



2.19 11G CDD H@Ant 1





2.20 11G CDD H@Ant 2



Appendix G: Unwanted Emissions into Non-Restricted Frequency

Bands

In this Appendix, the "Pref", which is used as the reference level, refers to the peak power level in any 100 kHz bandwidth within the fundamental emission, the "Puw" refers to the maximum emission power in 100 kHz band segments outside of the authorized frequency band.

Considering that the higher ratio of RBW to the span for the frequency ranges below 30 MHz makes the results determination be complicated, a narrower RBW other than 100 kHz is used for these ranges. The measured value should add a RBW correction factor (RBWCF) where $RBWCF [dB] = 10 \times \lg(100 [kHz]/\text{narrower RBW} [kHz])$. As to this Appendix, the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain and used as respective results for each chain, due to the relative-limit requirement.

In the result table, the "< Limit" denotes that "The Puw [dBm] is less than Pref[dBm]-30[dBm], see test plots for detailed".

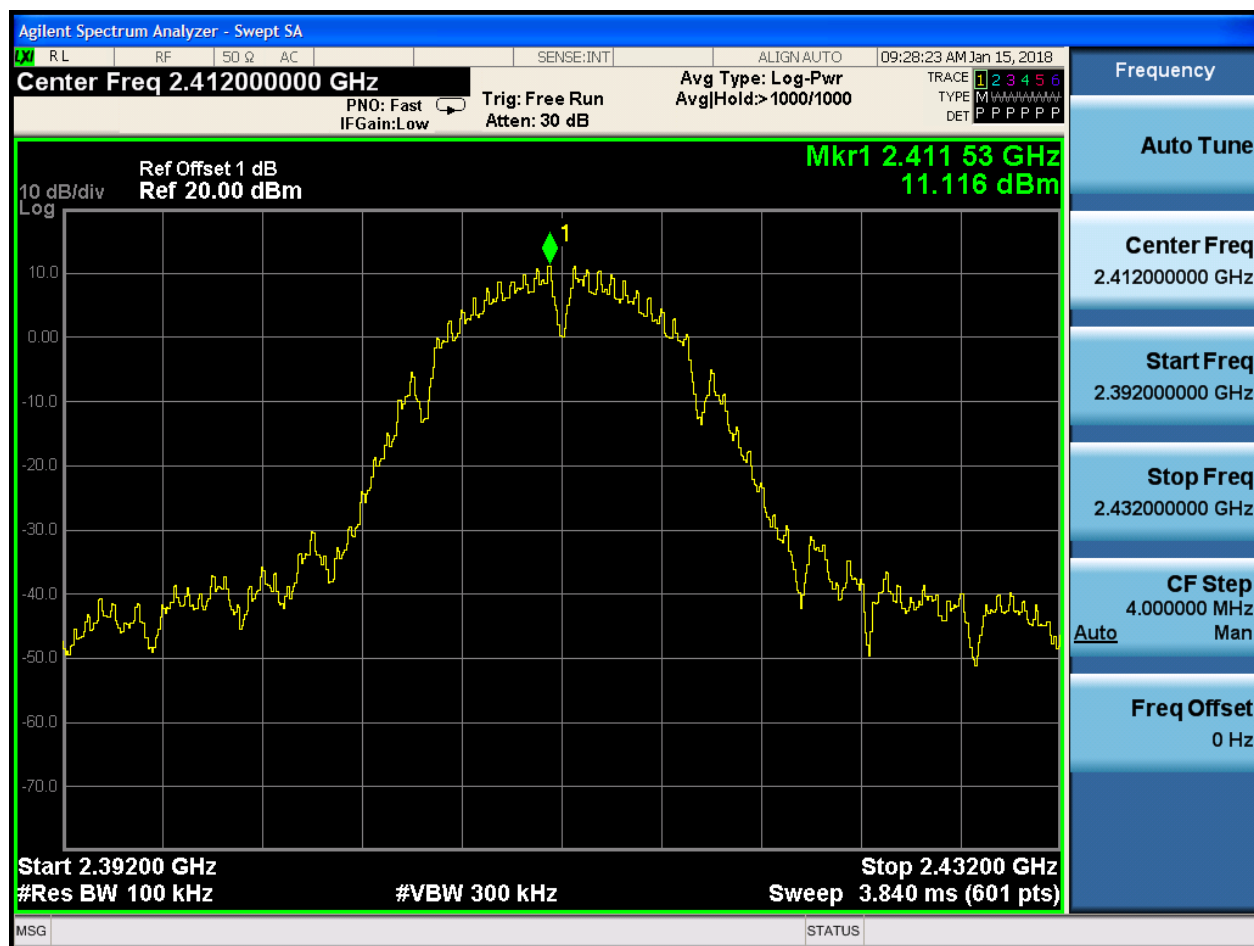
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Pref[dBm]	Puw[dBm]	Verdict
11B	L	2412	Ant 1	11.12	<limit	pass
11B	L	2412	Ant 2	10.51	<limit	pass
11B	M	2437	Ant 1	10.87	<limit	pass
11B	M	2437	Ant 2	10.23	<limit	pass
11B	H	2462	Ant 1	10.80	<limit	pass
11B	H	2462	Ant 2	10.93	<limit	pass
11G	L	2412	Ant 1	3.98	<limit	pass
11G	L	2412	Ant 2	4.45	<limit	pass
11G	M	2437	Ant 1	4.82	<limit	pass
11G	M	2437	Ant 2	4.24	<limit	pass
11G	H	2462	Ant 1	4.45	<limit	pass
11G	H	2462	Ant 2	4.84	<limit	pass
11N20	L	2412	Ant 1	3.22	<limit	pass
11N20	L	2412	Ant 2	3.81	<limit	pass
11N20	M	2437	Ant 1	3.63	<limit	pass
11N20	M	2437	Ant 2	3.10	<limit	pass
11N20	H	2462	Ant 1	3.10	<limit	pass
11N20	H	2462	Ant 2	3.77	<limit	pass
11N20m	L	2412	Ant 1	3.09	<limit	pass
11N20m	L	2412	Ant 2	4.28	<limit	pass
11N20m	M	2437	Ant 1	4.03	<limit	pass
11N20m	M	2437	Ant 2	3.88	<limit	pass
11N20m	H	2462	Ant 1	3.79	<limit	pass
11N20m	H	2462	Ant 2	4.40	<limit	pass
11G CDD	L	2412	Ant 1	4.15	<limit	pass
11G CDD	L	2412	Ant 2	4.77	<limit	pass
11G CDD	M	2437	Ant 1	4.83	<limit	pass
11G CDD	M	2437	Ant 2	4.98	<limit	pass
11G CDD	H	2462	Ant 1	4.85	<limit	pass
11G CDD	H	2462	Ant 2	4.70	<limit	pass

Part II - Test Plots

2.1 11B L@Ant 1

Pref:





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω DC SENSE:INT ALIGN: AUTO 09:28:38 AM Jan 15, 2018

Center Freq 79.500 kHz Avg Type: Log-Pwr Avg/Hold: >50/50

PNO: Wide IF Gain: Low Trig: Free Run #Atten: 26 dB

TRACE 1 2 3 4 5 6
TYPE M M M M M M
DET P P P P P P

Ref Offset 1 dB Ref 0.00 dBm

Mkr1 10.880 kHz -54.444 dBm

10 dB/div Log

-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0

-38.88 dBm

Start 9.00 kHz Stop 150.00 kHz

#Res BW 1.0 kHz #VBW 3.0 kHz Sweep 134.8 ms (601 pts)

MSG STATUS DC Coupled

Frequency

Auto Tune

Center Freq 79.500 kHz

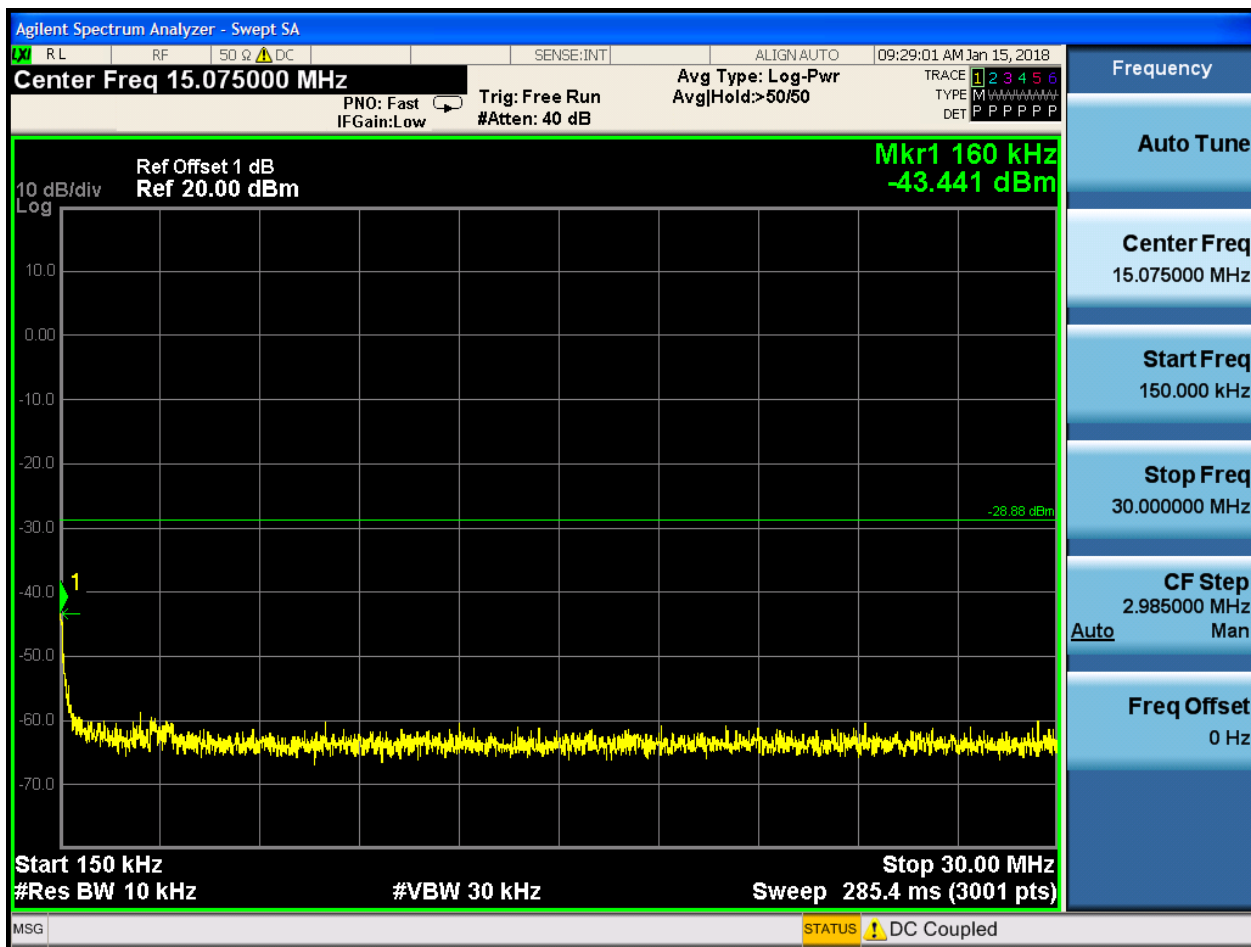
Start Freq 9.000 kHz

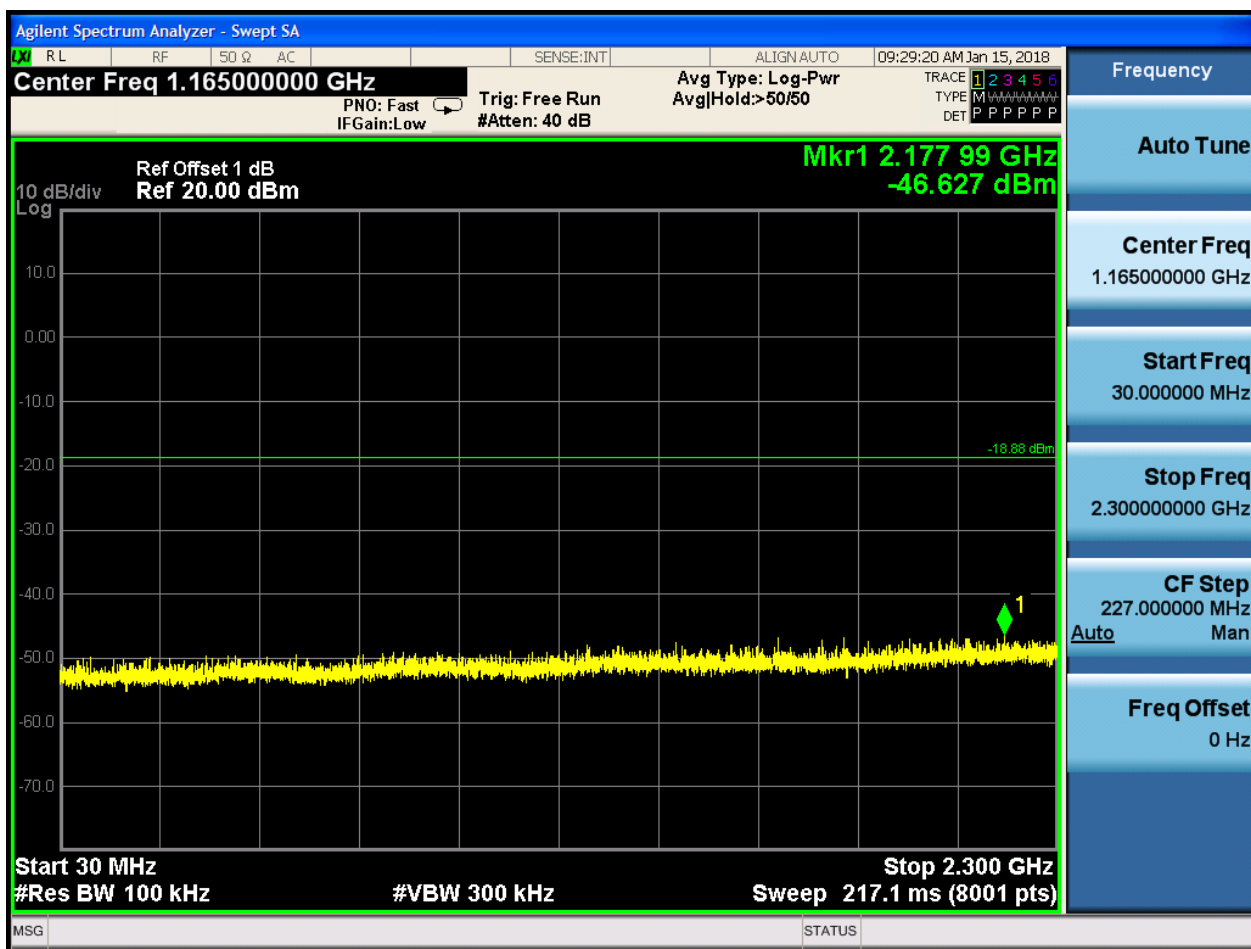
Stop Freq 150.000 kHz

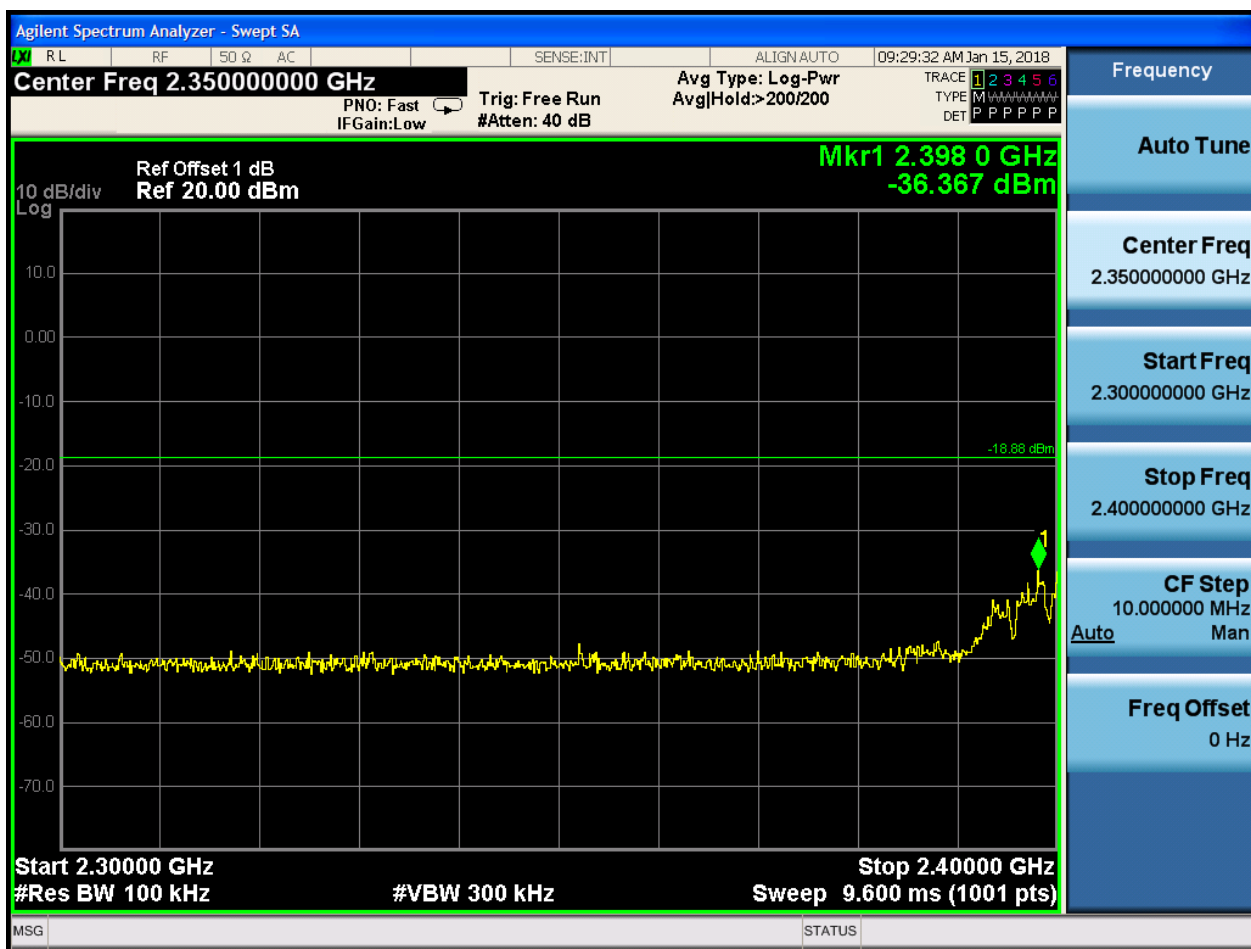
CF Step 14.100 kHz Man

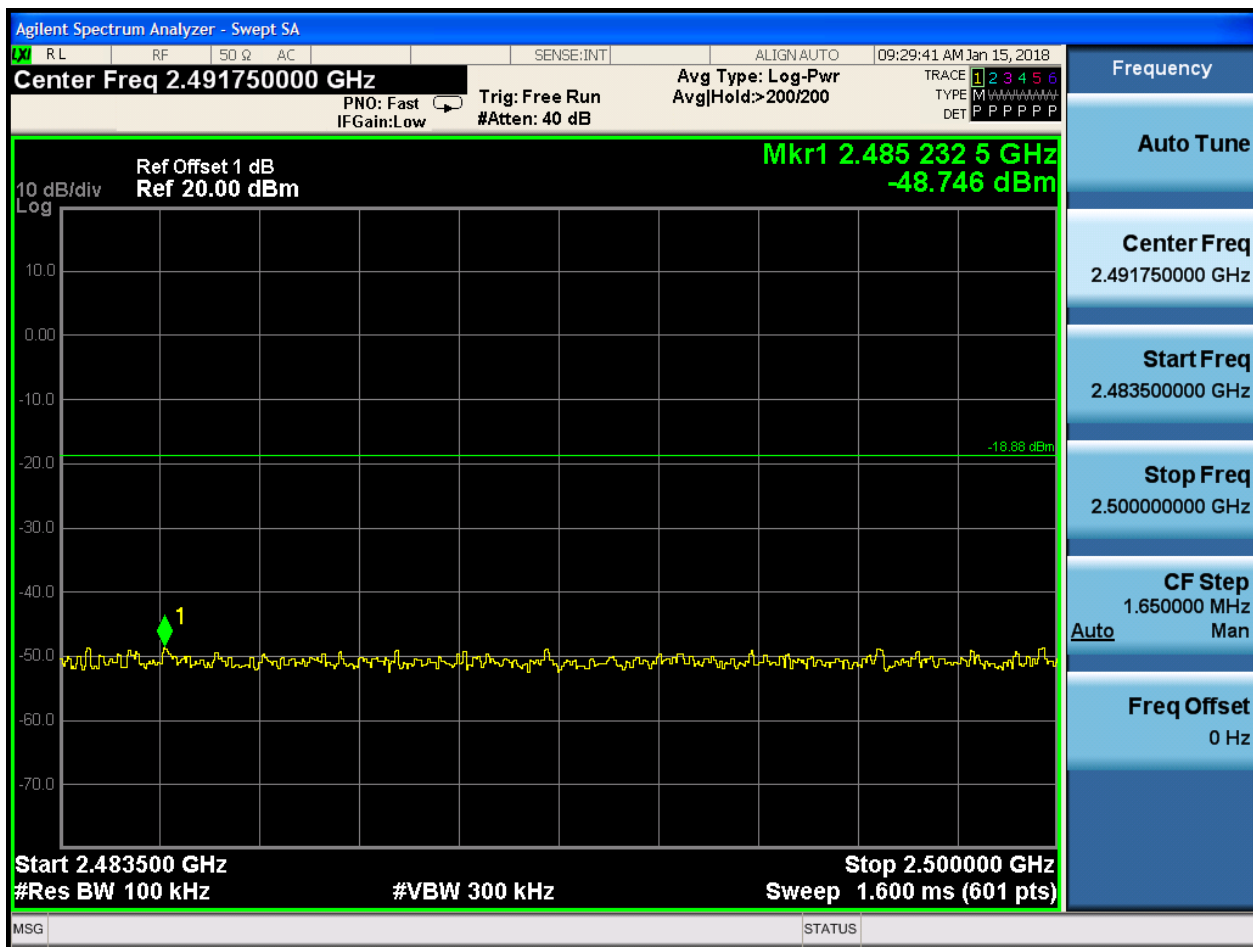
Auto

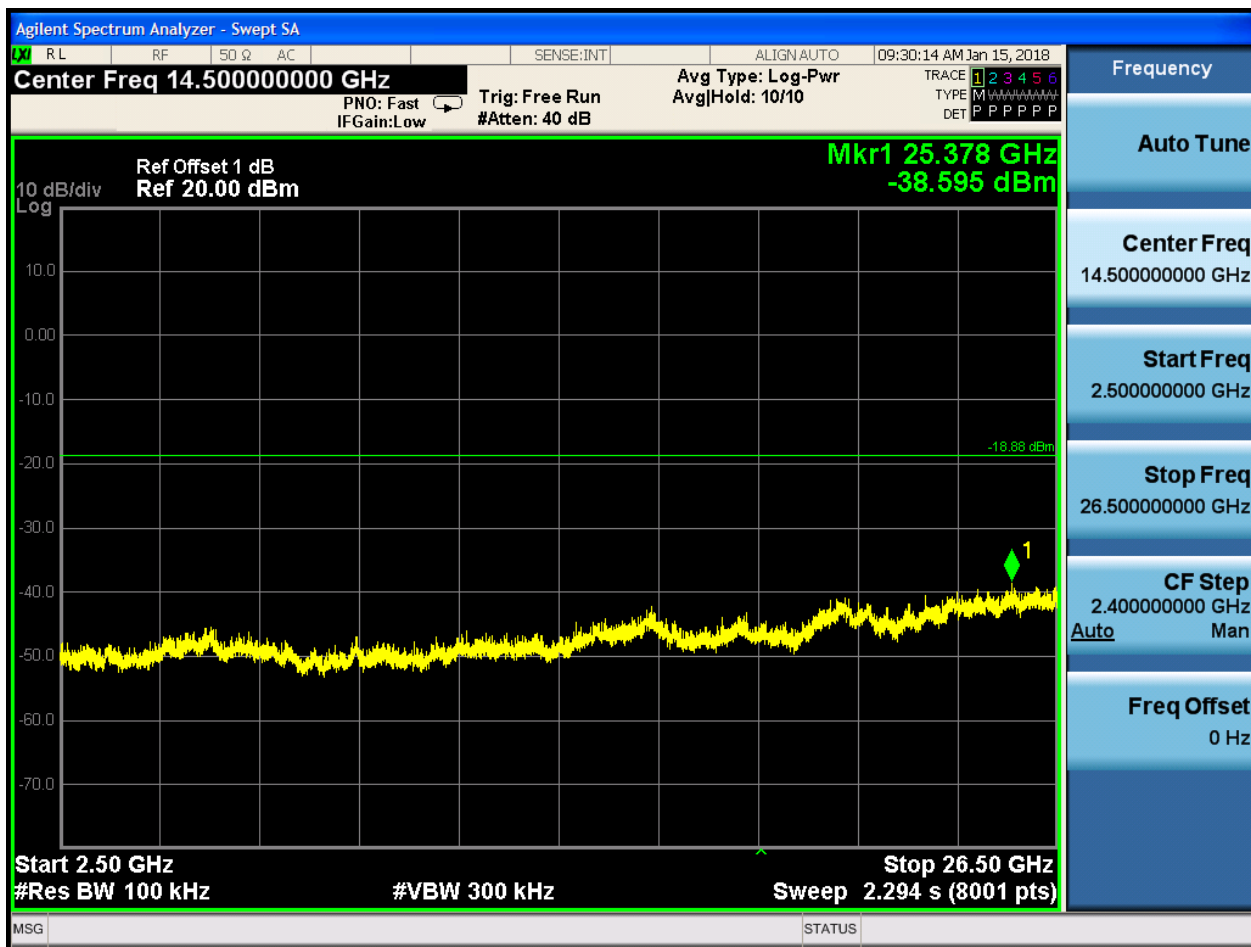
Freq Offset 0 Hz





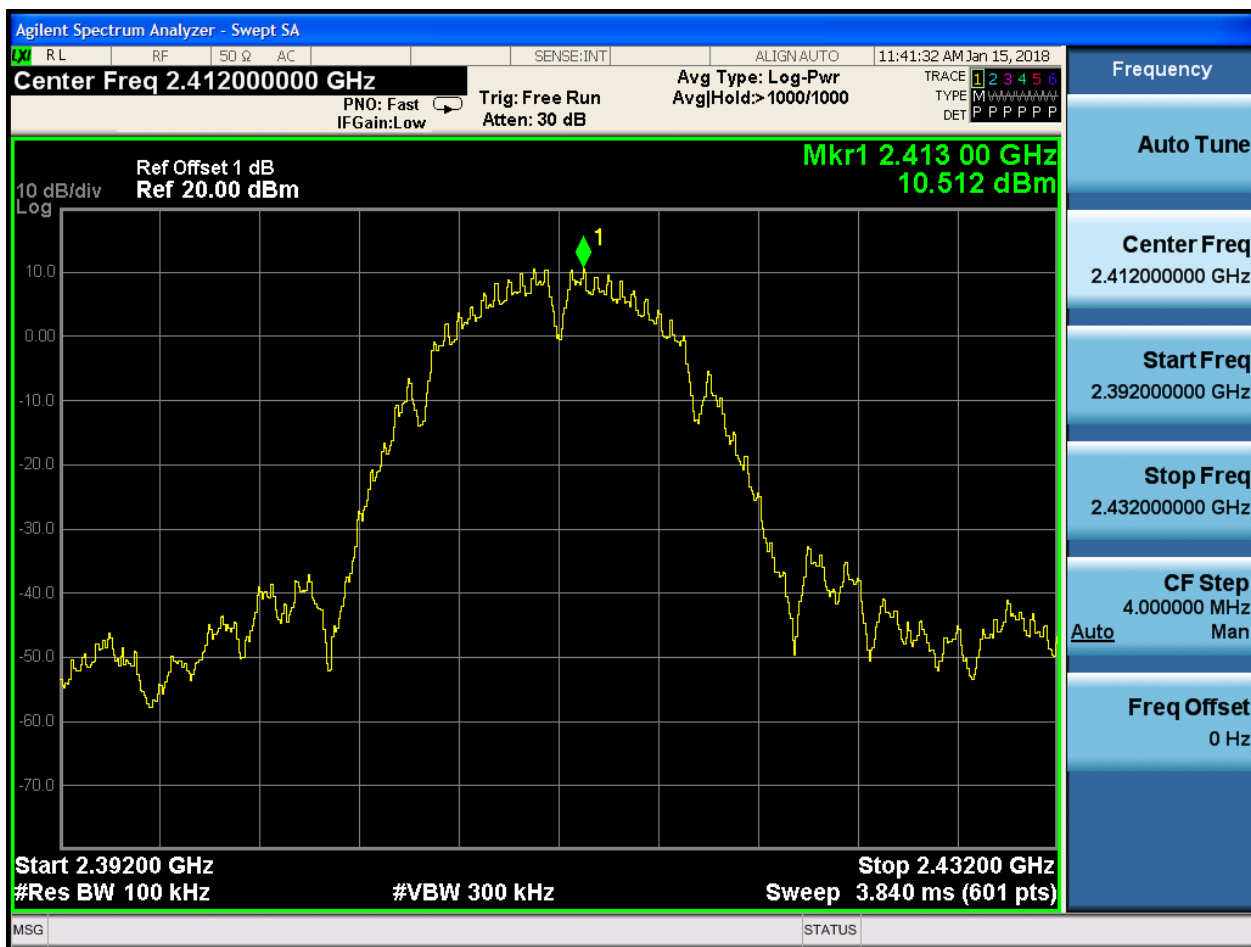






2.2 11B_L@Ant 2

Pref:





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω DC SENSE:INT ALIGN: AUTO 11:41:47 AM Jan 15, 2018

