VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: MFC6170-5

OPTIMIZED BANDWIDTH
610 - 700 MHz

FEATURES:
► Low Phase Noise Performance
► Fast Tuning
► Ideal for PLL Applications
► Small Size, Surface Mount
► Lead Free Patented REL-PRO® Technology

SPECIFICATIONS (Rev. F 08/24/09)

Frequency: 610 - 700 MHz
Tuning Voltage: See table below.
Bias Voltage: +5 VDC @ 16 mA (Max.)
Output Power: +4 dBm (Min.)
Tuning Sensitivity: 17 - 30 MHz/V (Typ.)
Output Impedance: 50 Ohms (Nom.)
Harmonic Suppression: 15 dB (Typ.)
Frequency Pulling: 1 MHz (Typ. @ 1.75:1 VSWR)
Frequency Pushing: 0.5 MHz/V (Typ.)
Tuning Port Capacitance: 33 pF (Typ.)
Phase Noise @ 10 kHz: -113 dBc/Hz (Typ.)
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>610 (Max.)</td>
</tr>
<tr>
<td>5</td>
<td>700 (Min.)</td>
</tr>
</tbody>
</table>

Absolute Maximum Ratings

Storage Temp. Range: -55 to +125 °C
Bias Voltage: +5.5 V
Tuning Voltage: +10 V
DC Voltage Applied to RF Out: ± 25 V

This product is manufactured under one or more of the following patents. Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,055,605; 6,055,575; 6,186,199; 6,188,381; 6,196,581; 6,260,670; 6,260,113; 6,316,612; 6,495,025; 2,548,311 0,348,017; 7,465,297; 7,465,685; 7,495,297; 7,495,297; 7,495,297; 7,495,297; 7,495,297; 7,495,297; 7,548,317; 7,548,226; 7,563,174; 7,585,603; 7,612,396; 7,654,751

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PERFORMANCE PLOTS
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Control Voltage (Vdc)

Tuning Sensitivity (MHz/V)

2nd Harmonic Suppression (dB)

+25ºC  +85ºC  -40ºC

0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5

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