

REFERENCE PHASE LOCKED TRANSLATOR

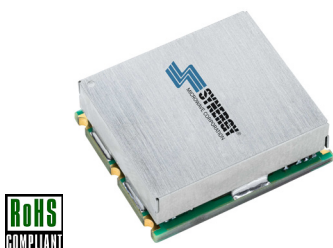
SURFACE MOUNT MODEL: VFCTS100-10

FIXED FREQUENCY

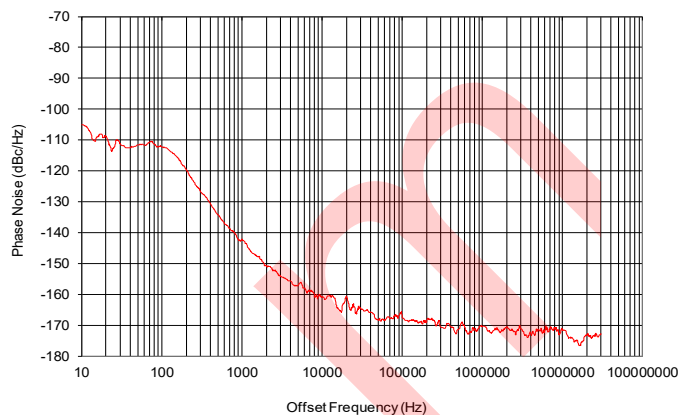
100 MHz

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

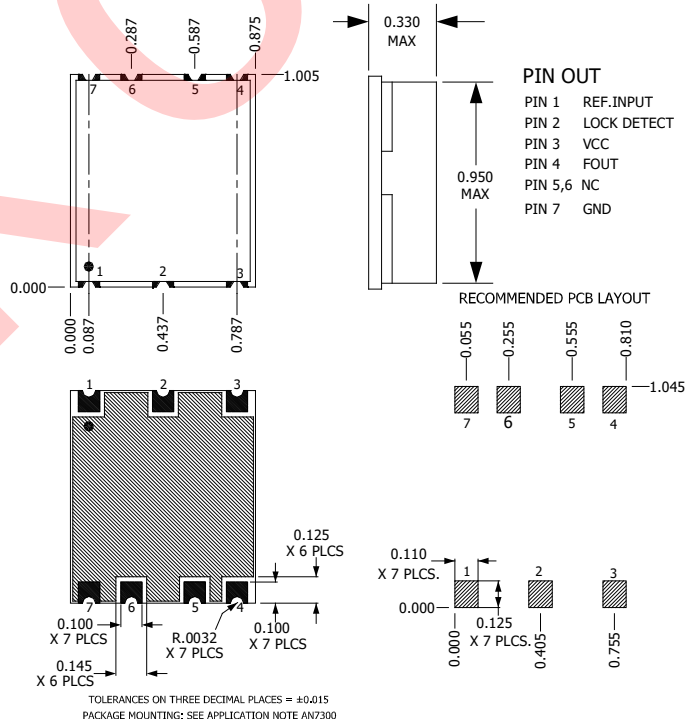
Frequency	100 MHz										
Reference Input Frequency	10 MHz ¹										
Reference Input Voltage	1.0 to 3.3 V p-p										
Bias Voltage (Vcc)	+5 Vdc @ 85 mA (max.)										
Output Power	7 dBm (Min.)										
Modulation Bandwidth	30 Hz (Typ.)										
Harmonic Suppression	28 dB (Typ.)										
Output 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>-110 dBc/Hz</td></tr> <tr> <td>@ 1 kHz</td><td>-140 dBc/Hz</td></tr> <tr> <td>@ 10 kHz</td><td>-156 dBc/Hz</td></tr> <tr> <td>@ 100 kHz</td><td>-165 dBc/Hz</td></tr> </tbody> </table>	Offset	Phase Noise	@ 100 Hz	-110 dBc/Hz	@ 1 kHz	-140 dBc/Hz	@ 10 kHz	-156 dBc/Hz	@ 100 kHz	-165 dBc/Hz
Offset	Phase Noise										
@ 100 Hz	-110 dBc/Hz										
@ 1 kHz	-140 dBc/Hz										
@ 10 kHz	-156 dBc/Hz										
@ 100 kHz	-165 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>

