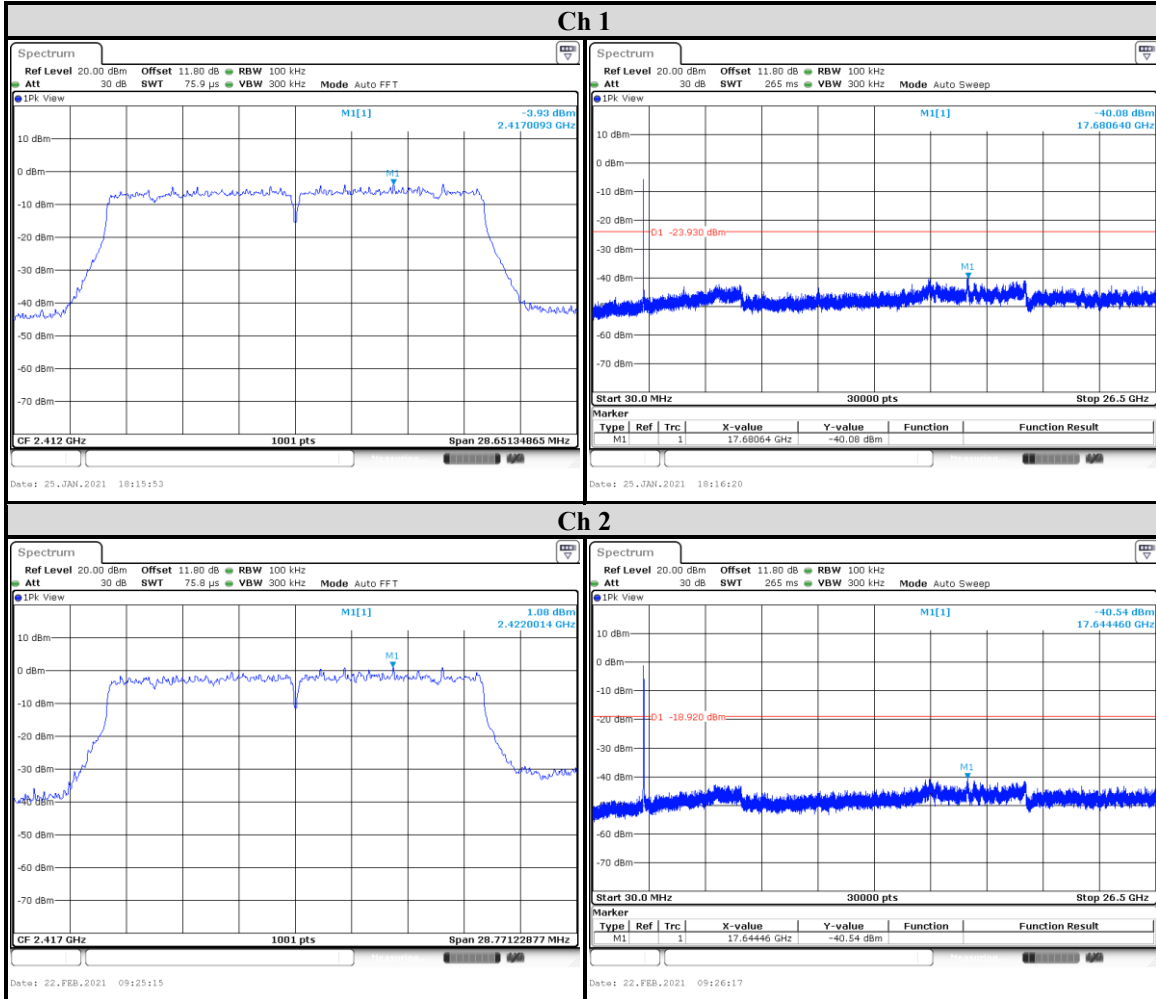




OFDMA
CHAIN 0

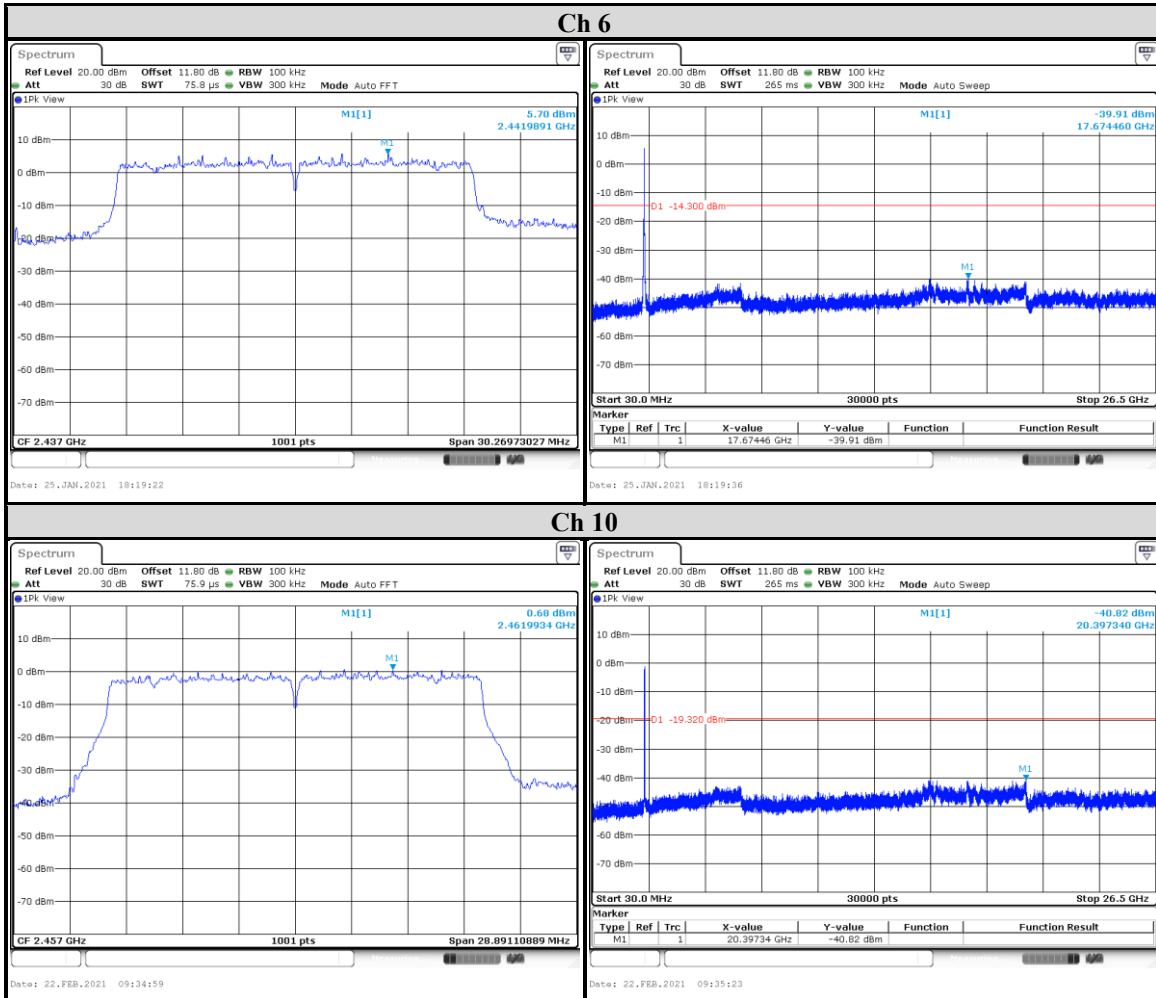


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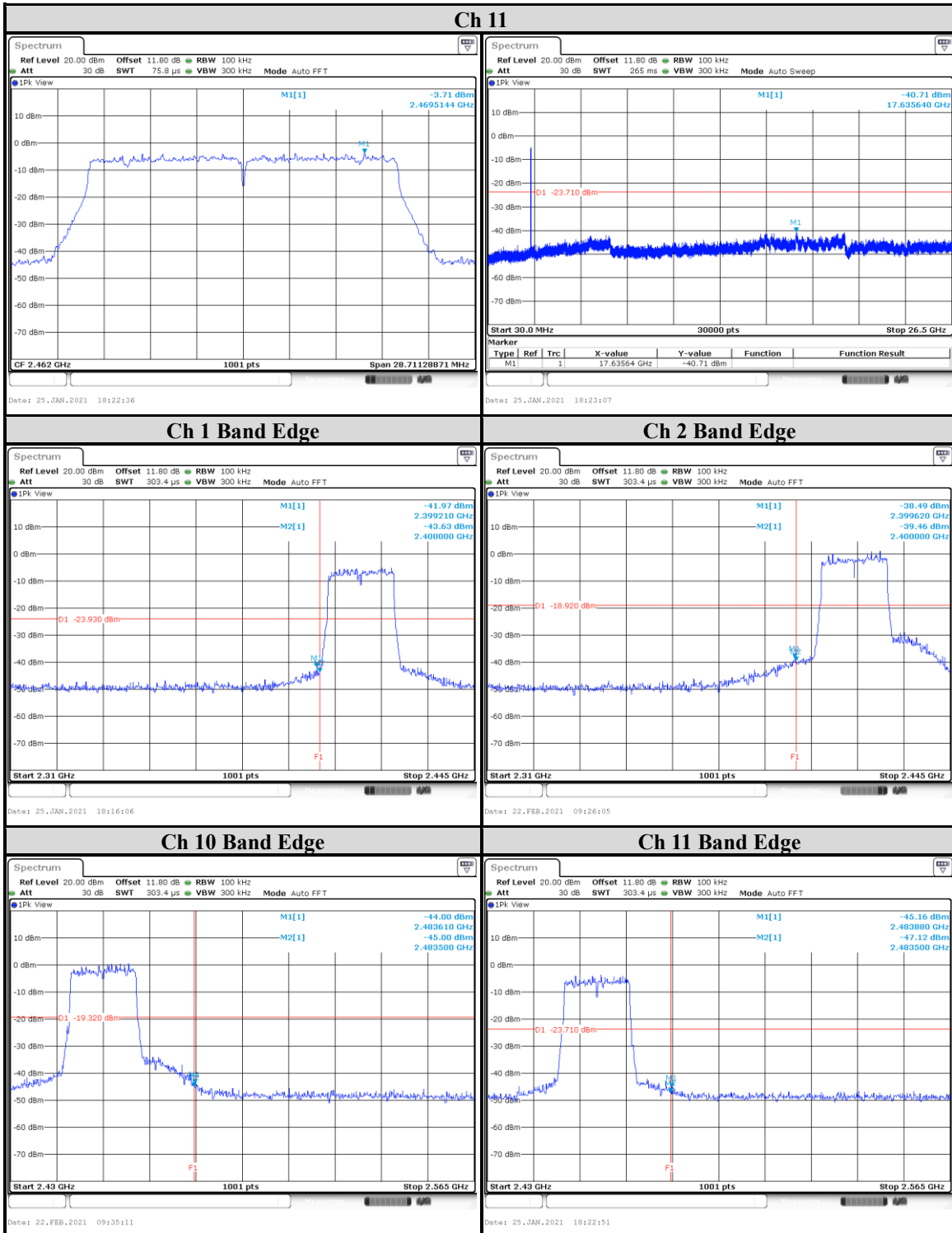


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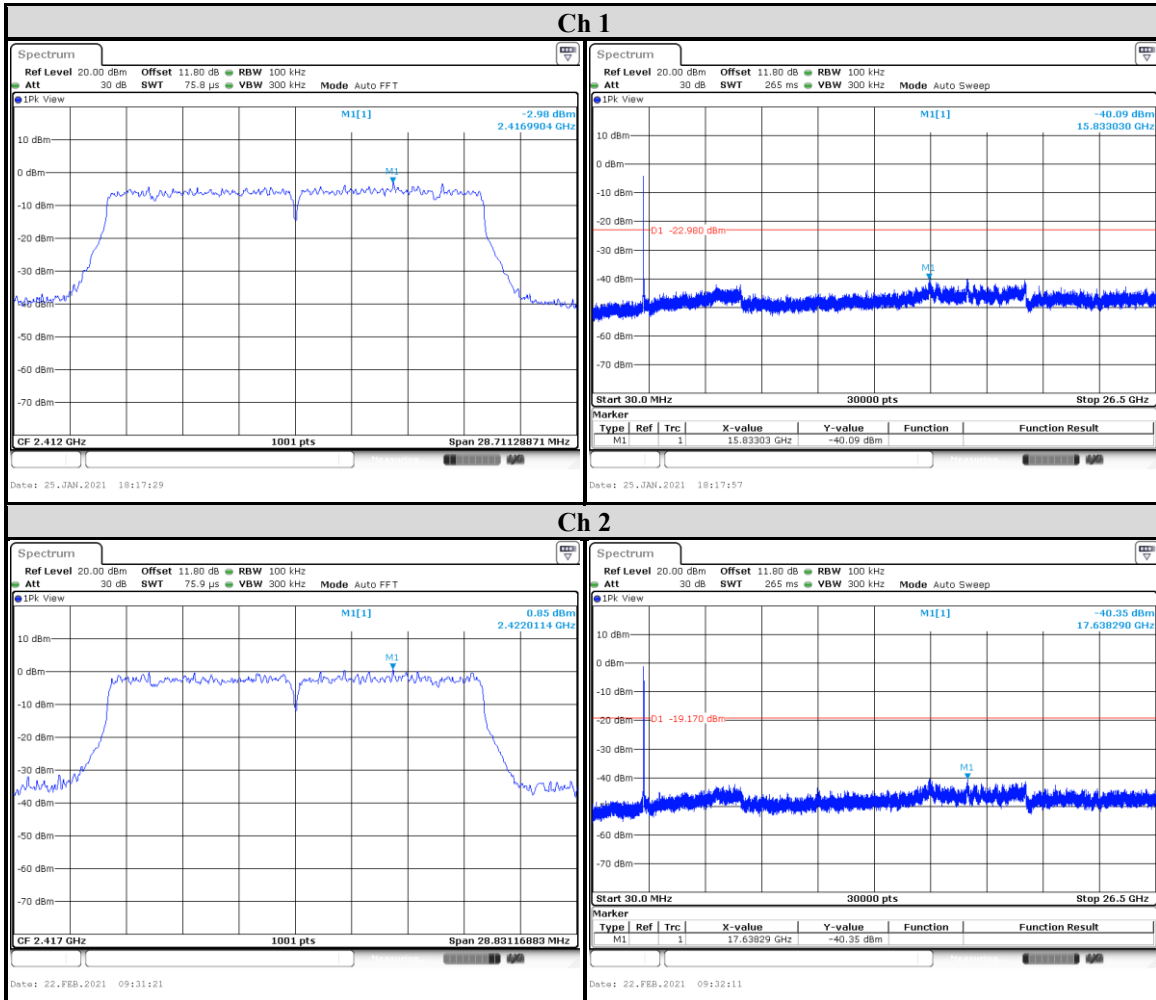
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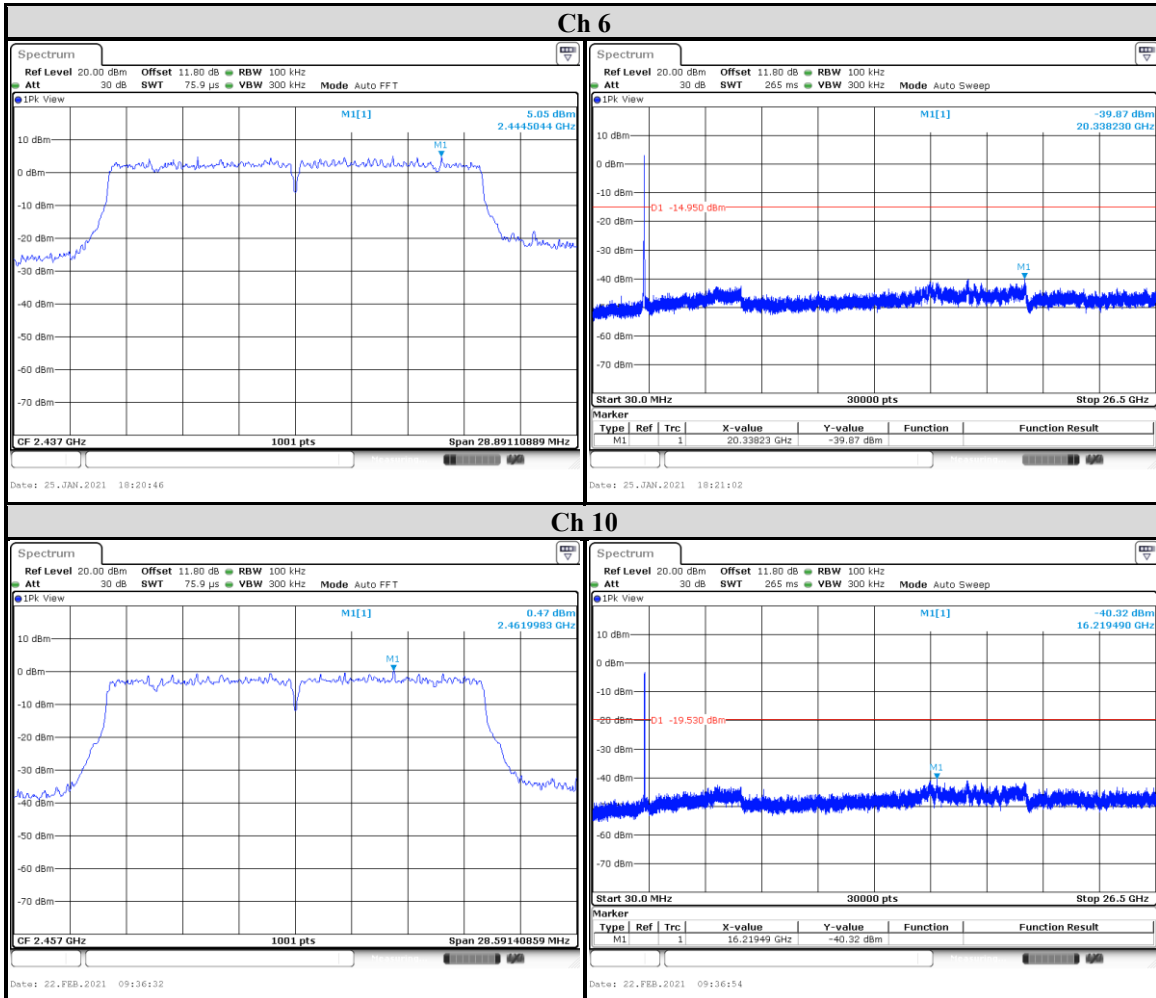
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CHAIN 1



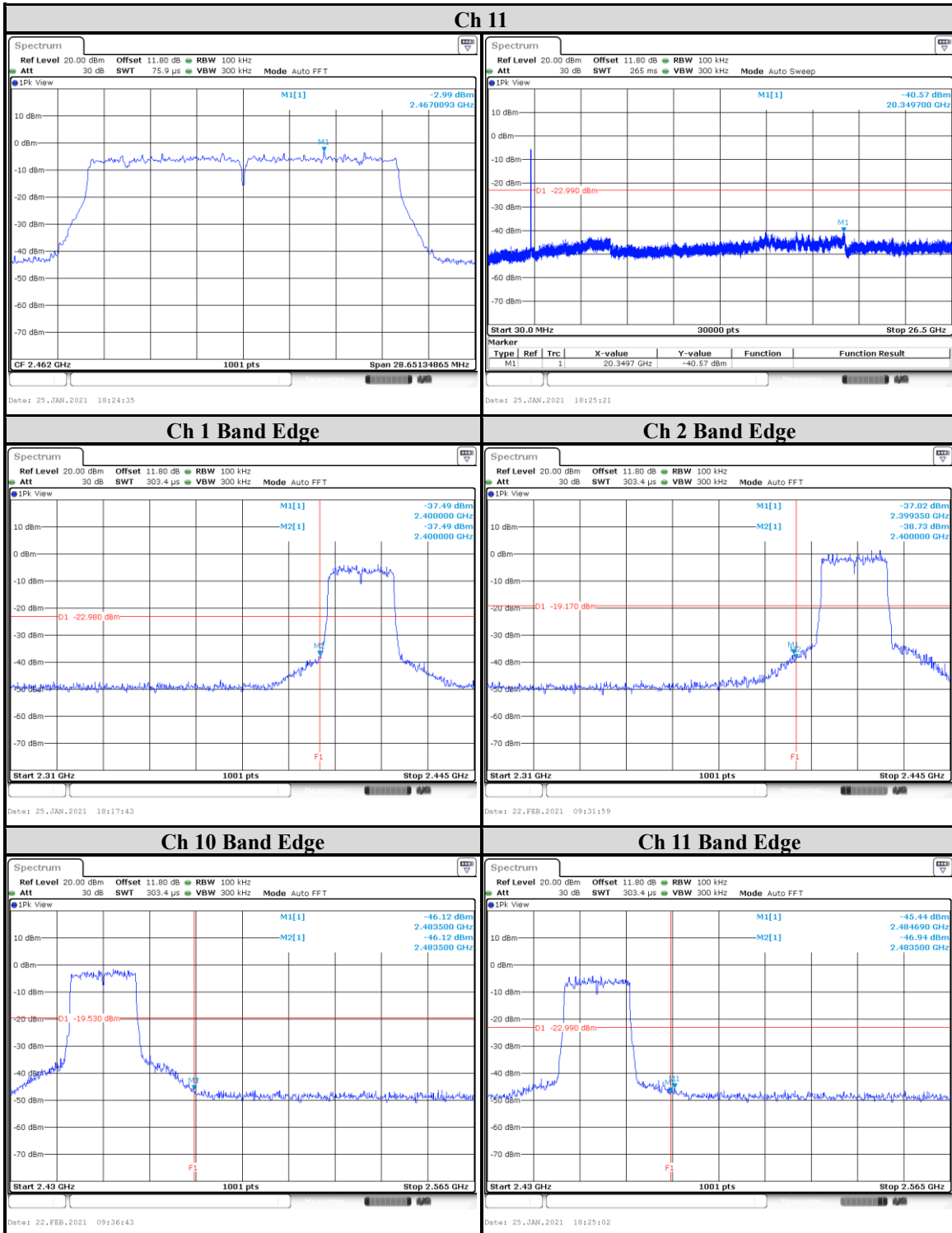


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9.5. Radiated Spurious Emission

Requirements

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

Frequency(MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

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Doc No: 17-EM-F0876 / 5.0



Test Procedures

[For 9 kHz ~ 30 MHz]

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. For measurement below 30MHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

[For above 30 MHz]

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
- f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

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Note:

- a. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- b. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
- c. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.

