

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Low Operating Voltage
- Excellent Linearity (CV Curve)
- Large Capacitance Ratio (A = 4.6 minimum)
- 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 KV1350NT variable capacitance diode was specially made to be used as tuning elements in car radios, radio cassettes, stereos, and other consumer radios. The KV1350NT is suitable for wide band tuning from 76 to 108 MHz.

If the KV1350NT is used only for FM reception, it is possible to operate it at 4.5 V so it is very useful in lowering the power demands of the set.

CLASSIFICATION

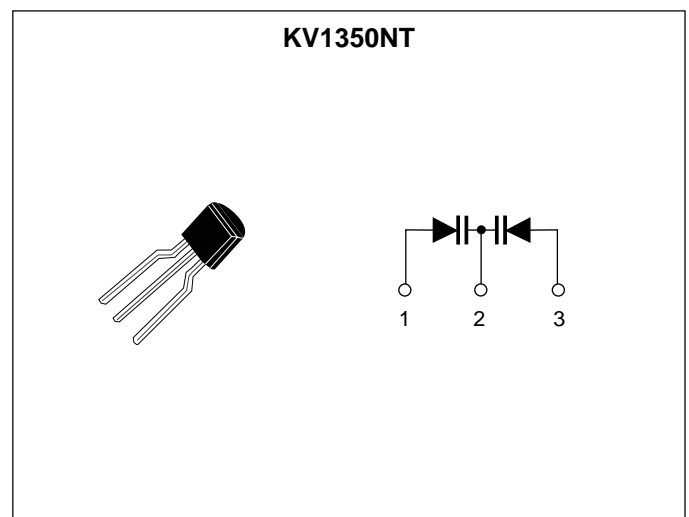
(Unit: pF)

C		RANK				
		1	2	3	4	5
C ₁	MIN	59.15	60.30	61.50	62.75	64.00
	MAX	60.90	62.10	63.35	64.65	65.90

ORDERING INFORMATION

KV1350NT

Note: The KV1350NT is supplied on folded paper tape (25 pieces per fold) 1500 pcs per box.



KV1350NT

ABSOLUTE MAXIMUM RATINGS

Reverse Voltage 18V Storage Temperature Range -55 to +150 °C
Forward Current 50 mA Operating Temperature Range -55 to +85 °C
Power Dissipation 100 mW

