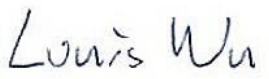
FCC Test Report

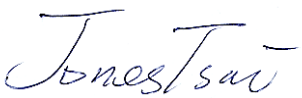
APPLICANT	:	Sony Mobile Communications Inc.
EQUIPMENT	:	GSM/WCDMA/LTE Phone+Bluetooth, DTS/UNII a/b/g/n and NFC
BRAND NAME	:	Sony
FCC ID	:	PY7-08618V
STANDARD	:	FCC 47 CFR FCC Part 15 Subpart B
CLASSIFICATION	:	FCC Class B personal computers and peripherals

The product was received on Dec. 29, 2016 and testing was completed on Mar. 02, 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.



Reviewed by: Louis Wu / Manager



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.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC6D2925	Rev. 01	Initial issue of report	Mar. 03, 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 14.60 dB at 0.166 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 8.73 dB at 720.000 MHz

1. General Description

1.1. Applicant

Sony Mobile Communications Inc.
4-12-3 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

1.2. Manufacturer

Sony Mobile Communications Inc.
4-12-3 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

1.3. Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, DTS/UNII a/b/g/n, NFC, and GPS

Product Specification subjective to this standard	
Antenna Type	WWAN: Coupling type (LDS) Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna GPS/Glonass: PIFA Antenna NFC: Loop Antenna

EUT Information List			
HW Version	SW Version	S/N	Performed Test Item
A	1.21	WUJ01NNPAN	Conducted Emission Radiated Spurious Emission

Accessory List	
Earphone	Model No. : MH410c
	S/N : N/A
USB Cable	Model No. : UCB20
	S/N : 1635A9190031260

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.

1.4. 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. TW1190 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.	
	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:

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.

