

TEST REPORT

Part 15 Subpart E 15.407

Equipment under test Flat Panel Digital X-ray Detector

Model name EXT 1824G

Variant Model name Scansilc 1824 EOD

FCC ID RNHEXT1824G

Applicant DRTECH Corporation

Manufacturer DRTECH Corporation

Date of test(s) 2020.09.01. ~ 2020.09.18

Date of issue 2020.10.12

Issued to

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Test report No.:
KES-RF1-20T0193
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Revision history

Revision	Date of issue	Test report No.	Description
-	2020.10.12	KES-RF1-20T0193	Initial

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1. General information

Applicant: DRTECH Corporation
Applicant address: Suite No.1, 1Floor / Suite No.2 3Floor, 29,
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Test Facility FCC Accreditation Designation No.: KR0100, Registration No.: 444148
FCC rule part(s): 15.407
FCC ID: RNHEXT1824G
Test device serial No.: ☒ Production ☐ Pre-production ☐ Engineering

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1.1. EUT description

Equipment under test	Flat Panel Digital X-ray Detector		
Frequency range &	2 402 MHz ~ 2 480 MHz (LE) : 40 ch		
Number of channels	2 412 MHz ~ 2 462 MHz (802.11b/g/n_HT20) : 11 ch		
	2 422 MHz ~ 2 452 MHz (802.11n_HT40) : 7 ch		
	UNII-1	5 180 MHz ~ 5 240 MHz (802.11a/n_HT20) : 4 ch	
		5 190 MHz ~ 5 230 MHz (802.11n_HT40) : 2 ch	
	UNII-2A	5 260 MHz ~ 5 320 MHz (802.11a/n_HT20) : 4 ch	
		5 270 MHz ~ 5 310 MHz (802.11n_HT40) : 2 ch	
	UNII-2C	5 500 MHz ~ 5 700 MHz (802.11a/n_HT20) : 11 ch	
		5 510 MHz ~ 5 670 MHz (802.11n_HT40) : 5 ch	
	UNII-3	5 745 MHz ~ 5 825 MHz (802.11a/n_HT20) : 5 ch	
		5 755 MHz ~ 5 795 MHz (802.11n_HT40) : 2 ch	
Model:	EXT 1824G		
Variant Model name	Scansilc 1824 EOD		
Modulation technique	WIFI : DSSS, OFDM, BT : GFSK		
Antenna specification			
Bluetooth antenna	2.4 GHz	Antenna type : PCB antenna,	Peak gain : -0.23 dBi
WLAN antenna	2.4 GHz	Antenna type : PCB antenna,	Peak gain : -5.6 dBi
ANT0 (Top antenna)	5 GHz	Antenna type : : PCB antenna,	Peak gain(UNII-1) : 0.7 dBi
			Peak gain(UNII-2A) : 1.7 dBi
			Peak gain(UNII-2C) : -0.6 dBi
			Peak gain(UNII-3) : 0.5 dBi
WLAN antenna	2.4 GHz	Antenna type : PCB antenna,	Peak gain : -3.6 dBi
ANT1 (Side antenna)	5 GHz	Antenna type : : PCB antenna,	Peak gain(UNII-1) : -0.4 dBi
			Peak gain(UNII-2A) : -0.4 dBi
			Peak gain(UNII-2C) : -1.2 dBi
			Peak gain(UNII-3) : -1.6 dBi
Power source	AC 120 V (AC/DC adaptor output 12 V)		
	1. EXT1824_BATTERY_BD_VER0.2		
	2. EXT1824_CONNECTION_BD_VER0.2		
	3. EXT1824_GATE_BD_VER0.1A		
H/W version	4. EXT1824_LED_BD_VER0.2		
	5. EXT1824_SYSTEM_BD_VER0.2		
	6. 2430NDT_XRAY_FPCB_VER0.1		
	7. 2430NDT_DATA_FPCB_VER0.2		
S/W version	EXT_1824G_SCA_HW0.01.01_V1_SW0.0.03_202004291		

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1.2. Test configuration

The **DRTECH Corporation // EXT 1824G // FCC ID: RNHEXT1824G** was tested per the guidance of KDB 789033 D02 v02r01. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

1.3. Device modifications

N/A

1.4. Frequency/channel operations

UNII-1		UNII-2A		UNII-2C		UNII-3	
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
36	5 180	52	5 260	100	5 500	149	5 745
38	5 200	56	5 280	.	.	.	.
44	5 220	60	5 300	120	5 600	157	5 785
48	5 240	64	5 320	.	.	.	.
				140	5 700	165	5 825

Table 1.7-1. 802.11a/n_HT20 mode

UNII-1		UNII-2A		UNII-2C		UNII-3	
Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
38	5 190	54	5 270	102	5 510	151	5 755
46	5 230	62	5 310	.	.	159	5 795
				118	5 590		
				.	.		
				134	5 670		

Table 1.7-2. 802.11n_HT40 mode

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1.5. Maximum average output power

Refer to the average output power.

Note.

1. Radiated emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.
2. Worst-case data rates as provided by the client were:
 UNII-1 n_HT 20/40 : **MCS8**
 UNII-2A n_HT 20/40 : **MCS8**
 UNII-2C n_HT 20/40 : **MCS8**
 UNII-3 n_HT 20/40 : **MCS8**

1.6. Accessory information

Equipment	Manufacturer	Model	Serial No.	Power source
-	-	-	-	-

1.7. Information about Variant Model name

Model name	Remark
EXT 1824G	There are no external or internal changes, and it is for the purpose of adding a model name.
Scansilc 1824 EOD	

1.8. Antenna information

Mode	SISO			MIMO
	Antenna 0	Antenna 1	Antenna 2	Antenna 1 + 2
LE	✓	×	×	×
802.11b 802.11g 802.11n_HT20 802.11n_HT40	×	×	✓	×
802.11a 802.11an_HT20 802.11an_HT40	×	×	×	✓

✓ = Support; × = Not support

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Bluetooth Antenna Model : -

Ant0 Gain (dBi)	Ant1 Gain (dBi)	Note
-0.23	-	2 402 to 2 480 MHz

WiFi Antenna Model : APDR-600WT (ANT0), APDR-600WS (ANT1),

Ant0 Gain (dBi)	Ant1 Gain (dBi)	Note
-	-3.6	2 412 to 2 472 MHz
0.7	-0.4	5 180 to 5 240 MHz
1.7	-0.4	5 260 to 5 320 MHz
-0.6	-1.2	5 500 to 5 700 MHz
0.5	-1.6	5 745 to 5 825 MHz

1.9. Measurement results explanation example

For all conducted test items :

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 1.78 + 10 = 11.78 \text{ (dB)}\end{aligned}$$

1.10. Measurement Uncertainty

Test Item		Uncertainty
Uncertainty for Conduction emission test		2.46 dB
Uncertainty for Radiation emission test (include Fundamental emission)	Below 1GHz	4.40 dB
	Above 1GHz	5.94 dB
Note. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

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2. Summary of tests

Reference	Parameter	Test results
15.407(a)	26 dB bandwidth & 99 % Occupied Bandwidth	Pass
15.407(a)	Maximum conducted output power	Pass
15.407(a)	Power spectral density	Pass
15.407(g)	Frequency stability	Pass
15.205 15.209	Radiated restricted band and emission	Pass
15.407(d)	General field strength limit (Restricted bands and radiated emission limit)	Pass
15.207	AC power line conducted emissions	Pass

Note :

- 1) Please Refer to the approved Module Report (Report No.: FR232843AN, FR232843AI) for result of existing test items.

The output power setting is same as original module and confirmed that RF conducted tests of original report remain valid for this filing.

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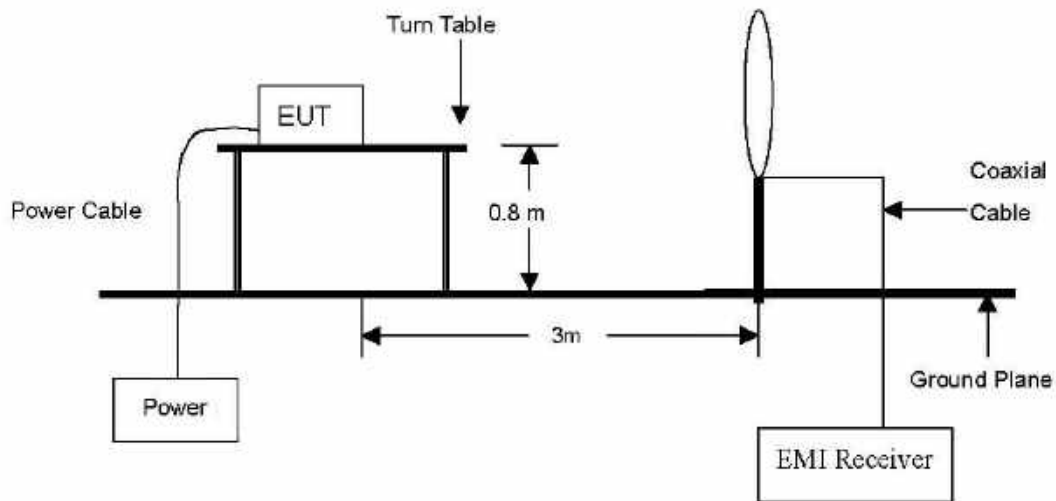
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3. Test results

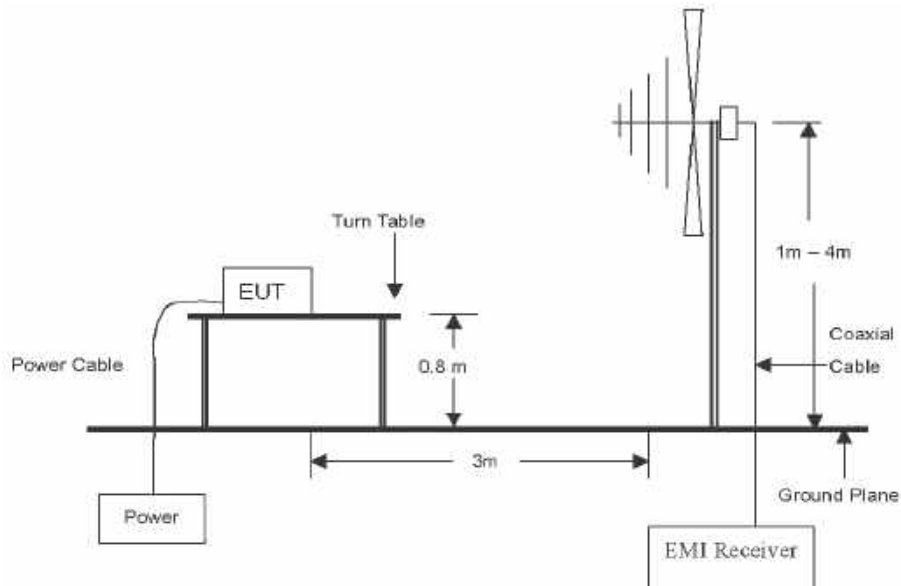
3.1. Radiated restricted band and emissions

Test setup

The diagram below shows the test setup that is utilized to make the measurements for emission from 9 kHz to 30 MHz Emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 MHz to 1 GHz emissions.

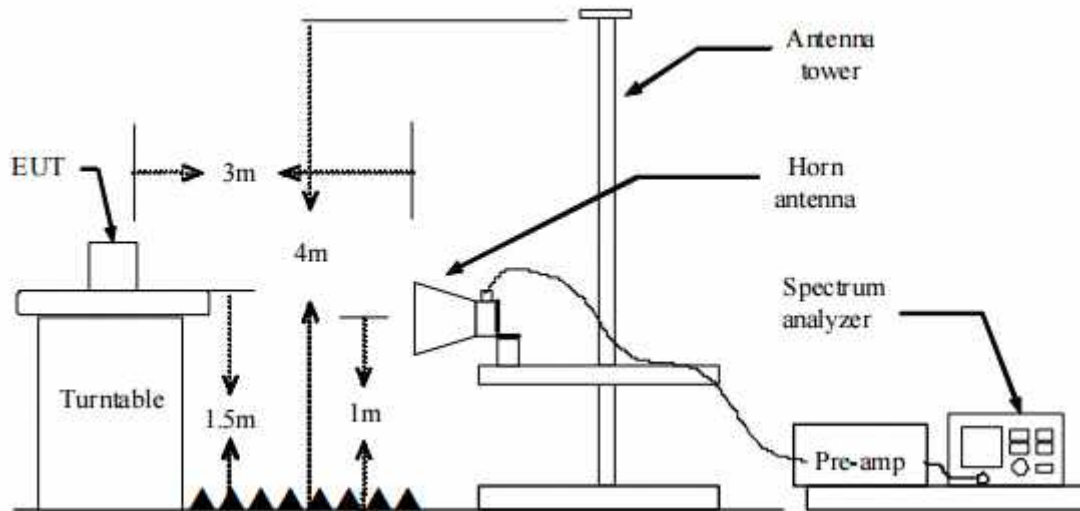


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The diagram below shows the test setup that is utilized to make the measurements for emission from 1 GHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz emissions, whichever is lower.



Test procedure below 30 MHz

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
2. Then antenna is a loop antenna is fixed at one meter above the ground to determine the maximum value of the field strength. Both parallel and perpendicular of the antenna are set to make the measurement.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization and Parallel to the ground plane in detecting antenna.
4. For each suspected emission, the EUT was arranged to its worst case and then the table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to average or quasi peak detect function and Specified Bandwidth with Maximum hold mode.

Test procedure above 30 MHz

1. Spectrum analyzer settings for $f < 1$ GHz:
 - ① Span = wide enough to fully capture the emission being measured
 - ② RBW = 120 kHz
 - ③ VBW $\geq$ RBW
 - ④ Detector = quasi peak
 - ⑤ Sweep time = auto
 - ⑥ Trace = max hold
2. Spectrum analyzer settings for $f \geq 1$ GHz: Peak
 - ① Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
 - ② RBW = 1 MHz
 - ③ VBW = 3 MHz ($\geq 3 \times$ RBW)
 - ④ Detector = peak
 - ⑤ Sweep time = auto
 - ⑥ Trace = max hold
 - ⑦ Trace was allowed to stabilize

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3. Spectrum analyzer settings for $f \geq 1$ GHz: Average

- ① Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- ② RBW = 1 MHz
- ③ VBW $\geq 3 \times$ RBW
- ④ Detector = RMS, if span/(# of points in sweep) $\leq$ (RBW/2). Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.
- ⑤ Averaging type = power(i.e., RMS)
 - 1) As an alternative, the detector and averaging type may be set for linear voltage averaging.
 - 2) Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.
- ⑥ Sweep = auto
- ⑦ Trace = max hold
- ⑧ Perform a trace average of at least 100 traces.
- ⑨ A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:
 - 1) If power averaging (RMS) mode was used in step ⑤, then the applicable correction factor is $10 \log(1/x)$, where x is the duty cycle.
 - 2) If linear voltage averaging mode was used in step ⑤, then the applicable correction factor is $20 \log(1/x)$, where x is the duty cycle.
 - 3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

Note.

1. $f < 30$ MHz, extrapolation factor of 40 dB/decade of distance. $F_d = 40 \log(D_m/D_s)$
 $f \geq 30$ MHz, extrapolation factor of 20 dB/decade of distance. $F_d = 20 \log(D_m/D_s)$
 Where:
 F_d = Distance factor in dB
 D_m = Measurement distance in meters
 D_s = Specification distance in meters
2. CF(Correction factors(dB)) = Antenna factor(dB/m) + Cable loss(dB) + or Amp. gain(dB) + or F_d (dB)
4. Field strength(dBμV/m) = Level(dBμV) + CF (dB) + or DCF(dB)
5. Margin(dB) = Limit(dBμV/m) - Field strength(dBμV/m)
6. Emissions below 18 GHz were measured at a 3 meter test distance while emissions above 18 GHz were measured at a 1 meter test distance with the application of a distance correction factor.
7. The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z, it was determined that **X orientation** was worst-case orientation; therefore, all final radiated testing was performed with the EUT in **X orientation**.
8. The worst-case emissions are reported however emissions whose levels were not within 20 dB of respective limits were not reported.
9. According to exploratory test no any obvious emission were detected from 9 kHz to 30 MHz. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30 m open field 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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Limit

According to 15.209(a), for an intentional radiator devices, the general required of field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values :

Frequency (MHz)	Distance (Meters)	Radiated ($\mu V/m$)
0.009 ~ 0.490	300	2400/F(kHz)
0.490 ~ 1.705	30	24000/F(kHz)
1.705 ~ 30.0	30	30
30 ~ 88	3	100**
88 ~ 216	3	150**
216 ~ 960	3	200**
Above 960	3	500

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54 ~ 72 MHz, 76 ~ 88 MHz, 174 ~ 216 MHz or 470 ~ 806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

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According to 15.407(b), (b) Undesirable emission limits: Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25–5.35 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47–5.725 GHz band: All emissions outside of the 5.47–5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725–5.85 GHz band:
 - i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
 - ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.
- (5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
- (6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in § 15.207.
- (7) The provisions of §15.205 apply to intentional radiators operating under this section.
- (8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

Duty cycle

Regarding to KDB 789033 D02 v02r01, B)2)b), the maximum duty cycles of all modes were investigated and set the spectrum analyzer as below.

Set $RBW \geq OBW$ if possible; otherwise, set RBW to the largest available value. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$, where T is defined in II.B.1.a), and the number of sweep points across duration T exceeds 100.

Antenna port 1

For the band 5.15-5.25 GHz

Test mode	T _{on} time (ms)	Period (ms)	Duty cycle (Linear)	Duty cycle (%)	Duty cycle correction factor (dB)
802.11a	10	10	1	100	0.00
802.11n_HT20	10	10	1	100	0.00
802.11n_HT40	10	10	1	100	0.00

For the band 5.25-5.35 GHz

Test mode	T _{on} time (ms)	Period (ms)	Duty cycle (Linear)	Duty cycle (%)	Duty cycle correction factor (dB)
802.11a	10	10	1	100	0.00
802.11n_HT20	10	10	1	100	0.00
802.11n_HT40	10	10	1	100	0.00

For the band 5.47-5.65 GHz

Test mode	T _{on} time (ms)	Period (ms)	Duty cycle (Linear)	Duty cycle (%)	Duty cycle correction factor (dB)
802.11a	10	10	1	100	0.00
802.11n_HT20	10	10	1	100	0.00
802.11n_HT40	10	10	1	100	0.00

For the band 5.725-5.85 GHz

Test mode	T _{on} time (ms)	Period (ms)	Duty cycle (Linear)	Duty cycle (%)	Duty cycle correction factor (dB)
802.11a	10	10	1	100	0.00
802.11n_HT20	10	10	1	100	0.00
802.11n_HT40	10	10	1	100	0.00

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Antenna port 2

For the band 5.15-5.25 GHz

Test mode	T _{on} time (ms)	Period (ms)	Duty cycle (Linear)	Duty cycle (%)	Duty cycle correction factor (dB)
802.11n_HT20	10	10	1	100	0.00
802.11n_HT40	10	10	1	100	0.00

For the band 5.25-5.35 GHz

Test mode	T _{on} time (ms)	Period (ms)	Duty cycle (Linear)	Duty cycle (%)	Duty cycle correction factor (dB)
802.11n_HT20	10	10	1	100	0.00
802.11n_HT40	10	10	1	100	0.00

For the band 5.47-5.65 GHz

Test mode	T _{on} time (ms)	Period (ms)	Duty cycle (Linear)	Duty cycle (%)	Duty cycle correction factor (dB)
802.11n_HT20	10	10	1	100	0.00
802.11n_HT40	10	10	1	100	0.00

For the band 5.725-5.85 GHz

Test mode	T _{on} time (ms)	Period (ms)	Duty cycle (Linear)	Duty cycle (%)	Duty cycle correction factor (dB)
802.11n_HT20	10	10	1	100	0.00
802.11n_HT40	10	10	1	100	0.00

Note:

Duty cycle (Linear) = T_{on} time/Period

DCF(Duty cycle correction factor (dB)) = 10log(1/duty cycle)

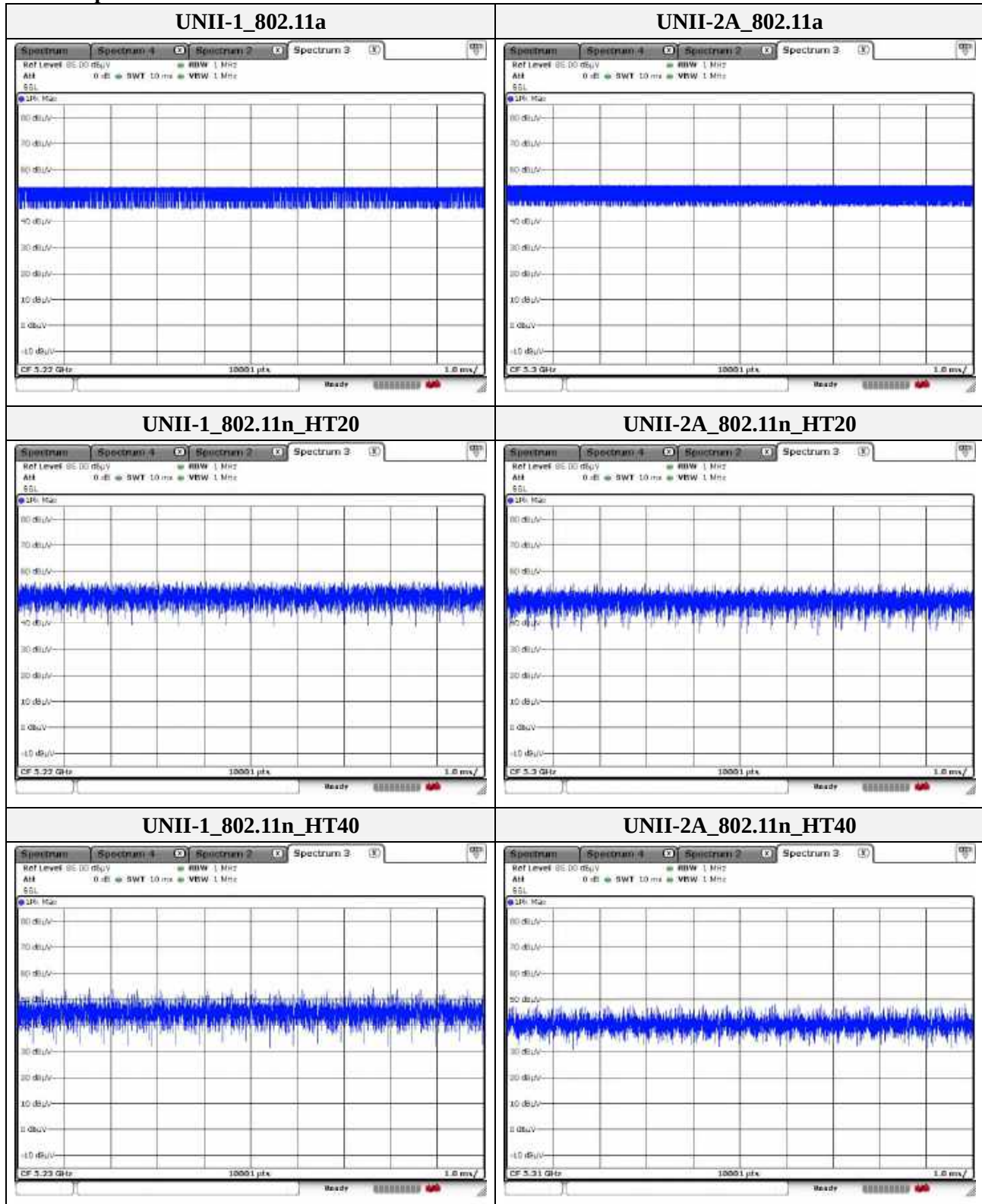
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Test plots

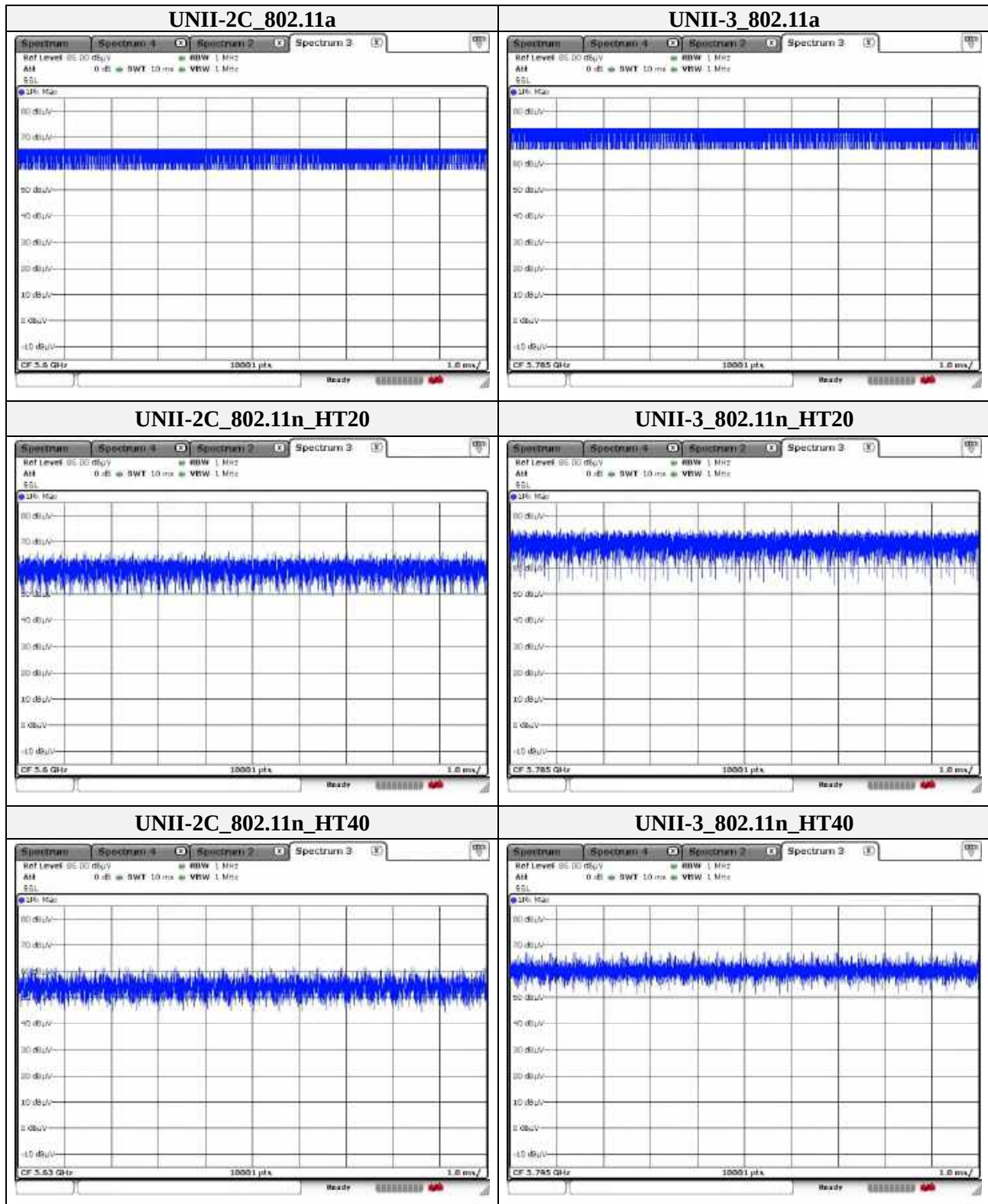
Antenna port 0



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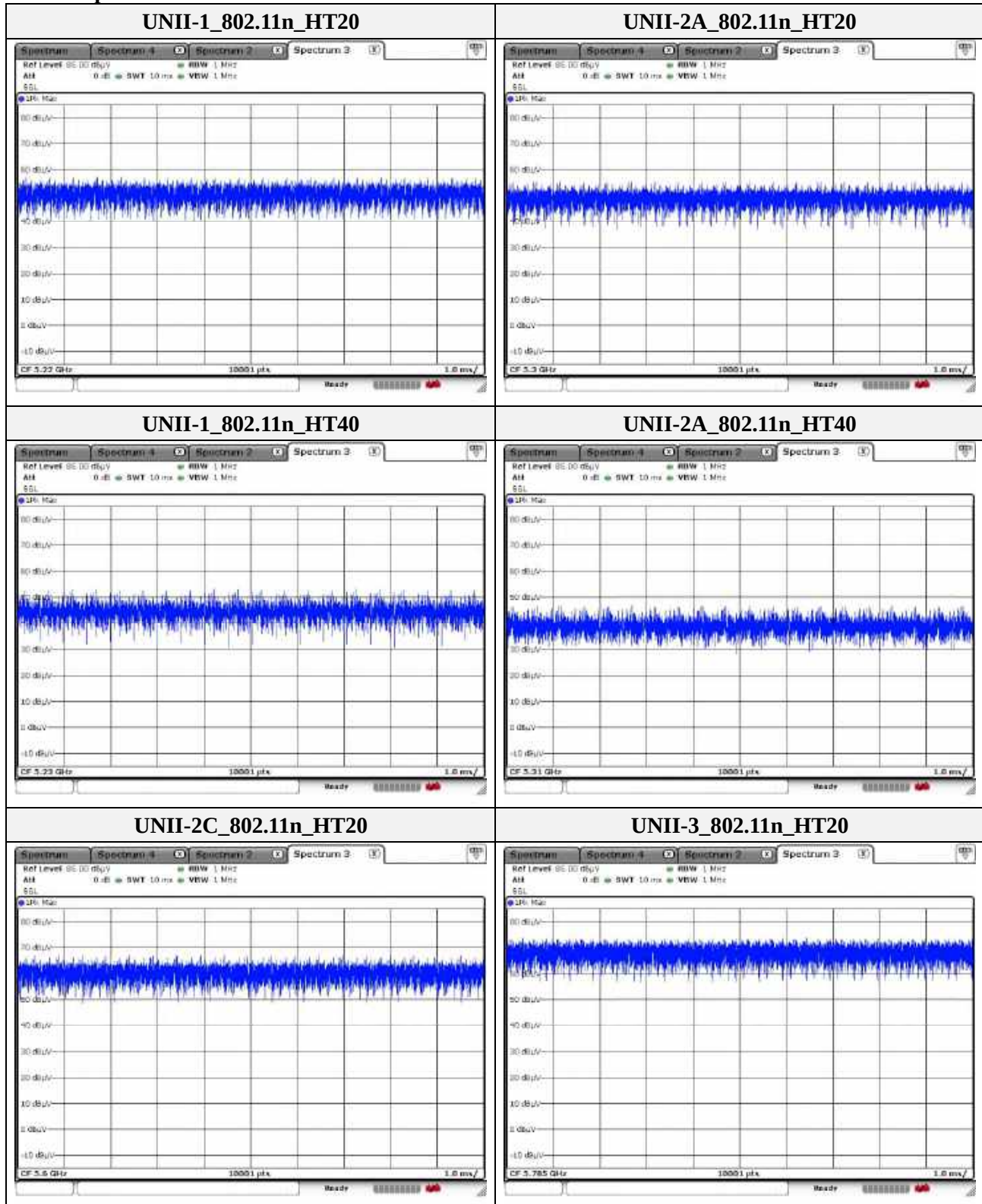
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Test plots

