



# FCC/IC Test Report

**APPLICANT** : Sony Mobile Communications Inc.  
**EQUIPMENT** : Smart phone  
**BRAND NAME** : SONY  
**TYPE NAME** : PM-0890-BV  
**FCC ID** : PY7-PM0890  
**IC** : 4170B-PM0890  
**STANDARD** : FCC 47 CFR FCC Part 15 Subpart B  
ICES-003 Issue 5  
**CLASSIFICATION** : FCC CLASS B PERSONAL  
COMPUTERS AND PERIPHERALS

The product was received on Apr. 30, 2015 and testing was completed on Jun. 05, 2015. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2009 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.

Reviewed by: Louis Wu / Manager

Approved by: Jones Tsai / Manager



## **SPORTON INTERNATIONAL INC.**

**No. 52, Hwa Ya 1<sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.**



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### SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.107	ICES003 Section 6.1	AC Conducted Emission	< 15.107 limits < ICES003 6.1 limits	PASS	Under limit 3.00 dB at 13.558 MHz
3.2	15.109	ICES003 Section 6.2	Radiated Emission	< 15.109 limits < ICES003 6.2 limits	PASS	Under limit 12.74 dB at 196.050 MHz



# 1. General Description

## 1.1. Applicant

**Sony Mobile Communications Inc.**  
Nya Vattentorget, 22188 Lund, Sweden

## 1.2. Manufacturer

**Arima Communications Corp.**  
6F, No. 866, Jhongjheng Rd., Jhonghe Dist., New Taipei City 23586, Taiwan

## 1.3. Product Feature of Equipment Under Test

The Equipment Under Test (hereafter called: EUT) is smart phone supporting, GSM/WCDMA/LTE, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n, Bluetooth with FM Receiver, GPS, and NFC features, and below is details of information.

Product Feature	
<b>Equipment</b>	Smart phone
<b>Brand Name</b>	SONY
<b>Type Name</b>	PM-0890-BV
<b>FCC ID</b>	PY7-PM0890
<b>IC</b>	4170B-PM0890
<b>GSM Operating Band(s)</b>	GSM 850/900/1800/1900MHz
<b>GPRS / EGPRS Multi Slot Class</b>	GPRS Class 12, EGPRS Class 12
<b>WCDMA Operating Band(s)</b>	FDD Band I / II / IV / V / VIII
<b>WCDMA Rel. Version</b>	Rel. 8
<b>LTE Operating Band(s)</b>	FDD Band II / IV / V / VII / XII / XIII / XVII / XXVIII
<b>LTE Rel. Version</b>	Rel. 8
<b>Wi-Fi Specification</b>	802.11a/b/g/n (HT20/HT40)
<b>Bluetooth Version</b>	v3.0+EDR / v4.0-LE
<b>NFC Specification</b>	ISO14443A / ISO14443B / Felica
<b>Power Supply</b>	Battery / AC Adapter / Car Charger

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.



### 1.4. Details of Tested Sample (EUT) Information

Below EUT sample and accessory are used to test.

EUT Information List				
IMEI	HW Version	SW Version	S/N	Performed Test Item
004402454681721	A	29.0.A.0.76	WUJ01HYJ4J	Conducted Emission Radiated Emission

Accessory List	
<b>Battery</b>	Model No. : LIS1579ERPC
<b>Earphone 1</b>	Model No. : MH410c
	Type No. : AG-1100
	S/N : 14371E6600174A0
<b>Earphone 2</b>	Model No. : MH410c
	Type No. : AG-1103
	S/N : 14292040011682C
<b>USB Cable</b>	Model No. : EC450
	Type No. : AI-0700
	S/N : 134912D1000585A

**Note:**

1. Above EUT list and accessory list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test.
3. For other wireless features of this EUT, test report will be issued separately.

### 1.5. Modification of EUT

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



### 1.6. Test Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

<b>Test Site</b>	SPORTON INTERNATIONAL INC.		
<b>Test Site Location</b>	No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978		
<b>Test Site No.</b>	<b>Sporton Site No.</b>		<b>IC Registration No.</b>
	CO05-HY	03CH06-HY	4086B-1



## 1.7. 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 C63.4-2009
- ♦ IC ICES-003 Issue 5

### Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. For FCC 15 Subpart B - Unintentional Radiators, device supporting USB interface or similar peripherals (defined as the Section 15.3 (r) Peripheral device) acting as a peripheral for personal computers shall be authorized as “The Class B personal computers and peripherals” per the Section 15.101 (a) Equipment authorization of unintentional radiators.
3. For other Unintentional Radiators features of this EUT, test reports are be issued separately. Per the Note of the Section 15.101, when device supports features (USB, FM Radio, digital devices...etc) more than one category of authorization, type of authorization shall be appropriately chosen for FCC 15B compliance rule, and the Section 15.101 (b), only those receivers that operate (tune) within the frequency range of 30-960 MHz, CB receivers and radar detectors are subject to the authorizations shown in paragraph (a) of the Section 15.101. However, receivers indicated as being subject to Declaration of Conformity that are contained within a transceiver, the transmitter portion of which is subject to certification, shall be authorized under the verification procedure.
4. The test results for FCC compliance, indicating that these results are deemed satisfactory evidence of compliance with **Industry Canada Interference-Causing Equipment Standard ICES-003**.



## 2. Test Configuration of Equipment Under Test

### 2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2009 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

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

The following tables are showing the test modes as the worst cases and recorded in this report.

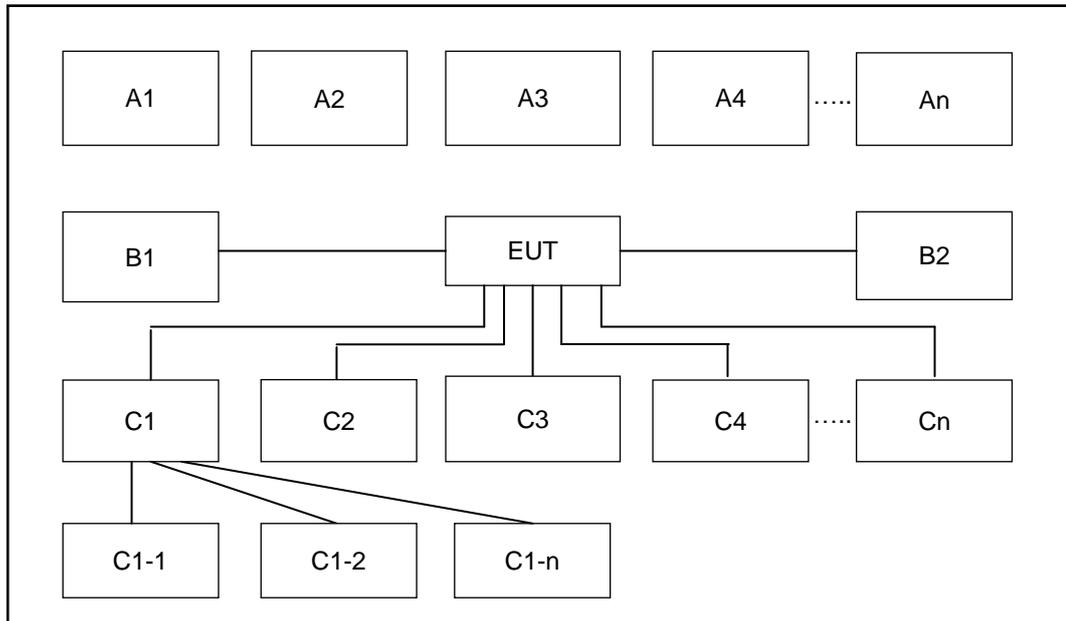
Item	EUT Configuration	Test Condition	
		EMI AC	EMI RE
1.	Data Link with Notebook	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

The data application (each file size is greater than 30Mbytes) is continuously transferred between the EUT and Notebook connected via USB cable, while GSM, WLAN, and Bluetooth and GPS idle.

