VARIABLE CAPACITANCE DIODE

FEATURES

- **Very Low Operating Voltage (1 to 6.5 V)**
- **Excellent Linearity (CV Curve)**
- **Large Capacitance Ratio (A = 4.70 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**
- **Battery Operated Products**

DESCRIPTION

The KV1360NT variable capacitance diode was specially developed for use as FM tuning elements in car radios, radio cassettes, and other consumer radios.

The KV1360NT uses a special process to provide a very high capacitance ratio in low voltage operation.

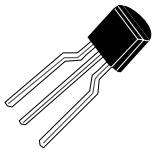
The KV1360NT is available in a TO92-3 package.

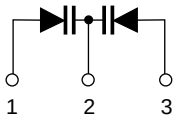
CLASSIFICATION

(Unit: pF)

C \ RANK		1A	2A	3A
C_1	MIN	86.10	89.60	93.30
	MAX	90.50	94.10	98.00

KV1360NT





ORDERING INFORMATION
KV1360NT

Note: The KV1360NT 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

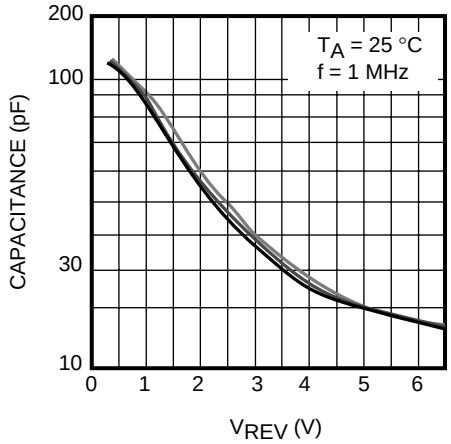
Test conditions: T_A = 25 °C

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			50	nA
C_1	Diode Capacitance 1	V_{REV} = 1.0 V, f = 1 MHz	86.10	92.00	98.00	pF
$C_{6.5}$	Diode Capacitance 6.5	V_{REV} = 6.5 V, f = 1 MHz	13.90	16.00	18.20	pF
R_S	Series Resistance	V_{REV} = 1.5 V, f = 100 MHz		0.5	0.6	Ω
A	Capacitance Ratio	C_1 / $C_{6.5}$	4.70			

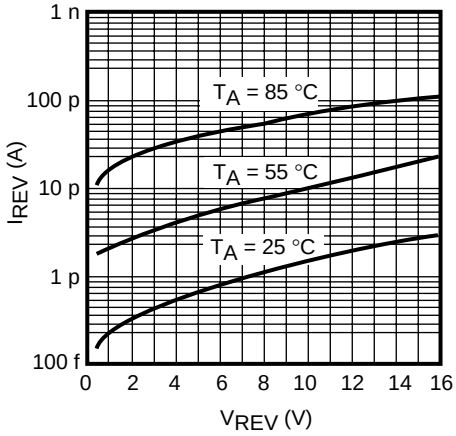
Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms, ± 5 mVrms).
Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

