

TEST REPORT

Reference No...... : WTS17S0888240-7E
FCC ID : 2AC88-G1701
Applicant..... : HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED
Address..... : Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road,
Kowloon, HongKong
Manufacturer : Shenzhen uCloudlink Network Technology, Co., Ltd
Address..... : 3rd Floor, A Part of Building 1, Shenzhen Software Industry Base,
nanshan district xuefu Road Post Code 518057, Shenzhen City,
Guangdong Province, P.R.China
Product..... : Smart Phone
Model(s)..... : G1701
Brand..... : GlocalMe
Standards..... : FCC CFR47 Part 15 Section 15.225: 2016
Date of Receipt sample : 2017-08-23
Date of Test : 2017-08-24 to 2017-11-30
Date of Issue..... : 2017-12-12
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:

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Approved by:



Philo Zhong

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2 Laboratories Introduction

Waltek Services Test Group Ltd. is one of the largest and the most comprehensive third party testing organizations in China, our headquarter located in Shenzhen (CNAS Registration No. L3110, A2LA Certificate Number: 4243.01) and have branches in Foshan (CNAS Registration No. L6478), Dongguan (CNAS Registration No. L9950), Zhongshan, Suzhou (CNAS Registration No. L7754), Ningbo and Hong Kong, Our test capability covered four large fields: safety test. Electronic Magnetic Compatibility(EMC), reliability and energy performance, Chemical test. Meanwhile, Waltek has got recognition as registration and accreditation laboratory from EMSD (Electrical and Mechanical Services Department), and American Energy star, FCC(The Federal Communications Commission), CPSC(Consumer Product Safety Commission), CEC(California energy efficiency), IC(Industry Canada) and ELI(Efficient Lighting Initiative). It's the strategic partner and data recognition laboratory of international authoritative organizations, such as UL, Intertek(ETL-SEMKO), CSA, TÜV Rheinland, TÜV SÜD, etc. As a professional, comprehensive, justice international test organization, we still keep the scientific and rigorous work attitude to help each client satisfy the international standards and assist their product enter into globe market smoothly.

Waltek Services (Shenzhen) Co., Ltd.

A. Accreditations for Conformity Assessment (International)

Country/Region	Accreditation Body	Scope	Note
USA	CNAS (Registration No.: L3110) A2LA (Certificate No.: 4243.01)	FCC ID \ DOC \ VOC	1
Canada		IC ID \ VOC	2
Japan		MIC-T \ MIC-R	-
Europe		EMCD \ RED	-
Taiwan		NCC	-
Hong Kong		OFCA	-
Australia		RCM	-
India		WPC	-
Thailand	International Services	NTC	-
Singapore		IDA	-
Note: 1. FCC Designation No.: CN1201. Test Firm Registration No.: 523476. 2. IC Canada Registration No.: 7760A			

B. TCBs and Notify Bodies Recognized Testing Laboratory.

Recognized Testing Laboratory of ...	Notify body number
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Waltek Services (Shenzhen) Co.,Ltd.

<http://www.waltek.com.cn>

TUV Rheinland	Optional.
Intertek	
TUV SUD	
SGS	
Phoenix Testlab GmbH	0700
Element Materials Technology Warwick Ltd	0891
Timco Engineering, Inc.	1177
Eurofins Product Service GmbH	0681

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3 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTS17S0888240-7E	2017-08-23	2017-08-24 to 2017-11-30	2017-12-12	original	-	Valid

4 General Information

4.1 General Description of E.U.T.

Product Name:	Smart Phone
Model No.:	G1701
Model Description:	N/A
GSM Band(s):	GSM 850/900/1800/1900MHz
GPRS/EGPRS Class:	12
WCDMA Band(s):	FDD Band I/II/IV/V
LTE Band(s):	FDD Band 2/4/5/7/12/13/17/25/26 TDD Band 41
Wi-Fi Specification:	2.4G-802.11b/g/n HT20 5G-802.11a/n HT20
Bluetooth Version:	Bluetooth v4.0 with BLE
GPS:	Support
NFC:	Support
Hardware Version:	G1701_VER_B
Software Version:	S1_C00_TSV1.0.001.008.171030 user dev-keys
Highest frequency (Exclude Radio):	1.25GHz
Storage Location:	Internal Storage

Note: This EUT has two SIM card slots, and use same one RF module. We found that RF parameters are the same, when we insert the card 1 and card 2. So we usually performed the test under main card slot 1.

4.2 Details of E.U.T.

Operation Frequency:	GSM/GPRS/EDGE 850: 824~849MHz PCS/GPRS/EDGE 1900: 1850~1910MHz WCDMA Band II: 1850~1910MHz WCDMA Band V: 824~849MHz WCDMA Band IV: 1710~1755MHz LTE Band 2: 1850~1910MHz LTE Band 4: 1710~1755MHz LTE Band 5: 824~849MHz LTE Band 7: 2500~2570MHz LTE Band 12: 699~716MHz LTE Band 13: 777~787MHz LTE Band 17: 704~716MHz LTE Band 25: 1850~1915MHz LTE Band 26: 814~849MHz LTE Band 41: 2496~2690MHz WiFi:
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	802.11b/g/n HT20: 2412~2462MHz
	802.11a/ n(HT20): 5150MHz~5250MHz 5725MHz~5850MHz
	Bluetooth: 2402~2480MHz
	NFC:13.56MHz
Max. RF output power:	GSM 850: 32.82dBm PCS1900: 29.98dBm WCDMA Band II: 22.81dBm WCDMA Band V: 22.70dBm WCDMA Band IV: 22.81dBm LTE Band 2: 23.90dBm LTE Band 4: 22.89dBm LTE Band 5: 22.95dBm LTE Band 7: 21.97dBm LTE Band 12: 23.88dBm LTE Band 13: 23.73dBm LTE Band 17: 22.93dBm LTE Band 25: 22.95dBm LTE Band 26: 22.98dBm LTE Band 41: 22.95dBm WiFi(2.4G): 9.49dBm WiFi(5G) Band I: 9.52dBm WiFi(5G)Band IV: 7.44dBm Bluetooth: 2.13dBm
Type of Modulation:	GSM,GPRS: GMSK EDGE: GMSK, 8PSK WCDMA: BPSK, 16QAM LTE: QPSK, 16QAM WiFi: CCK, OFDM Bluetooth: GFSK, Pi/4 DQPSK, 8DPSK NFC: ASK, 2ASK
Antenna installation:	GSM/WCDMA/LTE: internal permanent antenna WiFi/Bluetooth: internal permanent antenna NFC: Loop antenna
Antenna Gain:	GSM 850: -1.56dBi PCS1900: 1.79dBi WCDMA Band II: 1.79dBi WCDMA Band V: -1.56dBi WCDMA Band IV: -0.12dBi LTE Band 2: 1.79dBi LTE Band 4: -0.12dBi LTE Band 5: -1.56dBi LTE Band 7: 3.01dBi LTE Band 12: -2.76dBi LTE Band 13: -1.28dBi LTE Band 17: -2.76dBi LTE Band 25: 1.79dBi

