

4.5 CONDUCTED BANDEDGE AND SPURIOUS EMISSION

4.5.1 Test Limit

According to §15.247(d),

In any 100 kHz bandwidth outside the authorized frequency band,

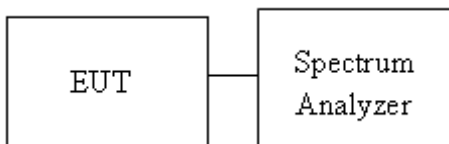
Non-restricted bands shall be attenuated at least 20 dB/30 dB relative to the maximum PSD level in 100 kHz by RF conducted or a radiated measurement which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

4.5.2 Test Procedure

Test method Refer as KDB 662911 D01, 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.

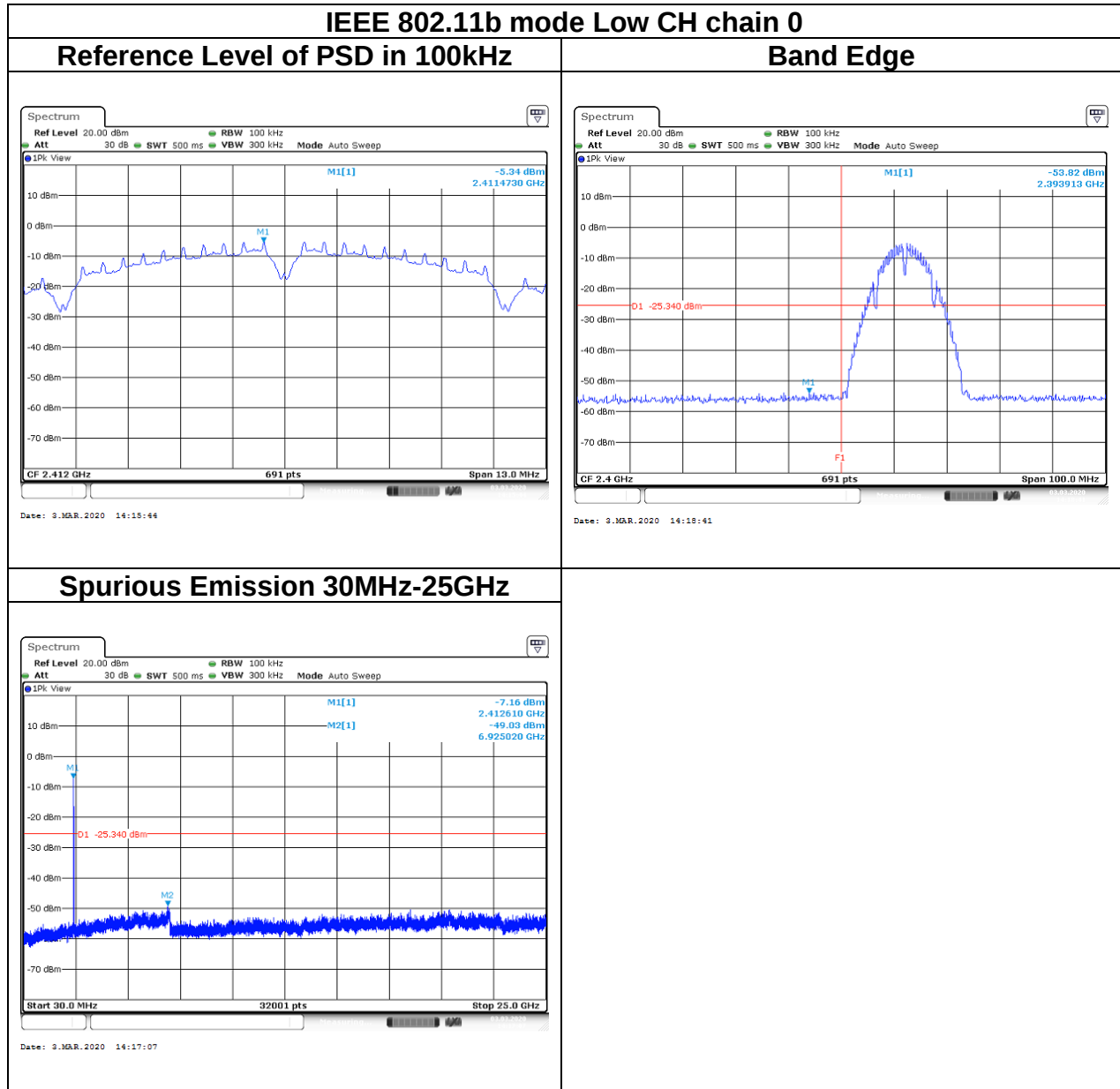
4.5.3 Test Setup



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4.5.4 Test Result

Test Data

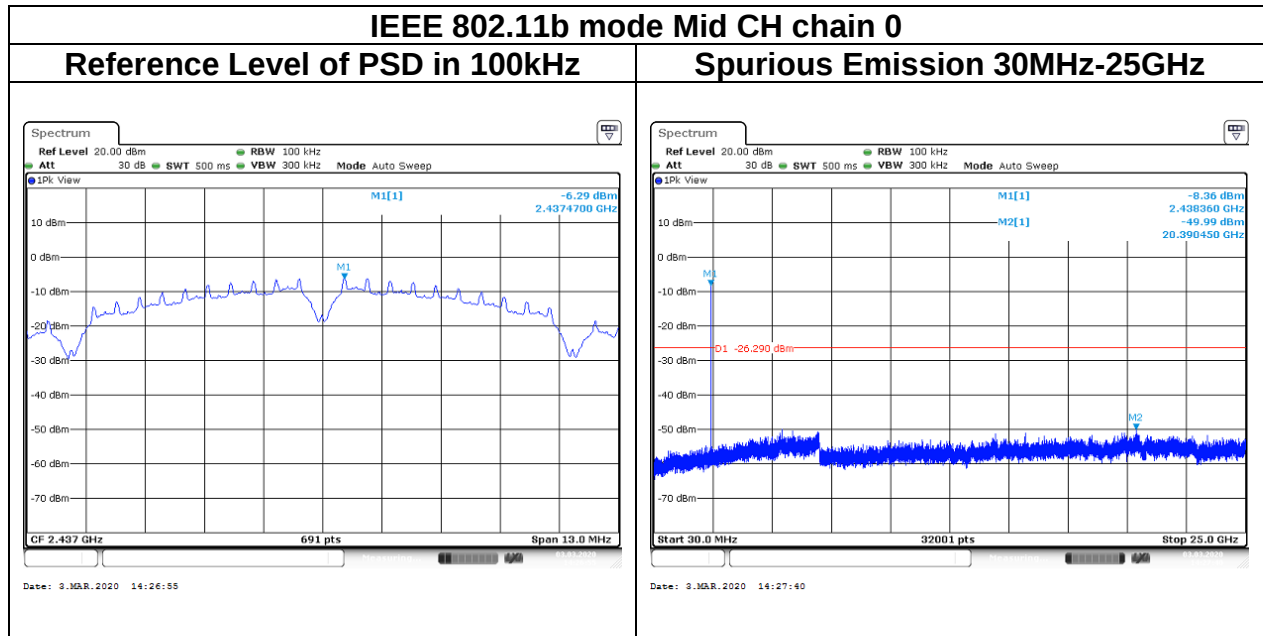




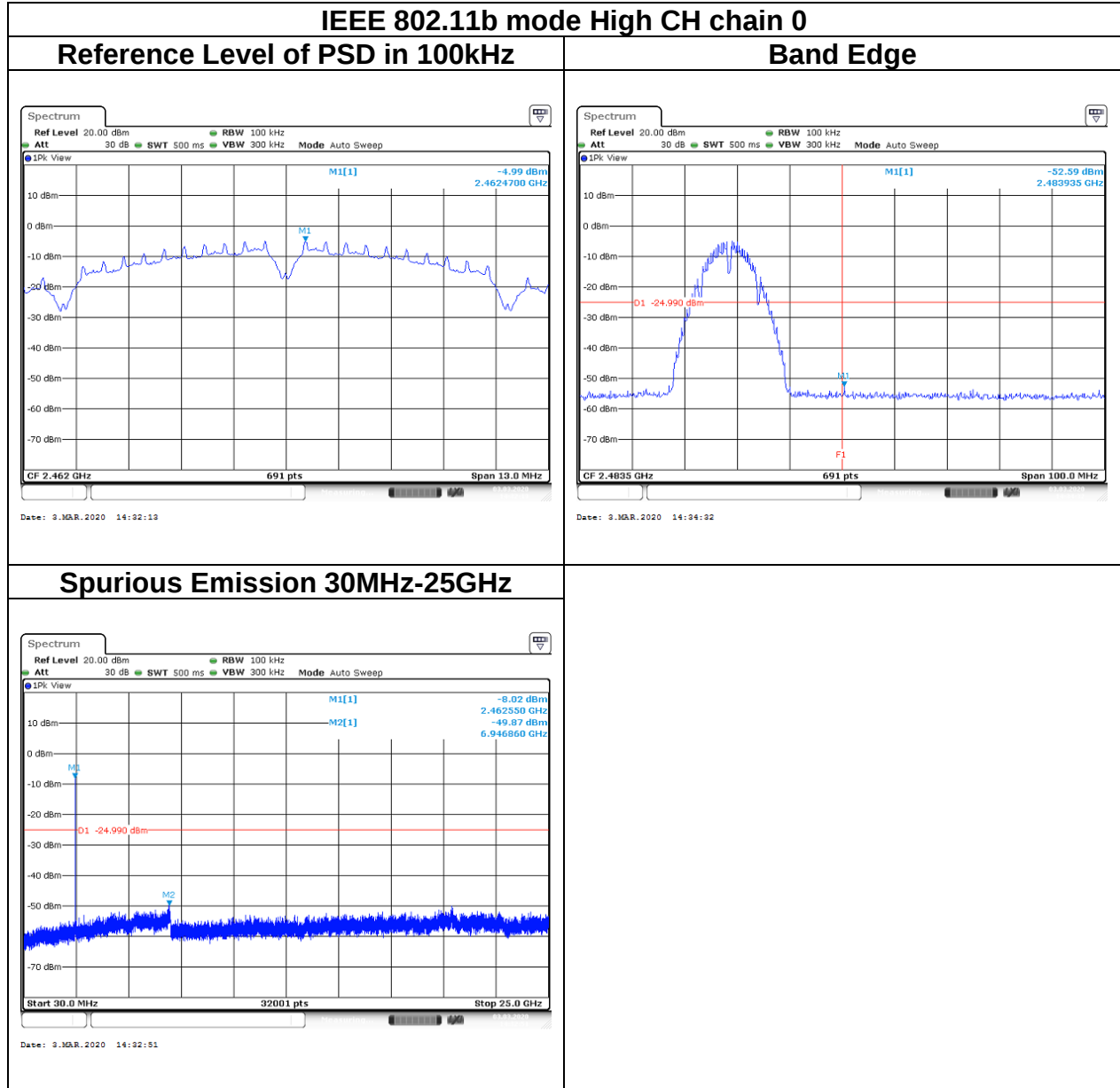
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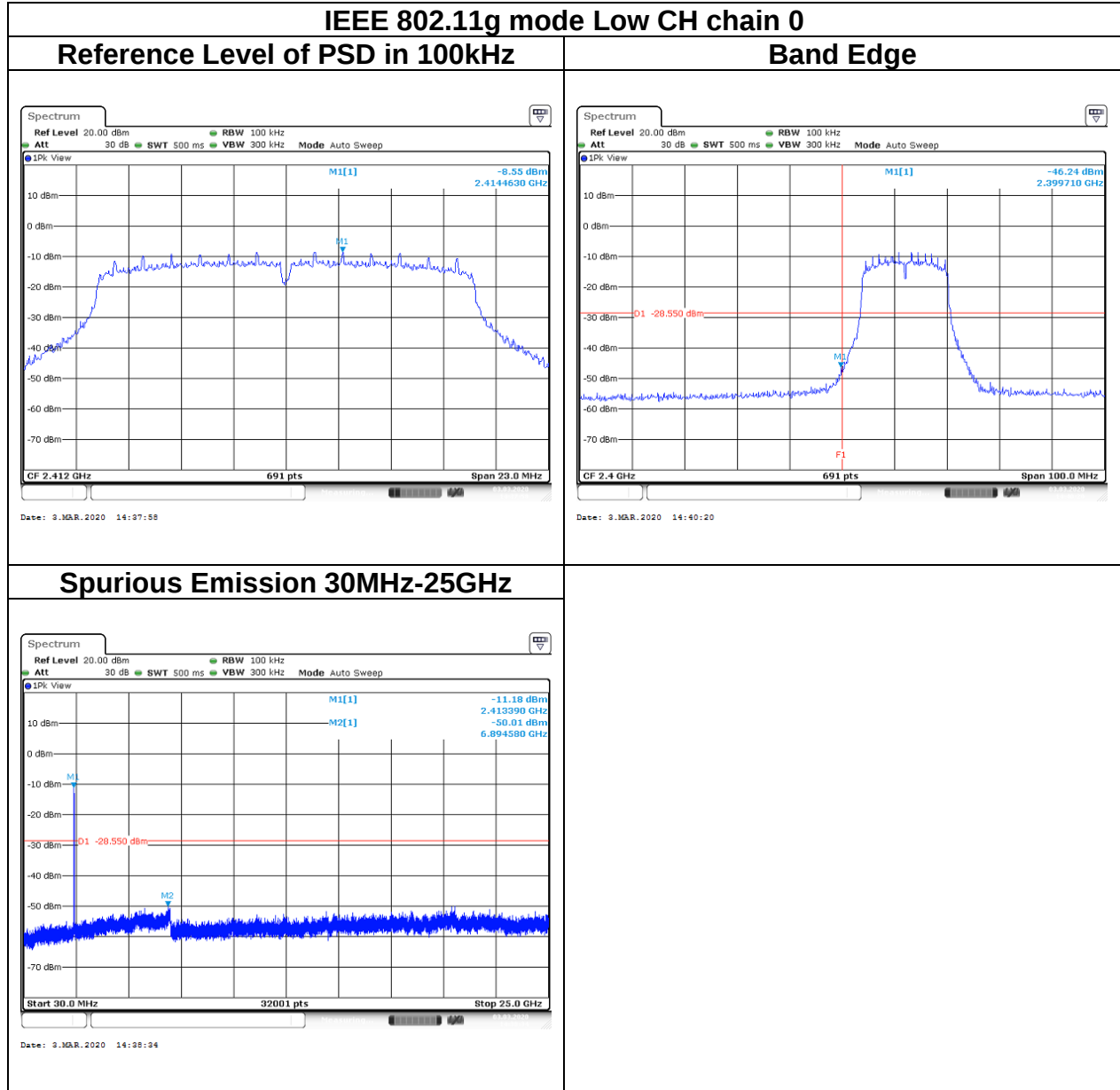
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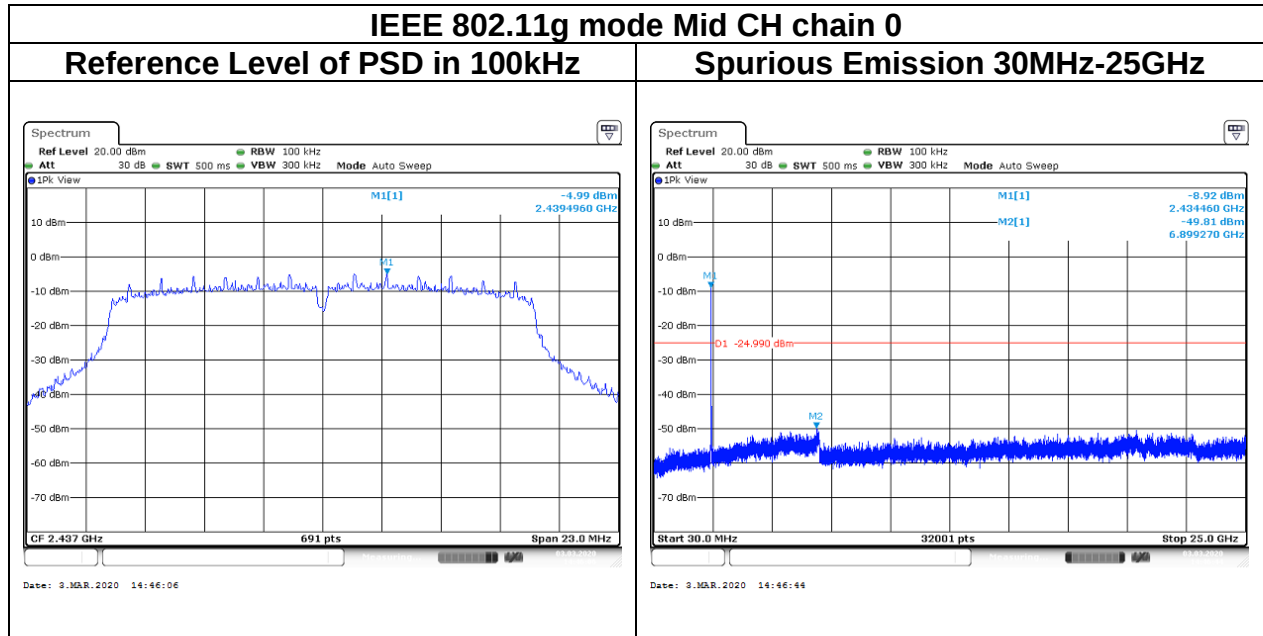


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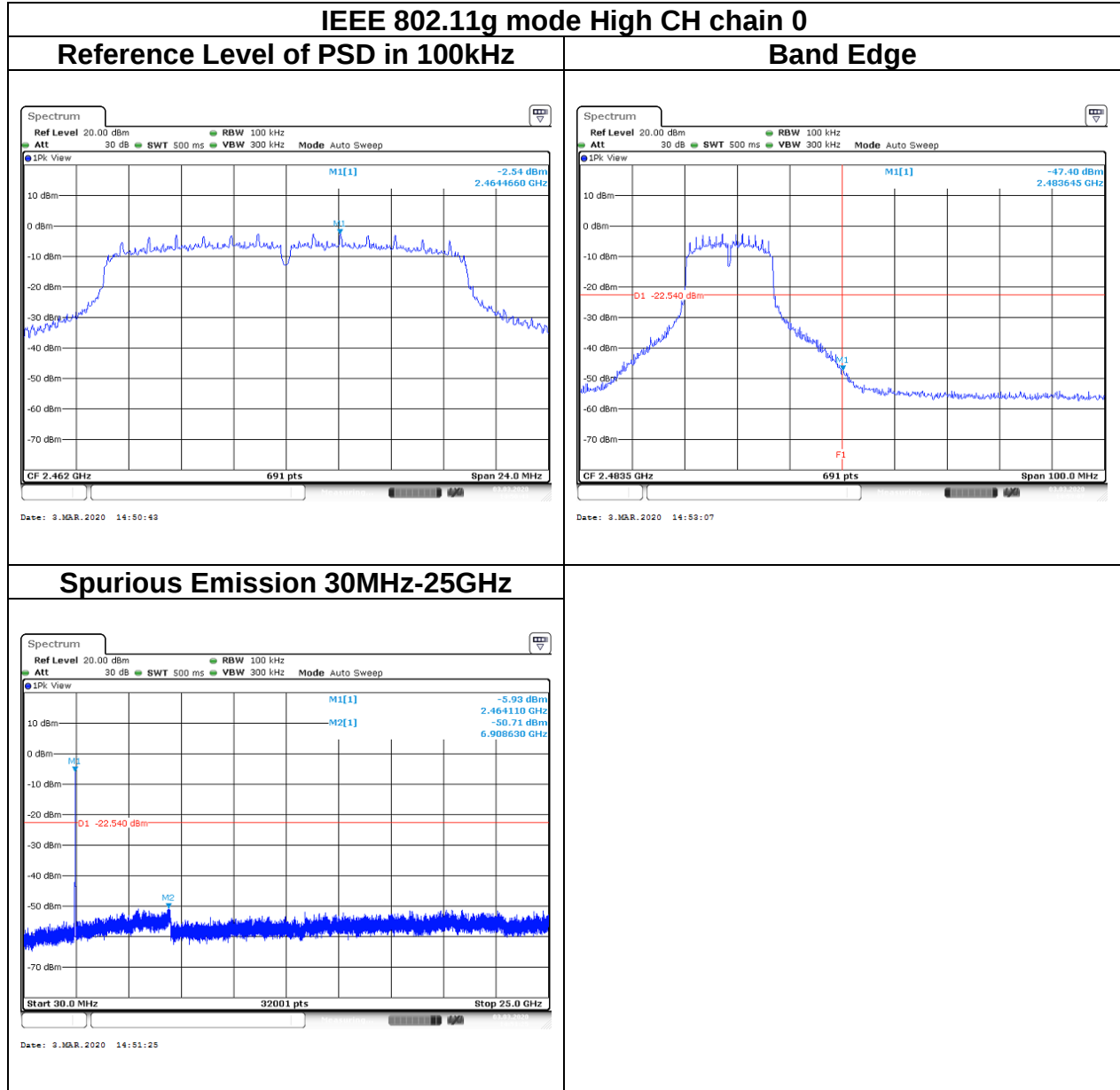


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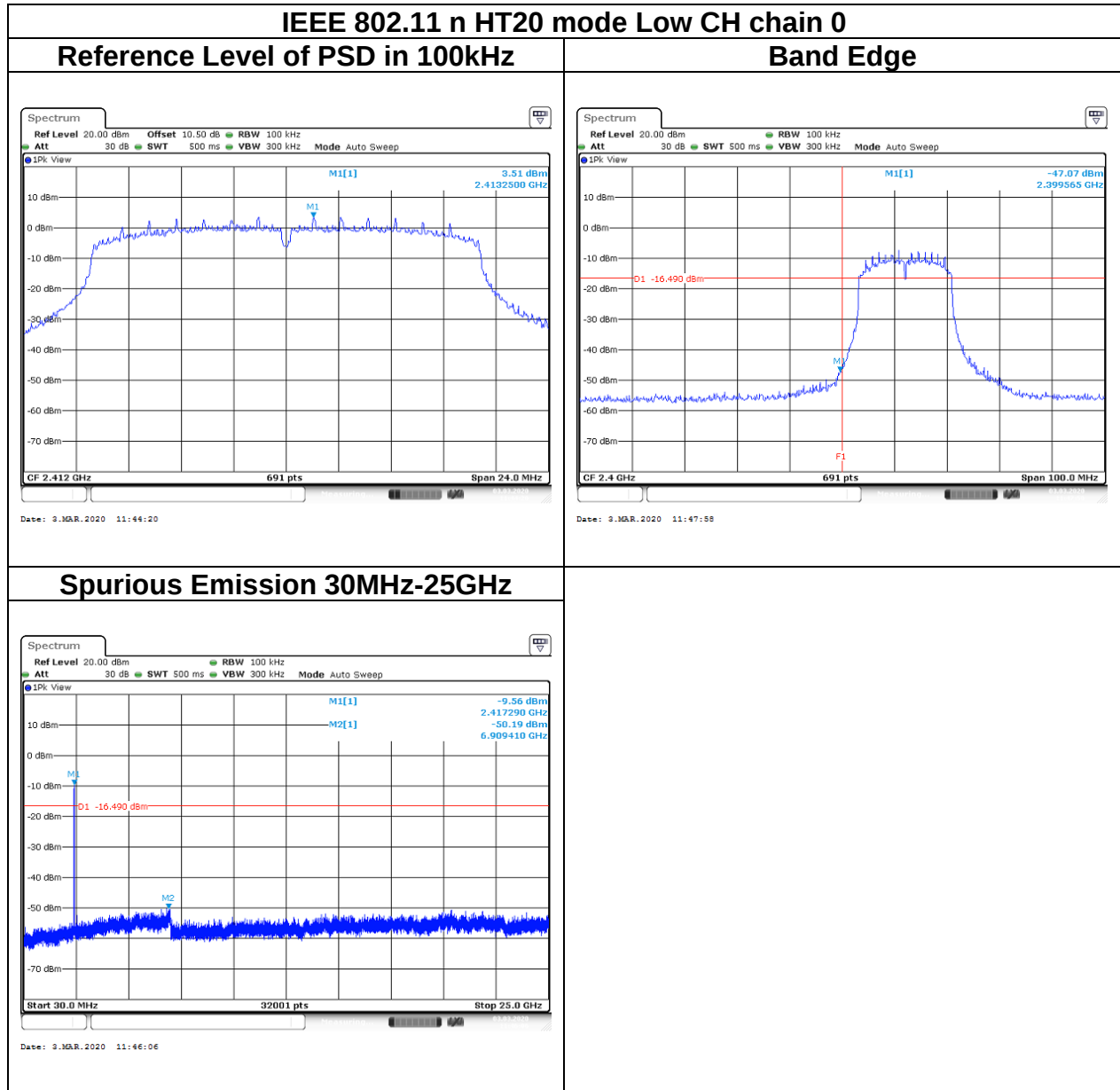


