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TEST REPORT

Eurofins KCTL Co.,Ltd. 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea TEL: 82-70-4904-0113 FAX: 82-505-299-8311 www.kctl.co.kr	Report No.: KR26-SRF0134 Page (1) of (49)	eurofins KCTL

1. Client

- Name : SAMJIN C&I CO.,LTD.
- Address : 2F, 87, Anyangcheonseo-ro, Manan-gu, Anyang-si, Gyeonggi-do, Republic of Korea
- Date of Receipt : 2026-05-06

2. Use of Report : Certification

3. Name of Product / Model : Smart Card Tag / IA70001-SCT03

4. Manufacturer / Country of Origin : JAEMIN VIEW TECH / Korea

5. FCC ID : 2AXISIA70001-SCT03

6. IC Certificate No. : 35939-IA7001SCT03

7. Date of Test : 2026-05-18 to 2026-07-28

8. Location of Test : ■ Permanent Testing Lab ☐ On Site Testing
(Address:65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea)

9. Test method used : FCC Part 15 Subpart C, 15.247
RSS-247 Issue 4 July 2025
RSS-Gen Issue 5 February 2021

10. Test Result : Refer to the test result in the test report

Affirmation	Tested by Name : Dongyeon Yoon (Signature)	Technical Manager Name : Bobae Lee (Signature)

2026-07-29

Eurofins KCTL Co.,Ltd.

REPORT REVISION HISTORY

Date	Revision	Page No
2026-07-29	Originally issued	-

General remarks for test reports

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title:

Calculations leading to the reported values are on file with the testing laboratory that conducted the testing.

☒ **Statement not required by the standard or client used for type testing**

CONTENTS

1. General information

Client	:	SAMJIN C&I CO.,LTD.
Address	:	2F, 87, Anyangcheonseo-ro, Manan-gu, Anyang-si, Gyeonggi-do, Republic of Korea
Manufacturer	:	JAEMIN VIEW TECH
Address	:	76, Gunpocheomdansaneop 2-ro, Gunpo-si, Gyeonggi-do, Republic of Korea
Laboratory	:	Eurofins KCTL Co.,Ltd.
Address	:	65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea
Accreditations	:	FCC Site Designation No: KR0040, FCC Site Registration No: 687132 VCCI Registration No. : R-20080, G-20078, C-20059, T-20056 CAB Identifier: KR0040 ISED Number: 8035A KOLAS No.: KT231

2. Device information

Equipment under test	:	Smart Card Tag
Model	:	IA70001-SCT03
Derivative Model	:	IA70001-SCT04, IA70001-SCT05, IA70001-SCT06, IA70001-SCT07, IA70001-SCT08, IA70001-SCT09, IA70001-SCT10
Modulation technique	:	Bluetooth Low Energy : GFSK
Number of channels	:	40 ch
Power source	:	DC 3.7 V
Antenna specification	:	PCB Pattern Antenna
Antenna gain	:	3.49 dBi
Frequency range	:	2 402 ㎒ ~ 2 480 ㎒
Software version	:	V0.1.0
Hardware version	:	V0.3
Test device serial No.	:	SCT03AM2P0036
Operation temperature	:	-20 ℃ ~ 50 ℃

2.1. Information about derivative model

The difference between basic model and derivative models is:
Derivative models are different only for the marketing area, and all model names are electrically identical in construction, radio characteristics, and features.

2.2. Frequency/channel operations

This device contains the following capabilities:
Bluetooth Low Energy(1M, 2M)

Ch.	Frequency (㎒)
00	2 402
. .	. .
19	2 440
. .	. .
39	2 480

Table 2.2.1. Bluetooth Low Energy(1M, 2M)

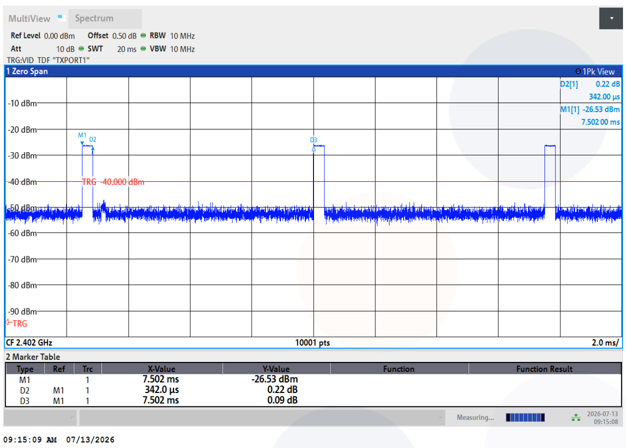
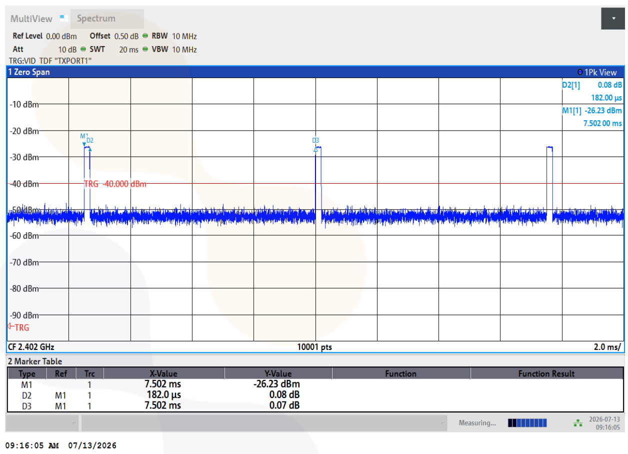
2.3. RF power setting in TEST SW

Operation mode	Test Program	Power Setting
Bluetooth Low Energy	Atmosic RF Tool	8(4dBm)

2.4. Duty Cycle Factor

Test mode	Period (ms)	On time (ms)	Duty cycle		Duty Cycle Factor (dB)
			(Linear)	(%)	
1M Bits/s, 31 packet	7.502	0.342	0.045 6	4.56	13.41
2M Bits/s, 31 packet	7.502	0.182	0.024 3	2.43	16.15

Notes:
1. Duty cycle (Linear) = T_{On} time / Period
2. DCF(Duty cycle factor) = 10log(1/duty cycle)
3. DCF is not compensated to average result if the duty cycle is more than 98%

1M Bits/s, 31 Packet	2M Bits/s, 31 Packet
	

3. Antenna requirement

Requirement of FCC part section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

Requirement of RSS-Gen Section 6.8:

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).

When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.

The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna type.

- The transmitter has permanently attached PCB Pattern antenna (internal antenna) on board.
- The E.U.T Complies with the requirement of §15.203, §15.247.

4. Summary of tests

FCC Part section(s)	IC Rule Reference	Parameter	Test Condition	Test results
15.247(b)(3)	RSS-247 (6.3.2)	Maximum Peak Output Power	Conducted	Pass
15.247(e)	RSS-247 (6.3.1)(b)	Peak Power Spectral Density	Conducted	Pass
15.247(a)(2)	RSS-247 (6.3.1)(a)	6 dB Channel Bandwidth	Conducted	Pass
-	RSS-Gen (6.7)	Occupied Bandwidth	Conducted	Pass
15.207(a)	RSS-Gen (8.8)	AC Conducted Emissions	Conducted	N/A(Note1)
15.247(d)	RSS-247 (6.6)	Conducted Spurious Emissions	Conducted	Pass
15.205(a), 15.209(a)	RSS-247 (6.6) RSS-Gen (8.9), (8.10)	Spurious emission	Radiated	Pass
15.205(a), 15.209(a)	RSS-247 (6.6) RSS-Gen (8.9), (8.10)	Band-edge, restricted band	Radiated	Pass

Notes: (N/T: Not Tested, N/A: Not Applicable)

1. This test was not applied because it is an EUT using DC Battery.
2. All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
3. 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.
4. EUT was investigated in two orthogonal orientations X, and Y. it was determined that **X** orientation was worst-case orientation. Therefore, all final radiated testing was performed with the EUT in **X** orientation.
5. The test procedure(s) in this report were performed in accordance as following.
   - ANSI C63.10-2020+Cor.1-2023
   - ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024
   - KDB 558074 D01 v05r02
6. The worst-case data rate were:
   1, 2M Bits/s, Packet length 31 Bytes

5. Measurement uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2020.

All measurement uncertainty values are shown with a coverage factor of *k*=2 to indicated a 95 % level of confidence. The measurement data shown herein meets of exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded uncertainty (±)	
Maximum Peak Output Power	0.9 ㏈	
Peak Power Spectral Density	1.4 ㏈	
Channel Bandwidth	0.9 %	
Occupied Bandwidth	0.9 %	
Conducted spurious emission	1.7 ㏈	
Radiated spurious emissions (Bandedge, restricted band)	Below 30 ㎒	2.4 ㏈
	30 ㎒ to 1 000 ㎒	2.6 ㏈
	1 000 ㎒ to 18 000 ㎒	4.7 ㏈
	Above 18 000 ㎒	4.8 ㏈
AC Conducted Emissions	150 ㎑ ~ 30 ㎒	2.8 ㏈

6. Measurement results explanation example

The offset level is set in the spectrum analyzer to compensate the RF cable loss 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.

Frequency (㎒)	Factor(dB)	Frequency (㎒)	Factor(dB)
30	10.13	11 000	13.12
50	10.19	12 000	13.20
100	10.29	13 000	13.37
200	10.42	14 000	13.46
300	10.53	15 000	13.59
400	10.62	16 000	13.77
500	10.71	17 000	13.99
600	10.79	18 000	14.21
700	10.86	19 000	14.22
800	10.92	20 000	13.98
900	11.00	21 000	13.95
1 000	11.04	22 000	15.25
2 000	11.43	23 000	15.31
3 000	12.13	24 000	14.88
4 000	12.24	25 000	14.63
5 000	12.50	26 000	14.95
6 000	12.73	26 500	14.98
7 000	12.83	27 000	15.51
8 000	12.80	28 000	15.74
9 000	12.84	29 000	15.10
10 000	13.04	30 000	15.09

Notes:
Offset(dB) = RF cable loss(dB) + Attenuator(dB)

7. Test results

7.1. Maximum peak output power

Test setup

EUT	Attenuator	Power sensor

Limit

FCC

According to §15.247(b)(3),

For systems using digital modulation in the 902-928 ㎒, 2 400-2 483.5 ㎒, and 5 725-5 850 ㎒ bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

According to §15.247(b)(4)

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC

According to RSS-247 (6.3.2),

For DTS operating in the bands 2400-2483.5 ㎒, the maximum peak conducted output power shall not exceed 1 W, and the e.i.r.p. shall not exceed 4 W, except as provided in section 6.5 a) and b).

As an alternative to a peak power measurement, compliance can be based on a measurement of the maximum conducted output power.

Test procedure

ANSI C63.10 - Section 11.9.1.2, 11.9.2.3.1

Test settings

General

Section 15.247 permits the maximum conducted (average) output power to be measured as an alternative to the maximum peak conducted output power for demonstrating compliance to the limit. When this option is exercised, the measured power is to be referenced to the OBW rather than the DTS bandwidth (see ANSI C63.10 for measurement guidance).

When using a spectrum analyzer or EMI receiver to perform these measurements, it shall be capable of utilizing a number of measurement points in each sweep that is greater than or equal to twice the span/RBW to set a bin-to-bin spacing of ≤ RBW/2 so that narrowband signals are not lost between frequency bins.

If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level. The intent is to test at 100 % duty cycle; however a small reduction in duty cycle (to no lower than 98 %) is permitted, if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

If continuous transmission (or at least 98 % duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level, with the transmit duration as long as possible, and the duty cycle as high as possible during which sweep triggering/signal gating techniques may be used to perform the measurement over the transmission duration.

11.9.1.2. PKPM1 Peak power meter method

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

11.9.2.3.1. Measurement using a power meter (PM)

Method AVGPM is a measurement using an RF average power meter, as follows:

a) As an alternative to spectrum analyzer or EMI receiver measurements, 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:
   1) The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
   2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
   3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
b) If the transmitter does not transmit continuously, measure the duty cycle, D, of the transmitter output signal as described in 11.6.
c) Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.
d) Correct the measurement in dBm by adding [10 log(1/D)], where D is the duty cycle

Notes:

A peak responding power sensor is used, where the power sensor system video bandwidth is greater than the occupied bandwidth of the EUT.

