TEST REPORT

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1. Client

- Name : UWICOM
- Address : Industry University Cooperation Foundation, 703, 154-42, GwangKyosan-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do,16227, Korea
- Date of Receipt : 2019-04-17

2. Use of Report : -

3. Name of Product and Model : Smart Voice Sender Receiver / SVS-R

4. Manufacturer and Country of Origin : UWICOM / Korea

5. FCC ID : 2AS7E-SVS-R

6. Date of Test : 2019-05-13 to 2019-05-17

7. Test Standards : FCC Part 15 Subpart C, 15.247

8. Test Results : Refer to the test result in the test report

Affirmation	Tested by Name : Seonjun Yun (Signature)	Technical Manager Name : Jaehyong Lee (Signature)

2019-08-23

KCTL Inc.

As a test result of the sample which was submitted from the client, this report does not guarantee the whole product quality. This test report should not be used and copied without a written agreement by KCTL Inc.

Report revision history

Date	Revision	Page No
2019-06-14	Initial report	-
2019-07-16	Updated output power	8 ~ 9
2019-08-23	Updated	9

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1. General information

Client : UWICOM

Address : Industry University Cooperation Foundation, 703, 154-42, GwangKyosan-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16227 Korea

Manufacturer : UWICOM

Address : Industry University Cooperation Foundation, 703, 154-42, GwangKyosan-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16227 Korea

Laboratory : KCTL Inc.

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-3327, G-198, C-3706, T-1849
Industry Canada Registration No. : 8035A
KOLAS No.: KT231

2. Device information

Equipment under test : Smart Voice Sender Receiver

Model : SVS-R

Derivative Model : HA1000

Frequency range : 2 402 ㎒ ~ 2 480 ㎒_Bluetooth(BDR/EDR)

Modulation technique : GFSK, π/4DQPSK, 8DPSK_Bluetooth(BDR/EDR)

Number of channels : 79 ch

Power source : DC 5 V

Antenna specification : PCB Antenna

Software version : SVS_Rx_Ver2.00

Hardware version : SVS_R_V05

Test device serial No. : N/A

Operation temperature : 23 ℃

Approved Module FCC ID : A8TBM64S1

2.1. Accessory information

Equipment	Manufacturer	Model	Serial No.	Power source
Earphones	ONETECHplus	UW-02	-	5.0 V d.c., 1.5 A
Li-ion Battery	HUIZHOU KAIYESHENG ENERGY CO., LTD	KYS 521753	-	3.7 V, 450mAh, 1.665Wh

2.2. Information about derivative model

The basic and derivative model are electrically identical.
The derivative model has a microphone.

2.3. Frequency/channel operations

This device contains the following capabilities:
Bluetooth(BDR, EDR)

Ch.	Frequency (㎒)
00	2 402
.	.
39	2 441
.	.
78	2 480

Table 2.3.1. Bluetooth(BDR/EDR) mode

15.247 Requirements for Bluetooth transmitter:

- This Bluetooth module has been tested by a Bluetooth Qualification Lab, and we confirm the following:
  1) This system is hopping pseudo-randomly.
  2) Each frequency is used equally on the average by each transmitter.
  3) The receiver input bandwidths that match the hopping channel bandwidths of their corresponding transmitters
  4) The receiver shifts frequencies in synchronization with the transmitted signals.
- 15.247(g): The system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this Section 15.247 should the transmitter be presented with a continuous data (or information) stream.
- 15.247(h): The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

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.

- The transmitter has permanently attached PCB Antenna(internal antenna) on board.

4. Summary of tests

FCC Part section(s)	Parameter	Test results
15.247(b)(1), (4)	Maximum peak output power	Pass
15.247(a)(1)	Carrier frequency separation	NT(Note[1])
15.247(a)(1)	20dB channel bandwidth	NT(Note[1])
15.247(a)(iii) 15.247(b)(1)	Number of hopping channel	NT(Note[1])
15.247(a) (iii)	Time of occupancy(dwell time)	NT(Note[1])
15.205(a), 15.209(a) 15.247(d),	Spurious emission	Pass
	Band-edge, restricted band	Pass
15.207(a)	Conducted Emissions	Pass

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

1. Test was performed by modular transmitter (Model Name: BM64SPKabcC1 (a,b,c= 0~9, A~Z), FCC ID: A8TBM64S1, Test Report No. 50041195 001 issued on 17, May, 2016 by TUV Rheinland Taiwan Ltd.
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 ㎑ 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.
4. 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
5. The test procedure(s) in this report were performed in accordance as following.
   - ANSI C63.10-2013
   - KDB 558074 D01 v05r02

5. Measurement uncertainty

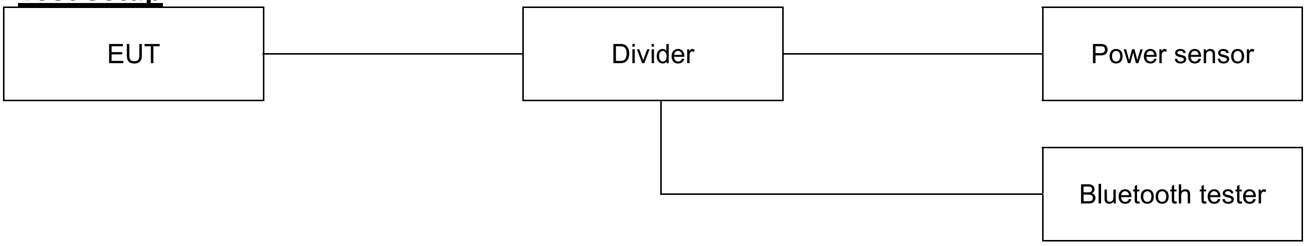
The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013.
All measurement uncertainty values are shown with a coverage factor of *k*=2 to indicated a 95 % level of confidence. The measurement data shown herein meets of exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded uncertainty	
Radiated spurious emissions	9 ㎑ ~ 30 ㎒:	2.28 ㏈
	30 ㎒ ~ 300 ㎒	4.98 ㏈
	300 ㎒ ~ 1 000 ㎒	5.14 ㏈
	1 ㎓ ~ 6 ㎓	6.70 ㏈
	Above 6 ㎓	6.60 ㏈

6 Test results

6.1. Maximum peak output power

Test setup



Limit

According to §15.247(a)(1) Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 ㎑ or the 20 ㏈ bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2 400-2 483.5 ㎒ band may have hopping channel carrier frequencies that are separated by 25 ㎑ or two-thirds of the 20 ㏈ bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 ㎽.

According to §15.247(b)(1), for frequency hopping systems operating in the 2 400-2 483.5 ㎒ band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5 725-5 850 ㎒ band: 1 watt. For all other frequency hopping systems in the 2 400-2 483.5 ㎒ band: 0.125 watts.

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 ㏈i. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 ㏈i 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 ㏈ that the directional gain of the antenna exceeds 6 ㏈i.

Test procedure

ANSI C63.10-2013 - Section 7.8.5

Test settings

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:
Use the following spectrum analyzer settings:

1) Span: Approximately five times the 20 ㏈ bandwidth, centered on a hopping channel.
2) RBW > 20 ㏈ bandwidth of the emission being measured.
3) VBW ≥ RBW.
4) Sweep: Auto.
5) Detector function: Peak.
6) Trace: Max hold.
7) Allow trace to stabilize.

