



Appendix for Testreport

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.

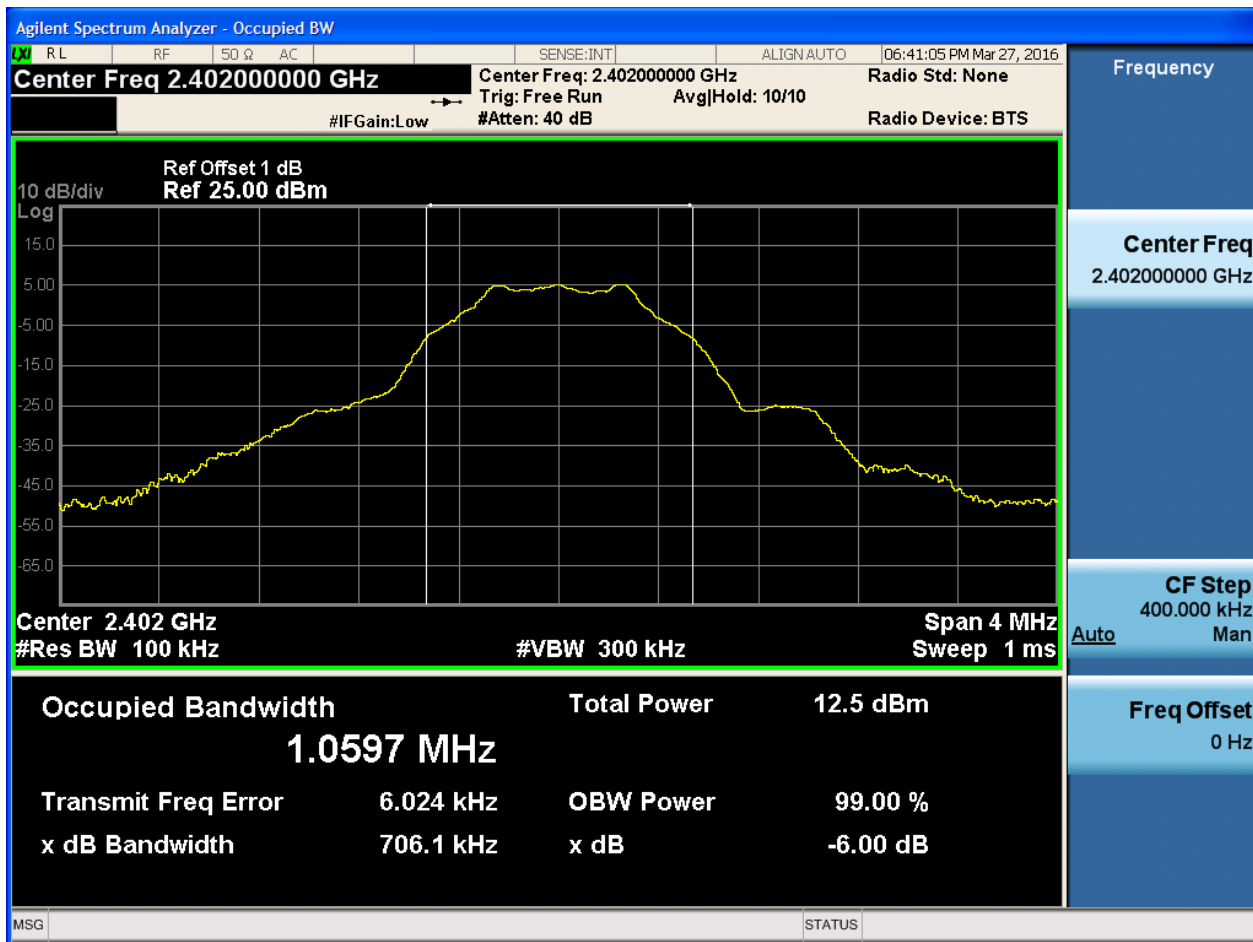
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	DTS6dBBW[MHz]	Verdict
TM1 _Ch0	L	2402	0.71	pass
TM1 _Ch19	M	2440	0.71	pass
TM1 _Ch39	H	2480	0.70	pass



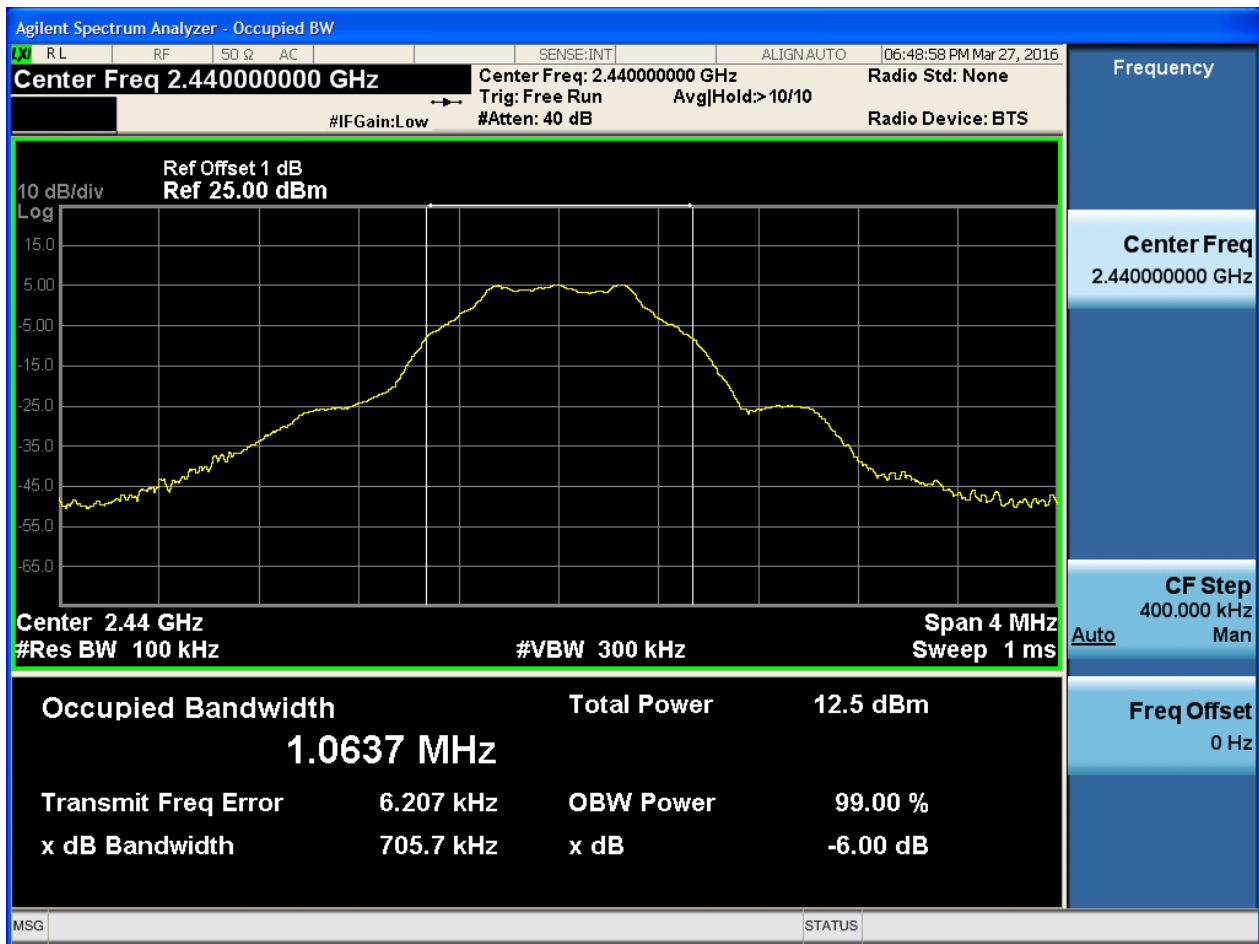
Part II - Test Plots

2.1 TM1_Ch0_L



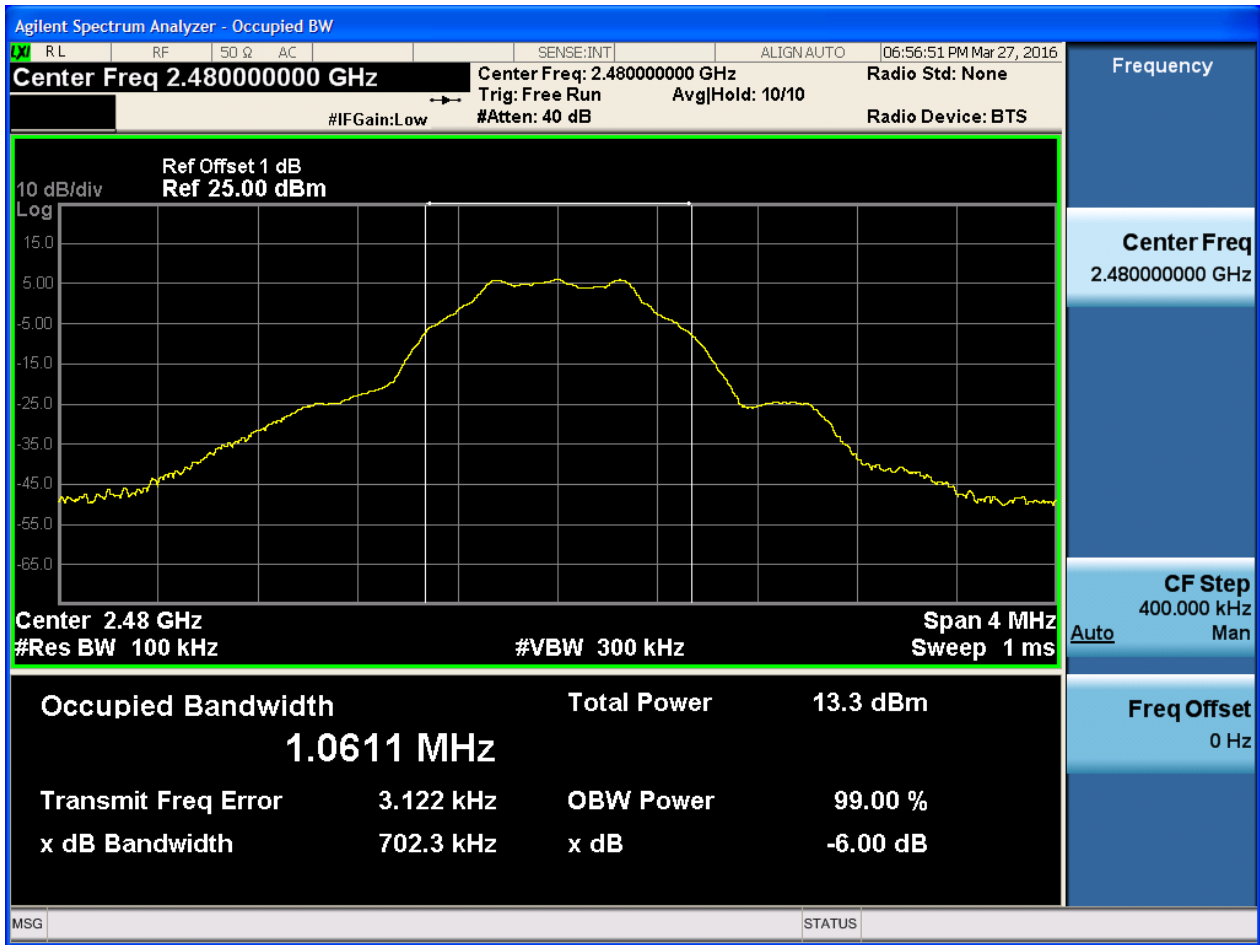


2.2 TM1_Ch19_M





2.3 TM1_Ch39_H





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.

