



# FCC EMI TEST REPORT

**FCC ID** : APYHRO00304  
**Equipment** : Smart phone  
**Brand Name** : SHARP  
**Model Name** : APYHRO00304  
**Applicant** : SHARP CORPORATION  
1 Takumi-Cho, Sakai-Ku, Sakai-Shi, Osaka 590-8522, Japan  
**Manufacturer** : SHARP CORPORATION  
1 Takumi-Cho, Sakai-Ku, Sakai-Shi, Osaka 590-8522, Japan  
**Standard** : FCC 47 CFR FCC Part 15 Subpart B Class B

The product was received on Sep. 13, 2021 and testing was started from Sep. 28, 2021 and completed on Oct. 07, 2021. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

*Louis Wu*

Approved by: Louis Wu

**Sporton International Inc. EMC & Wireless Communications Laboratory**

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)



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### History of this test report

Report No.	Version	Description	Issued Date
FC190730-01	01	Initial issue of report	Oct. 28, 2021
FC190730-01	02	Revise applicant information	Nov. 01, 2021



### Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.107	AC Conducted Emission	Pass	Under limit 7.32 dB at 0.188 MHz
3.2	15.109	Radiated Emission	Pass	Under limit 6.69 dB at 205.230 MHz

<b>Declaration of Conformity:</b>
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
<b>Comments and Explanations:</b>
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Keven Cheng

Report Producer: Lucy Wu



# 1. General Description

## 1.1. Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ac, Wi-Fi 5GHz 802.11a/n/ac, NFC, and GNSS.

Product Specification subjective to this standard	
Antenna Type	WWAN <Ant.0>: PIFA Antenna <Ant.1>: PIFA Antenna <Ant.2>: PIFA Antenna WLAN: Loop Antenna Bluetooth: Loop Antenna GPS/Glonass/BDS/Galileo: PIFA Antenna NFC: Loop Antenna

**Remark:** The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

## 1.2. Modification of EUT

No modifications are made to the EUT during all test items.

## 1.3. Test Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	<b>Sporton Site No.</b> CO05-HY, 03CH06-HY

FCC designation No.: TW1093

## 1.4. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC 47 CFR FCC Part 15 Subpart B Class B
- ♦ ANSI C63.4-2014

**Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.



## 2. Test Configuration of Equipment Under Test

### 2.1. Test Mode

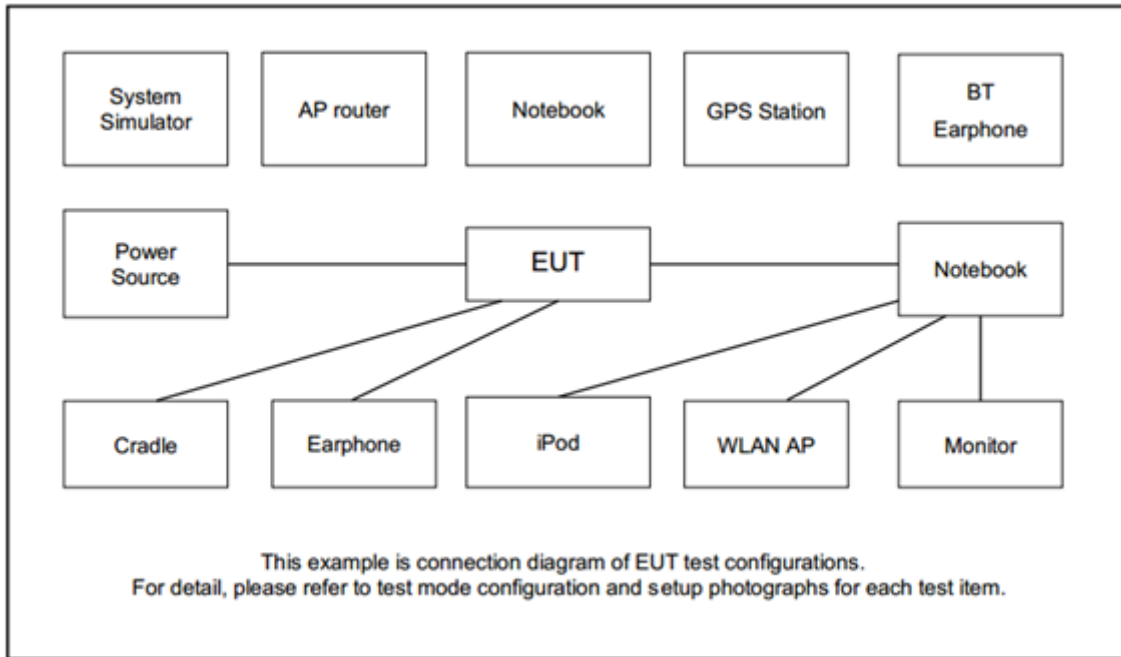
The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Test Items	Function Type
<b>AC Conducted Emission</b>	Mode 1: GSM850 Idle + Bluetooth Link + WLAN (2.4GHz) Link + Camera (Rear) + Earphone + USB Cable (Charging form Adapter) + SD Card + Battery + SIM 1
	Mode 2: WCDMA Band V Idle + Bluetooth Link + WLAN (5GHz) Link + Camera (Front) + Earphone + USB Cable (Charging form Adapter) + SD Card + Battery + E-SIM
	Mode 3: LTE Band 5 Idle + Bluetooth Link + WLAN (2.4GHz) Link + MPEG4 + Earphone + USB Cable (Charging form Adapter) + SD Card + Battery + SIM 1
	Mode 4: LTE Band 5 Idle + Bluetooth Link + WLAN (5GHz) Link + NFC On + Earphone + USB Cable (Charging form Adapter) + SD Card + Battery + SIM 1
	Mode 5: LTE Band 5 Idle + Bluetooth Link + WLAN (2.4GHz) Link + Fingerprint + Earphone + USB Cable (Data Link with Notebook) (Read) + SD Card + Battery + SIM 1
	Mode 6: LTE Band 7 Idle + Bluetooth Link + WLAN (5GHz) Link + GPS Rx + Earphone + USB Cable (Data Link with Notebook) (Write) + SD Card + Battery + SIM 1
	Mode 7: LTE Band 38 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + MPEG4 + USB Cable (Charging form Adapter) + SD Card + Battery + SIM 1
<b>Radiated Emissions</b>	Mode 1: GSM850 Idle + Bluetooth Link + WLAN (2.4GHz) Link + Camera (Rear) + Earphone + USB Cable (Charging form Adapter) + SD Card + Battery + SIM 1
	Mode 2: WCDMA Band V Idle + Bluetooth Link + WLAN (5GHz) Link + Camera (Front) + Earphone + USB Cable (Charging form Adapter) + SD Card + Battery + E-SIM
	Mode 3: LTE Band 5 Idle + Bluetooth Link + WLAN (2.4GHz) Link + MPEG4 + Earphone + USB Cable (Charging form Adapter) + SD Card + Battery + SIM 1
	Mode 4: LTE Band 5 Idle + Bluetooth Link + WLAN (5GHz) Link + NFC On + Earphone + USB Cable (Charging form Adapter) + SD Card + Battery + SIM 1
	Mode 5: LTE Band 5 Idle + Bluetooth Link + WLAN (2.4GHz) Link + Fingerprint + Earphone + USB Cable (Data Link with Notebook) (Read) + SD Card + Battery + SIM 1
	Mode 6: LTE Band 7 Idle + Bluetooth Link + WLAN (5GHz) Link + GPS Rx + Earphone + USB Cable (Data Link with Notebook) (Write) + SD Card + Battery + SIM 1
	Mode 7: LTE Band 38 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + MPEG4 + USB Cable (Charging form Adapter) + SD Card + Battery + SIM 1

