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# FCC Test Report

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Report No.: AGC19C120201-1F1

**FCC ID** : ZL5B10

**PRODUCT DESIGNATION** : 3G Mobile Phone

**BRAND NAME** : CAT

**MODEL NAME** : B10

**CLIENT** : Bullitt Group

**DATE OF ISSUE** : Mar. 02, 2012

**STANDARD(S)** : FCC Part 15 Rules

## Attestation of Global Compliance Co., Ltd.

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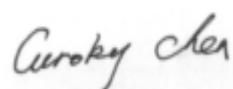
## 1. VERIFICATION OF COMPLIANCE

Applicant:	Bullitt Group No. 4, The Aquarium, King Street, United Kingdom RG1 2AN
Manufacturer:	Leadsky International Development Limited Room 401, Huahan Building A, Langshan North Road, Science and Technology Park, Nanshan District, Shenzhen, P.R.China
Product Designation:	3G Mobile Phone
Brand name:	CAT
Model Name:	B10
FCC ID:	ZL5B10
Measurement Procedure:	ANSI C63.4: 2003
File Number:	AGC19C120201-1F1
Date of test:	Feb. 28 to Mar. 02, 2012
Deviation:	None
Condition of Test Sample:	Normal

The above equipment was tested by Attestation Of Global Compliance Co., Ltd. for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, the measurement procedure according to ANSI C63.4:2003. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

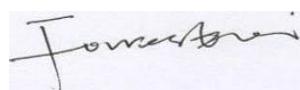
The test results of this report relate only to the tested sample identified in this report.

Tested By :



Curoky Chen Mar. 02, 2012

Reviewed By :



Forrest Lei Mar. 02, 2012

Approved By:



Solger Zhang Mar. 02, 2012

## 2. PRODUCT INFORMATION

**Housing Type:** Plastic and metal  
**EUT Rating Voltage:** DC 3.7V by battery  
**Adapter Input** AC100~240V,50/60Hz  
**Adapter output** DC 5V, 500mA

**I/O Port Information (**Applicable Not Applicable**)**

I/O Port of EUT			
I/O Port Type	Q'TY	Cable	Tested with
USB PORT	1	N/A	3
EARPHONE PORT	1	N/A	1

### 3. TEST FACILITY

**Facility** Attestation of Global Compliance Co., Ltd.

**Location:** 1F, No.2 Building, Huafeng No.1 Technical, Industrial Park, Sanwei, Xixiang, Baoan District, Shenzhen, China

**Description:** The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2003.

**Site Filing:** The FCC Registration Number is 259865

**Instrument Tolerance:** All measuring equipment is in accord with ANSI C63.4 requirements that meet industry regulatory agency and accreditation agency requirement.

#### 4. SUPPORT EQUIPMENT LIST

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable
PC	Dell	Inpiron N4110	N/A	N/A	1.5m unshielded
SD CARD	Kingston	--	--	--	--

\*\*Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

#### 5. SYSTEM DESCRIPTION

##### **EUT test procedure:**

1. Connect EUT and peripheral devices (if need).
2. Power on the EUT, the EUT begins to work.
3. Make sure the EUT operates normally during the test.

##### **Test Mode**

1. USB (connection for date transferring)  
Other modes have been tested via the procedure of verification of confirm.

## 6 SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§15.107	Conduction Emission	Compliant
§15.109	Radiated Emission	Compliant

### Measurement uncertainty:

Conducted measurement: +/- 2.75dB

Radiated measurement: +/- 3.2dB

## 7. FCC LINE CONDUCTED EMISSION TEST

### 7.1. TEST EQUIPMENT OF LINE CONDUCTED EMISSION TEST

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	N/A	06/27/2011	06/26/2012
LISN	R&S	ESH3-Z5	N/A	06/27/2011	06/26/2012
AMN	R&S	ESH2-Z5	862060/020	06/27/2011	06/26/2012

