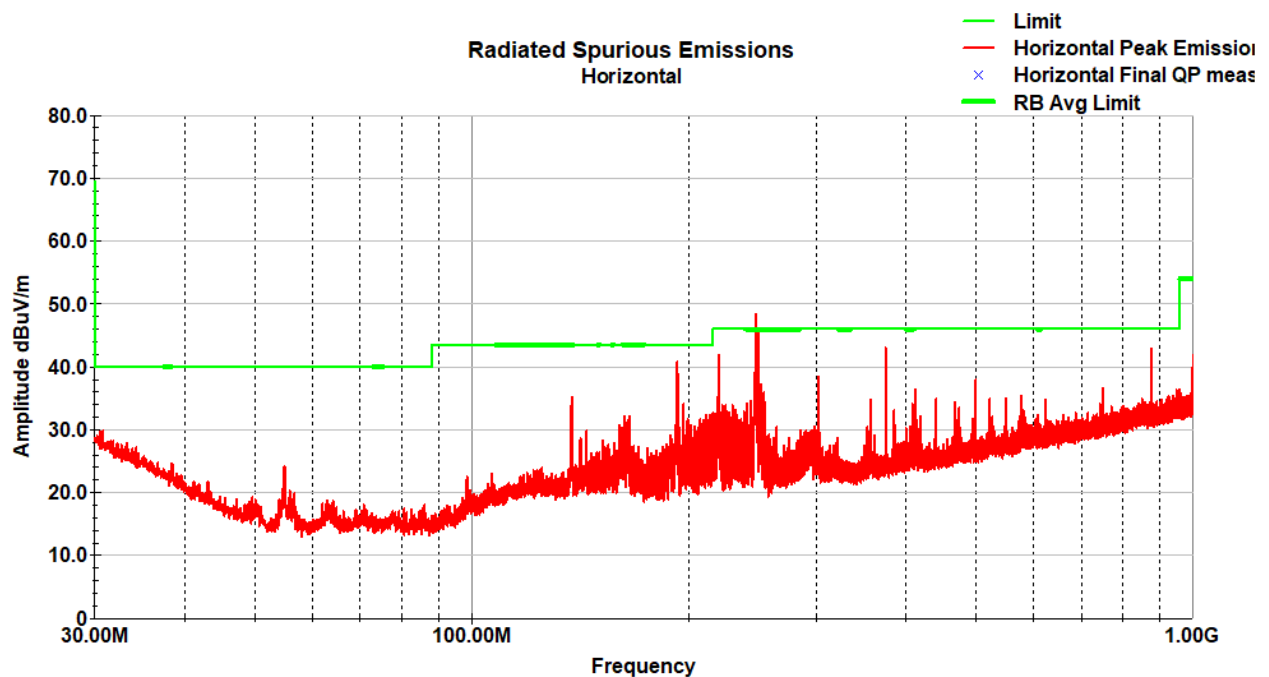
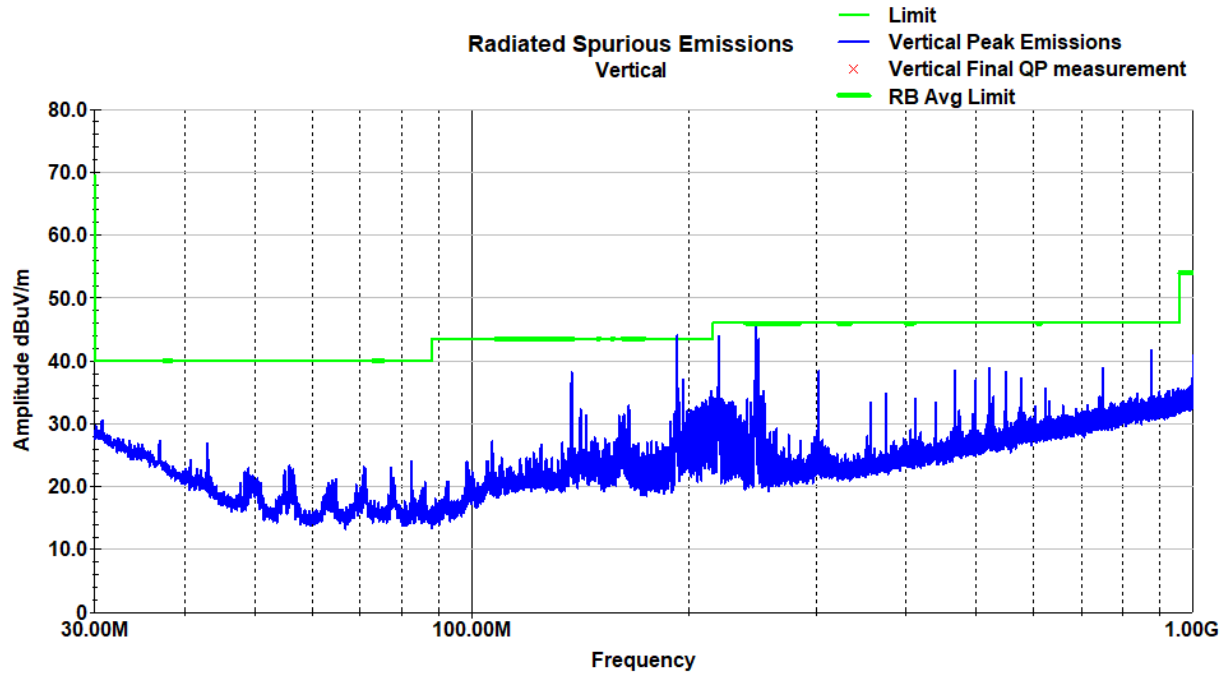


3.13 Test Data: 10-inch Display – U-NII Band 1 – 802.11ac

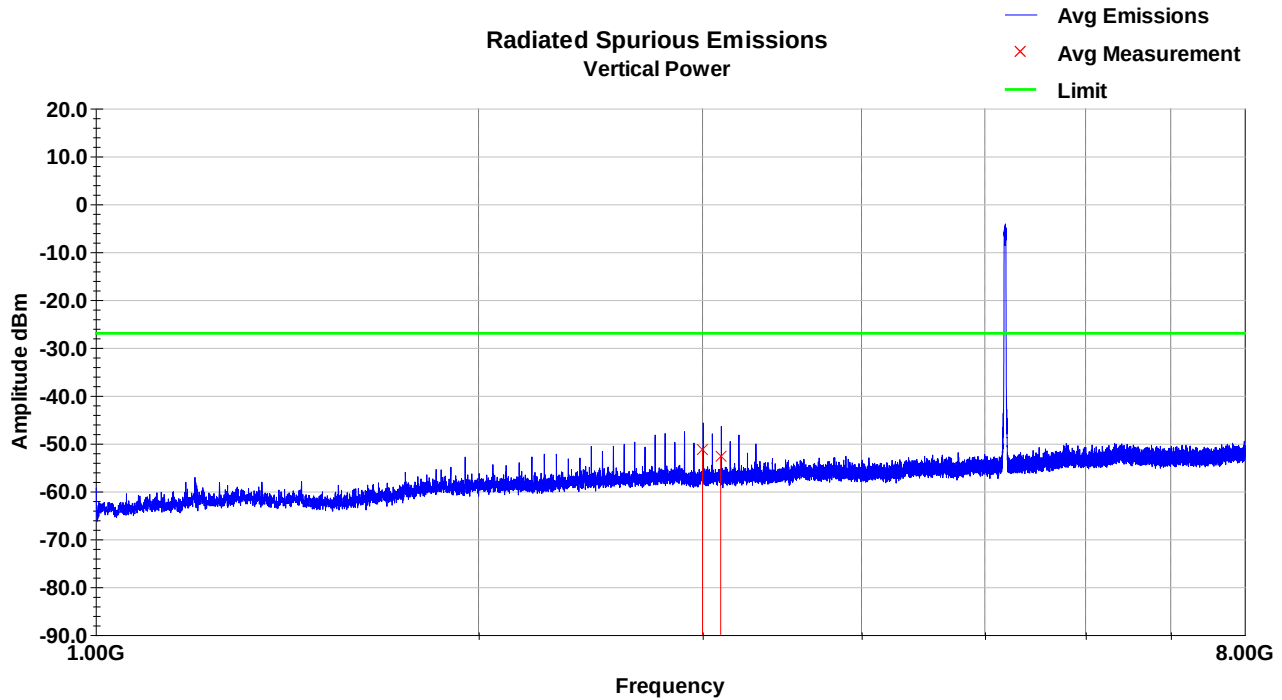
3.13.1 30-1000 MHz

Emissions were confirmed to be non-radio emissions. All channels had similar plots (worst case shown).



3.13.2 1-18 GHz

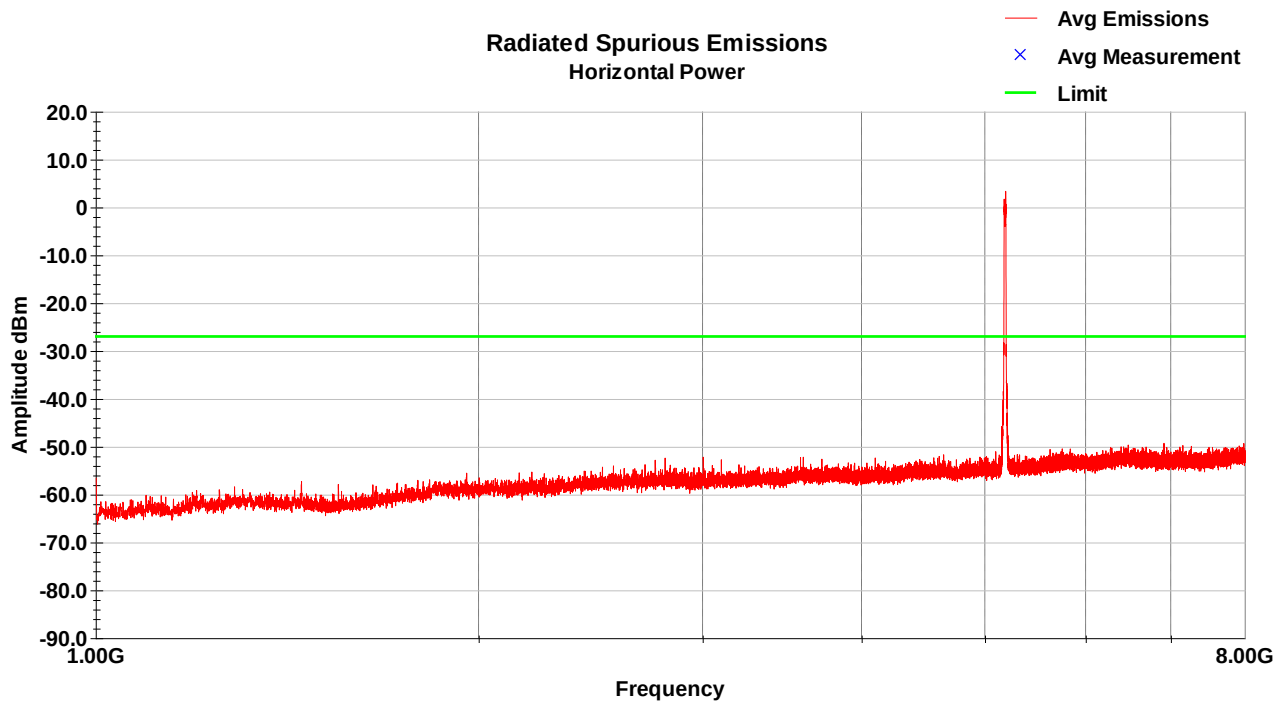
Vertical Plot – 1-8GHz – Low Channel



Vertical Data – 1-8GHz – Low Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
2999.80	-44.5	V	20.0	123.0	32.4	2.8	42.0	-51.2	-27.0	-24.2
3100.16	-46.4	V	351.0	127.0	32.8	2.8	41.9	-52.7	-27.0	-25.7
Avg Value = Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

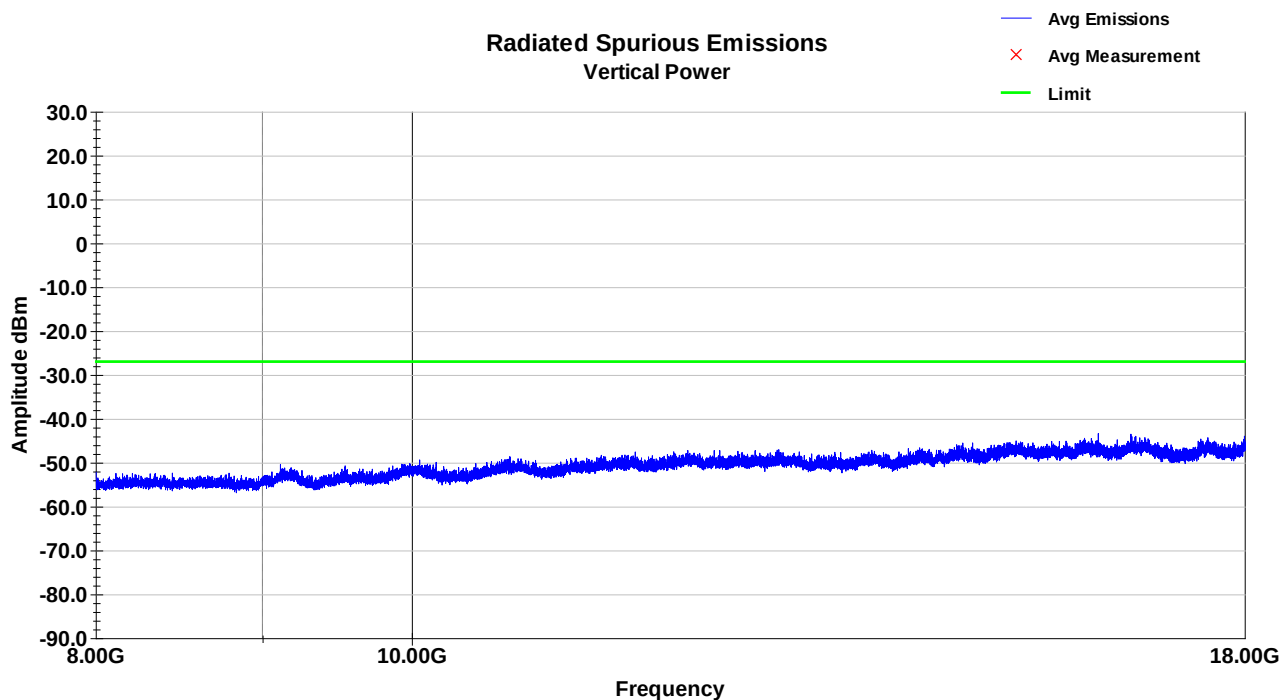
Horizontal Plot – 1-8GHz – Low Channel



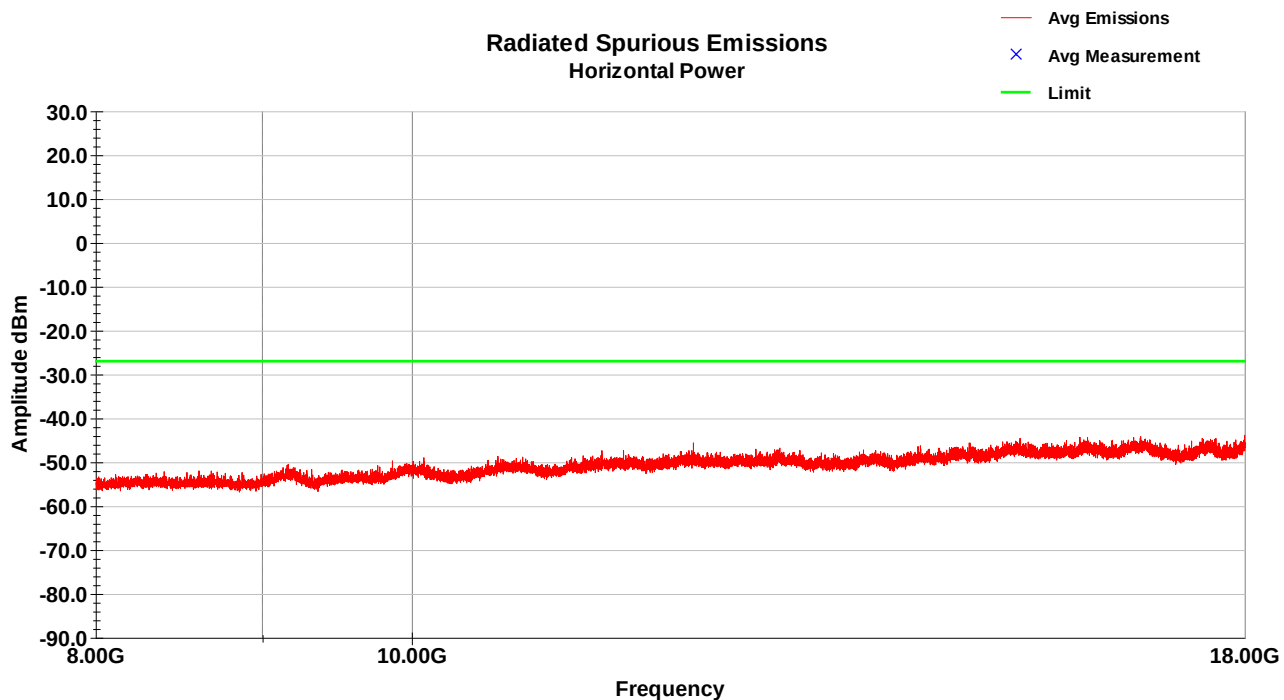
Horizontal Data – 1-8GHz – Low Channel

No emissions within 20dB of limit

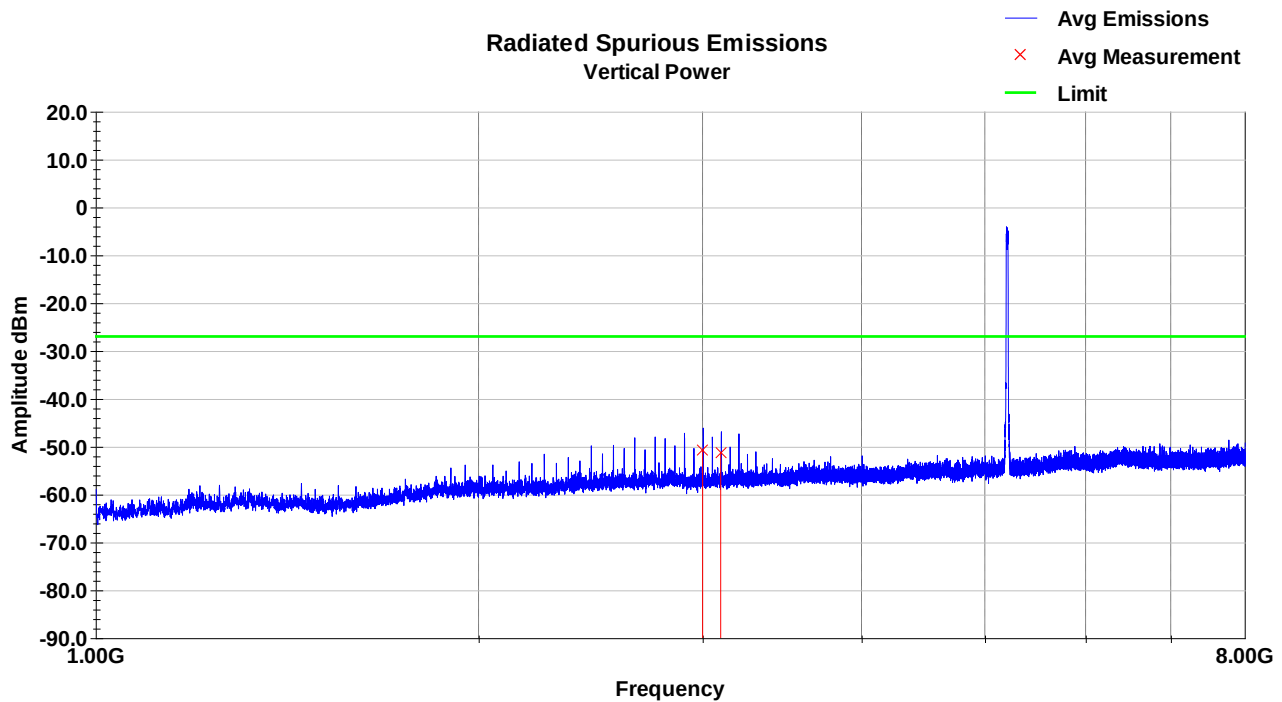
Vertical Plot – 8-18GHz – Low Channel



Horizontal Plot – 8-18GHz – Low Channel



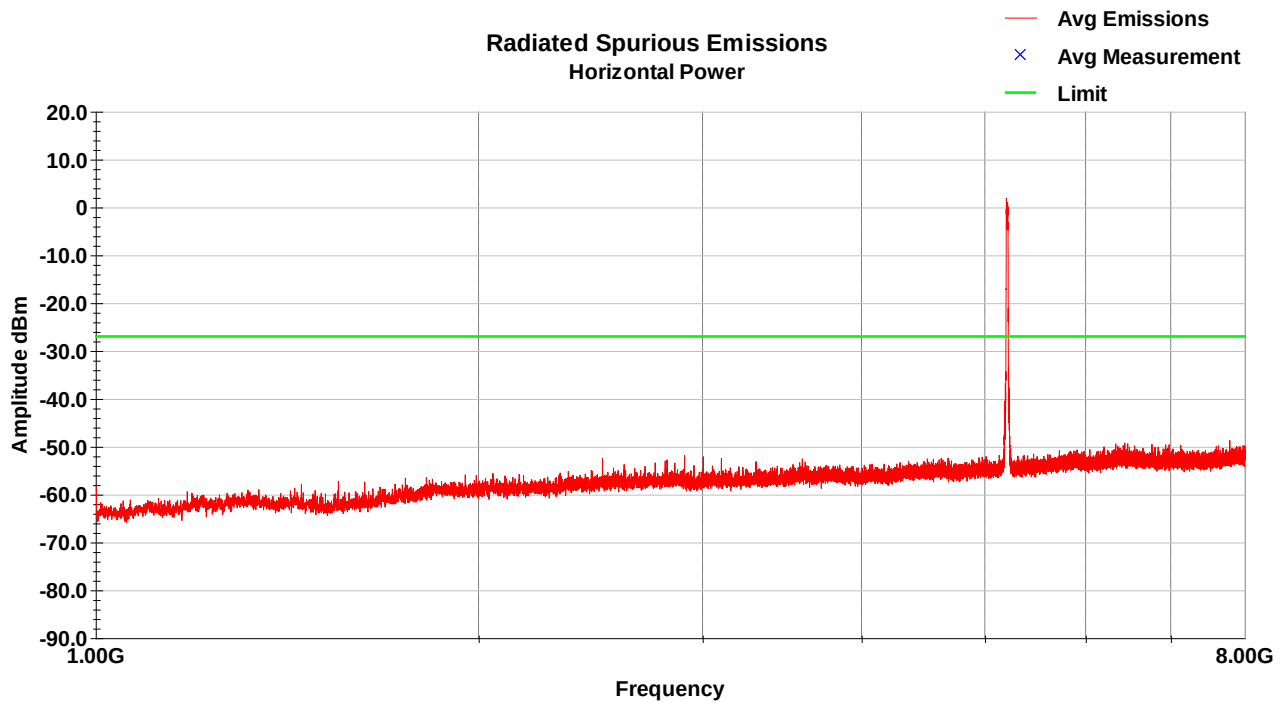
Vertical Plot – 1-8GHz – Mid Channel



Vertical Data – 1-8GHz – Mid Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
3000.04	-43.9	V	32.0	125.0	32.4	2.8	42.0	-50.7	-27.0	-23.7
3099.92	-44.9	V	9.0	119.0	32.8	2.8	41.9	-51.2	-27.0	-24.2
Avg Value = Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

