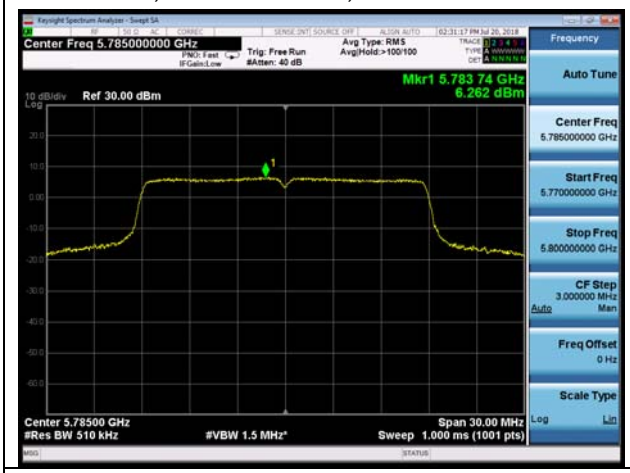
U-NII-3, 802.11n HT20, Channel No.: 149

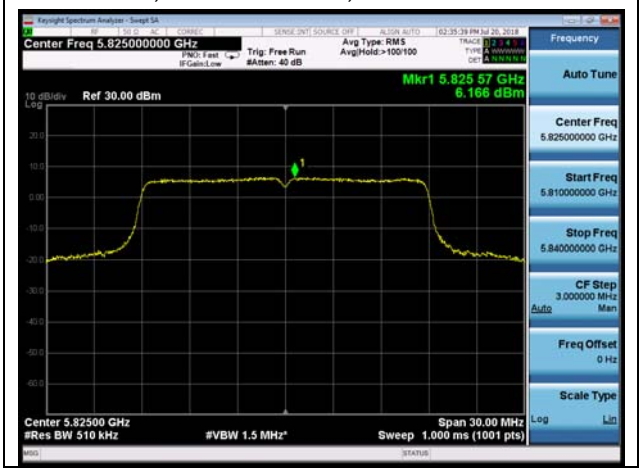
U-NII-3, 802.11n HT40, Channel No.: 151

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

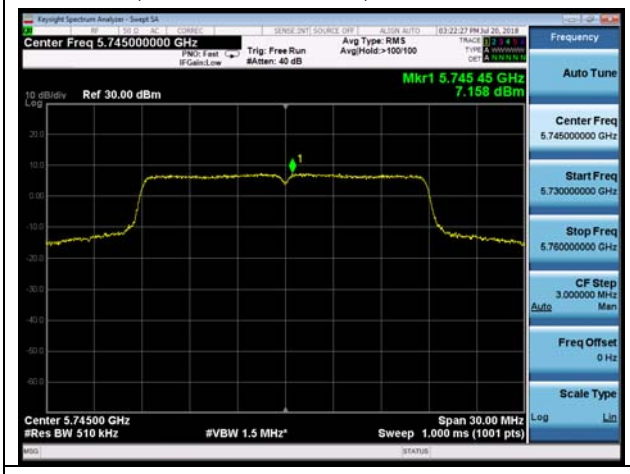


U-NII-3, 802.11n HT40, Channel No.: 159

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

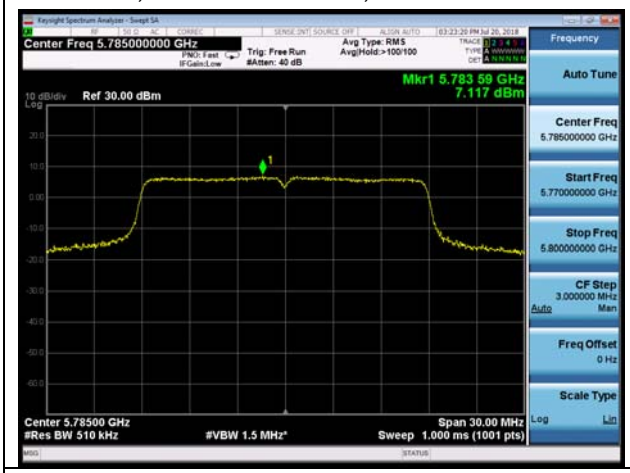


U-NII-3, 802.11ac VHT20, Channel No.: 149



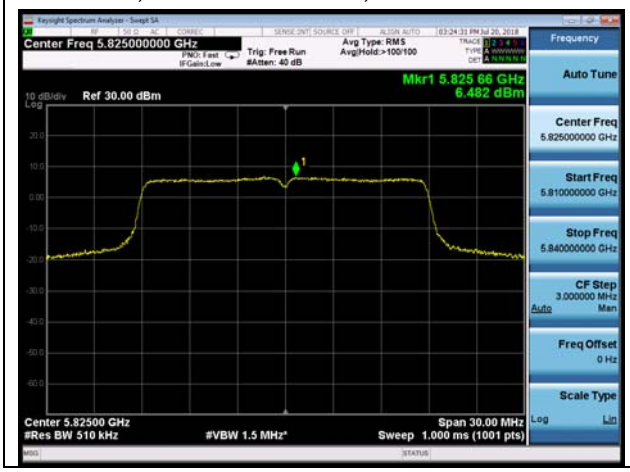
U-NII-3, 802.11ac VHT40, Channel No.: 151

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



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

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



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 ≥ [3 × 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 ≥ [3 × RBW].
c) Detector = RMS (power averaging), if [span / (# of points in sweep)] ≤ 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.

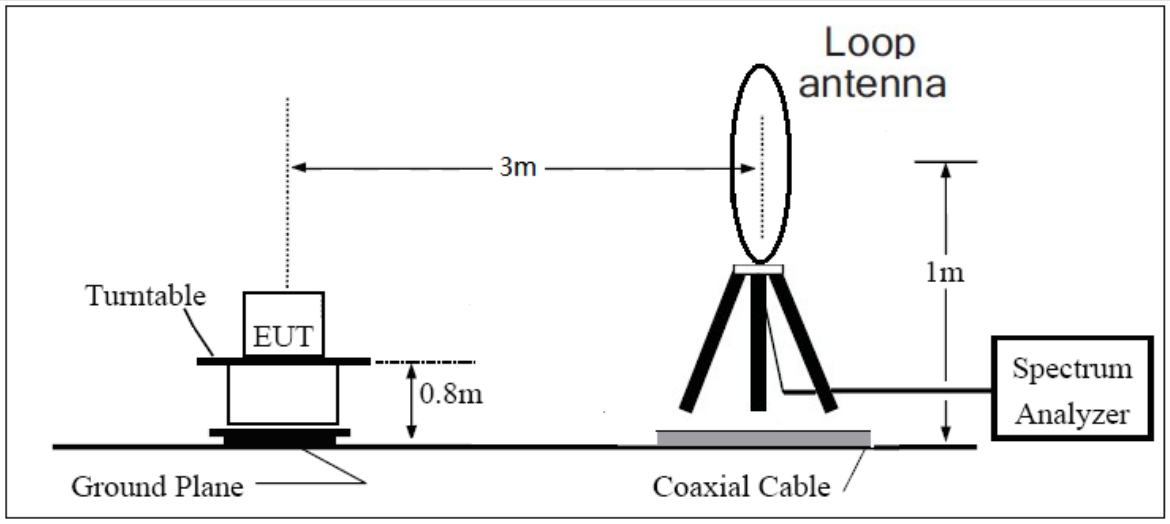
2) If linear voltage averaging mode was used in the preceding step e), then the correction factor is [20 log (1 / D)], where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB shall be added to the measured emission levels.

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.

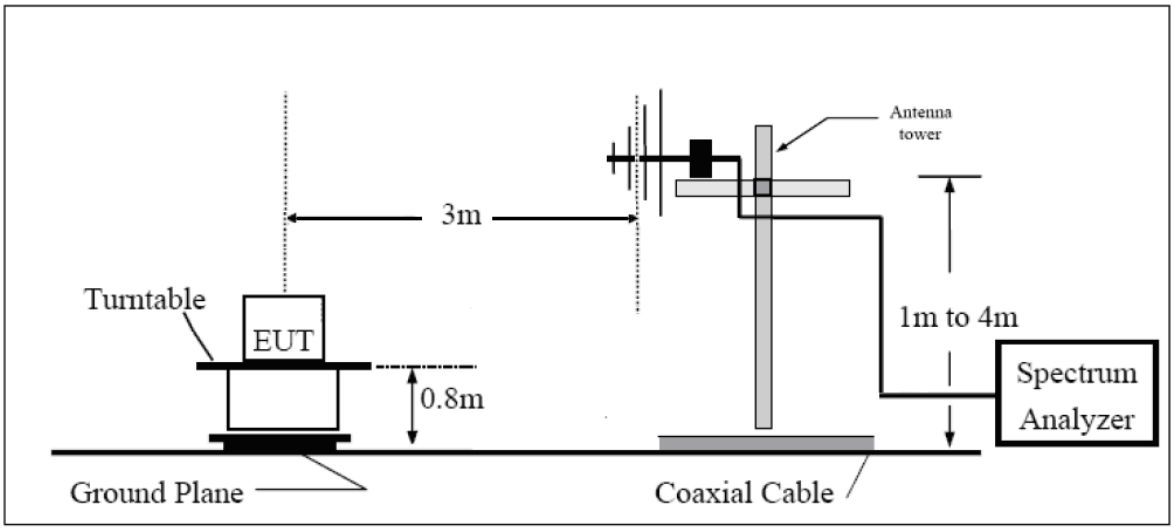
The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the antenna is vertical.

The test is in transmitting mode.

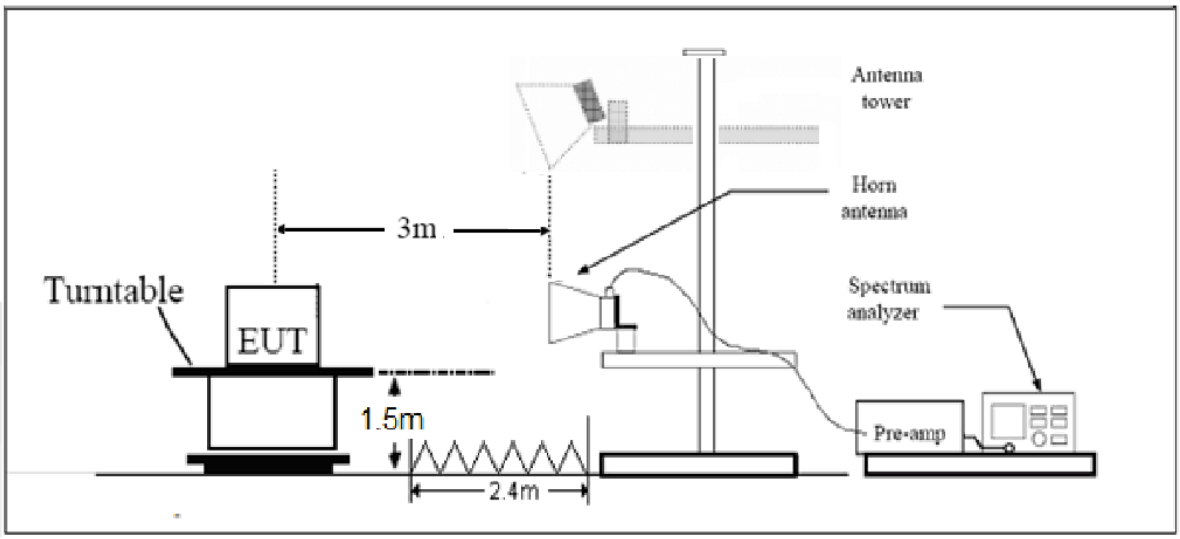
9KHz~~~30MHz



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[dBμV/m] = EIRP[dBm] - 20 log(d[meters]) + 104.77, where E = field strength and

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

§2、E[dBμV/m] = EIRP[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	4.19 dB
200MHz-1GHz	3.63 dB
1GHz-26.5G	3.68 dB
26.5G-40GHz	4.76dB

Test Results:

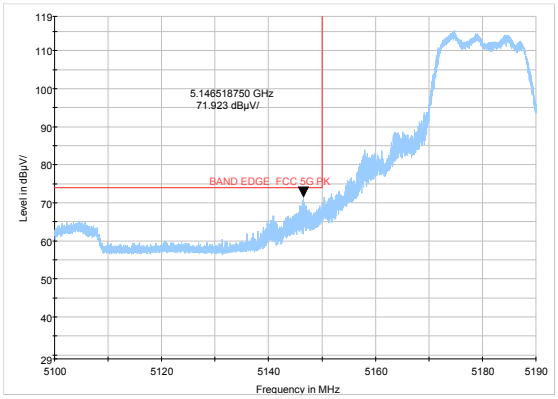
The modulation and bandwidth are similar for 802.11n mode for 20MHz/40MHz and 802.11ac mode for V20MHz/V40MHz, therefore investigated worst case to representative mode in test report.

The signal beyond the limit is carrier.

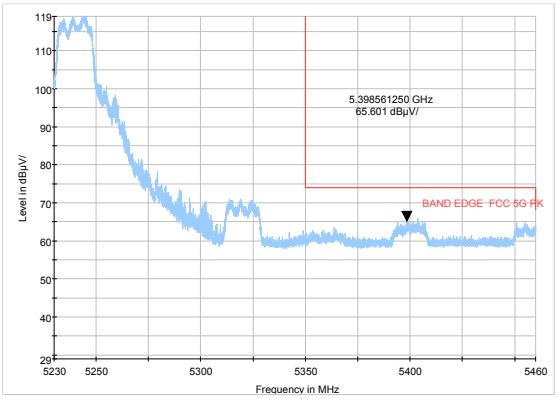
U-NII-1

SISO Antenna 3

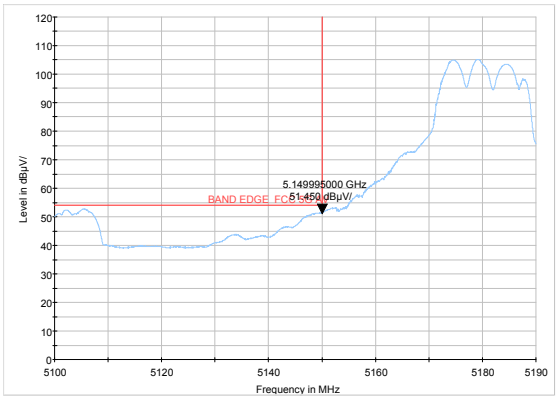
802.11a-Channel 36: Peak



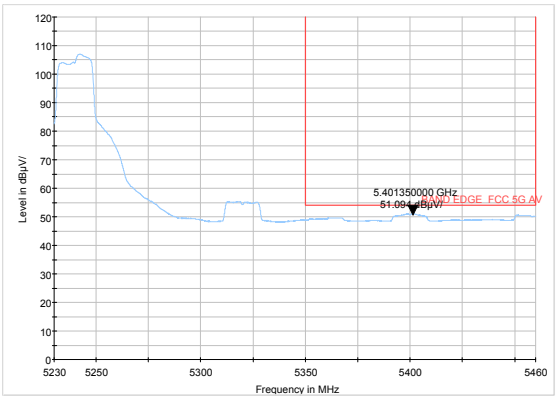
802.11a-Channel 48: Peak



802.11a-Channel 36: Average

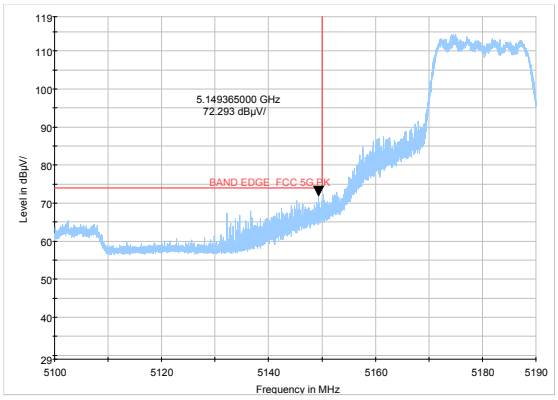


802.11a-Channel 48: Average

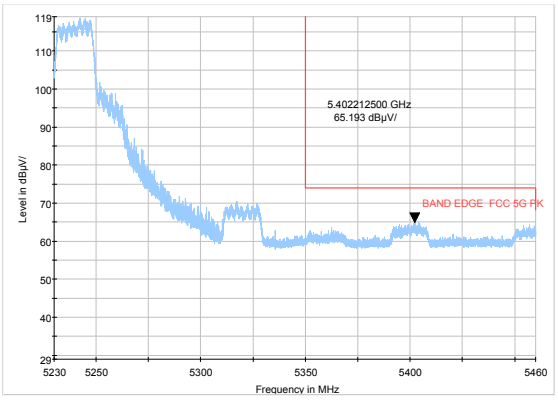


MIMO

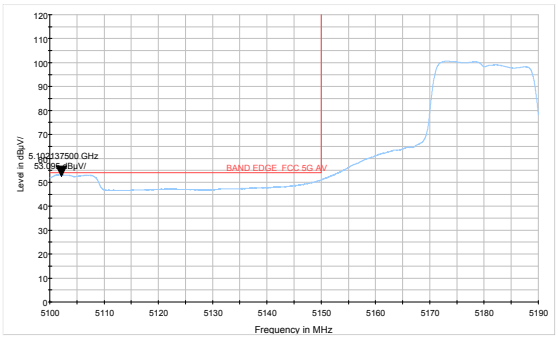
802.11n HT20-Channel 36: Peak



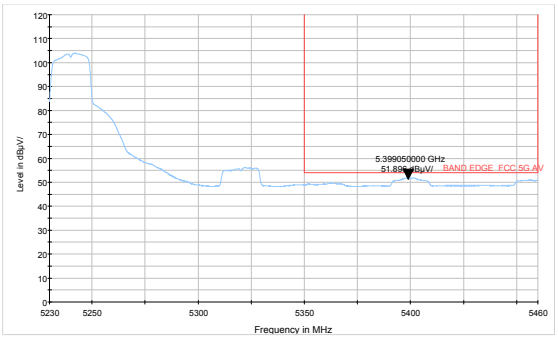
802.11n HT20-Channel 48: Peak



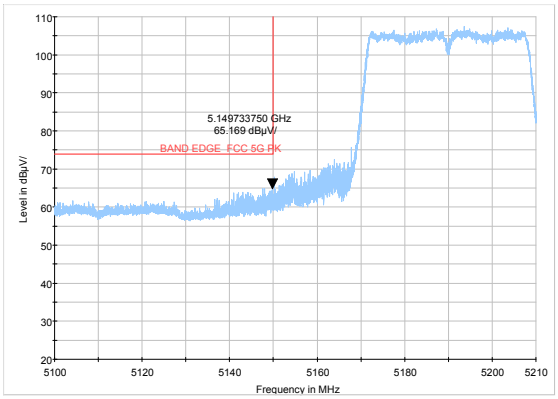
802.11n HT20-Channel 36: Average



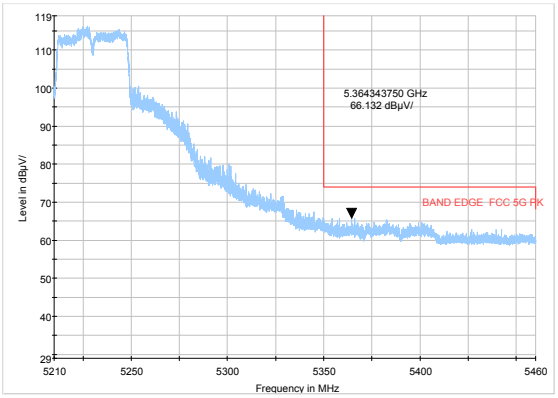
802.11n HT20-Channel 48: Average



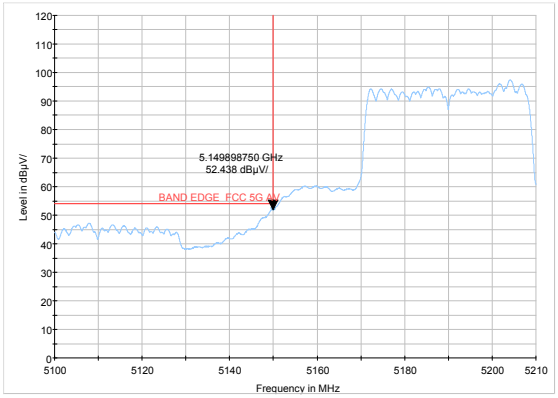
802.11n HT40-Channel 38: Peak



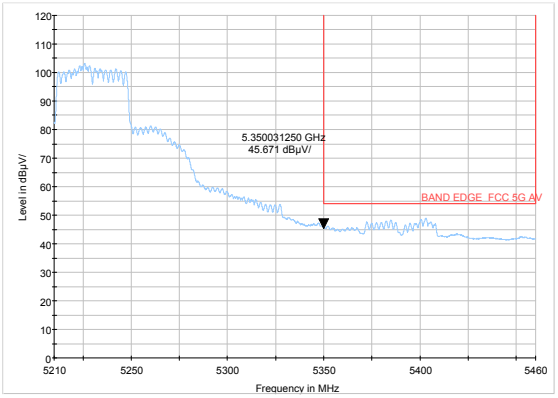
802.11n HT40-Channel 46: Peak

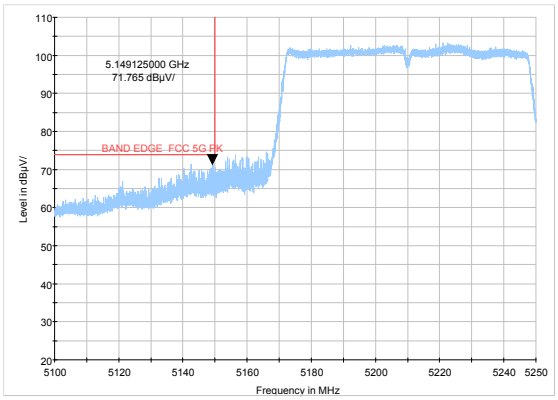
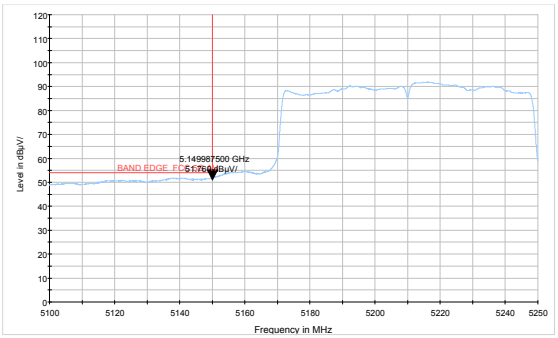


