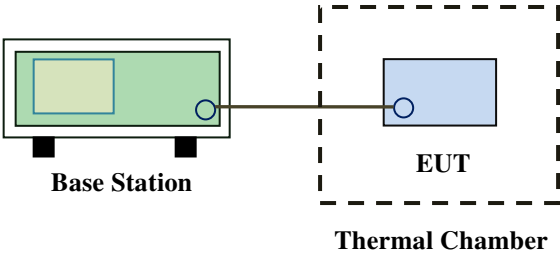


Test setup	 <p>The diagram illustrates the test setup. On the left, a green rectangular box labeled 'Base Station' is shown. A horizontal line connects it to a blue rectangular box labeled 'EUT' (Equipment Under Test) located inside a dashed-line rectangular box labeled 'Thermal Chamber'.</p>
Procedure	<p>A communication link was established between EUT and base station. The frequency error was monitored and measured by base station under variation of ambient temperature and variation of primary supply voltage.</p> <p>Limit: The frequency stability of the transmitter shall be maintained within <math>\pm 0.00025\%</math> (<math>\pm 2.5\text{ppm}</math>) of the center frequency.</p>
Remark	<p>Frequency Stability versus Temperature: The Frequency tolerance of the carrier signal shall be maintained within 2.5ppm of the operating frequency over a temperature variation of <math>-10^{\circ}\text{C}</math> to <math>+55^{\circ}\text{C}</math> at normal supply voltage.</p>
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

Test Data     Yes                       N/A

Test Plot     Yes (See below)             N/A

### LTE Band II (Part 24E) result

Middle Channel, $f_0 = 1880$ MHz				
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.8	-9	0.0048	2.5
0		-5	0.0027	2.5
10		-10	0.0053	2.5
20		-15	0.0080	2.5
30		-14	0.0074	2.5
40		-12	0.0064	2.5
50		-16	0.0085	2.5
55		-12	0.0064	2.5
25		4.2	-13	0.0069
	3.6	-12	0.0064	2.5

### LTE Band IV (Part 27) result

Middle Channel, $f_0 = 1732.5$ MHz				
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.8	-15	0.0087	2.5
0		-16	0.0092	2.5
10		-14	0.0081	2.5
20		-17	0.0098	2.5
30		-15	0.0087	2.5
40		-12	0.0069	2.5
50		-15	0.0087	2.5
55		-12	0.0069	2.5
25		4.2	-14	0.0081
	3.6	-13	0.0075	2.5

### LTE Band V (Part 22H) result

Middle Channel, $f_0 = 836.5$ MHz				
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.8	-15	0.0179	2.5
0		-30	0.0359	2.5
10		-14	0.0167	2.5
20		-12	0.0143	2.5
30		-14	0.0167	2.5
40		-16	0.0191	2.5
50		-15	0.0179	2.5
55		-13	0.0155	2.5
25	4.2	-15	0.0179	2.5
	3.6	-14	0.0167	2.5

### LTE Band VII (Part 27) result

Middle Channel, $f_0 = 2535$ MHz				
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.8	-15	0.0059	2.5
0		-14	0.0055	2.5
10		-16	0.0063	2.5
20		-12	0.0047	2.5
30		-14	0.0055	2.5
40		-18	0.0071	2.5
50		-19	0.0075	2.5
55		-13	0.0051	2.5
25	4.2	-15	0.0059	2.5
	3.6	-15	0.0059	2.5

### LTE Band XII (Part 27) result

Middle Channel, $f_0 = 707.5\text{MHz}$				
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.8	-10	0.0027	2.5
0		-13	0.0059	2.5
10		-15	0.0037	2.5
20		-14	0.0053	2.5
30		-16	0.0064	2.5
40		-14	0.0048	2.5
50		-12	0.0064	2.5
55		-13	0.0032	2.5
25	4.2	-16	0.0059	2.5
	3.6	-14	0.0053	2.5

### LTE Band XVII (Part 27) result

Middle Channel, $f_0 = 710\text{ MHz}$				
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.8	-10	0.0141	2.5
0		-15	0.0211	2.5
10		-14	0.0197	2.5
20		-16	0.0225	2.5
30		-14	0.0197	2.5
40		-12	0.0169	2.5
50		-14	0.0197	2.5
55		-19	0.0268	2.5
25	4.2	-15	0.0211	2.5
	3.6	-14	0.0197	2.5

## Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
<b>RF Conducted Test</b>					
Agilent ESA-E SERIES SPECTRUM ANALYZER	E4407B	MY45108319	09/15/2016	09/14/2017	<input checked="" type="checkbox"/>
Power Splitter	1#	1#	08/31/2016	08/30/2017	<input checked="" type="checkbox"/>
Universal Radio Communication Tester	CMU200	121393	09/24/2016	09/23/2017	<input checked="" type="checkbox"/>
Wideband Radio Communication Tester	CMW500	120906	03/26/2017	03/25/2018	<input checked="" type="checkbox"/>
Temperature/Humidity Chamber	UHL-270	001	10/08/2016	10/07/2017	<input checked="" type="checkbox"/>
DC Power Supply	E3640A	MY40004013	09/16/2016	09/15/2017	<input checked="" type="checkbox"/>
RF Power Sensor	Dare RPR3006C/P/W	AY554013	09/16/2016	09/15/2017	<input checked="" type="checkbox"/>
<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 (0.5 ~ 18GHz)	PAM-118	443008	08/31/2016	08/30/2017	<input checked="" type="checkbox"/>
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/20/2016	09/19/2017	<input checked="" type="checkbox"/>
Bilog Antenna (30MHz~2GHz)	JB1	A112017	09/20/2016	09/19/2017	<input checked="" type="checkbox"/>
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71259	09/23/2016	09/22/2017	<input checked="" type="checkbox"/>
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71283	09/23/2016	09/22/2017	<input checked="" type="checkbox"/>
SYNTHESIZED SIGNAL GENERATOR	8665B	3744A01293	09/16/2016	09/15/2017	<input checked="" type="checkbox"/>
Tunable Notch Filter	3NF-800/1000-S	AA4	08/31/2016	08/30/2017	<input checked="" type="checkbox"/>



Test Report	17070102-FCC-R5
Page	141 of 159

Tunable Notch Filter	3NF- 1000/2000-S	AM 4	08/31/2016	08/30/2017	<input checked="" type="checkbox"/>
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**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**

