

Test results (Above 1 000 MHz) – MIMO

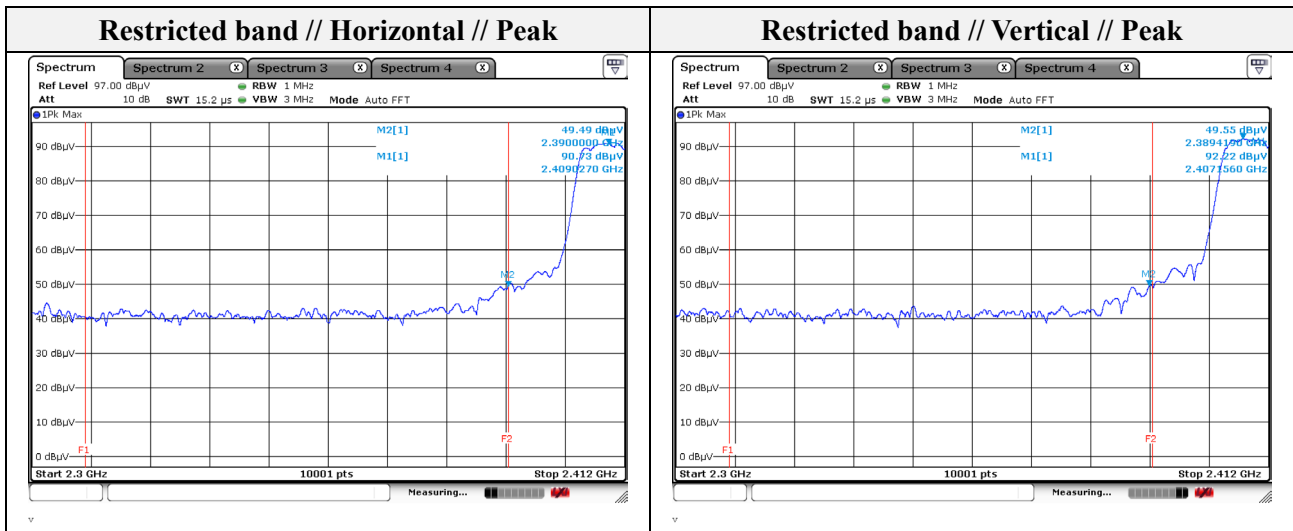
Mode: 802.11n_HT20
 Distance of measurement: 3 meter
 Channel: 01

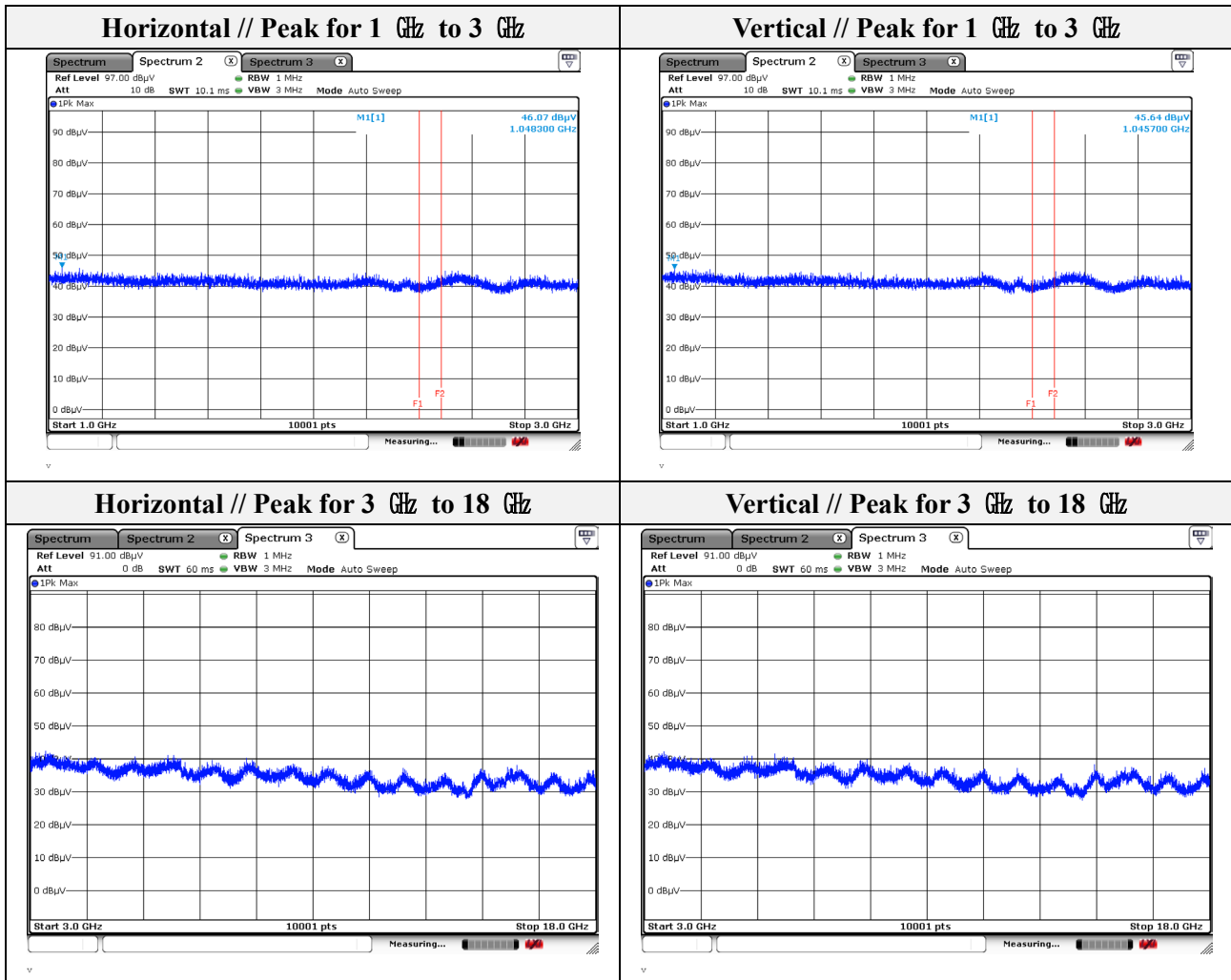
- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 045.70	45.64	Peak	V	-9.39	-	36.25	74.00	37.75
1 048.30	46.07	Peak	H	-9.39	-	36.68	74.00	37.32

- Band edge

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2 389.42	49.55	Peak	V	-3.55	-	46.00	74.00	28.00
2 390.00	49.49	Peak	H	-3.55	-	45.94	74.00	28.06





