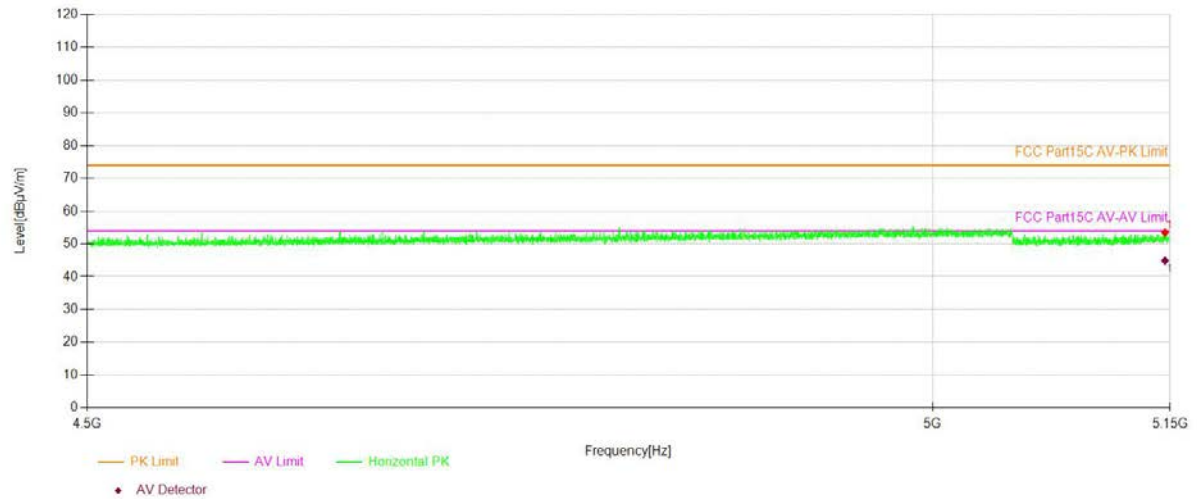
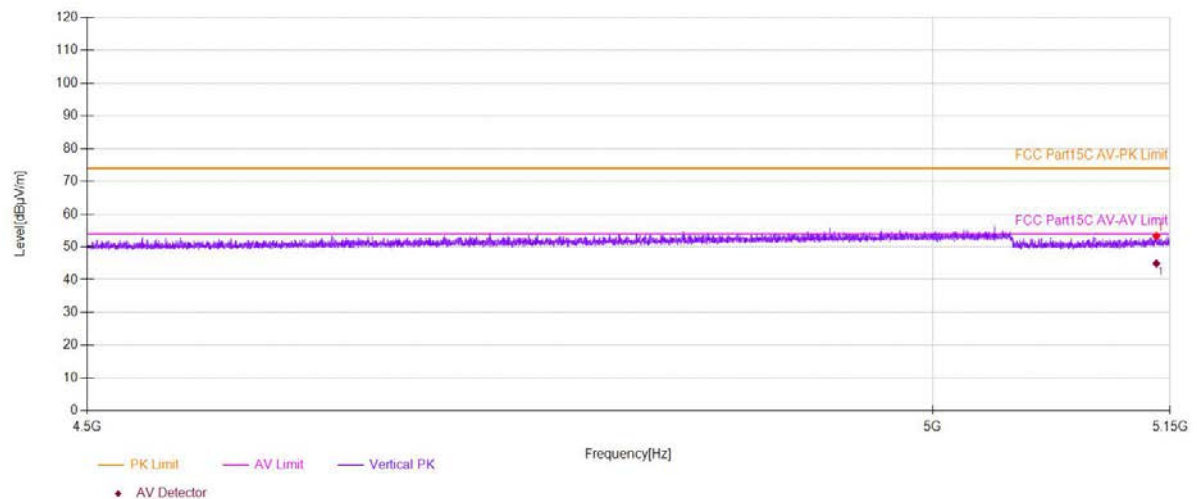


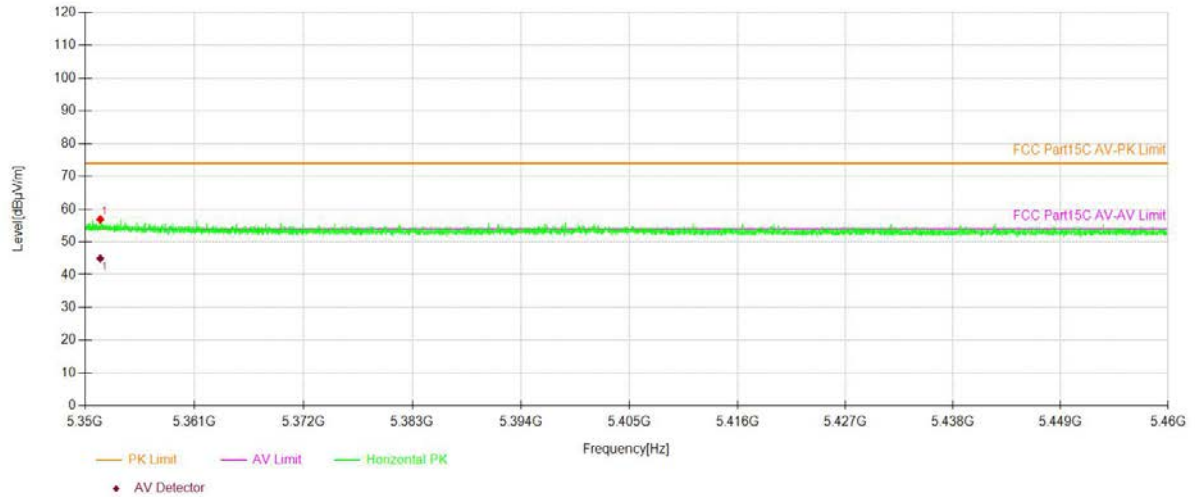
Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☒ 802.11n(20) ☐ 802.11 ac (VHT20)
☒ 5260 ☐ 5300 ☐ 5320 Ant.Pol H



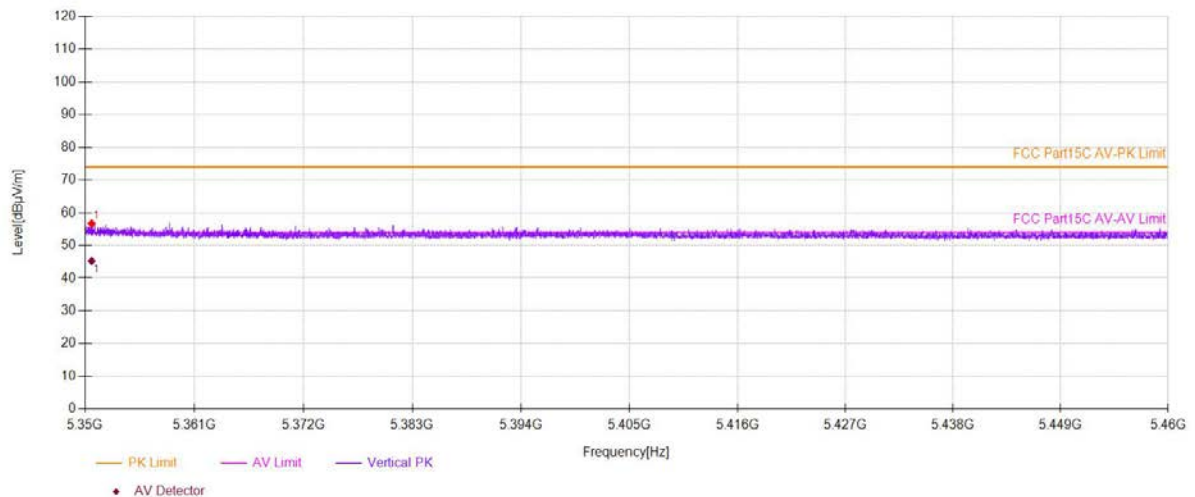
Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☒ 802.11n(20) ☐ 802.11 ac (VHT20)
☒ 5260 ☐ 5300 ☐ 5320 Ant.Pol V



Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11a ☒ 802.11n(20) ☐ 802.11 ac (VHT20)
☐ 5260 ☐ 5300 ☒ 5320 Ant.Pol H



Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11a ☒ 802.11n(20) ☐ 802.11 ac (VHT20)
☐ 5260 ☐ 5300 ☒ 5320 Ant.Pol V



- ☒ For Undesirable radiated Spurious Emission in U-NII -2C
 - ☒ Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)
- All of the configurations or modes are tested, the data of the worst case is recorded in the report.
Highest gain of each antenna and highest output power is ANT1 and MIMO as below:

ANT1:

Test mode: 802.11n(20) Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8090.41	V	57.13	-38.1	-27	11.1
10976.5	V	62.24	-32.99	-27	5.99
17198.9	V	67.83	-27.4	-27	0.4
8106.41	H	56.65	-38.58	-27	11.58
11098.5	H	63.07	-32.16	-27	5.16
17562.9	H	66.41	-28.82	-27	1.82

Test mode: 802.11n(20) Frequency(MHz): 5580

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8170.42	V	56.23	-39	-27	12
10738.5	V	62.10	-33.13	-27	6.13
17181.9	V	67.40	-27.83	-27	0.83
8707.45	H	56.58	-38.65	-27	11.65
13140.7	H	64.57	-30.66	-27	3.66
17916.9	H	66.96	-28.27	-27	1.27

Test mode: 802.11n(20) Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8110.41	V	56.70	-38.53	-27	11.53
11097.5	V	62.41	-32.82	-27	5.82
17191.9	V	66.30	-28.93	-27	1.93
8188.42	H	56.47	-38.76	-27	11.76
11499.6	H	63.22	-32.01	-27	5.01
17176.9	H	67.80	-27.43	-27	0.43

MIMO:

Test mode: 802.11n(20) Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8089.0200	V	57	-38.23	-27	11.23
10975.1100	V	62.08	-33.15	-27	6.15
17200.1800	V	67.8	-27.43	-27	0.43
8118.1000	H	56.57	-38.66	-27	11.66
11110.1900	H	62.86	-32.37	-27	5.37
17574.5900	H	66.25	-28.98	-27	1.98

Test mode: 802.11n(20) Frequency(MHz): 5580

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8169.0300	V	56.1	-39.13	-27	12.13
10737.1100	V	61.94	-33.29	-27	6.29
17183.1800	V	67.37	-27.86	-27	0.86
8719.1400	H	56.5	-38.73	-27	11.73
13152.3900	H	64.36	-30.87	-27	3.87
17928.5900	H	66.8	-28.43	-27	1.43

Test mode: 802.11n(20) Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8109.0200	V	56.57	-38.66	-27	11.66
11096.1100	V	62.25	-32.98	-27	5.98
17193.1800	V	66.27	-28.96	-27	1.96
8200.1100	H	56.39	-38.84	-27	11.84
11511.2900	H	63.01	-32.22	-27	5.22
17188.5900	H	67.64	-27.59	-27	0.59

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

ANT1:

Test mode: 802.11n(20)		Frequency(MHz): 5500			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8090.41	V	57.13	74.00	16.87	Peak
10976.5	V	62.24	74.00	11.76	Peak
17198.9	V	67.83	74.00	6.17	Peak
8090.41	V	41.01	54.00	12.99	Avg
10976.5	V	44.77	54.00	9.23	Avg
17198.9	V	46.29	54.00	7.71	Avg
8106.41	H	56.65	74.00	17.35	Peak
11098.5	H	63.07	74.00	10.93	Peak
17562.9	H	66.41	74.00	7.59	Peak
8106.41	H	40.38	54.00	13.62	Avg
11098.5	H	44.45	54.00	9.55	Avg
17562.9	H	46.50	54.00	7.50	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5580			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8170.42	V	56.23	74.00	17.77	Peak
10738.5	V	62.10	74.00	11.90	Peak
17181.9	V	67.40	74.00	6.60	Peak
8170.42	V	40.63	54.00	13.37	Avg
10738.5	V	44.97	54.00	9.03	Avg
17181.9	V	46.16	54.00	7.84	Avg
8707.45	H	56.58	74.00	17.42	Peak
13140.7	H	64.57	74.00	9.43	Peak
17916.9	H	66.96	74.00	7.04	Peak
8707.45	H	42.95	54.00	11.05	Avg
13140.7	H	47.15	54.00	6.85	Avg
17916.9	H	46.41	54.00	7.59	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5700			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8110.41	V	56.70	74.00	17.30	Peak
11097.5	V	62.41	74.00	11.59	Peak
17191.9	V	66.30	74.00	7.70	Peak
8110.41	V	40.33	54.00	13.67	Avg
11097.5	V	44.53	54.00	9.47	Avg
17191.9	V	46.19	54.00	7.81	Avg
8188.42	H	56.47	74.00	17.53	Peak
11499.6	H	63.22	74.00	10.78	Peak
17176.9	H	67.80	74.00	6.20	Peak
8188.42	H	39.97	54.00	14.03	Avg
11499.6	H	43.44	54.00	10.56	Avg
17176.9	H	47.00	54.00	7.00	Avg

MIMO:

Test mode: 802.11n(20)		Frequency(MHz): 5500			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8089.0200	V	57.00	74.00	17.00	Peak
10975.1100	V	62.08	74.00	11.92	Peak
17200.1800	V	67.80	74.00	6.20	Peak
8091.6900	V	40.99	54.00	13.01	Avg
10974.2500	V	44.51	54.00	9.49	Avg
17196.6500	V	46.10	54.00	7.90	Avg
8118.1000	H	56.57	74.00	17.43	Peak
11110.1900	H	62.86	74.00	11.14	Peak
17574.5900	H	66.25	74.00	7.75	Peak
8118.1000	H	40.24	54.00	13.76	Avg
11095.1900	H	44.27	54.00	9.73	Avg
17559.5900	H	46.37	54.00	7.63	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5580			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8169.0300	V	56.10	74.00	17.90	Peak
10737.1100	V	61.94	74.00	12.06	Peak
17183.1800	V	67.37	74.00	6.63	Peak
8171.7000	V	40.61	54.00	13.39	Avg
10736.2500	V	44.71	54.00	9.29	Avg
17179.6500	V	45.97	54.00	8.03	Avg
8719.1400	H	56.50	74.00	17.50	Peak
13152.3900	H	64.36	74.00	9.64	Peak
17928.5900	H	66.80	74.00	7.20	Peak
8719.1400	H	42.81	54.00	11.19	Avg
13137.3900	H	46.97	54.00	7.03	Avg
17913.5900	H	46.28	54.00	7.72	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5700			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8109.0200	V	56.57	74.00	17.43	Peak
11096.1100	V	62.25	74.00	11.75	Peak
17193.1800	V	66.27	74.00	7.73	Peak
8111.6900	V	40.31	54.00	13.69	Avg
11095.2500	V	44.27	54.00	9.73	Avg
17189.6500	V	46.00	54.00	8.00	Avg
8200.1100	H	56.39	74.00	17.61	Peak
11511.2900	H	63.01	74.00	10.99	Peak
17188.5900	H	67.64	74.00	6.36	Peak
8200.1100	H	39.83	54.00	14.17	Avg
11496.2900	H	43.26	54.00	10.74	Avg
17173.5900	H	46.87	54.00	7.13	Avg

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(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 radiated Spurious Emission in Band Edge

Test mode: 802.11n(20) Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5469.91	V	60.99	-34.24	-27	Pass
5469.68	H	58.69	-36.54	-27	Pass

Test mode: 802.11n(20) Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5727.40	V	61.09	-34.14	-27	Pass
5725.48	H	63.80	-31.43	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).

