

REFERENCE PHASE LOCKED TRANSLATOR

SURFACE MOUNT MODEL: VFCTS128-10

FIXED FREQUENCY

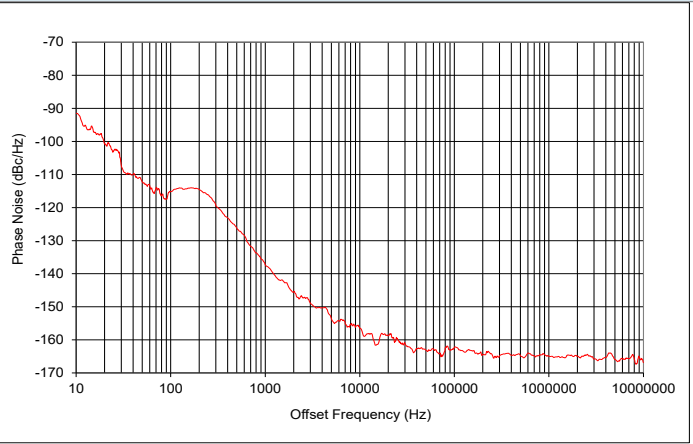
128 MHz

FEATURES:

- ▶ Ultra-Low Phase Noise
- ▶ No Programming Required
- ▶ Small Size, Surface Mount



Phase Noise (Measured with Agilent E5052A or R&S FSUP-26/27)



SPECIFICATIONS (Rev. A 12/3/18)

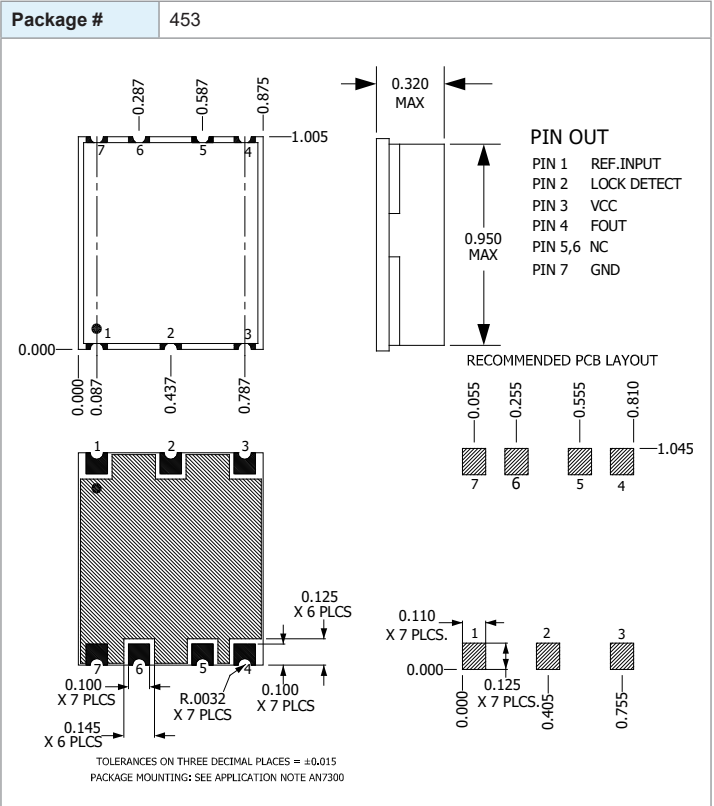
| Frequency | 128 MHz | | | | | | | | | | |
|-----------------------------|---|-------------|-------------|----------|-------------|---------|-------------|----------|-------------|-----------|-------------|
| Reference Input Frequency | 10 MHz ¹ | | | | | | | | | | |
| Reference Input Voltage | 1.0 to 3.3 V p-p | | | | | | | | | | |
| Bias Voltage (Vcc) | +5 Vdc @ 85 mA (max.) | | | | | | | | | | |
| Output Power | 8 dBm (Min.) | | | | | | | | | | |
| Modulation Bandwidth | 30 Hz (Typ.) | | | | | | | | | | |
| Harmonic Suppression | 20 dB (Typ.) | | | | | | | | | | |
| Output Impedance | 50 Ohms (Nom.) | | | | | | | | | | |
| Lock Detect Indicator | LVC MOS 3.3 V (logic: 1 = lock, 0 = unlock) | | | | | | | | | | |
| Typical Phase Noise | <table border="1"> <thead> <tr> <th>Offset</th> <th>Phase Noise</th> </tr> </thead> <tbody> <tr> <td>@ 100 Hz</td> <td>-100 dBc/Hz</td> </tr> <tr> <td>@ 1 kHz</td> <td>-130 dBc/Hz</td> </tr> <tr> <td>@ 10 kHz</td> <td>-155 dBc/Hz</td> </tr> <tr> <td>@ 100 kHz</td> <td>-160 dBc/Hz</td> </tr> </tbody> </table> | Offset | Phase Noise | @ 100 Hz | -100 dBc/Hz | @ 1 kHz | -130 dBc/Hz | @ 10 kHz | -155 dBc/Hz | @ 100 kHz | -160 dBc/Hz |
| | Offset | Phase Noise | | | | | | | | | |
| | @ 100 Hz | -100 dBc/Hz | | | | | | | | | |
| | @ 1 kHz | -130 dBc/Hz | | | | | | | | | |
| @ 10 kHz | -155 dBc/Hz | | | | | | | | | | |
| @ 100 kHz | -160 dBc/Hz | | | | | | | | | | |
| Operating Temperature Range | -40 to +85 °C | | | | | | | | | | |

¹ External 10 MHz reference sources should have phase noise better than -138 dBc/Hz @ 50 Hz offset to achieve published specifications.

