



U-NII-3, 802.11a, Channel No.: 149



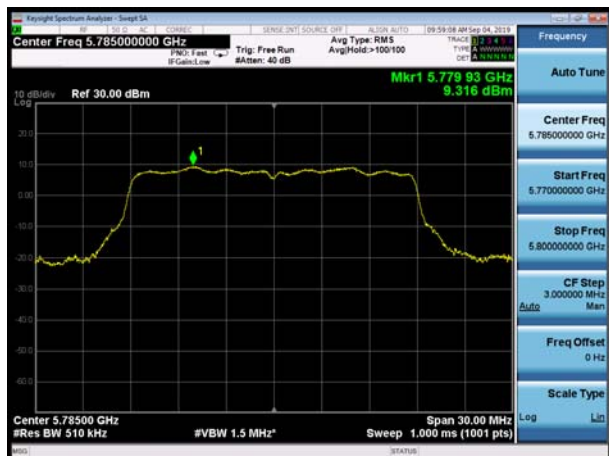
U-NII-3, 802.11n HT20, Channel No.: 149



U-NII-3, 802.11a, Channel No.: 157



U-NII-3, 802.11n HT20, Channel No.: 157



U-NII-3, 802.11a, Channel No.: 165



U-NII-3, 802.11n HT20, Channel No.: 165





U-NII-3, 802.11n HT40, Channel No.: 151



U-NII-3, 802.11ac VHT20, Channel No.: 149



U-NII-3, 802.11n HT40, Channel No.: 159



U-NII-3, 802.11ac VHT20, Channel No.: 157



U-NII-3, 802.11ac VHT40, Channel No.: 151

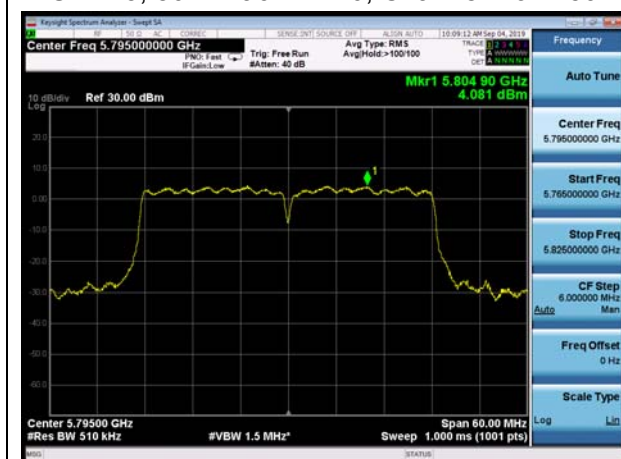


U-NII-3, 802.11ac VHT20, Channel No.: 165





U-NII-3, 802.11ac VHT40, Channel No.: 159



U-NII-3, 802.11ac VHT80, Channel No.: 155

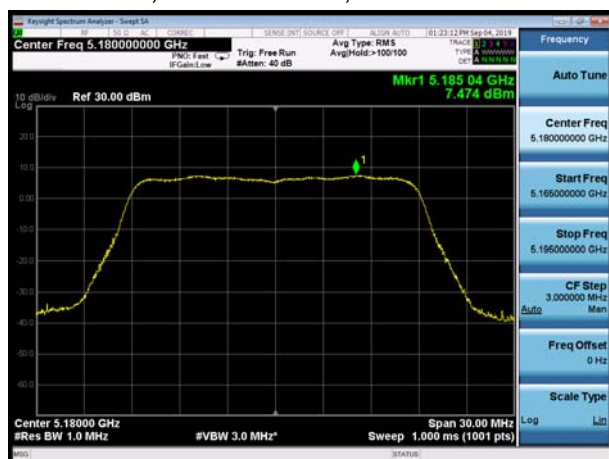




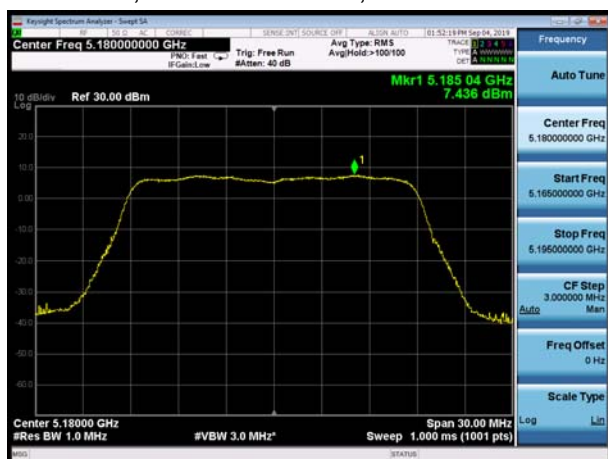
MIMO (With Beamforming)

Antenna 1

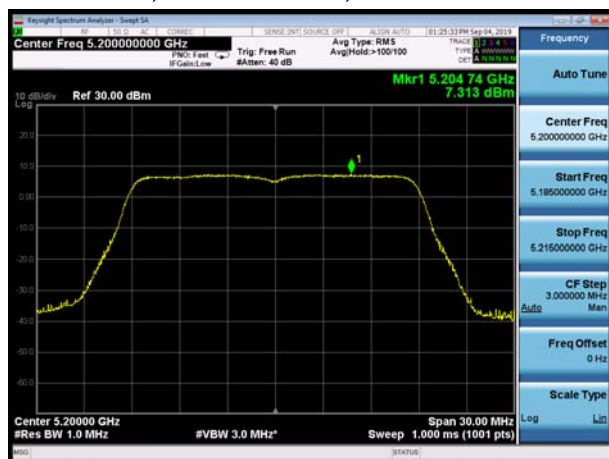
U-NII-1, 802.11n HT20, Channel No.: 36



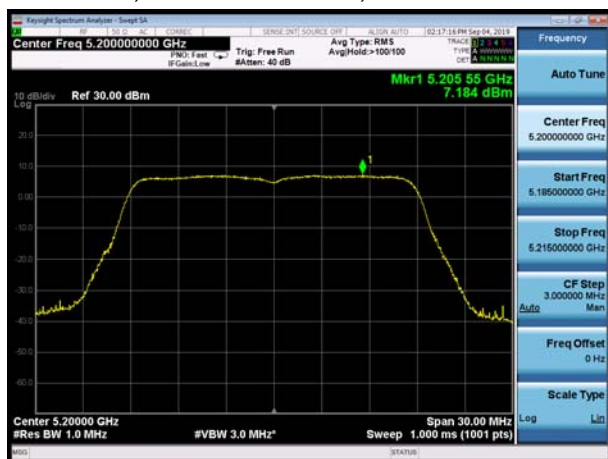
U-NII-1, 802.11ac VHT20, Channel No.: 36



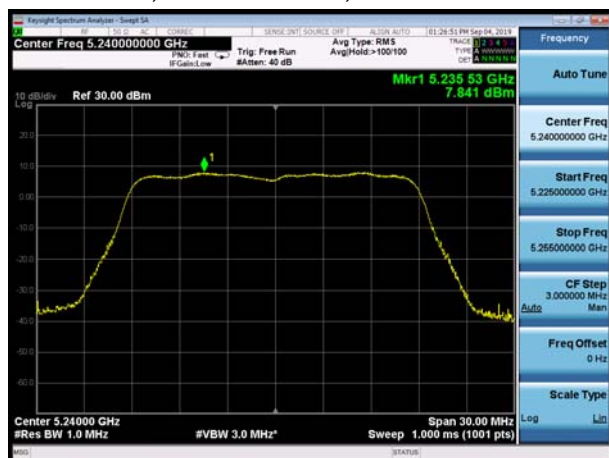
U-NII-1, 802.11n HT20, Channel No.: 40



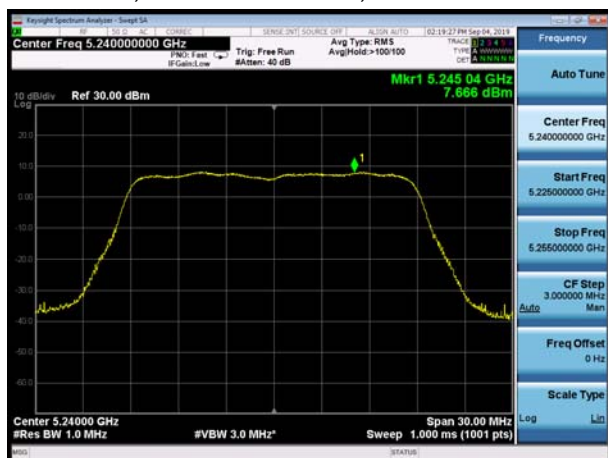
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U-NII-1, 802.11n HT20, Channel No.: 48

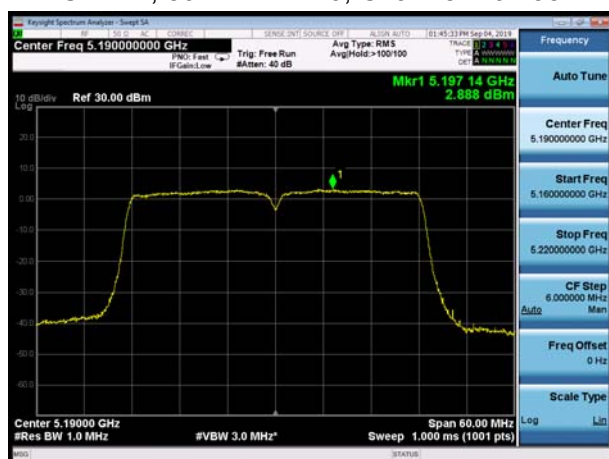


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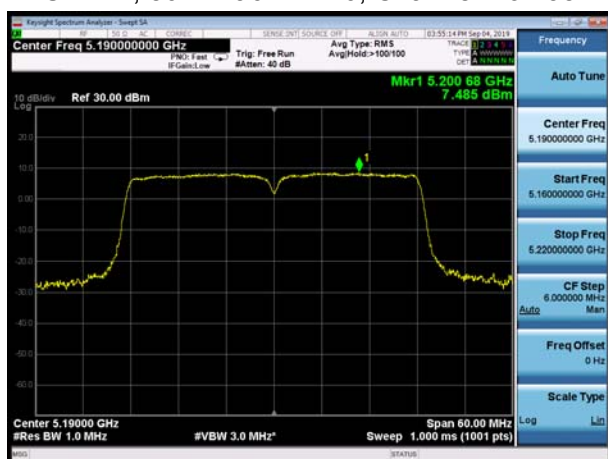




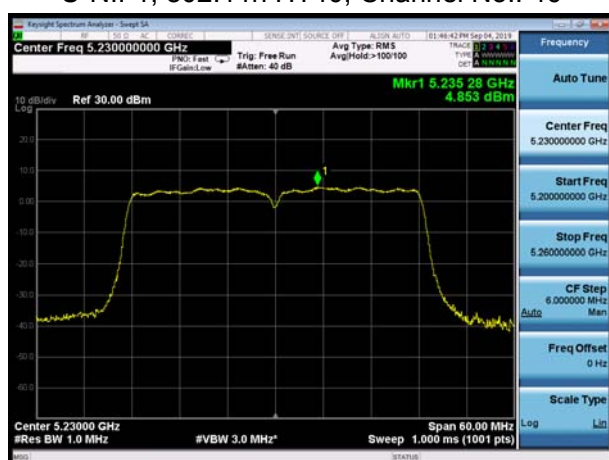
U-NII-1, 802.11n HT40, Channel No.: 38



U-NII-1, 802.11ac VHT40, Channel No.: 38



U-NII-1, 802.11n HT40, Channel No.: 46



U-NII-1, 802.11ac VHT40, Channel No.: 46



U-NII-1, 802.11ac VHT80, Channel No.: 42





U-NII-3, 802.11n HT20, Channel No.: 149



U-NII-3, 802.11ac VHT20, Channel No.: 149



U-NII-3, 802.11n HT20, Channel No.: 157



U-NII-3, 802.11ac VHT20, Channel No.: 157



U-NII-3, 802.11n HT20, Channel No.: 165



U-NII-3, 802.11ac VHT20, Channel No.: 165





U-NII-3, 802.11n HT40, Channel No.: 151



U-NII-3, 802.11ac VHT40, Channel No.: 151



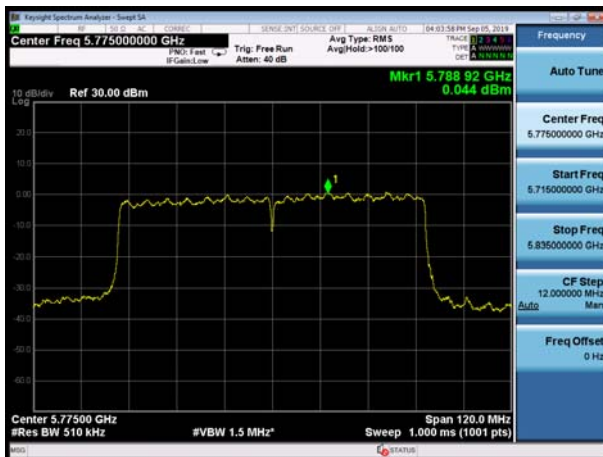
U-NII-3, 802.11n HT40, Channel No.: 159



U-NII-3, 802.11ac VHT40, Channel No.: 159



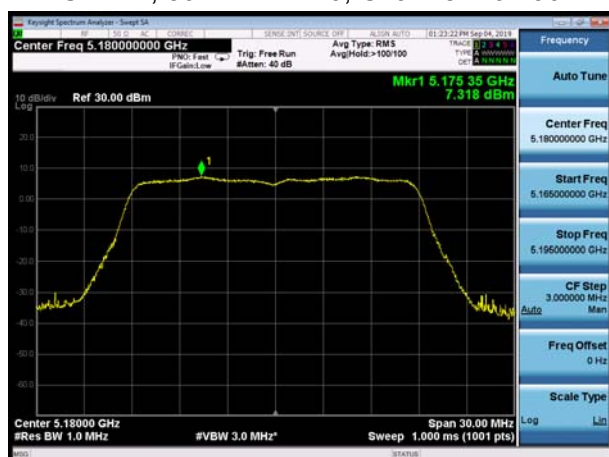
U-NII-3, 802.11ac VHT80, Channel No.: 155



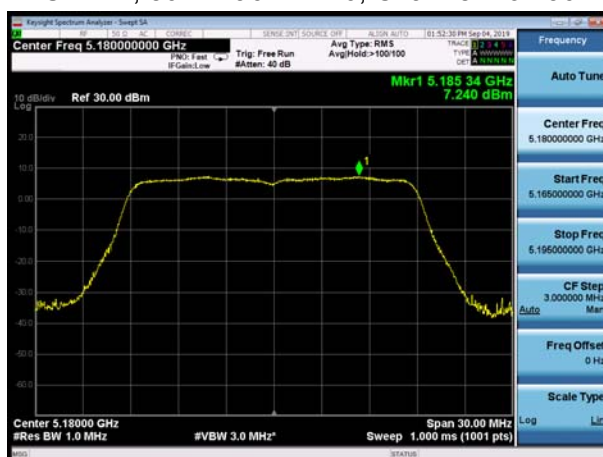


Antenna 2

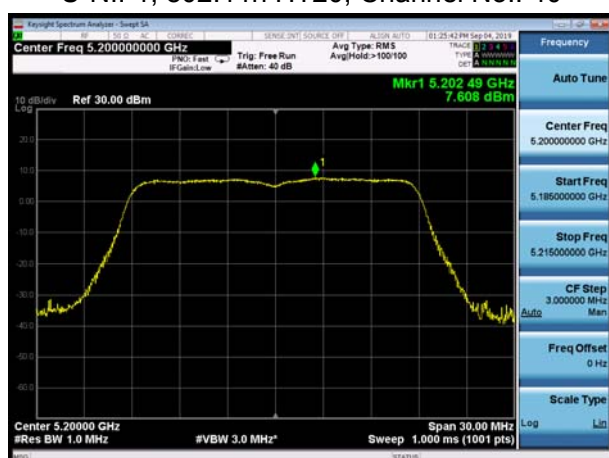
U-NII-1, 802.11n HT20, Channel No.: 36



U-NII-1, 802.11ac VHT20, Channel No.: 36



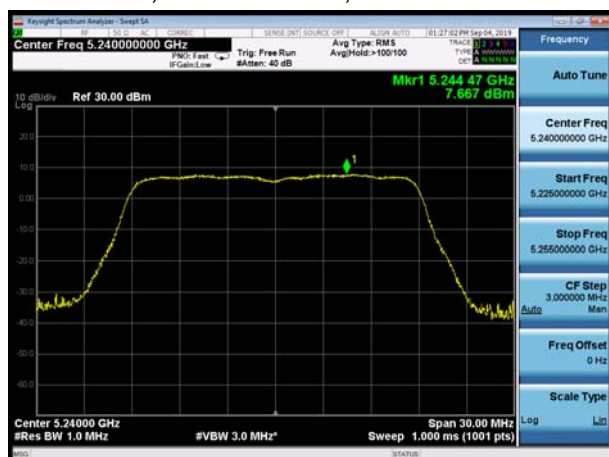
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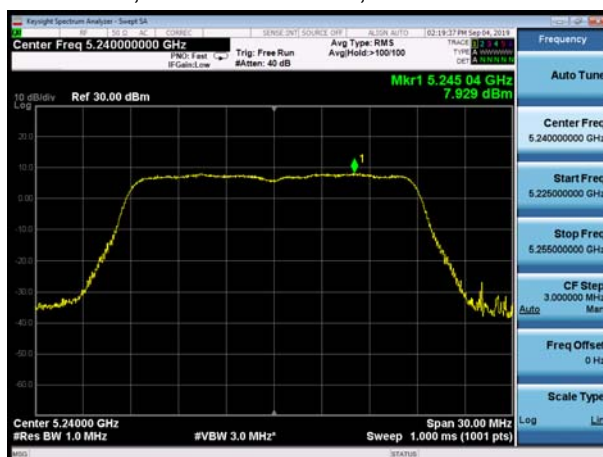
U-NII-1, 802.11ac VHT20, Channel No.: 40



U-NII-1, 802.11n HT20, Channel No.: 48

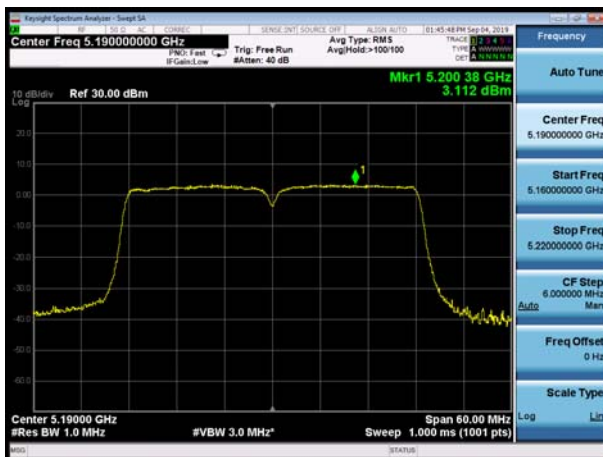


U-NII-1, 802.11ac VHT20, Channel No.: 48





U-NII-1, 802.11n HT40, Channel No.: 38



U-NII-1, 802.11ac VHT40, Channel No.: 38



U-NII-1, 802.11n HT40, Channel No.: 46



U-NII-1, 802.11ac VHT40, Channel No.: 46



U-NII-1, 802.11ac VHT80, Channel No.: 42





U-NII-3, 802.11n HT20, Channel No.: 149



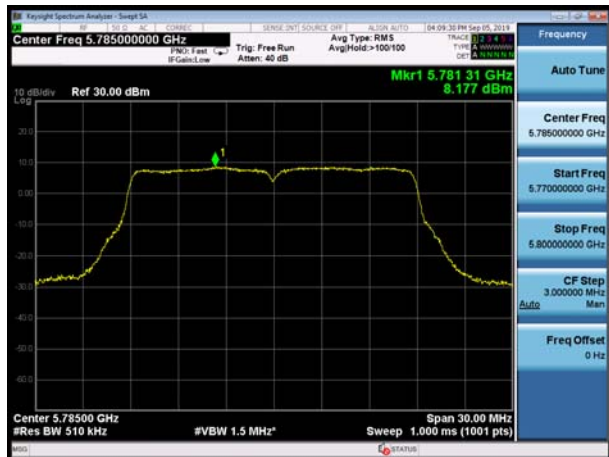
U-NII-3, 802.11ac VHT20, Channel No.: 149