**Abbreviations:**

- EMI AC: AC conducted emissions
- EMI RE: EUT radiated emissions

## 2.2. Connection Diagram of Test System



Conduction Test Setup									
No.	Wireless Station	Connection Type	Test Mode						
			1	2	3	-	-	-	-
A1	Bluetooth Earphone	Bluetooth	X	X	X				
A2	System Simulator	GSM	X	X	X				
A3	GPS Station	GPS	X						
A4	AP router	WiFi	X	X	X				
A5	NFC Card	NFC		X	X				
No.	Setup Peripherals	Connection Type	1	2	3	-	-	-	-
C1	Notebook	USB cable	X	X	X				
C1-1	iPod	USB Cable to C1	X	X	X				
C1-2	AP router	RJ-45 Cable to C1	X	X	X				
C2	Earphone	Earphone jack	X	X	X				
C3	SD card	SD I/O interface without cable	X	X	X				



Radiation Test Setup									
No.	Wireless Station	Connection Type	Test Mode						
			1	2	3	-	-	-	-
A1	Bluetooth Earphone	Bluetooth	X	X	X				
A2	System Simulator	GSM	X	X	X				
A3	GPS Station	GPS	X		X				
A4	AP router	WiFi	X	X	X				
A5	NFC Card	NFC		X					
No.	Setup Peripherals	Connection Type	1	2	3	-	-	-	-
C1	Notebook	USB cable	X	X	X				
C1-1	iPod	USB Cable to C1	X	X	X				
C1-2	AP router	RJ-45 Cable to C1	X	X	X				
C2	Earphone	Earphone jack	X	X	X				
C3	SD card	SD I/O interface without cable	X	X	X				

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

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
3.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
4.	Bluetooth Earphone	Sony	SBH20	PY7-RD0010	Unshielded, 0.75m	N/A
5.	WLAN AP	D-Link	DIR-865L	KA2IR865LA1	N/A	Unshielded, 1.8 m
6.	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
7.	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
8.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
9.	NFC Card	Metro Taipei	Easy Card	N/A	N/A	N/A
10.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
11.	iPod	Apple	A1199	FCC DoC	Shielded, 1.0 m	N/A

### 2.4. EUT Operation Test Setup

The data application (each file size is greater than 30Mbytes) is continuously transferred between the EUT and Notebook connected via USB cable, while GSM and Bluetooth, WLAN and GPS idle.



### 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 (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.

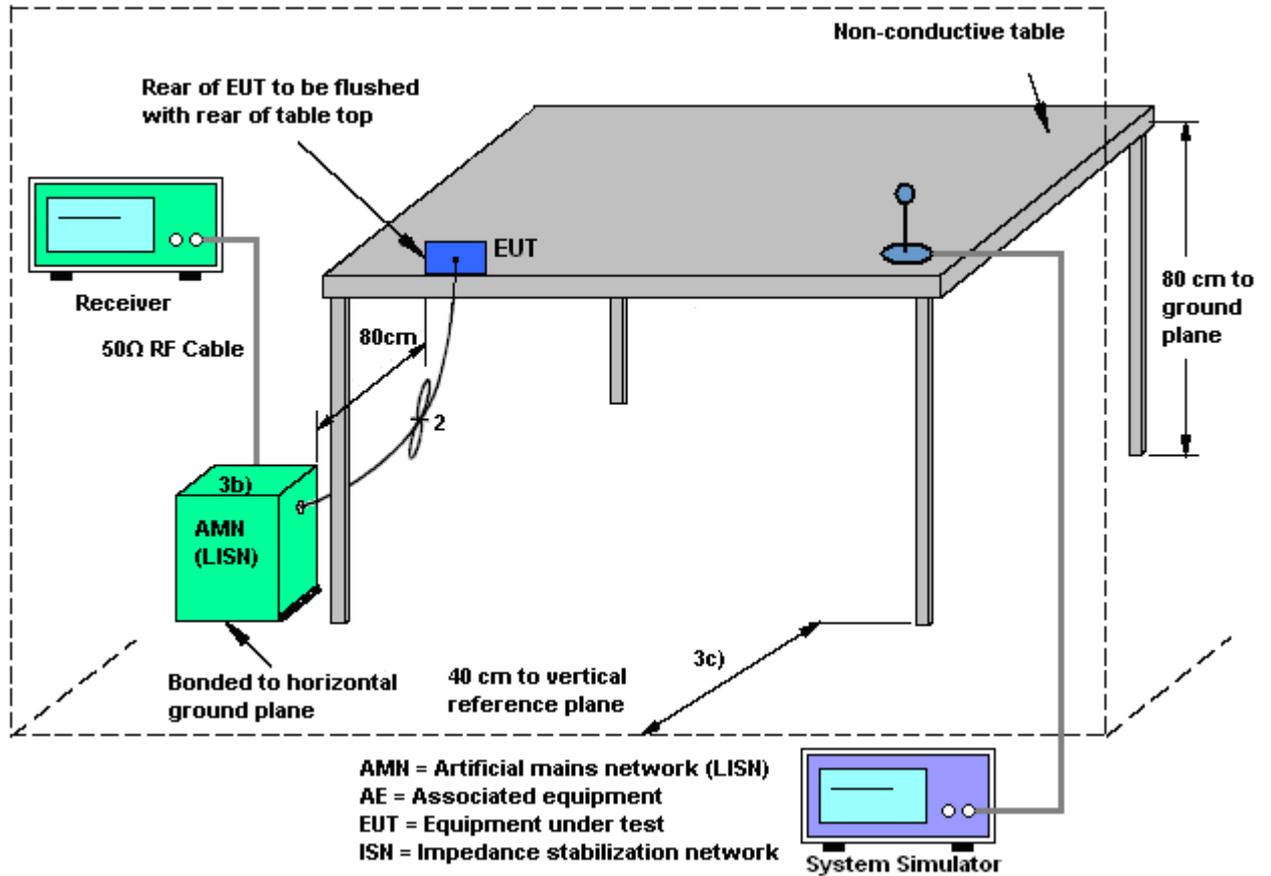
##### 3.1.2 Measuring Instruments

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.
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.