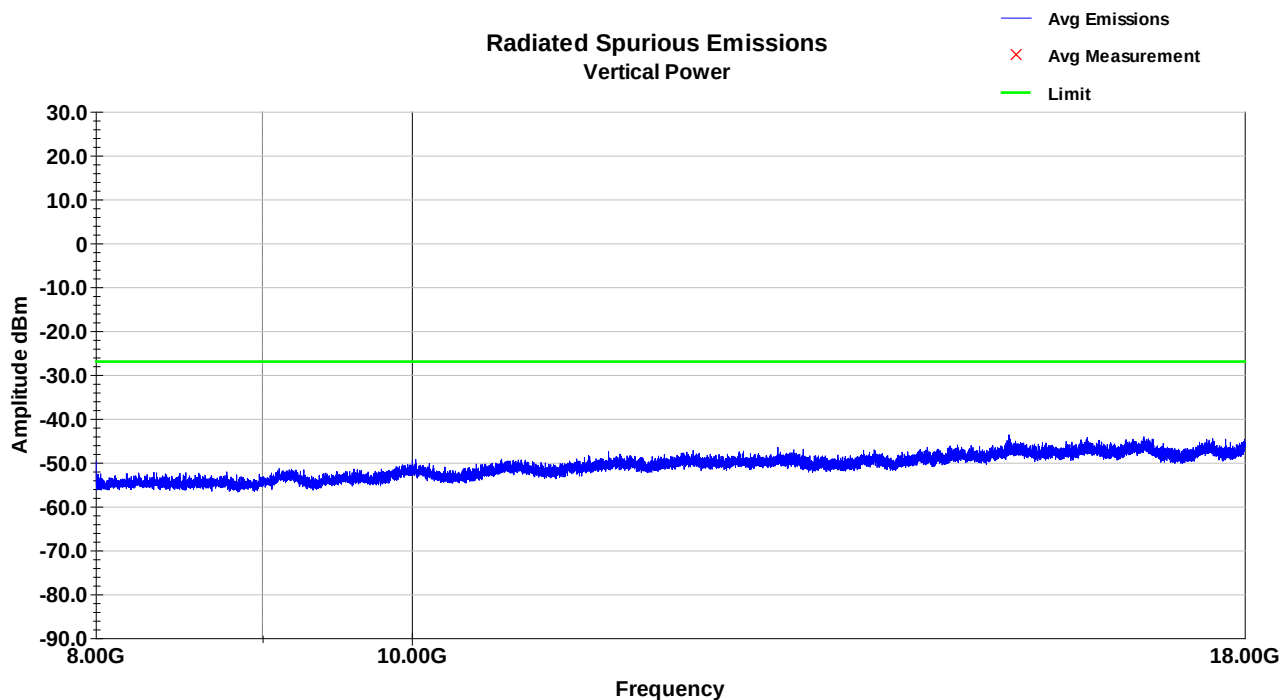
Horizontal Plot – 1-8GHz – Mid Channel



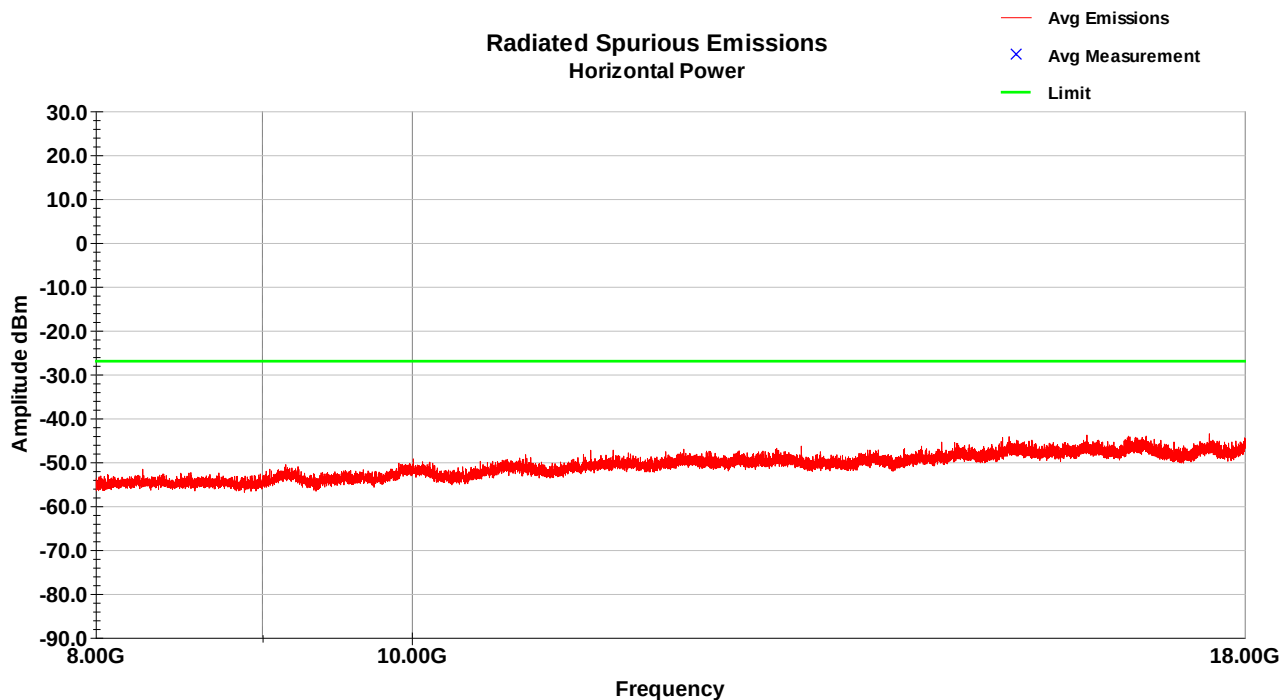
Horizontal Data – 1-8GHz – Mid Channel

No emissions within 20dB of limit

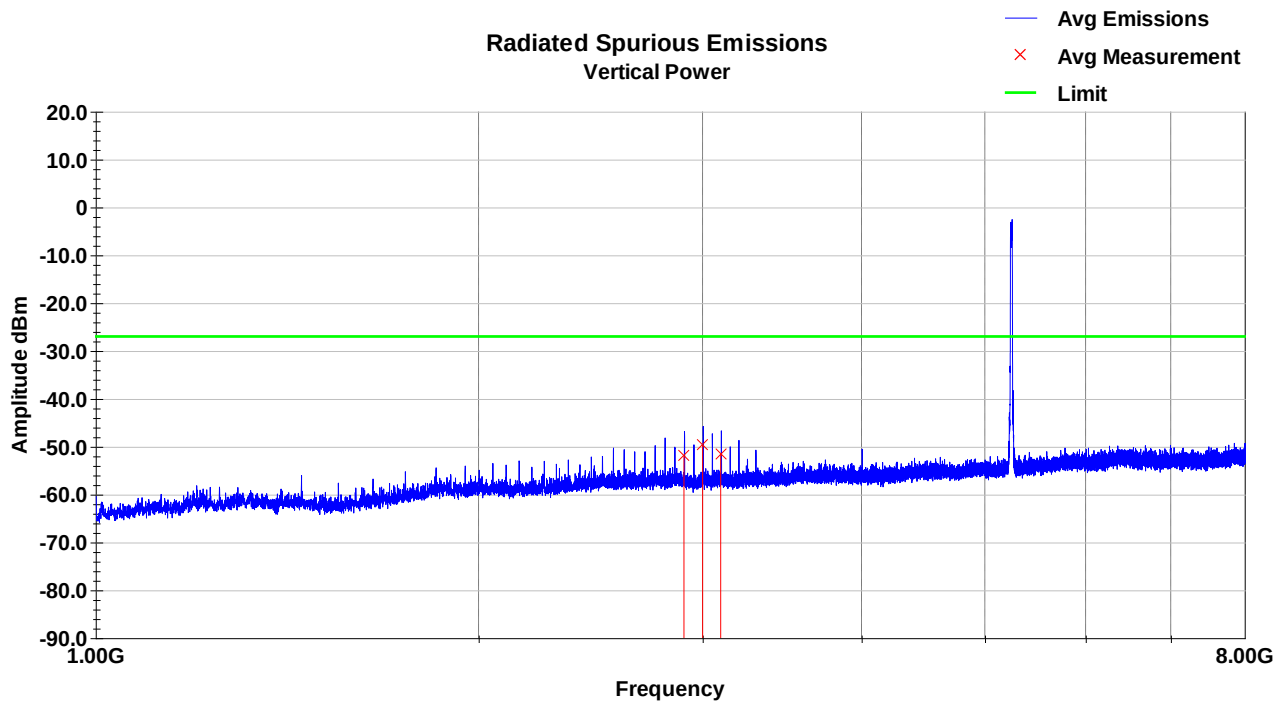
Vertical Plot – 8-18GHz – Mid Channel



Horizontal Plot – 8-18GHz – Mid Channel



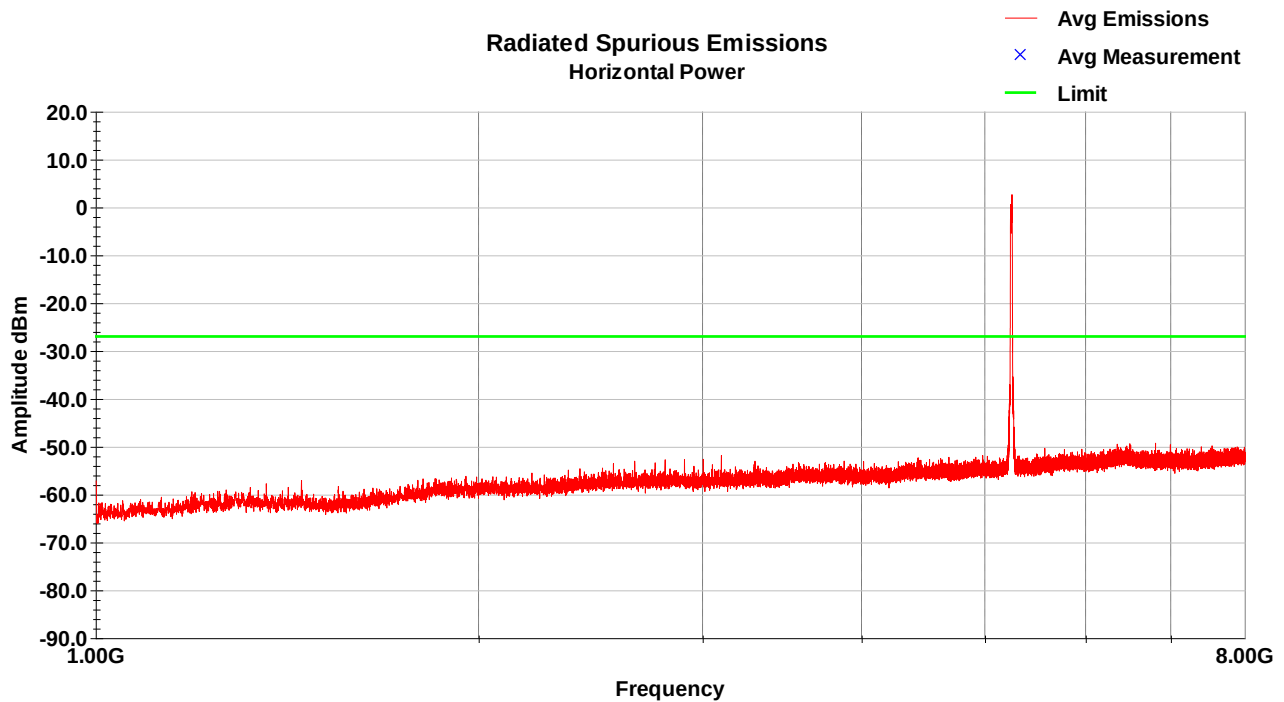
Vertical Plot – 1-8GHz – High Channel



Vertical Data – 1-8GHz – High Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
2900.28	-44.9	V	0.0	148.0	32.3	2.7	42.0	-51.9	-27.0	-24.9
3000.04	-43.0	V	349.0	100.0	32.4	2.8	42.0	-49.8	-27.0	-22.8
3100.04	-45.3	V	6.0	120.0	32.8	2.8	41.9	-51.6	-27.0	-24.6
Avg Value = Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

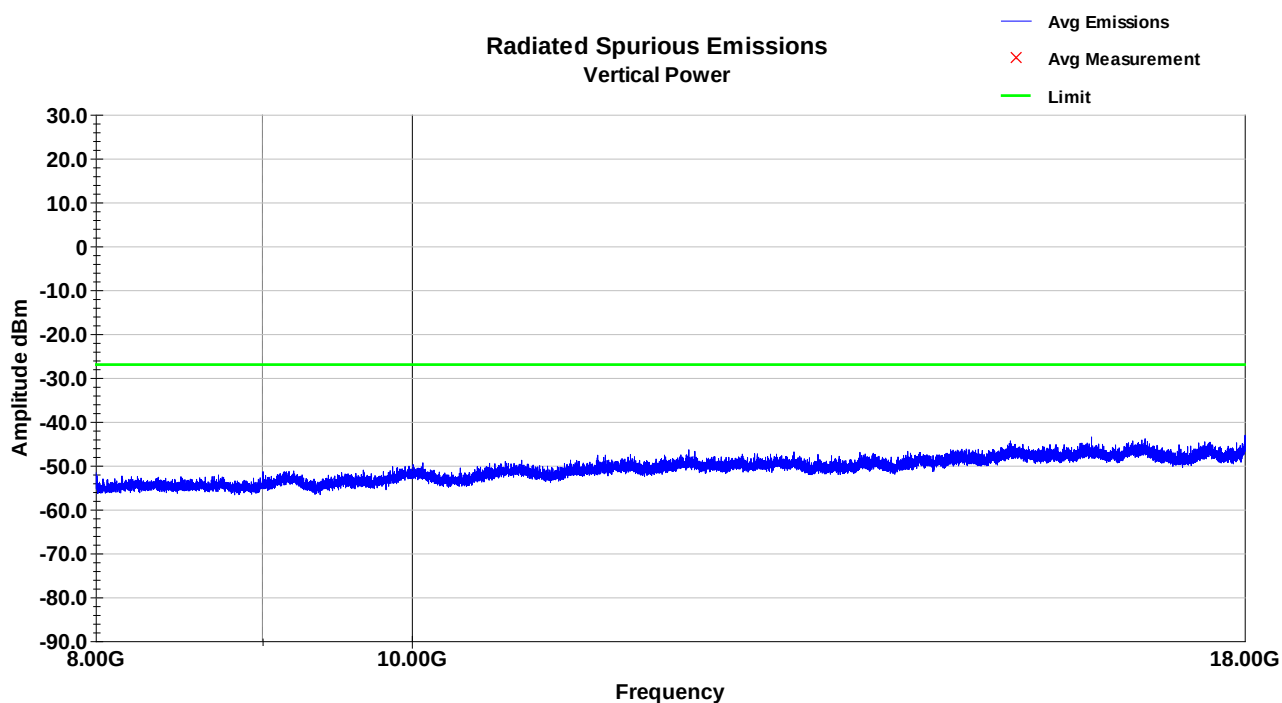
Horizontal Plot – 1-8GHz – High Channel



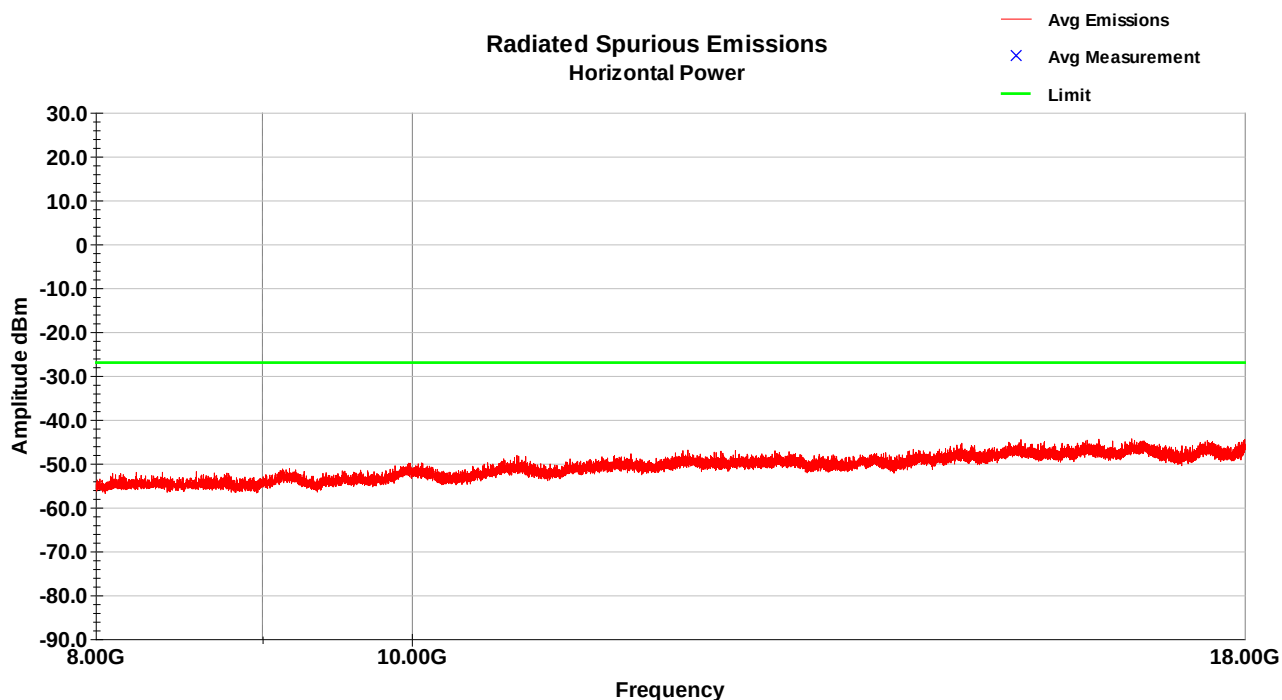
Horizontal Data – 1-8GHz – High Channel

No emissions within 20dB of limit

Vertical Plot – 8-18GHz – High Channel



Horizontal Plot – 8-18GHz – High Channel

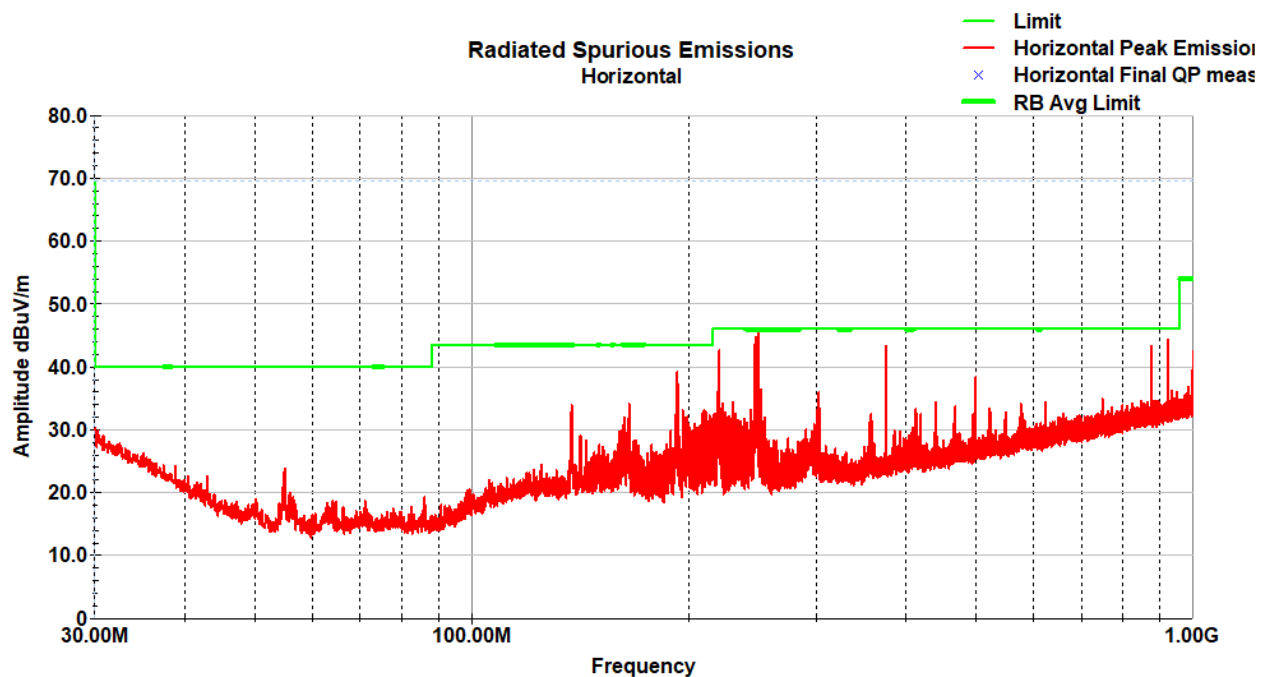
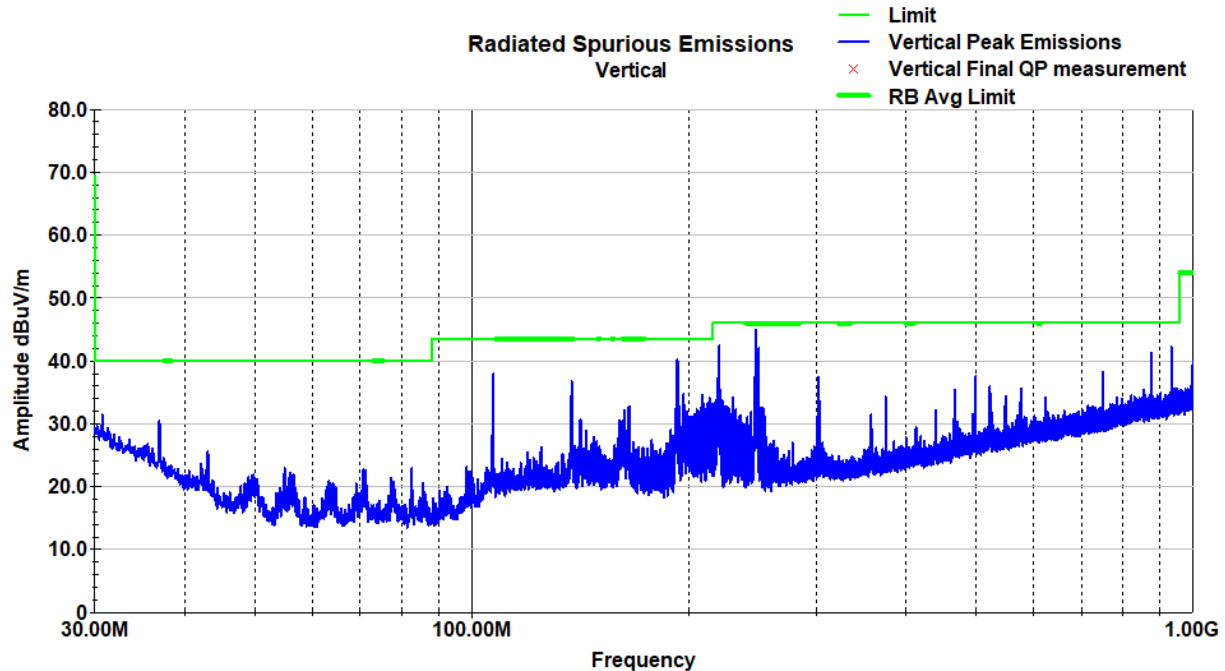


The worst-case final data in this section of -49.8dBm is below the restricted band limit of -41.2dBm. Emissions in the 18-40GHz frequency range were similar to those shown in section 3.11.3 above.

