

EMC Test Report

Project Number: 4227659

Report Number: 4227659EMC04

Revision Level: 0

Client: Technicolor Connected Home USA LLC

Equipment Under Test: Channel Master Android TV

Model: CM-7600

FCC ID: G95-CM-7600

IC ID: 431C-DWT765CHA

Applicable Standards: RSS-247, Issue 2

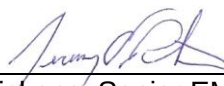
ANSI C63.10: 2013 per FCC Part 15 Subpart C, § 15.407

RSS-GEN, Issue 4

Report issued on: 05 January 2017

Test Result: Compliant

Tested by:



Jeremy Pickens, Senior EMC Engineer

Reviewed by:



David Schramm, Operations Manager

Remarks: This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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1 Summary of Test Results

Test Description	Test Specification		Test Result
	FCC	Canada	
Emission Bandwidth	15.407(a), 15.407(e)	RSS-247, S6.2.4.1	Compliant
Spectral Density	15.407(a)	RSS-247, S6.2.1.1 / S6.2.4.1	Compliant
Peak Power Output	15.407(a)	RSS-247, S6.2.1.1 / S6.2.4.1	Compliant
Unwanted Emissions	15.407(b)	RSS-247, S6.2.1.2 / S6.2.4.2	Compliant
AC Powerline Conducted Emission	15.107, 15.207	RSS-GEN 7.2.4	Compliant

1.1 Modifications Required for Compliance

None

2 General Information

2.1 Client Information

Name: Technicolor Connected Home USA LLC
Address: 5030 Sugarloaf Parkway Building 6
City, State, Zip, Country: Lawrenceville, GA 30044, USA

2.2 Test Laboratory

Name: SGS North America, Inc.
Address: 620 Old Peachtree Road NW, Suite 100
City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA
Type of lab: Testing Laboratory
Certificate Number: 3212.01

2.3 General Information of EUT

Type of Product: Channel Master Android TV
Model Number: CM-7600
Serial Number: 211930007386700018

Frequency Range: 5150 to 5250 MHz, 5250-5350 MHz, 5470-5725 MHz, 5725-5850 MHz
Number of channels: UNII Band 1 (Channels 36, 40, 44, 48)
UNII Band 2-A (Channels 52, 56, 60, 64)
UNII Band 2-B (Channels 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140)
UNII Band 3 (Channels 149, 153, 157, 161, 165)

Modulation type: 802.11a, 802.11n (HT20/HT40), 802.11ac (VHT20/ VHT40/ VHT80)
Antenna: 2x Internal PCB Trace
#1 5.6 dBi Max Gain
#2 5.4 dBi Max Gain

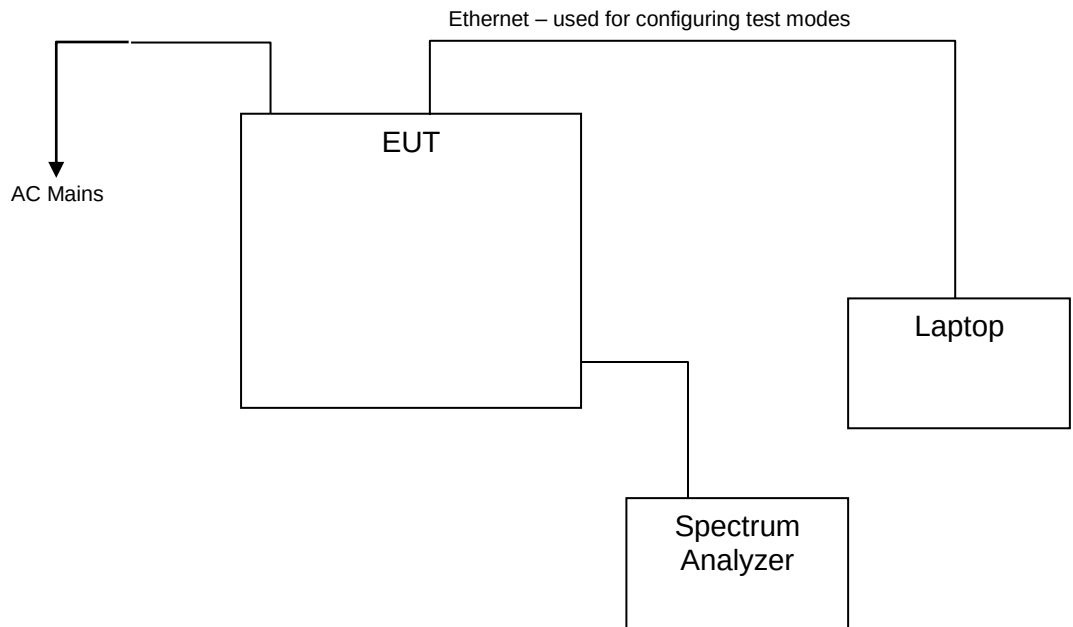
Rated Voltage: 12Vdc (Supplied via 100-120Vac, 60Hz AC Adapter)
Test Voltage: 12Vdc, (120Vac, 60Hz)

Sample Received Date: 30 October 2017
Dates of testing: 08 November - 27 December 2017

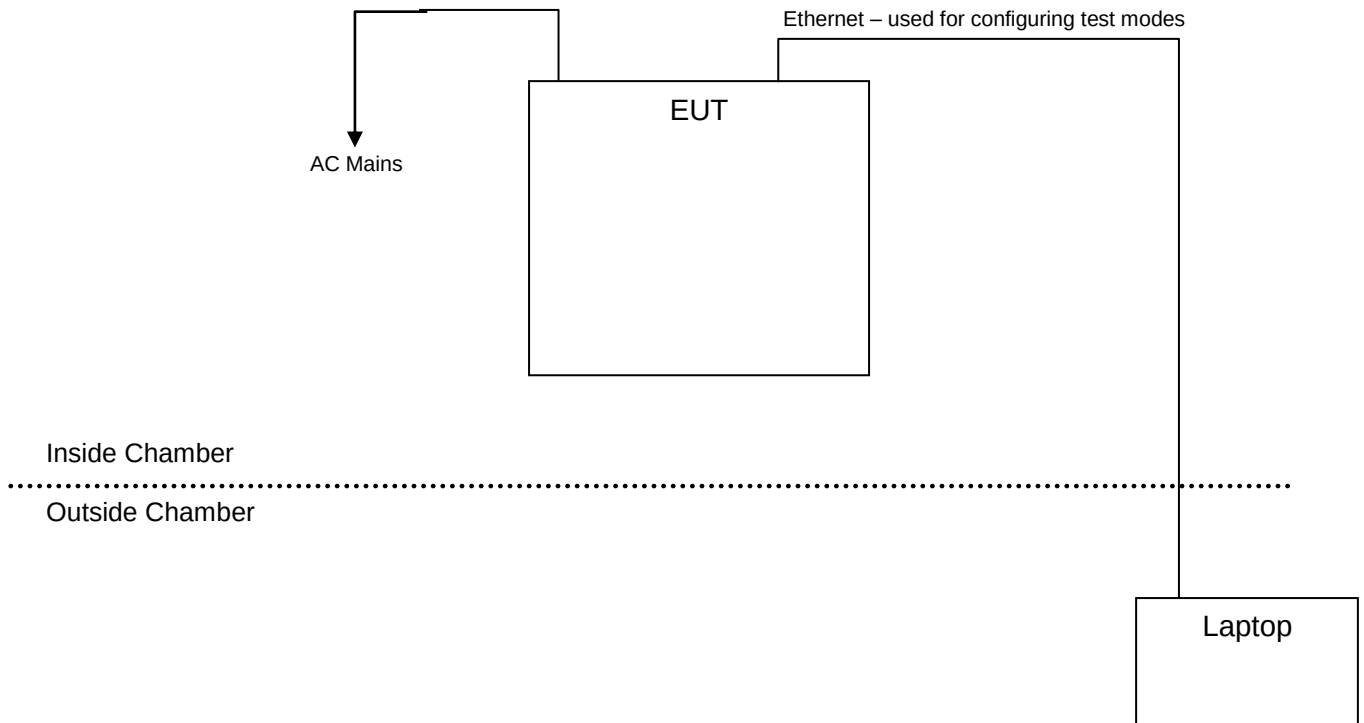
2.4 Operating Modes and Conditions

Using test commands, the EUT would transmit continuously on any of the UNII Band 1, 2, or 3 channels at full power. Worst-case power and PSD were achieved at the lowest data rates. For radiated spurious emissions measurements, only the worst-case mode with respect to peak power and PSD was investigated.

2.5 EUT Connection Block Diagram – Conducted Measurements



2.6 EUT Connection Block Diagram – Radiated Measurements



2.7 System Configurations

Device reference	Manufacturer	Description	Model Number	Serial Number
A	Technicolor	Channel Master Android TV	CM-7600	211930007386700018
B	Lenovo	ThinkPad Laptop	T400	276731U

3 Emission Bandwidth and Occupied Bandwidth

3.1 Test Result

Test Description	Test Specification	Test Result
Emission bandwidth / 99% OBW	15.407(a), 15.407(e) RSS-247, S6.2.4.1	Compliant

3.2 Test Method

The procedures from ANSI C63.10: 2013 clause 12.4 and KDB document 789033 D02 General UNII Test Procedures New Rules v02r01 were used to determine the 6 dB bandwidth, the 26dB bandwidth, and 99% OBW.

3.3 Test Site

SGS EMC Laboratory, Suwanee, GA

Environmental Conditions

Temperature: 22.8 °C

Relative Humidity: 38.5 %

3.4 Test Equipment

Test End Date: 13-Nov-2017

Tester: JOP

Equipment	Model	Manufacturer	Asset Number	Cal Due Date
SPCTRUM ANALYZER	FSV30	ROHDE & SCHWARZ	S/N: 103106	24-Jul-2018
RF CABLE	SF102	HUBER & SUHNER	B079823	26-Jul-2018

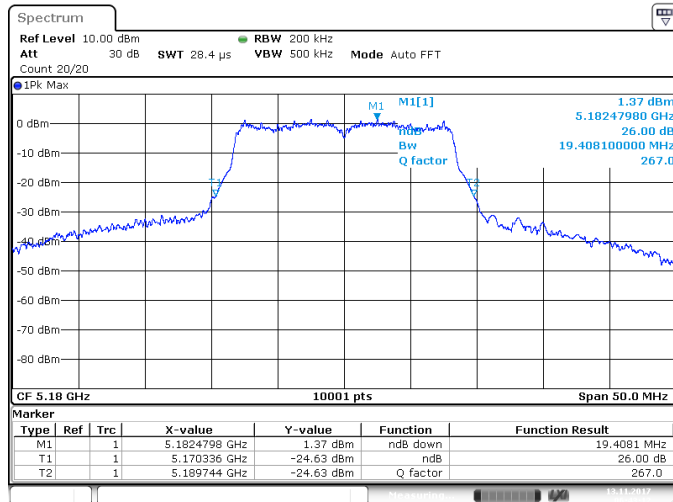
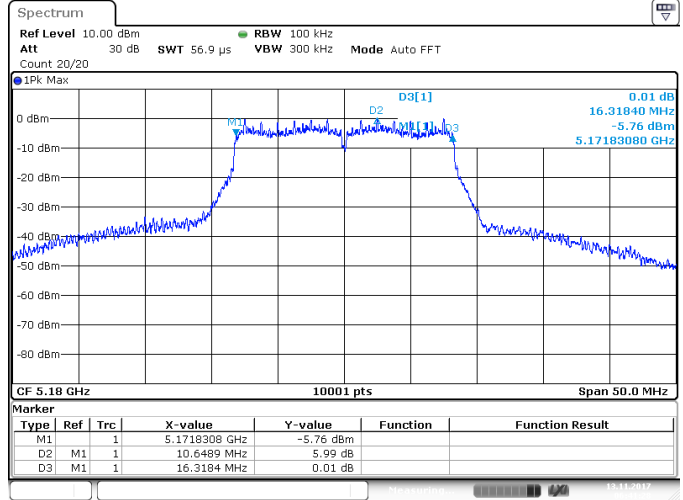
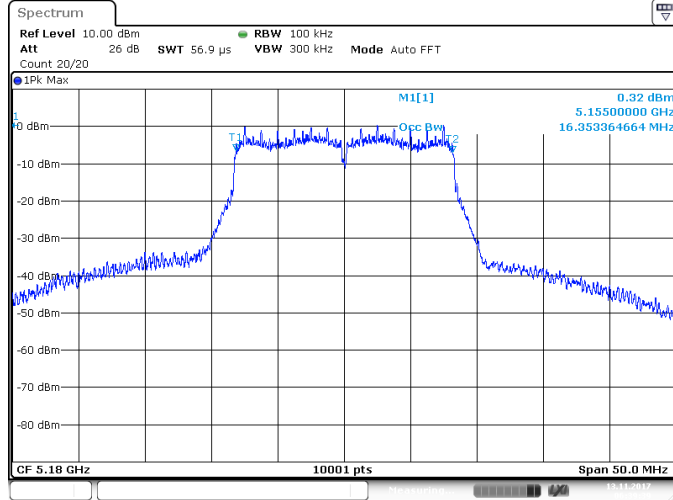
Note: The equipment calibration period is 1 year.

3.5 Test Data

Protocol	Channel	26dB Bandwidth (MHz)	6dB Bandwidth (MHz)	OBW (99%) (MHz)
802.11a	36	19.408	16.318	16.353
802.11a	44	19.398	16.336	16.398
802.11a	48	19.673	16.466	16.383
802.11a	52	19.158	16.206	16.378
802.11a	60	19.303	16.278	16.378
802.11a	64	19.168	16.211	16.378
802.11a	100	19.058	16.161	16.388
802.11a	116	19.093	16.191	16.413
802.11a	140	19.293	16.276	16.383
802.11a	149	19.468	16.356	16.368
802.11a	157	19.503	16.378	16.378
802.11a	165	19.323	16.313	16.428
802.11n (HT40)	38	38.776	36.146	36.086
802.11n (HT40)	46	38.896	36.166	36.006
802.11n (HT40)	54	38.926	36.176	35.996
802.11n (HT40)	62	39.236	36.356	36.046
802.11n (HT40)	102	39.086	36.296	36.076
802.11n (HT40)	134	38.786	36.131	36.046
802.11n (HT40)	151	39.266	36.401	36.106
802.11n (HT40)	159	39.186	36.361	36.106
802.11ac (VHT80)	42	79.932	76.432	75.972
802.11ac (VHT80)	58	80.032	76.452	75.912
802.11ac (VHT80)	106	79.752	76.537	75.892
802.11ac (VHT80)	155	79.292	76.347	75.972

Note: 802.11a and 802.11n (HT20) bandwidths are the same.

Sample Plots:



4 Output Power

4.1 Test Result

Test Description	Test Specification	Test Result
Peak Output Power	15.407(a) RSS-247, S6.2.1.1 / S6.2.4.1	Compliant

4.2 Test Method

Fundamental power measurements were recorded using the procedures from ANSI C63.10: 2013 clause 12.3 and KDB document 789033 D02 General UNII Test Procedures New Rules v02r01. Directional gain for cross-polarized antennas resulted in the highest gain between the two being applied.

Limits - FCC

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

For using antennas with greater than 6dBi of gain, the limit is reduced in dB by the amount the gain exceeds 6dBi

Limits - ISSED

For the frequency band 5150-5250 MHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz.

For the frequency bands 5250-5350 MHz and 5470-5600 MHz, the maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. Additionally, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz.

For the frequency band 5725-5850 MHz, the maximum conducted output power shall not exceed 1 W.

4.3 Test Site

SGS EMC Laboratory, Suwanee, GA

Environmental Conditions

Temperature: 22.8 °C
 Relative Humidity: 38.5 %

4.4 Test Equipment

Test End Date: 13-Nov-2017

Tester: JOP

Equipment	Model	Manufacturer	Asset Number	Cal Due Date
SPCTRUM ANALYZER	FSV30	ROHDE & SCHWARZ	S/N: 103106	24-Jul-2018
RF CABLE	SF102	HUBER & SUHNER	B079823	26-Jul-2018

Note: The equipment calibration period is 1 year.

4.5 Test Data – UNII Band 1

802.11a							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP Limit (dBm)	Margin (dB)
5180	36	13	13.1	16.07	5.60	23	-1.33
5220	44	13	12.9	15.97	5.60	23	-1.43
5240	48	12.9	12.5	15.72	5.60	23	-1.68

802.11n HT20							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP Limit (dBm)	Margin (dB)
5180	36	12.7	12.50	15.62	5.60	23	-1.78
5220	44	12.70	12.5	15.62	5.60	23	-1.78
5240	48	12.9	12.7	15.82	5.60	23	-1.58

802.11n HT40							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP Limit (dBm)	Margin (dB)
5190	38	10.4	10.4	13.42	5.60	23	-3.98
5230	46	10.3	10.4	13.37	5.60	23	-4.03

802.11ac VHT80							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	EIRP Limit (dBm)	Margin (dB)
5210	42	4.8	4.6	7.72	5.60	23	-9.68

4.6 Test Data – UNII Band 2-A

802.11a							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5260	52	12.90	13.00	15.97	5.60	24	-2.43
5300	60	12.80	12.80	15.82	5.60	24	-2.58
5320	64	12.30	12.50	15.42	5.60	24	-2.98

802.11n HT20							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5260	52	12.80	12.50	15.67	5.60	24	-2.73
5300	60	12.7	12.6	15.67	5.60	24	-2.73
5320	64	12.3	12.1	15.22	5.60	24	-3.18

802.11n HT40							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5270	54	10.50	10.50	13.52	5.60	24	-4.88
5310	62	10.40	10.4	13.42	5.60	24	-4.98

802.11ac VHT80							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5290	58	4.7	4.1	7.43	5.60	24	-10.97

4.7 Test Data – UNII Band 2-B

802.11a							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5500	100	13.10	13.30	16.22	5.60	24	-2.18
5580	116	12.50	12.50	15.52	5.60	24	-2.88
5700	140	12.20	12.30	15.27	5.60	24	-3.13

802.11n HT20							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5500	100	13.20	13.10	16.17	5.60	24	-2.23
5580	116	12.5	12.3	15.42	5.60	24	-2.98
5700	140	12.3	12.2	15.27	5.60	24	-3.13

802.11n HT40							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5510	102	10.10	10.10	13.12	5.60	24	-5.28
5670	134	9.20	9.3	12.27	5.60	24	-6.13

802.11ac VHT80							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5530	114	4.4	3.8	7.13	5.60	24	-11.27

4.8 Test Data – UNII Band 3

802.11a							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5745	149	12.30	12.70	15.52	5.60	30	-8.88
5785	157	13.30	12.80	16.07	5.60	30	-8.33
5825	165	14.30	13.20	16.80	5.60	30	-7.60

802.11n HT20							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5745	149	12.30	12.90	15.63	5.60	30	-8.77
5785	157	13.4	13	16.22	5.60	30	-8.18
5825	165	14.4	12.9	16.73	5.60	30	-7.67

802.11n HT40							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5755	151	9.60	9.60	12.62	5.60	30	-11.78
5795	159	10.80	10.9	13.87	5.60	30	-10.53

802.11ac VHT80							
Frequency (MHz)	Channel (WLAN)	Chain 0 (dBm)	Chain 1 (dBm)	Total Power (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5775	155	4.20	4	7.12	5.60	30	-17.28

5 Power Spectral Density

5.1 Test Result

Test Description	Test Specification	Test Result
Power Spectral Density	15.407(a) RSS-247, S6.2.1.1 / S6.2.4.1	Compliant

5.2 Test Method

Peak power spectral density measurements were recorded using the procedures from ANSI C63.10: 2013 clause 12.5 and KDB document 789033 D02 General UNII Test Procedures New Rules v02r01. The lowest data rate for each modulation was determined to be the worst-case.

