# Fixed Frequency Synthesizer
## Surface Mount Module

### Applications
- Radar Equipment
- Test Systems

### Application Notes
- AN-107: Manual Soldering Technique
- AN-205: Measuring Phase Noise for SFS Series

### Performance Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>7500</td>
<td>7500</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>Phase Noise @ 10 kHz offset (1 Hz BW)</td>
<td>-95</td>
<td></td>
<td>dBc/Hz</td>
<td></td>
</tr>
<tr>
<td>Harmonic Suppression (2nd)</td>
<td>-30</td>
<td></td>
<td>dBc</td>
<td></td>
</tr>
<tr>
<td>Spurious Suppression</td>
<td>-65</td>
<td>-3</td>
<td>dBc</td>
<td></td>
</tr>
<tr>
<td>Power Output</td>
<td>-6</td>
<td>-3</td>
<td>3</td>
<td>dBm</td>
</tr>
<tr>
<td>Load Impedance</td>
<td>50</td>
<td></td>
<td>Ω</td>
<td></td>
</tr>
<tr>
<td>Settling Time</td>
<td>10</td>
<td></td>
<td>mS</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40</td>
<td>-85</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Package Style</td>
<td>SFS-L1</td>
<td></td>
<td></td>
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</tbody>
</table>

### Power Supply Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Voltage 1: PLL (Vcc, nom)</td>
<td>3</td>
<td></td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Supply Voltage 2: VCO (Vcc, nom)</td>
<td>5</td>
<td></td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Supply Current 1: PLL (Icc, typ)</td>
<td>11</td>
<td></td>
<td>mA</td>
<td></td>
</tr>
<tr>
<td>Supply Current 2: VCO (Icc, typ)</td>
<td>120</td>
<td></td>
<td>mA</td>
<td></td>
</tr>
</tbody>
</table>

### Reference Oscillator Signal

<table>
<thead>
<tr>
<th>Specification</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>10</td>
<td></td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>Phase Noise @1 kHz Offset</td>
<td>-145</td>
<td></td>
<td>dBc/Hz</td>
<td></td>
</tr>
</tbody>
</table>

### Additional Notes

LFSuffix = RoHS Compliant. All specifications are subject to change without notice.
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URL: www.zcomm.com | EMAIL: applications@zcomm.com
### Phase Noise, typ.

**PHASE NOISE (1 Hz BW, typical)**

- **Frequency (Hz)**
  - 10 Hz: -150.0 dBc/Hz
  - 100 Hz: -127.4 dBc/Hz
  - 1 kHz: -108.5 dBc/Hz
  - 10 kHz: -97.0 dBc/Hz
  - 100 kHz: -85.2 dBc/Hz

#### Footprint

**RECOMMENDED FOOTPRINT**

- Several holes of 0.015" are recommended for good grounding.
- 0.020" min. cutback from lead pads.

**Offset (Hz)**

- 0.000
- 2x 0.030
- 2x 0.050
- 2x 0.070
- 2x 0.100
- 2x 0.170

**Typ.**

- 0.000
- 2x 0.030
- 2x 0.050
- 2x 0.070
- 2x 0.100
- 2x 0.170

### Physical Dimensions

**Z-COMM SFSXXXXX**

**W/O#**

**D/C**

**PIN CONFIGURATION**

- 6 RF OUT
- 11 Lock detect
- 12 NC
- 13 NC
- 14 NC
- 15 NC
- 17 REF IN
- 23 NC
- 24 VCC CHIP
- 26 Vcc VCO
- 27 REST GROUND

**Note:** All dimensions are in inches. TOL: 30X +/- 0.010

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