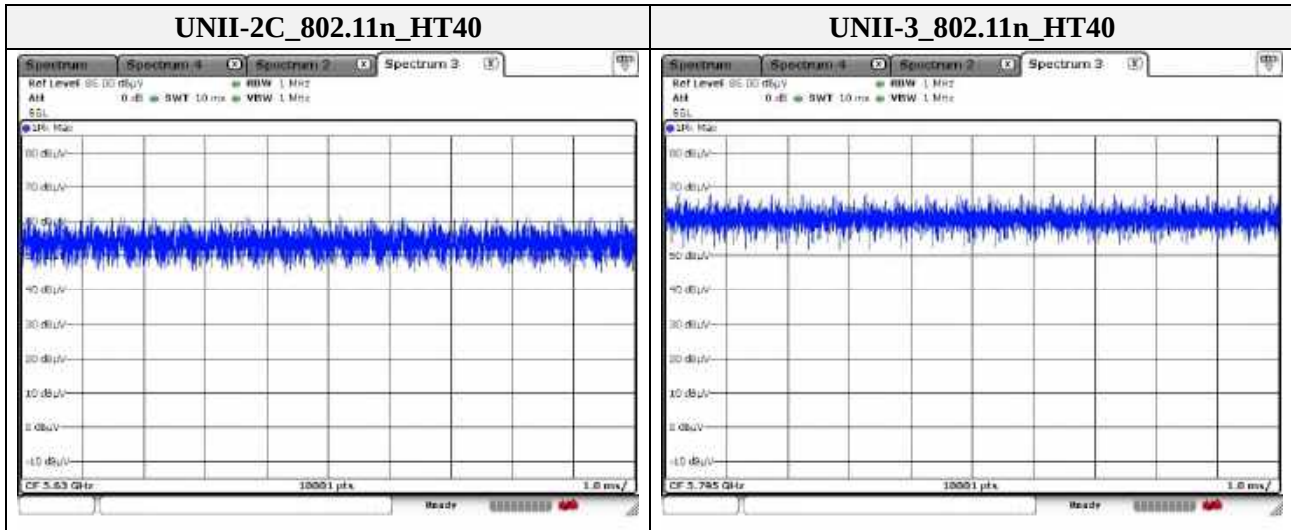
Antenna port 1



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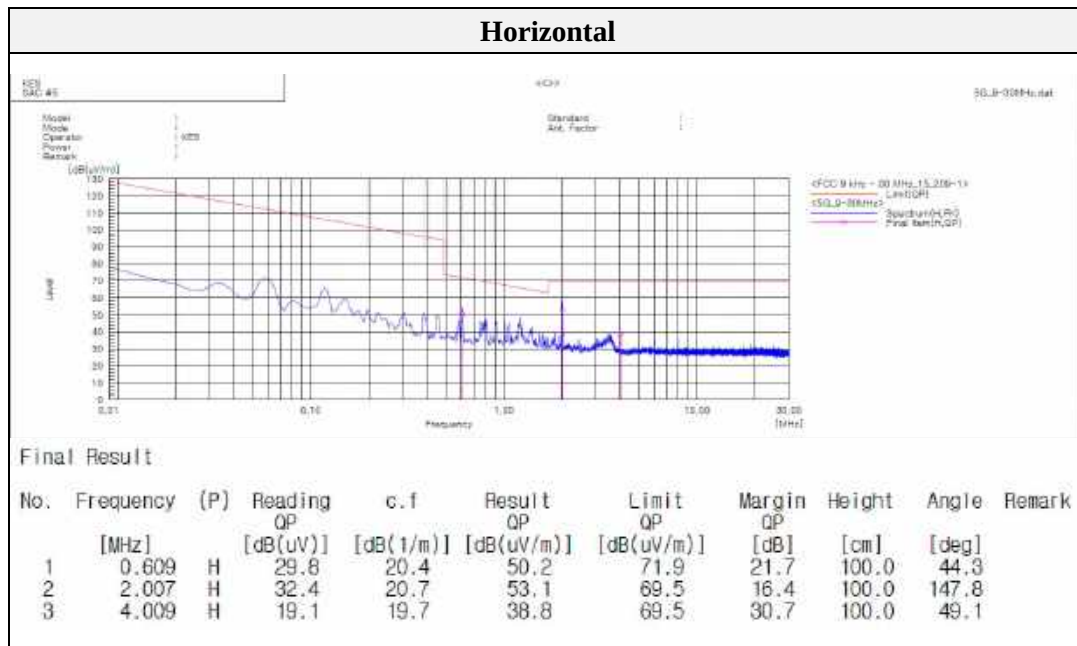
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Test results (Below 30 MHz) – Worst case

Mode: 802.11a
 Distance of measurement: 3 meter
 Channel: 52 (Worst case)



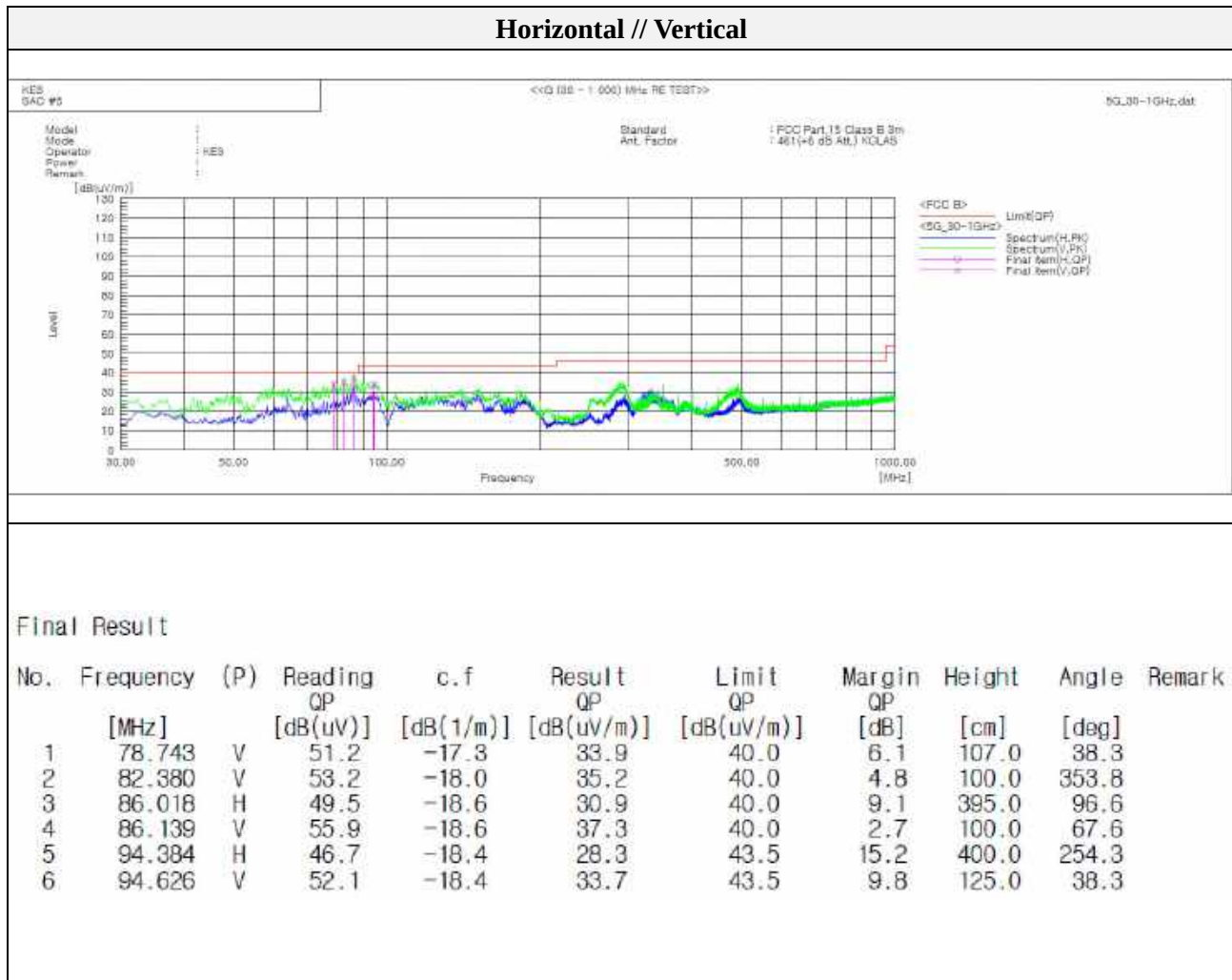
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Test results (Below 1 000 MHz) – Worst case

Mode: 802.11a
Distance of measurement: 3 meter
Channel: 52 (Worst case)



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Test results (Above 1 000 MHz)

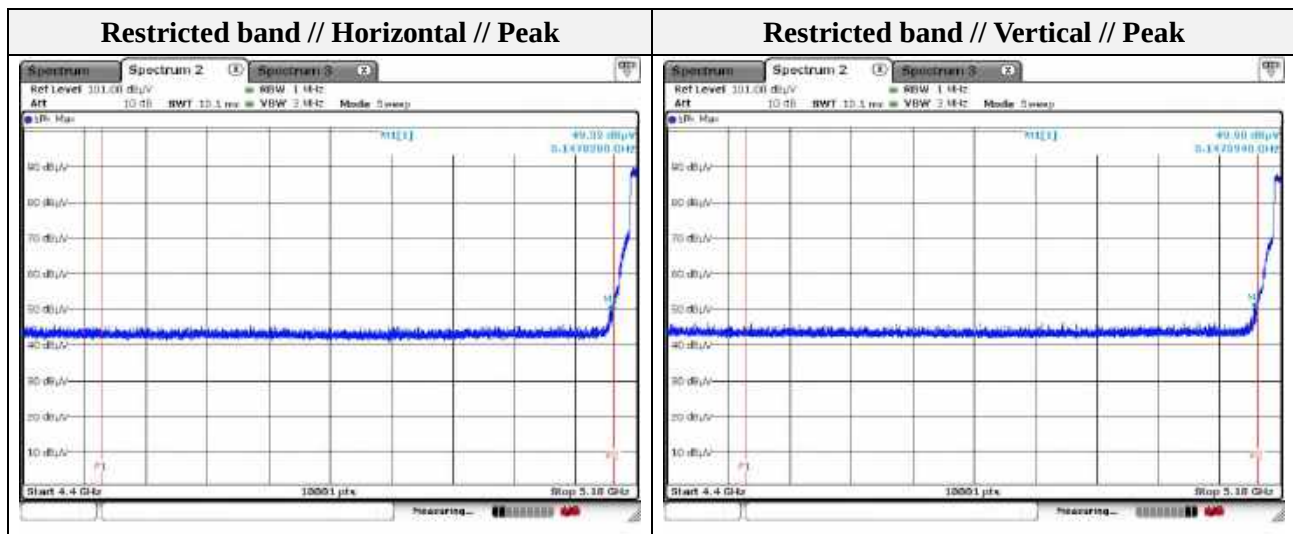
Mode: UNII-1 802.11a
 Distance of measurement: 3 meter
 Channel: 36

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1046.75	47.73	Peak	H	-11.31	-	36.42	74.00	37.58
1021.25	48.55	Peak	V	-11.31	-	37.24	74.00	36.76

- Band edge

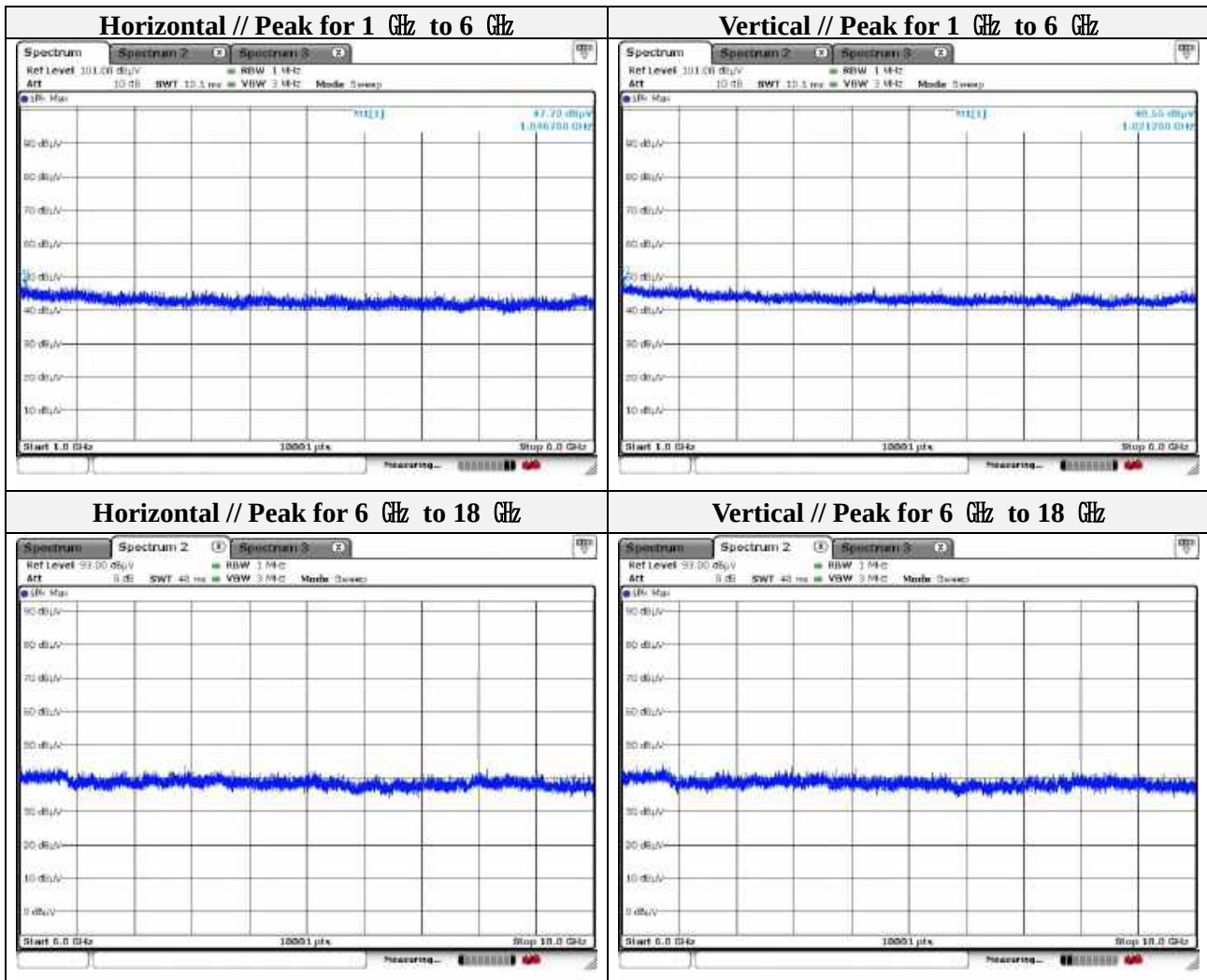
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5147.83	49.32	Peak	H	4.05	-	53.37	74.00	20.63
5147.59	49.90	Peak	V	4.05	-	53.95	74.00	20.05



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Note.

1. No spurious emission were detected above 6 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

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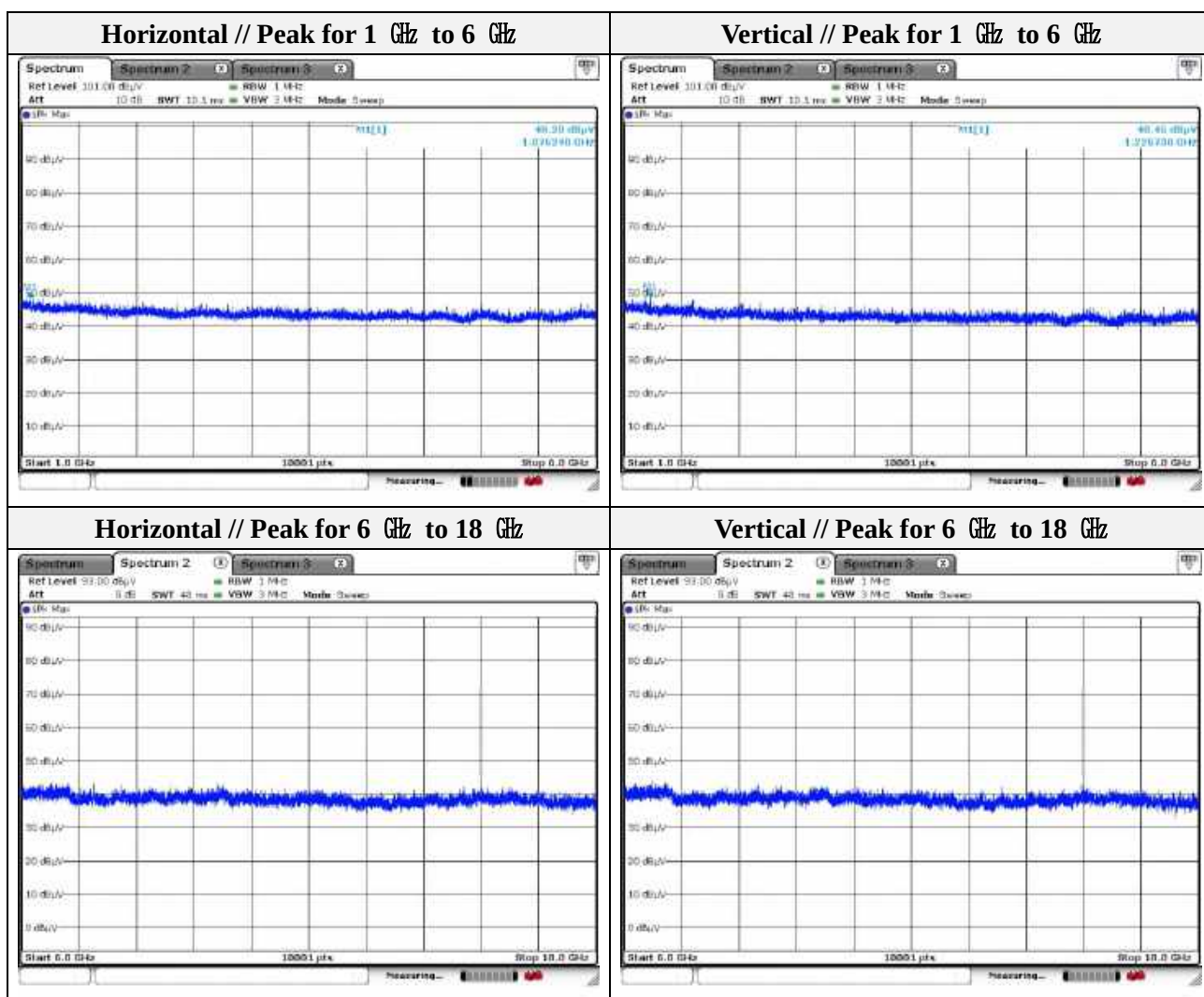
Mode: UNII-1 802.11a

Distance of measurement: 3 meter

Channel: 44

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1076.24	48.20	Peak	H	-11.29	-	36.91	74.00	37.09
1226.73	48.45	Peak	V	-11.24	-	37.21	74.00	36.79



Note.

1. No spurious emission were detected above 6 GHz.

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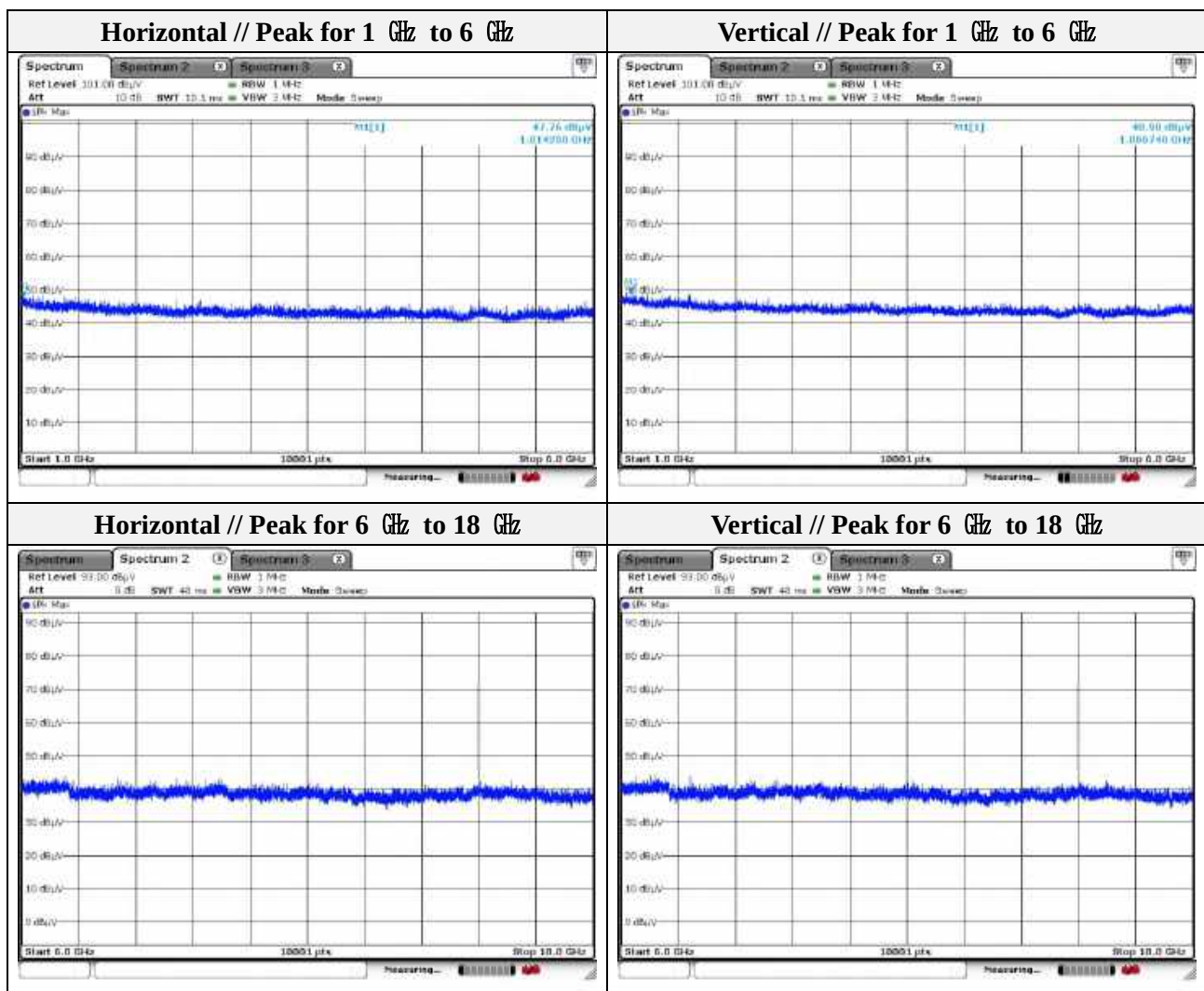
Mode: UNII-1 802.11a

Distance of measurement: 3 meter

Channel: 48

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1014.25	47.76	Peak	H	-11.32	-	36.44	74.00	37.56
1086.74	48.90	Peak	V	-11.29	-	37.61	74.00	36.39



Note.

1. No spurious emission were detected above 6 GHz.

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Mode: UNII-1 802.11n_HT20

Distance of measurement: 3 meter

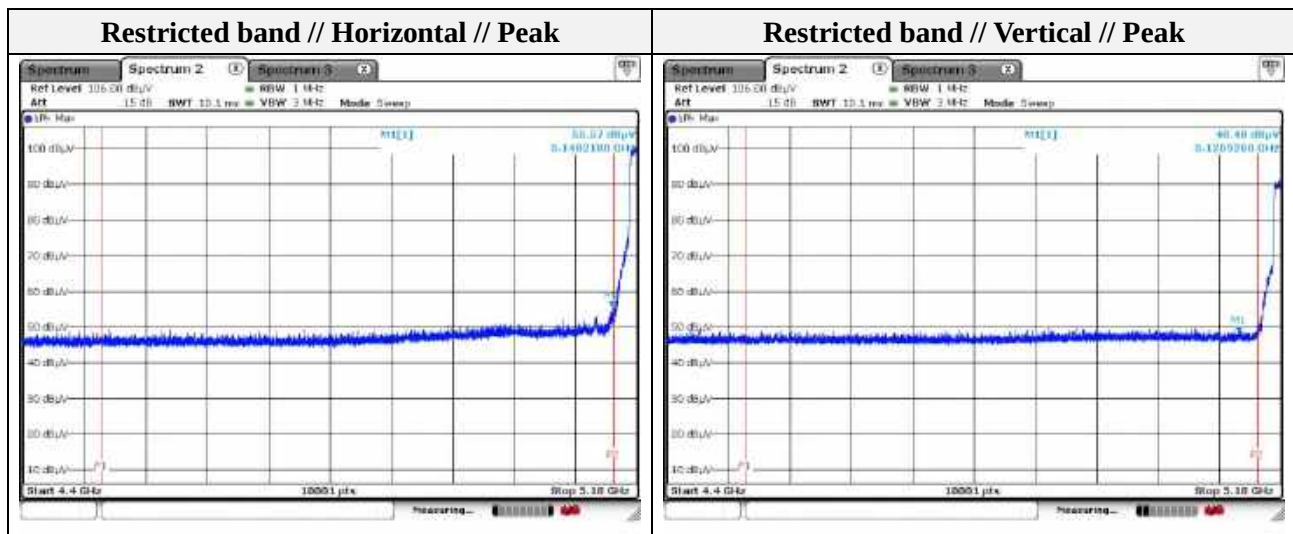
Channel: 36

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1106.74	47.53	Peak	H	-11.29	-	36.24	74.00	37.76
1603.19	47.47	Peak	V	-7.47	-	40.00	74.00	34.00

- **Band edge**

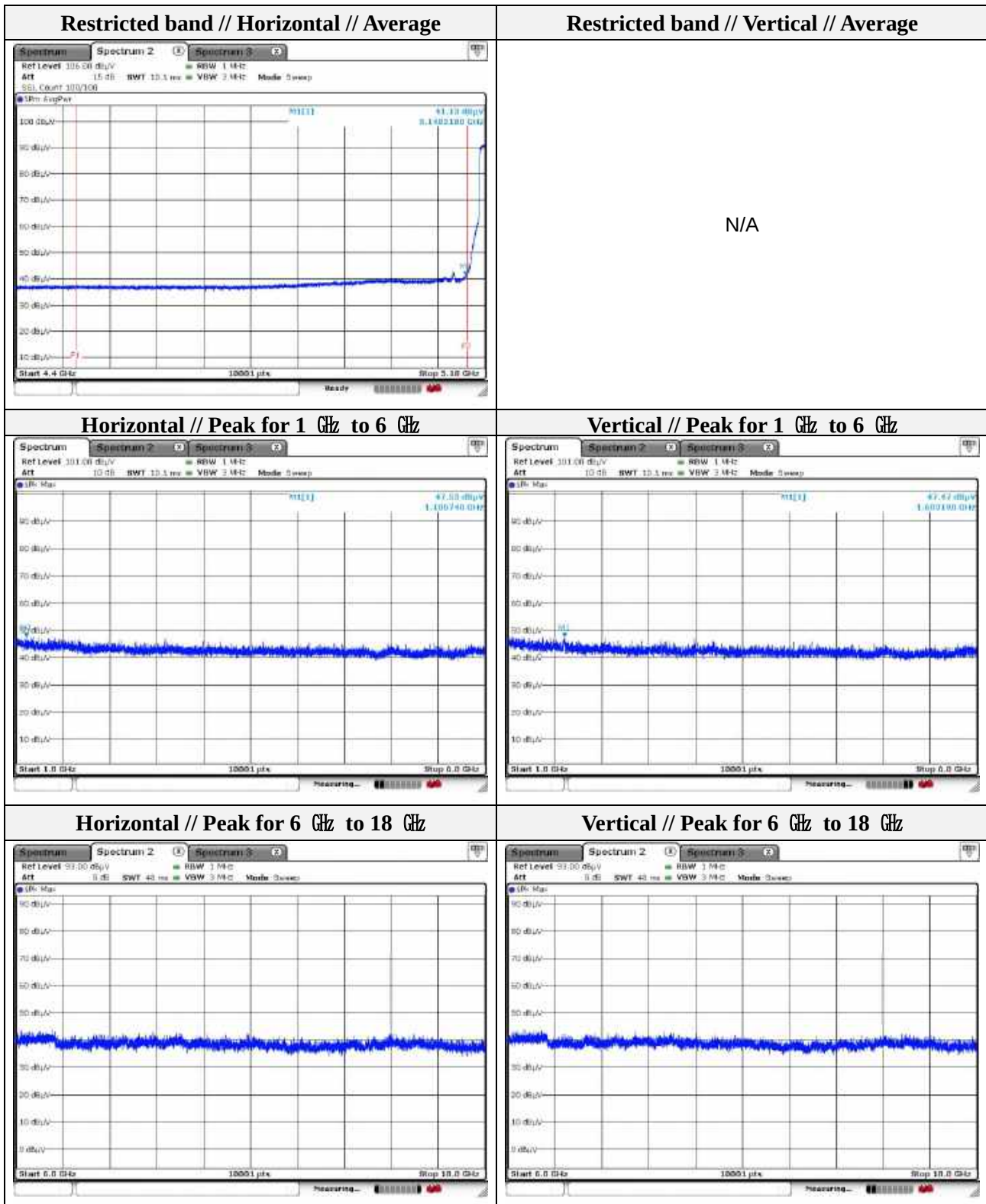
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5148.22	55.57	Peak	H	4.05	-	59.62	74.00	14.38
5148.22	41.13	Average	H	4.05	-	45.18	54.00	8.82
5126.93	48.48	Peak	V	4.18	-	52.66	74.00	21.34



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Note.

