
FCC Test Report

Report No.: AGC01272160102FE08

FCC ID : 2ACDFC5

APPLICATION PURPOSE : Class II Permissive Change

PRODUCT DESIGNATION : Mobile Phone

BRAND NAME : Superinworld

MODEL NAME : C5

CLIENT : SUPERDIGITAL TECHNOLOGY CO., LIMITED

DATE OF ISSUE : Mar:17, 2016

STANDARD(S) : FCC Part 15 Rules

REPORT VERSION : V1.0

Attestation of **Global Compliance (Shenzhen) Co., Ltd**

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Mar.17, 2016	Valid	Class II Permissive Change
Note: The report was based-on the project - AGC01272160102FE08, which was named (C5), has replaced a new one adapter; In the test results, the conducted emission test results were different from the original.				

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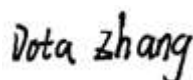
1. VERIFICATION OF COMPLIANCE

Applicant	SUPERDIGITAL TECHNOLOGY CO., LIMITED
Address	F19, Block B, Nanxian Building, Longhua New District, Shenzhen 518000, P.R.China
Manufacturer	SUPERDIGITAL TECHNOLOGY CO., LIMITED
Address	F19, Block B, Nanxian Building, Longhua New District, Shenzhen 518000, P.R.China
Product Designation	Mobile Phone
Brand Name	Superinworld
Test Model	C5
Date of test	Mar.01, 2016 to Mar.11, 2016
Deviation	None
Condition of Test Sample	Normal
Report Template	AGCRT-US-IT/AC

WE HEREBY CERTIFY THAT:

The above equipment was tested by Dongguan Precise Testing Service Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with requirement of FCC Part 15 Rules requirement.


Tested By



Dota Zhang(Zhang Jianfeng)

Mar.17, 2016

Reviewed By



Bart Xie(Xie Xiaobin)

Mar.17, 2016

Approved By



Solger Zhang(Zhang Hongyi)
Authorized Officer

Mar.17, 2016

2. GENERAL INFORMATION

2.1 PRODUCT DESCRIPTION

The EUT is designed as a “**Mobile Phone**”. It is designed by way of utilizing the FHSS technology to achieve the system operation.

2.2 RELATED SUBMITTAL(S)/GRANT(S)

This submittal(s) (test report) is intended for **FCC ID: 2ACDFC5** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

2.3 TEST METHODOLOGY

All measurements contained in this report were conducted with KDB 558074 D01 DTS Meas Guidance v03r02, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions. The EUT was tested in all three orthogonal planes and the worse case was showed.

2.4 TEST FACILITY

Site	Dongguan Precise Testing Service Co., Ltd.
Location	Building D, Baoding Technology Park, Guangming Road2, Dongcheng District, Dongguan, Guangdong, China,
FCC Registration No.	371540
Description	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2009.

2.5 SPECIAL ACCESSORIES

Refer to section 2.2.

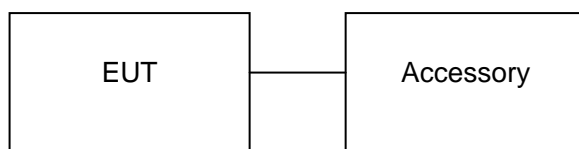
2.6 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

3. SYSTEM TEST CONFIGURATION

3.1 CONFIGURATION OF TESTED SYSTEM

Configuration:



3.2 EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Model No.	ID or Specification	Note
1	Mobile Phone	C5	FCC ID:2ACDFC5	EUT
2	Adapter	TEKA006-0501000UK	DC5V / 1A	Accessory
3	Battery	C5	DC3.7V / 1150 mAh	Accessory
4	Earphone	C5	N/A	Accessory
5	USB Cable	C5	N/A	Accessory

ALL TEST EQUIPMENT LIST

Conducted Emission Test Site					
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 4, 2015	July 3, 2016
Artificial Mains Network	Narda	L2-16B	000WX31025	July 8, 2015	July 7, 2016
Artificial Mains Network (AUX)	Narda	L2-16B	000WX31026	July 8, 2015	July 7, 2016
RF Cable	SCHWARZBECK	AK9515E	96222	July 4, 2015	July 3, 2016
Shielded Room	CHENGYU	843	PTS-002	June 6,2015	June 5,2016

4. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.207	Line Conduction Emission	Compliant

5. DESCRIPTION OF TEST MODES

The EUT has been operated in three modulations: GFSK independently.