802.11n HT40-Channel 38: Average



802.11n HT40-Channel 46: Average

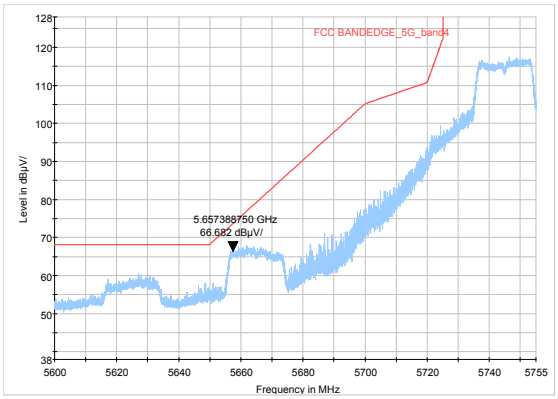


802.11ac VHT80 –Channel 42: Peak	802.11ac VHT80- Channel 42: Average
	

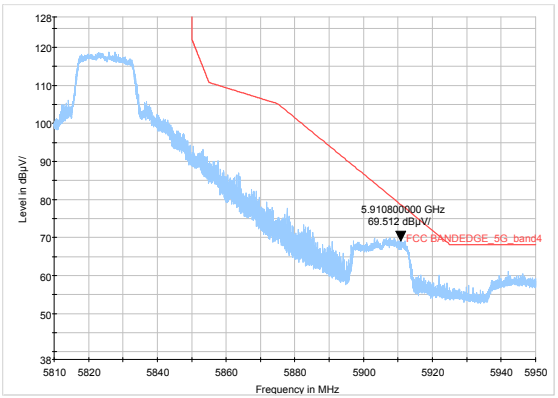
U-NII-3

SISO Antenna 3

802.11a-Channel 149: Peak

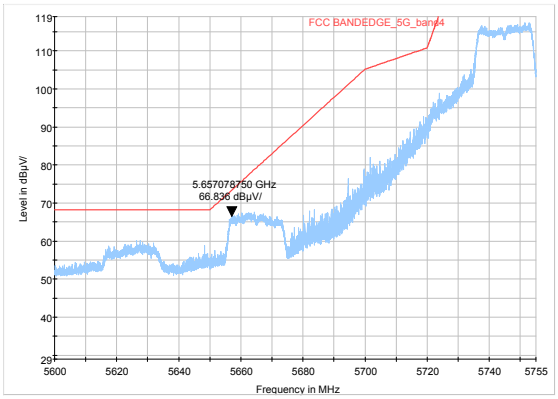


802.11a-Channel 165: Peak

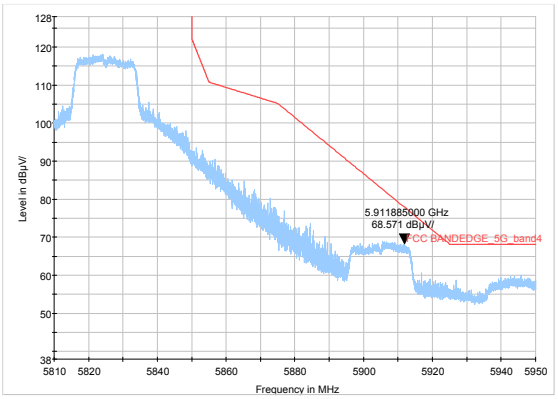


MIMO

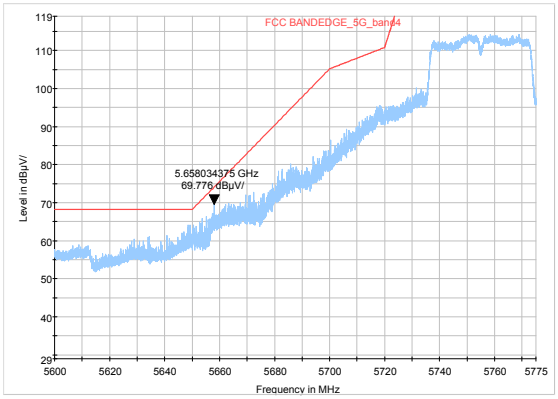
802.11n HT20-Channel 149: Peak



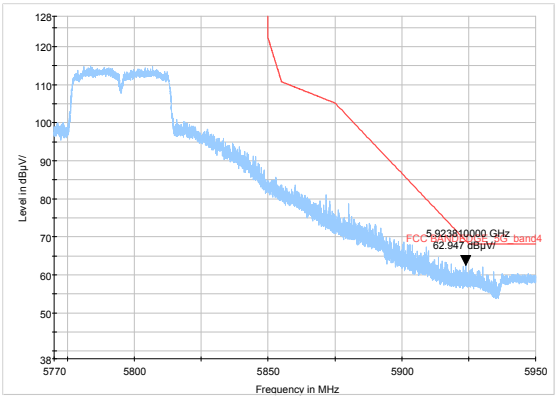
802.11n HT20-Channel 165: Peak



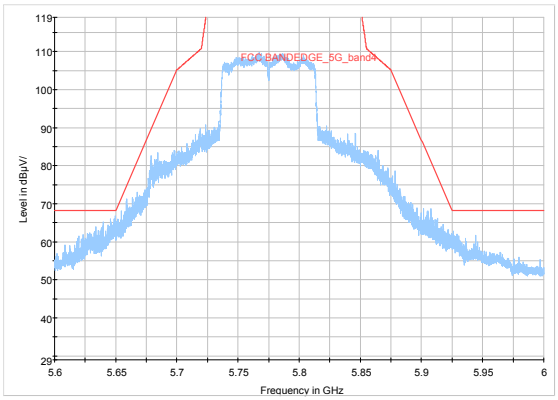
802.11n HT40-Channel 151: Peak



802.11n HT40-Channel 159: Peak



802.11ac VHT80- Channel 155: Peak



Result of RE

Test result

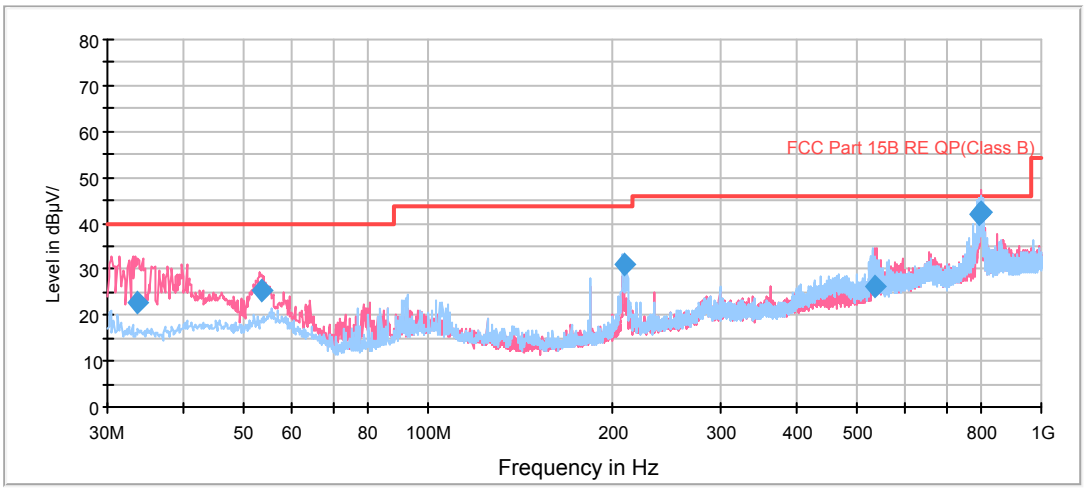
Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the Emissions in the frequency band 9kHz-30MHz and 18GHz-40GHz are more than 20dB below the limit are not reported.

After the pretest, MIMO was selected as the worst antenna. SISO Antenna 3 was selected as the worst SISO antenna for 802.11a.

During the test, the Radiates Emission from 30MHz to 1GHz was performed in all modes with all channels, 802.11a, Channel 36 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)	Reading value (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
33.631250	22.6	10.6	100.0	V	202.0	12.0	17.4	40.0
53.527500	25.5	12.7	100.0	V	0.0	12.8	14.5	40.0
208.356250	31.1	18.7	100.0	H	0.0	12.4	12.4	43.5
535.285000	26.0	4.6	100.0	V	0.0	21.4	20.0	46.0
791.813750	41.9	16.7	100.0	H	0.0	25.2	4.1	46.0
799.008750	42.2	16.9	203.0	V	79.0	25.3	3.8	46.0

Remark: 1. Quasi-Peak = Reading value + Correction factor

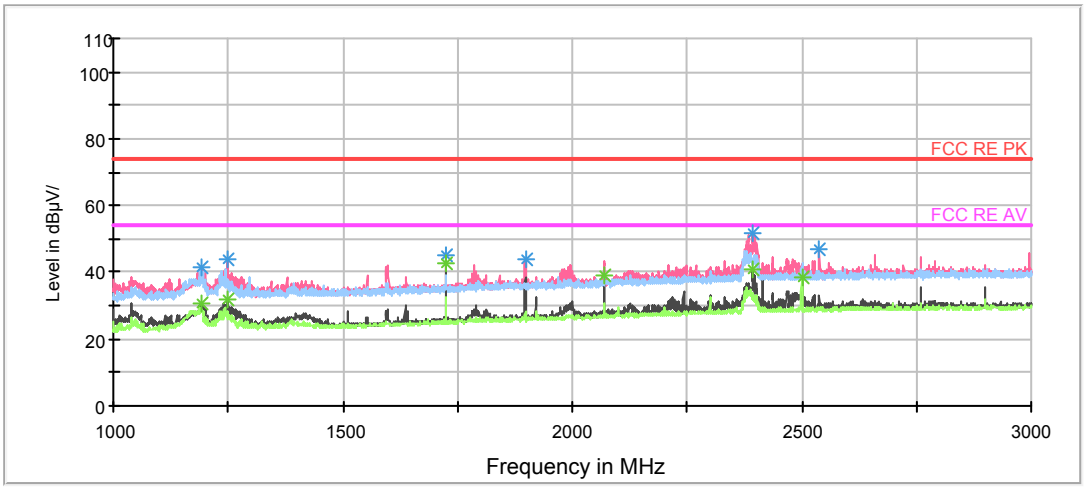
2. Correction Factor = Antenna factor+ Insertion loss(cable loss+amplifier gain)

3. Margin = Limit – Quasi-Peak

SISO Antenna 3

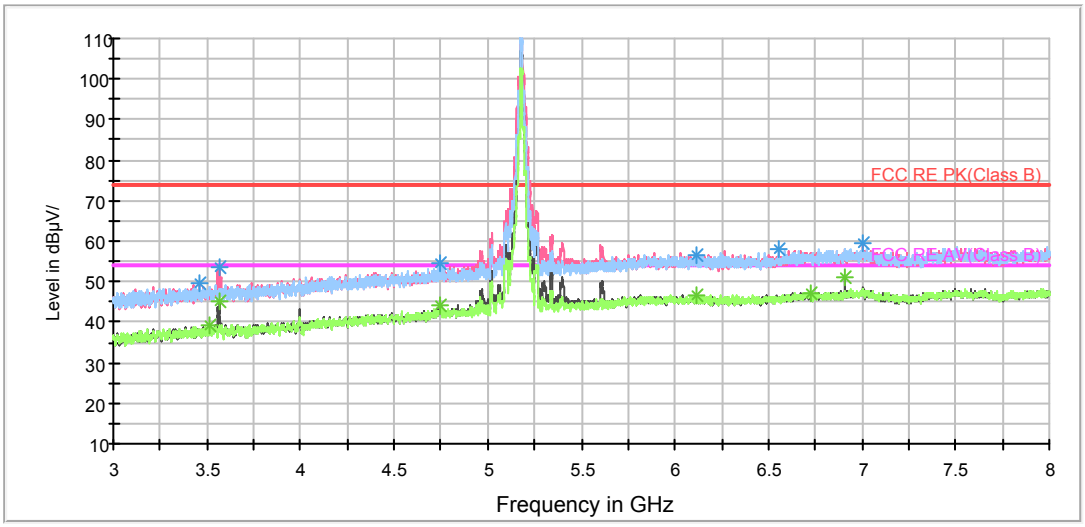
802.11a CH36

RE 1G-6GHz PK+AV Class B



Radiates Emission from 1GHz to 3GHz

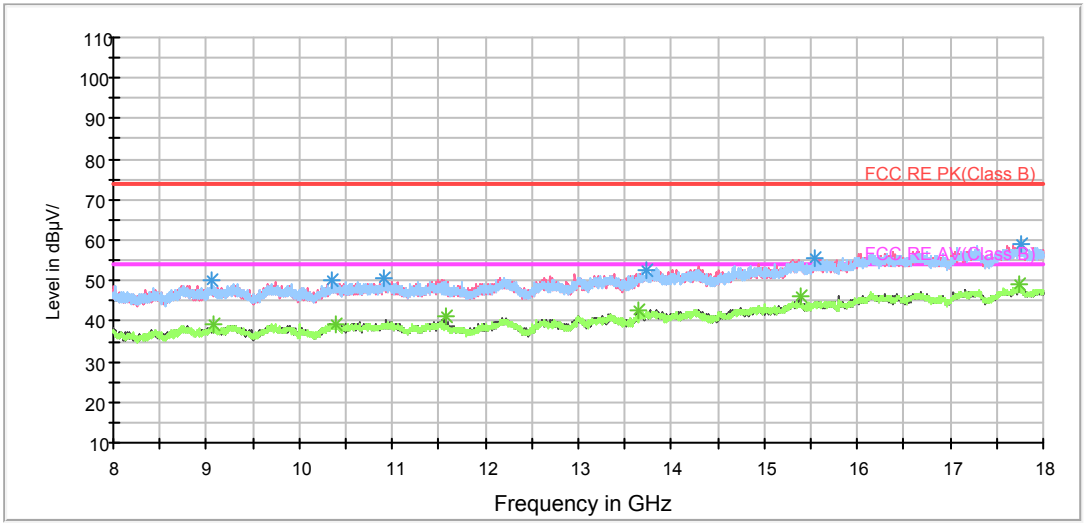
RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz

RE 3-18GHz PK+AV



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3458.125000	49.4	100.0	V	0.0	41.2	8.2	24.6	74
3566.250000	53.4	100.0	V	268.0	44.9	8.5	20.6	74
4750.000000	54.6	200.0	H	55.0	43.0	11.6	19.4	74
6116.250000	56.6	200.0	V	14.0	41.3	15.3	17.4	74
6551.875000	58.0	200.0	H	76.0	42.2	15.8	16.0	74
7005.625000	59.5	100.0	V	86.0	43.0	16.5	14.5	74

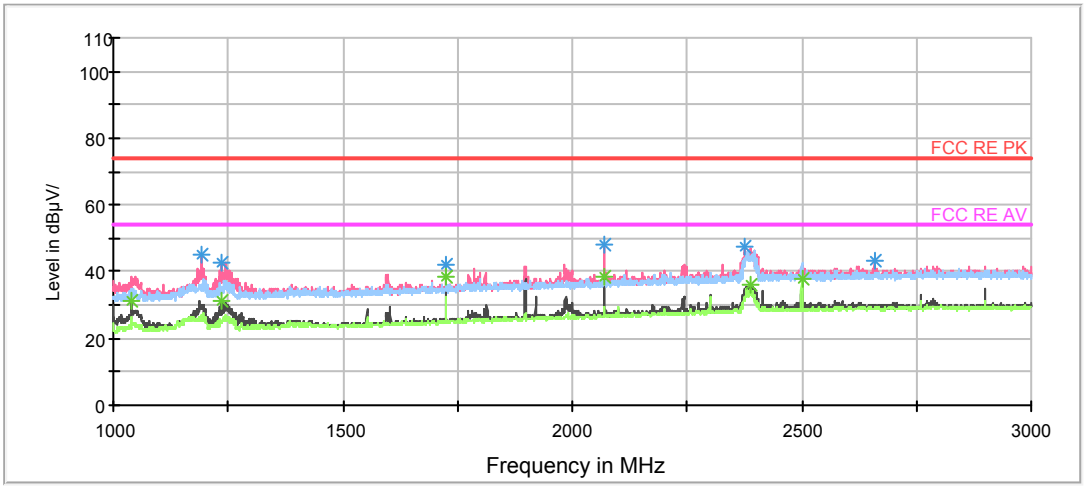
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3513.750000	39.0	100.0	H	0.0	30.6	8.4	15.0	54
3566.250000	44.9	100.0	V	268.0	36.4	8.5	9.1	54
4748.125000	44.3	100.0	V	278.0	32.7	11.6	9.7	54
6116.875000	46.7	200.0	H	264.0	31.4	15.3	7.3	54
6728.125000	47.3	200.0	H	254.0	31.1	16.2	6.7	54
6906.875000	51.2	100.0	V	179.0	34.8	16.4	2.8	54