ELECTRICAL CHARACTERISTICS

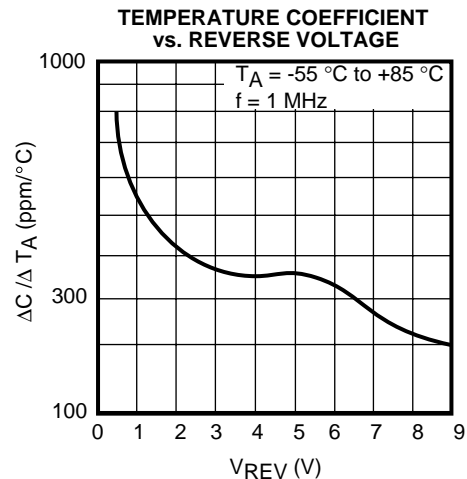
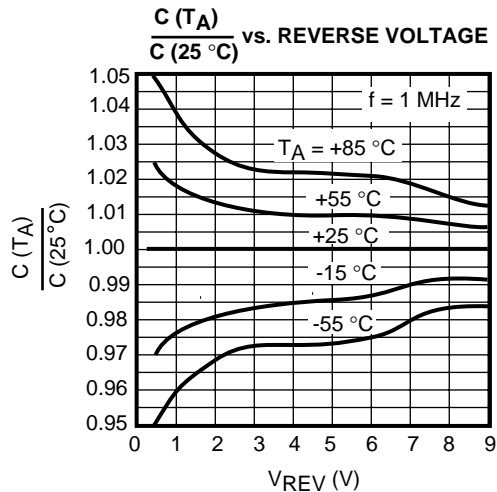
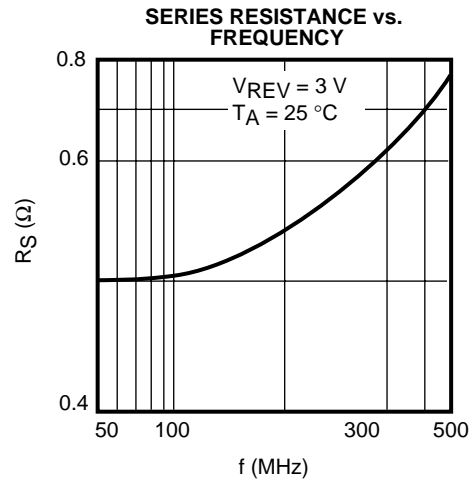
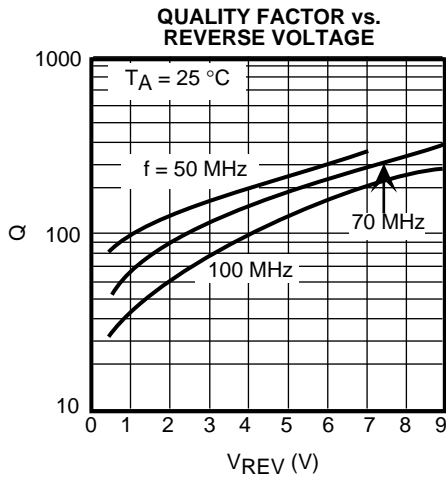
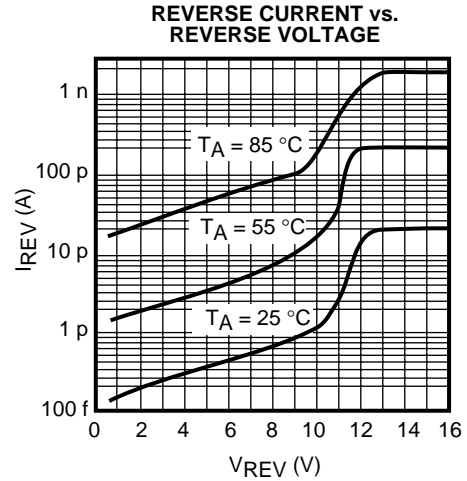
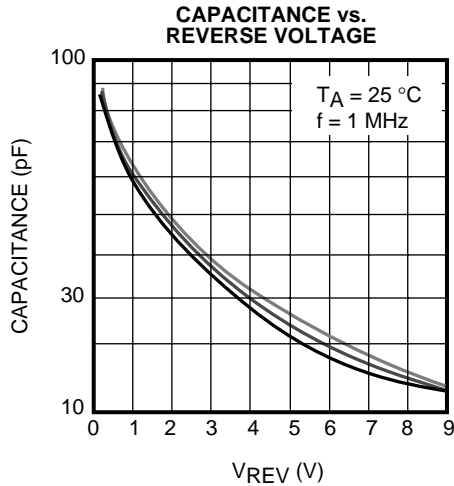
Test conditions: $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 10\ \mu\text{A}$	16			V
I_{REV}	Reverse Current	$V_{REV} = 10.0\ \text{V}$			100	nA
C_1	Diode Capacitance 1	$V_{REV} = 1.0\ \text{V}, f = 1\ \text{MHz}$	59.15	62.50	65.90	pF
C_6	Diode Capacitance 6	$V_{REV} = 6.0\ \text{V}, f = 1\ \text{MHz}$	17.67		23.54	pF
C_9	Diode Capacitance 9	$V_{REV} = 9.0\ \text{V}, f = 1\ \text{MHz}$	10.77		13.26	pF
Q	Quality Factor	$V_{REV} = 3.0\ \text{V}, f = 100\ \text{MHz}$	60			
A	Capacitance Ratio	C_1 / C_9	4.6			