Notes:

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

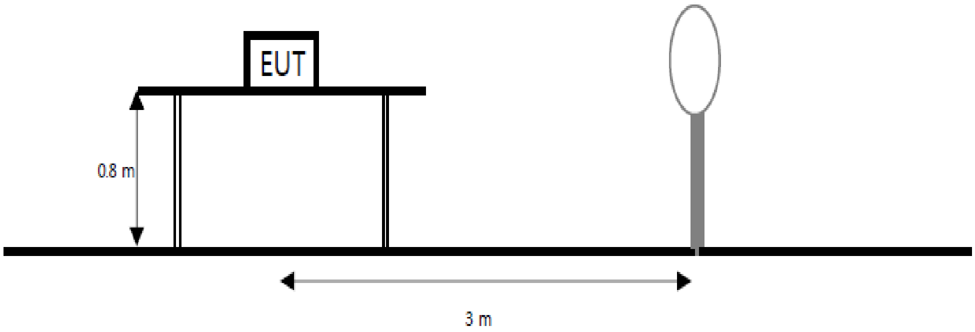
Test results

Frequency(㎒)	Modulation	Measured output power(㏈m)		Limit(㏈m)
		Peak	Average	
2 402	GFSK	16.11	14.95	20.97
2 441		15.51	14.35	
2 480		15.01	13.85	
2 402	π/4DQPSK	14.07	12.91	20.97
2 441		13.17	12.01	
2 480		12.66	11.50	
2 402	8DPSK	14.13	12.97	20.97
2 441		13.33	12.17	
2 480		12.66	11.50	

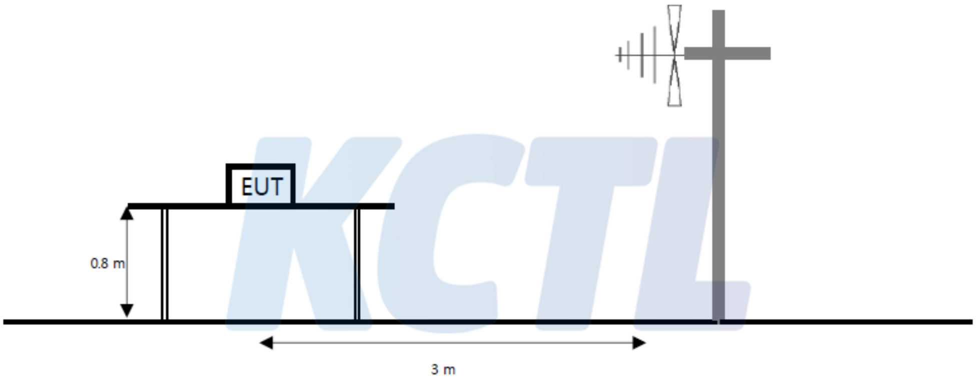
6.2. Radiated spurious emissions & band edge

Test setup

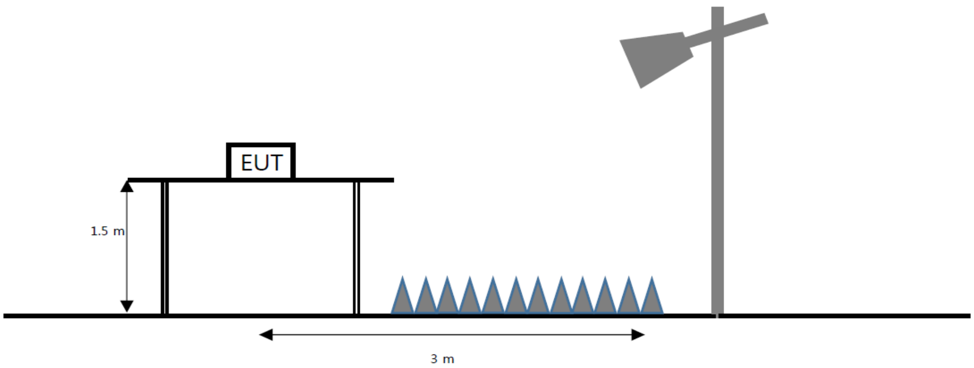
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 ㎑ to 30 ㎒ Emissions



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.

Test procedure

ANSI C63.10-2013

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 = auto
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

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 ㎒
3. VBW = 1/T ≥ 1 ㎐
4. Averaging type was set to RMS to ensure that video filtering was applied in the power domain
5. Detector = peak
6. Sweep time = auto
7. Trace mode = max hold
8. Trace was allowed to run for at least 50 times(1/duty cycle) traces

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 ㎒ for Peak detection and frequency above 1 ㎓. The resolution bandwidth of test receiver/spectrum analyzer is 1 ㎒ and the video bandwidth is 1 ㎑(≥1/T) for Average detection (AV) at frequency above 1 ㎓. (where T = pulse width)
2. *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
3. Factors(㏈) = Antenna factor(㏈/m) + Cable loss(㏈) + or Amp. gain(㏈) + or F_d(㏈)
4. The worst-case emissions are reported however emissions whose levels were not within 20 ㏈ of respective limits were not reported.
5. Average test would be performed if the peak result were greater than the average limit.
6. [1)] means restricted band.
7. According to part 15.31(f)(2), an extrapolation factor of 40 dB/decade is applied because measured distance of radiated emission is 3 m.
8. 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.”

Duty cycle correction factor calculation:

According to 7.5 Procedure for determining the average value of pulsed emissions

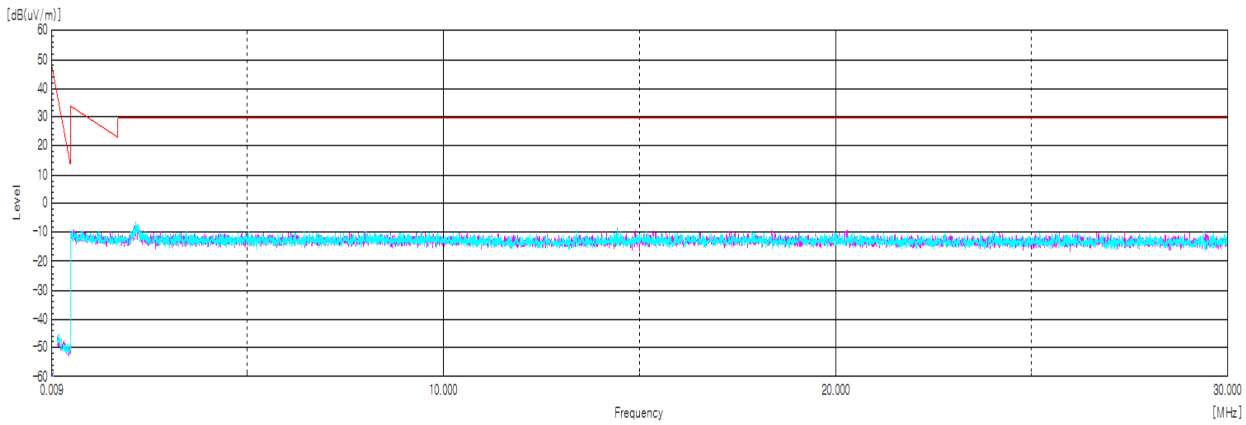
Duty Cycle Correction Factor Calculation

- Worst case : AFH mode
- Channel hop rate = 800 hops/second
- Hopping rate for DH5 mode = 800 hops/second / 5 (6 slots for DH5) = 133.33 hops/second
- Time per channel hop = 1 / 133.33 hops/second = 7.50 ㎳
- Time to cycle through all channels = 7.50 x 20 channels(AFH mode) = 150 ㎳
- Number of times transmitter hits on one channel = 100 ㎳ / Time to cycle through all channels (㎳)
  = 100 ㎳ / 150 ㎳ = 1 time
- Worst case Dwell time = 7.5 ㎳
- Duty Cycle Correction Factor = 20log(7.5 ㎳/100 ㎳) = -22.5 ㏈

Test results (Below 30 ㎒) – Worst case: GFSK Low frequency

Frequency	Pol.	Reading	Cable Loss	Amp Gain	Antenna Factor	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
No spurious emissions were detected within 20 dB of the limit.									