3.14 Test Data: 10-inch Display – U-NII Band 3 – 802.11a

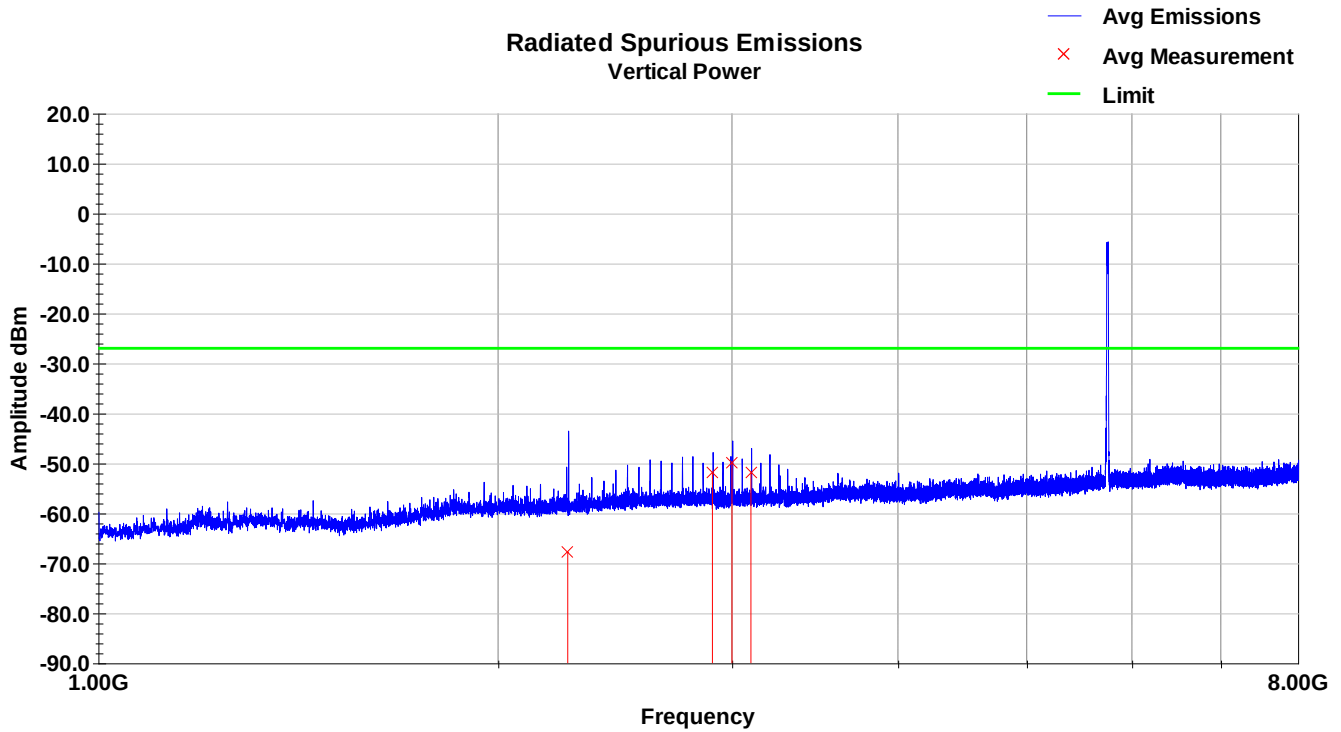
3.14.1 30-1000 MHz

Emissions were confirmed to be non-radio emissions. All channels had similar plots (worst case shown).



3.14.2 1-18 GHz

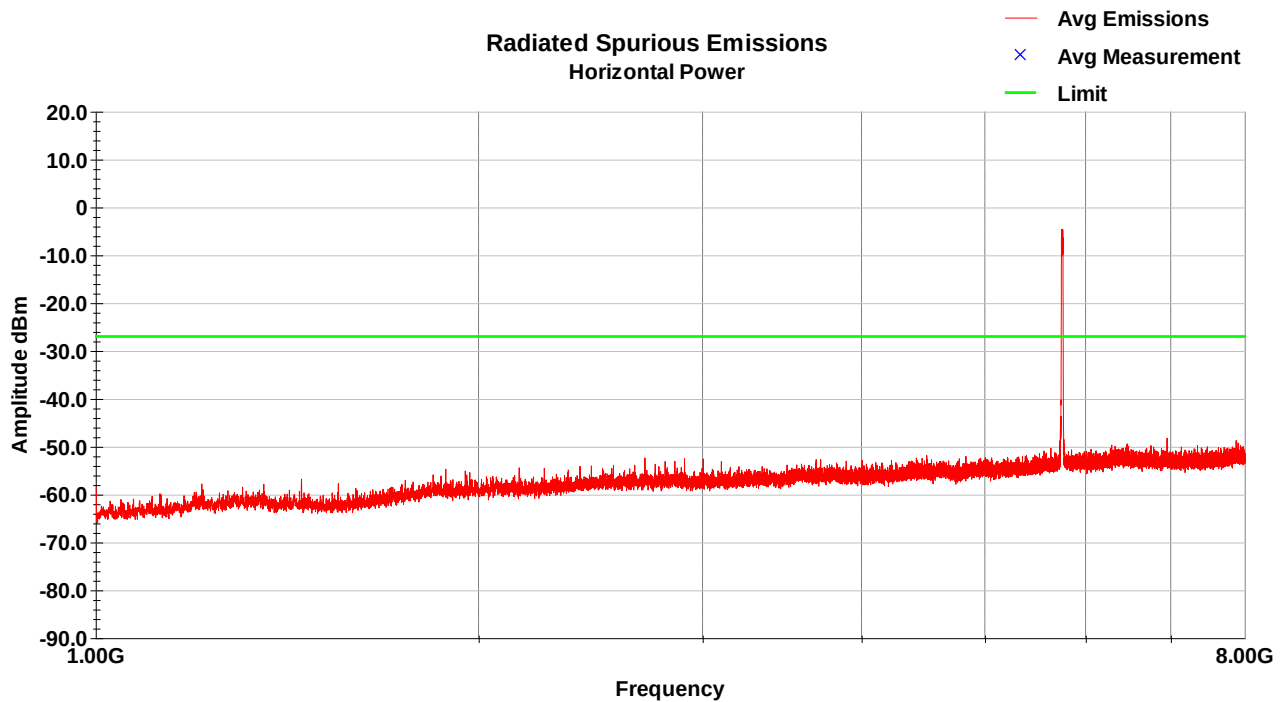
Vertical Plot – 1-8GHz – Low Channel



Vertical Data – 1-8GHz – Low Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
2256.56	-59.2	V	38.0	105.0	31.4	2.4	42.3	-67.7	-27.0	-40.7
2900.04	-44.8	V	4.0	123.0	32.3	2.7	42.0	-51.8	-27.0	-24.8
2999.92	-43.1	V	9.0	110.0	32.4	2.8	42.0	-49.8	-27.0	-22.8
3099.92	-45.5	V	33.0	120.0	32.8	2.8	41.9	-51.9	-27.0	-24.9
Avg Value = Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

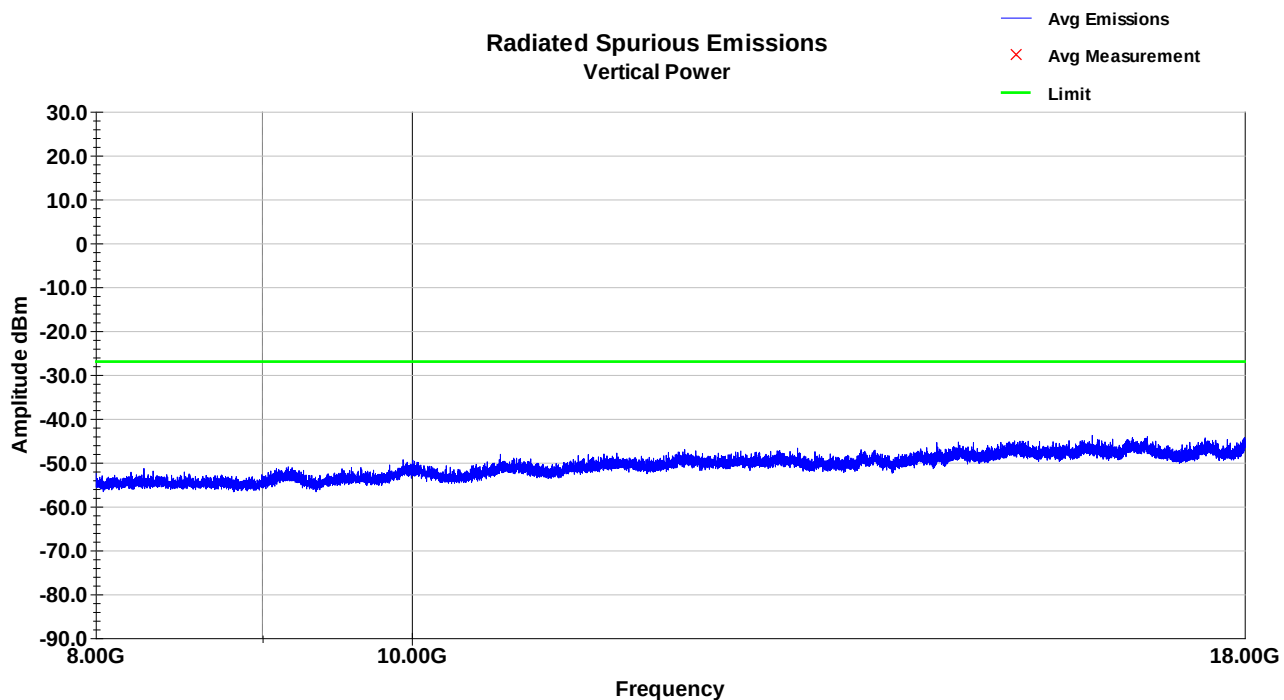
Horizontal Plot – 1-8GHz – Low Channel



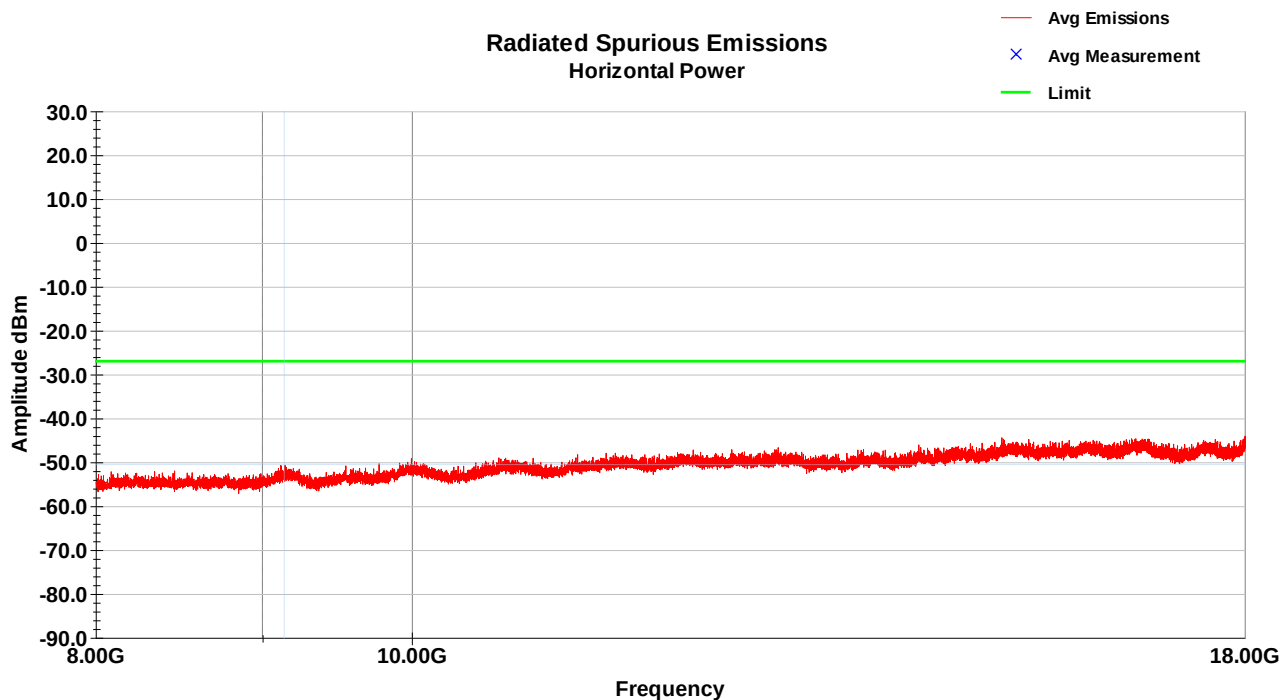
Horizontal Data – 1-8GHz – Low Channel

No emissions within 20dB of limit

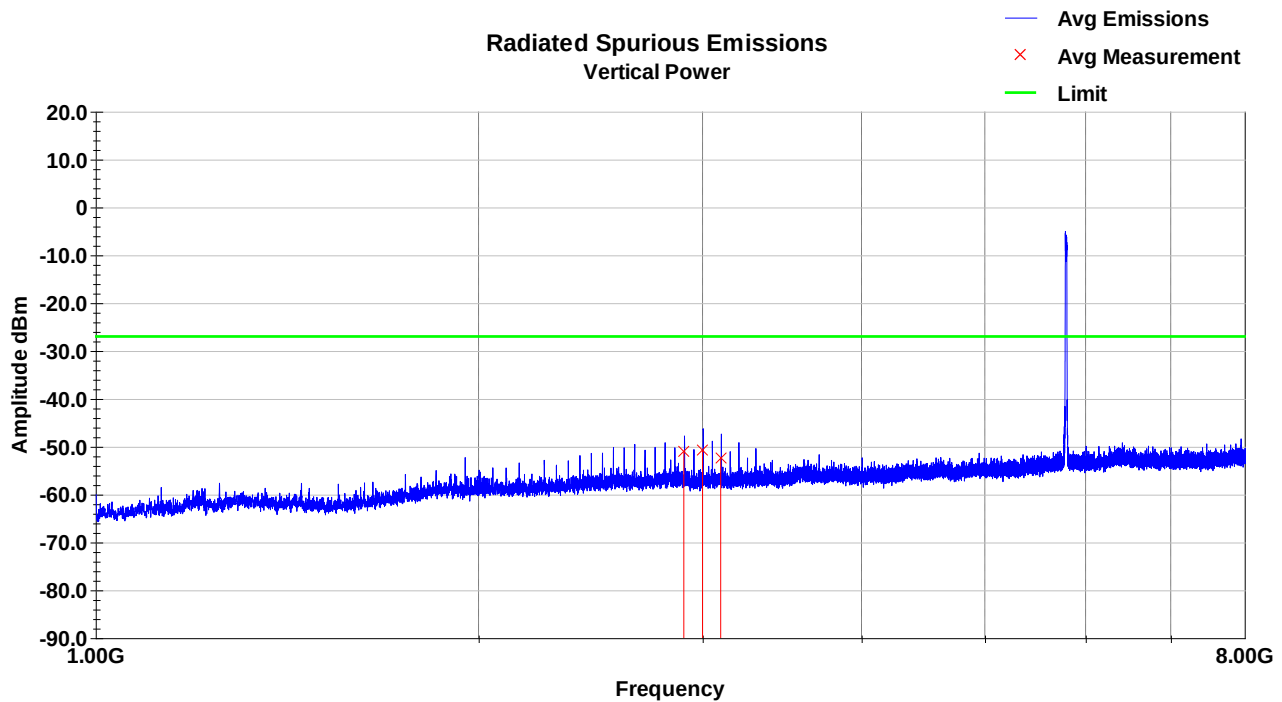
Vertical Plot – 8-18GHz – Low Channel



Horizontal Plot – 8-18GHz – Low Channel



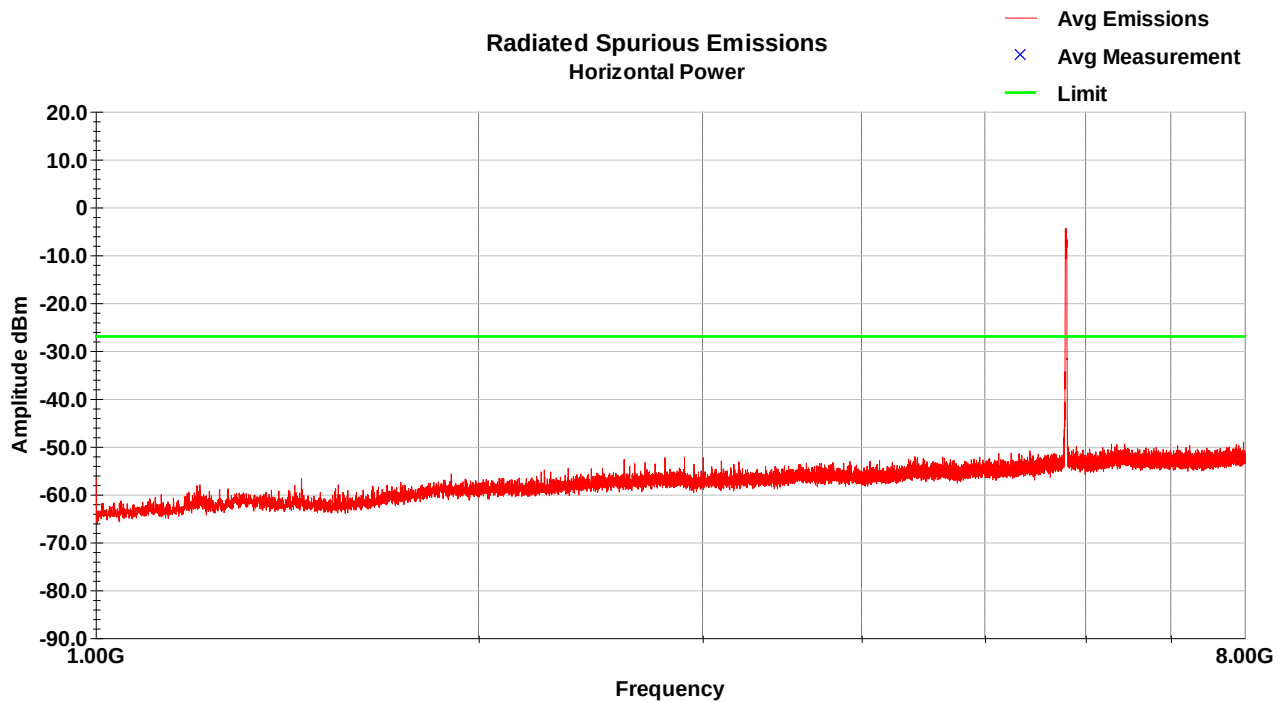
Vertical Plot – 1-8GHz – Mid Channel



Vertical Data – 1-8GHz – Mid Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
2900.04	-44.0	V	354.0	113.0	32.3	2.7	42.0	-51.0	-27.0	-24.0
2999.92	-44.0	V	11.0	127.0	32.4	2.8	42.0	-50.8	-27.0	-23.8
3100.28	-46.0	V	28.0	126.0	32.8	2.8	41.9	-52.4	-27.0	-25.4
Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

