FCC RF Test Report

APPLICANT	:	FUJITSU LIMITED
EQUIPMENT	:	STYLISTIC Q series
BRAND NAME	:	FUJITSU
MODEL NAME	:	Q616
FCC ID	:	EJE-WB0099
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System

This is a partial report which is included the radiated band edges, radiated spurious emission, and AC conducted emission test item. The product was received on Nov. 13, 2015 and testing was completed on Jan. 08, 2016. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures 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: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

Testing Laboratory 1190

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

TABLE OF CONTENTS

REVISION HISTORY **3**

SUMMARY OF TEST RESULT **4**

1 GENERAL DESCRIPTION **5**

1.1 Applicant 5
1.2 Manufacturer 5
1.3 Product Feature of Equipment Under Test 5
1.4 Product Specification of Equipment Under Test 6
1.5 Modification of EUT 6
1.6 Testing Location 7
1.7 Applicable Standards 7

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST **8**

2.1 Carrier Frequency and Channel 8
2.2 Pre-Scanned RF Power 9
2.3 Test Mode 12
2.4 Connection Diagram of Test System 13
2.5 Support Unit used in test configuration and system 14
2.6 EUT Operation Test Setup 14
2.7 Measurement Results Explanation Example 15

3 TEST RESULT **16**

3.1 Radiated Band Edges and Spurious Emission Measurement 16
3.2 AC Conducted Emission Measurement 20
3.3 Antenna Requirements 24

4 LIST OF MEASURING EQUIPMENT **26**

5 UNCERTAINTY OF EVALUATION **27**

APPENDIX A. RADIATED SPURIOUS EMISSION

APPENDIX B. RADIATED SPURIOUS EMISSION PLOTS

APPENDIX C. SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR5N1313C	Rev. 01	Initial issue of report	Jan. 15, 2016

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 0.76 dB at 2483.920 MHz
3.2	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 14.30 dB at 0.198 MHz
3.3	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

FUJITSU LIMITED

1-1, Kamikonadaka 4-chome, Nakahara-ku, Kawasaki, 211-8588 Japan

1.2 Manufacturer

FUJITSU LIMITED

1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, 211-8588 Japan

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	STYLISTIC Q series
Brand Name	FUJITSU
Model Name	Q616
FCC ID	EJE-WB0099
Integrated WLAN Module	Brand Name: Intel Model Name: 8260NGW FCC ID: PD98260NG, PD98260NGU
EUT supports Radios application	WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth v4.1 EDR/LE
EUT Stage	Pre-Production Unit

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 Product Specification of Equipment Under Test

<table>
<tr><th colspan="2">Standards-related Product Specification</th></tr>
<tr><td>Tx/Rx Channel Frequency Range</td><td>2412 MHz ~ 2462 MHz</td></tr>
<tr><td>Maximum (Peak) Output Power to antenna</td><td><Ant 1>
802.11b : 17.51 dBm (0.0564 W)
802.11g : 20.36 dBm (0.1086 W)
<Ant 2>
802.11b : 17.56 dBm (0.0570 W)
802.11g : 20.11 dBm (0.1026 W)
SISO <Ant 1>
802.11n HT20 : 20.37 dBm (0.1089 W)
802.11n HT40 : 19.33 dBm (0.0857 W)
SISO <Ant 2>
802.11n HT20 : 20.15 dBm (0.1035 W)
802.11n HT40 : 19.21 dBm (0.0834 W)
MIMO < Ant 1+2>
802.11n HT20 : 23.31 dBm (0.2143 W)
802.11n HT40 : 21.90 dBm (0.1549 W)</td></tr>
<tr><td>Antenna Type</td><td><Ant 1>
802.11b/g/n : PIFA Antenna type with gain -2.60 dBi
<Ant 2>
802.11b/g/n : PIFA Antenna type with gain -1.36 dBi</td></tr>
<tr><td>Type of Modulation</td><td>802.11b : DSSS (DBPSK / DQPSK / CCK)
802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)</td></tr>
<tr><td>Antenna Function for Transmitter</td><td>
<table>
<tr><th></th><th>Ant. 1</th><th>Ant. 2</th></tr>
<tr><td>802.11 b</td><td>V</td><td>V</td></tr>
<tr><td>802.11 g</td><td>V</td><td>V</td></tr>
<tr><td>802.11 n SISO</td><td>V</td><td>V</td></tr>
<tr><td>802.11 n MIMO</td><td>V</td><td>V</td></tr>
</table>
</td></tr>
</table>

1.5 Modification of EUT

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

1.6 Testing 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.

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 1st 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	
Test Site No.	**Sporton Site No.**	
	TH05-HY	CO05-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

Test Site	SPORTON INTERNATIONAL INC.
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.	**Sporton Site No.**
	03CH10-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

1.7 Applicable Standards

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

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r03
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

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

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test shown in the following tables.