NO.	TEST MODE DESCRIPTION
1	Normal Operating (BT TX + Charging)

Note:

The test modes can be supply by Built-in Li-ion battery, only the result of the worst case was recorded in the report if no any records.

2. Eut is operating at its maximum duty cycle>or equal 98%

6. ANTENNA REQUIREMENT

6.1. STANDARD APPLICABLE

According to FCC 15.203, An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

6.2. TEST RESULT

This product has a permanent antenna, fulfill the requirement of this section.

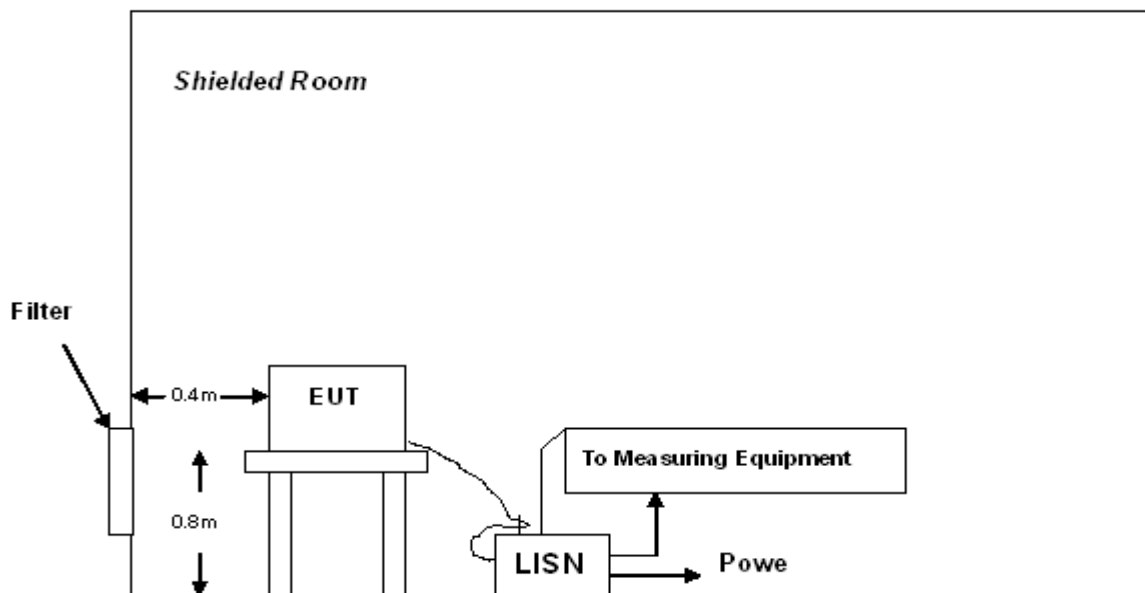
7. FCC LINE CONDUCTED EMISSION TEST

7.1 LIMITS

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

7.2 TEST SETUP



A: Powered through filter

7.3 PRELIMINARY PROCEDURE

