VARIABLE CAPACITANCE DIODE

FEATURES

- **Very Wide Operating Voltage Range (1 to 8 V)**
- **Excellent Linearity (CV Curve)**
- **Large Capacitance Ratio (A = 17 minimum)**
- **Two Diodes in a 3 Lead Through-Hole Discrete Package (TO92-3)**
- **Very Small Capacitance Deviation at Tape/Reel**

APPLICATIONS

- **AM Radio**
- **Voltage Controlled Oscillator**

DESCRIPTION

The KV1560NT variable capacitance diode is well-suited for use in all types of VFO and VCO, as well as radio cassettes, stereos, and car radios.

The KV1560NT has a high degree of matching characteristics.

The KV1560NT is housed in a TO92-3 package.

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CLASSIFICATION

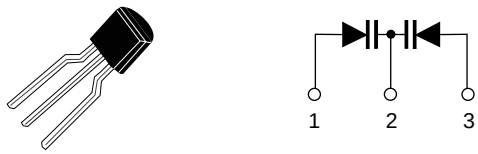
(Unit: pF)

C \ RANK		1	2	3	4
C_1	MIN	428.00	446.00	464.00	482.00
	MAX	452.00	470.00	488.00	506.00

ORDERING INFORMATION
KV1560NT

Note: The KV1560NT is supplied on folded paper tape (25 pieces per fold), 1500 pcs per box.

KV1560NT



ABSOLUTE MAXIMUM RATINGS

Reverse Voltage ..... 16 V
Forward Current ..... 50 mA
Power Dissipation ..... 100 mW
Storage Temperature Range ..... -55 to +150 °C
Operating Temperature Range .....-55 to +85 °C
Lead Soldering Temperature (10 s) ..... 235 °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	428.00		506.00	pF
C_8	Diode Capacitance 8	V_{REV} = 8.0 V, f = 1 MHz	20.00		27.50	pF
ΔC1.0	Capacitance Tolerance (Note 2)	V_{REV} = 1.0 V, f = 1 MHz			1.0	%
ΔC4.5		V_{REV} = 4.5 V, f = 1 MHz			2.0	%
ΔC8.0		V_{REV} = 8.0 V, f = 1 MHz			2.0	%
Q	Quality Factor	V_{REV} = 1.0 V, f = 1MHz	200			
A	Capacitance Ratio	C_1 / C_8	17.00			

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

Note 2: $\Delta C = \frac{Cmax\ (D_1, D_2) - Cmin\ (D_1, D_2)}{Cmin\ (D_1, D_2)} \times 100$

*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

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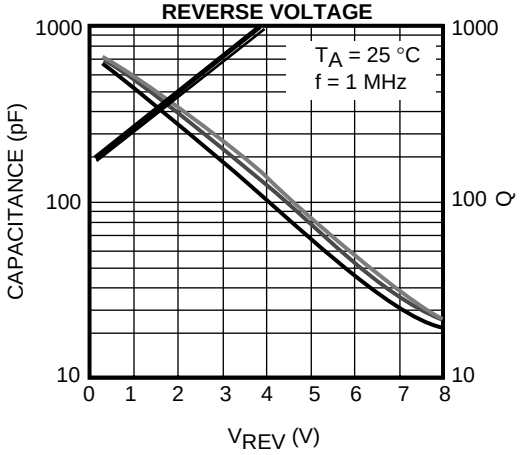
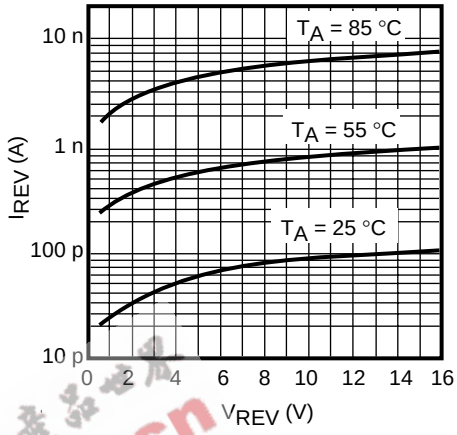
TYPICAL PERFORMANCE CHARACTERISTICS

