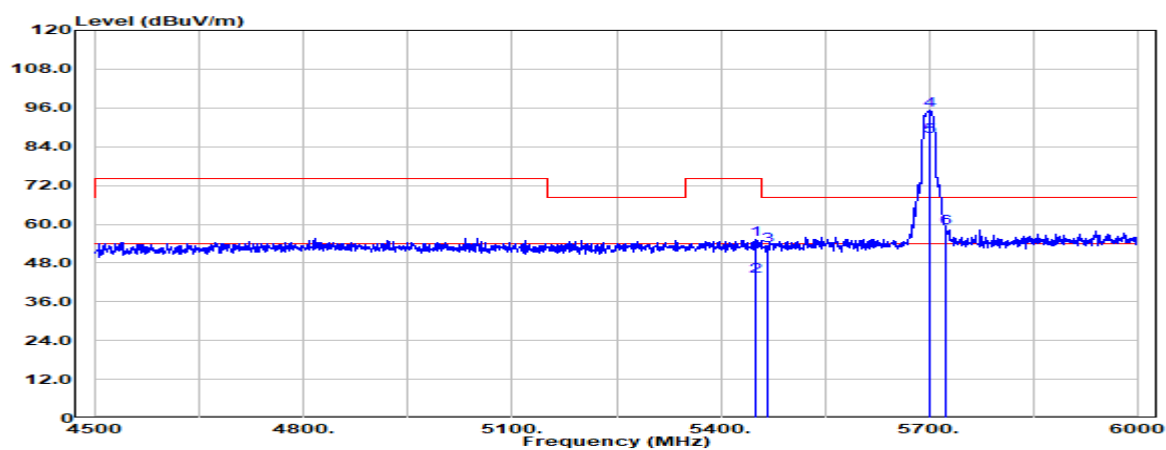
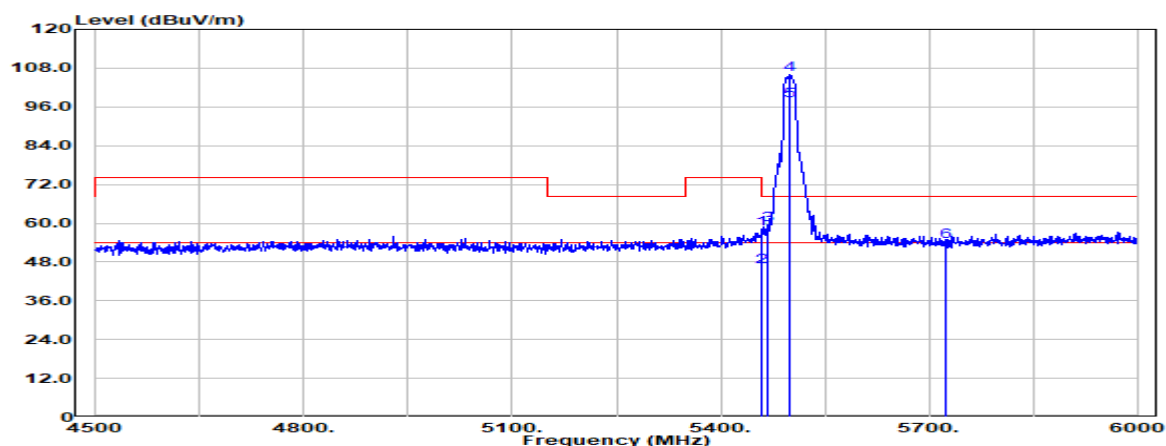


Test Mode	IEEE 802.11a / 5700 MHz	Temp/Hum	20.0(°C) / 62%RH
Test Item	Band Edge	Test Date	February 24, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



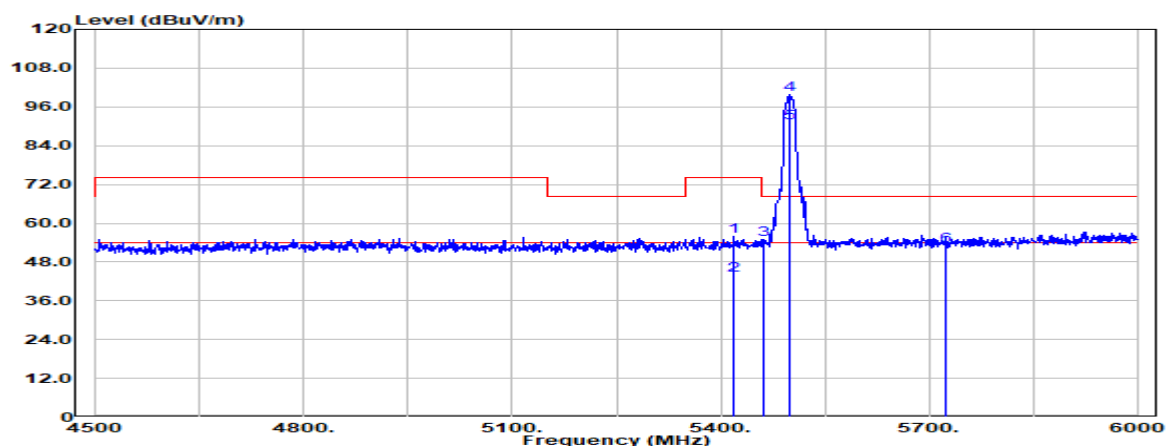
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
5451.75	Peak	35.31	20.07	55.38	74.00	-18.62
5451.75	Average	23.68	20.07	43.75	54.00	-10.25
5466.75	Peak	33.38	20.05	53.43	68.20	-14.77
5700.00	Peak	75.05	20.16	95.21	-	-
5700.00	Average	66.83	20.16	86.99	-	-
5725.00	Peak	38.56	20.32	58.88	68.20	-9.32

Test Mode	IEEE 802.11n 20 MHz / 5500MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Band Edge	Test Date	February 24, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



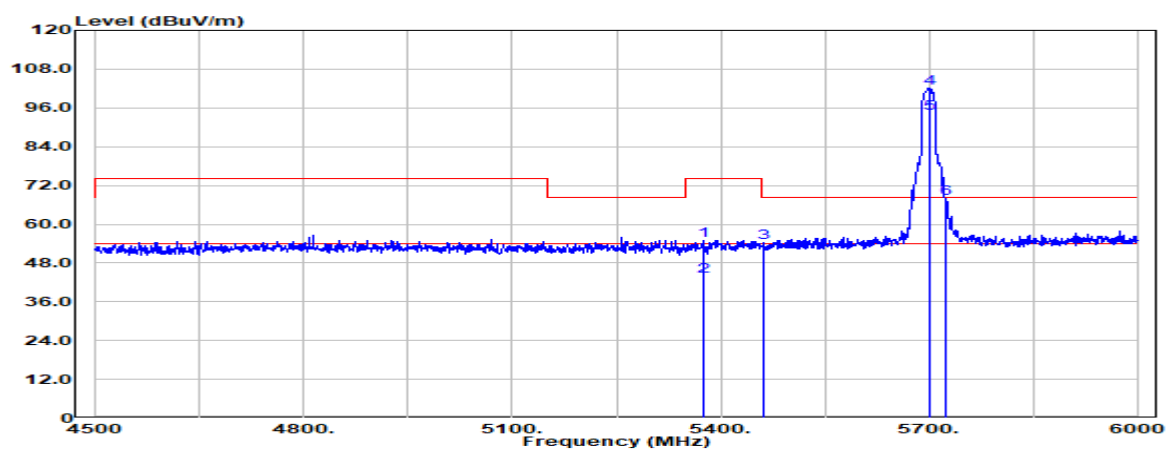
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
5460.00	Peak	38.20	20.06	58.26	68.20	-9.94
5460.00	Average	26.35	20.06	46.41	54.00	-7.59
5466.75	Peak	39.34	20.05	59.39	68.20	-8.81
5500.00	Peak	85.96	20.02	105.98	-	-
5500.00	Average	77.71	20.02	97.73	-	-
5725.00	Peak	33.86	20.32	54.18	68.20	-14.02

Test Mode	IEEE 802.11n 20 MHz / 5500MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Band Edge	Test Date	February 24, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



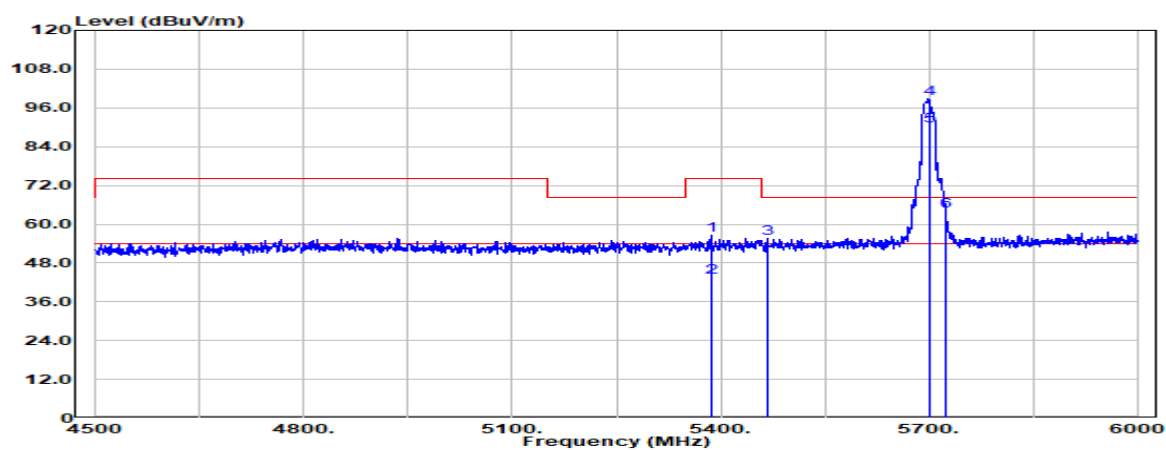
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
5418.75	Peak	36.02	20.06	56.08	74.00	-17.92
5418.75	Average	23.84	20.06	43.91	54.00	-10.09
5460.75	Peak	34.92	20.06	54.98	68.20	-13.22
5500.00	Peak	79.82	20.02	99.84	-	-
5500.00	Average	70.93	20.02	90.95	-	-
5725.00	Peak	32.59	20.32	52.91	68.20	-15.29

Test Mode	IEEE 802.11n 20 MHz / 5700 MHz	Temperature	20.0(°C)/ 62%RH
Test Item	Band Edge	Test Date	February 24, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



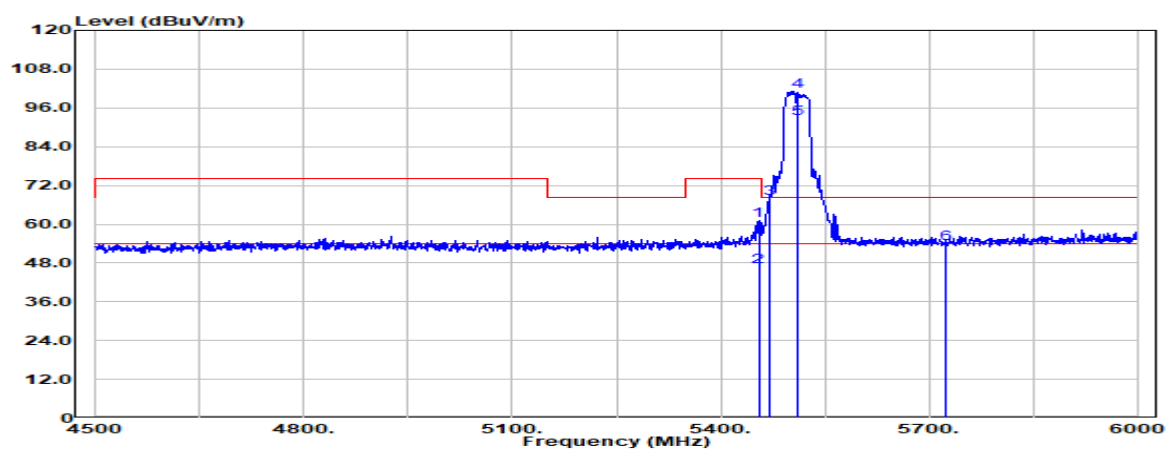
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
5375.25	Peak	35.10	19.94	55.04	74.00	-18.96
5375.25	Average	23.93	19.94	43.87	54.00	-10.13
5462.25	Peak	34.20	20.06	54.26	68.20	-13.94
5700.00	Peak	82.00	20.16	102.16	-	-
5700.00	Average	74.01	20.16	94.17	-	-
5725.00	Peak	47.59	20.32	67.91	68.20	-0.29

Test Mode	IEEE 802.11n 20 MHz / 5700 MHz	Temperature	20.0(°C)/ 62%RH
Test Item	Band Edge	Test Date	February 24, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



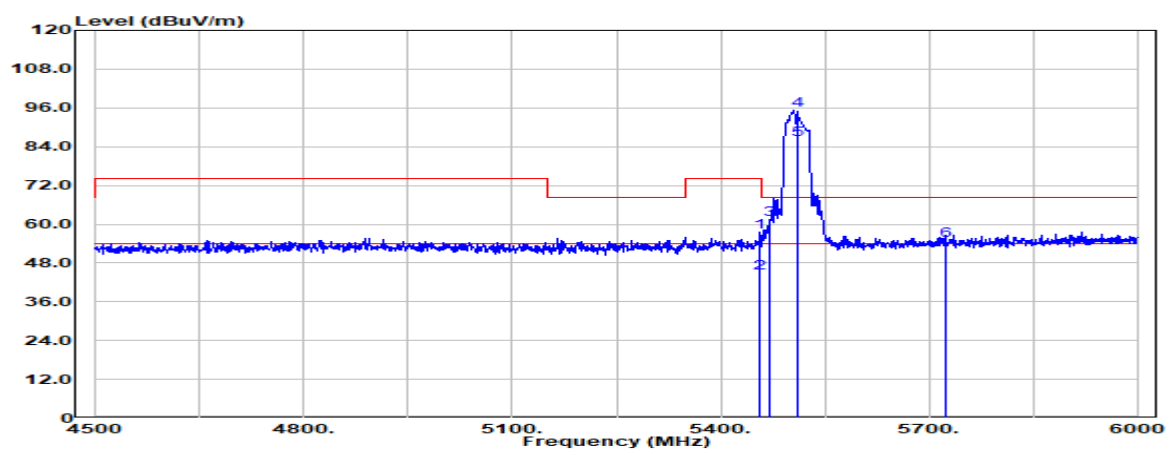
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
5385.75	Peak	36.57	19.99	56.57	74.00	-17.43
5385.75	Average	23.66	19.99	43.65	54.00	-10.35
5466.75	Peak	35.54	20.05	55.59	68.20	-12.61
5700.00	Peak	78.55	20.16	98.71	-	-
5700.00	Average	70.23	20.16	90.39	-	-
5725.00	Peak	43.58	20.32	63.90	68.20	-4.30

Test Mode	IEEE 802.11n 40 MHz / 5510 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Band Edge	Test Date	February 24, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



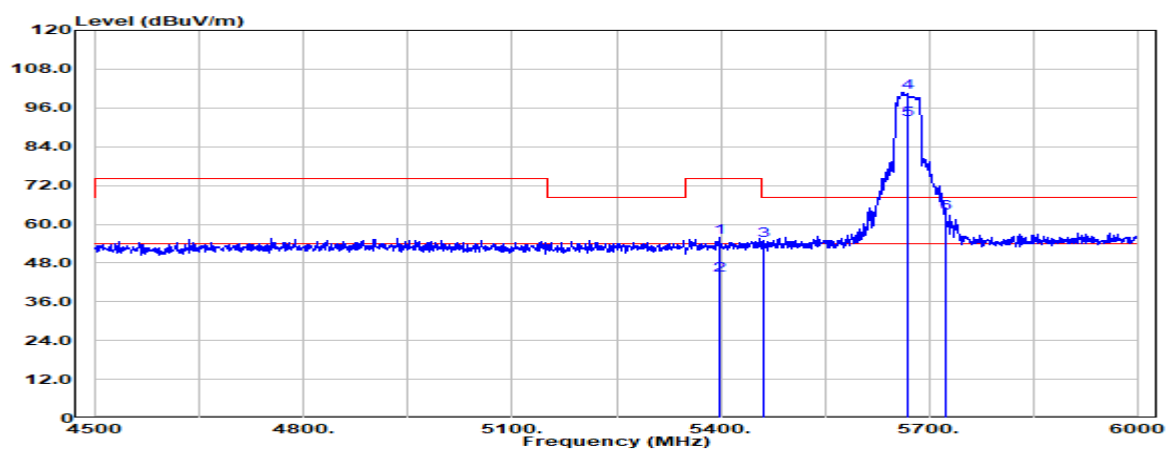
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
5454.75	Peak	41.13	20.07	61.19	74.00	-12.81
5454.75	Average	26.82	20.07	46.88	54.00	-7.12
5469.75	Peak	47.90	20.05	67.95	68.20	-0.25
5510.00	Peak	81.17	20.02	101.19	-	-
5510.00	Average	72.69	20.02	92.71	-	-
5725.00	Peak	33.50	20.32	53.82	68.20	-14.38