Center Freq 79.500 kHz

PNO: Wide IF Gain: Low Trig: Free Run #Atten: 26 dB

Avg Type: Log-Pwr Avg/Hold: >50/50

TRACE 1 2 3 4 5 6
TYPE M
DET P P P P P P

Ref Offset 1 dB
Ref 0.00 dBm

Mkr1 9.000 kHz
-53.719 dBm

10 dB/div
Log

-39.49 dBm

Start 9.00 kHz
#Res BW 1.0 kHz

Stop 150.00 kHz
Sweep 134.8 ms (601 pts)

#VBW 3.0 kHz

Frequency

Auto Tune

Center Freq
79.500 kHz

Start Freq
9.000 kHz

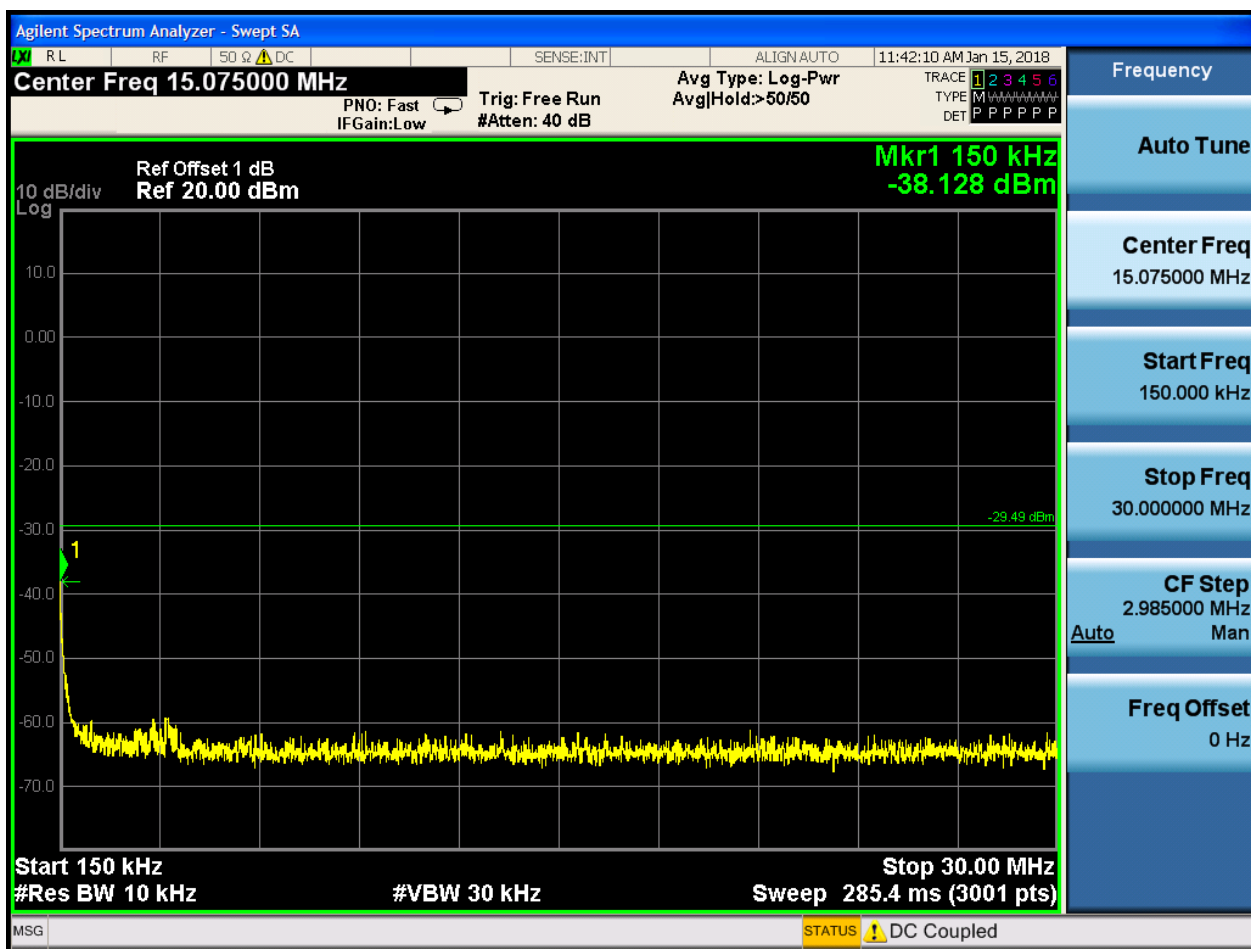
Stop Freq
150.000 kHz

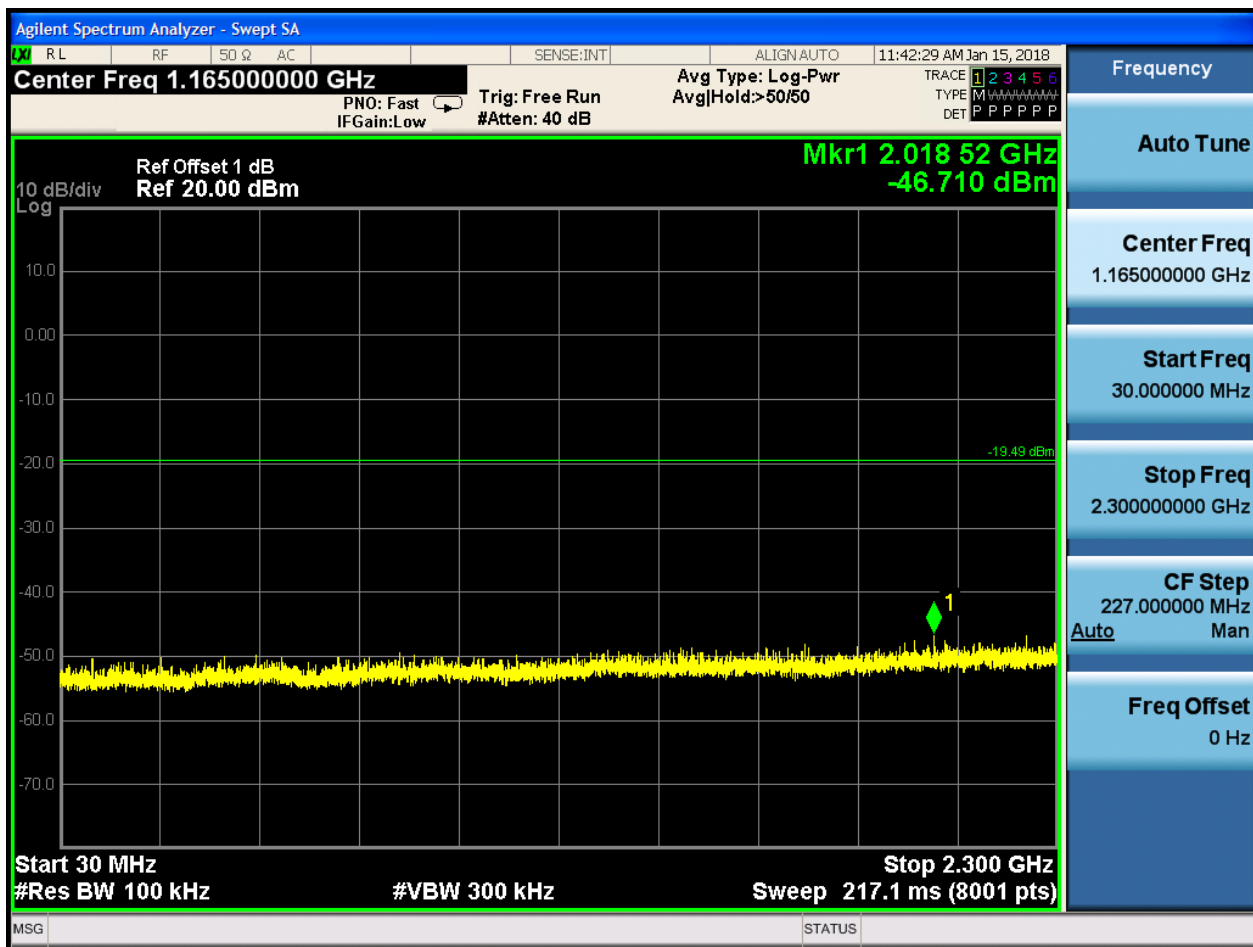
CF Step
14.100 kHz
Man

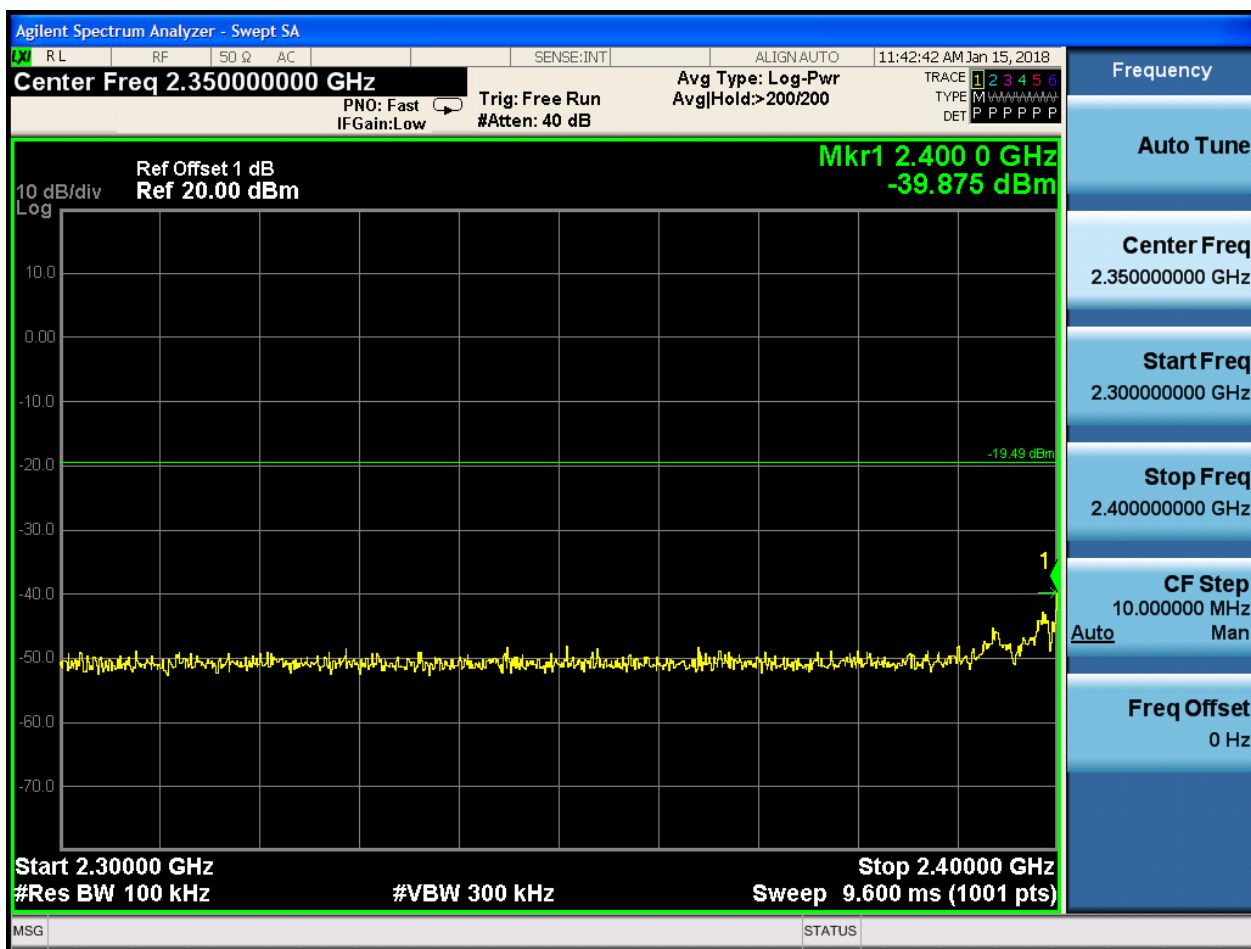
Auto

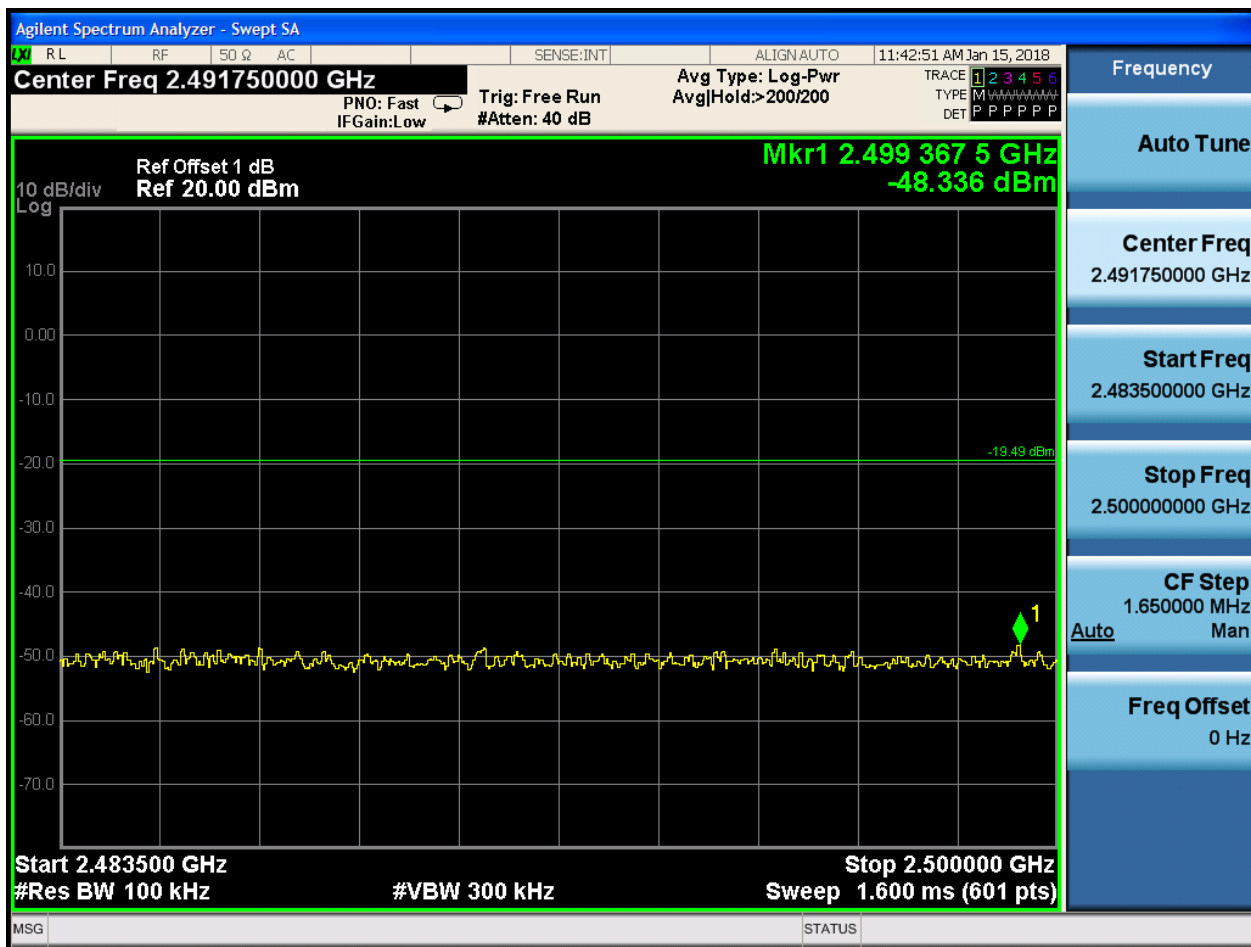
Freq Offset
0 Hz

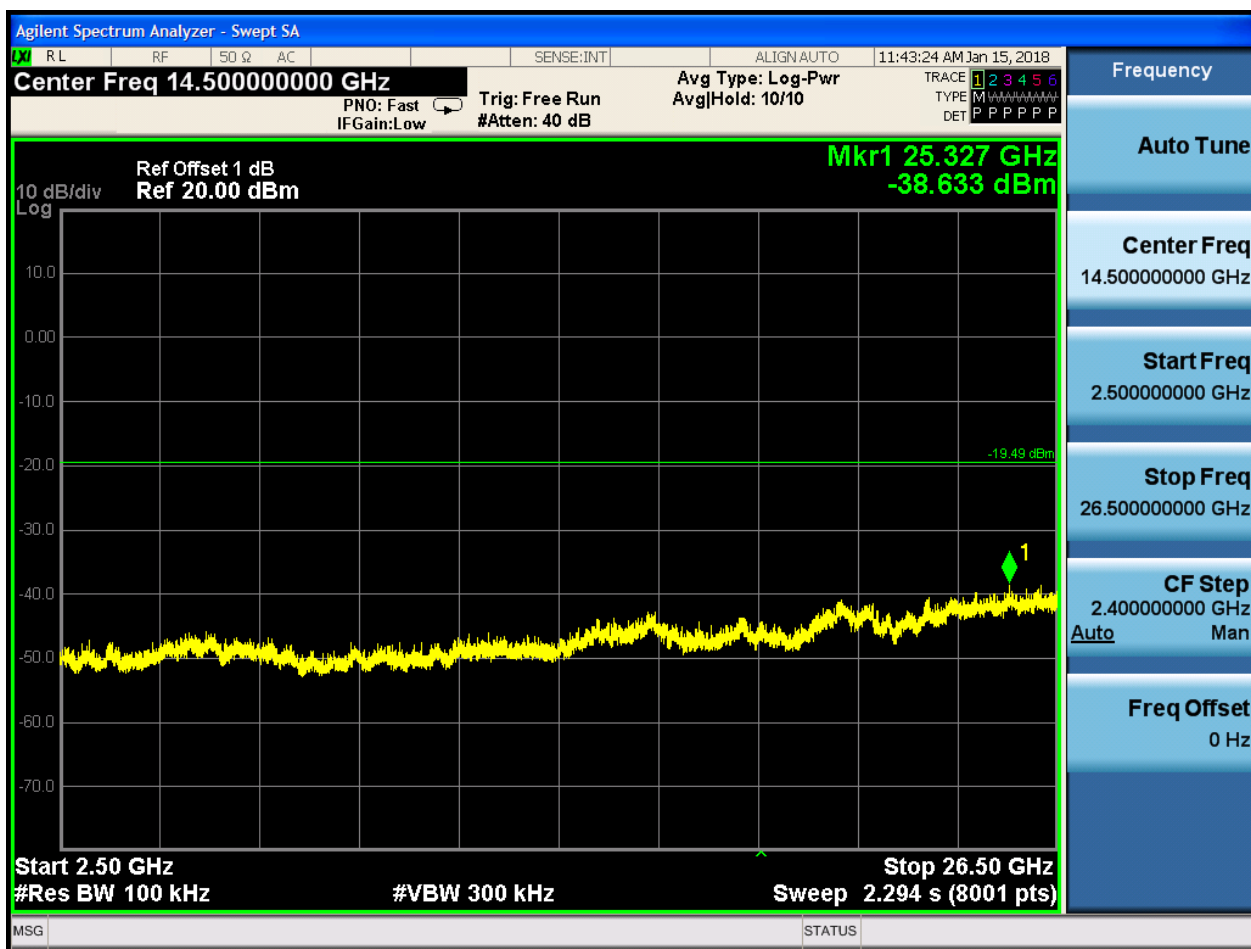
MSG STATUS Δ DC Coupled







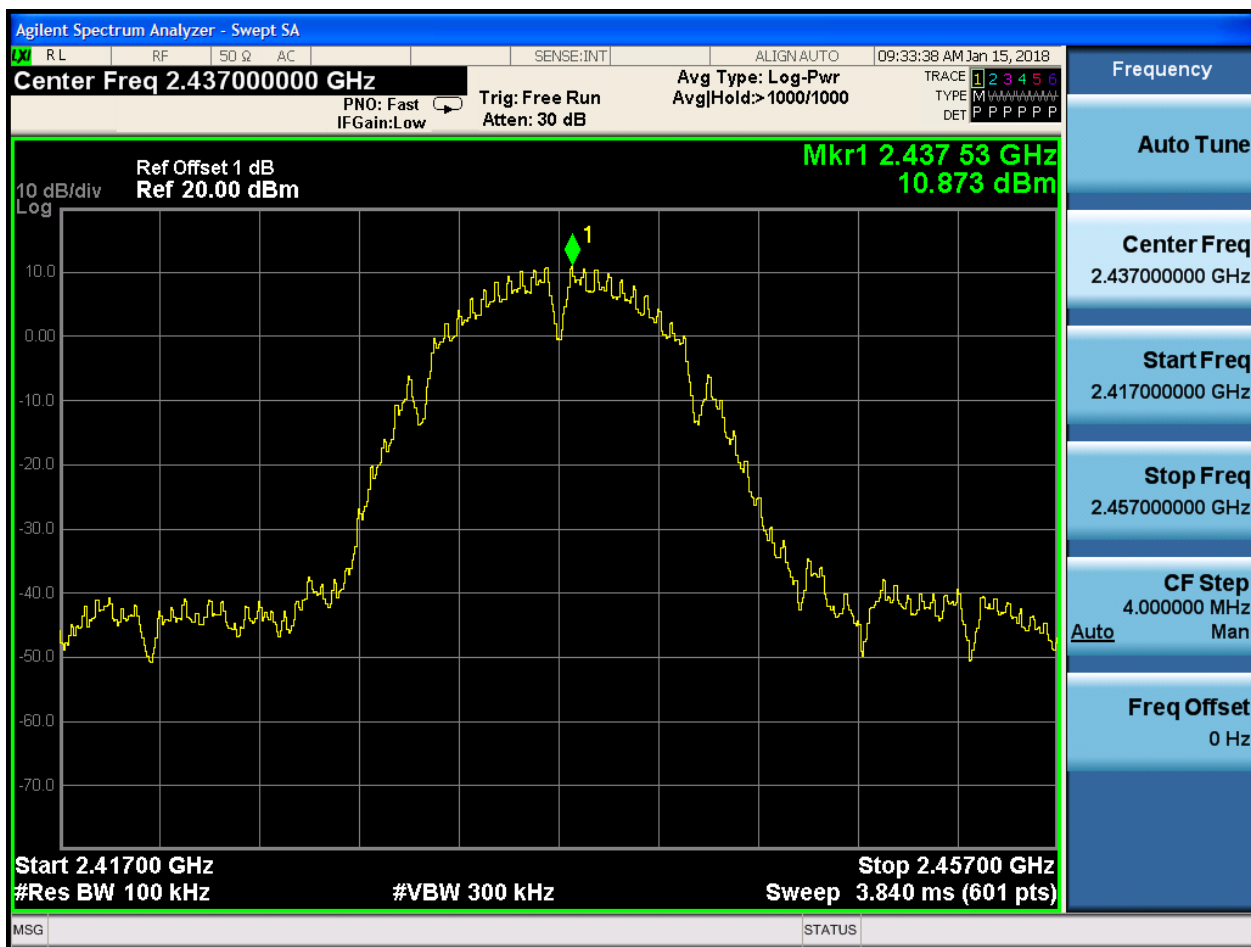






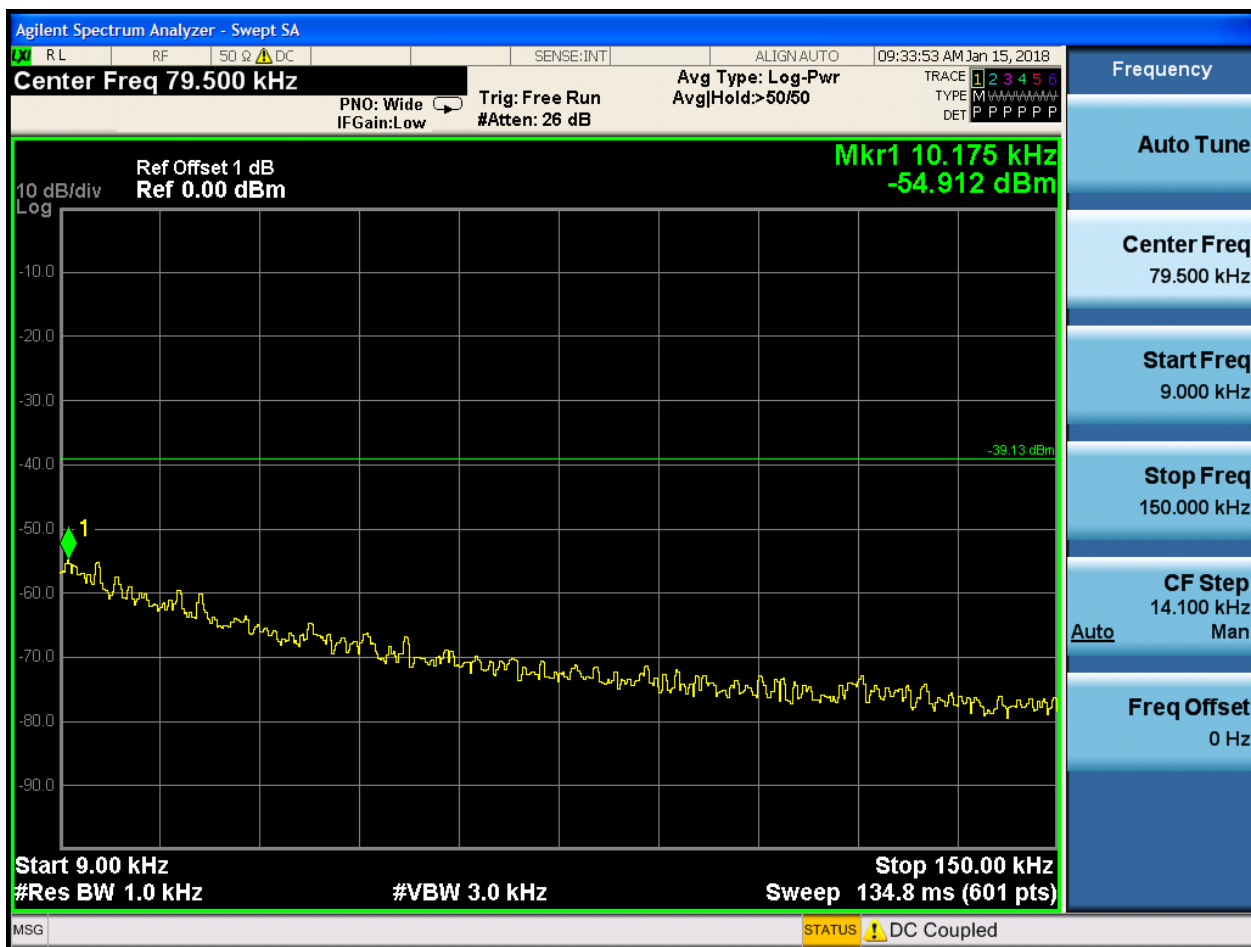
2.3 11B_M@Ant 1

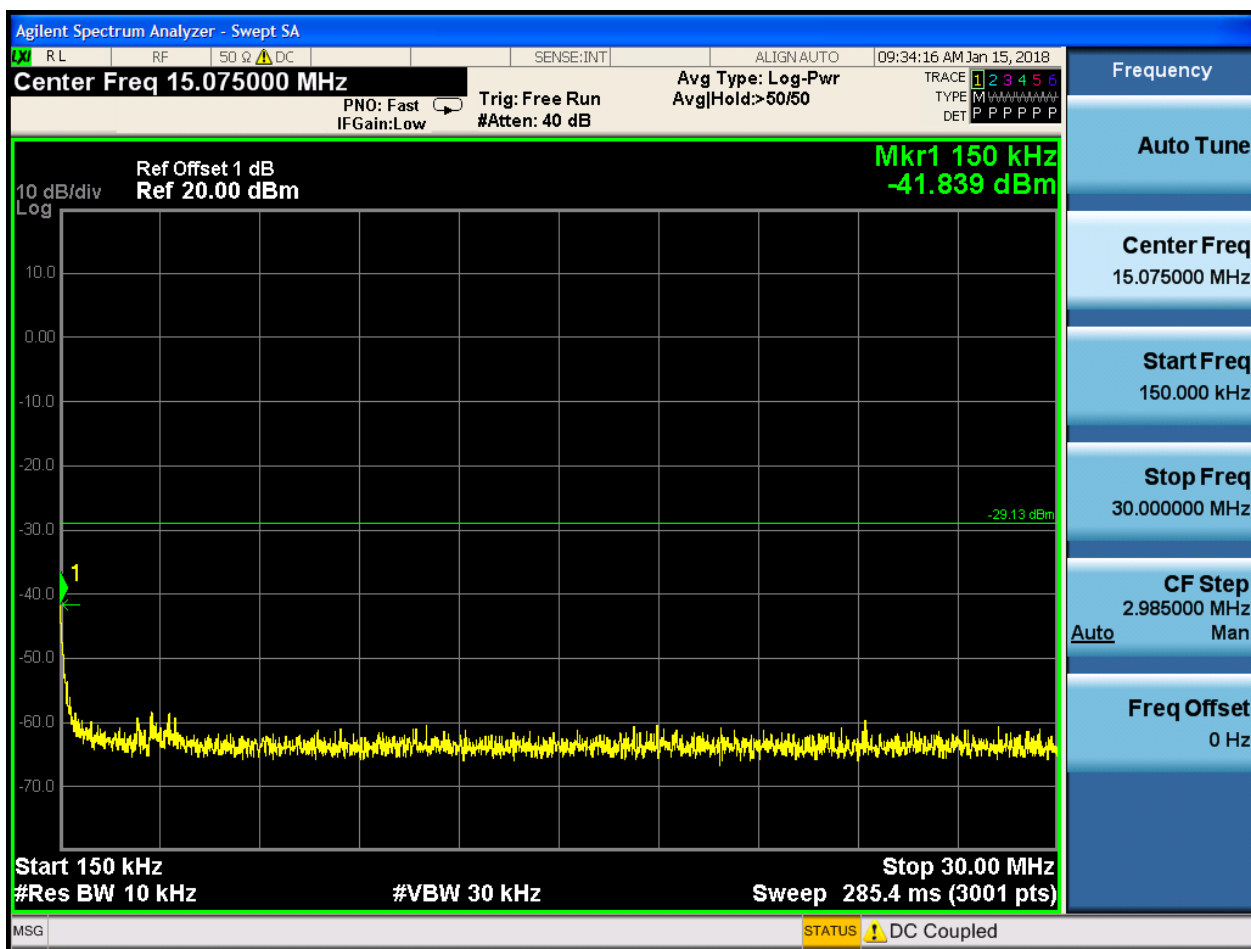
Pref:

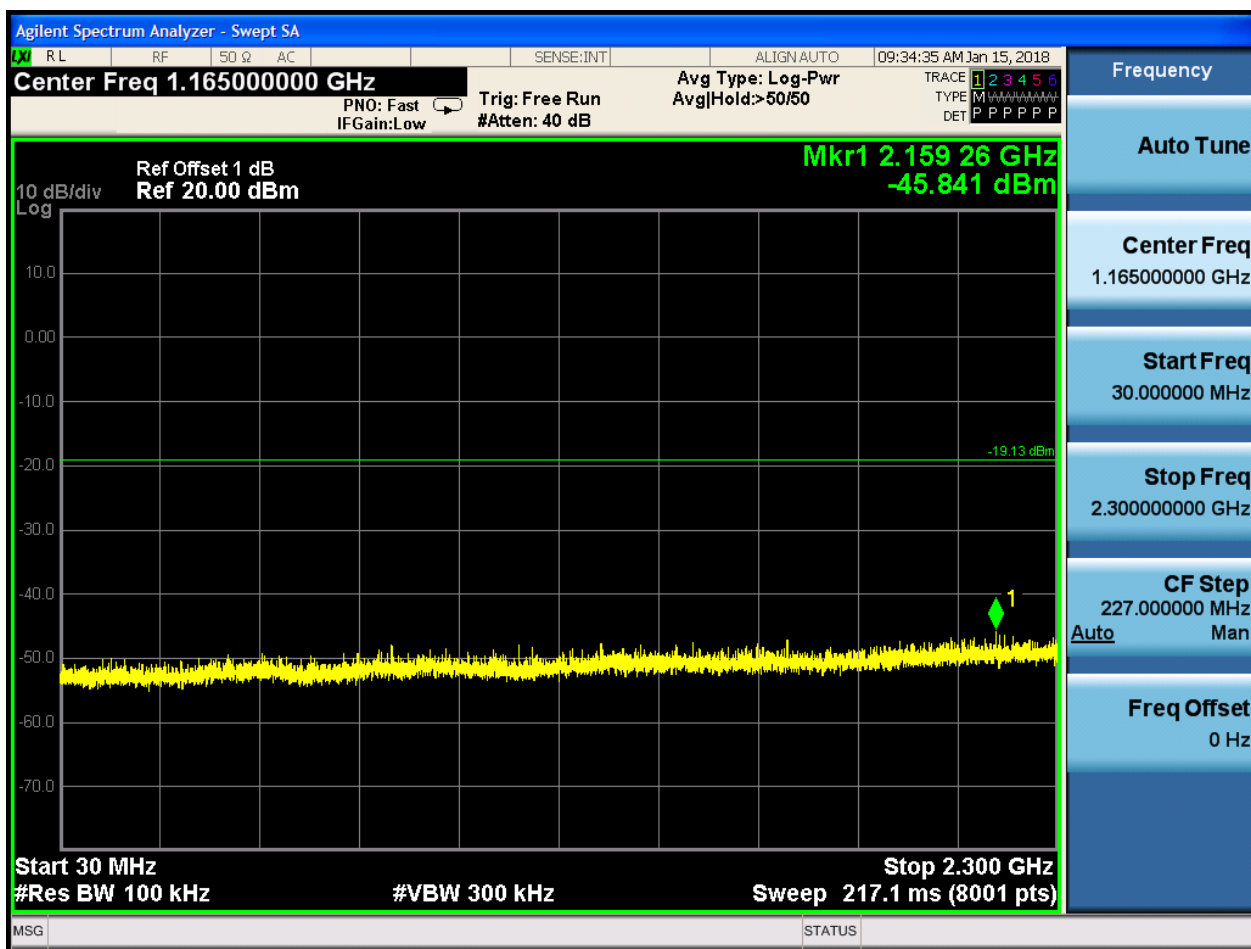


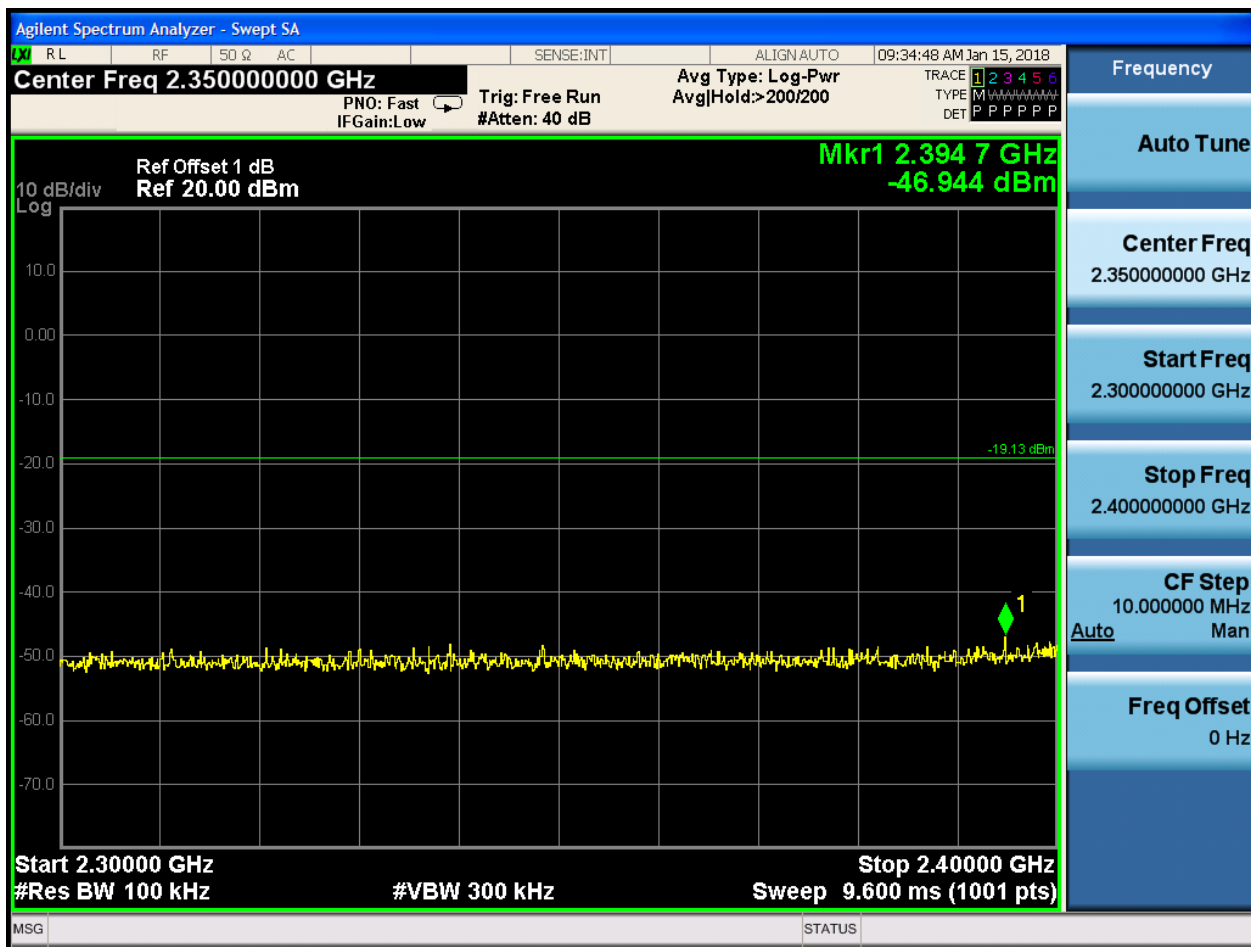


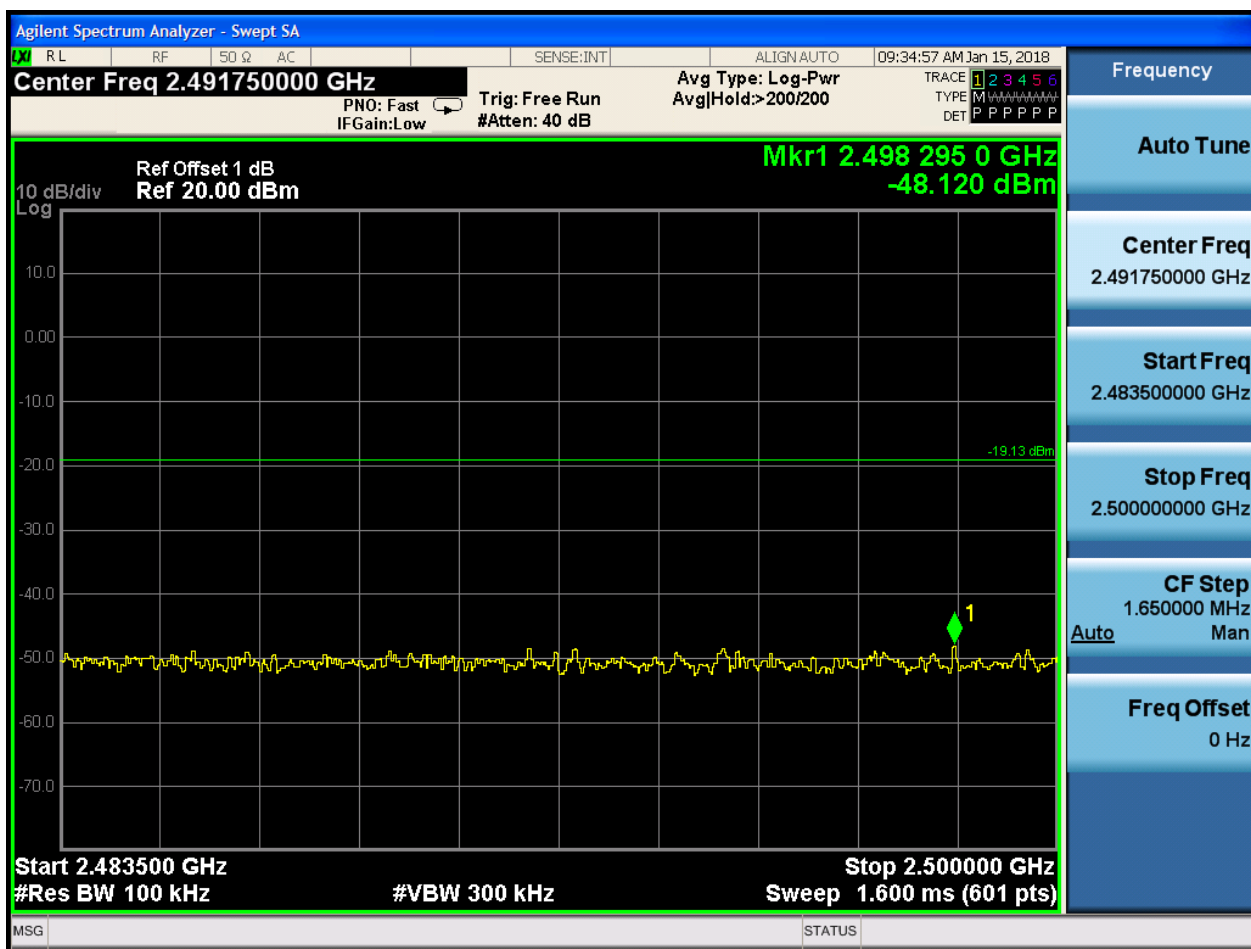
Puw:

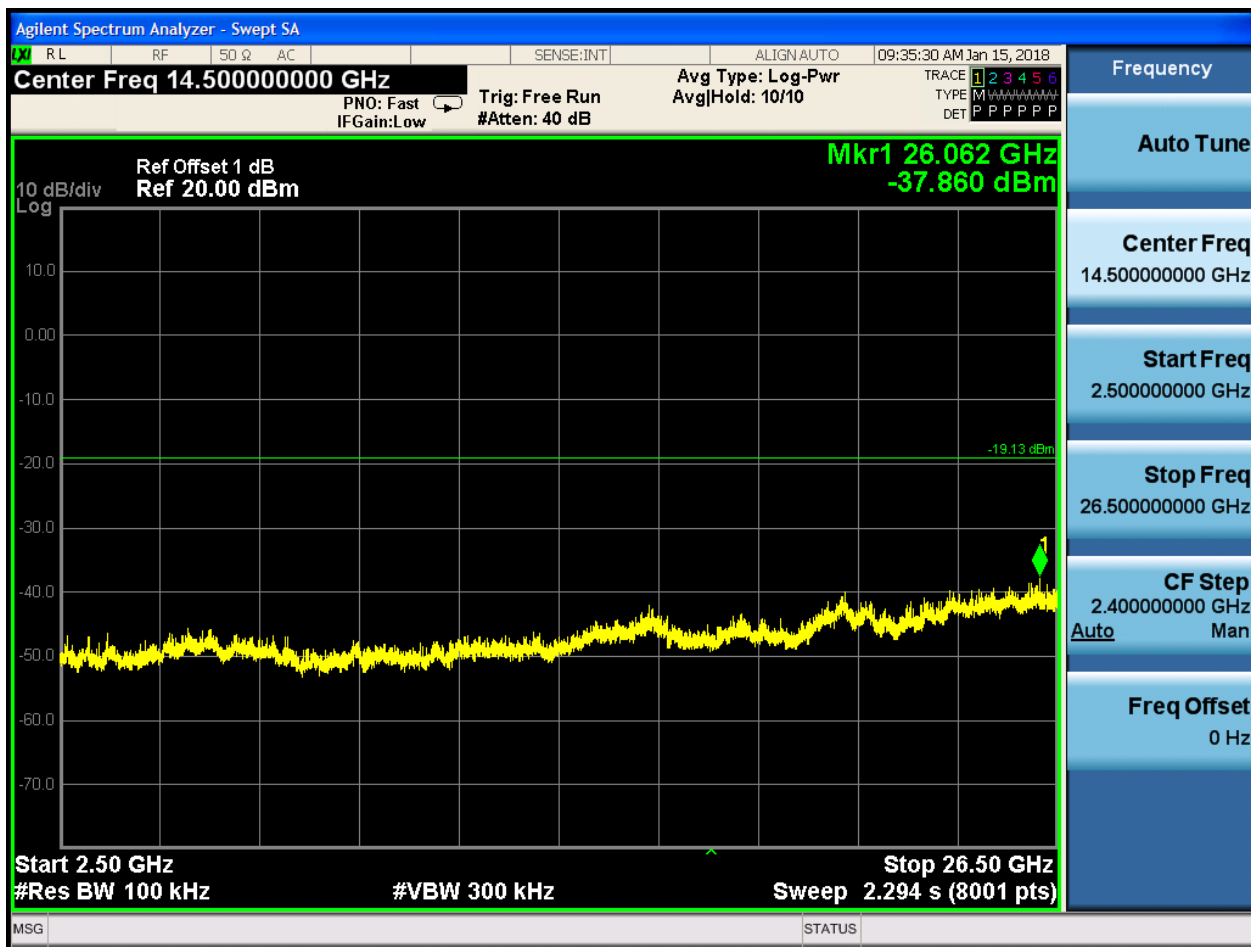








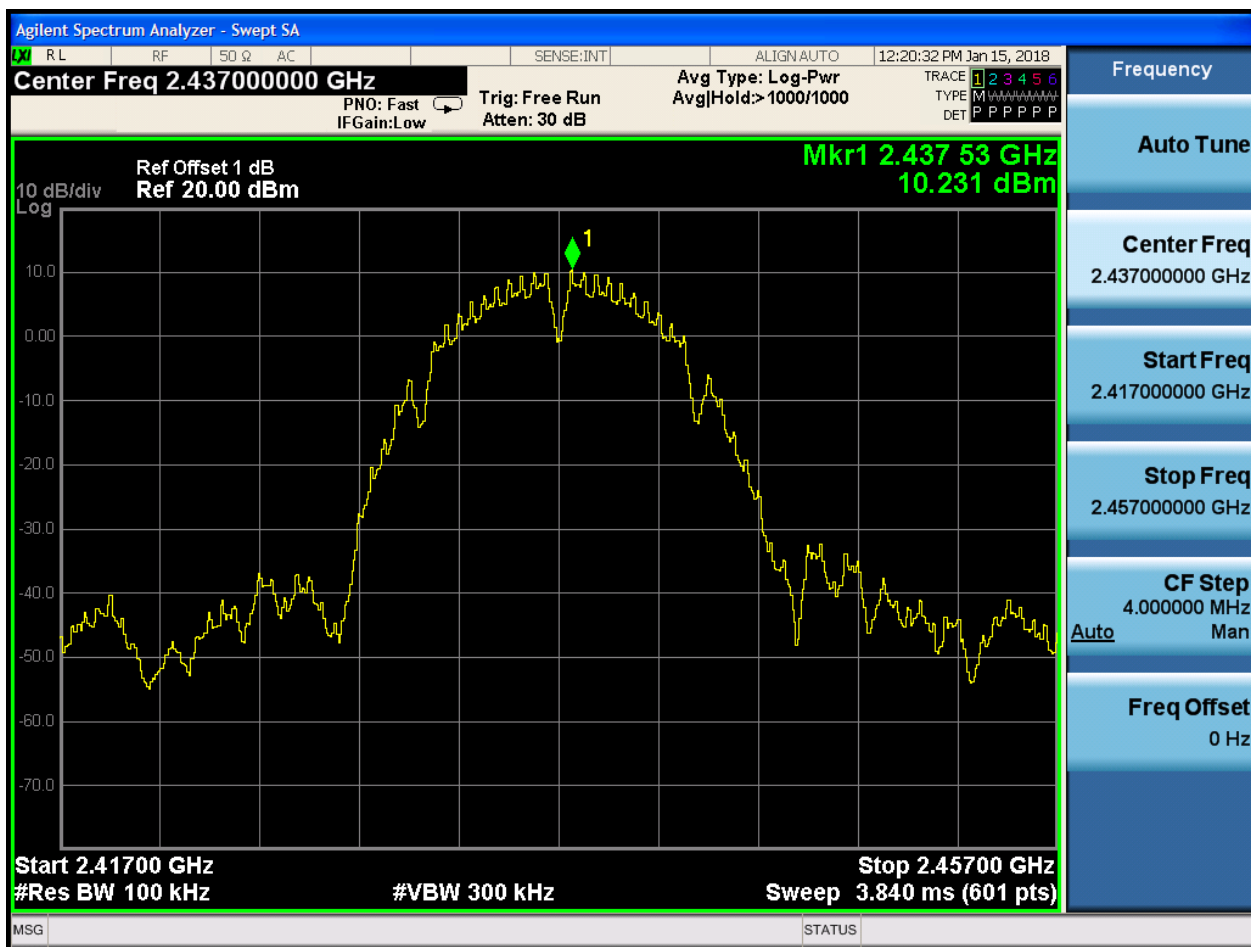






2.4 11B_M@Ant 2

Pref:





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω DC SENSE:INT ALIGN: AUTO 12:20:47 PM Jan 15, 2018

Center Freq 79.500 kHz

PNO: Wide Trg: Free Run Avg Type: Log-Pwr
IFGain: Low #Atten: 26 dB Avg|Hold:>50/50

TRACE 1 2 3 4 5 6
TYPE M
DET P P P P P P

Ref Offset 1 dB
Ref 0.00 dBm

Mkr1 9.000 kHz
-53.170 dBm

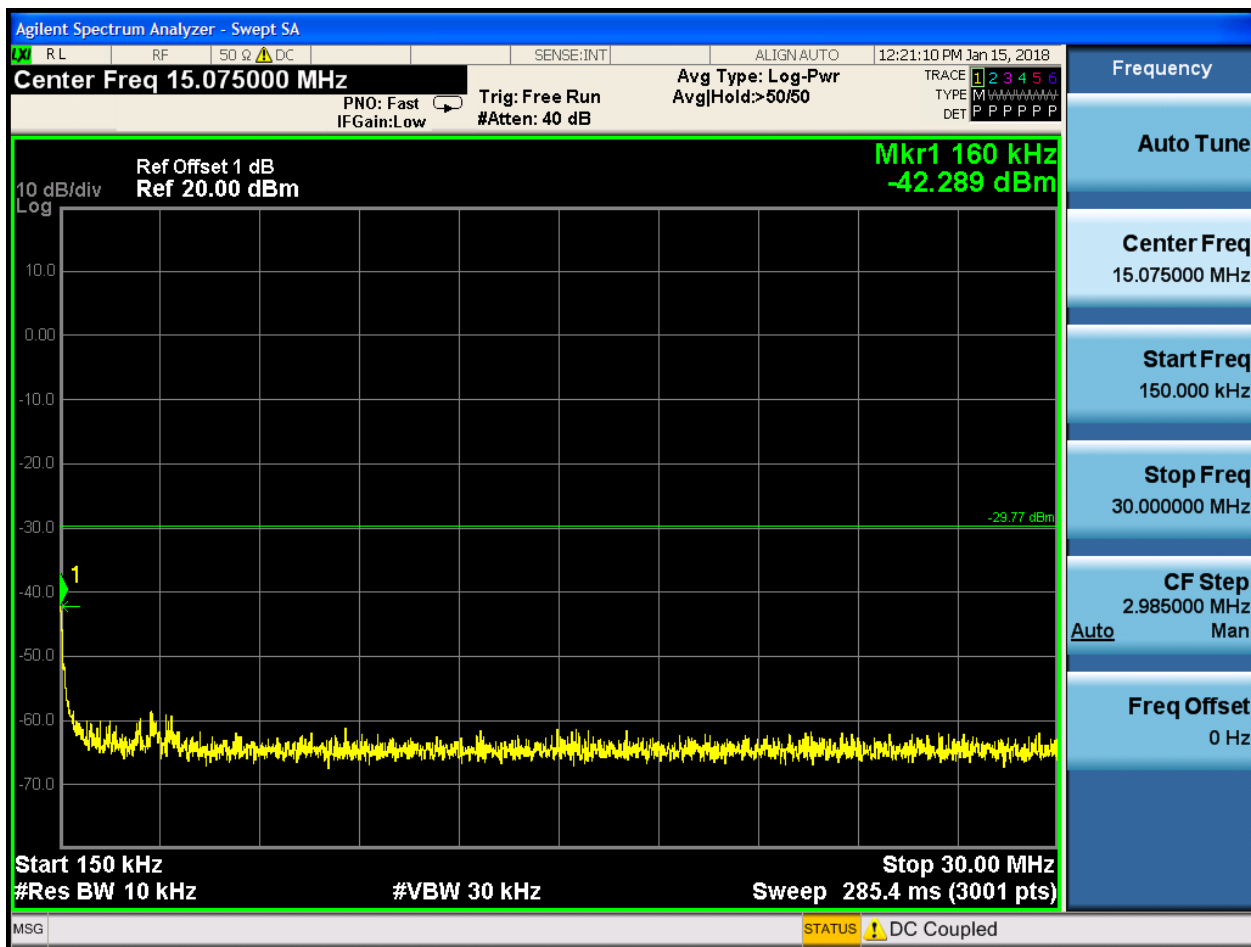
10 dB/div
Log

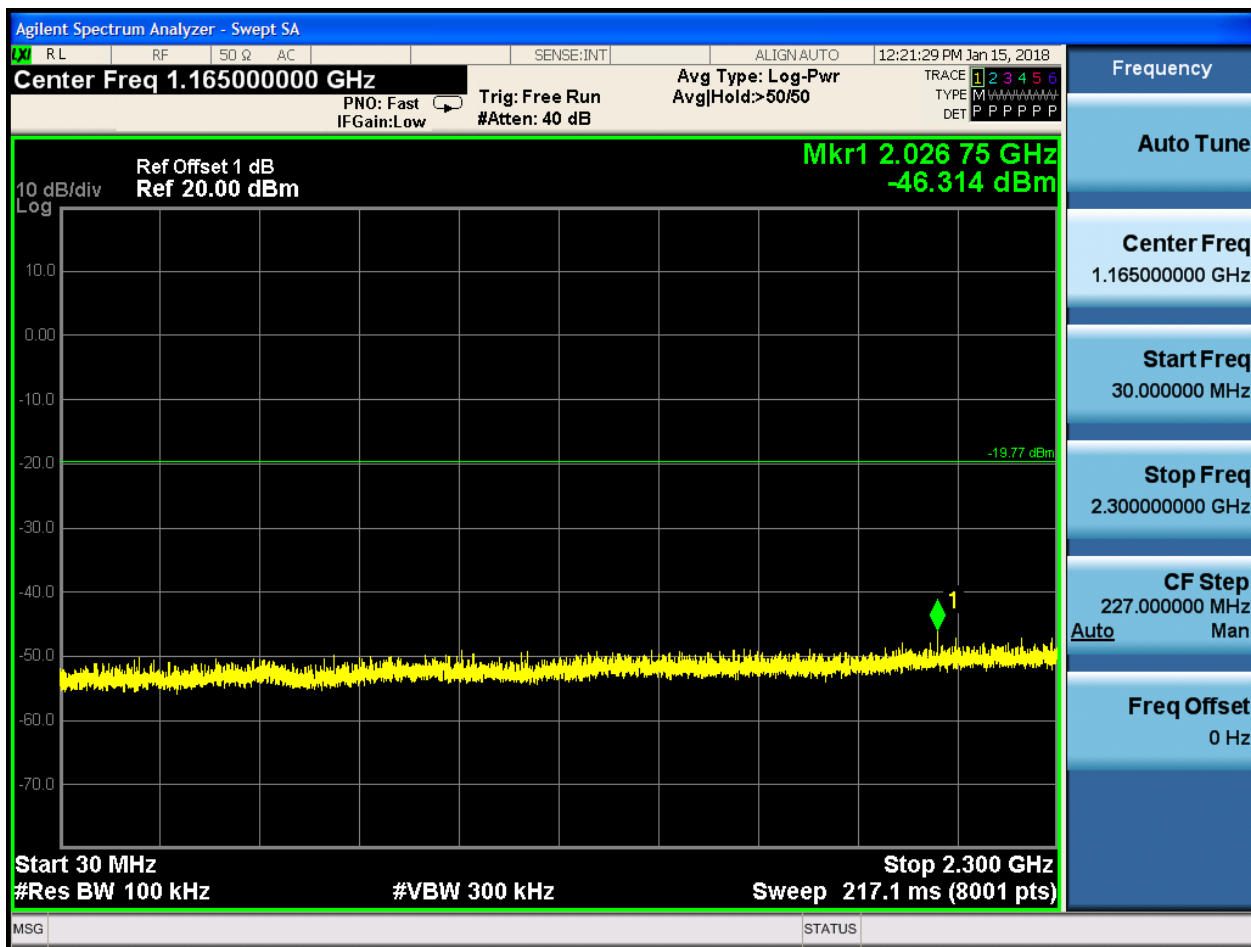
Start 9.00 kHz
#Res BW 1.0 kHz

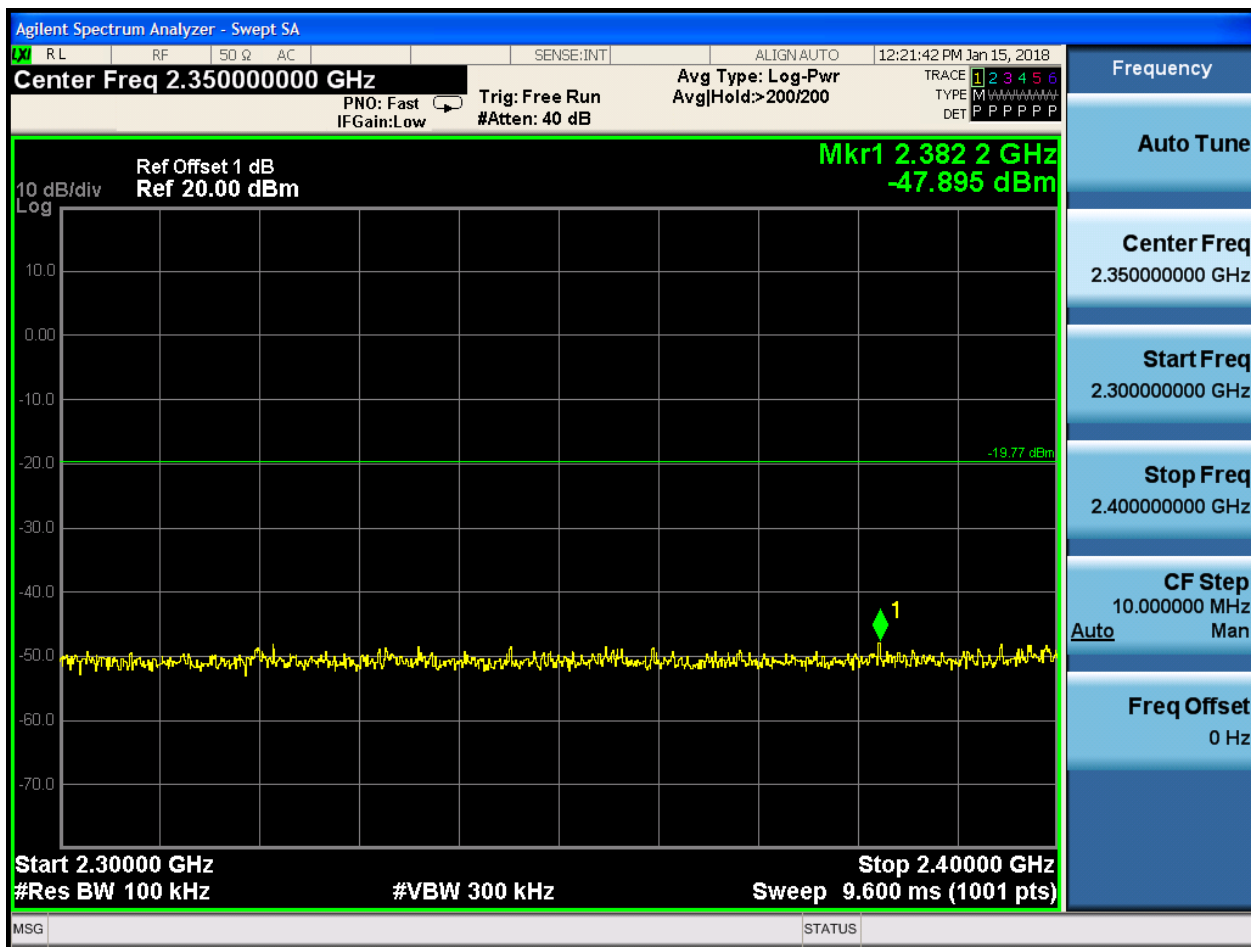
#VBW 3.0 kHz

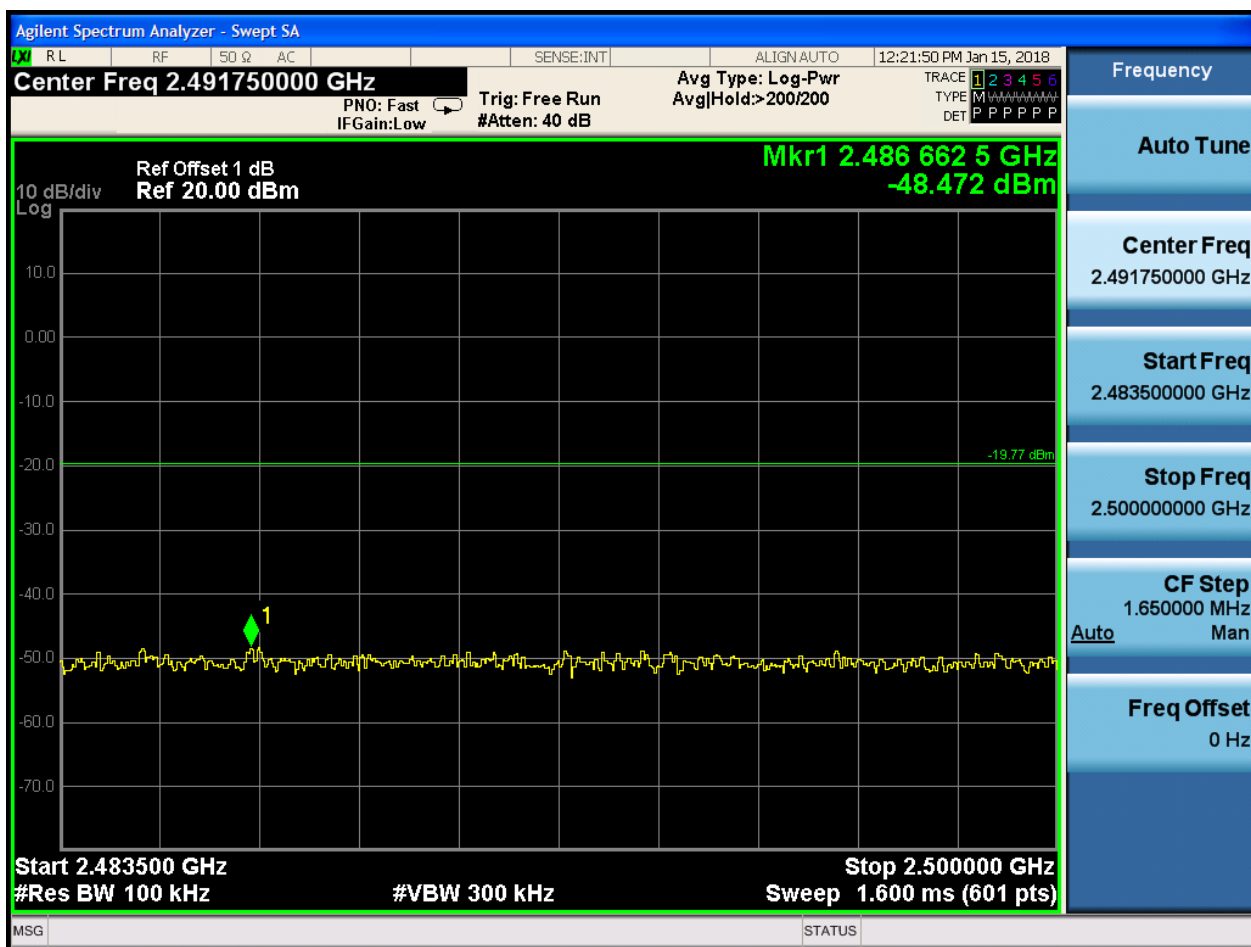
Stop 150.00 kHz
Sweep 134.8 ms (601 pts)