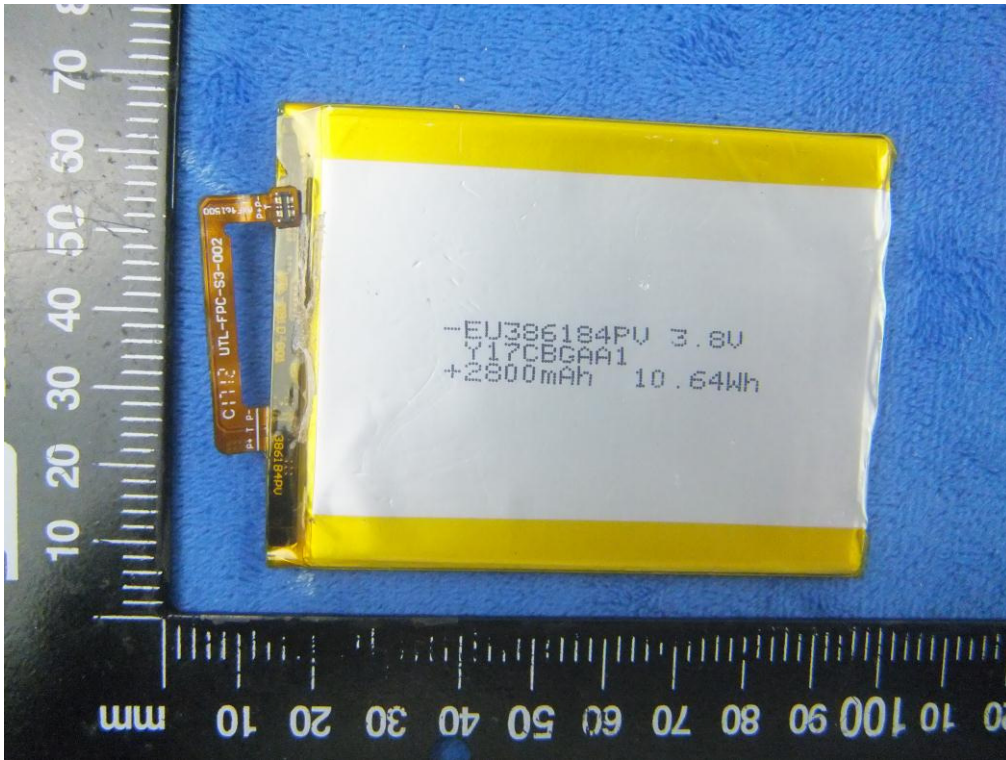
Cover Off - Top View 1



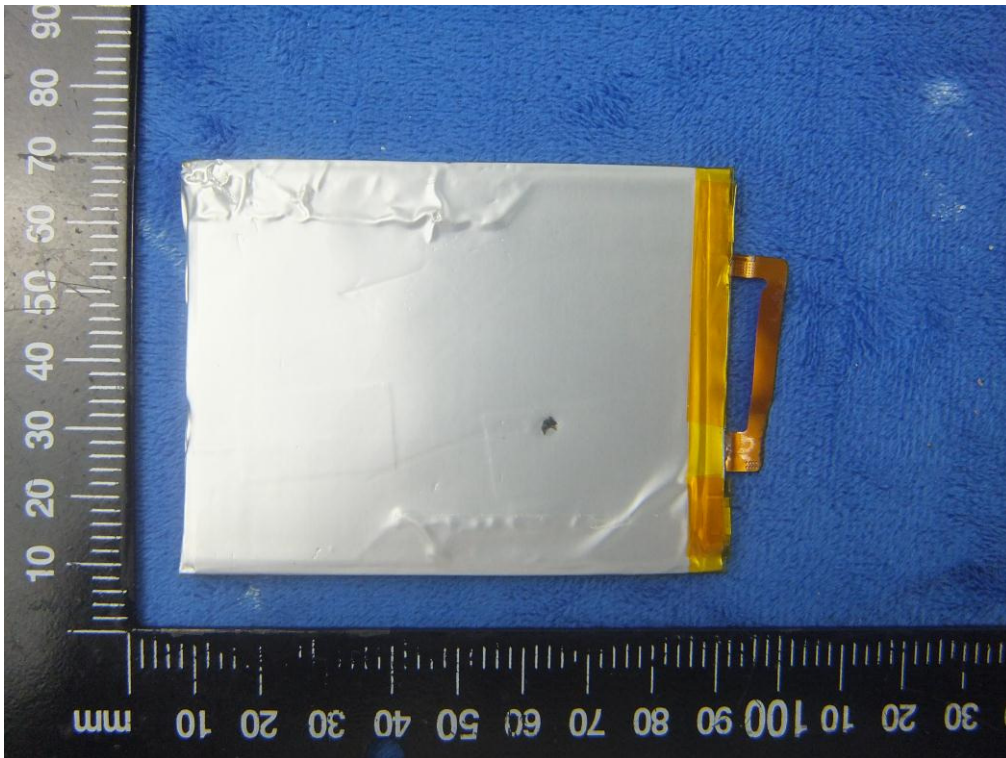
Cover Off - Top View 2



Battery - Front View

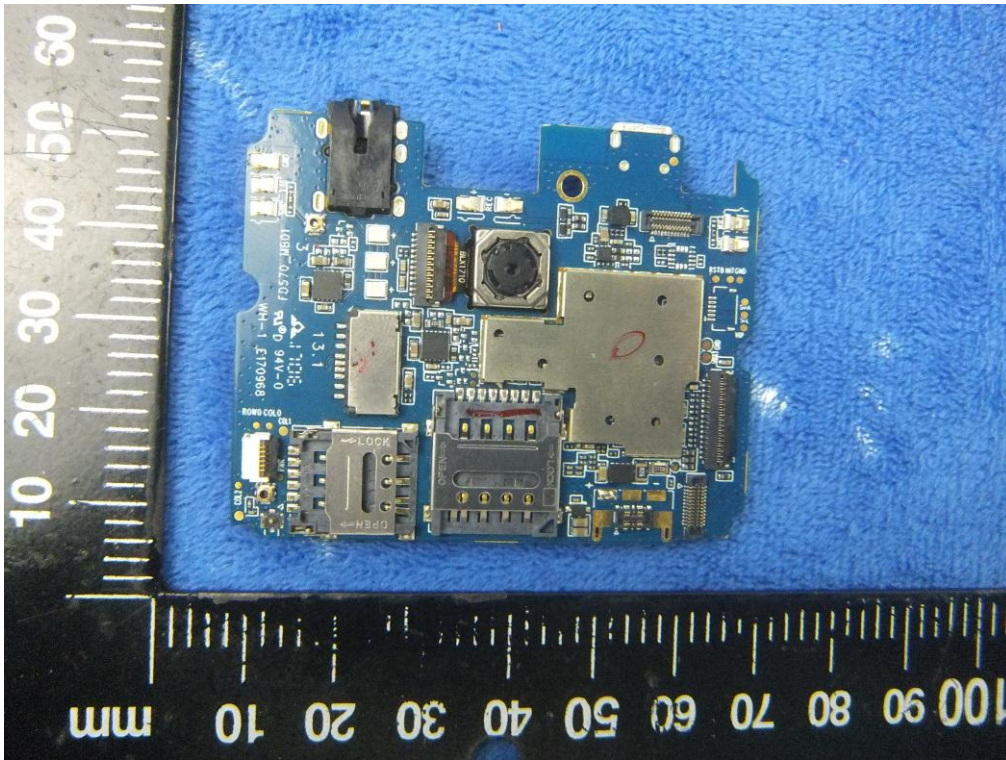


Battery - Rear View

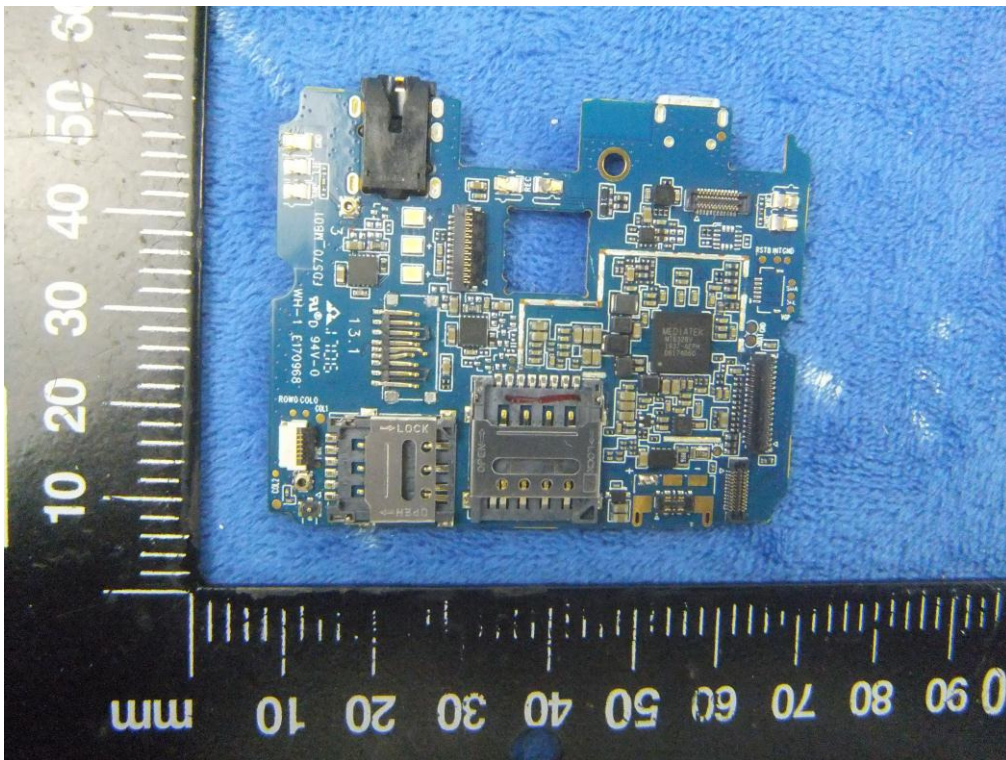