Limits - FCC

For client devices in the 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

For using antennas with greater than 6dBi of gain, the limit is reduced in dB by the amount the gain exceeds 6dBi

Limits - ISSED

For the frequency band 5150-5250 MHz, the e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

For the frequency bands 5250-5350 MHz and 5470-5600 MHz, the power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

For the frequency band 5725-5850 MHz, the output power spectral density shall not exceed 30 dBm in any 500 kHz band.

5.3 Test Site

SGS EMC Laboratory, Suwanee, GA

Environmental Conditions

Temperature: 22.8 °C
 Relative Humidity: 38.5 %

5.4 Test Equipment

Test End Date: 13-Nov-2017

Tester: JOP

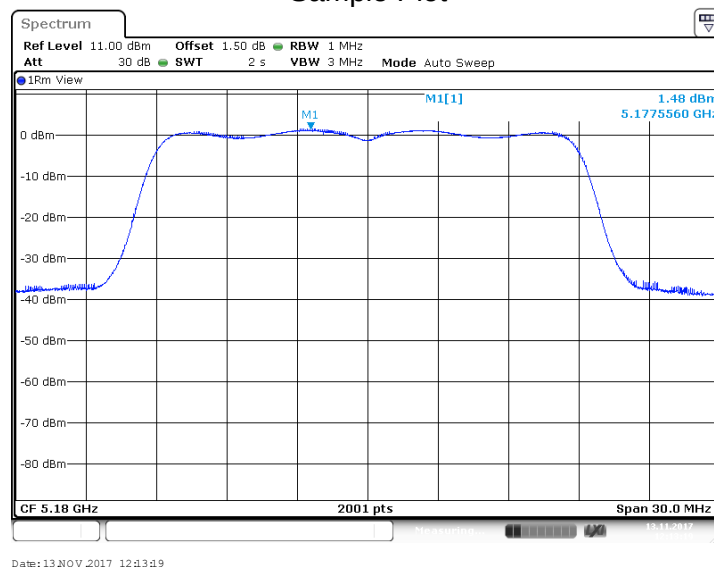
Equipment	Model	Manufacturer	Asset Number	Cal Due Date
SPCTRUM ANALYZER	FSV30	ROHDE & SCHWARZ	S/N: 103106	24-Jul-2018
RF CABLE	SF102	HUBER & SUHNER	B079823	26-Jul-2018

Note: The equipment calibration period is 1 year.

5.5 Test Data (UNII Bands 1 and 2)

Protocol	Channel	Chain 0 (dBm/MHz)	Chain 1 (dBm/MHz)	Duty Cycle Correction	Summed (dBm/MHz)	Limit (dBm)	Margin (dB)
802.11a	36	2.1	1.4	3	7.78	10	-2.22
802.11a	44	2.2	1.7	3	7.97	10	-2.03
802.11a	48	1.9	2	3	7.97	10	-2.03
802.11n (HT20)	36	1.6	1.1	3.8	8.17	10	-1.83
802.11n (HT20)	44	1.8	1.5	3.8	8.47	10	-1.53
802.11n (HT20)	48	1.8	1.7	3.8	8.57	10	-1.43
802.11n (HT40)	38	-1.5	-2.1	5.9	7.13	10	-2.87
802.11n (HT40)	46	-1.5	-1.7	5.9	7.32	10	-2.68
802.11ac (VHT80)	46	-13.5	-14.2	6.1	-4.72	10	-14.72
802.11a	52	1.6	1.7	3	7.67	11	-3.33
802.11a	60	2.2	1.6	3	7.93	11	-3.07
802.11a	64	2.3	1.8	3	8.07	11	-2.93
802.11n (HT20)	52	1.8	1.4	3.8	8.42	11	-2.58
802.11n (HT20)	60	1.6	1.3	3.8	8.27	11	-2.73
802.11n (HT20)	64	1.8	1.4	3.8	8.42	11	-2.58
802.11n (HT40)	54	-1.8	-1.9	5.9	7.07	11	-3.93
802.11n (HT40)	62	-1.7	-1.9	5.9	7.12	11	-3.88
802.11ac (VHT80)	58	-13.6	-14.3	6.1	-4.82	11	-15.82
802.11a	100	1.9	1.1	3	7.53	11	-3.47
802.11a	116	2.2	1.5	3	7.88	11	-3.12
802.11a	140	1.4	1.8	3	7.62	11	-3.38
802.11n (HT20)	100	1.8	0.9	3.8	8.19	11	-2.81
802.11n (HT20)	116	2	1.4	3.8	8.53	11	-2.47
802.11n (HT20)	140	1.2	1.2	3.8	8.02	11	-2.98
802.11n (HT40)	102	-1.6	-2.2	5.9	7.03	11	-3.97
802.11n (HT40)	138	-2.2	-2.1	5.9	6.77	11	-4.23
802.11ac (VHT80)	114	-13.9	-14.4	6.1	-5.03	11	-16.03

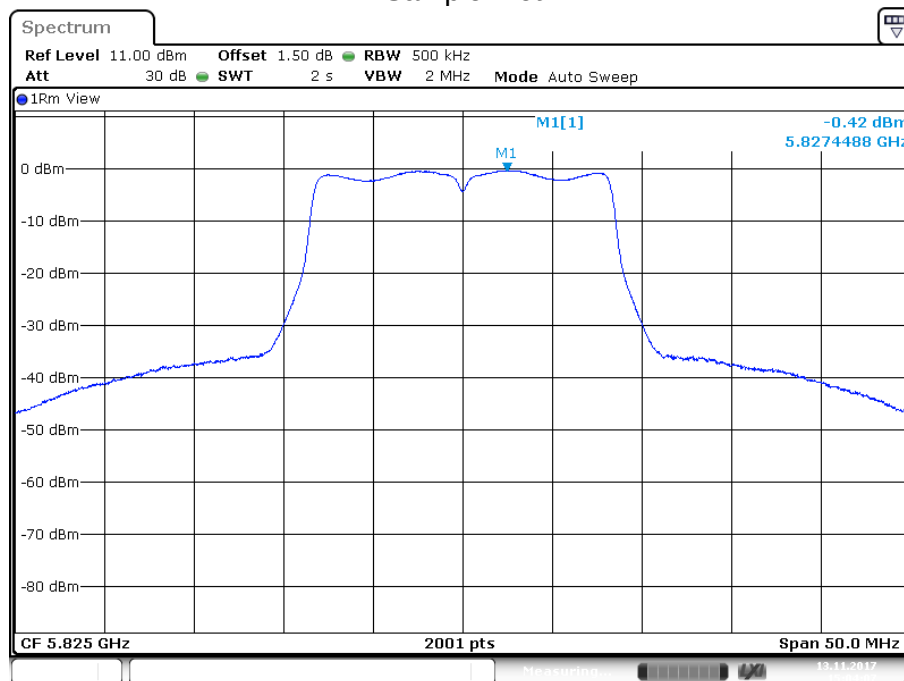
Sample Plot



5.6 Test Data (UNII Band 3)

Protocol	Channel	Meas PSD Chain 0 (dBm/500kHz)	Meas PSD Chain 1 (dBm/500kHz)	Duty Cycle Correction	Max PSD Summed (dBm/500kHz)	Limit (dBm)	Margin (dB)
802.11a	149	-1.1	-0.5	3	5.23	30	-24.77
802.11a	157	-0.2	-0.5	3	5.67	30	-24.33
802.11a	165	1.1	-0.4	3	6.43	30	-23.57
802.11n (HT20)	149	-1	-0.7	3.8	5.97	30	-24.03
802.11n (HT20)	157	-0.6	-1	3.8	6.02	30	-23.98
802.11n (HT20)	165	0.8	0.7	3.8	7.57	30	-22.43
802.11n (HT40)	151	-4.8	-4.3	5.9	4.37	30	-25.63
802.11n (HT40)	159	-3.9	-4.1	5.9	4.92	30	-25.08
802.11ac (VHT80)	155	-15.8	-15.9	6.1	-6.73	30	-36.73

Sample Plot



Date: 13 NOV 2017 15:04:08

6 Unwanted Emissions

6.1 Test Result

Test Description	Test Specification	Test Result
Spurious Emissions	15.407(b) RSS-247, S6.2.1.2 / S6.2.4.1 ANSI C63.10: 2013	Compliant

6.2 Test Method

Testing was performed using the radiated and conducted methods defined in ANSI C63.10: 2013 clause 12.7 and KDB 789033 D02 General UNII Test Procedures New Rules v02r01. In lieu of the marker-delta or integration methods, band edge compliance was shown using a peak detector and a 1MHz resolution bandwidth.

Lowest, middle, and highest channels were investigated for each band. Only the modulation providing the worst-case power was reported except at the band edges where all bandwidths were measured. The frequency range examined was 9kHz to 40GHz. A pre-scan was performed in the 9kHz-30MHz range and no emissions associated with the radio were observed.

Limit:

For transmitters operating in the 5.15-5.25 GHz, 5.25-5.35 GHz, or 5.47-5.725 GHz band: All emissions outside of the authorized band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz..

6.3 Test Site

SGS EMC Laboratory, Suwanee, GA

Environmental Conditions

Temperature: 22.8 °C
Relative Humidity: 38.5 %

6.4 Test Equipment

Test End Date: 14-Nov-2017

Tester: JOP

Equipment	Model	Manufacturer	Asset Number	Cal Due Date
EMI TEST RECEIVER	ESU40	ROHDE & SCHWARZ	B079629	25-Apr-2018
RF CABLE	SF102	HUBER & SUHNER	B079823	26-Jul-2018

Note: The equipment calibration period is 1 year.

6.5 Test Equipment – Radiated Measurements

Measurements below 1GHz

Test End Date: 1-Dec-2017

Tester: JOP/AF

Equipment	Model	Manufacturer	Asset Number	Cal Due Date
EMI TEST RECEIVER	ESU8	ROHDE & SCHWARZ	B085759	25-Jul-2018
ANTENNA, BILOG	CBL 6143A	TESEQ	B085931	6-Dec-2017
RF CABLE	SF106	HUBER & SUHNER	B079661	25-Jul-2018
RF CABLE	SF106	HUBER & SUHNER	B079713	24-Jul-2018
RF CABLE	UC-N-MM-78	MAURY MICROWAVE	17017	25-Jul-2018
RF CABLE	SUCOFLEX 100	HUBER & SUHNER	B108523	24-Jul-2018
LOW NOISE AMPLIFIER	TS-PR18	ROHDE & SCHWARZ	B094463	22-Feb-2018
ANTENNA, LOOP, ACTIVE	6502	ETS LINDGREN	B085752	22-Aug-2018

Measurements above 1GHz

Test End Date: 14-Dec-2017

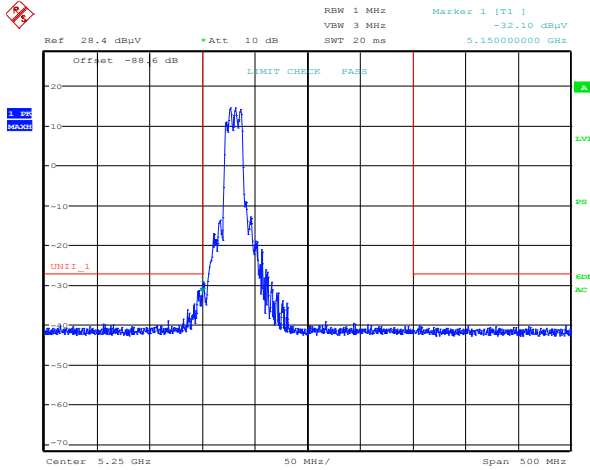
Tester: JOP/AF

Equipment	Model	Manufacturer	Asset Number	Cal Due Date
EMI TEST RECEIVER	ESU40	ROHDE & SCHWARZ	B079629	25-Apr-2018
ANTENNA, DRG HORN (MEDIUM)	3117	ETS LINDGREN	B079691	27-Jul-2018
RF CABLE	SF106	HUBER & SUHNER	B079712	24-Jul-2018
RF CABLE	104PE	HUBER & SUHNER	B079793	24-Jul-2018
LOW NOISE AMPLIFIER	TS-PR18	ROHDE & SCHWARZ	15003	28-Jul-2018
FILTER, HIGH PASS (>6000MHZ)	HPM50112	MICRO-TRONICS	B093647	27-Jul-2018
HORN(SMALL)	LB-180400-20-C-KF	A-INFO	15007	21-Mar-2018
RF CABLE	SF102	HUBER & SUHNER	B079822	27-Jul-2018
RF CABLE	SF102	HUBER & SUHNER	B079824	26-Jul-2018
LOW NOISE AMPLIFIER	NSP1840-HG	MITEQ	B087572	28-Jul-2018

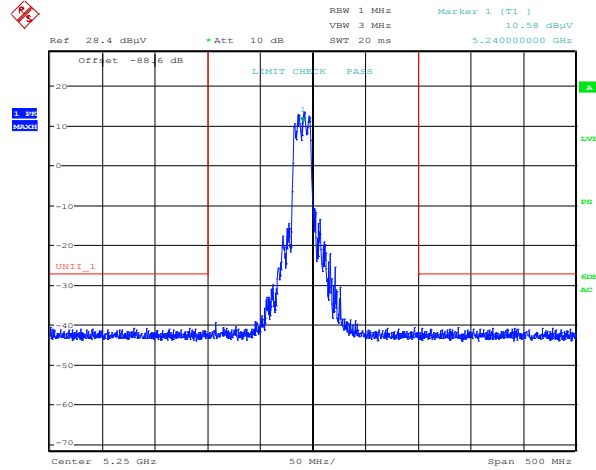
Note: The equipment calibration period is 1 year except for the FSV30 which is on a 2-year cycle.

