



# FCC EMI TEST REPORT

**FCC ID** : GKRPIXM01  
**Equipment** : Smart Baby Camera  
**Brand Name** : PIXSEE  
**Model Name** : SC-PIXM01  
**Applicant** : Compal Electronics, Inc.  
No.581 & 581-1, Ruiguang Rd.,  
Neihu District, Taipei, (114) Taiwan  
**Manufacturer** : Compal Electronics, Inc.  
No.581 & 581-1, Ruiguang Rd.,  
Neihu District, Taipei, (114) Taiwan  
**Standard** : FCC 47 CFR FCC Part 15 Subpart B Class B

The product was received on Oct. 06, 2020 and testing was started from Nov. 10, 2020 and completed on Nov. 11, 2020. 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, Taiwan (R.O.C.)



# Table of Contents

**History of this test report..... 3**

**Summary of Test Result..... 4**

**1. General Description ..... 5**

    1.1. Product Feature of Equipment Under Test ..... 5

    1.2. Modification of EUT ..... 5

    1.3. Test Location ..... 5

    1.4. Applicable Standards ..... 5

**2. Test Configuration of Equipment Under Test ..... 6**

    2.1. Test Mode ..... 6

    2.2. Connection Diagram of Test System ..... 6

    2.3. Support Unit used in test configuration and system ..... 7

    2.4. EUT Operation Test Setup ..... 7

**3. Test Result ..... 8**

    3.1. Test of AC Conducted Emission Measurement ..... 8

    3.2. Test of Radiated Emission Measurement ..... 10

**4. List of Measuring Equipment..... 12**

**5. Uncertainty of Evaluation ..... 13**

**Appendix A. AC Conducted Emission Test Result**

**Appendix B. Radiated Emission Test Result**

**Appendix C. Setup Photographs**



### History of this test report

Report No.	Version	Description	Issued Date
FC010711-01	01	Initial issue of report	Nov. 23, 2020



### 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 19.78 dB at 0.501 MHz
3.2	15.109	Radiated Emission	Pass	Under limit 6.55 dB at 76.560 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: Dara Chiu

Report Producer: Ruby Zou



# 1. General Description

## 1.1. Product Feature of Equipment Under Test

Wi-Fi 2.4GHz 802.11b/g/n and Wi-Fi 5GHz 802.11a/n/ac

Product Specification subjective to this standard	
Antenna Type	WLAN <Ant. 1>: Chip Antenna <Ant. 2>: Dipole Antenna

## 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, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	<b>Sporton Site No.</b> CO05-HY

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	<b>Sporton Site No.</b> 03CH10-HY