Configuration	Non-Beamforming mode		Beamforming mode	
	Average		Average	
	RBW	RBW	RBW	VBW
802.11b	1MHz	10 Hz	-	-
802.11g		1 kHz	-	-
802.11ax (HE20)_OFDM		2 kHz	1MHz	2 kHz
802.11ax (HE20)_OFDMA		300 Hz		300 Hz

Note: Refer to section 6.6 for duty cycle.

- d. All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported.

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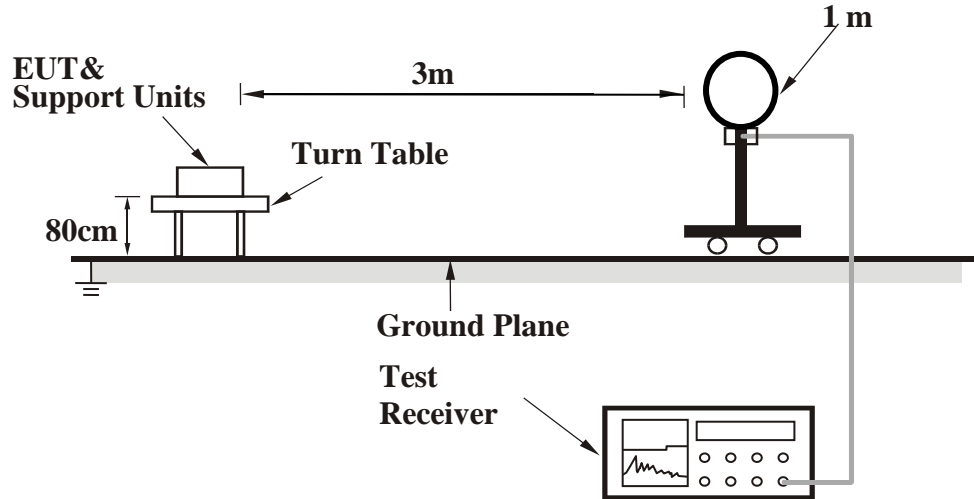
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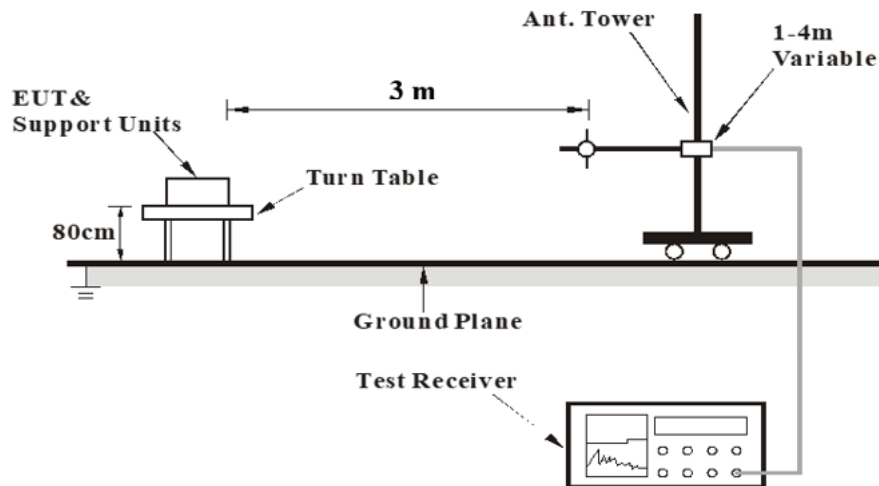


Test Setup

<Frequency Range 9 kHz ~ 30 MHz>



<Frequency Range 30 MHz ~ 1 GHz >



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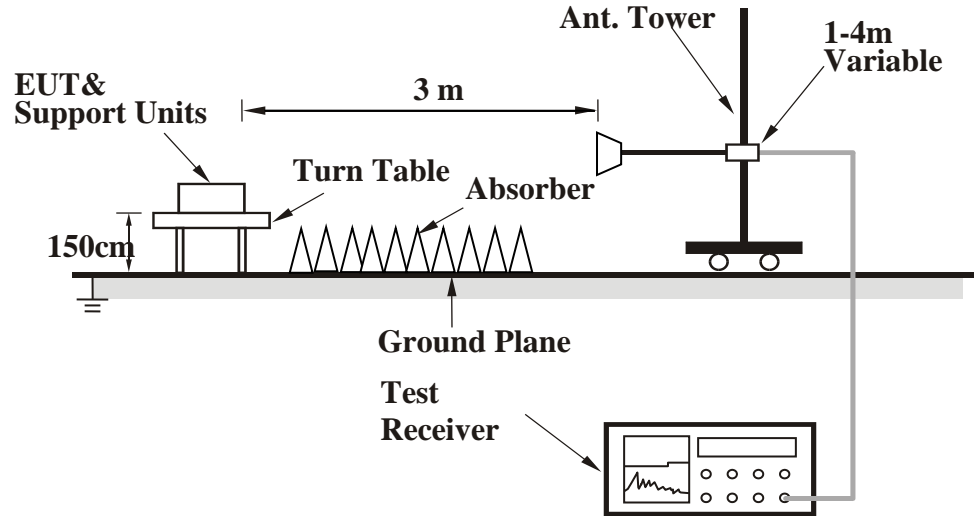
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<Frequency Range above 1 GHz>



For the actual test configuration, please refer to the Setup Configurations.



Test Data

Above 1GHz Data

Non-Beamforming mode

802.11b

EUT Test Condition		Measurement Detail	
Channel	Channel 1	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4824	38.27	3.58	41.85	74	-32.15	Peak
-	2384.2	42.85	6.7	49.55	54	-4.45	Average
@	2412	95.57	6.73	102.3	-	-	Average
-	2384.4	49.31	6.7	56.01	74	-17.99	Peak
@	2412	99.04	6.73	105.77	-	-	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4824	47.65	3.58	51.23	74	-22.77	Peak
-	2384.2	44.39	6.7	51.09	54	-2.91	Average
@	2412	101.13	6.73	107.86	-	-	Average
-	2385.2	52.36	6.71	59.07	74	-14.93	Peak
@	2412	103.64	6.73	110.37	-	-	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4874	35.56	3.68	39.24	74	-34.76	Peak
-	2383.8	36.77	6.7	43.47	54	-10.53	Average
@	2437	95.09	6.74	101.83	-	-	Average
-	2483.6	37.73	6.73	44.46	54	-9.54	Average
-	2385.4	44.97	6.71	51.68	74	-22.32	Peak
@	2437	98.7	6.74	105.44	-	-	Peak
-	2489.8	45.83	6.73	52.56	74	-21.44	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4874	45.76	3.68	49.44	74	-24.56	Peak
-	2384.4	39.91	6.7	46.61	54	-7.39	Average
@	2437	101.61	6.74	108.35	-	-	Average
-	2483.6	40.83	6.73	47.56	54	-6.44	Average
-	2386.6	47.99	6.71	54.7	74	-19.3	Peak
@	2437	104.76	6.74	111.5	-	-	Peak
-	2490	50.09	6.73	56.82	74	-17.18	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "*": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 11	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4924	36.7	3.64	40.34	74	-33.66	Peak
@	2462	95.46	6.74	102.2	-	-	Average
-	2490.2	38.19	6.73	44.92	54	-9.08	Average
@	2462	98.47	6.74	105.21	-	-	Peak
-	2494.4	46.8	6.73	53.53	74	-20.47	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4924	46.08	3.64	49.72	74	-24.28	Peak
@	2462	101.66	6.74	108.4	-	-	Average
-	2490.4	43.56	6.73	50.29	54	-3.71	Average
@	2462	104.83	6.74	111.57	-	-	Peak
-	2488	51.78	6.72	58.5	74	-15.5	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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802.11g

EUT Test Condition		Measurement Detail	
Channel	Channel 1	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4824	37.35	3.58	40.93	74	-33.07	Peak
-	2390	36.99	6.72	43.71	54	-10.29	Average
@	2412	88.81	6.73	95.54	-	-	Average
-	2390	52.46	6.72	59.18	74	-14.82	Peak
@	2412	98.87	6.73	105.6	-	-	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4824	42.25	3.58	45.83	74	-28.17	Peak
-	2390	44.57	6.72	51.29	54	-2.71	Average
@	2412	95.64	6.73	102.37	-	-	Average
-	2390	62.79	6.72	69.51	74	-4.49	Peak
@	2412	103.58	6.73	110.31	-	-	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* * ": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 2	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4834	36.81	3.63	40.44	74	-33.56	Peak
-	2389.4	41.54	6.71	48.25	54	-5.75	Average
@	2417	92.2	6.73	98.93	-	-	Average
-	2389.2	62.87	6.71	69.58	74	-4.42	Peak
@	2417	101.52	6.73	108.25	-	-	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4834	40.79	3.63	44.42	74	-29.58	Peak
-	2389.8	46.07	6.72	52.79	54	-1.21	Average
@	2417	97.64	6.73	104.37	-	-	Average
-	2389.4	65.61	6.71	72.32	74	-1.68	Peak
@	2417	106.39	6.73	113.12	-	-	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4874	35.49	3.68	39.17	74	-34.83	Peak
-	2389.8	39.19	6.72	45.91	54	-8.09	Average
@	2437	93.2	6.74	99.94	-	-	Average
-	2483.6	40.12	6.73	46.85	54	-7.15	Average
-	2387	57.07	6.71	63.78	74	-10.22	Peak
@	2437	102.93	6.74	109.67	-	-	Peak
-	2485.4	53.76	6.73	60.49	74	-13.51	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4874	40.03	3.68	43.71	74	-30.29	4874
-	2390	42.36	6.72	49.08	54	-4.92	2390
@	2437	99.36	6.74	106.1	-	-	2437
-	2483.8	44.72	6.73	51.45	54	-2.55	2483.8
-	2387	61.25	6.71	67.96	74	-6.04	2387
@	2437	107.74	6.74	114.48	-	-	2437
-	2485.4	62.74	6.73	69.47	74	-4.53	2485.4

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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Doc No: 17-EM-F0876 / 5.0



EUT Test Condition		Measurement Detail	
Channel	Channel 10	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4914	37.27	3.65	40.92	74	-33.08	Peak
@	2457	90.8	6.74	97.54	-	-	Average
-	2483.8	39.51	6.73	46.24	54	-7.76	Average
@	2457	100.23	6.74	106.97	-	-	Peak
-	2484.4	59.28	6.73	66.01	74	-7.99	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4914	40.63	3.65	44.28	74	-29.72	Peak
@	2457	97.68	6.74	104.42	-	-	Average
-	2484	45.49	6.73	52.22	54	-1.78	Average
@	2457	106.91	6.74	113.65	-	-	Peak
-	2487	65.1	6.73	71.83	74	-2.17	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 11	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4924	38.4	3.64	42.04	74	-31.96	Peak
@	2462	85.91	6.74	92.65	-	-	Average
-	2484	36.6	6.73	43.33	54	-10.67	Average
@	2462	94.75	6.74	101.49	-	-	Peak
-	2484	46.36	6.73	53.09	74	-20.91	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4924	39.87	3.64	43.51	74	-30.49	Peak
@	2462	93.59	6.74	100.33	-	-	Average
-	2483.8	43.98	6.73	50.71	54	-3.29	Average
@	2462	103.05	6.74	109.79	-	-	Peak
-	2484	66.22	6.73	72.95	74	-1.05	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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Doc No: 17-EM-F0876 / 5.0



802.11ax (HE20)

OFDM

EUT Test Condition		Measurement Detail	
Channel	Channel 1	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4824	35.57	3.58	39.15	74	-34.85	Peak
-	2390	36.63	6.72	43.35	54	-10.65	Average
@	2412	85.17	6.73	91.9	-	-	Average
-	2390	46.65	6.72	53.37	74	-20.63	Peak
@	2412	96.09	6.73	102.82	-	-	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4824	38.11	3.58	41.69	74	-32.31	Peak
-	2390	41.14	6.72	47.86	54	-6.14	Average
@	2412	91.49	6.73	98.22	-	-	Average
-	2389.4	55.48	6.71	62.19	74	-11.81	Peak
@	2412	101.75	6.73	108.48	-	-	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 2	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4834	37.89	3.63	41.52	74	-32.48	Peak
-	2389.8	40.84	6.72	47.56	54	-6.44	Average
@	2417	89.65	6.73	96.38	-	-	Average
-	2387.4	58.64	6.71	65.35	74	-8.65	Peak
@	2417	100.23	6.73	106.96	-	-	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4834	40.58	3.63	44.21	74	-29.79	Peak
-	2390	46.11	6.72	52.83	54	-1.17	Average
@	2412	96	6.73	102.73	-	-	Average
-	2389.6	64.17	6.72	70.89	74	-3.11	Peak
@	2417	107.58	6.73	114.31	-	-	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4874	36.92	3.68	40.6	74	-33.4	Peak
-	2390	40.36	6.72	47.08	54	-6.92	Average
@	2437	92.28	6.74	99.02	-	-	Average
-	2484.2	41.37	6.73	48.1	54	-5.9	Average
-	2389.8	57.77	6.72	64.49	74	-9.51	Peak
@	2437	105.06	6.74	111.8	-	-	Peak
-	2484.4	56.05	6.73	62.78	74	-11.22	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4874	40.33	3.68	44.01	74	-29.99	Peak
-	2390	43.92	6.72	50.64	54	-3.36	Average
@	2437	98.28	6.74	105.02	-	-	Average
-	2483.8	46.45	6.73	53.18	54	-0.82	Average
-	2385.8	60.43	6.71	67.14	74	-6.86	Peak
@	2437	108.55	6.74	115.29	-	-	Peak
-	2485.6	60.43	6.73	67.16	74	-6.84	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "*": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 10	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4914	36.6	3.65	40.25	74	-33.75	Peak
@	2457	87.46	6.74	94.2	-	-	Average
-	2483.8	38.51	6.73	45.24	54	-8.76	Average
@	2457	98.34	6.74	105.08	-	-	Peak
-	2489.6	51.07	6.73	57.8	74	-16.2	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4914	41	3.65	44.65	74	-29.35	Peak
@	2457	95.17	6.74	101.91	-	-	Average
-	2483.6	45.49	6.73	52.22	54	-1.78	Average
@	2457	106.09	6.74	112.83	-	-	Peak
-	2483.8	63.05	6.73	69.78	74	-4.22	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 11	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4924	36.49	3.64	40.13	74	-33.87	Peak
@	2462	85.33	6.74	92.07	-	-	Average
-	2483.8	37.17	6.73	43.9	54	-10.1	Average
@	2462	92.75	6.74	99.49	-	-	Peak
-	2485.4	48.53	6.73	55.26	74	-18.74	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4924	38.22	3.64	41.86	74	-32.14	Peak
@	2462	92.97	6.74	99.71	-	-	Average
-	2483.6	44.91	6.73	51.64	54	-2.36	Average
@	2462	102.61	6.74	109.35	-	-	Peak
-	2483.8	58.45	6.73	65.18	74	-8.82	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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OFDMA

