

VARIABLE CAPACITANCE DIODE

FEATURES

- Suitable for World Wide Band (76 to 108 MHz)
- Excellent Linearity (CV Curve)
- Large Capacitance Ratio ($A = 3.30$ minimum) with Very Low Series Resistance
- Two Diodes in a Miniature Package (SOT-23-3)
- Very Small Capacitance Deviation at Tape/Reel
- Very High Q

APPLICATIONS

- FM Radio
- Voltage Controlled Oscillator

DESCRIPTION

The KV1435 is a 9 volt range variable capacitance diode designed for FM tuner applications. It contains two elements housed in the miniature SOT23-3 surface mount package.

CLASSIFICATION

(Unit: pF)

RANK		1	2	3	4
C	MIN	68.86	70.81	72.80	74.85
	MAX	71.52	73.53	75.61	77.74

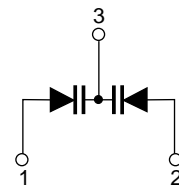
ORDERING INFORMATION

KV1435 □□

Tape/Reel Code

TAPE/REEL CODE
TL: Tape Left

KV1435



ABSOLUTE MAXIMUM RATINGS

Reverse Voltage 18 V
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: $T_A = 25\text{ °C}$

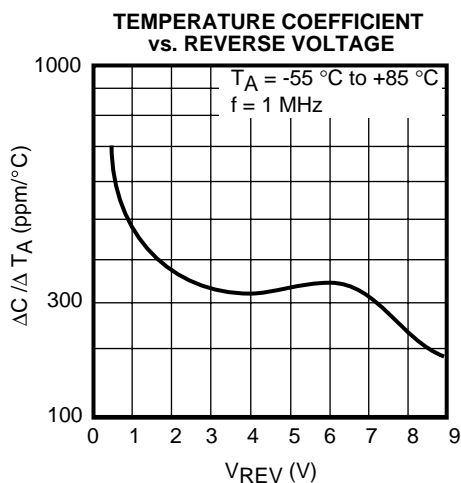
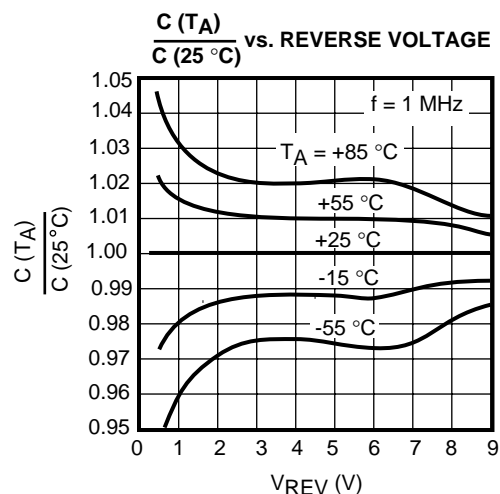
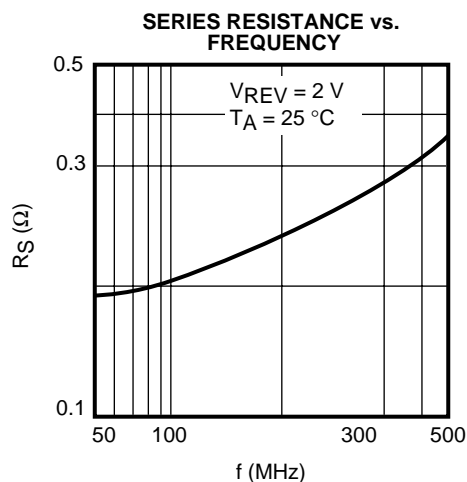
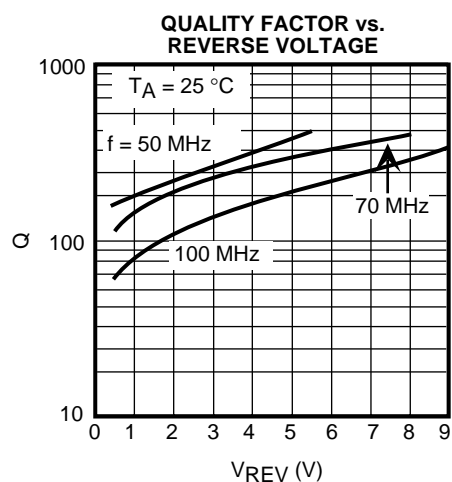
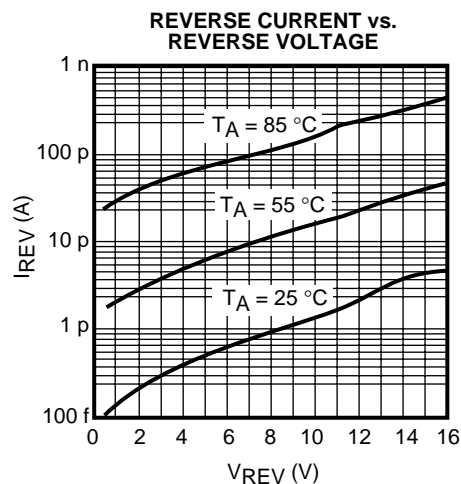
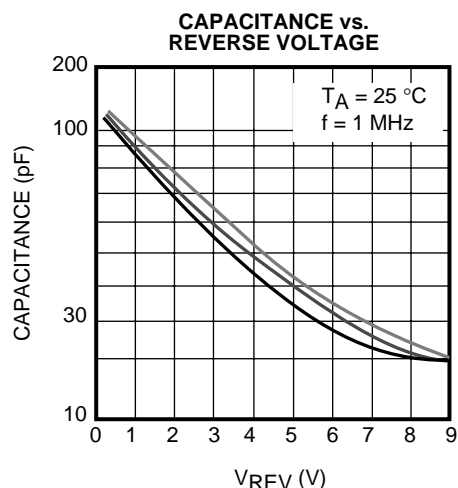
SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 10\text{ }\mu\text{A}$	16			V
I_{REV}	Reverse Current	$V_{REV} = 10.0\text{ V}$			50	nA
C_2	Diode Capacitance 2	$V_{REV} = 2.0\text{ V}$, $f = 1\text{ MHz}$	68.86		77.74	pF
C_4	Diode Capacitance 4	$V_{REV} = 4.0\text{ V}$, $f = 1\text{ MHz}$	42.93		56.46	pF
C_6	Diode Capacitance 6	$V_{REV} = 6.0\text{ V}$, $f = 1\text{ MHz}$	26.39		36.69	pF
C_9	Diode Capacitance 9	$V_{REV} = 9.0\text{ V}$, $f = 1\text{ MHz}$	16.91		22.25	pF
R_S	Series Resistance	$V_{REV} = 2.0\text{ V}$, $f = 70\text{ MHz}$			0.4	Ω
A	Capacitance Ratio	C_2 / C_9	3.30		4.60	

