

5.5 CONDUCTED BANDEDGE AND SPURIOUS EMISSION

5.5.1 Test Limit

According to §15.247(d),

In any 100 kHz bandwidth outside the authorized frequency band,

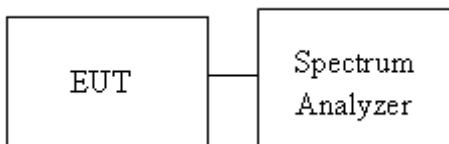
Non-restricted bands shall be attenuated at least 20 dB/30 dB relative to the maximum PSD level in 100 kHz by RF conducted or a radiated measurement which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

5.5.2 Test Procedure

Test method Refer as KDB 558074 D01.

1. EUT RF output port connected to the SA by RF cable, and the path loss was compensated to result.
2. SA setting, RBW=100kHz, VBW=300kHz, Detector=Peak, Trace mode = max hold, SWT = Auto.
3. In any 100 kHz bandwidth outside the authorized frequency band, shall be attenuated at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when conducted power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

5.5.3 Test Setup

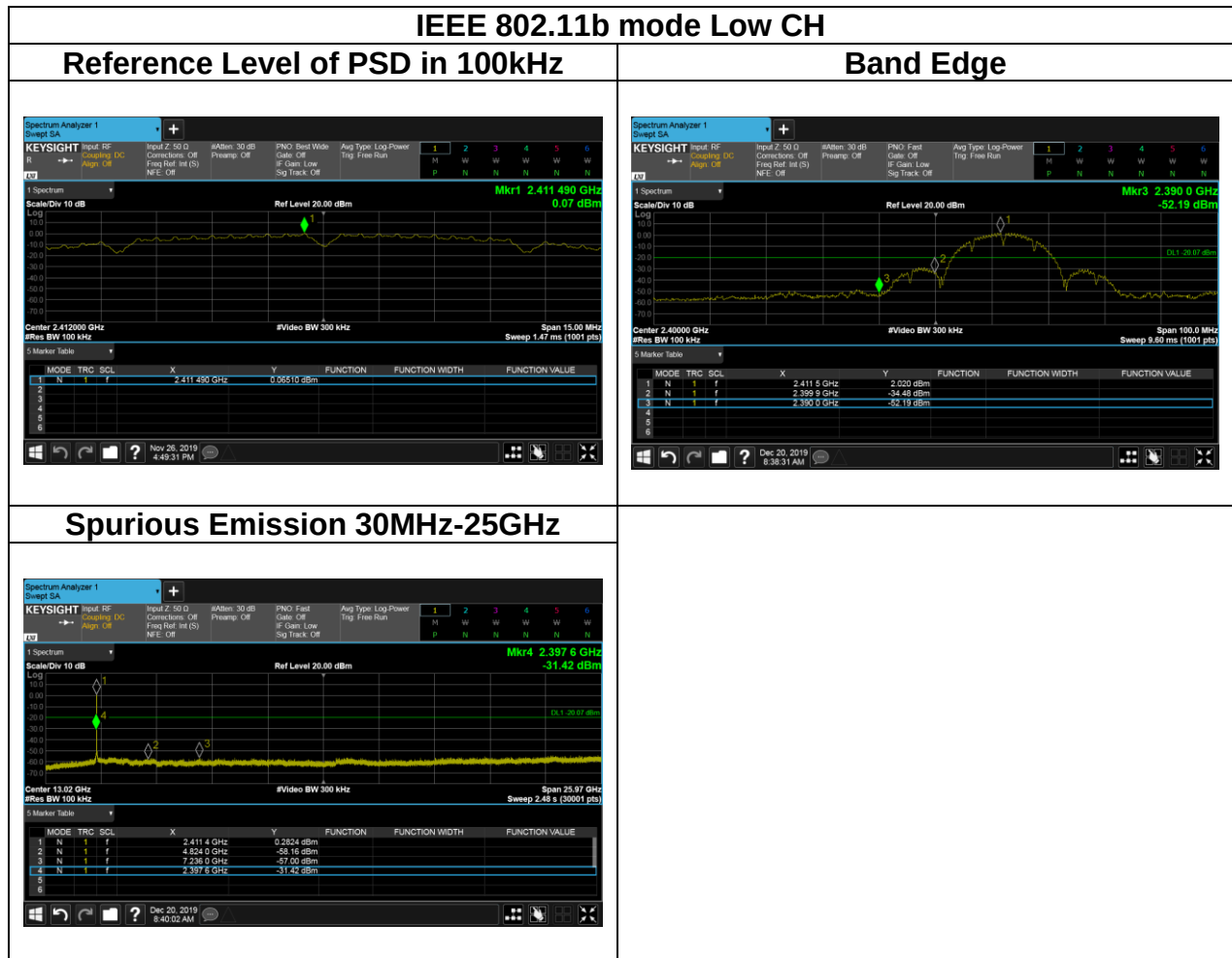


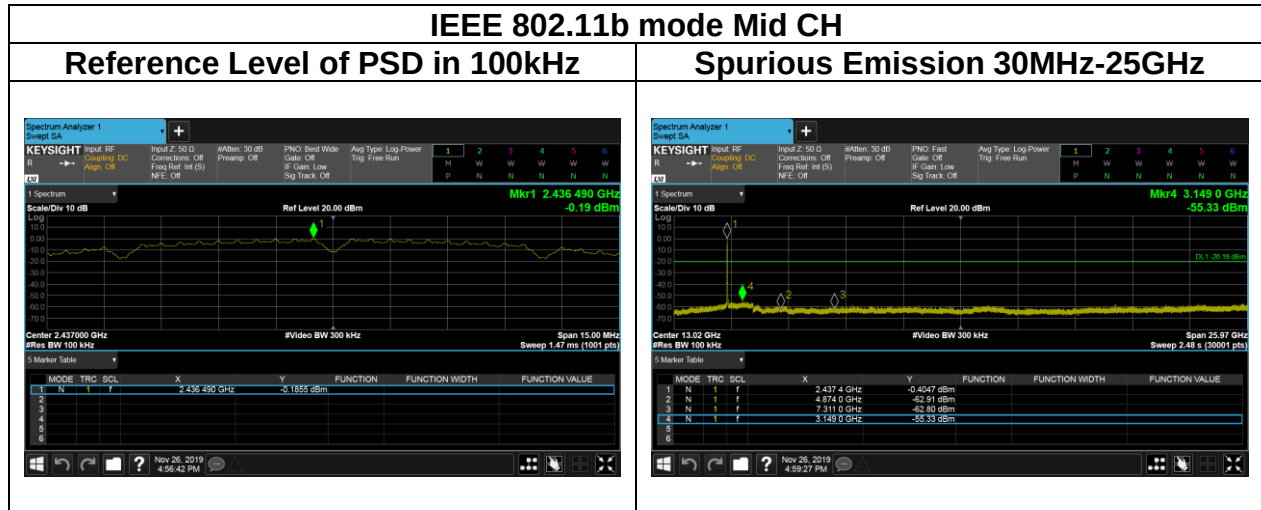
Report No.: T191111D02-RP

5.5.4 Test Result

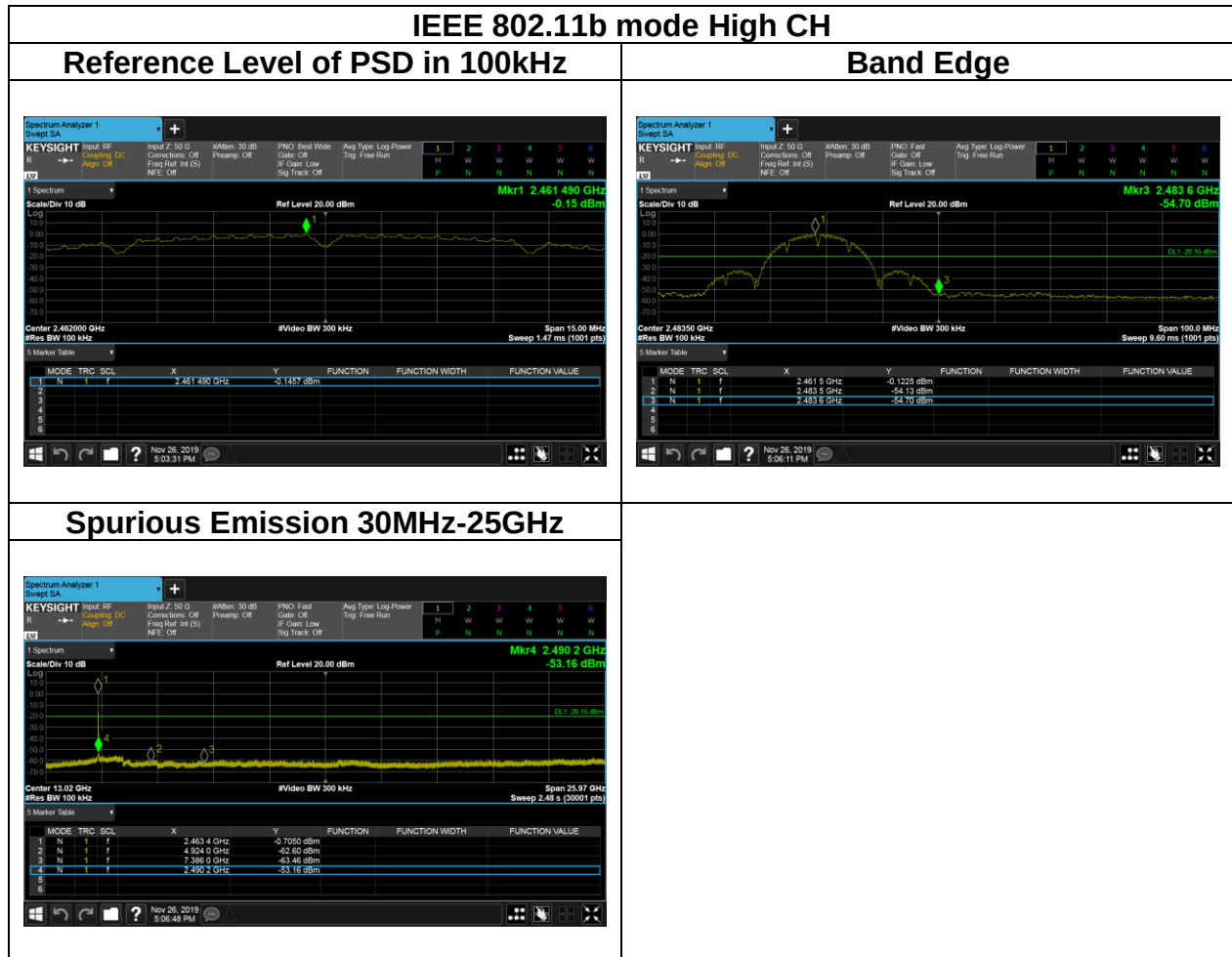
Test Data

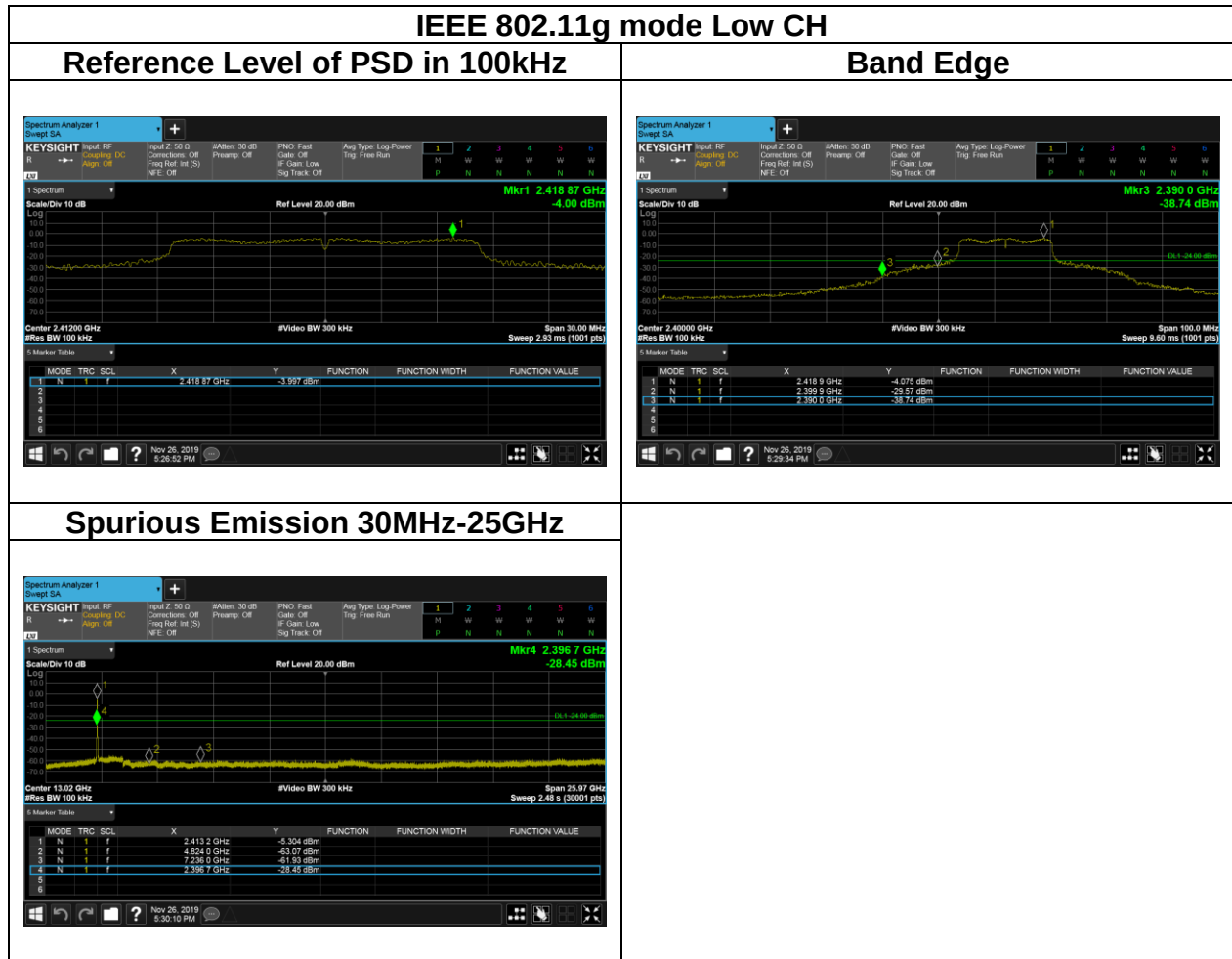
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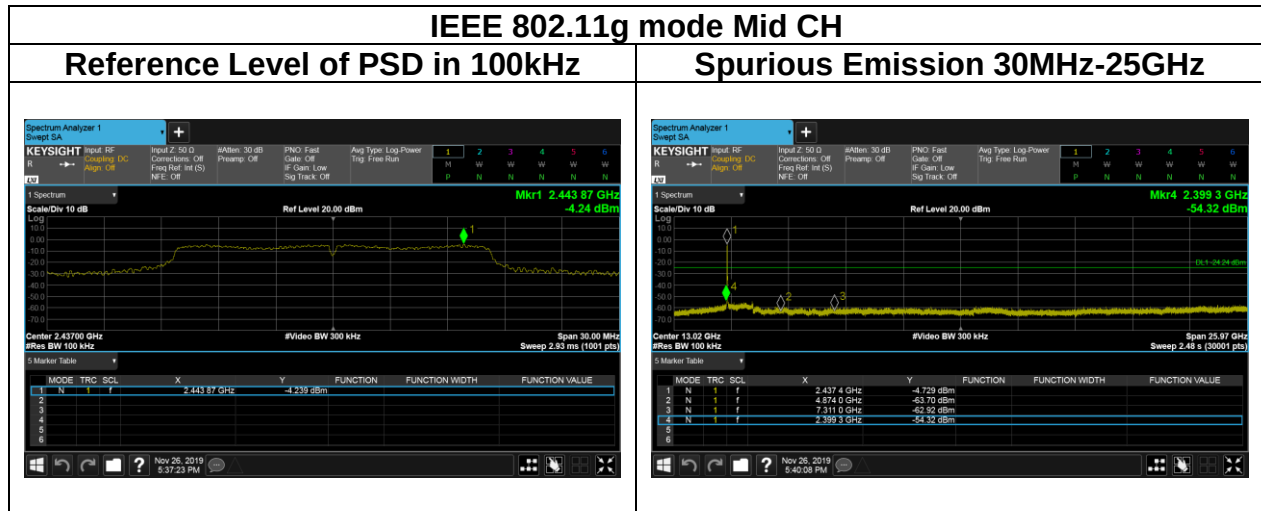


