

# EMC TEST REPORT



Report No.: 17070565-FCC-E

Supersede Report No: N/A

Applicant	BLU Products , Inc	
Product Name	Mobile phone	
Model No.	ADVANCE 4.0M	
Serial No.	N/A	
Test Standard	FCC Part 15 Subpart B Class B:2016, ANSI C63.4: 2014	
Test Date	July 07 to 11, 2017	
Issue Date	July 12, 2017	
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
Equipment complied with the specification <input checked="" type="checkbox"/>		
Equipment did not comply with the specification <input type="checkbox"/>		
<i>Evans He</i>	<i>David Huang</i>	
Evans He Test Engineer	David Huang Checked By	
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](mailto:China@siemic.com.cn)

## 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

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## 1. Report Revision History

Report No.	Report Version	Description	Issue Date
17070565-FCC-E	NONE	Original	July 12, 2017

## 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
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park 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 of Radiated Emission	Radiated Emission Program-To Shenzhen v2.0
Test Software of Conducted Emission	EZ-EMC(ver.lcp-03A1)

#### 4. Equipment under Test (EUT) Information

Description of EUT:	Mobile phone
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Main Model: ADVANCE 4.0M

Serial Model: N/A

Equipment Category : JBP

Antenna Gain:	GSM850:-0.3dBi
	PCS1900: 0.1dBi
	UMTS-FDD Band V: -0.6dBi
	UMTS-FDD Band II: -0.8dBi
	WIFI: 0.3dBi
	Bluetooth: -0.2dBi

Antenna Type: PIFA antenna

	GSM / GPRS: GMSK
	EGPRS: GMSK, 8PSK
Type of Modulation:	UMTS-FDD: QPSK
	802.11b/g/n: DSSS, OFDM
	Bluetooth: GFSK, $\pi/4$ DQPSK, 8DPSK

RF Operating Frequency (ies): 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 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

Number of Channels: GSM 850: 124CH  
PCS1900: 299CH  
UMTS-FDD Band V : 102CH  
UMTS-FDD Band II : 277CH  
WIFI :802.11b/g/n(20M): 11CH  
Bluetooth: 79CH

Port: USB Port, Earphone Port

Input Power: Adapter:  
Model: US-WW-0502  
Input: AC100-240V~50/60Hz,0.15A  
Output: DC 5.0V,500mA  
Battery :  
Model: C615044130L  
Spec: 3.7V,1300mAh, 4.81Wh

Trade Name : BLU

FCC ID: YHLBLUADVANCE4M

Date EUT received: July 06, 2017

Test Date(s): July 07 to 11, 2017

**Note: The difference between the old case RSZ160906003-00D and new case 17070565: Antenna and Appearance shape , accessories are the same . The only difference is added one LCD bonding pad on PCB, the other construction is the same.**  
**So, we have retested the Radiated Emissions data in this report.**

## 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
§15.109; ANSI C63.4: 2014	Radiated Emissions	Compliance

### Measurement Uncertainty

Parameter	Uncertainty
Radiated Emission(30MHz~1GHz)	±5.12dB
Radiated Emission(1GHz~6GHz)	±5.34dB




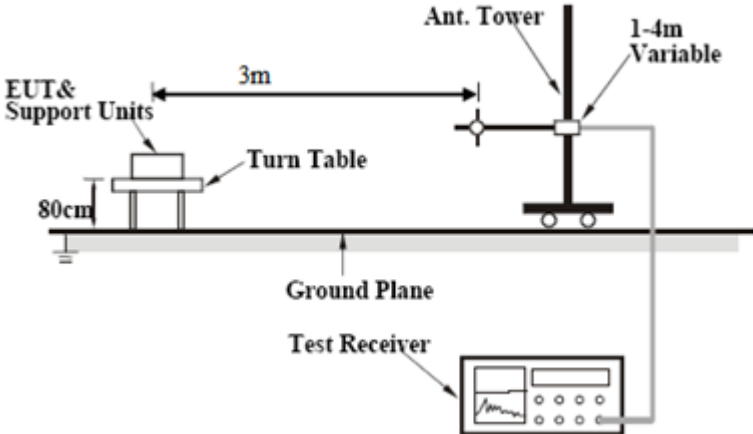
## 6. Measurements, Examination And Derived Results

### 6.1 Radiated Emissions

Temperature	25°C
Relative Humidity	57%
Atmospheric Pressure	1015mbar
Test date :	July 07, 2017
Tested By :	Evans He

#### Requirement(s):

Spec	Item	Requirement	Applicable	
47CFR§15.109(d)	a)	Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges		
		Frequency range (MHz)		Field Strength (µV/m)
		30 – 88		100
		88 – 216		150
		216 - 960		200
		Above 960		500