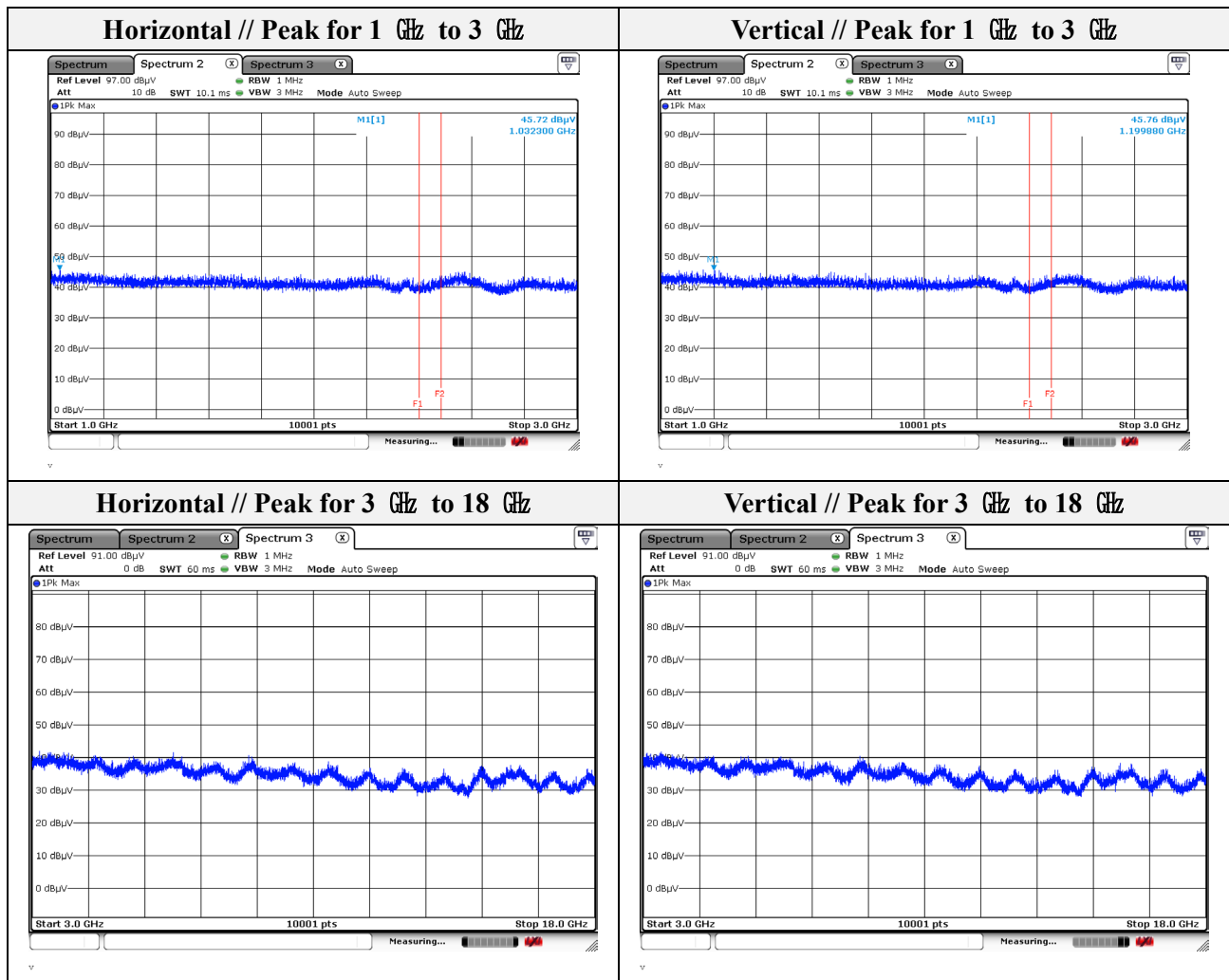
Note.

1. No spurious emission were detected above 3 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

Mode: 802.11n_HT20
 Distance of measurement: 3 meter
 Channel: 6

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 032.30	45.72	Peak	H	-9.41	-	36.31	74.00	37.69
1 199.88	45.76	Peak	V	-9.24	-	36.52	74.00	37.48



Note.

1. No spurious emission were detected above 3 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

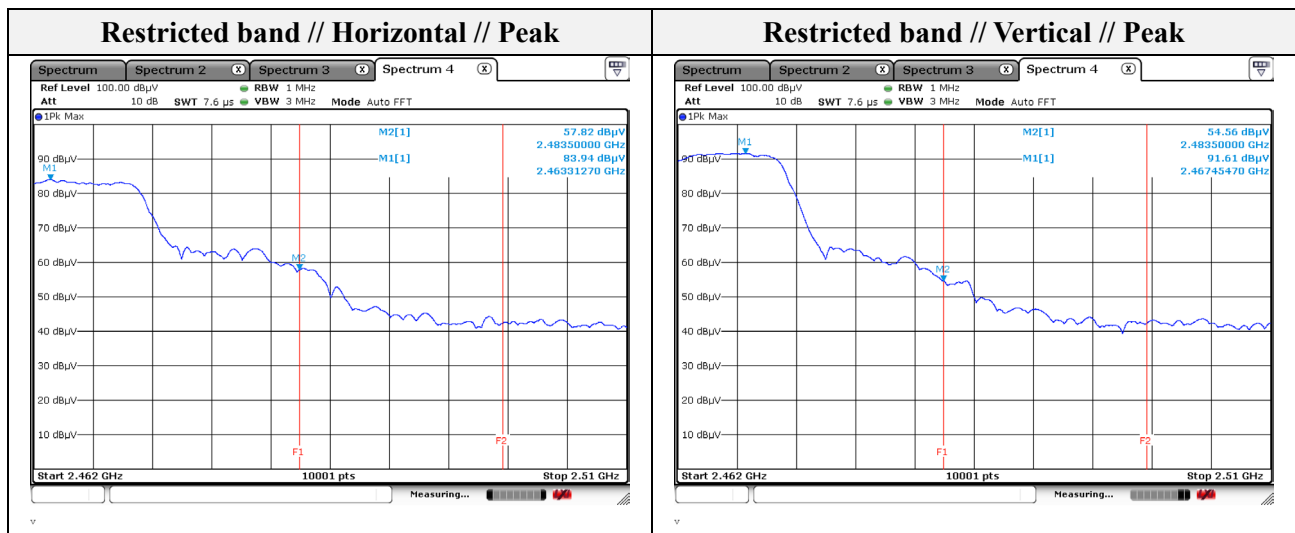
Mode: 802.11n_HT20
 Distance of measurement: 3 meter
 Channel: 11

