

FCC Test Report

APPLICANT	:	Ubiquiti Networks, Inc.
EQUIPMENT	:	airCube loco
BRAND NAME	:	UBIQUITI
MODEL NAME	:	ACB-LOCO
FCC ID	:	SWX-ACBLOCO
STANDARD	:	FCC 47 CFR FCC Part 15 Subpart B
CLASSIFICATION	:	Certification

The product was received on Oct. 06, 2017 and testing was completed on Oct. 12, 2017. We, SPORTON INTERNATIONAL INC., 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., the test report shall not be reproduced except in full.

Louis Wu

Reviewed by: Louis Wu / Manager

Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC. No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.

SPORTON INTERNATIONAL INC. TEL : 886-3-327-3456 FAX : 886-3-328-4978 FCC ID : SWX-ACBLOCO Page Number: 1 of 18Report Issued Date: Nov. 22, 2017Report Version: Rev. 01Report Template No.: BU5-FD15B Version 2.0



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APPENDIX A. SETUP PHOTOGRAPHS



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC741927-02	Rev. 01	Initial issue of report	Nov. 22, 2017



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	Under limit
5.1	13.107	Ao oonadelea Emission		1 400	8.90 dB at 0.518 MHz
3.2	15 100	Detlicted Entropy AF 400 limits DAG		PASS	Under limit
3.2	15.109	Radiated Emission	< 15.109 limits	PA33	7.21 dB at 30.000 MHz



1. General Description

1.1. Applicant

Ubiquiti Networks, Inc.

685 Third Avenue, 27th Floor New York, New York 10017 USA

1.2. Manufacturer

Ubiquiti Networks, Inc.

685 Third Avenue, 27th Floor New York, New York 10017 USA

1.3. Product Feature of Equipment Under Test

Wi-Fi 2.4GHz 802.11b/g/n

Product Specification subjective to this standard					
Antenna Type	WLAN: Internal Antenna				

1.4. Modification of EUT

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

1.5. Test Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1093 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.					
	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park,					
Test Site Location	Kwei-Shan District, Tao Yuan City, Ta	iwan, R.O.C.				
Test Site Location	TEL: +886-3-327-3456					
	FAX: +886-3-328-4978					
Test Cite No	Sporton	Sporton Site No.				
Test Site No.	CO05-HY	03CH06-HY				



1.6. 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
- ANSI C63.4-2014

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





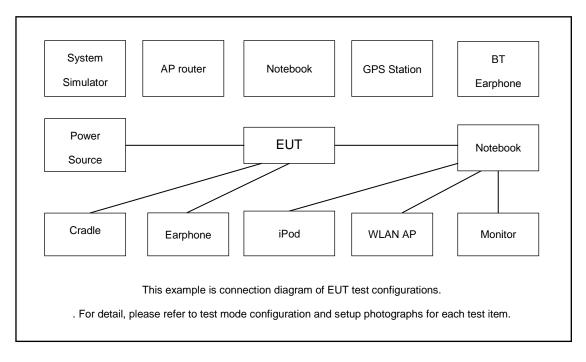
2. Test Configuration of Equipment Under Test

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
AC Conducted Emission	Mode 1: WLAN Idle + WAN Link + LAN Link + Adapter
Radiated Emissions	Mode 1: WLAN Idle + WAN Link + LAN Link + Adapter

2.2. Connection Diagram of Test System





ltem	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	LCD MONITOR	Dell	P2715Qt	FCC DoC	Shielded, 1.6m	Unshielded, 1.8 m
2.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
3.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Notebook	DELL	Latitude E3340	FCC DoC/ Contains FCC ID: PD97260NGU	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	Adapter	HUAWEI	HW-059200UHQ	N/A	N/A	N/A
6.	НИВ	D-Link	DES-1005A	FCC DoC	N/A	Unshielded, 1.4m
7.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded,1.8m
8.	Smart phone	Apple	A1529	BCG-E2694A	N/A	N/A

2.4. EUT Operation Test Setup

At the same time, the EUT was attached to the Smart phone or WLAN AP, and EUT links with Notebook and execute ping via RJ-45.



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.

Frequency of emission	Conducted limit (dBuV)				
(MHz)	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

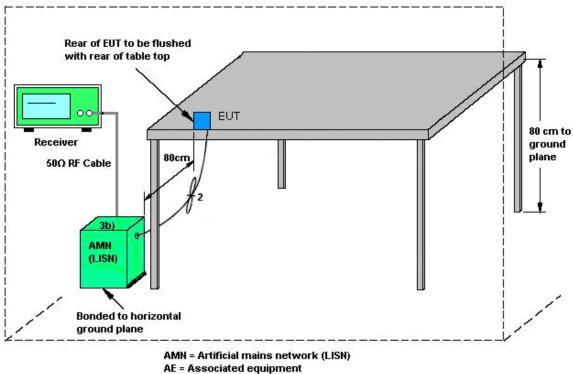
The measuring equipment is listed in the section 4 of this test report.