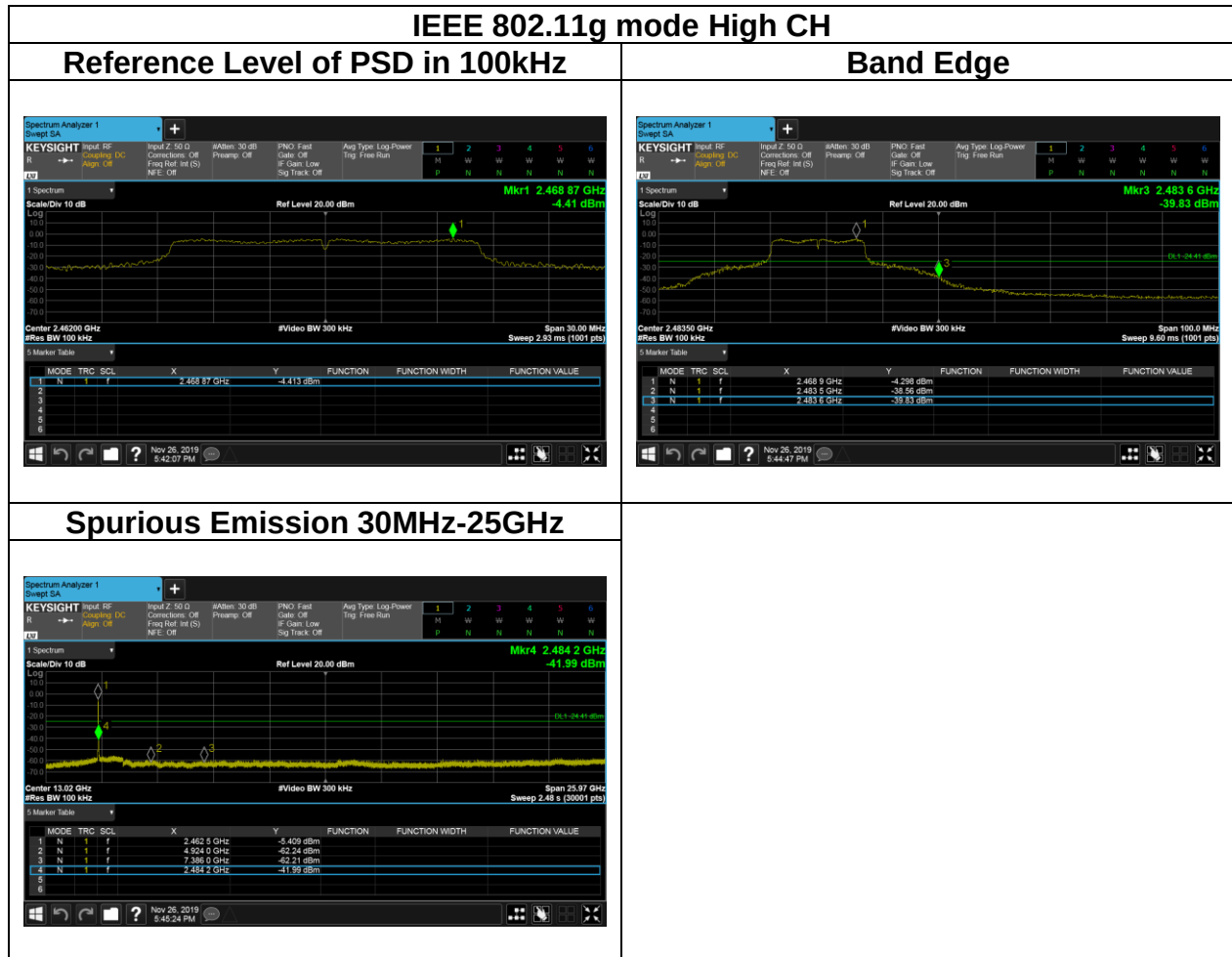


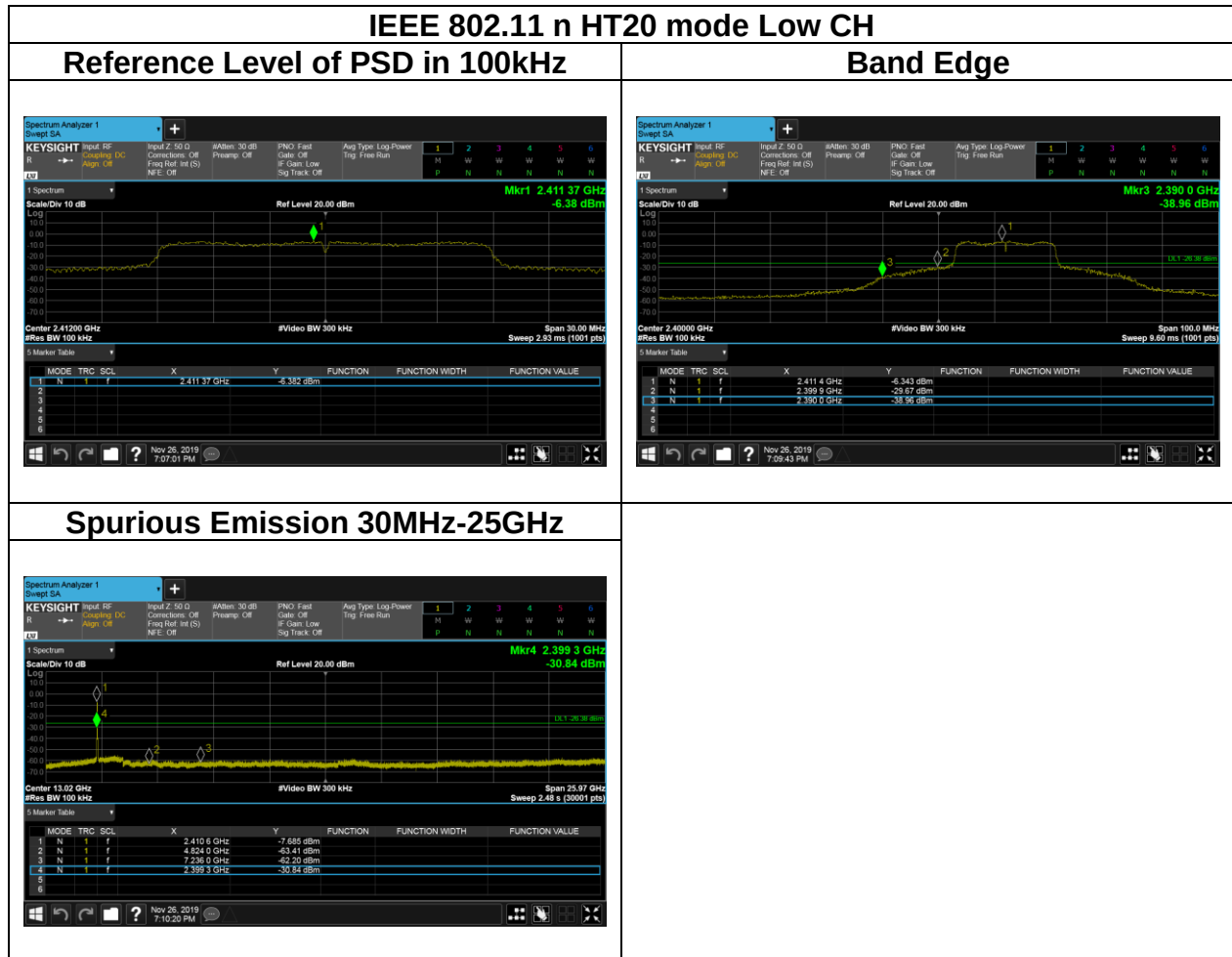
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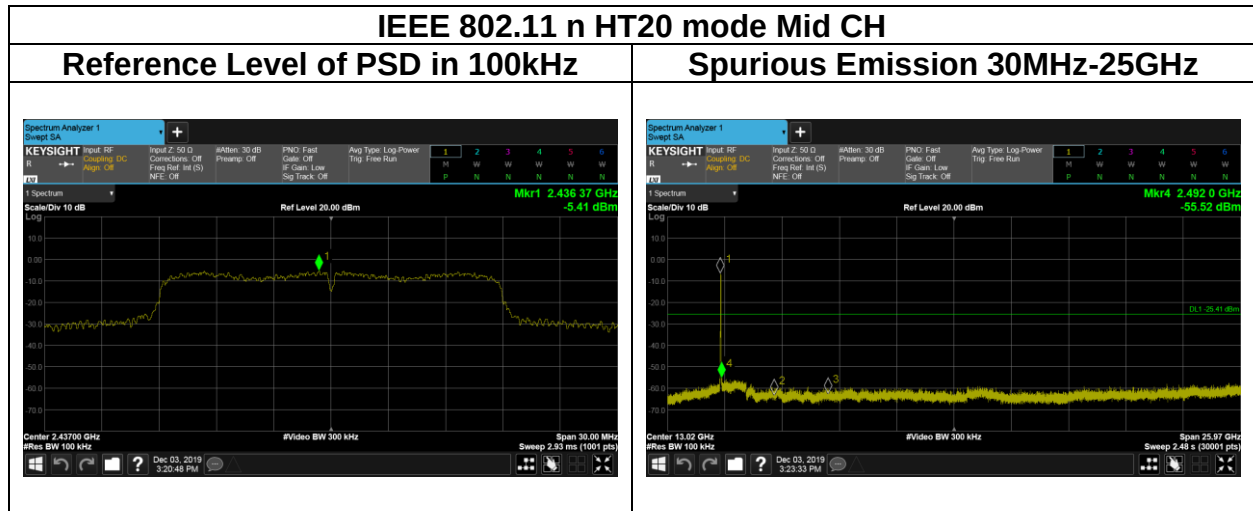




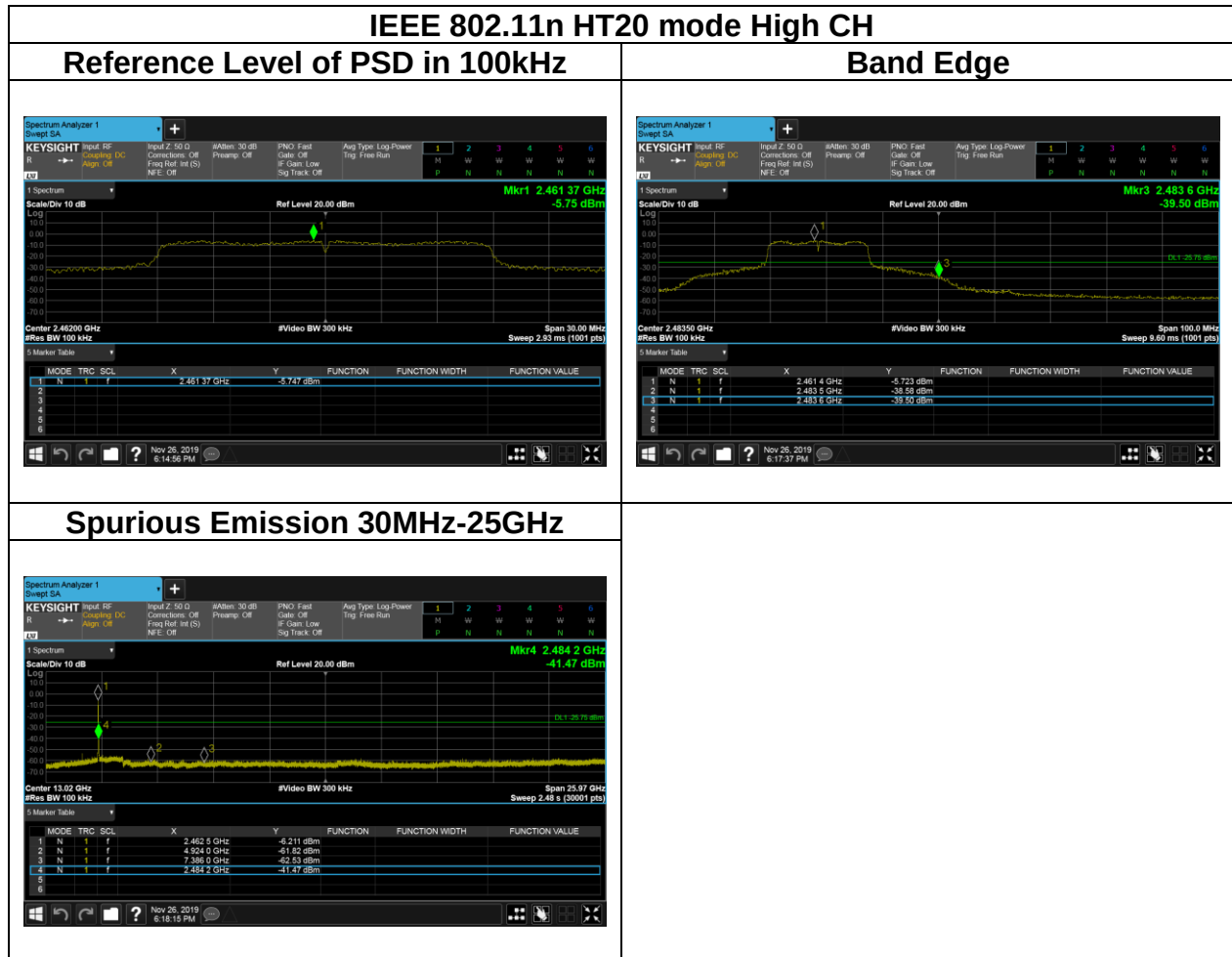




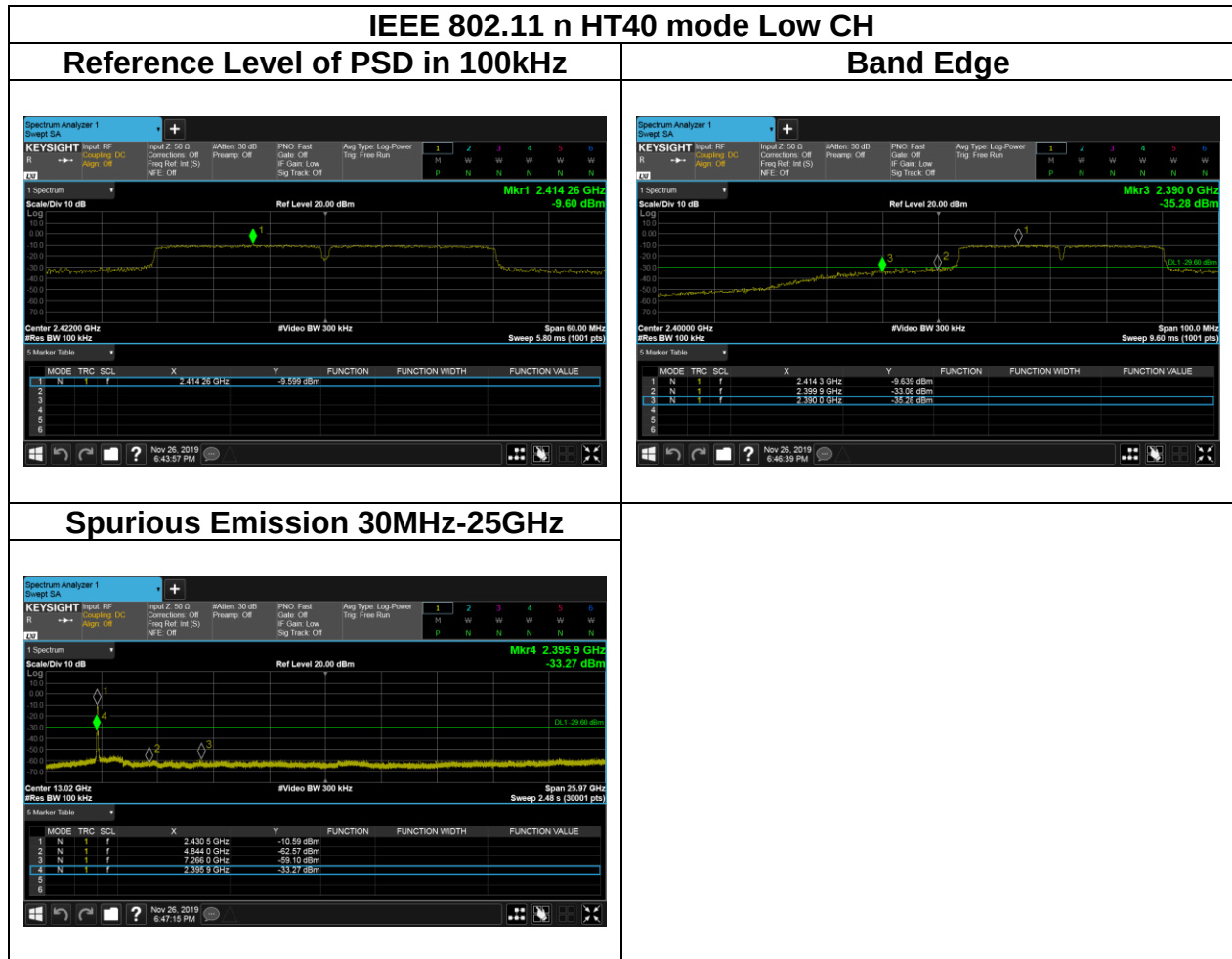


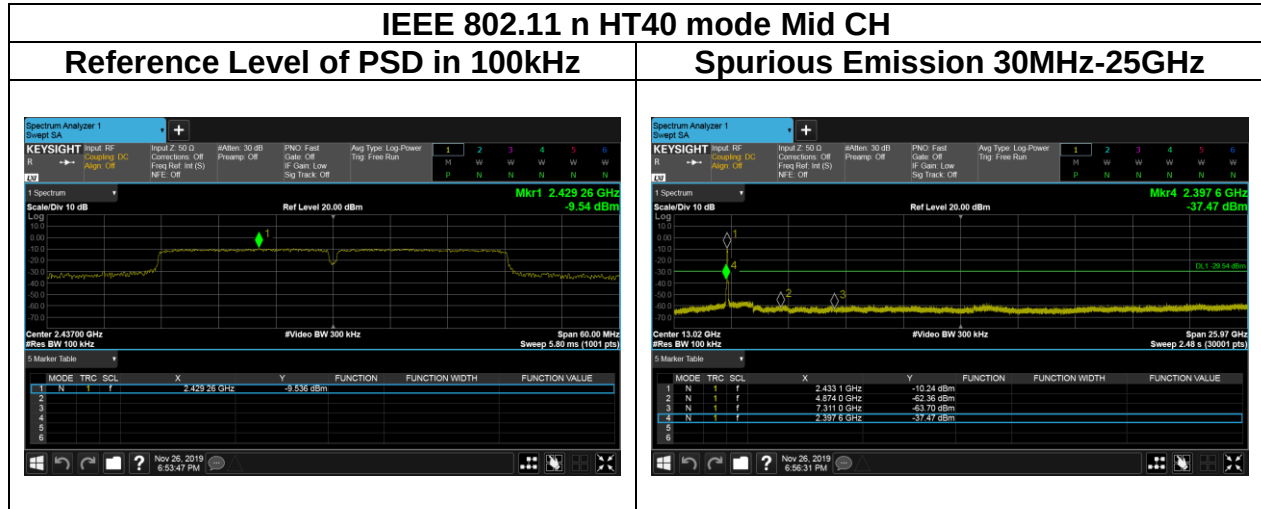


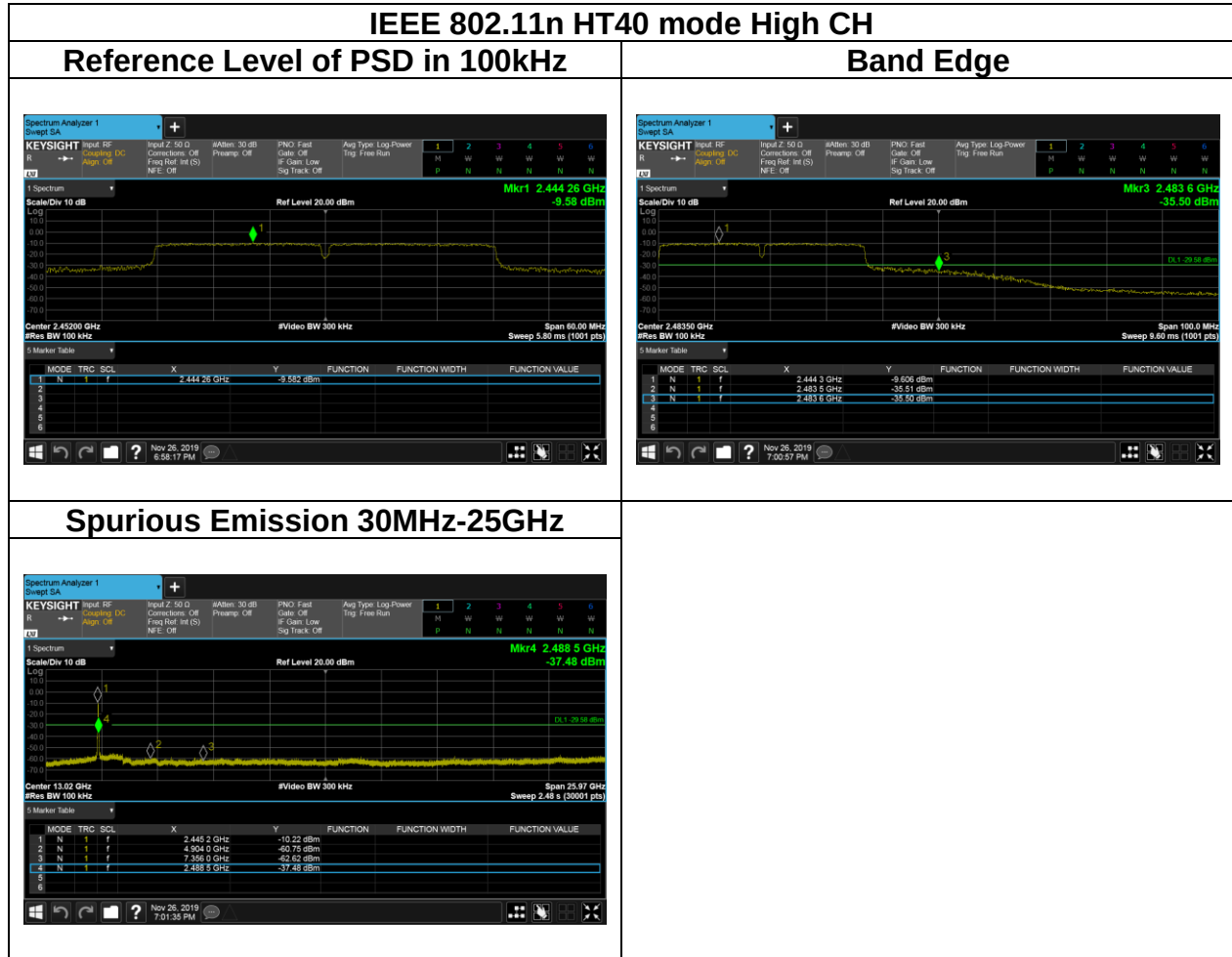
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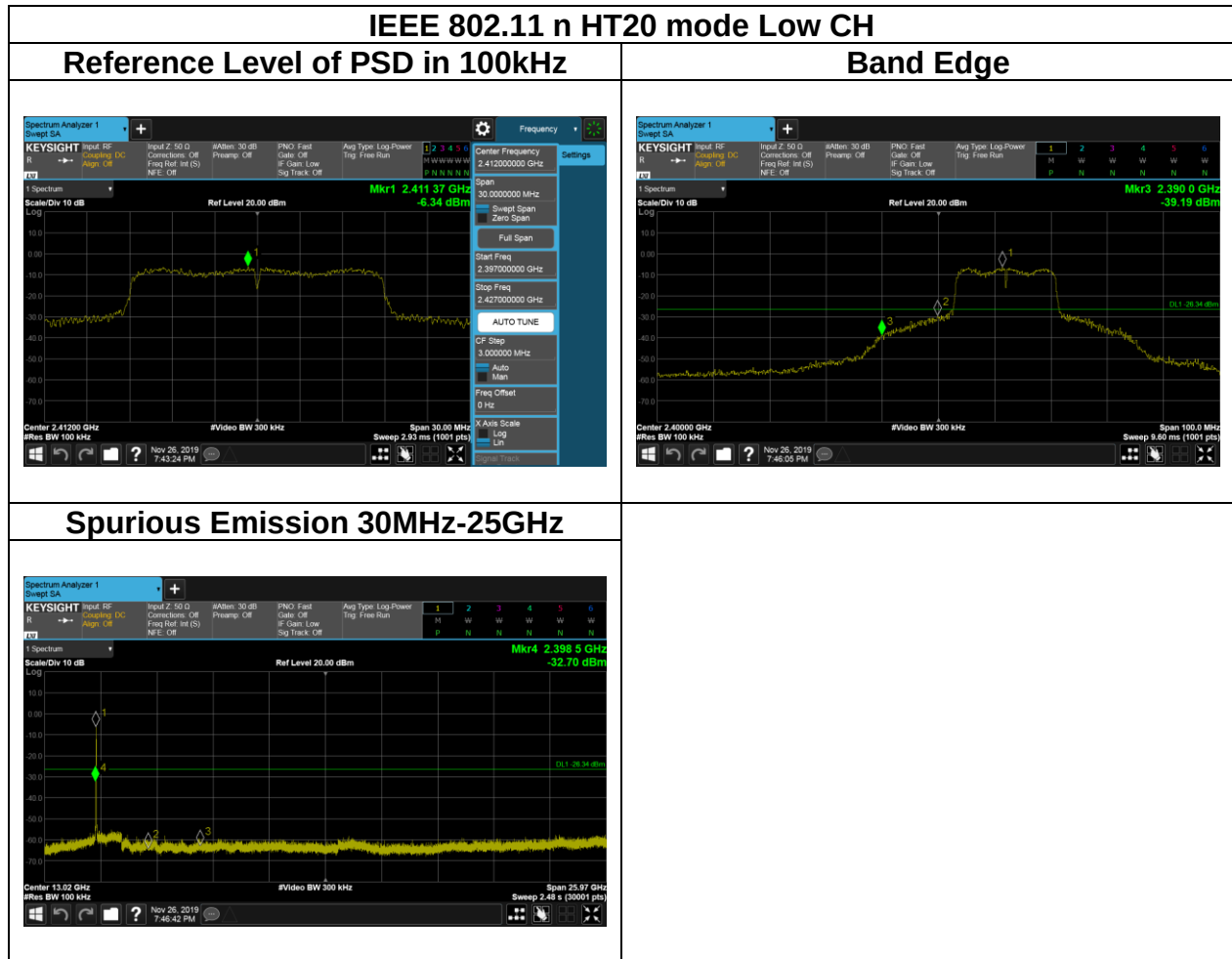
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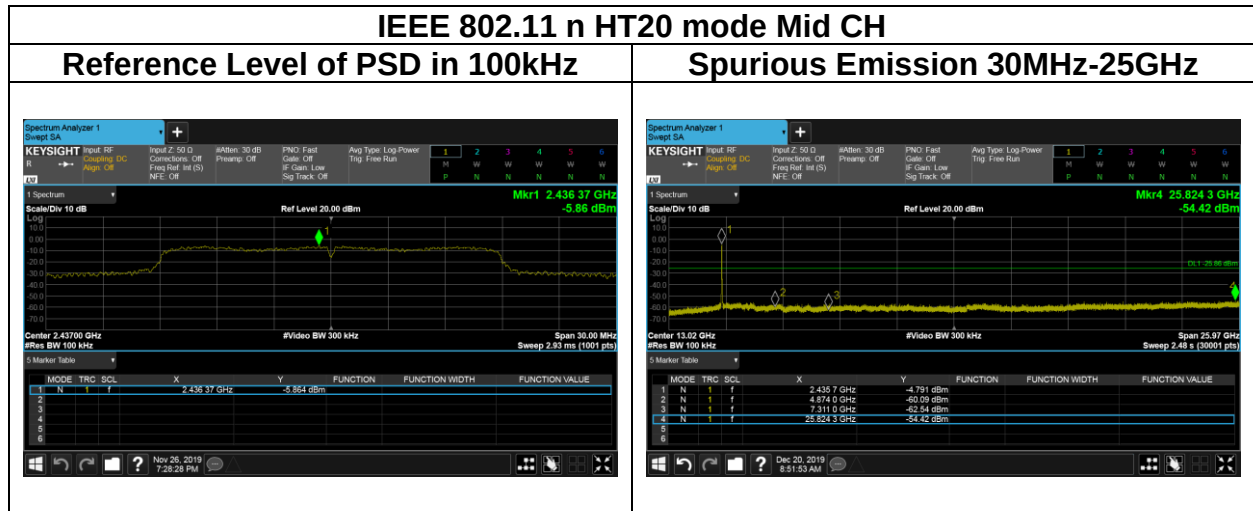