U-NII-3, 802.11n HT20, Channel No.: 157



U-NII-3, 802.11ac VHT20, Channel No.: 157



U-NII-3, 802.11n HT20, Channel No.: 165



U-NII-3, 802.11ac VHT20, Channel No.: 165





U-NII-3, 802.11n HT40, Channel No.: 151



U-NII-3, 802.11ac VHT40, Channel No.: 151



U-NII-3, 802.11n HT40, Channel No.: 159



U-NII-3, 802.11ac VHT40, Channel No.: 159



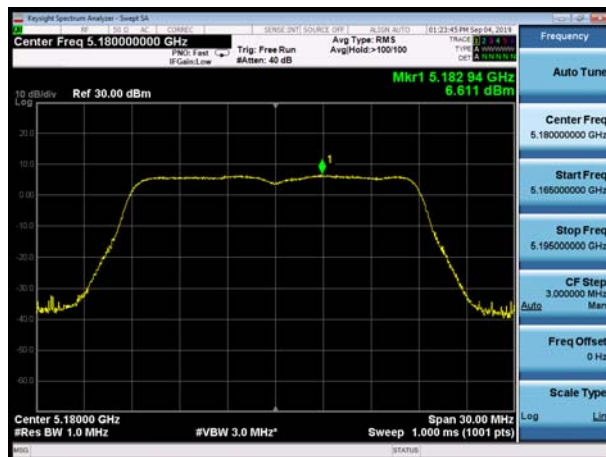
U-NII-3, 802.11ac VHT80, Channel No.: 155





Antenna 3

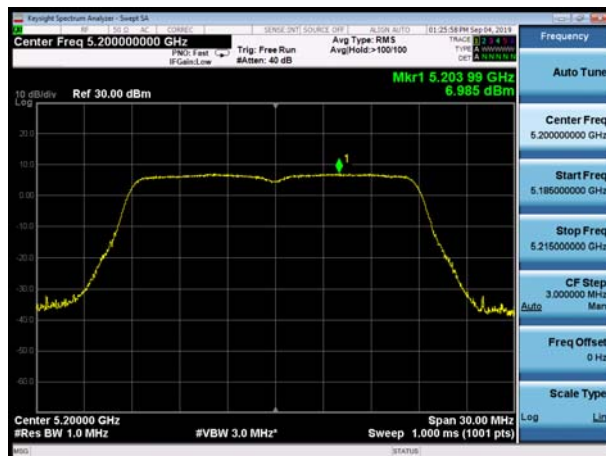
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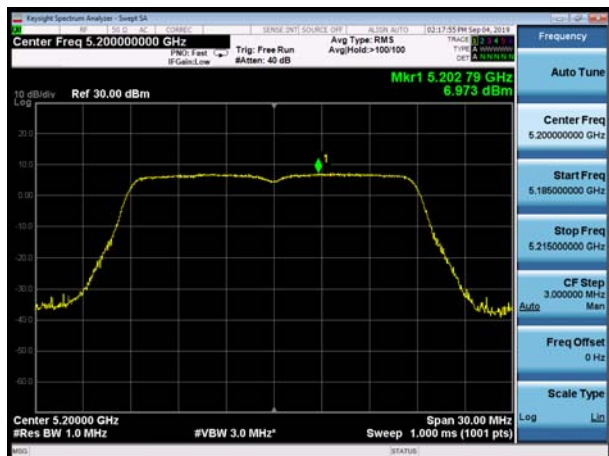
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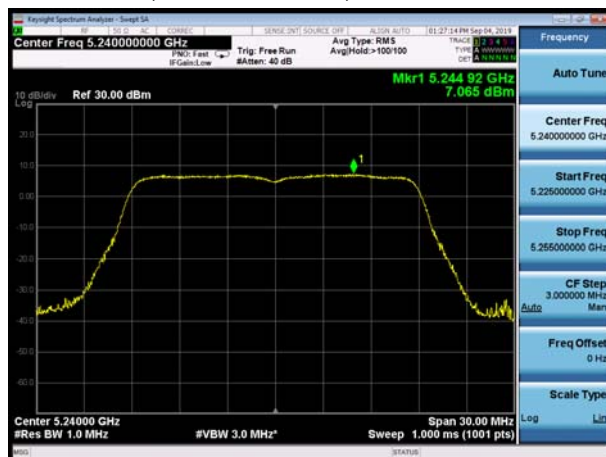
U-NII-1, 802.11n HT20, Channel No.: 40



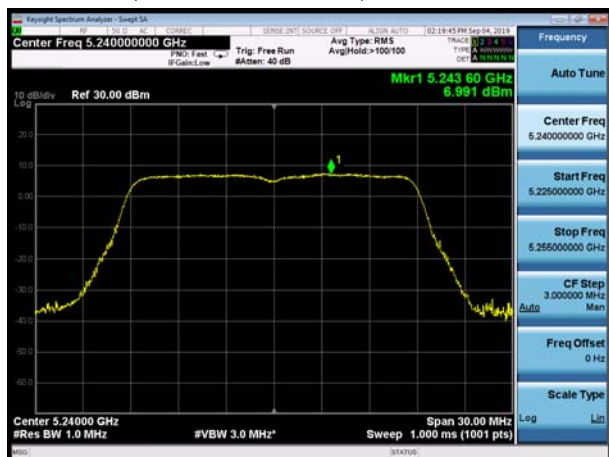
U-NII-1, 802.11ac VHT20, Channel No.: 40



U-NII-1, 802.11n HT20, Channel No.: 48



U-NII-1, 802.11ac VHT20, Channel No.: 48

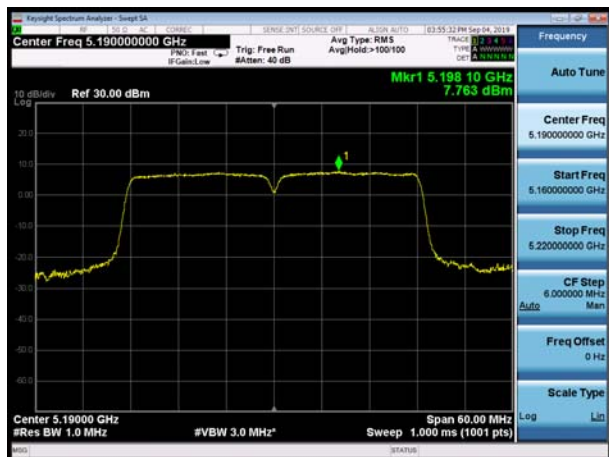




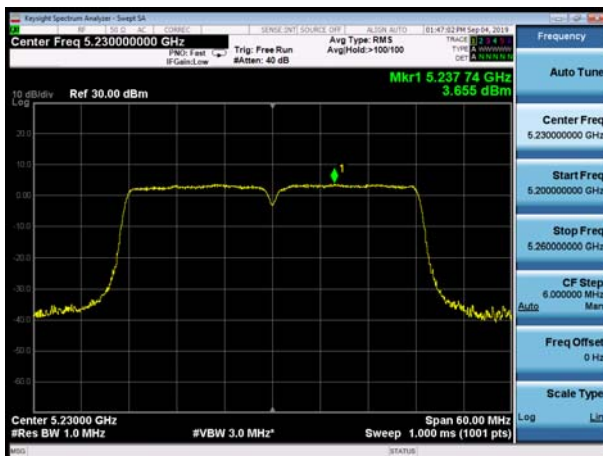
U-NII-1, 802.11n HT40, Channel No.: 38



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U-NII-1, 802.11n HT40, Channel No.: 46



U-NII-1, 802.11ac VHT40, Channel No.: 46

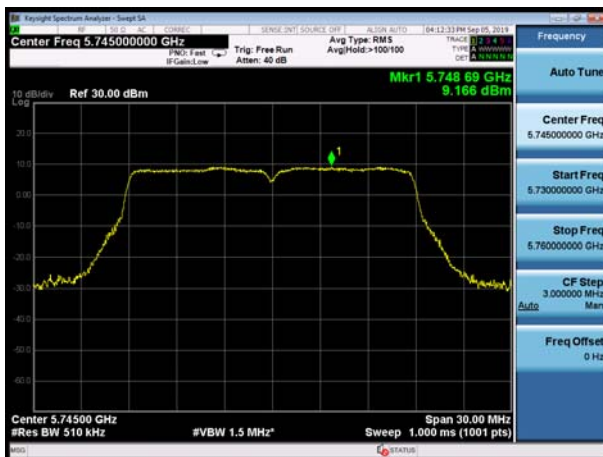


U-NII-1, 802.11ac VHT80, Channel No.: 42





U-NII-3, 802.11n HT20, Channel No.: 149



U-NII-3, 802.11ac VHT20, Channel No.: 149



U-NII-3, 802.11n HT20, Channel No.: 157



U-NII-3, 802.11ac VHT20, Channel No.: 157



U-NII-3, 802.11n HT20, Channel No.: 165



U-NII-3, 802.11ac VHT20, Channel No.: 165





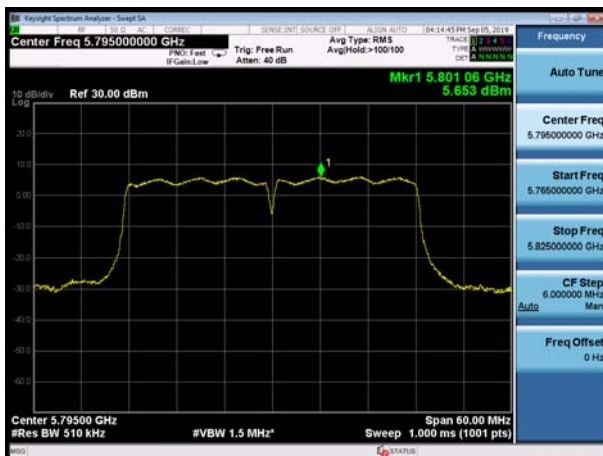
U-NII-3, 802.11n HT40, Channel No.: 151



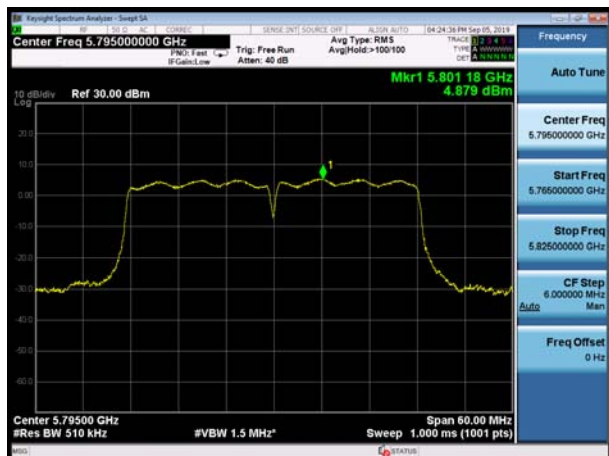
U-NII-3, 802.11ac VHT40, Channel No.: 151



U-NII-3, 802.11n HT40, Channel No.: 159



U-NII-3, 802.11ac VHT40, Channel No.: 159



U-NII-3, 802.11ac VHT80, Channel No.: 155





Antenna 4

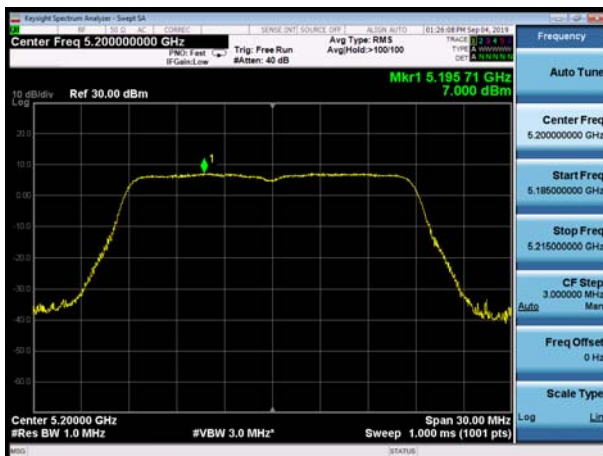
U-NII-1, 802.11n HT20, Channel No.: 36



U-NII-1, 802.11ac VHT20, Channel No.: 36



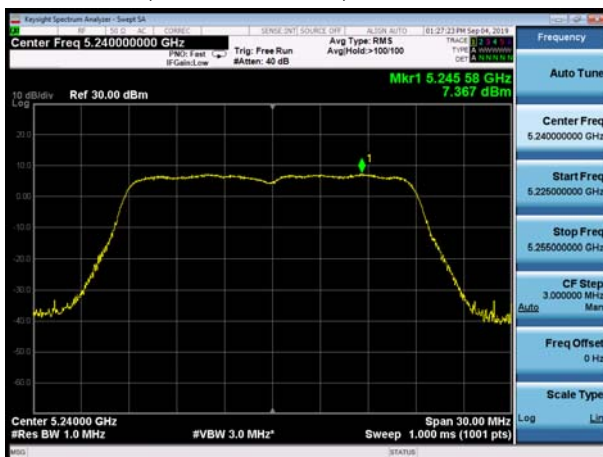
U-NII-1, 802.11n HT20, Channel No.: 40



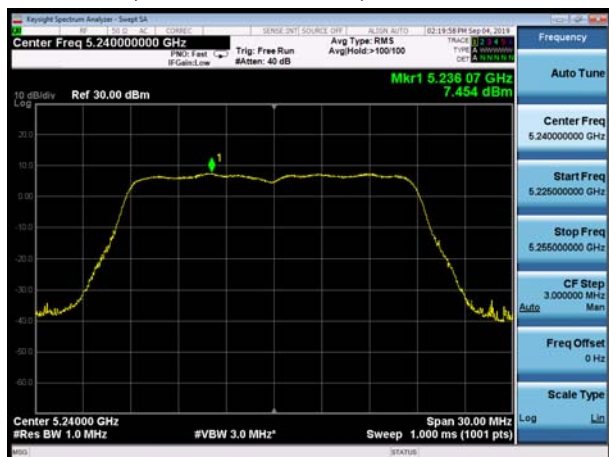
U-NII-1, 802.11ac VHT20, Channel No.: 40



U-NII-1, 802.11n HT20, Channel No.: 48



U-NII-1, 802.11ac VHT20, Channel No.: 48

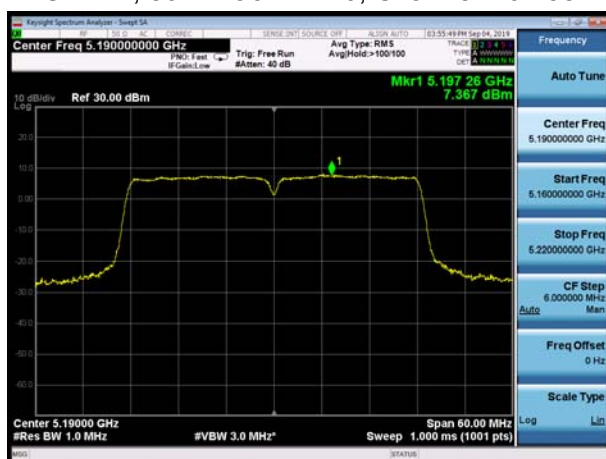




U-NII-1, 802.11n HT40, Channel No.: 38



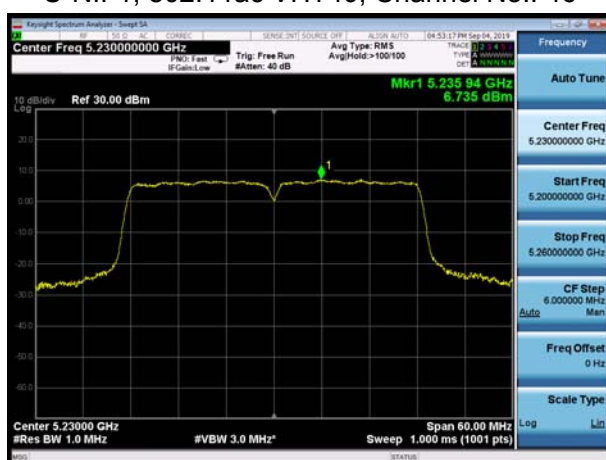
U-NII-1, 802.11ac VHT40, Channel No.: 38



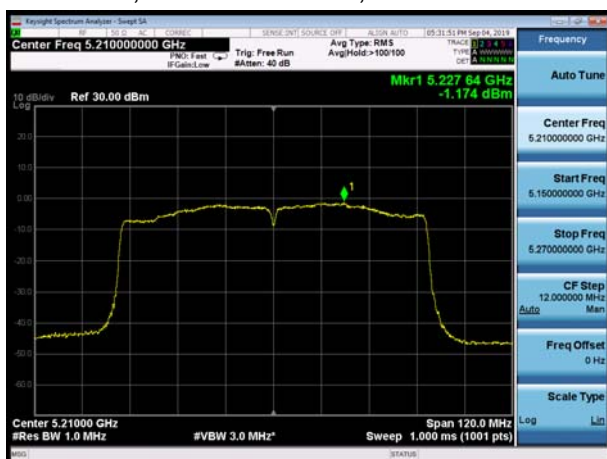
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U-NII-1, 802.11ac VHT40, Channel No.: 46

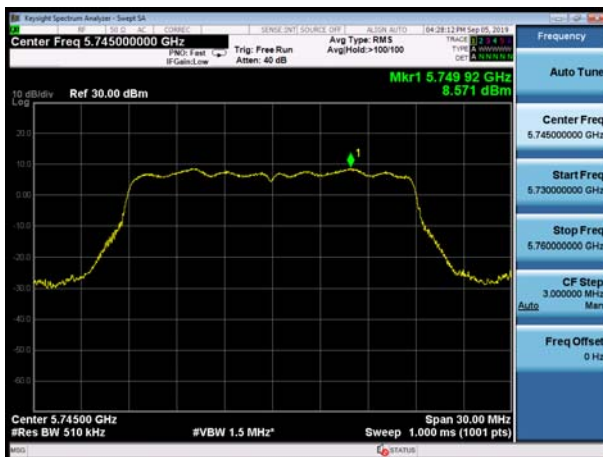


U-NII-1, 802.11ac VHT80, Channel No.: 42

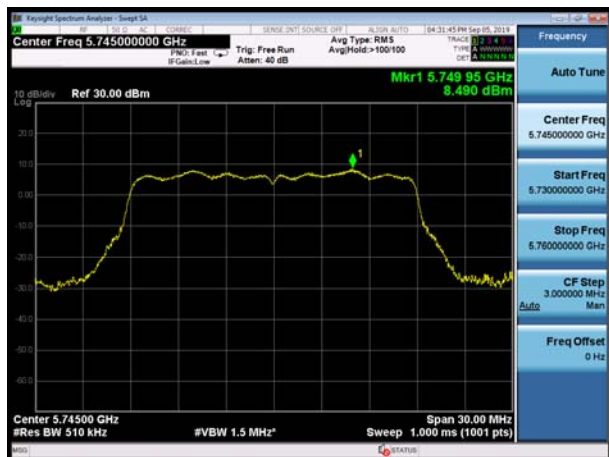




U-NII-3, 802.11n HT20, Channel No.: 149



U-NII-3, 802.11ac VHT20, Channel No.: 149



U-NII-3, 802.11n HT20, Channel No.: 157



U-NII-3, 802.11ac VHT20, Channel No.: 157



U-NII-3, 802.11n HT20, Channel No.: 165

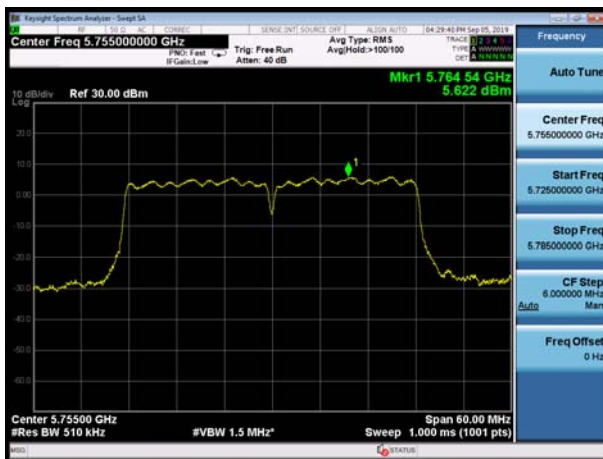


U-NII-3, 802.11ac VHT20, Channel No.: 165

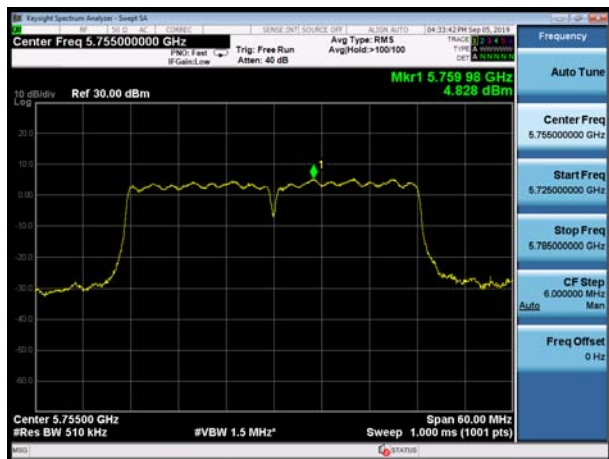




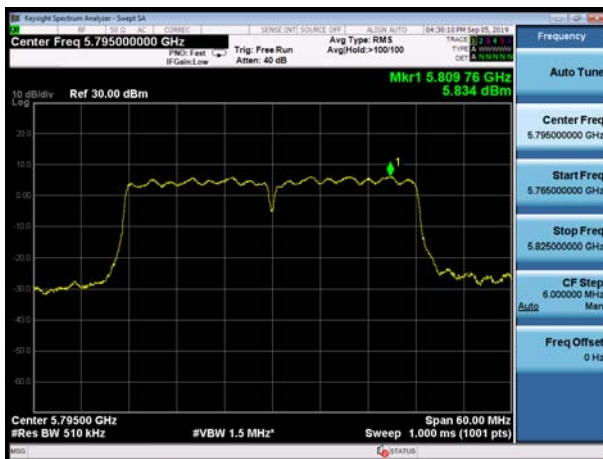
U-NII-3, 802.11n HT40, Channel No.: 151



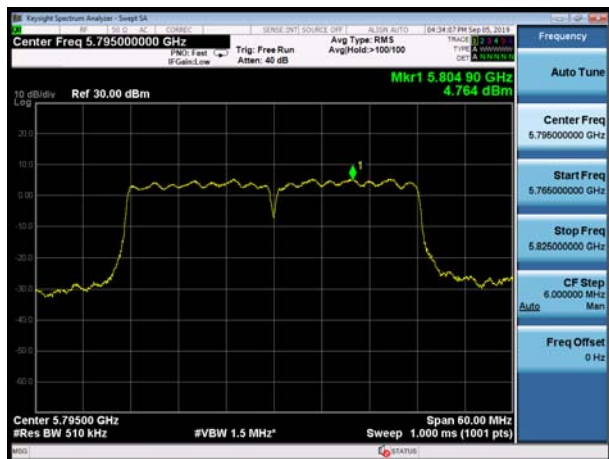
U-NII-3, 802.11ac VHT40, Channel No.: 151



