EMC TEST REPORT



Report No.: 16071343-FCC-E
Supersede Report No: N/A

Applicant	BLU Products, Inc.			
Product Name	smartphone			
Model No.	ADVANCE	4.0 L3		
Serial No.	N/A			
Test Standard	FCC Part 1	5 Subpart B C	ass B:2015, Al	NSI C63.4: 2014
Test Date	Dec 3 to D	Dec 3 to Dec 30, 2016		
Issue Date	Dec 30 , 2016			
Test Result	Pass	Fail		
Equipment compl	Equipment complied with the specification			
Equipment did not comply with the specification				
Loven	Luo	David	Huang	
Loren Luo Test Engineer		David Check		

This test report may be reproduced in full only

Test result presented in this test report is applicable to the tested sample only

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park
South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108
Phone: +86 0755 2601 4629801 Email: China@siemic.com.cn



Test Report	16071343-FCC-E
Page	2 of 30

Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety



Test Report	16071343-FCC-E
Page	3 of 30

This page has been left blank intentionally.



Test Report	16071343-FCC-E
Page	4 of 30

CONTENTS

1.	REPORT REVISION HISTORY	5
2.	CUSTOMER INFORMATION	5
3.	TEST SITE INFORMATION	5
4.	EQUIPMENT UNDER TEST (EUT) INFORMATION	6
5.	TEST SUMMARY	8
6.	MEASUREMENTS, EXAMINATION AND DERIVED RESULTS	9
6.1	AC POWER LINE CONDUCTED EMISSIONS	9
6.2	RADIATED EMISSIONS	15
INA	NEX A. TEST INSTRUMENT	20
INA	NEX B. EUT AND TEST SETUP PHOTOGRAPHS	21
INA	NEX C. TEST SETUP AND SUPPORTING EQUIPMENT	26
INA	NEX D. USER MANUAL / BLOCK DIAGRAM / SCHEMATICS / PARTLIST	29
INA	NEX E. DECLARATION OF SIMILARITY	30



Test Report	16071343-FCC-E
Page	5 of 30

1. Report Revision History

Report No.	Report Version	Description	Issue Date
16071343-FCC-E	NONE	Original	Dec 30 , 2016

2. Customer information

Applicant Name	BLU Products, Inc.
Applicant Add	10814 NW 33rd St # 100 Doral, FL 33172
Manufacturer	BLU Products, Inc.
Manufacturer Add	10814 NW 33rd St # 100 Doral, FL 33172

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES		
Zone A, Floor 1, Building 2 Wan Ye Long Technology Park			
Lab Address	South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China		
	518108		
FCC Test Site No.	718246		
IC Test Site No.	4842E-1		
Test Software	Radiated Emission Program-To Shenzhen v2.0		



Test Report	16071343-FCC-E
Page	6 of 30

4. Equipment under Test (EUT) Information

Description of EUT:	smartphone
---------------------	------------

ADVANCE 4.0 L3 Main Model:

Serial Model: N/A

> GSM850: -0.5dBi PCS1900:0.5dBi

UMTS-FDD Band V: -0.5dBi UMTS-FDD Band IV: 0.5dBi

Antenna Gain: UMTS-FDD Band II: 0.5dBi

WIFI: 1.6dBi Bluetooth:1.6dBi GPS: 0.5dBi

Antenna Type: PIFA antenna

Adapter:

Model: US-BM-0700

Input: AC100-240V, 50/60Hz,0.12A

Output: DC 5.0V-0.7A

Input Power: Battery:

Model: C535143130T

Voltage: 3.7V

Battery Capacity: 1300mAh, 4.81Wh

Charging limit voltage: 4.35V

Equipment Category: JBP

> GSM / GPRS: GMSK EGPRS: GMSK,8PSK UMTS-FDD: QPSK

Type of Modulation: 802.11b/g/n: DSSS, OFDM

Bluetooth: GFSK, π /4DQPSK, 8DPSK

GPS:BPSK



Test Report	16071343-FCC-E
Page	7 of 30

GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz

PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz

UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz

UMTS-FDD Band IV TX:1712.4 ~ 1752.6 MHz;

RX: 2112.4 ~ 2152.6 MHz

RF Operating Frequency (ies): UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz;