FCC designation No.: TW1093 and TW1098

## 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

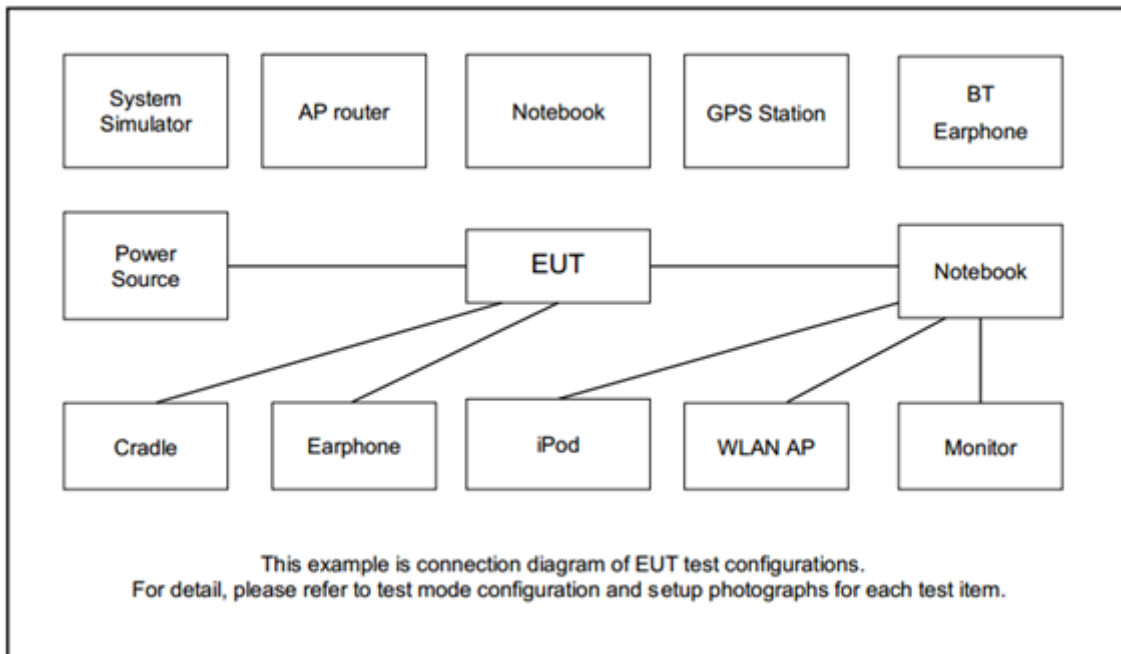
### 2.1. Test Mode

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 : WLAN (2.4GHz) Link + Camera On (Video) + Adapter Mode 2 : WLAN (5GHz) Link + Camera On (Play Music) + Adapter
<b>Radiated Emissions</b>	Mode 1 : WLAN (2.4GHz) Link + Camera On (Video) + Adapter Mode 2 : WLAN (5GHz) Link + Camera On (Play Music) + Adapter
<b>Remark:</b>	
1. The worst case of AC is mode 1; only the test data of this mode was reported.	
2. The worst case of RE is mode 2; only the test data of this mode was reported.	

### 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.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
2.	Notebook	Dell	Latitude 3400	FCC DoC	N/A	AC I/P : Unshielded, 1.2m DC O/P : Shielded, 1.8m
3.	Smartphone	Sony	H3113	FCC DoC	N/A	N/A

### 2.4. EUT Operation Test Setup

The EUT was attached to the WLAN AP, and the following programs installed in the EUT were programmed during the test:

1. Turn on camera to capture images.
2. Turn on camera and play music.



### 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

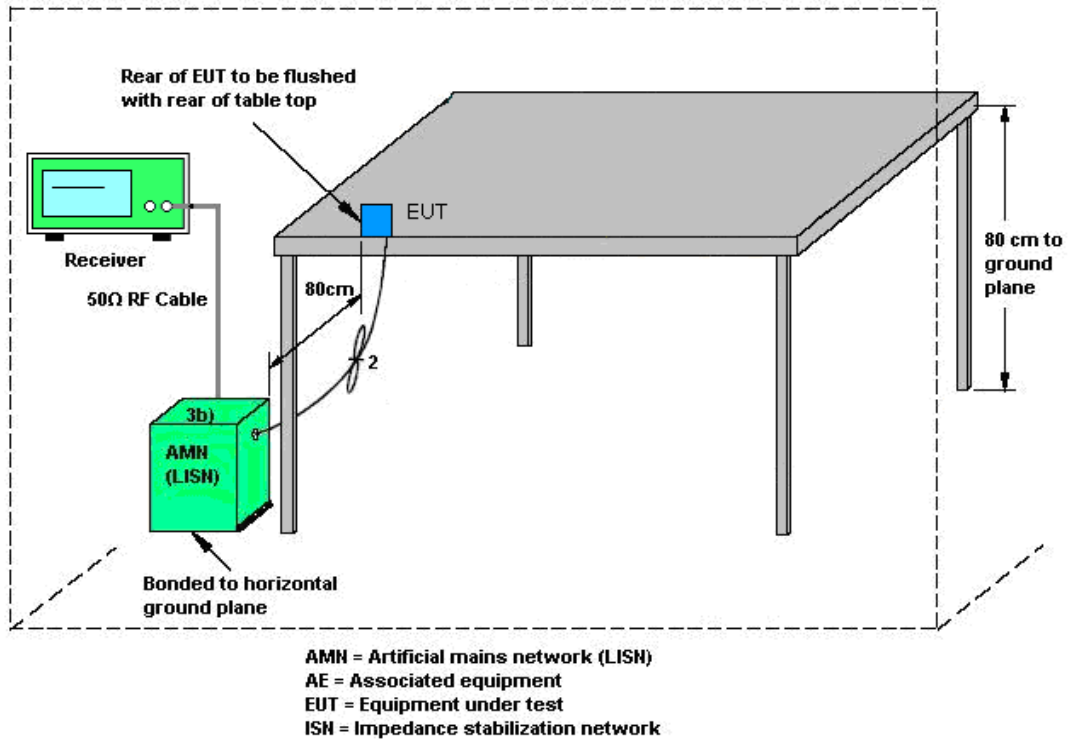
Refer a test equipment and calibration data table in this test report.