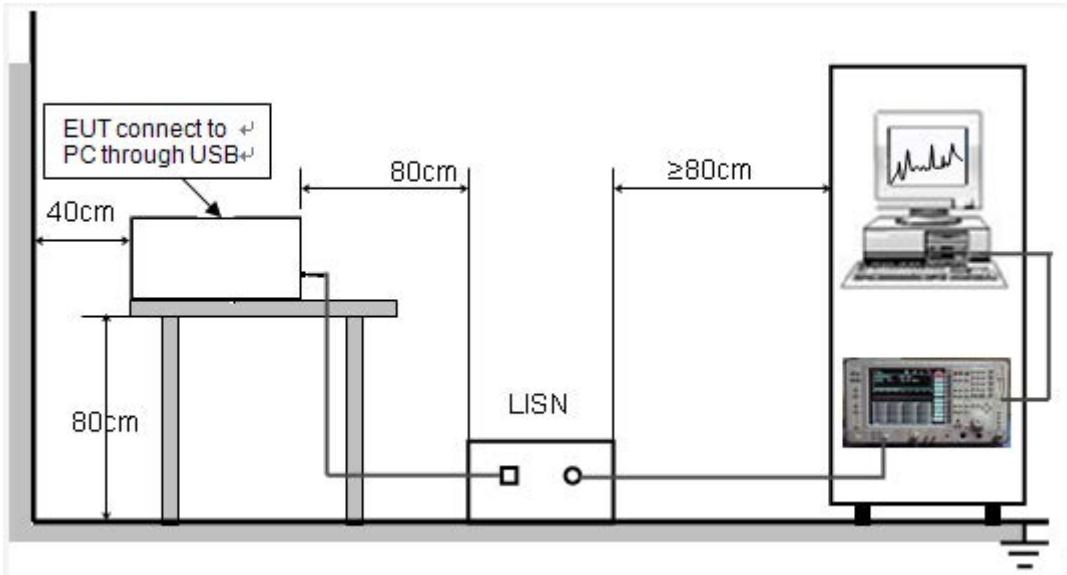
### 7.2 .LIMITS OF LINE CONDUCTED EMISSION TEST

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

### 7.3. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST

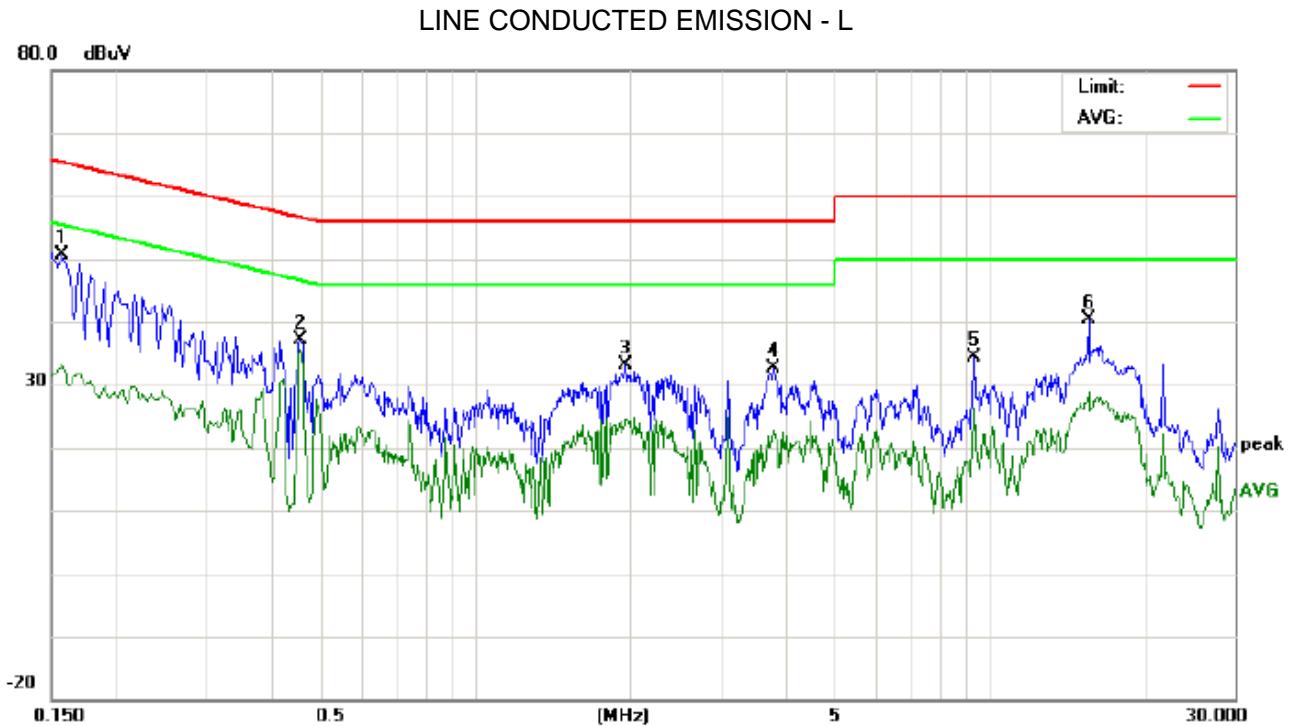


#### 7.4. PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 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 ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a 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 ANSI C63.4.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- 4) The EUT received DC5V power from PC with receive 120V/60Hz power from a LISN.
- 5) 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.
- 6) Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 7) During the above scans, the emissions were maximized by cable manipulation.
- 8) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions.
- 9) 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 (mode 1) was reported on the Summary Data page.