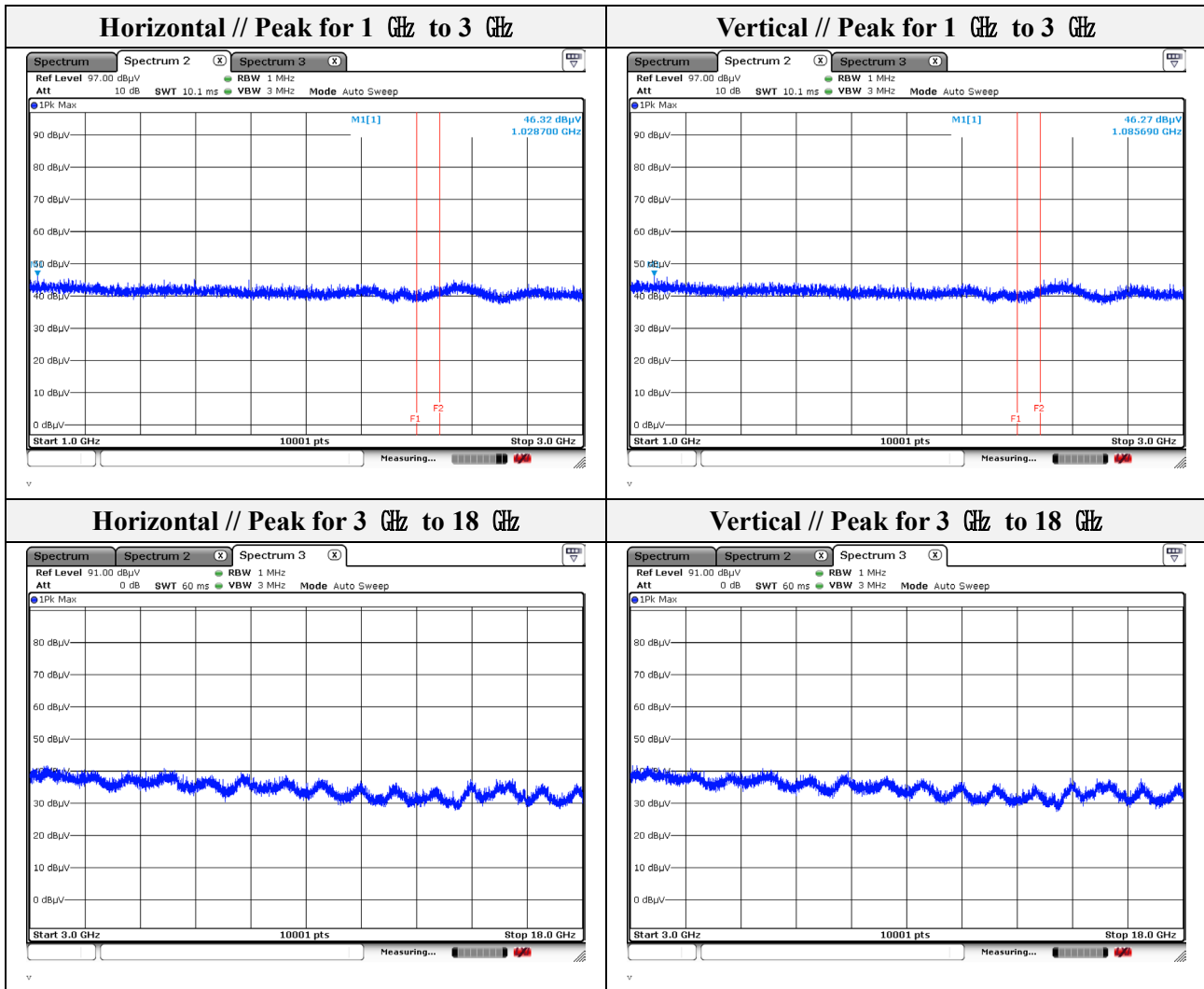
- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 028.70	46.32	Peak	H	-9.41	-	36.91	74.00	37.09
1 085.69	46.27	Peak	V	-9.35	-	36.92	74.00	37.08

- **Band edge**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2 483.50	54.56	Peak	V	-4.15	-	50.41	74.00	23.59
2 483.50	57.82	Peak	H	-4.15	-	53.67	74.00	20.33





Note.

1. No spurious emission were detected above 3 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

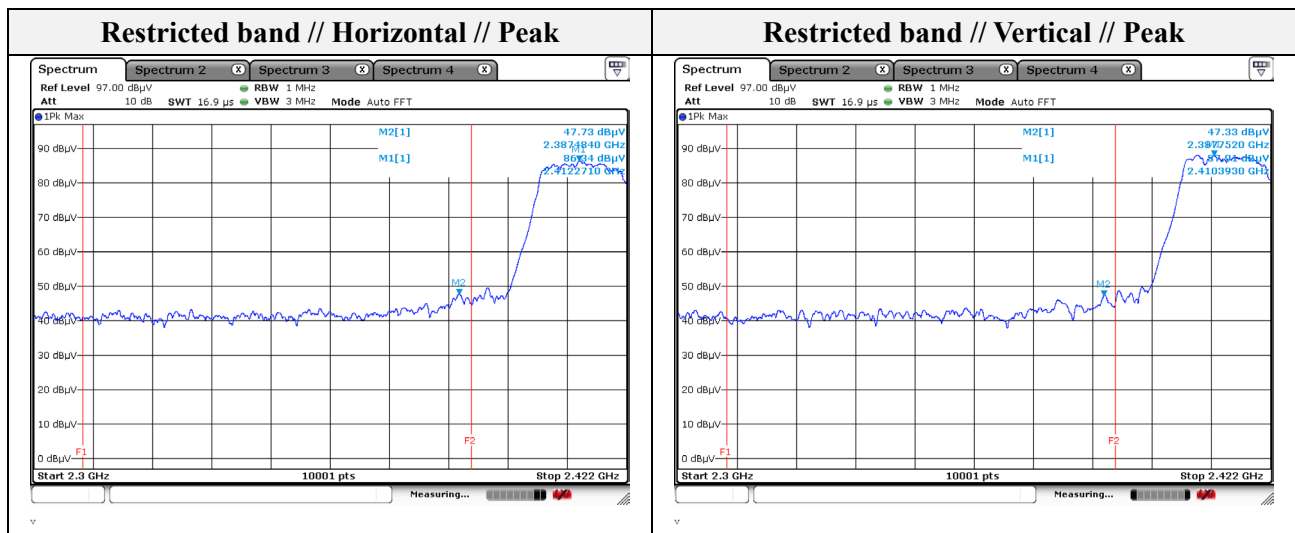
Mode: 802.11n_HT40
 Distance of measurement: 3 meter
 Channel: 3

