

## 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 <sub>1</sub>	MIN	400.00	413.00	426.00
MAX	419.00		432.00	445.00	458.00	

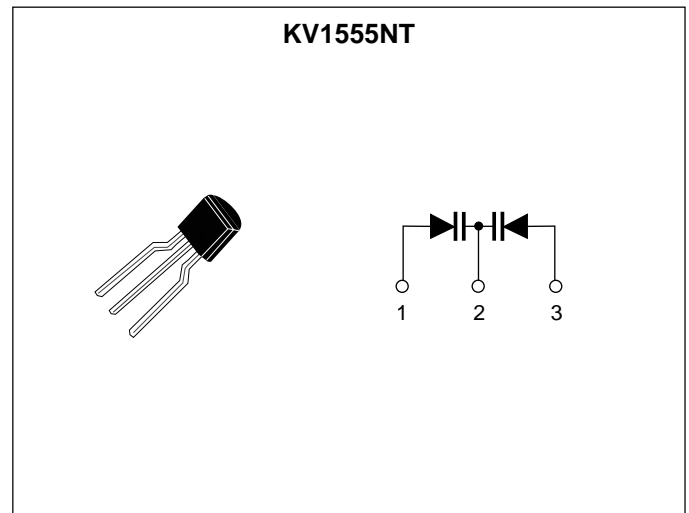
### ORDERING INFORMATION

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:  $T_A = 25\text{ °C}$

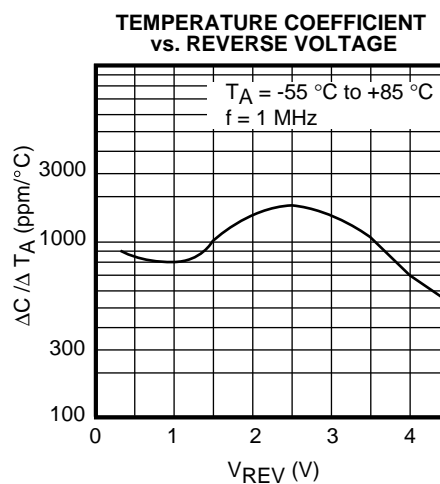
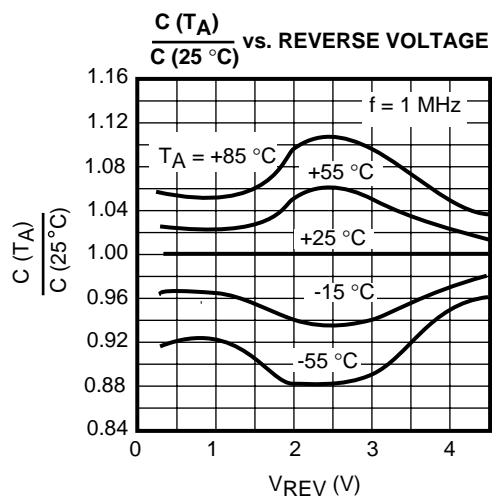
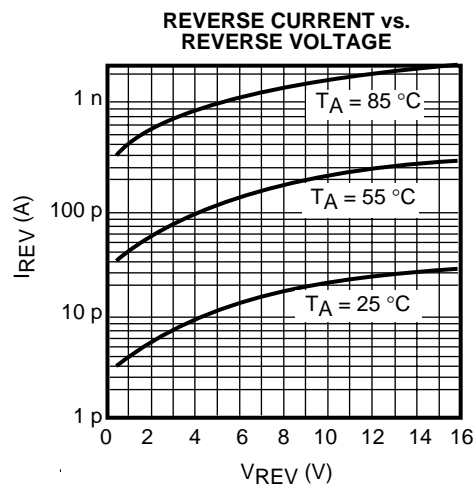
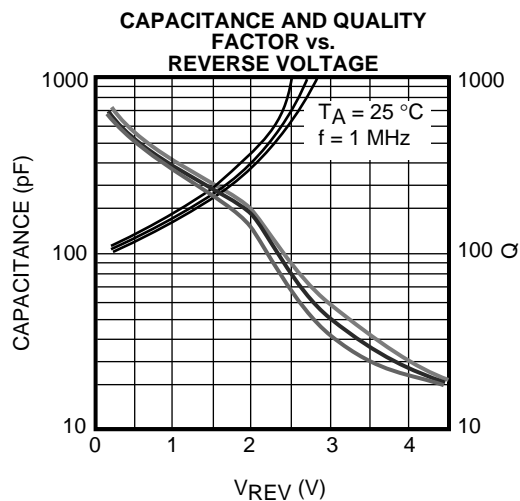
SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$V_{REV}$	Reverse Voltage	$I_{REV} = 10\ \mu\text{A}$	20			V
$I_{REV}$	Reverse Current	$V_{REV} = 15.0\ \text{V}$			50	nA
$C_1$	Diode Capacitance 1	$V_{REV} = 1.0\ \text{V}, f = 1\ \text{MHz}$	400.00	429.00	458.00	pF
$C_{4.5}$	Diode Capacitance 4.5	$V_{REV} = 4.5\ \text{V}, f = 1\ \text{MHz}$	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,  $\pm 5\ \text{mVrms}$ ).