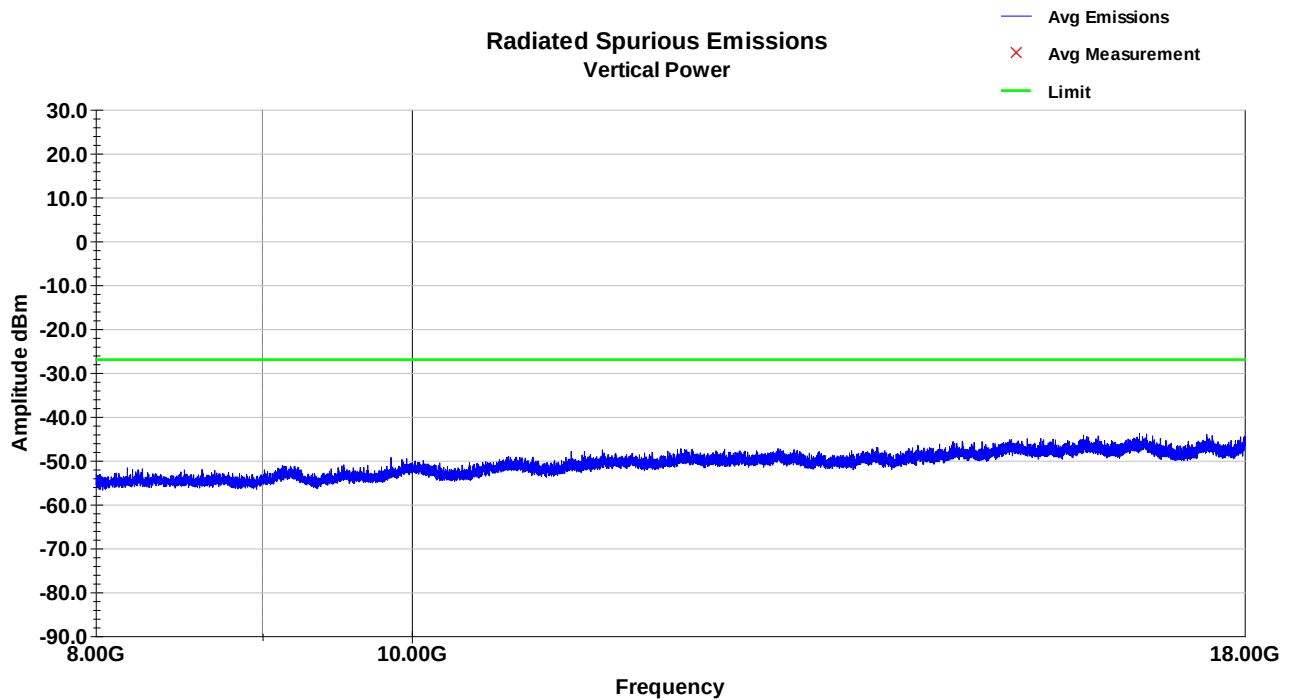
Horizontal Plot – 1-8GHz – Mid Channel



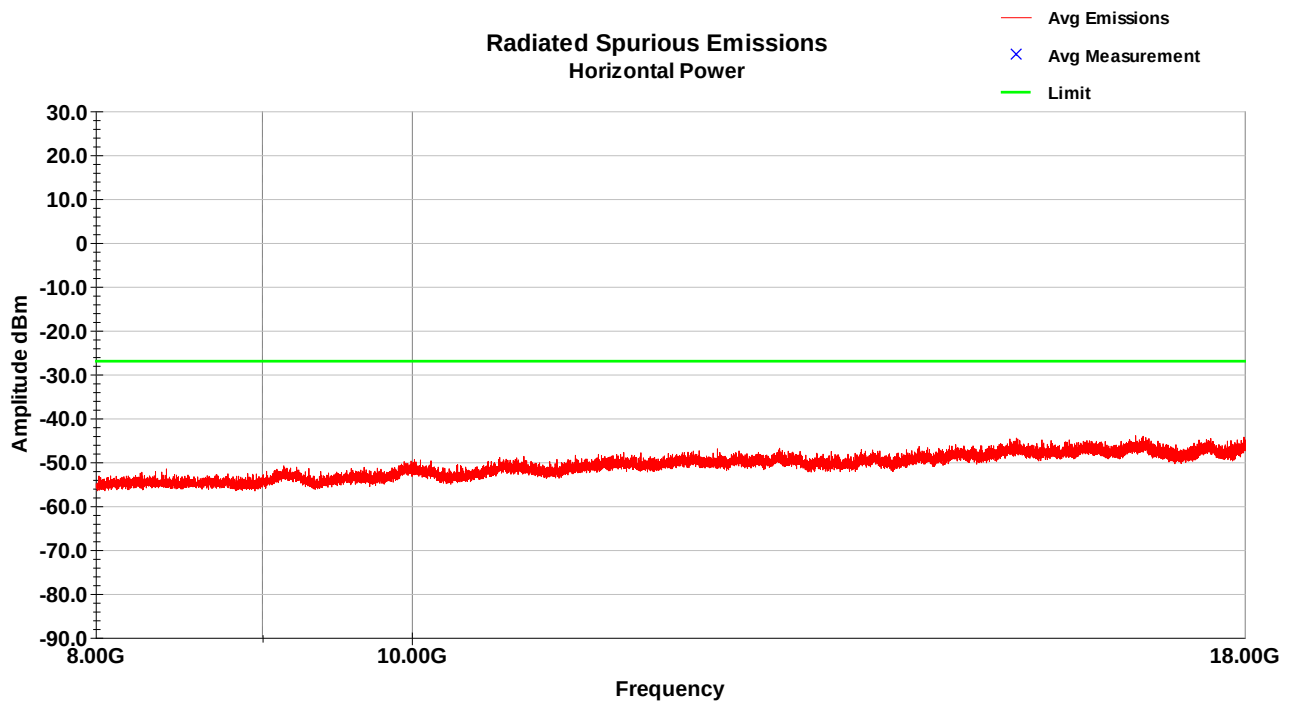
Horizontal Data – 1-8GHz – Mid Channel

No emissions within 20dB of limit

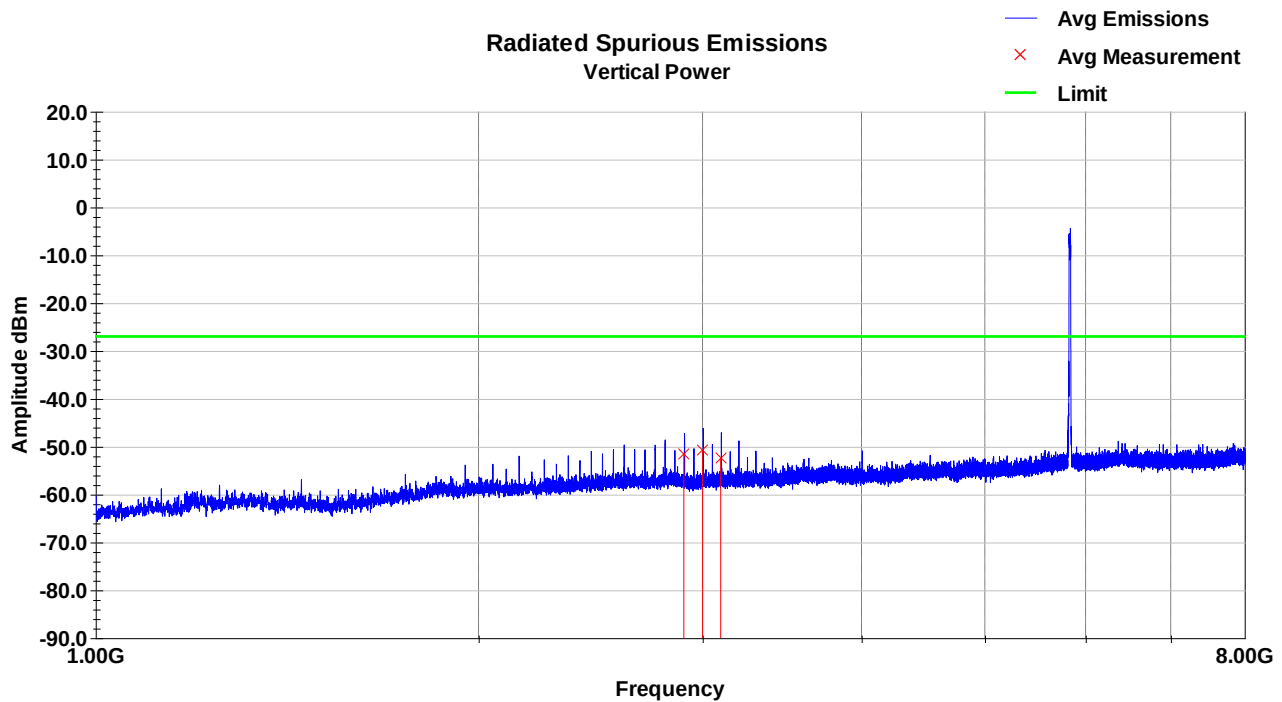
Vertical Plot – 8-18GHz – Mid Channel



Horizontal Plot – 8-18GHz – Mid Channel



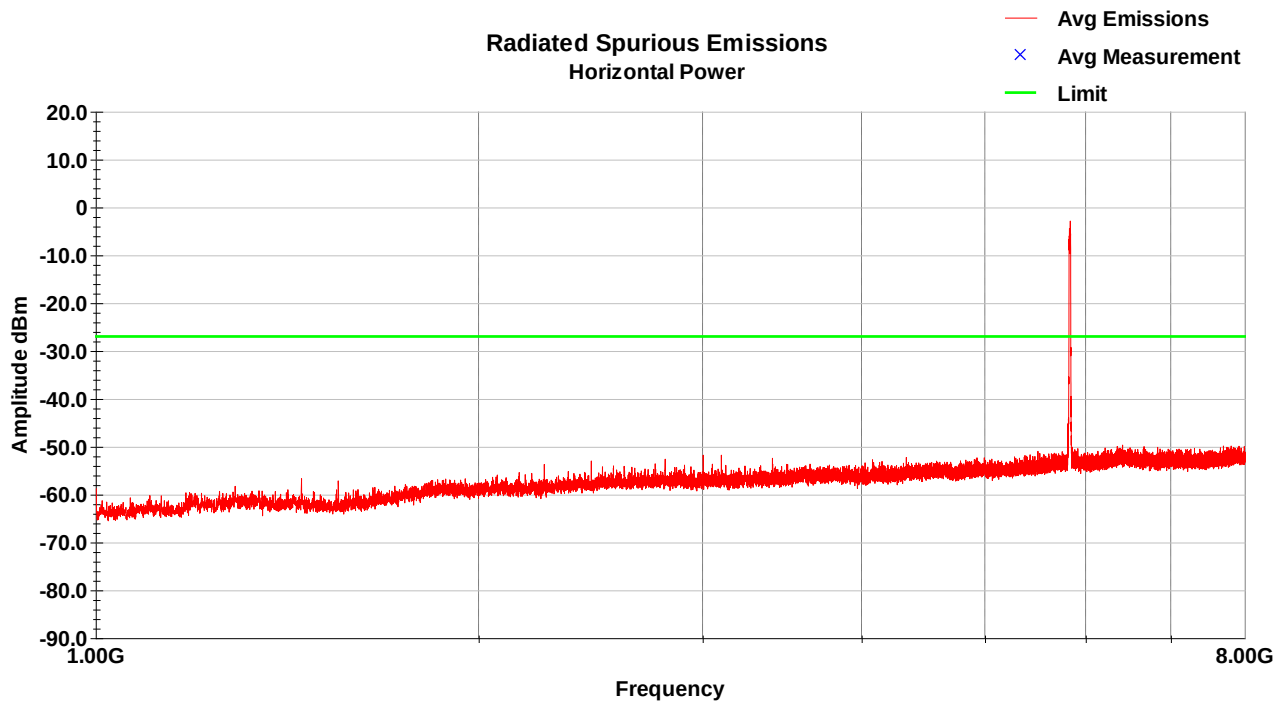
Vertical Plot – 1-8GHz – High Channel



Vertical Data – 1-8GHz – High Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
2899.80	-44.6	V	0.0	149.0	32.3	2.7	42.0	-51.6	-27.0	-24.6
3000.04	-44.1	V	345.0	118.0	32.4	2.8	42.0	-50.8	-27.0	-23.8
3100.04	-46.2	V	351.0	128.0	32.8	2.8	41.9	-52.5	-27.0	-25.5
Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

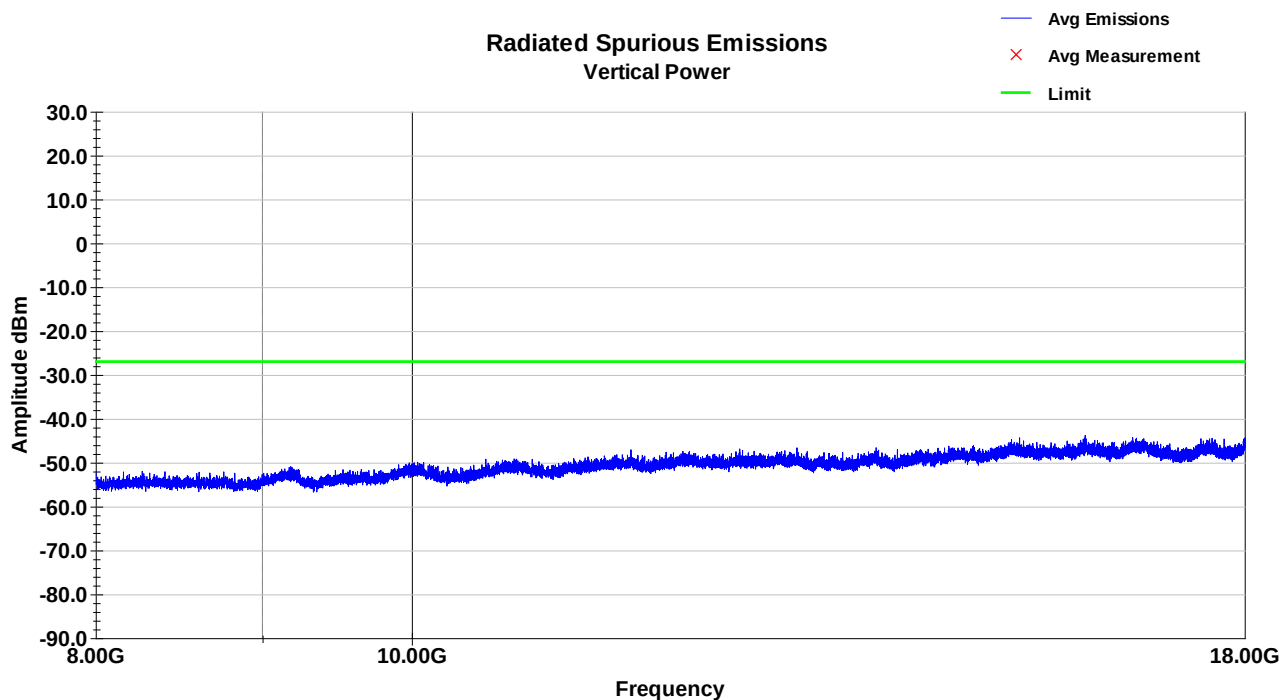
Horizontal Plot – 1-8GHz – High Channel



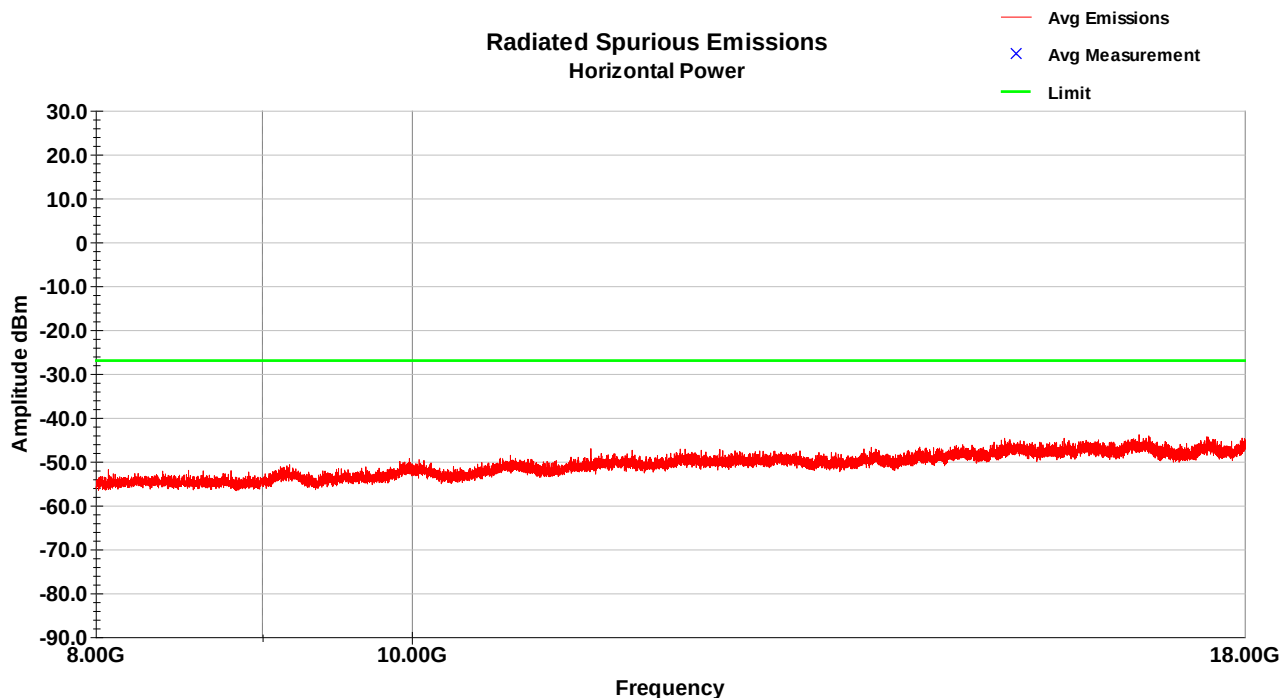
Horizontal Data – 1-8GHz – High Channel

No emissions within 20dB of limit

Vertical Plot – 8-18GHz – High Channel



Horizontal Plot – 8-18GHz – High Channel

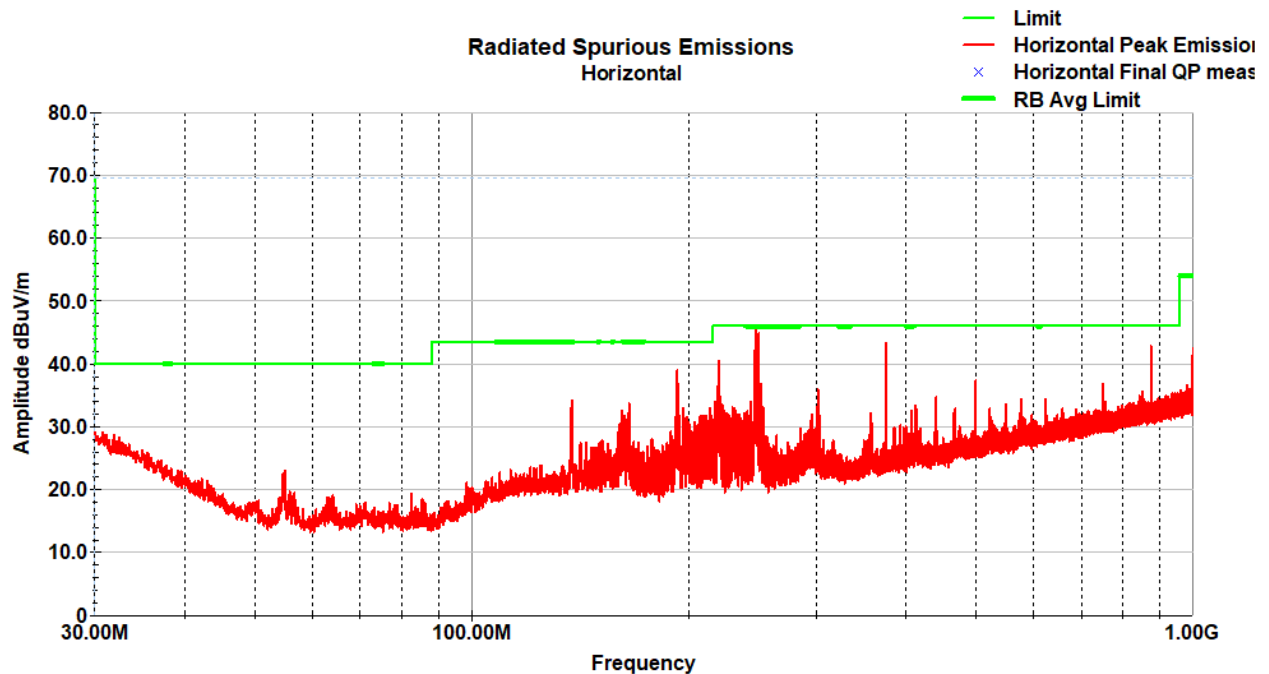
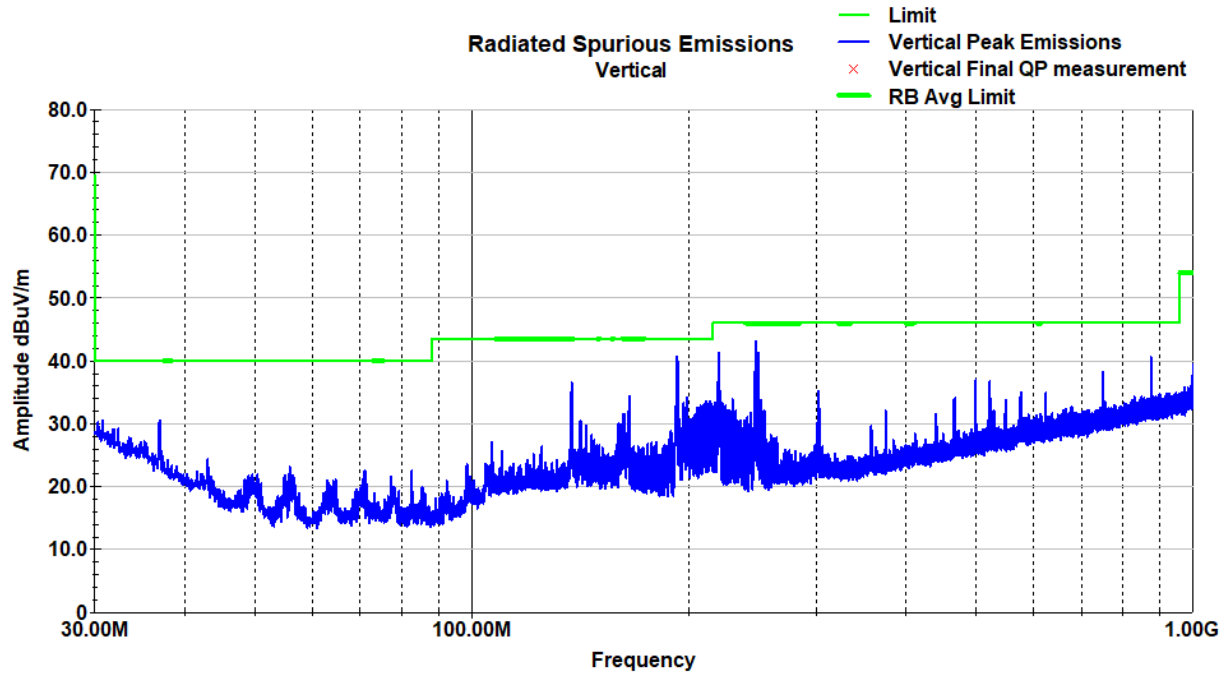


The worst-case final data in this section of -49.8dBm is below the restricted band limit of -41.2dBm. Emissions in the 18-40GHz frequency range were similar to those shown in section 3.11.3 above.

3.15 Test Data: 10-inch Display – U-NII Band 3 – 802.11n

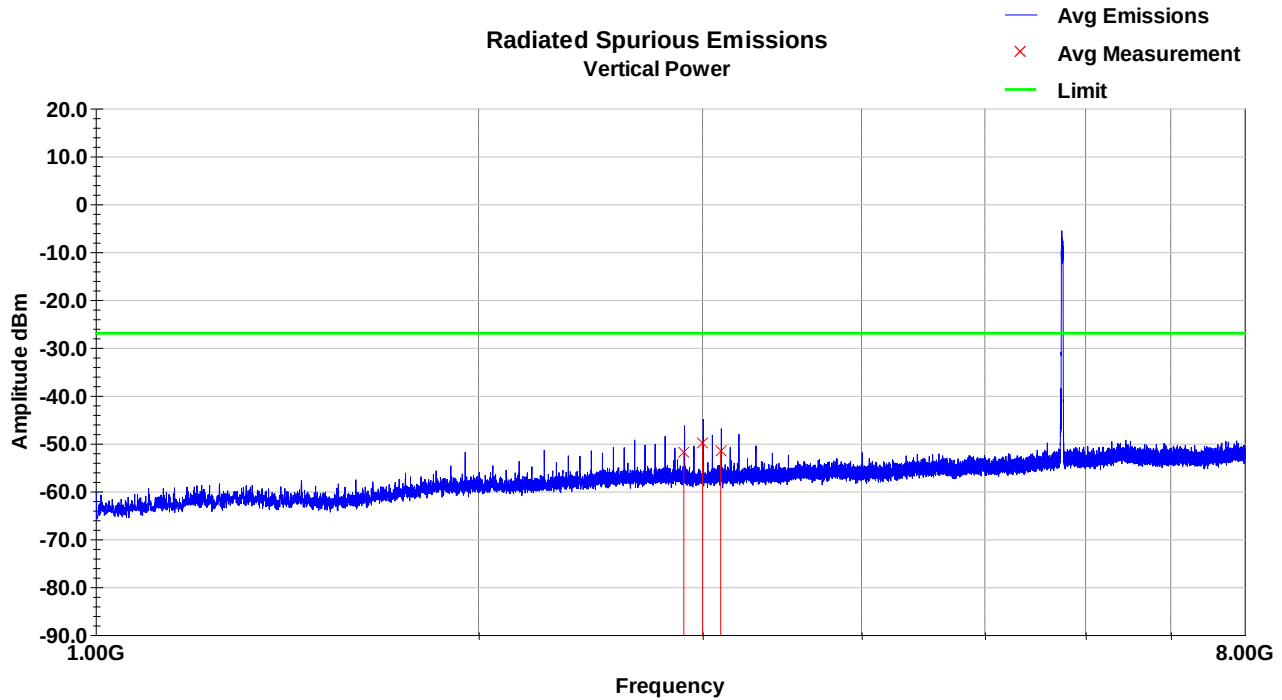
3.15.1 30-1000 MHz

Emissions were confirmed to be non-radio emissions. All channels had similar plots (worst case shown).



