



Appendix for Test report

Appendix A: DTS (6 dB) Bandwidth

In this document, the "DTS6dBBW" refers to the measured "DTS (6 dB) Bandwidth" value. In this Appendix, the "fc(DTS6dBBW)" refers to the centre of the measured "DTS6dBBW". The introduction of the "fc(DTS6dBBW)" is due to that other measurements use it as the spectrum analyzer setting.

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.

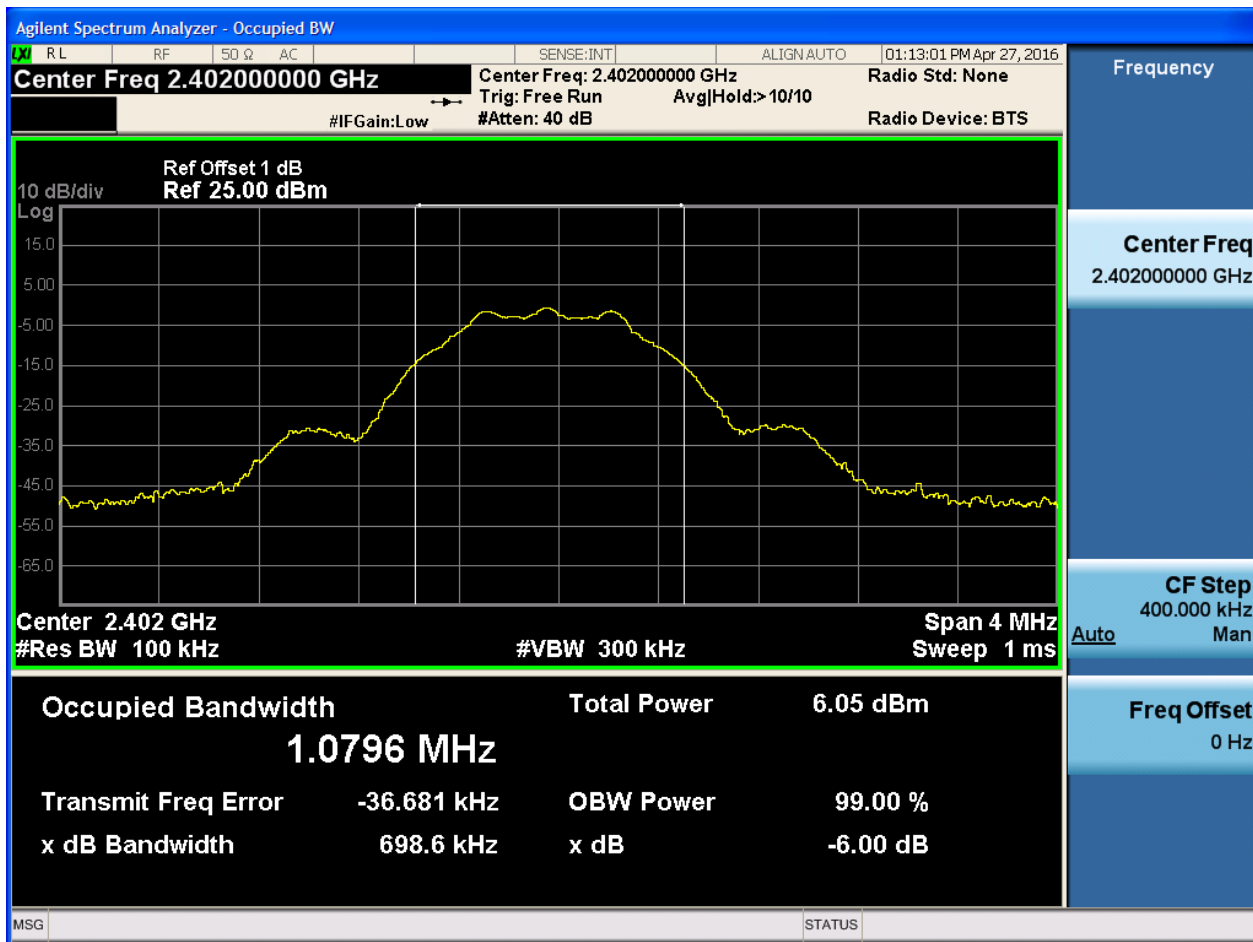
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	DTS6dBBW[MHz]	Verdict
TM1	L	2402	0.70	pass
	M	2440	0.70	pass
	H	2480	0.69	pass



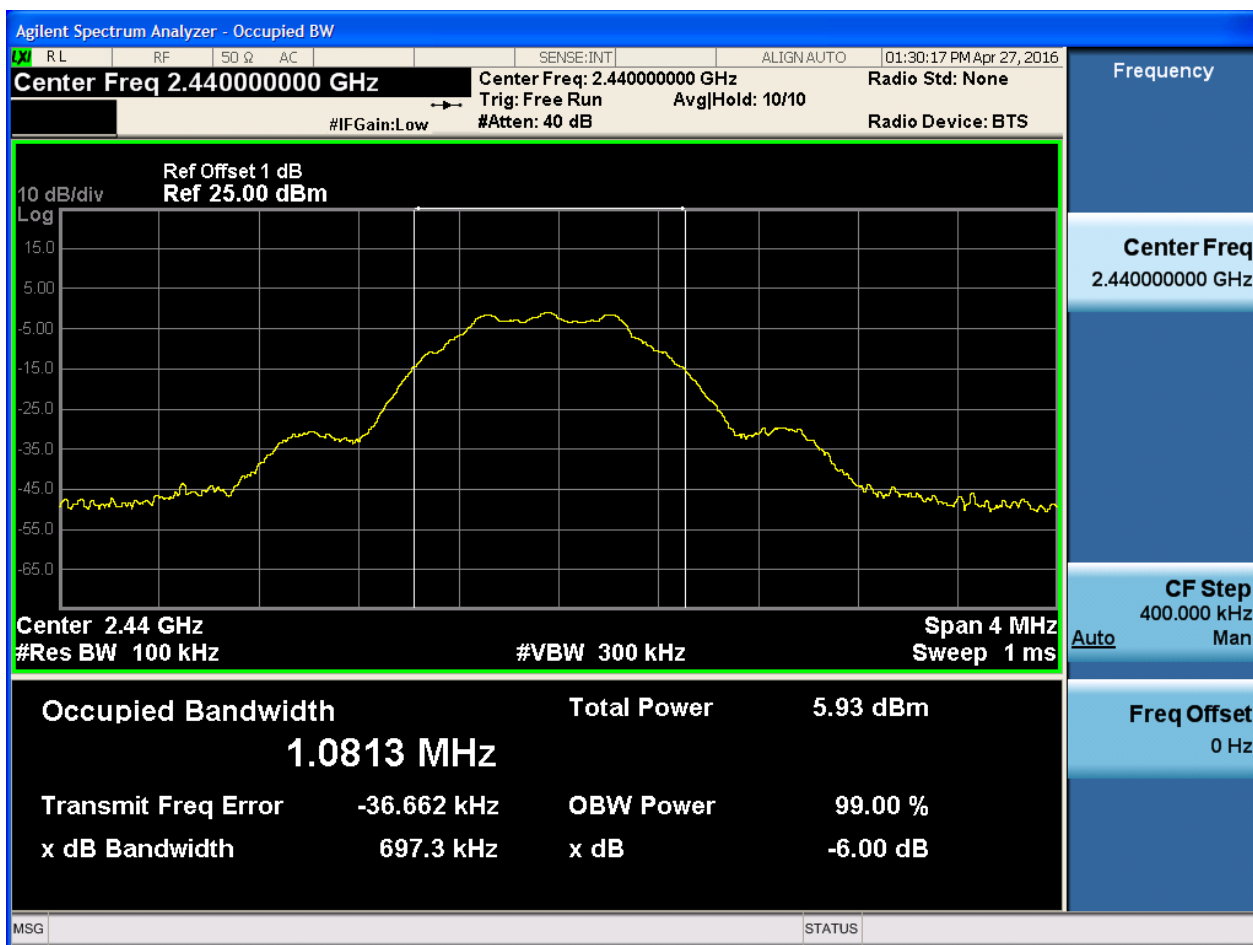
Part II - Test Plots

2.1 TM1_L@Ant 1



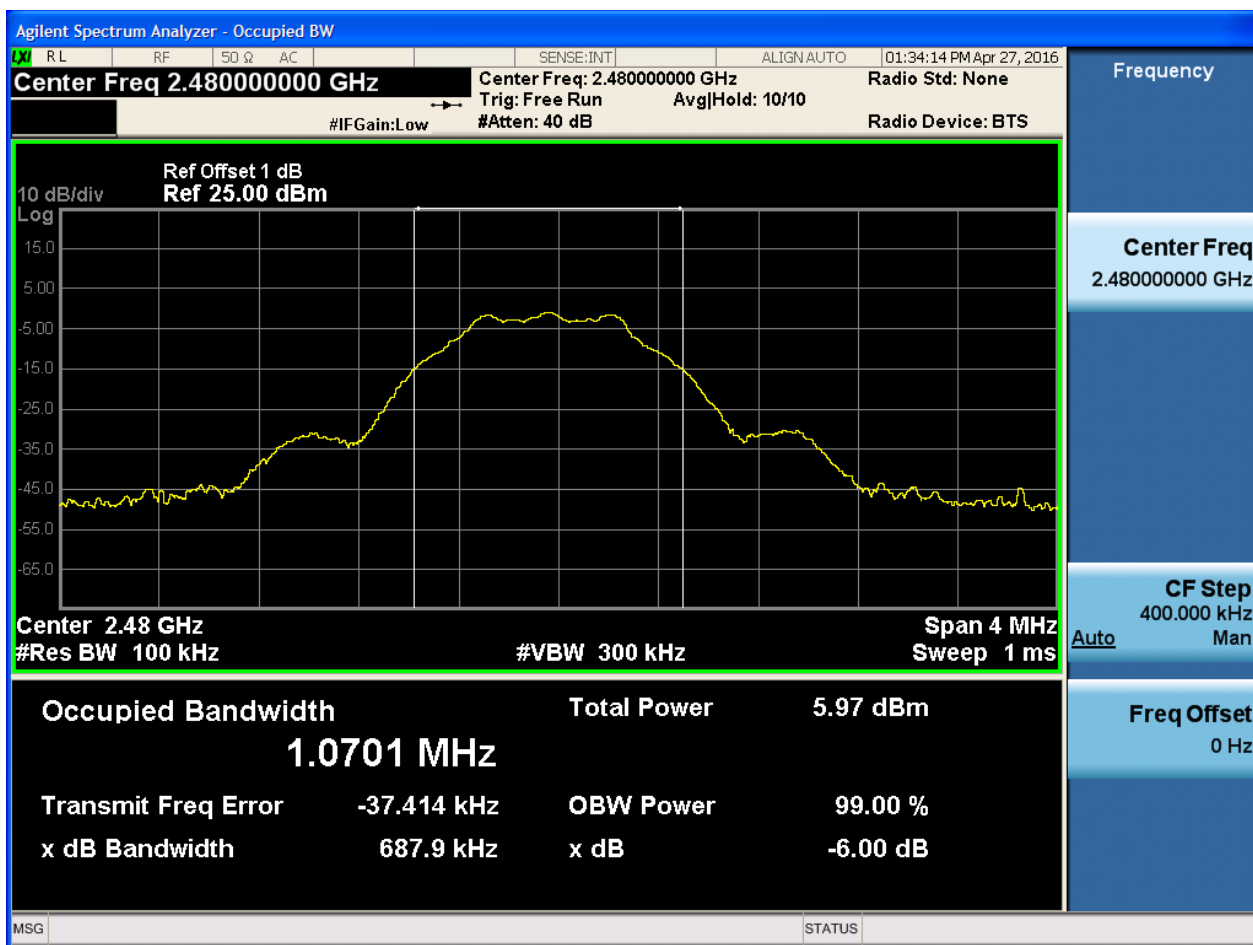


2.3 TM1_M@Ant 1





2.5 TM1_H@Ant 1



Appendix B: Occupied Bandwidth

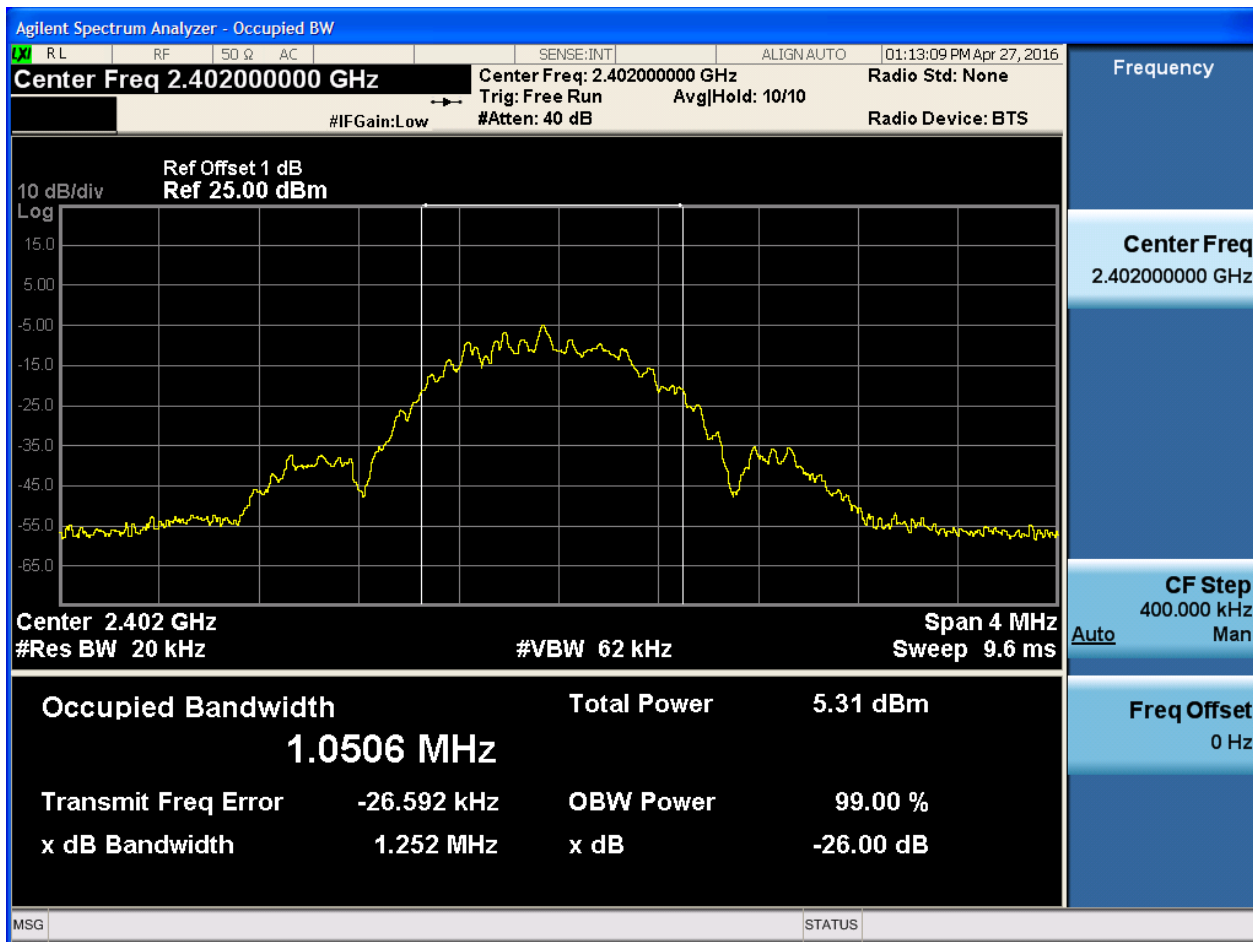
For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Occupied Bandwidth [MHz]	Verdict
TM1	L	2402	1.05	pass
TM1	M	2440	1.05	pass
TM1	H	2480	1.04	pass