RX: 1932.4 ~ 1987.6 MHz

WIFI: 802.11b/g/n(20M): 2412-2462 MHz

Bluetooth: 2402-2480 MHz

GPS: 1575.42 MHz

GSM 850: 124CH PCS1900: 299CH

UMTS-FDD Band V: 102CH

UMTS-FDD Band IV: 202CH Number of Channels:

UMTS-FDD Band II: 277CH

WIFI:802.11b/g/n(20M): 11CH

Bluetooth: 79CH

GPS:1CH

Port: USB Port, Earphone Port

Trade Name : BLU

FCC ID: YHLBLUAD4L3

Date EUT received: Dec 2, 2016

Test Date(s): Dec 3 to Dec 30, 2016



Test Report	16071343-FCC-E
Page	8 of 30

5. Test Summary

The product was tested in accordance with the following specifications.

All testing has been performed according to below product classification:

FCC Rules	Description of Test	Result
§15.107; ANSI C63.4: 2014	AC Power Line Conducted Emissions	Compliance
§15.109; ANSI C63.4: 2014	Radiated Emissions	Compliance

Measurement Uncertainty

Emissions					
Test Item Description Uncertainty					
Band Edge and Radiated Spurious Emissions	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+5.6dB/-4.5dB			
-	-	-			



Test Report	16071343-FCC-E
Page	9 of 30

6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

Temperature	25 °C
Relative Humidity	53%
Atmospheric Pressure	1020mbar
Test date :	Dec 20, 2016
Tested By:	Loren Luo

Requirement(s):

Spec	Item	Requirement	Applicable		
47CFR§15.	For Low-power radio-frequency devices 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, as measured using a 50 [mu] H/50 ohms line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequencies ranges.				
107		Frequency ranges	Limit (
		(MHz)	QP	Average	
		0.15 ~ 0.5	66 – 56	56 – 46	
		0.5 ~ 5	56	46	
		5 ~ 30	60	50	
Test Setup			scal Ground Frence Plane	Test Receiver	
Procedure	 The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table. The power supply for the EUT was fed through a 50Ω /50mH EUT LISN, connected to filtered mains. 				



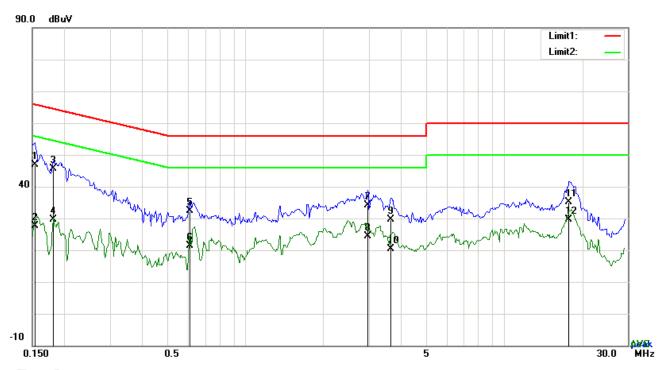
Test Report	16071343-FCC-E
Page	10 of 30

	The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.
	4. All other supporting equipment were powered separately from another main supply.
	5. The EUT was switched on and allowed to warm up to its normal operating condition.
	6. A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power)
	over the required frequency range using an EMI test receiver.
	7. High peaks, relative to the limit line, The EMI test receiver was then tuned to the
	selected frequencies and the necessary measurements made with a receiver bandwidth
	setting of 10 kHz.
	8. Step 7 was then repeated for the LIVE line (for AC mains) or DC line (for DC power).
Remark	
Result	Pass Fail

