

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Small URD Surface Mount Package
- Very Low Series Resistance
- Large Capacitance Ratio (A = 1.85 minimum)
- Excellent Linearity (CV Curve)
- Very Small Capacitance Deviation at Tape/Reel

APPLICATIONS

- UHF Communications Equipment
- Voltage Controlled Oscillator
- 900 MHz Communications Systems
- GPS Equipment

DESCRIPTION

The KV1847E is a variable capacitance diode designed for UHF applications.

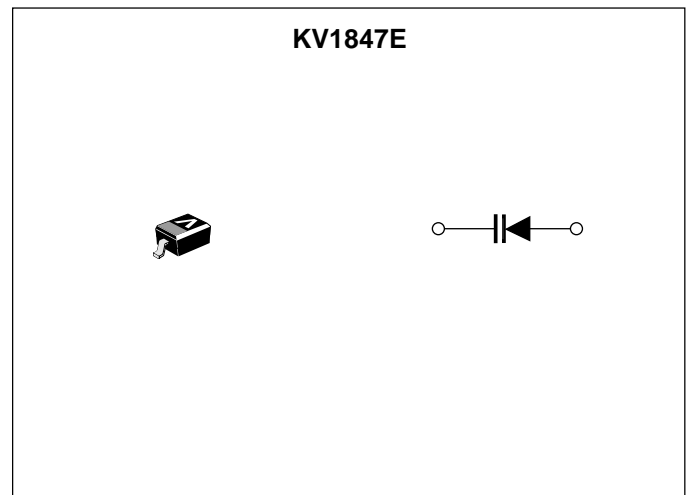
The KV1847E is available in a very small URD Surface Mount Package.

CLASSIFICATION


(Unit: pF)

C		RANK		
		1	2	3
C ₁	MIN	4.10	4.32	4.83
	MAX	4.47	4.98	5.20

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

KV1847E 
 Tape/Reel Code

TAPE/REEL CODE
 TR: Tape Right

KV1847E

ABSOLUTE MAXIMUM RATINGS

Reverse Voltage 15V Storage Temperature Range -55 to +150 °C
Forward Current 7 mA Operating Temperature Range -55 to +85 °C
Power Dissipation 25 mW