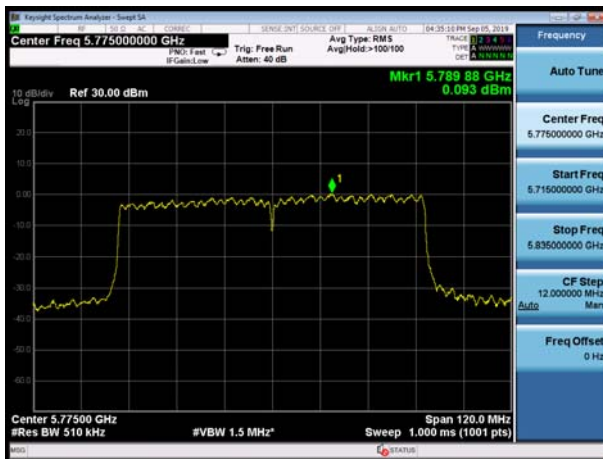
U-NII-3, 802.11n HT40, Channel No.: 159



U-NII-3, 802.11ac VHT40, Channel No.: 159



U-NII-3, 802.11ac VHT80, Channel No.: 155



5.5. Unwanted Emission

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The test set-up was made in accordance to the general provisions of ANSI C63.10-2013. The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The test was performed at the distance of 3 m between the EUT and the receiving antenna. The radiated emissions measurements were made in a typical installation configuration. Sweep the whole frequency band range from 9kHz to the 10th harmonic of the carrier, and the emissions less than 20 dB below the permissible value are reported.

During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turntable shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna. The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.

Set the spectrum analyzer in the following:

Below 1GHz (detector: Peak and Quasi-Peak)

RBW=100kHz / VBW=300kHz / Sweep=AUTO

Above 1GHz (detector: Peak):

I) Peak emission levels are measured by setting the instrument as follows:

- 1) RBW = 1 MHz.
- 2) VBW $\geq [3 \times \text{RBW}]$
- 3) Detector = peak.
- 4) Sweep time = auto.
- 5) Trace mode = max hold.
- 6) Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, then the time required for the trace to stabilize will increase by a factor of approximately $1 / D$, where D is the duty cycle.

II) Average emission levels are measured by setting the instrument as follows:

- a) RBW = 1 MHz.
- b) VBW $\geq [3 \times \text{RBW}]$.
- c) Detector = RMS (power averaging), if $[\text{span} / (\# \text{ of points in sweep})] \leq \text{RBW} / 2$. Satisfying this condition can require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, then the detector mode shall be set to peak.
- d) Averaging type = power (i.e., rms) (As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.)



e) Sweep time = auto.

f) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, then the number of traces shall be increased by a factor of $1 / D$, where D is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—then rather than turning ON and OFF with the transmit cycle, at least 100 traces shall be averaged.)

g) If tests are performed with the EUT transmitting at a duty cycle less than 98%, then a correction factor shall be added to the measurement results prior to comparing with the emission limit, to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:

1) If power averaging (rms) mode was used in the preceding step e), then the correction factor is $[10 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB shall be added to the measured emission levels.

2) If linear voltage averaging mode was used in the preceding step e), then the correction factor is $[20 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB shall be added to the measured emission levels.

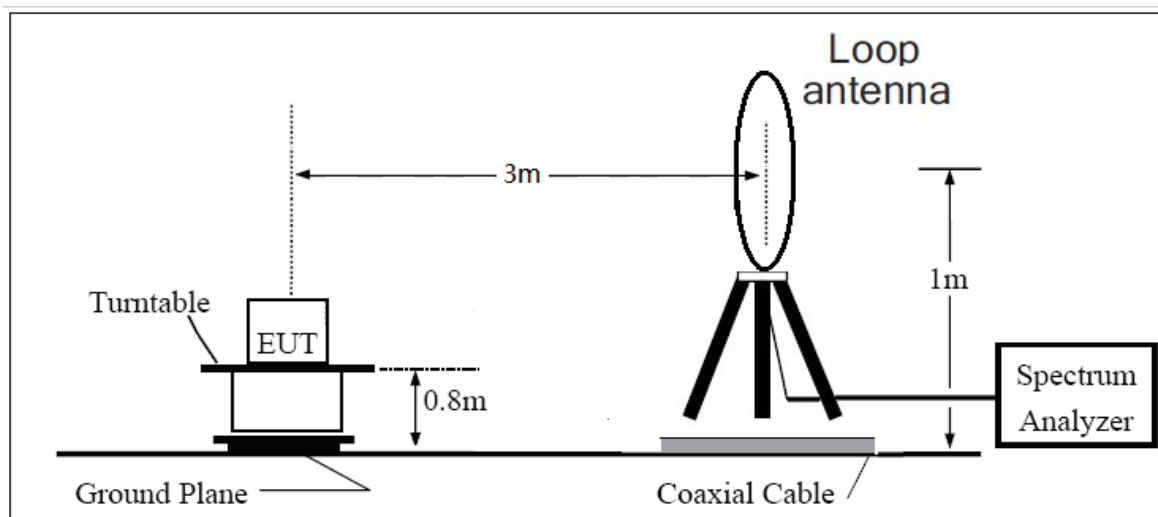
3) If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission.

Reduce the video bandwidth until no significant variations in the displayed signal are observed in subsequent traces, provided the video bandwidth is no less than 1 Hz. For regulatory requirements that specify averaging only over the transmit duration (e.g., digital transmission system [DTS] and Unlicensed National Information Infrastructure [U-NII]), the video bandwidth shall be greater than $[1 / (\text{minimum transmitter on time})]$ and no less than 1 Hz.

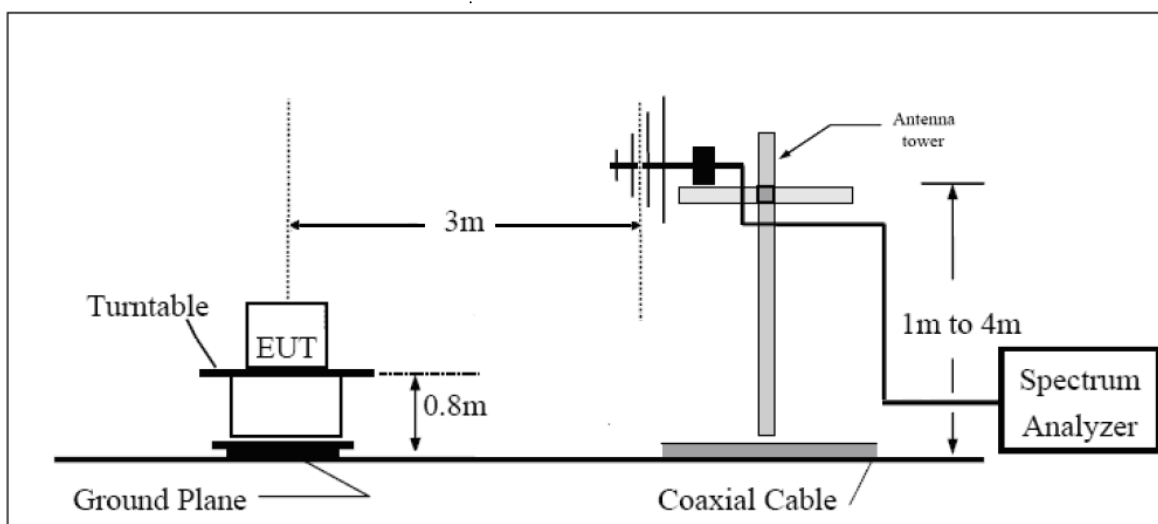
The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the loop antenna is vertical, others antenna are vertical and horizontal.

The test is in transmitting mode.

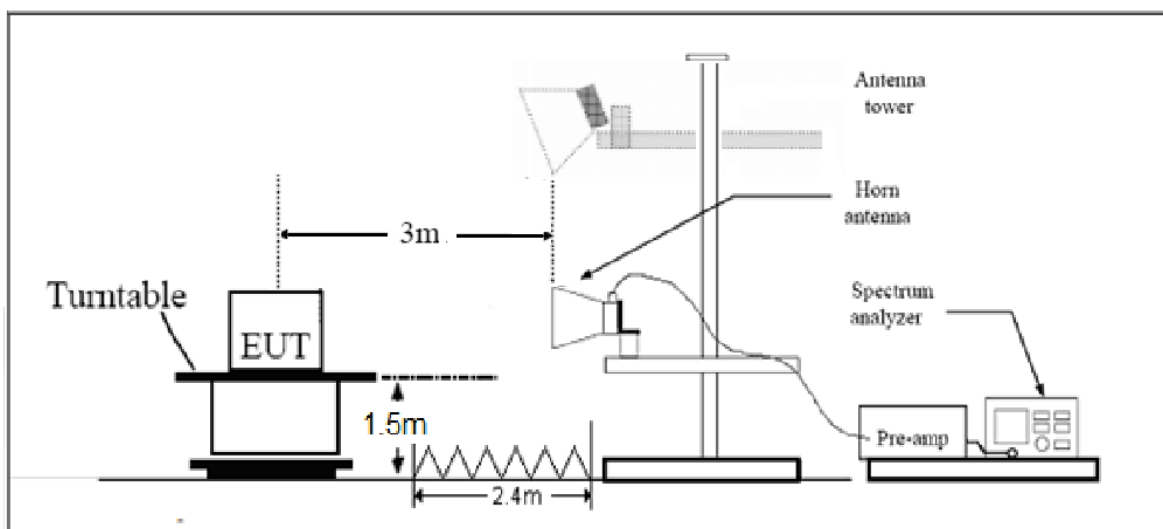
9KHz~~~30MHz



30MHz~~~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

**Limits**

- (1) For transmitters operating in the 5725-5850 MHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
- (2) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz(68.2dBμV/m).
- (3) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz(68.2dBμV/m).
- (4) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz(68.2dBμV/m).

Note: the following formula is used to convert the EIRP to field strength

§1、 $E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] - 20 \log(d[\text{meters}]) + 104.77$, where E = field strength and

d = distance at which field strength limit is specified in the rules;

§2、 $E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] + 95.2$, for d = 3 meters

- (5) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table.

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
0.009–0.490	2400/F(kHz)	/
0.490–1.705	24000/F(kHz)	/
1.705–30.0	30	/
30-88	100	40
88-216	150	43.5
216-960	200	46
Above960	500	54

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

Measurement Uncertainty

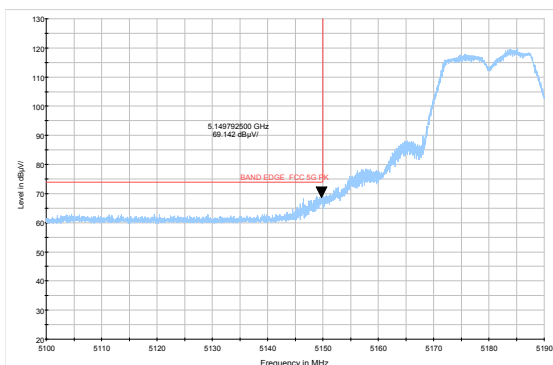
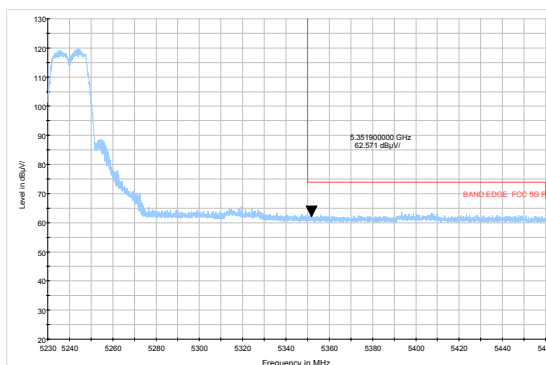
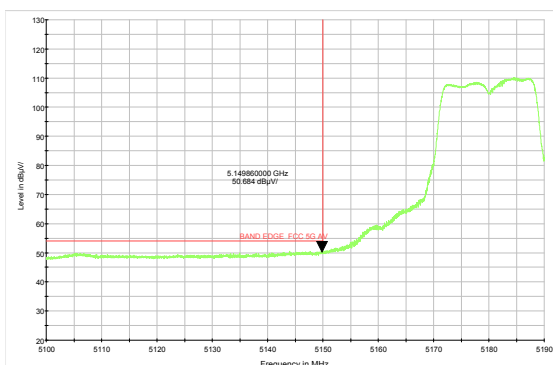
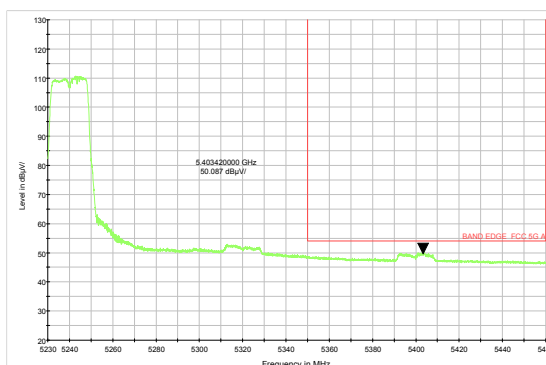
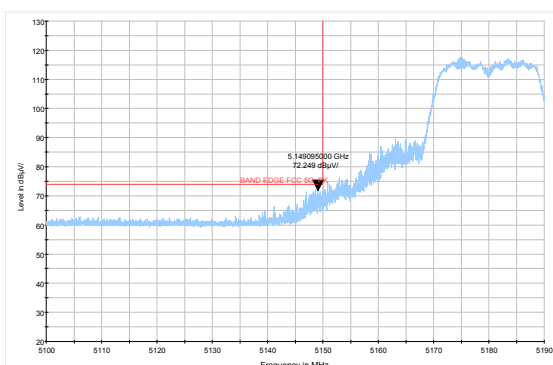
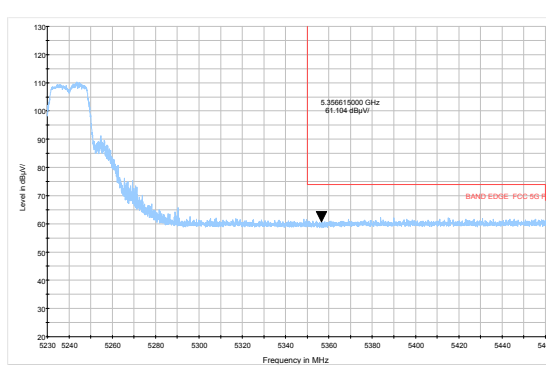
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

Frequency	Uncertainty
9KHz-30MHz	3.55 dB
30MHz-200MHz	4.02 dB
200MHz-1GHz	3.28 dB
1GHz-18G	3.70 dB
18GHz-26.5GHz	5.78 dB
26.5G-40GHz	5.82 dB

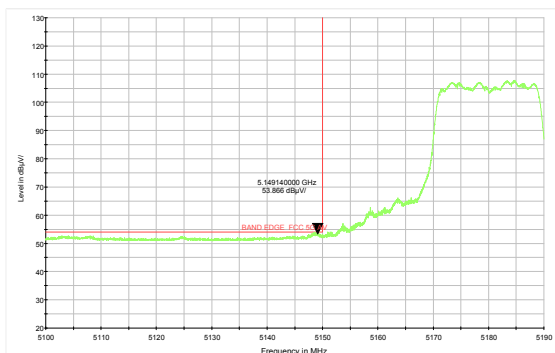
**Test Results:**

The modulation and bandwidth are similar for 802.11n mode for 20MHz/40MHz and 802.11ac mode for V20MHz/V40MHz, therefore investigated worst case to representative mode in test report.

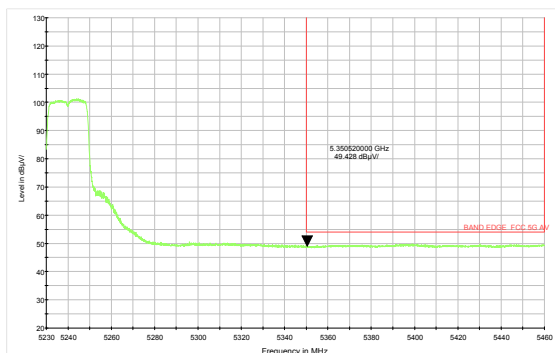
The signal beyond the limit is carrier.