Test Items	Function Type
<b>Remark:</b>	
1. The worst case of AC is mode 5; only the test data of this mode was reported.	
2. The worst case of RE is mode 6; only the test data of this mode was reported.	
3. Data Link with Notebook means data application transferred mode between EUT and Notebook.	

## 2.2. Connection Diagram of Test System



## 2.3. Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
3.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
4.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
5.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
6.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
7.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
8.	Earphone	Nokia	WH-108	N/A	Unshielded, 1.5m	N/A



## **2.4. EUT Operation Test Setup**

The EUT was in GSM or WCDMA or LTE idle mode during the test. The EUT was synchronized with the BCCH, and had been continuous receiving mode by setting paging reorganization of the system simulator.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test:

1. Data application is transferred between Laptop and EUT via USB cable.
2. Execute "GPS Test" to make the EUT receive continuous signals from GPS station.
3. Execute "Video player" to play MPEG4 files.
4. Turn on camera to capture images.
5. Turn on Fingerprint or NFC function.
6. EUT links with Notebook and executes ping via WLAN AP.





### 3. Test Result

#### 3.1. Test of AC Conducted Emission Measurement

##### 3.1.1. Limits of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

<Class B>

Frequency of emission (MHz)	Conducted limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

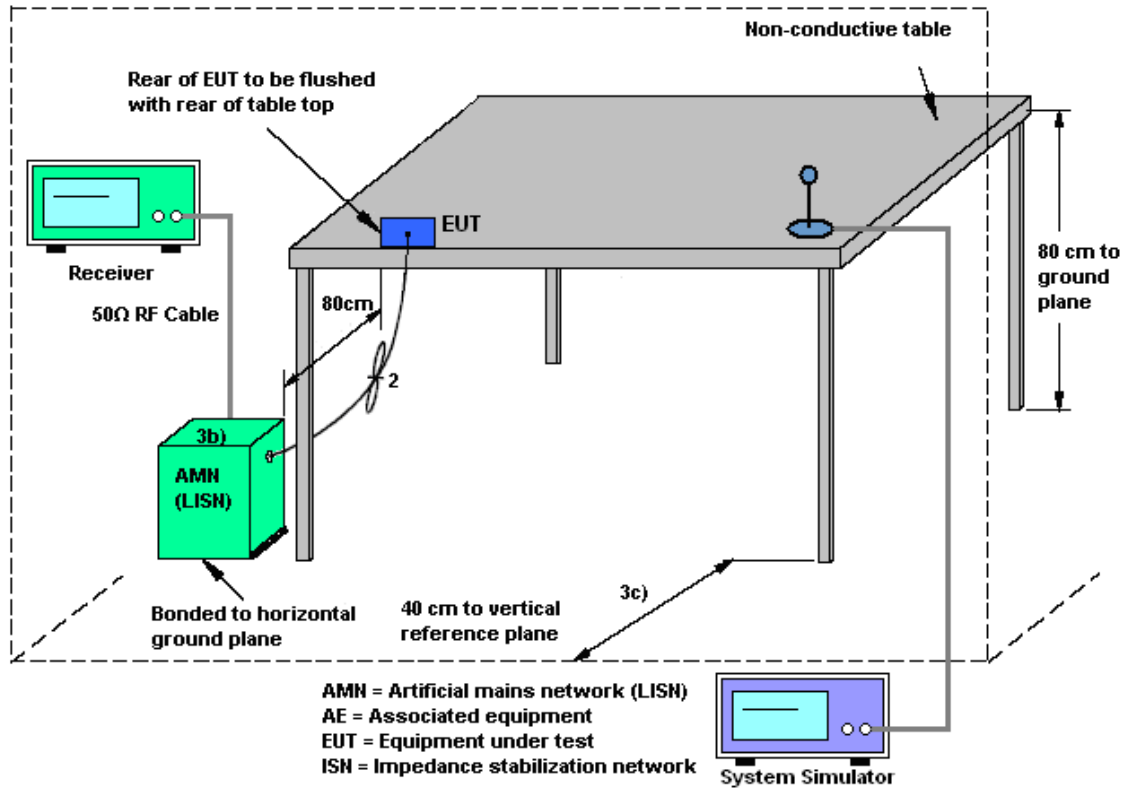
##### 3.1.2. Measuring Instruments

Refer a test equipment and calibration data table in this test report.

