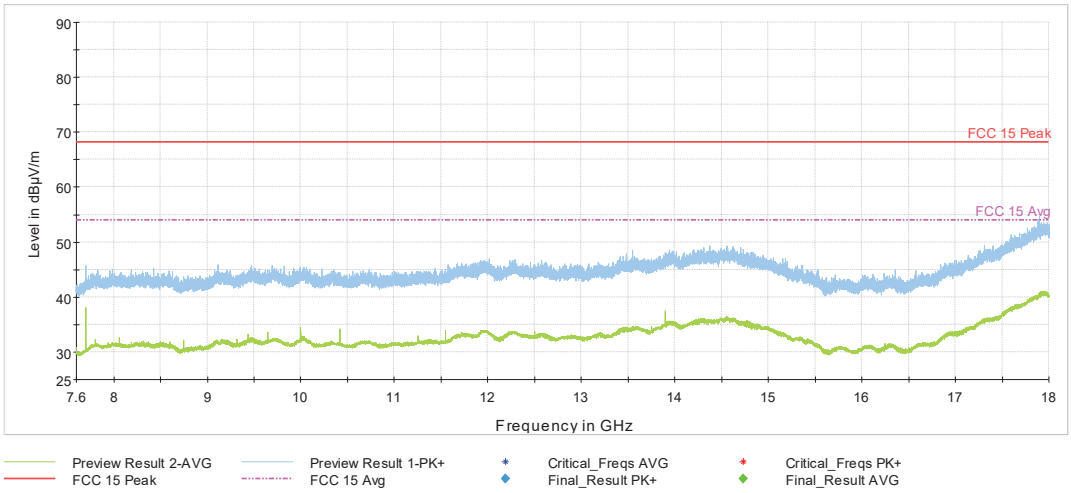


Figure 144: 7.6-18GHz 802.11ac VHT80+80 Mode Channel 42 & 155

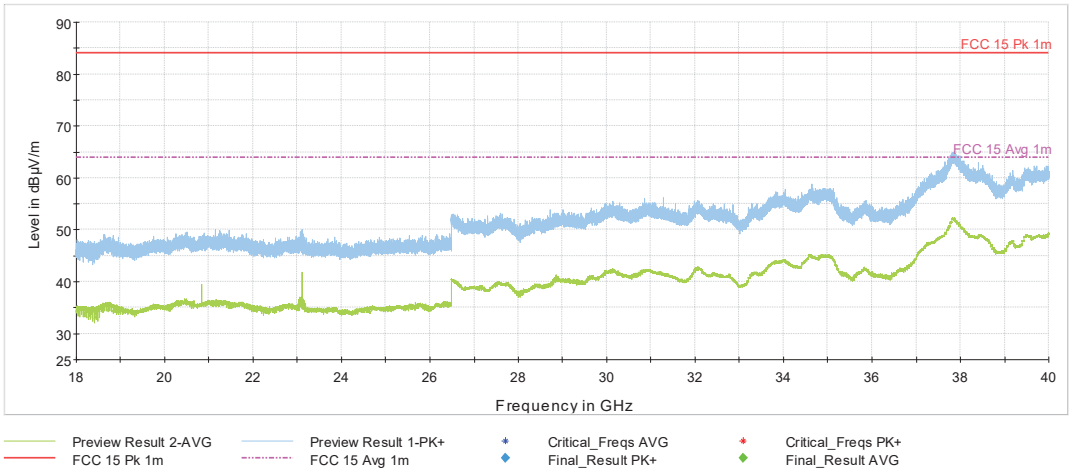
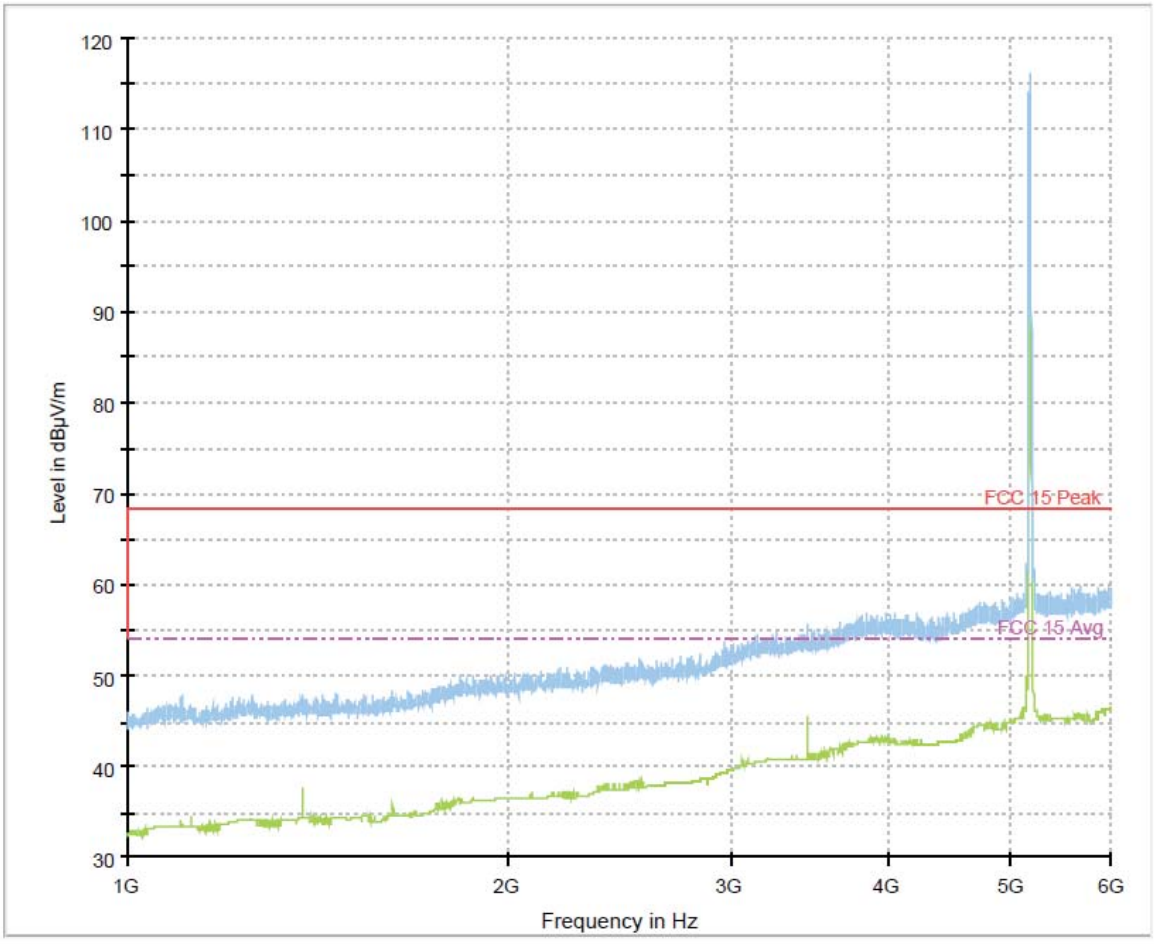


Figure 145: 18-40GHz 802.11ac VHT80+80 Mode Channel 42 & 155

4.6.5.2 Plots: Beamforming Mode

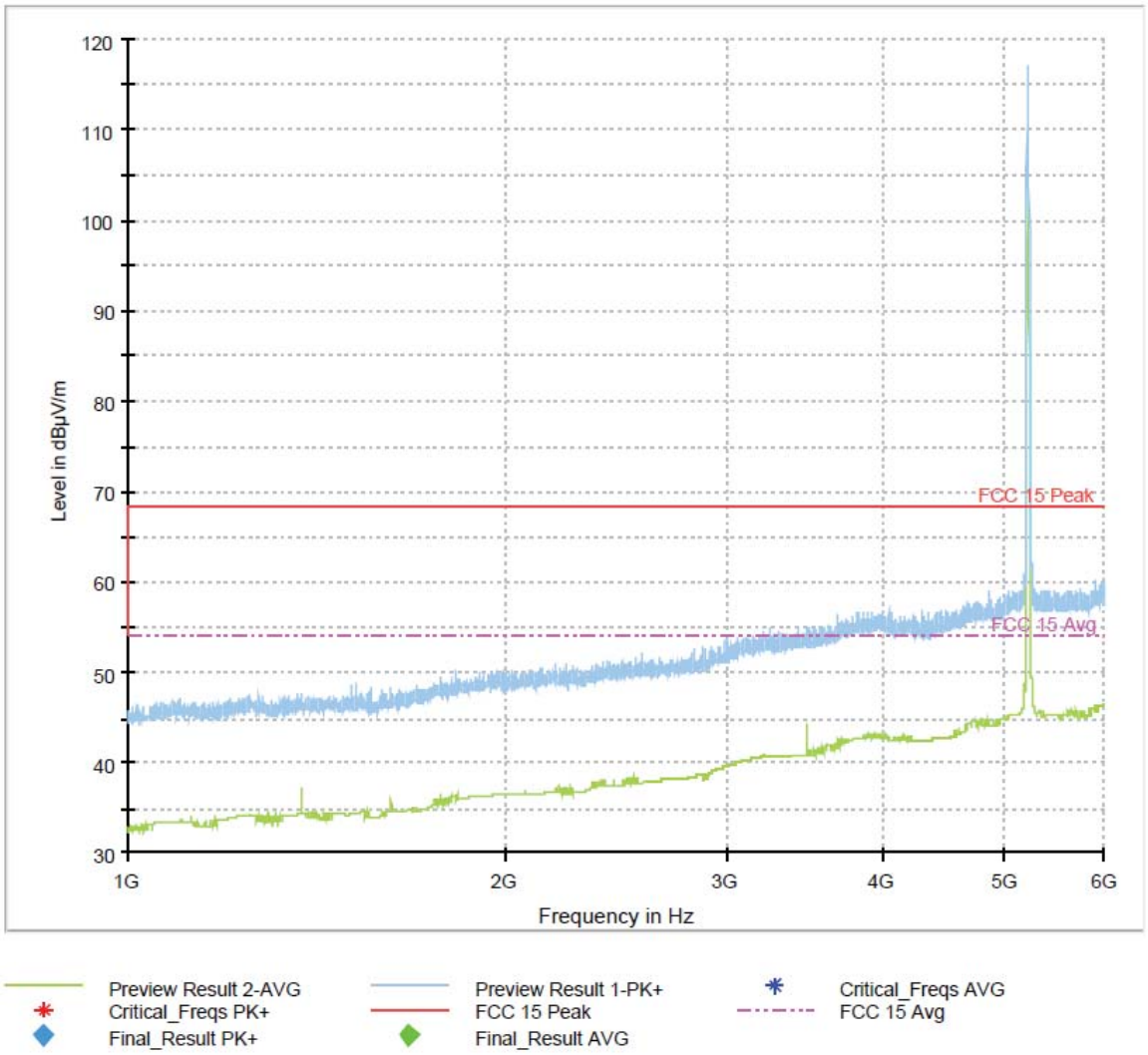
4.6.5.2.1 UNII-1

4.6.5.2.1.1 802.11ac VHT20



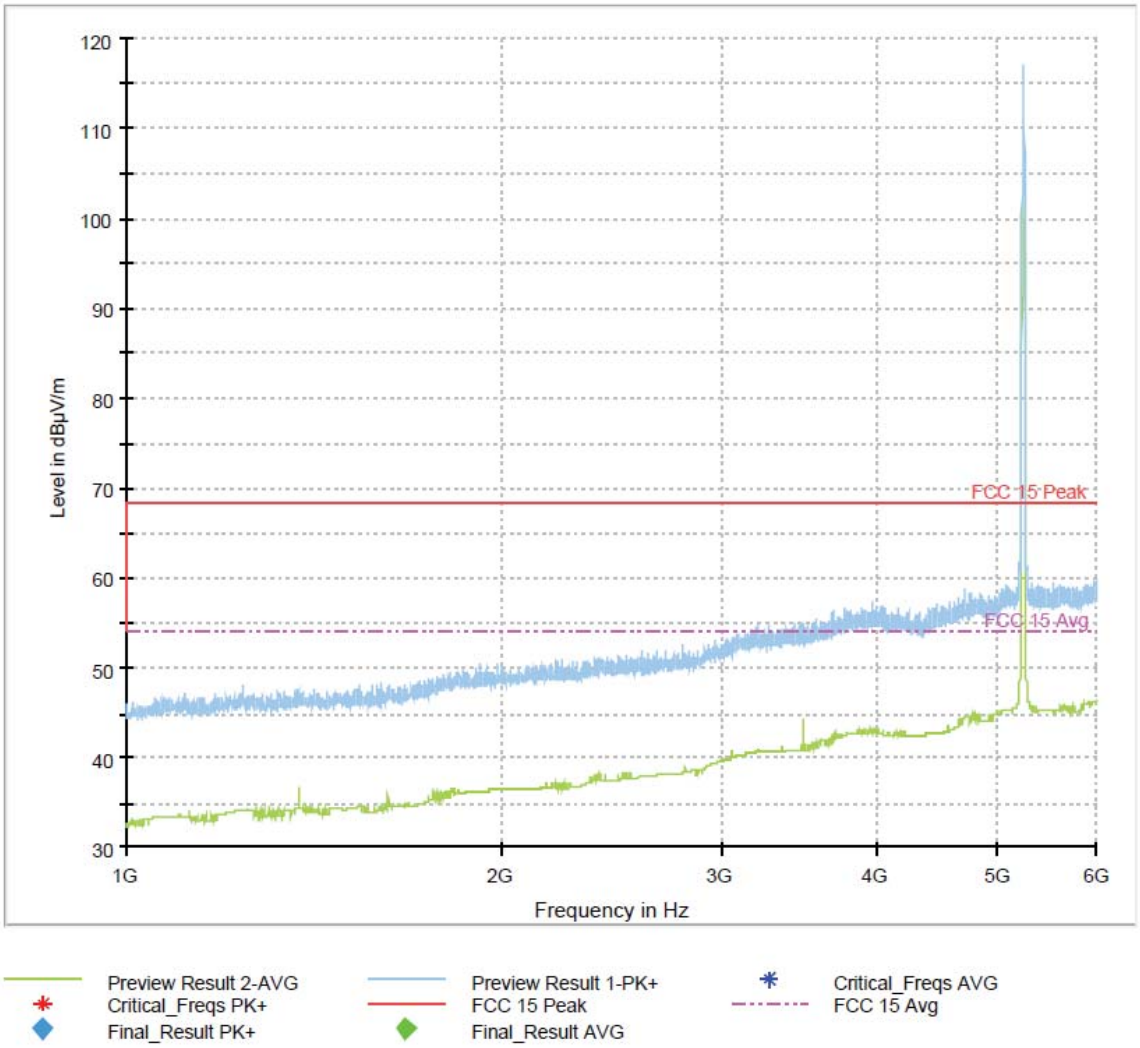
Note: Emission above limit is fundamental

Figure 146: 1-6GHz 802.11ac VHT20 Mode Channel 36



Note: Emission above limit is fundamental

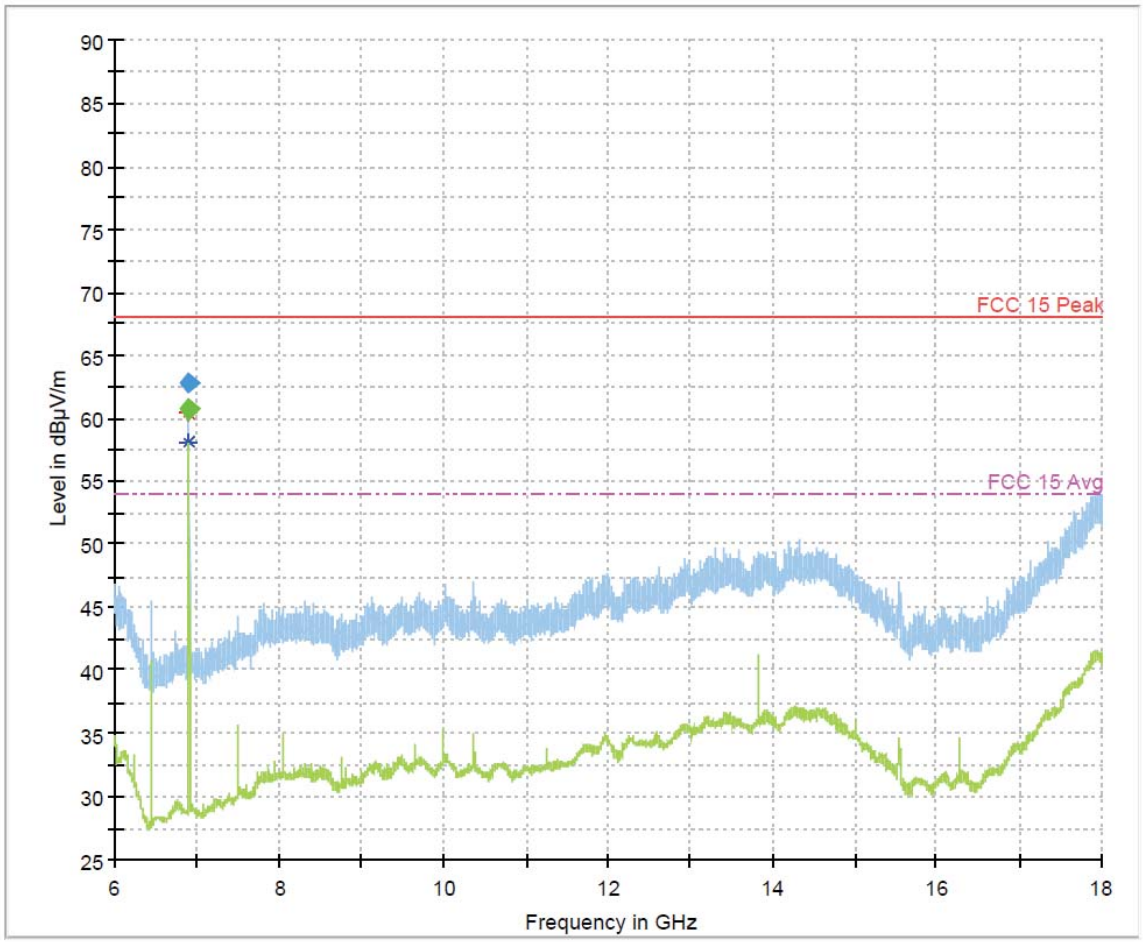
Figure 147: 1-6GHz 802.11ac VHT20 Mode Channel 44



Note: Emission above limit is fundamental

Figure 148: 1-6GHz 802.11ac VHT20 Mode Channel 48

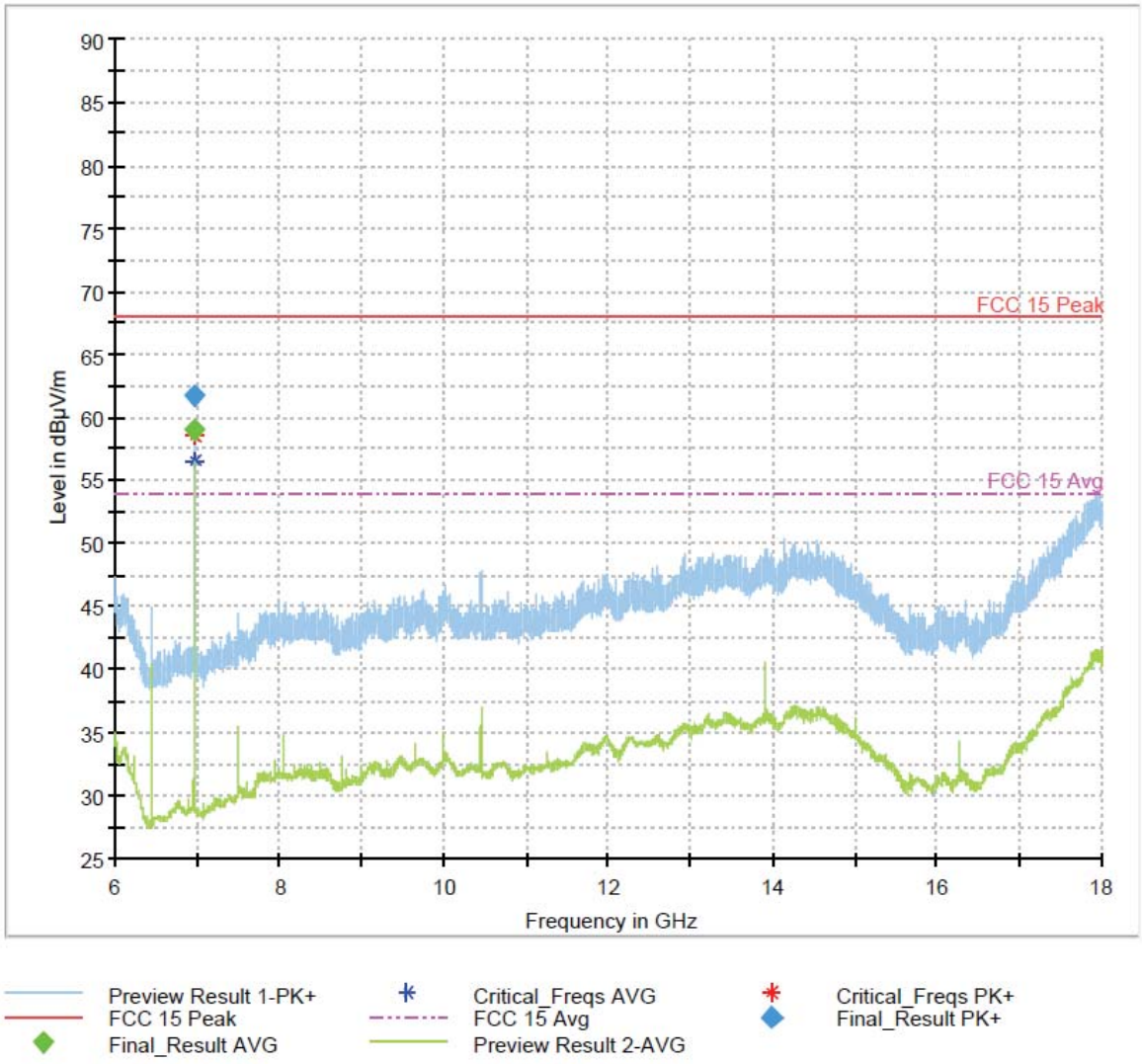
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
6906.600000	---	60.69	54.00	-6.69	200.0	1000.000	136.2	V	75.0
6906.600000	62.75	---	68.20	5.45	200.0	1000.000	137.8	V	75.0



Note: Emission above the limit is in a non-restricted band, therefor a peak detector limit of 68.2 dBuV/m applies for this frequency.