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.
- 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



EUT = Equipment under test

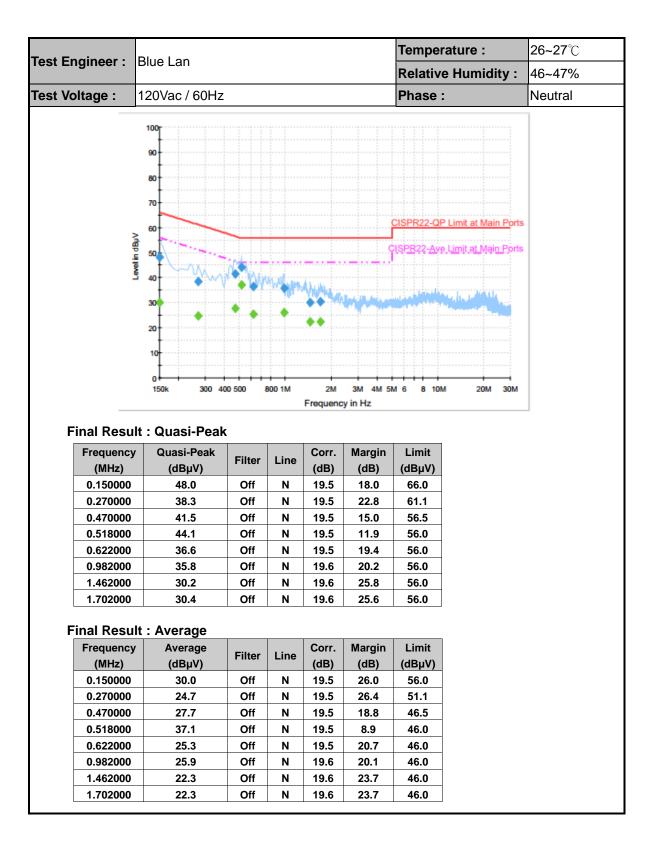
ISN = Impedance stabilization network



of Engineer	П.	uolon					Temper	rature :	26~27 ℃
est Engineer : Blue Lan							Relative Humidity :		46~47%
est Voltage :	Voltage : 120Vac / 60Hz							Phase :	
	Level in dByV	00 50 50 50 50 50 50 50 50 50 50 50 50 5					ISPB22-OP	Limit at Main Ports	
		0 150k 300 40							
		150k 300 40	0 500 1	800 1M	2M Frequenc	3M 4M 5M sy in Hz	M 6 8 10M	I 20M 30M	
Final Res	Final Result : Quasi-Peak								
	Frequency Quasi-Peak Corr. Margin Limit								
Frequen				Line	Corr.	Margin	Limit		
(MHz)	су	Quasi-Peak (dBµV)	Filter	Line	(dB)	(dB)	(dBµV)		
(MHz) 0.15000	cy 0	Quasi-Peak (dBµV) 43.9	Filter Off	L1	(dB) 19.6	(dB) 22.1	(dBµV) 66.0		
(MHz) 0.15000 0.47000	cy 0 0	Quasi-Peak (dBµV) 43.9 46.9	Filter Off Off	L1 L1	(dB) 19.6 19.6	(dB) 22.1 9.6	(dBµV) 66.0 56.5		
(MHz) 0.15000 0.47000 0.51000	cy 0 0 0	Quasi-Peak (dBµV) 43.9 46.9 45.8	Filter Off Off Off	L1 L1 L1	(dB) 19.6 19.6 19.6	(dB) 22.1 9.6 10.2	(dBµV) 66.0 56.5 56.0		
(MHz) 0.15000 0.47000 0.51000 0.62200	Cy 0 0 0 0	Quasi-Peak (dBµV) 43.9 46.9 45.8 40.0	Filter Off Off Off Off	L1 L1 L1 L1	(dB) 19.6 19.6 19.6 19.6	(dB) 22.1 9.6 10.2 16.0	(dBµV) 66.0 56.5 56.0 56.0		
(MHz) 0.15000 0.47000 0.51000 0.62200 0.73400	Cy 0 0 0 0 0	Quasi-Peak (dBµV) 43.9 46.9 45.8 40.0 36.7	Filter Off Off Off Off Off	L1 L1 L1 L1 L1 L1	(dB) 19.6 19.6 19.6 19.6 19.6	(dB) 22.1 9.6 10.2 16.0 19.3	(dBµV) 66.0 56.5 56.0 56.0 56.0		
(MHz) 0.15000 0.47000 0.51000 0.62200 0.73400 0.98200	Cy 0 0 0 0 0 0 0	Quasi-Peak (dBµV) 43.9 46.9 45.8 40.0 36.7 41.3	Filter Off Off Off Off Off Off	L1 L1 L1 L1 L1 L1 L1	(dB) 19.6 19.6 19.6 19.6 19.6 19.6	(dB) 22.1 9.6 10.2 16.0 19.3 14.7	(dBµV) 66.0 56.5 56.0 56.0 56.0 56.0		
(MHz) 0.15000 0.47000 0.51000 0.62200 0.73400 0.98200 1.37400	Cy 0 0 0 0 0 0 0 0 0 0	Quasi-Peak (dBµV) 43.9 46.9 45.8 40.0 36.7 41.3 35.4	Filter Off Off Off Off Off Off Off	L1 L1 L1 L1 L1 L1 L1 L1	(dB) 19.6 19.6 19.6 19.6 19.6 19.6 19.6	(dB) 22.1 9.6 10.2 16.0 19.3 14.7 20.6	(dBµV) 66.0 56.5 56.0 56.0 56.0 56.0 56.0		
(MHz) 0.15000 0.47000 0.51000 0.62200 0.73400 0.98200 1.37400 1.60600	Cy 0 0 0 0 0 0 0 0 0 0	Quasi-Peak (dBµV) 43.9 46.9 45.8 40.0 36.7 41.3 35.4 31.1	Filter Off Off Off Off Off Off	L1 L1 L1 L1 L1 L1 L1	(dB) 19.6 19.6 19.6 19.6 19.6 19.6	(dB) 22.1 9.6 10.2 16.0 19.3 14.7	(dBµV) 66.0 56.5 56.0 56.0 56.0 56.0		