Test Data	Yes	□ _{N/A}
Test Plot	Yes (See below)	□ _{N/A}



Test Report	16071343-FCC-E
Page	11 of 30



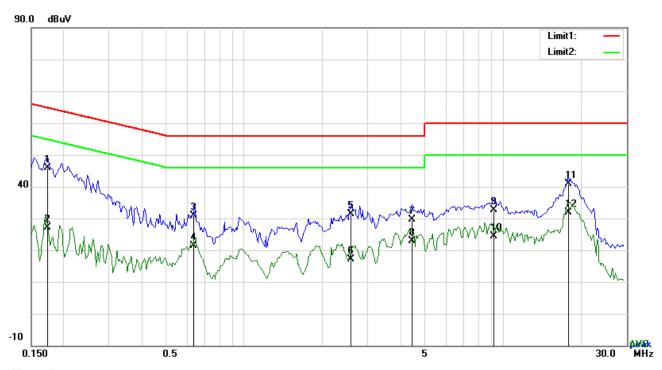
Test Data

Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	L1	0.1539	36.73	QP	10.03	46.76	65.79	-19.03
2	L1	0.1539	17.61	AVG	10.03	27.64	55.79	-28.15
3	L1	0.1812	35.63	QP	10.03	45.66	64.43	-18.77
4	L1	0.1812	19.48	AVG	10.03	29.51	54.43	-24.92
5	L1	0.6075	22.26	QP	10.03	32.29	56.00	-23.71
6	L1	0.6075	11.30	AVG	10.03	21.33	46.00	-24.67
7	L1	2.9619	24.11	QP	10.05	34.16	56.00	-21.84
8	L1	2.9619	14.22	AVG	10.05	24.27	46.00	-21.73
9	L1	3.6552	19.58	QP	10.06	29.64	56.00	-26.36
10	L1	3.6552	10.31	AVG	10.06	20.37	46.00	-25.63
11	L1	17.7810	24.85	QP	10.27	35.12	60.00	-24.88
12	L1	17.7810	19.41	AVG	10.27	29.68	50.00	-20.32



Test Report	16071343-FCC-E
Page	12 of 30



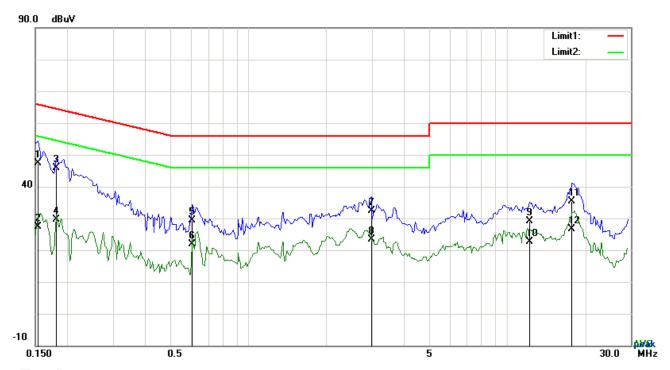
Test Data

Phase Neutral Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	N	0.1734	35.80	QP	10.02	45.82	64.80	-18.98
2	Ν	0.1734	17.05	AVG	10.02	27.07	54.80	-27.73
3	Ν	0.6375	20.79	QP	10.02	30.81	56.00	-25.19
4	N	0.6375	11.40	AVG	10.02	21.42	46.00	-24.58
5	N	2.5758	21.23	QP	10.05	31.28	56.00	-24.72
6	Ν	2.5758	6.97	AVG	10.05	17.02	46.00	-28.98
7	Ν	4.4391	19.54	QP	10.06	29.60	56.00	-26.40
8	Ν	4.4391	12.76	AVG	10.06	22.82	46.00	-23.18
9	N	9.2283	22.56	QP	10.13	32.69	60.00	-27.31
10	N	9.2283	14.27	AVG	10.13	24.40	50.00	-25.60
11	N	17.8941	30.55	QP	10.23	40.78	60.00	-19.22
12	Ν	17.8941	21.68	AVG	10.23	31.91	50.00	-18.09



