TEST REPORT

KES Co., Ltd.
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Anyang-si, Gyeonggi-do, 14057, Republic of Korea
Tel : +82-31-425-6200, Fax : +82-31-341-3838

■ **FCC TEST REPORT**

1. Client

○ Name : THINKWARE CORPORATION

○ Address : A, 9FL., Samwhan Hipex, 240, Pangyoyeok-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, South Korea

2. Sample Description

○ Product item : THINKWARE DASH CAM

○ Model name : ARC700

○ Manufacturer etc. : THINKWARE CORPORATION

3. Date of test : 2025.03.05 ~ 2025.03.14

4. Location of Test : ☑ Permanent Testing Lab ☐ On Site Testing

○ Adress : 473-21, Gayeo-ro, Yeoju-si, Gyeonggi-do, Korea

5. Test method used : Part 15 Subpart E 15.407

6. Test result : PASS

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
This laboratory is not accredited for the test results marked *.
This test report is not related to KOLAS accreditation.

Affirmation	Tested by	Technical Manager
	Name : Gu-Bong, Kang (Signature) [강구봉]2025/03/25	Name : Yeong-Jun Cho (Signature) [조영준]2025/03/25

2025 . 03. 25.

KES Co., Ltd.

Accredited by KOLAS, Republic of KOREA

REPORT REVISION HISTORY

Date	Test Report No.	Revision History
2025.03.24	KES-RF250060	Initial
2025.03.25	KES-RF250060-R1	Corrected Model name at Page 1, 4, 5 : 'ARC 700' -> 'ARC700'

Use of uncertainty of measurement for decisions on conformity (decision rule):

■ No decision rule is specified by the standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty("simple acceptance" decision rule, previously known as "accuracy method").

☐ Other (to be specified, for example when required by the standard or client)

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1. General information

Applicant:	THINKWARE CORPORATION
Applicant address:	A, 9FL., Samwhan Hipex, 240, Pangyoyeok-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, South Korea
Test site:	KES Co., Ltd.
Test site address:	☐ #3002, #3503, #3701, 40, Simin-daero365beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Republic of Korea ☒ 473-21, Gayeo-ro, Yeoju-si, Gyeonggi-do, Korea
Test Facility	FCC Accreditation Designation No.: KR0100, Registration No.: 444148
FCC rule part(s):	15.407
FCC ID:	2ADTG-ARC700
Test device serial No.:	☒ Production ☐ Pre-production ☐ Engineering

1.1. EUT description

Equipment under test	THINKWARE DASH CAM
Frequency range & Number of channels	2 402 ㎒ ~ 2 480 ㎒ (LE 1 Mbps) : 40 ch 2 412 ㎒ ~ 2 462 ㎒ (802.11b/g/n_HT20) : 11 ch 2 422 ㎒ ~ 2 452 ㎒ (802.11n_HT40) : 7 ch **5 180 ㎒ ~ 5 240 ㎒ (802.11a/n_HT20/ac_VHT20) : 4 ch** **UNII-1 5 190 ㎒ ~ 5 230 ㎒ (802.11n_HT40/ac_VHT40) : 2 ch** **5 210 ㎒ (802.11ac_VHT80) : 1 ch**
Model	ARC700
Modulation technique	GFSK, DSSS, **OFDM**
Antenna specification	2.4 ㎓ band PCB Antenna // Peak gain: 4.12 ㏈i UNII-1 PCB Antenna // Peak gain: 1.78 ㏈i
Power source	DC 12 V, 24 V
H/W version	V3.1
S/W version	V0.21
Serial Number	QALCCFLD000282B

1.2. Test configuration

The **THINKWARE CORPORATION // THINKWARE DASH CAM // ARC700 // FCC ID: 2ADTG-ARC700** was tested according to the specification of EUT, the EUT must comply with following standards and KDB documents.

FCC Part 15.407
KDB 789033 D02 v02r01
ANSI C63.10-2013

1.3. Information about derivative model

N/A.

1.4. Accessory information

Equipment	Manufacturer	Model	Serial No.	Power source
Main unit (Front camera)	THINKWARE CORPORATION	-	-	DC 12 V, DC 24 V
Rear camera	THINKWARE CORPORATION	-	-	-
Power cable	-	-	-	-
Hardwiring cable (Front camera)	-	-	-	-
Hardwiring cable (Rear camera)	-	-	-	-
MicroSD memory card	-	-	-	-

1.5. Device modifications

N/A

1.6. Sample calculation

Where relevant, the following sample calculation is provided
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.

Offset(㏈) = RF cable loss(㏈) + attenuator factor(㏈).
= 1.59 + 20 = 21.59 (㏈)

For Radiation test :
Field strength level (㏈㎶/m) = Measured level (㏈㎶) + Antenna factor (㏈) + Cable loss (㏈) – Amplifier gain (㏈)

1.7. Worst case data rate

1. Worst-case data rates were:

802.11a : 6 Mbps

802.11n_HT20/40 : MCS0

802.11ac_VHT20/40/80 : MCS0

1.8. Measurement Uncertainty

Test Item		Uncertainty
Uncertainty for Conduction emission test		2.22 ㏈ (SHIELD ROOM #6)
Uncertainty for Radiation emission test (include Fundamental emission)	Below 1 ㎓	4.04 ㏈ (SAC #6)
	Above 1 ㎓	5.32 ㏈ (SAC #5)
Note. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

1.9. Frequency/channel operations

Ch.	Frequency (㎒)	Rate(Mbps)
00	2 402	LE 1 Mbps
. .	. .	. .
20	2 442	LE 1 Mbps
. .	. .	. .
39	2 480	LE 1 Mbps

Ch.	Frequency (㎒)	Mode
1	2 412	802.11b/g/n_HT20
. .	. .	. .
6	2 437	802.11b/g/n_HT20
. .	. .	. .
11	2 462	802.11b/g/n_HT20

Ch.	Frequency (㎒)	Mode
3	2 422	802.11n_HT40
. .	. .	. .
6	2 437	802.11n_HT40
. .	. .	. .
9	2 452	802.11n_HT40

Ch.	Frequency (㎒)	Mode
36	**5 180**	**802.11a/an_HT20/ac_VHT20**
.	.	.
.	.	.
44	**5 220**	**802.11a/an_HT20/ac_VHT20**
.	.	.
.	.	.
48	**5 240**	**802.11a/an_HT20/ac_VHT20**

Ch.	Frequency (㎒)	Mode
38	**5 190**	**802.11an_HT40/ac_VHT40**
.	.	.
.	.	.
46	**5 230**	**802.11an_HT40/ac_VHT40**

Ch.	Frequency (㎒)	Mode
42	**5 210**	**802.11ac_VHT80**

2. Summary of tests

Section in FCC Part 15	Parameter	Test results
15.407(a)	26 ㏈ bandwidth & 99 % bandwidth	N/T Note.1
15.407(a)	6 ㏈ bandwidth	N/T Note.1
15.407(a)	Maximum conducted output power	Pass
15.407(a)	Power spectral density	N/T Note.1
15.407(g)	Frequency stability	N/T Note.1
15.205, 15.209, 15.407(b)	Radiated restricted band and emission	Pass
15.207(a)	AC power line conducted emissions	N/T Note.2
15.203	Antenna Requirement	Pass

*N/T: Not Tested

Note.

1. This product is equipped with an approved module, please refer to Module Report below for details. Report No. E04A24070678F00104
2. This device is powered by DC 12 V or DC 24 V.
3. By the request of applicant, test is performed with power setting value below :

Mode	UNII-1	
	Frequency (㎒)	Setting value
802.11a (6 Mbps)	5 180 ~ 5 240	44
802.11n_HT20 (MCS0)		44
802.11ac_VHT20 (MCS0)		44
802.11n_HT40 (MCS0)	5 190 ~ 5 230	44
802.11ac_VHT40 (MCS0)		44
802.11ac_VHT80 (MCS0)	5 210	44

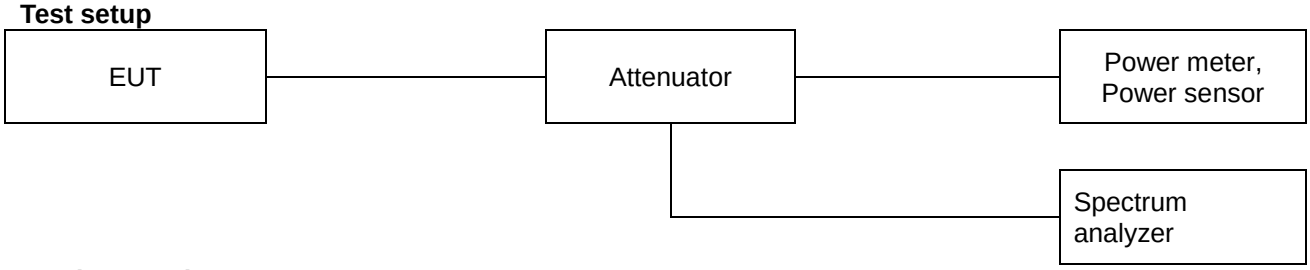
3. Test results

3.1. Maximum conducted output power

Test procedure

KDB 789033 D02 v02r01– Section E.3.a) or b)
Used test method is Section E.3.b)

Test setup



Section E.3.a)

Method PM (Measurement using an RF average power meter):

i. Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied.
   - The EUT is configured to transmit continuously or to transmit with a constant duty cycle.
   - At all times when the EUT is transmitting, it must be transmitting at its maximum power control level.
   - The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.

ii. If the transmitter does not transmit continuously, measure the duty cycle, x, of the transmitter output signal as described in section II.B.

iii. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.

iv. Adjust the measurement in dBm by adding 10 log (1/x) where x is the duty cycle (e.g., 10 log (1/0.25) if the duty cycle is 25 %).

Section E.3.b)

Method PM-G (Measurement using a gated RF average power meter):

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

Limit

Band	EUT Category		Limit
UNII-1		Outdoor access point	1 W (30 dBm)
	✔	Indoor access point	
		Fixed point-to-point access point	
		Mobile and portable client device	250 mW(23.97 dBm)
UNII-2A			250 mW or 11 dBm + 10logB*
UNII-2C			250 mW or 11 dBm + 10logB*
UNII-3			1 W (30 dBm)

Note.