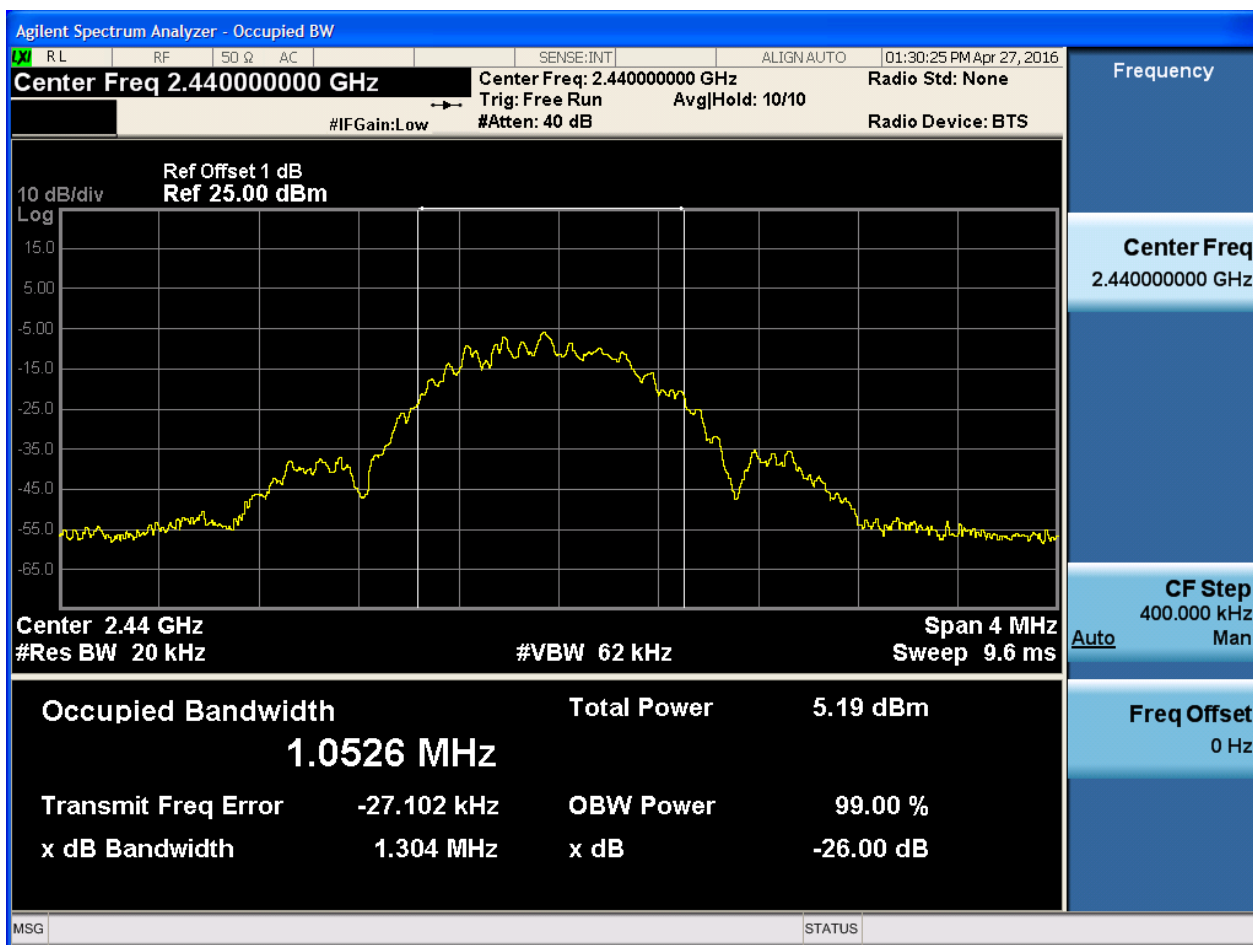
Part II - Test Plots

2.1 TM1_L@Ant 1



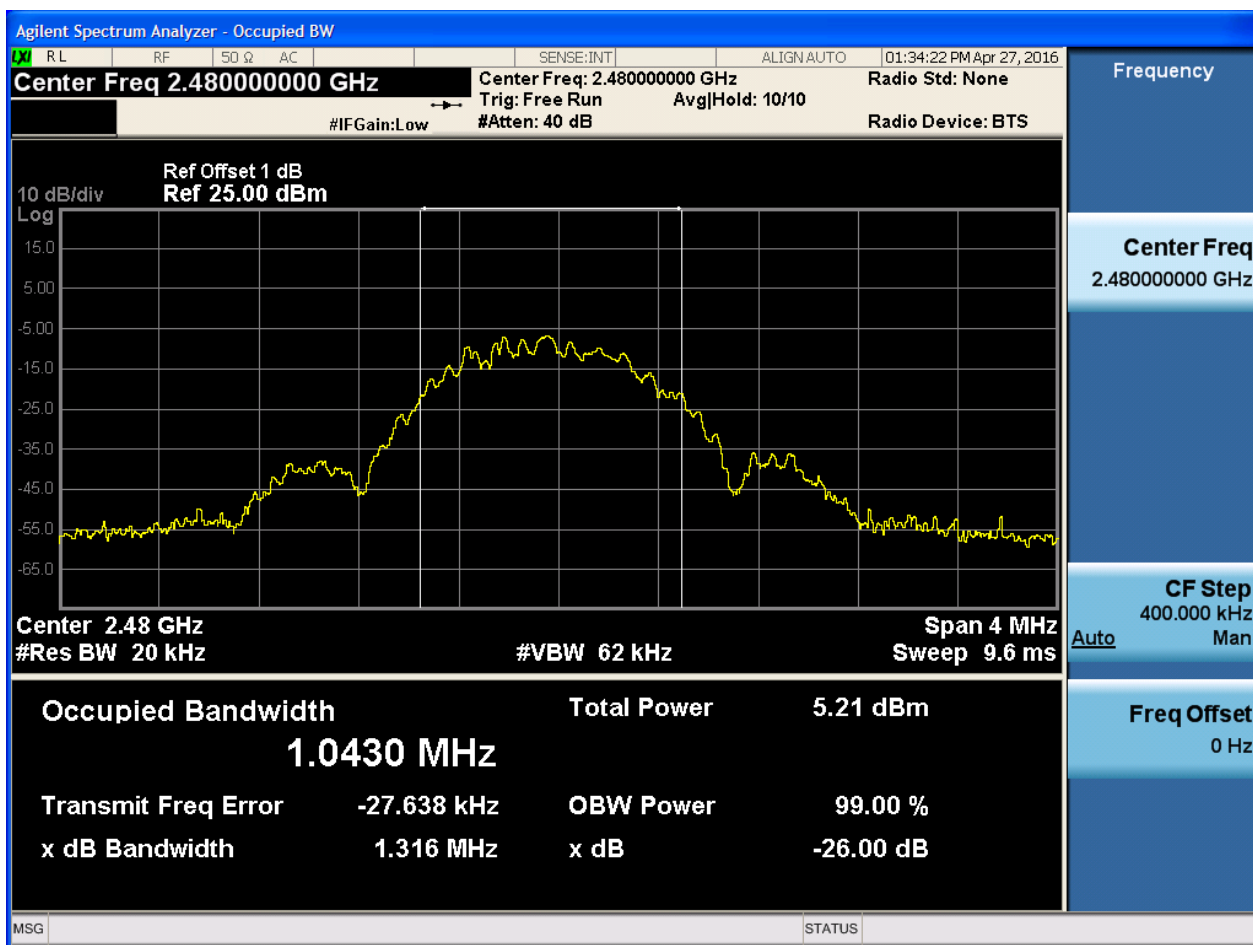


2.1 TM1_M@Ant 1





2.1 TM1_H@Ant 1



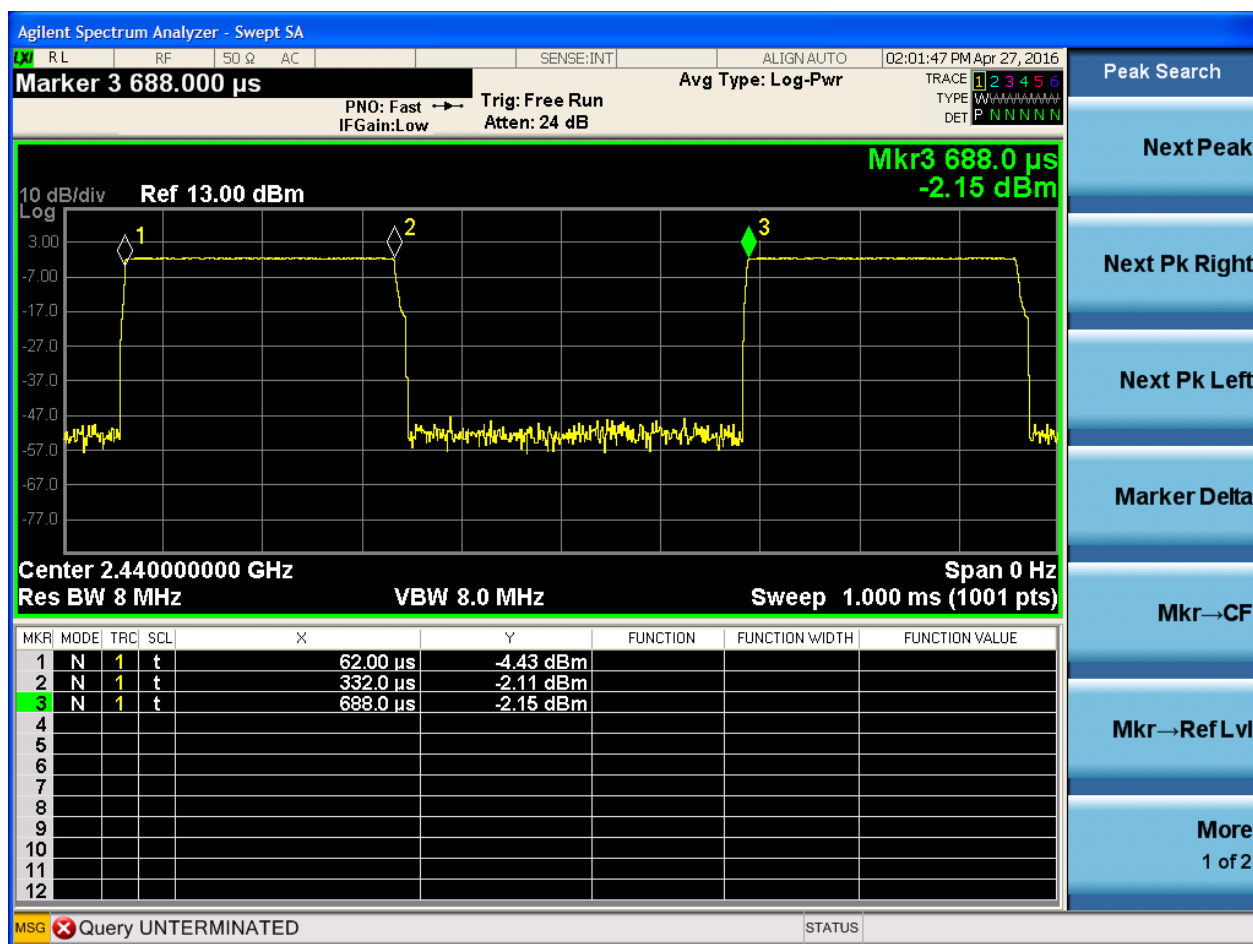
Appendix C: Duty Cycle

Part I - Test Results

Test Mode	TX Freq. [MHz]	Duty cycle [%]
TM1	CH0,CH19,CH39	43.1

Part II - Test Plots

2.1 TM1



Appendix D: Maximum Conducted Average Output Power

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Power[dBm]	Verdict
TM1	L	2402	-0.78	pass
TM1	M	2440	-0.99	pass
TM1	H	2480	-0.64	pass



Part II - Test Plots

2.1 TM1_L@Ant 1





2.3 TM1_M@Ant 1





2.5 TM1_H@Ant 1



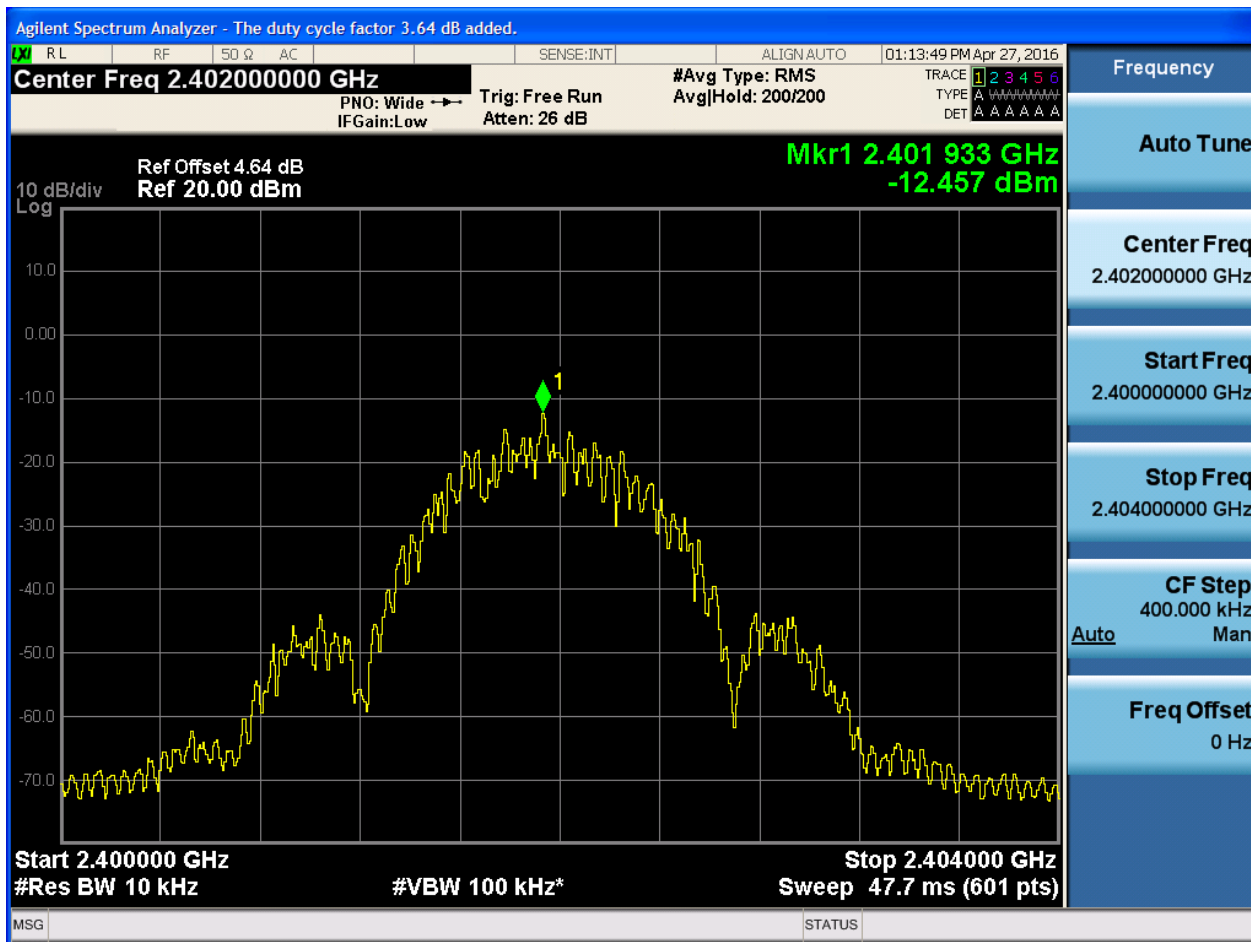
Appendix E: Maximum Power Spectral Density Level

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	PD[MHz]	Verdict
TM1	L	2402	-12.46	pass
TM1	M	2440	-13.38	pass
TM1	H	2480	-13.67	pass