(2) Emission Level= Reading Level+Correct Factor +Cable Loss.

(3) Correct Factor= Ant_F + Cab_L - Preamp

(4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77

d is the measurement distance in 3 meters

Test mode: 802.11n(20) Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5469.91	V	60.99	74.00	13.01	Peak
5469.91	V	46.12	54.00	7.88	Avg
5469.68	H	58.69	74.00	15.31	Peak
5469.68	H	45.21	54.00	8.79	Avg

Test mode: 802.11n(20) Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5727.40	V	61.09	74.00	12.91	Peak
5727.40	V	44.13	54.00	9.87	Avg
5725.48	H	63.80	74.00	10.20	Peak
5725.48	H	45.81	54.00	8.19	Avg

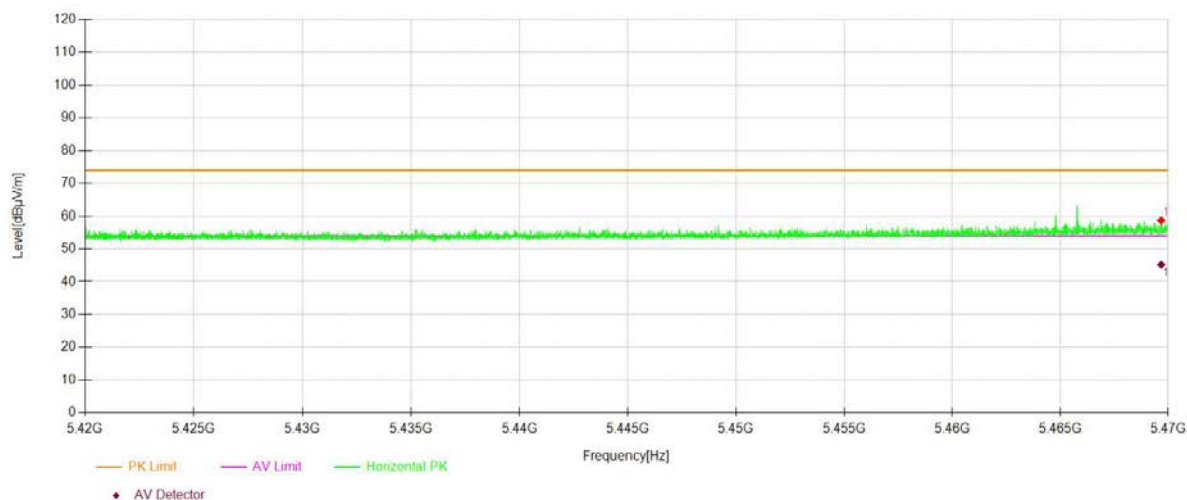
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).

(2) Emission Level= Reading Level+Correct Factor +Cable Loss.

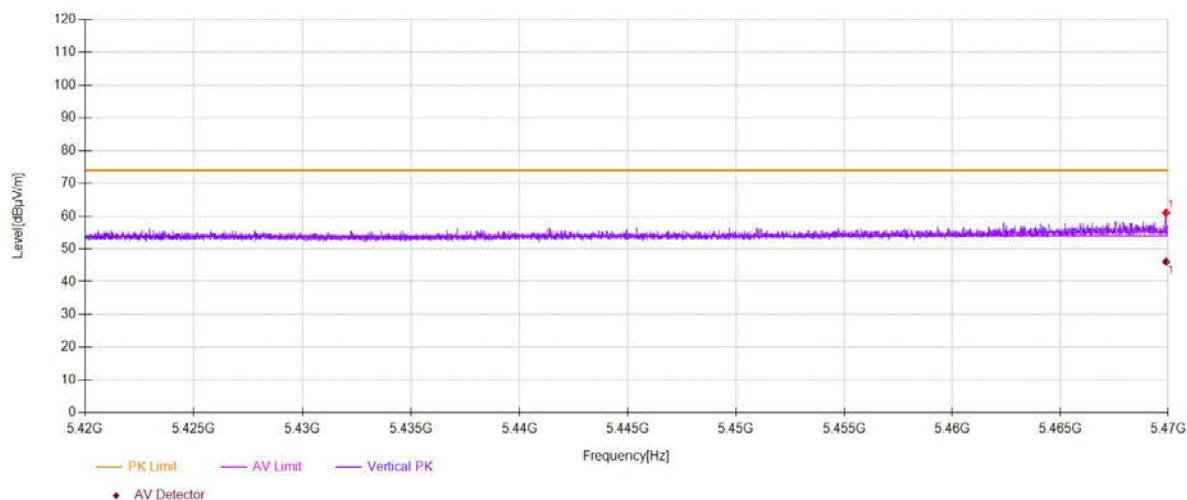
(3) Correct Factor= Ant_F + Cab_L - Preamp

(4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

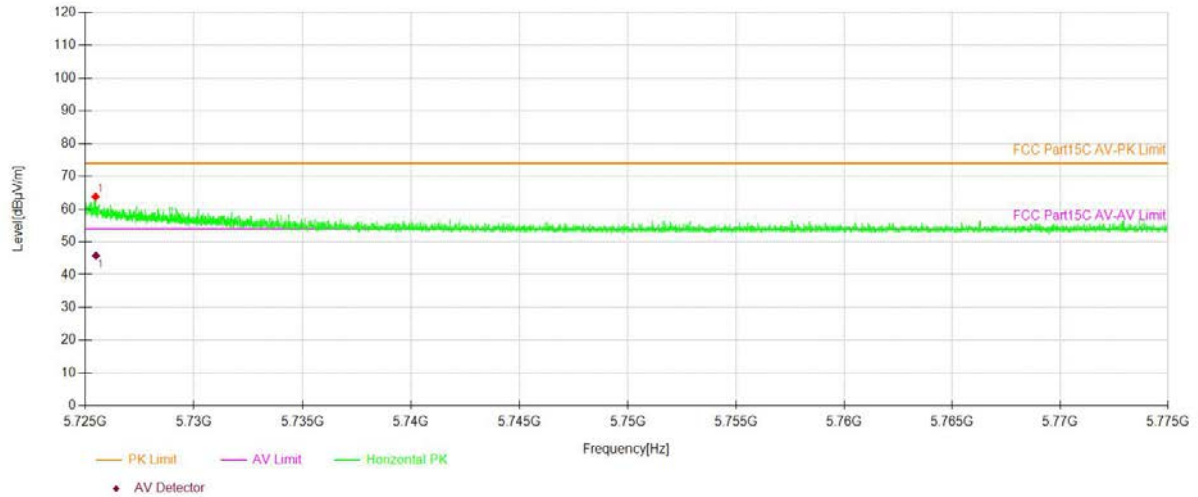
Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☒ 802.11n(20) ☐ 802.11 ac (VHT20)
☒ 5500 ☐ 5580 ☐ 5700 Ant.Pol H