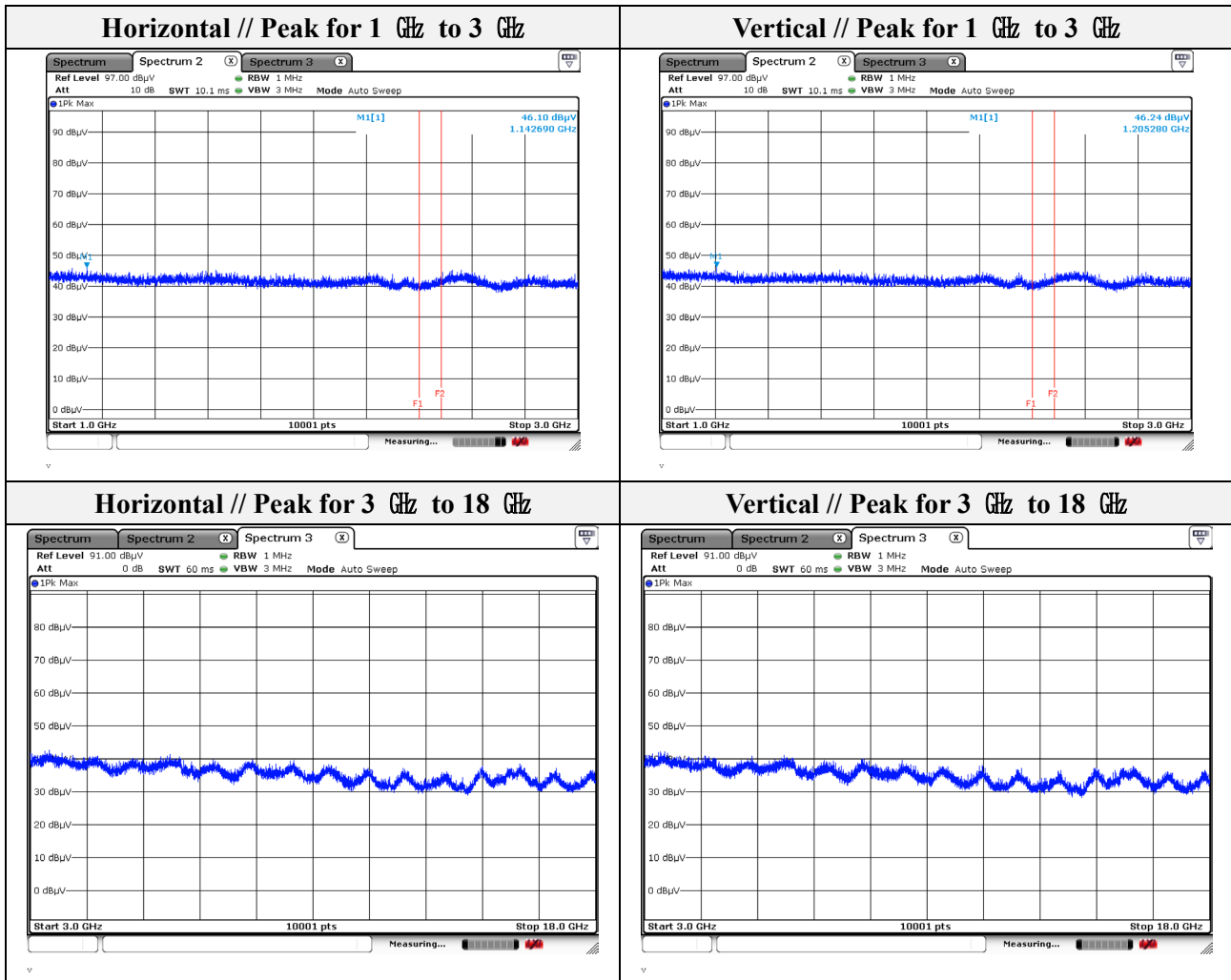
- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 142.69	46.10	Peak	H	-9.30	-	36.80	74.00	37.20
1 205.28	46.24	Peak	V	-9.24	-	37.00	74.00	37.00

- Band edge

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2 387.48	47.73	Peak	H	-3.54	-	44.19	74.00	29.81
2 387.75	47.33	Peak	V	-3.55	-	43.78	74.00	30.22





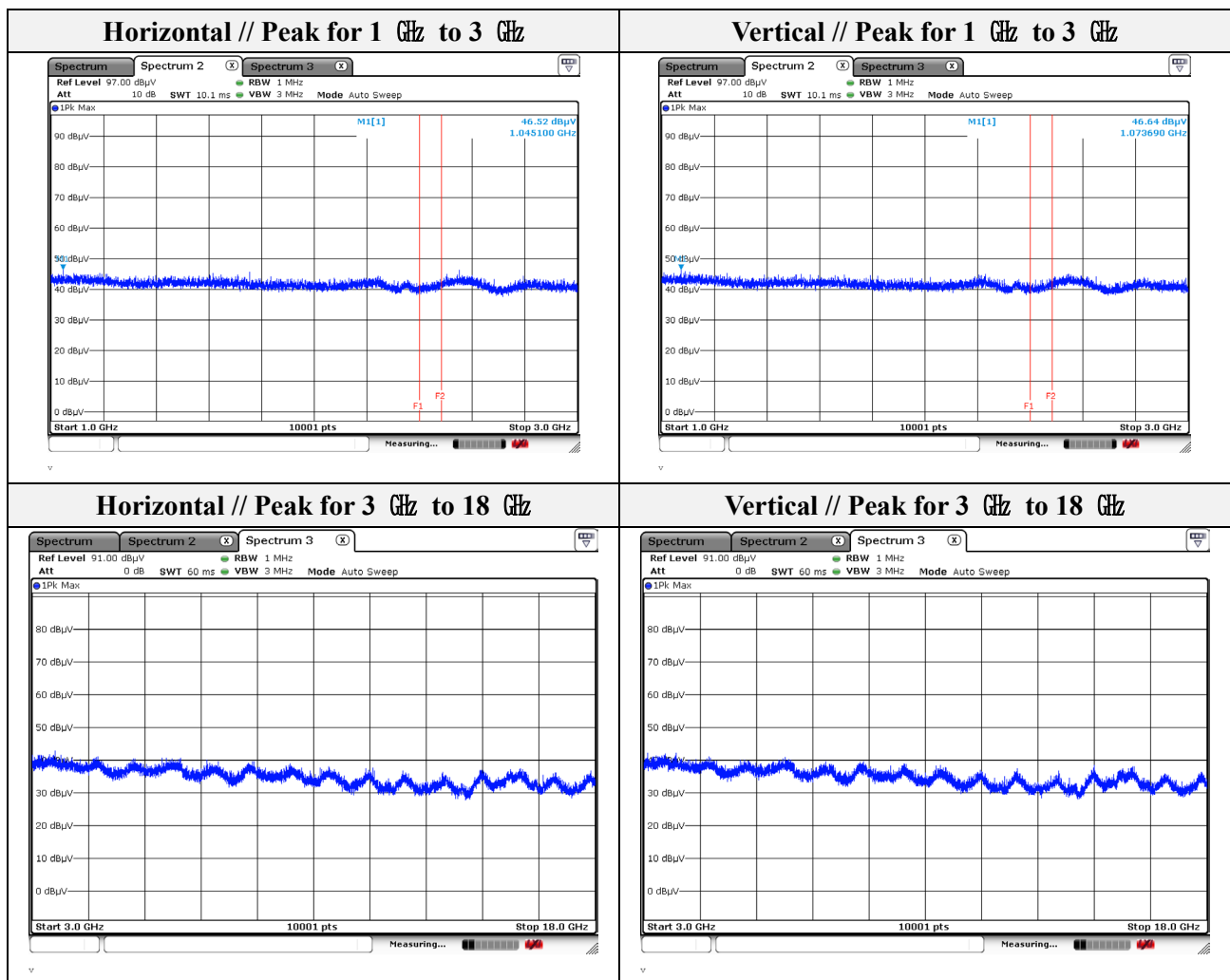
Note.

1. No spurious emission were detected above 3 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

Mode: 802.11n_HT40
 Distance of measurement: 3 meter
 Channel: 6

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 045.10	46.52	Peak	H	-9.39	-	37.13	74.00	36.87
1 073.69	46.64	Peak	V	-9.36	-	37.28	74.00	36.72



Note.