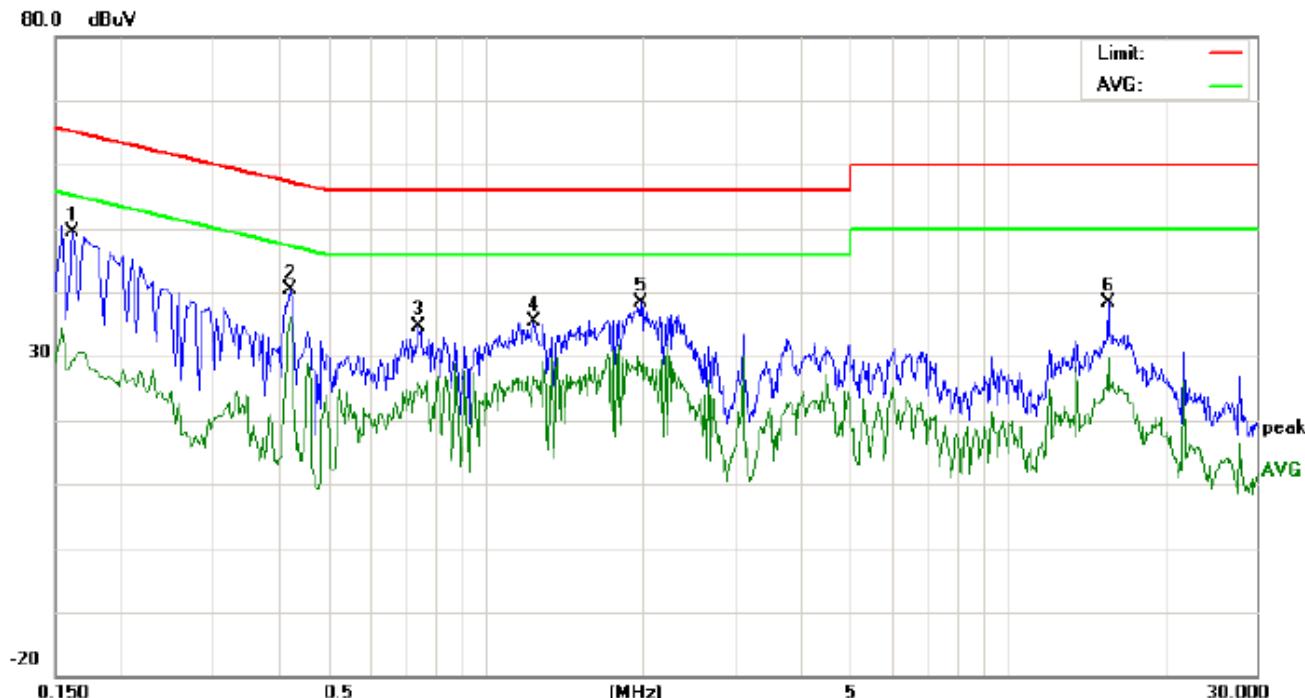
## 7.5 TEST RESULT OF LINE CONDUCTED EMISSION TEST



Site: Conduction Phase: L1 Temperature: 26  
 Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 60 %  
 EUT: 3G Mobile Phone  
 M/N: B10  
 Mode: USB  
 Note:

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	Avg		Peak	QP	Avg	QP	Avg	QP	Avg		
1	0.1580	40.33		22.88	10.17	50.50		33.05	65.56	55.56	-15.06	-22.51	P	
2	0.4580	26.76		25.28	10.37	37.13		35.65	56.73	46.73	-19.60	-11.08	P	
3	1.9620	23.01		14.46	10.23	33.24		24.69	56.00	46.00	-22.76	-21.31	P	
4	3.8020	22.23		12.33	10.46	32.69		22.79	56.00	46.00	-23.31	-23.21	P	
5	9.3260	23.94		16.12	10.32	34.26		26.44	60.00	50.00	-25.74	-23.56	P	
6	15.5580	30.22		18.78	10.11	40.33		28.89	60.00	50.00	-19.67	-21.11	P	

LINE CONDUCTED EMISSION – N



Site: Conduction Phase: **N** Temperature: 26  
 Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 60 %  
 EUT: 3G Mobile Phone  
 M/N: B10  
 Mode: USB  
 Note:

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	Avg		dB	Peak	QP	Avg	QP	Avg	QP	Avg	
1	0.1620	39.24		19.14	10.17	49.41		29.31	65.36	55.36	-15.95	-26.05	P	
2	0.4220	30.06		25.83	10.35	40.41		36.18	57.41	47.41	-17.00	-11.23	P	
3	0.7460	24.22		15.45	10.32	34.54		25.77	56.00	46.00	-21.46	-20.23	P	
4	1.2420	24.89		16.49	10.37	35.26		26.86	56.00	46.00	-20.74	-19.14	P	
5	1.9860	28.11		18.37	10.22	38.33		28.59	56.00	46.00	-17.67	-17.41	P	
6	15.5580	28.22		19.44	10.11	38.33		29.55	60.00	50.00	-21.67	-20.45	P	