Figure 149: 6-18GHz 802.11ac VHT20 Mode Channel 36

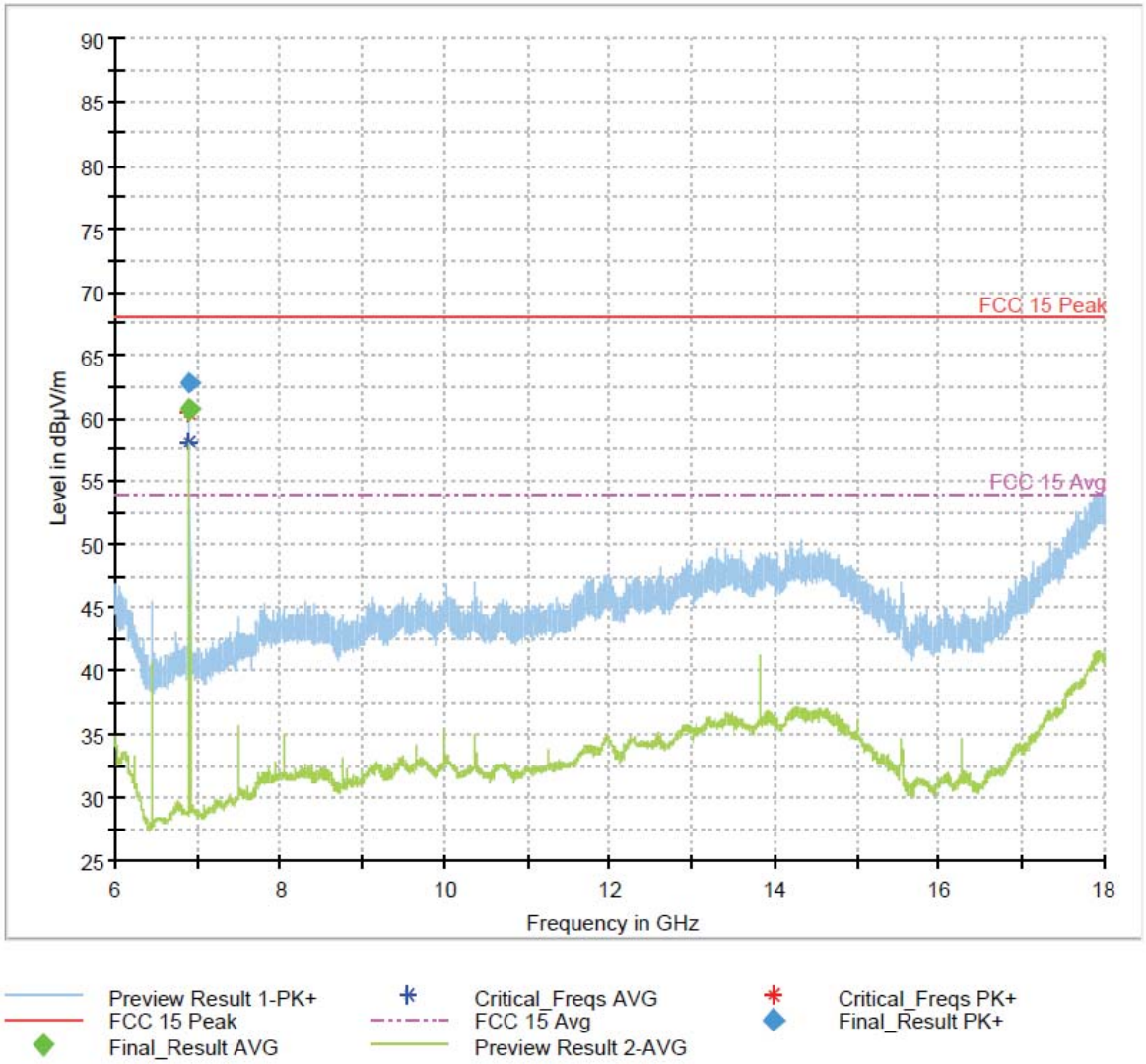
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
6960.200000	---	58.98	54.00	-4.98	200.0	1000.000	119.9	V	76.0
6960.200000	61.73	---	68.20	6.47	200.0	1000.000	132.4	V	76.0



Note: Emission above the limit is in a non-restricted band, therefor a peak detector limit of 68.2 dBuV/m applies for this frequency.

Figure 150: 6-18GHz 802.11ac VHT20 Mode Channel 44

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
6906.600000	---	60.69	54.00	-6.69	200.0	1000.000	136.2	V	75.0
6906.600000	62.75	---	68.20	5.45	200.0	1000.000	137.8	V	75.0



Note: Emission above the limit is in a non-restricted band, therefor a peak detector limit of 68.2 dBuV/m applies for this frequency.

