EMC TEST REPORT

Test Report No.	:	KES-EM-22T0504
Date of Issue	:	Jun. 22, 2022
Product name	:	iiRCADE GAME CONSOLE BARTOP
Model/Type No.	:	IRORO2-128C19
Variant Model	:	-
Applicant	:	IIRCADE, INC.
Applicant Address	:	No.A-627, 338 GwanggyoJungang-Ro, Suji-Gu, Yongin-Si, Gyeonggi-Do, 16942, Republic o f KOREA
Manufacturer	:	IIRCADE, INC.
Manufacturer Address	:	No.A-627, 338 GwanggyoJungang-Ro, Suji-Gu, Yongin-Si, Gyeonggi-Do, 16942, Republic o f KOREA
FCC ID	:	2AXRR-IRORO2
IC ID	:	26813-IRORO2
Date of Receipt	:	May. 02, 2022
Test date	:	May. 11, 2022
Test Results	:	☒ **In Compliance** ☐ **Not in Compliance**

Tested by

Dong Jun, Shin
EMC Test Engineer

Reviewed by

Dong Hun, Jang
EMC Technical Manager

REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Jun. 22, 2022	KES-EM-22T0504	Issued

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1.0 General Product Description

Main Specifications of EUT are:

Division	Characteristic
Wireless Operating Frequency	WLAN 2.4 ㎓ Band / WLAN 5 ㎓ Band / Bluetooth
Power	DC 24 V (Adapter)
Port	USB x 2 EA
Components	EUT 1 EA
H/W version	1.5
S/W version	9.008.002

1.1 Test Voltage & Frequency

Unless indicated otherwise on the individual data sheet or test results, the test voltage and frequency was as indicated below.

☒ AC 120 V, 60 Hz

1.2 Variant Model Differences

Not applicable

1.3 Device Modifications

Not applicable

1.4 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
iiRCADE GAME CONSOLE BARTOP	IRORO2-128C19	-	iiRCADE GAME CONSOLE BARTOP	EUT

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
Adapter	FY2405000	-	-	-
Bluetooth Speaker	-	-	-	-
Mouse	AA-SM7PCP	-	Acrox Technologies Co., Ltd.	-
Router	A2004plus	-	IpTIME	-
Router Adapter	TY-2007	-	Zioncoin Electronics (Shenzhen) Ltd.	-
Notebook	LG15N54	503NZWY038929	LG Electronics Inc.	-
Notebook Adapter	PA-1900-14	OF2R2633487017764	LITE-ON TECHNOLOGY COPORATION	-

1.6 External I/O Cabling

■ WLAN 2.4 ㎓ Mode

Start		END		Cable Spec.	
Description	**I/O Port**	**Description**	**I/O Port**	**Length**	**Shield**
iiRCADE GAME CONSOLE BARTOP (EUT)	DC Jack	Adapter	DC Jack	0.5	U
	USB	Mouse	USB	2.2	U
	Wireless	Router	Wireless	-	-
Router	RJ-45	Notebook	RJ-45	1.0	U
	DC Jack	Router Adapter	DC Jack	1.6	U
Notebook	DC Jack	Notebook Adapter	DC Jack	1.7	U

* Unshielded = U, Shielded = S

■ WLAN 5 ㎓ + Bluetooth Mode

Start		END		Cable Spec.	
Description	**I/O Port**	**Description**	**I/O Port**	**Length**	**Shield**
iiRCADE GAME CONSOLE BARTOP (EUT)	DC Jack	Adapter	DC Jack	0.5	U
	USB	Mouse	USB	2.2	U
	Wireless	Bluetooth Speaker	Wireless	-	-
	Wireless	Router	Wireless	-	-
Router	RJ-45	Notebook	RJ-45	1.0	U
	DC Jack	Router Adapter	DC Jack	1.6	U
Notebook	DC Jack	Notebook Adapter	DC Jack	1.7	U

* Unshielded = U, Shielded = S

1.7 EUT Operating Mode(s)

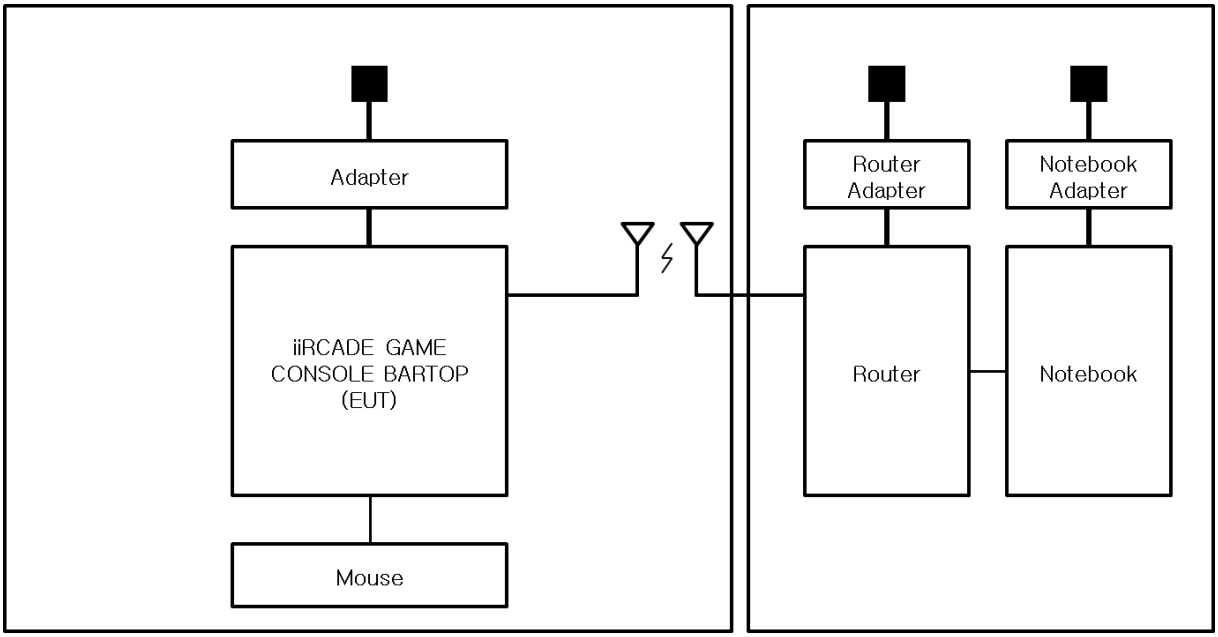
Test mode	operating
WLAN 2.4 GHz	1. Check the operation through the screen by pressing the button on the EUT. 2. Connect EUT and Notebook to Router wirelessly. 3. Check communication via ping test on Notebook.
WLAN 5 GHz + Bluetooth	1. Check the operation through the screen by pressing the button on the EUT. 2. Connect EUT and Notebook to Router wirelessly. 3. Check communication via ping test on Notebook. 4. Connect the EUT to the speaker wirelessly and check if sound is output.