(MHz) 0.15000 0.47000 0.51000 0.62200 0.73400 0.98200 1.37400	Cy 0 0 0 0 0 0 0 0 0 0	Quasi-Peak (dBµV) 43.9 46.9 45.8 40.0 36.7 41.3 35.4 31.1	Filter Off Off Off Off Off Off Off	L1 L1 L1 L1 L1 L1 L1 L1	(dB) 19.6 19.6 19.6 19.6 19.6 19.6 19.6	(dB) 22.1 9.6 10.2 16.0 19.3 14.7 20.6	(dBµV) 66.0 56.5 56.0 56.0 56.0 56.0 56.0 56.0		
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(MHz) 0.15000 0.47000 0.51000 0.62200 0.73400 0.98200 1.37400 1.60600 Final Res	Cy 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Quasi-Peak (dBµV) 43.9 46.9 45.8 40.0 36.7 41.3 35.4 31.1 Average Average (dBµV) 30.6	Filter Off Off Off Off Off Off Off	L1 L1 L1 L1 L1 L1 L1 L1	(dB) 19.6 19.6 19.6 19.6 19.6 19.6 19.6 19.6	(dB) 22.1 9.6 10.2 16.0 19.3 14.7 20.6 24.9 Margin (dB) 25.4	(dBµV) 66.0 56.5 56.0 56.0 56.0 56.0 56.0 56.0		
(MHz) 0.15000 0.47000 0.51000 0.62200 0.73400 0.98200 1.37400 1.60600 Final Res Frequent (MHz)	cy 0	Quasi-Peak (dBµV) 43.9 46.9 45.8 40.0 36.7 41.3 35.4 31.1 Average Average (dBµV)	Filter Off Off Off Off Off Off Off Filter	L1 L1 L1 L1 L1 L1 L1 L1 L1	(dB) 19.6 19.6 19.6 19.6 19.6 19.6 19.6 19.6	(dB) 22.1 9.6 10.2 16.0 19.3 14.7 20.6 24.9 Margin (dB)	(dBµV) 66.0 56.5 56.0 56.0 56.0 56.0 56.0 56.0		
(MHz) 0.15000 0.47000 0.51000 0.62200 0.73400 1.37400 1.60600 Final Res Frequent (MHz) 0.15000	cy 0	Quasi-Peak (dBµV) 43.9 46.9 45.8 40.0 36.7 41.3 35.4 31.1 Average Average (dBµV) 30.6	Filter Off Off Off Off Off Off Off Off Filter	L1 L1 L1 L1 L1 L1 L1 L1 L1 L1 L1 L1 L1	(dB) 19.6 19.6 19.6 19.6 19.6 19.6 19.6 19.6	(dB) 22.1 9.6 10.2 16.0 19.3 14.7 20.6 24.9 Margin (dB) 25.4	(dBµV) 66.0 56.5 56.0 56.0 56.0 56.0 56.0 56.0		
(MHz) 0.15000 0.47000 0.51000 0.62200 0.73400 1.37400 1.60600 Final Res Frequent (MHz) 0.15000 0.47000	cy 0	Quasi-Peak (dBµV) 43.9 46.9 45.8 40.0 36.7 41.3 35.4 31.1 Average (dBµV) 30.6 33.4	Filter Off Off Off Off Off Off Off Filter	L1 L1 L1 L1 L1 L1 L1 L1 L1 L1 L1 L1	(dB) 19.6 19.6 19.6 19.6 19.6 19.6 19.6 19.6	(dB) 22.1 9.6 10.2 16.0 19.3 14.7 20.6 24.9 Margin (dB) 25.4 13.1	(dBµV) 66.0 56.5 56.0 56.0 56.0 56.0 56.0 56.0		
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(MHz) 0.15000 0.47000 0.51000 0.62200 0.73400 1.37400 1.60600 Final Res Frequent (MHz) 0.15000 0.47000 0.51000 0.51000	cy 0	Quasi-Peak (dBµV) 43.9 46.9 45.8 40.0 36.7 41.3 35.4 31.1 Average (dBµV) 30.6 33.4 35.1 29.2 27.0	Filter Off Off Off Off Off Off Off Filter Off Off Off Off Off	L1 L1 L1 L1 L1 L1 L1 L1 L1 L1 L1 L1 L1 L	(dB) 19.6 19.6 19.6 19.6 19.6 19.6 19.6 19.6	(dB) 22.1 9.6 10.2 16.0 19.3 14.7 20.6 24.9 Margin (dB) 25.4 13.1 10.9 16.8 19.0	(dBµV) 66.0 56.5 56.0 56.0 56.0 56.0 56.0 56.0		