1. Limit B is the 26 dB emission bandwidth.

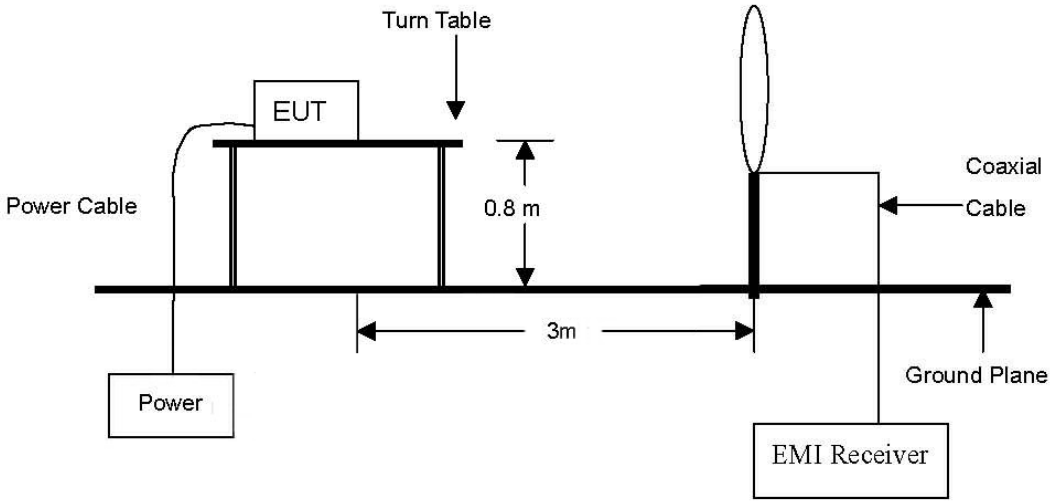
Test results

Mode	Frequency (㎒)	Detector mode	Ant Gain (dBi)	Output power (㏈m)	FCC Limit (㏈m)
802.11a	5 180	AV	1.78	13.31	30
	5 220			13.18	
	5 240			12.78	
802.11n_HT20	5 180			11.52	
	5 220			11.75	
	5 240			11.67	
802.11ac_VHT20	5 180			10.86	
	5 220			11.05	
	5 240			11.45	
802.11n_HT40	5 190			11.99	
	5 230			11.94	
802.11ac_VHT40	5 190			10.20	
	5 230			10.28	
802.11ac_VHT80	5 210			9.60	

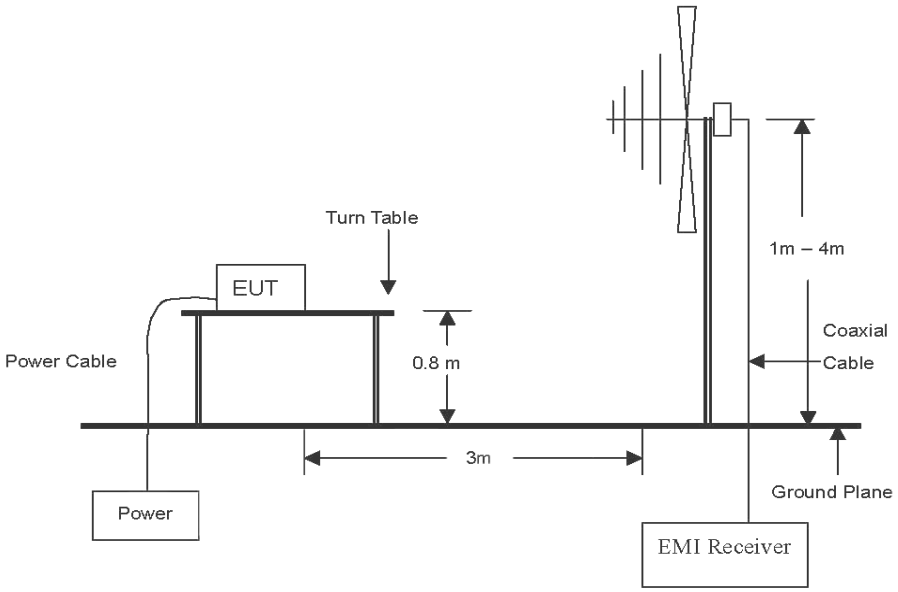
3.2. Radiated restricted band and emissions

Test setup

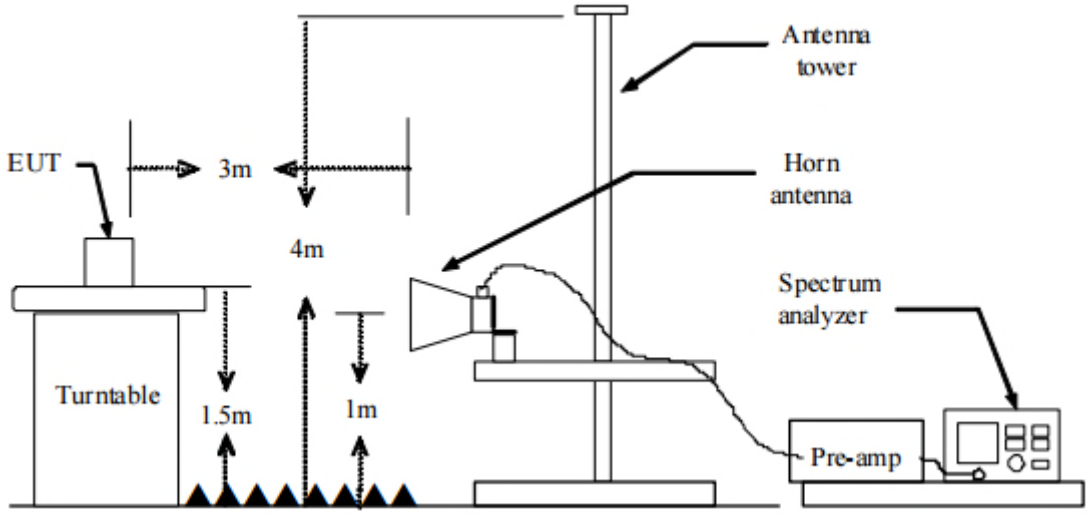
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 ㎑ to 30 ㎒ Emissions.



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



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



Test procedure

Radiated emissions from the EUT were measured according to the dictates in section 11.11 & 11.12 of ANSI C63.10-2013.

Test procedure below 30 ㎒

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, ground parallel and perpendicular of the antenna are set to make the measurement. It was determined that **parallel** was worst-case orientation; therefore, all final radiated testing was performed with the EUT in **parallel.**
3. 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.
4. The test-receiver system was set to average or quasi peak detect function and Specified Bandwidth with Maximum hold mode.

Test procedure above 30 ㎒

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground for 30 ㎒-1 ㎓ and 1.5 meters for above 1 ㎓ at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The antenna is a bi-log antenna, a horn antenna ,and its height are 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.
3. 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 table was turned from 0 degrees to 360 degrees to find the maximum reading.
4. The test receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

5. Spectrum analyzer settings for f < 1 ㎓:
   ① Span = wide enough to fully capture the emission being measured
   ② RBW = 120 ㎑
   ③ VBW ≥ RBW
   ④ Detector = quasi peak
   ⑤ Sweep time = auto
   ⑥ Trace = max hold

6. Spectrum analyzer settings for *f* ≥1 ㎓: Peak
   ① Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
   ② RBW = 1 ㎒
   ③ VBW ≥ 3 ㎒
   ④ Detector = peak
   ⑤ Sweep time = auto
   ⑥ Trace = max hold
   ⑦ Trace was allowed to stabilize

7. Spectrum analyzer settings for *f* ≥1 ㎓: Average
   ① Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
   ② RBW = 1 ㎒
   ③ VBW ≥ 3 × RBW
   ④ Detector = RMS, if span/(# of points in sweep) ≤ (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 ㏈ 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 ㎒, extrapolation factor of 40 ㏈/decade of distance. $F_d = 40\log(D_m/Ds)$
   f ≥30 ㎒, extrapolation factor of 20 ㏈/decade of distance. $F_d = 20\log(D_m/Ds)$
   Where:
   F_d = Distance factor in ㏈
   D_m = Measurement distance in meters
   D_s = Specification distance in meters
2. Field strength(㏈㎶/m) = Level(㏈㎶) + CF (㏈) + or DCF(㏈)
3. Margin(㏈) = Limit(㏈㎶/m) - Field strength(㏈㎶/m)
4. Emissions below 18 ㎓ were measured at a 3 meter test distance while emissions above 18 ㎓ were measured at a 1 meter test distance with the application of a distance correction factor.
5. 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.**
6. The worst-case emissions are reported however emissions whose levels were not within 20 ㏈ of respective limits were not reported.
7. According to exploratory test no any obvious emission were detected from 9 ㎑ to 30 ㎒. 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.

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 (㎒)	Distance (Meters)	Radiated (㎶/m)
0.009 ~ 0.490	300	2400/F(㎑)
0.490 ~ 1.705	30	24000/F(㎑)
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 ㎒, 76 ~ 88 ㎒, 174 ~ 216 ㎒ or 470 ~ 806 ㎒. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

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 ㎓ band: all emissions outside of the 5.15–5.35 ㎓ band shall not exceed an e.i.r.p of –27 ㏈m/㎒.
(2) For transmitters operating in the 5.25-5.35 ㎓ band: All emissions outside of the 5.15-5.35 ㎓ band shall not exceed an e.i.r.p. of −27 ㏈m/㎒.
(3) For transmitters operating in the 5.47-5.725 ㎓ band: All emissions outside of the 5.47-5.725 ㎓ band shall not exceed an e.i.r.p. of −27 ㏈m/㎒.
(4) For transmitters operating in the 5.725-5.85 ㎓ band:
i) All emissions shall be limited to a level of −27 ㏈m/㎒ at 75 ㎒ or more above or below the band edge increasing linearly to 10 ㏈m/㎒ at 25 ㎒ above or below the band edge, and from 25 ㎒ above or below the band edge increasing linearly to a level of 15.6 ㏈m/㎒ at 5 ㎒ above or below the band edge, and from 5 ㎒ above or below the band edge increasing linearly to a level of 27 ㏈m/㎒ at the band edge.
ii) Devices certified before March 2, 2017 with antenna gain greater than 10 ㏈i 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 ㏈i 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 ㎒.
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 ㎒.
(6) Unwanted emissions below 1 ㎓ 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.

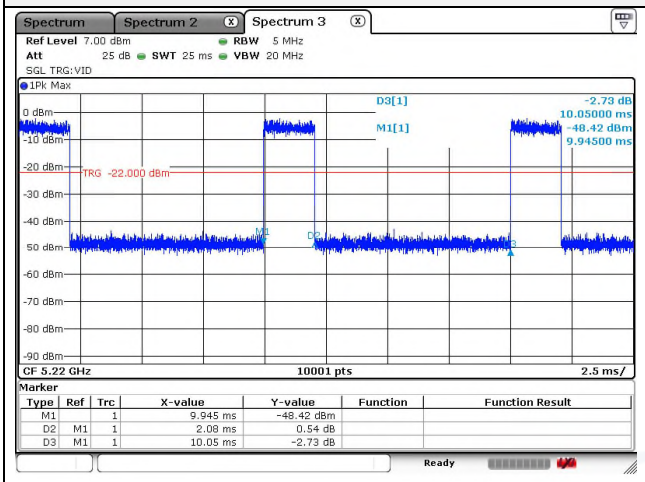
Duty cycle
Regarding to KDB 789033 D02 v02r01, B)2)b), the maximum duty cycles of all modes were investigated and set the spectrum analyzer as below.
Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value. Set detector = peak or average. The zero-span measurement method shall not 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.