	LTE Band 26 -1.56dBi
	LTE Band 41 3.62dBi
	WiFi(2.4G): 2.47dBi
	WiFi(5G): 2.47dBi
	Bluetooth: 2.47dBi
Ratings:	Battery DC 3.85V, 2900mAh
	DC 5V, 2.0A; 9V, 2.0A; 12V, 1.5A charging from adapter 1 (Adapter Input: 100-240V~50/60Hz 0.6A)
	DC 5V, 2.0A charging from adapter 2 (Adapter Input: 100-240V~50/60Hz MAX 0.3A)
Adapter1:	Manufacture: ShenZhen HuaJin Electronics CO.,LTD Model No.: HJ-FC010K7-US
Adapter2:	Manufacture: SHENZHEN HONOR ELECTRONIC CO.,LTD Model No.: ADS-12DA-05 05010E

4.3 Channel List

NFC Test Mode		
Channel No.	Channel No.	Frequency (MHz)
0	0	13.56MHz

4.4 Test Mode

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests; the worst data were recorded and reported.

Test mode	Lower channel	Middle channel	Upper channel
Transmitting	N/A	13.56MHz	N/A

5 Test Summary

Test Items	Test Requirement	Result
Conducted Emissions	15.207	PASS
Radiated Emission	15.205(a) 15.209 15.225	PASS
Frequency Tolerance	15.225	PASS
20dB Bandwidth	15.215(c)	PASS
Antenna Requirement	15.203	PASS
Note: C=Compliance; NC=Not Compliance; NT=Not Tested; N/A=Not Applicable.		

6 Equipment Used during Test

6.1 Equipments List

Conducted Emissions Test Site 1#						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMI Test Receiver	R&S	ESCI	100947	2017-09-12	2018-09-11
2.	LISN	R&S	ENV216	101215	2017-09-12	2018-09-11
3.	Cable	Top	TYPE16(3.5M)	-	2017-09-12	2018-09-11
Conducted Emissions Test Site 2#						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMI Test Receiver	R&S	ESCI	101155	2017-09-12	2018-09-11
2.	LISN	SCHWARZBECK	NSLK 8128	8128-289	2017-09-12	2018-09-11
3.	Limitter	York	MTS-IMP-136	261115-001-0024	2017-09-12	2018-09-11
4.	Cable	LARGE	RF300	-	2017-09-12	2018-09-11
3m Semi-anechoic Chamber for Radiation Emissions Test site 1#						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1	Spectrum Analyzer	R&S	FSP	100091	2017-04-29	2018-04-28
2	Amplifier	Agilent	8447D	2944A10178	2017-01-13	2018-01-12
3	Active Loop Antenna	Beijing Dazhi	ZN30900A	0703	2017-10-17	2018-10-16
4	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	33 6	2017-04-09	2018-04-08
5	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	2017-09-12	2018-09-11
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	2017-04-09	2018-04-08
7	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	2017-04-13	2018-04-12
8	Coaxial Cable (above 1GHz)	Top	1GHz-18GHz	EW02014-7	2017-04-13	2018-04-12
3m Semi-anechoic Chamber for Radiation Emissions Test site 2#						
Item	Equipment	Manufacturer	Model No.	Serial No	Last Calibration Date	Calibration Due Date
1	Test Receiver	R&S	ESCI	101296	2017-04-13	2018-04-12
2	Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	2017-04-09	2018-04-08
3	Amplifier	ANRITSU	MH648A	M43381	2017-04-13	2018-04-12
4	Cable	HUBER+SUHNER	CBL2	525178	2017-04-13	2018-04-12

RF Conducted Testing						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMC Analyzer (9k~26.5GHz)	Agilent	E7405A	MY45114943	2017-09-12	2018-09-11
2.	Spectrum Analyzer (9k-6GHz)	R&S	FSL6	100959	2017-09-12	2018-09-11
3.	Signal Analyzer (9k~26.5GHz)	Agilent	N9010A	MY50520207	2017-09-12	2018-09-11

6.2 Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-6}$
RF Power	± 1.0 dB
RF Power Density	± 2.2 dB
Radiated Spurious Emissions test	± 5.03 dB (Bilog antenna 30M~1000MHz)
	± 5.47 dB (Horn antenna 1000M~25000MHz)
Confidence interval: 95%. Confidence factor:k=2	

6.3 Test Equipment Calibration

All the test equipments used are valid and calibrated by CEPREI Certification Body that address is No.110 Dongguan Zhuang RD. Guangzhou, P.R.China.

