

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Low Operating Voltage
- Excellent Linearity (CV Curve)
- Large Capacitance Ratio ($A = 2.20$ minimum) with Low Series Resistance
- Two Diodes in a 3 Lead Through-Hole Discrete Package (TO92-3)
- Very Small Capacitance Deviation at Tape/Reel

APPLICATIONS

- FM Radio
- Voltage Controlled Oscillator

DESCRIPTION

The KV1310NT variable capacitance diode was specially developed for use as tuning elements in car radios, radio cassettes, and other consumer radios.

The KV1310NT minimizes cross modulation; thus allowing good signal-to-noise ratio in the overall design.

The KV1310NT is available in a TO92-3 package.

CLASSIFICATION

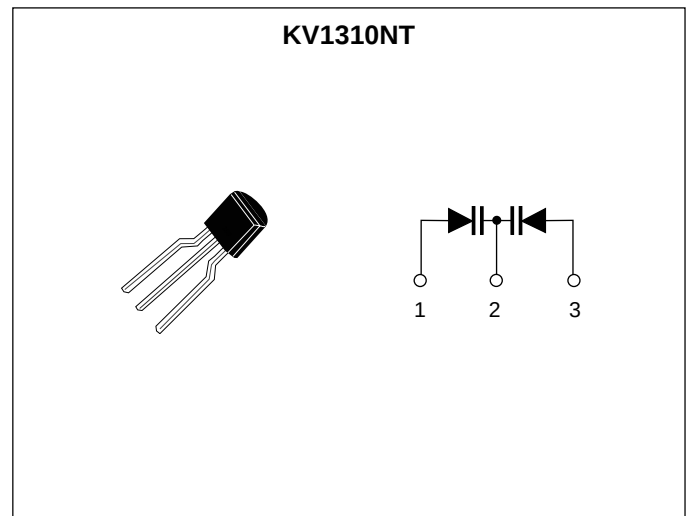
(Unit: pF)

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

KV1310NT

Note: The KV1310NT is supplied on folded paper tape (25 pieces per fold) 1500 pcs per box.



KV1310NT

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

ELECTRICAL CHARACTERISTICS

Test conditions: $T_A = 25\text{ °C}$

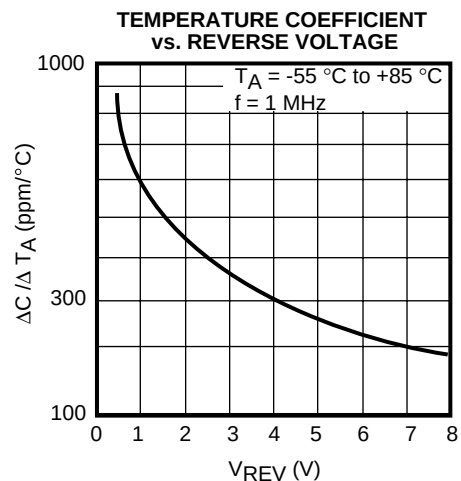
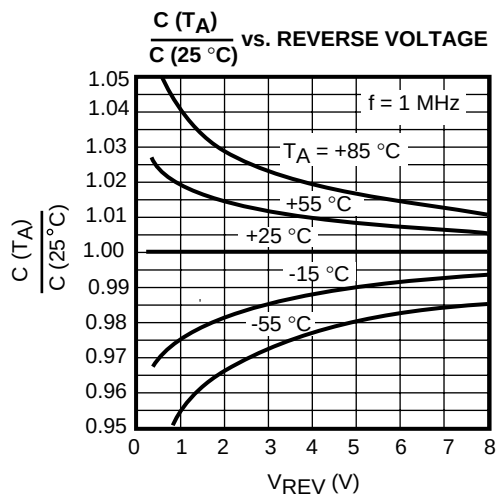
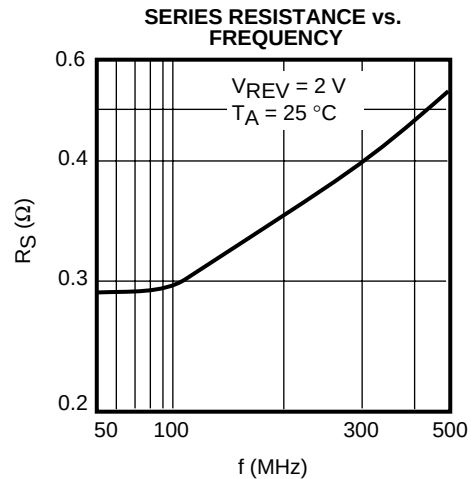
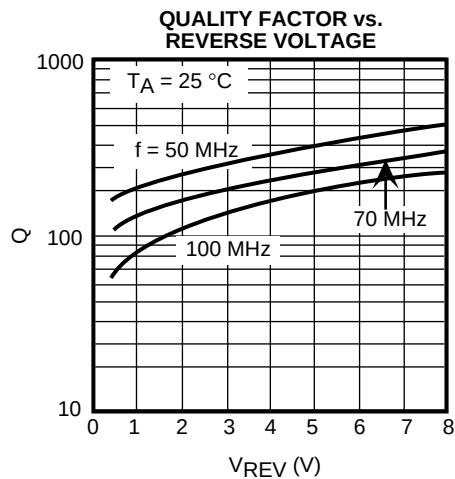
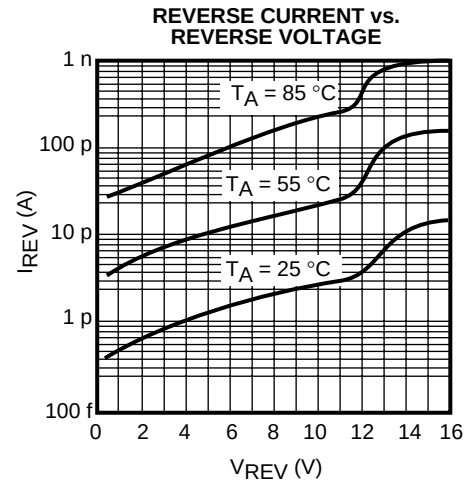
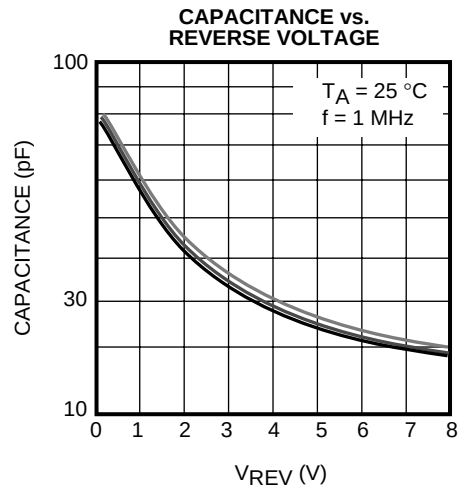
SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 10\text{ }\mu\text{A}$	16			V
I_{REV}	Reverse Current	$V_{REV} = 10.0\text{ V}$			100	nA
C_2	Diode Capacitance 2	$V_{REV} = 2.0\text{ V}$, $f = 1\text{ MHz}$	41.33		46.29	pF
C_4	Diode Capacitance 4	$V_{REV} = 4.0\text{ V}$, $f = 1\text{ MHz}$	26.49		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	2.20		2.42	