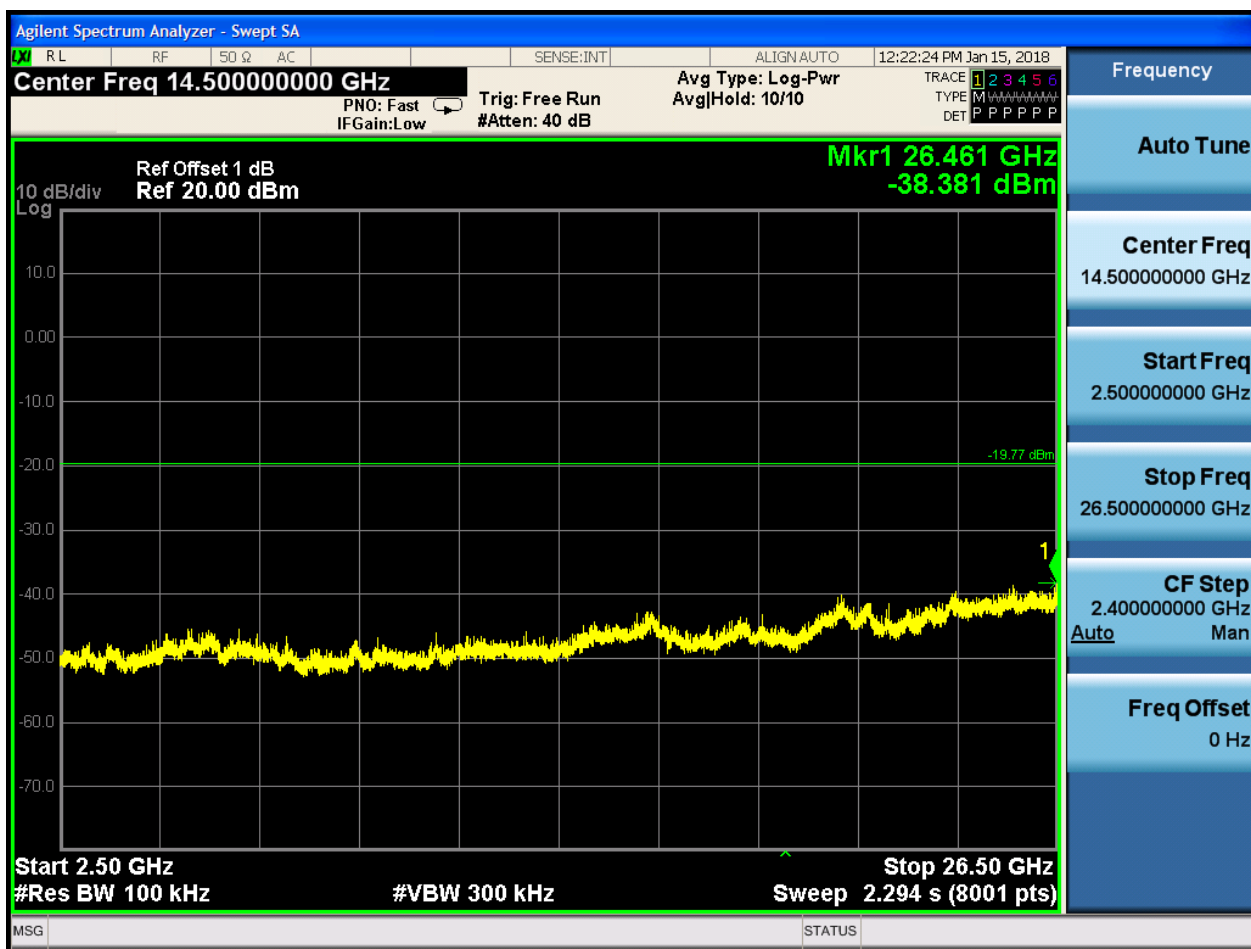
MSG STATUS DC Coupled





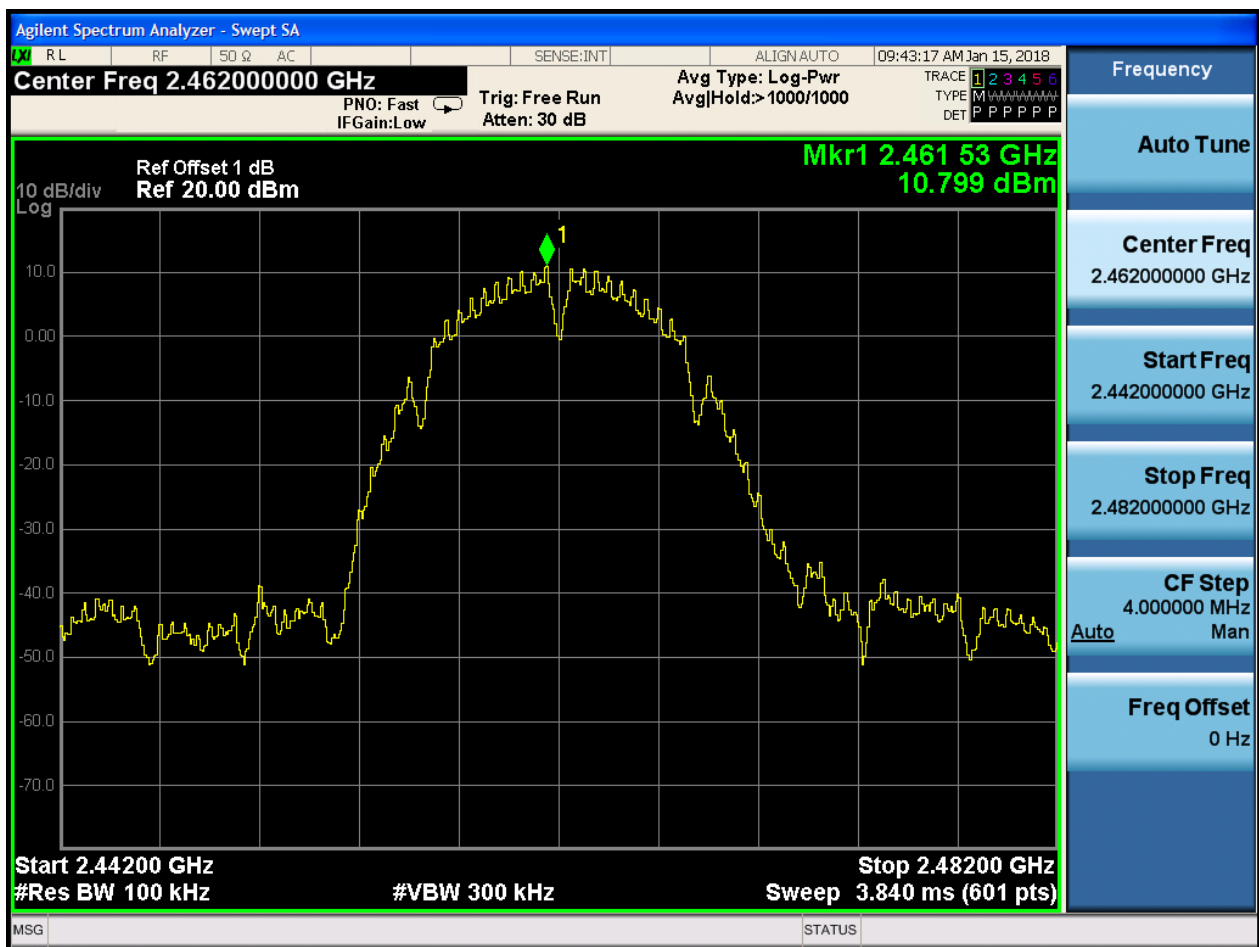






2.5 11B_H@Ant 1

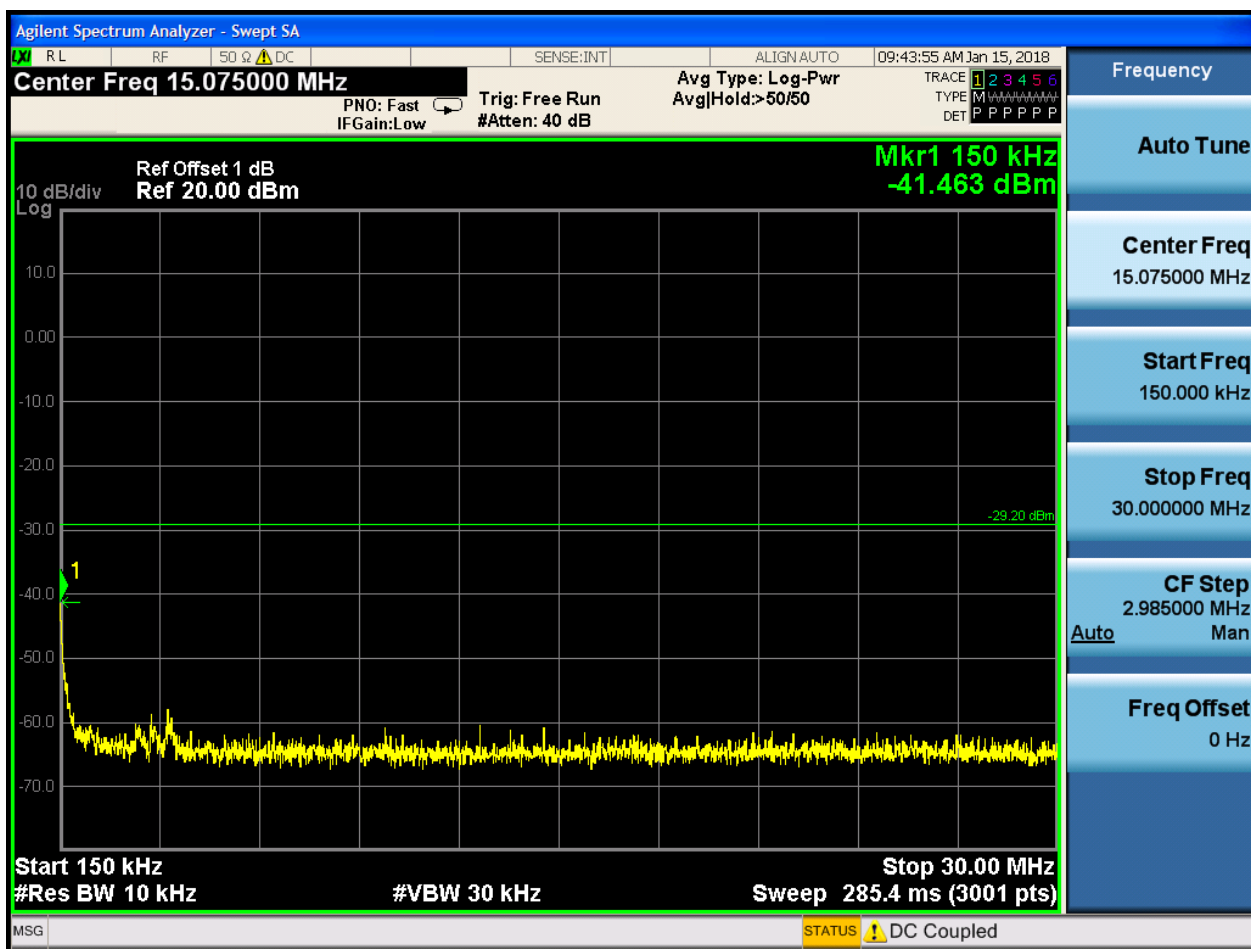
Pref:

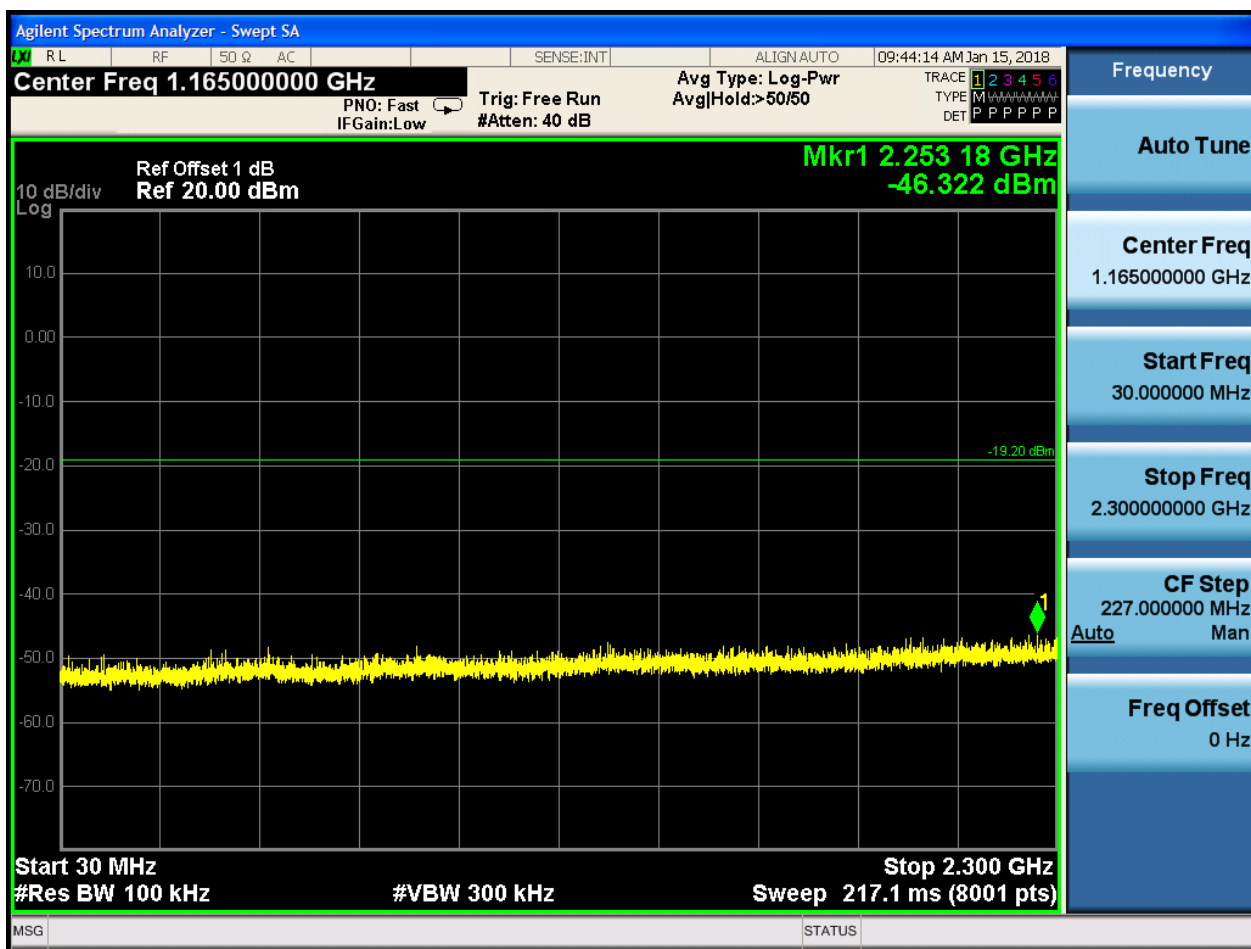


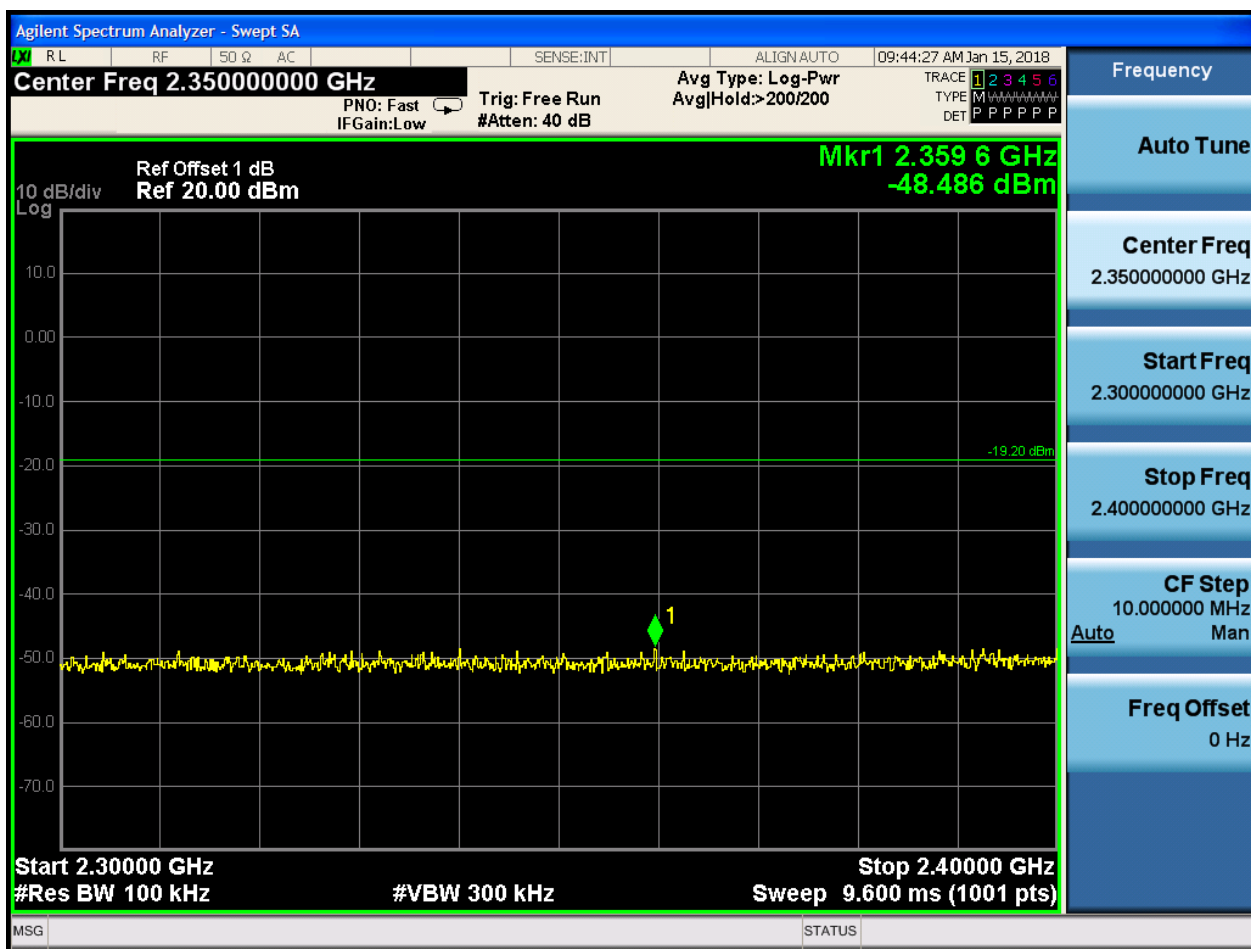


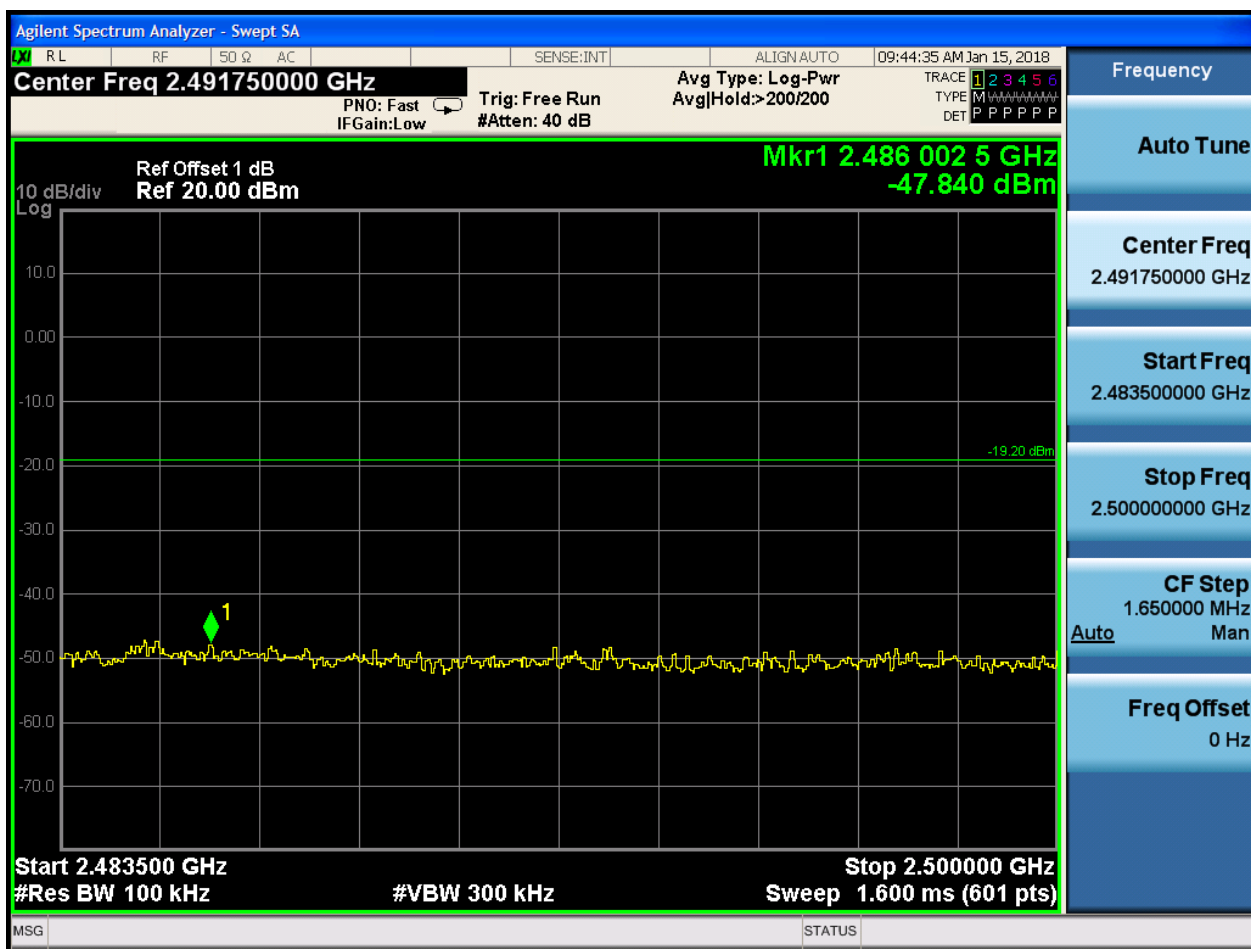
Puw:

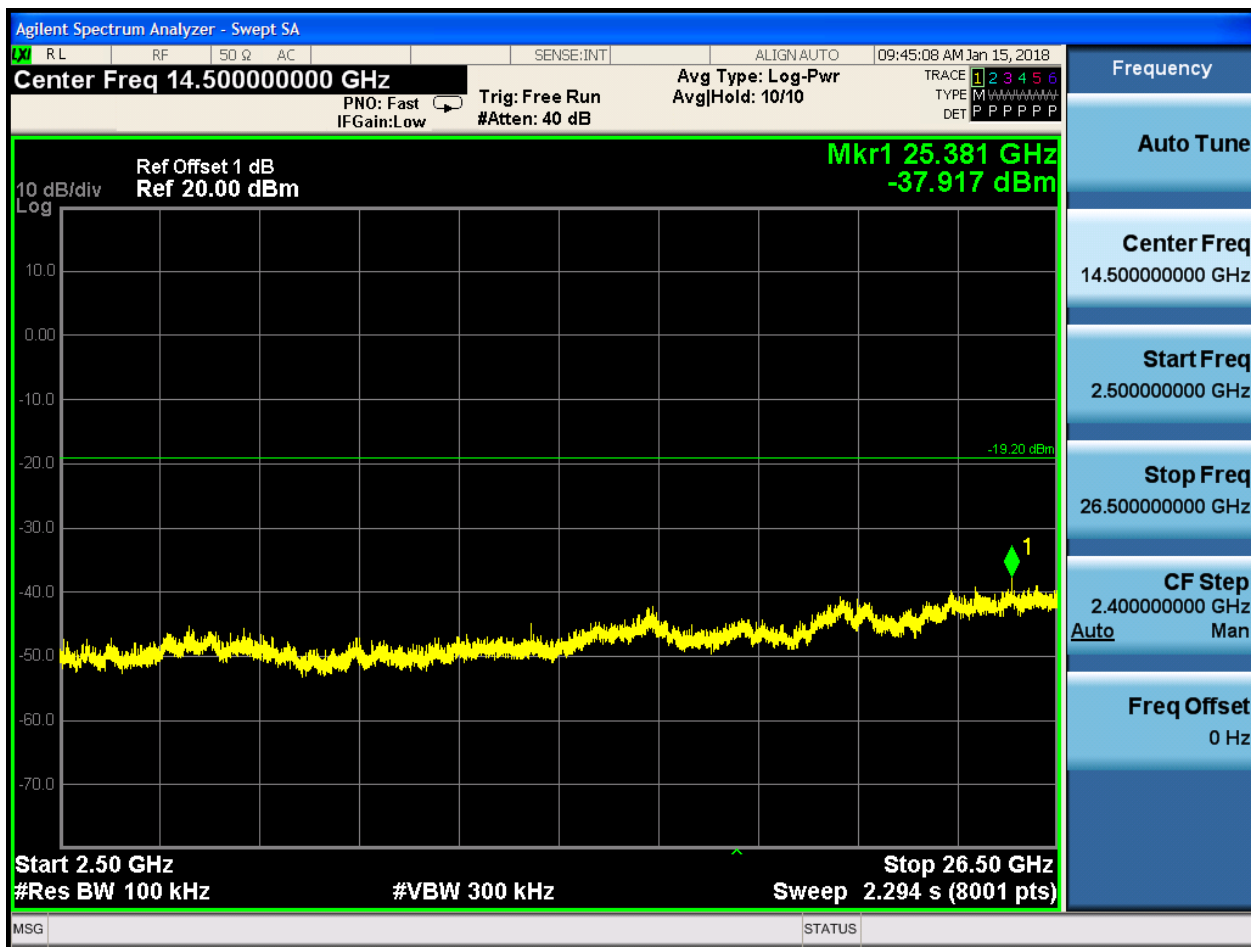








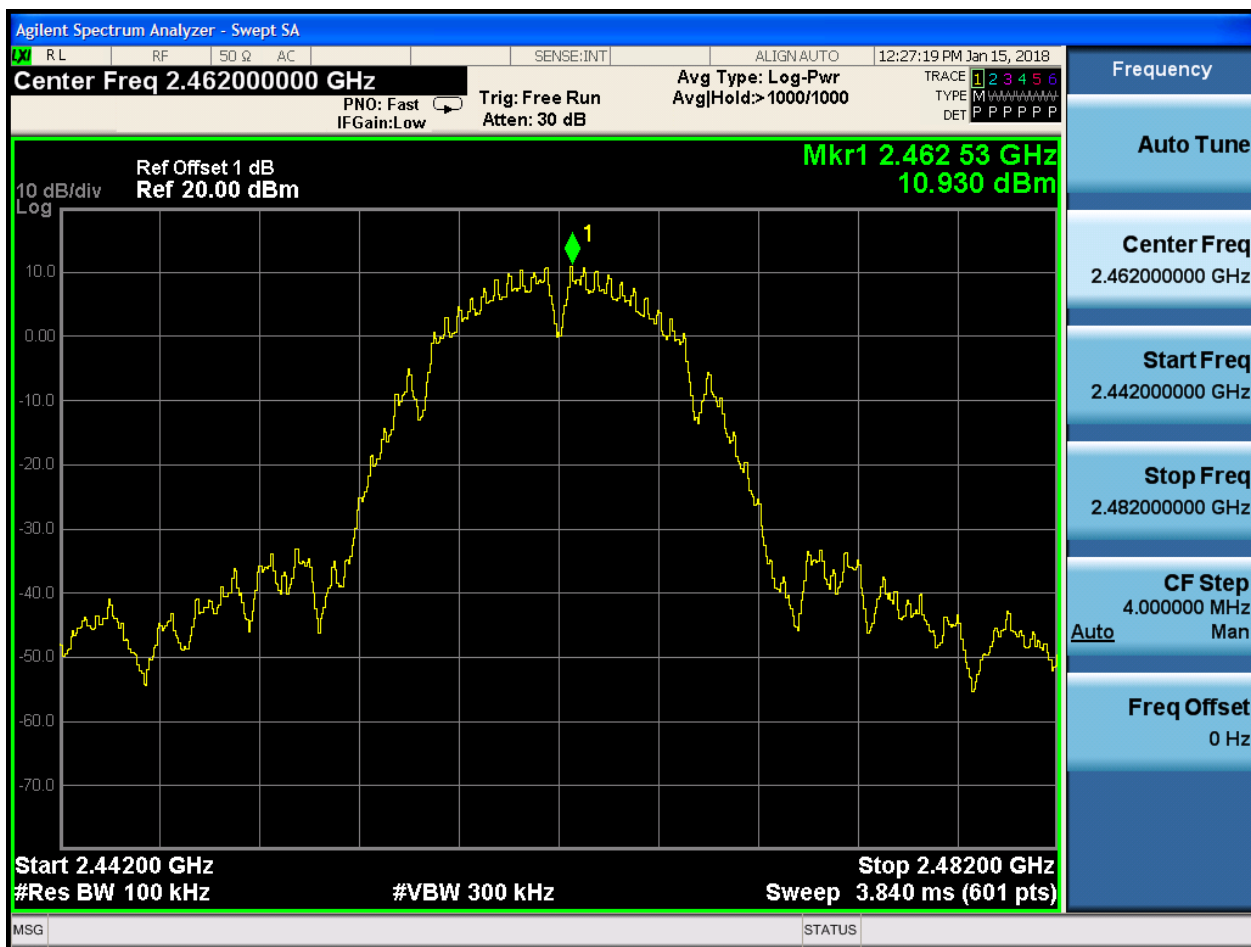






2.6 11B_H@Ant 2

Pref:





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω DC SENSE:INT ALIGN: AUTO 12:27:34 PM Jan 15, 2018

Center Freq 79.500 kHz

PNO: Wide IFGain: Low Trig: Free Run #Atten: 26 dB

Avg Type: Log-Pwr Avg/Hold: >50/50

TRACE 1 2 3 4 5 6
TYPE M
DET P P P P P P

Ref Offset 1 dB
Ref 0.00 dBm

Mkr1 9.000 kHz
-52.764 dBm

10 dB/div
Log

-39.07 dBm

Start 9.00 kHz
#Res BW 1.0 kHz

Stop 150.00 kHz
Sweep 134.8 ms (601 pts)