U-NII-1**802.11a-Channel 36: Peak****802.11a-Channel 48: Peak****802.11a-Channel 36: Average****802.11a-Channel 48: Average****802.11n HT20-Channel 36: Peak****802.11n HT20-Channel 48: Peak**

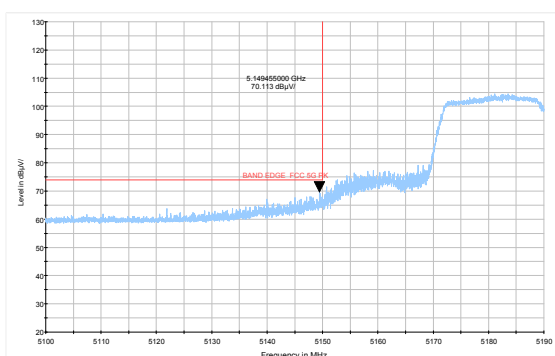
802.11n HT20-Channel 36: Average



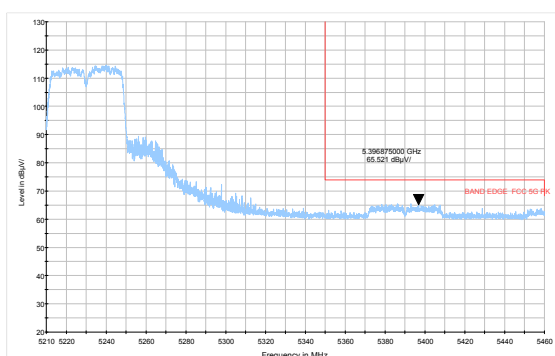
802.11n HT20-Channel 48: Average



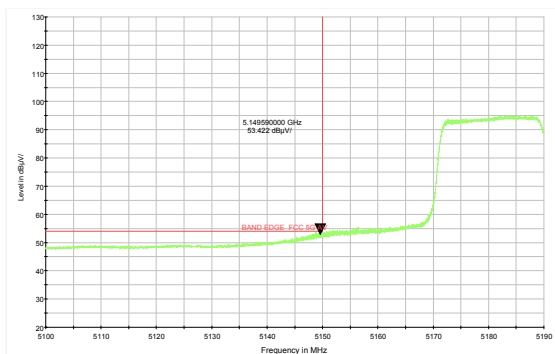
802.11n HT40-Channel 38: Peak



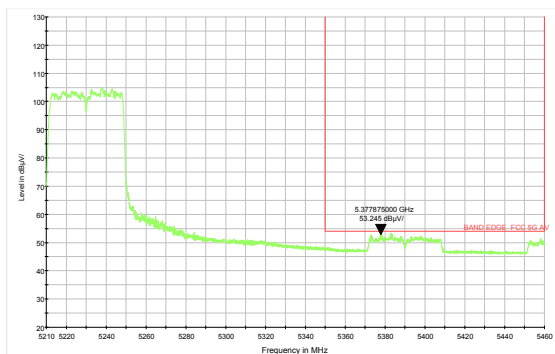
802.11n HT40-Channel 46: Peak



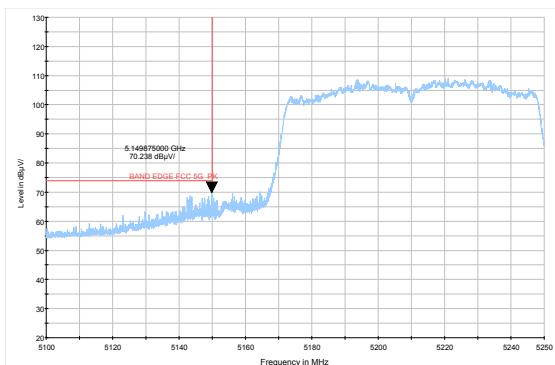
802.11n HT40-Channel 38: Average



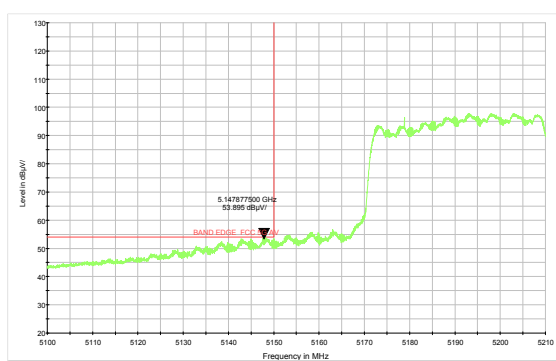
802.11n HT40-Channel 46: Average



802.11ac VHT80 –Channel 42: Peak



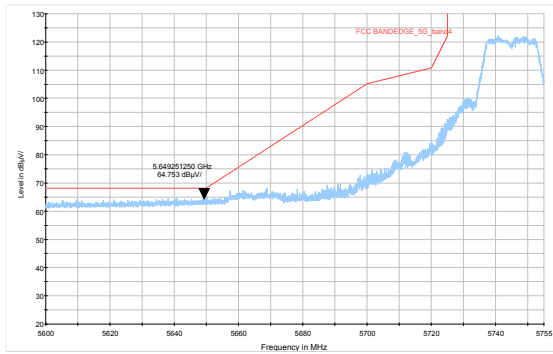
802.11ac VHT80- Channel 42: Average



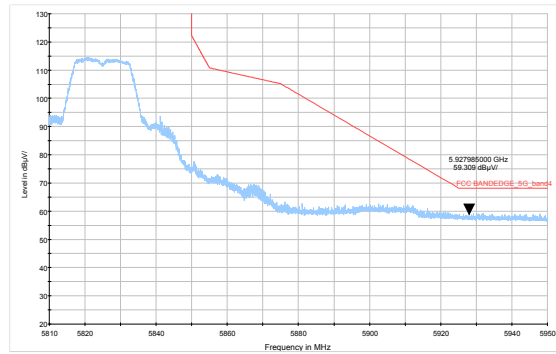


U-NII-3

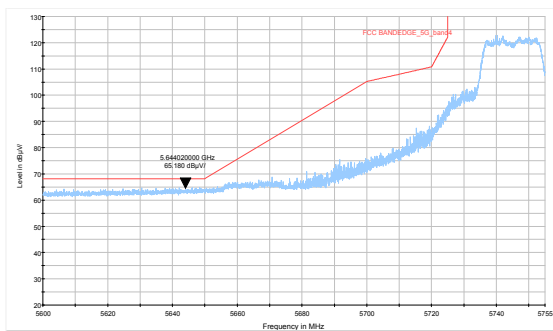
802.11a-Channel 149: Peak



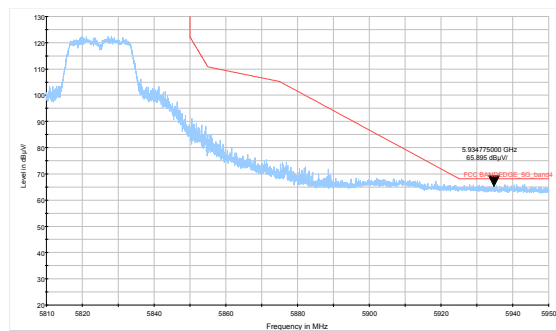
802.11a-Channel 165: Peak



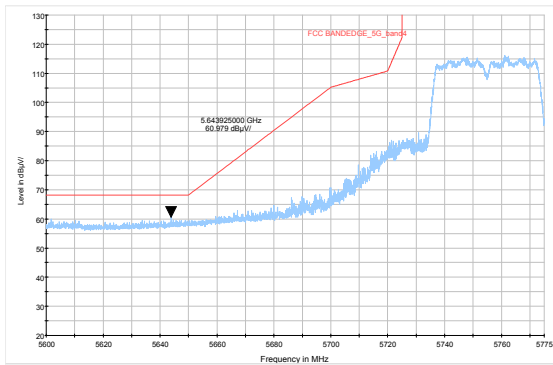
802.11n HT20-Channel 149: Peak



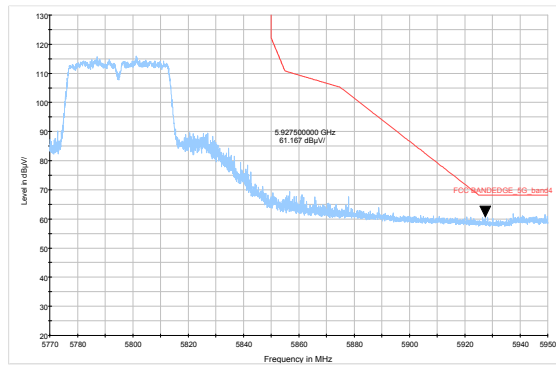
802.11n HT20-Channel 165: Peak



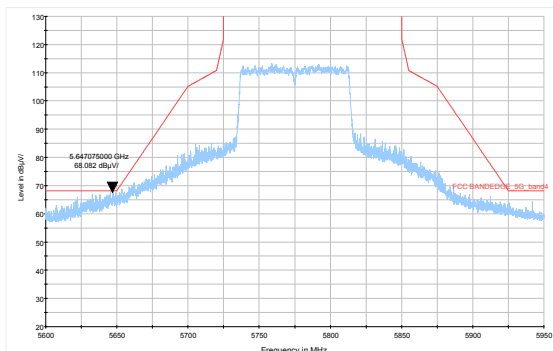
802.11n HT40-Channel 151: Peak



802.11n HT40-Channel 159: Peak



802.11ac VHT80- Channel 155: Peak



Result of RE

Test result

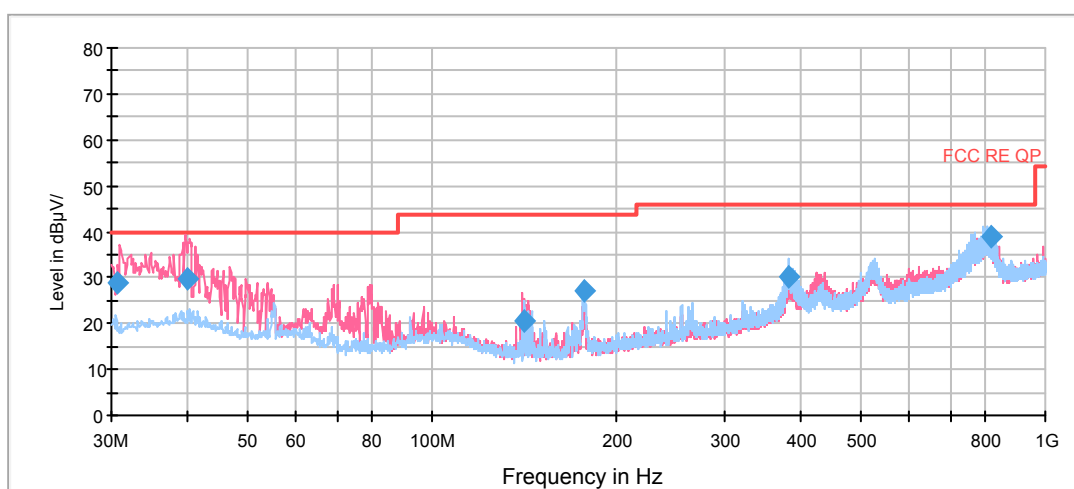
Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the Emissions in the frequency band 9kHz-30MHz and 26.5GHz-40GHz are more than 20dB below the limit are not reported.

After the pretest, MIMO Antenna 1 was selected as the worst antenna.

During the test, the Radiates Emission from 30MHz to 1GHz was performed in all modes with all channels, 802.11a, Channel 157 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Continuous TX mode:

RE 0.03-1GHz QP Class B



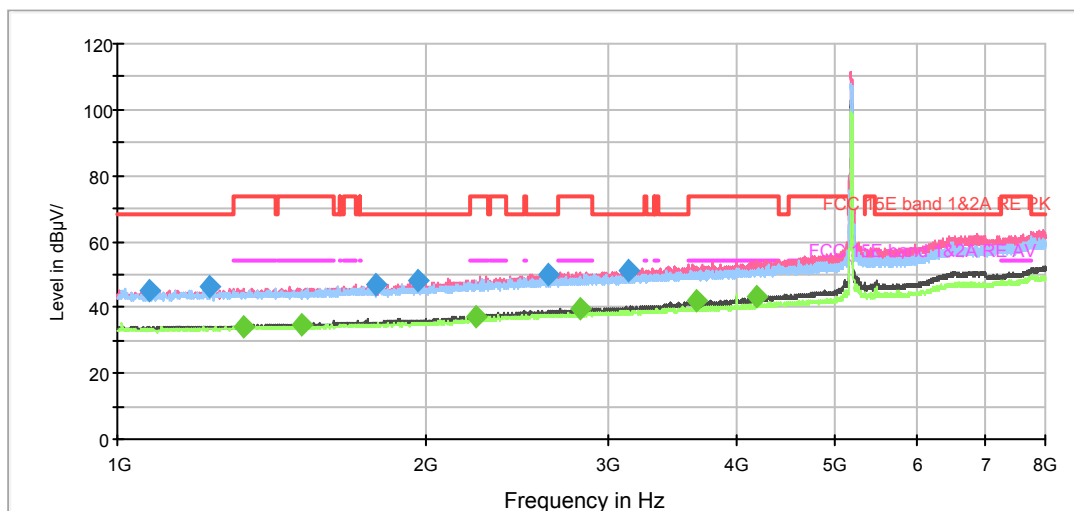
Radiates Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
30.730000	28.9	100.0	V	214.0	14.5	11.1	40.0
39.938750	29.6	100.0	V	178.0	17.0	10.4	40.0
141.301250	20.4	100.0	V	126.0	9.6	23.1	43.5
176.592500	26.9	125.0	H	76.0	10.9	16.6	43.5
382.796250	30.1	100.0	H	0.0	18.9	15.9	46.0
815.336250	38.8	114.0	V	38.0	25.1	7.2	46.0

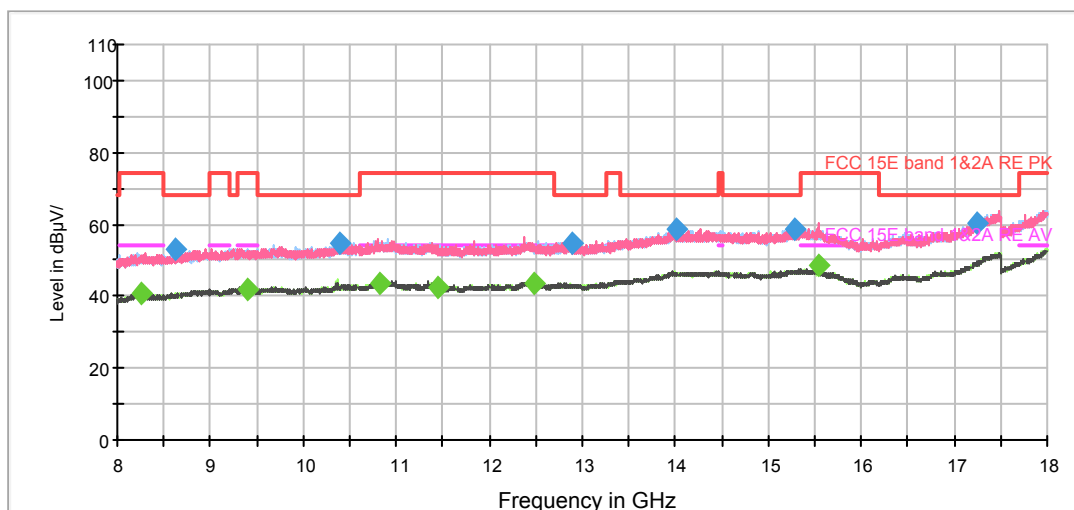
Remark: 1. Correction Factor = Antenna factor+ Insertion loss(cable loss+amplifier gain)

2. Margin = Limit – Quasi-Peak

802.11a CH36



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



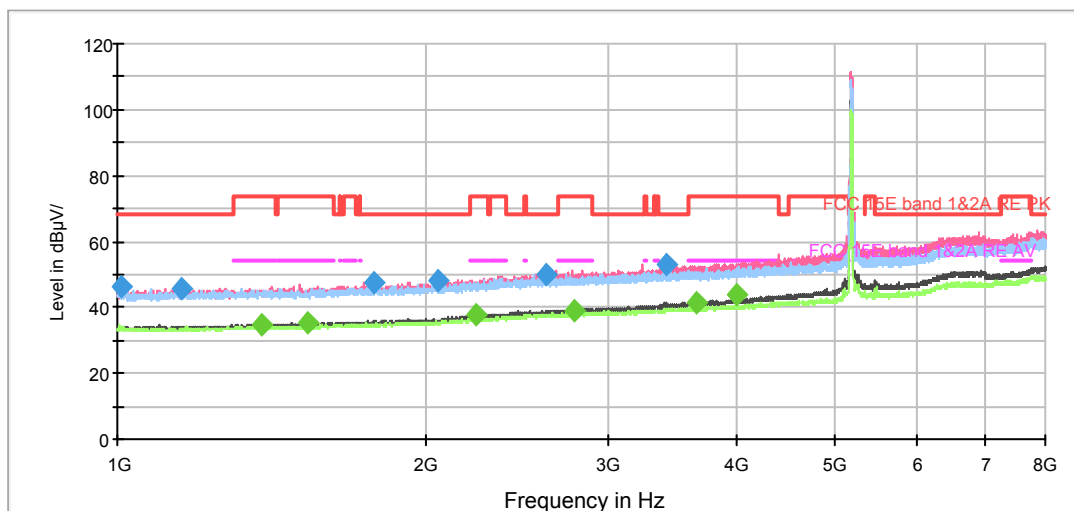
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1072.625000	44.8	100.0	H	75.0	-1.5	23.4	68.2
1230.125000	46.4	100.0	V	350.0	-1.2	21.8	68.2
1784.000000	47.0	100.0	V	245.0	0.6	21.2	68.2
1962.500000	48.1	100.0	V	263.0	1.0	20.1	68.2
2621.375000	50.1	100.0	V	236.0	3.8	18.1	68.2
3142.000000	51.3	100.0	V	334.0	5.1	16.9	68.2

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

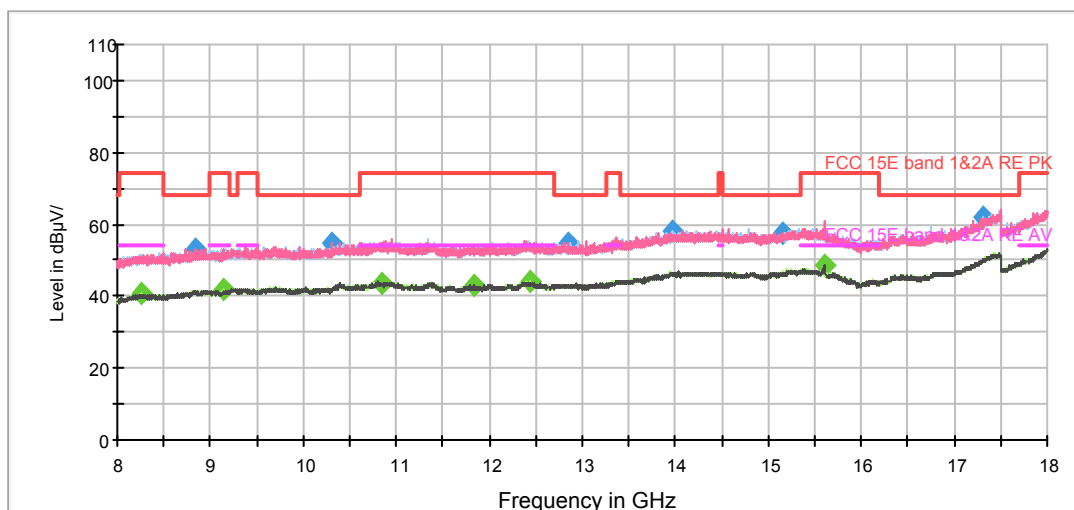
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1329.875000	34.2	100.0	V	308.0	-0.9	19.8	54.0
1508.375000	34.7	100.0	V	359.0	-0.4	19.3	54.0
2233.750000	37.1	100.0	V	181.0	2.4	16.9	54.0
2823.500000	39.3	100.0	V	0.0	4.4	14.7	54.0
3661.750000	41.8	100.0	V	0.0	6.5	12.2	54.0
4199.000000	43.1	100.0	V	0.0	7.8	10.9	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH40



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



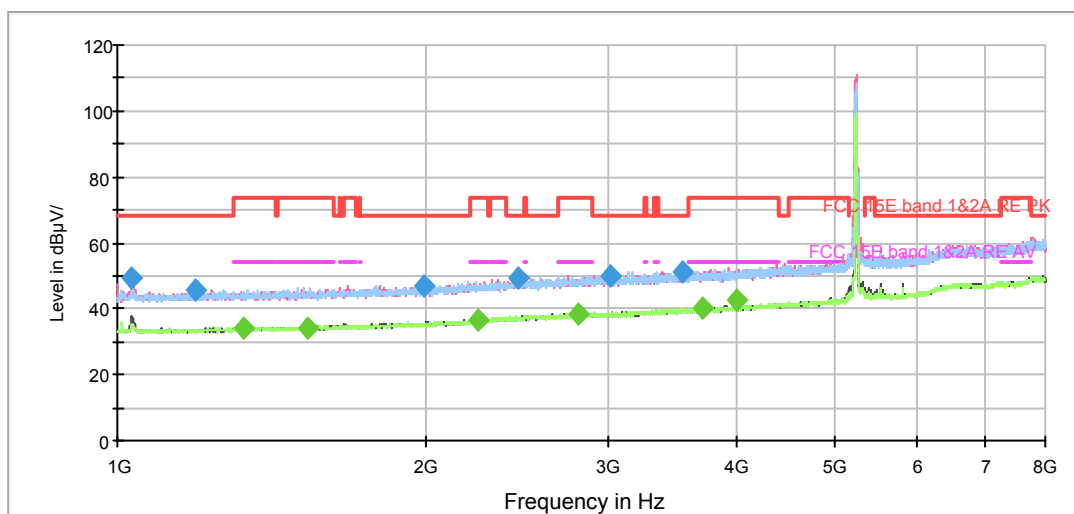
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1010.500000	46.5	100.0	H	16.0	-1.9	21.7	68.2
1154.875000	45.7	100.0	H	3.0	-1.3	22.5	68.2
1777.875000	47.3	100.0	V	132.0	0.6	20.9	68.2
2049.125000	48.1	100.0	V	344.0	1.4	20.1	68.2
2615.250000	50.0	100.0	H	46.0	3.8	18.2	68.2
3421.125000	52.8	100.0	V	0.0	5.9	15.4	68.2