Test Mode	IEEE 802.11n 40 MHz / 5510 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Band Edge	Test Date	February 24, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



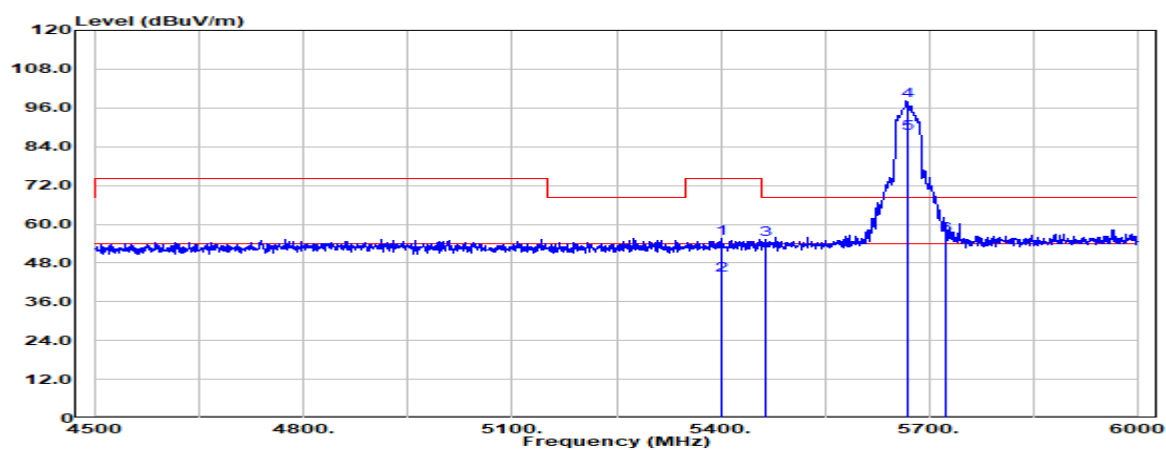
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
5457.00	Peak	37.40	20.06	57.46	74.00	-16.54
5457.00	Average	24.97	20.06	45.03	54.00	-8.97
5469.75	Peak	41.50	20.05	61.55	68.20	-6.65
5510.00	Peak	75.38	20.02	95.40	-	-
5510.00	Average	66.14	20.02	86.16	-	-
5725.00	Peak	34.53	20.32	54.85	68.20	-13.35

Test Mode	IEEE 802.11n 40 MHz / 5670 MHz	Temp/Hum	19.6(°C)/ 62%RH
Test Item	Band Edge	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
5398.50	Peak	35.92	20.05	55.97	74.00	-18.03
5398.50	Average	24.26	20.05	44.32	54.00	-9.68
5463.00	Peak	34.96	20.06	55.01	68.20	-13.19
5670.00	Peak	80.61	20.15	100.77	-	-
5670.00	Average	72.13	20.15	92.28	-	-
5725.00	Peak	43.12	20.32	63.44	68.20	-4.76

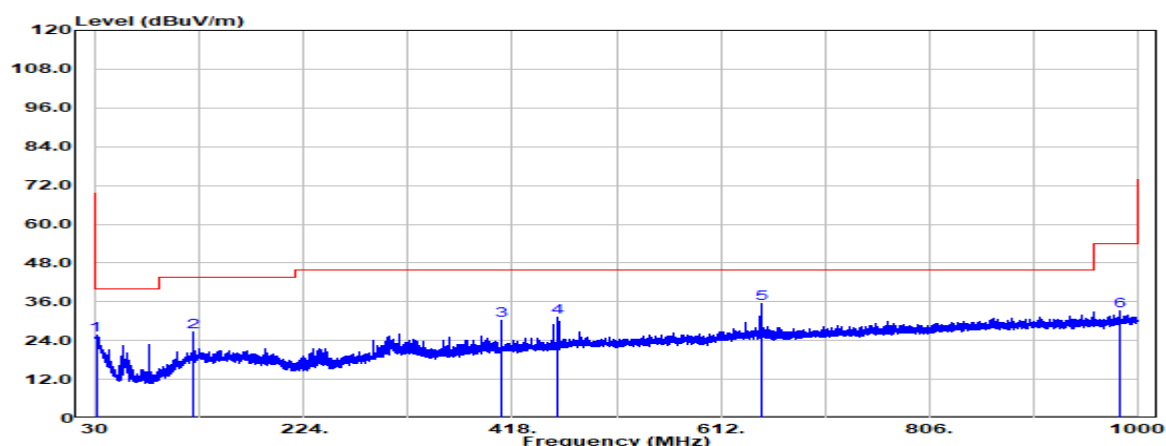
Test Mode	IEEE 802.11n 40 MHz / 5670 MHz	Temp/Hum	19.6(°C)/ 62%RH
Test Item	Band Edge	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
5401.50	Peak	35.44	20.06	55.50	74.00	-18.50
5401.50	Average	24.21	20.06	44.27	54.00	-9.73
5463.75	Peak	35.38	20.06	55.43	68.20	-12.77
5670.00	Peak	77.93	20.15	98.09	-	-
5670.00	Average	68.08	20.15	88.23	-	-
5725.00	Peak	36.43	20.32	56.75	68.20	-11.45

Below 1G Test Data

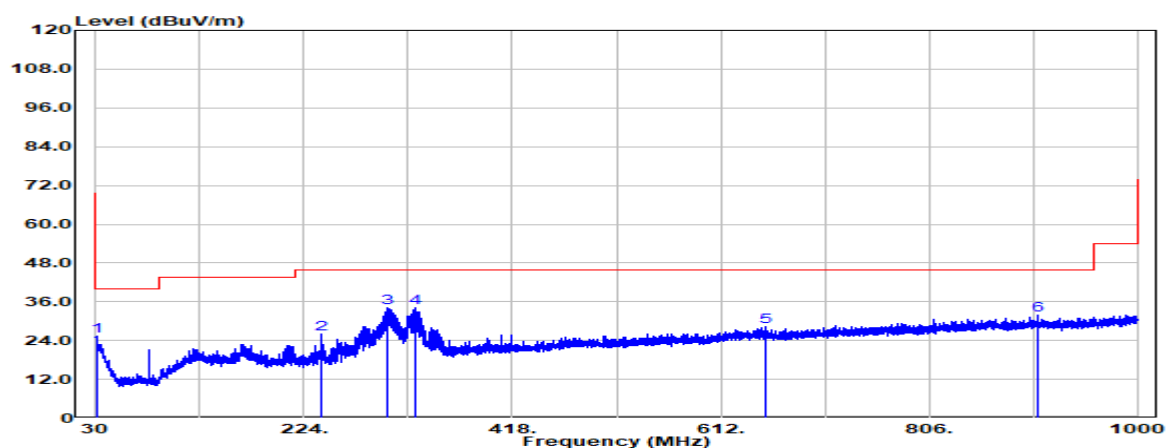
Test Mode	802.11n40 / 5310 MHz	Temp/Hum	19.6 (°C) / 62%RH
Test Item	30MHz-1GHz	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
30.24	Peak	28.56	-2.86	25.70	40.00	-14.30
119.97	Peak	35.96	-9.39	26.57	43.50	-16.93
407.94	Peak	35.92	-5.82	30.10	46.00	-15.90
460.56	Peak	35.73	-4.41	31.32	46.00	-14.68
649.83	Peak	36.39	-0.84	35.55	46.00	-10.45
984.36	Peak	29.29	3.86	33.16	54.00	-20.84

Note: 1. No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)
 2. For below 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit.

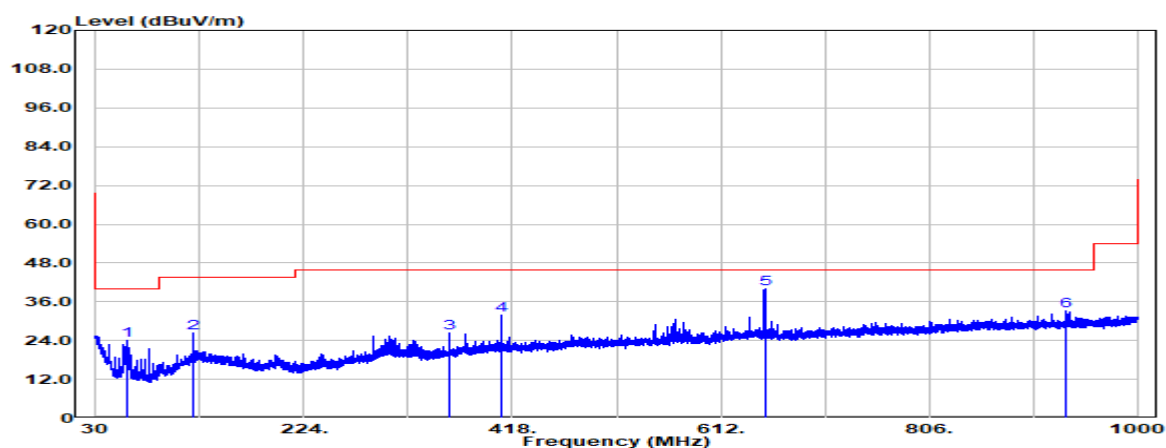
Test Mode	802.11n40 / 5310 MHz	Temp/Hum	19.6 (°C) / 62%RH
Test Item	30MHz-1GHz	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
30.61	Peak	28.43	-3.08	25.36	40.00	-14.64
240.01	Peak	36.73	-10.86	25.87	46.00	-20.13
302.09	Peak	43.17	-8.93	34.24	46.00	-11.76
326.94	Peak	42.35	-8.31	34.04	46.00	-11.96
653.23	Peak	29.14	-0.80	28.34	46.00	-17.66
906.76	Peak	28.83	2.97	31.80	46.00	-14.20

Note: 1. No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)
 2. For below 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit.

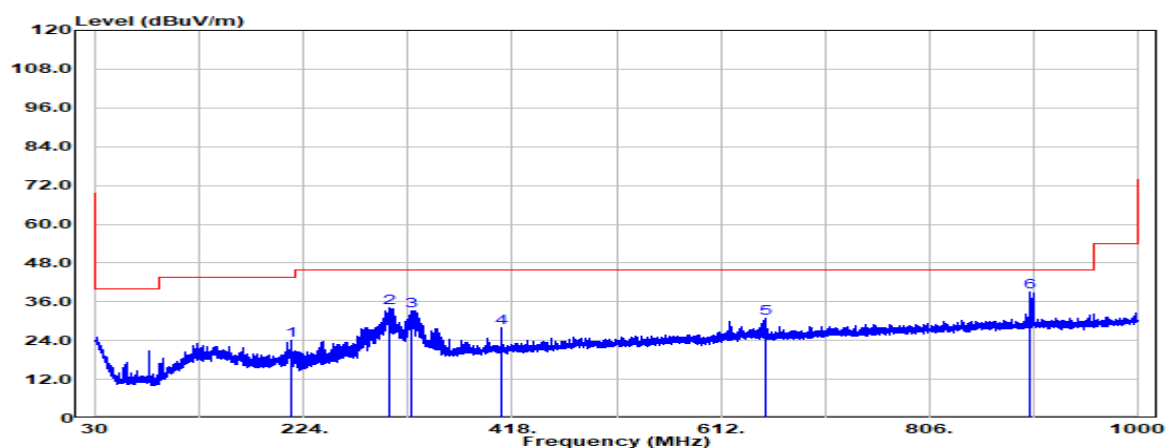
Test Mode	802.11n40 / 5510 MHz	Temp/Hum	19.6 (°C) / 62%RH
Test Item	30MHz-1GHz	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
59.46	Peak	40.07	-16.16	23.91	40.00	-16.09
119.97	Peak	35.63	-9.39	26.24	43.50	-17.26
360.04	Peak	33.77	-7.36	26.41	46.00	-19.59
408.06	Peak	37.79	-5.81	31.97	46.00	-14.03
653.71	Peak	40.88	-0.79	40.09	46.00	-5.91
933.19	Peak	29.99	3.15	33.14	46.00	-12.86

Note: 1. No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)
2. For below 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit.

Test Mode	802.11n40 / 5510 MHz	Temp/Hum	19.6 (°C)/ 62%RH
Test Item	30MHz-1GHz	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak		



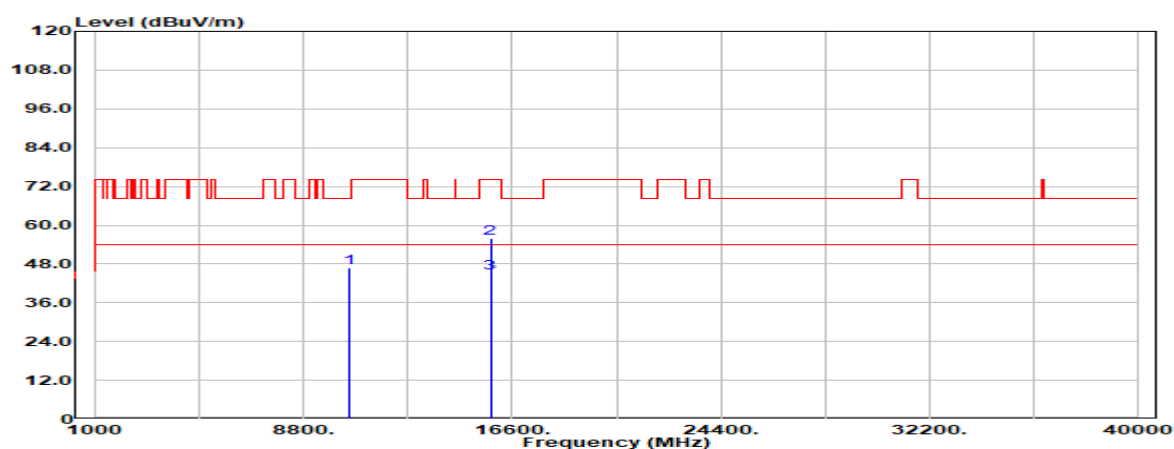
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
212.36	Peak	36.20	-12.21	23.99	43.50	-19.51
303.06	Peak	43.18	-8.90	34.28	46.00	-11.72
324.15	Peak	41.61	-8.39	33.22	46.00	-12.78
408.06	Peak	33.80	-5.81	27.98	46.00	-18.02
653.83	Peak	31.80	-0.79	31.01	46.00	-14.99
900.70	Peak	36.14	2.89	39.02	46.00	-6.98

Note: 1. No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)
 2. For below 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit.

