

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Low Operating Voltage (1 to 4.5 V)
- Excellent Linearity (CV Curve)
- Large Capacitance Ratio (A = 16.5 minimum)
- Two Diodes in a 3 Lead Through-Hole Discrete Package (TO92-3)
- Very Small Capacitance Deviation at Tape/Reel

DESCRIPTION

The KV1555NT variable capacitance diode was specially developed for use as tuning elements in car radios, radio cassettes, and other consumer radios. Single package construction includes an antenna and oscillating tuning element.

The KV1555NT is available in a TO92-3 package.

CLASSIFICATION

(Unit: pF)

C		RANK	1	2	3	4
		C ₁	MIN	400.00	413.00	426.00
MAX	419.00		432.00	445.00	458.00	

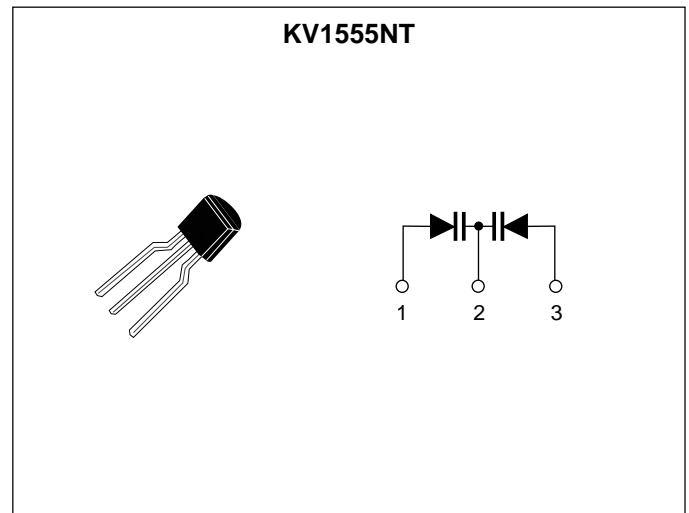
ORDERING INFORMATION

KV1555NT

Note: The KV1555NT is supplied on folded paper tape (25 pieces per fold), 1500 pcs per box.

APPLICATIONS

- AM Radio
- Voltage Controlled Oscillator



KV1555NT

ABSOLUTE MAXIMUM RATINGS

Reverse Voltage 30 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: $T_A = 25\text{ °C}$

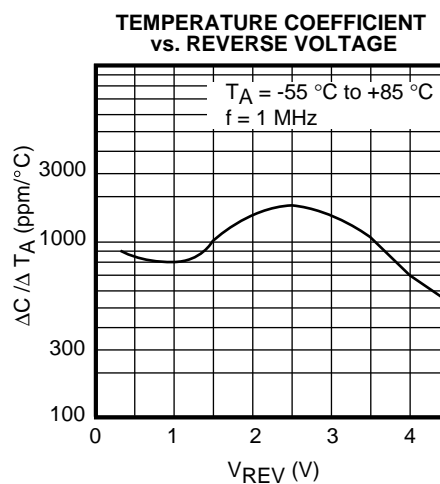
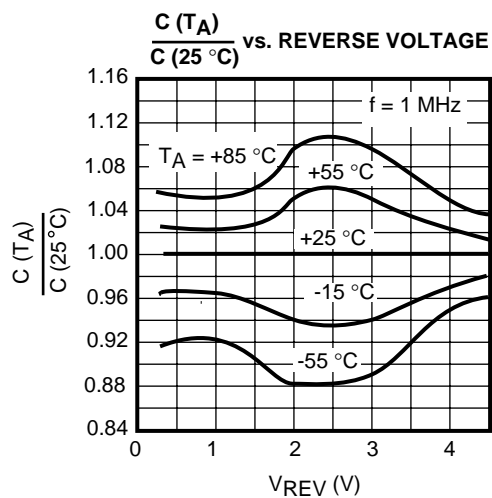
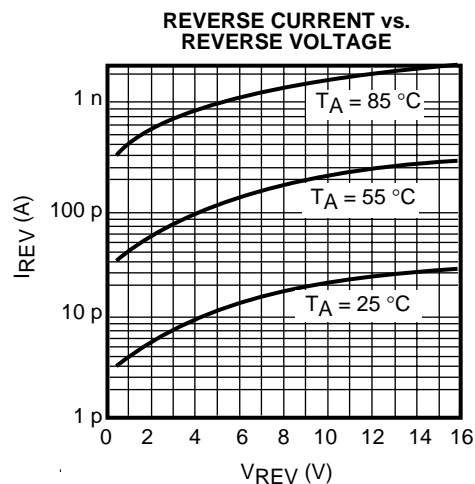
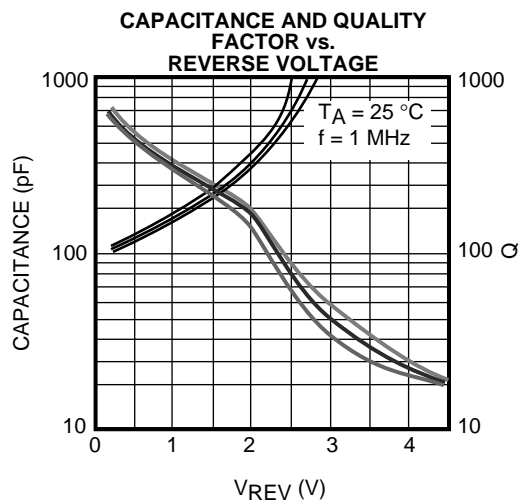
SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 10\ \mu\text{A}$	20			V
I_{REV}	Reverse Current	$V_{REV} = 15.0\ \text{V}$			50	nA
C_1	Diode Capacitance 1	$V_{REV} = 1.0\ \text{V}, f = 1\ \text{MHz}$	400.00	429.00	458.00	pF
$C_{4.5}$	Diode Capacitance 4.5	$V_{REV} = 4.5\ \text{V}, f = 1\ \text{MHz}$	21.00	23.50	26.00	pF
$\Delta C_{1.0}$	Capacitance Tolerance (Note 2)	$V_{REV} = 1.0\ \text{V}, f = 1\ \text{MHz}$			2.0	%
$\Delta C_{3.0}$		$V_{REV} = 3.0\ \text{V}, f = 1\ \text{MHz}$			3.0	%
$\Delta C_{4.5}$		$V_{REV} = 4.5\ \text{V}, f = 1\ \text{MHz}$			3.0	%
Q	Quality Factor	$V_{REV} = 1.0\ \text{V}, f = 1\ \text{MHz}$	200			
A	Capacitance Ratio	$C_1 / C_{4.5}$	16.50	18.30	20.00	

