



RF Signal Generator– 0.039-22GHz Ultra Low Phase Noise USB Control

Summary

The RSGLP0120GA is an easy to use high frequency signal generator controlled through a standard USB port. Using advanced VCO and DDS based technology along with a temperature compensated crystal reference, it offers ultra-low phase noise (-135dBc/Hz at 1MHz offset 1GHz output) and high frequency resolution. The unit can also be locked to an external 10MHz reference source.

General Specification

Output Frequency Range: 0.039 ~ 22GHz

Output Power Range: -20dBm to +10dBm

Frequency Stability: +/-0.5ppm with internal reference

Frequency Step Tuning Speed: <100us

Tuning Step: 0.001Hz

Phase Noise @10KHz offset -116dBc/Hz (@10GHz Output Frequency)

Control Interface: USB



Electrical Specifications

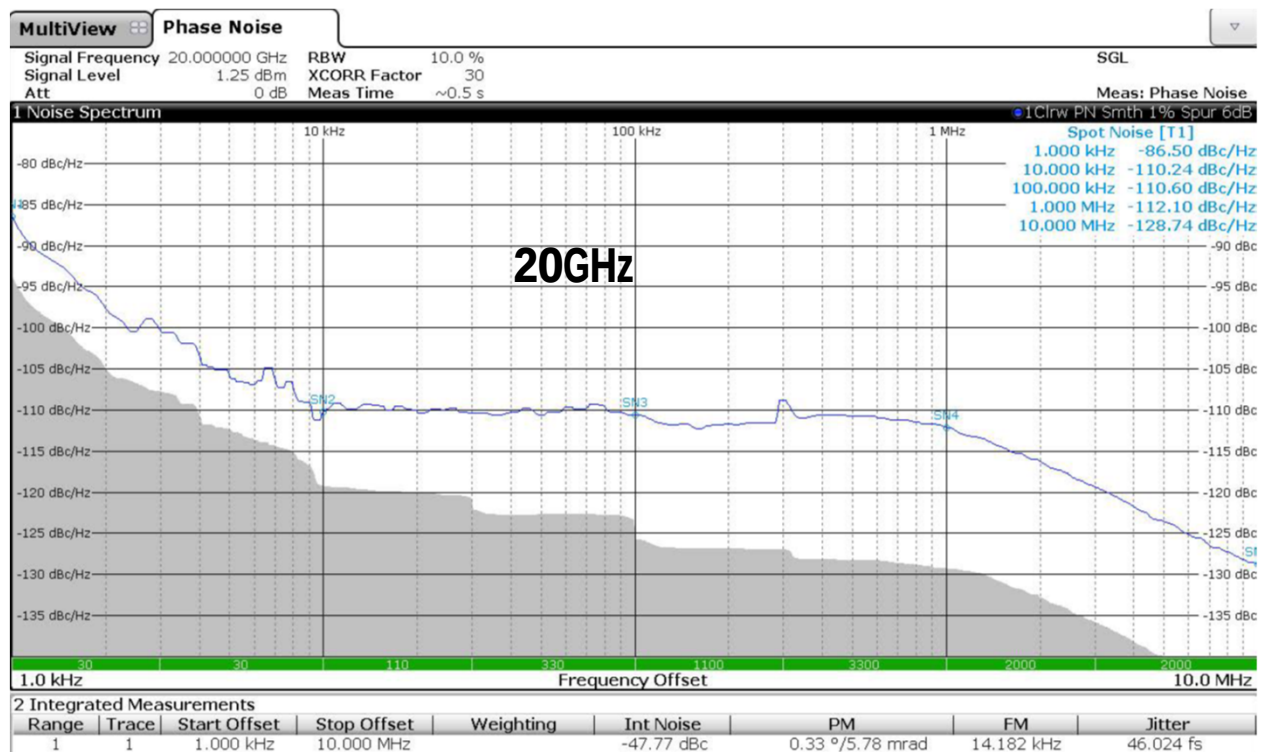
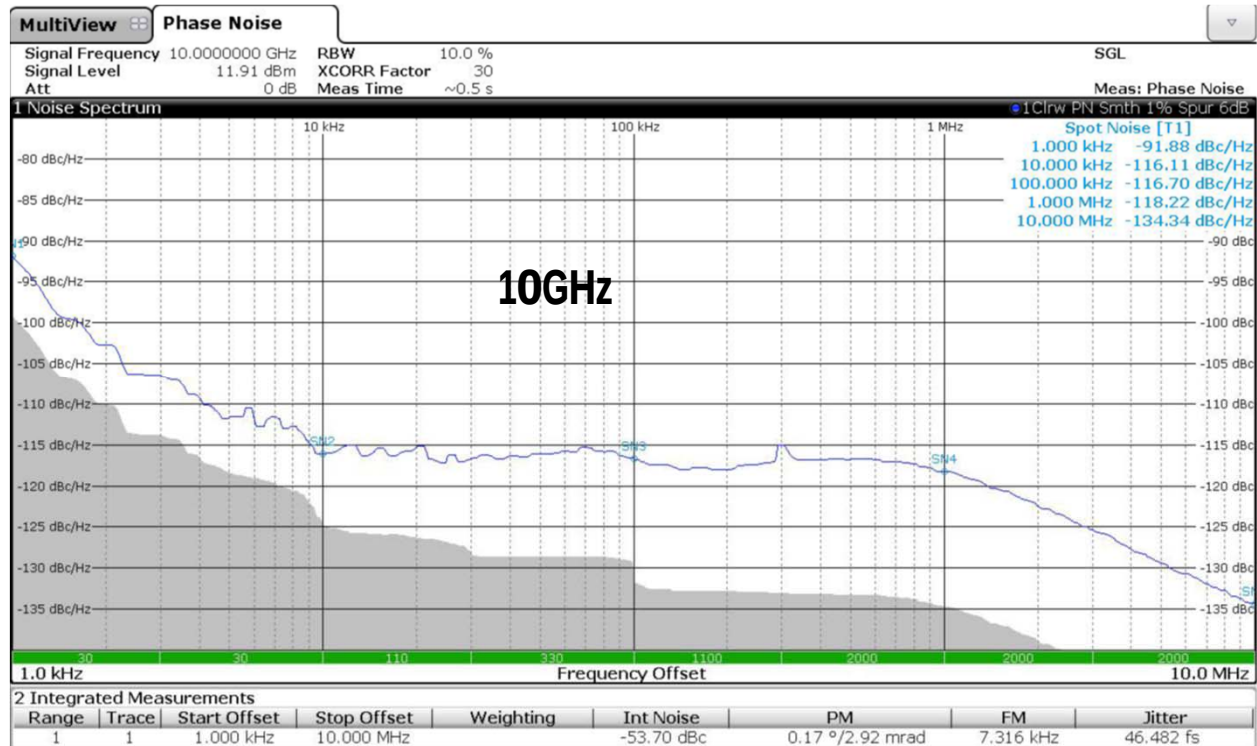
Frequency	39MHz-22GHz	Typical Output Power	10dBm
Frequency Stability	+/-0.5ppm	Output Power Tuning Range	31.5dB with 0.5dB step
Frequency Aging	+/- 3ppm (10 years)	Output Power Linearity	+/- 0.5dB
Reference Tuning Range	+/-100ppm	Output Power Accuracy	+/- 1.5dB
Tuning Step	0.001Hz	SFDR 1MHz Tuning Step	65dBc
Phase Noise @ 10GHz Typical	-116dBc/Hz (@10KHz) -117dBc/Hz (@100KHz) -118dBc/Hz (@1MHz) -140dBc/Hz (@10MHz)	2 nd Harmonic	-30dBc
Power Supply Voltage	110 / 240V AC	3 rd Harmonic	-35dBc
USB Standard	USB 2.0	EXT Reference Power	0dBm to 10dBm