EUT Test Condition		Measurement Detail	
Channel	Channel 1	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4824	35.45	3.58	39.03	74	-34.97	Peak
-	2390	37.72	6.72	44.44	54	-9.56	Average
@	2412	84.28	6.73	91.01	-	-	Average
-	2390	51.29	6.72	58.01	74	-15.99	Peak
@	2412	95.09	6.73	101.82	-	-	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4824	37.88	3.58	41.46	74	-32.54	Peak
-	2389	43.04	6.71	49.75	54	-4.25	Average
@	2412	90.09	6.73	96.82	-	-	Average
-	2388.8	58.77	6.71	65.48	74	-8.52	Peak
@	2412	100.32	6.73	107.05	-	-	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "*": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 2	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4834	37.64	3.63	41.27	74	-32.73	Peak
-	2389.8	38.78	6.72	45.5	54	-8.5	Average
@	2417	88.18	6.73	94.91	-	-	Average
-	2389.6	56.06	6.72	62.78	74	-11.22	Peak
@	2417	99.58	6.73	106.31	-	-	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4834	40.35	3.63	43.98	74	-30.02	Peak
-	2390	44.67	6.72	51.39	54	-2.61	Average
@	2417	94.34	6.73	101.07	-	-	Average
-	2389	56.91	6.71	63.62	74	-10.38	Peak
@	2417	103.58	6.73	110.31	-	-	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4874	36.74	3.68	40.42	74	-33.58	Peak
-	2390	41.58	6.72	48.3	54	-5.7	Average
@	2437	91.21	6.74	97.95	-	-	Average
-	2483.6	43.7	6.73	50.43	54	-3.57	Average
-	2389.8	57.52	6.72	64.24	74	-9.76	Peak
@	2437	101.33	6.74	108.07	-	-	Peak
-	2483.6	56.28	6.73	63.01	74	-10.99	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4874	40.31	3.68	43.99	74	-30.01	Peak
-	2389.6	45.13	6.72	51.85	54	-2.15	Average
@	2437	97.01	6.74	103.75	-	-	Average
-	2483.6	46.25	6.73	52.98	54	-1.02	Average
-	2389.4	61.3	6.71	68.01	74	-5.99	Peak
@	2437	107.3	6.74	114.04	-	-	Peak
-	2488.6	61.15	6.73	67.88	74	-6.12	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
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EUT Test Condition		Measurement Detail	
Channel	Channel 10	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4914	36.51	3.65	40.16	74	-33.84	Peak
@	2457	85.77	6.74	92.51	-	-	Average
-	2484.4	37.44	6.73	44.17	54	-9.83	Average
@	2457	94.42	6.74	101.16	-	-	Peak
-	2485.2	51.01	6.73	57.74	74	-16.26	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4914	40.9	3.65	44.55	74	-29.45	Peak
@	2457	92.62	6.74	99.36	-	-	Average
-	2483.6	46.1	6.73	52.83	54	-1.17	Average
@	2457	103.77	6.74	110.51	-	-	Peak
-	2483.6	66.1	6.73	72.83	74	-1.17	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
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EUT Test Condition		Measurement Detail	
Channel	Channel 11	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4924	36.3	3.64	39.94	74	-34.06	Peak
@	2462	82.27	6.74	89.01	-	-	Average
-	2483.6	37.19	6.73	43.92	54	-10.08	Average
@	2462	94.48	6.74	101.22	-	-	Peak
-	2483.6	51.39	6.73	58.12	74	-15.88	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4924	38.04	3.64	41.68	74	-32.32	Peak
@	2462	89.74	6.74	96.48	-	-	Average
-	2483.6	45	6.73	51.73	54	-2.27	Average
@	2462	101.53	6.74	108.27	-	-	Peak
-	2483.6	64.2	6.73	70.93	74	-3.07	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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Beamforming mode

802.11ax (HE20)

OFDM

EUT Test Condition		Measurement Detail	
Channel	Channel 1	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4824	35.79	3.58	39.37	74	-34.63	Peak
-	2390	36.7	6.72	43.42	54	-10.58	Average
@	2412	86.11	6.73	92.84	-	-	Average
-	2389.8	47.85	6.72	54.57	74	-19.43	Peak
@	2412	97.53	6.73	104.26	-	-	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4824	37.99	3.58	41.57	74	-32.43	Peak
-	2390	42.88	6.72	49.6	54	-4.4	Average
@	2412	92.16	6.73	98.89	-	-	Average
-	2389	58.48	6.71	65.19	74	-8.81	Peak
@	2412	102.94	6.73	109.67	-	-	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* * ": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 2	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4834	37.78	3.63	41.41	74	-32.59	Peak
-	2389.8	41.43	6.72	48.15	54	-5.85	Average
@	2417	90.31	6.73	97.04	-	-	Average
-	2389.8	58.24	6.72	64.96	74	-9.04	Peak
@	2417	100.58	6.73	107.31	-	-	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4834	40.63	3.63	44.26	74	-29.74	Peak
-	2389.8	45.67	6.72	52.39	54	-1.61	Average
@	2417	95.63	6.73	102.36	-	-	Average
-	2389.8	64.72	6.72	71.44	74	-2.56	Peak
@	2417	107.39	6.73	114.12	-	-	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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Doc No: 17-EM-F0876 / 5.0



EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4874	37.03	3.68	40.71	74	-33.29	Peak
-	2390	41.12	6.72	47.84	54	-6.16	Average
@	2437	92.77	6.74	99.51	-	-	Average
-	2483.6	40.46	6.73	47.19	54	-6.81	Average
-	2387.4	56.9	6.71	63.61	74	-10.39	Peak
@	2437	103.84	6.74	110.58	-	-	Peak
-	2484.6	54.43	6.73	61.16	74	-12.84	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4874	41.9	3.68	45.58	74	-28.42	Peak
-	2390	44.4	6.72	51.12	54	-2.88	Average
@	2437	98.16	6.74	104.9	-	-	Average
-	2484	46.22	6.73	52.95	54	-1.05	Average
-	2388.4	60.4	6.71	67.11	74	-6.89	Peak
@	2437	109.45	6.74	116.19	-	-	Peak
-	2485	60.39	6.73	67.12	74	-6.88	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "*": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 10	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4914	36.77	3.65	40.42	74	-33.58	Peak
@	2457	87.75	6.74	94.49	-	-	Average
-	2483.6	37.21	6.73	43.94	54	-10.06	Average
@	2457	98.06	6.74	104.8	-	-	Peak
-	2486.8	51.13	6.73	57.86	74	-16.14	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4914	40.8	3.65	44.45	74	-29.55	Peak
@	2457	95.07	6.74	101.81	-	-	Average
-	2483.6	45.25	6.73	51.98	54	-2.02	Average
@	2457	106.1	6.74	112.84	-	-	Peak
-	2483.6	60.71	6.73	67.44	74	-6.56	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* * ": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
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EUT Test Condition		Measurement Detail	
Channel	Channel 11	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4924	36.33	3.64	39.97	74	-34.03	Peak
@	2462	83.86	6.74	90.6	-	-	Average
-	2484.4	37.19	6.73	43.92	54	-10.08	Average
@	2462	92.64	6.74	99.38	-	-	Peak
-	2484.2	47.8	6.73	54.53	74	-19.47	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4924	38.41	3.64	42.05	74	-31.95	Peak
@	2462	92.38	6.74	99.12	-	-	Average
-	2483.6	45.52	6.73	52.25	54	-1.75	Average
@	2462	103.42	6.74	110.16	-	-	Peak
-	2483.6	59.77	6.73	66.5	74	-7.5	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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OFDMA

EUT Test Condition		Measurement Detail	
Channel	Channel 1	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4824	35.36	3.58	38.94	74	-35.06	Peak
-	2390	38.2	6.72	44.92	54	-9.08	Average
@	2412	84.38	6.73	91.11	-	-	Average
-	2390	52.07	6.72	58.79	74	-15.21	Peak
@	2412	95.54	6.73	102.27	-	-	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4824	38.02	3.58	41.6	74	-32.4	Peak
-	2389.2	43.29	6.71	50	54	-4	Average
@	2412	90.2	6.73	96.93	-	-	Average
-	2389.4	60.75	6.71	67.46	74	-6.54	Peak
@	2412	100.6	6.73	107.33	-	-	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "*": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 2	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4834	37.41	3.63	41.04	74	-32.96	Peak
-	2389.6	39.19	6.72	45.91	54	-8.09	Average
@	2417	88.26	6.73	94.99	-	-	Average
-	2385	56.37	6.71	63.08	74	-10.92	Peak
@	2417	100.01	6.73	106.74	-	-	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4834	40.54	3.63	44.17	74	-29.83	Peak
-	2390	45.06	6.72	51.78	54	-2.22	Average
@	2417	94.39	6.73	101.12	-	-	Average
-	2389	60.15	6.71	66.86	74	-7.14	Peak
@	2417	105.09	6.73	111.82	-	-	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4874	36.52	3.68	40.2	74	-33.8	Peak
-	2390	42.14	6.72	48.86	54	-5.14	Average
@	2437	91.4	6.74	98.14	-	-	Average
-	2483.6	41.88	6.73	48.61	54	-5.39	Average
-	2385	58.97	6.71	65.68	74	-8.32	Peak
@	2437	101.69	6.74	108.43	-	-	Peak
-	2483.6	57.15	6.73	63.88	74	-10.12	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4874	40.54	3.68	44.22	74	-29.78	Peak
-	2389.6	45.06	6.72	51.78	54	-2.22	Average
@	2437	97.24	6.74	103.98	-	-	Average
-	2484	46.3	6.73	53.03	54	-0.97	Average
-	2384	58.95	6.7	65.65	74	-8.35	Peak
@	2437	107.98	6.74	114.72	-	-	Peak
-	2485.6	61.5	6.73	68.23	74	-5.77	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
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EUT Test Condition		Measurement Detail	
Channel	Channel 10	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4914	36.44	3.65	40.09	74	-33.91	Peak
@	2457	84.82	6.74	91.56	-	-	Average
-	2484	37.06	6.73	43.79	54	-10.21	Average
@	2457	94.44	6.74	101.18	-	-	Peak
-	2483.8	52.08	6.73	58.81	74	-15.19	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4914	40.75	3.65	44.4	74	-29.6	Peak
@	2457	93.14	6.74	99.88	-	-	Average
-	2483.6	46.03	6.73	52.76	54	-1.24	Average
@	2457	104.72	6.74	111.46	-	-	Peak
-	2483.8	65.6	6.73	72.33	74	-1.67	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
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EUT Test Condition		Measurement Detail	
Channel	Channel 11	Frequency Range	1 GHz ~ 26.5 GHz

Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4924	36.33	3.64	39.97	74	-34.03	Peak
@	2462	82.07	6.74	88.81	-	-	Average
-	2484	37.76	6.73	44.49	54	-9.51	Average
@	2462	93.76	6.74	100.5	-	-	Peak
-	2486.4	52.24	6.73	58.97	74	-15.03	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
*	4924	37.92	3.64	41.56	74	-32.44	Peak
@	2462	89.93	6.74	96.67	-	-	Average
-	2483.6	45.94	6.73	52.67	54	-1.33	Average
@	2462	101.46	6.74	108.2	-	-	Peak
-	2483.8	65.57	6.73	72.3	74	-1.7	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. "@": Fundamental Frequency.
5. "* *": The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
6. The other emission levels were very low against the limit.

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9 kHz ~ 30 MHz Data:

For 9 kHz to 30 MHz radiated emission have performed all modes of operation were investigated. The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

No non-compliance noted:

KDB 414788 D01 OATS and Chamber Correlation Justification

- Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

- OATs and chamber correlation testing had been performed and chamber measured test results is the worst case test result.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open area 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.

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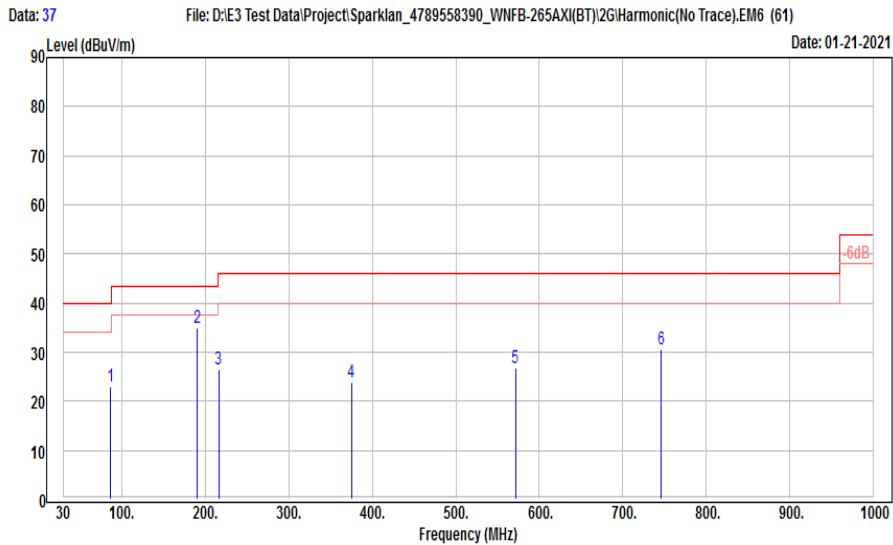
30 MHz ~ 1 GHz Data

Non-Beamforming mode

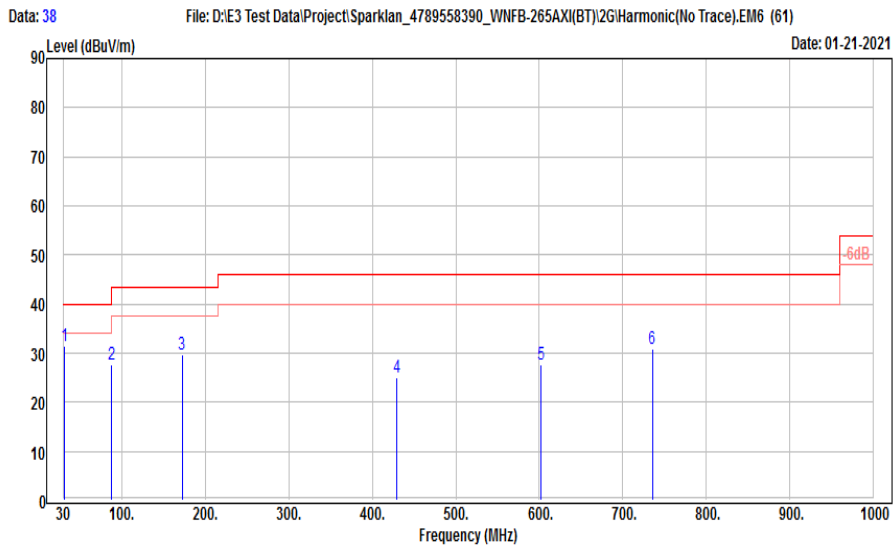
802.11b

EUT Test Condition		Measurement Detail	
Channel	Channel 1	Frequency Range	30 MHz ~ 1 GHz

Horizontal



Vertical



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Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	87.23	40.63	-17.59	23.04	40	-16.96	Peak
-	191.02	47.42	-12.59	34.83	43.5	-8.67	Peak
-	216.24	39.95	-13.57	26.38	46	-19.62	Peak
-	375.32	31.56	-7.69	23.87	46	-22.13	Peak
-	571.26	29.8	-2.91	26.89	46	-19.11	Peak
-	745.86	30.04	0.64	30.68	46	-15.32	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	31.94	43.8	-12.34	31.46	40	-8.54	Peak
-	88.2	45.18	-17.61	27.57	43.5	-15.93	Peak
-	172.59	41.09	-11.38	29.71	43.5	-13.79	Peak
-	429.64	31.24	-6.33	24.91	46	-21.09	Peak
-	602.3	29.84	-2.31	27.53	46	-18.47	Peak
-	735.19	30.32	0.47	30.79	46	-15.21	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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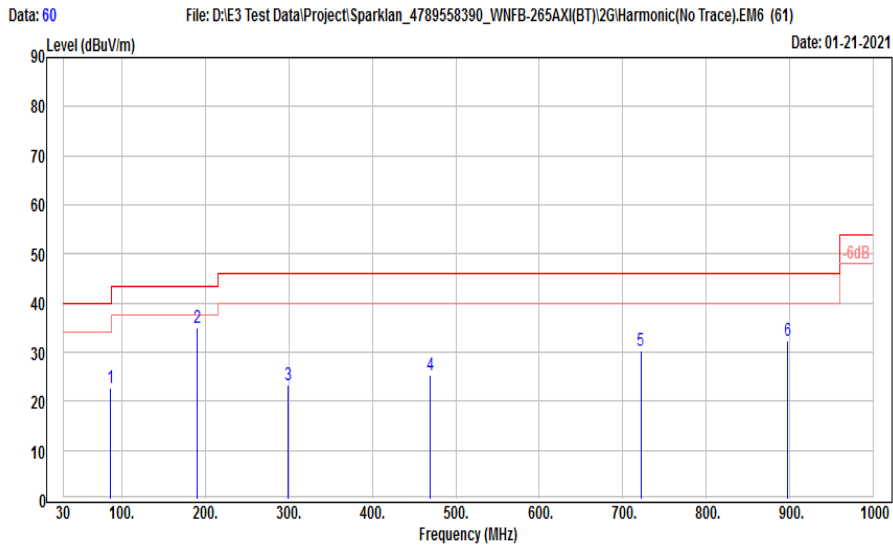


Beamforming mode

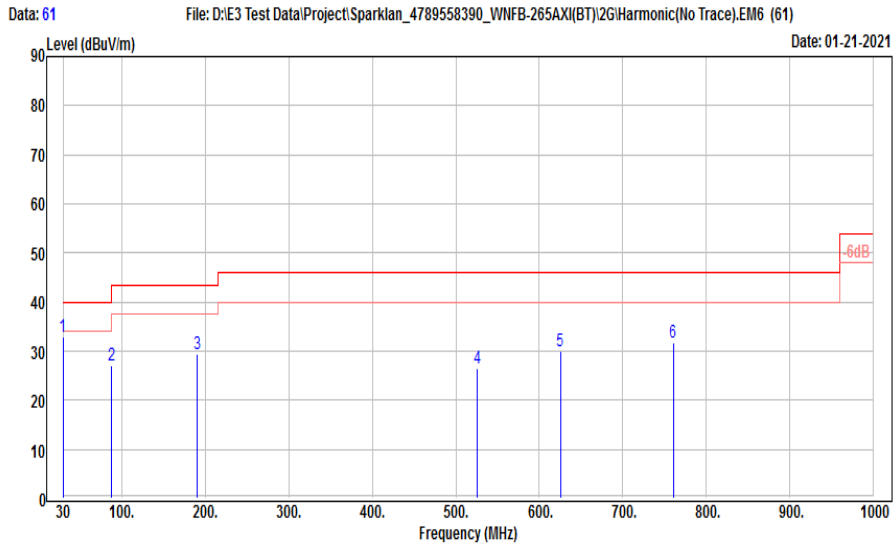
802.11ax (HE20)

EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	30 MHz ~ 1 GHz

Horizontal



Vertical



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Antenna Polarity & Test Distance: Horizontal at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	87.23	40.21	-17.59	22.62	40	-17.38	Peak
-	191.02	47.56	-12.59	34.97	43.5	-8.53	Peak
-	299.66	33.2	-10.03	23.17	46	-22.83	Peak
-	469.41	30.37	-5.07	25.3	46	-20.7	Peak
-	721.61	30.41	-0.13	30.28	46	-15.72	Peak
-	897.18	29.24	2.98	32.22	46	-13.78	Peak
Antenna Polarity & Test Distance: Vertical at 3 m							
Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
-	30	45.18	-12.22	32.96	40	-7.04	Peak
-	88.2	44.68	-17.61	27.07	43.5	-16.43	Peak
-	191.02	41.89	-12.59	29.3	43.5	-14.2	Peak
-	525.67	30.25	-3.71	26.54	46	-19.46	Peak
-	625.58	31.21	-1.35	29.86	46	-16.14	Peak
-	760.41	30.74	0.97	31.71	46	-14.29	Peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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9.6. AC Power Line Conducted Emission

Requirements

Frequency (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note:

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

Test Procedures

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

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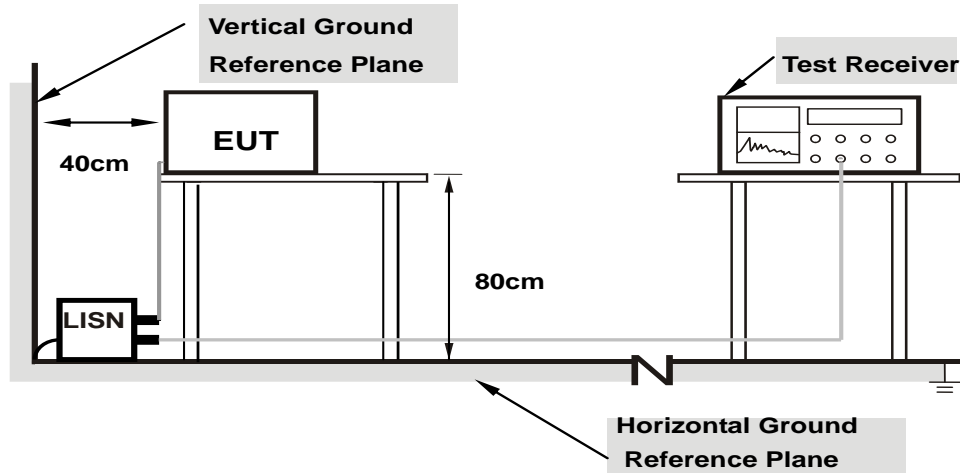
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Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the Setup Configurations.