Test Report	16071343-FCC-E
Page	13 of 30



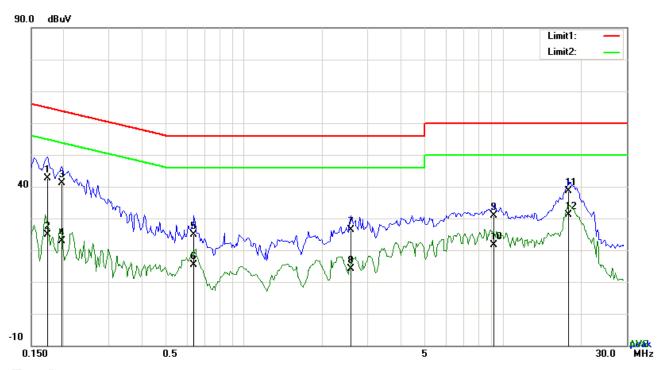
Test Data

Phase Line Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	L1	0.1539	37.28	QP	10.03	47.31	65.79	-18.48
2	L1	0.1539	17.26	AVG	10.03	27.29	55.79	-28.50
3	L1	0.1812	35.73	QP	10.03	45.76	64.43	-18.67
4	L1	0.1812	19.71	AVG	10.03	29.74	54.43	-24.69
5	L1	0.6063	19.38	QP	10.03	29.41	56.00	-26.59
6	L1	0.6063	11.73	AVG	10.03	21.76	46.00	-24.24
7	L1	2.9931	22.41	QP	10.05	32.46	56.00	-23.54
8	L1	2.9931	13.32	AVG	10.05	23.37	46.00	-22.63
9	L1	12.2040	18.91	QP	10.18	29.09	60.00	-30.91
10	L1	12.2040	12.48	AVG	10.18	22.66	50.00	-27.34
11	L1	17.7810	24.99	QP	10.27	35.26	60.00	-24.74
12	L1	17.7810	16.25	AVG	10.27	26.52	50.00	-23.48



Test Report	16071343-FCC-E
Page	14 of 30



Test Data

Phase Neutral Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	N	0.1734	32.51	QP	10.02	42.53	64.80	-22.27
2	N	0.1734	14.85	AVG	10.02	24.87	54.80	-29.93
3	N	0.1968	31.01	QP	10.02	41.03	63.74	-22.71
4	N	0.1968	12.94	AVG	10.02	22.96	53.74	-30.78
5	N	0.6375	14.81	QP	10.02	24.83	56.00	-31.17
6	N	0.6375	5.40	AVG	10.02	15.42	46.00	-30.58
7	Ν	2.5758	16.27	QP	10.05	26.32	56.00	-29.68
8	Ν	2.5758	4.05	AVG	10.05	14.10	46.00	-31.90
9	Ν	9.2283	20.70	QP	10.13	30.83	60.00	-29.17
10	N	9.2283	11.43	AVG	10.13	21.56	50.00	-28.44
11	Ν	17.8941	28.41	QP	10.23	38.64	60.00	-21.36
12	Ν	17.8941	20.81	AVG	10.23	31.04	50.00	-18.96



Test Report	16071343-FCC-E
Page	15 of 30

6.2 Radiated Emissions

Temperature	24 °C
Relative Humidity	57%
Atmospheric Pressure	1015mbar
Test date :	Dec 15, 2016
Tested By :	Loren Luo

Requirement(s):

Spec	Item	tem Requirement Applicable				
47CFR§15. 109(d)	a)	Except higher limit as specified else emissions from the low-power radio exceed the field strength levels spethe level of any unwanted emission the fundamental emission. The tight edges Frequency range (MHz) 30 - 88 88 - 216	p-frequency devices shall not ecified in the following table and as shall not exceed the level of ter limit applies at the band Field Strength (µV/m) 100 150	\		
		216 960 Above 960	200 500			
Test Setup		Ant. Tower Variable Support Units Ground Plane Test Receiver				
Procedure 1. The EUT was switched on and allowed to warm up to its normal operating cond. 2. The test was carried out at the selected frequency points obtained from the EU characterization. Maximization of the emissions, was carried out by rotating the changing the antenna polarization, and adjusting the antenna height in the followanner: a. Vertical or horizontal polarization (whichever gave the higher emission)				the EUT ating the EUT, the following		



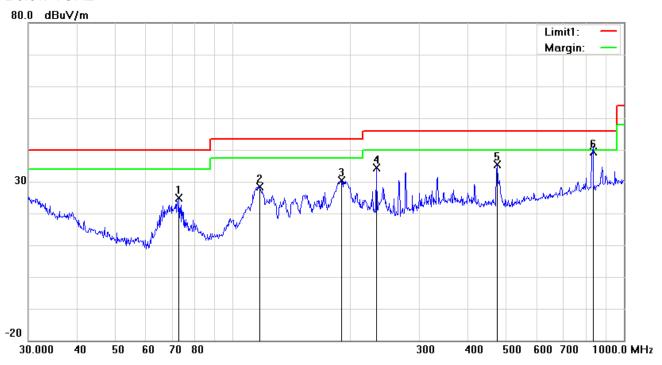
Test Report	16071343-FCC-E
Page	16 of 30

