

# **FCC 47 CFR PART 15 SUBPART B**

## **TEST REPORT**

*For*

**Applicant: AEG Telecomunicações, S.A.**

**Address: Rua João Saraiva, 4, 1700-249 Lisboa, Portugal**

**Product Name: Mobile Phone**

**Model Name: BTX330**

**Brand Name: AEG**

**FCC ID: A72-BTX330**

**Report No.: STS111104F1**

**Date of Issue: December. 14, 2011**

**Issued by: MOST Technology Service Co., Ltd.**

**Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial Park ,  
Nanshan, Shenzhen, Guangdong ,China**

**Tel: 86-755-2795 8522**

**Fax : 86-755-2795 8022**

*The report consists 46 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by MOST. The test results in the report only apply to the tested sample. The test report shall be invalid without all the signatures of testing engineers, reviewer and approver.*

## TABLE OF CONTENTS

<b>1. VERIFICATION OF CONFORMITY.....</b>	<b>3</b>
<b>2. GENERAL INFORMATION.....</b>	<b>4</b>
2.1 PRODUCT INFORMATION.....	4
2.2 OBJECTIVE.....	5
2.3 TEST STANDARDS AND RESULTS.....	5
2.4 ENVIRONMENTAL CONDITIONS.....	5
<b>3. TEST FACILITY.....</b>	<b>6</b>
<b>4. TEST EQUIPMENT LIST.....</b>	<b>7</b>
<b>5. 47 CFR PART 15B REQUIREMENTS.....</b>	<b>8</b>
5.1 GENERAL INFORMATION.....	8
<b>6. LINE CONDUCTED EMISSION TEST.....</b>	<b>10</b>
6.1. LIMITS OF LINE CONDUCTED EMISSION TEST.....	10
6.2. BLOCK DIAGRAM OF TEST SETUP.....	10
6.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST.....	11
6.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST.....	12
6.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST.....	13
<b>7. RADIATED EMISSION TEST.....</b>	<b>19</b>
7.1. LIMITS OF RADIATED DISTURBANCES AT 3M DISTANCES FOR CLASS B.....	19
7.2 TEST DESCRIPTION.....	19
7.3 TEST RESULT.....	21
<b>APPENDIX 1.....</b>	<b>29</b>
<b>PHOTOGRAPHS OF TEST SETUP.....</b>	<b>29</b>
<b>APPENDIX 2.....</b>	<b>33</b>
<b>PHOTOGRAPHS OF EUT.....</b>	<b>33</b>

**1. VERIFICATION OF CONFORMITY**

**Equipment Under Test:** Mobile Phone  
**Brand Name:** AEG  
**Model Number:** BTX330  
**Series Model Name:** N/A  
**Difference description:** N/A  
**FCC ID:** A72-BTX330  
**Applicant:** AEG Telecomunicações, S.A.  
Rua João Saraiva, 4, 1700-249 Lisboa, Portugal  
**Manufacturer:** Hong Kong Sharp Technology Limited  
Room 604, Guoren Mansion, Sic-tech 3rd Road, Sic-tech park, NanShan, Shenzhen, China  
**Technical Standards:** FCC Part 15 B  
**File Number:** STS111104F1  
**Date of test:** December. 1, 2011 ~ December. 12, 2011  
**Deviation:** None  
**Condition of Test Sample:** Normal  
**Test Result:** PASS

The above equipment was tested by Most Technology Service Co., Ltd. for compliance with the requirements set forth in FCC Part 15 and the Technical Standards mentioned above. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment and the level of the immunity endurance of the equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.

Tested by (+ signature):



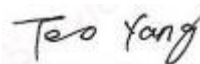
Zhang Ling      December. 14, 2011

Review by (+ signature):



July Wen      December. 14, 2011

Approved by (+ signature):



Terry Yang      December. 14, 2011

## 2. GENERAL INFORMATION

### 2.1 PRODUCT INFORMATION

EUT1- Mobile Phone	
Description:	Mobile Phone
Brand Name:	AEG
Model Name:	BTX330
IMEI No.:	--
Hardware Version:	Z16-V3.0
Software Version:	Z16_AEG_MT5193_K5N5666ATD_BTMT6612_RF7170D_ILI9325_JAVA_EN_SP_PR_20111116
Frequency:	Tx: 824.2-848.8 MHz 1850.2-1909.8 MHz Rx: 849.2-893.8 MHz 1930.2-1989.8 MHz
EUT2- Battery	
Description:	Lithium-ion Battery
Model Name:	BTX330
Brand Name:	AEG
Manufacturer:	Shenzhen Mange Electronics Co., Ltd.
Capacitance:	1000mAh
Rated Voltage:	3.7V
Charge Limit:	4.2V
EUT3 – Power Supply	
Description:	Travel Charger
Model Name:	BTX330
Brand Name:	AEG
Manufacturer:	Shenzhen Yifanxing Technology Co.,Ltd.
Rated Input:	AC 100-240V,0.15A, 50/60Hz
Rated Output:	DC 5V, 0.5A
Length of USB cable:	1.0m

#### NOTE:

1. The EUT is a model of GSM Portable Mobile Station (MS). It consists of **hand telephone set, Lithium battery, headphone ,USB and Charger** as listed above.
2. Please refer to Appendix 2 for the photographs of the EUT. For a more detailed features description about the EUT, please refer to User's Manual.

## 2.2 OBJECTIVE

Perform FCC Part 15 Subpart B tests for FCC Marking.

## 2.3 TEST STANDARDS AND RESULTS

Test items and the results are as bellow:

EMISSION				
Standard	Item		Result	Remarks
FCC 47 CFR Part 15 Subpart B (10-1-05 Edition)	§15.107	Conducted Emission	PASS	Meet Class B limit
	§15.109	Radiated Emission	PASS	Meet Class B limit

Note: 1. The test result judgment is decided by the limit of measurement standard  
2. The information of measurement uncertainty is available upon the customer's request.

## 2.4 ENVIRONMENTAL CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 15-35°C
- Humidity: 30-60 %
- Atmospheric pressure: 86-106 kPa

### 3. TEST FACILITY

Test Site: Most Technology Service Co.,Ltd.  
Location: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park, Nanshan, Shenzhen, Guangdong ,China  
Description: There is one 3m semi-anechoic an area test sites and two line conducted labs for final test. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4 and CISPR 16 requirements. The FCC Registration Number is **490827**.  
The **CNAS** Registration Number is **CNAS L3573**.  
Site Filing: The site description is on file with the Federal Communications Commission, 7435 Oakland Mills Road, Columbia, MD 21046.  
Instrument Tolerance: All measuring equipment is in accord with ANSI C63.4 and CISPR 16 requirements that meet industry regulatory agency and accreditation agency requirement.  
Ground Plane: Two conductive reference ground planes were used during the Line Conducted Emission, one in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40 cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For Radiated Emission Test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire area between the EUT and the antenna. It has no holes or gaps having longitudinal dimensions larger than one-tenth of a wavelength at the highest frequency of measurement up to 1GHz.

#### 4. TEST EQUIPMENT LIST

**Instrumentation:** The following list contains equipment used at MOST for testing. The equipment conforms to the CISPR 16-1 / ANSI C63.2 Specifications for Electromagnetic Interference and Field Strength Instrumentation from 10 kHz to 1.0 GHz or above.

No.	Equipment	Manufacturer	Model No.	S/N	Calibration due date
1	Test Receiver	Rohde & Schwarz	ESCI	100492	2012/03/14
2	L.I.S.N.	Rohde & Schwarz	ENV216	100093	2012/03/14
3	Coaxial Switch	Anritsu Corp	MP59B	6200283933	2012/03/14
4	Terminator	Hubersuhner	50Ω	No.1	2012/03/14
5	RF Cable	SchwarzBeck	N/A	No.1	2012/03/14
6	Test Receiver	Rohde & Schwarz	ESPI	101202	2012/03/14
7	Bilog Antenna	Sunol	JB3	A121206	2012/03/14
8	Test Antenna - Horn	Schwarzbeck	BBHA 9120C	--	2012/03/14
9	Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	--	2012/03/14
10	Cable	Resenberger	N/A	NO.1	2012/03/14
11	Cable	SchwarzBeck	N/A	NO.2	2012/03/14
12	Cable	SchwarzBeck	N/A	NO.3	2012/03/14
13	DC Power Filter	DuoJi	DL2×30B	N/A	2012/03/14
14	Single Phase Power Line Filter	DuoJi	FNF 202B30	N/A	2012/03/14
15	3 Phase Power Line Filter	DuoJi	FNF 402B30	N/A	2012/03/14
16	Test Receiver	Rohde & Schwarz	ESCI	100492	2012/03/14
17	Absorbing Clamp	Luthi	MDS21	3635	2012/03/14
18	Coaxial Switch	Anritsu Corp	MP59B	6200283933	2012/03/14
19	AC Power Source	Kikusui	AC40MA	LM003232	2012/03/14
20	Test Analyzer	Kikusui	KHA1000	LM003720	2012/03/14
21	Line Impedence Network	Kikusui	LIN40MA-PCR-L	LM002352	2012/03/14
22	ESD Tester	Kikusui	KES4021	LM003537	2012/03/14
23	EMC PRO System	EM Test	UCS-500-M4	V0648102026	2012/03/14
24	Signal Generator	IFR	2032	203002/100	2012/03/14
25	Amplifier	A&R	150W1000	301584	2012/03/14
26	CDN	FCC	FCC-801-M2-25	47	2012/03/14
27	CDN	FCC	FCC-801-M3-25	107	2012/03/14
28	EM Injection Clamp	FCC	F-203I-23mm	403	2012/03/14
29	RF Cable	MIYAZAKI	N/A	No.1/No.2	2012/03/14
30	Universal Radio Communication Tester	ROHDE&SCHWARZ	CMU200	0304789	2012/03/14
31	Telecommunication Antenna	European Antennas	PSA 75301R/170	0304213	2012/03/14

**NOTE:** Equipments listed above have been calibrated and are in the period of validation.

## 5. 47 CFR PART 15B REQUIREMENTS

### 5.1 GENERAL INFORMATION

#### EUT Function and Test Mode

##### Mode 1: Idle Mode

The MS was registered to the base station simulator but no call was set up.

The EUT configuration of the emission test was **MS + Battery+ Charger**.

##### Mode 2: Call Mode

Before the measurement, the lithium battery was completely discharge.

During the measurement, the lithium battery and the charger were installed, and the MS were in charging state. A communication link was established between the MS and a System Simulator (SS). The MS operated at GSM 850/1900MHz mid ARFCN and maximum output power.

The EUT configuration of the emission test was **MS + Battery + Charger**.

##### Mode 3: GPRS Mode

During the test, the MS was playing the GPRS function continuously.

The EUT configuration of the emission test was **MS + Battery + Charger**.

##### Mode 4: Bluetooth Mode

During the measurement, the lithium battery and the charger were installed, and the MS were in charging state. A communication link was established between the EUT and the Bluetooth Earphone and a System Simulator (SS).