EUT Test operating S/W		
Name	**Version**	**Manufacture Company**
-	-	-

1.8 Configuration

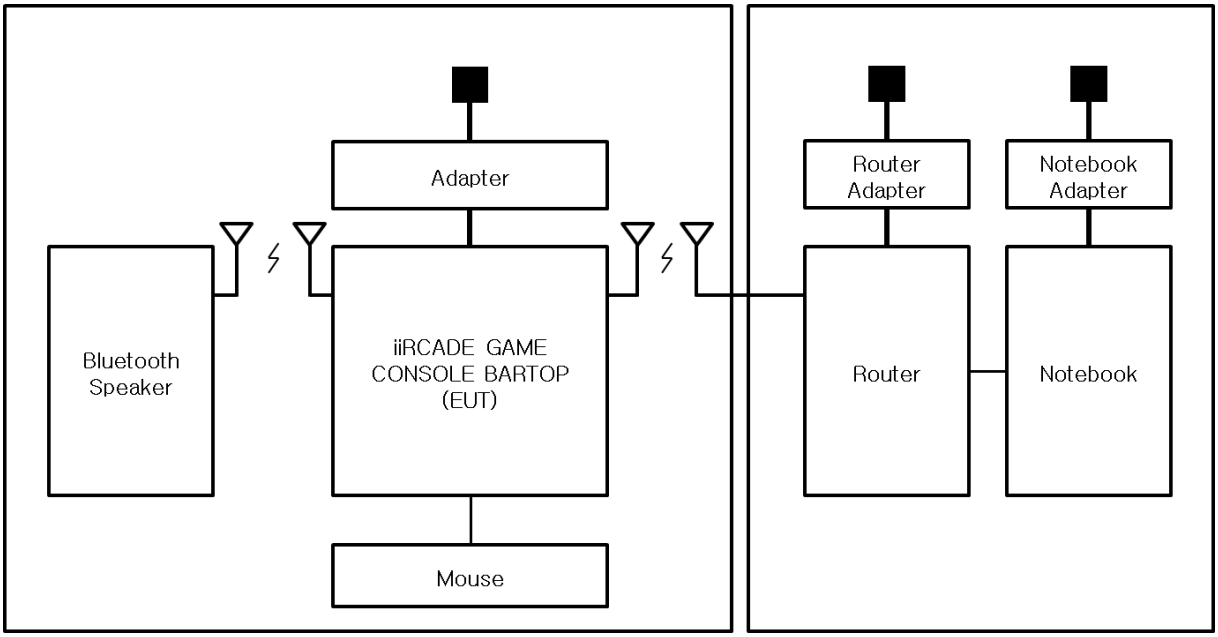
■ AC Main
□ DC Main

■ WLAN 2.4 ㎓ Mode



EUT - Router : WLAN 2.4 ㎓ Band

■ WLAN 5 ㎓ + Bluetooth Mode



EUT - Router : WLAN 5 ㎓ Band
EUT – Bluetooth Speaker : Bluetooth

1.9 Remarks when standards applied

N/A

1.10 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less.

1.11 Test Facility

The measurement facility is located at 473-21 Gayeo-ro, Yeoju-si, Gyeonggi-do, 12658, Korea. The sites are constructed in conformance with the requirements of ANSI C63.4a-2017 and CISPR 16-1-4:2019

1.12 Measurement Procedure

- Conducted Emissions

The conducted emission levels were measured on each current-carrying line with the spectrum analyzer operating in the CISPR quasi-peak mode (or peak mode if applicable). The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. If the conducted emission exceed the average limit with the instrument set to the quasi-peak mode, the measurements are made in the average mode. The emission spectrum was scanned from 150 ㎑ to 30 ㎒. The highest emission amplitudes relative to the appropriate limits were measured and have been recorded. Quasi-peak readings are distinguished with a "QP".

- Radiated Electric Field Emissions

The test was done at a SEMI ANECHOIC CHAMBER with quasi-peak detector. The final test data was measured using a Quasi-Peak detector below 1㎓ at 10 m or 3 m distance and a Peak and Average detector above 1 ㎓ at 3 m distance. Test was proceeded worst case test mode and cable configuration.
Measurements were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna height was varied from 1 m to 4 m and the EUT was rotated 360° to find the maximum emitting point for each frequency.

Measurement procedures was In accordance with ANSI C63.4-2014 7.3.3, 7.3.4, 8.3.1.1, 8.3.1.2, 8.3.2.1, 8.3.2.2

1.13 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
KOREA	**RRA**	EMI (3 m & 10 m Semi-Aechoic Chamber ,10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	KR0100
International	**KOLAS**	EMI (3 m & 10 m Semi-Aechoic Chamber , and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	KT489
USA	**FCC**	3 m & 10 m Semi-Aechoic Chamber, 10 m Open Area and Conducted test site to perform FCC Part 15/18 measurements.	KR0100
Canada	**ISED**	3 m & 10 m Semi-Aechoic Chamber and Conducted test site	23298
JAPAN	**VCCI**	Mains Ports Conducted Interference Measurement, Telecommunication Ports Conducted Disturbance Measurement and Radiation 10 meter site, Facility for measuring radiated disturbance above 1 GHz	R-20056, C-20036 T-20040, G-20057
Europe	**TÜV SÜD**	EMI (3 m & 10 m Semi-Aechoic Chamber , 10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	CARAT 001633 0004

2.0 Test Regulations

The emissions tests were performed according to following regulations:

☒ **47 CFR Part 15, Subpart B**

☐ CISPR 22:2009 +A1:2010	☐ Class A	☐ Class B
☒ ANSI C63.4a-2017	☐ Class A	☒ Class B

☒ **IC Regulation ICES-003 Issue 7**

☐ CAN/CSA-CISPR 32:17	☐ Class A	☐ Class B
☒ ANSI C63.4a-2017	☐ Class A	☒ Class B

2.1 Conducted Emissions at Mains Power Ports

Test Date
May. 11, 2022

Test Location
Electro wave Shieldroom #6

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due	calibration interval
☒	EMI Test S/W	EMC32	R & S	9.12.00	-	-
☒	EMI TEST RECEIVER	ESR3	R & S	101783	12, 28, 2022	1 Year
☒	LISN	ENV216	R & S	101787	12, 27, 2022	1 Year
☐	LISN	ESH2-Z5	R & S	100450	12, 27, 2022	1 Year
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	12, 27, 2022	1 Year

Test Conditions
Temperature: (24,6 ± 0,1) ℃
Relative Humidity: (42,3 ± 0,1) % R.H.

Frequency Range of Measurement
150 ㎑ to 30 ㎒

Instrument Settings
IF Band Width: 9 ㎑

Test Results
The requirements are:

☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks
See Appendix A for test data.

2.2 Radiated Electric Field Emissions(Below 1 ㎓)

Test Date
May. 11, 2022

Test Location
☐ OPEN AREA TEST SITE #2 ☒ SEMI ANECHOIC CHAMBER #4(10 m)

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due	calibration interval
☒	EMI Test S/W	EP5/RE	TOYO Corporation	6.0.0	-	-
☒	EMI TEST RECEIVER	ESU26	R & S	100551	03, 31, 2023	1 Year
☒	AMPLIFIER	SCU 01	R & S	100603	11, 24, 2022	1 Year
☒	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	715	12, 08, 2022	1 Year
☒	ATTENUATOR	8491A	HP	32173	03, 08, 2023	1 Year

Test Conditions
Temperature: (20,5 ± 0,2) ℃
Relative Humidity: (40,6 ± 0,1) % R.H.

Frequency Range of Measurement
30 ㎒ to 1 ㎓

Instrument Settings
IF Band Width: 120 ㎑

Test Results
The requirements are:

☒ PASS
☐ NOT APPLICABLE

Remarks
See Appendix A for test data.

2.3 Radiated Electric Field Emissions(Above 1 ㎓)

Test Date
May. 11, 2022

Test Location
SEMI ANECHOIC CHAMBER #5

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due	calibration interval
☒	EMI Test S/W	ES10/RE	TOYO Corporation	2022.01.000	-	-
☒	EMI TEST RECEIVER	ESU26	Rohde & Schwarz	100552	03, 31, 2023	1 Year
☒	HORN ANTENNA	BBHA 9120D	SCHWARZBECK	9120D-1802	12, 16, 2022	1 Year
☒	PREAMPLIFIER	8449B	HP	3008A00538	06, 21, 2022	1 Year
☒	ATTENUATOR	8491B	HP	23094	04, 21, 2023	1 Year
☒	SPECTRUM ANALYZER	FSV40	R&S	101002	06, 16, 2023	1 Year
☒	HORN ANTENNA	BBHA9170	Schwarzbeck	BBHA9170550	01, 20, 2023	1 Year
☒	HORN ANTENNA	BBHA9170	Schwarzbeck	BBHA9170551	01, 20, 2023	1 Year
☒	BROADBAND AMPLIFIER	BBV9721	SCHWARZBECK	PS9721-003	01, 17, 2023	1 Year

Test Conditions
Temperature: (22,8 ± 0,2) ℃
Relative Humidity: (39,6 ± 0,1) % R.H.