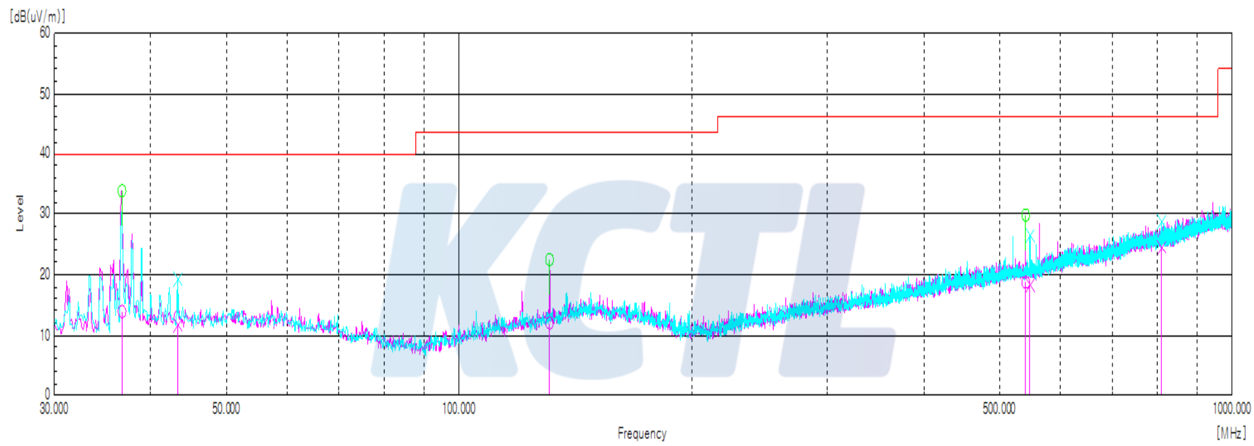
Horizontal/Vertical



Test results (Below 1 000 ㎒) – Worst case: GFSK Low frequency

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Quasi peak data								
36.67	H	27.10	17.73	-30.86	-	13.97	40.00	26.03
43.34	V	24.20	18.40	-30.77	-	11.83	40.00	28.17
131.12	H	23.50	18.01	-29.65	-	11.86	43.50	31.64
541.19	H	21.30	24.22	-26.78	-	18.74	46.00	27.26
548.10	V	20.70	24.36	-26.76	-	18.30	46.00	27.70
810.37	V	21.40	28.50	-25.26	-	24.64	46.00	21.36

Horizontal/Vertical



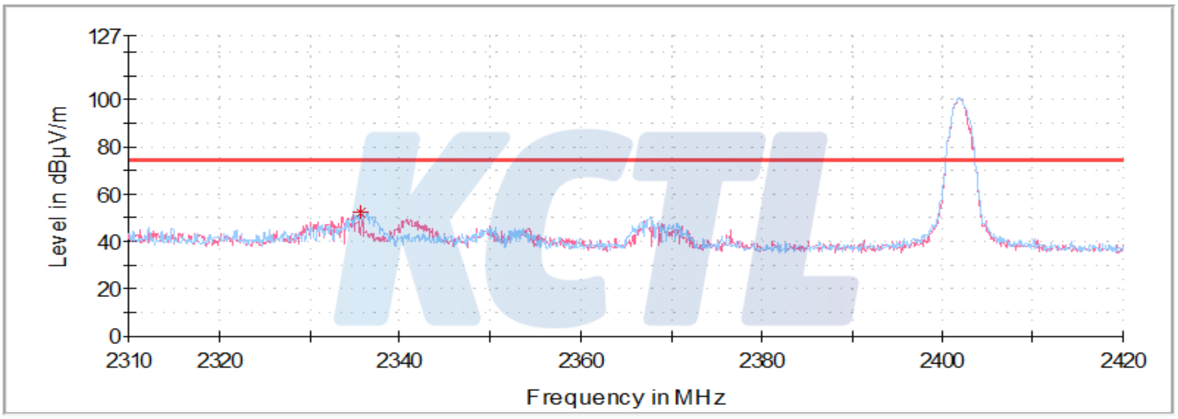
Test results (Above 1 000 ㎒)

GFSK

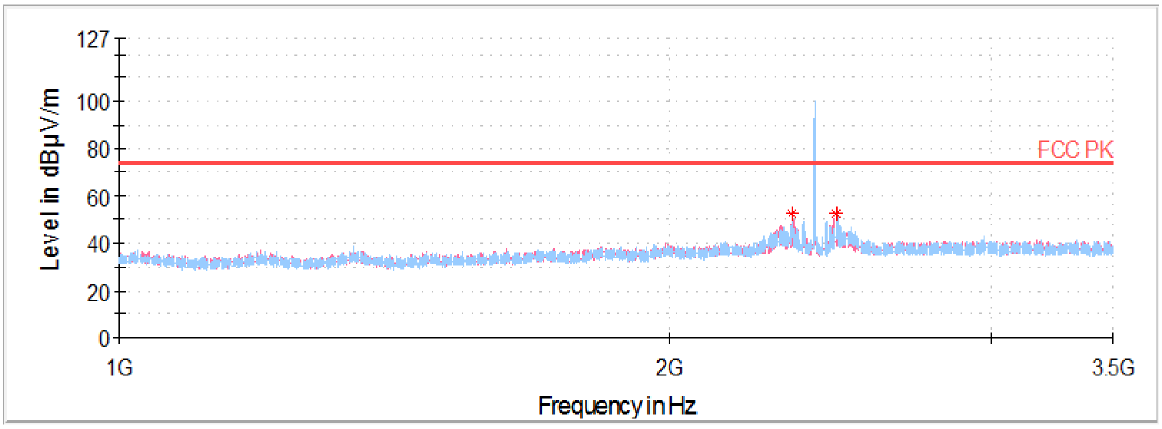
Low Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
2 335.55[1)]	H	79.88	31.97	-59.56	-	52.29	74.00	21.71
4 803.64[1)]	H	68.48	33.78	-56.47	-	45.79	74.00	28.21
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