2. Test Configuration of Equipment Under Test

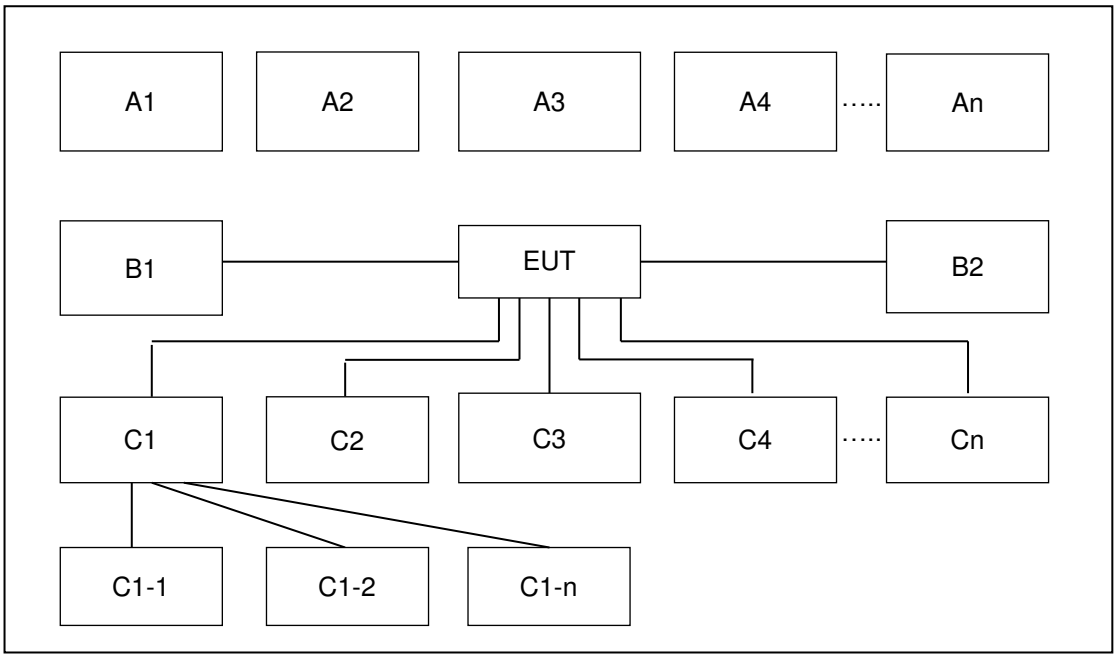
2.1. Test Mode

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 (150 kHz to 30 MHz), radiation (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 : Flight Mode + USB Cable (Data Link with Notebook) + Battery + Earphone
Radiated Emissions	Mode 1 : Flight Mode + USB Cable (Data Link with Notebook) + Battery + Earphone
Remark: Data Link with Notebook means data application transferred mode between EUT and Notebook.	

2.2. Connection Diagram of Test System



Test Setup								
No.	Wireless Station	Connection Type	Test Mode						
			1	-	-	-	-	-	-
C1	Notebook	USB cable	X						
C1-1	IPod	USB Cable to C1	X						
C1-2	WLAN AP	RJ-45 Cable to C1	X						
C2	Earphone	Earphone jack	X						
C3	SD card	SD I/O interface without cable	X						

2.3. Support Unit used in test configuration and system

Item	Equipment	Trade 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 E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
4.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	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 Flight mode.

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.

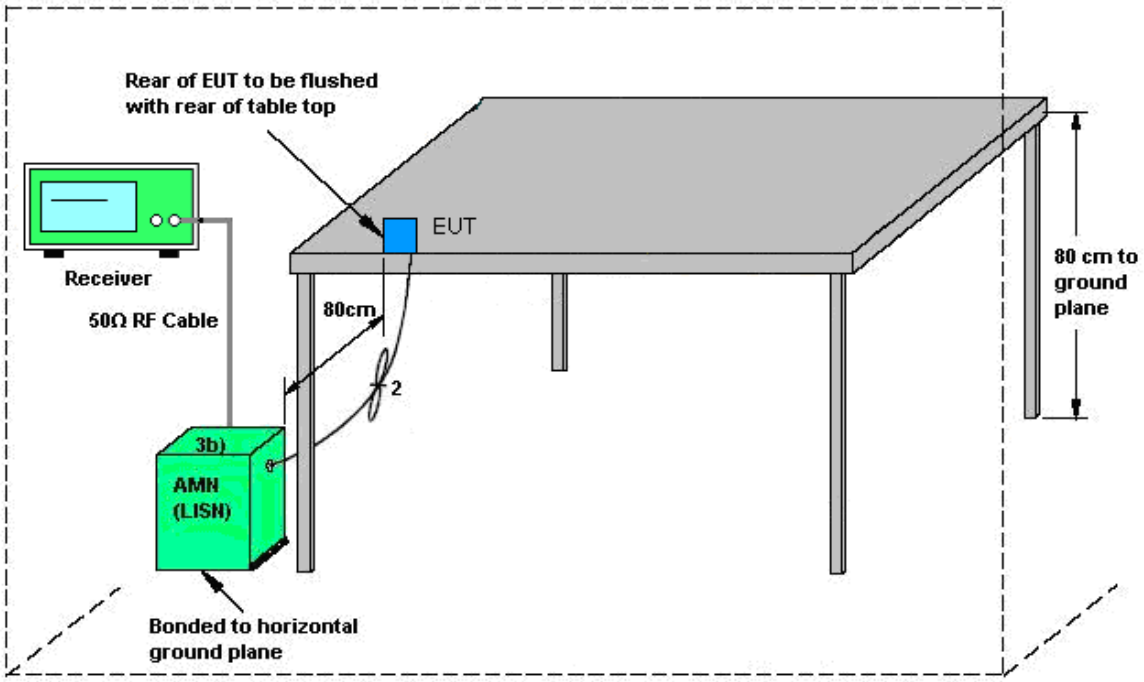
3.1.2 Measuring Instruments

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.