			over a full rotation of the EUT) was chosen.				
		b.	The EUT was then rotated to the direction that gave the maximum				
			emission.				
		C.	Finally, the antenna height was adjusted to the height that gave the maximum				
			emission.				
	3.	The res	solution bandwidth and video bandwidth of test receiver/spectrum analyzer is				
		120 kH	z for Quasiy Peak detection at frequency below 1GHz.				
	4.	The res	olution bandwidth of test receiver/spectrum analyzer is 1MHz and video				
		bandwi	idth is 3MHz with Peak detection for Peak measurement at frequency above				
		1GHz.					
		The re	esolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video				
		bandv	vidth with Peak detection for Average Measurement as below at frequency				
		above	1GHz.				
		■ 1 kH	Hz (Duty cycle < 98%) □ 10 Hz (Duty cycle > 98%)				
	5.	Steps 2	2 and 3 were repeated for the next frequency point, until all selected frequency				
		points	were measured.				
Remark							
- ·	V De		F				
Result	Pa Pa	ass	└── Fail				
	7.,		□				
Test Data	Yes		N/A				
Test Plot	Yes (S	See belo	w) N/A				



Test Report	16071343-FCC-E
Page	17 of 30

Below 1GHz



Test Data

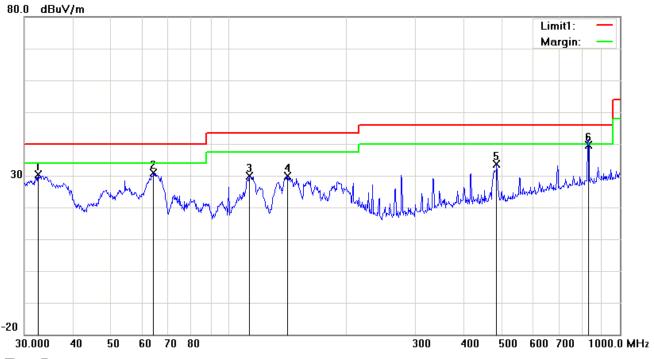
Horizontal Polarity Plot @3m

No.	P/L	Frequency	Readin g	Detector	Corrected	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/ m)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	Ι	72.8466	38.50	peak	-13.68	24.82	40.00	-15.18	100	68
2	Н	116.9495	36.18	peak	-7.82	28.36	43.50	-15.14	100	172
3	Н	189.7385	39.69	peak	-9.23	30.46	43.50	-13.04	100	284
4	Н	232.5318	43.46	peak	-9.04	34.42	46.00	-11.58	100	115
5	Н	473.8347	37.87	peak	-2.41	35.46	46.00	-10.54	100	306
6	Н	833.3171	35.76	QP	3.61	39.37	46.00	-6.63	100	91



Test Report	16071343-FCC-E
Page	18 of 30

Below 1GHz



Test Data

Vertical Polarity Plot @3m

No.	P/L	Frequency	Readin g	Detector	Corrected	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/ m)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	V	32.5198	32.59	peak	-2.11	30.48	40.00	-9.52	100	35
2	V	64.2075	44.83	peak	-14.03	30.80	40.00	-9.20	100	241
3	V	112.9196	38.29	peak	-8.52	29.77	43.50	-13.73	100	168
4	V	141.3298	38.39	peak	-8.52	29.87	43.50	-13.63	100	324
5	V	483.9094	35.74	peak	-2.13	33.61	46.00	-12.39	100	107
6	V	830.4002	36.15	QP	3.57	39.72	46.00	-6.28	100	98



Test Report	16071343-FCC-E
Page	19 of 30

Above 1GHz

Frequency (MHz)	Amplitude (dΒμV/m)	Azimuth	Height (cm)	Polarity (H/V)	Factors (dB)	Limit (dBµV/m)	Margin (dB)	Detector (PK/AV)
1555.46	50.32	85	154	V	-21.32	74	-23.68	PK
2065.32	50.35	60	131	V	-22.75	74	-23.65	PK
1645.25	49.45	45	145	V	-21.73	74	-24.55	PK
2165.52	50.26	70	112	Н	-21.76	74	-23.74	PK
2885.24	49.56	53	115	Н	-21.56	74	-24.44	PK
1886.15	50.78	81	132	Н	-21.45	74	-23.22	PK

Note1: The highest frequency of the EUT is 2480 MHz, so the testing has been conformed to 5*2480 MHz=12,400 MHz.