3.1.5 Test Result of AC Conducted Emission







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:

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

3.2.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

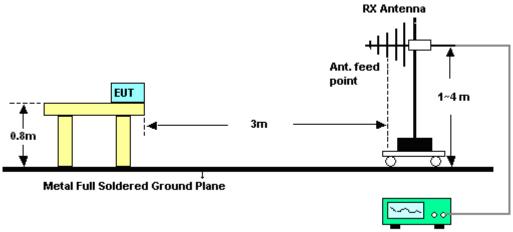
3.2.3. Test Procedures

- 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.
- 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 (dB μ V/m) = 20 log Emission level (μ V/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level



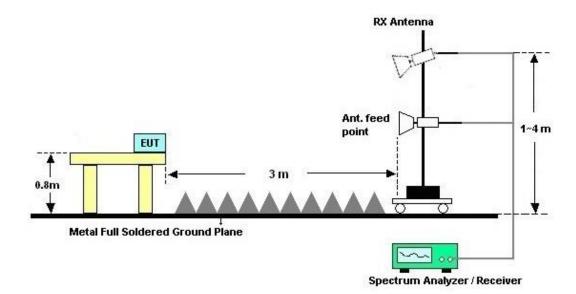
3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



Spectrum Analyzer / Receiver

For radiated emissions above 1GHz







	Derror	Tan			Temp	erature	:	23~2	25°C		
est Engineer :	Donny Tang				Relative Humidity : Polarization :			: 50~!	50~52% Horizontal		
est Distance :	3m							Hori			
Le le	evel (dBuV/m)									Date: 20	17-10-12
97		, 									
84.9											
										FCC C	LASS-B
72.8											-6dB
60.6											D (1) (2)
										C CLASS-	
48.5						9		10	1	112	<u>-6dB</u>
۲- <u>۱</u>			_	8		9		Ĩ			
36.4	56		7	_							
2	3 4 1										
24.3											
27.0											
40.1											
12.1											
0 <mark>0</mark> 30)	2624		52	18.		7812.	[]	10406.		13000
									10400.		10000
					Freque	ncy (MHz)			10400.		10000
Site		03CH06	5-Н У		Freque				10400.		13000
	:			m 9120D		ncy (MHz)		NTAL	10400.		13000
Site	: ion : t :	FCC CL/ 741927	455-B 3 -02			ncy (MHz)		NTAL	10400.		10000
Site Condit Projec Power	: ion : t :	FCC CL/ 741927 120Vac/	455-B 3 -02			ncy (MHz)		NTAL	10400.		10000
Site Condit Projec	: ion : t :	FCC CL/ 741927	455-B 3 -02 /60Hz	m 9120D	_1156_1	ncy (MHz) .70915 ŀ	IORIZO				
Site Condit Projec Power	: ion : t : :	FCC CL/ 741927 120Vac, Mode 1	455-B3 -02 /60Hz Over	m 9120D Limit	_1156_1 ReadA	ncy (MHz) 70915 ŀ Intenna	fORIZC Cable	Preamp		T/Pos	
Site Condit Projec Power	: ion : t : :	FCC CL/ 741927 120Vac, Mode 1	455-B3 -02 /60Hz Over	m 9120D	_1156_1 ReadA	ncy (MHz) 70915 ŀ Intenna	fORIZC Cable	Preamp		T/Pos	
Site Condit Projec Power	ion : t : Freq	FCC CL/ 741927 120Vac, Mode 1 Level	455-B3 -02 /60Hz Over Limit	m 9120D Limit Line	_1156_1 ReadA Leve1	ncy (MHz) 70915 F Intenna Factor	ORIZO Cable Loss	Preamp	A/Pos		Remark
Site Condit Projec Power	ion : t : Freq	FCC CL/ 741927 120Vac, Mode 1	455-B3 -02 /60Hz Over Limit	m 9120D Limit	_1156_1 ReadA	ncy (MHz) 70915 ŀ Intenna	fORIZC Cable	Preamp Factor		T/Pos deg	Remark
Site Condit Projec Power	ion : t : Freq	FCC CLA 741927 120Vac, Mode 1 Level dBuV/m	ASS-B3 -02 /60Hz Over Limit 	m 9120D Limit Line dBuV/m	_1156_1 ReadA Leve1	ncy (MHz) 70915 F ntenna Factor dB/m	HORIZC Cable Loss dB 1.90	Preamp Factor 	A/Pos	deg	Remark
Site Condit Projec Power Memo 1 2	ion : t : Freq MHz 30.00 105.60	FCC CLA 741927 120Vac, Mode 1 Level dBuV/m 21.84 29.54	ASS-B 3 -O2 /60Hz Over Limit 	m 9120D Limit Line dBuV/m 40.00 43.50	_1156_1 Read/ Level dBuV 27.48 42.72	ncy (MHz) 70915 F Intenna Factor dB/m 24.30 16.61	ORIZC Cable Loss dB 1.90 2.02	Preamp Factor dB 31.84 31.81	A/Pos 	deg	Remark Peak Peak
Site Condit Projec Power Memo 1 2 3	ion : t : Freq MHz 30.00 105.60 246.00	FCC CL/ 741927 120Vac/ Mode 1 Level dBuV/m 21.84 29.54 31.30	ASS-B 3 -02 /60Hz Over Limit -18.16 -13.96 -14.70	m 9120D Limit Line dBuV/m 40.00 43.50 46.00		ncy (MHz) 70915 F untenna Factor dB/m 24.30 16.61 18.11	Cable Loss dB 1.90 2.02 2.19	Preamp Factor dB 31.84 31.81 31.76	A/Pos 	deg	Remark Peak Peak Peak Peak
Site Condit Projec Power Memo 1 2 3 4	ion : t : Freq MHz 30.00 105.60 246.00 564.60	FCC CLA 741927 120Vac, Mode 1 Level dBuV/m 21.84 29.54 31.30 31.87	ASS-B 3 -O2 /60Hz Uver Limit -18.16 -13.96 -14.70 -14.13	m 9120D Limit Line dBuV/m 40.00 43.50 46.00 46.00		ncy (MHz) 70915 F untenna Factor dB/m 24.30 16.61 18.11 26.10	Cable Loss dB 1.90 2.02 2.19 3.16	Preamp Factor dB 31.84 31.81 31.76 32.00	A/Pos 	deg 	Remark Peak Peak Peak Peak Peak