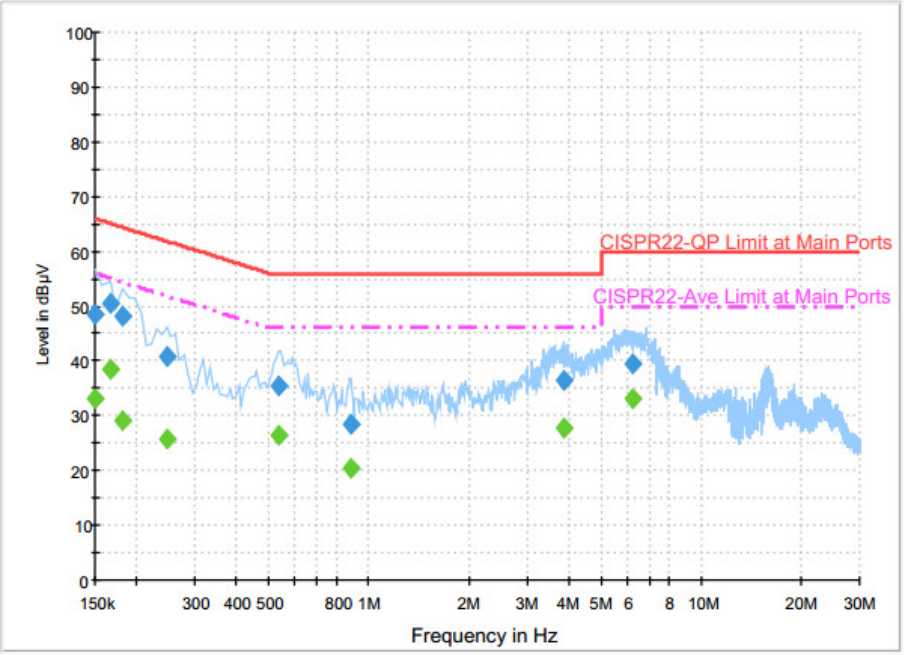
3.1.4 Test Setup



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

3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	**Temperature :**	21~24℃
Test Engineer :	Arthur Hsieh	**Relative Humidity :**	50~53%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	Flight Mode + USB Cable (Data Link with Notebook) + Battery + Earphone		



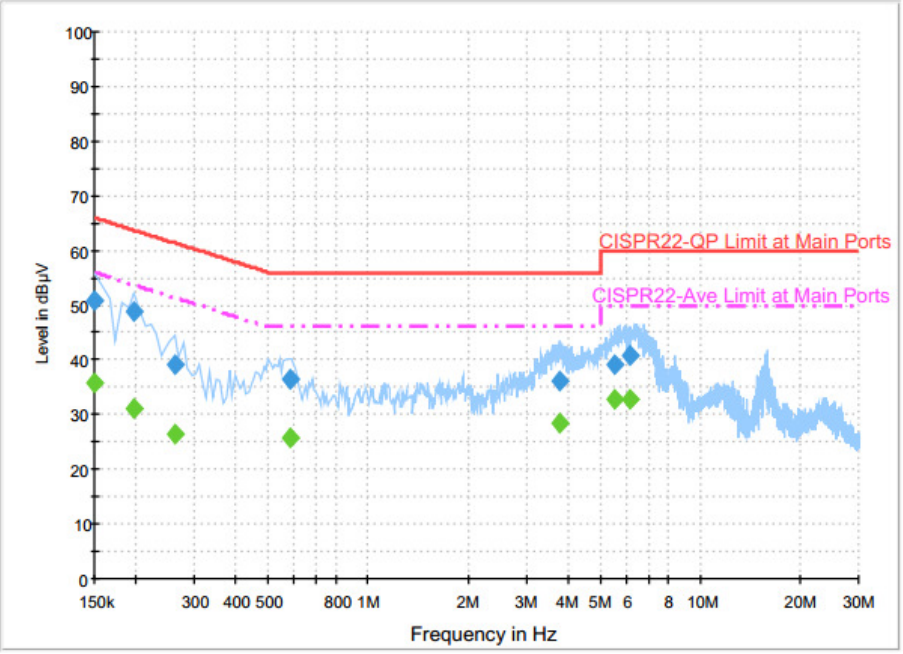
Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	48.6	Off	L1	19.6	17.4	66.0
0.166000	50.6	Off	L1	19.6	14.6	65.2
0.182000	48.0	Off	L1	19.6	16.4	64.4
0.246000	40.6	Off	L1	19.6	21.3	61.9
0.534000	35.6	Off	L1	19.6	20.4	56.0
0.886000	28.4	Off	L1	19.6	27.6	56.0
3.854000	36.4	Off	L1	19.6	19.6	56.0
6.246000	39.6	Off	L1	19.6	20.4	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	33.3	Off	L1	19.6	22.7	56.0
0.166000	38.3	Off	L1	19.6	16.9	55.2
0.182000	29.0	Off	L1	19.6	25.4	54.4
0.246000	25.6	Off	L1	19.6	26.3	51.9
0.534000	26.4	Off	L1	19.6	19.6	46.0
0.886000	20.4	Off	L1	19.6	25.6	46.0
3.854000	27.9	Off	L1	19.6	18.1	46.0
6.246000	33.1	Off	L1	19.6	16.9	50.0