Above 1G

Test Data for UNII-2a

Test Mode	IEEE 802.11a / 5260 MHz	Temp/Hum	19.6(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

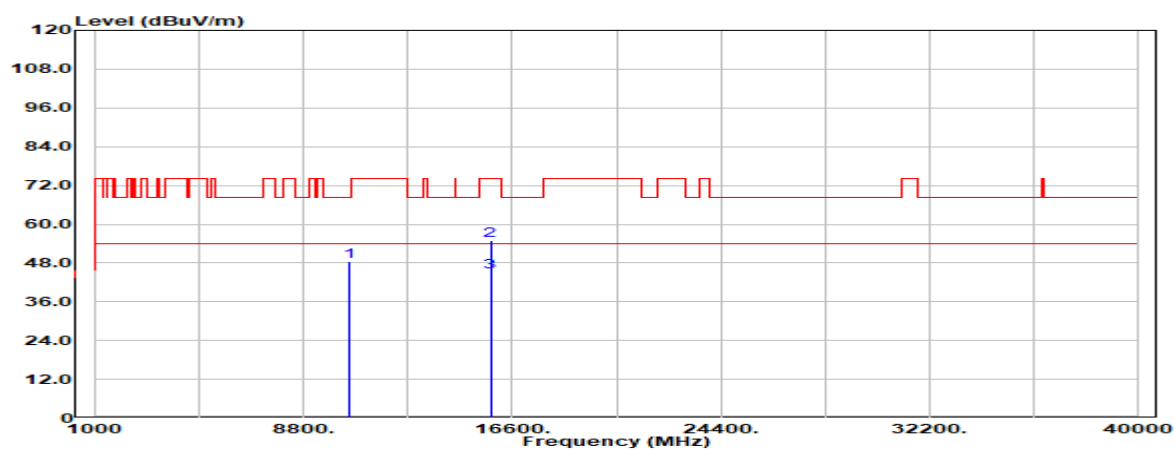


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10520.00	Peak	28.60	18.16	46.76	68.20	-21.44
15780.00	Peak	30.13	25.80	55.94	74.00	-18.06
15780.00	Average	19.25	25.80	45.05	54.00	-8.95
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11a / 5260 MHz	Temp/Hum	19.6(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

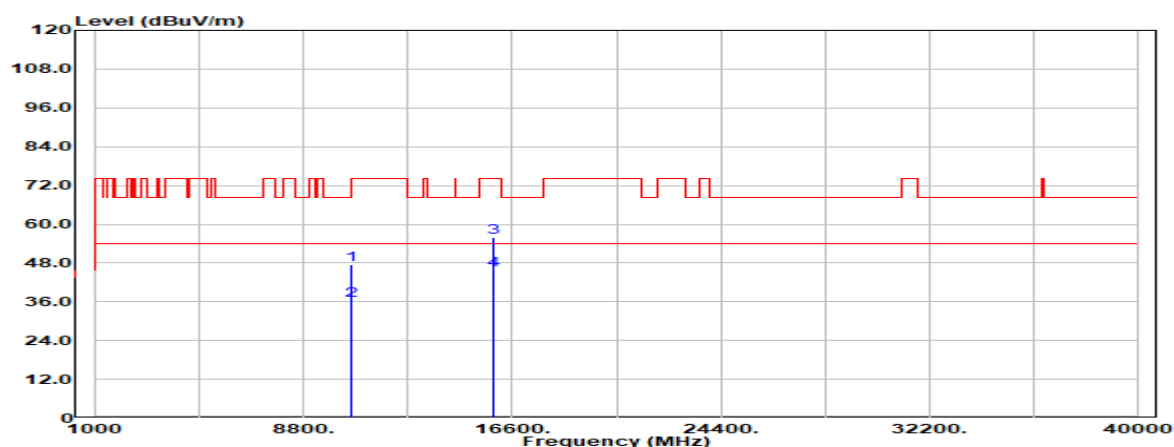


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10520.00	Peak	30.23	18.16	48.39	68.20	-19.81
15780.00	Peak	29.16	25.80	54.96	74.00	-19.04
15780.00	Average	19.55	25.80	45.35	54.00	-8.65
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11a / 5300 MHz	Temp/Hum	19.6(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

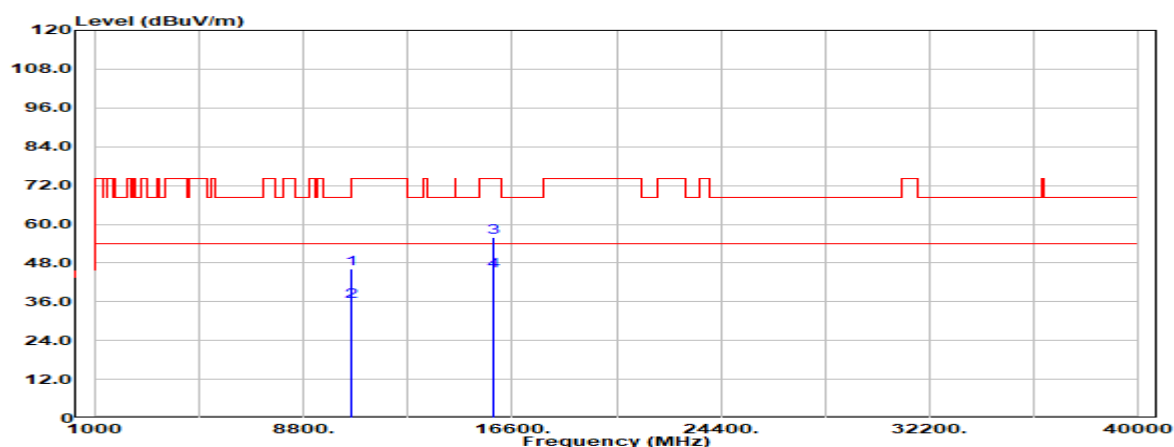


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10600.00	Peak	29.14	18.20	47.34	68.20	-20.86
10600.00	Average	18.18	18.20	36.38	54.00	-17.62
15900.00	Peak	29.47	26.46	55.93	74.00	-18.07
15900.00	Average	19.38	26.46	45.84	54.00	-8.16
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11a / 5300 MHz	Temp/Hum	19.6(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

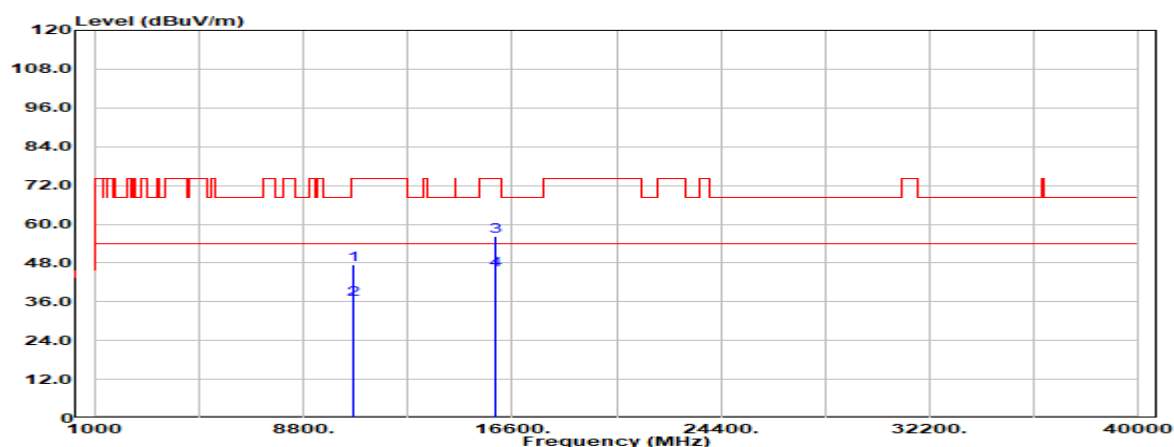


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10600.00	Peak	28.03	18.20	46.23	68.20	-21.97
10600.00	Average	17.92	18.20	36.12	54.00	-17.88
15900.00	Peak	29.60	26.46	56.06	74.00	-17.94
15900.00	Average	19.17	26.46	45.63	54.00	-8.37
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11a / 5320 MHz	Temp/Hum	19.6(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

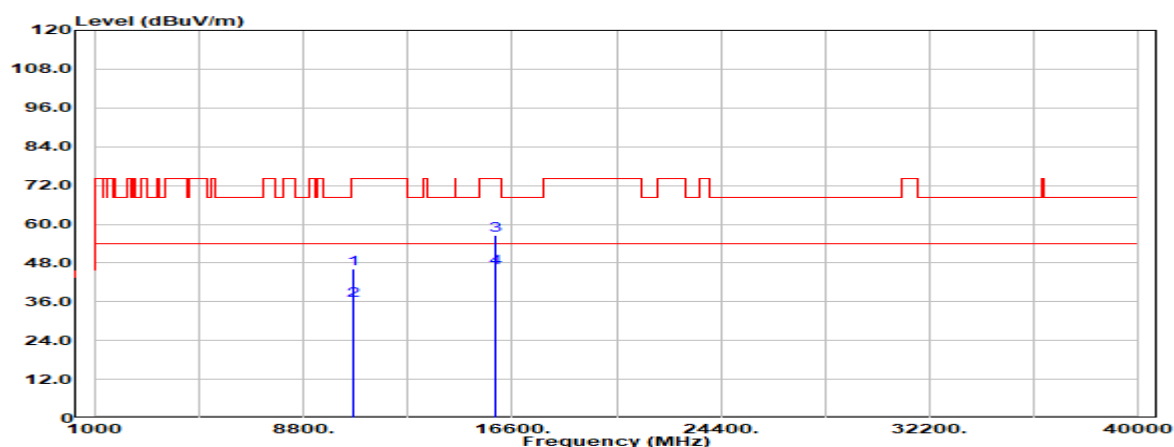


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10640.00	Peak	29.06	18.37	47.43	74.00	-26.57
10640.00	Average	18.24	18.37	36.61	54.00	-17.39
15960.00	Peak	29.48	26.84	56.32	74.00	-17.68
15960.00	Average	19.10	26.84	45.94	54.00	-8.06
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11a / 5320 MHz	Temp/Hum	19.6(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

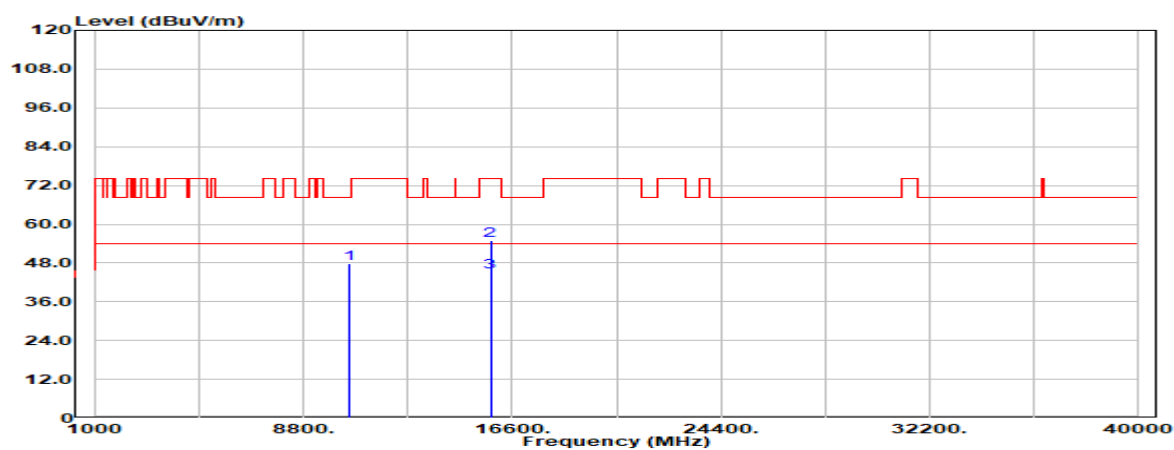


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10640.00	Peak	27.68	18.37	46.05	74.00	-27.95
10640.00	Average	18.08	18.37	36.45	54.00	-17.55
15960.00	Peak	29.81	26.84	56.65	74.00	-17.35
15960.00	Average	19.58	26.84	46.42	54.00	-7.58
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 20 MHz / 5260 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

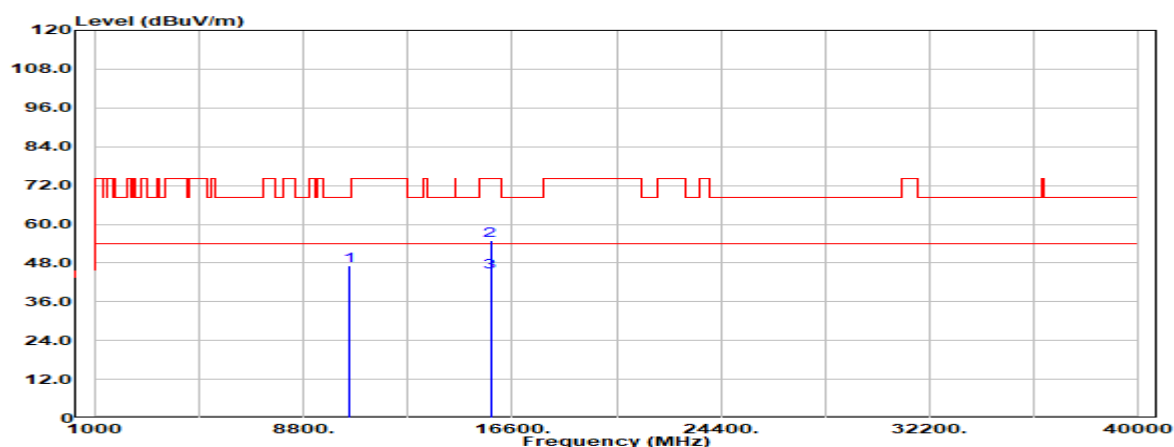


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10520.00	Peak	29.71	18.16	47.87	68.20	-20.33
15780.00	Peak	29.26	25.80	55.06	74.00	-18.94
15780.00	Average	19.39	25.80	45.20	54.00	-8.80
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 20 MHz / 5260 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

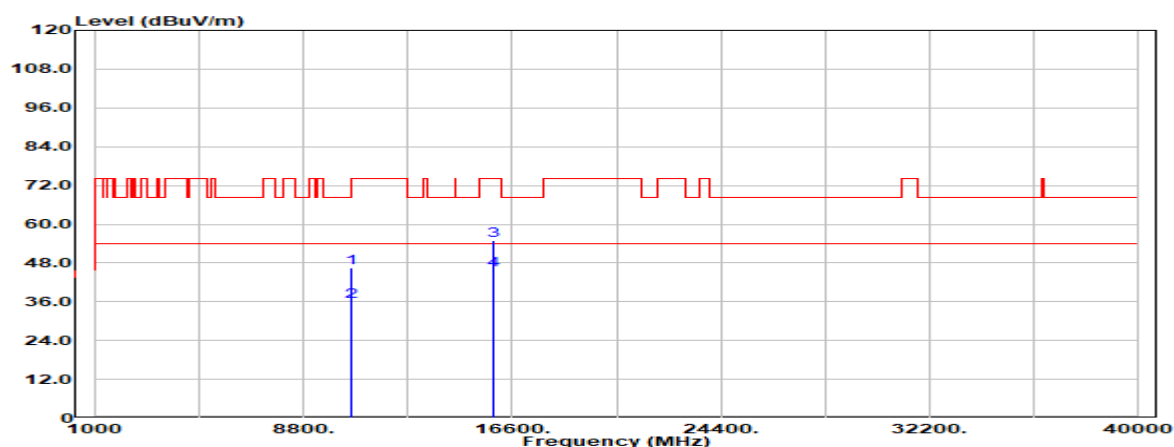


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10520.00	Peak	28.85	18.16	47.01	68.20	-21.19
15780.00	Peak	29.20	25.80	55.01	74.00	-18.99
15780.00	Average	19.40	25.80	45.20	54.00	-8.80
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 20 MHz / 5300 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

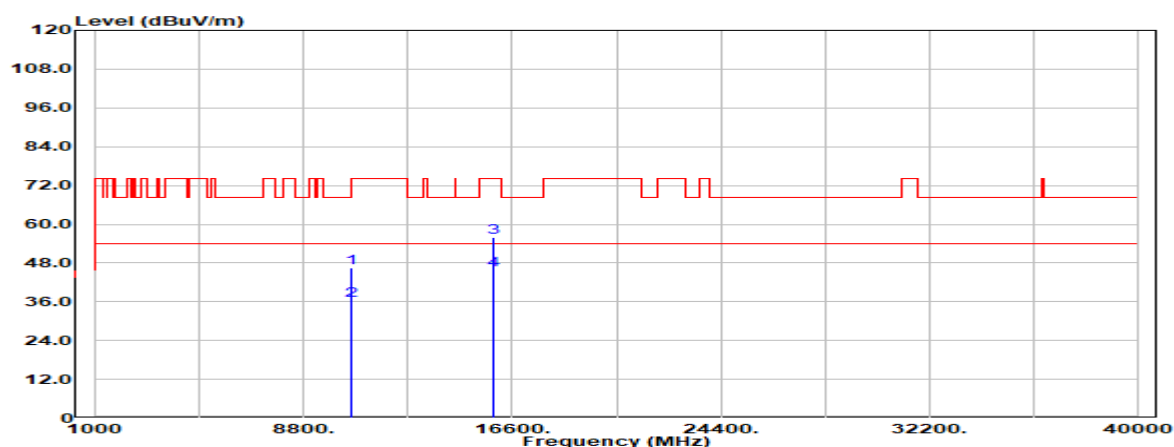


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10600.00	Peak	28.15	18.20	46.35	68.20	-21.85
10600.00	Average	17.84	18.20	36.04	54.00	-17.96
15900.00	Peak	28.37	26.46	54.83	74.00	-19.17
15900.00	Average	19.29	26.46	45.75	54.00	-8.25
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 20 MHz / 5300 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