Mainboard with Shielding - Front View

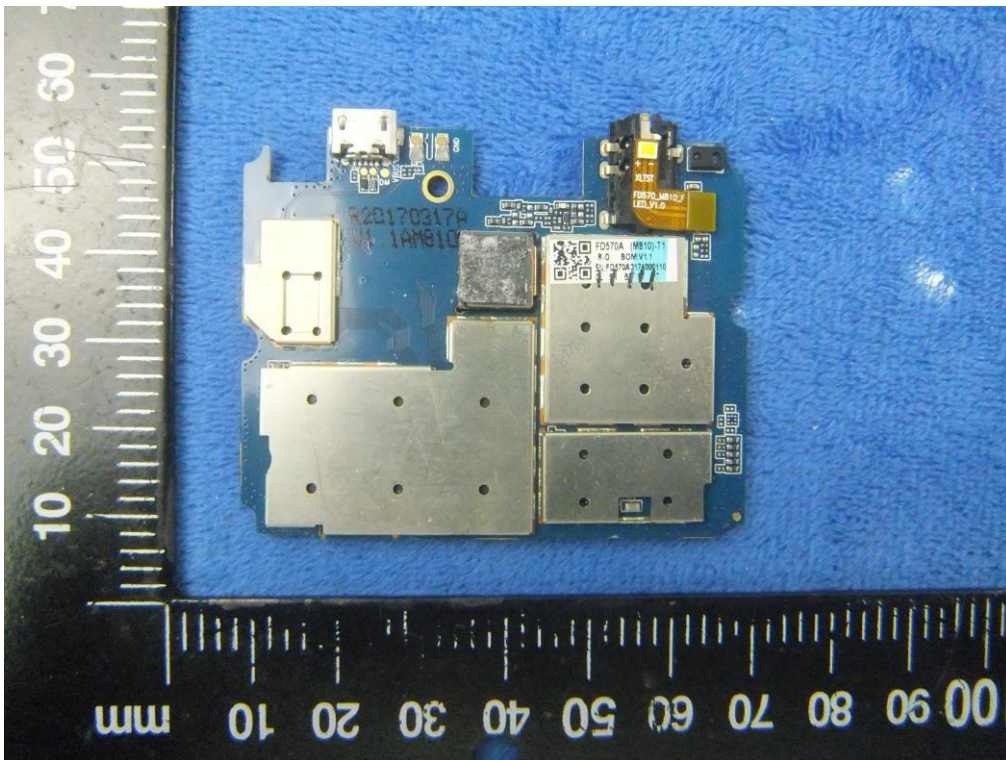


Mainboard without Shielding - Front View

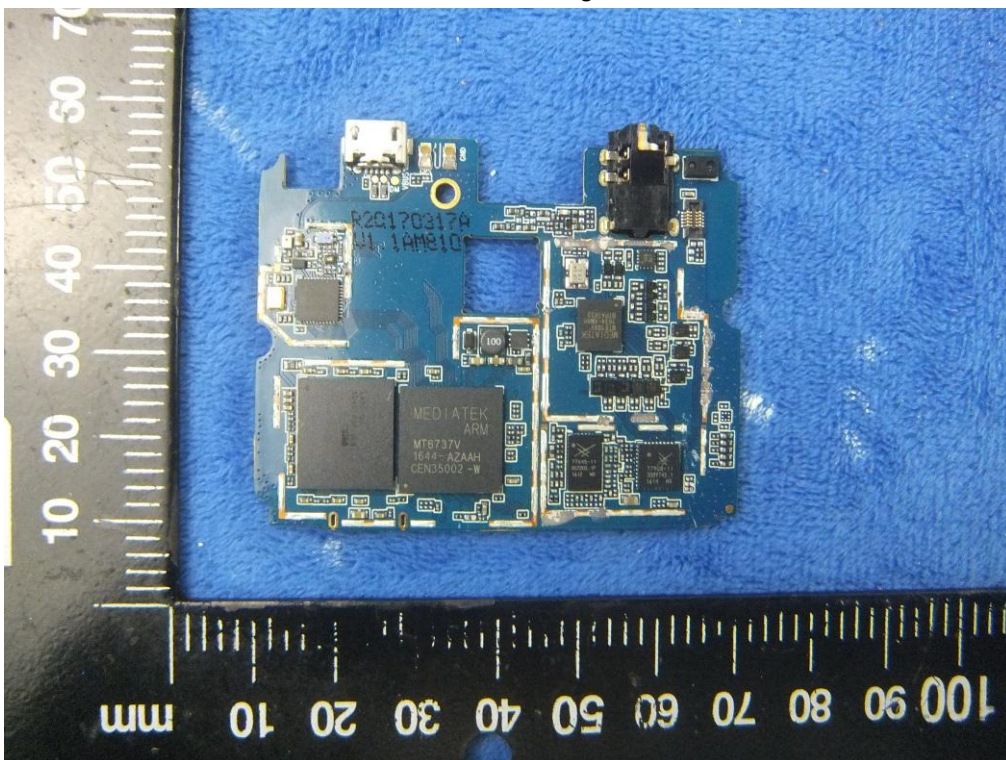




Mainboard with Shielding – Rear View