## 8. FCC RADIATED EMISSION TEST

### 8.1. TEST EQUIPMENT OF RADIATED EMISSION

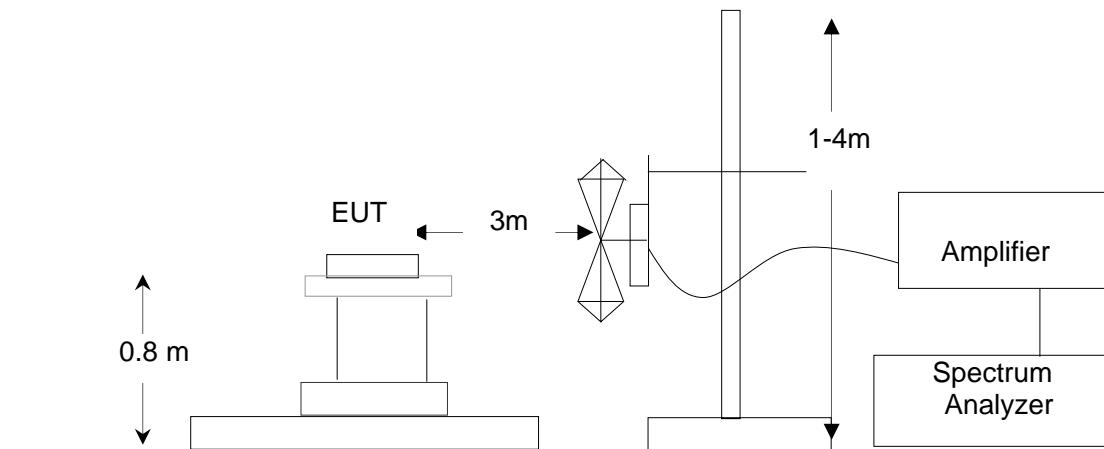
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
PSA SERIES SPECTRUM ANALYZER	AGILENT	E4440A	US41421290	06/27/2011	06/26/2012
ANTENNA	A.H.	SAS-521-4	128	06/27/2011	06/26/2012
HORN ANTENNA	EM	EM-AH-10180	N/A	06/27/2011	06/26/2012
AMPLIFIER	EM	EM30180	0607030	06/27/2011	06/26/2012
POSITIONING CONTROLLER	MF	MF-7802	MF780208147	06/27/2011	06/26/2012

### 8.2. LIMITS OF RADIATED EMISSION TEST

Frequency (MHz)	Distance (m)	Maximum Field Strength Limit (dBuV/m/ Q.P.)
30~88	3	40.0
88~216	3	43.5
216~960	3	46.0
Above 960	3	54.0

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

### 8.3 BLOCK DIAGRAM OF RADIATED EMISSION TEST

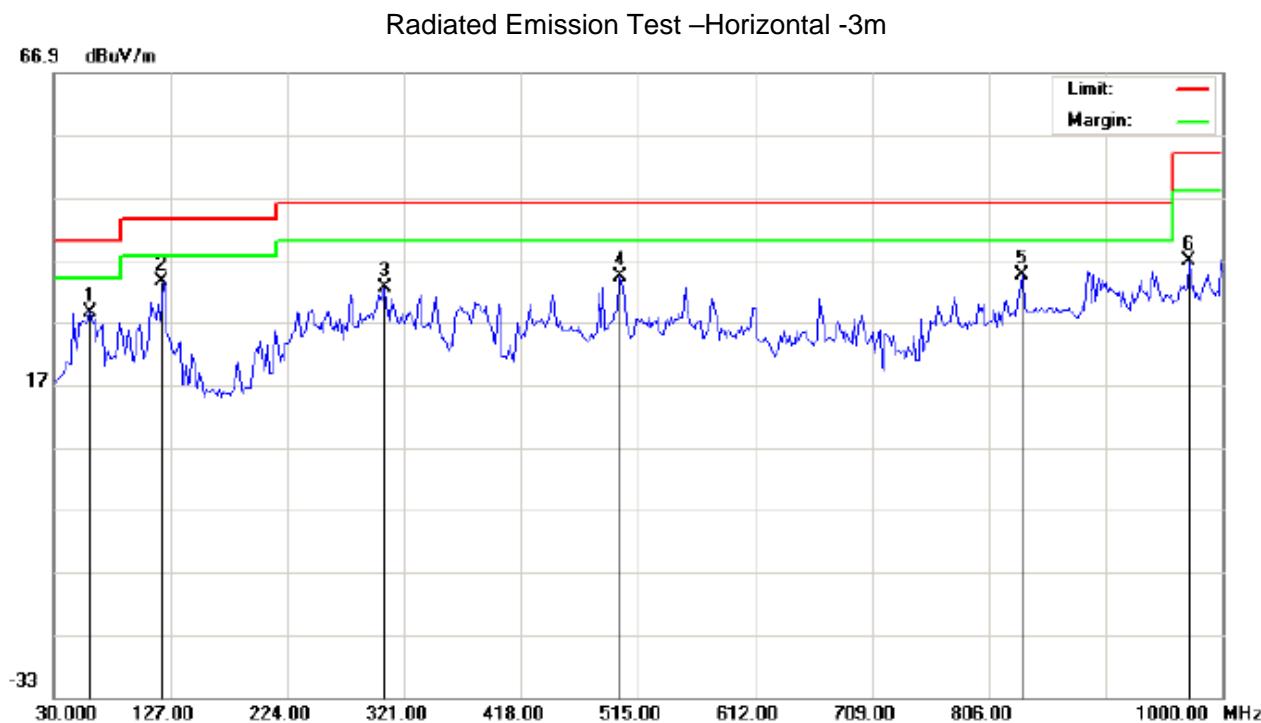


#### 8.4 PROCEDURE OF RADIATED EMISSION TEST

- 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 turntable with a height of 0.8 meters is used which is placed on the ground plane as per ANSI C63.4 (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 ANSI C63.4.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- 4) The EUT received DC 5V power from PC with receive 120V/60Hz power from socket under the turntable through a LISN.
- 5) The antenna was placed at 3 meter away from the EUT as stated in FCC Part 15. The antenna connected to the Analyzer via a cable and at times a pre-amplifier would be used.
- 6) The Analyzer / Receiver quickly scanned from 30MHz to 1000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- 7) The test mode(s) were scanned during the test:
- 8) Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and Q.P./Peak reading is presented.

