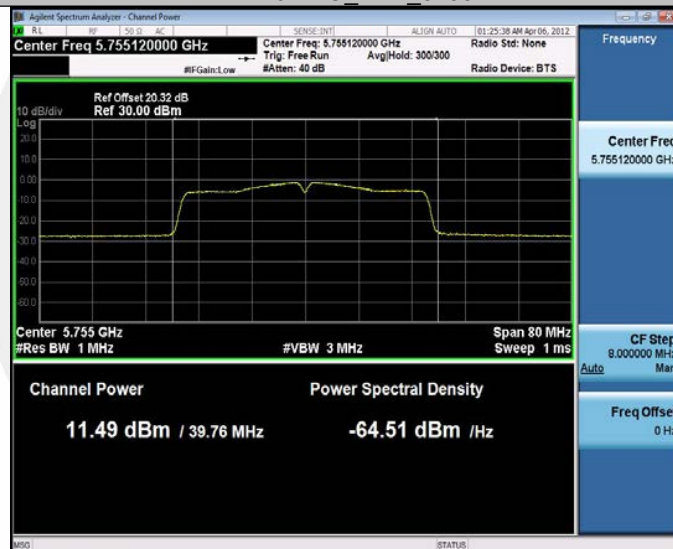


11N40SISO_Ant1_5670



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



11AC20SISO_Ant1_5180



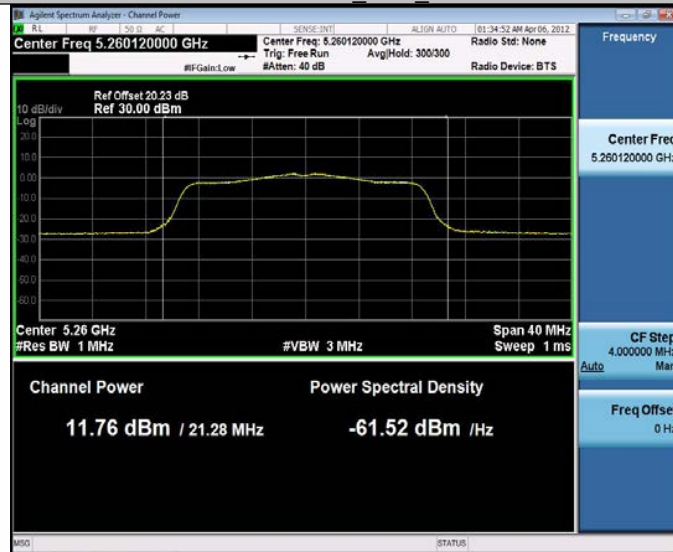
11AC20SISO_Ant1_5200



11AC20SISO_Ant1_5240



11AC20SISO_Ant1_5260



11AC20SISO_Ant1_5280



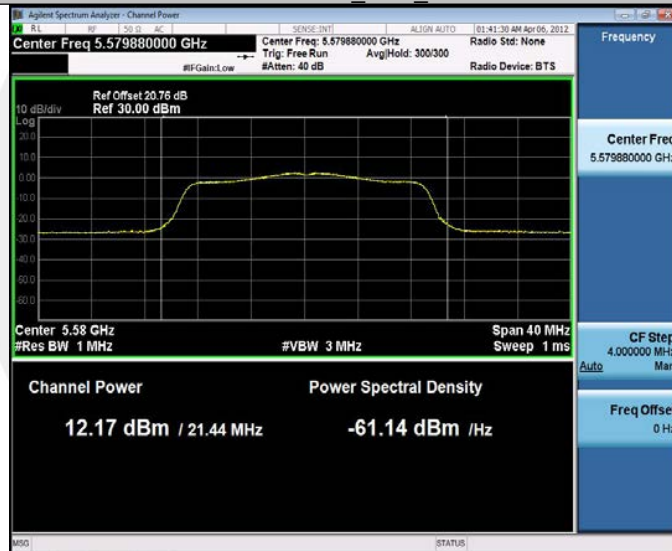
11AC20SISO_Ant1_5320



11AC20SISO_Ant1_5500



11AC20SISO_Ant1_5580



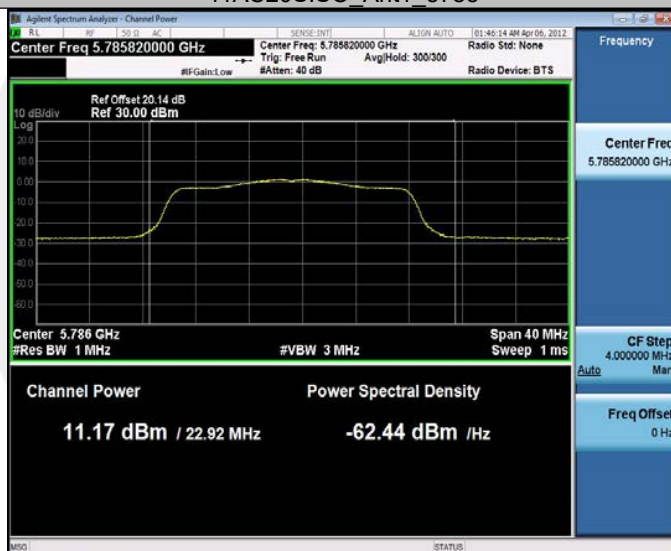
11AC20SISO_Ant1_5700



11AC20SISO_Ant1_5745



11AC20SISO_Ant1_5785



11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5190



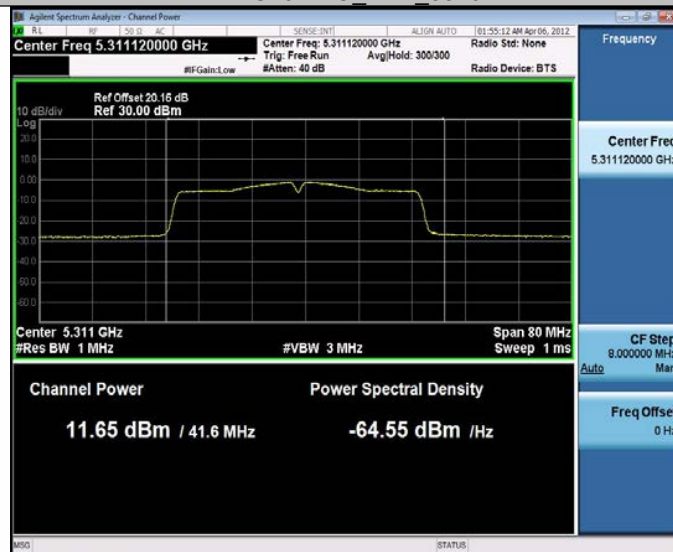
11AC40SISO_Ant1_5230



11AC40SISO_Ant1_5270



11AC40SISO_Ant1_5310



11AC40SISO_Ant1_5510



11AC40SISO_Ant1_5550



11AC40SISO_Ant1_5670



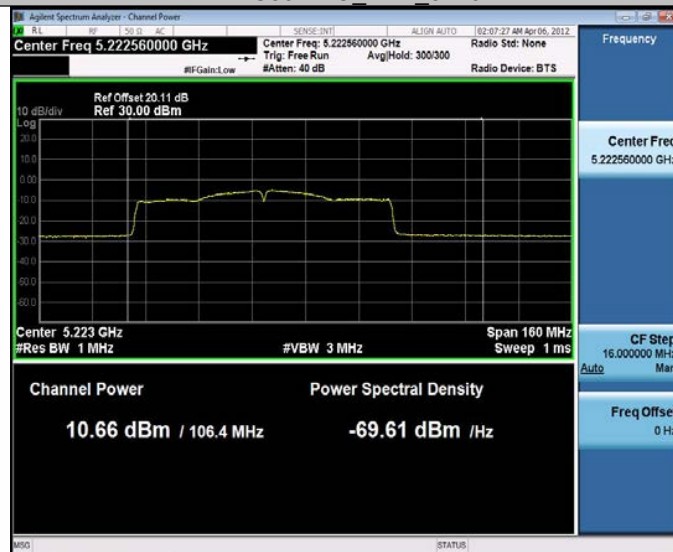
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5210



11AC80SISO_Ant1_5290



11AC80SISO_Ant1_5530



11AC80SISO_Ant1_5610



11AC80SISO_Ant1_5775



8.3 MAXIMUM PEAK POWER DENSITY

8.3.1 Applicable Standard

According to FCC Part 15.407(a)(1) for UNII Band I
According to FCC Part 15.407(a)(2) for UNII Band II-A and UNII Band II-C
According to FCC Part 15.407(a)(3) for UNII Band III
According to 789033 D02 Section II(F)
According to RSS 247, 6.2

8.3.2 Conformance Limit

FCC Limit:

■ For the band 5.15-5.25 GHz,

(a)(1) (i) For an outdoor access point, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(a) (1) (ii) For an indoor access point, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(a) (1) (iii) For fixed point-to-point access points, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(a) (1) (iv) For client devices, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

■ For the 5.25-5.35 GHz and 5.47-5.725 GHz bands

(b) (2) The maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

■ For the band 5.725-5.85 GHz

(a) (3) The maximum power spectral density shall not exceed 30 dBm in any 500-kHz band provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations

IC Limit:

- Frequency band 5150-5250 MHz
The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.
- Frequency band 5250-5350 MHz
The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.
- Frequency bands 5470-5600 MHz and 5650-5725 MHz
The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.
- Frequency band 5725-5850 MHz

The output power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the output power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

8.3.3 Test Configuration

Test according to clause 6.1 radio frequency test setup

8.3.4 Test Procedure

Methods refer to FCC KDB 789033

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

- a) Set $RBW \geq 1/T$, where T is defined in section II.B.I.a).
- b) Set $VBW \geq 3 RBW$.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/RBW)$ to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/RBW)$ to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

8.3.5 Test Results

Temperature:	25 °C
Relative Humidity:	45%
ATM Pressure:	1011 mbar

Note: N/A

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	5.11	≤8.70	PASS
		5200	5.30	≤8.70	PASS
		5240	5.24	≤8.70	PASS
		5260	2.70	≤8.70	PASS
		5280	2.98	≤8.70	PASS
		5320	2.75	≤8.70	PASS
		5500	2.73	≤8.70	PASS
		5580	2.89	≤8.70	PASS
		5700	2.15	≤8.70	PASS
		5745	2.86	≤27.70	PASS
		5785	2.58	≤27.70	PASS
		5825	2.60	≤27.70	PASS
11N20SISO	Ant1	5180	4.66	≤8.70	PASS
		5200	4.90	≤8.70	PASS
		5240	4.73	≤8.70	PASS
		5260	5.54	≤8.70	PASS
		5280	4.33	≤8.70	PASS
		5320	4.30	≤8.70	PASS
		5500	4.33	≤8.70	PASS
		5580	4.34	≤8.70	PASS
		5700	3.53	≤8.70	PASS
		5745	1.44	≤27.70	PASS
		5785	1.39	≤27.70	PASS
		5825	1.04	≤27.70	PASS
11N40SISO	Ant1	5190	1.00	≤8.70	PASS
		5230	0.91	≤8.70	PASS
		5270	1.39	≤8.70	PASS
		5310	-1.42	≤8.70	PASS
		5510	-0.68	≤8.70	PASS
		5550	-0.33	≤8.70	PASS
		5670	-1.61	≤8.70	PASS
		5755	-3.58	≤27.70	PASS
		5795	-4.21	≤27.70	PASS
		5745	-0.42	≤27.70	PASS
11AC20SISO	Ant1	5180	1.92	≤8.70	PASS
		5200	1.80	≤8.70	PASS
		5240	2.07	≤8.70	PASS
		5260	2.33	≤8.70	PASS
		5280	2.32	≤8.70	PASS
		5320	2.22	≤8.70	PASS
		5500	2.23	≤8.70	PASS
		5580	2.60	≤8.70	PASS
		5700	1.68	≤8.70	PASS
		5745	-0.42	≤27.70	PASS