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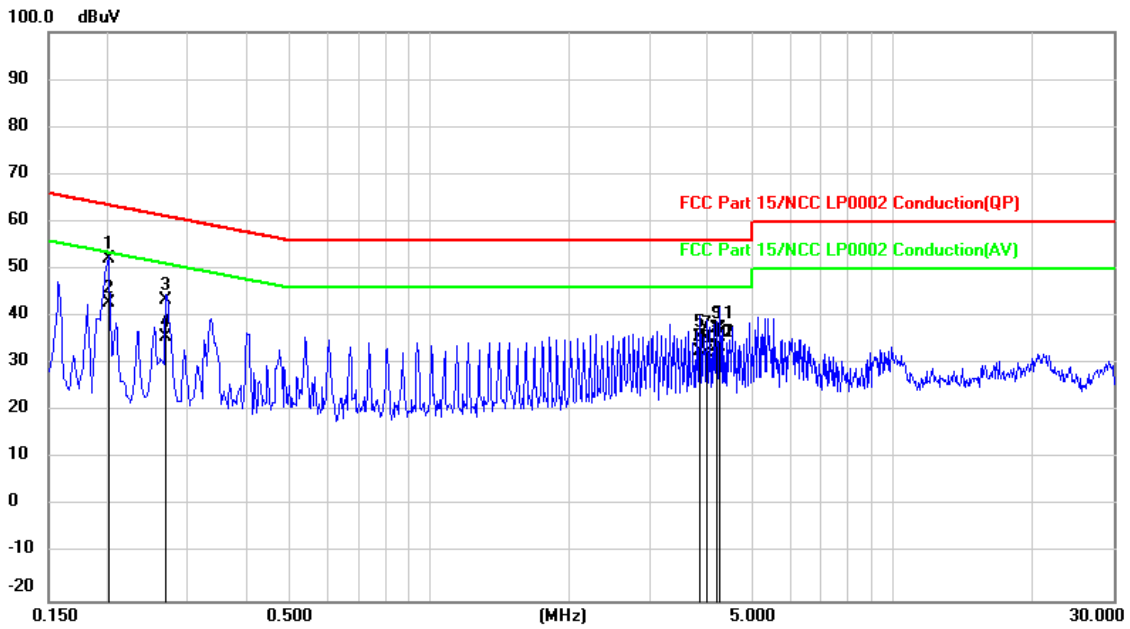
Test Data

Non-Beamforming mode

802.11b

EUT Test Condition		Measurement Detail	
Channel	Channel 1	Frequency Range	150 kHz ~ 30 MHz

Phase of Power : Line (L)



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No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2020	32.61	19.48	52.09	63.53	-11.44	QP
2	0.2020	23.40	19.48	42.88	53.53	-10.65	AVG
3	0.2700	23.99	19.48	43.47	61.12	-17.65	QP
4	0.2700	16.26	19.48	35.74	51.12	-15.38	AVG
5	3.8380	16.01	19.57	35.58	56.00	-20.42	QP
6	3.8380	13.03	19.57	32.60	46.00	-13.40	AVG
7	3.9700	15.86	19.57	35.43	56.00	-20.57	QP
8	3.9700	12.69	19.57	32.26	46.00	-13.74	AVG
9	4.1740	17.90	19.58	37.48	56.00	-18.52	QP
10	4.1740	13.98	19.58	33.56	46.00	-12.44	AVG
11	4.2420	17.95	19.58	37.53	56.00	-18.47	QP
12	4.2420	14.10	19.58	33.68	46.00	-12.32	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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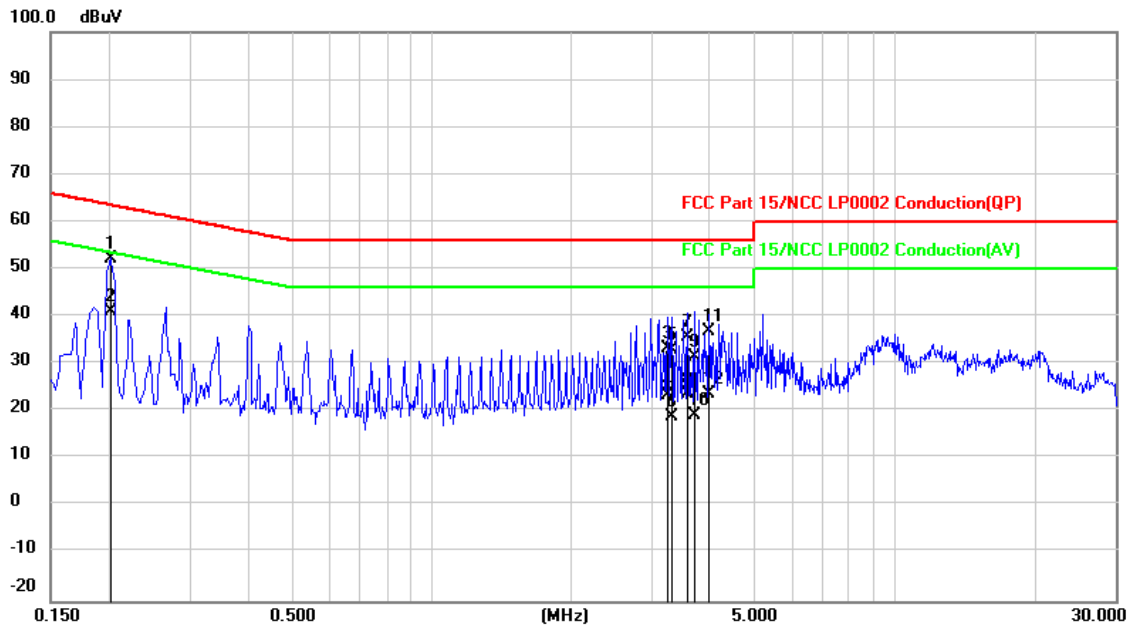
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Phase of Power : Neutral (N)



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No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2020	32.54	19.48	52.02	63.53	-11.51	QP
2	0.2020	21.63	19.48	41.11	53.53	-12.42	AVG
3	3.2300	13.65	19.54	33.19	56.00	-22.81	QP
4	3.2300	3.95	19.54	23.49	46.00	-22.51	AVG
5	3.2940	13.50	19.54	33.04	56.00	-22.96	QP
6	3.2940	-0.59	19.54	18.95	46.00	-27.05	AVG
7	3.5700	16.10	19.57	35.67	56.00	-20.33	QP
8	3.5700	3.96	19.57	23.53	46.00	-22.47	AVG
9	3.6980	11.89	19.57	31.46	56.00	-24.54	QP
10	3.6980	-0.40	19.57	19.17	46.00	-26.83	AVG
11	3.9700	17.26	19.57	36.83	56.00	-19.17	QP
12	3.9700	4.07	19.57	23.64	46.00	-22.36	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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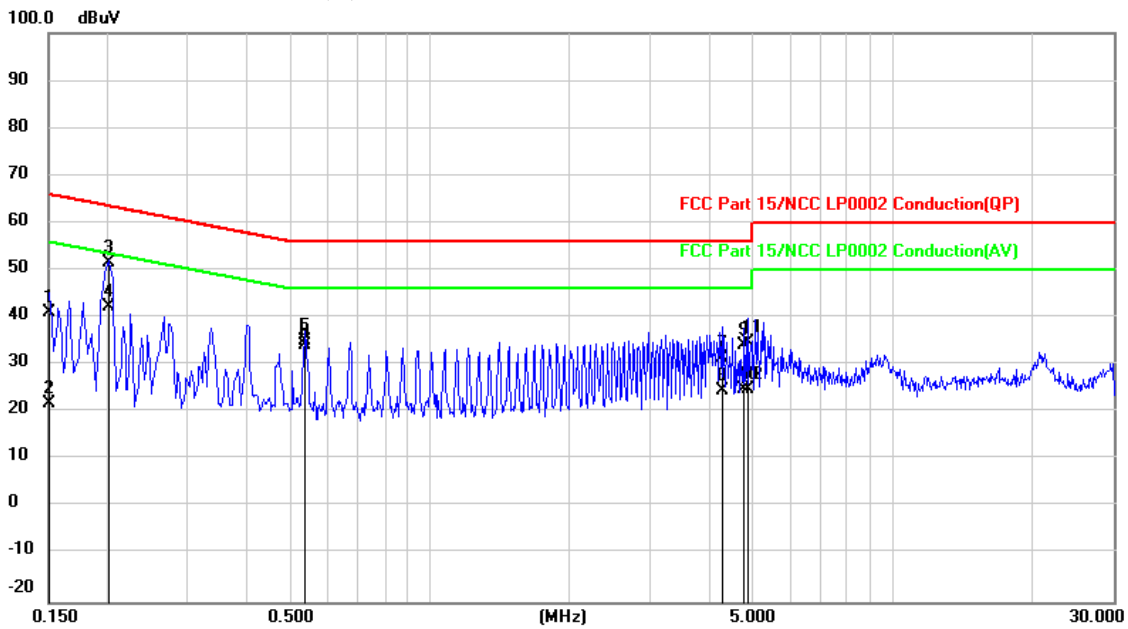
Beamforming mode

802.11ax (HE20)

OFDM

EUT Test Condition		Measurement Detail	
Channel	Channel 6	Frequency Range	150 kHz ~ 30 MHz

Phase of Power : Line (L)



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No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	21.43	19.48	40.91	66.00	-25.09	QP
2	0.1500	2.38	19.48	21.86	56.00	-34.14	AVG
3	0.2020	32.21	19.48	51.69	63.53	-11.84	QP
4	0.2020	22.85	19.48	42.33	53.53	-11.20	AVG
5	0.5380	15.49	19.48	34.97	56.00	-21.03	QP
6	0.5380	14.67	19.48	34.15	46.00	-11.85	AVG
7	4.3140	11.80	19.58	31.38	56.00	-24.62	QP
8	4.3140	5.08	19.58	24.66	46.00	-21.34	AVG
9	4.7819	14.42	19.60	34.02	56.00	-21.98	QP
10	4.7819	5.32	19.60	24.92	46.00	-21.08	AVG
11	4.8500	15.22	19.60	34.82	56.00	-21.18	QP
12	4.8500	5.26	19.60	24.86	46.00	-21.14	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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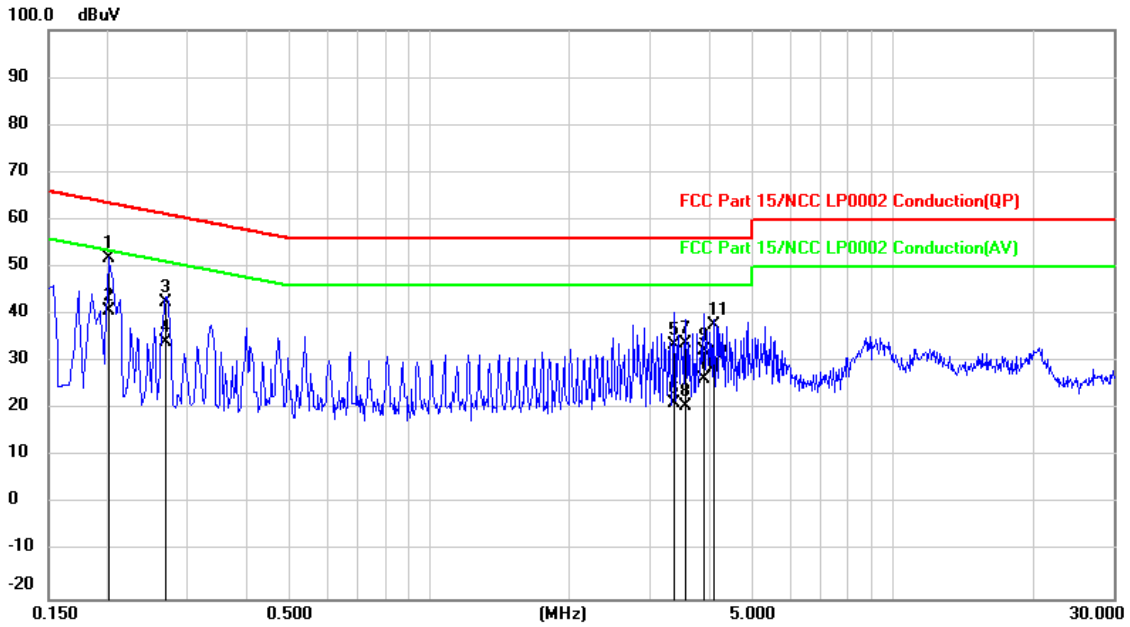
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Phase of Power : Neutral (N)



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No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2020	32.24	19.48	51.72	63.53	-11.81	QP
2	0.2020	21.37	19.48	40.85	53.53	-12.68	AVG
3	0.2700	23.14	19.48	42.62	61.12	-18.50	QP
4	0.2700	14.65	19.48	34.13	51.12	-16.99	AVG
5	3.3660	14.09	19.55	33.64	56.00	-22.36	QP
6	3.3660	1.63	19.55	21.18	46.00	-24.82	AVG
7	3.5660	14.20	19.57	33.77	56.00	-22.23	QP
8	3.5660	1.04	19.57	20.61	46.00	-25.39	AVG
9	3.9060	12.93	19.57	32.50	56.00	-23.50	QP
10	3.9060	6.77	19.57	26.34	46.00	-19.66	AVG
11	4.1060	18.30	19.58	37.88	56.00	-18.12	QP
12	4.1060	9.20	19.58	28.78	46.00	-17.22	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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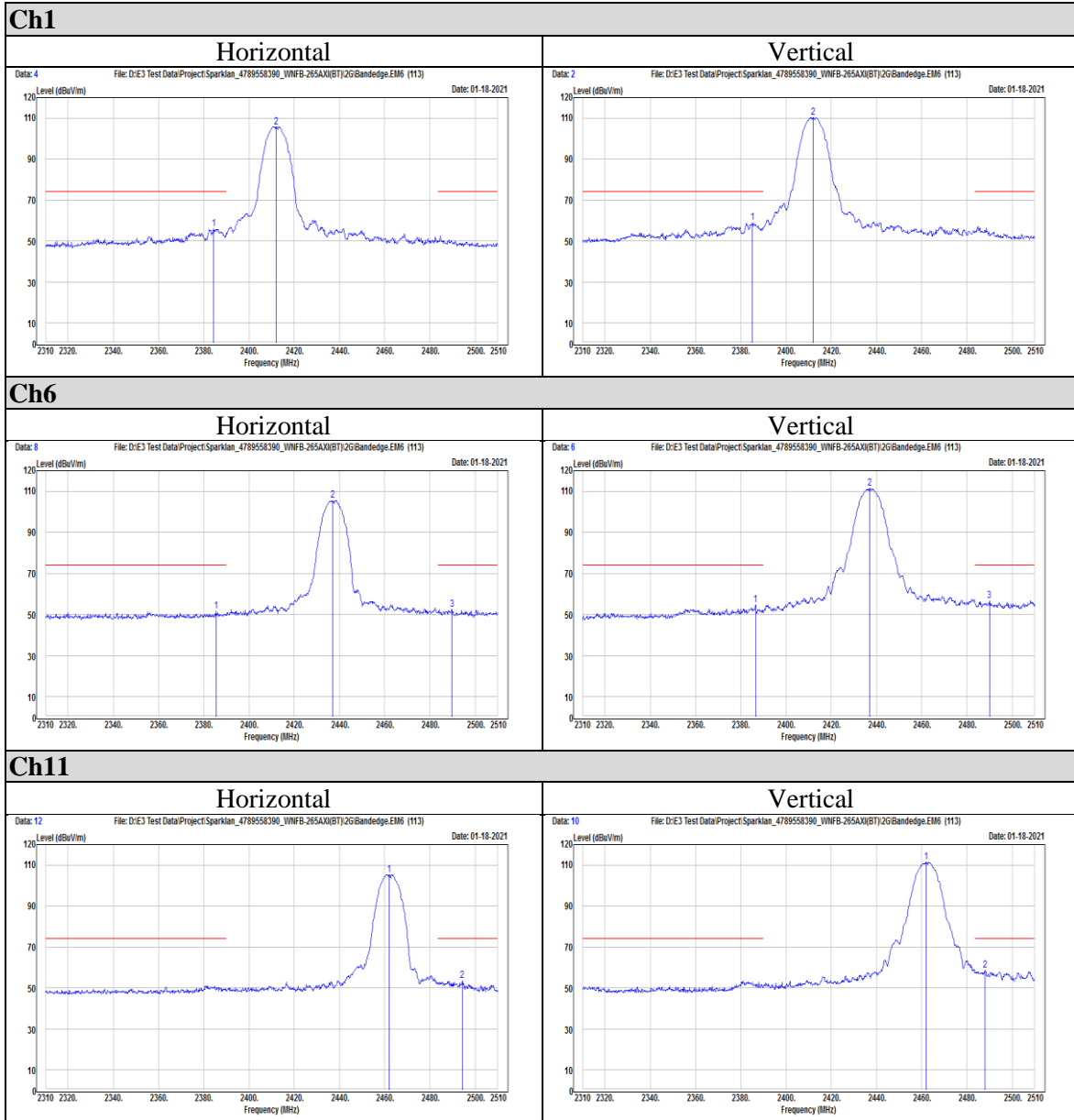