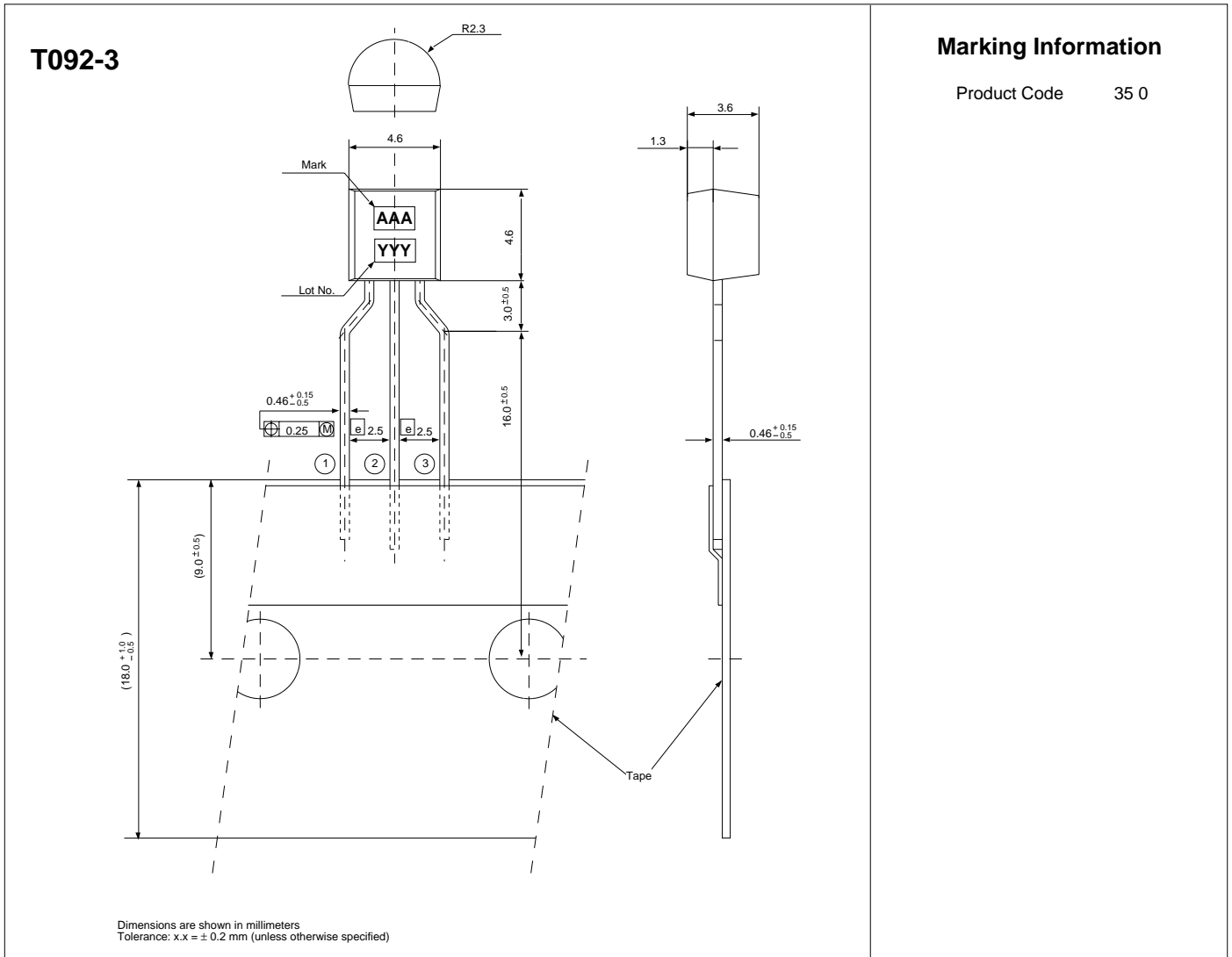
Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms, $\pm 5\ \text{mVrms}$).

Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

TYPICAL PERFORMANCE CHARACTERISTICS



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