

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 KV1845K is a variable capacitance diode designed for UHF applications.

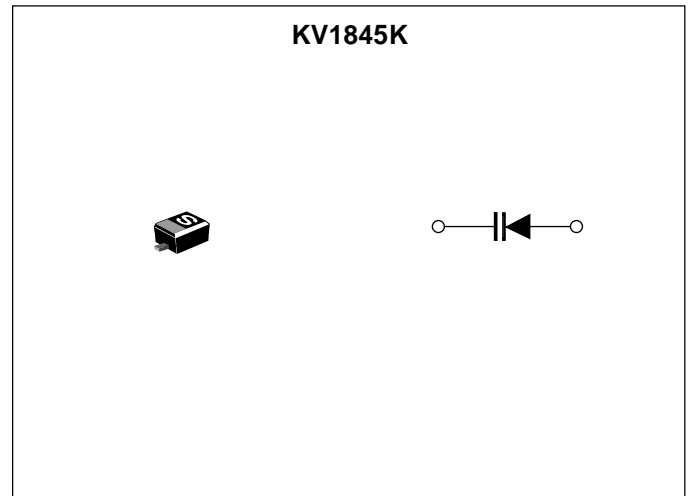
The KV1845K is available in a very small URD Surface Mount Package.

CLASSIFICATION


(Unit: pF)

C		RANK		
		1	2	3
C ₁	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

KV1845K 
 Tape/Reel Code

TAPE/REEL CODE
 TR: Tape Right

KV1845K

ABSOLUTE MAXIMUM RATINGS

Reverse Voltage 15 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

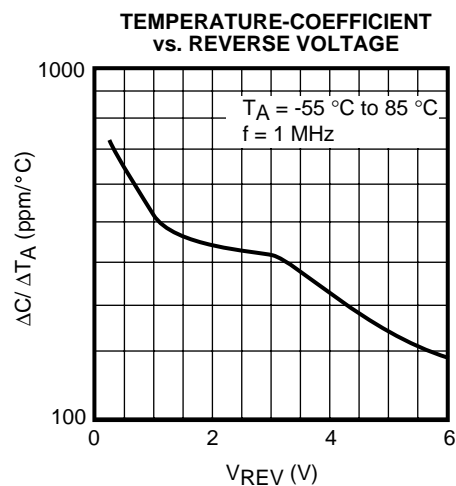
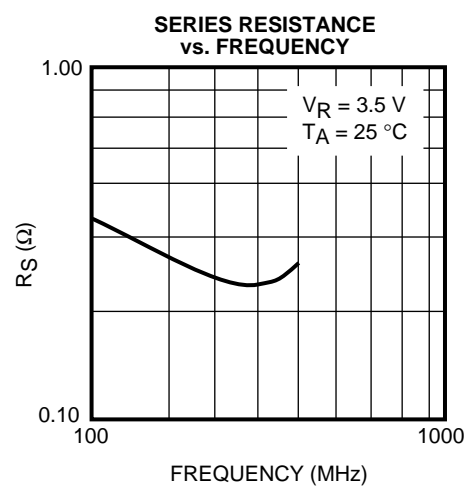
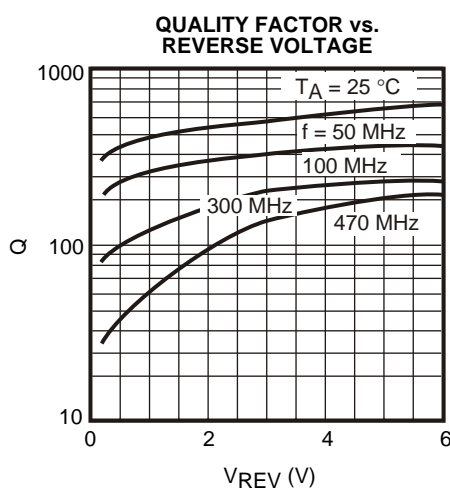
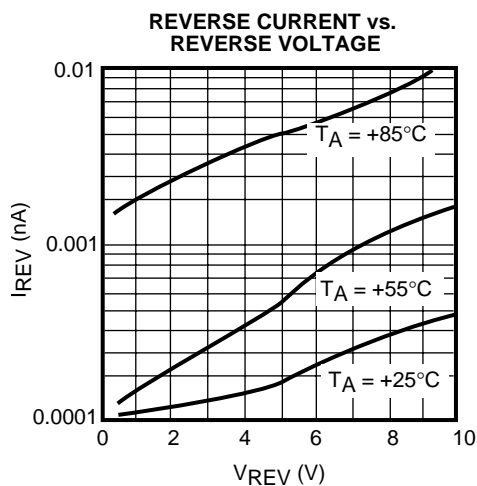
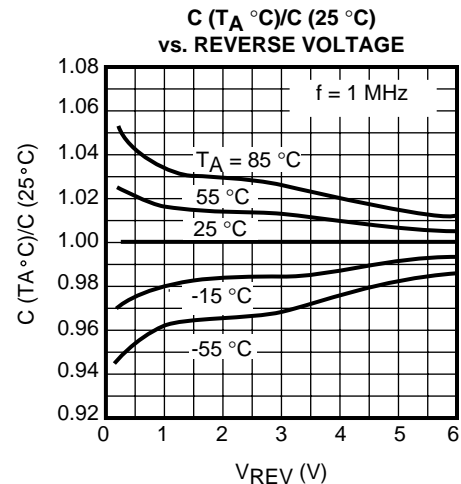
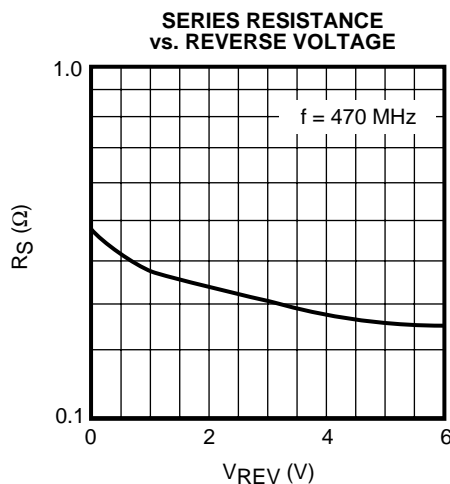
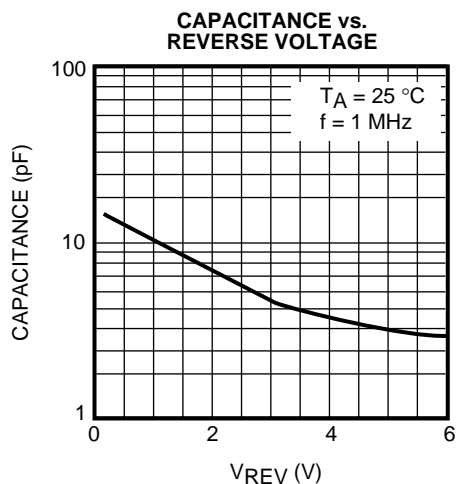
Test conditions: $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 1\ \mu\text{A}$	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	Ω
A	Capacitance Ratio	C_1 / C_4	2.20			