6.6 Test Data - UNII Band 1 – Radiated Band Edge

802.11a Channels 36 and 48

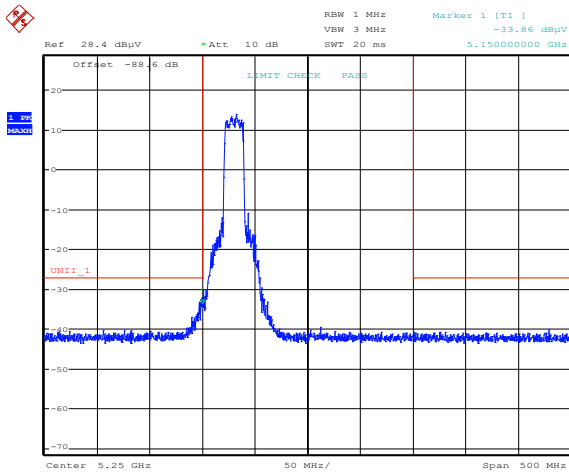


Date: 14.DEC.2017 07:52:14

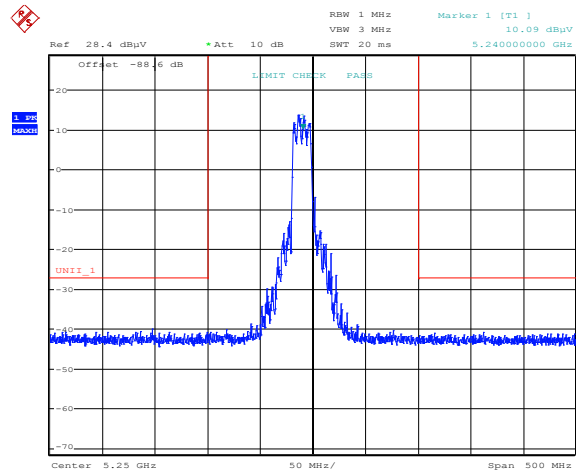


Date: 14.DEC.2017 08:40:29

802.11n (HT20) Channels 36 and 48

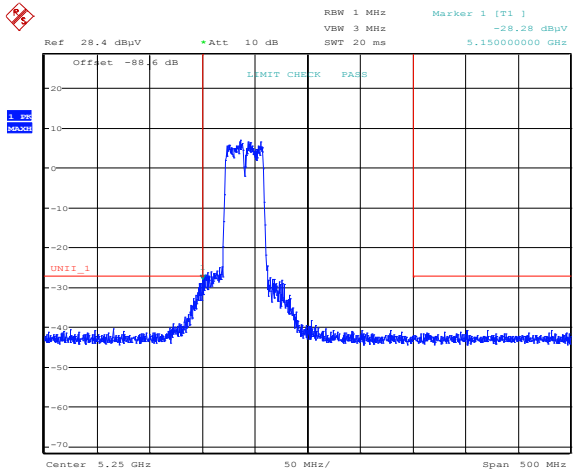


Date: 14.DEC.2017 07:40:32

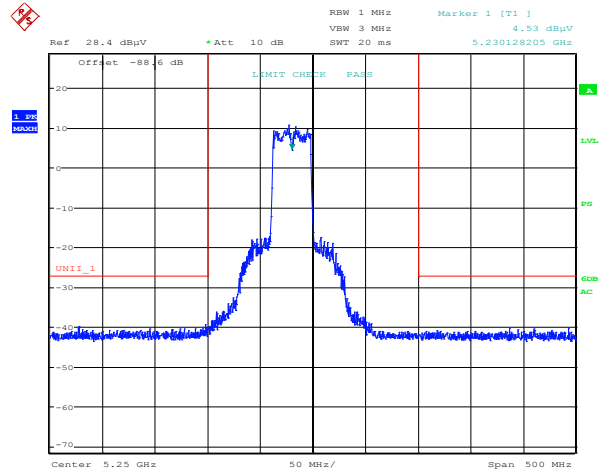


Date: 14.DEC.2017 08:42:16

802.11n (HT40) Channels 38 and 46

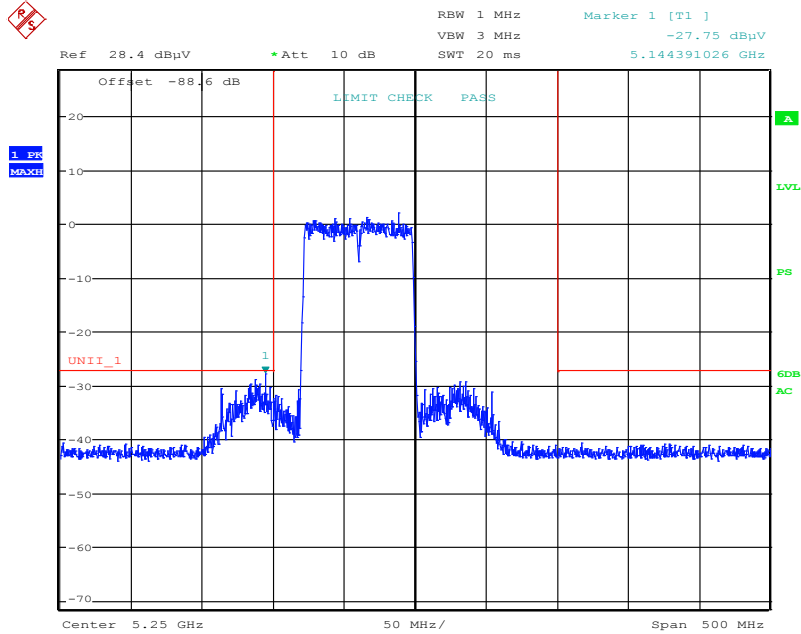


Date: 14.DEC.2017 08:06:48



Date: 14.DEC.2017 08:37:54

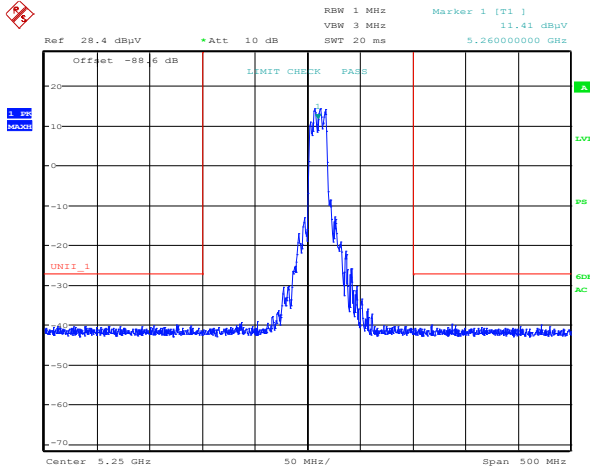
802.11ac (VHT80) Channel 42



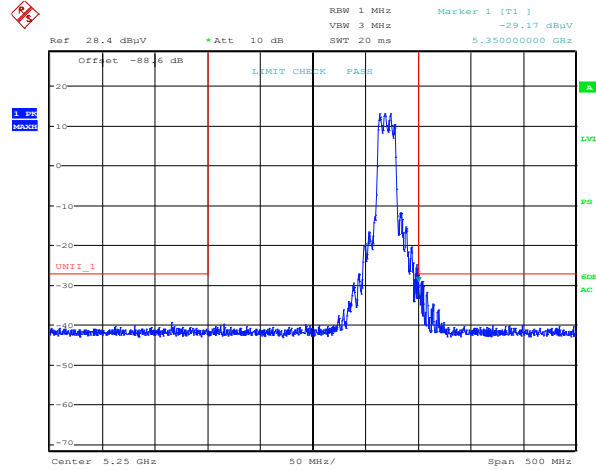
Date: 14.DEC.2017 08:28:09

6.7 Test Data - UNII Band 2a – Radiated Band Edge

802.11a
 Channels 52 and 64

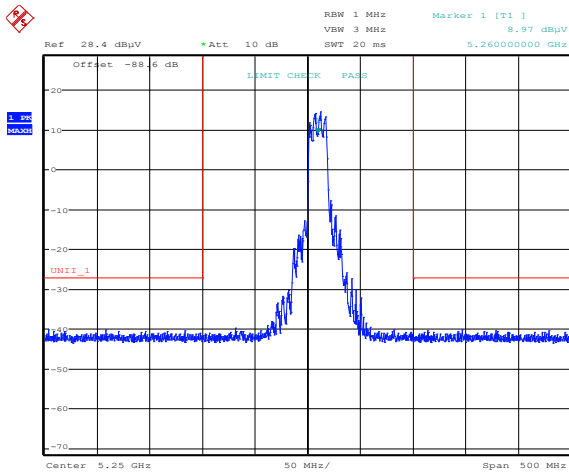


Date: 14.DEC.2017 09:18:23

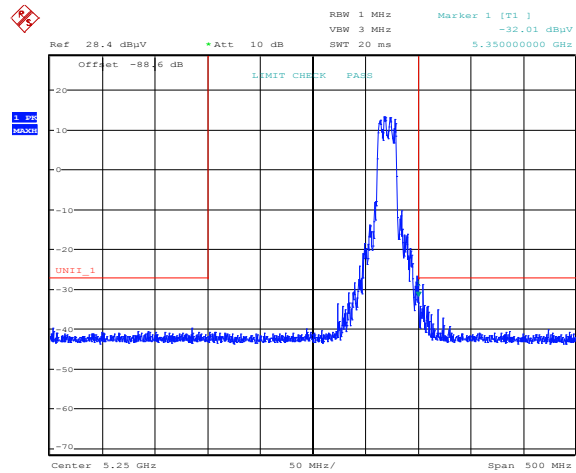


Date: 14.DEC.2017 09:09:43

802.11n (HT20)
 Channels 52 and 64

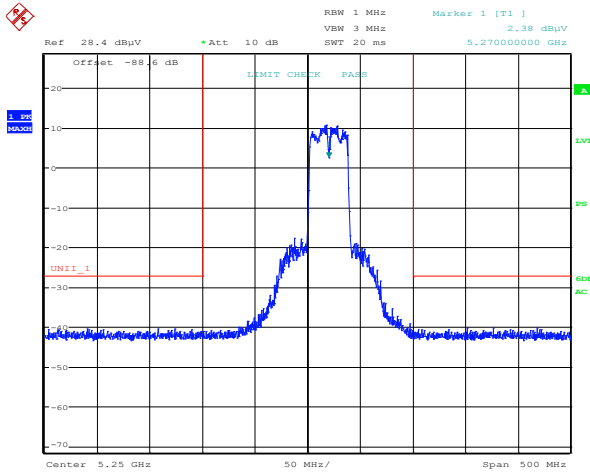


Date: 14.DEC.2017 09:21:22

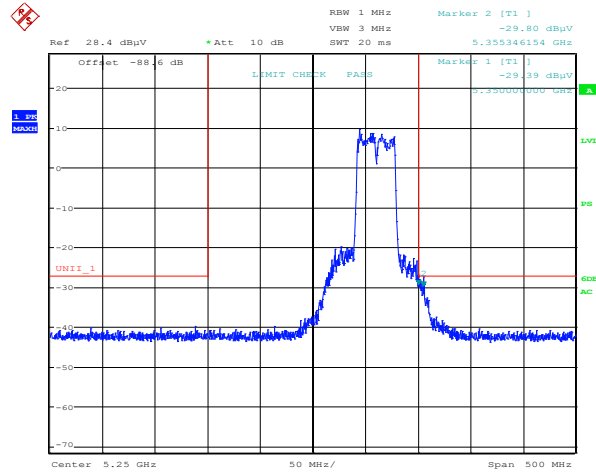


Date: 14.DEC.2017 09:01:10

802.11n (HT40) Channels 54 and 62

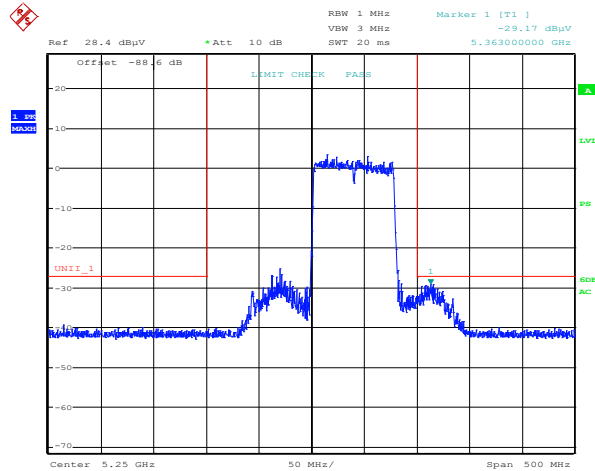


Date: 14.DEC.2017 09:28:06



Date: 14.DEC.2017 09:33:20

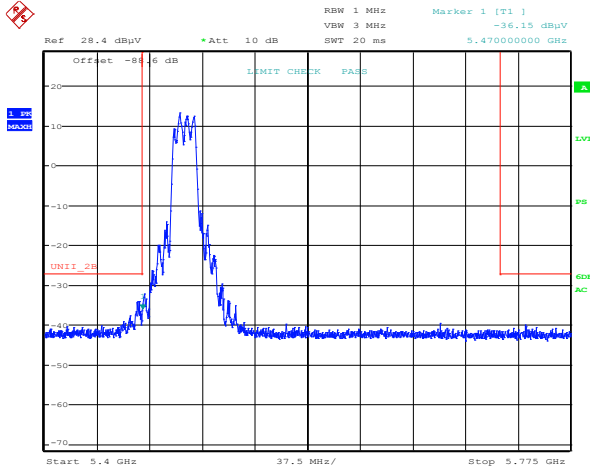
802.11ac (VHT80) Channel 58



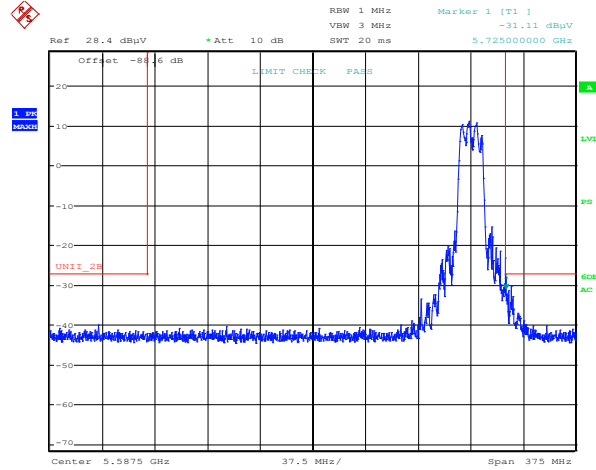
Date: 14.DEC.2017 09:50:43

6.8 Test Data - UNII Band 2b – Radiated Band Edge

802.11a
 Channels 100 and 140

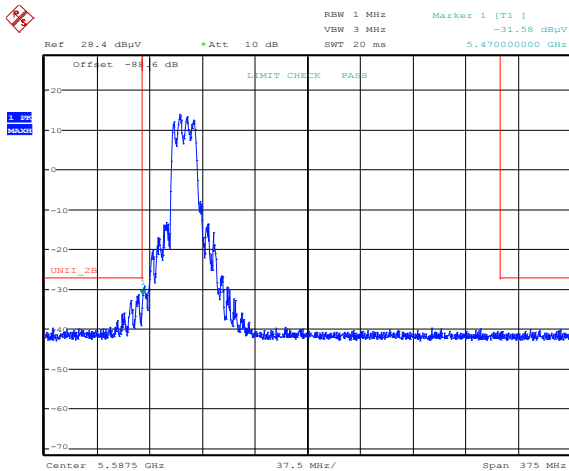


Date: 14.DEC.2017 10:06:24

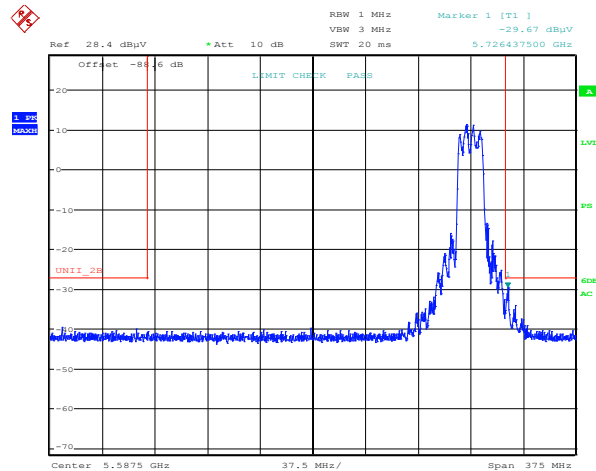


Date: 14.DEC.2017 11:11:19

802.11n (HT20)
 Channels 100 and 140

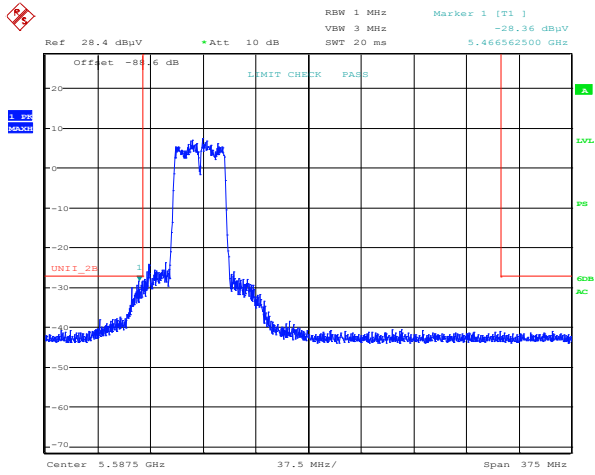


Date: 14.DEC.2017 10:15:11

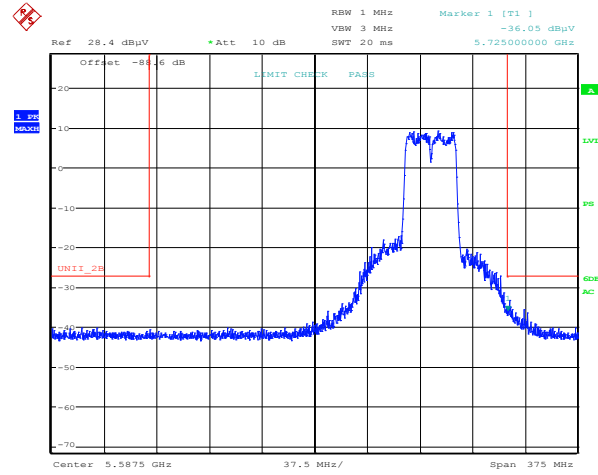


Date: 14.DEC.2017 11:05:27

802.11n (HT40) Channels 102 and 134