Figure 151: 6-18GHz 802.11ac VHT20 Mode Channel 48

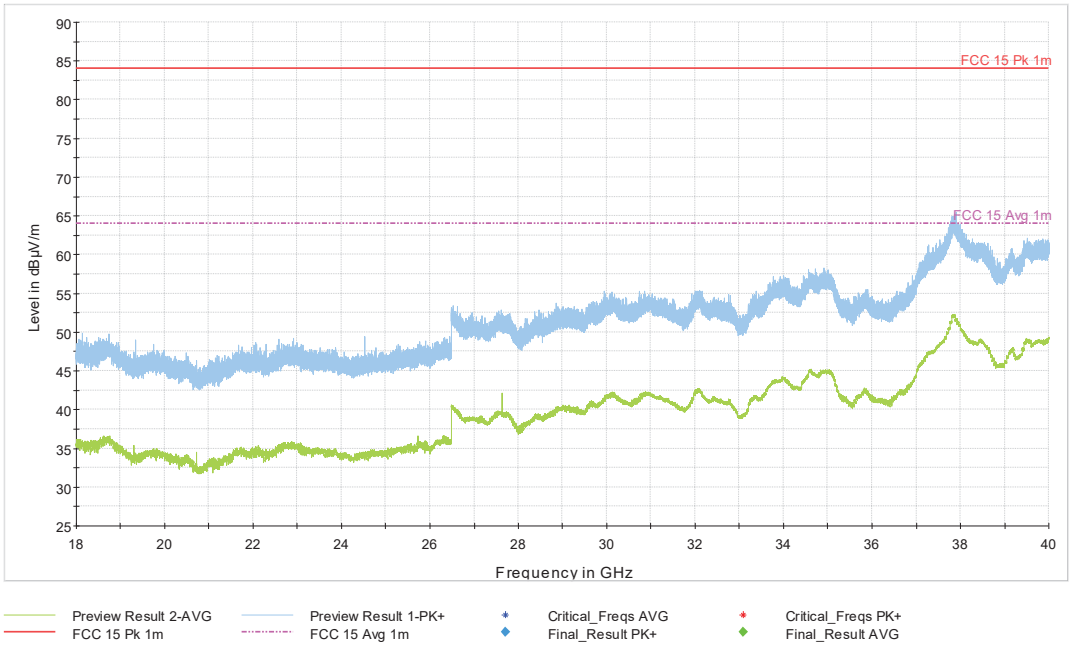


Figure 152: 18-40GHz 802.11ac VHT20 Mode Channel 36

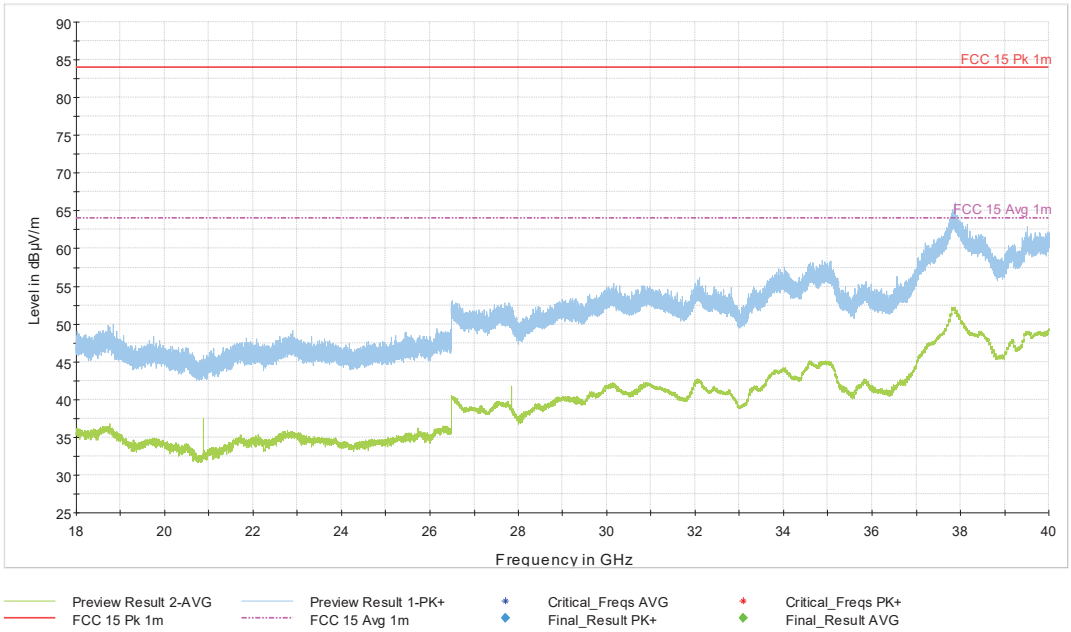


Figure 153: 18-40GHz 802.11ac VHT20 Mode Channel 44

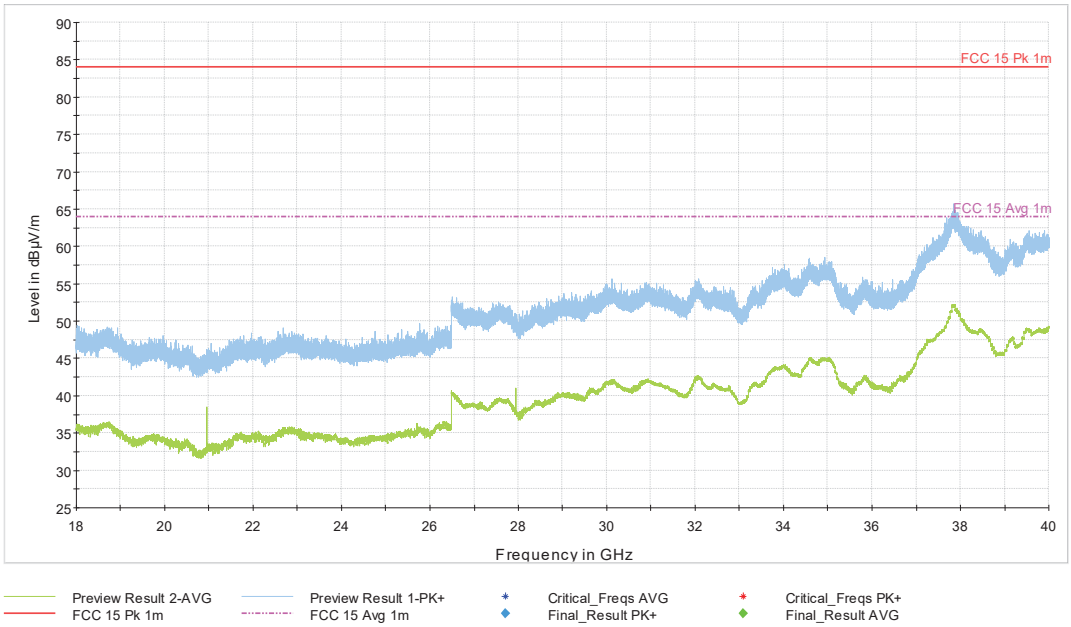


Figure 154: 18-40GHz 802.11ac VHT20 Mode Channel 48

4.6.5.2.1.2 802.11ac VHT40 Mode

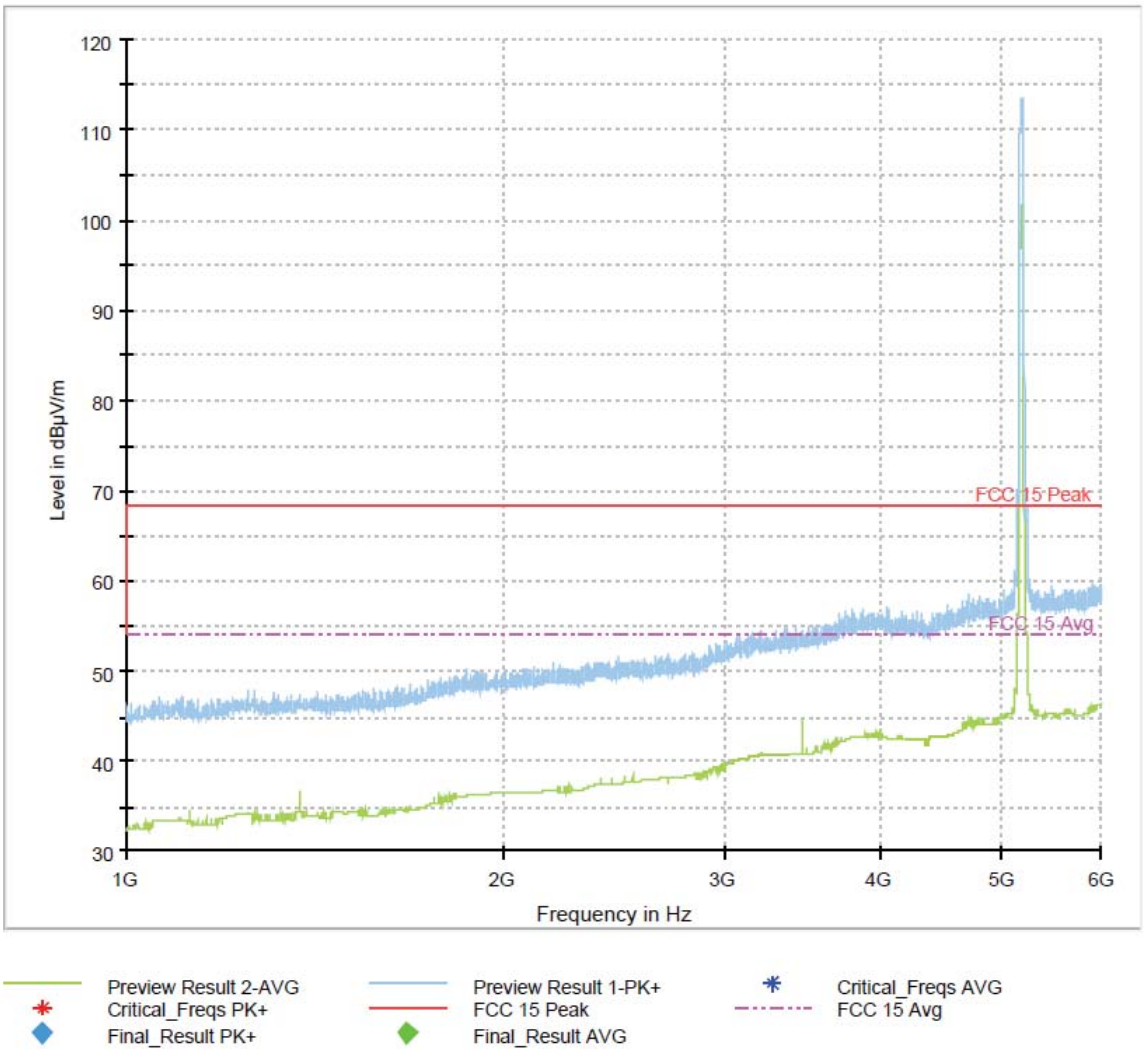


Figure 155: 1-6GHz 802.11ac VHT40 Mode Channel 38

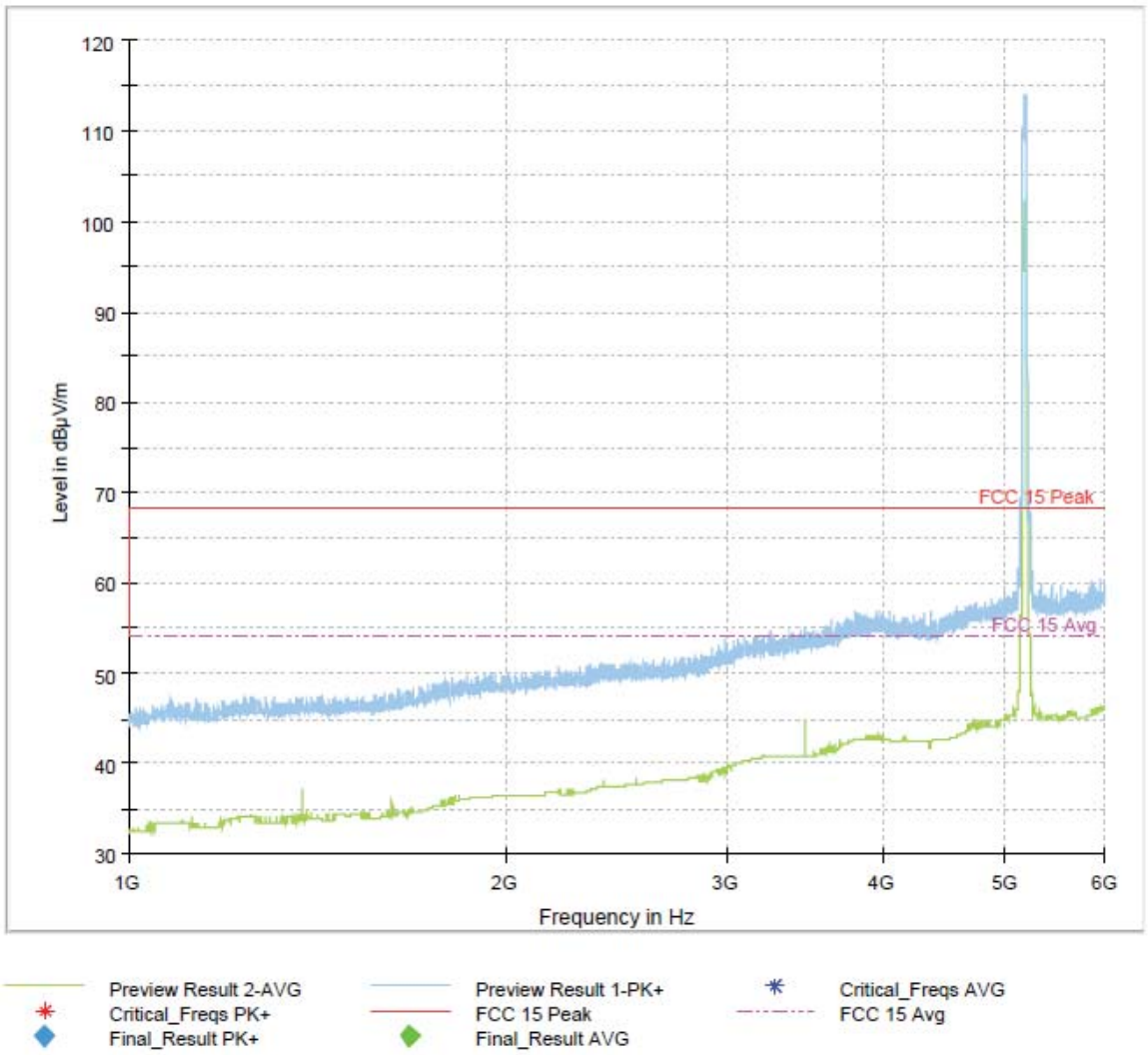
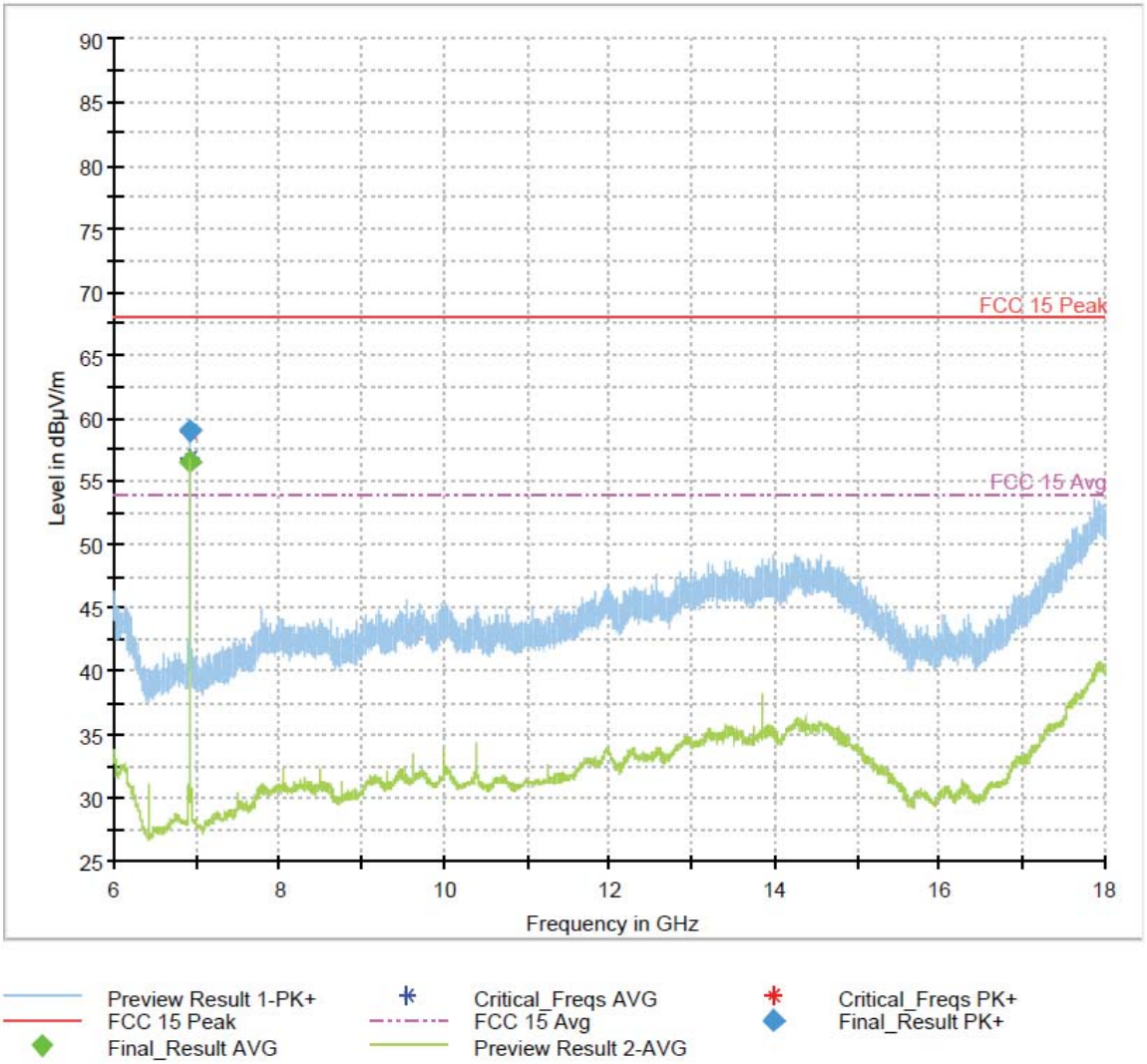


Figure 156: 1-6GHz 802.11ac VHT40 Mode Channel 46

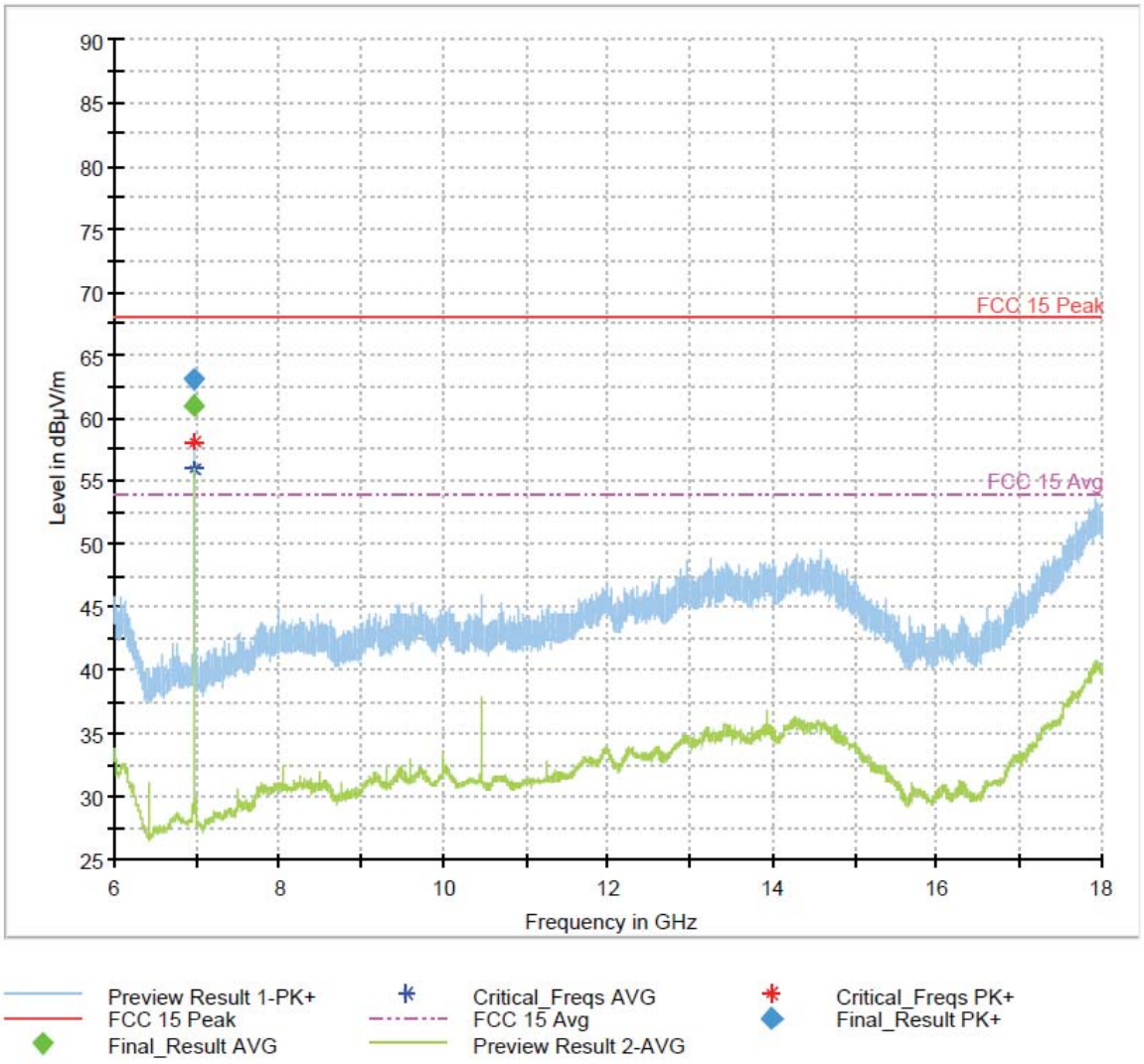
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
6919.800000	---	56.54	54.00	-2.54	200.0	1000.000	238.0	H	349.0
6919.800000	59.01	---	68.20	9.19	200.0	1000.000	244.9	H	351.0



Note: Emission above the limit is in a non-restricted band, therefor a peak detector limit of 68.2 dBuV/m applies for this frequency.

Figure 157: 6-18GHz 802.11ac VHT40 Mode Channel 38

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
6973.400000	---	60.94	54.00	-6.94	200.0	1000.000	186.2	V	40.0
6973.400000	63.12	---	68.20	5.08	200.0	1000.000	157.0	V	39.0



Note: Emission above the limit is in a non-restricted band, therefor a peak detector limit of 68.2 dBuV/m applies for this frequency.

Figure 158: 6-18GHz 802.11ac VHT40 Mode Channel 46

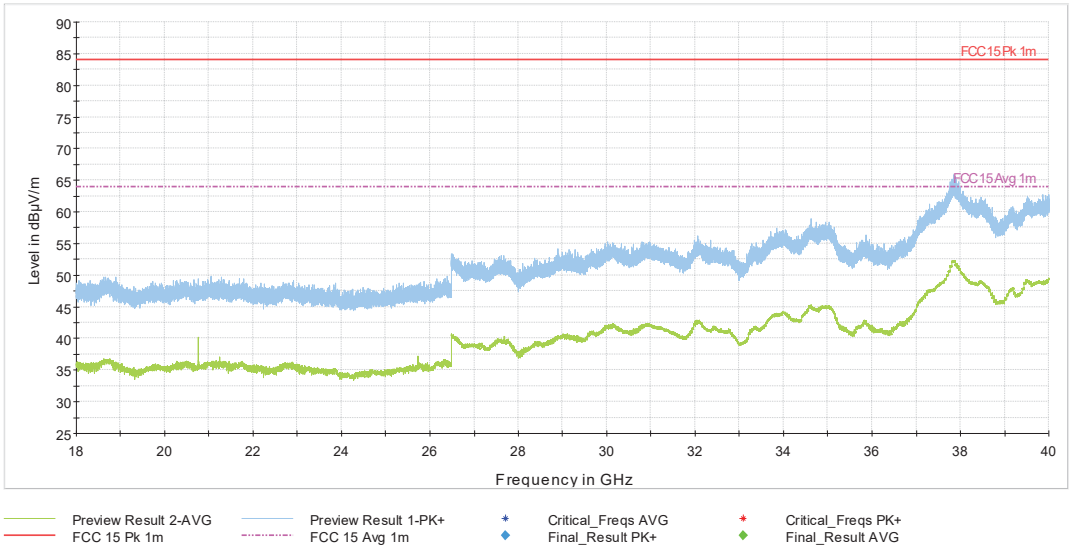


Figure 159: 18-40GHz 802.11ac VHT40 Mode Channel 38

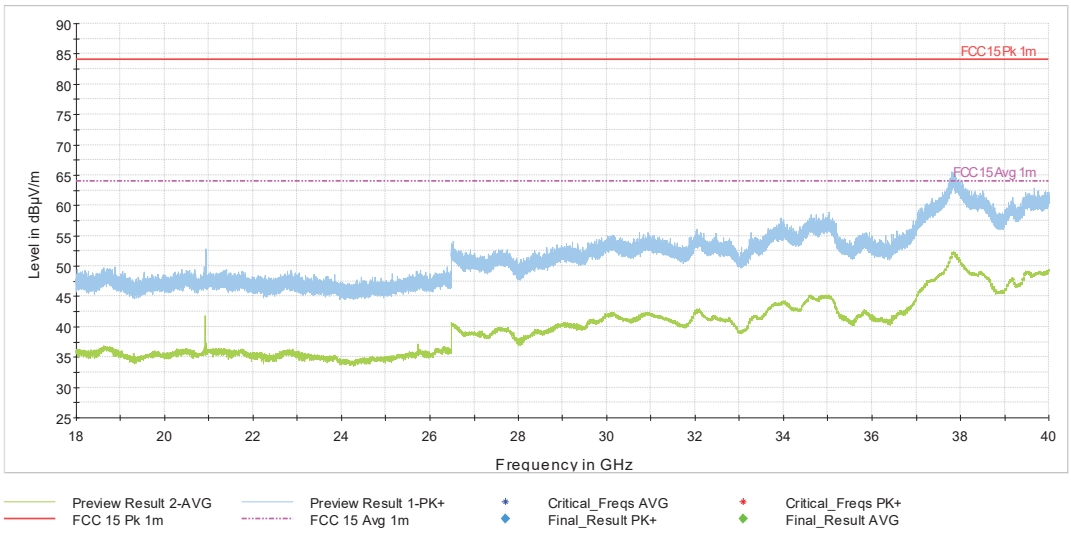
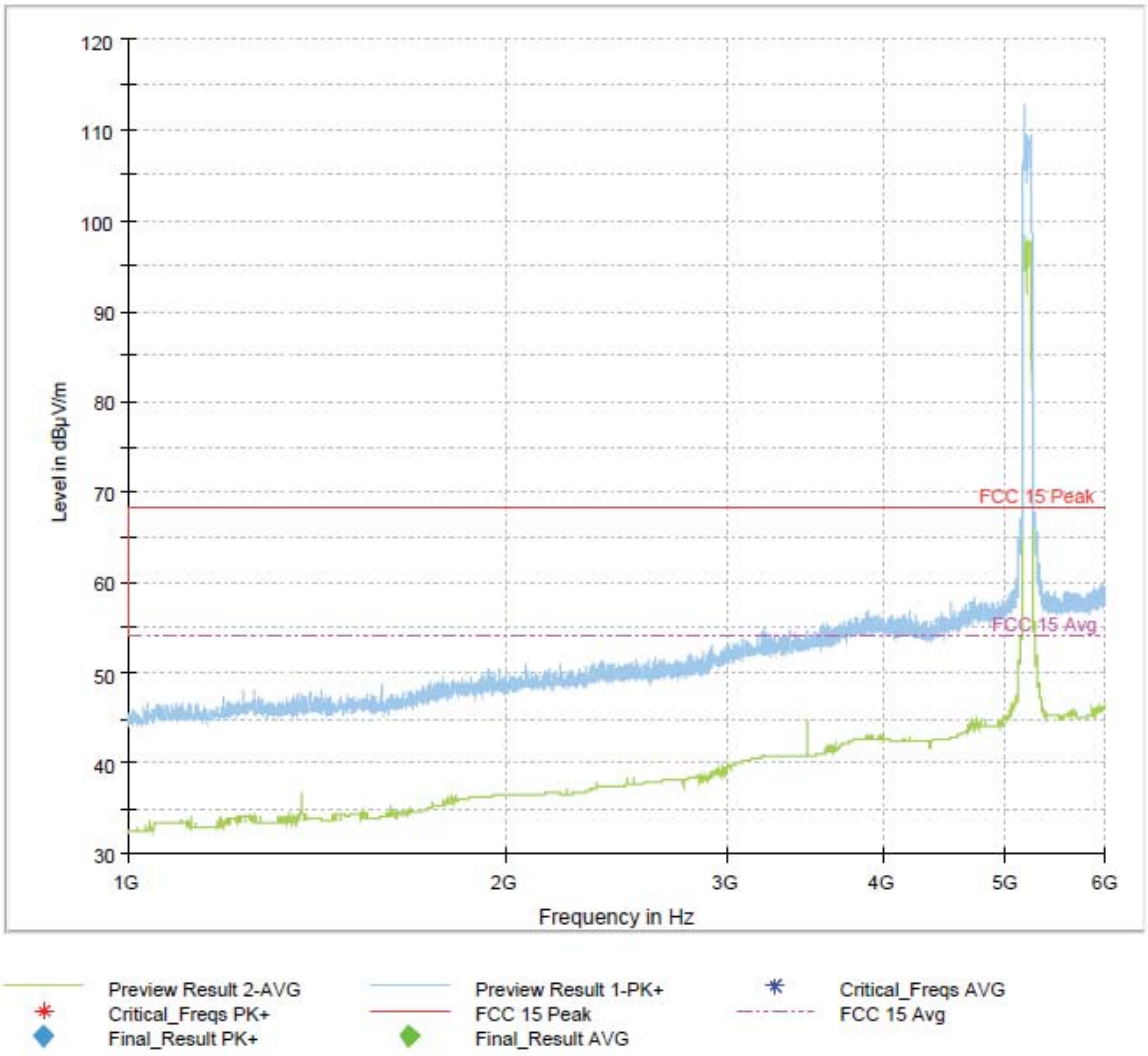


Figure 160: 18-40GHz 802.11ac VHT40 Mode Channel 46

4.6.5.2.1.3 802.11ac VHT80 Mode



Note: Emission above limit is the fundamental transmission.