<Ant. 1>

Channel	Frequency	2.4GHz 802.11b RF Peak Power (dBm)
		DSSS Data Rate
		1 Mbps
CH 01	2412MHz	**17.51**
CH 06	2437MHz	17.48
CH 11	2462MHz	17.49

Channel	Frequency	2.4GHz 802.11g RF Peak Power (dBm)
		OFDM Data Rate
		6 Mbps
CH 01	2412MHz	**20.36**
CH 06	2437MHz	20.04
CH 11	2462MHz	20.01

<Ant. 2>

Channel	Frequency	2.4GHz 802.11b RF Peak Power (dBm)
		DSSS Data Rate
		1 Mbps
CH 01	2412MHz	17.45
CH 06	2437MHz	17.43
CH 11	2462MHz	**17.56**

Channel	Frequency	2.4GHz 802.11g RF Peak Power (dBm)
		OFDM Data Rate
		6 Mbps
CH 01	2412MHz	19.87
CH 06	2437MHz	19.92
CH 11	2462MHz	**20.11**

SISO <Ant. 1>

Channel	Frequency	2.4GHz 802.11n HT20 RF Peak Power (dBm)
		OFDM Data Rate
		MCS0
CH 01	2412MHz	20.23
CH 06	2437MHz	**20.37**
CH 11	2462MHz	20.20

Channel	Frequency	2.4GHz 802.11n HT40 RF Peak Power (dBm)
		OFDM Data Rate
		MCS0
CH 03	2422MHz	18.26
CH 06	2437MHz	**19.33**
CH 09	2472MHz	19.23

SISO <Ant. 2>

Channel	Frequency	2.4GHz 802.11n HT20 RF Peak Power (dBm)
		OFDM Data Rate
		MCS0
CH 01	2412MHz	20.08
CH 06	2437MHz	**20.15**
CH 11	2462MHz	20.09

Channel	Frequency	2.4GHz 802.11n HT40 RF Peak Power (dBm)
		OFDM Data Rate
		MCS0
CH 03	2422MHz	**19.21**
CH 06	2437MHz	19.15
CH 09	2472MHz	19.11

MIMO <Ant. 1+2>

Channel	Frequency	2.4GHz 802.11n HT20 RF Peak Power (dBm)
		OFDM Data Rate
		MCS0
CH 01	2412MHz	21.69
CH 06	2437MHz	**23.31**
CH 11	2462MHz	23.07

Channel	Frequency	2.4GHz 802.11n HT40 RF Peak Power (dBm)
		OFDM Data Rate
		MCS0
CH 03	2422MHz	20.27
CH 06	2437MHz	**21.90**
CH 09	2472MHz	19.25

Note: MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.

2.3 Test Mode

Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates from the power table described in section 2.2.

Single Antenna

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

MIMO Antenna

Modulation	Data Rate
802.11n HT20	MCS0
802.11n HT40	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : TC + TF + Bluetooth Tx
	Mode 2 TC + TF + WLAN (2.4GHz) Tx