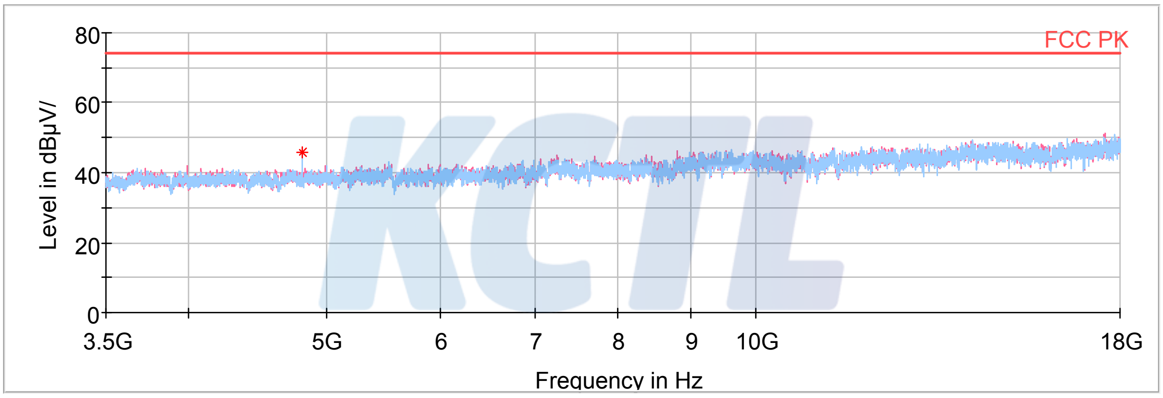
Horizontal/Vertical for Band-edge



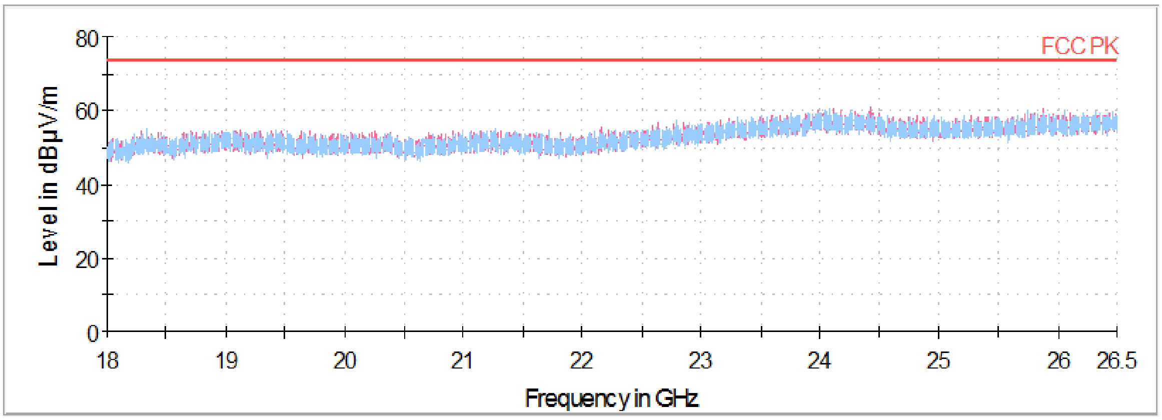
Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



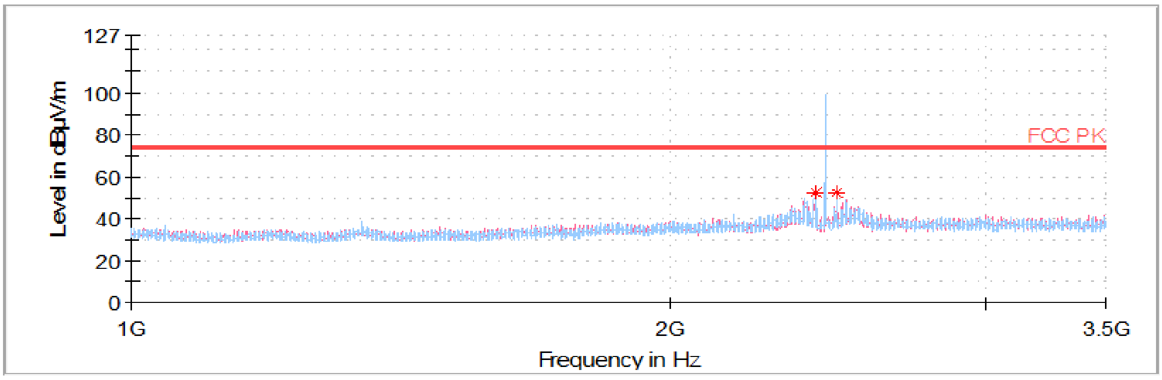
Horizontal/Vertical for 18 ㎓ ~ 26.5 ㎓



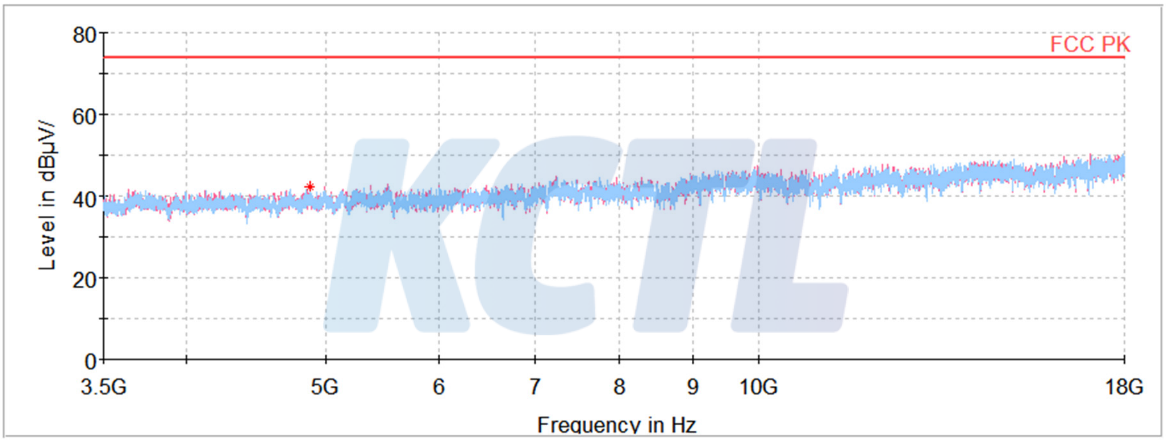
Middle Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
4 881.58[1)]	H	64.89	33.83	-56.66	-	42.06	74.00	31.94
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

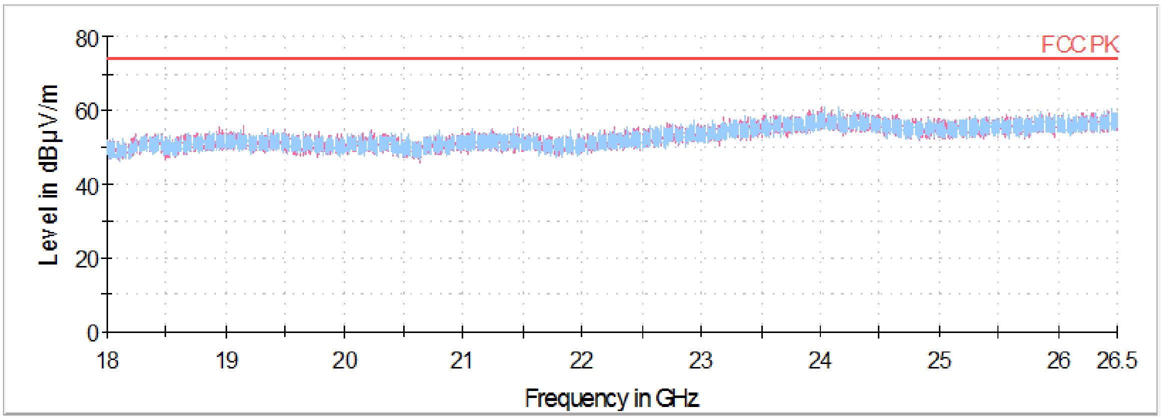
Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