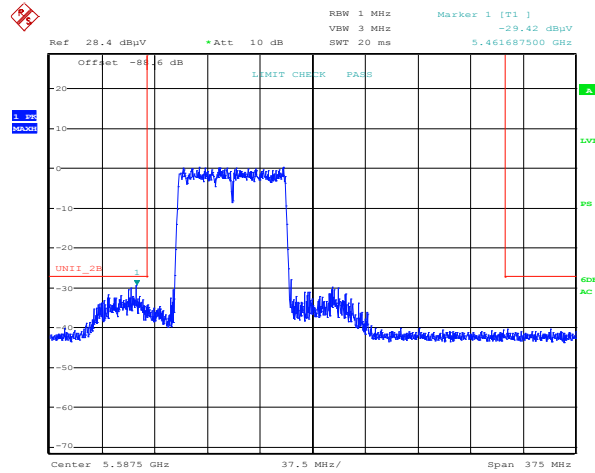


Date: 14.DEC.2017 11:17:57

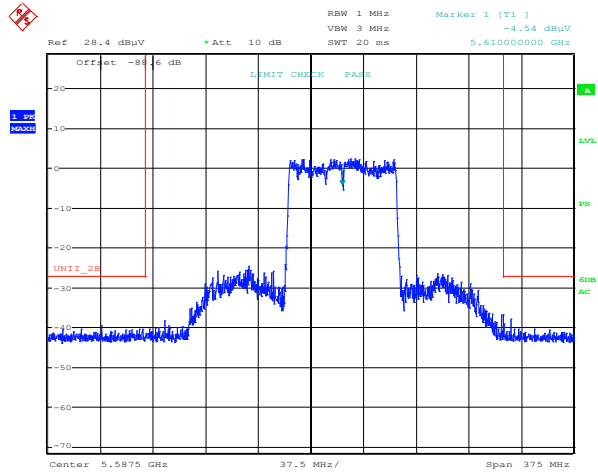


Date: 14.DEC.2017 11:23:27

802.11ac (VHT80) Channel 106 and 122



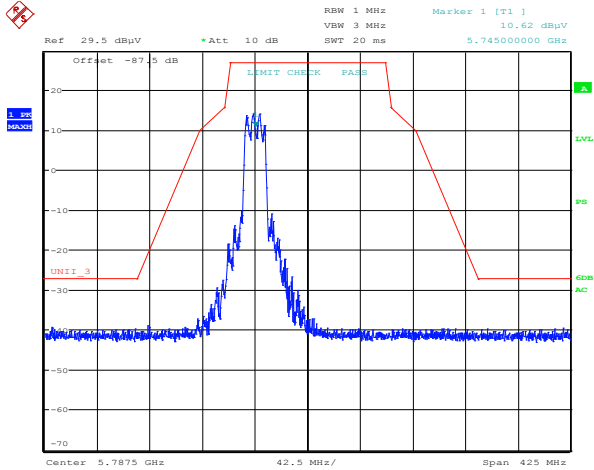
Date: 14.DEC.2017 11:33:31



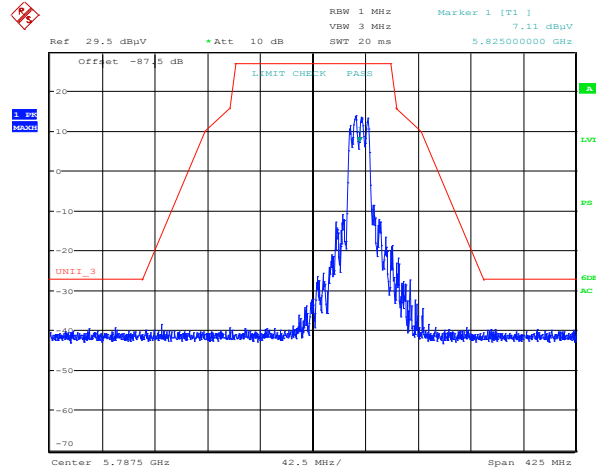
Date: 14.DEC.2017 11:40:19

6.9 Test Data - UNII Band 3 – Radiated Band Edge

802.11a Channels 149 and 165

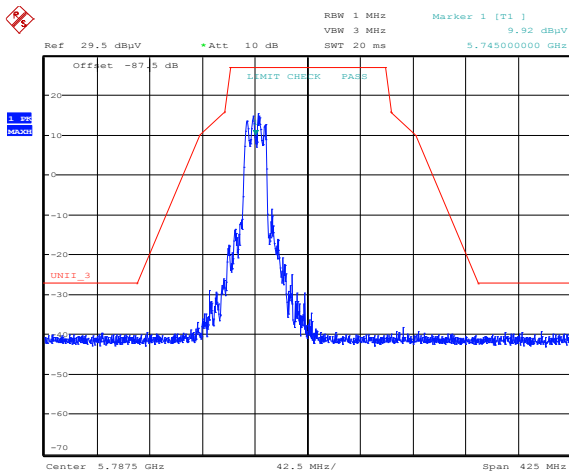


Date: 14.DEC.2017 12:18:35

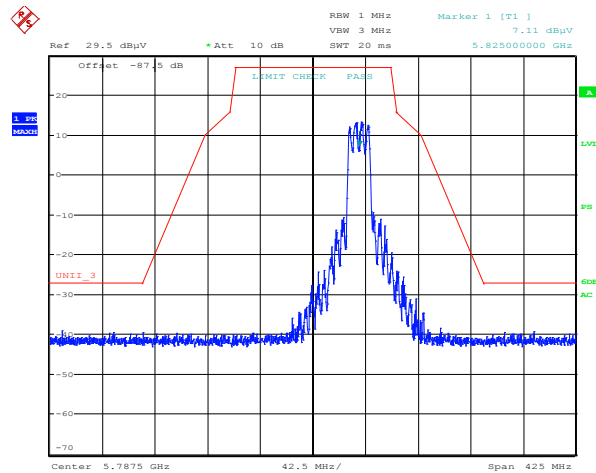


Date: 14.DEC.2017 12:20:18

802.11n (HT20) Channels 149 and 165

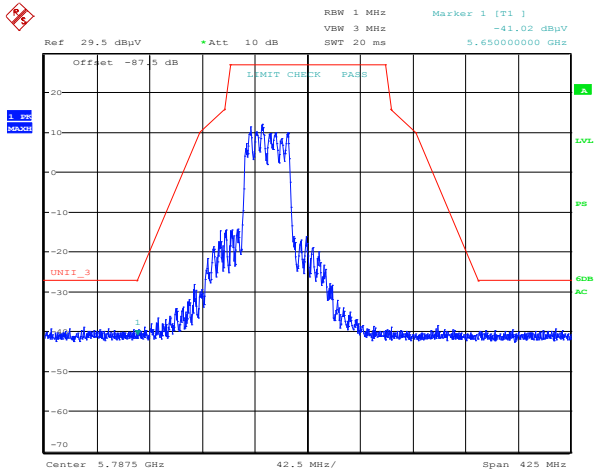


Date: 14.DEC.2017 12:16:48

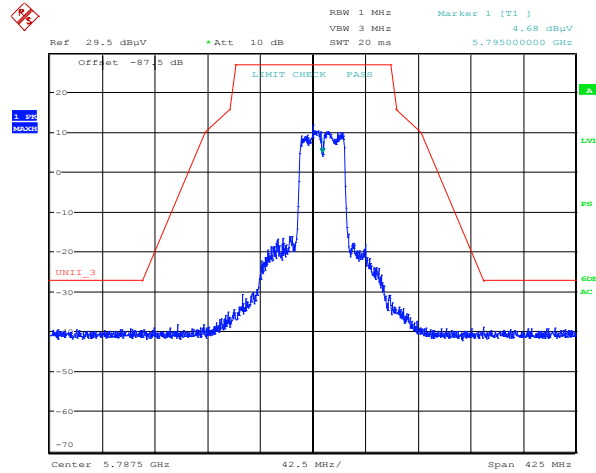


Date: 14.DEC.2017 12:21:44

802.11n (HT40) Channels 151 and 159

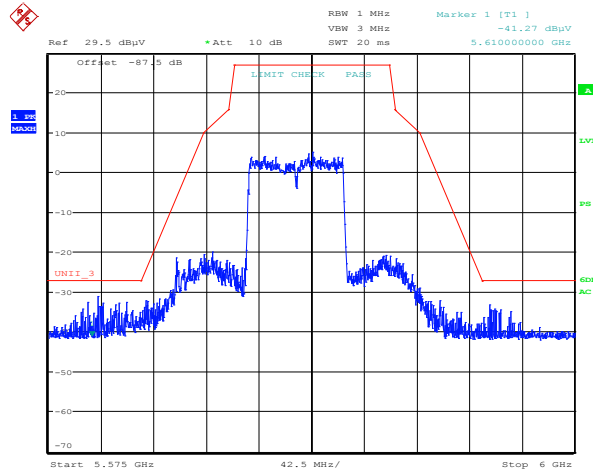


Date: 14.DEC.2017 12:05:42



Date: 14.DEC.2017 12:13:42

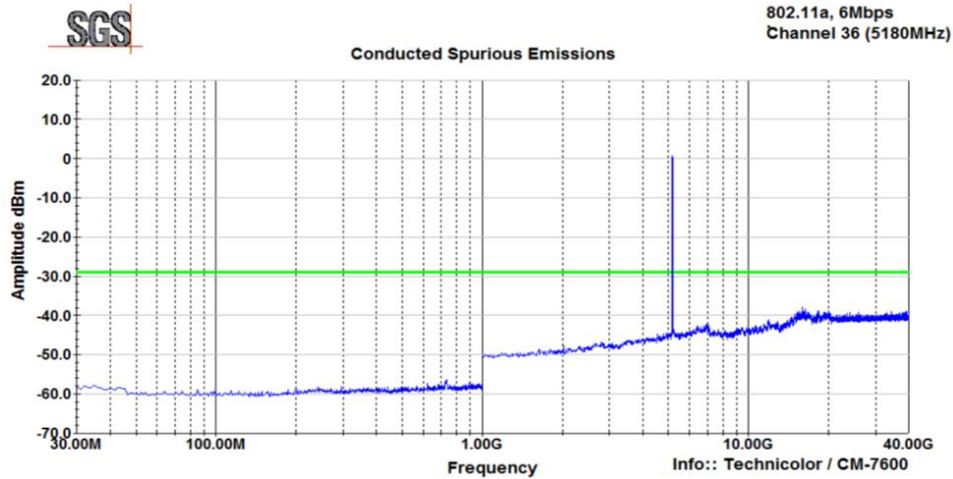
802.11ac (VHT80) Channel 155



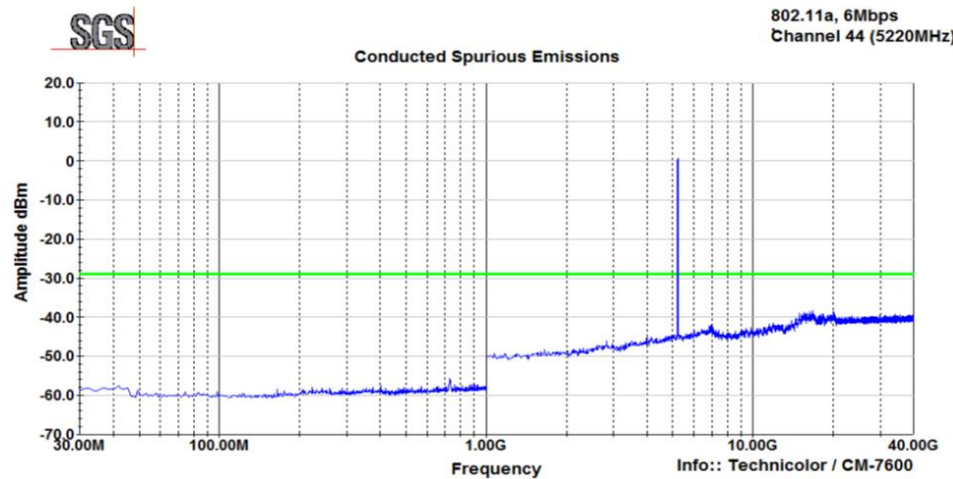
Date: 14.DEC.2017 12:01:25

6.10 Test Data – Conducted Spurs

Conducted Spurs – 802.11a, 6Mbit/s, Channel 36



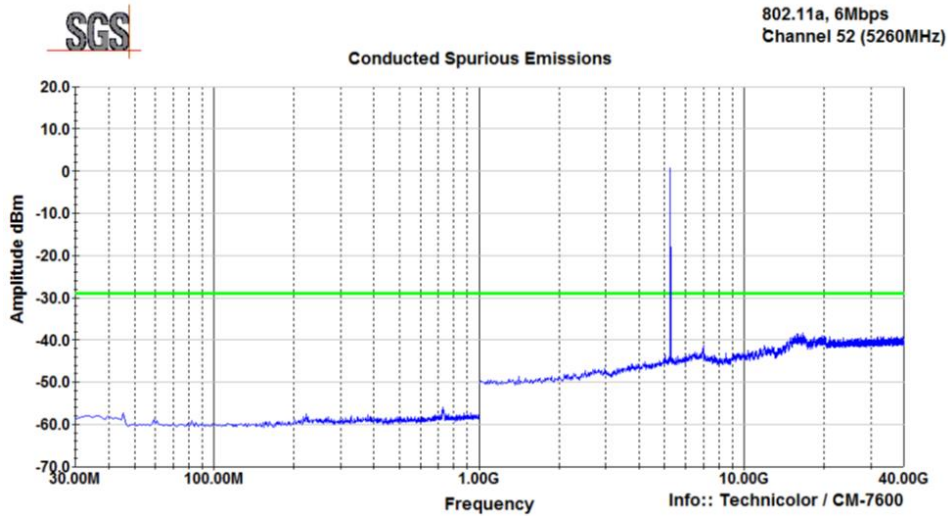
Conducted Spurs – 802.11a, 6Mbit/s, Channel 44



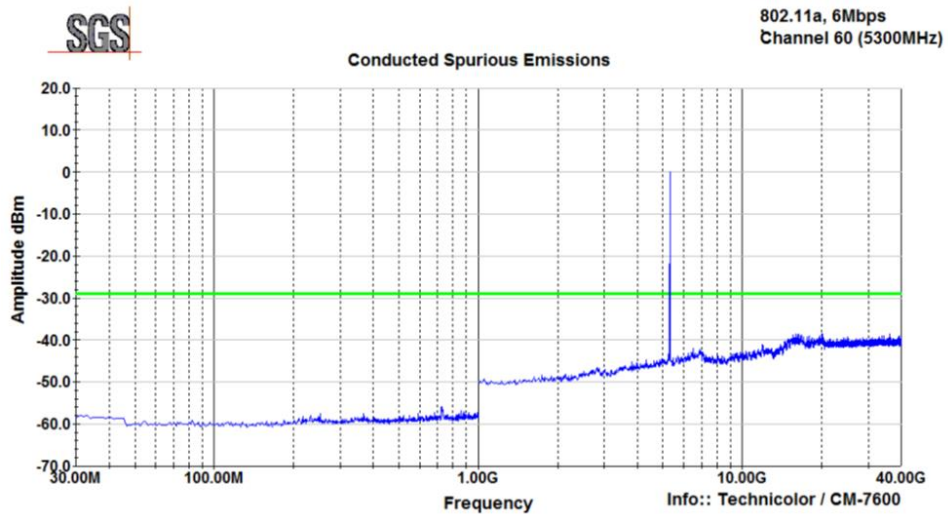
Conducted Spurs – 802.11a, 6Mbit/s, Channel 48



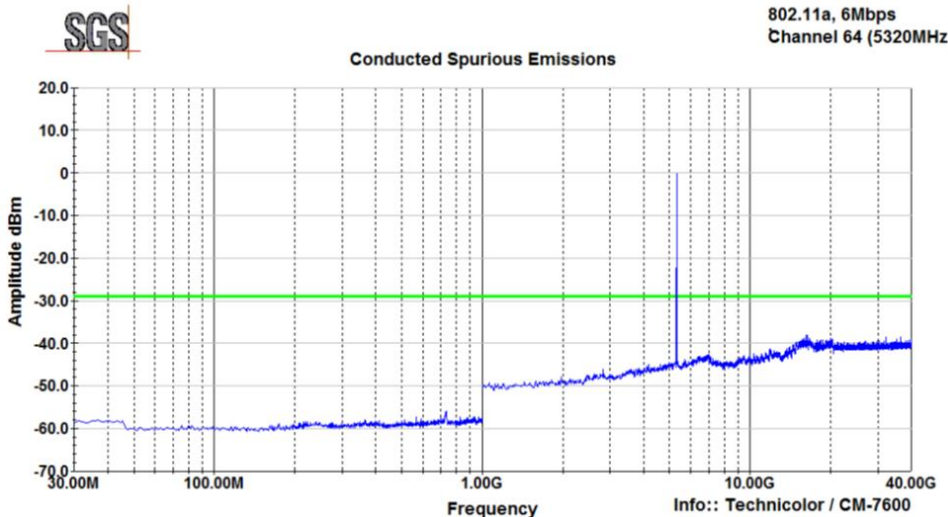
Conducted Spurs – 802.11a, 6Mbit/s, Channel 52



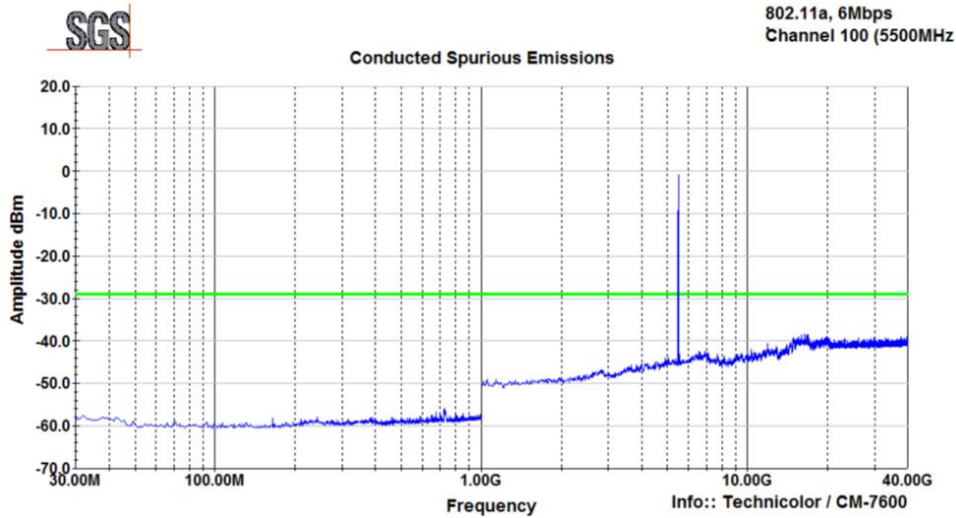
Conducted Spurs – 802.11a, 6Mbit/s, Channel 60



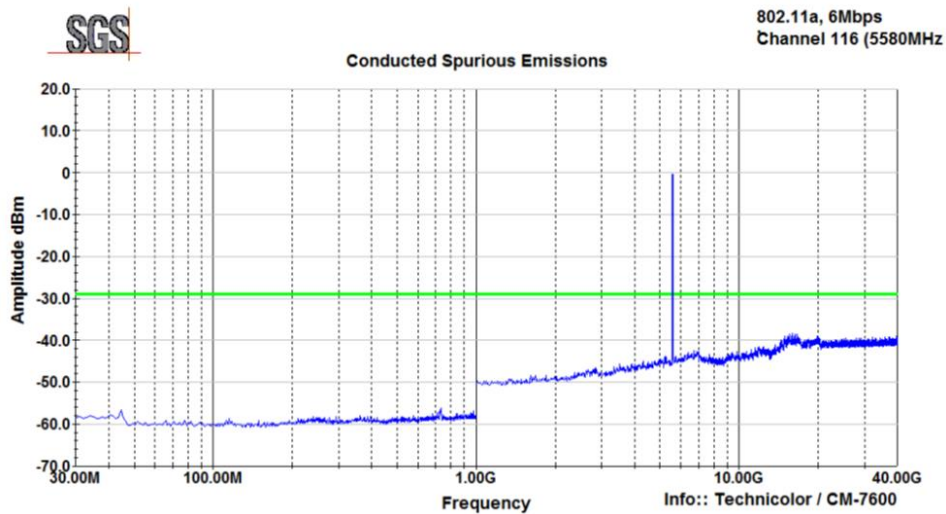
Conducted Spurs – 802.11a, 6Mbit/s, Channel 64



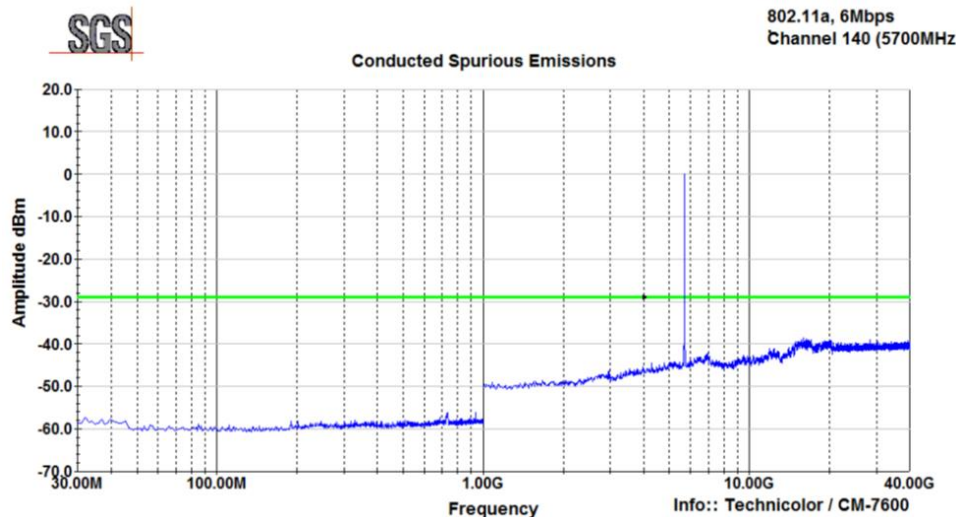
Conducted Spurs – 802.11a, 6Mbit/s, Channel 100



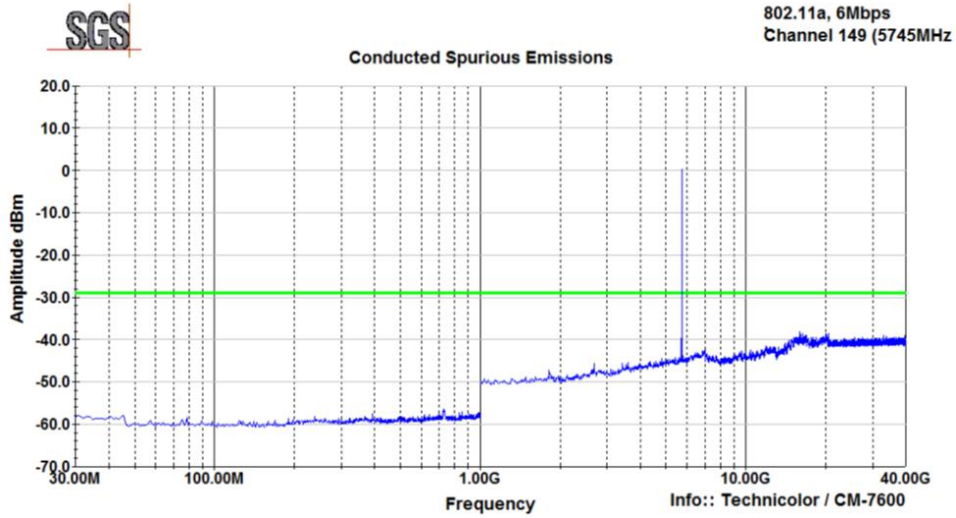
Conducted Spurs – 802.11a, 6Mbit/s, Channel 116



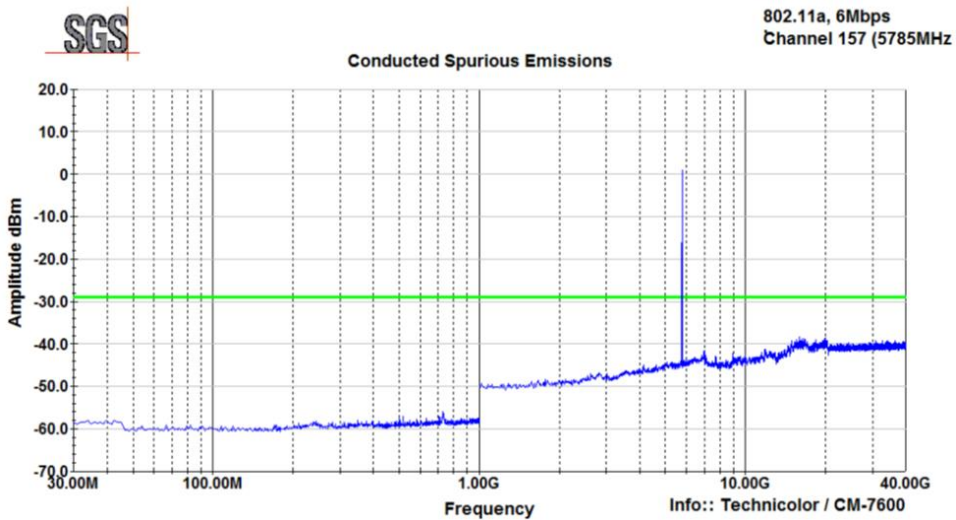
Conducted Spurs – 802.11a, 6Mbit/s, Channel 140