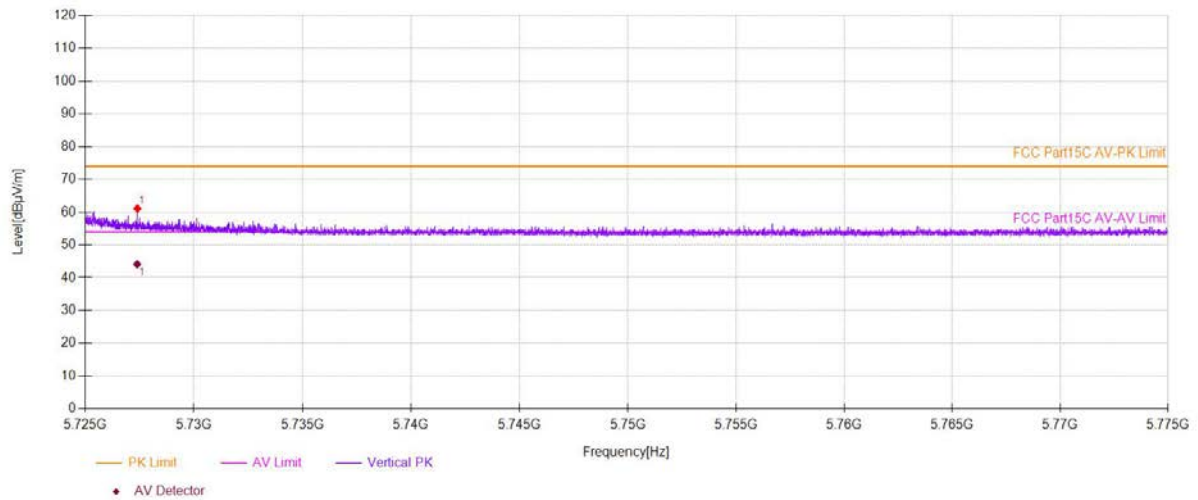
Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☒ 802.11n(20) ☐ 802.11 ac (VHT20)
☒ 5500 ☐ 5580 ☐ 5700 Ant.Pol V



Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11a ☒ 802.11n(20) ☐ 802.11 ac (VHT20)
☐ 5500 ☐ 5580 ☒ 5700 Ant.Pol H



Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11a ☒ 802.11n(20) ☐ 802.11 ac (VHT20)
☐ 5500 ☐ 5580 ☒ 5700 Ant.Pol V



- ☒ For Undesirable radiated Spurious Emission in U-NII -3
- ☒ Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

All of the configurations or modes are tested, the data of the worst case is recorded in the report.
Highest gain of each antenna and highest output power is ANT1 and MIMO as below:

ANT1:

Test mode: 802.11n(20) Frequency(MHz): 5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8078.41	V	56.59	-38.64	-27	11.64
11091.5	V	62.36	-32.87	-27	5.87
17090.9	V	67.30	-27.93	-27	0.93
8065.41	H	56.53	-38.7	-27	11.7
11547.6	H	62.62	-32.61	-27	5.61
16936.9	H	66.52	-28.71	-27	1.71

Test mode: 802.11n(20) Frequency(MHz): 5785

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7480.38	V	55.55	-39.68	-27	12.68
11019.5	V	62.80	-32.43	-27	5.43
17118.9	V	66.60	-28.63	-27	1.63
9338.49	H	58.70	-36.53	-27	9.53
12497.6	H	63.54	-31.69	-27	4.69
17973.9	H	66.17	-29.06	-27	2.06

Test mode: 802.11n(20) Frequency(MHz): 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8184.42	V	56.40	-38.83	-27	11.83
11071.5	V	62.42	-32.81	-27	5.81
17027.9	V	67.06	-28.17	-27	1.17
7572.38	H	55.41	-39.82	-27	12.82
10039.5	H	61.61	-33.62	-27	6.62
16862.9	H	67.14	-28.09	-27	1.09

MIMO:

Test mode: 802.11n(20) Frequency(MHz): 5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8077.0200	V	56.46	-38.77	-27	11.77
11090.1100	V	62.2	-33.03	-27	6.03
17092.1800	V	67.27	-27.96	-27	0.96
8077.1000	H	56.45	-38.78	-27	11.78
11559.2900	H	62.41	-32.82	-27	5.82
16948.5900	H	66.36	-28.87	-27	1.87

Test mode: 802.11n(20) Frequency(MHz): 5785

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7478.9900	V	55.42	-39.81	-27	12.81
11018.1100	V	62.64	-32.59	-27	5.59
17120.1800	V	66.57	-28.66	-27	1.66
9350.1800	H	58.62	-36.61	-27	9.61
12509.2900	H	63.33	-31.90	-27	4.90
17985.5900	H	66.01	-29.22	-27	2.22

Test mode: 802.11n(20) Frequency(MHz): 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8183.0300	V	56.27	-38.96	-27	11.96
11070.1100	V	62.26	-32.97	-27	5.97
17029.1800	V	67.03	-28.20	-27	1.20
7584.0700	H	55.33	-39.90	-27	12.90
10051.1900	H	61.4	-33.83	-27	6.83
16874.5900	H	66.98	-28.25	-27	1.25

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

ANT1:

Test mode: 802.11n(20)		Frequency(MHz): 5745			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8078.41	V	56.59	74.00	17.41	Peak
11091.5	V	62.36	74.00	11.64	Peak
17090.9	V	67.30	74.00	6.70	Peak
8078.41	V	40.18	54.00	13.82	Avg
11091.5	V	44.43	54.00	9.57	Avg
17090.9	V	45.89	54.00	8.11	Avg
8065.41	H	56.53	74.00	17.47	Peak
11547.6	H	62.62	74.00	11.38	Peak
16936.9	H	66.52	74.00	7.48	Peak
8065.41	H	40.65	54.00	13.35	Avg
11547.6	H	43.24	54.00	10.76	Avg
16936.9	H	45.29	54.00	8.71	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5785			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
7480.38	V	55.55	74.00	18.45	Peak
11019.5	V	62.80	74.00	11.20	Peak
17118.9	V	66.60	74.00	7.40	Peak
7480.38	V	39.41	54.00	14.59	Avg
11019.5	V	44.00	54.00	10.00	Avg
17118.9	V	46.62	54.00	7.38	Avg
9338.49	H	58.70	74.00	15.30	Peak
12497.6	H	63.54	74.00	10.46	Peak
17973.9	H	66.17	74.00	7.83	Peak
9338.49	H	43.15	54.00	10.85	Avg
12497.6	H	47.62	54.00	6.38	Avg
17973.9	H	46.16	54.00	7.84	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5825			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8184.42	V	56.40	74.00	17.60	Peak
11071.5	V	62.42	74.00	11.58	Peak
17027.9	V	67.06	74.00	6.94	Peak
8184.42	V	40.39	54.00	13.61	Avg
11071.5	V	44.54	54.00	9.46	Avg
17027.9	V	46.27	54.00	7.73	Avg
7572.38	H	55.41	74.00	18.59	Peak
10039.5	H	61.61	74.00	12.39	Peak
16862.9	H	67.14	74.00	6.86	Peak
7572.38	H	39.90	54.00	14.10	Avg
10039.5	H	41.88	54.00	12.12	Avg
16862.9	H	44.34	54.00	9.66	Avg

MIMO:

Test mode: 802.11n(20)		Frequency(MHz): 5745			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8077.0200	V	56.46	74.00	17.54	Peak
11090.1100	V	62.20	74.00	11.80	Peak
17092.1800	V	67.27	74.00	6.73	Peak
8079.6900	V	40.16	54.00	13.84	Avg
11089.2500	V	44.17	54.00	9.83	Avg
17088.6500	V	45.70	54.00	8.30	Avg
8077.1000	H	56.45	74.00	17.55	Peak
11559.2900	H	62.41	74.00	11.59	Peak
16948.5900	H	66.36	74.00	7.64	Peak
8077.1000	H	40.51	54.00	13.49	Avg
11544.2900	H	43.06	54.00	10.94	Avg
16933.5900	H	45.16	54.00	8.84	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5785			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
7478.9900	V	55.42	74.00	18.58	Peak
11018.1100	V	62.64	74.00	11.36	Peak
17120.1800	V	66.57	74.00	7.43	Peak
7481.6600	V	39.39	54.00	14.61	Avg
11017.2500	V	43.74	54.00	10.26	Avg
17116.6500	V	46.43	54.00	7.57	Avg
9350.1800	H	58.62	74.00	15.38	Peak
12509.2900	H	63.33	74.00	10.67	Peak
17985.5900	H	66.01	74.00	7.99	Peak
9350.1800	H	43.01	54.00	10.99	Avg
12494.2900	H	47.44	54.00	6.56	Avg
17970.5900	H	46.03	54.00	7.97	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5825			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8183.0300	V	56.27	74.00	17.73	Peak
11070.1100	V	62.26	74.00	11.74	Peak
17029.1800	V	67.03	74.00	6.97	Peak
8185.7000	V	40.37	54.00	13.63	Avg
11069.2500	V	44.28	54.00	9.72	Avg
17025.6500	V	46.08	54.00	7.92	Avg
7584.0700	H	55.33	74.00	18.67	Peak
10051.1900	H	61.40	74.00	12.60	Peak
16874.5900	H	66.98	74.00	7.02	Peak
7584.0700	H	39.76	54.00	14.24	Avg
10036.1900	H	41.70	54.00	12.30	Avg
16859.5900	H	44.21	54.00	9.79	Avg

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(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 Spurious Emission in band edge

Test mode:		802.11n(20)		Frequency:		5745	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict		
5723.74	V	70.37	-24.86	-27	PASS		
5724.31	H	73.35	-21.88	-27	PASS		

Test mode:		802.11n(20)		Frequency:		5825	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict		
5850.12	V	63.45	-31.78	-27	PASS		
5850	H	66.45	-28.78	-27	PASS		

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).

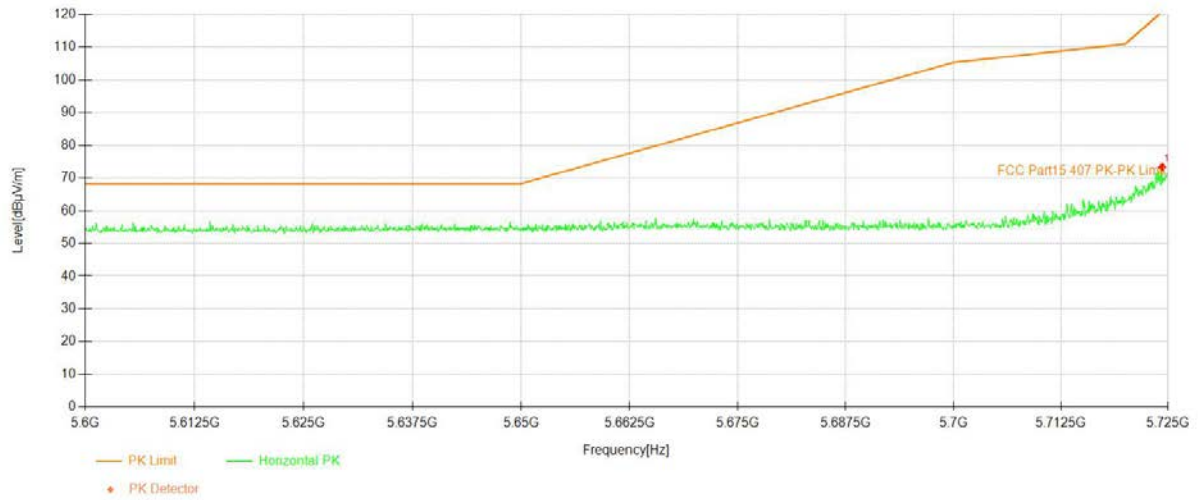
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.

(3) Correct Factor= Ant_F + Cab_L - Preamp

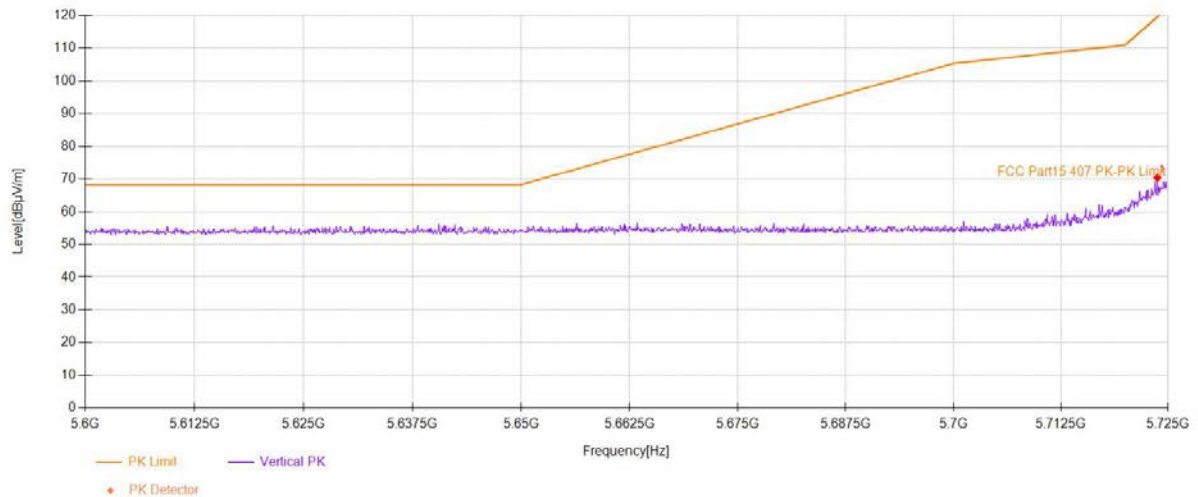
(4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77

d is the measurement distance in 3 meters

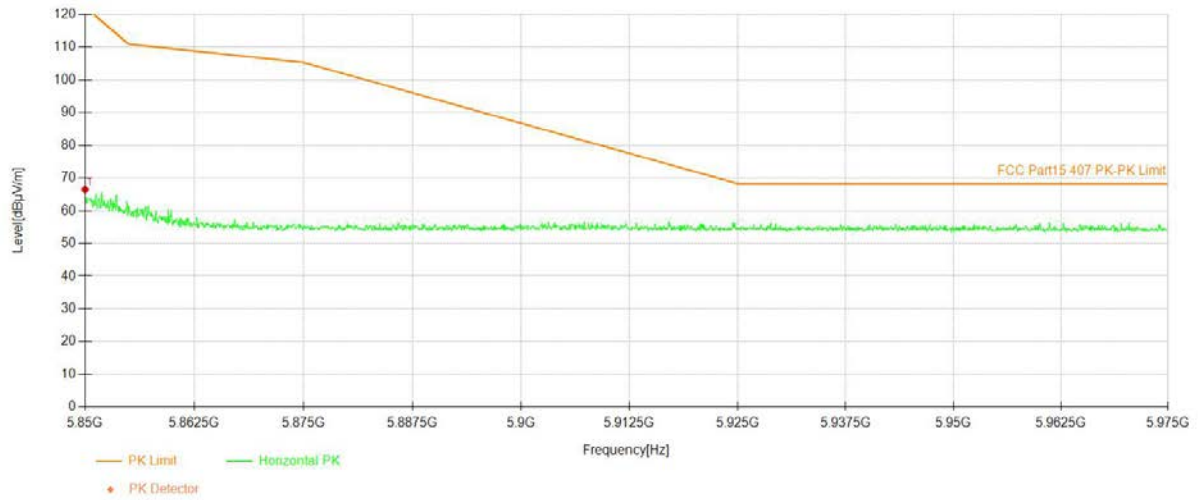
Test Model U-NII -3
Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
802.11a 802.11n(20) 802.11n(HT40)
5745 Ant.Pol H