Site Condit Projec Power Memo 1 2 3 4 5	ion : t : Freq MHz 30.00 105.60 246.00 564.60 742.40	FCC CLA 741927 120Vac, Mode 1 Level dBuV/m 21.84 29.54 31.30 31.87 34.41	ASS-B 3 -O2 /60Hz Uver Limit -18.16 -13.96 -14.70 -14.13 -11.59	m 9120D Limit Line dBuV/m 40.00 43.50 46.00 46.00 46.00		ncy (MHz) 70915 F antenna Factor dB/m 24.30 16.61 18.11 26.10 28.26	Cable Loss dB 1.90 2.02 2.19 3.16 3.41	Preamp Factor dB 31.84 31.81 31.76 32.00 32.06	A/Pos 	deg 159	Remark Peak Peak Peak Peak Peak Peak
Site Condit Projec Power Memo 1 2 3 4 5 6	ion : t : Freq MHz 30.00 105.60 246.00 564.60 742.40 874.70	FCC CL/ 741927 120Vac, Mode 1 Level dBuV/m 21.84 29.54 31.30 31.87 34.41 34.36	ASS-B 3 -02 /60Hz Uver Limit -18.16 -13.96 -14.70 -14.13 -11.59 -11.64	m 9120D Limit Line dBuV/m 40.00 43.50 46.00 46.00 46.00 46.00		ncy (MHz) 70915 F ntenna Factor dB/m 24.30 16.61 18.11 26.10 28.26 29.25	Cable Loss dB 1.90 2.02 2.19 3.16 3.41 3.35	Preamp Factor dB 31.84 31.81 31.76 32.00 32.06 31.66	A/Pos 	deg 159 	Remark Peak Peak Peak Peak Peak Peak Peak
Site Condit Projec Power Memo 1 2 3 4 5 6 7	ion : t : Freq MHz 30.00 105.60 246.00 564.60 742.40 874.70 2992.00	FCC CL/ 741927 120Vac, Mode 1 Level dBuV/m 21.84 29.54 31.30 31.87 34.41 34.36 36.64	ASS-B 3 -02 /60Hz Uver Limit -18.16 -13.96 -14.70 -14.13 -11.59 -11.64 -37.36	m 9120D Limit Line dBuV/m 40.00 43.50 46.00 46.00 46.00 46.00 74.00		ncy (MHz) 70915 F ntenna Factor dB/m 24.30 16.61 18.11 26.10 28.26 29.25 28.69	Cable Loss dB 1.90 2.02 2.19 3.16 3.41 3.35 7.91	Preamp Factor dB 31.84 31.81 31.76 32.00 32.06 31.66 61.29	A/Pos 	deg 159 	Remark Peak Peak Peak Peak Peak Peak Peak Pea
Site Condit Projec Power Memo 1 2 3 4 5 6 7 8	ion : t : Freq MHz 30.00 105.60 246.00 564.60 742.40 874.70 2992.00 4440.00	FCC CL/ 741927 120Vac, Mode 1 Level dBuV/m 21.84 29.54 31.30 31.87 34.41 34.36 36.64 39.36	ASS-B 3 -02 /60Hz Uver Limit -18.16 -13.96 -14.70 -14.13 -11.59 -11.64 -37.36 -34.64	m 9120D Limit Line dBuV/m 40.00 43.50 46.00 46.00 46.00 46.00 74.00 74.00		ncy (MHz) 70915 F ntenna Factor dB/m 24.30 16.61 18.11 26.10 28.26 29.25 28.69 30.43	Cable Loss dB 1.90 2.02 2.19 3.16 3.41 3.35 7.91 9.79	Preamp Factor dB 31.84 31.81 31.76 32.00 32.06 31.66 61.29 60.52	A/Pos 	deg 159 	Remark Peak Peak Peak Peak Peak Peak Peak Pea
Site Condit Projec Power Memo 1 2 3 4 5 6 7	ion : t : Freq MHz 30.00 105.60 246.00 564.60 742.40 874.70 2992.00 4440.00 6782.00	FCC CL/ 741927 120Vac, Mode 1 Level dBuV/m 21.84 29.54 31.30 31.87 34.41 34.36 36.64 39.36 43.25	ASS-B 3 -02 /60Hz Uver Limit -18.16 -13.96 -14.70 -14.13 -11.59 -11.64 -37.36 -34.64 -30.75	m 9120D Limit Line dBuV/m 40.00 43.50 46.00 46.00 46.00 46.00 74.00 74.00 74.00		rtenna Factor dB/m 24.30 16.61 18.11 26.10 28.26 29.25 28.69 30.43 34.91	Cable Loss dB 1.90 2.02 2.19 3.16 3.41 3.35 7.91 9.79 12.51	Preamp Factor dB 31.84 31.81 31.76 32.00 32.06 31.66 61.29 60.52 59.29	A/Pos 	deg	Remark Peak Peak Peak Peak Peak Peak Peak Pea
Site Condit Projec Power Memo 1 2 3 4 5 6 7 8 9	ion : t : Freq MHz 30.00 105.60 246.00 564.60 742.40 874.70 2992.00 4440.00	FCC CL/ 741927 120Vac, Mode 1 Level dBuV/m 21.84 29.54 31.30 31.87 34.41 34.36 36.64 39.36 43.25 44.30	ASS-B 3 -02 /60Hz 0ver Limit -18.16 -13.96 -14.70 -14.13 -11.59 -11.64 -37.36 -34.64 -30.75 -29.70	m 9120D Limit Line dBuV/m 40.00 43.50 46.00 46.00 46.00 46.00 74.00 74.00 74.00 74.00		rtenna Factor dB/m 24.30 16.61 18.11 26.10 28.26 29.25 28.69 30.43 34.91 36.91	Cable Loss dB 1.90 2.02 2.19 3.16 3.41 3.35 7.91 9.79 12.51 14.79	Preamp Factor dB 31.84 31.81 31.76 32.00 32.06 31.66 61.29 60.52 59.29 58.37	A/Pos cm 100 	deg	Remark Peak Peak Peak Peak Peak Peak Peak Pea