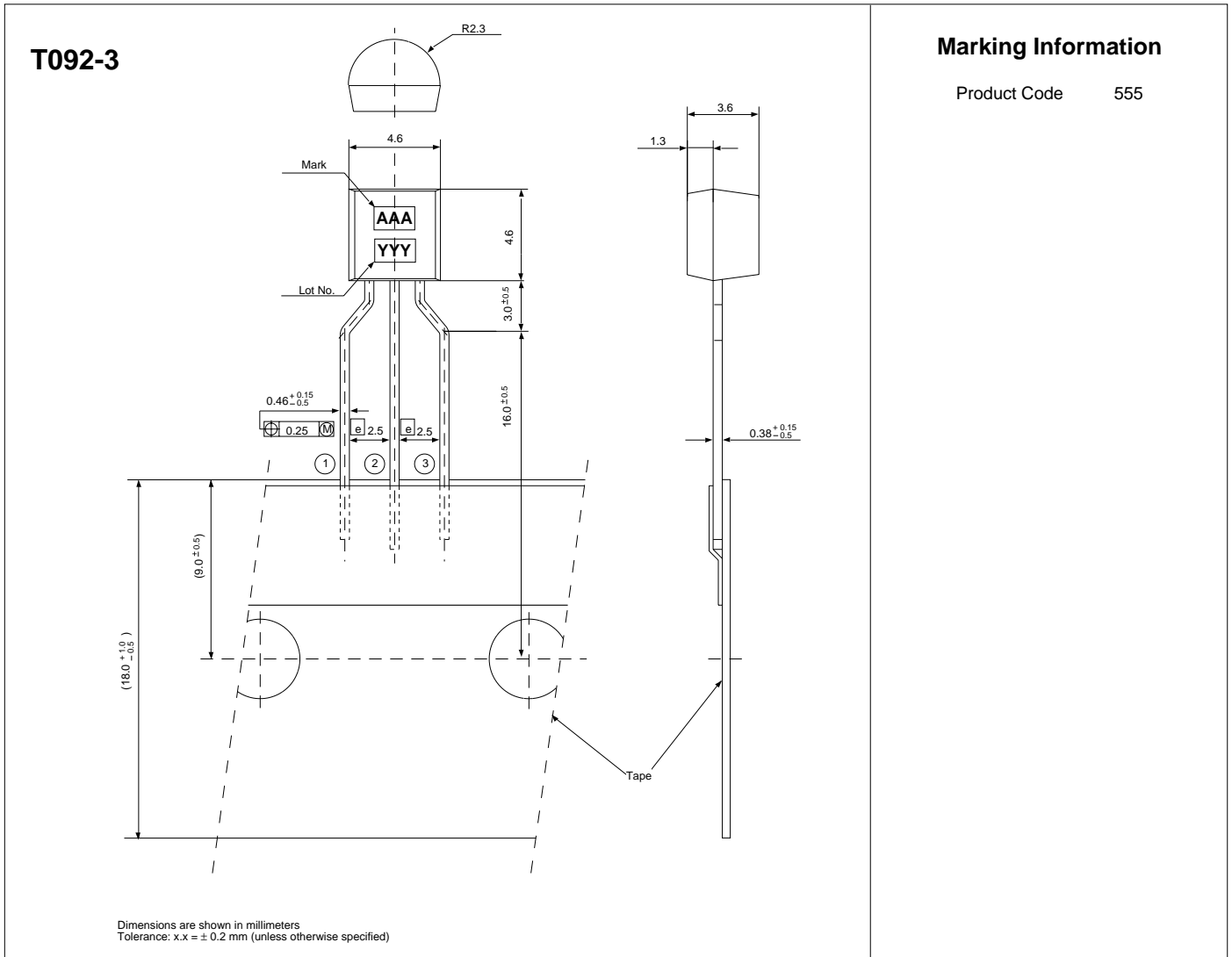
Note 2:  $\Delta C = \frac{C_{\text{max}}(D_1, D_2) - C_{\text{min}}(D_1, D_2)}{C_{\text{min}}(D_1, D_2)} \times 100$       \* $D_1, D_2$ : Please refer to the Pin Layout shown below.

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

## TYPICAL PERFORMANCE CHARACTERISTICS



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