The test data of the worst case condition (mode 1) was reported on the Summary Data page.

## 8.5 TEST RESULT OF RADIATED EMISSION TEST



Site: site #1

Polarization: *Horizontal*

Temperature: 26

Limit: FCC Class B 3M Radiation

Power: AC 120V/60Hz

Humidity: 60 %

EUT: 3G Mobile Phone

Distance: 3m

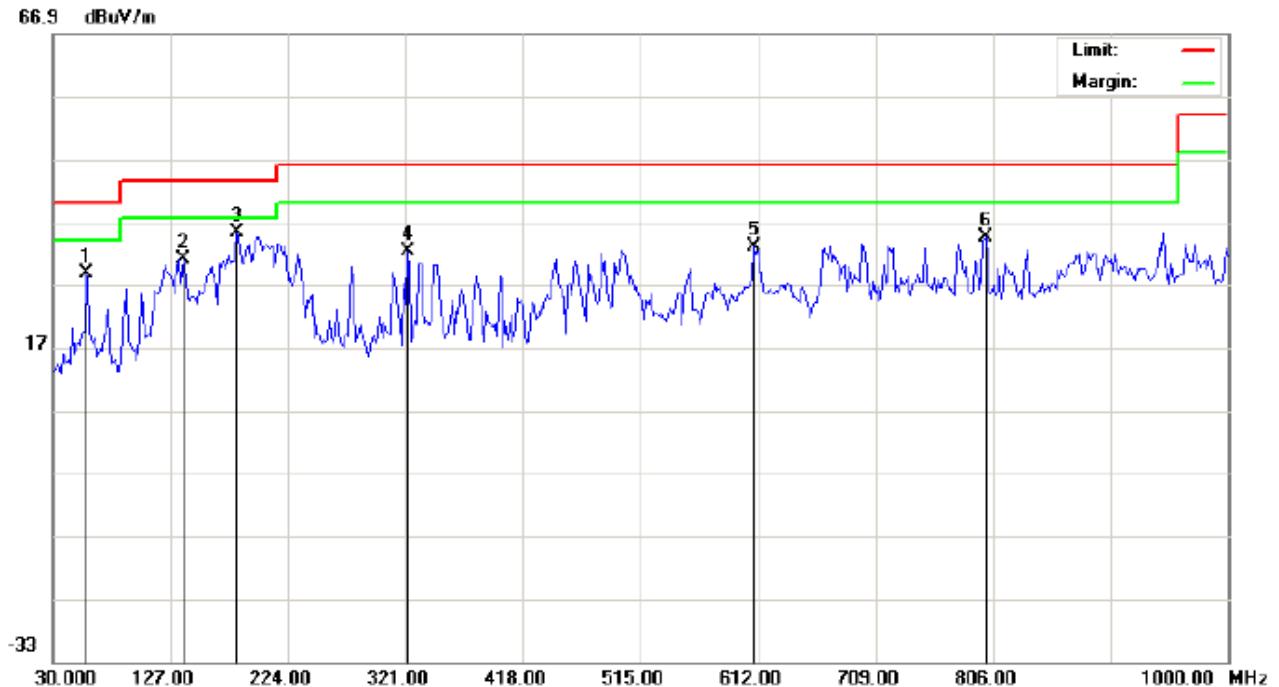
M/N: B10

Mode: USB

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		60.7167	18.08	10.39	28.47	40.00	-11.53	peak			
2	*	120.5331	19.88	13.63	33.51	43.50	-9.99	peak			
3		304.8333	15.29	17.32	32.61	46.00	-13.39	peak			
4		500.4499	11.30	22.90	34.20	46.00	-11.80	peak			
5		833.4832	4.18	30.28	34.46	46.00	-11.54	peak			
6		972.5167	3.39	33.38	36.77	54.00	-17.23	peak			

## Radiated Emission Test –Vertical -3m



Site: site #1 Polarization: **Vertical** Temperature: 26  
Limit: FCC Class B 3M Radiation Power: AC 120V/60Hz Humidity: 60 %  
EUT: 3G Mobile Phone Distance: 3m  
M/N: B10  
Mode: USB  
Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		57.4831	14.16	14.54	28.70	40.00	-11.30	peak			
2		138.3163	17.35	13.64	30.99	43.50	-12.51	peak			
3	*	181.9667	16.83	18.36	35.19	43.50	-8.31	peak			
4		322.6166	13.81	18.40	32.21	46.00	-13.79	peak			
5		608.7667	8.08	24.98	33.06	46.00	-12.94	peak			
6		799.5333	4.30	30.14	34.44	46.00	-11.56	peak			