3.15.2 1-18 GHz

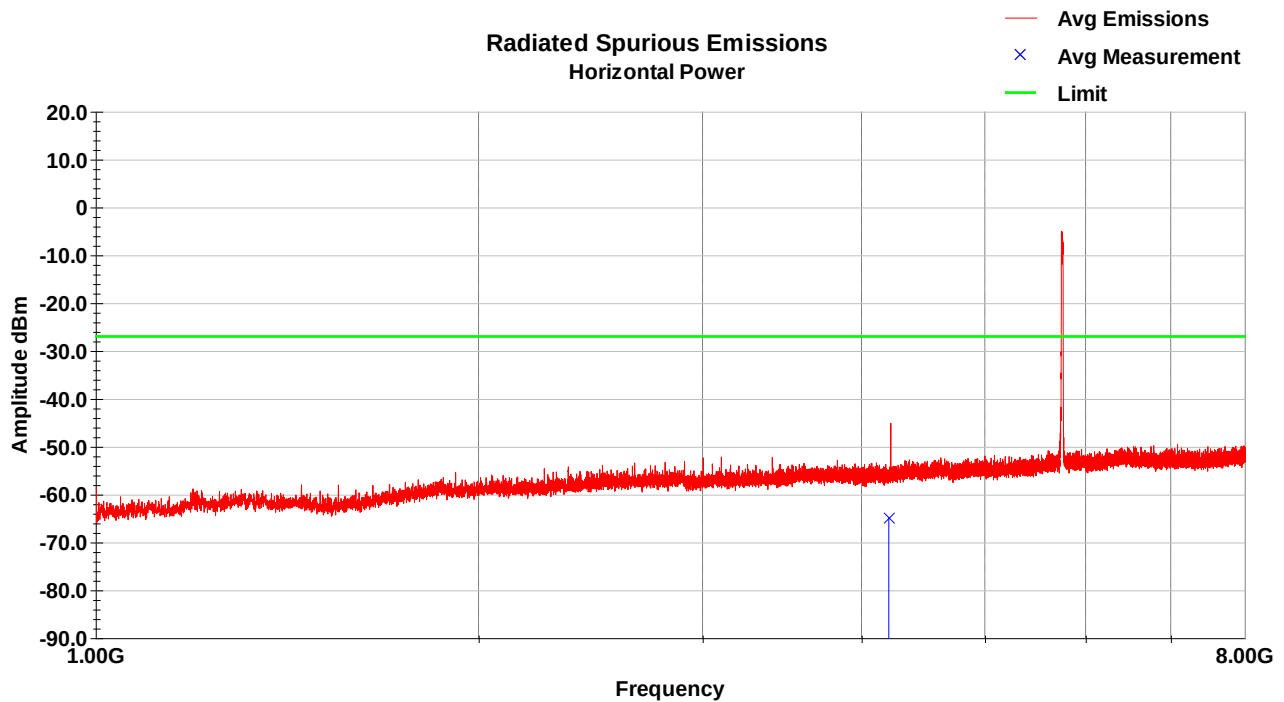
Vertical Plot – 1-8GHz – Low Channel



Vertical Data – 1-8GHz – Low Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
2899.92	-44.8	V	-1.0	121.0	32.3	2.7	42.0	-51.8	-27.0	-24.8
3000.16	-43.2	V	10.0	109.0	32.4	2.8	42.0	-50.0	-27.0	-23.0
3100.04	-45.1	V	29.0	110.0	32.8	2.8	41.9	-51.4	-27.0	-24.4
Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

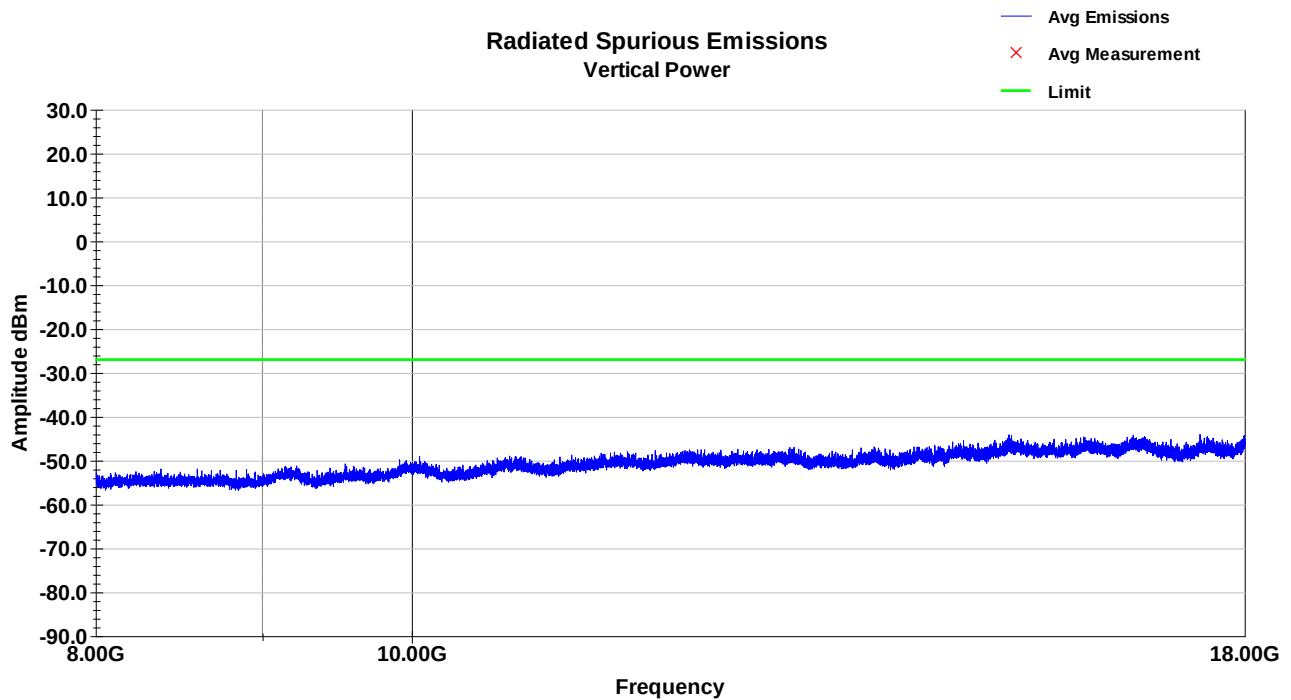
Horizontal Plot – 1-8GHz – Low Channel



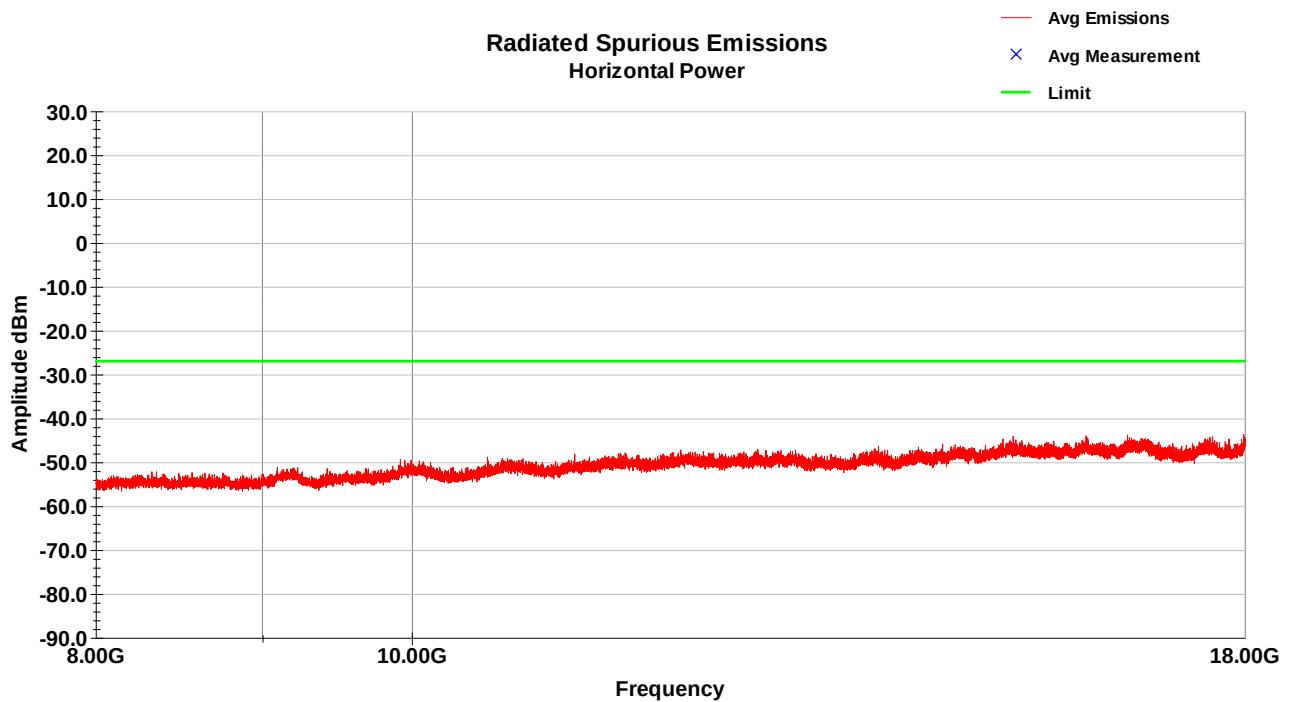
Horizontal Data – 1-8GHz – Low Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
4202.92	-59.4	H	142.0	100.0	33.3	3.2	42.0	-64.8	-27.0	-37.8
Avg Value = Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

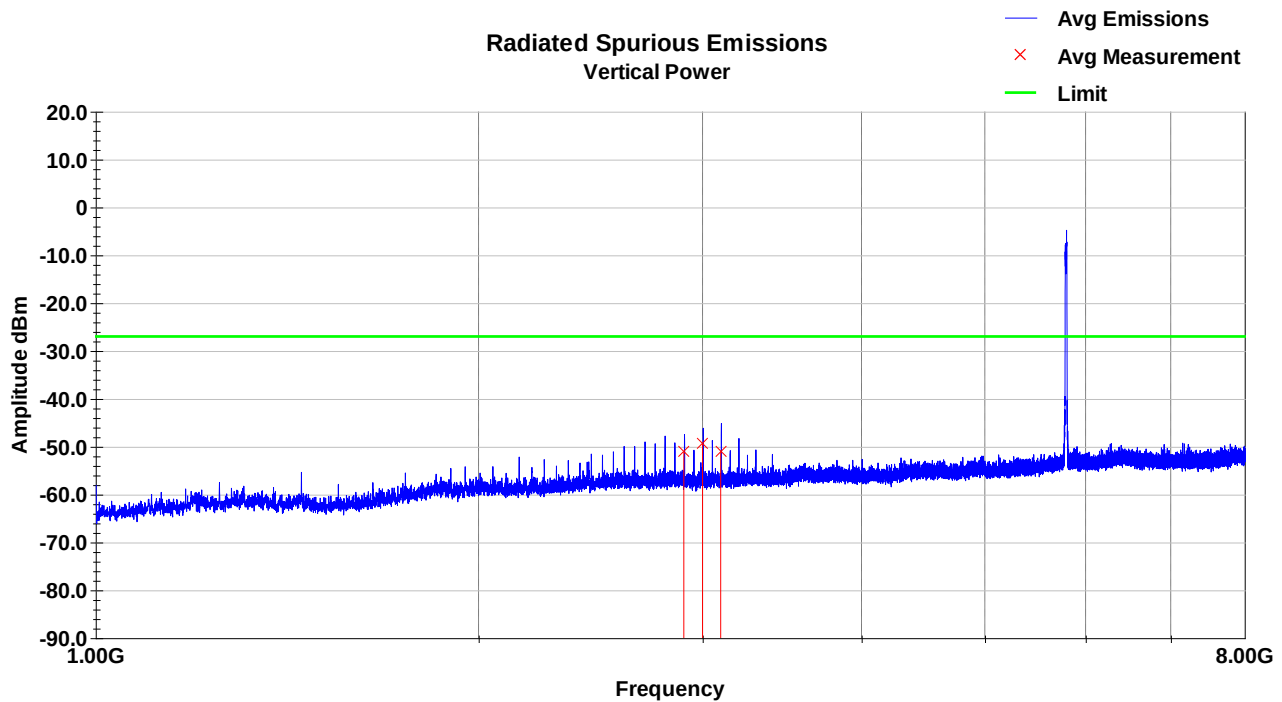
Vertical Plot – 8-18GHz – Low Channel



Horizontal Plot – 8-18GHz – Low Channel



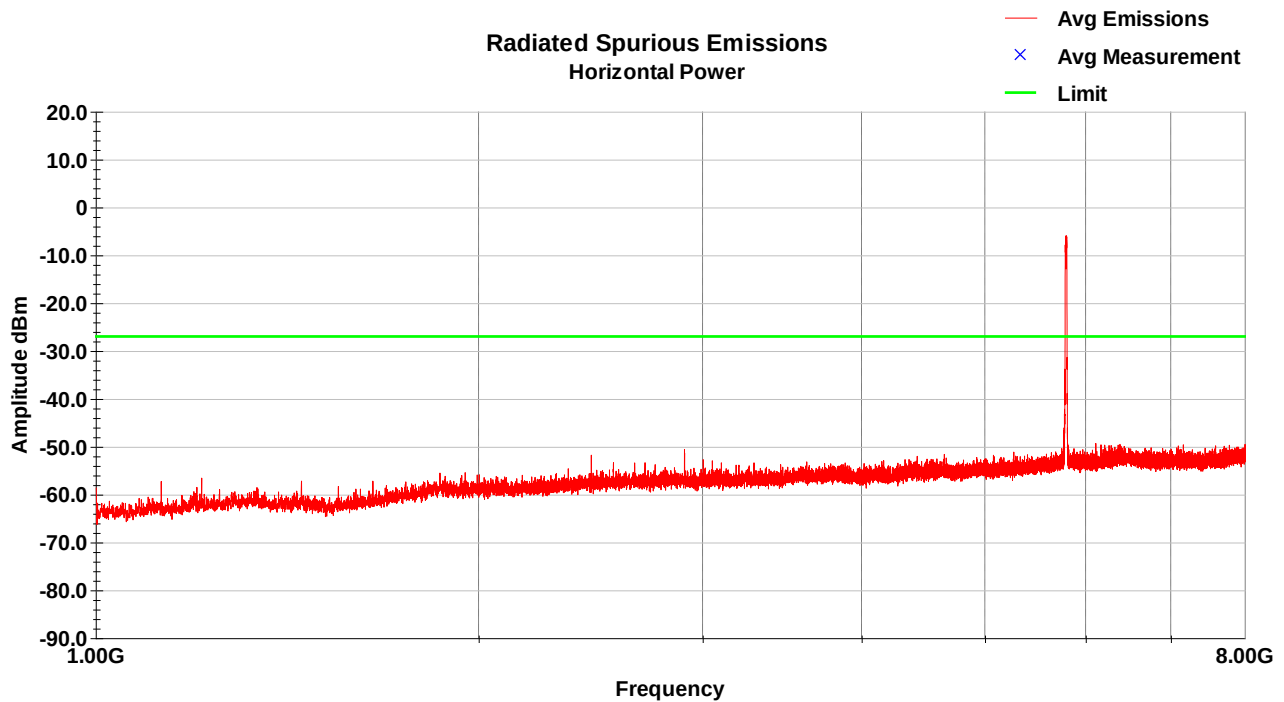
Vertical Plot – 1-8GHz – Mid Channel



Vertical Data – 1-8GHz – Mid Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
2900.04	-44.1	V	350.0	120.0	32.3	2.7	42.0	-51.1	-27.0	-24.1
2999.92	-42.6	V	13.0	118.0	32.4	2.8	42.0	-49.4	-27.0	-22.4
3100.16	-44.7	V	10.0	117.0	32.8	2.8	41.9	-51.0	-27.0	-24.0
Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

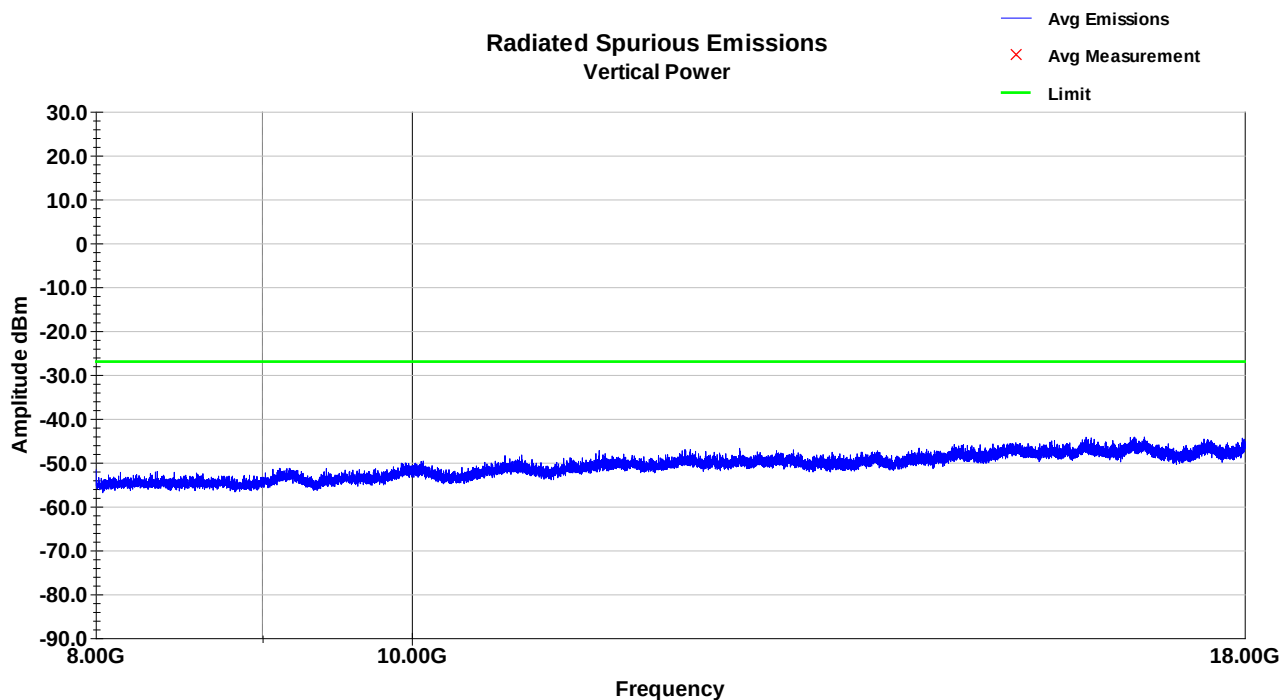
Horizontal Plot – 1-8GHz – Mid Channel



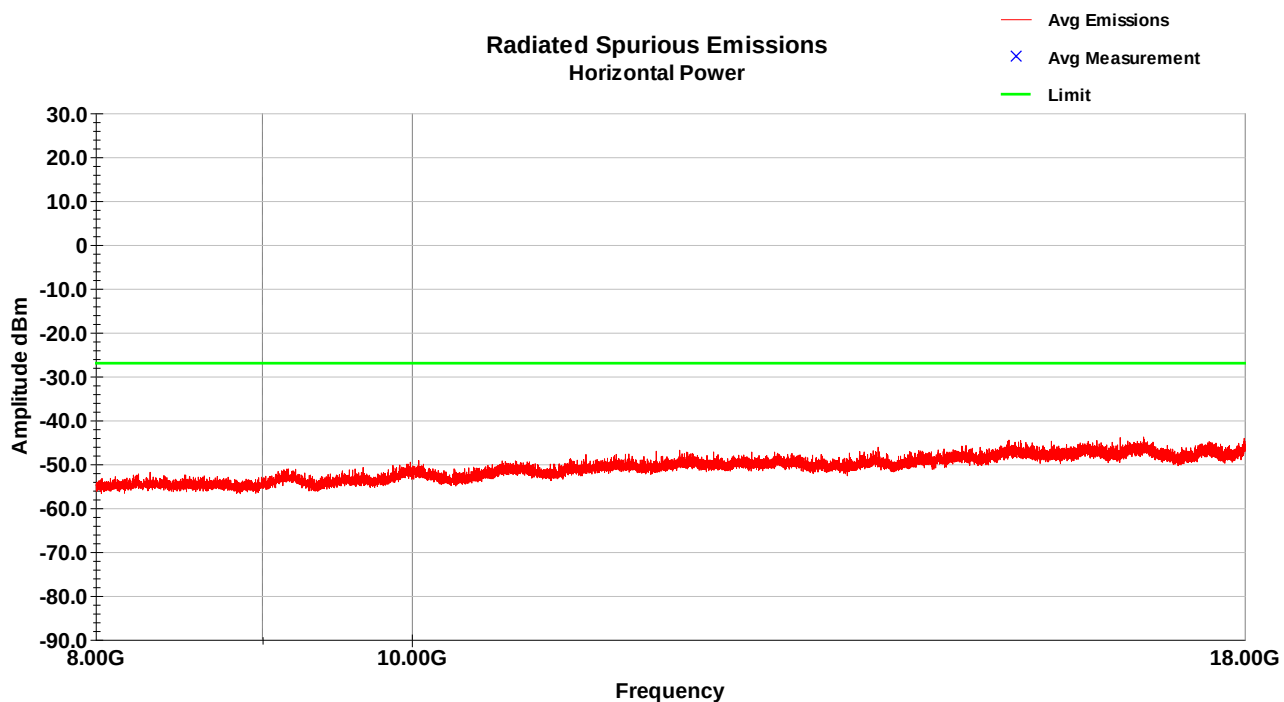
Horizontal Data – 1-8GHz – Mid Channel

No emissions within 20dB of limit

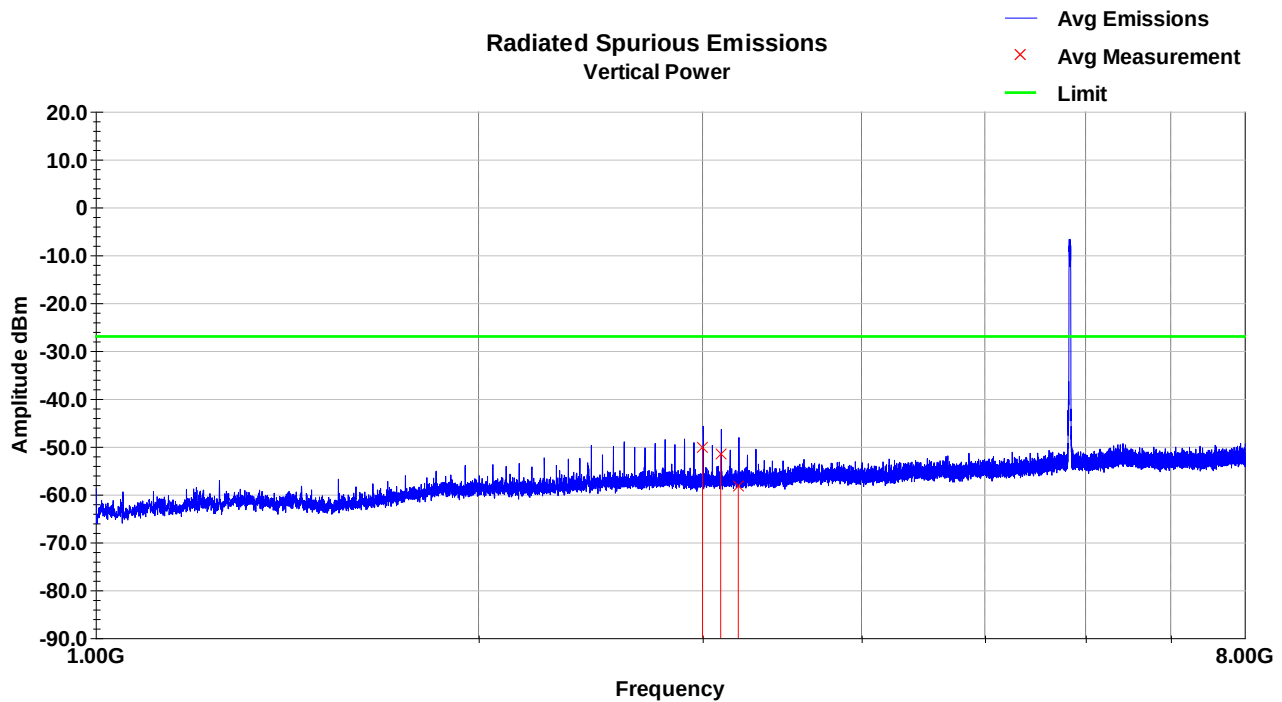
Vertical Plot – 8-18GHz – Mid Channel



Horizontal Plot – 8-18GHz – Mid Channel



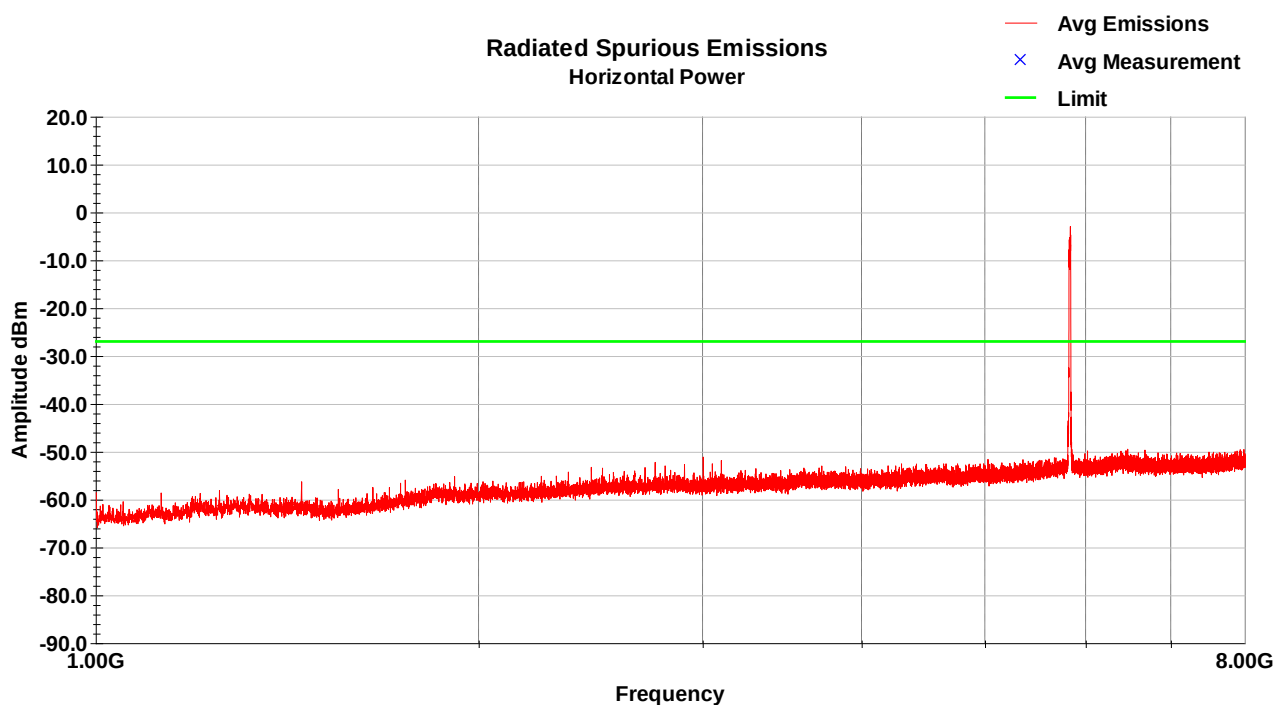
Vertical Plot – 1-8GHz – High Channel



Vertical Data – 1-8GHz – High Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
2999.92	-43.5	V	22.0	113.0	32.4	2.8	42.0	-50.3	-27.0	-23.3
3099.80	-45.3	V	10.0	128.0	32.8	2.8	41.9	-51.6	-27.0	-24.6
3200.16	-52.1	V	326.0	118.0	32.8	2.9	41.8	-58.2	-27.0	-31.2
Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