		5785	-0.98	≤27.70	PASS
		5825	-1.02	≤27.70	PASS
11AC40SISO	Ant1	5190	-1.21	≤8.70	PASS
		5230	-0.97	≤8.70	PASS
		5270	-0.56	≤8.70	PASS
		5310	-1.10	≤8.70	PASS
		5510	-0.44	≤8.70	PASS
		5550	-0.47	≤8.70	PASS
		5670	-1.34	≤8.70	PASS
		5755	-3.99	≤27.70	PASS
		5795	-3.85	≤27.70	PASS
11AC80SISO	Ant1	5210	-4.91	≤8.70	PASS
		5290	-4.26	≤8.70	PASS
		5530	-4.14	≤8.70	PASS
		5610	-4.06	≤8.70	PASS
		5775	-7.82	≤27.70	PASS

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

11A_Ant1_5180



11A_Ant1_5200



11A_Ant1_5240



11A_Ant1_5260



11A_Ant1_5280



11A_Ant1_5320



11A_Ant1_5500



11A_Ant1_5580



11A_Ant1_5700



11A_Ant1_5745



11A_Ant1_5785



11A_Ant1_5825



11N20SISO_Ant1_5180



11N20SISO_Ant1_5200



11N20SISO_Ant1_5240



11N20SISO_Ant1_5260



11N20SISO_Ant1_5280



11N20SISO_Ant1_5320



11N20SISO_Ant1_5500



11N20SISO_Ant1_5580



11N20SISO_Ant1_5700



11N20SISO_Ant1_5745



11N20SISO_Ant1_5785



11N20SISO_Ant1_5825



11N40SISO_Ant1_5190



11N40SISO_Ant1_5230



11N40SISO_Ant1_5270



11N40SISO_Ant1_5310



11N40SISO_Ant1_5510



11N40SISO_Ant1_5550



11N40SISO_Ant1_5670



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



11AC20SISO_Ant1_5180



11AC20SISO_Ant1_5200



11AC20SISO_Ant1_5240



11AC20SISO_Ant1_5260



11AC20SISO_Ant1_5280



11AC20SISO_Ant1_5320



11AC20SISO_Ant1_5500



11AC20SISO_Ant1_5580



11AC20SISO_Ant1_5700



11AC20SISO_Ant1_5745



11AC20SISO_Ant1_5785



11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



11AC40SISO_Ant1_5270



11AC40SISO_Ant1_5310



11AC40SISO_Ant1_5510



11AC40SISO_Ant1_5550



11AC40SISO_Ant1_5670



11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5210



11AC80SISO_Ant1_5290



11AC80SISO_Ant1_5530



11AC80SISO_Ant1_5610



11AC80SISO_Ant1_5775



8.4 UNDESIRABLE RADIATED SPURIOUS EMISSION

8.4.1 Applicable Standard

According to FCC Part 15.407 (b), 15.209, 15.205

According to 789033 D02 SectionII(G)

According to RSS-GEN 8.9, 8.10 and 6.13

8.4.2 Conformance Limit

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.

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.

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.

For transmitters operating in the 5.725-5.85 GHz 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.

The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table 15.209(a):

Restricted Frequency(MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance
0.009-0.490	2400/F(KHz)	20 log (uV/m)	300
0.490-1.705	24000/F(KHz)	20 log (uV/m)	30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

The provisions of §15.205 apply to intentional radiators operating under this section, 15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	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	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			

- Remark:
1. Emission level in dBuV/m = $20 \log(uV/m)$
 2. Measurement was performed at an antenna to the closed point of EUT distance of meters.
 3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of 15.205, and the emissions located in restricted bands also comply with 15.209 limit.

8.4.3 Test Configuration

Test according to clause 6.2 radio frequency test setup

8.4.4 Test Procedure

■ Unwanted Emissions Measurements below 1000 MHz

Compliance shall be demonstrated using CISPR quasi-peak detection; however, peak detection is permitted as an alternative to quasi-peak detection.

The EUT was placed on a turn table which is 0.8m above ground plane.

And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

Repeat above procedures until all frequency measured was complete.

We use software control the EUT, Let EUT hopping on and transmit with highest power, All the modes have been tested and the worst result was reported.

Use the following spectrum analyzer settings:

Set RBW = 120kHz for $f < 1$ GHz (30MHz to 1GHz), 200Hz for $f < 150$ KHz (9KHz to 150KHz), 9KHz for $f > 150$ KHz (150KHz to 30KHz).

Set the VBW > RBW.

Detector = Peak.

Trace mode = max hold.

Follow the guidelines in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization, etc. A pre-amp and a high pass filter are required for this test, in order to provide the measuring system with sufficient sensitivity. Allow the trace to stabilize. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, which must comply with the limit specified in Section 15.35(b). Submit this data.

Repeat above procedures until all frequency measured was complete.

■ Unwanted Maximumpeak Emissions Measurements above 1000 MHz

Maximum emission levels are measured by setting the analyzer as follows:

RBW = 1 MHz.

VBW $\geq$ 3 MHz.

Detector = Peak.

Sweep time = auto.

Trace mode = max hold.

Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately $1/x$, where x is the duty cycle. For example, at 50 percent duty cycle, the measurement time will increase by a factor of two relative to measurement time for continuous transmission.

■ Unwanted Average Emissions Measurements above 1000 MHz

Method VB (Averaging using reduced video bandwidth): Alternative method.

RBW = 1 MHz.

Video bandwidth. • If the EUT is configured to transmit with duty cycle $\geq$ 98 percent, set $VBW \leq RBW/100$ (i.e., 10 kHz) but not less than 10 Hz.

• If the EUT duty cycle is $<$ 98 percent, set $VBW \geq 1/T$, where T is defined in section II.B.1.a).

Video bandwidth mode or display mode • The instrument shall be set to ensure that video filtering is applied in the power domain. Typically, this requires setting the detector mode to RMS and setting the Average-VBW Type to Power (RMS).

• As an alternative, the analyzer may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some analyzers require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode.

Detector = Peak.

Sweep time = auto.

Trace mode = max hold.

Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98 percent duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of $1/x$, where x is the duty cycle. For example, use at least 200 traces if the duty cycle is 25 percent. (If a specific emission is demonstrated to be continuous—i.e., 100 percent duty cycle—rather than turning on and off with the transmit cycle, at least 50 traces shall be averaged.)

■ Band edge measurements.

Unwanted band-edge emissions may be measured using either of the special band-edge measurement techniques (the marker-delta or integration methods) described below. Note that the marker-delta method is primarily a radiated measurement technique that requires the 99% occupied bandwidth edge to be within 2 MHz of the authorized band edge, whereas the integration method can be used in either a radiated or conducted measurement without any special requirement with regards to the displacement of the unwanted emission(s) relative to the authorized bandwidth.

Marker-Delta Method.

The marker-delta method, as described in ANSI C63.10, can be used to perform measurements of the radiated unwanted emissions level of emissions provided that the 99% occupied bandwidth of the fundamental is within 2 MHz of the authorized band-edge.

8.4.5 Test Results

Temperature:	22° C
Relative Humidity:	43%
ATM Pressure:	1011 mbar

■ Spurious Emission below 30MHz(9KHz to 30MHz)

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

Distance extrapolation factor = $40\log(\text{Specific distance/ test distance})$ (dB);

Limit line = Specific limits(dBuV) + distance extrapolation factor

■ For Undesirable radiatedSpurious Emission in U-NII - 1

●Undesirable radiated Spurious Emission Above 1GHz(1GHz to 40GHz)

All the antenna(Antenna 1) and modes(802.11a/n/ac) has been tested and the worst(Antenna 1,802.11a) result recorded was report as below:

Test mode:		802.11a		Frequency:		Channel 36: 5180MHz	
Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
8849.42	V	56.64	-38.59	-27	11.59		
11528.2	V	60.49	-34.74	-27	7.74		
17506.7	V	65.76	-29.47	-27	2.47		
8177.58	H	56.26	-38.97	-27	11.97		
11536.7	H	59.73	-35.5	-27	8.5		
17506.7	H	65.91	-29.32	-27	2.32		

Test mode:		802.11a		Frequency:		Channel 40: 5200MHz	
Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
8925.96	V	56.67	-38.56	-27	11.56		
11485.7	V	60.51	-34.72	-27	7.72		
17498.2	V	66.28	-28.95	-27	1.95		
8747.37	H	57.02	-38.21	-27	11.21		
11502.7	H	59.34	-35.89	-27	8.89		
17489.7	H	65.78	-29.45	-27	2.45		

Test mode:		802.11a		Frequency:		Channel 48: 5240MHz	
Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
8866.43	V	56.79	-38.44	-27	11.44		
11545.2	V	60.10	-35.13	-27	8.13		
17481.2	V	67.43	-27.8	-27	0.8		
8832.41	H	57.10	-38.13	-27	11.13		
11494.2	H	59.38	-35.85	-27	8.85		
17506.7	H	66.01	-29.22	-27	2.22		

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value(VBW=10Hz).
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3)EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

Test mode: 802.11a Frequency: Channel 36: 5180MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8849.42	V	56.64	37.40	74	54	17.36	16.60
11528.2	V	60.49	37.94	74	54	13.51	16.06
17506.7	V	65.76	43.59	74	54	8.24	10.41
8177.58	H	56.26	36.03	74	54	17.74	17.97
11536.7	H	59.73	37.86	74	54	14.27	16.14
17506.7	H	65.91	43.58	74	54	8.09	10.42

Test mode: 802.11a Frequency: Channel 40: 5200MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8925.96	V	56.67	37.91	74	54	17.33	16.09
11485.7	V	60.51	37.94	74	54	13.49	16.06
17498.2	V	66.28	43.82	74	54	7.72	10.18
8747.37	H	57.02	37.22	74	54	16.98	16.78
11502.7	H	59.34	38.18	74	54	14.66	15.82
17489.7	H	65.78	43.37	74	54	8.22	10.63

Test mode: 802.11a Frequency: Channel 48: 5240MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8866.43	V	56.79	37.55	74	54	17.21	16.45
11545.2	V	60.10	37.79	74	54	13.90	16.21
17481.2	V	67.43	43.01	74	54	6.57	10.99
8832.41	H	57.10	37.57	74	54	16.90	16.43
11494.2	H	59.38	38.03	74	54	14.62	15.97
17506.7	H	66.01	43.63	74	54	7.99	10.37

Note:

- (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
- (2) Emission Level= Reading Level+Correct Factor.
- (3) Correct Factor= Ant_F + Cab_L - Preamp
- (4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

●Undesirable radiated Undesirable radiatedSpurious Emission in Band Edge

All the antenna(Antenna 1) and modes(802.11a/n/ac) has been tested and the worst(Antenna 1,802.11ac(VHT20)) result recorded was report as below:

Test mode:		802.11ac(VHT20)		Frequency:	Channel 36: 5180MHz
Freq. (MHz)	Ant.Pol.	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5148.78	H	58.53	-36.7	-27	Pass
5149.59	V	56.63	-38.6	-27	Pass

Test mode:		802.11ac(VHT20)		Frequency:	Channel 48: 5240MHz
Freq. (MHz)	Ant.Pol.	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5351.21	H	54.25	-40.98	-27	Pass
5358.25	V	54.00	-41.23	-27	Pass