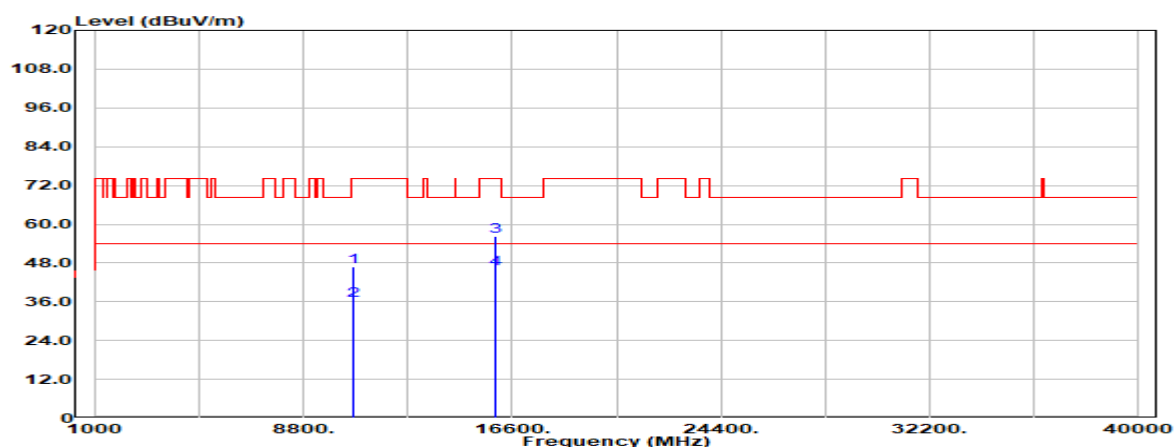


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10600.00	Peak	28.33	18.20	46.53	68.20	-21.67
10600.00	Average	18.25	18.20	36.45	54.00	-17.55
15900.00	Peak	29.58	26.46	56.04	74.00	-17.96
15900.00	Average	19.27	26.46	45.73	54.00	-8.27
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 20 MHz / 5320 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

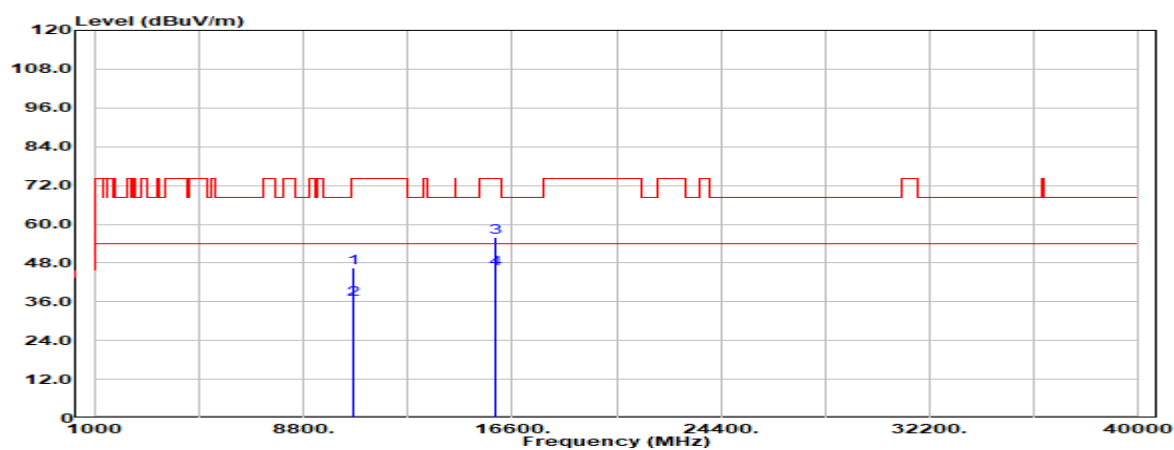


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10640.00	Peak	28.48	18.37	46.85	74.00	-27.15
10640.00	Average	18.19	18.37	36.55	54.00	-17.45
15960.00	Peak	29.31	26.84	56.15	74.00	-17.85
15960.00	Average	19.25	26.84	46.09	54.00	-7.91
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 20 MHz / 5320 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

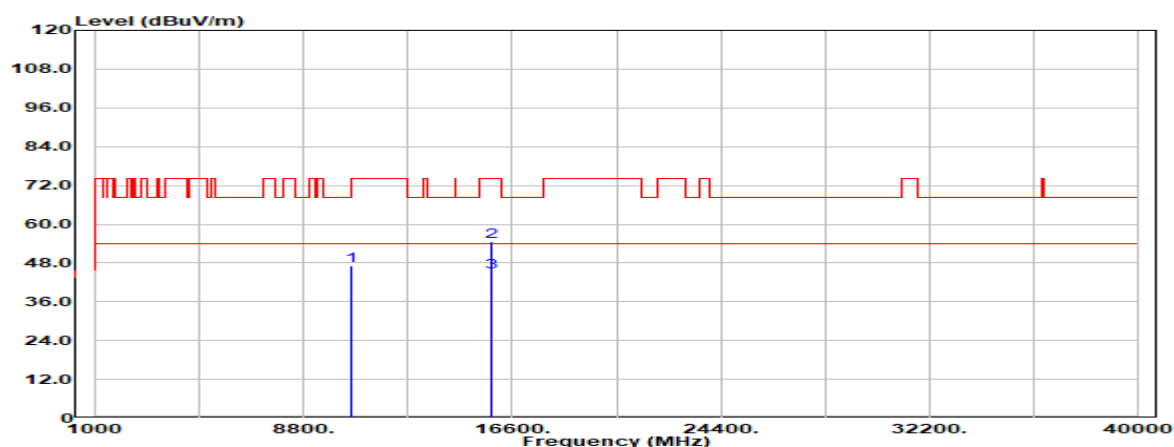


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10640.00	Peak	28.13	18.37	46.49	74.00	-27.51
10640.00	Average	18.28	18.37	36.65	54.00	-17.35
15960.00	Peak	29.17	26.84	56.02	74.00	-17.98
15960.00	Average	19.38	26.84	46.22	54.00	-7.78
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 40 MHz / 5270 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

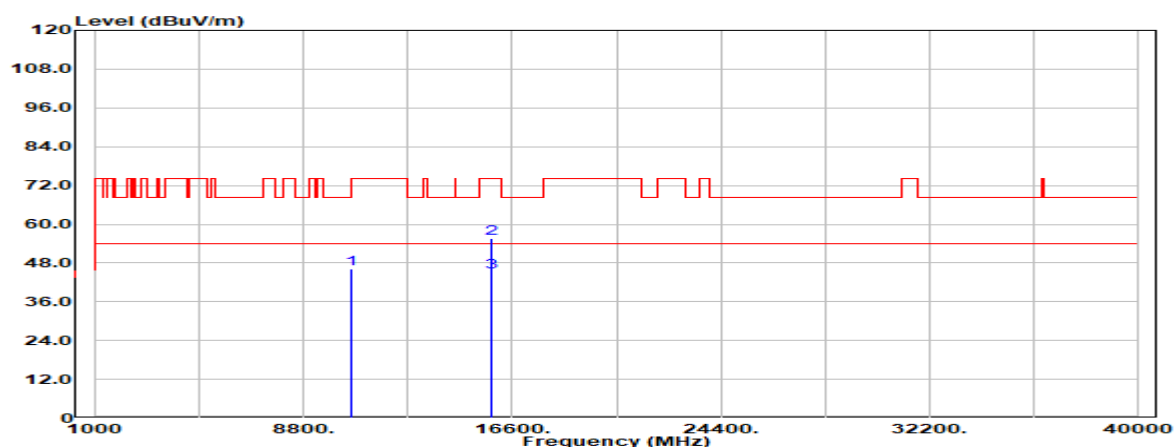


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10540.00	Peak	28.91	18.19	47.10	68.20	-21.10
15810.00	Peak	28.86	25.92	54.77	74.00	-19.23
15810.00	Average	19.24	25.92	45.16	54.00	-8.84
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 40 MHz / 5270 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

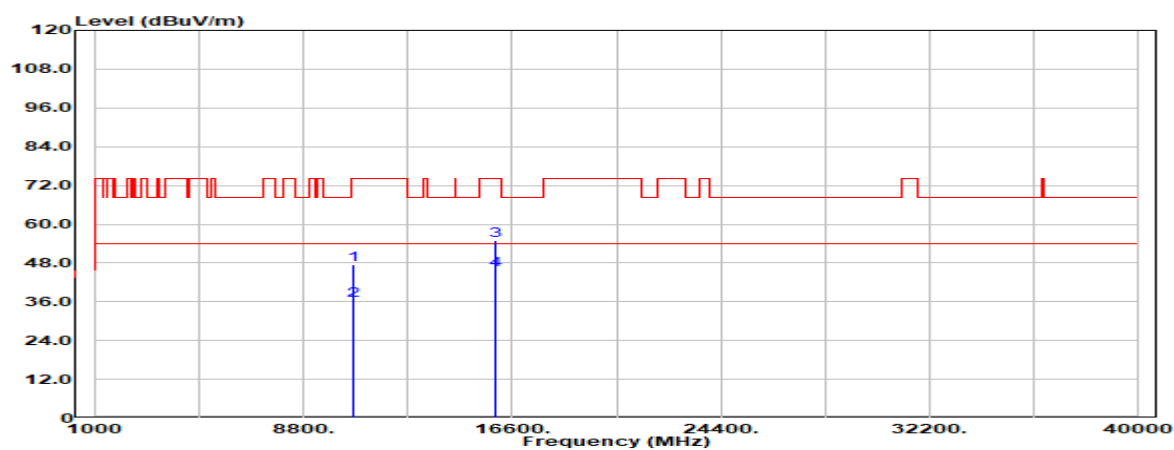


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10540.00	Peak	28.03	18.19	46.22	68.20	-21.98
15810.00	Peak	29.63	25.92	55.54	74.00	-18.46
15810.00	Average	19.21	25.92	45.12	54.00	-8.88
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 40 MHz / 5310 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

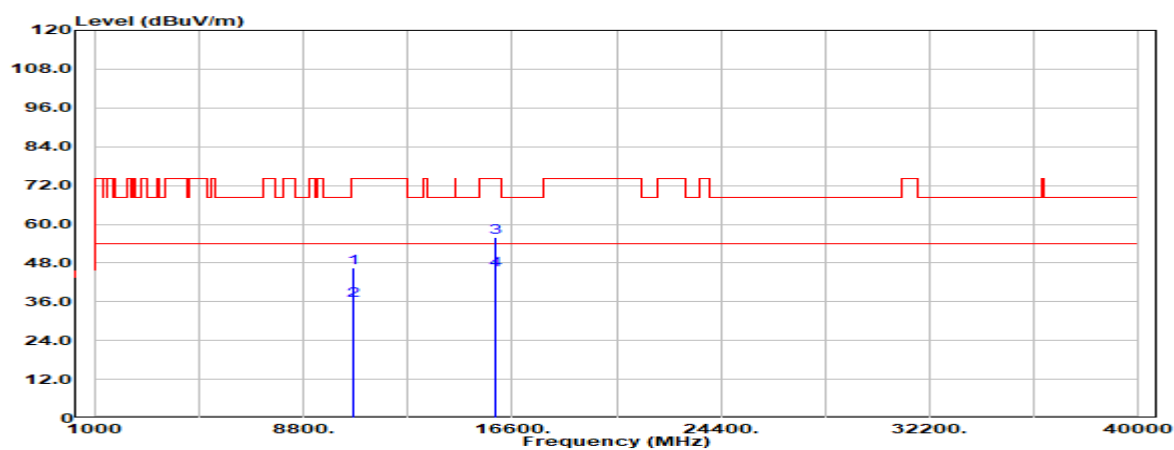


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10620.00	Peak	29.09	18.28	47.37	74.00	-26.63
10620.00	Average	18.13	18.28	36.41	54.00	-17.59
15930.00	Peak	28.42	26.63	55.06	74.00	-18.94
15930.00	Average	19.10	26.63	45.73	54.00	-8.27
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 40 MHz / 5310 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
10620.00	Peak	28.34	18.28	46.63	74.00	-27.37
10620.00	Average	18.08	18.28	36.36	54.00	-17.64
15930.00	Peak	29.45	26.63	56.08	74.00	-17.92
15930.00	Average	19.20	26.63	45.83	54.00	-8.17
N/A						

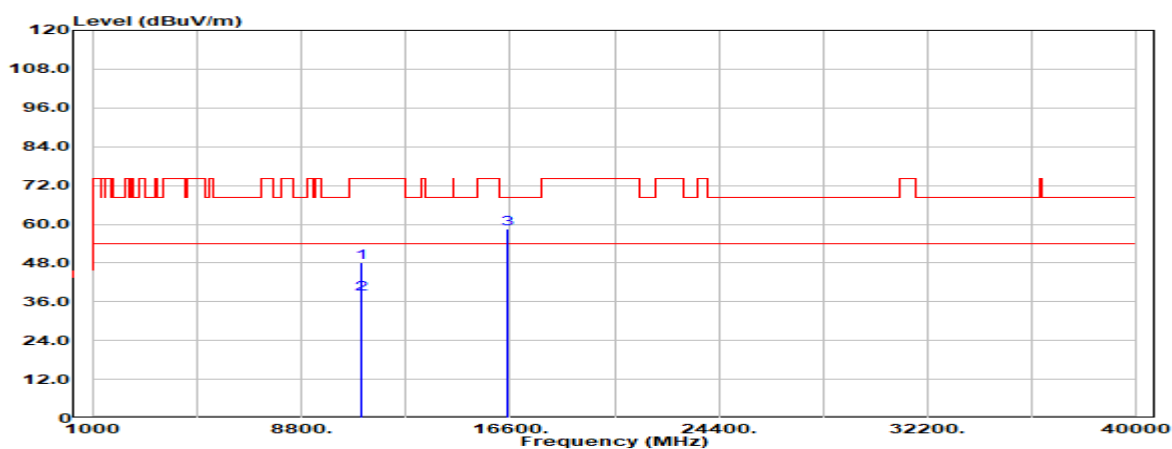
Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2202000669KR

Test Data for UNII-2c

Test Mode	IEEE 802.11a / 5500 MHz	Temp/Hum	19.6(°C) / 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

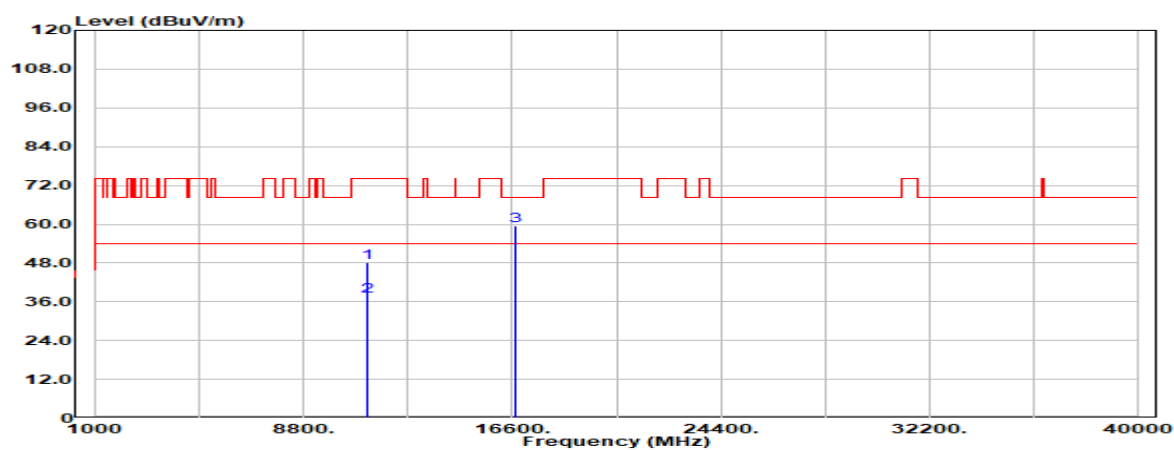


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11000.00	Peak	28.94	19.04	47.98	74.00	-26.02
11000.00	Average	19.34	19.04	38.38	54.00	-15.62
16500.00	Peak	29.49	29.02	58.51	68.20	-9.69
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11a / 5580 MHz	Temp/Hum	19.6(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