ELECTRICAL CHARACTERISTICS

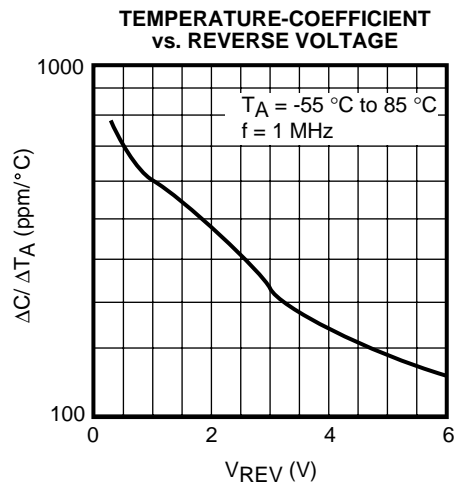
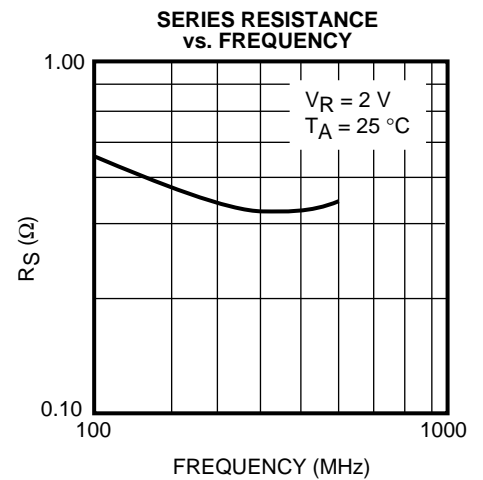
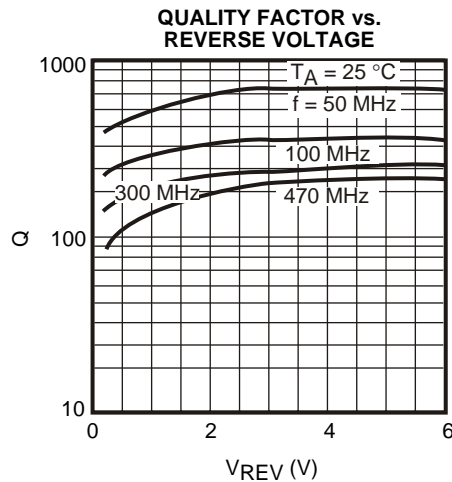
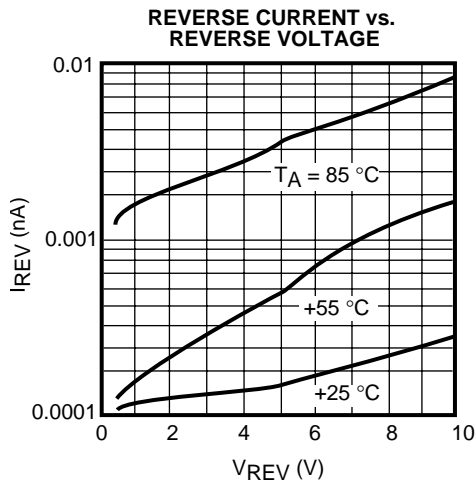
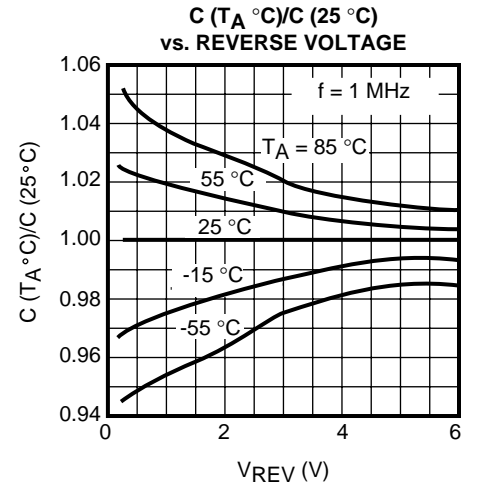
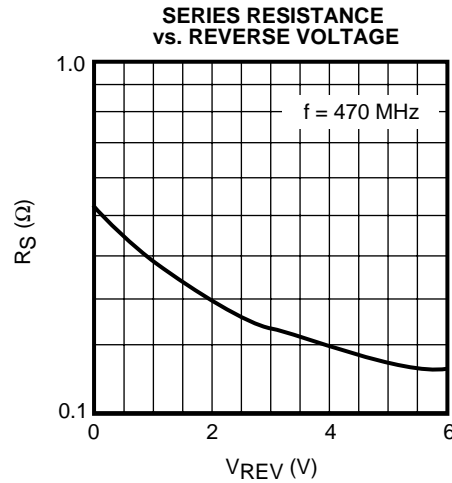
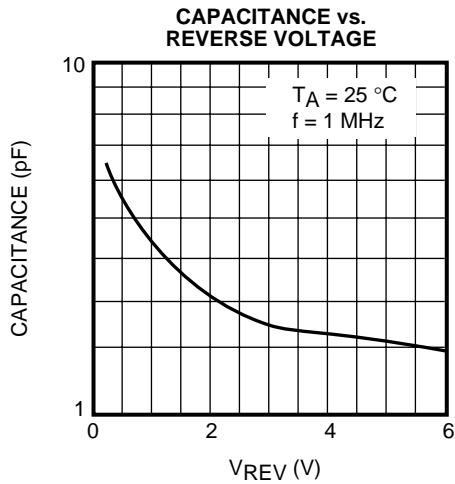
Test conditions: $T_A = 25\text{ °C}$

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	$V_{REV} = 1\ \text{V}, f = 1\ \text{MHz}$	4.1	4.65	5.2	pF
C_4	Diode Capacitance 4	$V_{REV} = 4\ \text{V}, f = 1\ \text{MHz}$	1.9	2.23	2.56	pF
R_S	Series Resistance	$C = 3\ \text{pF}, f = 470\ \text{MHz}$		0.35	0.40	Ω
A	Capacitance Ratio	C_1 / C_4	1.85			