For the band 5.150-5.250 ㎓

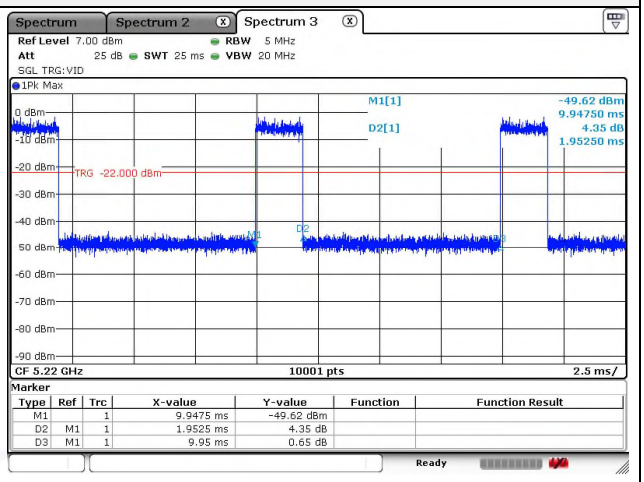
Test mode	T_{on} time (㎳)	Period (㎳)	Duty cycle (Linear)	Duty cycle (%)	Duty cycle correction factor (㏈)
802.11a	2.080	10.050	0.21	20.70	6.78
802.11n_HT20	1.953	9.950	0.20	19.63	6.99
802.11ac_VHT20	0.693	10.060	0.07	6.89	11.55
802.11n_HT40	0.950	10.015	0.09	9.49	10.46
802.11ac_VHT40	0.350	10.078	0.03	3.47	15.23
802.11ac_VHT80	0.188	10.078	0.02	1.87	16.99

Note:
Duty cycle (Linear) = T_{on} time/Period
DCF(Duty cycle correction factor (㏈)) = 10log(1/duty cycle)

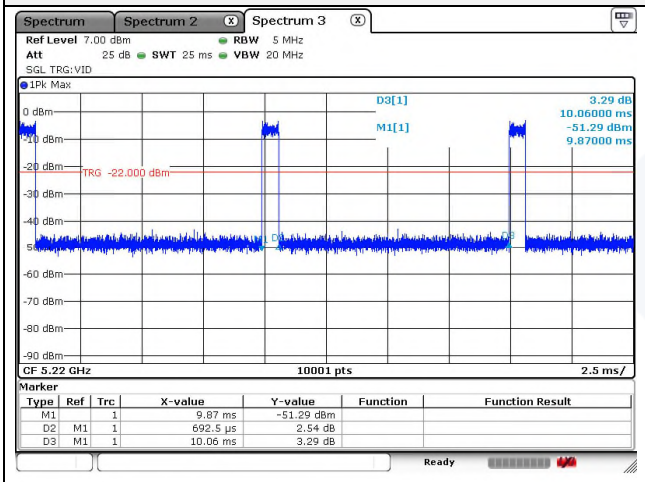
802.11a (6 Mbps)



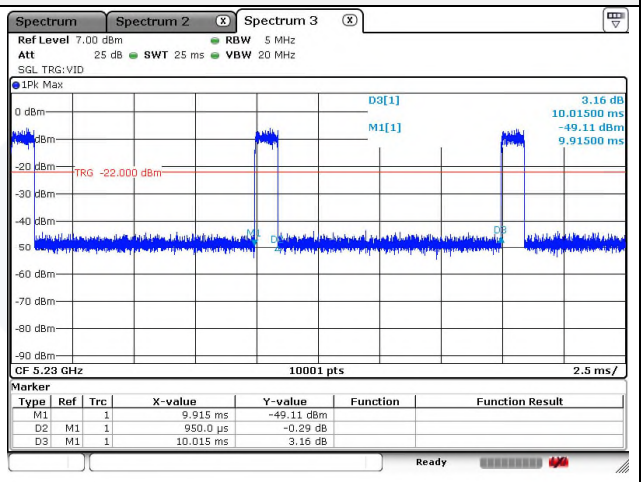
802.11n_HT20 (MCS0)



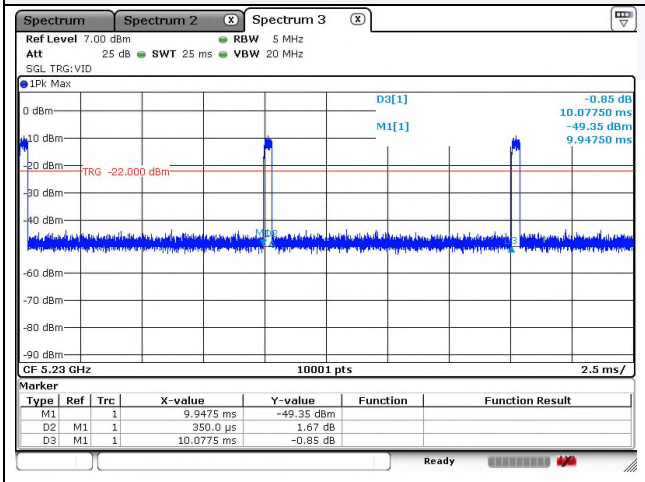
802.11ac_VHT20 (MCS0)



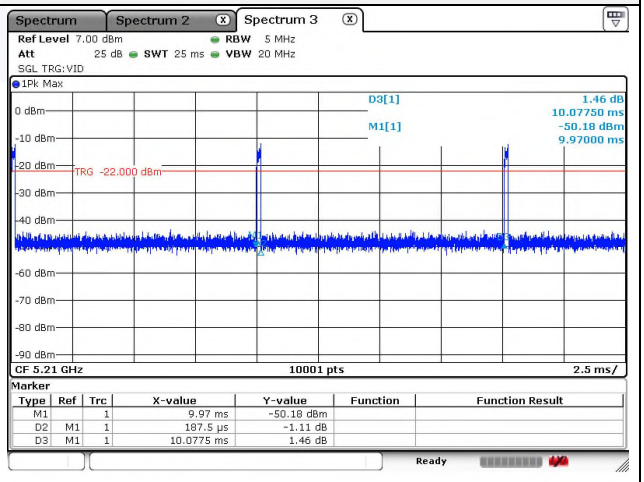
802.11n_HT40 (MCS0)



802.11ac_VHT40 (MCS0)



802.11ac_VHT80 (MCS0)



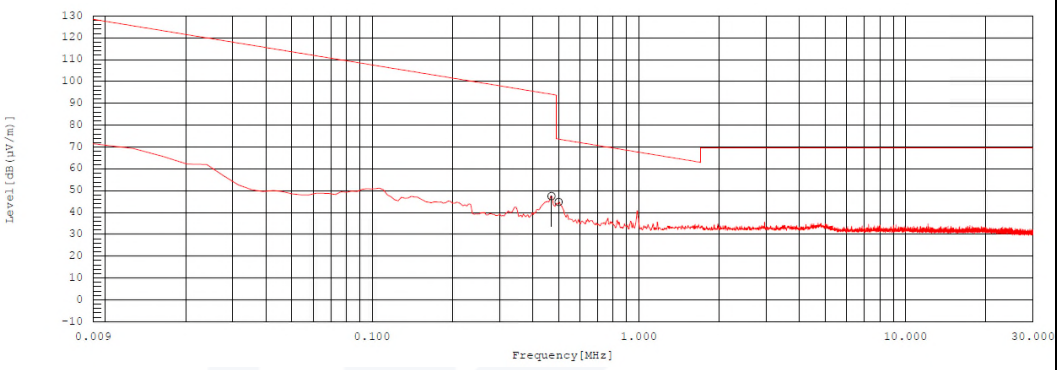
Note.

1. Tested with the maximum duty that can be set on the EUT.

Test results (Below 30 ㎒)

Band	802.11a (Worst Case)_DC 12 V
Distance of measurement:	3 meter
Channel	36 (Worst Case)

Parallel



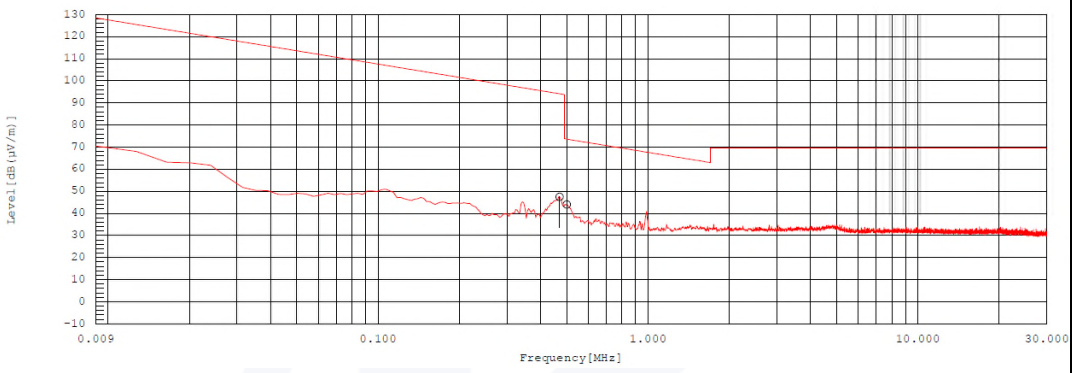
No.	Frequency [MHz]	Reading PK [dB(µV)]	c.f [dB(1/m)]	Result PK [dB(µV/m)]	Limit PK [dB(µV/m)]	Angle [deg]	Remark
1	0.470	26.7	20.8	47.5	----------	309.9	
2	0.500	23.9	20.9	44.8	----------	309.9	

Note.