Part II - Test Plots

2.1 TM1_L@Ant 1



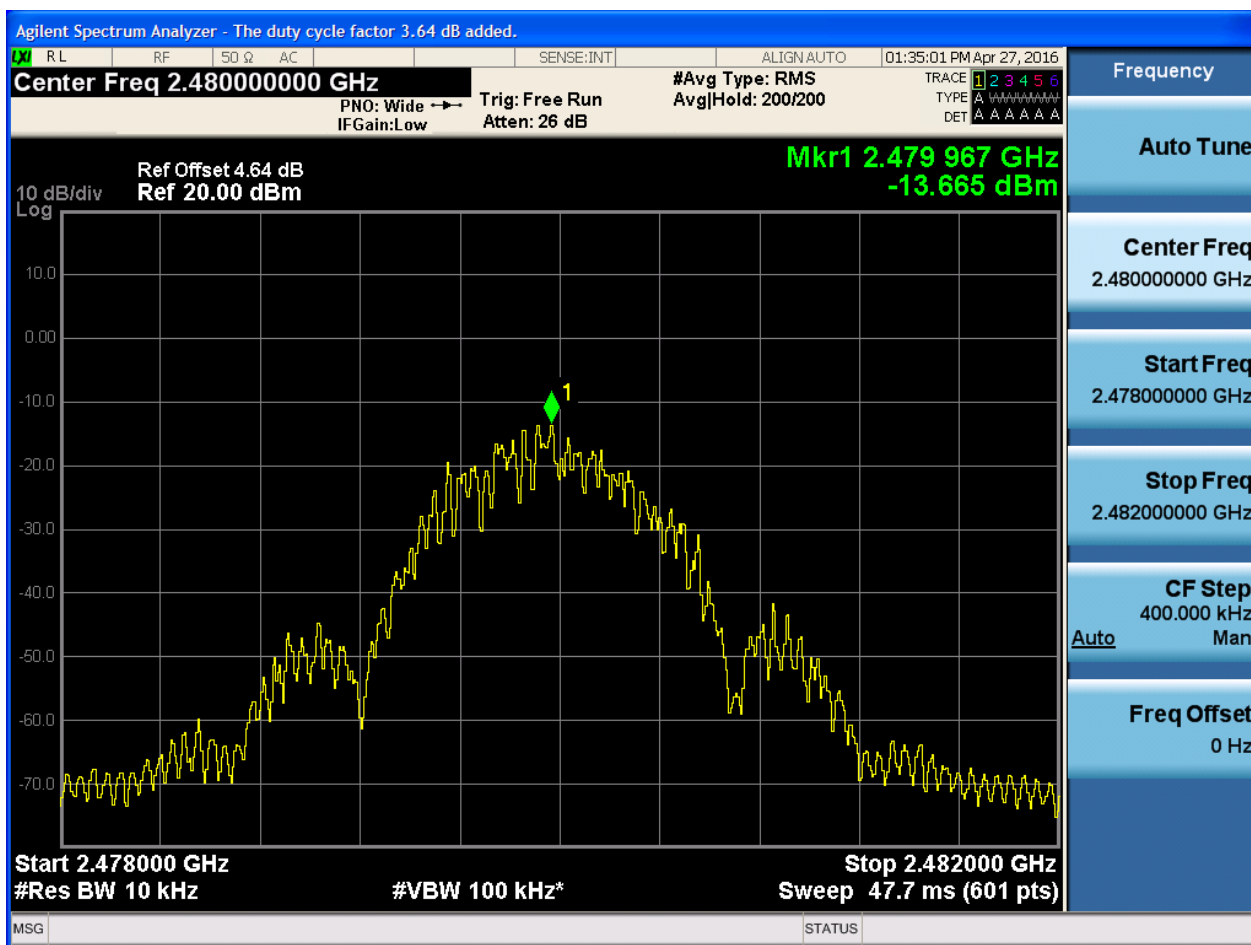


2.3 TM1_M@Ant 1





2.5 TM1_H@Ant 1



Appendix F: Band Edges Compliance

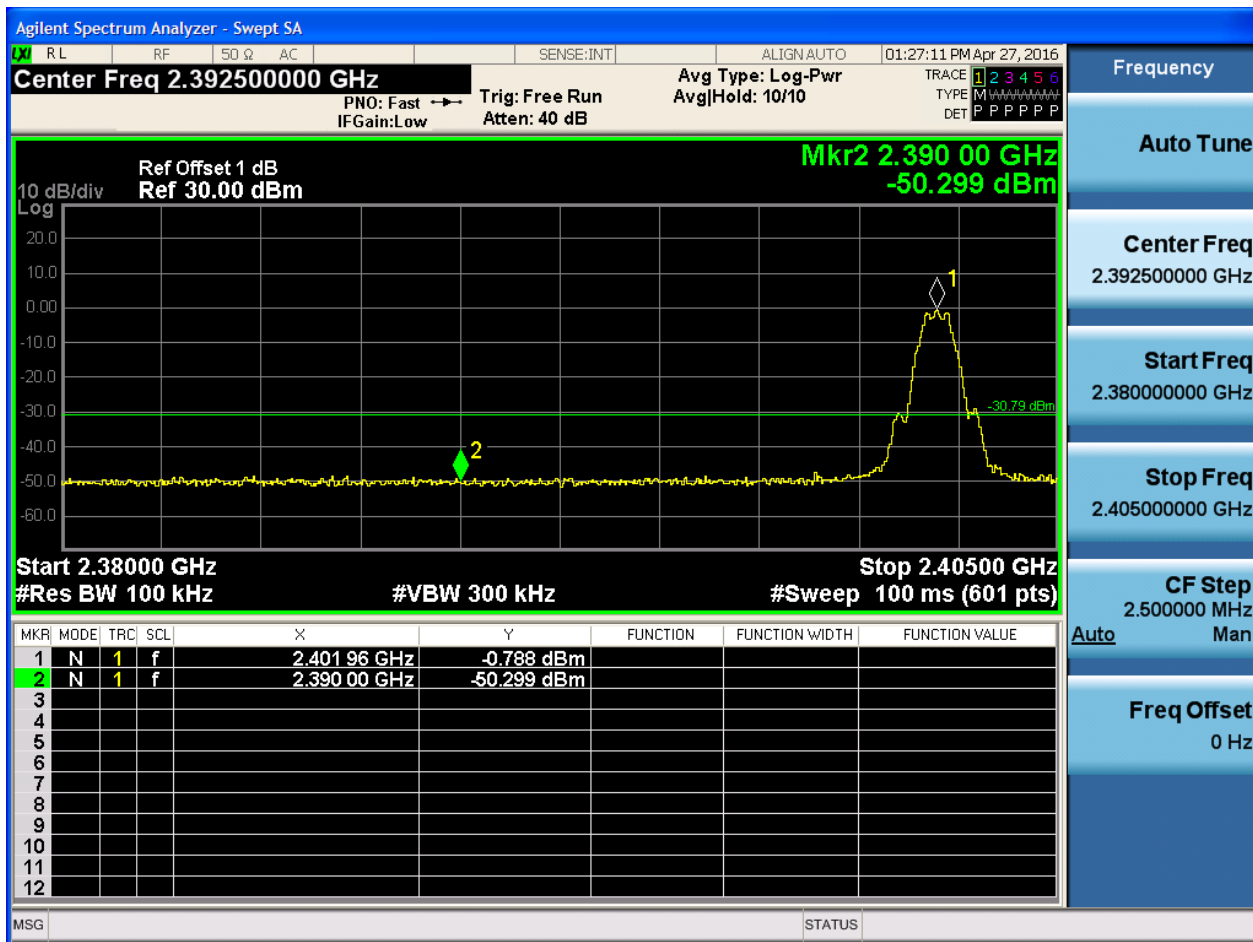
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
TM1	L	2402	-0.79	-50.30	pass
TM1	H	2480	-0.90	-49.71	pass



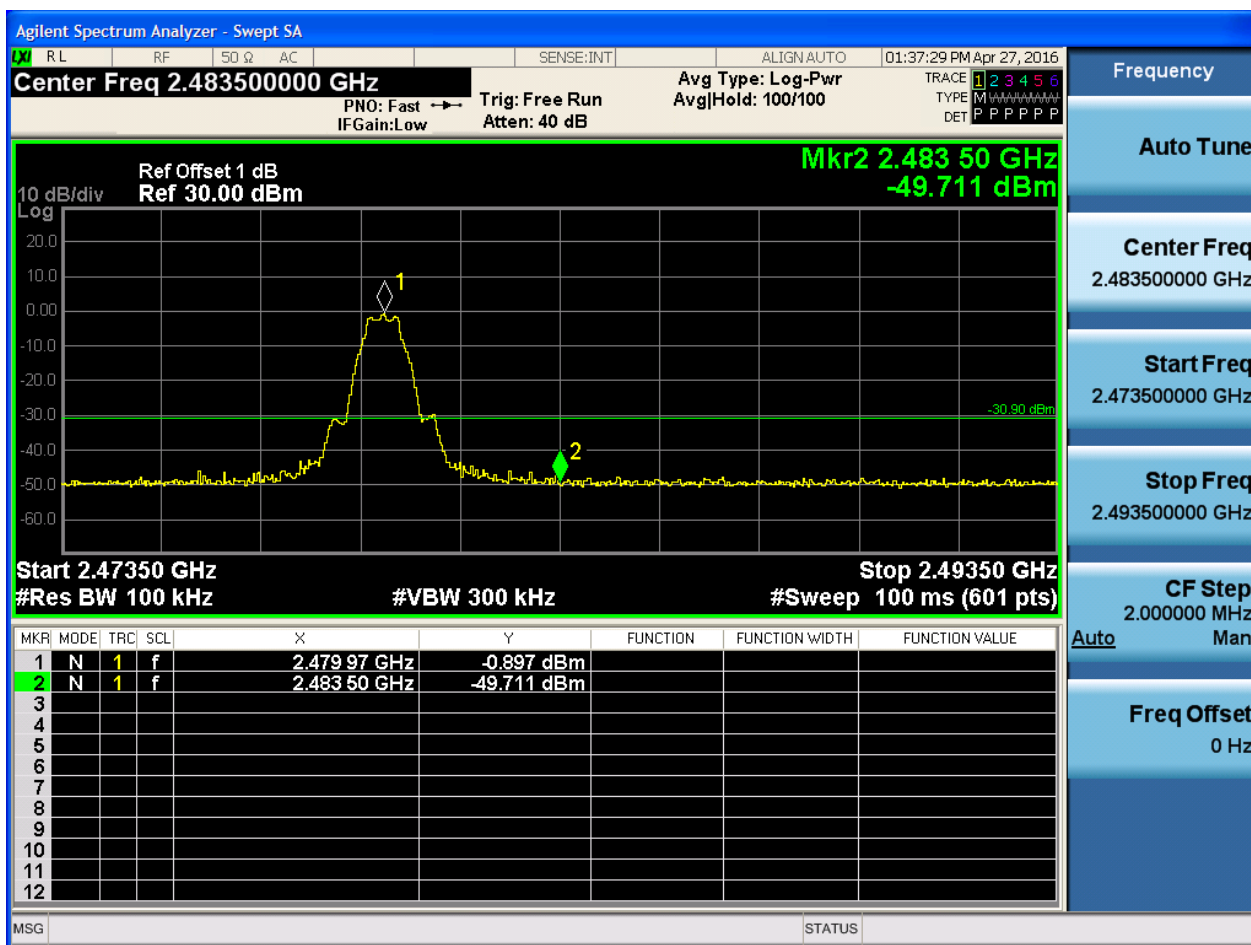
Part II - Test Plots

2.1 TM1_L@Ant 1





2.3 TM1_H@Ant 1



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

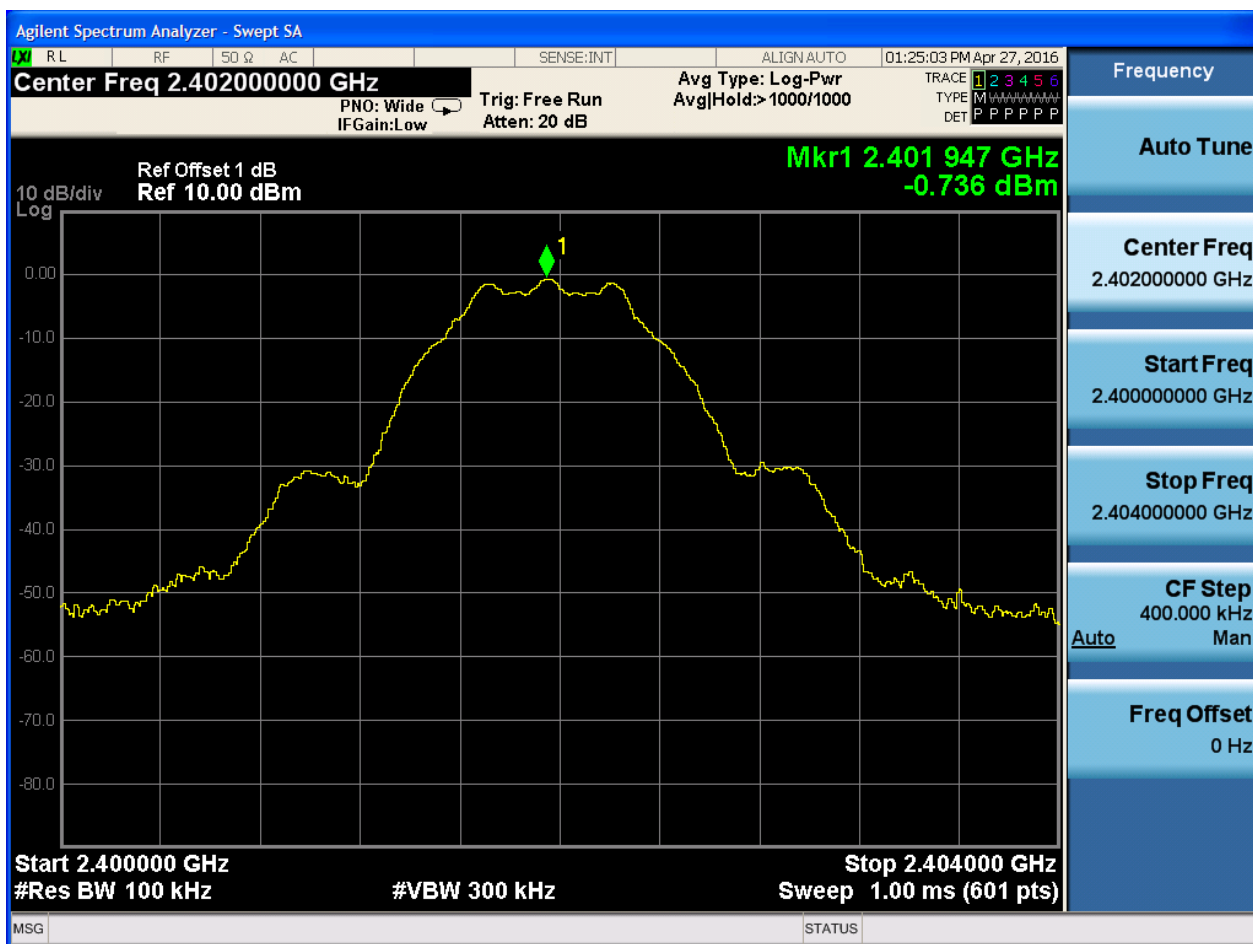
Test Mode	Test Channel	Frequency[MHz]	Pref[dBm]	Puw[dBm]	Verdict
TM1	L	2402	-0.74	<limit	pass
TM1	M	2440	-0.90	<limit	pass
TM1	H	2480	-0.88	<limit	pass