Appendix I Radiated Band Edge Measurement

Non-Beamforming mode

802.11b

Peak



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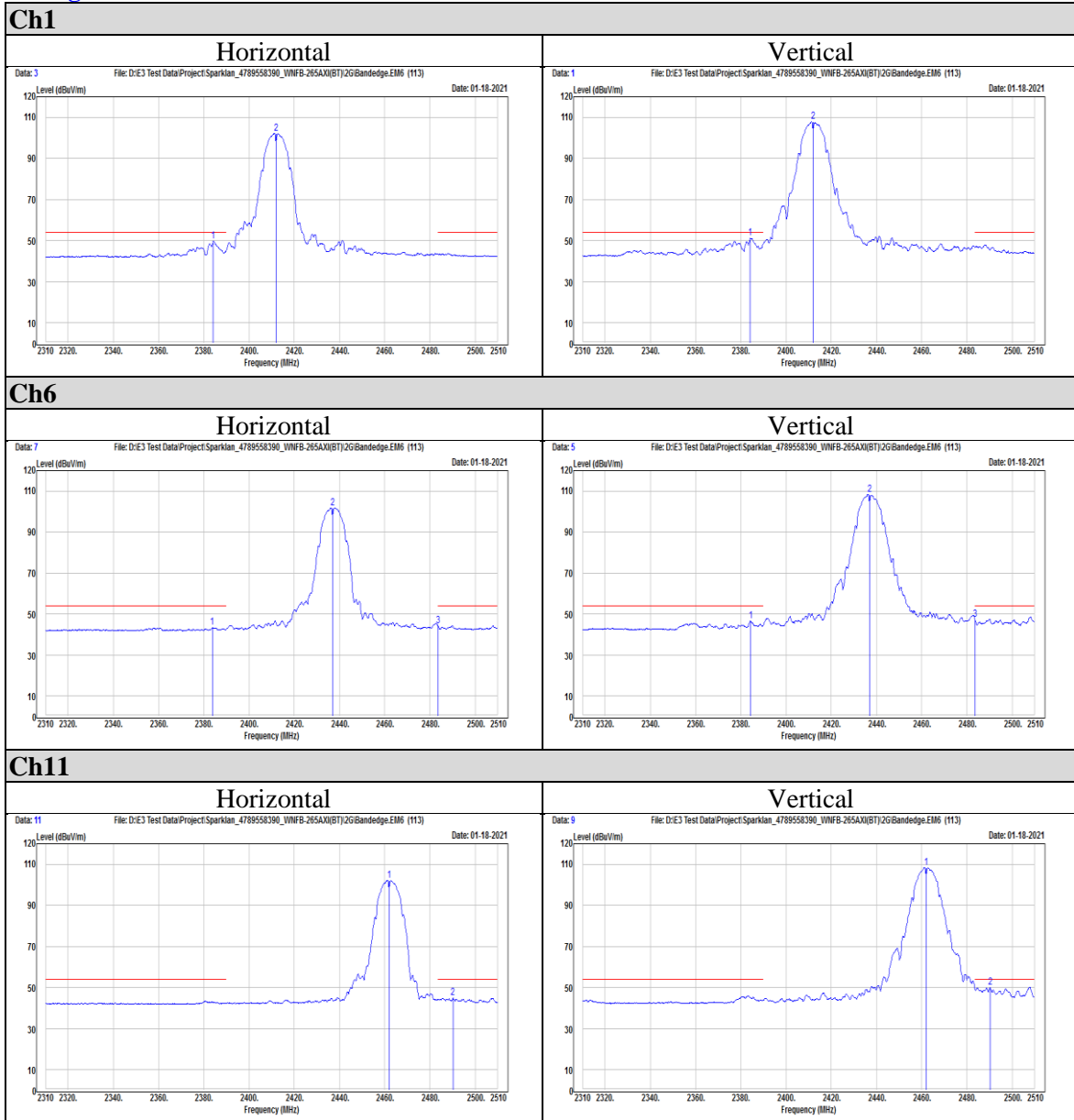
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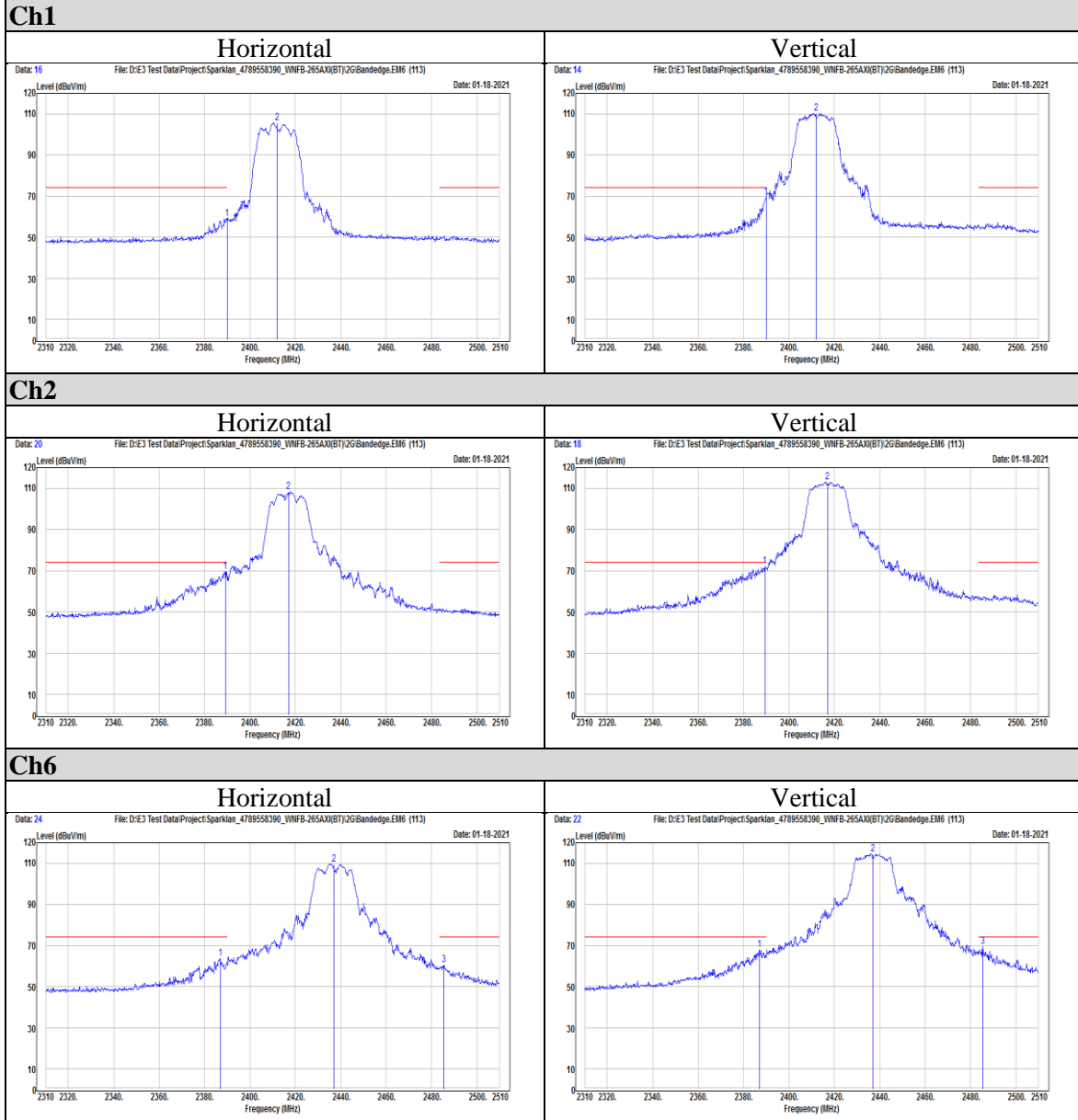
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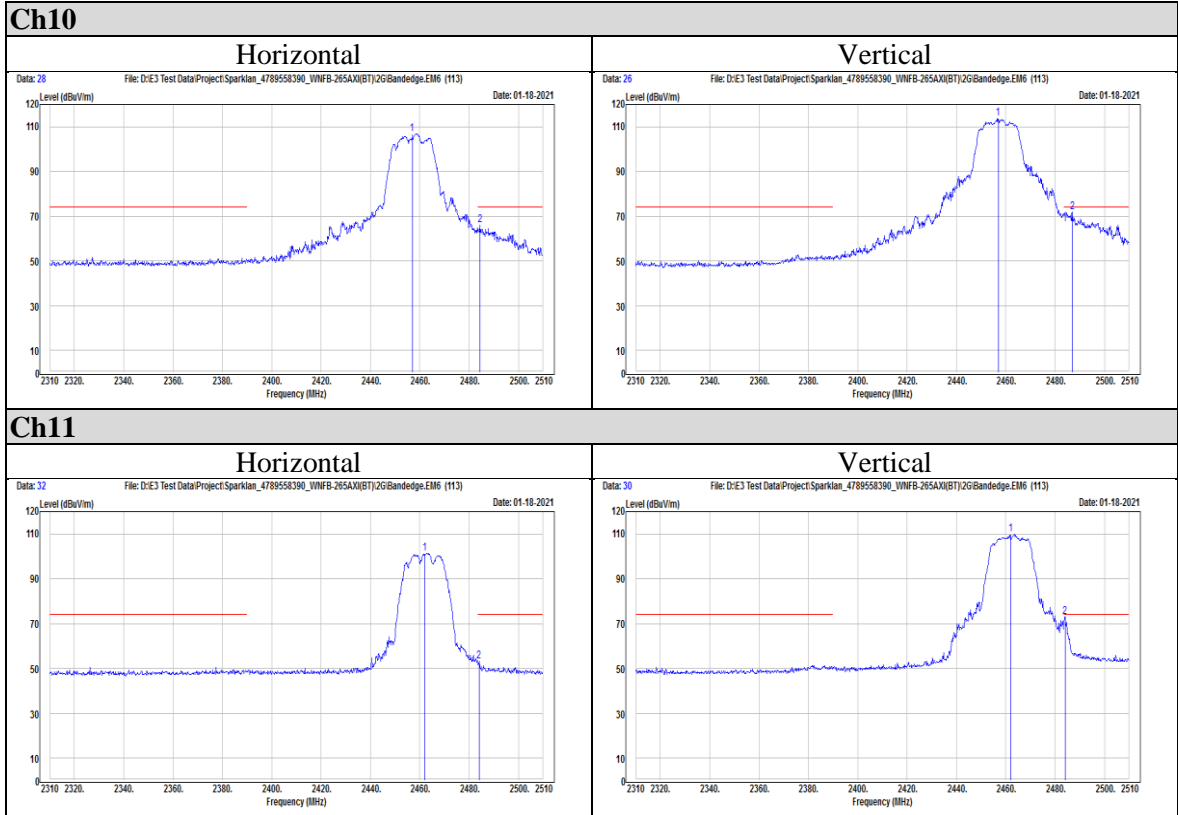




802.11g

Peak





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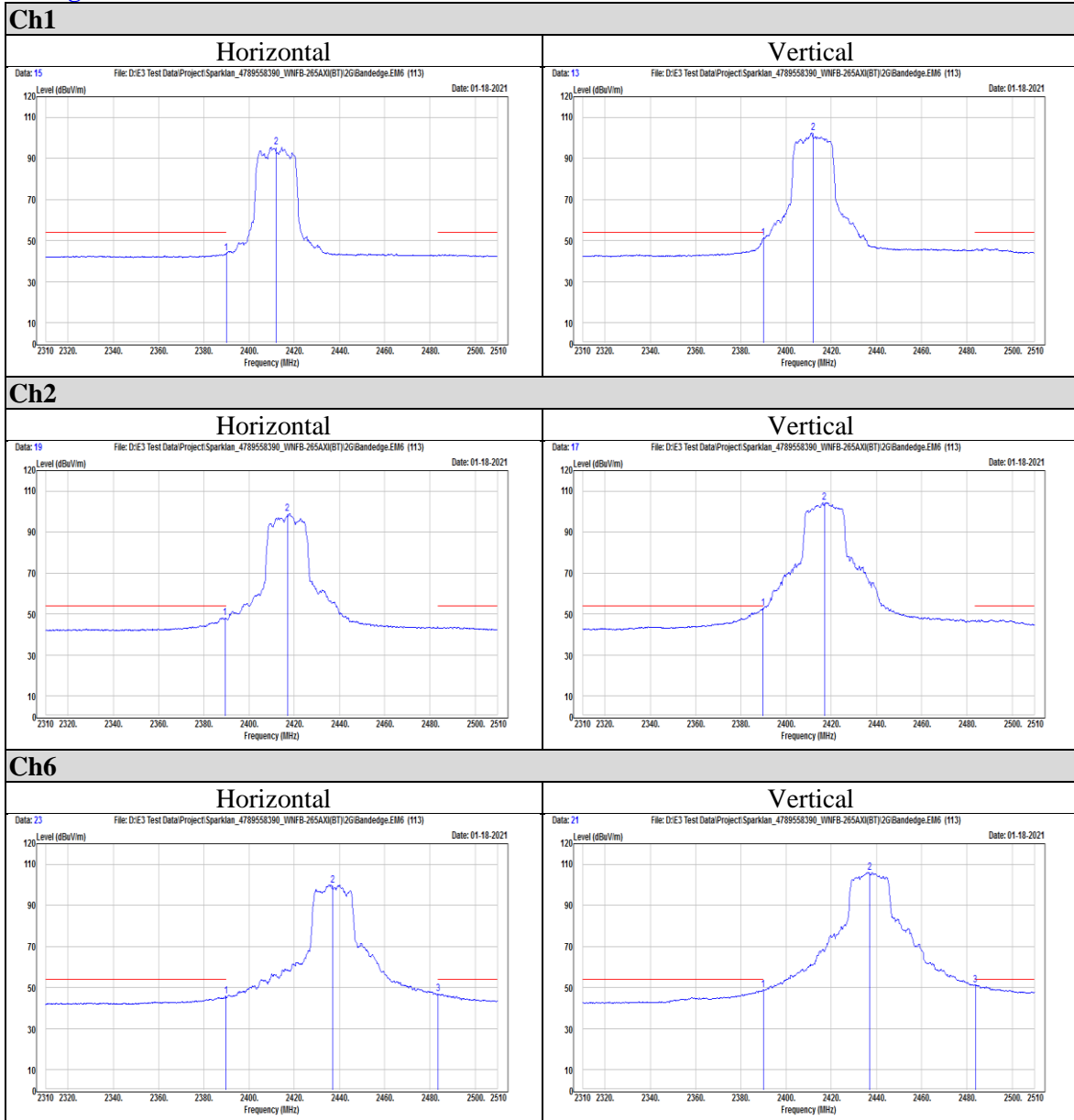
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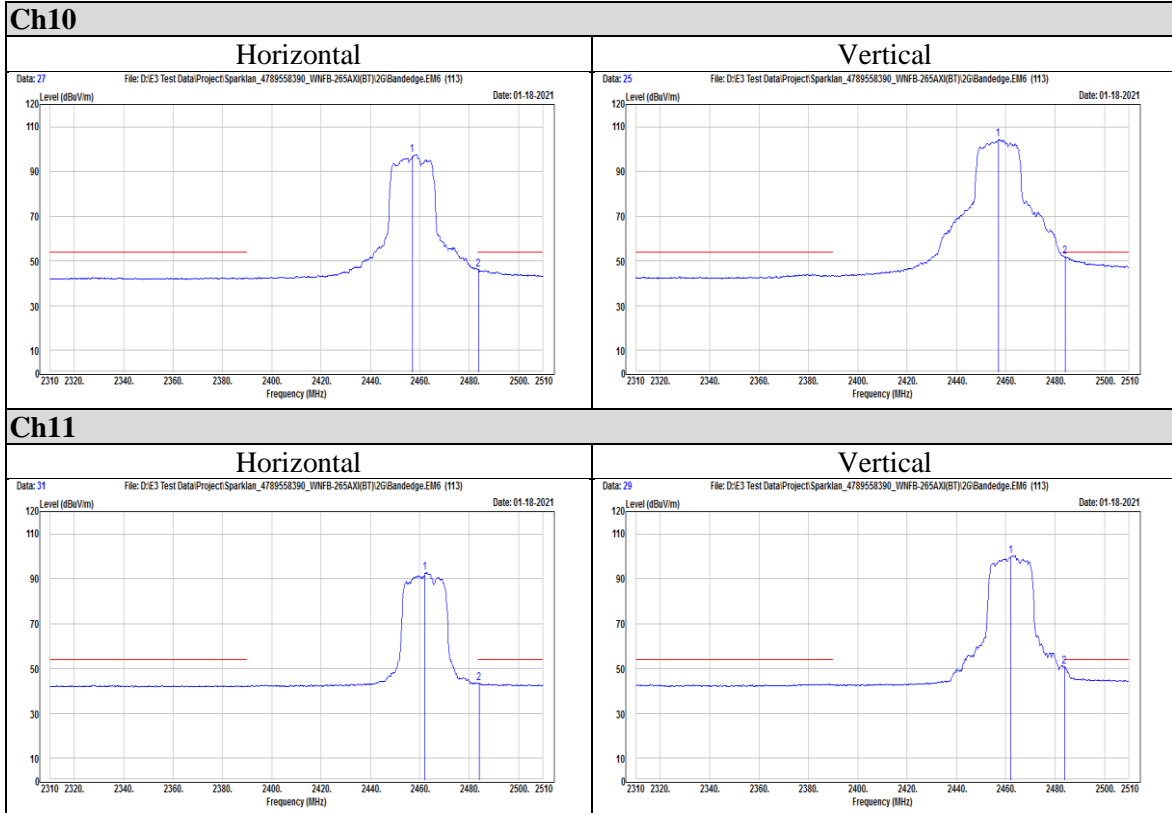
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Average





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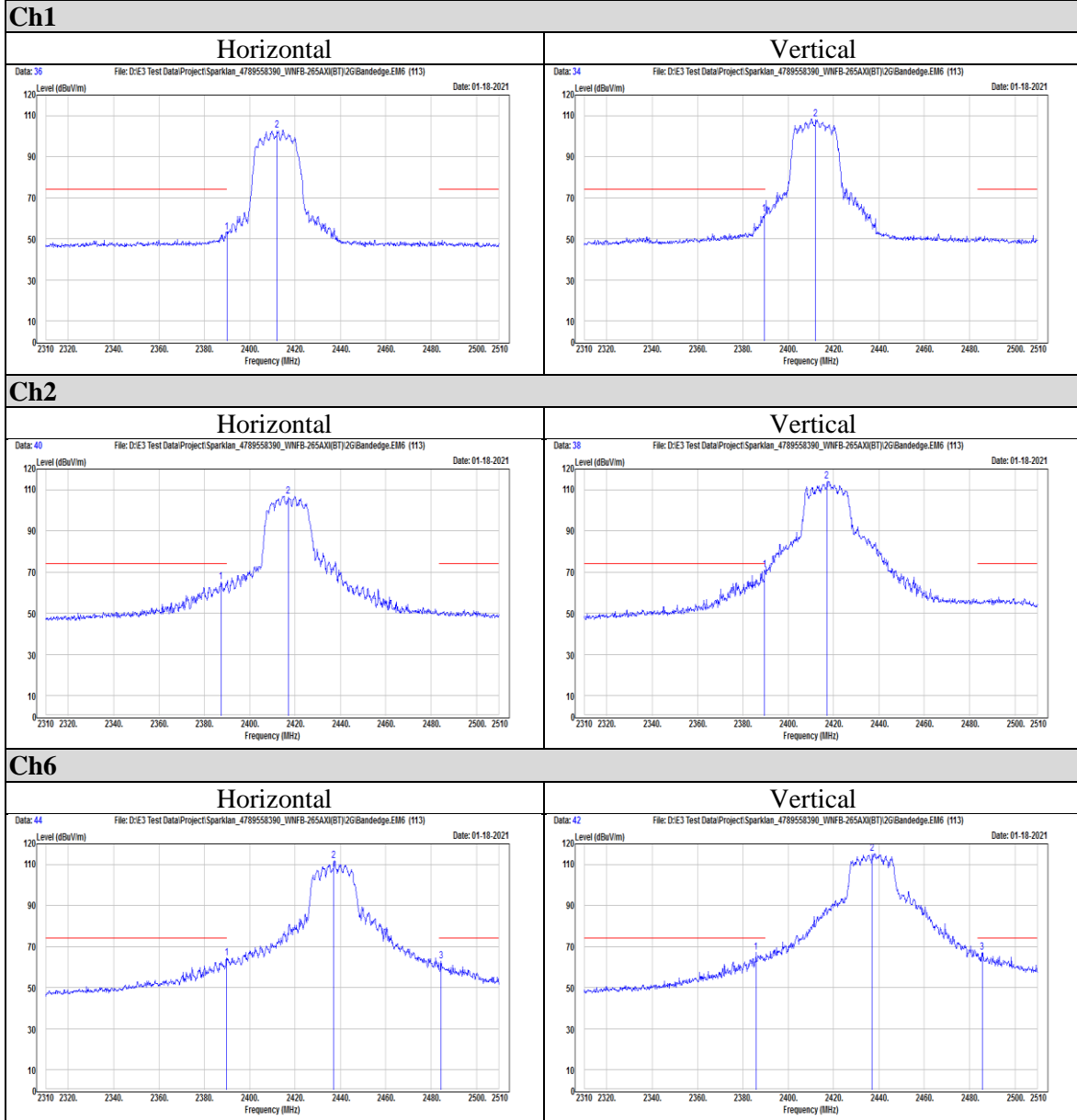
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802.11ax (HE20)