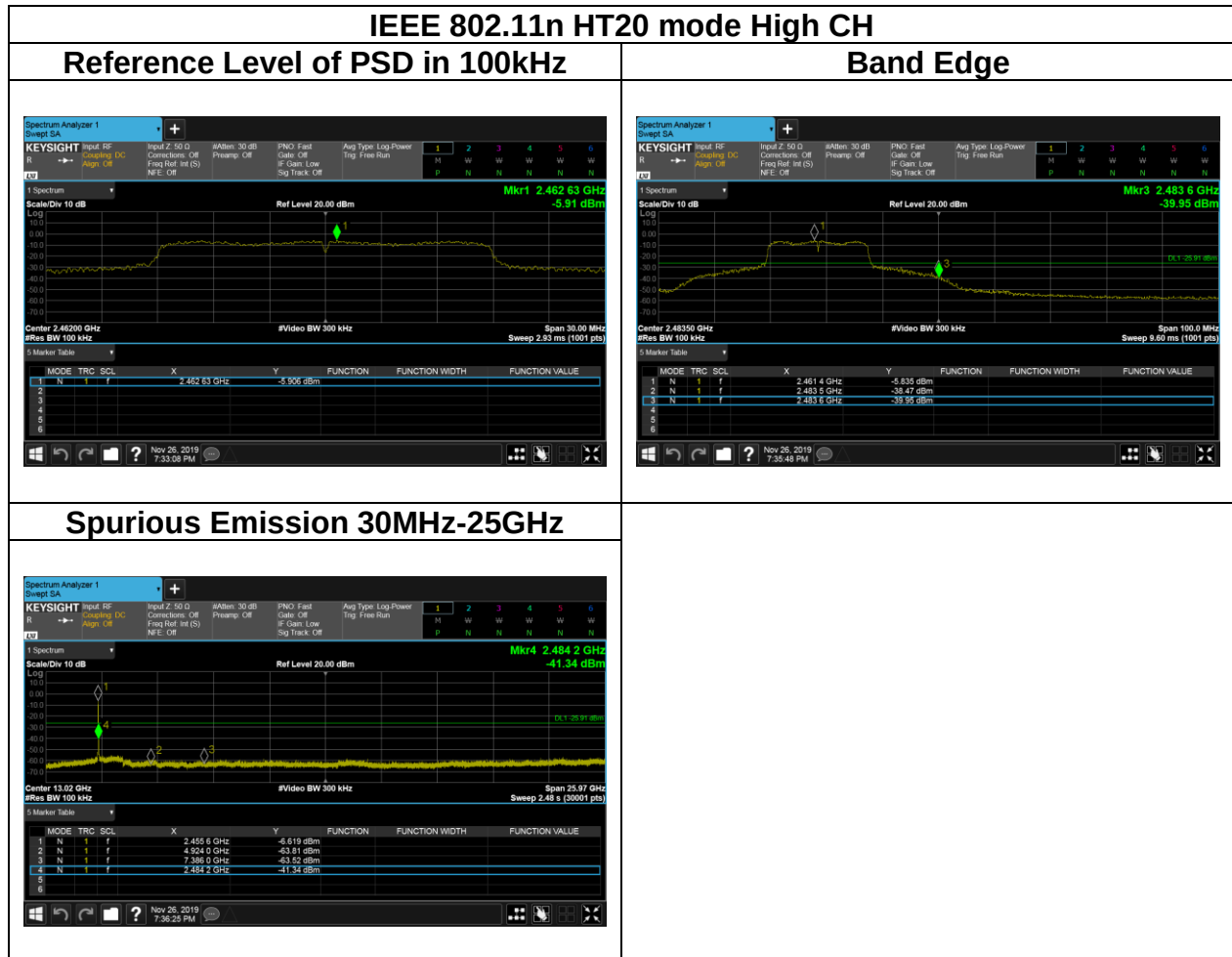


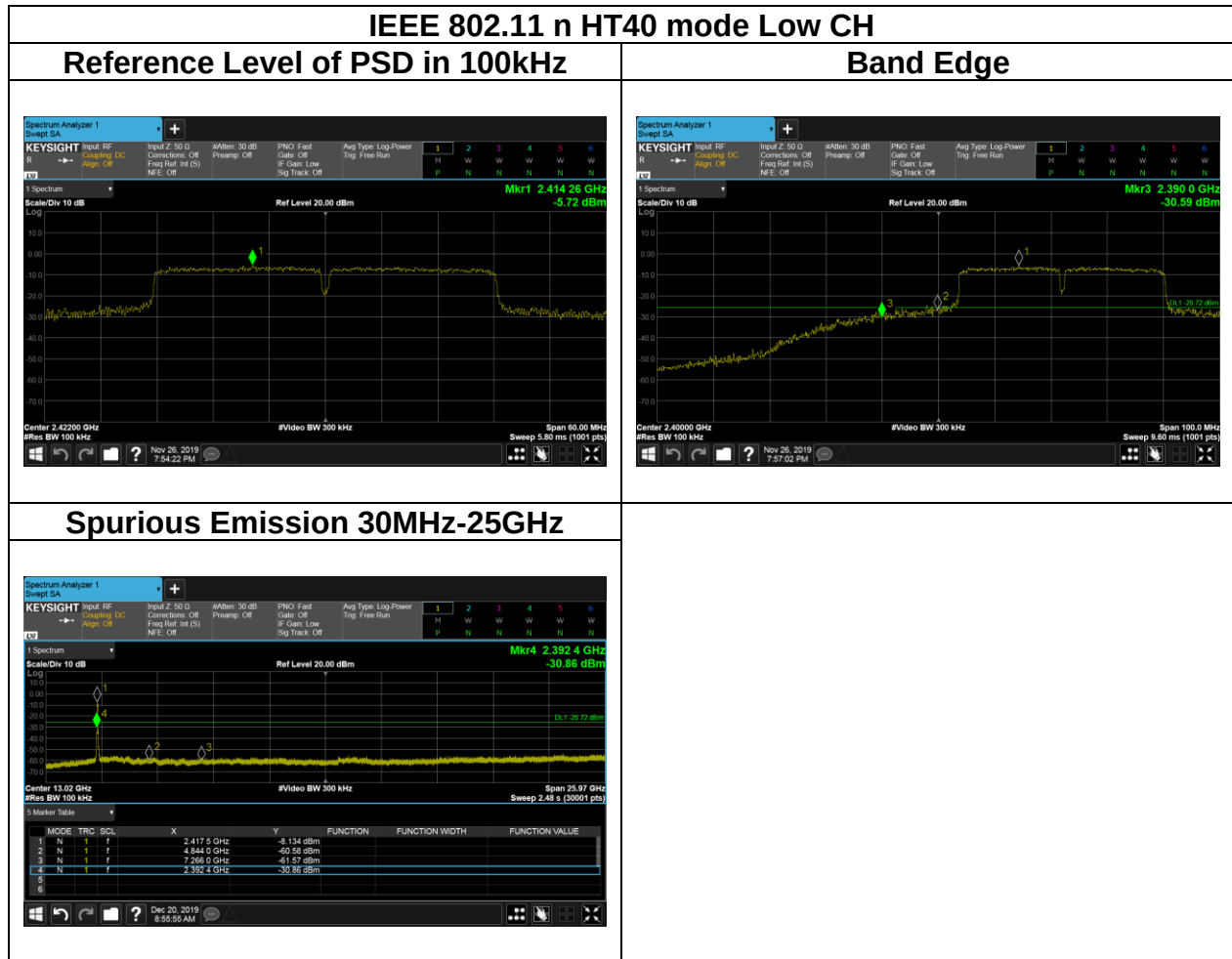
Chain 1

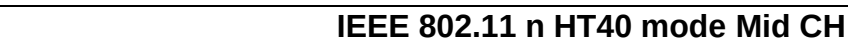




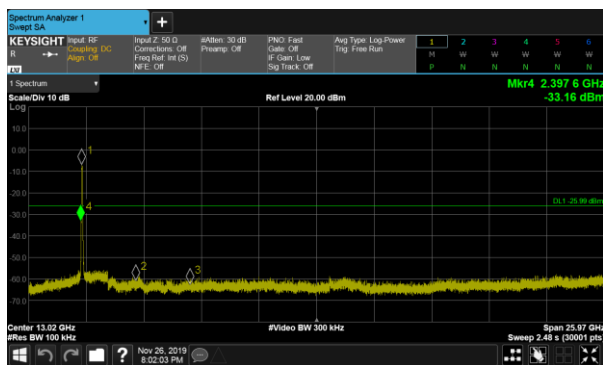
Report No.: T191111D02-RP

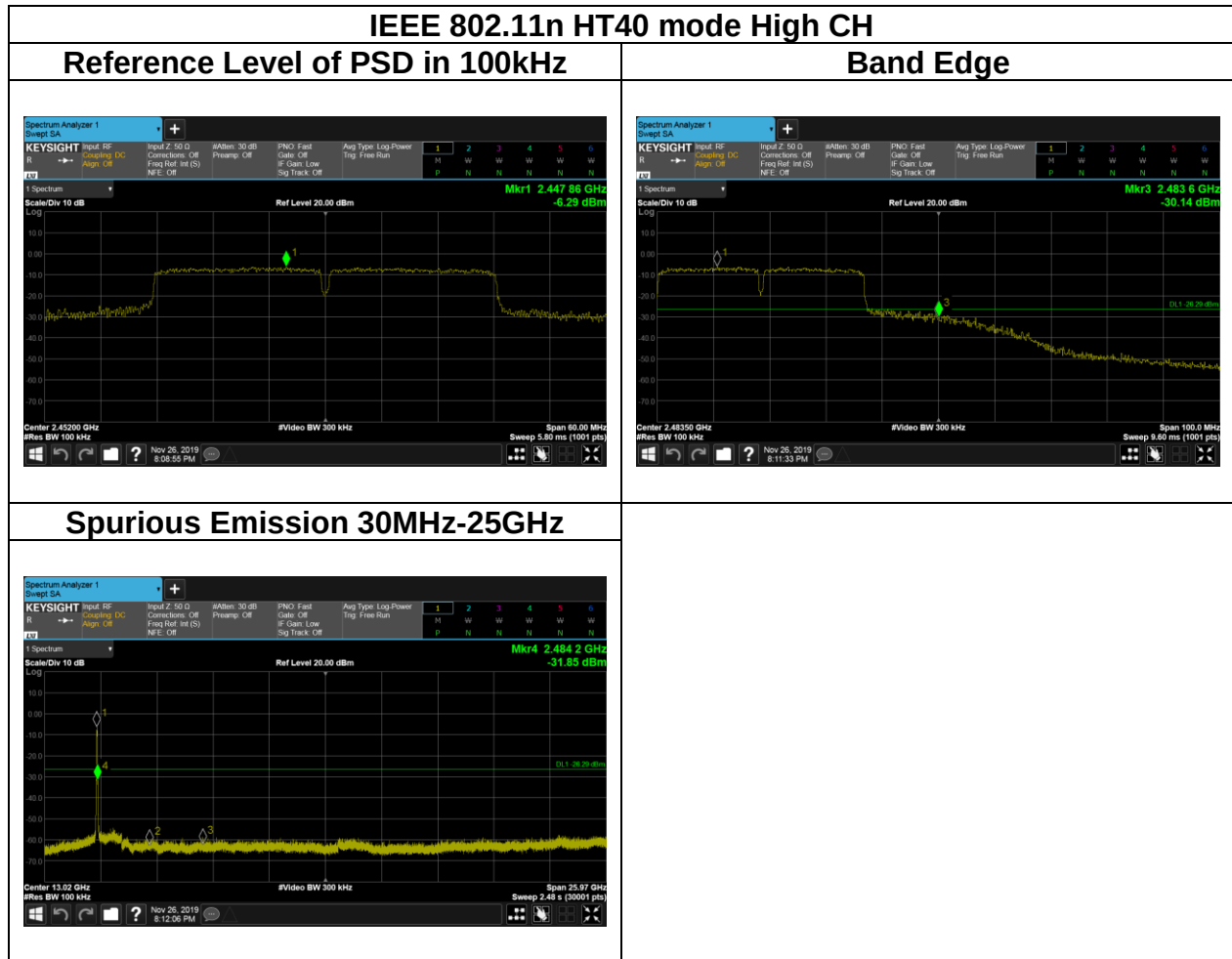






Spurious Emission 30MHz-25GHz





5.6 RADIATION BANDEDGE AND SPURIOUS EMISSION

5.6.1 Test Limit

FCC according to §15.247(d), §15.209 and §15.205,

In any 100 kHz bandwidth outside the authorized frequency band, all harmonic and spurious must be least 20 dB below the highest emission level with the authorized frequency band. Radiation emission which fall in the restricted bands must also follow the FCC section 15.209 as below limit in table.

Below 30 MHz

Frequency	Field Strength (microvolts/m)	Magnetic H-Field (microamperes/m)	Measurement Distance (metres)
9-490 kHz	2,400/F (F in kHz)	2,400/F (F in kHz)	300
490-1,705 kHz	24,000/F (F in kHz)	24,000/F (F in kHz)	30
1.705-30 MHz	30	N/A	30

Above 30 MHz

Frequency	Field Strength (microvolts/m)	Measurement Distance (metres)
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

5.6.2 Test Procedure

Test method Refer as KDB 558074 D01.

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10: 2013, and the EUT set in a continuous mode.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.
3. Span shall wide enough to full capture the emission measured. The SA from 9kHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.
4. The SA setting following :
 - (1) Below 1G : RBW = 100kHz, VBW $\geq$ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
 - (2) Above 1G :
 - (2.1) For Peak measurement : RBW = 1MHz, VBW $\geq$ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
 - (2.2) For Average measurement : RBW = 1MHz, VBW
If Duty Cycle $\geq$ 98%, VBW=10Hz.
If Duty Cycle < 98%, VBW=1/T.