##### 3.1.3. Test Procedure

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN shall be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

### 3.1.4. Test Setup



### 3.1.5. Test Result of AC Conducted Emission

Please refer to Appendix A.



### 3.2. Test of Radiated Emission Measurement

#### 3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

<Class B>

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

#### 3.2.2. Measuring Instruments

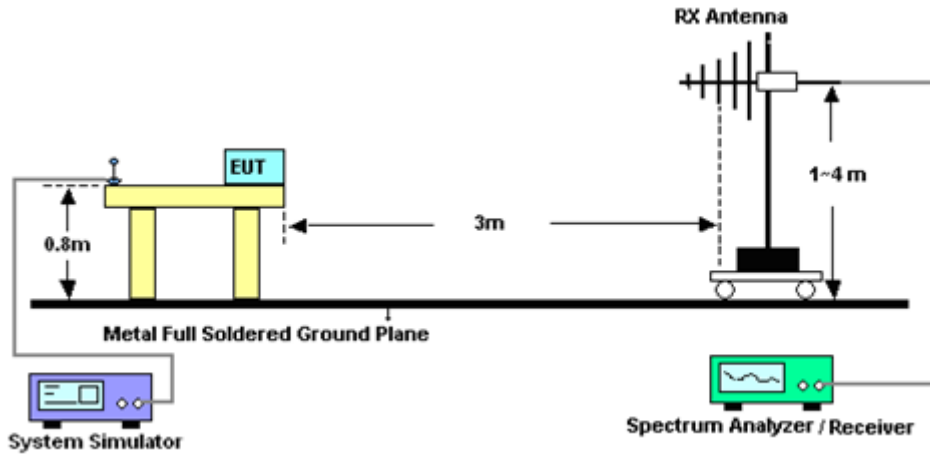
Refer a test equipment and calibration data table in this test report.

#### 3.2.3. Test Procedures

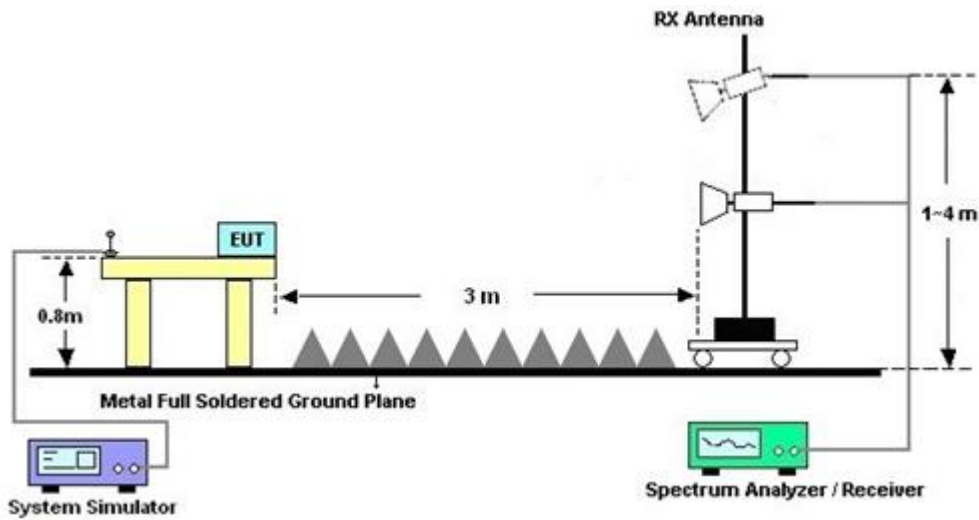
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120 kHz/VBW=300 kHz for frequency below 1 GHz; RBW=1 MHz VBW=3 MHz (Peak), RBW=1 MHz/VBW=10 Hz (Average) for frequency above 1 GHz).
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
8. Emission level (dBµV/m) = 20 log Emission level (µV/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

### 3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



### 3.2.5. Test Result of Radiated Emission

Please refer to Appendix B.