Conducted Spurs – 802.11a, 6Mbit/s, Channel 149



Conducted Spurs – 802.11a, 6Mbit/s, Channel 157

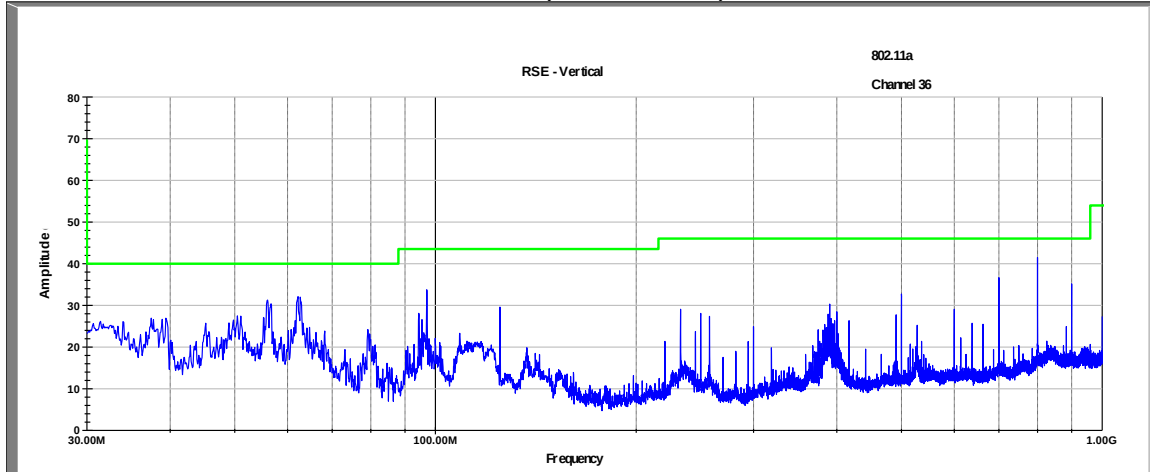


Conducted Spurs – 802.11a, 6Mbit/s, Channel 165



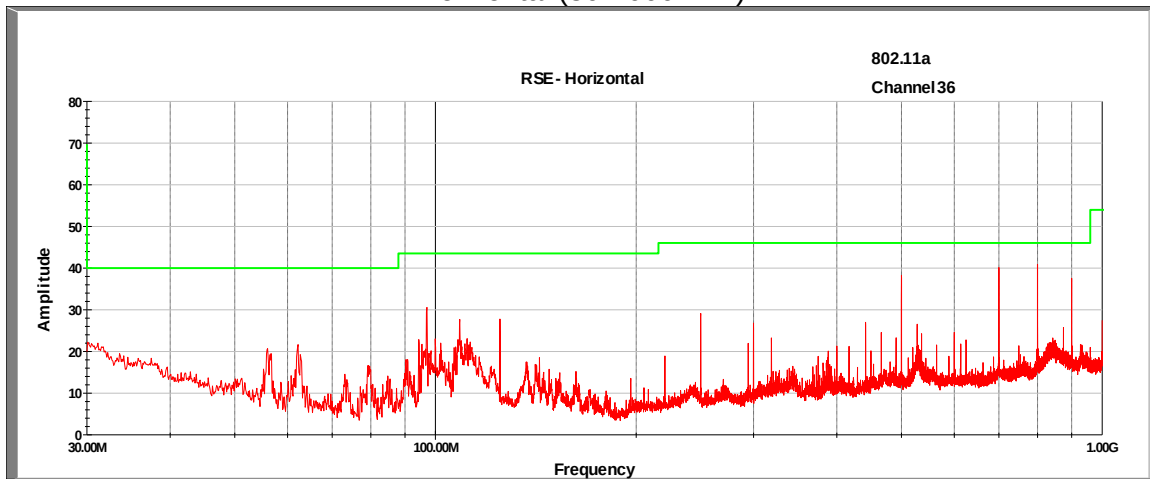
6.11 Unwanted Emissions – Cabinet Radiation

Channel 36
 Vertical (30-1000MHz)

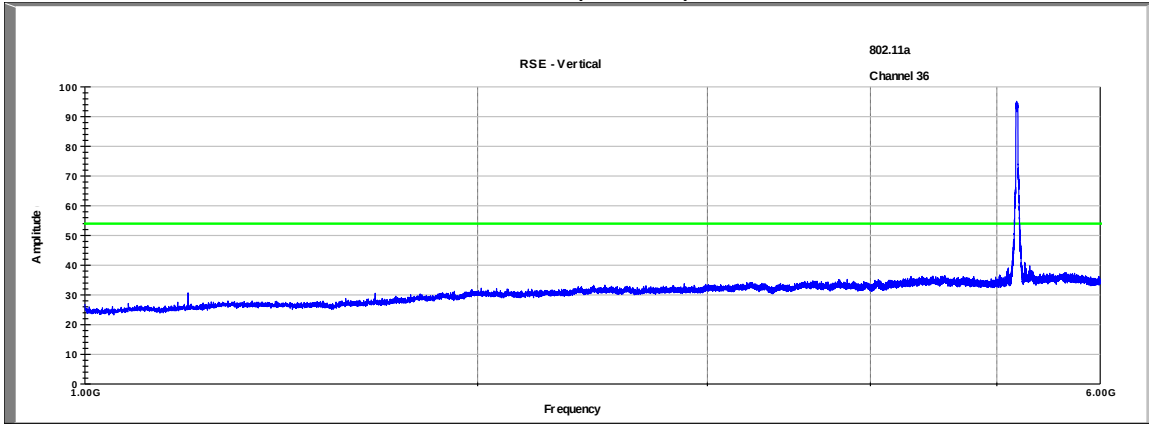


Worst-case emission: -41.8dBμV/m @ 800MHz (4.2dB Margin)

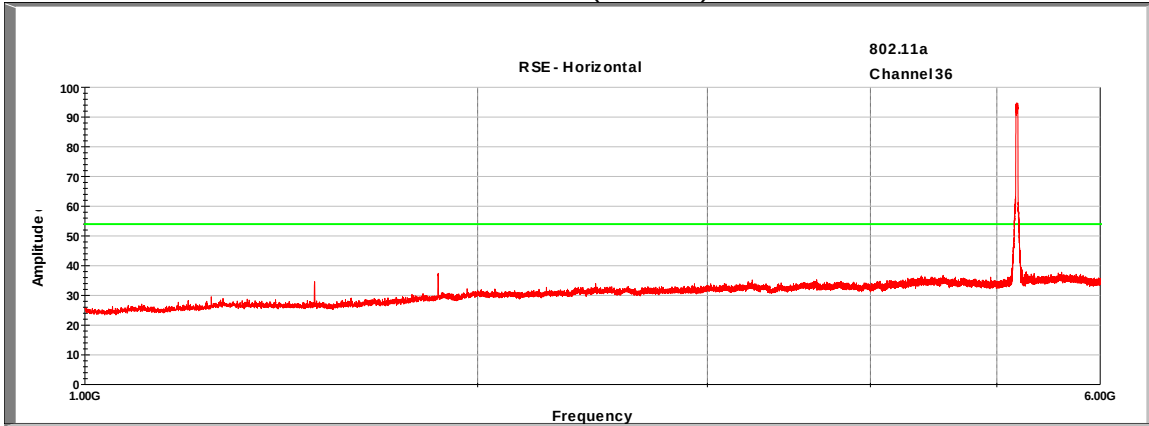
Channel 36
 Horizontal (30-1000MHz)



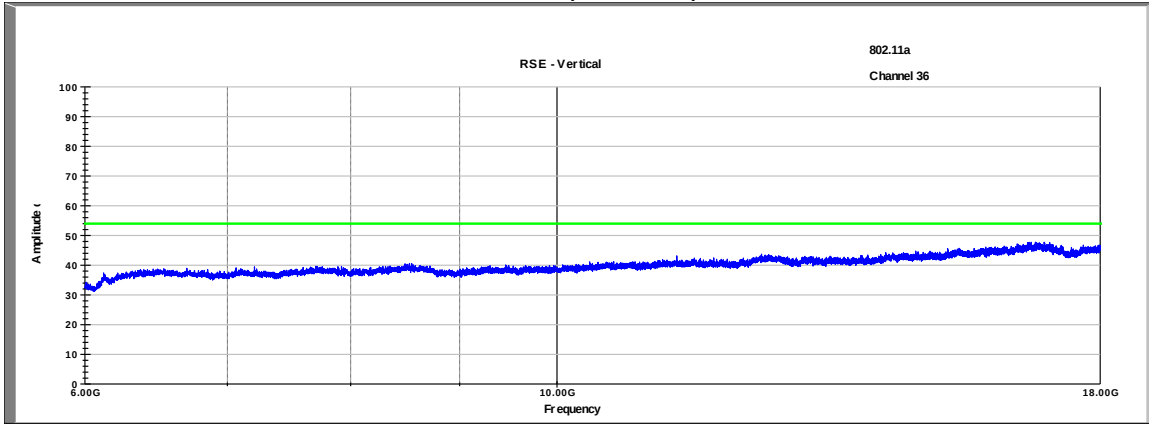
Channel 36
 Vertical (1-6GHz)



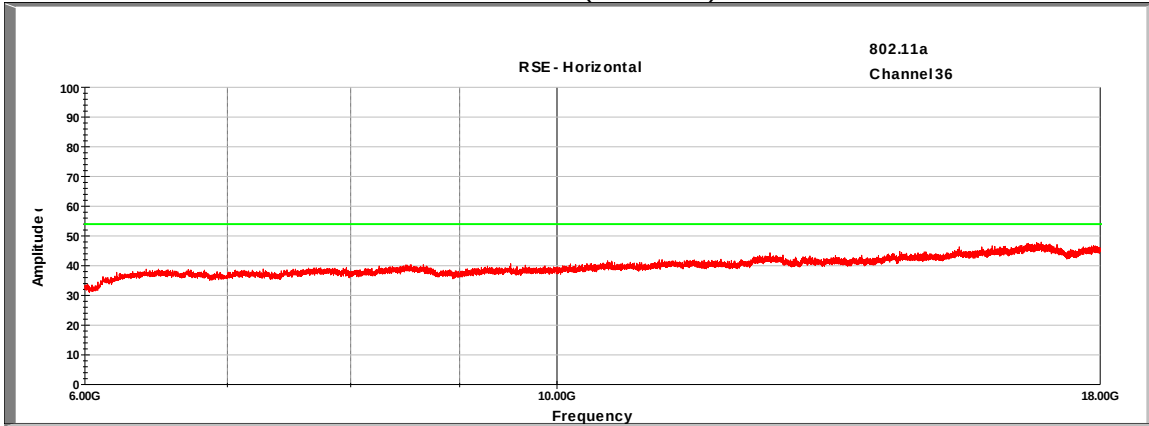
Channel 36
 Horizontal (1-6GHz)



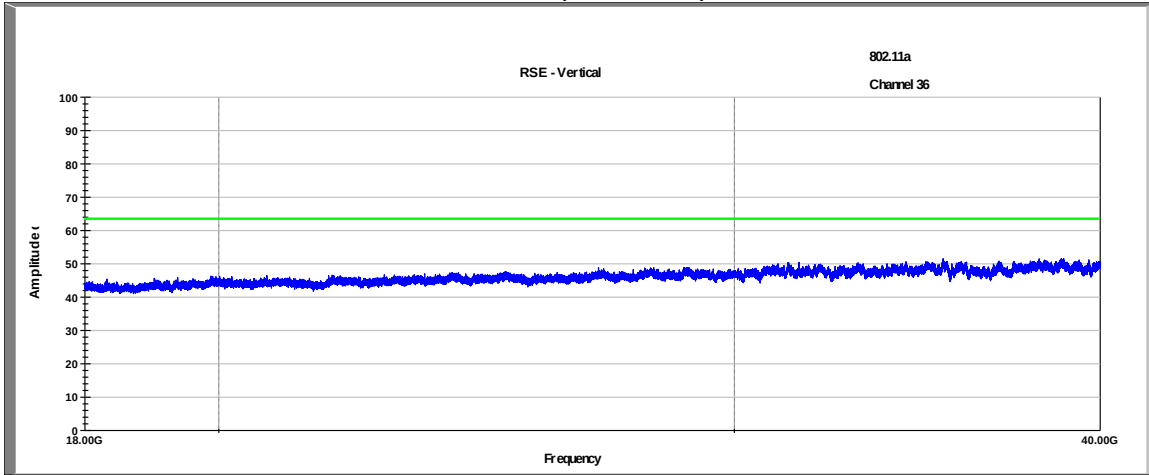
Channel 36
 Vertical (6-18GHz)



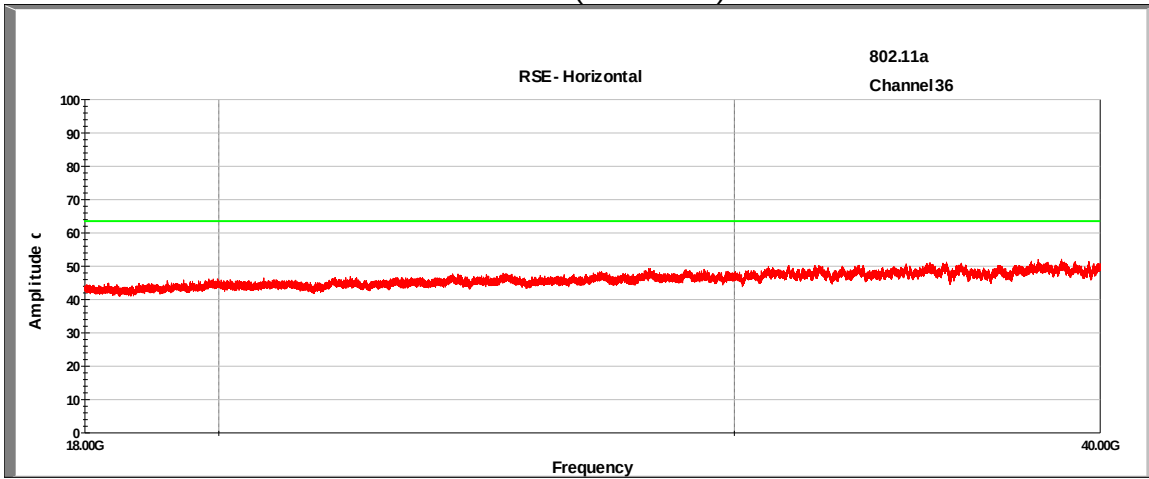
Channel 36
 Horizontal (6-18GHz)



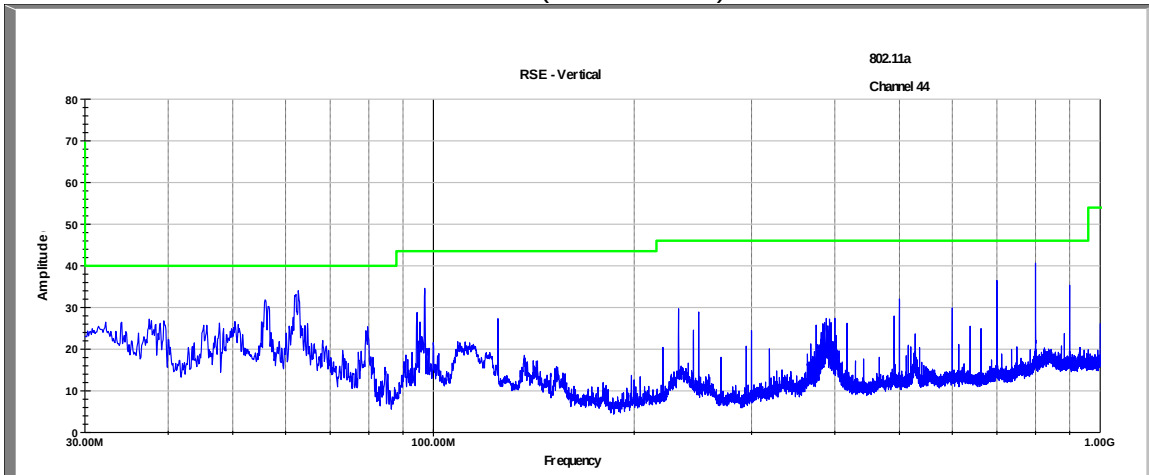
Channel 36
 Vertical (18-40GHz)



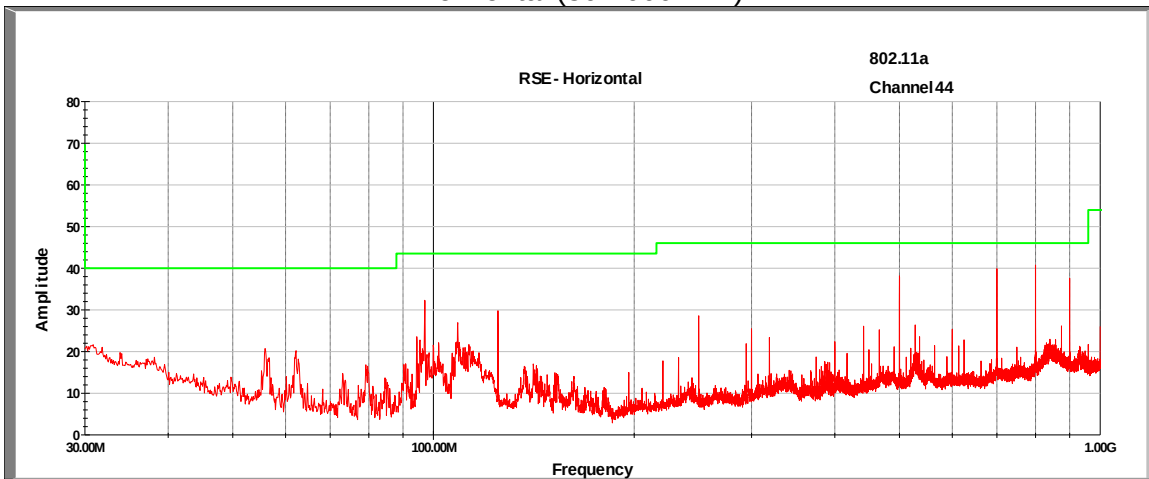
Channel 36
 Horizontal (18-40GHz)