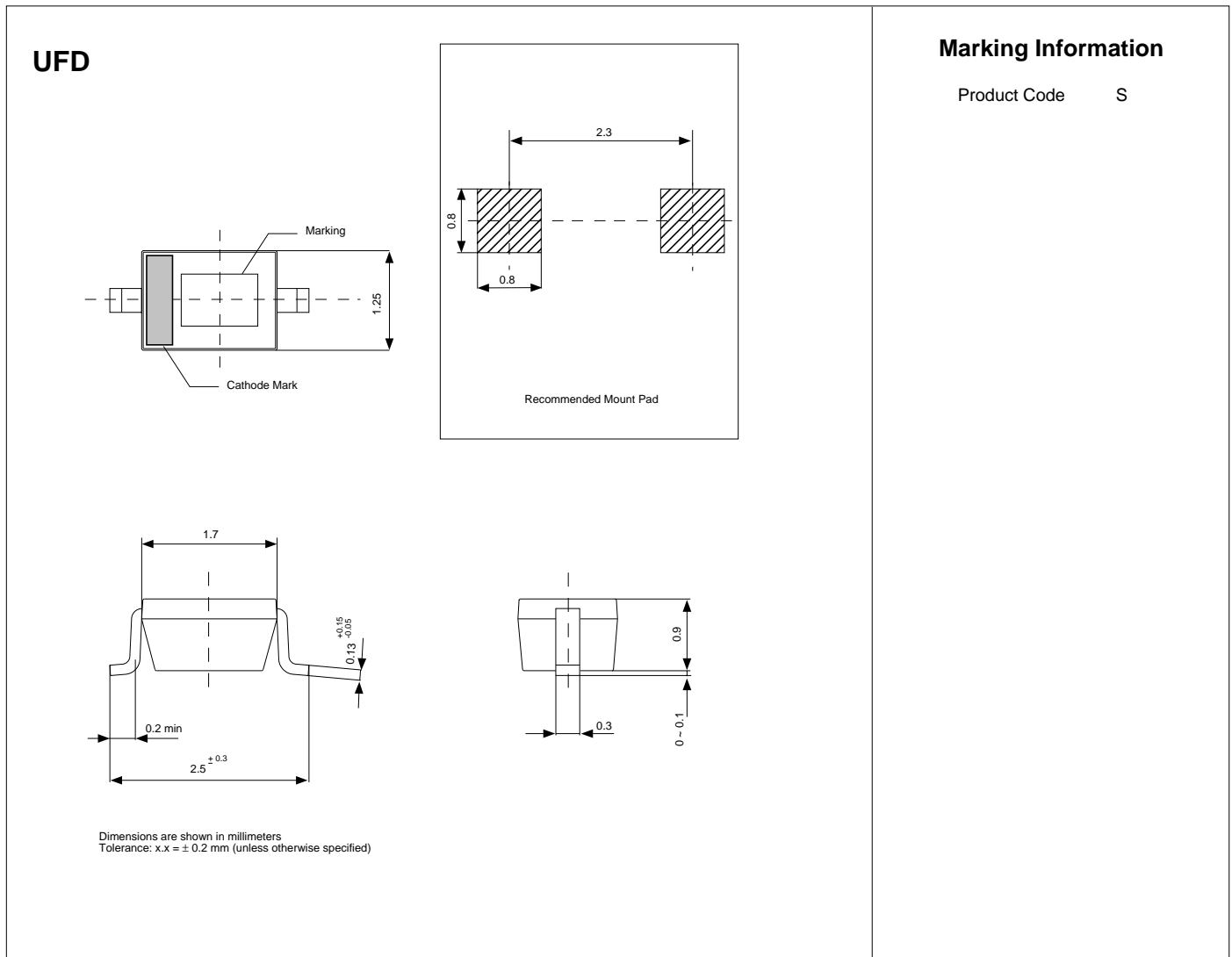
Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms, ± 5 mVrms).

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

TYPICAL PERFORMANCE CHARACTERISTICS



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