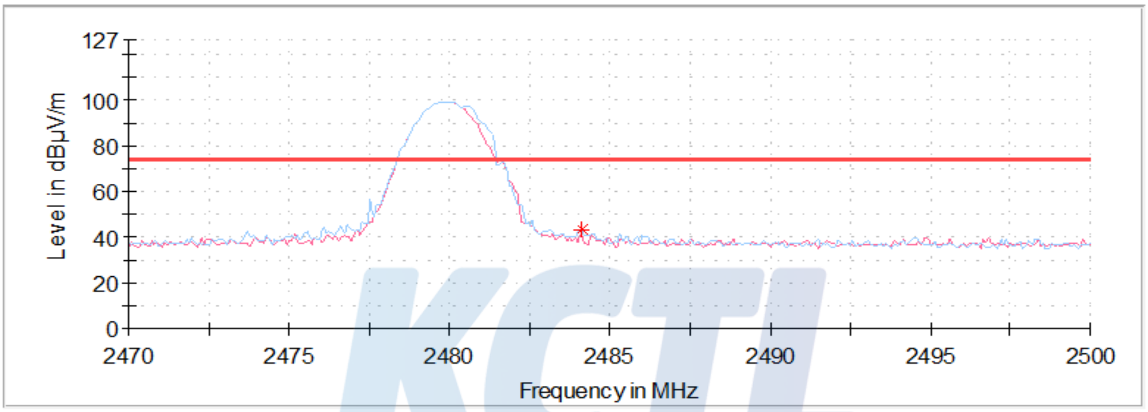
Horizontal/Vertical for 18 ㎓ ~ 26.5 ㎓



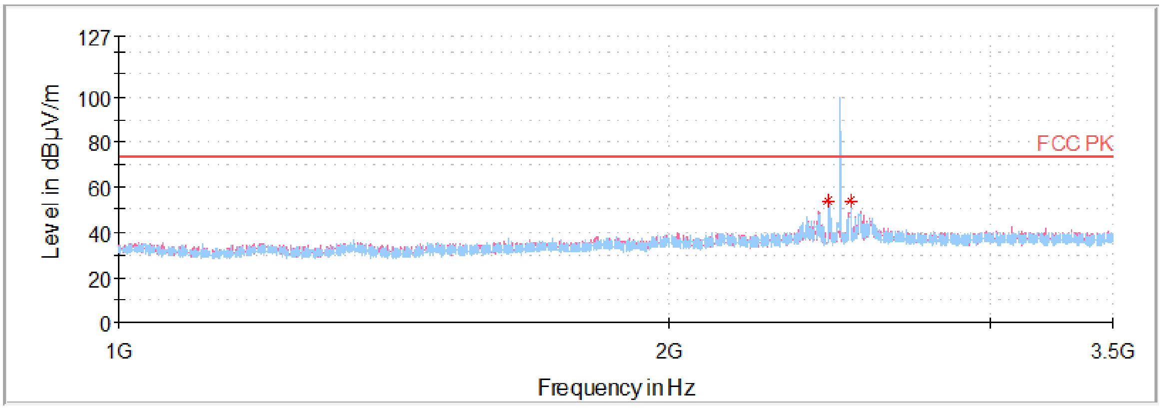
High Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
2 484.14[1)]	H	70.11	32.09	-59.17	-	43.03	74.00	30.97
4 959.97[1)]	V	63.58	33.88	-56.27	-	41.19	74.00	32.81
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

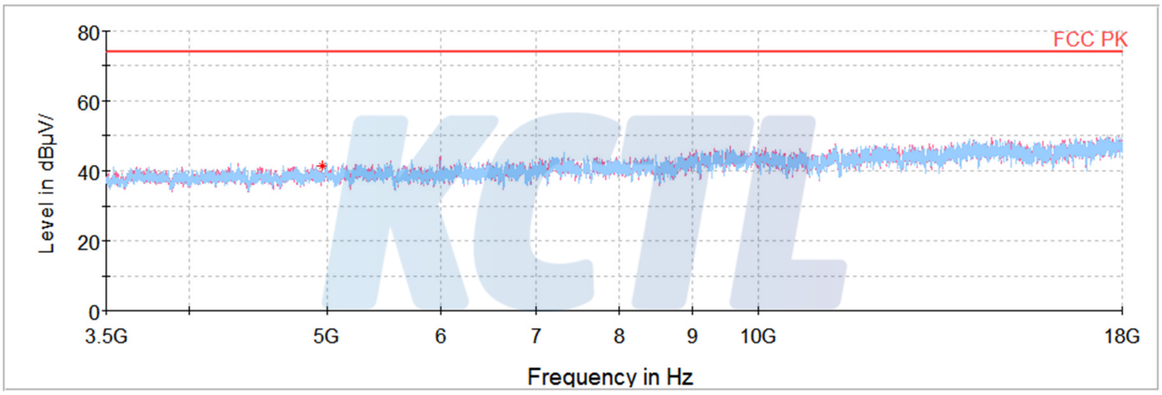
Horizontal/Vertical for Band-edge



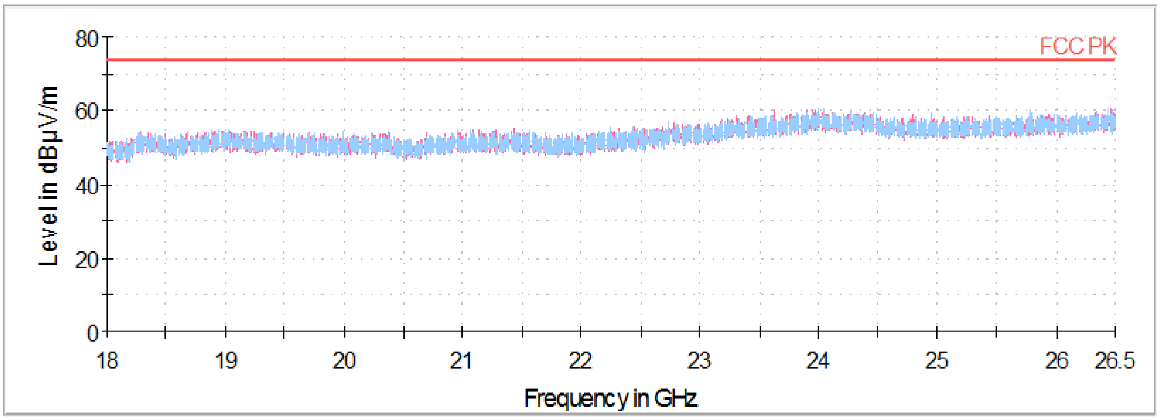
Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



Horizontal/Vertical for 18 ㎓ ~ 26.5 ㎓

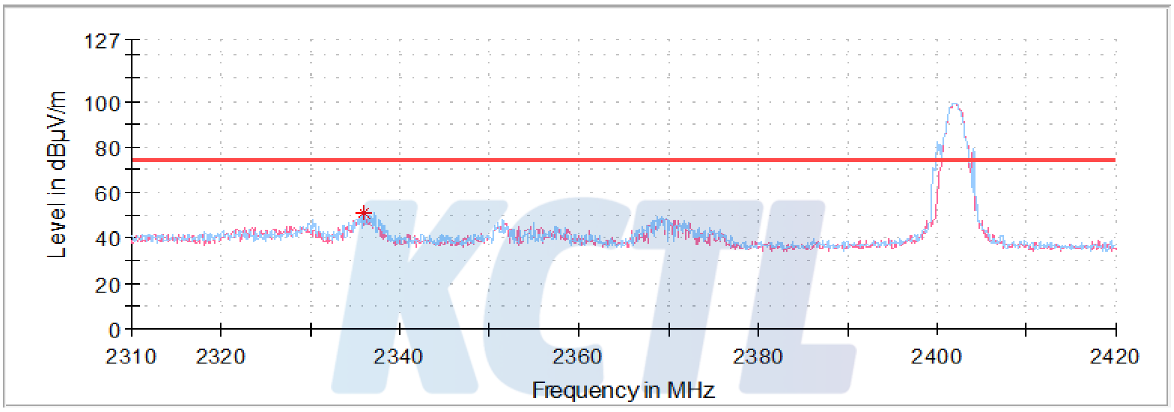


8DPSK

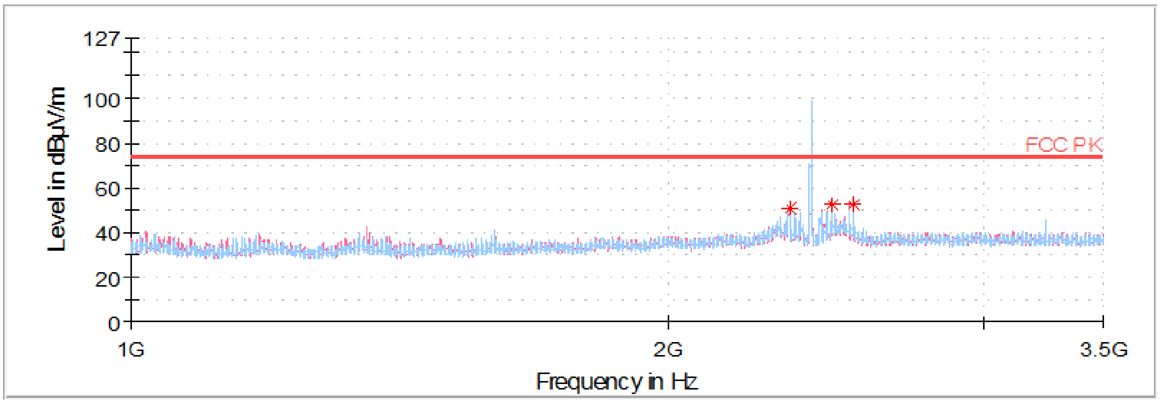
Low Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
2 335.94 1)	V	77.96	31.97	-59.56	-	50.37	74.00	23.63
4 804.09 1)	V	61.58	33.78	-56.47	-	38.89	74.00	35.11
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