1. No spurious emission were detected above 6 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

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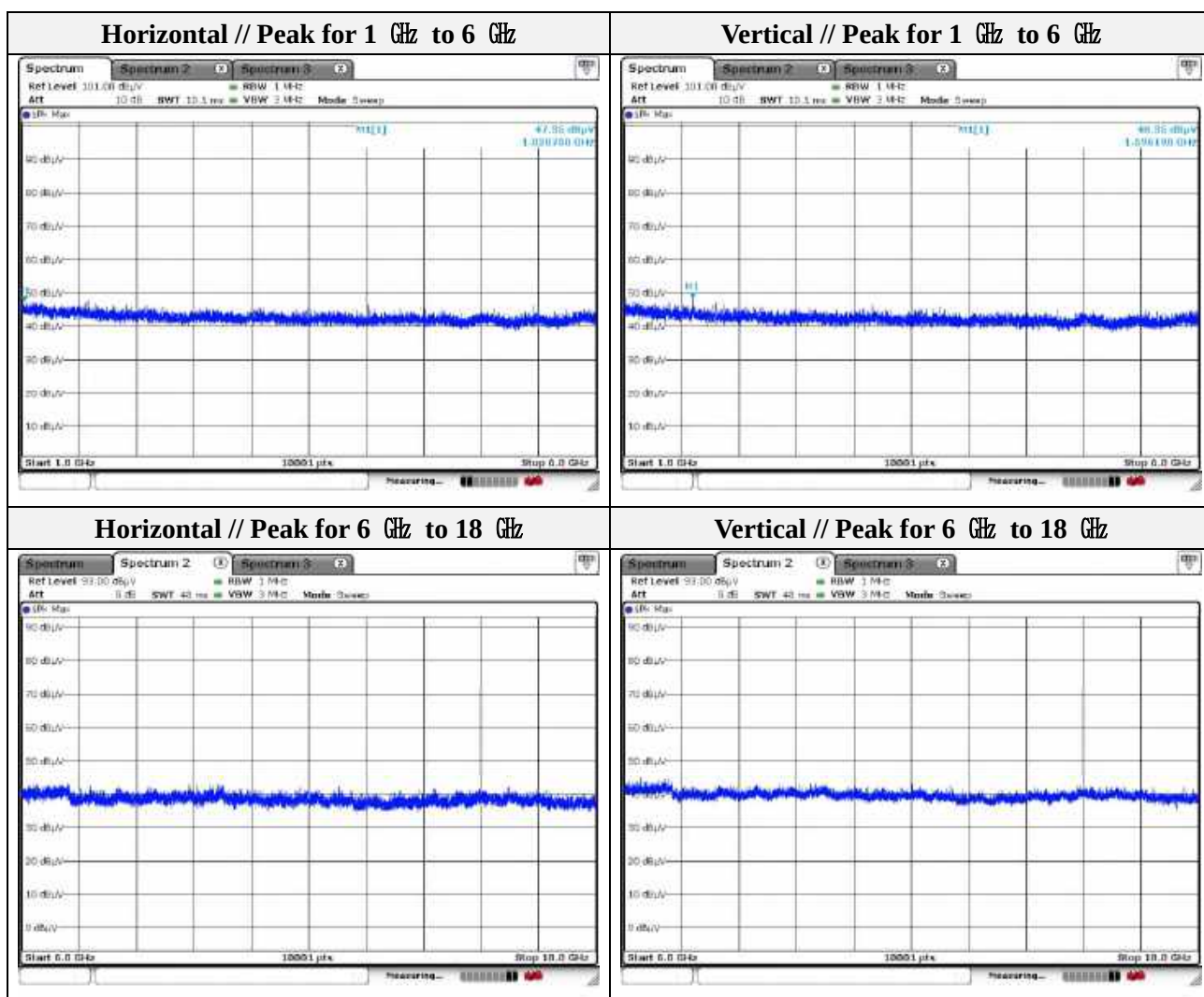
Mode: UNII-1 802.11n_HT20

Distance of measurement: 3 meter

Channel: 44

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1020.75	47.35	Peak	H	-11.31	-	36.04	74.00	37.96
1596.19	48.35	Peak	V	-7.58	-	40.77	74.00	33.23



Note.

1. No spurious emission were detected above 6 GHz.

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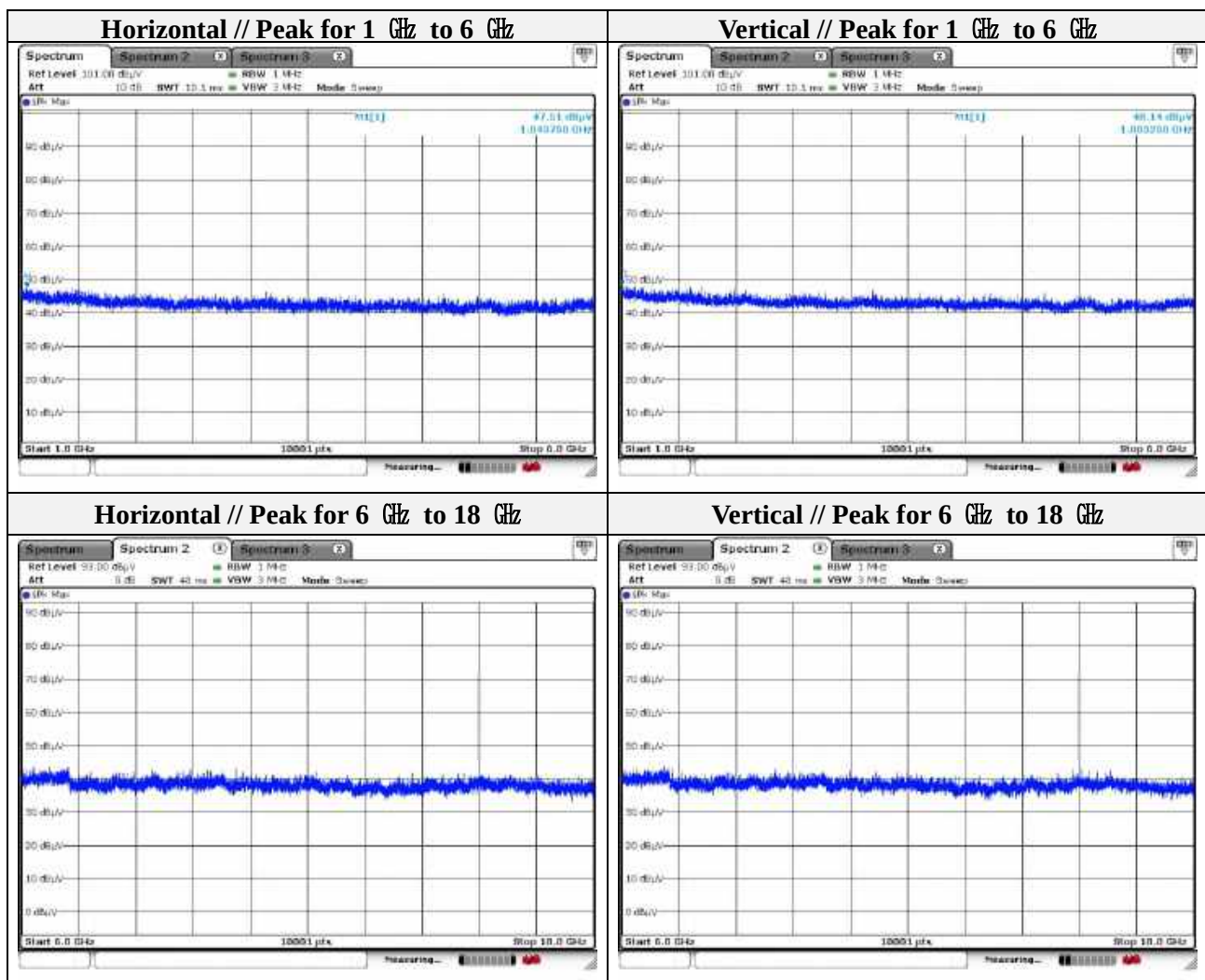
Mode: UNII-1 802.11n_HT20

Distance of measurement: 3 meter

Channel: 48

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1043.75	47.51	Peak	H	-11.30	-	36.21	74.00	37.79
1003.25	48.14	Peak	V	-11.32	-	36.82	74.00	37.18



Note.

1. No spurious emission were detected above 6 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

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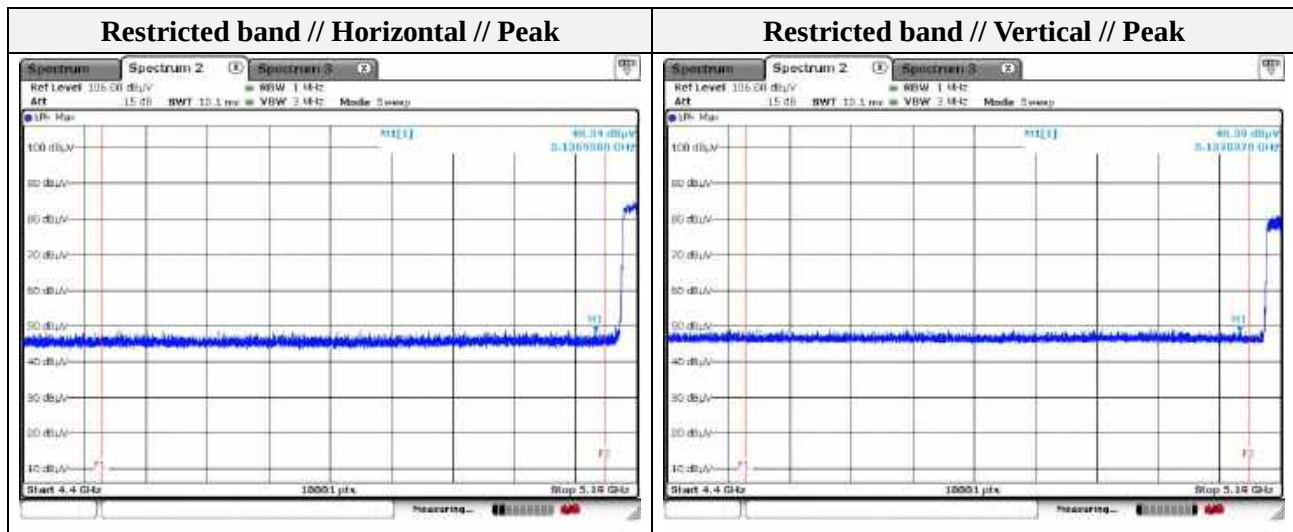
Mode: UNII-1 802.11n_HT40
 Distance of measurement: 3 meter
 Channel: 38

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1062.74	46.89	Peak	H	-11.30	-	35.59	74.00	38.41
1117.74	48.52	Peak	V	-11.28		37.24	74.00	36.76

- **Band edge**

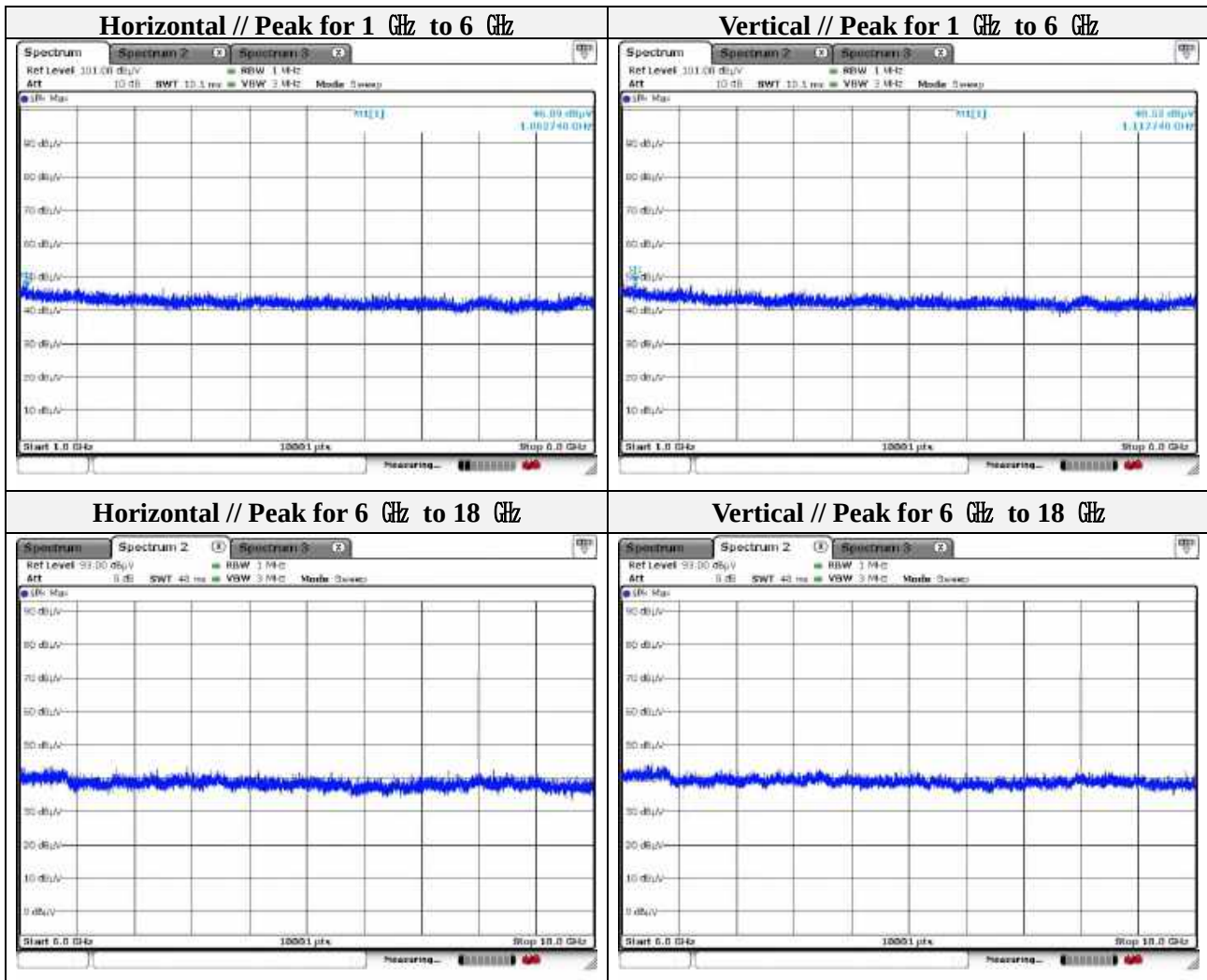
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5136.96	48.34	Peak	H	4.12	-	52.46	74.00	21.54
5137.04	48.39	Peak	V	4.12	-	52.51	74.00	21.49



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Note.

1. No spurious emission were detected above 6 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

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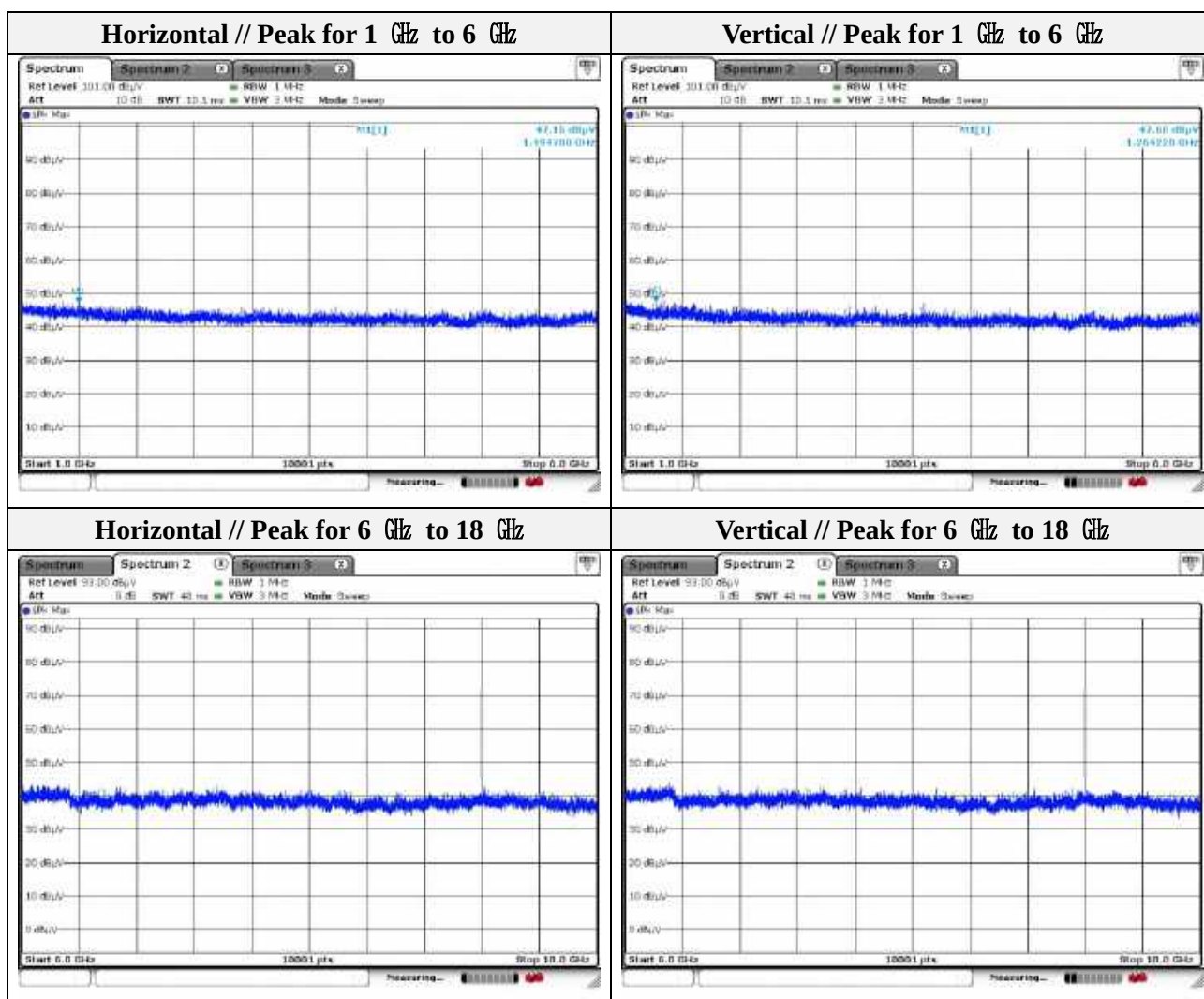
Mode: UNII-1 802.11n_HT40

Distance of measurement: 3 meter

Channel: 46

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1494.70	47.15	Peak	H	-11.13	-	36.02	74.00	37.98
1264.22	47.60	Peak	V	-11.23	-	36.37	68.30	31.93



Note.

1. No spurious emission were detected above 6 GHz.

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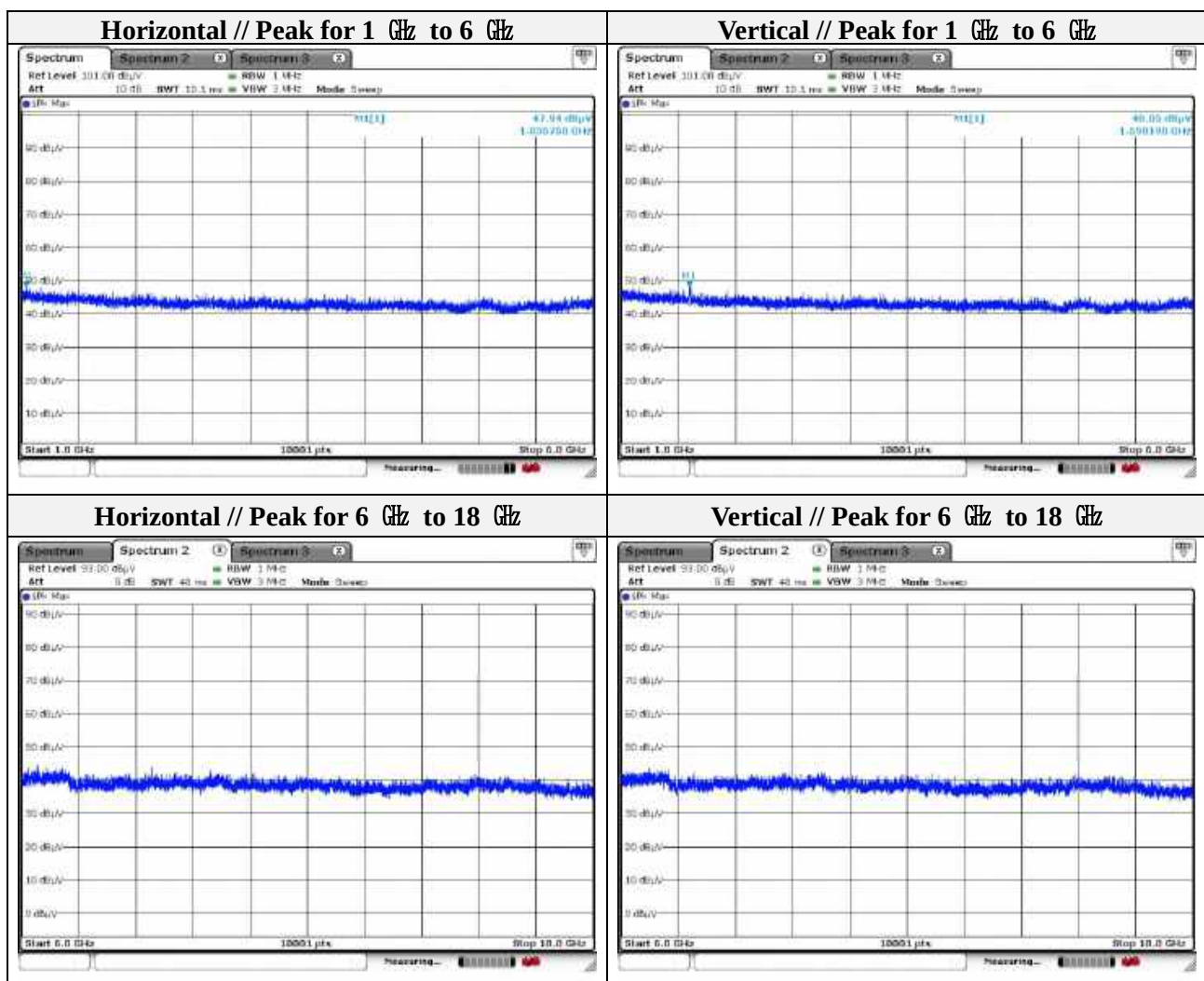
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Mode: UNII-2A 802.11a
Distance of measurement: 3 meter
Channel: 52

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1035.75	47.94	Peak	H	-11.31	-	36.63	74.00	37.37
1598.19	48.05	Peak	V	-7.55	-	40.50	74.00	33.50



Note.

1. No spurious emission were detected above 6 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

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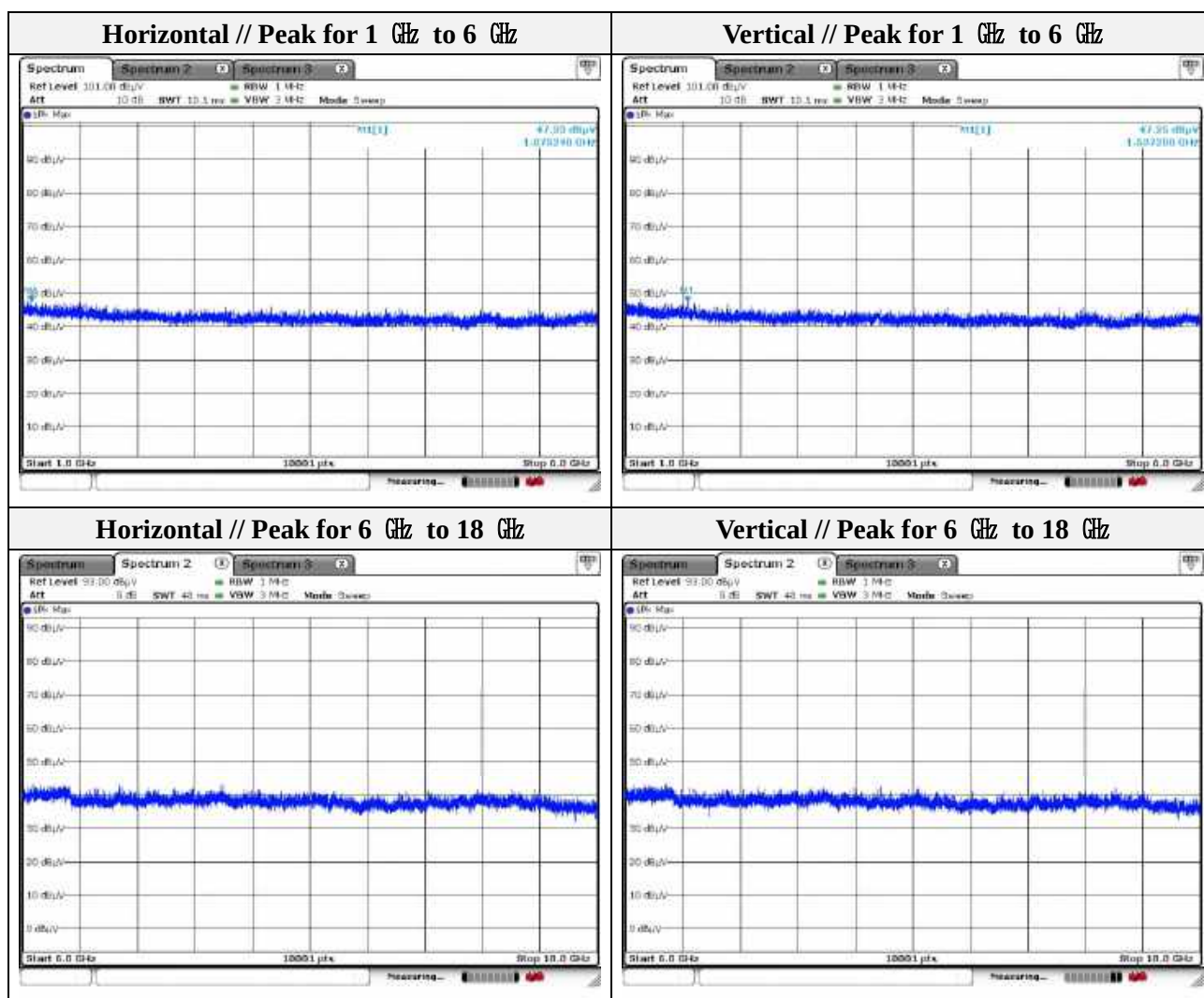
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Mode: UNII-2A 802.11a
Distance of measurement: 3 meter
Channel: 60

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1075.24	47.33	Peak	H	-11.29	-	36.04	74.00	37.96
1537.20	47.25	Peak	V	-8.49	-	38.76	74.00	35.24



Note.