Test results

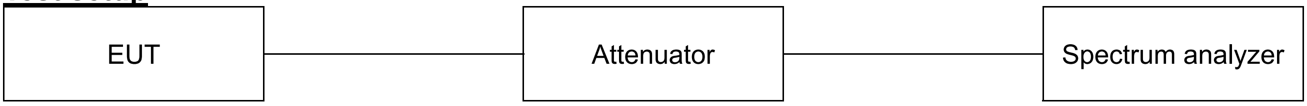
Frequency (㎒)	Data rate (Bits/s)	Packet length (Bytes)	Measured output power (dBm)						
			Conducted output power (dBm)		Limit (dBm)	ANT Gain (dBi)	Max. e.i.r.p (dBm)		Max. e.i.r.p Limit (dBm)
			Peak	Average			Peak	Average	
2 402	1M	31	4.57	4.29	30.00	3.49	8.06	7.78	36.02
2 440			4.56	4.18			8.05	7.67	
2 480			4.48	4.07			7.97	7.56	
2 402	2M	31	4.53	4.20	30.00	3.49	8.02	7.69	36.02
2 440			4.57	4.15			8.06	7.64	
2 480			4.47	4.10			7.96	7.59	

Notes:

1. Average conducted output power (dBm) = Reading value of average power (dBm) + D.C.F (dB)
2. E.I.R.P. Calculation: E.I.R.P. (dBm) = Conducted output power (dBm) + Antenna gain (dBi)

7.2. Peak Power Spectral Density

Test setup



Limit

According to §15.247(e),

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 ㎑ band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

According to RSS-247(6.3.1)(b),

The following applies to the bands 902-928 ㎒ and 2 400-2 483.5 ㎒.
The transmitter power spectral density conducted from the transmitter to the antenna(s) shall not be greater than 8 dBm in any 3 ㎑ band during any time interval of continuous transmission.
This power spectral density shall be determined in accordance with the provisions of section 6.3.2.
The power spectral density shall be determined using the same method as is used to determine the maximum conducted output power.

Test procedure

ANSI C63.10 - Section 11.10.2

Test settings

Method PKPSD (peak PSD)

The following procedure shall be used if maximum peak conducted output power was used to determine compliance, and it is optional if the maximum conducted (average) output power was used to determine compliance:

a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span > 1.5 times the DTS bandwidth.
c) Set the RBW to: 3 ㎑ ≤ RBW ≤ 100 ㎑.
d) Set the VBW ≥ 3 x RBW.
e) Detector = peak.
f) Sweep time = No faster than coupled (auto) time.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.
j) If measured value exceeds limit, reduce RBW (no less than 3 ㎑) and repeat.

Test results

Frequency (㎒)	Data rate (Bits/s)	Packet length (Bytes)	PSD(dBm/3 ㎑)	Limit(dBm/3 ㎑)
2 402	1M	31	-11.60	8
2 440			-11.54	
2 480			-11.50	
2 402	1M	31	-14.50	
2 440			-14.68	
2 480			-14.60	

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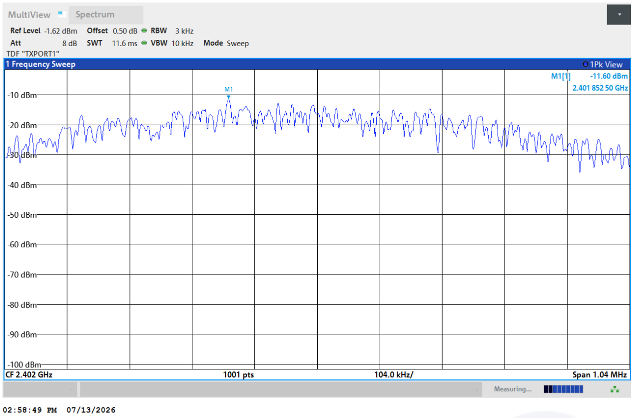	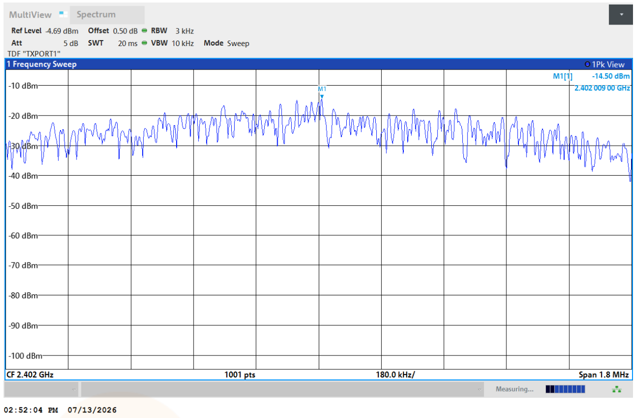
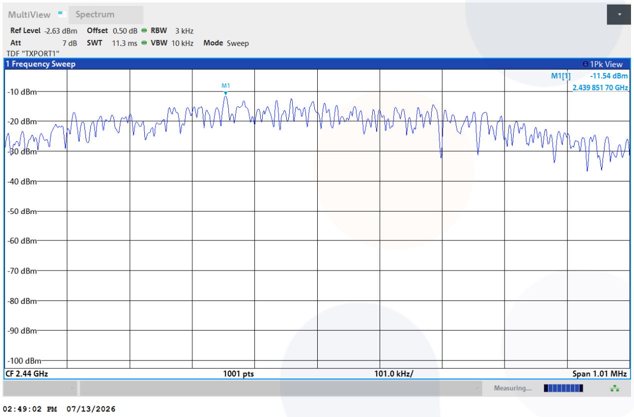	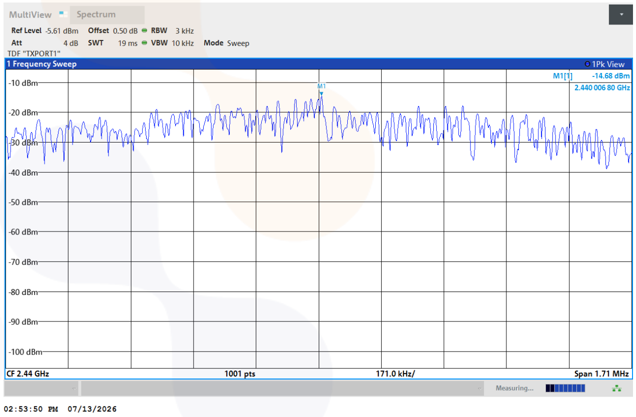
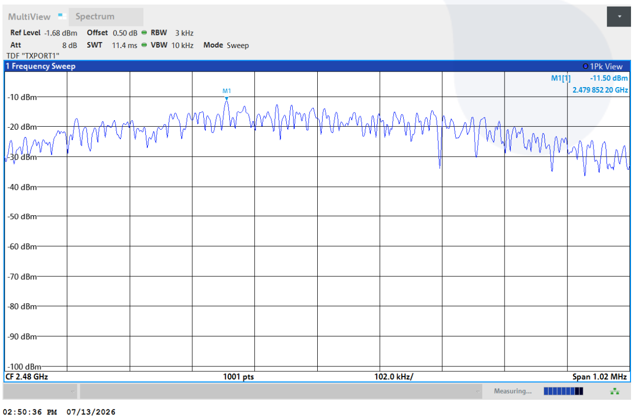	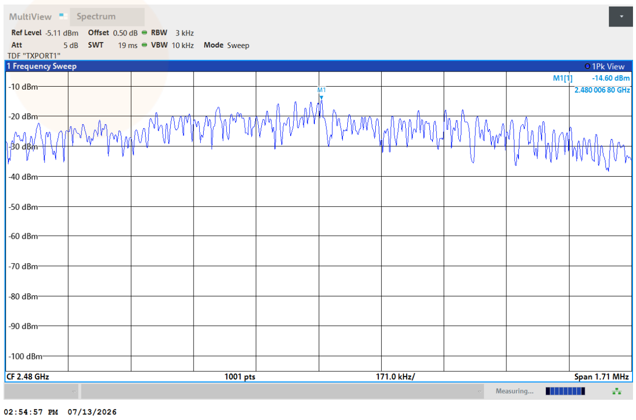

7.3. 6 dB Bandwidth(DTS Channel Bandwidth) & 99% Bandwidth

Test setup

EUT	Attenuator	Spectrum analyzer

Limit

According to §15.247(a)(2),

For Systems using digital modulation techniques may operate in the 902–928 MHz, 2 400–2 483.5 MHz, and 5 725–5 850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

According to RSS-247(6.3.1)(a),

The following applies to the bands 902-928 MHz and 2 400-2 483.5 MHz

The minimum 6 dB bandwidth shall be 500 kHz.

Test procedure

ANSI C63.10 – Section 11.8.2, 6.9.3

Test settings

DTS bandwidth

One of the following procedures may be used to determine the modulated DTS bandwidth.

Option 1

a) Set RBW = Shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 x RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = No faster than coupled (auto) time.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "-6 dB down amplitude". If a marker is below this "-6 dB down amplitude" value, then it shall be as close as possible to this value.

Option 2

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in 11.8.1 (i.e., RBW = 100 kHz, VBW ≥ 3 × RBW, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥6 dB.

Occupied bandwidth (or 99% emission bandwidth)
The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.
The following procedure shall be used for measuring 99% power bandwidth:

a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be at least three times the RBW, unless otherwise specified by the applicable requirement.
c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.6.2.
d) Step a) through step c) might require iteration to adjust within the specified range.
e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max-hold mode (until the trace stabilizes) shall be used.
f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

The occupied bandwidth shall be reported by providing spectral plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Note:
It may be necessary to repeat the measurement a few times until the RBW and VBW are in compliance with the above requirement.

Test results

Frequency (㎒)	Data rate (Bits/s)	Packet length (Bytes)	6 ㏈ Bandwidth(㎒)	99% Bandwidth(㎒)	Limit (㎒)
2 402	1 M	31	0.690	1.043	0.500
2 440			0.675	1.073	
2 480			0.680	1.048	
2 402	2 M	31	1.200	2.045	
2 440			1.140	2.047	
2 480			1.140	2.035	