7 Conducted Emission

Test Requirement:	FCC CFR 47 Part 15 Section 15.207
Test Method:	ANSI C63.10:2013
Test Result:	PASS
Frequency Range:	150kHz to 30MHz
Class/Severity:	Class B
Limit:	

Frequency (MHz)	Limit (dB μ V)	
	Quasi-peak	Average
0.15 to 0.5	66 to 5 *	56 to 46*
0.5 to	56	60
5 to 30	60	50

7.1 E.U.T. Operation

Operating Environment :

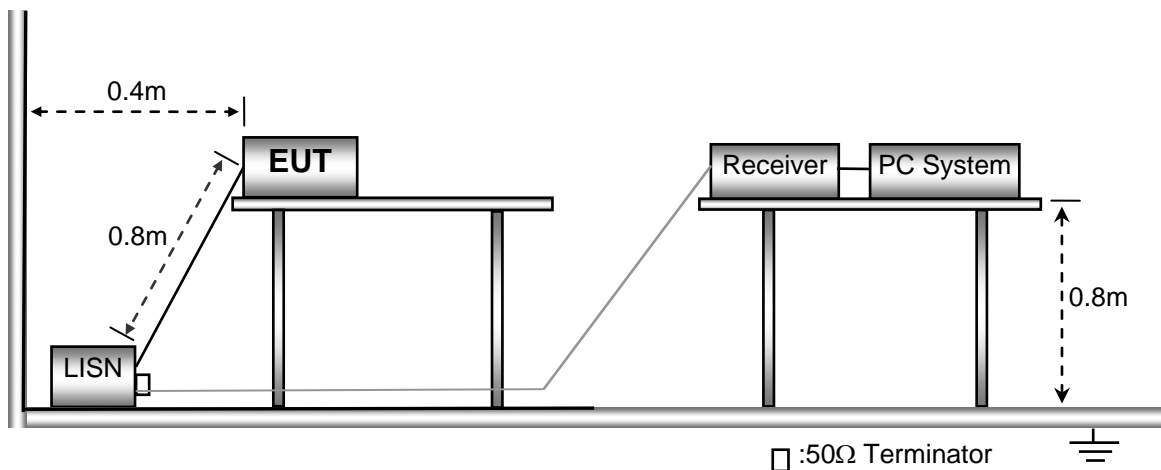
Temperature:	25.5 °C
Humidity:	51 % RH
Atmospheric Pressure:	101.2kPa

EUT Operation :

The test was performed in transmitting mode, the test data were shown in the report.

7.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10:2013



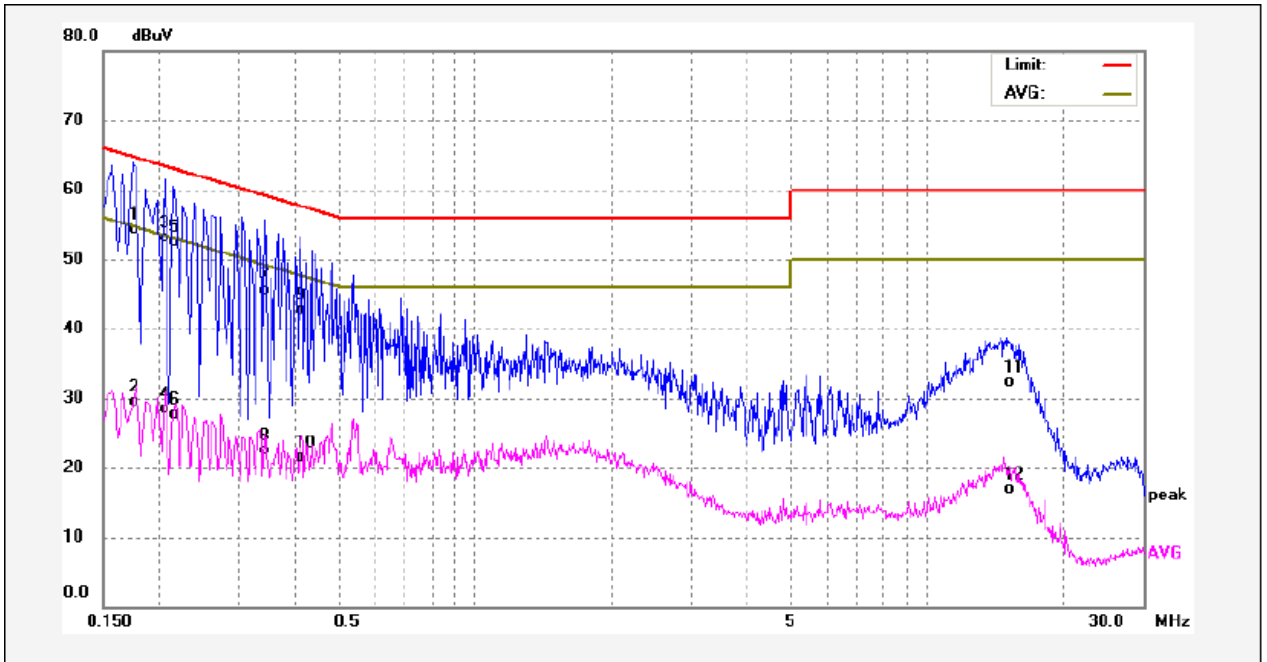
7.3 Measurement Description

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

7.4 Test Result

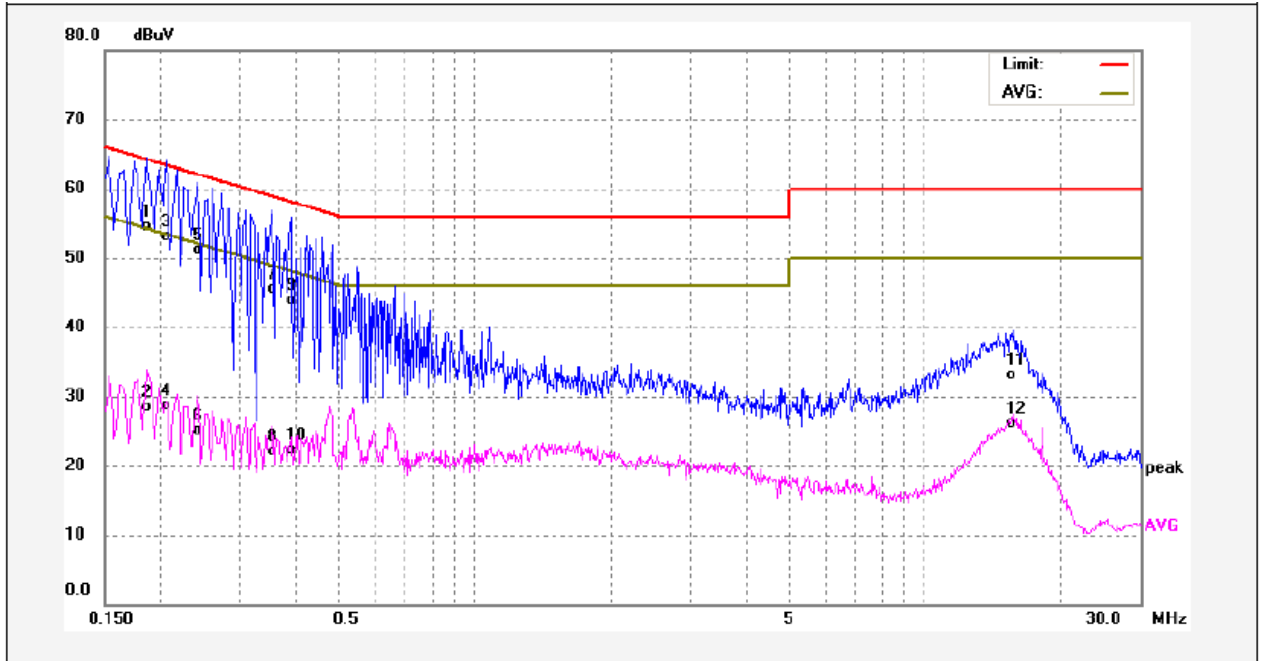
Adapter1:

Live line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1740	44.35	9.87	54.22	64.76	-10.54	QP	
2	0.1740	19.60	9.87	29.47	54.76	-25.29	AVG	
3	0.2060	43.12	9.93	53.05	63.36	-10.31	QP	
4	0.2060	18.53	9.93	28.46	53.36	-24.90	AVG	
5	0.2140	42.57	9.94	52.51	63.04	-10.53	QP	
6	0.2140	17.72	9.94	27.66	53.04	-25.38	AVG	
7	0.3420	35.51	10.05	45.56	59.15	-13.59	QP	
8	0.3420	12.54	10.05	22.59	49.15	-26.56	AVG	
9	0.4100	32.60	10.03	42.63	57.65	-15.02	QP	
10	0.4100	11.49	10.03	21.52	47.65	-26.13	AVG	
11	15.0500	21.96	10.38	32.34	60.00	-27.66	QP	
12	15.0500	6.46	10.38	16.84	50.00	-33.16	AVG	

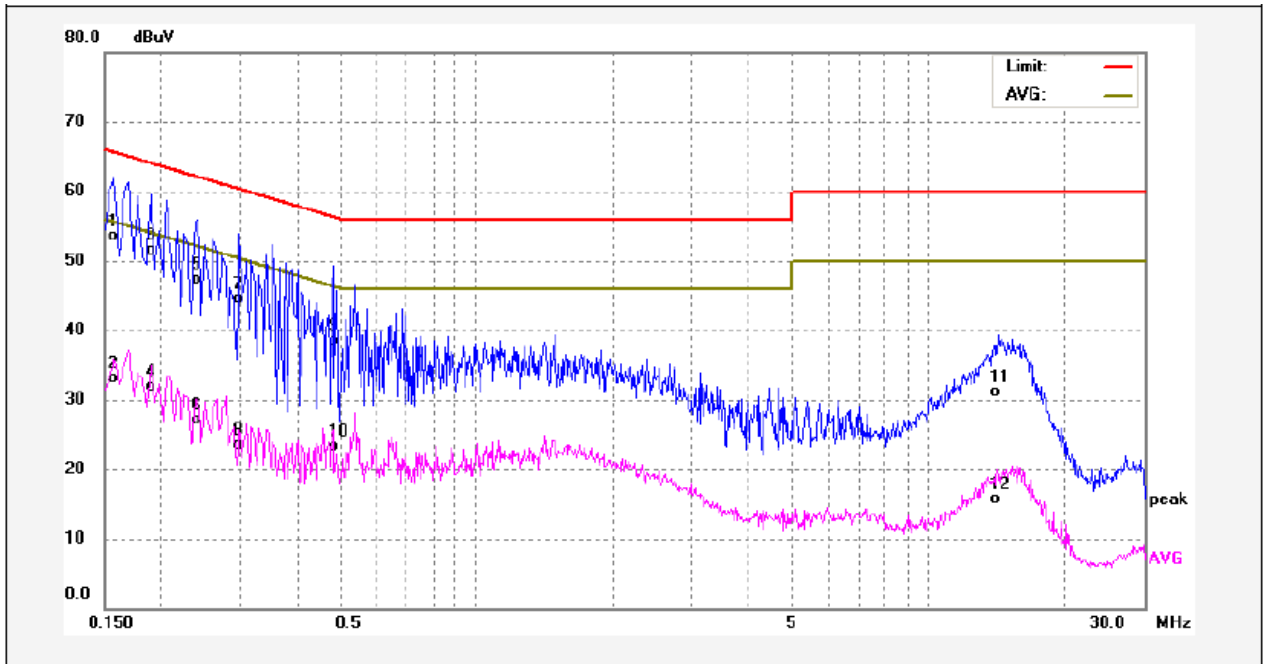
Neutral line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1860	44.62	9.89	54.51	64.21	-9.70	QP	
2	0.1860	18.63	9.89	28.52	54.21	-25.69	AVG	
3	0.2060	43.20	9.93	53.13	63.36	-10.23	QP	
4	0.2060	18.76	9.93	28.69	53.36	-24.67	AVG	
5	0.2420	41.07	9.99	51.06	62.02	-10.96	QP	
6	0.2420	15.09	9.99	25.08	52.02	-26.94	AVG	
7	0.3540	35.52	10.06	45.58	58.87	-13.29	QP	
8	0.3540	12.00	10.06	22.06	48.87	-26.81	AVG	
9	0.3899	33.89	10.04	43.93	58.06	-14.13	QP	
10	0.3899	12.20	10.04	22.24	48.06	-25.82	AVG	
11	15.7620	22.77	10.39	33.16	60.00	-26.84	QP	
12	15.7620	15.64	10.39	26.03	50.00	-23.97	AVG	