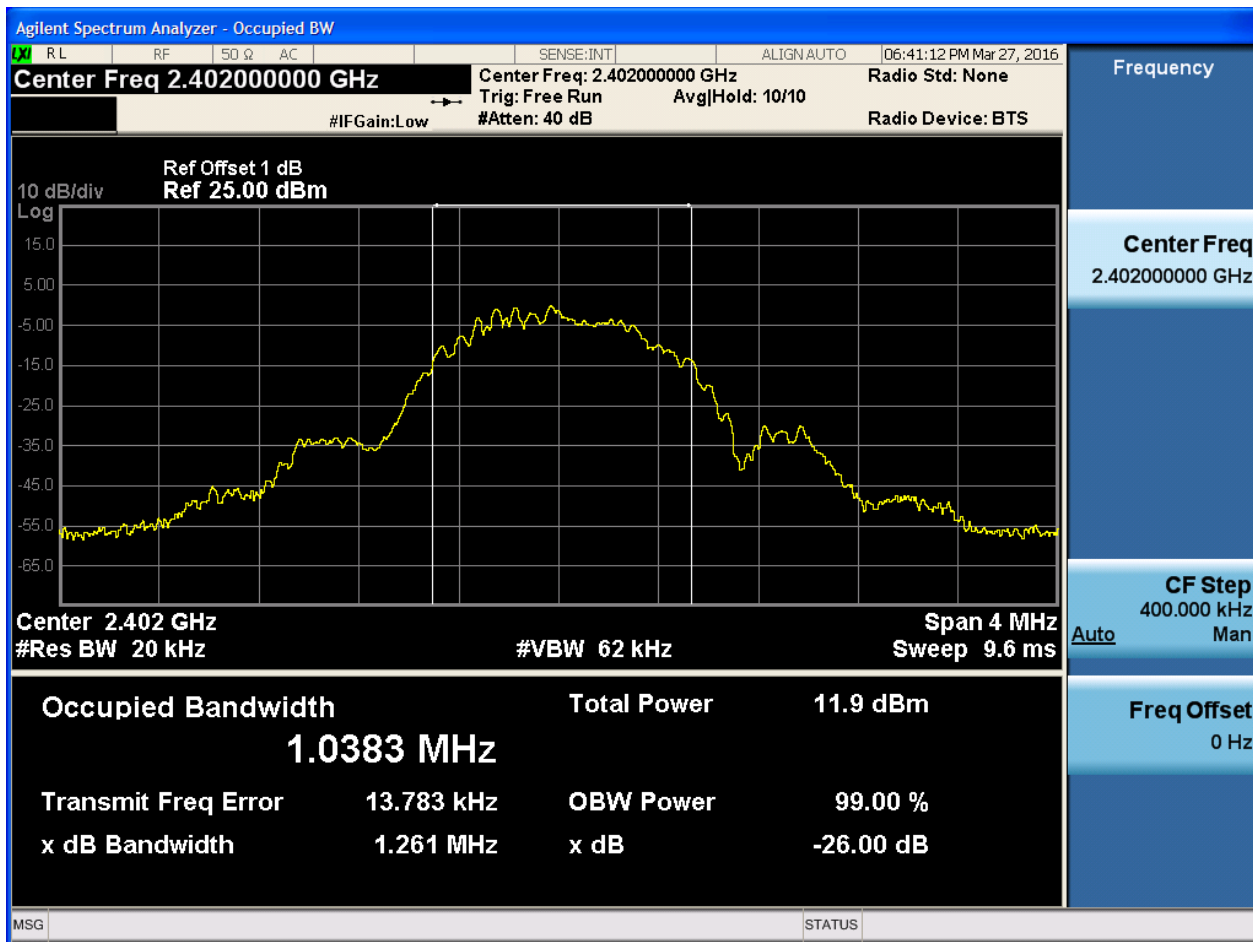
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Occupied Bandwidth [MHz]	Verdict
TM1 _Ch0	L	2402	1.04	pass
TM1 _Ch19	M	2440	1.04	pass
TM1 _Ch39	H	2480	1.04	pass



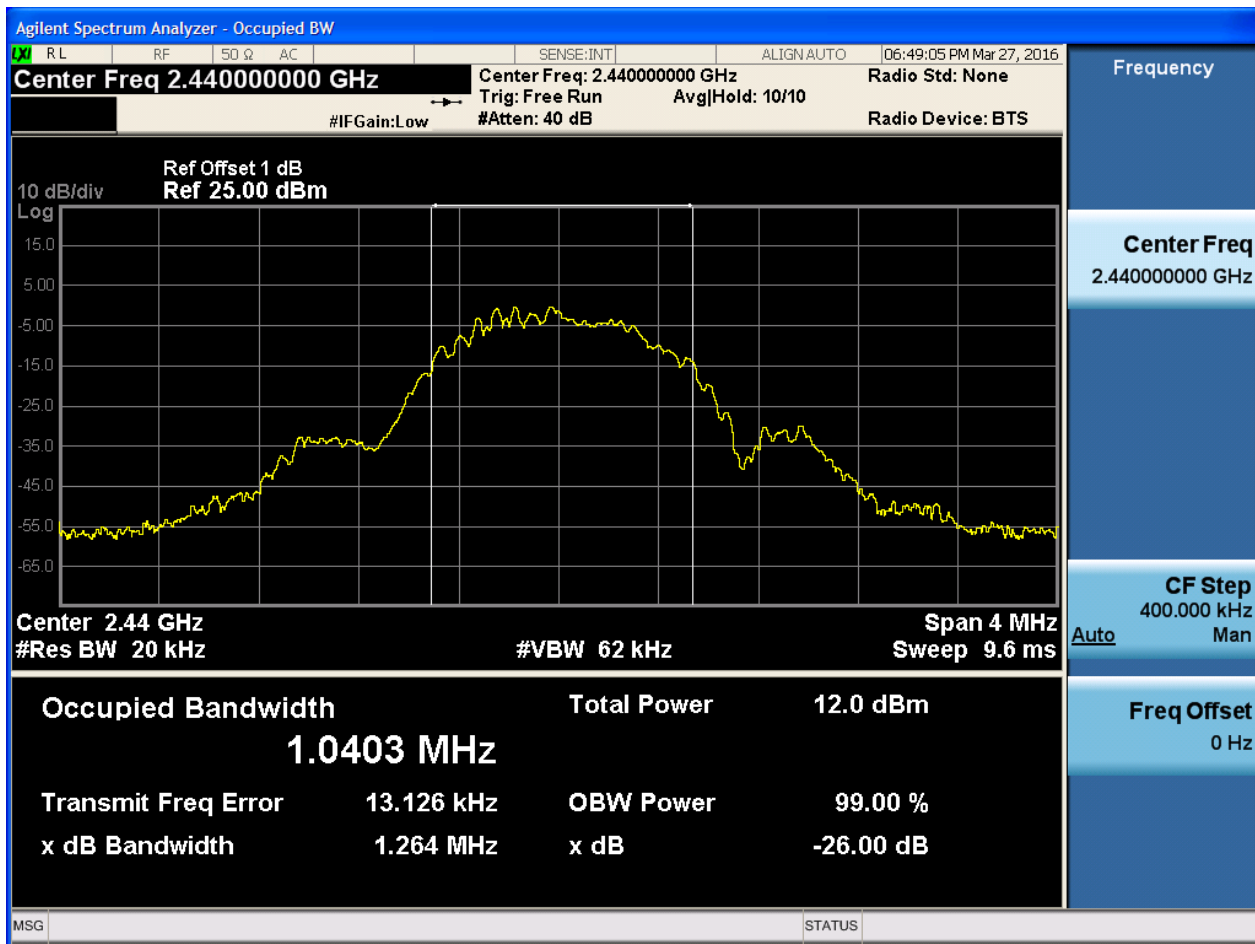
Part II - Test Plots

2.1 TM1_Ch0_L





2.2 TM1_Ch19_M





2.3 TM1_Ch39_H





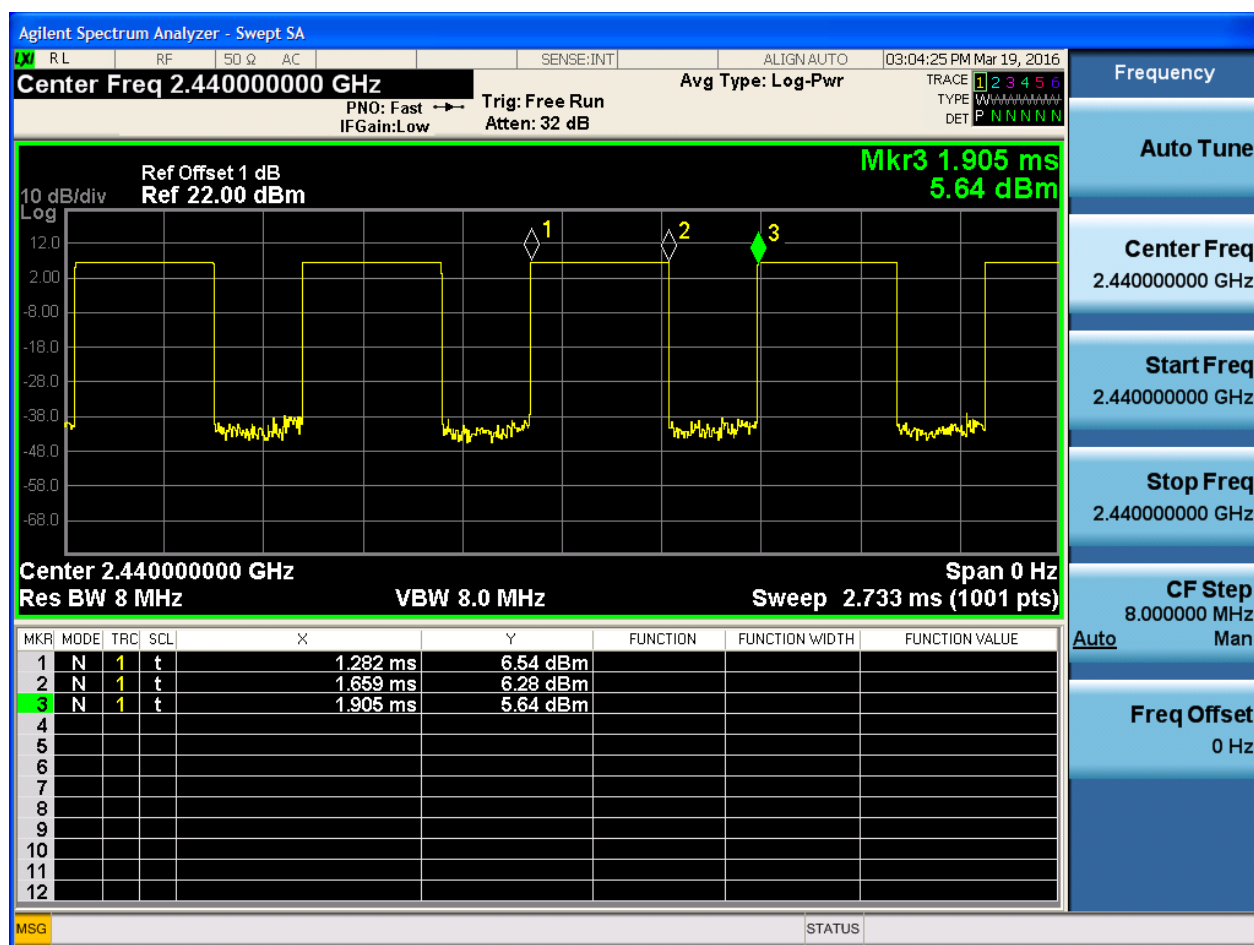
Appendix C: Duty Cycle

Part I - Test Results

Test Mode	TX Freq. [MHz]	Duty cycle [%]
TM1	CH0,CH19,CH39	61

Part II - Test Plots

2.1 TM1





Appendix D: Maximum Conducted Average Output Power

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Duty Cycle [%]	Power[dBm]	Verdict
TM1 _Ch0	L	2402	61	5.76	pass
TM1 _Ch19	M	2440	61	5.83	pass
TM1 _Ch39	H	2480	61	6.68	pass



Part II - Test Plots

2.1 TM1_Ch0_L





Agilent Spectrum Analyzer - The duty cycle factor 2.15 dB added.

RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 06:49:24 PM Mar 27, 2016

Center Freq 2.44000000 GHz #Avg Type: RMS Avg|Hold: 500/500

PNO: Wide → Trig: Free Run

IFGain: Low Atten: 38 dB

TRACE 1 2 3 4 5 6

TYPE A A A A A A

DET A A A A A A

Mkr1 2.440 000 GHz

Band Power 5.825 dBm

Ref Offset 3.15 dB

Ref 30.00 dBm

10 dB/div

Log

Start 2.438000 GHz **Stop 2.442000 GHz**

#Res BW 20 kHz **#VBW 62 kHz*** **Sweep 12.3 ms (601 pts)**

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.440 000 GHz	-9.797 dBm	Band Power	1.053 MHz	5.825 dBm
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

MSG STATUS

Frequency

Auto Tune

Center Freq
2.44000000 GHz

Start Freq
2.43800000 GHz

Stop Freq
2.44200000 GHz

CF Step
400.000 kHz
Man

Freq Offset
0 Hz



2.3 TM1_Ch39_H



Appendix E: Maximum Power Spectral Density Level

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Duty Cycle [%]	PD[MHz]	Verdict
TM1 _Ch0	L	2402	61	-6.22	pass
TM1 _Ch19	M	2440	61	-7.68	pass
TM1 _Ch39	H	2480	61	-5.81	pass

