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]	Ant	DTS6dBBW[MHz]	Verdict
TM1_Ch0_L	L	2402	Ant 1	0.7	pass
TM1_Ch19_M	M	2440	Ant 1	0.69	pass
TM1_Ch39_H	H	2480	Ant 1	0.7	pass
TM2_Ch0_L	L	2402	Ant 1	1.24	pass
TM2_Ch19_M	M	2440	Ant 1	1.24	pass
TM2_Ch39_H	H	2480	Ant 1	1.24	pass

Part II - Test Plots

2.1 TM1_Ch0_L

2.2 TM1_Ch19_M

2.3 TM1_Ch39_H

2.4 TM2_Ch0_L

2.5 TM2_Ch19_M

2.6 TM2_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]	Ant	Occupied Bandwidth [MHz]	Verdict
TM1_Ch0_L	L	2402	Ant 1	1.03	pass
TM1_Ch19_M	M	2440	Ant 1	1.03	pass
TM1_Ch39_H	H	2480	Ant 1	1.03	pass
TM2_Ch0_L	L	2402	Ant 1	2.06	pass
TM2_Ch19_M	M	2440	Ant 1	2.05	pass
TM2_Ch39_H	H	2480	Ant 1	2.06	pass

Part II - Test Plots

2.1 TM1_Ch0_L

2.2 TM1_Ch19_M

2.3 TM1_Ch39_H

2.4 TM2_Ch0_L

2.5 TM2_Ch19_M

2.6 TM2_Ch39_H

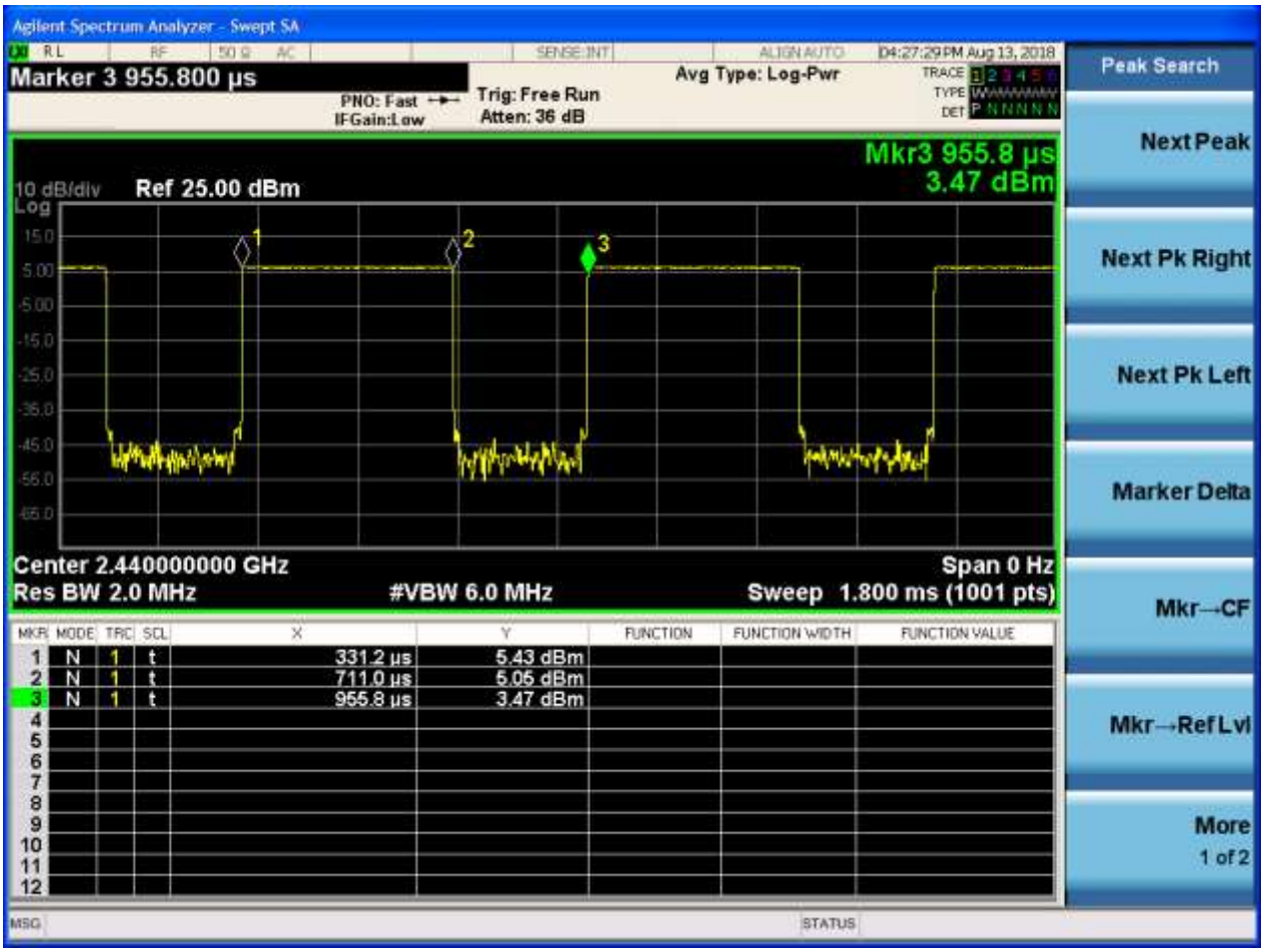
Appendix C: Duty Cycle

Part I - Test Results

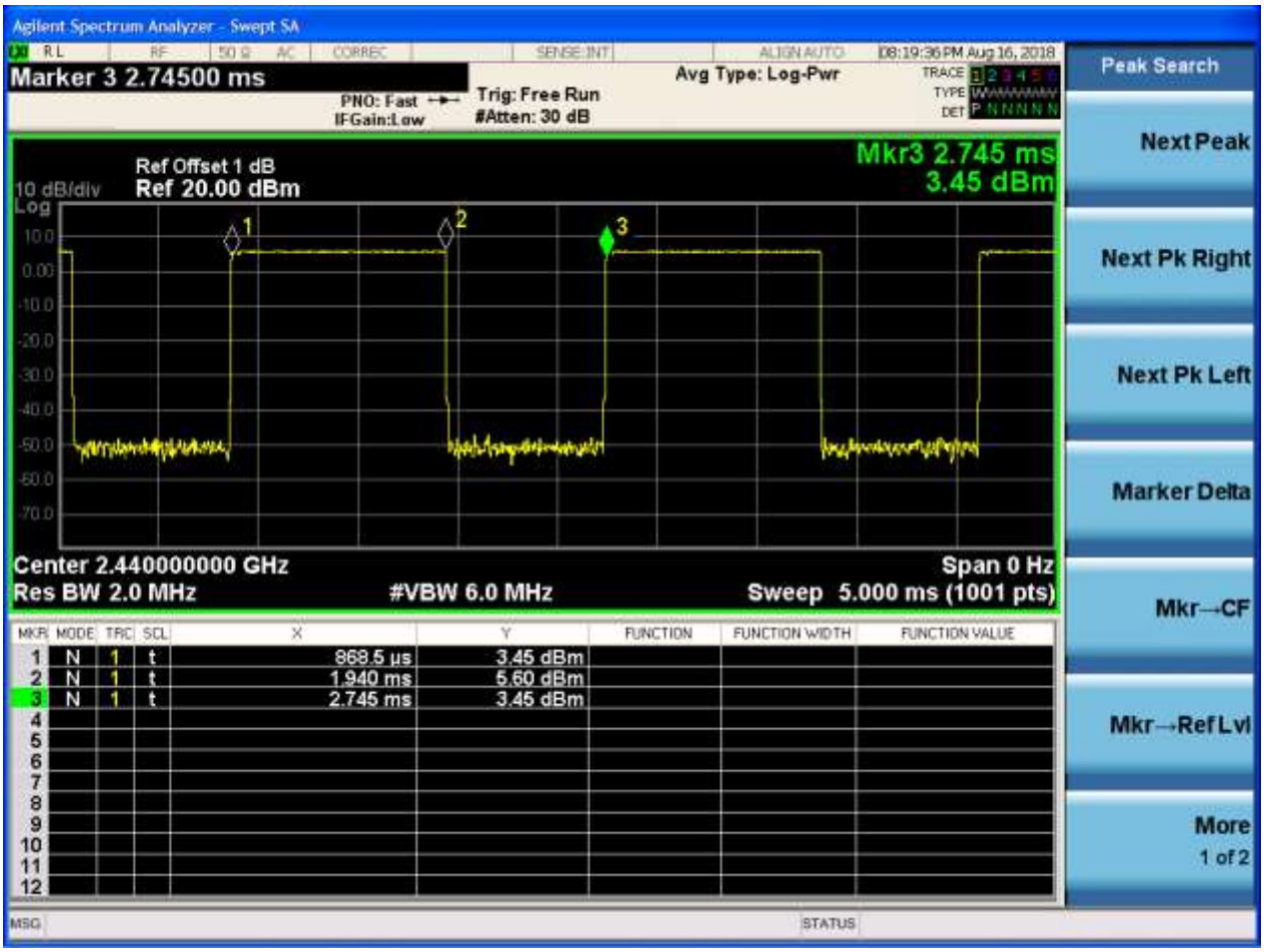
Test Mode	TX Freq. [MHz]	Duty cycle [%]
TM1	CH0,CH19,CH39	60.8
TM2	CH0,CH19,CH39	57.1

Part II - Test Plots

2.1 TM1



2.2 TM2



Appendix D: Maximum Conducted Average Output Power

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Duty Cycle [%]	Power[dBm]	EIRP[dBm]	Verdict
TM1_Ch0_L	L	2402	60.8	5.94	4.75	pass
TM1_Ch19_M	M	2440	60.8	7.05	5.86	pass
TM1_Ch39_H	H	2480	60.8	5.93	4.74	pass
TM2_Ch0_L	L	2402	50.7	4.57	3.38	pass
TM2_Ch19_M	M	2440	50.7	5.58	4.39	pass
TM2_Ch39_H	H	2480	50.7	4.9	3.71	pass

Part II - Test Plots

2.1 TM1_Ch0_L

2.2 TM1_Ch19_M

2.3 TM1_Ch39_H

2.4 TM1_Ch0_L

2.5 TM1_Ch19_M

2.6 TM1_Ch39_H

Appendix E: Maximum Power Spectral Density Level

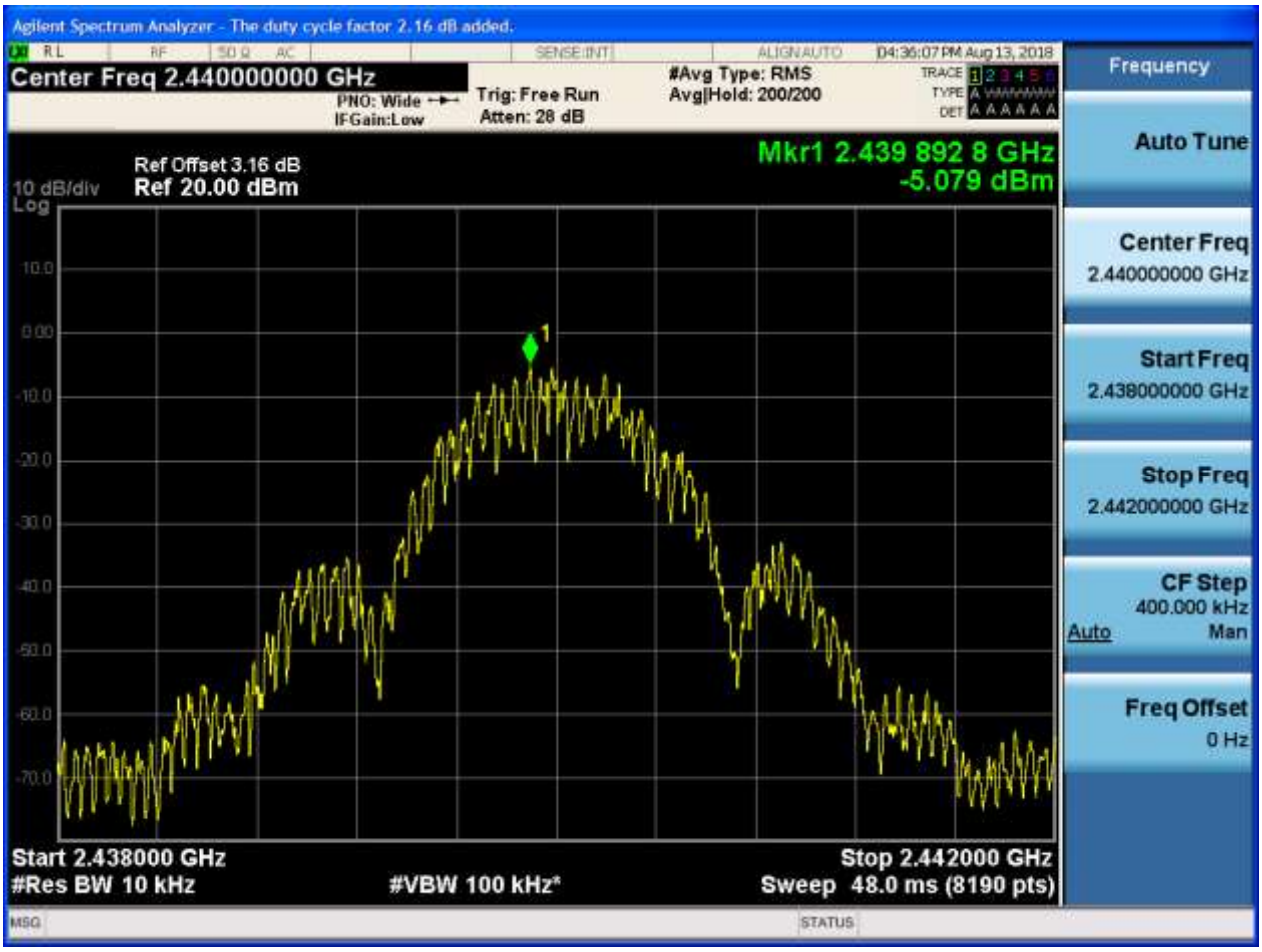
Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Duty Cycle [%]	PD[MHz]	Verdict
TM1_Ch0_L	L	2402	60.8	-5.68	pass
TM1_Ch19_M	M	2440	60.8	-5.08	pass
TM1_Ch39_H	H	2480	60.8	-8.5	pass
TM2_Ch0_L	L	2402	57.1	-13.35	pass
TM2_Ch19_M	M	2440	57.1	-12.57	pass
TM2_Ch39_H	H	2480	57.1	-13.8	pass