**Note:** All Other modes above 1GHz have more than 20db margin, no recording in the report

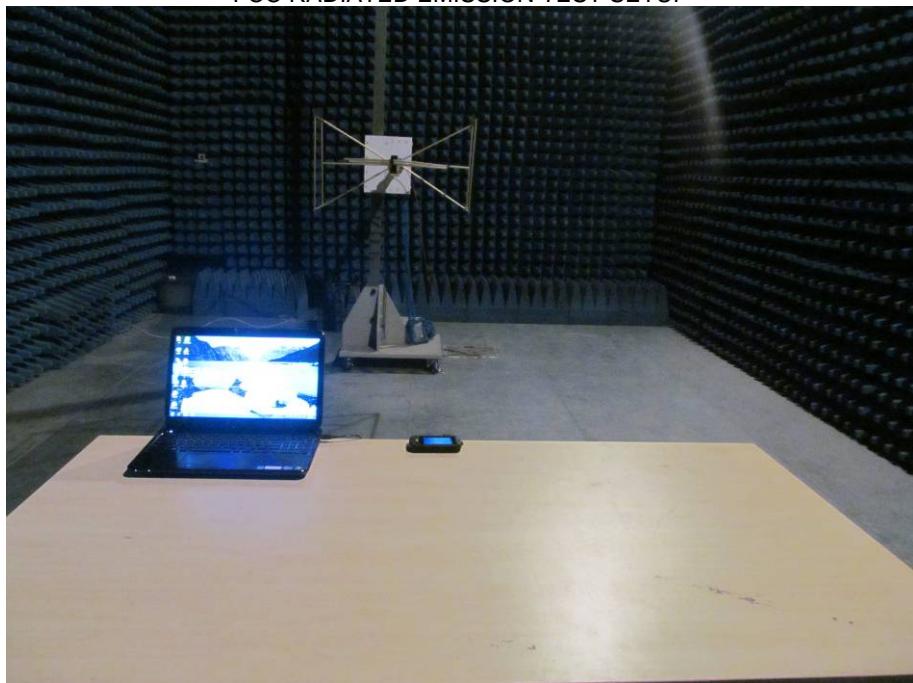
*Measurement = Reading + Factor, Over = Measurement – Limit.*