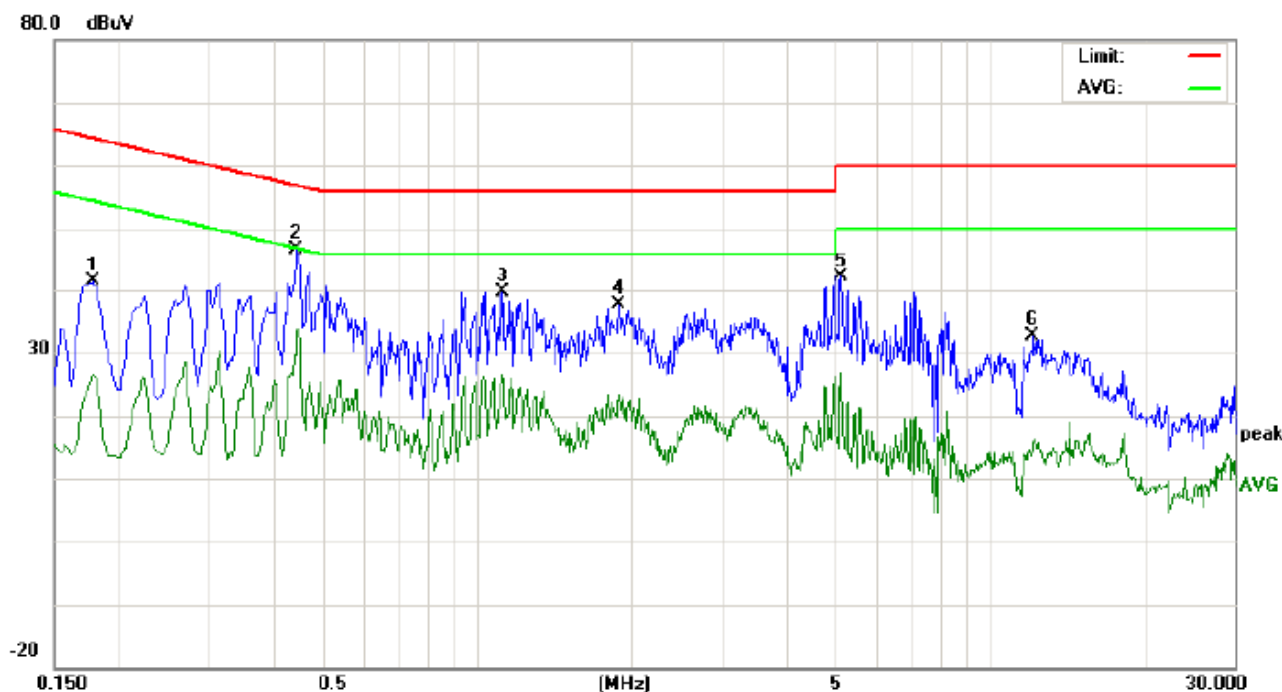
- 1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground 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) All support equipments received AC120V/60Hz power from a LISN, if any.
- 5) The EUT received power by adapter which received power by a LISN.
- 6) The 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 30MHz 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.
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

7.4 FINAL TEST PROCEDURE

- 10) EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 11) 2) 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.
- 12) 3) The test data of the worst case condition(s) was reported on the Summary Data page.