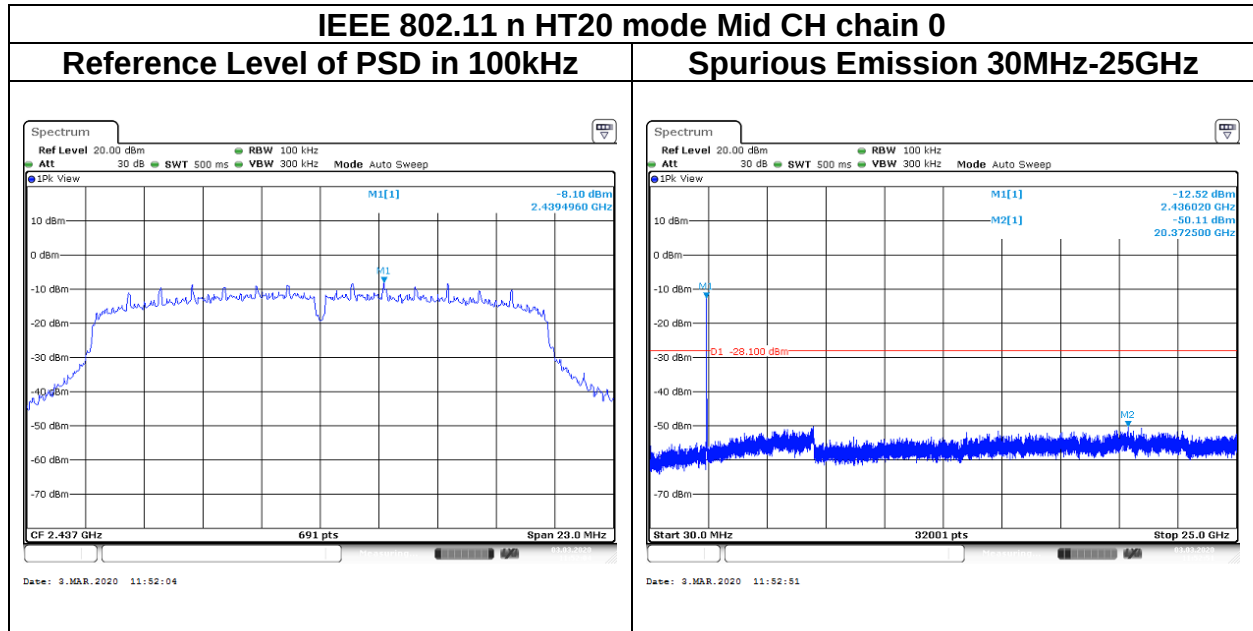


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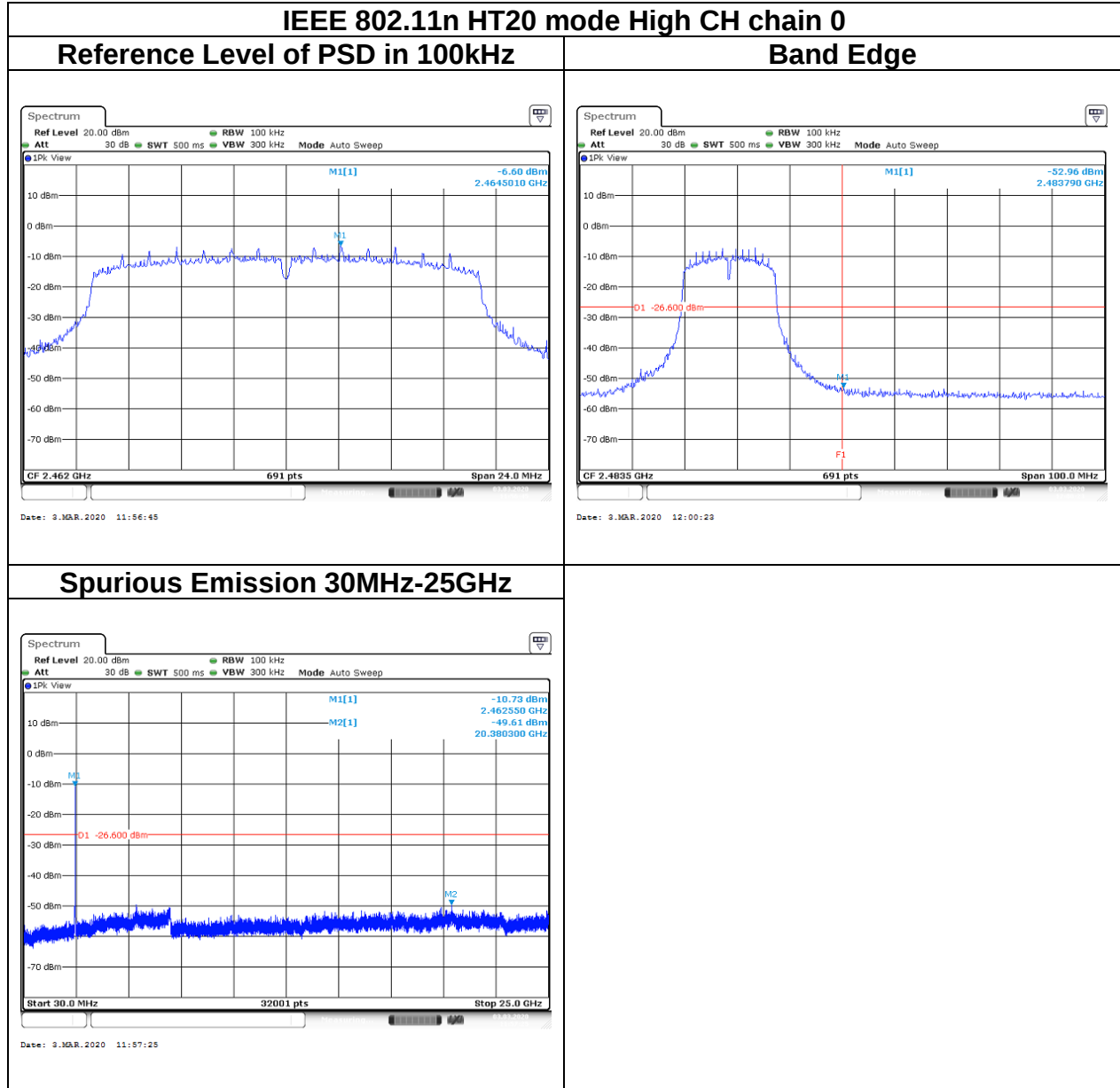


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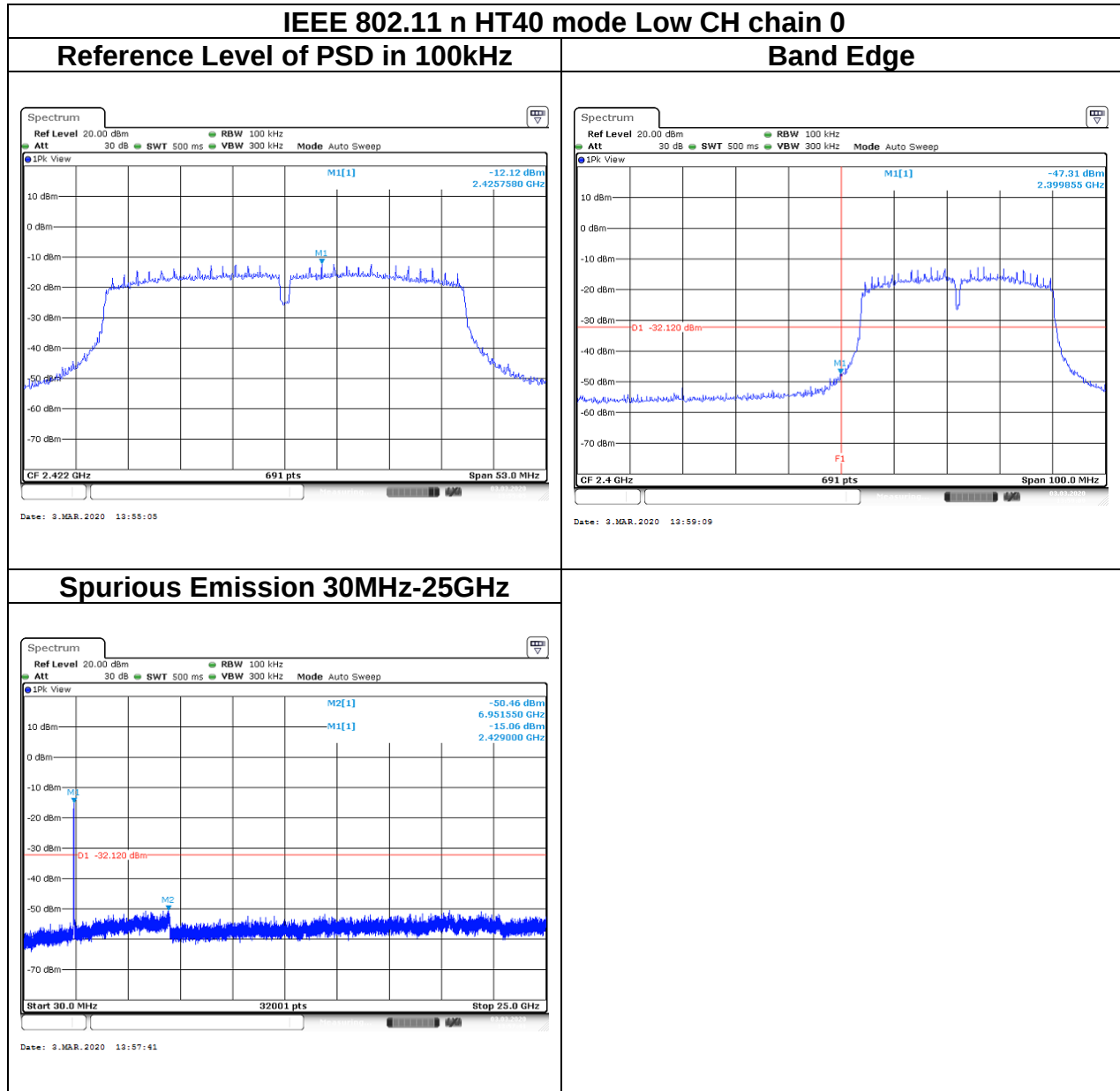




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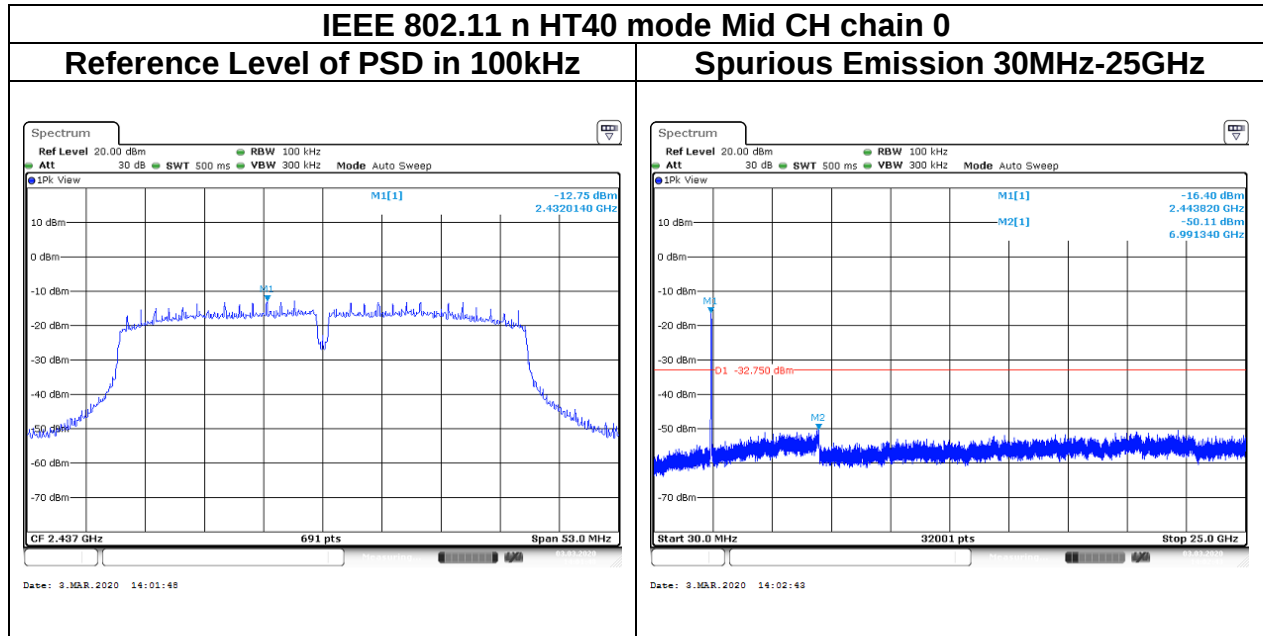




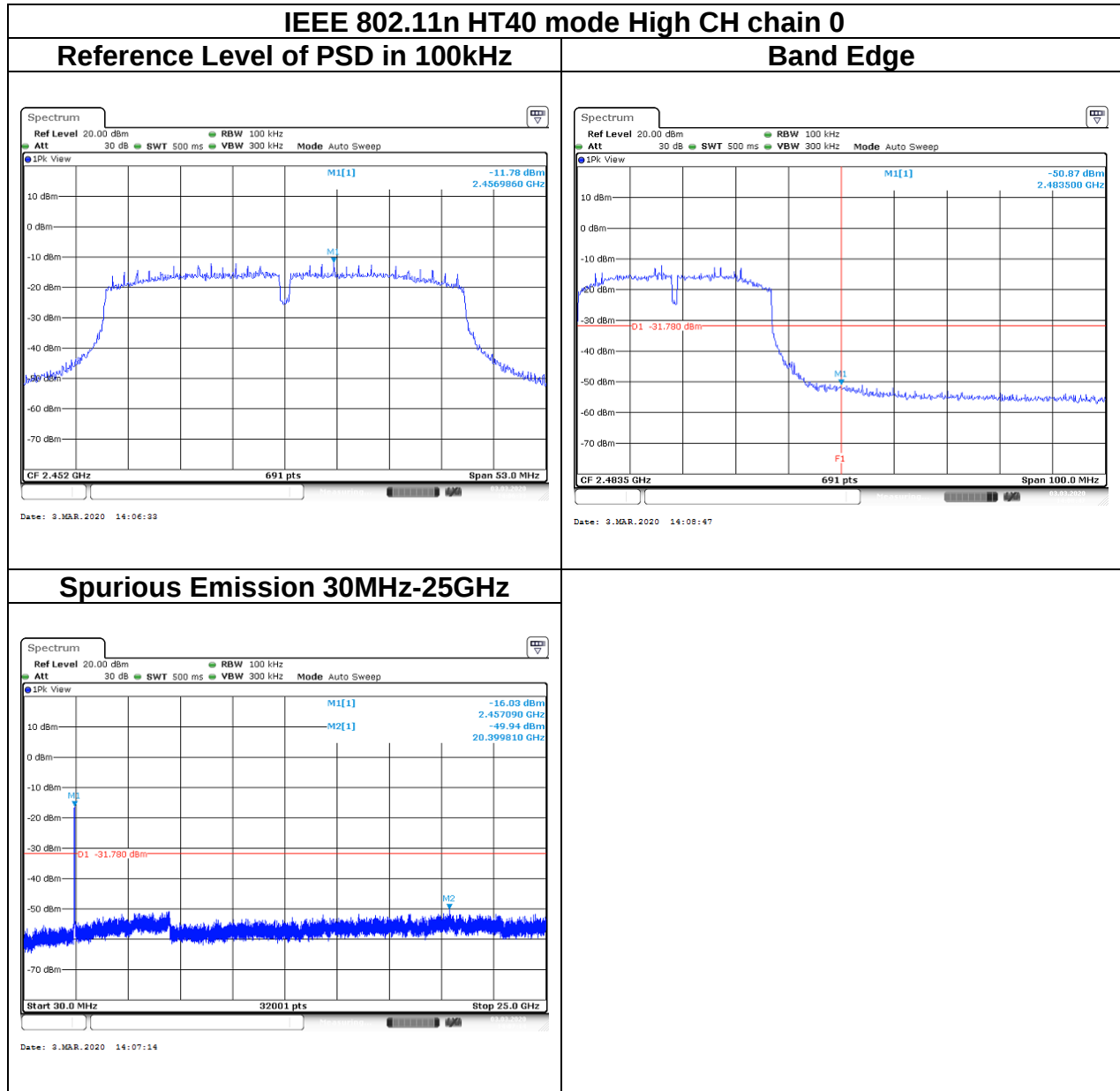
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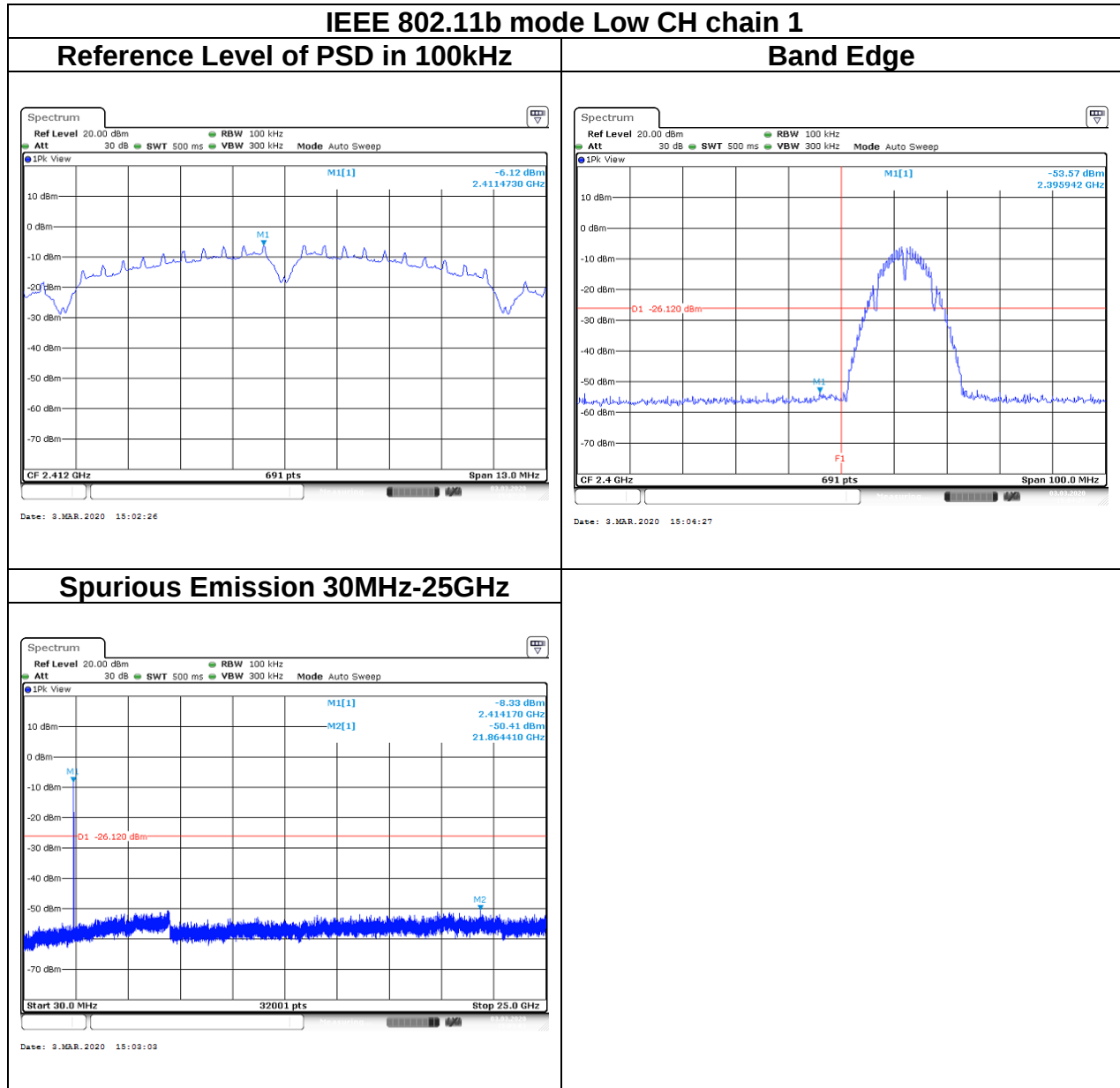
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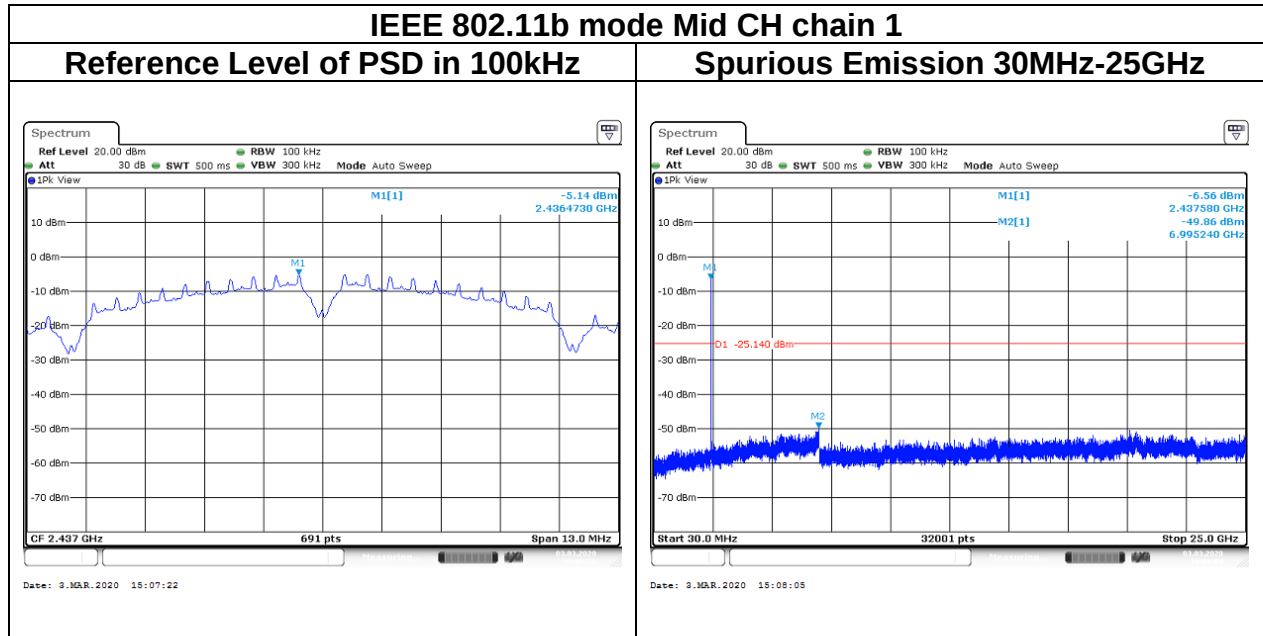