Part II - Test Plots

2.1 TM1_Ch0_L

2.2 TM1_Ch19_M



2.3 TM1_Ch39_H

2.4 TM2_Ch0_L

2.5 TM2_Ch19_M

2.6 TM2_Ch39_H

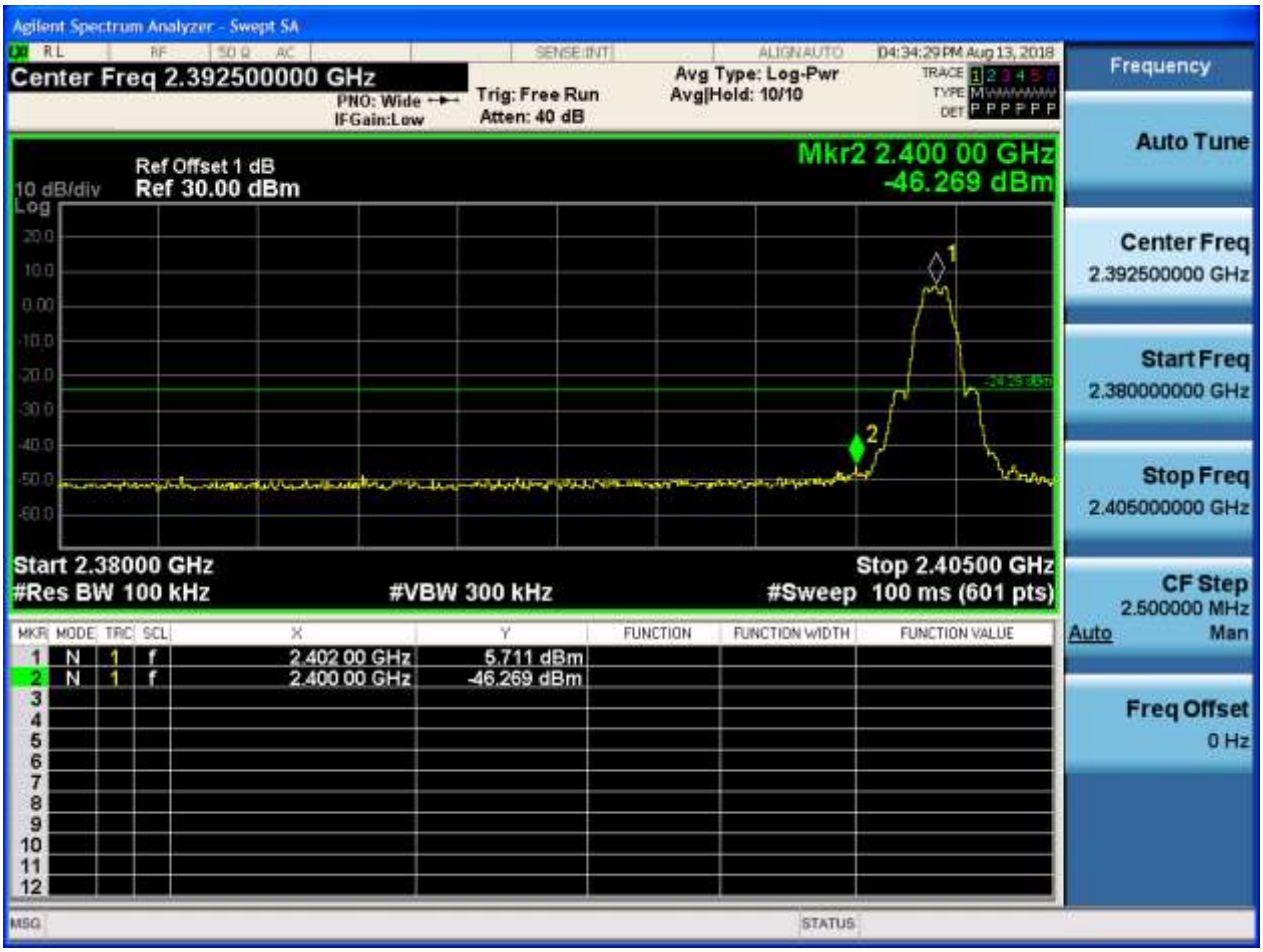
Appendix F: Band Edges Compliance

Part I - Test Results

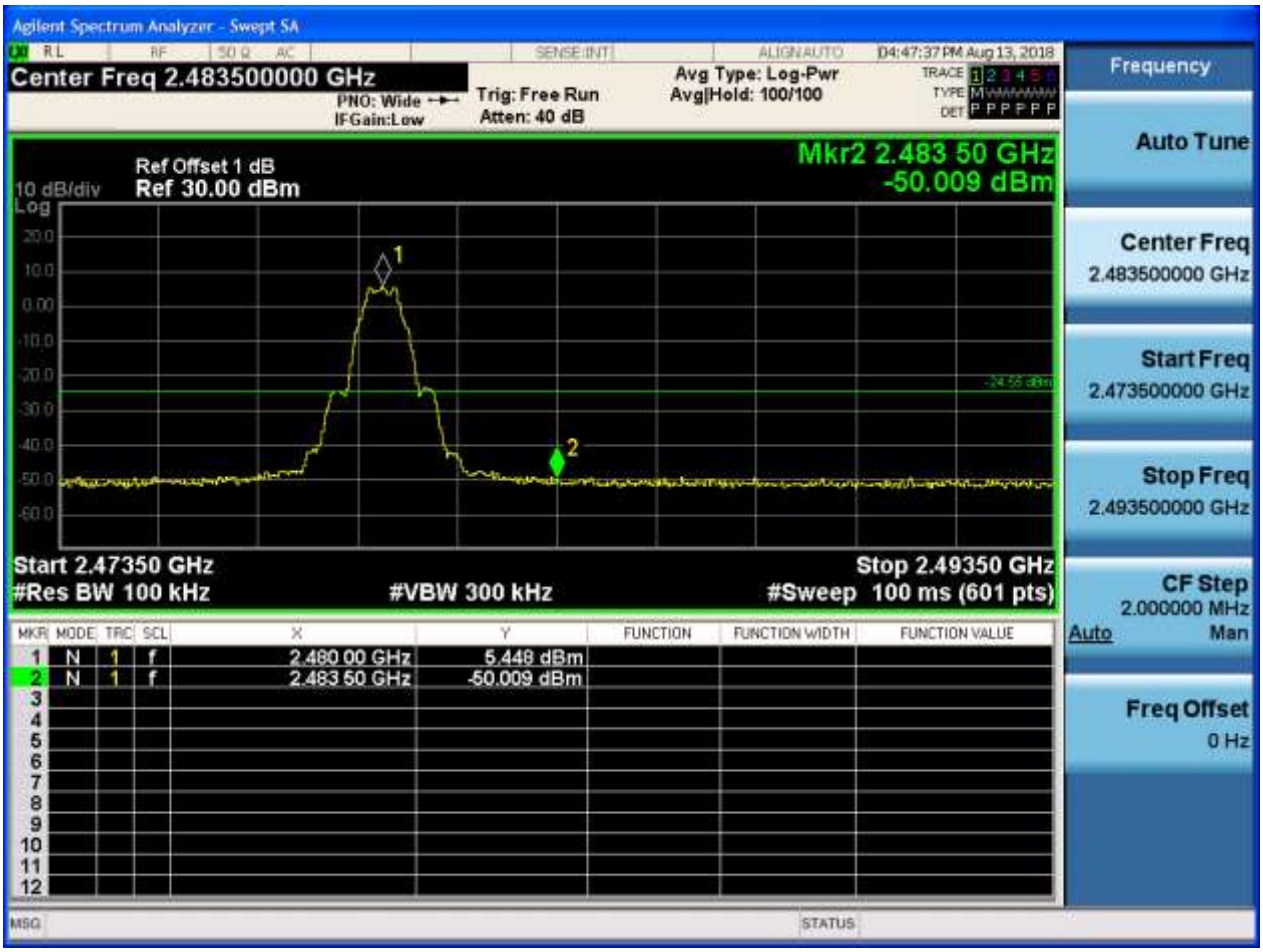
Test Mode	Test Channel	Frequency[MHz]	Ant	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
TM1_Ch0_L	L	2402	Ant 1	5.71	-46.27	pass
TM1_Ch39_H	H	2480	Ant 1	5.45	-50.01	pass
TM2_Ch0_L	L	2402	Ant 1	3.56	-28.37	pass
TM1_Ch39_H	H	2480	Ant 1	3.75	-48.72	pass

Part II - Test Plots

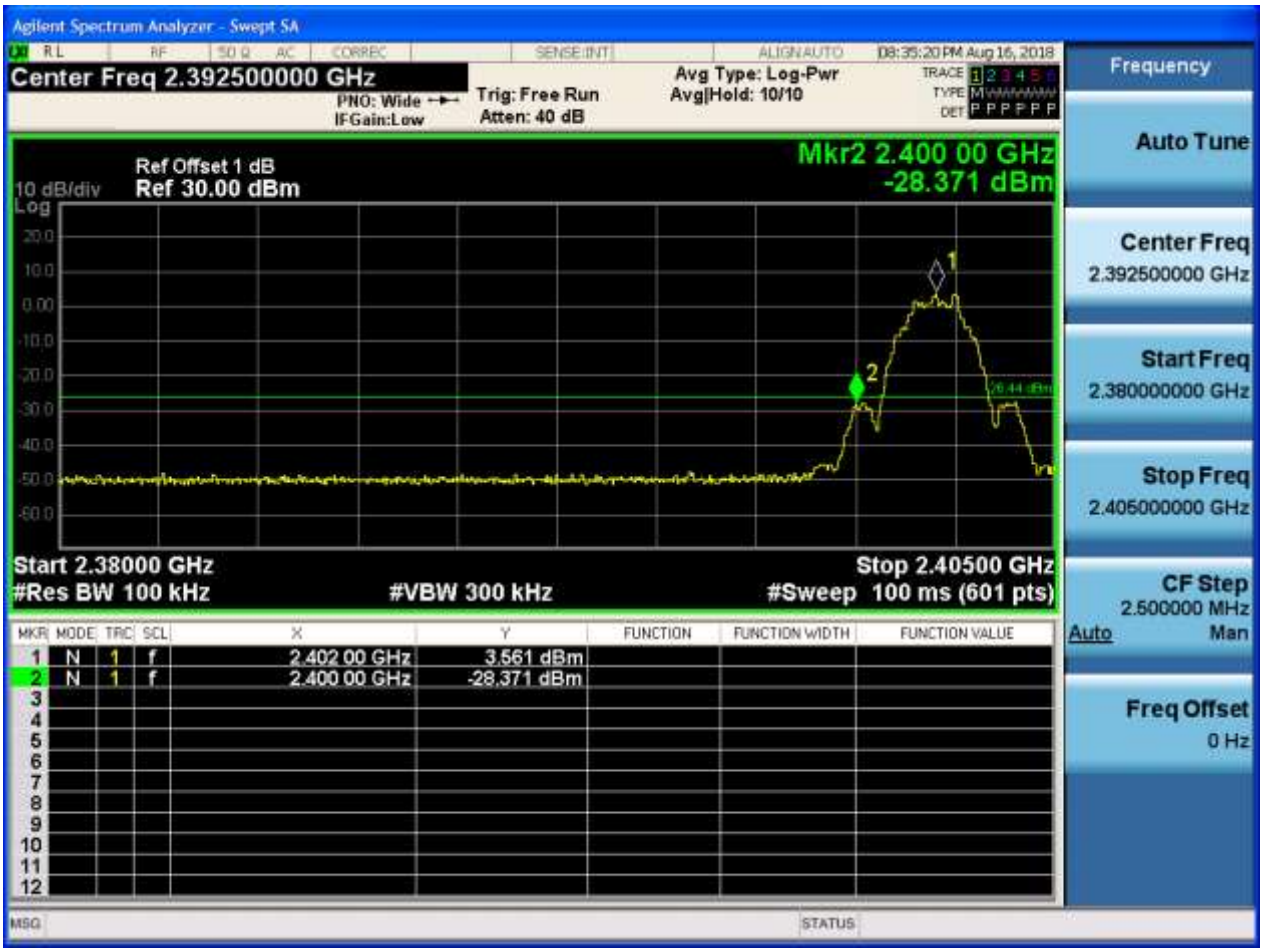
2.1 TM1_Ch0_L



2.2 TM1_Ch39_H



2.3 TM2_Ch0_L



2.4 TM2_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" referrers 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 x lg(100 [kHz]/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

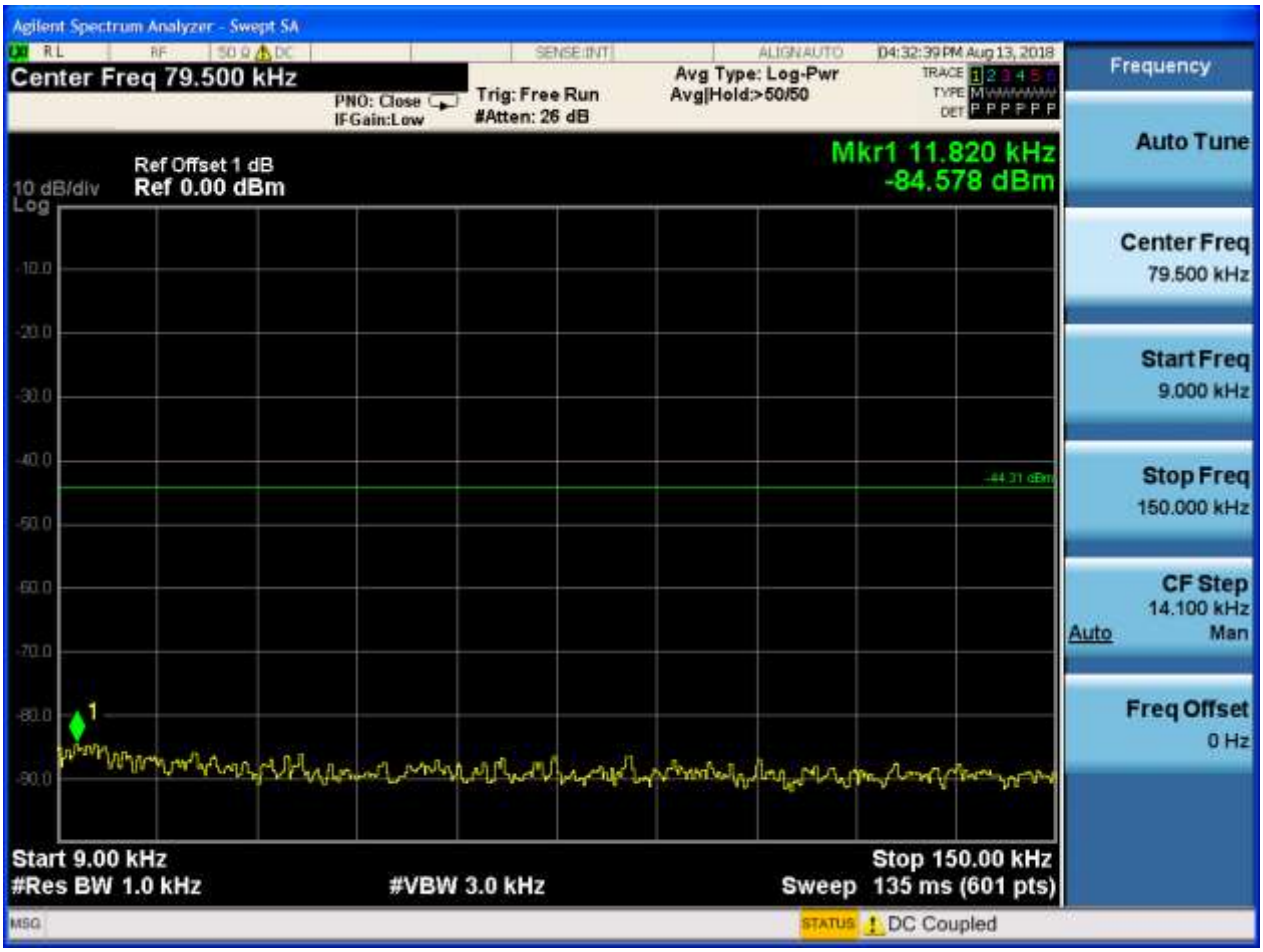
Test Mode	Test Channel	Frequency[MHz]	Ant	Pref[dBm]	Puw[dBm]	Verdict
TM1_Ch0_L	L	2402	Ant 1	5.69	<limit	pass
TM1_Ch19_M	M	2440	Ant 1	6.58	<limit	pass
TM1_Ch39_H	H	2480	Ant 1	5.4	<limit	pass
TM2_Ch0_L	L	2402	Ant 1	3.5	<limit	pass
TM2_Ch19_M	M	2440	Ant 1	4.41	<limit	pass
TM2_Ch39_H	H	2480	Ant 1	3.75	<limit	pass