3.2.5. Test Result of Radiated Emission



4 F u almaar	Dames	Tan			Temp	erature	:	23~2	25°C		
st Engineer :	Donny Tang				Relative Humidity : Polarization :			: 50~!	50~52% Vertical		
st Distance :	3m							Vert			
07Le	evel (dBuV/m))								Date: 201	17-10-12
51											
84.9											
0 110											
72.8										FCC C	LASS-B
12.0											-6dB
60.6											
00.0									FCO	CLASS-	B (AVG)
10.5									11	12	-6dB
48.5			7			9		10		1	
ſ				8							
36.4	456			_			_				
24.3				_							
12.1											
0 <mark></mark> 030											
30		2624	•	52	18. Freque	ncy (MHz)	7812.		10406.		13000
Site		03CH06	5-HV		-						
JULE		USCINO	<i>J-117</i>								
Condit	ion :		455-R 3	m 9120D	1156	170915		AJ			
Condit Projec		FCC CL		m 9120D	_1156_	170915 V	ERTIC/	AL.			
Projec	t :	FCC CL/ 741927	-02	m 9120D	_1156_	170915 V	ERTICA	AL			
	t :	FCC CL	-02	m 9120D	_1156_	170915 V	ERTICA	AL			
Projec Power	t :	FCC CL/ 741927 120Vac	-02 /60Hz	m 9120D Limit				AL Preamp	A/Pos	T/Pos	
Projec Power	t : :	FCC CL/ 741927 120Vac	-02 /60Hz 0ver	Limit	Read		Cable		A/Pos	T/Pos	Remark
Projec Power	t : : : Freq	FCC CL/ 741927 120Vac, Mode 1 Level	-02 /60Hz Over Limit	Limit Line	Read/ Level	Antenna Factor	Cable Loss	Preamp Factor			Remark
Projec Power	t : : : Freq	FCC CL/ 741927 120Vac Mode 1	-02 /60Hz Over Limit	Limit	Read	Antenna	Cable	Preamp	A/Pos cm	T/Pos 	Remark
Projec Power	t : : Freq MHz	FCC CL/ 741927 120Vac Mode 1 Level dBuV/m	-02 /60Hz Over Limit 	Limit Line	Read/ Level dBuV	Antenna Factor	Cable Loss dB	Preamp Factor		deg	Remark
Projec Power Memo 1 2	t : Freq MHz 30.00 35.40	FCC CL/ 741927 120Vac Mode 1 Level dBuV/m 32.79 30.39	-02 /60Hz Uver Limit dB -7.21 -9.61	Limit Line dBuV/m 40.00 40.00	Read/ Level dBuV 38.43 39.16	Antenna Factor dB/m 24.30 21.15	Cable Loss dB 1.90 1.92	Preamp Factor dB 31.84 31.84	 	deg 121	Remark
Projec Power Memo 1 2 3	t : Freq MHz 30.00 35.40 157.71	FCC CL/ 741927 120Vac Mode 1 Level dBuV/m 32.79 30.39 32.22	-02 /60Hz Over Limit 	Limit Line dBuV/m 40.00 40.00 43.50	Read/ Level dBuV 38.43 39.16 45.48	Antenna Factor dB/m 24.30 21.15 16.40	Cable Loss dB 1.90 1.92 2.13	Preamp Factor dB 31.84 31.84 31.79	cm 100 	deg 121 	Remark Peak Peak Peak Peak
Projec Power Memo 1 2 3 4	t : Freq MHz 30.00 35.40 157.71 620.60	FCC CL/ 741927 120Vac Mode 1 Level dBuV/m 32.79 30.39 32.22 35.02	-02 /60Hz Limit -7.21 -9.61 -11.28 -10.98	Limit Line dBuV/m 40.00 40.00 43.50 46.00	Read/ Level dBuV 38.43 39.16 45.48 37.46	Antenna Factor dB/m 24.30 21.15 16.40 26.44	Cable Loss dB 1.90 1.92 2.13 3.18	Preamp Factor dB 31.84 31.84 31.79 32.06	cm 100 	deg 121 	Remark Peak Peak Peak Peak
Projec Power Memo 1 2 3 4 5	t : Freq MHz 30.00 35.40 157.71 620.60 742.40	FCC CLA 741927 120Vac Mode 1 Level dBuV/m 32.79 30.39 32.22 35.02 34.34	-02 /60Hz Uver Limit -7.21 -9.61 -11.28 -10.98 -11.66	Limit Line dBuV/m 40.00 40.00 43.50 46.00	Read/ Level dBuV 38.43 39.16 45.48 37.46 34.73	Antenna Factor dB/m 24.30 21.15 16.40 26.44 28.26	Cable Loss dB 1.90 1.92 2.13 3.18 3.41	Preamp Factor dB 31.84 31.84 31.79 32.06 32.06	cm 100 	deg 121 	Remark Peak Peak Peak Peak Peak