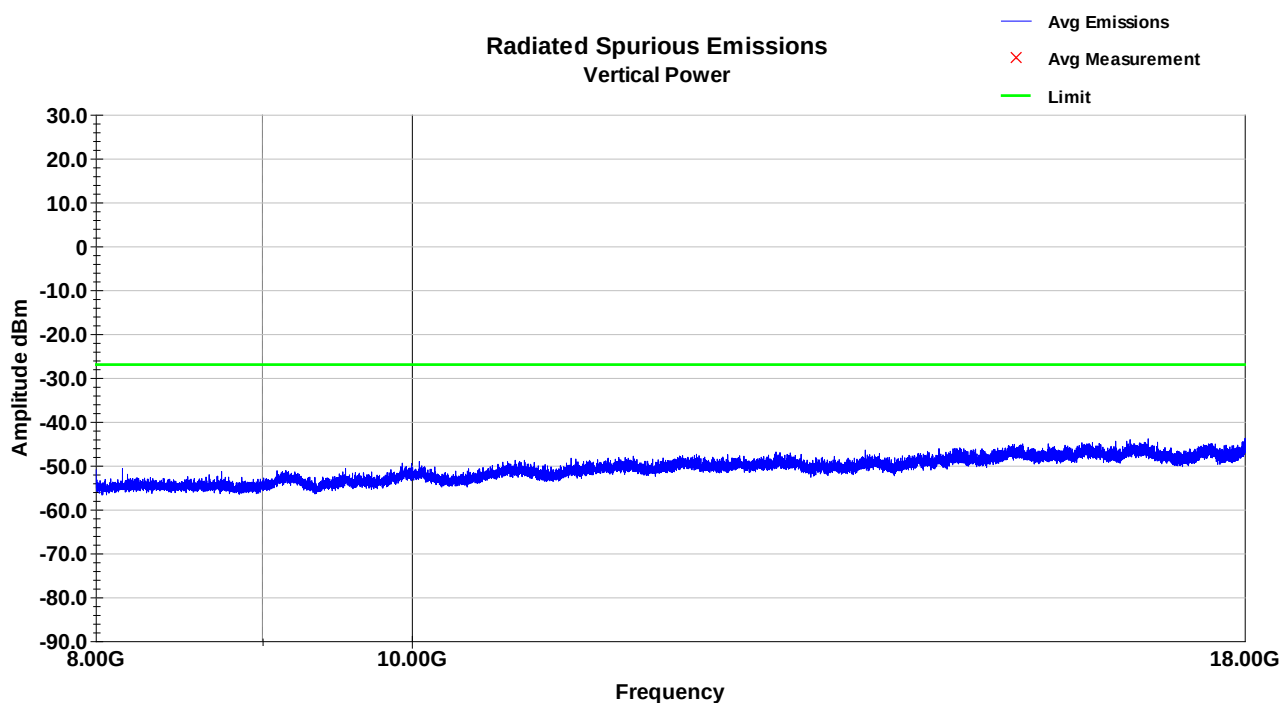
Horizontal Plot – 1-8GHz – High Channel



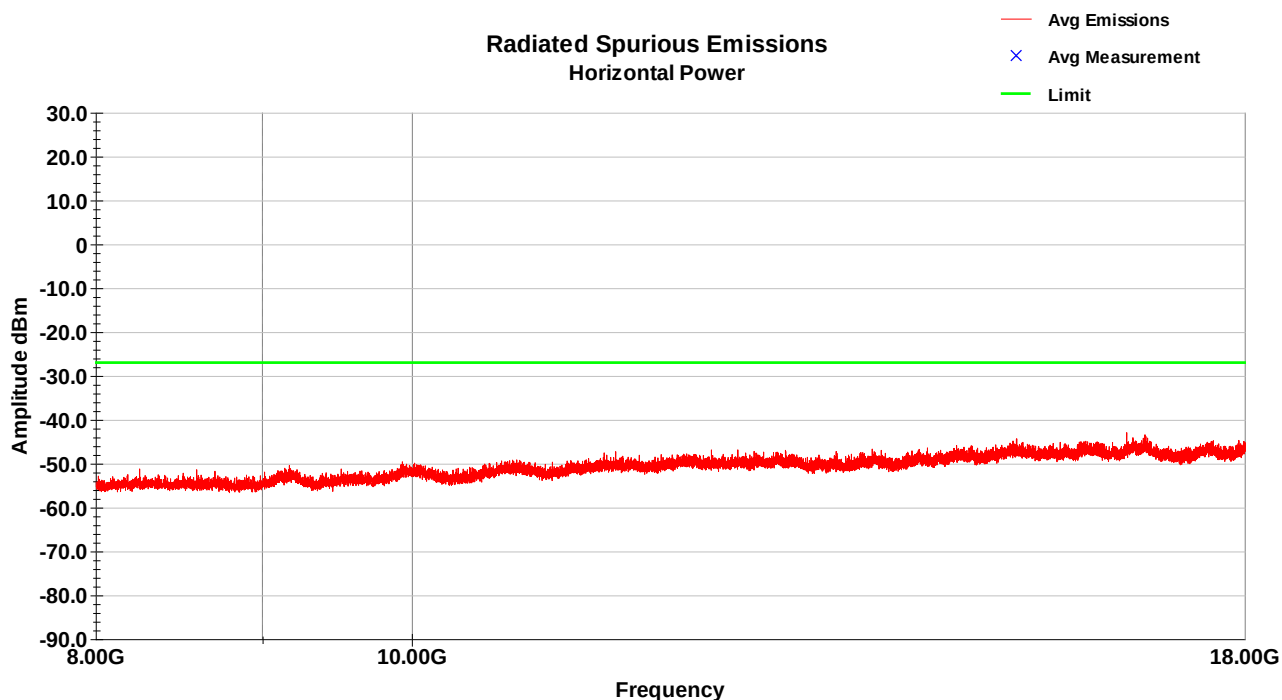
Horizontal Data – 1-8GHz – High Channel

No emissions within 20dB of limit

Vertical Plot – 8-18GHz – High Channel



Horizontal Plot – 8-18GHz – High Channel

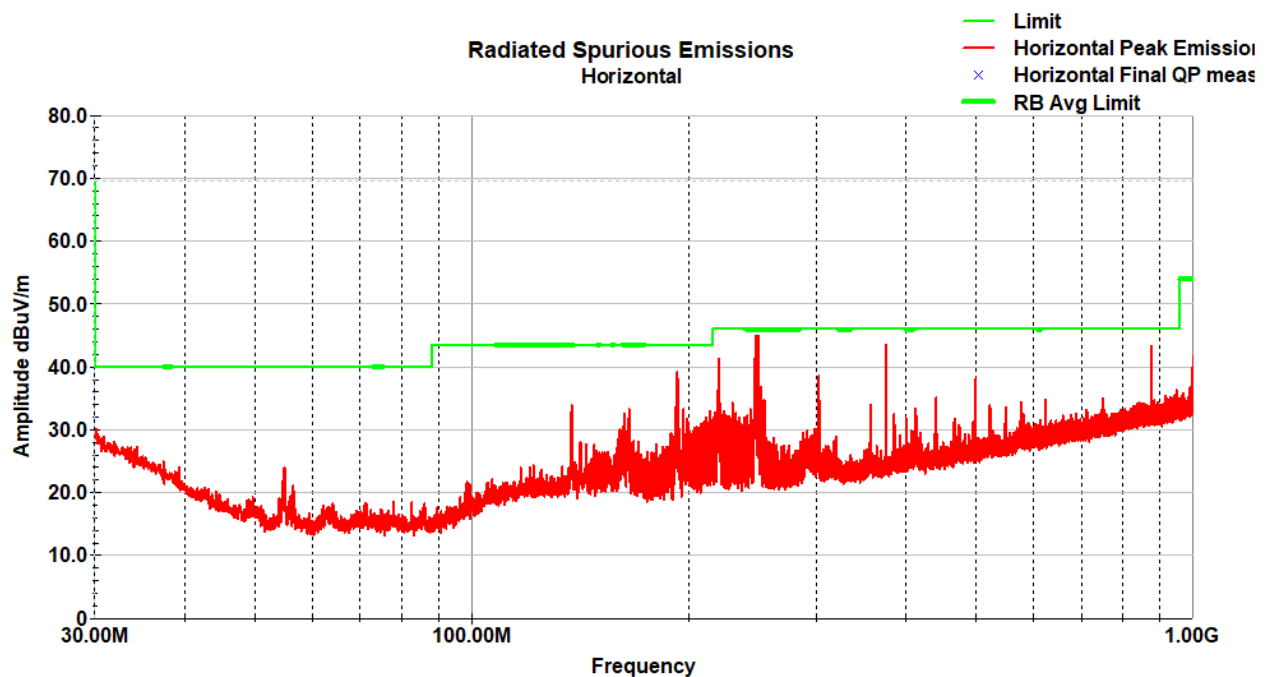
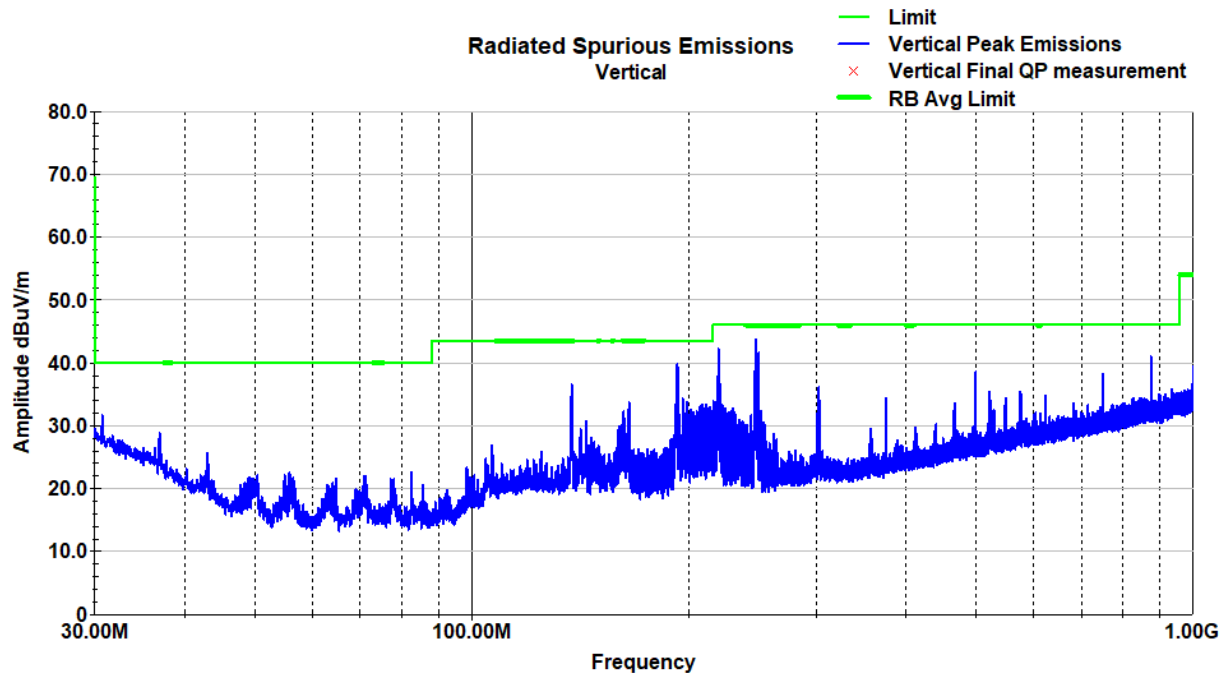


The worst-case final data in this section of -49.4dBm is below the restricted band limit of -41.2dBm. Emissions in the 18-40GHz frequency range were similar to those shown in section 3.11.3 above.

3.16 Test Data: 10-inch Display – U-NII Band 3 – 802.11ac

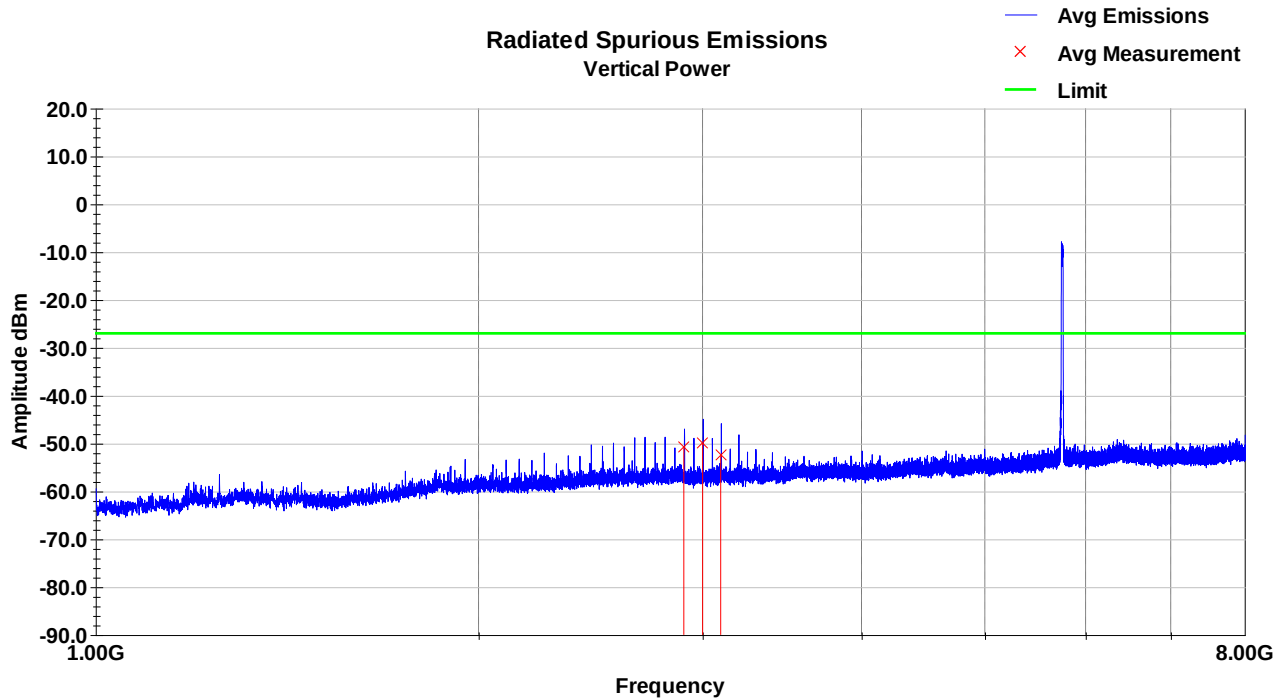
3.16.1 30-1000 MHz

Emissions were confirmed to be non-radio emissions. All channels had similar plots (worst case shown).



3.16.2 1-18 GHz

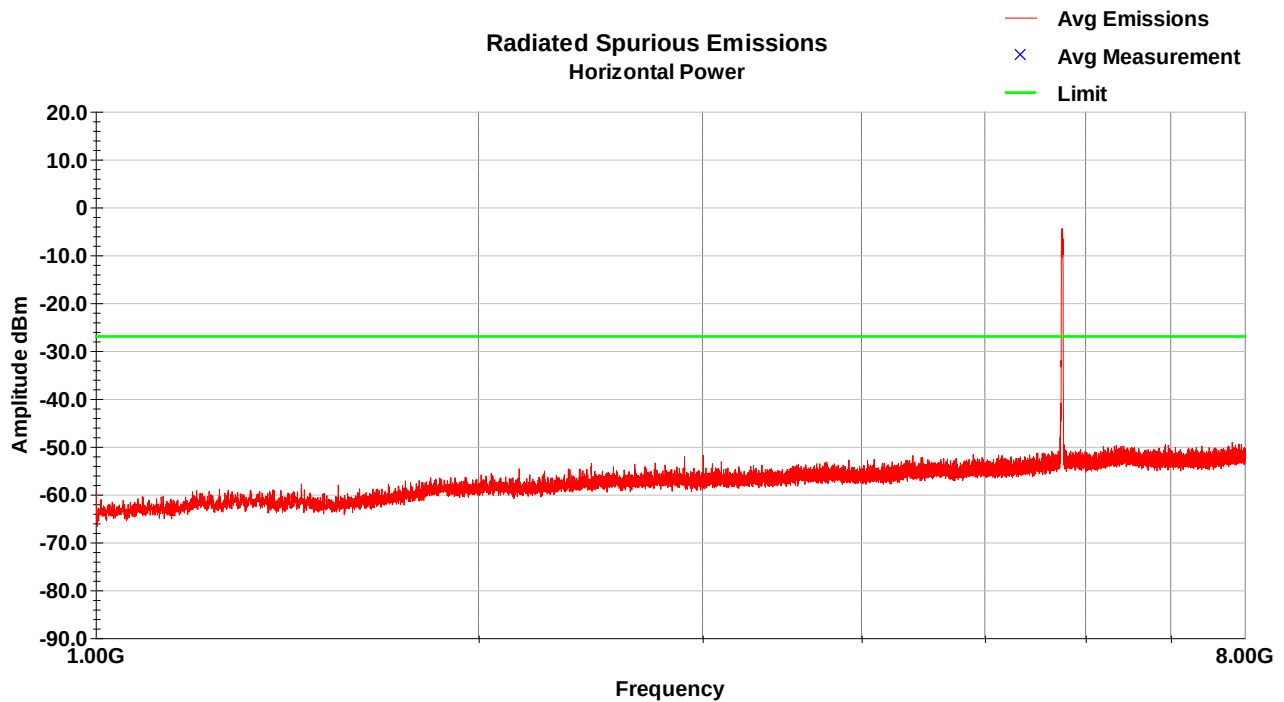
Vertical Plot – 1-8GHz – Low Channel



Vertical Data – 1-8GHz – Low Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
2899.95	-43.6	V	4.0	146.0	32.3	2.7	42.0	-50.6	-27.0	-23.6
3000.05	-43.1	V	9.0	143.0	32.4	2.8	42.0	-49.9	-27.0	-22.9
3099.92	-46.2	V	9.0	141.0	32.8	2.8	41.9	-52.5	-27.0	-25.5
Avg Value = Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