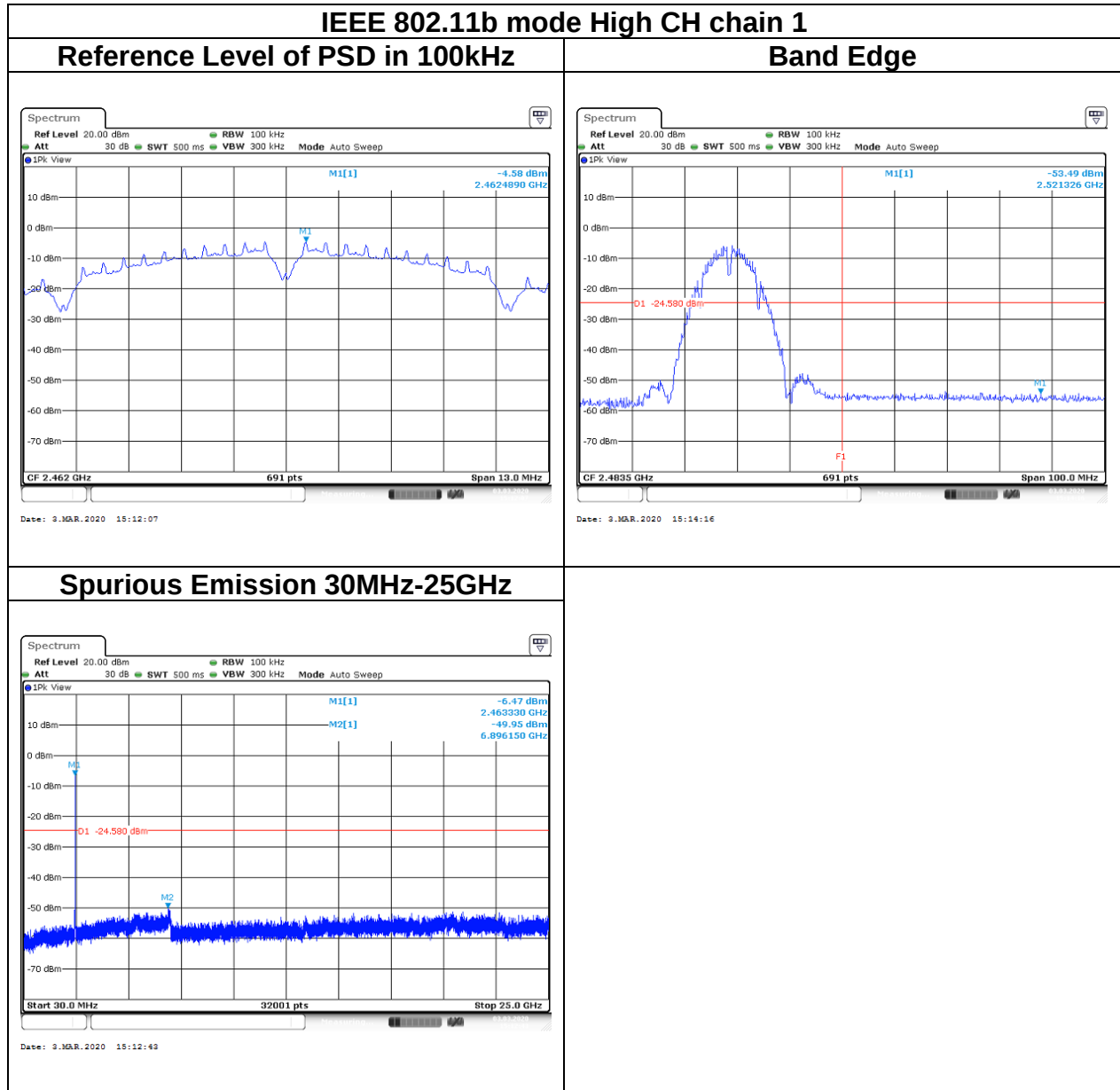
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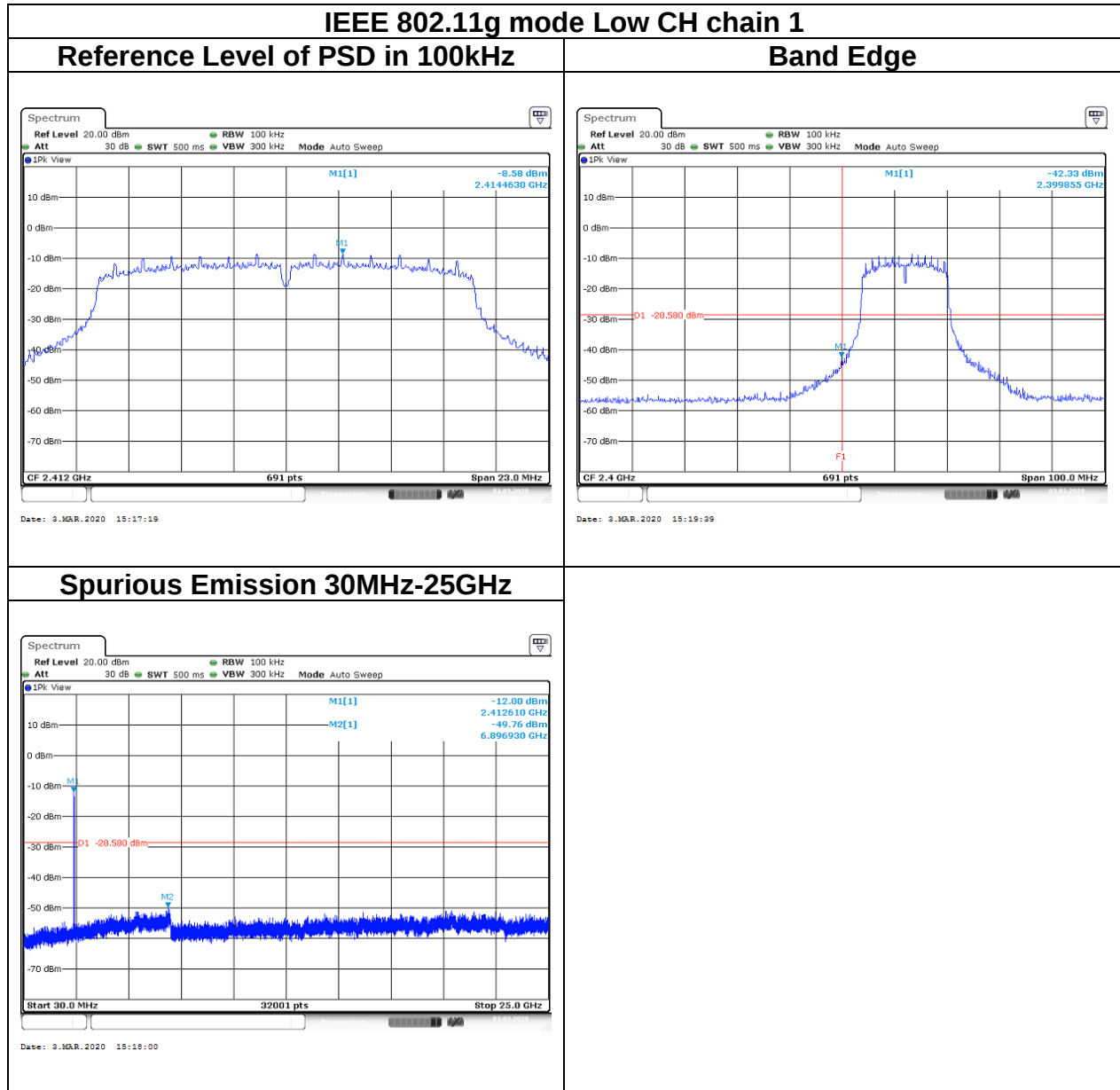




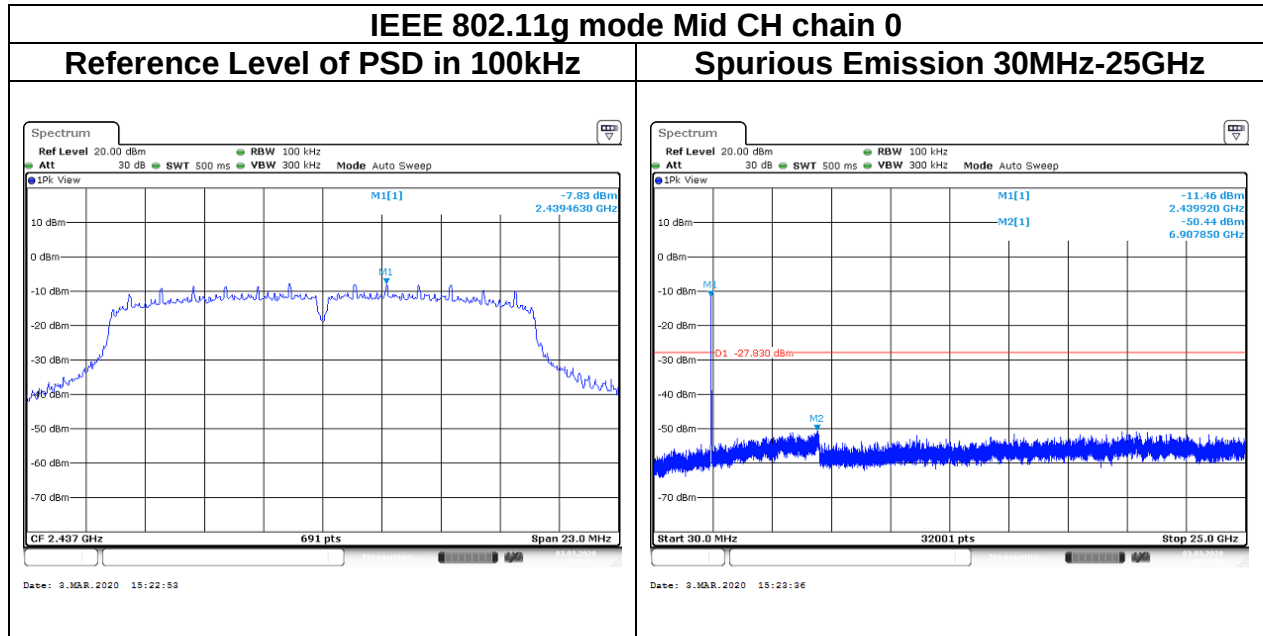
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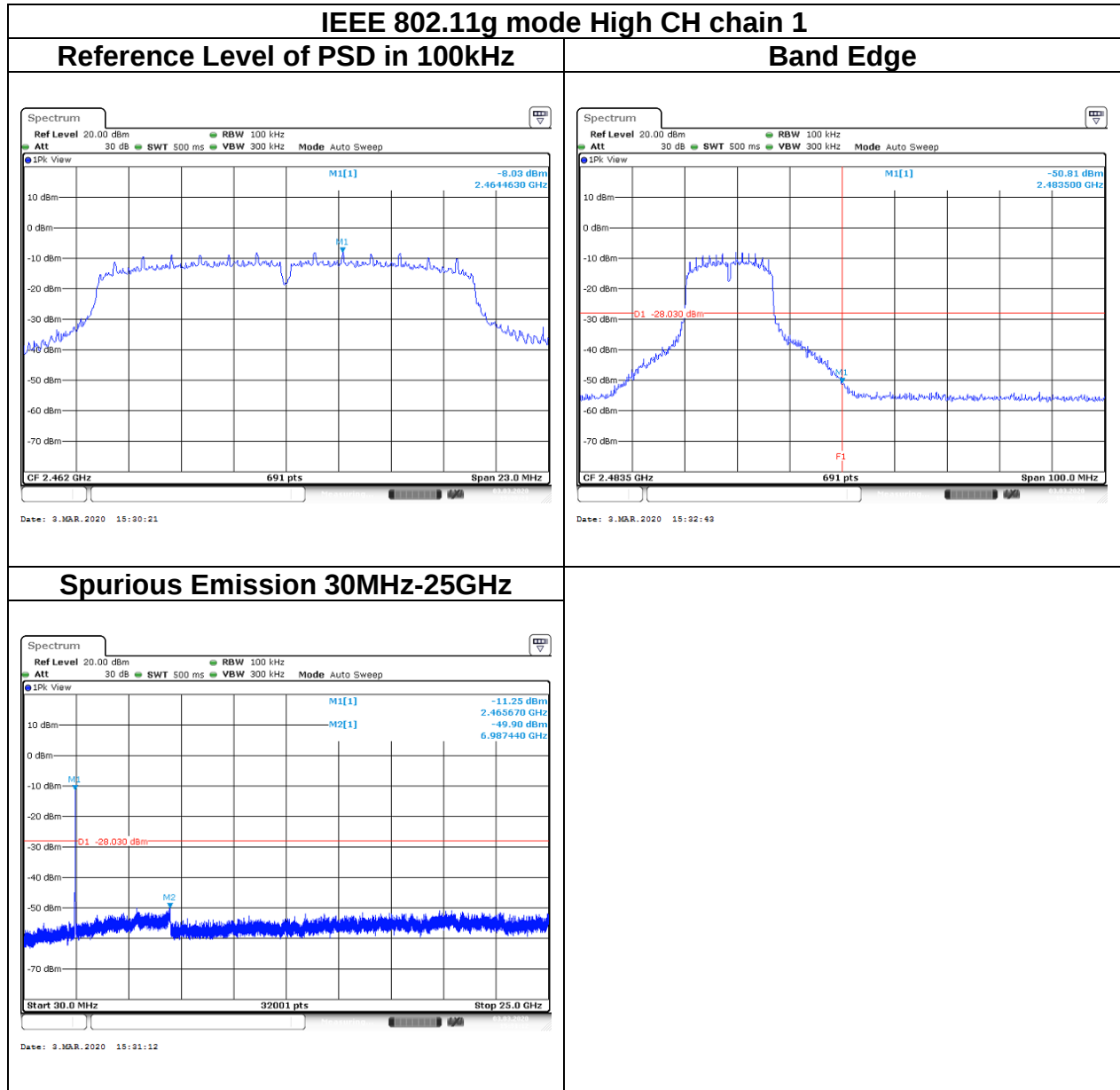


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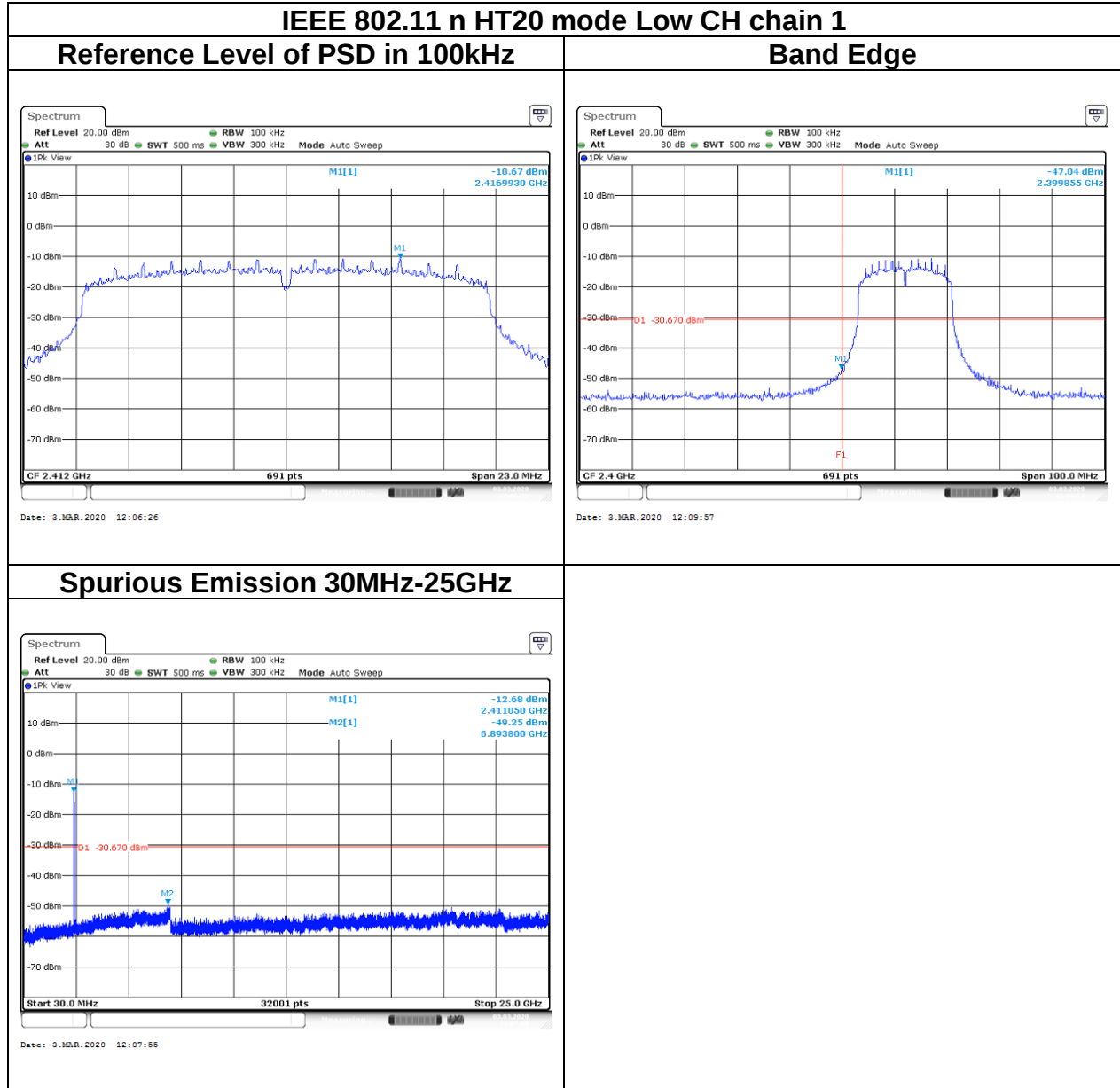


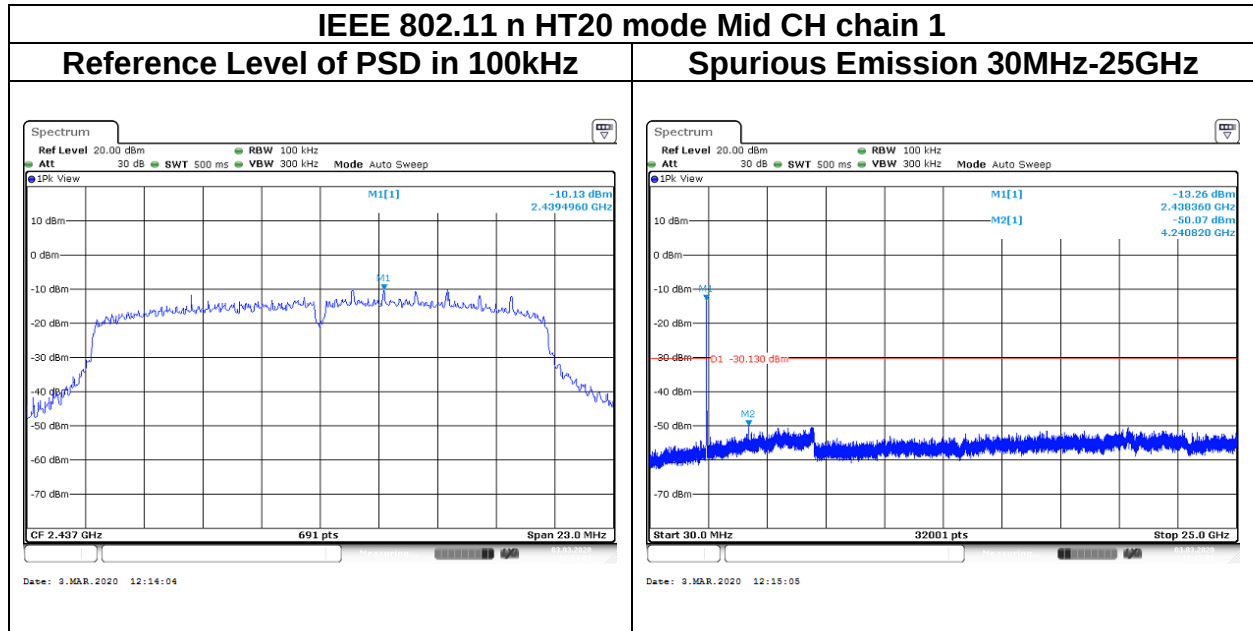


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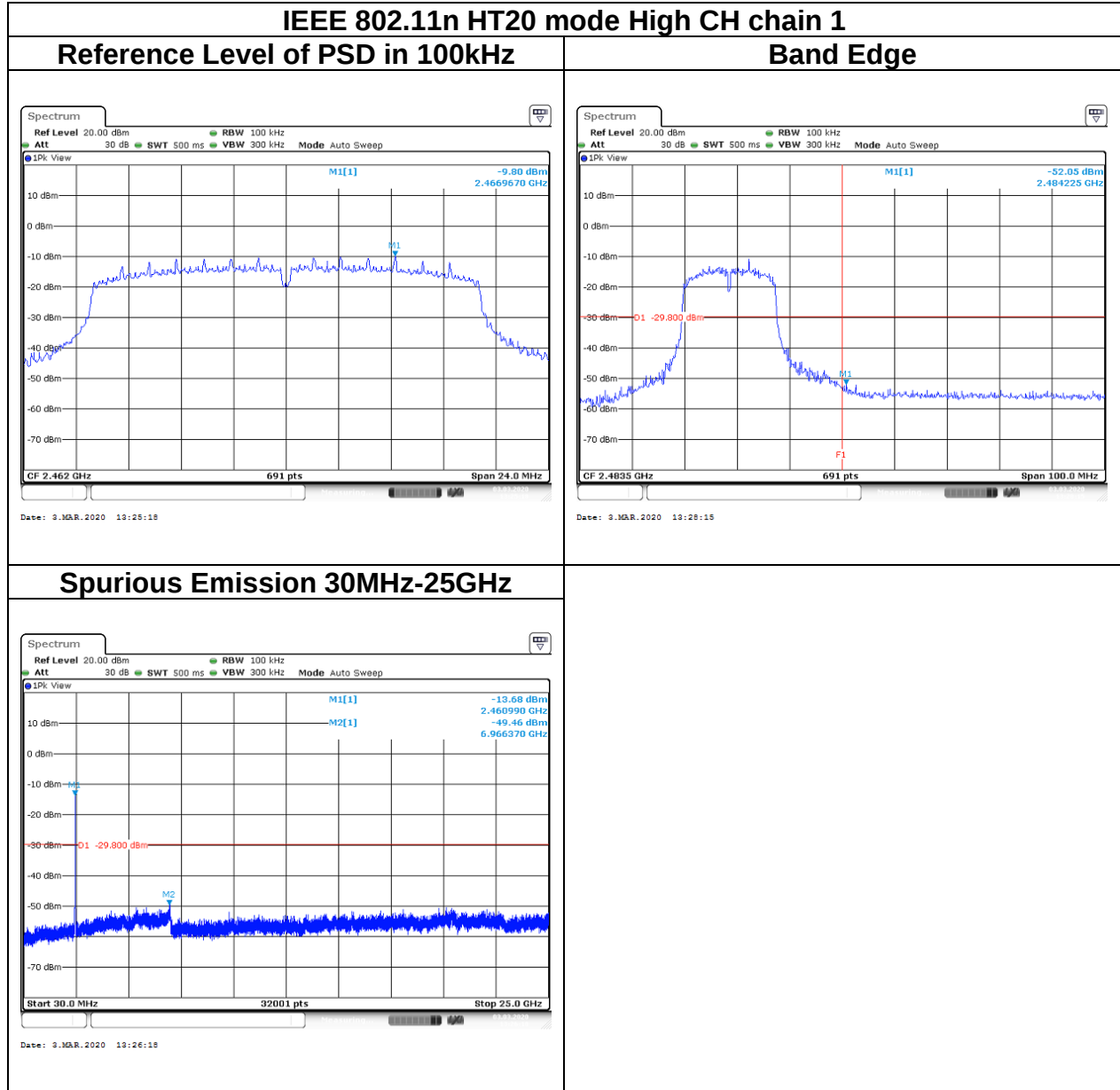