6 dB Bandwidth

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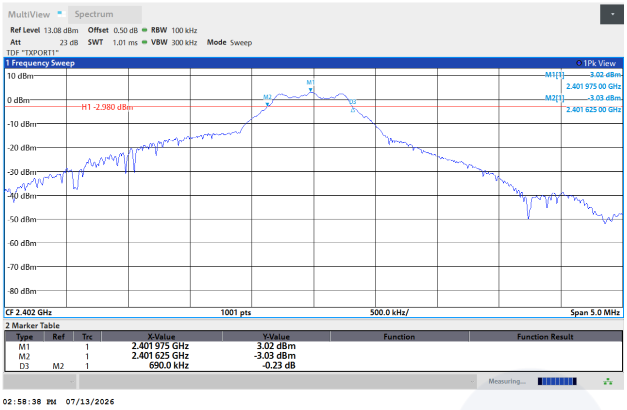
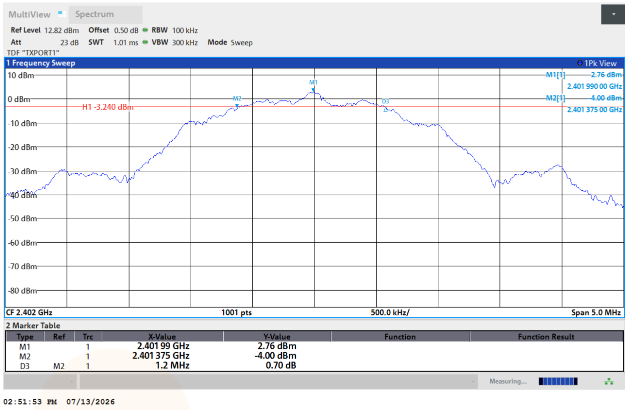
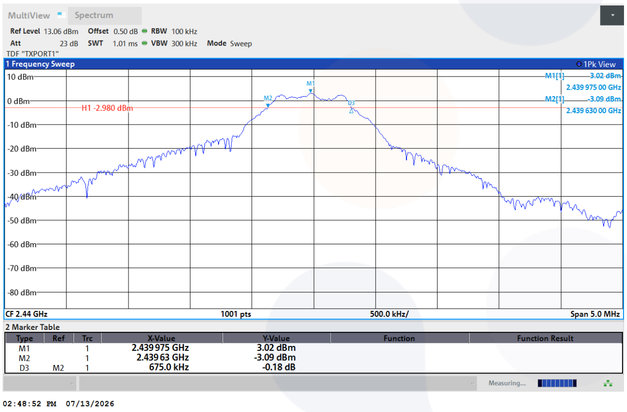
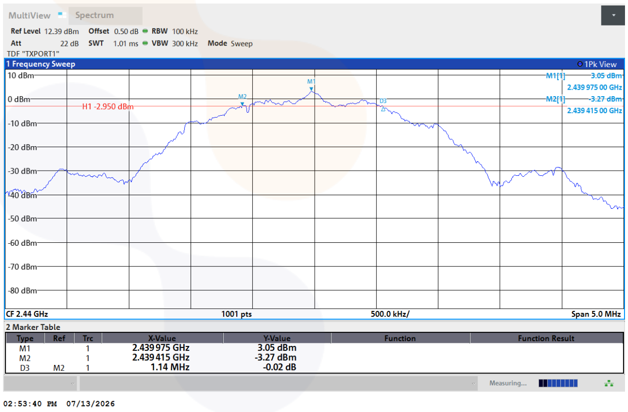
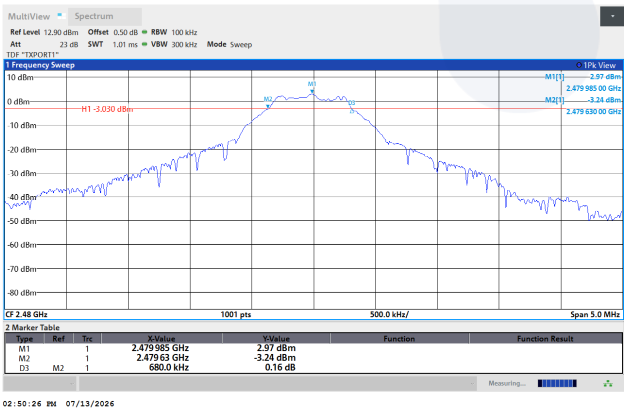
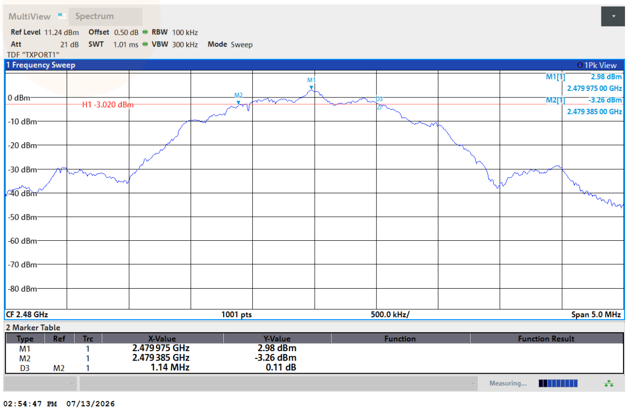
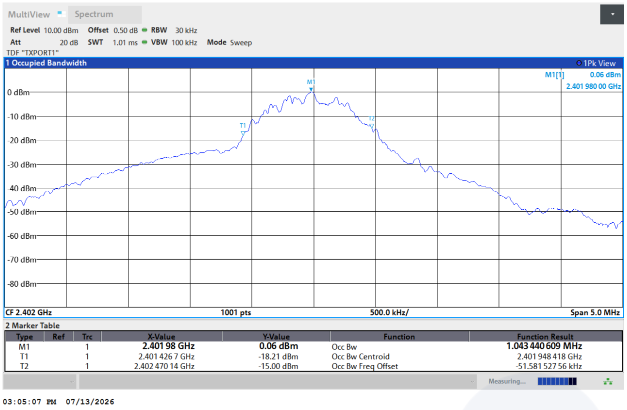
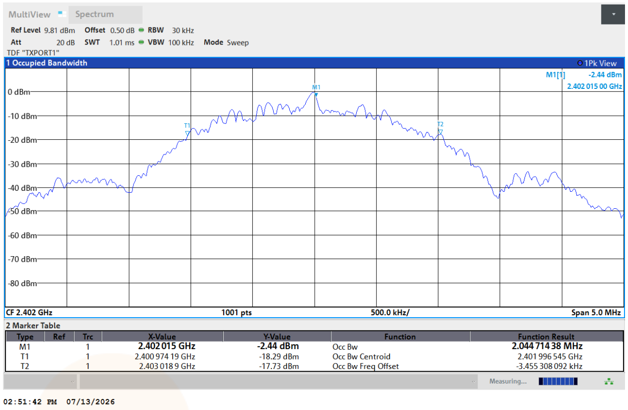
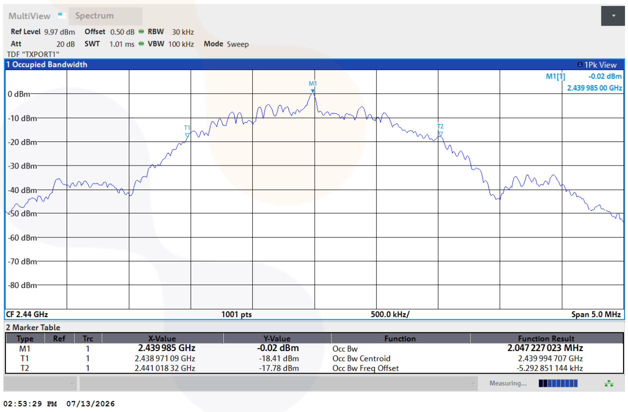
	
	
	

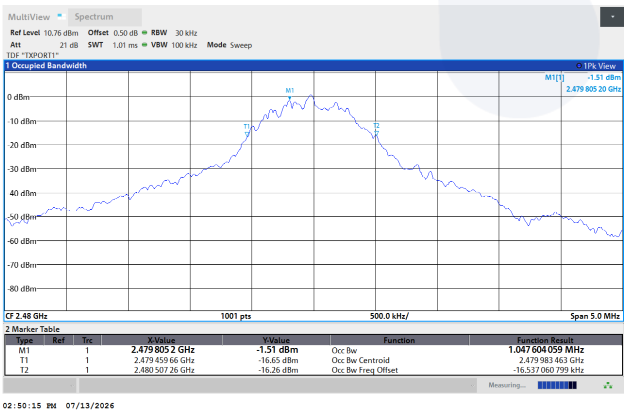
99% Bandwidth

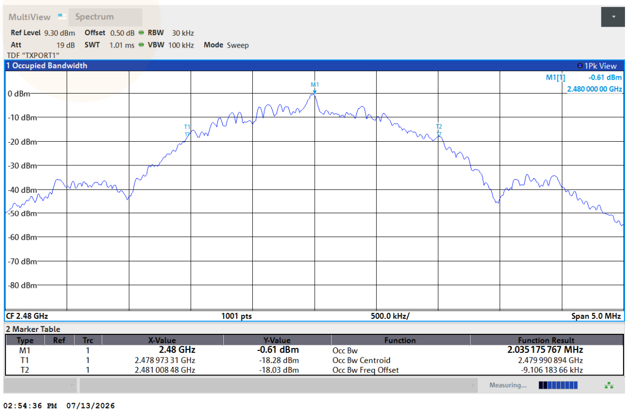
BLE_1 MBits/s	BLE_2 MBits/s







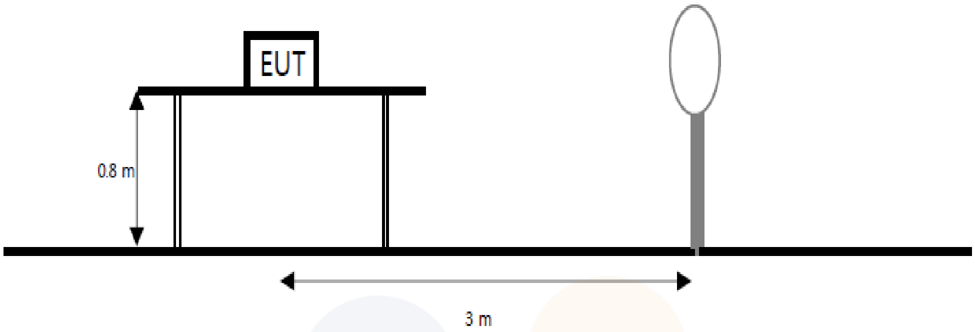




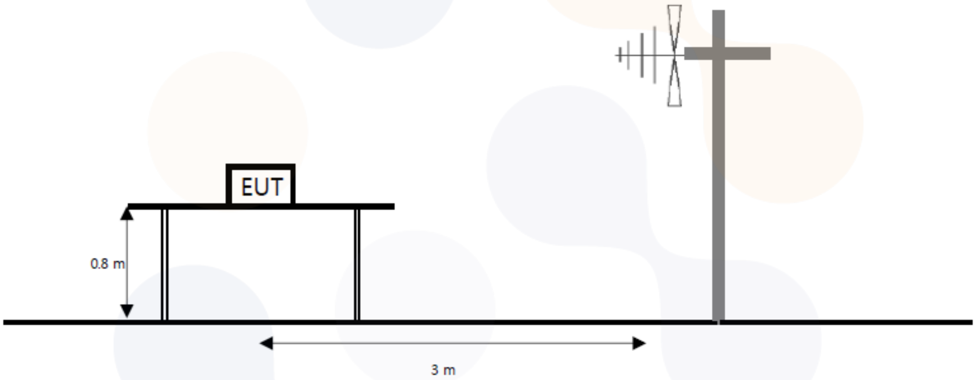
7.4. Spurious Emission, Band Edge and Restricted bands

Test setup

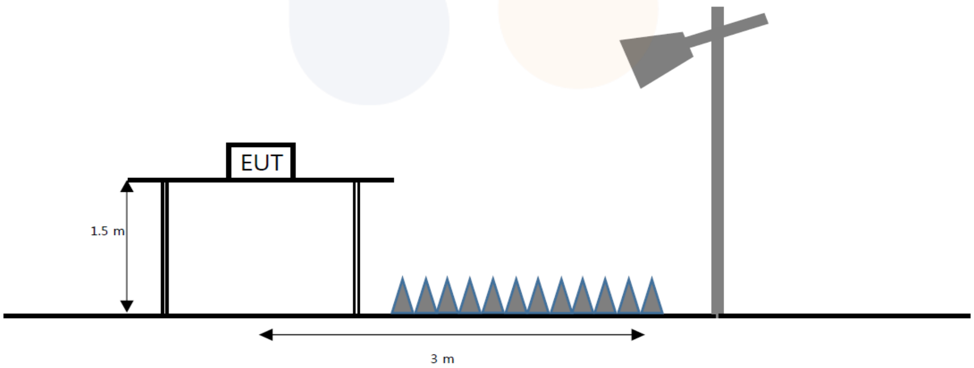
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 ㎑ to 30 ㎒ Emissions



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.



Limit

According to section 15.209(a),

Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (㎒)	Field strength (㎶/m)	Measurement distance (m)
0.009 - 0.490	2 400/F(㎑)	300
0.490 - 1.705	24 000/F(㎑)	30
1.705 - 30	30	30
30 - 88	100**	3
88 - 216	150**	3
216 - 960	200**	3
Above 960	500	3

**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., Section15.231 and 15.241.

According to section 15.205(a) and (b),

Only spurious emissions are permitted in any of the frequency bands listed below:

㎒	㎒	㎒	㎓
0.009 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
0.495 - 0.505	16.694 75 - 16.695 25	608 - 614	5.35 - 5.46
2.173 5 - 2.190 5	16.804 25 - 16.804 75	960 – 1 240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1 300 – 1 427	8.025 - 8.5
4.177 25 - 4.177 75	37.5 - 38.25	1 435 – 1 626.5	9.0 - 9.2
4.207 25 - 4.207 75	73 - 74.6	1 645.5 – 1 646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1 660 – 1 710	10.6 - 12.7
6.267 75 - 6.268 25	108 - 121.94	1 718.8 – 1 722.2	13.25 - 13.4
6.311 75 - 6.312 25	123 - 138	2 200 – 2 300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2 310 – 2 390	15.35 - 16.2
8.362 - 8.366	156.524 75 - 156.525 25	2 483.5 – 2 500	17.7 - 21.4
8.376 25 - 8.386 75	156.7 - 156.9	2 690 – 2 900	22.01 - 23.12
8.414 25 - 8.414 75	162.012 5 - 167.17	3 260 – 3 267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3 332 – 3 339	31.2 - 31.8
12.519 75 - 12.520 25	240 - 285	3 345.8 – 3 358	36.43 - 36.5
12.576 75 - 12.577 25	322 - 335.4	3 600 – 4 400	Above 38.6
13.36 - 13.41			

The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in section 15.209. At frequencies equal to or less than 1 000 ㎒, compliance with the limits in section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1 000 ㎒, compliance with the emission limits in section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in section 15.35 apply to these measurements.

IC

According to RSS-247(6.6),

In any 100 ㎑ bandwidth outside the frequency band in which the spread spectrum device, digitally modulated device, or hybrid system is operating, the RF power that is produced shall be at least 20 ㏈ below that in the 100 ㎑ bandwidth within the band that contains the highest level of the desired power – based on either an RF conducted or a radiated measurement provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 6.3.2, the attenuation required shall be 30 ㏈ instead of 20 ㏈. Attenuation below the general field strength limits specified in RSS-Gen is not required.

According to RSS-Gen(8.9),

Except where otherwise indicated in the applicable RSS, radiated emissions shall comply with the field strength limits shown in table 5 and table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.

Table 5- General field strength limits at frequencies above 30 ㎒

Frequency(㎒)	Field strength (μV/m at 3 m)
30 to 88	100
88 to 216	150
216 to 960	200
Above 960	500

Table 6- General field strength limits at frequencies below 30 ㎒

Frequency	Magnetic field strength (H-Field) (µA/m)	Measurement distance(m)
9 – 490 ㎑ 1)	6.37/F (F in ㎑)	300
490 – 1705 ㎑	63.7/F (F in ㎑)	30
1.705 - 30 ㎒	0.08	30

Note 1: The emission limits for the ranges 9-90 ㎑ and 110-490 ㎑ are based on measurements employing a linear average detector.