Test Mode :	Mode 1	Temperature :	21~24℃
Test Engineer :	Arthur Hsieh	Relative Humidity :	50~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Flight Mode + USB Cable (Data Link with Notebook) + Battery + Earphone		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	51.0	Off	N	19.6	15.0	66.0
0.198000	48.9	Off	N	19.5	14.8	63.7
0.262000	39.0	Off	N	19.5	22.4	61.4
0.582000	36.4	Off	N	19.5	19.6	56.0
3.766000	36.2	Off	N	19.6	19.8	56.0
5.518000	39.2	Off	N	19.6	20.8	60.0
6.150000	40.9	Off	N	19.6	19.1	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	35.9	Off	N	19.6	20.1	56.0
0.198000	31.0	Off	N	19.5	22.7	53.7
0.262000	26.4	Off	N	19.5	25.0	51.4
0.582000	25.9	Off	N	19.5	20.1	46.0
3.766000	28.4	Off	N	19.6	17.6	46.0
5.518000	32.9	Off	N	19.6	17.1	50.0
6.150000	32.8	Off	N	19.6	17.2	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

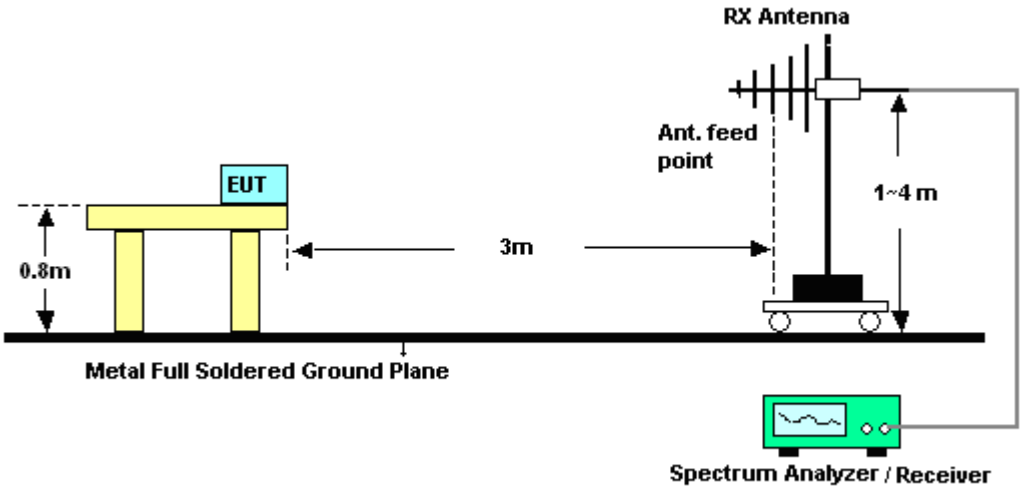
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