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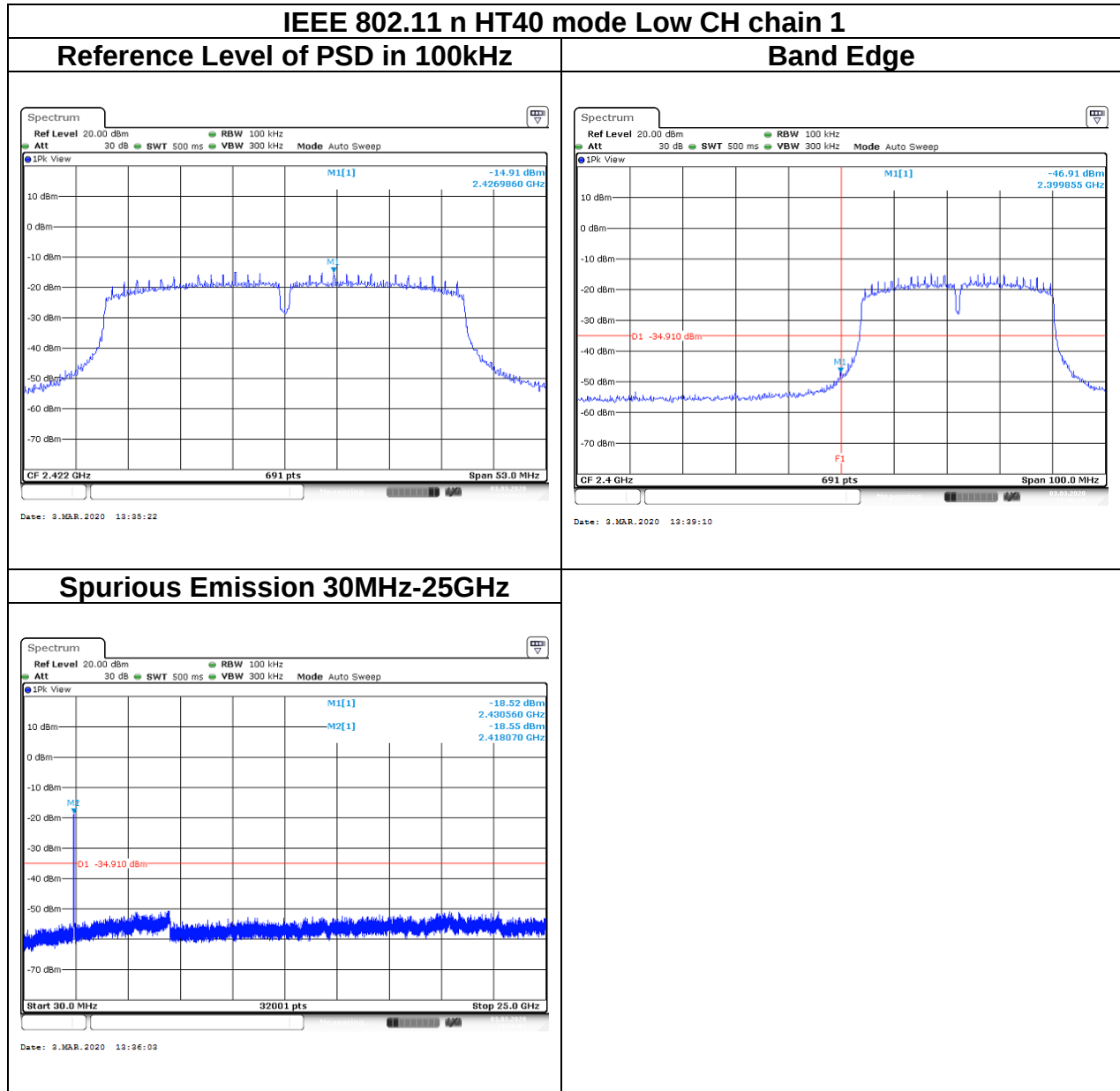




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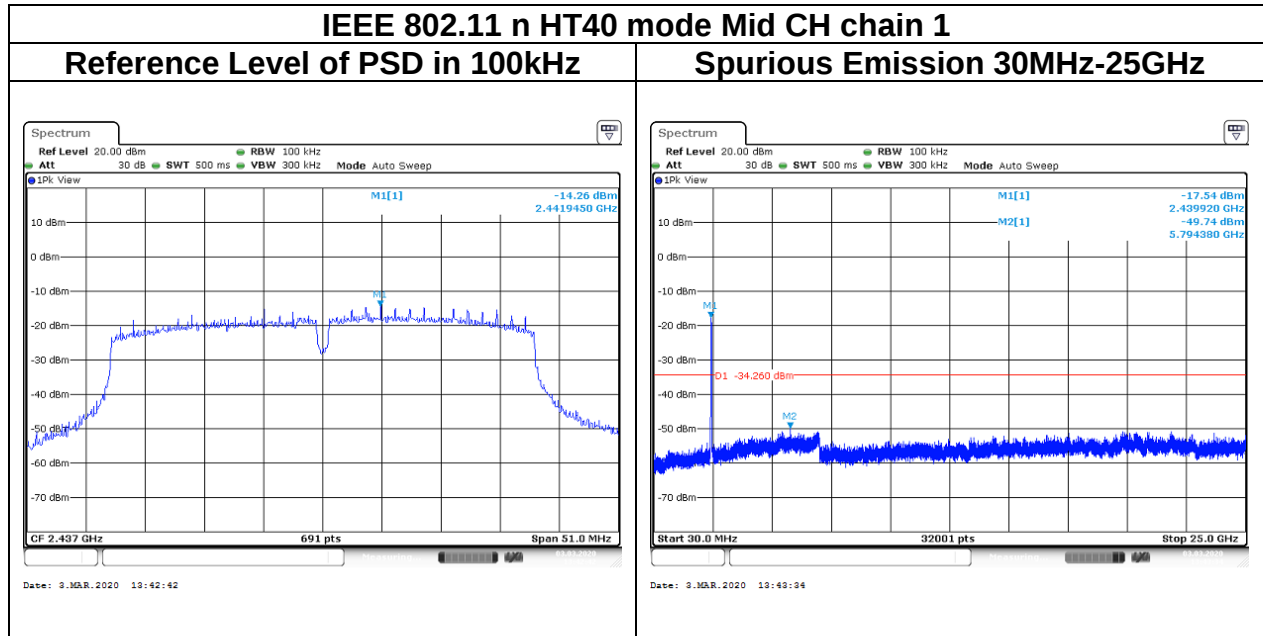




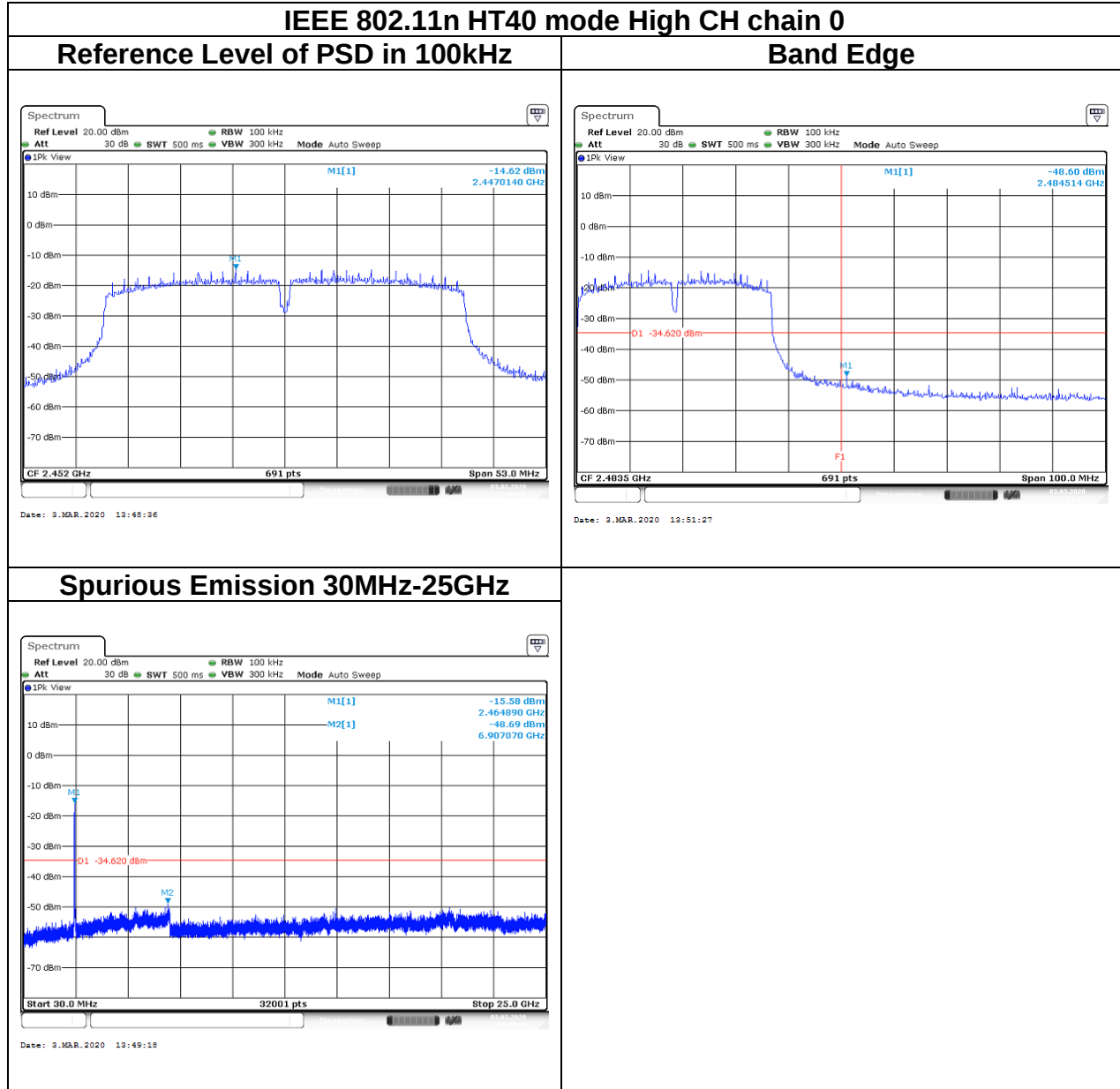
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4.6 RADIATION BANDEDGE AND SPURIOUS EMISSION

4.6.1 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

4.6.2 Test Procedure

Test method Refer as KDB 662911 D01, 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.

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

Remark:

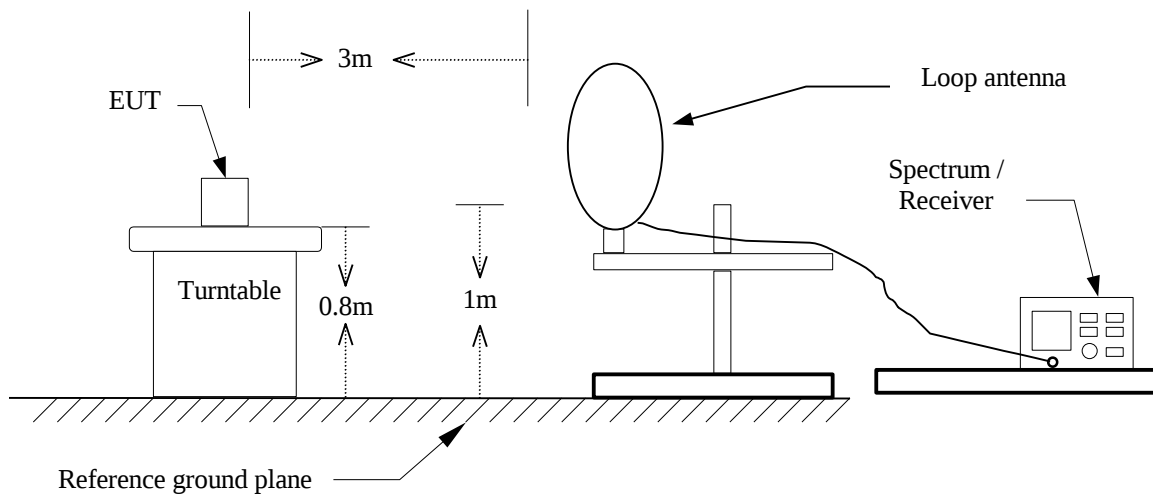
Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

4. The SA setting following :

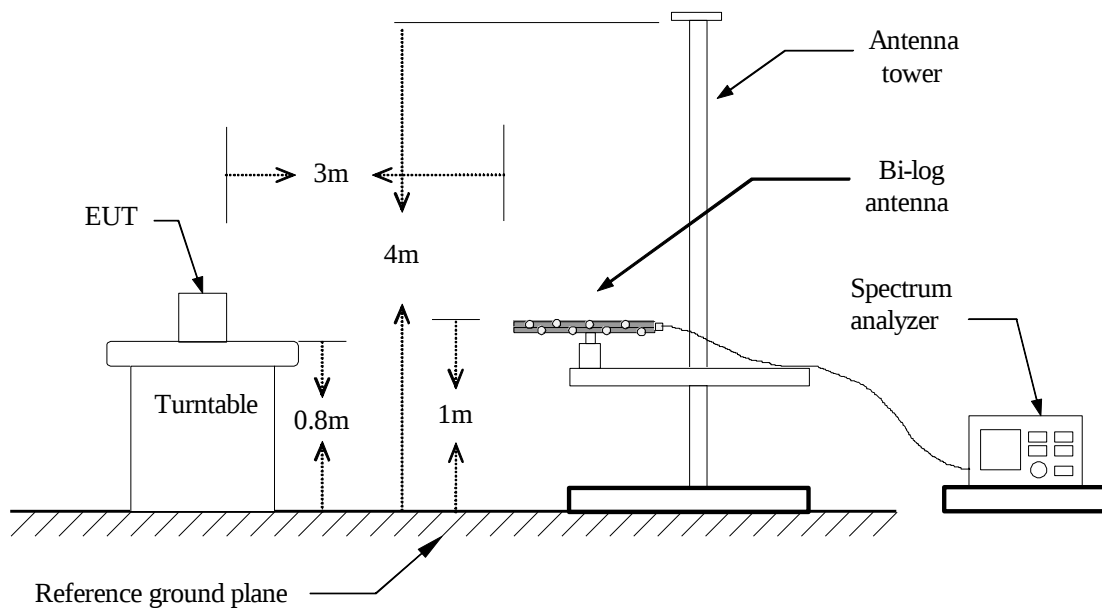
- (1) Below 1G : RBW = 100kHz, VBW $\geq$ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
- (2) Above 1G :
 - (2.1) For Peak measurement : RBW = 1MHz, VBW $\geq$ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
 - (2.2) For Average measurement : RBW = 1MHz, VBW
 - 'If Duty Cycle $\geq$ 98%, VBW=10Hz.
 - 'If Duty Cycle < 98%, VBW=1/T.

4.6.3 Test Setup

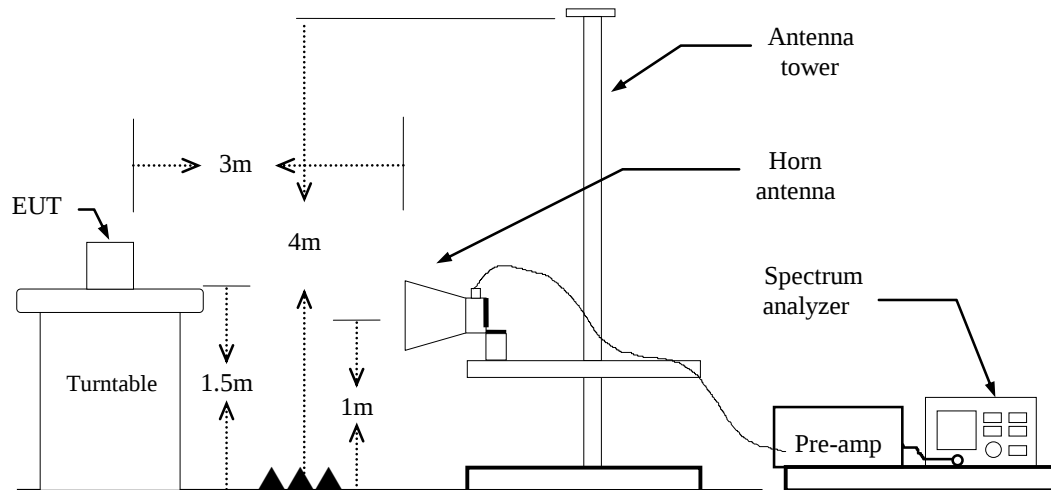
9kHz ~ 30MHz



30MHz ~ 1GHz



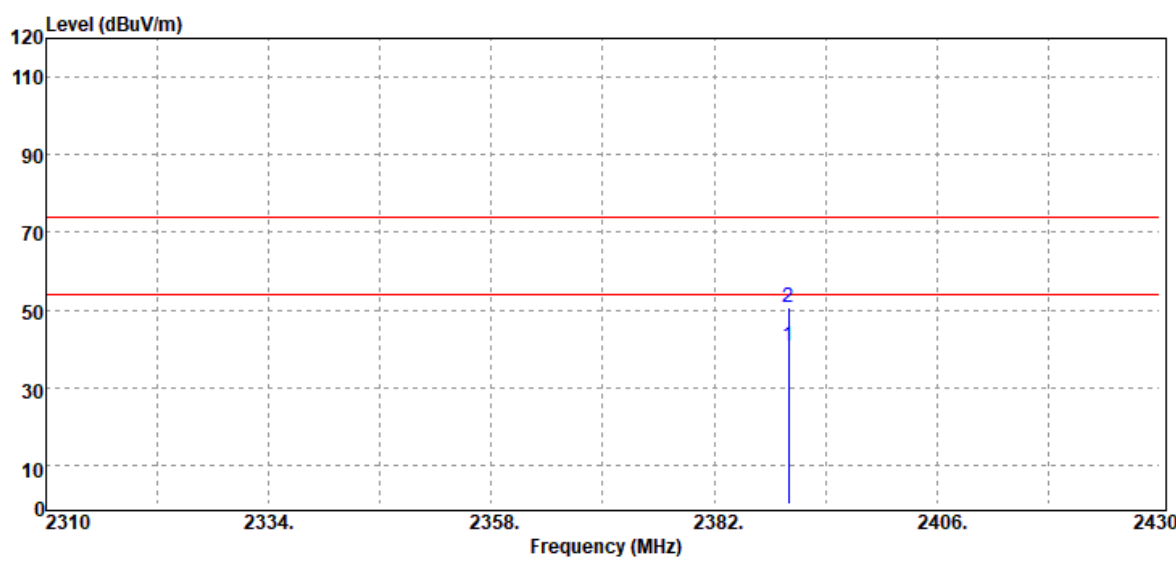
Above 1 GHz



4.6.4 Test Result

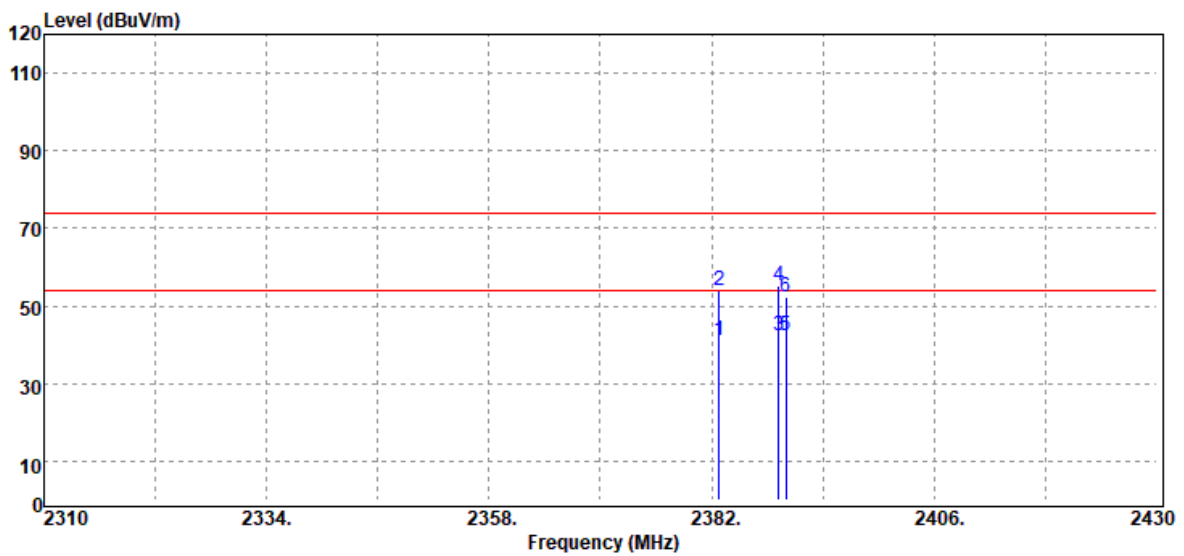
Band Edge Test Data

Test Mode	IEEE 802.11b Low CH 2412MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 25, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