According to RSS-Gen(8.10),

Restricted frequency bands, identified in table 7, are designated primarily for safety-of-life services (distress calling and certain aeronautical activities), certain satellite downlinks, radio astronomy and some government uses. Except where otherwise indicated, the following conditions related to the restricted frequency bands apply:

(a) The transmit frequency, including fundamental components of modulation, of licence-exempt radio apparatus shall not fall within the restricted frequency bands listed in table 7 except for apparatus compliant with RSS-287, Emergency Position Indicating Radio Beacons (EPIRB), Emergency Locator Transmitters (ELT), Personal Locator Beacons (PLB), and Maritime Survivor Locator Devices (MSLD).
(b) Unwanted emissions that fall into restricted frequency bands listed in table 7 shall comply with the limits specified in table 5 and table 6.
(c) Unwanted emissions that do not fall within the restricted frequency bands listed in table 7 shall comply either with the limits specified in the applicable RSS or with those specified in table 5 and table 6.

Table 7- Restricted frequency bands*

MHz	MHz	GHz
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 - 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	3345.8 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 - 8500	
108 - 138	--	

* Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

Test procedure

ANSI C63.10 - Section 7.5, 11.12.2.4, 11.12.2.5.1, 11.12.2.5.2.1

Test settings

Peak field strength measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in table
3. VBW ≥ (3×RBW)
4. Detector = peak
5. Sweep time = No faster than coupled (auto) time
6. Trace mode = max hold
7. Allow sweeps to continue until the trace stabilizes

Table. RBW as a function of frequency

Frequency	RBW
9 ㎑ to 150 ㎑	200 ㎐ to 300 ㎐
0.15 ㎒ to 30 ㎒	9 ㎑ to 10 ㎑
30 ㎒ to 1 000 ㎒	100 ㎑ to 120 ㎑
> 1 000 ㎒	1 ㎒

Average field strength measurements

Unless otherwise specified, when the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 s (100 ㎳). In cases where the pulse train exceeds 0.1 s, the measured field strength shall be determined during a 0.1 s interval.[62] The following procedure is an example of how the average value may be determined. The average field strength may be found by measuring the peak pulse amplitude (in log equivalent units) and determining the duty cycle correction factor (in dB) associated with the pulse modulation as shown in Equation (10):

$$\delta \text{ (dB)} = 20 \log(\Delta) \qquad (10)$$

where

δ is the duty cycle correction factor (㏈)

Δ is the duty cycle (dimensionless)

This correction factor may then be subtracted from the peak pulse amplitude (in ㏈) to find the average emission. This correction may be applied to all emissions that demonstrate the same pulse timing characteristics as the fundamental emission (e.g., the fundamental and harmonic emissions). In cases where the pulse train is truly random or pseudo random, some regulatory agencies might accept a declaration by the manufacturer of the worst-case value of t_{ON}. The duty cycle correction is determined as follows:

a) Adjust and configure any EUT switches, controls, or input data streams to ensure that the EUT is transmitting or encoded to obtain the “worst-case” pulse ON time.

b) Couple the final radio frequency output signal to the input of a spectrum analyzer. This may be performed by a radiated, direct connection (i.e., conducted) or by a “near-field” coupling method. The signal received shall be of sufficient level to trigger adequately the spectrum analyzer sweep display.

NOTE—If the bandwidth of the pulse is greater than the RBW of the spectrum analyzer, then a similar measurement may be performed using a wideband digital storage oscilloscope (DSO).

c) Adjust the center frequency of the spectrum analyzer to the center of the RF signal.

d) Set the spectrum analyzer for ZERO SPAN.

e) Adjust the SWEEP TIME to obtain at least a 100 ㎳ period of time on the horizontal display axis of the spectrum analyzer.

f) If the pulse train is periodic (i.e., consists of a series of pulses that repeat in a characteristic pattern over a constant time period), and the period (T) is less than or equal to 100 ㎳, then:

1) Set the TRIGGER on the spectrum analyzer to capture at least one period of the pulse train, including any blanking intervals.

2) Determine the total maximum pulse “ON time” (t_{ON}) over one period of the pulse train. An example of a periodic pulse train and the associated period is shown in Figure 15. If the pulse train contains pulses of different widths, then tON is determined by summing the duration of all of the pulses within the pulse train [i.e., $t_{ON} = \Sigma(t_1 + t_2 + \ldots t_n)$].

3) The duty cycle is then determined by dividing the total maximum “ON time” by the period of the pulse train (t_{ON} /T).

g) If the pulse train is nonperiodic or is periodic with a period that exceeds 100 ㎳, or as an alternative to step f), then:

1) Set the TRIGGER on the spectrum analyzer to capture the greatest amount of pulse “ON time” over 100 ㎳.

2) Find the 100 ㎳ period that contains the maximum “on time”; this could require summing the duration of multiple pulses as described in step f2).

3) Determine the duty cycle by dividing the total maximum “ON time” by 100 ㎳(t_{ON}/100 ㎳).

h) Determine the duty cycle correction factor by applying Equation (10) to the duty cycle determined in the preceding steps.

Figure 15 shows an example of a ZERO SPAN spectrum analyzer display of a representative pulse train. The center frequency is set to the maximum of the emission, and the triggering is set to capture a single sweep over 100 ㎳. The pulse train is composed of two different duration pulses, t_1 and t_2. Using the delta marker function, the times t_1 and t_2 are measured and recorded. The total number of times that the two pulses occur over the period (i.e., time interval T) is counted. The duty cycle correction factor is calculated from the sum of the individual ON times, per Equation:

$$\delta\ (\mathrm{dB}) = 20 \log[\textstyle\sum(nt_1 + mt_2 + \ldots + \xi t_x) / T]$$

where

n is the number of pulses of duration t_1

m is the number of pulses of duration t_2

ξ is the number of pulses of duration t_x

T is the period of the pulse train, or 100 ms if the pulse train length is greater than 100 ㎳

Notes:

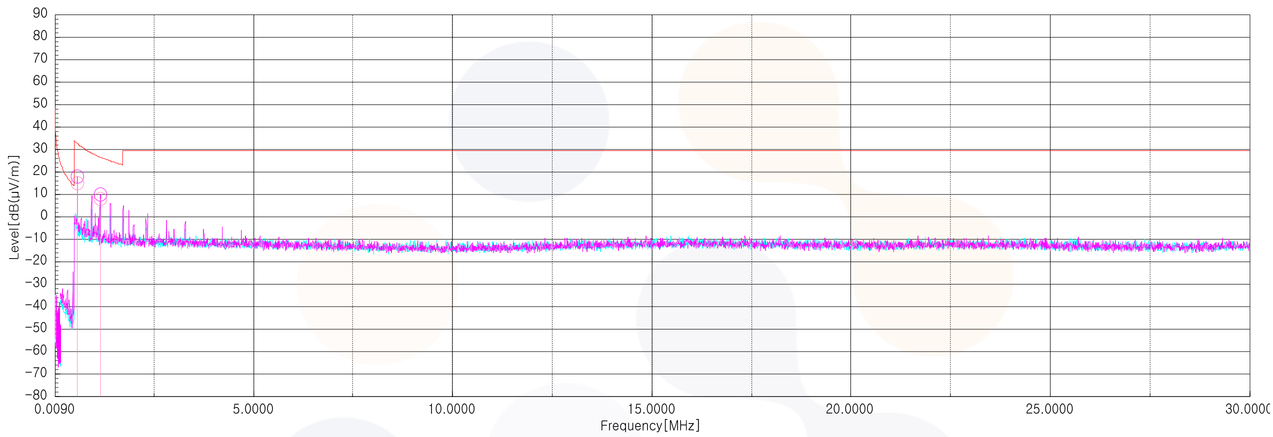
1. *f* <30 ㎒, extrapolation factor of 40 ㏈/decade of distance. $F_d = 40\log(D_m/D_s)$
   f ≥30 ㎒, extrapolation factor of 20 ㏈/decade of distance. $F_d = 20\log(D_m/D_s)$
   Where:
   F_d= Distance factor in ㏈
   D_m= Measurement distance in meters
   D_s= Specification distance in meters
2. Factors(㏈) = Antenna factor(㏈/m) + Cable loss(㏈) + or Amp. gain(㏈) - or F_d(㏈)
3. The worst-case emissions are reported however emissions whose levels were not within 20 ㏈ of respective limits were not reported.
4. Average test would be performed if the peak result were greater than the average limit.
5. [1)] means restricted band.
6. Above 1 ㎓ the worst results between two antenna polarizations (H and V) were documented in the test report.
7. Below 30 ㎒ frequency range, In order to search for the worst result, all orientations about parallel, perpendicular, and ground-parallel were investigated then reported. when the emission level was higher than 20 ㏈ of the limit, then the following statement shall be made: “No spurious emissions were detected within 20 ㏈ of the limit.”
8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω. For example, the measurement frequency X ㎑ resulted in a level of Y ㏈㎶/m, which is equivalent to Y - 51.5 = Z ㏈㎂/m, which has the same margin, W ㏈, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

Test results

Test results (Below 30 ㎒) – Worst case: 1 MBits/s(31 Bytes) 2 402 ㎒

Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	Distance factor	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Quasi peak data								
0.58	H	67.50	20.21	-32.69	40.00	15.02	32.41	17.39
1.15	H	60.30	20.21	-32.69	40.00	7.82	26.39	18.57

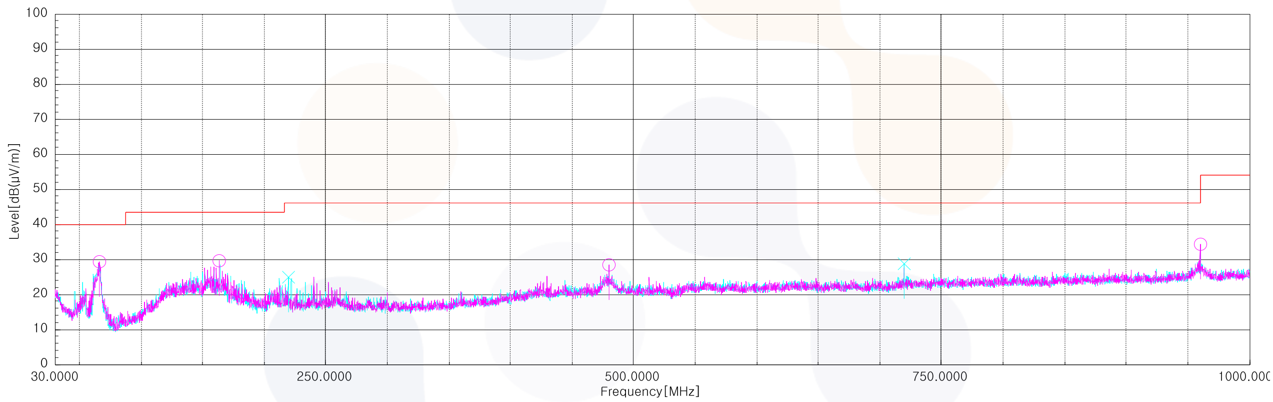
Horizontal/Vertical



Test results (Below 1 000 ㎒) – Worst case: 1 MBits/s(31 Bytes) 2 402 ㎒

Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	Distance factor	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Quasi peak data								
66.01	H	44.30	12.30	-31.52	-	25.08	40.00	14.92
163.62[1)]	H	43.20	15.80	-31.35	-	27.65	43.52	15.87
219.76	V	37.70	15.19	-30.70	-	22.19	46.02	23.83
479.96	H	32.10	23.10	-30.18	-	25.02	46.02	21.00
720.03	V	30.60	25.00	-29.67	-	25.93	46.02	20.09
959.99	H	30.60	26.80	-27.57	-	29.83	46.02	16.19

Horizontal/Vertical



Test results (Above 1 000 ㎒)

1 MBits/s(31 Bytes)

Low Channel

Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
[㎒]	[V/H]	[dB(㎶)]	[dB]	[dB]	[dB]	[dB(㎶/m)]	[dB(㎶/m)]	[dB]
Peak data								
2 388.76 1)	H	64.10	27.00	-29.04	-	62.06	74.00	11.94
2 491.45 1)	H	52.70	27.81	-29.00	-	51.51	74.00	22.49
4 803.65 1)	H	66.90	32.21	-41.08	-	58.03	74.00	15.97
7 205.23	H	68.90	36.51	-39.18	-	66.23	74.00	7.77
9 608.85	V	67.60	38.50	-40.79	-	65.31	74.00	8.69
Average Data								
2 388.76 1)	H	64.10	27.00	-29.04	-26.40	35.66	54.00	18.34
2 491.45 1)	H	52.70	27.81	-29.00	-26.40	25.11	54.00	28.89
4 803.65 1)	H	66.90	32.21	-41.08	-26.40	31.63	54.00	22.37