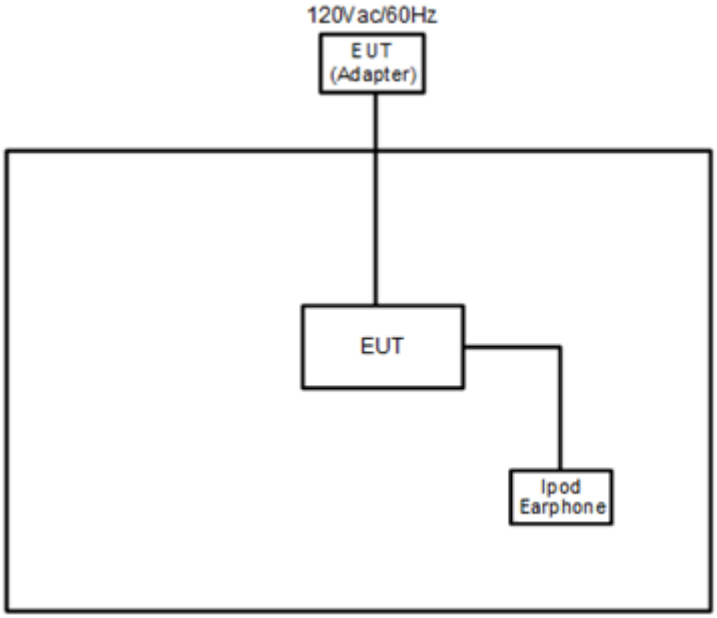
Remark:

1. TC stands for Test Configuration, and consists of USB HD, SD Card, HDMI Cable, Earphone, and Adapter.
2. TF stands for Test Configuration, and consists of H-Pattern, Camera, and MPEG4.
3. The worst case of conducted emission is mode 1; only the test data of it was reported.

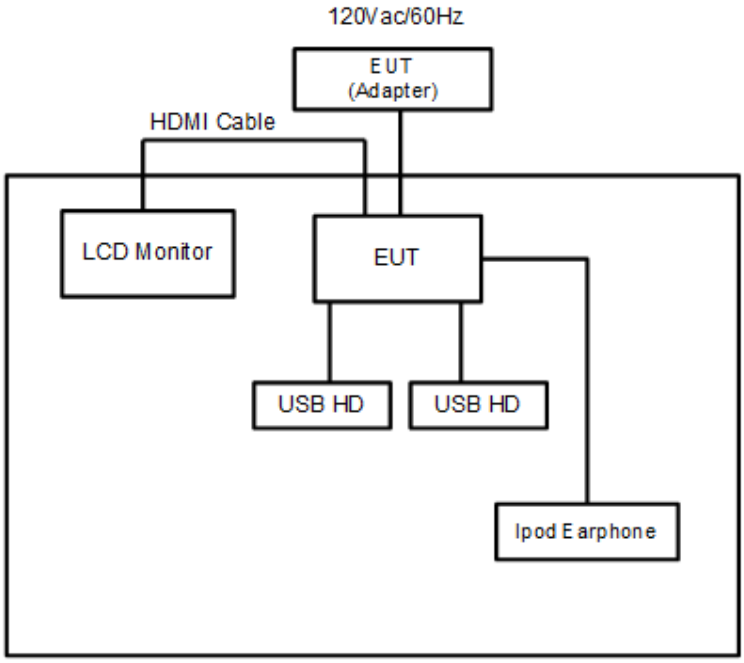
2.4 Connection Diagram of Test System

<WLAN Tx Mode without Earphone and Adapter>

<WLAN Tx Mode with Earphone and Adapter>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	USB HD	PQI	H568B	FCC DoC	Unshielded, 0.58m	N/A
2.	LCD Monitor	DELL	U2410	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
3.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
4.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.6 EUT Operation Test Setup

The programmed RF utility “DRTU Tool” is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

2.7 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:
The spectrum analyzer offset is derived from RF cable loss and attenuator factor.
Offset = RF cable loss + attenuator factor.
Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).
= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 Radiated Band Edges and Spurious Emission Measurement

3.1.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.1.2 Measuring Instruments

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

3.1.3 Test Procedure

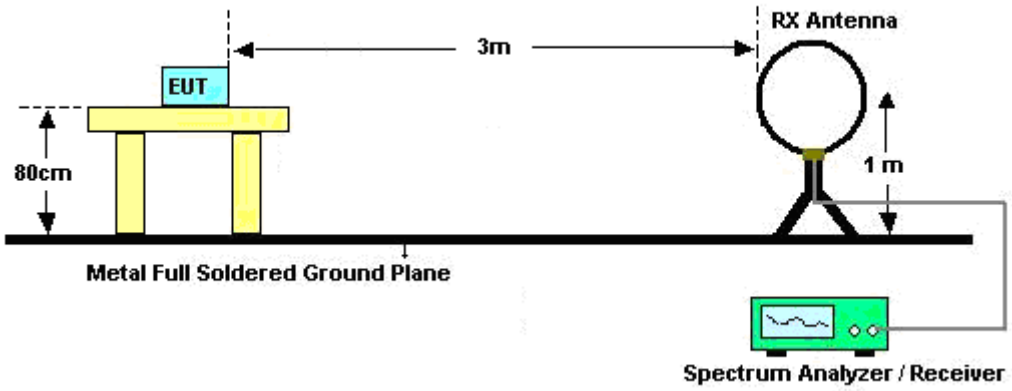
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r03.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