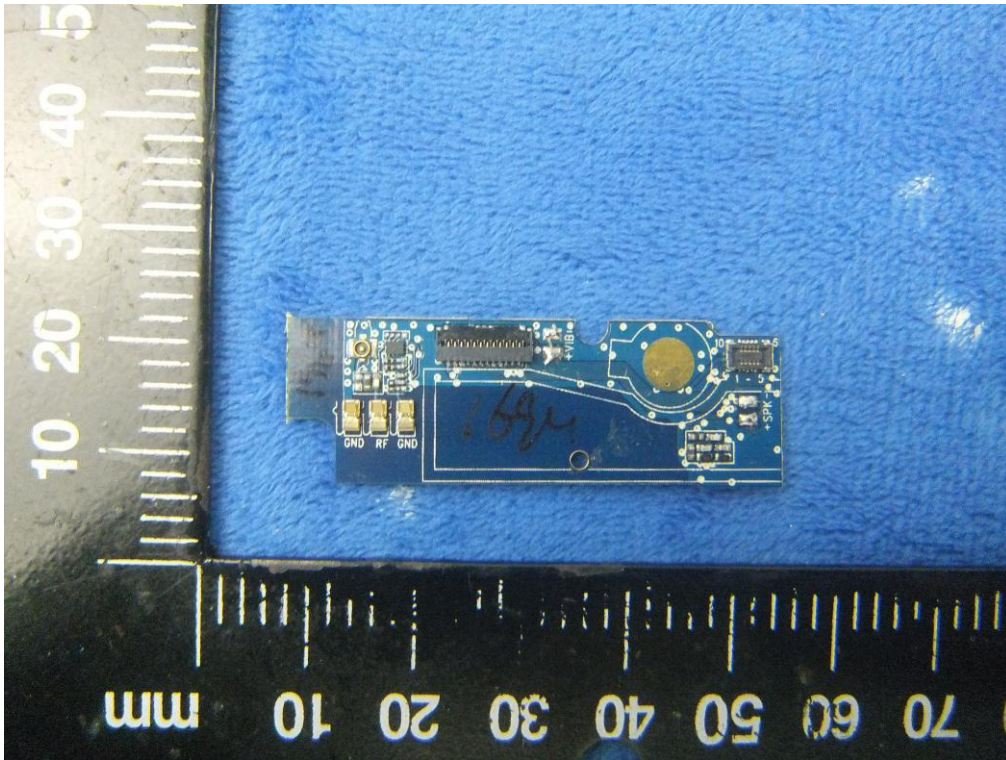


Mainboard without Shielding – Rear View

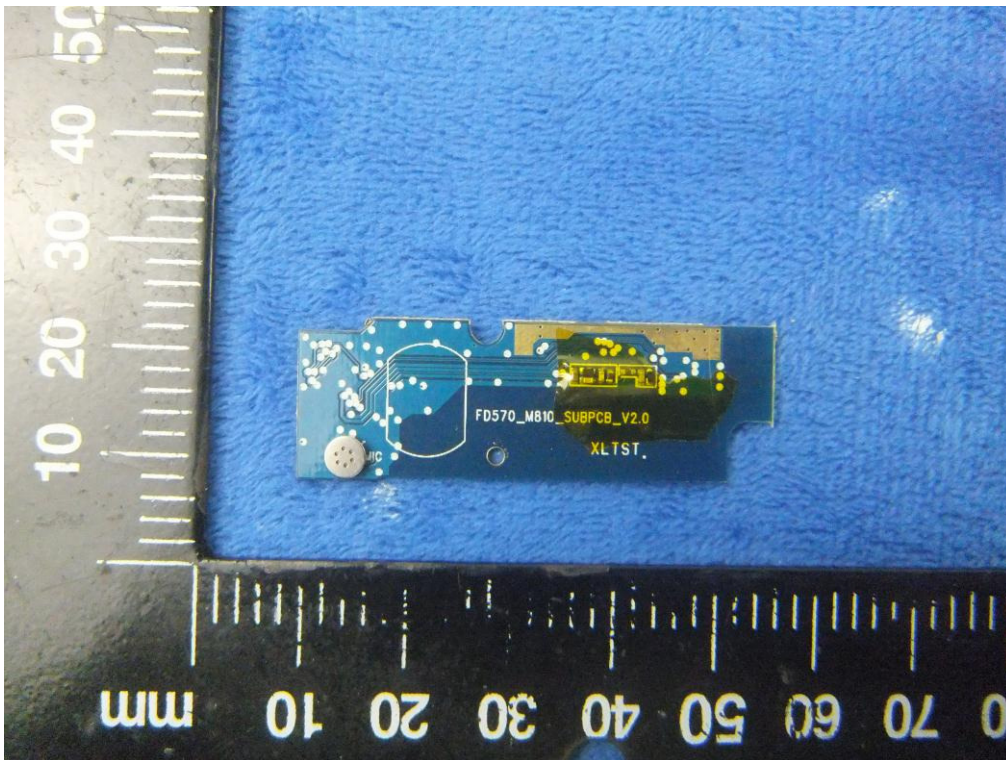




Smallboard – Front View



Smallboard – Rear View





LCD – Front View



LCD – Rear View





GSM/PCS/UMTS-FDD Antenna View