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

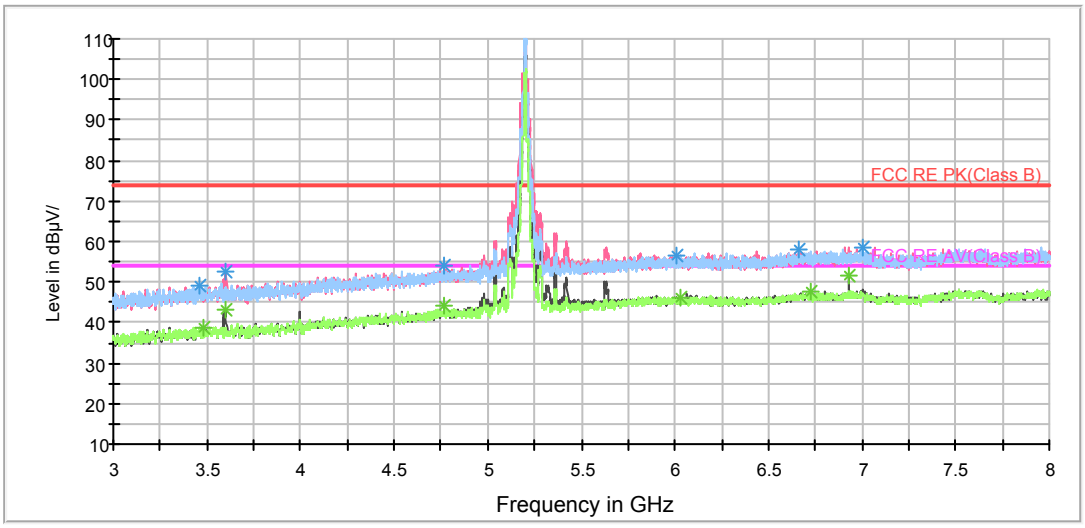
802.11a CH40

RE 1G-6GHz PK+AV Class B



Radiates Emission from 1GHz to 3GHz

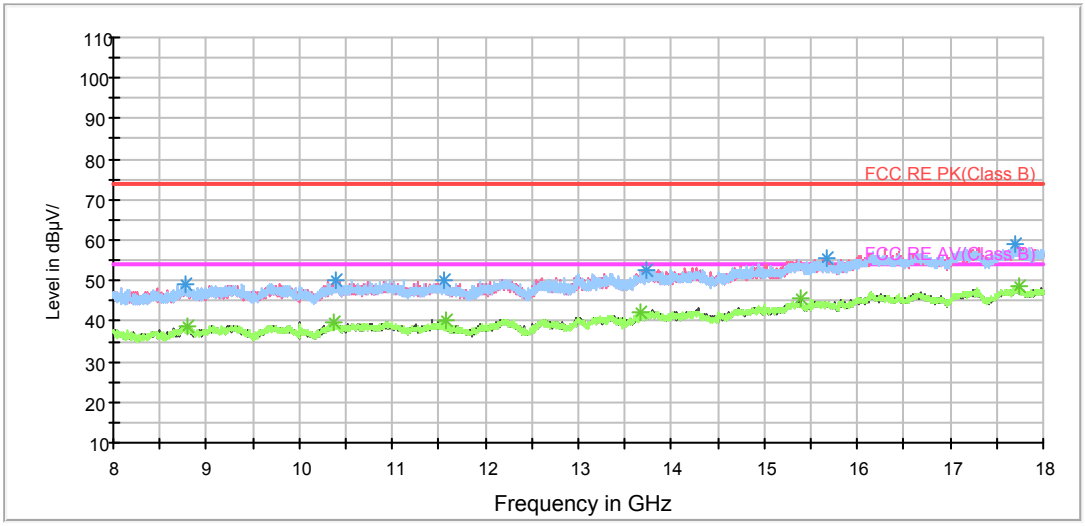
RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz

RE 3-18GHz PK+AV



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3458.125000	49.1	100.0	V	0.0	40.9	8.2	24.9	74
3603.750000	52.4	200.0	V	273.0	43.9	8.5	21.6	74
4768.125000	54.0	100.0	V	273.0	42.4	11.6	20.0	74
6008.125000	56.3	200.0	V	14.0	41.0	15.3	17.7	74
6658.750000	57.9	200.0	V	72.0	41.8	16.1	16.1	74
7008.750000	58.5	200.0	H	351.0	42.0	16.5	15.5	74

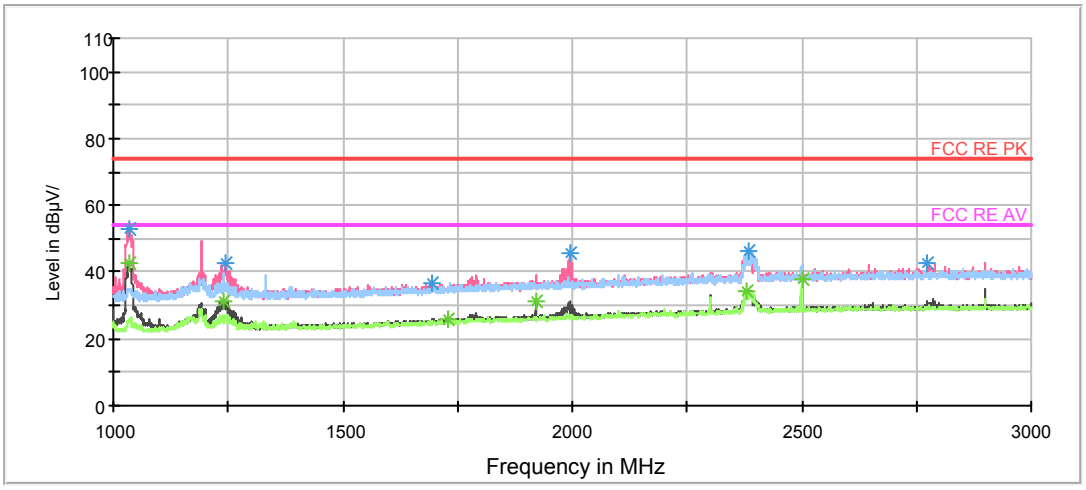
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3476.875000	38.8	200.0	V	212.0	30.5	8.3	15.2	54
3595.625000	43.0	100.0	V	273.0	34.5	8.5	11.0	54
4766.250000	44.3	100.0	H	48.0	32.7	11.6	9.7	54
6028.750000	46.3	200.0	V	24.0	31.0	15.3	7.7	54
6730.000000	47.4	200.0	H	312.0	31.1	16.3	6.6	54
6933.125000	51.4	200.0	V	173.0	34.9	16.5	2.6	54

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

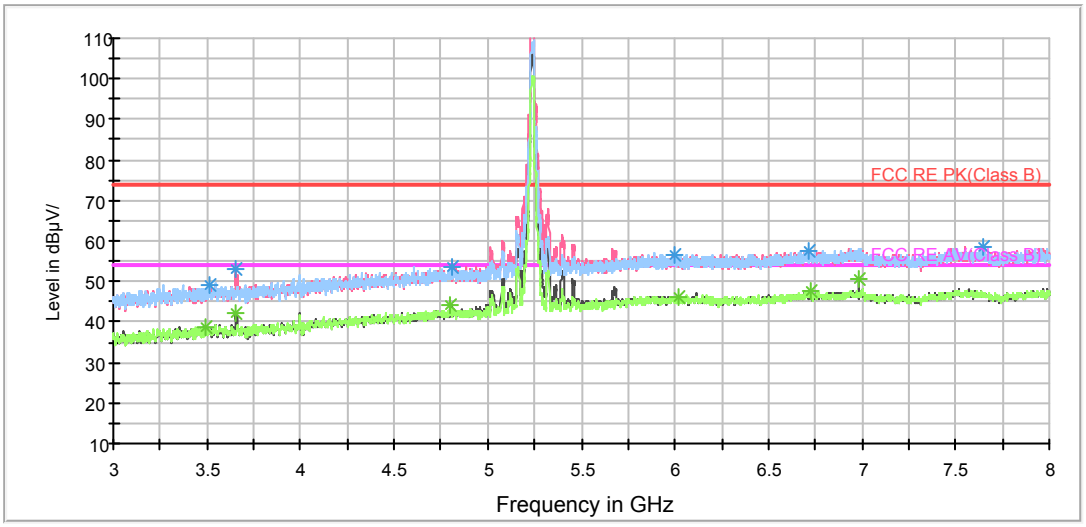
802.11a CH48

RE 1G-6GHz PK+AV Class B



Radiates Emission from 1GHz to 3GHz

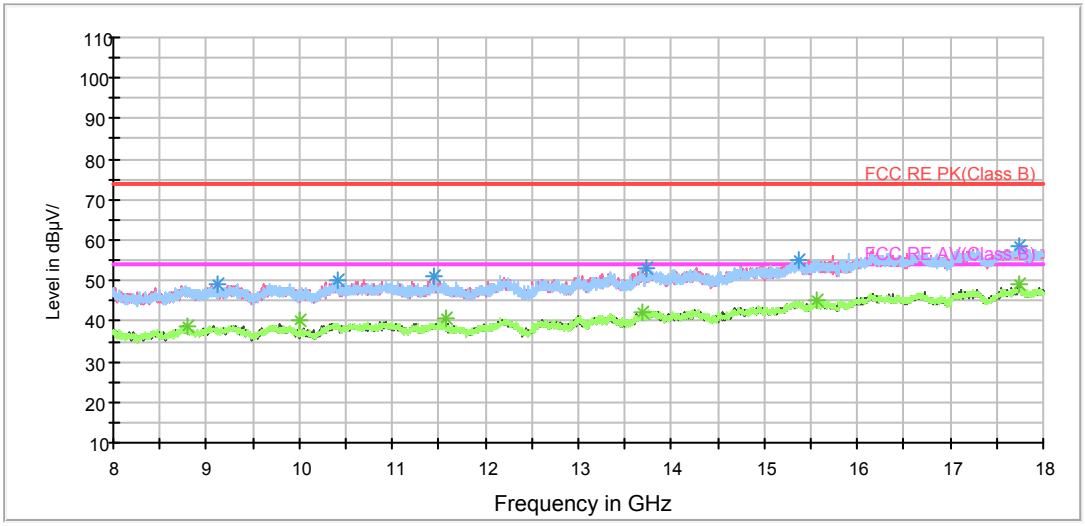
RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz

RE 3-18GHz PK+AV



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3516.250000	49.1	101.0	H	0.0	40.7	8.4	24.9	74
3656.875000	53.1	200.0	V	350.0	44.6	8.5	20.9	74
4810.625000	53.5	101.0	H	58.0	41.8	11.7	20.5	74
6711.250000	57.6	200.0	V	69.0	41.4	16.2	16.4	74
7643.750000	58.4	100.0	V	345.0	41.6	16.8	15.6	74
5995.625000	56.7	200.0	V	224.0	41.4	15.3	17.3	74

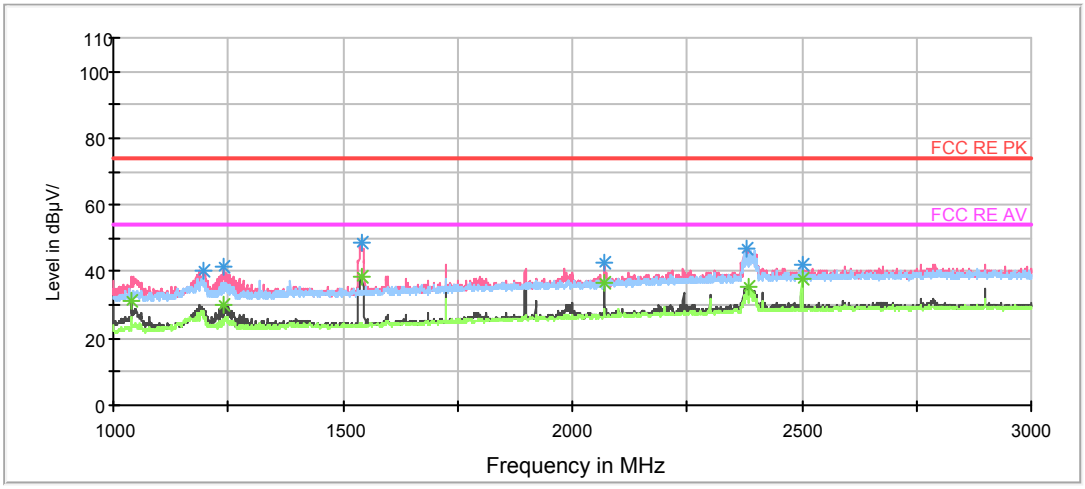
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3493.125000	38.9	200.0	V	98.0	30.6	8.3	15.1	54
3655.000000	42.4	100.0	V	267.0	33.9	8.5	11.6	54
4803.125000	44.2	200.0	H	0.0	32.5	11.7	9.8	54
6728.750000	47.4	200.0	H	285.0	31.2	16.2	6.6	54
6986.875000	50.4	200.0	V	166.0	33.9	16.5	3.6	54
6021.250000	46.1	200.0	V	78.0	30.8	15.3	7.9	54

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

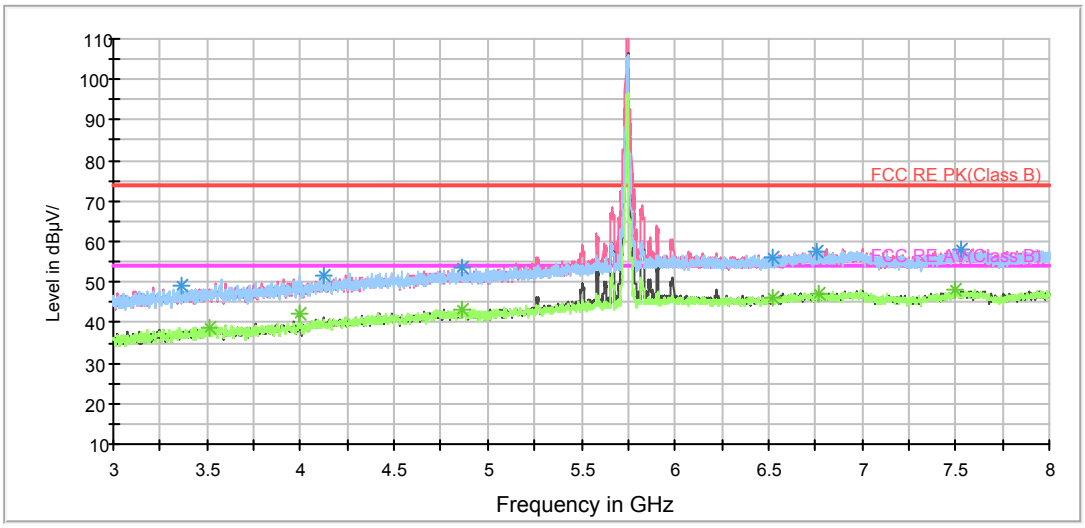
802.11a CH149

RE 1G-6GHz PK+AV Class B



Radiates Emission from 1GHz to 3GHz

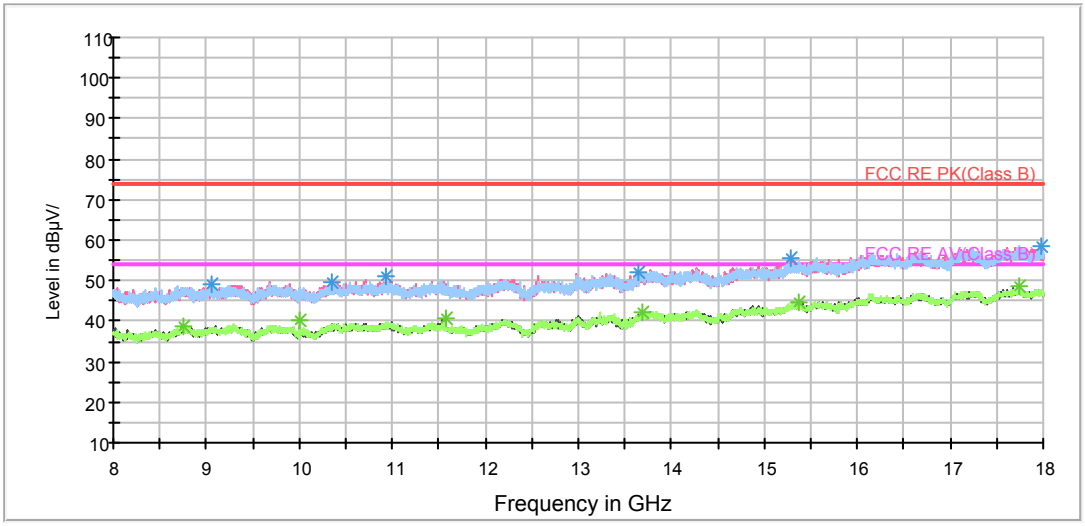
RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz

RE 3-18GHz PK+AV



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3358.750000	49.1	100.0	H	20.0	41.2	7.9	24.9	74
4121.250000	51.8	200.0	H	204.0	41.9	9.9	22.2	74
4860.000000	53.4	100.0	H	38.0	41.7	11.7	20.6	74
6519.375000	55.9	200.0	V	139.0	40.2	15.7	18.1	74
6753.125000	57.6	200.0	V	22.0	41.3	16.3	16.4	74
7529.375000	58.1	100.0	V	141.0	41.6	16.5	15.9	74

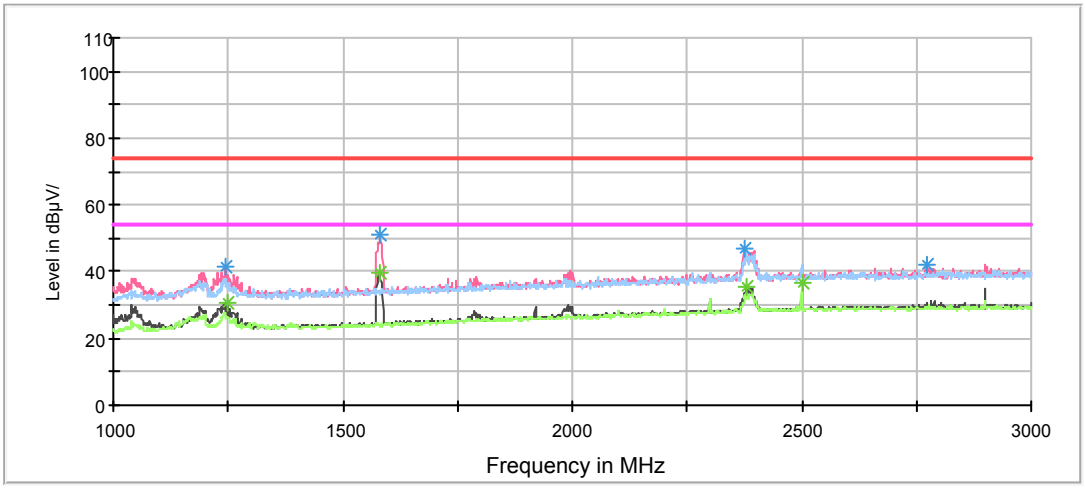
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3515.000000	38.9	200.0	V	42.0	30.5	8.4	15.1	54
4000.000000	42.0	200.0	V	179.0	32.6	9.4	12.0	54
4860.000000	43.1	200.0	V	42.0	31.4	11.7	10.9	54
7500.625000	48.1	200.0	H	66.0	31.7	16.4	5.9	54
6518.125000	46.3	100.0	V	181.0	30.6	15.7	7.7	54
6766.875000	47.1	200.0	H	343.0	30.8	16.3	6.9	54