##### 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 should 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

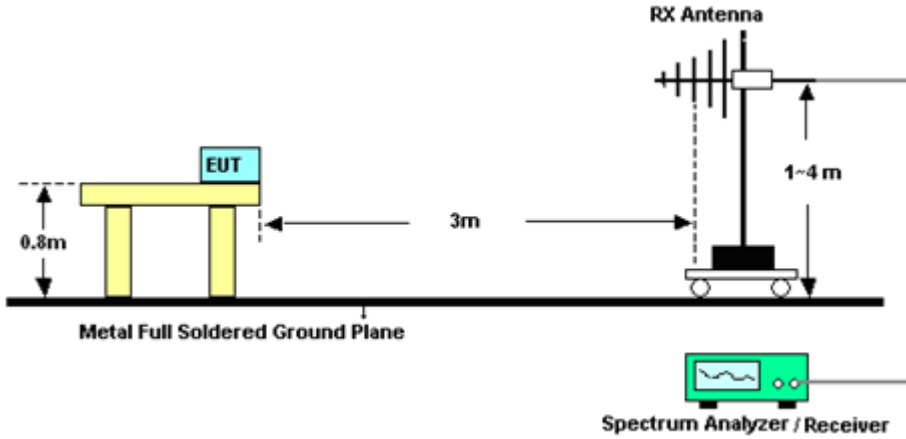
Refer a test equipment and calibration data table in this test report.