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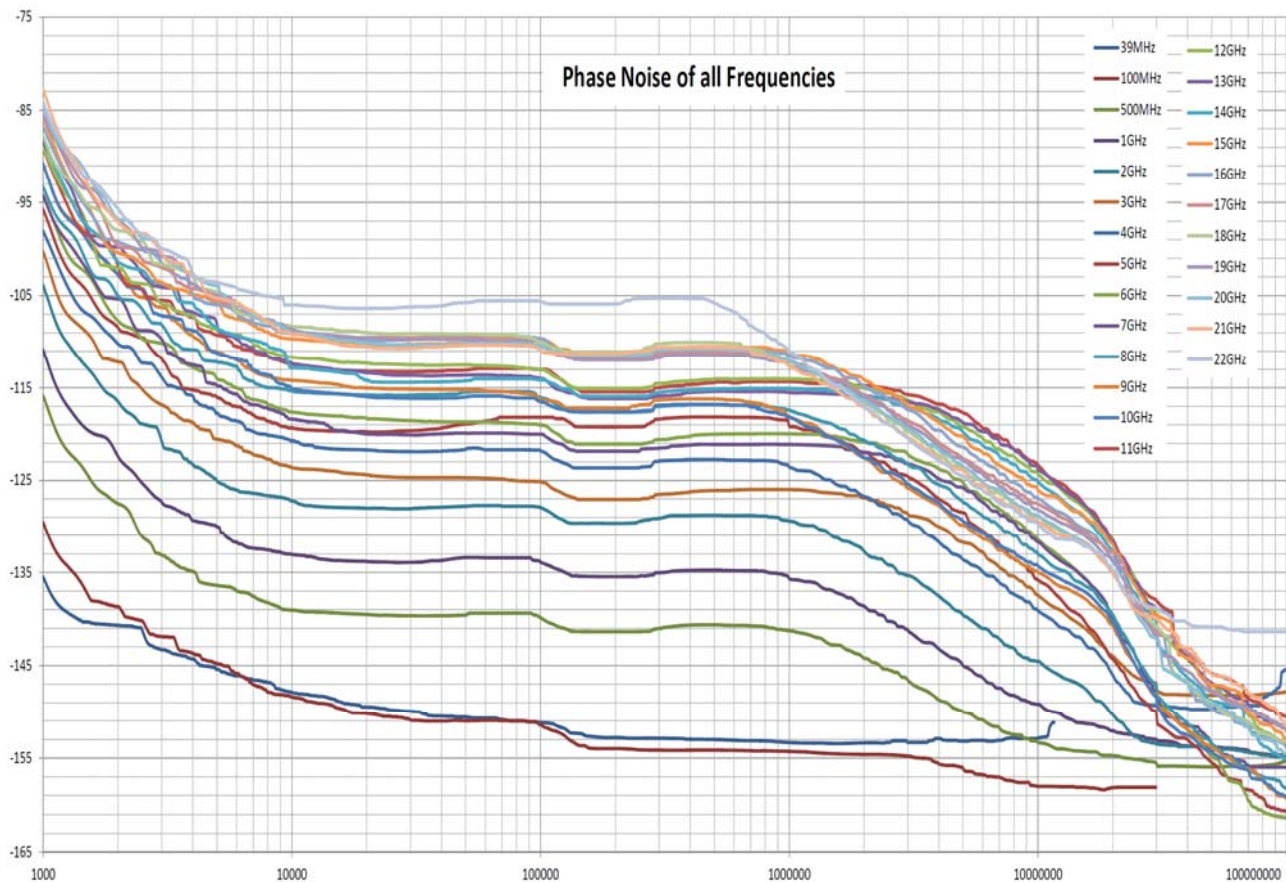