## 4. List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Sep. 28, 2021~ Sep. 29, 2021	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 30, 2020	Sep. 28, 2021~ Sep. 29, 2021	Nov. 29, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 18, 2020	Sep. 28, 2021~ Sep. 29, 2021	Nov. 17, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 01, 2020	Sep. 28, 2021~ Sep. 29, 2021	Nov. 30, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2020	Sep. 28, 2021~ Sep. 29, 2021	Nov. 15, 2021	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Sep. 28, 2021~ Sep. 29, 2021	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	00691	N/A	Jul. 28, 2021	Sep. 28, 2021~ Sep. 29, 2021	Jul. 27, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 31, 2020	Sep. 28, 2021~ Sep. 29, 2021	Dec. 30, 2021	Conduction (CO05-HY)
Amplifier	SONOMA	310N	186713	9kHz~1GHz	Apr. 29, 2021	Oct. 07, 2021	Apr. 28, 2022	Radiation (03CH06-HY)
Bilog Antenna	Schaffner	CBL 6111C & N-6-06	2725 & AT-N0601	30MHz~1GHz	Jan. 08, 2021	Oct. 07, 2021	Jan. 07, 2022	Radiation (03CH06-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100472	20Hz~26.5GHz	Feb. 03, 2021	Oct. 07, 2021	Feb. 02, 2022	Radiation (03CH06-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02114	1GHz~18GHz	Aug. 04, 2021	Oct. 07, 2021	Aug. 03, 2022	Radiation (03CH06-HY)
Preamplifier	Jet-Power	JPA00101800- 30-10P	1601180001	1GHz~18GHz	Jul. 19, 2021	Oct. 07, 2021	Jul. 18, 2022	Radiation (03CH06-HY)
RF Cable	HUBER + SUHNER	SF102_7000m m	532299/2	30MHz to 40GHz	Jul. 05, 2021	Oct. 07, 2021	Jul. 04, 2022	Radiation (03CH06-HY)
RF Cable	HUBER + SUHNER	SF102_3000m m	532422/2	30MHz to 40GHz	Jul. 05, 2021	Oct. 07, 2021	Jul. 04, 2022	Radiation (03CH06-HY)
RF Cable	HUBER + SUHNER	SF102_2000m m	532421/2	30MHz to 40GHz	Jul. 05, 2021	Oct. 07, 2021	Jul. 04, 2022	Radiation (03CH06-HY)
RF Cable	HUBER + SUHNER	SF104	802433/4	30Mhz to 18Ghz	Aug. 19, 2021	Oct. 07, 2021	Aug. 18, 2022	Radiation (03CH06-HY)
Controller	INN-CO	EM1000	060782	Control Turn table & Ant Mast	N/A	Oct. 07, 2021	N/A	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF780208212	1m~4m	N/A	Oct. 07, 2021	N/A	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0-360 degree	N/A	Oct. 07, 2021	N/A	Radiation (03CH06-HY)
Software	Audix	E3 6.2009-8-24 (k5)	N/A	N/A	N/A	Oct. 07, 2021	N/A	Radiation (03CH06-HY)



## 5. Uncertainty of Evaluation

### Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.3 dB
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	6.3 dB
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### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.4 dB
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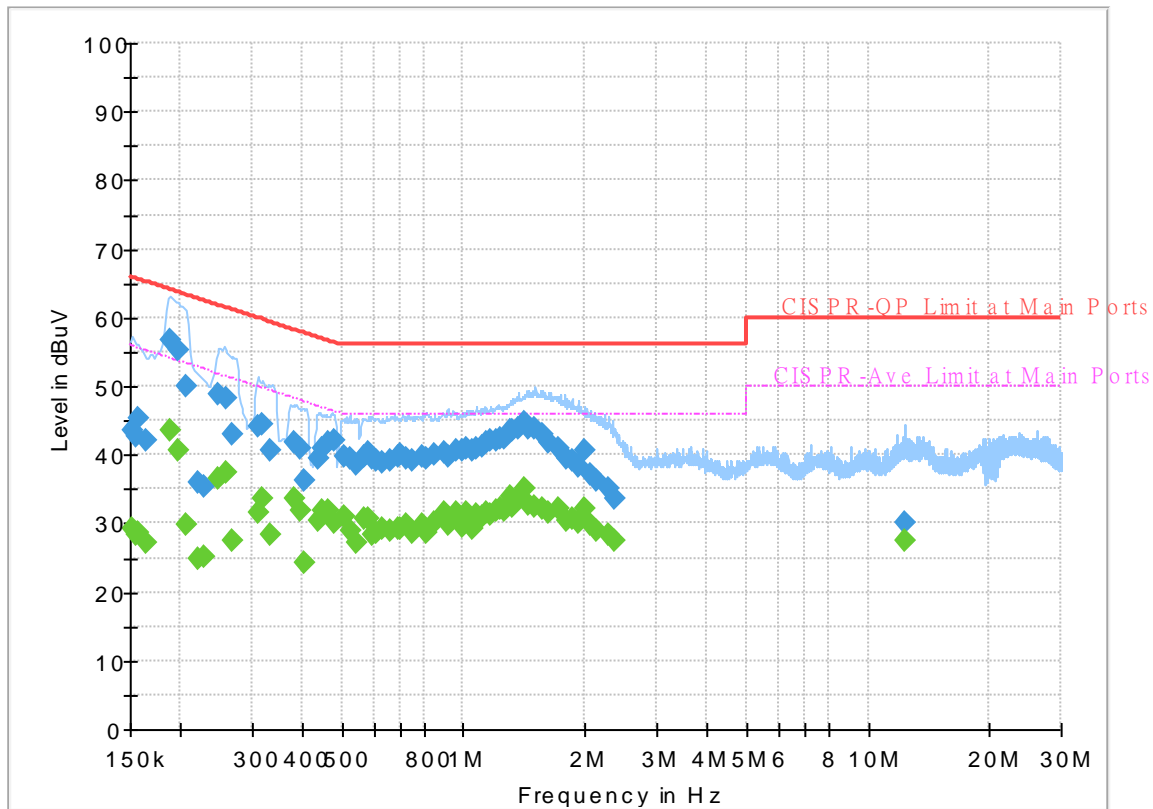
## Appendix A. AC Conducted Emission Test Results

<b>Test Engineer :</b> Tom Lee and Calvin Wang	<b>Temperature :</b>	23~26°C
	<b>Relative Humidity :</b>	40~50%

# EUT Information

Report NO : 190730-01  
 Test Mode : Mode 5  
 Test Voltage : Power From System  
 Phase : Line