1. No spurious emission were detected above 3 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

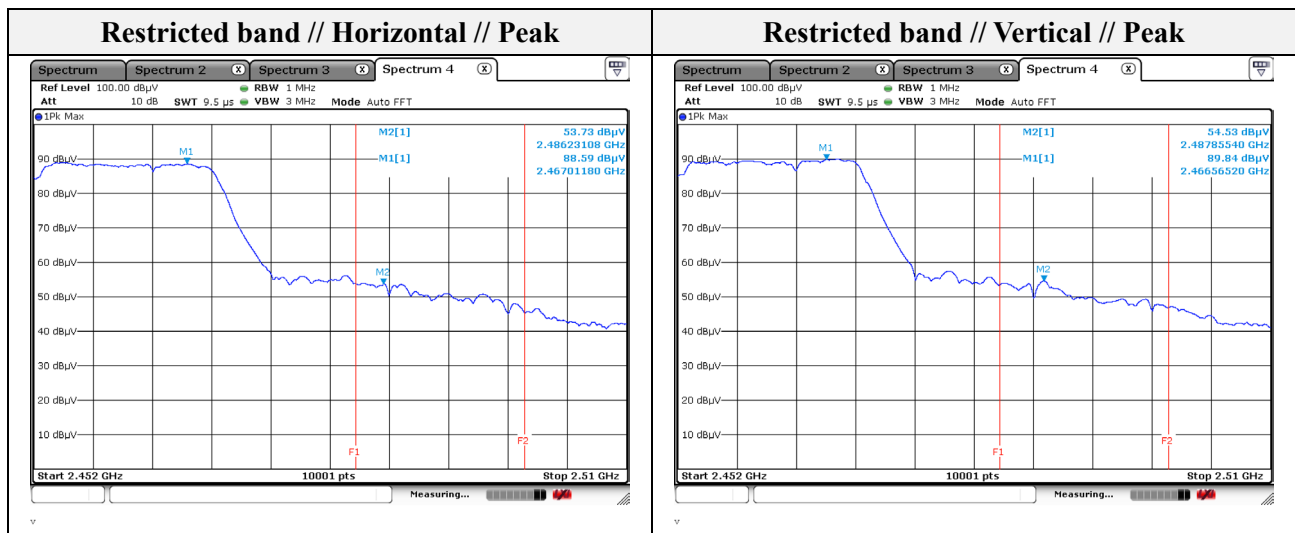
Mode: 802.11n_HT40
 Distance of measurement: 3 meter
 Channel: 9

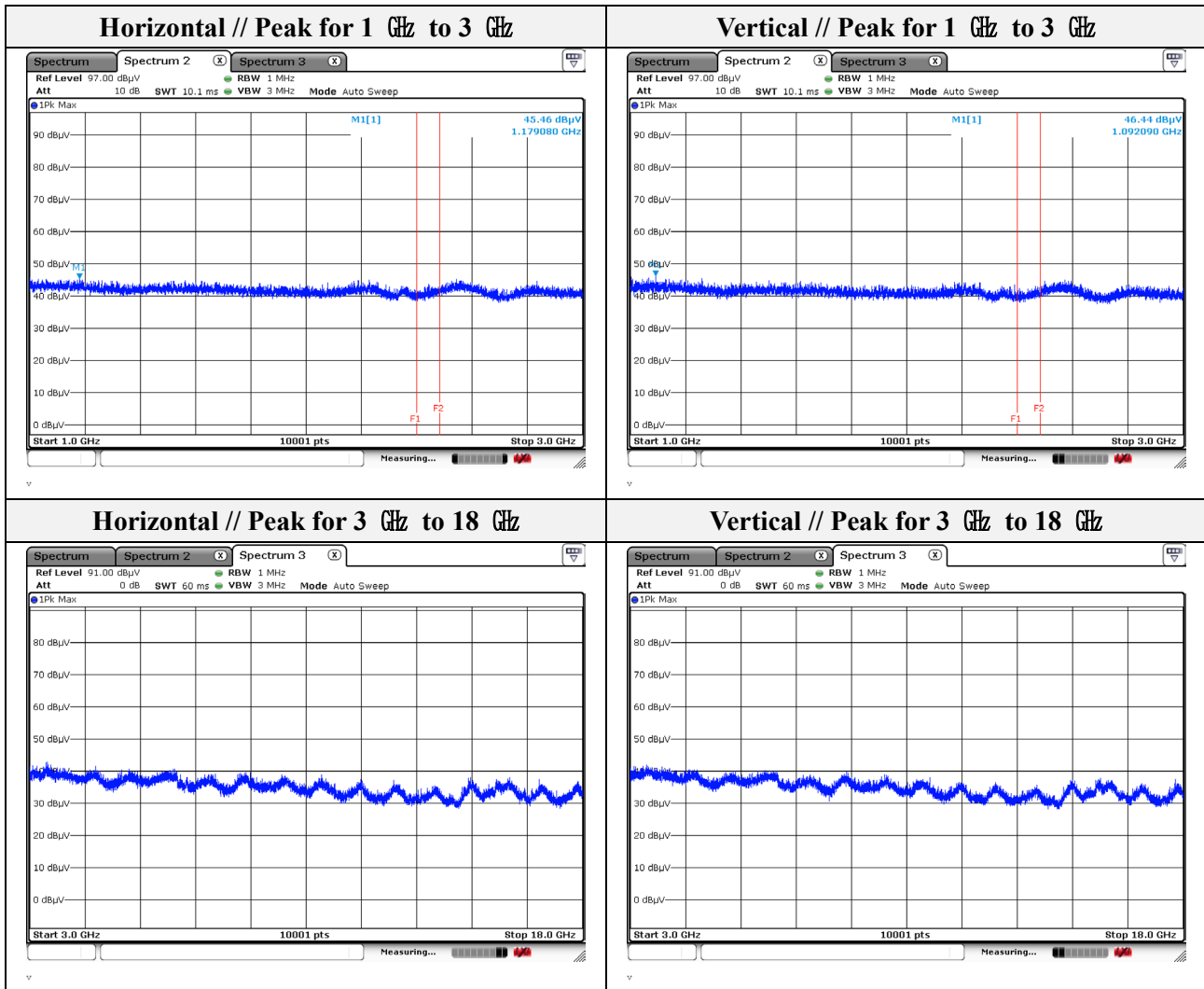
- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 092.09	46.44	Peak	V	-9.35	-	37.09	74.00	36.91
1 179.08	45.46	Peak	H	-9.26	-	36.20	74.00	37.80

- Band edge

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2 486.23	53.73	Peak	H	-4.17	-	49.56	74.00	24.44
2 487.86	54.53	Peak	V	-4.19	-	50.34	74.00	23.66



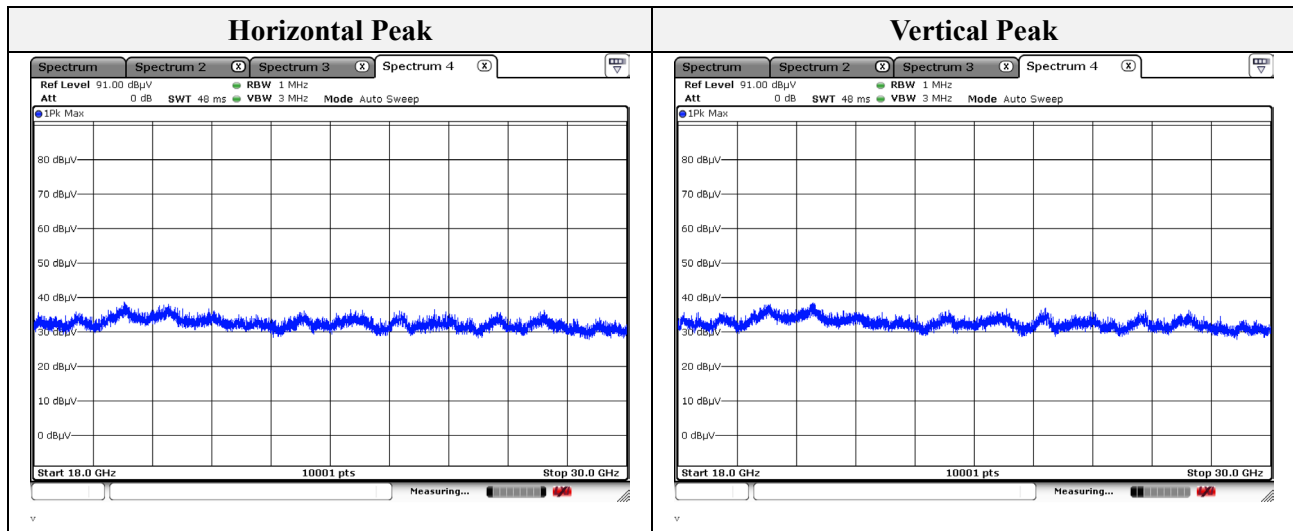


Note.