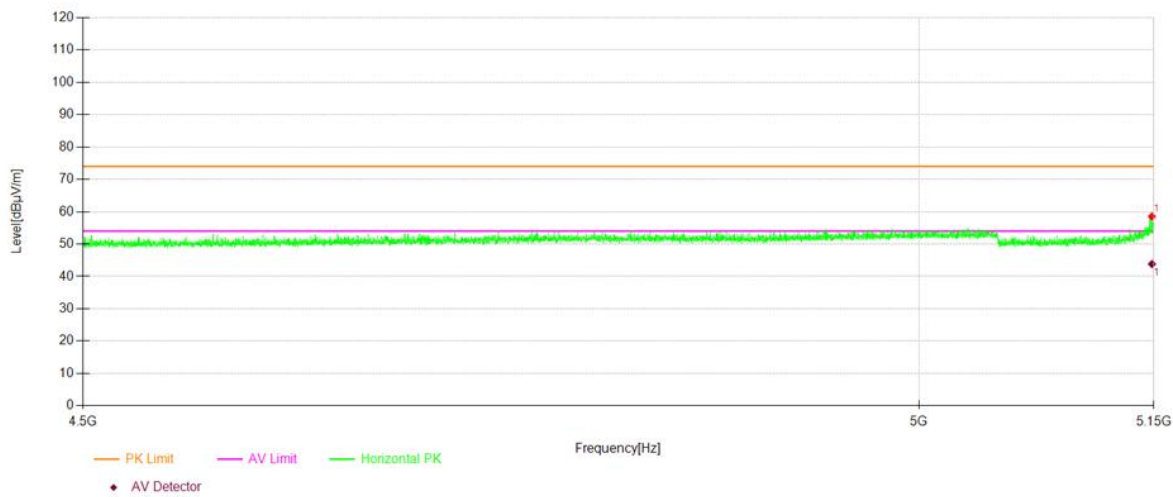
Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value(VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3)EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test mode:		802.11ac(VHT20)	Frequency:	Channel 36: 5180MHz			
Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)	Over(dB)
5148.78	H	58.53	74.00	15.47	43.82	54.00	10.18
5149.59	V	56.63	74.00	17.37	43.87	54.00	10.13

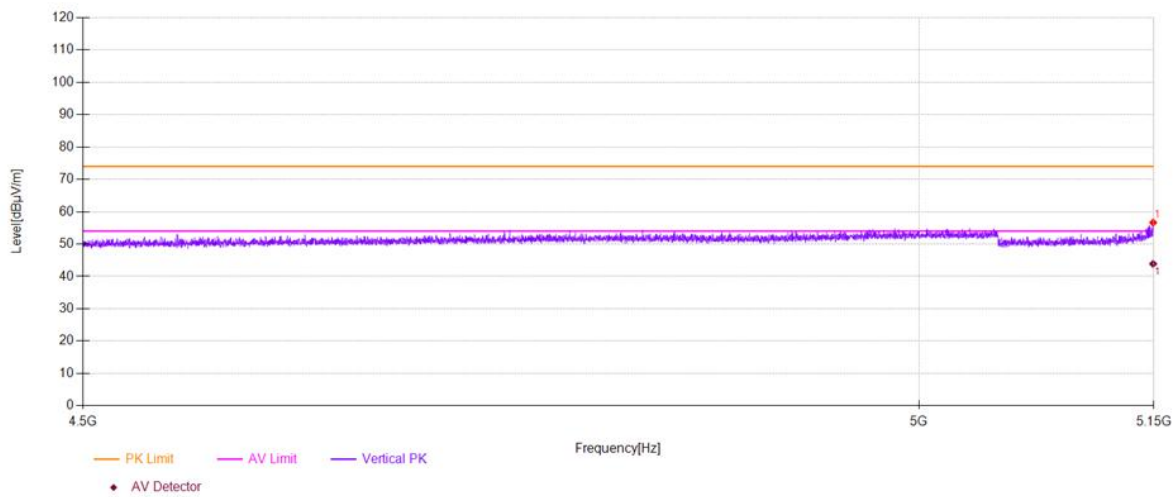
Test mode:		802.11ac(VHT20)		Frequency:	Channel 48: 5240MHz		
Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)	Over(dB)
5351.21	H	54.25	74.00	19.75	44.82	54.00	9.18
5358.25	V	54.00	74.00	20.00	44.26	54.00	9.74

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

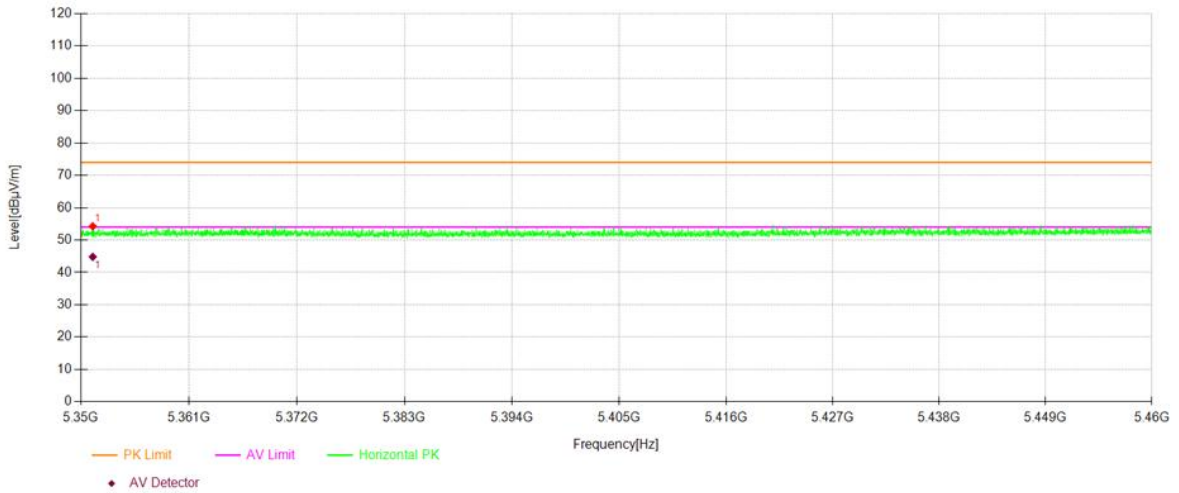
U-NII - 1				
Test Model	Undesirable radiated 802.11ac(VHT20)	Undesirable radiated Channel 36: 5180MHz	Spurious Emission in Band Edge Ant.Pol	H



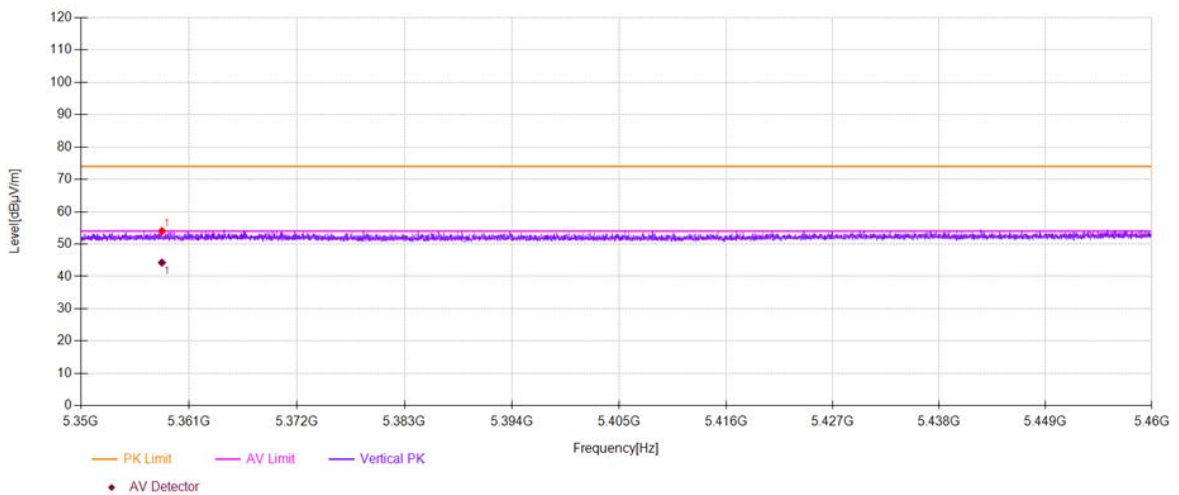
U-NII - 1				
Test Model	Undesirable radiated 802.11ac(VHT20)	Undesirable radiated Channel 36: 5180MHz	Spurious Emission in Band Edge Ant.Pol	V



U-NII - 1				
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge	
	802.11ac(VHT20)	Channel 48: 5240MHz	Ant.Pol	H



U-NII - 1				
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge	
	802.11ac(VHT20)	Channel 48: 5240MHz	Ant.Pol	V



■ For Undesirable Radiated Spurious Emission in U-NII -2A

● Undesirable radiated Spurious Emission Above 1GHz(1GHz to 40GHz)

All the antenna(Antenna 1) and modes(802.11a/n/ac) has been tested and the worst(Antenna 1,802.11a) result recorded was report as below:

Test mode:		802.11a		Frequency:		Channel 52: 5260MHz	
Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
8874.93	V	57.15	-38.08	-27	11.08		
11528.2	V	59.57	-35.66	-27	8.66		
17506.7	V	66.17	-29.06	-27	2.06		
8832.41	H	57.32	-37.91	-27	10.91		
11528.2	H	60.10	-35.13	-27	8.13		
17515.2	H	65.87	-29.36	-27	2.36		

Test mode:		802.11a		Frequency:		Channel 56: 5280MHz	
Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
8849.42	V	57.05	-38.18	-27	11.18		
11545.2	V	60.46	-34.77	-27	7.77		
17506.7	V	66.43	-28.8	-27	1.8		
8908.95	H	57.93	-37.3	-27	10.3		
11451.7	H	60.17	-35.06	-27	8.06		
17506.7	H	66.26	-28.97	-27	1.97		

Test mode:		802.11a		Frequency:		Channel 64: 5320MHz	
Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
8194.59	V	57.08	-38.15	-27	11.15		
11494.2	V	59.56	-35.67	-27	8.67		
17498.2	V	66.01	-29.22	-27	2.22		
8866.43	H	57.47	-37.76	-27	10.76		
11511.2	H	60.16	-35.07	-27	8.07		
17506.7	H	66.49	-28.74	-27	1.74		

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value(VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test mode: 802.11a Frequency: Channel 52: 5260MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8874.93	V	57.15	37.71	74	54	16.85	16.29
11528.2	V	59.57	37.97	74	54	14.43	16.03
17506.7	V	66.17	43.39	74	54	7.83	10.61
8832.41	H	57.32	37.38	74	54	16.68	16.62
11528.2	H	60.10	37.94	74	54	13.90	16.06
17515.2	H	65.87	43.29	74	54	8.13	10.71

Test mode: 802.11a Frequency: Channel 56: 5280MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8849.42	V	57.05	37.49	74	54	16.95	16.51
11545.2	V	60.46	37.82	74	54	13.54	16.18
17506.7	V	66.43	43.59	74	54	7.57	10.41
8908.95	H	57.93	37.92	74	54	16.07	16.08
11451.7	H	60.17	37.63	74	54	13.83	16.37
17506.7	H	66.26	43.59	74	54	7.74	10.41

Test mode: 802.11a Frequency: Channel 64: 5320MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8194.59	V	57.08	36.09	74	54	16.92	17.91
11494.2	V	59.56	38.01	74	54	14.44	15.99
17498.2	V	66.01	43.78	74	54	7.99	10.22
8866.43	H	57.47	37.70	74	54	16.53	16.30
11511.2	H	60.16	37.99	74	54	13.84	16.01
17506.7	H	66.49	43.58	74	54	7.51	10.42

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
 - (2) Emission Level= Reading Level+Correct Factor.
 - (3) Correct Factor= Ant_F + Cab_L - Preamp
 - (4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

●Undesirable radiated Undesirable radiatedSpurious Emission in Band Edge

All the antenna(Antenna 1) and modes(802.11a/n/ac) has been tested and the worst(Antenna 1,802.11ac(VHT20)) result recorded was report as below:

Test mode:		802.11ac(VHT20)		Frequency:		Channel 52: 5260MHz	
Freq. (MHz)	Ant.Pol.	Field Strength (RBW=100KHz) (dBuV/m)		E.I.R.P (dBm)		Limit (dBm)	Verdict
5097.67	H	62.53		-32.7		-27	Pass
5131.06	V	62.41		-32.82		-27	Pass

