Voltage Controlled Oscillator, 6.0-12.0GHz
0dBm Output Power, 15Volts DC Voltage, Surface Mount Package

Features:
- Frequency up to 12.0 GHz
- Micro-strip Line Topologic
- Low Phase Noise
- Custom options available

Applications
- Telecommunications
- High Performance Radio
- Base Stations
- Instrumentation

Order Examples: RVCO-6.0-12.0-15V-S-r24

Description: (Voltage Controlled Oscillator, 6.0-12.0GHz, (-10 to 0) dBm Output Power, 15Volts DC Voltage, Surface Mount Package)

Electrical Specification

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>COMMENTS, EXAMPLES</th>
<th>SYMBOL</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>Currently available in 0.5 SQ inch-package</td>
<td>f0</td>
<td>6000</td>
<td></td>
<td>12000</td>
<td>MHz</td>
</tr>
<tr>
<td>Tuning Voltage</td>
<td>Vt</td>
<td>Vt</td>
<td>0–5</td>
<td>0–15</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>Typical Voltage 5V, Stationary up to 12V</td>
<td>Vcc</td>
<td>5</td>
<td>12</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Supply Current</td>
<td>Dependent on Frequency and Output Power</td>
<td>Icc</td>
<td>150</td>
<td></td>
<td>mA</td>
<td></td>
</tr>
<tr>
<td>Output Power</td>
<td>Output Power Tolerance is typ. ±5dBm</td>
<td>Pout</td>
<td>-10</td>
<td>-5</td>
<td>0</td>
<td>dBm</td>
</tr>
<tr>
<td>Harmonic Suppression</td>
<td>Dependent on Tuning Range and Freq</td>
<td>a(2fo)</td>
<td>-10</td>
<td></td>
<td>dBc</td>
<td></td>
</tr>
<tr>
<td>Sub-harmonic Suppression</td>
<td>Dependent on Tuning Range and Freq</td>
<td>a(fo/2)</td>
<td>-20</td>
<td></td>
<td>dBc</td>
<td></td>
</tr>
<tr>
<td>Pushing</td>
<td>Dependent on Freq, Tuning R</td>
<td>df/dVcc</td>
<td>3.0</td>
<td></td>
<td>MHz/V</td>
<td></td>
</tr>
<tr>
<td>Pulling</td>
<td>Dependent on Freq, Output Power and Circuit</td>
<td>df/dZL</td>
<td>2.5</td>
<td></td>
<td>MHz</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions: 12.7mm [0.5"] SQ x 6mm [0.24”]
Dimension: In mm/inches
Outline Tolerances:±0.20mm / .008”

RVCO-6.0-12.0-0dBm-15V-S-r24 is a VCO designed to meet the requirements for a variety of applications. The unit main characteristics are High Frequency Band, Low Noise and Linear Tuning. Components are selected for high-Q and tight tolerances.

It is developed and manufactured in its ISO9000 certified facility. RF-simulation (CAE), automated test-equipment (Agilent VCO/PLL-Analyzer) and statistical process control (SPC) are integral part of R&D and manufacturing – which ensures minimal process variances and a high degree of repeatability.

Specifications may be subject to change 03/01/18
1. Load Impedance is 50 Ω.
2. Operating temperature range is typically 0°C...+85°C.
3. The package is non-hermetic. Substrate is glass-reinforced laminate; the cover is folded nickel-silver.
4. Bypass-capacitors (ceramic) from Vcc to Ground are recommended: 1nF||50pF.
5. Customized specifications may deviate from this General Specification.
6. Phase-noise performance depends on the individual specification. Phase Noise is strongly dependent on (a) frequency (b) supply voltage and (c) tuning range.
7. The phase noise graph (to right) shows the typical characteristic.
8. The sample was measured at 5V supply and have -2dBm output power.

**Ultra-Low Phase Noise-VCO 6500 MHz ±1%**

![SSB Phase Noise Graph](image-url)