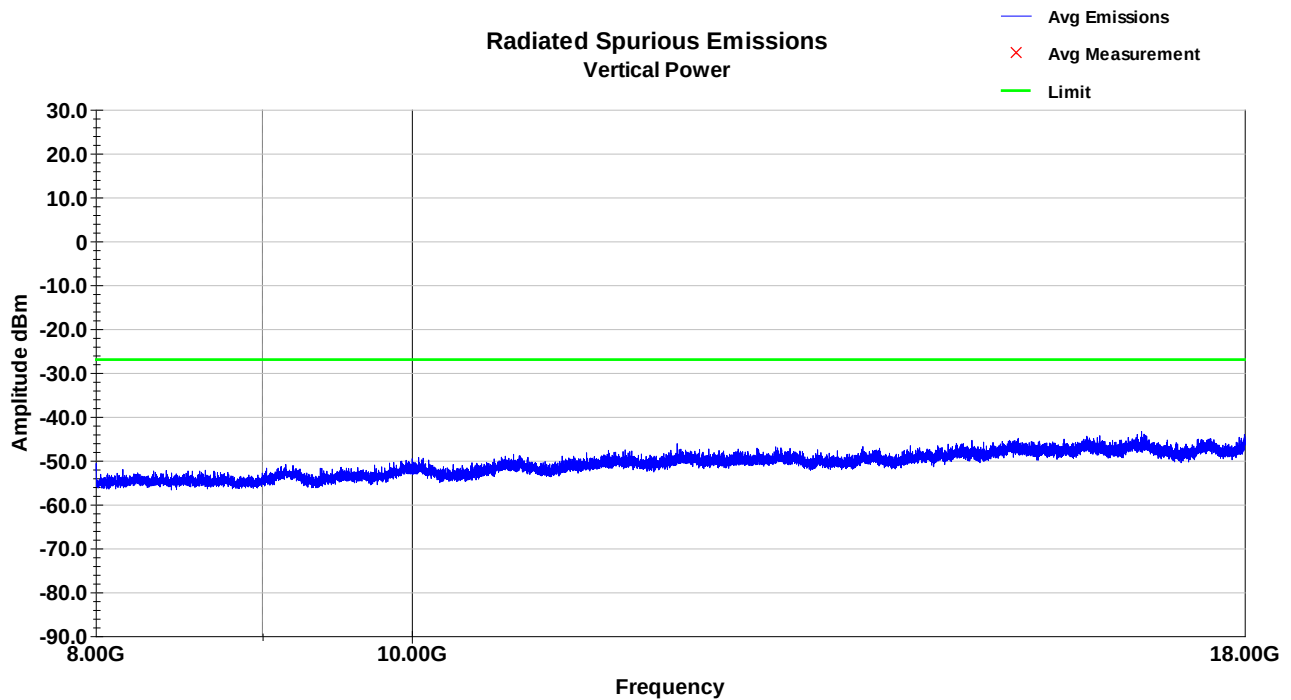
Horizontal Plot – 1-8GHz – Low Channel



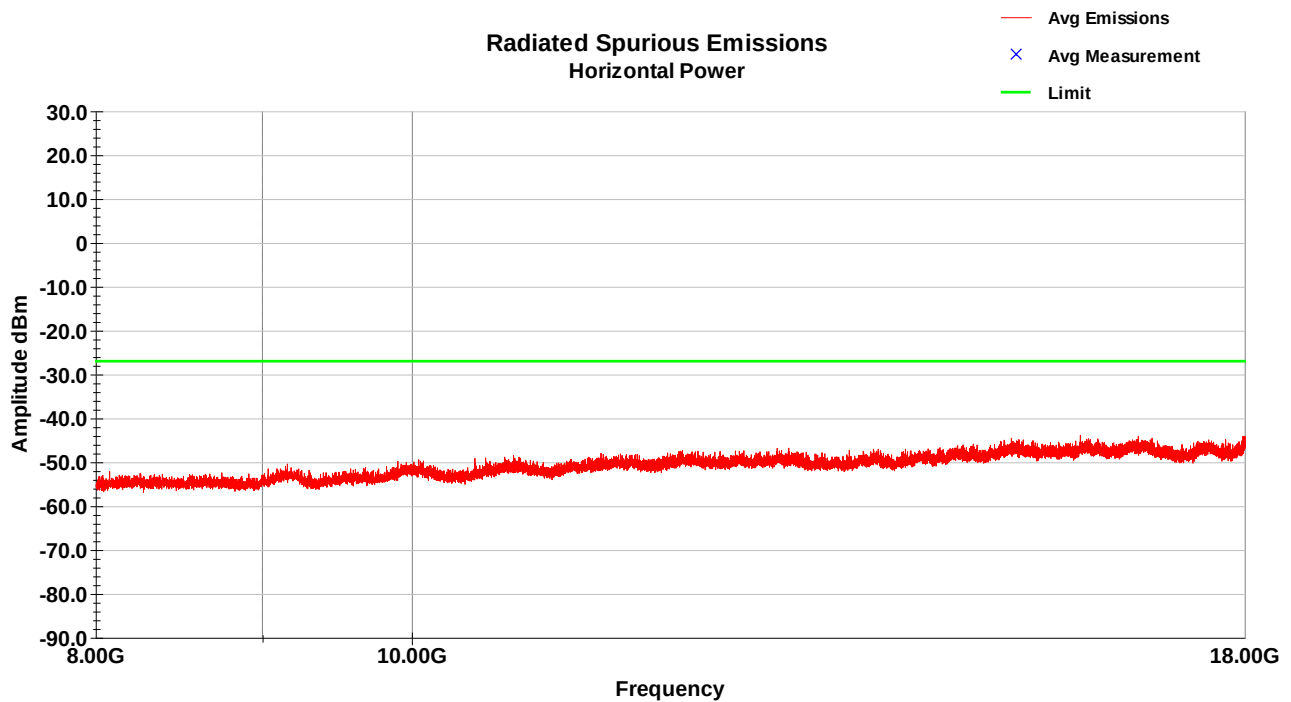
Horizontal Data – 1-8GHz – Low Channel

No emissions within 20dB of limit

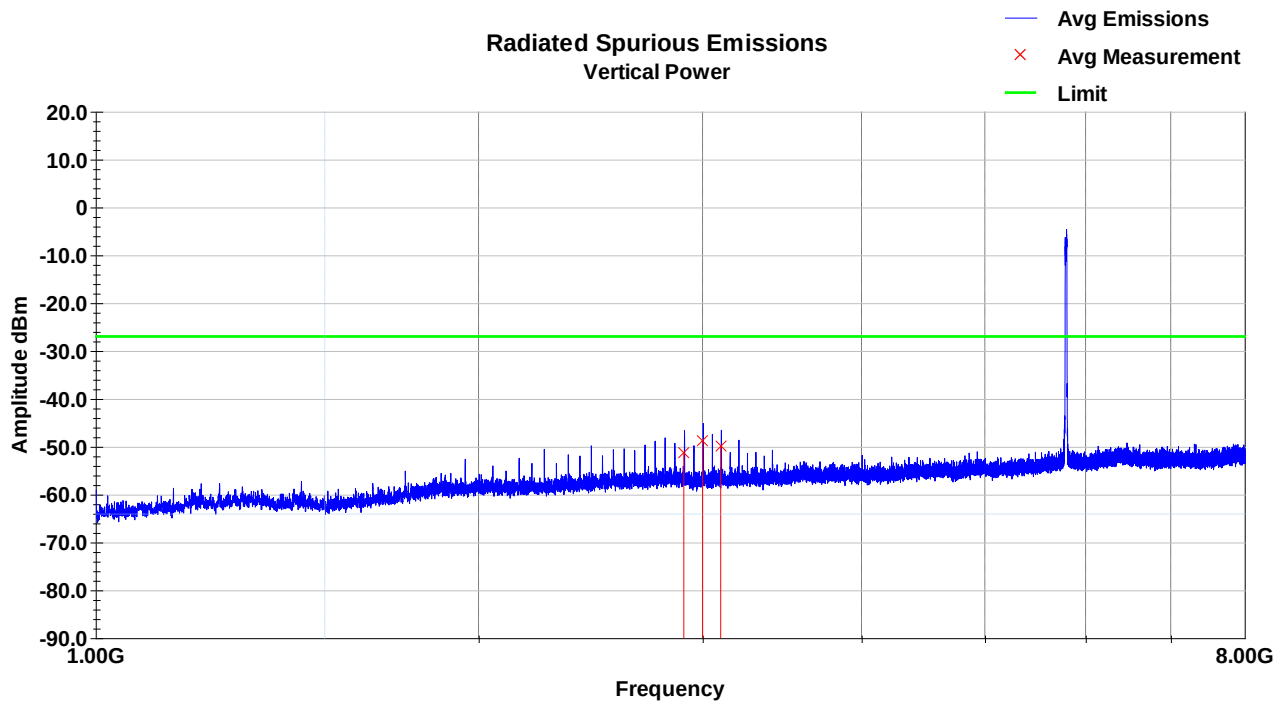
Vertical Plot – 8-18GHz – Low Channel



Horizontal Plot – 8-18GHz – Low Channel



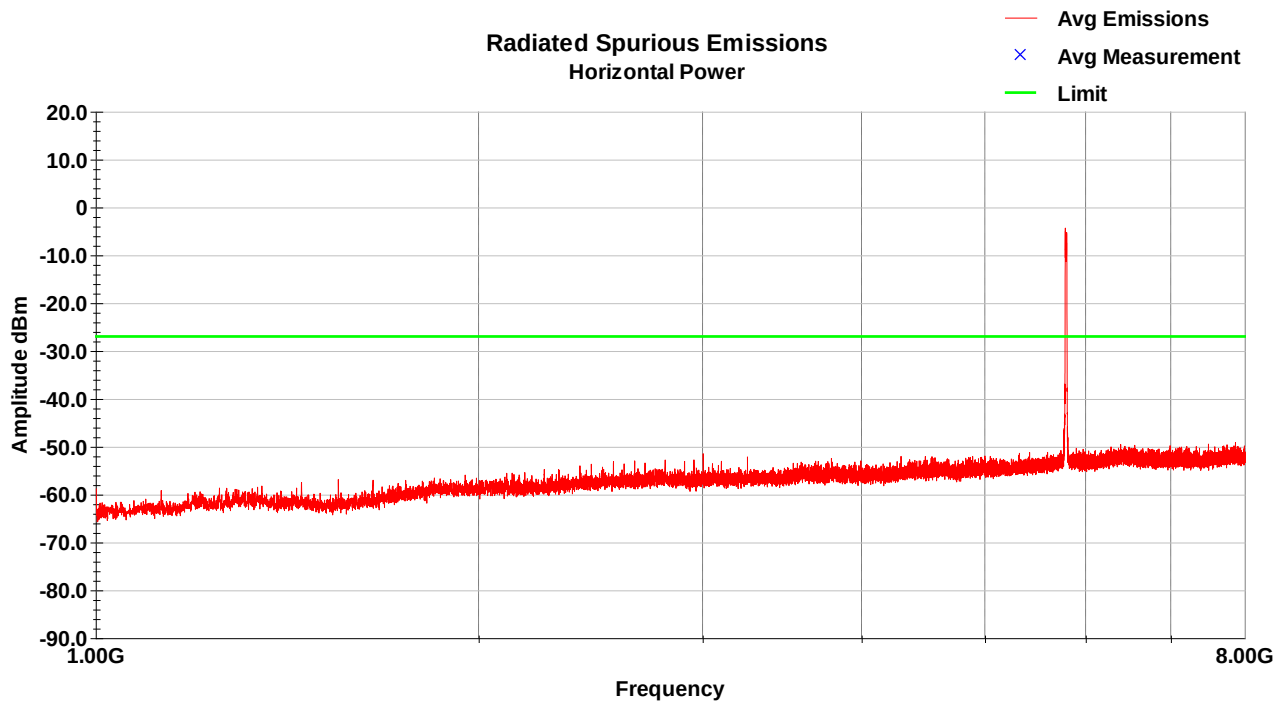
Vertical Plot – 1-8GHz – Mid Channel



Vertical Data – 1-8GHz – Mid Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
2899.83	-44.4	V	356.0	117.0	32.3	2.7	42.0	-51.4	-27.0	-24.4
3000.17	-42.0	V	11.0	100.0	32.4	2.8	42.0	-48.7	-27.0	-21.7
3100.16	-43.7	V	33.0	100.0	32.8	2.8	41.9	-50.0	-27.0	-23.0
Avg Value = Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

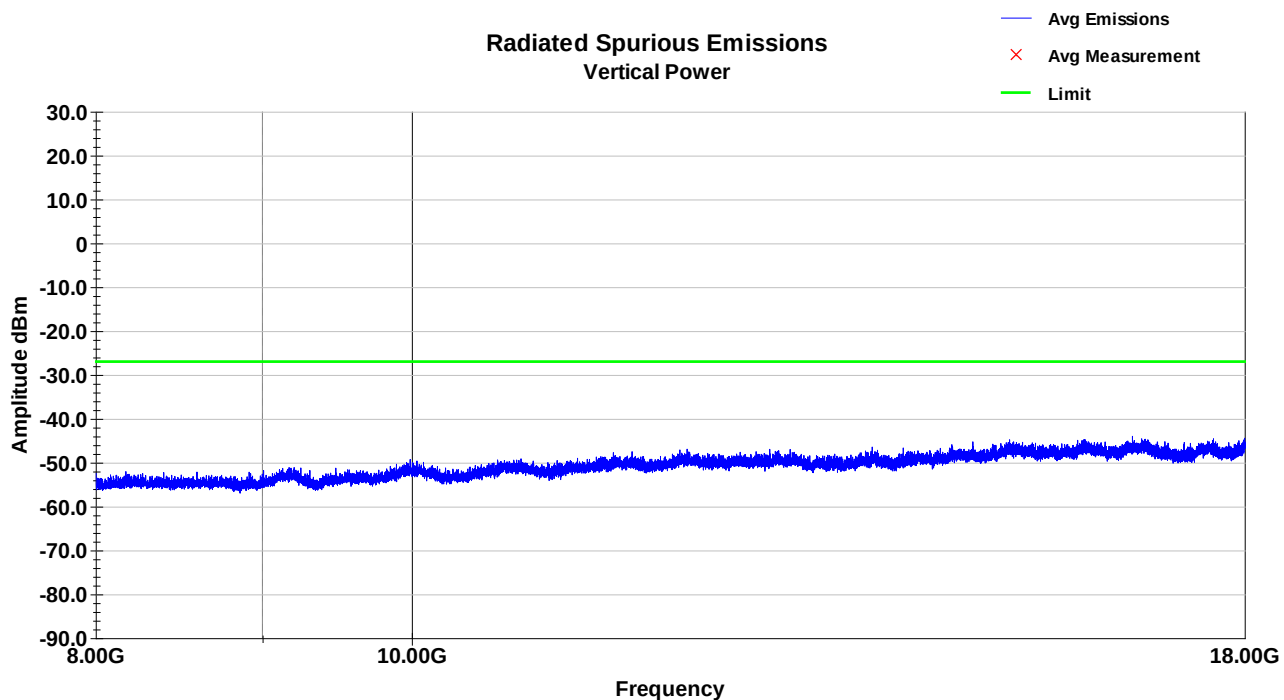
Horizontal Plot – 1-8GHz – Mid Channel



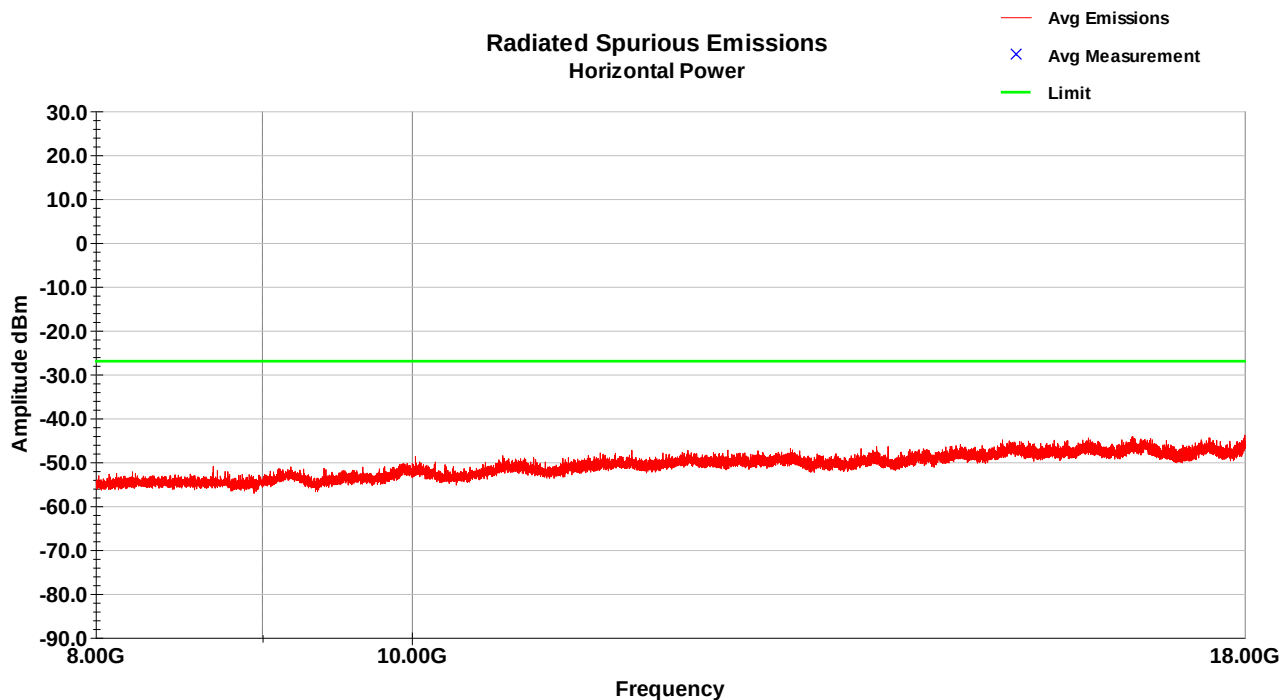
Horizontal Data – 1-8GHz – Mid Channel

No emissions within 20dB of limit

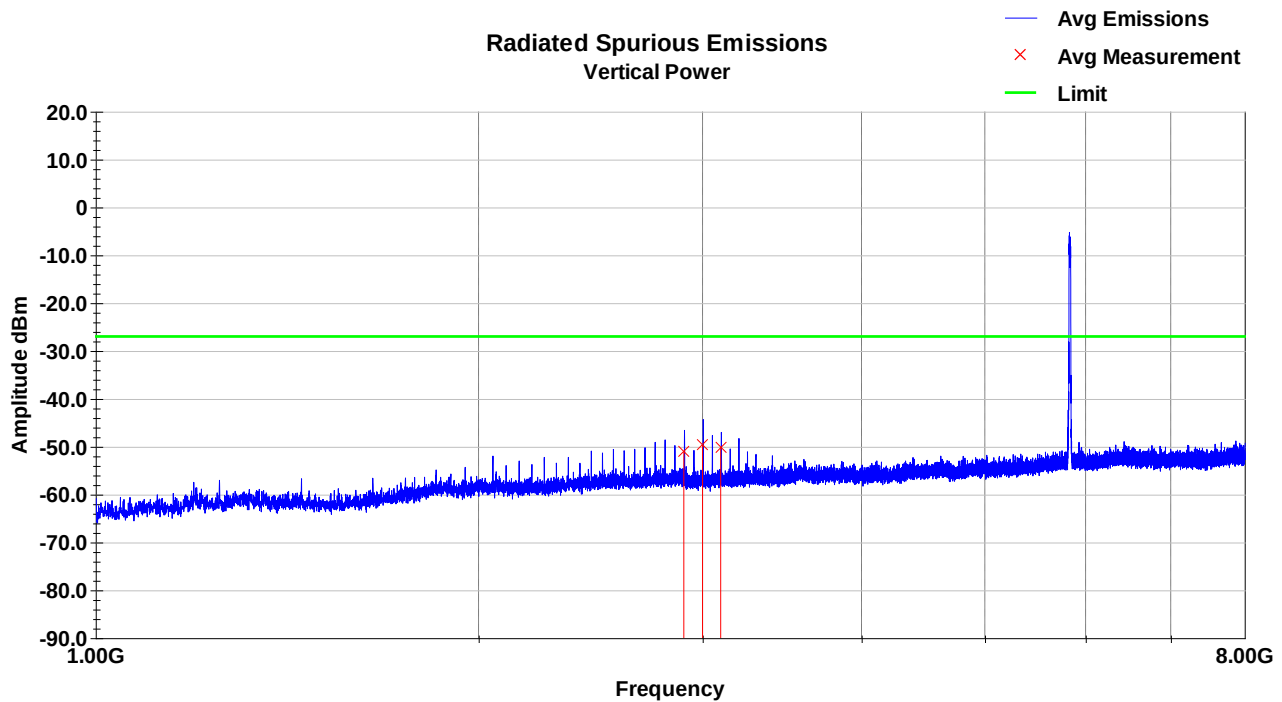
Vertical Plot – 8-18GHz – Mid Channel



Horizontal Plot – 8-18GHz – Mid Channel



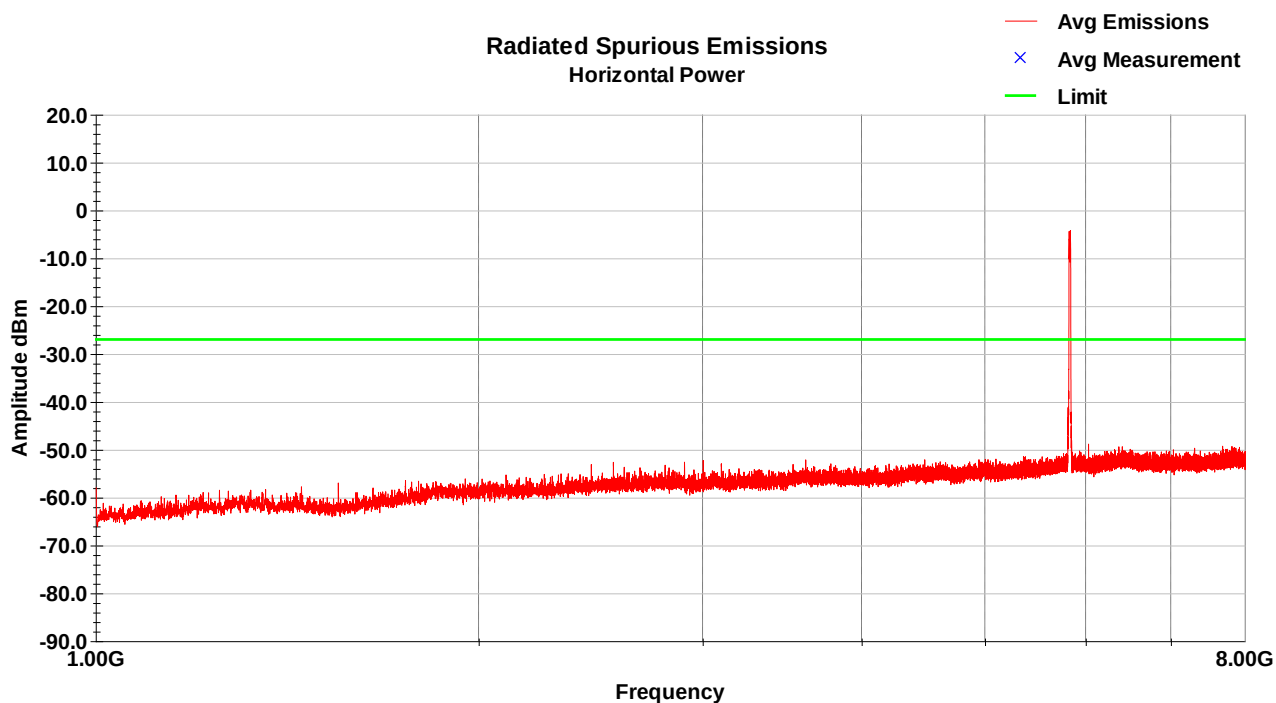
Vertical Plot – 1-8GHz – High Channel



Vertical Data – 1-8GHz – High Channel

Frequency MHz	Raw Avg dBm	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	Amp dB	Avg Value dBm	Limit dBm	Margin dB
2900.07	-44.0	V	8.0	101.0	32.3	2.7	42.0	-51.0	-27.0	-24.0
2999.81	-43.0	V	9.0	110.0	32.4	2.8	42.0	-49.7	-27.0	-22.7
3099.92	-43.9	V	14.0	100.0	32.8	2.8	41.9	-50.2	-27.0	-23.2
Avg Value = Raw Avg + AF + Loss - Amp										
Margin = Avg Value - Limit										