OFDM
Peak

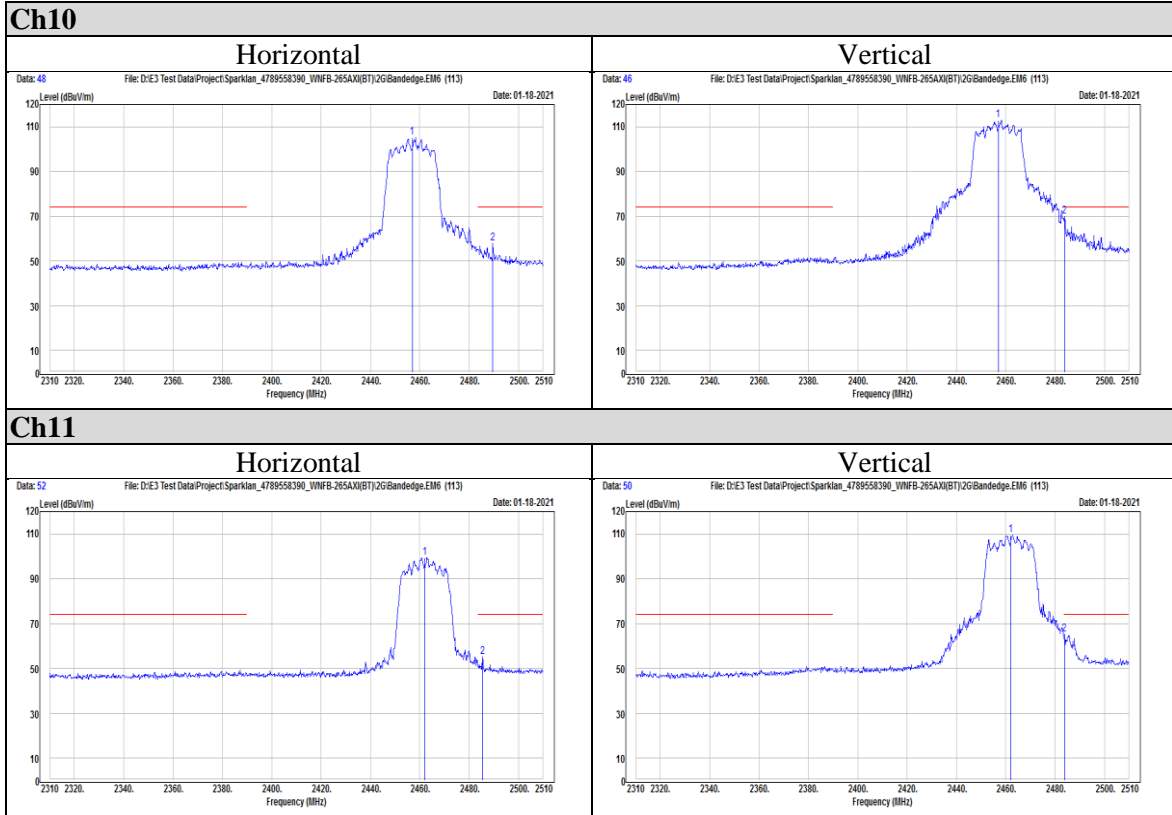


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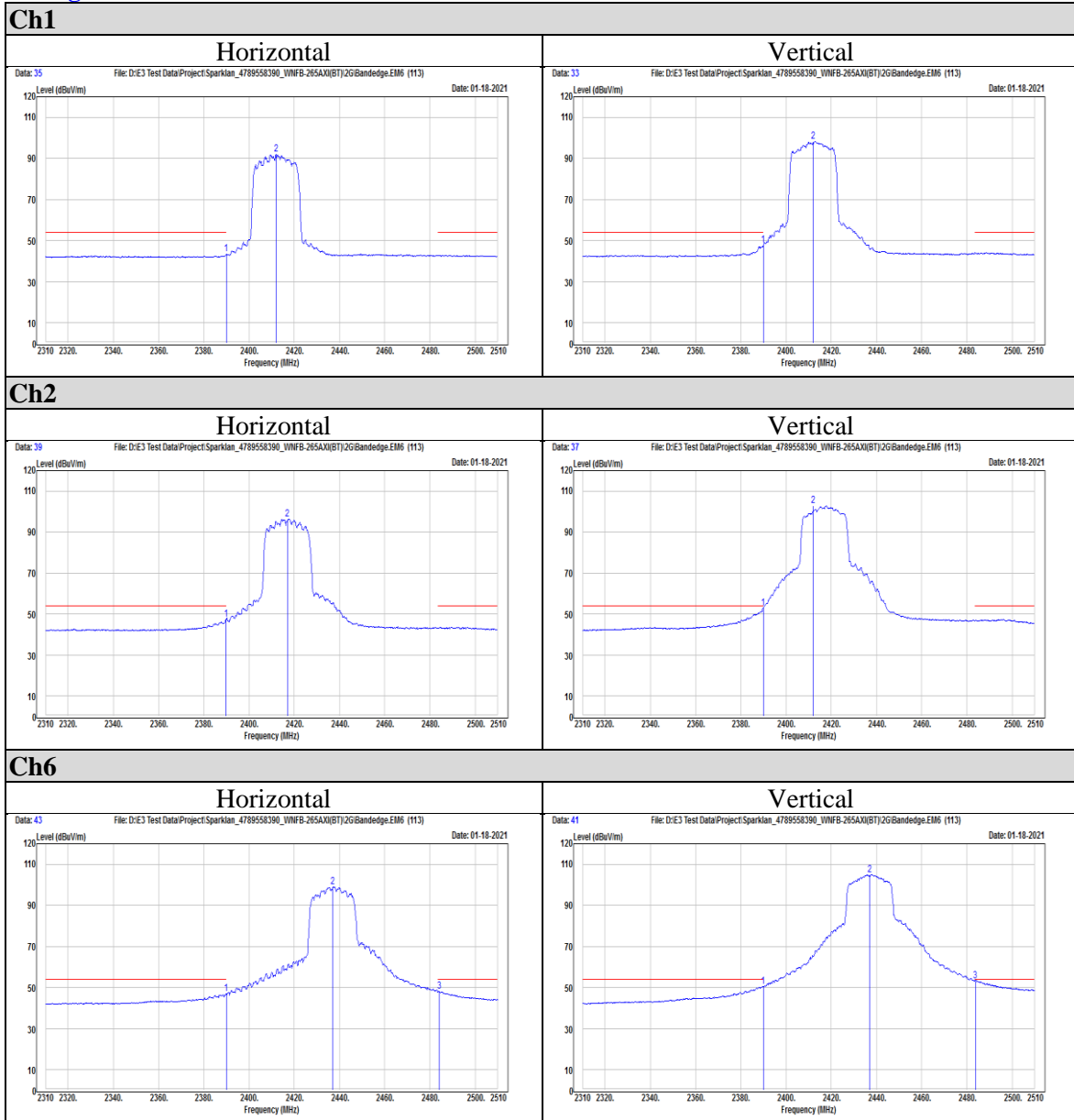
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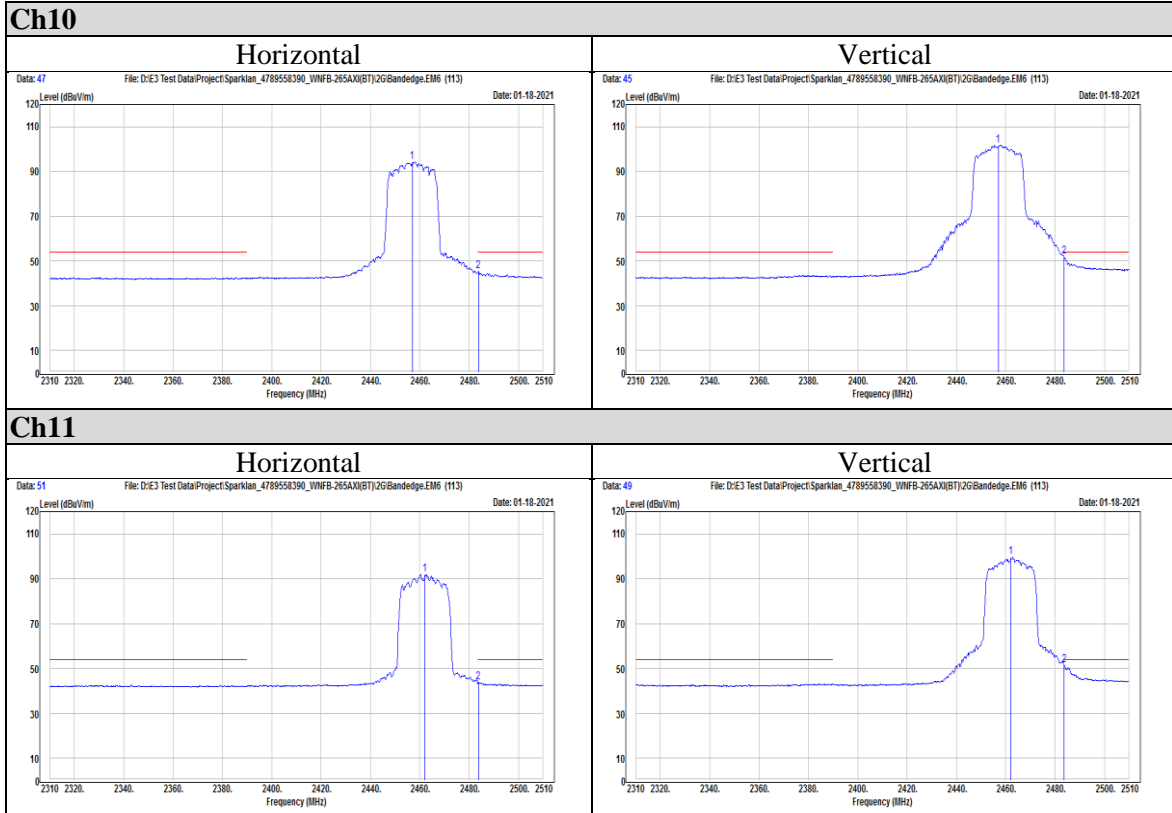
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Average





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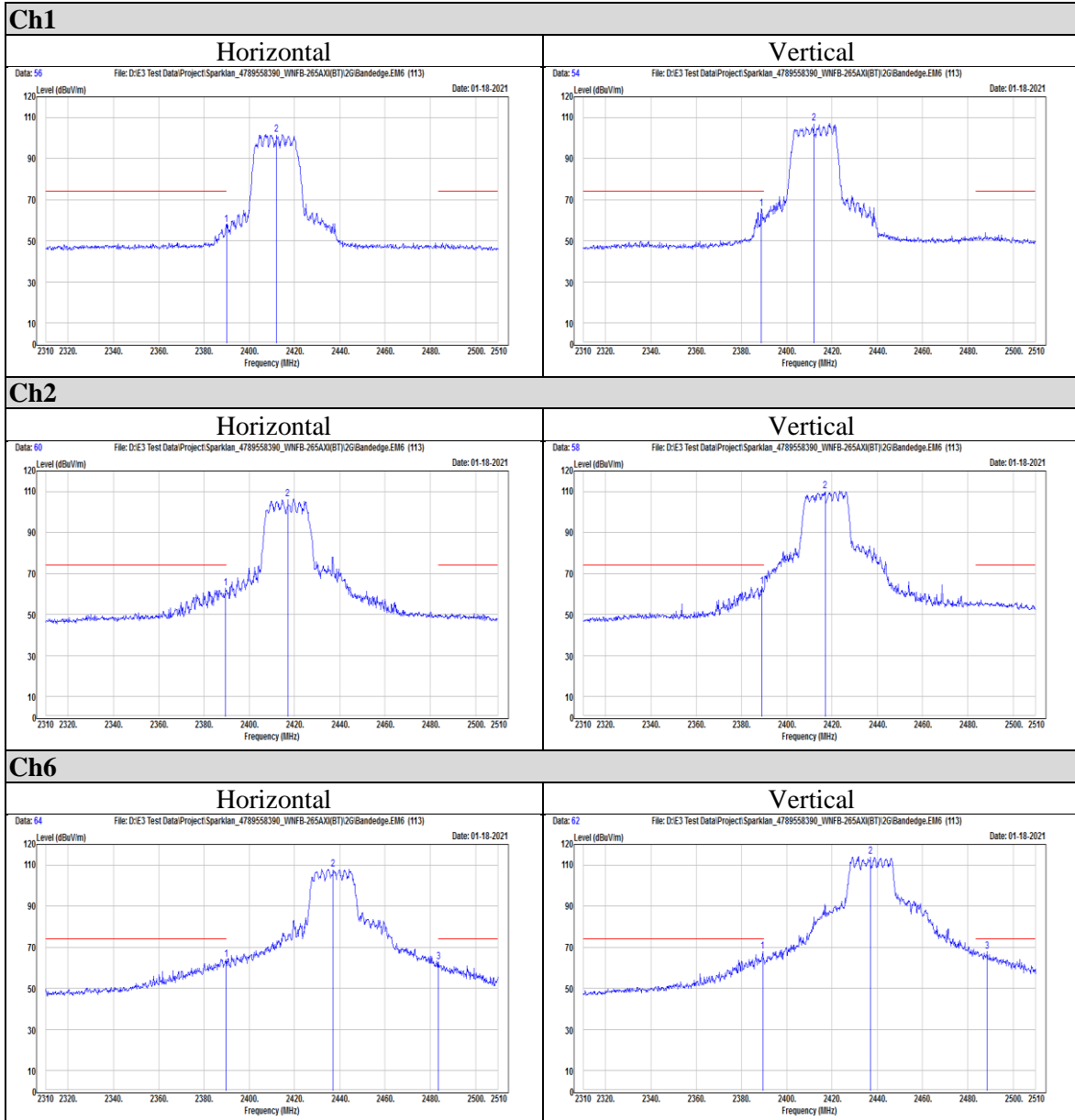
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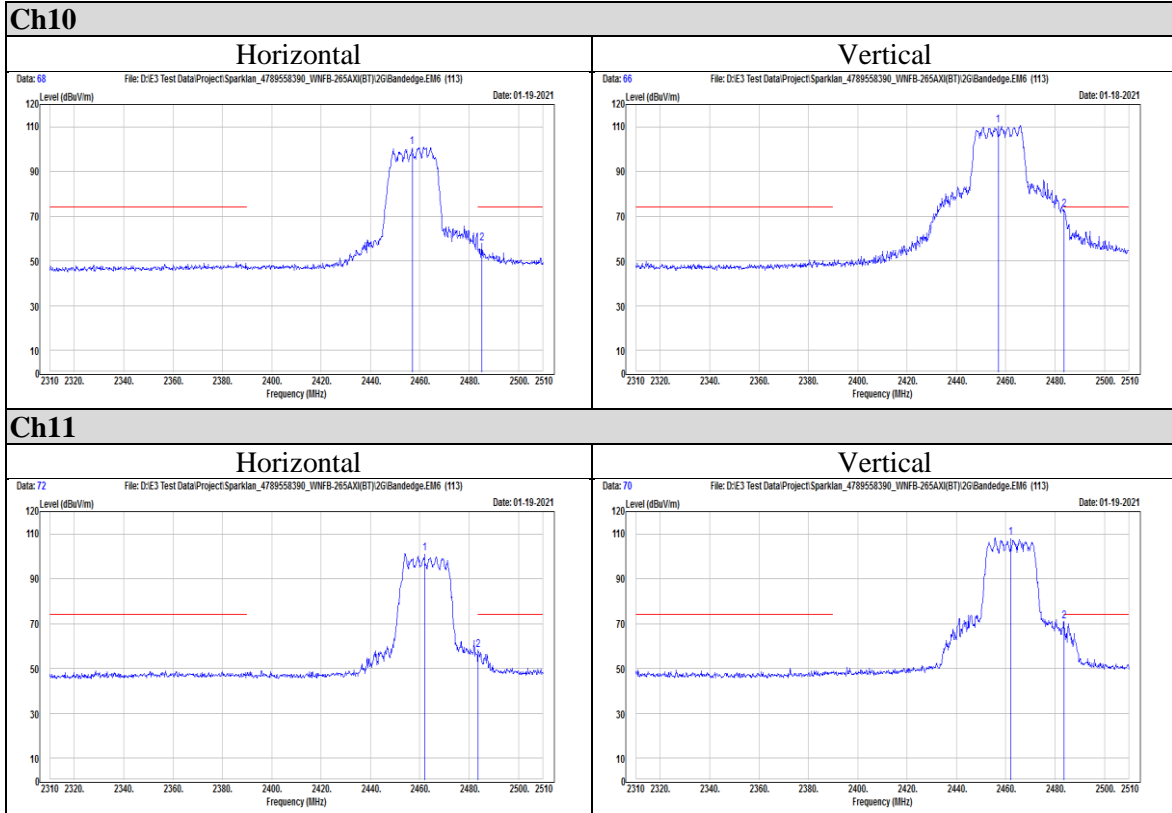
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OFDMA
Peak