The MS operated at GSM 850/1900MHz mid and maximum output power.

During the test, the MS was playing the Bluetooth function continuously.

The EUT configuration of the emission test was **MS + Battery + Charger + BT Earphone**.

##### Mode 5: MP3/MP4 Mode

During the test, the MS was playing the MP3/MP4 function continuously.

The EUT configuration of the emission test was **MS + Battery + Charger**.

##### Mode 6: Camera Mode

During the test, the MS was playing the camera function continuously.

The EUT configuration of the emission test was **MS + Battery + Charger**.

##### Mode 7: FM Mode

During the test, the MS was playing the FM function continuously.

The EUT configuration of the emission test was **MS + Battery + Earphone**.



**Mode 8: USB Mode**

During the test, the MS was connected with the notebook and made the data transmission function continuously.

The EUT configuration of the emission test was **MS + Battery+ USB Cable+ Notebook**((MSi-MS-1224).

**Mode 9: TV Mode**

During the test, the MS was playing the TV function continuously.

The EUT configuration of the emission test was **MS + Battery + Earphone.**

Note: Due to the different configuration and test, in this list only some worse mode. The worst test data of the worse mode is reported by this report.

## 6. LINE CONDUCTED EMISSION TEST

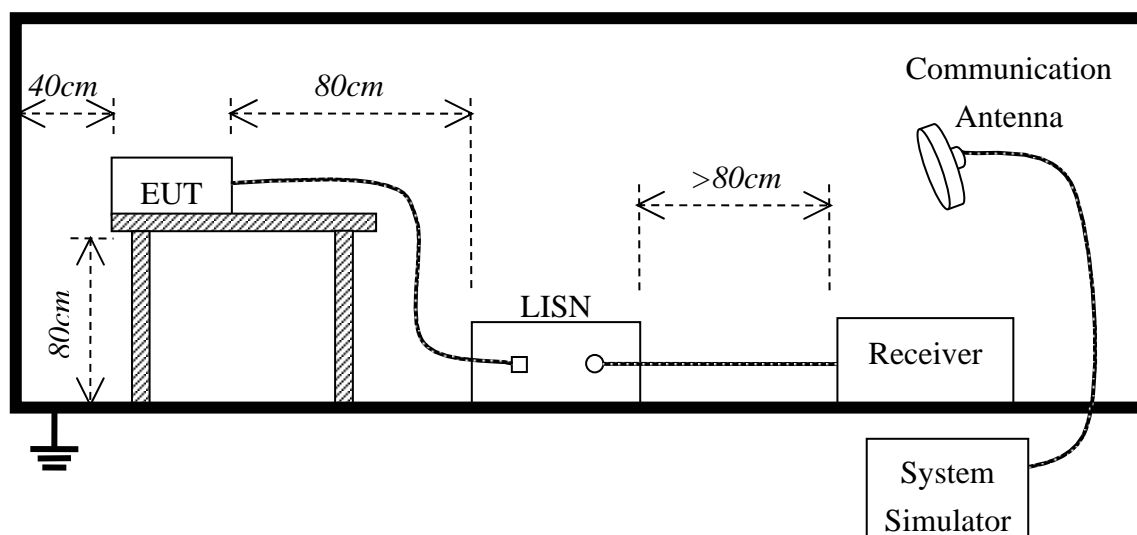
### 6.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.( dBuV)	Average( dBuV)
150kHz-500kHz	66-56	56-46
500kHz-5MHz	56	46
5MHz-30MHz	60	50

**\*\*Note:** 1. the lower limit shall apply at the transition frequency.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

### 6.2. BLOCK DIAGRAM OF TEST SETUP



### 6.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per FCC Part 15 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, was placed as per FCC Part 15.
- 3) All I/O cables were positioned to simulate typical actual usage as per FCC Part 15.
- 4) The EUT received DC 5V by AC/DC adapter or USB port of notebook which through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5) All support equipments received power from a second LISN supplying power of AC 120V/60Hz, if any.
- 6) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7) Analyzer / Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.
- 8) During the above scans, the emissions were maximized by cable manipulation.
- 9) The following test mode(s) were scanned during the preliminary test:

Preliminary Conducted Emission Test				
Keyboard 1				
Frequency Range Investigated		150KHz TO 30 MHz		
Mode of operation	Date	Report No.	Data#	Worst Mode
Idle Mode	2011-12-6	MOST111104F1	BTX330_0_(L, N)	<input type="checkbox"/>
Call Mode	2011-12-6	MOST111104F1	BTX330_1_(L, N)	<input type="checkbox"/>
GPRS Mode	2011-12-6	MOST111104F1	BTX330_2_(L, N)	<input type="checkbox"/>
Bluetooth Mode	2011-12-6	MOST111104F1	BTX330_3_(L, N)	<input type="checkbox"/>
MP3/MP4 Mode	2011-12-6	MOST111104F1	BTX330_4_(L, N)	<input type="checkbox"/>
Camera Mode	2011-12-6	MOST111104F1	BTX330_5_(L, N)	<input checked="" type="checkbox"/>
Keyboard 2				
Idle Mode	2011-12-6	MOST111104F1	BTX330_6_(L, N)	<input type="checkbox"/>
Call Mode	2011-12-6	MOST111104F1	BTX330_7_(L, N)	<input type="checkbox"/>
GPRS Mode	2011-12-6	MOST111104F1	BTX330_8_(L, N)	<input type="checkbox"/>
Bluetooth Mode	2011-12-6	MOST111104F1	BTX330_9_(L, N)	<input type="checkbox"/>
MP3/MP4 Mode	2011-12-6	MOST111104F1	BTX330_0_(L, N)	<input type="checkbox"/>

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

#### **6.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST**

EUT and support equipment was set up on the test bench as per step 9 of the preliminary test.

A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.

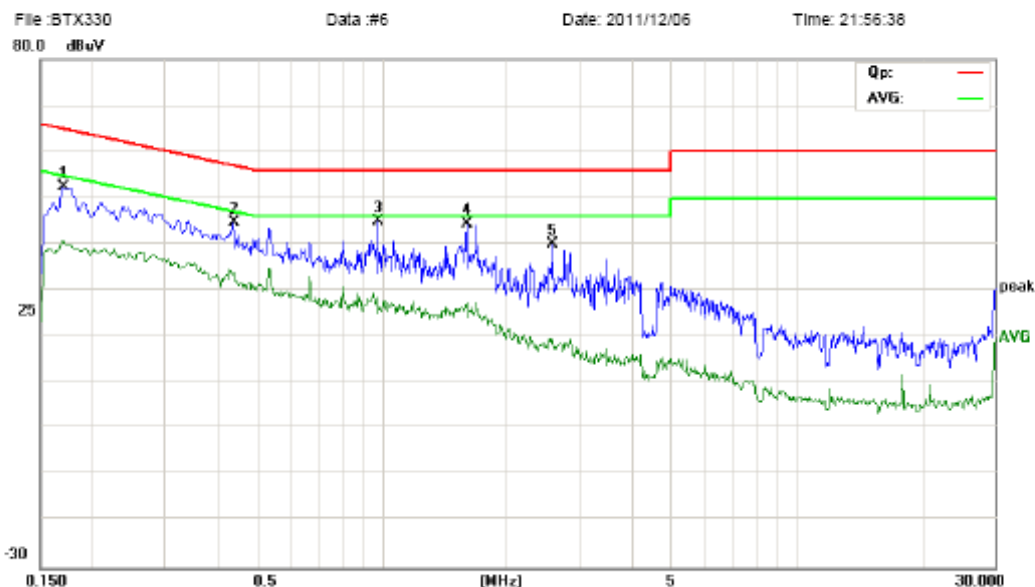
The test data of the worst case condition(s) was reported on the Summary Data page.

## 6.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong, China  
Tel: 0755-86170306 Fax: 0755-86170310

### Conducted Emission Measurement



Site site #1

Phase: **N**

Temperature: 26

Limit: FCC Part15 B Class B QP

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Mobile Phone

MN: BTX330

Mode: CAMERA

Note:

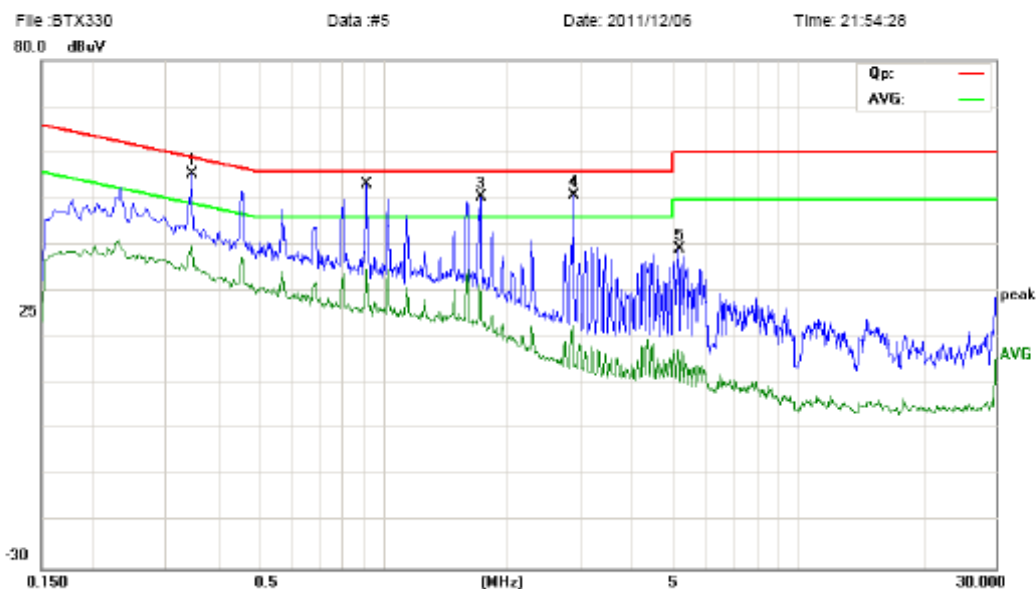
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1700	42.05	10.20	52.25	64.96	-12.71	peak	
2		0.4380	34.15	10.41	44.56	57.10	-12.54	peak	
3	*	0.9780	35.06	10.00	45.06	56.00	-10.94	peak	
4		1.6020	34.90	9.40	44.30	56.00	-11.70	peak	
5		2.5740	30.32	9.57	39.89	56.00	-16.11	peak	

\*:Maximum data x:Over limit !:over margin



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong, China  
Tel: 0755-86170306 Fax: 0755-86170310

### Conducted Emission Measurement



Site site #1

Phase: **L1**

Temperature: 26

Limit: FCC Part15 B Class B QP

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Mobile Phone

MN: BTX330

Mode: CAMERA

Note:

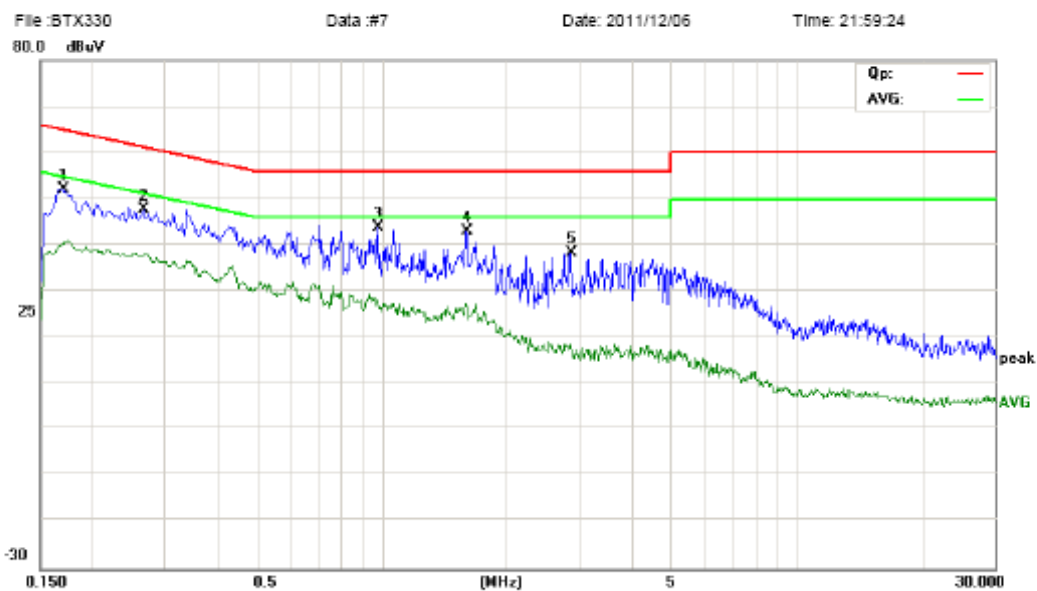
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.3460	44.41	11.03	55.44	59.06	-3.62	peak	
2	*	0.9180	43.17	10.00	53.17	56.00	-2.83	QP	
3		1.7220	41.05	9.28	50.33	56.00	-5.67	peak	
4		2.8740	40.75	9.87	50.62	56.00	-5.38	peak	
5		5.1500	27.28	11.91	39.19	60.00	-20.81	peak	

\*:Maximum data x:Over limit !:over margin



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong, China  
Tel: 0755-86170306 Fax: 0755-86170310

### Conducted Emission Measurement



Site site #1

Phase: **N**

Temperature: 26

Limit: FCC Part15 B Class B QP

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Mobile Phone

MN: BTX330

Mode: CALL

Note:

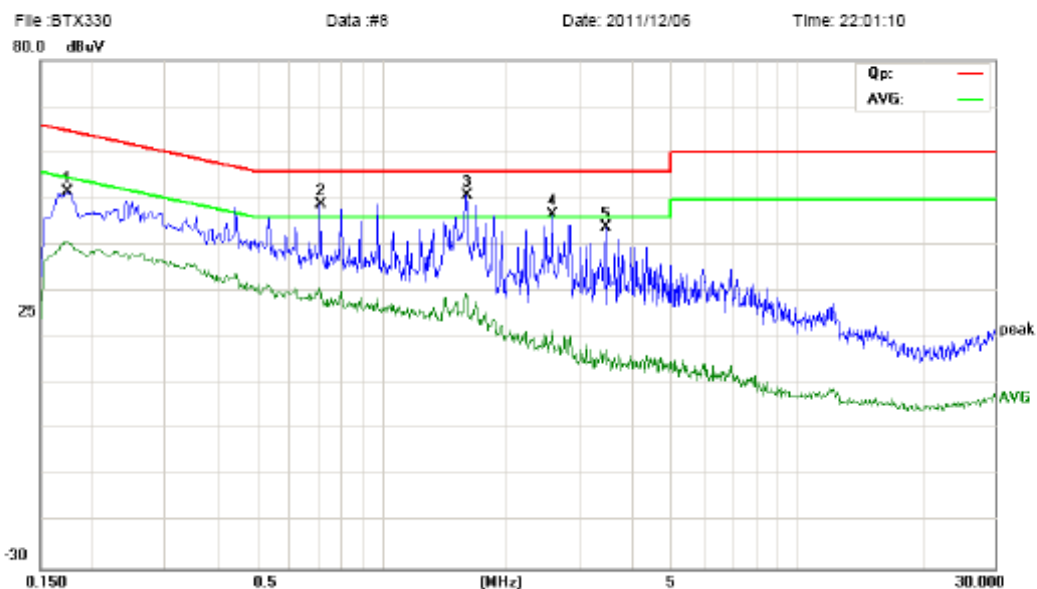
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1700	41.89	10.20	52.09	64.96	-12.87	peak	
2		0.2660	36.17	11.56	47.73	61.24	-13.51	peak	
3	*	0.9780	33.96	10.00	43.96	56.00	-12.04	peak	
4		1.5940	33.72	9.41	43.13	56.00	-12.87	peak	
5		2.8500	28.61	9.85	38.46	56.00	-17.54	peak	

\*:Maximum data x:Over limit !:over margin



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong, China  
Tel: 0755-86170306 Fax: 0755-86170310

### Conducted Emission Measurement



Site site #1

Phase: **L1**

Temperature: 26

Limit: FCC Part15 B Class B QP

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Mobile Phone

MN: BTX330

Mode: CALL

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1740	40.98	10.44	51.42	64.77	-13.35	peak	
2		0.7100	38.74	10.00	48.74	56.00	-7.26	peak	
3	*	1.5940	41.40	9.41	50.81	56.00	-5.19	peak	
4		2.5740	37.00	9.57	46.57	56.00	-9.43	peak	
5		3.4620	33.32	10.46	43.78	56.00	-12.22	peak	

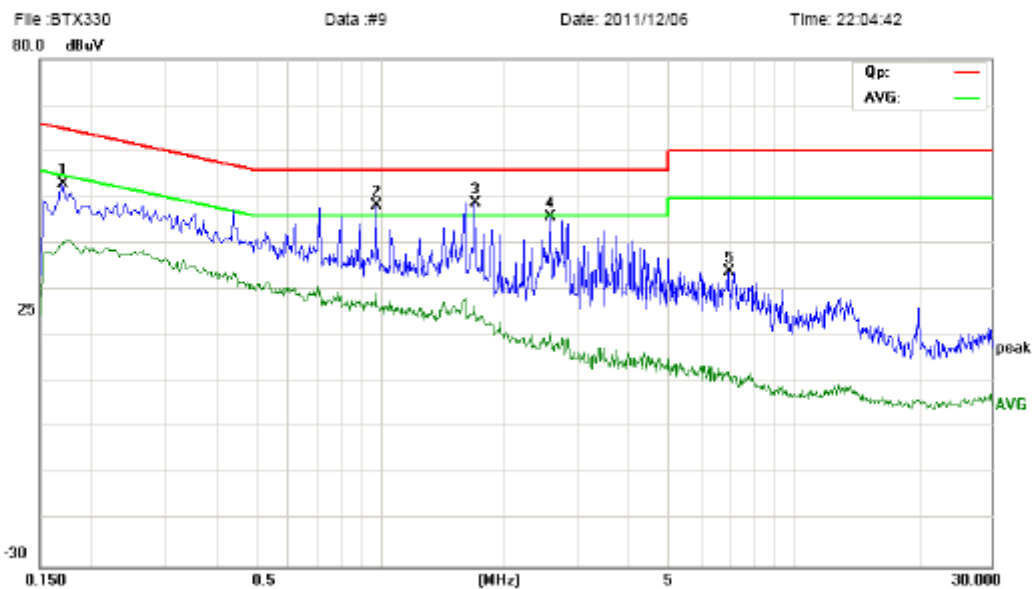
\*:Maximum data x:Over limit !:over margin





Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong, China  
Tel: 0755-86170306 Fax: 0755-86170310

### Conducted Emission Measurement



Site site #1

Phase: **L1**

Temperature: 26

Limit: FCC Part15 B Class B QP

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Mobile Phone

M/N: BTX330

Mode: BLUETOOTH

Note:

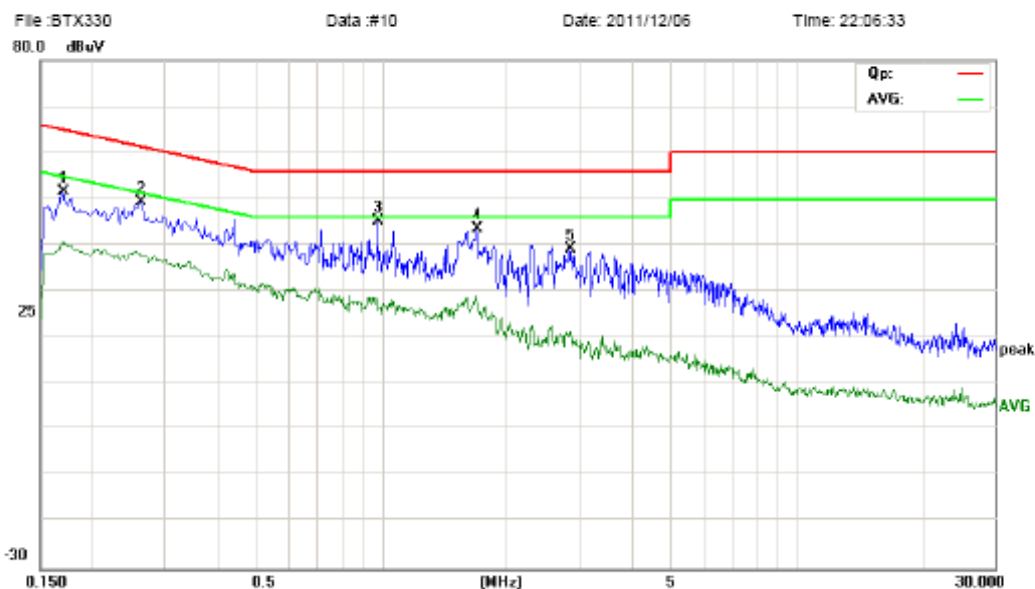
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1700	42.66	10.20	52.86	64.96	-12.10	peak	
2		0.9780	38.20	10.00	48.20	56.00	-7.80	peak	
3	*	1.6900	39.58	9.31	48.89	56.00	-7.11	peak	
4		2.5740	36.12	9.57	45.69	56.00	-10.31	peak	
5		6.9460	23.12	10.83	33.95	60.00	-26.05	peak	

\*:Maximum data x:Over limit !:over margin



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong, China  
Tel: 0755-86170306 Fax: 0755-86170310