Frequency Range of Measurement
1 ㎓ to 30 ㎓

Instrument Settings
IF Band Width: 1 ㎒

Test Results
The requirements are:

☒ PASS
☐ NOT APPLICABLE

Remarks
See Appendix A for test data.

APPENDIX A – TEST DATA

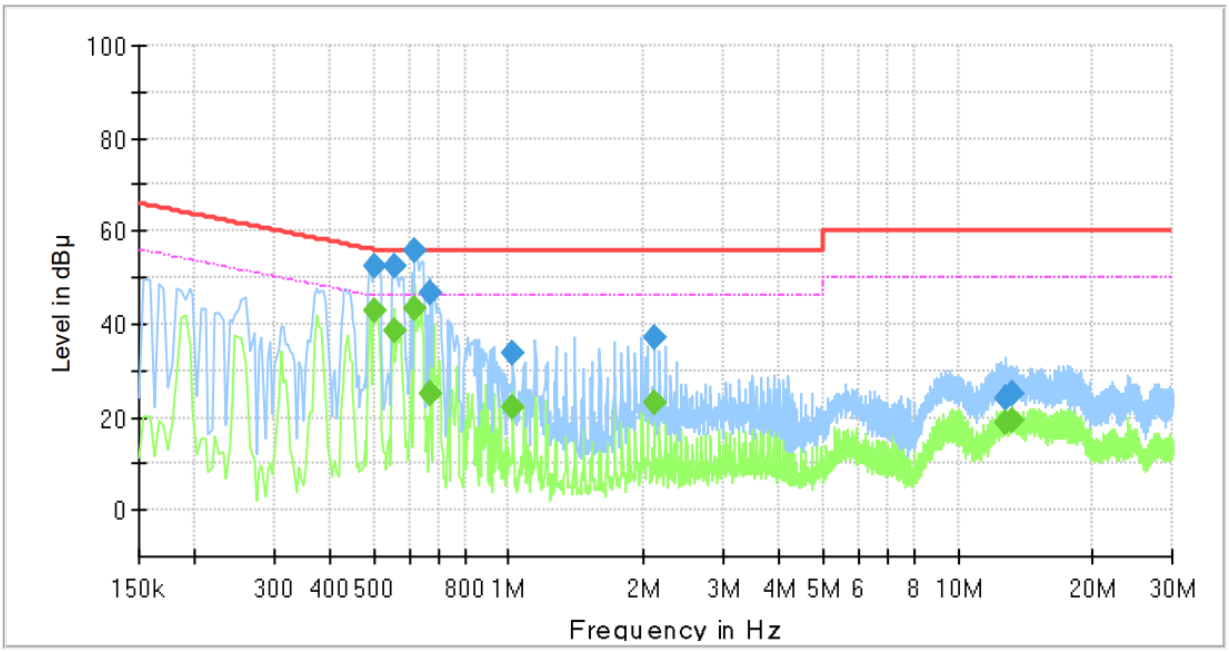
Conducted Emissions at Mains Power Ports

■ WLAN 2.4 ㎓ Mode

HOT LINE

Common Information

Test Description:	Conducted Emission
Model No.:	IRORO2-128C19
Phase:	
Mode:	WLAN 2.4 GHz_L1
Operator Name:	KES



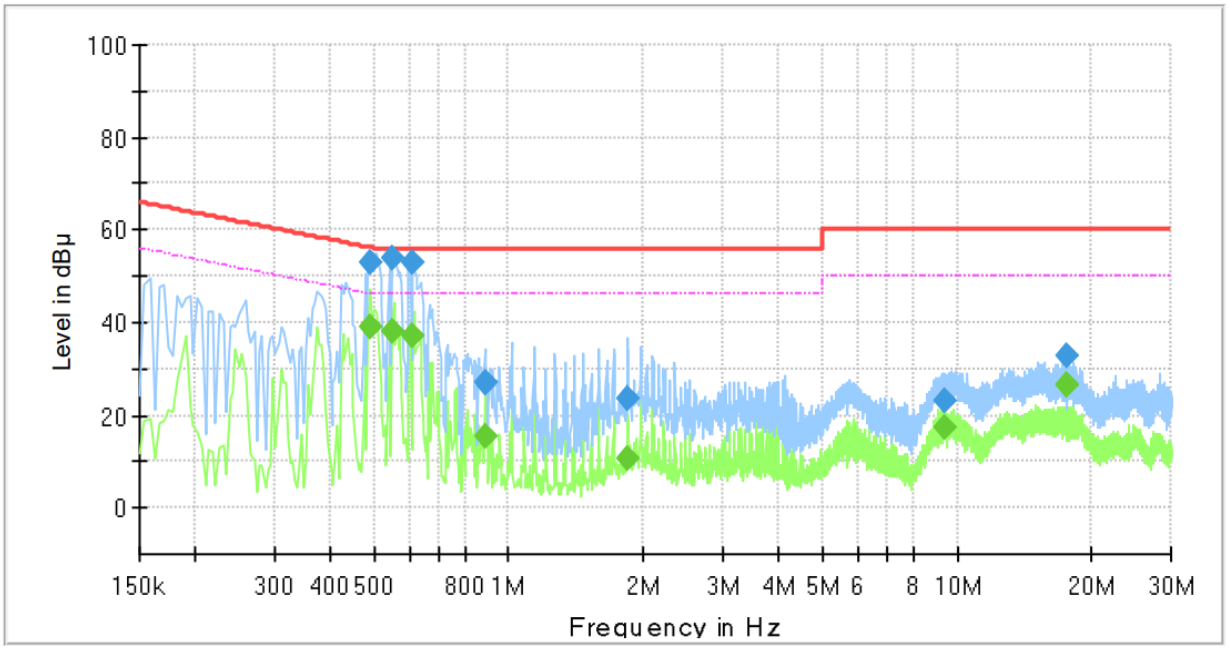
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.502000	---	42.61	46.00	3.39	1000.0	9.000	L1	19.7
0.502000	52.38	---	56.00	3.62	1000.0	9.000	L1	19.7
0.554000	52.42	---	56.00	3.58	1000.0	9.000	L1	19.8
0.554000	---	38.72	46.00	7.28	1000.0	9.000	L1	19.8
0.618000	---	43.47	46.00	2.53	1000.0	9.000	L1	19.8
0.618000	55.80	---	56.00	0.20	1000.0	9.000	L1	19.8
0.670000	46.72	---	56.00	9.28	1000.0	9.000	L1	19.9
0.670000	---	25.00	46.00	21.00	1000.0	9.000	L1	19.9
1.018000	33.89	---	56.00	22.11	1000.0	9.000	L1	20.0
1.018000	---	21.99	46.00	24.01	1000.0	9.000	L1	20.0
2.102000	---	23.21	46.00	22.79	1000.0	9.000	L1	20.3
2.102000	37.04	---	56.00	18.96	1000.0	9.000	L1	20.3
12.822000	24.24	---	60.00	35.76	1000.0	9.000	L1	19.9
12.822000	---	18.79	50.00	31.21	1000.0	9.000	L1	19.9
13.186000	---	19.26	50.00	30.74	1000.0	9.000	L1	19.9
13.186000	25.21	---	60.00	34.79	1000.0	9.000	L1	19.9

NEUTRAL LINE

Common Information

Test Description:	Conducted Emission
Model No.:	IRORO2-128C19
Phase:	
Mode:	WLAN 2.4 GHz_N
Operator Name:	KES