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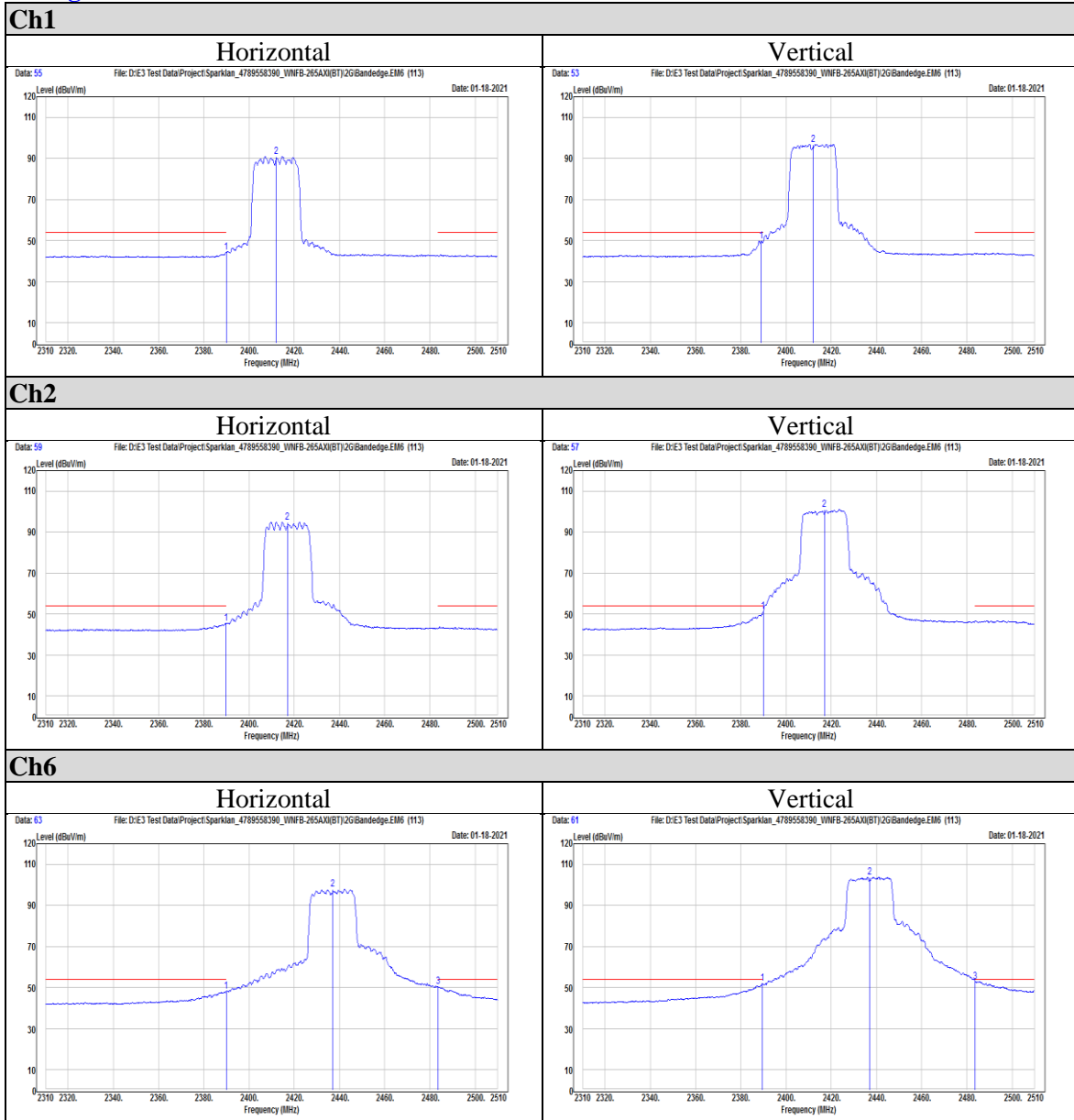
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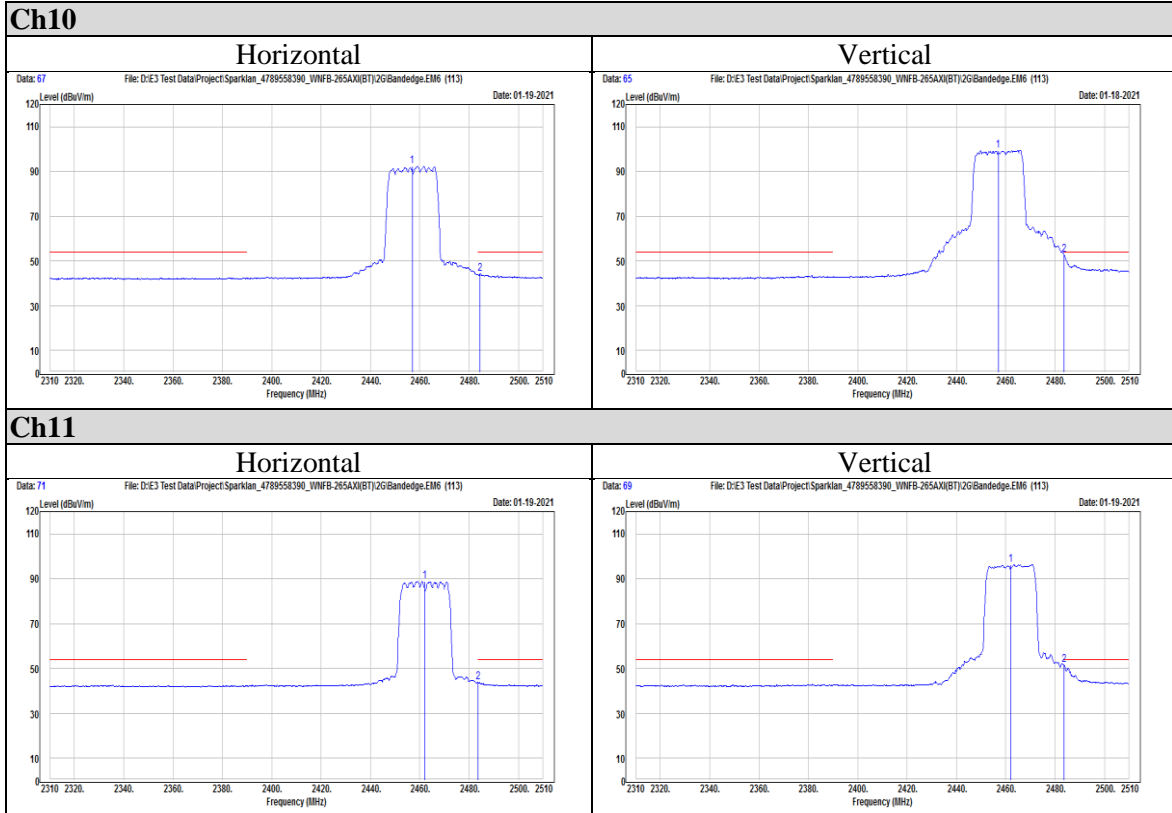
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Average





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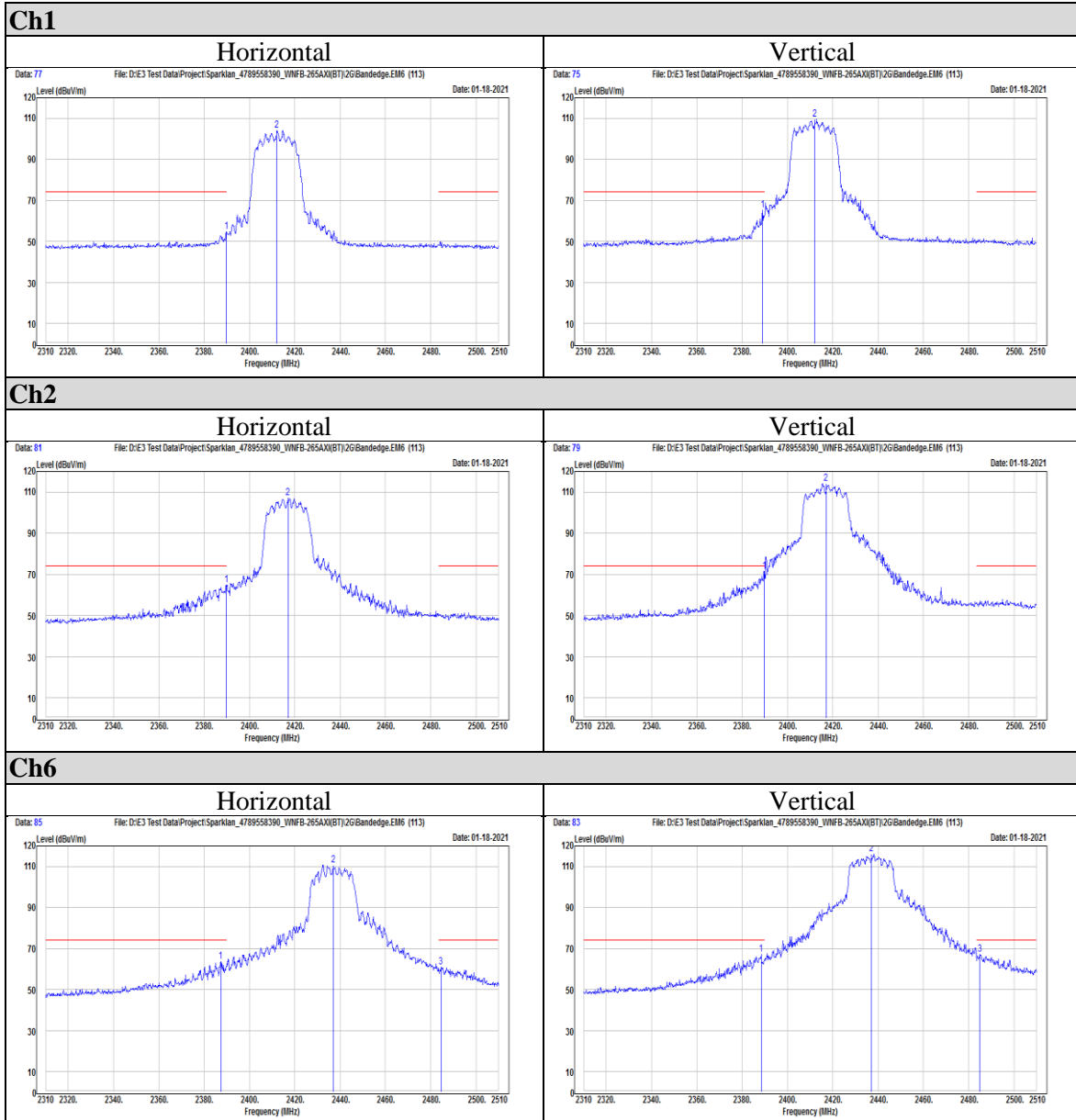
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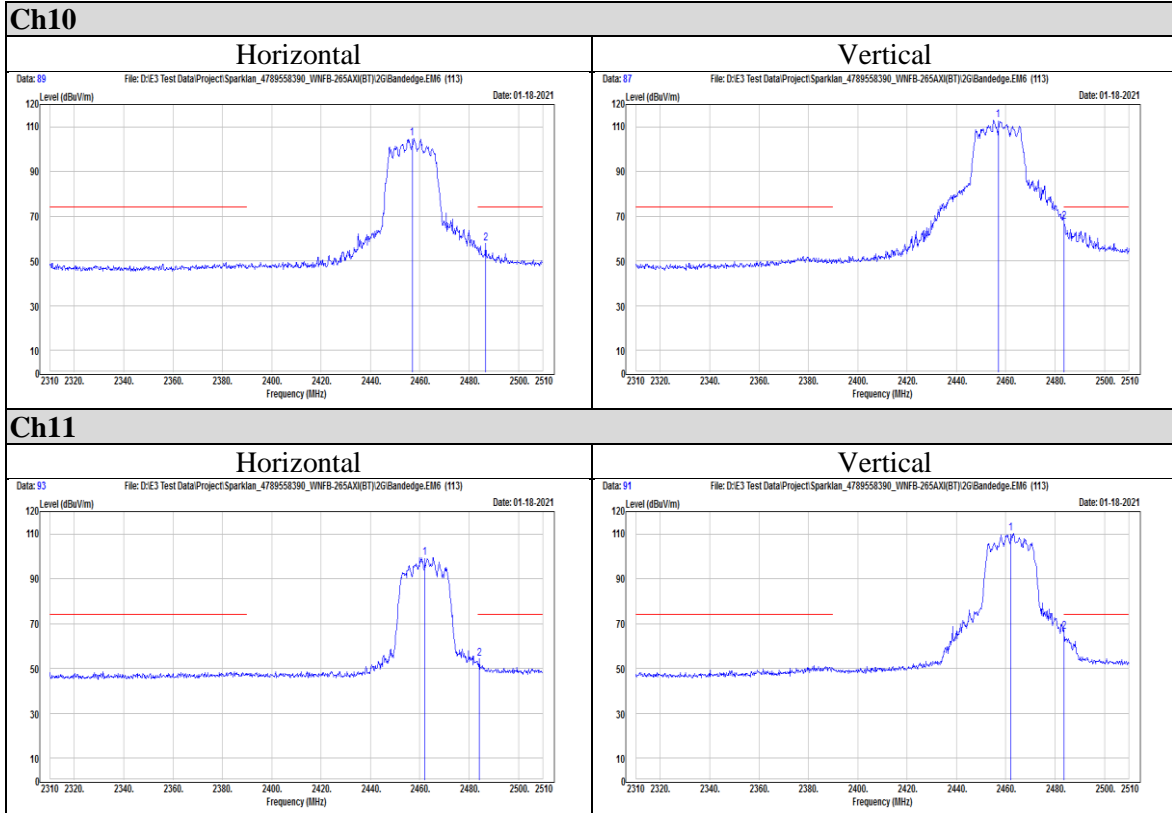


Beamforming mode

802.11ax (HE20)

OFDM
Peak





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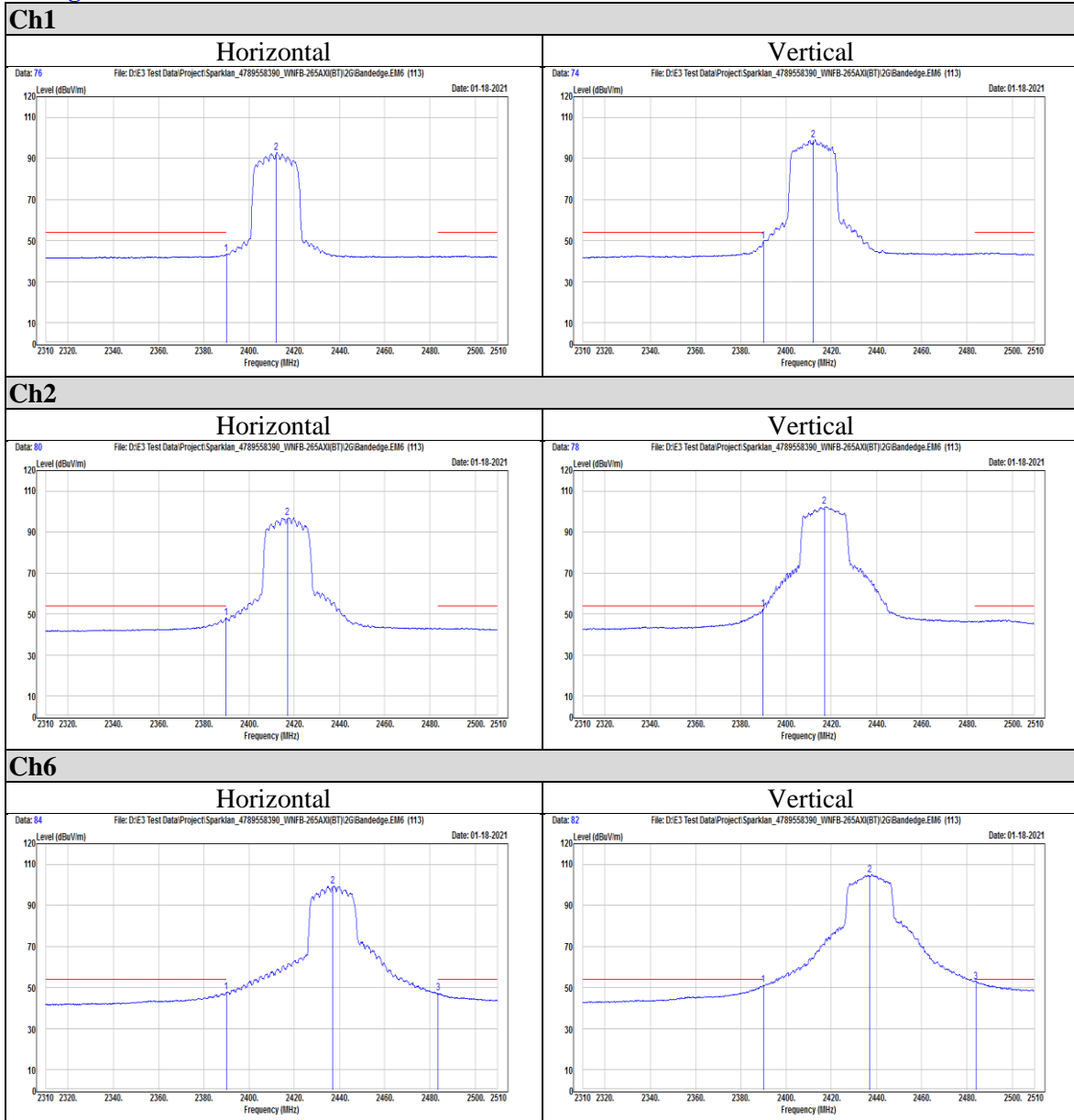
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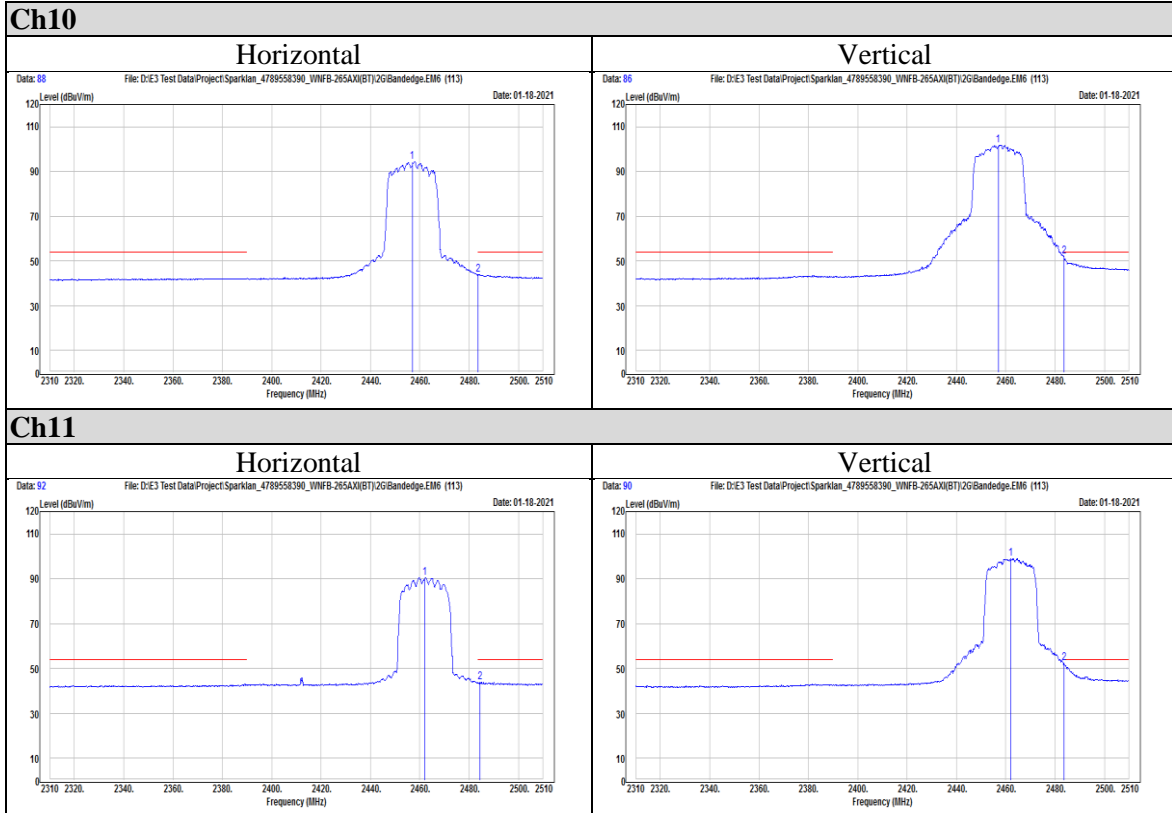
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Average