1. No spurious emission were detected under 30 ㎒, Above data is peak result.

Band	802.11a (Worst Case)_DC 24 V
Distance of measurement:	3 meter
Channel	36 (Worst Case)

Parallel



No.	Frequency [MHz]	Reading PK [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Limit PK [dB(μV/m)]	Angle [deg]	Remark
1	0.470	26.7	20.8	47.5	----------	0.1	
2	0.500	23.1	20.9	44.0	----------	28.5	

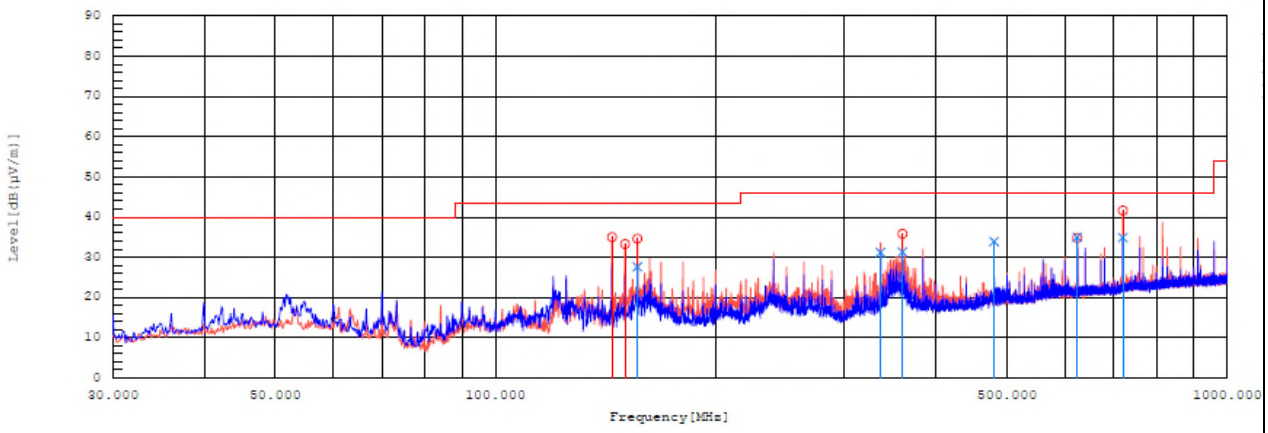
Note.

1. No spurious emission were detected under 30 ㎒, Above data is peak result.

Test results (Below 1 000 ㎒)

Band	802.11a (Worst Case)_DC 12 V
Distance of measurement:	3 meter
Channel	36 (Worst Case)

Horizontal // Vertical

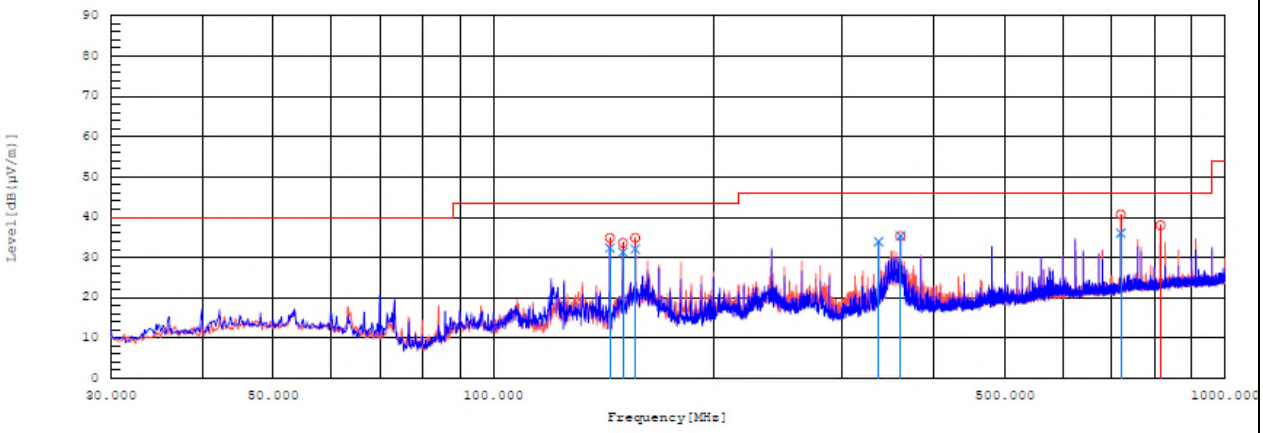


Final Result

No.	Frequency [MHz]	Pol	Reading QP [dB(μV)]	c.f [dB(1/m)]	Result QP [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	144.339	H	51.8	-16.8	35.0	43.5	8.5	187.0	115.2	
2	150.401	H	50.4	-17.1	33.3	43.5	10.2	210.0	115.2	
3	156.343	H	51.2	-16.6	34.6	43.5	8.9	185.0	93.2	
4	156.343	V	44.2	-16.6	27.6	43.5	15.9	100.0	332.7	
5	335.914	V	40.1	-8.9	31.2	46.0	14.8	104.0	0.1	
6	359.921	V	39.5	-8.2	31.3	46.0	14.7	120.0	226.3	
7	360.043	H	44.0	-8.2	35.8	46.0	10.2	100.0	89.1	
8	479.959	V	40.0	-6.1	33.9	46.0	12.1	110.0	163.5	
9	624.004	H	38.0	-3.2	34.8	46.0	11.2	104.0	22.5	
10	624.004	V	38.2	-3.2	35.0	46.0	11.0	101.0	269.8	
11	720.034	H	43.5	-1.9	41.6	46.0	4.4	109.0	43.6	
12	720.034	V	36.8	-1.9	34.9	46.0	11.1	104.0	315.0	

Band	802.11a (Worst Case)_DC 24 V
Distance of measurement:	3 meter
Channel	36 (Worst Case)

Horizontal // Vertical



Final Result

No.	Frequency [MHz]	Pol	Reading QP [dB(µV)]	c.f [dB(1/m)]	Result QP [dB(µV/m)]	Limit QP [dB(µV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	144.339	H	51.7	-16.8	34.9	43.5	8.6	193.0	67.2	
2	144.339	V	49.1	-16.8	32.3	43.5	11.2	107.0	65.9	
3	150.401	H	50.7	-17.1	33.6	43.5	9.9	188.0	67.2	
4	150.401	V	48.4	-17.1	31.3	43.5	12.2	124.0	45.8	
5	156.343	H	51.5	-16.6	34.9	43.5	8.6	204.0	67.2	
6	156.343	V	48.7	-16.6	32.1	43.5	11.4	164.0	95.3	
7	336.035	V	42.8	-8.9	33.9	46.0	12.1	100.0	332.9	
8	360.043	H	43.5	-8.2	35.3	46.0	10.7	100.0	248.1	
9	360.043	V	43.5	-8.2	35.3	46.0	10.7	105.0	199.9	
10	720.034	H	42.6	-1.9	40.7	46.0	5.3	110.0	182.7	
11	720.034	V	37.9	-1.9	36.0	46.0	10.0	104.0	27.3	
12	816.064	H	38.7	-0.7	38.0	46.0	8.0	100.0	270.1	

Test results (Above 1 000 ㎒)

Mode:	DC 12 V_802.11a (6 Mbps)
Distance of measurement:	3 meter
Channel:	36

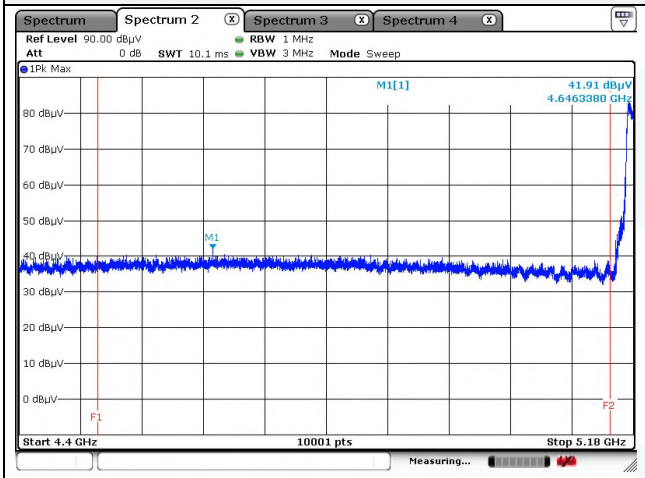
- **Spurious**

Frequency (㎒)	Level (dB㎶)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
1 070.24	44.70	Peak	V	-7.51	-	37.19	74.00	36.81
1 086.74	43.85	Peak	H	-7.42	-	36.43	74.00	37.57

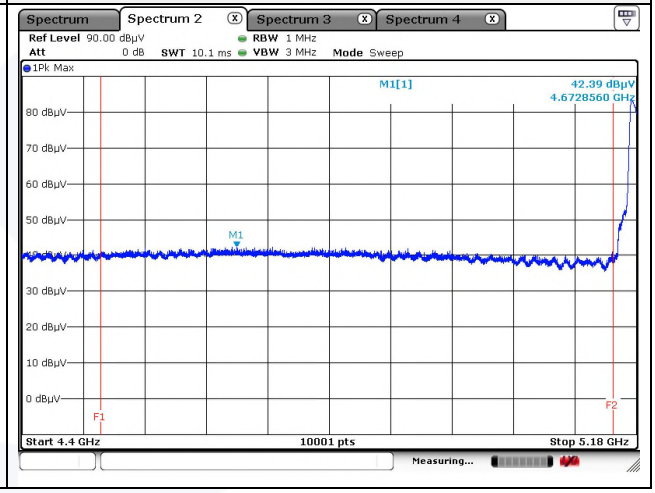
- **Band edge**

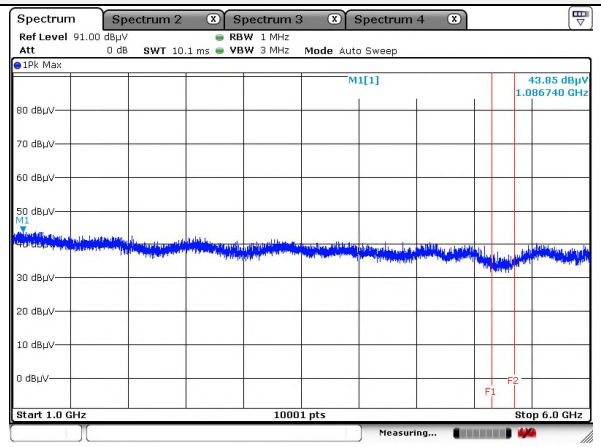
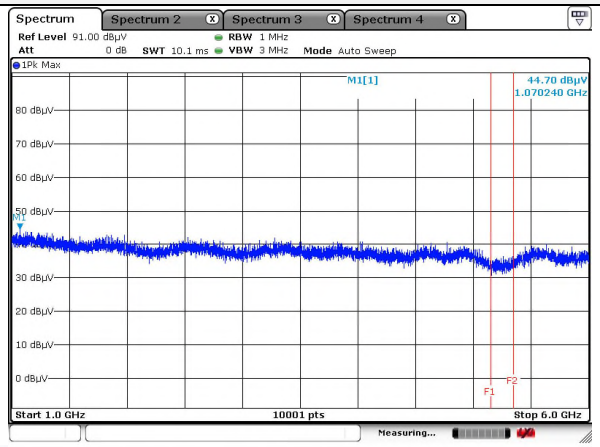
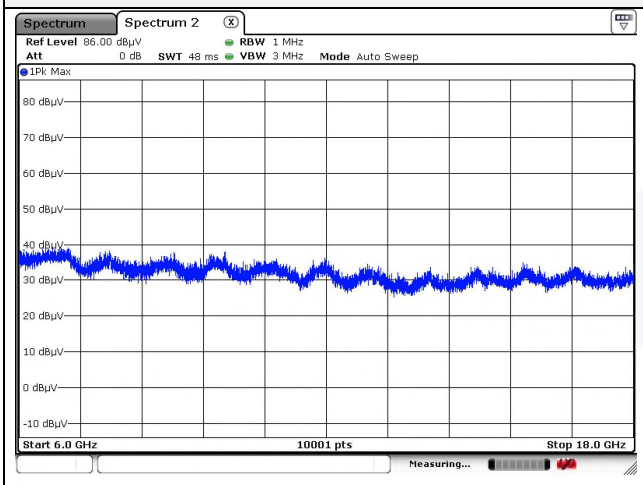
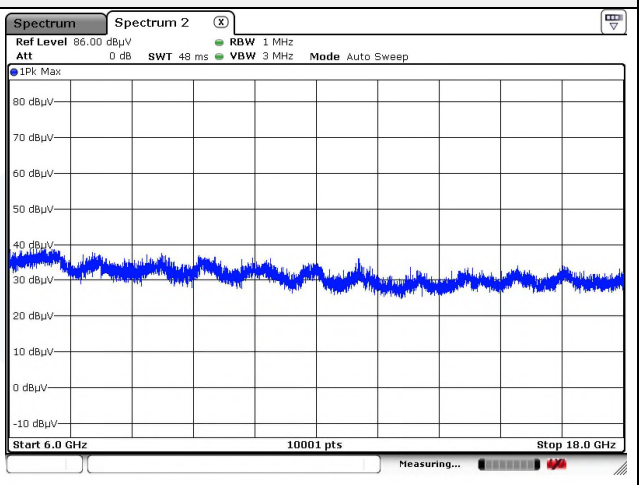
Frequency (㎒)	Level (dB㎶)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
4 646.34	41.91	Peak	H	4.76	-	46.67	74.00	27.33
4 672.86	42.39	Peak	V	4.85	-	47.24	74.00	26.76