#### 3.2.3. Test Procedures

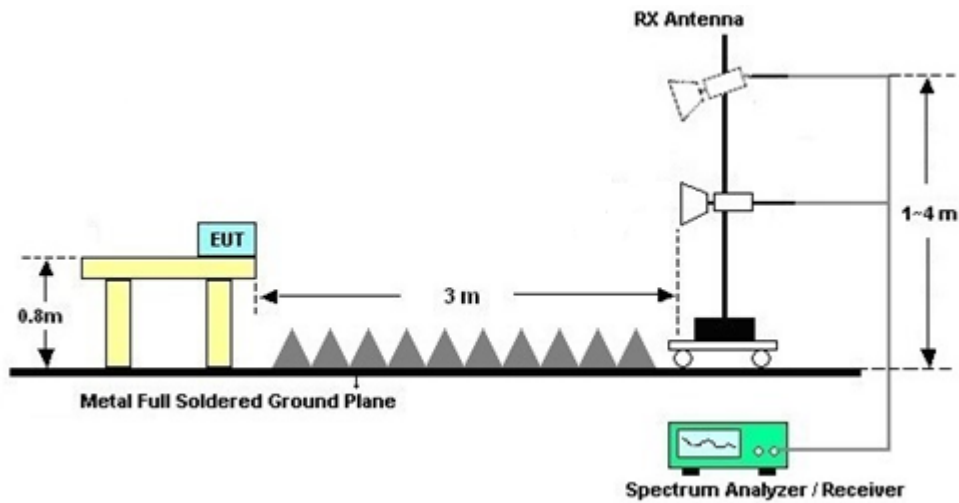
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna 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=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
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	Nov. 11, 2020	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 15, 2019	Nov. 11, 2020	Nov. 14, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 20, 2019	Nov. 11, 2020	Nov. 19, 2020	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Nov. 11, 2020	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 02, 2020	Nov. 11, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 02, 2020	Nov. 11, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 02, 2020	Nov. 11, 2020	Mar. 01, 2021	Conduction (CO05-HY)
Amplifier	SONOMA	310N	187311	9kHz~1GHz	Oct. 21, 2020	Nov. 10, 2020	Oct. 20, 2021	Radiation (03CH10-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	35413 & 02	30MHz~1GHz	Feb. 11, 2020	Nov. 10, 2020	Feb. 10, 2021	Radiation (03CH10-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02114	1GHz~18GHz	Aug. 04, 2020	Nov. 10, 2020	Aug. 03, 2021	Radiation (03CH10-HY)
Preamplifier	Jet-Power	JAP00101800-30-10P	160118550004	1GHz~18GHz	Mar. 02, 2020	Nov. 10, 2020	Mar. 01, 2021	Radiation (03CH10-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz~44GHz	Feb. 10, 2020	Nov. 10, 2020	Feb. 09, 2021	Radiation (03CH10-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Nov. 10, 2020	N/A	Radiation (03CH10-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Nov. 10, 2020	N/A	Radiation (03CH10-HY)
Turn Table	EMEC	TT 2200	N/A	0~360 Degree	N/A	Nov. 10, 2020	N/A	Radiation (03CH10-HY)
Software	Audix	E3 6.2009-8-24	RK-001042	N/A	N/A	Nov. 10, 2020	N/A	Radiation (03CH10-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290045	20MHz~8.4GHz	Jan. 18, 2020	Nov. 10, 2020	Jan. 17, 2021	Radiation (03CH10-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104 / 102	MY11692/4PE, MY11693/4PE, MY2855/2	30MHz~1GHz	Nov. 06, 2020	Nov. 10, 2020	Nov. 05, 2021	Radiation (03CH10-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104 / 102	MY11692/4PE, MY11693/4PE, MY2855/2	1GHz~18GHz	Nov. 06, 2020	Nov. 10, 2020	Nov. 05, 2021	Radiation (03CH10-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
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.7
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### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.1
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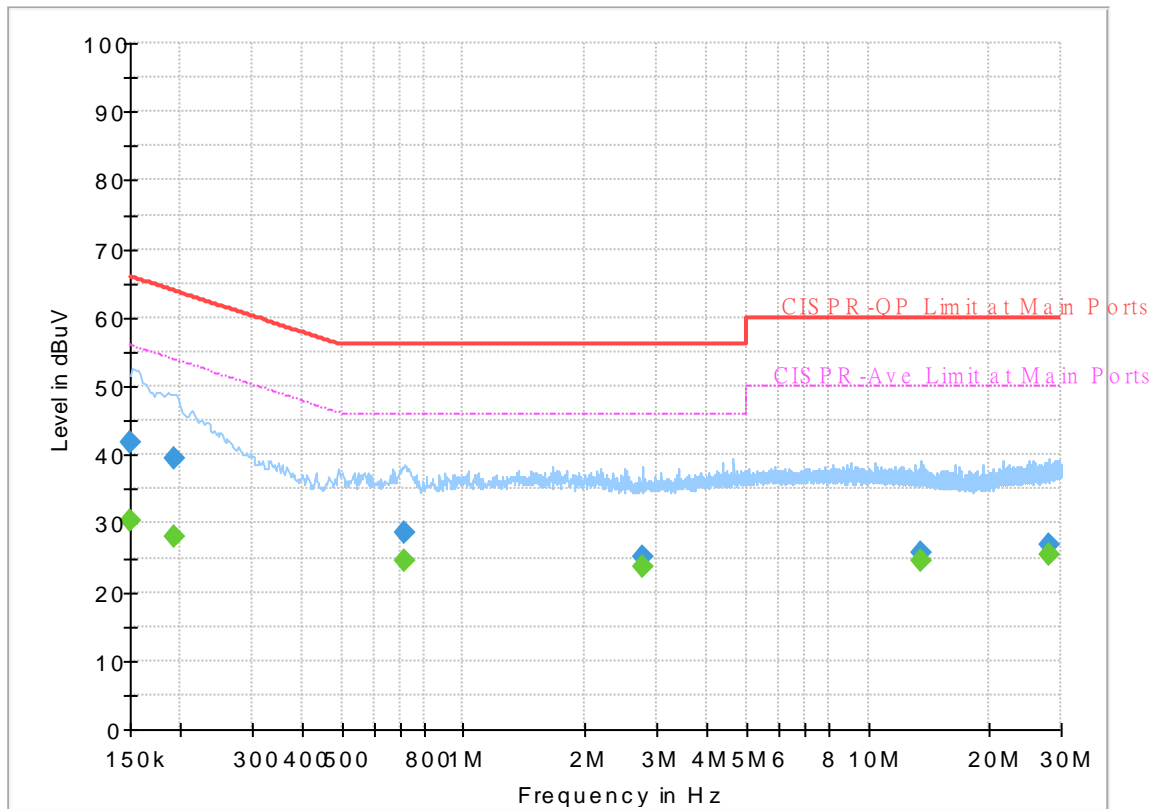
## Appendix A. AC Conducted Emission Test Results