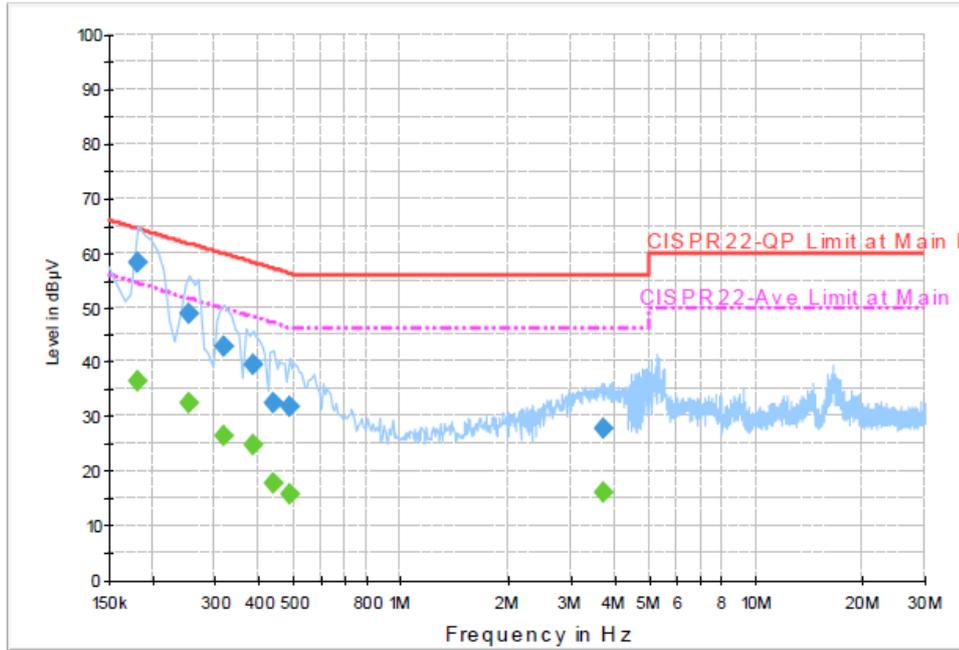
### 3.1.4 Test Setup





3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	53~54%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1		



Final Result : Quasi-Peak

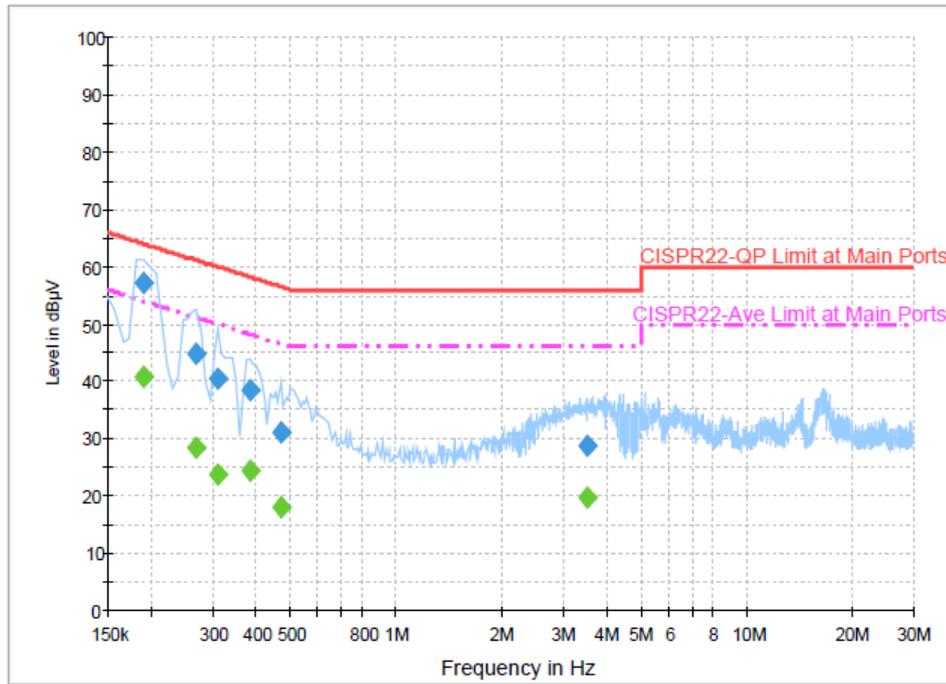
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	58.1	Off	L1	19.5	6.3	64.4
0.254000	48.7	Off	L1	19.5	12.9	61.6
0.318000	42.7	Off	L1	19.4	17.1	59.8
0.382000	39.4	Off	L1	19.5	18.8	58.2
0.438000	32.3	Off	L1	19.5	24.8	57.1
0.486000	31.7	Off	L1	19.5	24.5	56.2
3.750000	27.6	Off	L1	19.7	28.4	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	36.5	Off	L1	19.5	17.9	54.4
0.254000	32.3	Off	L1	19.5	19.3	51.6
0.318000	26.3	Off	L1	19.4	23.5	49.8
0.382000	24.8	Off	L1	19.5	23.4	48.2
0.438000	17.6	Off	L1	19.5	29.5	47.1
0.486000	15.9	Off	L1	19.5	30.3	46.2
3.750000	16.0	Off	L1	19.7	30.0	46.0



Test Mode :	Mode 1	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	53~54%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1		



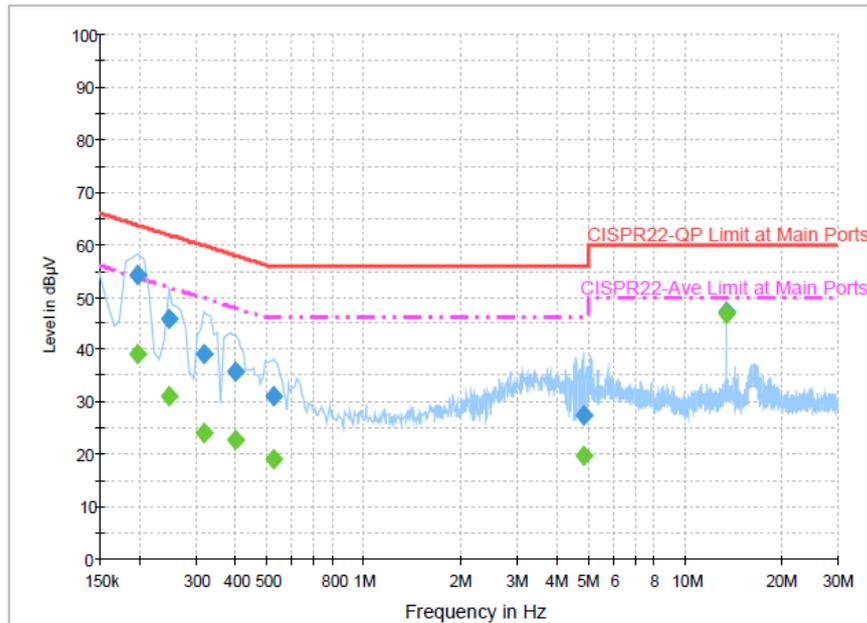
**Final Result : Quasi-Peak**

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	57.1	Off	N	19.5	6.9	64.0
0.270000	44.7	Off	N	19.4	16.4	61.1
0.310000	40.5	Off	N	19.5	19.5	60.0
0.382000	38.4	Off	N	19.5	19.8	58.2
0.470000	31.1	Off	N	19.5	25.4	56.5
3.534000	28.8	Off	N	19.7	27.2	56.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	40.9	Off	N	19.5	13.1	54.0
0.270000	28.3	Off	N	19.4	22.8	51.1
0.310000	23.8	Off	N	19.5	26.2	50.0
0.382000	24.3	Off	N	19.5	23.9	48.2
0.470000	18.2	Off	N	19.5	28.3	46.5
3.534000	19.7	Off	N	19.7	26.3	46.0

Test Mode :	Mode 2	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	53~54%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On + Earphone 1		