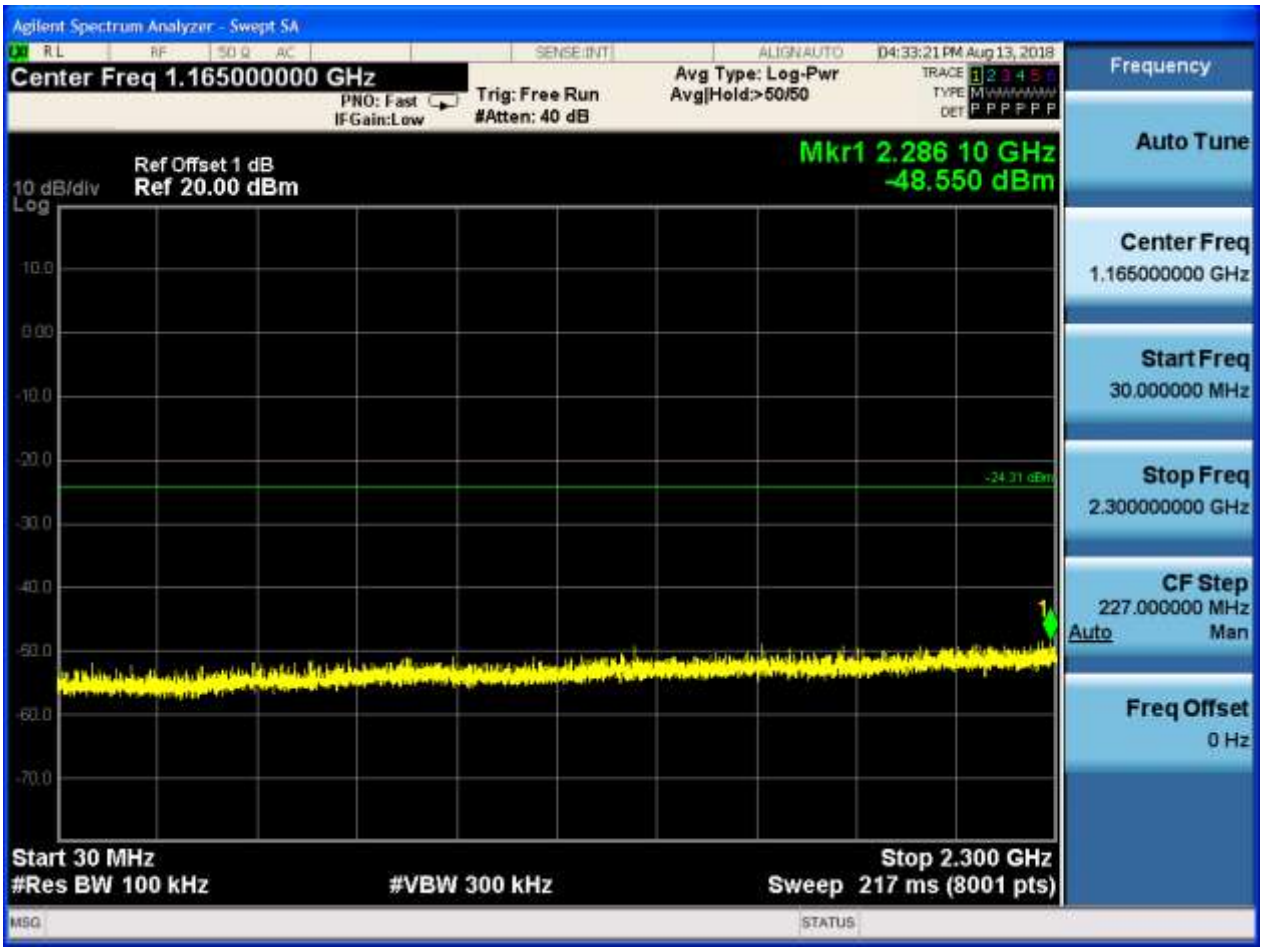
Part II - Test Plots

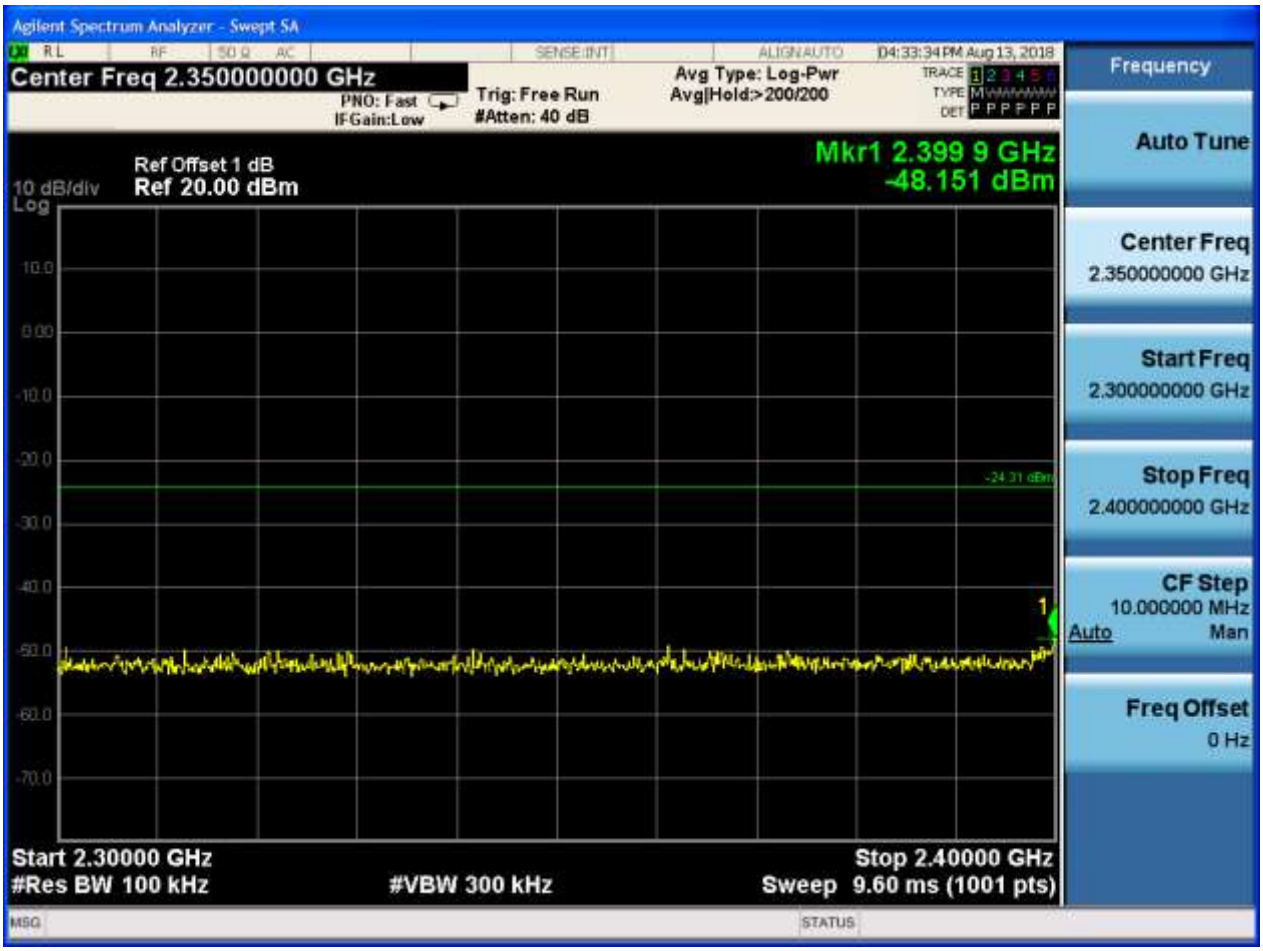
2.1 TM1_Ch0_L

Pref:

Puw:



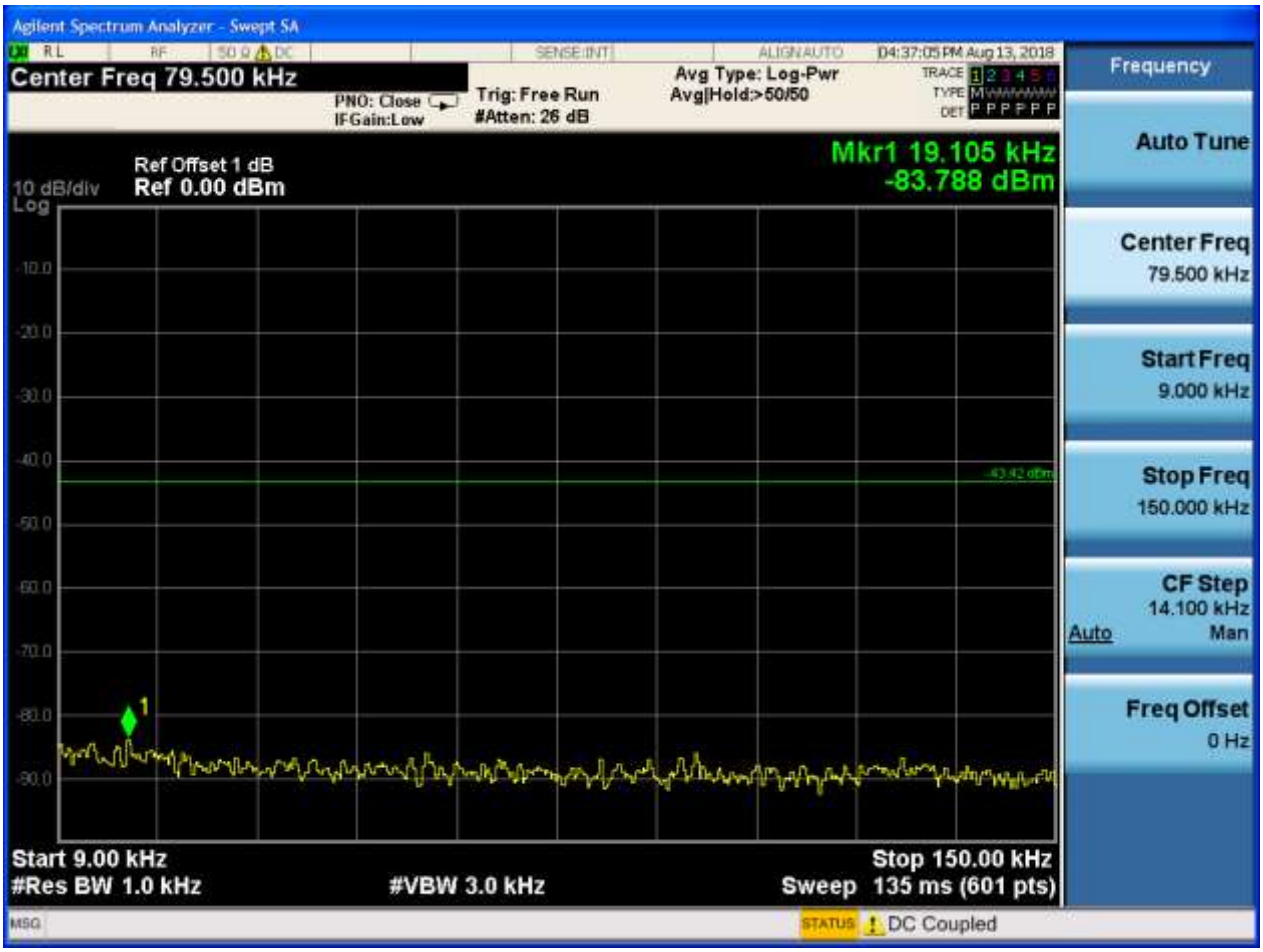


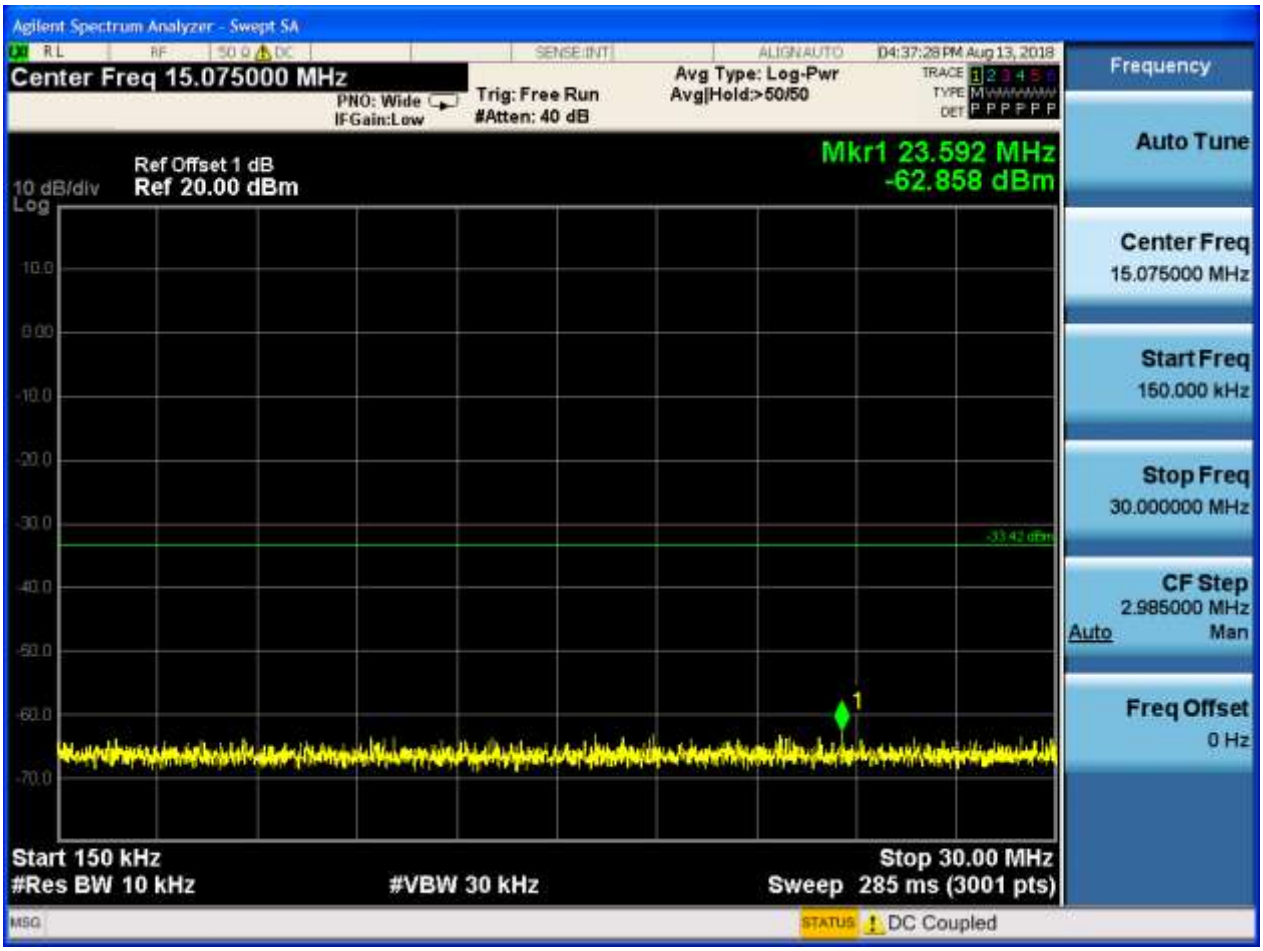


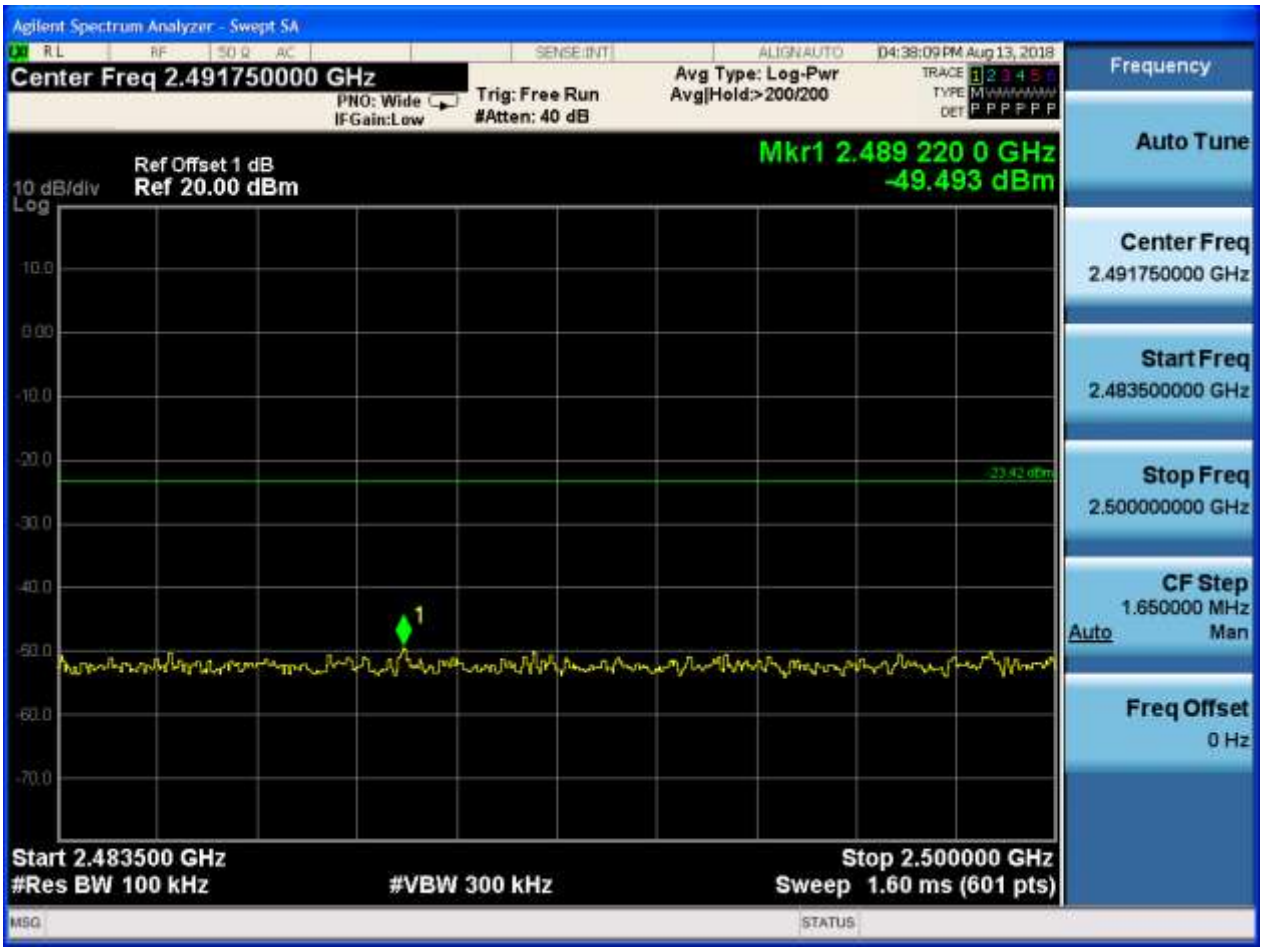
2.2 TM1_Ch19_M

Pref:

Puw:



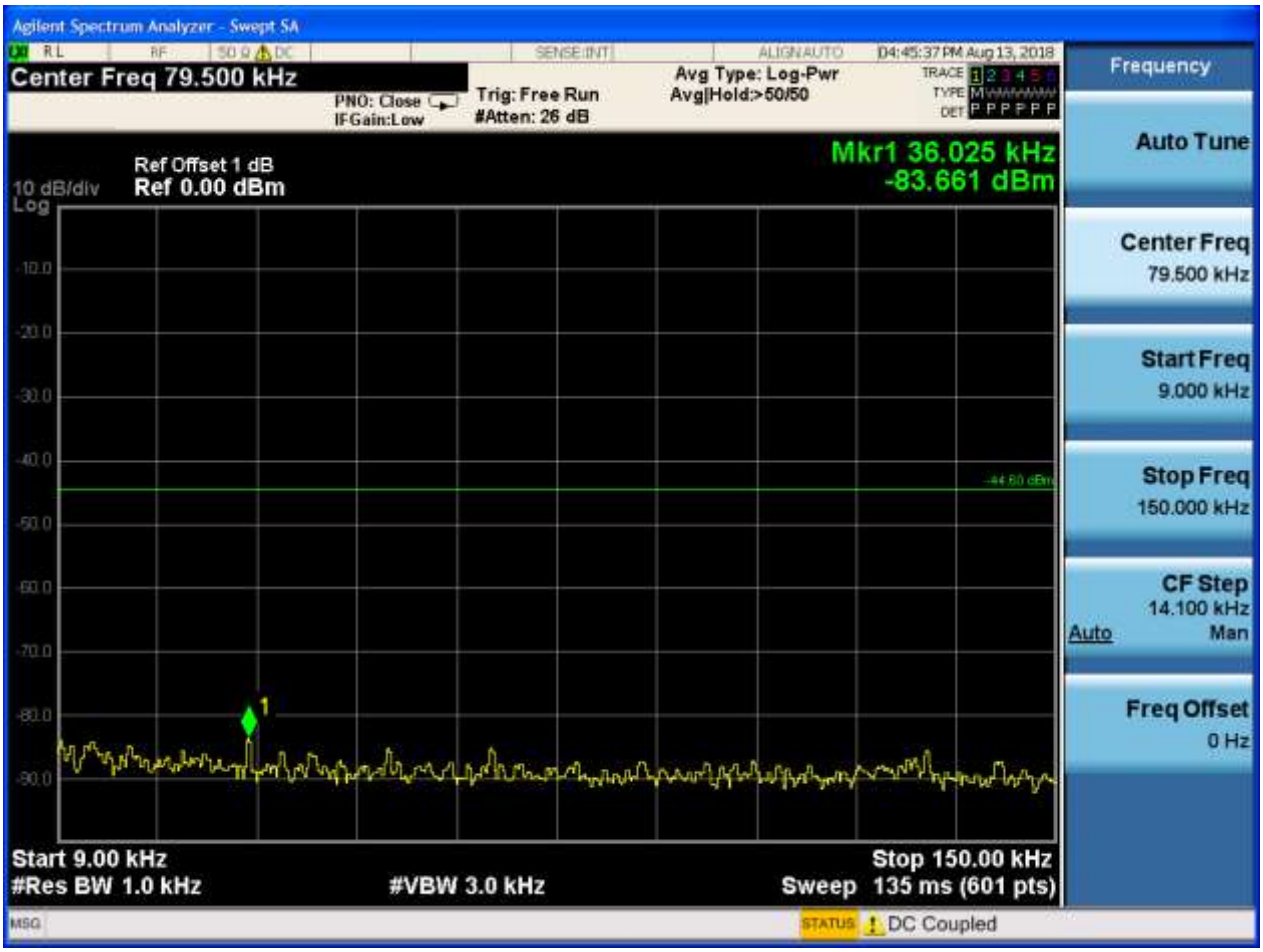




2.3 TM1_Ch39_H

Pref:

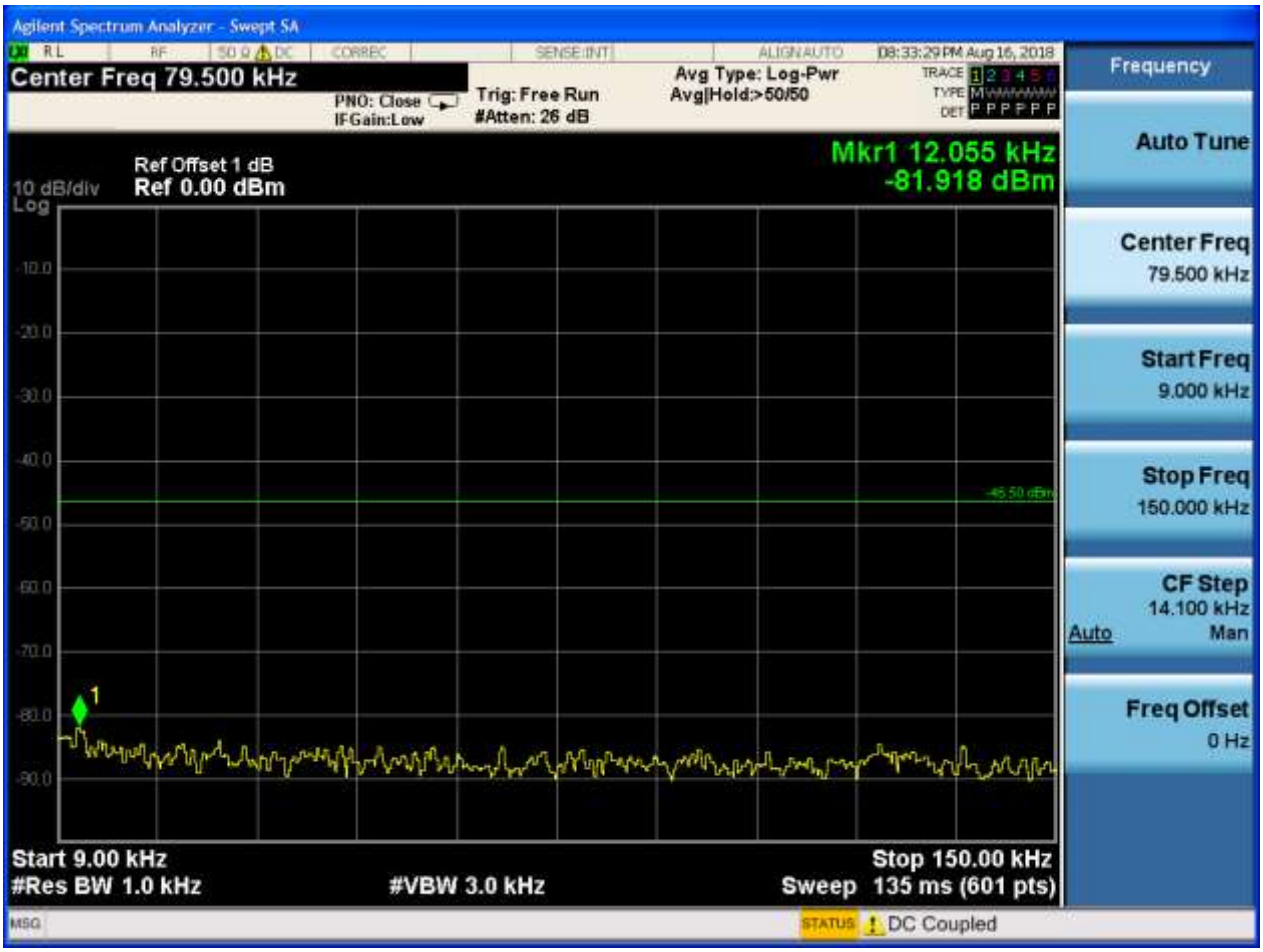
Puw:

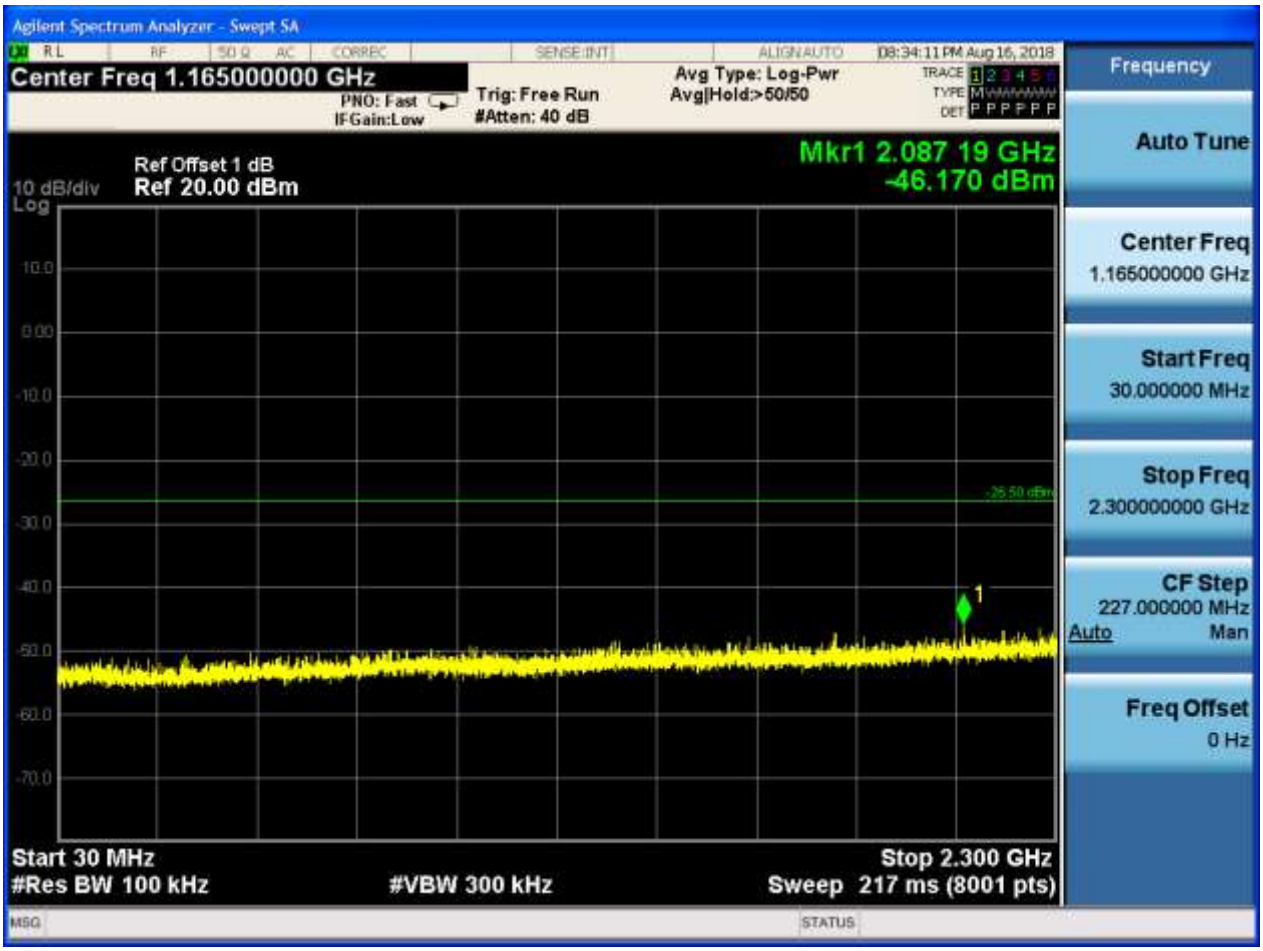


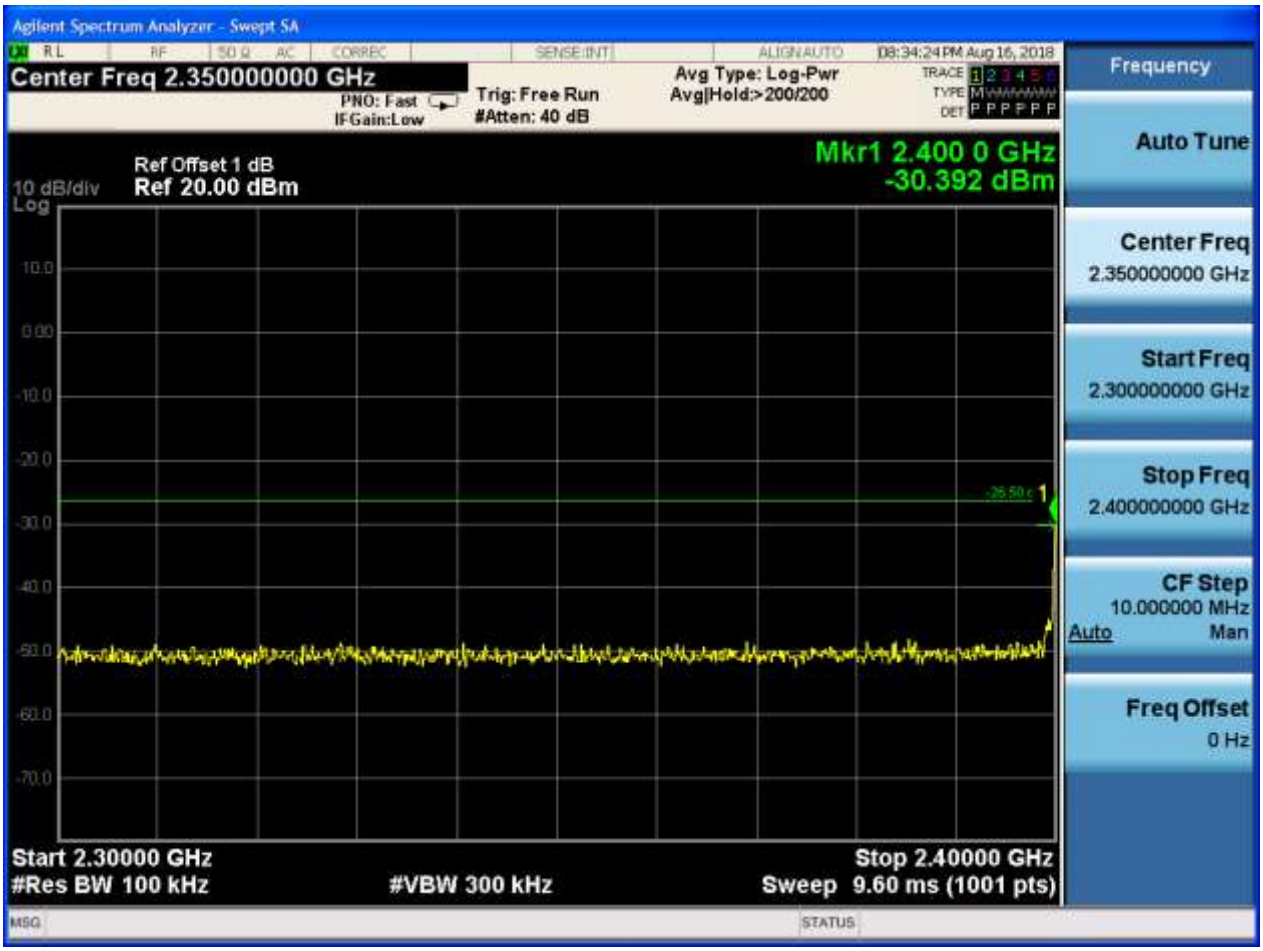
2.4 TM2_Ch0_L

Pref:

Puw:



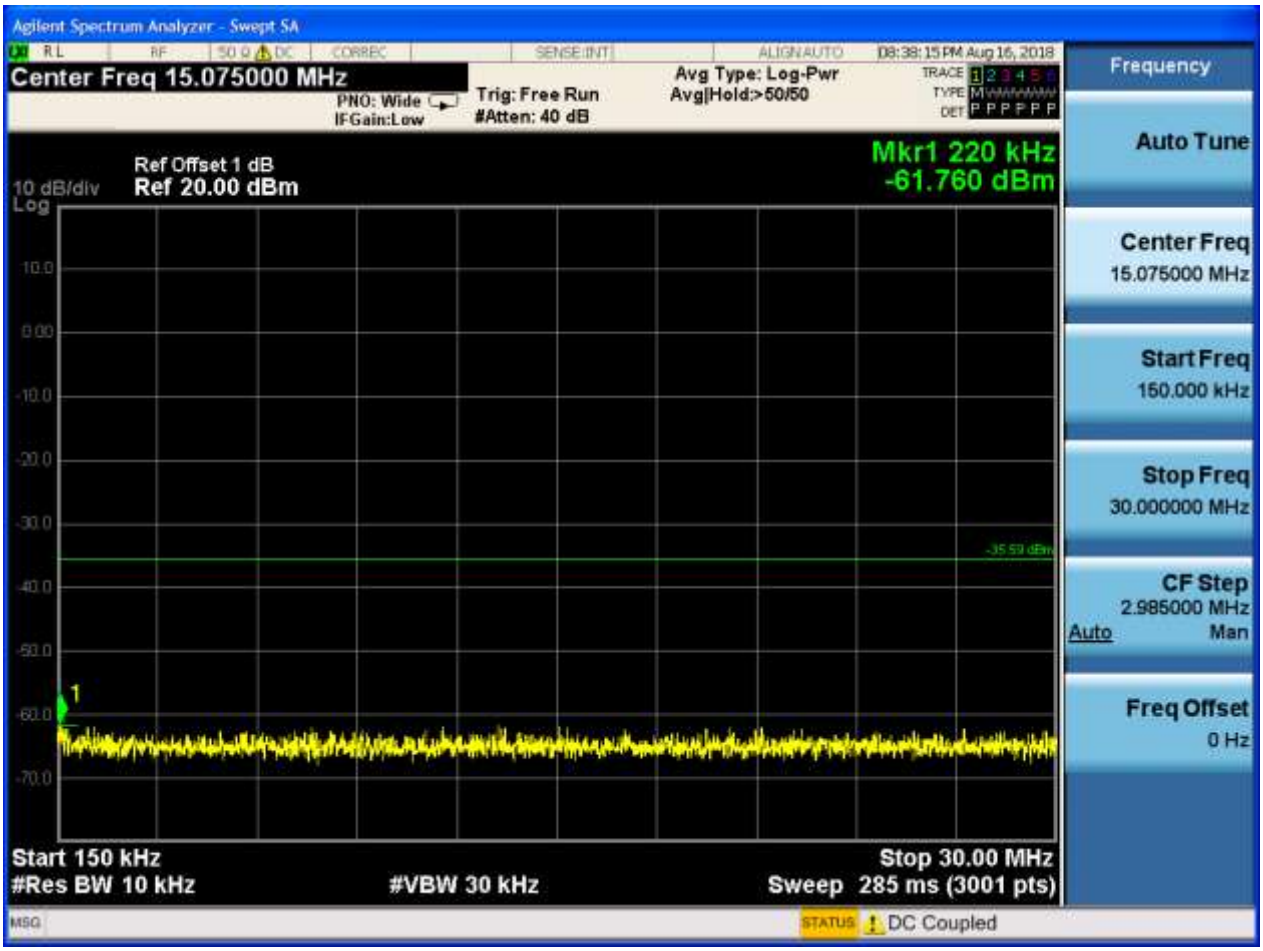


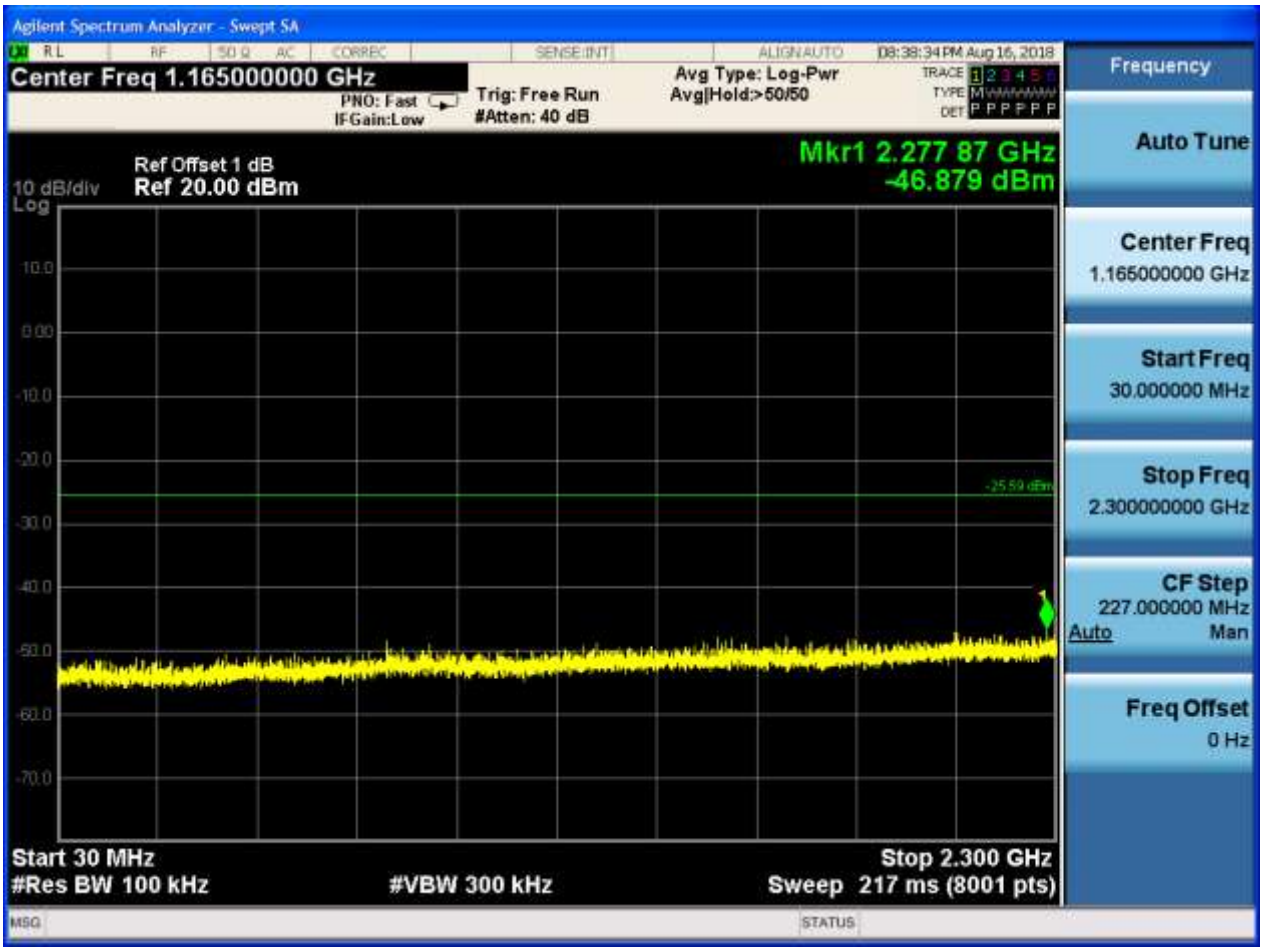


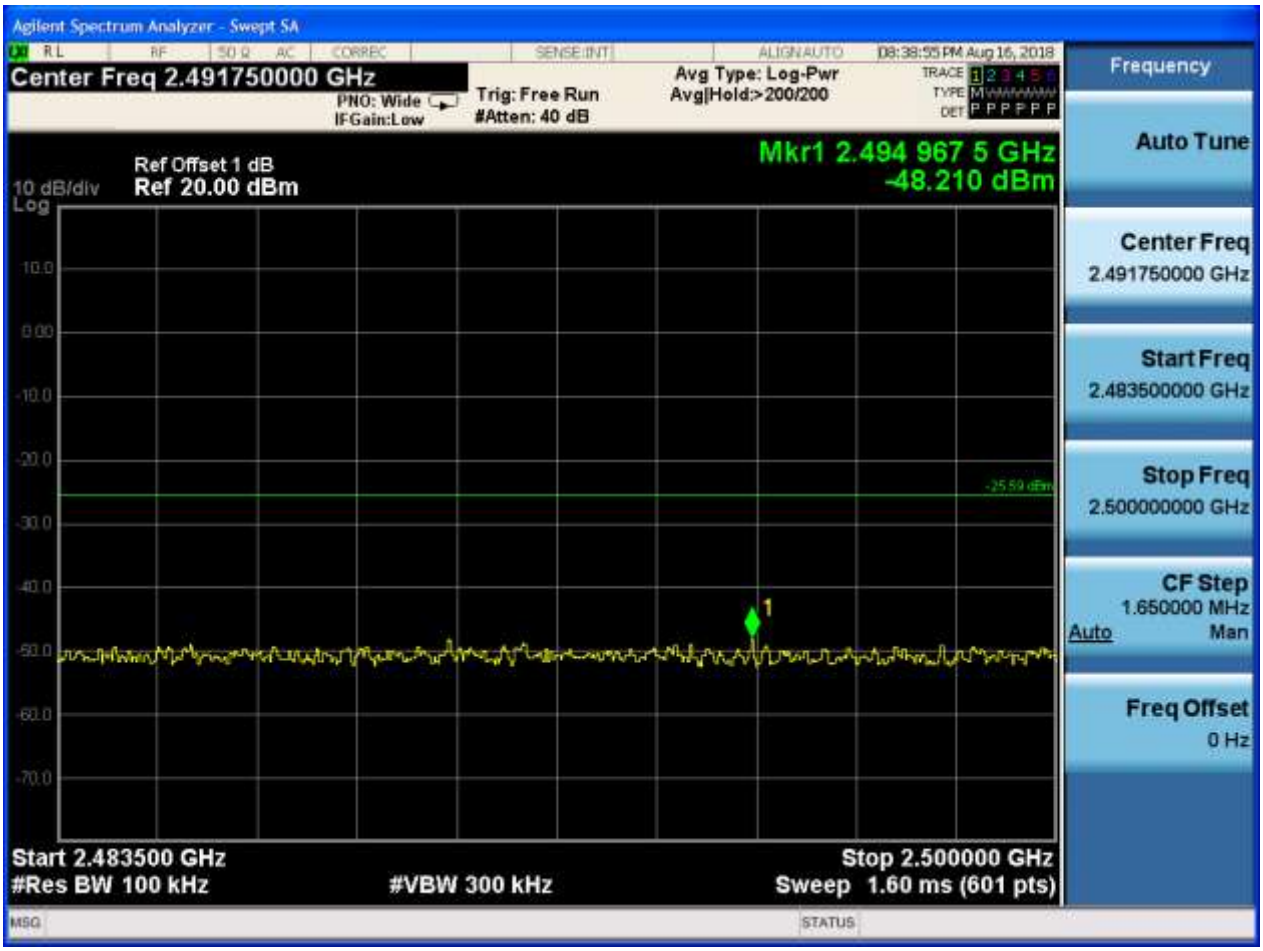
2.5 TM2_Ch19_M

Pref:

Puw:



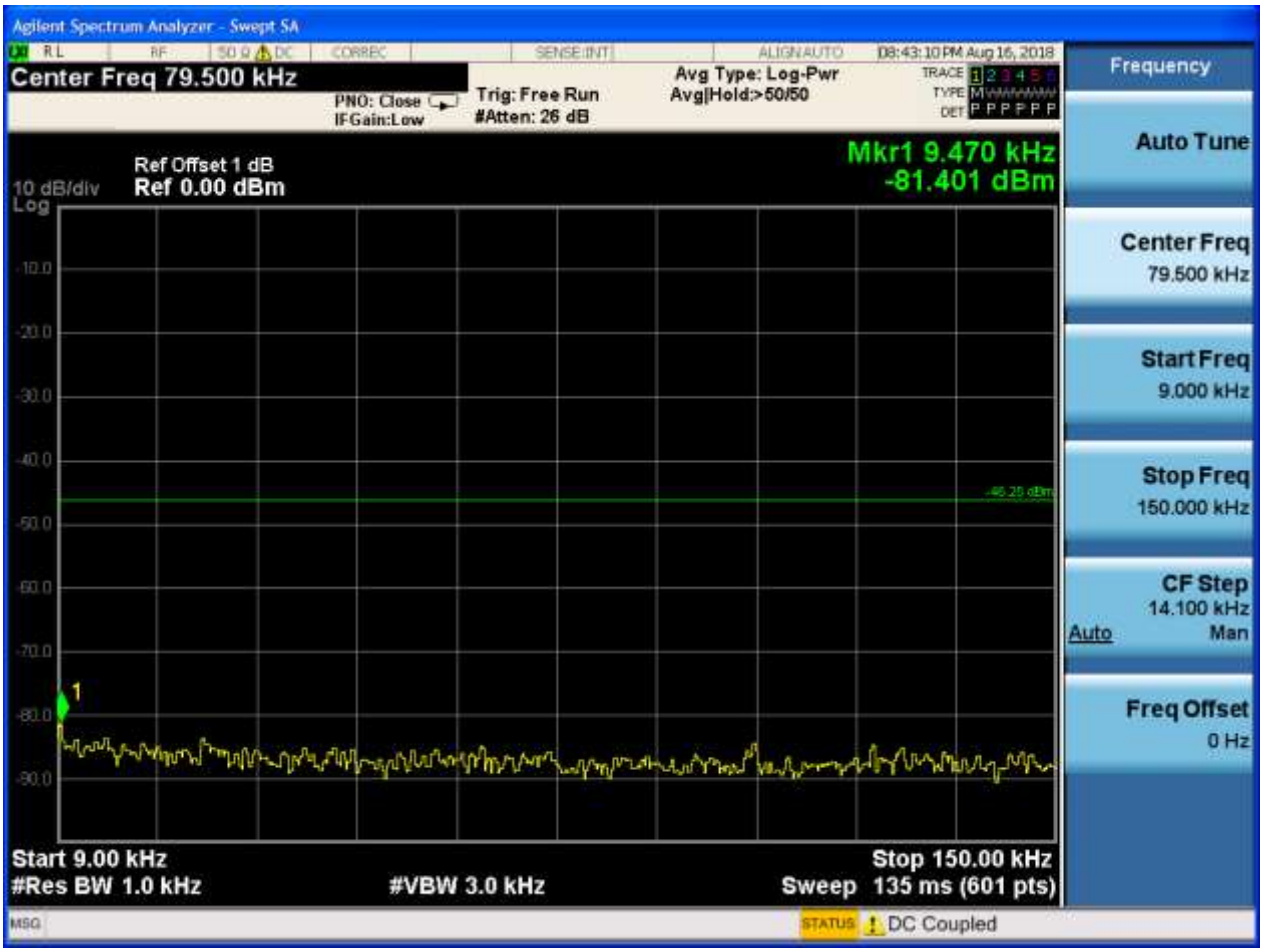


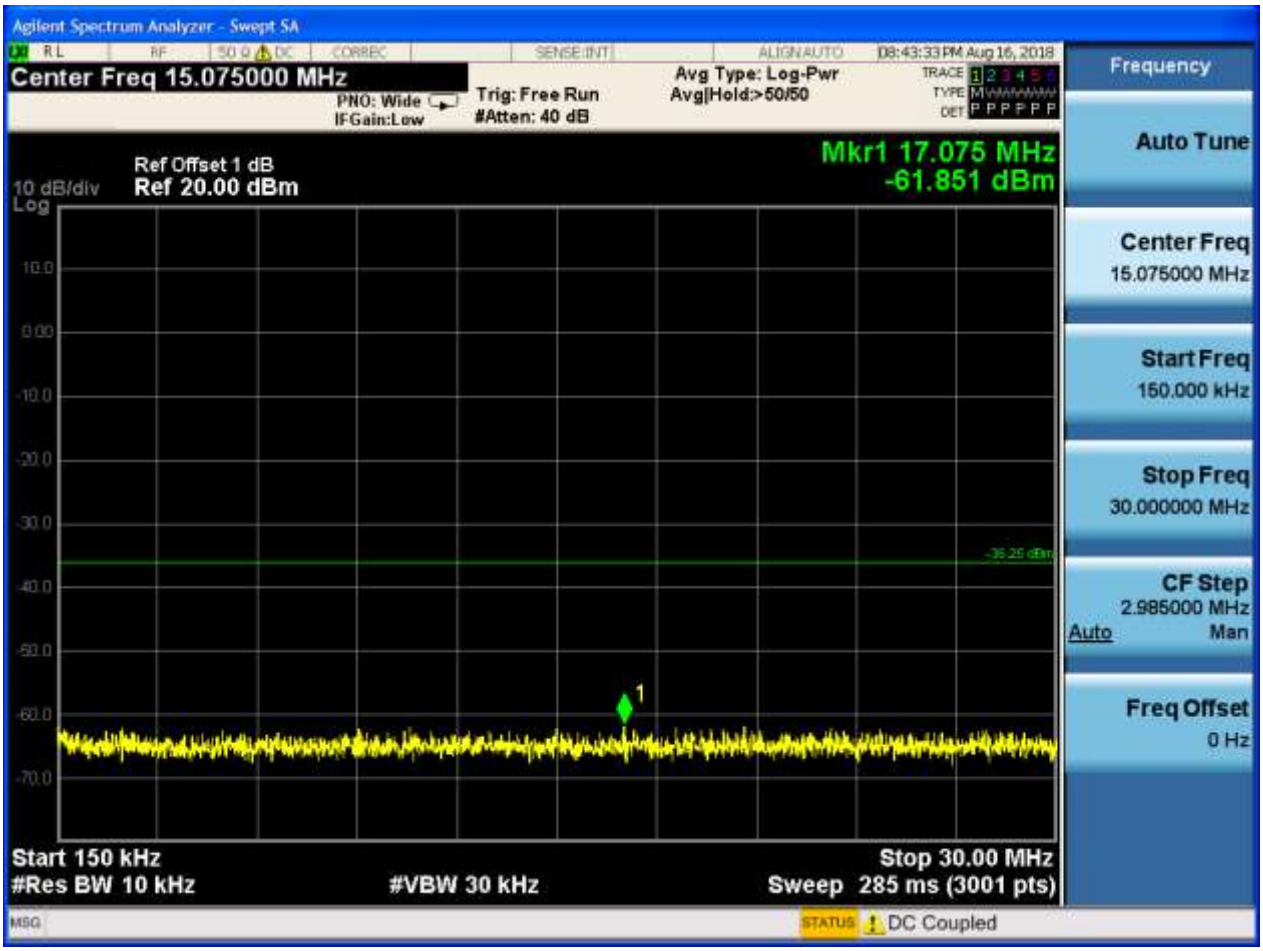


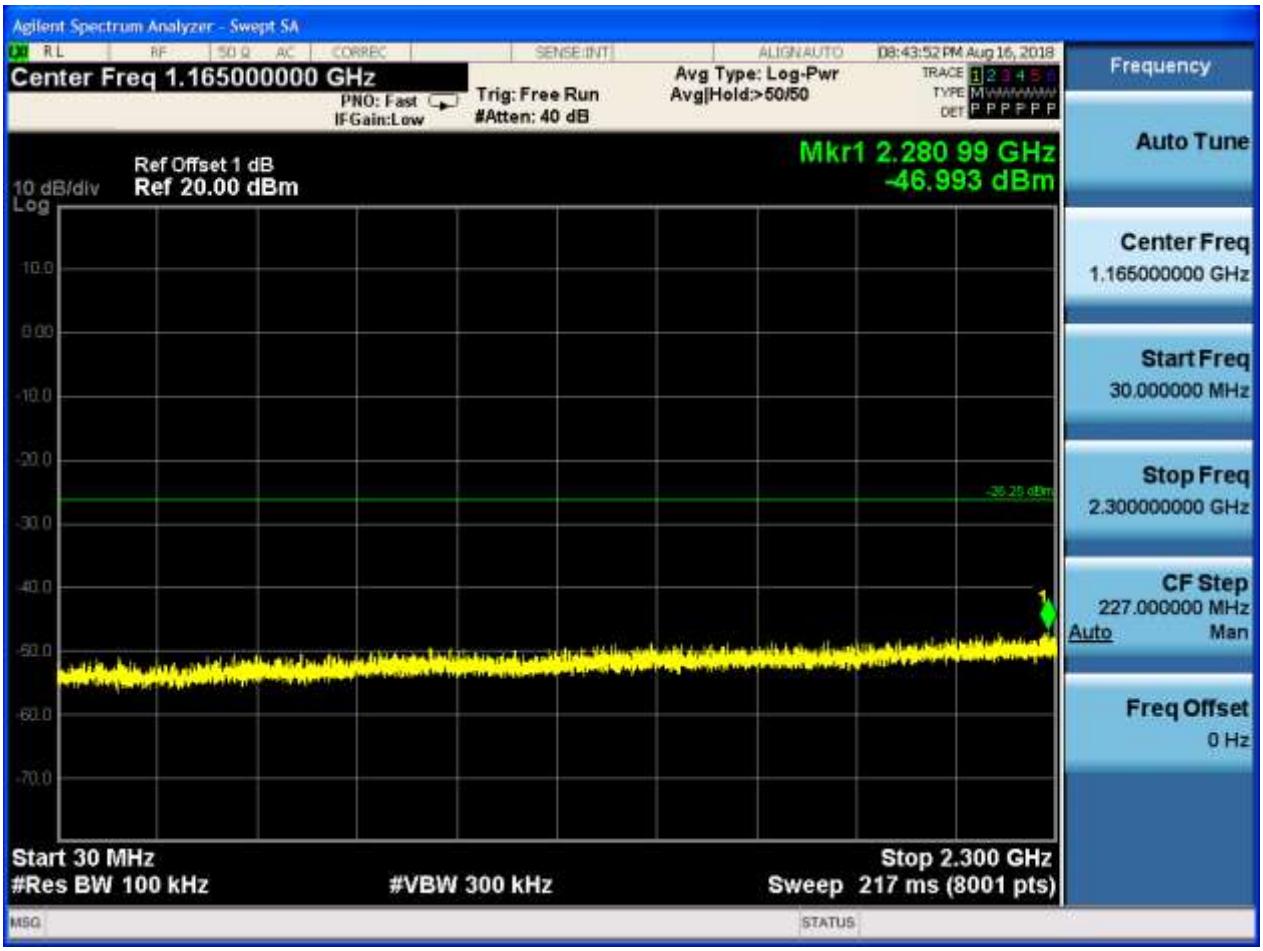
2.6 TM2_Ch39_H

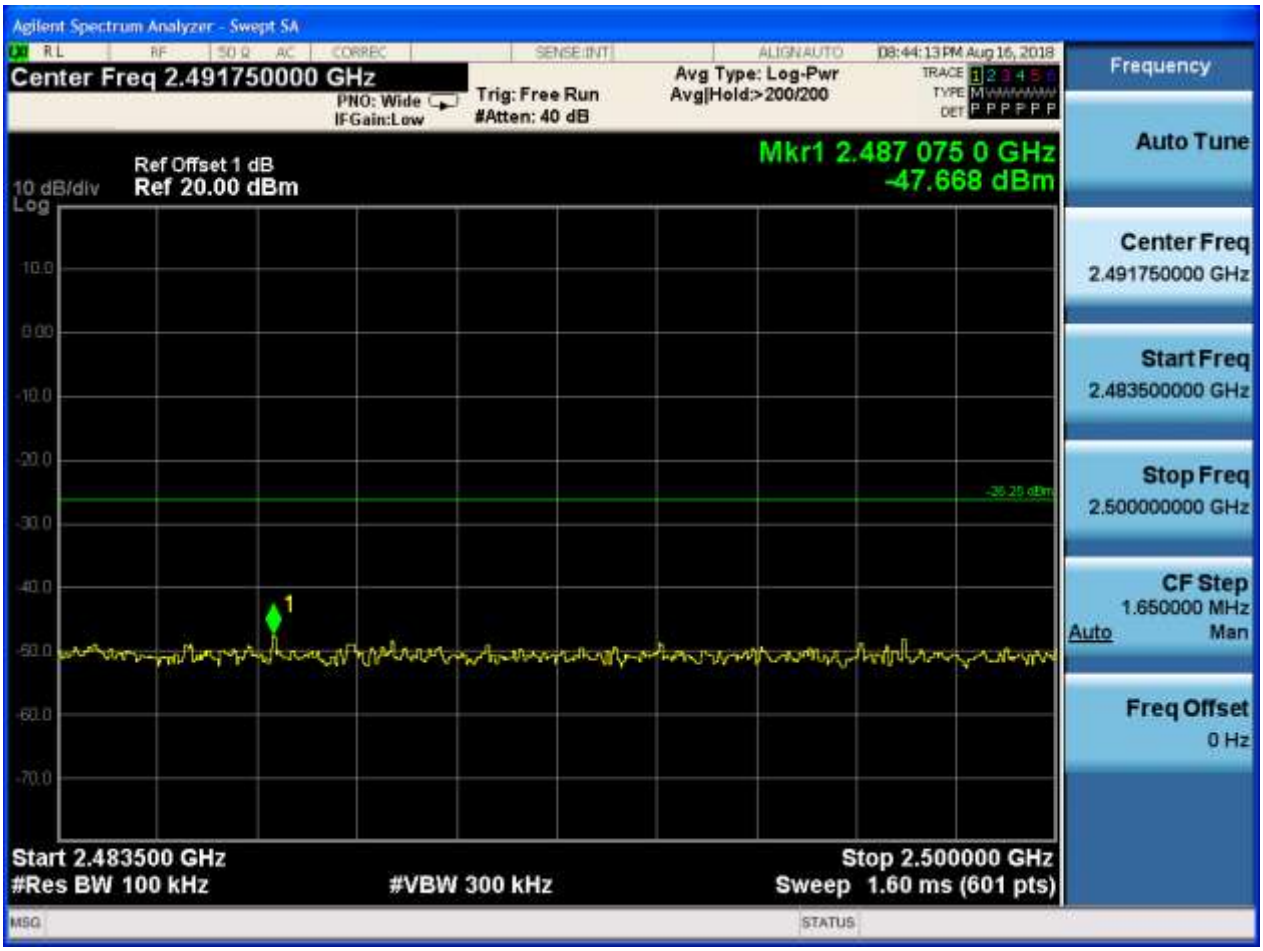
Pref:

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.

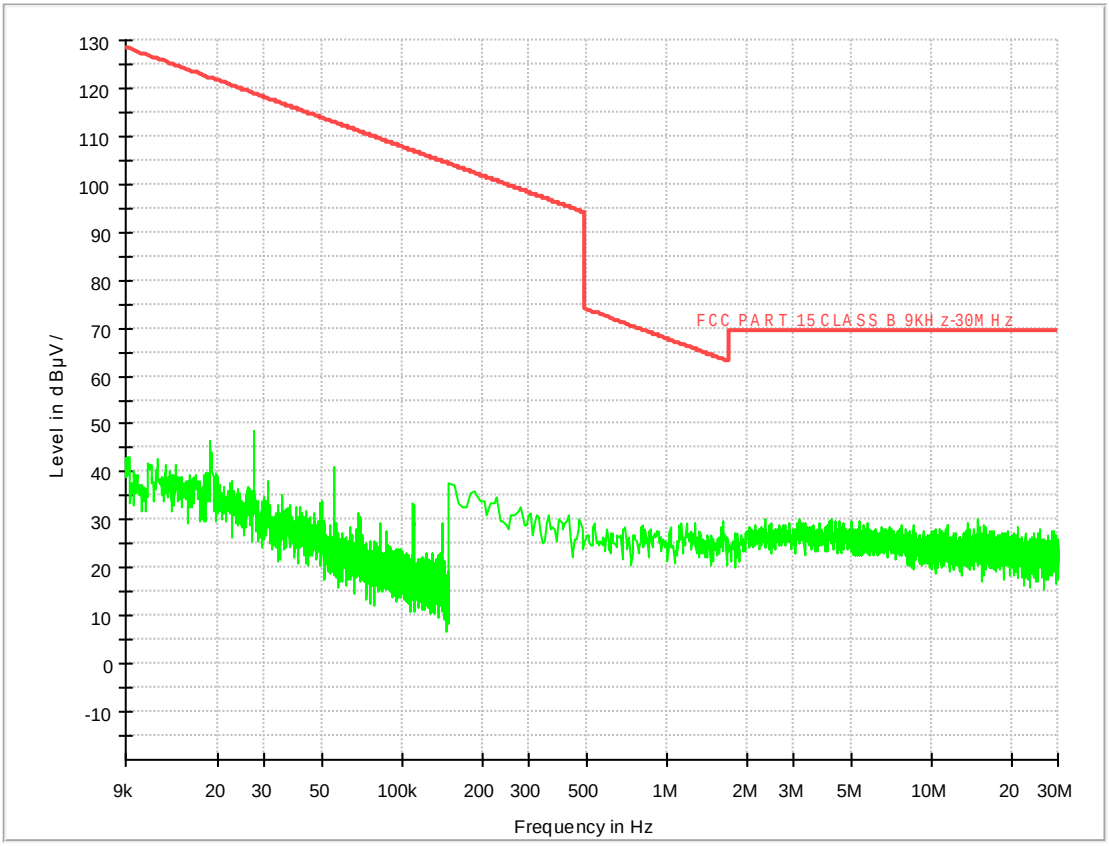
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.

The simultaneous transmission has been considered

TM1

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

Note 1: The test results and plot for testing range of “9 kHz to 30 MHz” 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.

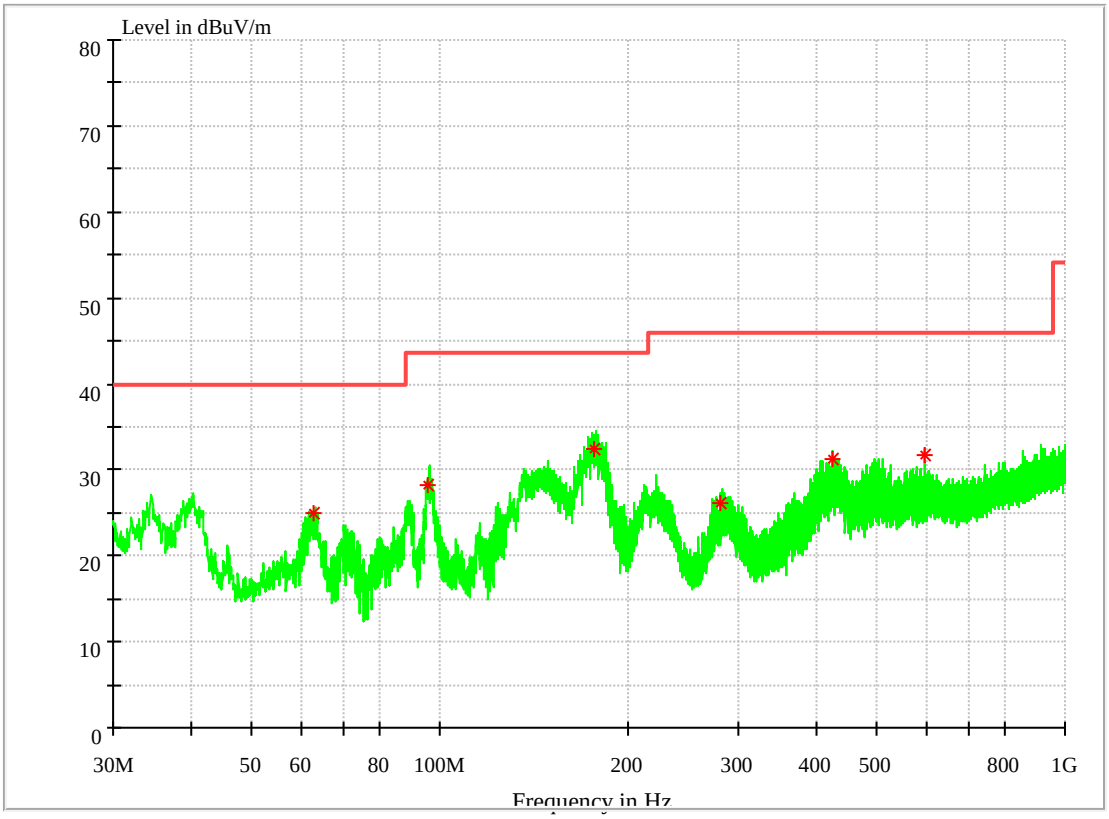


1.2 Part 2: Testing Range of “30 MHz to 1 GHz”

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).

Full Spectrum



Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
62.972880	25.02	40.00	14.98	101.0	V	229.0	12.6
95.869420	28.32	43.50	15.18	101.0	V	194.0	14.2
175.923900	32.48	43.50	11.02	100.0	V	180.0	11.2
280.679960	26.14	46.00	19.86	100.0	H	63.0	15.1
423.940180	31.34	46.00	14.66	100.0	H	27.0	18.4
596.338660	31.65	46.00	14.35	101.0	V	271.0	21.8

Note:

1, 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.

2, Margin=Limit - Level

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

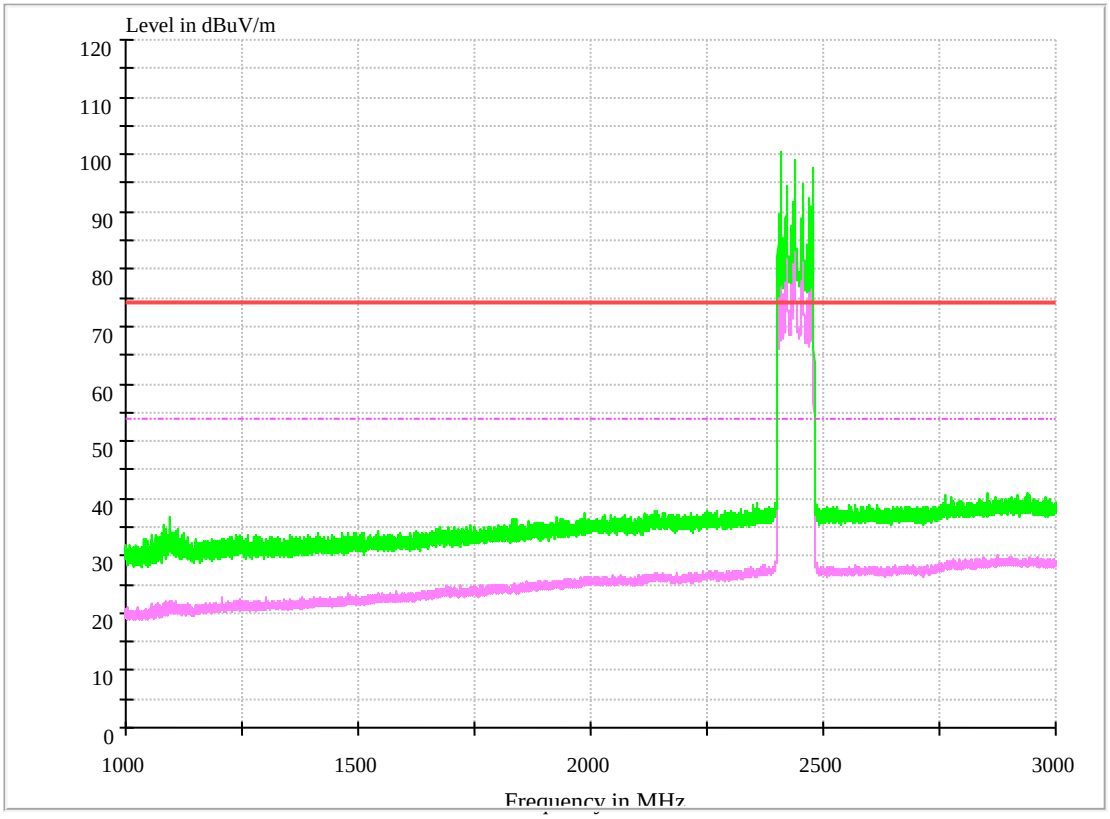
Note 1: The testing range of “1GHz to 3 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.

Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).

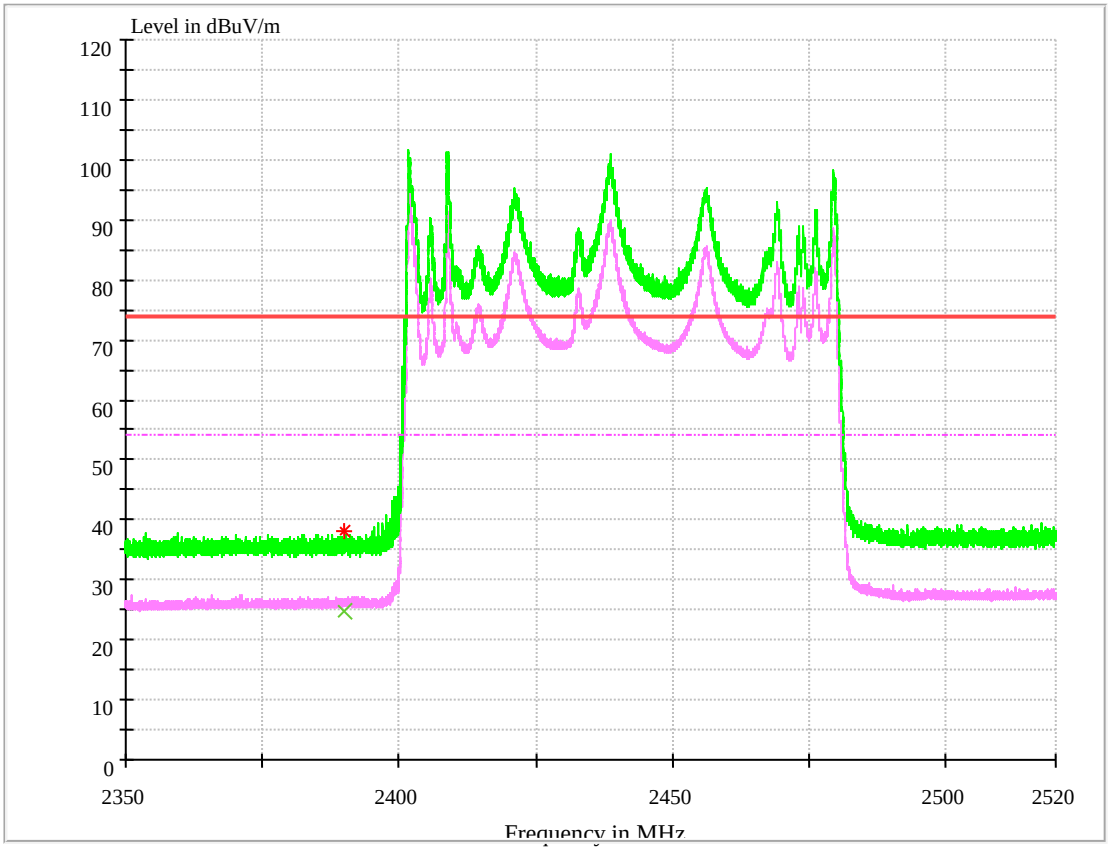
Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

Test Mode:

1.3.1Test Mode: TM1



1.3.1.1 Channel 0



MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2390	25.75	54.00	28.25	150.0	H	45.0	-8.6

MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Transd. (dB)
2390	39.26	74.00	34.74	150.0	H	96.0	-8.6

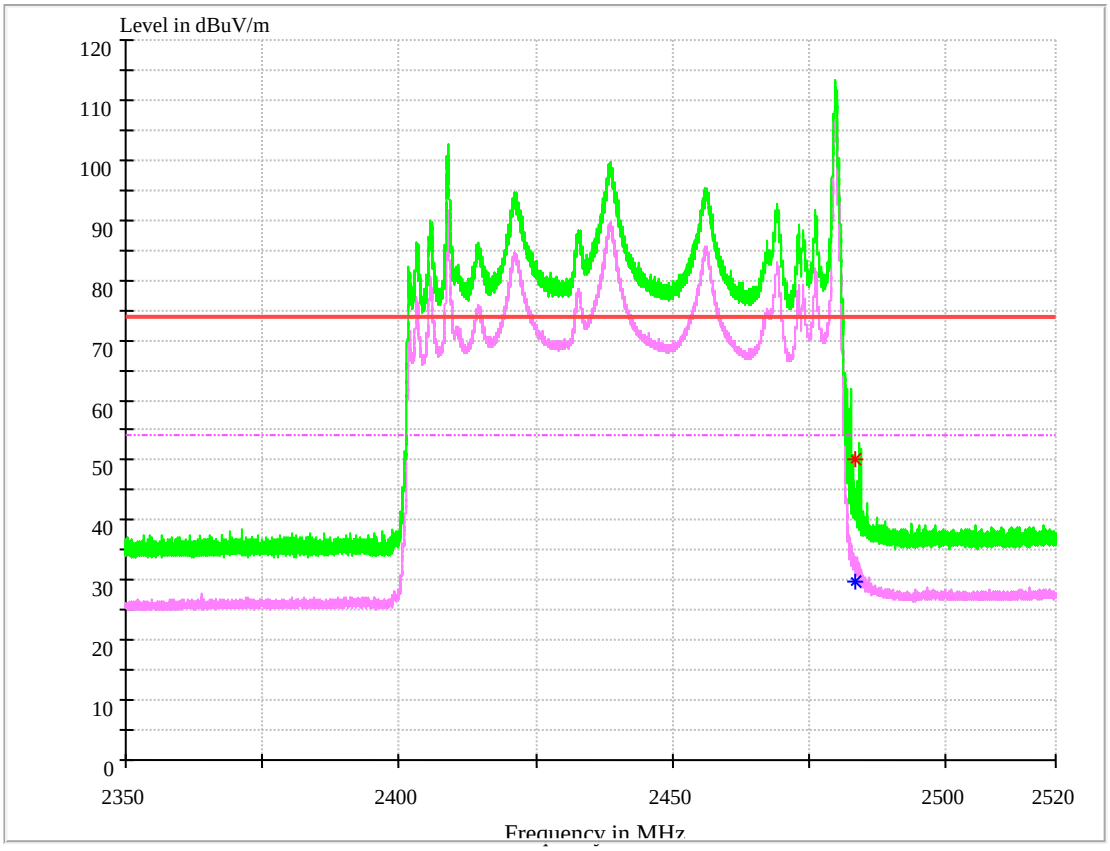
Note:

1, 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.