## APPENDIX 1 PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP



## APPENDIX 2 PHOTOGRAPHS OF EUT

TOTAL VIEW OF EUT



TOP VIEW OF EUT



BOTTOM VIEW OF EUT



FRONT VIEW OF EUT



BACK VIEW OF EUT



LEFT VIEW OF EUT



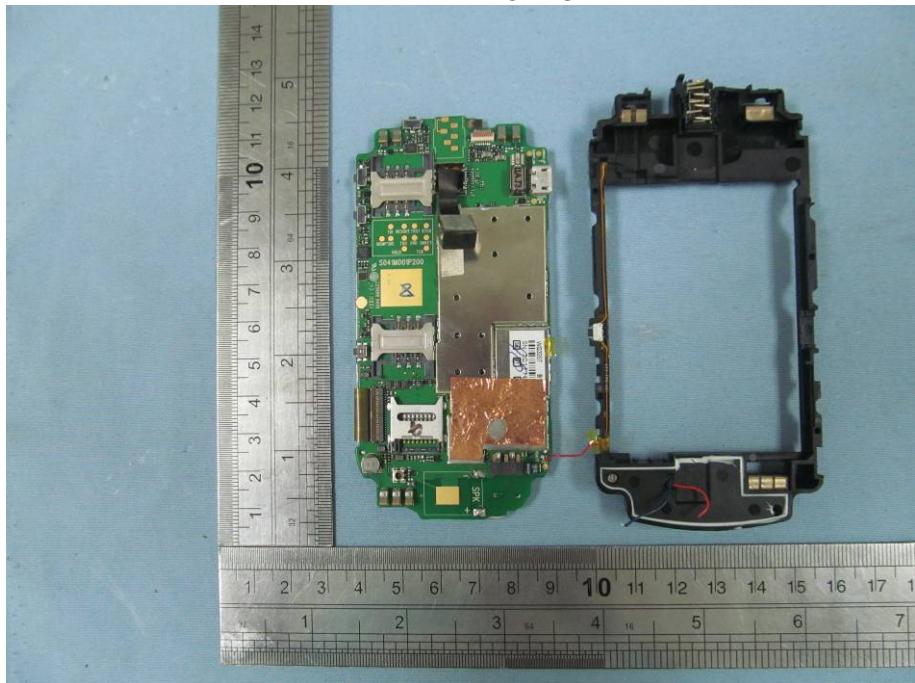
RIGHT VIEW OF EUT



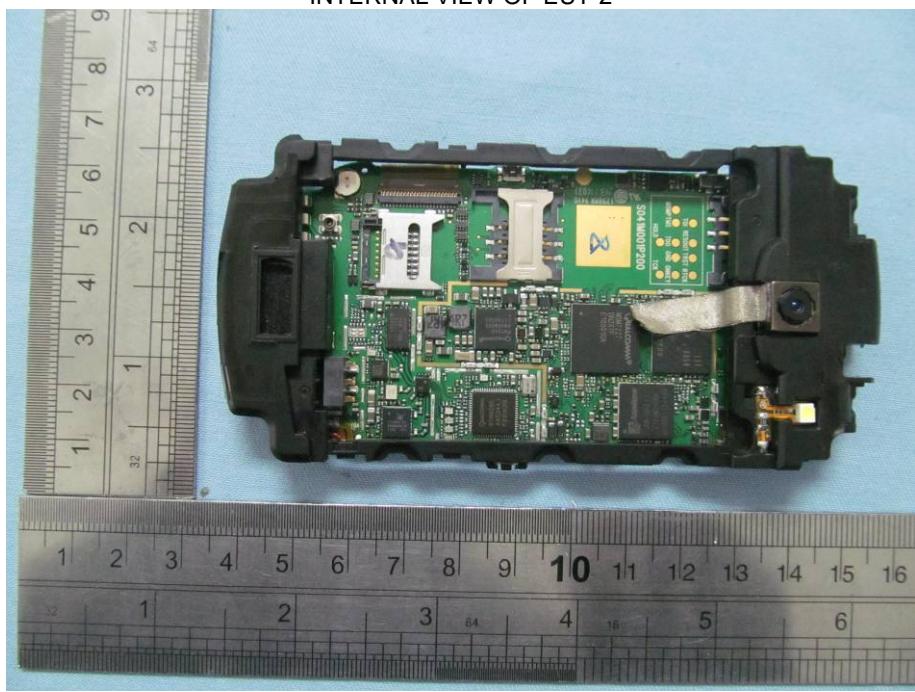
OPEN VIEW OF EUT-1