Full Spectrum



## Final\_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	29.10	55.88	26.78	L1	OFF	19.7
0.152250	43.52	---	65.88	22.36	L1	OFF	19.7
0.154500	---	28.30	55.75	27.45	L1	OFF	19.7
0.154500	42.82	---	65.75	22.93	L1	OFF	19.7
0.156750	---	28.69	55.63	26.94	L1	OFF	19.7
0.156750	45.43	---	65.63	20.20	L1	OFF	19.7
0.163500	---	27.29	55.28	27.99	L1	OFF	19.7
0.163500	42.06	---	65.28	23.22	L1	OFF	19.7
0.188250	---	43.46	54.11	10.65	L1	OFF	19.7
0.188250	56.79	---	64.11	7.32	L1	OFF	19.7
0.197250	---	40.56	53.73	13.17	L1	OFF	19.7
0.197250	55.31	---	63.73	8.42	L1	OFF	19.7
0.206250	---	29.94	53.36	23.42	L1	OFF	19.7
0.206250	50.11	---	63.36	13.25	L1	OFF	19.7
0.222000	---	24.86	52.74	27.88	L1	OFF	19.7
0.222000	36.10	---	62.74	26.64	L1	OFF	19.7
0.228750	---	25.12	52.50	27.38	L1	OFF	19.7
0.228750	35.42	---	62.50	27.08	L1	OFF	19.7
0.246750	---	36.54	51.87	15.33	L1	OFF	19.7
0.246750	48.97	---	61.87	12.90	L1	OFF	19.7
0.260250	---	37.52	51.42	13.90	L1	OFF	19.7



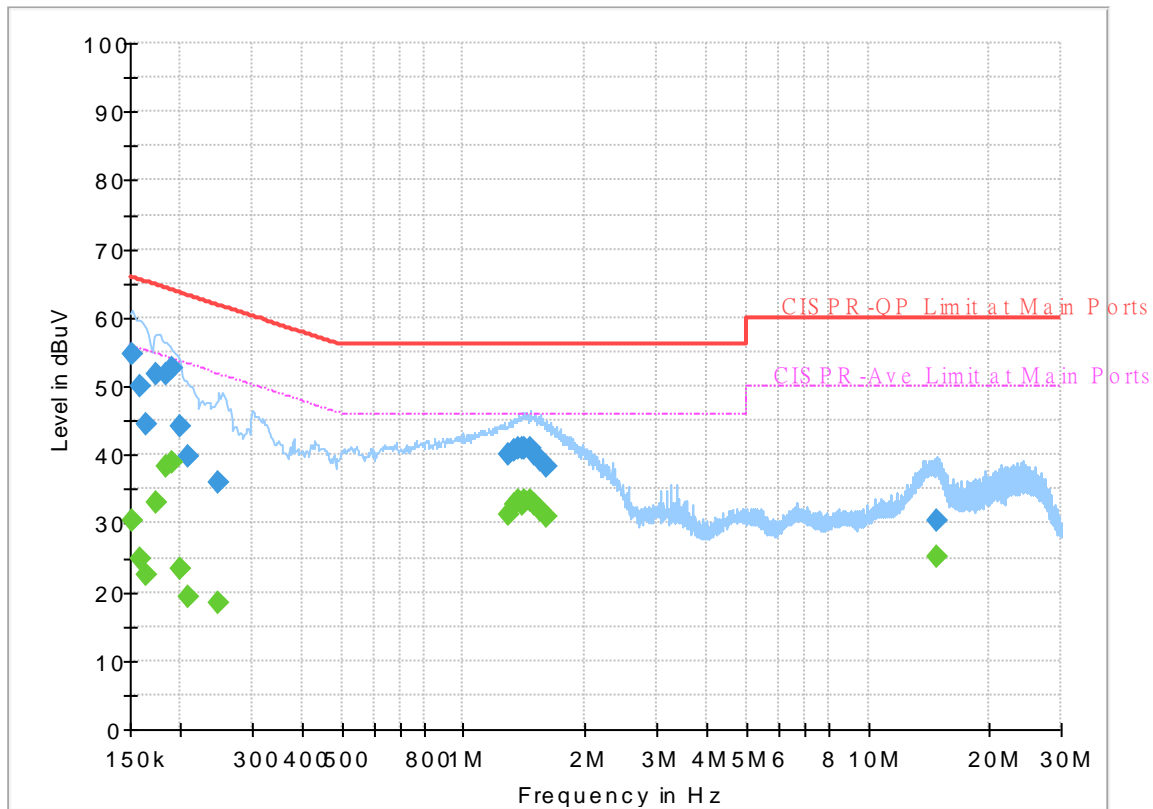
0.260250	48.30	---	61.42	13.12	L1	OFF	19.7
0.269250	---	27.41	51.14	23.73	L1	OFF	19.7
0.269250	42.95	---	61.14	18.19	L1	OFF	19.7
0.309750	---	31.59	49.98	18.39	L1	OFF	19.7
0.309750	44.01	---	59.98	15.97	L1	OFF	19.7
0.318750	---	33.51	49.74	16.23	L1	OFF	19.7
0.318750	44.44	---	59.74	15.30	L1	OFF	19.7
0.332250	---	28.28	49.40	21.12	L1	OFF	19.7
0.332250	40.54	---	59.40	18.86	L1	OFF	19.7
0.384000	---	33.77	48.19	14.42	L1	OFF	19.7
0.384000	41.83	---	58.19	16.36	L1	OFF	19.7
0.395250	---	31.89	47.95	16.06	L1	OFF	19.7
0.395250	41.05	---	57.95	16.90	L1	OFF	19.7
0.406500	---	24.35	47.72	23.37	L1	OFF	19.7
0.406500	36.13	---	57.72	21.59	L1	OFF	19.7
0.438000	---	30.50	47.10	16.60	L1	OFF	19.7
0.438000	39.44	---	57.10	17.66	L1	OFF	19.7
0.449250	---	31.81	46.89	15.08	L1	OFF	19.8
0.449250	40.92	---	56.89	15.97	L1	OFF	19.8
0.465000	---	31.84	46.60	14.76	L1	OFF	19.8
0.465000	41.71	---	56.60	14.89	L1	OFF	19.8
0.478500	---	30.09	46.37	16.28	L1	OFF	19.8
0.478500	42.15	---	56.37	14.22	L1	OFF	19.8
0.505500	---	31.08	46.00	14.92	L1	OFF	19.8
0.505500	39.90	---	56.00	16.10	L1	OFF	19.8
0.525750	---	28.95	46.00	17.05	L1	OFF	19.8
0.525750	39.44	---	56.00	16.56	L1	OFF	19.8
0.541500	---	27.28	46.00	18.72	L1	OFF	19.9
0.541500	38.47	---	56.00	17.53	L1	OFF	19.9
0.570750	---	30.56	46.00	15.44	L1	OFF	19.9
0.570750	39.87	---	56.00	16.13	L1	OFF	19.9
0.584250	---	30.79	46.00	15.21	L1	OFF	19.9
0.584250	40.21	---	56.00	15.79	L1	OFF	19.9
0.597750	---	28.26	46.00	17.74	L1	OFF	19.9
0.597750	39.49	---	56.00	16.51	L1	OFF	19.9
0.611250	---	28.80	46.00	17.20	L1	OFF	19.9
0.611250	39.10	---	56.00	16.90	L1	OFF	19.9
0.629250	---	29.21	46.00	16.79	L1	OFF	19.9
0.629250	38.87	---	56.00	17.13	L1	OFF	19.9
0.663000	---	28.85	46.00	17.15	L1	OFF	20.0
0.663000	39.19	---	56.00	16.81	L1	OFF	20.0
0.687750	---	29.23	46.00	16.77	L1	OFF	20.0
0.687750	39.63	---	56.00	16.37	L1	OFF	20.0
0.701250	---	29.24	46.00	16.76	L1	OFF	20.0
0.701250	39.97	---	56.00	16.03	L1	OFF	20.0
0.723750	---	29.74	46.00	16.26	L1	OFF	20.0
0.723750	39.50	---	56.00	16.50	L1	OFF	20.0
0.750750	---	28.78	46.00	17.22	L1	OFF	20.0
0.750750	39.17	---	56.00	16.83	L1	OFF	20.0
0.789000	---	29.74	46.00	16.26	L1	OFF	20.1
0.789000	39.73	---	56.00	16.27	L1	OFF	20.1
0.813750	---	28.54	46.00	17.46	L1	OFF	20.1
0.813750	39.47	---	56.00	16.53	L1	OFF	20.1
0.852000	---	30.07	46.00	15.93	L1	OFF	20.1
0.852000	40.01	---	56.00	15.99	L1	OFF	20.1
0.894750	---	31.58	46.00	14.42	L1	OFF	20.1
0.894750	40.35	---	56.00	15.65	L1	OFF	20.1
0.915000	---	29.97	46.00	16.03	L1	OFF	20.1
0.915000	39.85	---	56.00	16.15	L1	OFF	20.1
0.957750	---	31.69	46.00	14.31	L1	OFF	20.2
0.957750	40.73	---	56.00	15.27	L1	OFF	20.2
0.993750	---	29.53	46.00	16.47	L1	OFF	20.2
0.993750	40.60	---	56.00	15.40	L1	OFF	20.2
1.018500	---	31.61	46.00	14.39	L1	OFF	20.2
1.018500	41.07	---	56.00	14.93	L1	OFF	20.2
1.052250	---	29.38	46.00	16.62	L1	OFF	20.2
1.052250	40.52	---	56.00	15.48	L1	OFF	20.2
1.074750	---	31.39	46.00	14.61	L1	OFF	20.2
1.074750	40.93	---	56.00	15.07	L1	OFF	20.2
1.117500	---	30.98	46.00	15.02	L1	OFF	20.2
1.117500	41.29	---	56.00	14.71	L1	OFF	20.2