2, Margin=Limit - Level

1.3.1.2 Channel 39



MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2483.5	29.75	54.00	24.25	150.0	H	186.0	-6.8

MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Transd. (dB)
2483.5	46.13	74.00	27.87	150.0	H	132.0	-6.8

Note:

1, 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.

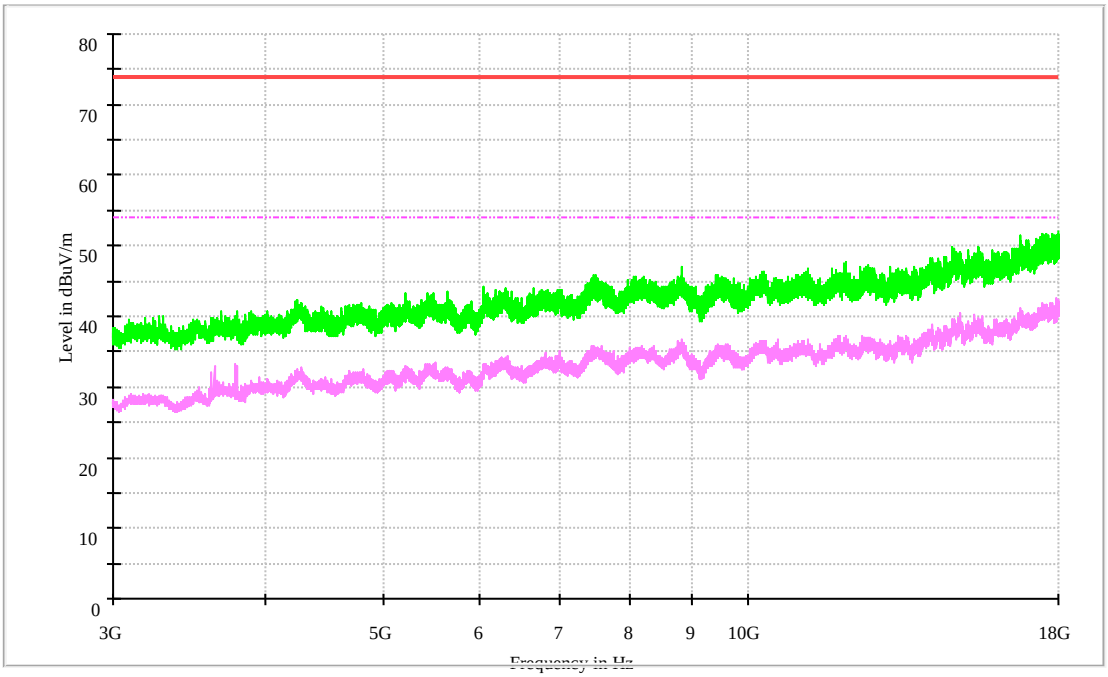
2, Margin=Limit - Level

1.4 Part 4: 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 dBµV/m) and Average Limit (54 dBµV/m).

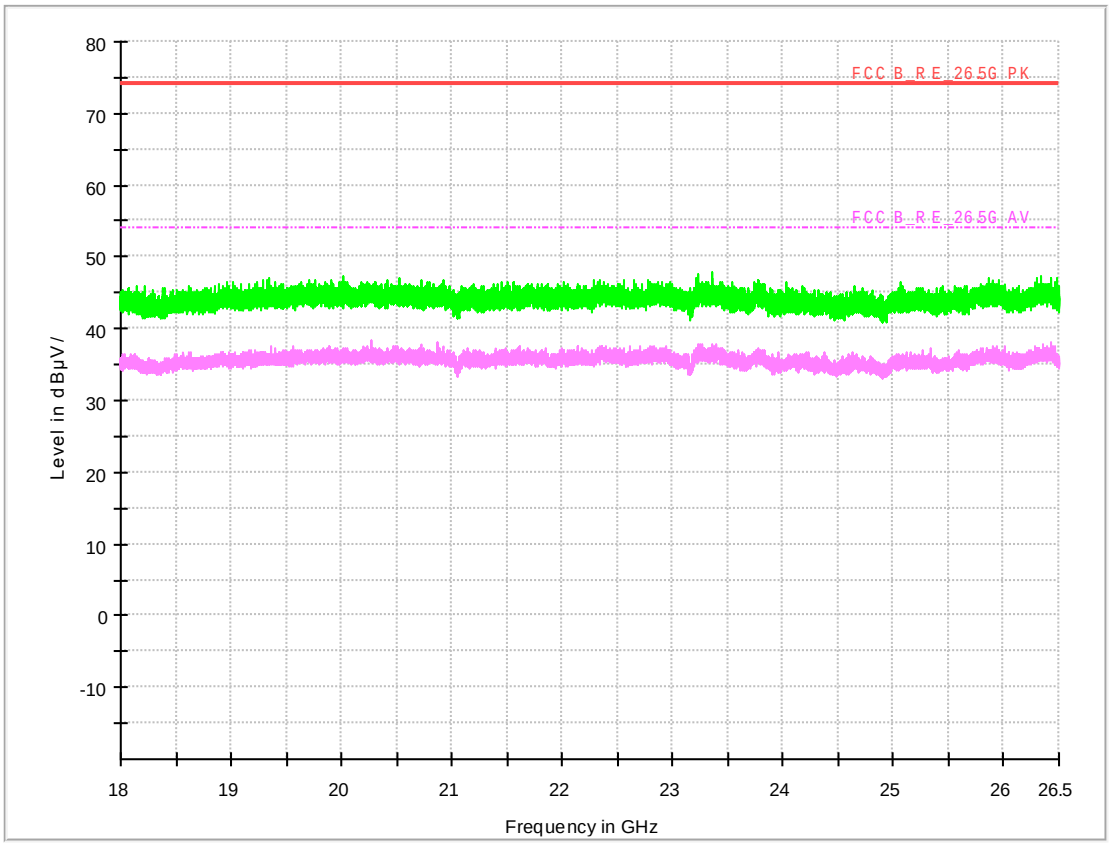


1.5 Part 5: Testing Range of "18 GHz to 26.5 GHz"

Note 1: The test results and plot for testing range of "18 GHz to 26.5 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 "18 GHz to 26.5 GHz" is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

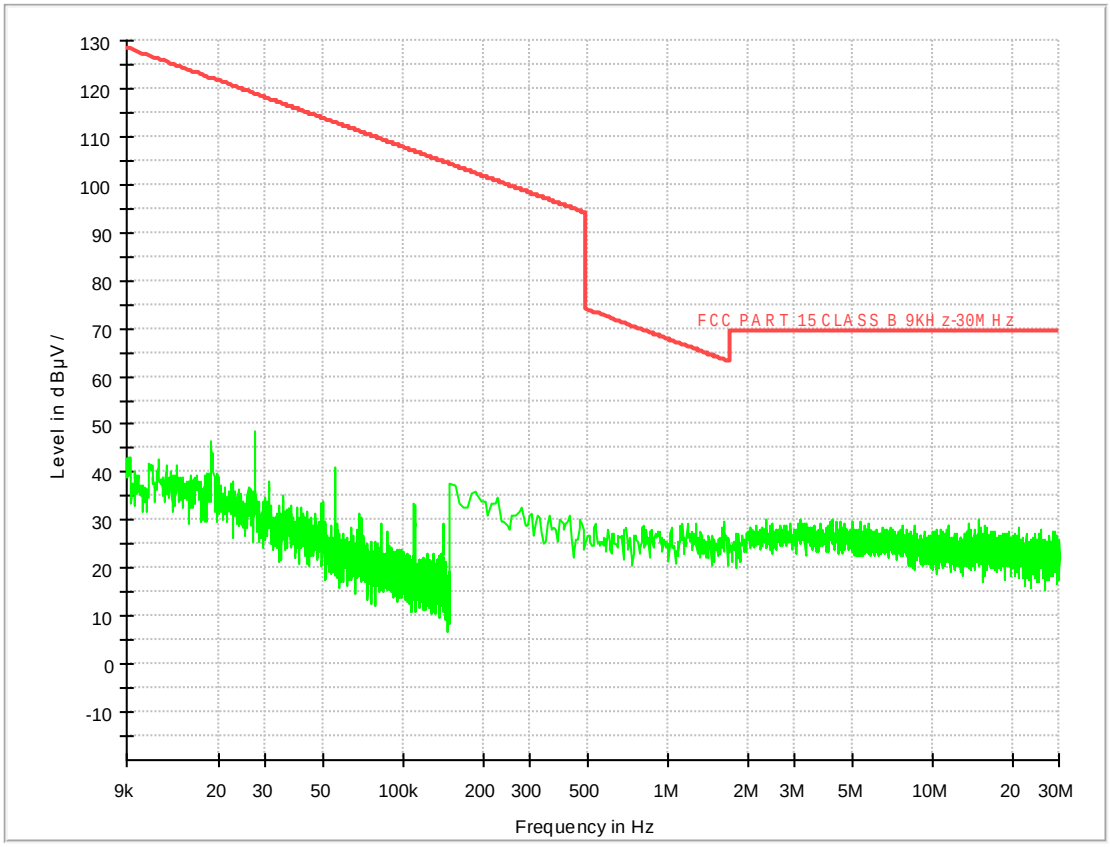
Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).



TM2

1.1 Part 1: Testing Range of "9 kHz to 30MHz"

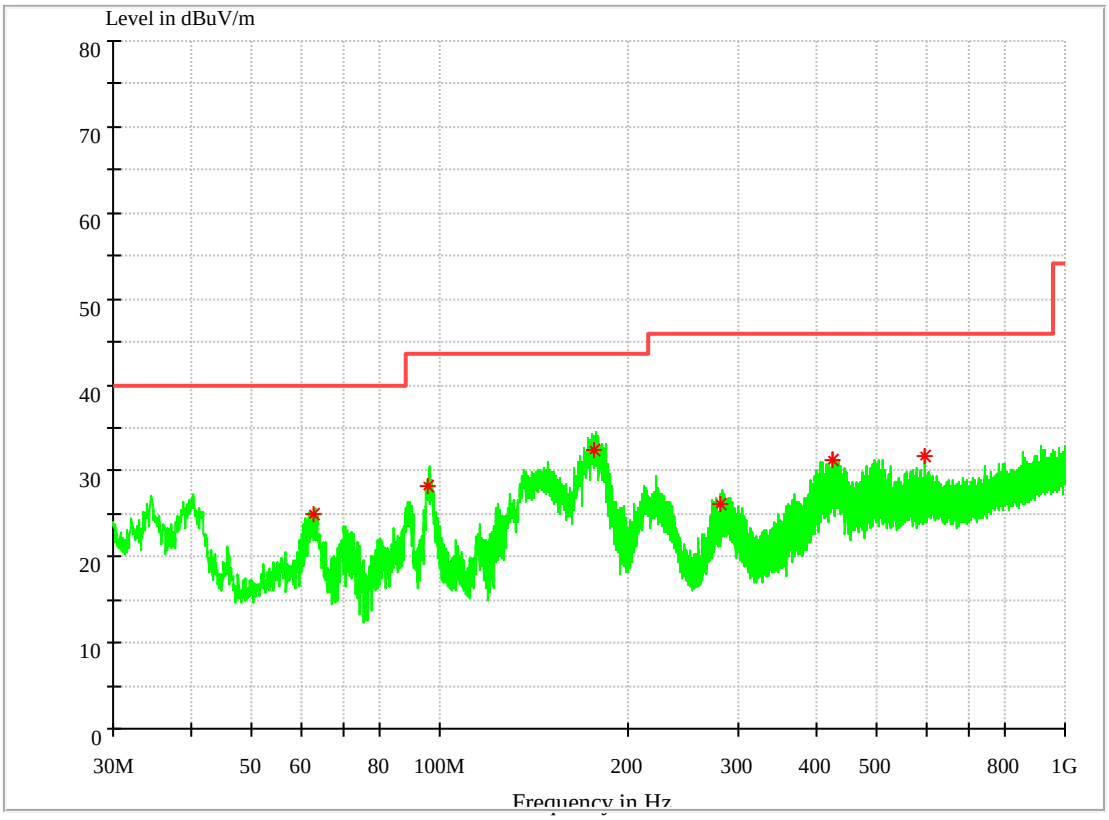
Note 1: The test results and plot for testing range of "9 kHz to 30 MHz" showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.



1.2 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).



MEASUREMENT RESULT: QP Detector

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Transd. (dB)
62.972880	25.02	40.00	14.98	101.0	V	229.0	12.6
95.869420	28.32	43.50	15.18	101.0	V	194.0	14.2
175.923900	32.48	43.50	11.02	100.0	V	180.0	11.2
280.679960	26.14	46.00	19.86	100.0	H	63.0	15.1
423.940180	31.34	46.00	14.66	100.0	H	27.0	18.4
596.338660	31.65	46.00	14.35	101.0	V	271.0	21.8

Note:

1, 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.

2, Margin=Limit - Level

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

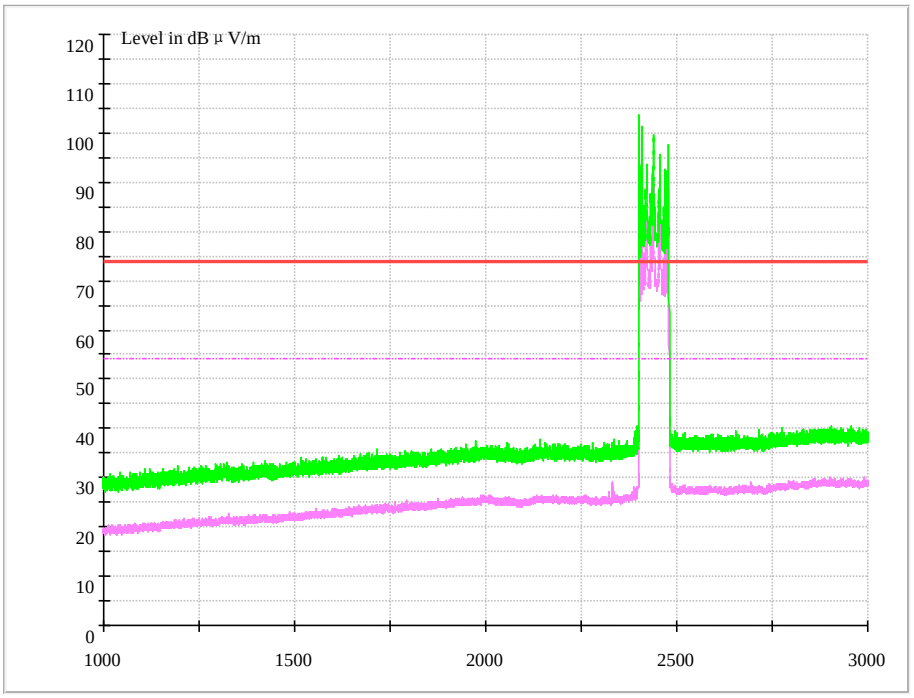
Note 1: The testing range of “1GHz to 3 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.

Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).