Figure 161: 1-6GHz 802.11ac VHT80 Mode Channel 42

Figure 162: 6-18GHz 802.11ac VHT80 Mode Channel 42

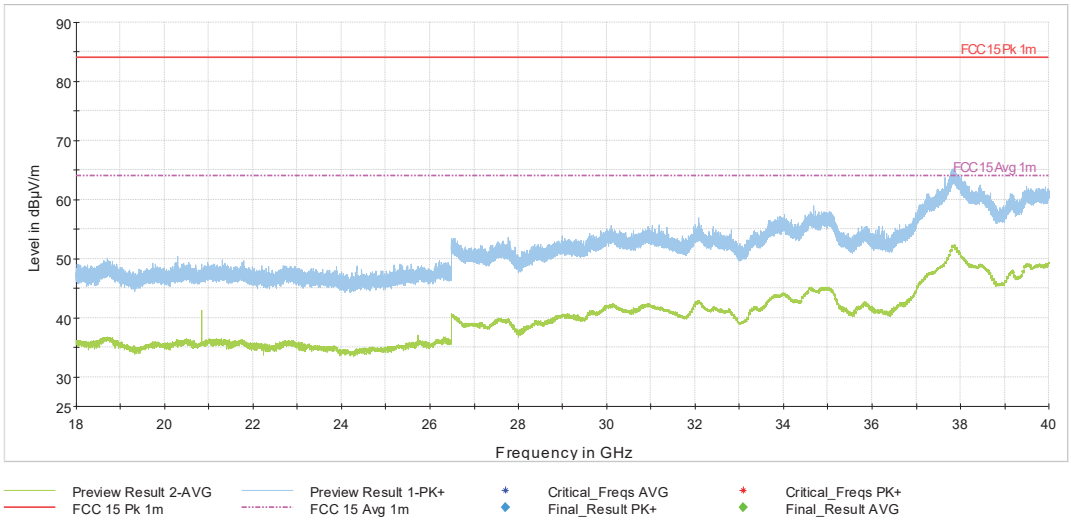
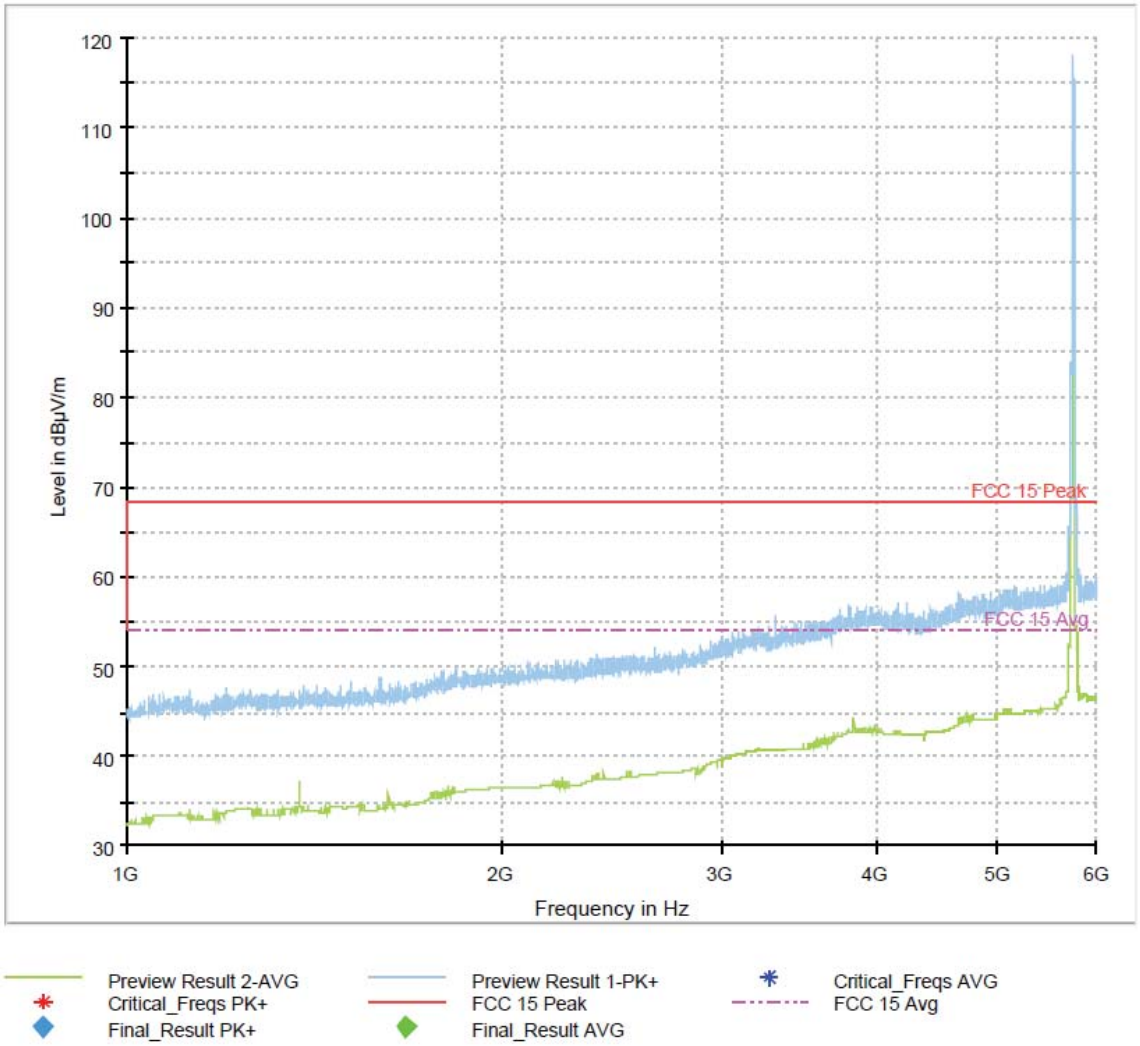


Figure 163: 18-40GHz 802.11ac VHT80 Mode Channel 42

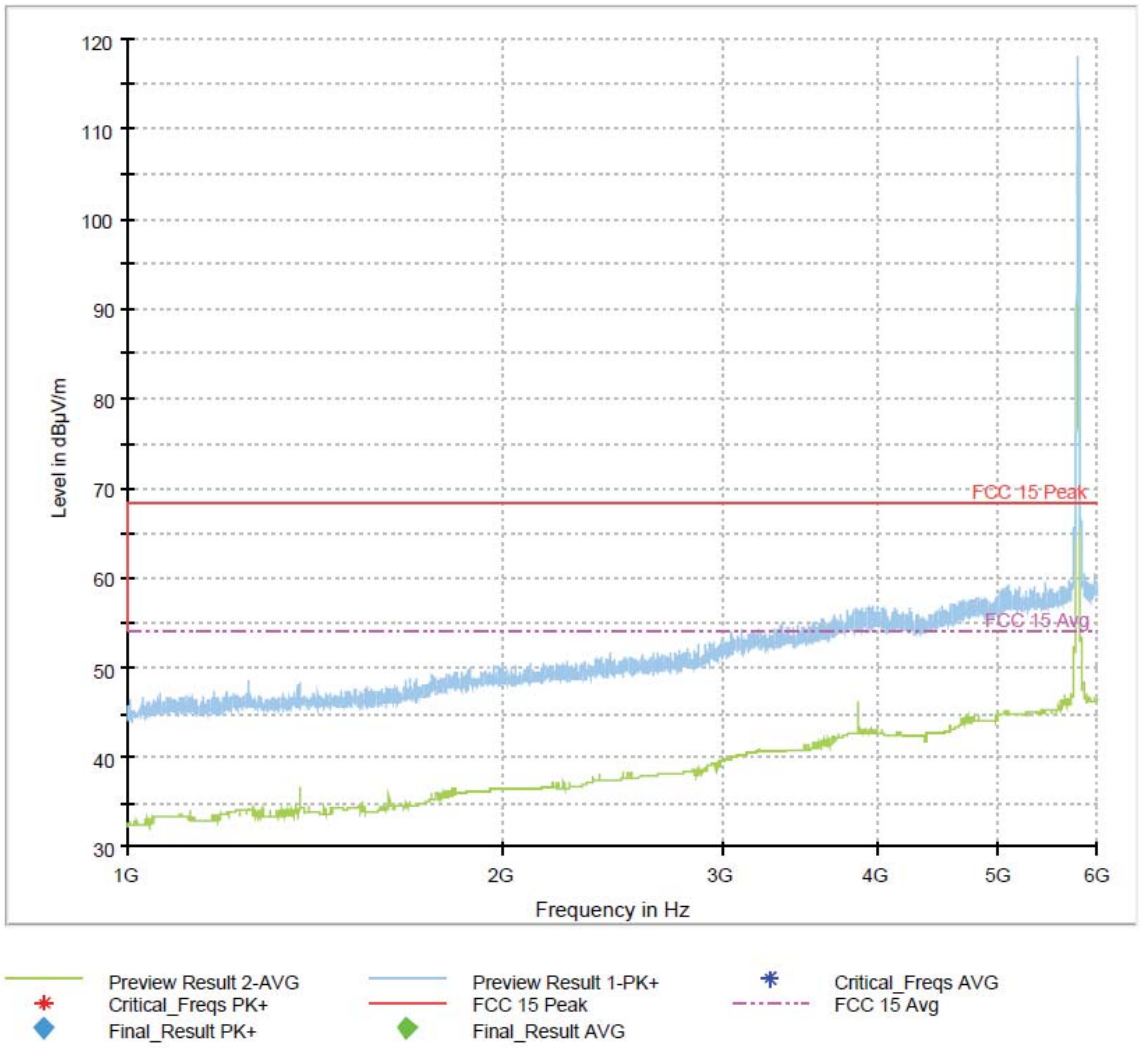
4.6.5.2.2 UNII-3

4.6.5.2.2.1 802.11ac VHT20



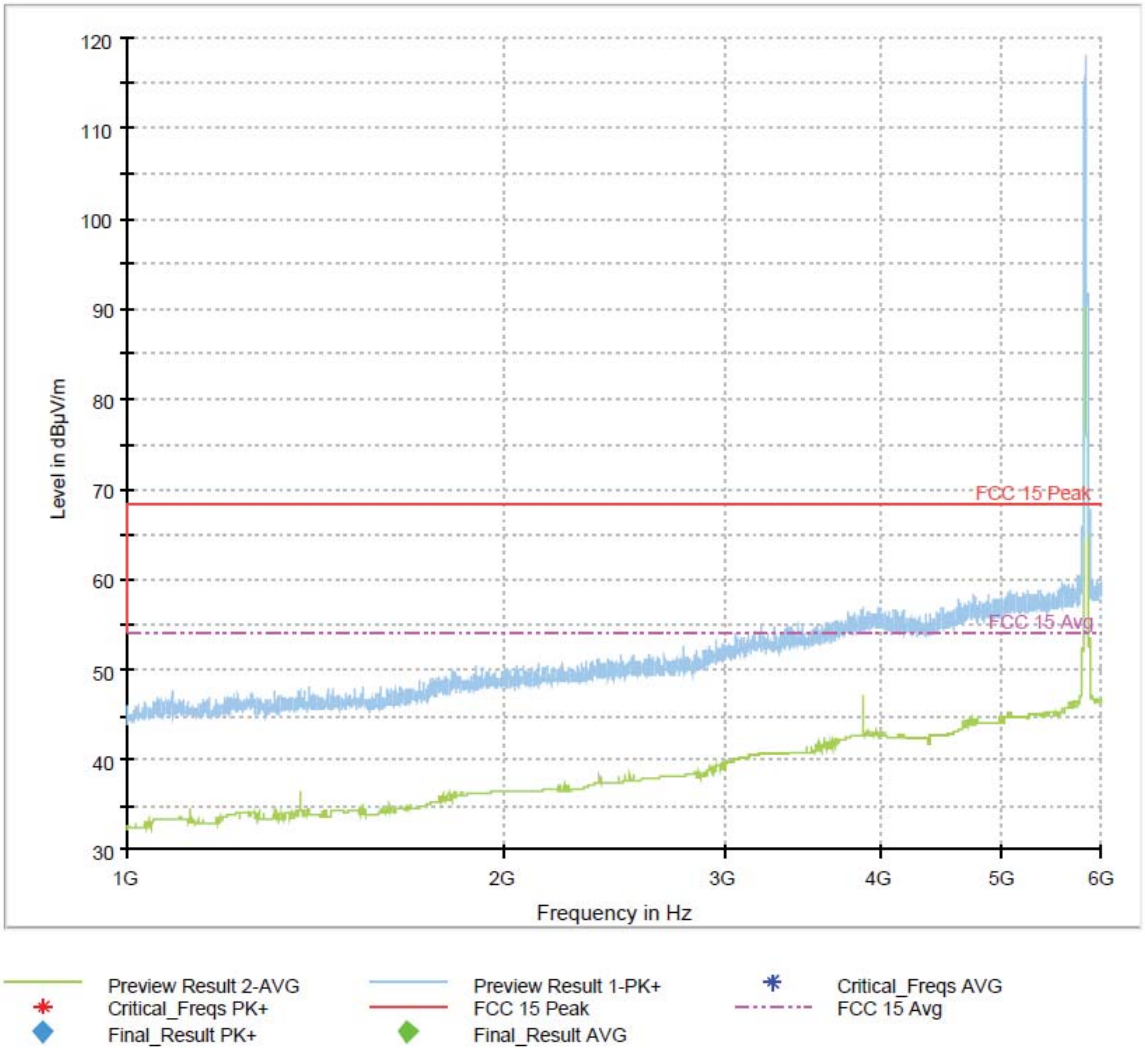
Note: Emission above limit is the fundamental transmission.

Figure 164: 1-6GHz 802.11ac VHT20 Mode Channel 149



Note: Emission above limit is the fundamental transmission.

Figure 165: 1-6GHz 802.11ac VHT20 Mode Channel 157



Note: Emission above limit is the fundamental transmission.

Figure 166: 1-6GHz 802.11ac VHT20 Mode Channel 165

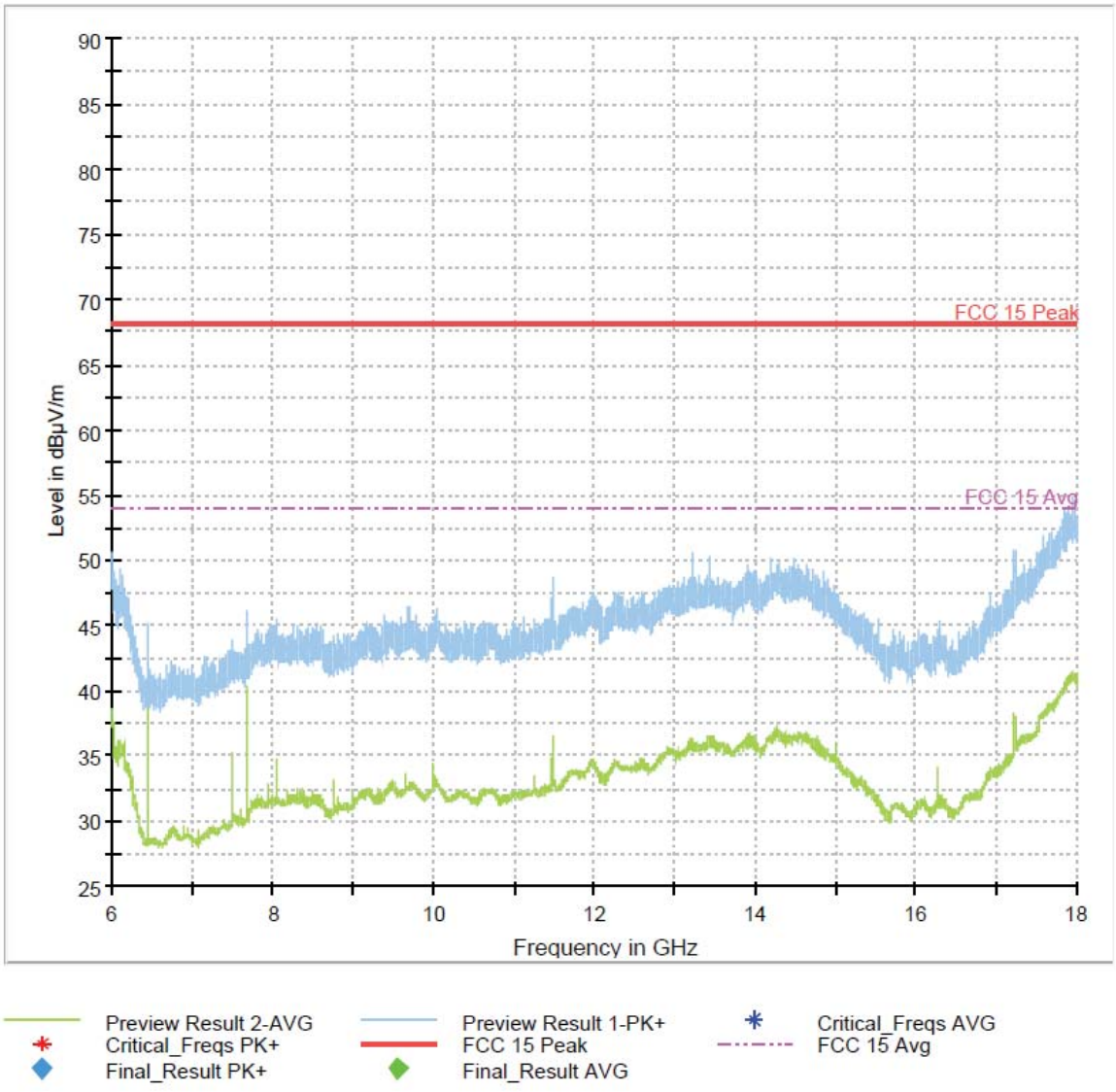


Figure 167: 6-18GHz 802.11ac VHT20 Mode Channel 149

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
17352.600000	---	41.89	54.00	12.11	200.0	1000.000	143.3	H	0.0
17354.600000	54.23	---	68.20	13.97	200.0	1000.000	269.5	H	12.0

