



KV1440

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Low Series Resistance
- Excellent Linearity (CV Curve)
- Large Capacitance Ratio (A1 = 1.23 minimum, A2 = 1.65 minimum)
- Two Diodes in a Miniature Package (SOT23-3)
- Very Small Capacitance Deviation at Tape/Reel

APPLICATIONS

- FM Radio
- Voltage Controlled Oscillator

DESCRIPTION

The KV1440 is specially made to be used as a tuning element in radio cassettes, stereos, car radios, and other consumer radios.

The KV1440 minimizes cross modulation, allowing good signal-to-noise ratio in the overall design.


The KV1440 is available in the miniature SOT23-3 surface mount package.

CLASSIFICATION

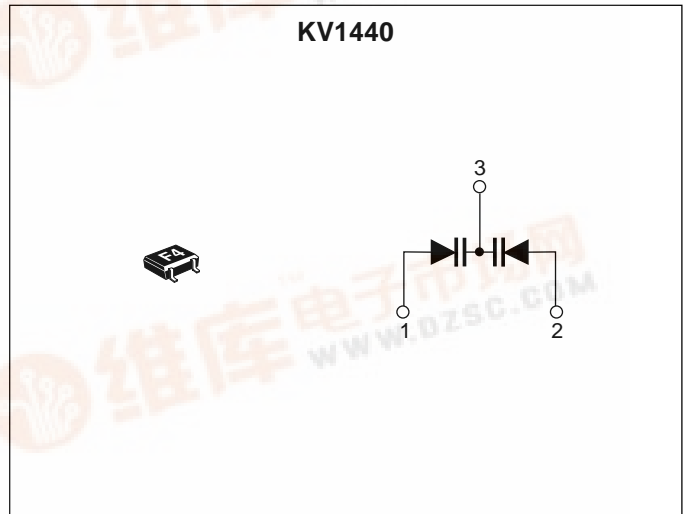
(Unit: pF)

C		RANK			
		1	2	3	4
C ₂	MIN	43.00	44.00	45.00	46.00
	MAX	44.60	45.60	46.60	47.60

ORDERING INFORMATION

KV1440 
 _____ Tape/Reel Code

TAPE/REEL CODE
 TL: Tape Left



KV1440

ABSOLUTE MAXIMUM RATINGS

Reverse Voltage 18 V Storage Temperature Range -55 to +150 °C
Forward Current 50 mA Operating Temperature Range -55 to +85 °C
Power Dissipation 100 mW Lead Soldering Temperature (10 s) 235 °C