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

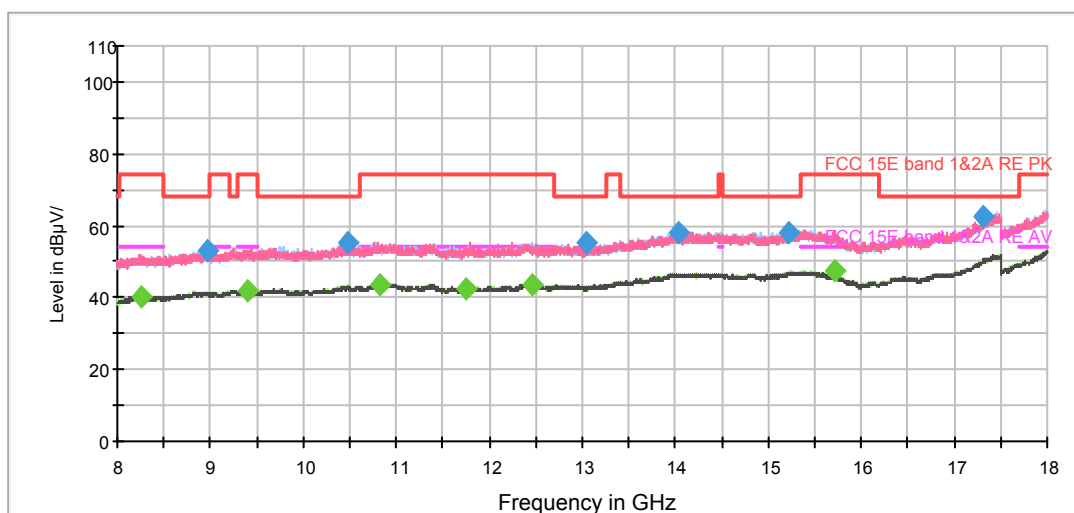
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1381.500000	35.0	100.0	V	359.0	-0.7	19.0	54.0
1534.625000	35.1	100.0	V	257.0	-0.3	18.9	54.0
2232.875000	37.5	100.0	V	344.0	2.4	16.5	54.0
2788.500000	39.2	100.0	V	352.0	4.3	14.8	54.0
3656.500000	41.3	100.0	V	266.0	6.5	12.7	54.0
4000.375000	43.6	100.0	V	352.0	7.3	10.4	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH48



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



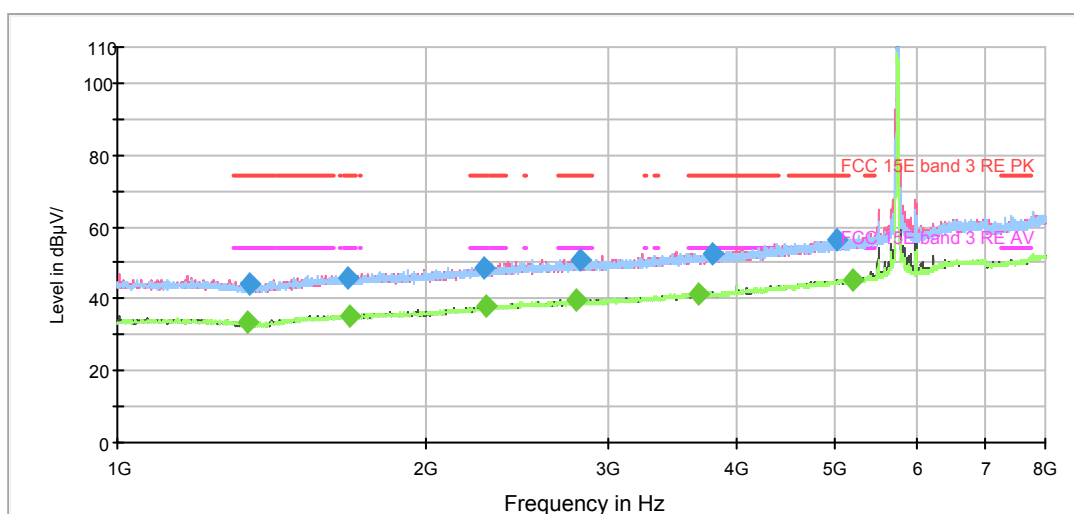
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1033.250000	49.4	100.0	V	241.0	-1.7	18.8	68.2
1189.000000	45.6	100.0	V	341.0	-1.2	22.6	68.2
1988.750000	47.0	100.0	V	358.0	1.1	21.2	68.2
2453.375000	49.4	100.0	V	355.0	3.4	18.8	68.2
3023.875000	50.0	100.0	H	57.0	4.8	18.2	68.2
3553.250000	51.1	100.0	H	1.0	6.3	17.1	68.2

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

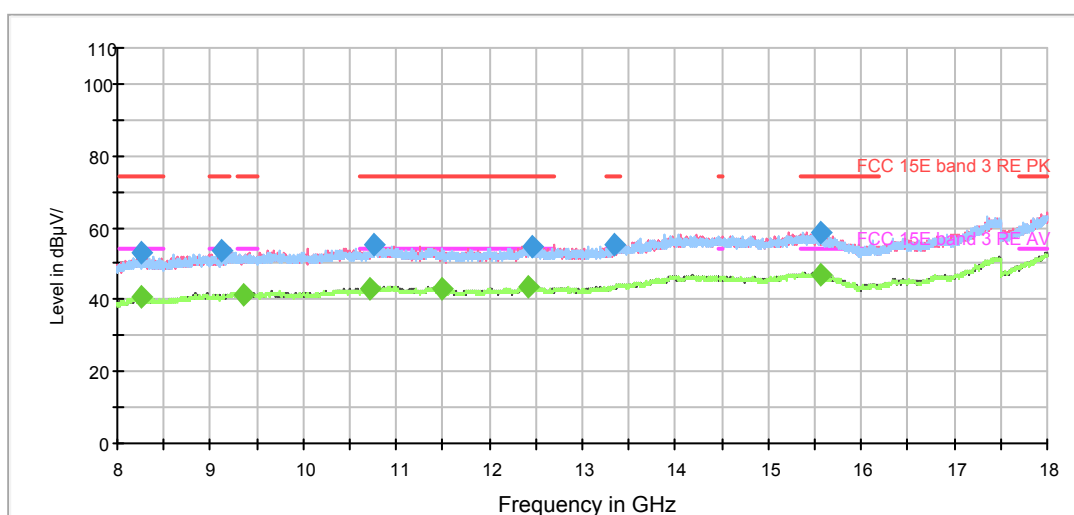
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1328.125000	33.9	100.0	V	0.0	-0.9	20.1	54.0
1529.375000	34.2	100.0	V	161.0	-0.3	19.8	54.0
2240.750000	36.4	100.0	V	320.0	2.4	17.6	54.0
2806.000000	38.4	100.0	H	14.0	4.3	15.6	54.0
3707.250000	40.0	100.0	H	110.0	6.5	14.0	54.0
3999.500000	42.5	100.0	H	75.0	7.3	11.5	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH149



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



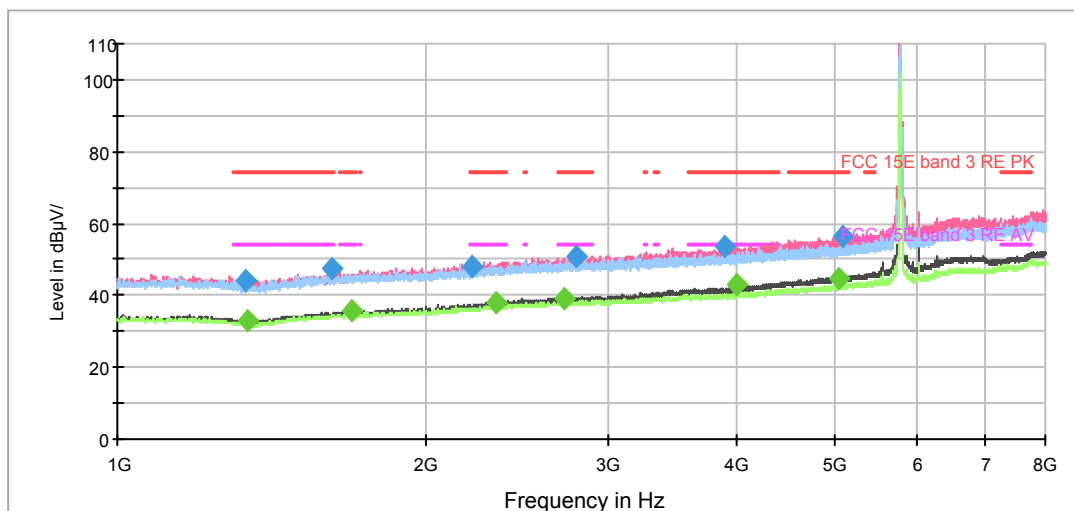
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1342.125000	44.3	200.0	H	0.0	-0.9	29.7	74.0
1679.000000	46.1	200.0	H	158.0	0.3	27.9	74.0
2272.250000	48.5	200.0	V	0.0	2.7	25.5	74.0
2825.250000	50.8	200.0	V	353.0	4.4	23.2	74.0
3795.625000	52.4	200.0	V	335.0	6.8	21.6	74.0
5017.125000	56.3	200.0	V	346.0	9.7	17.7	74.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

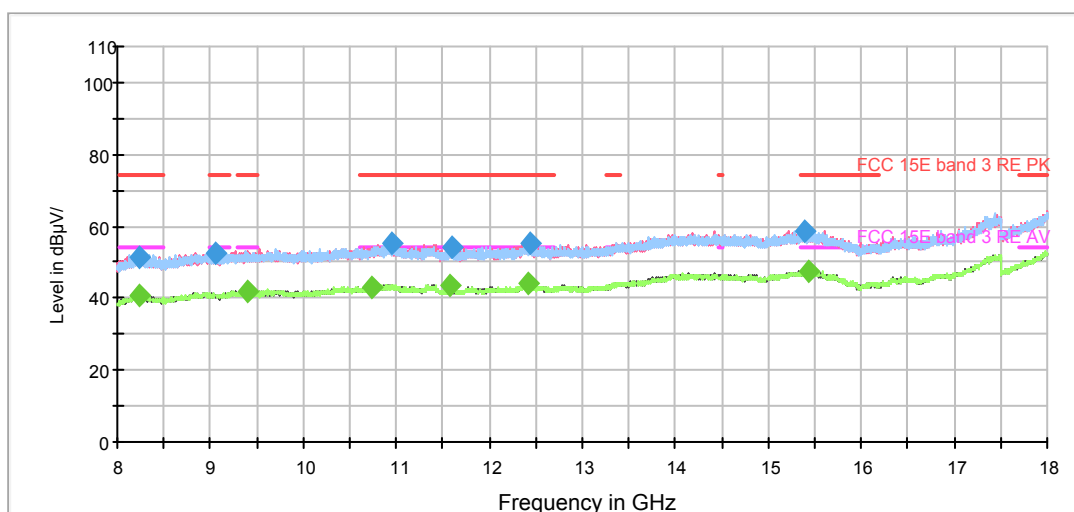
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1338.625000	33.4	200.0	H	275.0	-0.9	20.6	54.0
1683.375000	35.3	200.0	H	0.0	0.3	18.7	54.0
2285.375000	37.9	200.0	V	335.0	2.7	16.1	54.0
2801.625000	39.4	200.0	H	3.0	4.3	14.6	54.0
3680.125000	41.5	200.0	H	5.0	6.5	12.5	54.0
5188.625000	45.3	200.0	V	178.0	10.2	8.7	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH157



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



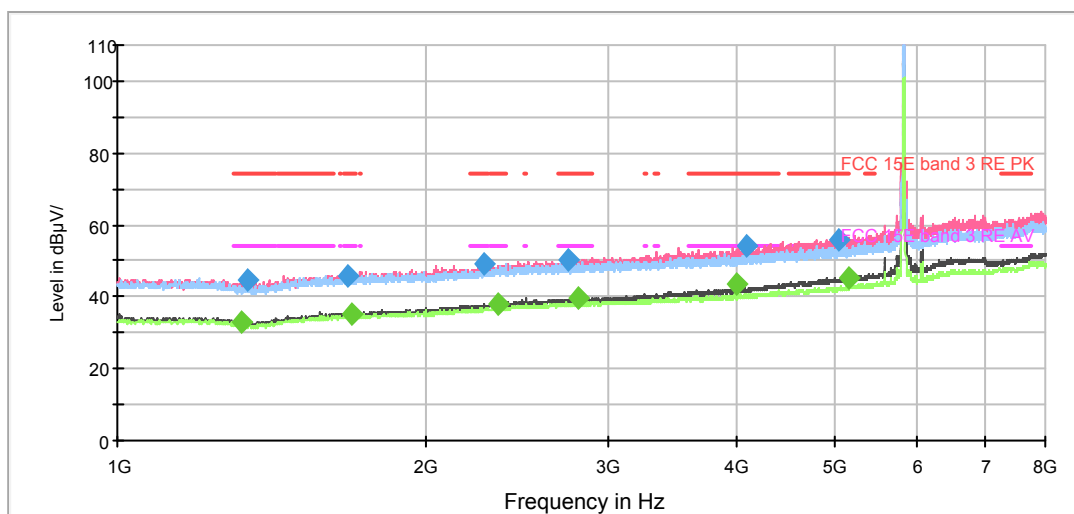
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1332.500000	43.9	200.0	V	268.0	-0.9	30.1	74.0
1614.250000	47.3	200.0	V	358.0	0.0	26.7	74.0
2218.875000	48.1	200.0	V	352.0	2.3	25.9	74.0
2799.000000	51.0	200.0	V	352.0	4.3	23.0	74.0
3891.000000	53.7	200.0	V	352.0	7.1	20.3	74.0
5079.250000	56.5	200.0	V	0.0	9.8	17.5	74.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

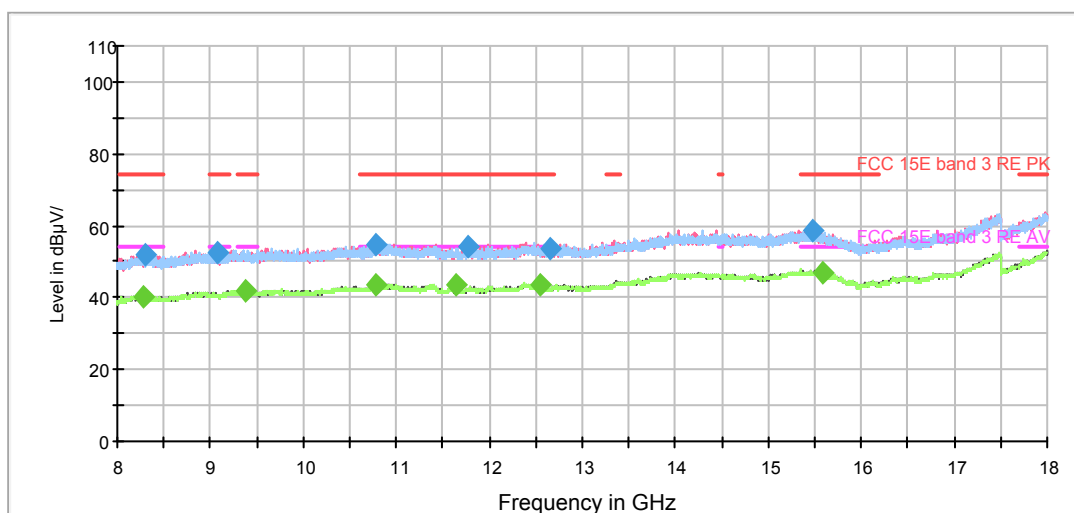
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1341.250000	33.0	200.0	V	359.0	-0.9	21.0	54.0
1693.875000	35.6	200.0	V	246.0	0.4	18.4	54.0
2337.875000	37.9	200.0	V	268.0	3.0	16.1	54.0
2723.750000	39.3	200.0	V	257.0	4.1	14.7	54.0
3999.500000	42.7	200.0	V	348.0	7.3	11.3	54.0
5031.125000	44.9	200.0	V	0.0	9.7	9.1	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11a CH165



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



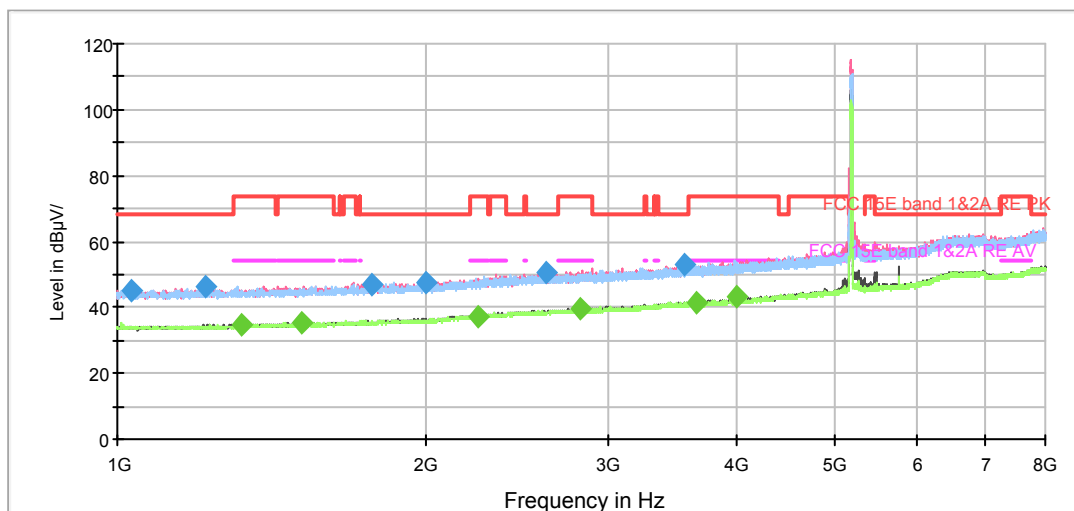
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1341.250000	44.5	200.0	V	184.0	-0.9	29.5	74.0
1672.875000	46.0	200.0	V	356.0	0.3	28.0	74.0
2270.500000	48.9	200.0	V	197.0	2.6	25.1	74.0
2751.750000	50.3	200.0	V	197.0	4.2	23.7	74.0
4095.750000	54.1	200.0	V	301.0	7.6	19.9	74.0
5039.000000	55.7	200.0	V	197.0	9.8	18.3	74.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