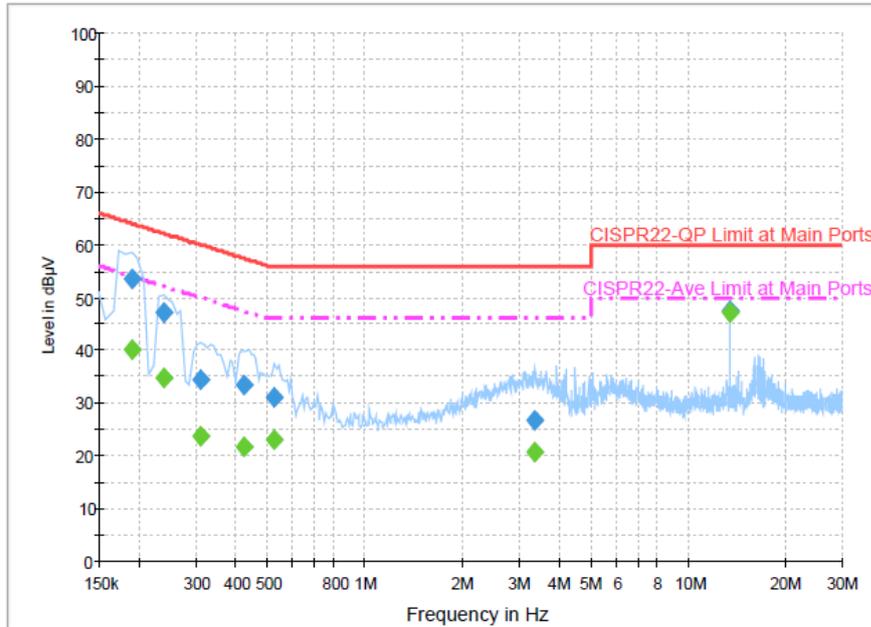
**Final Result : Quasi-Peak**

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.198000	54.3	Off	L1	19.4	9.4	63.7
0.246000	45.8	Off	L1	19.4	16.1	61.9
0.318000	39.3	Off	L1	19.4	20.5	59.8
0.398000	35.8	Off	L1	19.5	22.1	57.9
0.526000	31.0	Off	L1	19.5	25.0	56.0
4.862000	27.3	Off	L1	19.7	28.7	56.0
13.558000	47.1	Off	L1	19.9	12.9	60.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.198000	39.1	Off	L1	19.4	14.6	53.7
0.246000	31.0	Off	L1	19.4	20.9	51.9
0.318000	24.0	Off	L1	19.4	25.8	49.8
0.398000	22.7	Off	L1	19.5	25.2	47.9
0.526000	19.0	Off	L1	19.5	27.0	46.0
4.862000	19.6	Off	L1	19.7	26.4	46.0
13.558000	46.9	Off	L1	19.9	3.1	50.0

Test Mode :	Mode 2	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	53~54%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On + Earphone 1		



**Final Result : Quasi-Peak**

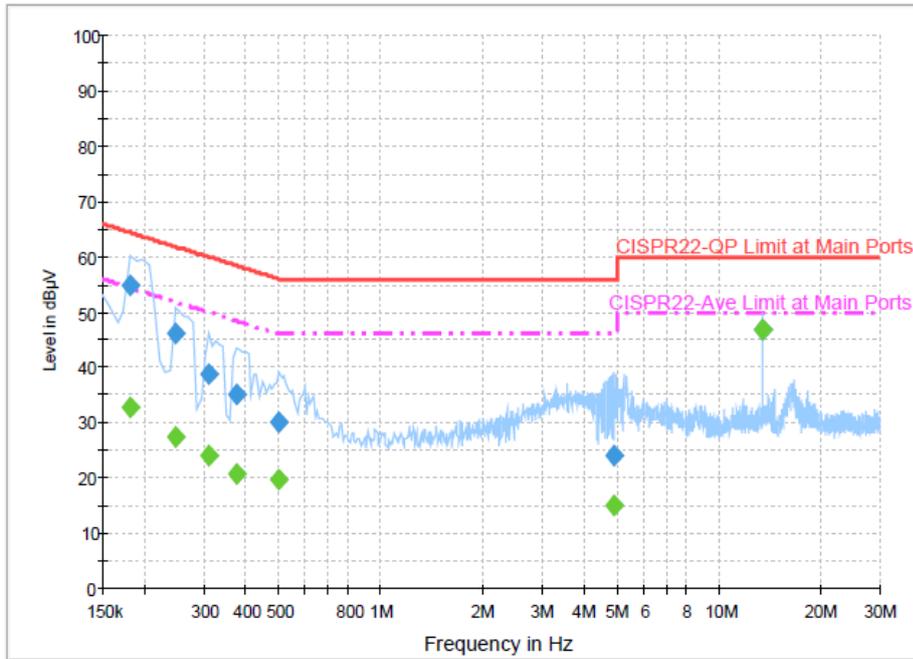
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	53.6	Off	N	19.5	10.4	64.0
0.238000	47.2	Off	N	19.5	15.0	62.2
0.310000	34.4	Off	N	19.5	25.6	60.0
0.422000	33.4	Off	N	19.4	24.0	57.4
0.526000	31.2	Off	N	19.5	24.8	56.0
3.374000	26.6	Off	N	19.7	29.4	56.0
13.558000	47.5	Off	N	20.0	12.5	60.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	40.0	Off	N	19.5	14.0	54.0
0.238000	34.9	Off	N	19.5	17.3	52.2
0.310000	23.6	Off	N	19.5	26.4	50.0
0.422000	21.7	Off	N	19.4	25.7	47.4
0.526000	23.2	Off	N	19.5	22.8	46.0
3.374000	20.6	Off	N	19.7	25.4	46.0
13.558000	47.0	Off	N	20.0	3.0	50.0



Test Mode :	Mode 3	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	53~54%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On + Earphone 2		



**Final Result : Quasi-Peak**

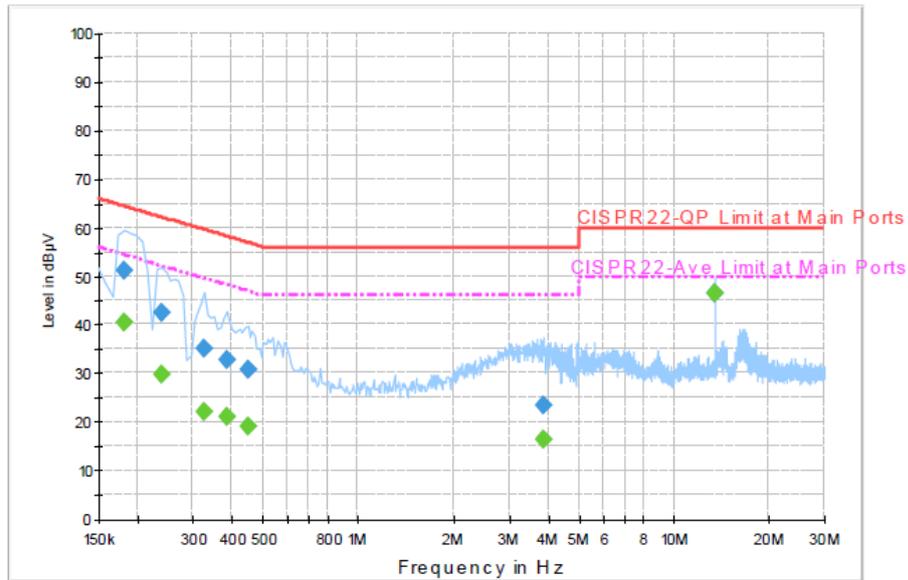
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	54.8	Off	L1	19.5	9.6	64.4
0.246000	46.2	Off	L1	19.4	15.7	61.9
0.310000	38.9	Off	L1	19.5	21.1	60.0
0.374000	35.1	Off	L1	19.5	23.3	58.4
0.502000	30.1	Off	L1	19.5	25.9	56.0
4.926000	24.1	Off	L1	19.7	31.9	56.0
13.558000	46.7	Off	L1	19.9	13.3	60.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	32.8	Off	L1	19.5	21.6	54.4
0.246000	27.5	Off	L1	19.4	24.4	51.9
0.310000	24.1	Off	L1	19.5	25.9	50.0
0.374000	20.8	Off	L1	19.5	27.6	48.4
0.502000	19.6	Off	L1	19.5	26.4	46.0
4.926000	15.1	Off	L1	19.7	30.9	46.0
13.558000	46.8	Off	L1	19.9	3.2	50.0