Restricted band // Horizontal // Peak



Restricted band // Vertical // Peak



Horizontal // Peak for 1 ㎓ to 6 ㎓	Vertical // Peak for 1 ㎓ to 6 ㎓
	
Horizontal // Peak for 6 ㎓ to 18 ㎓	**Vertical // Peak for 6 ㎓ to 18 ㎓**
	

Note.

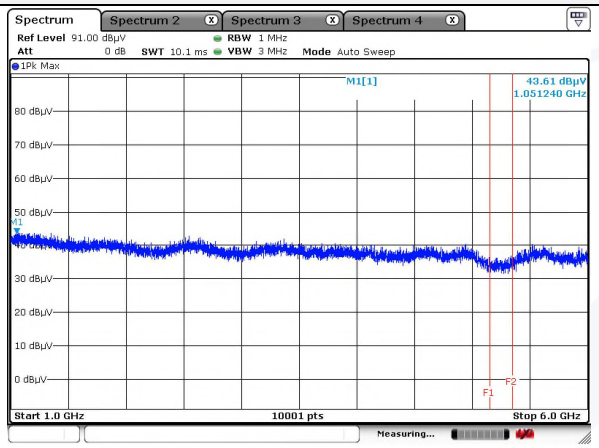
1. No spurious emission were detected above 6 ㎓.
2. Average test would be performed if the peak result were greater than the average limit.

Mode:	DC 12 V_802.11a (6 Mbps)
Distance of measurement:	3 meter
Channel:	44

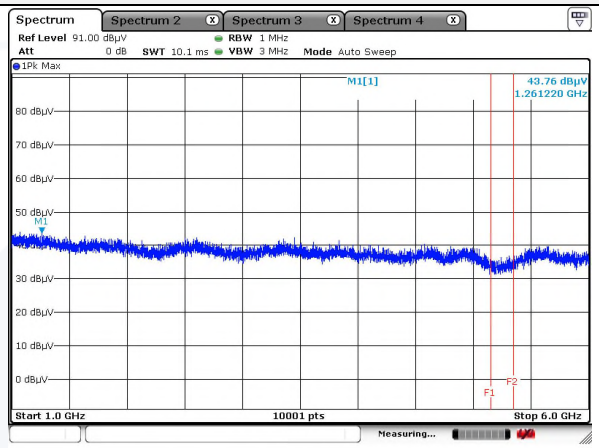
- **Spurious**

Frequency (㎒)	Level (dB㎶)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
1 051.24	43.61	Peak	H	-7.61	-	36.00	74.00	38.00
1 261.22	43.76	Peak	H	-6.48	-	37.28	68.20	30.92

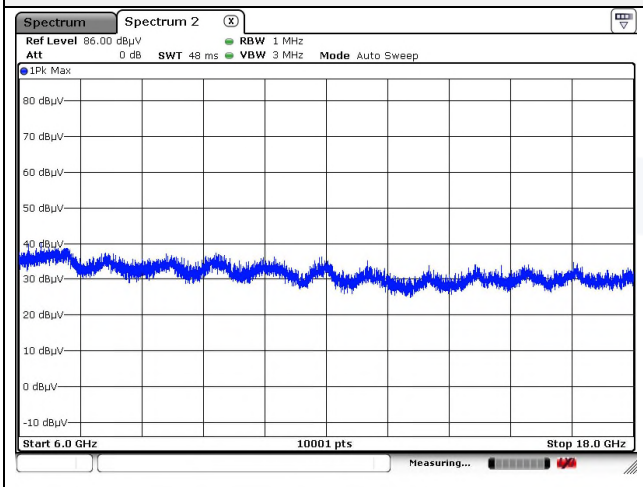
Horizontal // Peak for 1 ㎓ to 6 ㎓



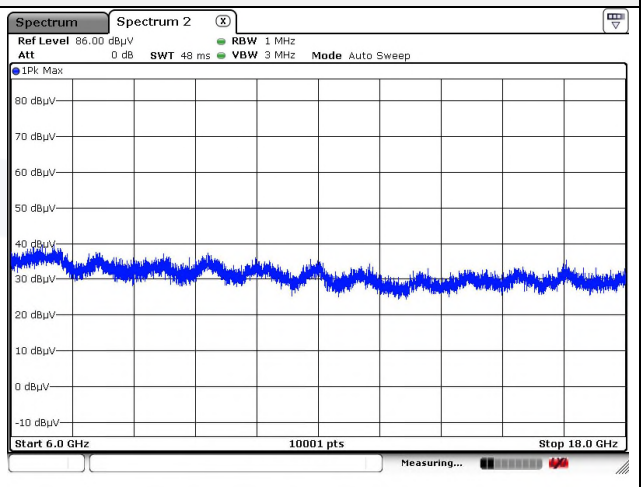
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



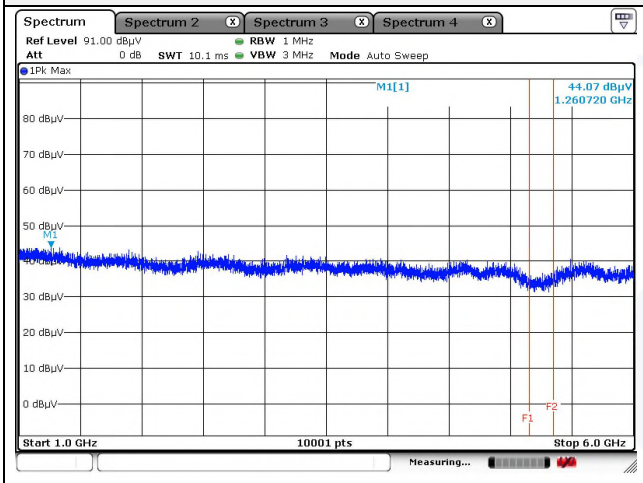
Note.
1. No spurious emission were detected above 6 ㎓.
2. Average test would be performed if the peak result were greater than the average limit.

Mode:	DC 12 V_802.11a (6 Mbps)
Distance of measurement:	3 meter
Channel:	48

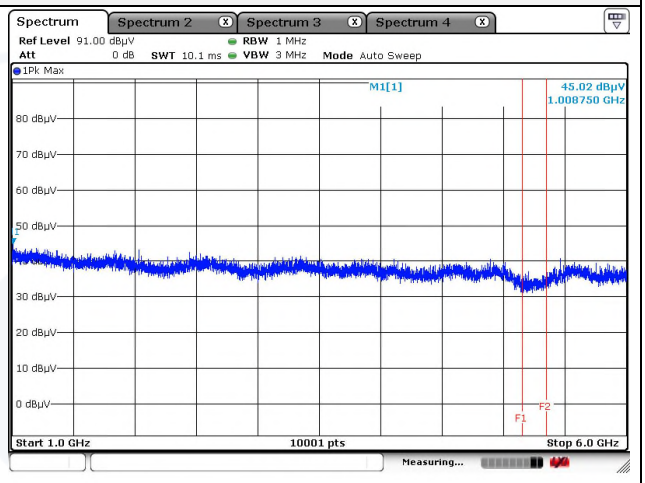
- **Spurious**

Frequency (㎒)	Level (dB㎶)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
1 008.75	45.02	Peak	V	-7.83	-	37.19	74.00	36.81
1 260.72	44.07	Peak	H	-6.48	-	37.59	68.20	30.61

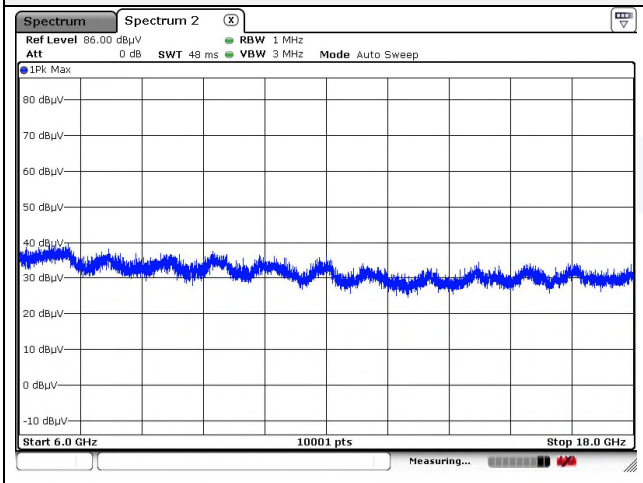
Horizontal // Peak for 1 ㎓ to 6 ㎓



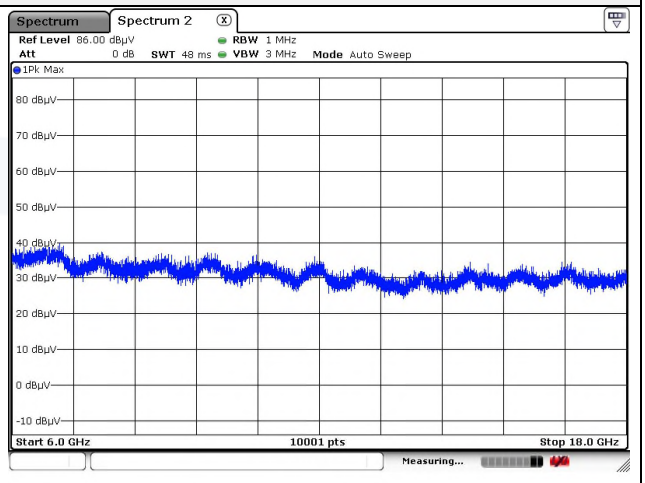
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