Test Setup			
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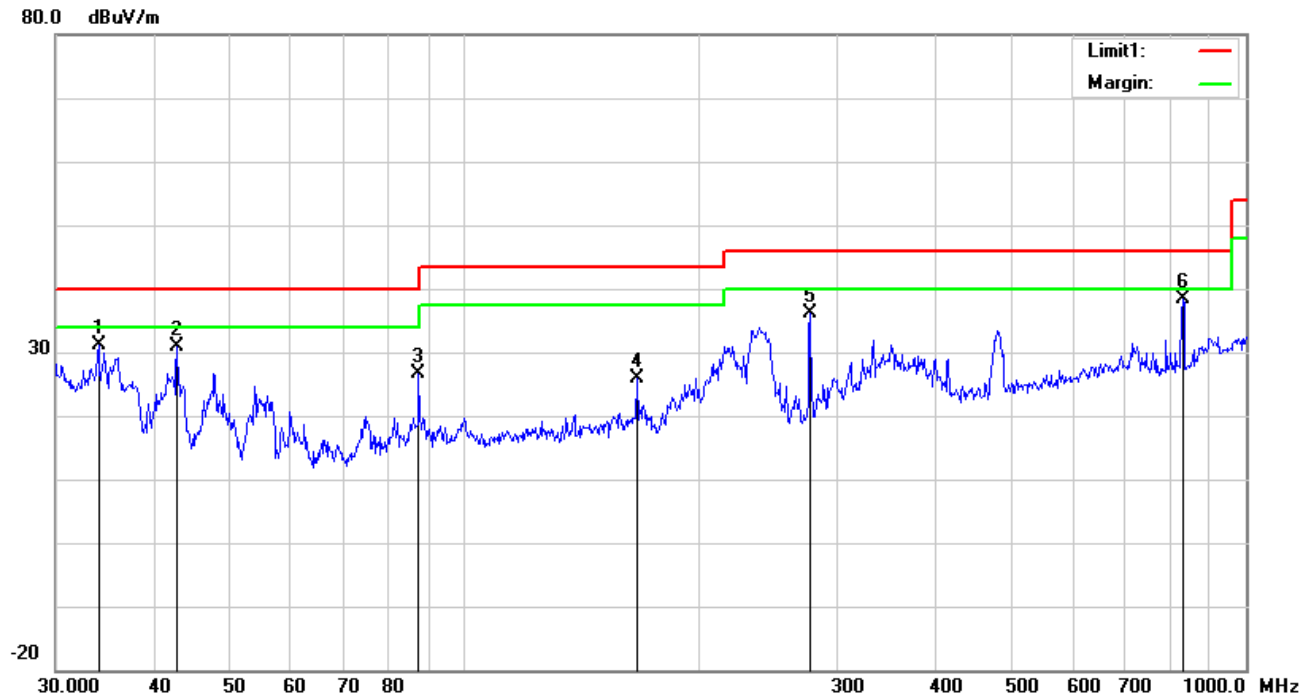
Procedure	<ol style="list-style-type: none"> <li>1. The EUT was switched on and allowed to warm up to its normal operating condition.</li> <li>2. The test was carried out at the selected frequency points obtained from the EUT characterization. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following</li> </ol>
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	<p>manner:</p> <ul style="list-style-type: none"> <li>a. Vertical or horizontal polarization (whichever gave the higher emission level over a full rotation of the EUT) was chosen.</li> <li>b. The EUT was then rotated to the direction that gave the maximum emission.</li> <li>c. Finally, the antenna height was adjusted to the height that gave the maximum emission.</li> </ul> <p>3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasiy Peak detection at frequency below 1GHz.</p> <p>4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz with Peak detection for Peak measurement at frequency above 1GHz.</p> <p>The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth with Peak detection for Average Measurement as below at frequency above 1GHz.</p> <ul style="list-style-type: none"> <li>■ 1 kHz (Duty cycle &lt; 98%) □ 10 Hz (Duty cycle &gt; 98%)</li> </ul> <p>5. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.</p>
Remark	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