Final_Result

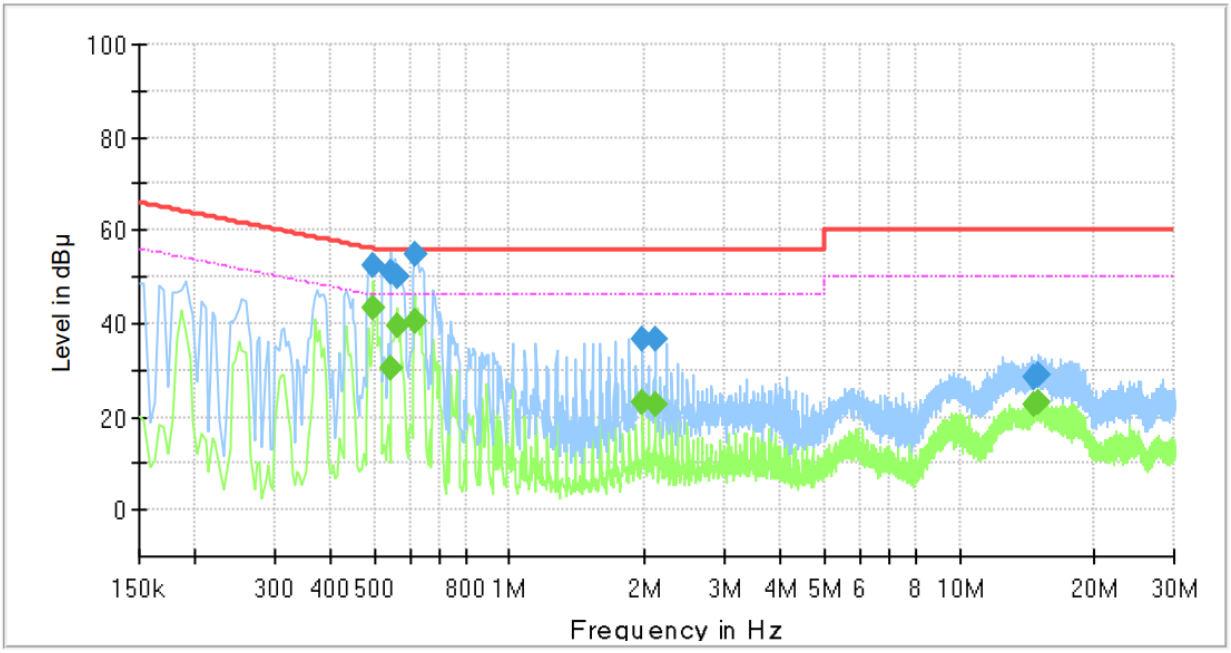
Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.490000	52.73	---	56.17	3.44	1000.0	9.000	N	19.7
0.490000	---	38.86	46.17	7.31	1000.0	9.000	N	19.7
0.550000	53.99	---	56.00	2.01	1000.0	9.000	N	19.8
0.550000	---	37.93	46.00	8.07	1000.0	9.000	N	19.8
0.610000	---	37.13	46.00	8.87	1000.0	9.000	N	19.8
0.610000	52.97	---	56.00	3.03	1000.0	9.000	N	19.8
0.886000	---	15.45	46.00	30.55	1000.0	9.000	N	20.1
0.886000	26.80	---	56.00	29.20	1000.0	9.000	N	20.1
1.838000	---	10.81	46.00	35.19	1000.0	9.000	N	20.3
1.838000	23.62	---	56.00	32.38	1000.0	9.000	N	20.3
9.398000	---	17.41	50.00	32.59	1000.0	9.000	N	19.8
9.398000	23.34	---	60.00	36.66	1000.0	9.000	N	19.8
17.638000	---	26.40	50.00	23.60	1000.0	9.000	N	20.0
17.638000	32.67	---	60.00	27.33	1000.0	9.000	N	20.0

■ WLAN 5 ㎓ + Bluetooth Mode

HOT LINE

Common Information

Test Description:	Conducted Emission
Model No.:	IRORO2-128C19
Phase:	
Mode:	WLAN 5 GHz + Bluetooth_L1
Operator Name:	KES



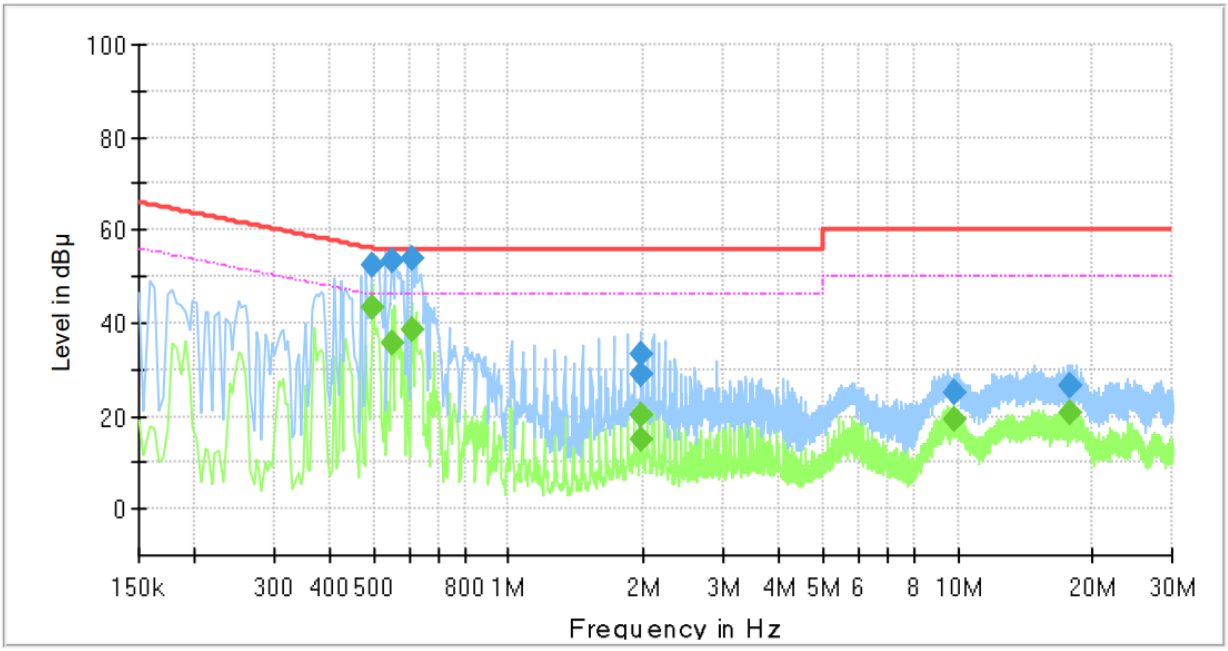
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.498000	---	43.35	46.03	2.68	1000.0	9.000	L1	19.7
0.498000	52.55	---	56.03	3.48	1000.0	9.000	L1	19.7
0.546000	---	30.21	46.00	15.79	1000.0	9.000	L1	19.8
0.546000	51.13	---	56.00	4.87	1000.0	9.000	L1	19.8
0.562000	---	39.42	46.00	6.58	1000.0	9.000	L1	19.8
0.562000	50.00	---	56.00	6.00	1000.0	9.000	L1	19.8
0.614000	54.97	---	56.00	1.03	1000.0	9.000	L1	19.8
0.614000	---	40.29	46.00	5.71	1000.0	9.000	L1	19.8
1.974000	---	23.01	46.00	22.99	1000.0	9.000	L1	20.3
1.974000	36.43	---	56.00	19.57	1000.0	9.000	L1	20.3
2.102000	---	22.61	46.00	23.39	1000.0	9.000	L1	20.3
2.102000	36.69	---	56.00	19.31	1000.0	9.000	L1	20.3
14.714000	---	22.84	50.00	27.16	1000.0	9.000	L1	19.9
14.714000	28.60	---	60.00	31.40	1000.0	9.000	L1	19.9
15.034000	28.96	---	60.00	31.04	1000.0	9.000	L1	19.9
15.034000	---	23.21	50.00	26.79	1000.0	9.000	L1	19.9

NEUTRAL LINE

Common Information

Test Description:	Conducted Emission
Model No.:	IRORO2-128C19
Phase:	
Mode:	WLAN 5 GHz + Bluetooth_N
Operator Name:	KES