Note 2: The frequency that above 3GHz is mainly from the environment noise.

Note 3: The AV measurement performed, more than 20dB below limit so AV test data was not presented.



Test Report	16071343-FCC-E
Page	20 of 30

Annex A. TEST INSTRUMENT

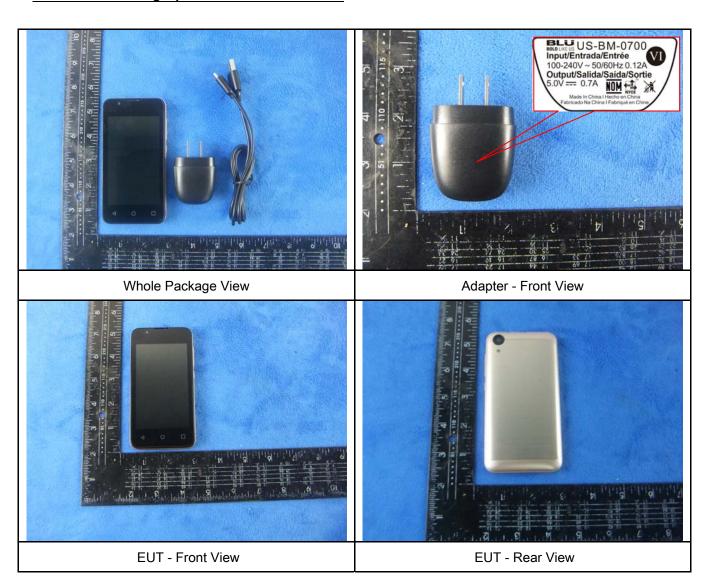
Instrument	Model	Serial #	Cal Date	Cal Due	In use			
AC Line Conducted Emissions								
EMI test receiver	ESCS30	8471241027	09/16/2016	09/15/2017	•			
Line Impedance Stabilization Network	LI-125A	191106	09/24/2016	09/23/2017	>			
Line Impedance Stabilization Network	LI-125A	191107	09/24/2016	09/23/2017	<u><</u>			
LISN	ISN T800	34373	09/24/2016	09/23/2017	<			
Transient Limiter	LIT-153	531118	08/31/2016	08/30/2017	>			
Radiated Emissions								
EMI test receiver	ESL6	100262	09/16/2016	09/15/2017	>			
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/31/2016	08/30/2017	>			
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/24/2016	03/23/2017	(
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/20/2016	09/19/2017	\			
Double Ridge Horn Antenna	AH-118	71259	09/23/2016	09/22/2017	•			