Test Data ☒ Yes ☐ N/A  
 Test Plot ☒ Yes (See below) ☐ N/A

Test Mode : USB Mode

**Below 1GHz**

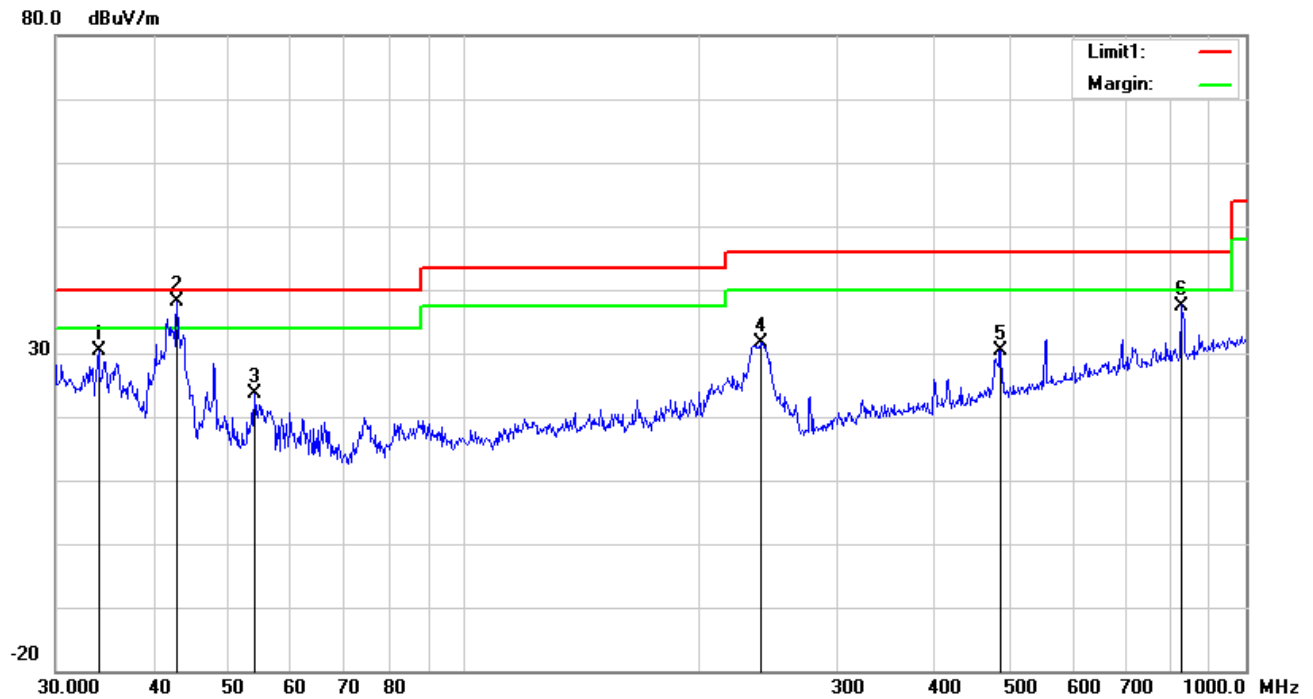


**Test Data**

**Horizontal Polarity Plot @3m**

No.	P/L	Frequency (MHz)	Reading (dBuV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)
1	H	34.0365	34.31	peak	18.29	22.26	0.73	31.07	40.00	-8.93	100	131
2	H	42.8998	40.32	peak	11.99	22.29	0.77	30.79	40.00	-9.21	100	124
3	H	87.4177	39.95	peak	7.90	22.35	1.01	26.51	40.00	-13.49	100	217
4	H	166.0680	34.61	peak	12.11	22.26	1.37	25.83	43.50	-17.67	100	312
5	H	277.0935	43.98	peak	12.59	22.29	1.75	36.03	46.00	-9.97	100	184
6	H	830.4002	34.86	peak	21.73	21.07	2.91	38.43	46.00	-7.57	100	48

## Below 1GHz



## Test Data

### Vertical Polarity Plot @3m

No.	P/L	Frequency	Reading	Detector	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	V	34.0365	33.56	peak	18.29	22.26	0.73	30.32	40.00	-9.68	100	301
2	V	42.8998	47.62	peak	11.99	22.29	0.77	38.09	40.00	-1.91	100	293
3	V	53.8818	37.33	peak	7.97	22.39	0.78	23.69	40.00	-16.31	100	92
4	V	239.1473	40.75	peak	11.55	22.31	1.67	31.66	46.00	-14.34	100	287
5	V	485.6093	32.54	peak	17.41	21.84	2.34	30.45	46.00	-15.55	100	201
6	V	827.4934	33.97	peak	21.70	21.08	2.91	37.50	46.00	-8.50	100	156

***Above 1GHz***

Frequency (MHz)	Read_level (dBμV/m)	Azimuth	Height (cm)	Polarity (H/V)	Level (dBμV/m)	Factors (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/AV)
1354.3	63.4	84	100	V	-19.14	44.26	74	-29.74	PK
1957.8	62.41	175	100	V	-15.25	47.16	74	-26.84	PK
2195.3	58.4	92	100	V	-14.49	43.91	74	-30.09	PK
1732.8	59.34	136	100	H	-16.76	42.58	74	-31.42	PK
1944.5	63.7	308	100	H	-14.97	48.73	74	-25.27	PK
2564.3	59.57	298	100	H	-13.46	46.11	74	-27.89	PK

## Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
<b>Radiated Emissions</b>					
EMI test receiver	ESL6	100262	09/16/2016	09/15/2017	<input checked="" type="checkbox"/>
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/31/2016	08/30/2017	<input checked="" type="checkbox"/>
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/23/2017	03/22/2018	<input checked="" type="checkbox"/>
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/20/2016	09/19/2017	<input checked="" type="checkbox"/>
Double Ridge Horn Antenna	AH-118	71259	09/23/2016	09/22/2017	<input checked="" type="checkbox"/>