TYPICAL PERFORMANCE CHARACTERISTICS

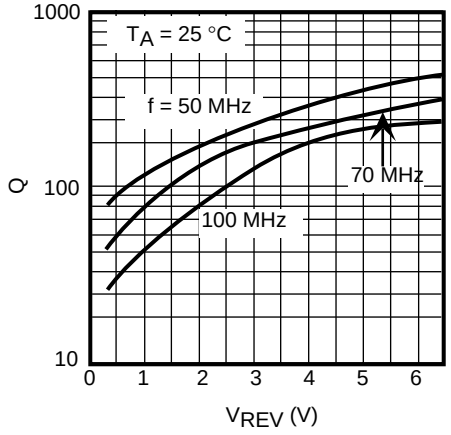
CAPACITANCE vs. REVERSE VOLTAGE



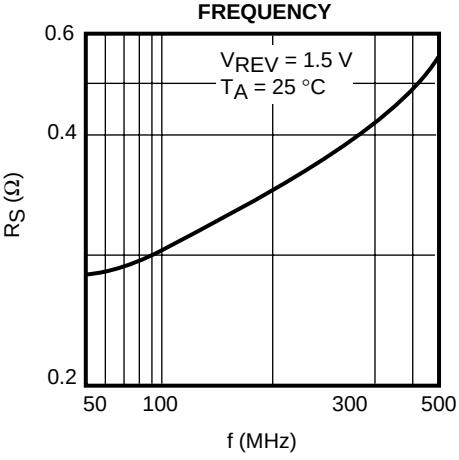
REVERSE CURRENT vs. REVERSE VOLTAGE



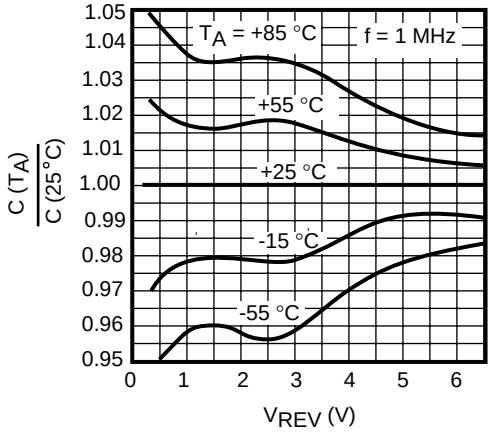
QUALITY FACTOR vs. REVERSE VOLTAGE



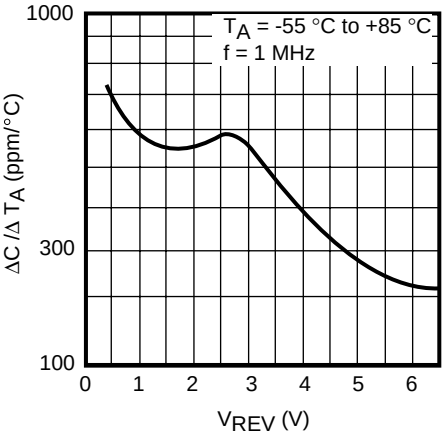
SERIES RESISTANCE vs. FREQUENCY



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

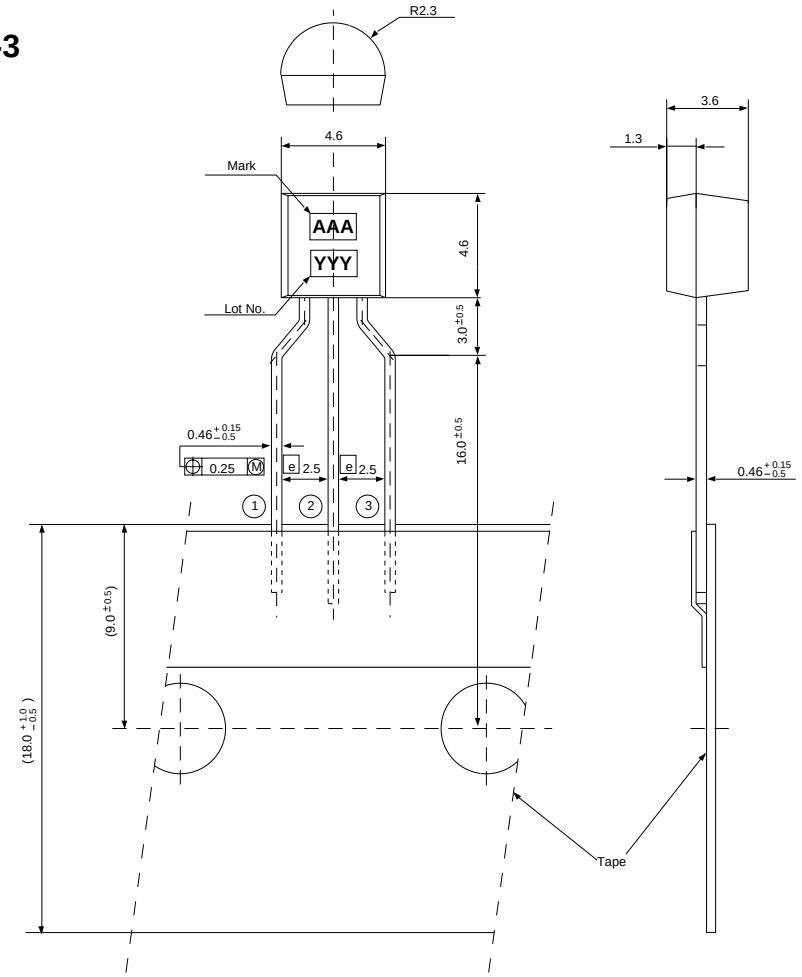


TEMPERATURE COEFFICIENT vs. REVERSE VOLTAGE



PACKAGE OUTLINE

T092-3



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

Marking Information

Product Code	360

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