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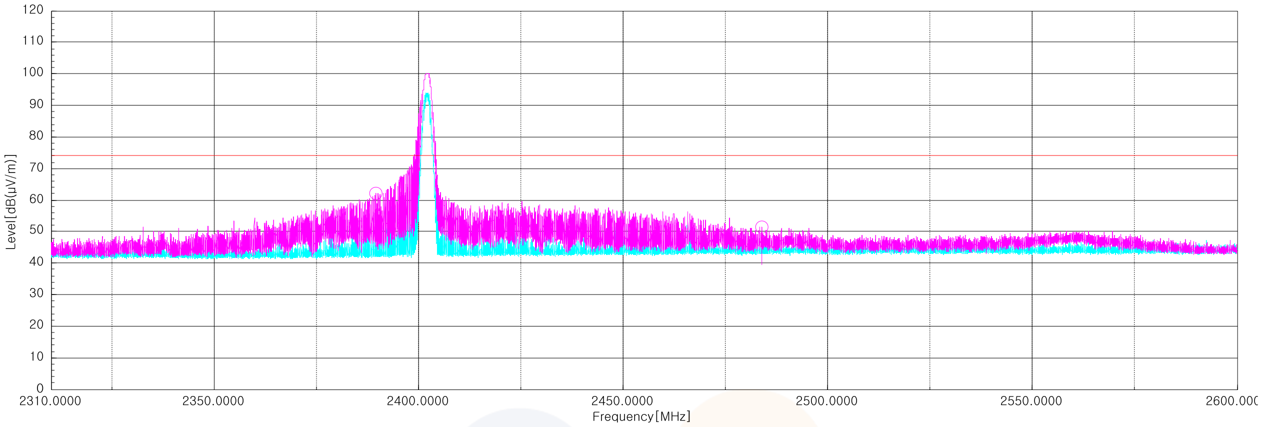
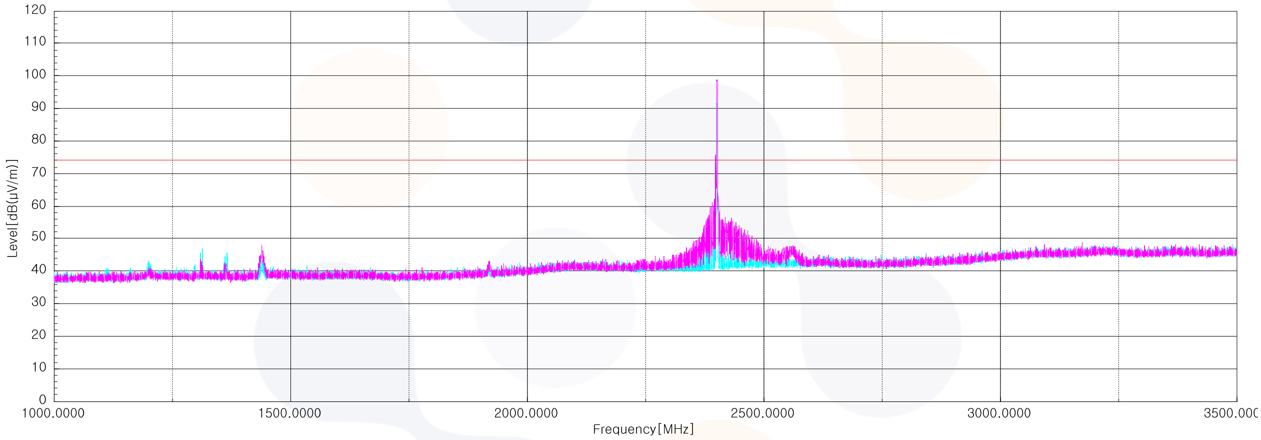
www.kctl.co.kr

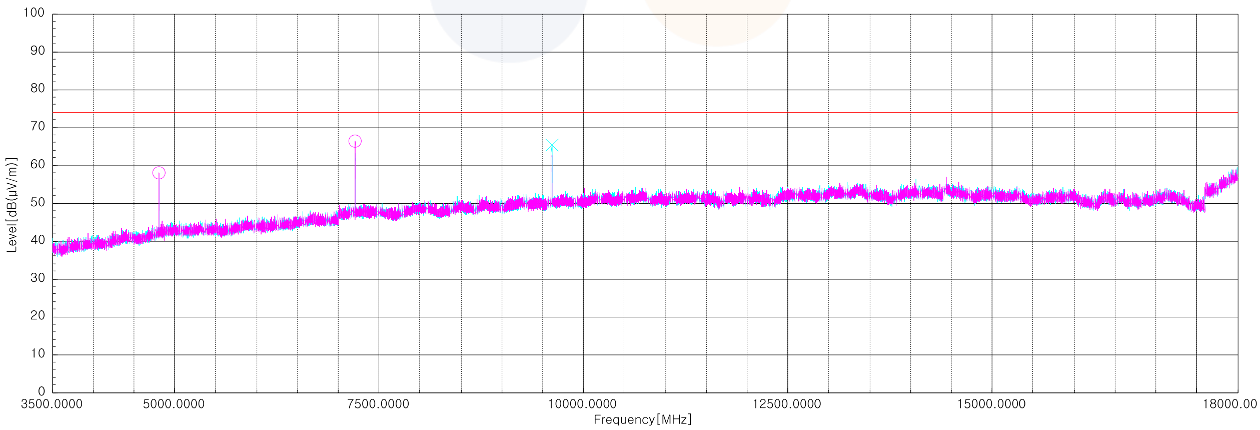
Horizontal/Vertical for Band-edge



Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



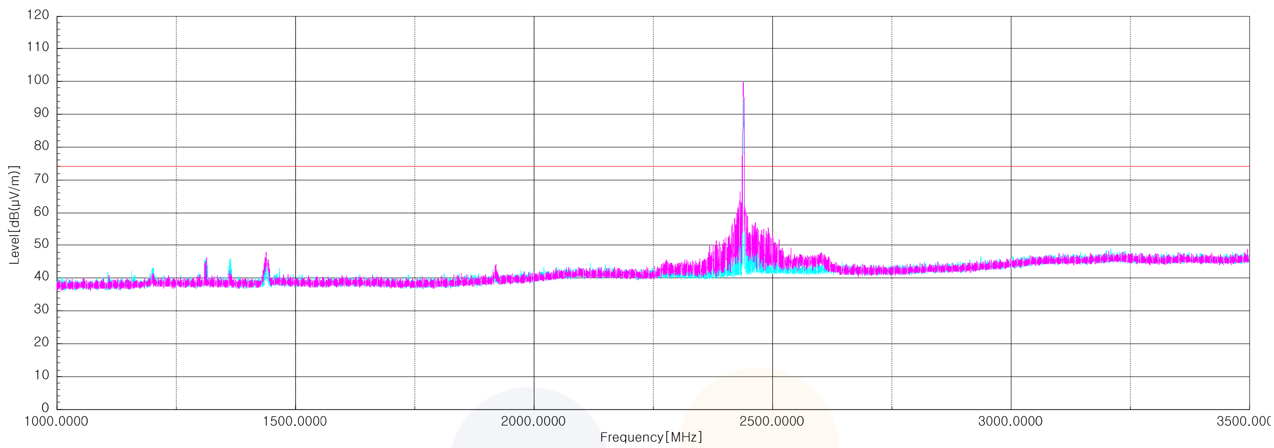
Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



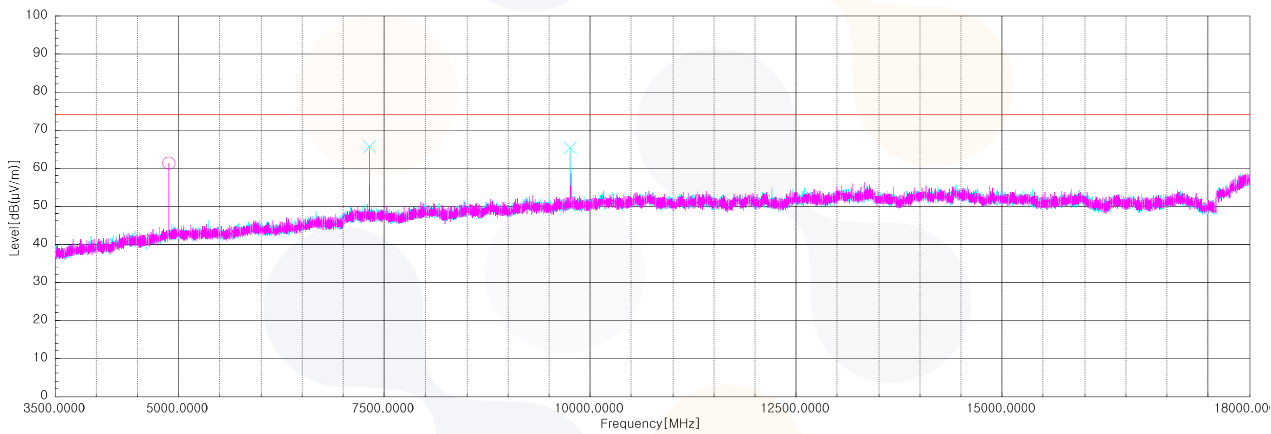
Middle Channel

Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
[MHz]	[V/H]	[dB(μV)]	[dB]	[dB]	[dB]	[dB(μV/m)]	[dB(μV/m)]	[dB]
Peak data								
4 880.18[1)]	H	69.50	32.68	-40.90	-	61.28	74.00	12.72
7 319.26[1)]	V	68.20	36.46	-39.29	-	65.37	74.00	8.63
9 759.17	V	67.40	38.40	-40.42	-	65.38	74.00	8.62
Average Data								
4 880.18[1)]	H	69.50	32.68	-40.90	-26.40	34.88	54.00	19.12
7 319.26[1)]	V	68.20	36.46	-39.29	-26.40	38.97	54.00	15.03

Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



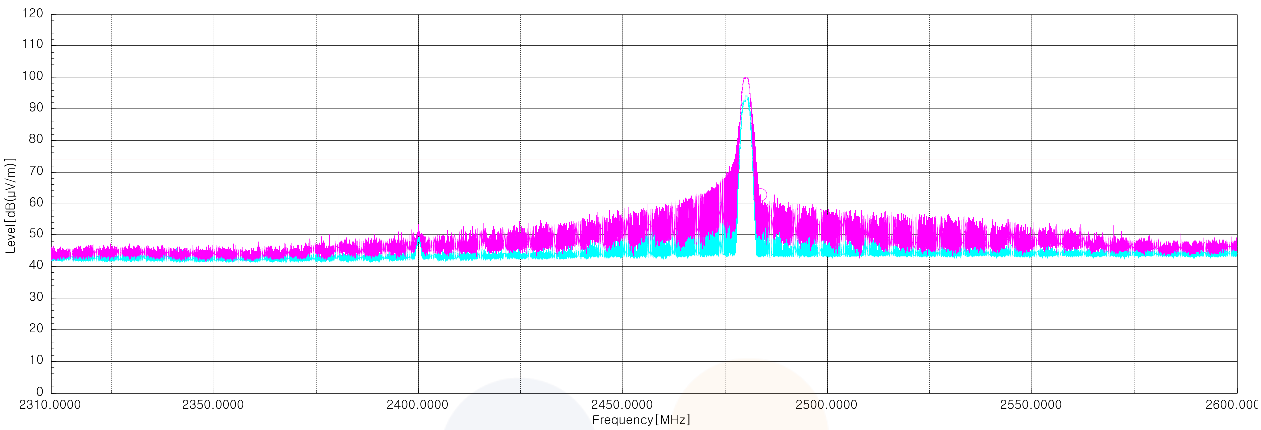
Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



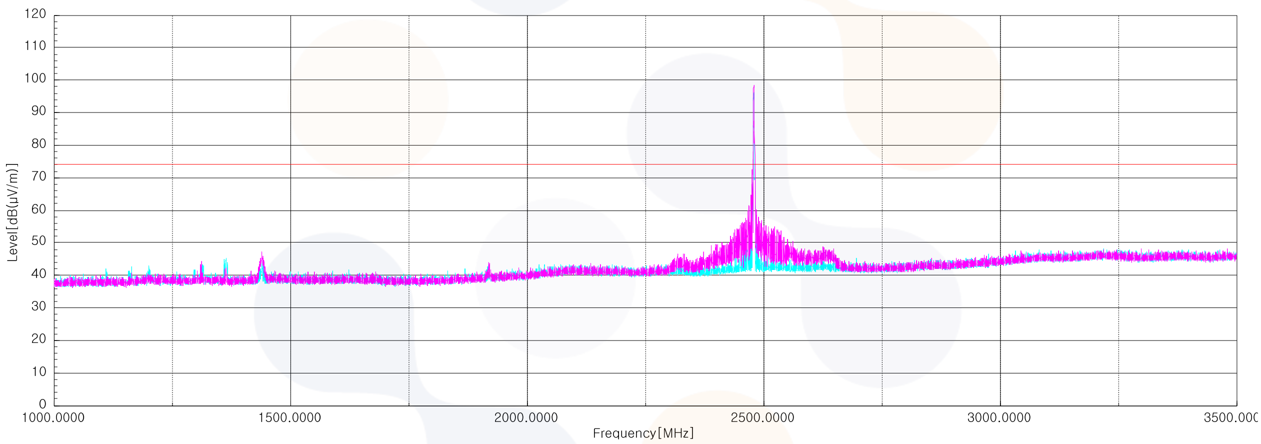
High Channel

Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
[MHz]	[V/H]	[dB(μV)]	[dB]	[dB]	[dB]	[dB(μV/m)]	[dB(μV/m)]	[dB]
Peak data								
2 487.91[1)]	H	64.10	27.78	-29.00	-	62.88	74.00	11.12
4 960.10[1)]	H	67.00	32.84	-40.71	-	59.13	74.00	14.87
7 439.45[1)]	V	67.80	36.22	-39.30	-	64.72	74.00	9.28
9 919.63	V	66.50	38.40	-40.39	-	64.51	74.00	9.49
Average Data								
2 487.91[1)]	H	64.10	27.78	-29.00	-26.40	36.48	54.00	17.52
4 960.10[1)]	H	67.00	32.84	-40.71	-26.40	32.73	54.00	21.27
7 439.45[1)]	V	67.80	36.22	-39.30	-26.40	38.32	54.00	15.68