## Annex B. EUT And Test Setup Photographs

### Annex B.i. Photograph: EUT External Photo

Whole Package View



Adapter - Label View





EUT - Front View



EUT - Rear View





EUT - Top View



EUT - Bottom View



EUT - Left View



EUT - Right View





**Annex B.ii. Photograph: EUT Internal Photo**

Cover Off - Top View 1



Cover Off - Top View 2

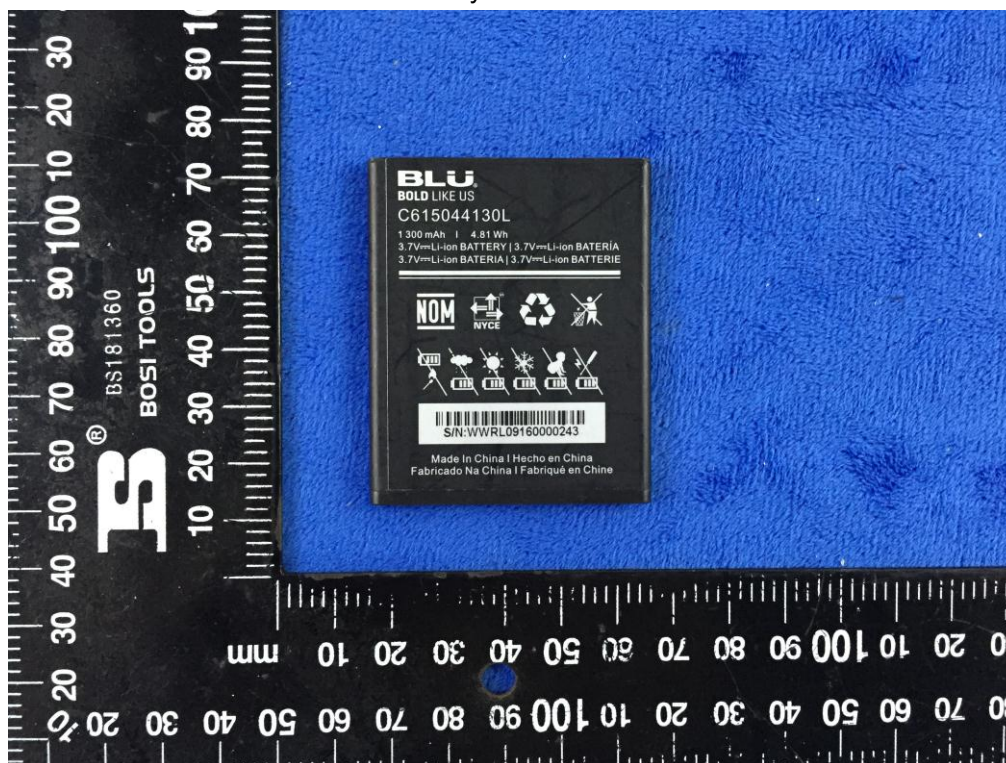




Battery - Front View

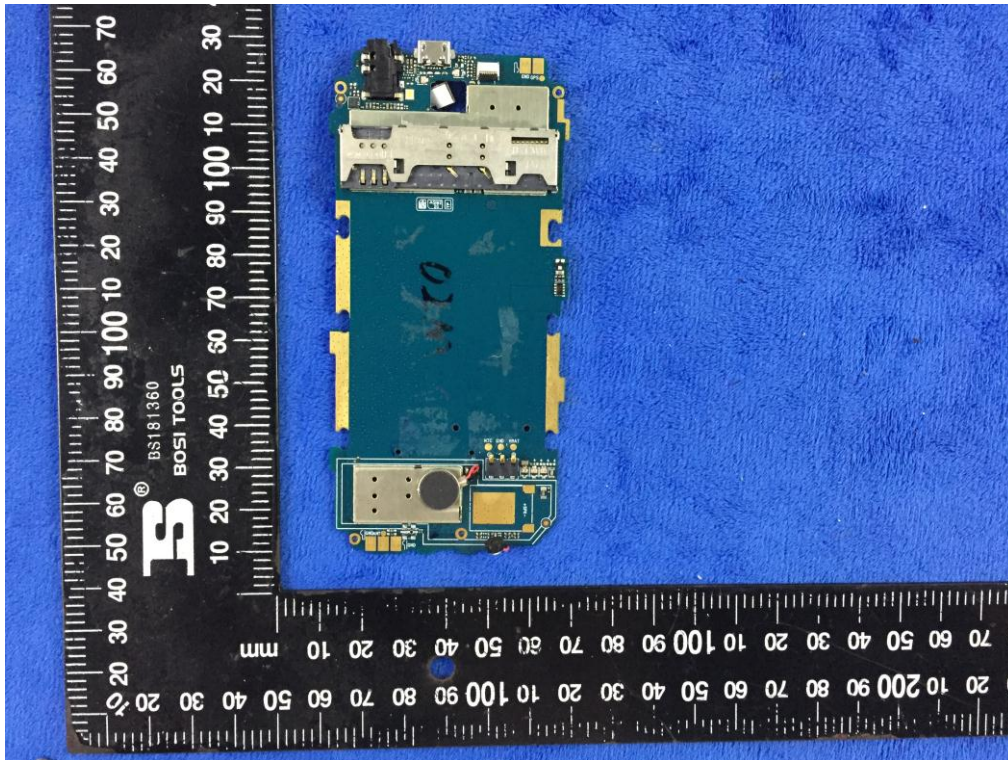


Battery - Rear View