Absolute Maximum Ratings

| | |
|---------------------|---------------|
| Storage Temp. Range | -40 to +85 °C |
| Bias Voltage (Vcc) | +5.25 V |

Patent : <http://www.synergymwave.com/patents>



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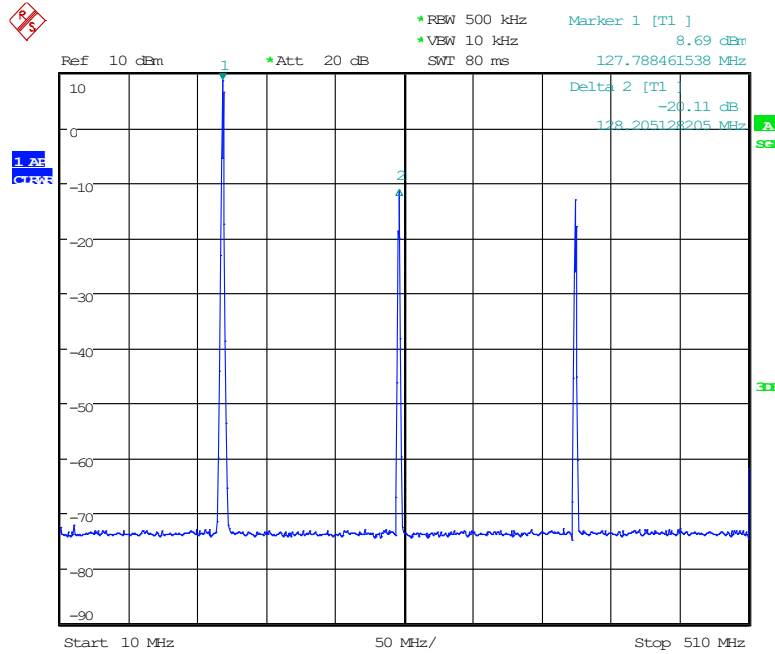
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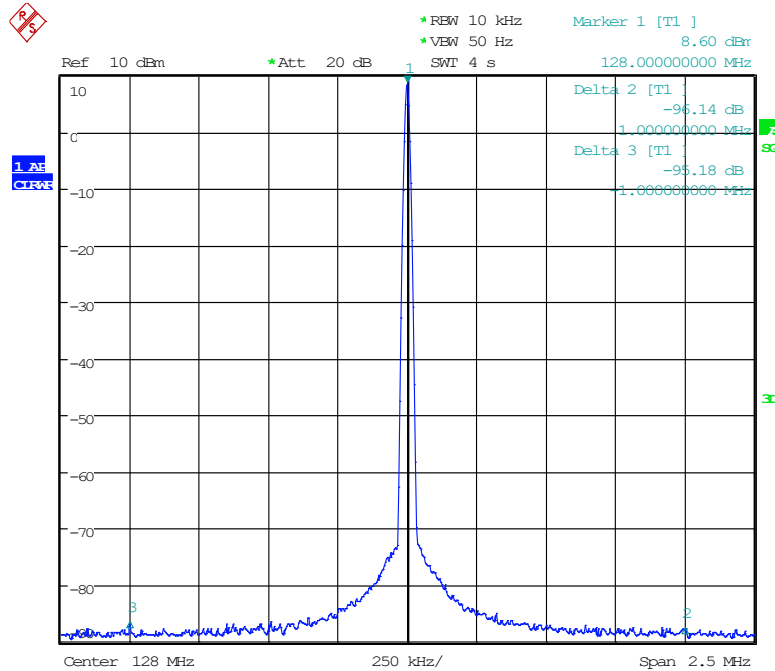
128 MHz

@ 25 °C

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

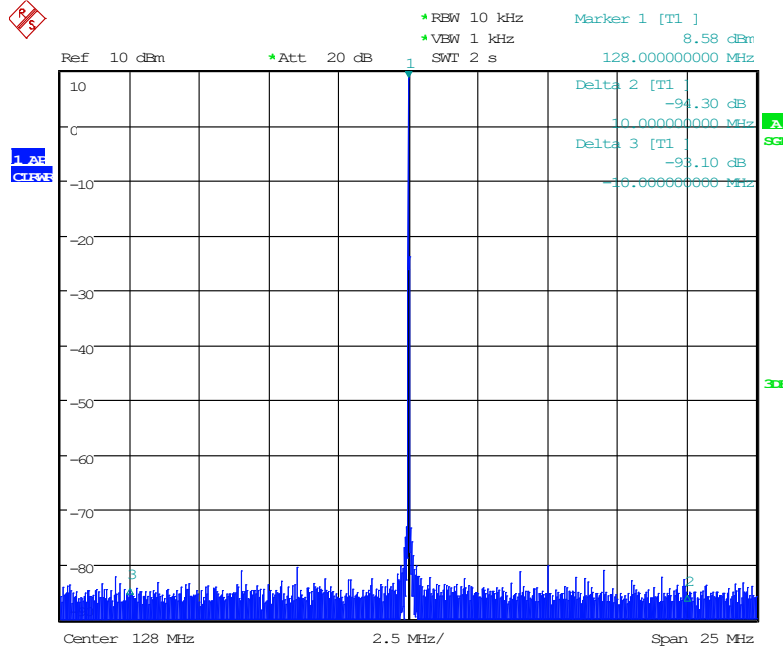
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