

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Small UFD 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 KV1841K is a variable capacitance diode designed for UHF applications.

The KV1841K is available in a very small UFD Surface Mount Package.

CLASSIFICATION

(Unit: pF)

RANK		1	2	3	4
C	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

KV1841K  Tape/Reel Code

TAPE/REEL CODE
TR: Tape Right

KV1841K



KV1841K

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

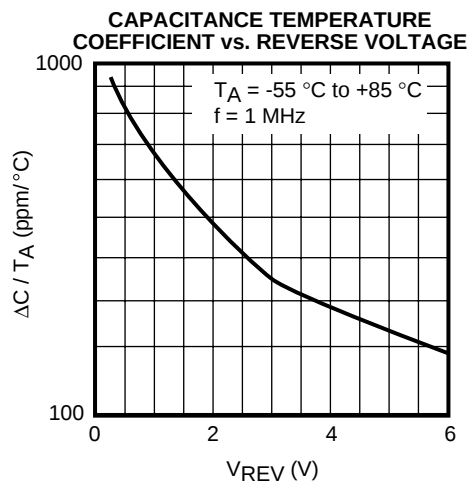
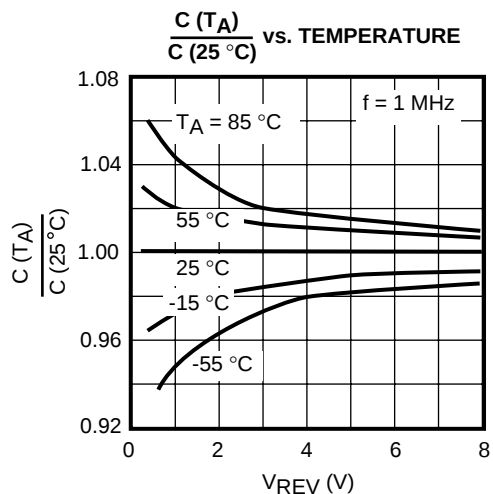
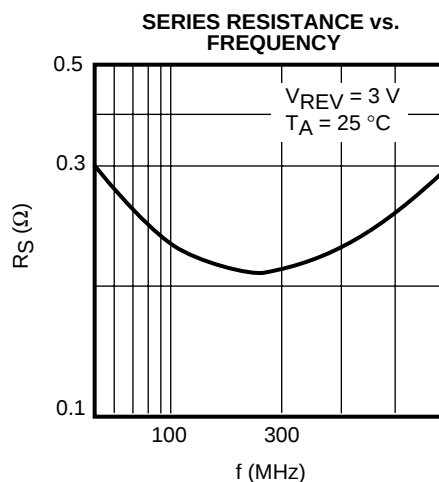
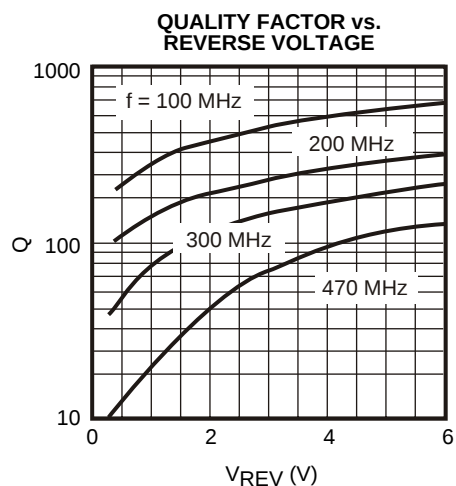
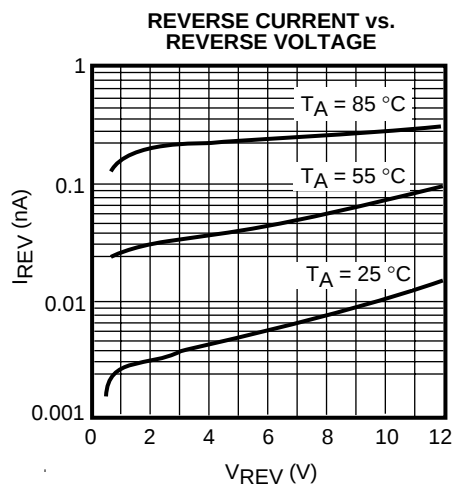
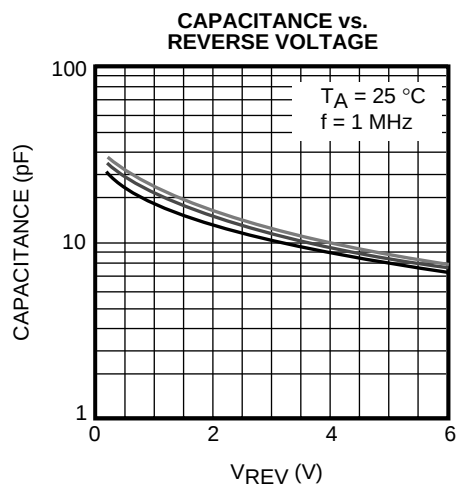
Test conditions: $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 1\text{ }\mu\text{A}$	12			V
I_{REV}	Reverse Current	$V_{REV} = 10\text{ V}$			5.0	nA
C_2	Diode Capacitance 2	$V_{REV} = 2\text{ V}$, $f = 1\text{ MHz}$	13.50	14.50	15.50	pF
C_6	Diode Capacitance 6	$V_{REV} = 6\text{ V}$, $f = 1\text{ MHz}$	6.80	7.50	8.30	pF
R_S	Series Resistance	$C = 11\text{ pF}$, $f = 470\text{ MHz}$			0.3	Ω
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, $\pm 5\text{ mVrms}$).