1. No spurious emission were detected above 3 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

Test results (18 GHz to 30 GHz)

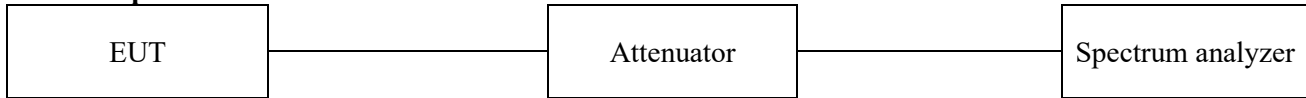
Mode: 802.11b
 Distance of measurement: 3 meter
 Channel: 01 (Worst case)



Note.
 No spurious emission were detected above 18 GHz.

3.6. Conducted spurious emissions & band edge

Test setup



Test procedure

Band edge

ANSI C63.10-2013 - Section 11.11

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. Set the RBW = 100 kHz
4. Set the VBW = $[3 \times \text{RBW}]$.
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow trace to fully stabilize.

Out of band emissions

ANSI C63.10-2013 - Section 11.11

1. Start frequency was set to 30 MHz and stop frequency was set to 25 GHz for 2.4 GHz frequencies and 40 GHz for 5 GHz frequencies
2. Set the RBW = 100 kHz
3. Set the VBW = $[3 \times \text{RBW}]$.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Allow trace to fully stabilize.

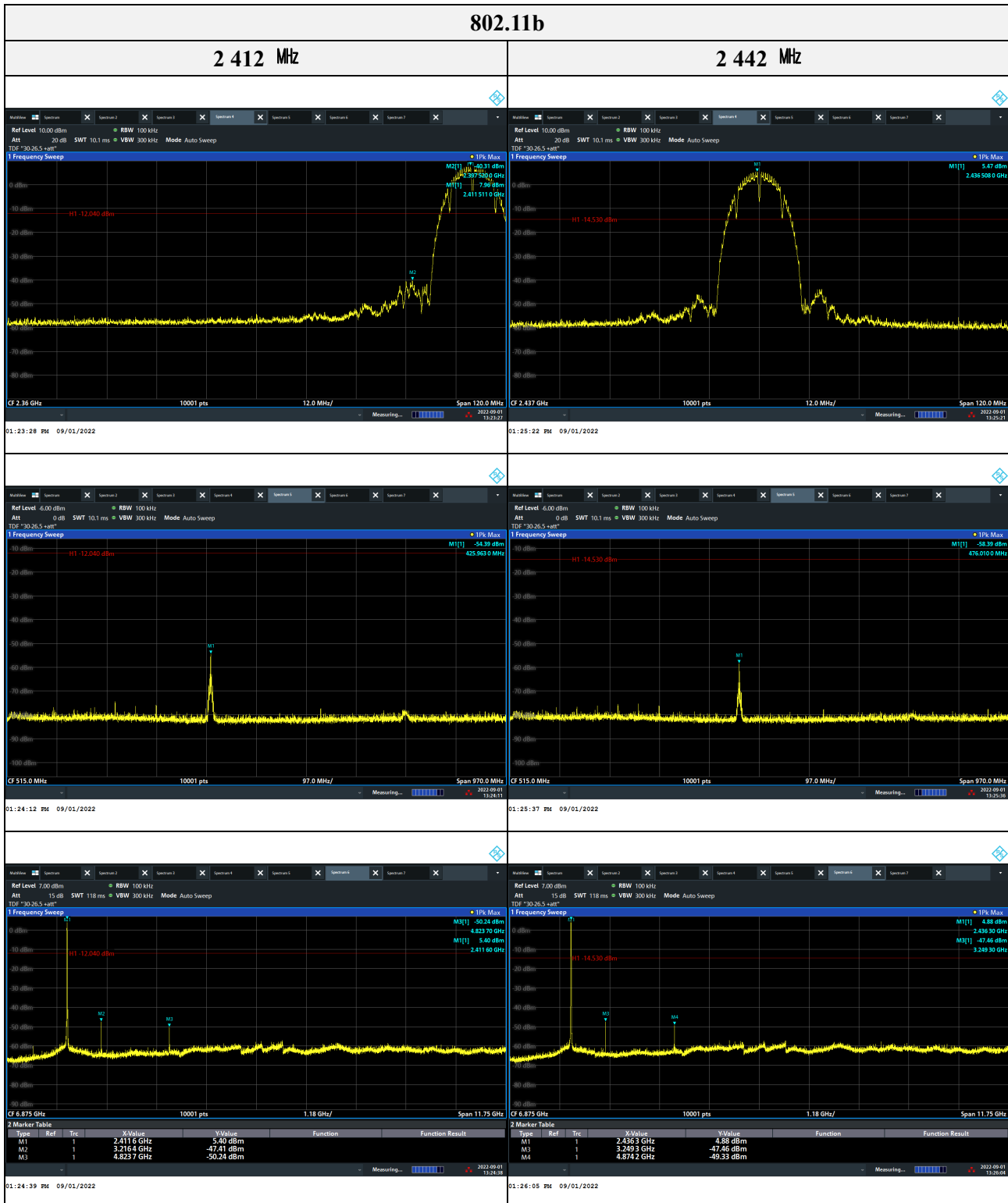
Limit

According to 15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph(b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in section 15.209(a) is not required. In addition, radiated emission which in the restricted band, as define in section 15.205(a), must also comply the radiated emission limits specified in section 15.209(a) (see section 15.205(c))