Test mode:		802.11ac(VHT20)		Frequency:		Channel 64: 5320MHz	
Freq. (MHz)	Ant.Pol.	Field Strength (RBW=100KHz) (dBuV/m)		E.I.R.P (dBm)		Limit (dBm)	Verdict
5358.85	H	64.29		-30.94		-27	Pass
5351.81	V	63.57		-31.66		-27	Pass

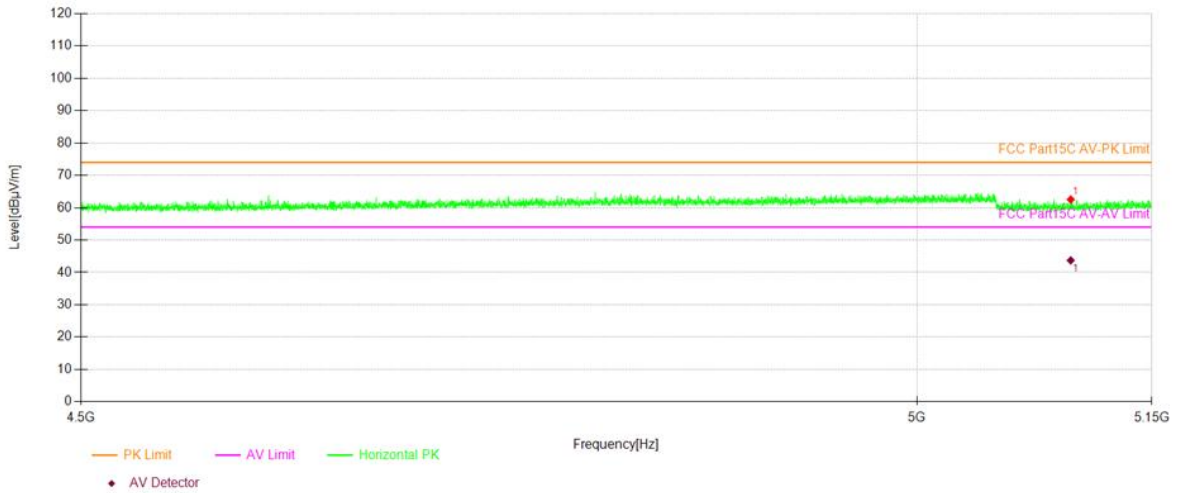
Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value(VBW=10Hz).
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3)EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

Test mode:		802.11ac(VHT20)		Frequency:		Channel 52: 5260MHz	
Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)	Over(dB)
5097.67	H	62.53	74.00	11.47	43.72	54.00	10.28
5131.06	V	62.41	74.00	11.59	44.31	54.00	9.69

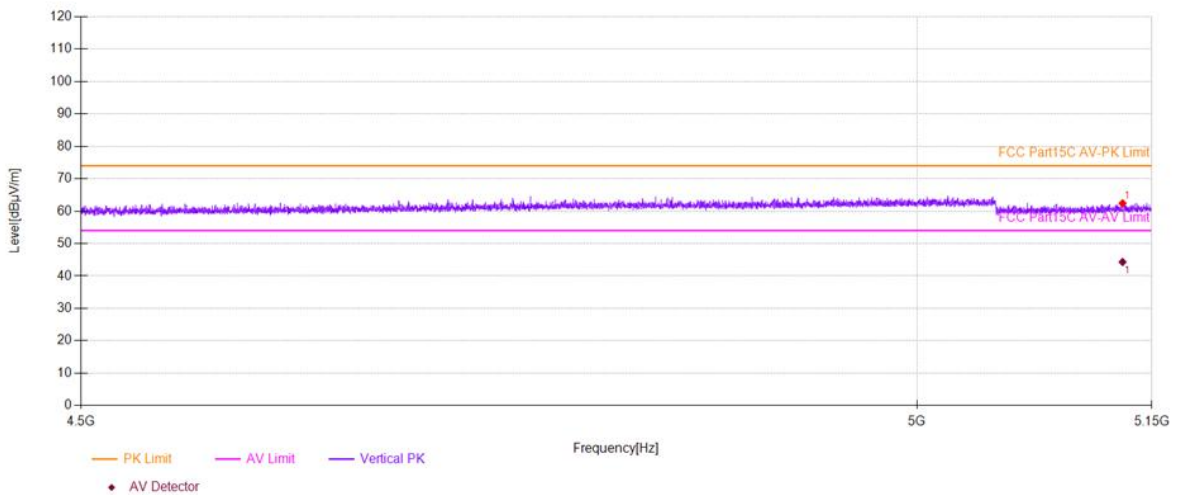
Test mode:		802.11ac(VHT20)		Frequency:		Channel 64: 5320MHz	
Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)	Over(dB)
5358.85	H	64.29	74.00	9.71	45.01	54.00	8.99
5351.81	V	63.57	74.00	10.43	44.38	54.00	9.62

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

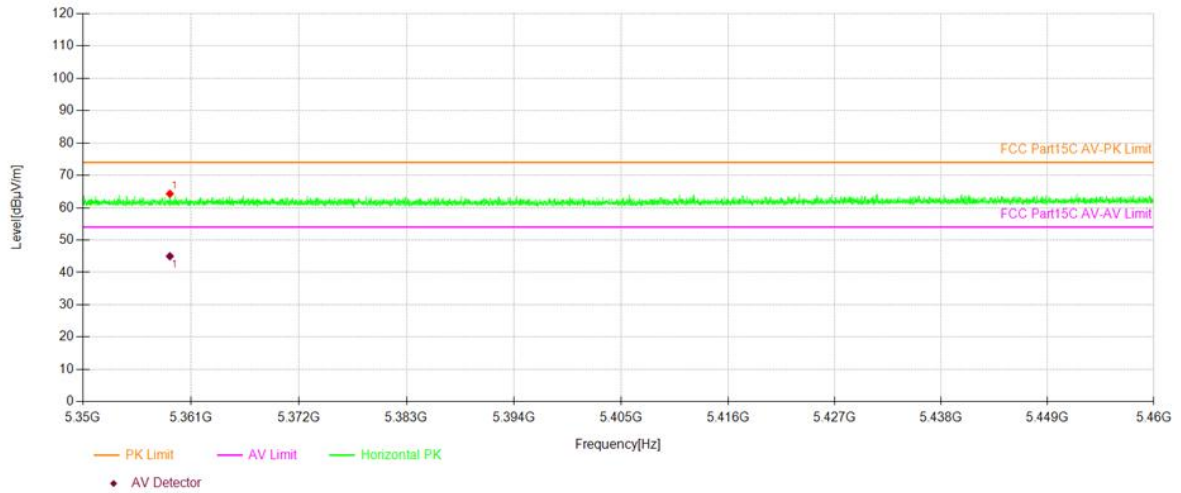
Test Model	U-NII -2A			
	Undesirable radiated 802.11ac(VHT20)	Undesirable radiated Channel 52: 5260MHz	Spurious Emission in Band Edge Ant.Pol	H



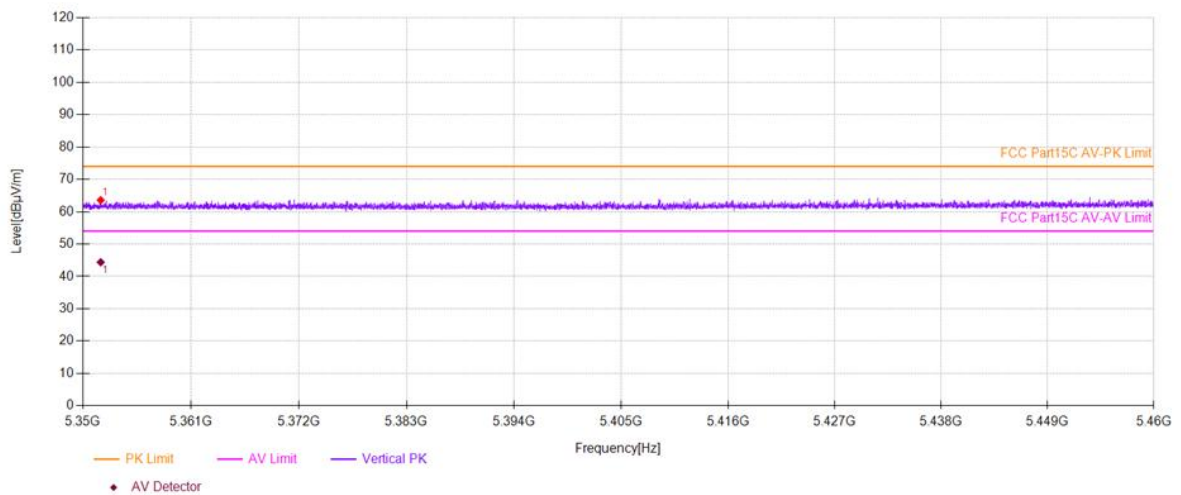
Test Model	U-NII -2A			
	Undesirable radiated 802.11ac(VHT20)	Undesirable radiated Channel 52: 5260MHz	Spurious Emission in Band Edge Ant.Pol	V



U-NII -2A
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
802.11ac(VHT20) Channel 64: 5320MHz Ant.Pol H



U-NII -2A
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
802.11ac(VHT20) Channel 64: 5320MHz Ant.Pol V



■ For Undesirable radiatedSpurious Emission in U-NII -2C

●Undesirable radiated Spurious Emission Above 1GHz(1GHz to 40GHz)

All the antenna(Antenna 1) and modes(802.11a/n/ac) has been tested and the worst(Antenna 1,802.11a) result recorded was report as below:

Test mode: 802.11a Frequency: Channel 100: 5500MHz

Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8764.38	V	56.43	-38.8	-27	11.8
11970.4	V	59.80	-35.43	-27	8.43
17030.5	V	65.71	-29.52	-27	2.52
8092.54	H	55.95	-39.28	-27	12.28
11460.2	H	59.86	-35.37	-27	8.37
17515.2	H	66.02	-29.21	-27	2.21

Test mode: 802.11a Frequency: Channel 120: 5600MHz

Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8908.95	V	56.98	-38.25	-27	11.25
11553.7	V	60.09	-35.14	-27	8.14
17489.7	V	66.73	-28.5	-27	1.5
8203.10	H	56.19	-39.04	-27	12.04
11587.7	H	59.34	-35.89	-27	8.89
17498.2	H	66.19	-29.04	-27	2.04

Test mode: 802.11a Frequency: Channel 140: 5700MHz

Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8874.93	V	57.24	-37.99	-27	10.99
11477.2	V	60.48	-34.75	-27	7.75
17047.5	V	65.80	-29.43	-27	2.43
8832.41	H	57.53	-37.7	-27	10.7
11511.2	H	60.20	-35.03	-27	8.03
17498.2	H	66.02	-29.21	-27	2.21

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value(VBW=10Hz).
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3)EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

Test mode: 802.11a Frequency: Channel 100: 5500MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8764.38	V	56.43	37.11	74	54	17.57	16.89
11970.4	V	59.80	37.68	74	54	14.20	16.32
17030.5	V	65.71	43.26	74	54	8.29	10.74
8092.54	H	55.95	35.94	74	54	18.05	18.06
11460.2	H	59.86	37.79	74	54	14.14	16.21
17515.2	H	66.02	43.86	74	54	7.98	10.14

Test mode: 802.11a Frequency: Channel 116: 5580MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8908.95	V	56.98	37.92	74	54	17.02	16.08
11553.7	V	60.09	37.75	74	54	13.91	16.25
17489.7	V	66.73	43.64	74	54	7.27	10.36
8203.10	H	56.19	36.12	74	54	17.81	17.88
11587.7	H	59.34	37.63	74	54	14.66	16.37
17498.2	H	66.19	44.15	74	54	7.81	9.85