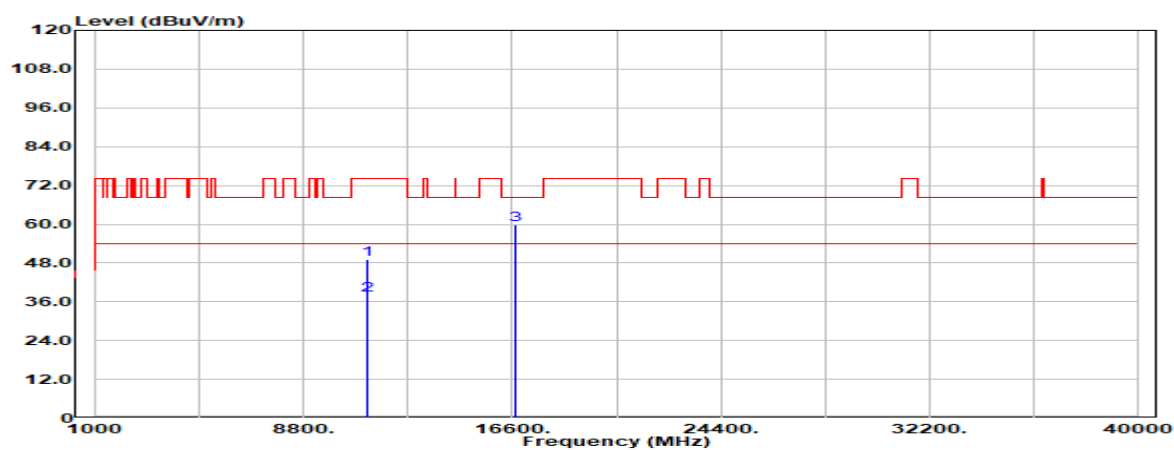


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11160.00	Peak	29.00	19.22	48.22	74.00	-25.78
11160.00	Average	18.57	19.22	37.80	54.00	-16.20
16740.00	Peak	29.29	30.21	59.50	68.20	-8.70
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11a / 5580 MHz	Temp/Hum	19.6(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

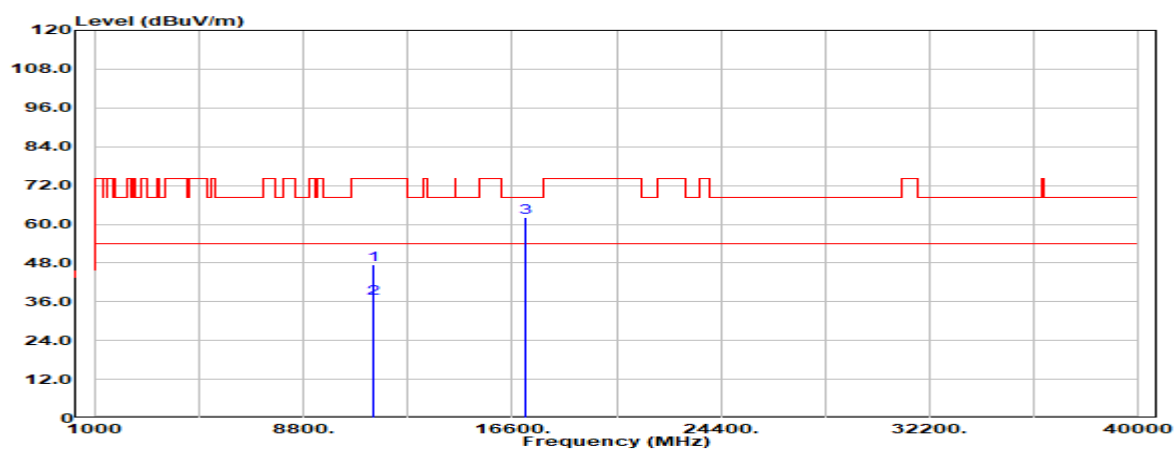


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11160.00	Peak	29.98	19.22	49.21	74.00	-24.79
11160.00	Average	18.94	19.22	38.16	54.00	-15.84
16740.00	Peak	29.59	30.21	59.81	68.20	-8.39
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11a / 5700 MHz	Temp/Hum	19.6(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

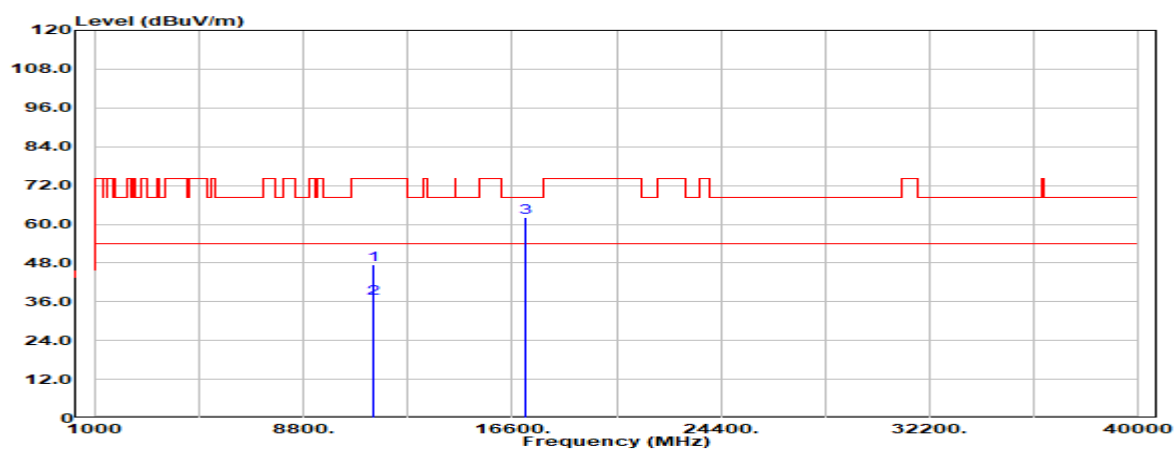


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11400.00	Peak	28.02	19.58	47.60	74.00	-26.40
11400.00	Average	17.40	19.58	36.98	54.00	-17.02
17100.00	Peak	30.79	31.23	62.02	68.20	-6.18
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11a / 5700 MHz	Temp/Hum	19.6(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

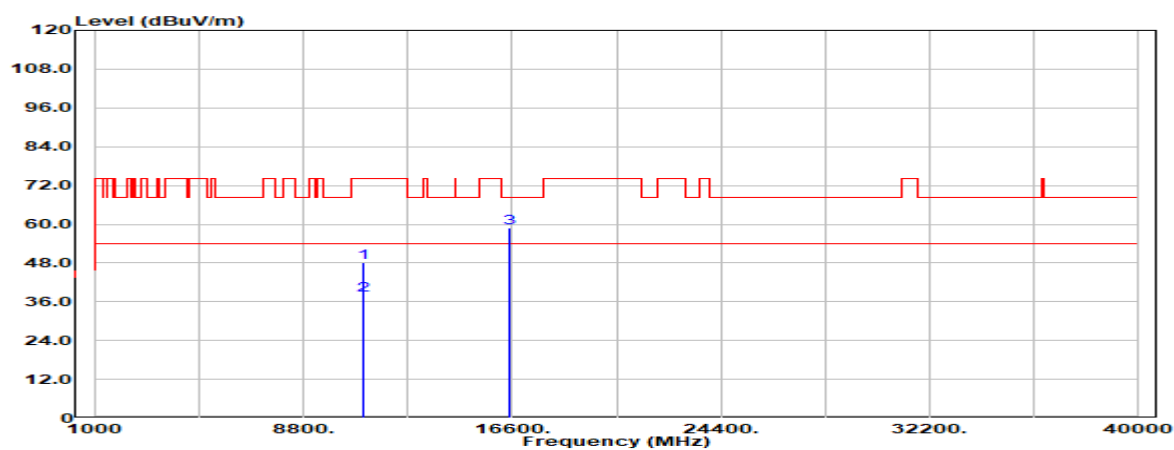


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11400.00	Peak	28.00	19.58	47.58	74.00	-26.42
11400.00	Average	17.38	19.58	36.96	54.00	-17.04
17100.00	Peak	30.78	31.23	62.01	68.20	-6.19
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 20 MHz / 5500 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

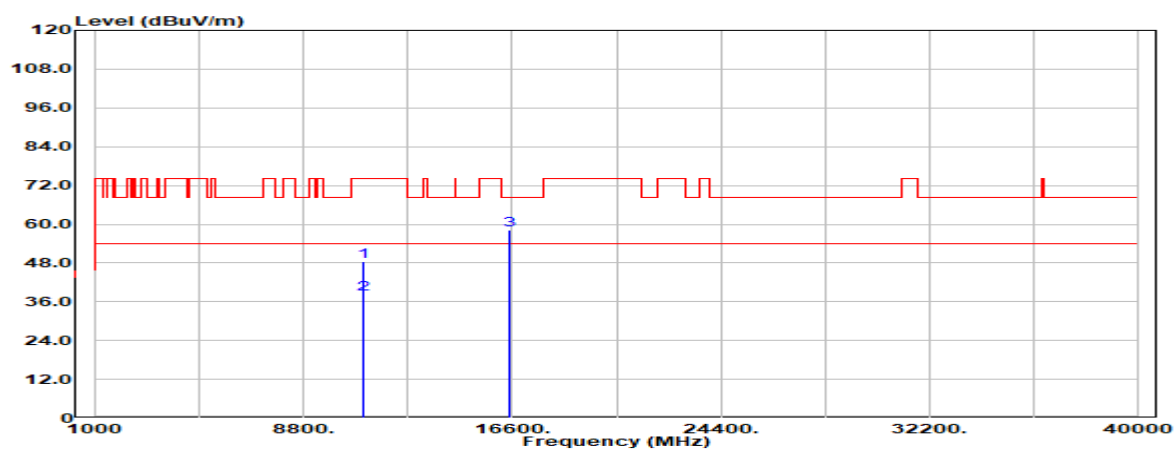


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11000.00	Peak	28.93	19.04	47.97	74.00	-26.03
11000.00	Average	19.09	19.04	38.13	54.00	-15.87
16500.00	Peak	29.97	29.02	58.99	68.20	-9.21
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 20 MHz / 5500 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

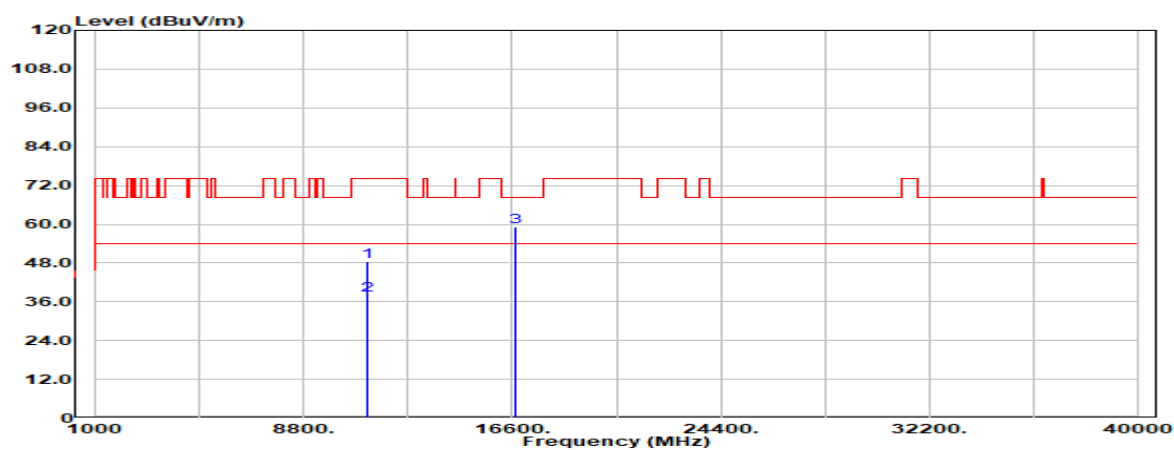


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11000.00	Peak	29.41	19.04	48.45	74.00	-25.55
11000.00	Average	19.26	19.04	38.30	54.00	-15.70
16500.00	Peak	29.19	29.02	58.21	68.20	-9.99
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 20 MHz / 5580 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

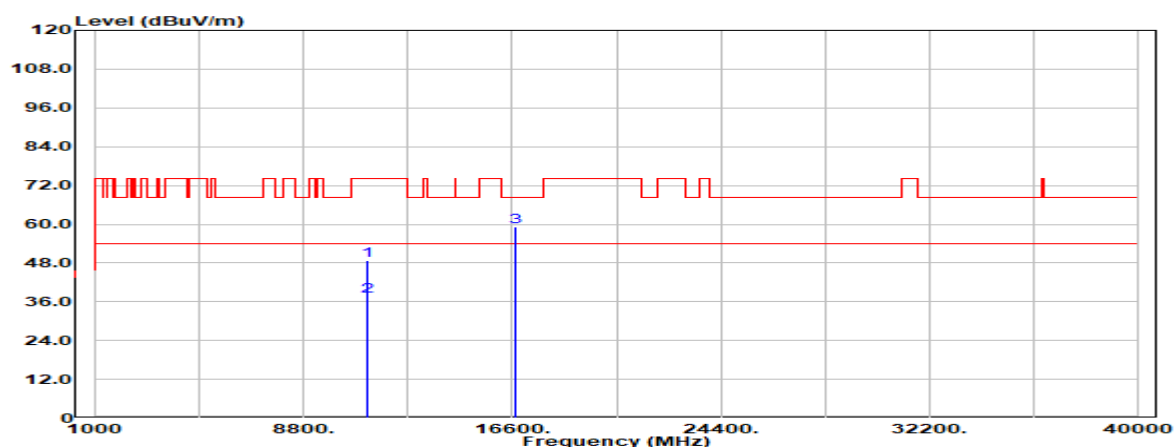


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11160.00	Peak	29.30	19.22	48.52	74.00	-25.48
11160.00	Average	18.73	19.22	37.95	54.00	-16.05
16740.00	Peak	29.08	30.21	59.29	68.20	-8.91
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 20 MHz / 5580 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

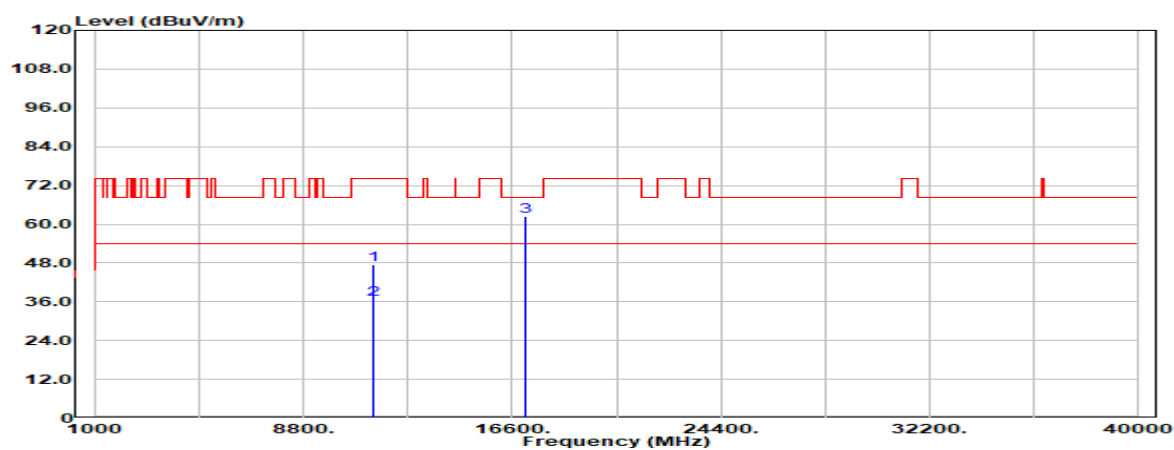


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11160.00	Peak	29.47	19.22	48.70	74.00	-25.30
11160.00	Average	18.57	19.22	37.79	54.00	-16.21
16740.00	Peak	28.98	30.21	59.19	68.20	-9.01
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 20 MHz / 5700 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