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

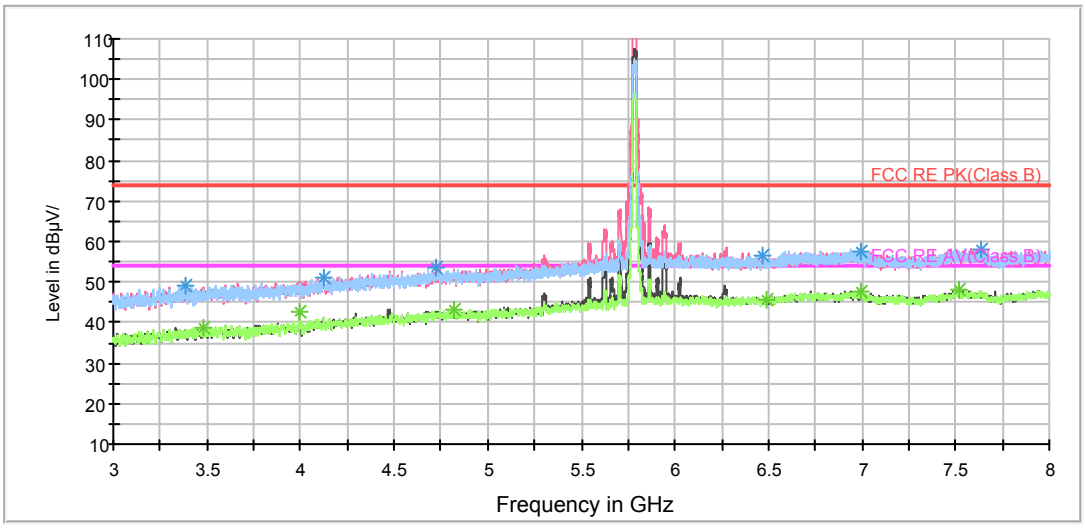
802.11a CH157

RE 1G-6GHz PK+AV Class B



Radiates Emission from 1GHz to 3GHz

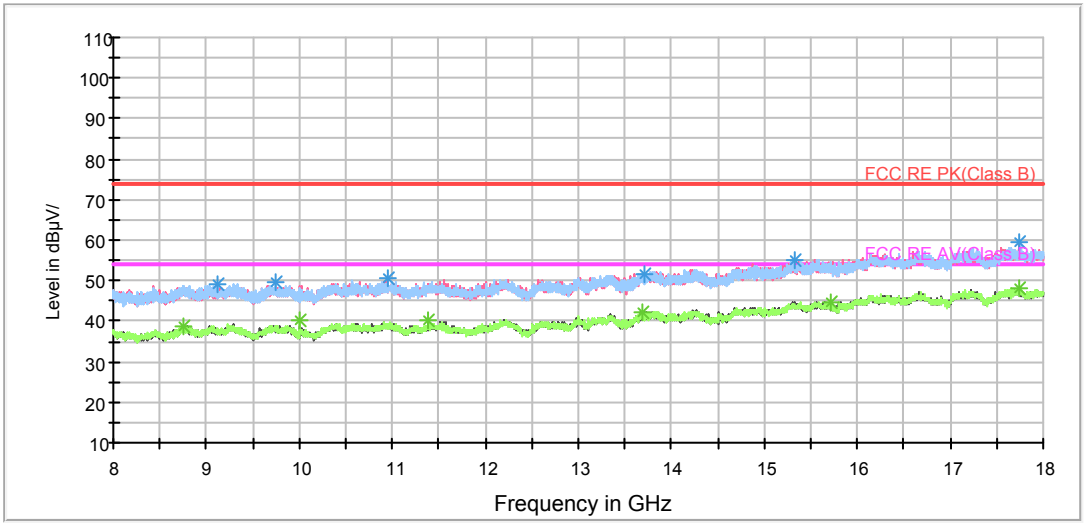
RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz

RE 3-18GHz PK+AV



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3388.750000	48.9	200.0	H	233.0	40.9	8.0	25.1	74
4122.500000	50.9	200.0	V	36.0	41.0	9.9	23.1	74
4719.375000	53.3	100.0	H	165.0	41.8	11.5	20.7	74
7641.250000	58.1	100.0	V	157.0	41.3	16.8	15.9	74
6466.250000	56.5	100.0	V	257.0	40.9	15.6	17.5	74
6988.750000	57.4	200.0	V	164.0	40.9	16.5	16.6	74

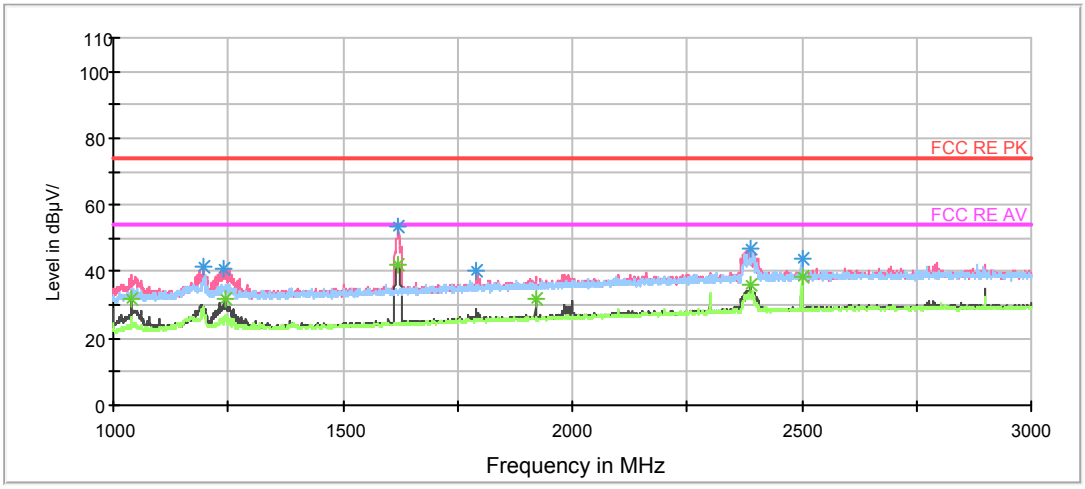
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3477.500000	38.7	100.0	H	254.0	30.4	8.3	15.3	54
4000.000000	42.4	200.0	V	183.0	33.0	9.4	11.6	54
4822.500000	43.2	200.0	H	0.0	31.5	11.7	10.8	54
7515.625000	48.0	200.0	H	243.0	31.5	16.5	6.0	54
6495.000000	45.7	200.0	H	271.0	30.1	15.6	8.3	54
6998.750000	47.4	100.0	H	18.0	30.9	16.5	6.6	54

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

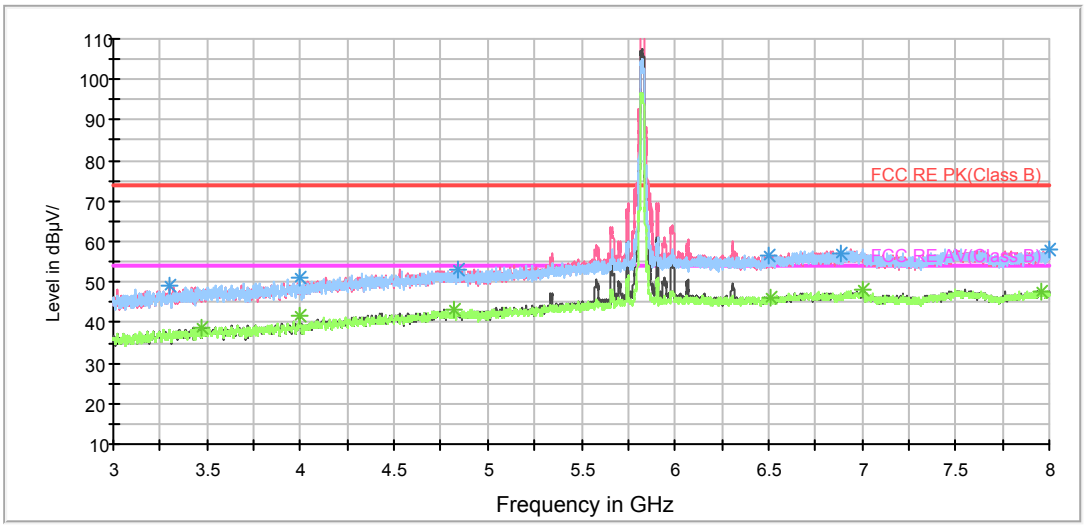
802.11a CH165

RE 1G-6GHz PK+AV Class B



Radiates Emission from 1GHz to 3GHz

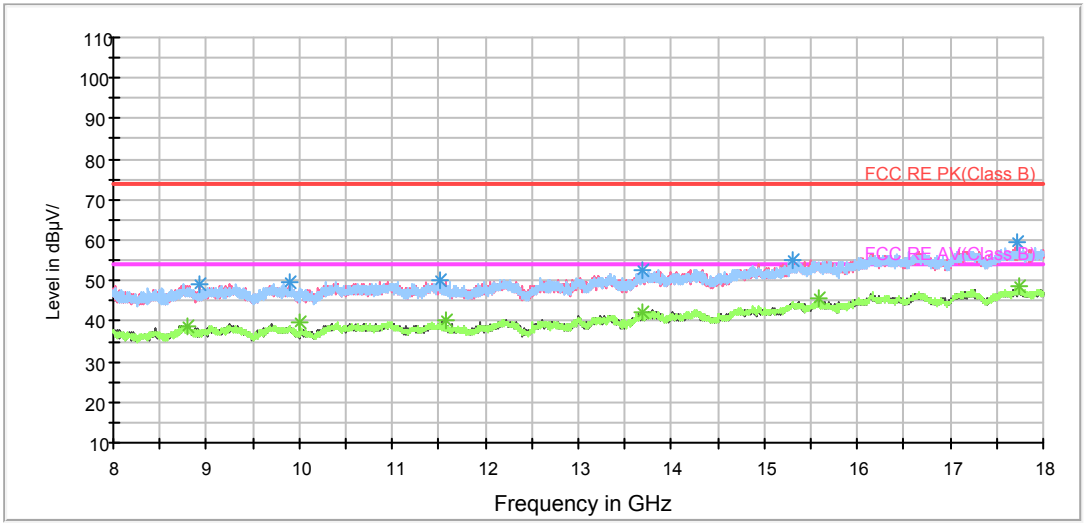
RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz

RE 3-18GHz PK+AV



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3300.000000	49.1	100.0	V	326.0	41.3	7.8	24.9	74
3999.375000	51.3	200.0	H	327.0	41.9	9.4	22.7	74
4840.000000	53.2	100.0	V	207.0	41.5	11.7	20.8	74
7998.125000	58.2	200.0	V	11.0	41.1	17.1	15.8	74
6501.250000	56.5	100.0	H	107.0	40.9	15.6	17.5	74
6883.750000	57.0	100.0	V	316.0	40.6	16.4	17.0	74

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

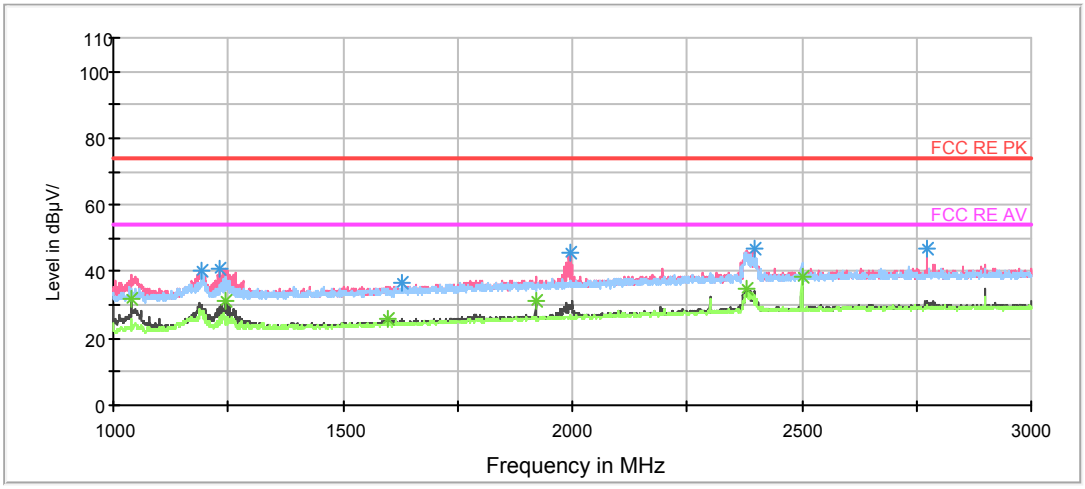
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3476.250000	38.6	200.0	H	0.0	30.3	8.3	15.4	54
3999.375000	41.6	200.0	V	174.0	32.2	9.4	12.4	54
4823.125000	43.1	100.0	V	296.0	31.4	11.7	10.9	54
7006.250000	48.0	200.0	V	97.0	31.5	16.5	6.0	54
6516.875000	46.1	100.0	H	193.0	30.5	15.6	7.9	54
7956.250000	47.5	200.0	V	31.0	30.4	17.1	6.5	54

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

MIMO

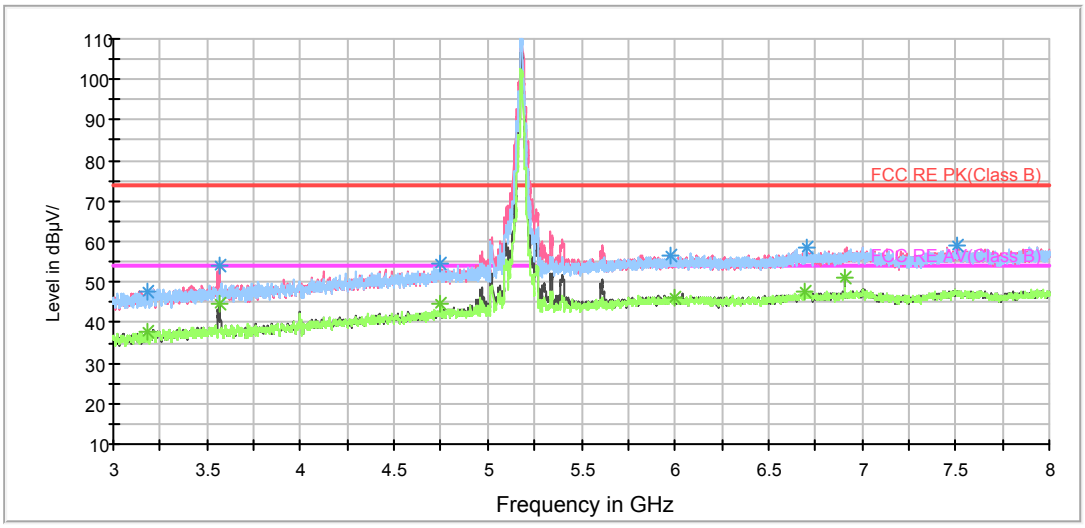
802.11n (HT20) CH36

RE 1G-6GHz PK+AV Class B



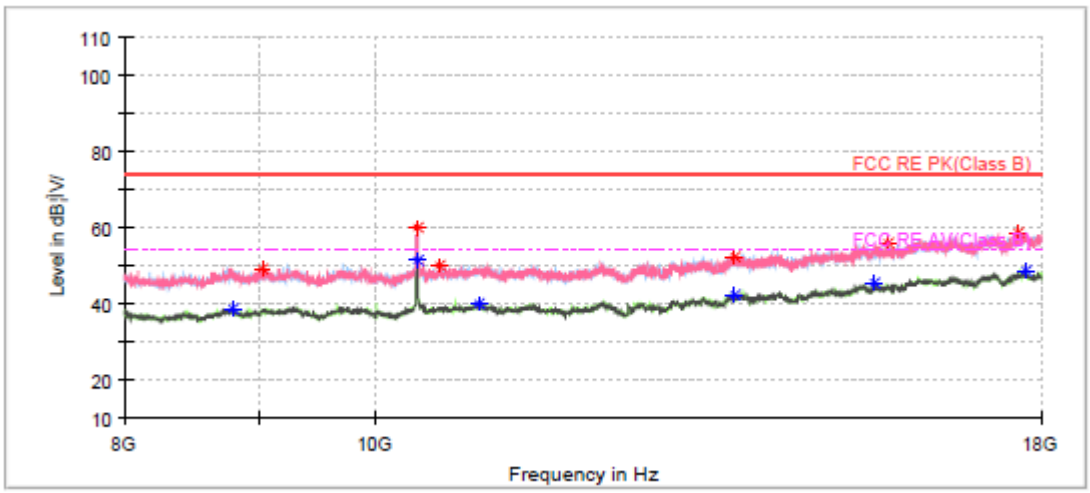
Radiates Emission from 1GHz to 3GHz

RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3178.125000	47.8	200.0	H	267.0	40.4	7.4	26.2	74
3566.875000	54.1	100.0	V	265.0	45.6	8.5	19.9	74
4744.375000	54.7	200.0	V	40.0	43.1	11.6	19.3	74
5975.000000	56.4	100.0	V	346.0	41.2	15.2	17.6	74
6706.875000	58.3	200.0	H	0.0	42.1	16.2	15.7	74
7508.125000	59.1	200.0	V	0.0	42.6	16.5	14.9	74

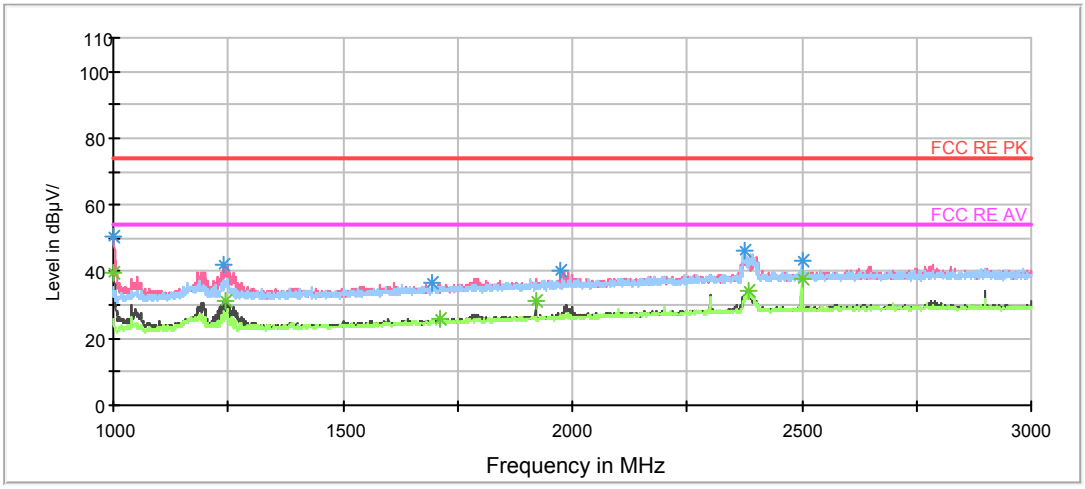
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3178.750000	37.7	200.0	H	238.0	30.3	7.4	16.3	54
3563.125000	44.7	100.0	V	275.0	36.2	8.5	9.3	54
4748.125000	44.5	100.0	H	49.0	32.9	11.6	9.5	54
5996.250000	46.1	200.0	H	305.0	30.8	15.3	7.9	54
6695.625000	47.6	200.0	H	276.0	31.4	16.2	6.4	54
6906.875000	51.2	200.0	V	194.0	34.8	16.4	2.8	54