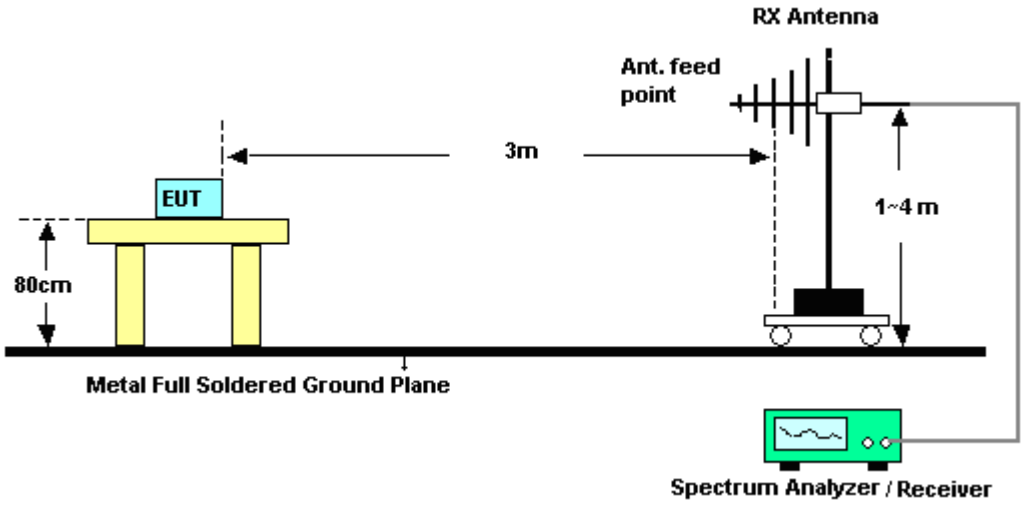
Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
0	802.11b	98.26	-	-	10Hz
0	802.11g	98.10	-	-	10Hz
0	2.4GHz 802.11n HT20	97.96	1920.00	0.52	1kHz
0	2.4GHz 802.11n HT40	95.92	940.00	1.06	3kHz
1	802.11b	98.70	-	-	10Hz
1	2.4GHz 802.11n HT40	96.94	950.00	1.05	3kHz
1+2	2.4GHz 802.11n HT20 for Ant 1	96.12	990.00	1.01	3kHz
1+2	2.4GHz 802.11n HT20 for Ant 2	96.08	980.00	1.02	3kHz
1+2	2.4GHz 802.11n HT40 for Ant 1	93.26	498.00	2.01	3kHz
1+2	2.4GHz 802.11n HT40 for Ant 2	93.26	498.00	2.01	3kHz

3.1.4 Test Setup

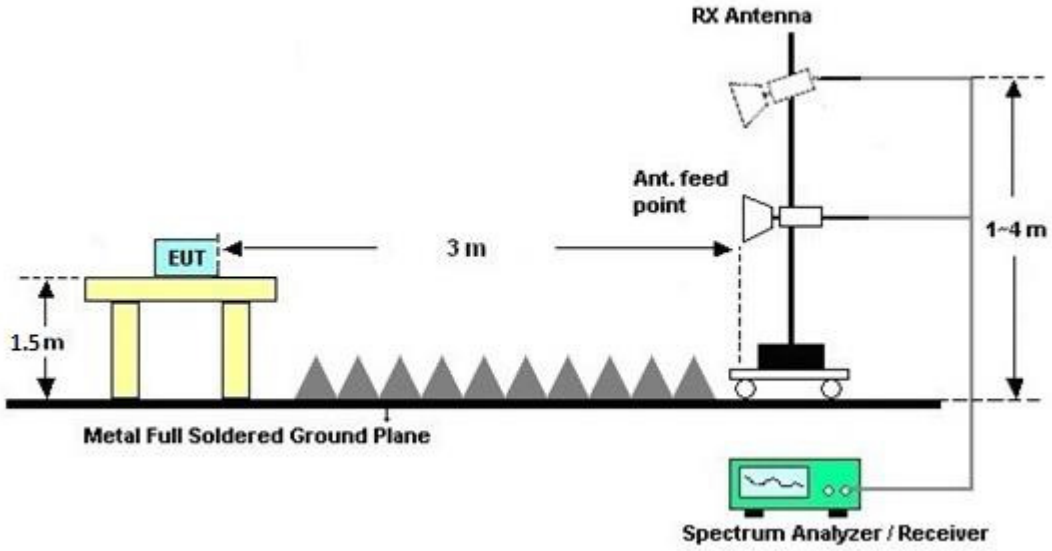
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.1.5 Test Results of Radiated Emissions (9kHz ~ 30MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