Test Report	16071343-FCC-E
Page	21 of 30

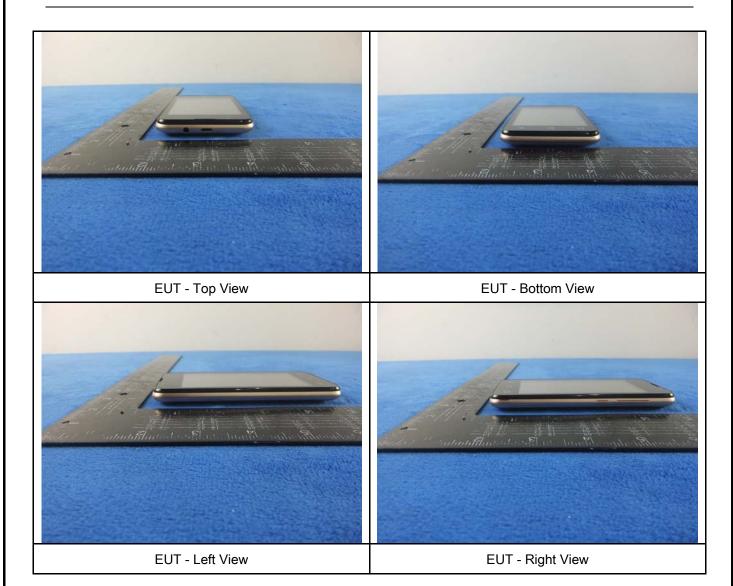
Annex B. EUT And Test Setup Photographs

Annex B.i. Photograph: EUT External Photo





Test Report	16071343-FCC-E
Page	22 of 30





Test Report	16071343-FCC-E
Page	23 of 30

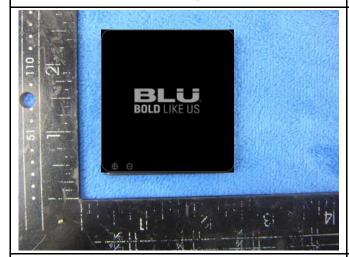
Annex B.ii. Photograph: EUT Internal Photo