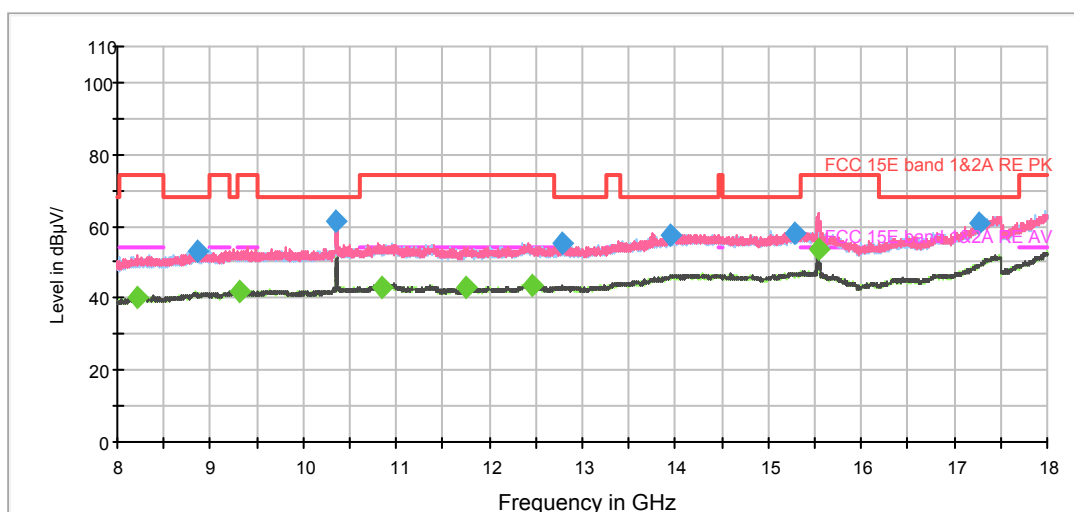
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1323.750000	33.1	200.0	V	290.0	-0.9	20.9	54.0
1688.625000	35.4	200.0	V	337.0	0.4	18.6	54.0
2347.500000	37.8	200.0	V	337.0	3.0	16.2	54.0
2808.625000	39.6	200.0	V	358.0	4.3	14.4	54.0
3999.500000	43.7	200.0	V	348.0	7.3	10.3	54.0
5144.000000	45.5	200.0	V	343.0	10.1	8.5	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH36



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



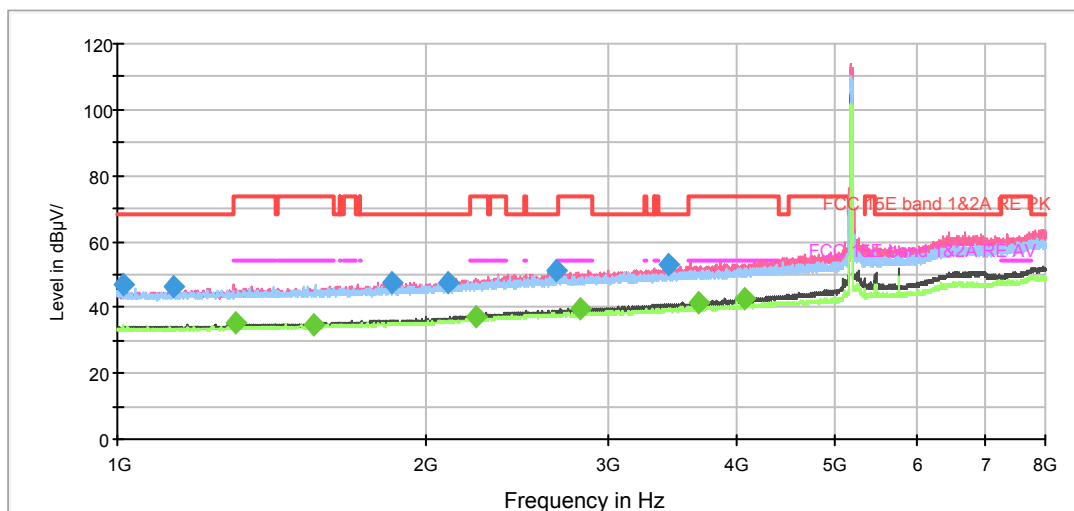
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1034.125000	45.3	100.0	H	0.0	-1.7	22.9	68.2
1217.000000	46.2	100.0	H	32.0	-1.2	22.0	68.2
1772.625000	46.6	100.0	V	206.0	0.6	21.6	68.2
1994.875000	47.6	100.0	V	0.0	1.1	20.6	68.2
2609.125000	50.7	100.0	V	353.0	3.8	17.5	68.2
3557.625000	53.2	100.0	V	0.0	6.3	15.0	68.2

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

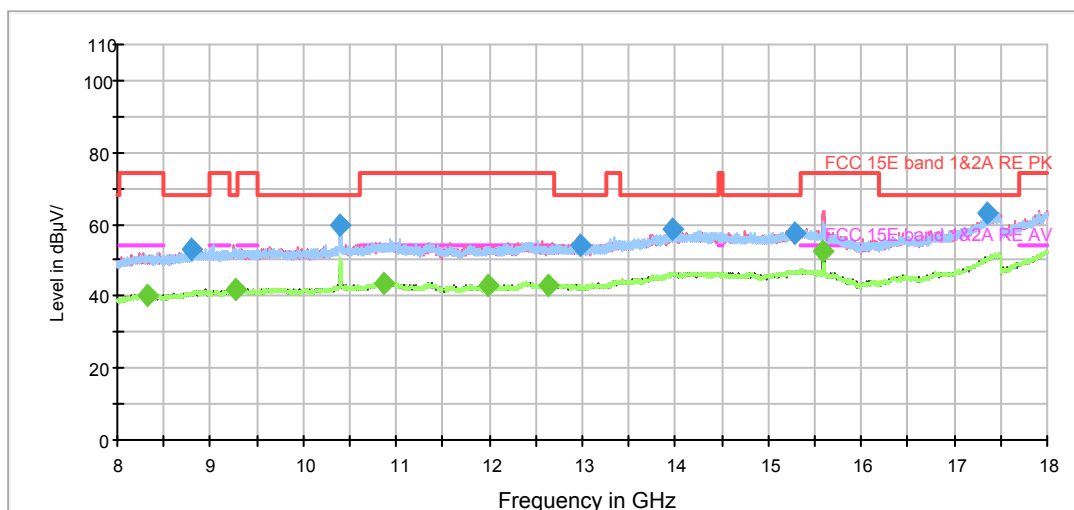
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1323.750000	34.7	100.0	H	89.0	-0.9	19.3	54.0
1509.250000	35.1	100.0	V	353.0	-0.4	18.9	54.0
2241.625000	37.3	100.0	H	0.0	2.4	16.7	54.0
2820.875000	39.4	100.0	V	0.0	4.4	14.6	54.0
3653.875000	41.3	100.0	V	0.0	6.5	12.7	54.0
3999.500000	43.0	100.0	H	69.0	7.3	11.0	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH40



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



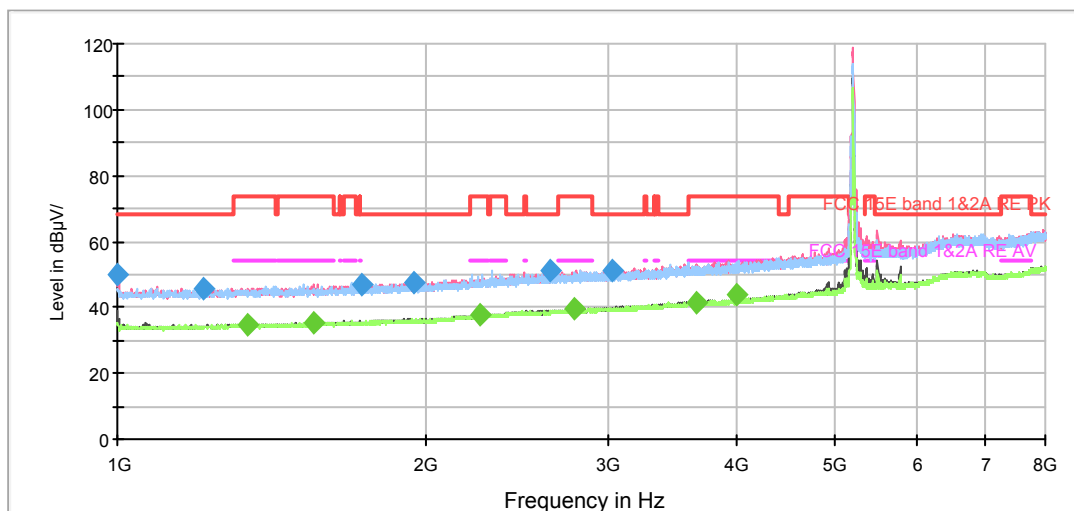
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1011.375000	46.8	100.0	H	218.0	-1.9	21.4	68.2
1133.875000	46.3	100.0	V	260.0	-1.3	21.9	68.2
1849.625000	47.6	100.0	V	313.0	0.7	20.6	68.2
2093.750000	47.5	100.0	V	348.0	1.6	20.7	68.2
2668.625000	51.2	100.0	V	322.0	3.9	17.0	68.2
3445.625000	52.9	100.0	V	322.0	6.0	15.3	68.2

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

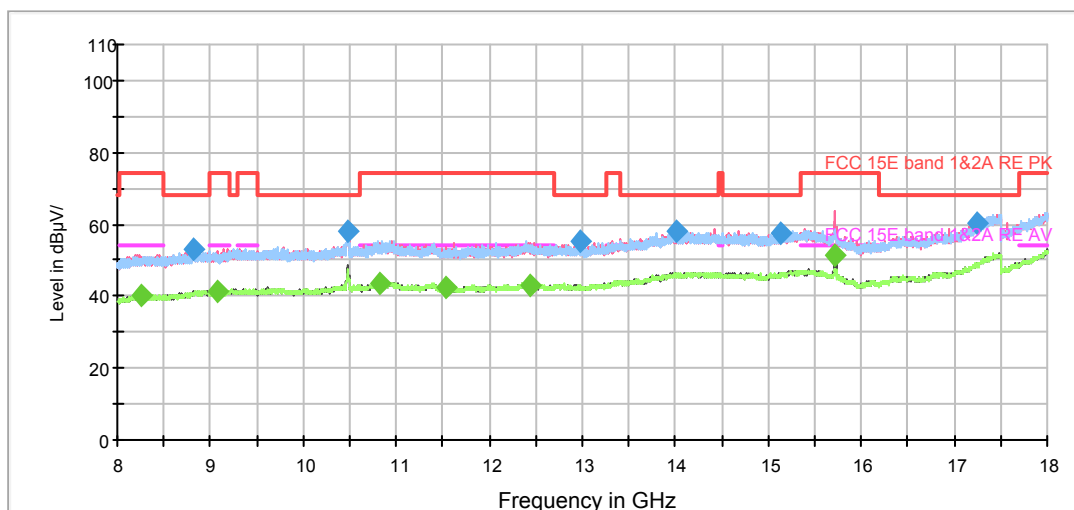
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1301.000000	35.1	100.0	V	338.0	-1.0	18.9	54.0
1550.375000	34.7	100.0	V	0.0	-0.2	19.3	54.0
2238.125000	37.4	100.0	V	0.0	2.4	16.6	54.0
2816.500000	39.4	100.0	V	305.0	4.3	14.6	54.0
3674.000000	41.3	100.0	V	358.0	6.5	12.7	54.0
4084.375000	42.4	100.0	V	175.0	7.6	11.6	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH48



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



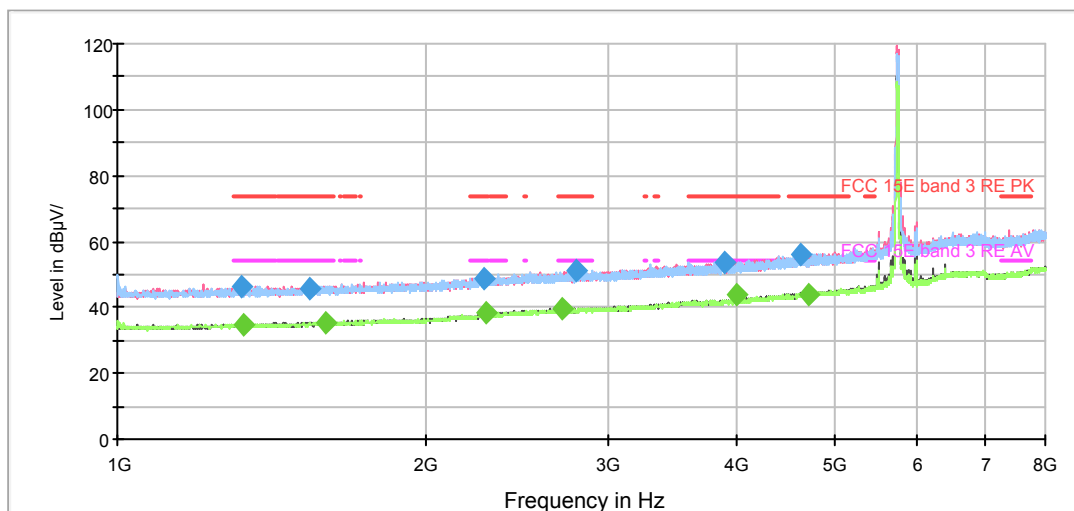
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1000.000000	49.8	100.0	V	94.0	-2.0	18.4	68.2
1214.375000	45.7	100.0	V	196.0	-1.2	22.5	68.2
1733.250000	47.1	100.0	V	0.0	0.5	21.1	68.2
1939.750000	47.6	100.0	H	0.0	1.0	20.6	68.2
2642.375000	51.2	100.0	H	4.0	3.9	17.0	68.2
3037.875000	51.3	100.0	V	306.0	4.8	16.9	68.2

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

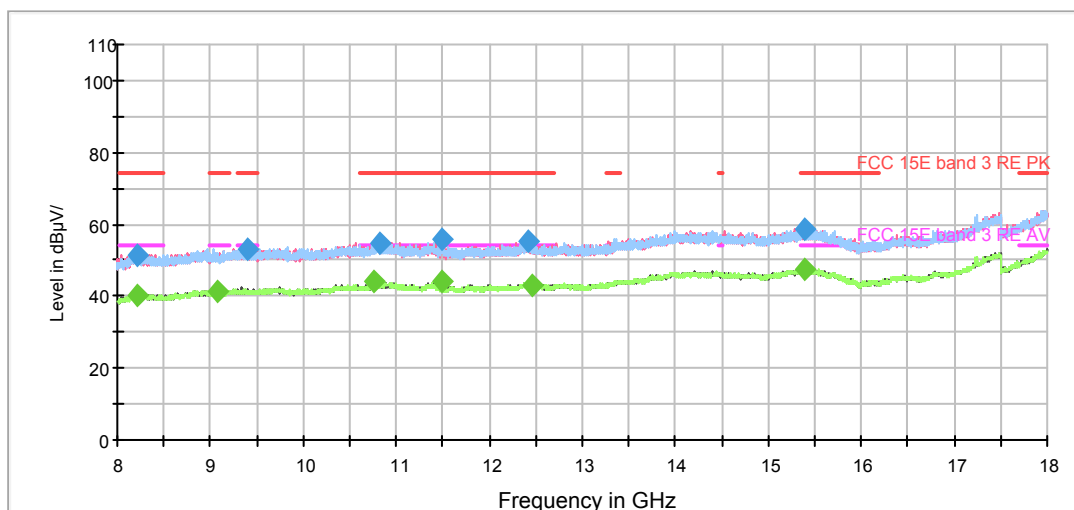
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1339.500000	34.8	100.0	H	21.0	-0.9	19.2	54.0
1550.375000	35.2	100.0	V	0.0	-0.2	18.8	54.0
2249.500000	37.5	100.0	V	323.0	2.4	16.5	54.0
2781.500000	39.5	100.0	H	36.0	4.2	14.5	54.0
3667.875000	41.5	100.0	V	254.0	6.6	12.5	54.0
3999.500000	43.9	100.0	H	64.0	7.3	10.1	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH149



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



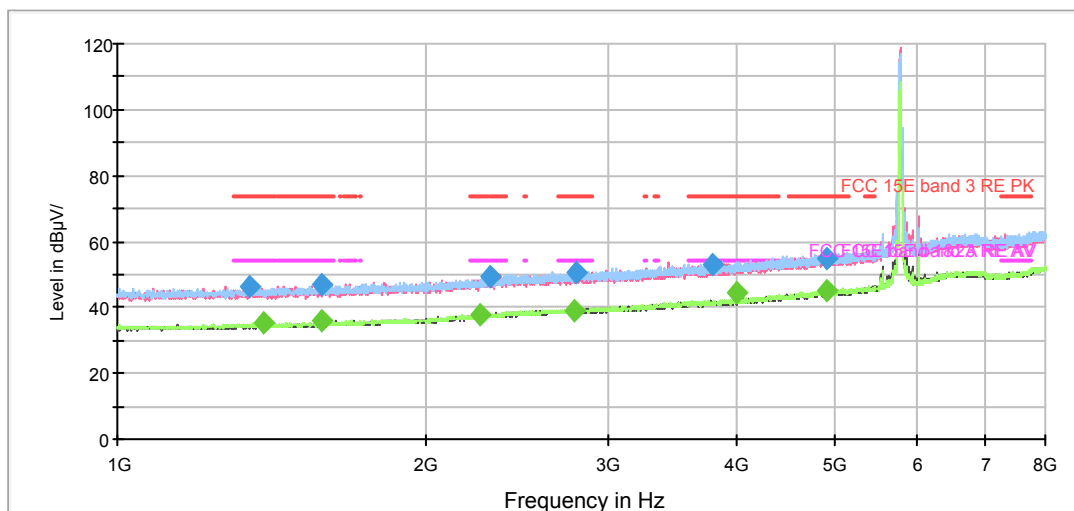
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1319.375000	46.3	100.0	V	346.0	-0.9	27.7	74.0
1538.125000	45.5	100.0	V	196.0	-0.3	28.5	74.0
2277.500000	48.9	100.0	V	168.0	2.7	25.1	74.0
2797.250000	51.1	100.0	V	0.0	4.3	22.9	74.0
3900.625000	53.7	100.0	H	0.0	7.1	20.3	74.0
4632.125000	56.3	100.0	V	187.0	9.0	17.7	74.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

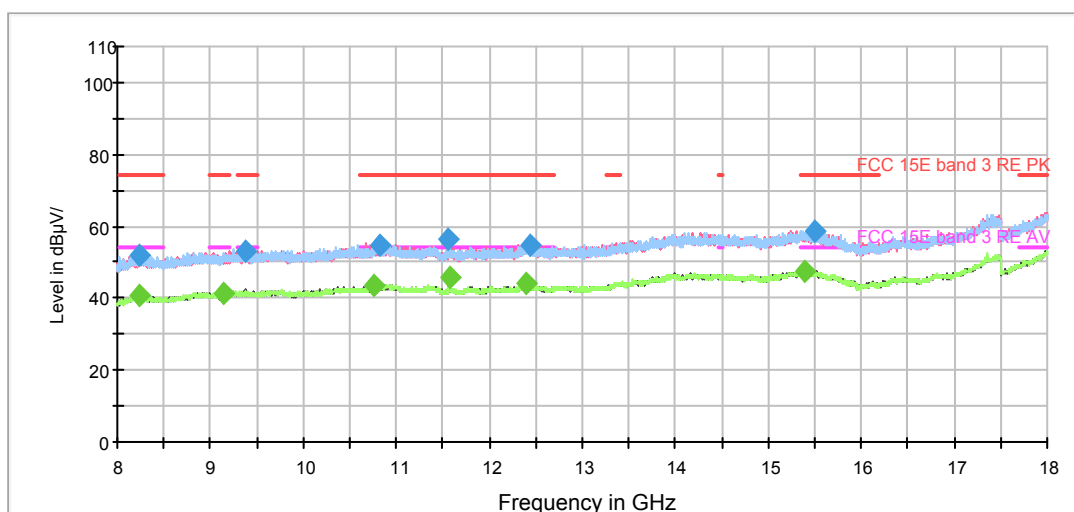
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1324.625000	34.7	100.0	V	301.0	-0.9	19.3	54.0
1596.750000	35.2	100.0	V	293.0	0.0	18.8	54.0
2280.125000	38.2	100.0	V	149.0	2.7	15.8	54.0
2709.750000	39.7	100.0	V	353.0	4.1	14.3	54.0
3999.500000	43.6	100.0	H	53.0	7.3	10.4	54.0
4698.625000	44.0	100.0	V	340.0	9.2	10.0	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH157