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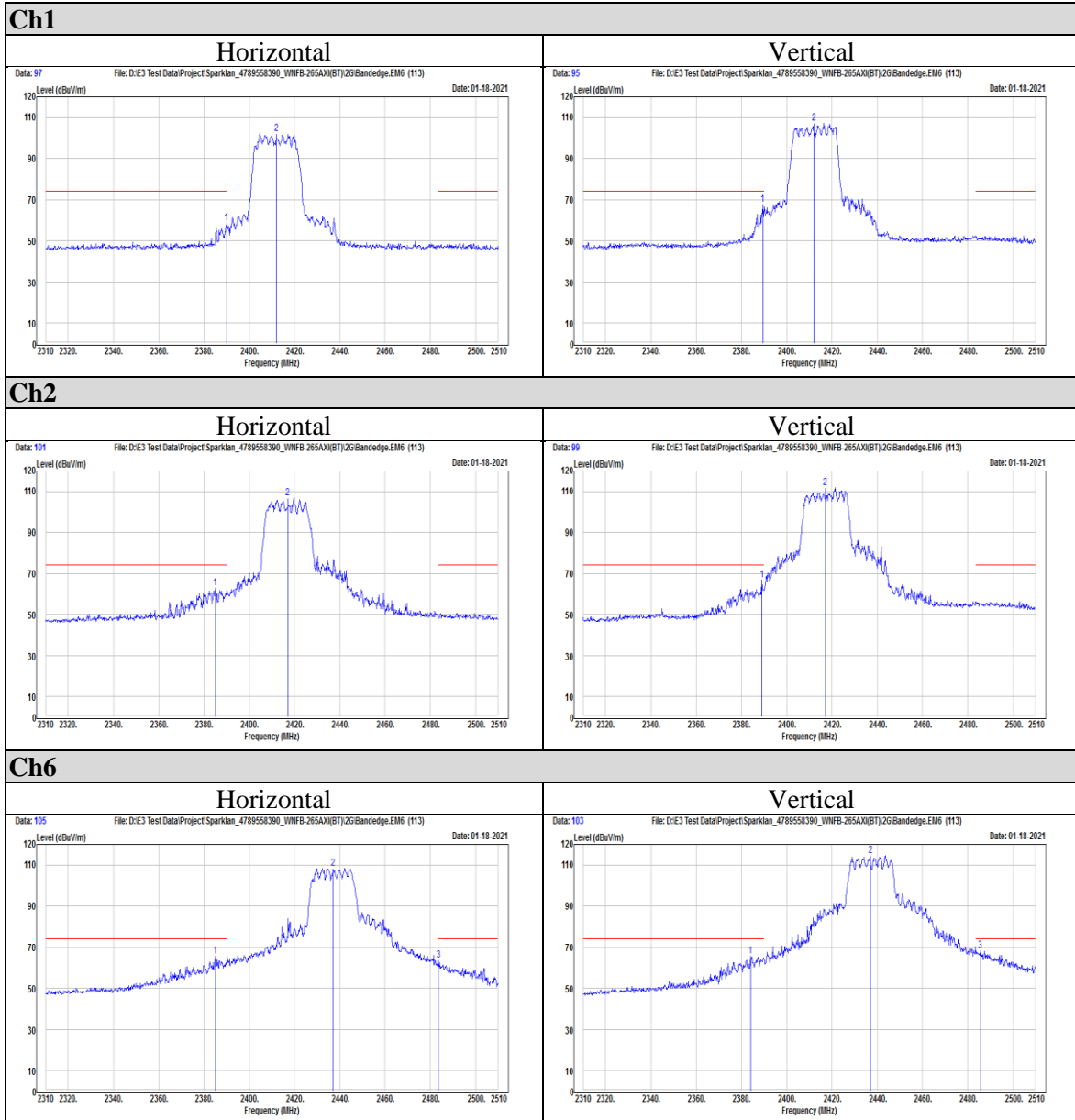
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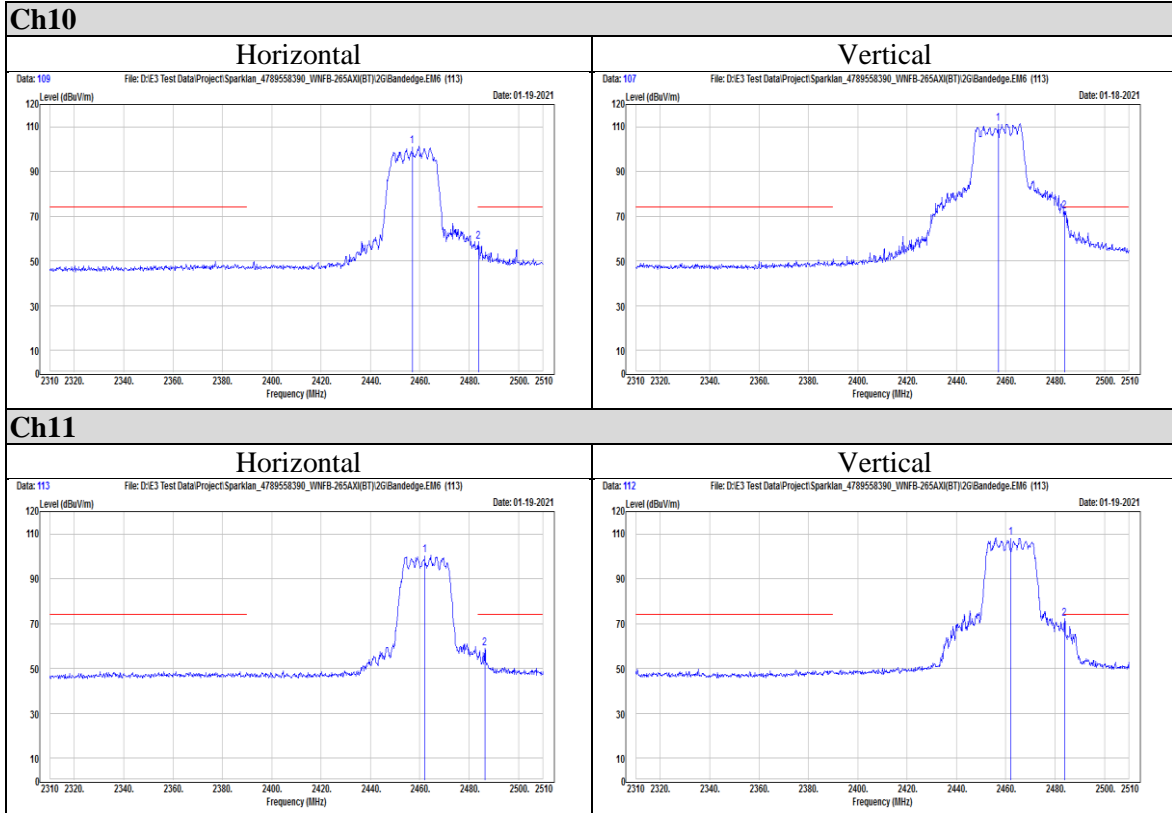
Telephone :+886-2-7737-3000

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OFDMA
Peak





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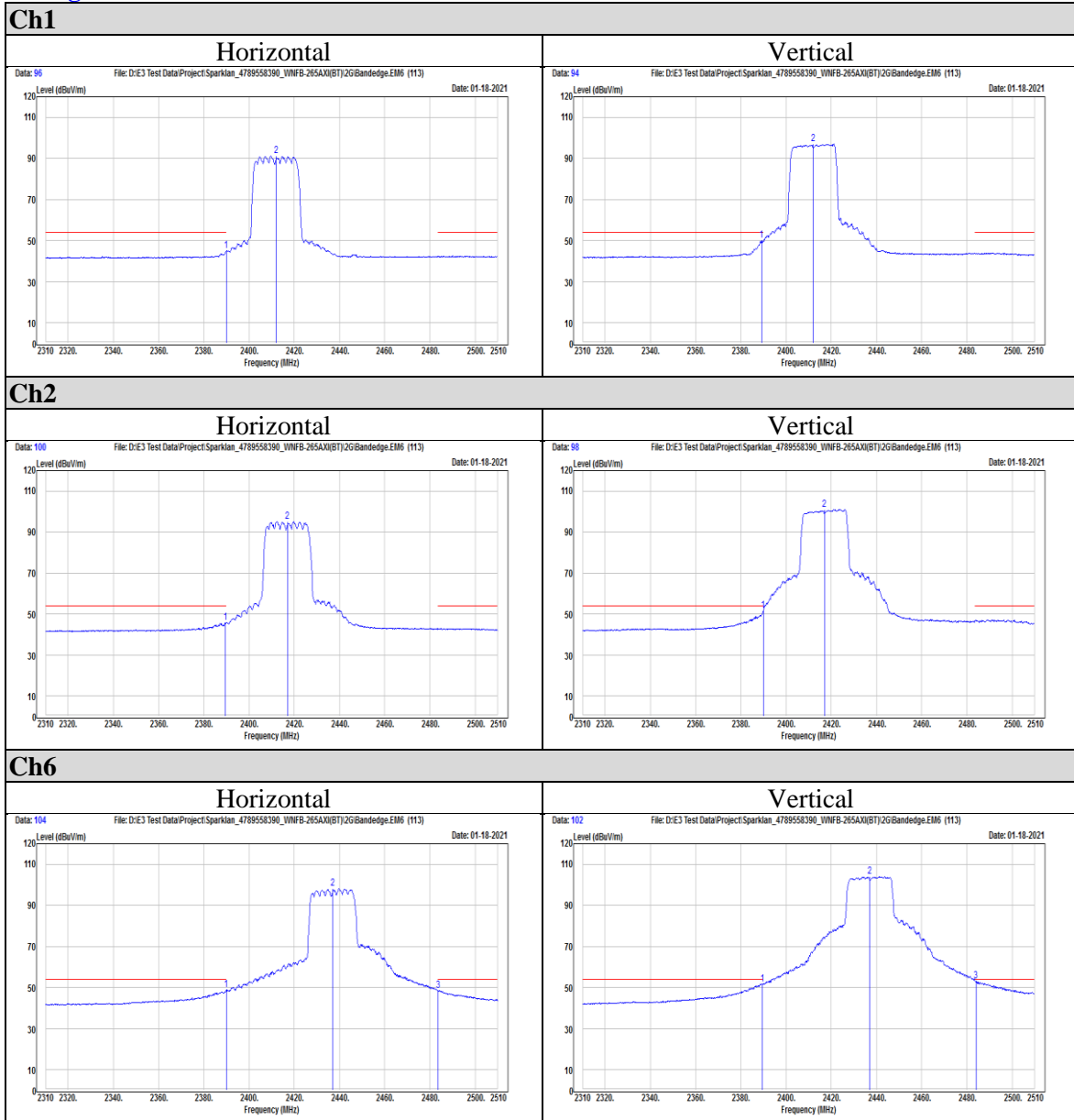
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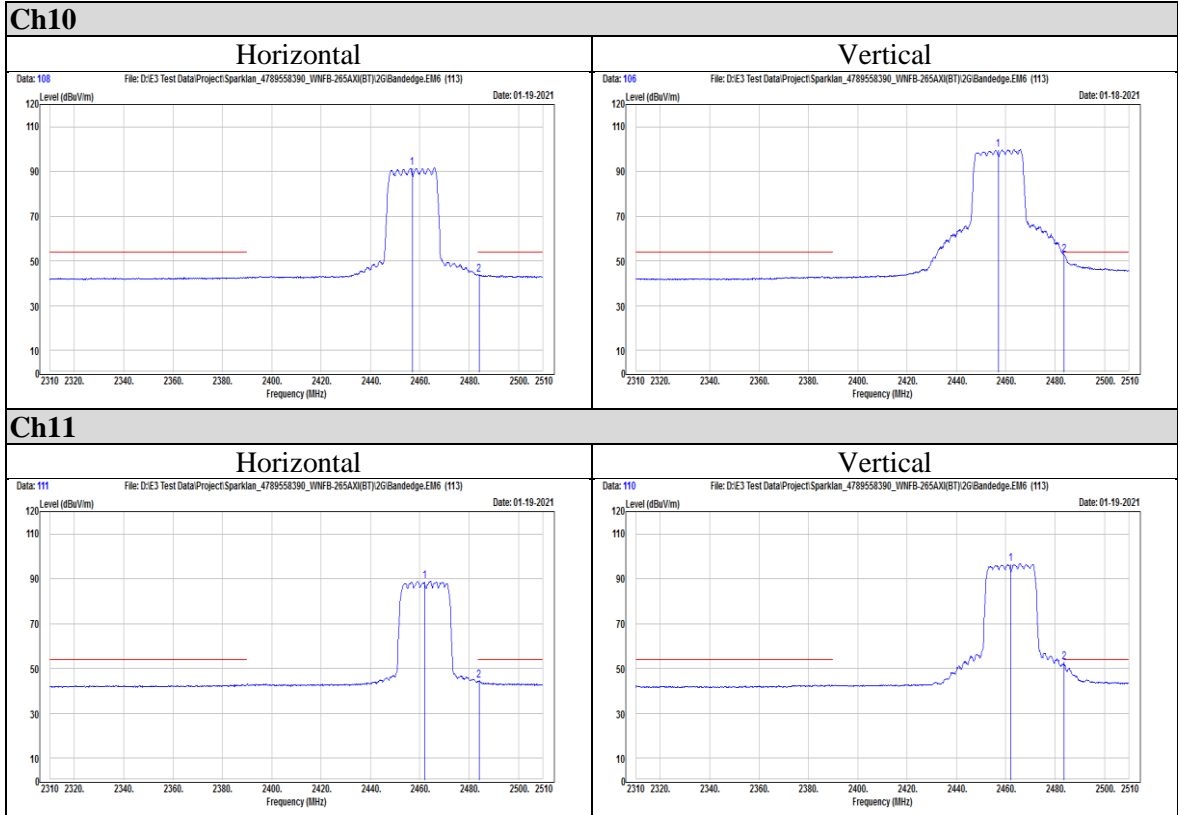
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Average





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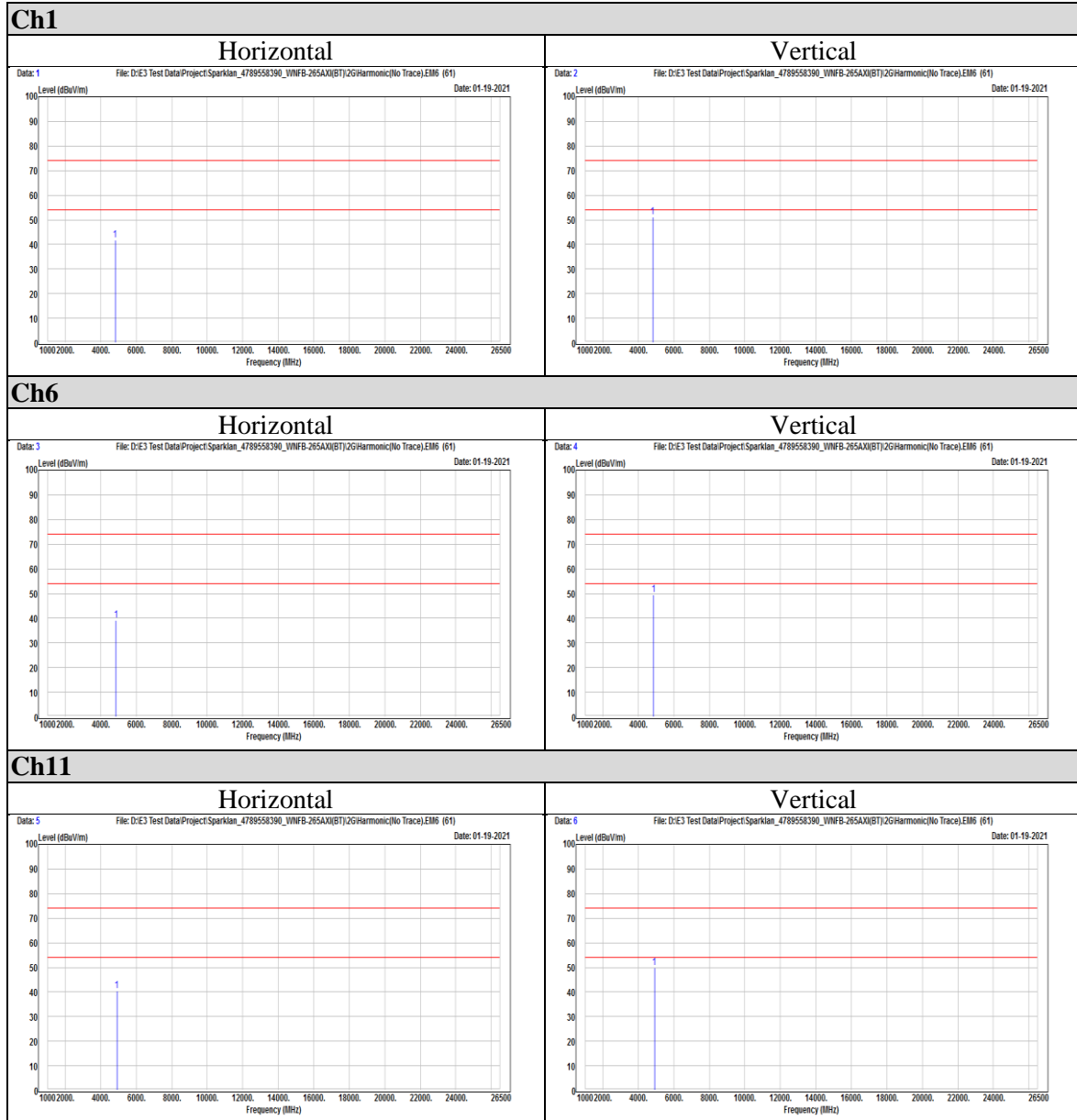
Facsimile (FAX) :+886-3-583-7948



Appendix II Radiated Spurious Emission Measurement

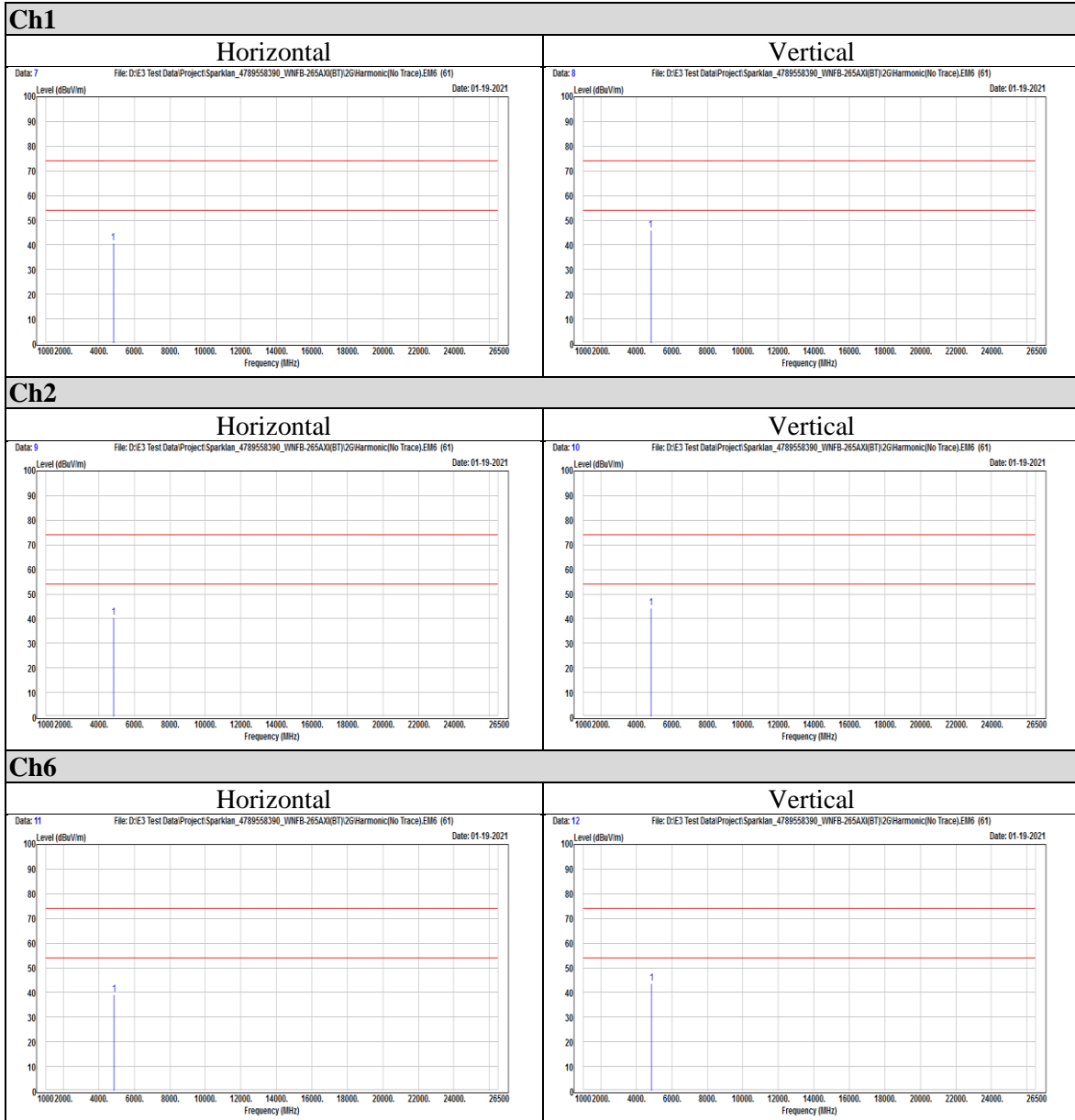
Non-Beamforming mode

802.11b





802.11g



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