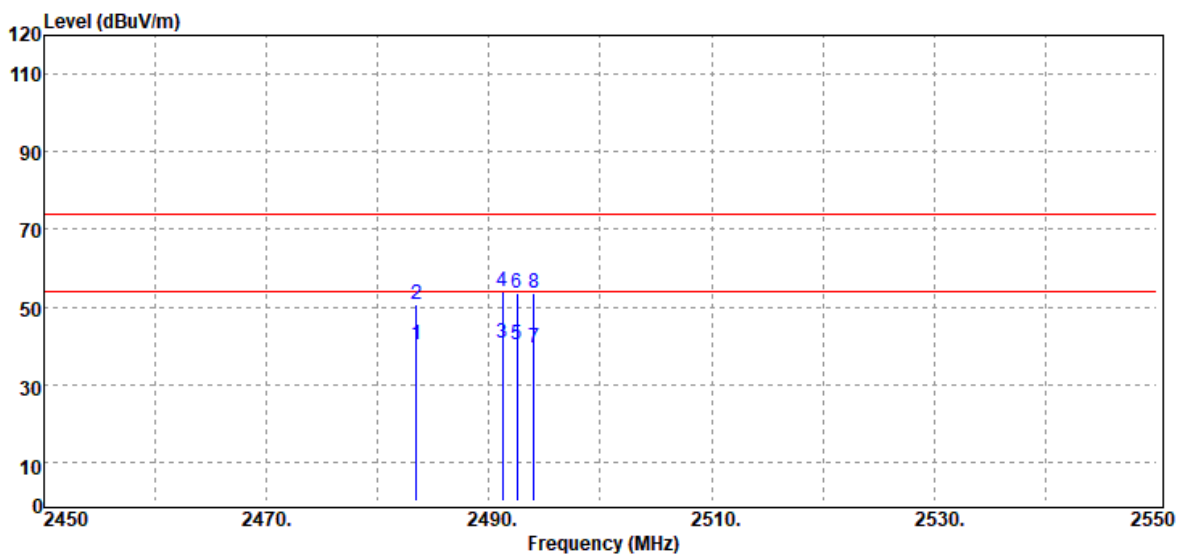
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2390.00	Average	43.66	-3.17	40.49	54.00	-13.51
2390.00	Peak	53.90	-3.17	50.73	74.00	-23.27

Test Mode	IEEE 802.11b Low CH 2412MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 25, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak & Average		



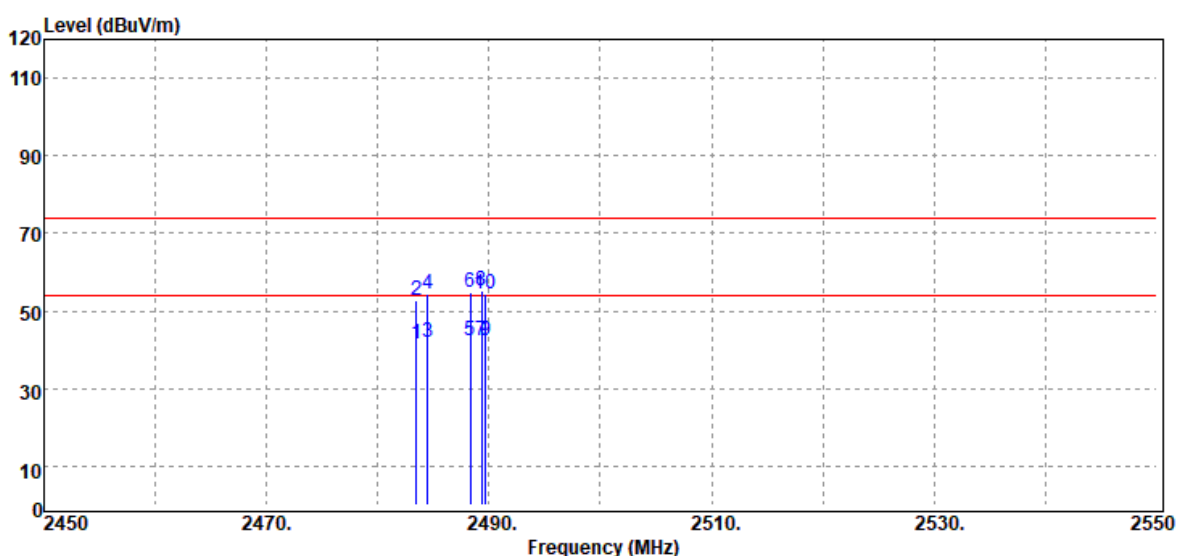
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2382.84	Average	44.39	-3.16	41.23	54.00	-12.77
2382.84	Peak	56.94	-3.16	53.78	74.00	-20.22
2389.20	Average	45.33	-3.18	42.15	54.00	-11.85
2389.20	Peak	58.28	-3.18	55.10	74.00	-18.90
2390.00	Average	45.34	-3.17	42.17	54.00	-11.83
2390.00	Peak	55.43	-3.17	52.26	74.00	-21.74

Test Mode	IEEE 802.11b High CH 2462MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 25, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



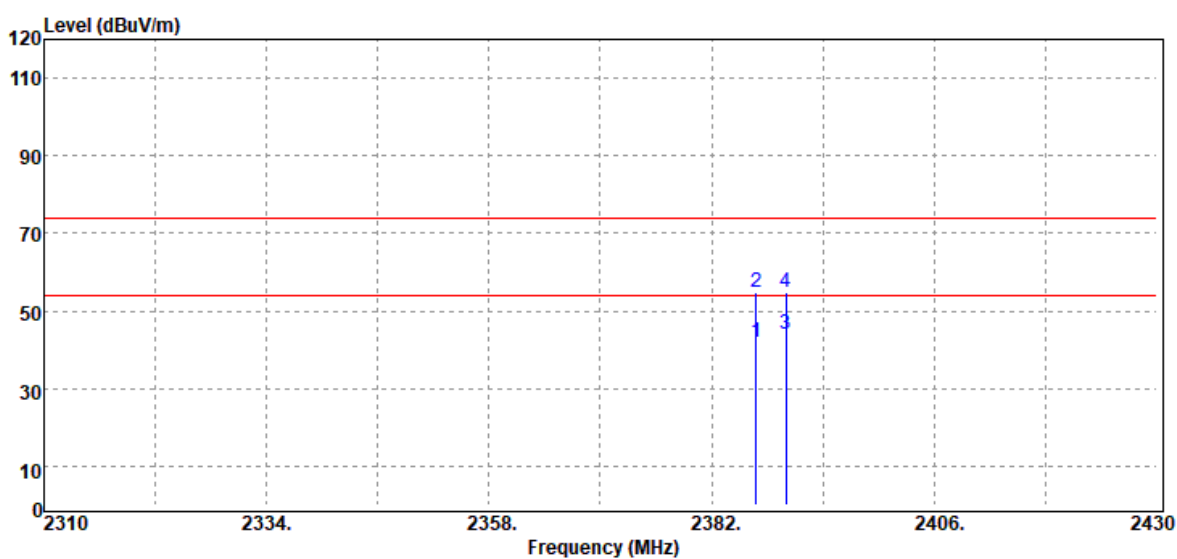
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2483.50	Average	42.98	-2.71	40.27	54.00	-13.73
2483.50	Peak	53.23	-2.71	50.52	74.00	-23.48
2491.20	Average	43.29	-2.67	40.62	54.00	-13.38
2491.20	Peak	56.50	-2.67	53.83	74.00	-20.17
2492.50	Average	42.93	-2.65	40.28	54.00	-13.72
2492.50	Peak	56.42	-2.65	53.77	74.00	-20.23
2494.00	Average	42.24	-2.64	39.60	54.00	-14.40
2494.00	Peak	56.14	-2.64	53.50	74.00	-20.50

Test Mode	IEEE 802.11b High CH 2462MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 25, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak & Average		



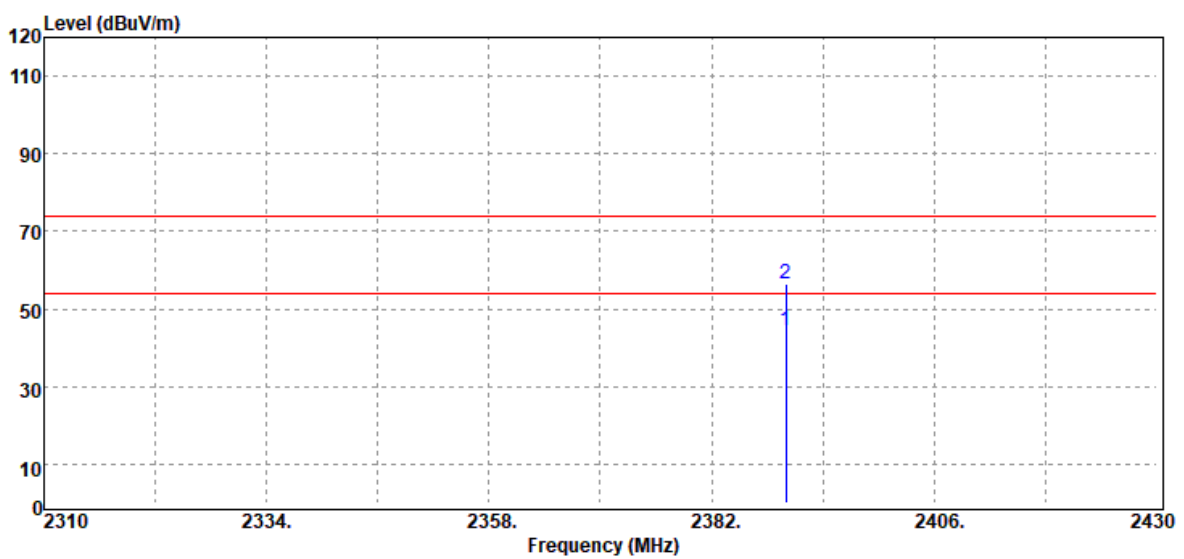
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2483.50	Average	44.42	-2.71	41.71	54.00	-12.29
2483.50	Peak	55.45	-2.71	52.74	74.00	-21.26
2484.50	Average	44.71	-2.70	42.01	54.00	-11.99
2484.50	Peak	57.10	-2.70	54.40	74.00	-19.60
2488.30	Average	45.19	-2.69	42.50	54.00	-11.50
2488.30	Peak	57.54	-2.69	54.85	74.00	-19.15
2489.30	Average	45.22	-2.67	42.55	54.00	-11.45
2489.30	Peak	57.77	-2.67	55.10	74.00	-18.90
2489.70	Average	45.06	-2.67	42.39	54.00	-11.61
2489.70	Peak	57.06	-2.67	54.39	74.00	-19.61

Test Mode	IEEE 802.11g Low CH 2412MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 25, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
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)
2386.80	Average	45.19	-3.16	42.03	54.00	-11.97
2386.80	Peak	57.77	-3.16	54.61	74.00	-19.39
2390.00	Average	47.08	-3.17	43.91	54.00	-10.09
2390.00	Peak	58.18	-3.17	55.01	74.00	-18.99

Test Mode	IEEE 802.11g Low CH 2412MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
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)
2390.00	Average	47.61	-3.17	44.44	54.00	-9.56
2390.00	Peak	59.57	-3.17	56.40	74.00	-17.60

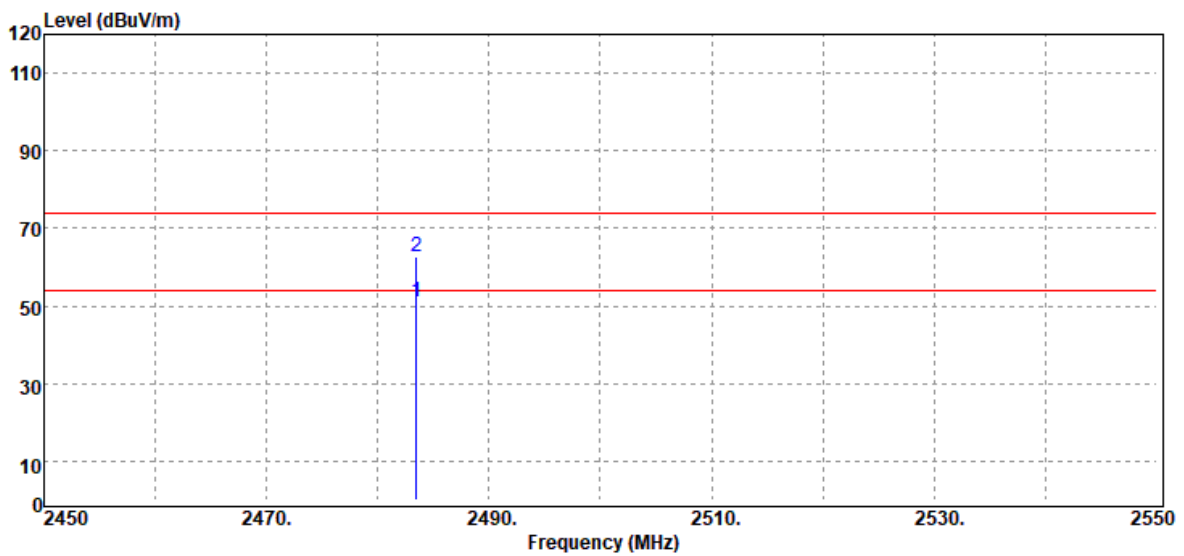


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Test Mode	IEEE 802.11g High CH 2462MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2483.50	Average	53.71	-2.71	51.00	54.00	-3.00
2483.50	Peak	65.27	-2.71	62.56	74.00	-11.44

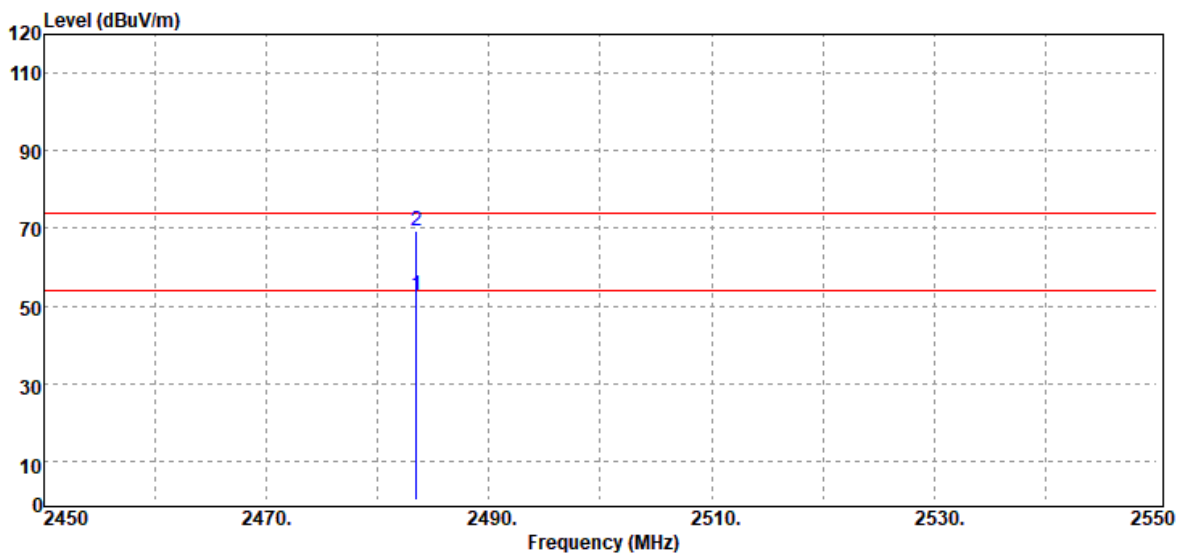


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Test Mode	IEEE 802.11g High CH 2462MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak & Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2483.50	Average	55.37	-2.71	52.66	54.00	-1.34
2483.50	Peak	71.95	-2.71	69.24	74.00	-4.76

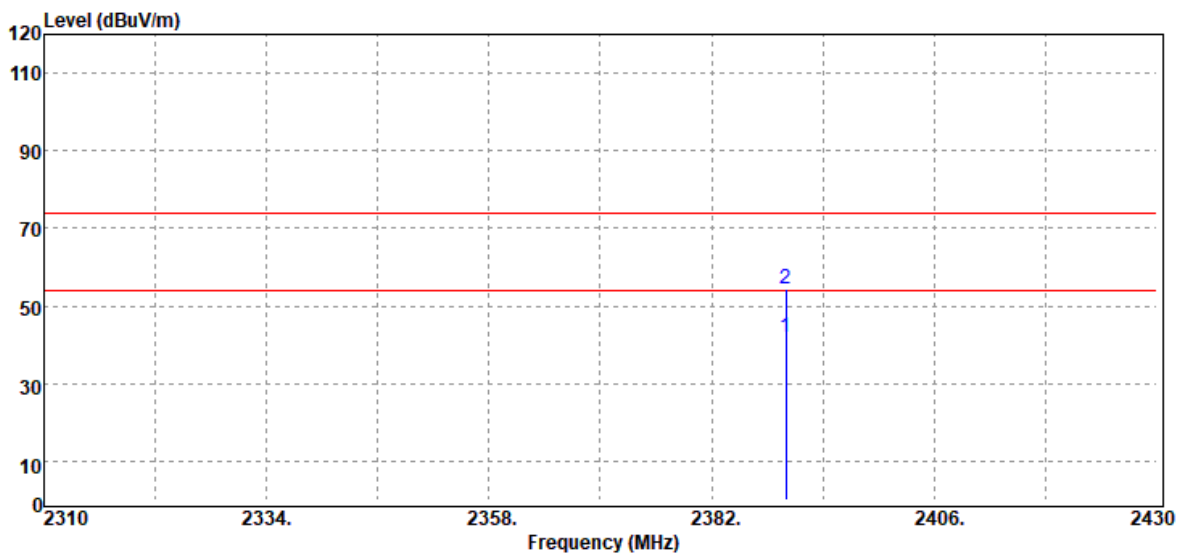


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Test Mode	IEEE 802.11n HT20 Low CH 2412MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2390.00	Average	45.09	-3.17	41.92	54.00	-12.08
2390.00	Peak	57.67	-3.17	54.50	74.00	-19.50

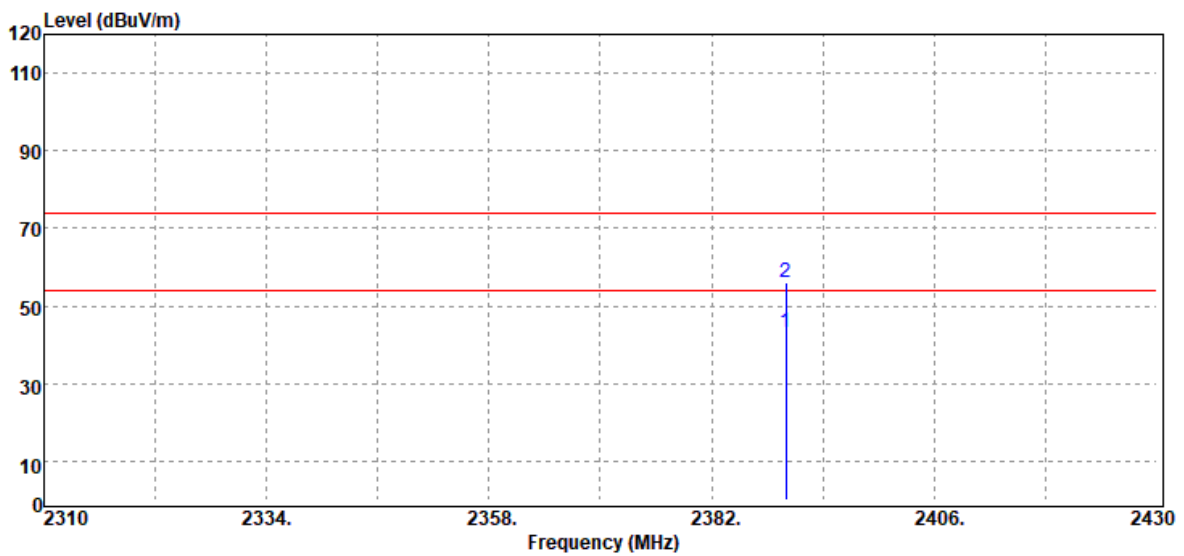


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Test Mode	IEEE 802.11 n20 Low CH 2412MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak & Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2390.00	Average	46.51	-3.17	43.34	54.00	-10.66
2390.00	Peak	59.33	-3.17	56.16	74.00	-17.84

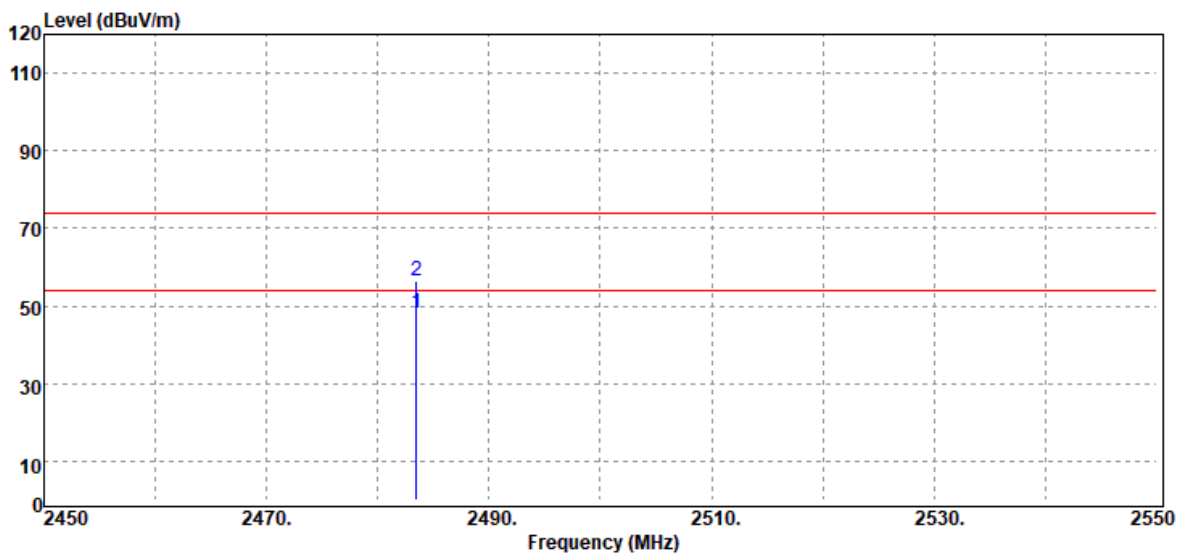


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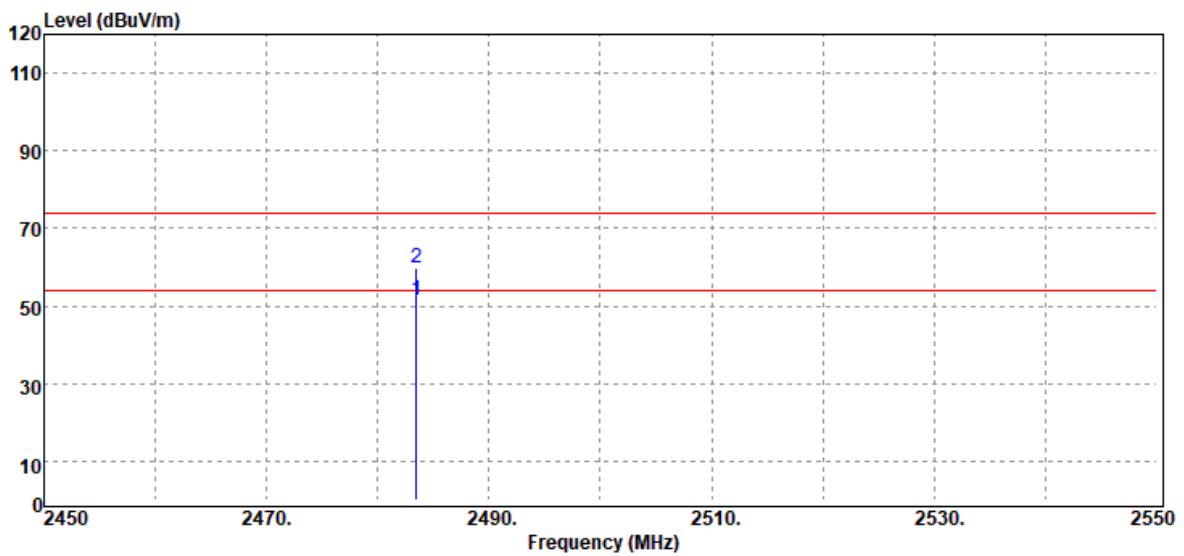
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Test Mode	IEEE 802.11n HT20 High CH 2462MHz	Temp/Hum	22.1(°C)/ 58%RH
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Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



