VOLTAGE CONTROLLED OSCILLATOR
CONNECTORIZED MODEL: KDCO615712-5

OPTIMIZED BANDWIDTH
6150 - 7120 MHz

FEATURES:
► Superb Phase Noise Performance
► Planar Resonator Construction

SPECIFICATIONS

Frequency
6150 - 7120 MHz

Tuning Voltage
See table below.

Bias Voltage
+5 VDC @ 22 mA (Max.)

Output Power
-5 dBm (Min.)

Tuning Sensitivity
55 - 170 MHz/V (Typ.)

Output Impedance
50 Ohms (Nom.)

Harmonic Suppression
25 dB (Typ.)

Frequency Pulling
12 MHz (Typ. @ 1.75:1 VSWR)

Frequency Pushing
12 MHz/V (Typ.)

Tuning Port Capacitance
10 pF (Typ.)

Typical Phase Noise

<table>
<thead>
<tr>
<th>Offset (kHz)</th>
<th>Phase Noise (dBc/Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 kHz</td>
<td>-85</td>
</tr>
<tr>
<td>100 kHz</td>
<td>-106</td>
</tr>
</tbody>
</table>

Operating Temperature Range
-40 to +85 °C

Guaranteed Tuning Specifications

<table>
<thead>
<tr>
<th>Tuning Voltage (V)</th>
<th>Frequency (MHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>6150 (Max.)</td>
</tr>
<tr>
<td>5</td>
<td>6400 (Min.)</td>
</tr>
<tr>
<td>8</td>
<td>6800 (Min.)</td>
</tr>
<tr>
<td>12</td>
<td>7120 (Min.)</td>
</tr>
</tbody>
</table>

Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Storage Temp. Range</th>
<th>Bias Voltage</th>
<th>Tuning Voltage</th>
<th>DC Voltage Applied to RF Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>-55 to +125 °C</td>
<td>+5.5 V</td>
<td>+15 V</td>
<td>± 25 V</td>
</tr>
</tbody>
</table>

Package #
110LF

All Dimensions in inches (mm)

Guaranteed Tuning Specifications

<table>
<thead>
<tr>
<th>Package</th>
<th>Absolute Maximum Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Out</td>
<td>Vcc</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
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PERFORMANCE PLOTS

- Top graph: Frequency (MHz) vs. Control Voltage (Vdc) for +25°C, +85°C, and -40°C.
  - Frequency range from 6020 to 7220 MHz.
  - Control Voltage range from 0 to 12 Vdc.

- Bottom graph: Output Power (dBm) vs. Control Voltage (Vdc) for +25°C, +85°C, and -40°C.
  - Output Power range from -5 to 3 dBm.
  - Control Voltage range from 0 to 12 Vdc.
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PERFORMANCE PLOTS

[Graphs showing tuning sensitivity and 2nd harmonic suppression across different control voltages and temperatures (+25°C, ±85°C, -40°C).]