Test mode: 802.11a Frequency: Channel 140: 5700MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8874.93	V	57.24	38.11	74	54	16.76	15.89
11477.2	V	60.48	38.53	74	54	13.52	15.47
17047.5	V	65.80	42.66	74	54	8.20	11.34
8832.41	H	57.53	37.90	74	54	16.47	16.10
11511.2	H	60.20	38.03	74	54	13.80	15.97
17498.2	H	66.02	43.82	74	54	7.98	10.18

Note:

- (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
- (2) Emission Level= Reading Level+Correct Factor.
- (3) Correct Factor= Ant_F + Cab_L - Preamp
- (4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

●Undesirable radiated Undesirable radiatedSpurious Emission in Band Edge

All the antenna(Antenna 1) and modes(802.11a/n/ac) has been tested and the worst(Antenna 1,802.11ac(VHT20)) result recorded was report as below:

Test mode:		802.11ac(VHT20)		Frequency:		Channel 100: 5500MHz	
Freq. (MHz)	Ant.Pol.	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict		
5468.51	H	54.58	-40.65	-27	Pass		
5466.76	V	55.32	-39.91	-27	Pass		

Test mode:		802.11ac(VHT20)		Frequency:		Channel 140: 5700MHz	
Freq. (MHz)	Ant.Pol.	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict		
5727.67	H	55.12	-40.11	-27	Pass		
5725.50	V	55.94	-39.29	-27	Pass		

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value(VBW=10Hz).
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3)EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

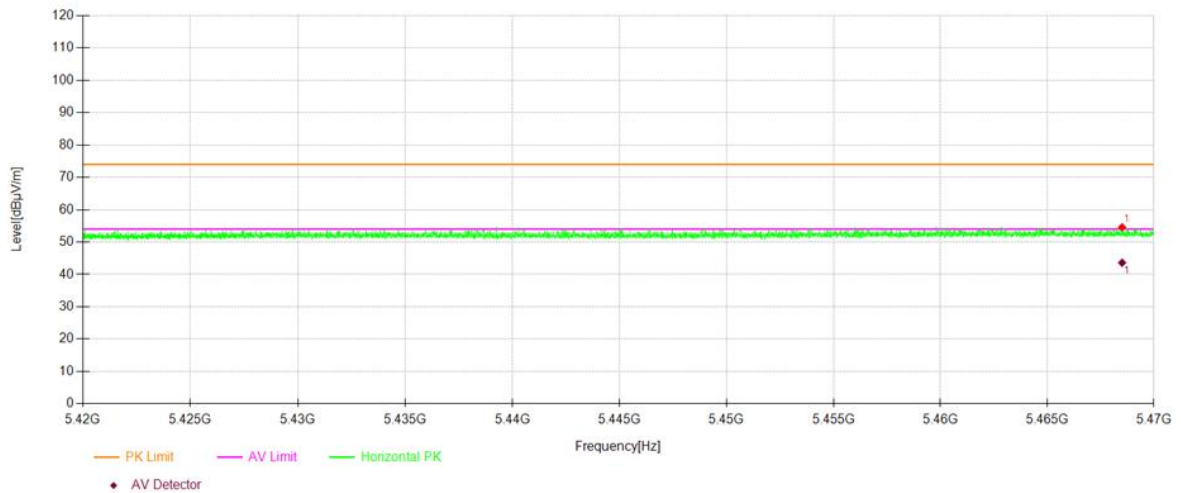
Test mode:		802.11ac(VHT20)		Frequency:		Channel 100: 5500MHz	
Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)	Over(dB)
5468.51	H	54.58	74.00	19.42	43.62	54.00	10.38
5466.76	V	55.32	74.00	18.68	44.64	54.00	9.36

Test mode:		802.11ac(VHT20)		Frequency:		Channel 140: 5700MHz	
Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)	Over(dB)
5727.67	H	55.12	74.00	18.88	44.71	54.00	9.29
5725.50	V	55.94	74.00	18.06	45.39	54.00	8.61

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

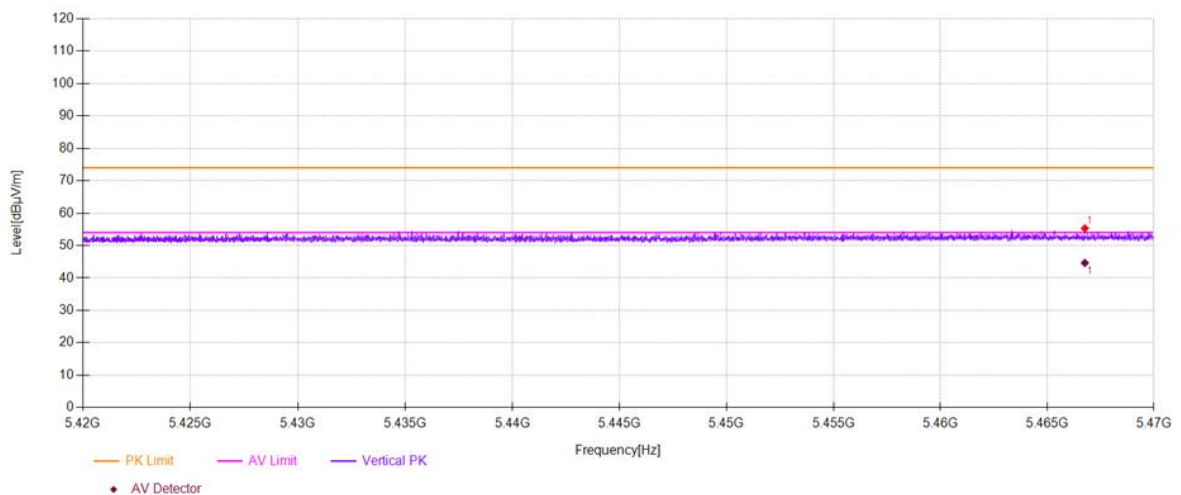
U-NII -2C

Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge	
	802.11ac(VHT20)	Channel 100: 5500MHz	Ant.Pol	H

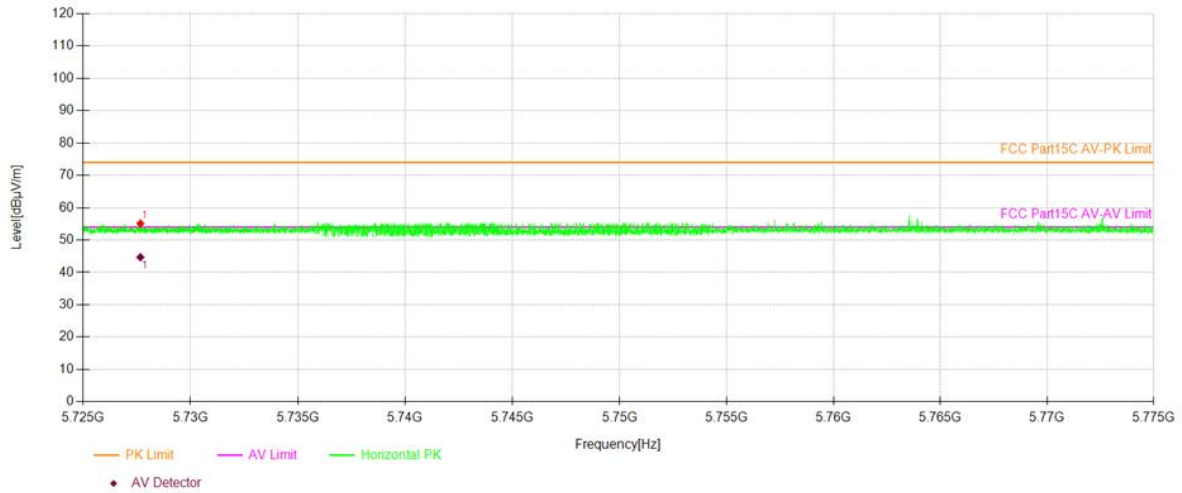


U-NII -2C

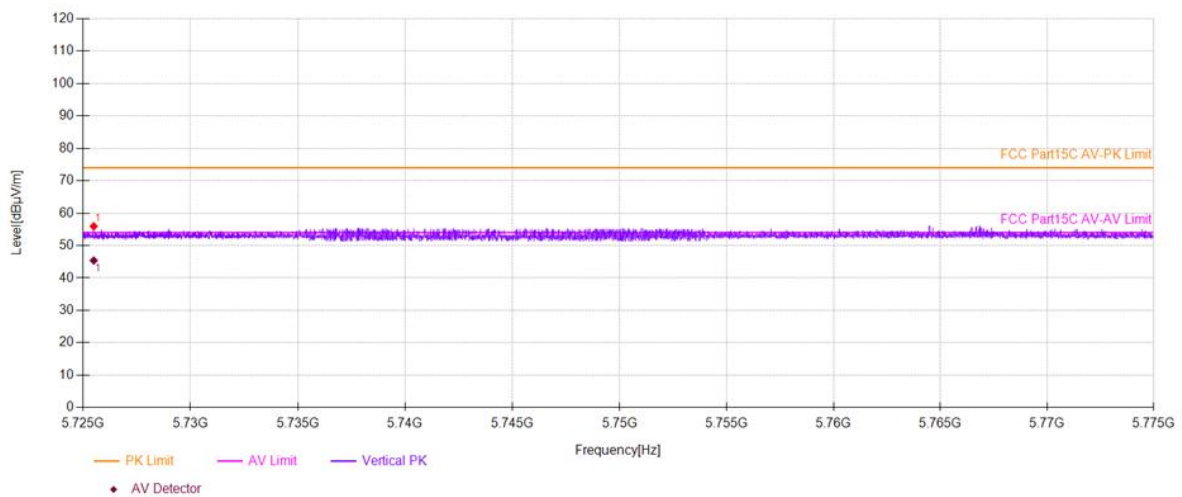
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge	
	802.11ac(VHT20)	Channel 100: 5500MHz	Ant.Pol	V



U-NII -2C				
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge	
	802.11ac(VHT20)	Channel 140: 5700MHz	Ant.Pol	H



U-NII -2C				
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge	
	802.11ac(VHT20)	Channel 140: 5700MHz	Ant.Pol	V



■ For Undesirable radiated Spurious Emission in U-NII -3

● Undesirable radiated Spurious Emission Above 1GHz(1GHz to 40GHz)

All the antenna(Antenna 1) and modes(802.11a/n/ac) has been tested and the worst(Antenna 1,802.11a) result recorded was report as below:

Test mode: 802.11a Frequency: Channel 149: 5745MHz

Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8849.42	V	57.46	-37.77	-27	10.77
11511.2	V	60.29	-34.94	-27	7.94
17506.7	V	65.68	-29.55	-27	2.55
8866.43	H	57.55	-37.68	-27	10.68
11502.7	H	59.45	-35.78	-27	8.78
17515.2	H	66.61	-28.62	-27	1.62

Test mode: 802.11a Frequency: Channel 157: 5785MHz

Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8866.43	V	57.58	-37.65	-27	10.65
11613.3	V	59.68	-35.55	-27	8.55
17498.2	V	66.10	-29.13	-27	2.13
8934.46	H	56.99	-38.24	-27	11.24
11485.7	H	60.48	-34.75	-27	7.75
17489.7	H	65.97	-29.26	-27	2.26

Test mode: 802.11a Frequency: Channel 165: 5825MHz

Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8143.57	V	56.58	-38.65	-27	11.65
11494.2	V	59.77	-35.46	-27	8.46
17489.7	V	66.28	-28.95	-27	1.95
8874.93	H	56.90	-38.33	-27	11.33
11511.2	H	59.57	-35.66	-27	8.66
17498.2	H	66.79	-28.44	-27	1.44