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.

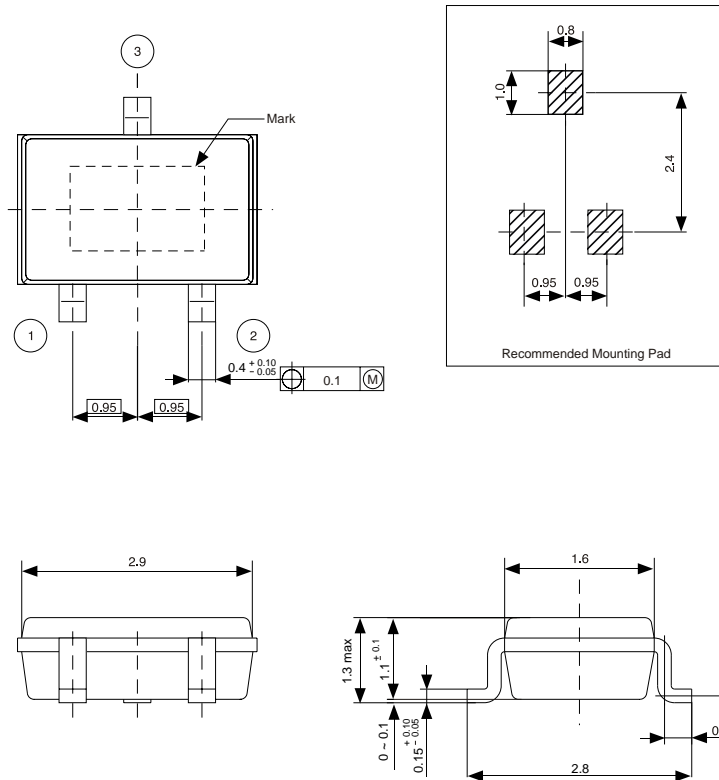
Note 3: The tolerance of two adjacent parts in a reel is within 3% at C2, C4, C6, and C9.

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 G3



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