### Conducted Emission Measurement



Site site #1

Phase: **N**

Temperature: 26

Limit: FCC Part15 B Class B QP

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Mobile Phone

MN: BTX330

Mode: BLUETOOTH

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1700	41.27	10.20	51.47	64.96	-13.49	peak	
2		0.2620	37.86	11.59	49.45	61.37	-11.92	peak	
3	*	0.9780	35.15	10.00	45.15	56.00	-10.85	peak	
4		1.6900	34.14	9.31	43.45	56.00	-12.55	peak	
5		2.8380	29.36	9.84	39.20	56.00	-16.80	peak	

\*:Maximum data x:Over limit !:over margin

## 7. RADIATED EMISSION TEST

### 7.1. LIMITS OF RADIATED DISTURBANCES AT 3M DISTANCES FOR CLASS B

According to FCC section 15.109, except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

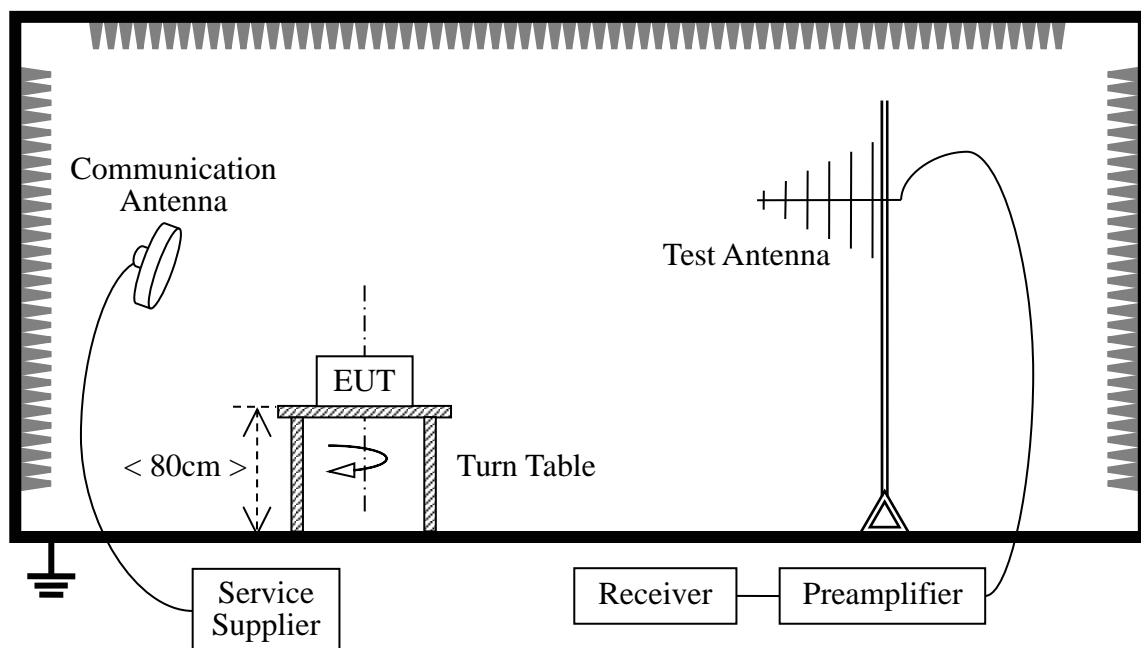
Frequency (MHz)	Field Strength ( $\mu\text{V/m}$ )	Measurement Distance (m)
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

#### NOTE:

1. Field Strength ( $\text{dB}\mu\text{V/m}$ ) =  $20 \cdot \log[\text{Field Strength } (\mu\text{V/m})]$ .
2. In the emission tables above, the tighter limit applies at the band edges.

### 7.2 TEST DESCRIPTION

#### Test Setup:



The EUT is powered by the Battery charged with the AC Adapter which is powered by 120V, 60Hz AC mains supply. The Module is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading. During the measurement, the EUT is activated and transmitting with the other Bluetooth device (Supply by the Applicant) during the test.

For the Test Antenna:

(a) In the frequency range of 9 kHz to 30MHz, magnetic field is measured with Loop Test Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.

(b) In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. The emission levels at both horizontal and vertical polarizations should be tested.

Preliminary Radiated Emission Test				
Keyboard 1				
Frequency Range Investigated			30 MHz TO 1000 MHz	
Mode of operation	Date	Report No.	Data#	Worst Mode
Idle Mode	2011-12-12	MOST111104F1	BTX330_0_(H, V)	<input type="checkbox"/>
Call Mode	2011-12-12	MOST111104F1	BTX330_1_(H, V)	<input type="checkbox"/>
GPRS Mode	2011-12-12	MOST111104F1	BTX330_2_(H, V)	<input type="checkbox"/>
Bluetooth Mode	2011-12-12	MOST111104F1	BTX330_3_(H, V)	<input type="checkbox"/>
MP3/MP4 Mode	2011-12-12	MOST111104F1	BTX330_4_(H, V)	<input type="checkbox"/>
Camera Mode	2011-12-12	MOST111104F1	BTX330_5_(H, V)	<input type="checkbox"/>
FM Mode	2011-12-12	MOST111104F1	BTX330_6_(H, V)	<input type="checkbox"/>
USB Mode	2011-12-12	MOST111104F1	BTX330_7_(H, V)	<input checked="" type="checkbox"/>
TV Mode	2011-12-12	MOST111104F1	BTX330_8_(H, V)	<input type="checkbox"/>
Keyboard 2				
Idle Mode	2011-12-12	MOST111104F1	BTX330_9_(H, V)	<input type="checkbox"/>
Call Mode	2011-12-12	MOST111104F1	BTX330_10_(H, V)	<input type="checkbox"/>
GPRS Mode	2011-12-12	MOST111104F1	BTX330_12_(H, V)	<input type="checkbox"/>
Bluetooth Mode	2011-12-12	MOST111104F1	BTX330_13_(H, V)	<input type="checkbox"/>
MP3/MP4 Mode	2011-12-12	MOST111104F1	BTX330_14_(H, V)	<input type="checkbox"/>
Camera Mode	2011-12-12	MOST111104F1	BTX330_15_(H, V)	<input type="checkbox"/>
FM Mode	2011-12-12	MOST111104F1	BTX330_16_(H, V)	<input type="checkbox"/>
USB Mode	2011-12-12	MOST111104F1	BTX330_17_(H, V)	

### 7.3 TEST RESULT

Form 9KHz to 30MHz:

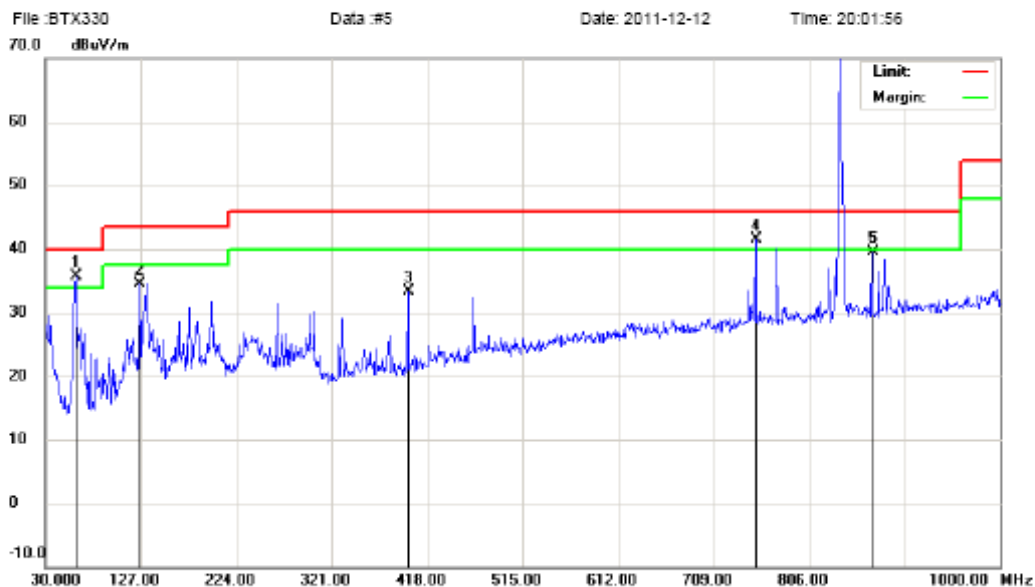
Freq. (MHz)	Ant. Pol H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant. / CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	AV Margin (dB)
					Peak (dBuV/m)	AV (dBuV/m)			
N/A	H								>20
N/A	V								>20

-No detected in below 30MHz.



Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong, China  
Tel: 0755-86170306 Fax: 0755-86170310

### Radiated Emission Measurement



Site: site MOST 3M

Polarization: *Horizontal*

Temperature: 26

Limit: FCC Part15 B 3M Radiation

Power: AC 120V/60Hz

Humidity: 61 %

EUT: Mobile Phone

Distance:

MN: BTX330

Mode: CALL

Note:

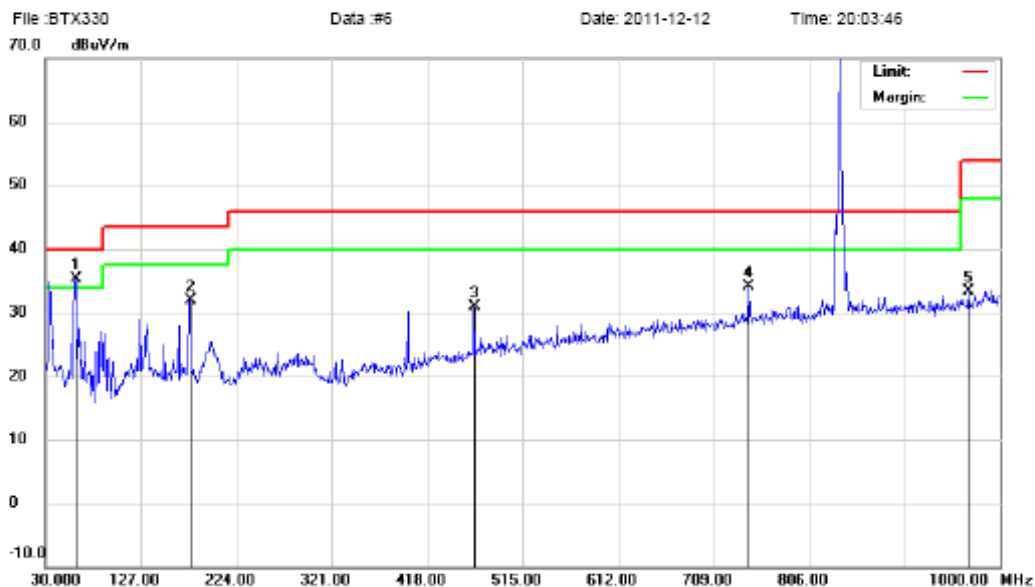
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1	*	61.0400	24.86	10.90	35.76	40.00	-4.24	peak			
2		126.0300	16.83	17.70	34.53	43.50	-8.97	peak			
3		398.6000	14.58	18.66	33.24	46.00	-12.76	peak			
4	!	751.6800	15.71	25.77	41.48	46.00	-4.52	peak			
5		870.0200	12.60	27.00	39.60	46.00	-6.40	peak			