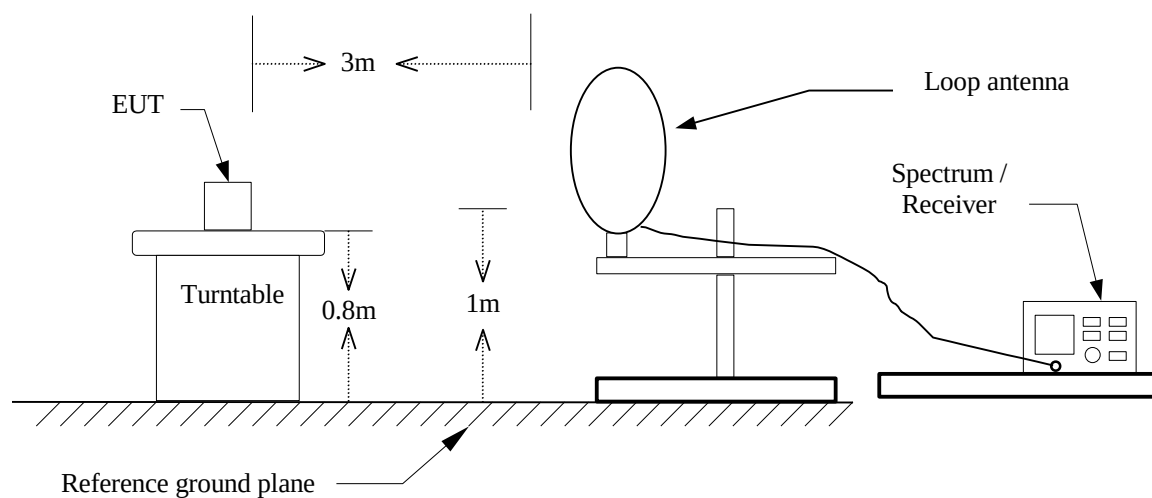
Remark:

1. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.
2. No emission found between lowest internal used/generated frequency to 30MHz (9KHz~30MHz)

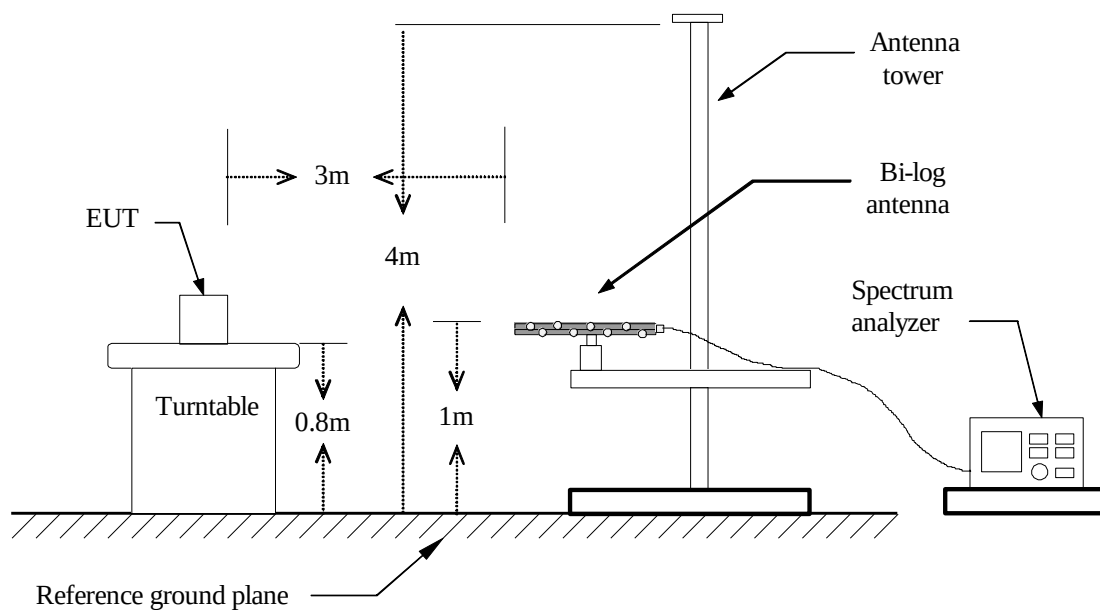
Report No.: T191111D02-RP

5.6.3 Test Setup

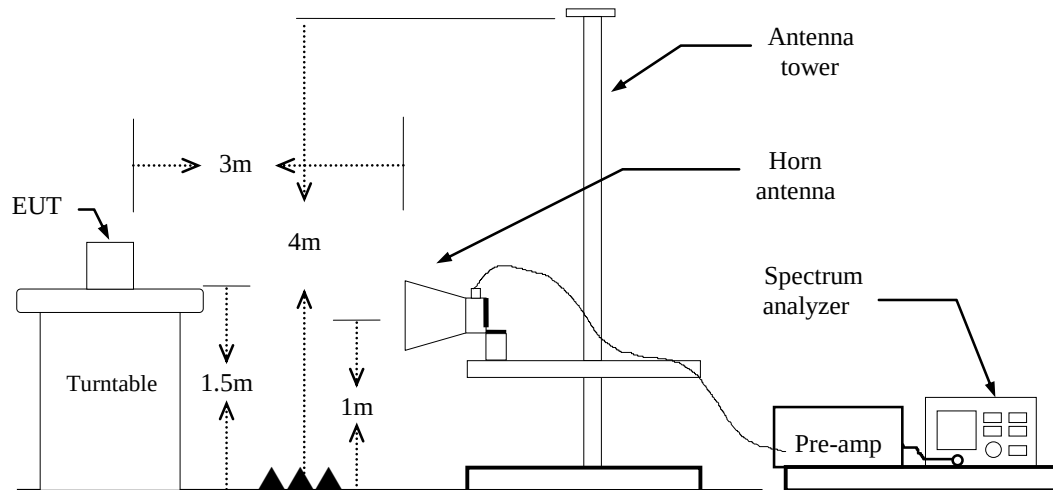
9kHz ~ 30MHz



30MHz ~ 1GHz



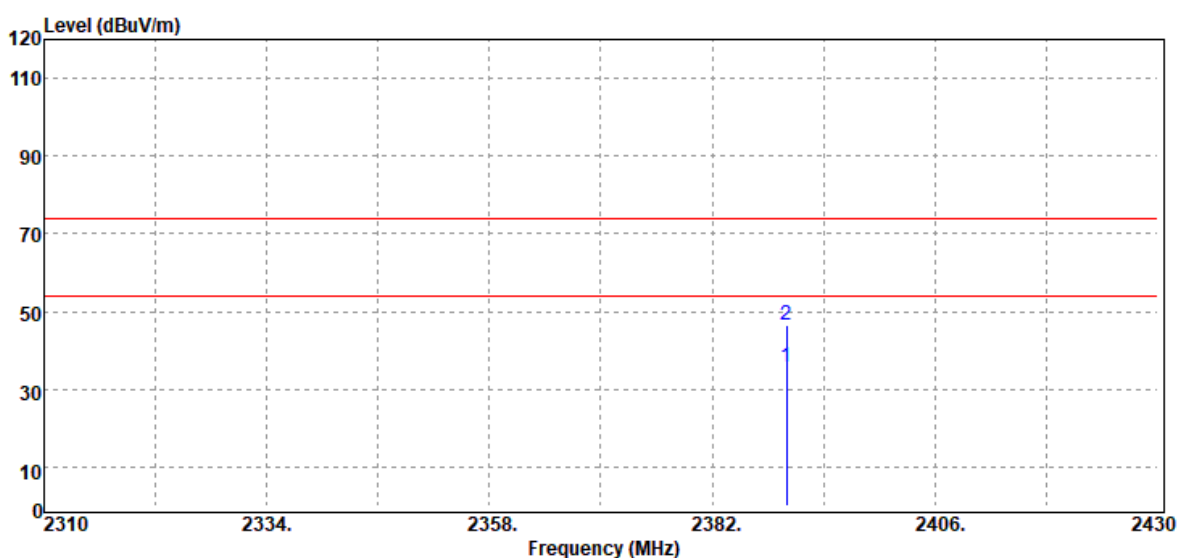
Above 1 GHz



5.6.4 Test Result

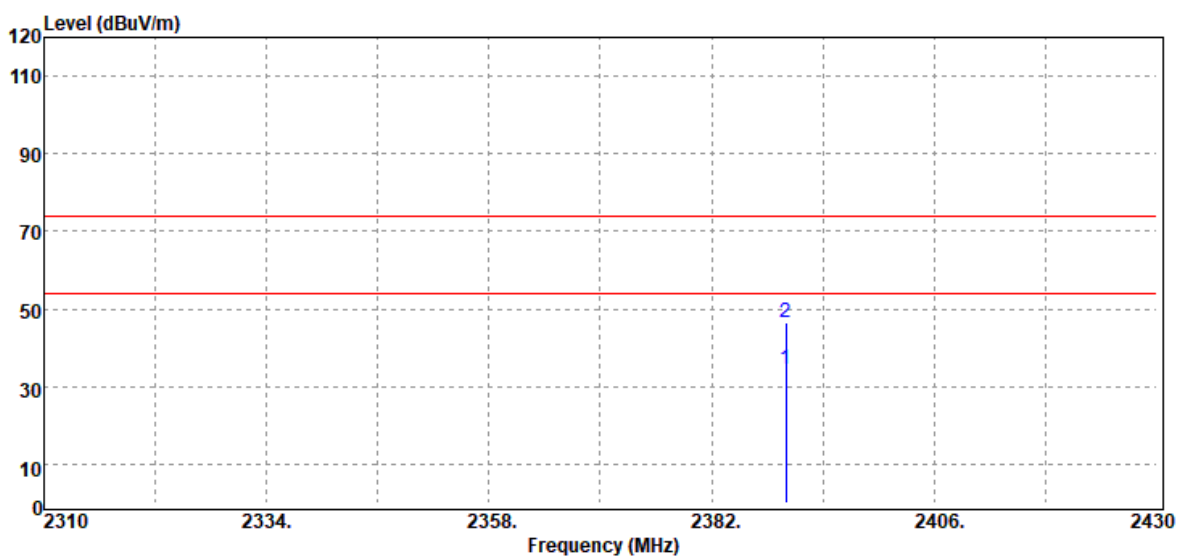
Band Edge Test Data

Test Mode	IEEE 802.11b Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



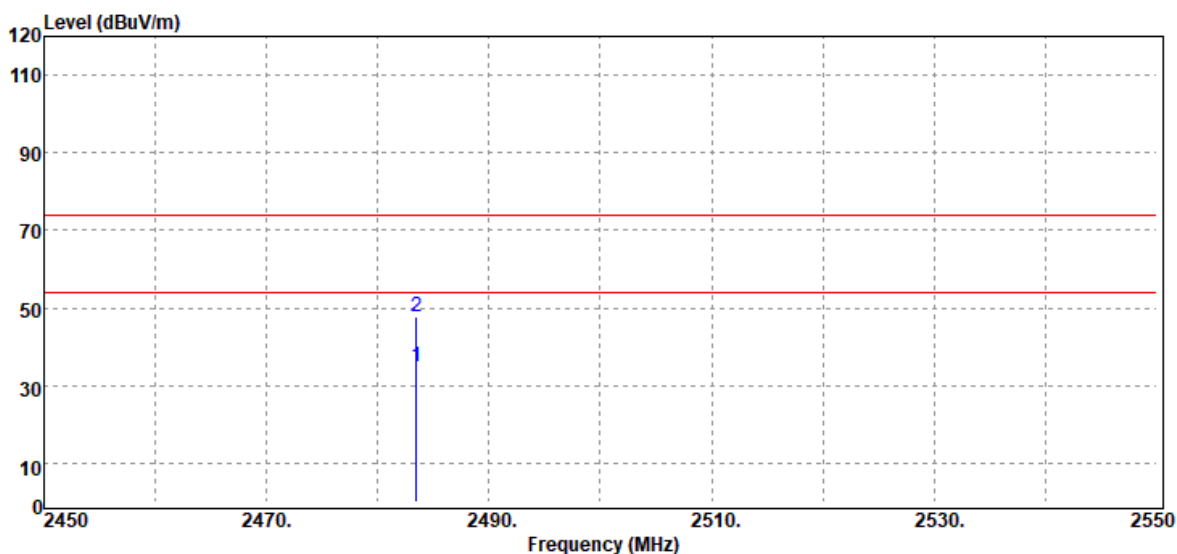
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
2390.00	Average	38.92	-3.38	35.54	54.00	-18.46
2390.00	Peak	50.00	-3.38	46.62	74.00	-27.38

Test Mode	IEEE 802.11b Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



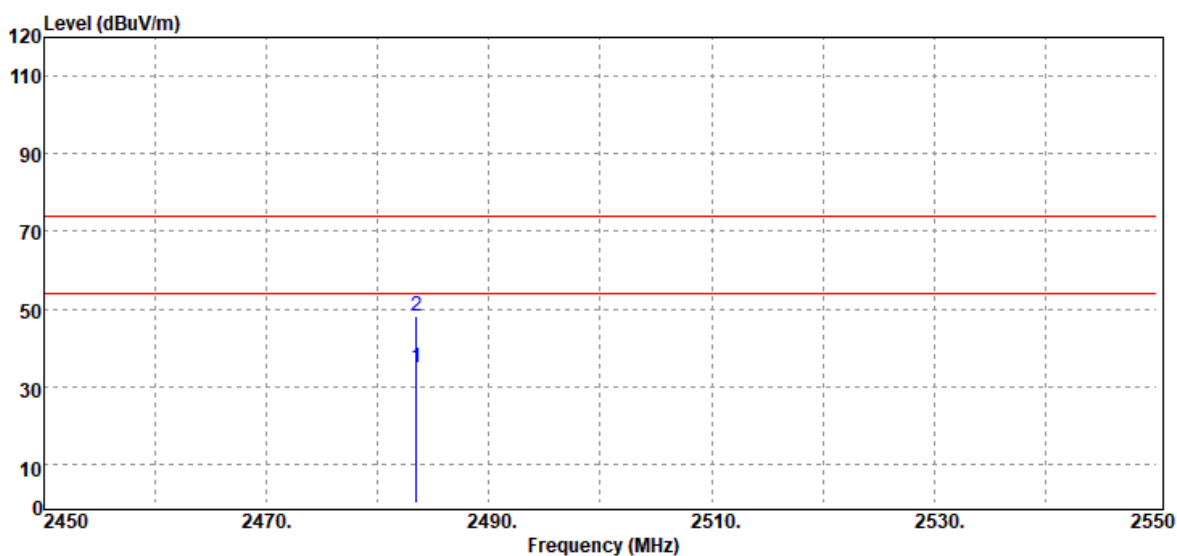
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
2390.00	Average	37.91	-3.38	34.53	54.00	-19.47
2390.00	Peak	49.85	-3.38	46.47	74.00	-27.53

Test Mode	IEEE 802.11b high CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



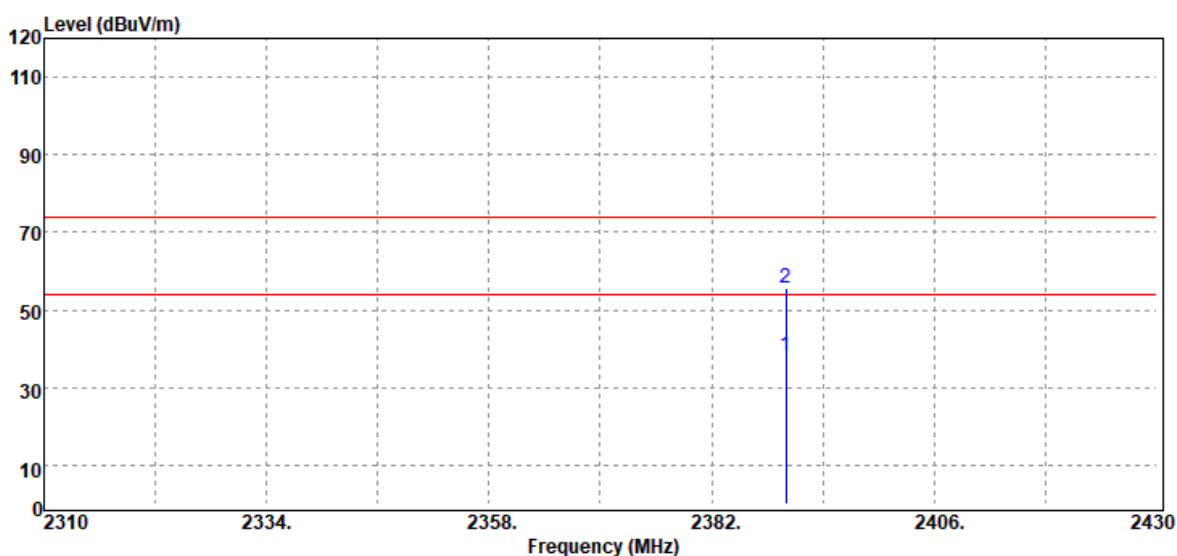
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
2483.50	Average	37.63	-2.83	34.80	54.00	-19.20
2483.50	Peak	50.58	-2.83	47.75	74.00	-26.25

Test Mode	IEEE 802.11b high CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



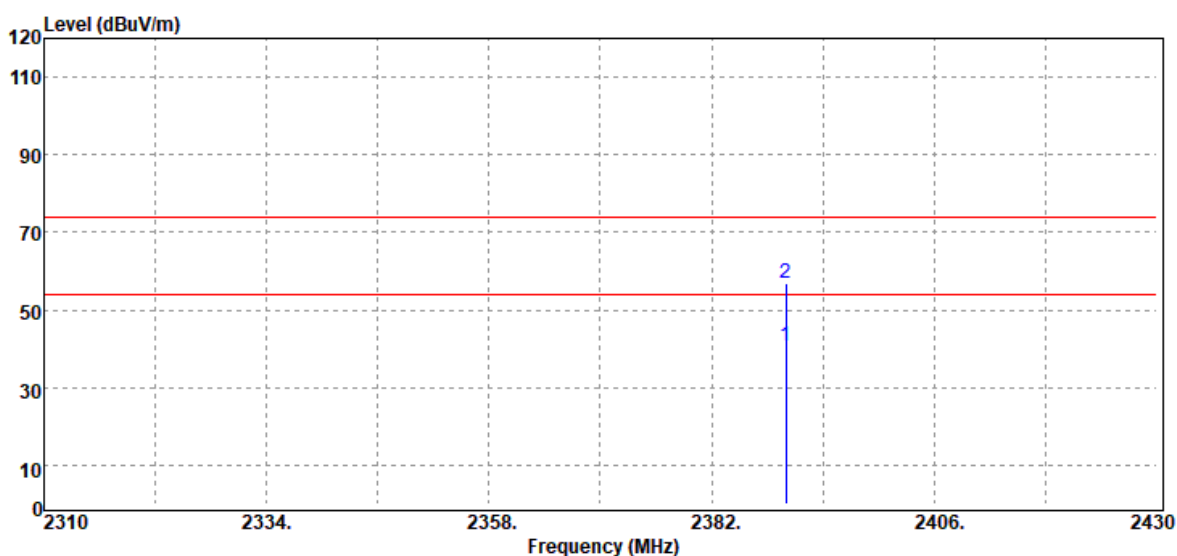
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
2483.50	Average	37.64	-2.83	34.81	54.00	-19.19
2483.50	Peak	50.99	-2.83	48.16	74.00	-25.84

Test Mode	IEEE 802.11g Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



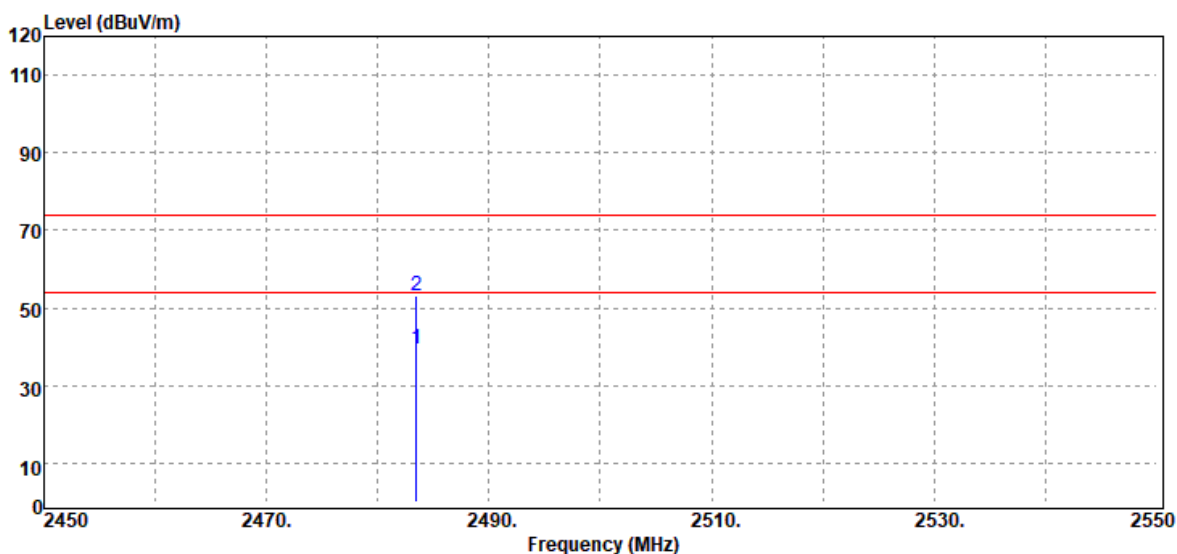
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
2390.00	Average	41.75	-3.38	38.37	54.00	-15.63
2390.00	Peak	58.88	-3.38	55.50	74.00	-18.50

Test Mode	IEEE 802.11g Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



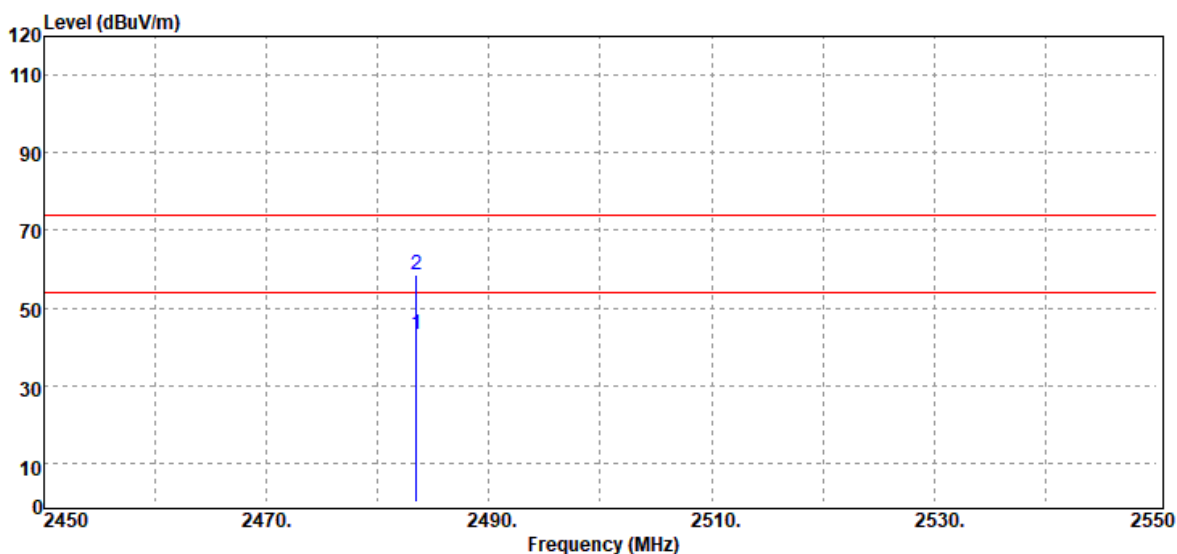
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
2390.00	Average	43.88	-3.38	40.50	54.00	-13.50
2390.00	Peak	60.41	-3.38	57.03	74.00	-16.97