Test Mode :	Mode 3	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	53~54%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On + Earphone 2		



**Final Result : Quasi-Peak**

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	51.3	Off	N	19.5	13.1	64.4
0.238000	42.6	Off	N	19.5	19.6	62.2
0.326000	35.0	Off	N	19.4	24.6	59.6
0.382000	32.9	Off	N	19.5	25.3	58.2
0.446000	30.8	Off	N	19.4	26.1	56.9
3.878000	23.4	Off	N	19.7	32.6	56.0
13.558000	46.6	Off	N	20.0	13.4	60.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	40.5	Off	N	19.5	13.9	54.4
0.238000	29.7	Off	N	19.5	22.5	52.2
0.326000	22.1	Off	N	19.4	27.5	49.6
0.382000	21.1	Off	N	19.5	27.1	48.2
0.446000	19.0	Off	N	19.4	27.9	46.9
3.878000	16.5	Off	N	19.7	29.5	46.0
13.558000	46.6	Off	N	20.0	3.4	50.0



### 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 (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

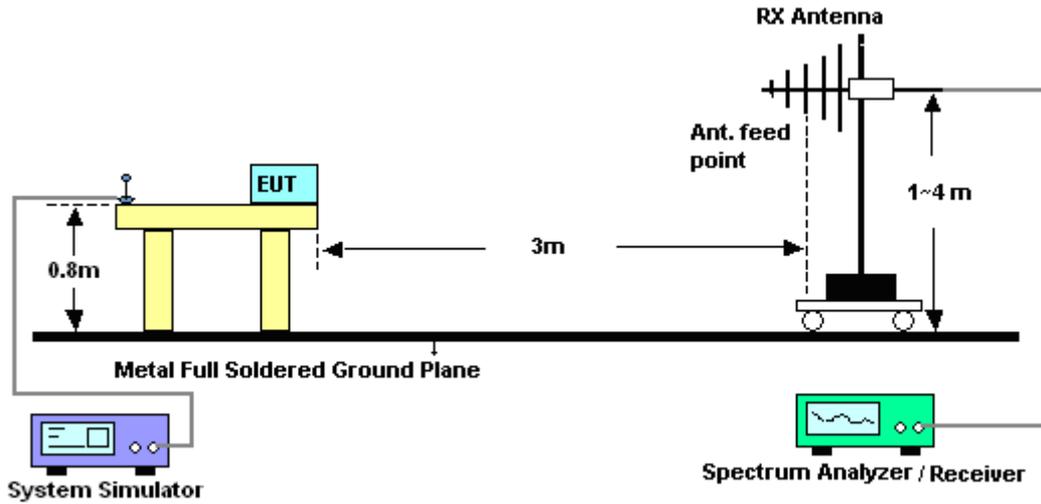
The measuring equipment is listed in the section 4 of this test report.

#### 3.2.3. Test Procedures

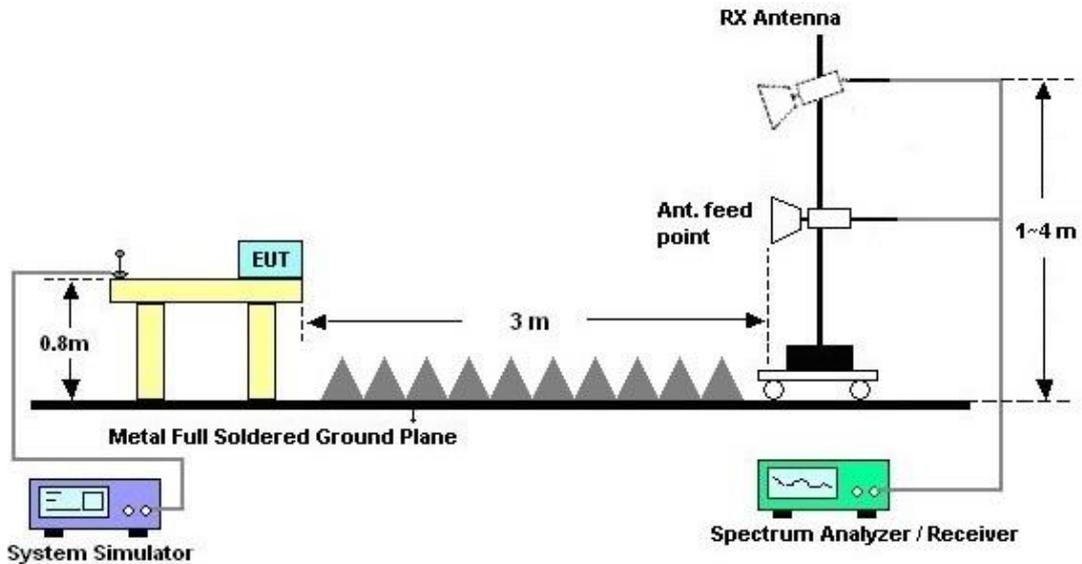
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna 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.
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



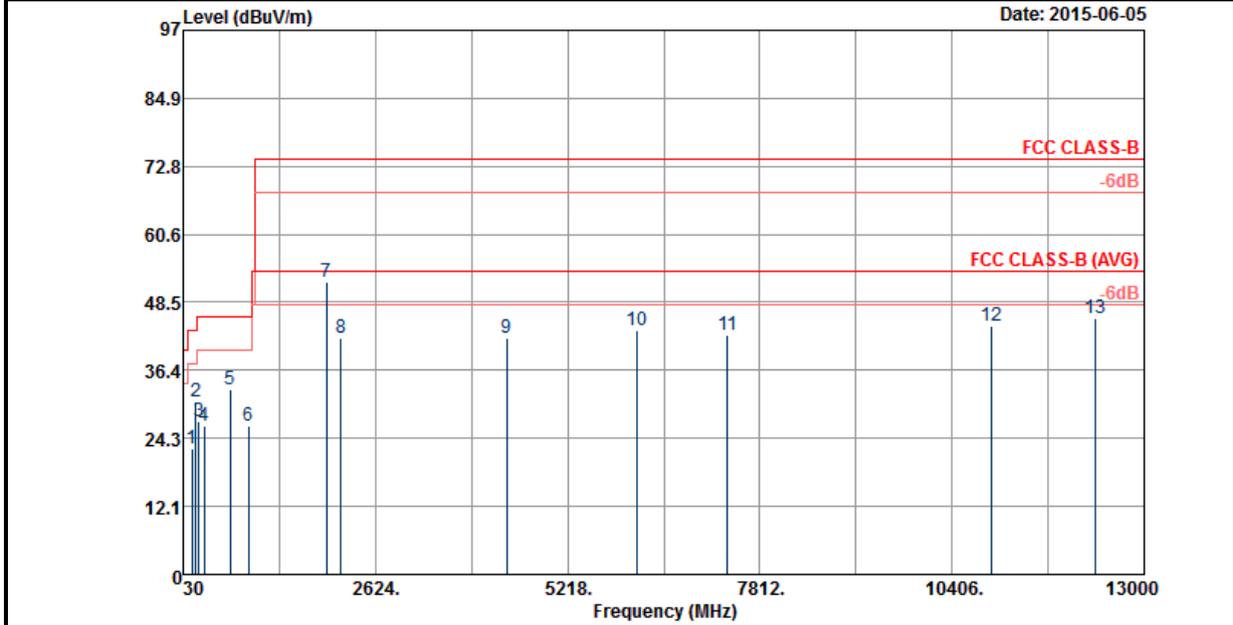
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 1	Temperature :	20~23°C
Test Engineer :	Hayden Wu and Donny Pang	Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1		
Remark :	#7 is system simulator signal which can be ignored.		