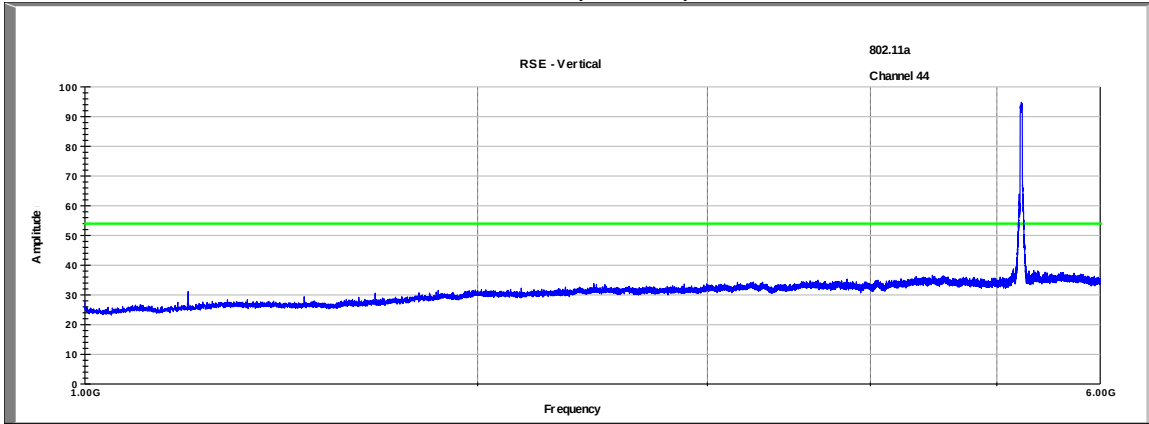
Channel 44
Vertical (30-1000MHz)



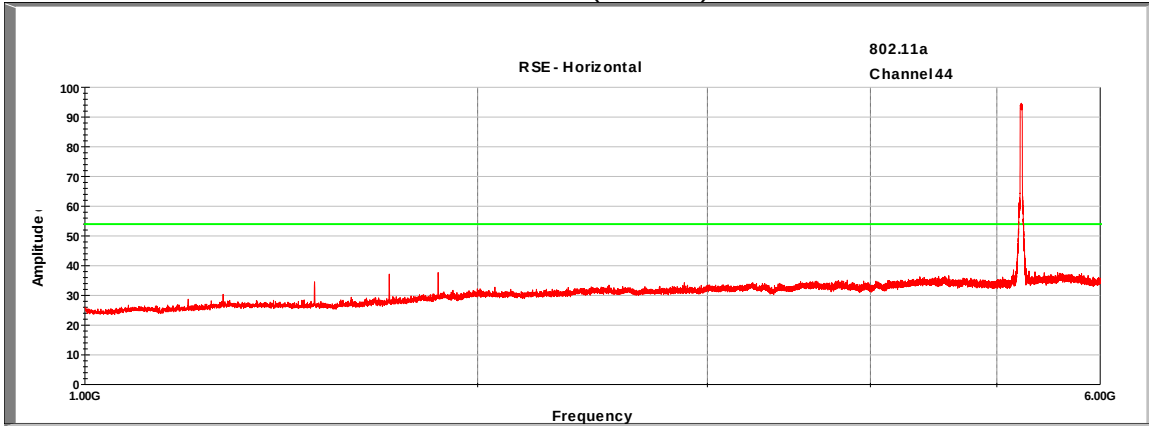
Channel 44
Horizontal (30-1000MHz)



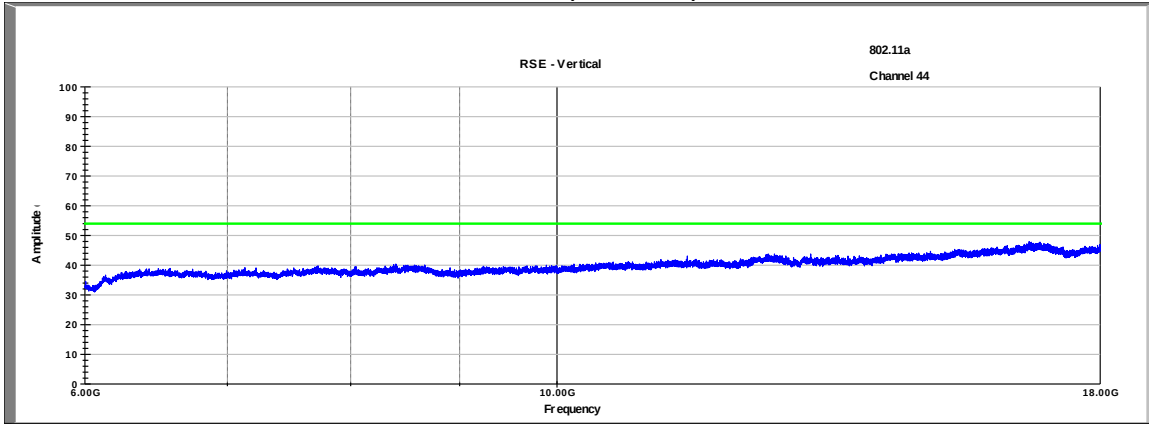
Channel 44
 Vertical (1-6GHz)



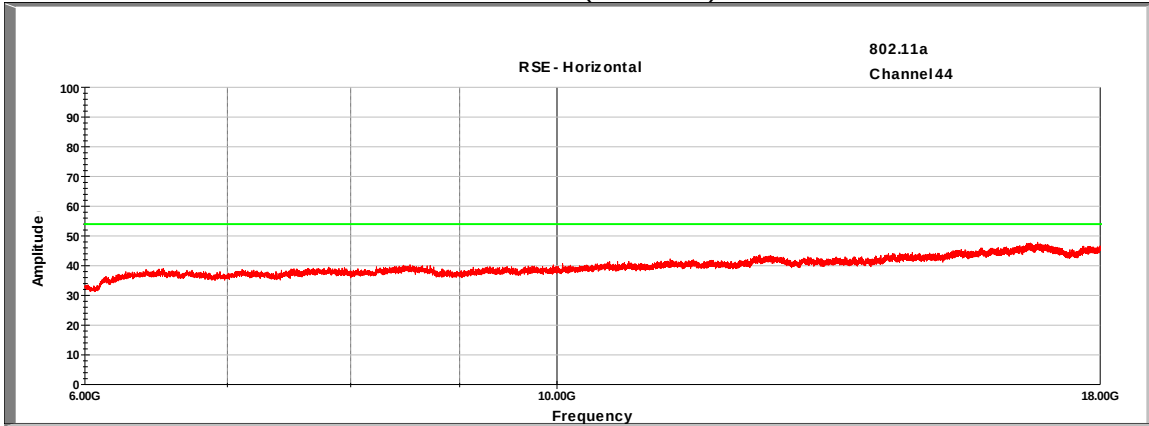
Channel 44
 Horizontal (1-6GHz)



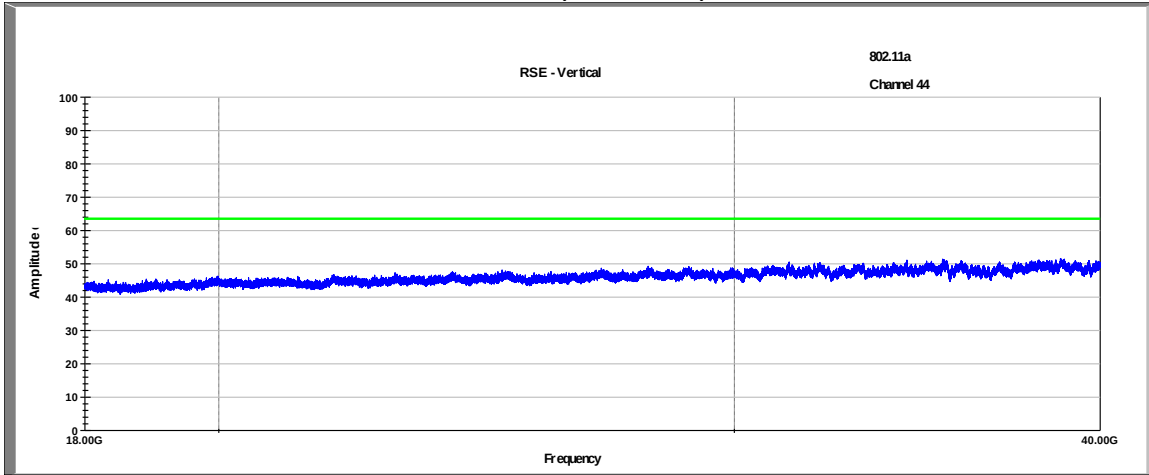
Channel 44
 Vertical (6-18GHz)



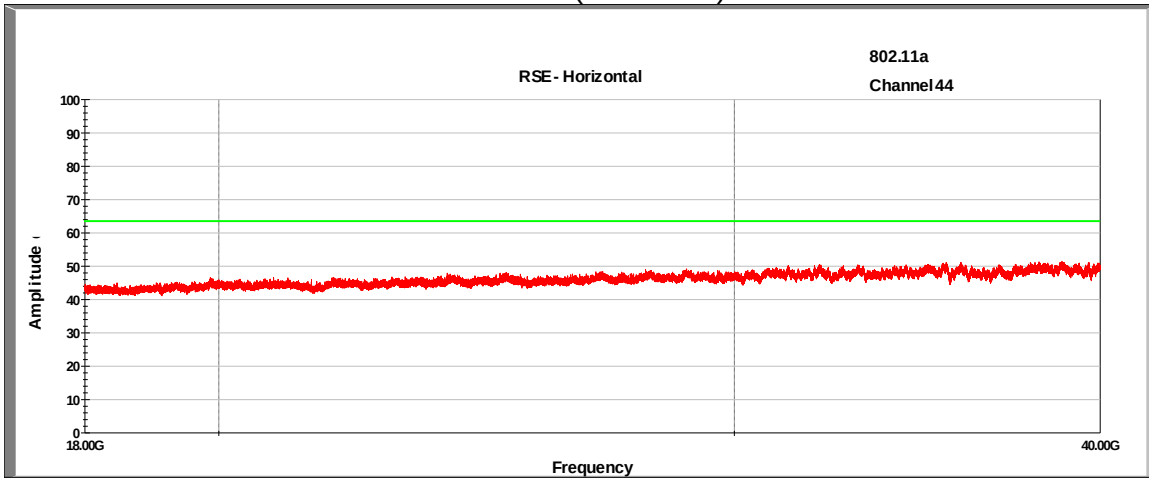
Channel 44
 Horizontal (6-18GHz)



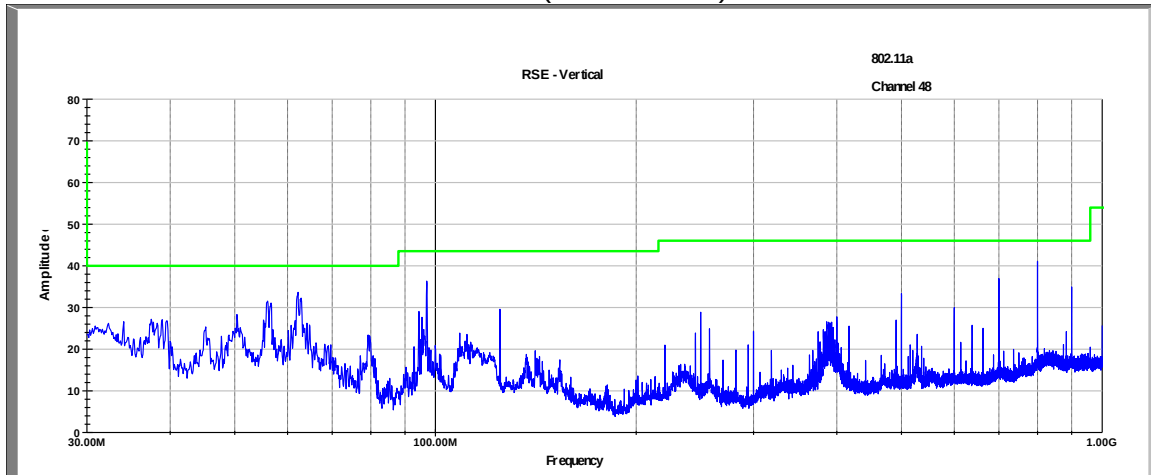
Channel 44
 Vertical (18-40GHz)



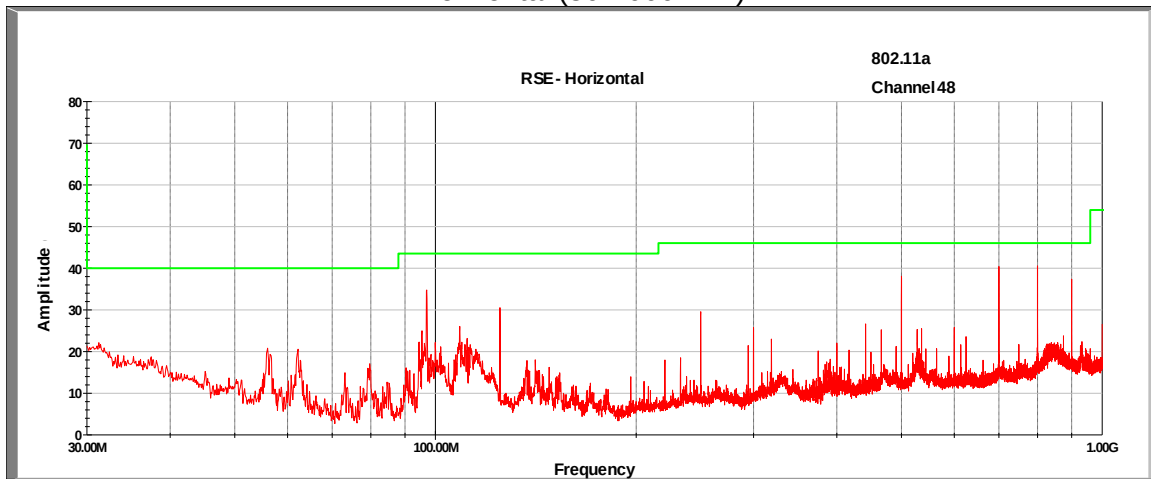
Channel 44
 Horizontal (18-40GHz)



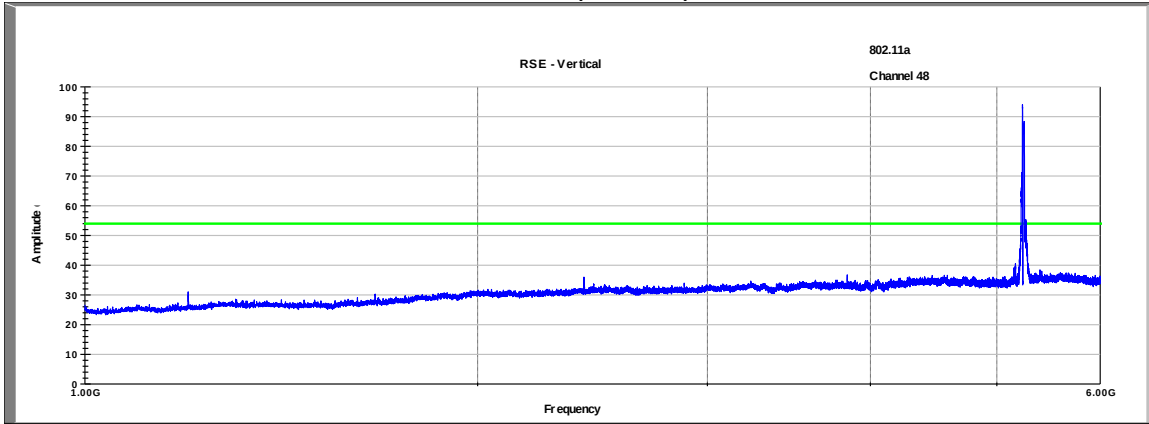
Channel 48
 Vertical (30-1000MHz)



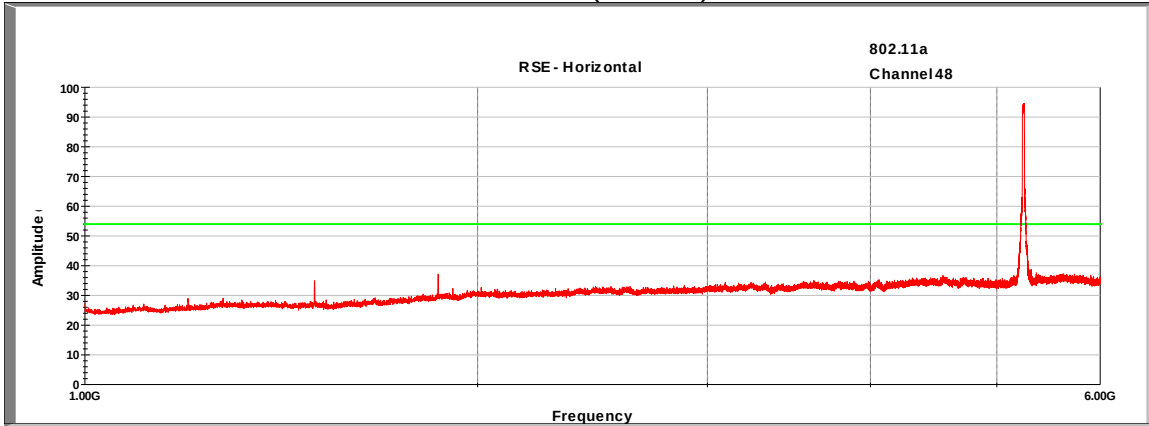
Channel 48
 Horizontal (30-1000MHz)



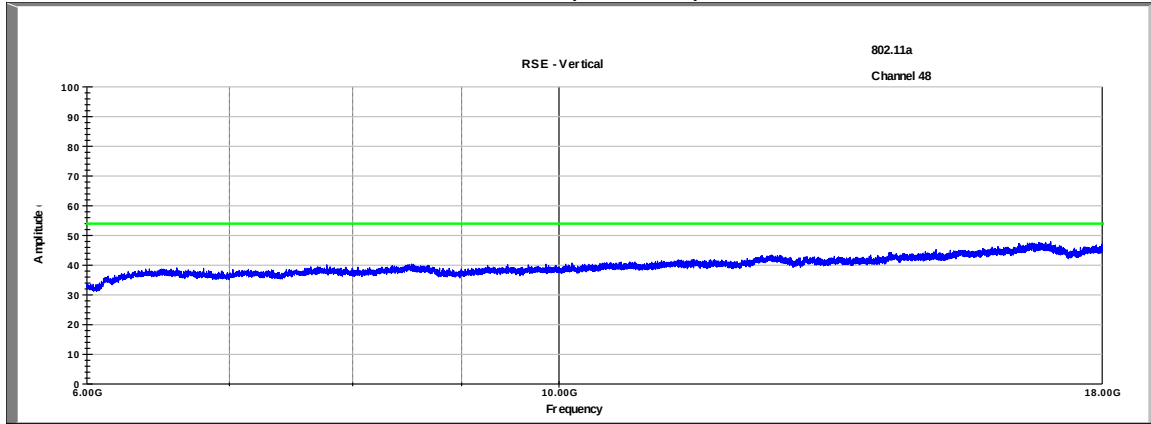
Channel 48
 Vertical (1-6GHz)