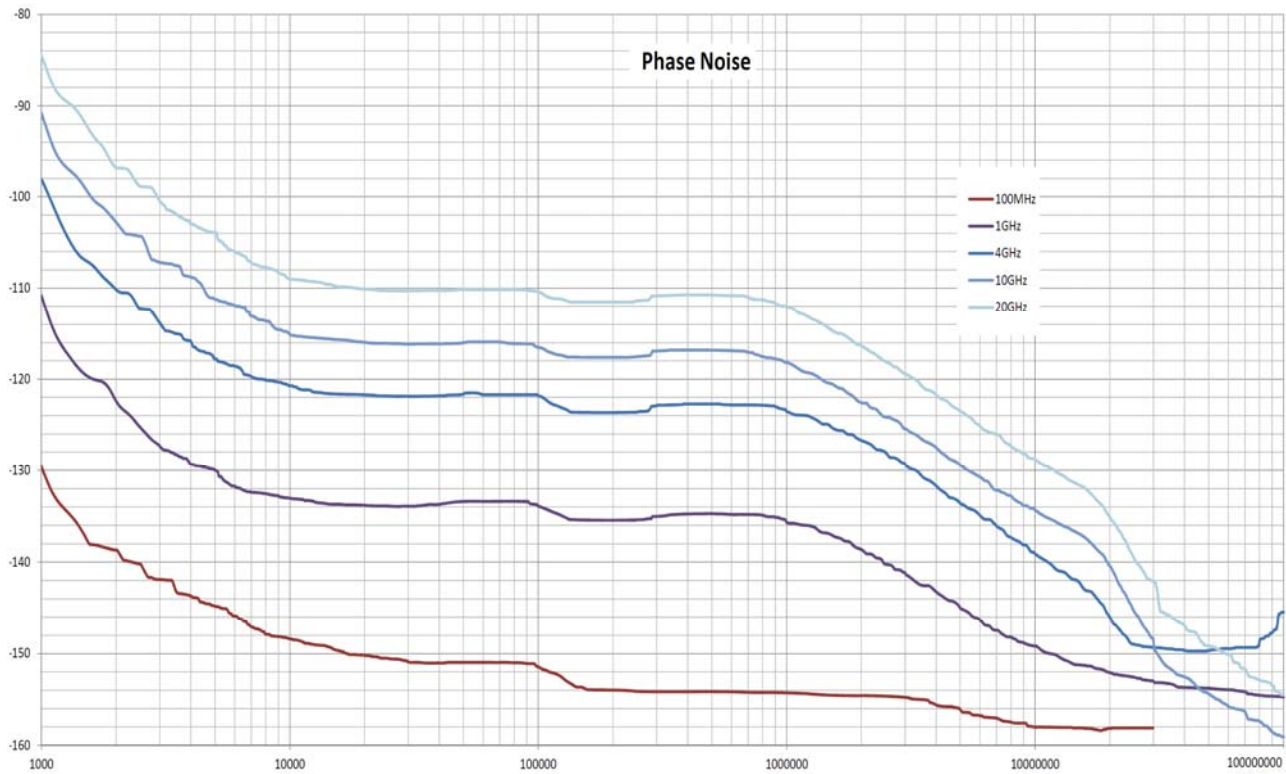
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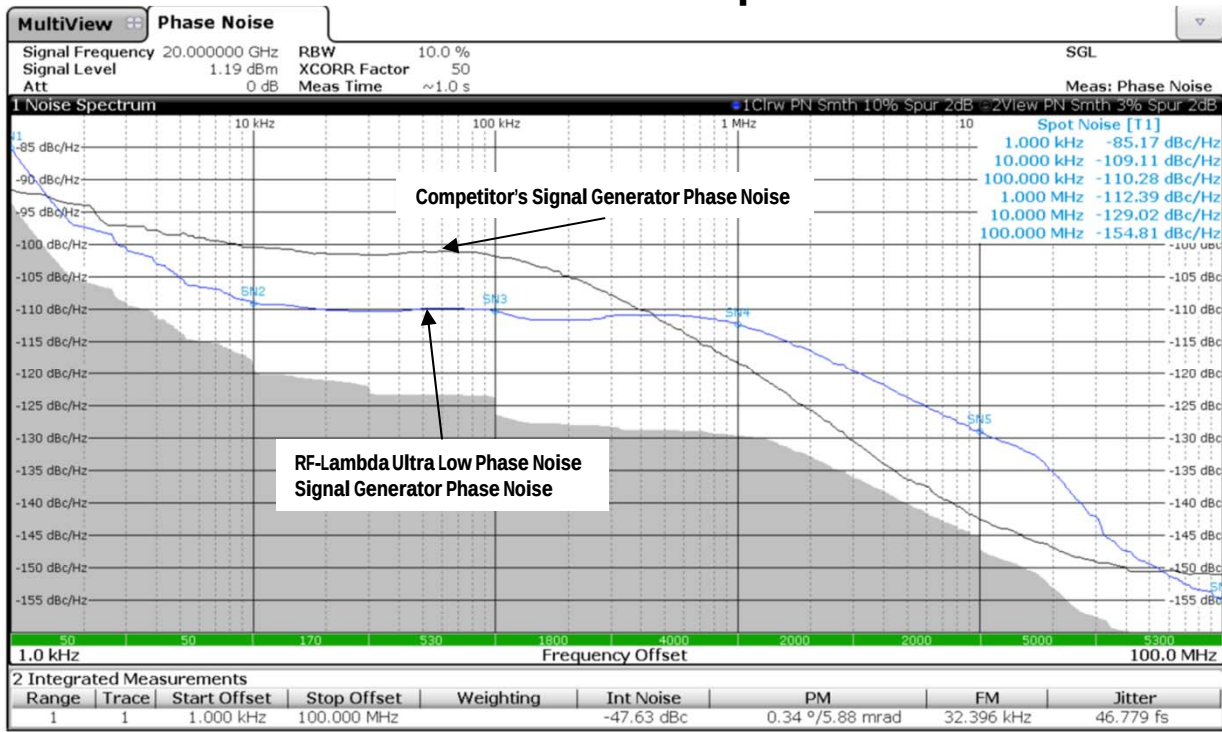