ELECTRICAL CHARACTERISTICS

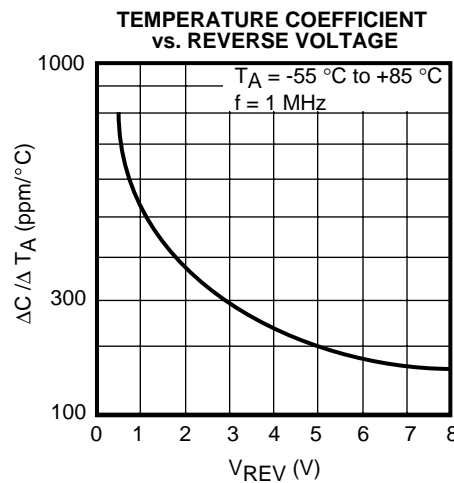
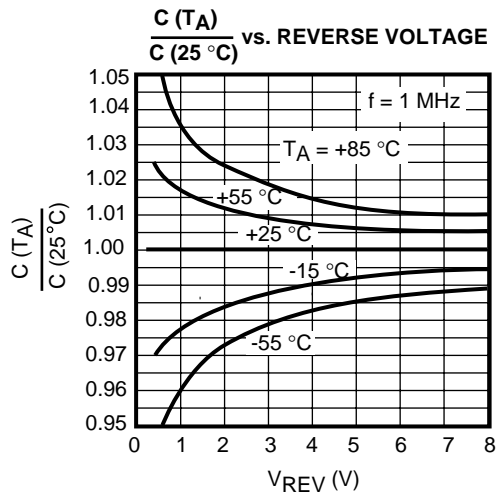
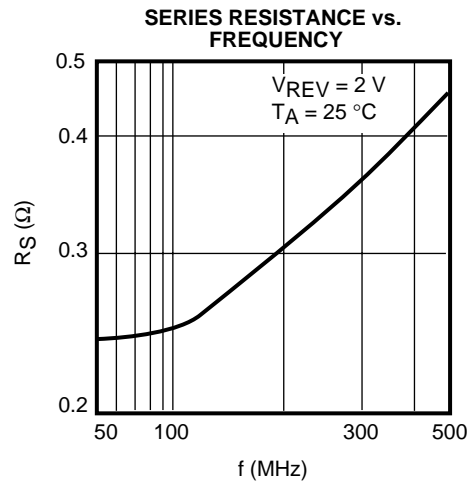
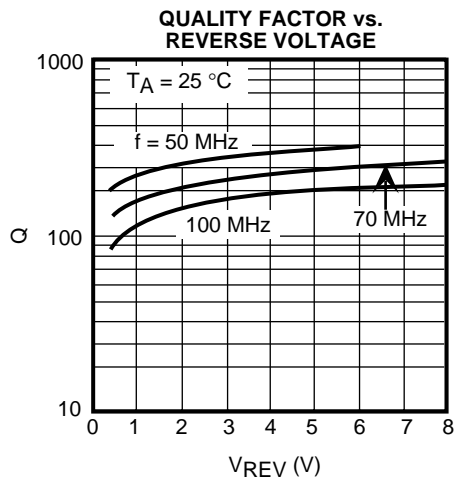
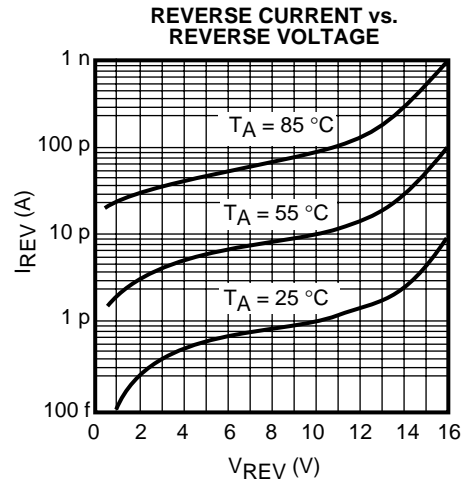
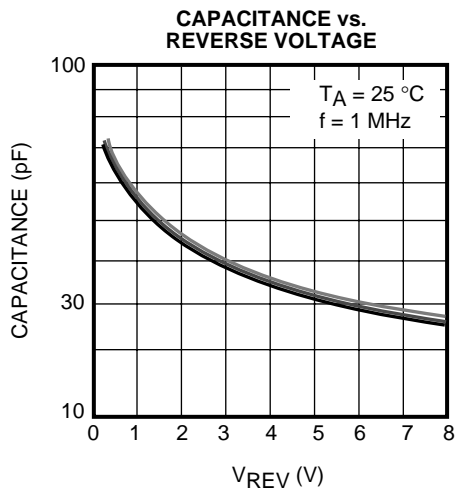
Test conditions: $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 10\text{ }\mu\text{A}$	16			V
I_{REV}	Reverse Current	$V_{REV} = 10.0\text{ V}$			50	nA
C_2	Diode Capacitance 2	$V_{REV} = 2.0\text{ V}$, $f = 1\text{ MHz}$	43.00		47.60	pF
Q	Quality Factor	$V_{REV} = 3.0\text{ V}$, $f = 100\text{ MHz}$	100			
A1	Capacitance Ratio	C_2 / C_4	1.23		1.33	
A2	Capacitance Ratio	C_2 / C_8	1.65		1.75	