<b>Test Engineer :</b>	Howard Huang, BorShiang Huang	<b>Temperature :</b>	21~24°C
		<b>Relative Humidity :</b>	40~44%

# EUT Information

Report NO : 010711-01  
 Test Mode : Mode 1  
 Test Voltage : 120Vac/60Hz  
 Phase : Line

Full Spectrum



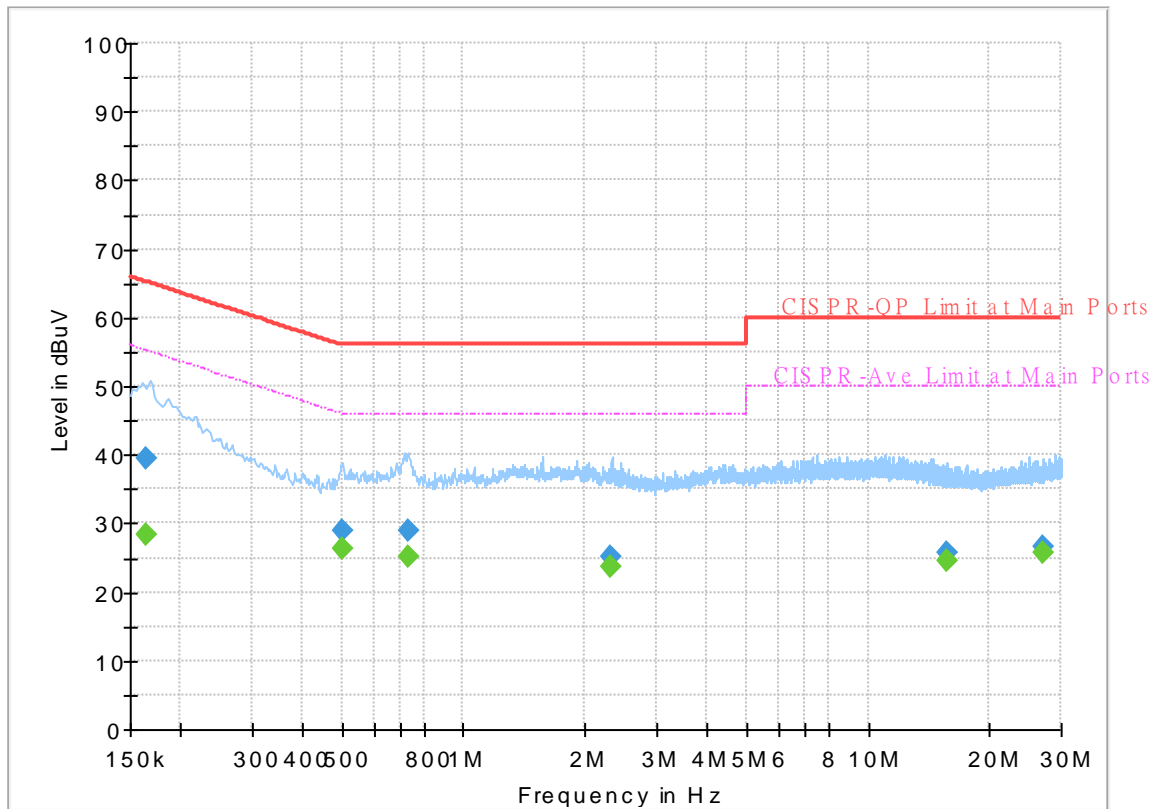
## Final\_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	30.35	56.00	25.65	L1	OFF	19.4
0.150000	41.76	---	66.00	24.24	L1	OFF	19.4
0.191850	---	28.00	53.96	25.96	L1	OFF	19.4
0.191850	39.51	---	63.96	24.45	L1	OFF	19.4
0.716820	---	24.64	46.00	21.36	L1	OFF	19.5
0.716820	28.61	---	56.00	27.39	L1	OFF	19.5
2.760000	---	23.72	46.00	22.28	L1	OFF	19.6
2.760000	25.10	---	56.00	30.90	L1	OFF	19.6
13.562250	---	24.68	50.00	25.32	L1	OFF	20.0
13.562250	25.78	---	60.00	34.22	L1	OFF	20.0
27.899250	---	25.54	50.00	24.46	L1	OFF	20.4
27.899250	26.82	---	60.00	33.18	L1	OFF	20.4