Test Mode	IEEE 802.11g high CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



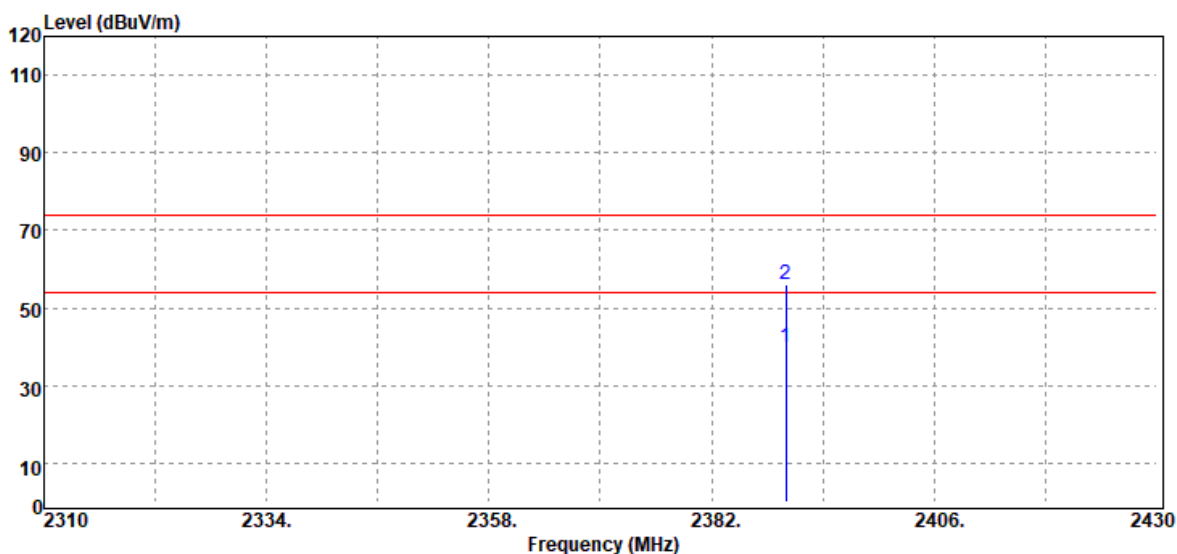
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
2483.50	Average	42.11	-2.83	39.28	54.00	-14.72
2483.50	Peak	55.82	-2.83	52.99	74.00	-21.01

Test Mode	IEEE 802.11g Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



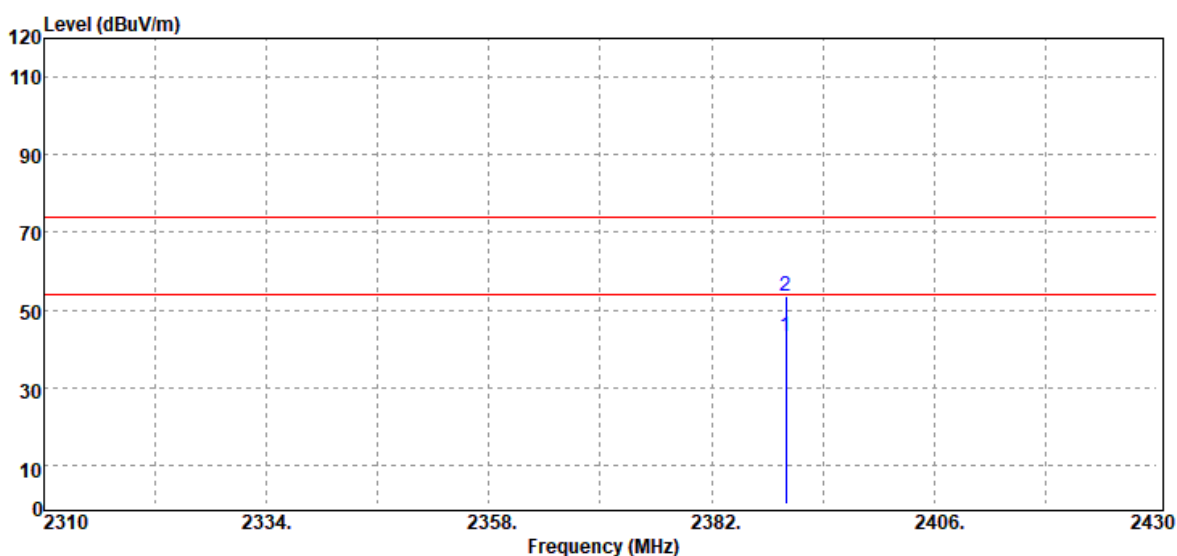
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
2483.50	Average	45.86	-2.83	43.03	54.00	-10.97
2483.50	Peak	61.36	-2.83	58.53	74.00	-15.47

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



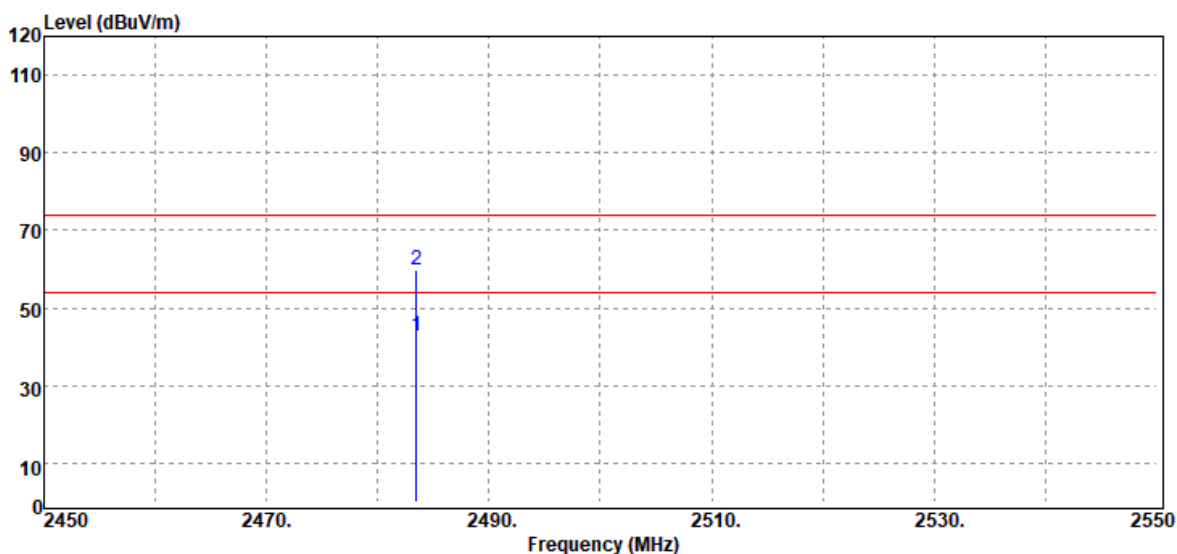
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
2390.00	Average	43.27	-3.38	39.89	54.00	-14.11
2390.00	Peak	59.26	-3.38	55.88	74.00	-18.12

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



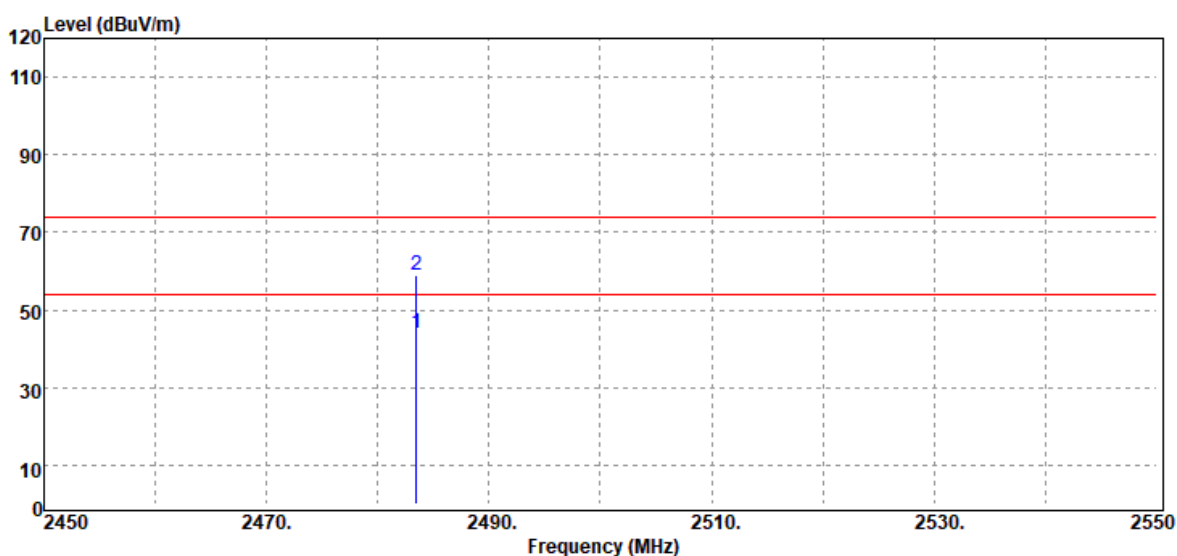
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
2390.00	Average	46.66	-3.38	43.28	54.00	-10.72
2390.00	Peak	57.11	-3.38	53.73	74.00	-20.27

Test Mode	IEEE 802.11n HT20 high CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



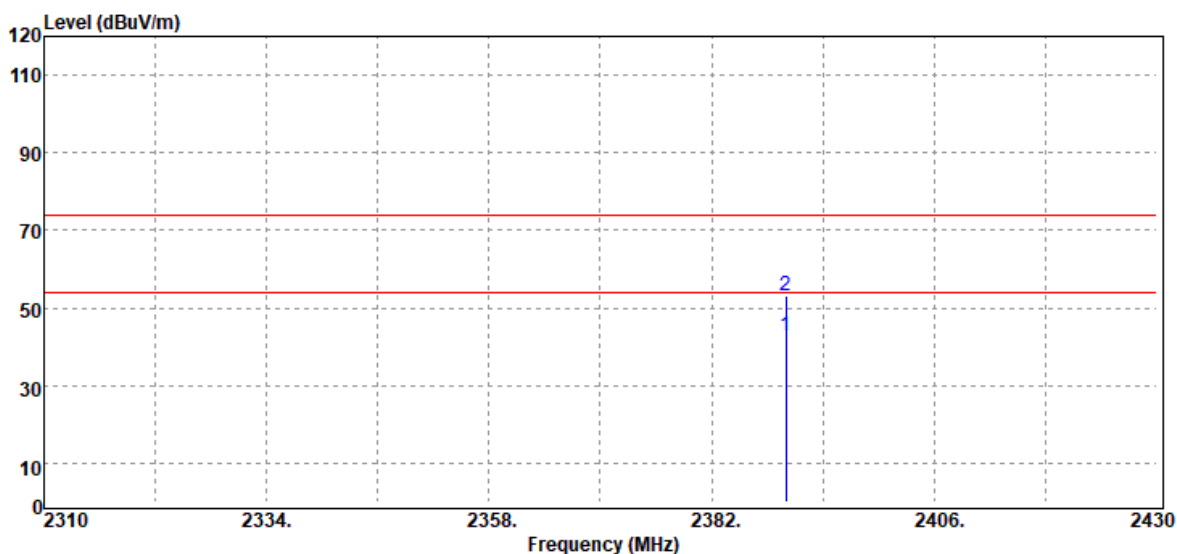
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
2483.50	Average	45.40	-2.83	42.57	54.00	-11.43
2483.50	Peak	62.53	-2.83	59.70	74.00	-14.30

Test Mode	IEEE 802.11n HT20 high CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



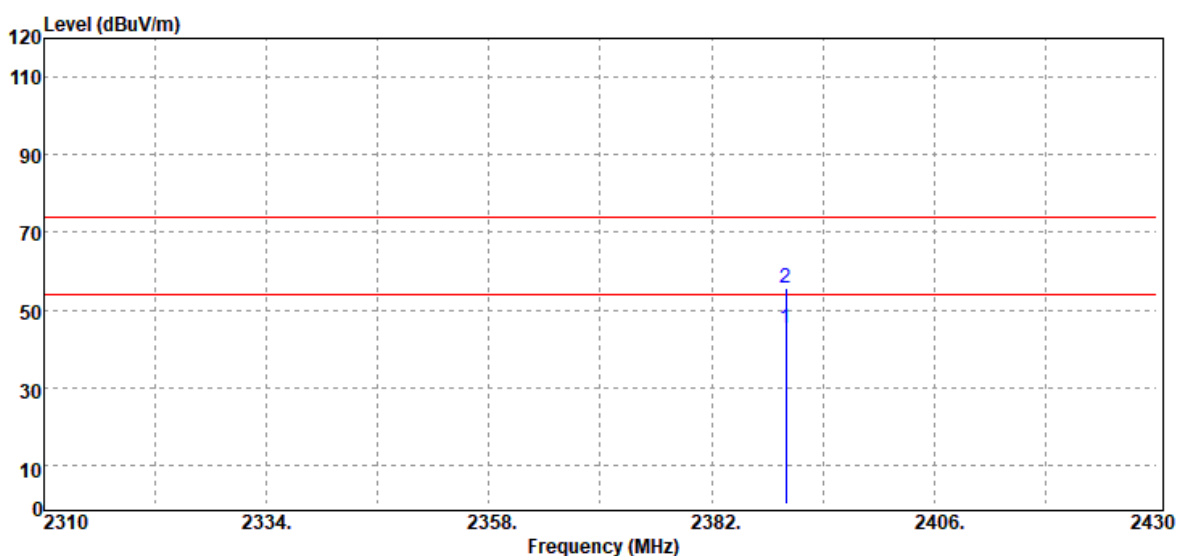
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
2483.50	Average	46.84	-2.83	44.01	54.00	-9.99
2483.50	Peak	61.76	-2.83	58.93	74.00	-15.07

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



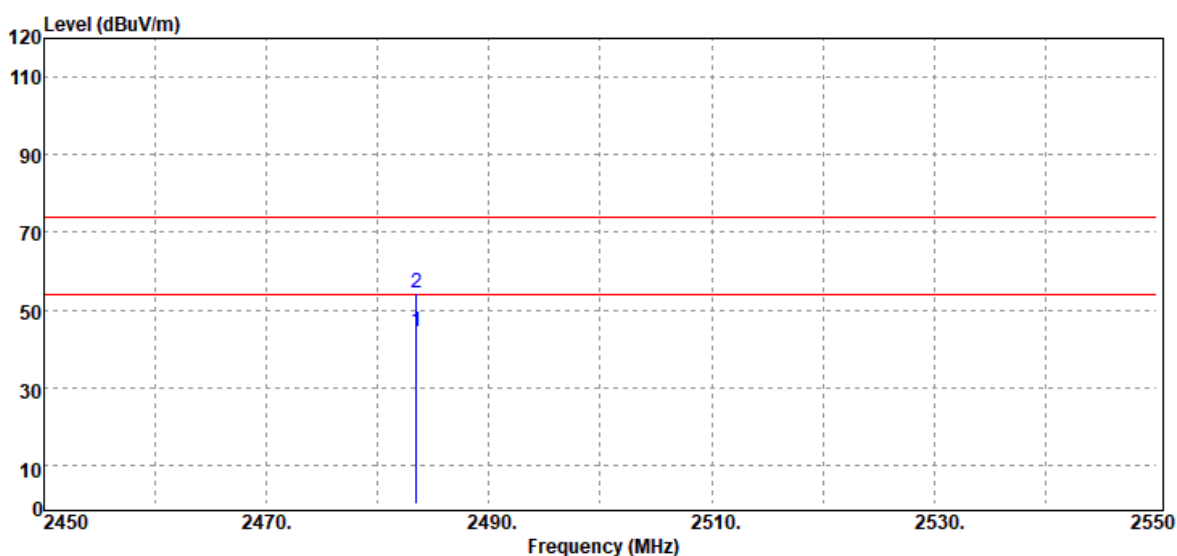
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
2390.00	Average	46.21	-3.38	42.83	54.00	-11.17
2390.00	Peak	56.40	-3.38	53.02	74.00	-20.98

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



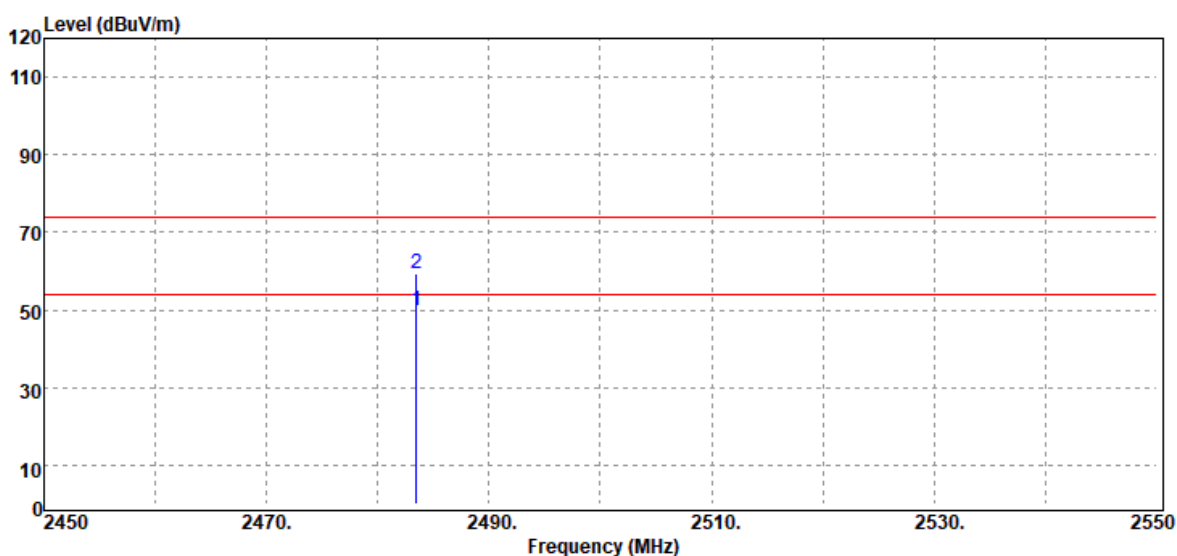
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
2390.00	Average	48.53	-3.38	45.15	54.00	-8.85
2390.00	Peak	59.12	-3.38	55.74	74.00	-18.26

Test Mode	IEEE 802.11n HT40 high CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
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
2483.50	Average	47.13	-2.83	44.30	54.00	-9.70
2483.50	Peak	57.08	-2.83	54.25	74.00	-19.75

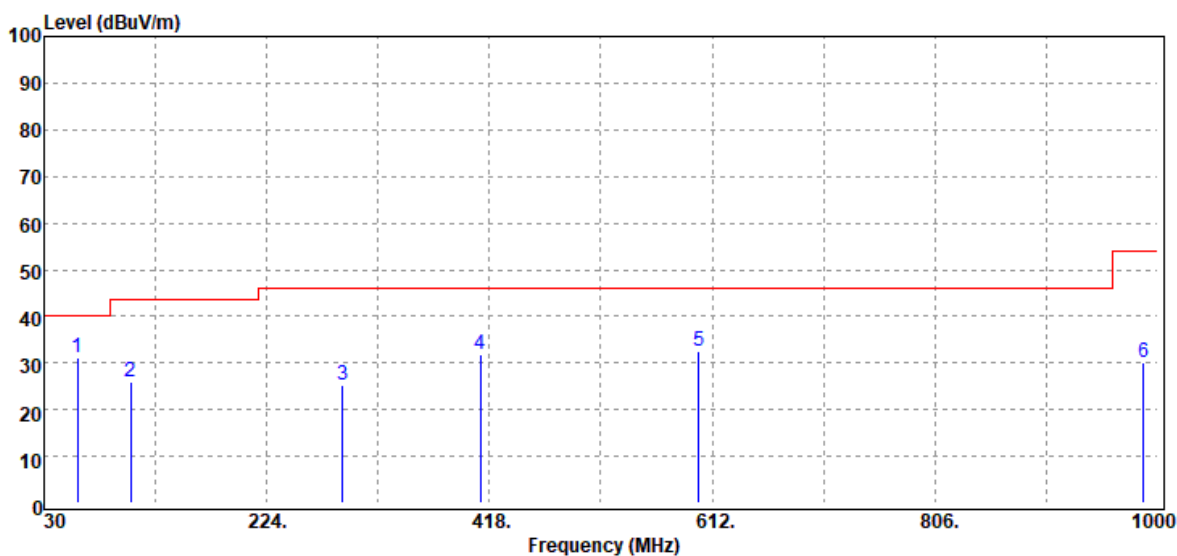
Test Mode	IEEE 802.11n HT40 high CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Band Edge	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
2483.50	Average	52.69	-2.83	49.86	54.00	-4.14
2483.50	Peak	62.19	-2.83	59.36	74.00	-14.64