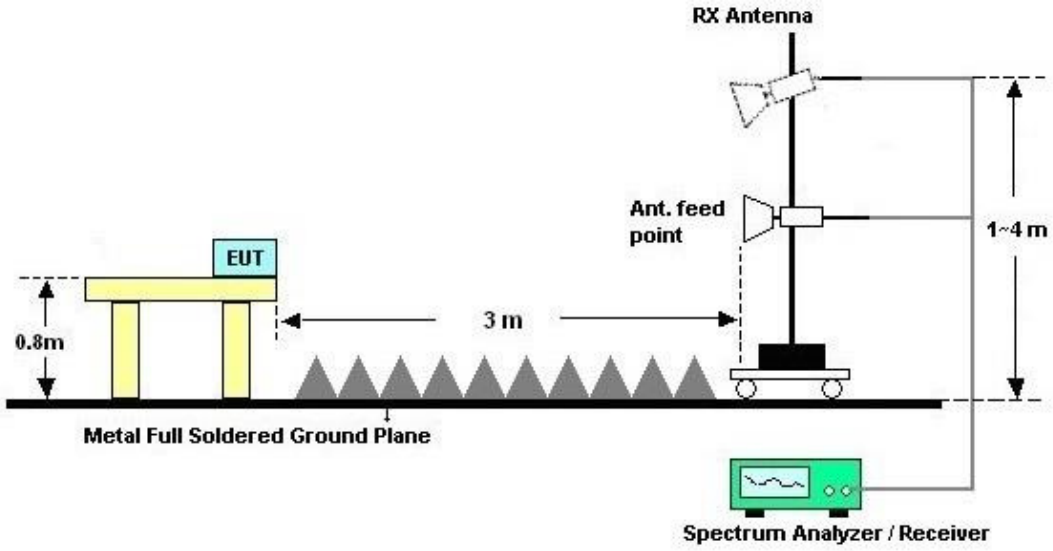
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna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

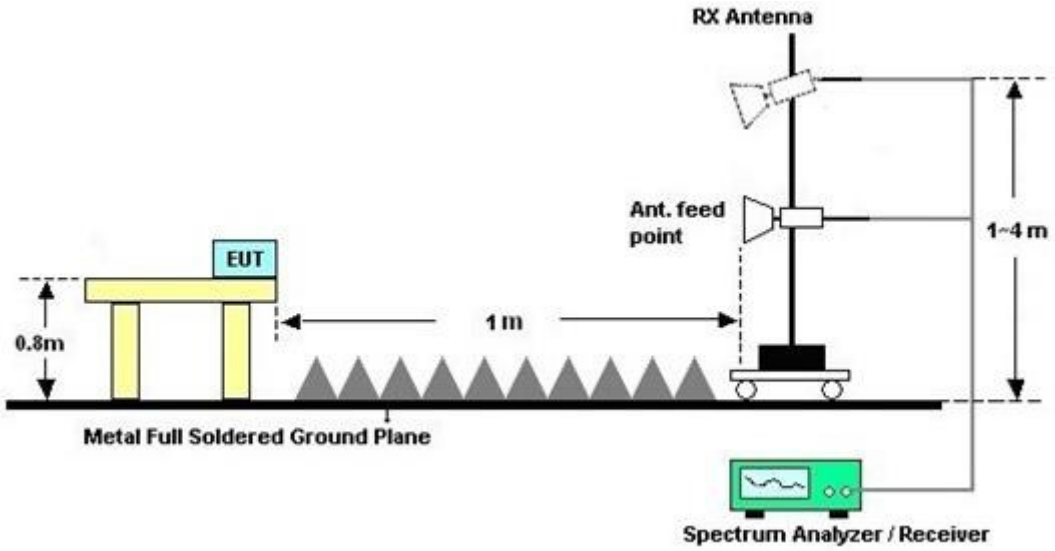
For radiated emissions from 30MHz to 1GHz