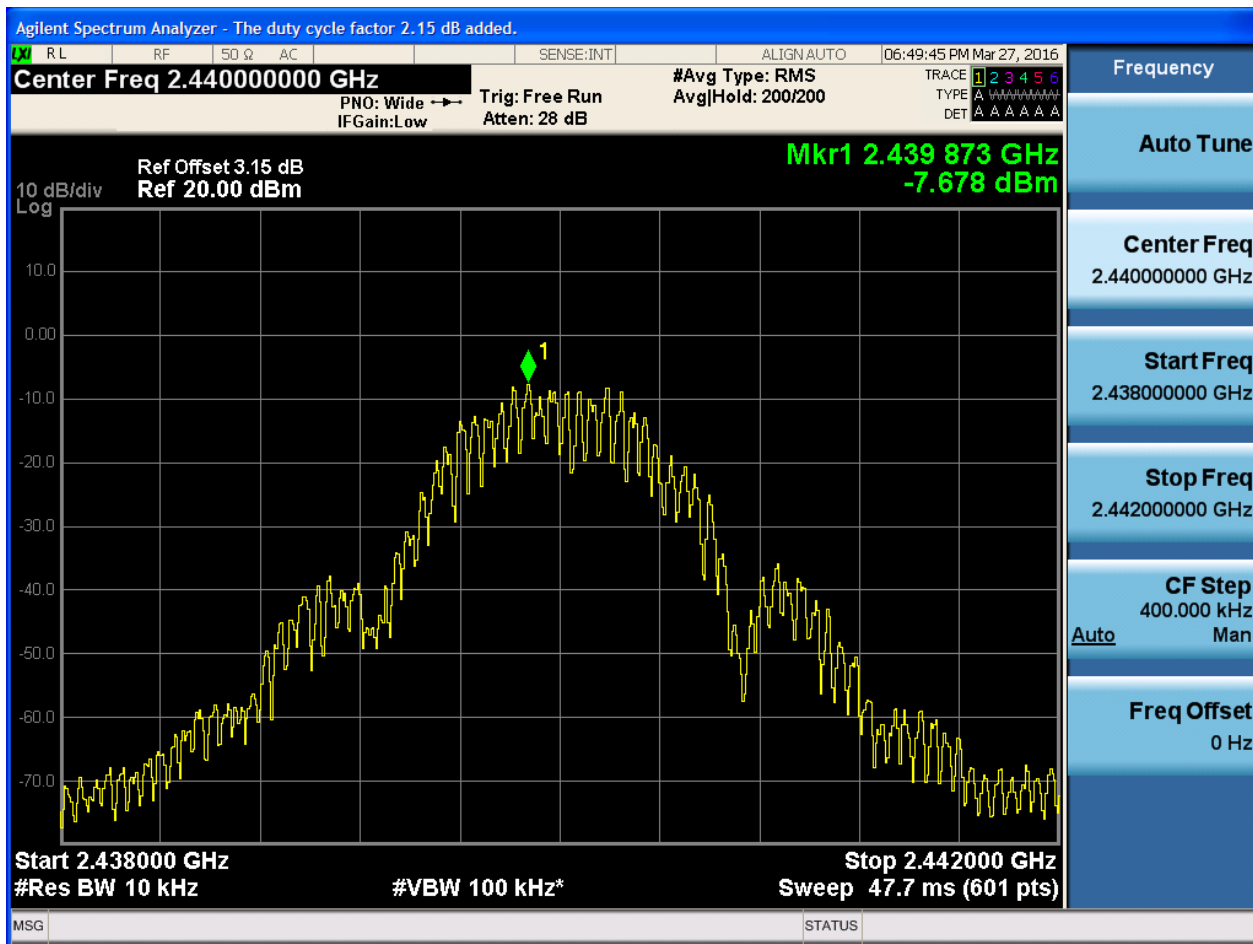
Part II - Test Plots

2.1 TM1_Ch0_L





2.2 TM1_Ch19_M





2.3 TM1_Ch39_H



Appendix F: Band Edges Compliance

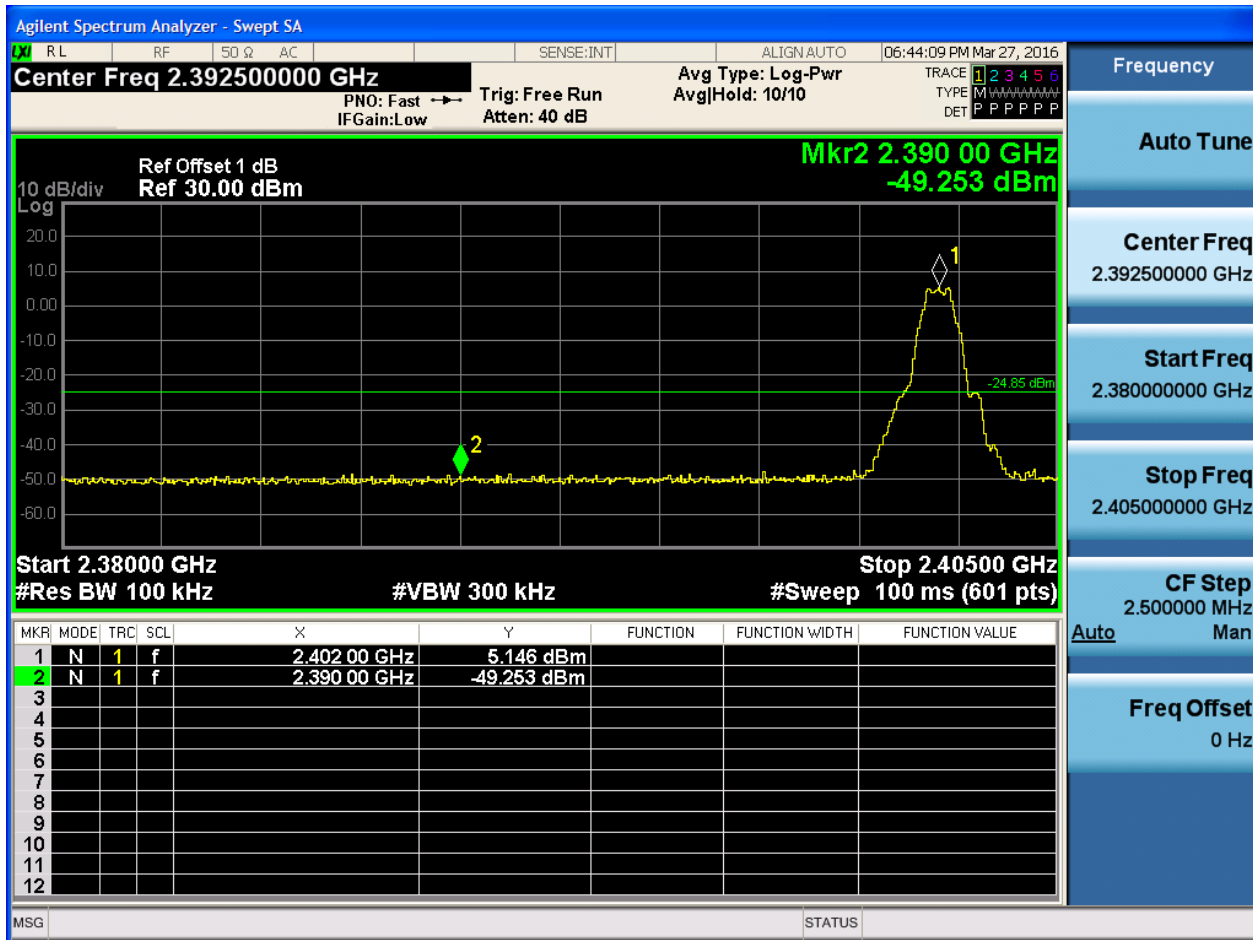
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
TM1_Ch0	L	2402	5.15	-49.25	pass
TM1_Ch39	H	2480	6.04	-50.43	pass



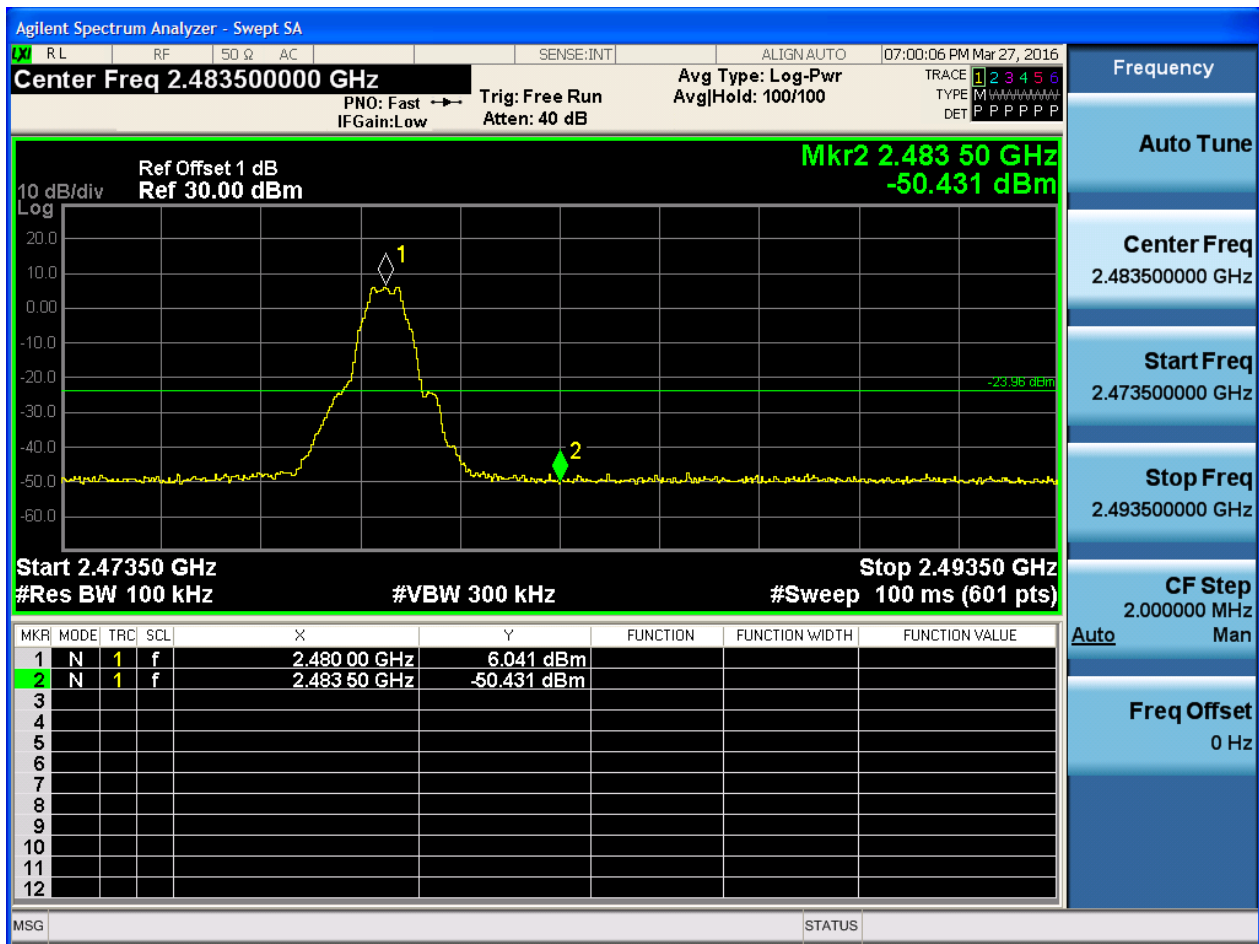
Part II - Test Plots

2.1 TM1_Ch0_L





2.2 TM1_Ch39_H



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_Ch0	L	2402	5.22	<limit	pass
TM1_Ch19	M	2440	5.15	<limit	pass
TM1_Ch39	H	2480	6.08	<limit	pass