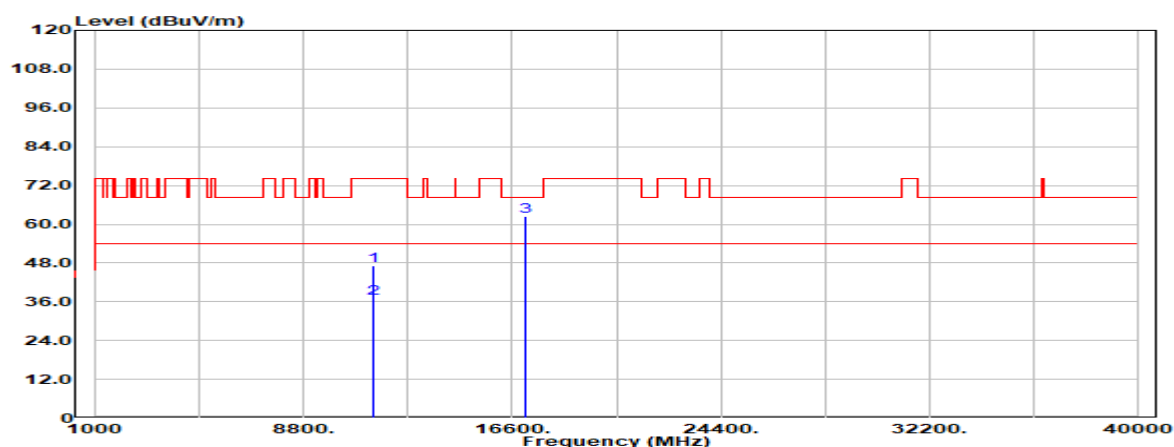


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11400.00	Peak	28.01	19.58	47.59	74.00	-26.41
11400.00	Average	17.25	19.58	36.83	54.00	-17.17
17100.00	Peak	31.17	31.23	62.40	68.20	-5.80
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 20 MHz / 5700 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

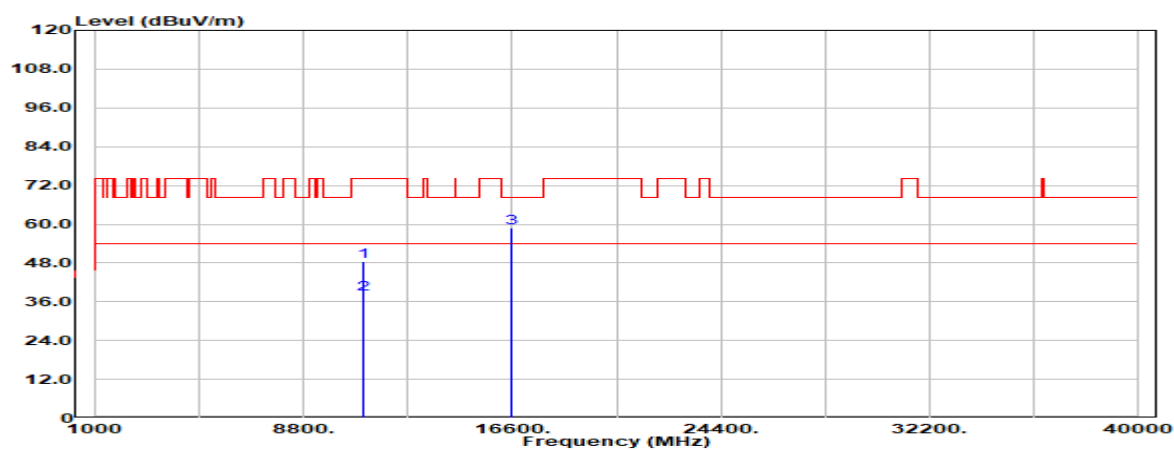


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11400.00	Peak	27.74	19.58	47.32	74.00	-26.68
11400.00	Average	17.57	19.58	37.15	54.00	-16.85
17100.00	Peak	31.17	31.23	62.40	68.20	-5.80
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 40 MHz / 5510 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

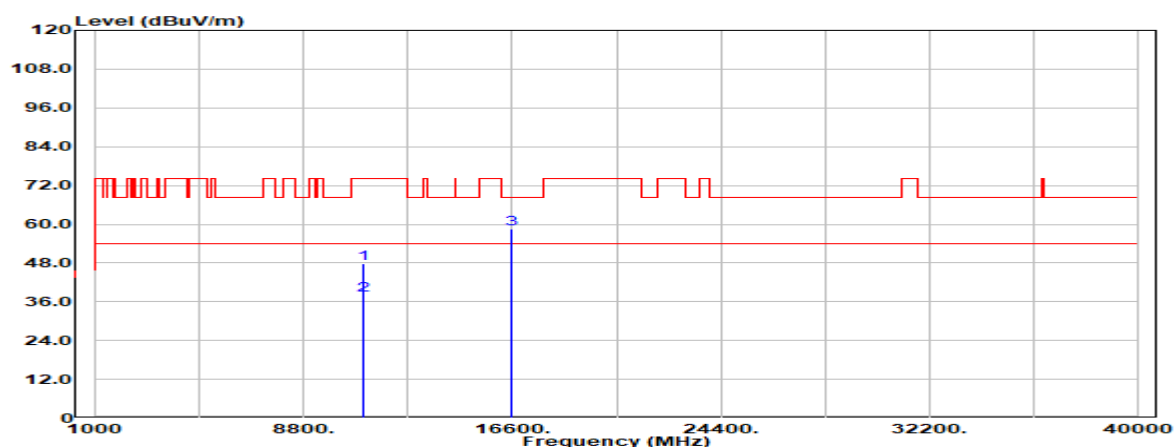


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11020.00	Peak	29.40	19.00	48.40	74.00	-25.60
11020.00	Average	19.36	19.00	38.36	54.00	-15.64
16530.00	Peak	29.94	28.97	58.91	68.20	-9.29
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 40 MHz / 5510 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

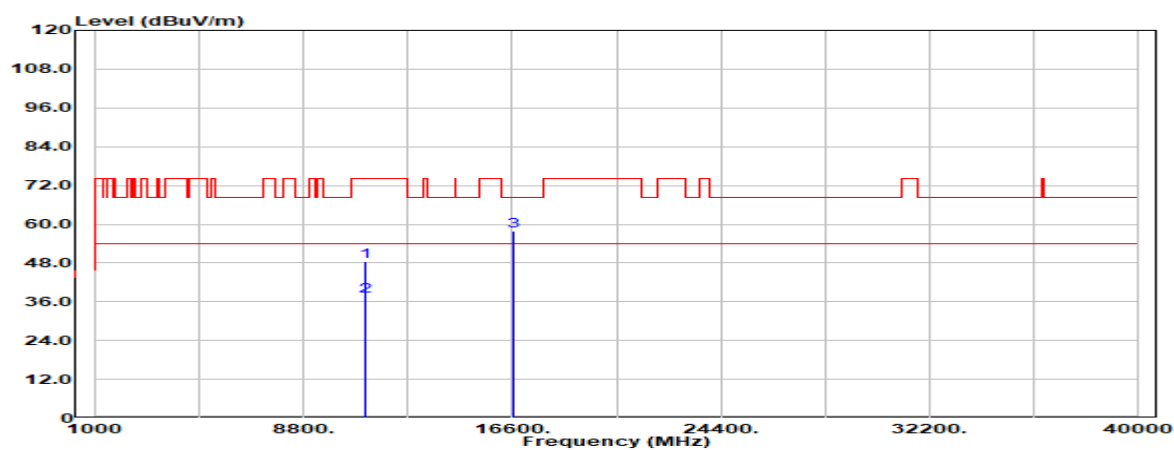


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11020.00	Peak	28.69	19.00	47.69	74.00	-26.31
11020.00	Average	19.10	19.00	38.10	54.00	-15.90
16530.00	Peak	29.52	28.97	58.49	68.20	-9.71
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 40 MHz / 5550 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

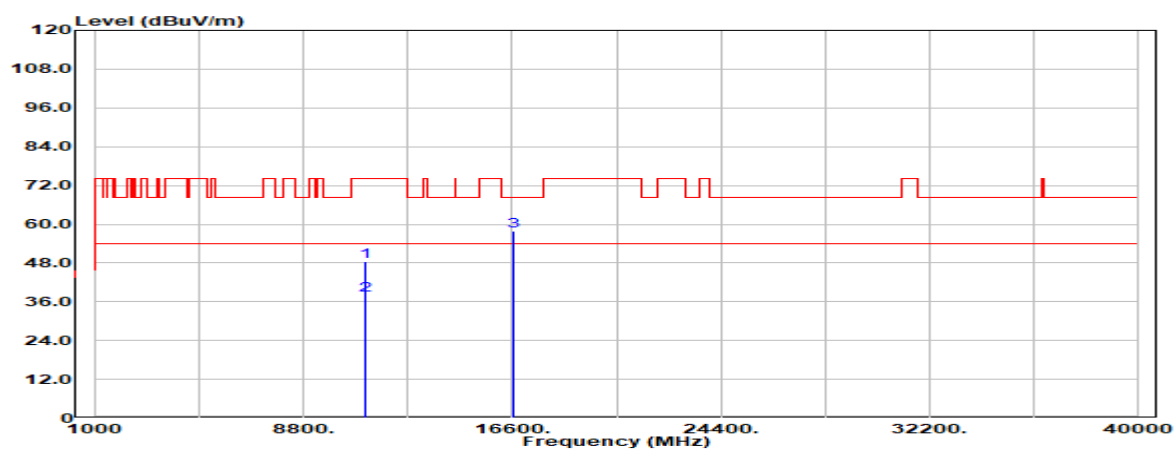


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11100.00	Peak	29.30	19.11	48.41	74.00	-25.59
11100.00	Average	18.68	19.11	37.79	54.00	-16.21
16650.00	Peak	28.61	29.28	57.89	68.20	-10.31
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 40 MHz / 5550 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

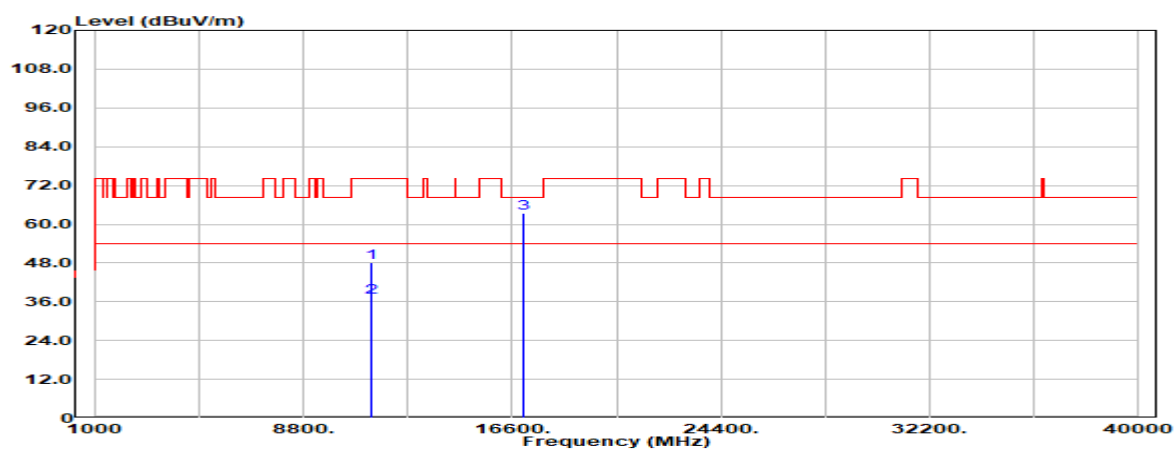


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11100.00	Peak	29.29	19.11	48.40	74.00	-25.60
11100.00	Average	19.03	19.11	38.14	54.00	-15.86
16650.00	Peak	28.77	29.28	58.05	68.20	-10.15
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 40 MHz / 5670 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

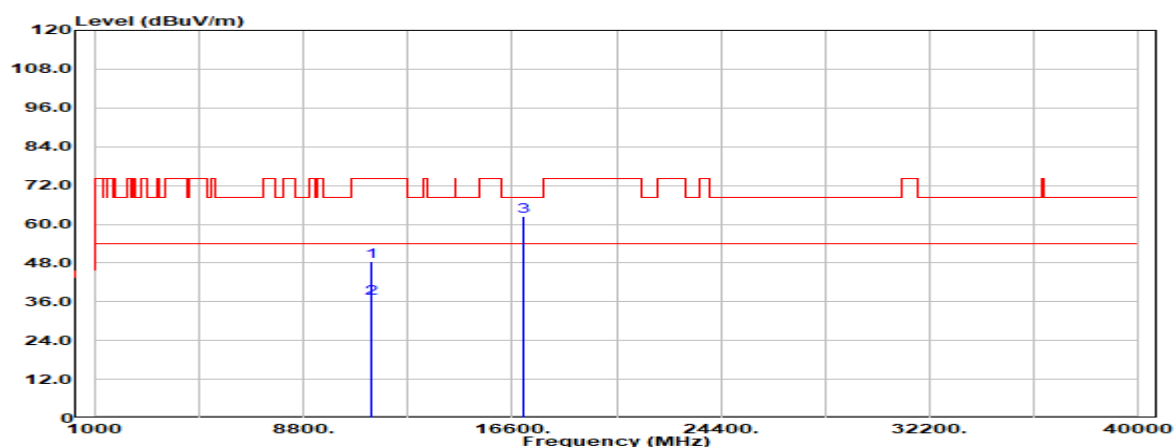


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11340.00	Peak	28.63	19.44	48.07	74.00	-25.93
11340.00	Average	18.07	19.44	37.51	54.00	-16.49
17010.00	Peak	31.89	31.48	63.37	68.20	-4.83
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n 40 MHz / 5670 MHz	Temp/Hum	20.0(°C)/ 62%RH
Test Item	Harmonic	Test Date	February 25, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
11340.00	Peak	28.99	19.44	48.43	74.00	-25.57
11340.00	Average	17.72	19.44	37.15	54.00	-16.85
17010.00	Peak	30.83	31.48	62.31	68.20	-5.89
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

4.6 DYNAMIC FREQUENCY SELECTION

4.6.1 TEST LIMIT

FCC according to §15.407 (h), KDB 905462 D02 "compliance measurement procedures for unlicensed-national information infrastructure devices operating in the 5250-5350 MHz and 5470-5725 MHz bands incorporating dynamic frequency selection". and KDB 905462 D03 " U-NII client devices without radar detection capability.

IC according RSS-247 section 6.3, and it harmonized with FCC Part 15 DFS rules.

The EIRP refer section 4.3 output power measurement in this report.

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client(with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	Master Device or Client with Radar Detection	Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth mods	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required

Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.

Table 3: Interference Threshold values, Master or Client incorporating In-Service

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP $\geq$ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

Table 4: DFS Response requirement values

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	Roundup $\left\{ \left(\frac{1}{360} \right) \cdot \left(\frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					



Table 6 – Long Pulse Radar Test Signal

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

4.6.2 TEST PROCEDURE

Overview Of EUT With Respect To §15.407 (H) Requirements

The firmware installed in the EUT during testing was:

Firmware Rev: 3.18.22

The EUT operates over the 5250-5350 MHz range as a Client Device that does not have radar detection capability.

The EUT uses one transmitter connected to two 50-ohm coaxial antenna ports via a diversity switch. Only one antenna port is connected to the test system since the EUT has one antenna only.

The Slave device associated with the EUT during these tests does not have radar detection capability.

WLAN traffic is generated by streaming the video file TestFile.mp2 “6 ½ Magic Hours” from the Master to the Slave in full motion video mode using the media player with the V2.61 Codec package.

The EUT utilizes the 802.11a architecture, with a nominal channel bandwidth of 20 MHz.