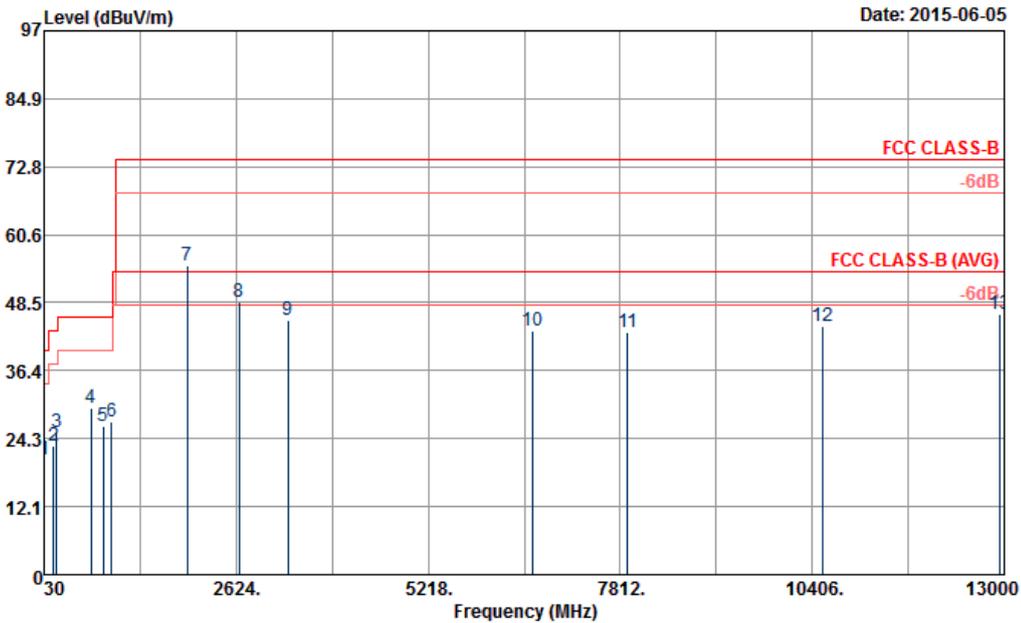


Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m HF-ANT\_583\_140731 HORIZONTAL  
 Project : 543002  
 Power : FromSystem  
 Mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	149.07	22.48	-21.02	43.50	41.99	10.88	1.34	31.73	---	---	Peak
2	196.05	30.76	-12.74	43.50	51.93	9.04	1.52	31.73	101	119	Peak
3	240.60	27.38	-18.62	46.00	46.02	11.39	1.69	31.72	---	---	Peak
4	311.20	26.51	-19.49	46.00	42.95	13.33	1.94	31.71	---	---	Peak
5	666.10	33.00	-13.00	46.00	43.30	18.96	2.83	32.09	---	---	Peak
6	911.80	26.58	-19.42	46.00	34.06	20.50	3.37	31.35	---	---	Peak
7	1960.00	52.24			73.20	31.45	6.10	58.51	---	---	Peak
8	2160.00	42.04	-31.96	74.00	62.30	31.79	6.36	58.41	---	---	Peak
9	4400.00	42.25	-31.75	74.00	57.04	33.96	9.41	58.16	---	---	Peak
10	6156.00	43.62	-30.38	74.00	54.57	35.45	11.51	57.91	---	---	Peak
11	7374.00	42.57	-31.43	74.00	53.57	35.72	12.46	59.18	---	---	Peak
12	10930.00	44.36	-29.64	74.00	48.73	37.66	15.60	57.63	---	---	Peak
13	12342.00	45.69	-28.31	74.00	48.41	39.14	16.58	58.44	100	0	Peak



Test Mode :	Mode 1	Temperature :	20~23°C
Test Engineer :	Hayden Wu and Donny Pang	Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Vertical
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1		
Remark :	#7 is system simulator signal which can be ignored.		

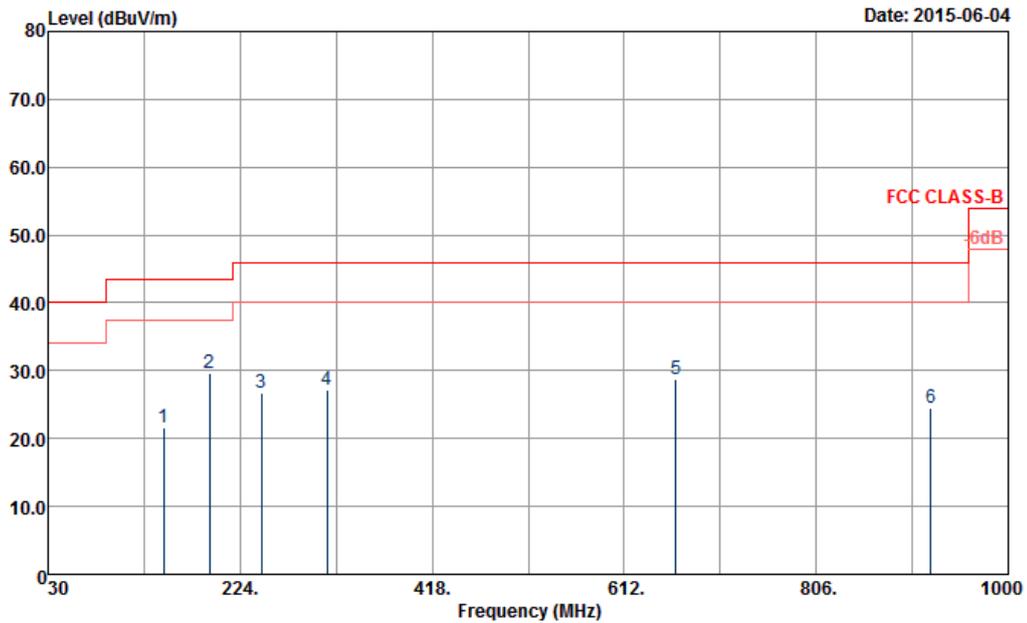


Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m HF-ANT\_583\_140731 VERTICAL  
 Project : 543002  
 Power : FromSystem  
 Mode : Mode 1