Package # 453



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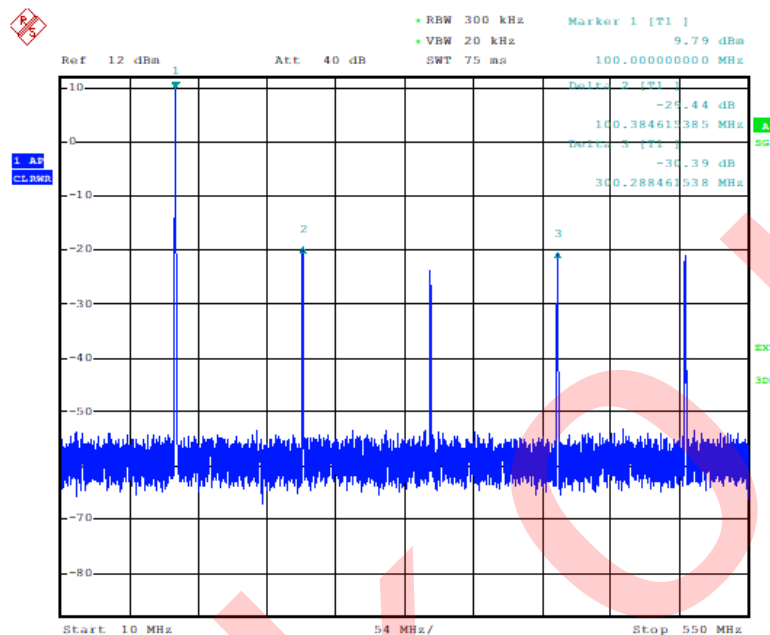
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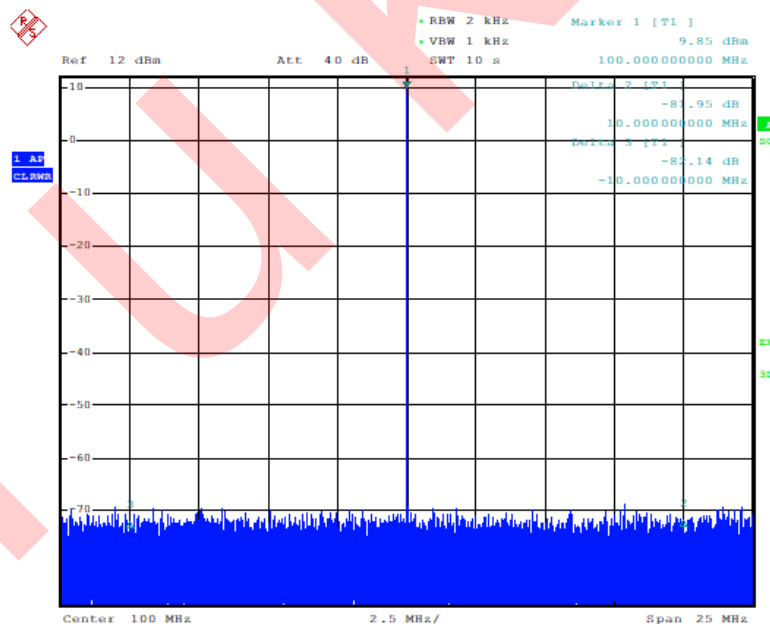
100 MHz

HARMONIC SUPPRESSION

@ 25 °C



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

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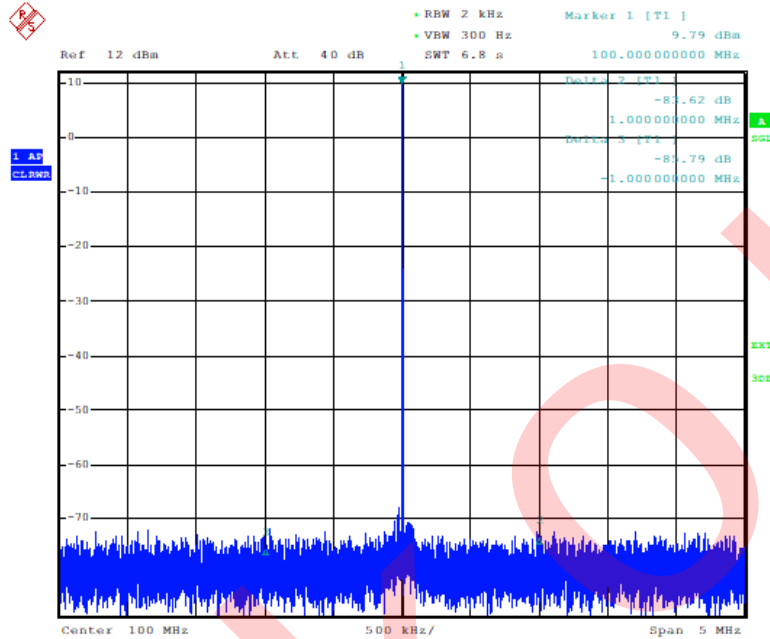
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PERFORMANCE PLOTS

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