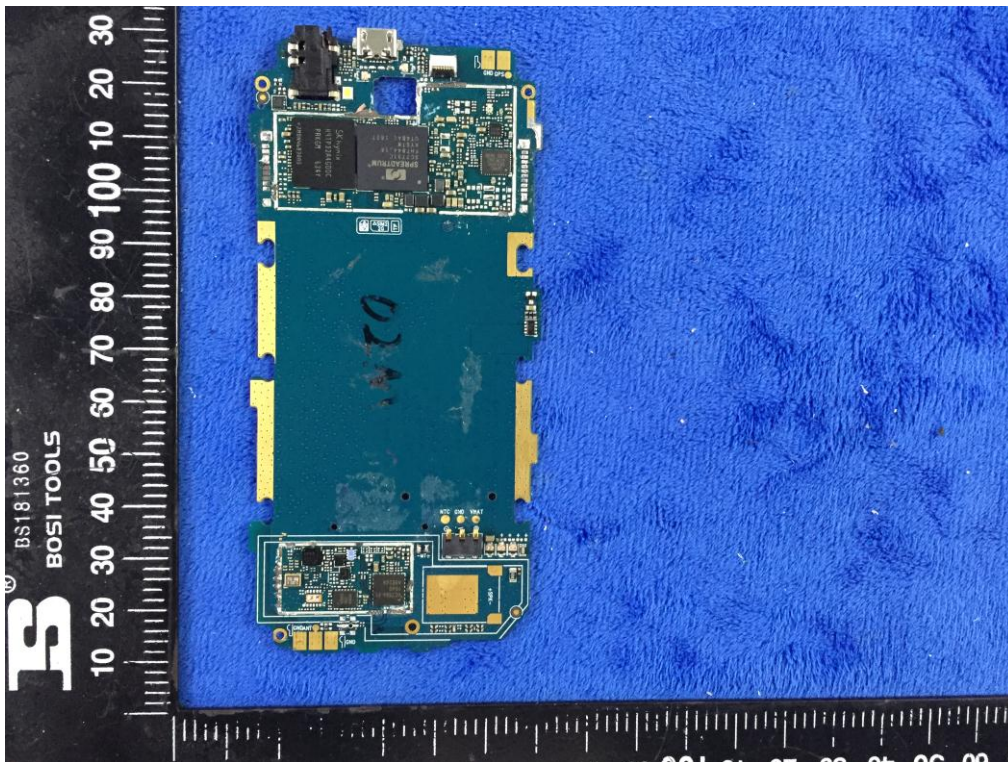




Mainboard with Shielding - Front View

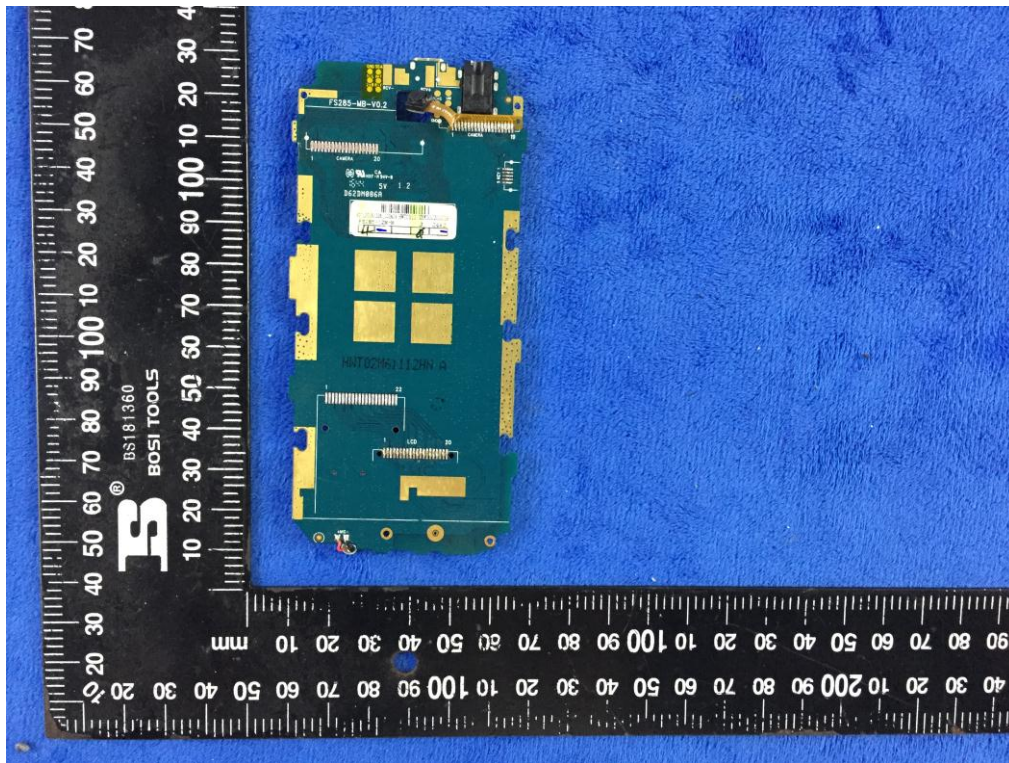


Mainboard without Shielding - Front View

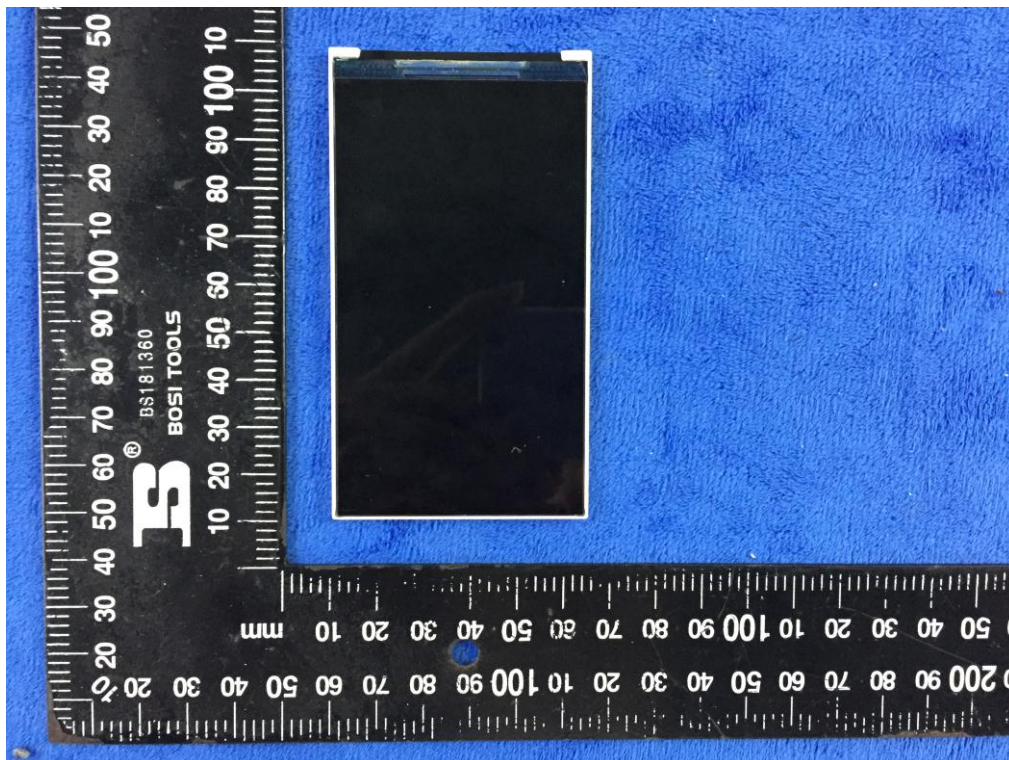




Mainboard – Rear View

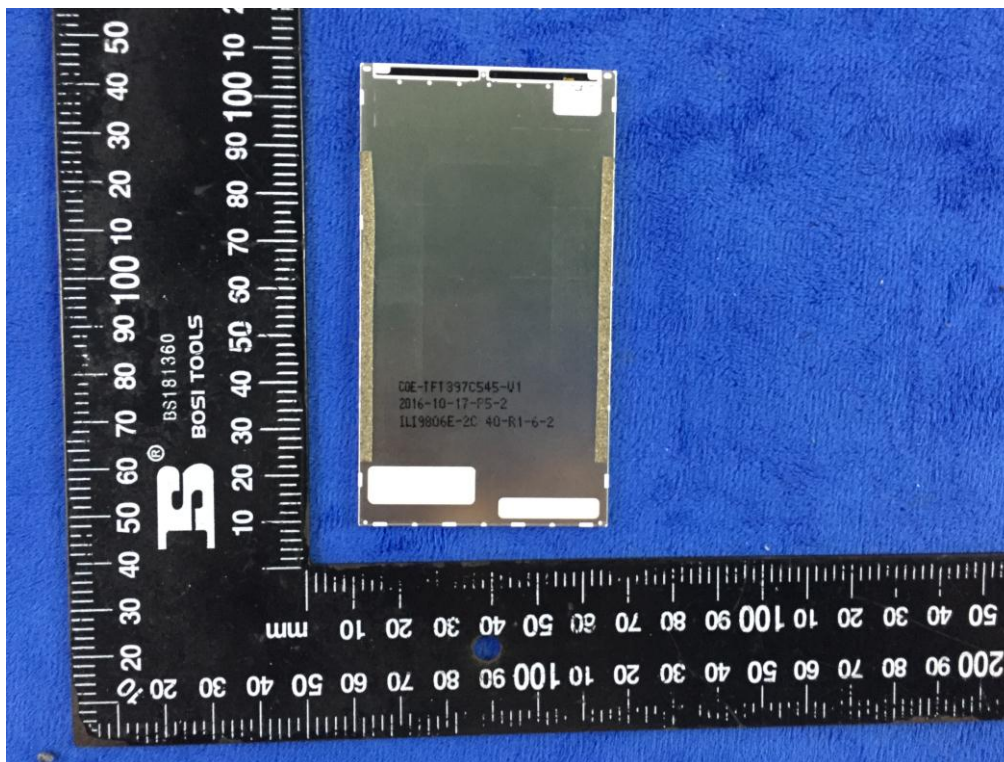


LCD – Front View

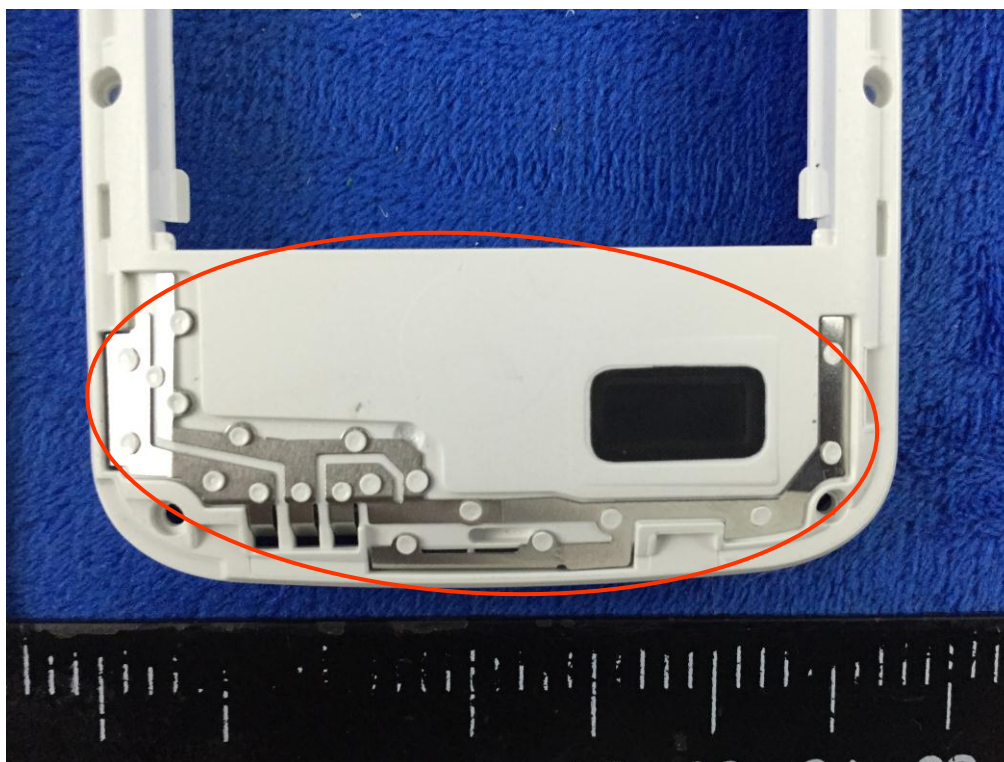




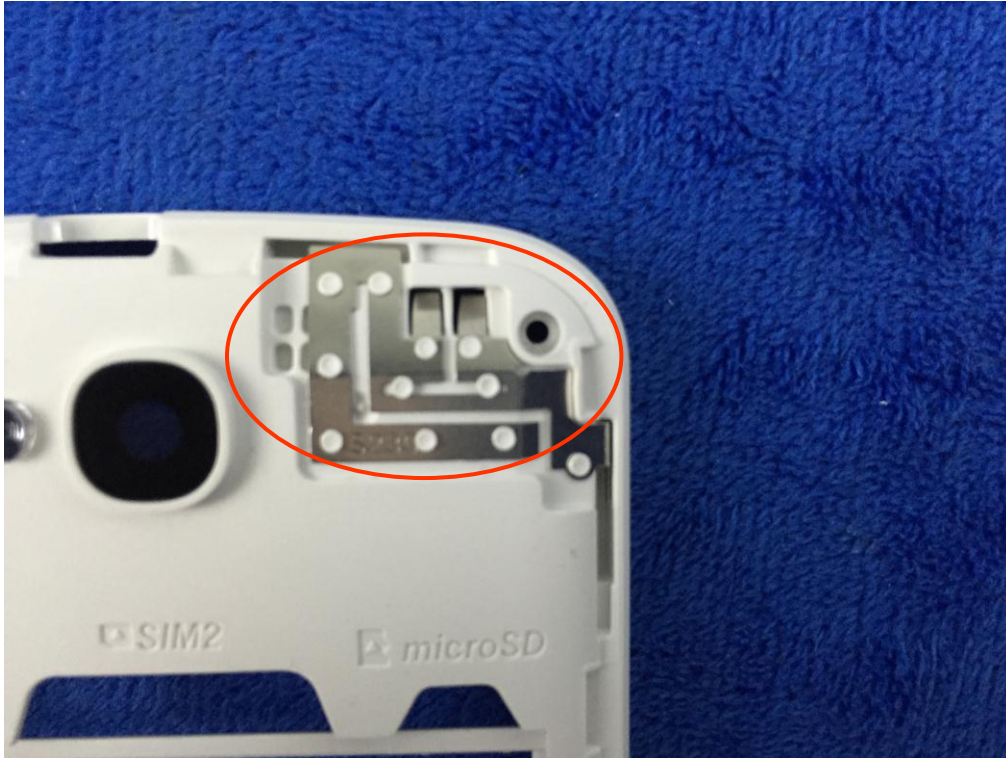
LCD – Rear View



GSM/PCS/UMTS-FDD Antenna View

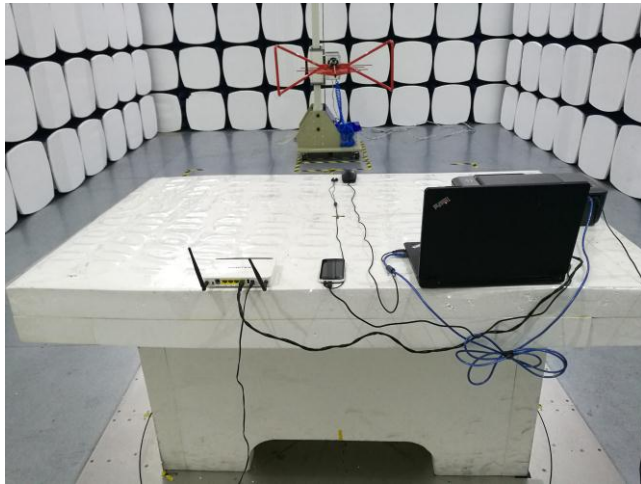