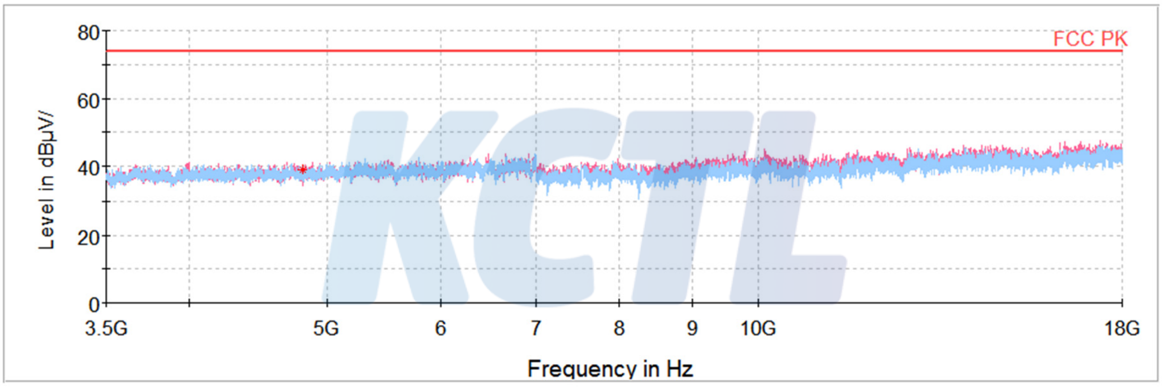
Horizontal/Vertical for Band-edge



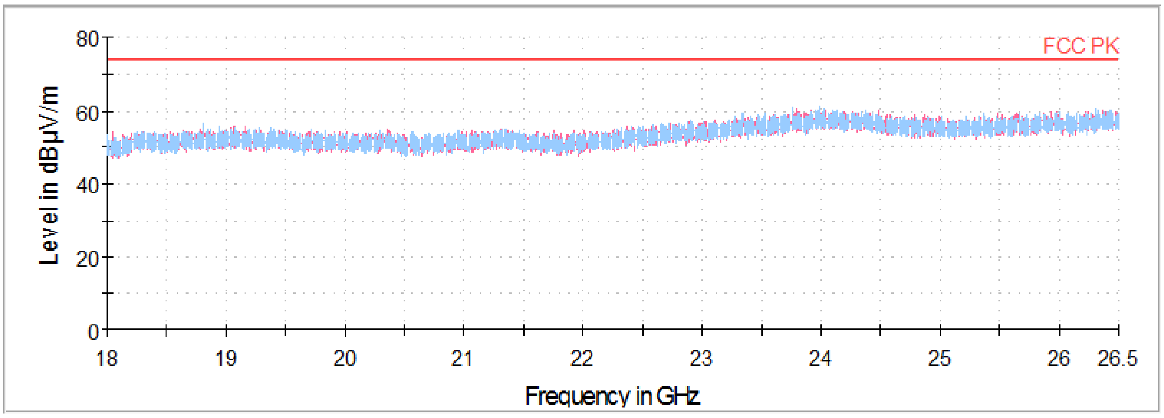
Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



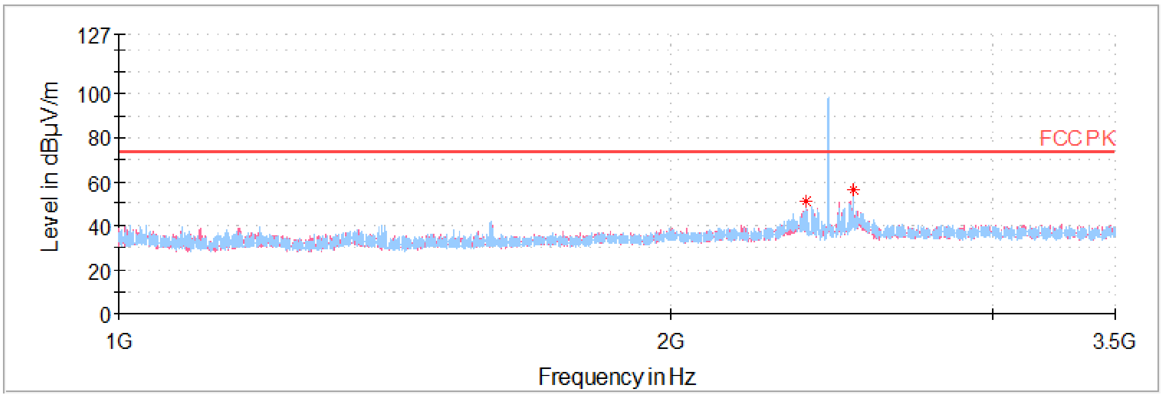
Horizontal/Vertical for 18 ㎓ ~ 26.5 ㎓



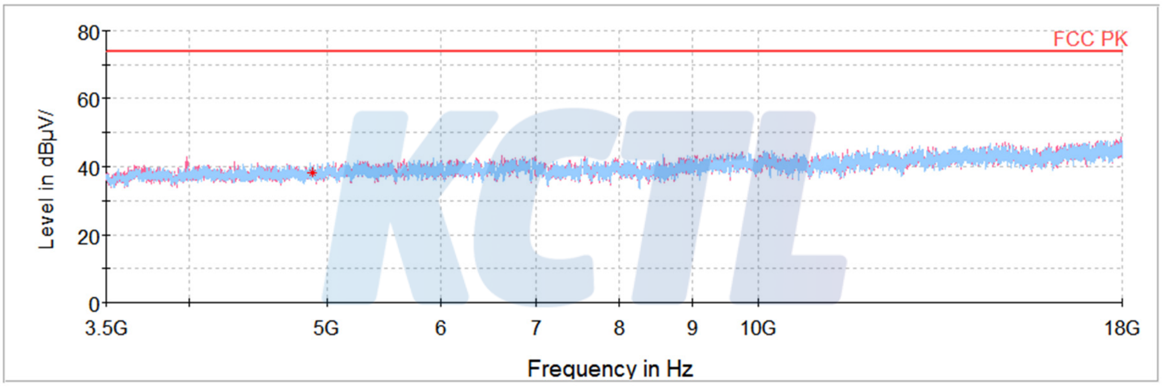
Middle Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
2 515.38	H	83.54	32.12	-59.10	-	56.56	74.00	17.44
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