Part II - Test Plots

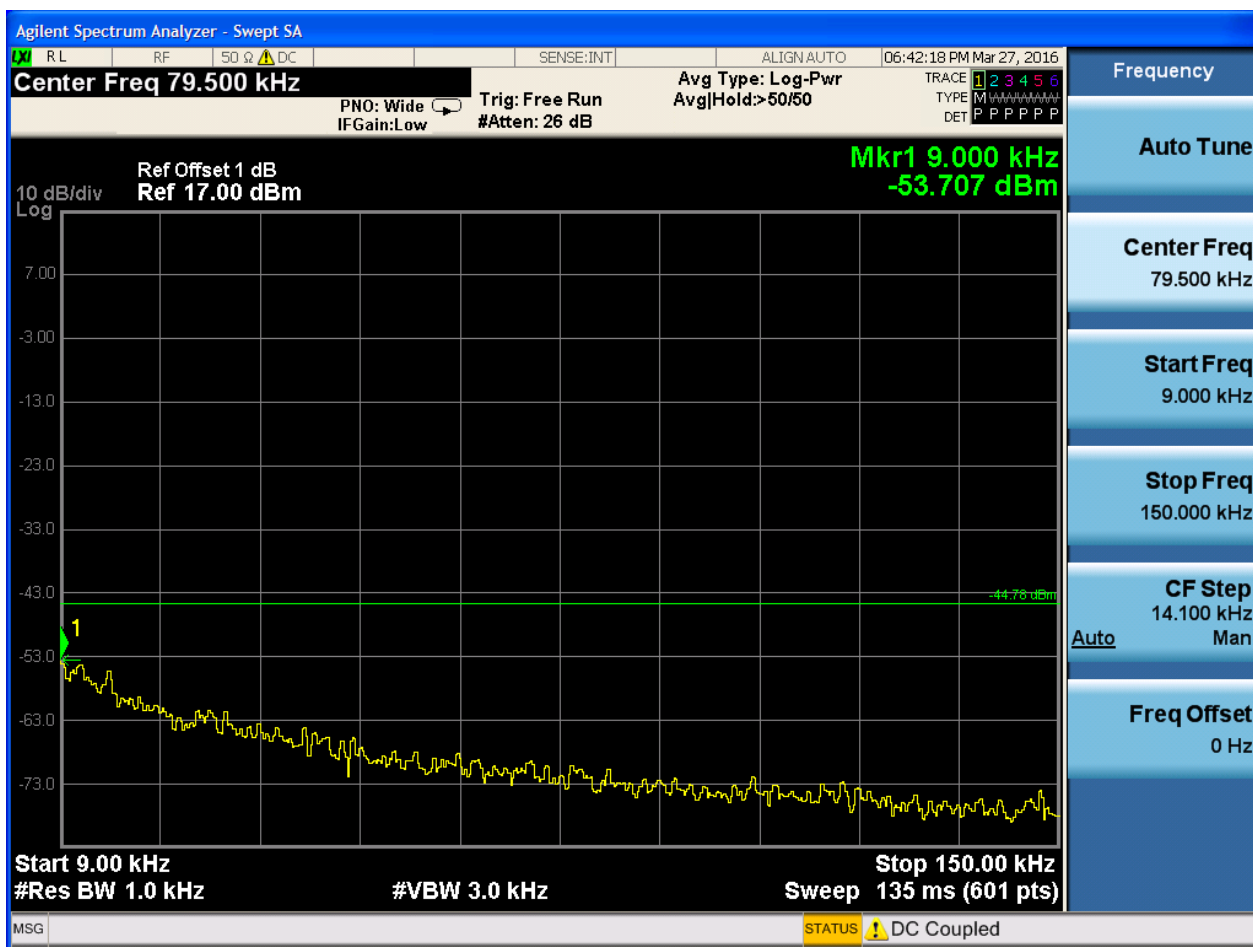
2.1 TM1_Ch0_L

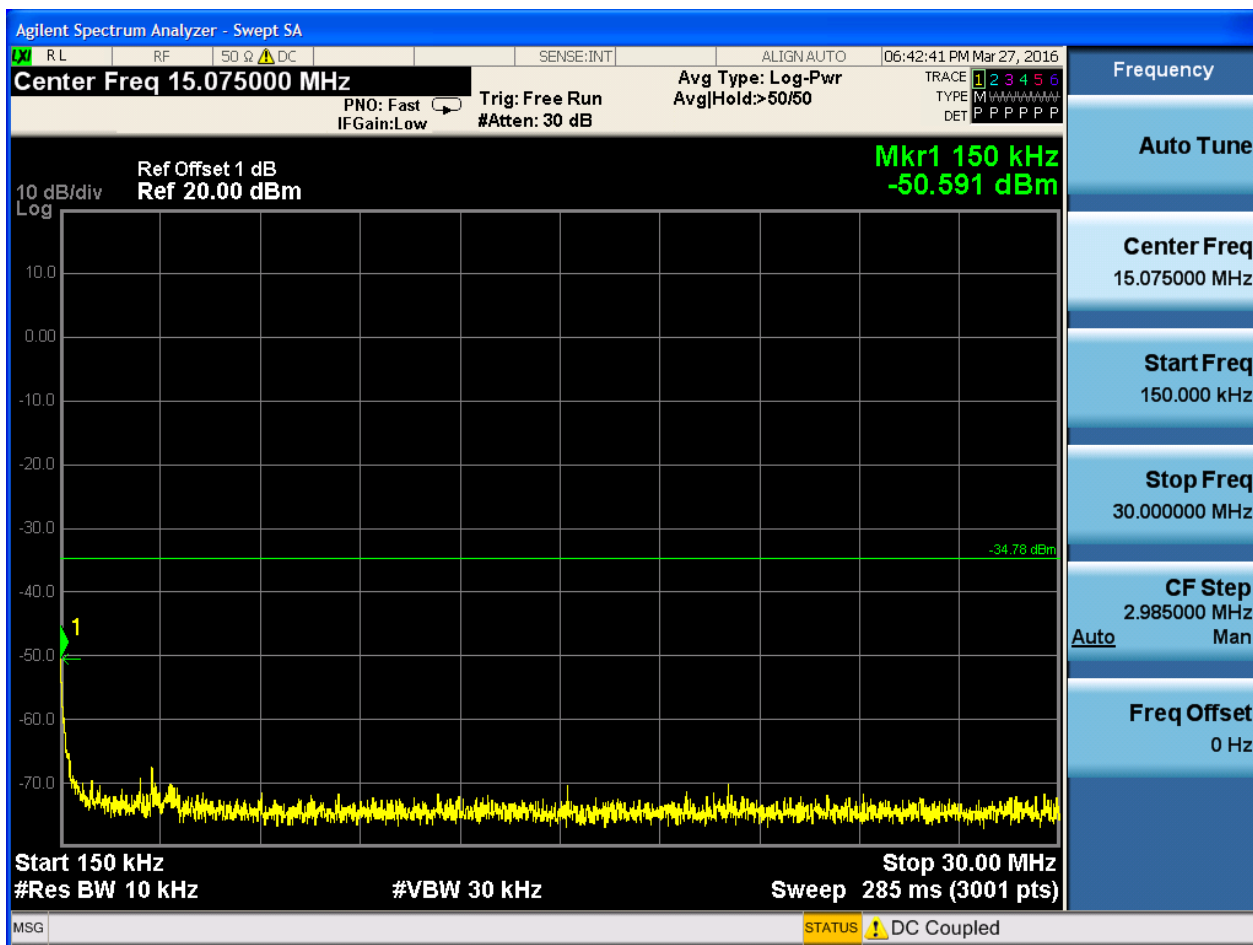
Pref:

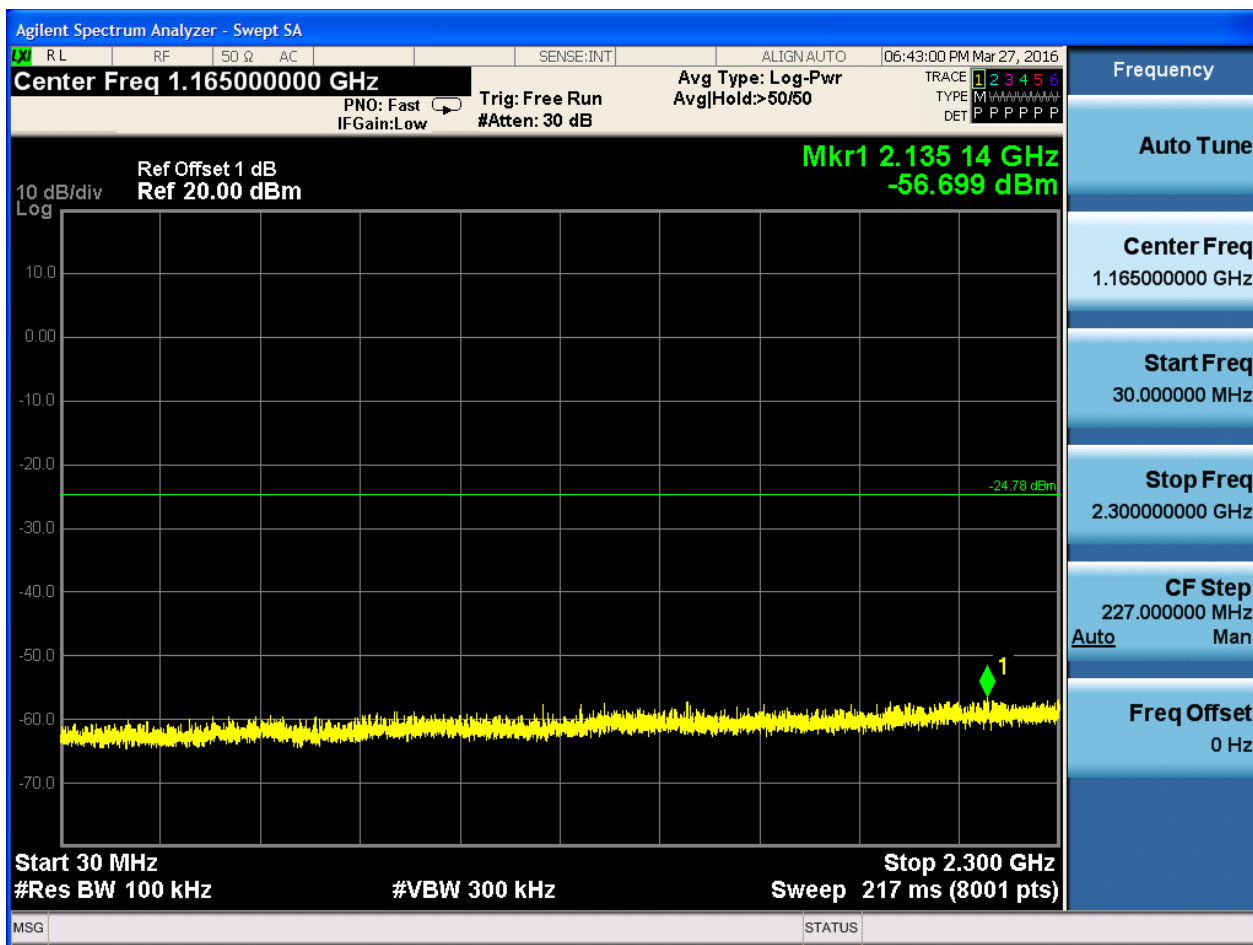


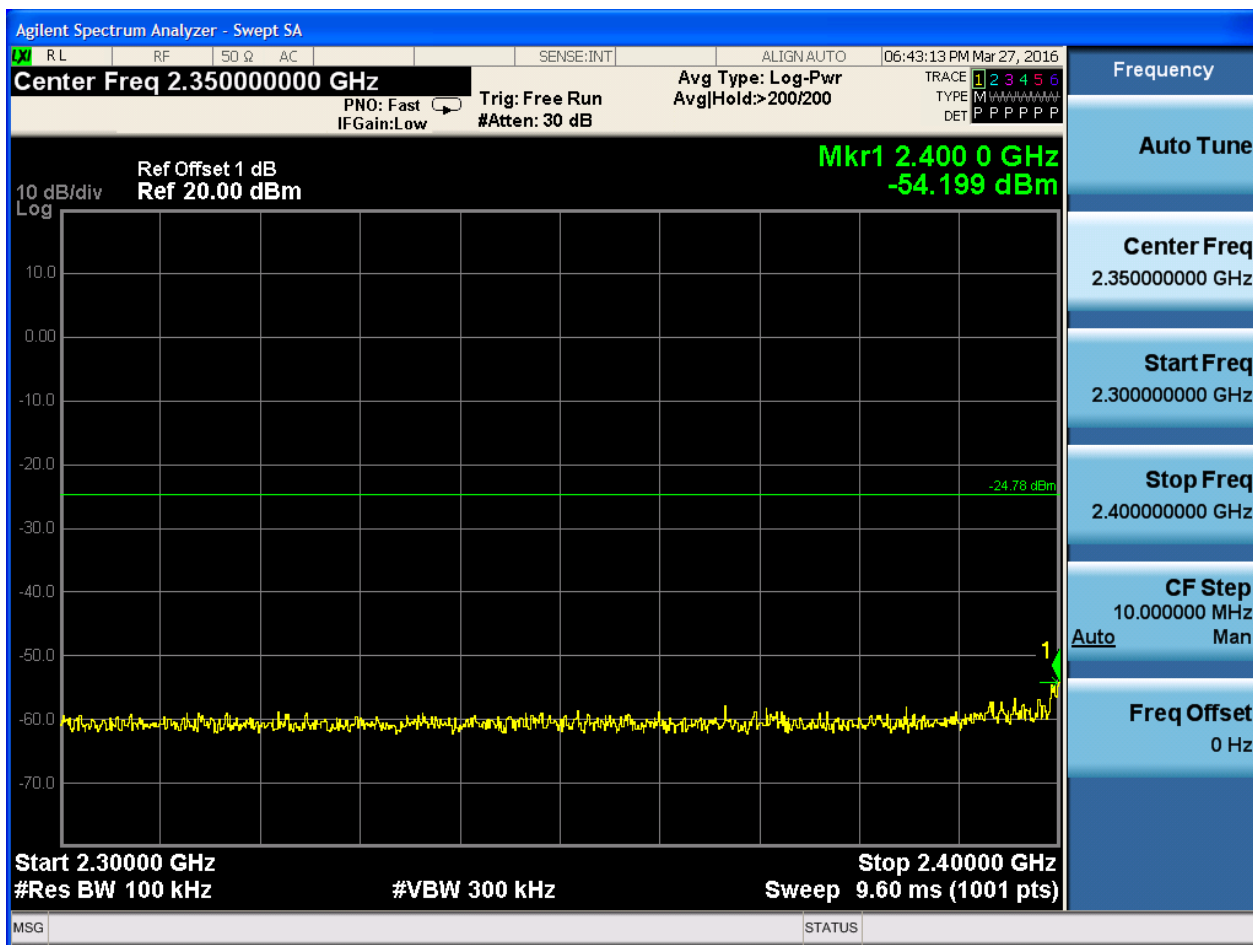


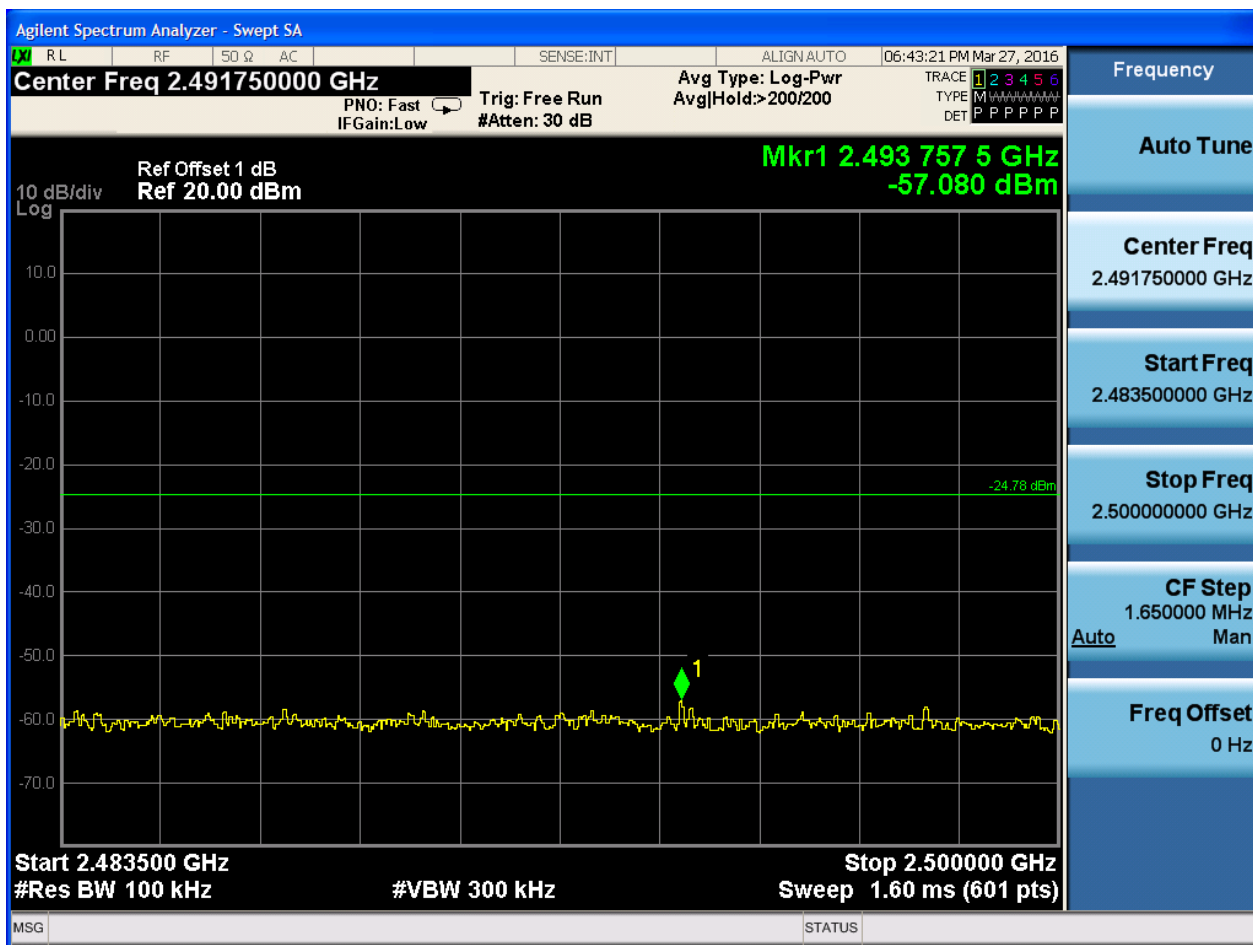
Puw:









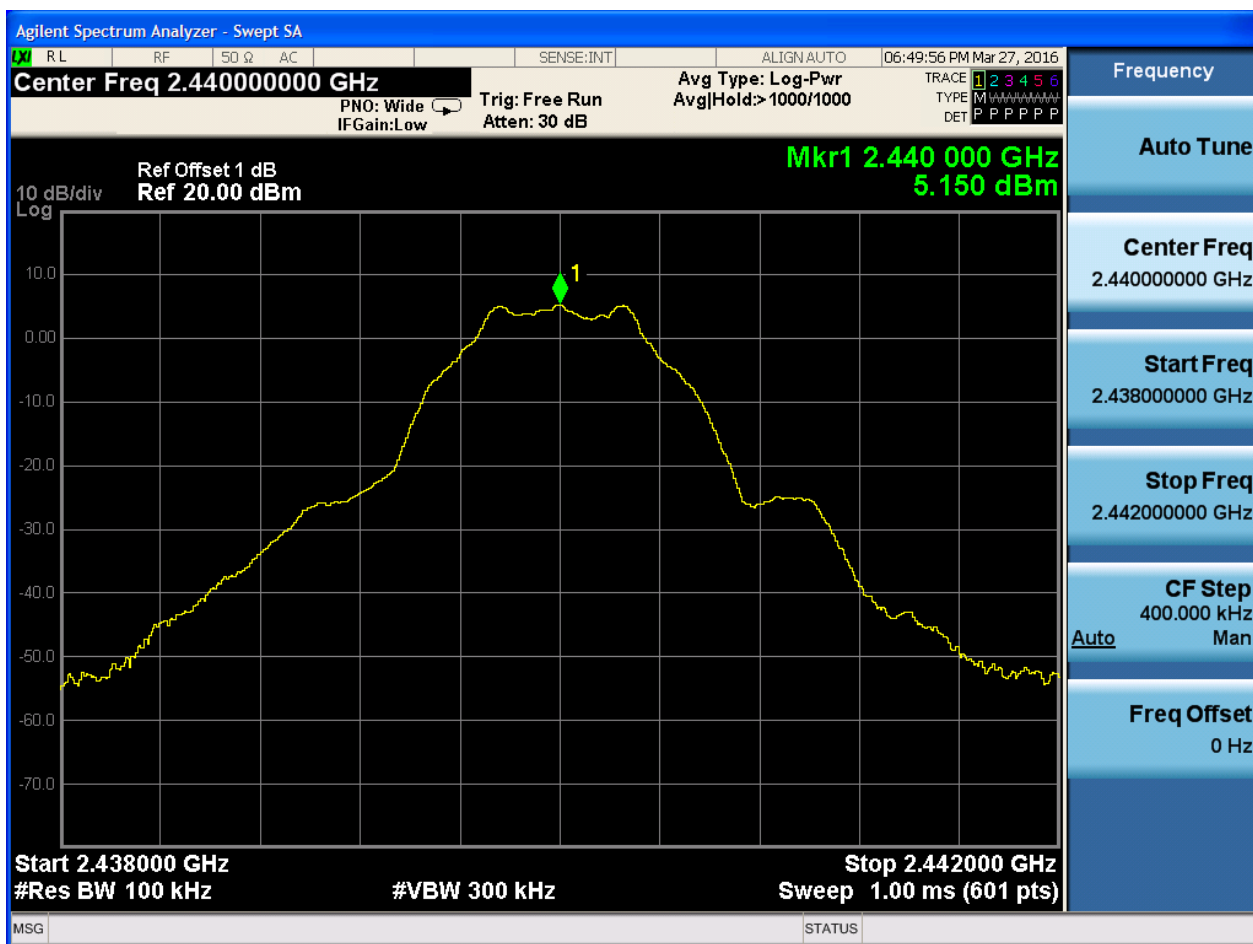






2.2 TM1_Ch19_M

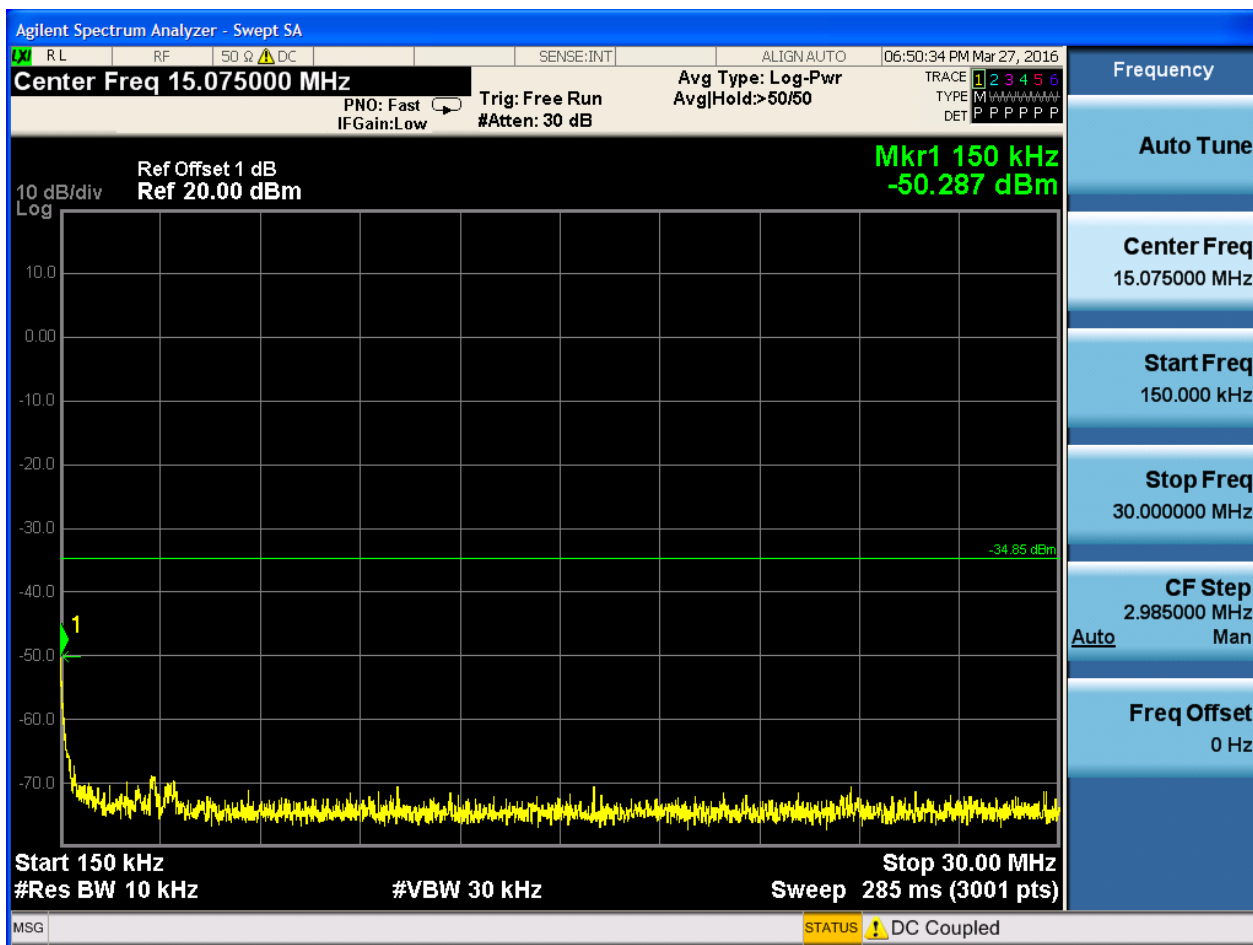
Pref:

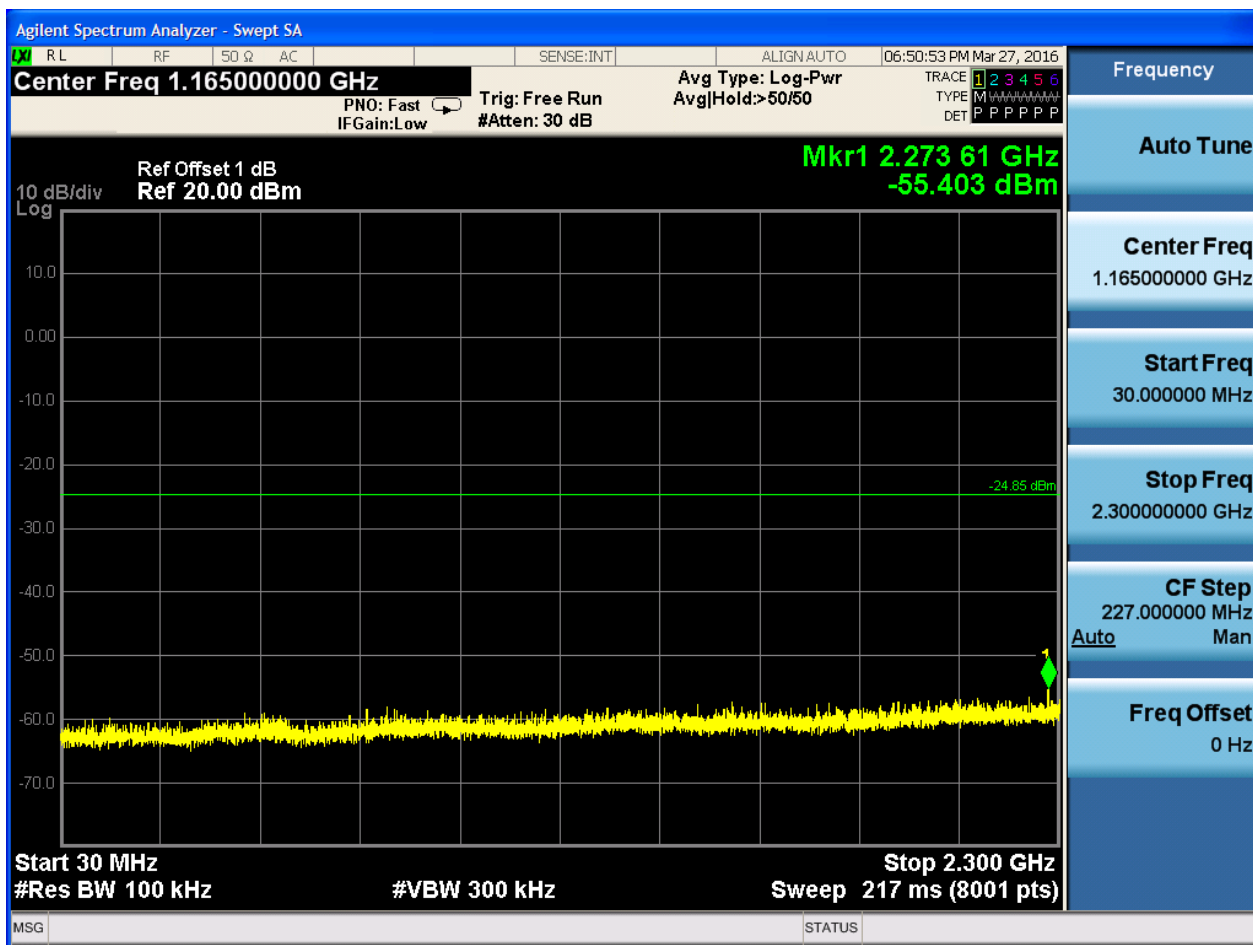


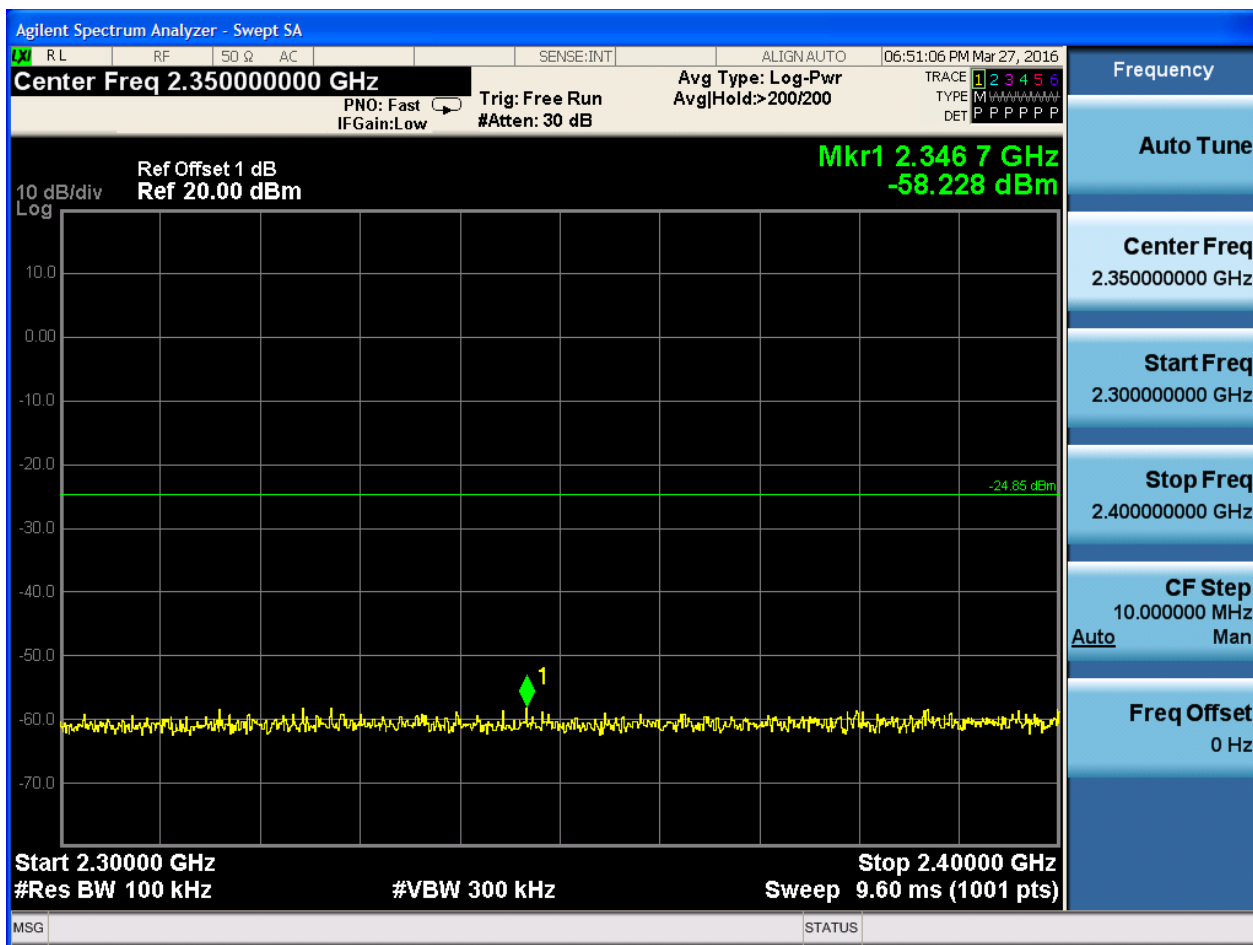


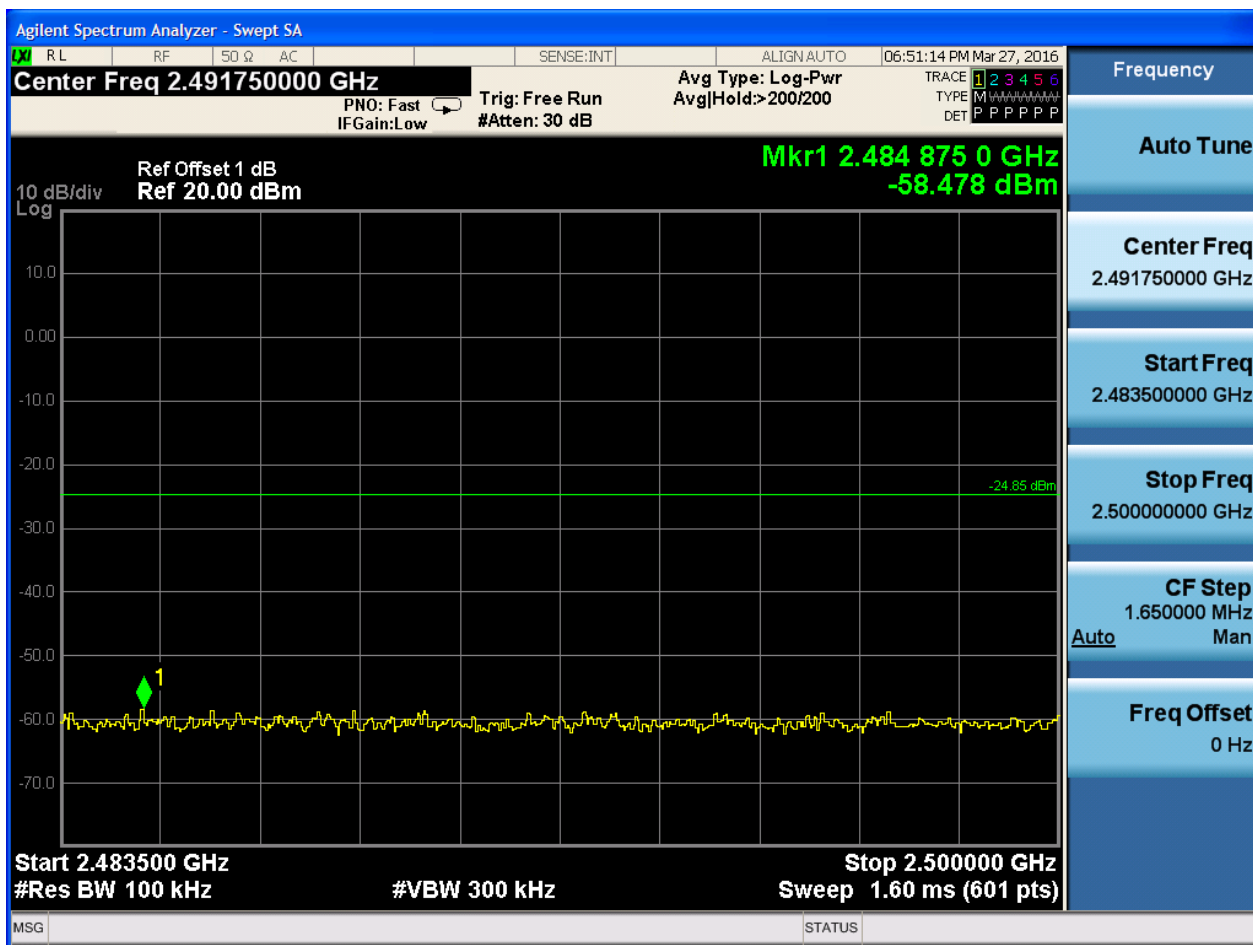
PuW:















2.3 TM1_Ch39_H

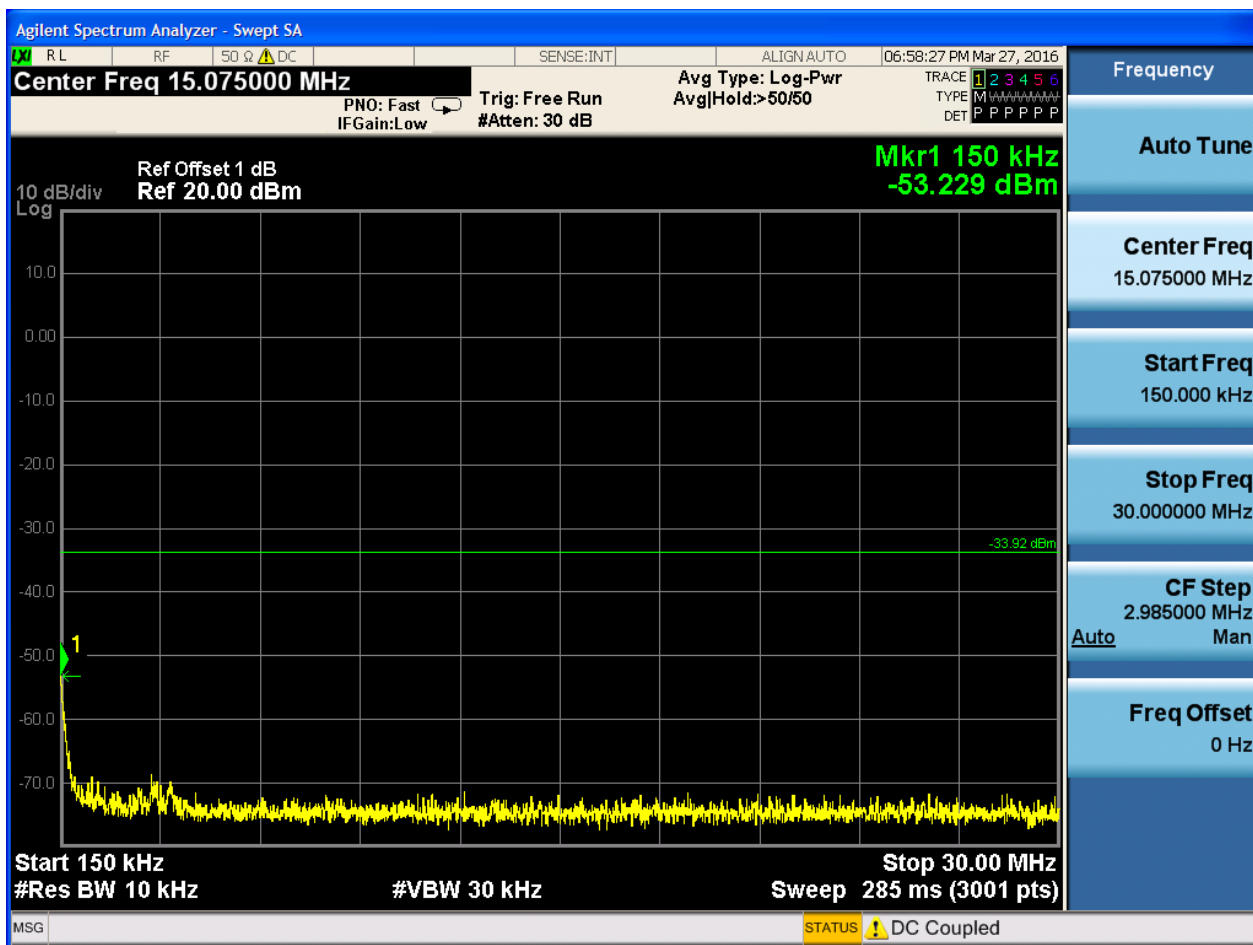
Pref:

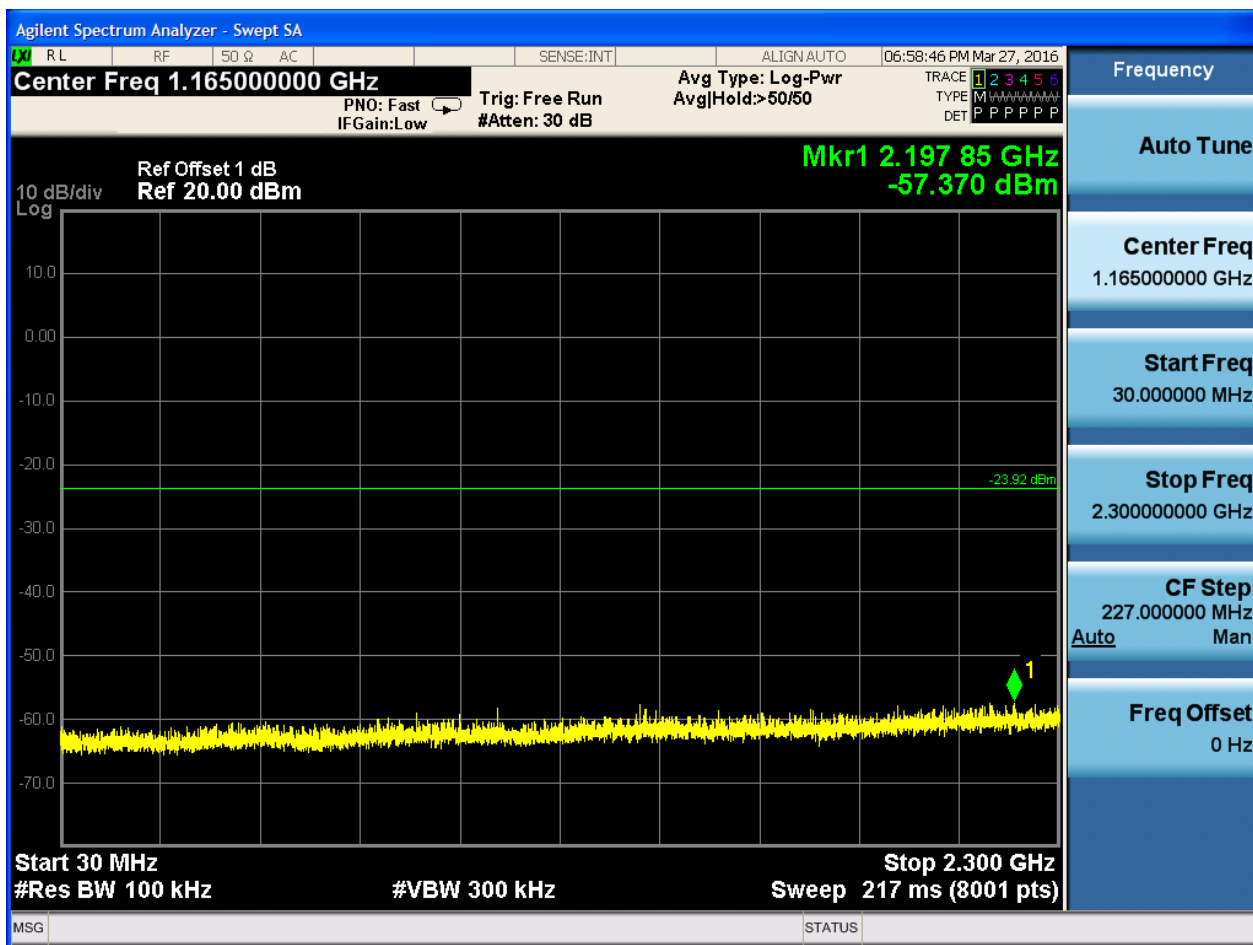


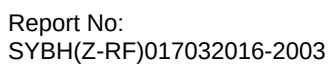


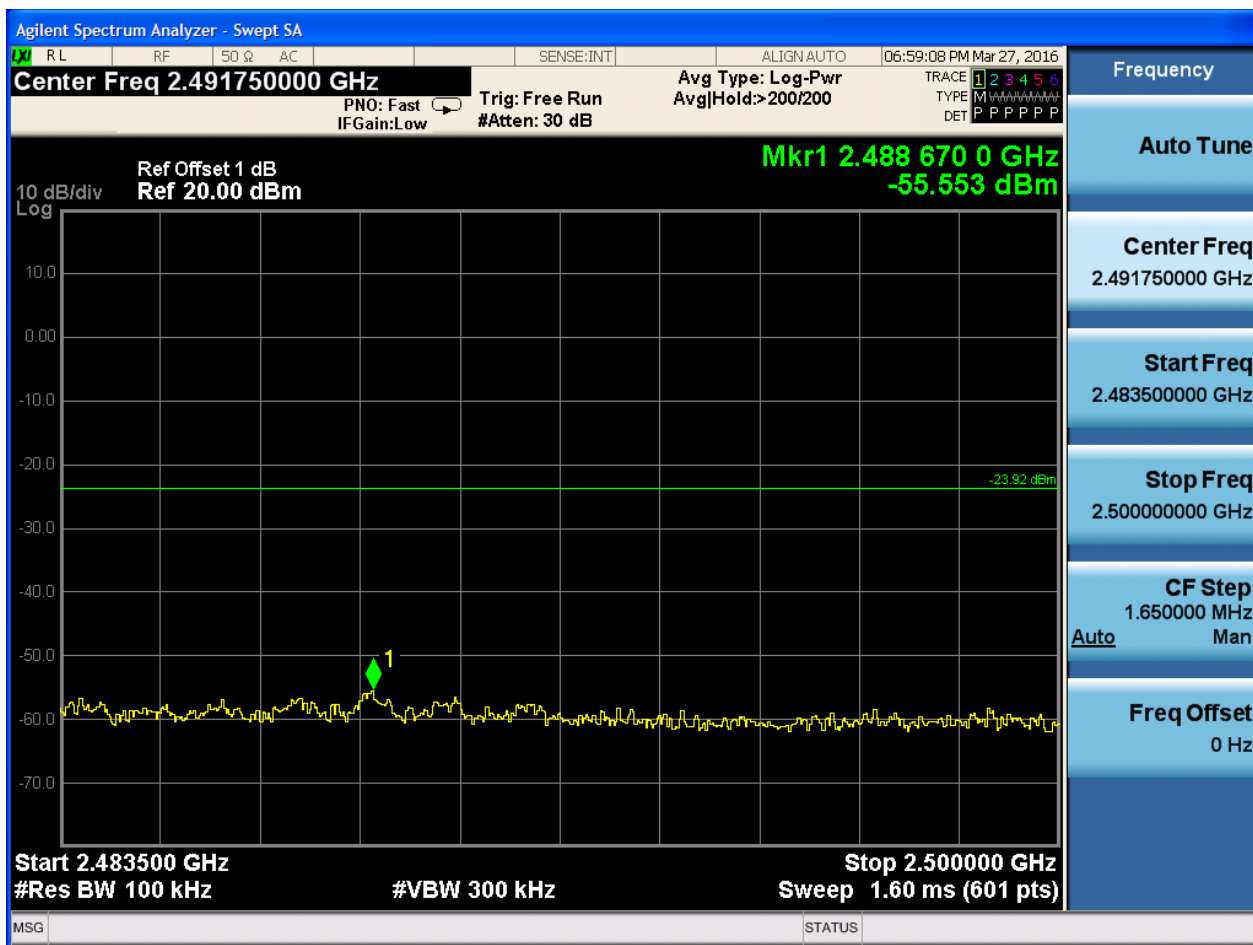
Puw:

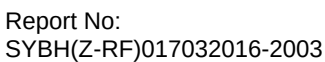












Appendix H: Radiated Spurious Emission & Spurious in Restricted Band

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

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

The simultaneous transmission has been considered

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

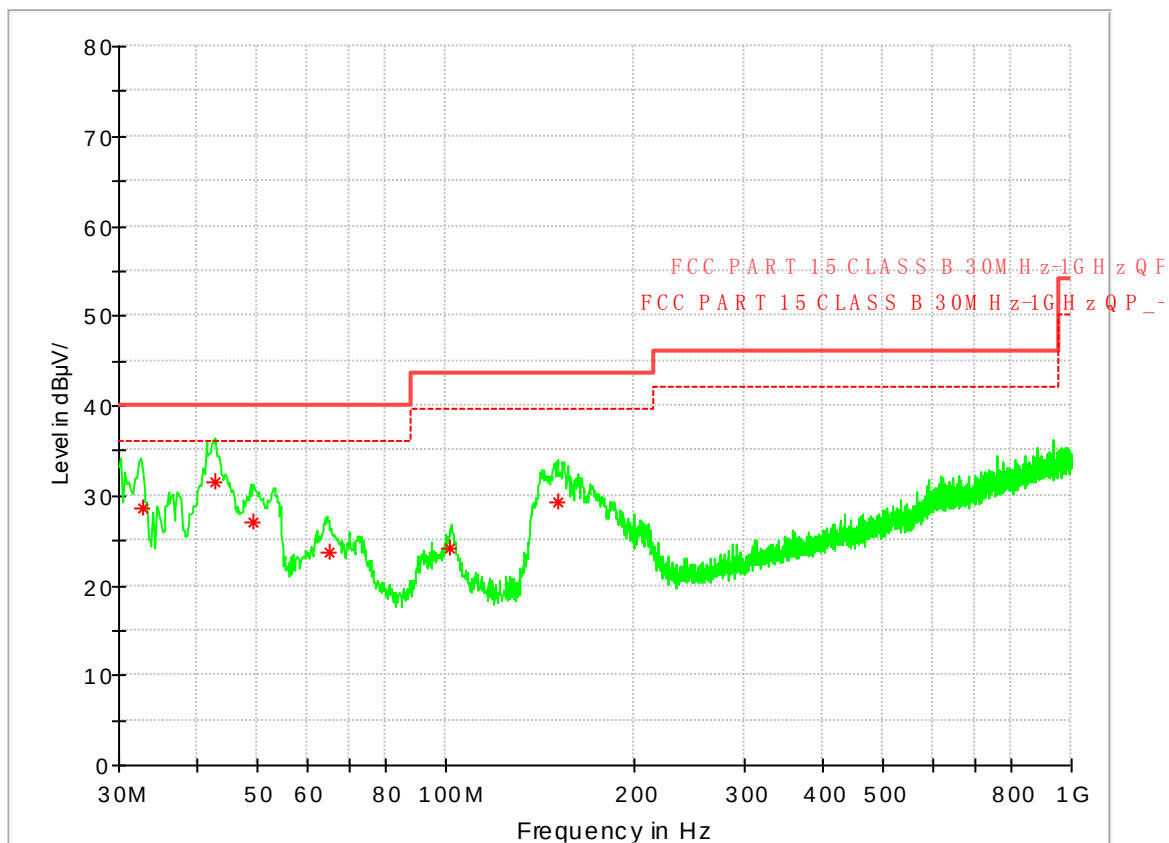
Part 1: Testing Range of “9 kHz to 30MHz”

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

Part 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).