Below 1G Test Data

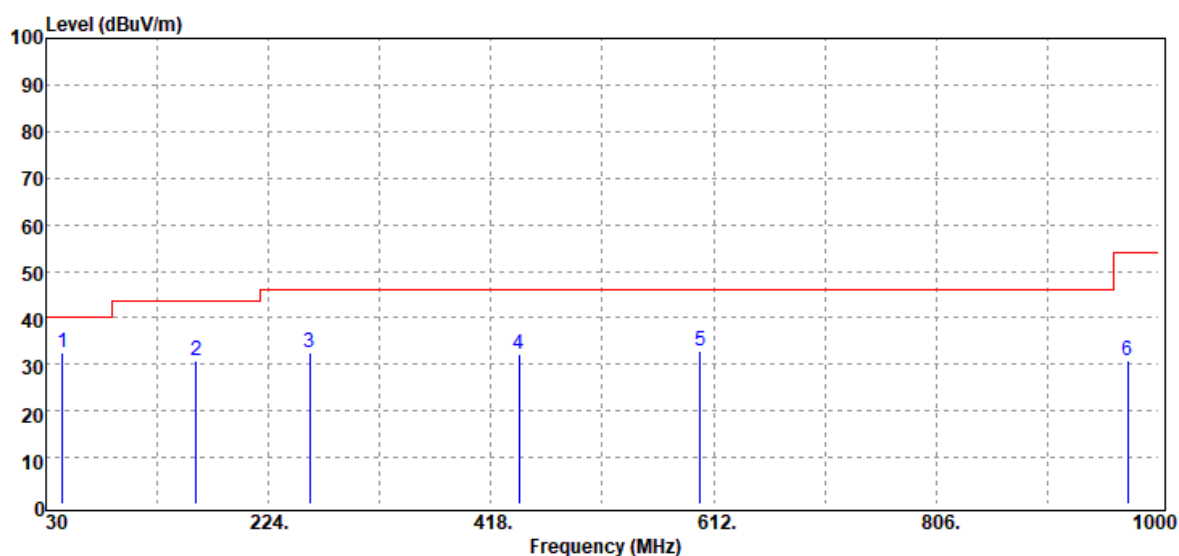
Test Mode	IEEE 802.11g Mid CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	30MHz-1GHz	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
59.10	Peak	47.14	-15.96	31.18	40.00	-8.82
105.66	Peak	37.01	-11.02	25.99	43.50	-17.51
289.96	Peak	33.53	-8.34	25.19	46.00	-20.81
410.24	Peak	37.02	-5.11	31.91	46.00	-14.09
600.36	Peak	34.02	-1.65	32.37	46.00	-13.63
987.39	Peak	24.77	5.46	30.23	54.00	-23.77

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

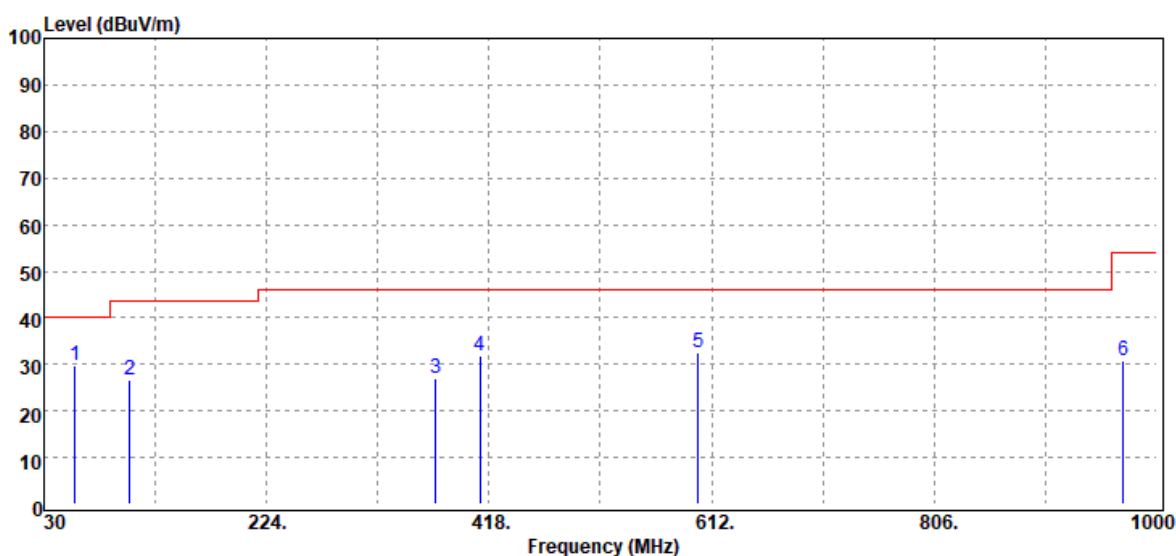
Test Mode	IEEE 802.11g Mid CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	30MHz-1GHz	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
44.55	Peak	45.17	-12.72	32.45	40.00	-7.55
160.95	Peak	40.83	-10.18	30.65	43.50	-12.85
259.89	Peak	42.37	-9.77	32.60	46.00	-13.40
442.25	Peak	36.09	-4.05	32.04	46.00	-13.96
600.36	Peak	34.49	-1.65	32.84	46.00	-13.16
972.84	Peak	25.10	5.56	30.66	54.00	-23.34

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

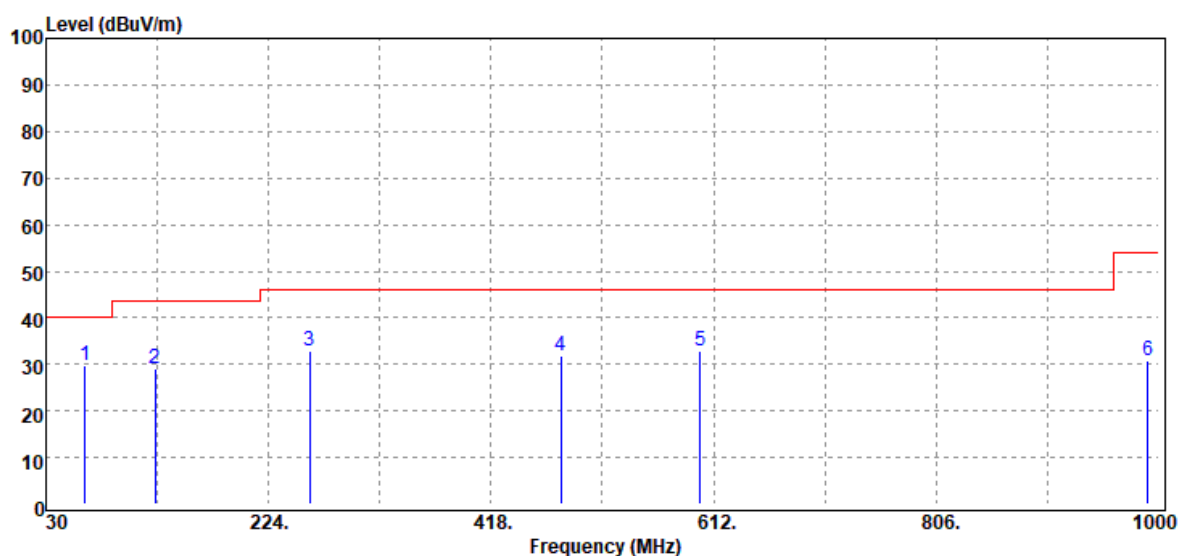
Test Mode	IEEE 802.11n HT40 Mid CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	30MHz-1GHz	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
57.16	Peak	45.69	-15.91	29.78	40.00	-10.22
104.69	Peak	37.90	-11.18	26.72	43.50	-16.78
371.44	Peak	33.42	-6.42	27.00	46.00	-19.00
410.24	Peak	36.81	-5.11	31.70	46.00	-14.30
600.36	Peak	34.05	-1.65	32.40	46.00	-13.60
970.90	Peak	25.52	5.37	30.89	54.00	-23.11

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

Test Mode	IEEE 802.11n HT40 Mid CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	30MHz-1GHz	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

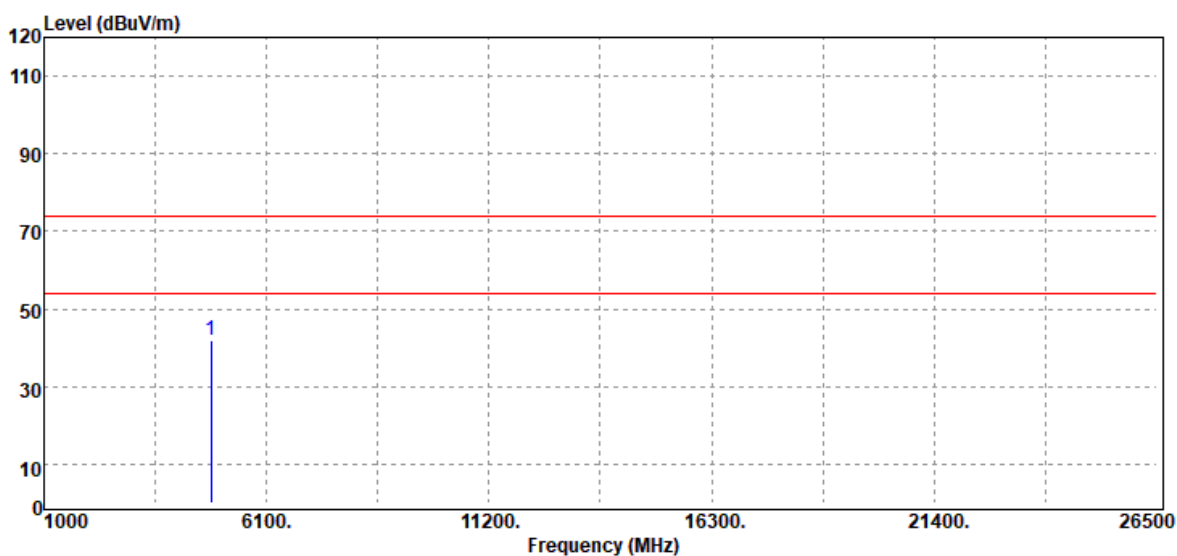


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
63.95	Peak	45.12	-15.28	29.84	40.00	-10.16
125.06	Peak	37.72	-8.80	28.92	43.50	-14.58
259.89	Peak	42.61	-9.77	32.84	46.00	-13.16
479.11	Peak	34.81	-2.98	31.83	46.00	-14.17
600.36	Peak	34.35	-1.65	32.70	46.00	-13.30
990.30	Peak	25.43	5.31	30.74	54.00	-23.26

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

Above 1G Test Data

Test Mode	IEEE 802.11b Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

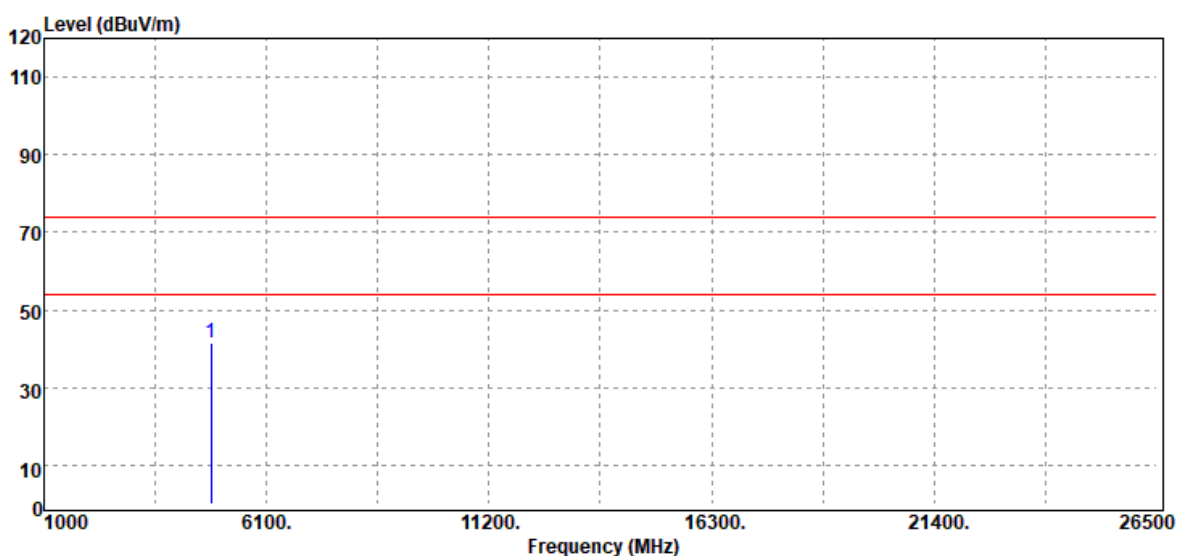


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.00	38.90	2.84	41.74	74.00	-32.26	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11b Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

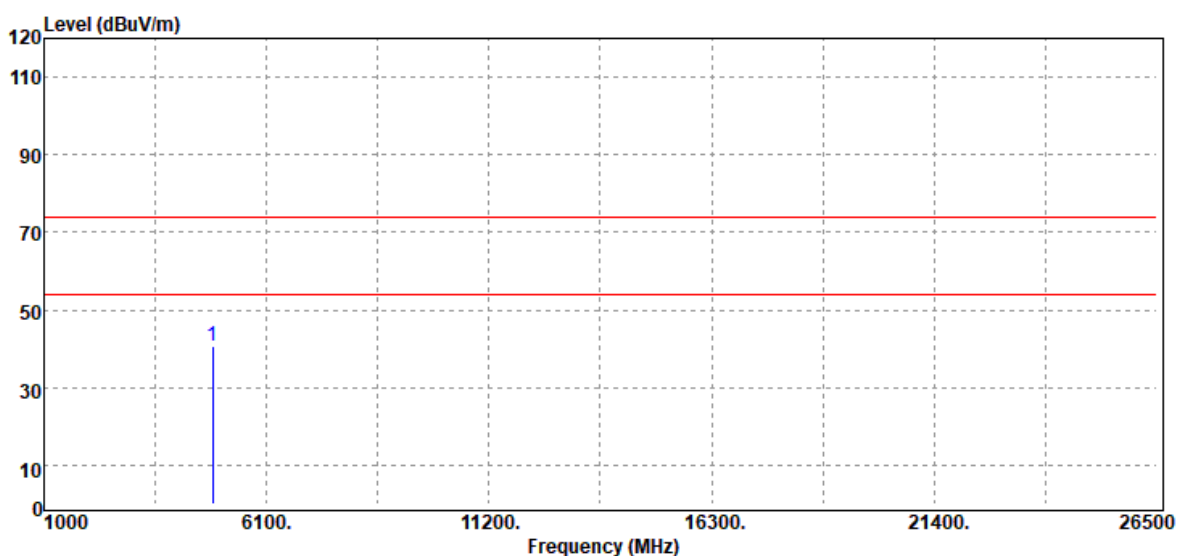


Frequency (MHz)	Reading (dBUV)	Correct Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Remark
4824.00	38.54	2.84	41.38	74.00	-32.62	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11b Mid CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

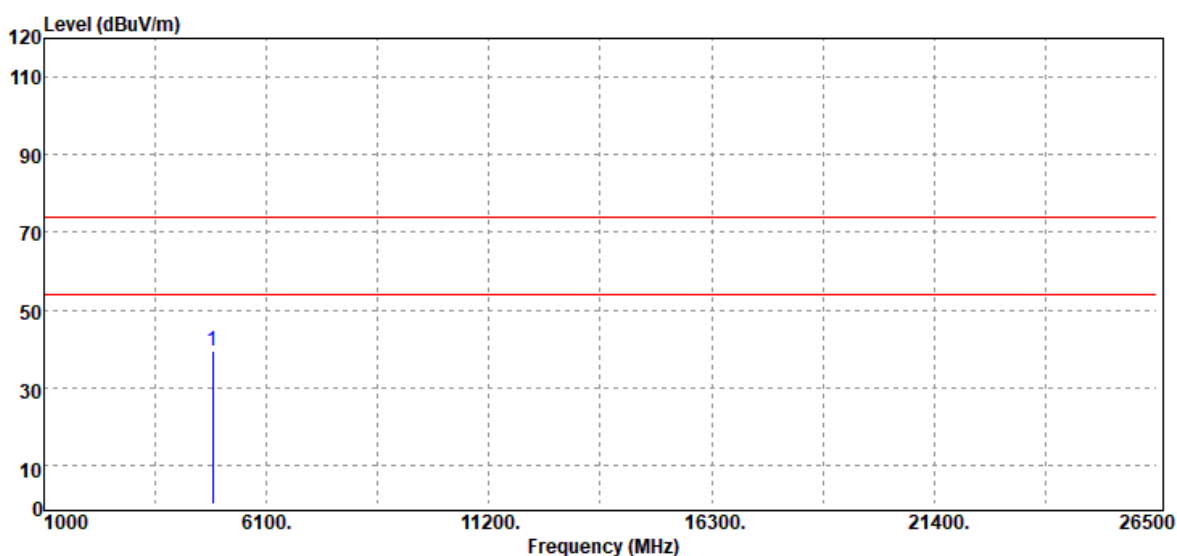


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.00	37.73	2.98	40.71	74.00	-33.29	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11b Mid CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

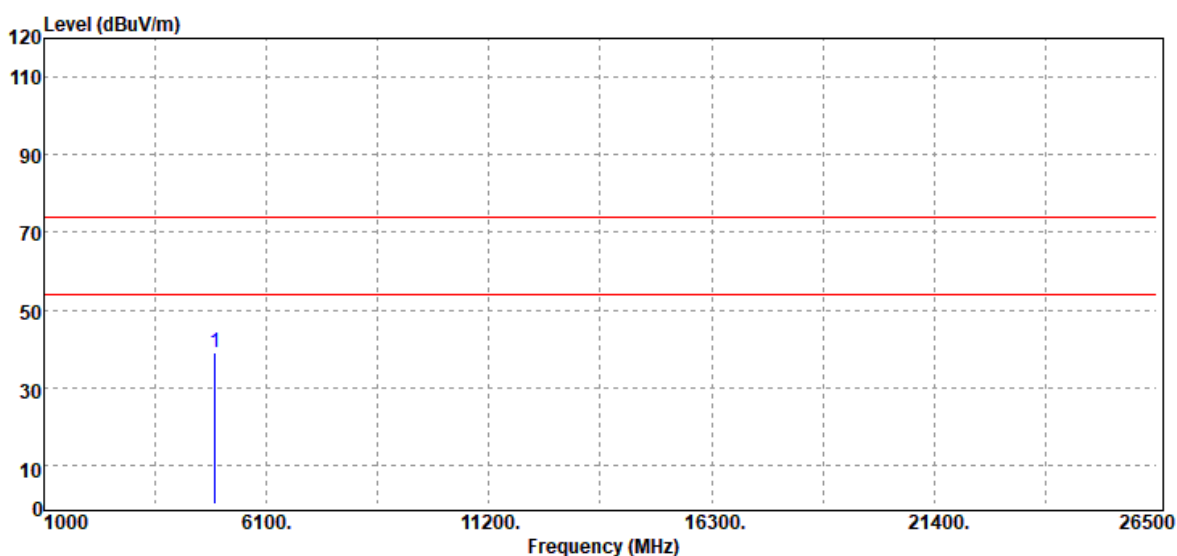


Frequency (MHz)	Reading (dBUV)	Correct Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Remark
4874.00	36.39	2.98	39.37	74.00	-34.63	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11b High CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