The rated output power of the Master unit is < 23dBm (EIRP). Therefore the required interference threshold level is -62 dBm. After correction for antenna gain and procedural adjustments, the required conducted threshold at the antenna port is $-62 + 5 = -57\text{dBm}$.

The calibrated conducted DFS Detection Threshold level is set to -57 dBm. The tested level is lower than the required level hence it provides margin to the limit.

Manufacturer’s Statement Regarding Uniform Channel Spreading

The end product implements an automatic channel selection feature at startup such that operation commences on channels distributed across the entire set of allowed 5GHz channels. This feature will ensure uniform spreading is achieved while avoiding non-allowed channels due to prior radar events.



TEST AND MEASUREMENT SYSTEM

System Overview

The measurement system is based on a conducted test method.

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

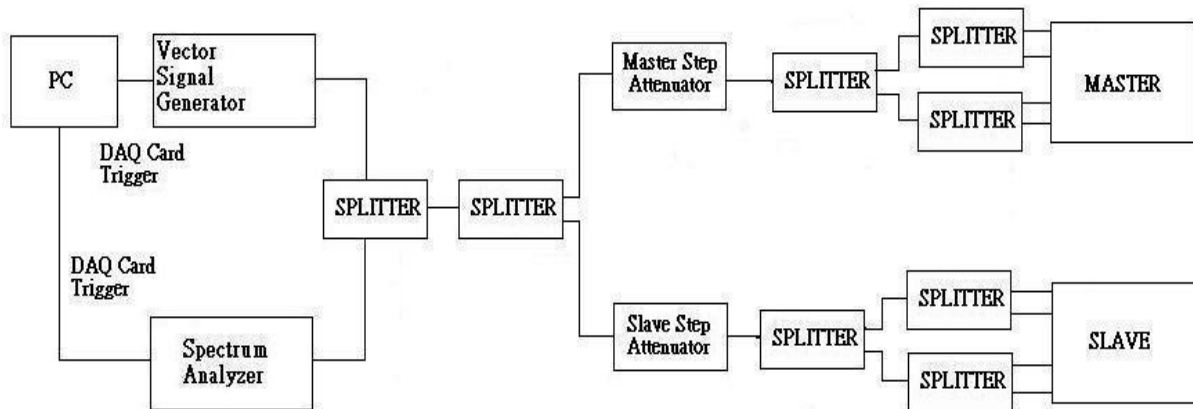
The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of FCC 06-96 APPENDIX. The frequency of the signal generator is incremented in 1 MHz steps from FL to FH for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer set to display 8001 bins on the horizontal axis. The time-domain resolution is 2 msec / bin with a 16 second sweep time, meeting the 10 second short pulse reporting criteria. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold. The time-domain resolution is 3 msec / bin with a 24 second sweep time, meeting the 22 second long pulse reporting criteria and allowing a minimum of 10 seconds after the end of the long pulse waveform.

Should multiple RF ports be utilized for the Master and/or Slave devices (for example, for diversity or MIMO implementations), 50 ohm termination would be removed from the splitter so that connection can be established between splitter and the Master and/or Slave devices.

Conducted Method System Block Diagram



System Calibration

Connect the spectrum analyzer to the test system in place of the master device. Set the signal generator to CW mode. Adjust the amplitude of the signal generator to yield a measured level of -62 dBm on the spectrum analyzer.

Without changing any of the instrument settings, reconnect the spectrum analyzer to the Common port of the Spectrum Analyzer Combiner/Divider and connect a 50 ohm load to the Master Device port of the test system.

Measure the amplitude and calculate the difference from -62 dBm. Adjust the Reference Level Offset of the spectrum analyzer to this difference. Confirm that the signal is displayed at -62 dBm. Readjust the RBW and VBW to 3 MHz, set the span to 10 MHz, and confirm that the signal is still displayed at -62 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of -62 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

Set the signal generator to produce a radar waveform, trigger a burst manually and measure the level on the spectrum analyzer. Readjust the amplitude of the signal generator as required so that the peak level of the waveform is at a displayed level equal to the required or desired interference detection threshold. Separate signal generator amplitude settings are determined as required for each radar type.

Adjustment Of Displayed Traffic Level

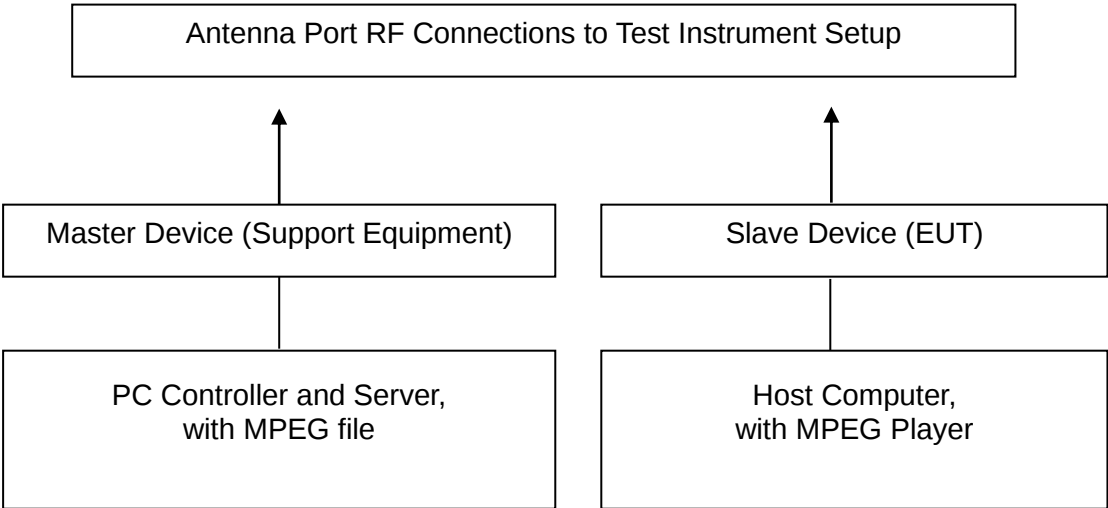
Establish a link between the Master and Slave, adjusting the Link Step Attenuator as needed to provide a suitable received level at the Master and Slave devices. Stream the video test file to generate WLAN traffic. Confirm that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold. Confirm that the displayed traffic is from the Master Device. For Master Device testing confirm that the displayed traffic does not include Slave Device traffic. For Slave Device testing confirm that the displayed traffic does not include Master Device traffic. If a different setting of the Master Step Attenuator is required to meet the above conditions, perform a new System Calibration for the new Master Step Attenuator setting.

Channel Loading

System testing will be performed with channel-loading using means appropriate to the data types that are used by the unlicensed device. The following requirements apply:

- a) The data file must be of a type that is typical for the device (i.e., MPEG-2, MPEG-4, WAV, MP3, MP4, AVI, etc.) and must generally be transmitting in a streaming mode.
- b) Software to ping the client is permitted to simulate data transfer but must have random ping intervals.
- c) Timing plots are required with calculations demonstrating a minimum channel loading of approximately 17% or greater. For example, channel loading can be estimated by setting the spectrum analyzer for zero span and approximate the Time On/ (Time On + Off Time). This can be done with any appropriate channel BW and modulation type.
- d) Unicast or Multicast protocols are preferable but other protocols may be used. The appropriate protocol used must be described in the test procedures.

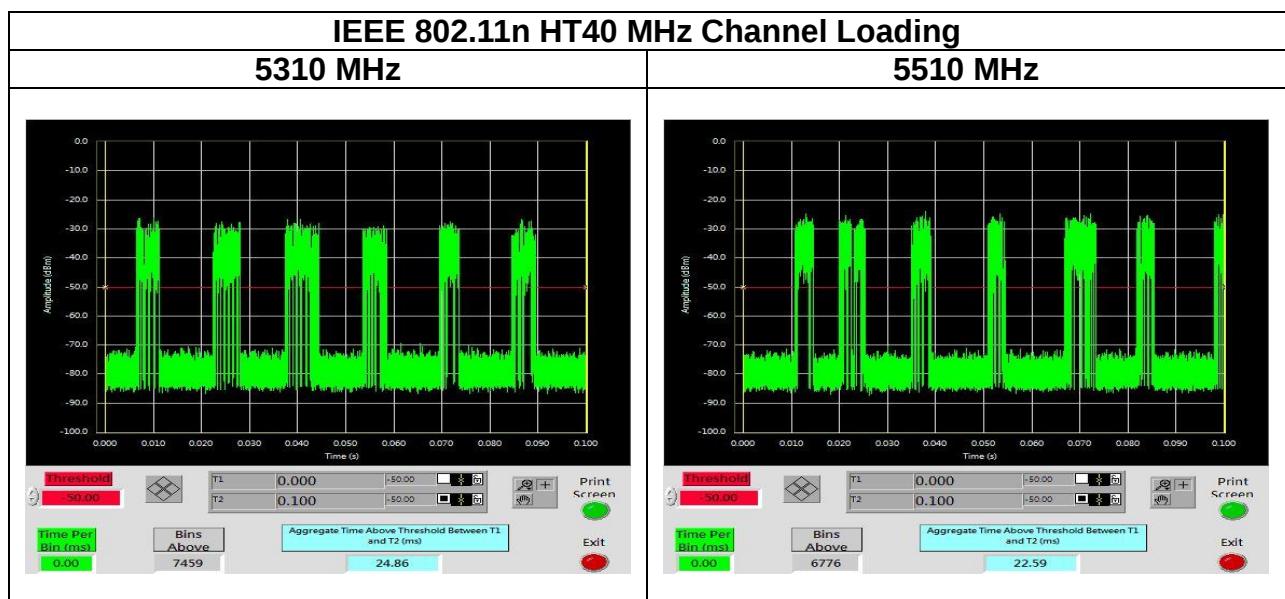
4.6.3 TEST SETUP



4.6.4 TEST RESULT

Temperature: 18.1°C
Humidity: 64% RH

Test date: February 24, 2022
Tested by: Jerry Chang



Note: During the monitoring period of 100ms, the packet flow exceeds 17%



Report No.: TMWK2202000669KR

Page: 117 / 125

Rev.: 01

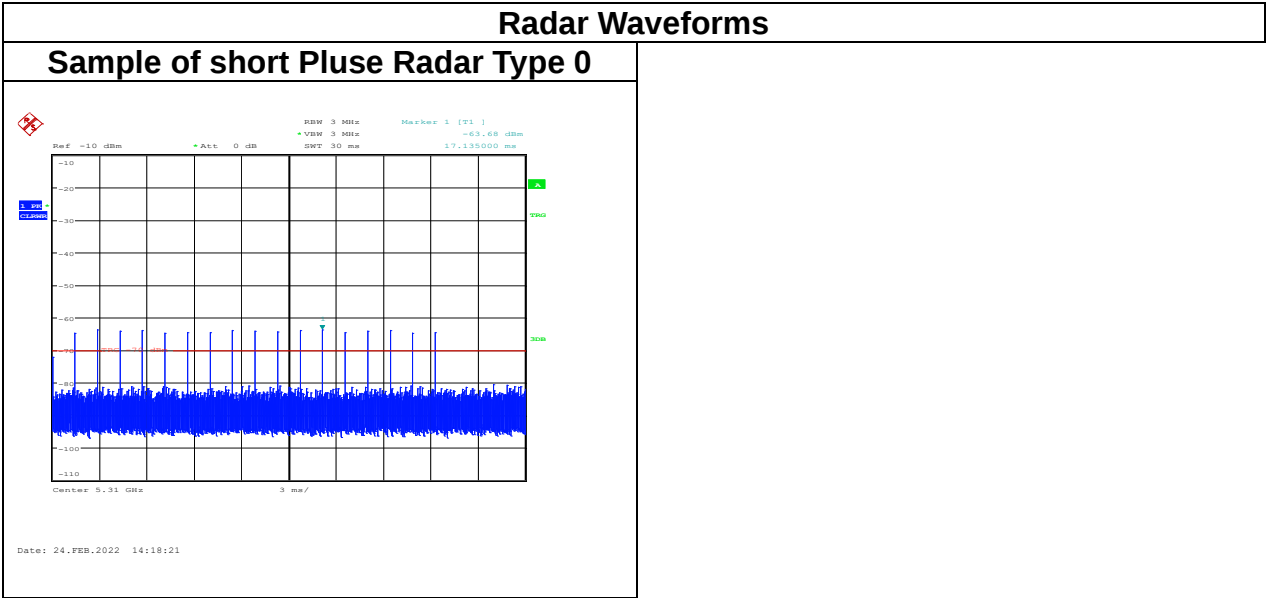
U-NII-2a





Report No.: TMWK2202000669KR

Page: 118 / 125
Rev.: 01

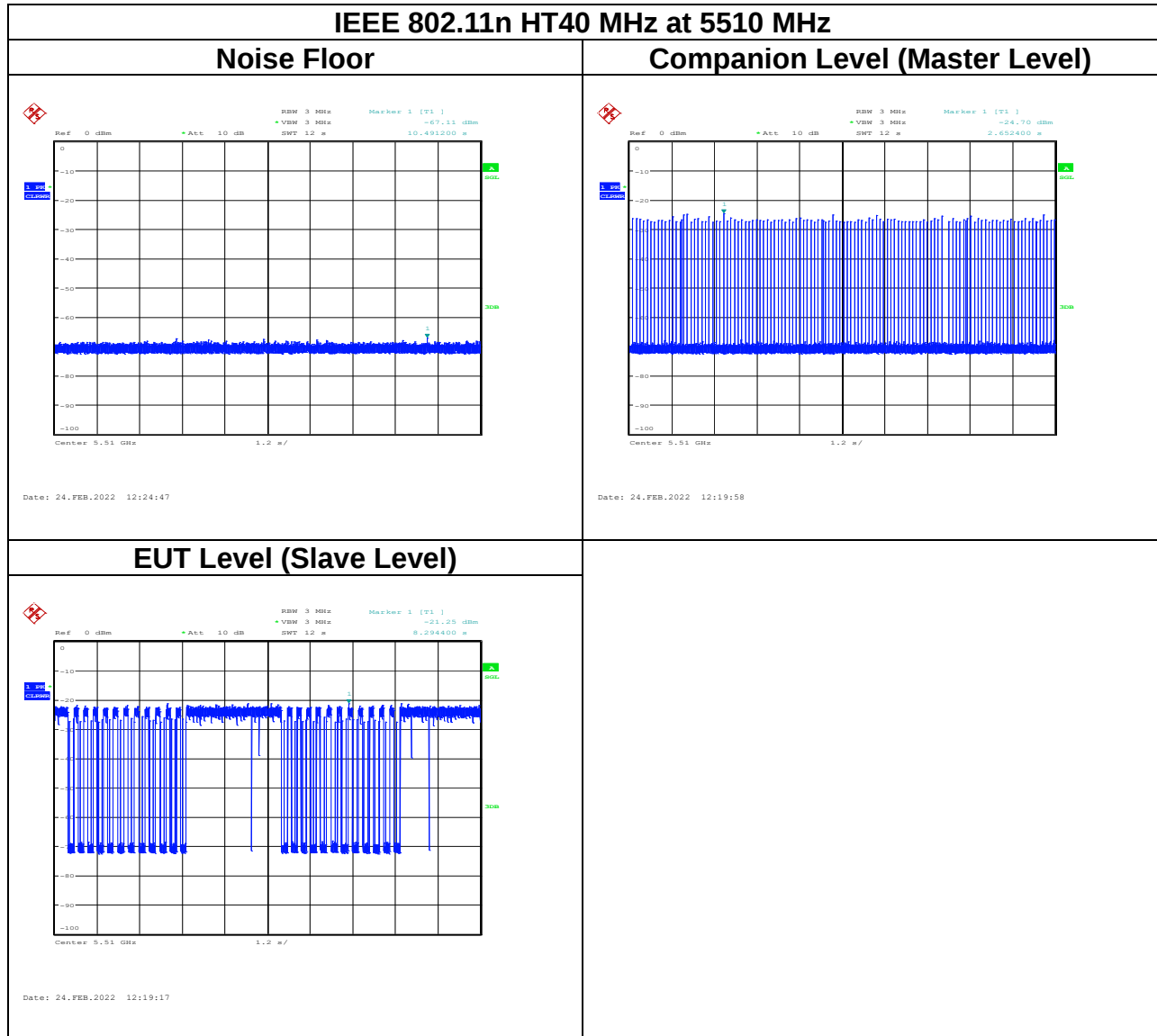




Report No.: TMWK2202000669KR

Page: 119 / 125
Rev.: 01

U-NII-2c





TEST CHANNEL AND METHOD

All tests were performed at a channel center frequency of 5290 MHz 、 5300 MHz 、 5500 MHz and 5530 MHz utilizing a conducted test method.