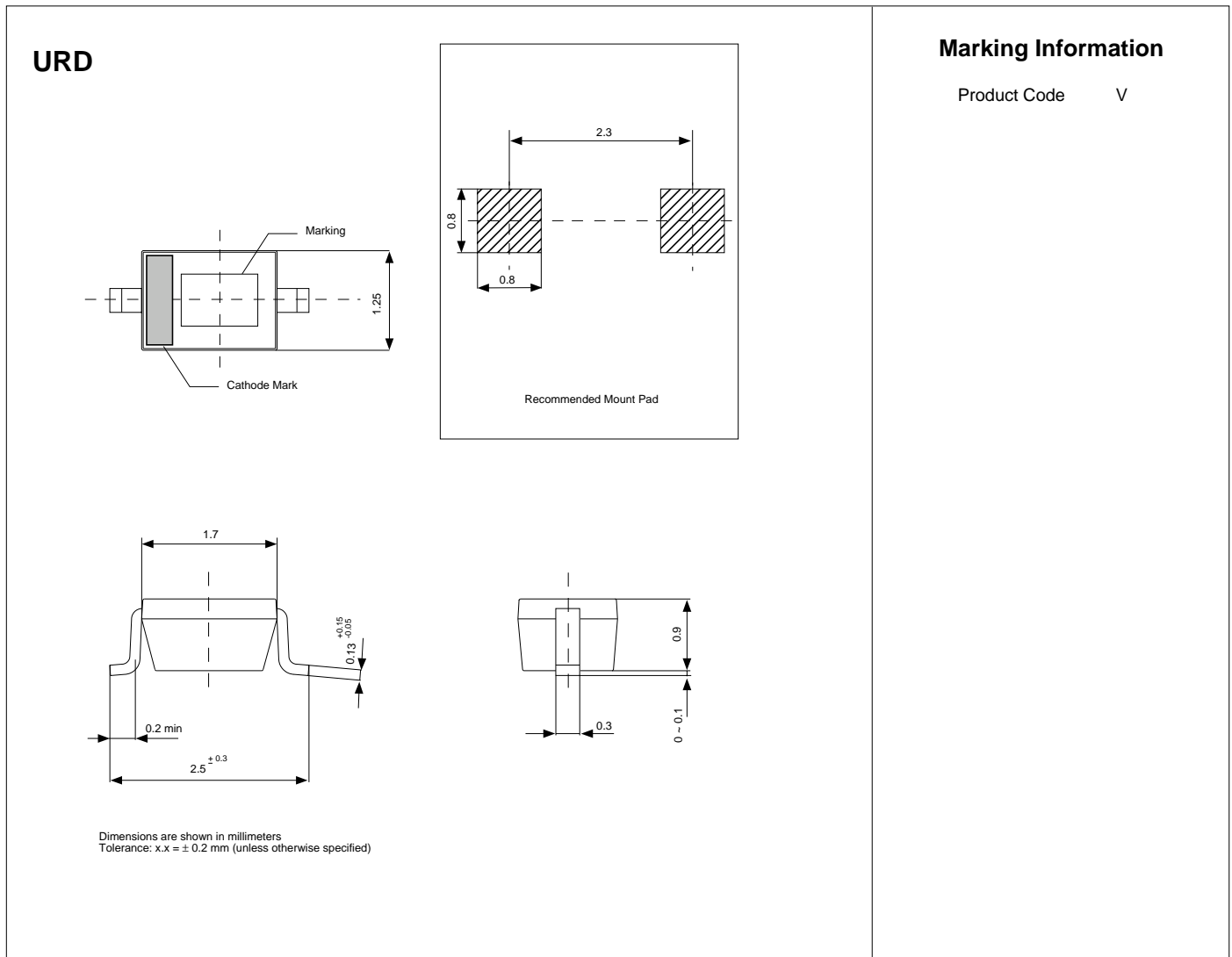
Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms, ± 5 mVrms).

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

TYPICAL PERFORMANCE CHARACTERISTICS



PACKAGE OUTLINE



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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