\*:Maximum data x:Over limit !:over margin



Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong, China  
Tel: 0755-86170306 Fax: 0755-86170310

### Radiated Emission Measurement



Site: site MOST 3M

Polarization: **Vertical**

Temperature: 26

Limit: FCC Part15 B 3M Radiation

Power: AC 120V/60Hz

Humidity: 61 %

EUT: Mobile Phone

Distance:

MN: BTX330

Mode: CALL

Note:

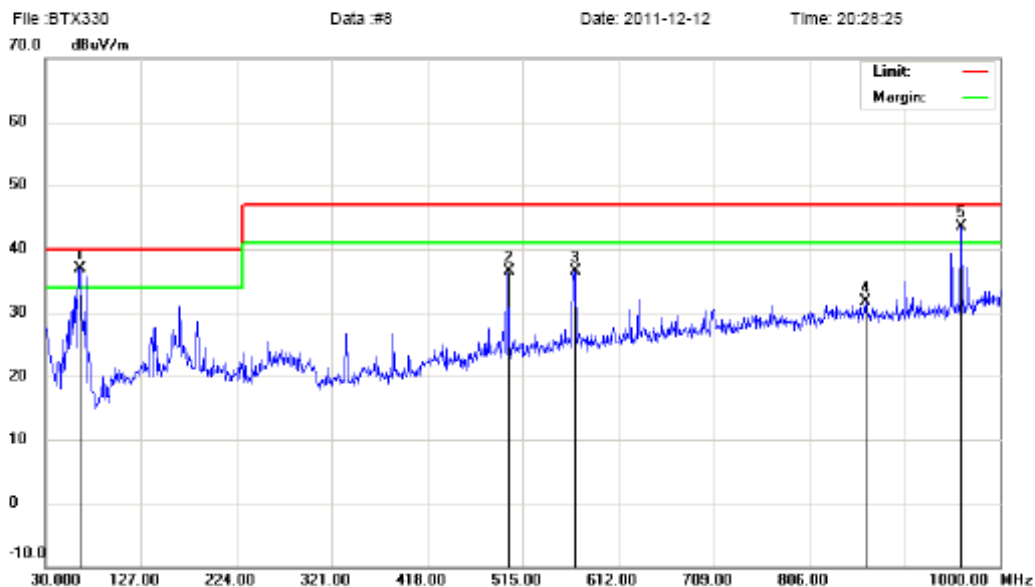
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1	*	61.0400	24.49	10.90	35.39	40.00	-4.61	peak			
2		176.4700	15.10	16.88	31.98	43.50	-11.52	peak			
3		465.5300	9.90	20.98	30.88	46.00	-15.12	peak			
4		743.9200	8.46	25.74	34.20	46.00	-11.80	peak			
5		967.9900	5.26	28.06	33.32	54.00	-20.68	peak			

\*:Maximum data x:Over limit !:over margin



Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong, China  
Tel: 0755-86170306 Fax: 0755-86170310

### Radiated Emission Measurement



Site: site MOST 3M

Polarization: **Vertical**

Temperature: 26

Limit: EN 55022 Class B 3M Radiation

Power: DC 5V From PC

Humidity: 61 %

EUT: Mobile Phone

Distance:

MN: BTX330

Mode: USB

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1	*	64.9200	25.62	11.29	36.91	40.00	-3.09	peak			
2		500.4500	15.11	21.40	36.51	47.00	-10.49	peak			
3		568.3500	13.68	22.85	36.53	47.00	-10.47	peak			
4		863.2300	4.74	27.03	31.77	47.00	-15.23	peak			
5	!	960.2300	15.59	28.00	43.59	47.00	-3.41	peak			

\*:Maximum data x:Over limit !:over margin





Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong, China  
Tel: 0755-86170306 Fax: 0755-86170310

### Radiated Emission Measurement

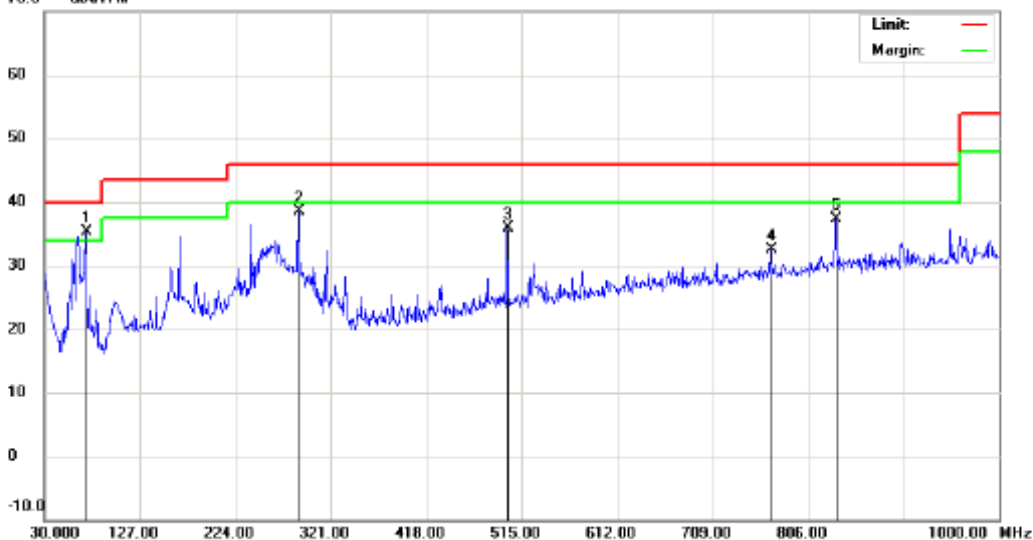
File: BTX330

Data: #9

Date: 2011-12-12

Time: 20:31:47

70.0 dBuV/m



Site: site MOST 3M

Polarization: *Horizontal*

Temperature: 26

Limit: FCC Part15 B 3M Radiation

Power: DC 5V From PC

Humidity: 61 %

EUT: Mobile Phone

Distance:

M/N: BTX330

Mode: USB

Note:

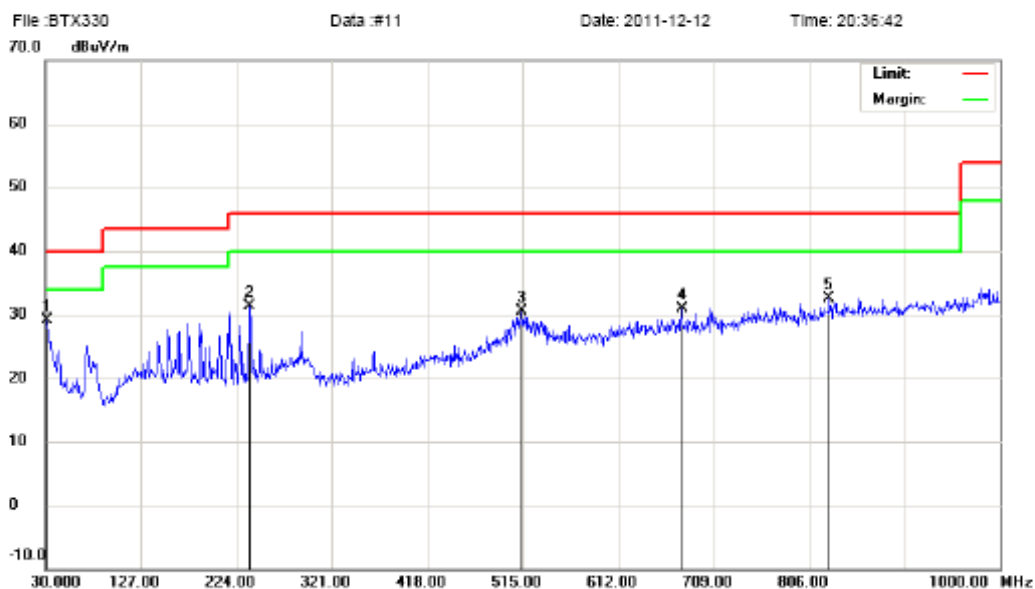
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	71.7100	23.61	11.68	35.29	40.00	-4.71	peak		
2		288.0200	18.99	19.42	38.41	46.00	-7.59	peak		
3		500.4500	14.56	21.40	35.96	46.00	-10.04	peak		
4		768.1700	6.71	25.86	32.57	46.00	-13.43	peak		
5		834.1300	10.25	27.08	37.33	46.00	-8.67	peak		

\*:Maximum data    x:Over limit    !:over margin



Address: No. 5, Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong, China  
Tel: 0755-86170306 Fax: 0755-86170310

### Radiated Emission Measurement



Site: site MOST 3M

Polarization: **Vertical**

Temperature: 26

Limit: FCC Part15 B 3M Radiation

Power: AC 120V/60Hz

Humidity: 61 %

EUT: Mobile Phone

Distance:

MN: BTX330

Mode: CAMERA

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1	*	30.9700	5.10	24.05	29.15	40.00	-10.85	peak			
2		237.5800	14.18	17.03	31.21	46.00	-14.79	peak			
3		513.0600	9.04	21.56	30.60	46.00	-15.40	peak			
4		676.0200	6.44	24.54	30.98	46.00	-15.02	peak			
5		826.3700	5.75	26.85	32.60	46.00	-13.40	peak			

\*:Maximum data    x:Over limit    !:over margin



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park  
Guangdong, China  
Tel: 0755-86170306 Fax: 0755-86170310

### Radiated Emission Measurement



Site: site MOST 3M

Polarization: *Horizontal*

Temperature: 26

Limit: FCC Part15 B 3M Radiation

Power: AC 120V/60Hz

Humidity: 61 %

EUT: Mobile Phone

Distance:

M/N: BTX330

Mode: CAMERA

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	30.0000	3.72	24.80	28.52	40.00	-11.48	peak		
2		290.9300	8.73	19.38	28.11	46.00	-17.89	peak		
3		609.0900	4.49	23.20	27.69	46.00	-18.31	peak		
4		748.7700	4.38	25.80	30.18	46.00	-15.82	peak		
5		851.5900	6.18	27.11	33.29	46.00	-12.71	peak		

\*:Maximum data x:Over limit !:over margin

**Notes:** The spikes which exceed the limit should be ignored because they are MS and SS carrier frequency.

The worst test data above 1 GHz was showed as the follow:

<b>Operation Mode:</b>	CALL(850MHz)	<b>Test Date:</b>	December. 12, 2011
<b>Temperature:</b>	24°C	<b>Tested by:</b>	Habby Guo
<b>Humidity:</b>	70 % RH	<b>Polarity:</b>	Ver. / Hor.