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

Mode:	DC 24 V_802.11a (6 Mbps)
Distance of measurement:	3 meter
Channel:	36

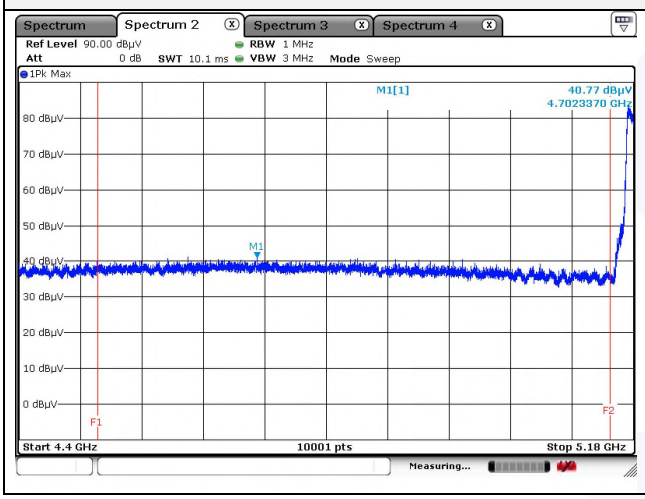
- **Spurious**

Frequency (㎒)	Level (dB㎶)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
1 207.23	45.08	Peak	H	-6.79	-	38.29	74.00	35.71
1 286.72	44.70	Peak	V	-6.34	-	38.36	68.20	29.84

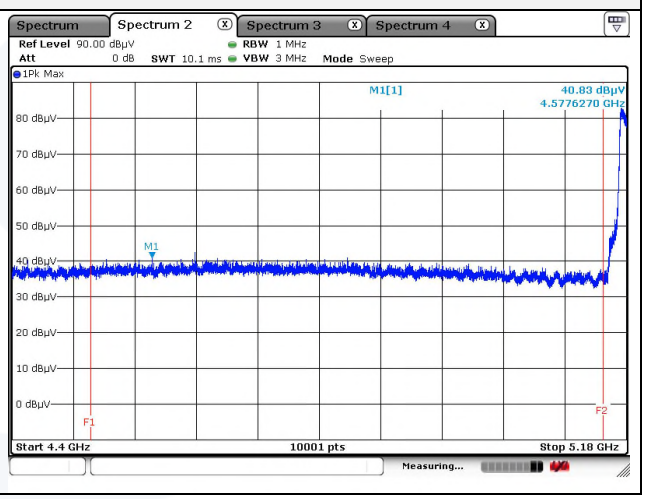
- **Band edge**

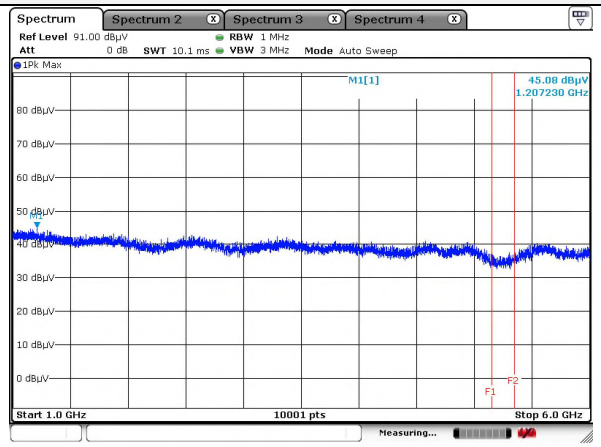
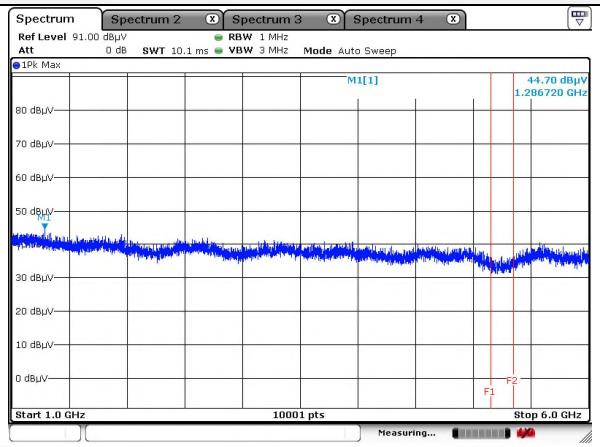
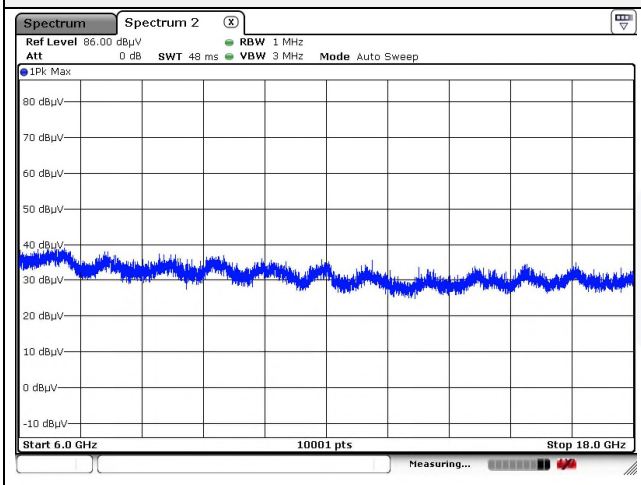
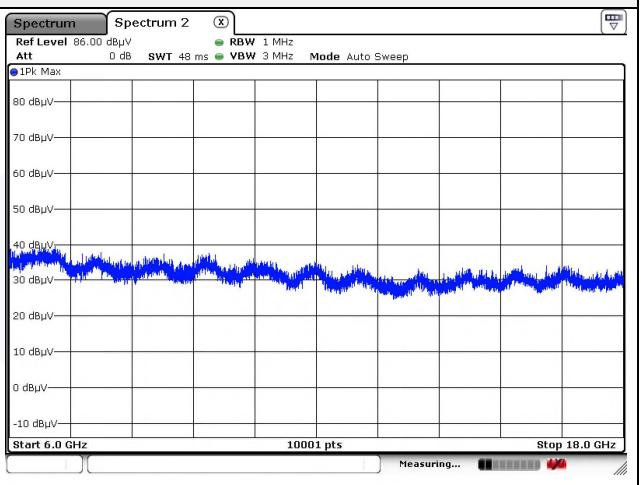
Frequency (㎒)	Level (dB㎶)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
4 577.63	40.83	Peak	V	4.49	-	45.32	74.00	28.68
4 702.34	40.77	Peak	H	4.96	-	45.73	74.00	28.27

Restricted band // Horizontal // Peak



Restricted band // Vertical // Peak



Horizontal // Peak for 1 ㎓ to 6 ㎓	Vertical // Peak for 1 ㎓ to 6 ㎓
	
Horizontal // Peak for 6 ㎓ to 18 ㎓	**Vertical // Peak for 6 ㎓ to 18 ㎓**
	

Note.

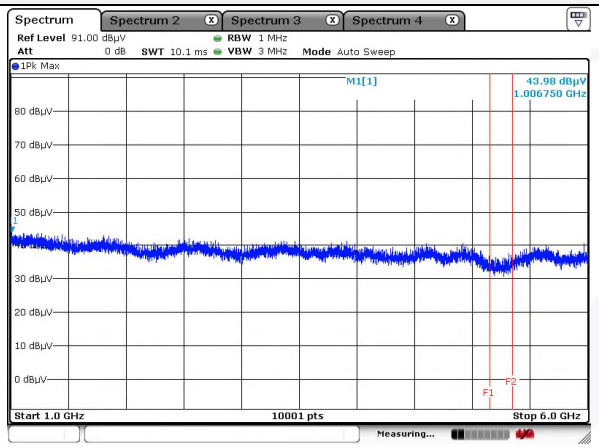
1. No spurious emission were detected above 6 ㎓.
2. Average test would be performed if the peak result were greater than the average limit.

Mode:	DC 24 V_802.11a (6 Mbps)
Distance of measurement:	3 meter
Channel:	44

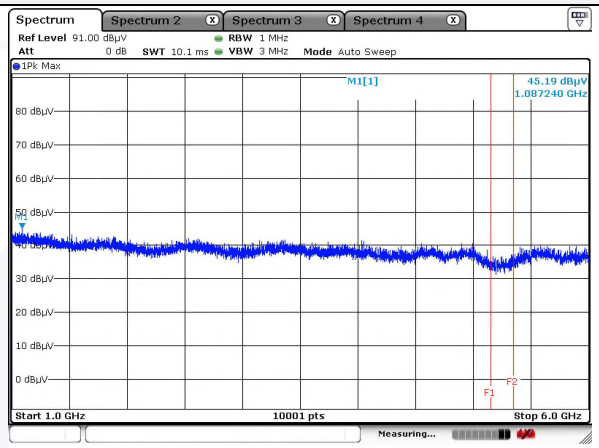
- **Spurious**

Frequency (㎒)	Level (dB㎶)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
1 006.75	43.98	Peak	H	-7.84	-	36.14	74.00	37.86
1 087.24	45.19	Peak	V	-7.42	-	37.77	74.00	36.23

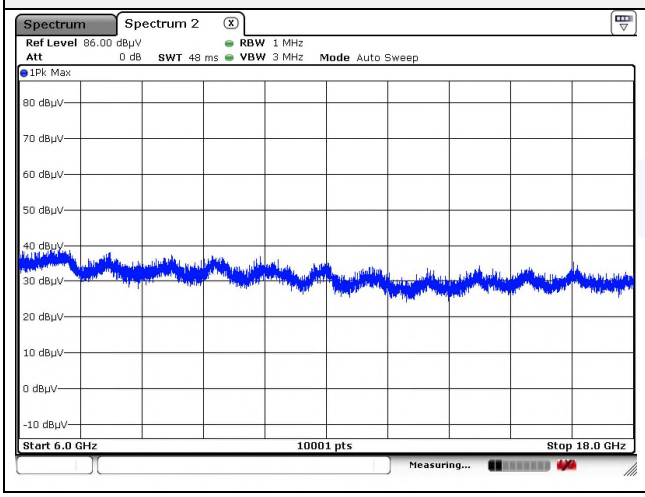
Horizontal // Peak for 1 ㎓ to 6 ㎓



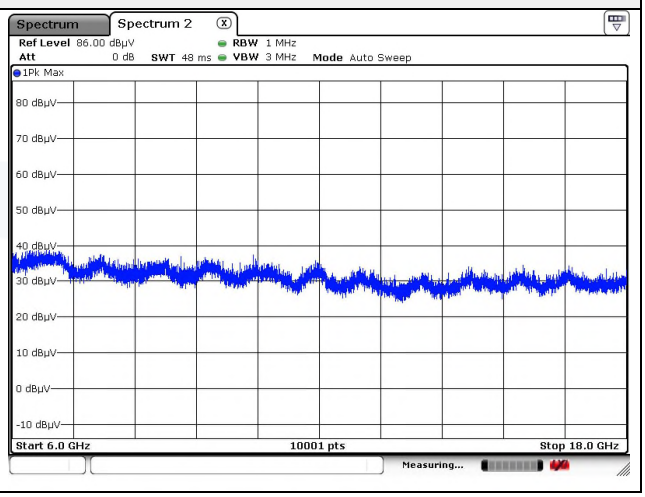
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