Part II - Test Plots

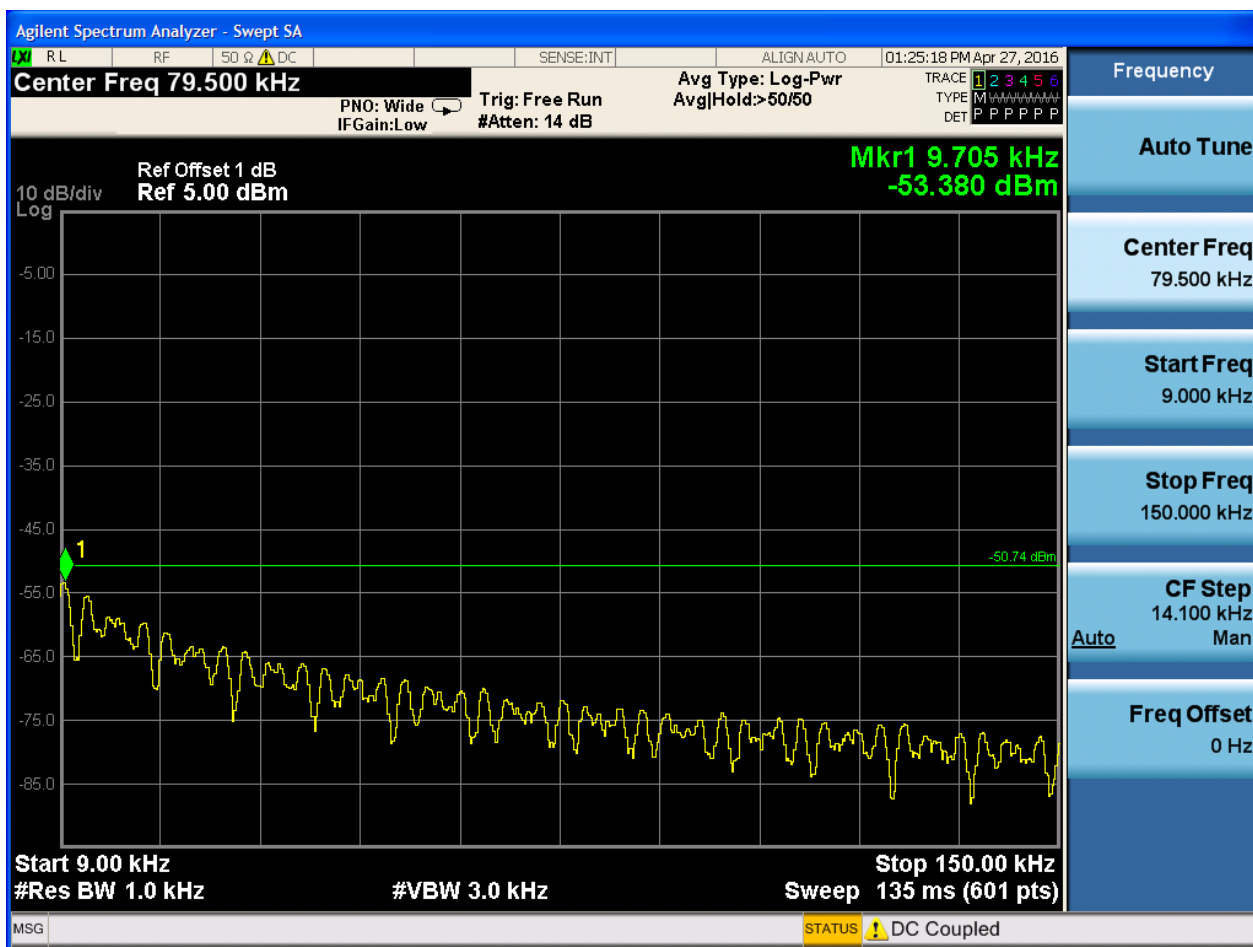
2.1 TM1_L@Ant 1

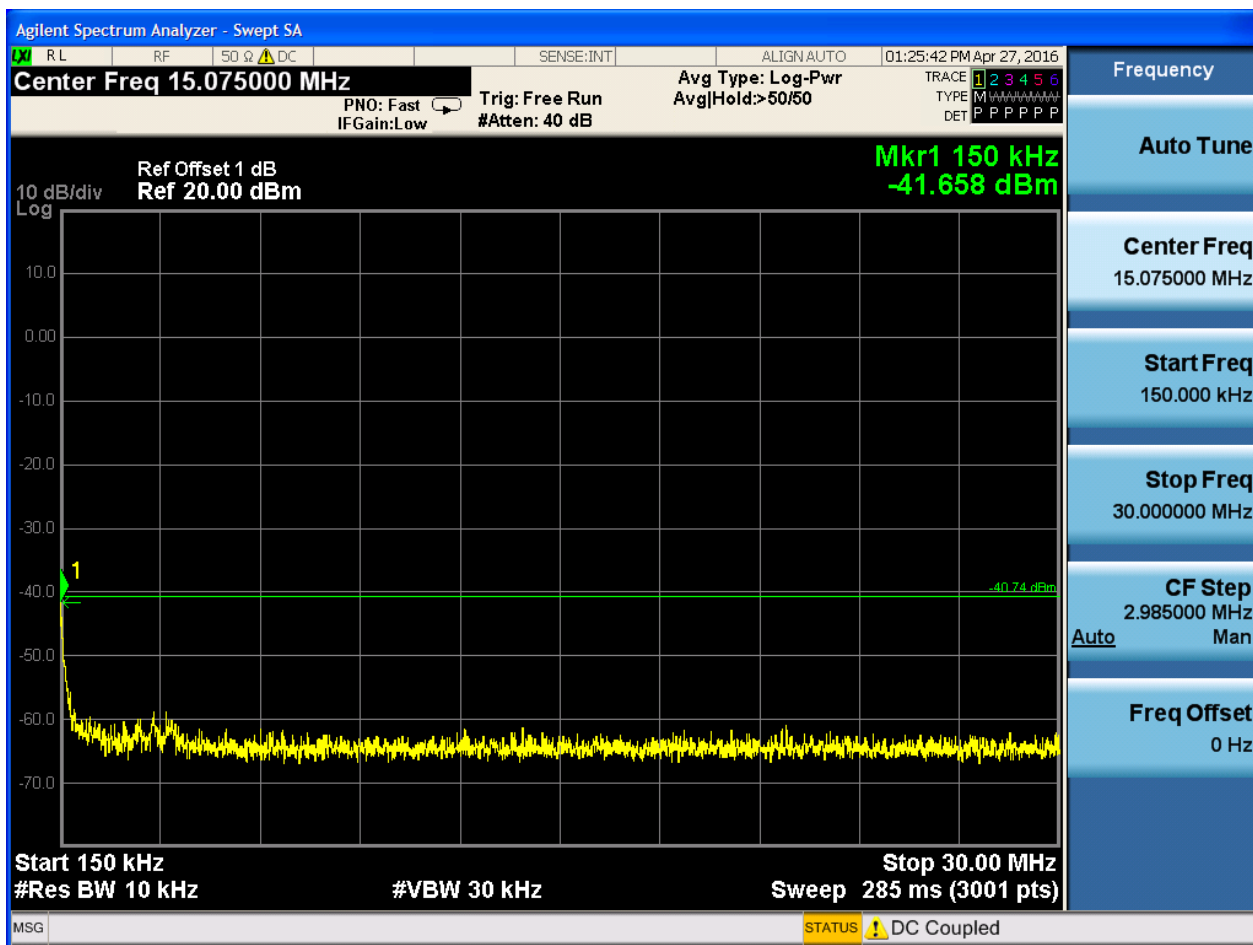
Pref:

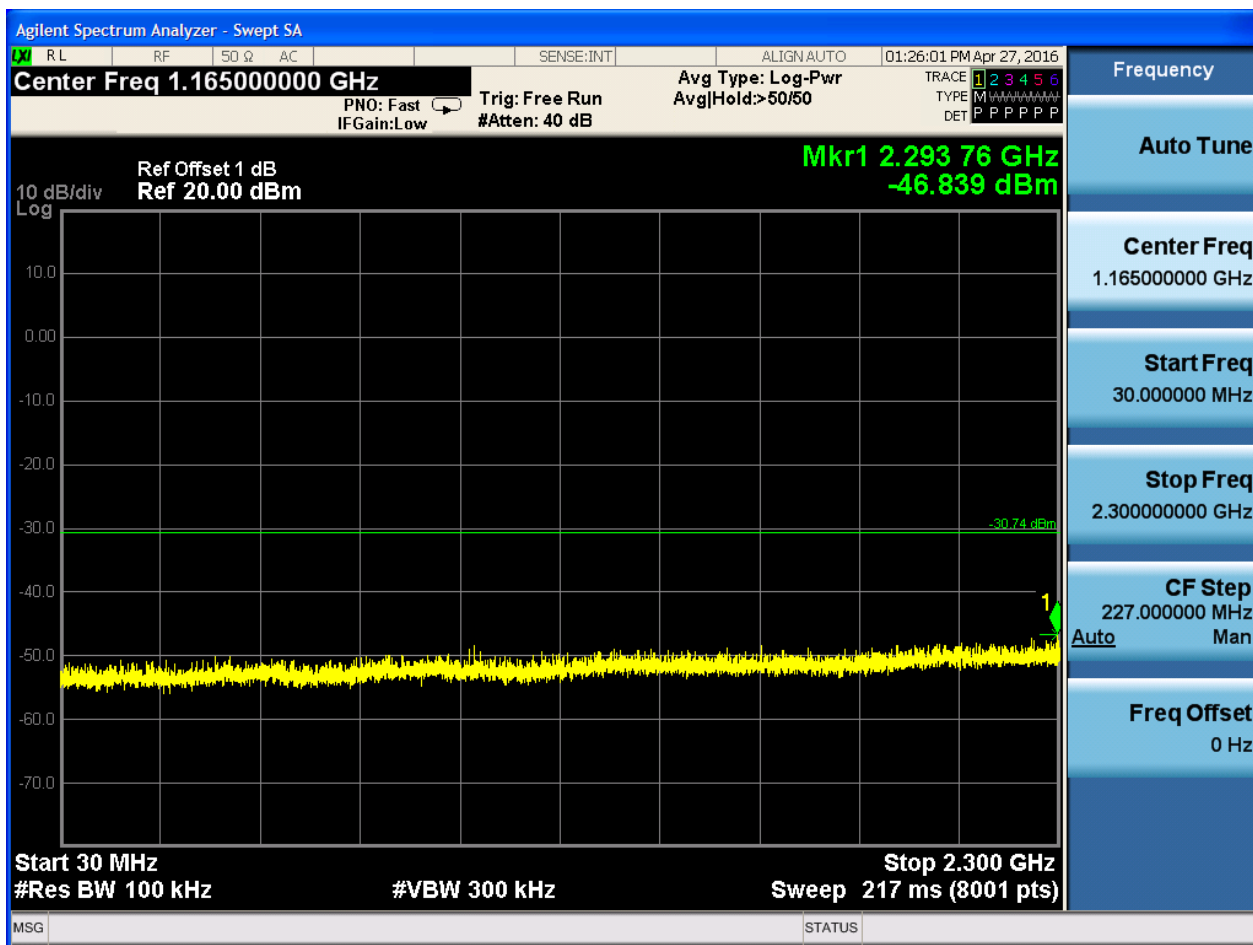


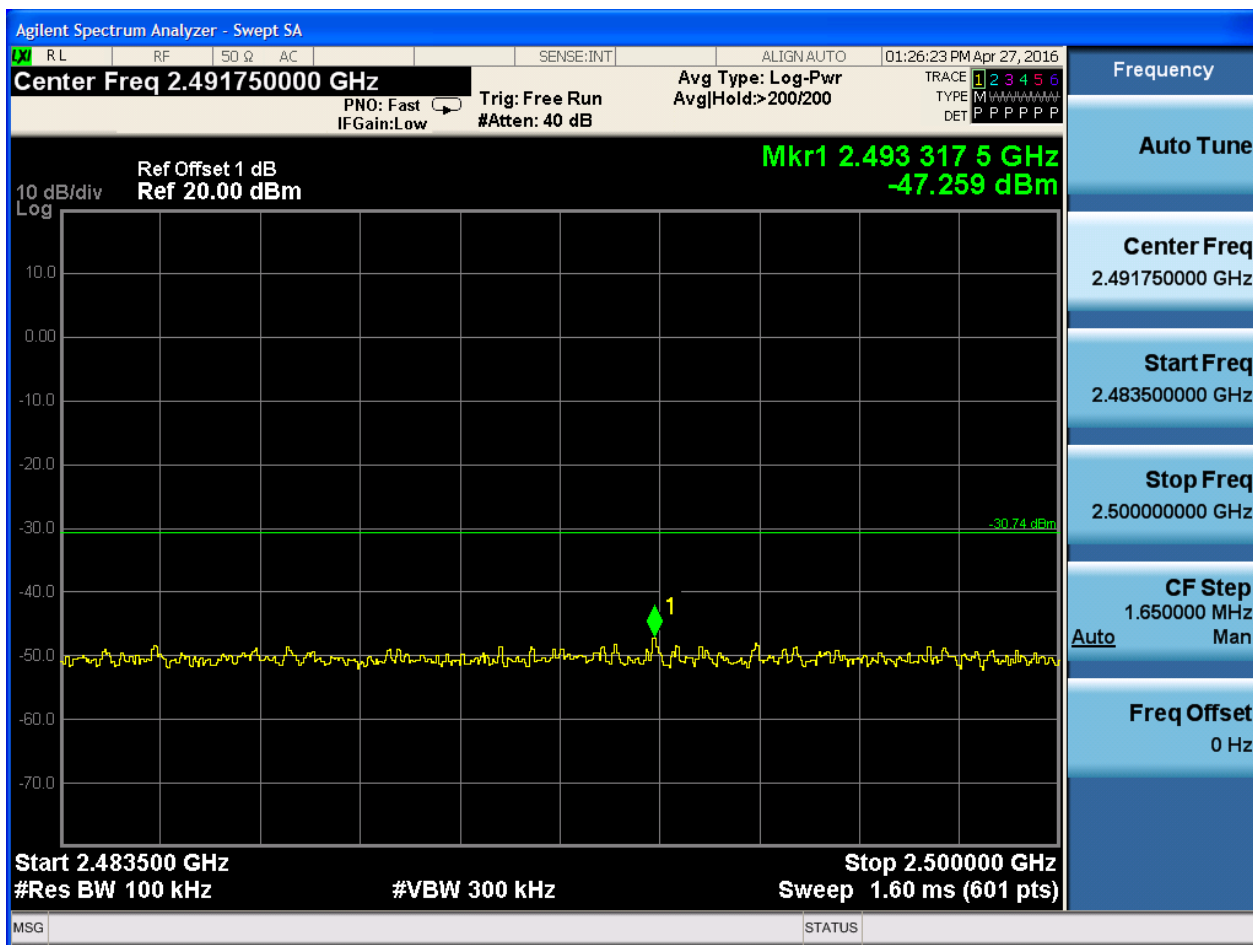


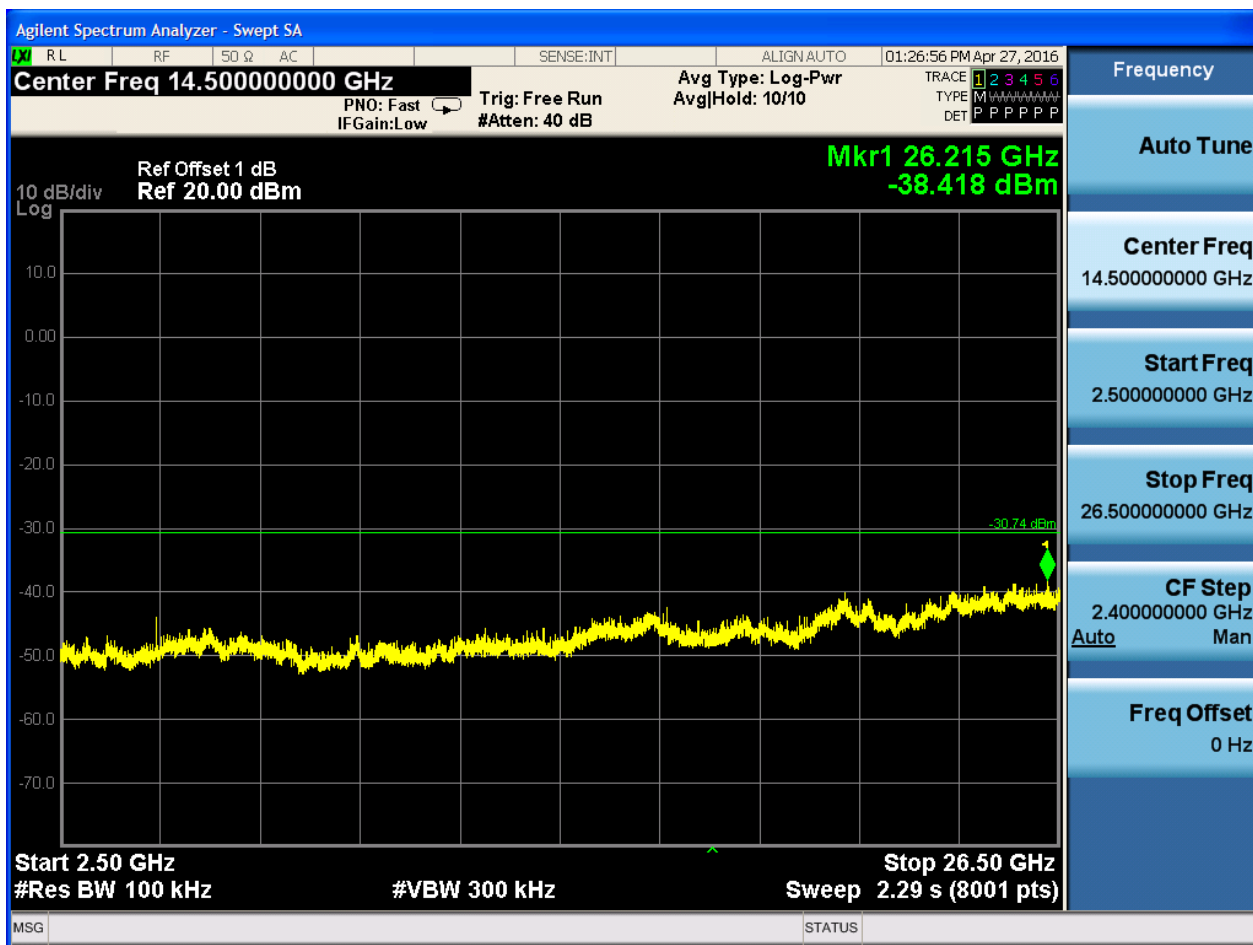
Puw:





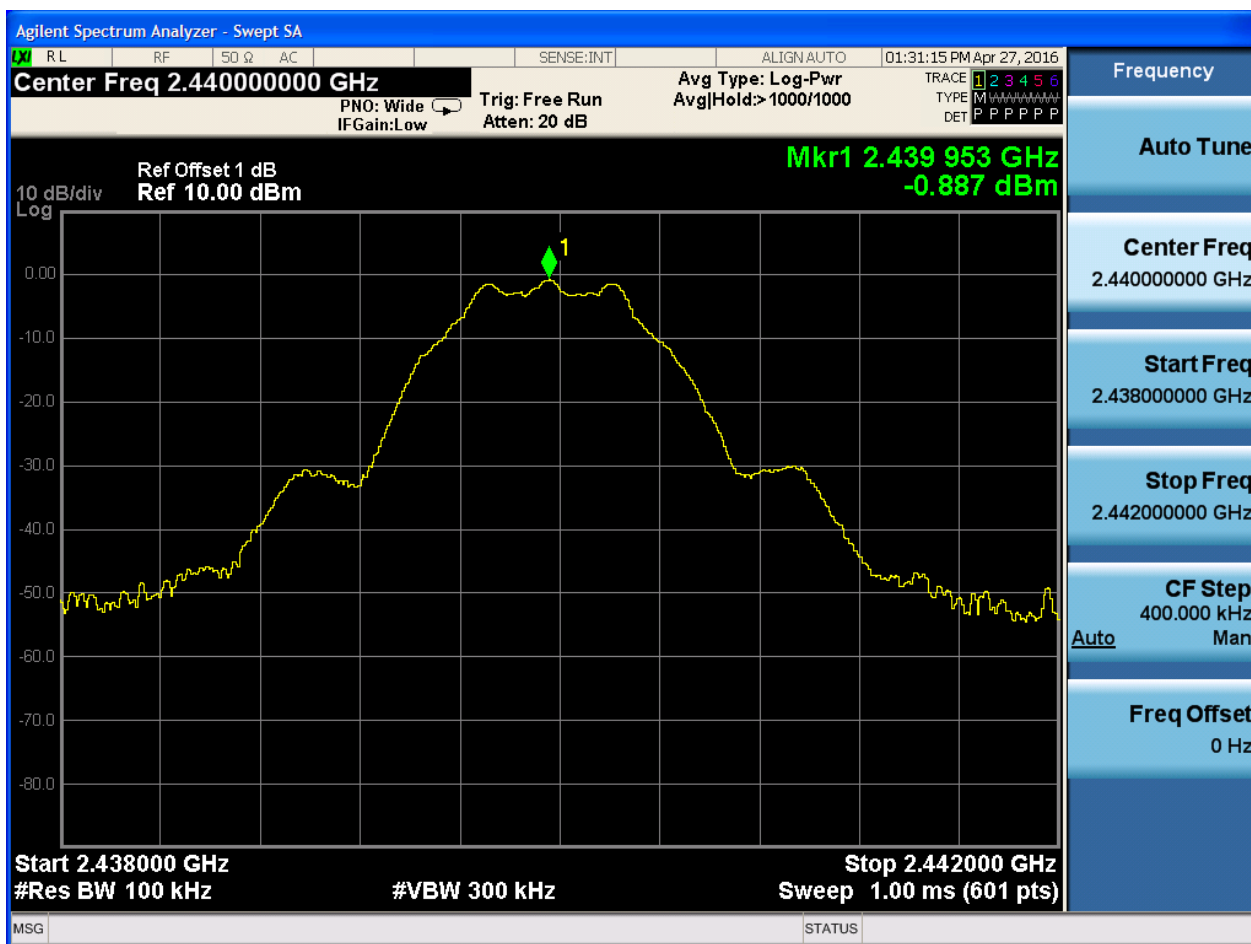






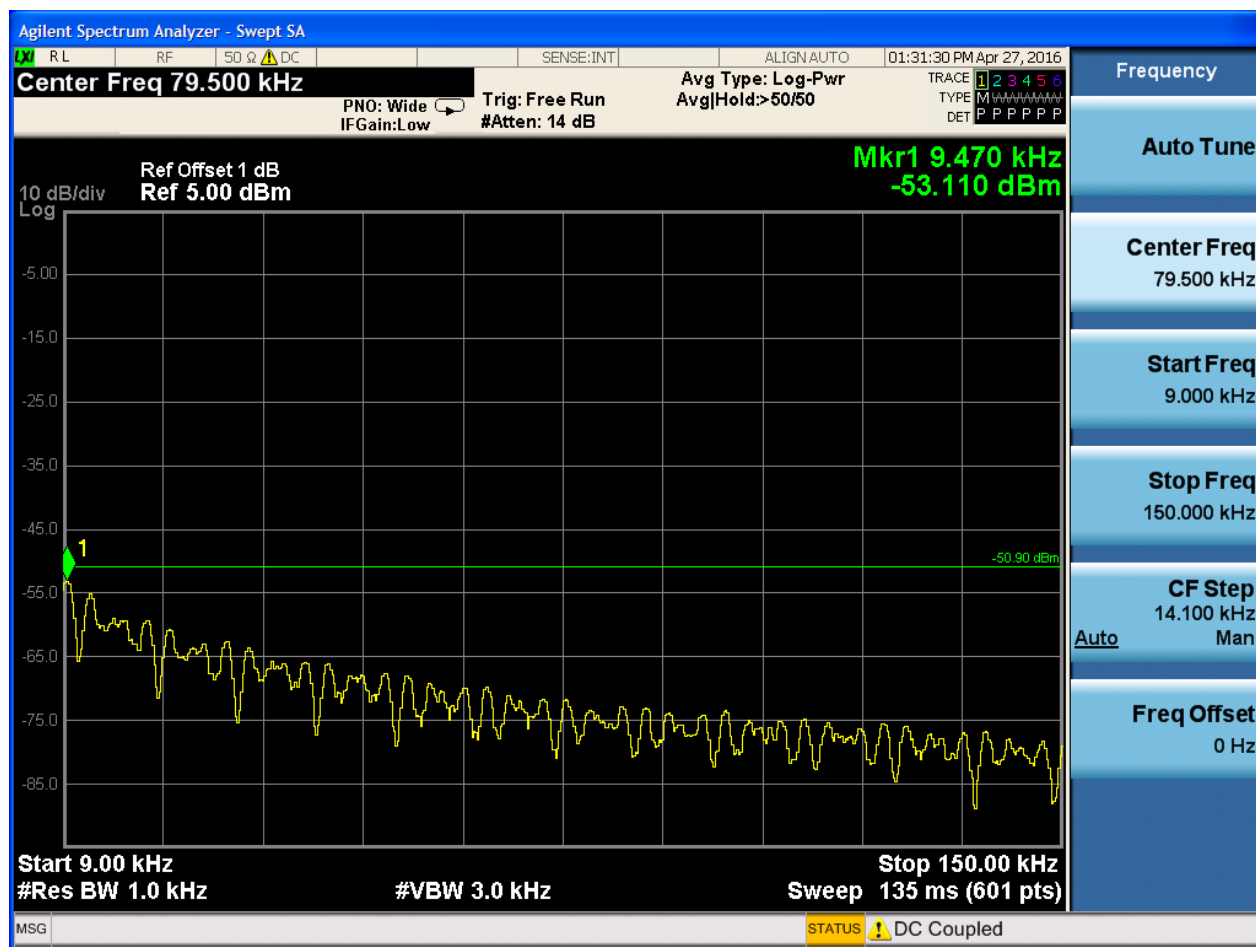
2.3 TM1_M@Ant 1

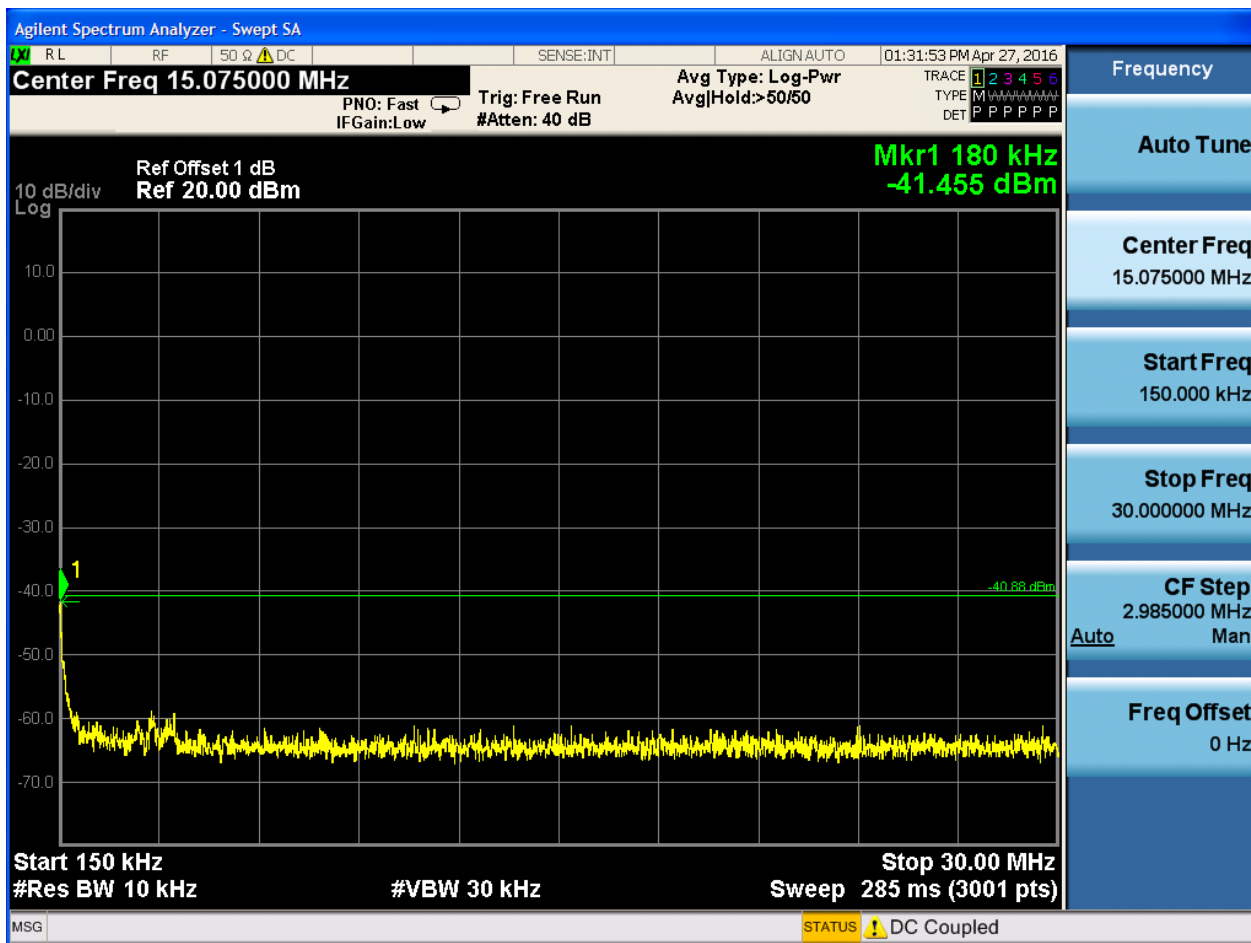
Pref:

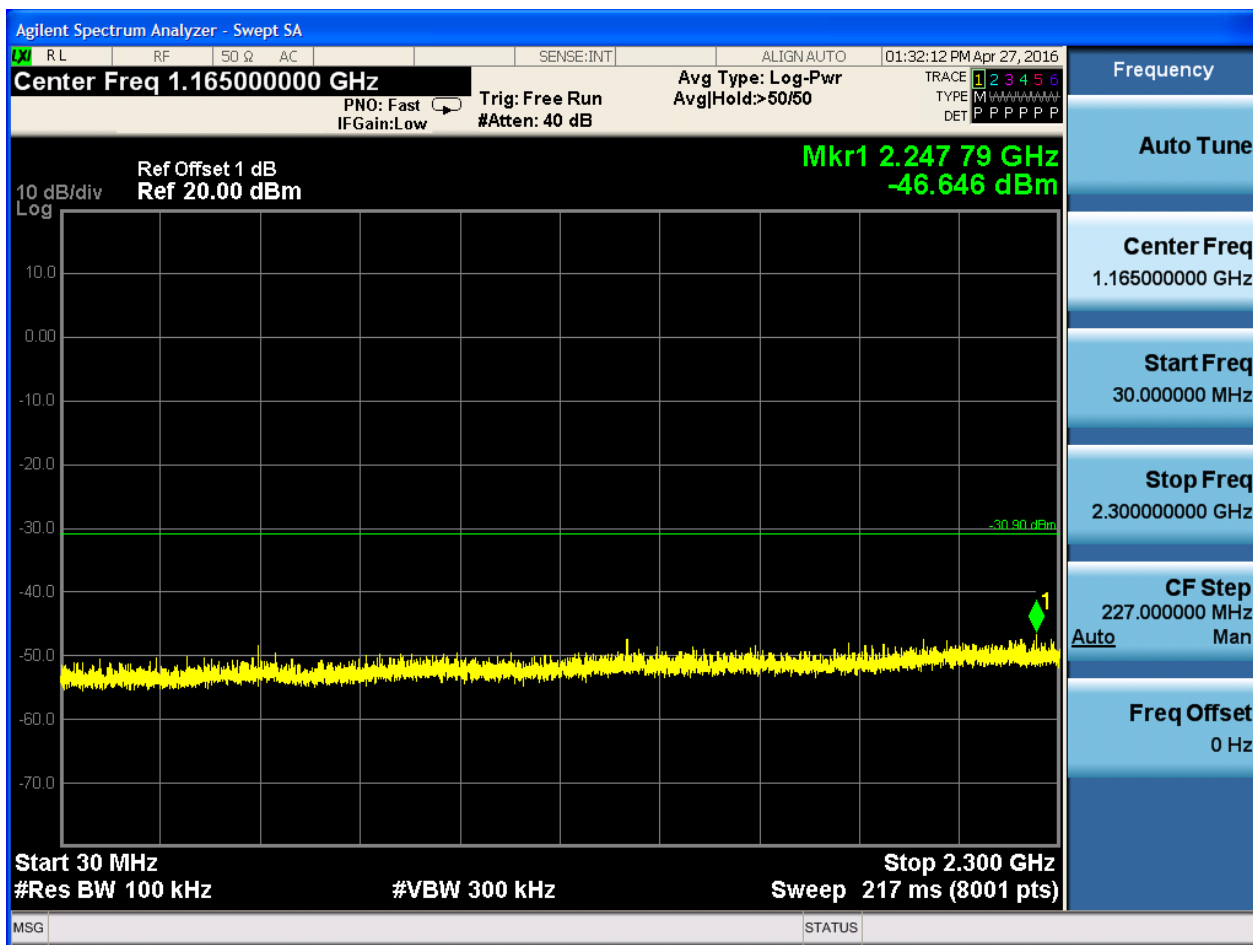


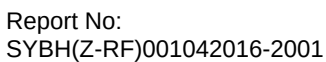


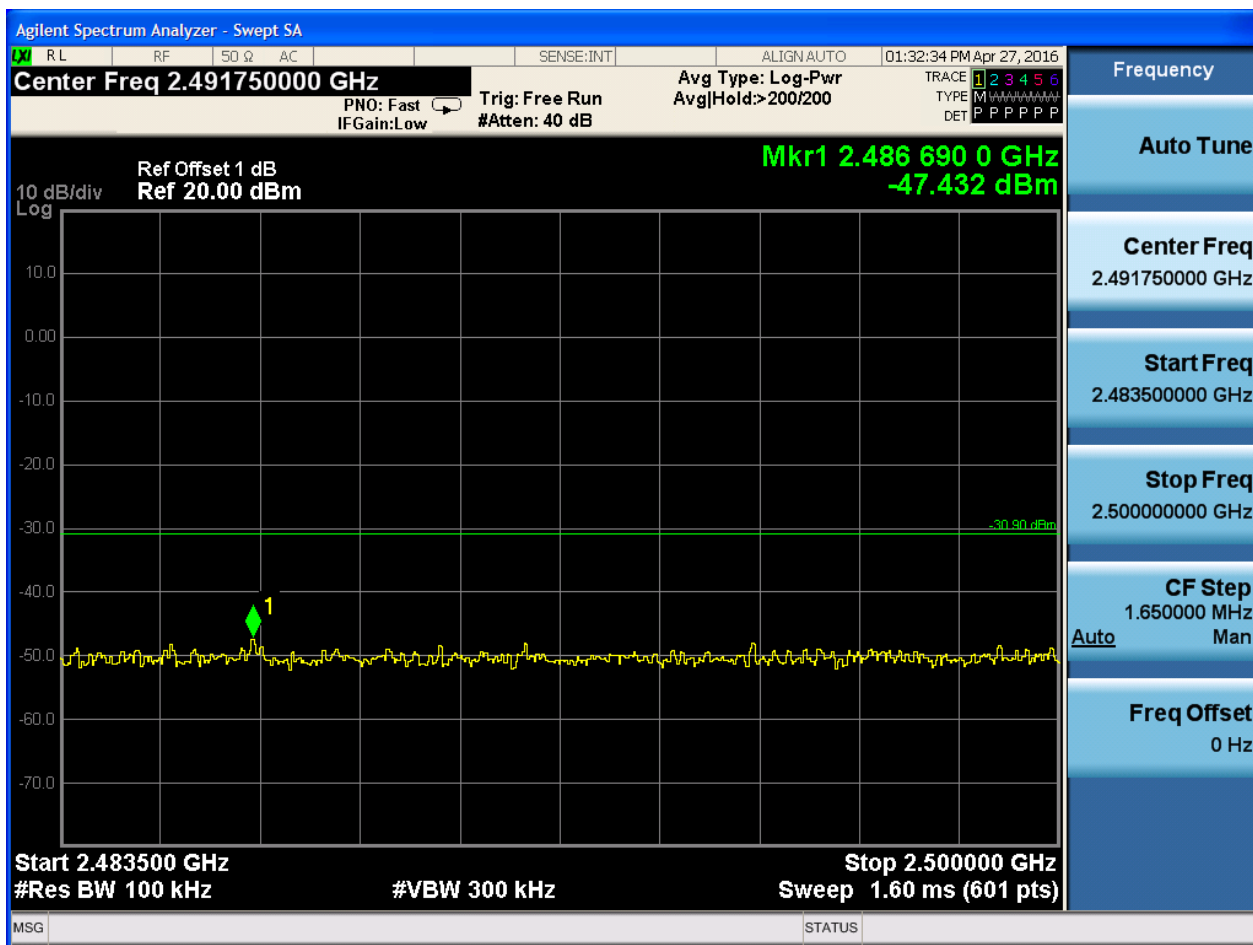
Puw:

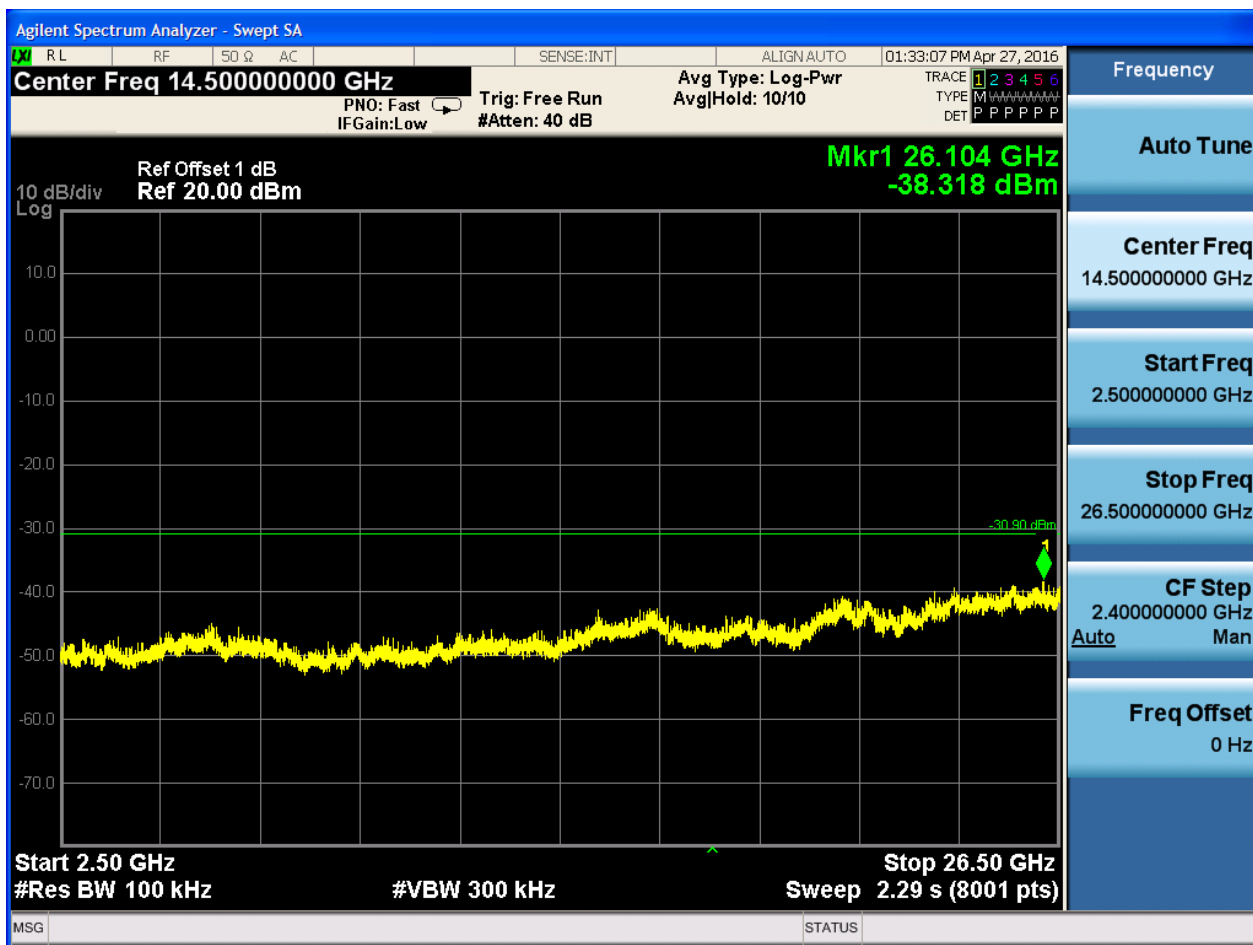






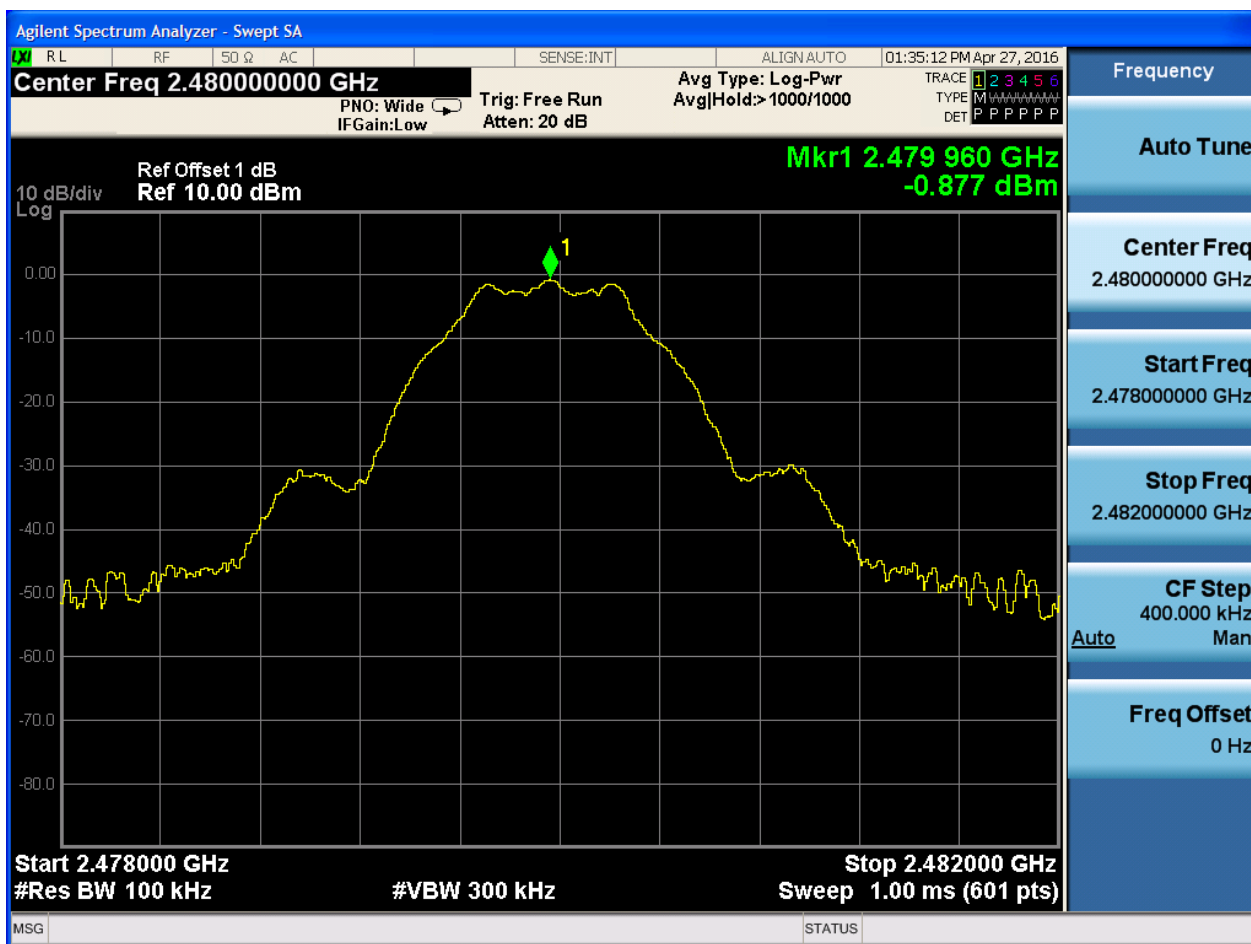






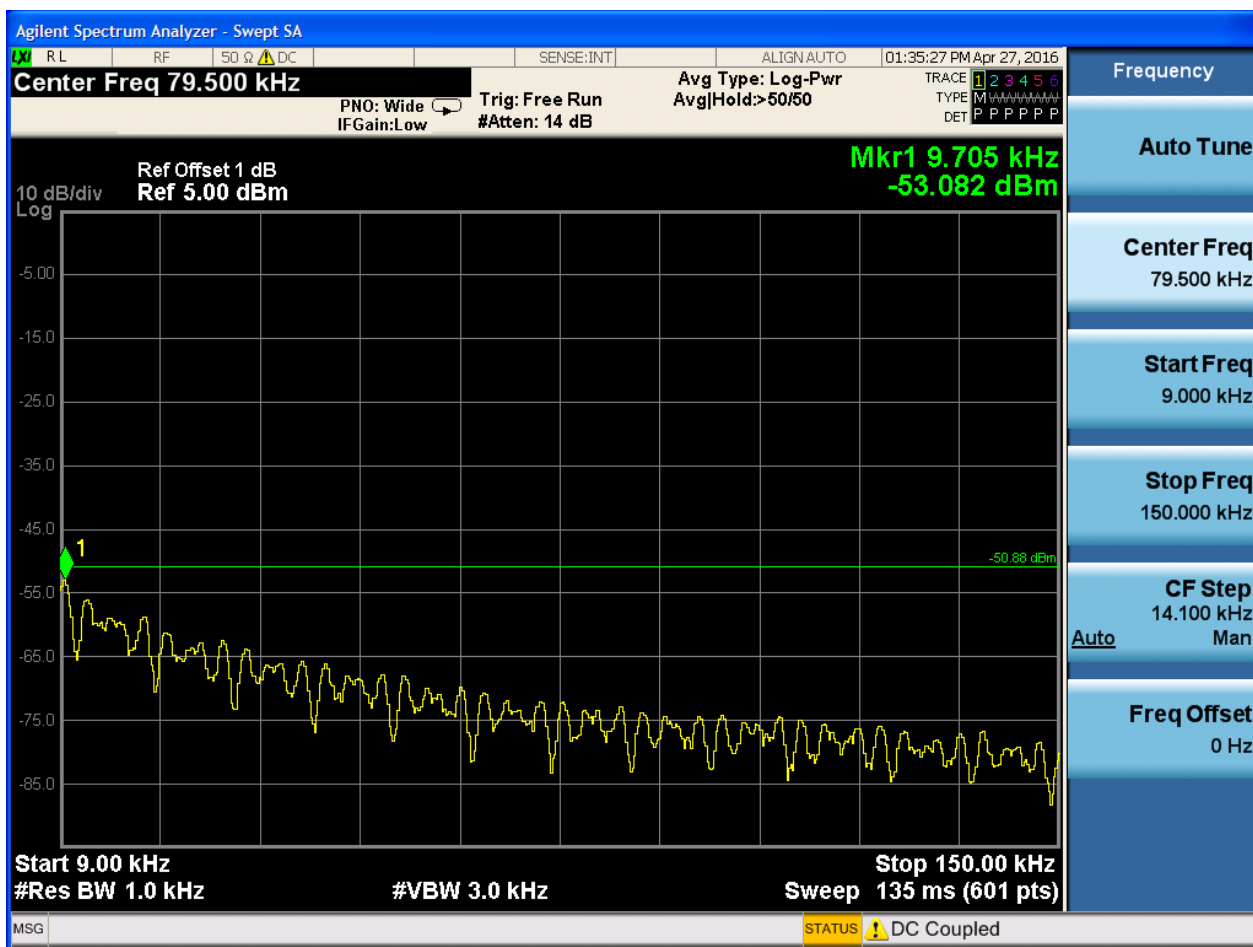
2.5 TM1_H@Ant 1

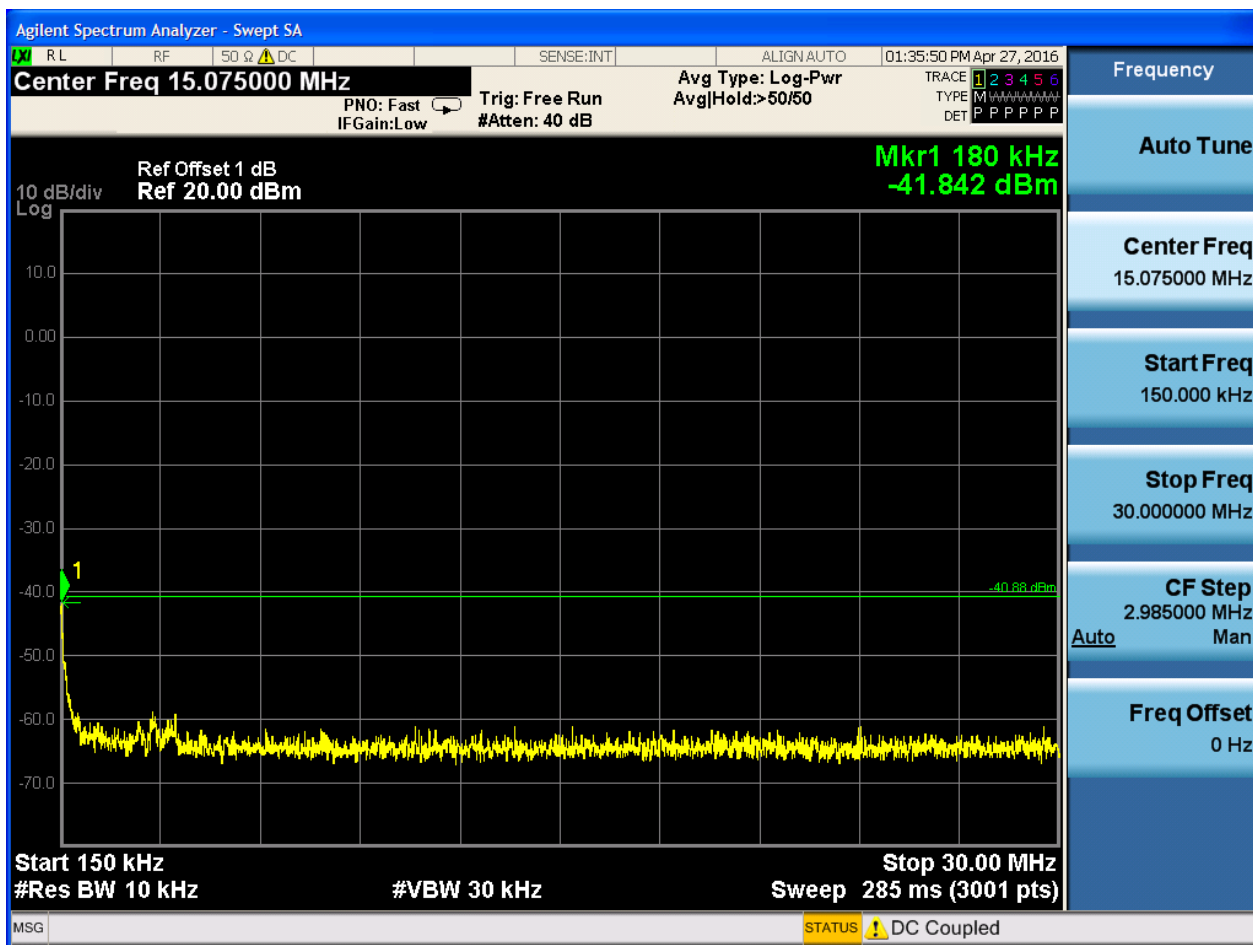
Pref:

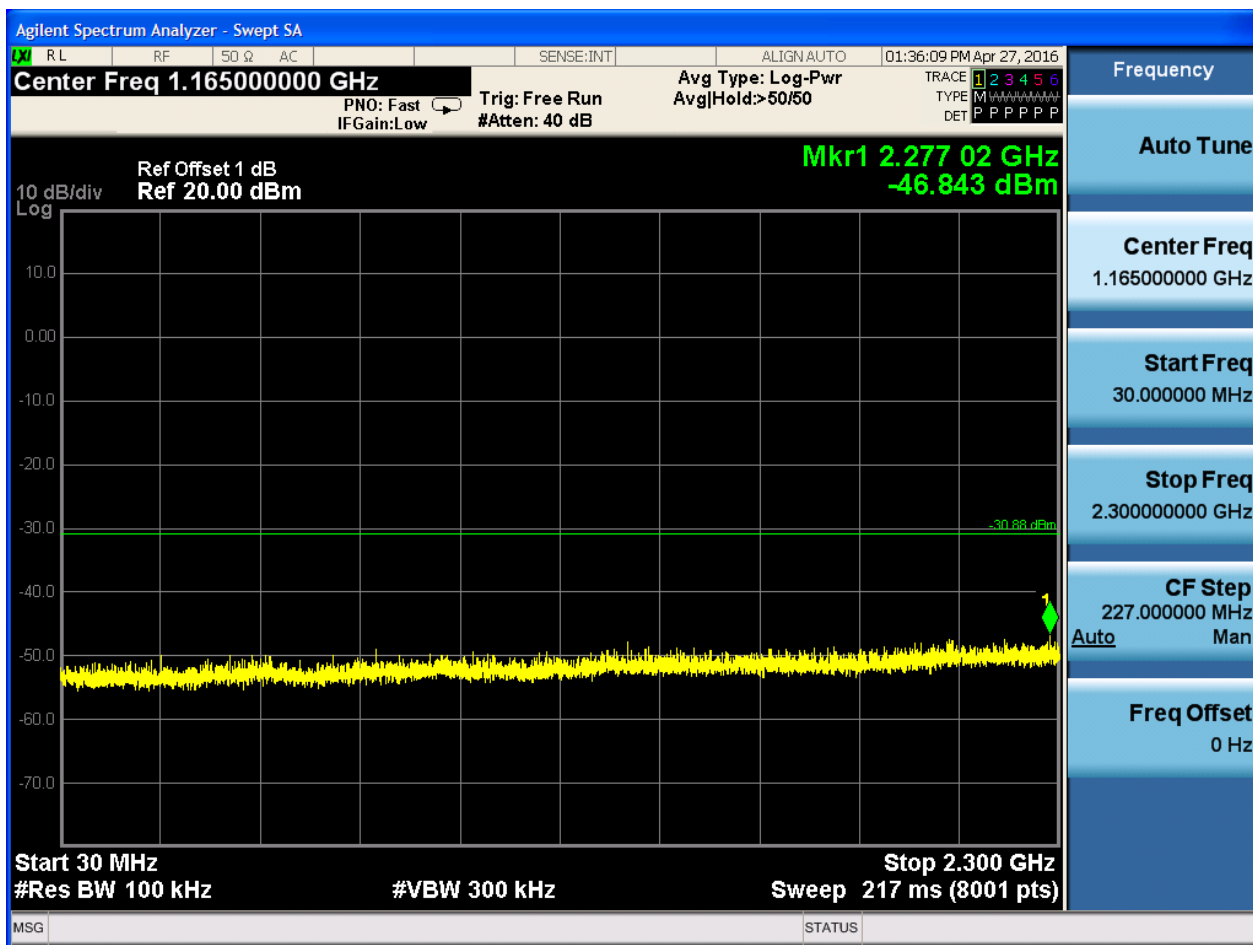


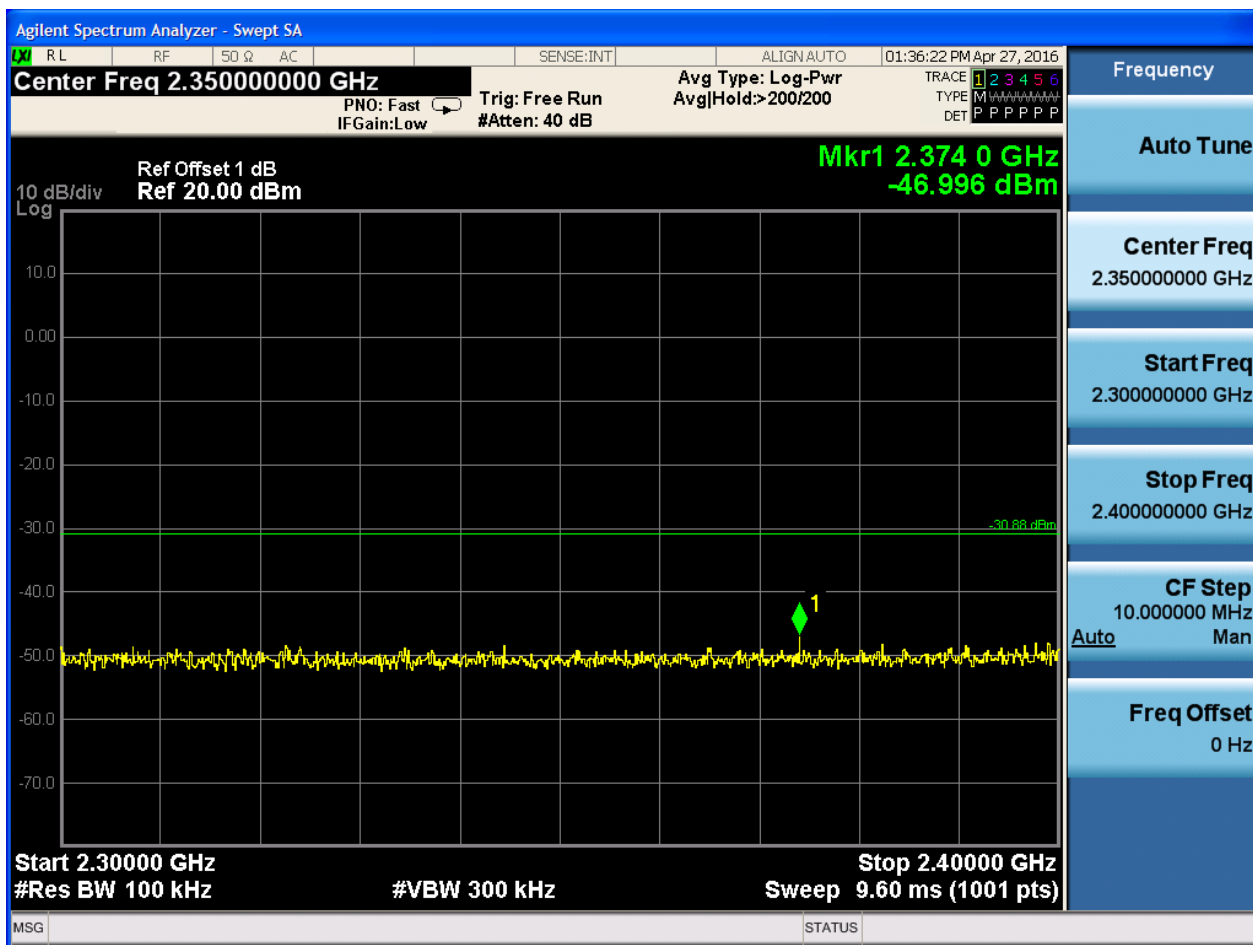


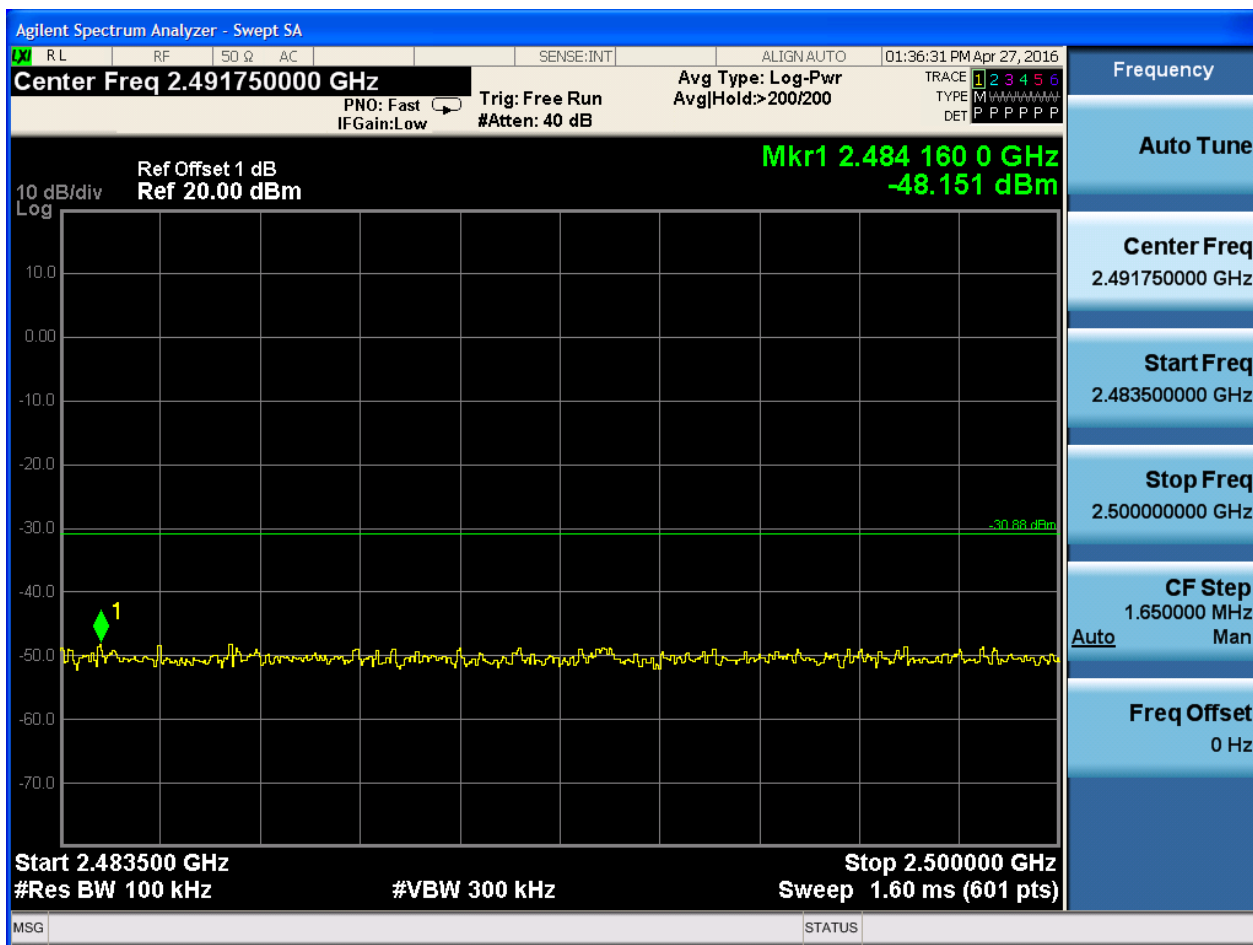
Puw:

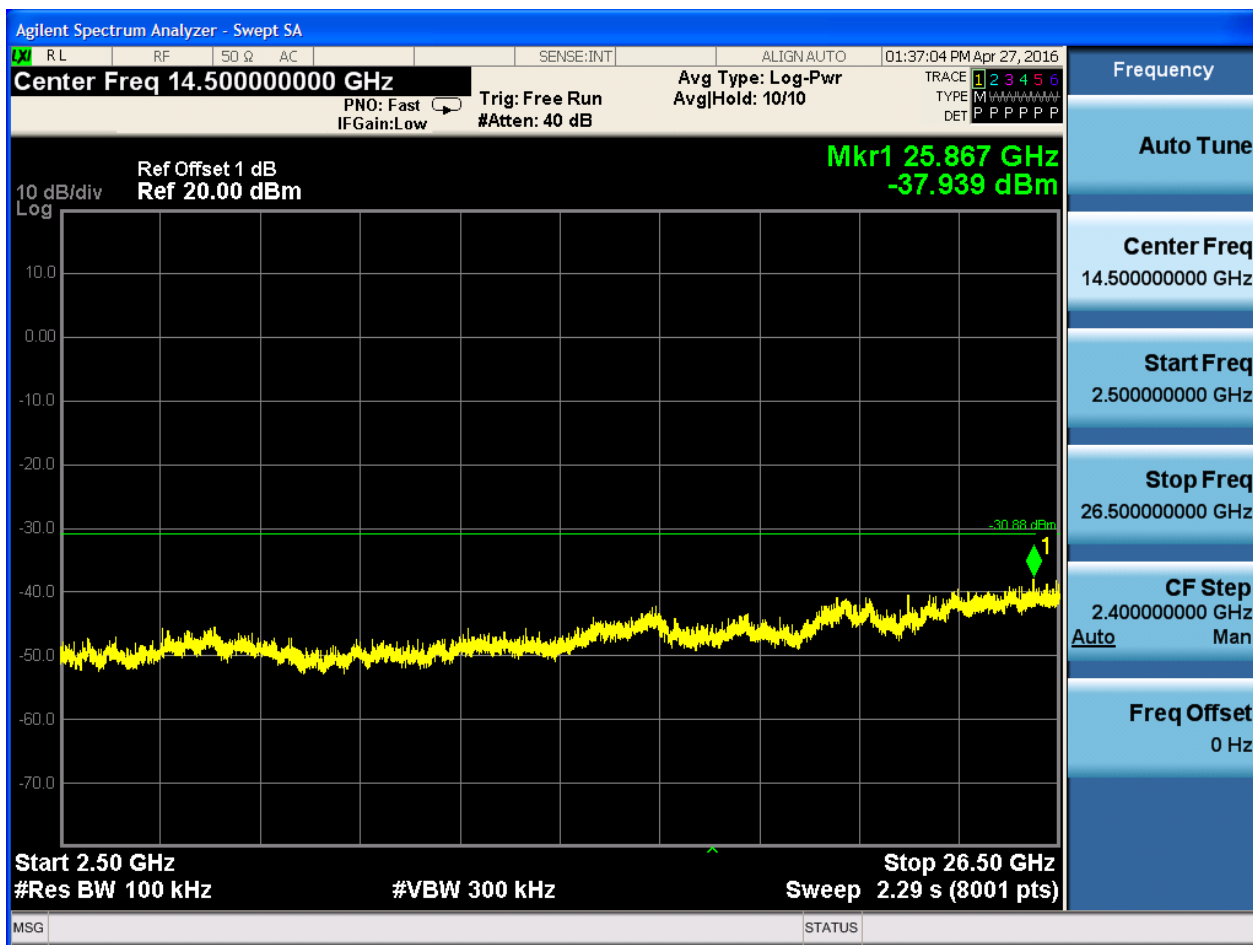












Appendix H: Radiated Spurious Emission & Spurious in Restricted Band

Note: We tested all modes, but the data presented below is the worst case.

Below 1GHz, RBW = 100 kHz, VBW = 300 kHz.

Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.

