

VARIABLE CAPACITANCE DIODE

FEATURES

- Excellent Linearity (CV Curve)
- Large Capacitance Ratio ($A = 2.00$ minimum) with Very Low Series Resistance
- Two Diodes in a Miniature Package (SOT23-3)
- Very Small Capacitance Deviation at Tape/Reel

APPLICATIONS

- FM Radio
- Voltage Controlled Oscillator

DESCRIPTION

The KV1410 is specially made to be used as a tuning element in radio cassettes, stereos, car radios, and other consumer radios.

The KV1410 minimizes cross modulation, allowing good signal-to-noise ratio in the overall design.

The KV1410 is available in the miniature SOT23-3 surface mount package.

CLASSIFICATION

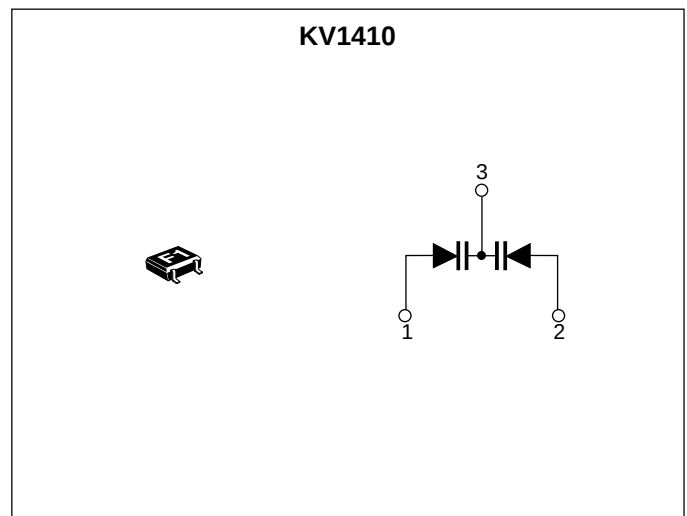
(Unit: pF)