1. No spurious emission were detected above 6 GHz.

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Mode: UNII-2A 802.11a

Distance of measurement: 3 meter

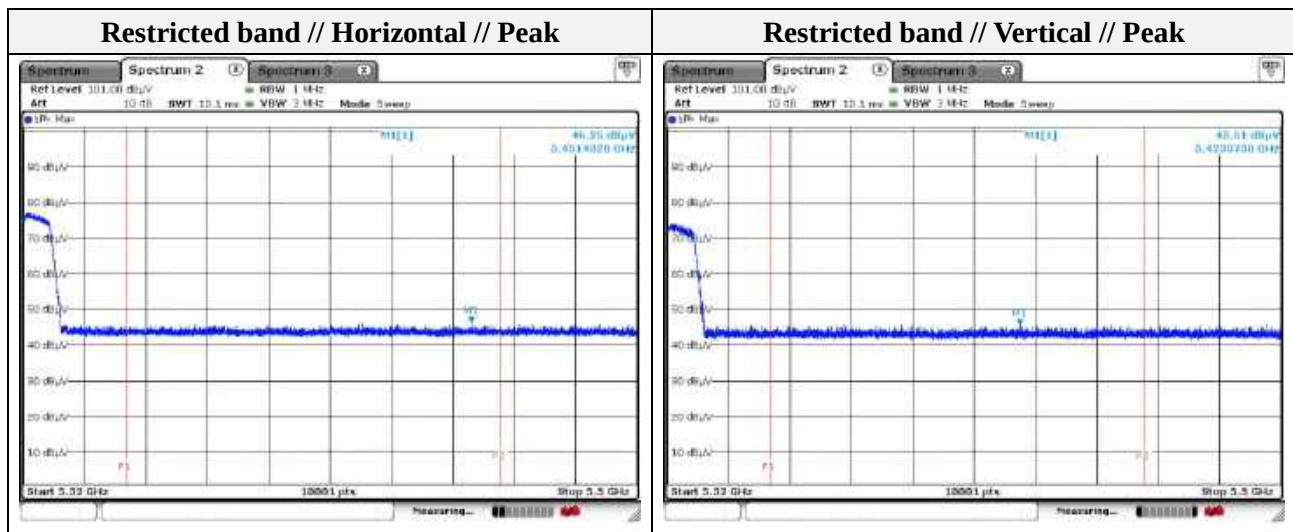
Channel: 64

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1162.23	46.74	Peak	H	-11.26	-	35.48	74.00	38.52
1025.25	47.68	Peak	V	-11.31	-	36.37	74.00	37.63

- **Band edge**

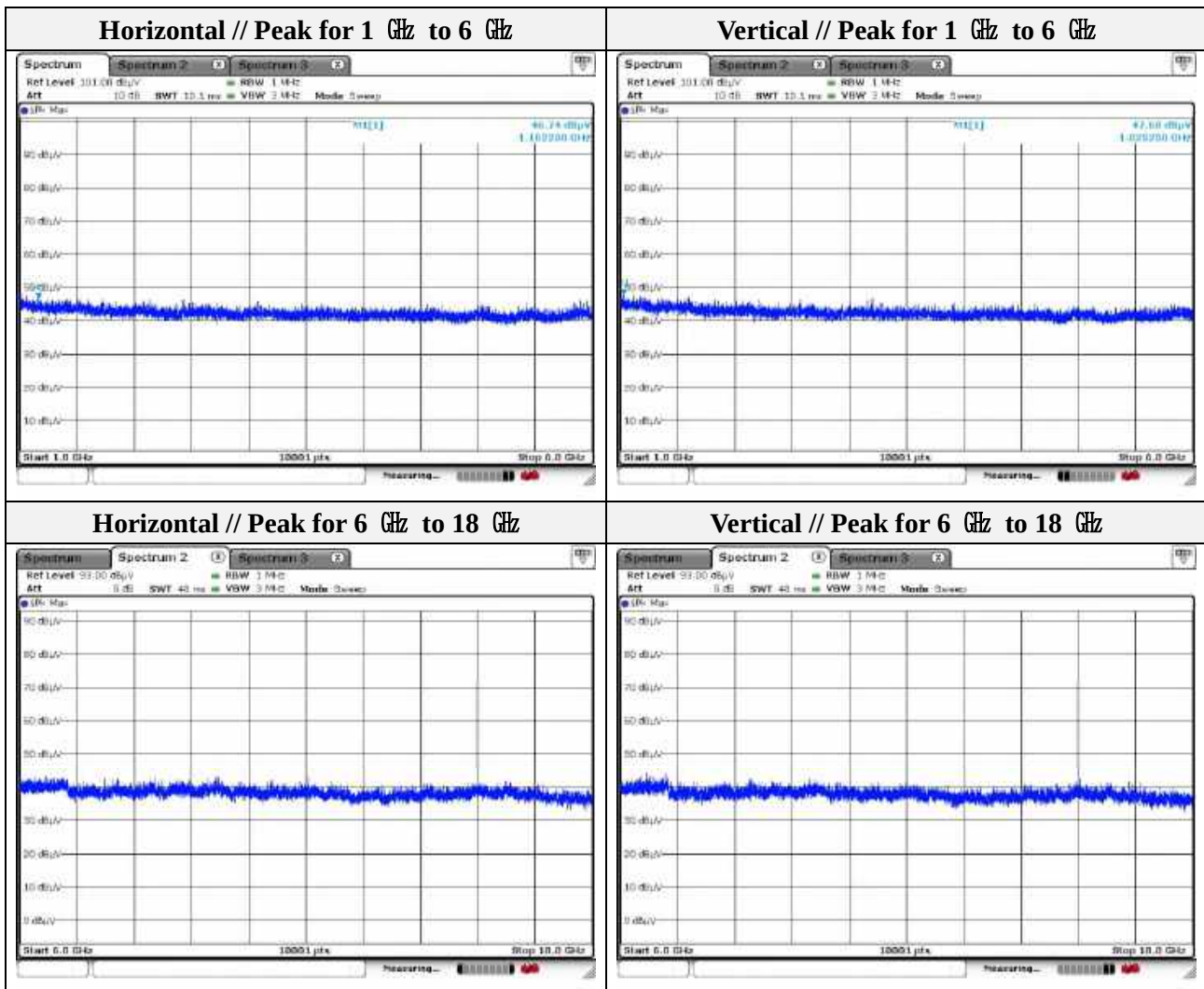
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5451.43	46.25	Peak	H	2.74	-	48.99	74.00	25.01
5423.37	45.51	Peak	V	2.86	-	48.37	74.00	25.63



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Note.

1. No spurious emission were detected above 6 GHz.

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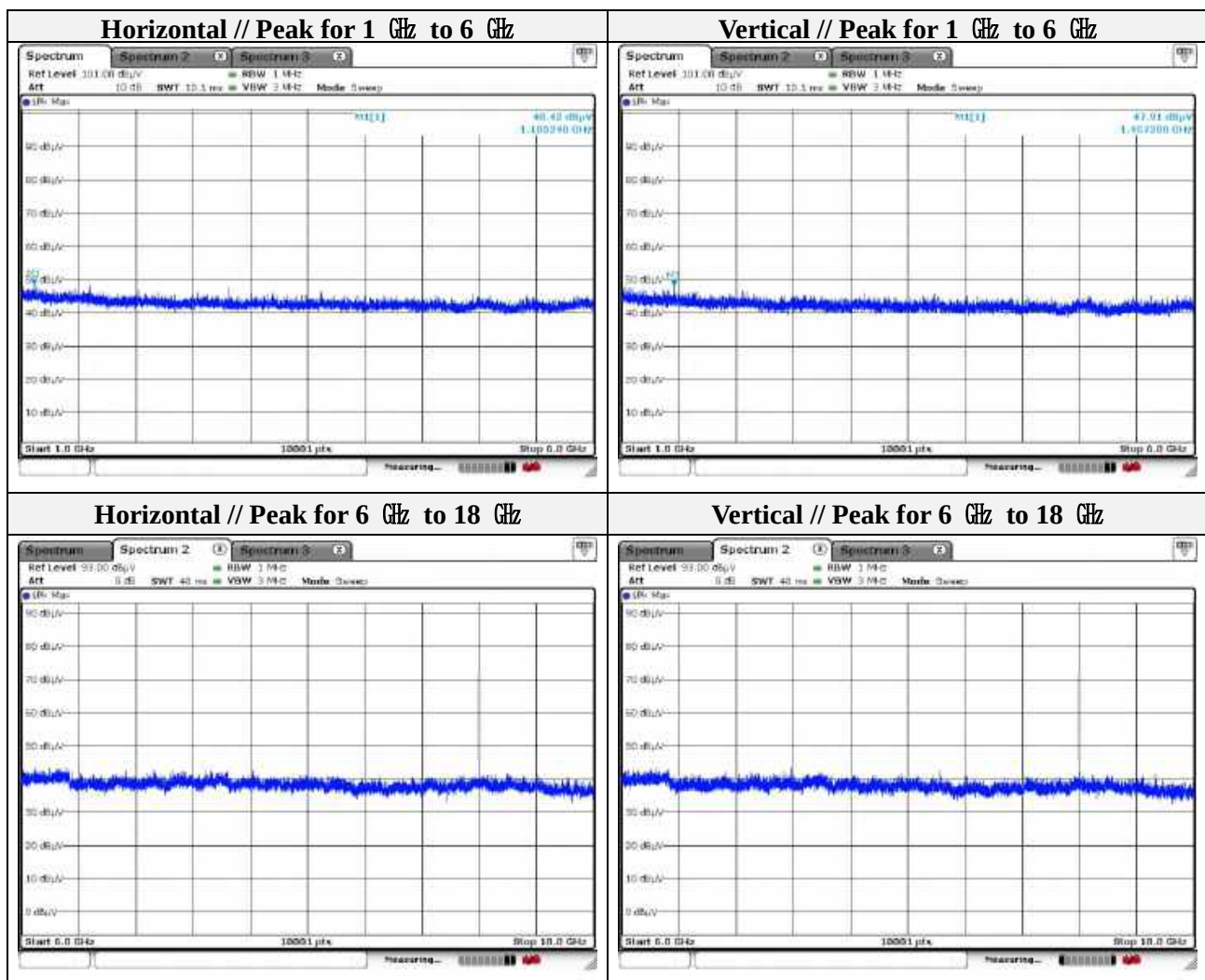
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Mode: UNII-2A 802.11n_HT20
Distance of measurement: 3 meter
Channel: 52

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1105.24	48.42	Peak	H	-11.28	-	37.14	74.00	36.86
1457.20	47.91	Peak	V	-11.14	-	36.77	74.00	37.23



Note.

1. No spurious emission were detected above 6 GHz.
2. Average test would be performed if the peak result were greater than the average limit

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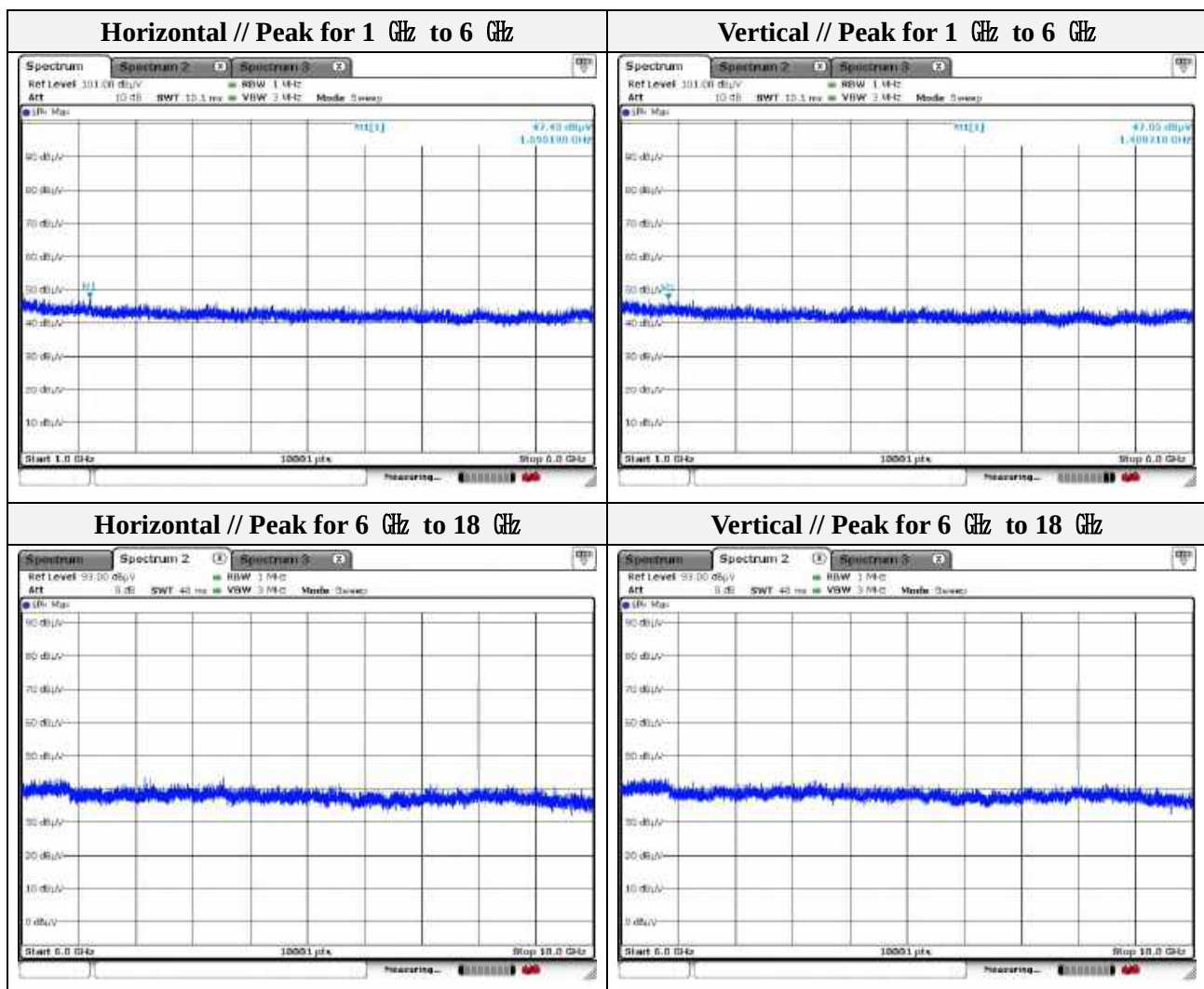
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Mode: UNII-2A 802.11n_HT20
Distance of measurement: 3 meter
Channel: 60

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1595.19	47.43	Peak	H	-7.60	-	39.83	74.00	34.17
1408.71	47.05	Peak	V	-11.17	-	35.88	74.00	38.12



Note.

1. No spurious emission were detected above 6 GHz.

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Mode: UNII-2A 802.11n_HT20

Distance of measurement: 3 meter

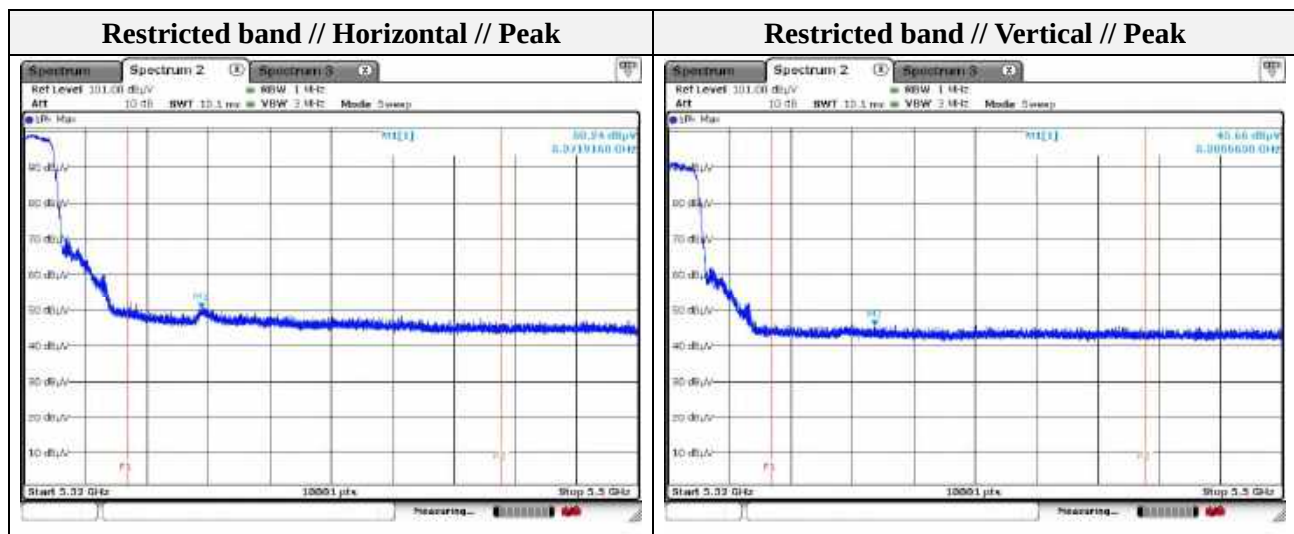
Channel: 64

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1090.24	47.86	Peak	H	-11.29	-	36.57	74.00	37.43
1339.22	47.56	Peak	V	-11.19		36.37	74.00	37.63

- **Band edge**

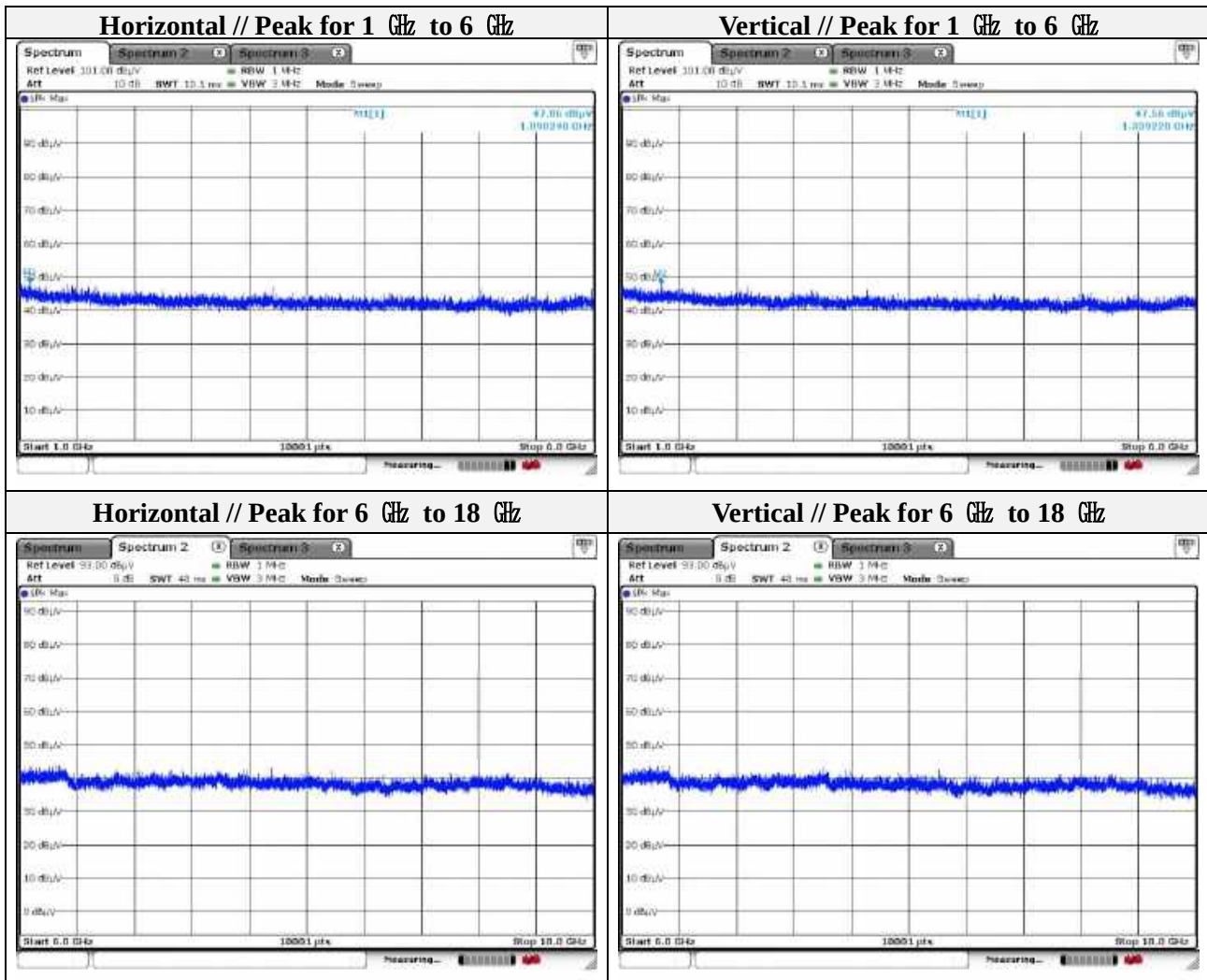
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5371.72	50.24	Peak	H	3.07	-	53.31	74.00	20.69
5380.66	45.66	Peak	V	3.03	-	48.69	74.00	25.31



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Note.

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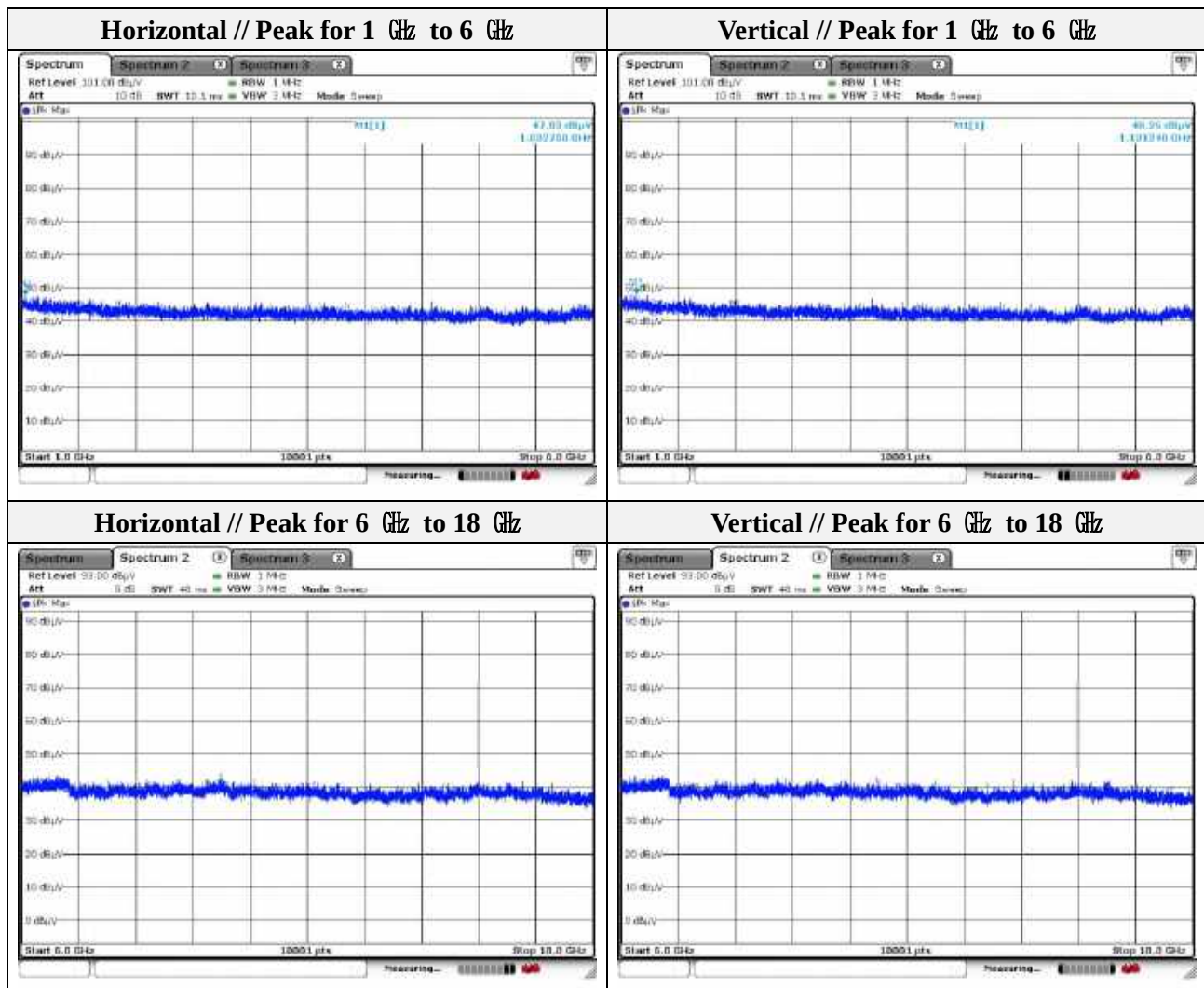
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Mode: UNII-2A 802.11n_HT40
Distance of measurement: 3 meter
Channel: 54

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1032.75	47.83	Peak	H	-11.31	-	36.52	74.00	37.48
1131.24	48.26	Peak	V	-11.27	-	36.99	74.00	37.01



Note.

1. No spurious emission were detected above 6 GHz.

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Mode: UNII-2A 802.11n_HT40

Distance of measurement: 3 meter

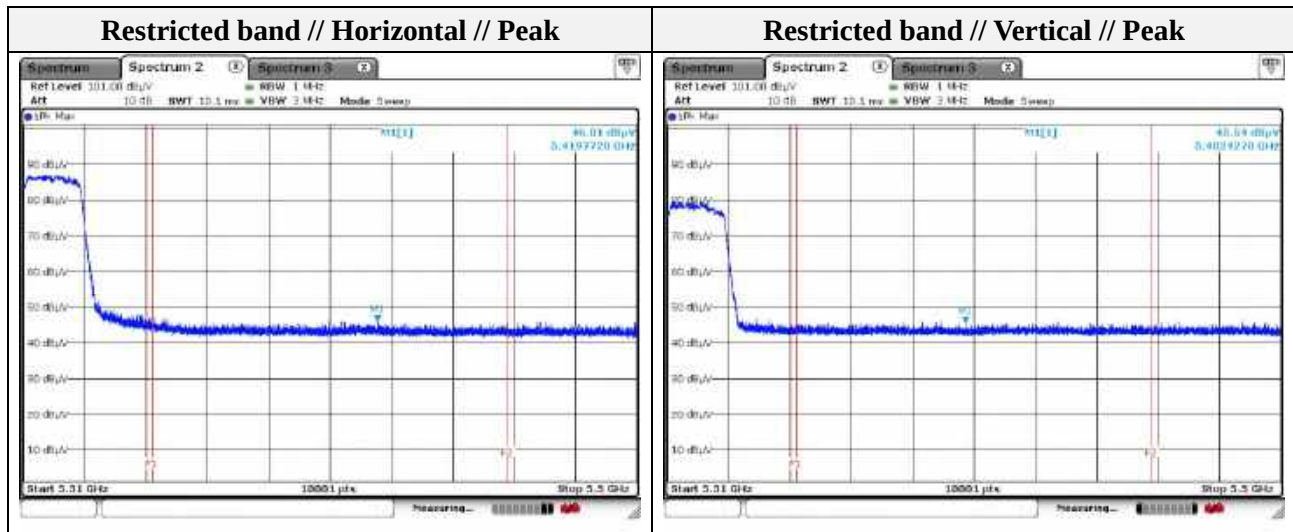
Channel: 62

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1374.71	48.41	Peak	H	-11.18	-	37.23	74.00	36.77
1037.25	48.54	Peak	V	-11.31	-	37.23	74.00	36.77

- Band edge

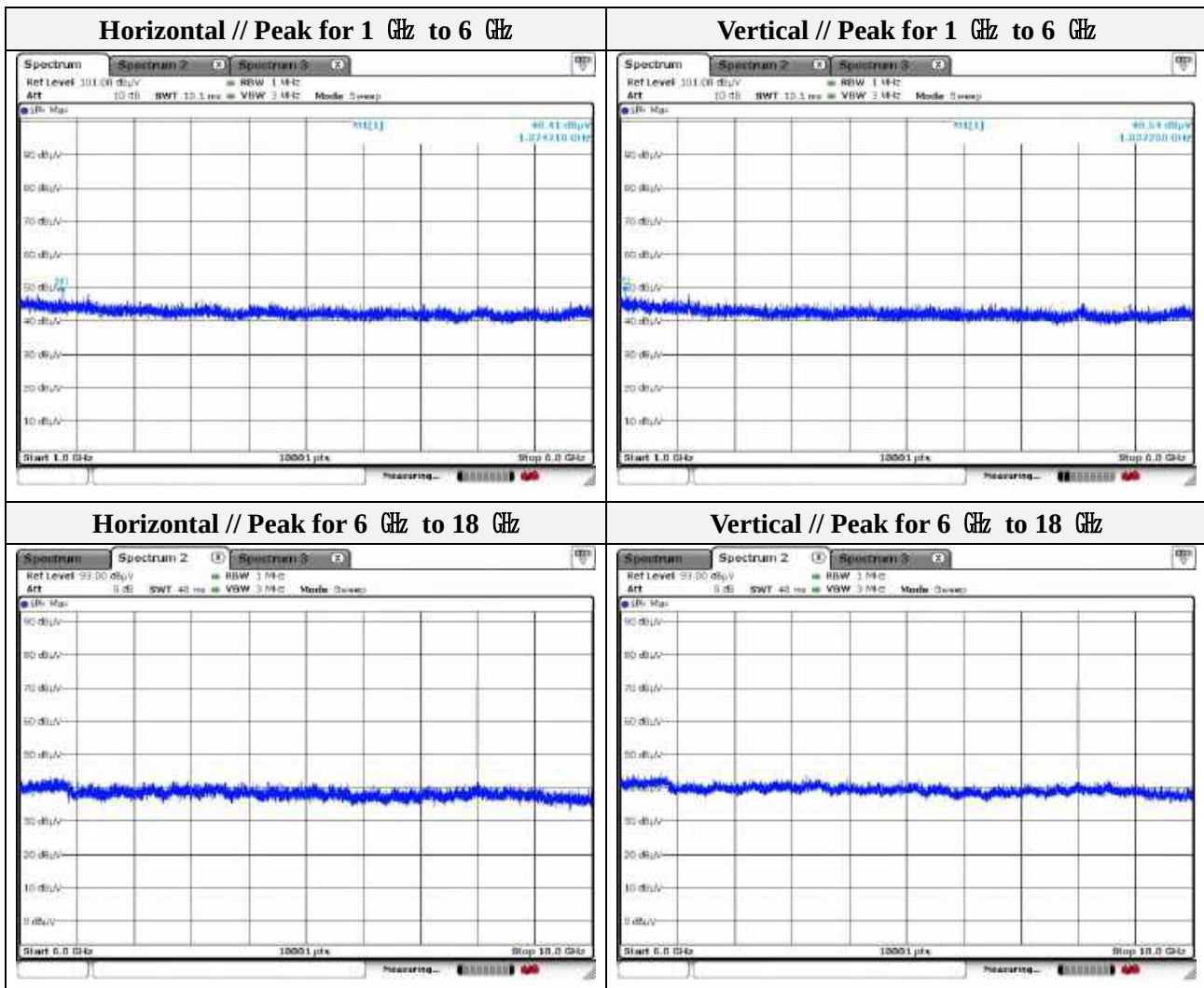
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5419.77	46.01	Peak	H	2.87	-	48.88	74.00	25.12
5402.43	45.54	Peak	V	2.96	-	48.50	74.00	25.50



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Note.