WIFI/BT - Antenna View

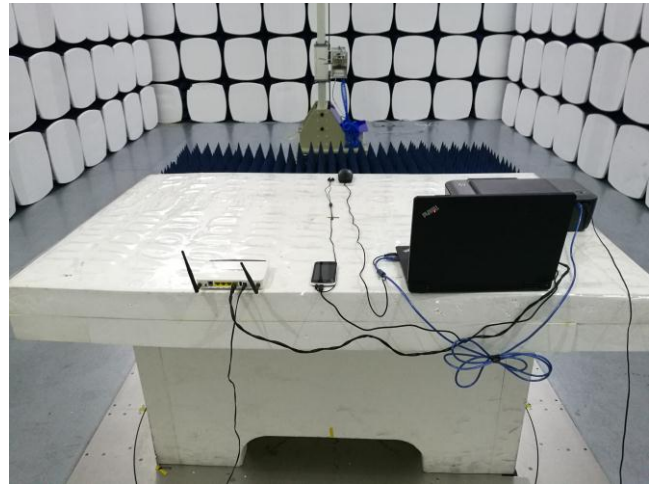




**Annex B.iii. Photograph: Test Setup Photo**



Radiated Emissions Test Setup Below 1GHz

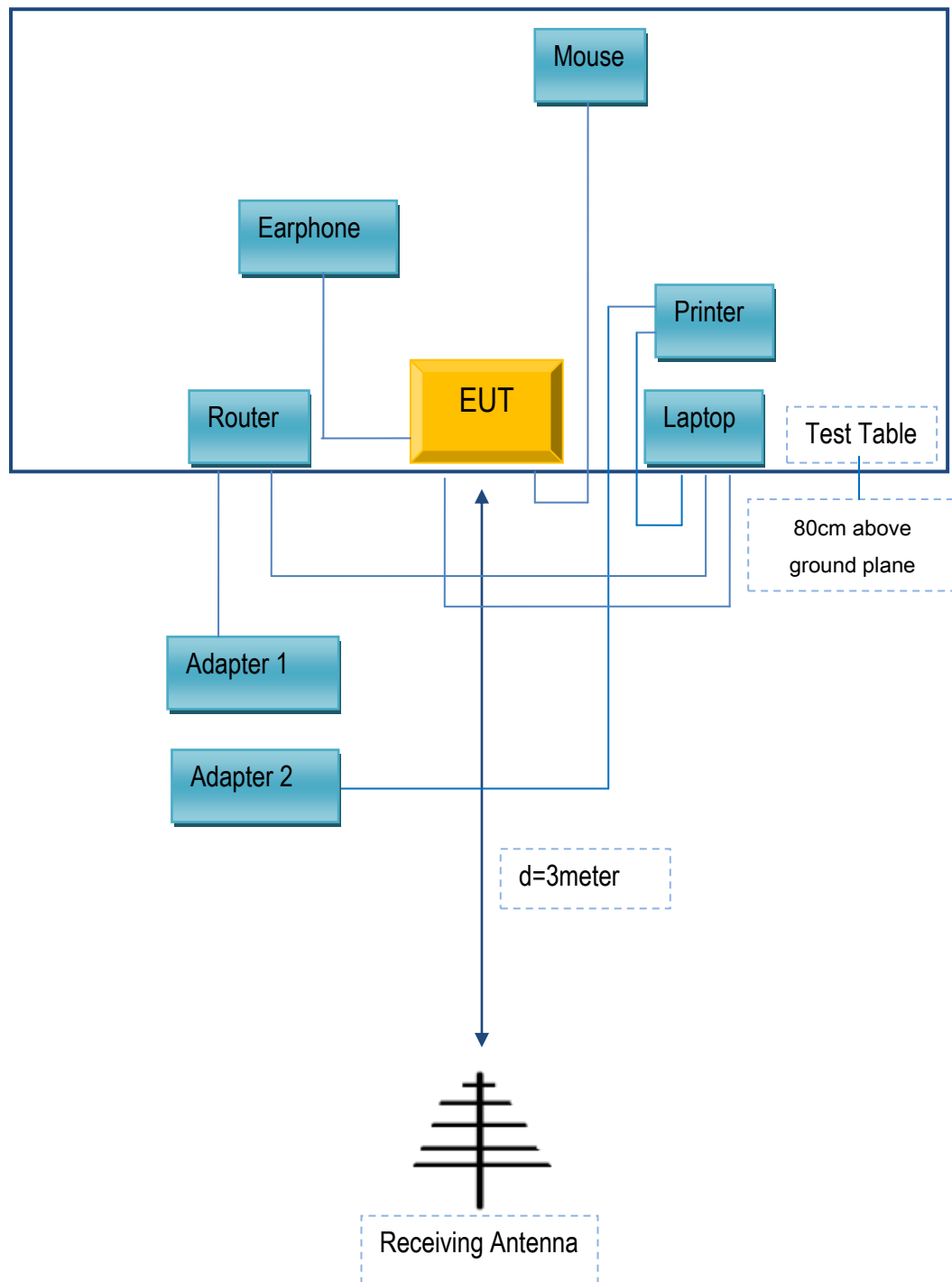


Radiated Emissions Test Setup Above 1GHz

## Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

### Annex C.ii. TEST SET UP BLOCK

#### Block Configuration Diagram for Radiated Emissions



## **Annex C. ii. 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
BLU Products , Inc	Earphone	ADVANCE 4.0M	N/A

### **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
Earphone Cables	Un-shielding	No	0.5m	N/A

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

Please see the attachment

## Annex E. DECLARATION OF SIMILARITY

### Declaration Letter

(Original approval holder)

Company name	BLU Products, Inc
Address	10814 NW 33rd St # 100 Doral, FL 33172

Declare that the following company:

(New approval holder)

Company name	BLU Products, Inc
Address	10814 NW 33rd St # 100 Doral, FL 33172

is here to declare that PCBA ,Antenna and Appearance shape , accessories are the same . The only difference is listed as below

(Difference from original approval holder's)

	Model	Difference
Original	ADVANCE 4.0M	Only add one LCD bonding pad on PCB
New	ADVANCE 4.0M	

and apply for own approval or certificate.

Attestation:

Date:	Name: (this must be a person)	Function:	Signature: (or official company stamp)
2017-7-13	Zeng wei		Zeng Wei