1.135500	---	31.64	46.00	14.36	L1	OFF	20.2
1.135500	41.74	---	56.00	14.26	L1	OFF	20.2
1.167000	---	31.22	46.00	14.78	L1	OFF	20.2
1.167000	42.04	---	56.00	13.96	L1	OFF	20.2
1.200750	---	31.84	46.00	14.16	L1	OFF	20.2
1.200750	42.25	---	56.00	13.75	L1	OFF	20.2
1.232250	---	32.26	46.00	13.74	L1	OFF	20.2
1.232250	42.38	---	56.00	13.62	L1	OFF	20.2
1.263750	---	31.88	46.00	14.12	L1	OFF	20.2
1.263750	42.31	---	56.00	13.69	L1	OFF	20.2
1.302000	---	33.80	46.00	12.20	L1	OFF	20.2
1.302000	43.50	---	56.00	12.50	L1	OFF	20.2
1.326750	---	32.50	46.00	13.50	L1	OFF	20.2
1.326750	43.64	---	56.00	12.36	L1	OFF	20.2
1.369500	---	33.67	46.00	12.33	L1	OFF	20.2
1.369500	43.94	---	56.00	12.06	L1	OFF	20.2
1.414500	---	35.08	46.00	10.92	L1	OFF	20.2
1.414500	44.67	---	56.00	11.33	L1	OFF	20.2
1.450500	---	32.62	46.00	13.38	L1	OFF	20.2
1.450500	43.93	---	56.00	12.07	L1	OFF	20.2
1.506750	---	32.58	46.00	13.42	L1	OFF	20.2
1.506750	43.82	---	56.00	12.18	L1	OFF	20.2
1.563000	---	32.18	46.00	13.82	L1	OFF	20.2
1.563000	42.91	---	56.00	13.09	L1	OFF	20.2
1.628250	---	31.65	46.00	14.35	L1	OFF	20.2
1.628250	41.85	---	56.00	14.15	L1	OFF	20.2
1.711500	---	32.13	46.00	13.87	L1	OFF	20.2
1.711500	40.94	---	56.00	15.06	L1	OFF	20.2
1.801500	---	30.55	46.00	15.45	L1	OFF	20.2
1.801500	39.52	---	56.00	16.48	L1	OFF	20.2
1.851000	---	30.62	46.00	15.38	L1	OFF	20.2
1.851000	39.14	---	56.00	16.86	L1	OFF	20.2
1.918500	---	30.10	46.00	15.90	L1	OFF	20.2
1.918500	38.29	---	56.00	17.71	L1	OFF	20.2
1.986000	---	32.28	46.00	13.72	L1	OFF	20.2
1.986000	40.75	---	56.00	15.25	L1	OFF	20.2
2.053500	---	29.72	46.00	16.28	L1	OFF	20.2
2.053500	37.22	---	56.00	18.78	L1	OFF	20.2
2.123250	---	29.01	46.00	16.99	L1	OFF	20.1
2.123250	36.37	---	56.00	19.63	L1	OFF	20.1
2.278500	---	28.49	46.00	17.51	L1	OFF	20.1
2.278500	35.00	---	56.00	21.00	L1	OFF	20.1
2.359500	---	27.57	46.00	18.43	L1	OFF	20.1
2.359500	33.50	---	56.00	22.50	L1	OFF	20.1
12.329250	---	27.36	50.00	22.64	L1	OFF	20.2
12.329250	30.06	---	60.00	29.94	L1	OFF	20.2