1. No spurious emission were detected above 6 GHz.

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Mode: UNII-2C 802.11a

Distance of measurement: 3 meter

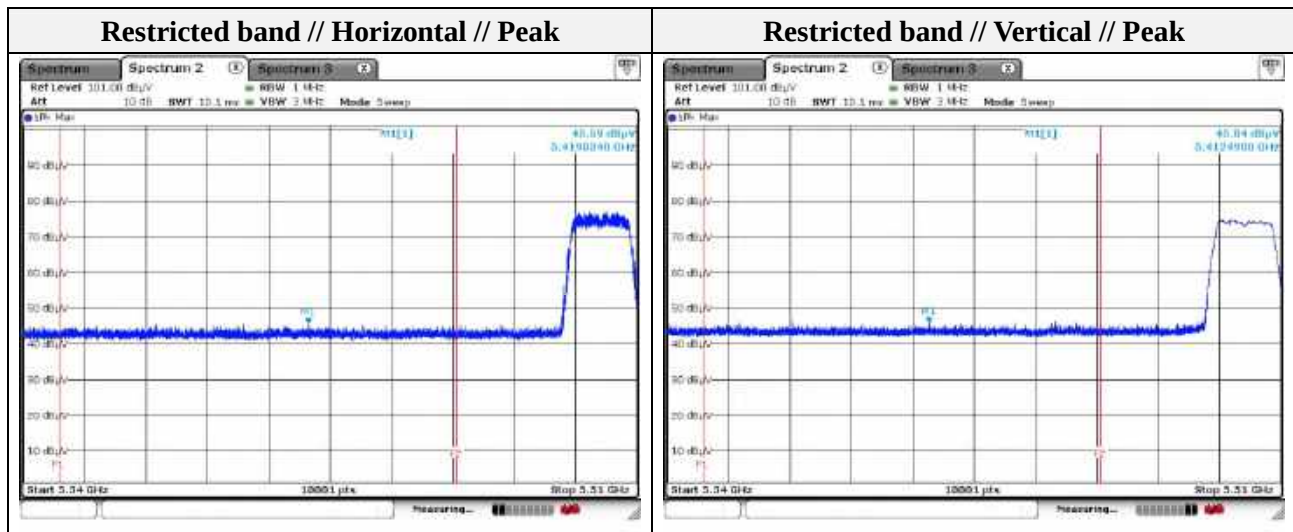
Channel: 100

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1033.75	48.07	Peak	H	-11.31	-	36.76	74.00	37.24
1058.24	48.60	Peak	V	-11.30	-	37.30	74.00	36.70

- **Band edge**

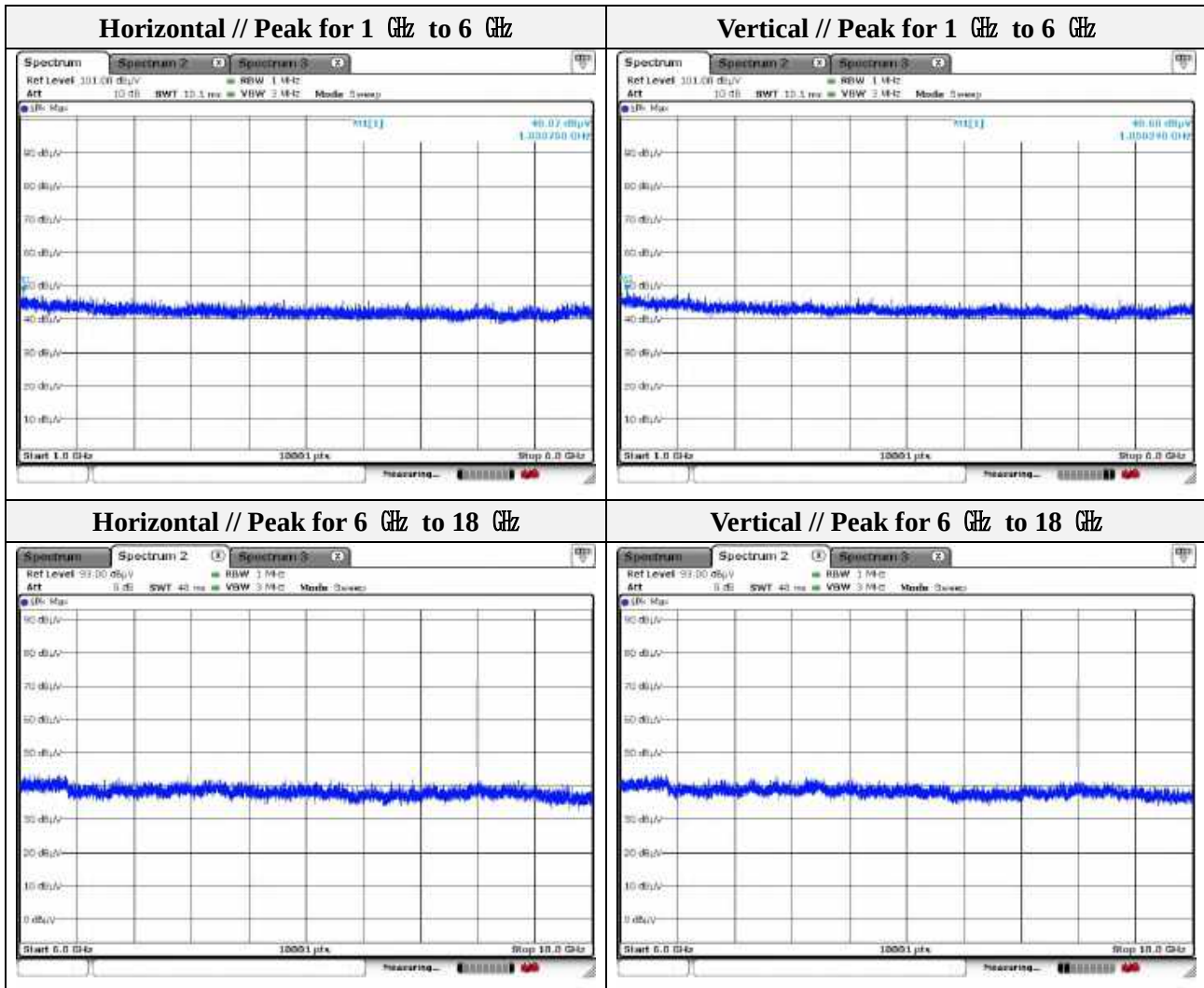
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5419.03	45.59	Peak	H	2.88	-	48.47	74.00	25.53
5412.49	45.84	Peak	V	2.91	-	48.75	74.00	25.25



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Note.

1. No spurious emission were detected above 6 GHz.

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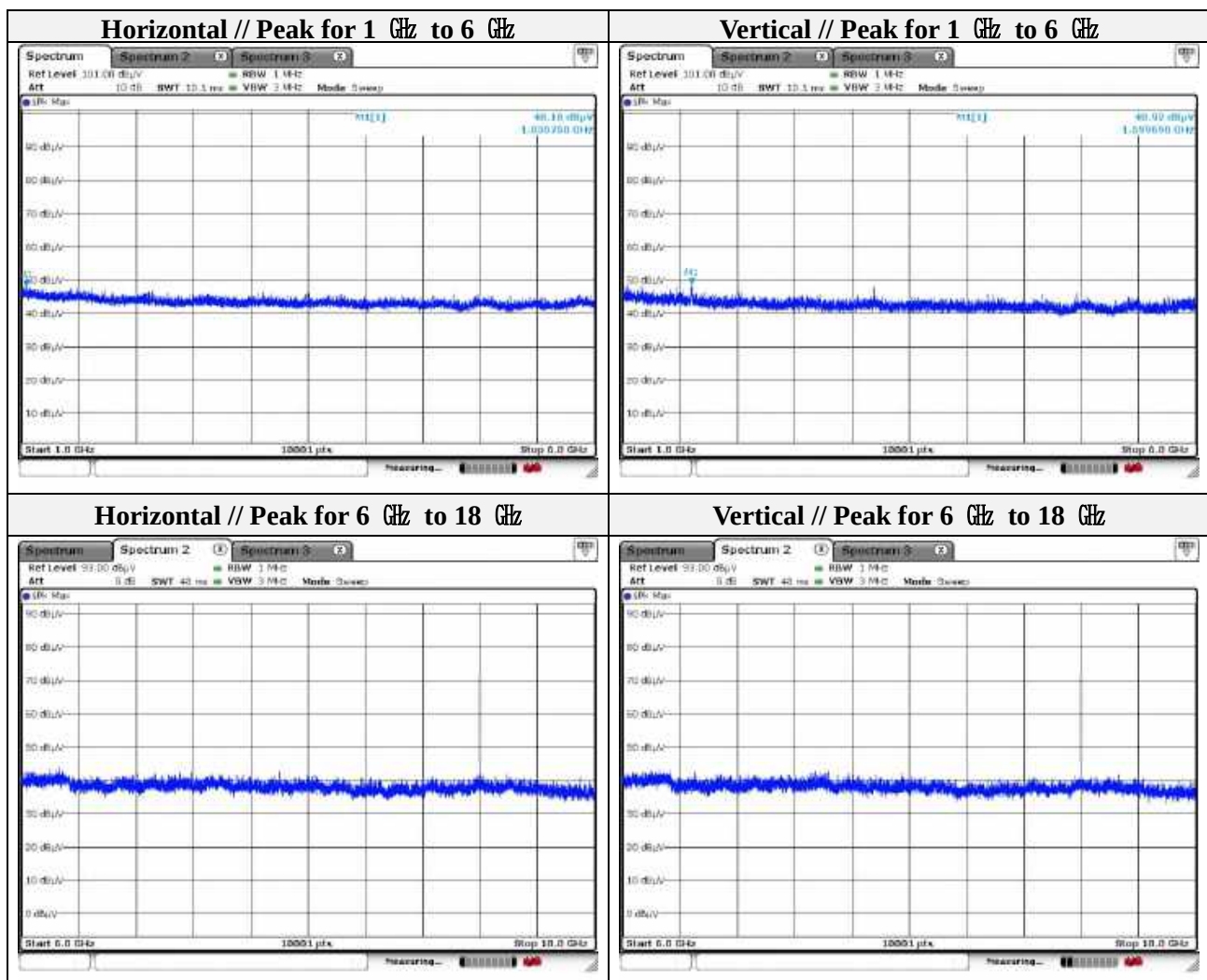
Mode: UNII-2C 802.11a

Distance of measurement: 3 meter

Channel: 120

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1035.75	48.18	Peak	H	-11.31	-	36.87	74.00	37.13
1599.69	48.92	Peak	V	-7.52	-	41.40	74.00	32.60



Note.

1. No spurious emission were detected above 6 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

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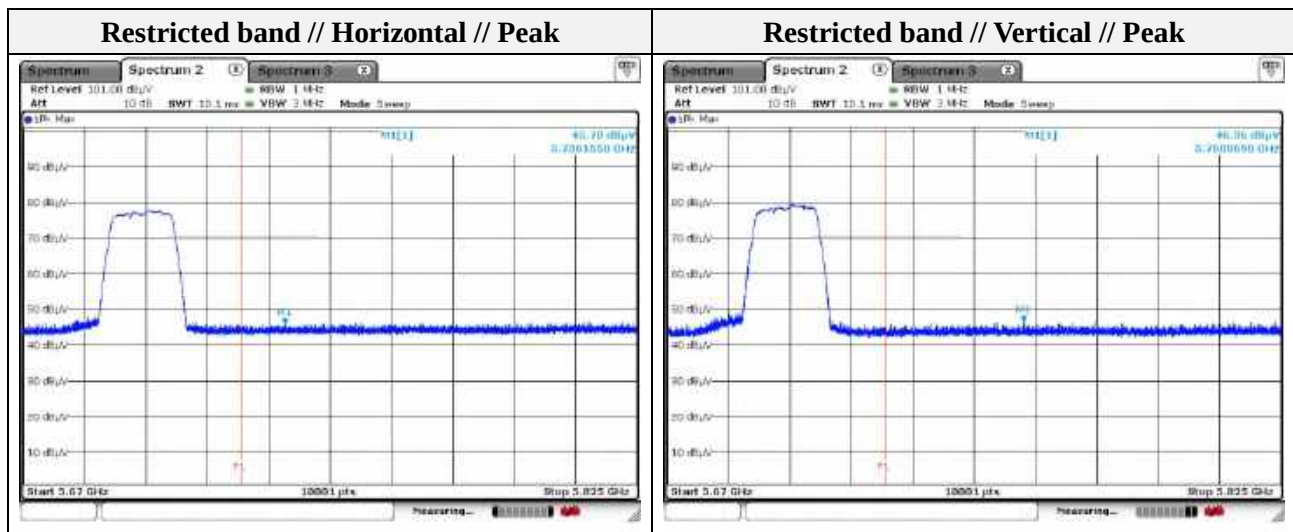
Mode: UNII-2C 802.11a
Distance of measurement: 3 meter
Channel: 140

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1186.23	47.28	Peak	H	-11.25	-	36.03	74.00	37.97
1213.73	48.00	Peak	V	-11.24	-	36.76	74.00	37.24

- **Band edge**

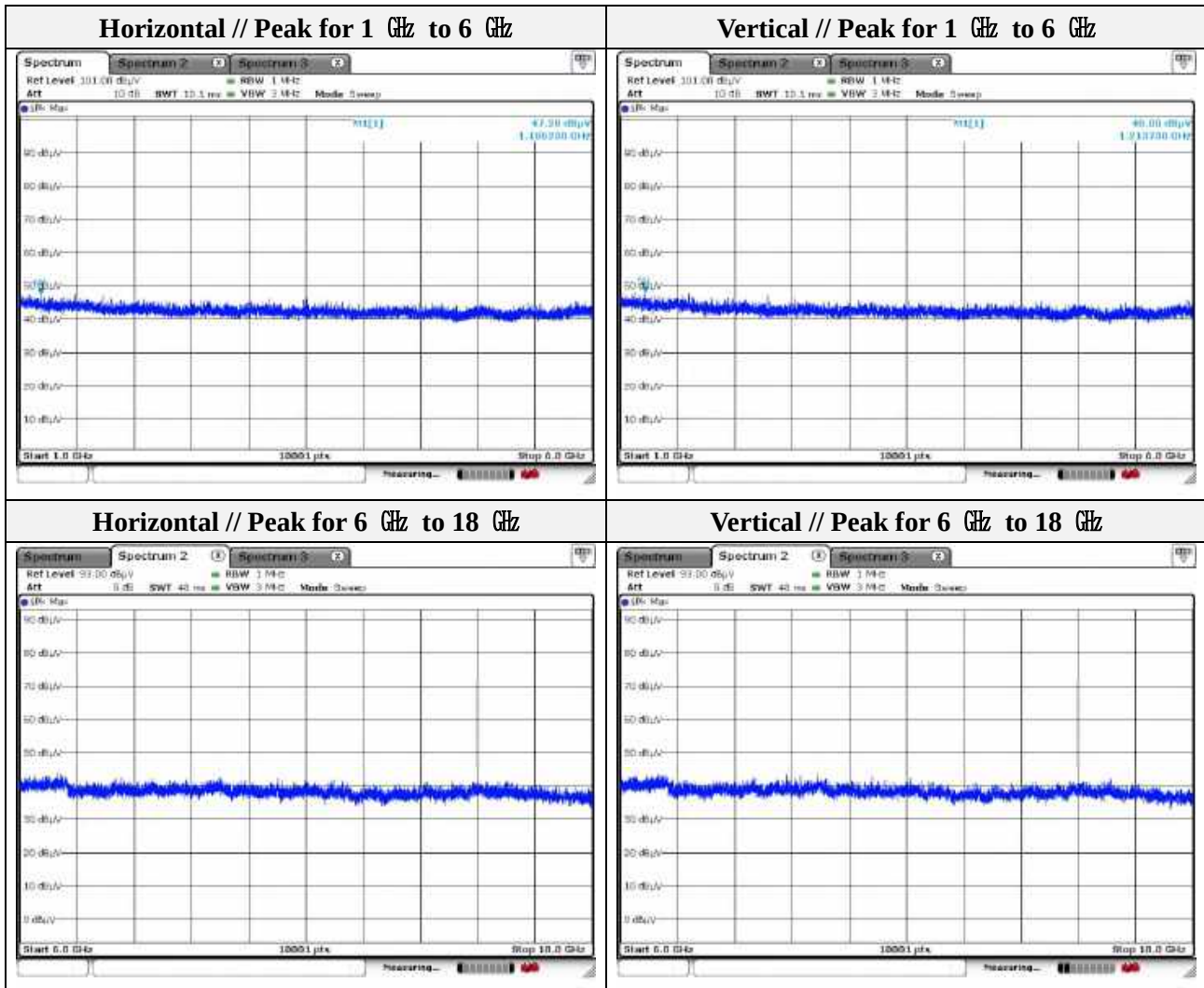
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5736.16	45.70	Peak	H	6.55	-	52.25	74.00	21.75
5760.07	46.36	Peak	V	6.78	-	53.14	74.00	20.86



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Note.

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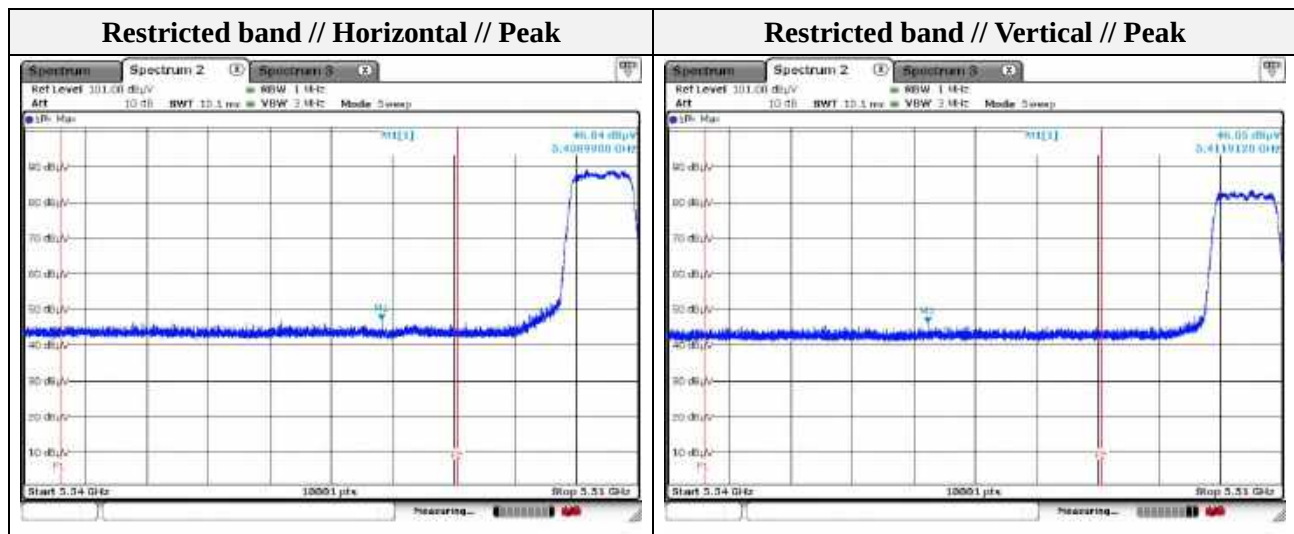
Mode: UNII-2C 802.11n_HT20
Distance of measurement: 3 meter
Channel: 100

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1171.73	47.69	Peak	H	-11.26	-	36.43	74.00	37.57
1100.74	47.76	Peak	V	-11.29	-	36.47	74.00	37.53

- **Band edge**

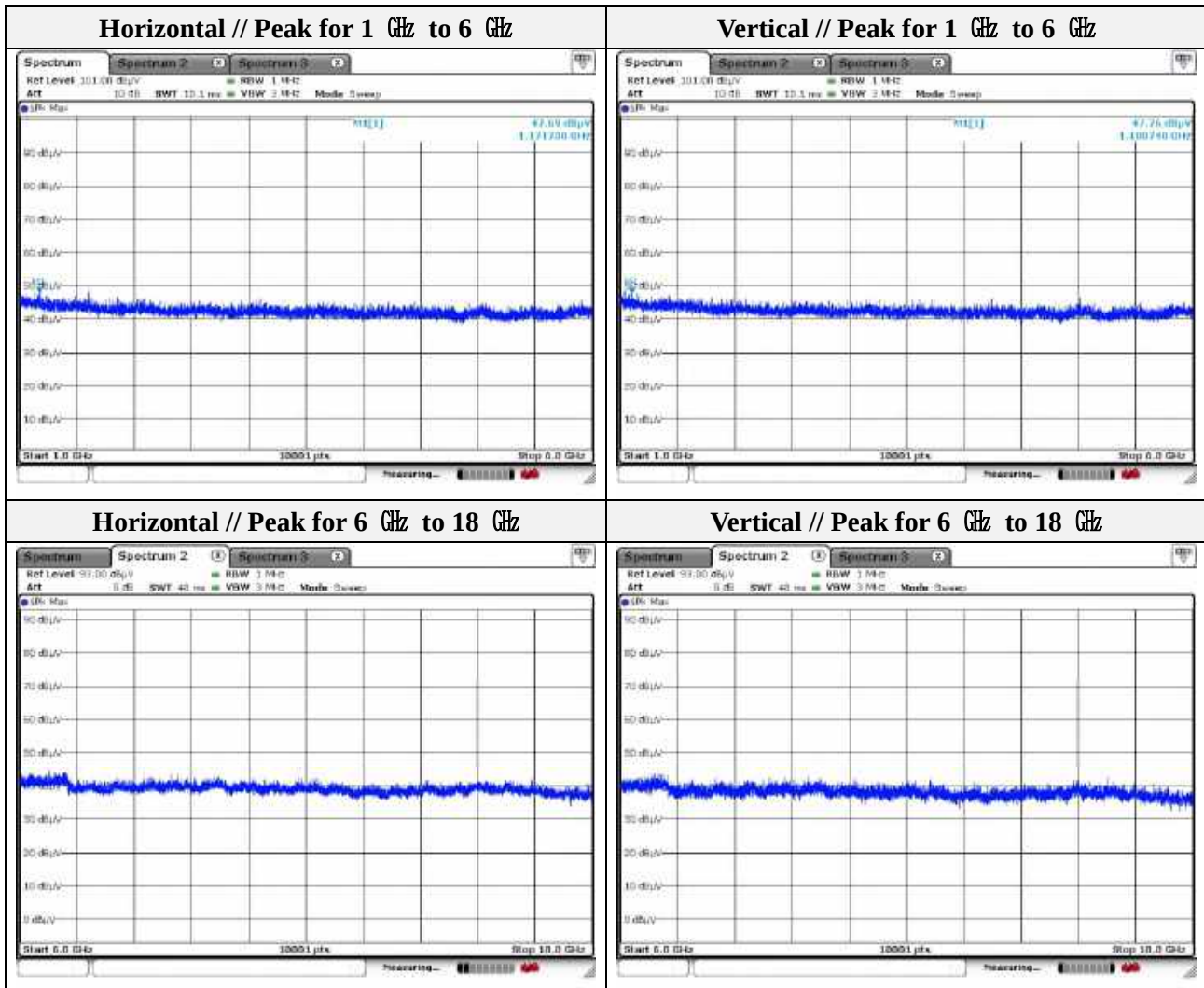
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5438.99	46.84	Peak	H	2.79	-	49.63	74.00	24.37
5411.91	46.05	Peak	V	2.91	-	48.96	74.00	25.04



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Note.

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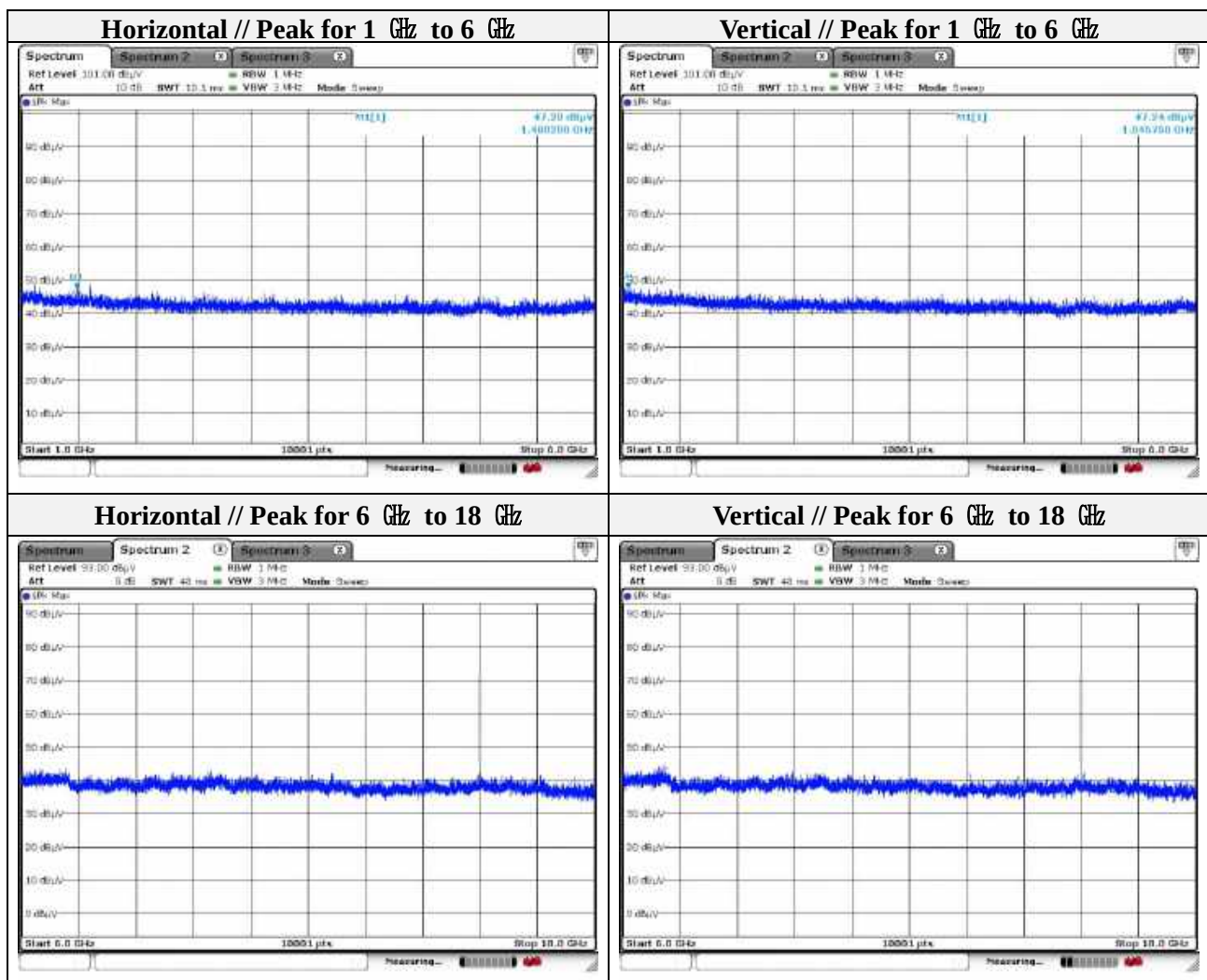
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Mode: UNII-2C 802.11n_HT20
Distance of measurement: 3 meter
Channel: 120

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1480.20	47.20	Peak	H	-11.13	-	36.07	74.00	37.93
1045.75	47.24	Peak	V	-11.30	-	35.94	74.00	38.06



Note.

1. No spurious emission were detected above 6 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

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Mode: UNII-2C 802.11n_HT20

Distance of measurement: 3 meter

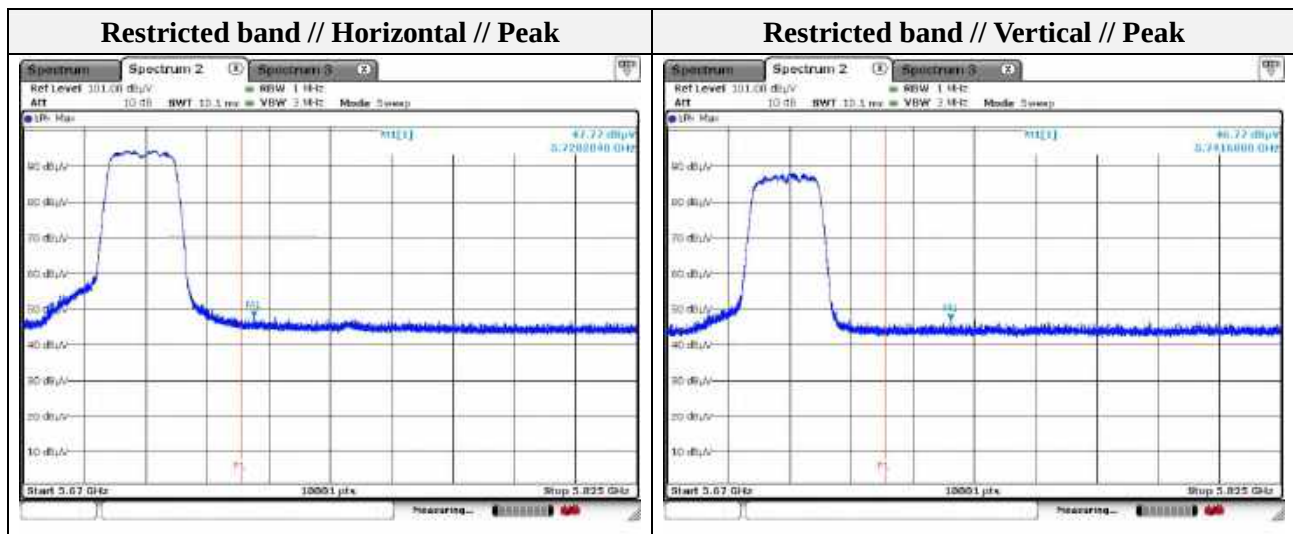
Channel: 140

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1127.74	48.53	Peak	H	-11.28	-	37.25	74.00	36.75
1061.24	48.18	Peak	V	-11.30	-	36.88	74.00	37.12

- Band edge

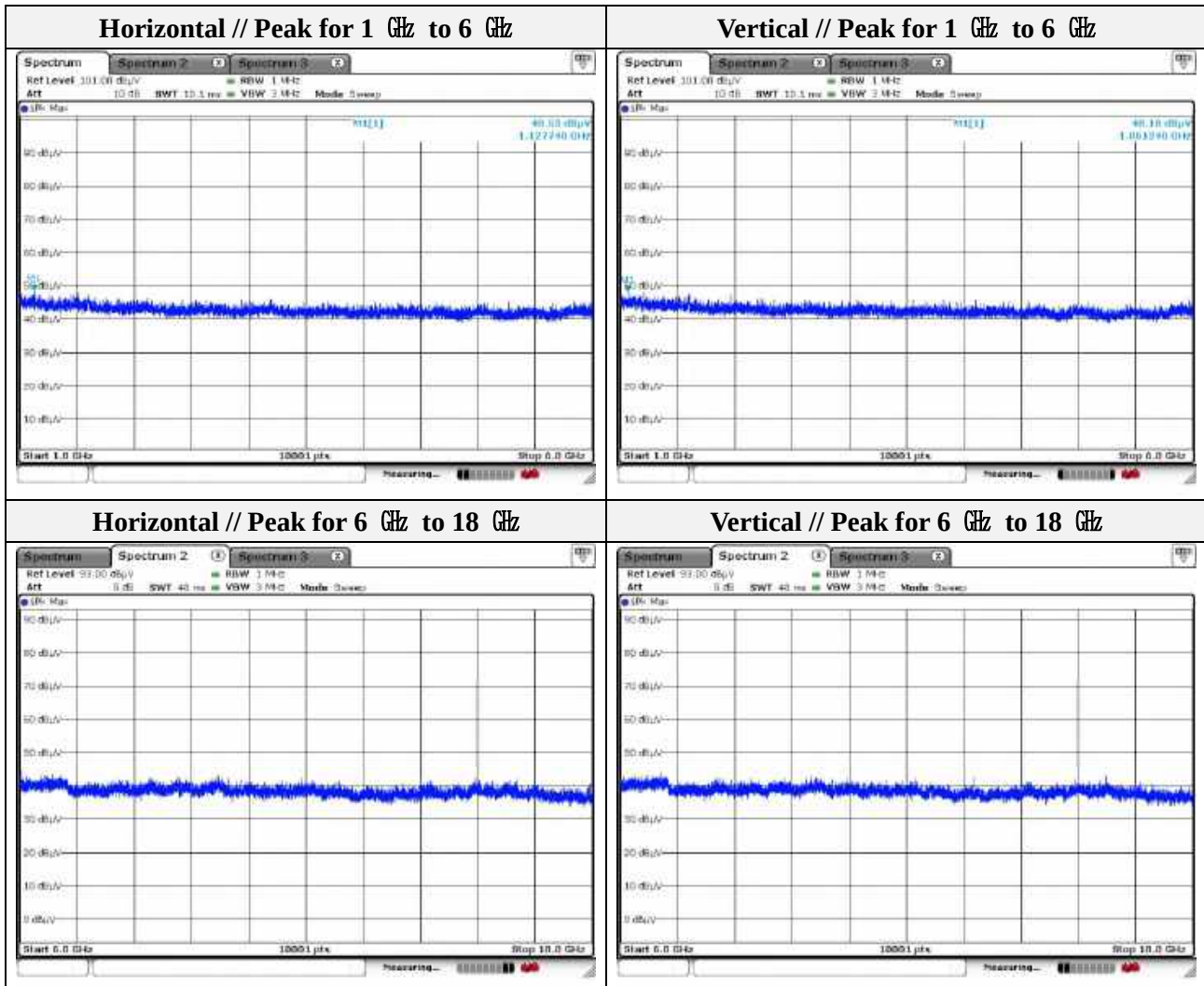
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5728.20	47.77	Peak	H	6.47	-	54.24	74.00	19.76
5728.20	35.35	Average	H	6.47	-	41.82	54.00	12.18
5741.69	46.77	Peak	V	6.61	-	53.38	74.00	20.62



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Note.

