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.

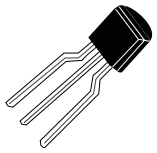
If the KV1350NT is used only for FM reception, it is possible to operate it at 4.5 V so it is very useful in lowering the power demands of the set.

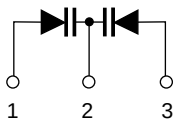
CLASSIFICATION

(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

KV1350NT





ORDERING INFORMATION
KV1350NT

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

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

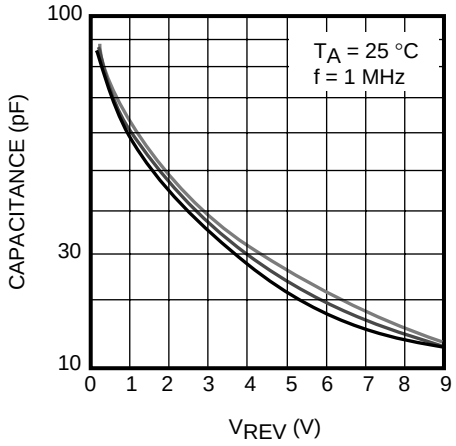
Test conditions: T_A = 25 °C

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

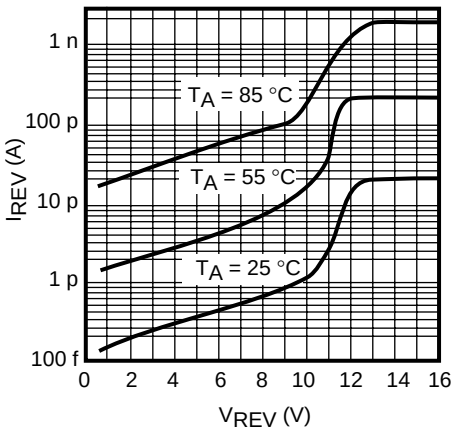
Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms, ± 5 mVrms).
Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