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



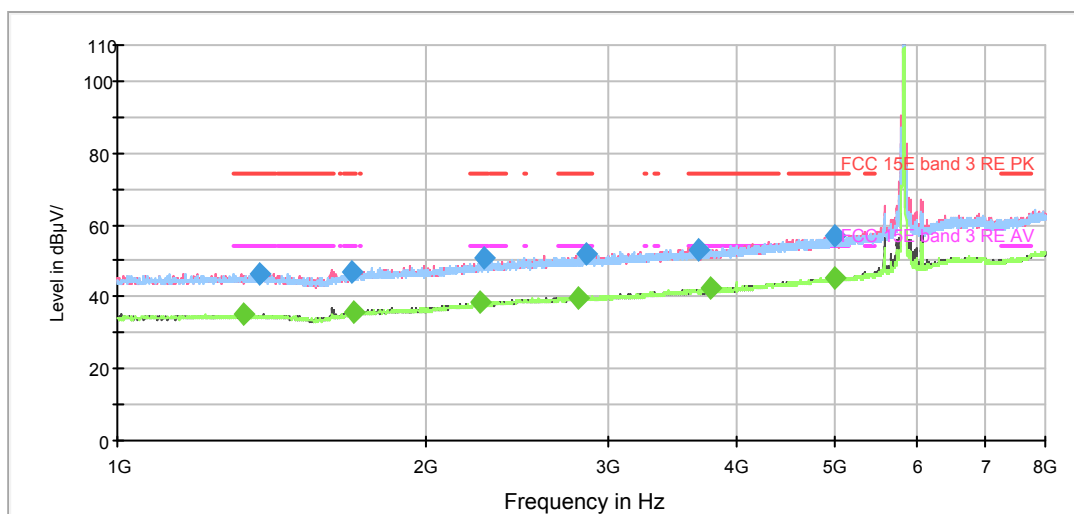
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1343.875000	46.2	100.0	H	225.0	-0.9	27.8	74.0
1580.125000	46.7	100.0	H	142.0	-0.1	27.3	74.0
2305.500000	49.6	100.0	H	70.0	2.7	18.6	74.0
2793.750000	50.5	100.0	H	206.0	4.3	23.5	74.0
3800.875000	53.2	100.0	H	2.0	6.8	20.8	74.0
4900.750000	55.1	100.0	H	4.0	9.5	18.9	74.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

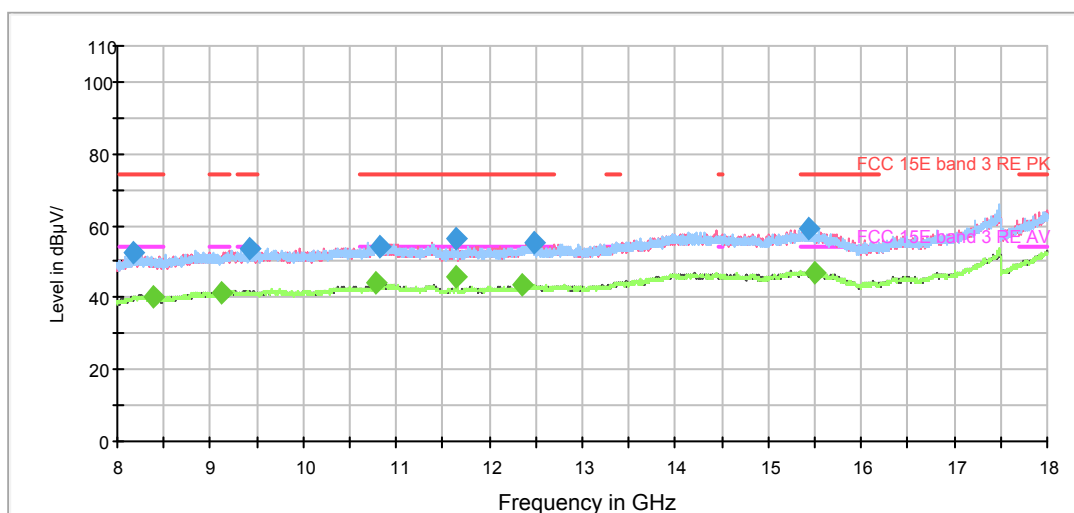
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1390.250000	35.3	100.0	V	344.0	-0.7	18.7	54.0
1583.625000	35.7	100.0	H	88.0	-0.1	18.3	54.0
2249.500000	37.9	100.0	V	0.0	2.4	16.1	54.0
2790.250000	39.3	100.0	H	151.0	4.3	14.7	54.0
4000.375000	44.4	100.0	H	142.0	7.3	9.6	54.0
4913.000000	44.8	100.0	H	15.0	9.5	9.2	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT20) CH165



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



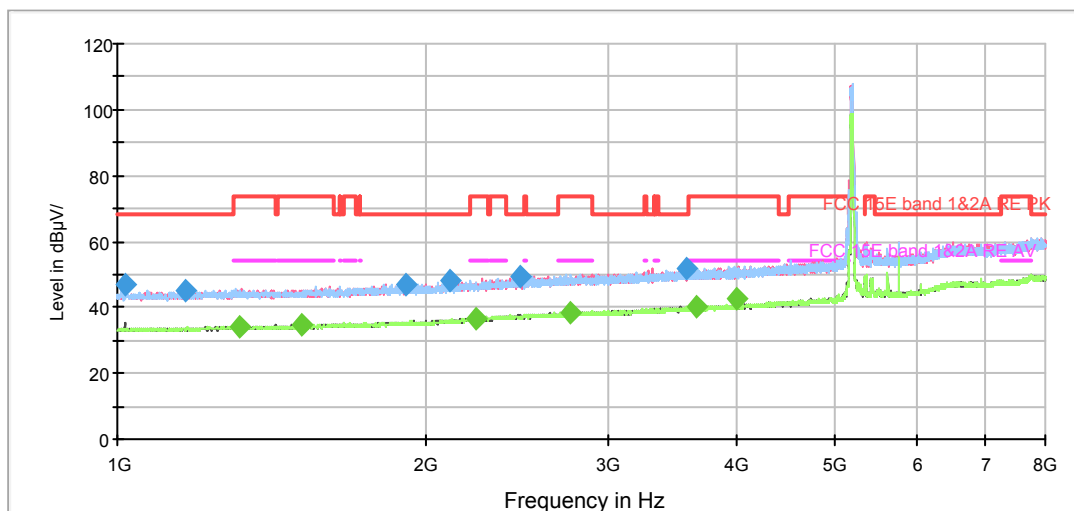
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1372.750000	46.3	200.0	V	28.0	-0.8	27.7	74.0
1687.750000	47.2	200.0	V	176.0	0.4	26.8	74.0
2276.625000	50.6	100.0	V	356.0	2.7	23.4	74.0
2860.250000	51.7	200.0	H	0.0	4.4	22.3	74.0
3682.750000	52.8	200.0	H	309.0	6.5	21.2	74.0
4988.250000	56.9	100.0	H	156.0	9.5	17.1	74.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

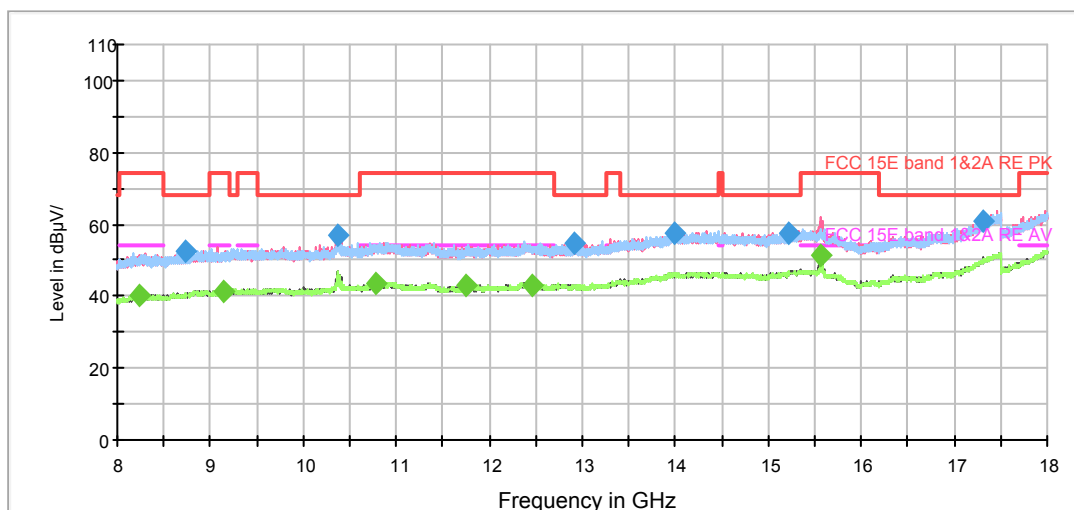
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1326.375000	35.0	100.0	V	140.0	-0.9	19.0	54.0
1695.625000	35.5	200.0	H	340.0	0.4	18.5	54.0
2257.375000	38.6	100.0	V	33.0	2.5	15.4	54.0
2806.875000	39.8	200.0	V	127.0	4.3	14.2	54.0
3780.750000	42.5	100.0	V	0.0	6.8	11.5	54.0
4997.875000	45.1	200.0	H	204.0	9.5	8.9	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH38



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



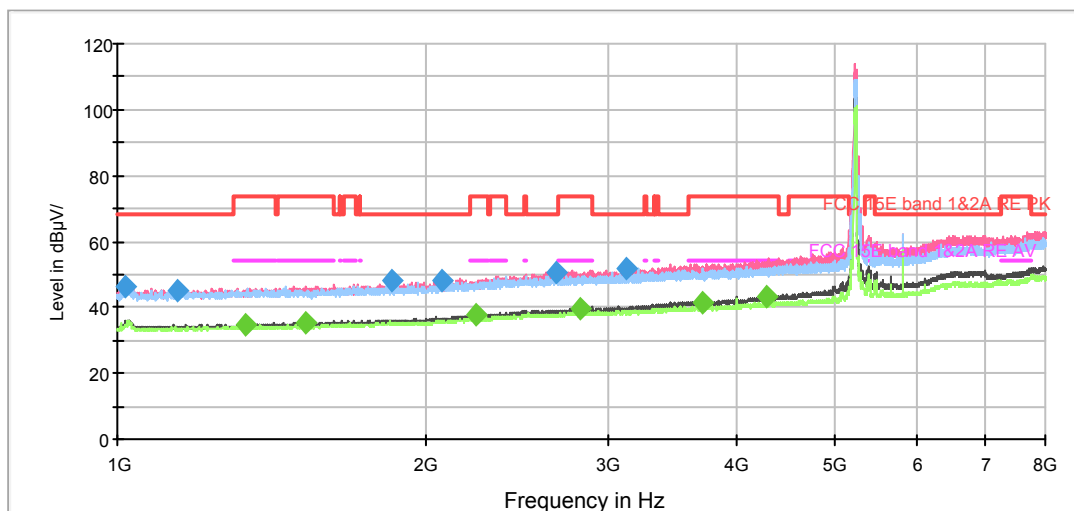
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1016.625000	46.7	100.0	V	221.0	-1.8	21.5	68.2
1162.750000	45.2	100.0	V	150.0	-1.3	23.0	68.2
1905.625000	47.0	100.0	H	1.0	0.9	21.2	68.2
2106.875000	48.4	100.0	H	17.0	1.7	19.8	68.2
2467.375000	49.6	100.0	H	9.0	3.5	18.6	68.2
3576.875000	51.6	100.0	H	38.0	6.3	16.6	68.2

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

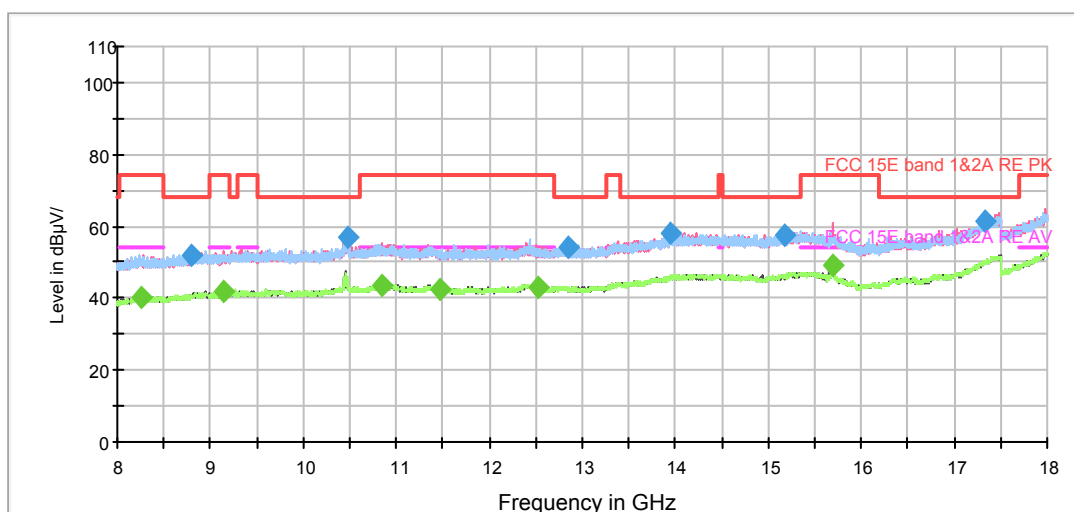
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1315.000000	34.2	100.0	V	359.0	-0.9	19.8	54.0
1508.375000	34.7	100.0	V	306.0	-0.4	19.3	54.0
2232.000000	36.7	100.0	V	315.0	2.4	17.3	54.0
2757.875000	38.4	100.0	V	315.0	4.2	15.6	54.0
3653.875000	40.0	100.0	H	1.0	6.5	14.0	54.0
3999.500000	42.6	100.0	V	66.0	7.3	11.4	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH46



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



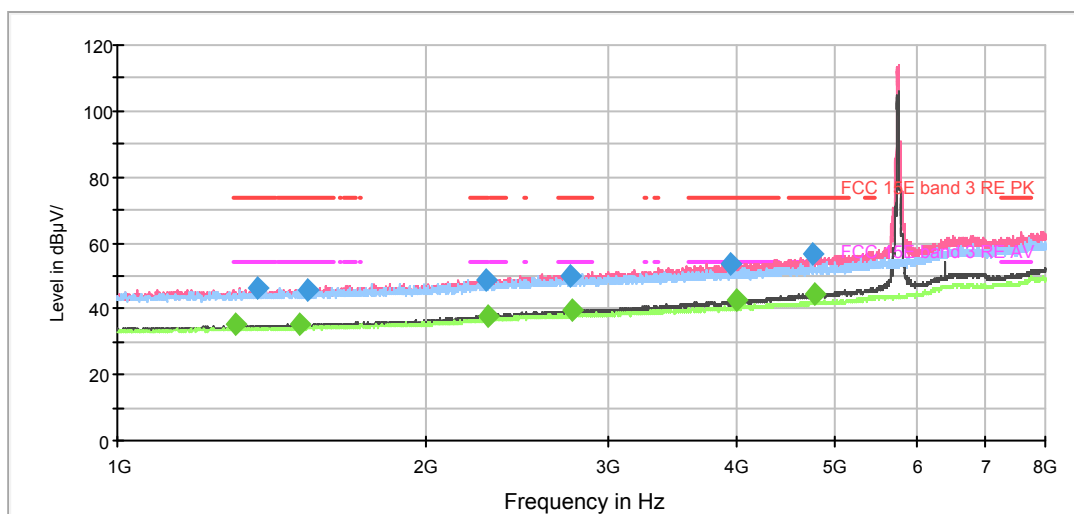
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1020.125000	46.6	100.0	V	0.0	-1.8	21.6	68.2
1143.500000	45.4	100.0	V	264.0	-1.3	22.8	68.2
1850.500000	48.0	100.0	V	237.0	0.7	20.2	68.2
2068.375000	48.3	100.0	V	349.0	1.5	19.9	68.2
2668.625000	50.6	100.0	V	156.0	3.9	17.6	68.2
3126.250000	51.6	100.0	V	0.0	5.0	16.6	68.2

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

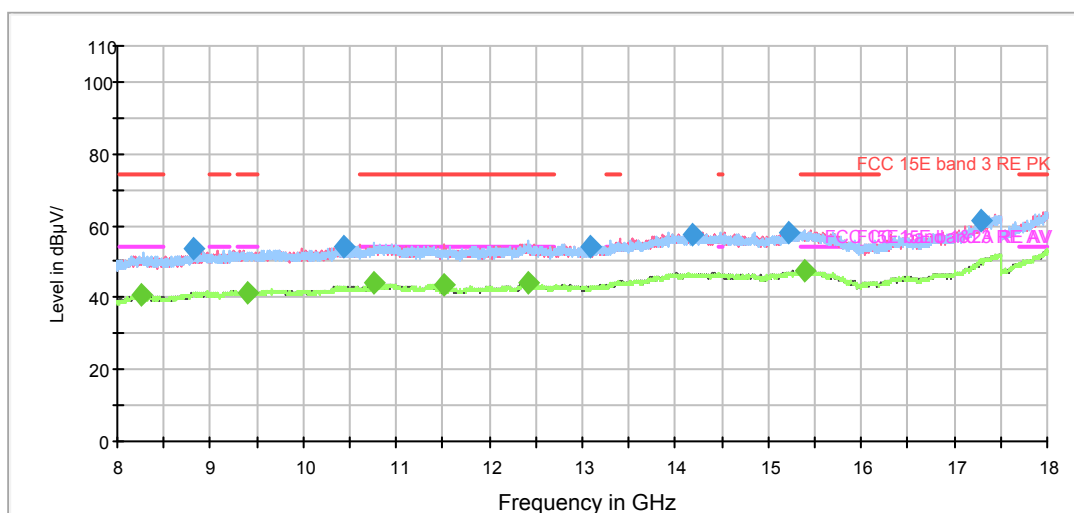
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1335.125000	34.7	100.0	V	326.0	-0.9	19.3	54.0
1527.625000	35.3	100.0	V	228.0	-0.3	18.7	54.0
2232.875000	37.5	100.0	V	281.0	2.4	16.5	54.0
2817.375000	39.7	100.0	V	353.0	4.3	14.3	54.0
3710.750000	41.5	100.0	V	349.0	6.5	12.5	54.0
4294.375000	43.0	100.0	V	219.0	8.2	11.0	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH151



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



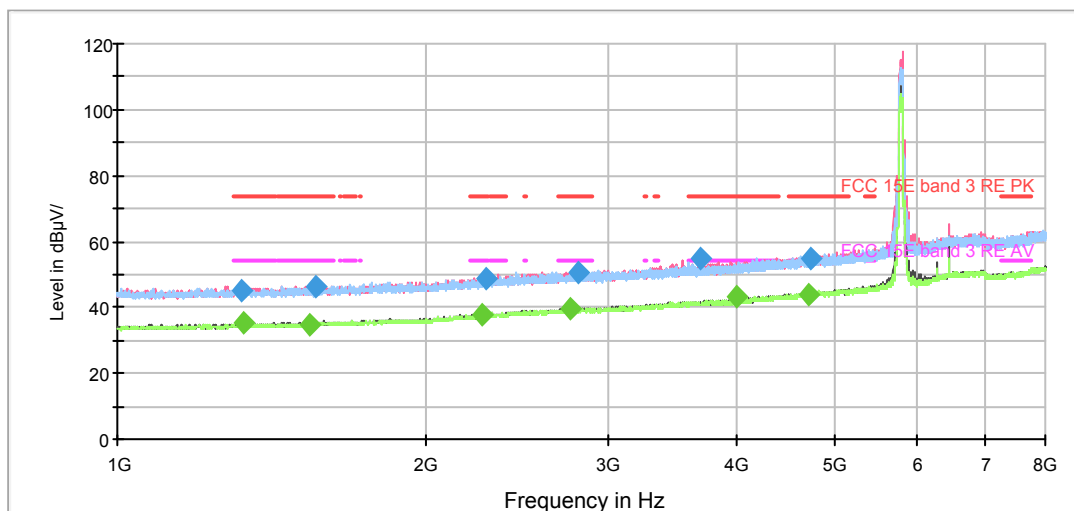
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1369.250000	46.5	100.0	V	255.0	-0.8	27.5	74.0
1529.375000	45.7	100.0	V	273.0	-0.3	28.3	74.0
2286.250000	48.9	100.0	V	349.0	2.7	25.1	74.0
2764.875000	49.8	100.0	V	184.0	4.2	24.2	74.0
3953.125000	53.5	100.0	V	309.0	7.1	20.5	74.0
4758.125000	56.5	100.0	V	358.0	9.3	17.5	74.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