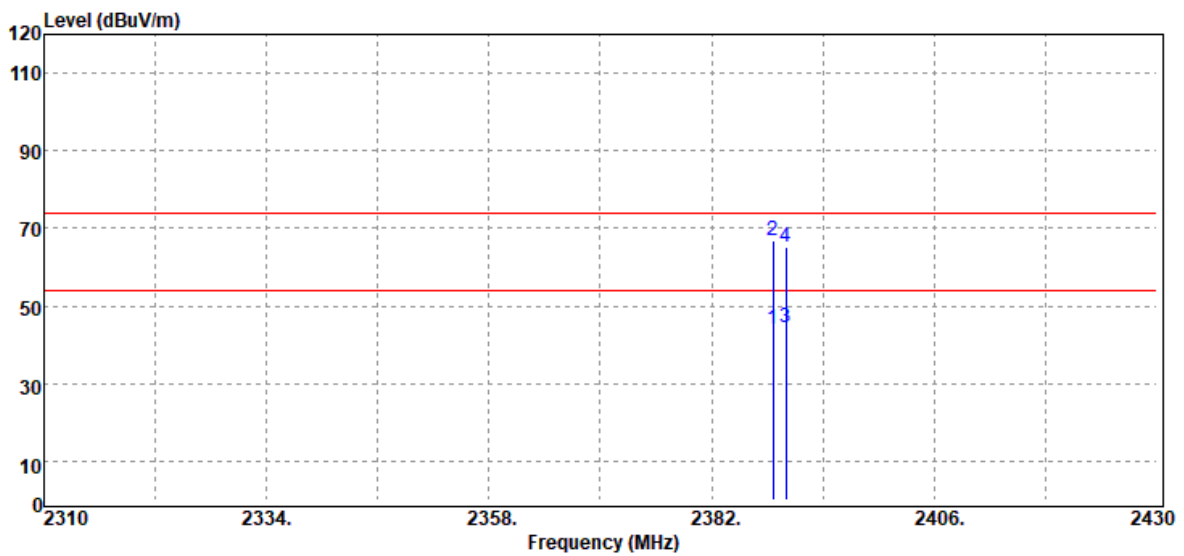
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2483.50	Average	50.82	-2.71	48.11	54.00	-5.89
2483.50	Peak	59.13	-2.71	56.42	74.00	-17.58

Test Mode	IEEE 802.11n20 High CH 2462MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak & Average		



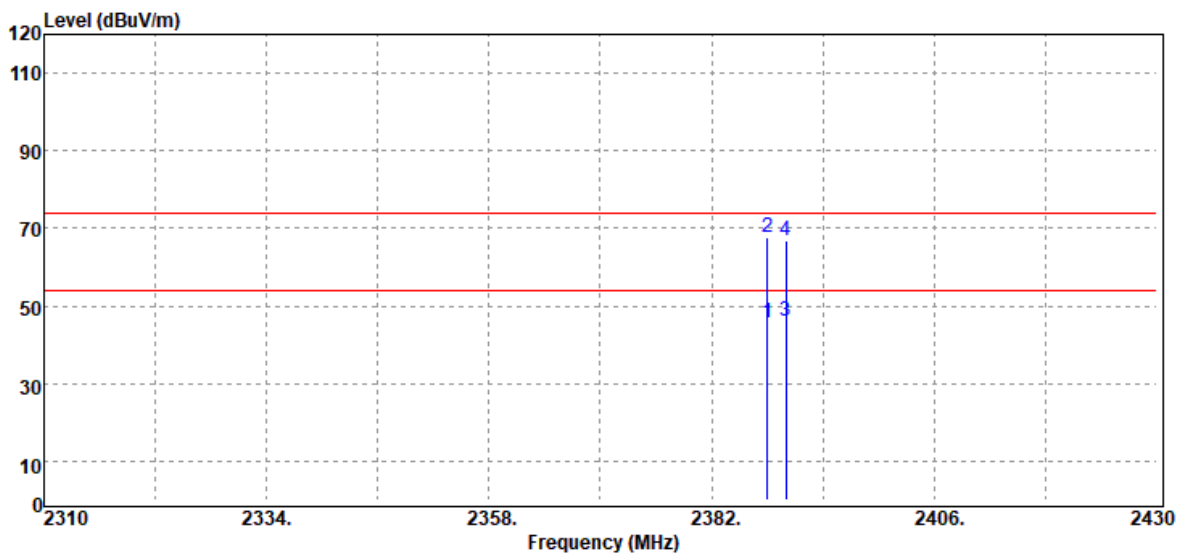
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2483.50	Average	54.37	-2.71	51.66	54.00	-2.34
2483.50	Peak	62.38	-2.71	59.67	74.00	-14.33

Test Mode	IEEE 802.11n HT40 Low CH 2422MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average	Test Voltage	



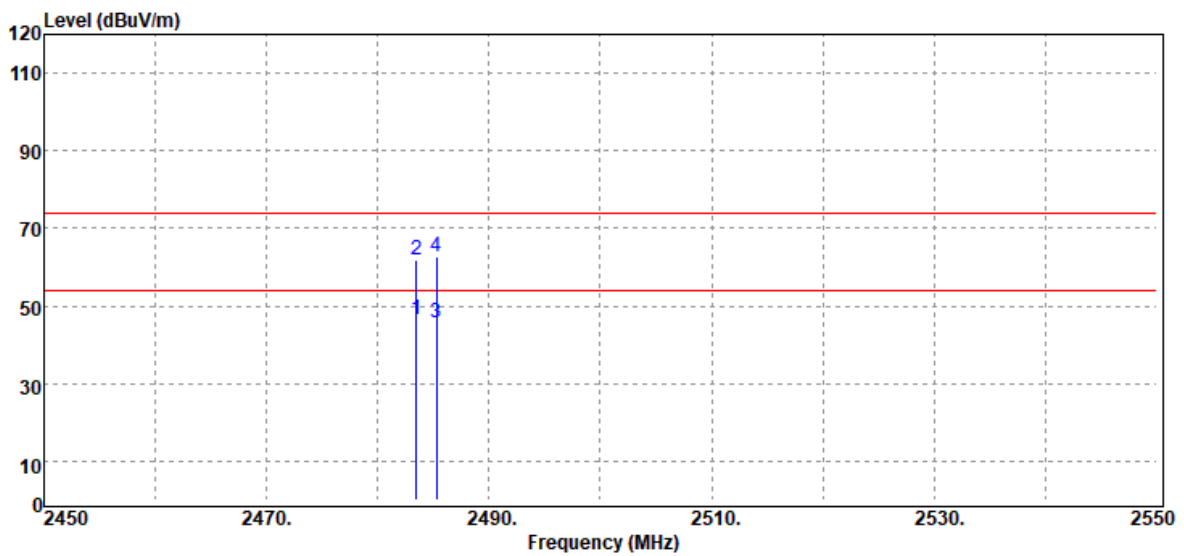
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2388.60	Average	47.36	-3.18	44.18	54.00	-9.82
2388.60	Peak	70.09	-3.18	66.91	74.00	-7.09
2390.00	Average	47.58	-3.17	44.41	54.00	-9.59
2390.00	Peak	68.18	-3.17	65.01	74.00	-8.99

Test Mode	IEEE 802.11n HT40 Low CH 2422MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average	Test Voltage	



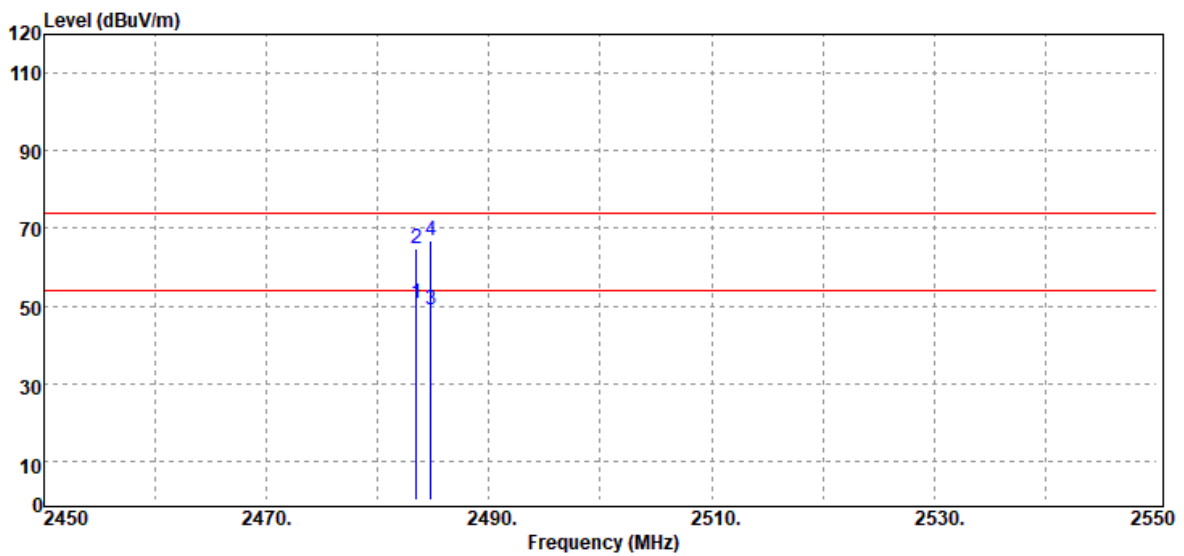
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2388.00	Average	48.65	-3.18	45.47	54.00	-8.53
2388.00	Peak	71.04	-3.18	67.86	74.00	-6.14
2390.00	Average	49.22	-3.17	46.05	54.00	-7.95
2390.00	Peak	69.92	-3.17	66.75	74.00	-7.25

Test Mode	IEEE 802.11n HT40 High CH 2452MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average	Test Voltage	



Frequency (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	49.05	-2.71	46.34	54.00	-7.66
2483.50	Peak	64.75	-2.71	62.04	74.00	-11.96
2485.30	Average	48.19	-2.70	45.49	54.00	-8.51
2485.30	Peak	65.41	-2.70	62.71	74.00	-11.29

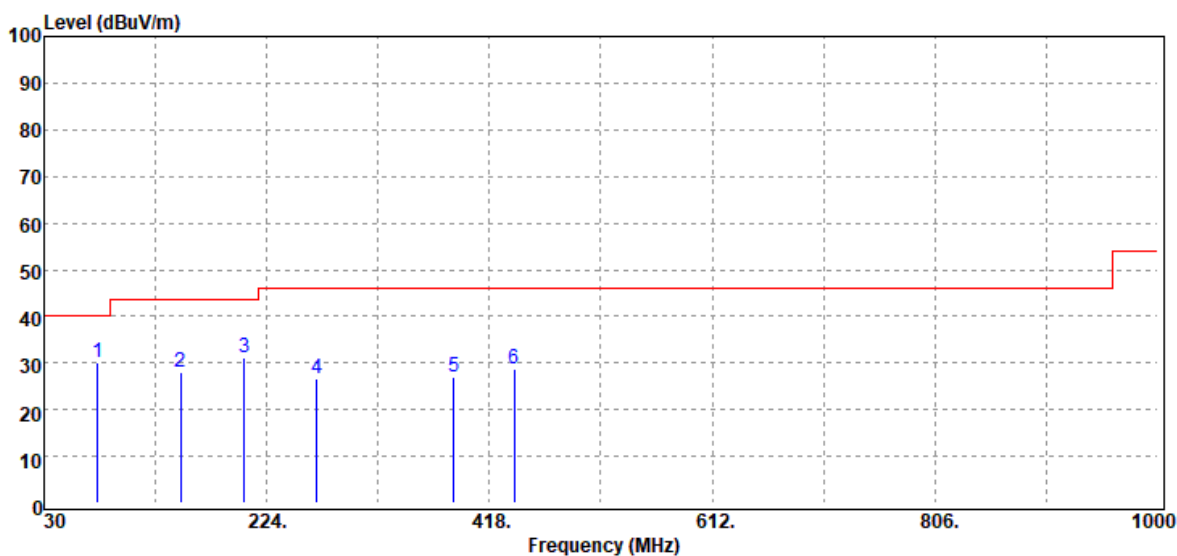
Test Mode	IEEE 802.11n HT40 High CH 2452MHz	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Band Edge	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average	Test Voltage	



Frequency (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	53.50	-2.71	50.79	54.00	-3.21
2483.50	Peak	67.59	-2.71	64.88	74.00	-9.12
2484.80	Average	51.83	-2.70	49.13	54.00	-4.87
2484.80	Peak	69.43	-2.70	66.73	74.00	-7.27

Below 1G Test Data

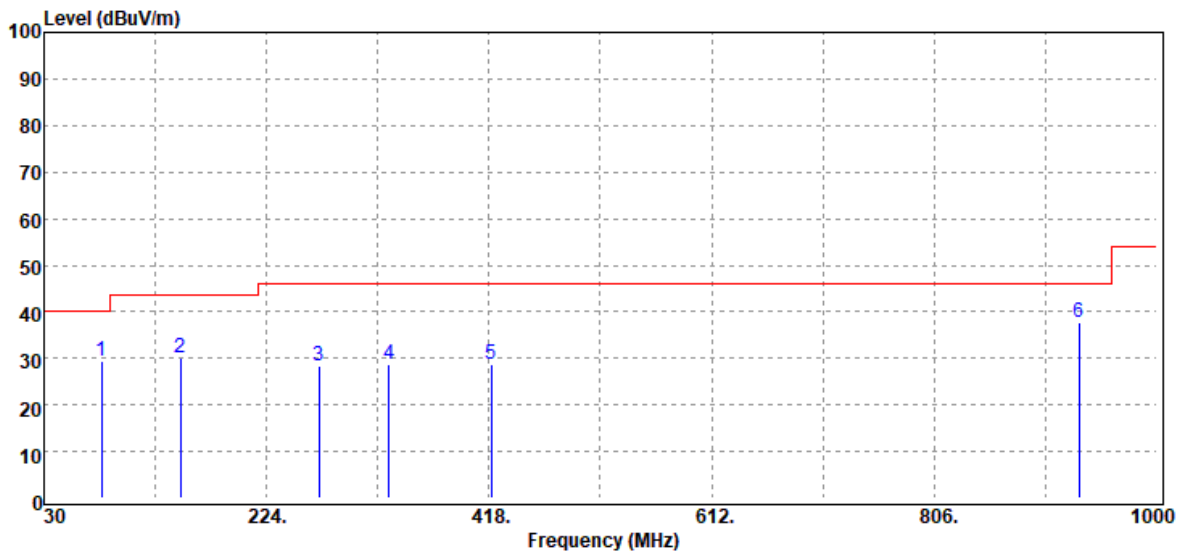
Test Mode	Mode 1	Temp/Hum	22.1(°C)/ 58%RH
Test Item	30MHz-1GHz	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak	Test Voltage	



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
76.56	Peak	45.40	-15.15	30.25	40.00	-9.75
149.31	Peak	38.41	-10.40	28.01	43.50	-15.49
204.60	Peak	42.84	-11.53	31.31	43.50	-12.19
267.65	Peak	35.66	-9.01	26.65	46.00	-19.35
386.96	Peak	33.16	-6.32	26.84	46.00	-19.16
439.34	Peak	33.11	-4.55	28.56	46.00	-17.44

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

Test Mode	Mode 1	Temp/Hum	22.1(°C)/ 58%RH
Test Item	30MHz-1GHz	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak	Test Voltage	

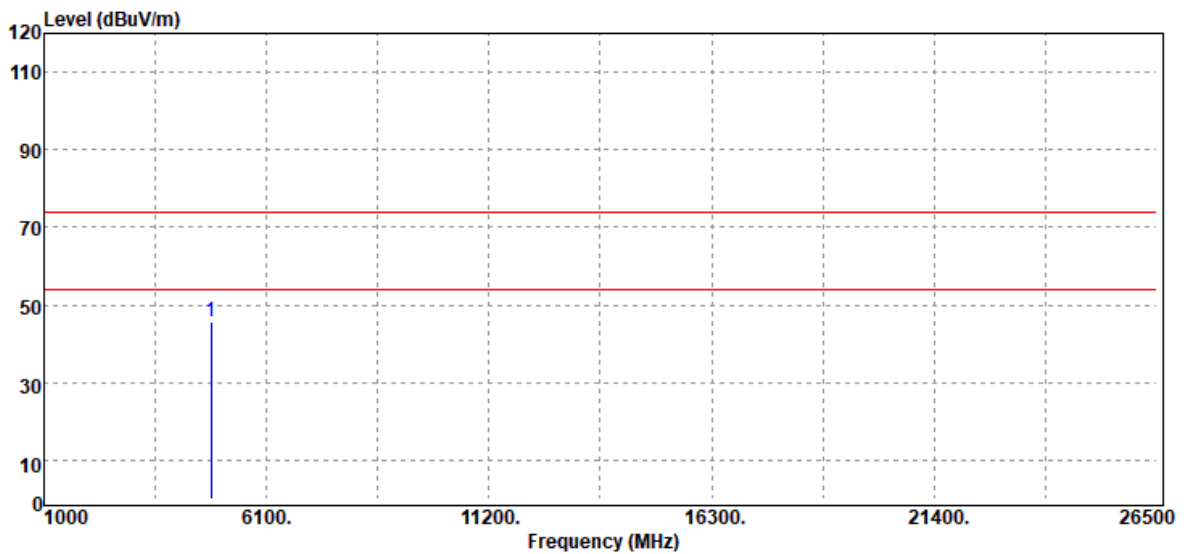


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
80.44	Peak	44.98	-15.52	29.46	40.00	-10.54
149.31	Peak	40.46	-10.40	30.06	43.50	-13.44
269.59	Peak	37.29	-8.88	28.41	46.00	-17.59
330.70	Peak	36.52	-7.72	28.80	46.00	-17.20
419.94	Peak	33.91	-5.06	28.85	46.00	-17.15
932.10	Peak	33.89	3.68	37.57	46.00	-8.43

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

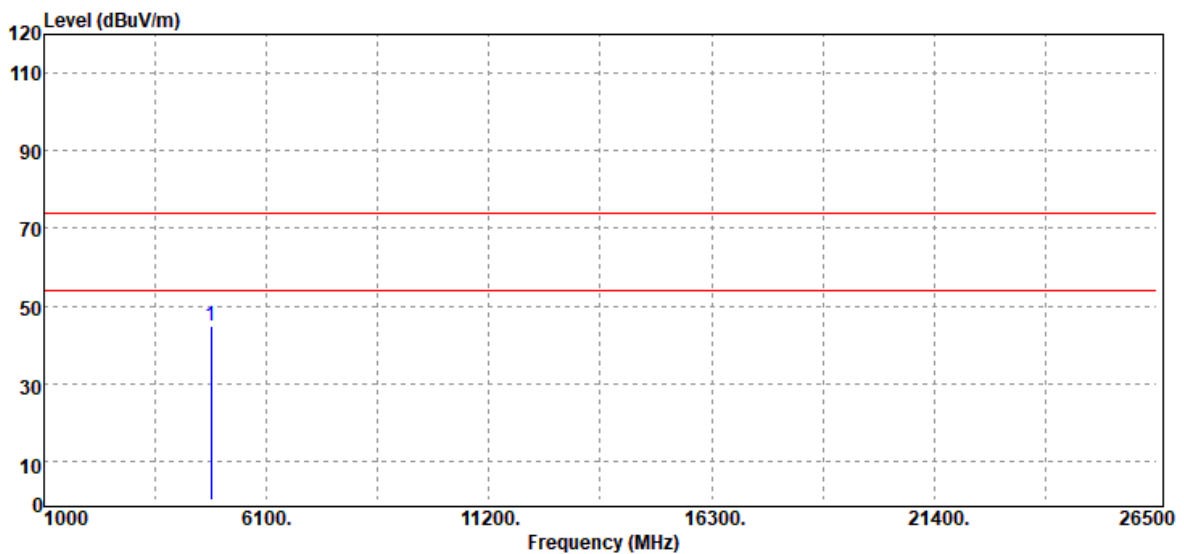


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4824.00	Peak	42.21	3.35	45.56	74.00	-28.44
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

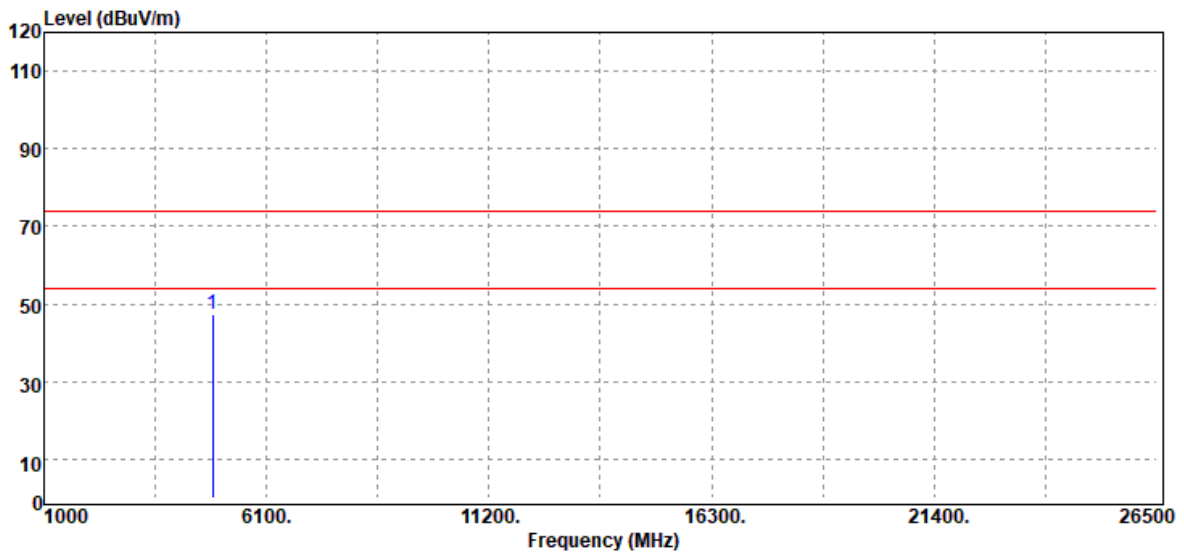


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4824.00	Peak	41.32	3.35	44.67	74.00	-29.33
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