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value(VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test mode: 802.11a Frequency: Channel 149: 5745MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8849.42	V	57.46	37.51	74	54	16.54	16.49
11511.2	V	60.29	38.01	74	54	13.71	15.99
17506.7	V	65.68	43.58	74	54	8.32	10.42
8866.43	H	57.55	37.57	74	54	16.45	16.43
11502.7	H	59.45	38.08	74	54	14.55	15.92
17515.2	H	66.61	43.69	74	54	7.39	10.31

Test mode: 802.11a Frequency: Channel 157: 5785MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8866.43	V	57.58	37.54	74	54	16.42	16.46
11613.3	V	59.68	37.69	74	54	14.32	16.31
17498.2	V	66.10	44.48	74	54	7.90	9.52
8934.46	H	56.99	37.96	74	54	17.01	16.04
11485.7	H	60.48	37.90	74	54	13.52	16.10
17489.7	H	65.97	43.70	74	54	8.03	10.30

Test mode:: 802.11a Frequency: Channel 165: 5825MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8143.57	V	56.58	36.04	74	54	17.42	17.96
11494.2	V	59.77	38.02	74	54	14.23	15.98
17489.7	V	66.28	43.89	74	54	7.72	10.11
8874.93	H	56.90	37.77	74	54	17.10	16.23
11511.2	H	59.57	38.01	74	54	14.43	15.99
17498.2	H	66.79	43.77	74	54	7.21	10.23

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
 - (2) Emission Level= Reading Level+Correct Factor.
 - (3) Correct Factor= Ant_F + Cab_L - Preamp
 - (4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

●Undesirable radiated Undesirable radiatedSpurious Emission in Band Edge

All the antenna(Antenna 1) and modes(802.11a/n/ac) has been tested and the worst(Antenna 1,802.11ac(VHT20)) result recorded was report as below:

Test mode: 802.11ac(VHT20) Frequency: Channel 149: 5745MHz

Freq. (MHz)	Ant.Pol.	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5724.6873	H	70.71	-24.52	-27	PASS
5724.3122	V	70.20	-25.03	-27	PASS

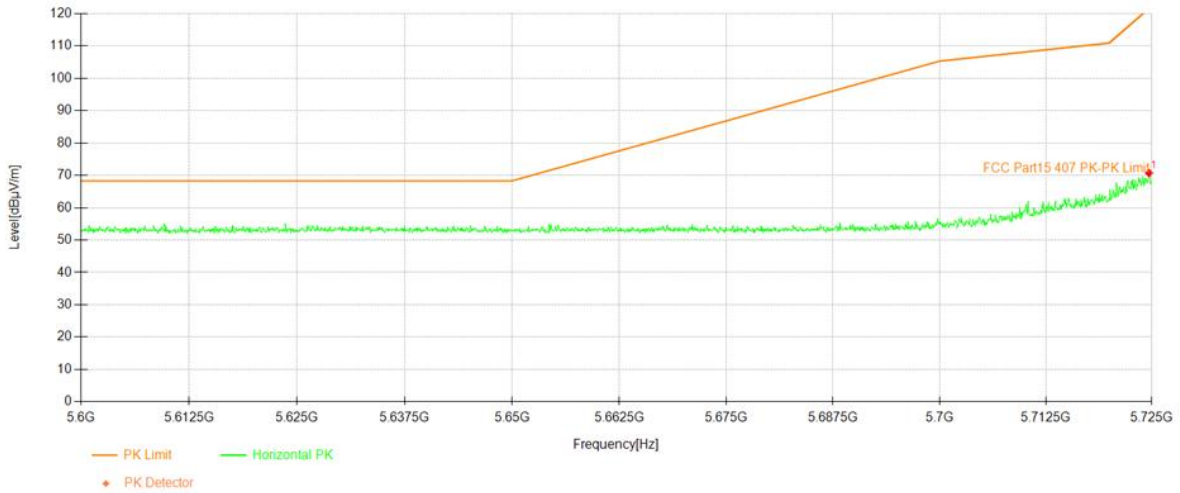
Test mode: 802.11ac(VHT20) Frequency: Channel 165: 5825MHz

Freq. (MHz)	Ant.Pol.	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5850.5002	V	60.26	-34.97	-27	PASS
5850.2501	H	63.65	-31.58	-27	PASS

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value(VBW=10Hz).
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3) $EIRP[dBm] = E[dB\mu V/m] + 20 \log(d[meters]) - 104.77$
d is the measurement distance in 3 meters

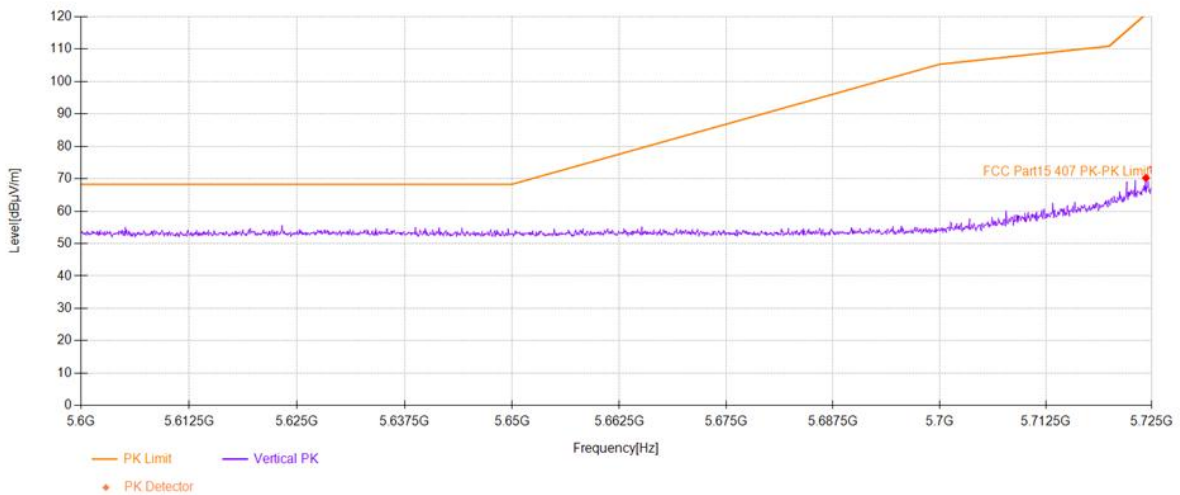
U-NII-3

Test Model	Undesirable radiated 802.11ac(VHT20)	Undesirable radiatedSpurious Emission in Band Edge Channel 149: 5745MHz	Ant.Pol	H
------------	--------------------------------------	---	---------	---

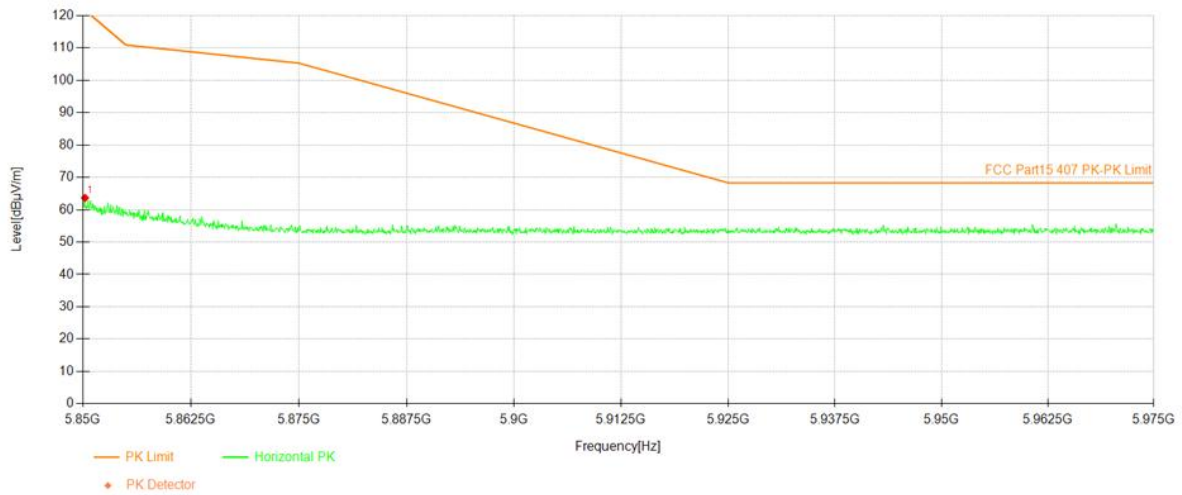


U-NII-3

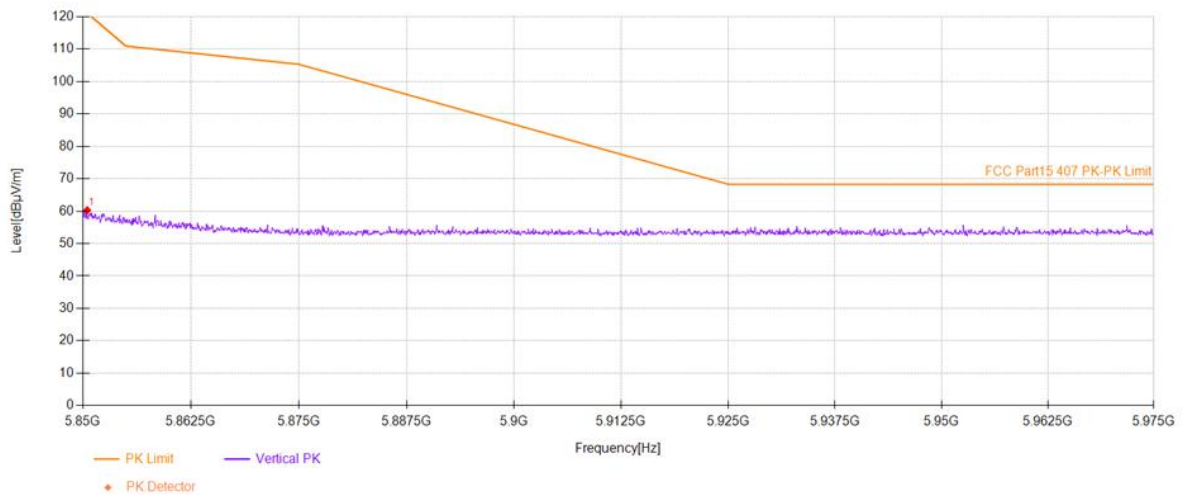
Test Model	Undesirable radiated 802.11ac(VHT20)	Undesirable radiatedSpurious Emission in Band Edge Channel 149: 5745MHz	Ant.Pol	V
------------	--------------------------------------	---	---------	---



U-NII-3				
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge	
	802.11ac(VHT20)	Channel 165: 5825MHz	Ant.Pol	H

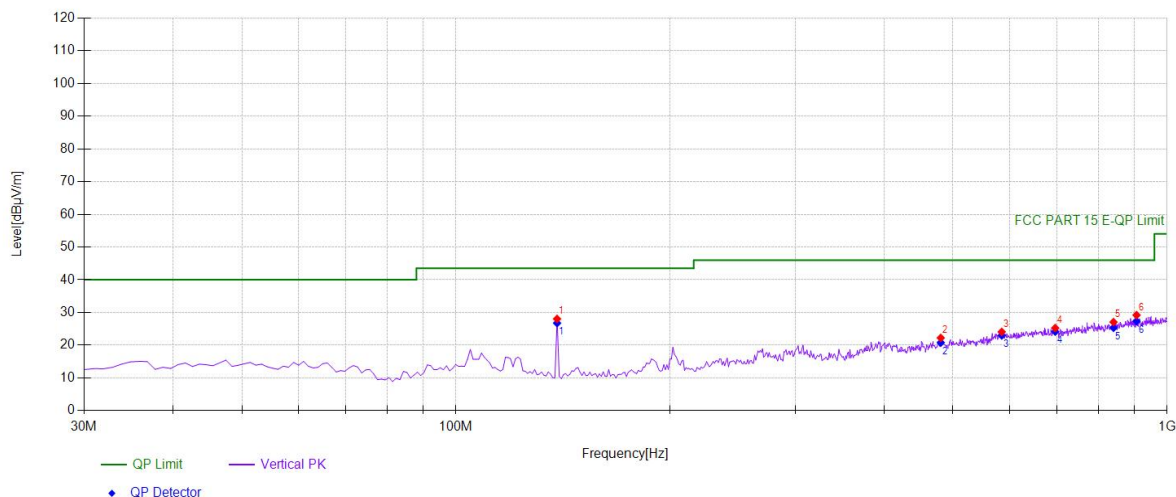


U-NII-3				
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge	
	802.11ac(VHT20)	Channel 165: 5825MHz	Ant.Pol	V