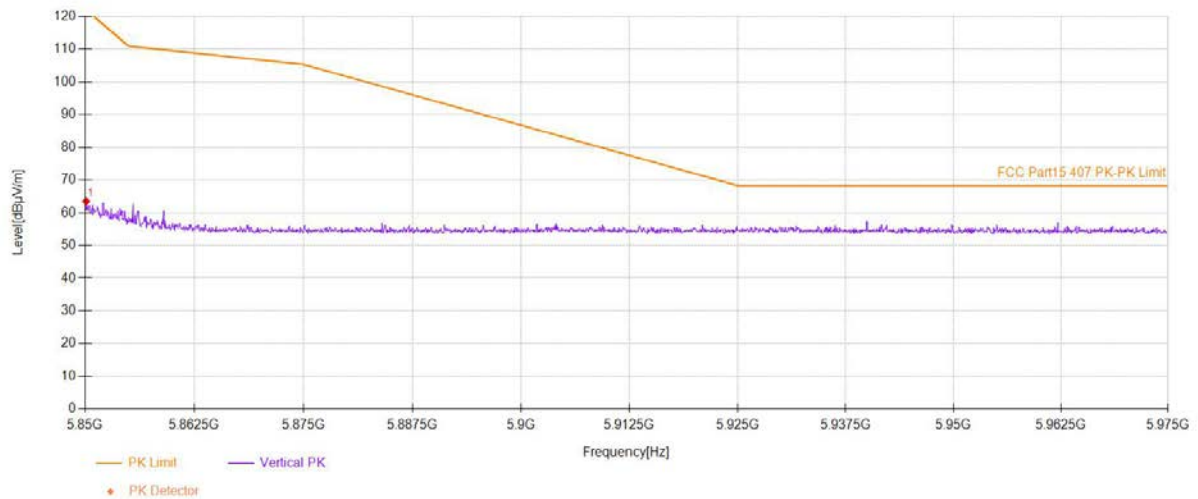
Test Model U-NII -3
Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
802.11a 802.11n(20) 802.11n(HT40)
5745 Ant.Pol V



Test Model U-NII -3
Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☒ 802.11n(20) ☐ 802.11n(HT40)
☒ 5825 Ant.Pol H

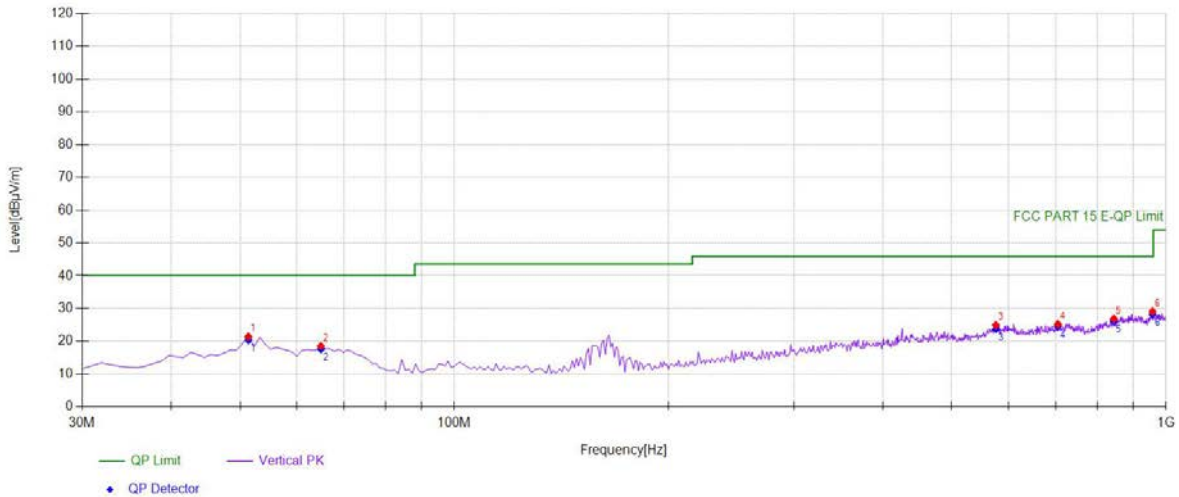


Test Model U-NII -3
Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☒ 802.11n(20) ☐ 802.11n(HT40)
☒ 5825 Ant.Pol V



- Undesirable radiated Spurious Emission below 1GHz (30MHz to 1GHz)
All of the configurations or modes are tested, the data of the worst case is recorded in the report.

Test mode: 802.11a Frequency(MHz): 5180

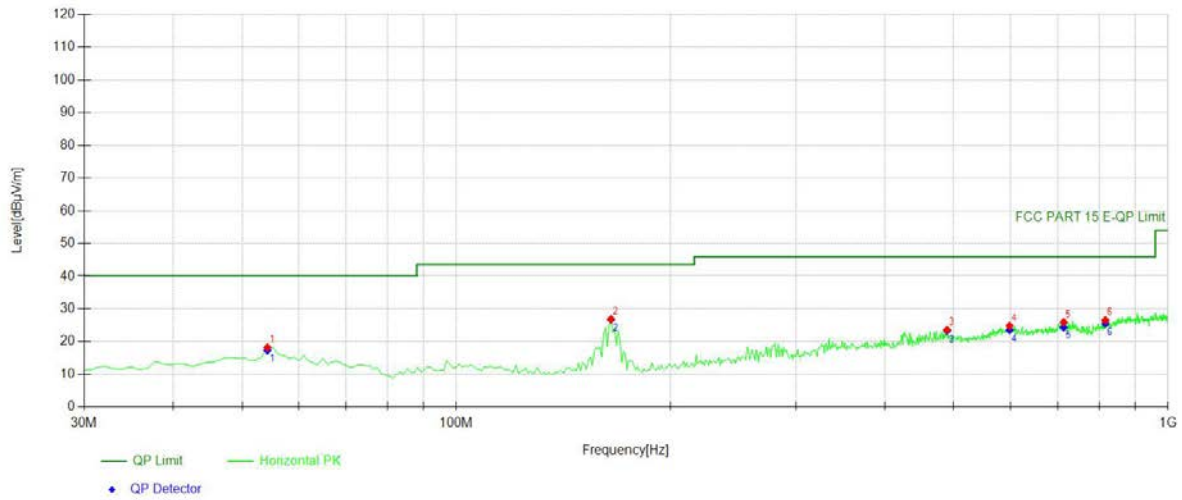


Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	51.3614	37.60	-16.21	21.39	PK	40.00	18.61	Vertical
2	64.955	36.62	-18.07	18.55	PK	40.00	21.45	Vertical
3	576.656	32.28	-7.34	24.94	PK	46.00	21.06	Vertical
4	704.824	31.07	-5.83	25.24	PK	46.00	20.76	Vertical
5	844.644	30.95	-4.12	26.83	PK	46.00	19.17	Vertical
6	957.277	31.23	-2.13	29.10	PK	46.00	16.90	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	51.3614	-16.21	20.45	40.00	19.55
2	64.955	-18.07	17.61	40.00	22.39
3	576.6567	-7.34	23.75	46.00	22.25
4	704.8248	-5.83	24.59	46.00	21.41
5	844.6446	-4.12	26.18	46.00	19.82
6	957.2773	-2.13	28.20	46.00	17.80