Final_Result

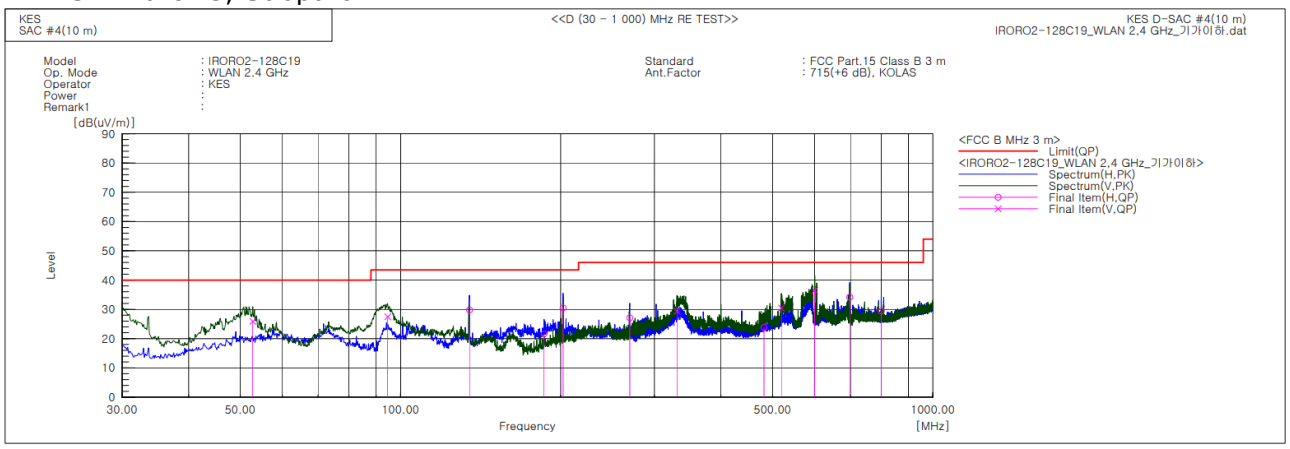
Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.498000	52.63	---	56.03	3.40	1000.0	9.000	N	19.7
0.498000	---	43.29	46.03	2.74	1000.0	9.000	N	19.7
0.550000	53.31	---	56.00	2.69	1000.0	9.000	N	19.8
0.550000	---	35.83	46.00	10.17	1000.0	9.000	N	19.8
0.610000	---	38.37	46.00	7.63	1000.0	9.000	N	19.8
0.610000	54.05	---	56.00	1.95	1000.0	9.000	N	19.8
1.966000	---	15.14	46.00	30.86	1000.0	9.000	N	20.3
1.966000	29.03	---	56.00	26.97	1000.0	9.000	N	20.3
1.970000	---	20.31	46.00	25.69	1000.0	9.000	N	20.3
1.970000	33.01	---	56.00	22.99	1000.0	9.000	N	20.3
9.866000	---	19.12	50.00	30.88	1000.0	9.000	N	19.8
9.866000	24.91	---	60.00	35.09	1000.0	9.000	N	19.8
17.734000	---	20.97	50.00	29.03	1000.0	9.000	N	20.0
17.734000	26.58	---	60.00	33.42	1000.0	9.000	N	20.0

♦ Calculation
QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]
QuasiPeak / CAverage : The Final Value
Reading Value : Not shown in the table.
Corr. : Correction values (LISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))

Radiated Electric Field Emissions(Below 1 ㎓)

■ WLAN 2.4 ㎓ Mode

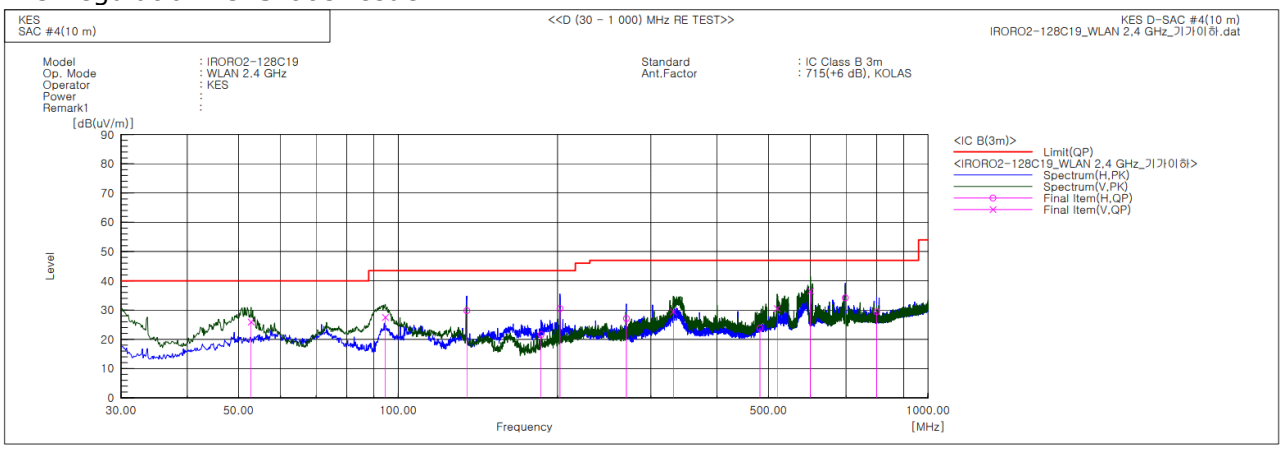
- 47 CFR Part 15, Subpart B



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	52.795	V	47.4	-21.5	25.9	40.0	14.1	123.0	119.0	
2	94.626	V	51.6	-24.1	27.5	43.5	16.0	108.0	290.0	
3	134.760	H	55.9	-26.1	29.8	43.5	13.7	358.0	323.0	
4	186.049	H	45.1	-23.5	21.6	43.5	21.9	325.0	97.0	
5	202.054	H	52.2	-21.7	30.5	43.5	13.0	362.0	117.0	
6	269.711	H	46.9	-19.8	27.1	46.0	18.9	314.0	205.0	
7	330.579	V	46.5	-17.1	29.4	46.0	16.6	137.0	184.0	
8	481.656	H	37.0	-13.2	23.8	46.0	22.2	276.0	297.0	
9	519.365	V	42.8	-12.3	30.5	46.0	15.5	140.0	194.0	
10	599.996	V	46.4	-9.9	36.5	46.0	9.5	122.0	213.0	
11	697.966	H	43.3	-9.1	34.2	46.0	11.8	384.0	70.0	
12	799.695	H	37.9	-8.5	29.4	46.0	16.6	383.0	311.0	