Freq. (MHz)	Ant. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF (dB)	Actual Fs		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Peak Margin (dB)	AV Margin (dB)
					Peak (dBuV/m)	AV (dBuV/m)				
1717.50	H	58.79	40.31	9.06	67.85	49.37	74.00	54.00	-6.15	-4.63
2765.50	H	55.37	36.58	9.09	64.46	45.67	74.00	54.00	-9.54	-8.33
N/A										>20
1717.50	V	56.47	36.26	9.06	65.53	45.32	74.00	54.00	-8.47	-8.68
2765.00	V	54.66	35.87	9.09	63.75	44.96	74.00	54.00	-10.25	-9.04
N/A										>20

**Notes:**

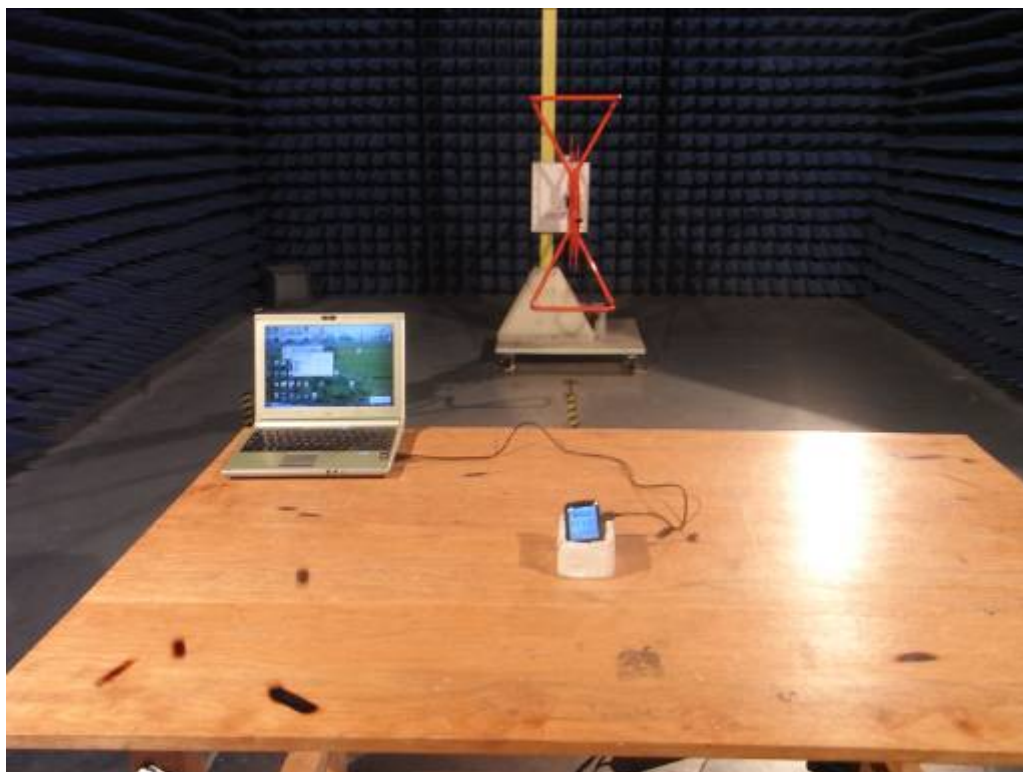
1. Measuring frequencies from 1 GHz to 6GHz.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
3. The frequency that above 3GHz is mainly from the environment noise.

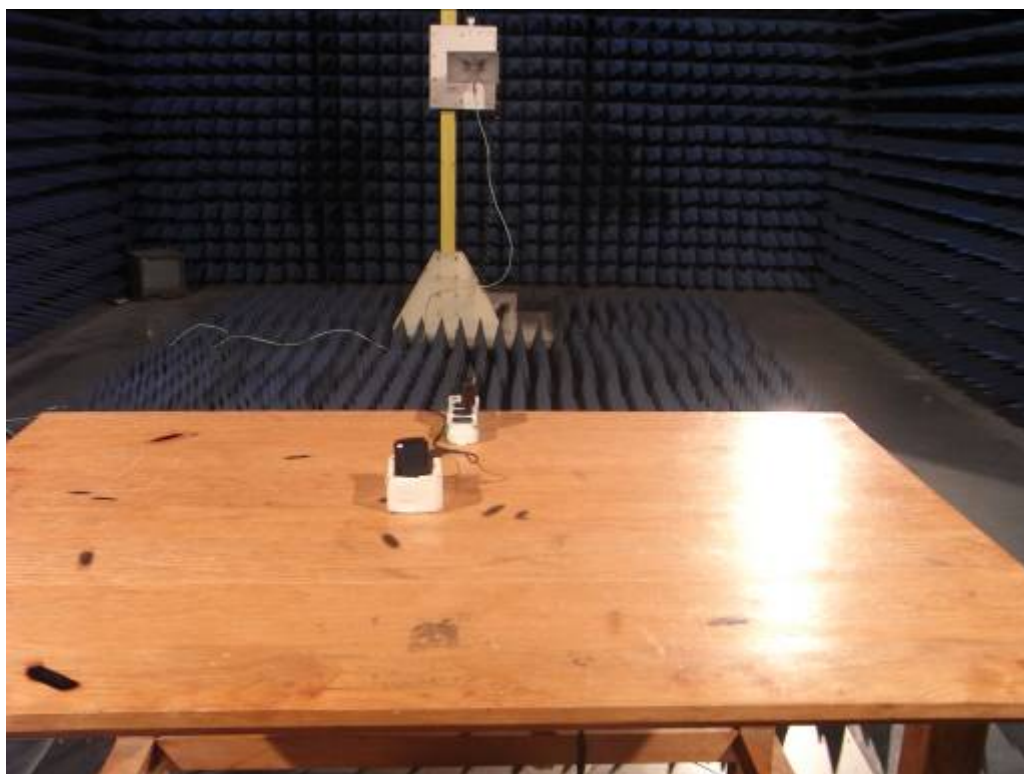
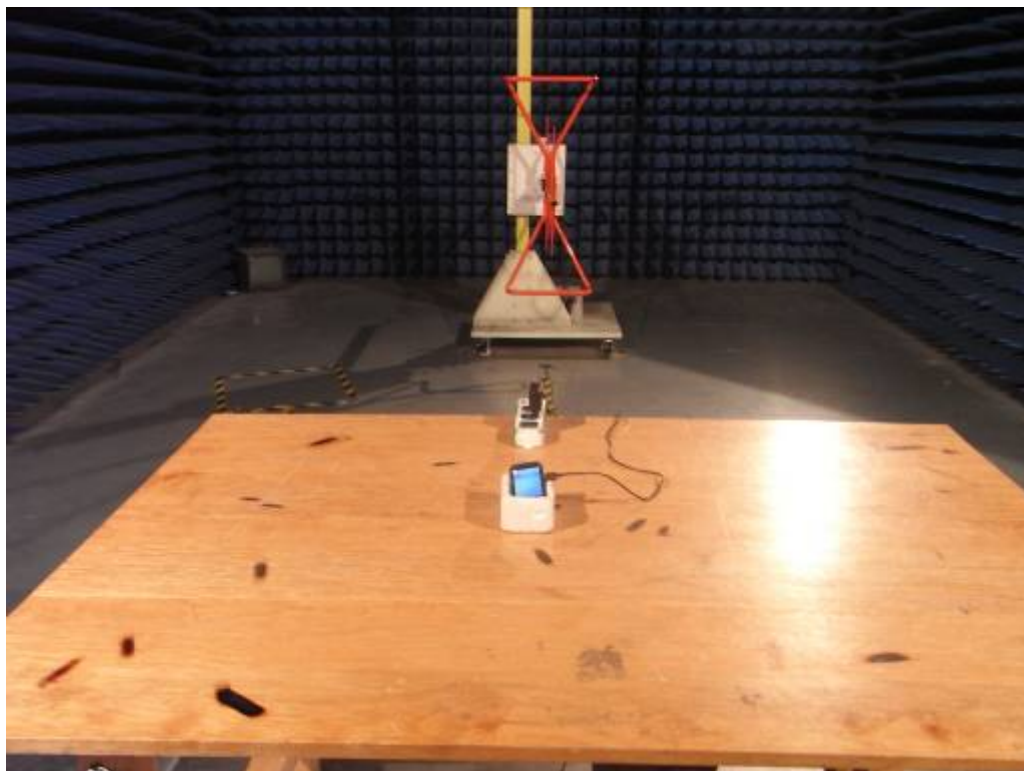
**APPENDIX 1**  
**PHOTOGRAPHS OF TEST SETUP**