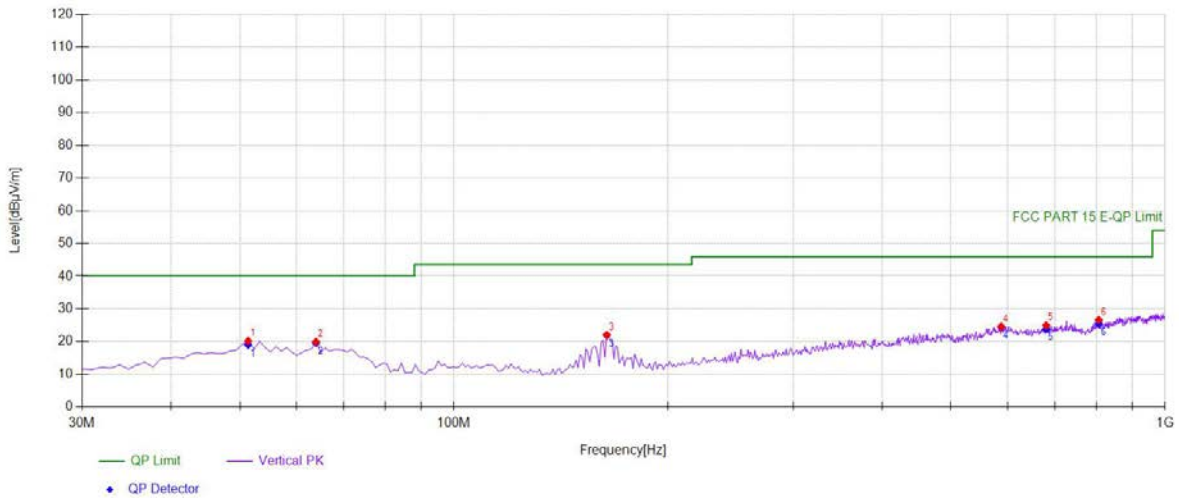
Suspected Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	54.2743	34.81	-16.60	18.21	PK	40.00	21.79	Horizontal
2	164.965	46.03	-19.24	26.79	PK	43.50	16.71	Horizontal
3	489.269	33.49	-9.88	23.61	PK	46.00	22.39	Horizontal
4	598.989	30.94	-6.16	24.78	PK	46.00	21.22	Horizontal
5	713.563	31.67	-5.77	25.90	PK	46.00	20.10	Horizontal
6	816.486	31.26	-4.77	26.49	PK	46.00	19.51	Horizontal

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]
1	54.2743	-16.60	17.34	40.00	22.66
2	164.965	-19.24	26.75	43.50	16.75
3	489.2693	-9.88	23.32	46.00	22.68
4	598.989	-6.16	23.53	46.00	22.47
5	713.5636	-5.77	24.41	46.00	21.59
6	816.4865	-4.77	25.53	46.00	20.47

Test mode: 802.11a Frequency(MHz): 5200

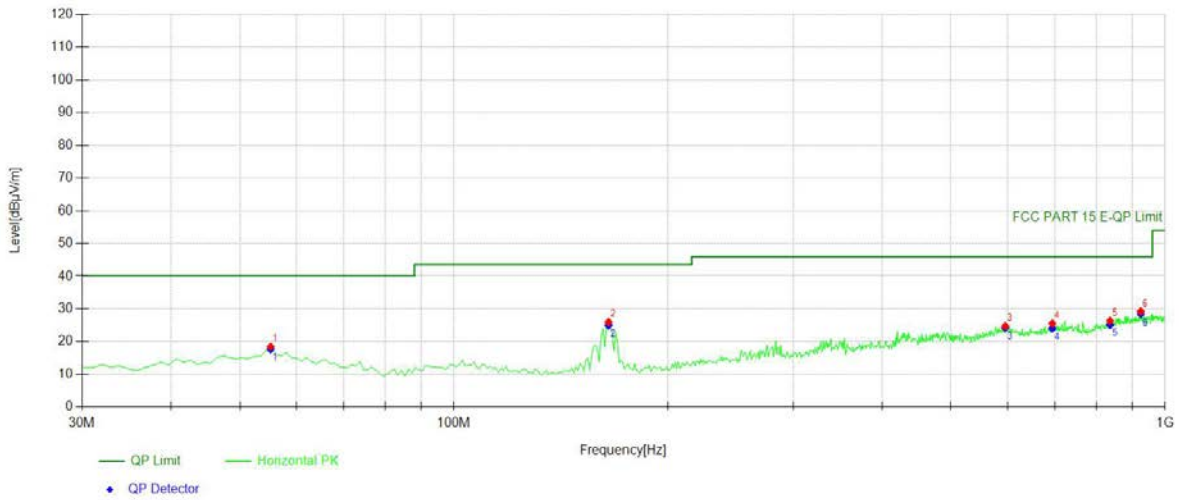


Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	51.3614	36.44	-16.21	20.23	PK	40.00	19.77	Vertical
2	63.984	37.90	-17.94	19.96	PK	40.00	20.04	Vertical
3	163.994	41.32	-19.28	22.04	PK	43.50	21.46	Vertical
4	588.308	31.37	-6.76	24.61	PK	46.00	21.39	Vertical
5	680.550	31.52	-6.57	24.95	PK	46.00	21.05	Vertical
6	806.776	31.54	-4.95	26.59	PK	46.00	19.41	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	51.3614	-16.21	19.02	40.00	20.98
2	63.984	-17.94	19.58	40.00	20.42
3	163.994	-19.28	21.95	43.50	21.55
4	588.3083	-6.76	24.52	46.00	21.48
5	680.5506	-6.57	23.90	46.00	22.10
6	806.7768	-4.95	25.54	46.00	20.46



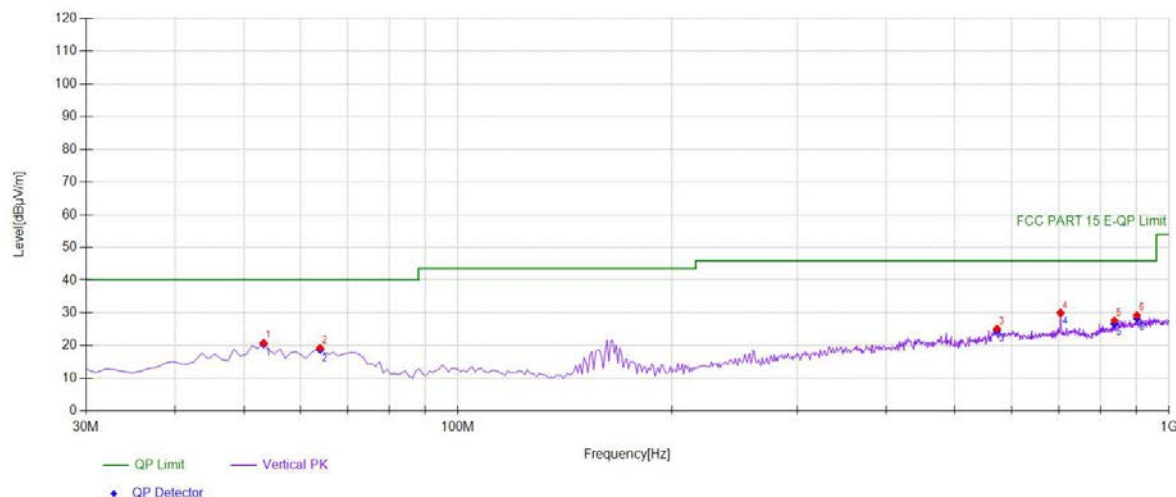
Suspected Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	55.2452	35.18	-16.74	18.44	PK	40.00	21.56	Horizontal
2	164.965	45.22	-19.24	25.98	PK	43.50	17.52	Horizontal
3	596.076	31.06	-6.34	24.72	PK	46.00	21.28	Horizontal
4	694.144	31.66	-6.14	25.52	PK	46.00	20.48	Horizontal
5	836.876	30.71	-4.43	26.28	PK	46.00	19.72	Horizontal
6	924.264	31.91	-2.68	29.23	PK	46.00	16.77	Horizontal