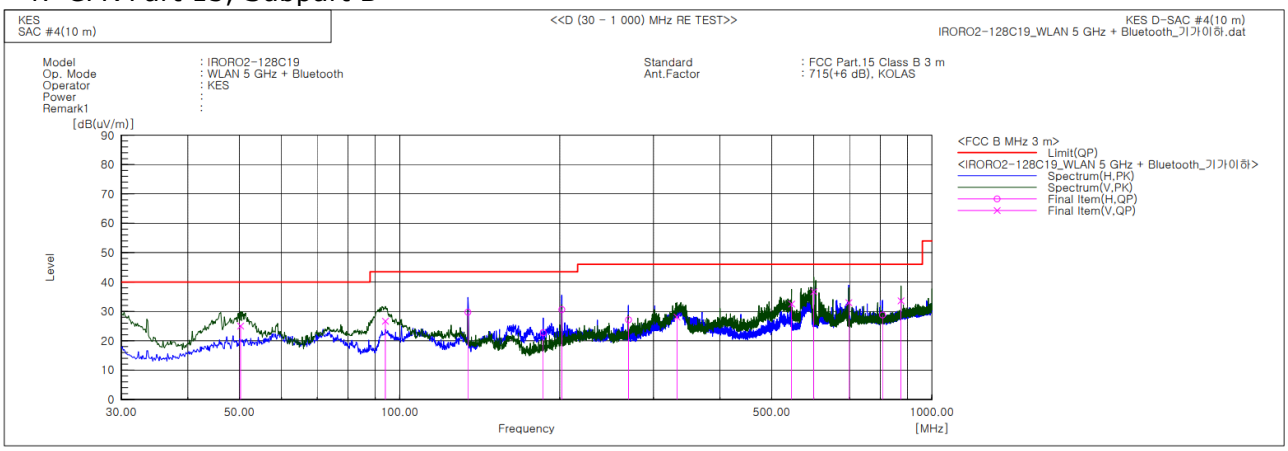
- IC Regulation ICES-003 Issue 7



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	52.795	V	47.4	-21.5	25.9	40.0	14.1	123.0	119.0	
2	94.626	V	51.6	-24.1	27.5	43.5	16.0	108.0	290.0	
3	134.760	H	55.9	-26.1	29.8	43.5	13.7	358.0	323.0	
4	186.049	H	45.1	-23.5	21.6	43.5	21.9	325.0	97.0	
5	202.054	H	52.2	-21.7	30.5	43.5	13.0	362.0	117.0	
6	269.711	H	46.9	-19.8	27.1	47.0	19.9	314.0	205.0	
7	330.579	V	46.5	-17.1	29.4	47.0	17.6	137.0	184.0	
8	481.656	H	37.0	-13.2	23.8	47.0	23.2	276.0	297.0	
9	519.365	V	42.8	-12.3	30.5	47.0	16.5	140.0	194.0	
10	599.996	V	46.4	-9.9	36.5	47.0	10.5	122.0	213.0	
11	697.966	H	43.3	-9.1	34.2	47.0	12.8	384.0	70.0	
12	799.695	H	37.9	-8.5	29.4	47.0	17.6	383.0	311.0	

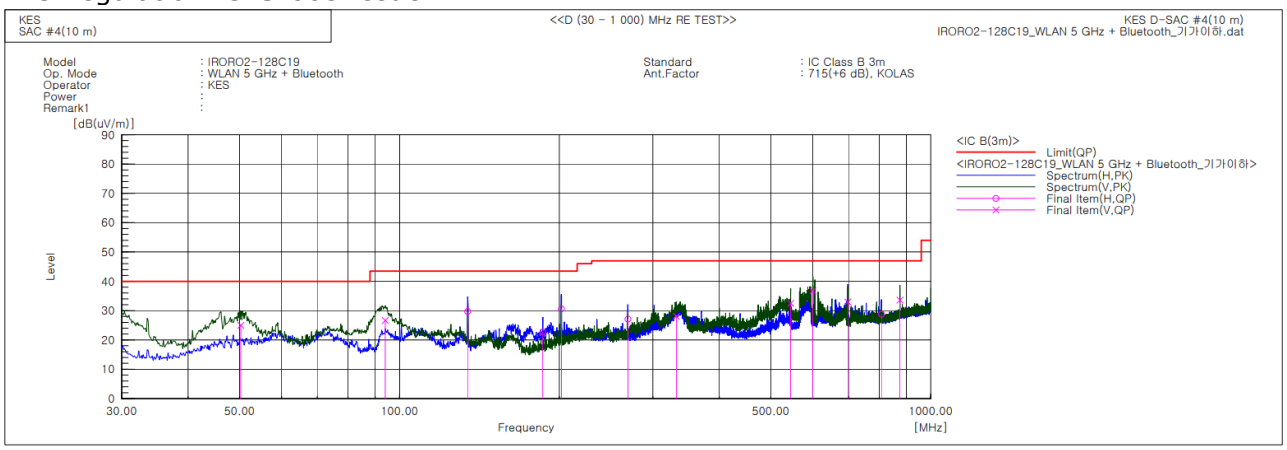
■ WLAN 5 ㎓ + Bluetooth Mode
- 47 CFR Part 15, Subpart B



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	50.249	V	46.4	-21.4	25.0	40.0	15.0	141.0	150.0	
2	94.020	V	50.8	-24.1	26.7	43.5	16.8	118.0	278.0	
3	134.396	H	55.8	-26.1	29.7	43.5	13.8	225.0	334.0	
4	186.049	H	46.2	-23.5	22.7	43.5	20.8	319.0	109.0	
5	201.690	H	52.3	-21.7	30.6	43.5	12.9	371.0	93.0	
6	269.105	H	46.9	-19.8	27.1	46.0	18.9	392.0	109.0	
7	332.034	V	45.1	-17.0	28.1	46.0	17.9	103.0	179.0	
8	544.949	V	44.2	-11.7	32.5	46.0	13.5	132.0	221.0	
9	599.996	V	46.6	-9.9	36.7	46.0	9.3	127.0	205.0	
10	698.088	V	42.1	-9.1	33.0	46.0	13.0	152.0	353.0	
11	807.334	H	37.2	-8.4	28.8	46.0	17.2	335.0	282.0	
12	874.991	V	39.9	-6.3	33.6	46.0	12.4	101.0	213.0	

- IC Regulation ICES-003 Issue 7



Final Result

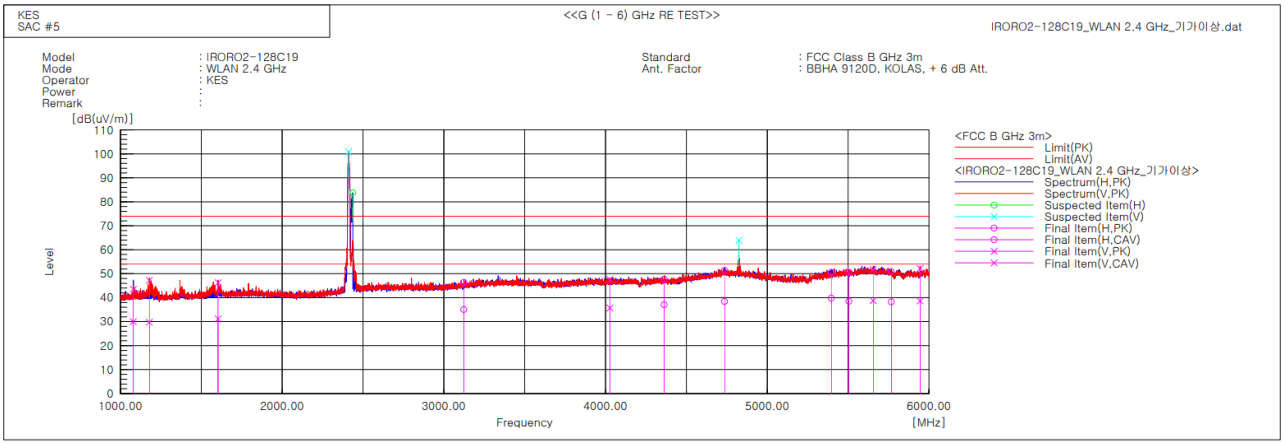
No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	50.249	V	46.4	-21.4	25.0	40.0	15.0	141.0	150.0	
2	94.020	V	50.8	-24.1	26.7	43.5	16.8	118.0	278.0	
3	134.396	H	55.8	-26.1	29.7	43.5	13.8	225.0	334.0	
4	186.049	H	46.2	-23.5	22.7	43.5	20.8	319.0	109.0	
5	201.690	H	52.3	-21.7	30.6	43.5	12.9	371.0	93.0	
6	269.105	H	46.9	-19.8	27.1	47.0	19.9	392.0	109.0	
7	332.034	V	45.1	-17.0	28.1	47.0	18.9	103.0	179.0	
8	544.949	V	44.2	-11.7	32.5	47.0	14.5	132.0	221.0	
9	599.996	V	46.6	-9.9	36.7	47.0	10.3	127.0	205.0	
10	698.088	V	42.1	-9.1	33.0	47.0	14.0	152.0	353.0	
11	807.334	H	37.2	-8.4	28.8	47.0	18.2	335.0	282.0	
12	874.991	V	39.9	-6.3	33.6	47.0	13.4	101.0	213.0	

♦ Calculation
Result(QP) [dB(㎶/m)] = (Reading(QP)[dB(㎶)] + c.f[dB(1/m)]
Margin(QP)[dB] = Limit[dB(㎶/m)] - Result(QP) [dB(㎶/m)]
Reading(QP) : Reading value, Result(QP) : Reading value + Factor value
Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value

Radiated Electric Field Emissions(Above 1 ㎓)