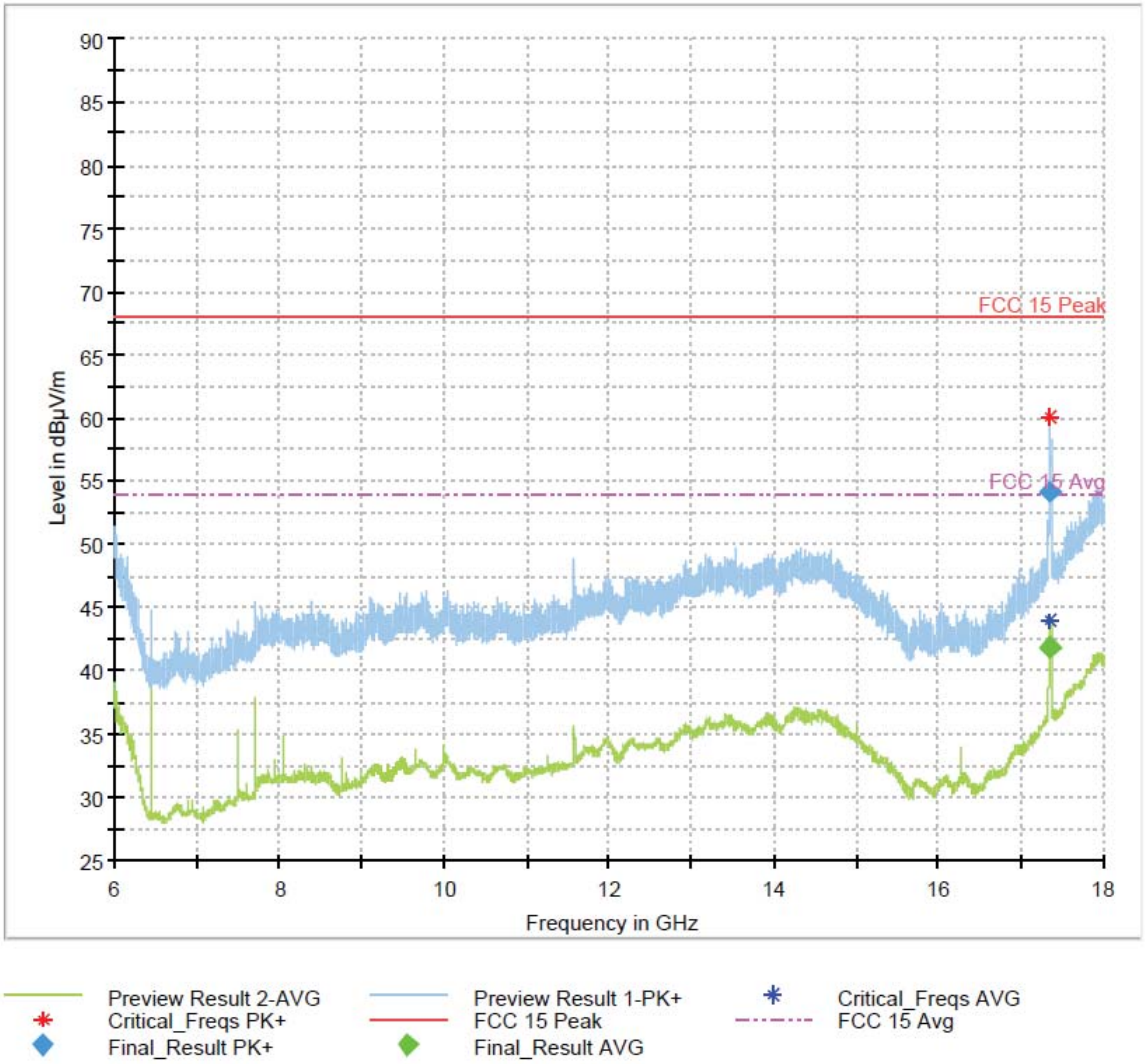


Figure 168: 6-18GHz 802.11ac VHT20 Mode Channel 157

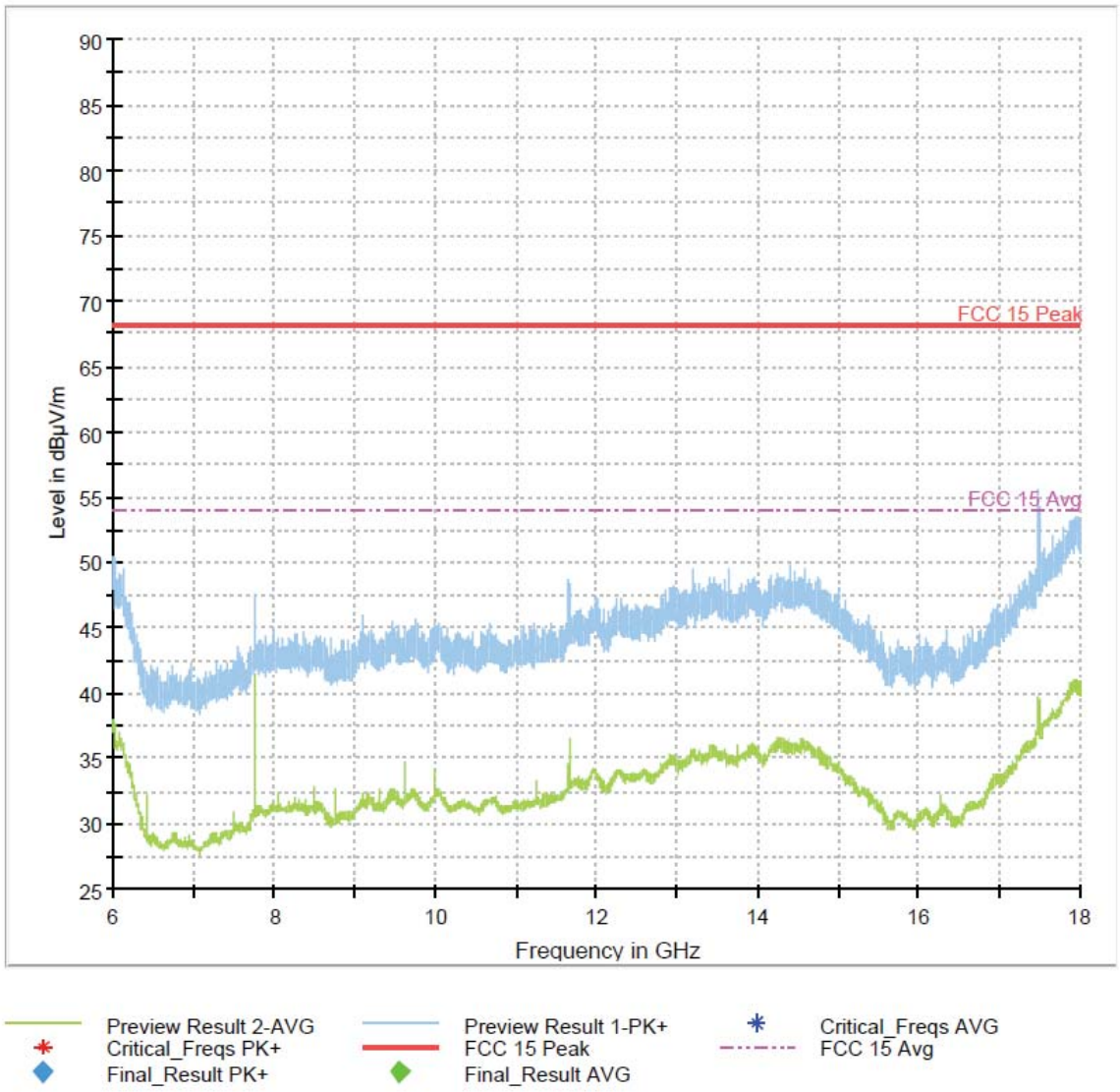


Figure 169: 6-18GHz 802.11ac VHT20 Mode Channel 165

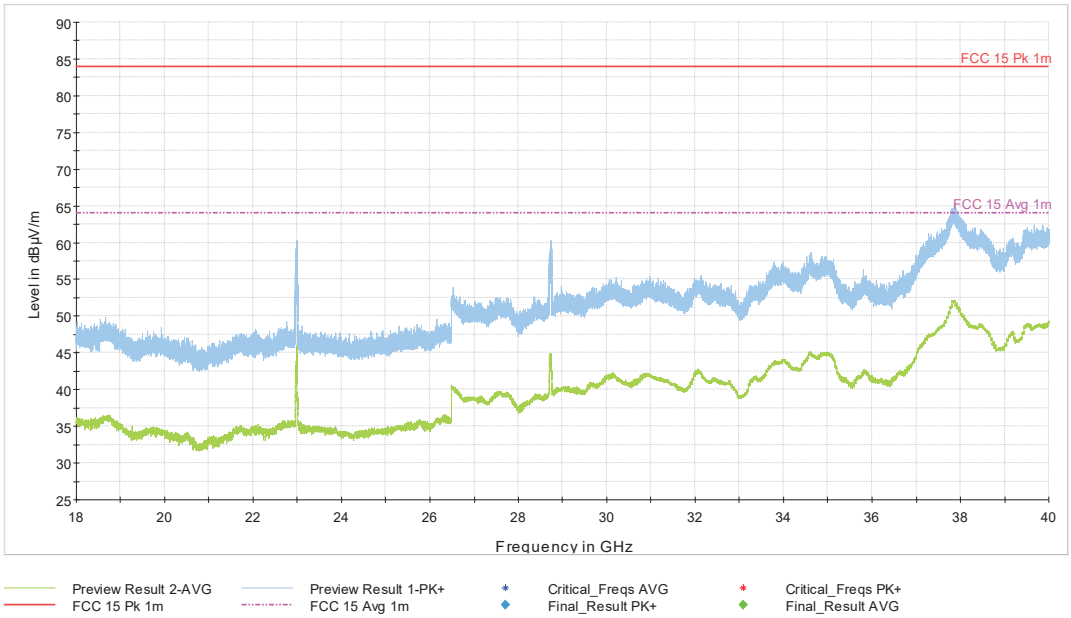


Figure 170: 18-40GHz 802.11ac VHT20 Mode Channel 149

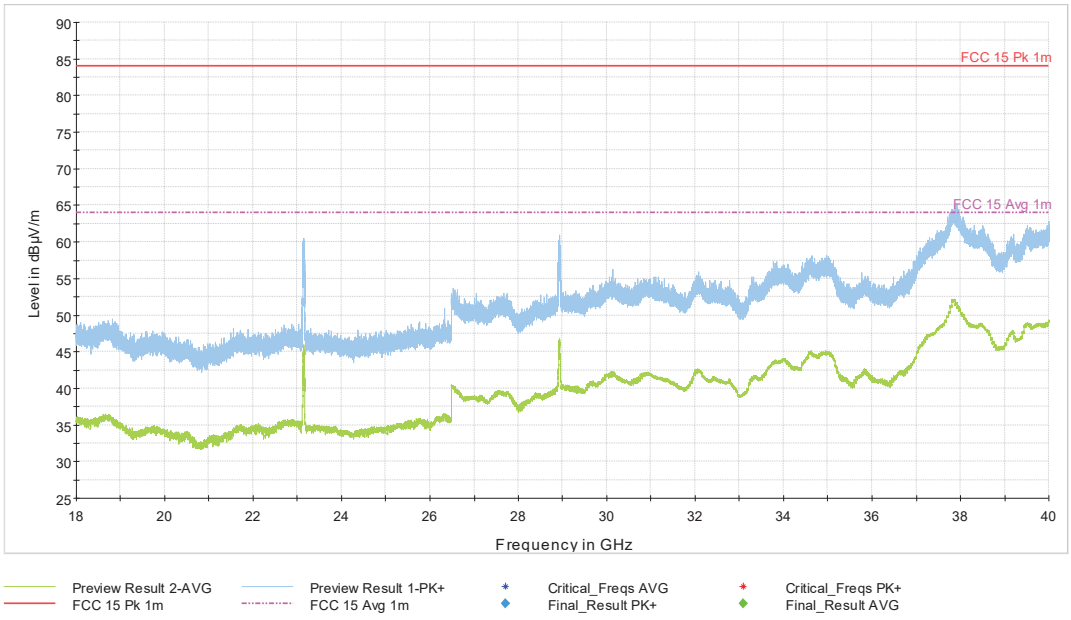


Figure 171: 18-40GHz 802.11ac VHT20 Mode Channel 157

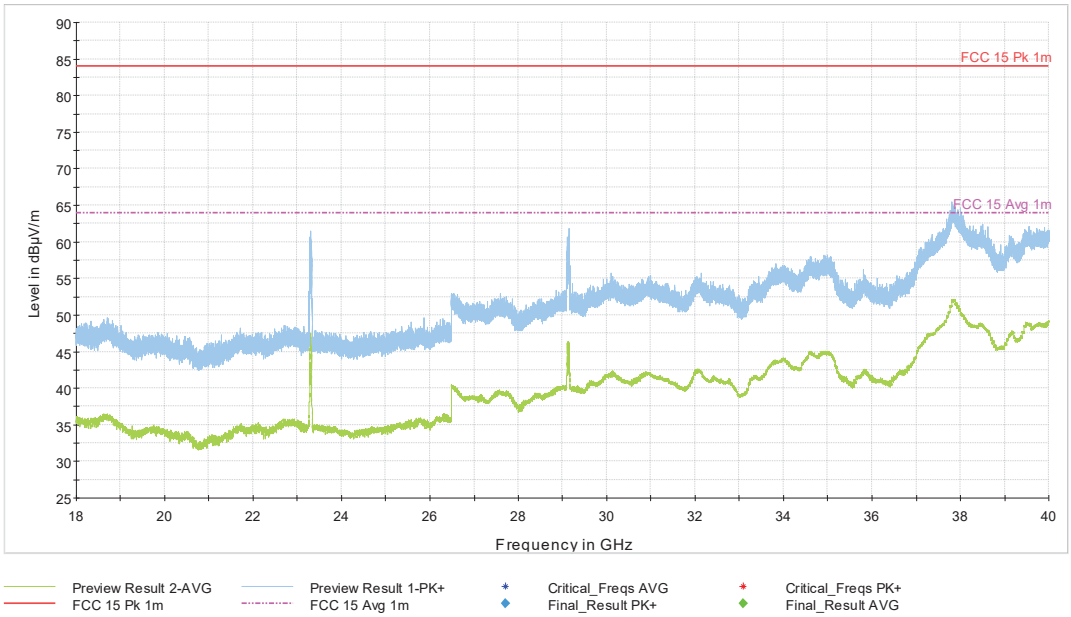
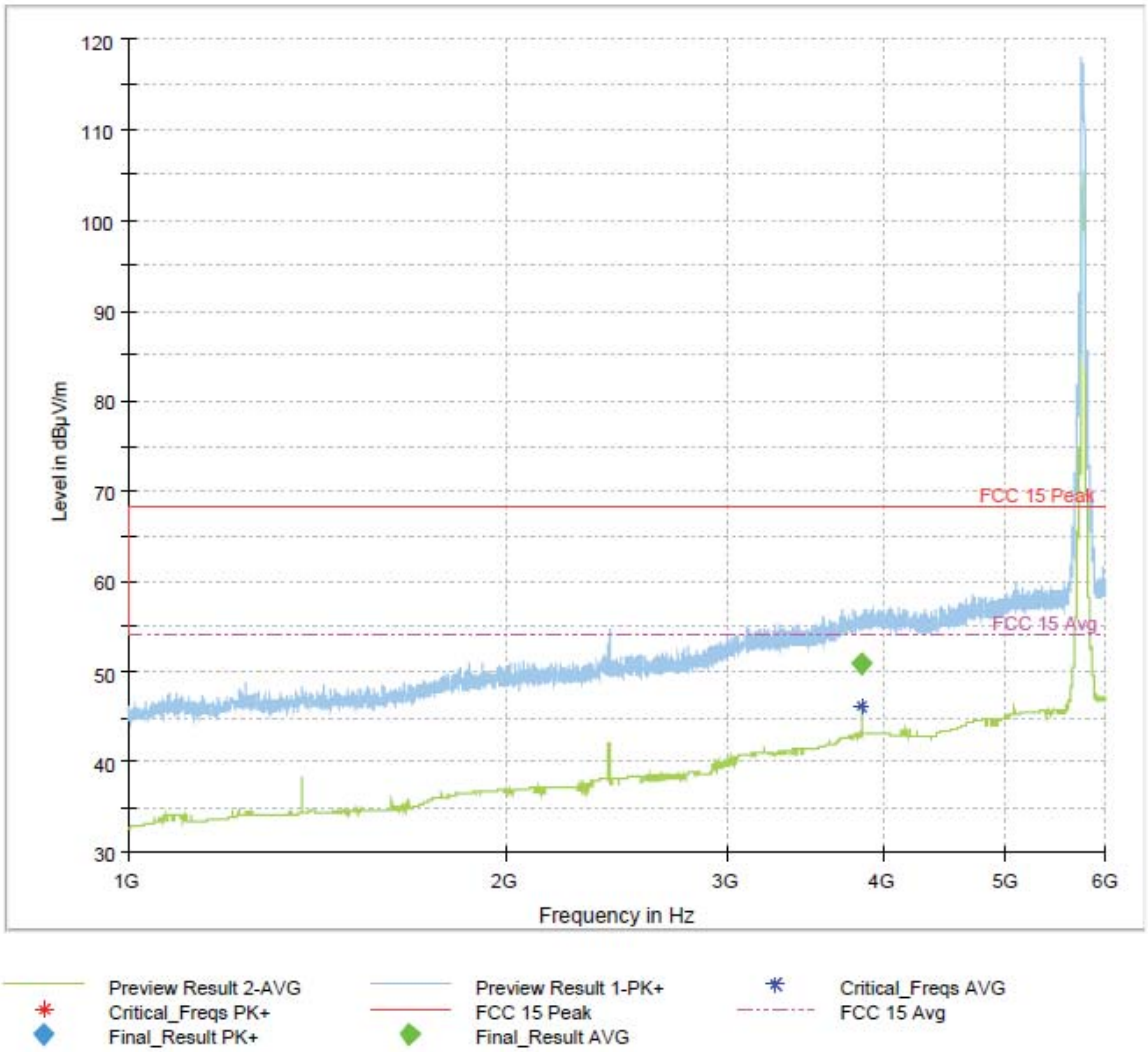


Figure 172: 18-40GHz 802.11ac VHT20 Mode Channel 165

4.6.5.2.2.2 802.11ac VHT40 Mode

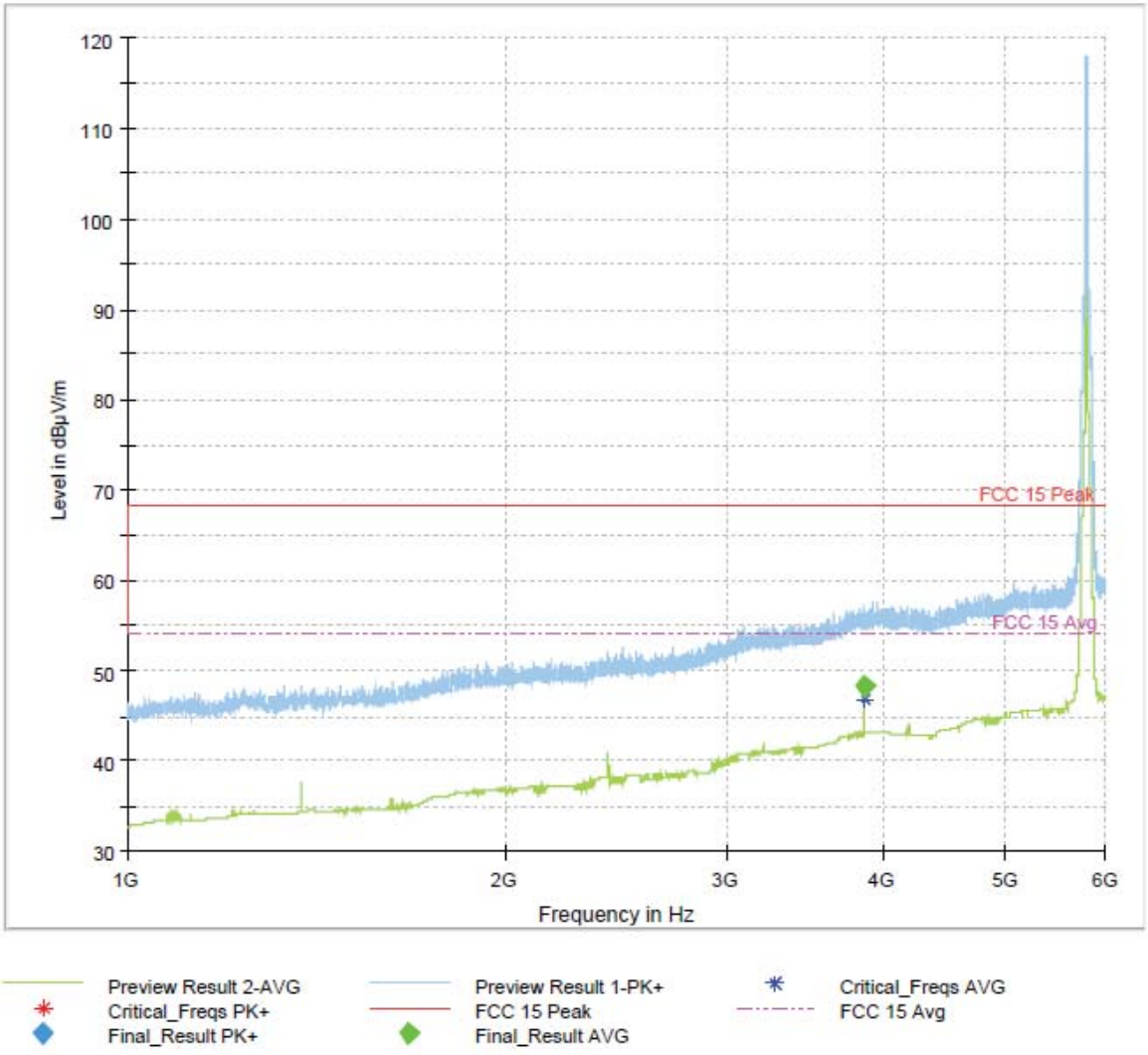
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
3836.743487	---	50.92	54.00	3.08	200.0	1000.000	124.8	V	143.0



Note: Emission above limit is the fundamental transmission.