3.1.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix A and B of this test report.

3.1.7 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix A and B of this test report.

3.2 AC Conducted Emission Measurement

3.2.1 Limit 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 (dBμV)	
	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.

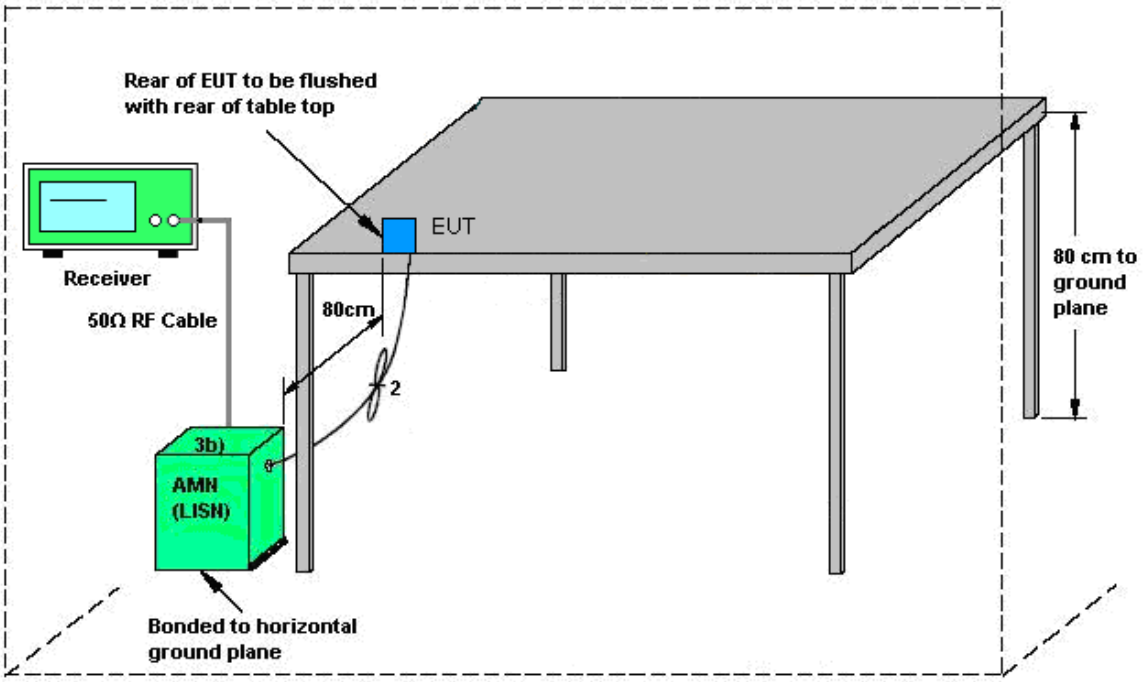
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it 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.