For radiated emissions from 1GHz to 18GHz

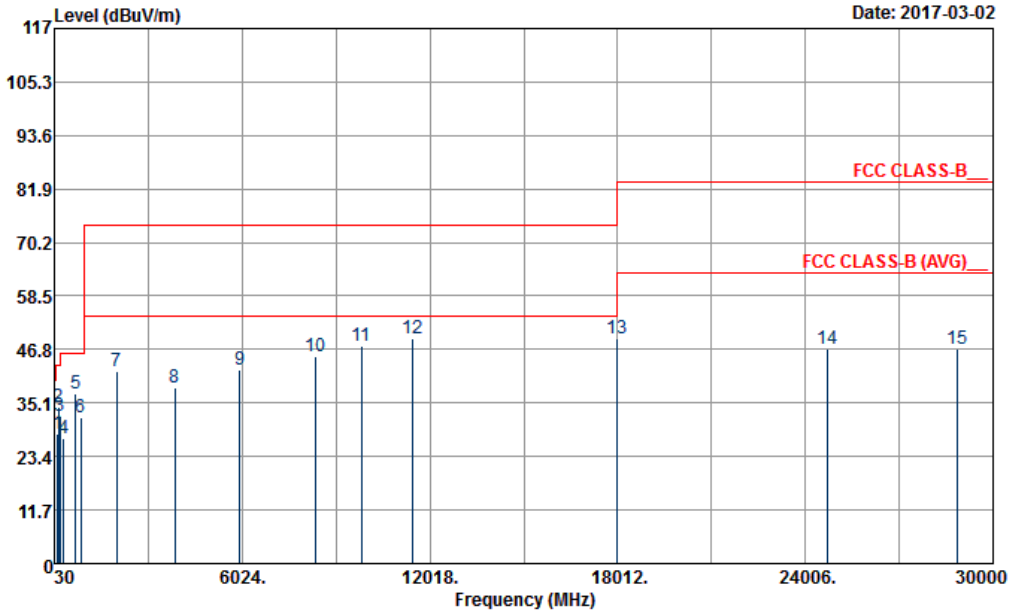


For radiated emissions above 18GHz



3.2.5. Test Result of Radiated Emission

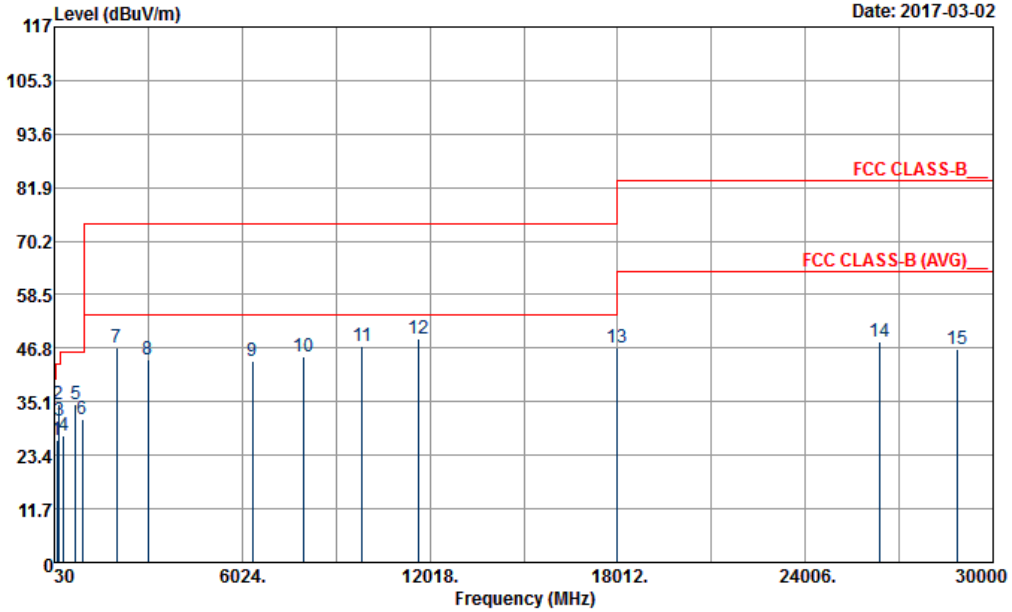
Test Mode :	Mode 1	Temperature :	24~26°C
Test Engineer :	Derreck Chen	Relative Humidity :	58~60%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	Flight Mode + USB Cable (Data Link with Notebook) + Battery + Earphone		