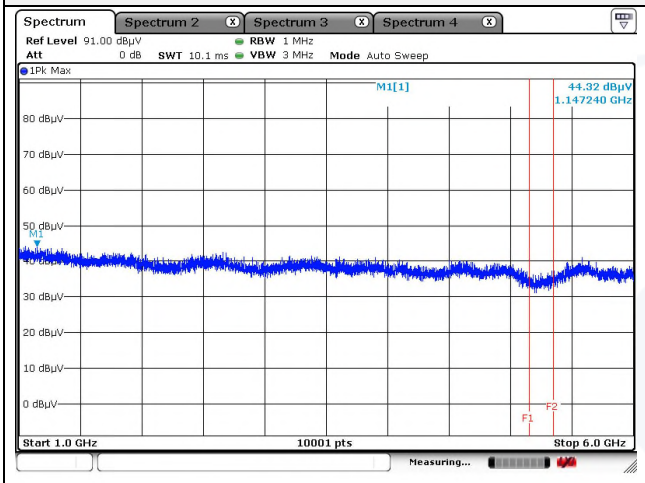
Note.
1. No spurious emission were detected above 6 ㎓.
2. Average test would be performed if the peak result were greater than the average limit.

Mode:	DC 24 V_802.11a (6 Mbps)
Distance of measurement:	3 meter
Channel:	48

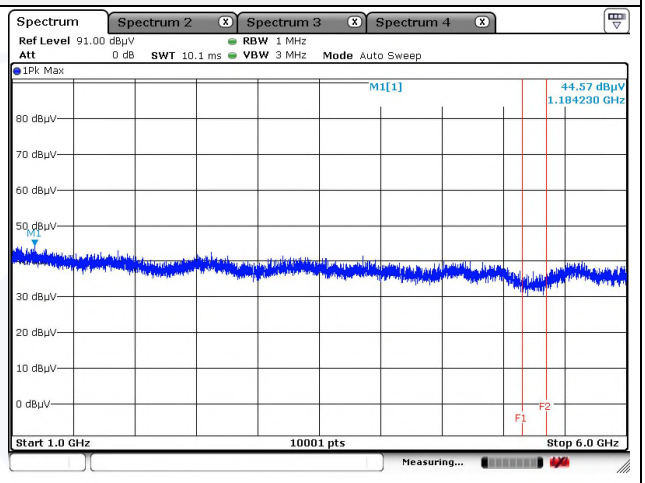
- **Spurious**

Frequency (㎒)	Level (dB㎶)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
1 147.24	44.32	Peak	H	-7.11	-	37.21	74.00	36.79
1 184.23	44.57	Peak	V	-6.91	-	37.66	74.00	36.34

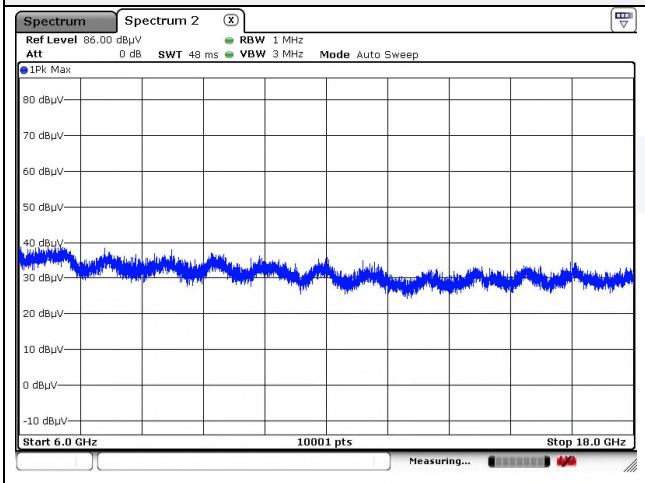
Horizontal // Peak for 1 ㎓ to 6 ㎓



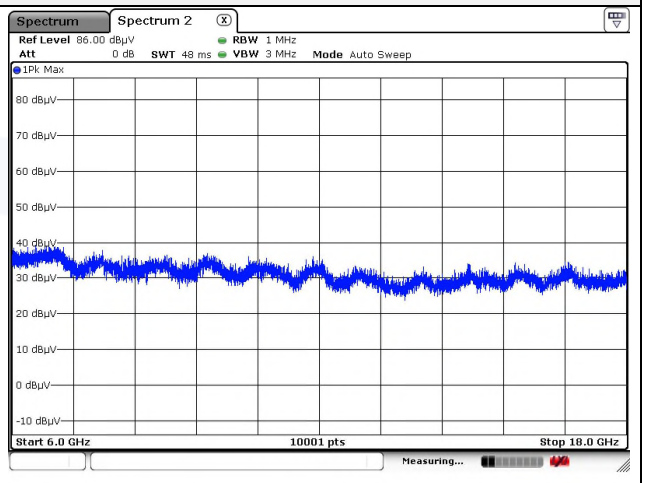
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



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

Mode:	DC 12 V_802.11n_HT20 (MCS0)
Distance of measurement:	3 meter
Channel:	36

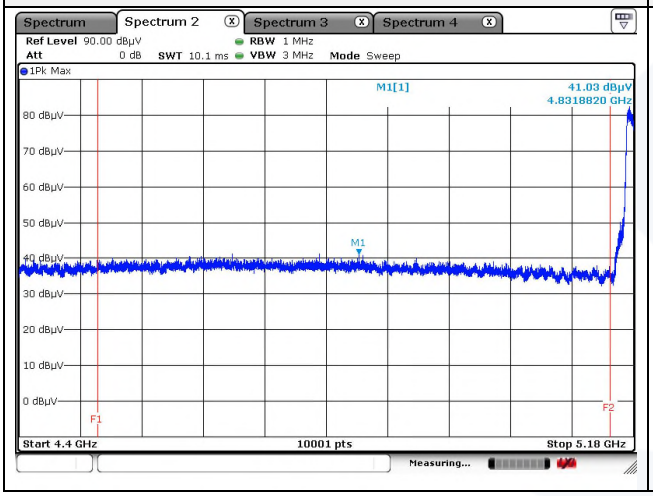
- **Spurious**

Frequency (㎒)	Level (dB㎶)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
1 080.74	44.90	Peak	V	-7.45	-	37.44	74.00	36.56
1 232.73	44.14	Peak	H	-6.64	-	37.50	74.00	36.50

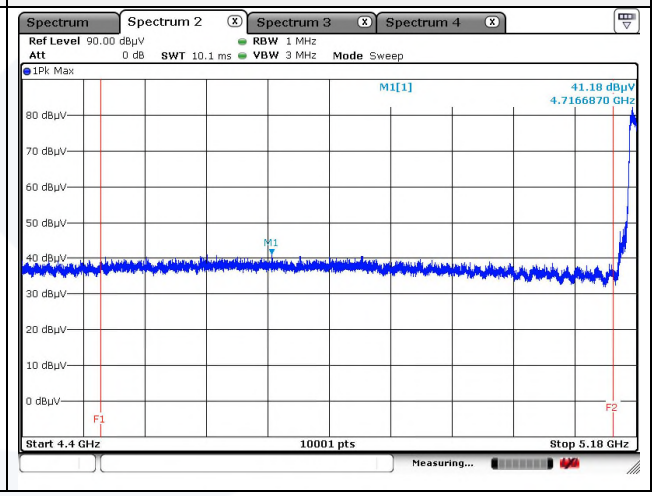
- **Band edge**

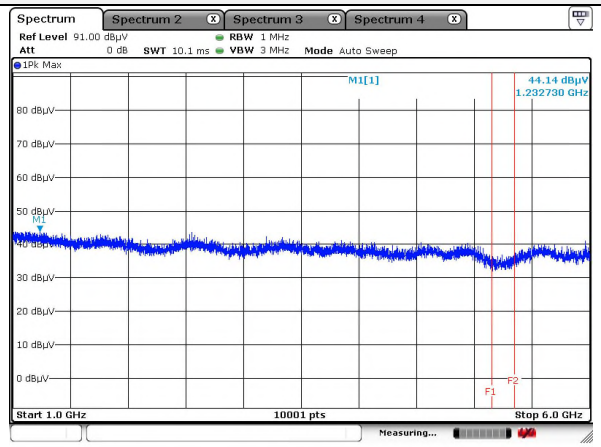
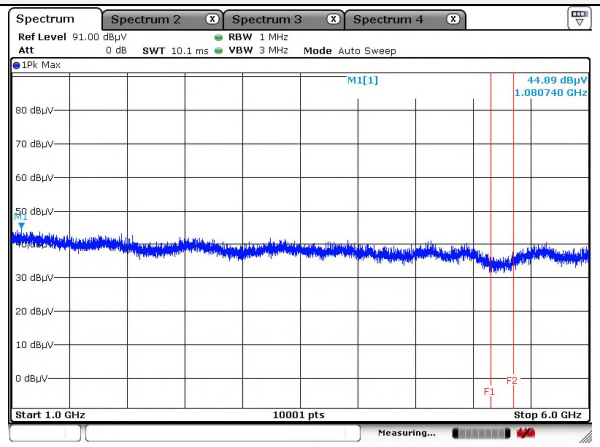
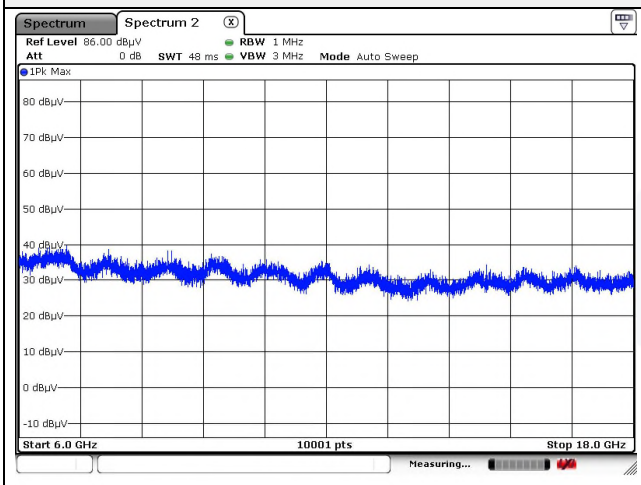
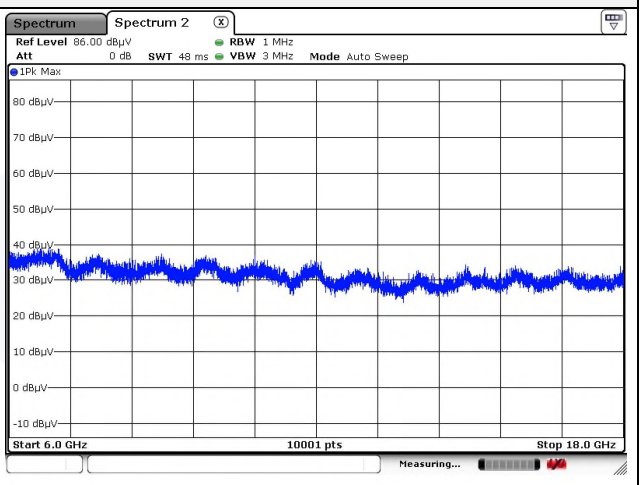
Frequency (㎒)	Level (dB㎶)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
4 716.69	41.18	Peak	V	5.01	-	46.19	74.00	27.81
4 831.88	41.03	Peak	H	5.47	-	46.50	74.00	27.50