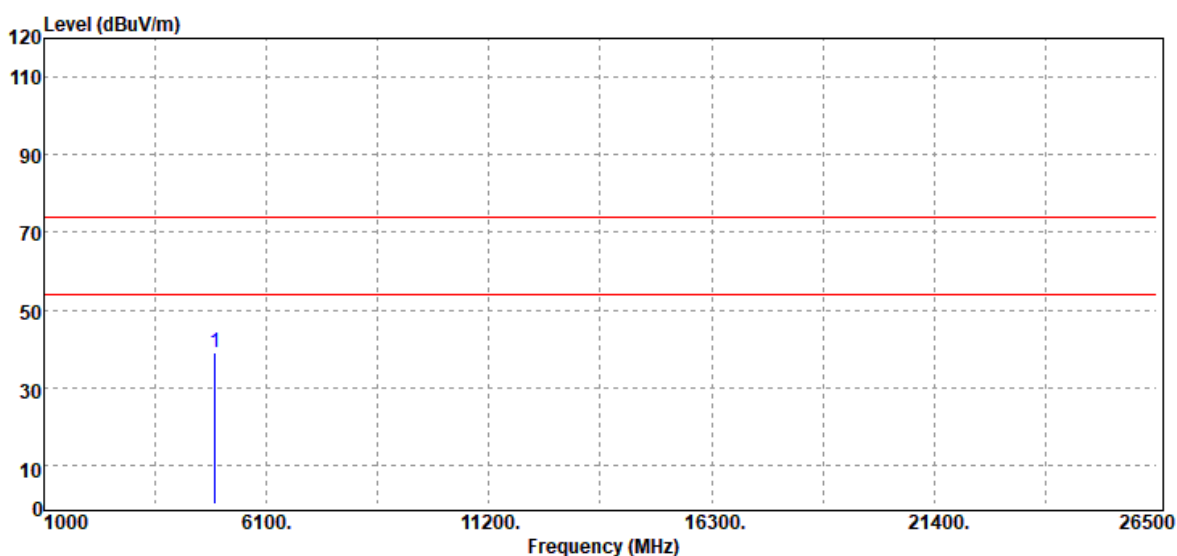


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.00	35.46	3.46	38.92	74.00	-35.08	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11b High CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

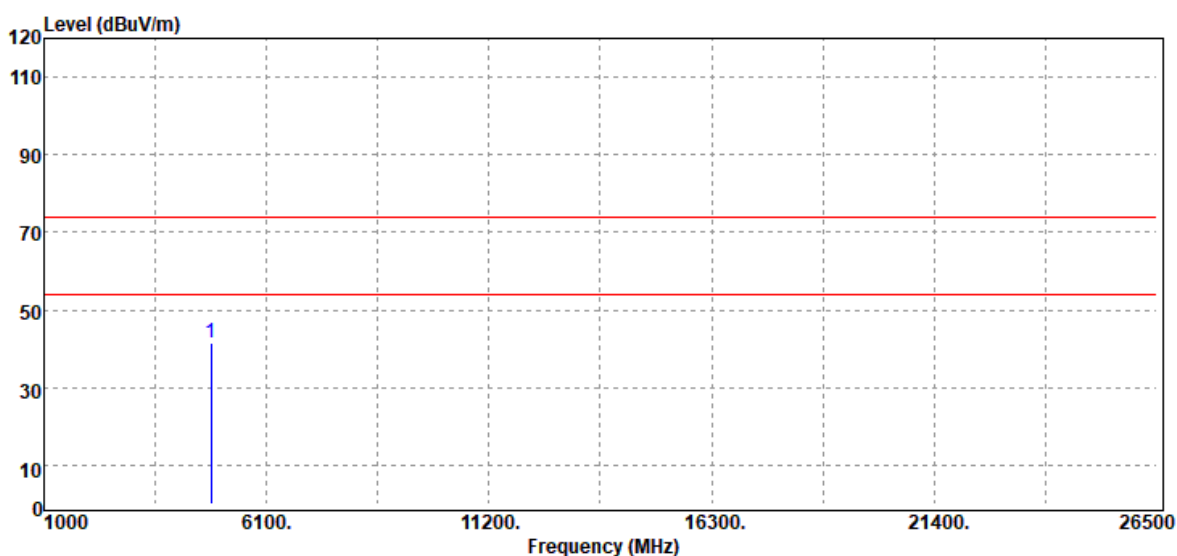


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.00	35.49	3.46	38.95	74.00	-35.05	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11g Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

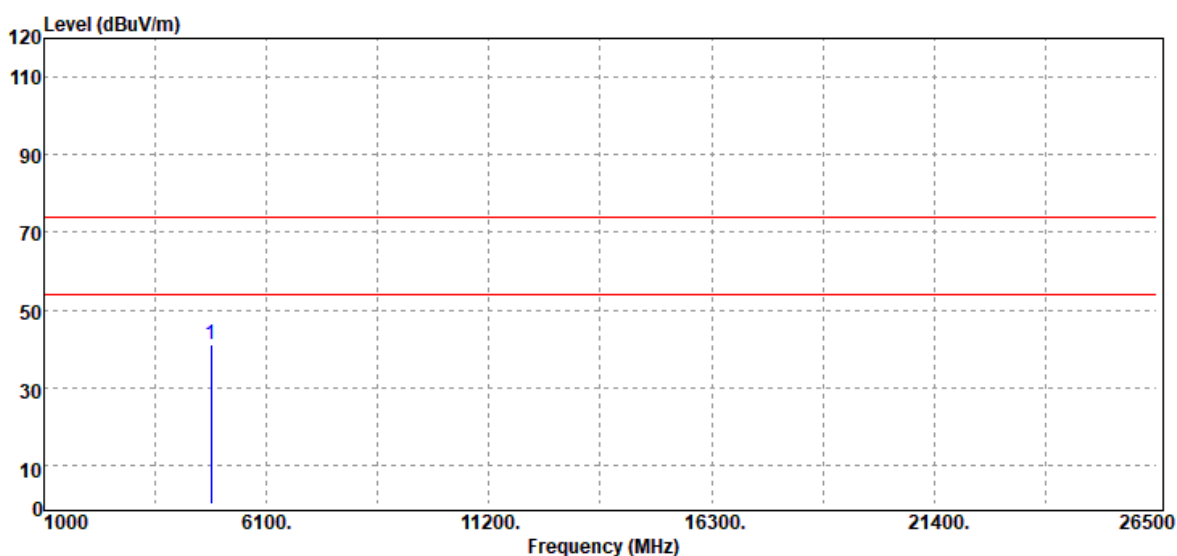


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.00	38.81	2.84	41.65	74.00	-32.35	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11g Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

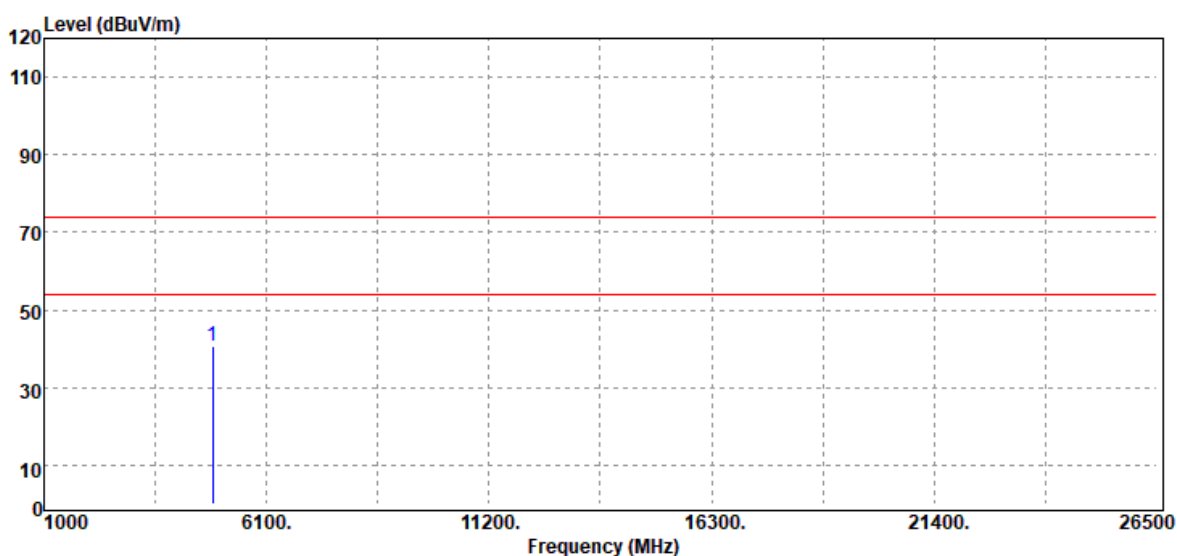


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.00	38.28	2.84	41.12	74.00	-32.88	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11g Mid CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

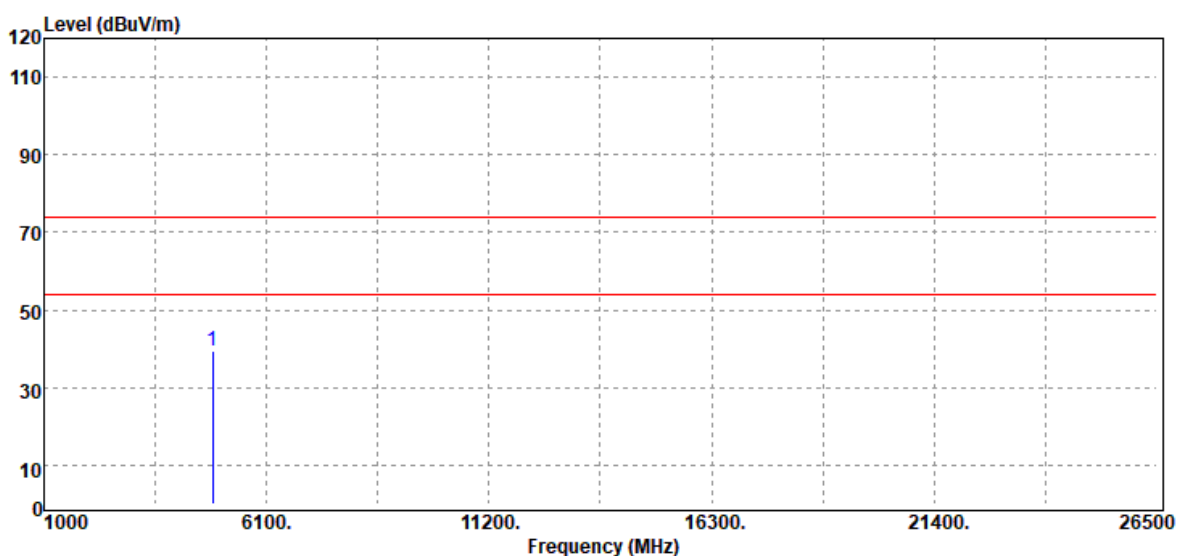


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.00	37.80	2.98	40.78	74.00	-33.22	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11g Mid CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

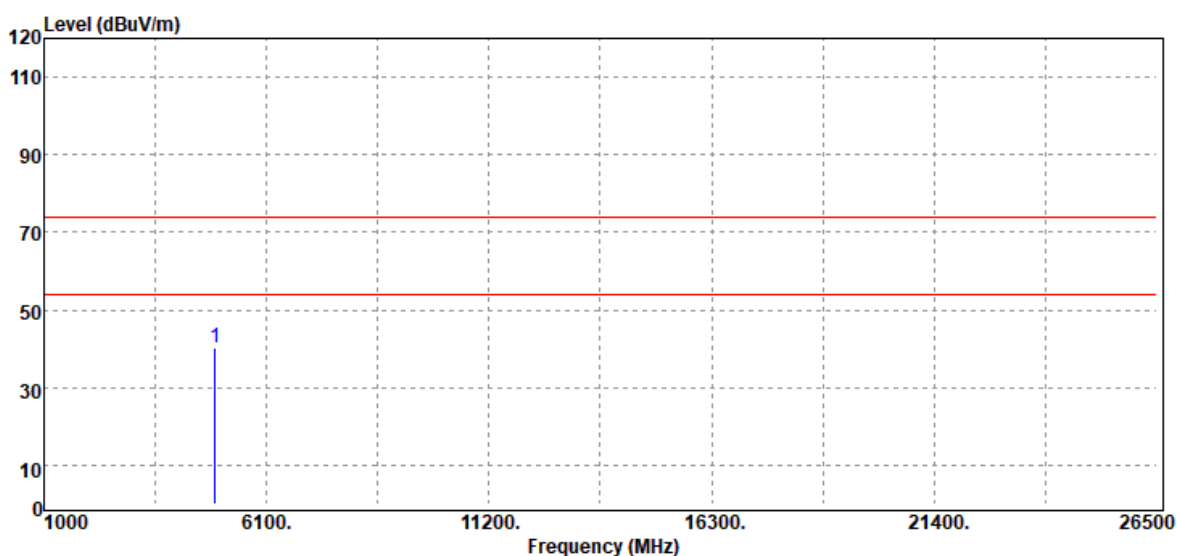


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.00	36.44	2.98	39.42	74.00	-34.58	Peak
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11g High CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

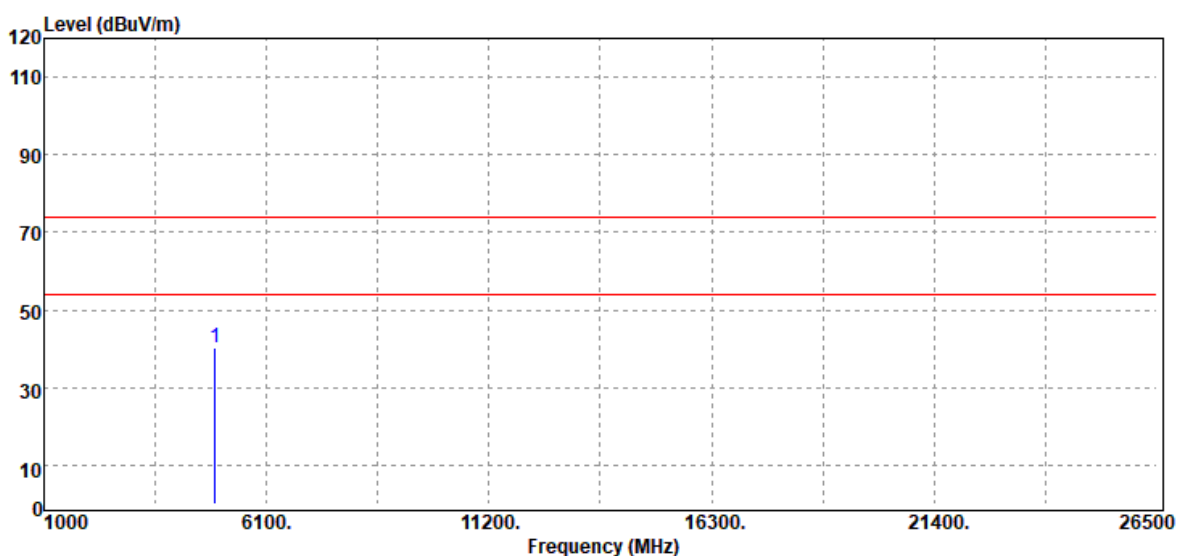


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.00	36.91	3.46	40.37	74.00	-33.63	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11g High CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

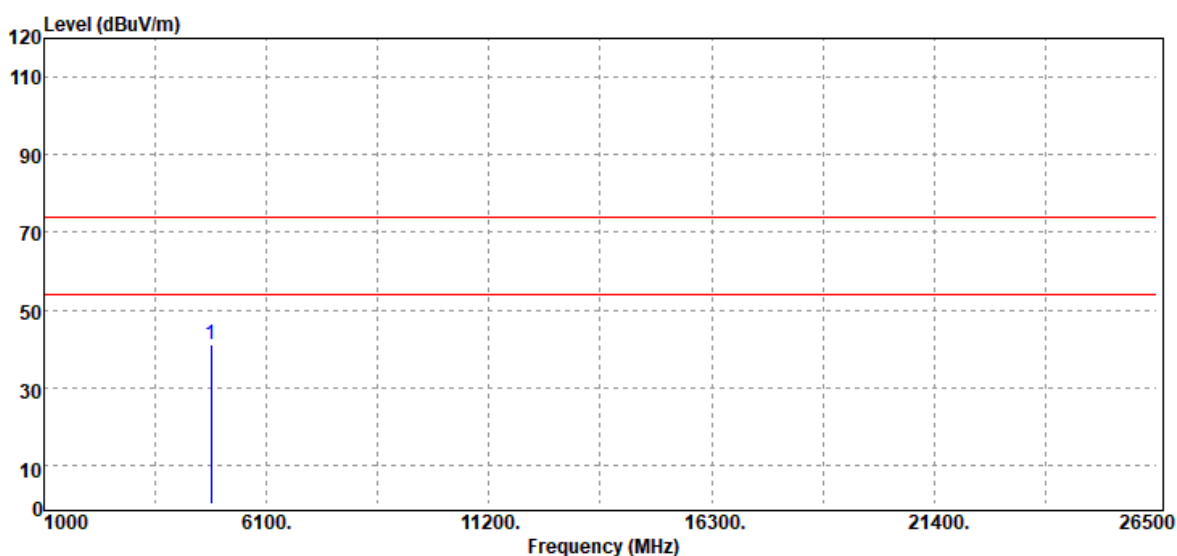


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.00	36.61	3.46	40.07	74.00	-33.93	Peak
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

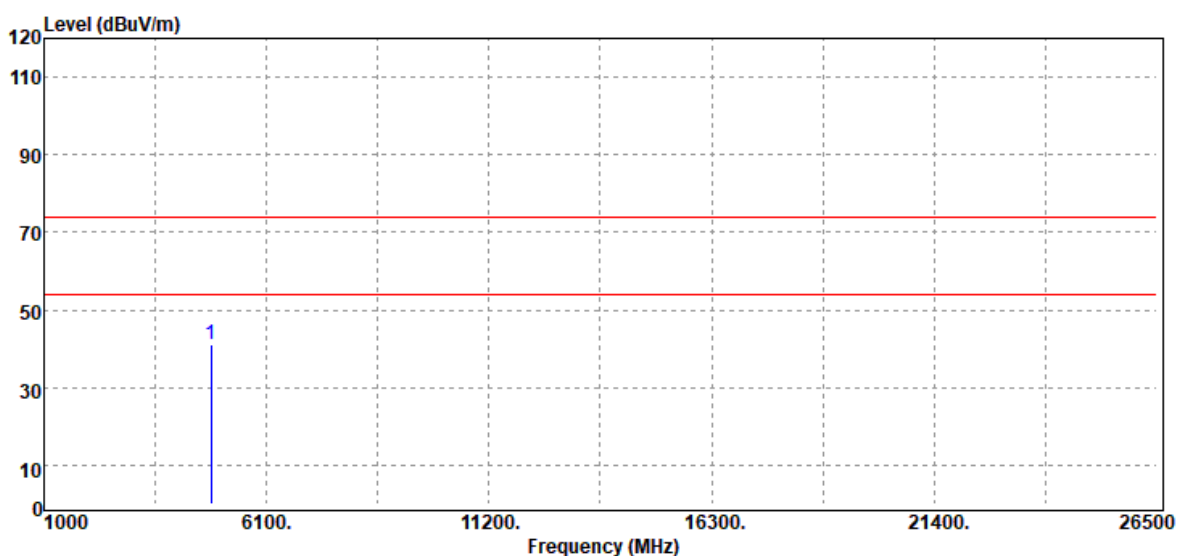


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.00	38.44	2.84	41.28	74.00	-32.72	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

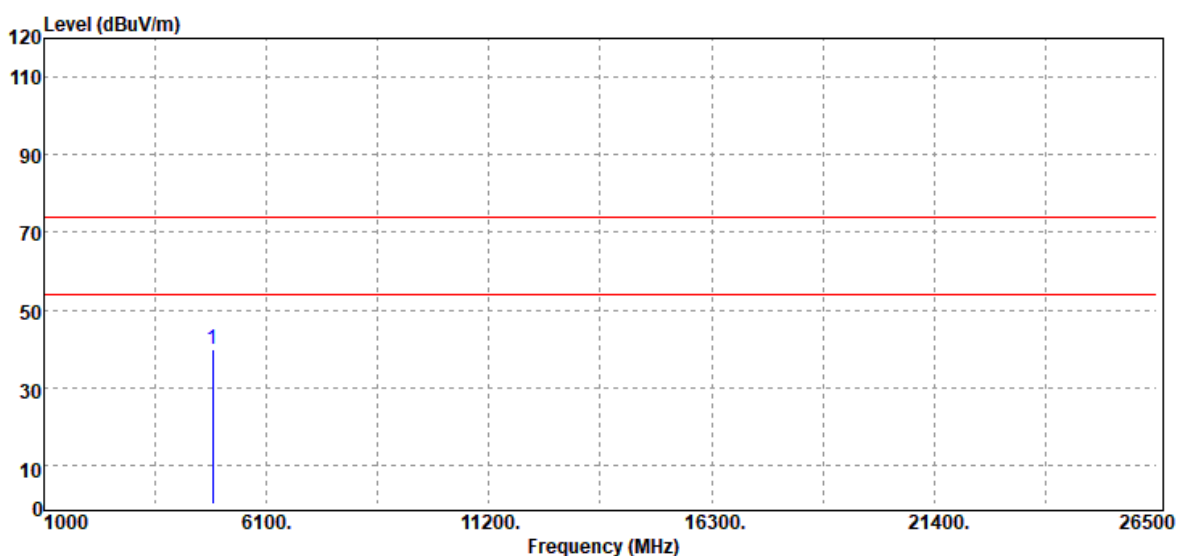


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.00	38.06	2.84	40.90	74.00	-33.10	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 Mid CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