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

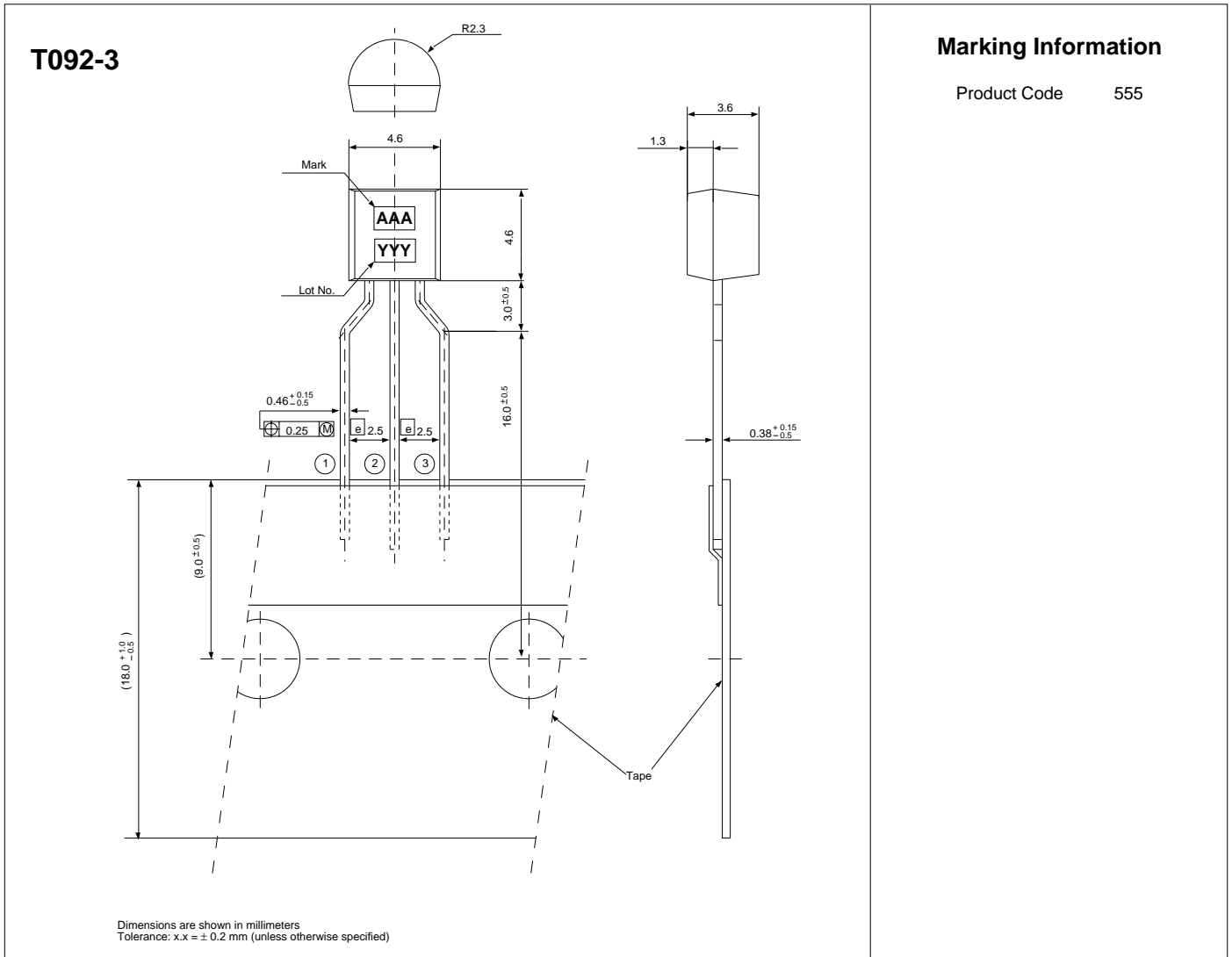
Note 2: $\Delta C = \frac{C_{\text{max}}(D_1, D_2) - C_{\text{min}}(D_1, D_2)}{C_{\text{min}}(D_1, D_2)} \times 100$ * D_1, D_2 : Please refer to the Pin Layout shown below.

	Symbol	Anode Pin	Cathode Pin
Diode 1	D_1	①	②
Diode 2	D_2	③	②

TYPICAL PERFORMANCE CHARACTERISTICS



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