- Undesirable radiated Spurious Emission below 1GHz (30MHz to 1GHz)
All the antenna(Antenna 1) and modes(802.11a/n/ac) has been tested and the worst(Antenna 1,802.11a) result recorded was report as below:

Mode:	11A 5180
-------	----------



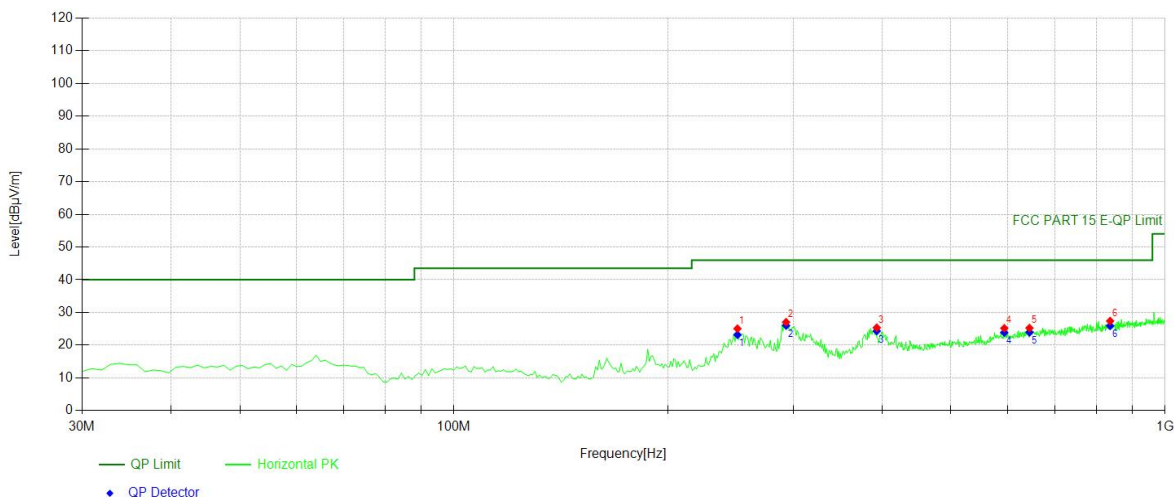
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	138.748	47.94	-19.89	28.05	PK	43.50	15.45	Vertical
2	480.530	32.03	-9.78	22.25	PK	46.00	23.75	Vertical
3	585.395	31.22	-7.14	24.08	PK	46.00	21.92	Vertical
4	696.086	31.22	-5.98	25.24	PK	46.00	20.76	Vertical
5	840.760	30.93	-3.86	27.07	PK	46.00	18.93	Vertical
6	905.815	32.04	-2.83	29.21	PK	46.00	16.79	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	138.7487	-19.89	26.76	43.50	16.74
2	480.5305	-9.78	20.80	46.00	25.20
3	585.3954	-7.14	22.99	46.00	23.01
4	696.0861	-5.98	24.15	46.00	21.85
5	840.7608	-3.86	25.34	46.00	20.66
6	905.8158	-2.83	27.32	46.00	18.68

Mode:	11A 5180
-------	----------



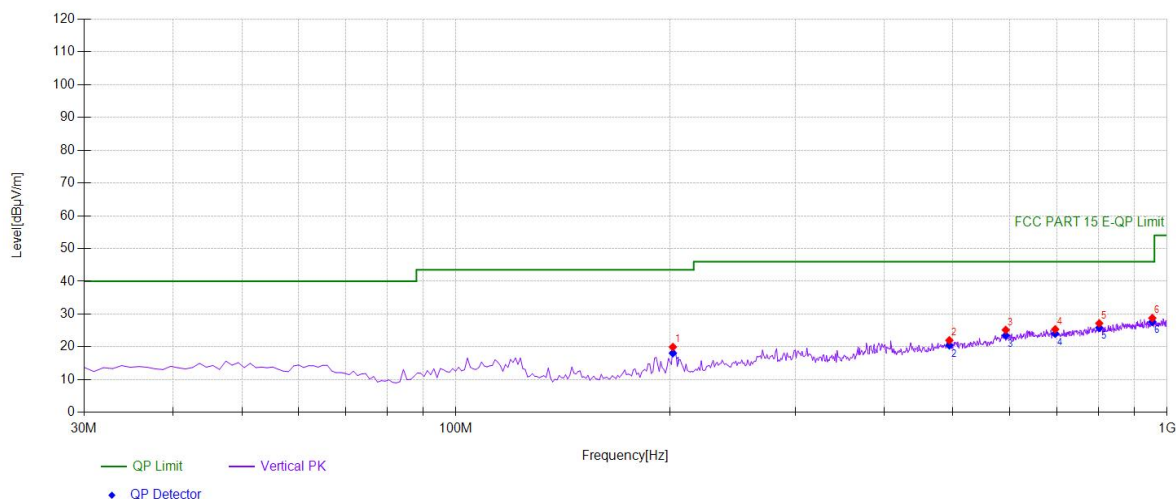
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	250.410	40.24	-15.17	25.07	PK	46.00	20.93	Horizontal
2	293.133	41.20	-14.15	27.05	PK	46.00	18.95	Horizontal
3	393.143	37.18	-11.82	25.36	PK	46.00	20.64	Horizontal
4	594.134	32.33	-7.14	25.19	PK	46.00	20.81	Horizontal
5	644.624	31.49	-6.24	25.25	PK	46.00	20.75	Horizontal
6	836.876	31.34	-3.94	27.40	PK	46.00	18.60	Horizontal

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	250.4104	-15.17	23.20	46.00	22.80
2	293.1331	-14.15	26.01	46.00	19.99
3	393.1431	-11.82	24.32	46.00	21.68
4	594.1341	-7.14	23.87	46.00	22.13
5	644.6246	-6.24	23.93	46.00	22.07
6	836.8769	-3.94	25.92	46.00	20.08

Mode:	11A 5200
-------	----------



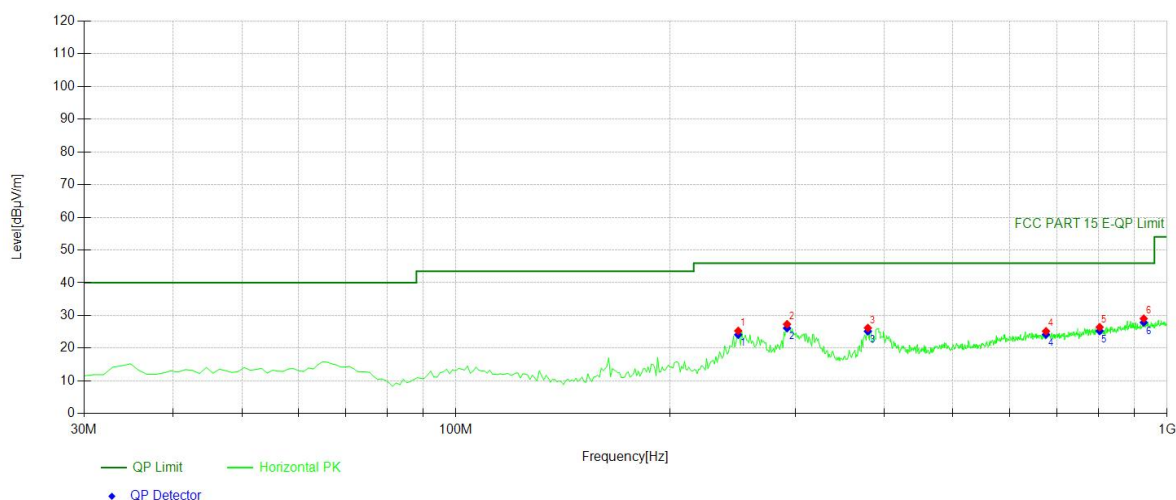
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	201.861	37.09	-17.13	19.96	PK	43.50	23.54	Vertical
2	494.124	31.79	-9.78	22.01	PK	46.00	23.99	Vertical
3	593.163	32.31	-7.14	25.17	PK	46.00	20.83	Vertical
4	696.086	31.34	-5.98	25.36	PK	46.00	20.64	Vertical
5	802.892	31.59	-4.40	27.19	PK	46.00	18.81	Vertical
6	953.393	31.10	-2.31	28.79	PK	46.00	17.21	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	201.8619	-17.13	18.09	43.50	25.41
2	494.1241	-9.78	20.49	46.00	25.51
3	593.1632	-7.14	23.49	46.00	22.51
4	696.0861	-5.98	24.04	46.00	21.96
5	802.8929	-4.40	25.87	46.00	20.13
6	953.3934	-2.31	27.66	46.00	18.34

Mode:	11A 5200
-------	----------



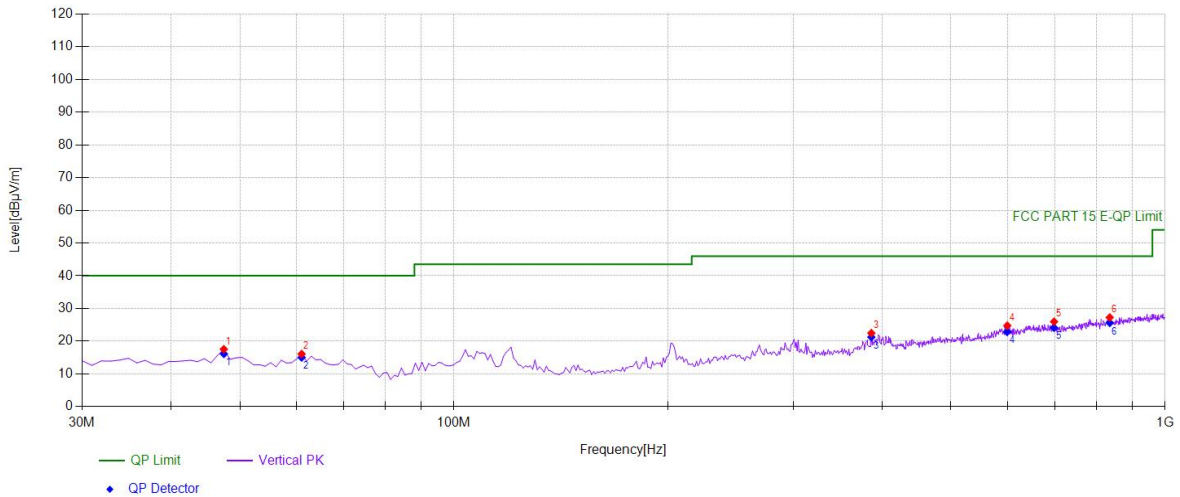
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	249.439	40.48	-15.17	25.31	PK	46.00	20.69	Horizontal
2	292.162	41.50	-14.16	27.34	PK	46.00	18.66	Horizontal
3	379.549	38.05	-11.86	26.19	PK	46.00	19.81	Horizontal
4	675.695	31.31	-6.12	25.19	PK	46.00	20.81	Horizontal
5	803.863	30.82	-4.39	26.43	PK	46.00	19.57	Horizontal
6	927.177	31.74	-2.69	29.05	PK	46.00	16.95	Horizontal

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	249.4394	-15.17	24.11	46.00	21.89
2	292.1622	-14.16	26.14	46.00	19.86
3	379.5496	-11.86	25.18	46.00	20.82
4	675.6957	-6.12	24.18	46.00	21.82
5	803.8639	-4.39	25.26	46.00	20.74
6	927.1772	-2.69	27.88	46.00	18.12