TYPICAL PERFORMANCE CHARACTERISTICS

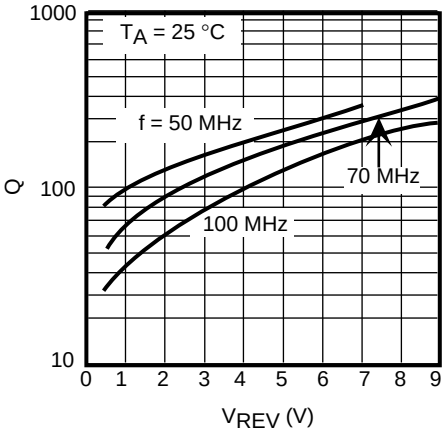
CAPACITANCE vs. REVERSE VOLTAGE



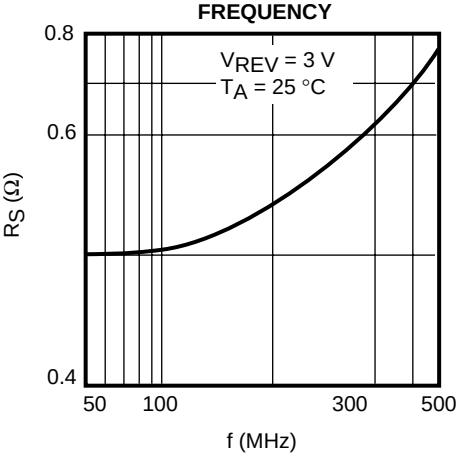
REVERSE CURRENT vs. REVERSE VOLTAGE



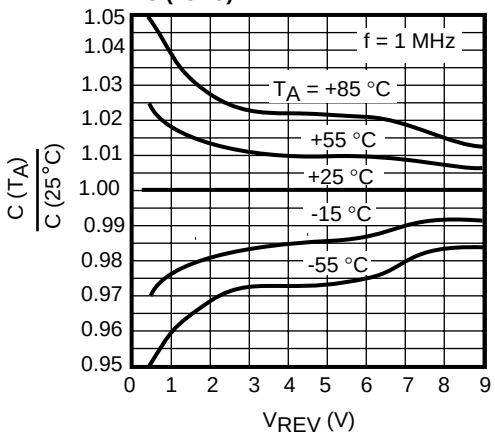
QUALITY FACTOR vs. REVERSE VOLTAGE



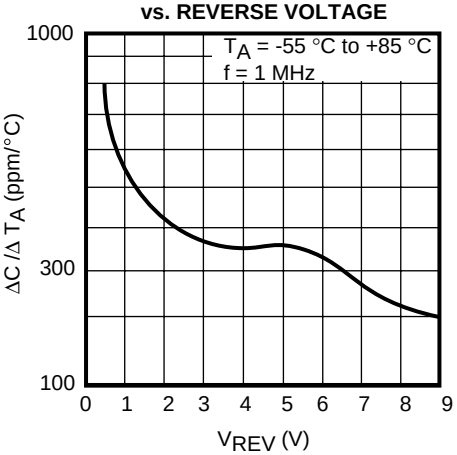
SERIES RESISTANCE vs. FREQUENCY



$\frac{C\ (T_A)}{C\ (25\ °C)}$ vs. REVERSE VOLTAGE

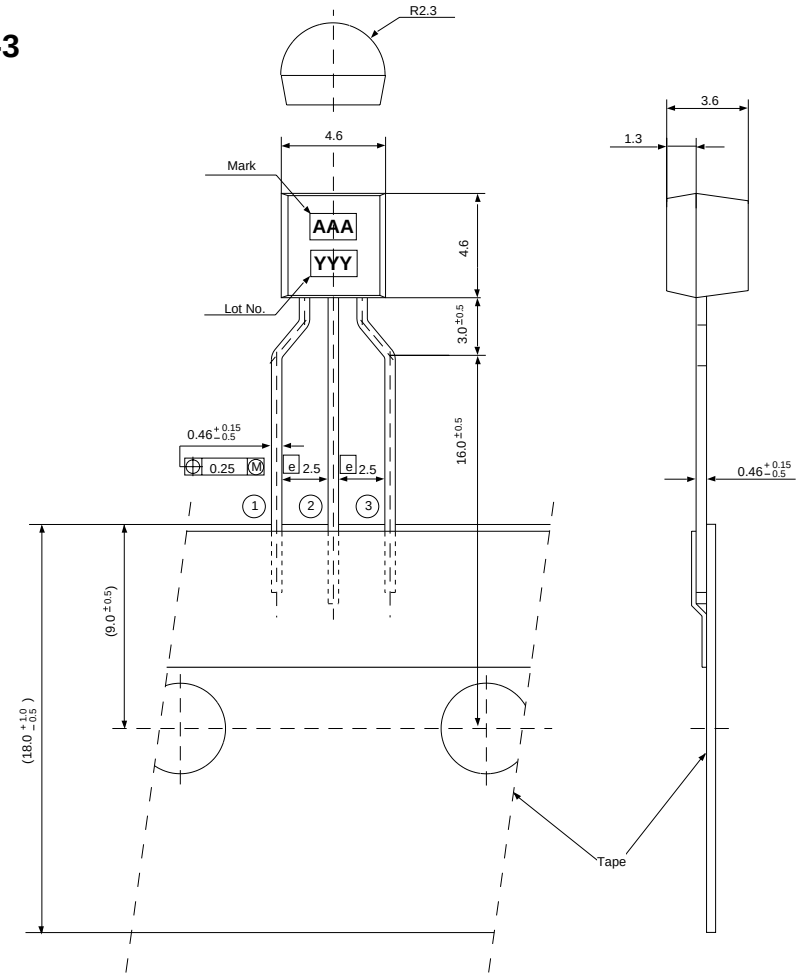


TEMPERATURE COEFFICIENT vs. REVERSE VOLTAGE



PACKAGE OUTLINE

T092-3



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

Marking Information

Product Code 35 0

TOKO

Toko America, Inc. Headquarters
1250 Feehanville Drive, Mount Prospect, Illinois 60056
Tel: (847) 297-0070 Fax: (847) 699-7864

TOKO AMERICA REGIONAL OFFICES

Midwest Regional Office
Toko America, Inc.
1250 Feehanville Drive
Mount Prospect, IL 60056
Tel: (847) 297-0070
Fax: (847) 699-7864

Western Regional Office
Toko America, Inc.
2480 North First Street , Suite 260
San Jose, CA 95131
Tel: (408) 432-8281
Fax: (408) 943-9790

Semiconductor Technical Support
Toko Design Center
4755 Forge Road
Colorado Springs, CO 80907
Tel: (719) 528-2200
Fax: (719) 528-2375

Visit our Internet site at http://www.tokoam.com

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