Frequency	QuasiPeak	Limit	Margin	Height	Pol	Azimuth	Corr.
32.755680	28.55	40.00	-11.45	100.0	V	-7.0	14.9
42.681600	31.48	40.00	-8.52	106.0	V	267.0	15.2
49.215920	27.11	40.00	-12.89	107.0	V	116.0	14.8
65.028240	23.74	40.00	-16.26	200.0	V	287.0	11.6
101.749760	24.23	43.50	-19.27	142.0	V	313.0	13.5
150.781920	29.27	43.50	-14.23	100.0	V	205.0	9.9

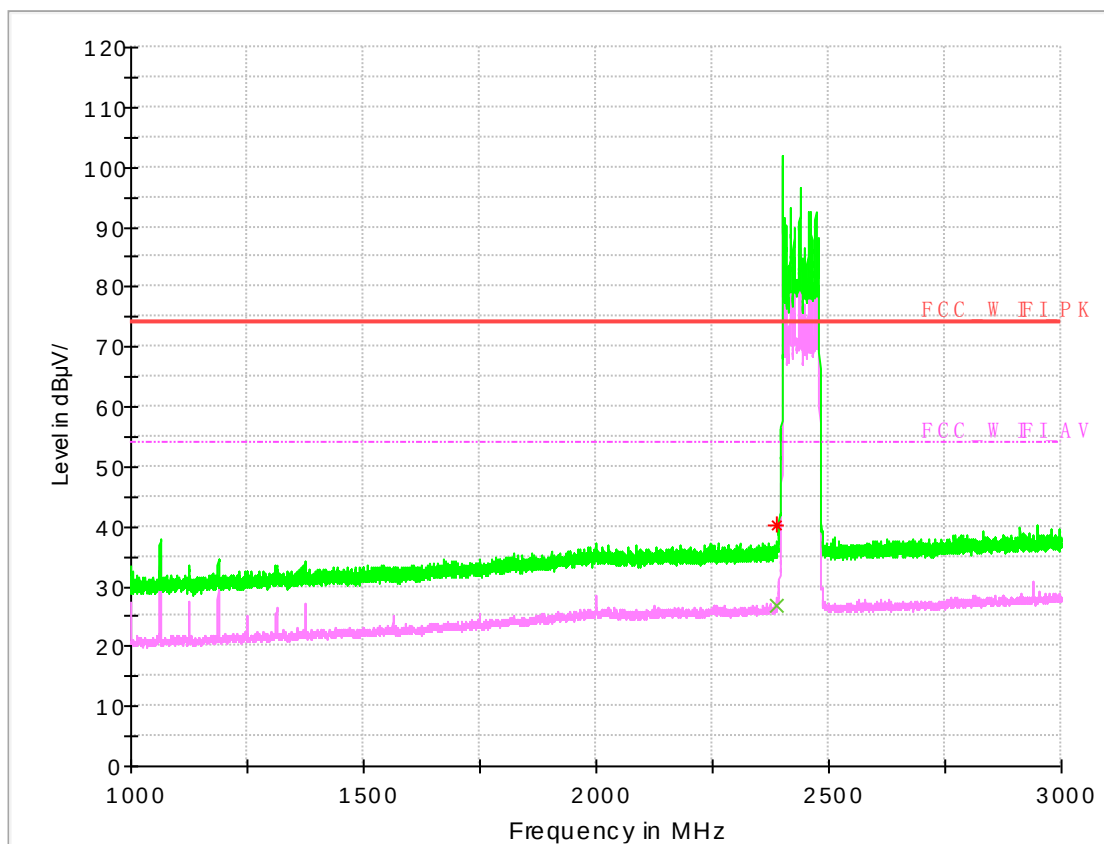
Part 3: Testing Range of “18 GHz to 26.5 GHz”

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

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

- Note 1: The testing range of “1 GHz to 3 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.

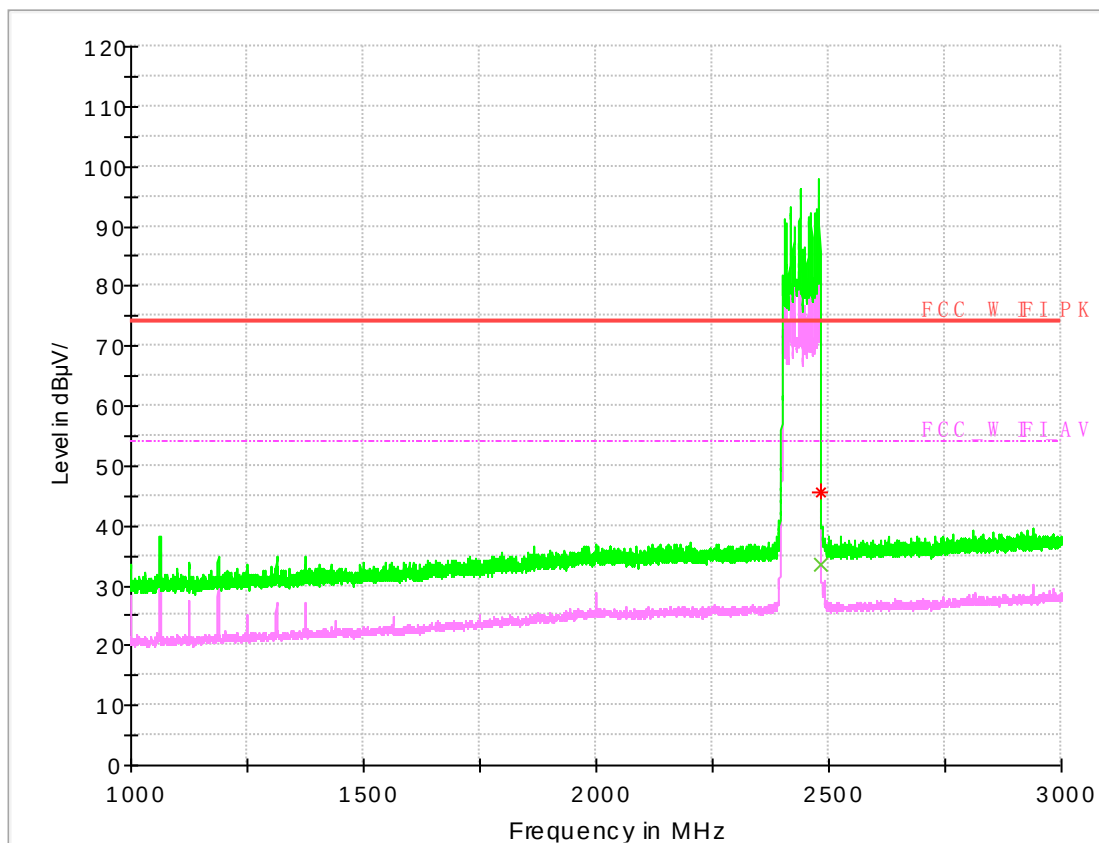
Channel 0



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

Frequency	MaxPeak	Average	Limit	Margin	Height	Pol	Azimuth	Corr.
2390.000000	---	26.81	54.00	-27.19	148.0	H	186.0	-7.8
2390.000000	40.32	---	74.00	-33.68	148.0	H	190.0	-7.8

Channel 39



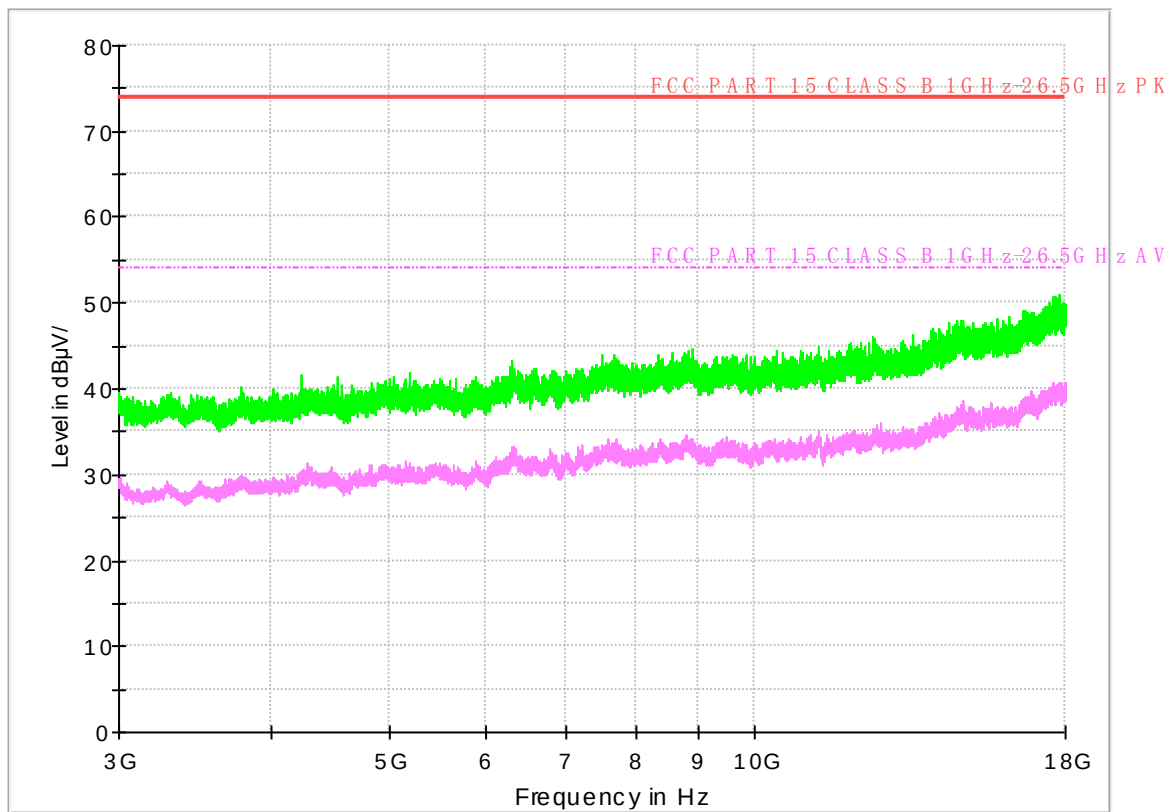
Note: The peak exceeds the limit line is carrier frequency.

Frequency	MaxPeak	Average	Limit	Margin	Height	Pol	Azimuth	Corr.
2483.500000	---	33.51	54.00	-20.49	107.0	H	186.0	-0.4
2483.500000	45.52	---	74.00	-28.48	252.0	V	132.0	-0.4

Part 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 “3 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 dB μ V/m) and Average Limit (54 dB μ V/m).

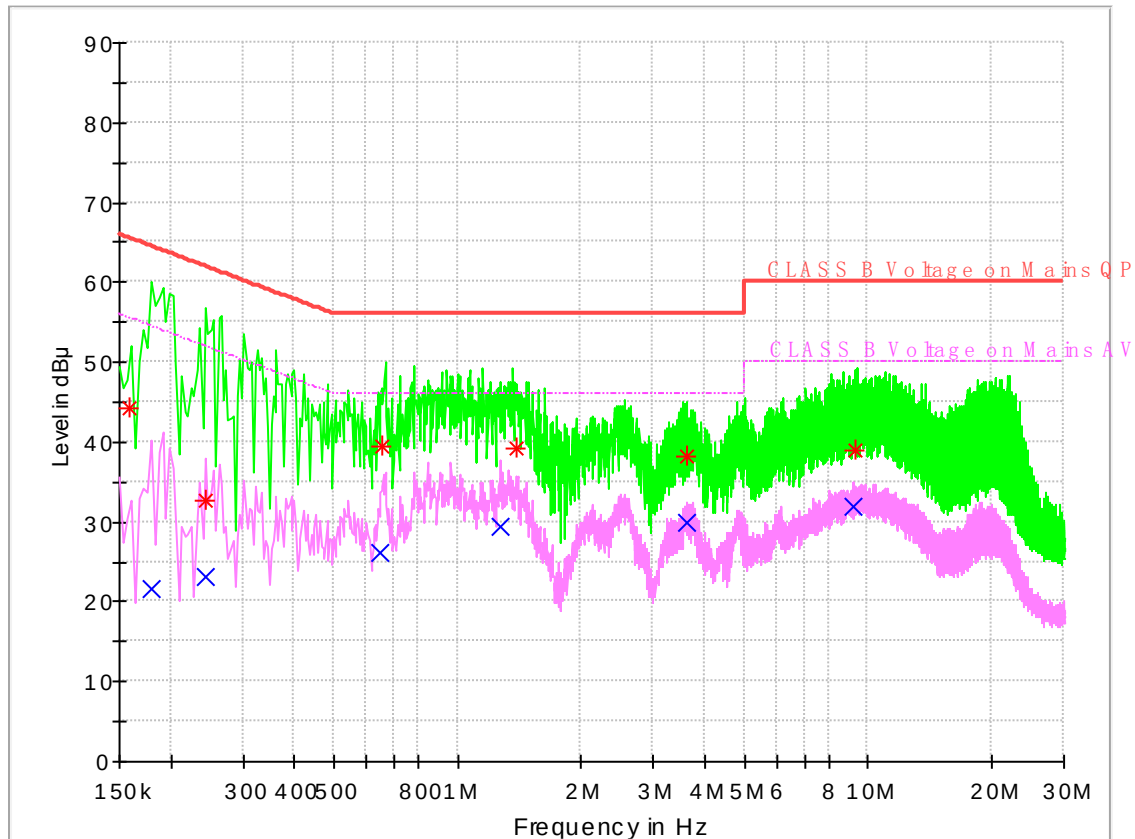
Full Spectrum



Appendix I: Conducted Emission at Power Port

Note: RBW =9 kHz, VBW = 30 kHz

Channel 39



Frequency	QuasiPeak	Average	Limit	Margin	Line	Filter	Corr.
0.158648	44.24	---	65.53	-21.29	N	ON	9.7
0.180528	---	21.64	54.46	-32.82	N	ON	9.7
0.242442	32.57	---	62.01	-29.45	N	ON	9.7
0.242559	---	23.25	52.01	-28.76	L1	ON	9.7
0.644189	---	26.18	46.00	-19.82	L1	ON	9.7
0.657378	39.40	---	56.00	-16.60	L1	ON	9.7
1.273504	---	29.47	46.00	-16.53	L1	ON	9.7
1.390445	39.13	---	56.00	-16.87	L1	ON	9.7
3.628054	38.13	---	56.00	-17.87	L1	ON	9.8
3.638294	---	29.84	46.00	-16.16	L1	ON	9.8
9.213373	---	31.93	50.00	-18.07	N	ON	9.9
9.339348	38.92	---	60.00	-21.08	N	ON	9.9

END