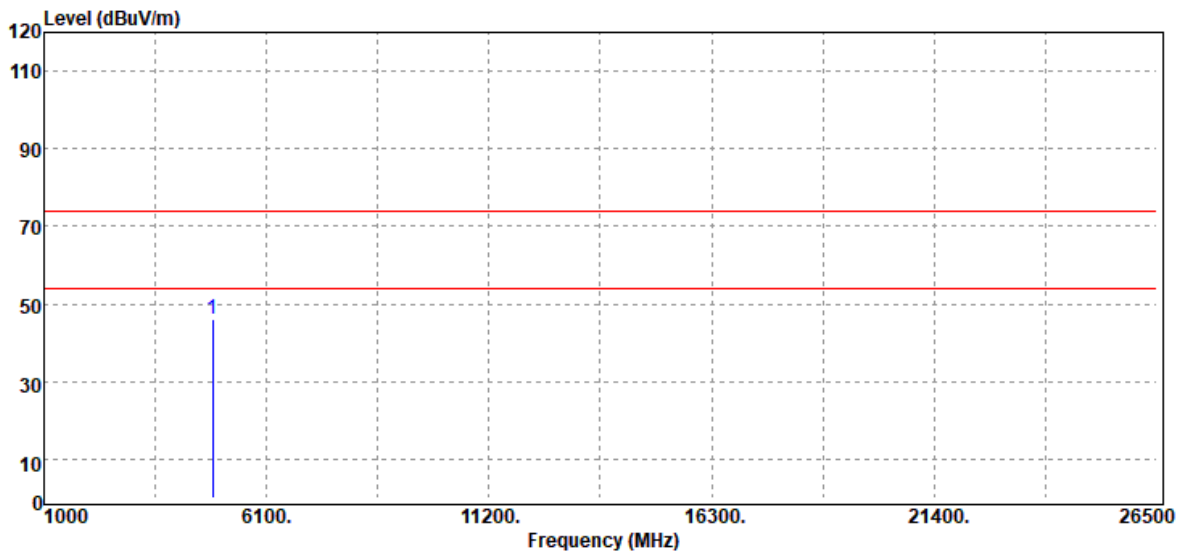


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4874.00	Peak	43.88	3.48	47.36	74.00	-26.64
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

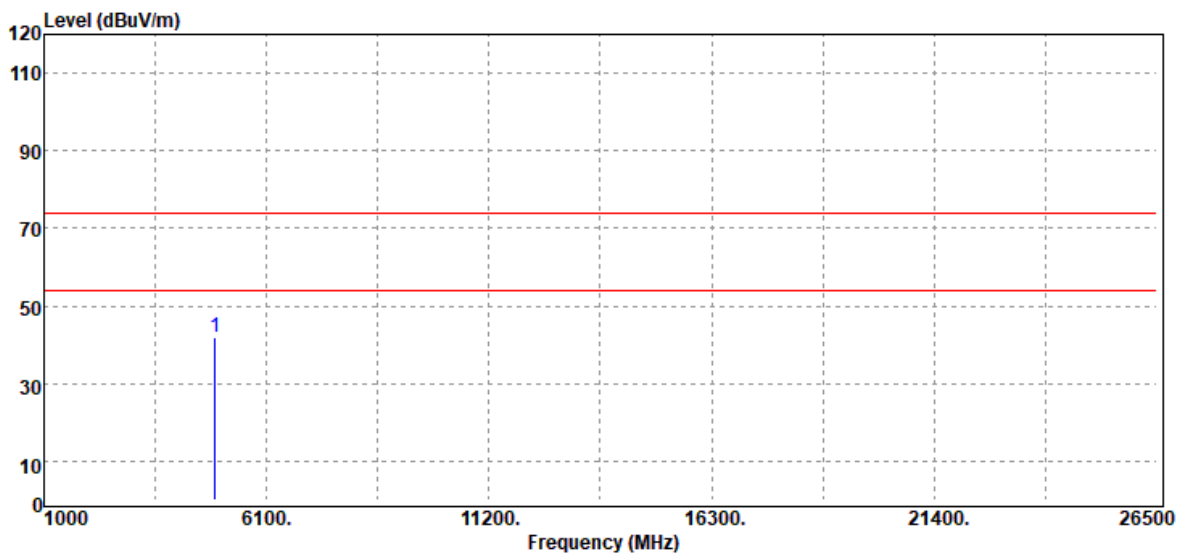


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4874.00	Peak	42.74	3.48	46.22	74.00	-27.78
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

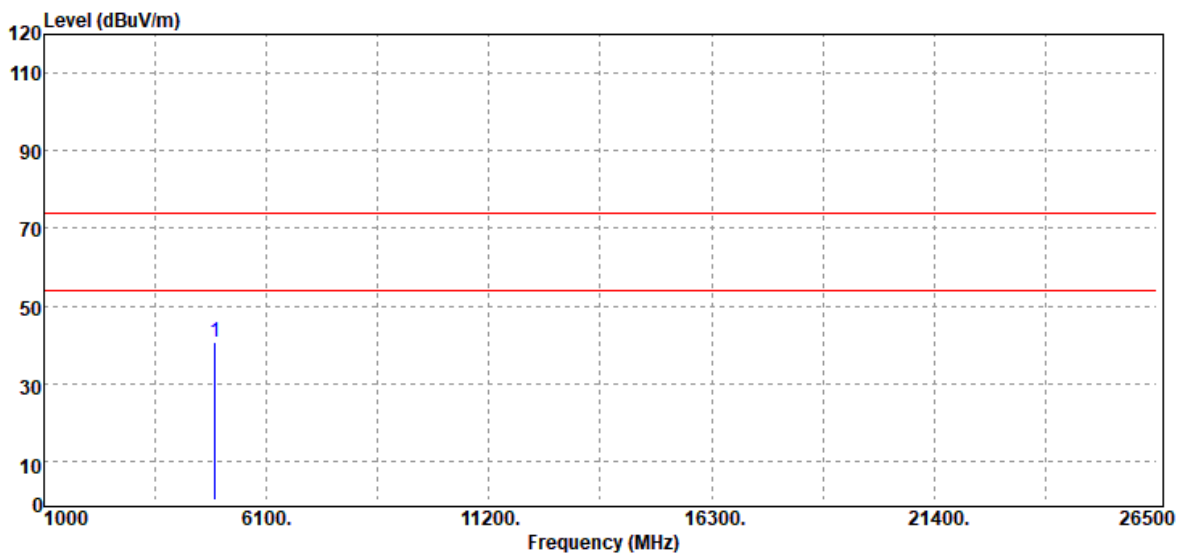


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4924.00	Peak	37.80	4.01	41.81	74.00	-32.19
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

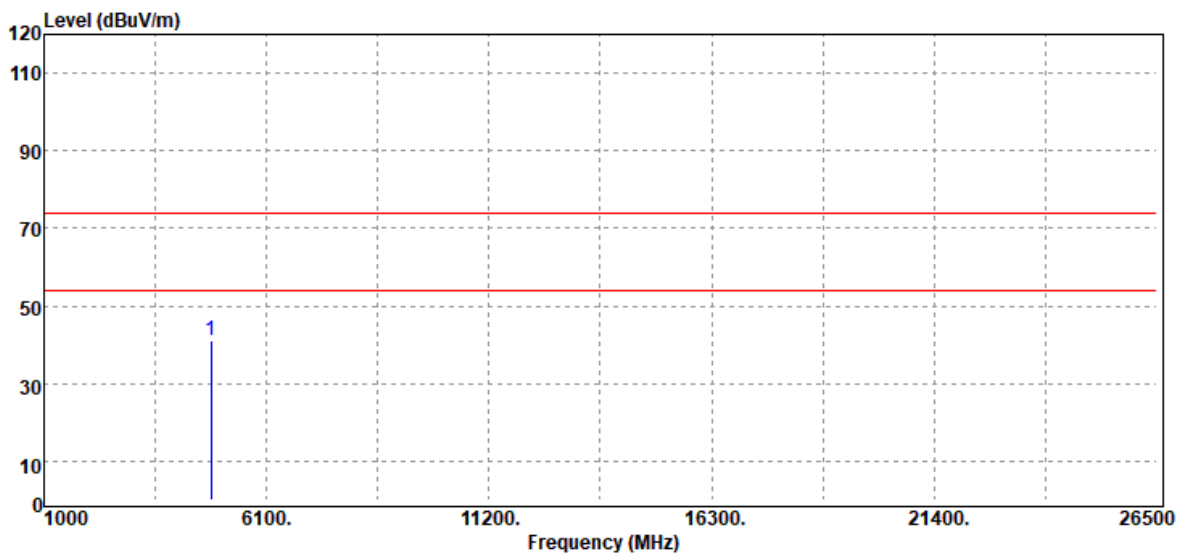


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4924.00	Peak	36.70	4.01	40.71	74.00	-33.29
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

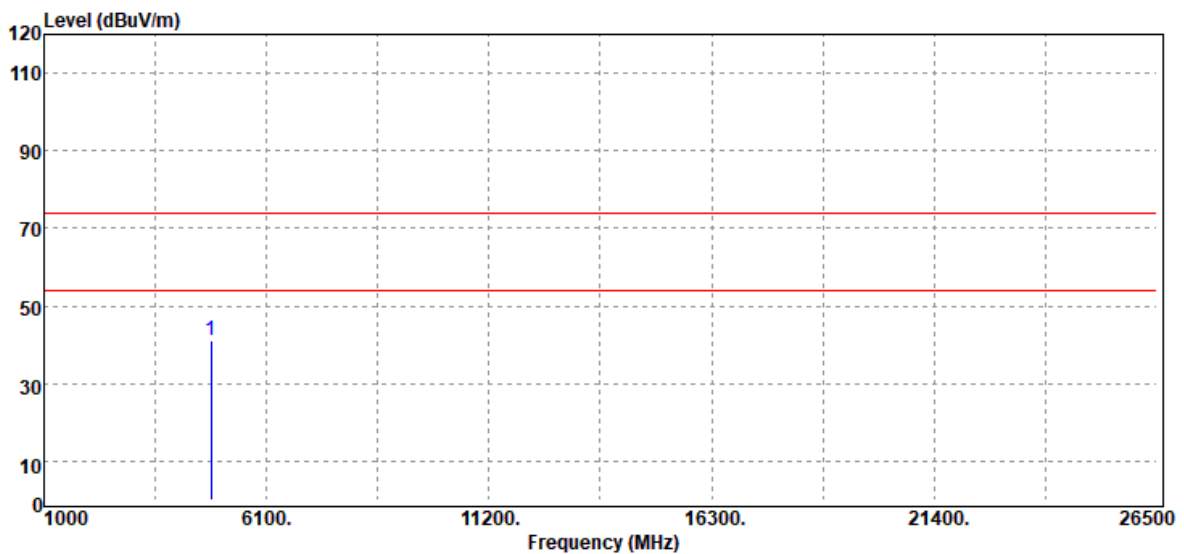


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4824.00	Peak	37.87	3.35	41.22	74.00	-32.78
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

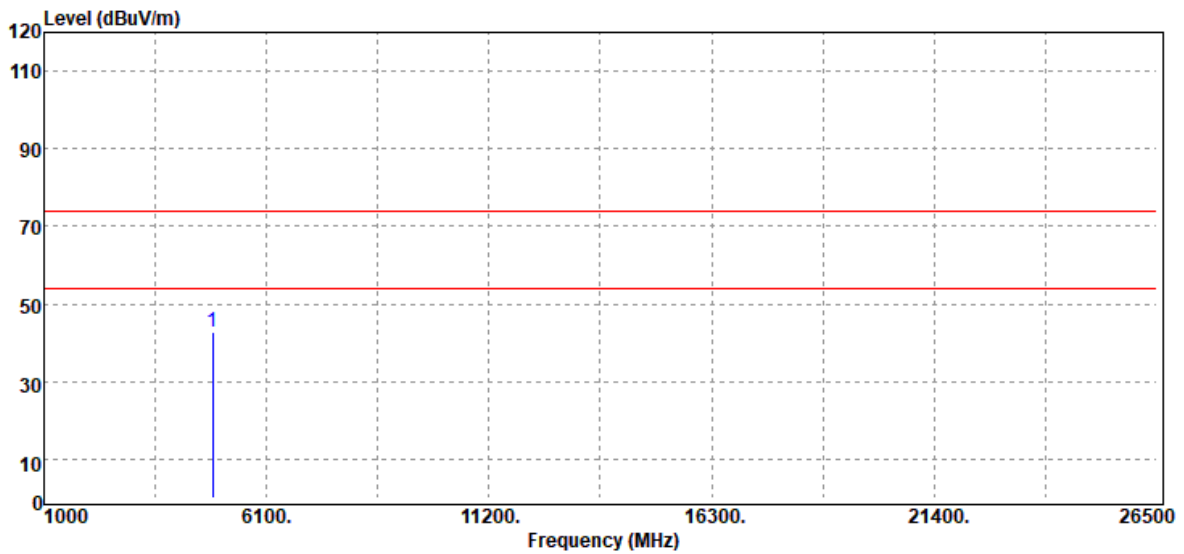


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4824.00	Peak	37.67	3.35	41.02	74.00	-32.98
N/A						

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 Mid CH	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak & Average		

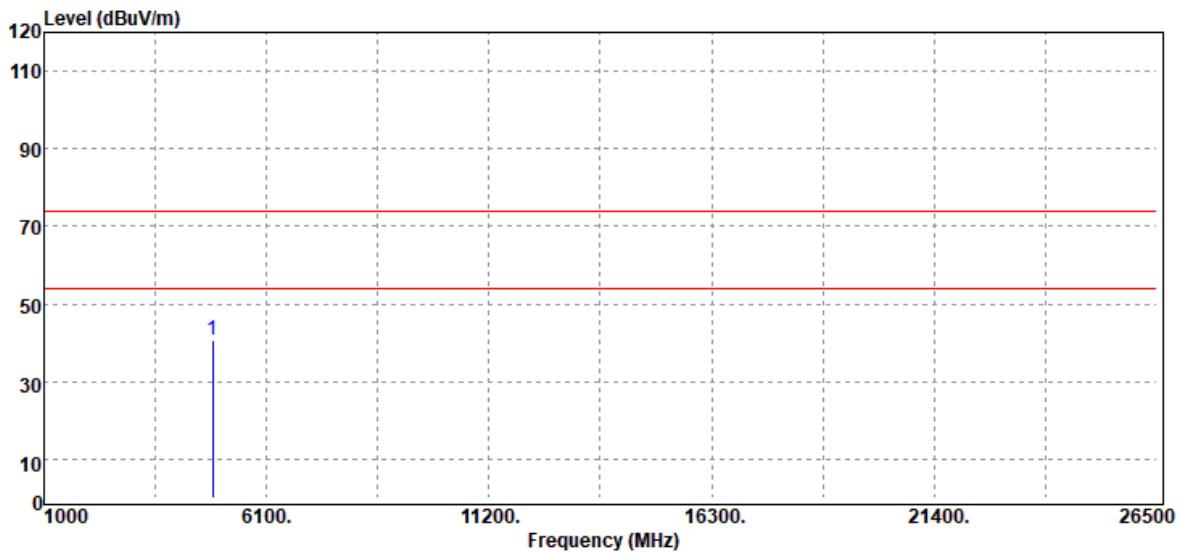


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4874.00	Peak	39.37	3.48	42.85	74.00	-31.15
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

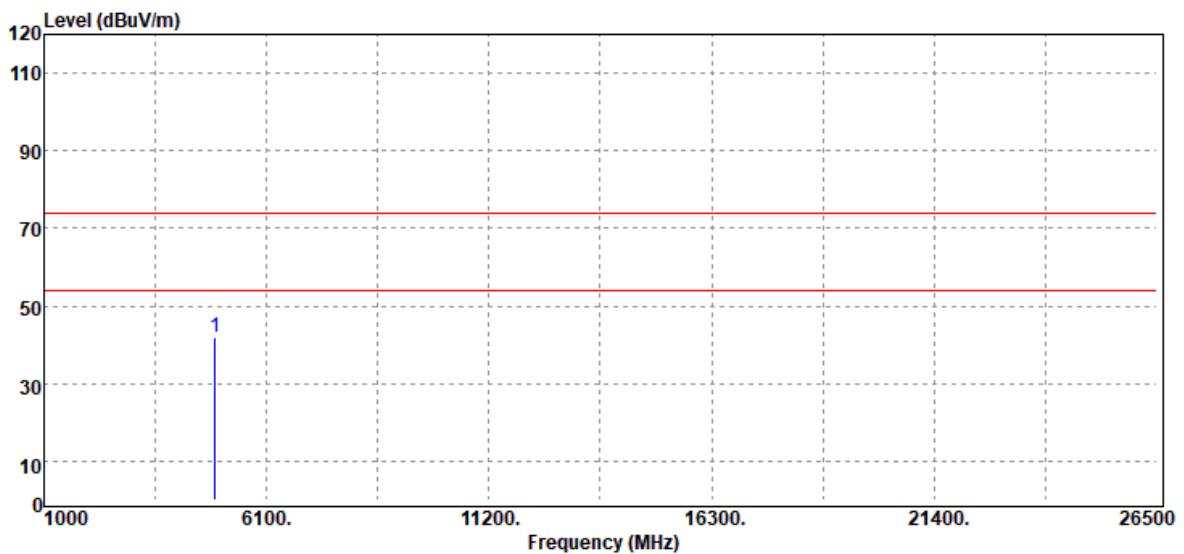


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4874.00	Peak	37.19	3.48	40.67	74.00	-33.33
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

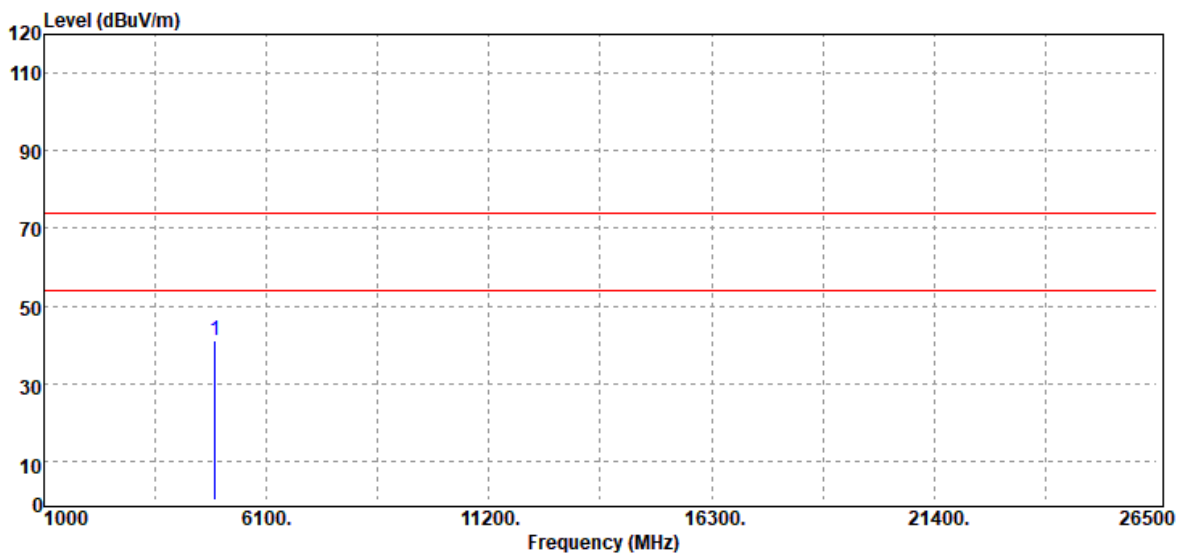


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4924.00	Peak	37.74	4.01	41.75	74.00	-32.25
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

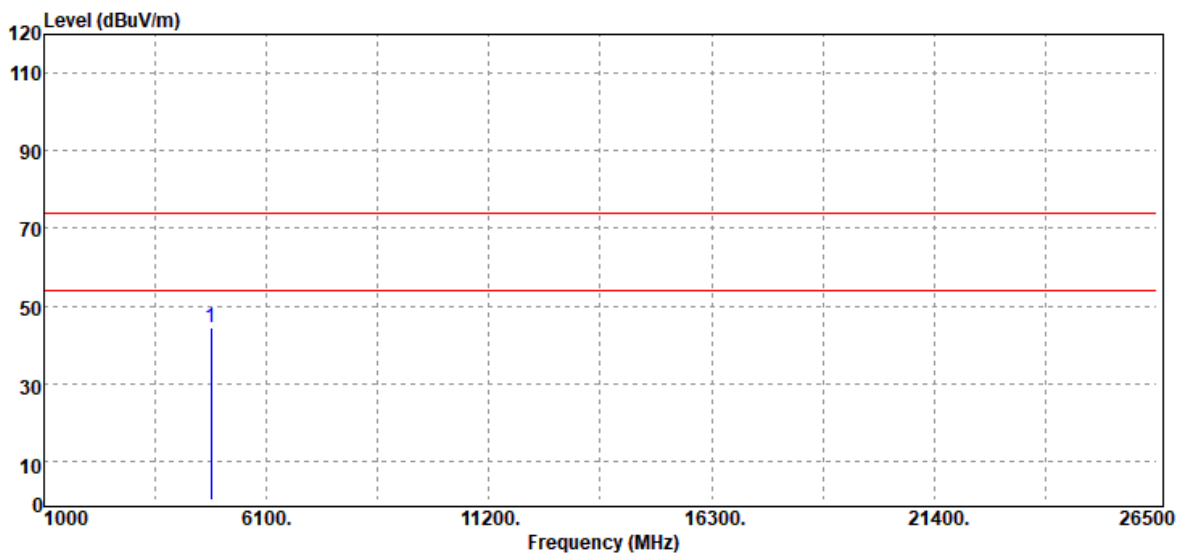


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4924.00	Peak	36.98	4.01	40.99	74.00	-33.01
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