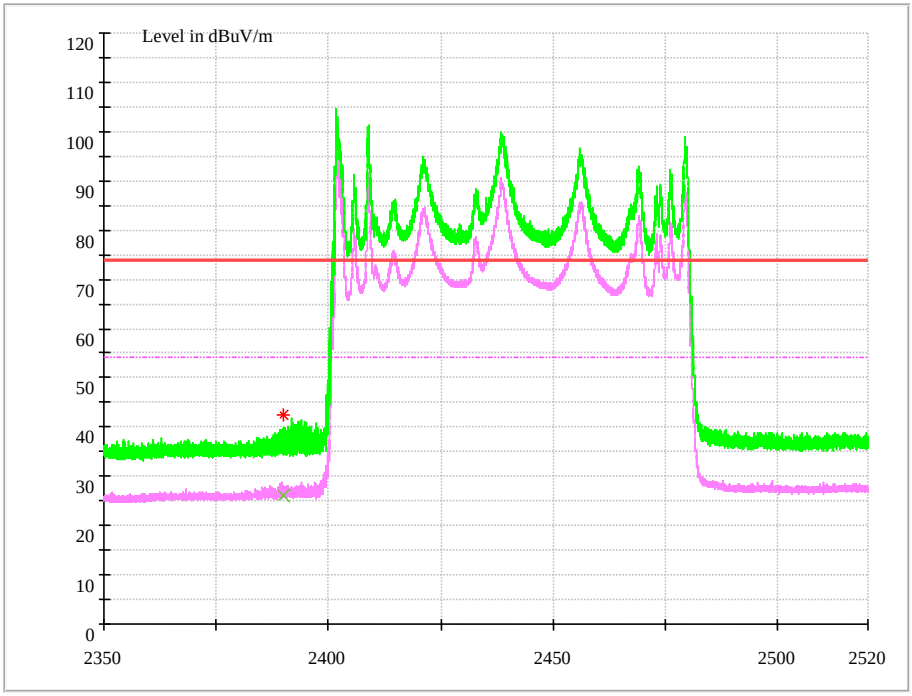
Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

Test Mode:

1.3.1Test Mode: TM1



1.3.1.1 Channel 0



MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2390.0	27.08	54.00	26.92	150.0	H	268.0	-10.2

MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2390.0	43.31	74.00	31.69	150.0	H	264.0	-10.2

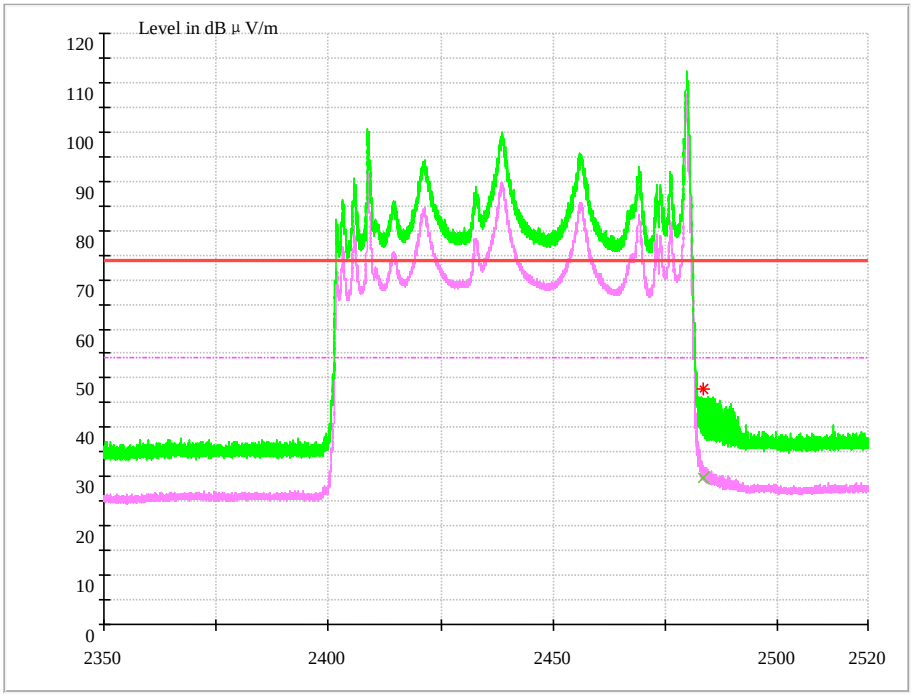
Note:

1, 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.

2, Margin=Limit - Level

1.3.1.2 Channel 39



MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2483.5	30.76	54.00	23.24	150.0	H	247.0	-6.8

MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Transd. (dB)
2483.5	48.85	74.00	25.15	150.0	H	245.0	-6.8

Note:

1, 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.

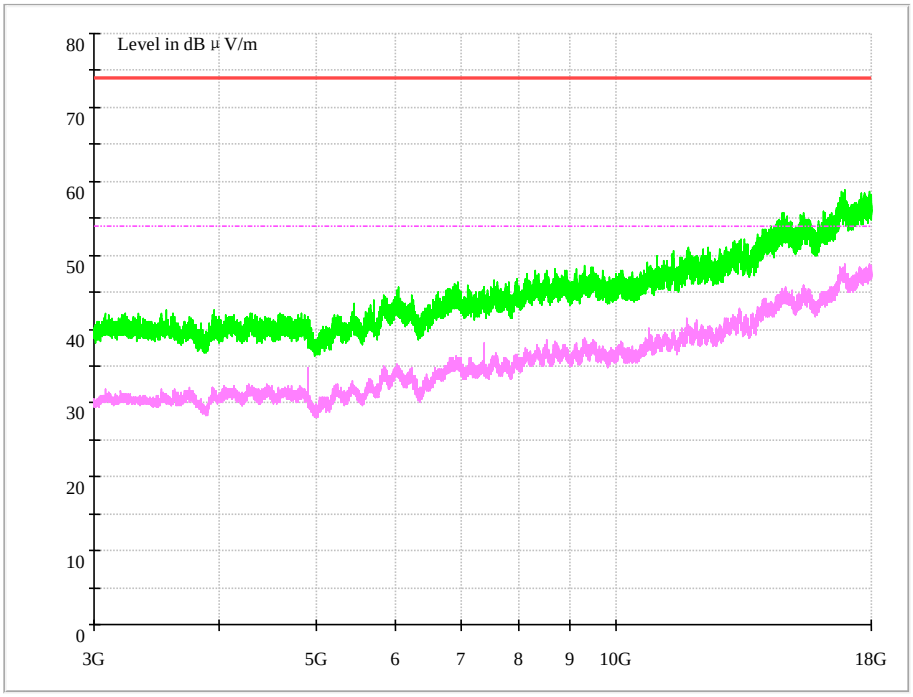
2, Margin=Limit - Level

1.4 Part 4: 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 dBµV/m) and Average Limit (54 dBµV/m).

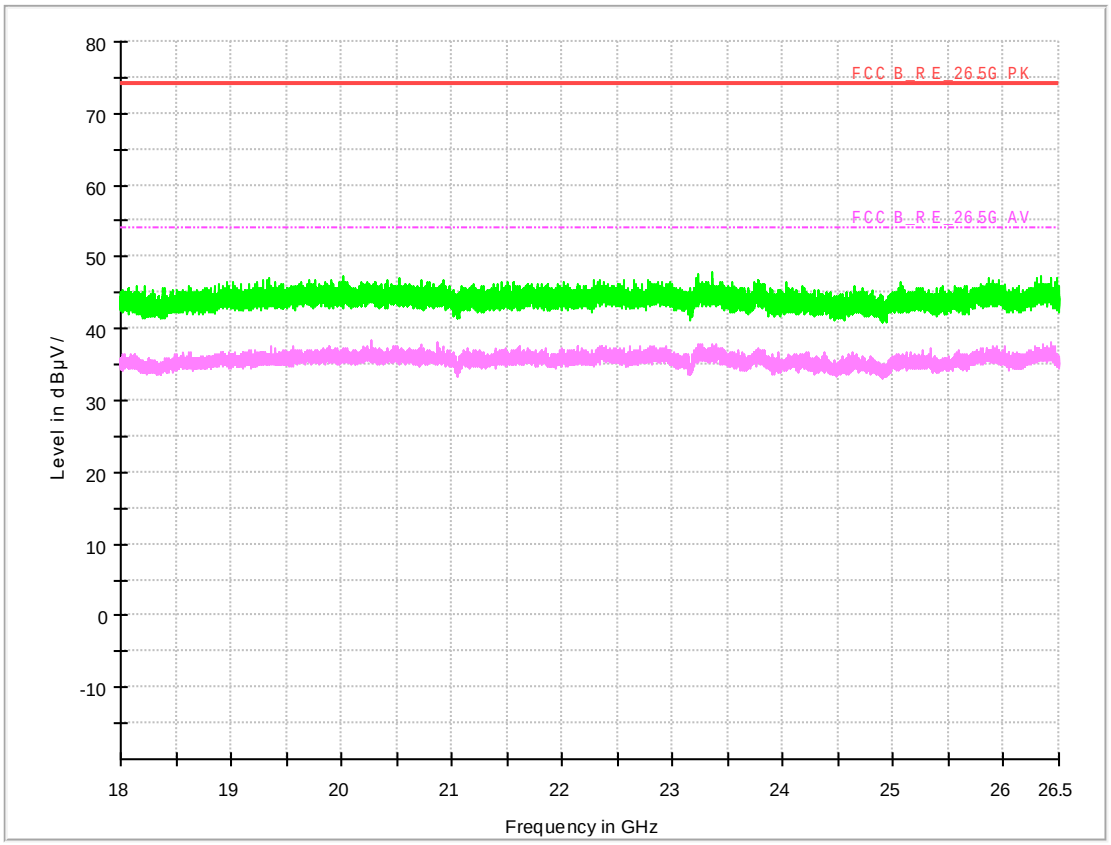


1.5 Part 5: Testing Range of "18 GHz to 26.5 GHz"

Note 1: The test results and plot for testing range of "18 GHz to 26.5 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 "18 GHz to 26.5 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).

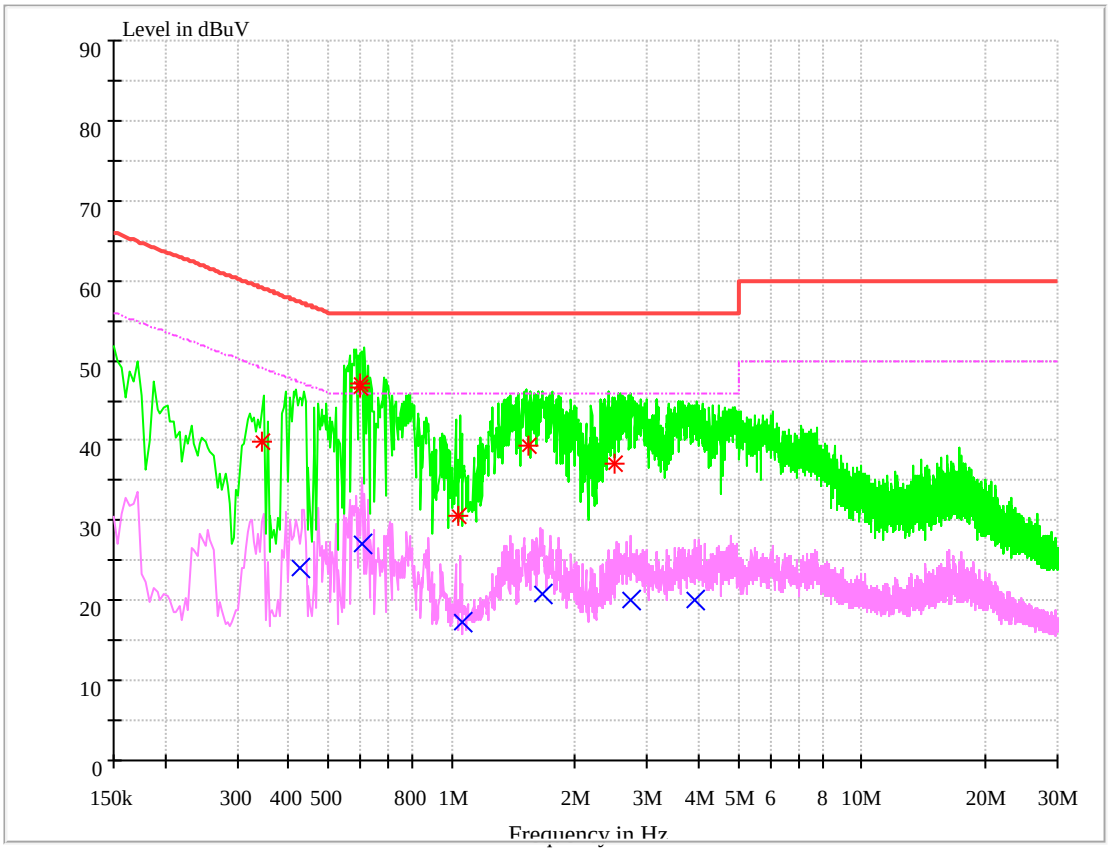


Appendix I: Conducted Emission at Power Port

TM1

Note: RBW =9 kHz, VBW = 30 kHz

Channel 39



MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dB μ V)	Limit (dB μ V)	Transd. (dB)	Margin (dB)	Line	PE
0.346602	39.81	59.04	9.7	19.23	L1	FLO
0.597268	46.58	56.00	9.7	9.42	L1	FLO
0.598210	47.16	56.00	9.7	8.84	N	FLO
1.040496	30.61	56.00	9.7	25.39	L1	FLO
1.541004	39.43	56.00	9.7	16.57	L1	FLO
2.502136	36.98	56.00	9.7	19.02	N	FLO

MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dB μ V)	Limit (dB μ V)	Transd. (dB)	Margin (dB)	Line	PE
0.428931	24.11	47.27	9.7	23.16	N	FLO
0.608337	27.01	46.00	9.7	18.99	L1	FLO
1.060031	17.27	46.00	9.7	28.73	L1	FLO
0.899221	20.78	46.00	9.7	25.22	N	FLO
1.680693	20.17	46.00	9.7	25.83	L1	FLO
2.866952	20.15	46.00	9.7	25.85	L1	FLO

Note:

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

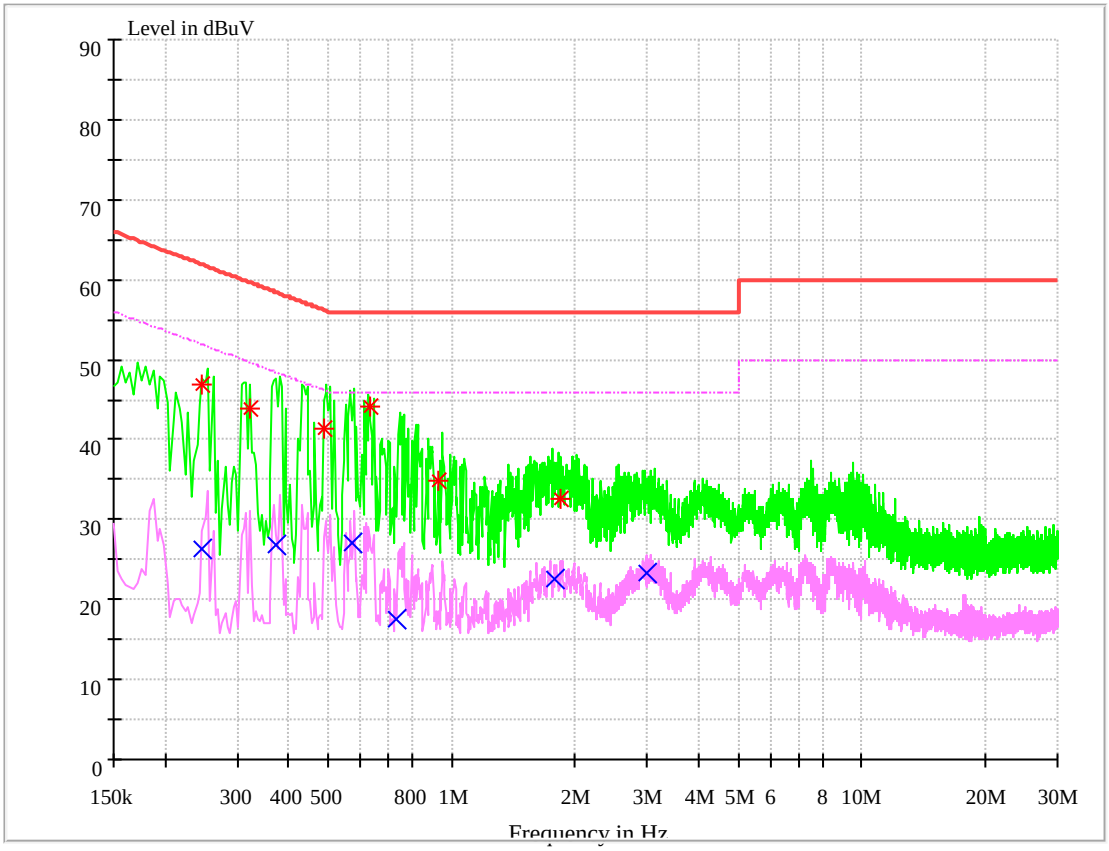
The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

TM2

Note: RBW =9 kHz, VBW = 30 kHz

Channel 39



MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dB μ V)	Limit (dB μ V)	Transd. (dB)	Margin (dB)	Line	PE
0.246289	47.00	61.88	9.7	14.88	N	FLO
0.322478	43.78	59.64	9.7	15.86	N	FLO
0.490276	41.46	56.16	9.7	14.70	N	FLO
0.634767	44.12	56.00	9.7	11.88	L1	FLO
0.928380	34.76	56.00	9.7	21.24	N	FLO
1.840479	32.56	56.00	9.7	23.44	L1	FLO

MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dB μ V)	Limit (dB μ V)	Transd. (dB)	Margin (dB)	Line	PE
0.246416	26.33	51.88	9.7	25.55	N	FLO
0.372786	26.91	48.44	9.7	21.53	N	FLO
0.569779	27.03	46.00	9.7	18.97	L1	FLO
0.733254	17.60	46	9.7	28.40	N	FLO
1.784688	22.49	46	9.7	23.51	N	FLO
3.003270	23.30	46.00	9.7	22.70	N	FLO

Note:

1, 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.

2, Margin=Limit - Level

END