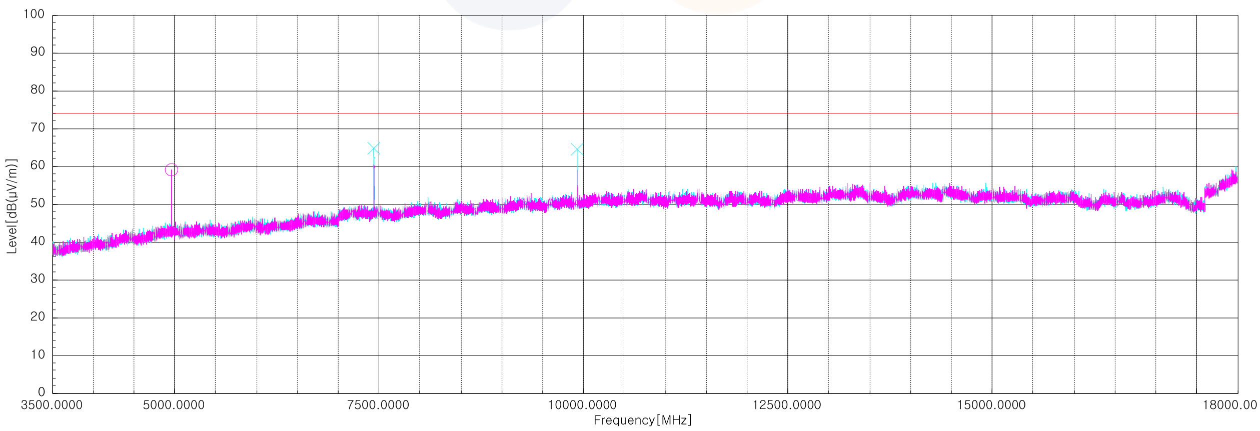
Horizontal/Vertical for Band-edge



Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



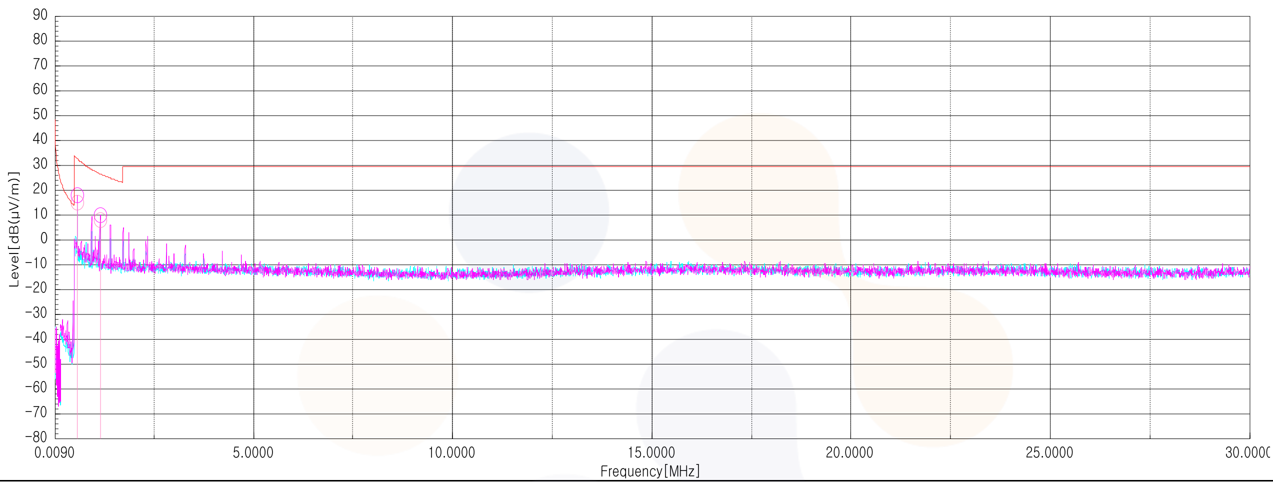
Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



Test results (Below 30 ㎒) – Worst case: 2 MBits/s(31 Bytes) 2 480 ㎒

Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	Distance factor	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Quasi peak data									
0.58	H	67.50	20.21	-32.69	40.00		15.02	32.41	17.39
1.15	H	60.30	20.21	-32.69	40.00		7.82	26.39	18.57

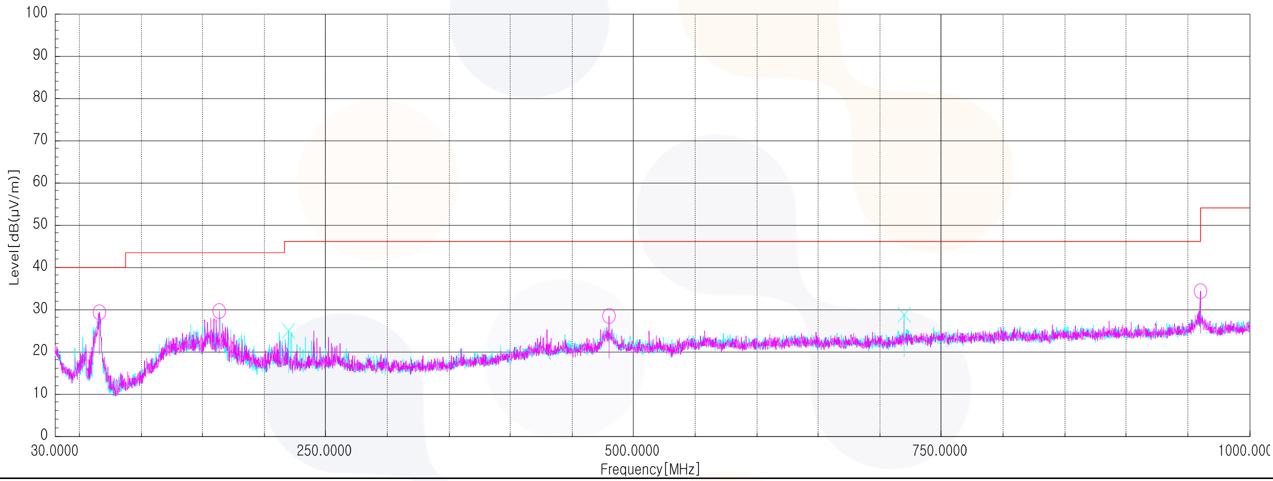
Horizontal/Vertical



Test results (Below 1 000 ㎒) – Worst case: 2 MBits/s(31 Bytes) 2 480 ㎒

Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Quasi peak data								
66.01	H	44.30	12.30	-31.52		25.08	40.00	14.92
163.62	H	43.20	15.80	-31.35		27.65	43.52	15.87
219.76	V	37.70	15.19	-30.70		22.19	46.02	23.83
479.96	H	32.10	23.10	-30.18		25.02	46.02	21.00
720.03	V	30.60	25.00	-29.67		25.93	46.02	20.09
959.99	H	30.60	26.80	-27.57		29.83	46.02	16.19

Horizontal/Vertical

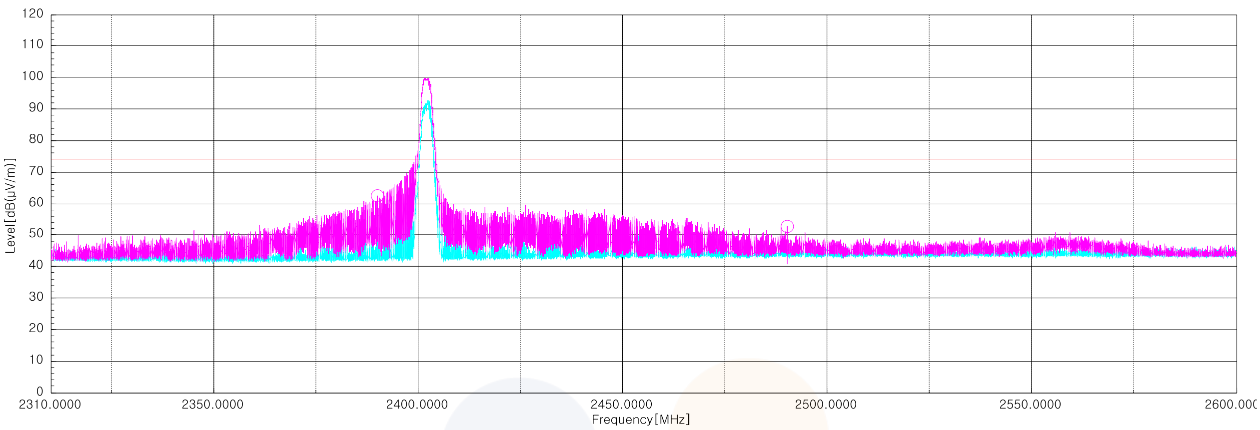
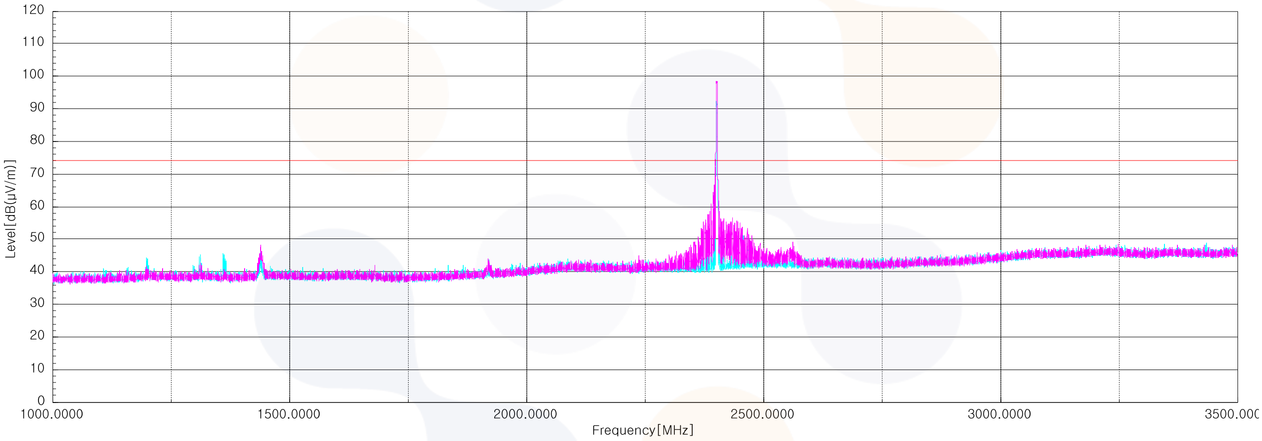
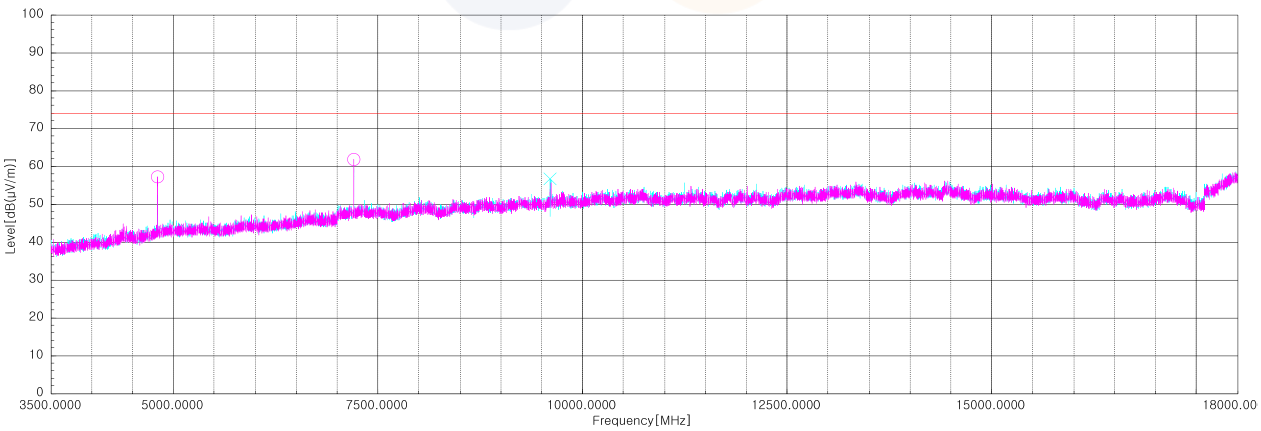


Test results (Above 1 000 ㎒)