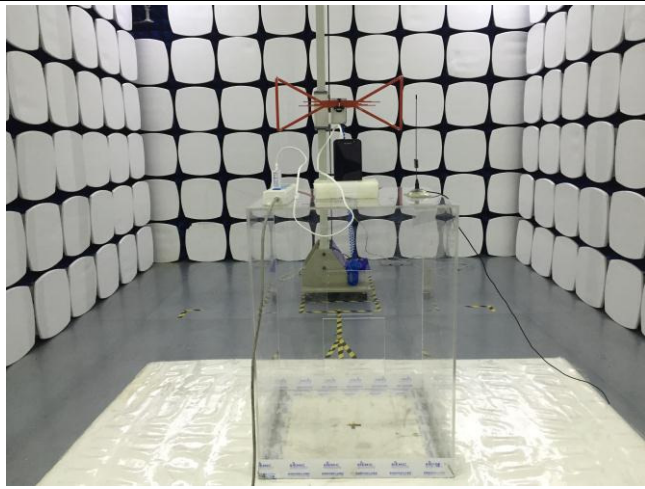
WIFI/BT/BLE - Antenna View



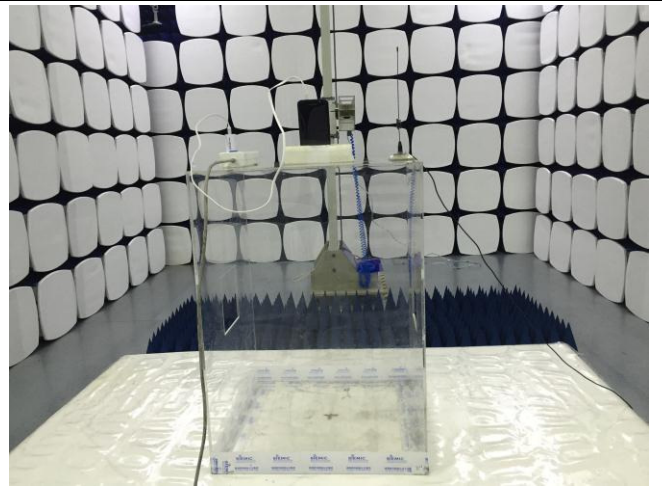
LTE - Antenna View



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



Radiated Spurious Emissions Test Setup Below 1GHz