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

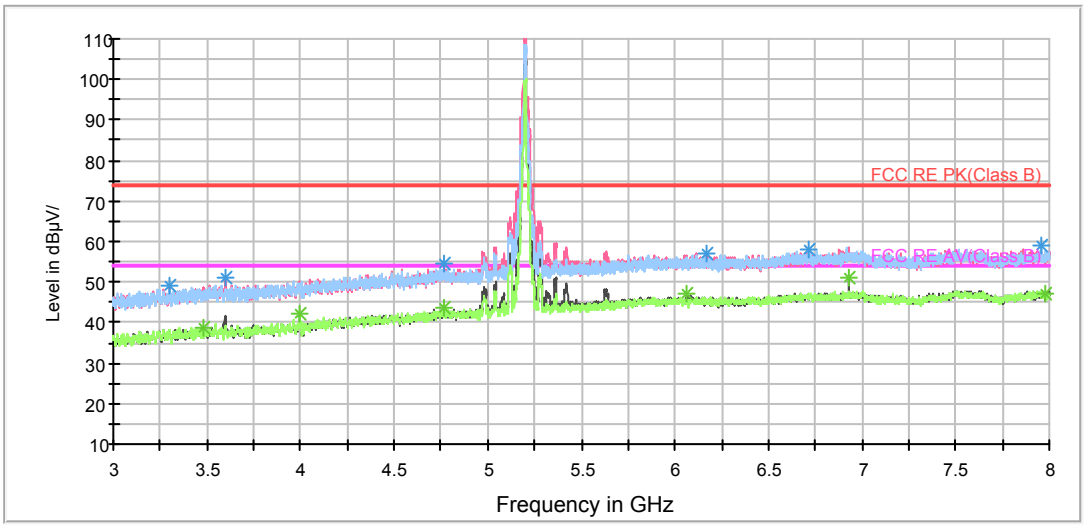
802.11n (HT20) CH40

RE 1G-6GHz PK+AV Class B



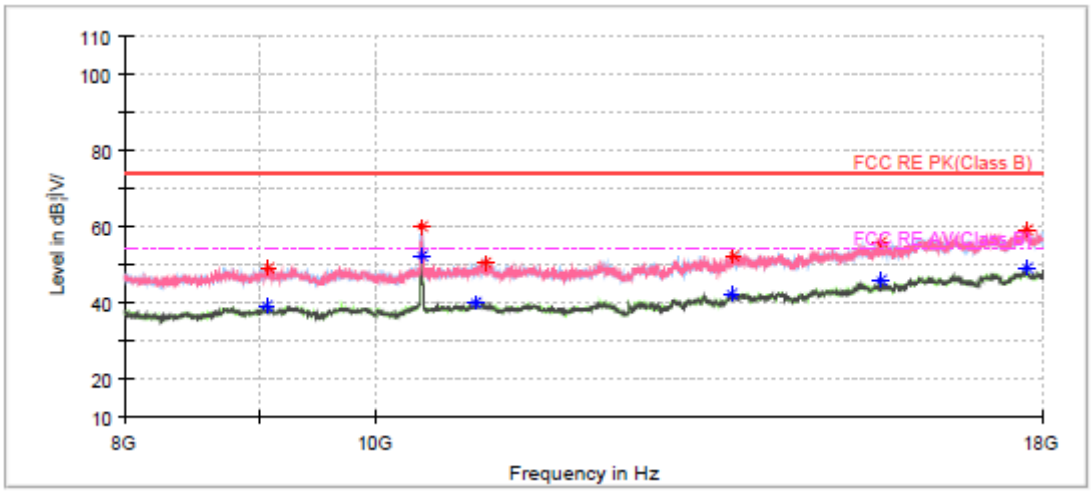
Radiates Emission from 1GHz to 3GHz

RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3300.625000	49.2	100.0	V	303.0	41.4	7.8	24.8	74
3595.625000	51.1	100.0	V	274.0	42.6	8.5	22.9	74
4768.125000	54.4	100.0	V	176.0	42.8	11.6	19.6	74
6712.500000	57.8	200.0	H	255.0	41.6	16.2	16.2	74
7955.625000	58.8	200.0	H	158.0	41.7	17.1	15.2	74
6170.000000	56.8	100.0	V	303.0	41.5	15.3	17.2	74

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

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3478.750000	38.7	200.0	H	294.0	30.4	8.3	15.3	54
4000.000000	42.2	200.0	V	191.0	32.8	9.4	11.8	54
4768.125000	43.7	100.0	V	176.0	32.1	11.6	10.3	54
6066.875000	47.2	200.0	V	11.0	32.0	15.2	6.8	54
6933.750000	50.9	200.0	V	162.0	34.4	16.5	3.1	54
7976.875000	47.1	200.0	V	80.0	30.0	17.1	6.9	54

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

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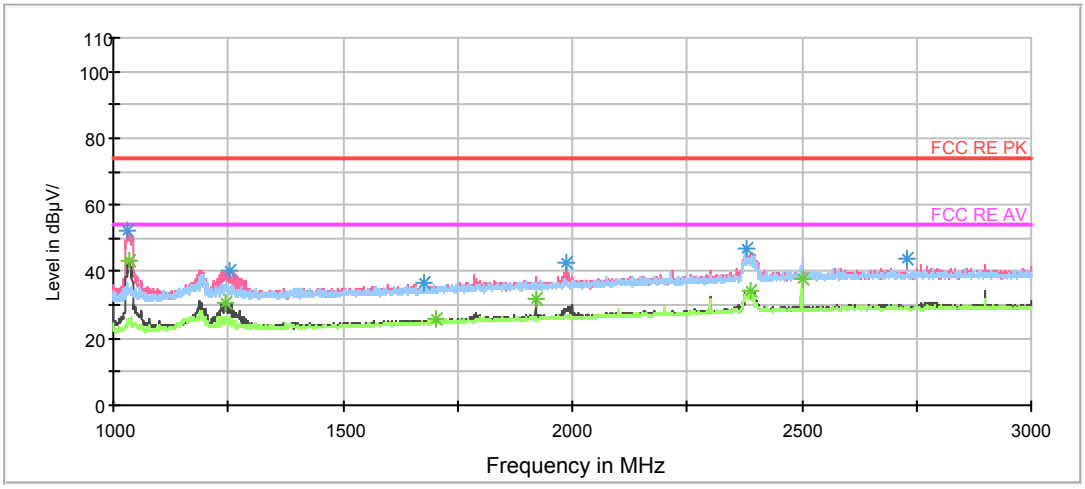
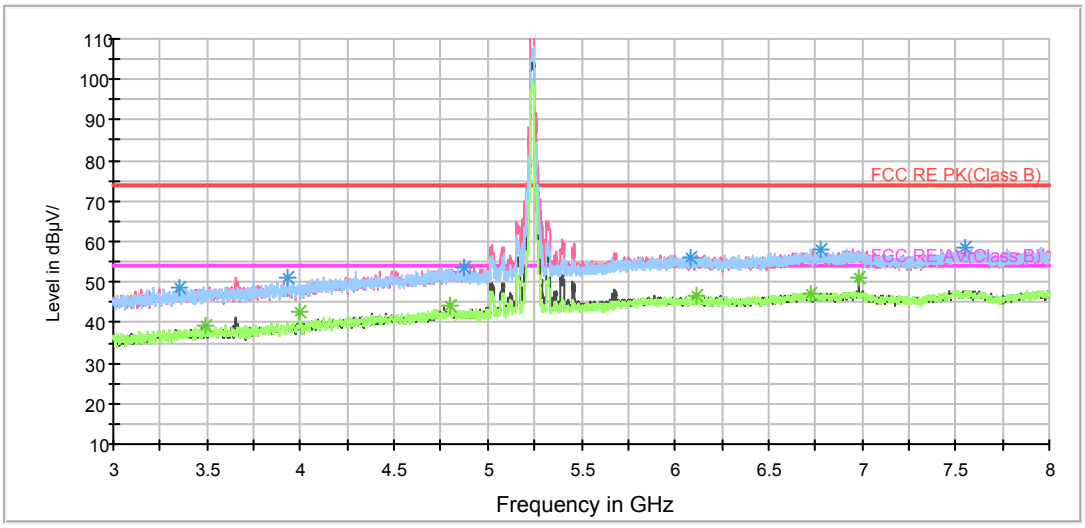
RE 1G-6GHz PK+AV Class B



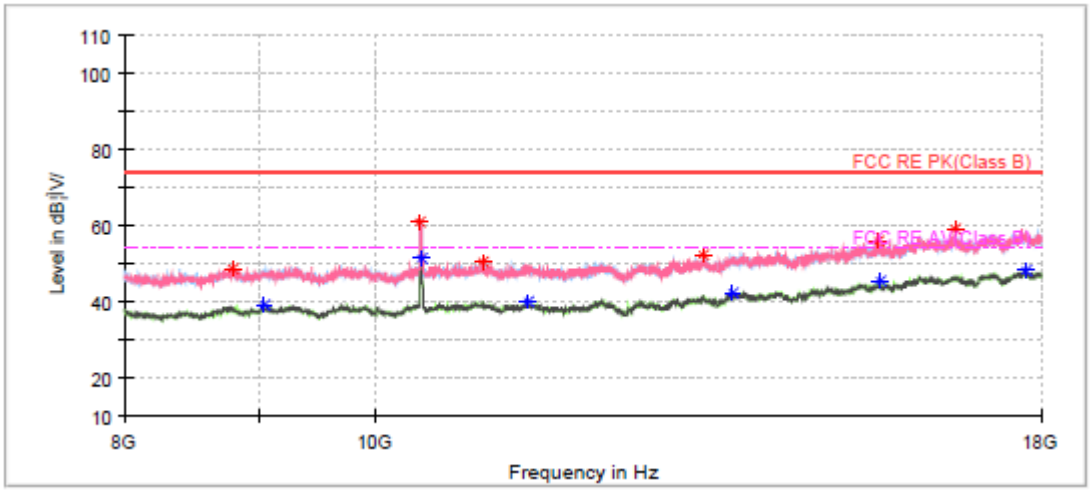
Radiates Emission from 1GHz to 3GHz

RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3356.875000	48.8	200.0	H	97.0	40.9	7.9	25.2	74
3931.875000	51.3	100.0	H	64.0	42.2	9.1	22.7	74
4873.750000	53.7	100.0	H	44.0	42.0	11.7	20.3	74
6780.000000	57.9	200.0	V	44.0	41.6	16.3	16.1	74
7555.625000	58.4	100.0	H	0.0	41.8	16.6	15.6	74
6081.875000	56.1	200.0	V	172.0	40.9	15.2	17.9	74

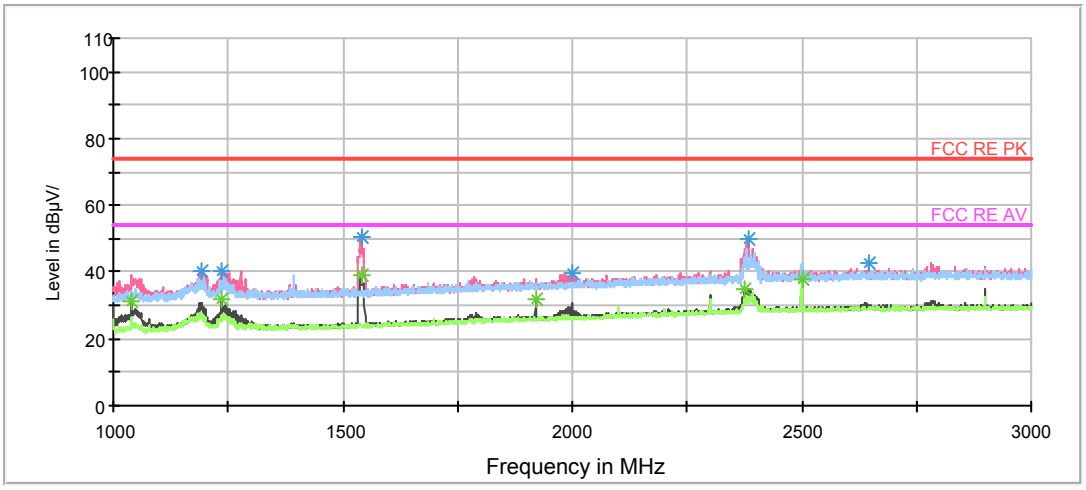
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3493.125000	39.0	100.0	H	254.0	30.7	8.3	15.0	54
4000.000000	42.6	200.0	V	182.0	33.2	9.4	11.4	54
4803.125000	44.3	200.0	V	339.0	32.6	11.7	9.7	54
6725.625000	47.2	200.0	H	126.0	31.0	16.2	6.8	54
6986.875000	50.9	200.0	V	172.0	34.4	16.5	3.1	54
6113.125000	46.5	200.0	V	284.0	31.2	15.3	7.5	54

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

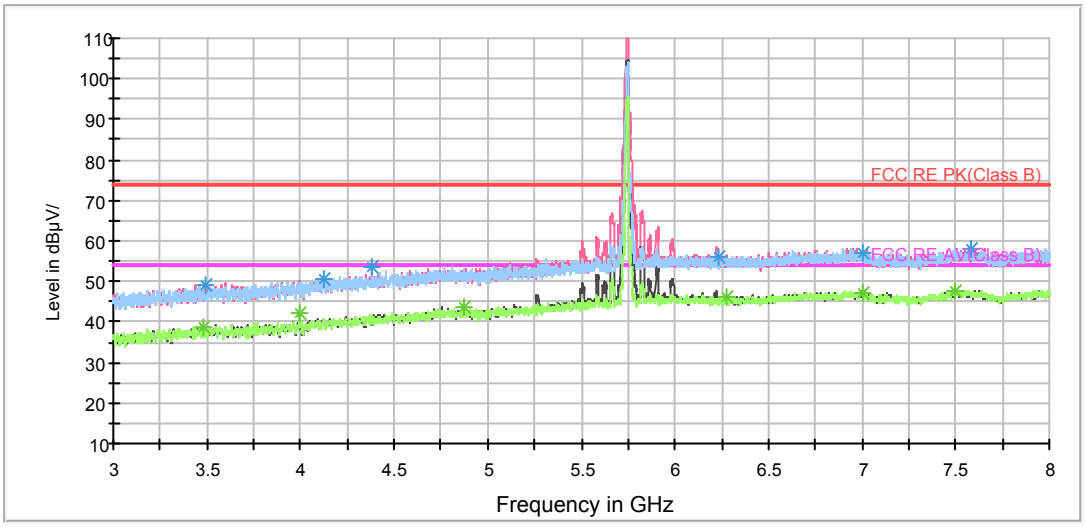
802.11n (HT20) CH149

RE 1G-6GHz PK+AV Class B



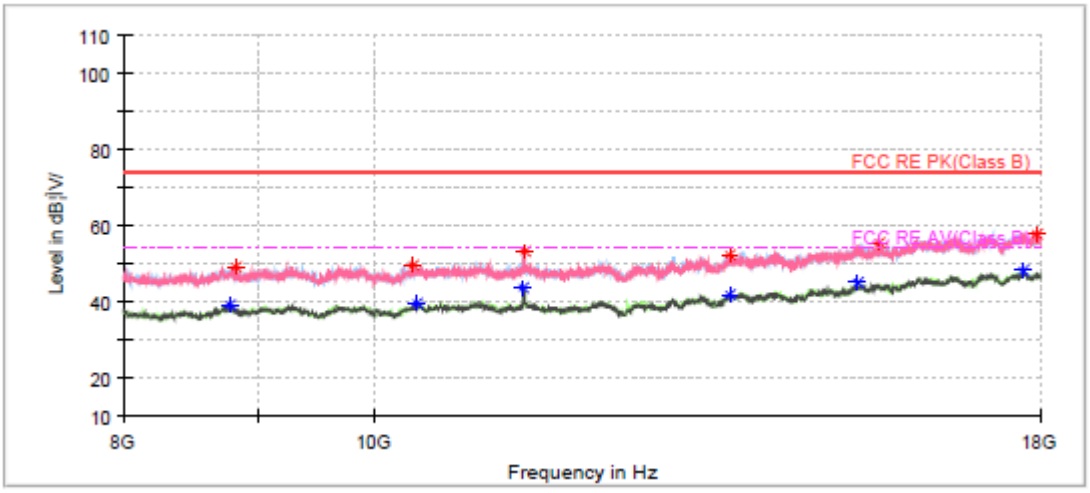
Radiates Emission from 1GHz to 3GHz

RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3497.500000	49.1	100.0	V	117.0	40.8	8.3	24.9	74
4120.625000	50.7	200.0	H	336.0	40.8	9.9	23.3	74
4383.750000	53.8	100.0	V	195.0	43.1	10.7	20.2	74
7579.375000	58.1	100.0	V	322.0	41.4	16.7	15.9	74
6237.500000	56.2	200.0	H	296.0	40.8	15.4	17.8	74
7004.375000	57.2	100.0	H	150.0	40.7	16.5	16.8	74

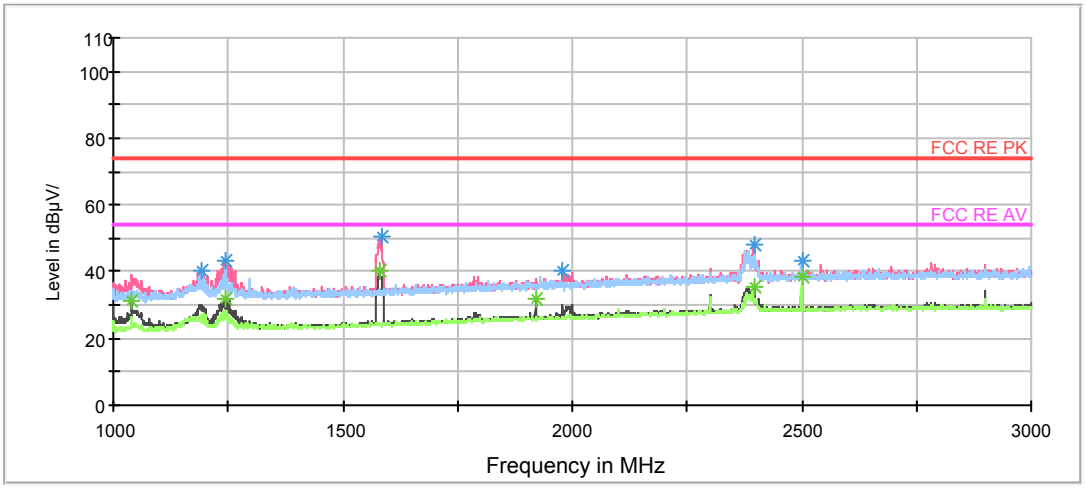
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3478.750000	38.8	100.0	V	342.0	30.5	8.3	15.2	54
4000.000000	42.4	200.0	V	175.0	33.0	9.4	11.6	54
4873.750000	43.5	200.0	V	284.0	31.8	11.7	10.5	54
7496.875000	47.9	200.0	V	95.0	31.5	16.4	6.1	54
6271.875000	46.1	100.0	H	327.0	30.7	15.4	7.9	54
7009.375000	47.3	100.0	V	0.0	30.8	16.5	6.7	54