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.

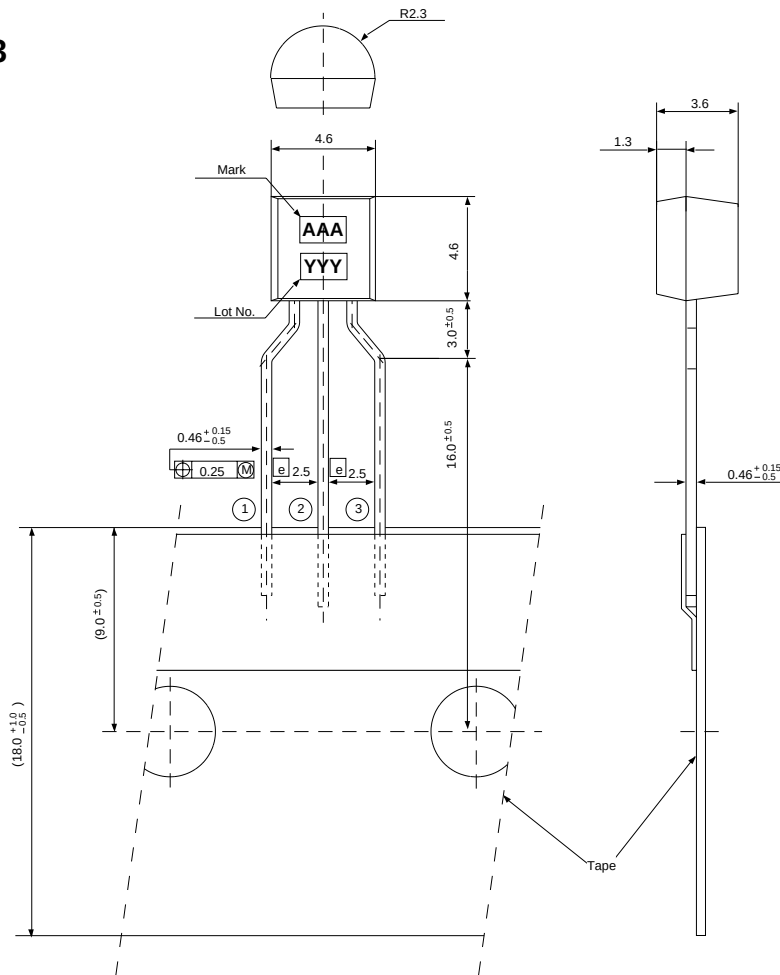
Note 3: The tolerance of two adjacent parts on a reel is within 3% at C2, C3, C6, and C8.

TYPICAL PERFORMANCE CHARACTERISTICS



PACKAGE OUTLINE

T092-3



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

Marking Information

Product Code 310



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