Limit

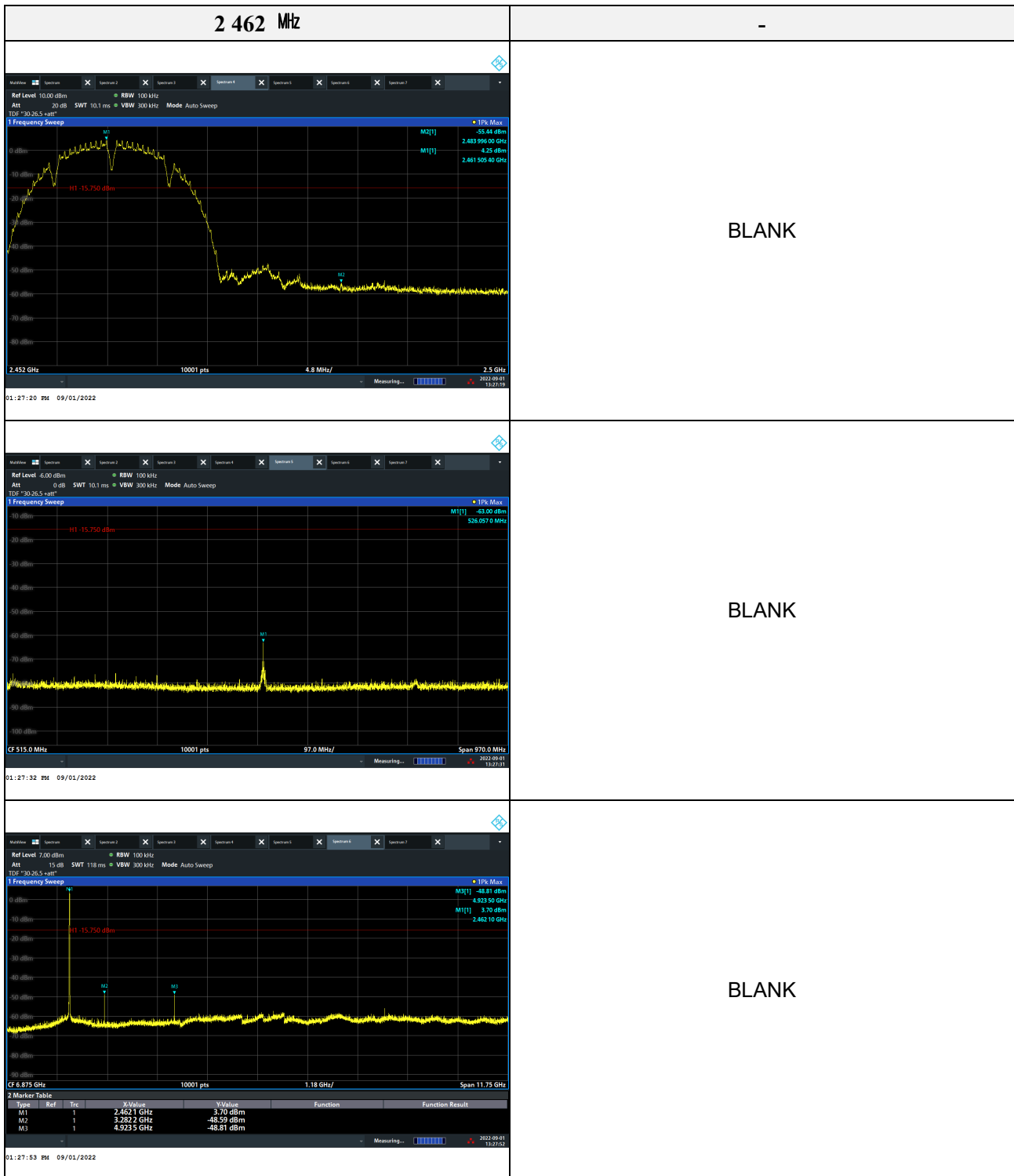
According to RSS-247 5.5, In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