# EUT Information

Report NO : 190730-01  
 Test Mode : Mode 5  
 Test Voltage : Power From System  
 Phase : Neutral

Full Spectrum



## Final\_Result

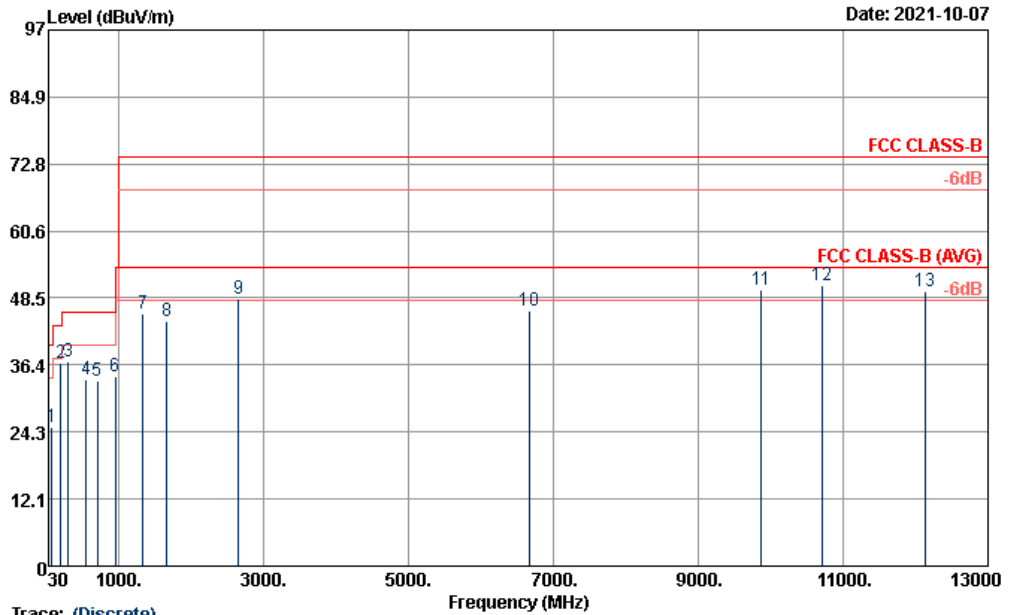
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	30.52	55.88	25.36	N	OFF	19.6
0.152250	54.56	---	65.88	11.32	N	OFF	19.6
0.159000	---	24.92	55.52	30.60	N	OFF	19.6
0.159000	49.96	---	65.52	15.56	N	OFF	19.6
0.163500	---	22.43	55.28	32.85	N	OFF	19.6
0.163500	44.31	---	65.28	20.97	N	OFF	19.6
0.174750	---	32.94	54.73	21.79	N	OFF	19.6
0.174750	51.89	---	64.73	12.84	N	OFF	19.6
0.183750	---	38.22	54.31	16.09	N	OFF	19.6
0.183750	51.77	---	64.31	12.54	N	OFF	19.6
0.190500	---	38.93	54.02	15.09	N	OFF	19.6
0.190500	52.73	---	64.02	11.29	N	OFF	19.6
0.199500	---	23.33	53.63	30.30	N	OFF	19.6
0.199500	44.05	---	63.63	19.58	N	OFF	19.6
0.208500	---	19.36	53.27	33.91	N	OFF	19.6
0.208500	39.84	---	63.27	23.43	N	OFF	19.6
0.249000	---	18.56	51.79	33.23	N	OFF	19.6
0.249000	35.90	---	61.79	25.89	N	OFF	19.6
1.297500	---	31.39	46.00	14.61	N	OFF	20.1
1.297500	39.91	---	56.00	16.09	N	OFF	20.1
1.331250	---	32.62	46.00	13.38	N	OFF	20.1

1.331250	40.60	---	56.00	15.40	N	OFF	20.1
1.367250	---	33.35	46.00	12.65	N	OFF	20.1
1.367250	40.96	---	56.00	15.04	N	OFF	20.1
1.401000	---	32.70	46.00	13.30	N	OFF	20.1
1.401000	40.86	---	56.00	15.14	N	OFF	20.1
1.421250	---	33.30	46.00	12.70	N	OFF	20.1
1.421250	41.03	---	56.00	14.97	N	OFF	20.1
1.464000	---	33.22	46.00	12.78	N	OFF	20.1
1.464000	40.83	---	56.00	15.17	N	OFF	20.1
1.506750	---	32.61	46.00	13.39	N	OFF	20.1
1.506750	40.00	---	56.00	16.00	N	OFF	20.1
1.551750	---	31.87	46.00	14.13	N	OFF	20.1
1.551750	39.25	---	56.00	16.75	N	OFF	20.1
1.596750	---	31.10	46.00	14.90	N	OFF	20.1
1.596750	38.39	---	56.00	17.61	N	OFF	20.1
14.750250	---	25.26	50.00	24.74	N	OFF	20.0
14.750250	30.33	---	60.00	29.67	N	OFF	20.0



## Appendix B. Radiated Emission Test Result

Test Engineer :	Nick Yu	Temperature :	24~26°C
		Relative Humidity :	45~47%
Test Distance :	3m	Polarization :	Horizontal
Remark :	#9 is system simulator signal which can be ignored.		