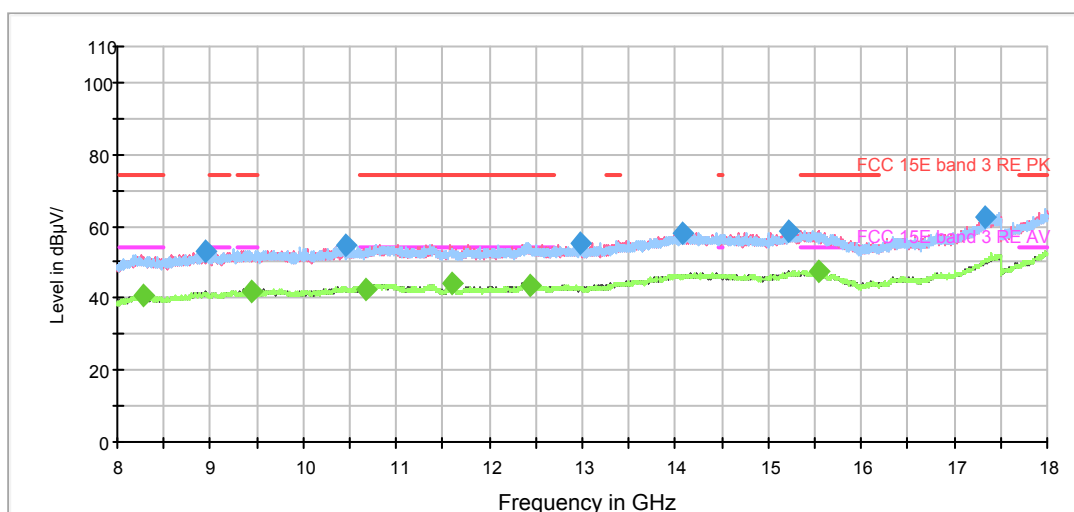
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1301.875000	35.1	100.0	V	318.0	-1.0	18.9	54.0
1504.000000	35.1	100.0	V	147.0	-0.4	18.9	54.0
2295.875000	37.9	100.0	V	357.0	2.7	16.1	54.0
2770.125000	39.5	100.0	V	359.0	4.2	14.5	54.0
3999.500000	42.7	100.0	V	119.0	7.3	11.3	54.0
4770.375000	44.5	100.0	V	334.0	9.3	9.5	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11n (HT40) CH159



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



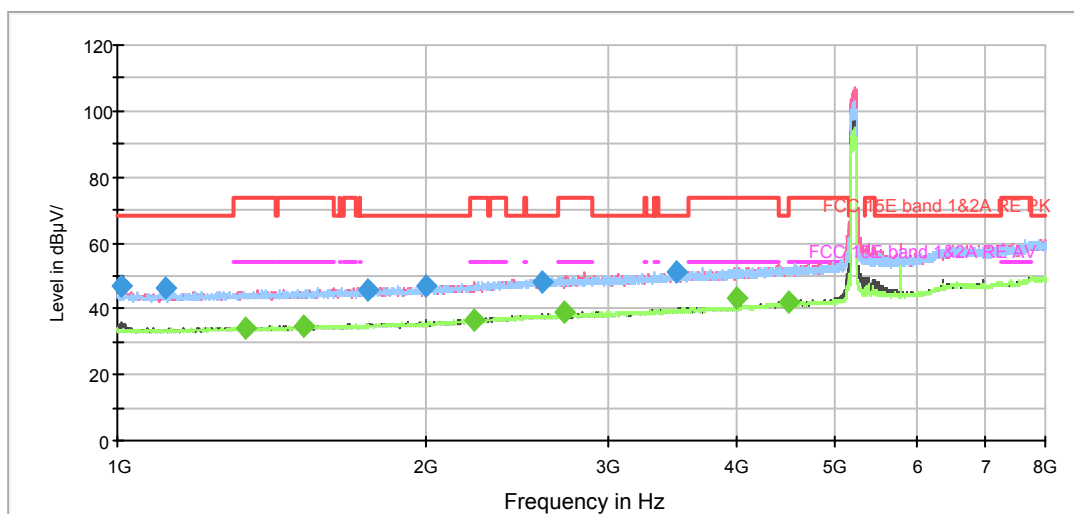
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1320.250000	45.4	100.0	H	188.0	-0.9	28.6	74.0
1560.000000	46.2	100.0	V	147.0	-0.2	27.8	74.0
2283.625000	48.9	100.0	V	341.0	2.7	25.1	74.0
2814.750000	50.5	100.0	H	98.0	4.3	23.5	74.0
3690.625000	54.7	100.0	V	203.0	6.5	19.3	74.0
4729.250000	55.1	100.0	V	341.0	9.2	18.9	74.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

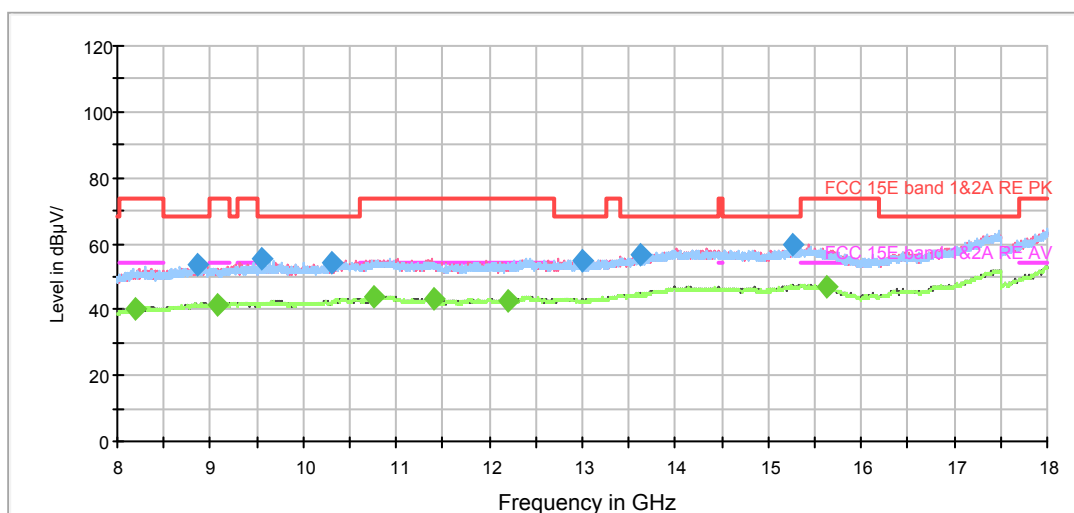
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1326.375000	35.1	100.0	V	350.0	-0.9	18.9	54.0
1538.125000	35.0	100.0	V	353.0	-0.3	19.0	54.0
2263.500000	37.9	100.0	V	184.0	2.6	16.1	54.0
2755.250000	39.6	100.0	V	275.0	4.2	14.4	54.0
3999.500000	43.4	100.0	H	138.0	7.3	10.6	54.0
4704.750000	44.0	100.0	H	5.0	9.2	10.0	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ac (HT80) CH42



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz



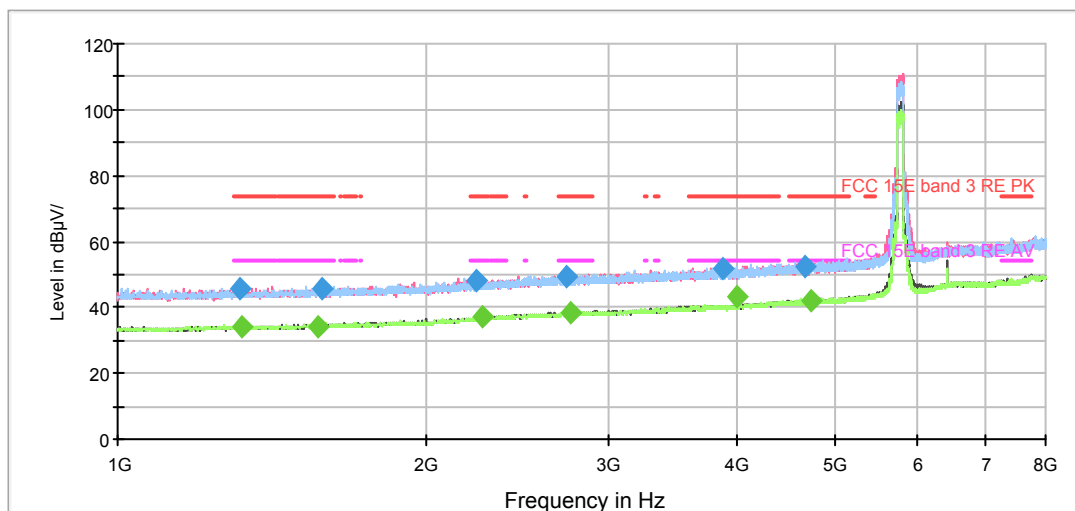
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1010.500000	47.0	100.0	V	89.0	-1.9	21.2	68.2
1112.875000	46.3	100.0	H	8.0	-1.4	21.9	68.2
1752.500000	45.8	100.0	V	256.0	0.5	22.4	68.2
1999.250000	46.7	100.0	V	282.0	1.1	21.5	68.2
2589.000000	48.4	100.0	V	333.0	3.8	19.8	68.2
3505.125000	51.0	100.0	H	234.0	6.1	17.2	68.2

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

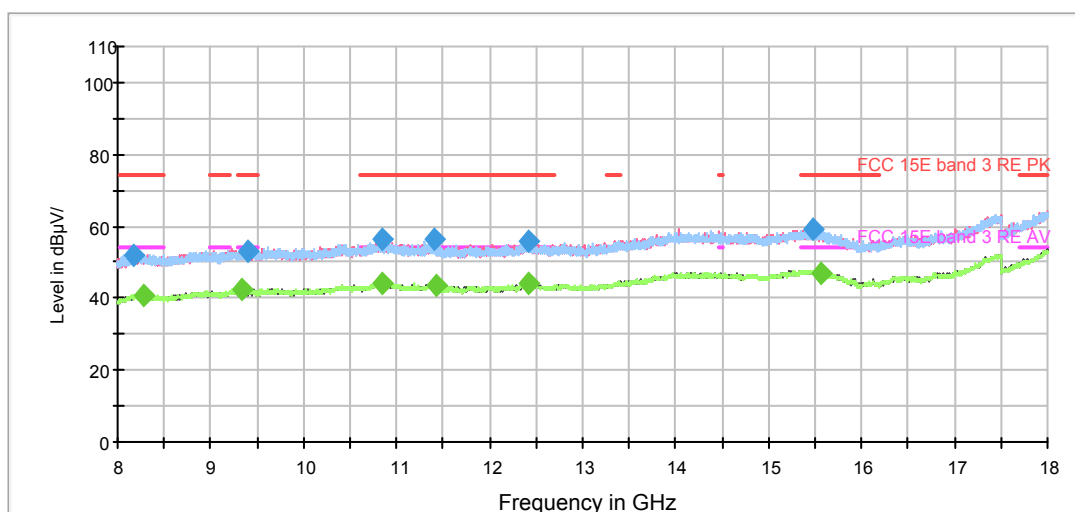
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1336.000000	34.2	100.0	V	358.0	-0.9	19.8	54.0
1518.875000	34.9	100.0	V	282.0	-0.3	19.1	54.0
2225.000000	36.5	100.0	V	349.0	2.3	17.5	54.0
2722.000000	38.7	100.0	V	221.0	4.1	15.3	54.0
3999.500000	43.1	100.0	H	53.0	7.3	10.9	54.0
4512.250000	41.8	100.0	V	339.0	8.8	12.2	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

802.11ac (HT80) CH155



Radiates Emission from 1GHz to 8GHz
Note: The signal beyond the limit is carrier.



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1315.000000	45.8	100.0	H	0.0	-0.9	28.2	74.0
1578.375000	45.9	100.0	V	192.0	-0.1	28.1	74.0
2234.625000	48.3	100.0	H	182.0	2.4	25.7	74.0
2733.375000	49.6	100.0	H	92.0	4.1	24.4	74.0
3884.875000	51.8	100.0	V	355.0	7.0	22.2	74.0
4676.750000	52.4	100.0	V	336.0	9.1	21.6	74.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1323.750000	34.4	100.0	H	3.0	-0.9	19.6	54.0
1569.625000	34.3	100.0	V	219.0	-0.1	19.7	54.0
2268.750000	36.9	100.0	H	92.0	2.6	17.1	54.0
2764.000000	38.5	100.0	V	336.0	4.2	15.5	54.0
3999.500000	43.0	100.0	H	65.0	7.3	11.0	54.0
4722.250000	42.2	100.0	H	2.0	9.2	11.8	54.0

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

5.6. Conducted Emission

Ambient condition

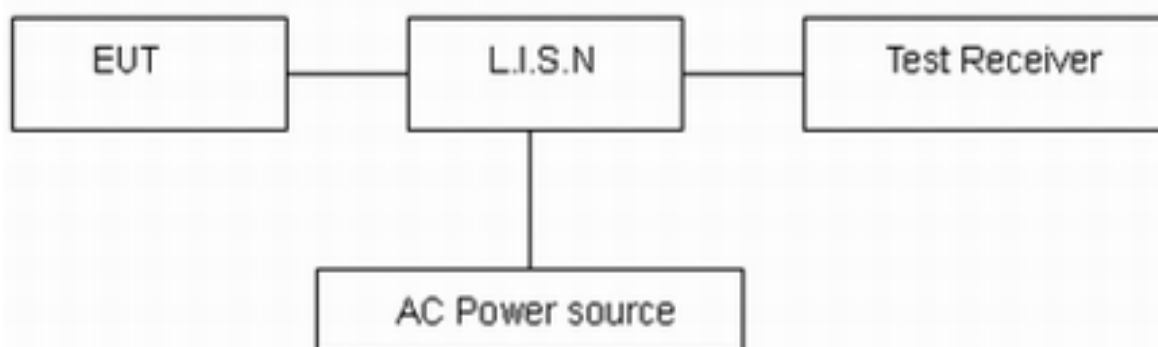
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

The EUT IS placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.10-2013. Connect the AC power line of the EUT to the LISN Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9kHz, VBW is set to 30kHz The measurement result should include both L line and N line.

The test is in transmitting mode.

Test Setup



Note: AC Power source is used to change the voltage 110V/60Hz.

Limits

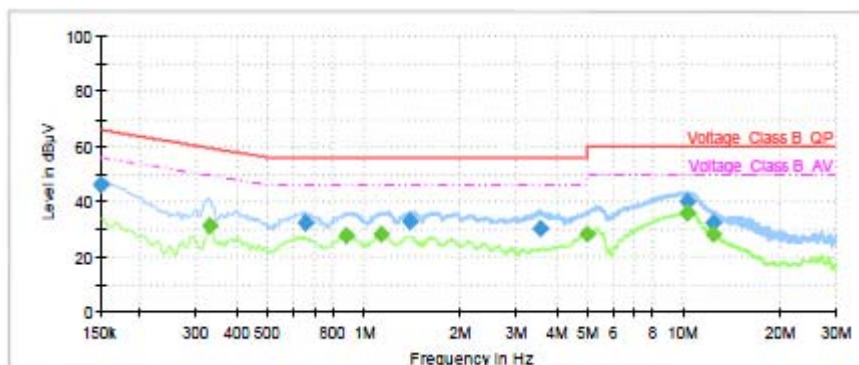
Frequency (MHz)	Conducted Limits(dB μ V)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46 *
0.5 - 5	56	46
5 - 30	60	50
*: Decreases with the logarithm of the frequency.		

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 2.69$ dB.

Test Results:

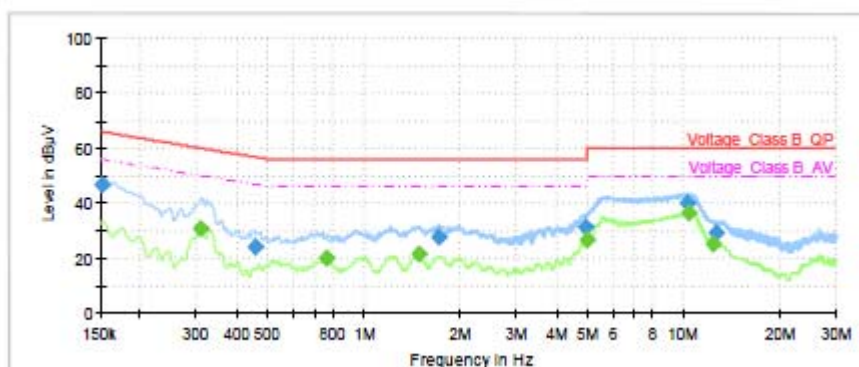
Following plots, Blue trace uses the peak detection and Green trace uses the average detection. During the test, the Conducted Emission was performed in all modes with all channels, 802.11a, Channel 157 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.



Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.15	46.12	---	66.00	19.88	1000.0	9.000	L1	ON	19.06
0.33	---	31.32	49.51	18.19	1000.0	9.000	L1	ON	19.18
0.66	32.24	---	56.00	23.76	1000.0	9.000	L1	ON	19.28
0.88	---	27.75	46.00	18.25	1000.0	9.000	L1	ON	19.24
1.14	---	27.98	46.00	18.02	1000.0	9.000	L1	ON	19.24
1.39	32.96	---	56.00	23.04	1000.0	9.000	L1	ON	19.18
3.57	30.11	---	56.00	25.89	1000.0	9.000	L1	ON	19.06
4.99	---	28.11	46.00	17.89	1000.0	9.000	L1	ON	19.08
10.31	40.10	---	60.00	19.90	1000.0	9.000	L1	ON	19.40
10.34	---	36.05	50.00	13.95	1000.0	9.000	L1	ON	19.39
12.41	---	28.05	50.00	21.95	1000.0	9.000	L1	ON	19.43
12.42	32.56	---	60.00	27.44	1000.0	9.000	L1	ON	19.43

Remark: Correct factor=cable loss + LISN factor

L line Conducted Emission from 150 KHz to 30 MHz



Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.15	46.49	---	65.88	19.39	1000.0	9.000	N	ON	19.07
0.31	---	30.64	50.04	19.40	1000.0	9.000	N	ON	19.19
0.46	24.32	---	56.77	32.45	1000.0	9.000	N	ON	19.23
0.77	---	20.25	46.00	25.75	1000.0	9.000	N	ON	19.25
1.48	---	21.56	46.00	24.44	1000.0	9.000	N	ON	19.18
1.71	27.71	---	56.00	28.29	1000.0	9.000	N	ON	19.18
4.97	31.14	---	56.00	24.86	1000.0	9.000	N	ON	19.07
5.00	---	26.89	46.00	19.11	1000.0	9.000	N	ON	19.08
10.27	40.08	---	60.00	19.92	1000.0	9.000	N	ON	19.42
10.38	---	36.48	50.00	13.52	1000.0	9.000	N	ON	19.40
12.41	---	25.22	50.00	24.78	1000.0	9.000	N	ON	19.41
12.70	28.99	---	60.00	31.01	1000.0	9.000	N	ON	19.45

Remark: Correct factor=cable loss + LISN factor

N line Conducted Emission from 150 KHz to 30 MHz



6. Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Spectrum Analyzer	R&S	FSV40	15195-01-00	2019-05-19	2020-05-18
EMI Test Receiver	R&S	ESCI	100948	2019-05-19	2020-05-18
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2017-09-26	2019-09-25
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9163	9163-201	2017-11-18	2019-11-17
Double Ridged Waveguide Horn Antenna	R&S	HF907	100126	2018-07-07	2020-07-06
Standard Gain Horn	ETS-Lindgren	3160-09	00102643	2018-06-20	2020-06-19
Standard Gain Horn	STEATITE	QSH-SL-26-40-K-15	16779	2017-07-20	2020-07-19
Broadband Horn Antenna	SCHWARZBECK	BBHA 9120D	430	2018-07-07	2020-07-06
EMI Test Receiver	R&S	ESR	101667	2019-05-19	2020-05-18
LISN	R&S	ENV216	101171	2016-12-16	2019-12-15
Spectrum Analyzer	KEYSIGHT	N9020A	MY54420163	2018-12-16	2019-12-15
RF Cable	Agilent	SMA 15cm	0001	2019-06-14	2020-06-13
TEMPERATURE CHAMBER	WEISS	VT4002	58226119450010	2018-12-16	2019-12-15
WLAN AP	Cisco	Air-AP1262N-A-K9	LDK102073 (FCC ID)	/	/
AV Power Meter	R&S	NRP	104306	2019-05-19	2020-05-18
Power Probe	R&S	NRP-Z21	104799	2019-05-19	2020-05-18
DC Power Supply	GWINSTEK	GPS-3030D	GEP882653	2019-05-19	2020-05-18
Software	R&S	EMC32	9.26.0	/	/

*****END OF REPORT *****