2 MBits/s(31 Bytes)

Low Channel

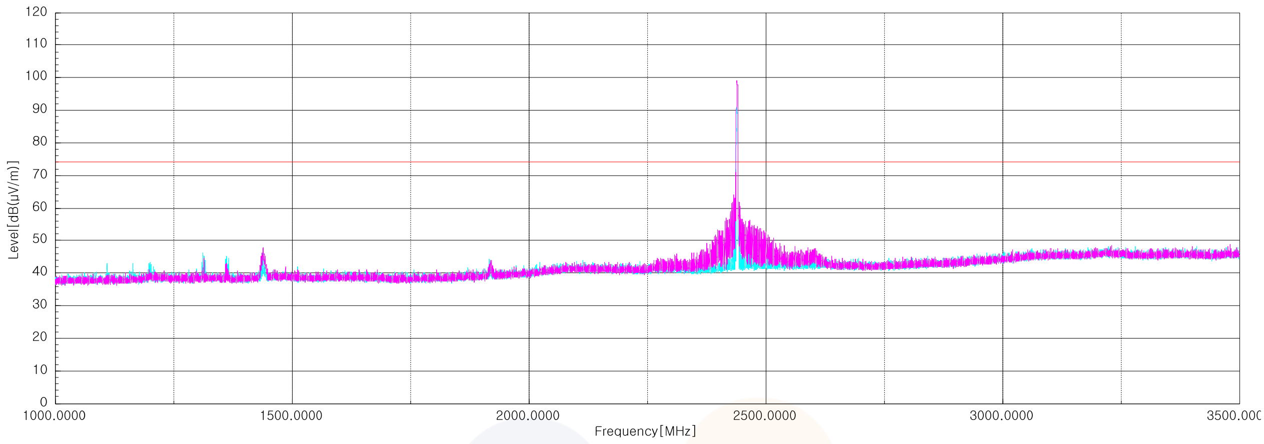
Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
[㎒]	[V/H]	[dB(㎶)]	[dB]	[dB]	[dB]	[dB(㎶/m)]	[dB(㎶/m)]	[dB]
Peak data								
2 386.56 1)	H	64.30	27.00	-29.05	-	62.25	74.00	11.75
2 493.77 1)	H	54.20	27.84	-29.00	-	53.04	74.00	20.96
4 804.00 1)	H	66.30	32.22	-41.08	-	57.44	74.00	16.56
7 204.75	H	64.10	36.51	-39.18	-	61.43	74.00	12.57
9 605.95	V	59.10	38.50	-40.80	-	56.80	74.00	17.20
Average Data								
2 386.56 1)	H	64.30	27.00	-29.05	-31.88	30.37	54.00	23.63
2 493.77 1)	H	54.20	27.84	-29.00	-31.88	21.16	54.00	32.84
4 804.00 1)	H	66.30	32.22	-41.08	-31.88	25.56	54.00	28.44

Horizontal/Vertical for Band-edge

Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓

Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓


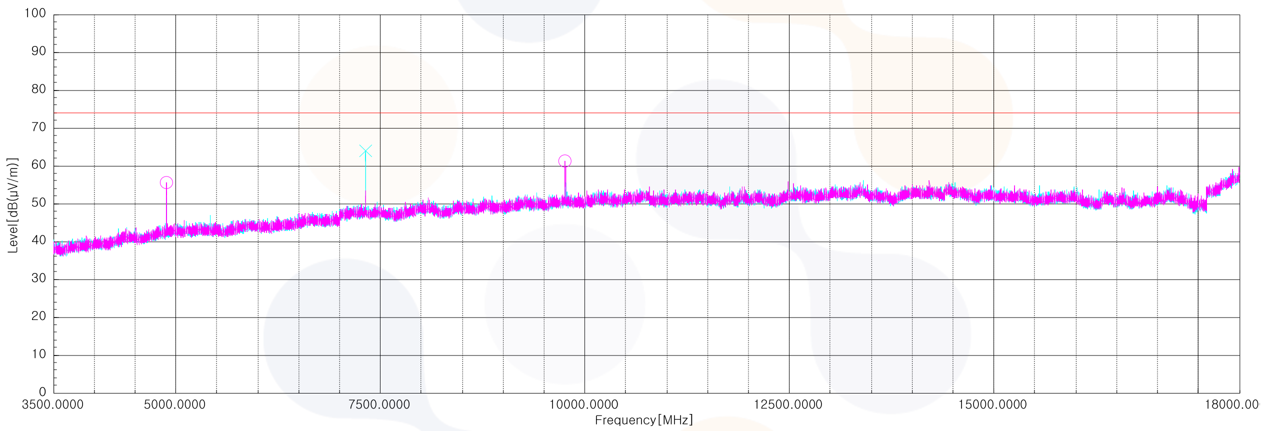
Middle Channel

Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
[MHz]	[V/H]	[dB(μV)]	[dB]	[dB]	[dB]	[dB(μV/m)]	[dB(μV/m)]	[dB]
Peak data								
4 879.26[1)]	H	63.90	32.68	-40.90	-	55.68	74.00	18.32
7 318.37[1)]	V	66.60	36.46	-39.29	-	63.77	74.00	10.23
9 759.65	H	63.40	38.40	-40.42	-	61.38	74.00	12.62
Average Data								
4 879.26[1)]	H	49.55	32.68	-40.90	-31.88	23.80	54.00	30.20
7 318.37[1)]	V	48.52	36.46	-39.29	-31.88	31.89	54.00	22.11

Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



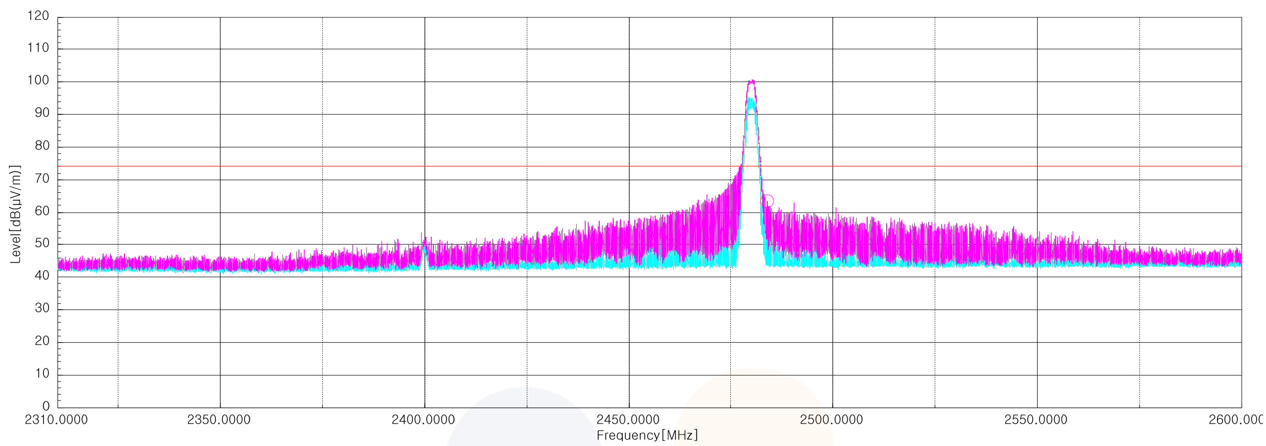
Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



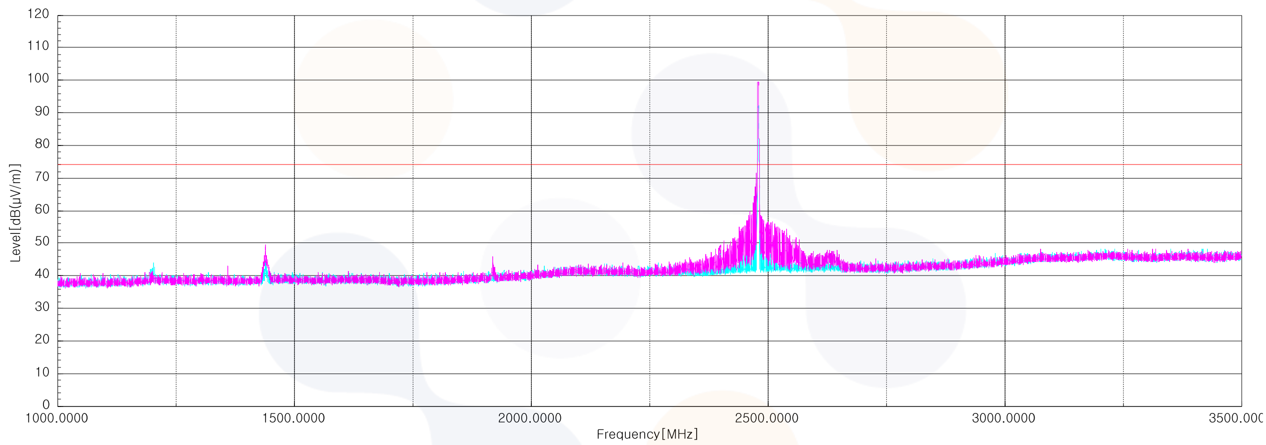
High Channel

Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
[MHz]	[V/H]	[dB(μV)]	[dB]	[dB]	[dB]	[dB(μV/m)]	[dB(μV/m)]	[dB]
Peak data								
2 483.99[1)]	H	64.80	27.74	-29.01	-	63.53	74.00	10.47
4 959.68[1)]	H	64.70	32.84	-40.72	-	56.82	74.00	17.18
7 438.70[1)]	H	65.00	36.22	-39.30	-	61.92	74.00	12.08
9 920.12	V	63.70	38.40	-40.39	-	61.71	74.00	12.29
Average Data								
2 483.99[1)]	H	38.98	27.74	-29.01	-31.88	31.65	54.00	22.35
4 959.68[1)]	H	51.93	32.84	-40.72	-31.88	24.94	54.00	29.06
7 438.70[1)]	H	48.37	36.22	-39.30	-31.88	30.04	54.00	23.96

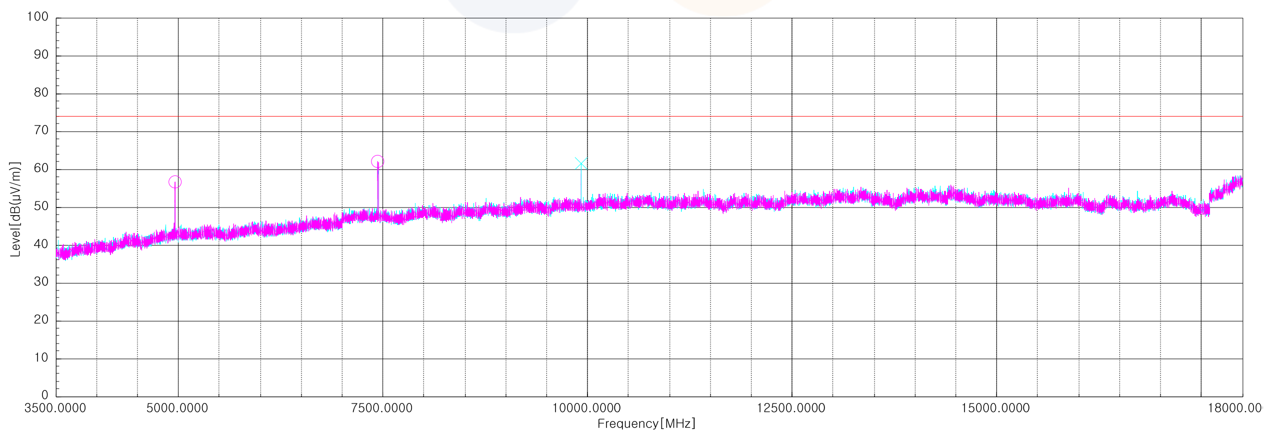
Horizontal/Vertical for Band-edge



Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓

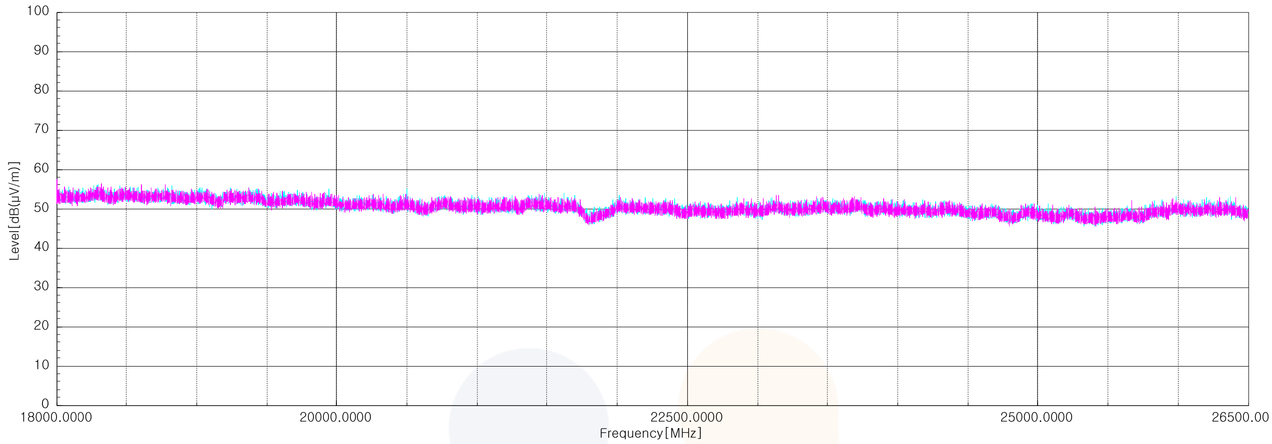


Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



Test results (Above 18 ㎓) – Worst case: 1 MBits/s(31 Bytes) 2 402 ㎒

Horizontal/Vertical for 18 ㎓ ~ 26.5 ㎓



Note: The Worst case was based on the lowest margin condition considering Harmonic and Spurious Emission