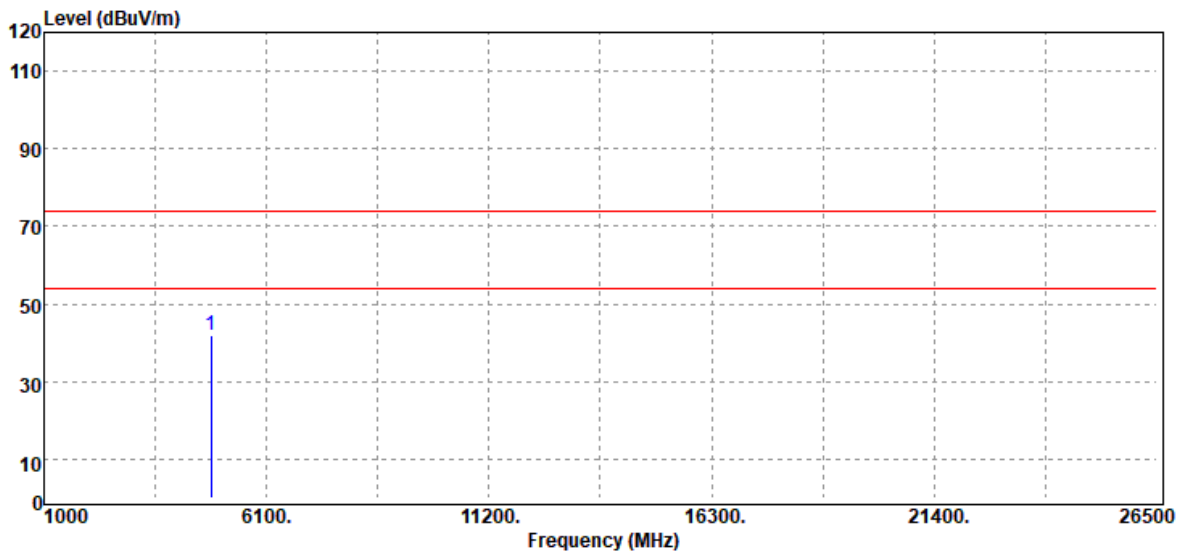


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4824.00	Peak	41.28	3.35	44.63	74.00	-29.37
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

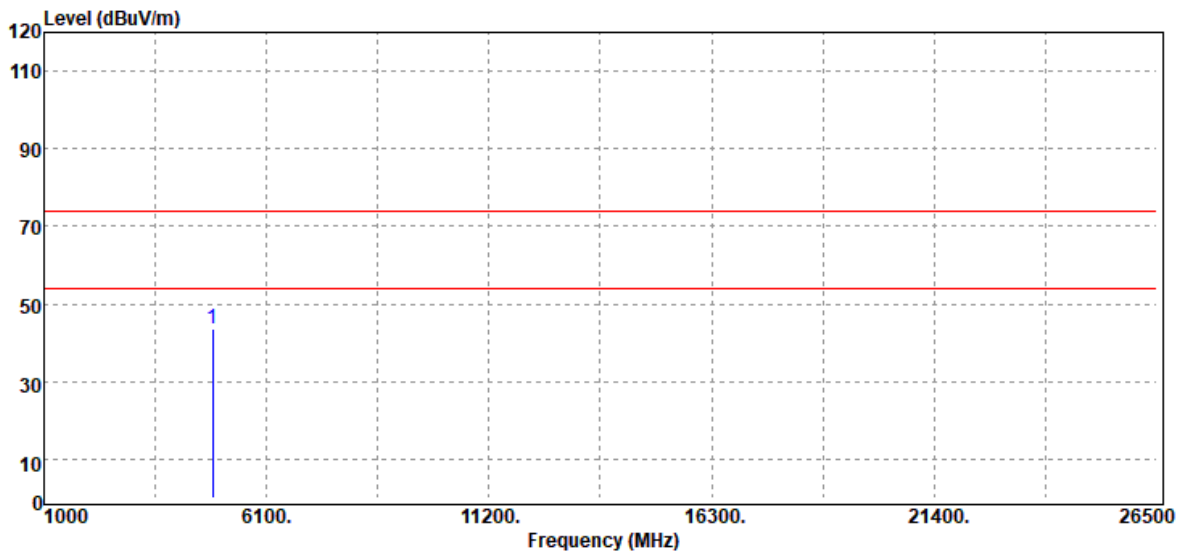


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4824.00	Peak	38.60	3.35	41.95	74.00	-32.05
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

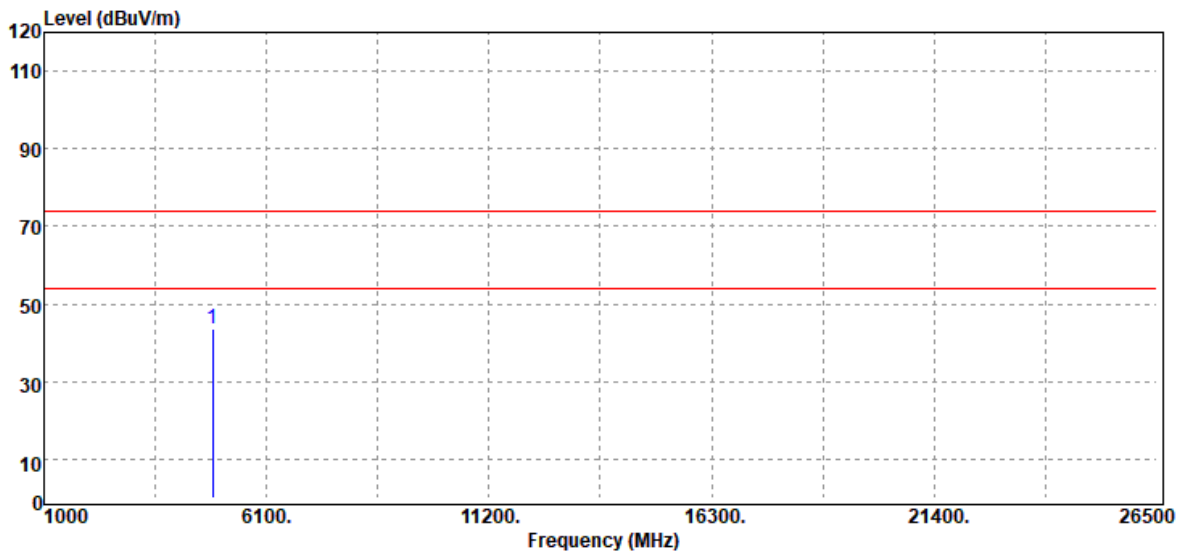


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4874.00	Peak	40.11	3.48	43.59	74.00	-30.41
N/A						

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 Mid CH	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

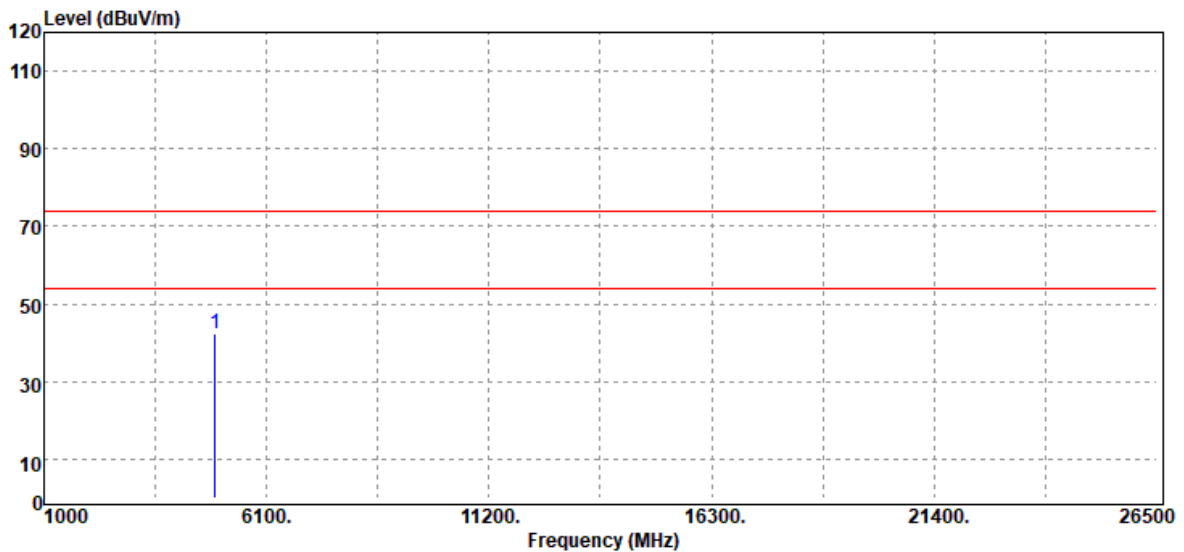


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4874.00	Peak	39.94	3.48	43.42	74.00	-30.58
N/A						

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 High CH	Temp/Hum	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

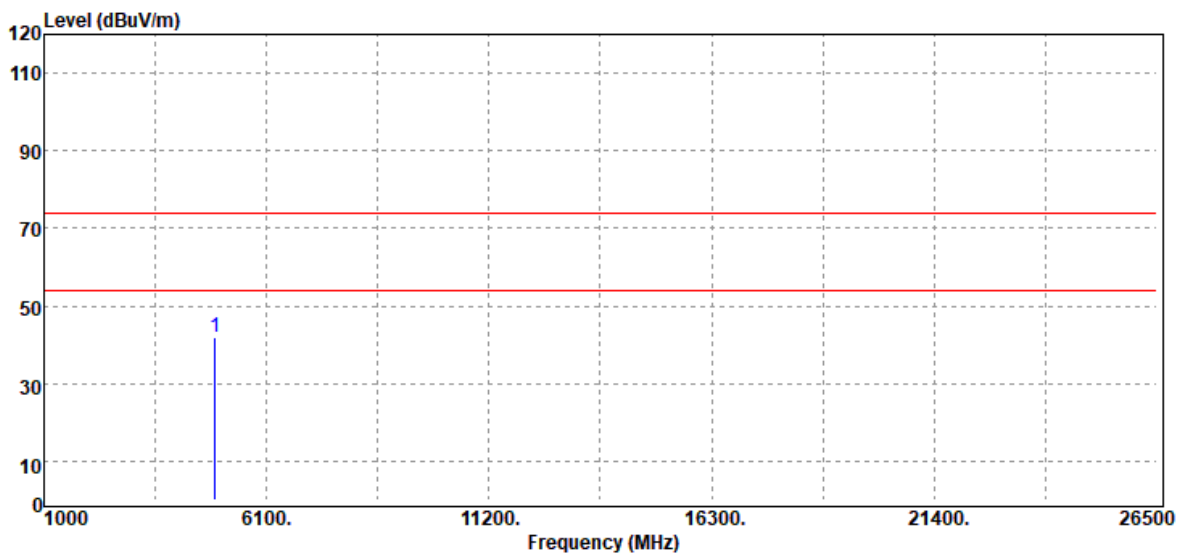


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4924.00	Peak	38.40	4.01	42.41	74.00	-31.59
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

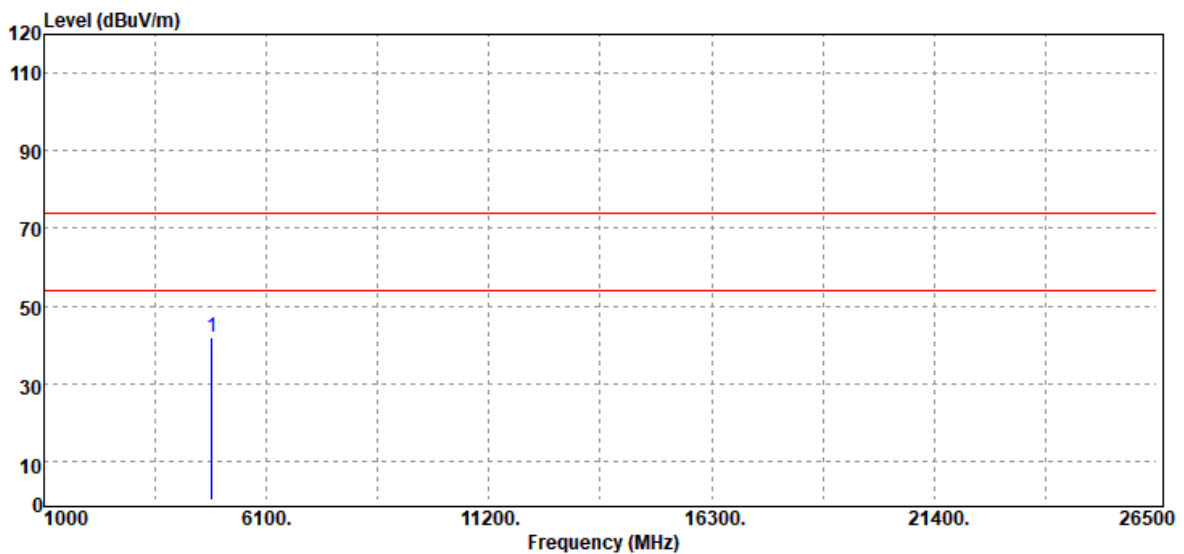


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4924.00	Peak	38.08	4.01	42.09	74.00	-31.91
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

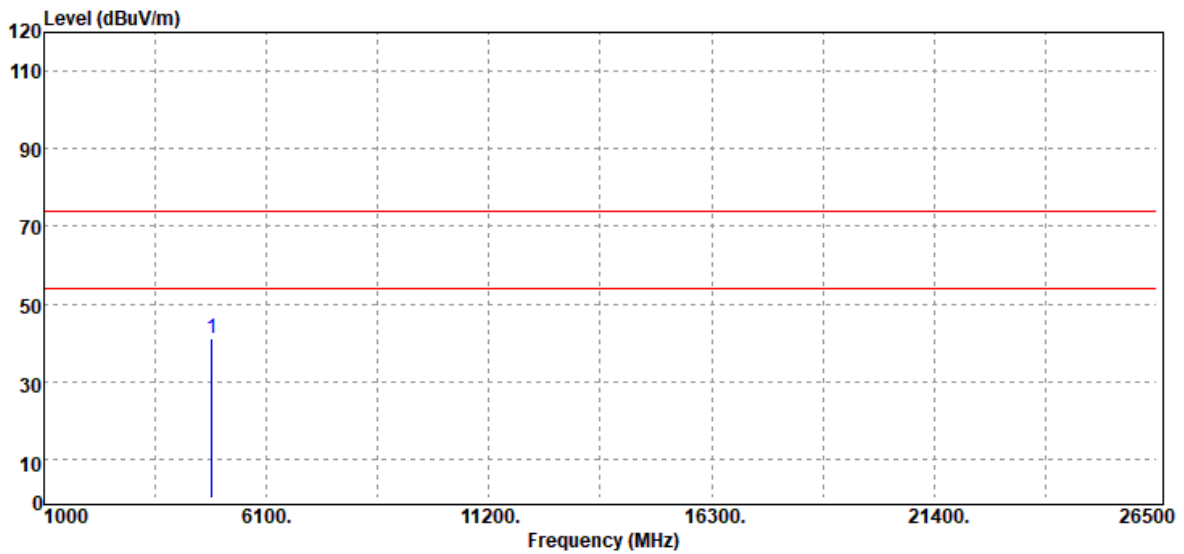


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4844.00	Peak	38.52	3.35	41.87	74.00	-32.13
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

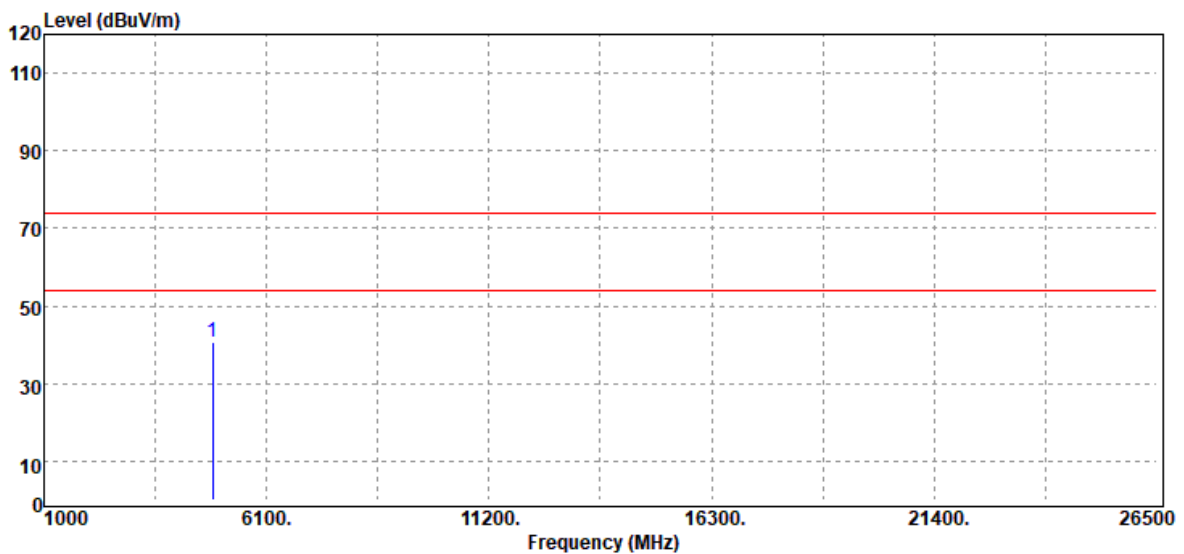


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4844.00	Peak	37.78	3.35	41.13	74.00	-32.87
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

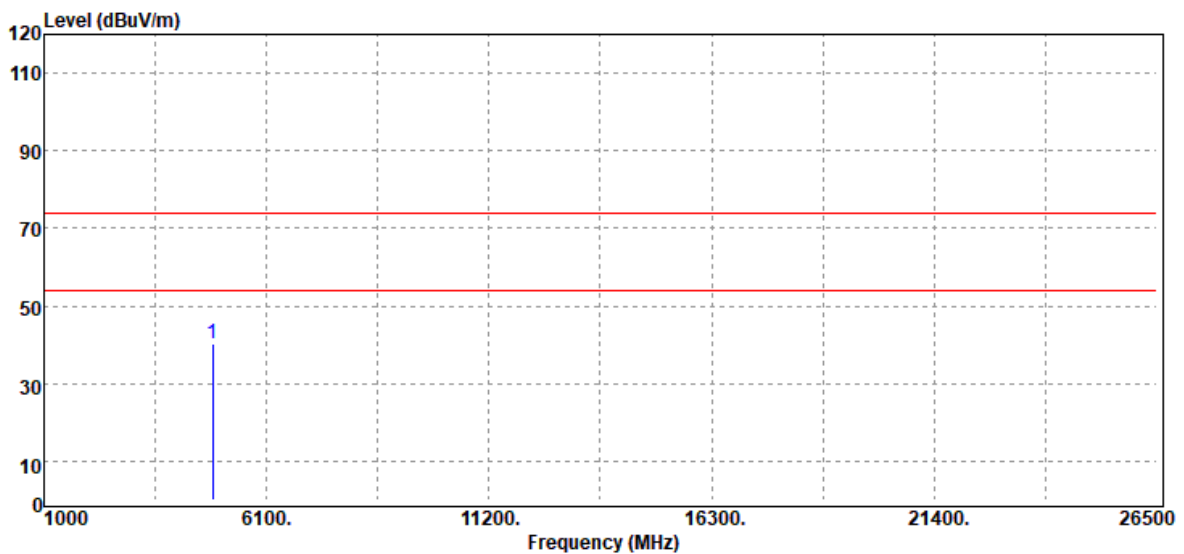


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4874.00	Peak	37.28	3.48	40.76	74.00	-33.24
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

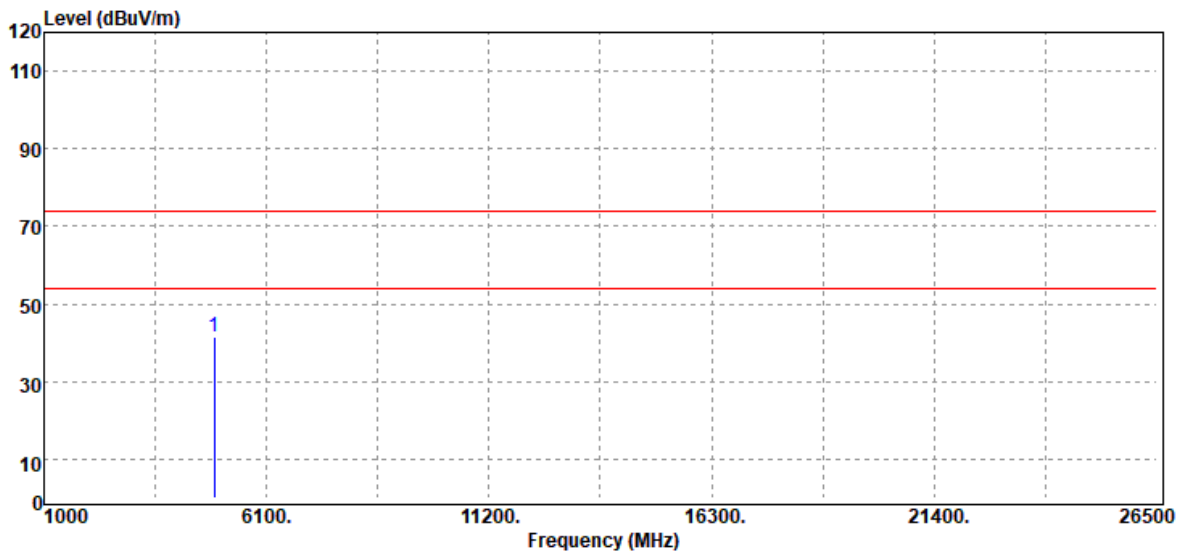


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4874.00	Peak	36.89	3.48	40.37	74.00	-33.63
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

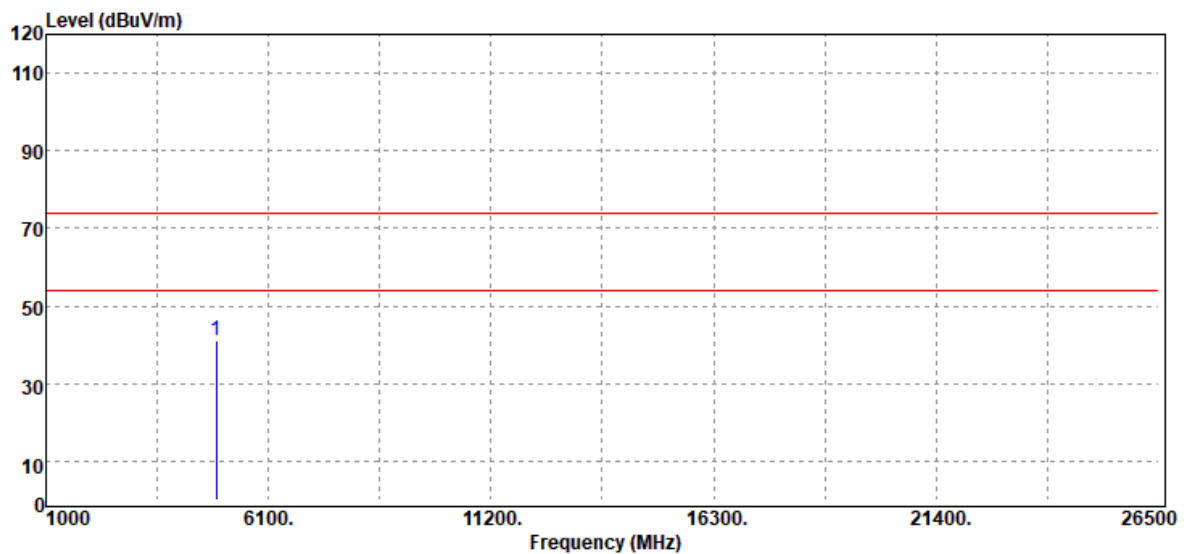


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4904.00	Peak	37.65	3.69	41.34	74.00	-32.66
N/A						

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	22.1(°C)/ 58%RH
Test Item	Harmonic	Test Date	March 26, 2020
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)
4904.00	Peak	37.47	3.69	41.16	74.00	-32.84
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

- End of Test Report -