# EUT Information

Report NO : 010711-01  
 Test Mode : Mode 1  
 Test Voltage : 120Vac/60Hz  
 Phase : Neutral

Full Spectrum



## Final\_Result

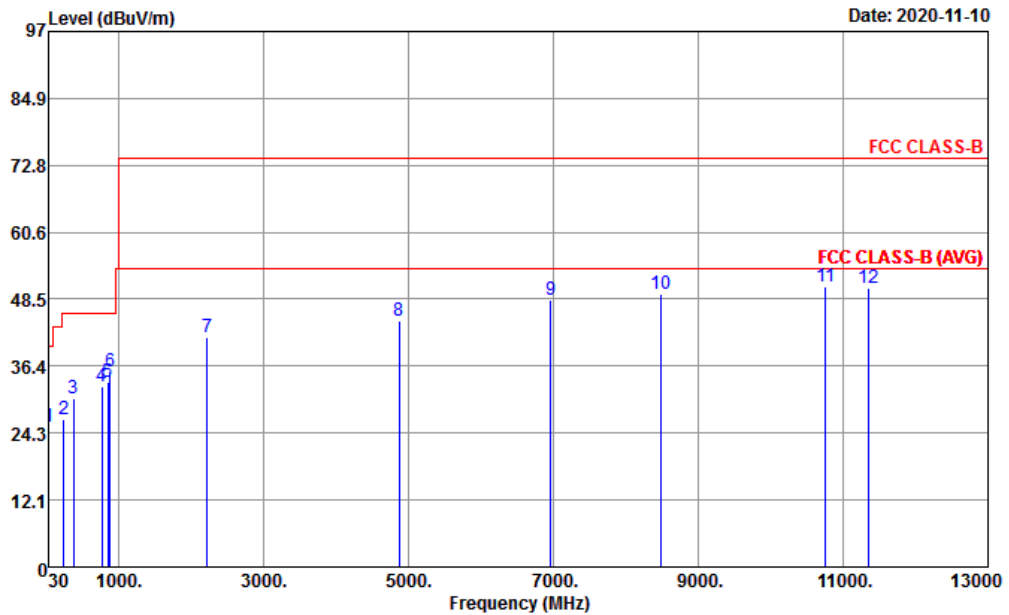
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.164490	---	28.32	55.23	26.91	N	OFF	19.5
0.164490	39.60	---	65.23	25.63	N	OFF	19.5
0.501180	---	26.22	46.00	19.78	N	OFF	19.5
0.501180	28.99	---	56.00	27.01	N	OFF	19.5
0.732030	---	25.21	46.00	20.79	N	OFF	19.5
0.732030	29.03	---	56.00	26.97	N	OFF	19.5
2.323410	---	23.70	46.00	22.30	N	OFF	19.7
2.323410	25.21	---	56.00	30.79	N	OFF	19.7
15.636840	---	24.45	50.00	25.55	N	OFF	20.2
15.636840	25.67	---	60.00	34.33	N	OFF	20.2
27.028500	---	25.66	50.00	24.34	N	OFF	20.6
27.028500	26.73	---	60.00	33.27	N	OFF	20.6





## Appendix B. Radiated Emission Test Result

Test Engineer :	Donny Tang	Temperature :	23~25°C
		Relative Humidity :	60~62%
Test Distance :	3m	Polarization :	Horizontal