Mode:	11A 5240
-------	----------



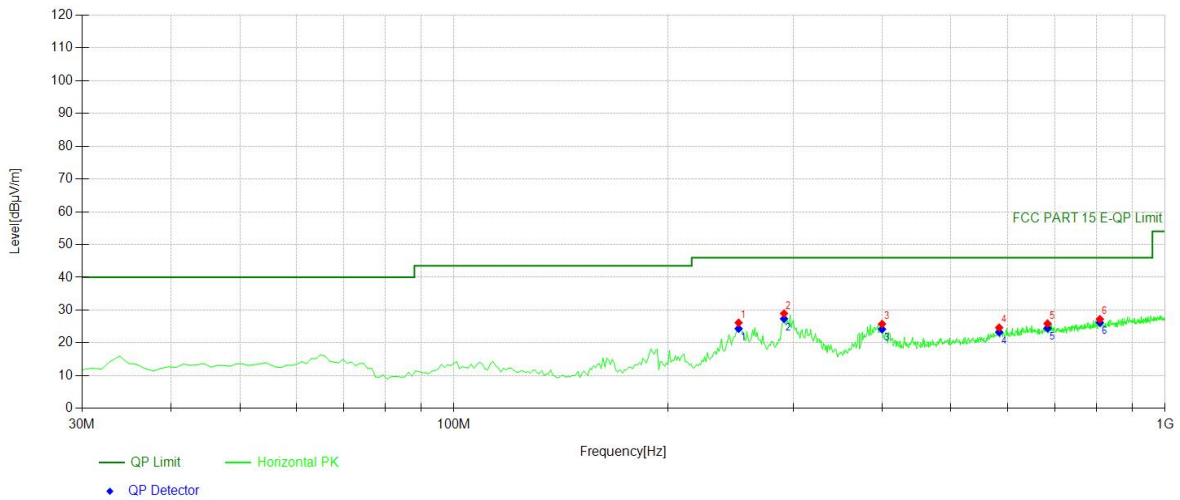
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	47.4775	34.94	-17.39	17.55	PK	40.00	22.45	Vertical
2	61.0711	34.80	-18.70	16.10	PK	40.00	23.90	Vertical
3	386.346	34.31	-11.83	22.48	PK	46.00	23.52	Vertical
4	599.96	31.90	-7.14	24.76	PK	46.00	21.24	Vertical
5	698.028	31.94	-5.96	25.98	PK	46.00	20.02	Vertical
6	835.909	31.23	-3.96	27.27	PK	46.00	18.73	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	47.4775	-17.39	16.13	40.00	23.87
2	61.0711	-18.70	15.04	40.00	24.96
3	386.3463	-11.83	21.26	46.00	24.74
4	599.96	-7.14	22.90	46.00	23.10
5	698.028	-5.96	24.12	46.00	21.88
6	835.9059	-3.96	25.60	46.00	20.40

Mode:	11A 5240
-------	----------



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	251.381	41.32	-15.17	26.15	PK	46.00	19.85	Horizontal
2	291.191	43.12	-14.16	28.96	PK	46.00	17.04	Horizontal
3	399.939	37.57	-11.79	25.78	PK	46.00	20.22	Horizontal
4	584.424	31.81	-7.14	24.67	PK	46.00	21.33	Horizontal
5	683.463	31.97	-6.08	25.89	PK	46.00	20.11	Horizontal
6	809.689	31.57	-4.34	27.23	PK	46.00	18.77	Horizontal

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	251.3814	-15.17	24.34	46.00	21.66
2	291.1912	-14.16	27.35	46.00	18.65
3	399.9399	-11.79	24.17	46.00	21.83
4	584.4244	-7.14	23.25	46.00	22.75
5	683.4635	-6.08	24.47	46.00	21.53
6	809.6897	-4.34	26.17	46.00	19.83

8.5 POWER LINE CONDUCTED EMISSIONS

8.5.1 Applicable Standard

According to FCC Part 15.207(a)
According to IC RSS-Gen 8.8

8.5.2 Conformance Limit

Frequency(MHz)	Conducted Emission Limit	
	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

8.5.3 Test Configuration

Test according to clause 6.3 conducted emission test setup

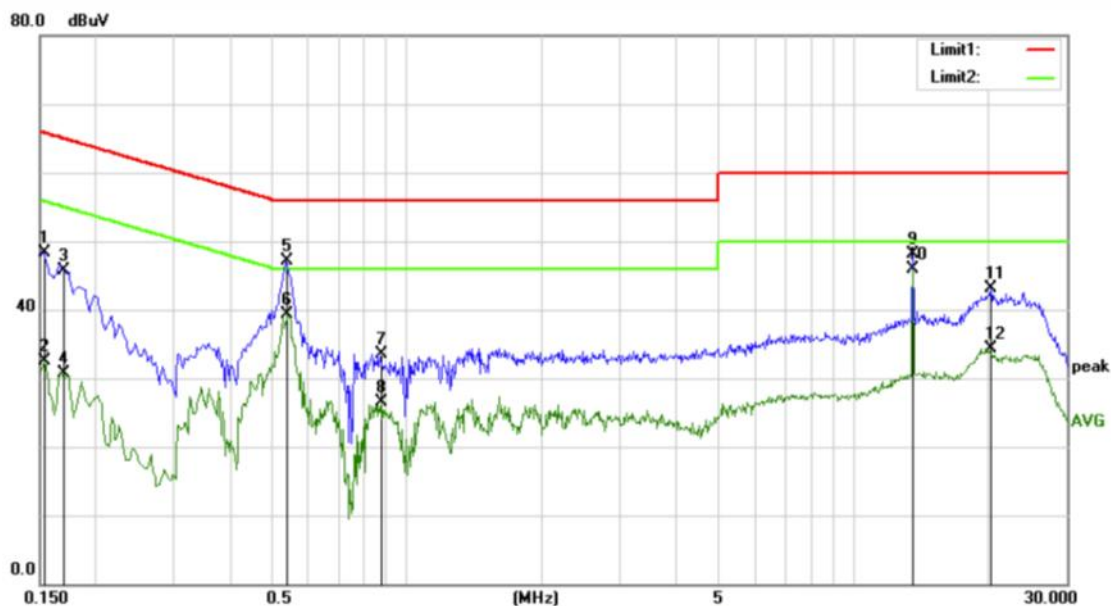
8.5.4 Test Procedure

The EUT was placed on a table which is 0.8m above ground plane.
Maximum procedure was performed on the highest emissions to ensure EUT compliance.
Repeat above procedures until all frequency measured were complete.

8.5.5 Test Results

Pass

The AC120V &240V voltage have been tested, and the worst result recorded was report as below:



Site Conduction #1

Phase: **N**

Temperature: 20.8

Limit: (CE)FCC PART 15 class B_QP

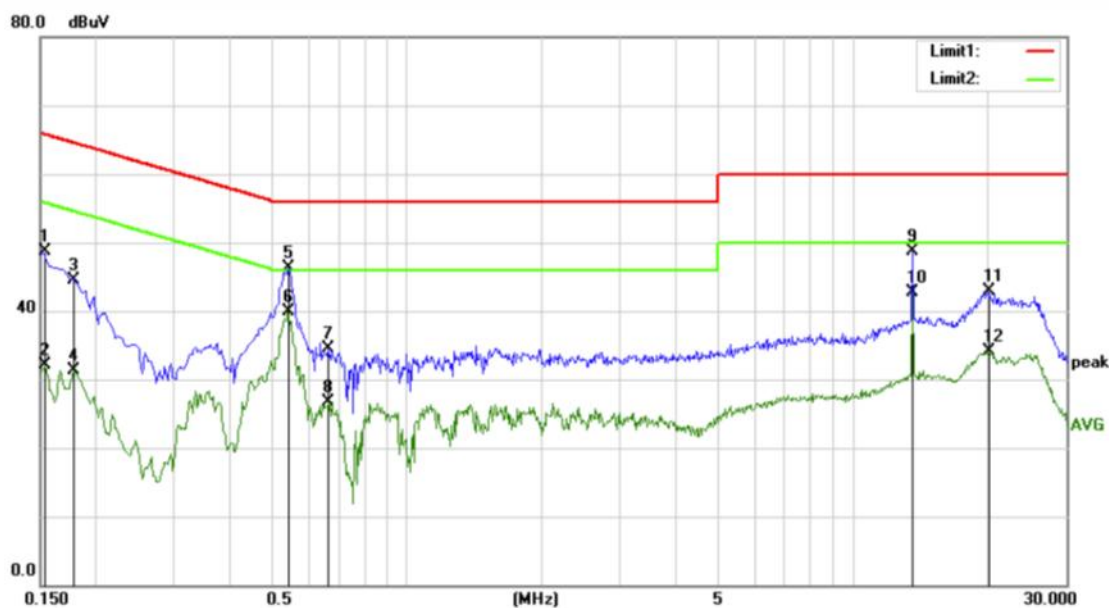
Power: AC 120V/60Hz

Humidity: 61 %

Mode: WIFI

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV	dBuV	dB		
1		0.1540	38.33	10.02	48.35	65.78	-17.43	QP	
2		0.1540	22.56	10.02	32.58	55.78	-23.20	AVG	
3		0.1700	35.57	10.04	45.61	64.96	-19.35	QP	
4		0.1700	20.57	10.04	30.61	54.96	-24.35	AVG	
5		0.5380	37.09	9.96	47.05	56.00	-8.95	QP	
6		0.5380	29.40	9.96	39.36	46.00	-6.64	AVG	
7		0.8780	23.47	9.98	33.45	56.00	-22.55	QP	
8		0.8780	16.51	9.98	26.49	46.00	-19.51	AVG	
9		13.5620	37.77	10.25	48.02	60.00	-11.98	QP	
10	*	13.5620	35.71	10.25	45.96	50.00	-4.04	AVG	
11		20.2780	32.60	10.46	43.06	60.00	-16.94	QP	
12		20.2780	23.88	10.46	34.34	50.00	-15.66	AVG	



Site Conduction #1

Phase: **L1**

Temperature: 20.8

Limit: (CE)FCC PART 15 class B_QP

Power: AC 120V/60Hz

Humidity: 61 %

Mode: WIFI

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1540	38.67	10.02	48.69	65.78	-17.09	QP	
2		0.1540	22.03	10.02	32.05	55.78	-23.73	AVG	
3		0.1787	34.45	10.04	44.49	64.55	-20.06	QP	
4		0.1787	21.34	10.04	31.38	54.55	-23.17	AVG	
5		0.5420	36.27	9.96	46.23	56.00	-9.77	QP	
6	*	0.5420	29.91	9.96	39.87	46.00	-6.13	AVG	
7		0.6620	24.57	9.99	34.56	56.00	-21.44	QP	
8		0.6620	16.78	9.99	26.77	46.00	-19.23	AVG	
9		13.5660	38.49	10.25	48.74	60.00	-11.26	QP	
10		13.5660	32.38	10.25	42.63	50.00	-7.37	AVG	
11		20.2580	32.52	10.46	42.98	60.00	-17.02	QP	
12		20.2580	23.73	10.46	34.19	50.00	-15.81	AVG	

8.6 ANTENNA APPLICATION

8.6.1 Antenna Requirement

Standard	Requirement
FCC CRF Part15.203	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
FCC 47 CFR Part15.407(a)	If transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.
RSS-Gen Section 6.8	The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

8.6.2 Result

PASS.

- Note:
- ☒ Antenna use a permanently attached antenna which is not replaceable.
 - ☐ Not using a standard antenna jack or electrical connector for antenna replacement
 - ☐ The antenna has to be professionally installed (please provide method of installation)

Please refer to the attached document Internal Photos to show the antenna connector.

----- END OF REPORT -----