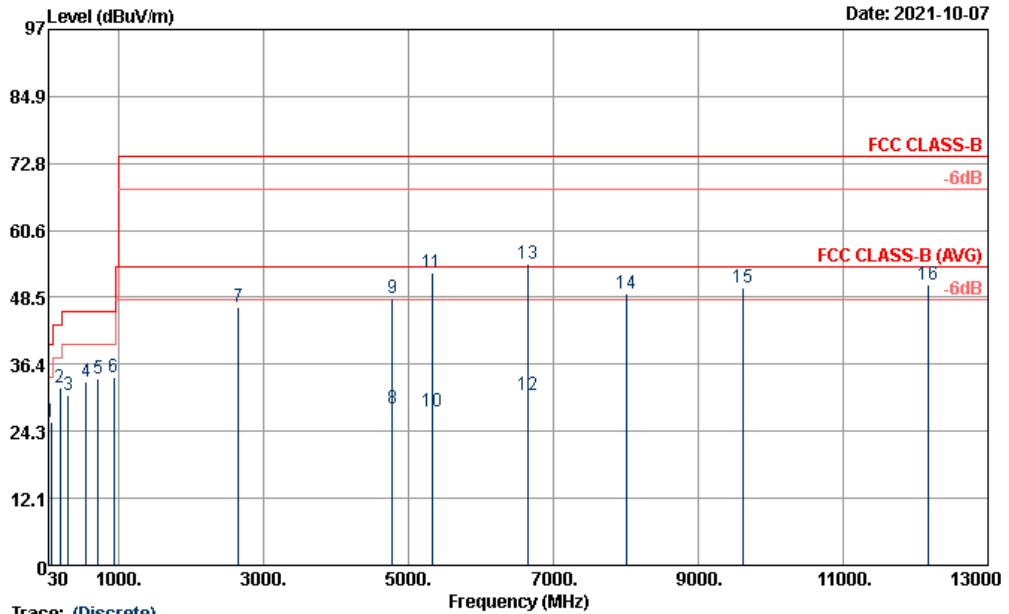
Trace: (Discrete)

Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m 9120B\_1156\_200915 HORIZONTAL  
 Project : 190730-01  
 Power : From System  
 Memo : Mode 6  
 : NB to eMMC

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1	80.76	25.21	-14.79	40.00	41.94	-16.73	---	---	Peak
2	205.23	36.81	-6.69	43.50	50.89	-14.08	---	---	Peak
3	299.73	36.91	-9.09	46.00	45.98	-9.07	---	---	Peak
4	552.70	33.70	-12.30	46.00	35.51	-1.81	---	---	Peak
5	704.60	33.45	-12.55	46.00	34.03	-0.58	---	---	Peak
6	956.60	34.44	-11.56	46.00	28.98	5.46	---	---	Peak
7	1330.00	45.57	-28.43	74.00	76.37	-30.80	---	---	Peak
8	1666.00	44.21	-29.79	74.00	75.12	-30.91	---	---	Peak
9	2655.00	48.25			74.21	-25.96	---	---	Peak
10	6664.00	46.25	-27.75	74.00	60.62	-14.37	---	---	Peak
11	9868.00	49.92	-24.08	74.00	57.42	-7.50	---	---	Peak
12	10702.00	50.82	-23.18	74.00	56.45	-5.63	---	---	Peak
13	12136.00	49.69	-24.31	74.00	54.79	-5.10	---	---	Peak



Test Engineer :	Nick Yu	Temperature :	24~26°C
		Relative Humidity :	45~47%
Test Distance :	3m	Polarization :	Vertical
Remark :	#7 is system simulator signal which can be ignored.		



Trace: (Discrete)

Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m 9120B\_1156\_200915 VERTICAL  
 Project : 190730-01  
 Power : From System  
 Memo : Mode 6  
 : NB to eMMC

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1	67.53	26.05	-13.95	40.00	44.09	-18.04	---	---	Peak
2	192.00	32.12	-11.38	43.50	46.55	-14.43	---	---	Peak
3	299.73	30.85	-15.15	46.00	39.92	-9.07	---	---	Peak
4	554.80	33.30	-12.70	46.00	34.93	-1.63	---	---	Peak
5	715.80	33.77	-12.23	46.00	33.91	-0.14	---	---	Peak
6	933.50	34.06	-11.94	46.00	29.47	4.59	---	---	Peak
7	2655.00	46.74			72.70	-25.96	---	---	Peak
8	4780.00	28.40	-25.60	54.00	46.81	-18.41	100	185	Average
9	4780.00	48.45	-25.55	74.00	66.86	-18.41	100	185	Peak
10	5326.00	27.79	-26.21	54.00	46.71	-18.92	100	190	Average
11	5326.00	52.99	-21.01	74.00	71.91	-18.92	100	190	Peak
12	6658.00	30.74	-23.26	54.00	45.10	-14.36	100	181	Average
13	6658.00	54.64	-19.36	74.00	69.00	-14.36	100	181	Peak
14	8002.00	49.16	-24.84	74.00	60.19	-11.03	---	---	Peak
15	9616.00	50.34	-23.66	74.00	57.77	-7.43	---	---	Peak
16	12178.00	50.71	-23.29	74.00	55.92	-5.21	---	---	Peak