Figure 173: 1-6GHz 802.11ac VHT40 Mode Channel 151

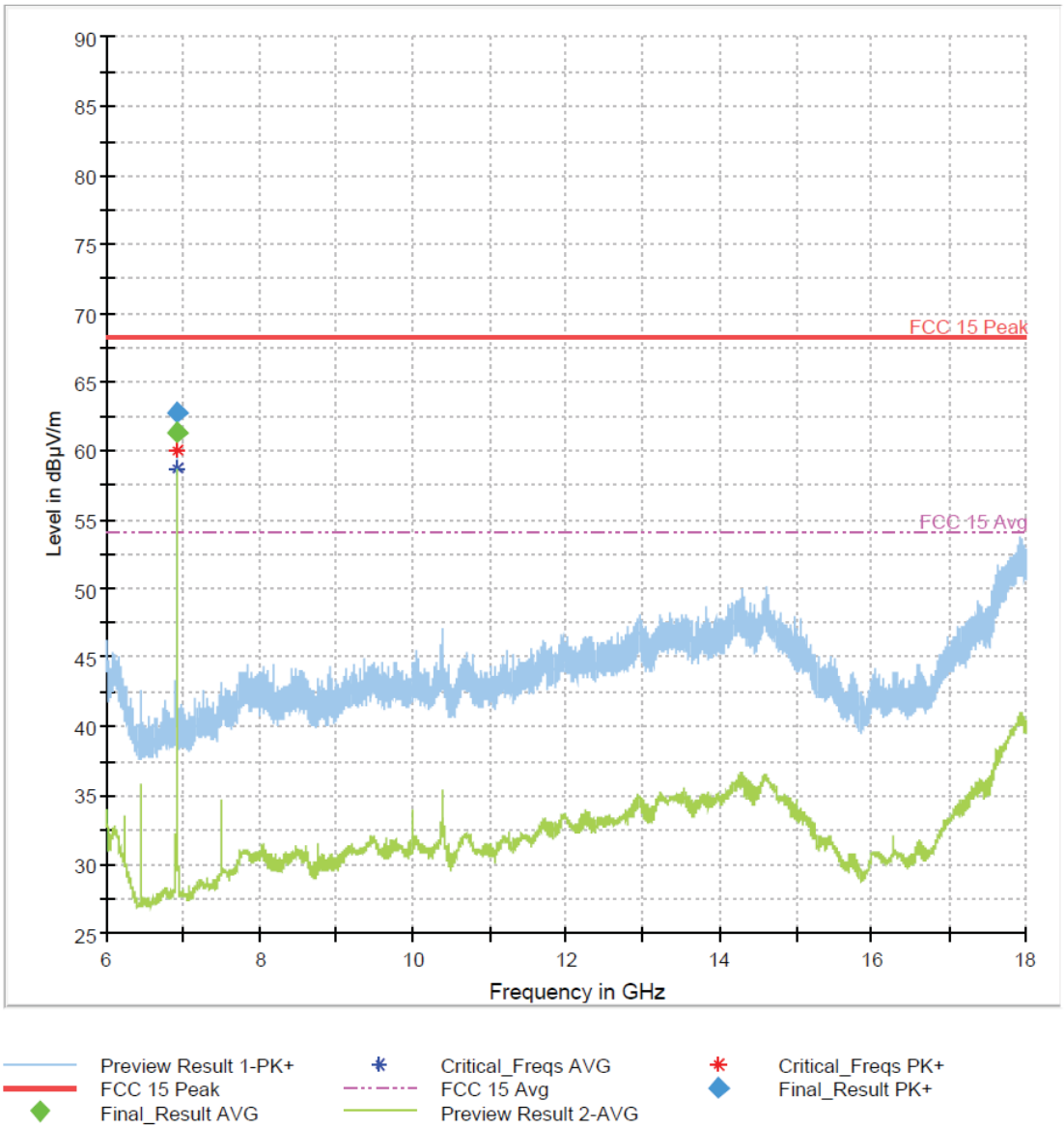
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
3863.597194	---	48.24	54.00	5.76	200.0	1000.000	153.3	H	195.0



Note: Emission above limit is the fundamental transmission.

Figure 174: 1-6GHz 802.11ac VHT40 Mode Channel 159

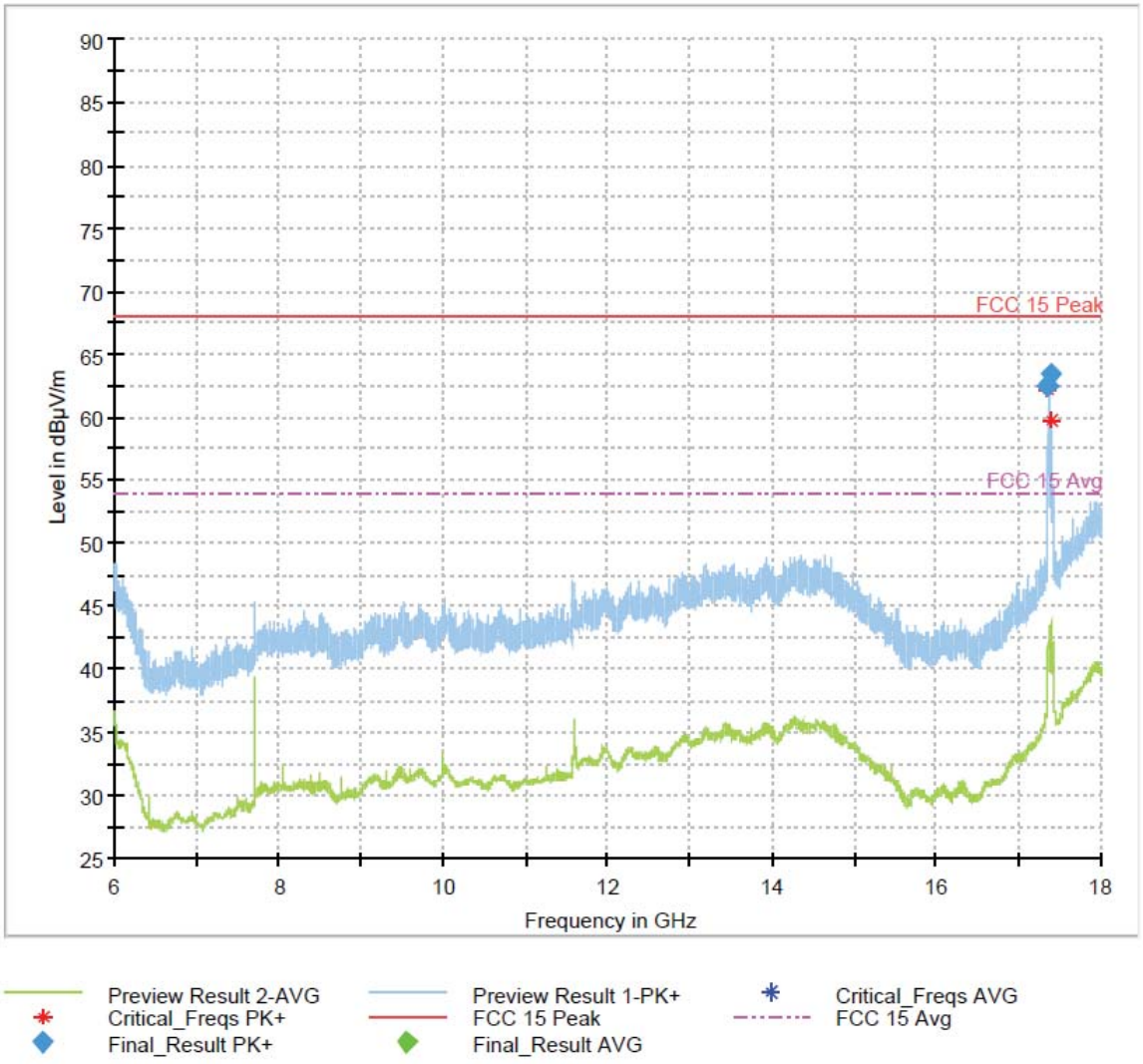
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
6920.200000	---	61.36	54.00	-7.36	200.0	1000.000	314.8	V	344.0	-11.7
6920.200000	62.79	---	68.20	5.41	200.0	1000.000	287.0	V	344.0	-11.7



Note: Emission above the limit is in a non-restricted band, therefor a peak detector limit of 68.2 dBuV/m applies for this frequency.

Figure 175: 6-18GHz 802.11ac VHT40 Mode Channel 151

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
17355.000000	62.46	---	68.20	5.74	200.0	1000.000	366.4	V	124.0
17398.200000	63.43	---	68.20	4.77	200.0	1000.000	152.0	V	118.0



Note: Emission above the limit is in a non-restricted band, therefor a peak detector limit of 68.2 dBuV/m applies for this frequency.

Figure 176: 6-18GHz 802.11ac VHT40 Mode Channel 159

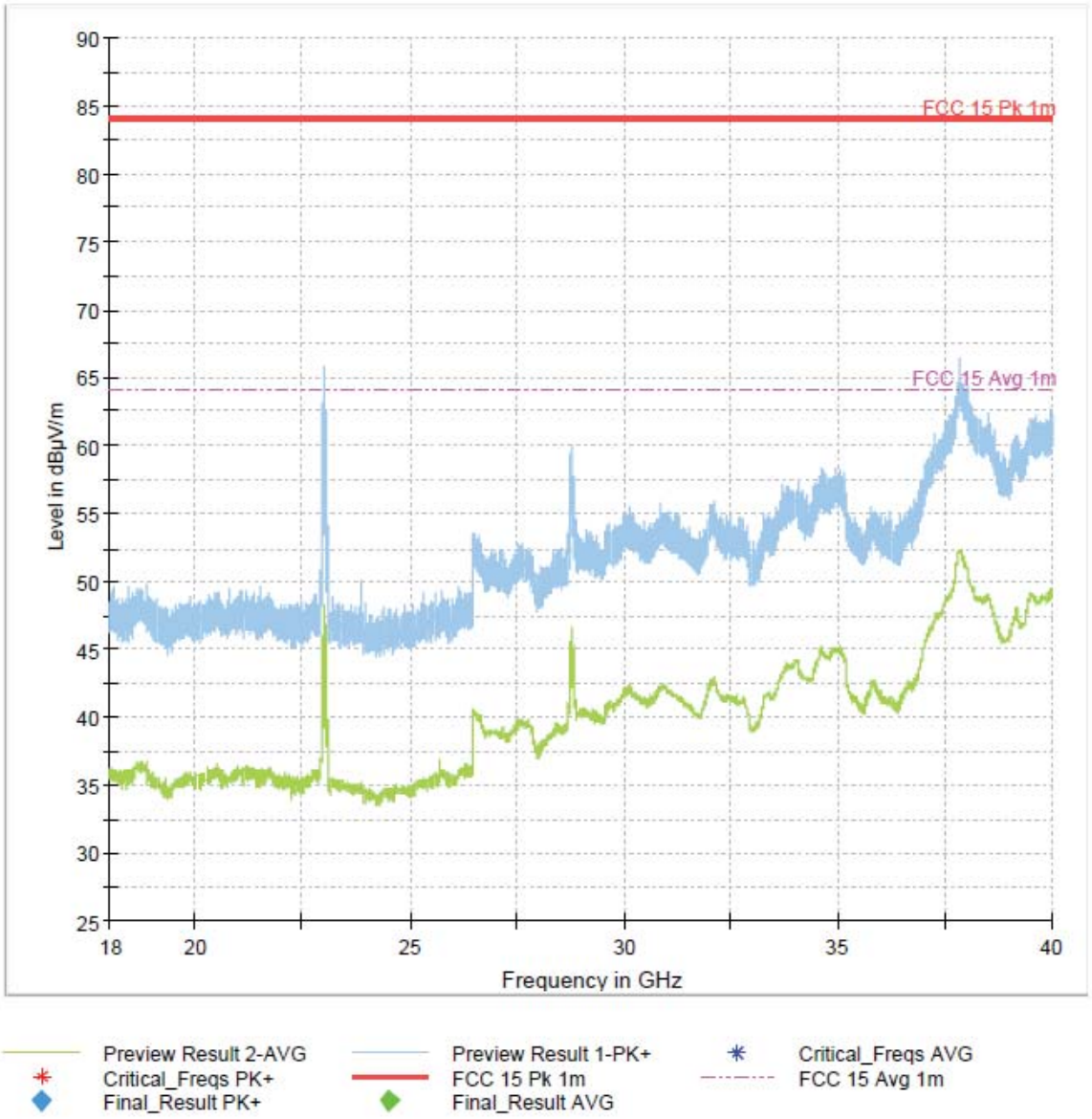


Figure 177: 18-40GHz 802.11ac VHT40 Mode Channel 151

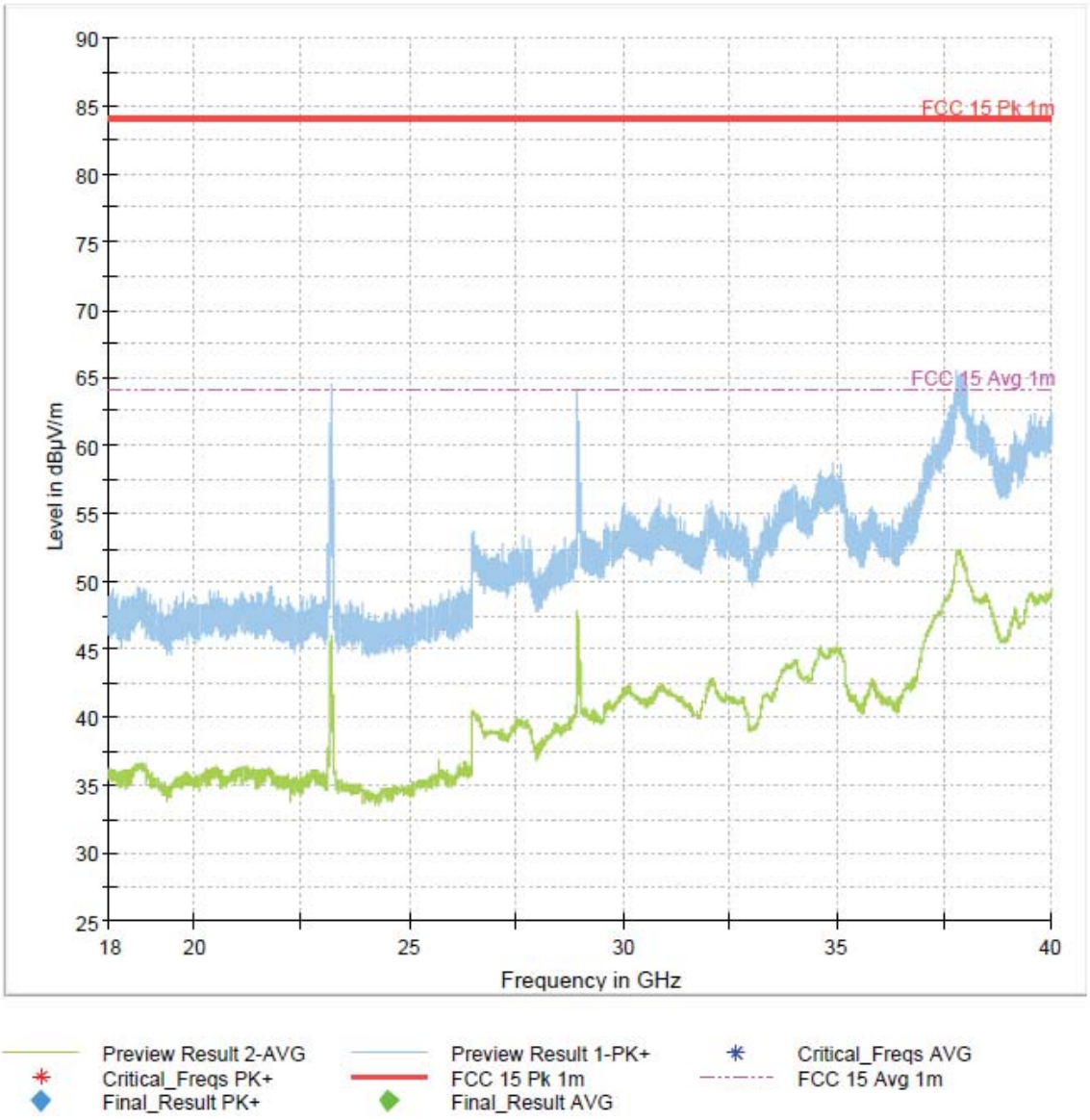
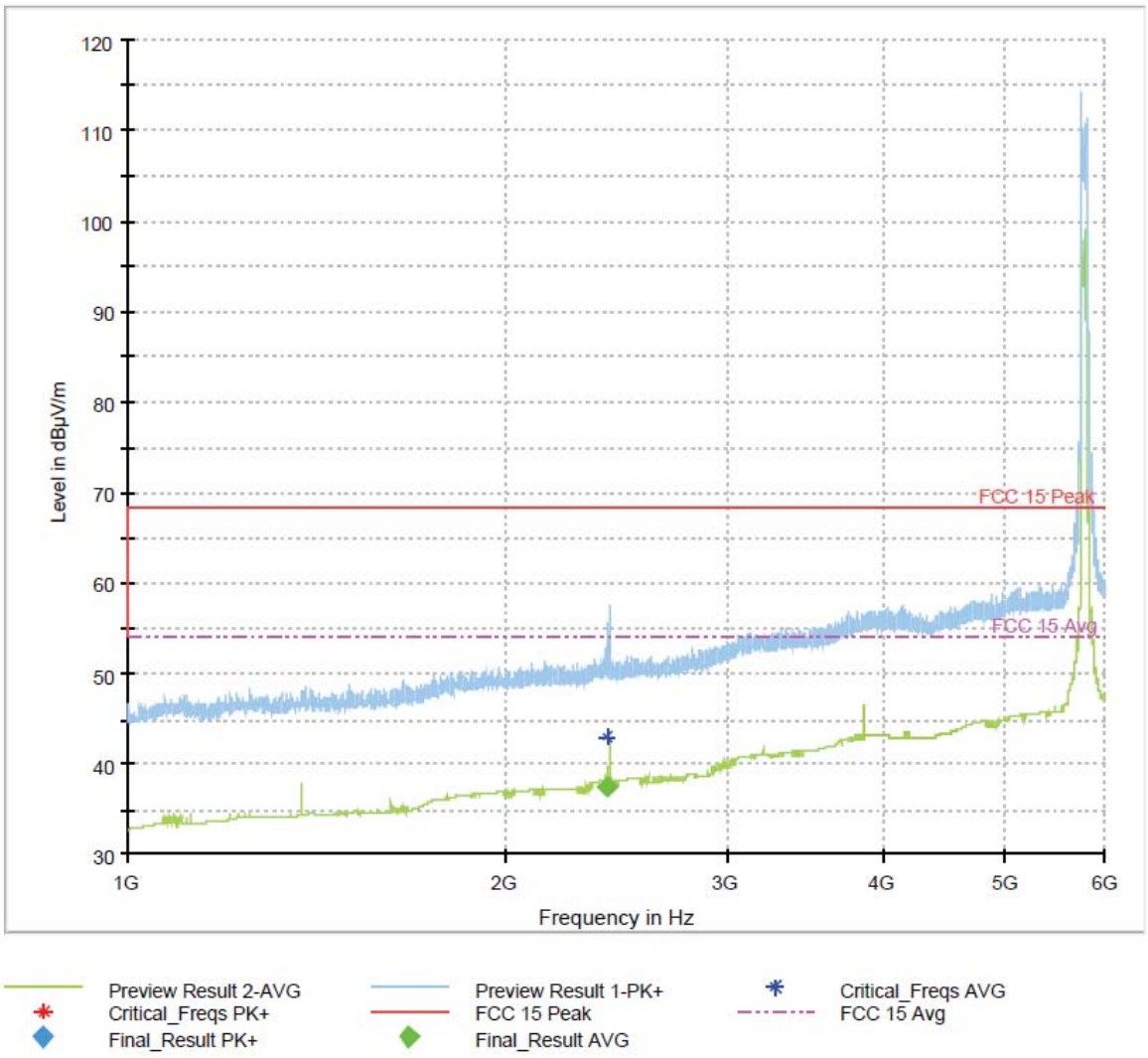


Figure 178: 18-40GHz 802.11ac VHT40 Mode Channel 159

4.6.5.2.2.3 802.11ac VHT80 Mode

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
2411.232465	---	37.40	54.00	16.60	200.0	1000.000	163.2	V	147.0



Note: Emission above limit is the fundamental transmission.