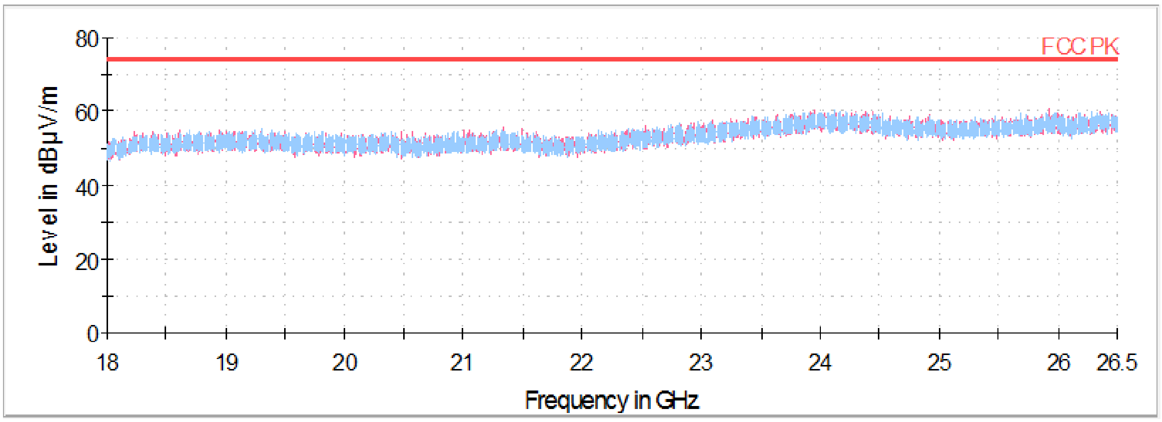
Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓



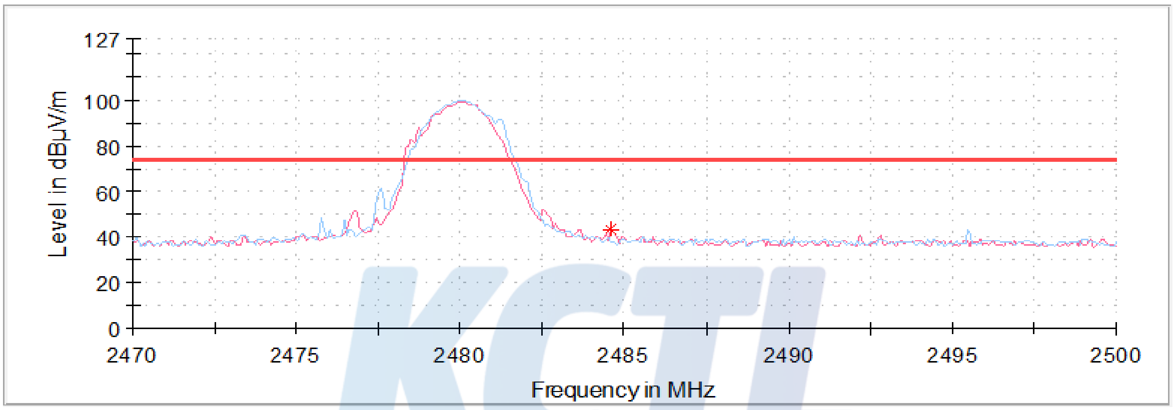
Horizontal/Vertical for 18 ㎓ ~ 26.5 ㎓



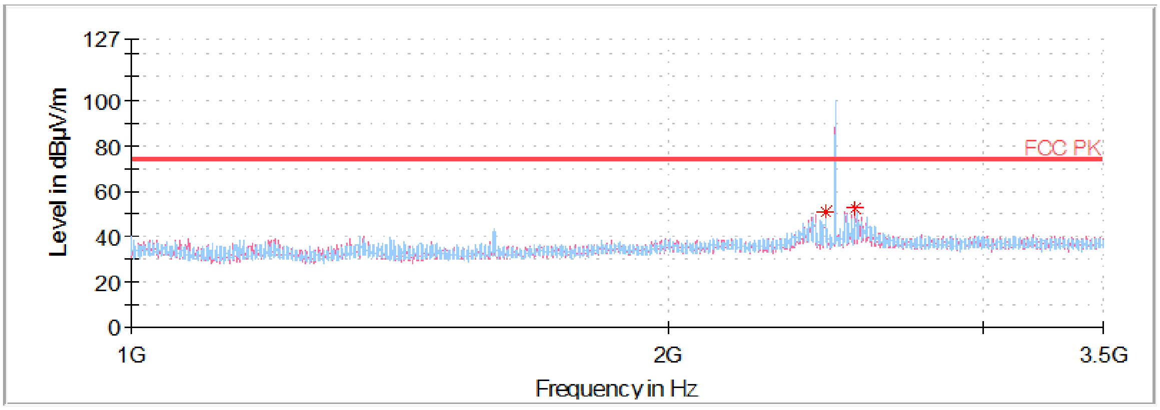
High Channel

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
2 484.61[1)]	V	69.84	32.09	-59.16	-	42.77	74.00	31.23
4 960.42[1)]	V	61.11	33.88	-56.27	-	38.72	74.00	35.28
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

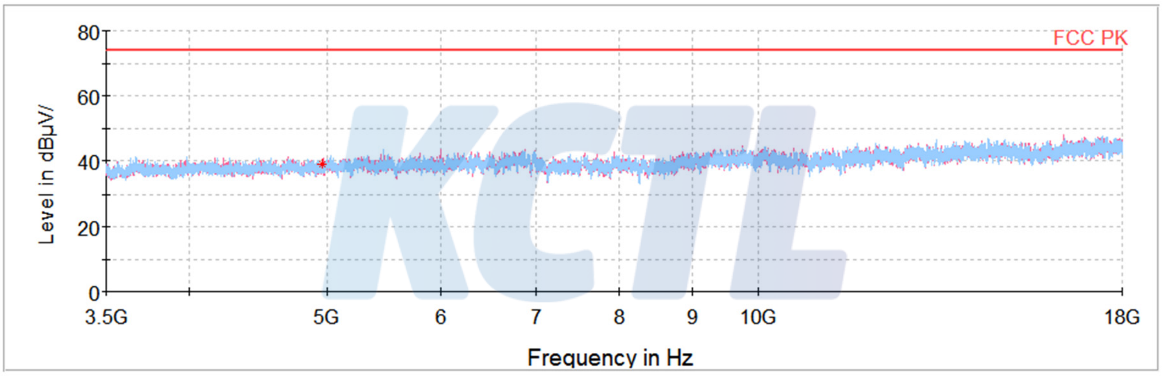
Horizontal/Vertical for Band-edge



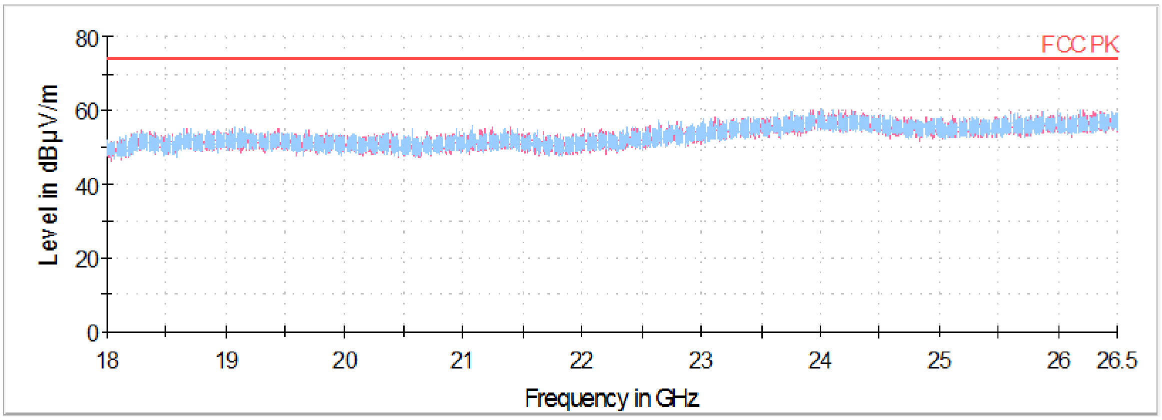
Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