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]
1	55.2452	-16.74	17.65	40.00	22.35
2	164.965	-19.24	24.94	43.50	18.56
3	596.0761	-6.34	24.22	46.00	21.78
4	694.1441	-6.14	24.06	46.00	21.94
5	836.8769	-4.43	25.11	46.00	20.89
6	924.2643	-2.68	28.36	46.00	17.64

Test mode: 802.11a Frequency(MHz): 5240

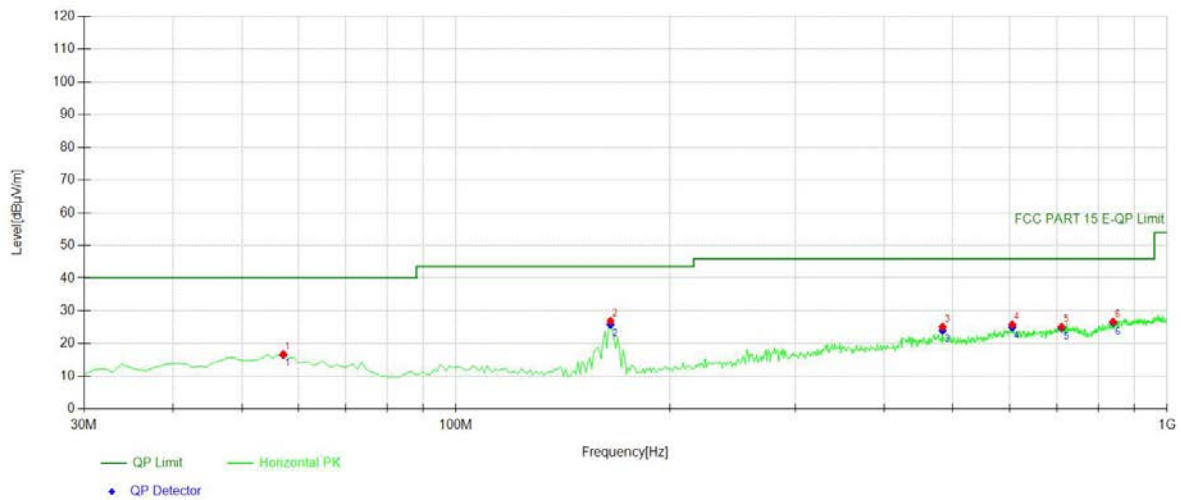


Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	53.3033	37.27	-16.47	20.80	PK	40.00	19.20	Vertical
2	63.984	37.24	-17.94	19.30	PK	40.00	20.70	Vertical
3	572.772	32.73	-7.57	25.16	PK	46.00	20.84	Vertical
4	703.853	35.83	-5.84	29.99	PK	46.00	16.01	Vertical
5	837.847	32.07	-4.41	27.66	PK	46.00	18.34	Vertical
6	900.961	32.18	-2.94	29.24	PK	46.00	16.76	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	53.3033	-16.47	20.50	40.00	19.50
2	63.984	-17.94	18.76	40.00	21.24
3	572.7728	-7.57	24.62	46.00	21.38
4	703.8539	-5.84	29.99	46.00	16.01
5	837.8478	-4.41	26.70	46.00	19.30
6	900.961	-2.94	28.28	46.00	17.72



Suspected Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	57.1872	33.71	-17.00	16.71	PK	40.00	23.29	Horizontal
2	164.965	46.12	-19.24	26.88	PK	43.50	16.62	Horizontal
3	483.443	35.05	-9.91	25.14	PK	46.00	20.86	Horizontal
4	605.785	32.20	-6.43	25.77	PK	46.00	20.23	Horizontal
5	710.650	30.86	-5.78	25.08	PK	46.00	20.92	Horizontal
6	839.789	31.02	-4.37	26.65	PK	46.00	19.35	Horizontal

Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]
1	57.1872	-17.00	16.56	40.00	23.44
2	164.965	-19.24	25.77	43.50	17.73
3	483.4434	-9.91	24.03	46.00	21.97
4	605.7858	-6.43	24.95	46.00	21.05
5	710.6507	-5.78	24.80	46.00	21.20
6	839.7898	-4.37	26.37	46.00	19.63

8.5 POWER LINE CONDUCTED EMISSIONS

8.5.1 Applicable Standard

According to FCC Part 15.207(a)

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

N/A

Not applicable, since EUT is DC power.

8.6 ANTENNA APPLICATION

8.6.1 Antenna Requirement

Standard	Requirement
FCC CRF Part 15.203	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. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

For intentional device, according to FCC 47 CFR Section 15.203, 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. And according to FCC 47 CFR Section 15.407 (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.

8.6.2 Result

Temperature : 25°C ATM Pressure:: 1011 mbar
Humidity : 60 % Test Engineer: GJ

PASS

The EUT is Ant1: External Antenna, Ant2: Integrated Antenna, Ant1: 5.19dBi, Ant2: 3.54dBi, Beamforming: 5.69dBi.

- ☒ Antennas 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)

Which in accordance to section 15.203, please refer to the internal photos.

Detail of factor for radiated emission:

Frequency(MHz)	Ant_F(dB)	Cab_L(dB)	Preamp(dB)	Correct Factor(dB)
0.009	20.6	0.03	\	20.63
0.15	20.7	0.1	\	20.8
1	20.9	0.15	\	21.05
10	20.1	0.28	\	20.38
30	18.8	0.45	\	19.25
30	11.7	0.62	27.9	-15.58
100	12.5	1.02	27.8	-14.28
300	12.9	1.91	27.5	-12.69
600	19.2	2.92	27	-4.88
800	21.1	3.54	26.6	-1.96
1000	22.3	4.17	26.2	0.27
1000	25.6	1.76	41.4	-14.04
3000	28.9	3.27	43.2	-11.03
5000	31.1	4.2	44.6	-9.3
8000	36.2	5.95	44.7	-2.55
10000	38.4	6.3	43.9	0.8
12000	38.5	7.14	42.3	3.34
15000	40.2	8.15	41.4	6.95
18000	45.4	9.02	41.3	13.12
18000	37.9	1.81	47.9	-8.19
21000	37.9	1.95	48.7	-8.85
25000	39.3	2.01	42.8	-1.49
28000	39.6	2.16	46.0	-4.24
31000	41.2	2.24	44.5	-1.06
34000	41.5	2.29	46.6	-2.81
37000	43.8	2.30	46.4	-0.3
40000	43.2	2.50	42.2	3.5

--- End of Report ---

声 明 Statement

1. 本报告无授权批准人签字及“检验检测专用章”无效。
1. This report is invalid without the signature of the authorized approver and "special seal for testing".
2. 未经许可本报告不得部分复制。
2. This report shall not be copied partly without authorization.
3. 本报告的检测结果仅对送测样品有效，委托方对样品的代表性和资料的真实性负责。
3. The test results or observations are applicable only to tested sample. Client shall be responsible for representativeness of the sample and authenticity of the material.
4. 本检测报告中检测项目标注有特殊符号则该项目不在资质认定范围内，仅作为客户委托、科研、教学或内部质量控制等目的使用。
4. The observations or tests with special mark fall outside the scope of accreditation, and are only used for purpose of commission, research, training, internal quality control etc.
5. 本检测报告以实测值进行符合性判定，未考虑不确定度所带来的风险，本实验室不承担相关责任，特别约定、标准或规范中有明确规定的除外。
5. The test results or observations are provided in accordance with measured value, without taking risks caused by uncertainty into account. Without explicit stipulation in special agreements, standards or regulations, EMTEK shall not assume any responsibility.
6. 对本检验报告若有异议，请于收到报告之日起 20 日内提出。
6. Objections shall be raised within 20 days from the date receiving the report.