The simultaneous transmission has been considered

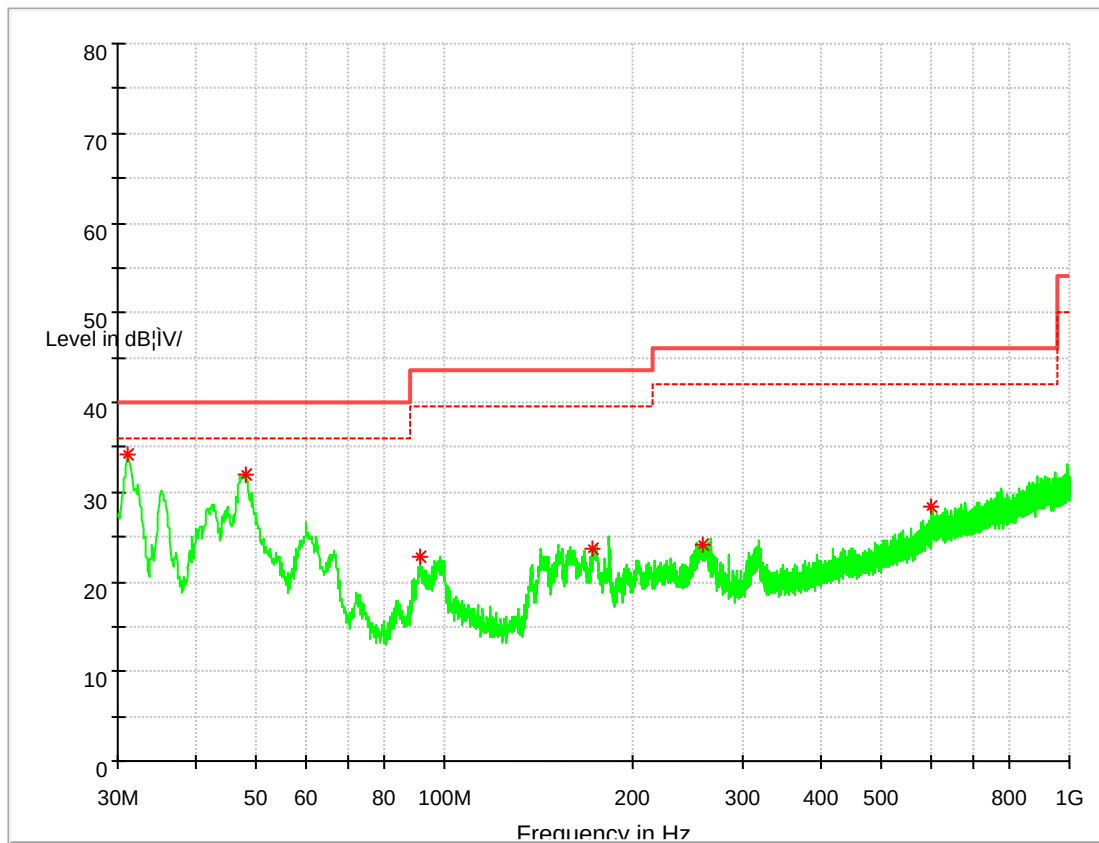
7.1Part 1: Testing Range of “9 kHz to 30MHz”

NOTE1: No peak found in the Test Range of “9 kHz to 30MHz”

7.2Part 2: Testing Range of “30 MHz to 1 GHz”

Note 1: The test results and plot for testing range of “30 MHz to 1 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).



Note1: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: QP Detector

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Polarisation	Azimuth (deg)	Transd (dB)
31.212500	34.26	40.00	5.74	100.0	V	190.0	14.7
47.945000	32.06	40.00	7.94	100.0	V	78.0	15.2
91.595000	22.87	43.50	20.63	100.0	V	106.0	12.5
172.832500	23.58	43.50	19.92	100.0	V	357.0	11.2
259.405000	24.18	46.00	21.82	100.0	V	183.0	14.6
601.330000	28.29	46.00	17.71	100.0	H	309.0	22.2

Note:

Level = Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.



7.3Part 3: Testing Range of “18 GHz to 26.5 GHz”

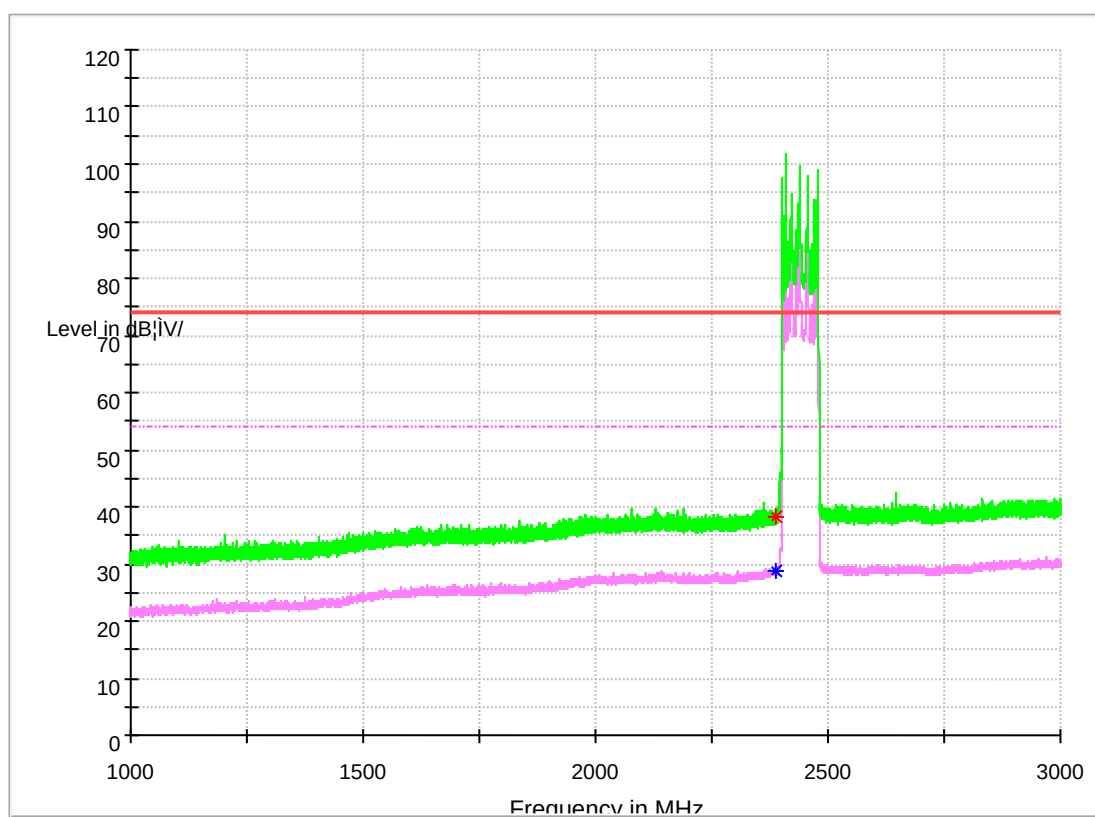
NOTE1: No peak found in the Test Range of “18 GHz to 26.5GHz”

7.4Part 4: Testing Range of “1GHz to 3GHz”

- Note 1: The testing range of “2.3 GHz to 2.5 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.
- Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dB μ V/m) and Average Limit (54 dB μ V/m).
- Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

Channel 0

Full Spectrum



Note1: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Polarisation	Azimuth (deg)	Transd (dB)
2390.000000	38.10	74.00	35.90	100.0	H	263.0	-7.6

MEASUREMENT RESULT: AV Detector



Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Polarisation	Azimuth (deg)	Transd (dB)
2390.000000	28.63	54.00	25.37	100.0	H	263.0	-7.6

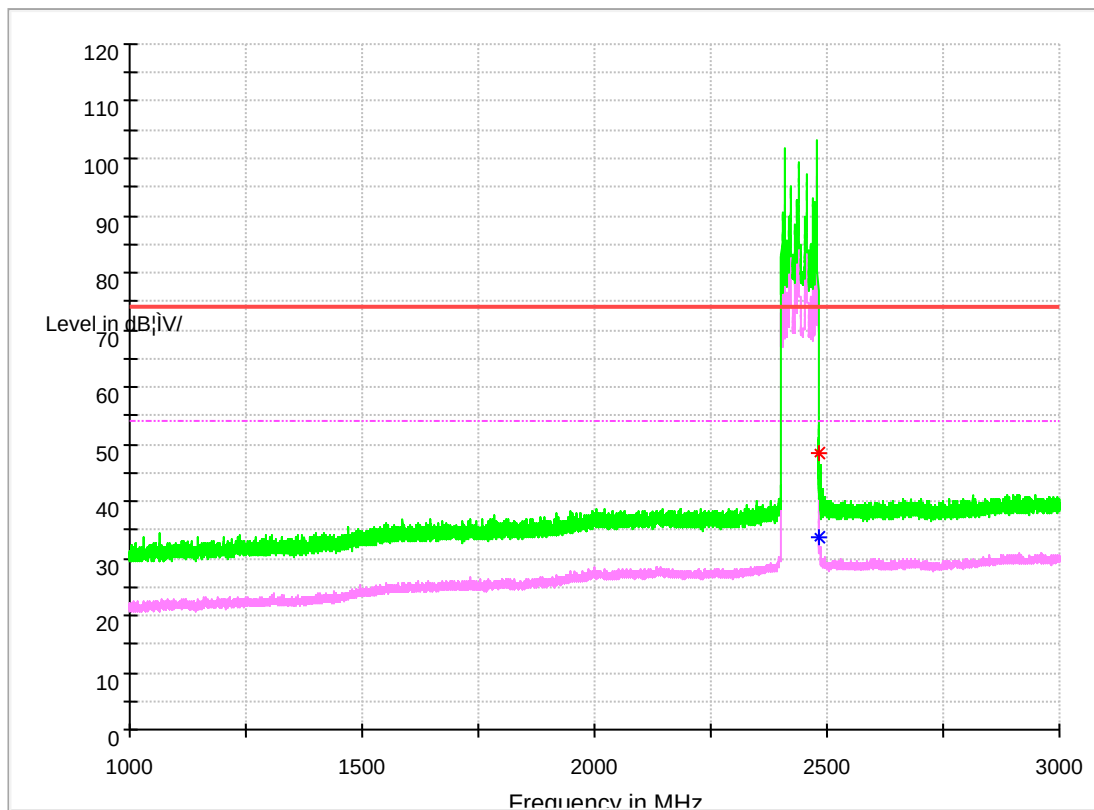
Note2:

Level = Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

Channel 39

Full Spectrum



Note1: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Polarisation	Azimuth (deg)	Transd (dB)
2483.500000	48.38	74.00	25.62	100.0	H	0.0	-5.4

MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Polarisation	Azimuth (deg)	Transd (dB)
2483.500000	33.80	54.00	20.20	100.0	H	0.0	-5.4

Note2:

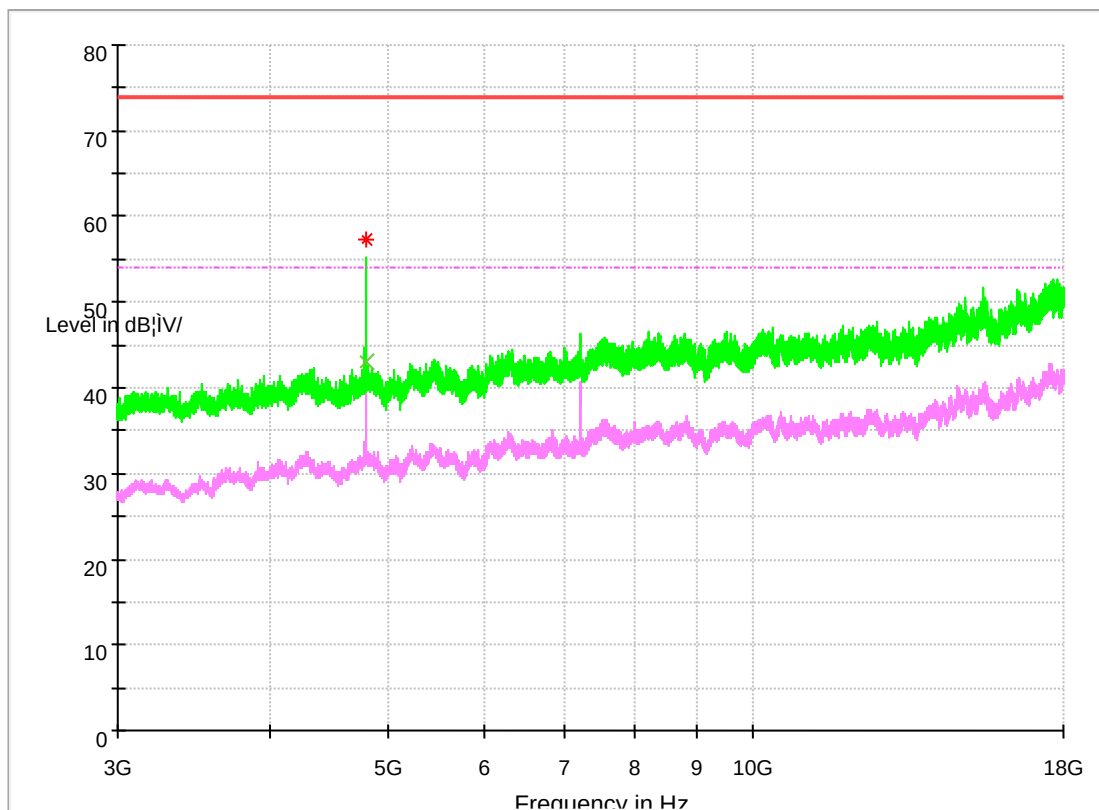
Level = Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

7.5Part 5: Testing Range of “3 GHz to 18 GHz”

- Note 1: The test results and plot for testing range of “3 GHz to 18 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of “1 GHz to 18 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.
- Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBμV/m) and Average Limit (54 dBμV/m).

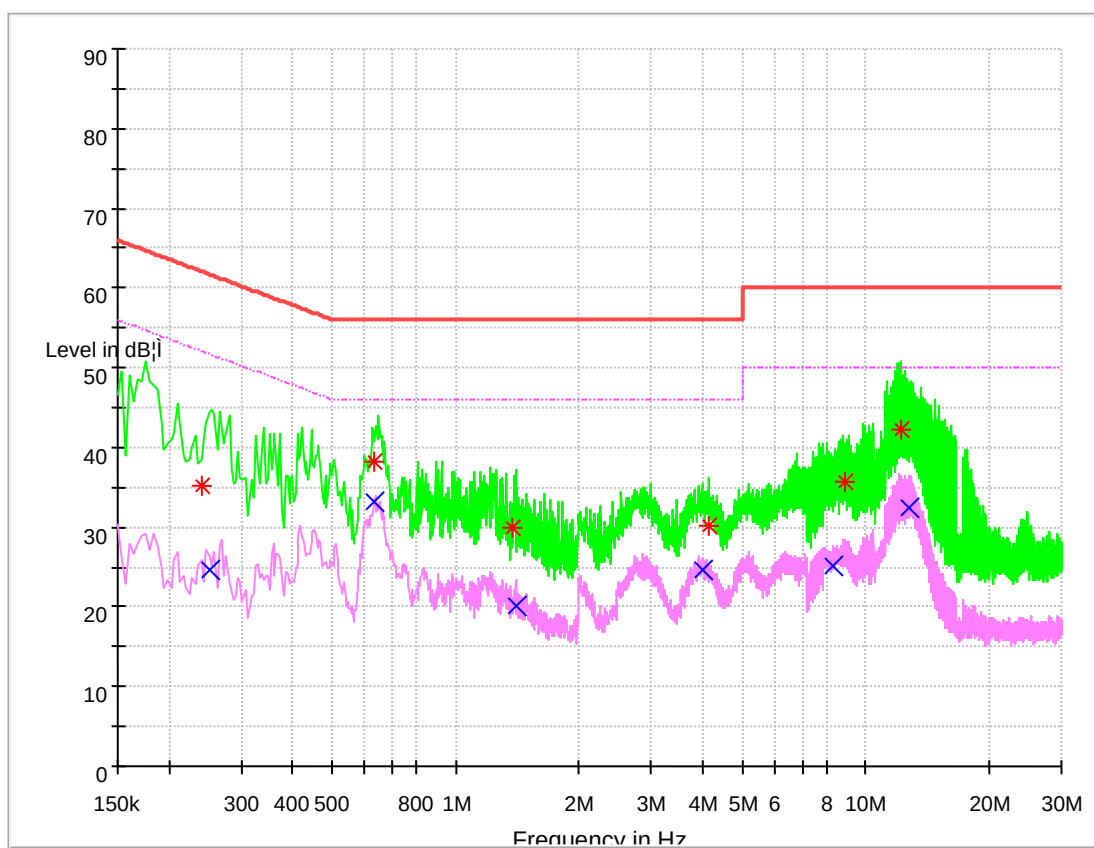
Full Spectrum



Appendix I: Conducted Emission at Power Port

Note: RBW =9 kHz, VBW = 30 kHz

Channel 39



MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBμV	Limit dBμV	Transd dB	Margin dB	Line	PE
0.240072	35.23	62.09	9.7	26.86	L1	FLO
0.634416	38.11	56.00	9.7	17.89	N	FLO
1.378896	29.95	56.00	9.7	26.05	N	FLO
4.160420	30.09	56.00	9.8	25.91	L1	FLO
8.861843	35.67	60.00	9.9	24.33	N	FLO
12.205518	42.28	60.00	10.0	17.72	N	FLO

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBμV	Limit dBμV	Transd dB	Margin dB	Line dBμV	PE
0.251317	24.56	51.71	9.7	27.15	L1	FLO
0.635210	33.06	46.00	9.7	12.94	L1	FLO
1.404917	20.21	46.00	9.7	25.79	N	FLO
4.015733	24.65	46.00	9.8	21.35	L1	FLO
8.318997	25.14	50.00	9.9	24.86	L1	FLO
12.734010	32.34	50.00	10.0	17.66	N	FLO

Note2:

Level = Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

END