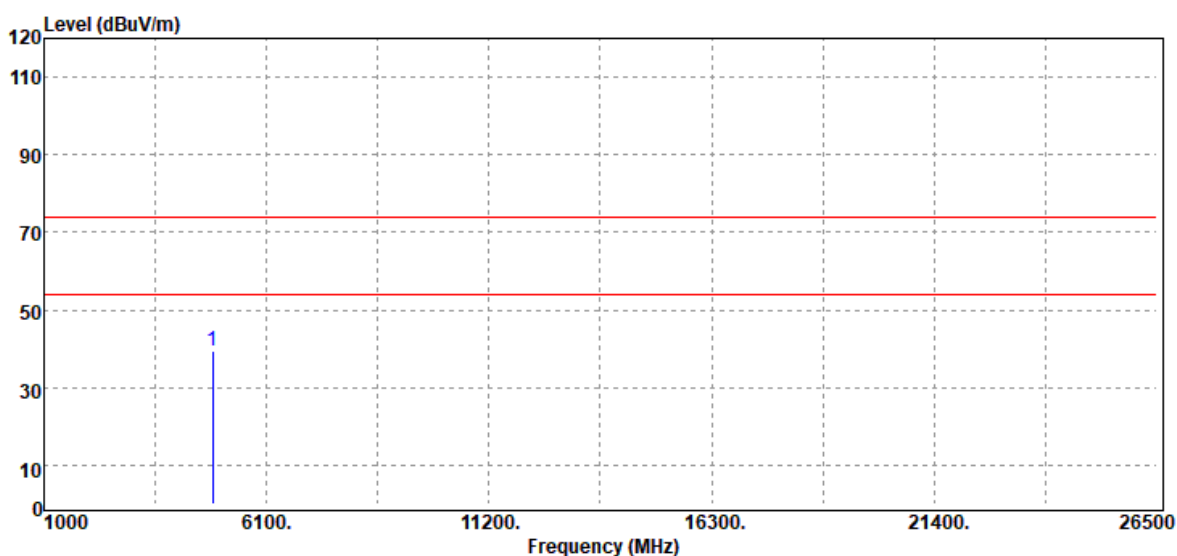


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.00	36.86	2.98	39.84	74.00	-34.16	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 Mid CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

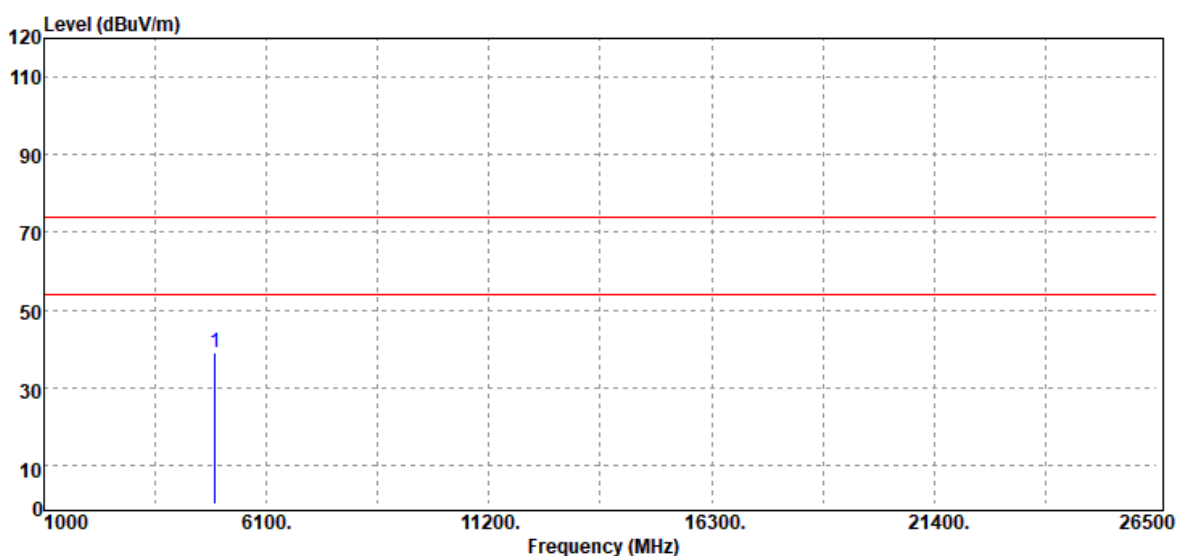


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.00	36.59	2.98	39.57	74.00	-34.43	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

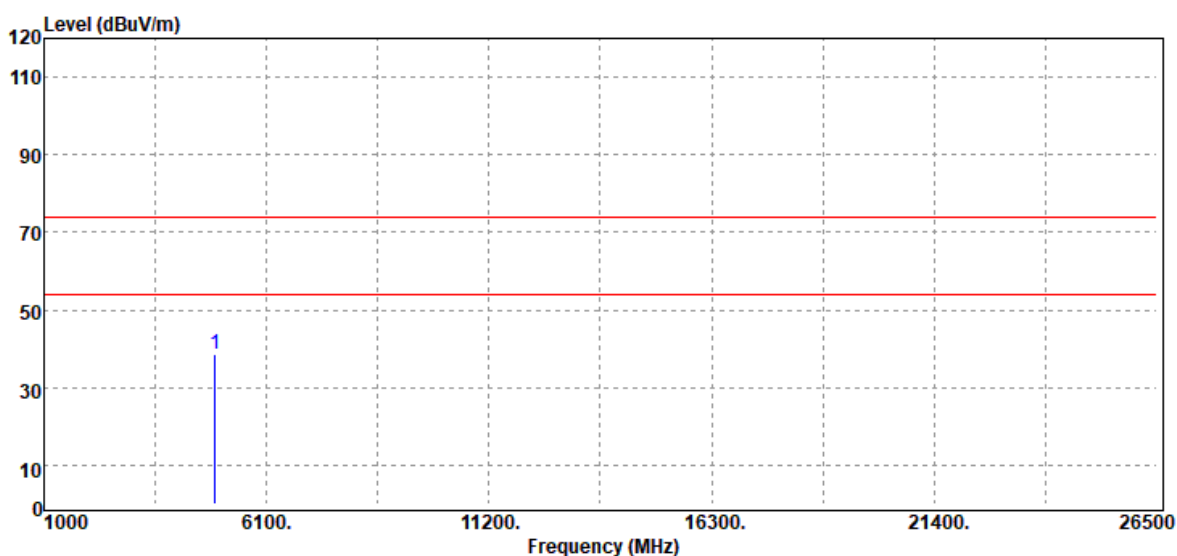


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.00	35.41	3.46	38.87	74.00	-35.13	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

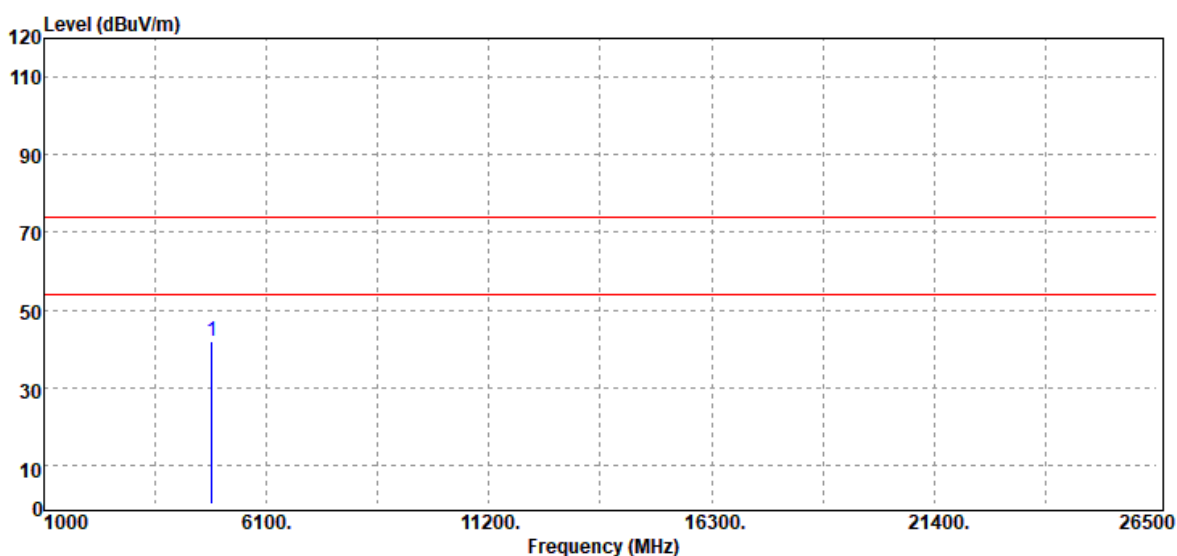


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.00	35.11	3.46	38.57	74.00	-35.43	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

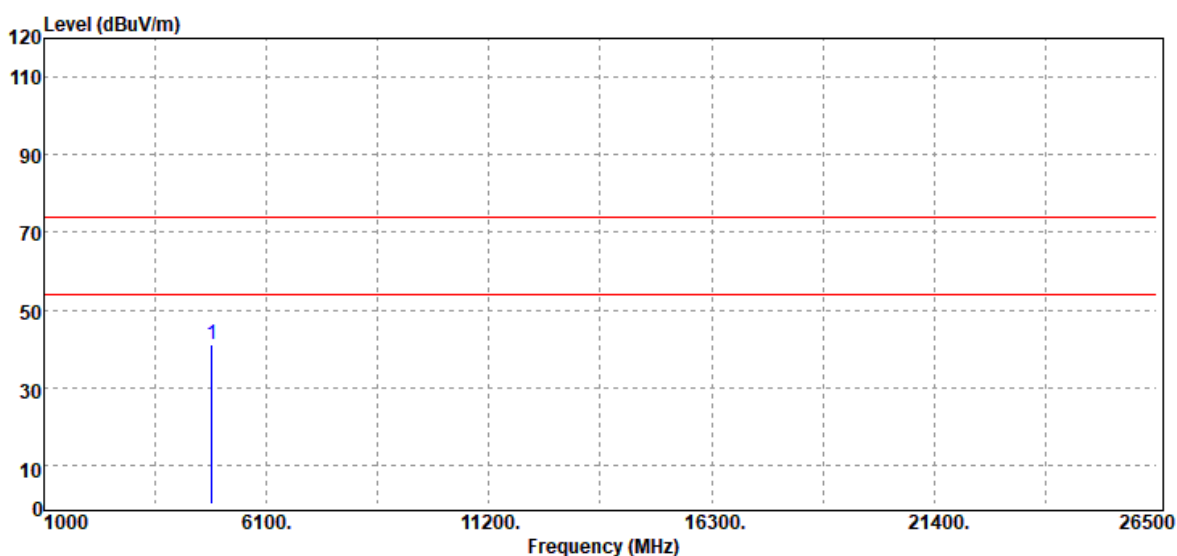


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4844.00	39.01	2.84	41.85	74.00	-32.15	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

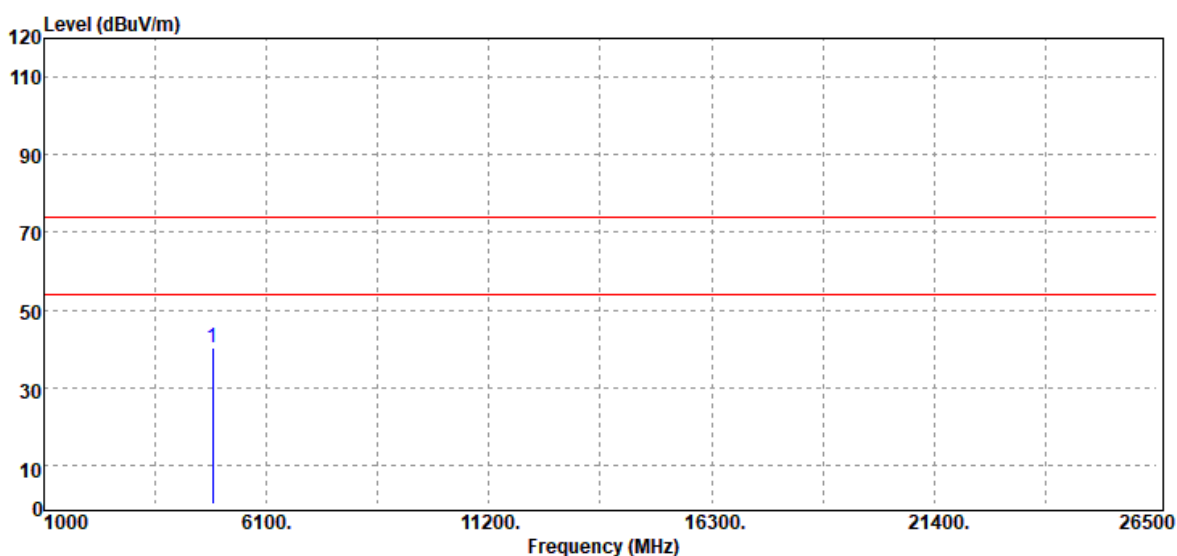


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4844.00	38.27	2.84	41.11	74.00	-32.89	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 Mid CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

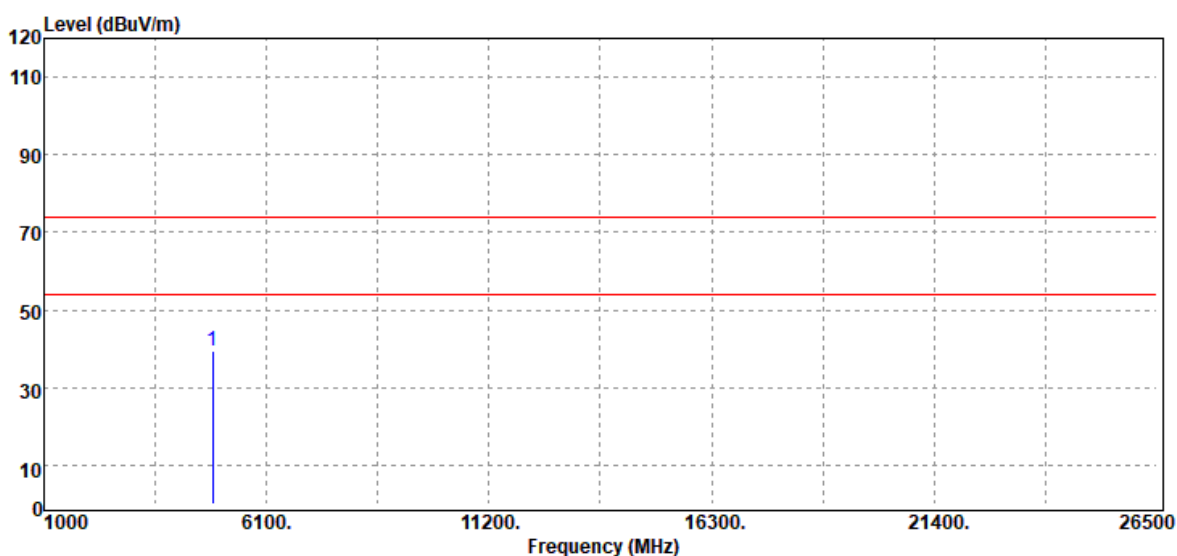


Frequency (MHz)	Reading (dBUV)	Correct Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Remark
4874.00	37.41	2.98	40.39	74.00	-33.61	Peak
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 Mid CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

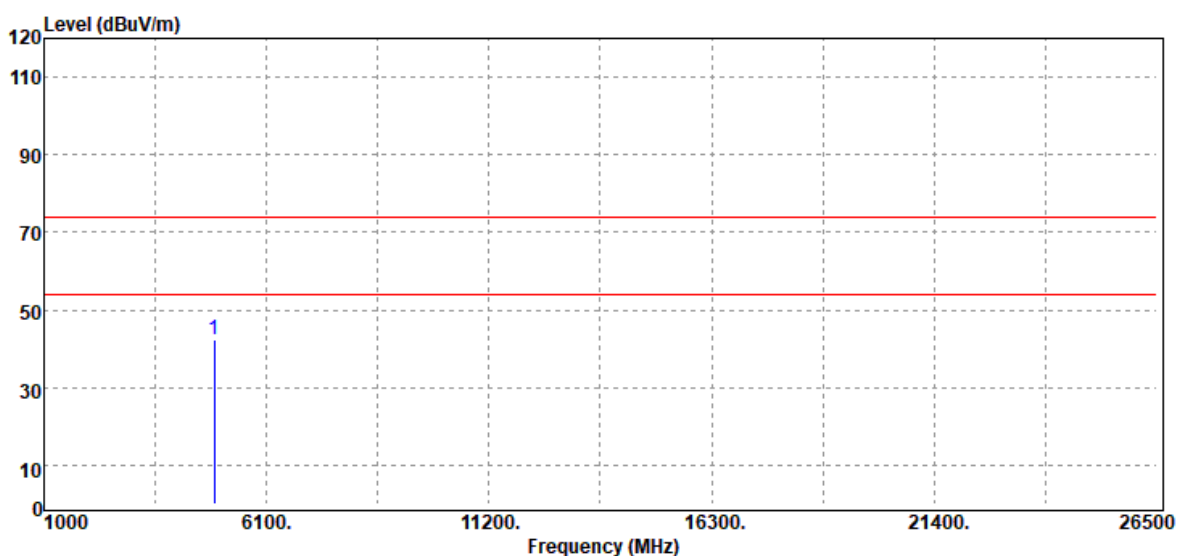


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.00	36.60	2.98	39.58	74.00	-34.42	Peak
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

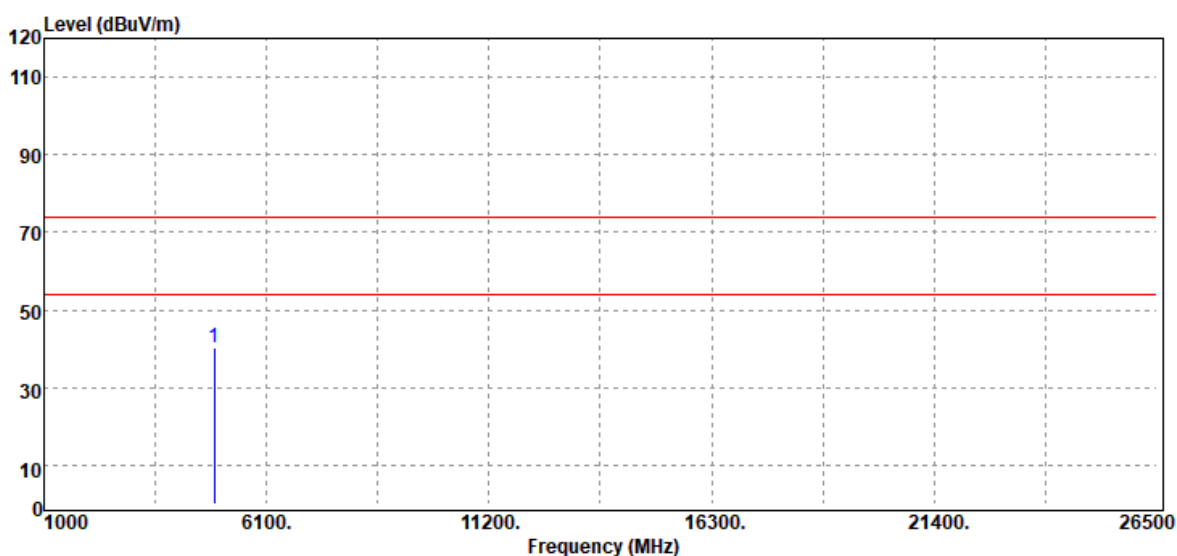


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4904.00	39.33	3.22	42.55	74.00	-31.45	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	22.5(°C)/ 59%RH
Test Item	Harmonic	Test Date	November 27, 2019
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4904.00	37.22	3.22	40.44	74.00	-33.56	Peak
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

- End of Test Report -