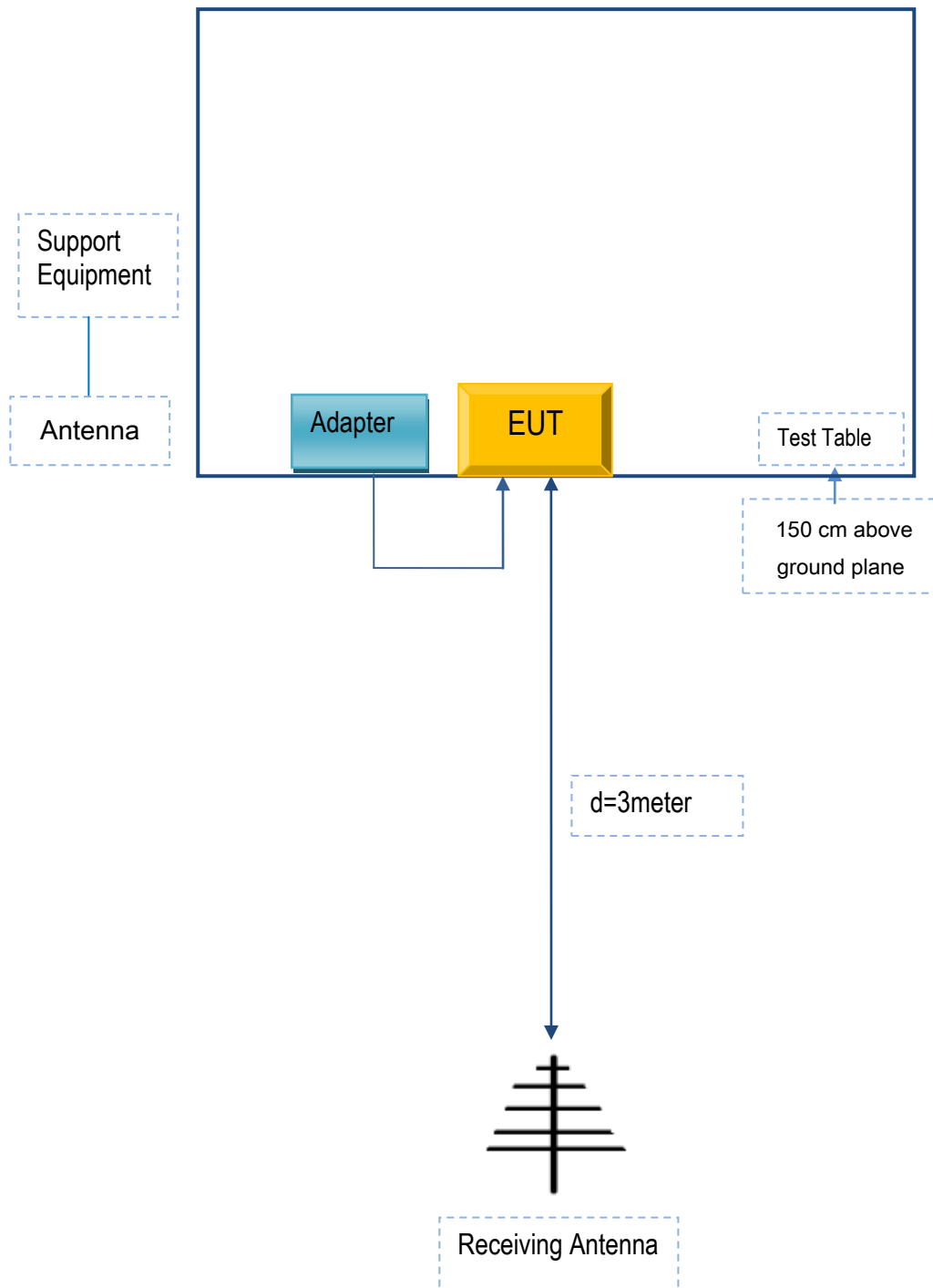
Radiated Spurious Emissions Test Setup Above  
1GHz



## 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
Verykool USA Inc	Adapter	TPA-46B050100UU	S20170127

### Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	0.8m	S20170127

## Annex C.ii. EUT OPERATING CONKITIONS

N/A

Test Report	17070102-FCC-R5
Page	158 of 159

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

**Please see the attachment**

## Annex E. DECLARATION OF SIMILARITY

N/A