INTERNAL VIEW OF EUT-1

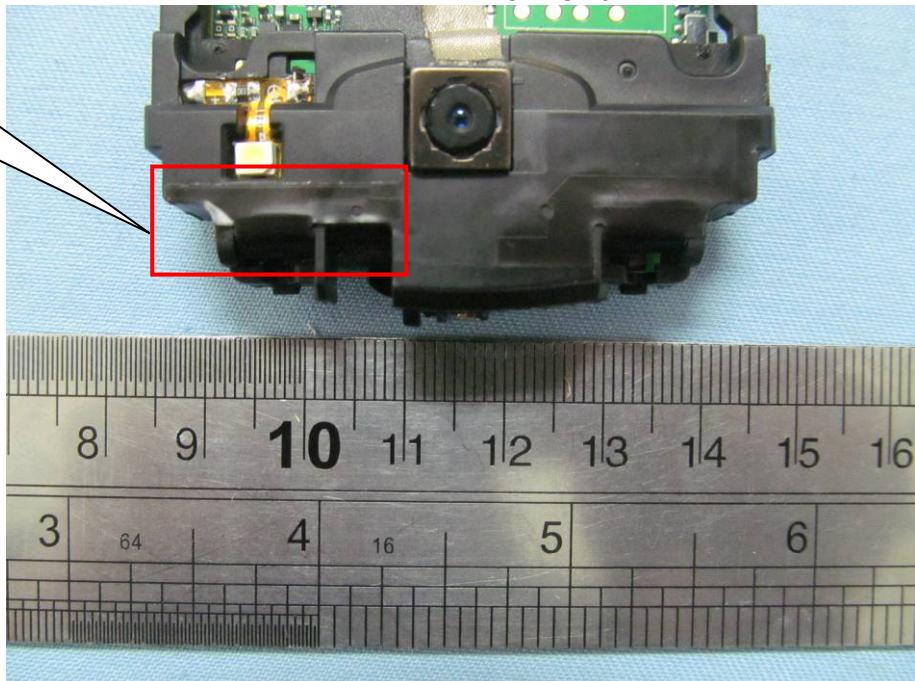


INTERNAL VIEW OF EUT-2



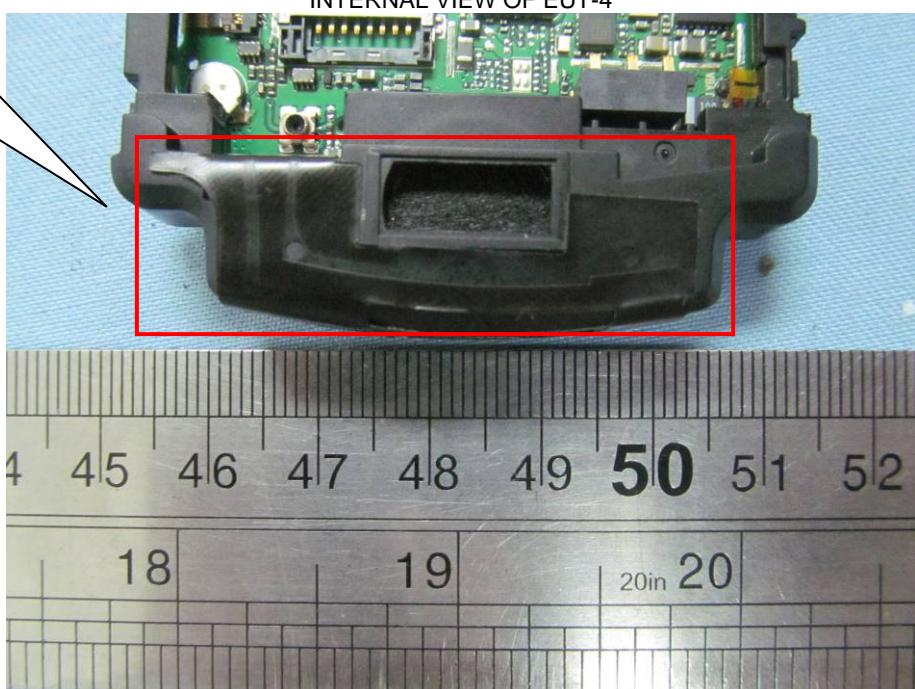
INTERNAL VIEW OF EUT-3

BT&  
Wi-fi

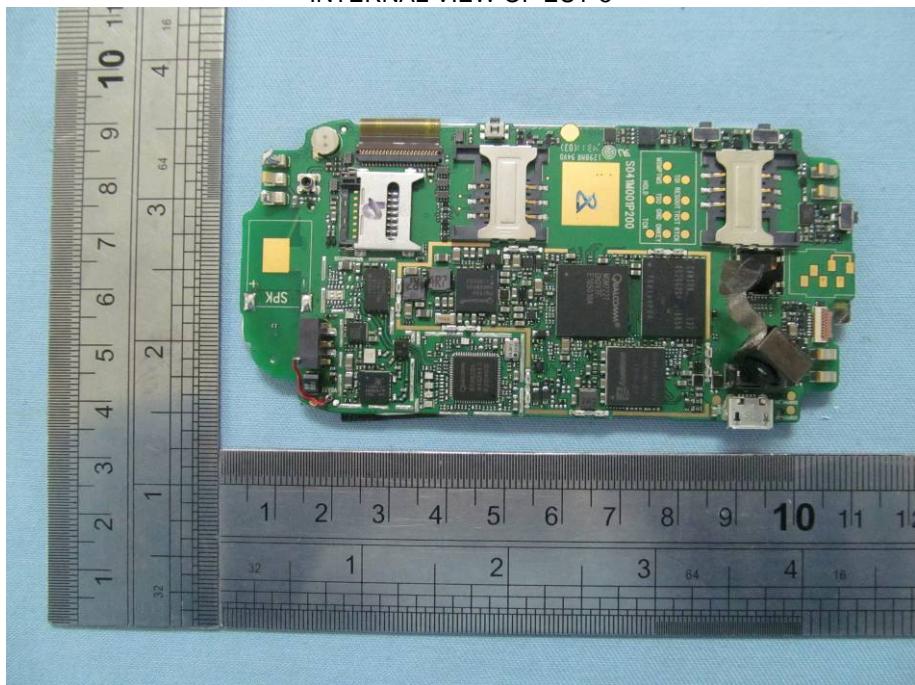


INTERNAL VIEW OF EUT-4

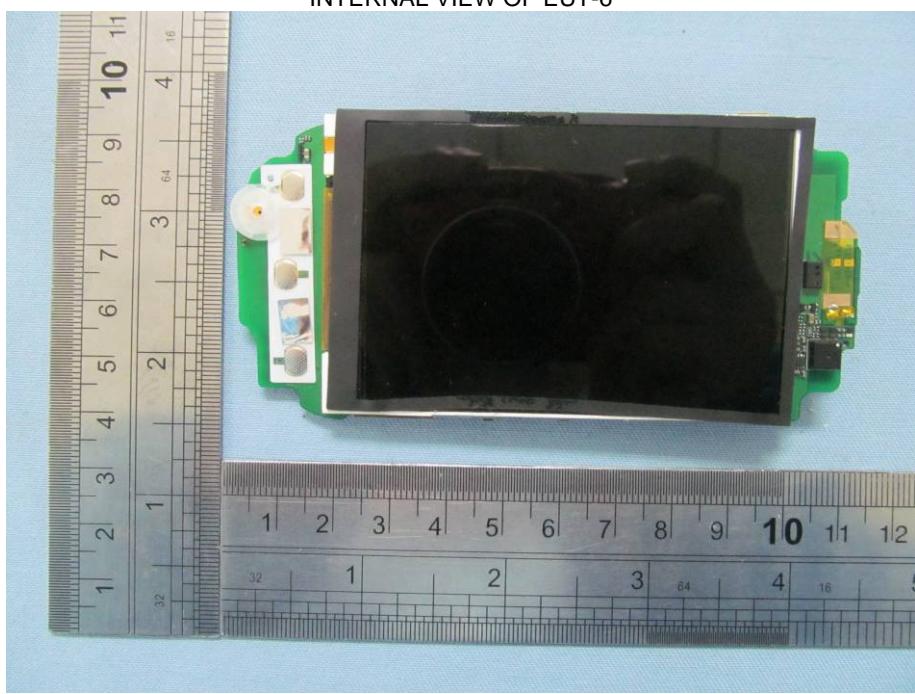
GSM&  
WCDMA  
Antenna



INTERNAL VIEW OF EUT-5



INTERNAL VIEW OF EUT-6



----END OF REPORT----