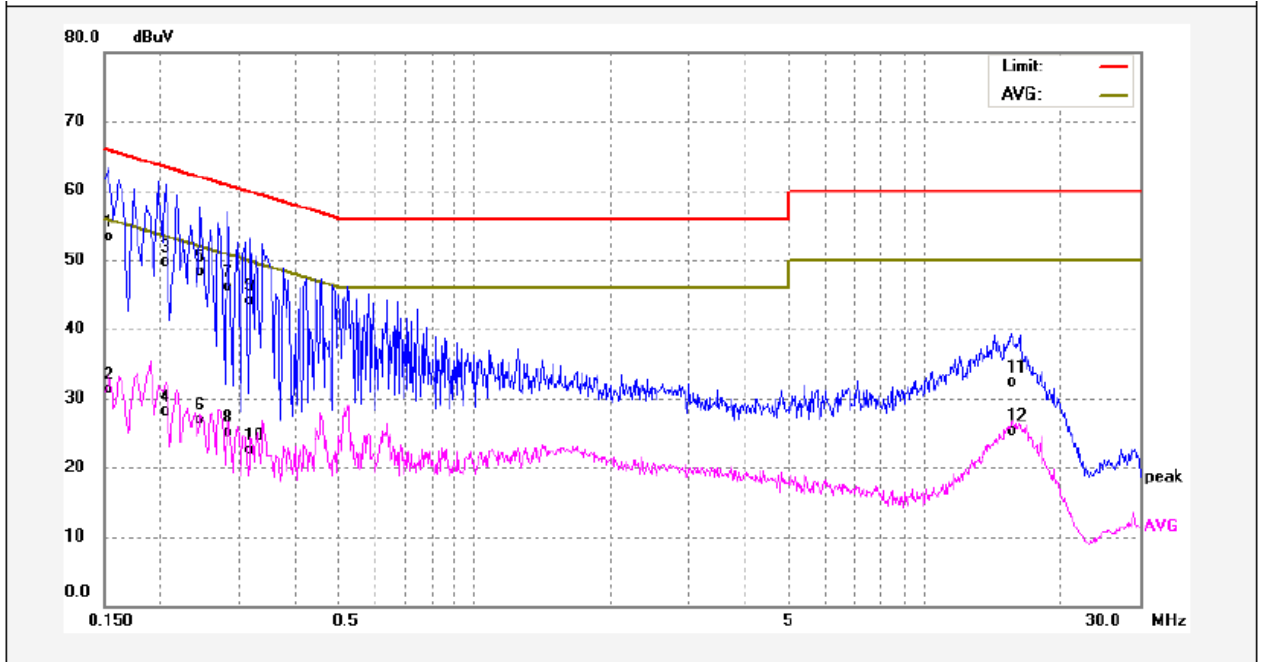
Adapter2:

Live line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1580	43.49	9.98	53.47	65.56	-12.09	QP	
2	0.1580	23.18	9.98	33.16	55.56	-22.40	AVG	
3	0.1900	41.51	9.90	51.41	64.03	-12.62	QP	
4	0.1900	21.94	9.90	31.84	54.03	-22.19	AVG	
5	0.2420	37.37	9.99	47.36	62.02	-14.66	QP	
6	0.2420	17.14	9.99	27.13	52.02	-24.89	AVG	
7	0.2980	34.58	9.98	44.56	60.30	-15.74	QP	
8	0.2980	13.59	9.98	23.57	50.30	-26.73	AVG	
9	0.4820	28.37	10.07	38.44	56.30	-17.86	QP	
10	0.4820	13.26	10.07	23.33	46.30	-22.97	AVG	
11	14.2340	20.74	10.38	31.12	60.00	-28.88	QP	
12	14.2340	5.37	10.38	15.75	50.00	-34.25	AVG	

Neutral line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1539	43.34	10.02	53.36	65.78	-12.42	QP	
2	0.1539	21.31	10.02	31.33	55.78	-24.45	AVG	
3	0.2060	39.72	9.93	49.65	63.36	-13.71	QP	
4	0.2060	18.10	9.93	28.03	53.36	-25.33	AVG	
5	0.2460	38.34	10.00	48.34	61.89	-13.55	QP	
6	0.2460	16.85	10.00	26.85	51.89	-25.04	AVG	
7	0.2819	36.05	9.99	46.04	60.76	-14.72	QP	
8	0.2819	15.02	9.99	25.01	50.76	-25.75	AVG	
9	0.3180	34.02	10.01	44.03	59.76	-15.73	QP	
10	0.3180	12.44	10.01	22.45	49.76	-27.31	AVG	
11	15.5460	22.01	10.39	32.40	60.00	-27.60	QP	
12	15.5460	15.00	10.39	25.39	50.00	-24.61	AVG	

8 Radiated Spurious Emissions

Test Requirement: FCC CFR47 Part 15 Section 15.209

Test Method: ANSI C63.10

Test Result: PASS

Measurement Distance: 3m

Limit:

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Dist	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	$20\log^{(2400/F(kHz))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	$20\log^{(24000/F(kHz))} + 40$
1.705 ~ 30	30	30	100 * 30	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

8.1 EUT Operation

Operating Environment :

Temperature: 23.5 °C

Humidity: 51.1 % RH

Atmospheric Pressure: 101.2kPa

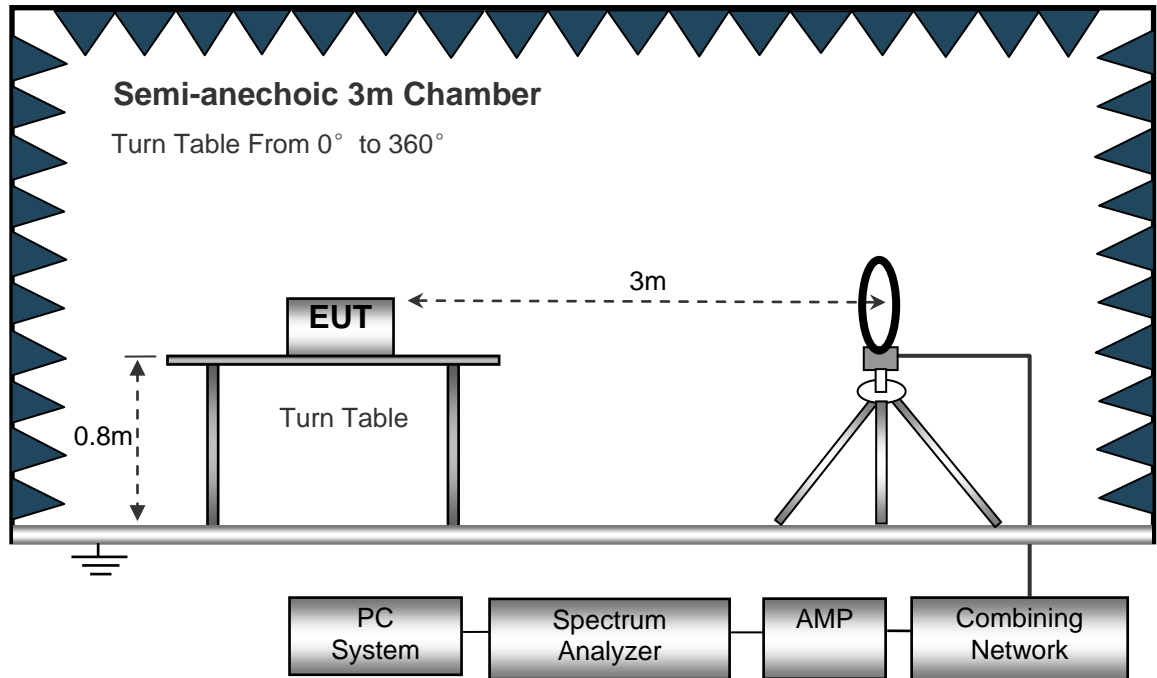
EUT Operation :