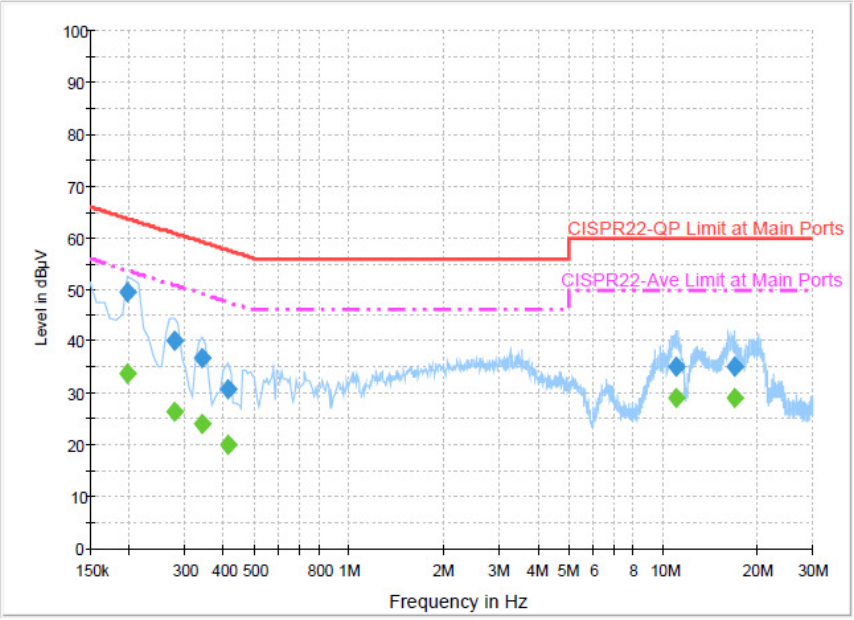
3.2.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.2.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	22~23℃
Test Engineer :	Derreck Chen	Relative Humidity :	52~53%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	TC + TF + Bluetooth Tx		



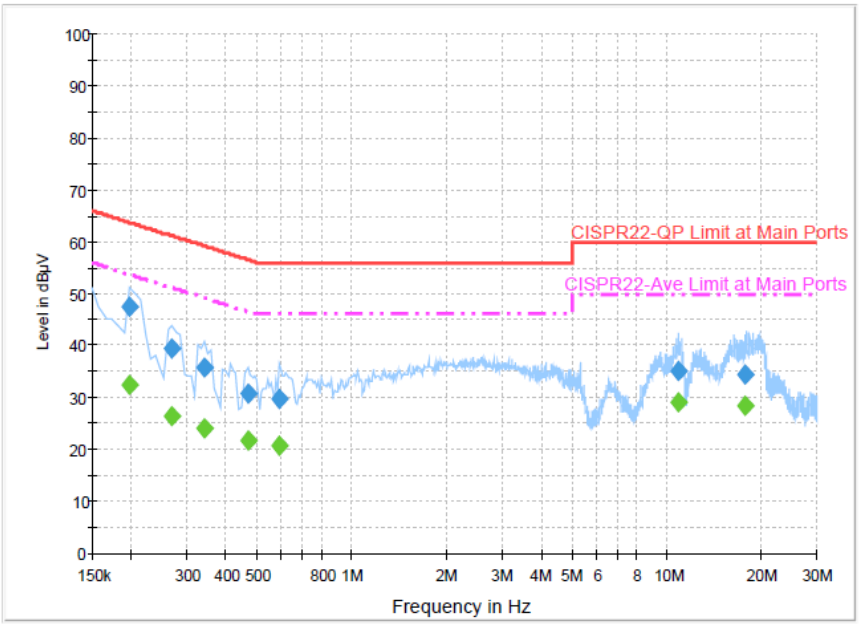
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.198000	49.4	Off	L1	19.7	14.3	63.7
0.278000	40.2	Off	L1	19.7	20.7	60.9
0.342000	36.7	Off	L1	19.7	22.5	59.2
0.414000	30.7	Off	L1	19.6	26.9	57.6
11.038000	35.2	Off	L1	19.8	24.8	60.0
16.886000	35.2	Off	L1	19.9	24.8	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.198000	33.6	Off	L1	19.7	20.1	53.7
0.278000	26.3	Off	L1	19.7	24.6	50.9
0.342000	24.0	Off	L1	19.7	25.2	49.2
0.414000	20.2	Off	L1	19.6	27.4	47.6
11.038000	29.0	Off	L1	19.8	21.0	50.0
16.886000	29.0	Off	L1	19.9	21.0	50.0