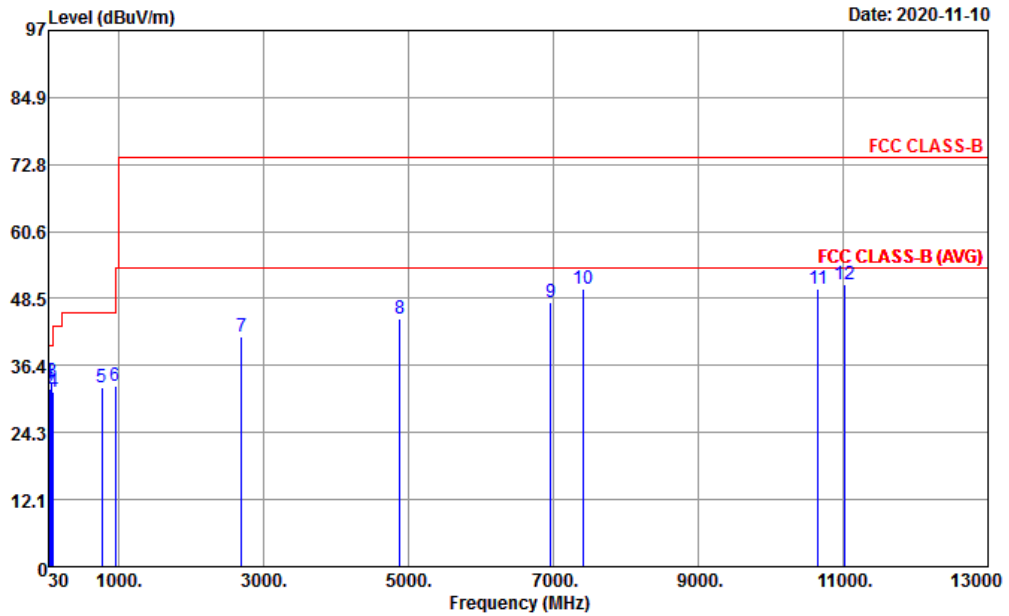


Site : 03CH10-HY  
 Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL  
 Project : 010711-01  
 Power : 120Vac/60Hz  
 Mode : 2

	Freq	Level	Over Limit	Limit	Antenna Line Factor	Read Level	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dB/m	dBuV	dB	dB	cm	deg	
1	32.91	25.32	-14.68	40.00	22.88	34.43	0.65	32.64	---	---	Peak
2	239.52	26.87	-19.13	46.00	17.17	40.44	1.73	32.47	---	---	Peak
3	375.32	30.45	-15.55	46.00	21.01	39.66	2.17	32.39	---	---	Peak
4	768.17	32.73	-13.27	46.00	28.04	33.95	3.13	32.39	---	---	Peak
5	851.59	33.56	-12.44	46.00	29.00	33.33	3.27	32.04	---	---	Peak
6	880.69	35.52	-10.48	46.00	29.00	35.06	3.33	31.87	100	148	Peak
7	2226.00	41.70	-32.30	74.00	27.85	66.13	5.50	57.78	---	---	Peak
8	4874.00	44.56	-29.44	74.00	30.95	63.51	8.59	58.49	---	---	Peak
9	6964.00	48.40	-25.60	74.00	35.06	61.87	11.06	59.59	---	---	Peak
10	8474.00	49.37	-24.63	74.00	36.74	60.99	11.71	60.07	---	---	Peak
11	10754.00	50.91	-23.09	74.00	39.66	57.41	13.32	59.48	100	109	Peak
12	11358.00	50.56	-23.44	74.00	39.52	56.18	13.79	58.93	---	---	Peak



Test Engineer :	Donny Tang	Temperature :	23~25°C
		Relative Humidity :	60~62%
Test Distance :	3m	Polarization :	Vertical



Site : 03CH10-HY  
 Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL  
 Project : 010711-01  
 Power : 120Vac/60Hz  
 Mode : 2

	Freq	Level	Over	Limit	Antenna	Read	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dB/m	dBuV	dB	dB	cm	deg	
1	38.73	33.16	-6.84	40.00	20.09	45.00	0.71	32.64	---	---	Peak
2	45.52	32.13	-7.87	40.00	16.74	47.25	0.77	32.63	---	---	Peak
3	76.56	33.45	-6.55	40.00	13.00	52.07	0.99	32.61	100	155	Peak
4	97.90	31.55	-11.95	43.50	15.82	47.19	1.13	32.59	---	---	Peak
5	768.17	32.41	-13.59	46.00	28.04	33.63	3.13	32.39	---	---	Peak
6	952.47	32.63	-13.37	46.00	30.77	29.58	3.48	31.20	---	---	Peak
7	2698.00	41.51	-32.49	74.00	27.80	65.49	6.12	57.90	---	---	Peak
8	4878.00	44.80	-29.20	74.00	30.94	63.76	8.59	58.49	---	---	Peak
9	6962.00	47.73	-26.27	74.00	35.05	61.21	11.06	59.59	---	---	Peak
10	7420.00	50.21	-23.79	74.00	36.24	61.76	11.69	59.48	---	---	Peak
11	10650.00	50.35	-23.65	74.00	39.50	57.33	13.23	59.71	---	---	Peak
12	11022.00	50.97	-23.03	74.00	39.91	56.48	13.53	58.95	100	103	Peak