The test was performed in transmitting mode, the test data were shown in the report.

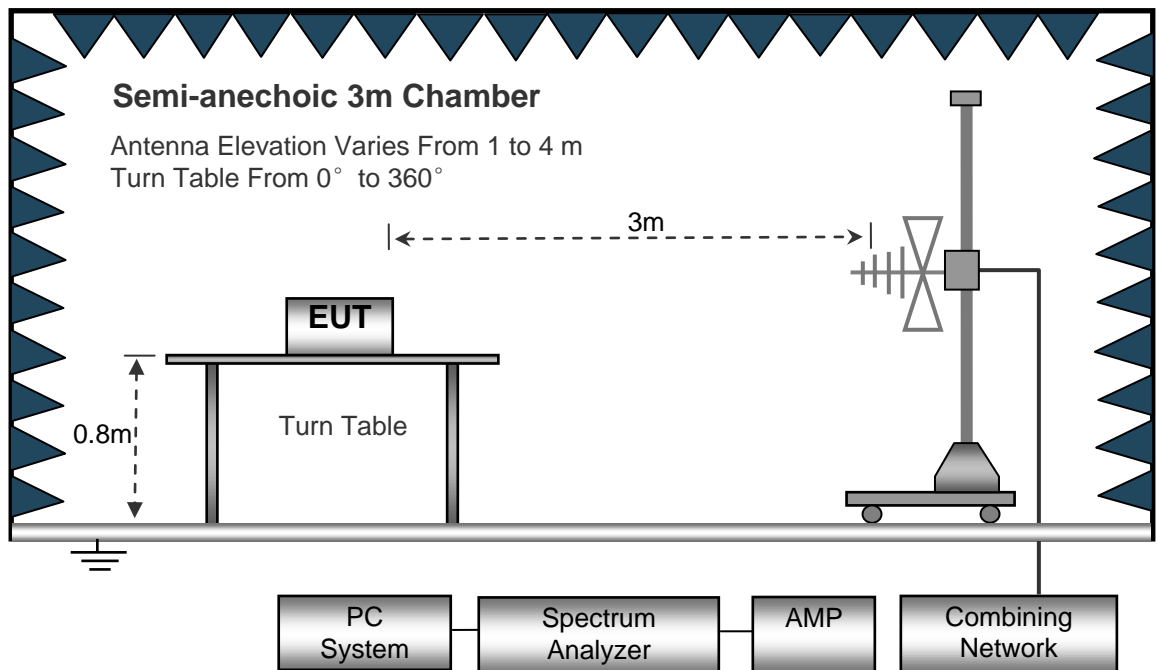
8.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.10: 2013

The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30 MHz to 1 GHz.



8.3 Spectrum Analyzer Setup

Below 30MHz

Sweep Speed Auto
 IF Bandwidth..... 10kHz
 Video Bandwidth..... 10kHz
 Resolution Bandwidth..... 10kHz

30MHz ~ 1GHz

Sweep Speed Auto
 Detector PK
 Resolution Bandwidth..... 100kHz
 Video Bandwidth..... 300kHz

8.4 Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane for below 1GHz
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions. The spectrum was investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The radiation measurements are tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the Z position. So the data shown was the Z position only.

8.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit}$$

8.6 Summary of Test Results

Test Frequency: 9 kHz ~ 30MHz Note: Correct factor = Cable loss + Antenna factor

Frequency (MHz)	Receiver Reading (PK) (dB μ V) @3m	Turn table Angle Degree	RX Antenna		Corrected Factor (dB/m)	Corrected Amplitude (PK) (dB μ V/m) @3m	FCC Part 15.225	
			Height (m)	Polar (H/V)			Limit (dB μ V/ m)@3m	Margin (dB)
13.56	42.53	124	1.9	H	19.68	65.25	124	-58.75
13.56	36.24	326	1.5	V	19.68	58.14	124	-65.86

Frequency (MHz)	Receiver Reading	Detector	Correct factor	Extrapolation factor	Measurement results (calculated)	Limits	Margin
	dB μ V @3m	QP	dB/m	dB	dB μ V/m @30m	dB μ V/m @30m	dB
5.268	32.59	QP	20.20	40.00	18.24	29.54	-11.30
12.547	35.64	QP	19.90	40.00	13.27	29.54	-16.27

Frequency Range (MHz)	Frequency (MHz)	Maximum Reading	Detector	Correct factor	Extrapolation factor	Measurement results (calculated)	Limits	Margin
		dB μ V @3m	QP	dB/m	dB	dB μ V/m @30m	dB μ V/m @30m	dB
13.110~ 13.41	13.395	40.36	QP	21.55	40	21.48	40.51	-19.03
13.410~ 13.553	13.532	48.64	QP	21.55	40	30.57	50.47	-19.90
13.567~ 13.71	13.569	48.29	QP	21.55	40	29.17	50.47	-21.30
13.710~ 14.01	13.704	37.47	QP	21.55	40	19.28	40.51	-21.23