Test results SISO ANT1

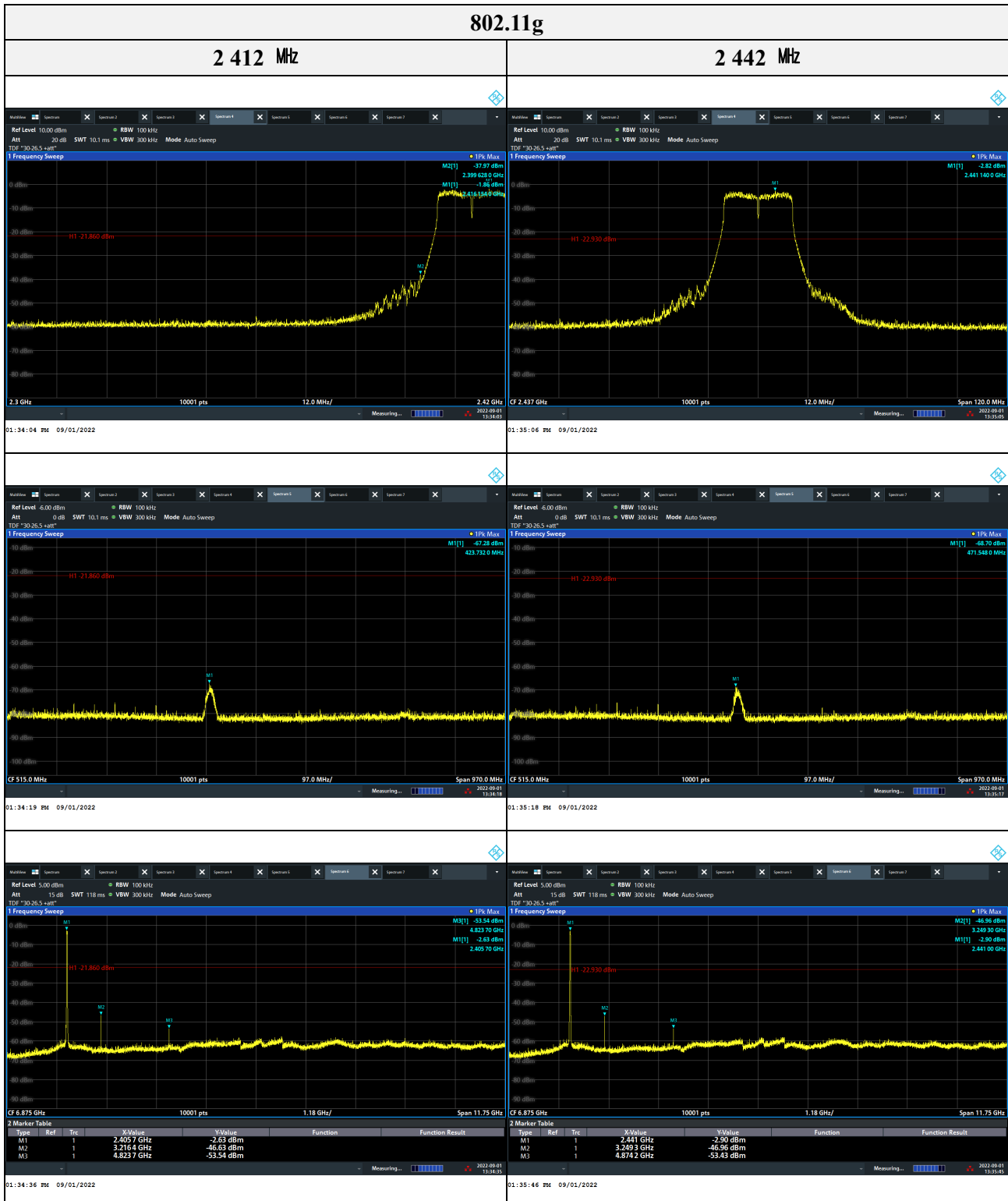


802.11b

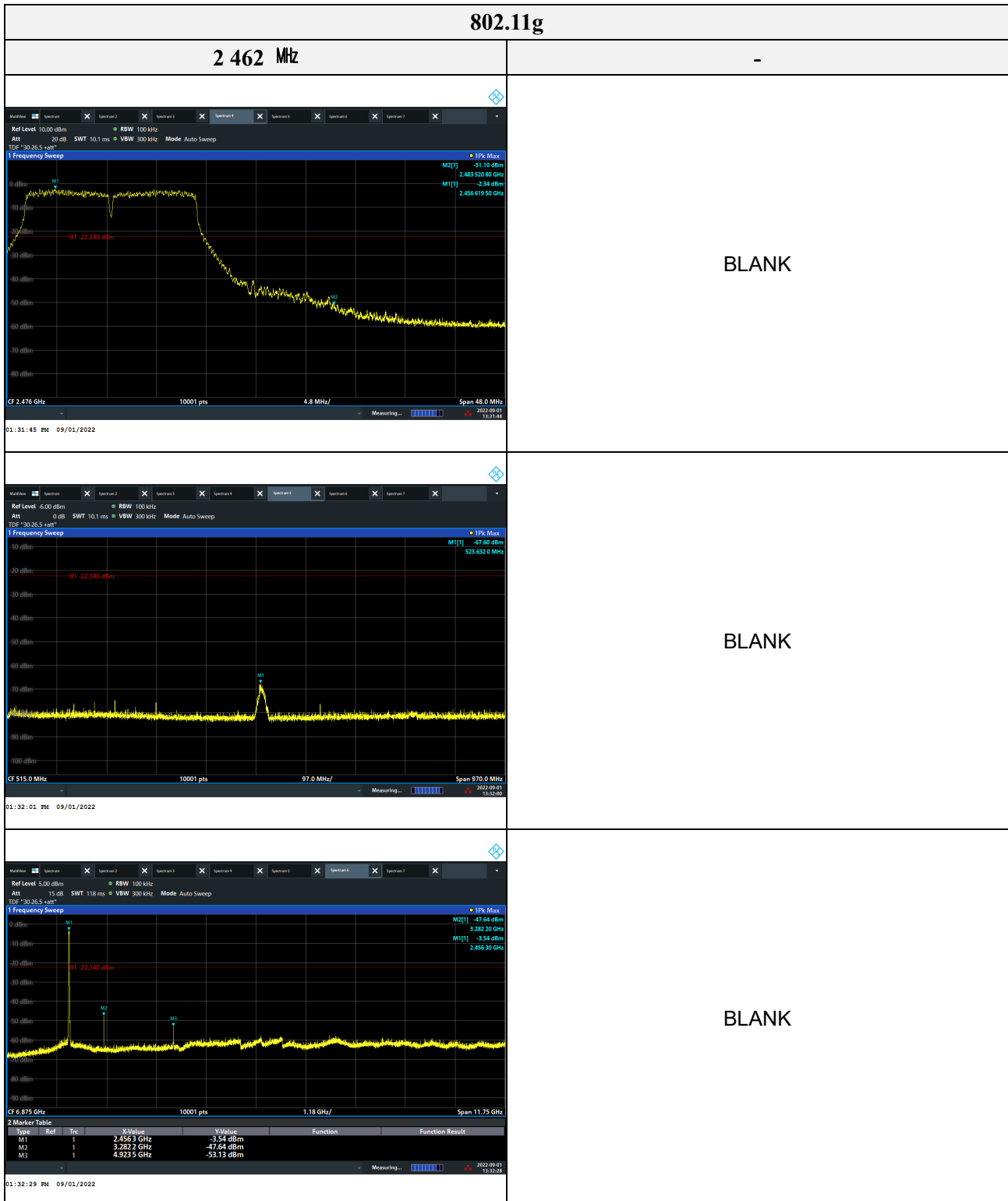
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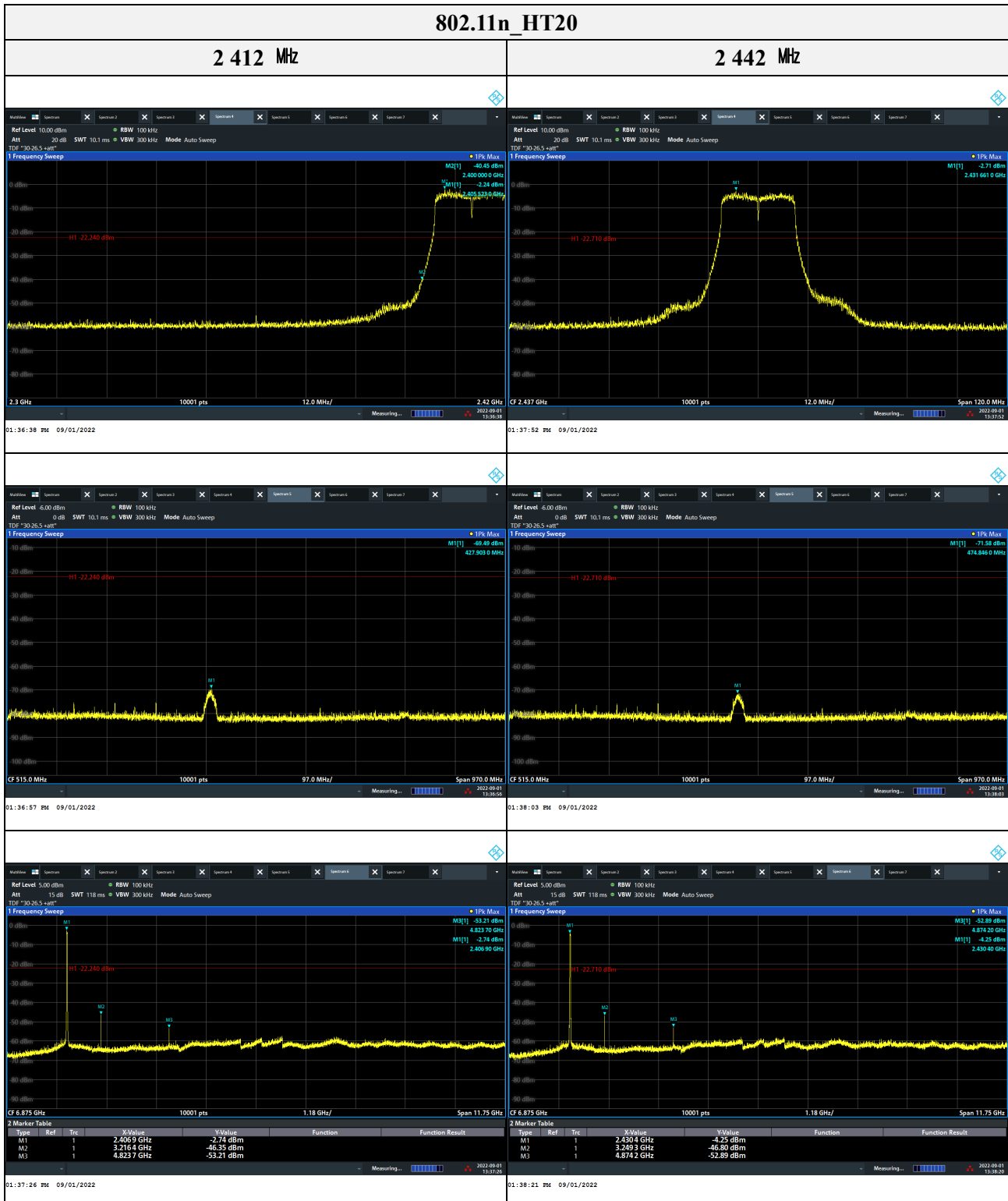


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