7.5. Conducted Spurious Emission

Test setup

EUT	—	Attenuator	—	Spectrum analyzer

Limit

According to §15.247(d),

In any 100 ㎑ bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operation, the radio frequency power that is produced by the intentional radiator shall be at least 20 ㏈ below that in the 100 ㎑ bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation specified in §15.209(a) is not required. In addition, radiated emission limits specified in §15.209(a) (see §15.205(c)). Limit : 20 ㏈c

According to RSS-247(6.6),

In any 100 ㎑ bandwidth outside the frequency band in which the spread spectrum device, digitally modulated device, or hybrid system is operating, the RF power that is produced shall be at least 20 ㏈ below that in the 100 ㎑ bandwidth within the band that contains the highest level of the desired power based on either an RF conducted or a radiated measurement – provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 6.3.2, the attenuation required shall be 30 ㏈ instead of 20 ㏈. Attenuation below the general field strength limits specified in RSS-Gen is not required. Limit : 20 ㏈c

Test procedure

ANSI C63.10-2020 - Section 11.11.3
ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024 - Section 11.11.3
KDB 558074 D01 v05 - Section 8.5

Test settings

Establish an emission level by using the following procedure:

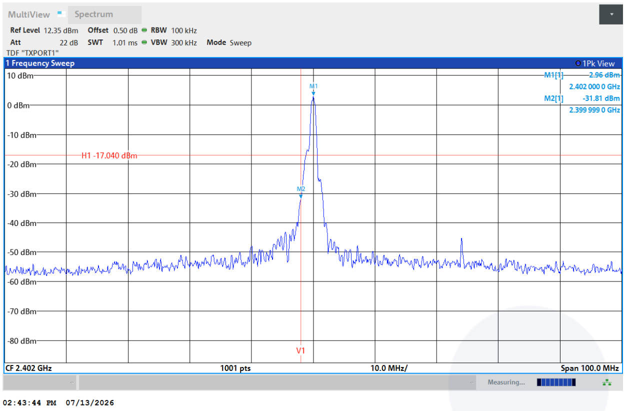
1) Set the center frequency and span to encompass frequency range to be measured.
2) Set the RBW = 100 ㎑
3) Set the VBW ≥ [3 x RBW]
4) Detector = peak
5) Sweep time = No faster than coupled (auto) time
6) Trace mode = max hold
7) Allow trace to fully stabilize.
8) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

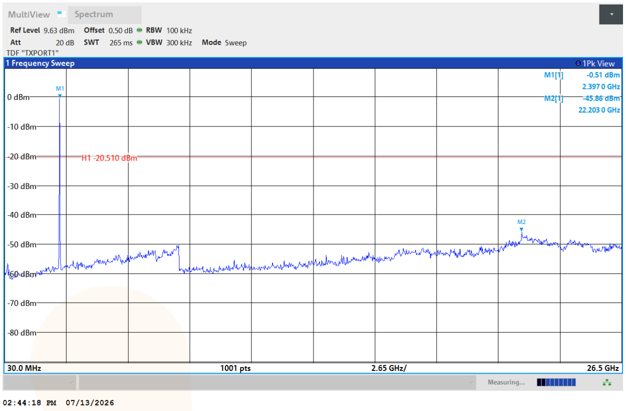
Test results

BLE_1 MBit/s(31 Bytes)

Conducted band-edge / Low ch.



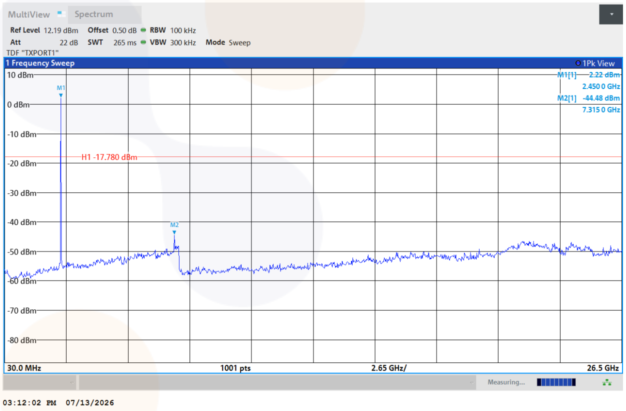
Conducted spurious / Low ch.



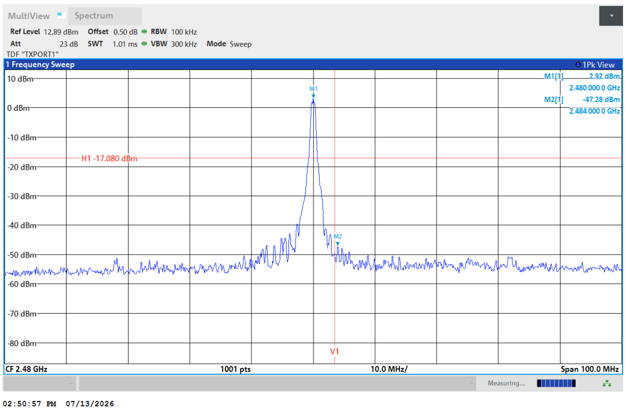
Conducted band-edge / Mid ch.

Blank

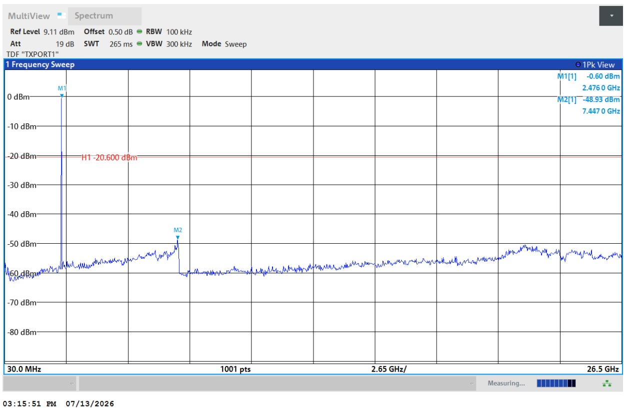
Conducted spurious / Mid ch.



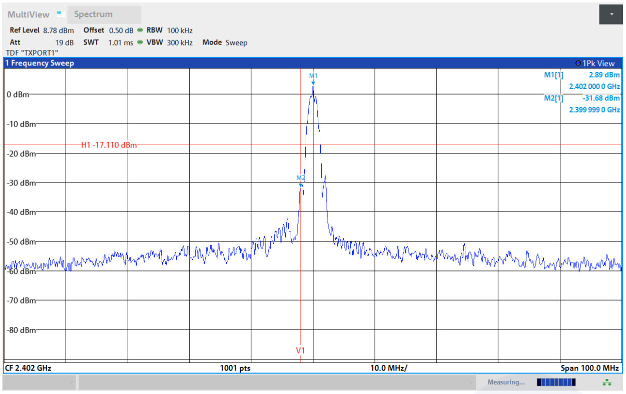
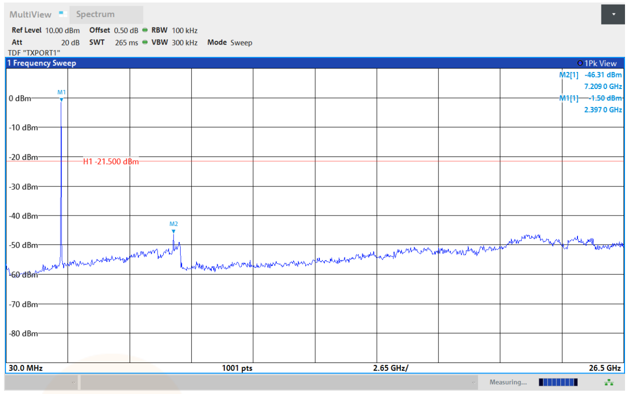
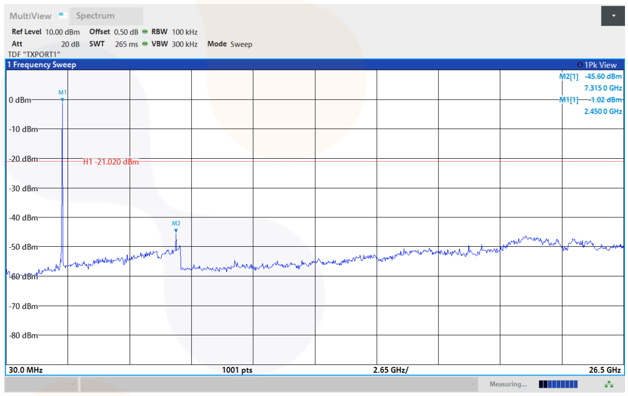
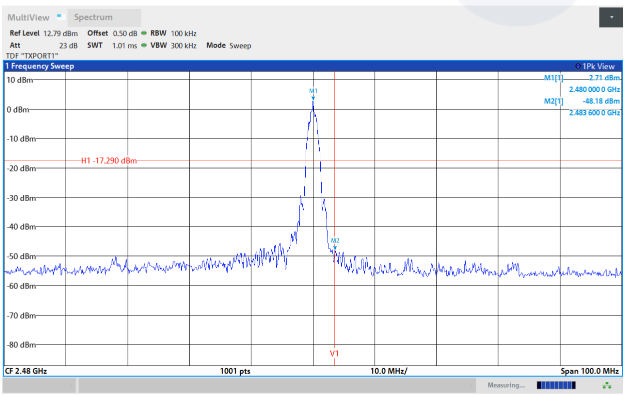
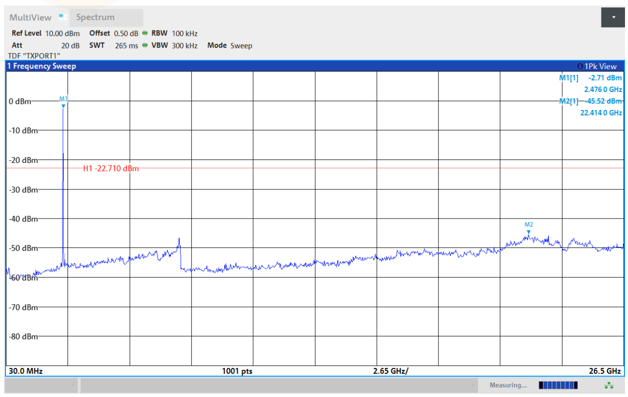
Conducted band-edge / High ch.



Conducted spurious / High ch.



BLE_2 MBit/s(31 Bytes)

Conducted band-edge / Low ch.	Conducted spurious / Low ch.
 02:52:24 PM 07/13/2026	 03:22:45 PM 07/13/2026
Conducted band-edge / Mid ch.	**Conducted spurious / Mid ch.**
Blank	 03:25:02 PM 07/13/2026
Conducted band-edge / High ch.	**Conducted spurious / High ch.**
 02:55:18 PM 07/13/2026	 03:29:40 PM 07/13/2026

8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R&S	FSVA3030	101123	27.02.02
Attenuator	HUBER+SUHNER	6610_SK-50-1/199_NE	ATT09	27.01.20
DC Power Supply	AGILENT	E3632A	MY40006352	27.04.23
Signal Generator	R&S	SMB100A	176206	27.01.15
Power Sensor	R&S	NRP-Z81	1137.9009.02-106223-bB	27.04.24
Attenuator	HP	8491A	42946	27.07.06
Spectrum Analyzer	R&S	FSV40	100988	27.04.06
Broadband PreAmplifier	SCHWARZBECK	BBV9718D	53	27.07.06
Low Noise Amplifier	TESTEK	TK-PA18H	220123-L	27.07.06
Low Noise Amplifier	TESTEK	TK-PA1840H	220234-L	27.06.30
Horn Antenna	SCHWARZBECK	BBHA9120D	2764	27.06.30
Horn Antenna	SCHWARZBECK	BBHA9170	1266	27.04.29
High Pass Filter	Wainwright Instruments GmbH	WHKX12-2805-3000-18000-40SS	SN59	27.06.27
High Pass Filter	Qotana	DBHF058004000A	23041800061	27.04.28
Amplifier	SONOMA INSTRUMENT	310N	421910	27.07.06
Bi-log Antenna	Teseq GmbH	CBL 6112D	61521	26.12.11
Loop Antenna	R&S	HFH2-Z2	100355	28.06.29
Vector Signal Generator	R&S	SMBV100A	257566	27.07.06
Controller	INNCO SYSTEMS	CO3000	1442/5437032 2/P	N/A
Antenna Mast	INNCO SYSTEMS	MA4640-XP-ET	AM002	N/A
Turn Device	INNCO SYSTEMS	DS1200-S-1t	0001	N/A

End of test report