Projec Power Memo 1 2 3 4 5 6	t : Freq MHz 30.00 35.40 157.71 620.60 742.40 931.40	FCC CLA 741927 120Vac Mode 1 Level dBuV/m 32.79 30.39 32.22 35.02 34.34 33.31	-02 /60Hz Uver Limit -7.21 -9.61 -11.28 -10.98 -11.66 -12.69	Limit Line dBuV/m 40.00 40.00 43.50 46.00 46.00	Read/ Level dBuV 38.43 39.16 45.48 37.46 34.73 30.90	Antenna Factor dB/m 24.30 21.15 16.40 26.44 28.26 30.51	Cable Loss dB 1.90 1.92 2.13 3.18 3.41 3.18	Preamp Factor dB 31.84 31.84 31.79 32.06 32.06 31.28	cm 100 	deg 121 	Remark Peak Peak Peak Peak Peak Peak
Projec Power Memo 1 2 3 4 5 6 7	t : Freq MHz 30.00 35.40 157.71 620.60 742.40 931.40 3000.00	FCC CLA 741927 120Vac Mode 1 Level dBuV/m 32.79 30.39 32.22 35.02 34.34 33.31 43.50	-02 /60Hz Uver Limit -7.21 -9.61 -11.28 -10.98 -11.66 -12.69 -30.50	Limit Line dBuV/m 40.00 40.00 43.50 46.00 46.00 74.00	Read/ Level dBuV 38.43 39.16 45.48 37.46 34.73 30.90 68.15	Antenna Factor dB/m 24.30 21.15 16.40 26.44 28.26 30.51 28.74	Cable Loss dB 1.90 1.92 2.13 3.18 3.41 3.18 7.91	Preamp Factor dB 31.84 31.84 31.79 32.06 32.06 31.28 61.30	cm 100 	deg 121 	Remark Peak Peak Peak Peak Peak Peak Peak
Projec Power Memo 1 2 3 4 5 6	t : Freq MHz 30.00 35.40 157.71 620.60 742.40 931.40	FCC CL/ 741927 120Vac Mode 1 Level dBuV/m 32.79 30.39 32.22 35.02 34.34 33.31 43.50 39.21	-02 /60Hz Uver Limit -7.21 -9.61 -11.28 -10.98 -11.66 -12.69 -30.50 -34.79	Limit Line dBuV/m 40.00 40.00 43.50 46.00 46.00 74.00 74.00	Read/ Level dBuV 38.43 39.16 45.48 37.46 34.73 30.90 68.15 59.74	Antenna Factor dB/m 24.30 21.15 16.40 26.44 28.26 30.51 28.74 30.38	Cable Loss dB 1.90 1.92 2.13 3.18 3.41 3.18 7.91 9.73	Preamp Factor dB 31.84 31.84 31.79 32.06 32.06 31.28 61.30 60.64	cm 100 	deg 121 	Remark Peak Peak Peak Peak Peak Peak
Projec Power Memo 1 2 3 4 5 6 7 8	t : Freq MHz 30.00 35.40 157.71 620.60 742.40 931.40 3000.00 4386.00	FCC CL/ 741927 120Vac Mode 1 Level dBuV/m 32.79 30.39 32.22 35.02 34.34 33.31 43.50 39.21 43.55	-02 /60Hz Uver Limit -7.21 -9.61 -11.28 -10.98 -11.66 -12.69 -30.50 -34.79 -30.45	Limit Line dBuV/m 40.00 40.00 43.50 46.00 46.00 74.00 74.00 74.00	Read/ Level dBuV 38.43 39.16 45.48 37.46 34.73 30.90 68.15 59.74 54.58	Antenna Factor dB/m 24.30 21.15 16.40 26.44 28.26 30.51 28.74 30.38 35.45	Cable Loss dB 1.90 1.92 2.13 3.18 3.41 3.18 7.91 9.73 12.73	Preamp Factor dB 31.84 31.84 31.79 32.06 32.06 31.28 61.30 60.64 59.21	cm 100 	deg 121 	Remark Peak Peak Peak Peak Peak Peak Peak Pea
Projec Power Memo 1 2 3 4 5 6 7 8 9 10	t : Freq MHz 30.00 35.40 157.71 620.60 742.40 931.40 3000.00 4386.00 6980.00	FCC CL/ 741927 120Vac Mode 1 Level dBuV/m 32.79 30.39 32.22 35.02 34.34 33.31 43.50 39.21 43.55 44.66 48.49	-02 /60Hz Uver Limit -7.21 -9.61 -11.28 -10.98 -11.66 -12.69 -30.50 -34.79 -30.45 -29.34 -25.51	Limit Line dBuV/m 40.00 40.00 43.50 46.00 46.00 74.00 74.00 74.00 74.00	Read/ Level dBuV 38.43 39.16 45.48 37.46 34.73 30.90 68.15 59.74 54.58 51.18 49.29	Antenna Factor dB/m 24.30 21.15 16.40 26.44 28.26 30.51 28.74 30.38 35.45 36.78 40.09	Cable Loss dB 1.90 1.92 2.13 3.18 3.41 3.18 7.91 9.73 12.73 14.83 16.21	Preamp Factor dB 31.84 31.84 31.84 31.79 32.06 32.06 31.28 61.30 60.64 59.21 58.13 57.10	cm 100 	deg 121 151	Remark Peak Peak Peak Peak Peak Peak Peak Pea