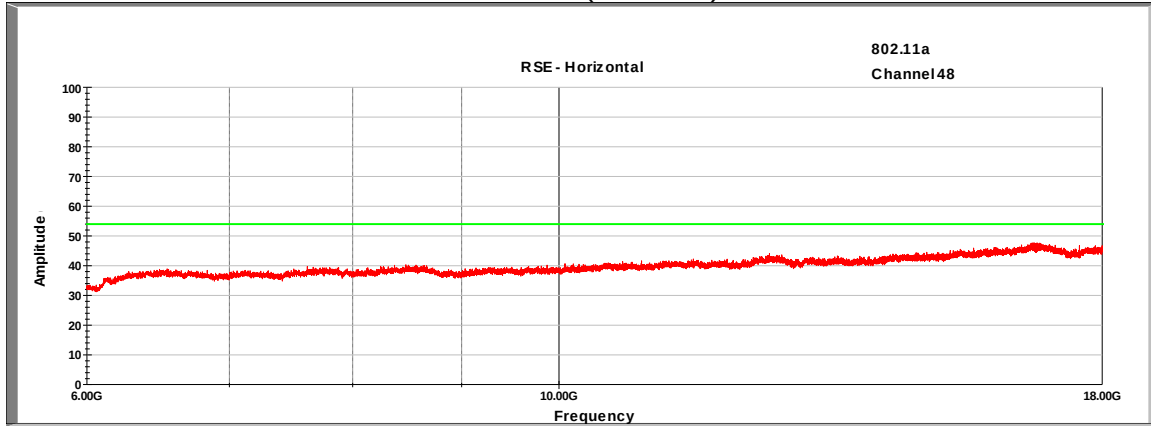
Channel 48
 Horizontal (1-6GHz)



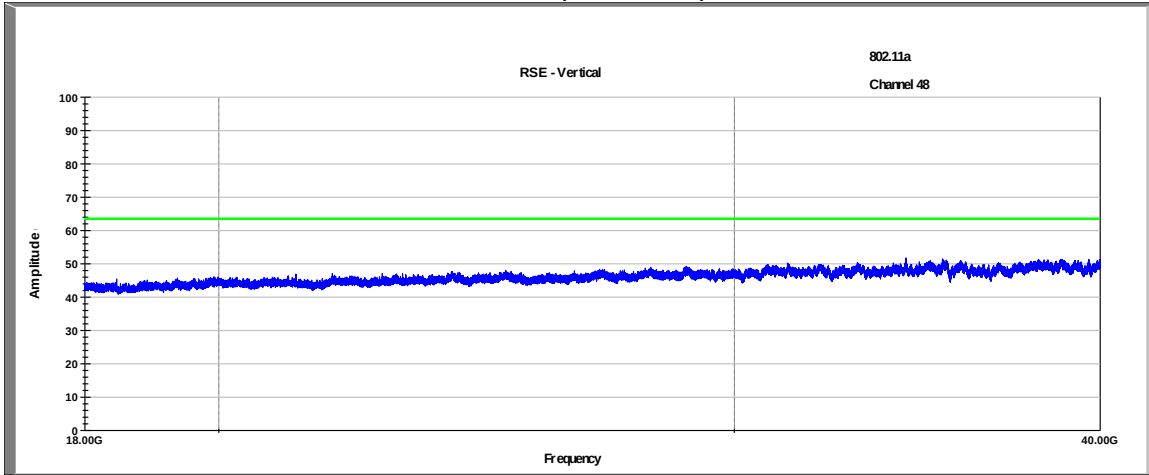
Channel 48
 Vertical (6-18GHz)



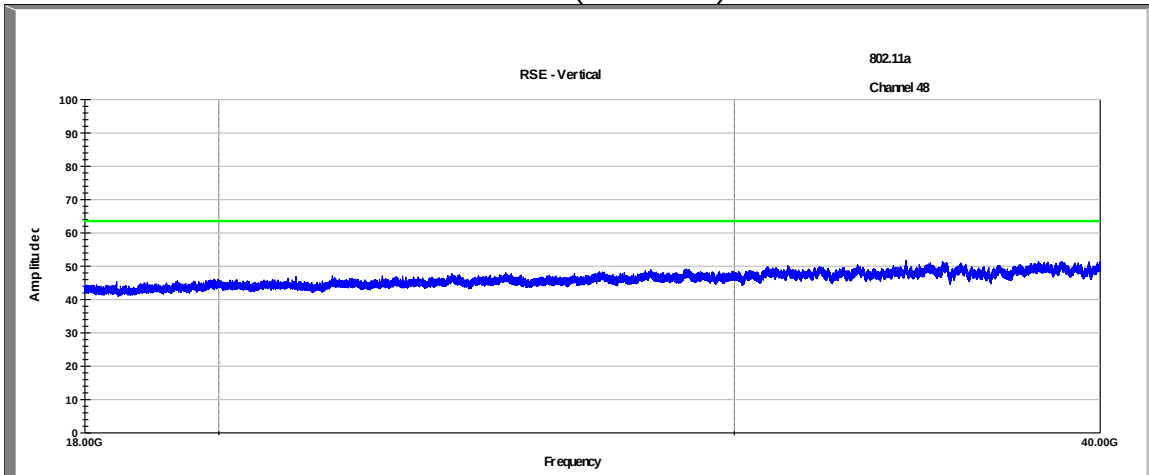
Channel 48
 Horizontal (6-18GHz)



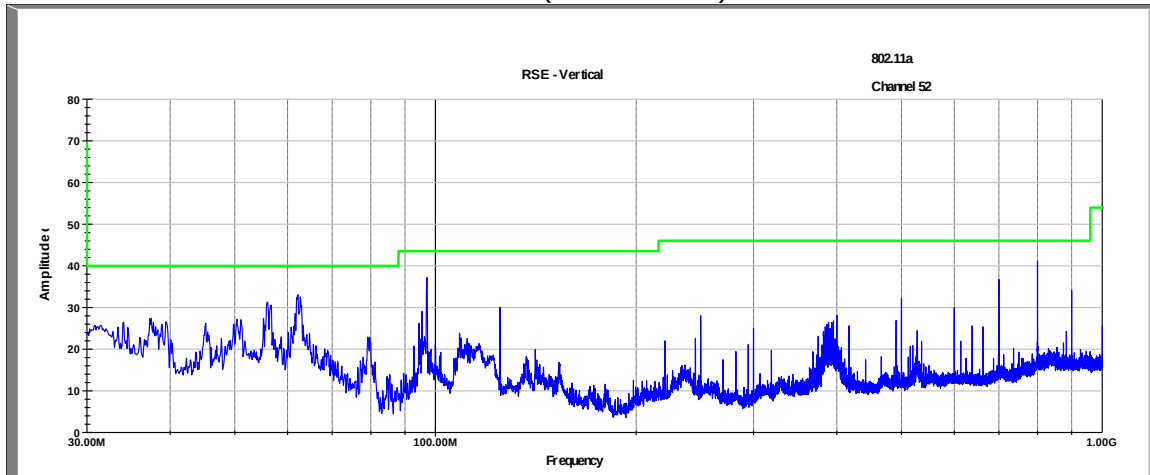
Channel 48
 Vertical (18-40GHz)



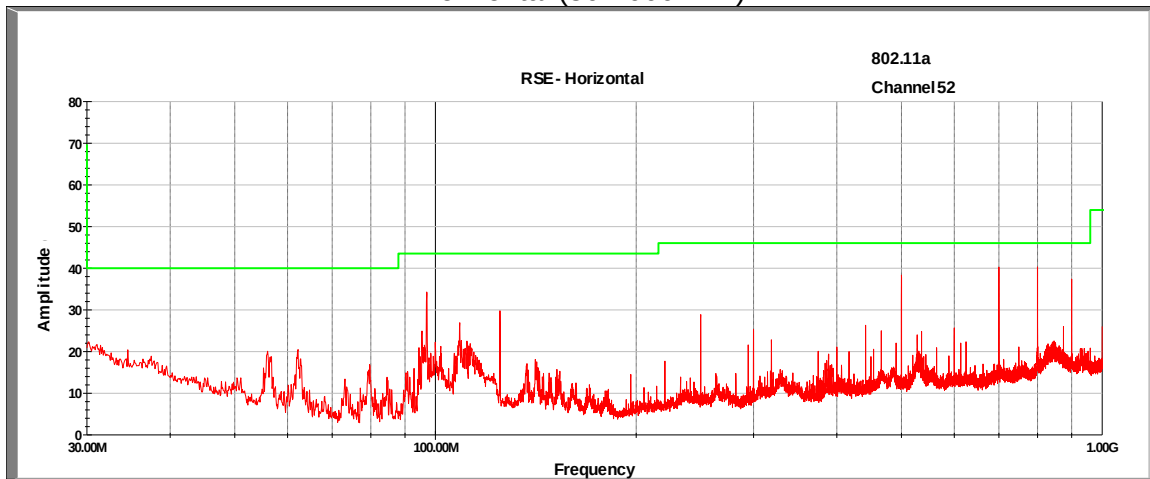
Channel 48
 Horizontal (18-40GHz)



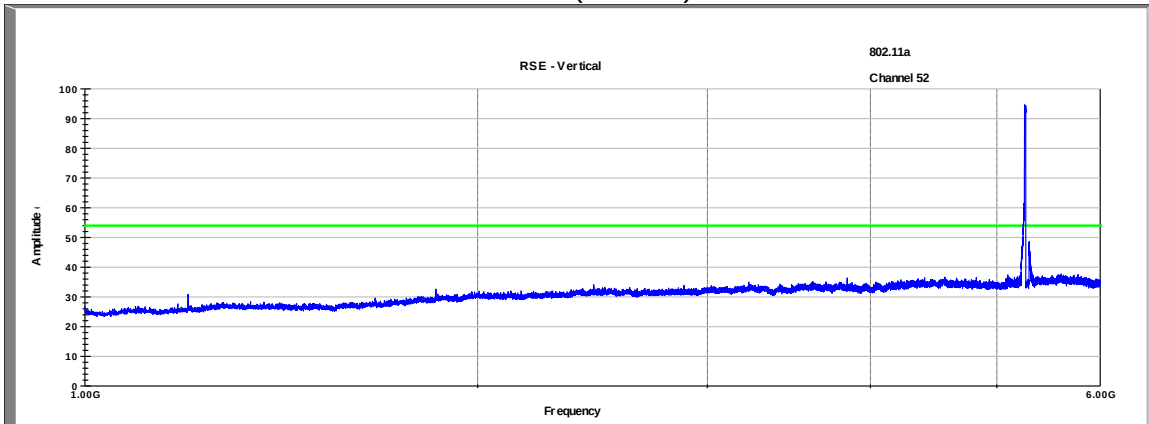
Channel 52
 Vertical (30-1000MHz)



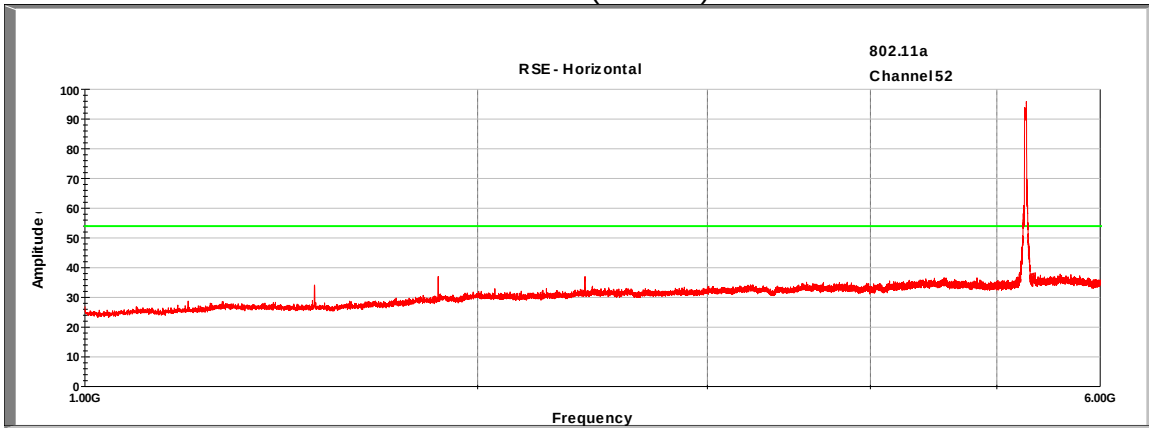
Channel 52
 Horizontal (30-1000MHz)



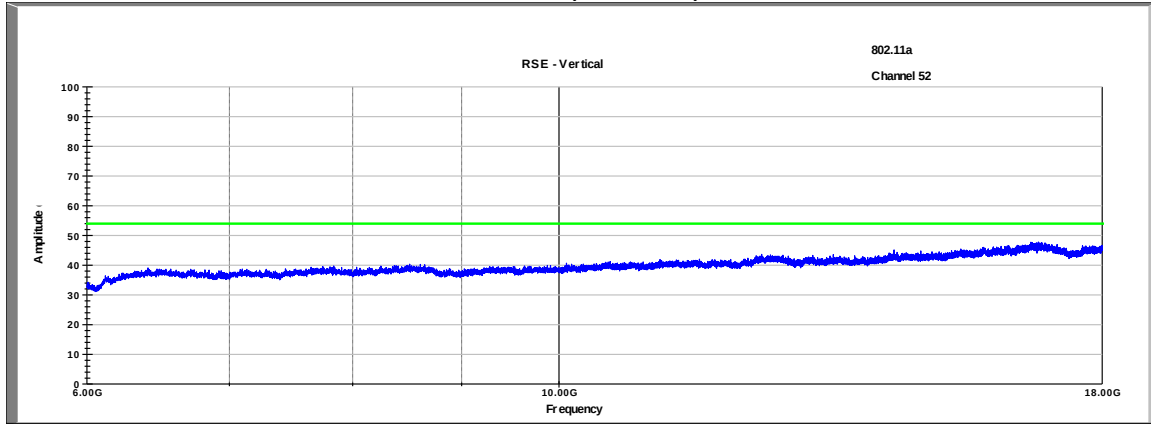
Channel 52
 Vertical (1-6GHz)



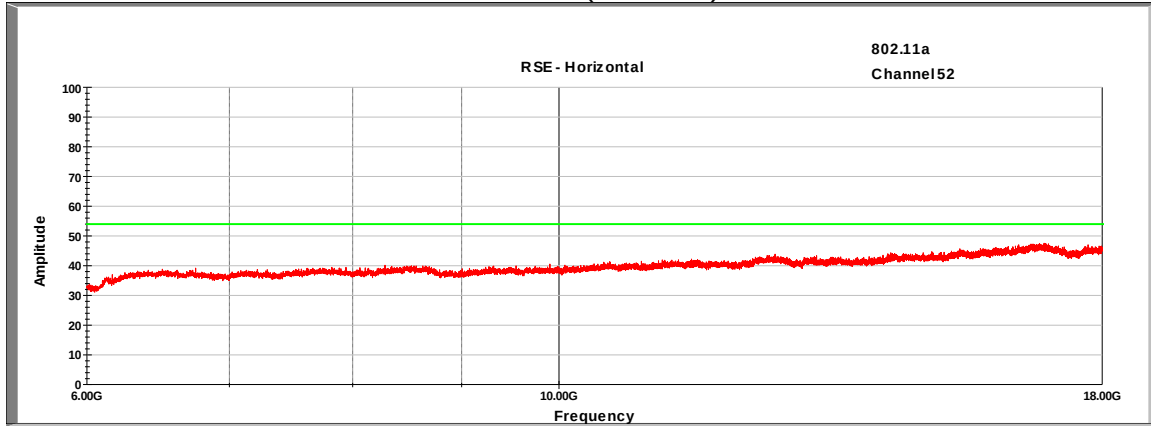
Channel 52
 Horizontal (1-6GHz)



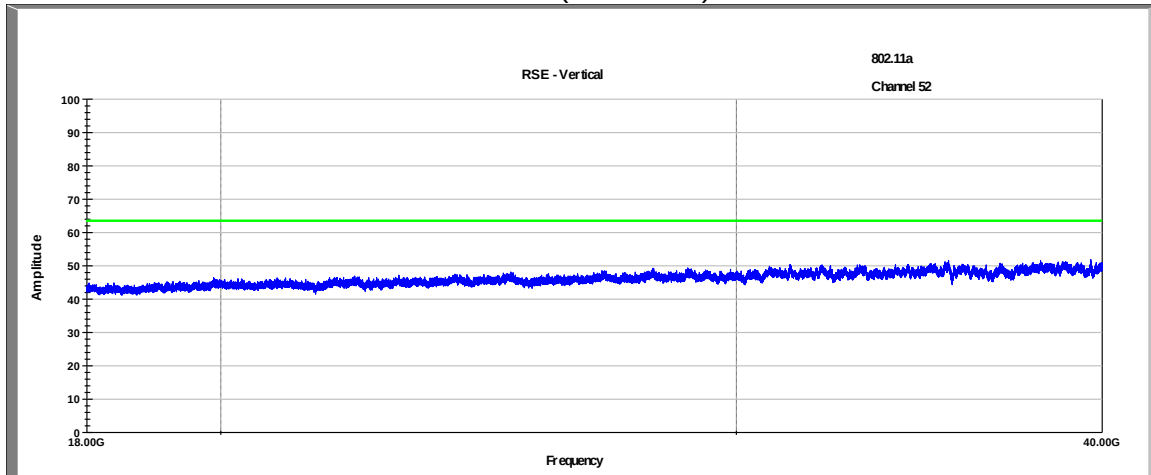
Channel 52
 Vertical (6-18GHz)



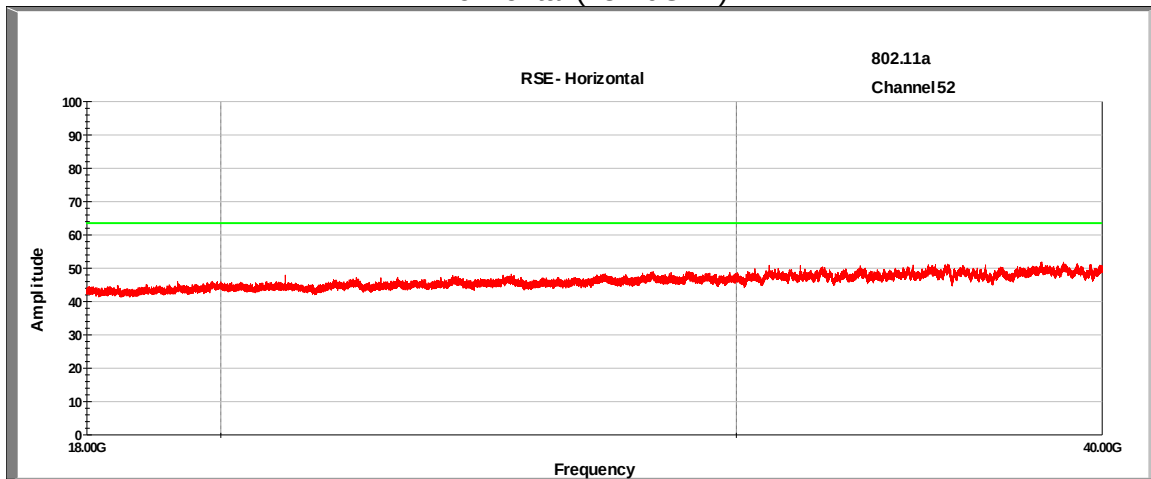
Channel 52
 Horizontal (6-18GHz)