Figure 179: 1-6GHz 802.11ac VHT80 Mode Channel 155

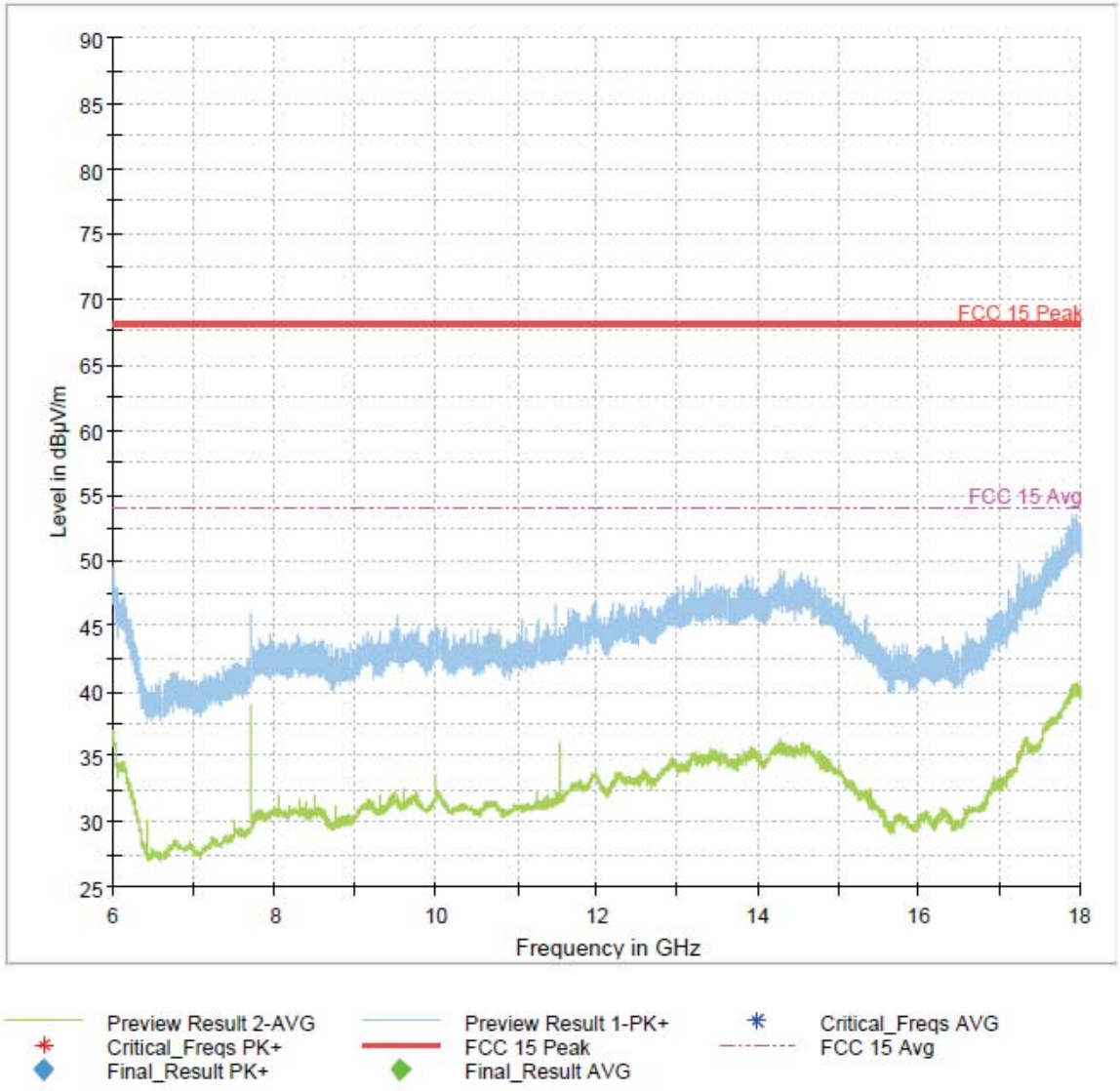


Figure 180: 6-18GHz 802.11ac VHT80 Mode Channel 155

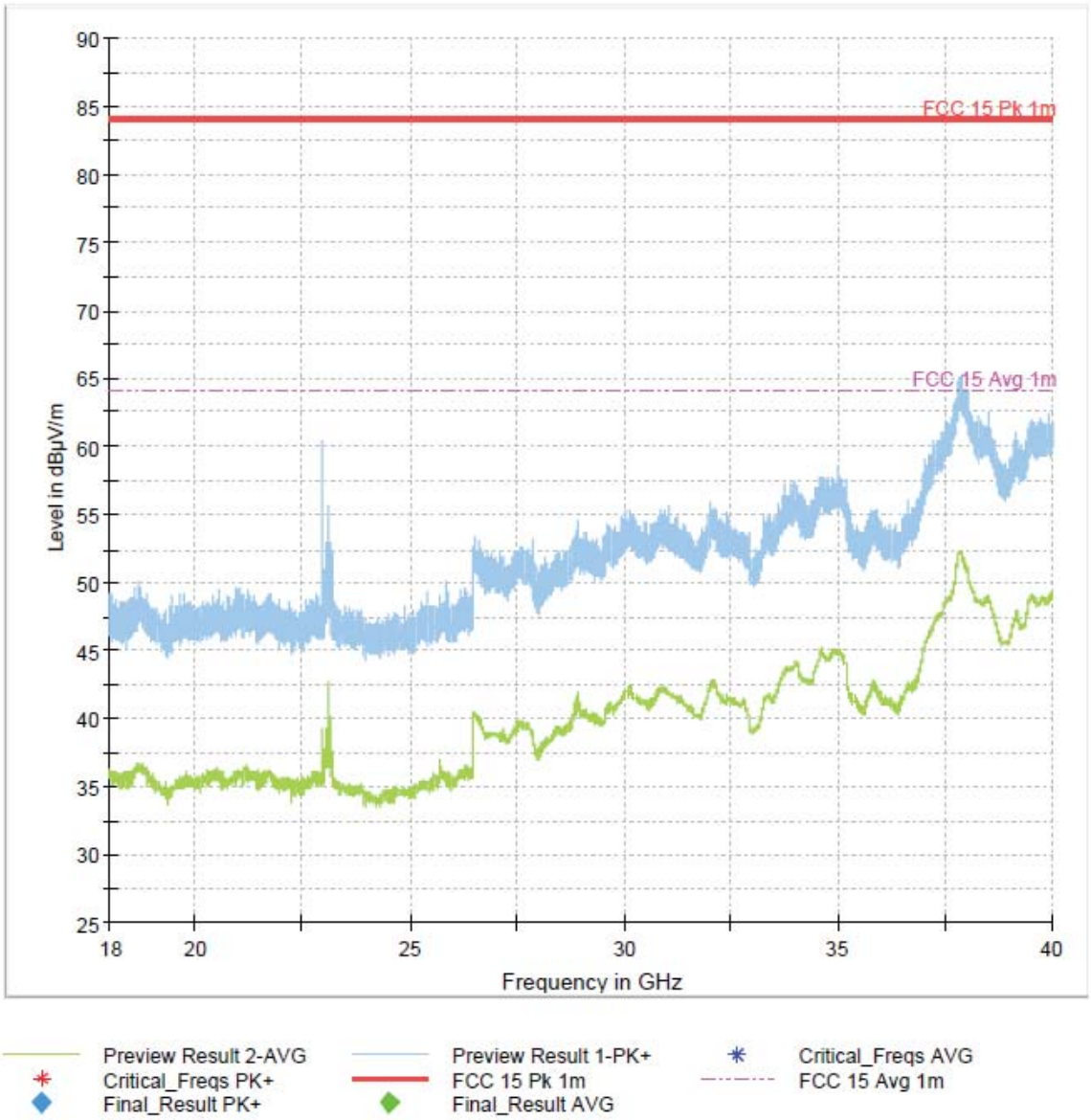
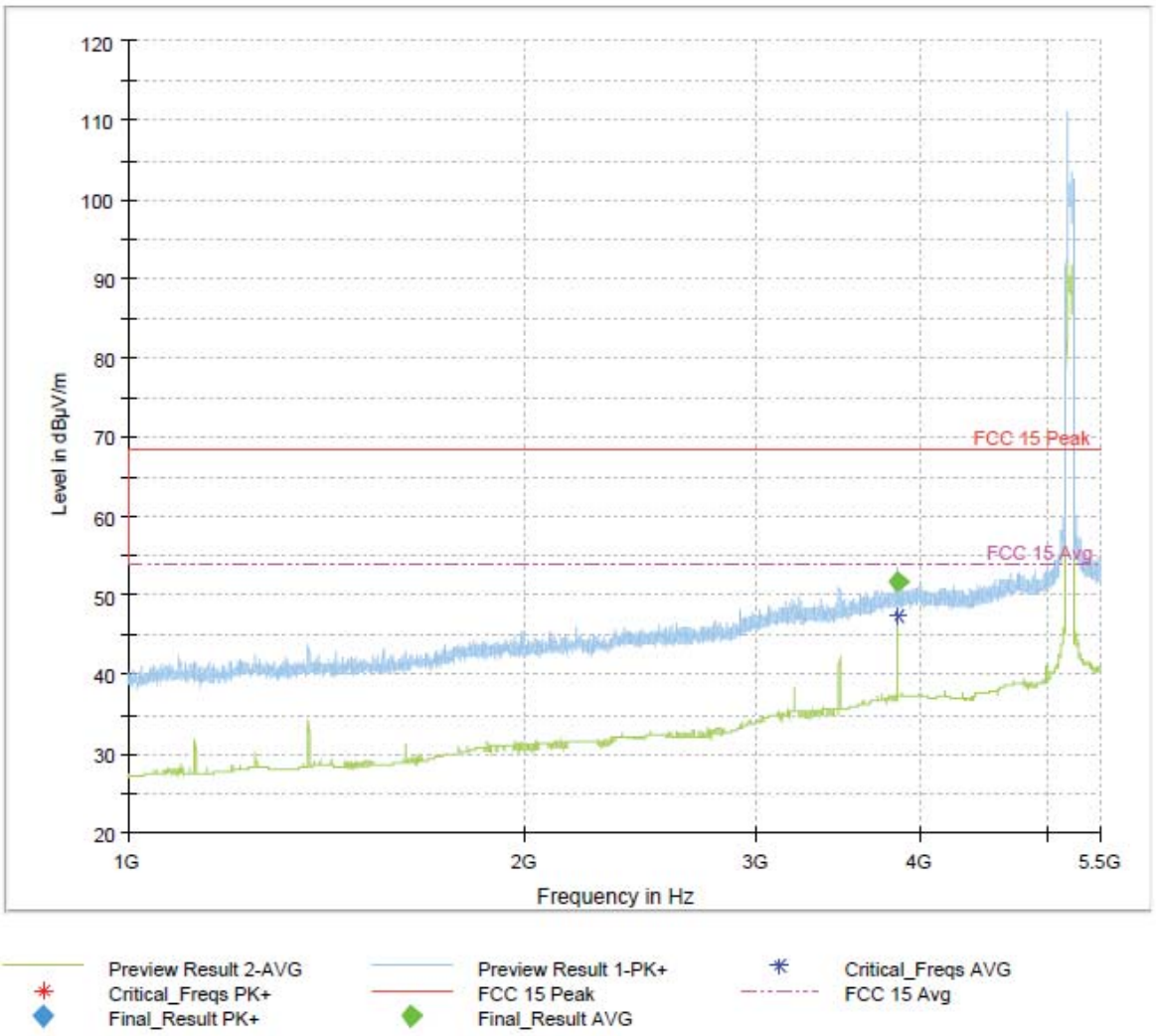


Figure 181: 18-40GHz 802.11ac VHT80 Mode Channel 155

4.6.5.2.3 UNII-1 & UNII-3

4.6.5.2.3.1 802.11ac VHT80+80 Mode

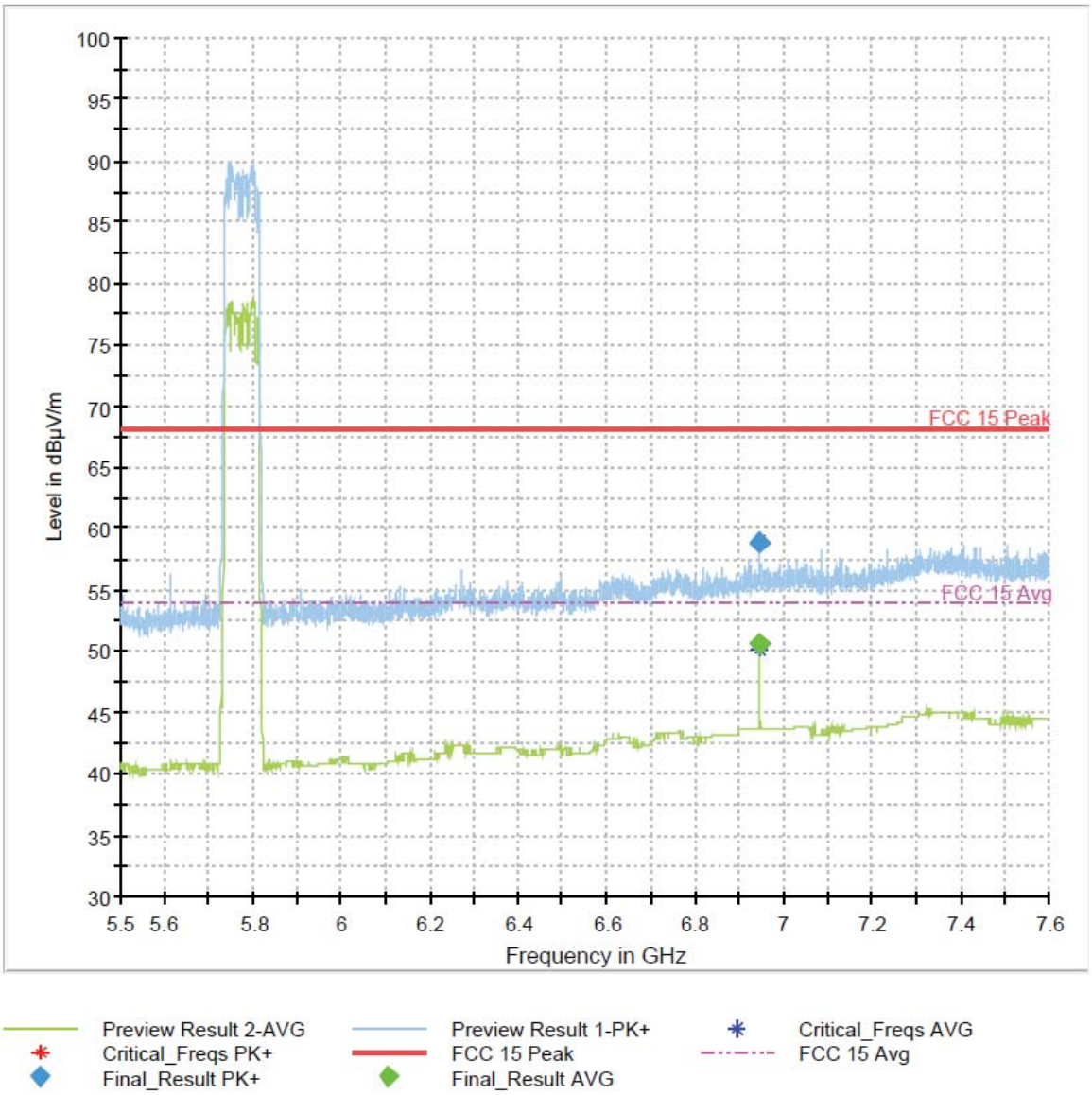
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3850.030060	---	51.78	54.00	2.22	200.0	1000.000	151.4	V	333.0	7.3



Note: Emission above limit is the fundamental transmission.

Figure 182: 1-5.5GHz 802.11ac VHT80+80 Mode Channel 42 & 155

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
6946.743487	---	50.69	54.00	3.31	200.0	1000.000	150.0	V	90.0	11.6
6947.224449	58.82	---	68.20	9.38	200.0	1000.000	239.0	V	240.0	11.6



Note: Emission above limit is the fundamental transmission.

Figure 183: 5.5-7.6GHz 802.11ac VHT80+80 Mode Channel 42 & 155

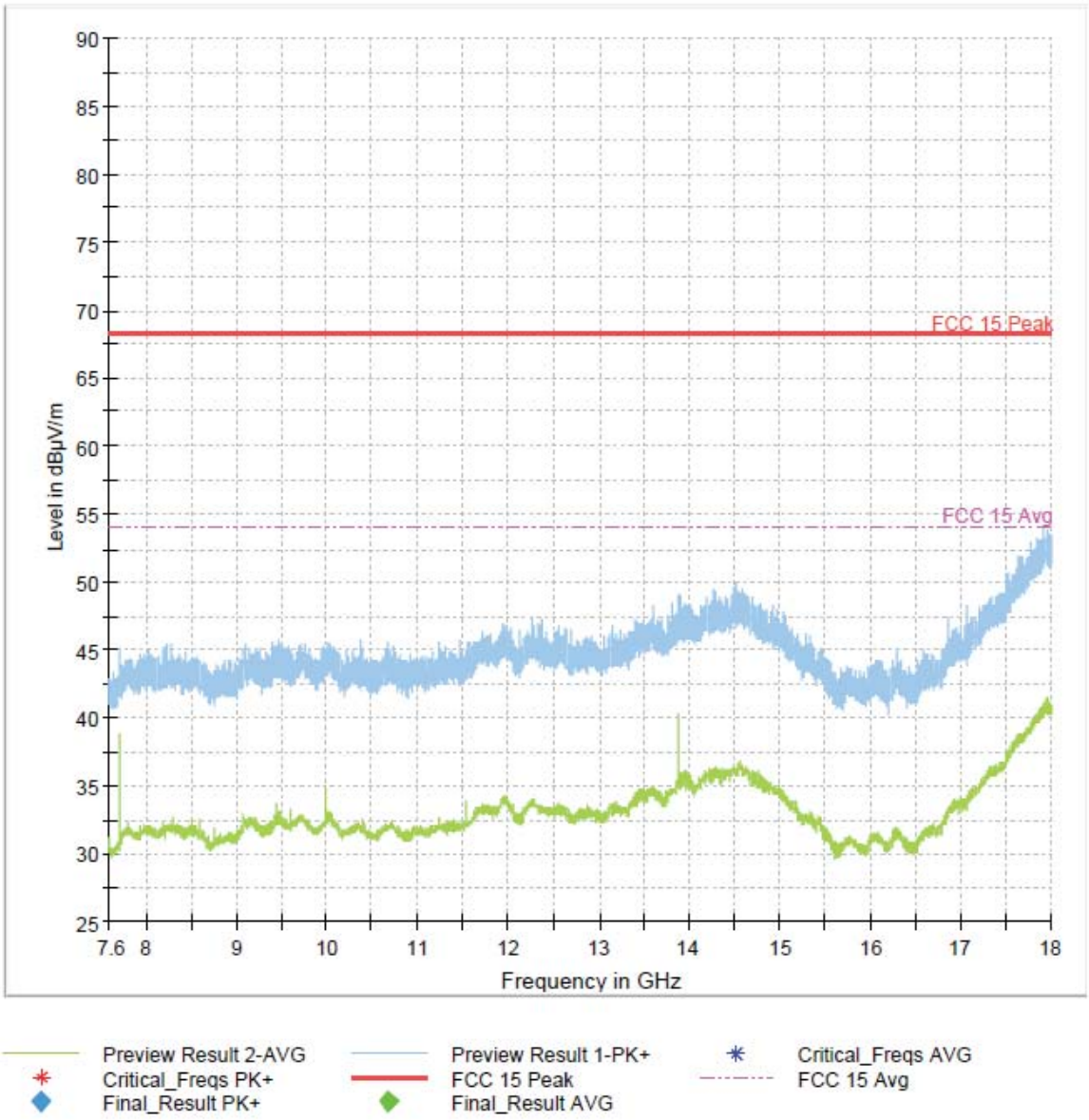


Figure 184: 7.6-18GHz 802.11ac VHT80+80 Mode Channel 42 & 155

Figure 185: 18-40GHz 802.11ac VHT80+80 Mode Channel 42 & 155

4.7 AC Conducted Emissions

Testing was performed in accordance with ANSI C63.4: 2014. These test methods are listed under the laboratory's A2LA Scope of Accreditation.