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

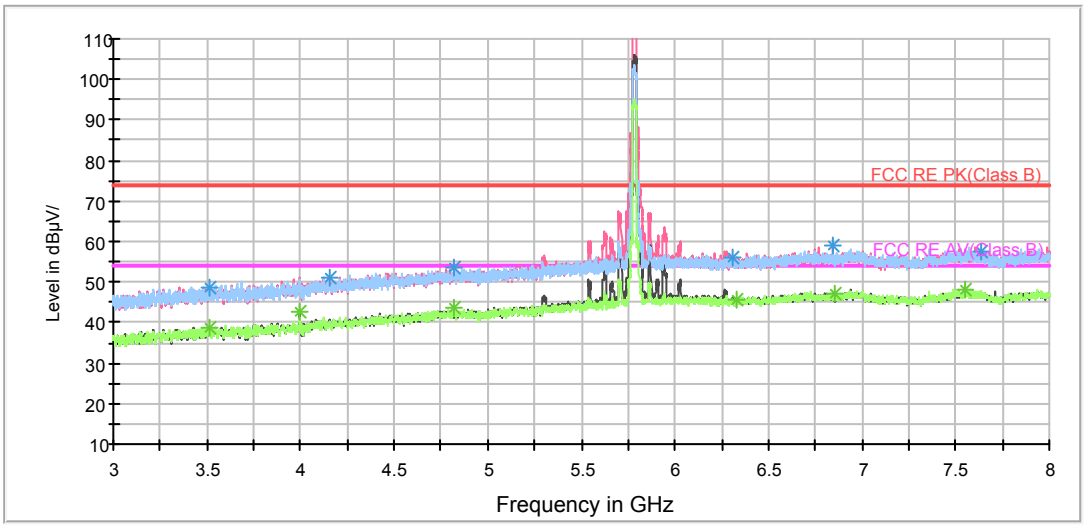
802.11n (HT20) CH157

RE 1G-6GHz PK+AV Class B



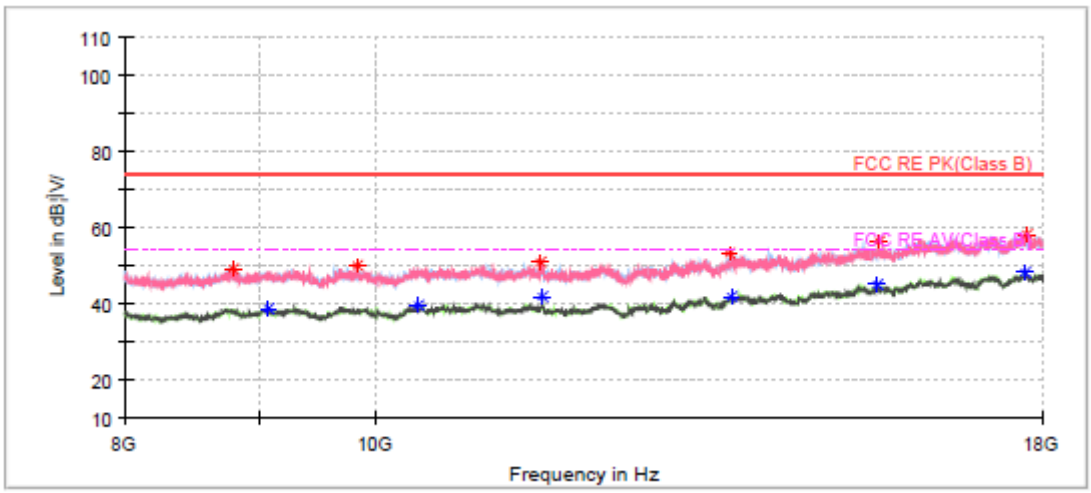
Radiates Emission from 1GHz to 3GHz

RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3514.375000	48.6	200.0	H	198.0	40.2	8.4	25.4	74
4160.000000	51.0	100.0	V	75.0	40.9	10.1	23.0	74
4823.750000	53.8	100.0	H	62.0	42.1	11.7	20.2	74
6305.000000	56.1	100.0	V	216.0	40.7	15.4	17.9	74
6839.375000	58.8	100.0	V	0.0	42.4	16.4	15.2	74
7640.000000	57.6	200.0	H	45.0	40.8	16.8	16.4	74

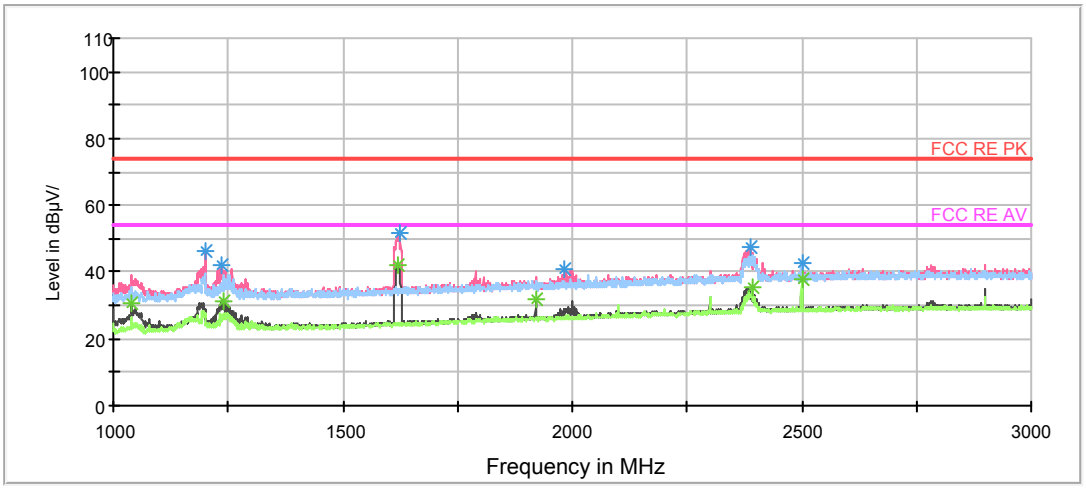
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3513.125000	38.6	200.0	V	135.0	30.2	8.4	15.4	54
4000.000000	42.6	200.0	V	184.0	33.2	9.4	11.4	54
4820.000000	43.4	100.0	H	283.0	31.7	11.7	10.6	54
6331.875000	45.7	100.0	V	75.0	30.3	15.4	8.3	54
6851.250000	47.0	100.0	H	62.0	30.6	16.4	7.0	54
7551.875000	48.3	100.0	H	273.0	31.7	16.6	5.7	54

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

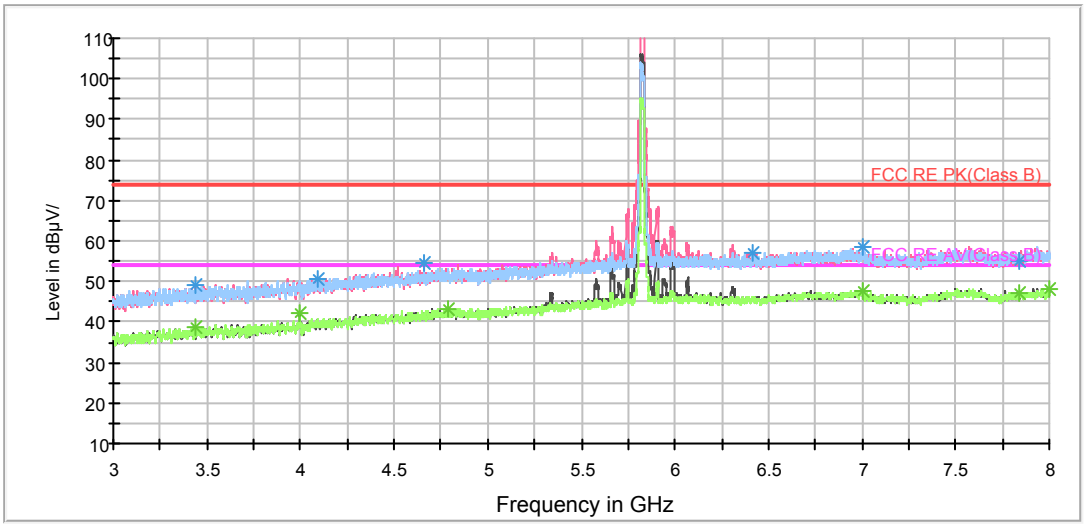
802.11n (HT20) CH165

RE 1G-6GHz PK+AV Class B



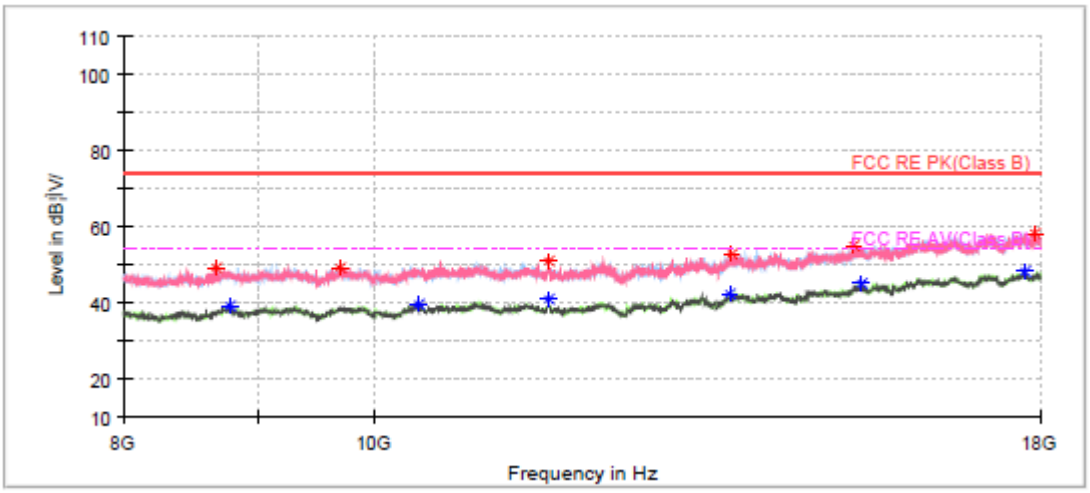
Radiates Emission from 1GHz to 3GHz

RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3440.625000	49.0	200.0	V	7.0	40.8	8.2	25.0	74
4092.500000	50.5	100.0	V	219.0	40.7	9.8	23.5	74
4663.125000	54.7	200.0	H	197.0	43.3	11.4	19.3	74
6414.375000	56.9	100.0	H	182.0	41.4	15.5	17.1	74
7009.375000	58.4	100.0	H	114.0	41.9	16.5	15.6	74
7838.750000	54.8	200.0	V	0.0	37.7	17.1	19.2	74

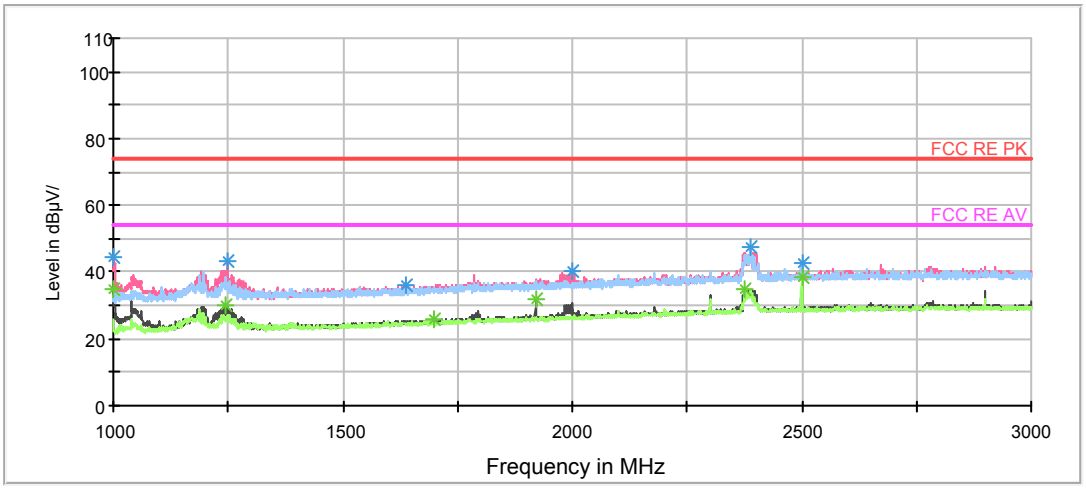
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3441.875000	38.7	200.0	H	315.0	30.5	8.2	15.3	54
3999.375000	42.2	200.0	V	185.0	32.8	9.4	11.8	54
4787.500000	43.2	200.0	V	0.0	31.6	11.6	10.8	54
7004.375000	47.6	200.0	V	328.0	31.1	16.5	6.4	54
7834.375000	46.9	100.0	V	179.0	29.8	17.1	7.1	54
7998.125000	48.2	200.0	V	18.0	31.1	17.1	5.8	54

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

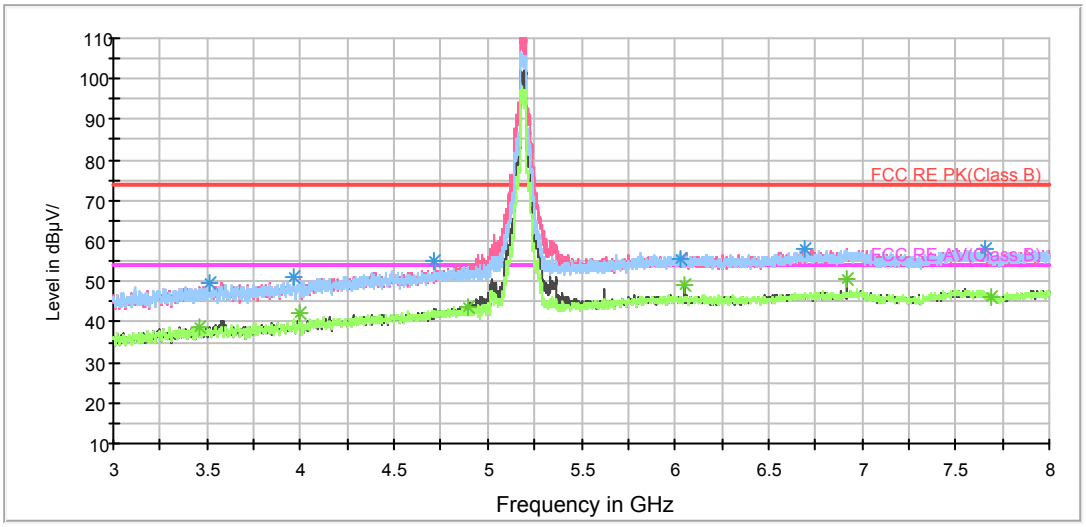
802.11n (HT40) CH38

RE 1G-6GHz PK+AV Class B



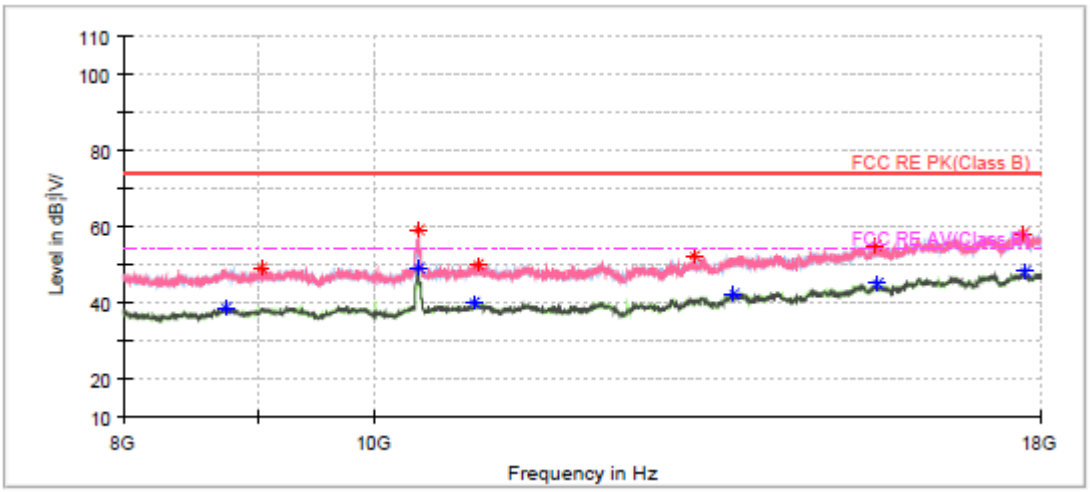
Radiates Emission from 1GHz to 3GHz

RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3511.875000	49.5	100.0	H	14.0	41.1	8.4	24.5	74
3963.750000	50.9	100.0	H	253.0	41.6	9.3	23.1	74
4718.125000	54.8	100.0	V	266.0	43.3	11.5	19.2	74
6691.875000	58.0	100.0	H	94.0	41.8	16.2	16.0	74
7652.500000	58.1	100.0	V	117.0	41.3	16.8	15.9	74
6025.000000	55.7	200.0	V	67.0	40.4	15.3	18.3	74

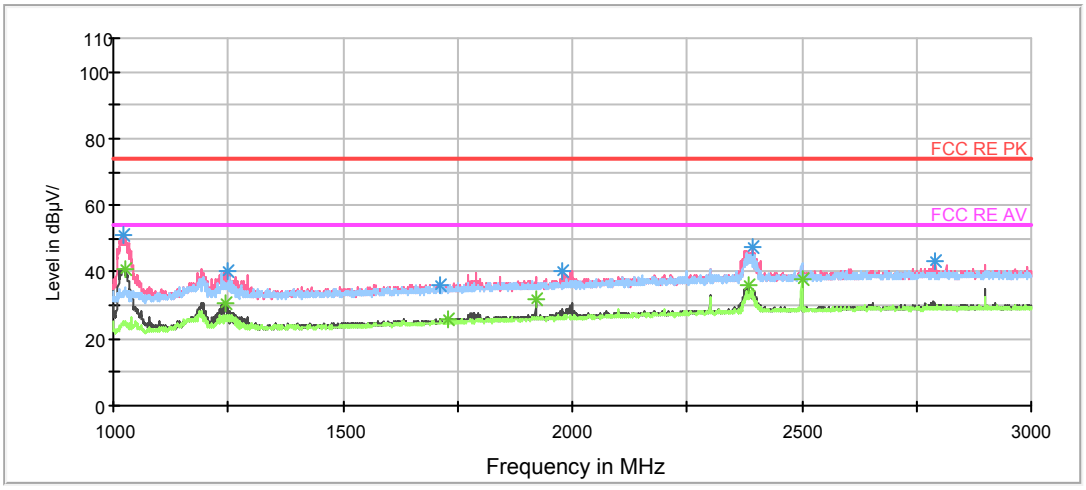
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3460.000000	38.8	200.0	V	213.0	30.6	8.2	15.2	54
4000.000000	42.3	200.0	V	194.0	32.9	9.4	11.7	54
4894.375000	43.8	200.0	V	263.0	32.0	11.8	10.2	54
6055.000000	48.9	200.0	V	184.0	33.7	15.2	5.1	54
6920.000000	50.6	200.0	V	326.0	34.2	16.4	3.4	54
7693.125000	46.1	100.0	V	354.0	29.1	17.0	7.9	54

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

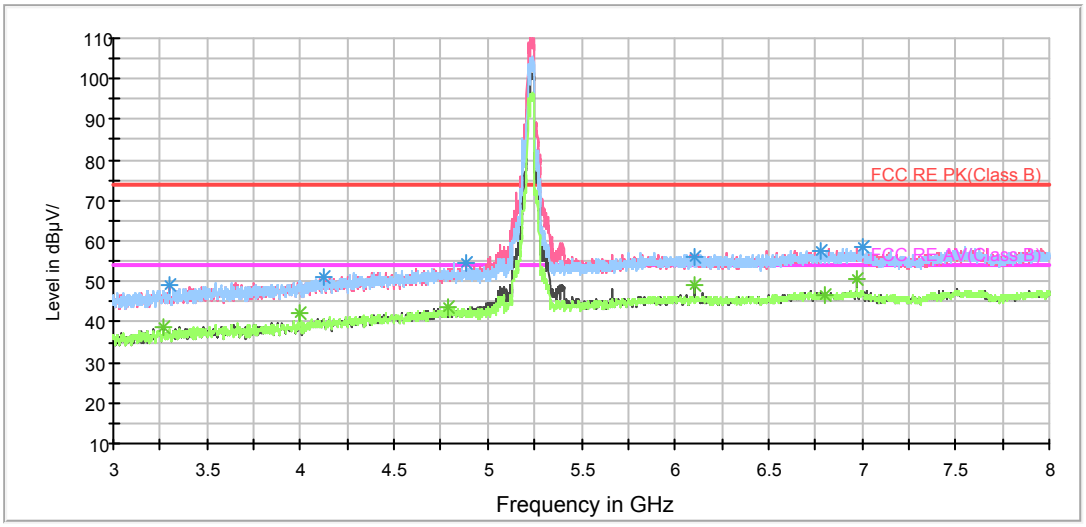
802.11n (HT40) CH46

RE 1G-6GHz PK+AV Class B



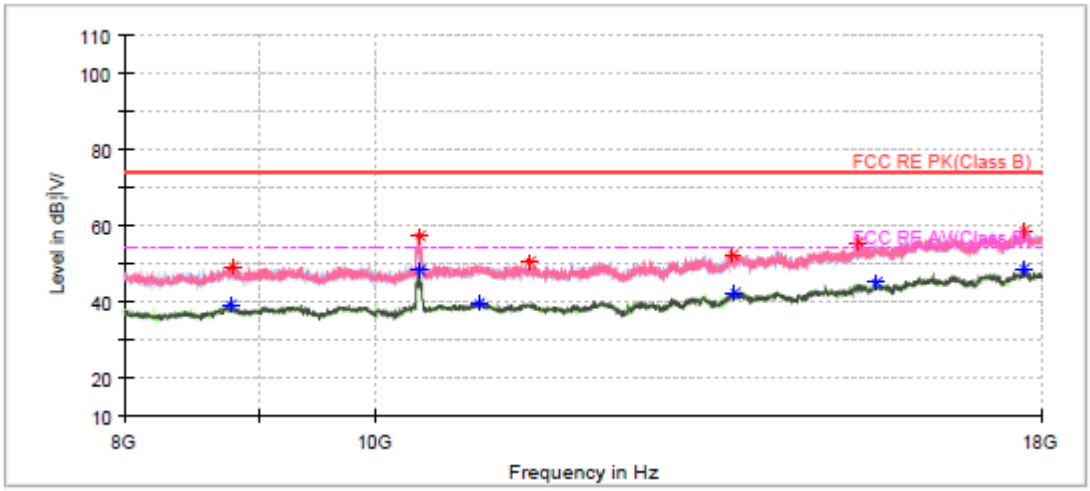
Radiates Emission from 1GHz to 3GHz

RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3301.250000	49.1	200.0	V	76.0	41.3	7.8	24.9	74
4125.625000	51.3	100.0	V	294.0	41.3	10.0	22.7	74
4887.500000	54.8	100.0	V	322.0	43.0	11.8	19.2	74
6101.250000	56.1	200.0	V	337.0	40.8	15.3	17.9	74
6776.250000	57.6	100.0	H	55.0	41.3	16.3	16.4	74
7000.625000	58.7	200.0	V	25.0	42.2	16.5	15.3	74