CE TEST



RE TEST











**APPENDIX 2**  
**PHOTOGRAPHS OF EUT**

FRONT VIEW OF SAMPLE



BACK VIEW OF SAMPLE



LEFT VIEW OF SAMPLE



RIGHT VIEW OF SAMPLE



TOP VIEW OF SAMPLE



BOTTOM VIEW OF SAMPLE



PHOTO OF POWER SUPPLY



PHOTO OF HEADPHONE



PHOTO OF USB



PHOTO OF BATTERY



PHOTO OF THE ENTIRE SAMPLE



INTERNAL PHOTO OF SAMPLE – 1

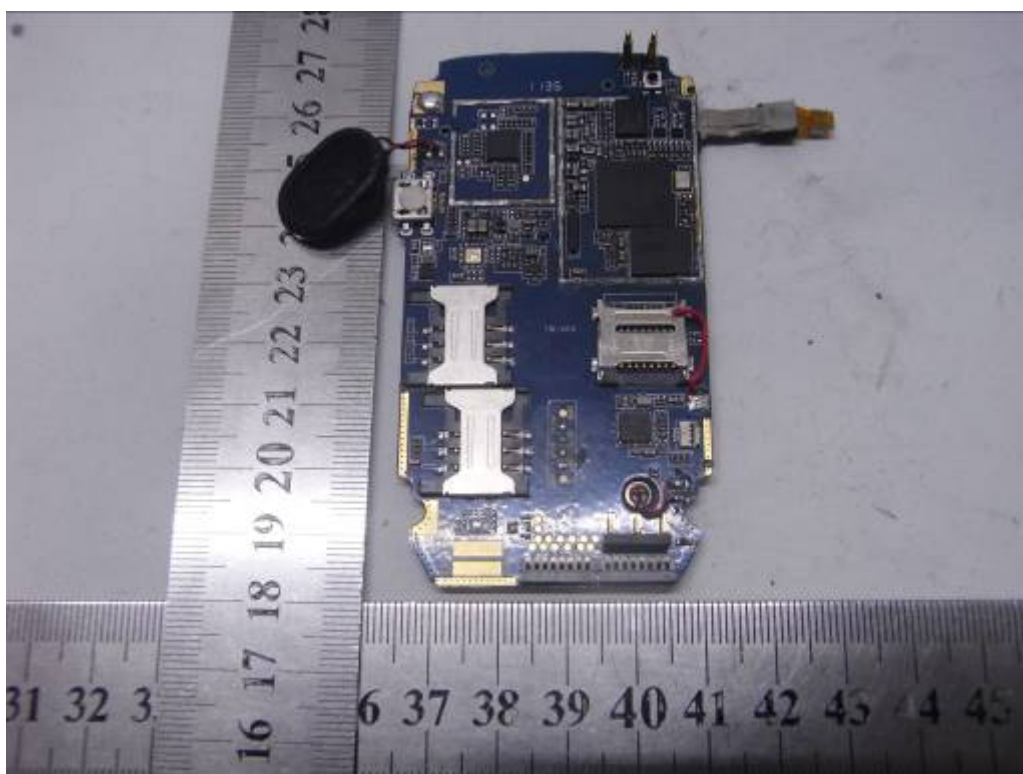




INTERNAL PHOTO OF SAMPLE – 2



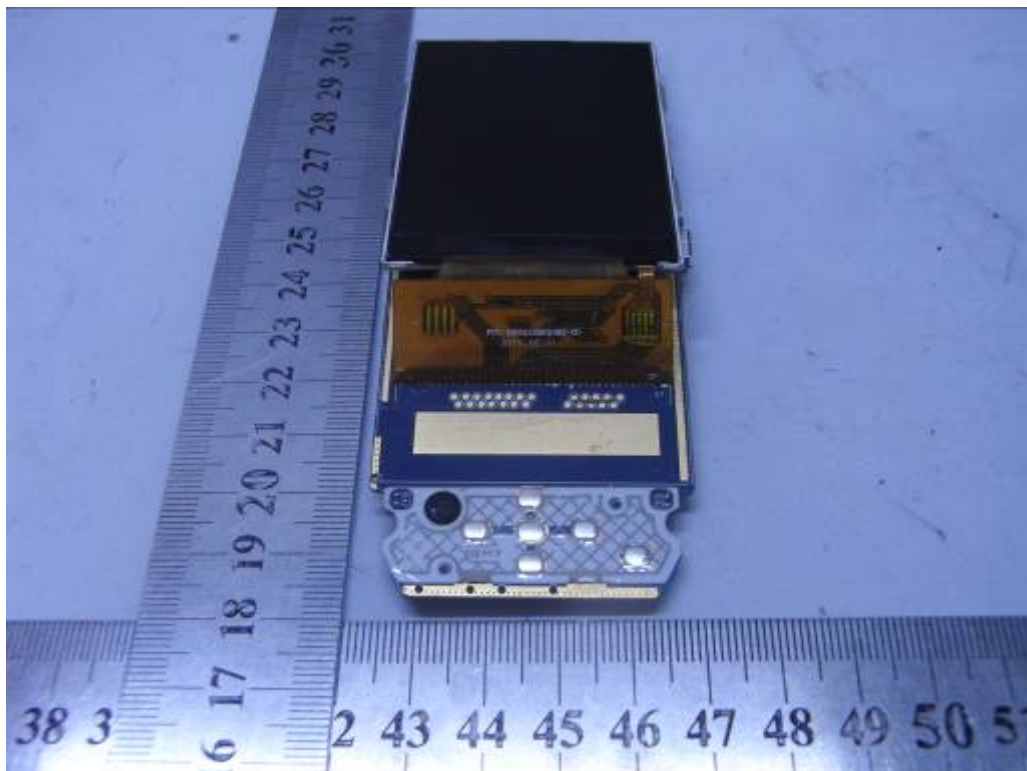
INTERNAL PHOTO OF SAMPLE –3



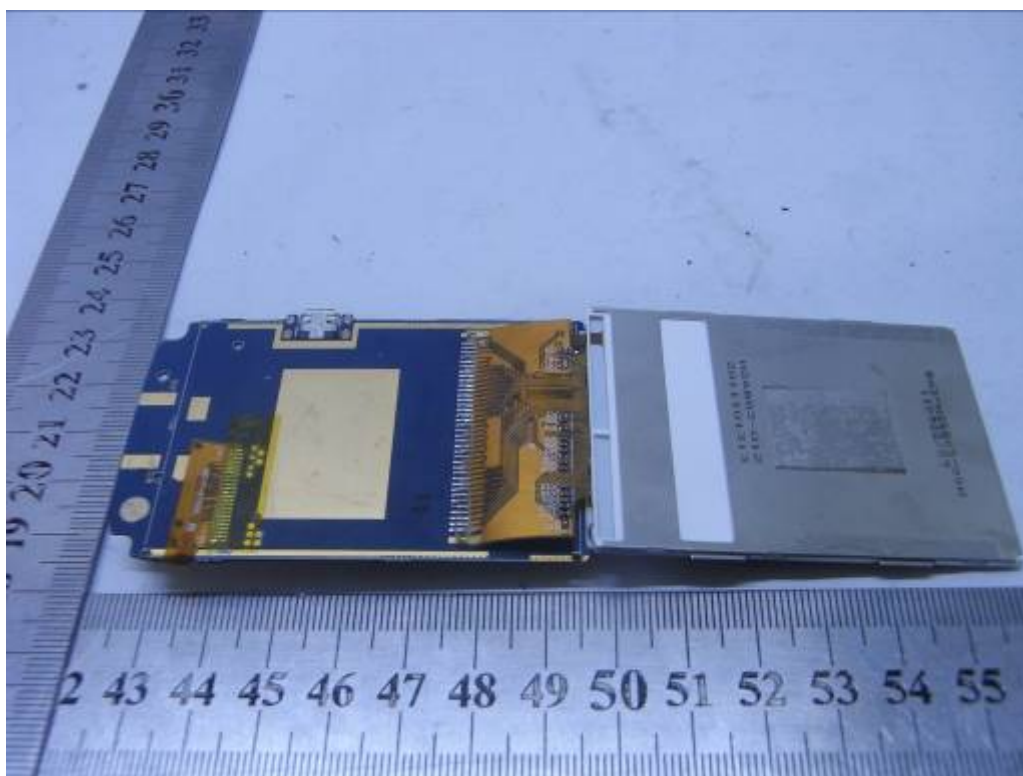
INTERNAL PHOTO OF SAMPLE -4