Test Mode :	Mode 1	Temperature :	22~23℃
Test Engineer :	Derreck Chen	Relative Humidity :	52~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	TC + TF + Bluetooth Tx		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.198000	47.6	Off	N	19.7	16.1	63.7
0.270000	39.5	Off	N	19.7	21.6	61.1
0.342000	35.9	Off	N	19.7	23.3	59.2
0.470000	30.6	Off	N	19.7	25.9	56.5
0.590000	29.9	Off	N	19.7	26.1	56.0
10.910000	35.2	Off	N	19.8	24.8	60.0
17.670000	34.3	Off	N	19.9	25.7	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.198000	32.3	Off	N	19.7	21.4	53.7
0.270000	26.5	Off	N	19.7	24.6	51.1
0.342000	24.1	Off	N	19.7	25.1	49.2
0.470000	21.7	Off	N	19.7	24.8	46.5
0.590000	20.8	Off	N	19.7	25.2	46.0
10.910000	28.9	Off	N	19.8	21.1	50.0
17.670000	28.3	Off	N	19.9	21.7	50.0

3.3 Antenna Requirements

3.3.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the Antenna exceeds 6 dBi. The use of a permanently attached Antenna or of an Antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

3.3.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.3.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

For CDD transmissions, directional gain is calculated as

$$Directional Gain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;

G_k is the gain in dBi of the kth antenna.

The EUT supports CDD mode.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain “DG” is calculated as following table.

	Ant. 1 (dBi)	Ant. 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
2.4 GHz	2.50	-1.36	3.79	3.79	0.00	0.00

Power Limit Reduction = DG(Power) – 6dBi, (min = 0)

PSD Limit Reduction = DG(PSD) – 6dBi, (min = 0)

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	1132003	300MHz~40GHz	Aug. 12, 2015	Dec. 03, 2015	Aug. 11, 2016	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~40GHz	Aug. 12, 2015	Dec. 03, 2015	Aug. 11, 2016	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 23, 2015	Dec. 03, 2015	Nov. 22, 2016	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jan. 08, 2016	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 26, 2015	Jan. 08, 2016	Aug. 25, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Jan. 08, 2016	Dec. 01, 2016	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Sep. 02, 2015	Dec. 16, 2015 ~ Dec. 25, 2015	Sep. 01, 2016	Radiation (03CH10-HY)
Amplifier	SONOMA	310N	187311	9kHz~1GHz	Nov. 16, 2015	Dec. 16, 2015 ~ Dec. 25, 2015	Nov. 15, 2016	Radiation (03CH10-HY)
EMI Test Receiver	Keysight	N9038A (MXE)	MY54130085	20Hz ~ 8.4GHz	Nov. 04, 2015	Dec. 16, 2015 ~ Dec. 25, 2015	Nov. 03, 2016	Radiation (03CH10-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1325	1GHz ~ 18GHz	Sep. 30, 2015	Dec. 16, 2015 ~ Dec. 25, 2015	Sep. 29, 2016	Radiation (03CH10-HY)
Preamplifier	Keysight	83017A	MY53270078	1GHz~26.5GHz	Nov. 13, 2015	Dec. 16, 2015 ~ Dec. 25, 2015	Nov. 12, 2016	Radiation (03CH10-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz ~ 44GHZ	Oct. 15, 2015	Dec. 16, 2015 ~ Dec. 25, 2015	Oct. 14, 2016	Radiation (03CH10-HY)
Notch Filter	Wainwright	WRCGV10-2375-2400-2483-2508-40SS	SN3	2.4G	Oct. 05, 2015	Dec. 16, 2015 ~ Dec. 25, 2015	Oct. 04, 2016	Radiation (03CH10-HY)
Filter	Woken	100-12750MHz SMA	0100V1H010001G	1.0G High Pass	Oct. 05, 2015	Dec. 16, 2015 ~ Dec. 25, 2015	Oct. 04, 2016	Radiation (03CH10-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Dec. 16, 2015 ~ Dec. 25, 2015	N/A	Radiation (03CH10-HY)
Turn Table	EMEC	TT 2200	N/A	0-360 degree	N/A	Dec. 16, 2015 ~ Dec. 25, 2015	N/A	Radiation (03CH10-HY)
Bilog Antenna	TESEQ	CBL 6111D	35414	30MHz~1GHz	Nov. 17, 2015	Dec. 16, 2015 ~ Dec. 25, 2015	Nov. 16, 2016	Radiation (03CH10-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.26**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.9**