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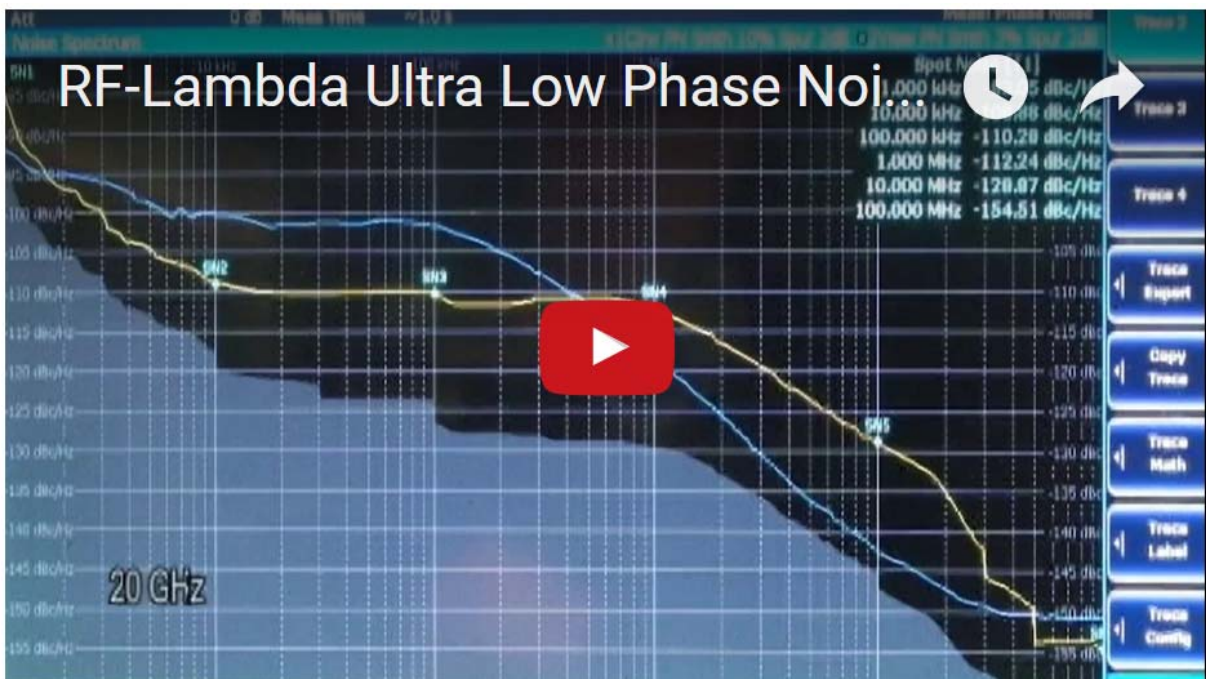