Horizontal/Vertical for 3.5 ㎓ ~ 18 ㎓

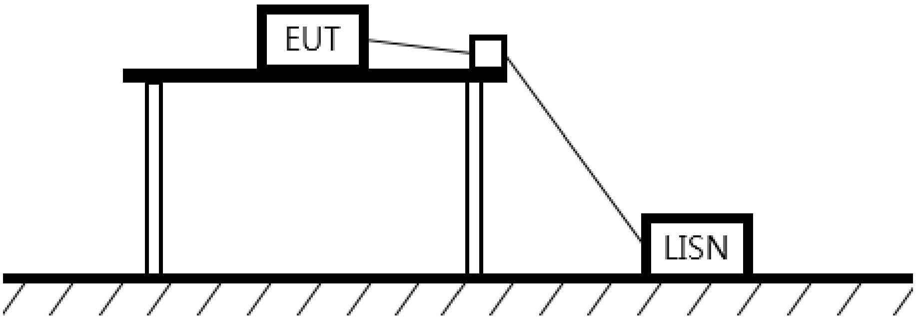


Horizontal/Vertical for 18 ㎓ ~ 26.5 ㎓



6.3. AC Conducted emission

Test setup



Limit

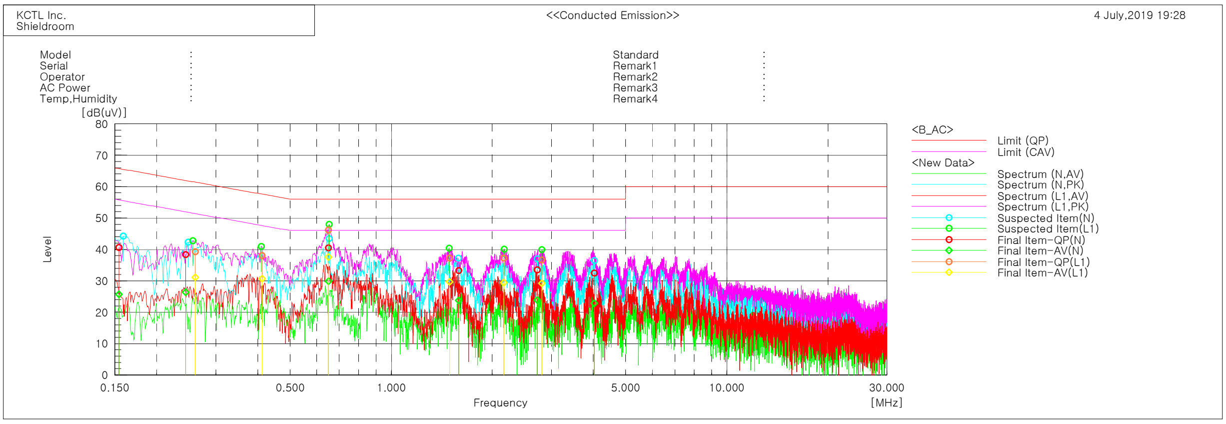
According to 15.207(a), for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 ㎑ to 30 ㎒, shall not exceed the limits in the following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

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

Measurement procedure

1. The EUT was placed on a wooden table of size, 1 m by 1.5 m, raised 80 ㎝ in which is located 40 ㎝ away from the vertical wall and 1.5m away from the side wall of the shielded room.
2. Each current-carrying conductor of the EUT power cord was individually connected through a 50Ω/50μH LISN, which is an input transducer to a spectrum analyzer or an EMI/Field Intensity —Meter, to the input power source.
3. Exploratory measurements were made to identify the frequency of the emission that had the highest amplitude relative to the limit by operating the EUT in a range of typical modes of operation, cable position, and with a typical system equipment configuration and arrangement. Based on the exploratory tests of the EUT, the one EUT cable configuration and arrangement and mode of operation that had produced the emission with the highest amplitude relative to the limit was selected for the final measurement.
4. The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment is the system) was then performed over the frequency range of 0.15 ㎒ to 30 ㎒.
5. The measurements were made with the detector set to peak amplitude within a bandwidth of 10 ㎑ or to quasi-peak and average within a bandwidth of 9 ㎑. The EUT was in transmitting mode during the measurements.

Test results



Final Result

--- N Phase ---

No.	Frequency [MHz]	Reading QP [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB]	Result QP [dB(uV)]	Result CAV [dB(uV)]	Limit QP [dB(uV)]	Limit AV [dB(uV)]	Margin QP [dB]	Margin CAV [dB]
1	0.1546	30.9	15.9	9.8	40.7	25.7	65.7	55.7	25.0	30.0
2	0.24396	28.8	16.8	9.6	38.4	26.4	62.0	52.0	23.6	25.6
3	0.65051	30.7	20.1	9.8	40.5	29.9	56.0	46.0	15.5	16.1
4	1.58751	23.6	14.0	9.7	33.3	23.7	56.0	46.0	22.7	22.3
5	2.71988	23.8	14.1	9.7	33.5	23.8	56.0	46.0	22.5	22.2
6	4.03224	22.8	13.2	9.7	32.5	22.9	56.0	46.0	23.5	23.1

--- L1 Phase ---

No.	Frequency [MHz]	Reading QP [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB]	Result QP [dB(uV)]	Result CAV [dB(uV)]	Limit QP [dB(uV)]	Limit AV [dB(uV)]	Margin QP [dB]	Margin CAV [dB]
1	0.26082	29.5	21.4	9.7	39.2	31.1	61.4	51.4	22.2	20.3
2	0.41199	28.1	20.8	9.9	38.0	30.7	57.6	47.6	19.6	16.9
3	0.64986	36.3	27.7	9.9	46.2	37.6	56.0	46.0	9.8	8.4
4	1.49033	27.4	19.8	9.8	37.2	29.6	56.0	46.0	18.8	16.4
5	2.16722	27.4	19.7	9.8	37.2	29.5	56.0	46.0	18.8	16.5
6	2.8101	26.8	19.4	9.8	36.6	29.2	56.0	46.0	19.4	16.8

7. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R & S	FSV30	100806	19.08.01
Spectrum Analyzer	R & S	FSV40	100989	20.01.04
Wideband Power Sensor	R & S	NRP-Z81	102398	20.01.25
Power Divider	Aeroflex/ Weinschel,Inc	1580-1	RM986	20.01.08
Bluetooth Tester	TESCOM	TC-3000B	3000B640056	20.01.25
ATTENUATOR	R & S	DNF Dämpfungsglied 10 dB in N-50 Ohm	31212	20.05.13
EMI TEST RECEIVER	R & S	ESCI	100732	19.08.23
Bi-Log Antenna	SCHWARZBECK	VULB 9168	583	20.05.04
Amplifier	SONOMA INSTRUMENT	310N	284608	19.08.23
COAXIAL FIXED ATTENUATOR	Agilent	8491B-003	2708A18758	20.05.04
Horn antenna	ETS.lindgren	3116	00086635	20.05.09
Horn antenna	ETS.lindgren	3117	161225	20.05.22
AMPLIFIER	L-3 Narda-MITEQ	AMF-7D-01001800 -22-10P	2031196	20.02.21
AMPLIFIER	L-3 Narda-MITEQ	JS44-18004000-33 -8P	2000997	19.08.02
LOOP Antenna	R & S	HFH2-Z2	100355	20.08.24
Antenna Mast	Innco Systems	MA4640-XP-ET	-	-
Turn Table	Innco Systems	DT2000	79	-
Antenna Mast	Innco Systems	MA4000-EP	303	-
Turn Table	Innco Systems	DT2000	79	-
TWO-LINE V - NETWORK	R&S	ENV216	101584	20.04.05
EMI TEST RECEIVER	R & S	ESCI	101408	19.08.23
Highpass Filter	WT	WT-A1698-HS	WT160411001	20.05.14
Vector Signal Generator	R & S	SMBV100A	257566	20.01.04
Signal Generator	R & S	SMR40	100007	20.05.13
Cable Assembly	RadiAll	2301761768000PJ	1724.659	-
Cable Assembly	gigalane	RG-400	-	-
Cable Assembly	HUER+SUHNER	SUCOFLEX 104	MY4342/4	-

End of test report