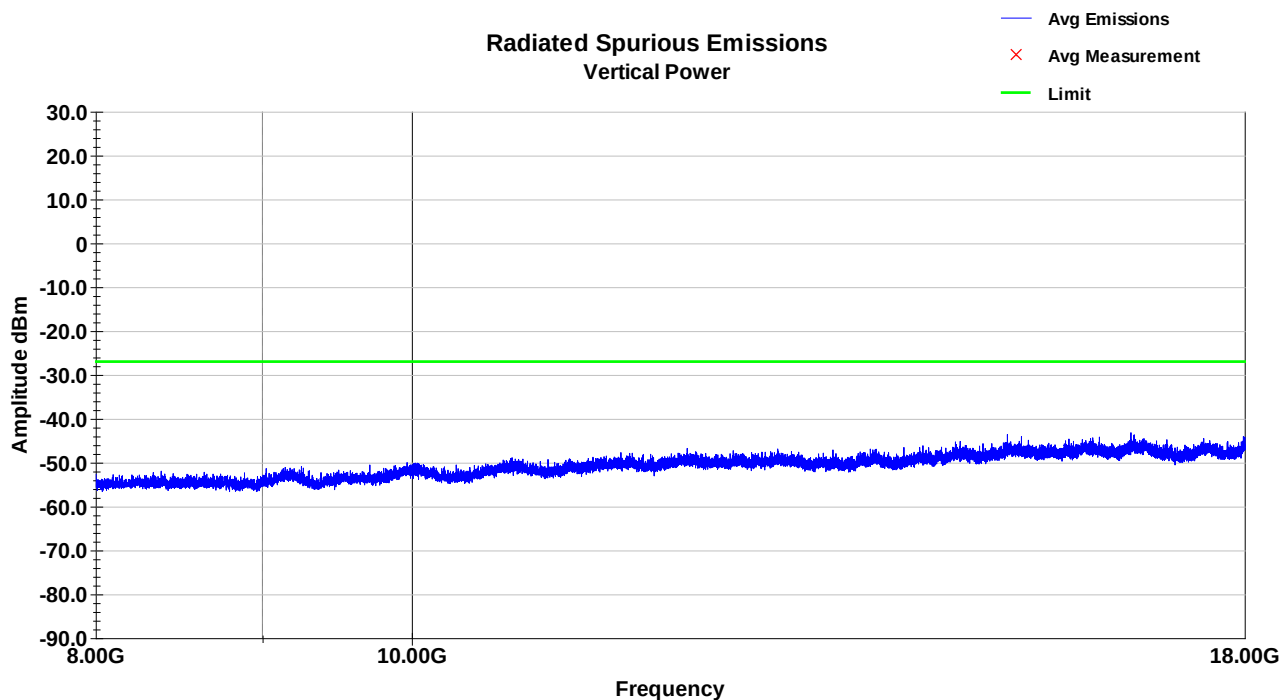
Horizontal Plot – 1-8GHz – High Channel



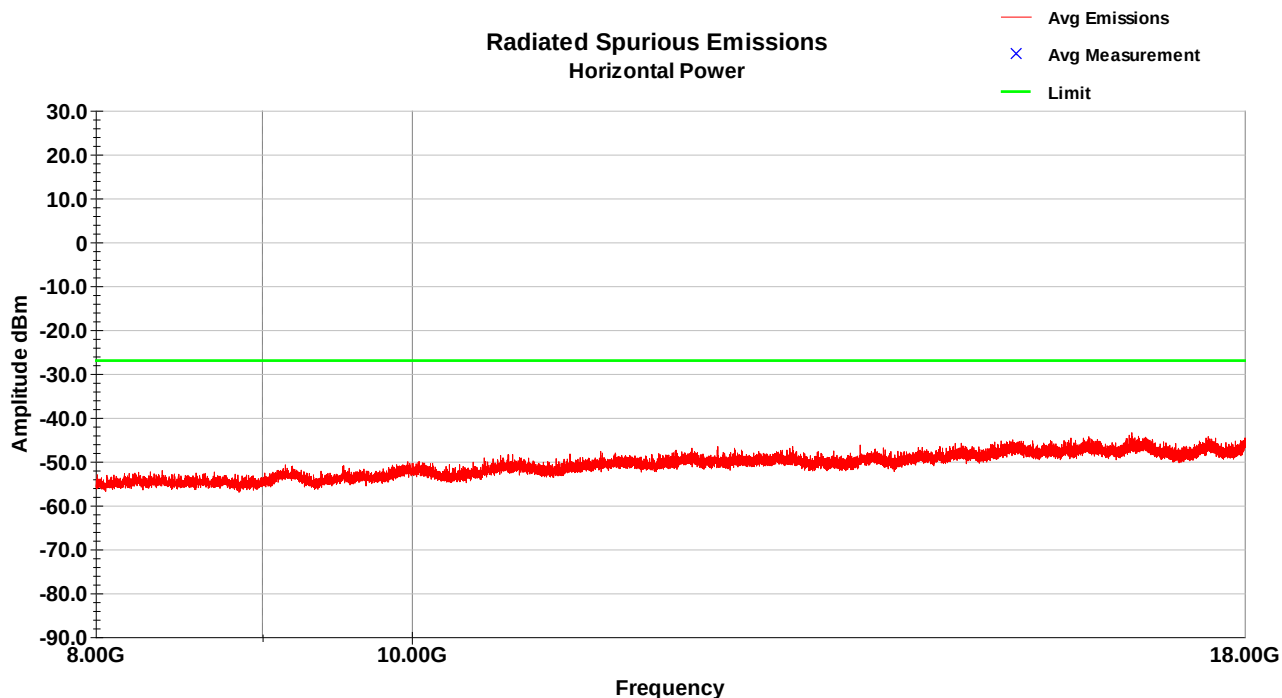
Horizontal Data – 1-8GHz – High Channel

No emissions within 20dB of limit

Vertical Plot – 8-18GHz – High Channel



Horizontal Plot – 8-18GHz – High Channel



The worst-case final data in this section of -48.7dBm is below the restricted band limit of -41.2dBm. Emissions in the 18-40GHz frequency range were similar to those shown in section 3.11.3 above.

4 AC Powerline Conducted Emissions

4.1 Test Result

Test Description	Test Specification		Test Result
AC Powerline Conducted Emissions	15.207	RSS-GEN 8.8	Compliant

4.2 Test Method

With the receiver's resolution bandwidth was set to 9 kHz, exploratory scans were performed over the measuring frequency range (0.15 MHz to 30 MHz) using a max hold mode incorporating a Peak detector and Average detector and using the TILE! software. The final test data was measured using a Quasi-Peak detector and Average detector and compared against the limits indicated in the table below.

Frequency Range	Limits (dBuV)
0.15 to 0.5 MHz	Avg 56 to 46 QP 66 to 56
0.5 to 5 MHz	Avg 46 Pk 56
5 to 30 MHz	Avg 50 Pk 60

4.3 Test Site

SGS EMC Laboratory, Suwanee, GA

Environmental Conditions	3-23-2023	4-7-2023
Temperature:	22.1 °C	25.1 °C
Relative Humidity:	42.8 %	40.6 %
Atmospheric Pressure:	98.7 kPa	98.1 kPa

4.4 Test Equipment

Test End Date: 23-Mar-2023

Tester: PL

Equipment	Model	Manufacturer	Asset	Cal Date	Cal Due Date
EMI TEST RECEIVER	ESW44	ROHDE & SCHWARZ	22027	13-Sep-2022	13-Sep-2023
RF CABLE	UC-N-MM-78	MAURY MICROWAVE	17017	25-Aug-2022	25-Aug-2023
LINE IMPEDANCE STABILIZATION NETWORK	NNB 51	TESEQ	B087573	13-Dec-2022	13-Dec-2023
IMPEDANCE STABILIZATION NETWORK	ISN T8-CAT6	TESEQ	B085926	18-Apr-2022	18-Apr-2023

Test End Date: 7-Apr-2023

Tester: ZH

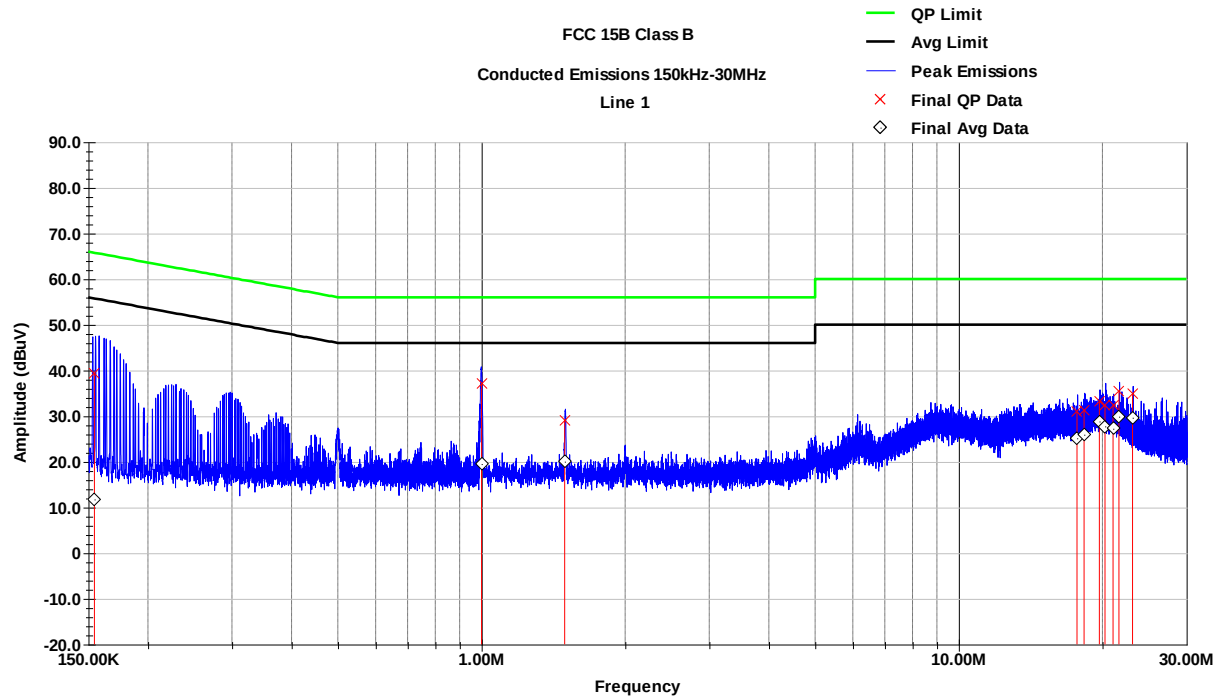
Equipment	Model	Manufacturer	Asset	Cal Date	Cal Due Date
EMI TEST RECEIVER	ESW44	ROHDE & SCHWARZ	22027	13-Sep-2022	13-Sep-2023
RF CABLE	UC-N-MM-78	MAURY MICROWAVE	17017	25-Aug-2022	25-Aug-2023
LINE IMPEDANCE STABILIZATION NETWORK	NNB 51	TESEQ	B087573	13-Dec-2022	13-Dec-2023
IMPEDANCE STABILIZATION NETWORK	ISN T8-CAT6	TESEQ	B085926	18-Apr-2022	18-Apr-2023

Software: TILE! software profile "Conducted Emissions 230206.til" dated 09-Feb-2023

4.5 Test Data

4.5.1 7-inch Display

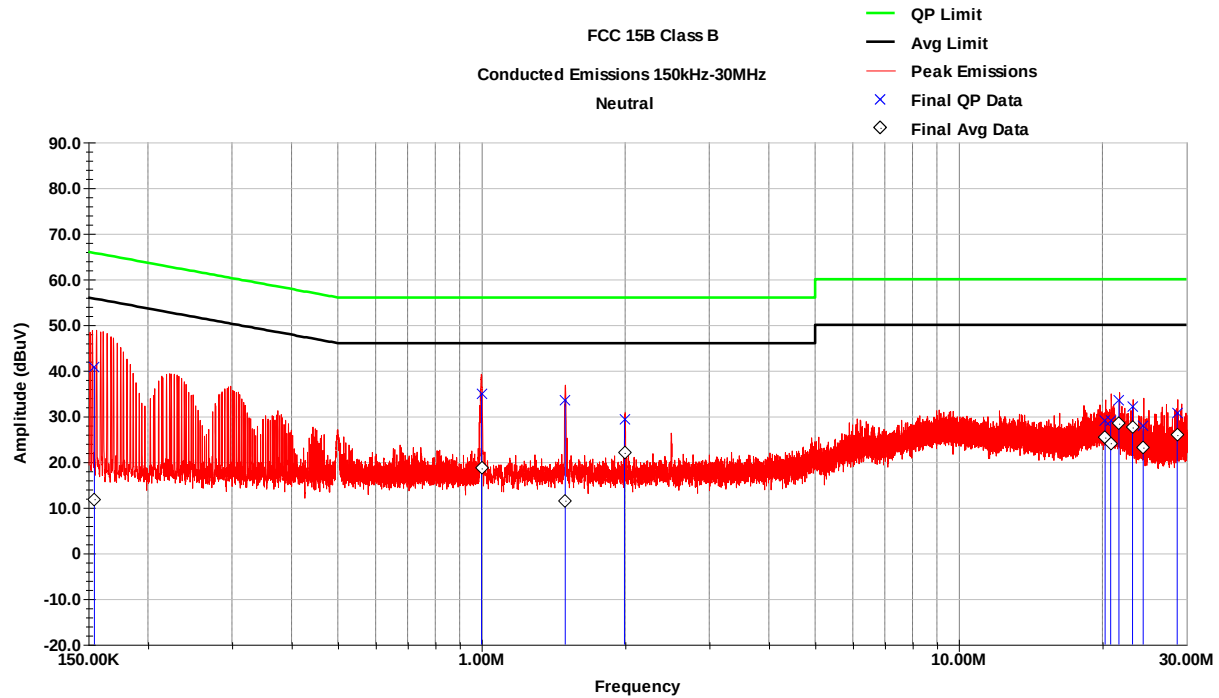
Line 1 Conducted Emissions – Peak Plot



Line 1 Conducted Emissions – Tabular Data

Frequency MHz	QP Value dBuV	QP Limit dBuV	QP Margin dB	Avg Value dBuV	Avg Limit dBuV	Avg Margin dB
0.154	39.4	65.7	-26.3	11.8	55.7	-44.0
1.000	37.2	56.0	-18.8	19.5	46.0	-26.5
1.494	29.1	56.0	-26.9	20.0	46.0	-26.0
17.691	30.9	60.0	-29.1	25.2	50.0	-24.8
18.305	31.3	60.0	-28.7	25.9	50.0	-24.1
19.709	33.1	60.0	-26.9	28.8	50.0	-21.2
20.256	32.3	60.0	-27.7	27.8	50.0	-22.2
21.052	32.5	60.0	-27.5	27.2	50.0	-22.8
21.662	35.4	60.0	-24.6	29.9	50.0	-20.1
23.128	35.0	60.0	-25.0	29.7	50.0	-20.3

Neutral Conducted Emissions – Peak Plot

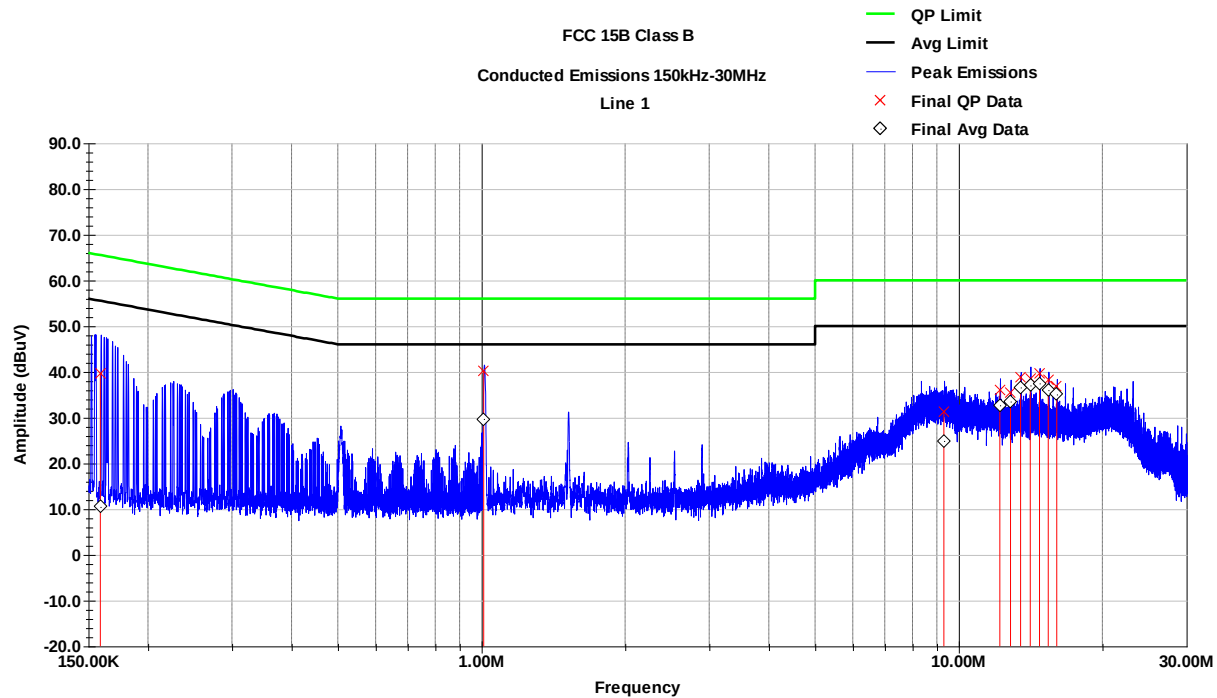


Neutral Conducted Emissions – Tabular Data

Frequency MHz	QP Value dBuV	QP Limit dBuV	QP Margin dB	Avg Value dBuV	Avg Limit dBuV	Avg Margin dB
0.154	40.8	65.7	-24.9	11.9	55.7	-43.9
1.000	35.0	56.0	-21.0	18.6	46.0	-27.4
1.498	33.6	56.0	-22.4	11.5	46.0	-34.5
1.994	29.2	56.0	-26.8	22.0	46.0	-24.0
20.261	29.0	60.0	-31.0	25.3	50.0	-24.7
20.811	29.0	60.0	-31.0	24.1	50.0	-25.9
21.663	33.5	60.0	-26.5	28.4	50.0	-21.6
23.128	32.1	60.0	-27.9	27.6	50.0	-22.4
24.349	28.0	60.0	-32.0	23.1	50.0	-26.9
28.683	30.8	60.0	-29.2	25.9	50.0	-24.1

4.5.2 10-inch Display

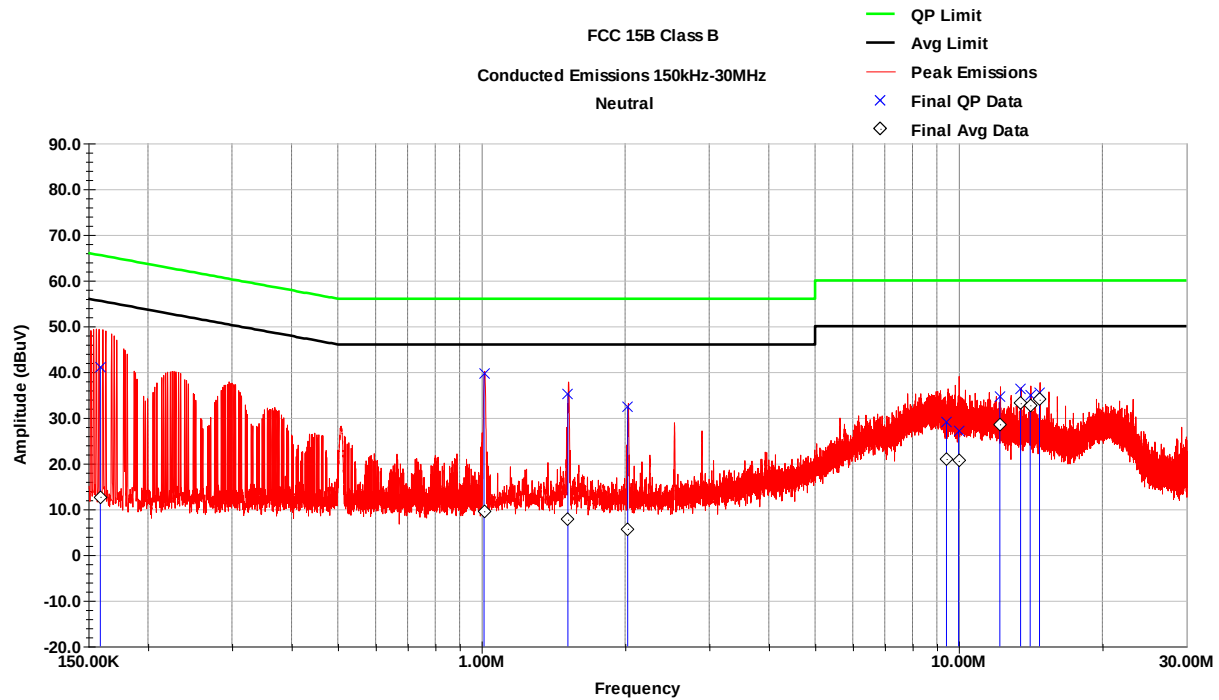
Line 1 Conducted Emissions – Peak Plot



Line 1 Conducted Emissions – Tabular Data

Frequency MHz	QP Value dBuV	QP Limit dBuV	QP Margin dB	Avg Value dBuV	Avg Limit dBuV	Avg Margin dB
0.159	39.7	65.5	-25.8	10.5	55.5	-45.1
1.011	40.2	56.0	-15.8	29.7	46.0	-16.3
9.311	31.4	60.0	-28.6	24.9	50.0	-25.1
12.197	36.1	60.0	-23.9	32.7	50.0	-17.3
12.837	35.5	60.0	-24.5	33.5	50.0	-16.5
13.481	38.8	60.0	-21.2	36.6	50.0	-13.4
14.121	38.4	60.0	-21.6	37.0	50.0	-13.0
14.764	39.6	60.0	-20.4	37.5	50.0	-12.5
15.405	38.1	60.0	-21.9	36.0	50.0	-14.0
16.049	36.9	60.0	-23.1	35.1	50.0	-14.9

Neutral Conducted Emissions – Peak Plot



Neutral Conducted Emissions – Tabular Data

Frequency MHz	QP Value dBuV	QP Limit dBuV	QP Margin dB	Avg Value dBuV	Avg Limit dBuV	Avg Margin dB
0.159	41.1	65.5	-24.4	12.7	55.5	-42.8
1.012	39.6	56.0	-16.4	9.5	46.0	-36.5
1.517	35.2	56.0	-20.8	7.7	46.0	-38.3
2.025	32.2	56.0	-23.8	5.7	46.0	-40.3
9.427	28.9	60.0	-31.1	21.0	50.0	-29.0
9.995	27.2	60.0	-32.8	20.6	50.0	-29.4
12.197	34.7	60.0	-25.3	28.6	50.0	-21.4
13.481	36.2	60.0	-23.8	33.2	50.0	-16.8
14.118	34.9	60.0	-25.1	32.7	50.0	-17.3
14.764	35.5	60.0	-24.5	33.9	50.0	-16.1

5 Measurement Uncertainty

The measurement uncertainty figures are be calculated in accordance with TR 100 028-1 [2] and correspond to an expansion factor (coverage factor) $k = 2$ (which provide confidence levels of 95,45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

Parameter	Expanded Uncertainty for Normal k factor equal to 2	
	Required	Laboratory Actual
Radio Frequency	$\pm 1 \times 10^{-5}$	$\pm 9.8 \times 10^{-8}$
total RF power, conducted	± 1.5 dB	± 1.2 dB
RF power density, conducted	± 3 dB	± 0.7 dB
spurious emissions, conducted	± 3 dB	± 2.1 dB
all emissions, radiated	± 6 dB	± 4.8 dB
temperature	$\pm 1^{\circ}\text{C}$	$\pm 0.5^{\circ}\text{C}$
humidity	± 5 %	± 3.5 %
DC and low frequency voltages	± 3 %	± 0.4 %

6 Revision History

Revision Level	Description of changes	Revision Date
0	Initial release	27 April 2023
1	Added EUT board part number in section 2.3	10 May 2023
2	- Updated Summary of Test Results table in section 1 - Added more information regarding limits in section 3.2 - Added statements of compliance to RB limits in several sections - Added 18-40GHz Radiated Spurious Emissions test results - Added AC Powerline Conducted Emissions test results	01 September 2023