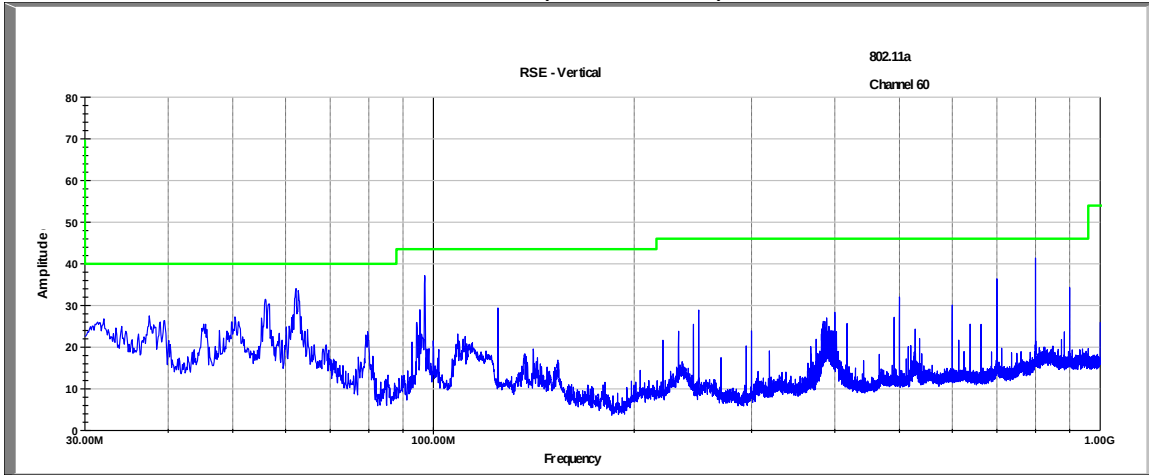
Channel 52
 Vertical (18-40GHz)



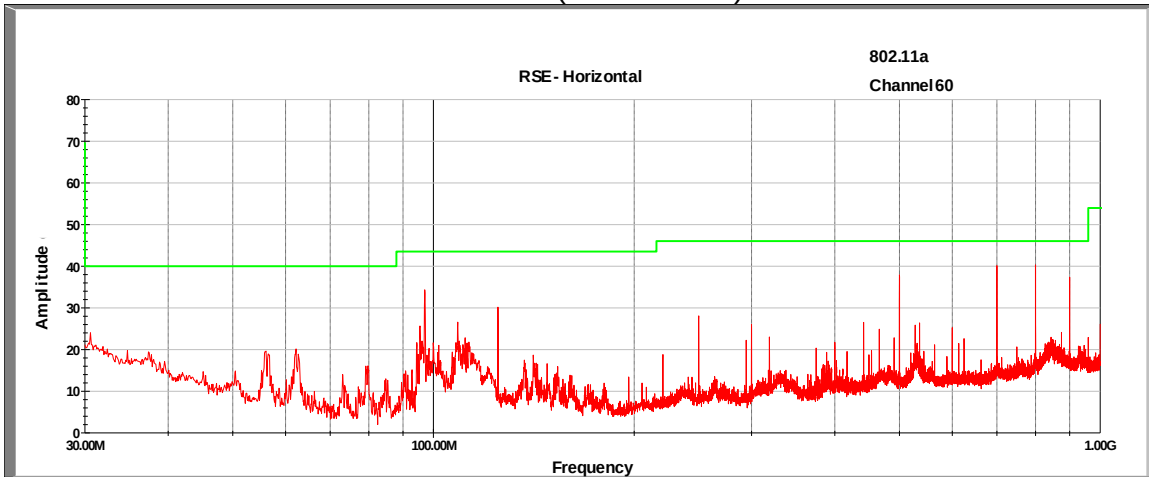
Channel 52
 Horizontal (18-40GHz)



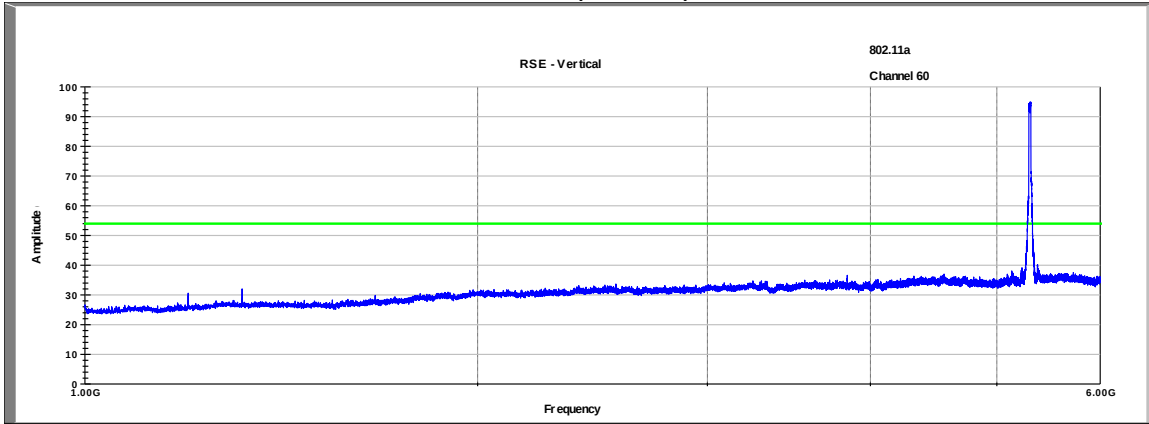
Channel 60
 Vertical (30-1000MHz)



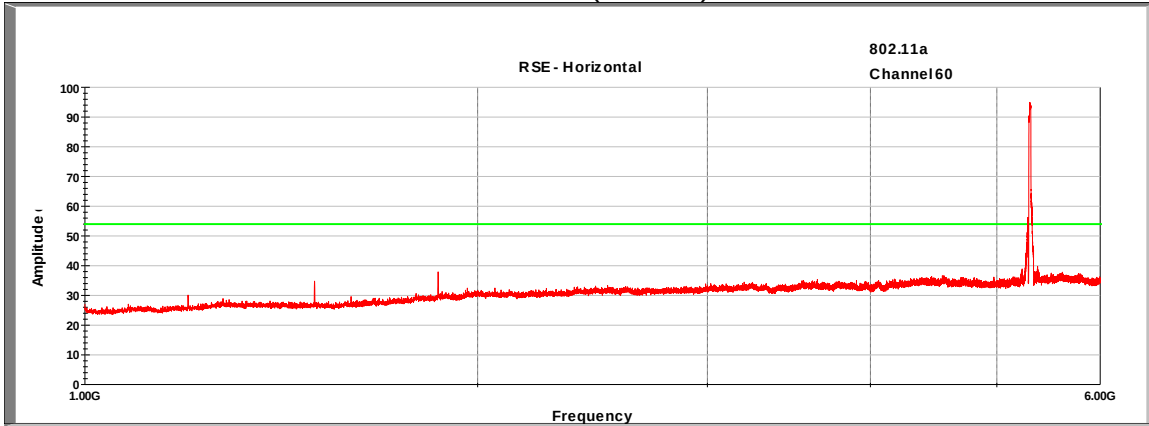
Channel 60
 Horizontal (30-1000MHz)



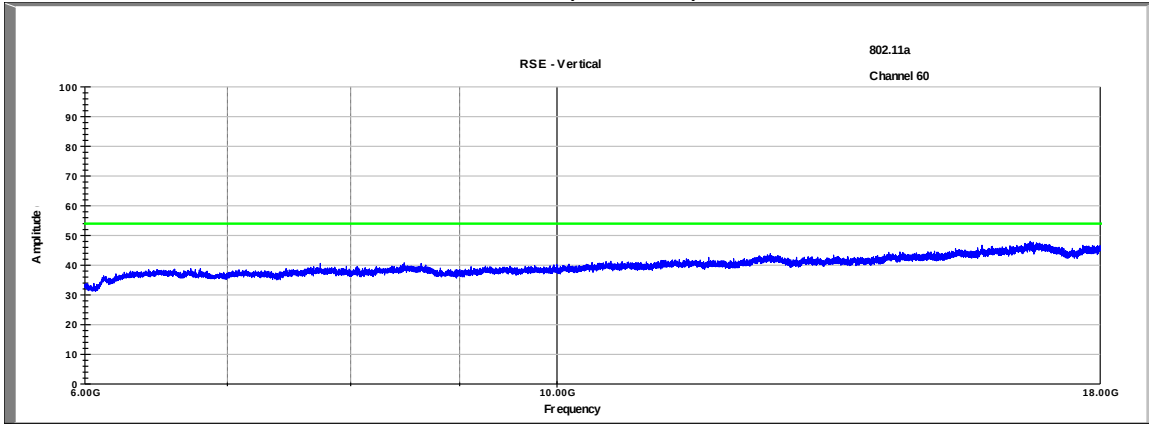
Channel 60
 Vertical (1-6GHz)



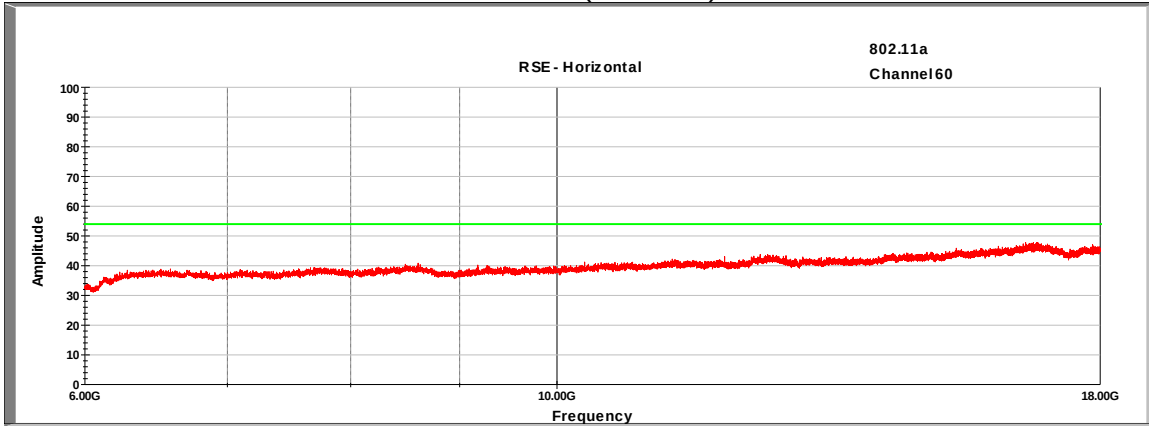
Channel 60
 Horizontal (1-6GHz)



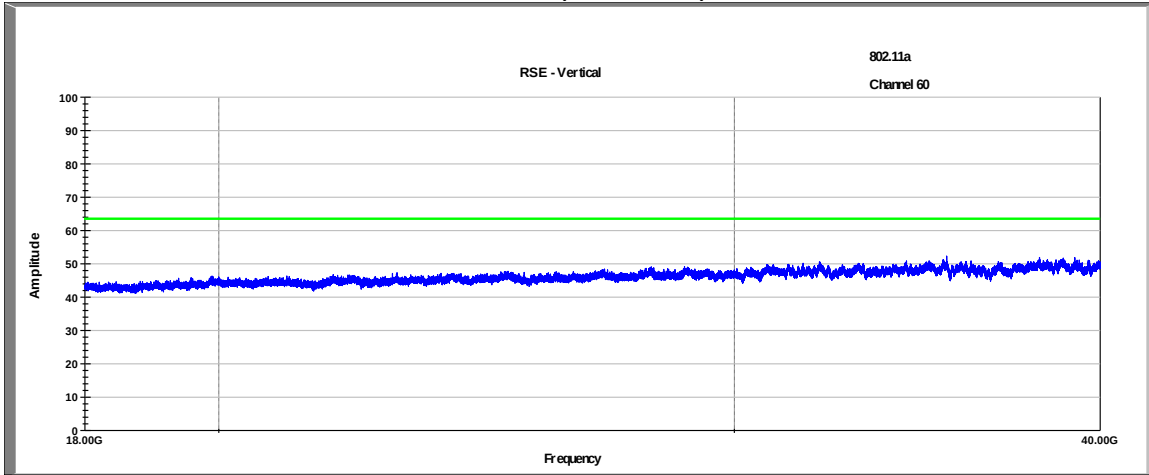
Channel 60
 Vertical (6-18GHz)



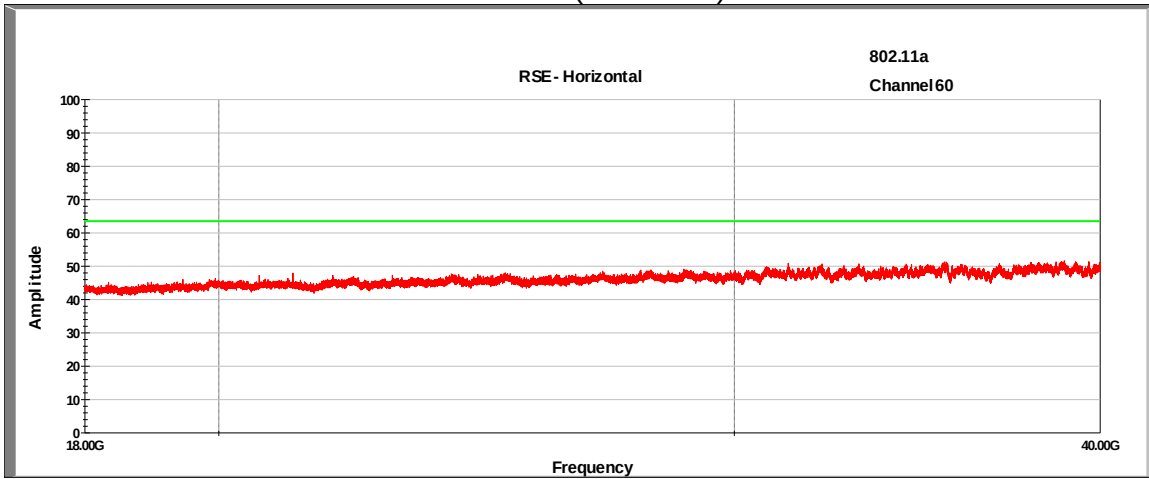
Channel 60
 Horizontal (6-18GHz)



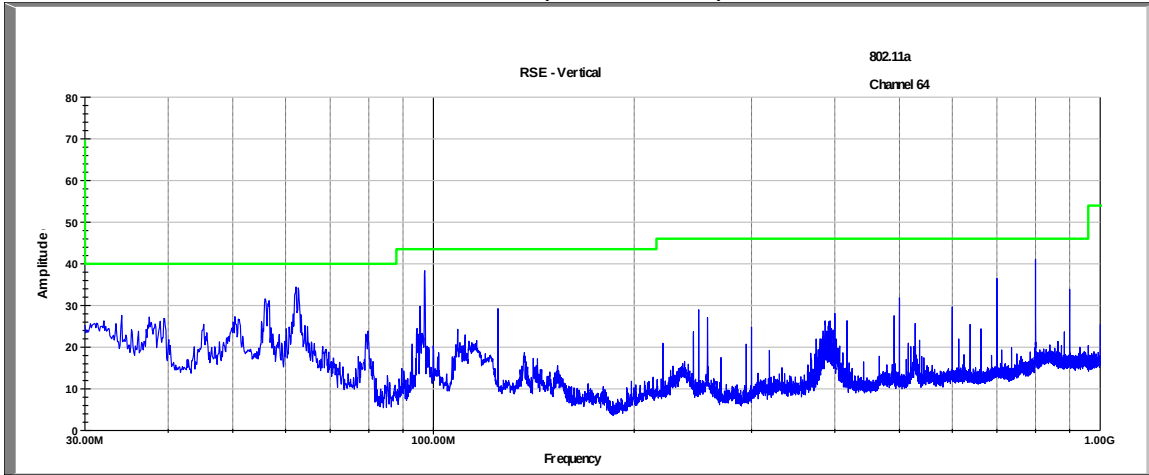
Channel 60
 Vertical (18-40GHz)



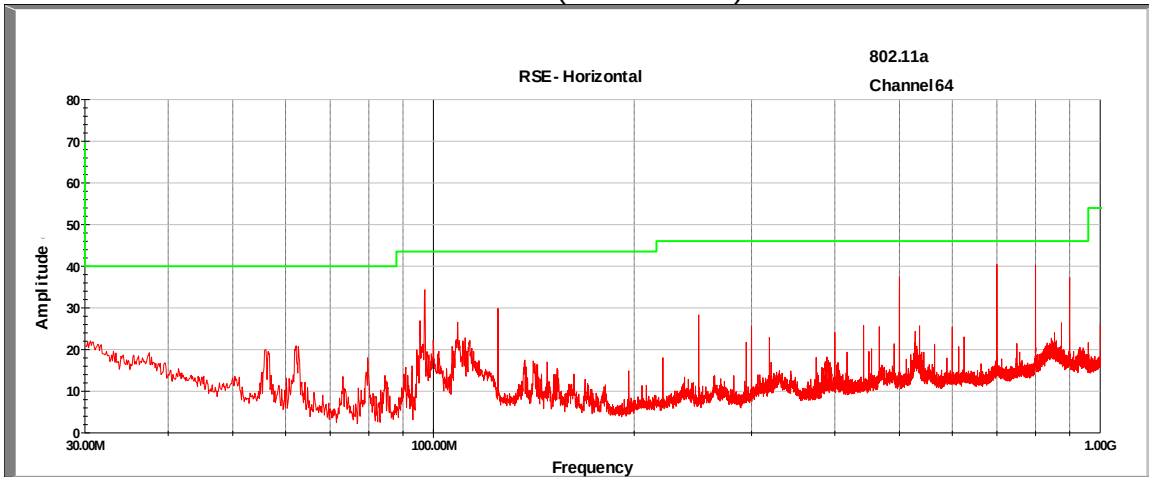
Channel 60
 Horizontal (18-40GHz)



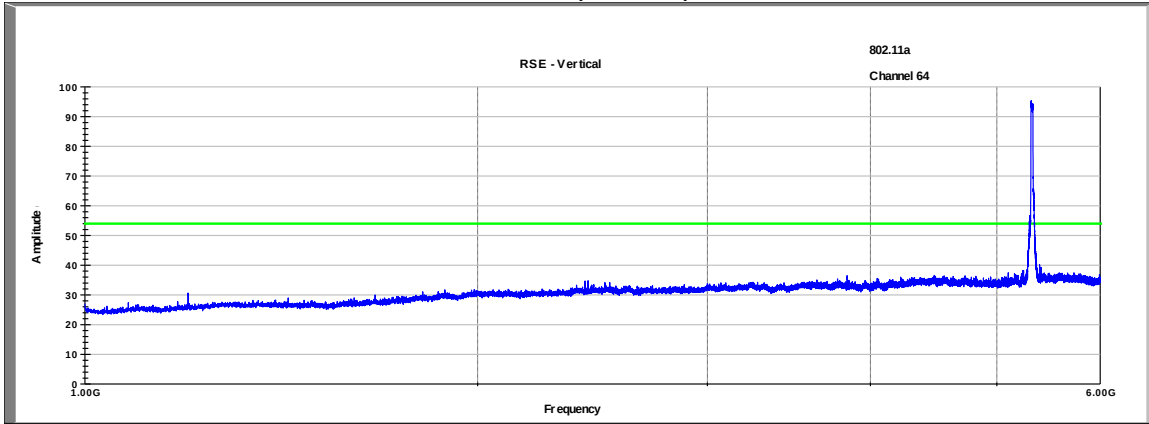
Channel 64
 Vertical (30-1000MHz)



Channel 64
 Horizontal (30-1000MHz)



Channel 64
 Vertical (1-6GHz)



Channel 64
 Horizontal (1-6GHz)