4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Oct. 12, 2017	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Sep. 20, 2017	Oct. 12, 2017	Sep. 19, 2018	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 29, 2016	Oct. 12, 2017	Nov. 28, 2017	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 06, 2016	Oct. 12, 2017	Dec. 05, 2017	Conduction (CO05-HY)
Bilog Antenna	Schaffner	CBL6111C&N- 6-06	2725&AT-N06 01	30MHz~1GHz	Oct. 15, 2016	Oct. 12, 2017	Oct. 14, 2017	Radiation (03CH06-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100472	20Hz~26.5GHz	Dec. 29, 2016	Oct. 12, 2017	Dec. 28, 2017	Radiation (03CH06-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1156	1GHz~18GHz	Aug. 08, 2017	Oct. 12, 2017	Aug. 07, 2018	Radiation (03CH06-HY)
Preamplifier	SONOMA	310N	186713	9kHz~1GHz	Apr. 25, 2017	Oct. 12, 2017	Apr. 24, 2018	Radiation (03CH06-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1850117	1GHz ~ 18GHz	May 22, 2017	Oct. 12, 2017	May. 21, 2018	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF78020821 2	1m~4m	N/A	Oct. 12, 2017	N/A	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0-360 degree	N/A	Oct. 12, 2017	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	27
of 95% (U = 2Uc(y))	2.1

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence	
of 95% (U = 2Uc(y))	3.9

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence	4.7
of 95% (U = 2Uc(y))	4.7