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Mode: UNII-2C 802.11n_HT40

Distance of measurement: 3 meter

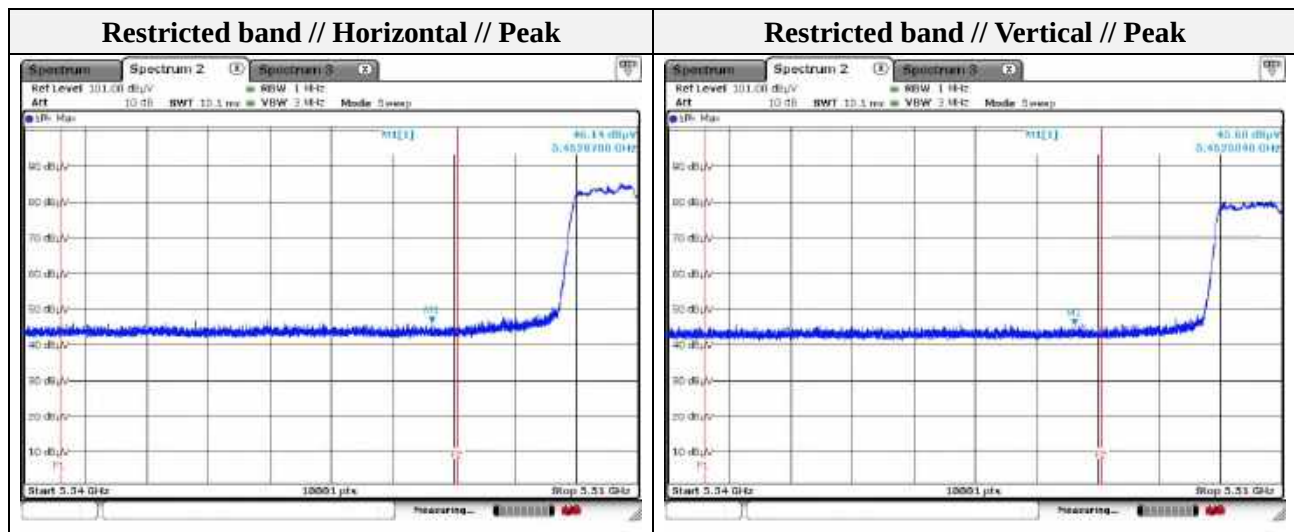
Channel: 102

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1198.73	47.07	Peak	H	-11.25	-	35.82	74.00	38.18
1130.24	47.98	Peak	V	-11.27	-	36.71	74.00	37.29

- Band edge

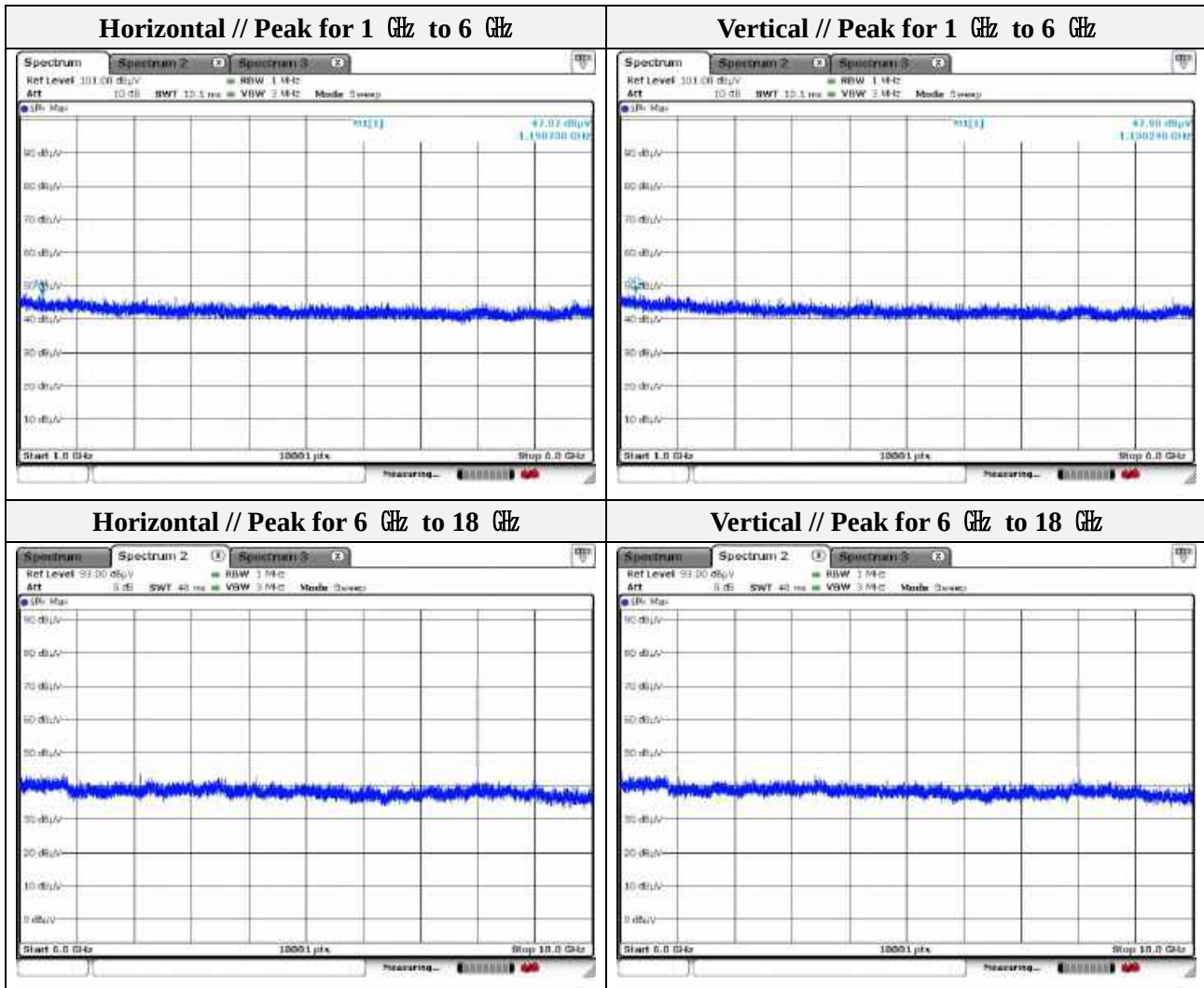
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5452.88	46.14	Peak	H	2.72	-	48.86	74.00	25.14
5452.50	45.60	Peak	V	2.74	-	48.34	74.00	25.66



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Note.

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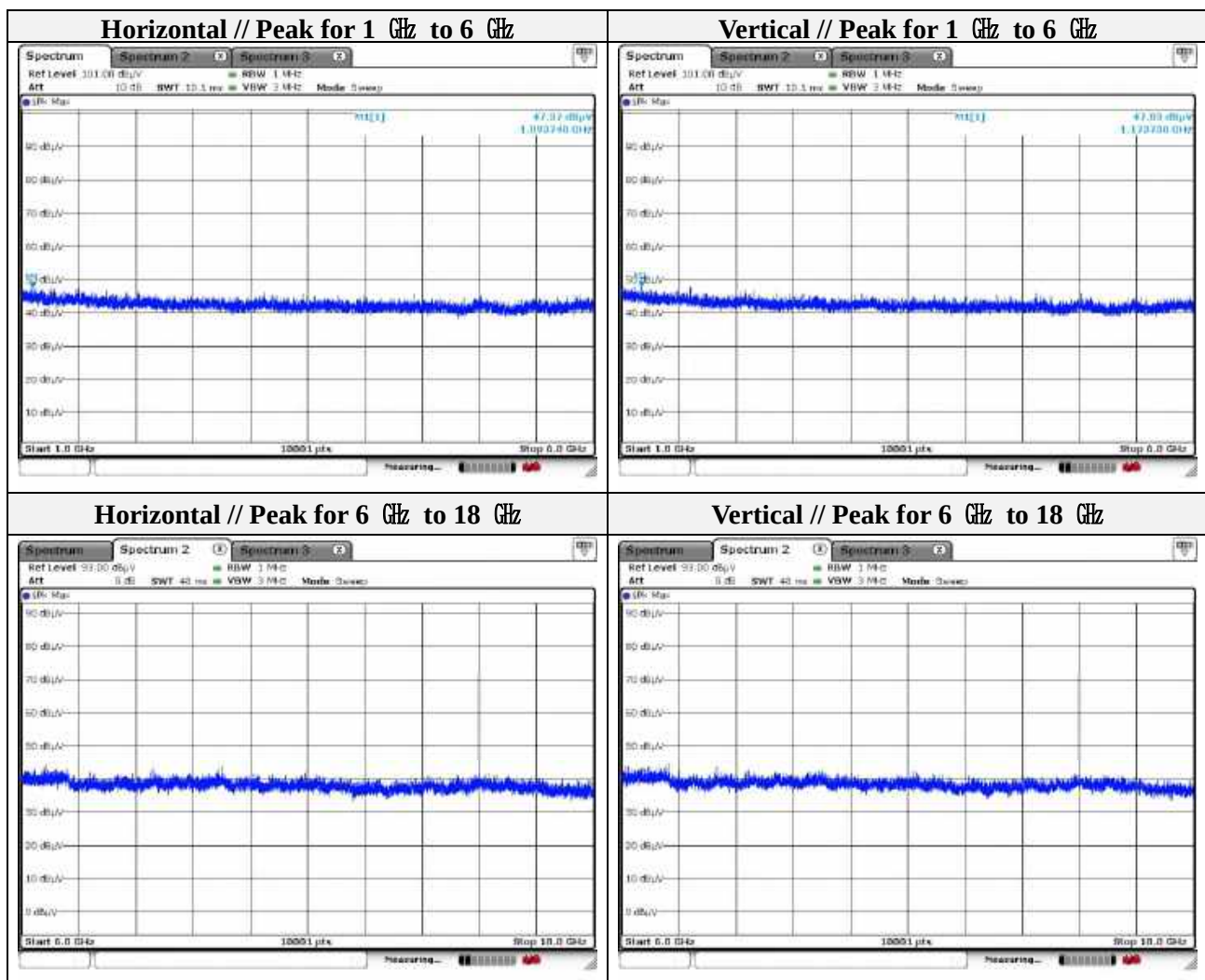
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

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Mode: UNII-2C 802.11n_HT40
Distance of measurement: 3 meter
Channel: 118

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1093.74	47.37	Peak	H	-11.28	-	36.09	74.00	37.91
1173.73	47.83	Peak	V	-11.26	-	36.57	74.00	37.43



Note.

1. No spurious emission were detected above 6 GHz.
2. Average test would be performed if the peak result were greater than the average limit.

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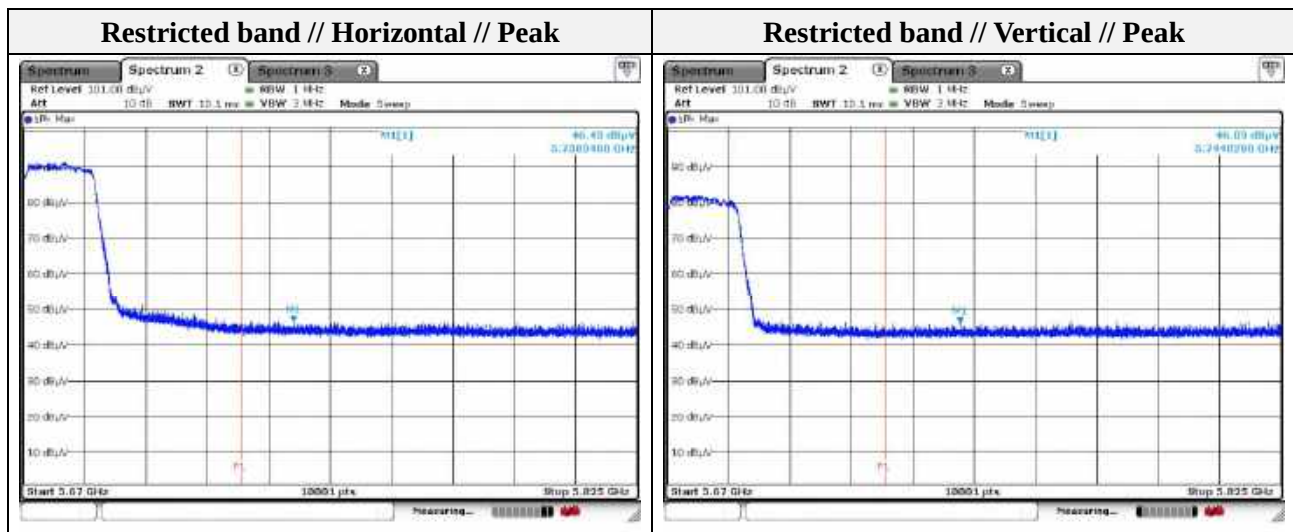
Mode: UNII-2C 802.11n_HT40
Distance of measurement: 3 meter
Channel: 134

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1132.24	48.31	Peak	H	-11.27	-	37.04	74.00	36.96
1039.75	47.90	Peak	V	-11.30	-	36.60	74.00	37.40

- **Band edge**

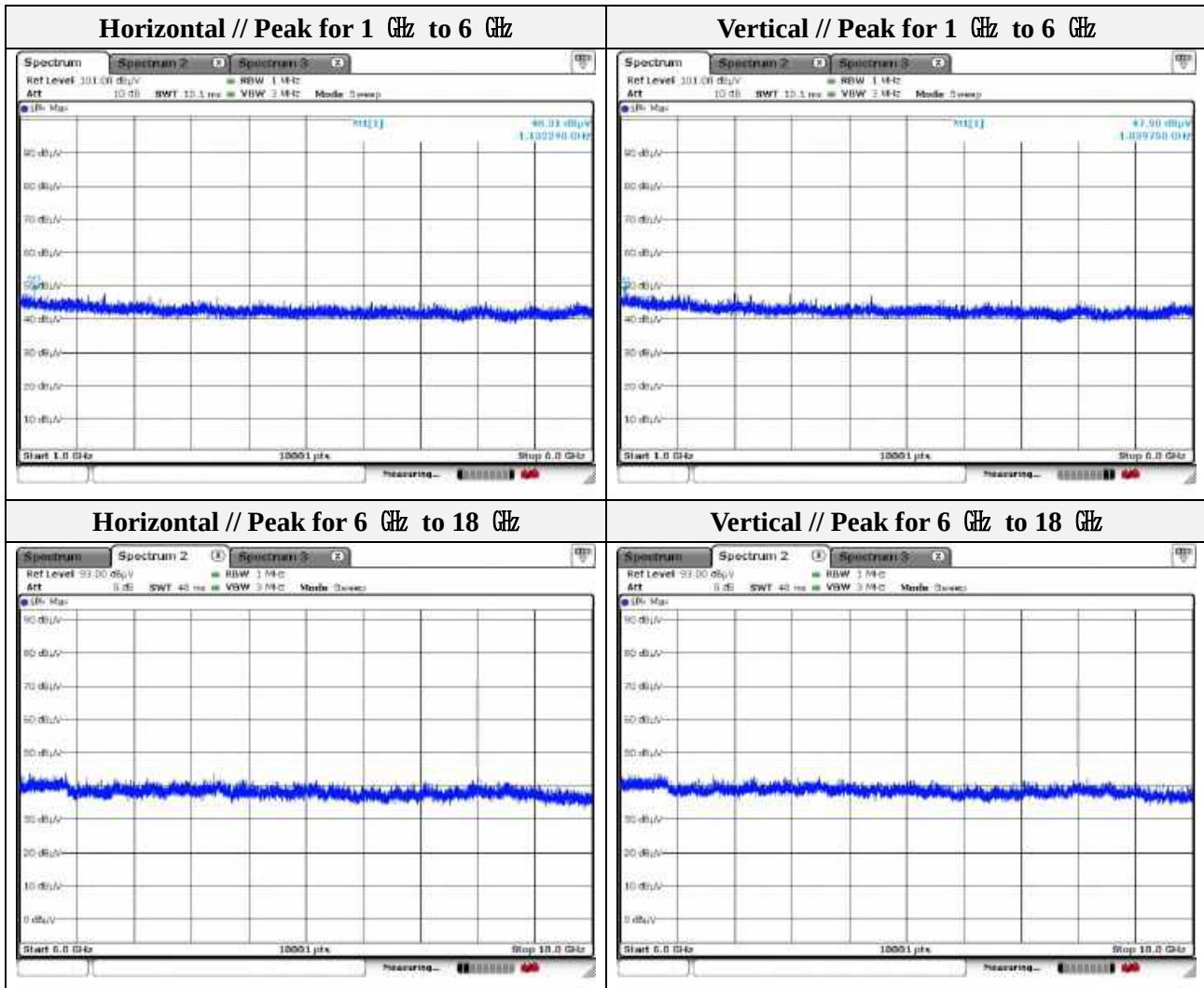
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5738.34	46.43	Peak	H	6.58	-	53.01	74.00	20.99
5744.03	46.03	Peak	V	6.63	-	52.66	74.00	21.34



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Note.

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Mode: UNII-3 802.11a

Distance of measurement: 3 meter

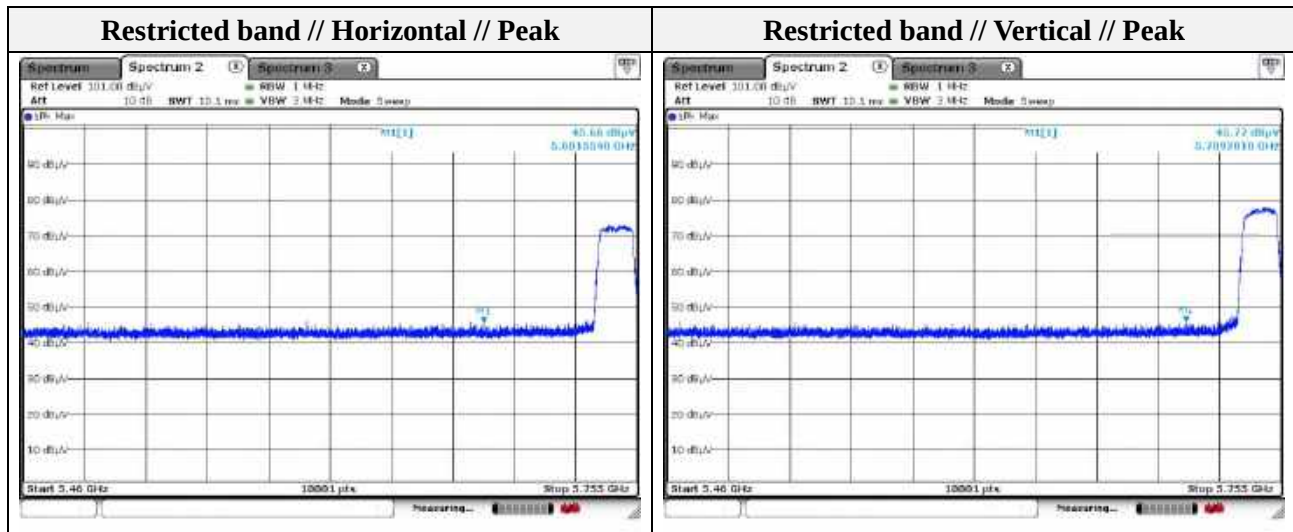
Channel: 149

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1119.74	47.96	Peak	H	-10.79	-	37.17	74.00	36.83
1031.25	47.43	Peak	V	-11.18	-	36.25	74.00	37.75

- **Band edge**

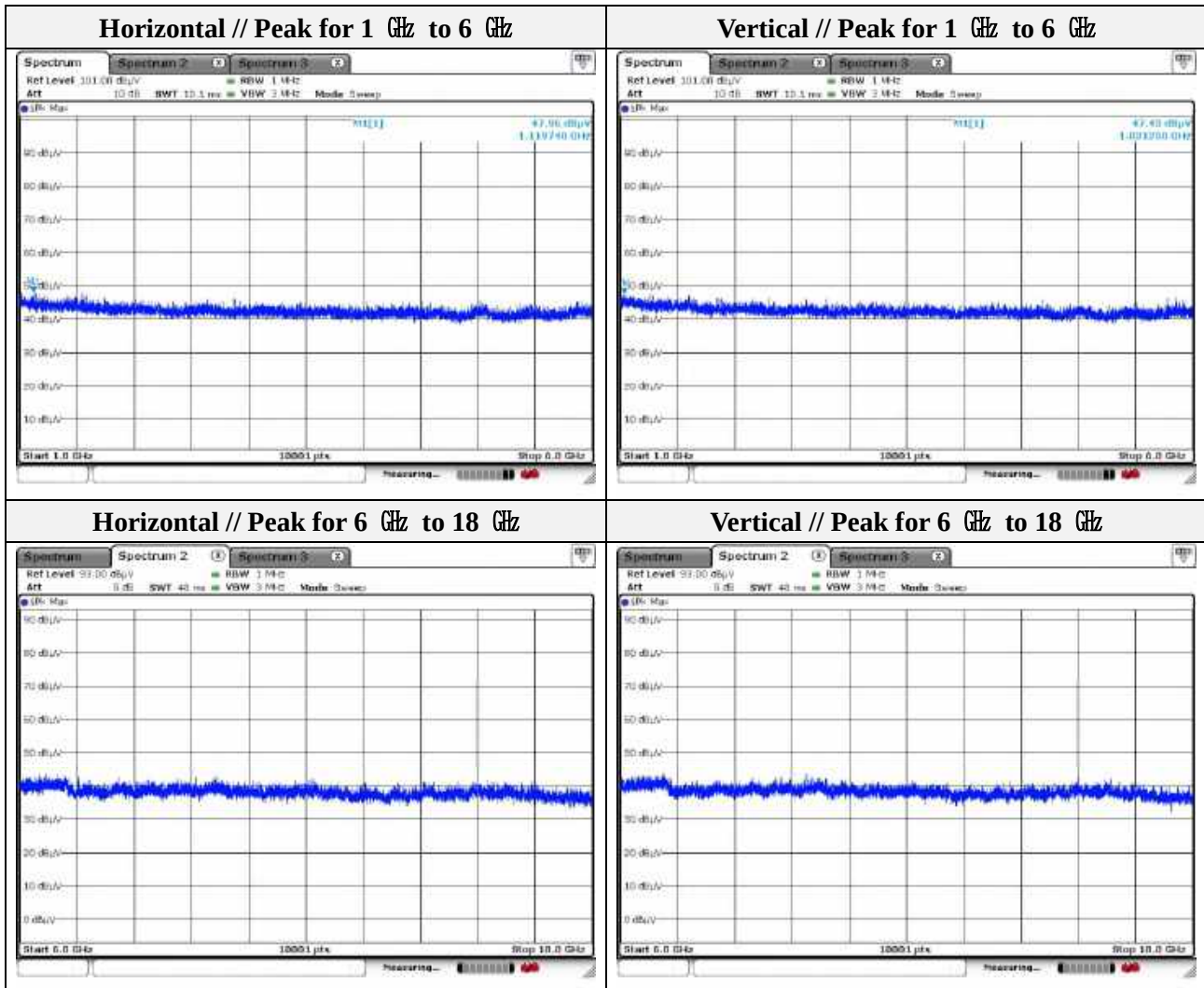
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5681.55	45.66	Peak	H	5.13	-	50.79	91.55	40.76
5709.27	45.77	Peak	V	5.26	-	51.03	107.80	56.77



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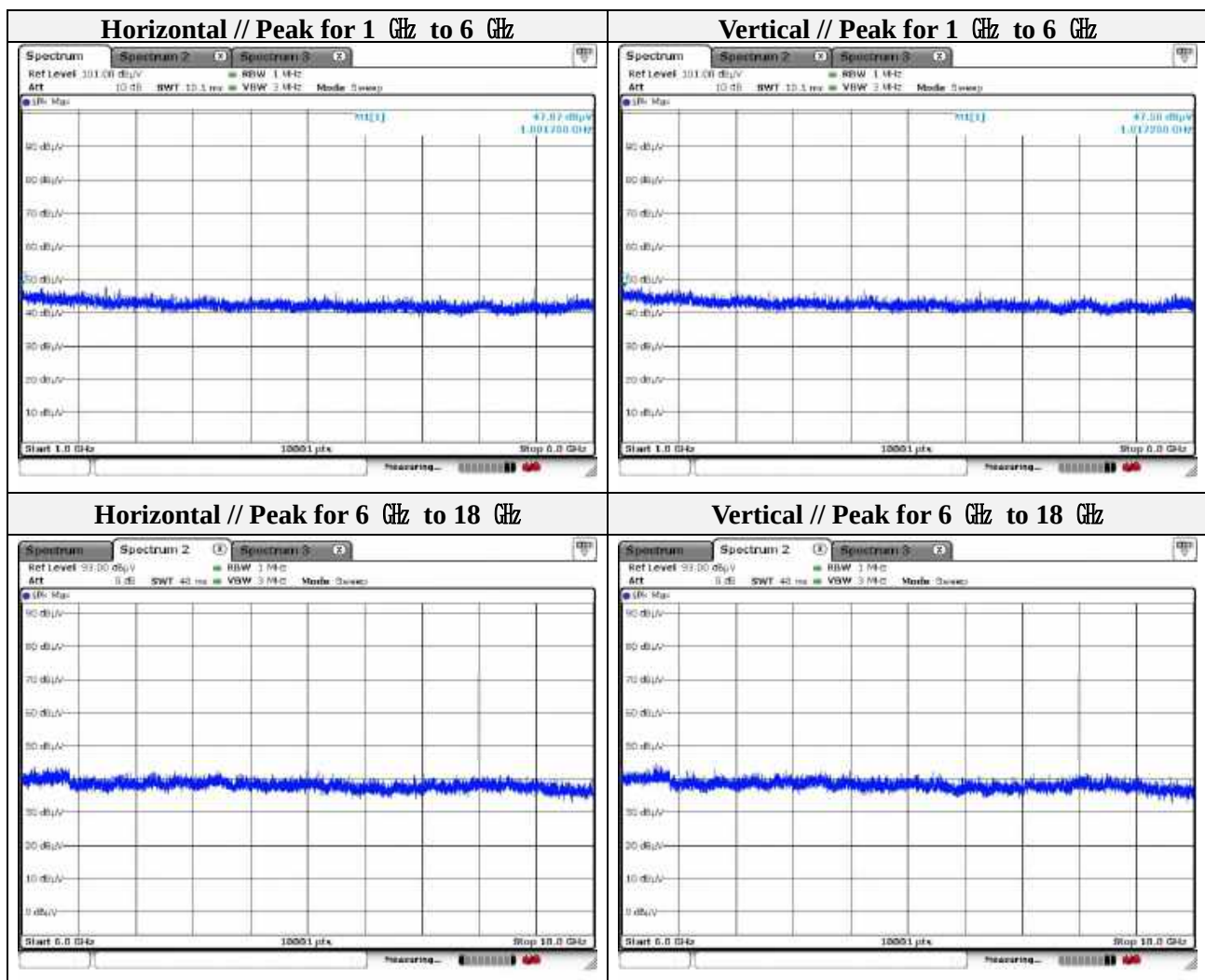
Mode: UNII-3 802.11a

Distance of measurement: 3 meter

Channel: 157

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1001.75	47.87	Peak	H	-11.32	-	36.55	74.00	37.45
1017.25	47.50	Peak	V	-11.24	-	36.26	74.00	37.74



Note.