Site : 03CH06-HY
Condition : FCC CLASS-B__ 1m SHF-EHF HORN HORIZONTAL
Project : 6D2925
Power : From System
Memo : Mode 1
Distance : below 18GHz:3m
: above 18GHz:1m

	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	142.32	28.52	-14.98	43.50	40.75	17.36	2.12	31.71	---	---	Peak
2	172.29	34.07	-9.43	43.50	48.48	15.27	2.04	31.72	---	---	Peak
3	197.94	32.19	-11.31	43.50	47.12	14.85	1.94	31.72	---	---	Peak
4	332.90	27.40	-18.60	46.00	37.05	19.81	2.25	31.71	---	---	Peak
5	720.00	37.27	-8.73	46.00	38.33	27.58	3.43	32.07	100	58	Peak
6	864.20	32.01	-13.99	46.00	30.97	29.38	3.33	31.67	---	---	Peak
7	2024.00	42.15	-31.85	74.00	69.45	26.71	6.39	60.40	---	---	Peak
8	3884.00	38.46	-35.54	74.00	59.55	30.24	10.11	61.44	---	---	Peak
9	5958.00	42.45	-31.55	74.00	55.85	34.52	11.08	59.00	---	---	Peak
10	8382.00	45.32	-28.68	74.00	52.49	38.36	13.67	59.20	---	---	Peak
11	9830.00	47.68	-26.32	74.00	53.13	40.64	14.51	60.60	---	---	Peak
12	11478.00	49.32	-24.68	74.00	49.02	42.40	15.95	58.05	100	0	Peak
13	18000.00	49.27	-24.73	74.00	42.95	48.50	15.12	57.30	---	---	Peak
14	24720.00	46.97	-36.57	83.54	34.87	40.20	25.86	53.96	---	---	Peak
15	28848.00	46.99	-36.55	83.54	32.23	40.18	28.91	54.33	---	---	Peak

Test Mode :	Mode 1	Temperature :	24~26°C
Test Engineer :	Derreck Chen	Relative Humidity :	58~60%
Test Distance :	3m	Polarization :	Vertical
Function Type :	Flight Mode + USB Cable (Data Link with Notebook) + Battery + Earphone		



Site : 03CH06-HY
Condition : FCC CLASS-B__ 1m SHF-EHF HORN VERTICAL
Project : 6D2925
Power : From System
Memo : Mode 1
Distance : below 18GHz:3m
: above 18GHz:1m