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.27	20.50	-19.50	40.00	33.24	18.40	0.64	31.78	---	---	Peak
2	163.38	23.09	-20.41	43.50	43.35	9.94	1.53	31.73	---	---	Peak
3	197.13	25.49	-18.01	43.50	46.62	9.08	1.52	31.73	---	---	Peak
4	666.10	29.83	-16.17	46.00	40.13	18.96	2.83	32.09	100	167	Peak
5	824.30	26.55	-19.45	46.00	35.36	19.89	3.14	31.84	---	---	Peak
6	940.50	27.22	-18.78	46.00	34.27	20.71	3.35	31.11	---	---	Peak
7	1960.00	55.25			76.21	31.45	6.10	58.51	---	---	Peak
8	2660.00	48.55	-25.45	74.00	67.33	32.27	7.15	58.20	100	0	Peak
9	3322.00	45.34	-28.66	74.00	63.10	32.67	8.03	58.46	---	---	Peak
10	6624.00	43.52	-30.48	74.00	54.45	35.80	11.77	58.50	---	---	Peak
11	7908.00	43.10	-30.90	74.00	53.69	35.78	13.09	59.46	---	---	Peak
12	10546.00	44.26	-29.74	74.00	49.36	37.43	15.25	57.78	---	---	Peak
13	12946.00	46.39	-27.61	74.00	48.71	39.48	16.61	58.41	---	---	Peak



Test Mode :	Mode 2	Temperature :	20~23°C
Test Engineer :	Hayden Wu and Donny Pang	Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On + Earphone 1		

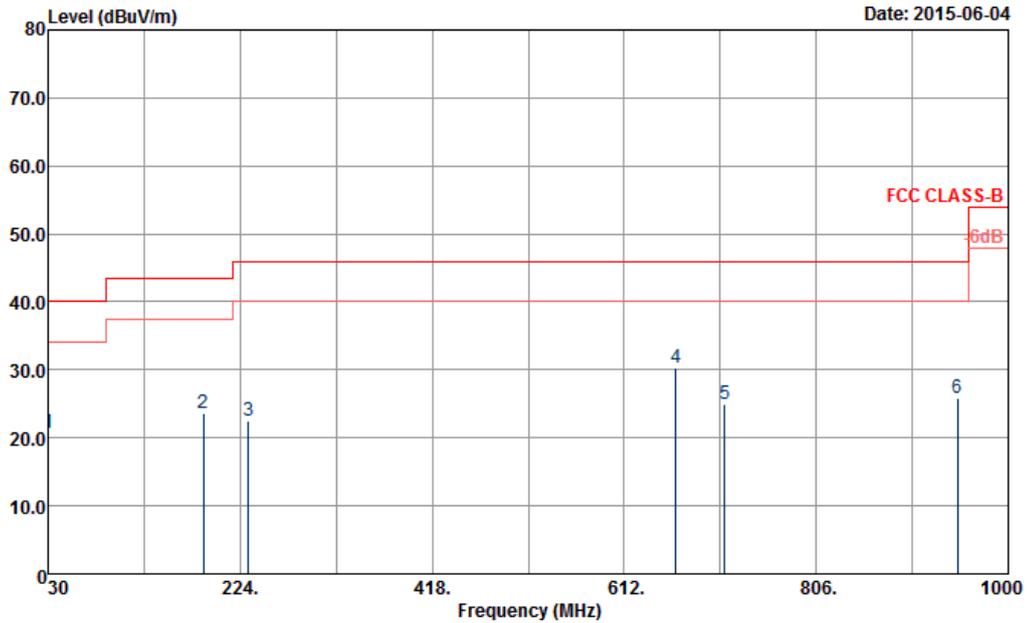


Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m BILOG\_131010\_9664 HORIZONTAL  
 Project : 543002  
 Power : FromSystem  
 Mode : Mode 2

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	147.18	21.62	-21.88	43.50	41.18	10.84	1.33	31.73	---	---	Peak
2	193.35	29.69	-13.81	43.50	50.92	9.00	1.50	31.73	100	299	Peak
3	245.19	26.64	-19.36	46.00	44.80	11.85	1.71	31.72	---	---	Peak
4	311.90	27.11	-18.89	46.00	43.52	13.36	1.94	31.71	---	---	Peak
5	664.00	28.85	-17.15	46.00	39.16	18.95	2.83	32.09	---	---	Peak
6	921.60	24.44	-21.56	46.00	31.84	20.51	3.36	31.27	---	---	Peak



Test Mode :	Mode 2	Temperature :	20~23°C
Test Engineer :	Hayden Wu and Donny Pang	Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Vertical
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On + Earphone 1		

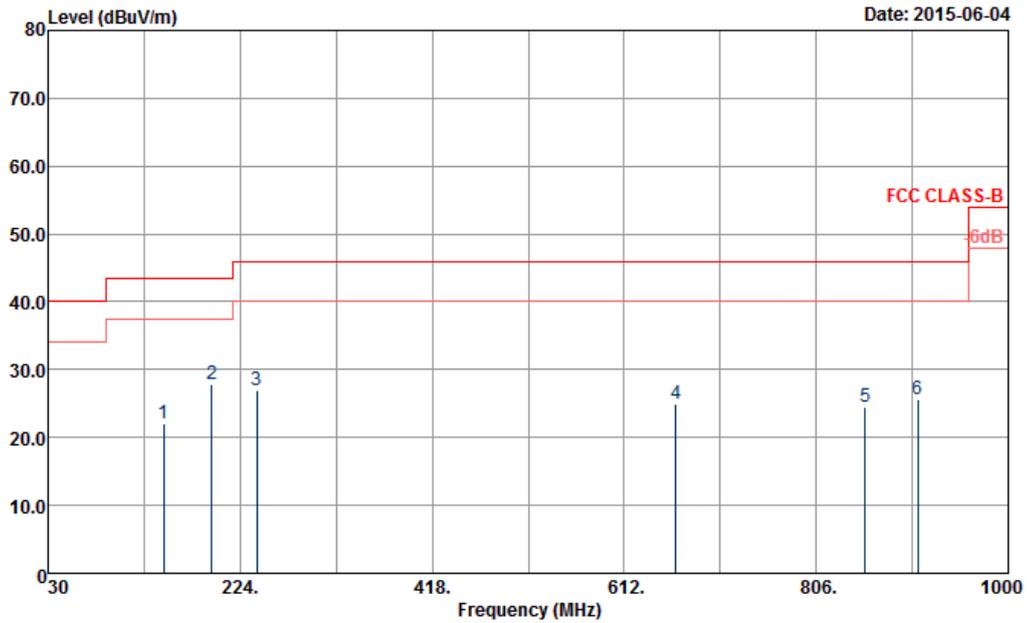


Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m BILOG\_131010\_9664 VERTICAL  
 Project : 543002  
 Power : FromSystem  
 Mode : Mode 2

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	20.78	-19.22	40.00	33.52	18.40	0.64	31.78	---	---	Peak
2	186.60	23.66	-19.84	43.50	44.92	9.00	1.47	31.73	---	---	Peak
3	232.50	22.55	-23.45	46.00	42.15	10.46	1.66	31.72	---	---	Peak
4	664.00	30.20	-15.80	46.00	40.51	18.95	2.83	32.09	100	312	Peak
5	713.70	24.97	-21.03	46.00	35.13	18.98	2.93	32.07	---	---	Peak
6	948.90	25.77	-20.23	46.00	32.66	20.79	3.35	31.03	---	---	Peak