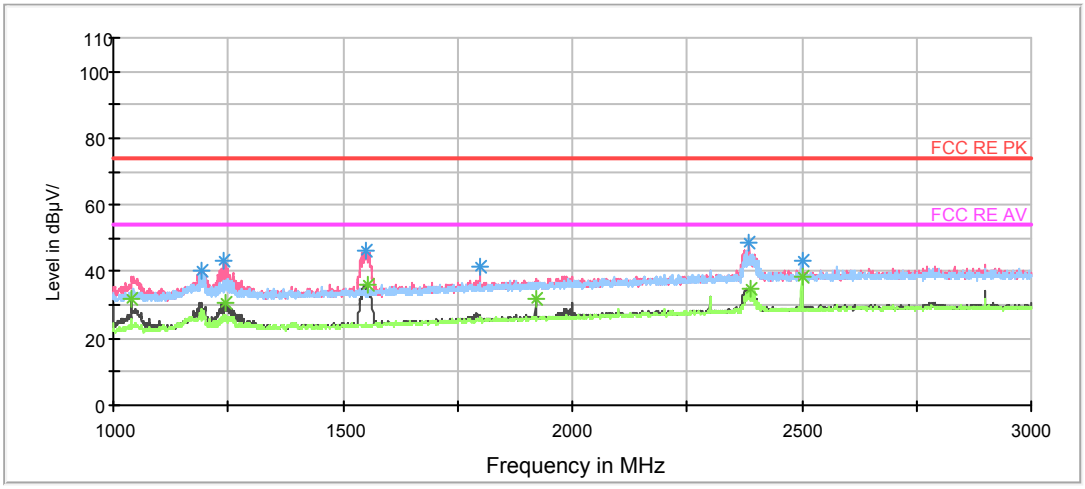
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3268.750000	38.7	100.0	V	263.0	31.0	7.7	15.3	54
4000.000000	42.4	100.0	V	195.0	33.0	9.4	11.6	54
4788.750000	43.6	200.0	H	0.0	32.0	11.6	10.4	54
6101.875000	49.3	200.0	V	25.0	34.0	15.3	4.7	54
6796.875000	46.6	200.0	V	183.0	30.3	16.3	7.4	54
6973.750000	50.5	200.0	V	164.0	34.0	16.5	3.5	54

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

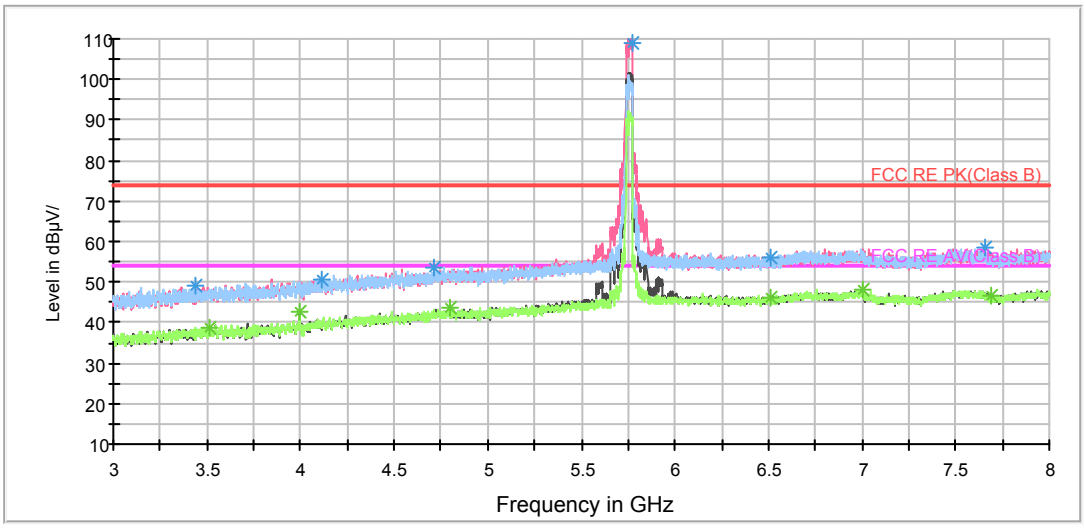
802.11n (HT40) CH151

RE 1G-6GHz PK+AV Class B



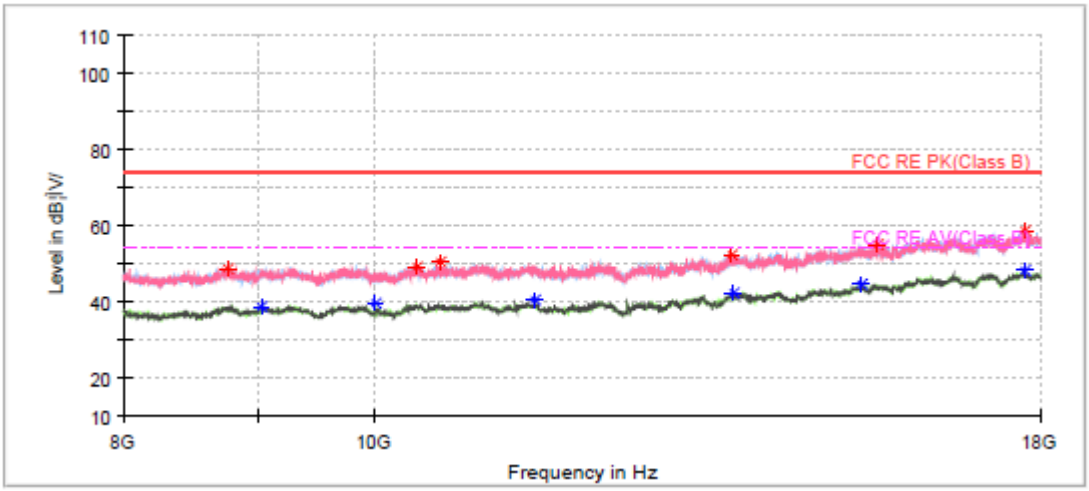
Radiates Emission from 1GHz to 3GHz

RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3443.125000	49.0	200.0	H	248.0	40.8	8.2	25.0	74
4118.125000	50.8	100.0	V	352.0	40.9	9.9	23.2	74
4718.125000	53.8	200.0	V	208.0	42.3	11.5	20.2	74
6510.625000	56.1	200.0	V	61.0	40.5	15.6	17.9	74
7660.625000	58.3	100.0	V	313.0	41.4	16.9	15.7	74
8775.000000	48.8	200.0	H	254.0	41.3	7.5	25.2	74

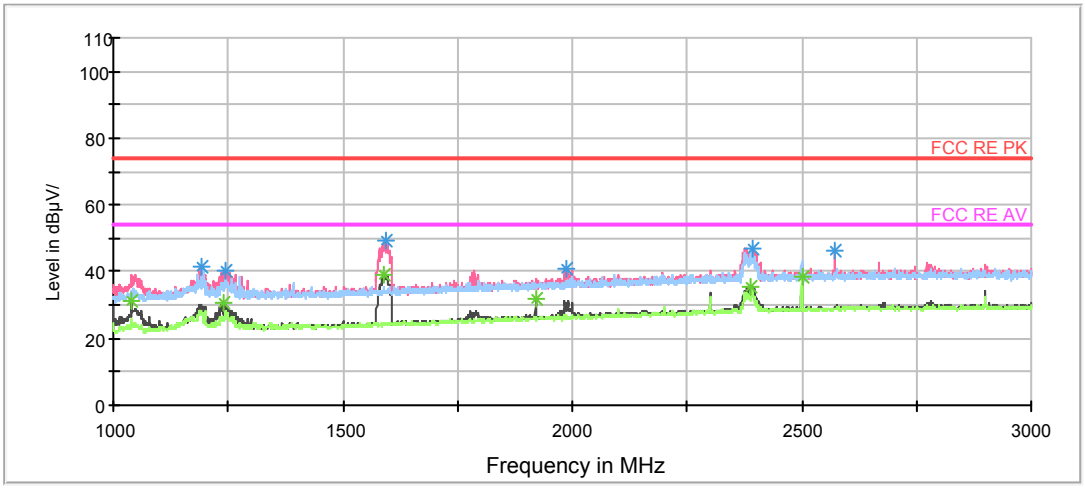
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3515.000000	38.9	200.0	H	346.0	30.5	8.4	15.1	54
4000.000000	42.6	200.0	V	178.0	33.2	9.4	11.4	54
4795.625000	43.7	200.0	V	41.0	32.0	11.7	10.3	54
6516.875000	46.1	100.0	H	223.0	30.5	15.6	7.9	54
7005.000000	48.1	200.0	H	228.0	31.6	16.5	5.9	54
7688.750000	46.7	100.0	H	7.0	29.8	16.9	7.3	54

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

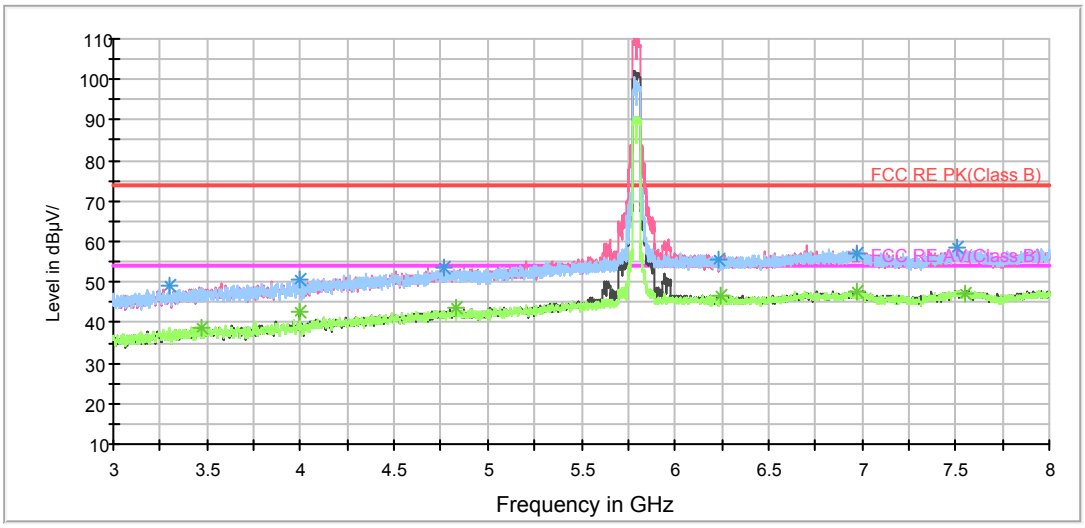
802.11n (HT40) CH159

RE 1G-6GHz PK+AV Class B



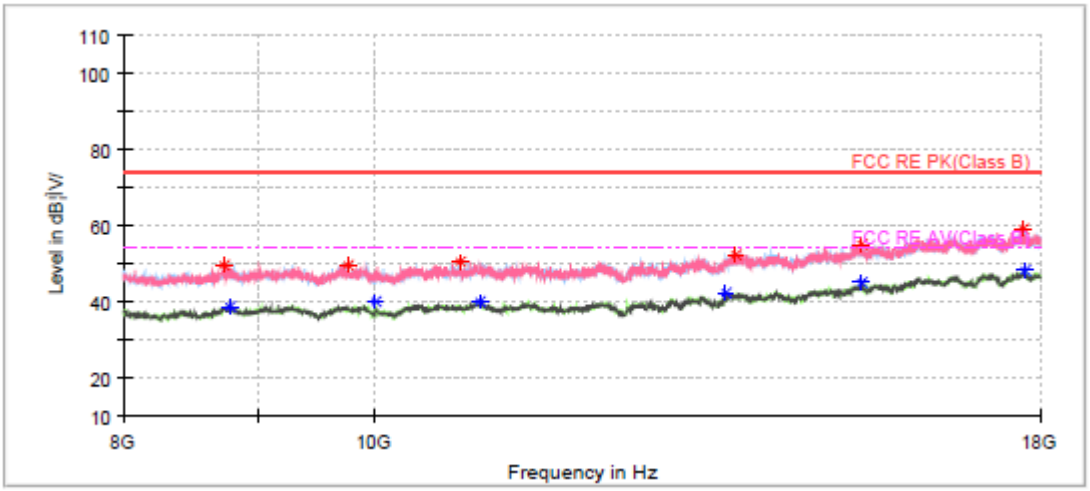
Radiates Emission from 1GHz to 3GHz

RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3301.250000	49.1	200.0	H	0.0	41.3	7.8	24.9	74
4000.000000	50.8	200.0	V	178.0	41.4	9.4	23.2	74
4770.000000	53.5	100.0	H	6.0	41.9	11.6	20.5	74
6237.500000	55.8	100.0	V	198.0	40.4	15.4	18.2	74
6976.875000	57.2	200.0	V	80.0	40.7	16.5	16.8	74
7510.000000	58.3	200.0	H	108.0	41.8	16.5	15.7	74

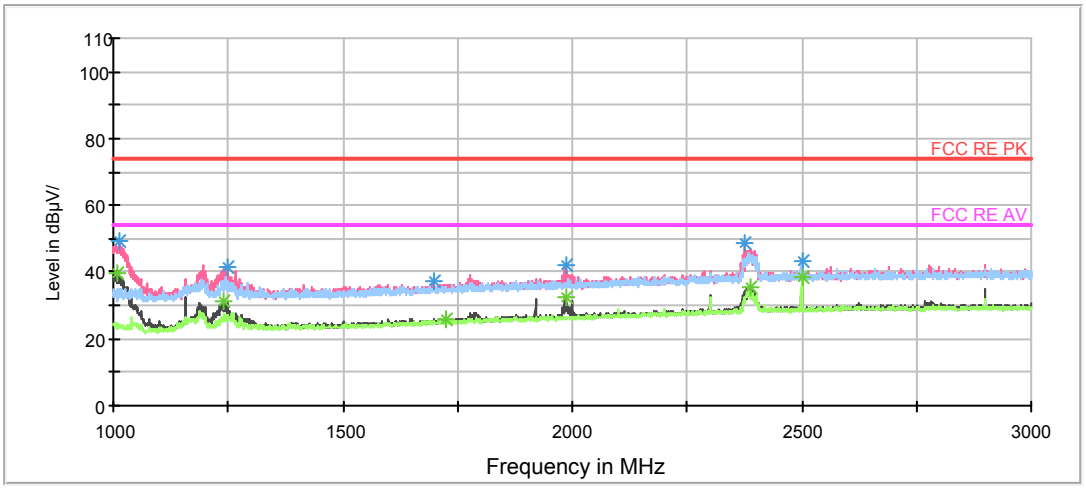
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3476.250000	38.8	200.0	V	241.0	30.5	8.3	15.2	54
4000.000000	42.5	200.0	V	178.0	33.1	9.4	11.5	54
4829.375000	43.9	100.0	V	318.0	32.2	11.7	10.1	54
6244.375000	46.4	200.0	H	315.0	31.0	15.4	7.6	54
6969.375000	47.8	200.0	H	187.0	31.3	16.5	6.2	54
7545.000000	47.4	200.0	V	159.0	30.8	16.6	6.6	54

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

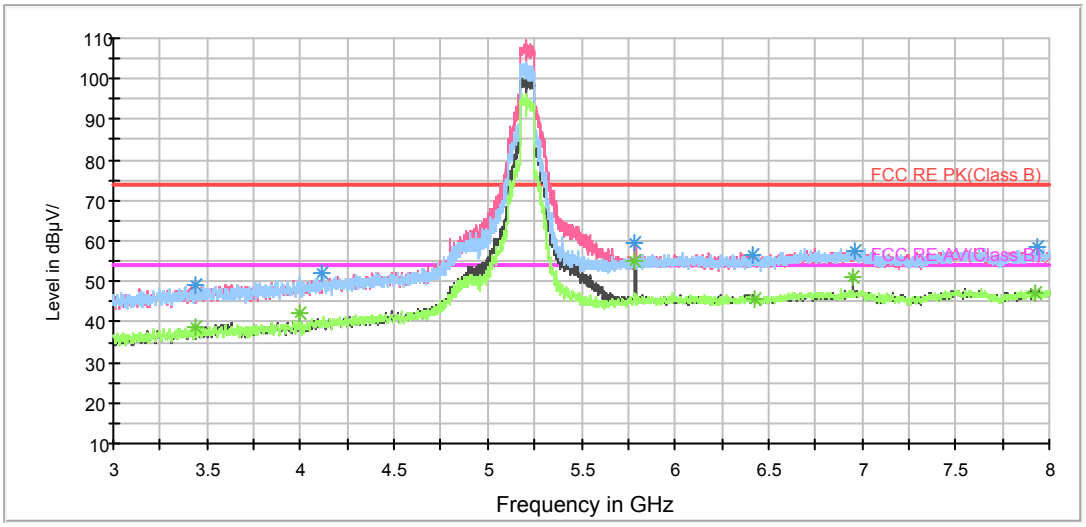
802.11ac (HT80) CH42

RE 1G-6GHz PK+AV Class B



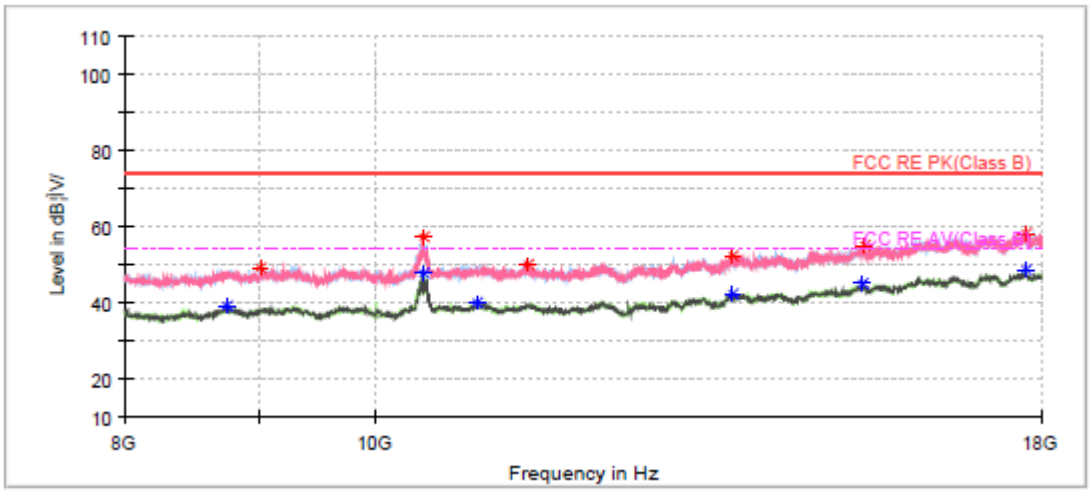
Radiates Emission from 1GHz to 3GHz

RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3443.125000	49.3	200.0	V	0.0	41.1	8.2	24.7	74
4117.500000	52.0	100.0	H	351.0	42.1	9.9	22.0	74
5788.750000	59.6	200.0	V	30.0	44.9	14.7	14.4	74
7937.500000	58.4	100.0	V	288.0	41.3	17.1	15.6	74
6418.750000	56.5	200.0	V	107.0	41.0	15.5	17.5	74
6958.750000	57.7	200.0	V	137.0	41.2	16.5	16.3	74