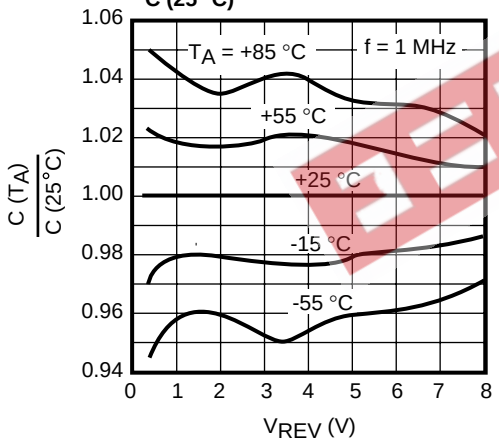
CAPACITANCE AND QUALITY FACTOR vs. REVERSE VOLTAGE



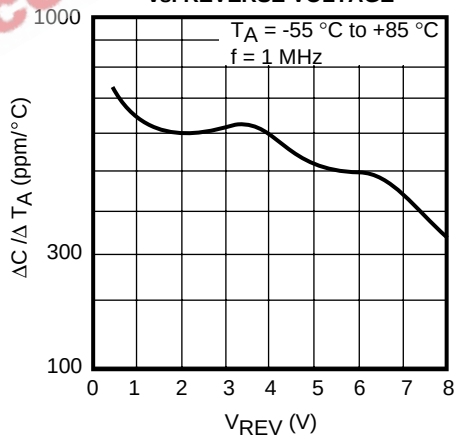
REVERSE CURRENT vs. REVERSE VOLTAGE



C (TA) / C (25 °C) vs. REVERSE VOLTAGE



TEMPERATURE COEFFICIENT vs. REVERSE VOLTAGE



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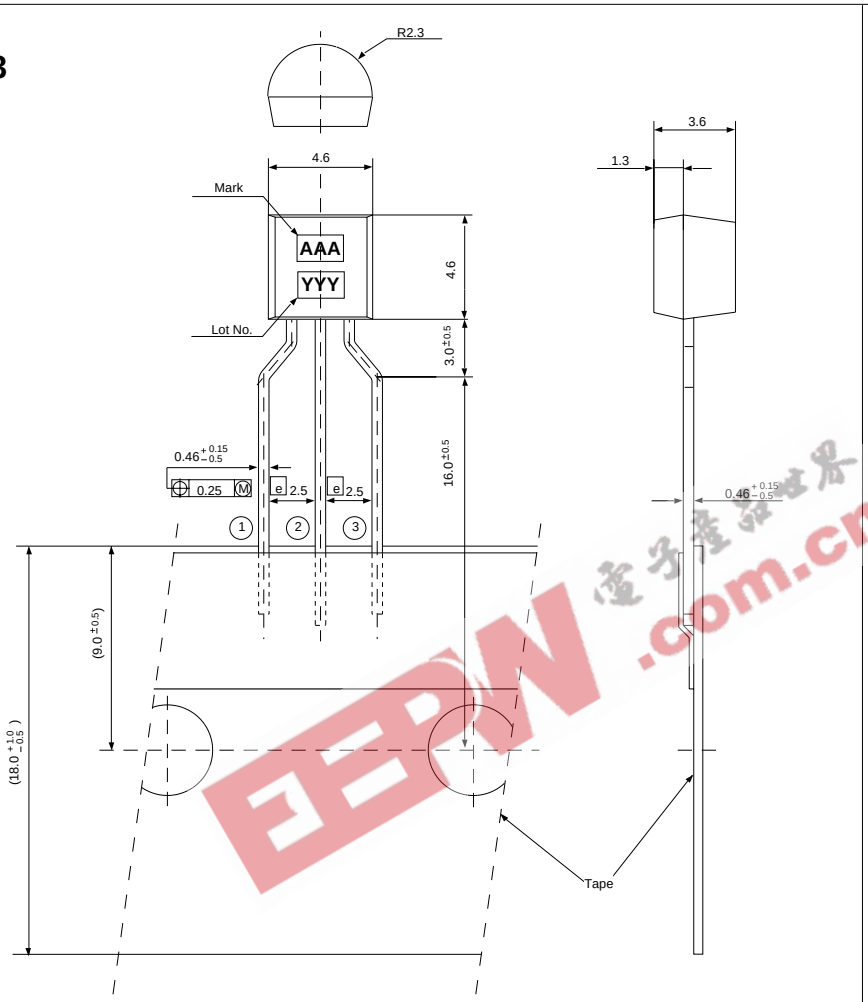
PACKAGE OUTLINE

T092-3



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

Marking Information

Product Code 560

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