	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	117.75	26.72	-16.78	43.50	39.02	17.38	2.03	31.71	---	---	Peak
2	172.29	34.50	-9.00	43.50	48.91	15.27	2.04	31.72	100	303	Peak
3	195.24	30.95	-12.55	43.50	45.91	14.81	1.95	31.72	---	---	Peak
4	332.20	27.55	-18.45	46.00	37.20	19.81	2.25	31.71	---	---	Peak
5	720.00	34.44	-11.56	46.00	35.50	27.58	3.43	32.07	---	---	Peak
6	927.90	31.14	-14.86	46.00	28.78	30.43	3.20	31.27	---	---	Peak
7	2024.00	46.99	-27.01	74.00	74.29	26.71	6.39	60.40	---	---	Peak
8	3022.00	44.40	-29.60	74.00	68.38	29.07	7.76	60.81	---	---	Peak
9	6356.00	44.00	-30.00	74.00	56.39	35.30	11.97	59.66	---	---	Peak
10	8006.00	44.95	-29.05	74.00	53.54	37.90	12.71	59.20	---	---	Peak
11	9860.00	47.22	-26.78	74.00	52.76	40.78	14.28	60.60	---	---	Peak
12	11676.00	48.90	-25.10	74.00	49.08	41.67	16.29	58.14	100	0	Peak
13	18000.00	47.01	-26.99	74.00	40.69	48.50	15.12	57.30	---	---	Peak
14	26364.00	48.24	-35.30	83.54	35.60	39.50	27.29	54.15	---	---	Peak
15	28848.00	46.76	-36.78	83.54	32.00	40.18	28.91	54.33	---	---	Peak

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	Jan. 09, 2017	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 30, 2016	Jan. 09, 2017	Aug. 29, 2017	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Apr. 19, 2016	Jan. 09, 2017	Apr. 18, 2017	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 29, 2016	Jan. 09, 2017	Nov. 28, 2017	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 06, 2016	Jan. 09, 2017	Dec. 05, 2017	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 05, 2017	Jan. 09, 2017	Jan. 04, 2018	Conduction (CO05-HY)
Test Software	N/A	EMC32	8.40.0	N/A	N/A	Jan. 09, 2017	N/A	Conduction (CO05-HY)
Bilog Antenna	Schaffner	CBL6111C&N-6-06	2725&AT-N0601	30MHz~1GHz	Oct. 15, 2016	Mar. 02, 2017	Oct. 14, 2017	Radiation (03CH06-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz ~ 44GHz	Oct. 17, 2016	Mar. 02, 2017	Oct. 16, 2017	Radiation (03CH06-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1156	1GHz~18GHz	Aug. 05, 2016	Mar. 02, 2017	Aug. 04, 2017	Radiation (03CH06-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 08, 2016	Mar. 02, 2017	Nov. 07, 2017	Radiation (03CH06-HY)
Preamplifier	SONOMA	310N	186713	9kHz~1GHz	Apr. 19, 2016	Mar. 02, 2017	Apr. 18, 2017	Radiation (03CH06-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1850117	1GHz ~ 18GHz	Jun. 22, 2016	Mar. 02, 2017	Jun. 21, 2017	Radiation (03CH06-HY)
Preamplifier	MITEQ	JS44-18004000-33-8P	1840917	18GHz~40GHz	Jun. 14, 2016	Mar. 02, 2017	Jun. 13, 2017	Radiation (03CH06-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY249564 MY249524 MY283184	30MHz~1GHz	Sep. 30, 2016	Mar. 02, 2017	Sep. 29, 2017	Radiation (03CH06-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4 MY28419/4M Y28654/4	9KHz~40GHz	Sep. 12, 2016	Mar. 02, 2017	Sep. 11, 2017	Radiation (03CH06-HY)
Controller	INN-CO	EM1000	060782	Control Turn table & Ant Mast	N/A	Mar. 02, 2017	N/A	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF780208212	1m~4m	N/A	Mar. 02, 2017	N/A	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0-360 degree	N/A	Mar. 02, 2017	N/A	Radiation (03CH06-HY)
Hygrometer	WISEWIND	410	BU5004	N/A	May 03, 2016	Mar. 02, 2017	May 02, 2017	Radiation (03CH06-HY)
Test Software	Audix	E3	6.2009-8-24	N/A	N/A	Mar. 02, 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 of 95% (U = 2Uc(y))	2.70

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.90

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 30000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.70