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)

<table>
<thead>
<tr>
<th>RANK</th>
<th>1A</th>
<th>2A</th>
<th>3A</th>
</tr>
</thead>
<tbody>
<tr>
<td>C_{1} MIN</td>
<td>86.10</td>
<td>89.60</td>
<td>93.30</td>
</tr>
<tr>
<td>C_{1} MAX</td>
<td>90.50</td>
<td>94.10</td>
<td>98.00</td>
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</tbody>
</table>

ORDERING INFORMATION

KV1360NT

Note: The KV1360NT is supplied on folded paper tape (25 pieces per fold) 1500 pcs per box.
KV1360NT

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: $T_A = 25 \, ^\circ C$

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>PARAMETER</th>
<th>TEST CONDITIONS</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{\text{REV}}$</td>
<td>Reverse Voltage</td>
<td>$I_{\text{REV}} = 10 , \mu A$</td>
<td>16</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>$I_{\text{REV}}$</td>
<td>Reverse Current</td>
<td>$V_{\text{REV}} = 10.0 , V$</td>
<td></td>
<td>50</td>
<td></td>
<td>nA</td>
</tr>
<tr>
<td>$C_1$</td>
<td>Diode Capacitance 1</td>
<td>$V_{\text{REV}} = 1.0 , V, f = 1 , MHz$</td>
<td>86.10</td>
<td>92.00</td>
<td>98.00</td>
<td>pF</td>
</tr>
<tr>
<td>$C_{6.5}$</td>
<td>Diode Capacitance 6.5</td>
<td>$V_{\text{REV}} = 6.5 , V, f = 1 , MHz$</td>
<td>13.90</td>
<td>16.00</td>
<td>18.20</td>
<td>pF</td>
</tr>
<tr>
<td>$R_S$</td>
<td>Series Resistance</td>
<td>$V_{\text{REV}} = 1.5 , V, f = 100 , MHz$</td>
<td></td>
<td>0.5</td>
<td>0.6</td>
<td>•</td>
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<tr>
<td>$A$</td>
<td>Capacitance Ratio</td>
<td>$C_1 / C_{6.5}$</td>
<td>4.70</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Marking Information
Product Code 360

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