Test Frequency: 30MHz ~ 1GHz

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.225/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V) @3m	(QP)	Degree	(m)	(H/V)	(dB)	(dB μ V/m) @3m	(dB μ V/m) @3m	(dB)
33.25	31.25	QP	142	1.2	H	-14.30	16.98	40.00	-23.02
33.25	32.65	QP	208	2.0	V	-14.30	14.64	40.00	-26.00
221.36	35.29	QP	48	1.8	H	-13.58	21.54	46.00	-24.46
21.26	39.65	QP	109	1.6	V	-13.58	25.63	46.00	20.37
516.69	38.45	QP	201	1.7	H	-5.63	32.54	46.00	-13.46
516.69	38.69	QP	198	1.6	V	-5.63	32.47	46.00	-13.53

9 Frequency Tolerance

Test Requirement: FCC Part15.225

Test Method: ANSI C63.10: 2013

Limit The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

9.1 Test Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set EUT as normal operation
3. Set SPA Centre Frequency = fundamental frequency, RBW=30 Hz, VBW= 100 Hz, Span =3 kHz.
4. Set SPA Max hold. Mark peak.

9.2 Test Result

Power Supply	Temperature (°C)	Measured Frequency (MHz)	Frequency Error	Part 15.225 Limit
DC 3.85V	-20	13.5636	0.0265%	±0.01%
	-10	13.5629	0.0214%	±0.01%
	0	13.5626	0.0194%	±0.01%
	+10	13.5629	0.0211%	±0.01%
	+20	13.5633	0.0241%	±0.01%
	+30	13.5635	0.0260%	±0.01%
	+40	13.5620	0.0147%	±0.01%
	+50	13.5634	0.0254%	±0.01%
DC 3.23 V	-20	13.5604	0.0033%	±0.01%
	-10	13.5612	0.0088%	±0.01%
	0	13.5617	0.0123%	±0.01%

	+10	13.5607	0.0055%	±0.01%
	+20	13.5614	0.0100%	±0.01%
	+30	13.5618	0.0131%	±0.01%
	+40	13.5604	0.0029%	±0.01%
	+50	13.5604	0.0027%	±0.01%
DC4.37V	-20	13.5608	0.0056%	±0.01%
	-10	13.5612	0.0088%	±0.01%
	0	13.5622	0.0162%	±0.01%
	+10	13.5608	0.0062%	±0.01%
	+20	13.5610	0.0071%	±0.01%
	+30	13.5606	0.0047%	±0.01%
	+40	13.5617	0.0122%	±0.01%
	+50	13.5615	0.0108%	±0.01%

10 20dB Bandwidth

Test Requirement: FCC Part15.215(C)

Test Method: ANSI C63.10: 2013

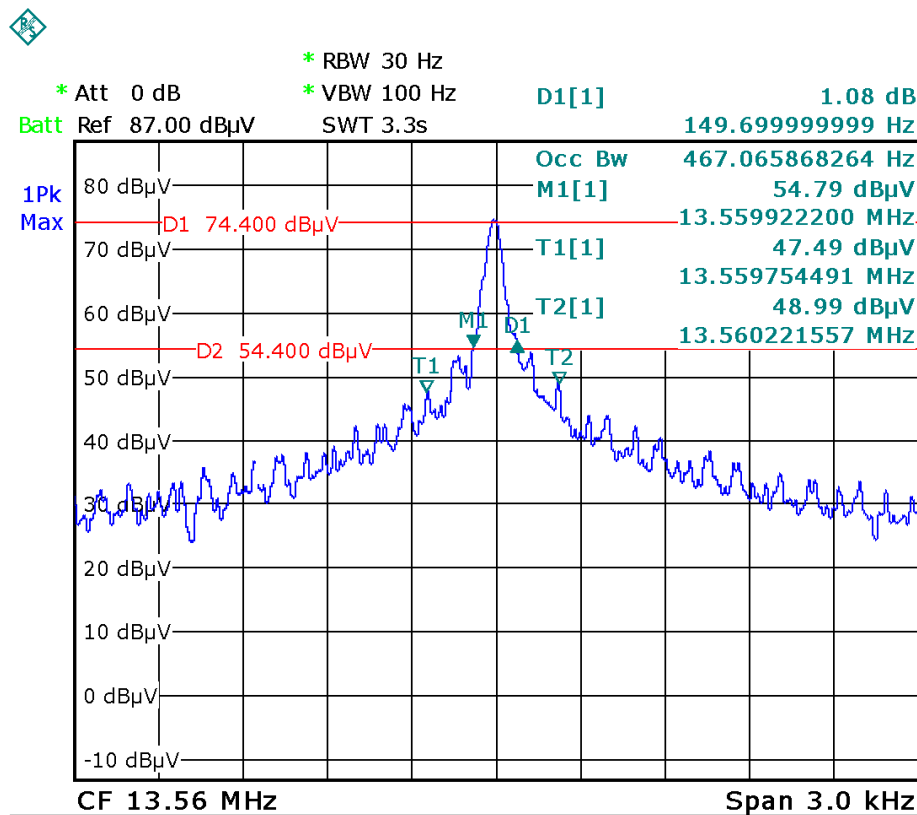
10.1 Test Procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer in peak mode.
2. 20dB Bandwidth the resolution bandwidth of 30 Hz and the video bandwidth of 100 Hz were used.
3. Measured the spectrum width with power higher than 20dB below carrier.

10.2 Test Result

Frequency(MHz)	Bandwidth Emission(Hz)
13.56	149.70

Test Plot



11 Antenna Requirement

According to the FCC Part 15 Paragraph 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. This product has an Loop antenna, fulfil the requirement of this section.