■ WLAN 2.4 ㎓ Mode

- (1 ~ 6) ㎓

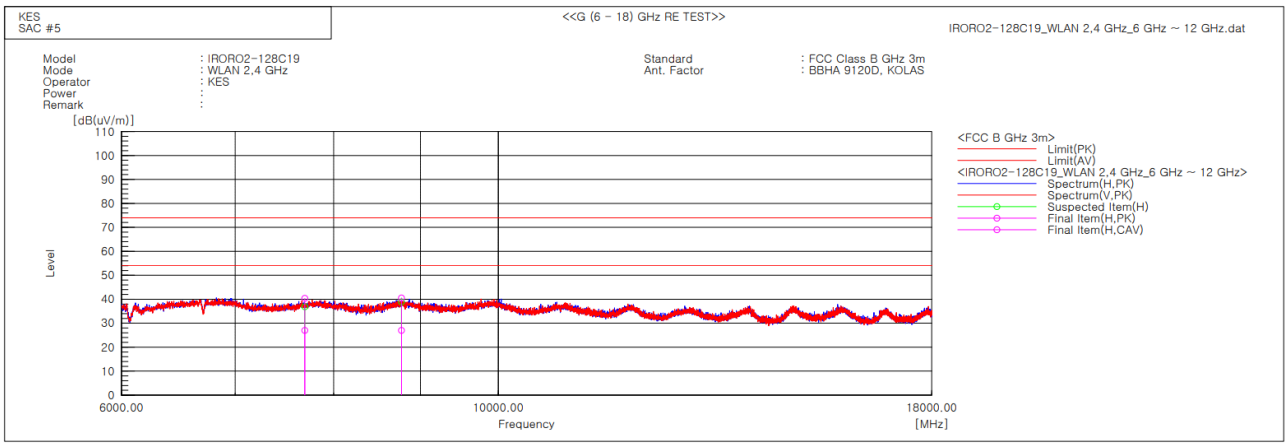


Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result CAV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [deg]	Remark
1	1079.651	V	44.8	31.2	-1.2	43.6	30.0	74.0	54.0	30.4	24.0	104.0	13.4	
2	1178.682	V	47.9	30.5	-0.7	47.2	29.8	74.0	54.0	26.8	24.2	136.0	195.8	
3	1603.938	V	44.8	29.7	1.5	46.3	31.2	74.0	54.0	27.7	22.8	141.0	338.8	
4	3123.441	H	39.1	27.8	7.3	46.4	35.1	74.0	54.0	27.6	18.9	352.0	169.6	
5	4026.169	V	38.3	26.4	9.3	47.6	35.7	74.0	54.0	26.4	18.3	124.0	347.6	
6	4361.873	H	36.9	26.3	10.8	47.7	37.1	74.0	54.0	26.3	16.9	314.0	338.2	
7	4735.736	H	39.0	26.0	12.4	51.4	38.4	74.0	54.0	22.6	15.6	327.0	271.8	
8	5395.726	H	36.1	25.3	14.5	50.6	39.8	74.0	54.0	23.4	14.2	348.0	126.1	
9	5505.166	H	36.3	24.2	14.3	50.6	38.5	74.0	54.0	23.4	15.5	396.0	177.1	
10	5653.702	V	37.6	24.6	14.2	51.8	38.8	74.0	54.0	22.2	15.2	140.0	327.1	
11	5767.045	H	36.6	24.0	14.3	50.9	38.3	74.0	54.0	23.1	15.7	342.0	124.9	
12	5944.572	V	37.6	24.1	14.6	52.2	38.7	74.0	54.0	21.8	15.3	138.0	264.8	
13	2410.000	V	--------	--------	4.6	--------	--------	74.0	54.0	--------	--------	149.7	287.2	
14	2436.250	H	--------	--------	4.7	--------	--------	74.0	54.0	--------	--------	400.2	299.4	
15	4824.375	V	--------	--------	12.7	--------	--------	74.0	54.0	--------	--------	149.7	47.2	

- Fundamental Frequency : 2.4 ㎓ Band
- Harmonic Frequency : 4.8 ㎓ Bnad

- (6 ~ 12) GHz



- PK

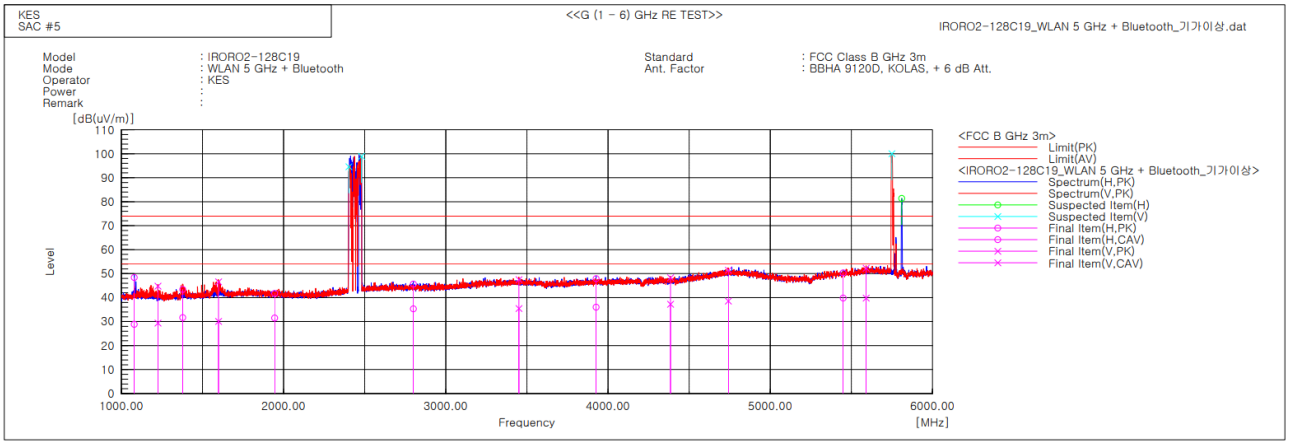
	Frequency (MHz)	Reading PK (dBuV)	Polarization	Height (m)	ANT Factor (dB)	Cable Loss (dB)	AMP Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
7	693.500	39.470	H	1.000	35.970	10.470	33.610	52.300	74.000	21.700
8	770.500	39.560	H	1.000	37.430	12.380	34.140	55.230	74.000	18.770

- CAV

	Frequency (MHz)	Reading CISPR AV (dBuV)	Polarization	Height (m)	ANT Factor (dB)	Cable Loss (dB)	AMP Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
7	693.500	27.020	H	1.000	35.970	10.470	33.610	39.850	54.000	14.150
8	770.500	26.990	H	1.000	37.430	12.380	34.140	42.660	54.000	11.340