This test measures the levels emanating from the EUT's AC input port, thus evaluating the potential for the EUT to cause radio frequency interference to other electronic devices.

4.7.1 Limit(s)

The AC conducted emissions of equipment under test shall not exceed the values in CFR47 Part 15.207: 2016 and RSS GEN: 2014.

Frequency of emission (MHz)	Conducted limit (dBµV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

4.7.2 Test Methodology

A test program that controls instrumentation and data logging was used to automate the AC Power Line Conducted emission test procedure. The frequency range of interest was divided into sub-ranges such as to yield a frequency resolution of 9 kHz. Each phase and neutral of the AC power line were measured with respect to ground. Measurements were performed using a set of 50µH / 50Ω LISNs.

Testing is performed in Lab 5. The setup photographs clearly identify which site was used. The vertical ground plane used in the semi-anechoic chamber is a 2m x 2m solid aluminum frame and panel, and it is bonded to the horizontal ground plane.

In the case of tabletop equipment, the EUT is placed on a 1.0m x 1.5m non-conductive table 80cm above the ground plane and 40cm from a vertical ground reference plane. The rear of the EUT was positioned flush with the backside of the table and directly over the LISNs. The power and I/O cables were routed over the edge of the table and bundled approximately 40cm from the ground plane. Support equipment was powered from a separate LISN. Measurements were made on 802.11a NoHT 6Mbps mode channel 36 as this mode had the highest output power.

4.7.2.1 Deviations

There were no deviations from this test methodology.

4.7.3 Test Results

As originally tested, the EUT was found to be compliant to the requirements of the test standard(s).

Table 11: AC Conducted Emissions – Test Results

Test Conditions: Conducted Measurement at Normal Conditions only		
Antenna Type: Stamped Metal	**Power Level:** See Section 4.1.4.1	
AC Power: 120 Vac/60 Hz	**Configuration:** Tabletop	
Ambient Temperature: 22° C	**Relative Humidity:** 40% RH	
Configuration	**Frequency Range**	**Test Result**
Line 1 (Hot)	0.15 to 30 MHz	Pass
Line 2 (Neutral)	0.15 to 30 MHz	Pass

SOP 2 Conducted Emissions

Tracking # 31852094.001 Page 1 of 4

EUT Name	Norton Core Secure WiFi Router	**Date**	6/15/2018
EUT Model	518	**Temp / Hum in**	22° C / 40% rh
EUT Serial	10041P231551	**Temp / Hum out**	N/A
EUT Config.	TX mode / 802.11a	**Line AC / Freq**	120Vac / 60Hz
Standard	CFR47 Part 15.207 and RSS Gen	**RBW / VBW**	9 kHz / 30 kHz
Lab/LISN	Lab #5 /Com-Power, Line 1	**Performed by**	Benjamin Atsu

Frequency MHz	Raw dBuV	Correction Factors dB	Level dBuV	Measurement Type	Line	Limit dBuV	Margin dB	Pass /Fail
16.30364	33.48	10.03	43.5	Quasi Peak	Live	60	-16.51	Pass
16.9031	31.07	10.04	41.09	Quasi Peak	Live	60	-18.91	Pass
17.22876	29.29	10.04	39.31	Quasi Peak	Live	60	-20.69	Pass
0.15	32.64	9.82	42.52	Quasi Peak	Live	66	-23.48	Pass
17.70349	27.35	10.04	37.36	Quasi Peak	Live	60	-22.64	Pass
0.172159	33.96	9.82	43.83	Quasi Peak	Live	64.86	-21.03	Pass
16.30364	26.45	10.03	36.47	Average	Live	50	-13.53	Pass
16.9031	24.07	10.04	34.09	Average	Live	50	-15.92	Pass
17.22876	22.42	10.04	32.44	Average	Live	50	-17.56	Pass
0.15	14	9.82	23.88	Average	Live	56	-32.13	Pass
17.70349	20.14	10.04	30.16	Average	Live	50	-19.84	Pass
0.172159	18.41	9.82	28.28	Average	Live	54.86	-26.57	Pass

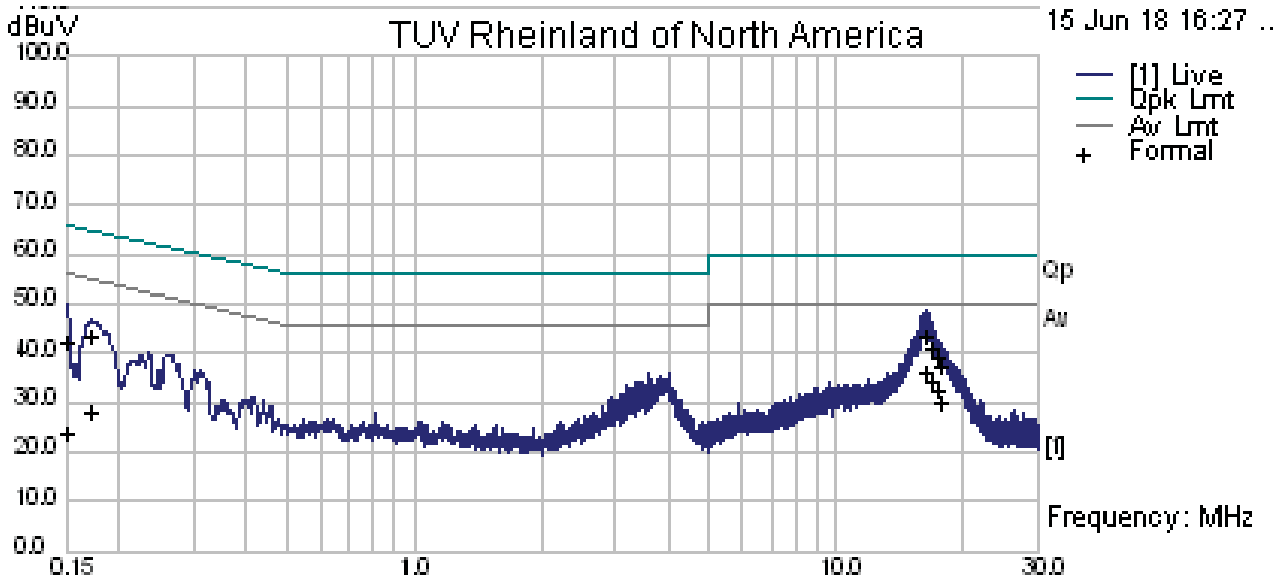
Spec Margin = QP./Ave. - Limit, ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.2 dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

Note:-

SOP 2 Conducted Emissions		Tracking # 31852094.001 Page 2 of 4	
EUT Name	Norton Core Secure WiFi Router	**Date**	6/15/2018
EUT Model	518	**Temp / Hum in**	22° C / 40% rh
EUT Serial	10041P231551	**Temp / Hum out**	N/A
EUT Config.	TX mode / 802.11a	**Line AC**	120Vac / 60Hz
Standard	CFR47 Part 15.207 and RSS Gen	**RBW / VBW**	9 kHz / 30 kHz
Lab/LISN	Lab #5 /Com-Power, Line 1	**Performed by**	Benjamin Atsu

150 kHz to 30 MHz Plot for Line 1 (Live)



Note: Met FCC Class B limit.

SOP 2 Conducted Emissions

Tracking # 31852094.001 Page 3 of 4

EUT Name	Norton Core Secure WiFi Router	**Date**	6/15/2018
EUT Model	518	**Temp / Hum in**	22° C / 40% rh
EUT Serial	10041P231551	**Temp / Hum out**	N/A
EUT Config.	TX mode / 802.11a	**Line AC / Freq**	120Vac / 60Hz
Standard	CFR47 Part 15.207 and RSS Gen	**RBW / VBW**	9 kHz / 30 kHz
Lab/LISN	Lab #5 /Com-Power, Line 2	**Performed by**	Benjamin Atsu

Frequency MHz	Raw dBuV	Correction Factors dB	Level dBuV	Measurement Type	Line	Limit dBuV	Margin dB	Pass /Fail
16.22084	37.84	10.03	47.85	Quasi Peak	Neutral	60	-12.15	Pass
16.941	35.62	10.04	45.64	Quasi Peak	Neutral	60	-14.36	Pass
17.14779	34.49	10.04	44.51	Quasi Peak	Neutral	60	-15.49	Pass
17.43263	33.33	10.04	43.34	Quasi Peak	Neutral	60	-16.66	Pass
18.00245	31.25	10.04	41.26	Quasi Peak	Neutral	60	-18.74	Pass
0.152916	35.25	9.82	45.13	Quasi Peak	Neutral	65.84	-20.71	Pass
16.22084	30.85	10.03	40.87	Average	Neutral	50	-9.13	Pass
16.941	28.47	10.04	38.49	Average	Neutral	50	-11.51	Pass
17.14779	27.83	10.04	37.85	Average	Neutral	50	-12.15	Pass
17.43263	26.3	10.04	36.32	Average	Neutral	50	-13.68	Pass
18.00245	24.26	10.04	34.27	Average	Neutral	50	-15.73	Pass
0.152916	15.27	9.82	25.15	Average	Neutral	55.84	-30.69	Pass

Spec Margin = QP./Ave. - Limit, ± Uncertainty

Combined Standard Uncertainty $u_c(y) = \pm 1.2$ dB Expanded Uncertainty $U = ku_c(y)$ $k = 2$ for 95% confidence

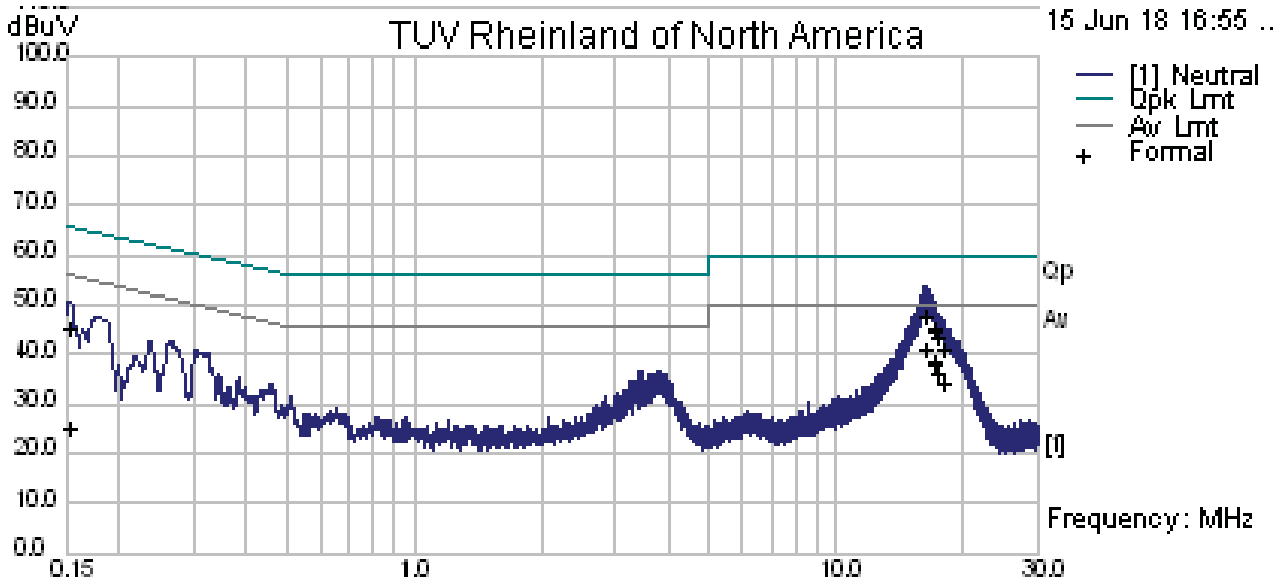
Note: -

SOP 2 Conducted Emissions

Tracking # 31852094.001 Page 4 of 4

EUT Name	Norton Core Secure WiFi Router	**Date**	6/15/2018
EUT Model	518	**Temp / Hum in**	22° C / 40% rh
EUT Serial	10041P231551	**Temp / Hum out**	N/A
EUT Config.	TX mode / 802.11a	**Line AC**	120Vac / 60Hz
Standard	CFR47 Part 15.207 and RSS Gen	**RBW / VBW**	9 kHz / 30 kHz
Lab/LISN	Lab #5 /Com-Power, Line 2	**Performed by**	Benjamin Atsu

150 kHz to 30 MHz Plot for Line 2 (Neutral)



Note: Met FCC Class B Limit.

4.8 Frequency Stability

In accordance with 47 CFR Part 15.407(g) and RSS GEN Sect. 6.11 the frequency stability of U-NII devices must be such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual. The Manufacturer calls out operating temperature ranges of +0º to +40º C

4.8.1 Limit(s)

CFR47 Part 15.407(g) and RSS GEN Sect. 6.11 - Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

4.8.2 Test Methodology

The manufacturer of the equipment is responsible for ensuring that the frequency stability is such that emissions are always maintained within the band of operation under all conditions. This test performs according to ANSI C63.10-2013 Section 6.8

4.8.3 Manufacturer Declaration

The EUT conforms to IEEE specs of a maximum +/- 20 PPM for the 5GHz band.

4.8.4 Test results

Pass. Per manufacturer's declaration, the EUT conforms to IEEE specifications of a maximum +/- 20 PPM for the 5GHz band under all conditions of normal operation as specified in the user's manual.

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5 Test Equipment List

5.1 Equipment List

Equipment	Manufacturer	Model #	Serial/Inst #	Last Cal mm/dd/yyyy	Next Cal mm/dd/yyyy
Bilog Antenna	Sunol Sciences	JB3	A102606	06/15/2016	06/15/2018
Horn Antenna	EMCO	3115	9211-3969	05/16/2017	05/16/2019
Active Horn Antenna	Com-Power	AHA-840	105005	05/26/2017	05/26/2019
LISN	Com-Power	LI-215	12100	01/24/2018	01/24/2019
Spectrum Analyzer	Agilent	N9038A	MY51210195	01/24/2018	01/24/2019
Spectrum Analyzer	Rohde & Schwarz	FSL6	100169	01/13/2018	01/13/2019
EMI Receiver	Rohde & Schwarz	ESIB40	832427/002	01/22/2018	01/22/2019
Thermometer	VWR	61161-378	160702310	08/15/2015	08/15/2018
Vector Signal Generator	Rohde & Schwarz	SMBV100A	257744	9/16/2016	9/16/2019
Thermo Chamber	Espec	BTZ-133	0613436	05/31/2018	05/31/2019
Power Sensors	Rohde & Schwarz	OSP-B157	26160467	01/18/2018	01/18/2019
Amplifier	Sonoma	310N	185516	N/A (See Note)	
Amplifier	Miteq	TTA1800-30-HG	1842452	N/A (See Note)	
Test Software	Rohde & Schwarz	EMC32 v.10.20.01	N/A	N/A	
1.6 GHz Low Pass Filter	K&L Microwave	8L120-X1600-0/09135-0249	UA691-35	N/A (See Note)	
7.6 GHz High Pass Filter	Micro Tronics	HPM50107	004	N/A (See Note)	

Note: Equipment is characterized before use.

6 EMC Test Plan

6.1 Introduction

This section provides a description of the Equipment Under Test (EUT), configurations, operating conditions, and performance acceptance criteria. It is an overview of information provided by the manufacturer so that the test laboratory may perform the requested testing.

6.2 Customer

Table 12: Customer Information

Company Name	Symantec Corporation
Address	350 Ellis Street
City, State, Zip	Mountain View, CA 94043
Country	USA

Table 13: Technical Contact Information

Name	Vijay Poojari
E-mail	Vijay_Poojari@symantec.com

6.3 Equipment Under Test (EUT)

The information provided in the following table should be listed as it should appear in the final report. For those products that have only a model name, list the model number as *non-applicable* and vice-versa.

Table 14: EUT Designation

Product Name	Norton Core
Model Number	518
System Name	NA
Product Description	Norton Core is a 4x4 secure wireless router that protects your connected home network, while delivering the highest level of security and performance. It is intended to work as a dual band (2.4GHz and 5GHz) wireless router. The router will be in compliance with regulatory standards of regions it will be operating in.

6.4 Product Specifications

Table 15: EUT Specifications

EUT Specifications	
AC Input	100-240V AC, 50 – 60 Hz
Environment	Indoor
Operating Temperature Range:	0 to 40 degrees C
Multiple Feeds:	☐ Yes and how many ☒ No
Product Marketing Name (PMN)	Norton Core
Hardware Version Identification Number (HVIN)	518
Firmware Version Identification Number (FVIN)	QSDK 5.3
RF Test Software Version	QCAQMSL – QLIV V6.1.291.QPHONEMS
Operating Modes	802.11a 802.11n (HT20, HT40) 802.11ac (VHT20, VHT40,VHT80, VHT80+80, CDD & Beamforming)
Transmitter Frequency Band	5.15-5.25 GHz, U-NII-1 Band 5.725-5.85GHz, U-NII-3 Band
Max. Power Output (RMS, Conducted)	28.2 dBm (802.11a)
Power Setting @ Operating Channel	See Section 4.1.4
Antenna Type	See Table 16
Antenna Gain	5150-5250 MHz (U-NII-1): 2.5 dBi 5725-5850 MHz (U-NII-3): 2.6 dBi
Modulation Type	☐ AM ☐ FM ☒ OFDM ☐ Other describe:
TX/RX Chain (s)	MIMO 4x4
Directional Gain Type	☒ Correlated (CDD) ☒ Beam-Forming ☐ Other describe:
Type of Equipment	☒ Table Top ☐ Wall-mount ☐ Floor standing cabinet ☐ Other:
Note: All 4 chains will be on / transmitted at all times with the same power levels and antenna gains per chain.	

Table 16: Antenna Information

Number	Antenna Type	Description	Max Gain (dBi)	
			5150-5250 MHz	5725-5850 MHz
Antenna 0	Internal, Stamped Metal	2.4GHz WLAN	2.5	2.6
Antenna 1	Internal, Stamped Metal	2.4GHz WLAN		
Antenna 2	Internal, Stamped Metal	2.4GHz WLAN		
Antenna 3	Internal, Stamped Metal	2.4GHz WLAN		

Table 17: Interface Specifications

Interface Type	Cabled with what type of cable?	Is the cable shielded?	Maximum potential length of the cable?	Metallic (M), Coax (C), Fiber (F), or Not Applicable?
Ethernet	Ethernet	☐ Yes	☒ Metric: > 3.0m	☒ M

Table 18: Accessory Equipment

Equipment	Manufacturer	Model	Serial	Comment
AC/DC Converter	Delta	21369161 REV2	IFSD79V020C	Power supply that ships with EUT
Note: None.				

Table 19: Ancillary Equipment (used for test purposes only)

Equipment	Manufacturer	Model	Serial	Used for
Laptop	Lenovo	Thinkpad	N/A	Setup EUT operating channels via terminal emulator with Ethernet connection to EUT
Norton Core	Symantec Corporation	518	10040P168521	Client used for Radiated Beamforming measurements
Note: None.				

Table 20: Description of Sample used for Testing

Sample Number	Device	Serial Number	Configuration	Used For
1	Norton Core	10041P625119C	Radiated Sample	TX Spurious Emissions, Bandedge
2	Norton Core	10041P231551	Radiated Sample	AC Mains Conducted Emissions
3	Norton Core	10041P492283	Conducted Sample	Worse Case Mode Pre-assessment (Section 3.5)
4	Norton Core	100A1P971547	Conducted Sample	All other conducted Measurments
Note: -				

Table 21: Description of Test Configuration used for Radiated Measurement.

Device	Antenna	Mode	Setup Photo (X-Axis)	Setup Photo (Y-Axis)	Setup Photo (Z-Axis)
Norton Core	Stamped Metal	Transmit	EUT upright	N/A	N/A
Note: Manufacturer has declared that the EUT is designed to operate in a fixed, upright position.					

6.5 Test Specifications

Testing requirements

Table 22: Test Specifications

Emissions and Immunity	
Standard	**Requirement**
CFR 47 Part 15.407: 2016	All
RSS 247 Issue 2, 2017	All

END OF REPORT