12 RF Exposure

Remark: refer to SAR test report: WTS17S0888245E

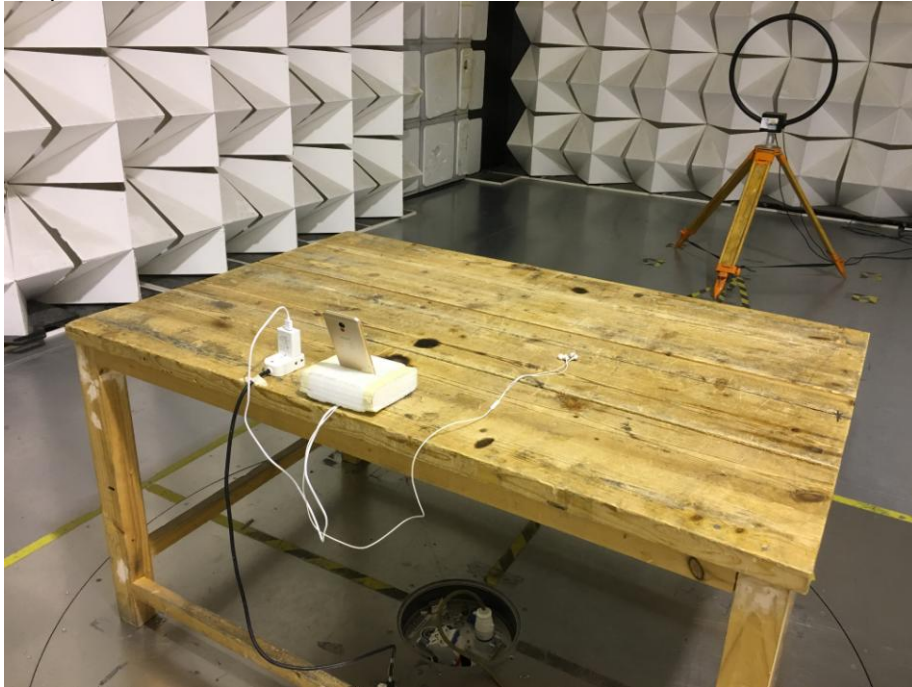
13 Photographs- Test Setup Photos

13.1 Photograph – Radiation Emission Test Setup

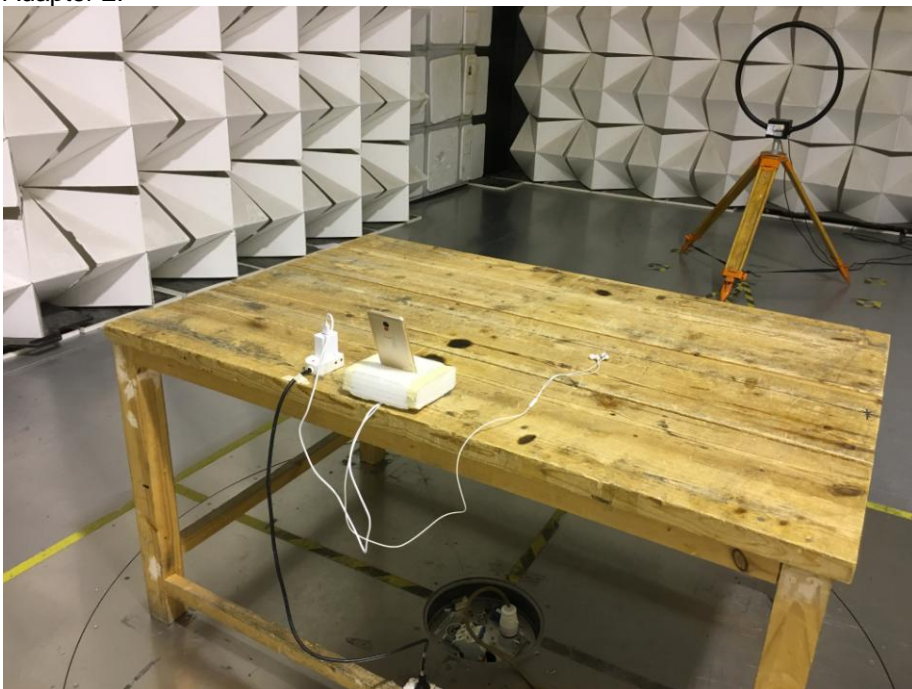
Test frequency from 9 KHz to 30MHz

Below 30MHz Test Site 2#

Adapter 1:



Adapter 2:



Test frequency from 30MHz to 1GHz

Adapter1:

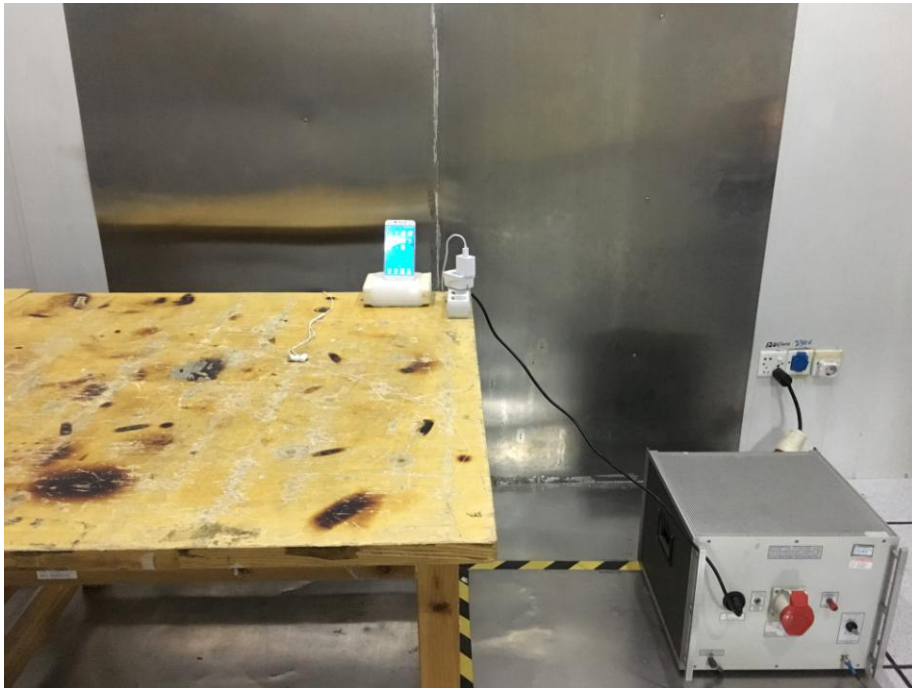


Adapter2:



13.2 Photograph – Conducted Emission Test Setup

Adater 1:
Test Site 1#



Adapter 2:



14 Photographs of EUT.

Note: Please refer to appendix: WTS17S0888240E_Photo.

=====**End of Report**=====