#VBW 3.0 kHz

Frequency

Auto Tune

Center Freq
79.500 kHz

Start Freq
9.000 kHz

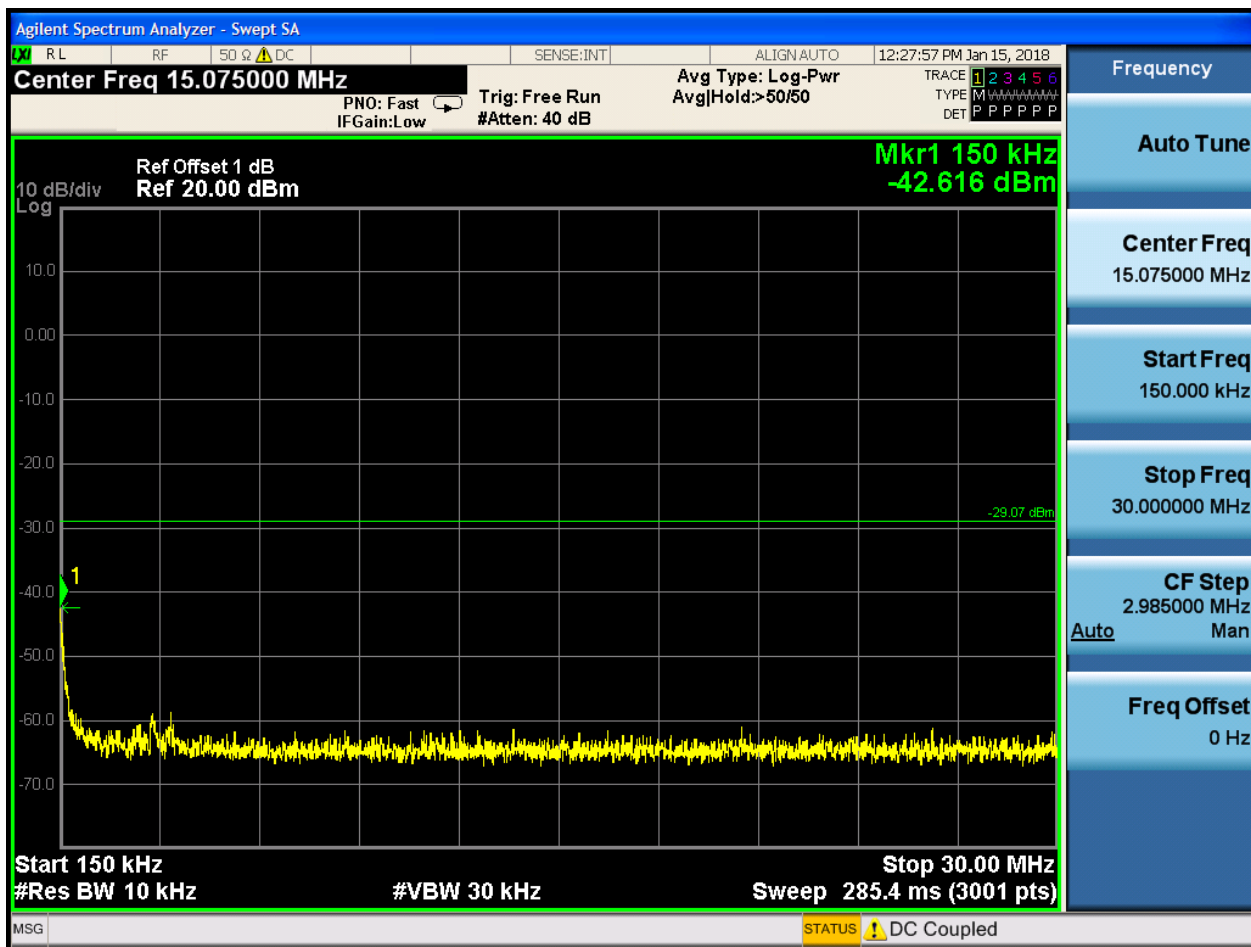
Stop Freq
150.000 kHz

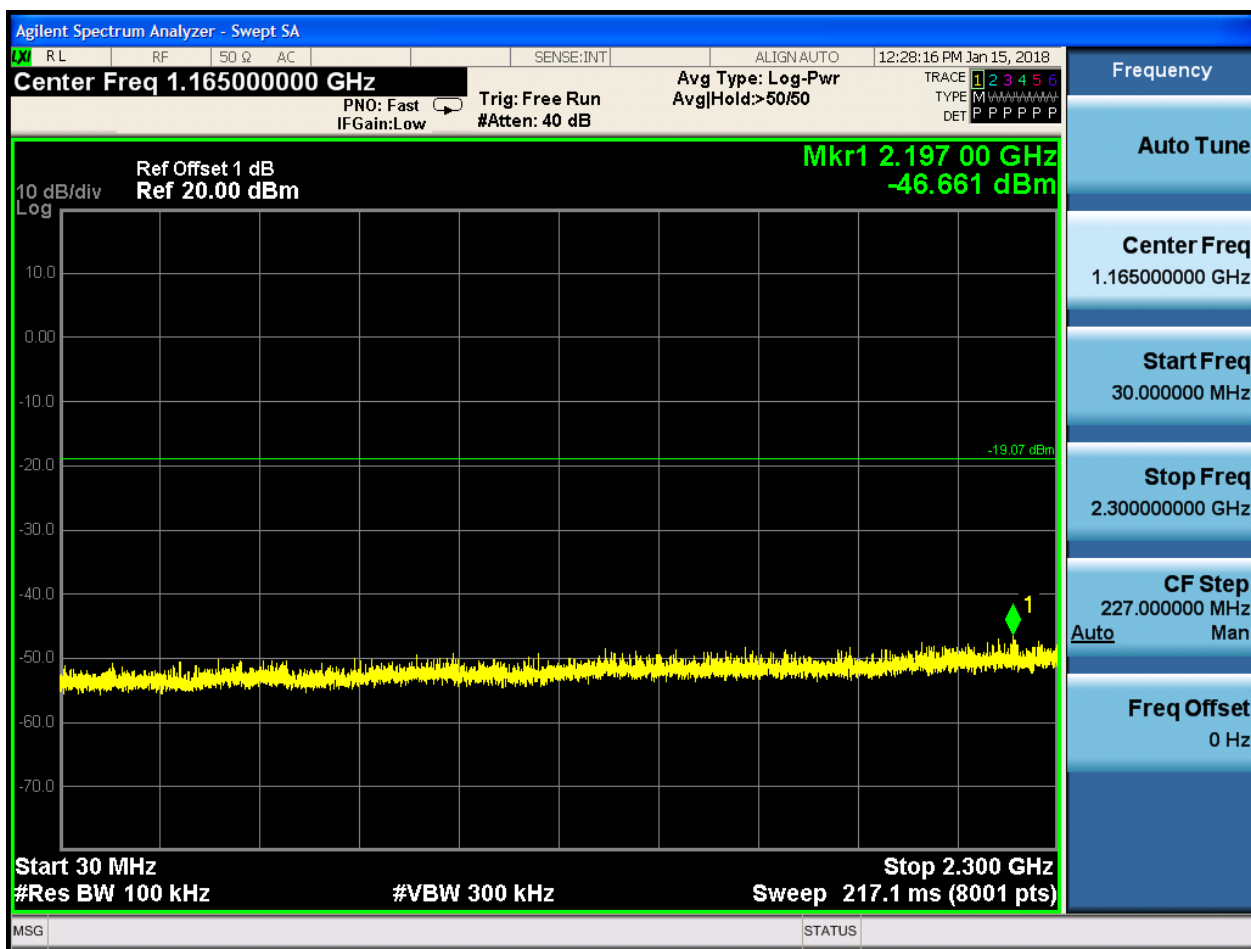
CF Step
14.100 kHz
Man

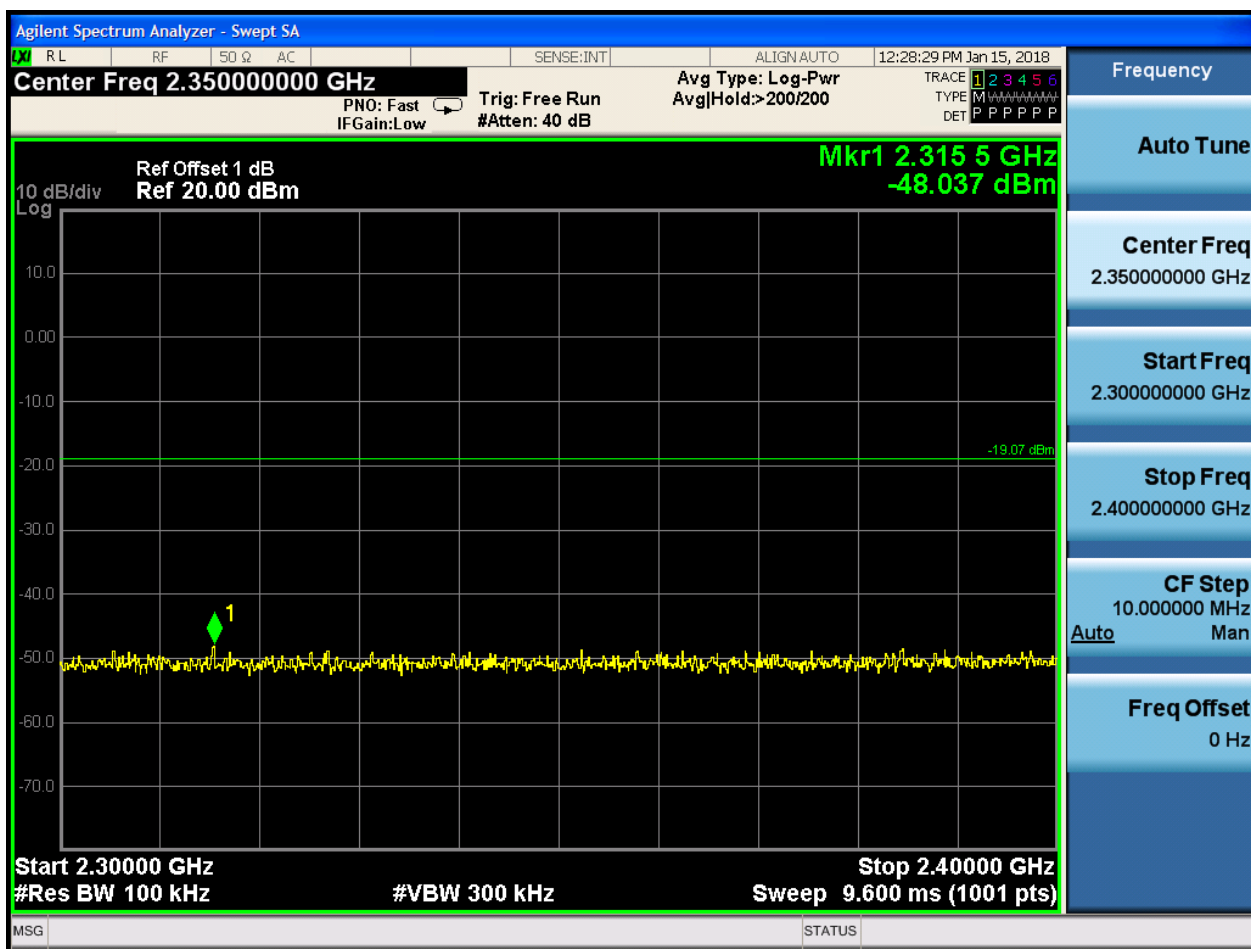
Auto

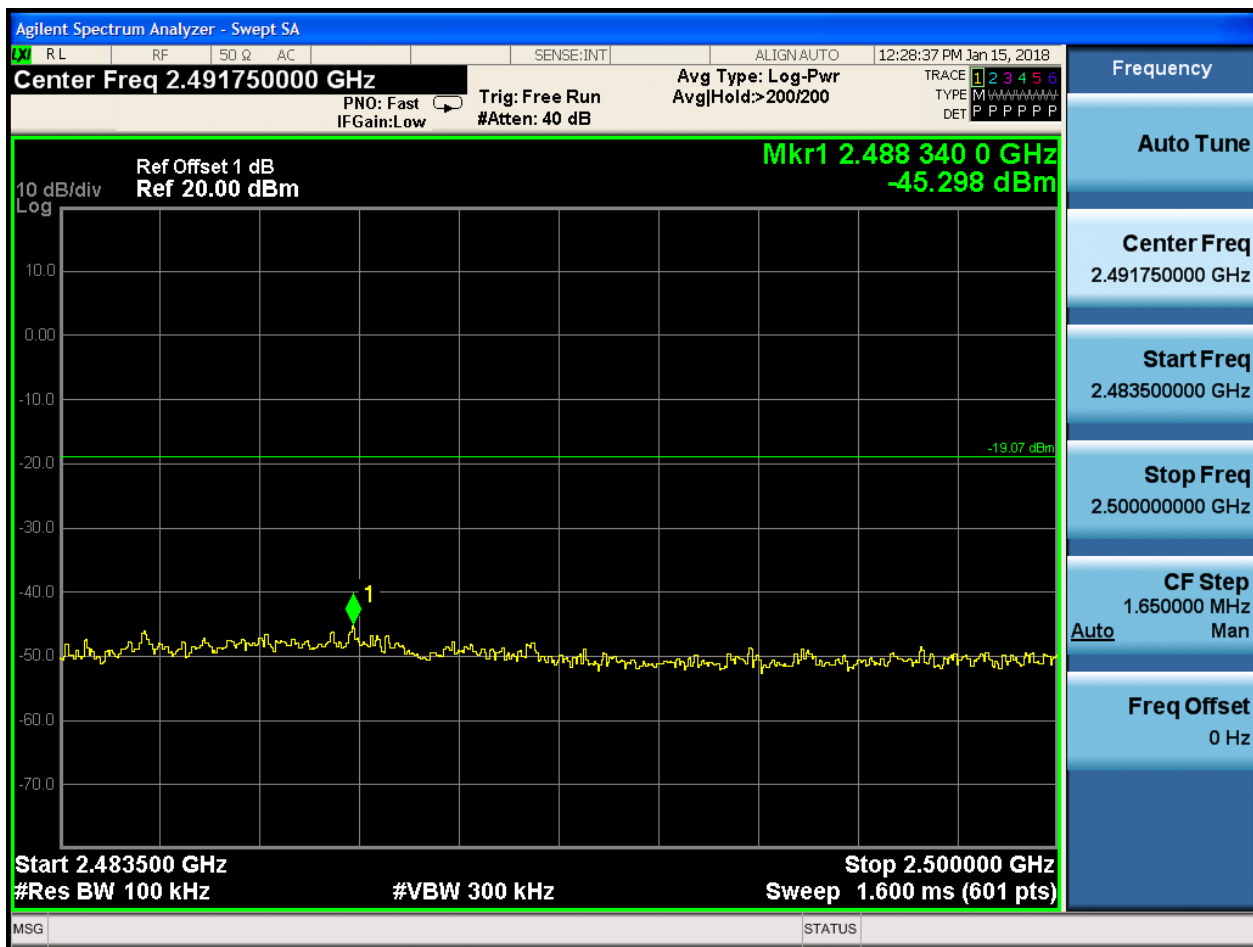
Freq Offset
0 Hz

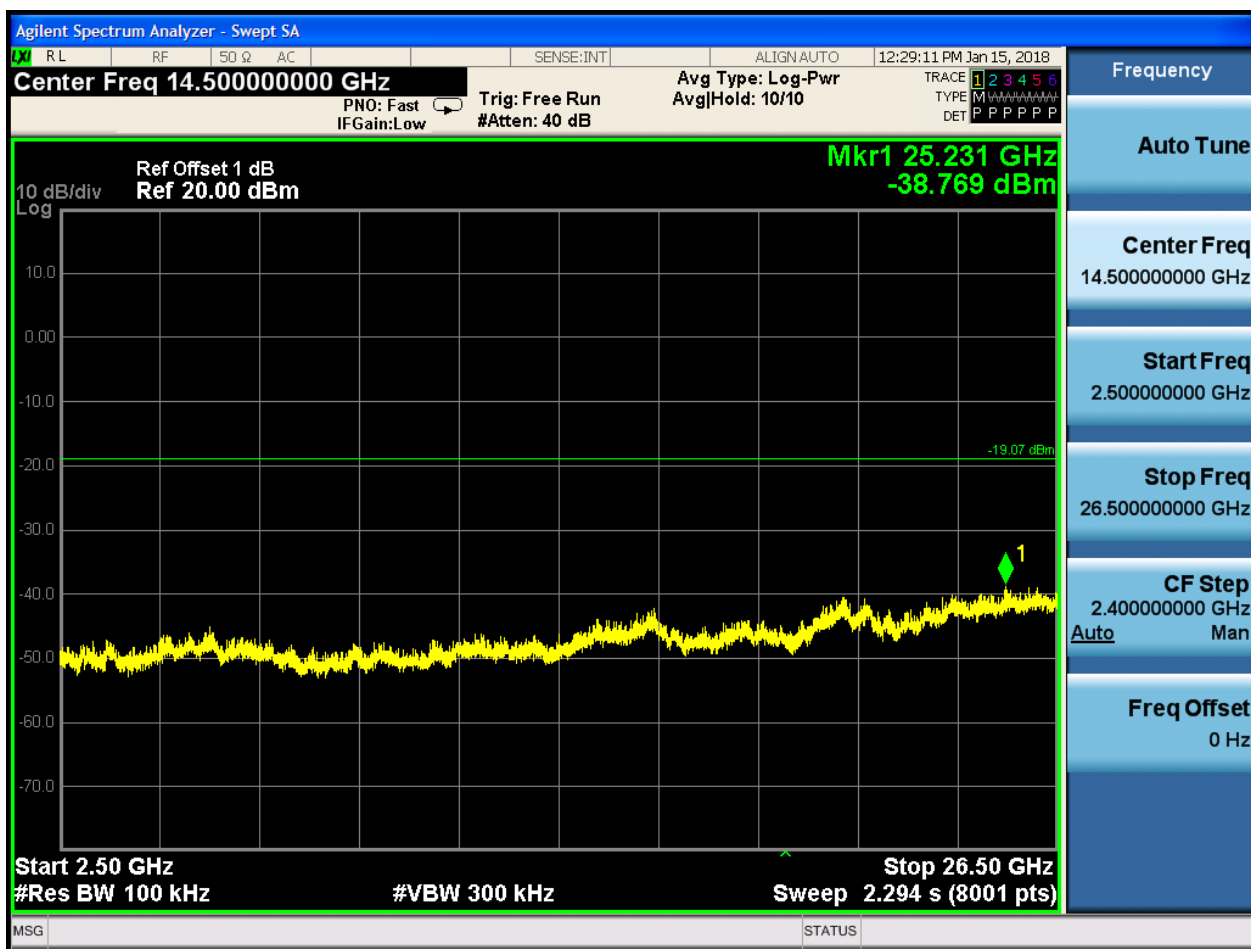
MSG STATUS DC Coupled





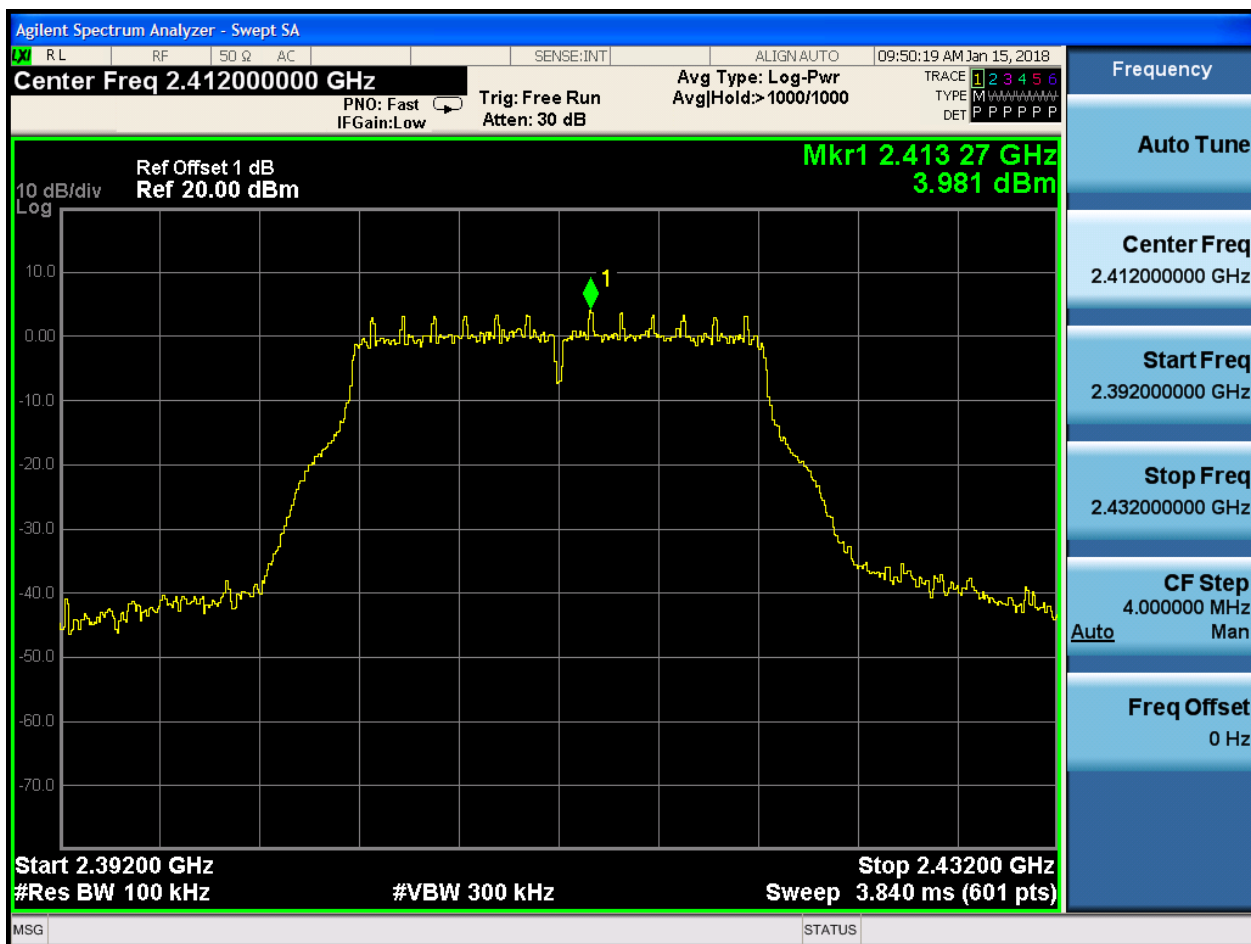


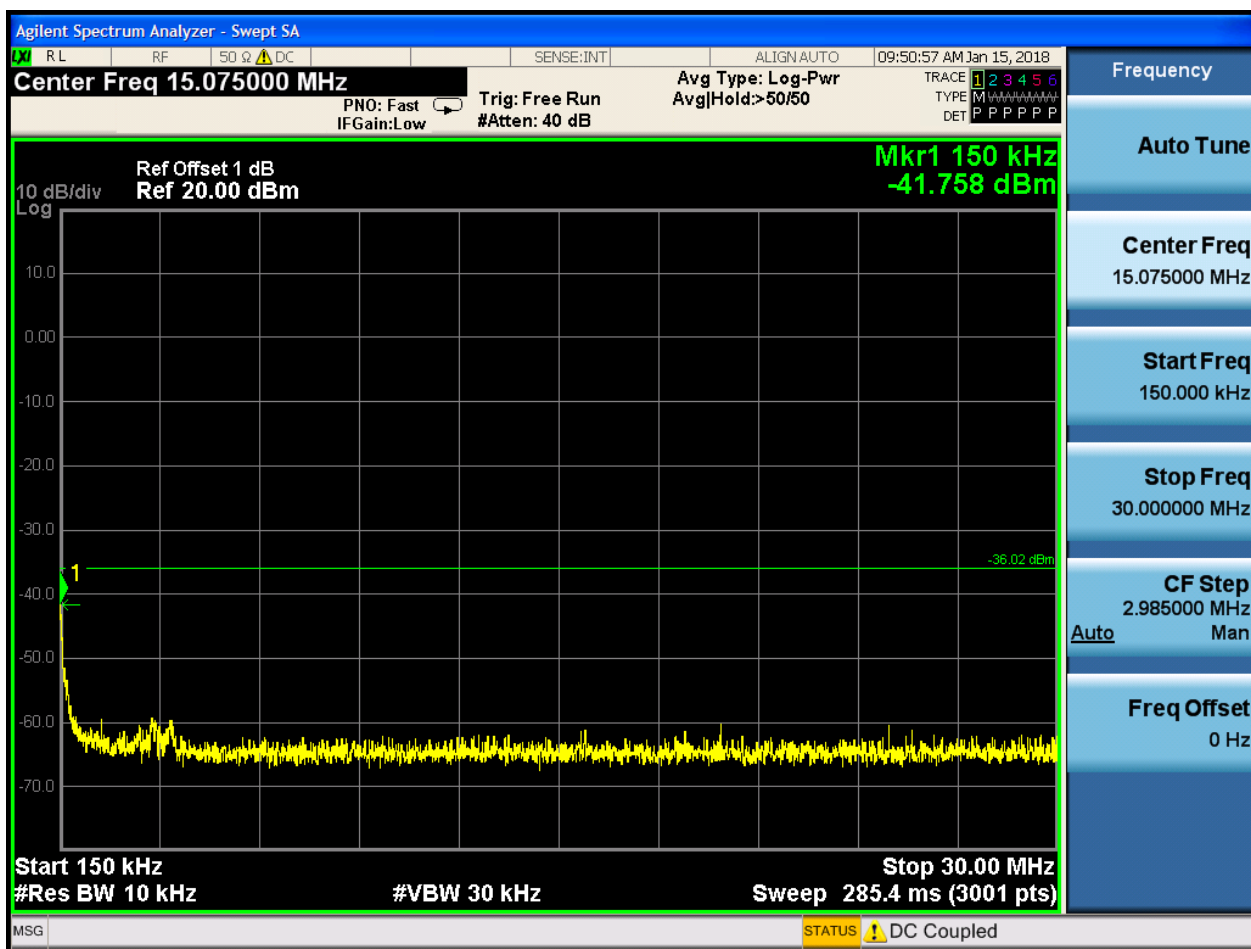


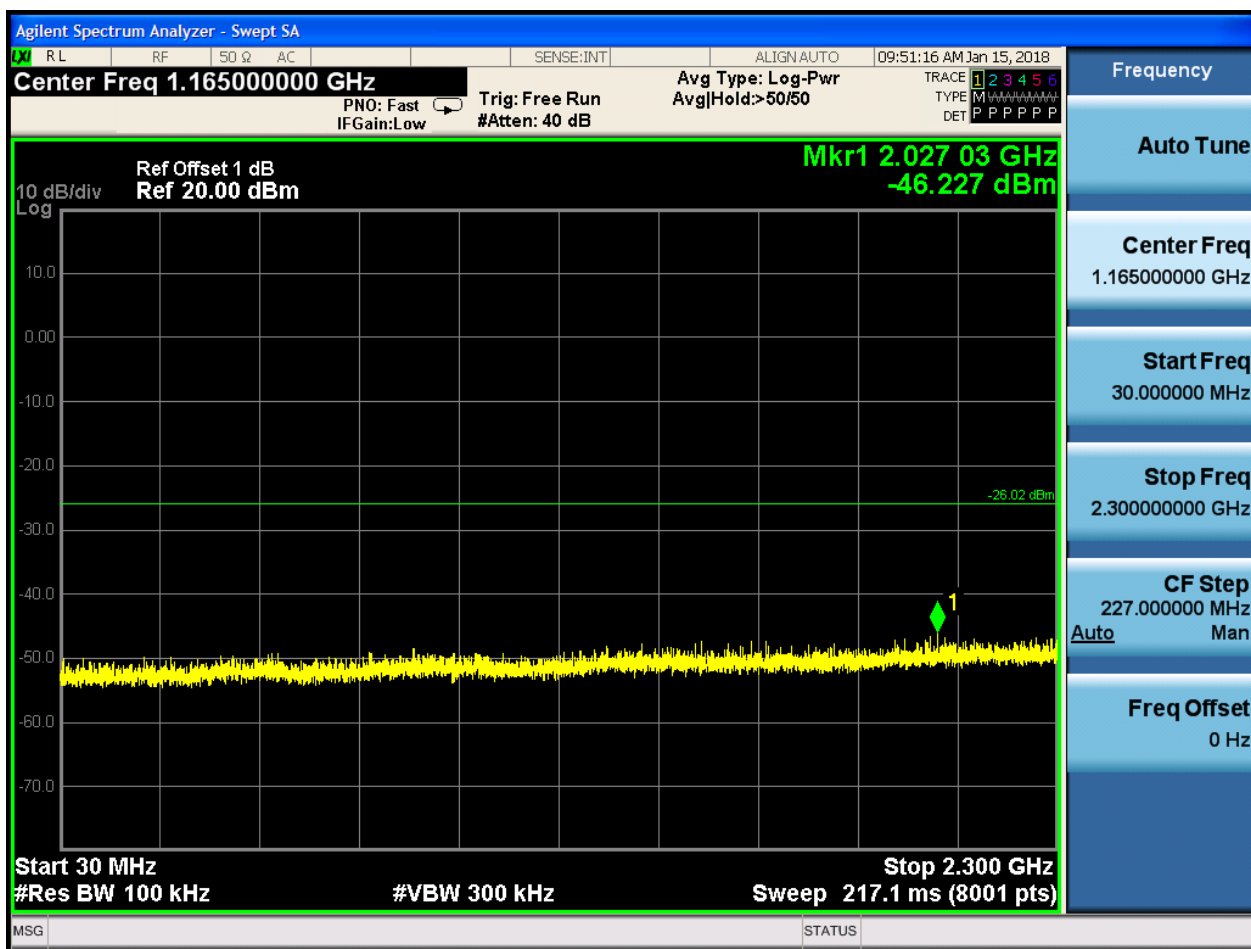


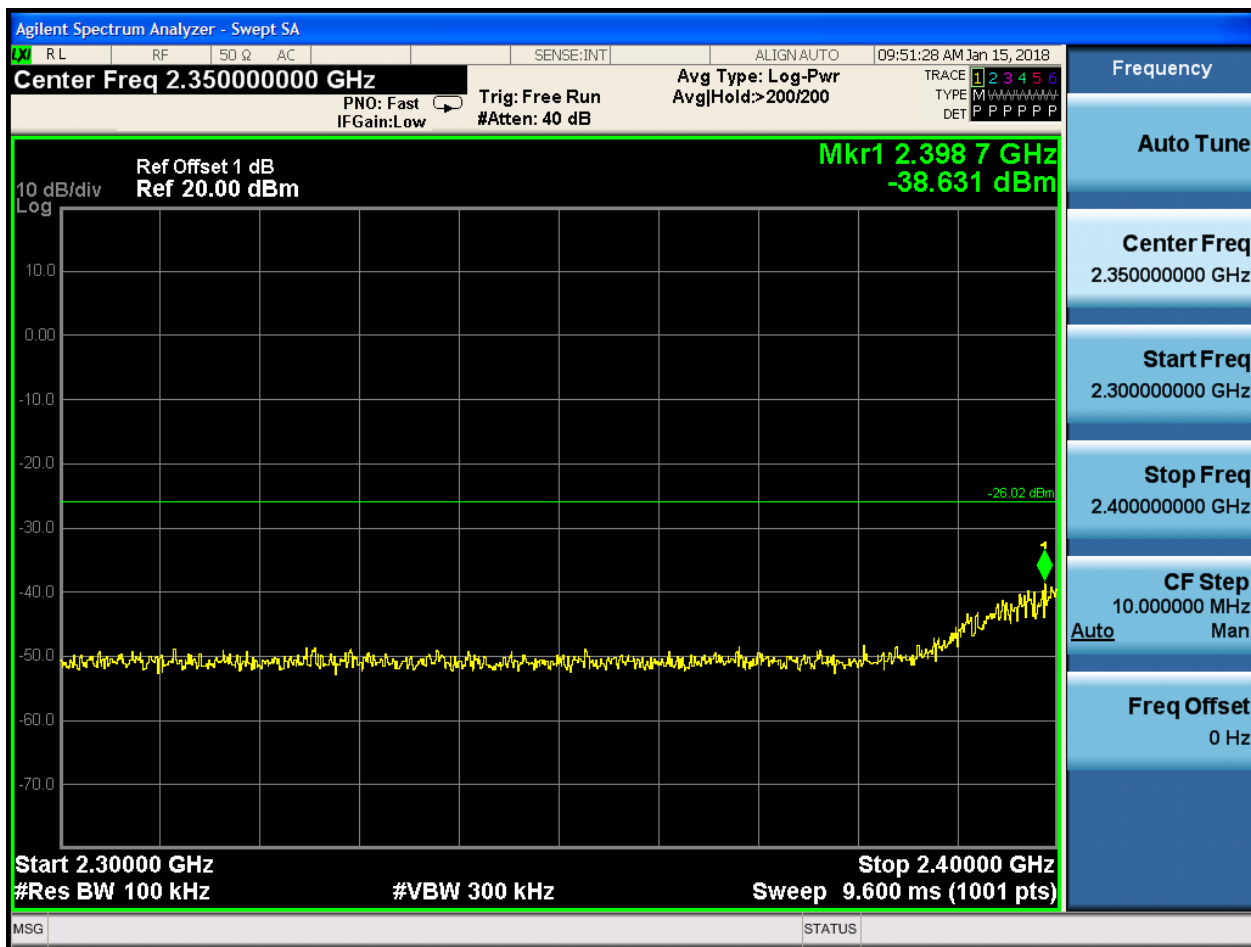
2.7 11G_L@Ant 1

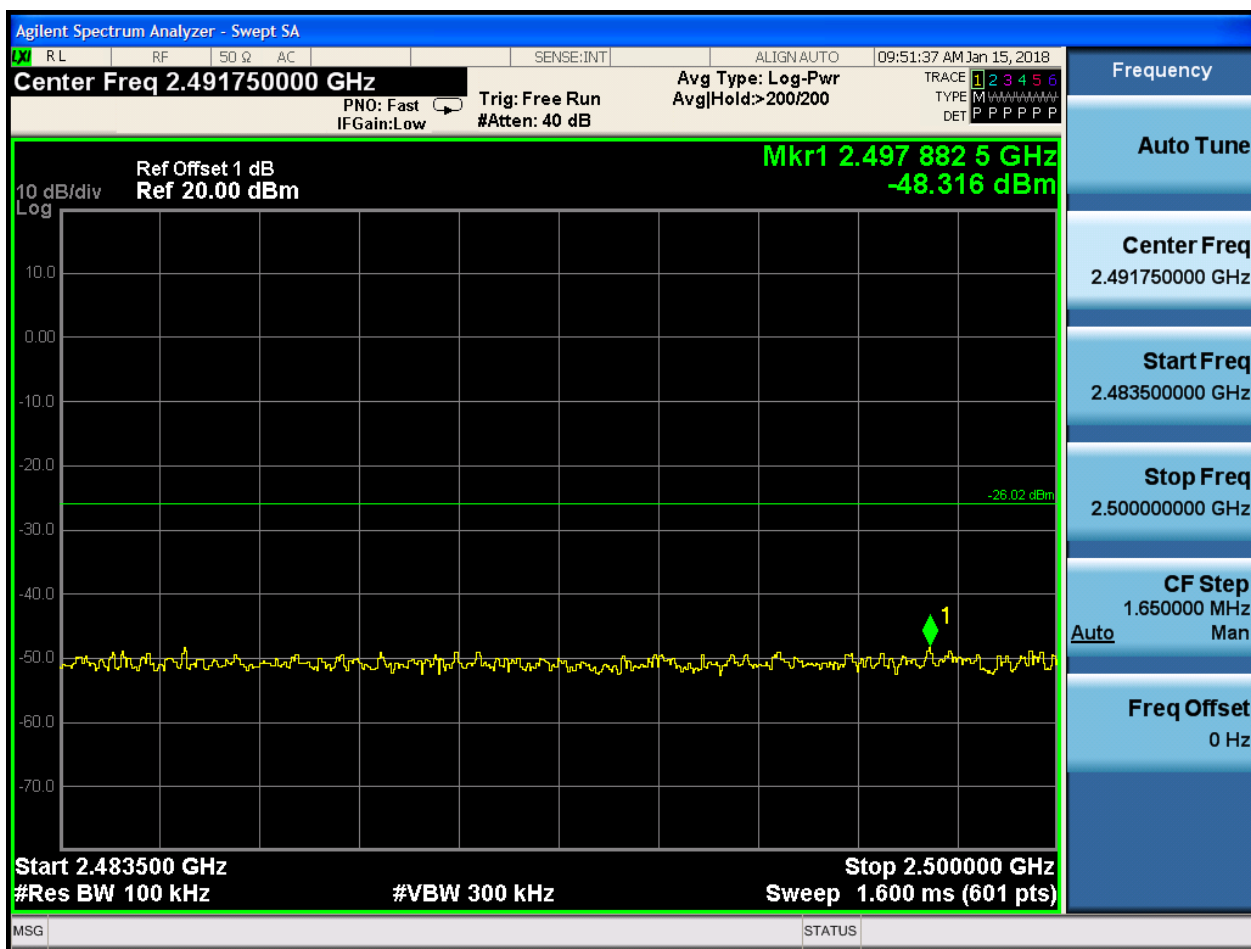
Pref:

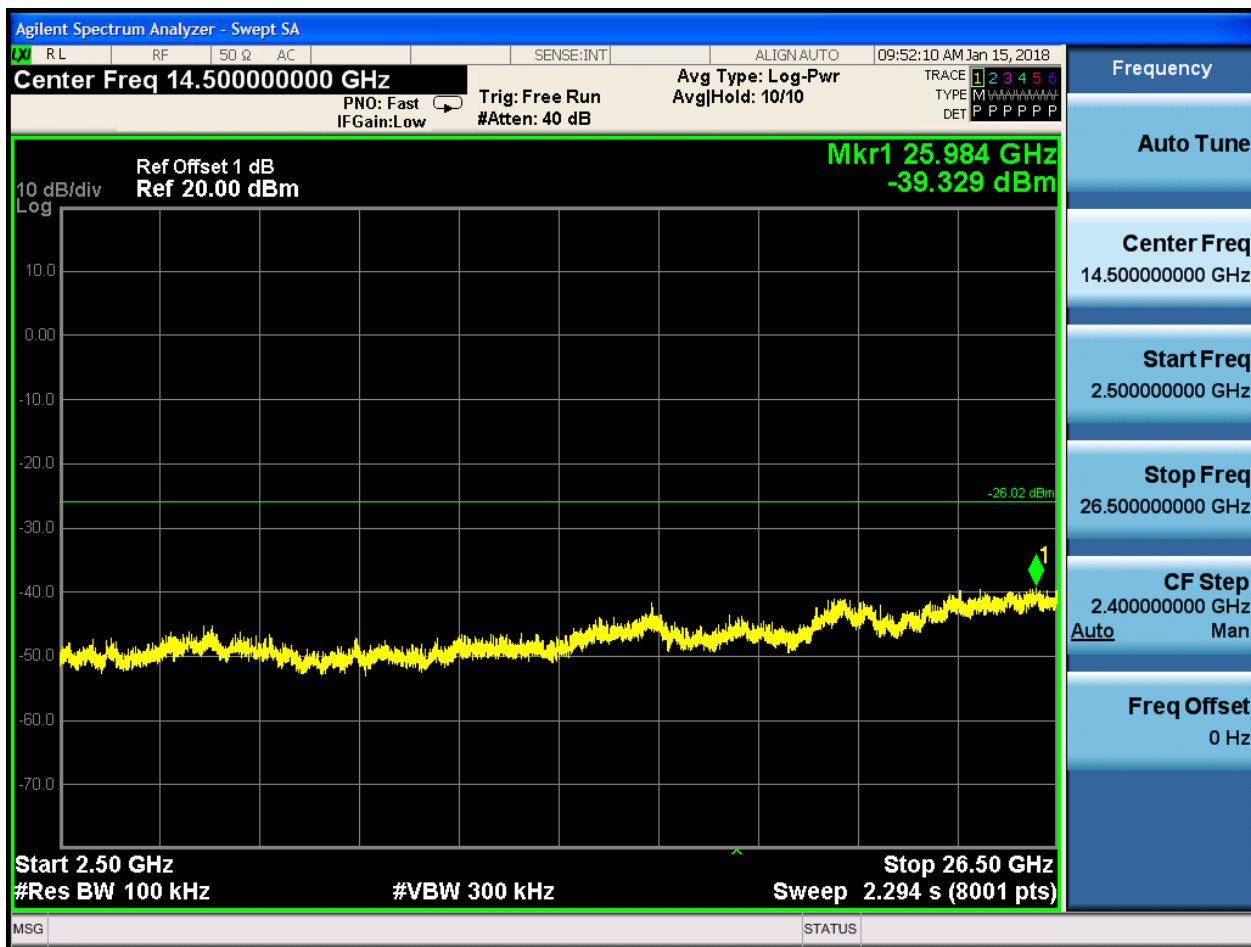














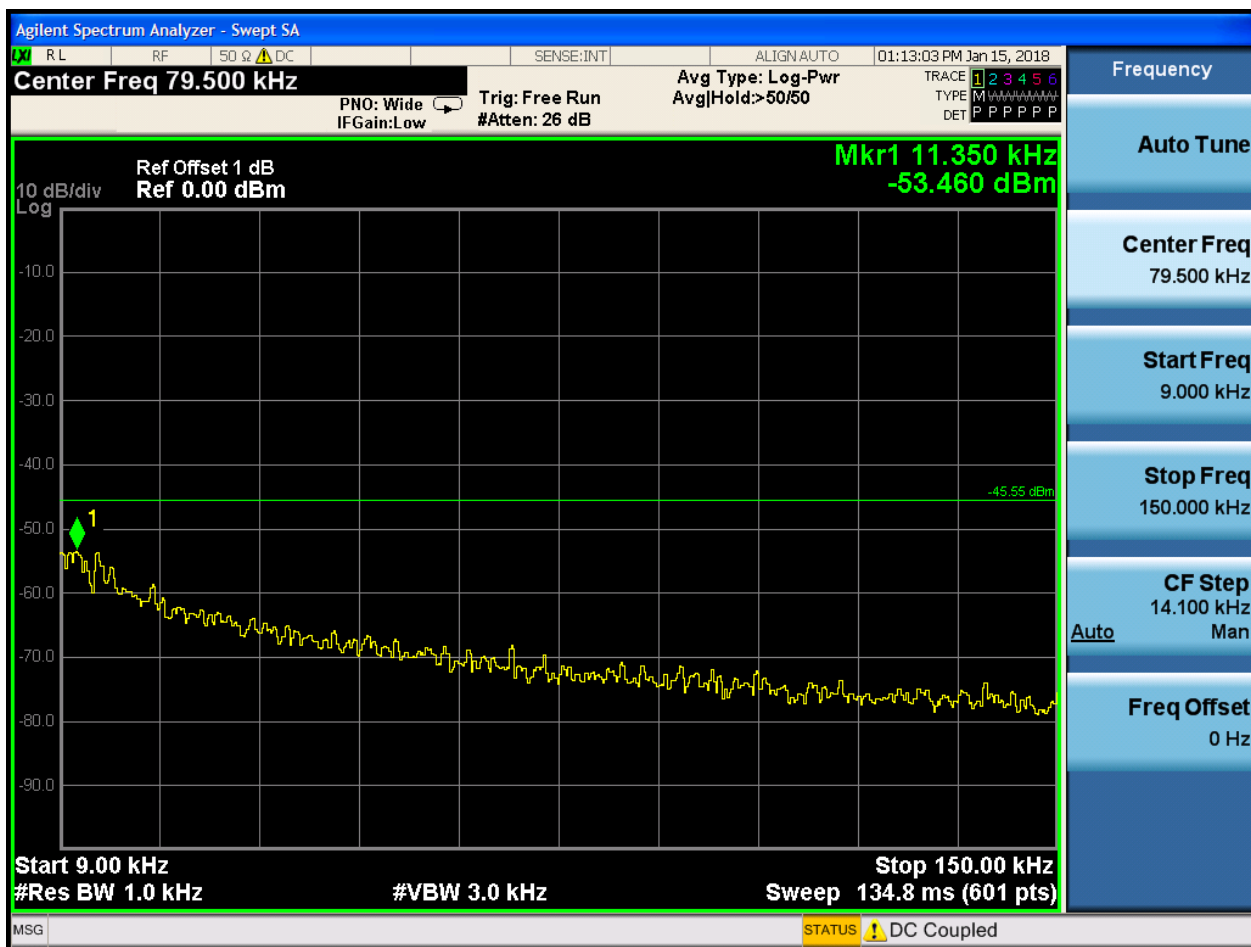
2.8 11G_L@Ant 2

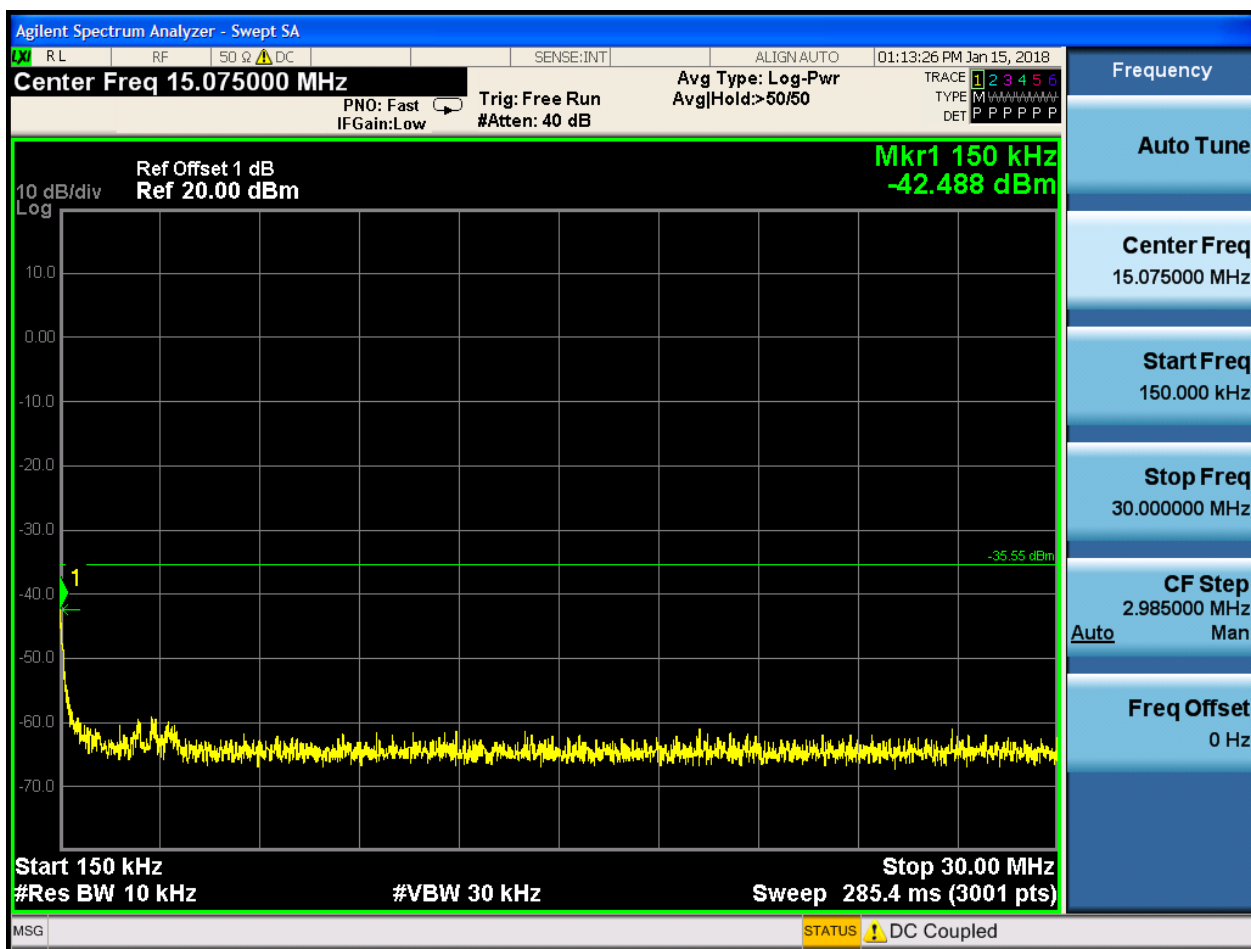
Pref:

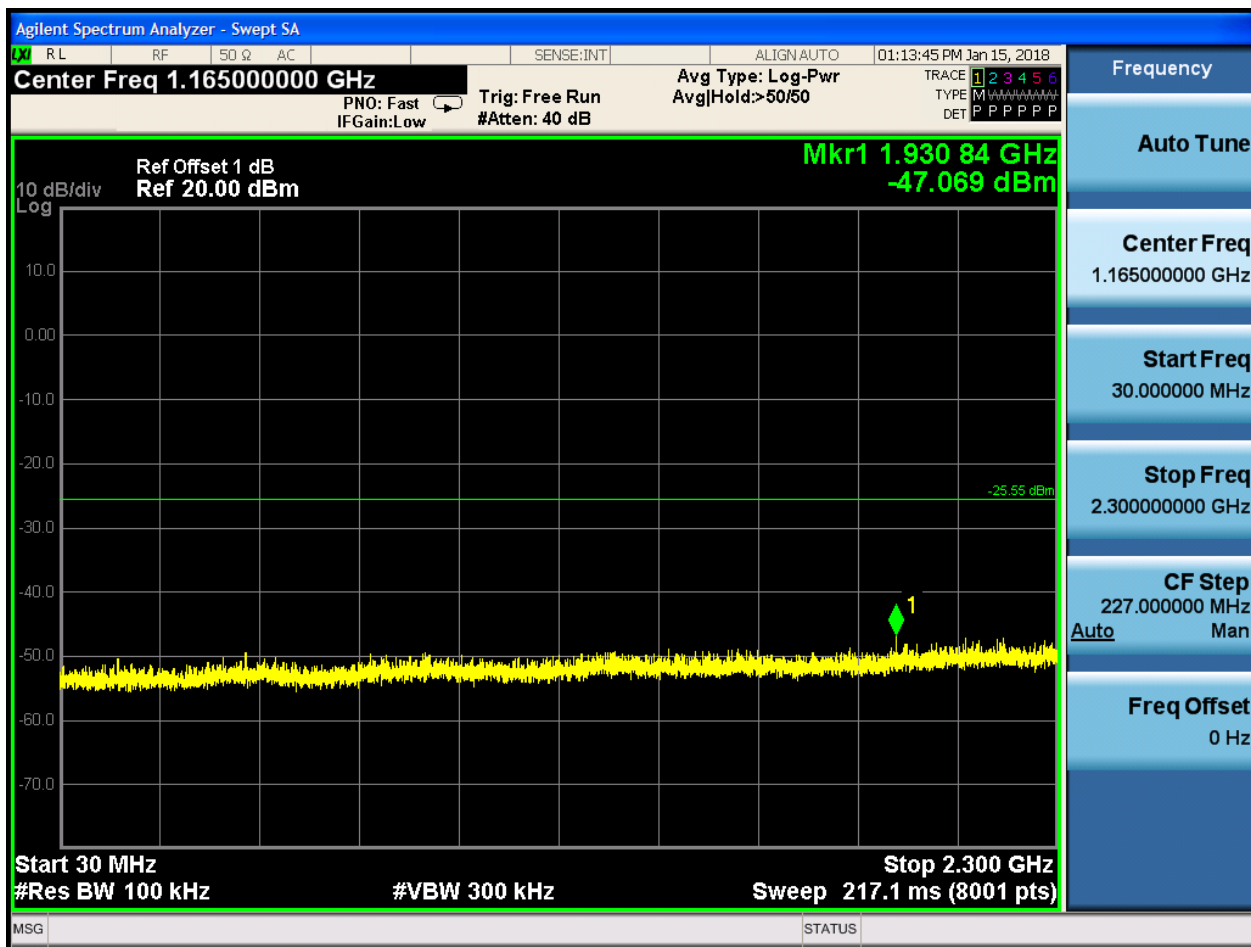


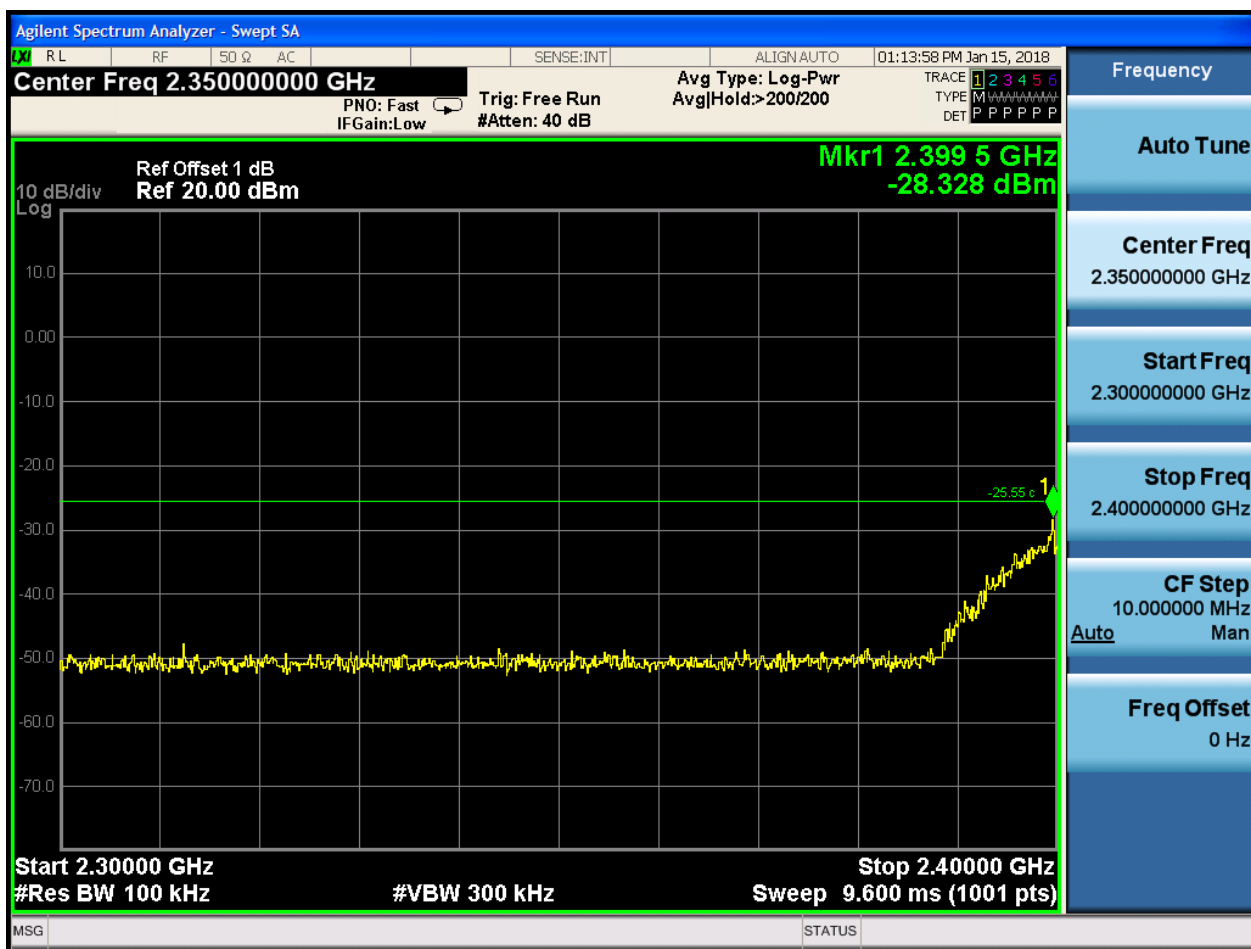


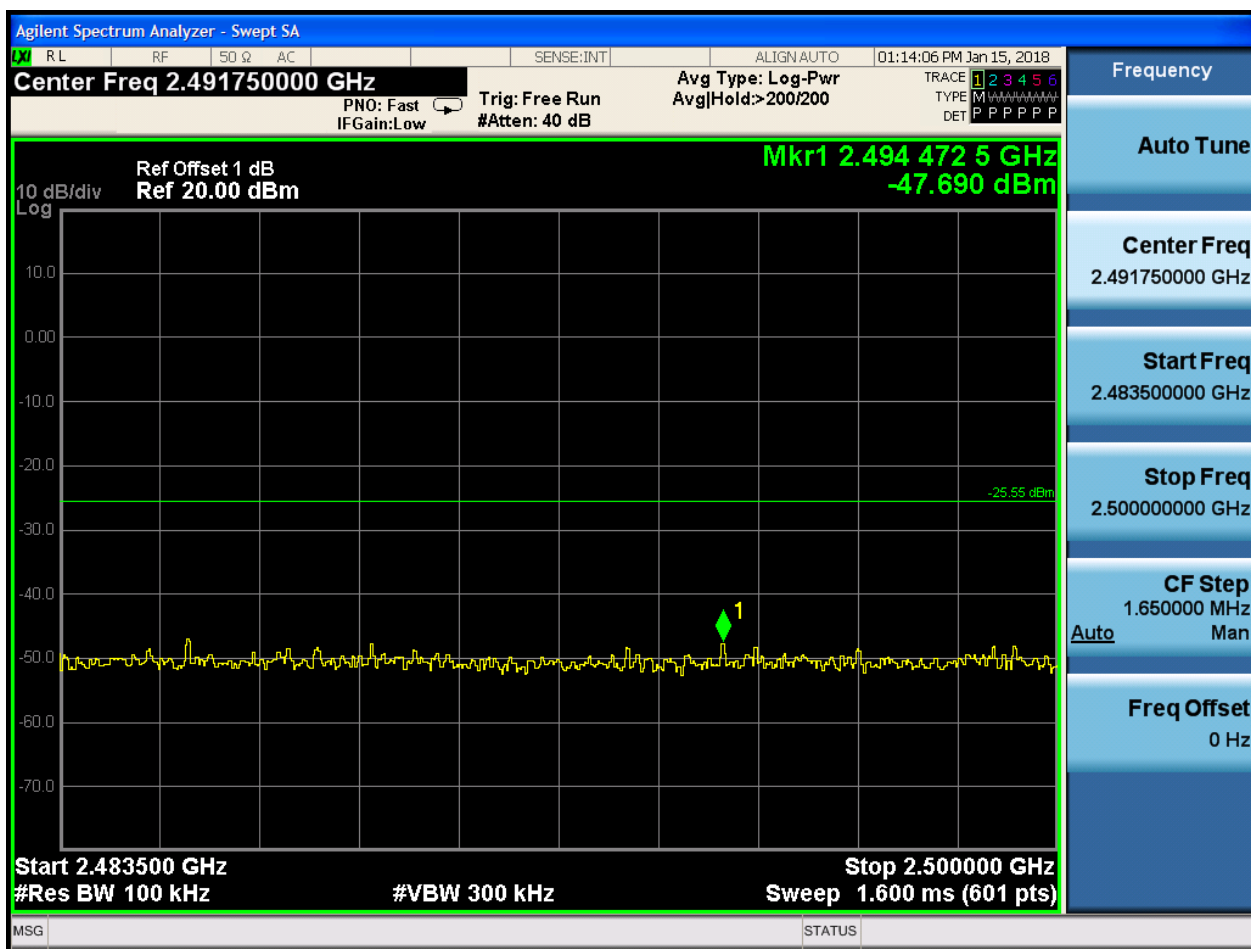
Puw:

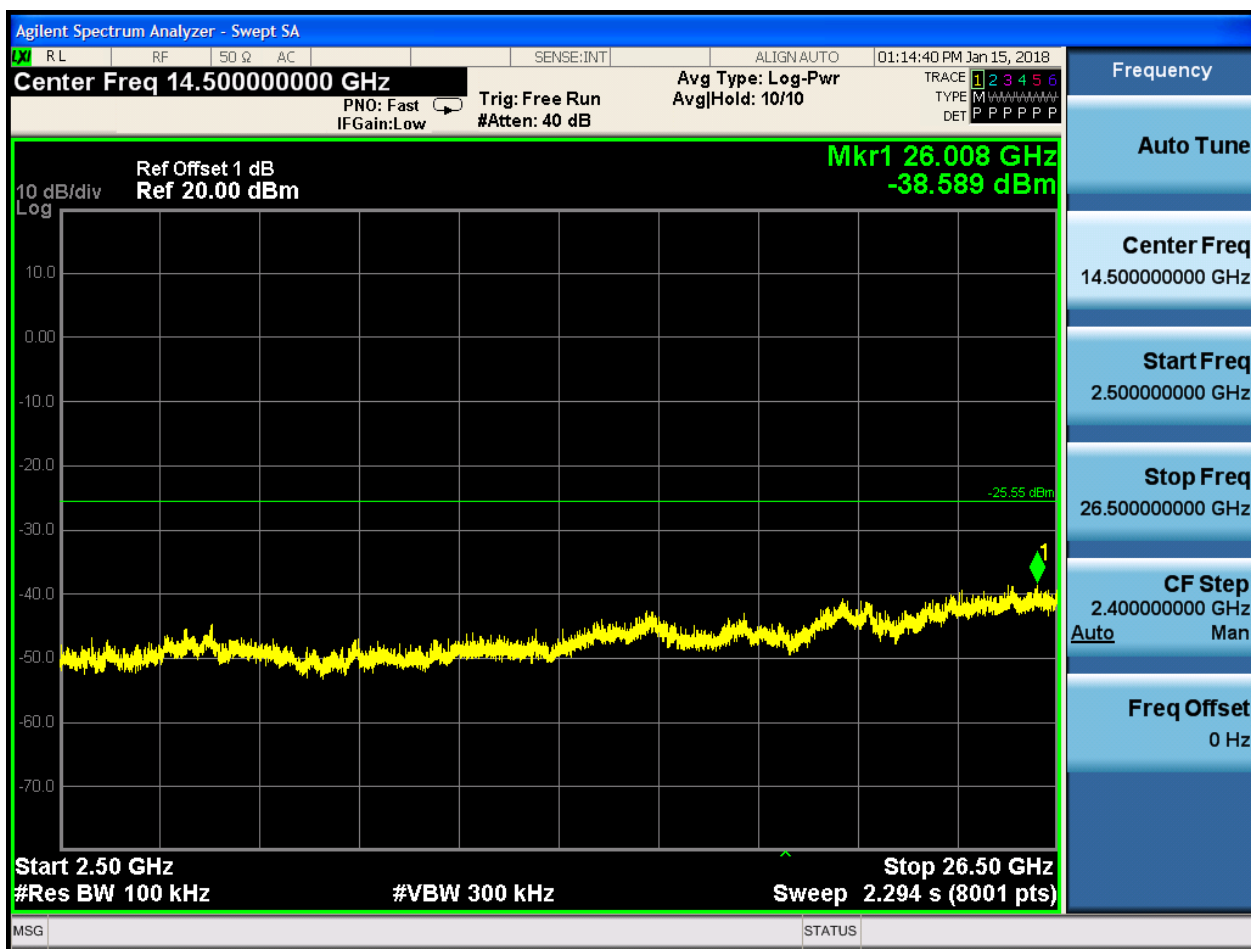








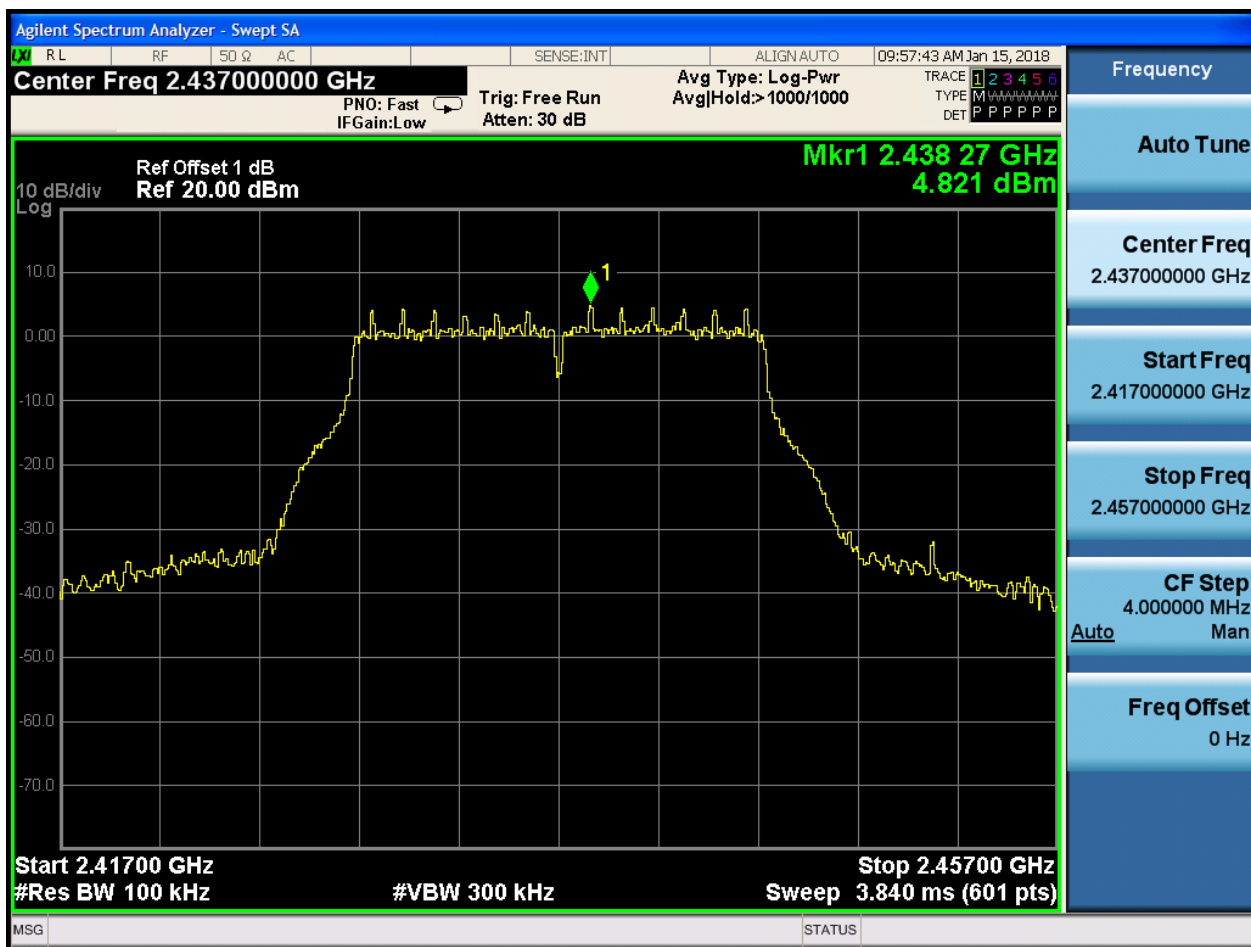






2.9 11G_M@Ant 1

Pref:





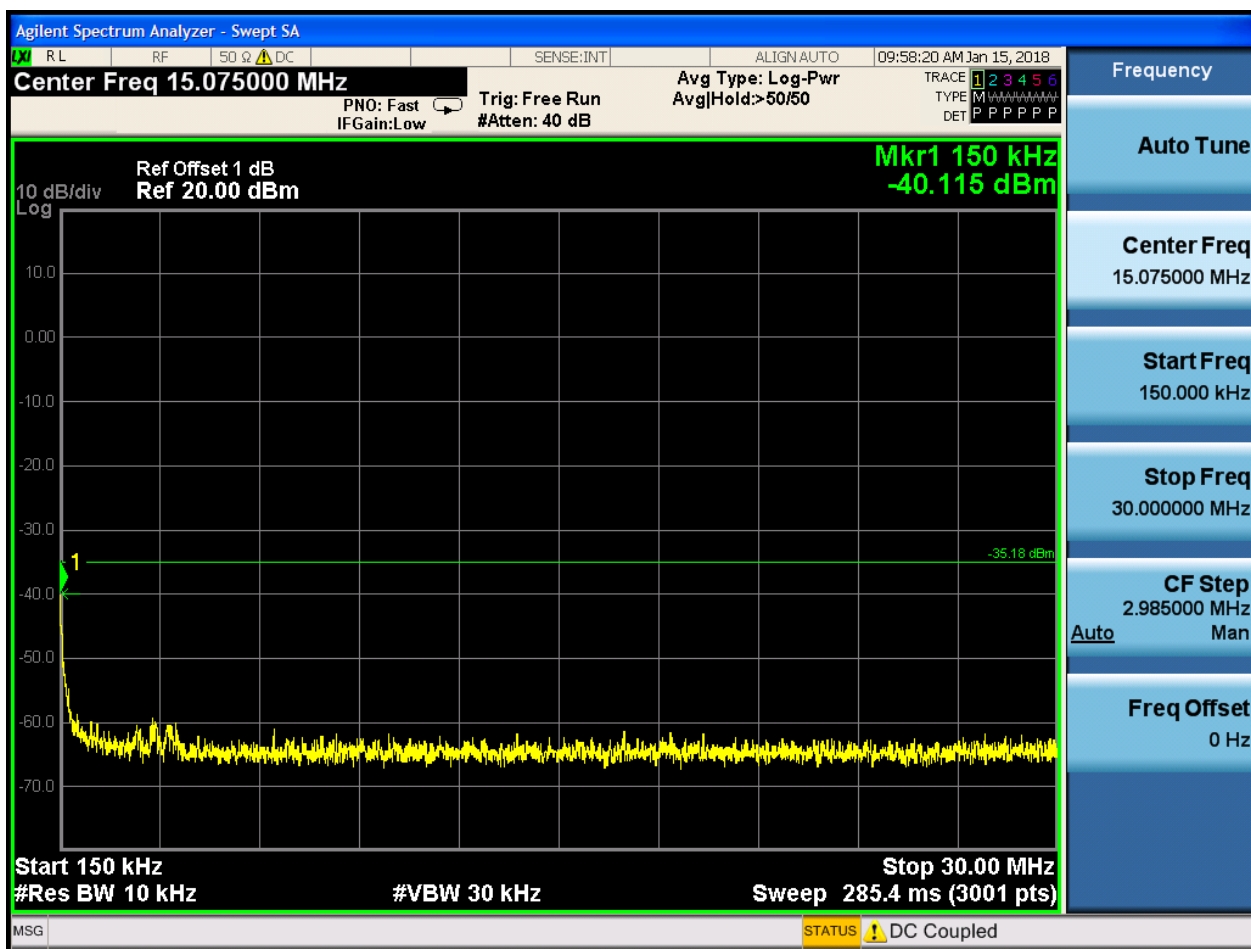
Agilent Spectrum Analyzer - Swept SA

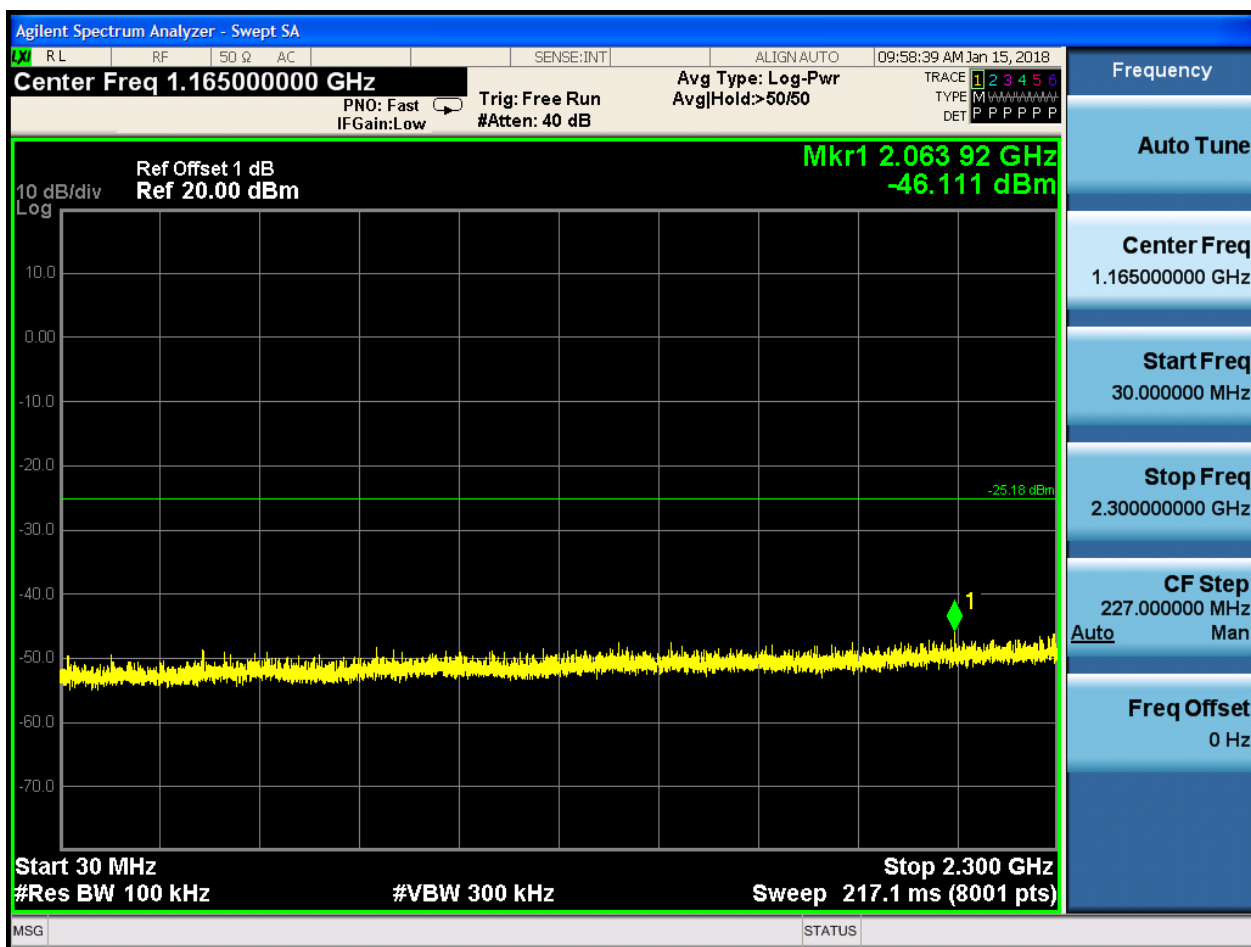
Center Freq 79.500 kHz Avg Type: Log-Pwr Trace 1 2 3 4 5 6
 PNO: Wide IFGain:Low Trig: Free Run AvgHold>50/50
 #Atten: 26 dB TYPE M DET P P P P P P

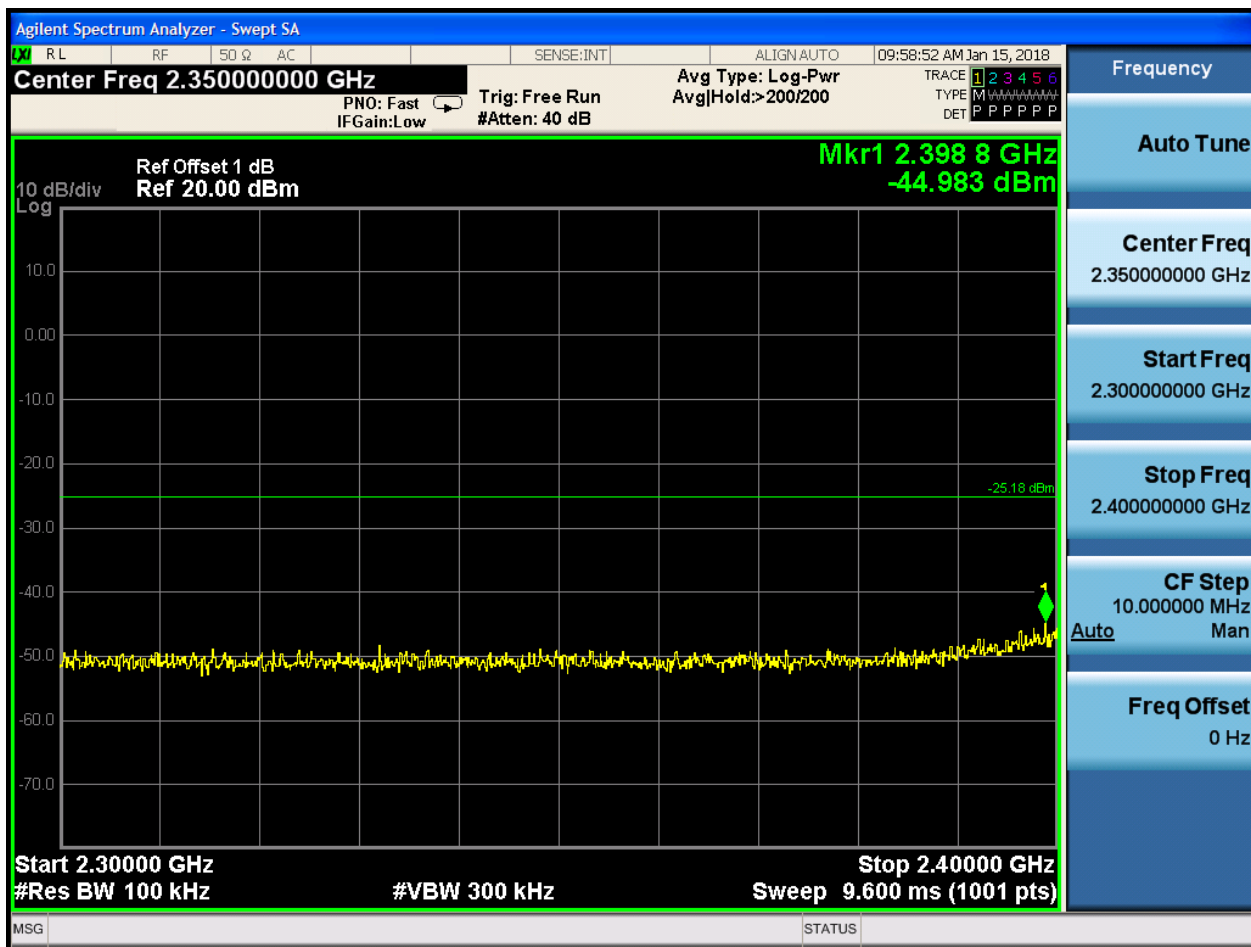
Ref Offset 1 dB Mkr1 10.645 kHz
 Ref 0.00 dBm -52.347 dBm

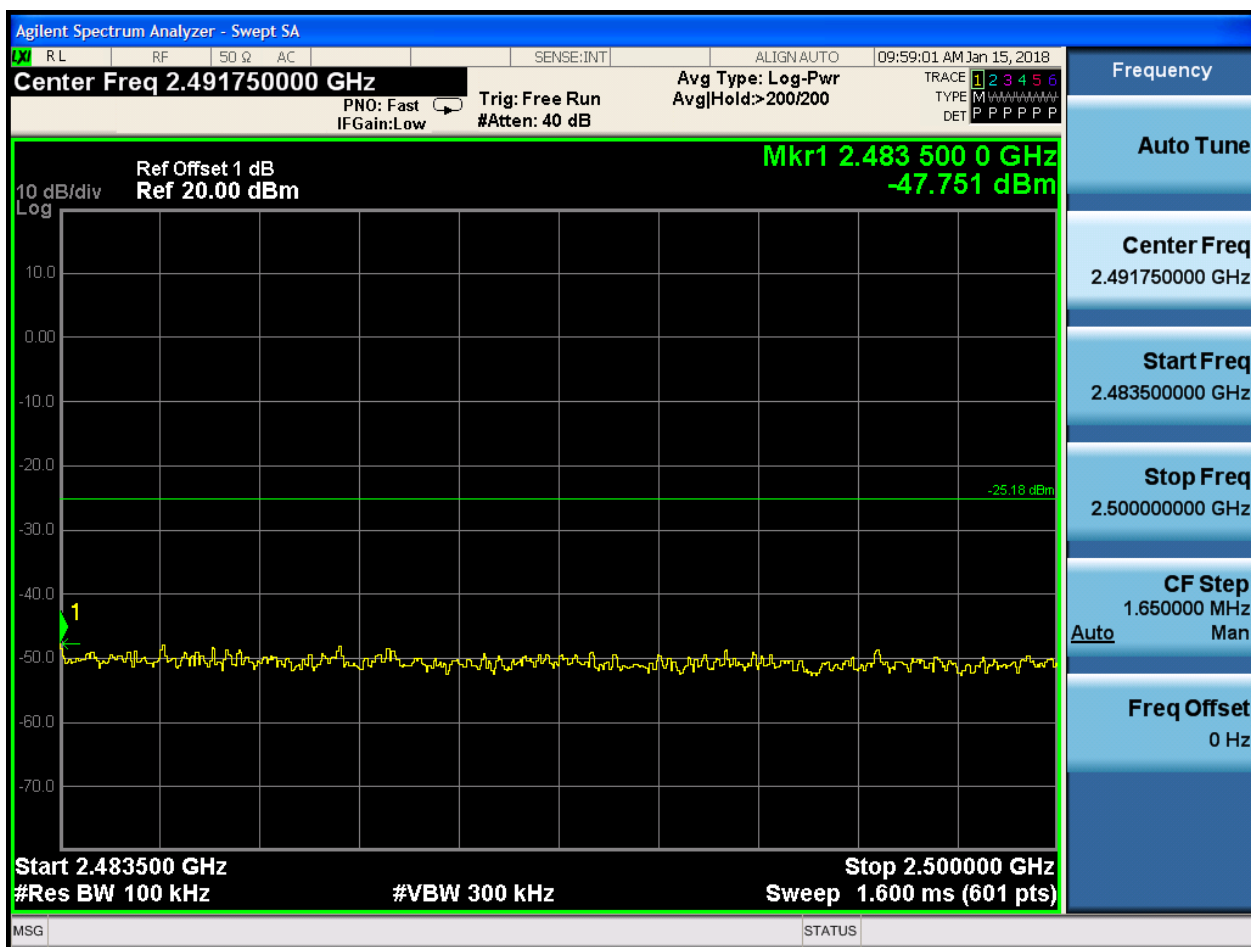
Start 9.00 kHz Stop 150.00 kHz
 #Res BW 1.0 kHz #VBW 3.0 kHz Sweep 134.8 ms (601 pts)

