835K  Tape/Reel Code

TAPE/REEL CODE
TR: Tape Right



KV1835K

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

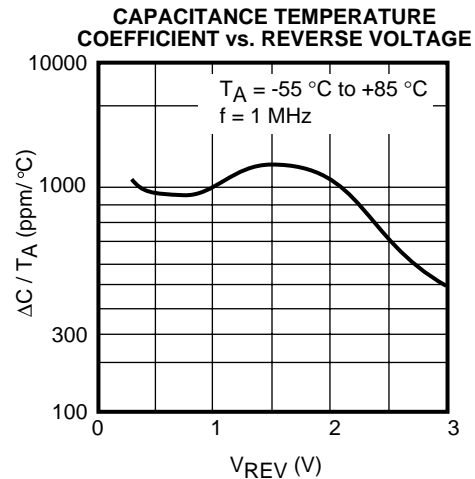
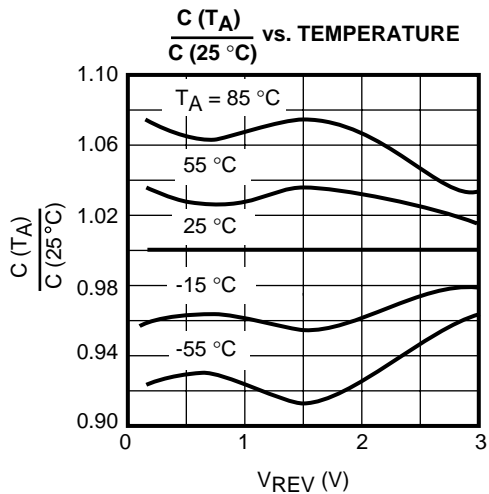
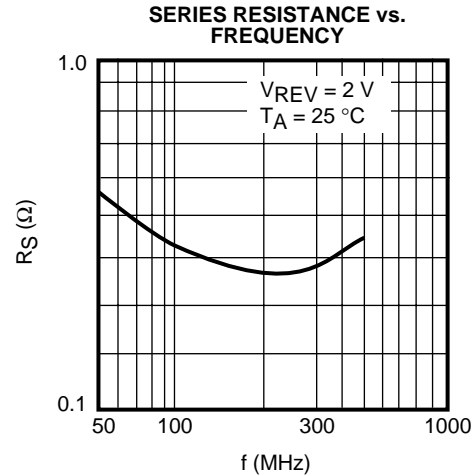
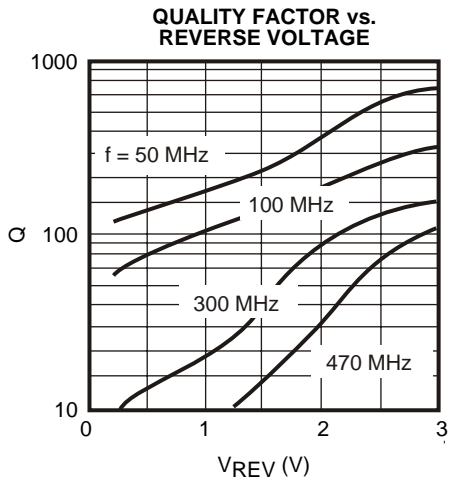
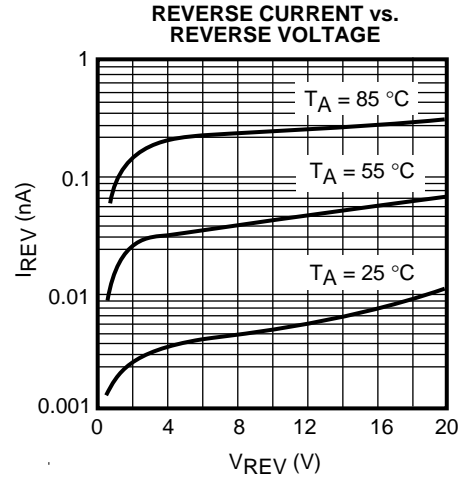
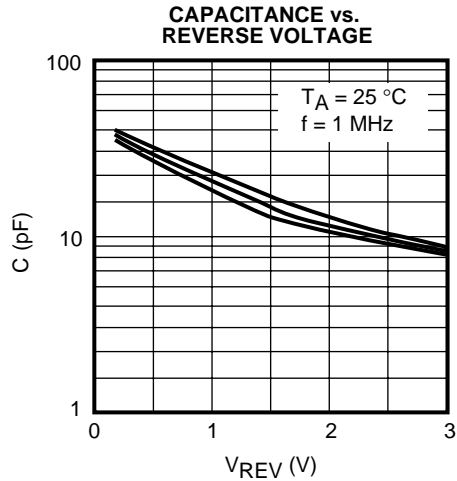
Test conditions: $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 10\ \mu\text{A}$	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	Ω
A	Capacitance Ratio	$C_{0.5} / C_2$	2.8			

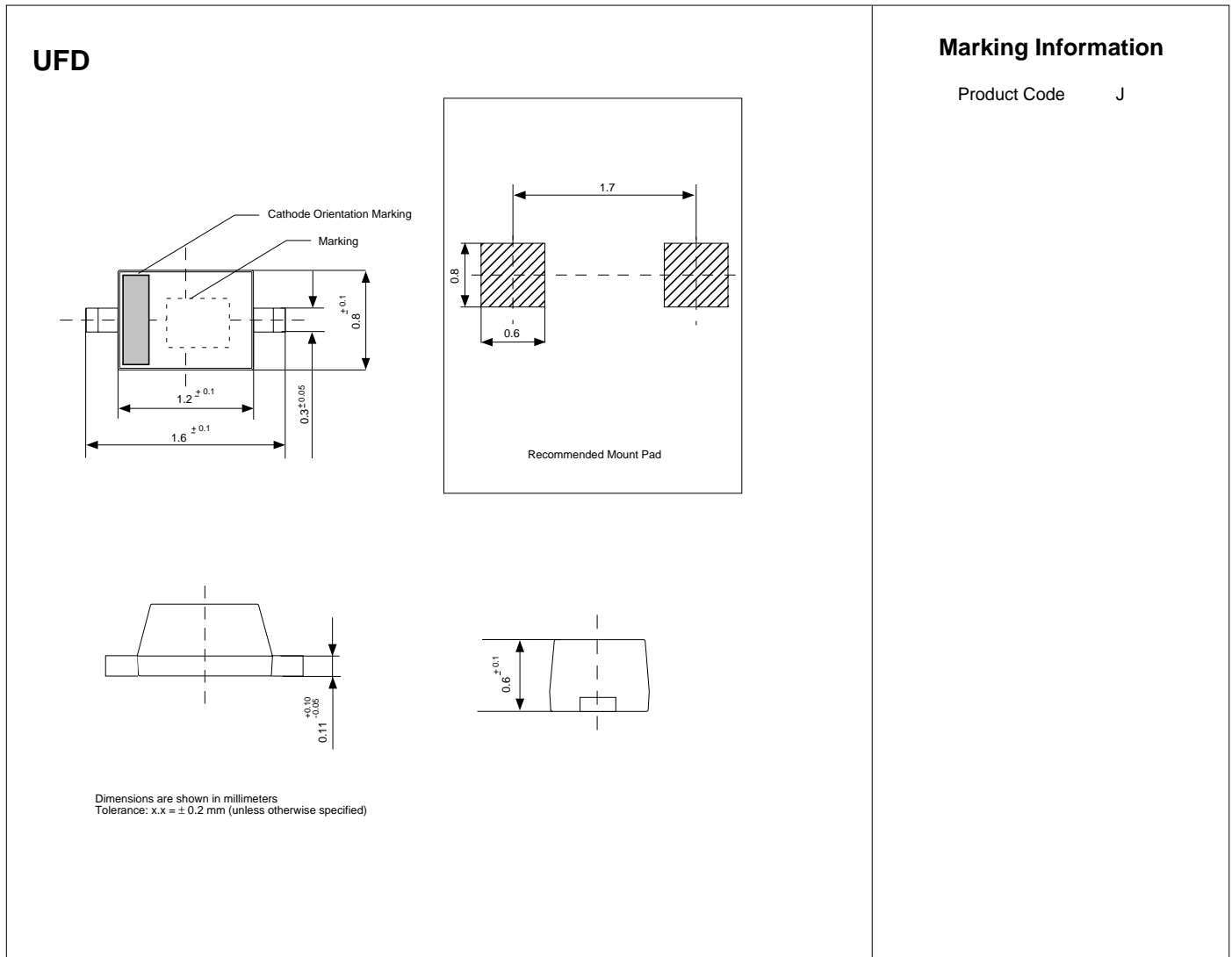
Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms, $\pm 5\ \text{mVrms}$).

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

TYPICAL PERFORMANCE CHARACTERISTICS



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