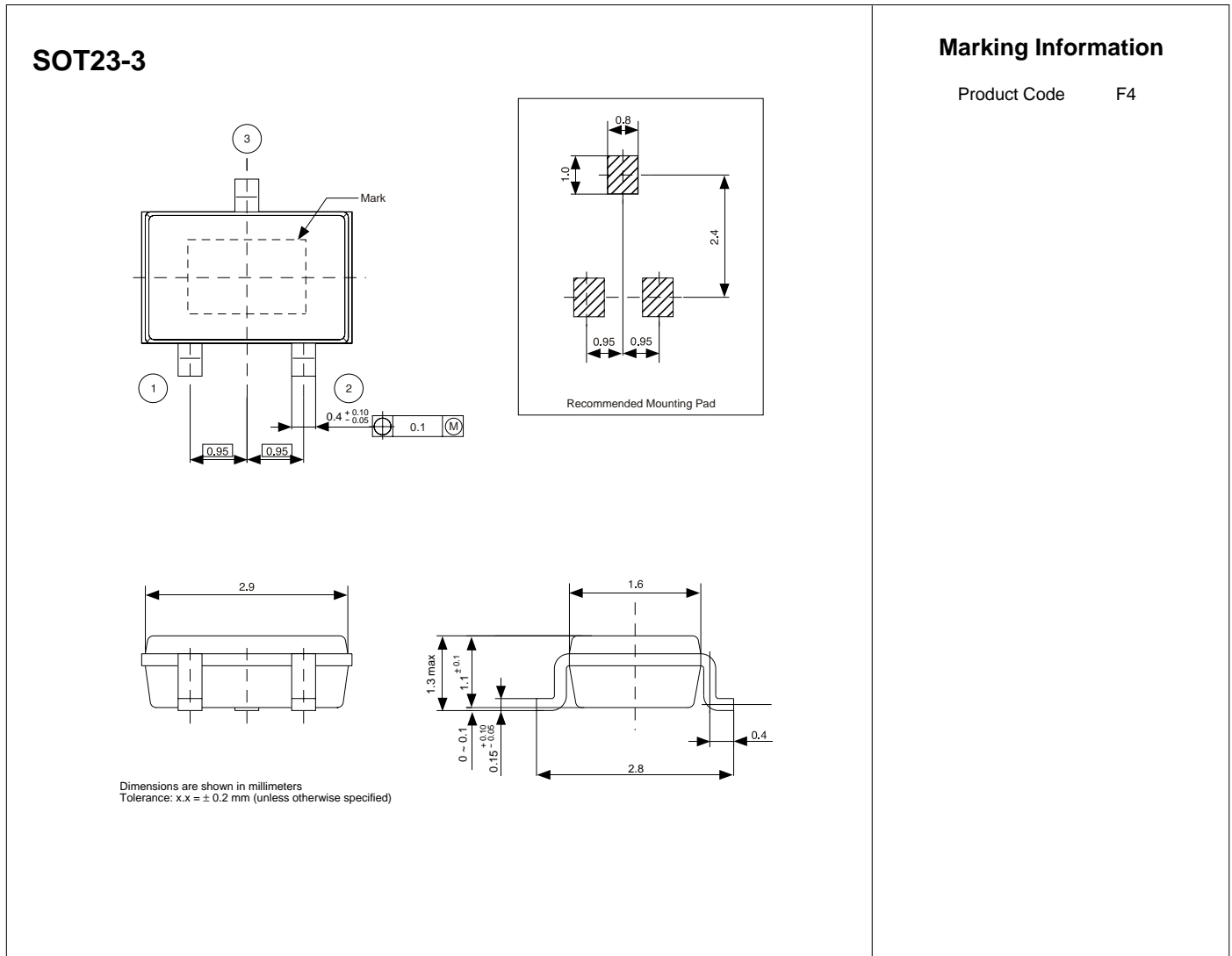
Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms, $\pm 5\text{ mVrms}$).

Note 2: Quality Factor 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>

The information furnished by TOKO, Inc. is believed to be accurate and reliable. However, TOKO reserves the right to make changes or improvements in the design, specification or manufacture of its products without further notice. TOKO does not assume any liability arising from the application or use of any product or circuit described herein, nor for any infringements of patents or other rights of third parties which may result from the use of its products. No license is granted by implication or otherwise under any patent or patent rights of TOKO, Inc.