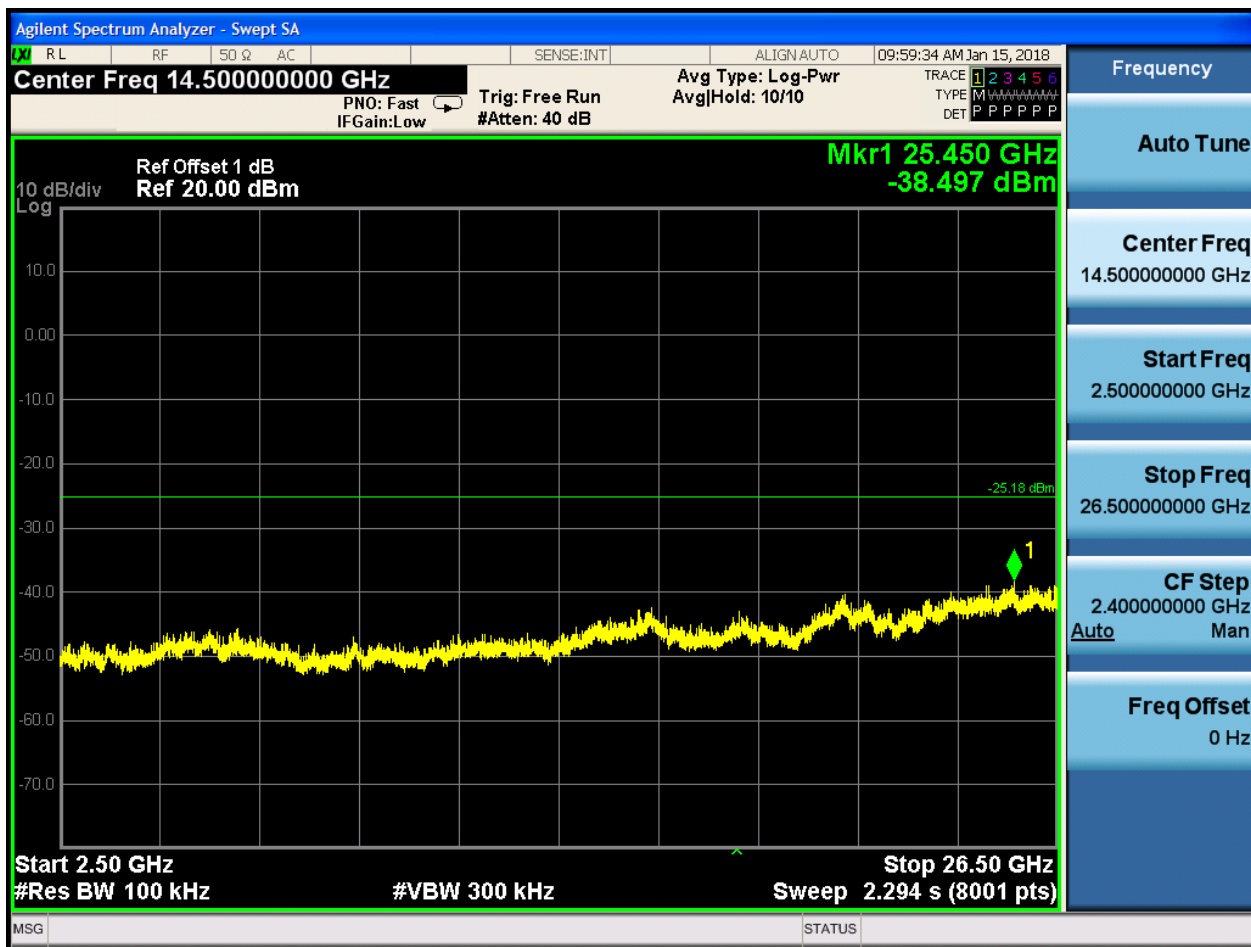
MSG STATUS DC Coupled







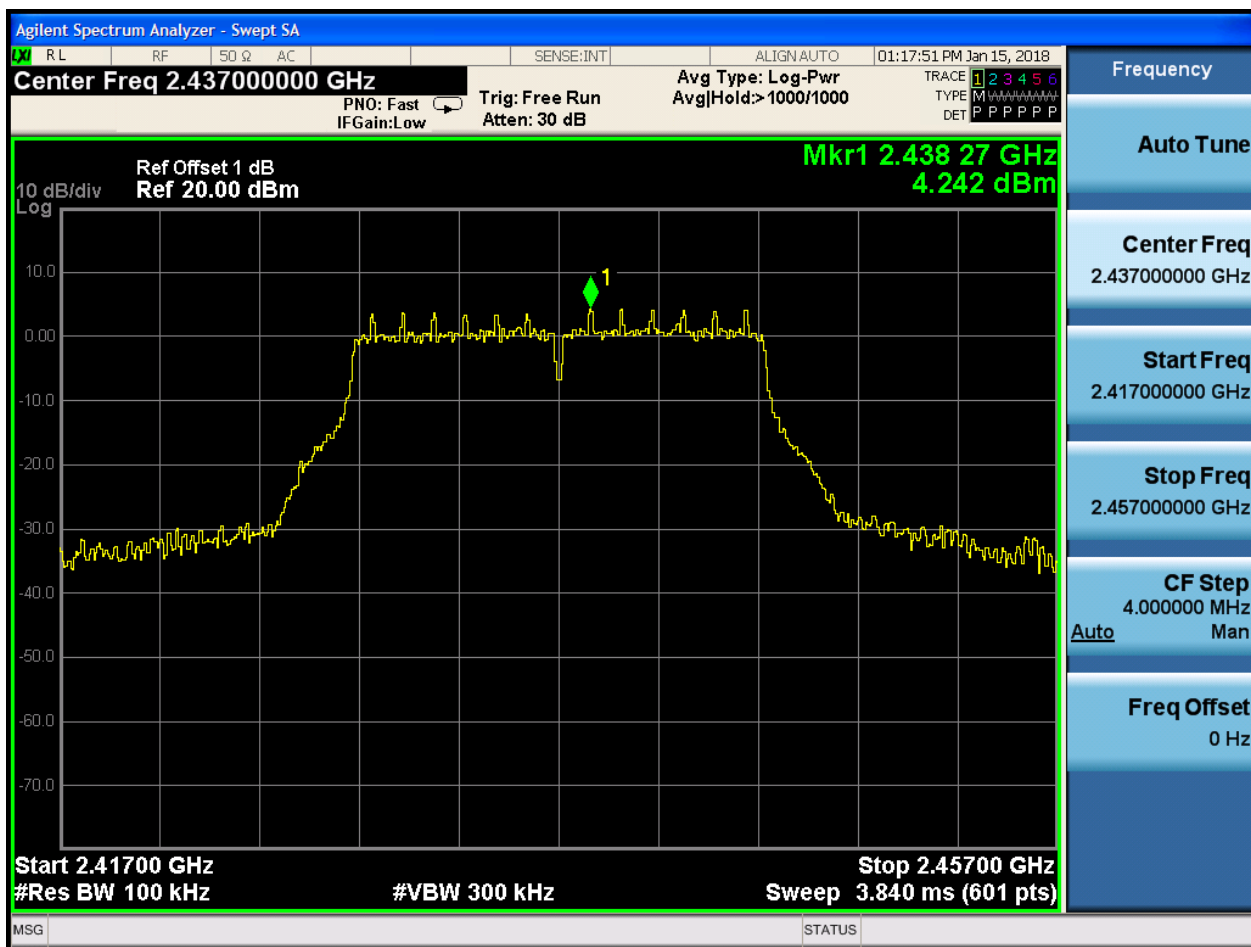






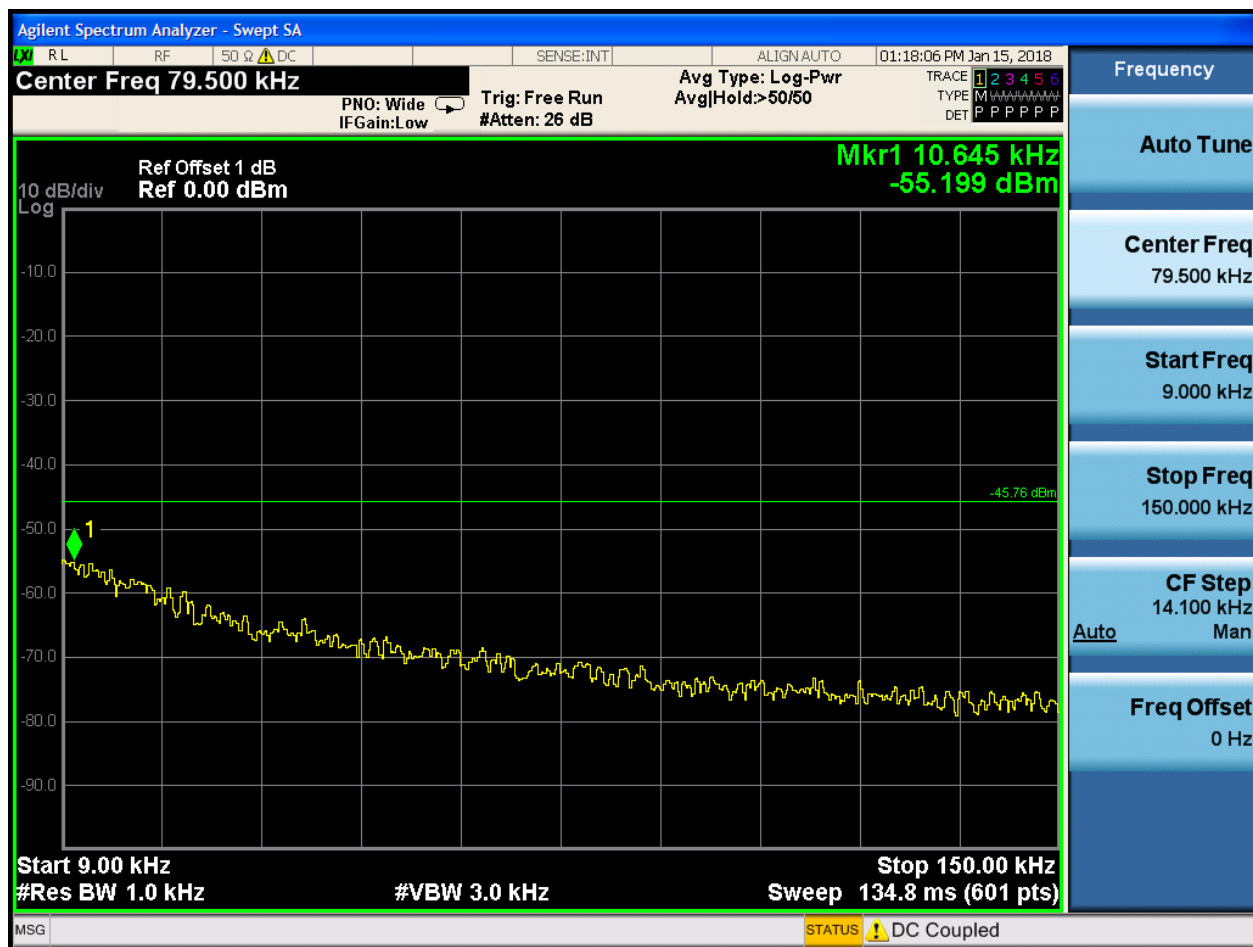
2.10 11G_M@Ant 2

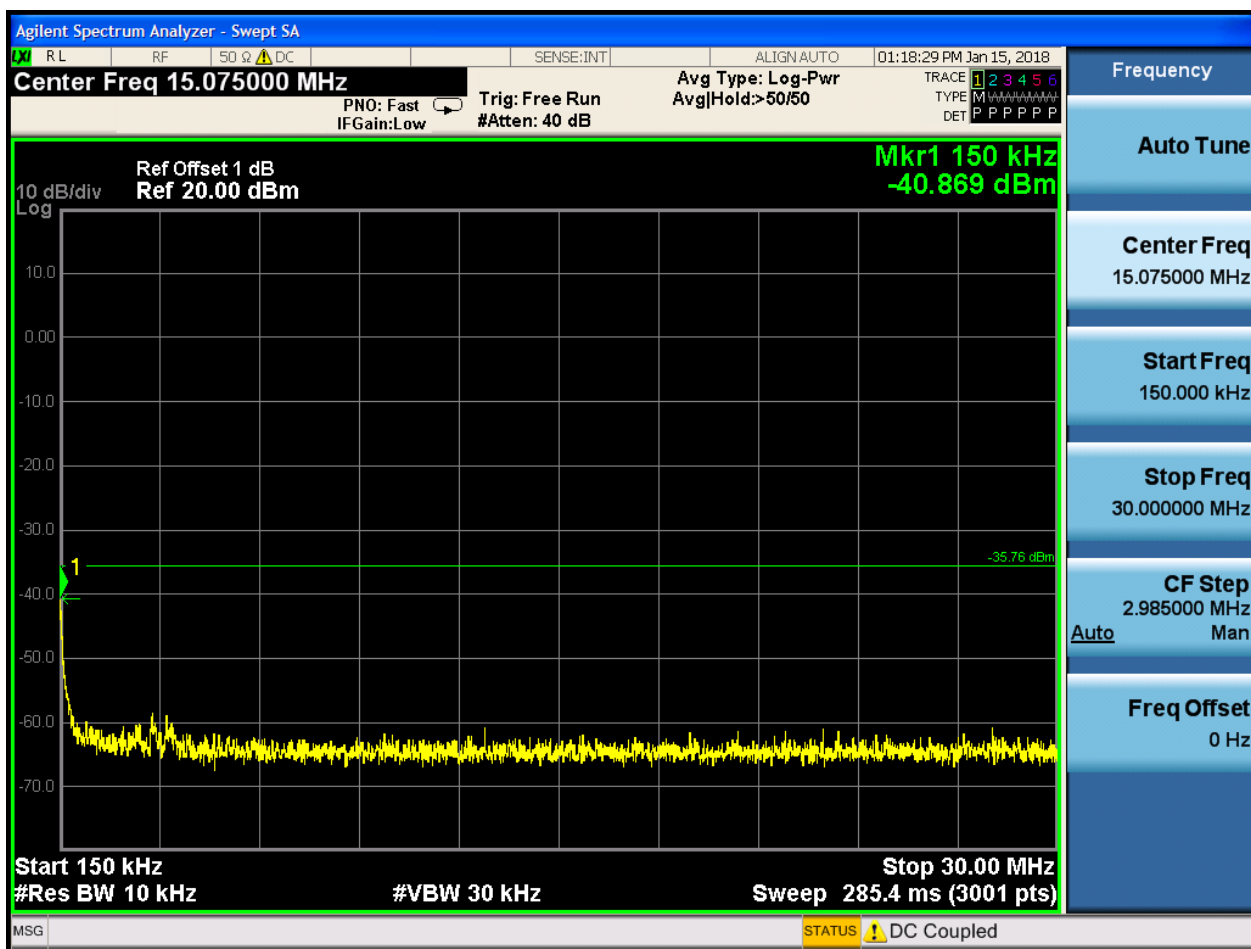
Pref:

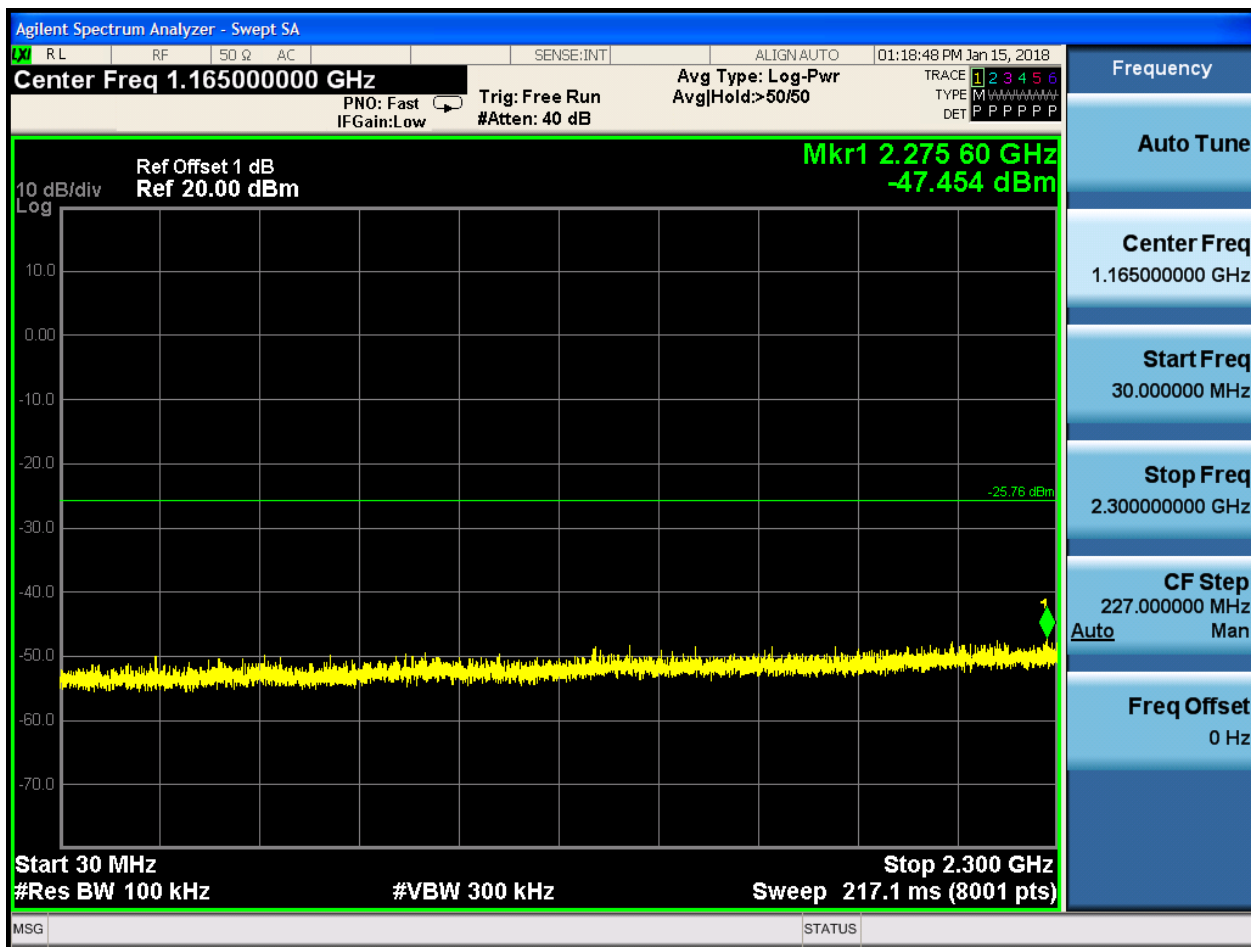


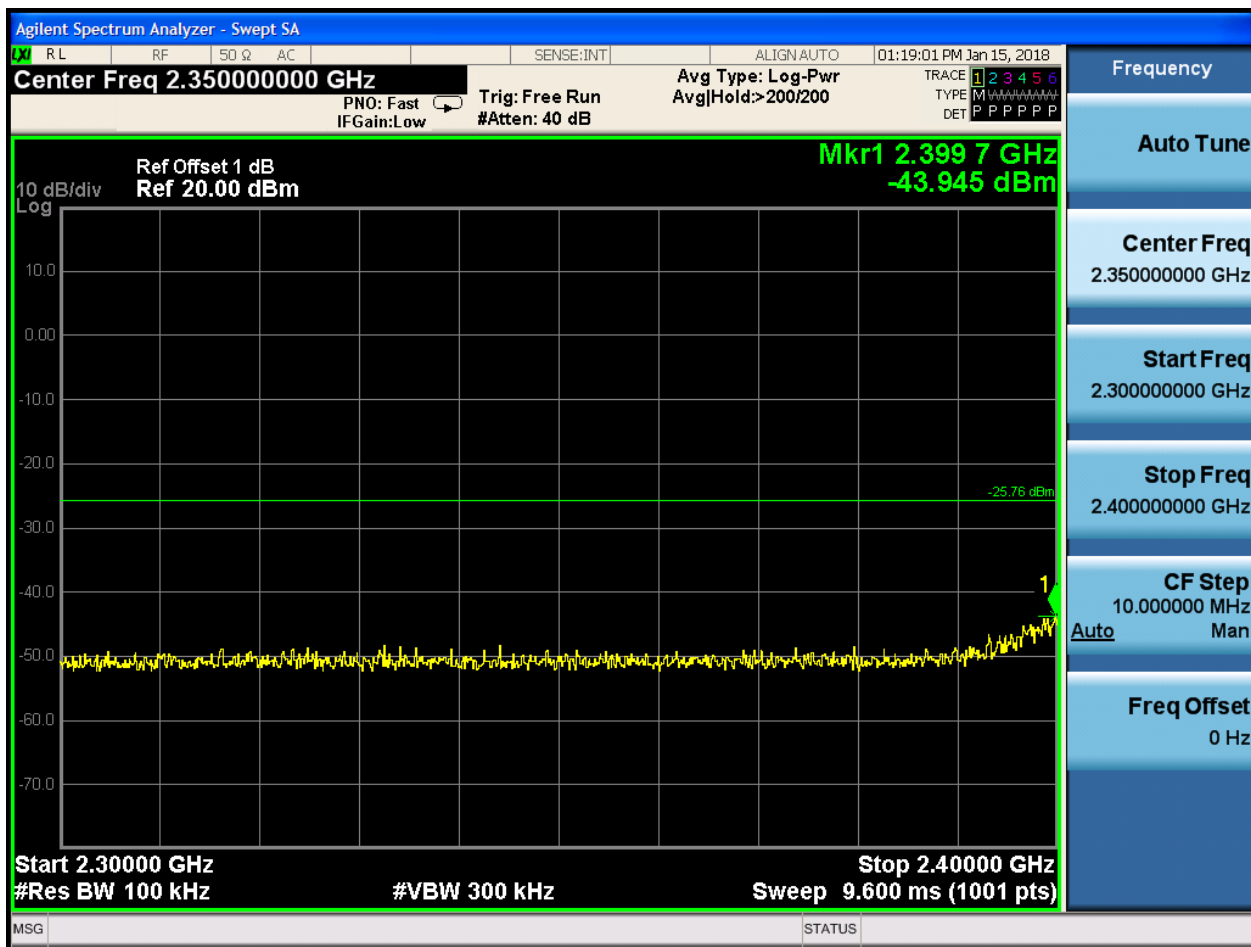


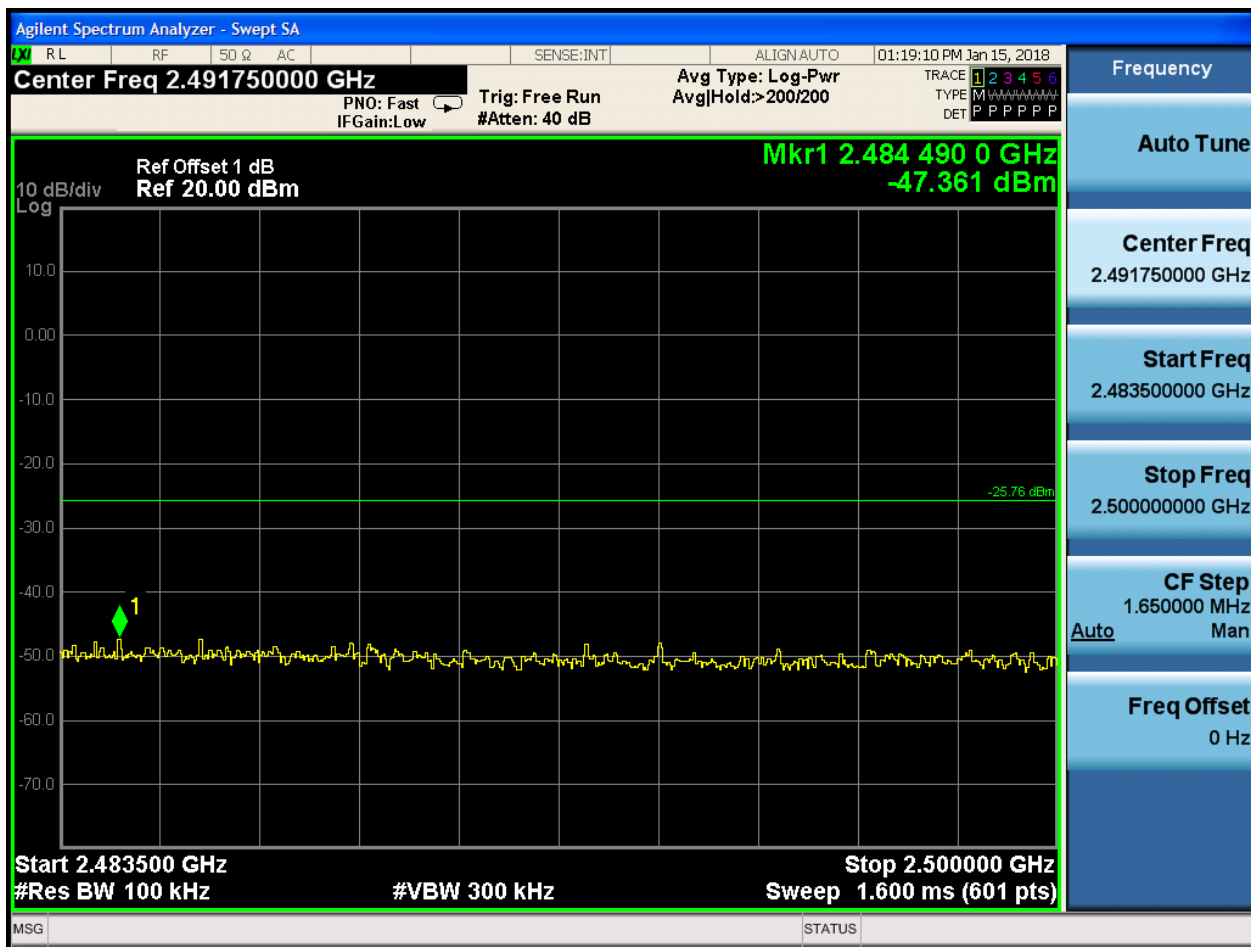
Puw:

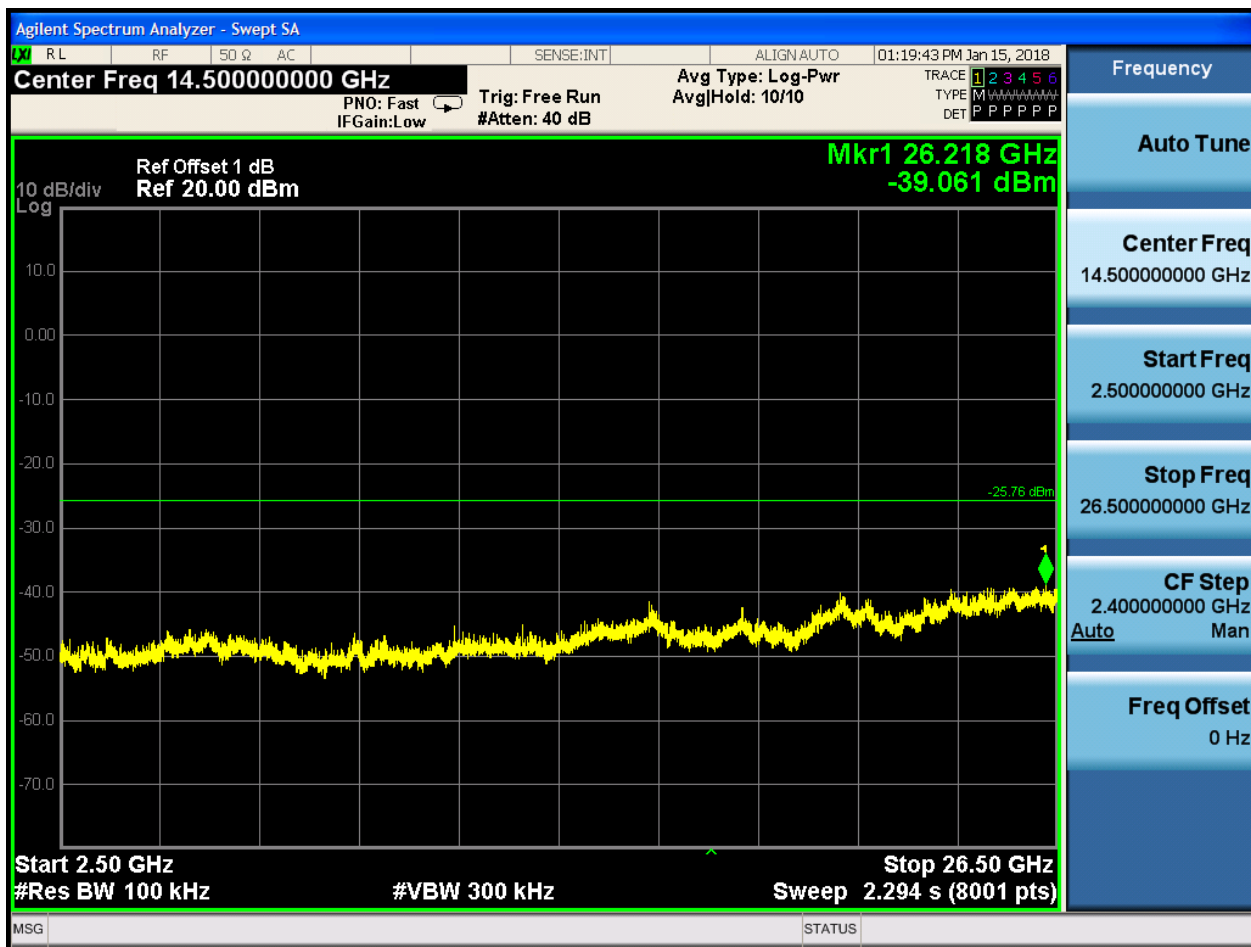








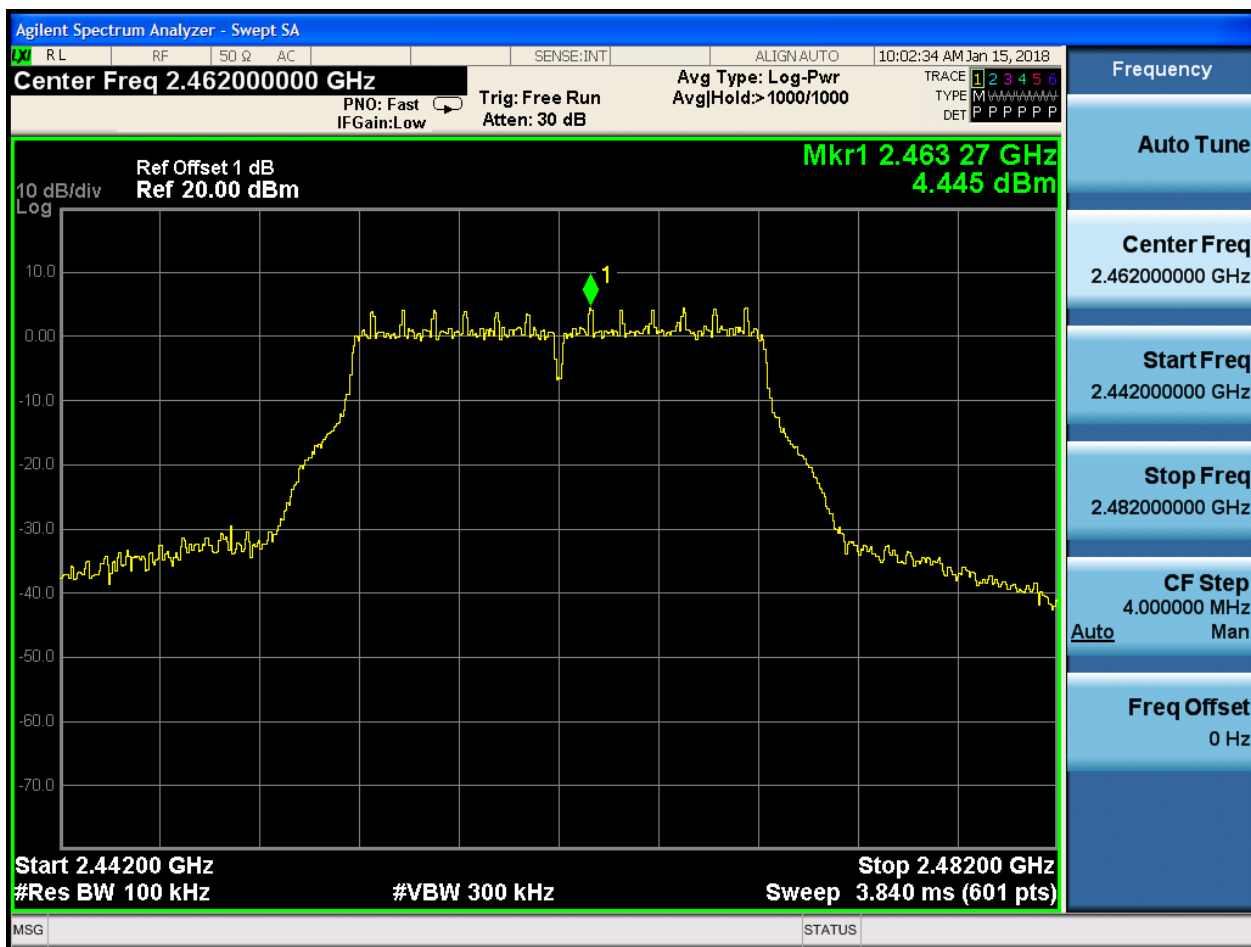






2.11 11G_H@Ant 1

Pref:





Puw:

