Tape & Reel:
F37
7” Reels with 10, 20, 50, 100 devices
13” Reels with 200, 500 devices

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REV. D
M164706
EDW-10026SFP1
ROS-1310C+
RAV
171214
Page 1 of 2

Surface Mount
Voltage Controlled Oscillator
ROS-1310C+
Ultra Low Noise 1260 to 1310 MHz

Features
• ultra low phase noise
• linear tuning characteristics
• low pushing
• low pulling
• aqueous washable

Applications
• wireless communications
• cellular infrastructure

Electrical Specifications

<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th>FREQUENCY (MHz)</th>
<th>POWER OUTPUT (dBm)</th>
<th>PHASE NOISE (dBc/Hz SSB at offset frequencies, kHz)</th>
<th>VOLTAGE SENSITIVITY (V)</th>
<th>POWER RANGE (dBm)</th>
<th>MODULATION BANDWIDTH (MHz)</th>
<th>TUNING NON HARMONIC SPURIOUS (dBc)</th>
<th>PULLING pk-pk (Hz)</th>
<th>PUSHING @ 12 dB (MHz/V)</th>
<th>DC OPERATING POWER (Watts)</th>
<th>MIN.</th>
<th>MAX.</th>
<th>TYP.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROS-1310C+</td>
<td>1260</td>
<td>1310</td>
<td>+3</td>
<td>-95</td>
<td>-120</td>
<td>-140</td>
<td>-159</td>
<td>0.5</td>
<td>20</td>
<td>2.5</td>
<td>-5</td>
<td>40</td>
<td>120</td>
</tr>
</tbody>
</table>

Pin Connections
- RF OUT: 10
- VCC: 14
- V-TUNE: 2
- GROUND: 1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 15, 16

Maximum Ratings
- Operating Temperature: -55°C to 85°C
- Storage Temperature: -55°C to 100°C
- Absolute Max. Supply Voltage (Vcc): 6V
- Absolute Max. Tuning Voltage (Vtune): 22V
- All specifications: 50 ohm system

Environmental Ratings: ENV65

Environmental Ratings: ENV65

Outline Dimensions (inches)

A B C D E F G H J K L M N P Q R S T wt.
.500 .500 .220 .100 .080 .115 .060 .040 .540 .600 .100 .135 .135 .115 .140 .070 .150 .070 grams
12.70 12.70 5.59 2.54 2.03 2.92 1.52 1.02 13.72 1.52 1.02 3.43 3.43 2.92 3.56 1.78 3.81 1.78 1.2

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+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Demo Board MCL P/N: TB-10
Suggested PCB Layout (PL-012)
## Performance Data & Curves*

*at 25°C unless mentioned otherwise

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*F3 = 29.20 MHz
*F4 = 29.18 MHz

### Table:

<table>
<thead>
<tr>
<th>FREQ. (MHz)</th>
<th>Output Power (dBm)</th>
<th>Harmonics (dBc)</th>
<th>PHASE NOISE (dBc/Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1kHz</td>
<td>-125</td>
<td>-135</td>
<td>-105</td>
</tr>
<tr>
<td>10kHz</td>
<td>-105</td>
<td>-115</td>
<td>-85</td>
</tr>
<tr>
<td>100kHz</td>
<td>-85</td>
<td>-95</td>
<td>-75</td>
</tr>
<tr>
<td>1MHz</td>
<td>-65</td>
<td>-75</td>
<td>-55</td>
</tr>
</tbody>
</table>

### Graphs:

- **Performance Data & Curves**
  - ROS-1310C+
    - Frequency and Tuning Sensitivity
    - Power Output
    - Harmonics Level
    - Frequency Pulling & Pushing (Vcc ± 5%)
    - Phase Noise Vs. Tuning Voltage
    - Phase Noise

---

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