Cover Off - Top View 1

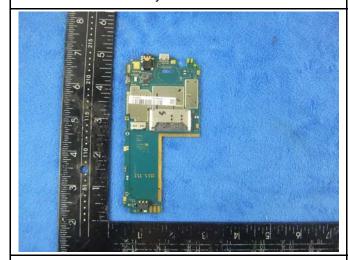
Cover Off - Top View 2



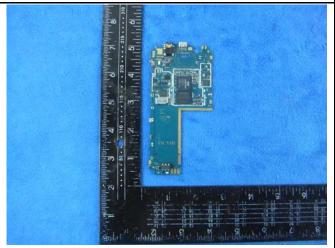


Battery - Front View

Battery - Rear View



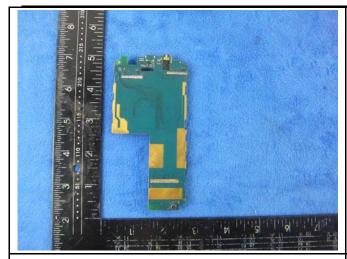
Mainboard with Shielding - Front View



Mainboard without Shielding - Front View

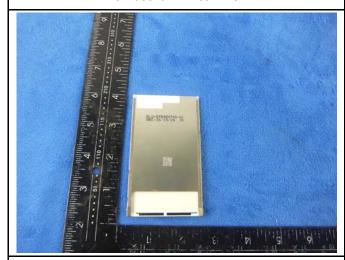


Test Report	16071343-FCC-E
Page	24 of 30



Mainboard - Rear View

LCD - Front View





LCD - Rear View

GSM/PCS/UMTS-FDD Antenna View

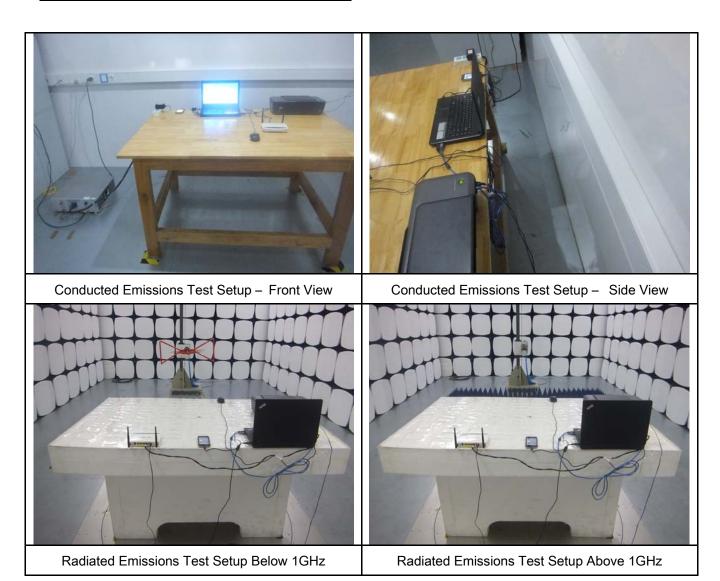


WIFI/BT/BLE/GPS - Antenna View



Test Report	16071343-FCC-E
Page	25 of 30

Annex B.iii. Photograph: Test Setup Photo

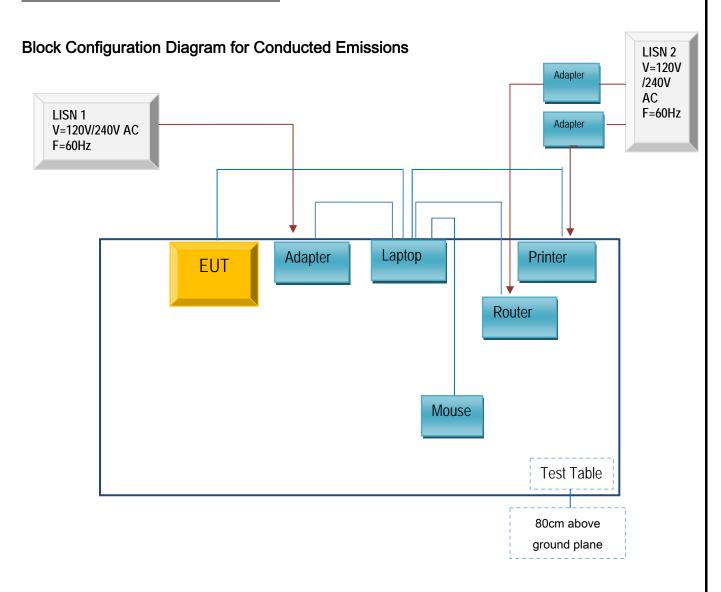




Test Report	16071343-FCC-E
Page	26 of 30

Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

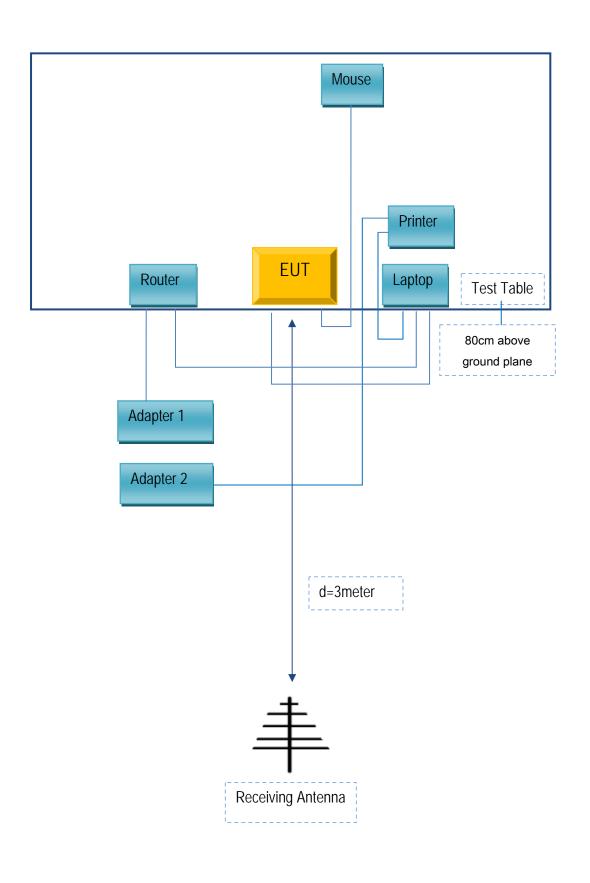
Annex C.ii. TEST SET UP BLOCK





Test Report	16071343-FCC-E
Page	27 of 30

Block Configuration Diagram for Radiated Emissions





Test Report	16071343-FCC-E
Page	28 of 30

Annex C. il. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Supporting Equipment:

Manufacturer	Equipment Description	Model	Serial No
Lenovo	Laptop	E40	LR-1EHRX
GOLDWEB	Router	R102	1202032094
Lenovo	AC Adapter	42T4416	21D9JU
HP	Printer	VCVRA-1003	CN36M19JWX
DELL	Mouse	E100	912NMTUT41481
BULL	Socket	GN-403	GN201203

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	2m	JX120051274
USB Cable	Un-shielding	No	2m	CBA3000AH0C1
RJ45 Cable	Un-shielding	No	2m	KX156327541
Router Power cable	Un-shielding	No	2m	13274630Z
Printer Power cable	Un-shielding	No	2m	127581031
Power Cable	Un-shielding	No	0.8m	GT211032



Test Report	16071343-FCC-E
Page	29 of 30

Annex D. User Manual / Block Diagram / Schematics / Partlist

Please see the attachment



Test Report	16071343-FCC-E
Page	30 of 30

Annex E. DECLARATION OF SIMILARITY

N/A