CHANNEL MOVE TIME AND CHANNEL CLOSING TRANSMISSION TIME

GENERAL REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =

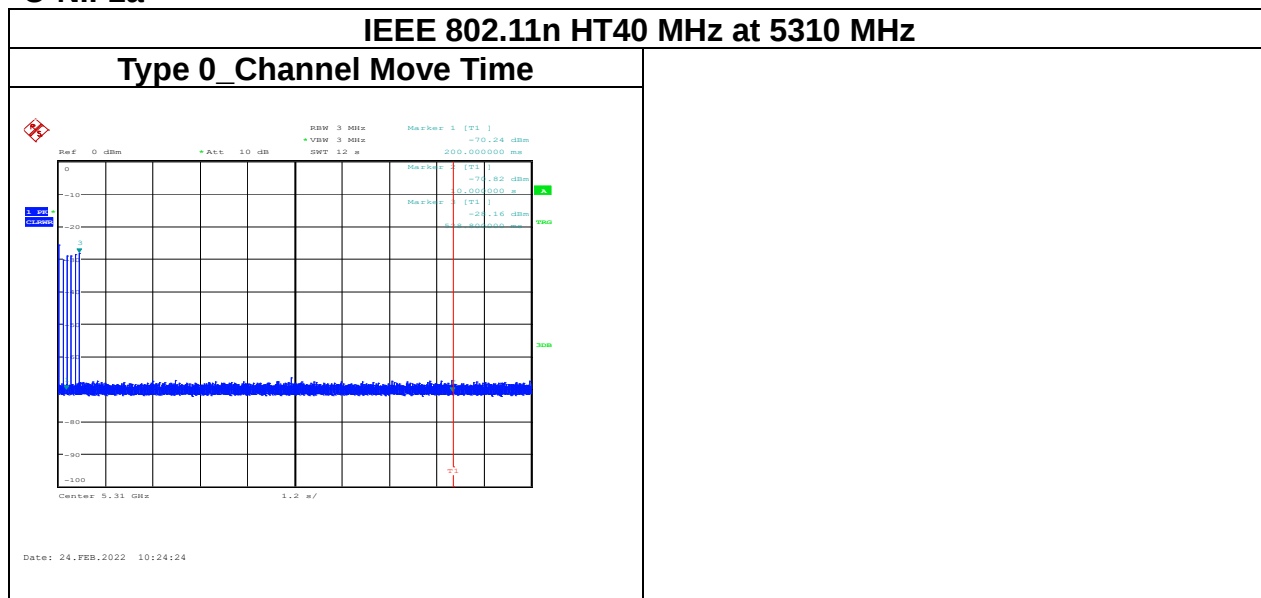
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated

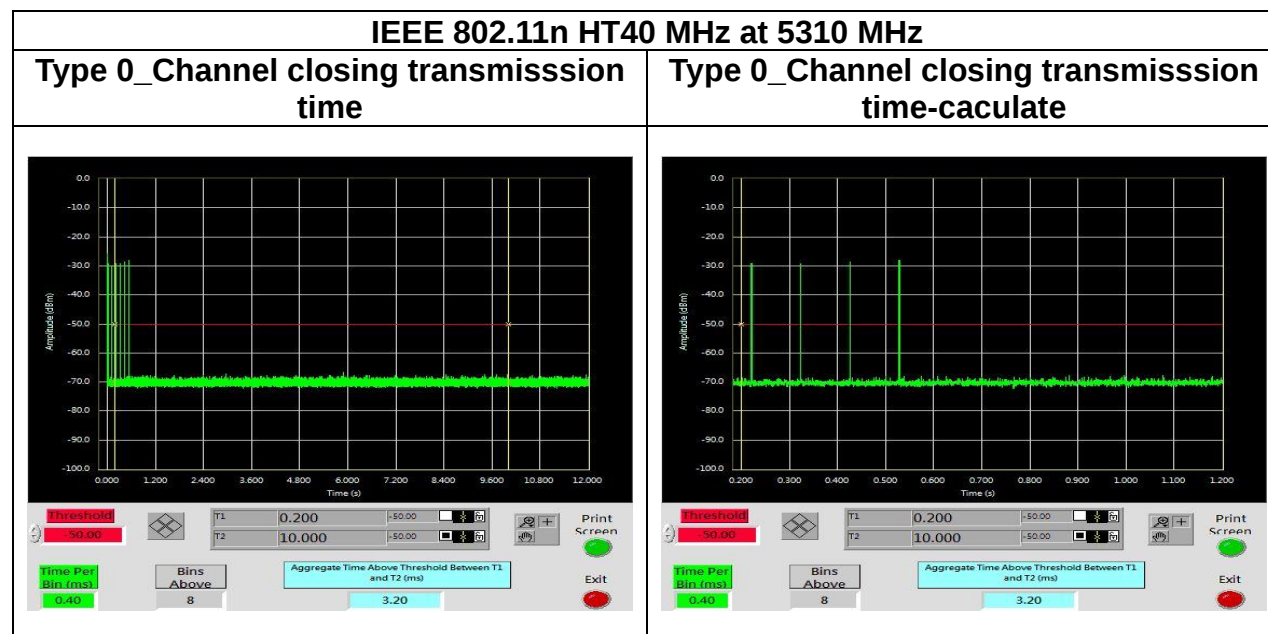
Begins at (Reference Marker + 200 msec) and

Ends no earlier than (Reference Marker + 10 sec).

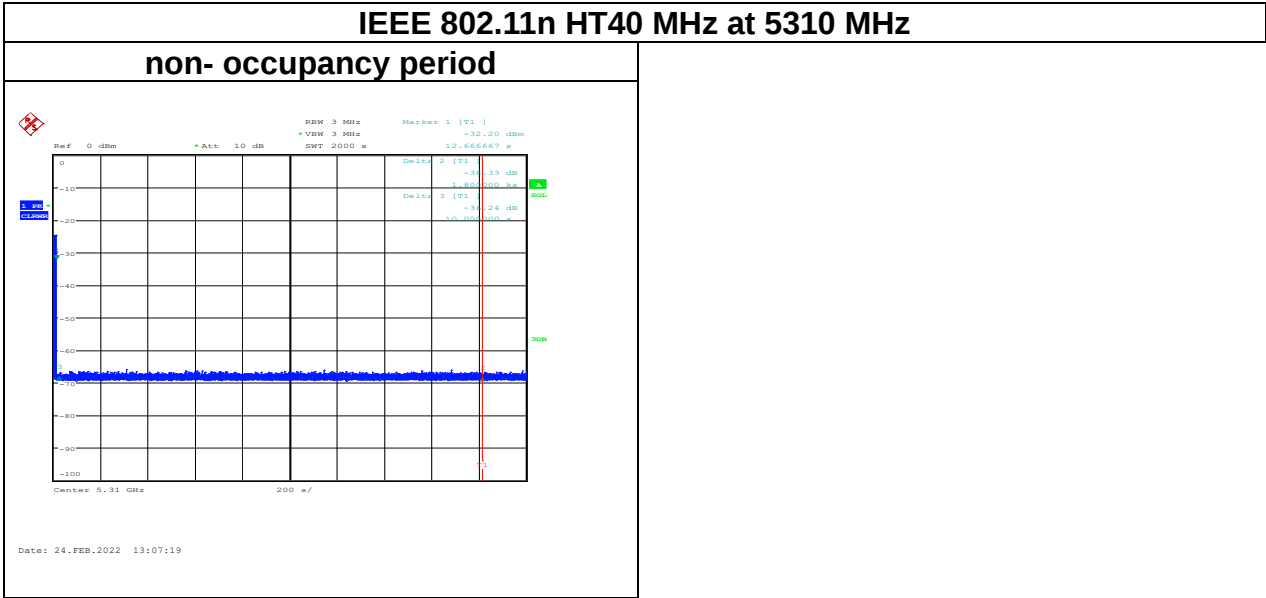
U-NII-2a



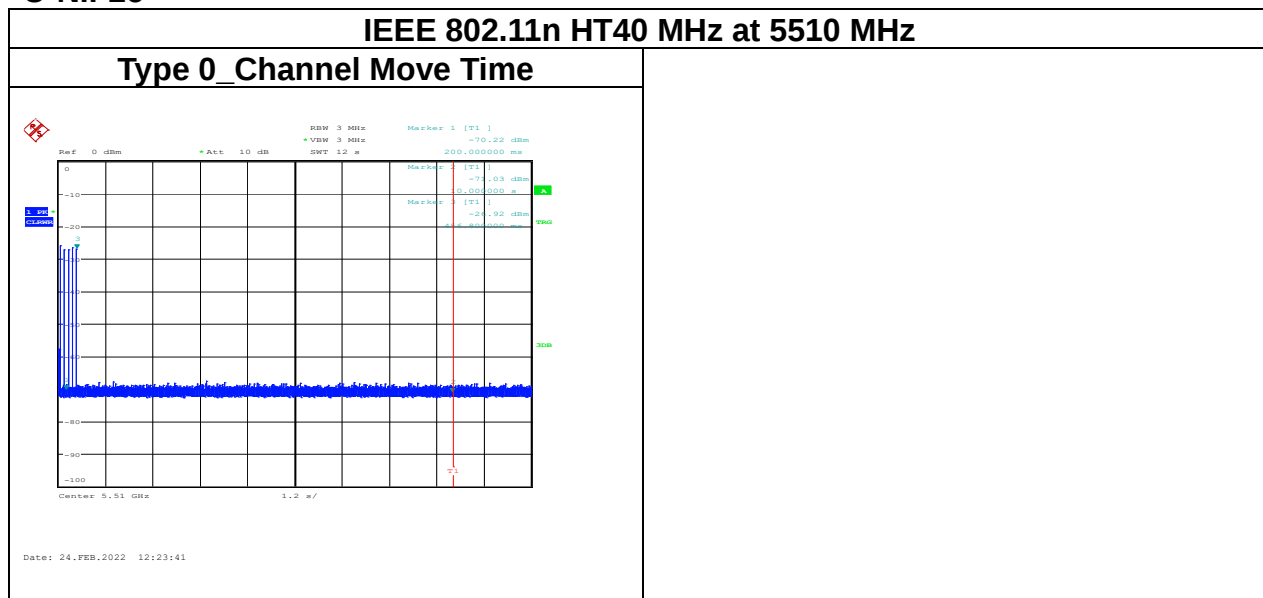
Channel Move Time (s)	Limit (s)
0.5288	10



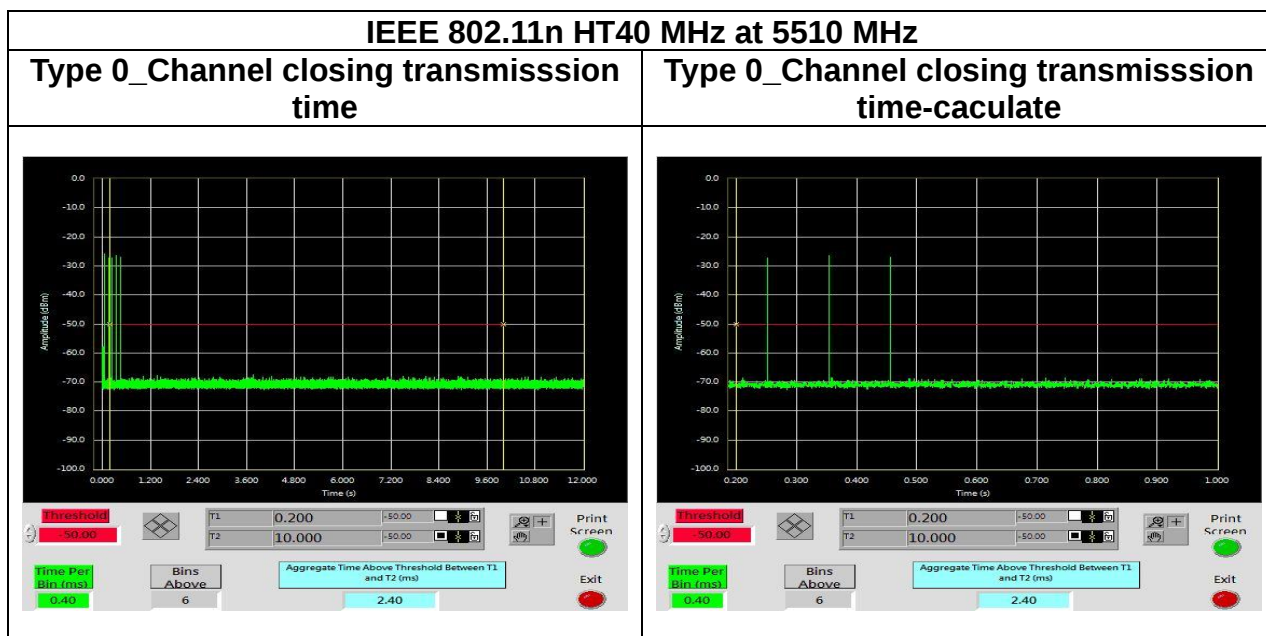
Aggregate Transmission Time (ms)	Limit (ms)	Margin (ms)
3.20	60	-56.80



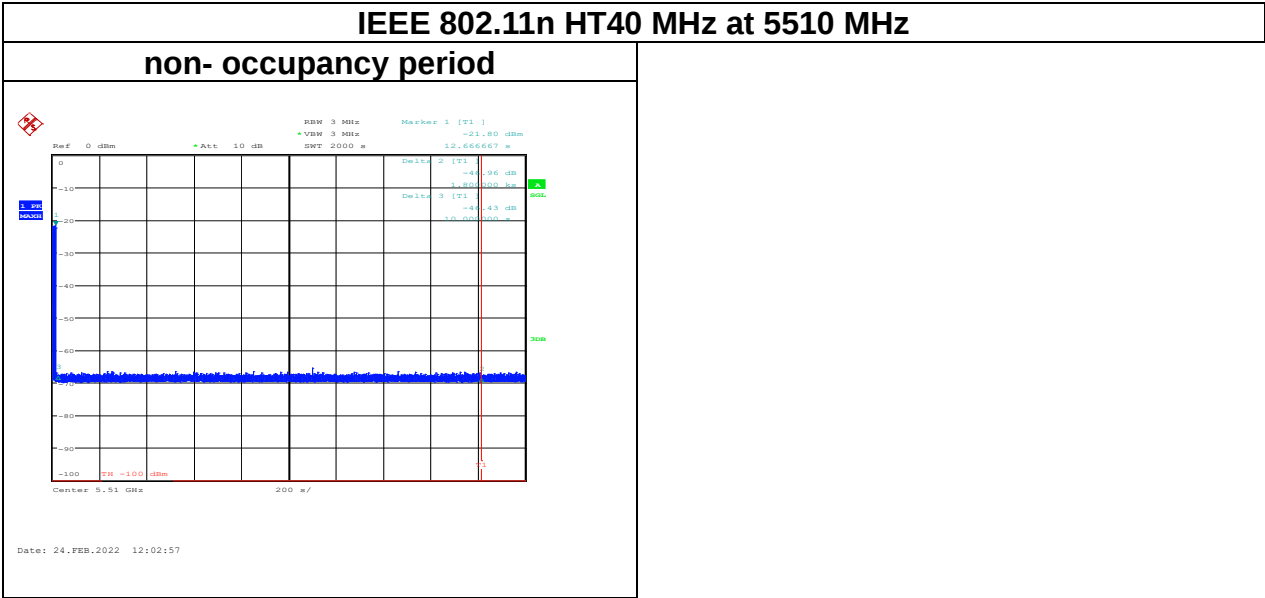
U-NII-2c



Channel Move Time (s)	Limit (s)
0.4568	10



Aggregate Transmission Time (ms)	Limit (ms)	Margin (ms)
2.40	60	-57.60



- End of Test Report -