Phase Noise Comparison



Video Instruction Link:

http://www.rflambda.com/product_signalgenerator.jsp



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User Instructions:

1. Install the following 3 utilities onto the control PC:

http://www.rflambda.com/product_signalgenerator.jsp

a. Visual C++ Redistributable Packages for Visual Studio 2013

<https://www.microsoft.com/en-us/download/details.aspx?id=40784>

a. Visual Studio 2010 Tools for Office Runtime

<https://www.microsoft.com/en-us/download/details.aspx?id=48217>

a. Microsoft .NET Framework 4.6.2

<https://www.microsoft.com/en-us/download/details.aspx?id=53344>

2. Install the USB Driver under this directory:

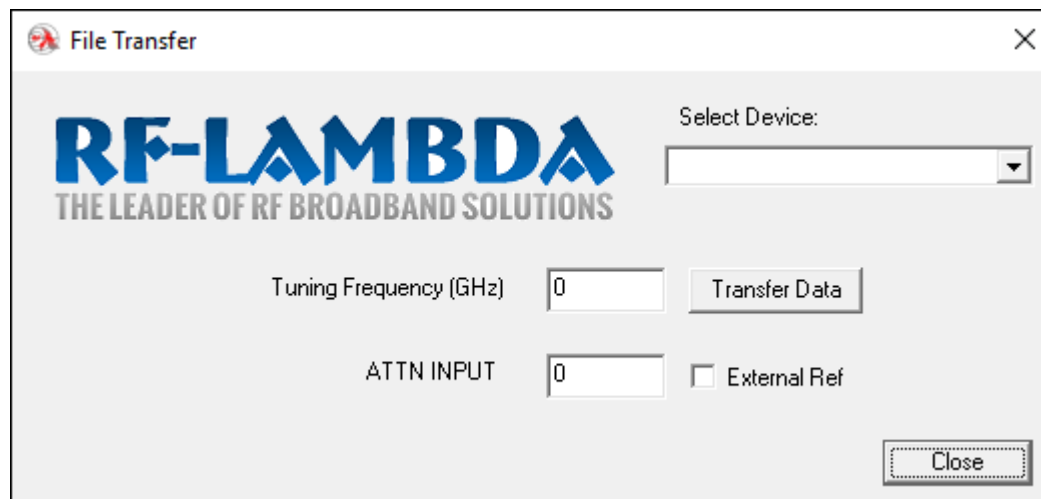
 USBXpressInstaller_x64.exe

\\... Lambda SG Utility_Rev_1.0\Installation Software\USB Driver \ USBXpressInstaller_x64.exe

3.  RF-Lambda SG Utility_Rev_1.0.exe /_1.0.exe”

\\RF-Lambda SG Utility_Rev_1.0\RF-Lambda SG Utility_Rev_1.0\RF-Lambda SG Utility_Rev_1.0.exe

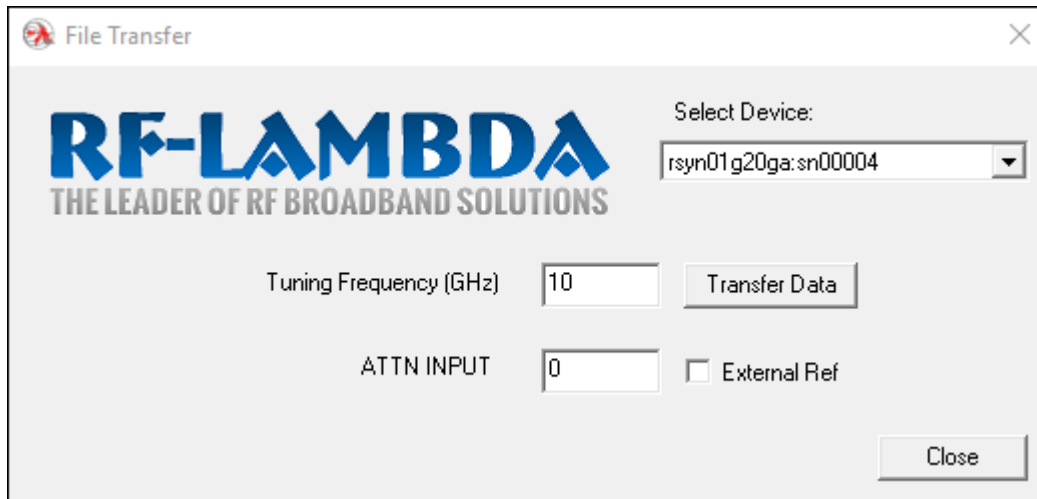
The following control window will pop up





4. Turn on the +15V power supply to the synthesizer

The part number and serial number will show up in the top right corner.



5. Enter the desired output frequency in GHz here:

Tuning Frequency (GHz)	10
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6. Click the Transfer Data button to set the frequency.

Transfer Data

7. Reduce the output power by adding attenuation here:

ATTN INPUT	0
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(Valid attenuation values are 0 to 31.5dB in 0.5dB increments)

8. You can select the external reference option by clicking here:

☒ External Ref
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