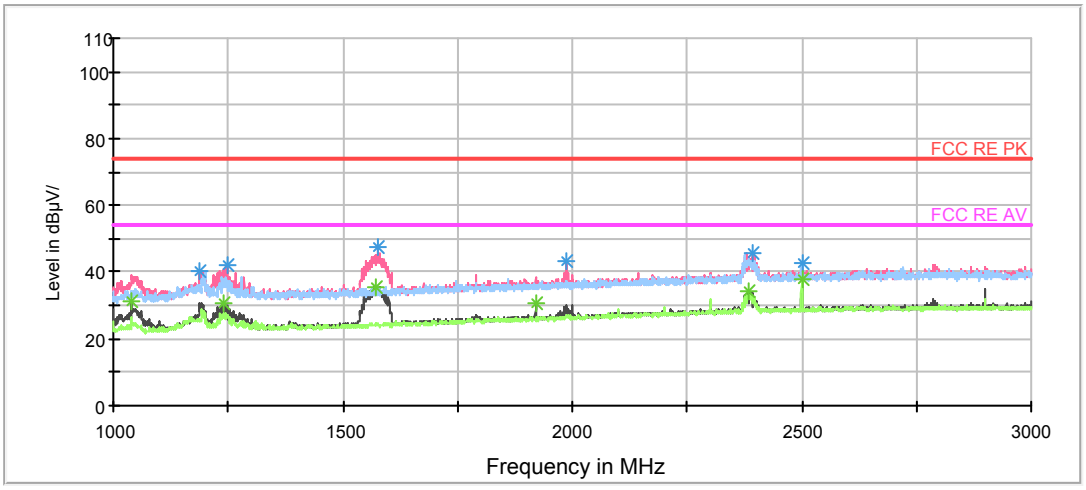
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3441.875000	39.0	200.0	V	87.0	30.8	8.2	15.0	54
4000.000000	42.3	200.0	V	165.0	32.9	9.4	11.7	54
6946.875000	50.9	200.0	V	165.0	34.4	16.5	3.1	54
6430.625000	45.5	200.0	V	0.0	30.0	15.5	8.5	54
7924.375000	47.2	200.0	V	1.0	30.1	17.1	6.8	54
8757.500000	39.1	200.0	H	73.0	31.7	7.4	14.9	54

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

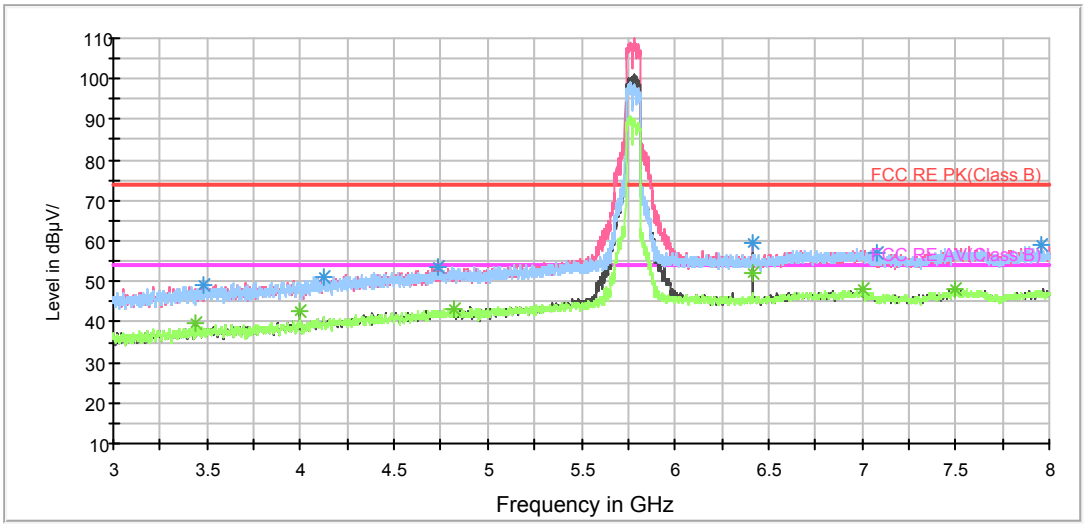
802.11ac (HT80) CH155

RE 1G-6GHz PK+AV Class B



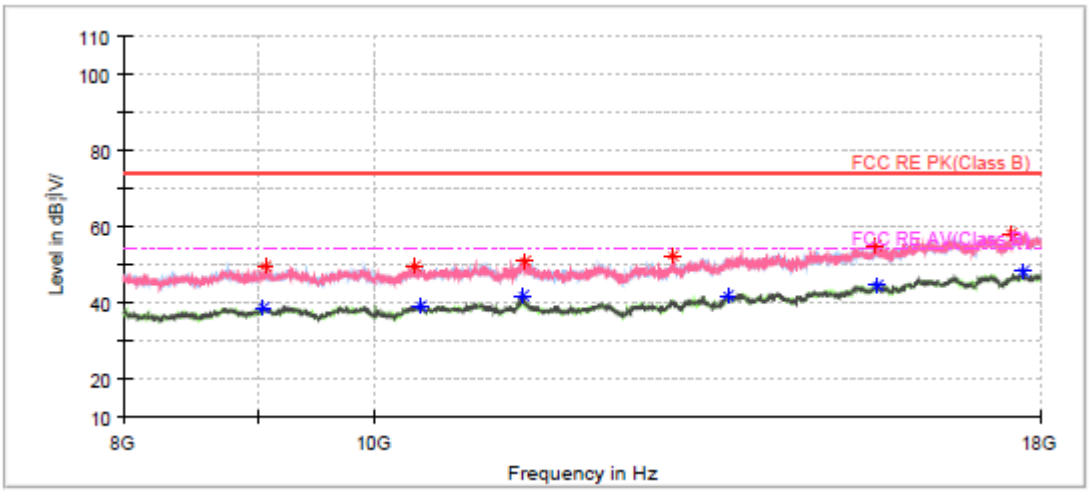
Radiates Emission from 1GHz to 3GHz

RE 3-18GHz PK+AV



Note: The signal beyond the limit is carrier.

Radiates Emission from 3GHz to 8GHz



Radiates Emission from 8GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3478.125000	48.9	200.0	V	184.0	40.6	8.3	25.1	74
4122.500000	51.2	100.0	V	0.0	41.3	9.9	22.8	74
4738.750000	53.4	100.0	V	187.0	41.8	11.6	20.6	74
6416.250000	59.3	200.0	V	184.0	43.8	15.5	14.7	74
7076.875000	57.0	100.0	V	148.0	40.5	16.5	17.0	74
7953.125000	59.0	100.0	V	293.0	41.9	17.1	15.0	74

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

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3443.750000	39.6	100.0	V	138.0	31.4	8.2	14.4	54
4000.000000	42.7	200.0	V	174.0	33.3	9.4	11.3	54
4823.750000	43.2	100.0	V	0.0	31.5	11.7	10.8	54
6417.500000	52.0	200.0	V	184.0	36.5	15.5	2.0	54
7004.375000	47.9	100.0	V	235.0	31.4	16.5	6.1	54
7500.000000	47.9	100.0	V	0.0	31.5	16.4	6.1	54

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

5.6. Conducted Emission

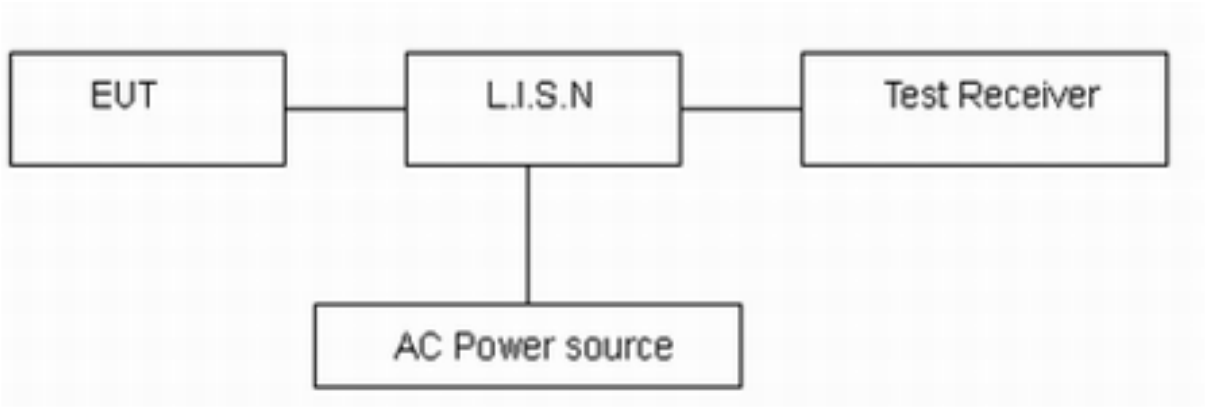
Ambient condition

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 120V/60Hz.

Limits

Frequency (MHz)	Conducted Limits(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.		

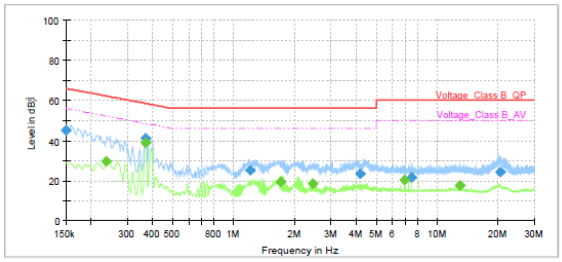
Measurement Uncertainty

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:

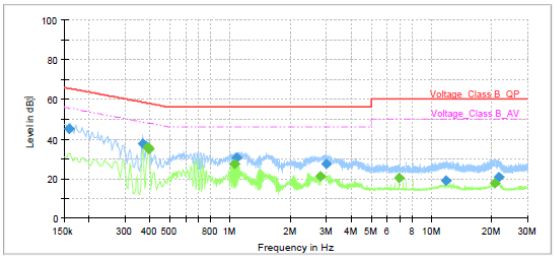
Following plots, Blue trace uses the peak detection and Green trace uses the average detection. During the test, the Conducted Emission was performed in all modes with all channels, 802.11a, Channel 36 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

L Line



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.150000	45.09	---	66.00	20.91	1000.0	9.000	L1	ON	19.1
0.237750	---	29.48	52.17	22.70	1000.0	9.000	L1	ON	19.1
0.368250	---	39.16	48.54	9.38	1000.0	9.000	L1	ON	19.2
0.370500	41.08	---	58.49	17.41	1000.0	9.000	L1	ON	19.2
1.205250	25.12	---	56.00	30.88	1000.0	9.000	L1	ON	19.2
1.695750	---	19.38	46.00	26.62	1000.0	9.000	L1	ON	19.2
2.433750	---	18.54	46.00	27.46	1000.0	9.000	L1	ON	19.0
4.195500	23.55	---	56.00	32.45	1000.0	9.000	L1	ON	19.1
6.893250	---	20.38	50.00	29.62	1000.0	9.000	L1	ON	19.2
7.494000	21.60	---	60.00	38.40	1000.0	9.000	L1	ON	19.2
12.887250	---	17.58	50.00	32.42	1000.0	9.000	L1	ON	19.5
20.258250	24.25	---	60.00	35.75	1000.0	9.000	L1	ON	19.7

N Line



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.159000	45.12	---	65.52	20.40	1000.0	9.000	N	ON	19.1
0.368250	37.80	---	58.54	20.74	1000.0	9.000	N	ON	19.2
0.390749	---	35.95	48.05	12.09	1000.0	9.000	N	ON	19.2
0.393000	---	34.85	48.00	13.15	1000.0	9.000	N	ON	19.2
1.052248	---	27.24	46.00	18.76	1000.0	9.000	N	ON	19.2
1.079250	30.33	---	56.00	25.67	1000.0	9.000	N	ON	19.2
2.791500	---	21.12	46.00	24.88	1000.0	9.000	N	ON	19.0
2.998500	27.48	---	56.00	28.52	1000.0	9.000	N	ON	19.1
6.893250	---	20.35	50.00	29.65	1000.0	9.000	N	ON	19.2
11.777973	19.03	---	60.00	40.97	1000.0	9.000	N	ON	19.4
20.578151	---	17.56	50.00	32.44	1000.0	9.000	N	ON	19.5
21.597344	20.96	---	60.00	39.04	1000.0	9.000	N	ON	19.5

6. Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Spectrum Analyzer	R&S	FSV40	15195-01-00	2018-05-20	2019-05-19
EMI Test Receiver	R&S	ESCI	100948	2018-05-20	2019-05-19
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	2019-07-19
Broadband Horn Antenna	Schwarzbeck	BBHA 9120D	430	2018-07-07	2020-07-06
EMI Test Receiver	R&S	ESR	101667	2018-05-20	2019-05-19
LISN	R&S	ENV216	101171	2016-12-16	2019-12-15
Spectrum Analyzer	KEYSIGHT	N9020A	MY54420163	2017-12-17	2018-12-16
RF Cable	Agilent	SMA 15cm	0001	/	/
TEMPERATURE CHAMBER	WEISS	VT4002	582261194500 10	2017-12-17	2018-12-16
AV Power Meter	R&S	NRP	104306	2018-05-20	2019-05-19
Power Probe	R&S	NRP-Z21	104799	2018-05-20	2019-05-19
DC Power Supply	GWINSTEK	GPS-3030D	GEP882653	2018-05-20	2020-05-19
Software	R&S	EMC32	9.26.0	/	/

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

ANNEX A: EUT Appearance and Test Setup

A.1 EUT Appearance

Front Side

Back Side

a: EUT

Adapter 1

Adapter 2

Adapter 3

Adapter 4

Adapter 5

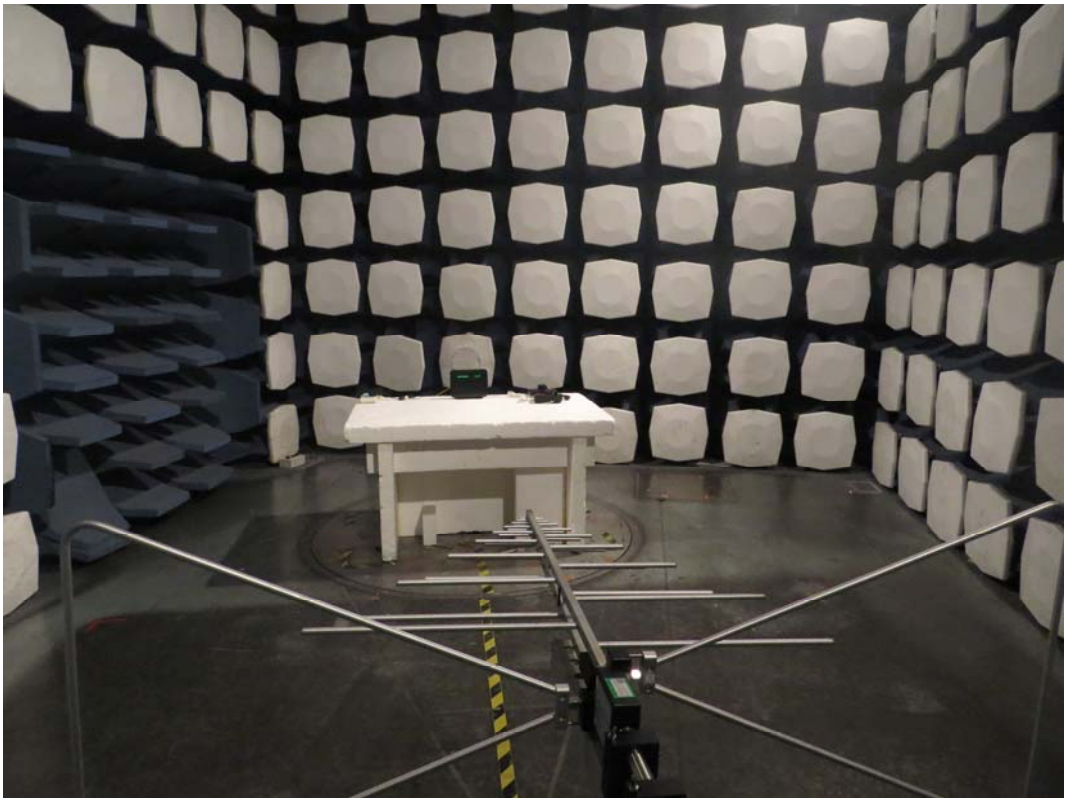
Adapter 6

Adapter 7

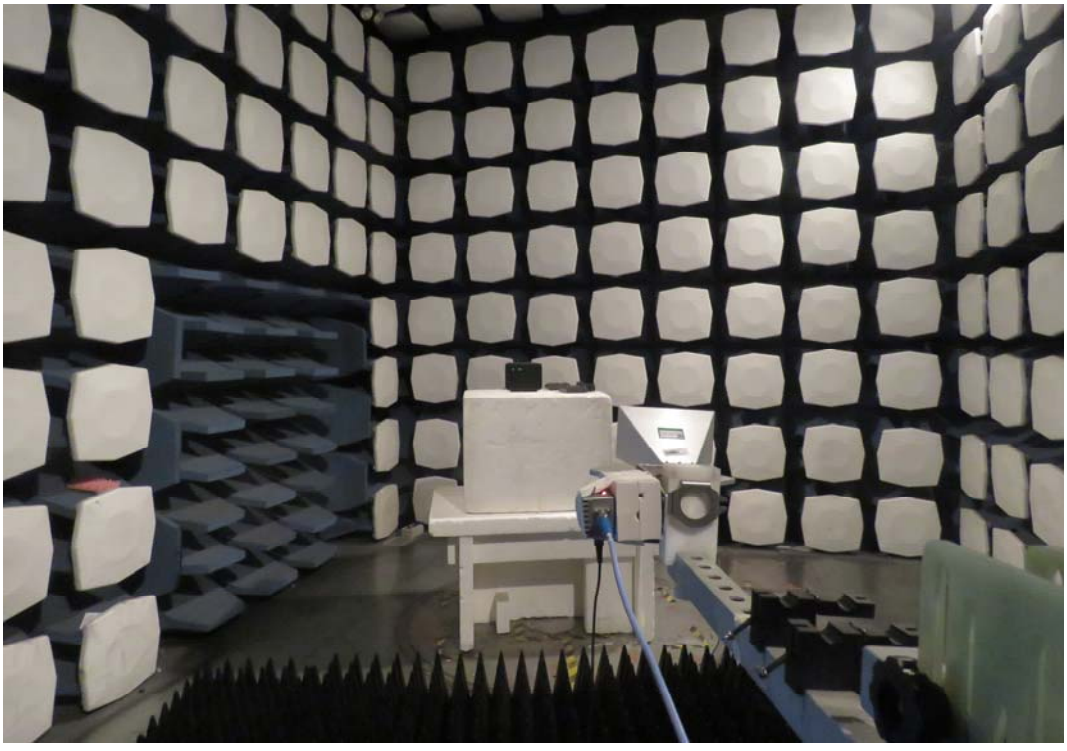
b: Adapter

Picture 1 EUT and Accessory

A.2 Test Setup



30MHz-1GHz



Above 1GHz

Picture 2 Radiated Emission Test Setup

Picture 3 Conducted Emission Test Setup