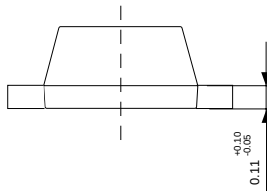
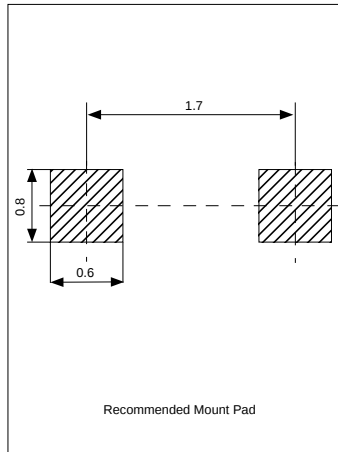
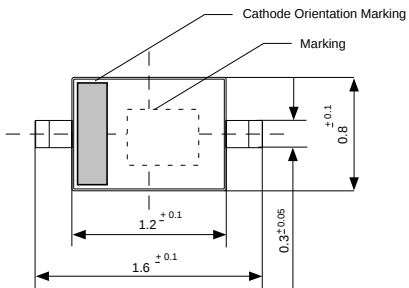
Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

TYPICAL PERFORMANCE CHARACTERISTICS



PACKAGE OUTLINE

UFD



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

Marking Information

Product Code P



Toko America, Inc. Headquarters
1250 Feehanville Drive, Mount Prospect, Illinois 60056
Tel: (847) 297-0070 Fax: (847) 699-7864

TOKO AMERICA REGIONAL OFFICES

Midwest Regional Office
Toko America, Inc.
1250 Feehanville Drive
Mount Prospect, IL 60056
Tel: (847) 297-0070
Fax: (847) 699-7864

Western Regional Office
Toko America, Inc.
2480 North First Street, Suite 260
San Jose, CA 95131
Tel: (408) 432-8281
Fax: (408) 943-9790

Eastern Regional Office
Toko America, Inc.
107 Mill Plain Road
Danbury, CT 06811
Tel: (203) 748-6871
Fax: (203) 797-1223

Semiconductor Technical Support
Toko Design Center
4755 Forge Road
Colorado Springs, CO 80907
Tel: (719) 528-2200
Fax: (719) 528-2375

Visit our Internet site at <http://www.tokoam.com>

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