C \ RANK		1	2	3	4
C ₂	MIN	41.33	42.49	43.69	44.92
	MAX	42.59	43.79	45.02	46.29

ORDERING INFORMATION

KV1410  Tape/Reel Code

TAPE/REEL CODE
TL: Tape Left



KV1410

ABSOLUTE MAXIMUM RATINGS

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

ELECTRICAL CHARACTERISTICS

Test conditions: $T_A = 25\text{ °C}$

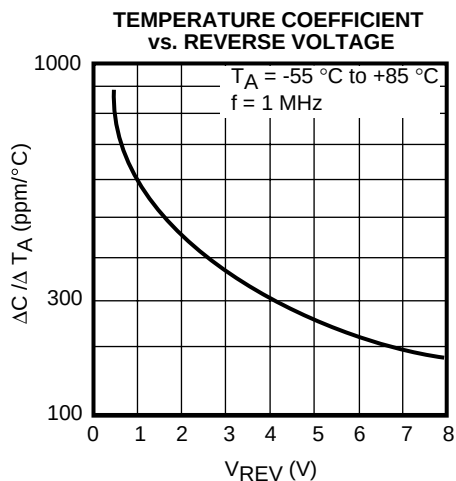
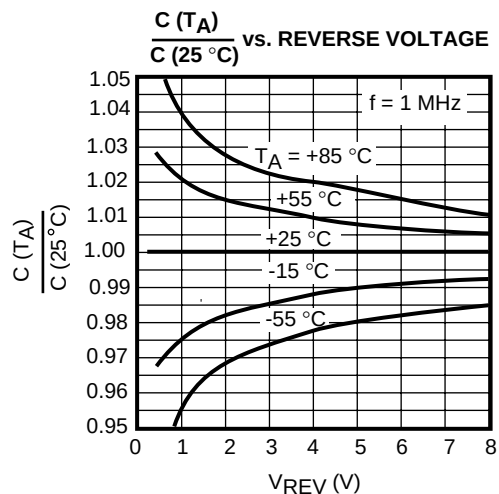
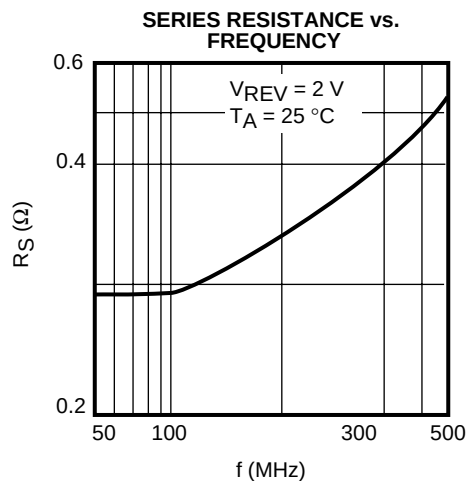
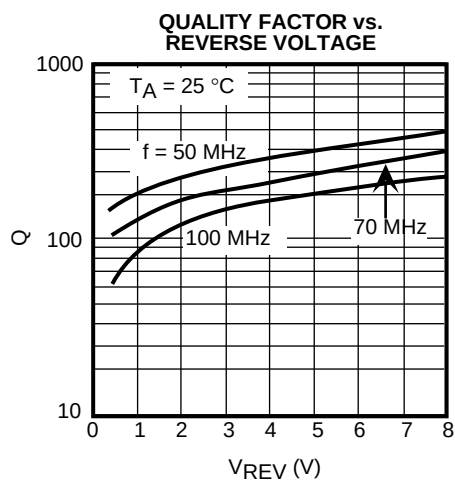
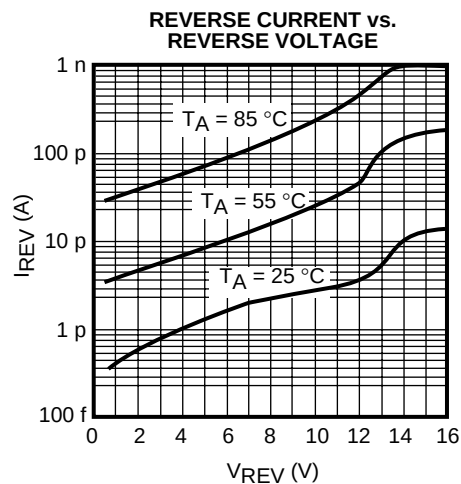
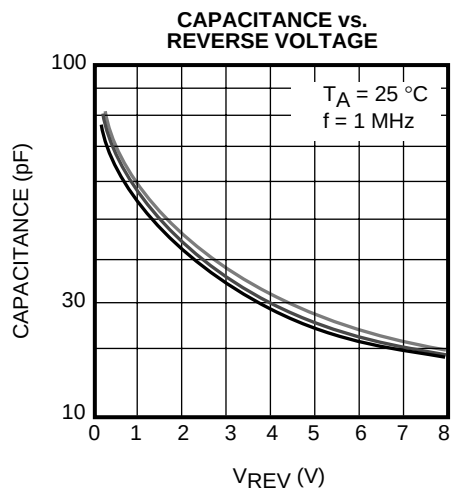
SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 10\text{ }\mu\text{A}$	16			V
I_{REV}	Reverse Current	$V_{REV} = 10\text{ V}$			100	nA
C_2	Diode Capacitance 2	$V_{REV} = 2.0\text{ V}$, $f = 1\text{ MHz}$	41.33		46.29	pF
C_4	Diode Capacitance 4	$V_{REV} = 4.0\text{ V}$, $f = 1\text{ MHz}$	26.46		35.06	pF
C_6	Diode Capacitance 6	$V_{REV} = 6.0\text{ V}$, $f = 1\text{ MHz}$	19.24		25.46	pF
C_8	Diode Capacitance 8	$V_{REV} = 8.0\text{ V}$, $f = 1\text{ MHz}$	16.05		21.25	pF
R_S	Series Resistance	$V_{REV} = 2.0\text{ V}$, $f = 70\text{ MHz}$			0.5	Ω
A	Capacitance Ratio	C_2 / C_8	2.00		2.60	

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.

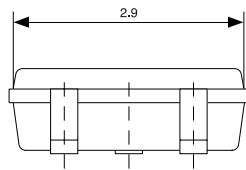
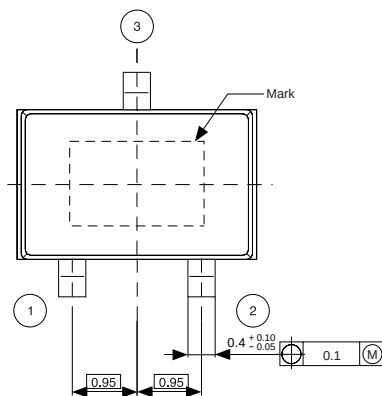
Note 3: The tolerance of two adjacent parts on a reel is within 3% at C2, C4, C6, and C8.

TYPICAL PERFORMANCE CHARACTERISTICS

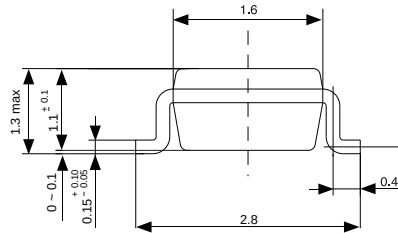


PACKAGE OUTLINE

SOT23-3



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



Marking Information

Product Code F1



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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