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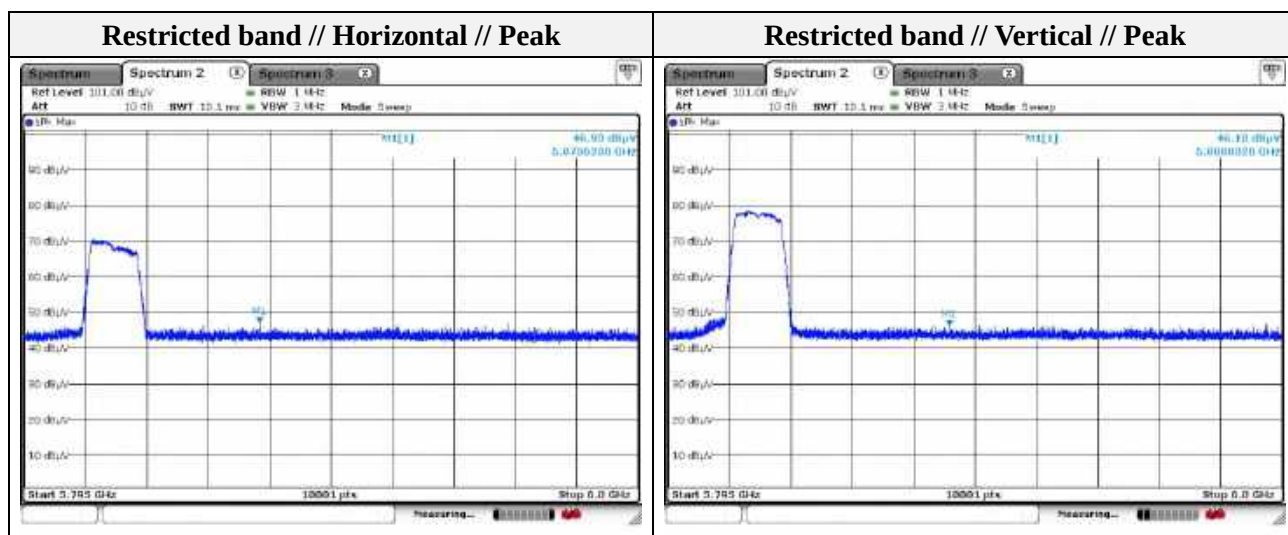
Mode: UNII-3 802.11a
Distance of measurement: 3 meter
Channel: 165

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1040.25	48.01	Peak	H	-11.14	-	36.87	74.00	37.13
1121.74	47.66	Peak	V	-10.77	-	36.89	74.00	37.11

- **Band edge**

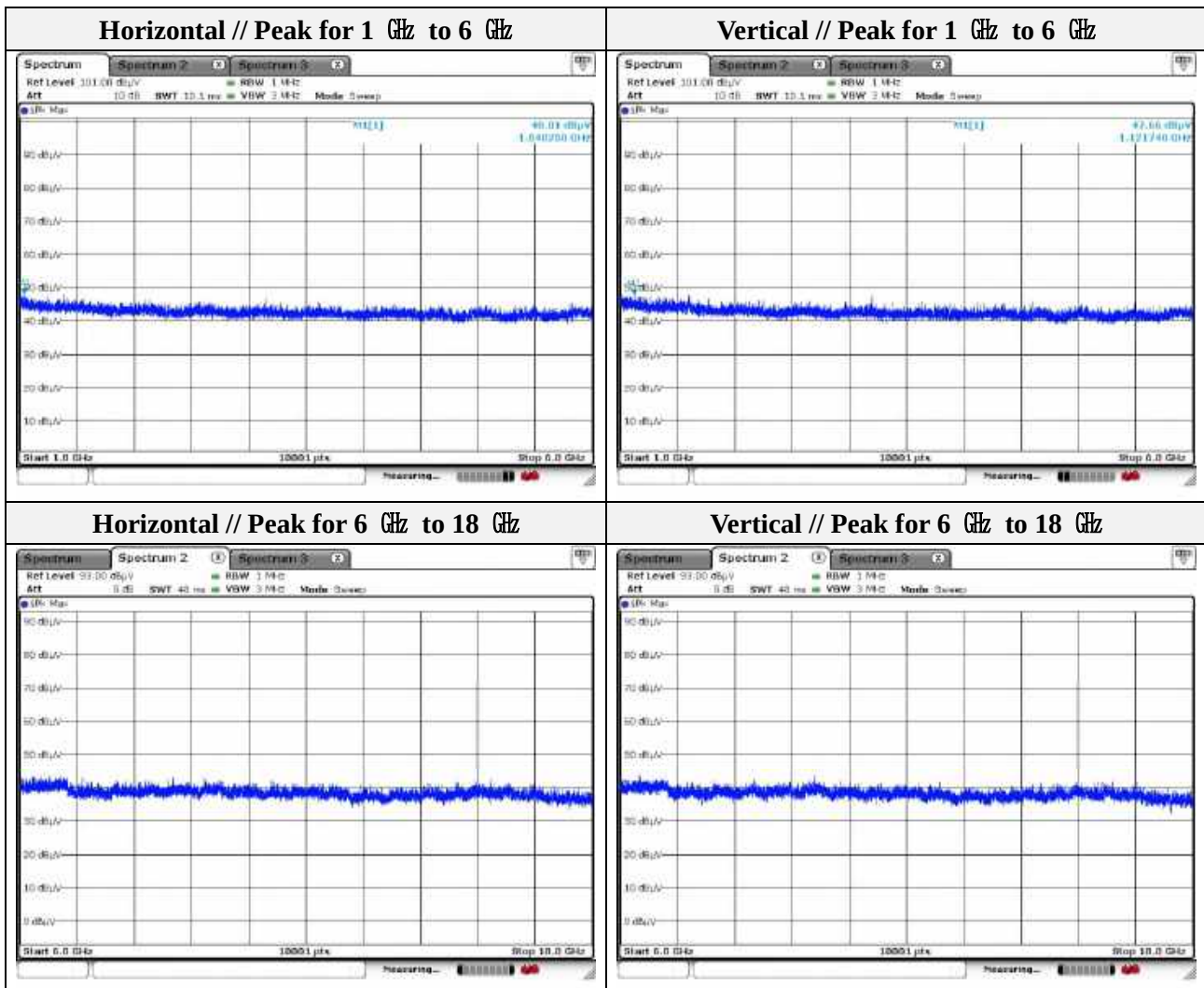
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5873.62	46.93	Peak	H	5.76	-	52.69	105.59	52.90
5888.83	46.10	Peak	V	5.78	-	51.88	93.83	41.95



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Note.

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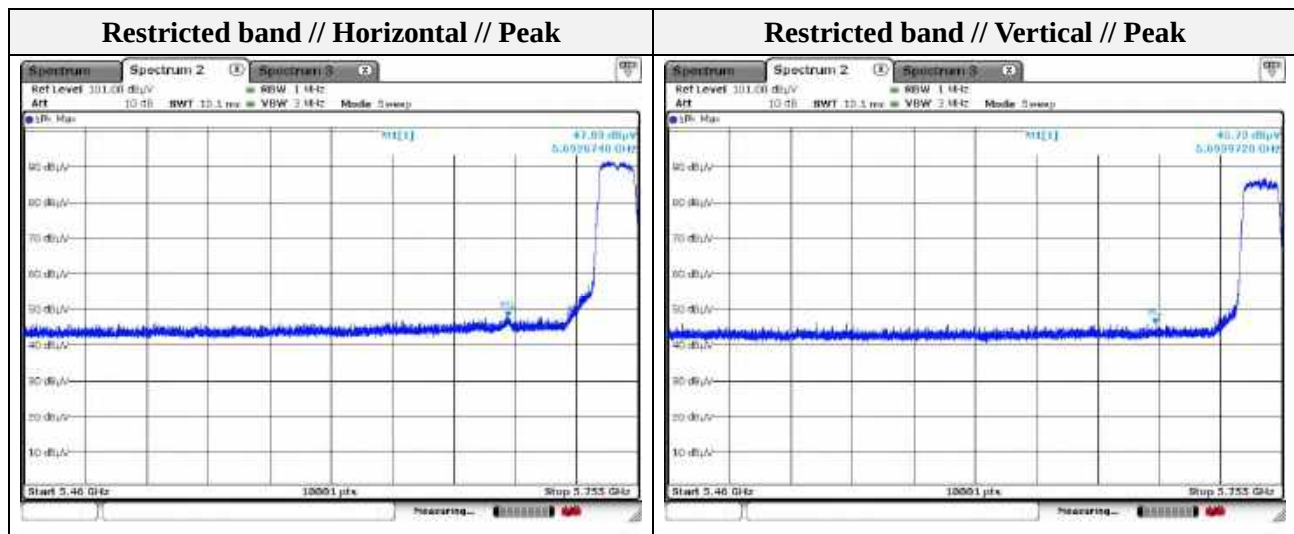
Mode: UNII-3 802.11n_HT20
Distance of measurement: 3 meter
Channel: 149

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1035.25	48.36	Peak	H	-11.16	-	37.20	74.00	36.80
1620.19	47.50	Peak	V	-8.16	-	39.34	74.00	34.66

- **Band edge**

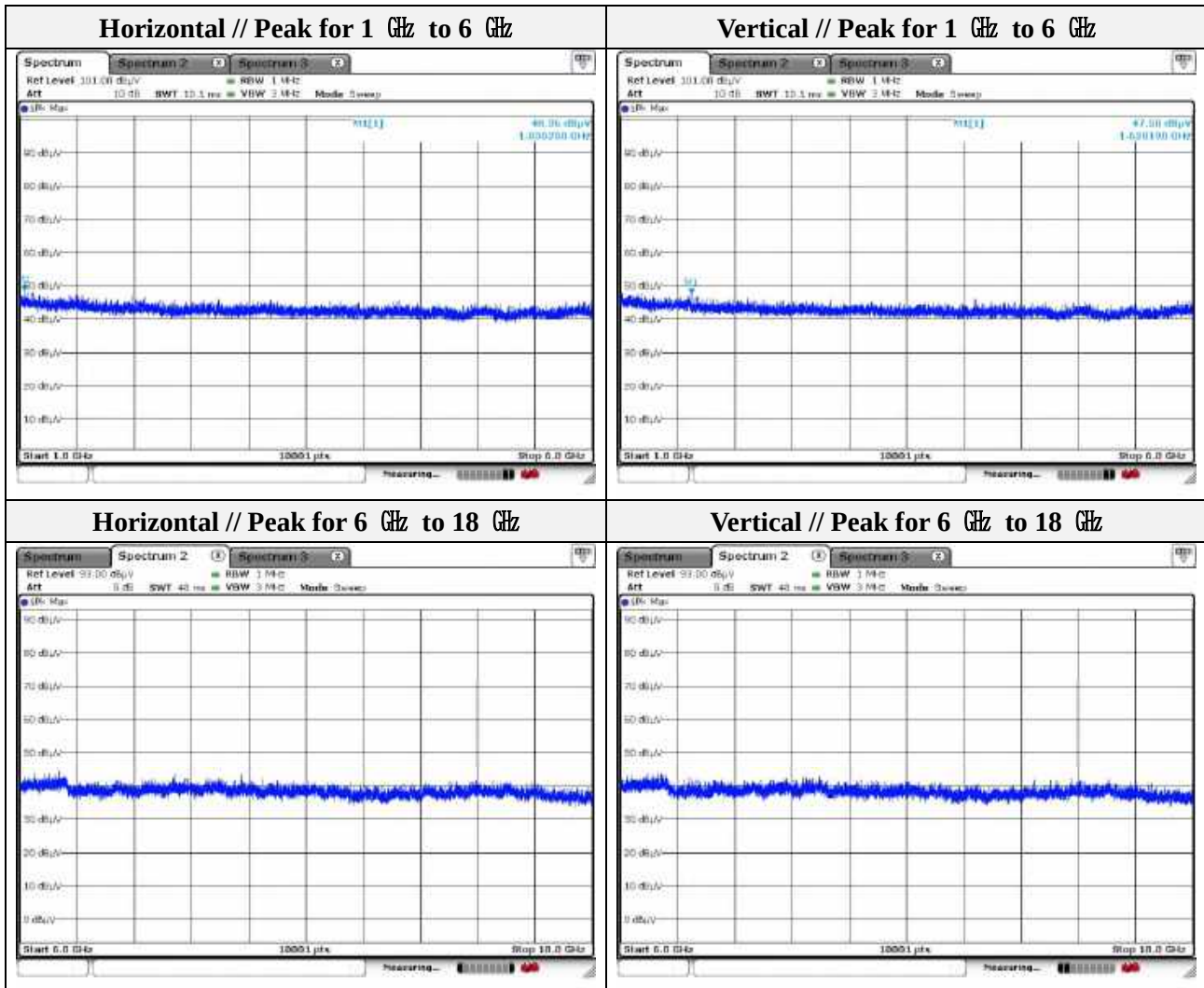
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5692.67	47.83	Peak	H	5.18	-	53.01	99.78	46.77
5693.97	45.73	Peak	V	5.19	-	50.92	100.74	49.82



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Note.

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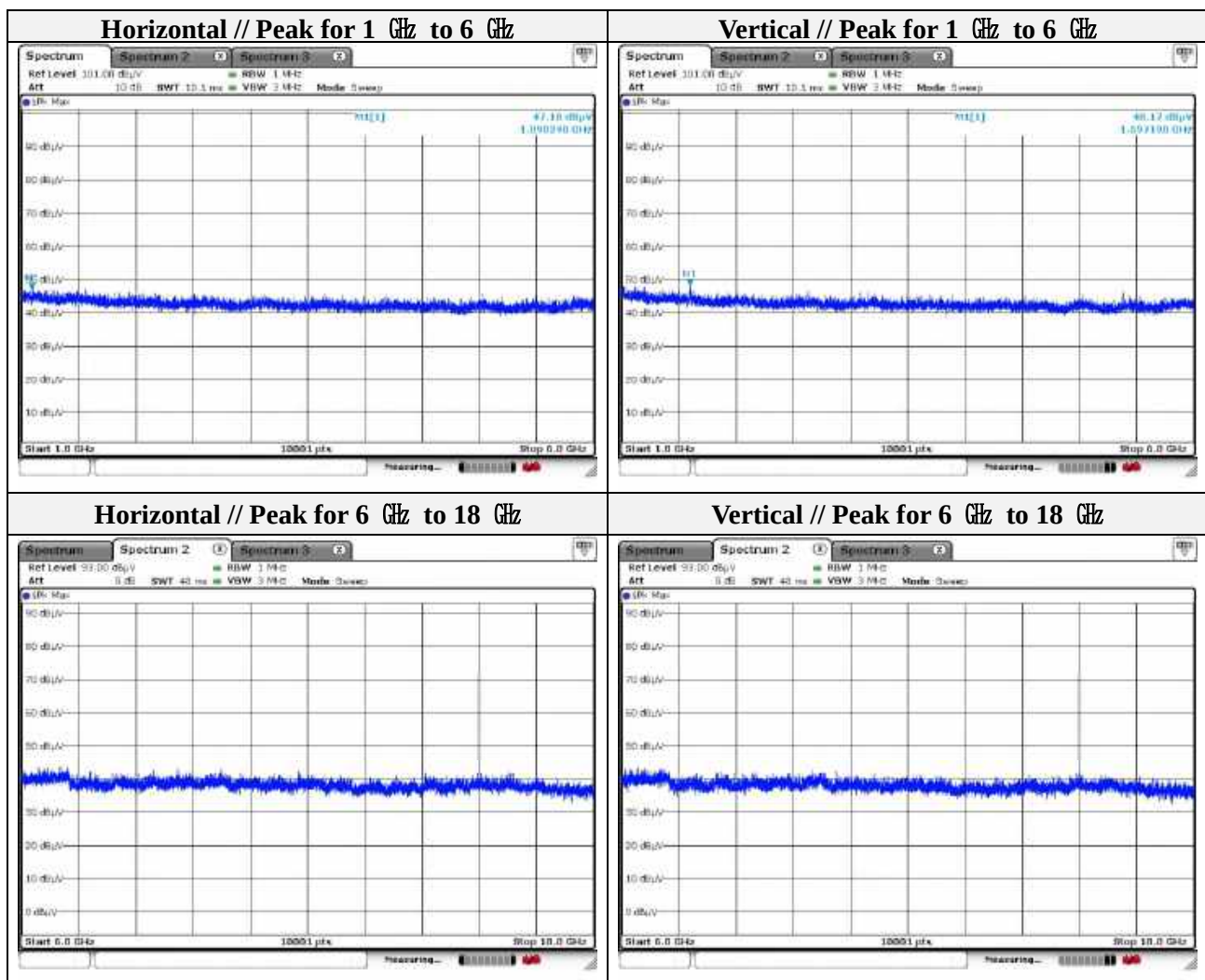
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Mode: UNII-3 802.11n_HT20
Distance of measurement: 3 meter
Channel: 157

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1090.24	47.18	Peak	H	-10.91	-	36.27	74.00	37.73
1597.19	48.17	Peak	V	-8.32	-	39.85	74.00	34.15



Note.

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Mode: UNII-3 802.11n_HT20

Distance of measurement: 3 meter

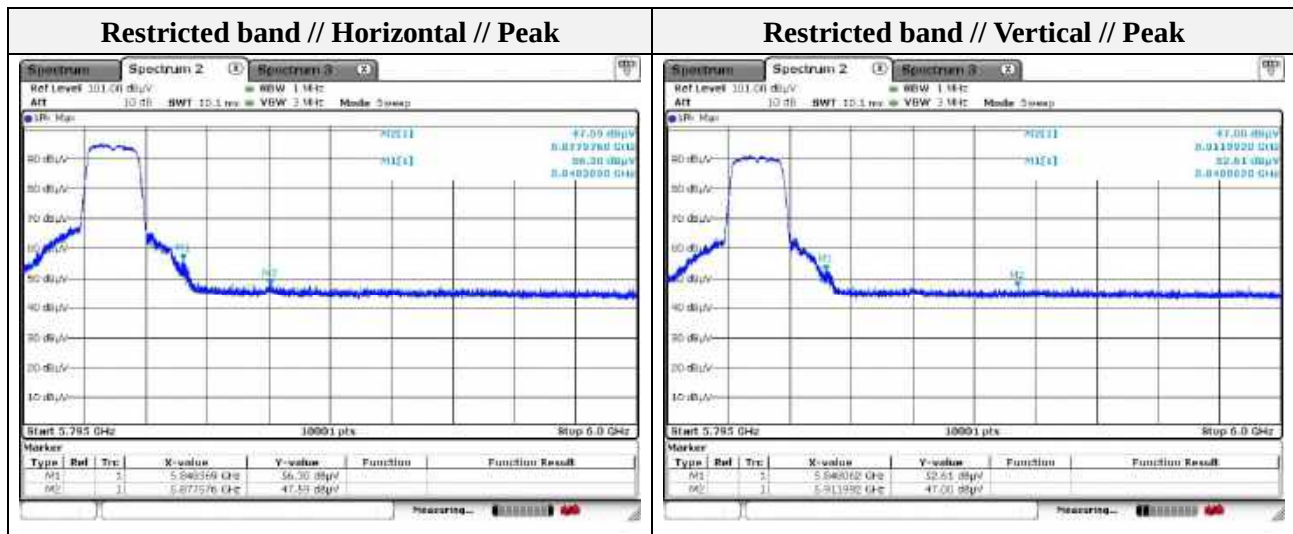
Channel: 165

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1004.75	48.38	Peak	H	-11.30	-	37.08	74.00	36.92
1021.25	48.28	Peak	V	-11.22	-	37.06	74.00	36.94

- Band edge

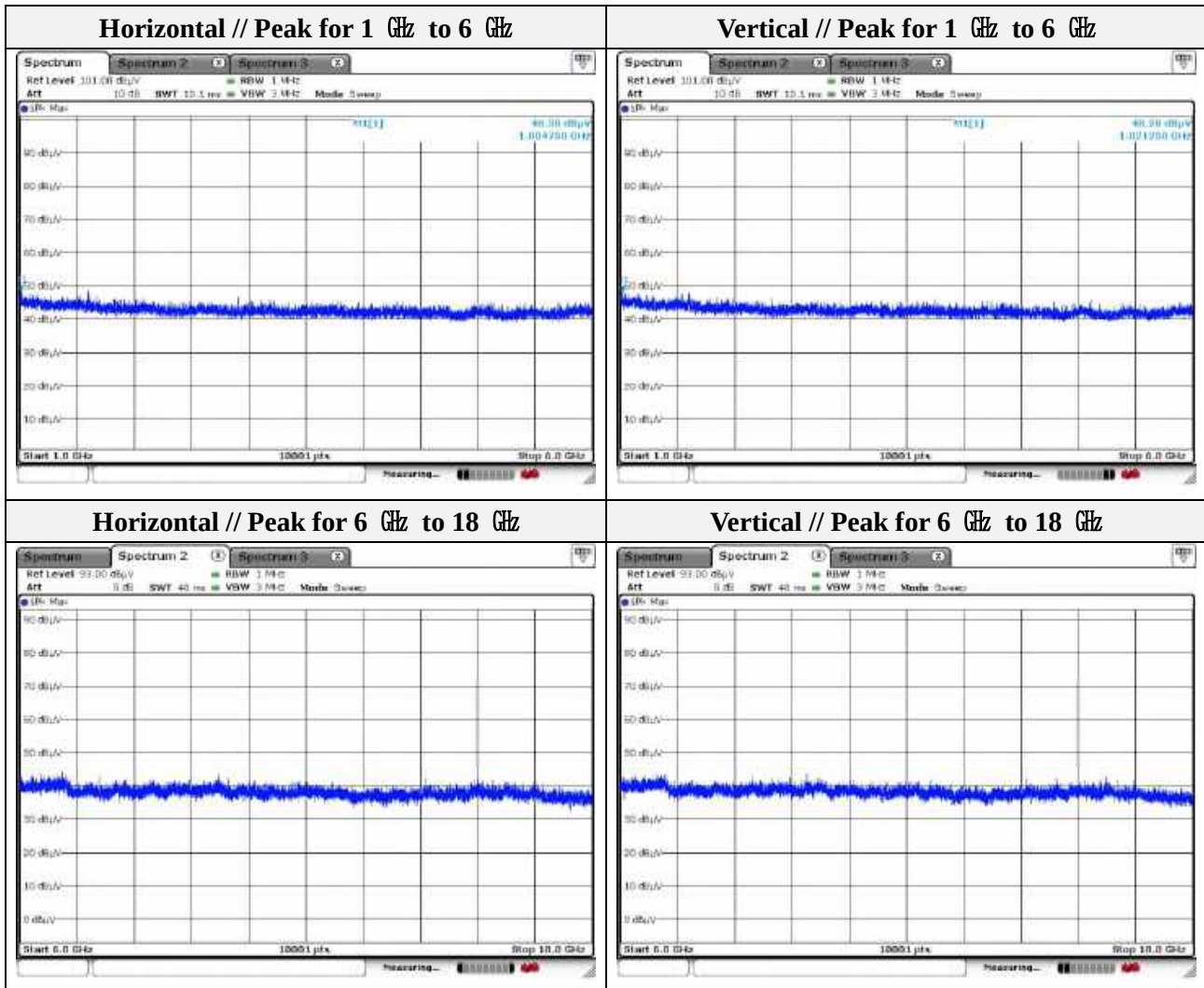
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5748.37	56.30	Peak	H	5.44	-	61.74	122.20	60.46
5877.58	47.59	Peak	H	5.76	-	53.35	103.08	49.73
5848.06	52.61	Peak	V	5.72	-	58.33	122.20	63.87
5911.99	47.00	Peak	V	5.80	-	52.80	74.79	21.99



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Note.

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Mode: UNII-3 802.11n_HT40

Distance of measurement: 3 meter

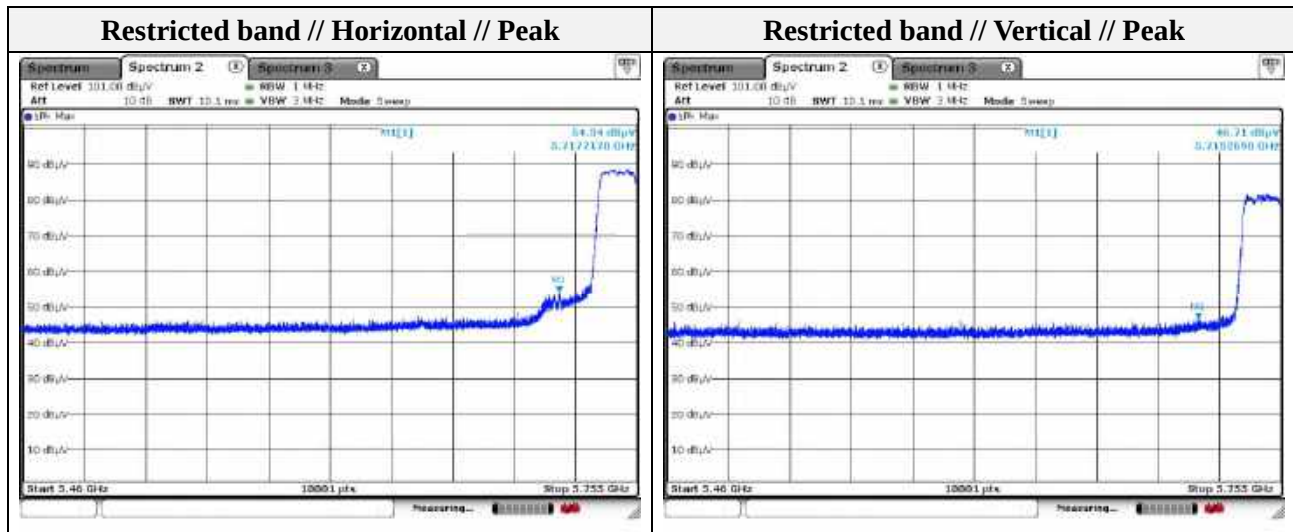
Channel: 151

- Spurious

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1522.70	48.20	Peak	H	-8.88	-	39.32	74.00	34.68
1086.74	48.80	Peak	V	-10.93	-	37.87	74.00	36.13

- Band edge

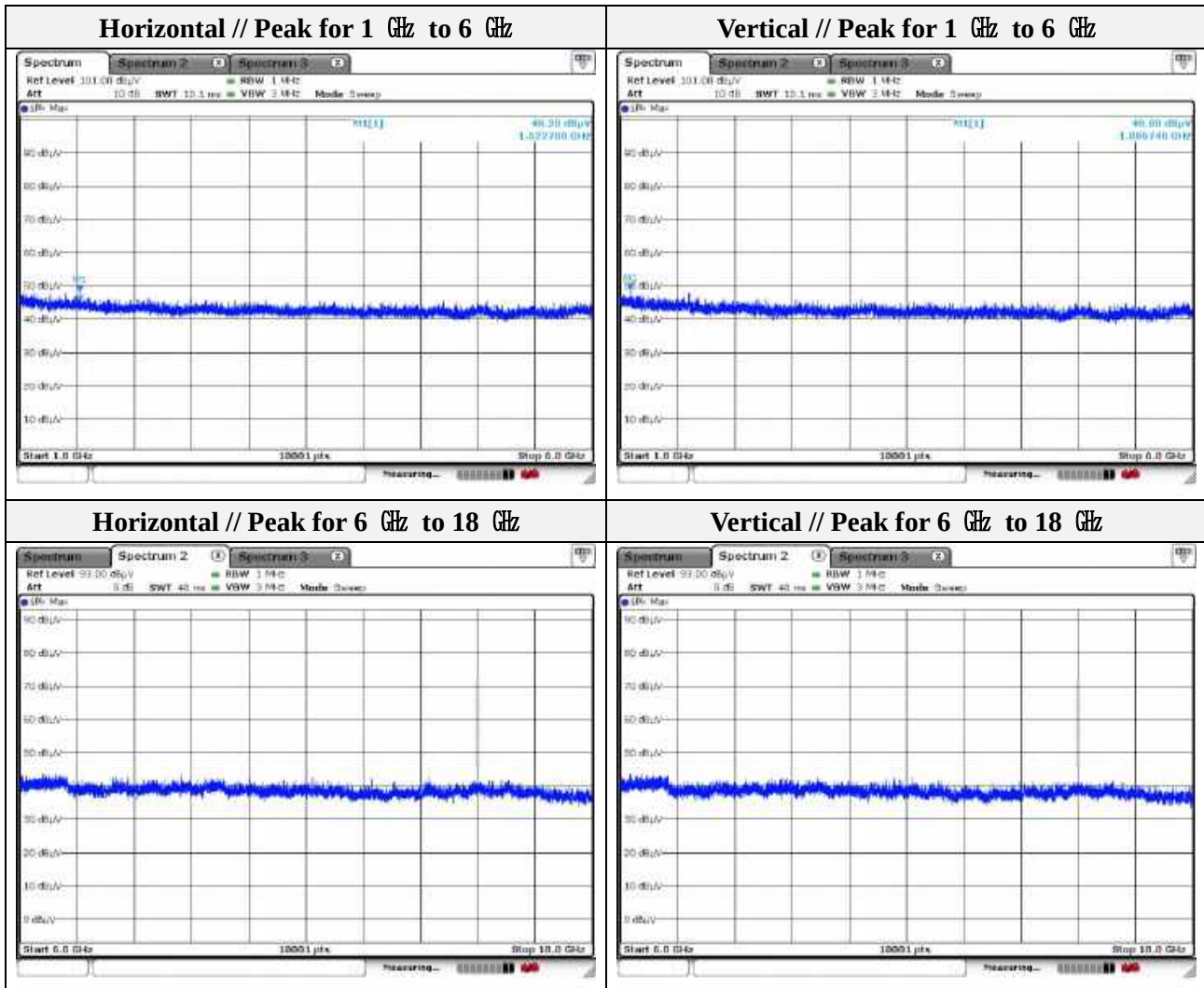
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5717.72	54.34	Peak	H	5.29	-	59.63	110.16	50.53
5715.27	46.71	Peak	V	5.29	-	52.00	109.48	57.48



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Note.