Restricted band // Horizontal // Peak



Restricted band // Vertical // Peak



Horizontal // Peak for 1 ㎓ to 6 ㎓	Vertical // Peak for 1 ㎓ to 6 ㎓
	
Horizontal // Peak for 6 ㎓ to 18 ㎓	**Vertical // Peak for 6 ㎓ to 18 ㎓**
	

Note.

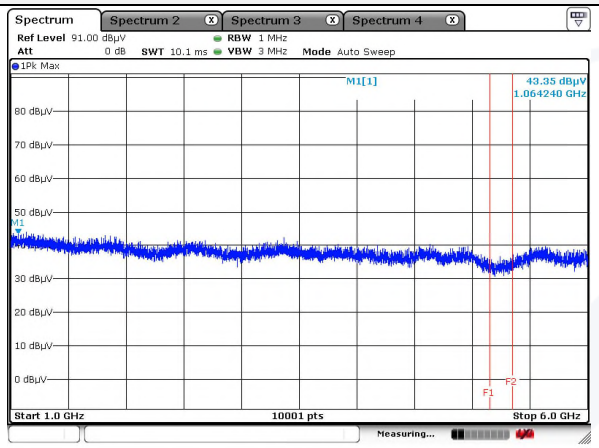
1. No spurious emission were detected above 6 ㎓.
2. Average test would be performed if the peak result were greater than the average limit.

Mode:	DC 12 V_802.11n_HT20 (MCS0)
Distance of measurement:	3 meter
Channel:	44

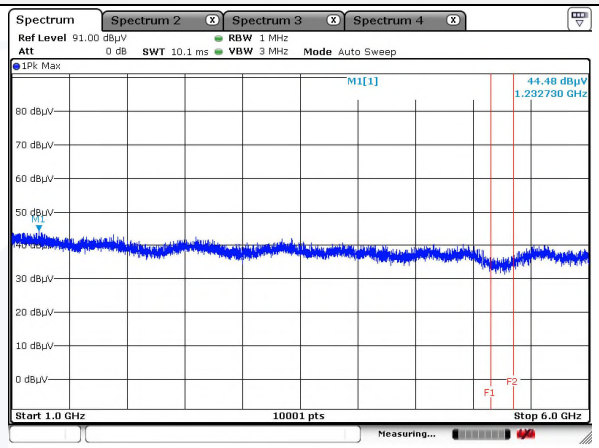
- **Spurious**

Frequency (㎒)	Level (dB㎶)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
1 064.24	43.35	Peak	H	-7.54	-	35.81	74.00	38.19
1 232.73	44.48	Peak	H	-6.64	-	37.84	74.00	36.16

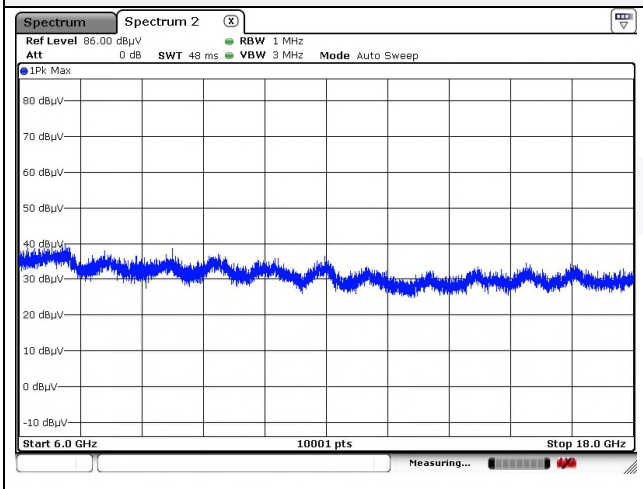
Horizontal // Peak for 1 ㎓ to 6 ㎓



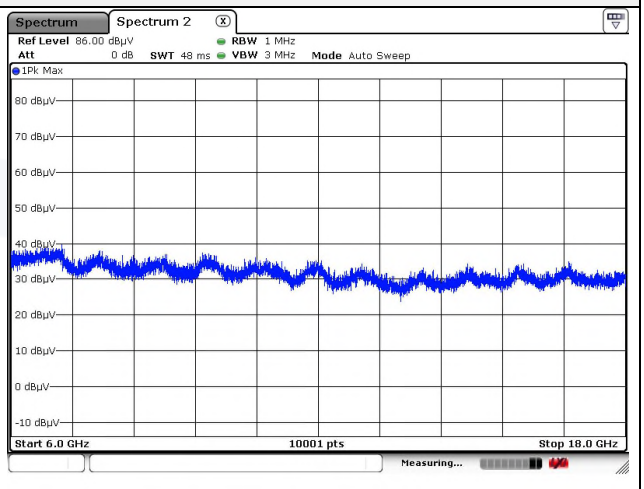
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



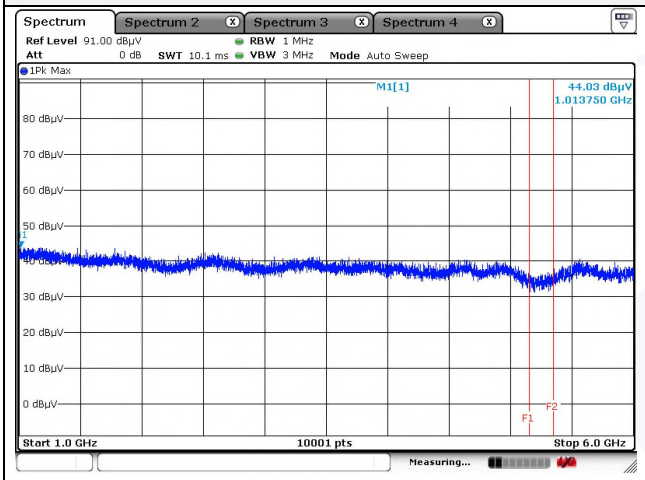
Note.
1. No spurious emission were detected above 6 ㎓.
2. Average test would be performed if the peak result were greater than the average limit.

Mode:	DC 12 V_802.11n_HT20 (MCS0)
Distance of measurement:	3 meter
Channel:	48

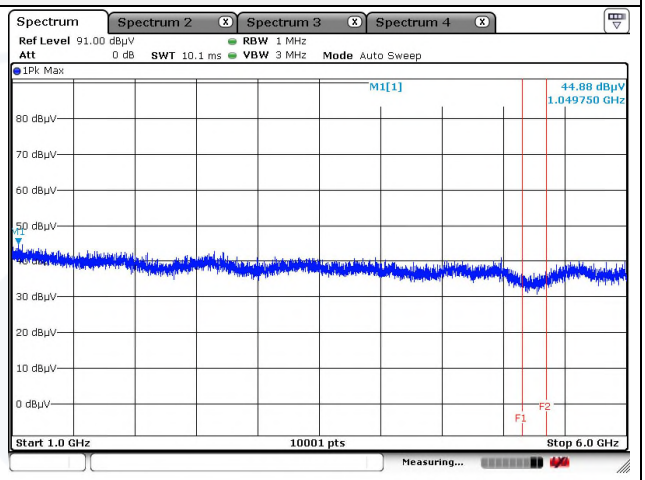
- **Spurious**

Frequency (㎒)	Level (dB㎶)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
1 013.75	44.03	Peak	H	-7.81	-	36.22	74.00	37.78
1 049.75	44.88	Peak	V	-7.62	-	37.26	74.00	36.74

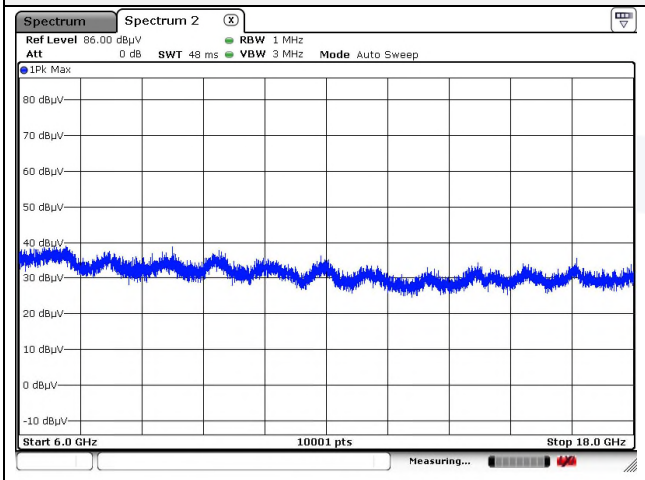
Horizontal // Peak for 1 ㎓ to 6 ㎓



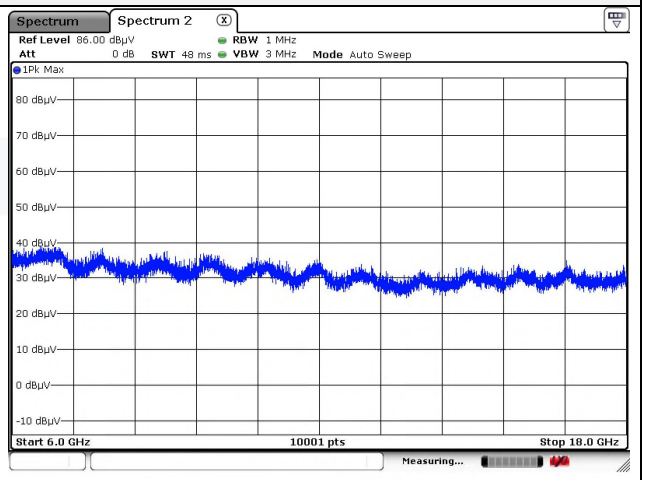
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



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