■ WLAN 5 GHz + Bluetooth Mode

- (1 ~ 6) GHz

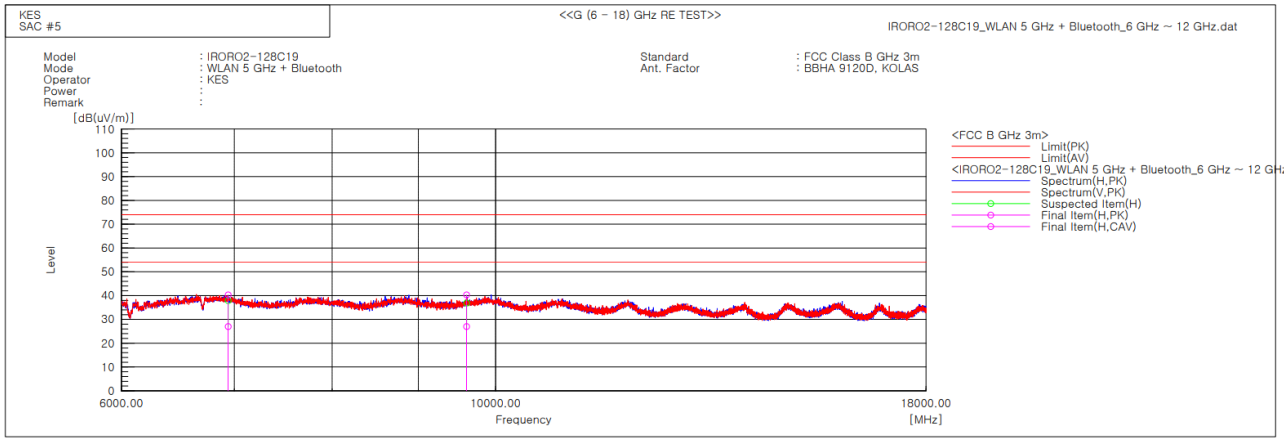


Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result CAV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [deg]	Remark
1	1079.368	H	49.6	30.1	-1.2	48.4	28.9	74.0	54.0	25.6	25.1	385.0	51.0	
2	1225.616	V	45.3	29.9	-0.5	44.8	29.4	74.0	54.0	29.2	24.6	153.0	24.1	
3	1377.680	H	42.8	31.1	0.6	43.4	31.7	74.0	54.0	30.6	22.3	242.0	339.3	
4	1598.752	V	45.1	28.6	1.5	46.6	30.1	74.0	54.0	27.4	23.9	135.0	331.9	
5	1944.582	H	38.8	28.5	3.0	41.8	31.5	74.0	54.0	32.2	22.5	299.0	228.1	
6	2800.166	H	39.2	28.8	6.5	45.7	35.3	74.0	54.0	28.3	18.7	271.0	145.9	
7	3450.301	V	39.7	27.7	7.8	47.5	35.5	74.0	54.0	26.5	18.5	144.0	168.1	
8	3926.229	H	38.9	27.0	9.0	47.9	36.0	74.0	54.0	26.1	18.0	237.0	298.0	
9	4384.903	V	37.4	26.4	10.9	48.3	37.3	74.0	54.0	25.7	16.7	142.0	1.3	
10	4740.924	V	39.0	26.2	12.4	51.4	38.6	74.0	54.0	22.6	15.4	379.0	88.9	
11	5449.283	H	35.9	25.4	14.4	50.3	39.8	74.0	54.0	23.7	14.2	374.0	10.5	
12	5591.009	V	38.1	25.6	14.2	52.3	39.8	74.0	54.0	21.7	14.2	154.0	157.9	
13	2402.500	V	--------	--------	4.5	--------	--------	74.0	54.0	--------	--------	149.8	34.3	
14	2480.000	V	--------	--------	4.9	--------	--------	74.0	54.0	--------	--------	149.8	0.6	
15	5749.375	V	--------	--------	14.2	--------	--------	74.0	54.0	--------	--------	149.8	348.2	
16	5810.625	H	--------	--------	14.3	--------	--------	74.0	54.0	--------	--------	400.0	98.5	

- Fundamental Frequency : 2.4 GHz Band, 5.7 GHz Band, 5.8 GHz Band

- (6 ~ 12) GHz



- PK

Frequency (MHz)	Reading PK (dBuV)	Polarization	Height (m)	ANT Factor (dB)	Cable Loss (dB)	AMP Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
6 940.500	37.900	H	1.000	35.460	11.480	34.830	50.010	74.000	23.990
9 612.000	36.900	H	1.000	38.570	11.810	33.300	53.980	74.000	20.020

- CAV

Frequency (MHz)	Reading CISPR AV (dBuV)	Polarization	Height (m)	ANT Factor (dB)	Cable Loss (dB)	AMP Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
6 940.500	26.970	H	1.000	35.460	11.480	34.830	39.080	54.000	14.920
9 612.000	26.950	H	1.000	38.570	11.810	33.300	44.030	54.000	9.970

♦ Calculation

Result(PK/CAV) [dB(μV/m)] = (Reading(PK/CAV)[dB(μV)] + c.f[dB(1/m)]

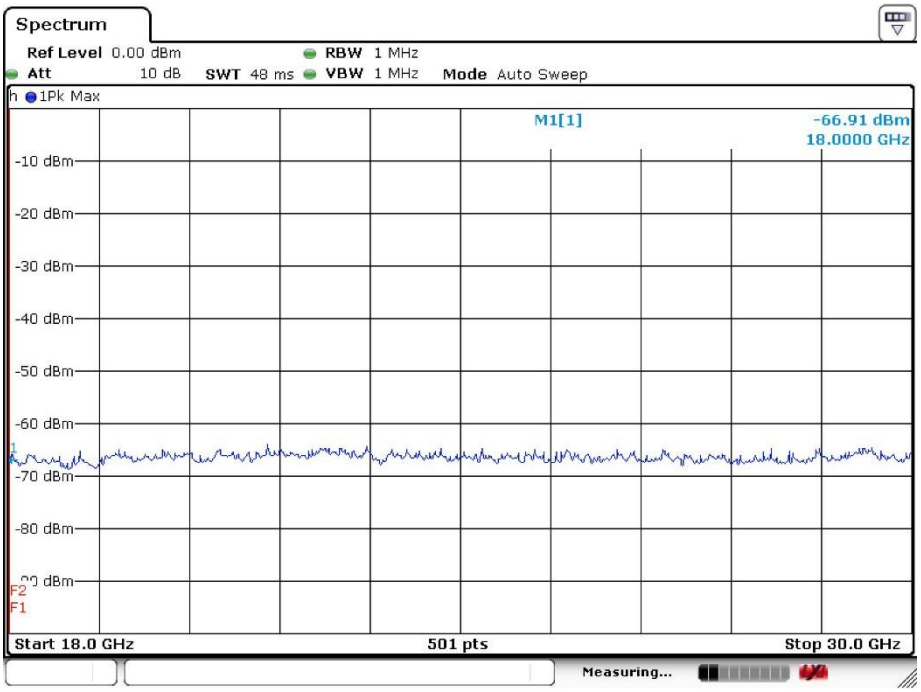
Margin(PK/CAV)[dB] = Limit[dB(μV/m)] - Result(PK/CAV) [dB(μV/m)]

Reading(PK/CAV) : Reading value, Result(PK/CAV) : Reading value + Factor value

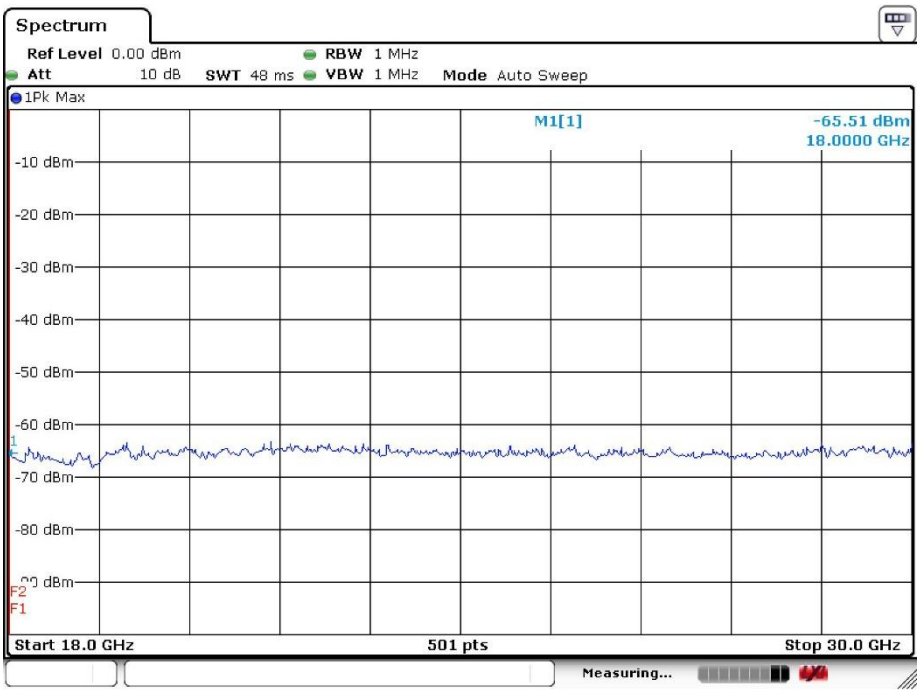
Limit(PK/CAV) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value

- (18 ~ 30) GHz

H



V



- No spurious emission were detected above 18 GHz