Test Mode :	Mode 3	Temperature :	20~23°C
Test Engineer :	Hayden Wu and Donny Pang	Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1		

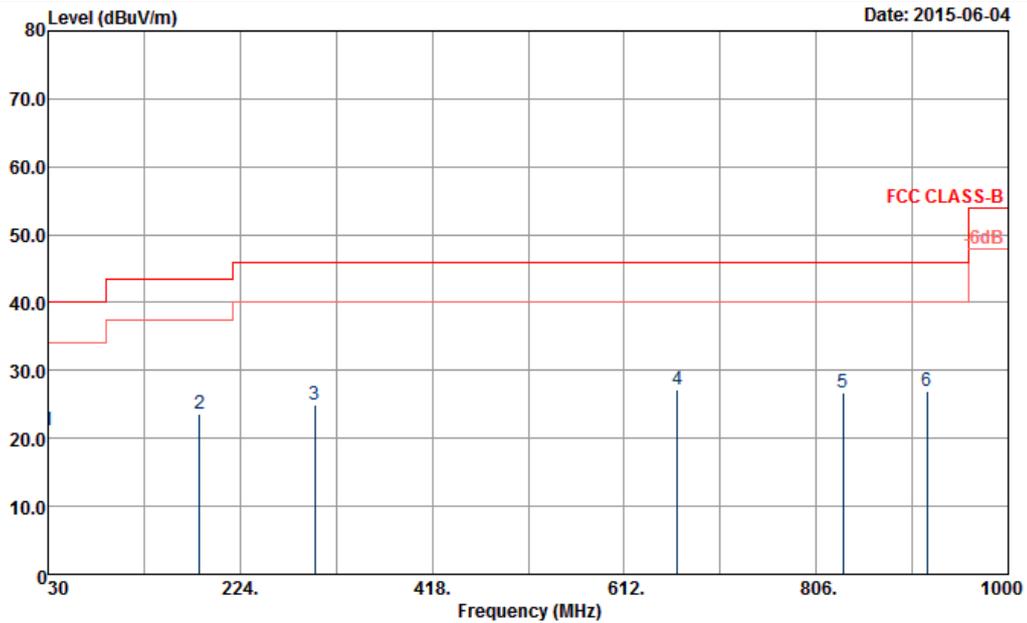


Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m BILOG\_131010\_9664 HORIZONTAL  
 Project : 543002  
 Power : FromSystem  
 Mode : Mode 3

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	146.91	22.08	-21.42	43.50	41.64	10.84	1.33	31.73	---	---	Peak
2	195.24	27.92	-15.58	43.50	49.14	9.00	1.51	31.73	100	127	Peak
3	240.60	26.98	-19.02	46.00	45.62	11.39	1.69	31.72	---	---	Peak
4	664.00	25.07	-20.93	46.00	35.38	18.95	2.83	32.09	---	---	Peak
5	855.80	24.41	-21.59	46.00	32.59	20.25	3.25	31.68	---	---	Peak
6	909.00	25.52	-20.48	46.00	33.03	20.50	3.37	31.38	---	---	Peak



Test Mode :	Mode 3	Temperature :	20~23°C
Test Engineer :	Hayden Wu and Donny Pang	Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Vertical
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1		



Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m BILOG\_131010\_9664 VERTICAL  
 Project : 543002  
 Power : FromSystem  
 Mode : Mode 3

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.54	21.18	-18.82	40.00	34.29	18.02	0.65	31.78	---	---	Peak
2	183.36	23.59	-19.91	43.50	44.74	9.12	1.46	31.73	---	---	Peak
3	299.73	24.93	-21.07	46.00	41.62	13.10	1.91	31.70	---	---	Peak
4	665.40	27.22	-18.78	46.00	37.53	18.95	2.83	32.09	100	189	Peak
5	833.40	26.65	-19.35	46.00	35.21	20.06	3.17	31.79	---	---	Peak
6	918.10	27.01	-18.99	46.00	34.45	20.50	3.36	31.30	---	---	Peak



### 4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Dec. 01, 2014	May 14, 2015	Nov. 30, 2015	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 02, 2014	May 14, 2015	Dec. 01, 2015	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 08, 2014	May 14, 2015	Dec. 07, 2015	Conduction (CO05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	May 14, 2015	N/A	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Apr. 20, 2015	May 14, 2015	Apr. 19, 2016	Conduction (CO05-HY)
LF Cable	Shuner	RG-402	N/A	N/A	Oct. 07, 2014	May 14, 2015	Oct. 06, 2015	Conduction (CO05-HY)
Test Software	N/A	EMC32	8.40.0	N/A	N/A	May 14, 2015	N/A	Conduction (CO05-HY)
Bilog Antenna	Teseq GmbH	CBL6112D	35379	30MHz~2GHz	Sep. 27, 2014	Jun. 04, 2015~ Jun. 05, 2015	Sep. 26, 2015	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz~18GHz	Jul. 24, 2014	Jun. 04, 2015~ Jun. 05, 2015	Jul. 23, 2015	Radiation (03CH06-HY)
Hygrometer	WISEWIND	410	BU5004	N/A	May. 04, 2015	Jun. 04, 2015~ Jun. 05, 2015	May. 03, 2016	Radiation (03CH06-HY)
Preamplifier	SONOMA	310N	186713	9kHz~1GHz	Apr. 20, 2015	Jun. 04, 2015~ Jun. 05, 2015	Apr. 19, 2016	Radiation (03CH06-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1815698	1GHz~18GHz	Dec. 12, 2014	Jun. 04, 2015~ Jun. 05, 2015	Dec. 11, 2015	Radiation (03CH06-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100472	20Hz~26.5GHz	Jan. 19, 2015	Jun. 04, 2015~ Jun. 05, 2015	Jan. 18, 2016	Radiation (03CH06-HY)
RF Cable	HUBER + SUHNER	RG_142_B/U	NA	30MHz ~ 1GHz	Nov. 27, 2014	Jun. 04, 2015~ Jun. 05, 2015	Nov. 26, 2015	Radiation (03CH06-HY)
RF Cable	Infinet	LL142	Infinet CA3601-3601- 1000	1GHz ~ 26.5GHz	Nov. 27, 2014	Jun. 04, 2015~ Jun. 05, 2015	Nov. 26, 2015	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF780208212	1m~4m	N/A	Jun. 04, 2015~ Jun. 05, 2015	N/A	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0 ~ 360 degree	N/A	Jun. 04, 2015~ Jun. 05, 2015	N/A	Radiation (03CH06-HY)
Filter	Microwave	H3G018G1	SN477215	1.0G High Pass	Oct. 01, 2014	Jun. 04, 2015~ Jun. 05, 2015	Sep. 30, 2015	Radiation (03CH06-HY)
Filter	Wainwright	WLKS1200-12 SS	SN2	1.2G Low Pass	Oct. 01, 2014	Jun. 04, 2015~ Jun. 05, 2015	Sep. 30, 2015	Radiation (03CH06-HY)
Test Software	Audix	E3	Version 6.2009-8-24	N/A	N/A	Jun. 04, 2015~ Jun. 05, 2015	N/A	Radiation (03CH06-HY)

**Note:** The test equipment calibration is traceable to the ISO17025.



## 5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.26
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.50
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