INTERNAL PHOTO OF SAMPLE -5



INTERNAL PHOTO OF SAMPLE -6

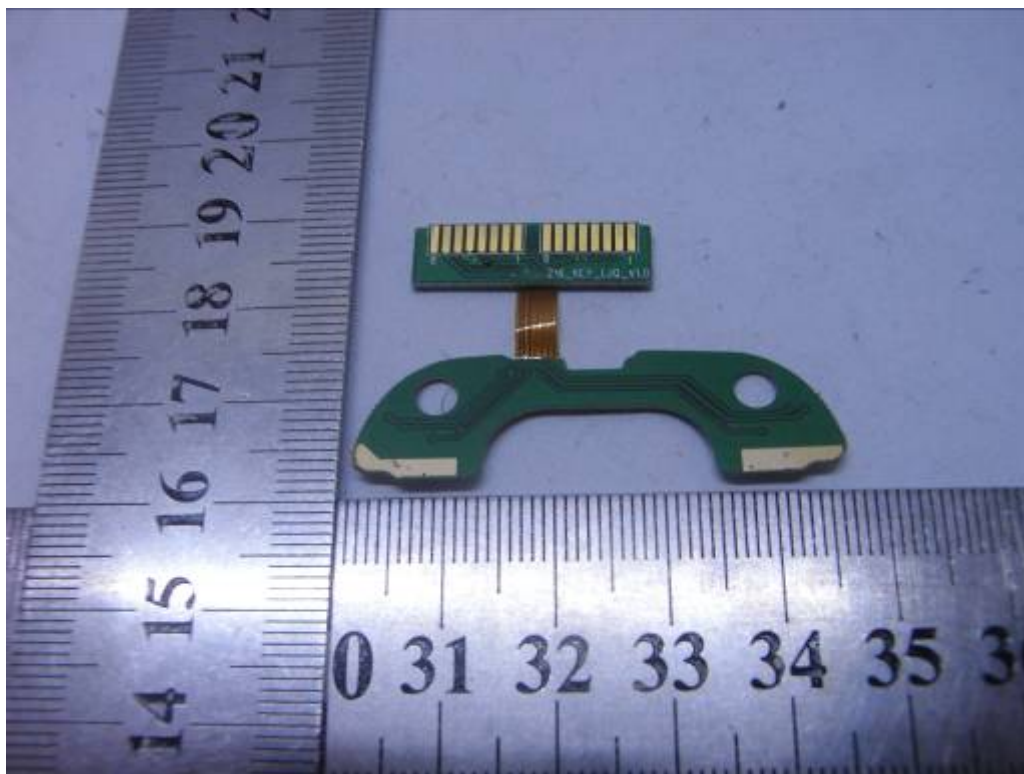


INTERNAL PHOTO OF SAMPLE -7

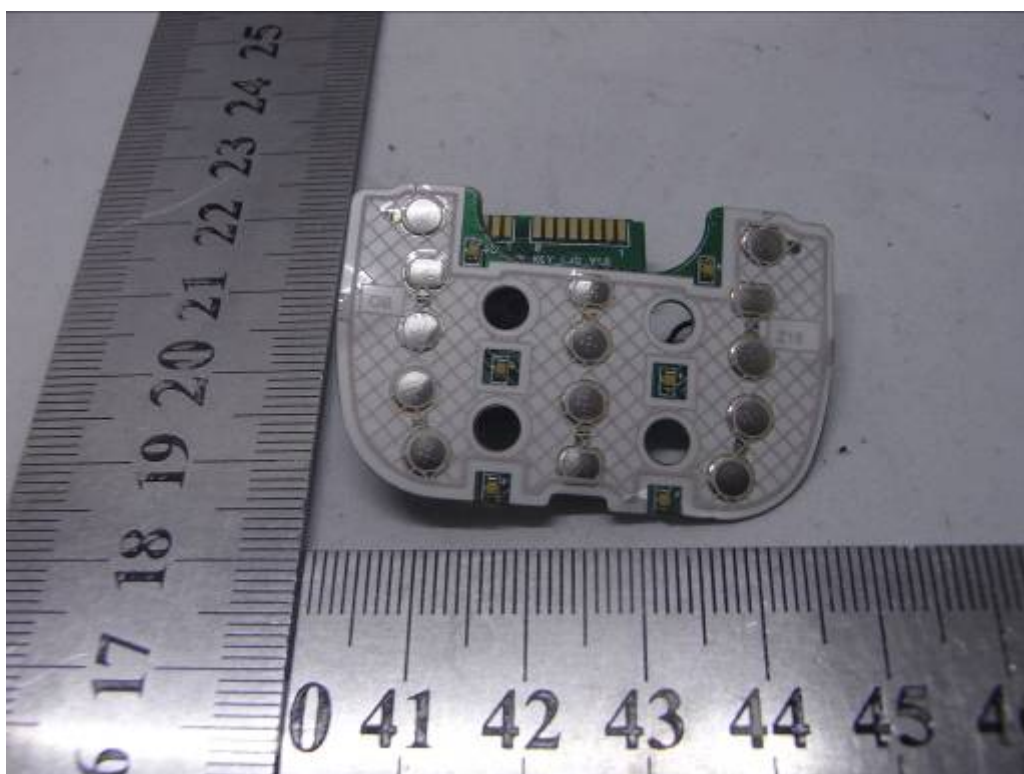




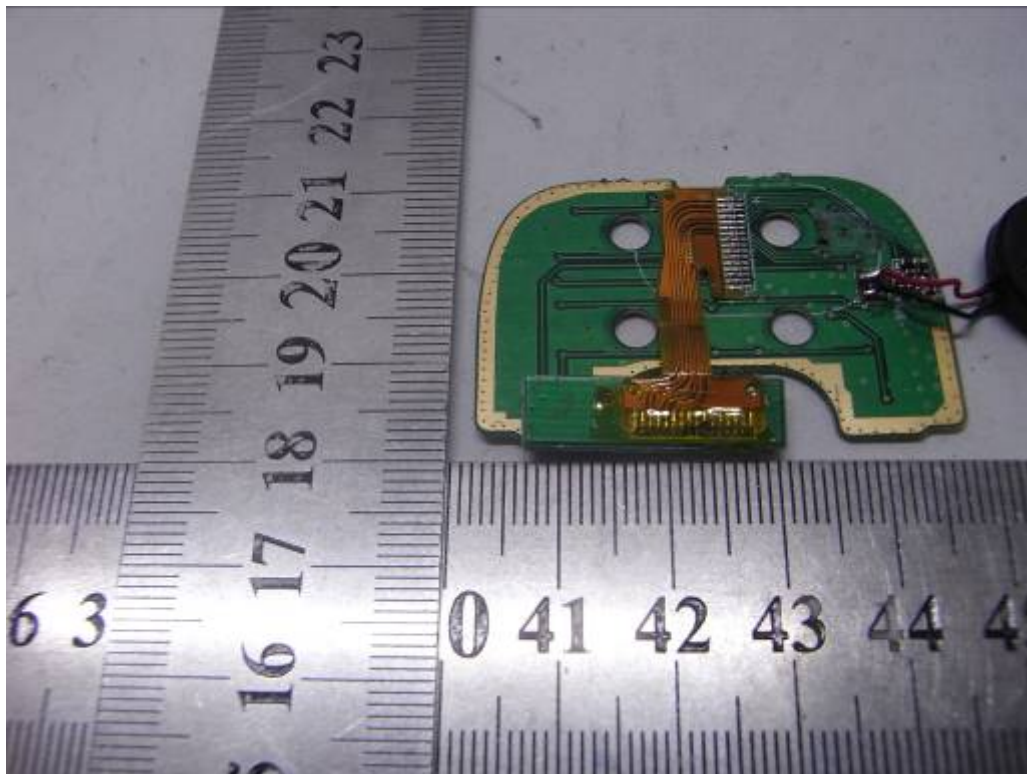
INTERNAL PHOTO OF SAMPLE -8



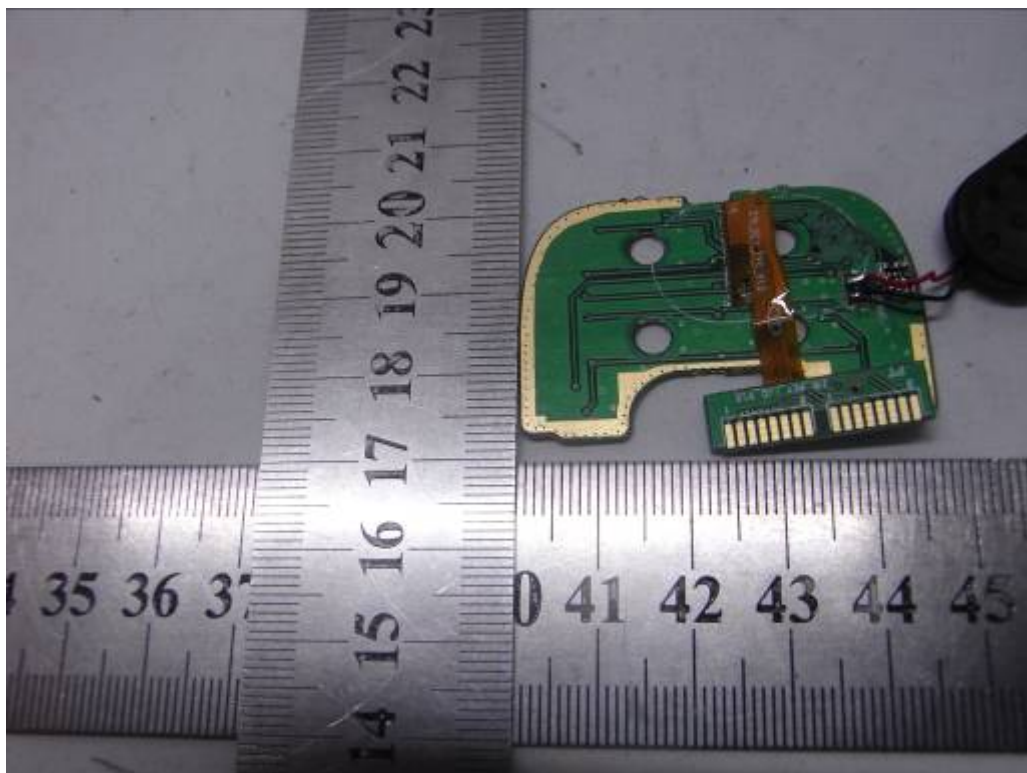
INTERNAL PHOTO OF SAMPLE-9



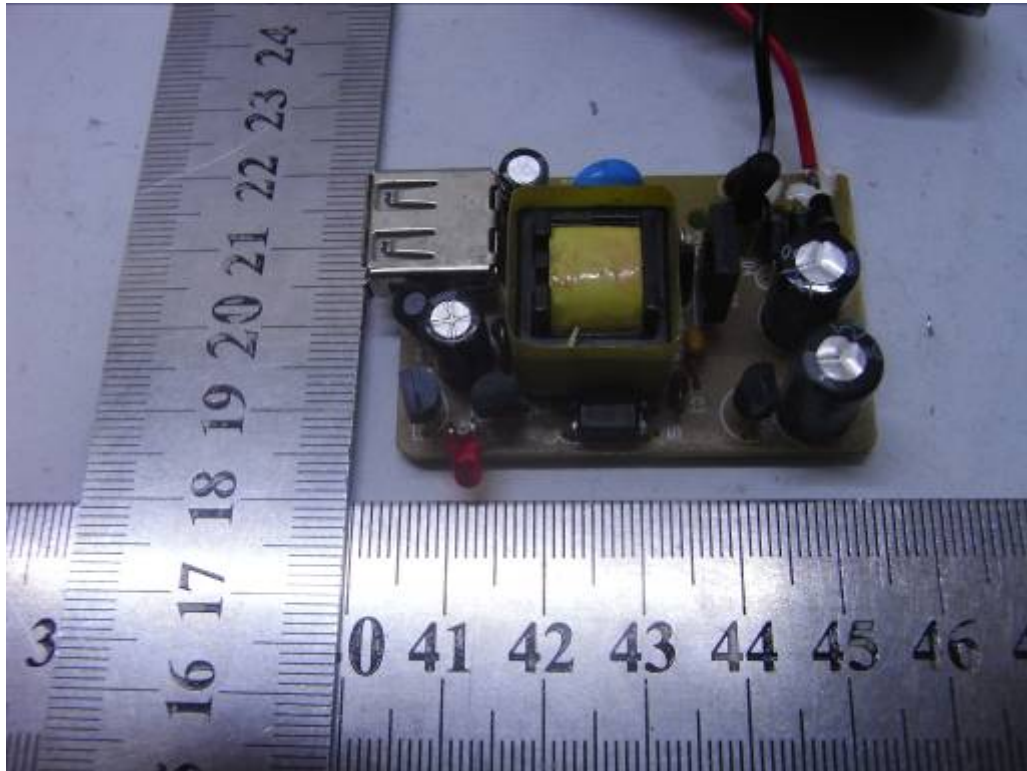
INTERNAL PHOTO OF SAMPLE –10



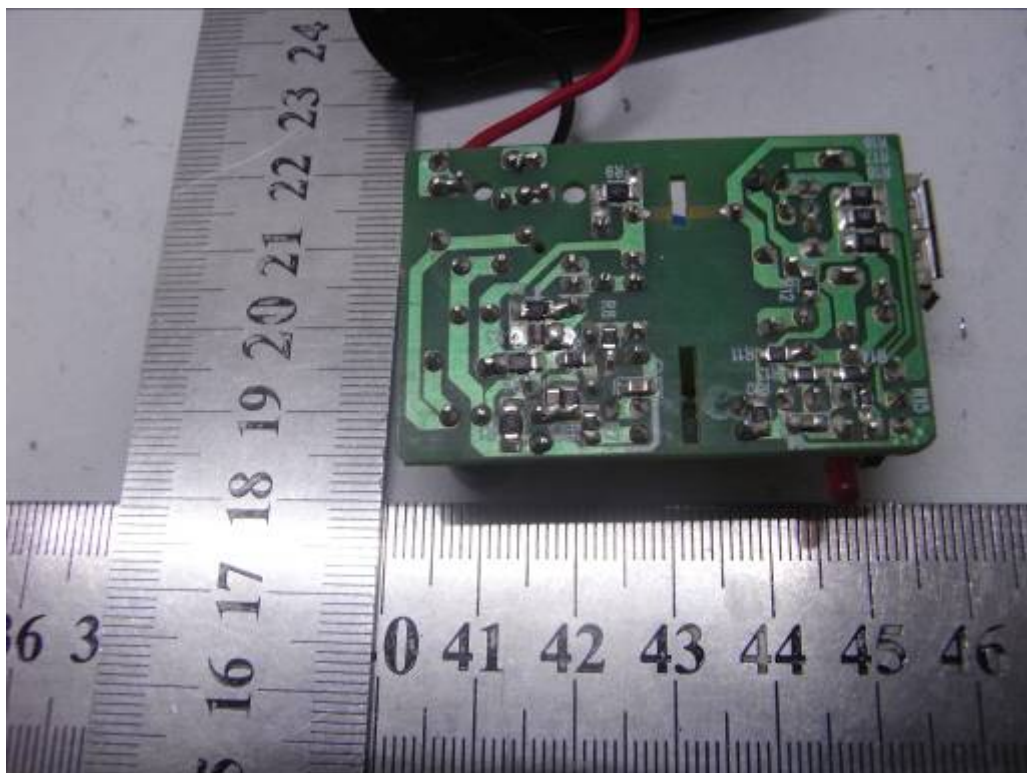
INTERNAL PHOTO OF SAMPLE –11



INTERNAL PHOTO OF POWER SUPPLY-1



INTERNAL PHOTO OF POWER SUPPLY-2



-----END OF REPORT-----