1. No spurious emission were detected above 6 GHz.

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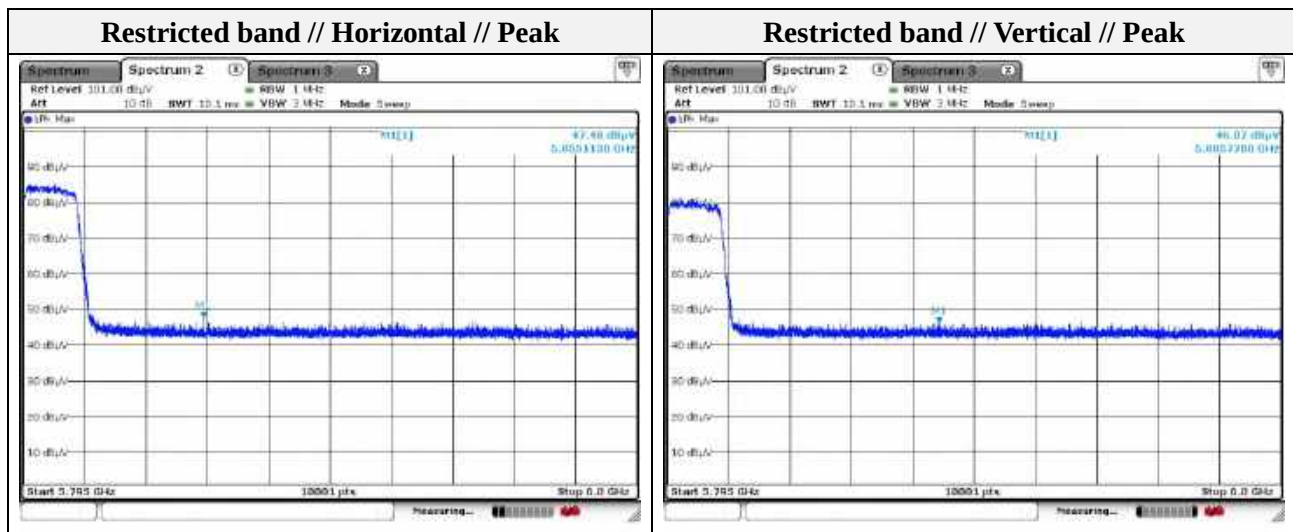
Mode: UNII-3 802.11n_HT40
Distance of measurement: 3 meter
Channel: 159

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1353.71	47.98	Peak	H	-9.72	-	38.26	74.00	35.74
1023.25	47.54	Peak	V	-11.22	-	36.32	74.00	37.68

- **Band edge**

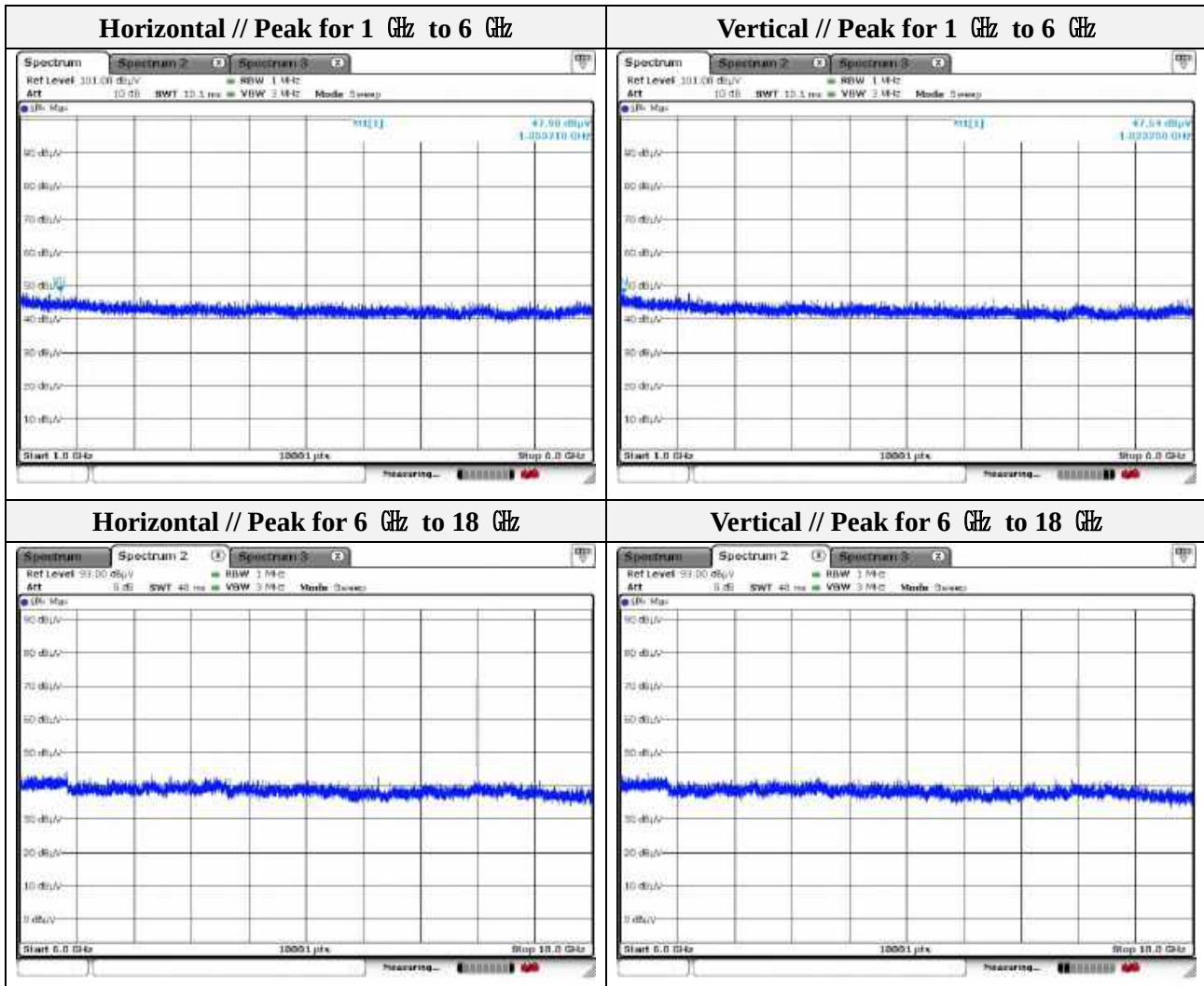
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5855.11	47.48	Peak	H	5.74	-	53.22	110.77	57.55
5885.78	46.07	Peak	V	5.77	-	51.84	96.34	44.50



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Note.

1. No spurious emission were detected above 6 GHz.

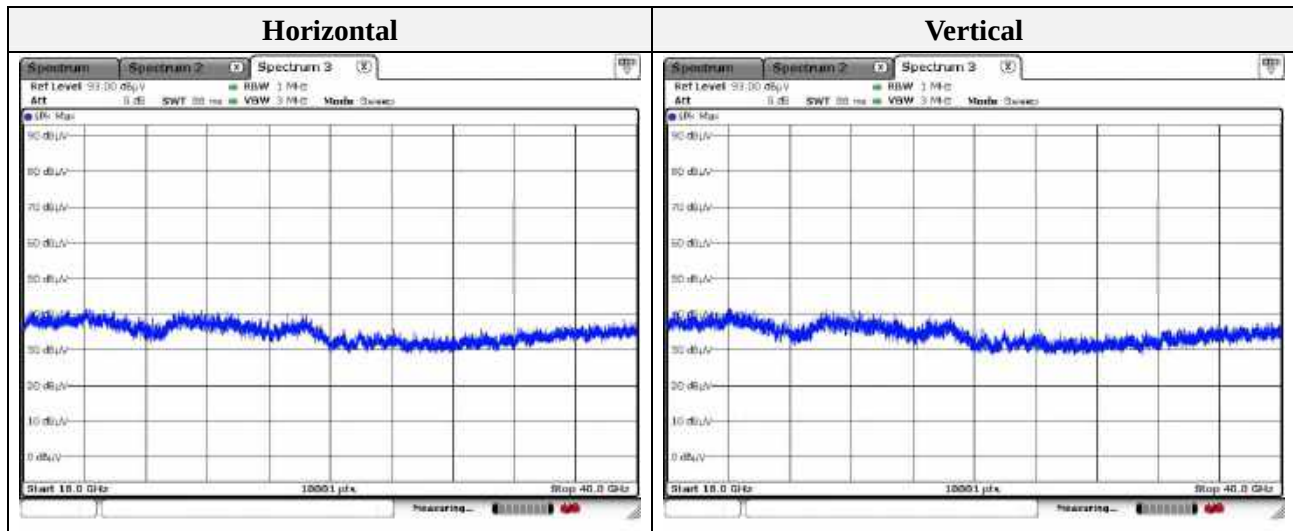
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Test results (18 GHz to 40 GHz) – Worst case

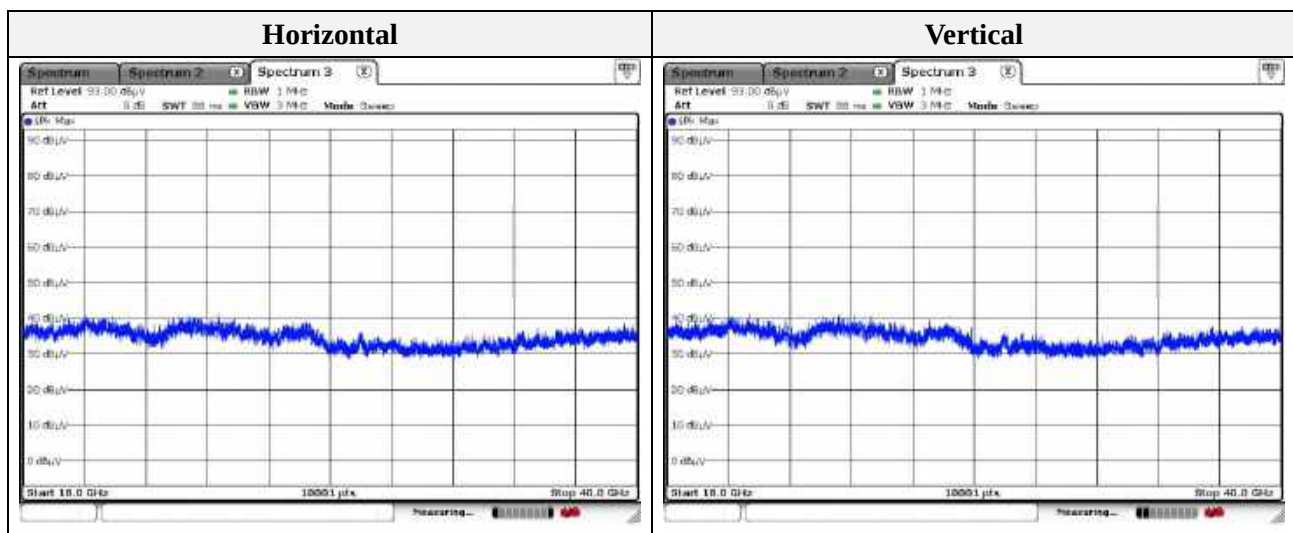
Mode: UNII-1 802.11a
Distance of measurement: 3 meter
Channel: 42



Note.

1. No spurious emission were detected above 18 GHz.

Mode: UNII-2A 802.11n_20
Distance of measurement: 3 meter
Channel: 52



Note.

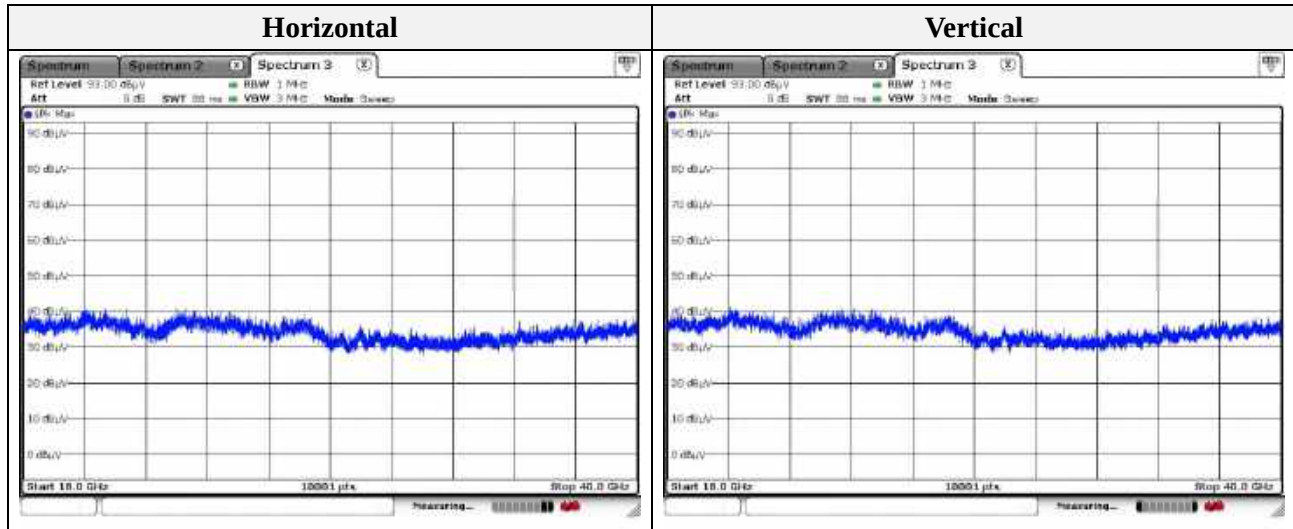
1. No spurious emission were detected above 18 GHz.

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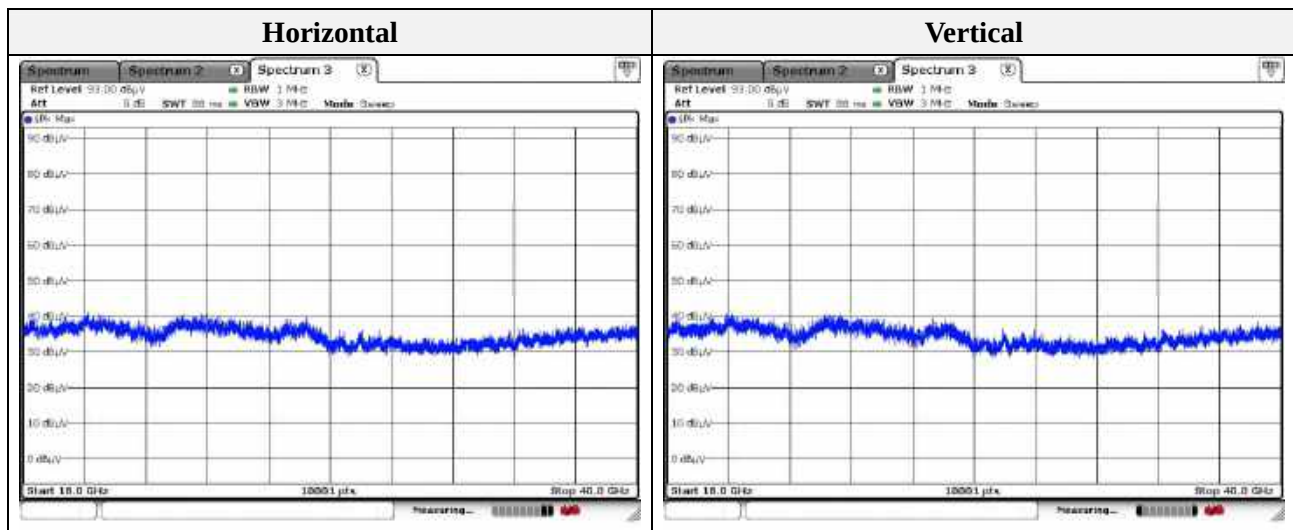
Mode: UNII-2C 802.11n_20
Distance of measurement: 3 meter
Channel: 100



Note.

1. No spurious emission were detected above 18 GHz.

Mode: UNII-3 802.11n_HT20
Distance of measurement: 3 meter
Channel: 149



Note.

1. No spurious emission were detected above 18 GHz.

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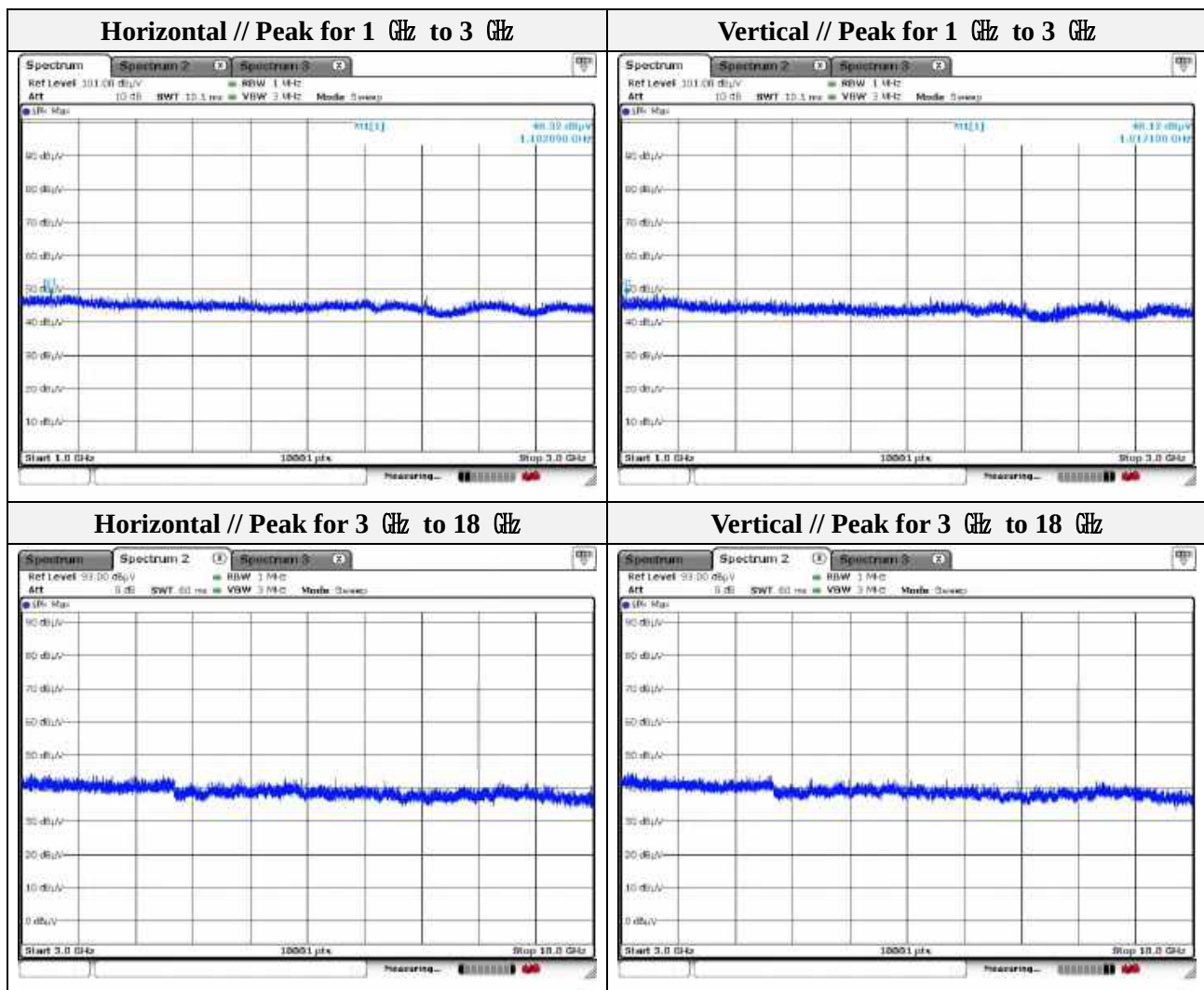
Test results (Above 1 000 MHz)

Mode: LE + WLAN

Distance of measurement: 3 meter

- Spurious

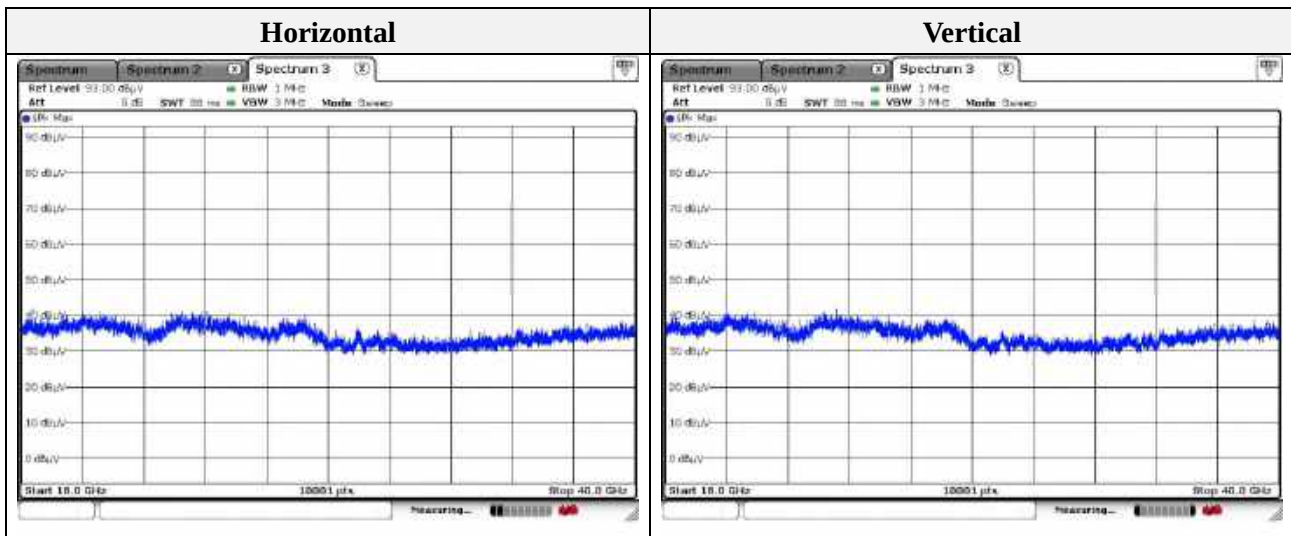
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1150.68	48.80	Peak	H	-11.27	-	37.53	74.00	36.47
1093.89	49.57	Peak	V	-11.28	-	38.29	74.00	35.71



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Note.

1. This product can operate both bluetooth and wlan at the same time, so it additionally performs spurious measurements in the simultaneous operation state.
2. No spurious emission were detected above 3 GHz.
3. No spurious emission were detected above 18 GHz.
4. Average test would be performed if the peak result were greater than the average limit.

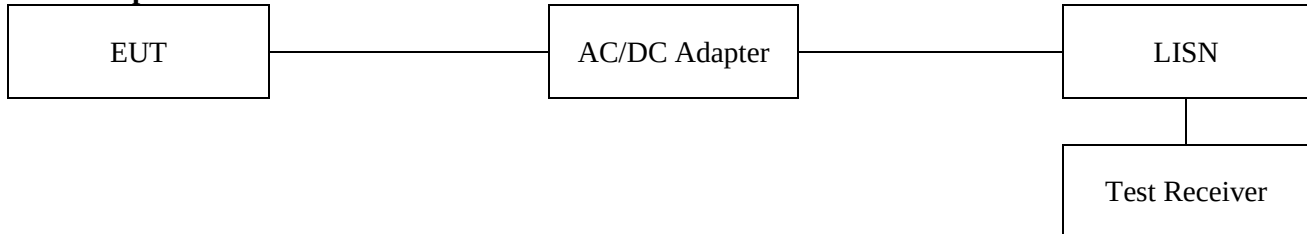
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3.7 AC conducted emissions

Test setup



Limit

According to 15.207(a), for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50uH/50 ohm line impedance stabilization network (LISN). Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequencies ranges.

Frequency of Emission (MHz)	Conducted limit (dBμV/m)	
	Quasi-peak	Average
0.15 – 0.50	66 - 56*	56 - 46*
0.50 – 5.00	56	46
5.00 – 30.0	60	50

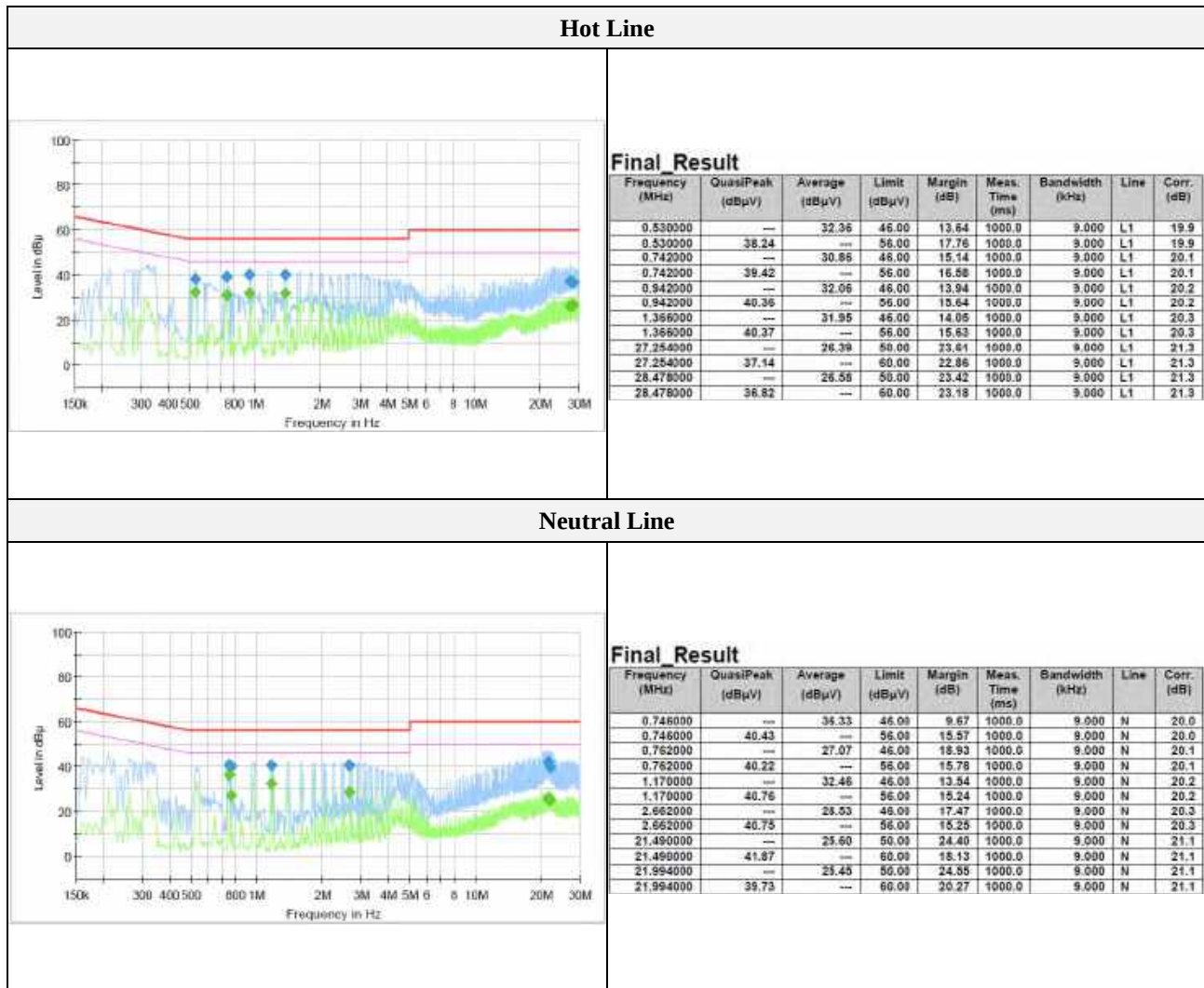
Note:

1. All AC line conducted spurious emission are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and the appropriate frequencies. All data rates and modes were investigated for conducted spurious emission. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section.
2. Both Cable loss and LISN factor are included in measurement level(QP Level or AV Level).



Test results

Mode: UNII-2A_802.11n_HT20 (Worst case)
Distance of measurement: 3 meter
Channel: 52 (Worst case)



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Appendix A. Measurement equipment

Equipment	Manufacturer	Model	Serial No.	Calibration interval	Calibration due.
EMI TEST RECEIVER	ESU26	Rohde & Schwarz	100552	1 year	2021.04.01
SPECTRUM ANALYZER	R&S	FSV40	101725	1 year	2021.06.22
8360B Series Swept Signal Generator	HP	83630B	3844A00786	1 year	2021.01.15
SIGNAL GENERATOR	KEYSIGHT	N5182B	MY59100115	1 year	2021.05.12
Power Meter	Anritsu	ML2495A	1438001	1 year	2021.05.12
Pulse Power Sensor	Anritsu	MA2411B	1339205	1 year	2021.05.12
DC POWER SUPPLY	SORENSEN	DCS40-75E	1408A02745	1 year	2021.01.15
ATTENUATOR	Mini-Circuits	BW-S10-2W263+	1	1 year	2021.01.17
Loop Antenna	Schwarzbeck	FMZB1513	225	2 years	2021.02.15
BILOG ANTENNA	VULB 9168	SCHWARZBECK	9168-461	2 years	2022.05.26
HORN ANTENNA	A.H.	SAS-571	414	1 years	2021.01.31
BAND REJECT FILTER	MICRO-TRONICS	BRM50702	G272	1 year	2021.01.15
BAND REJECT FILTER	MICRO-TRONICS	BRM50716	G199	1 year	2021.01.15
AMPLIFIER	310N	SONOMA INSTRUMENT	401123	1 year	2021.06.08
PREAMPLIFIER	8449B	AGILENT	8008A01640	1 year	2021.04.01
ATTENUATOR	F04-C1206-01	SRT	20022403	1 year	2021.05.06
EMI Test Receiver	R&S	ESR3	101783	1 year	2021.01.20
EMI Test Receiver	R&S	ESU26	100552	1 year	2021.04.01
Pulse Limiter	R&S	ESH3-Z2	101915	1 year	2021.01.02
LISN	R&S	ENV216	101787	1 year	2021.01.02

Peripheral devices

Device	Manufacturer	Model No.	Serial No.
Notebook computer	LG Electronics Inc.,	15UD590	904QCSF564006
Test Jig Board	N/A	N/A	N/A

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