7.5 TEST RESULT OF POWER LINE

Line Conducted Emission Test Line 1-L



Site: Conduction

Phase: **L1**

Temperature: 23.6

Limit: FCC Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 53.6 %

EUT: Mobile phone

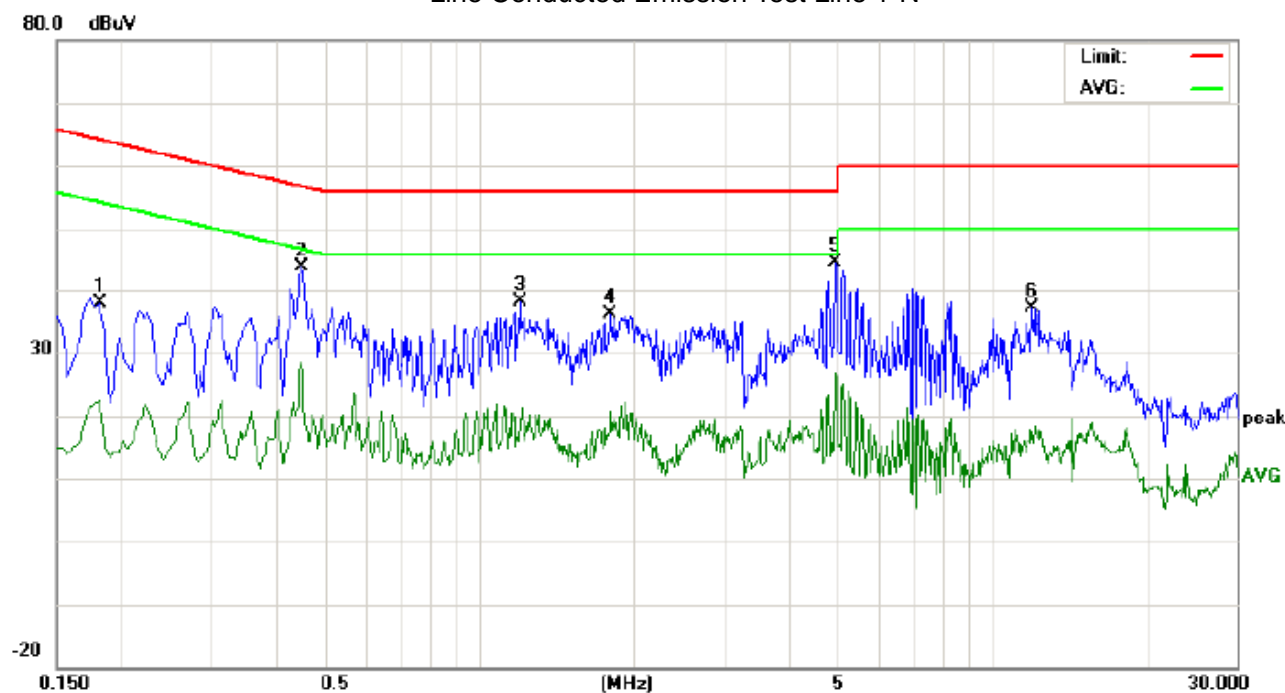
M/N: C5

Mode: BT LE TX + charging

Note:

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1780	31.09		16.35	10.19	41.28		26.54	64.57	54.57	-23.29	-28.03	P	
2	0.4460	36.35		23.31	10.36	46.71		33.67	56.95	46.95	-10.24	-13.28	P	
3	1.1220	29.26		16.30	10.37	39.63		26.67	56.00	46.00	-16.37	-19.33	P	
4	1.8900	27.34		13.23	10.26	37.60		23.49	56.00	46.00	-18.40	-22.51	P	
5	5.1340	32.00		16.61	10.24	42.24		26.85	60.00	50.00	-17.76	-23.15	P	
6	12.1420	22.60		5.82	10.14	32.74		15.96	60.00	50.00	-27.26	-34.04	P	

Line Conducted Emission Test Line 1-N



Site: Conduction Phase: **N** Temperature: 23.6
Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 53.6 %
EUT: Mobile phone
M/N: C5
Mode: BT LE TX + charging
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	0.1819	27.78		12.18	10.20	37.98		22.38	64.39	54.39	-26.41	-32.01	P	
2	0.4500	33.55		18.30	10.37	43.92		28.67	56.87	46.87	-12.95	-18.20	P	
3	1.2020	27.73		8.44	10.37	38.10		18.81	56.00	46.00	-17.90	-27.19	P	
4	1.8020	25.75		10.33	10.28	36.03		20.61	56.00	46.00	-19.97	-25.39	P	
5	4.9500	34.46		16.56	10.24	44.70		26.80	56.00	46.00	-11.30	-19.20	P	
6	11.9819	26.91		7.03	10.14	37.05		17.17	60.00	50.00	-22.95	-32.83	P	

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP



APPENDIX B: 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



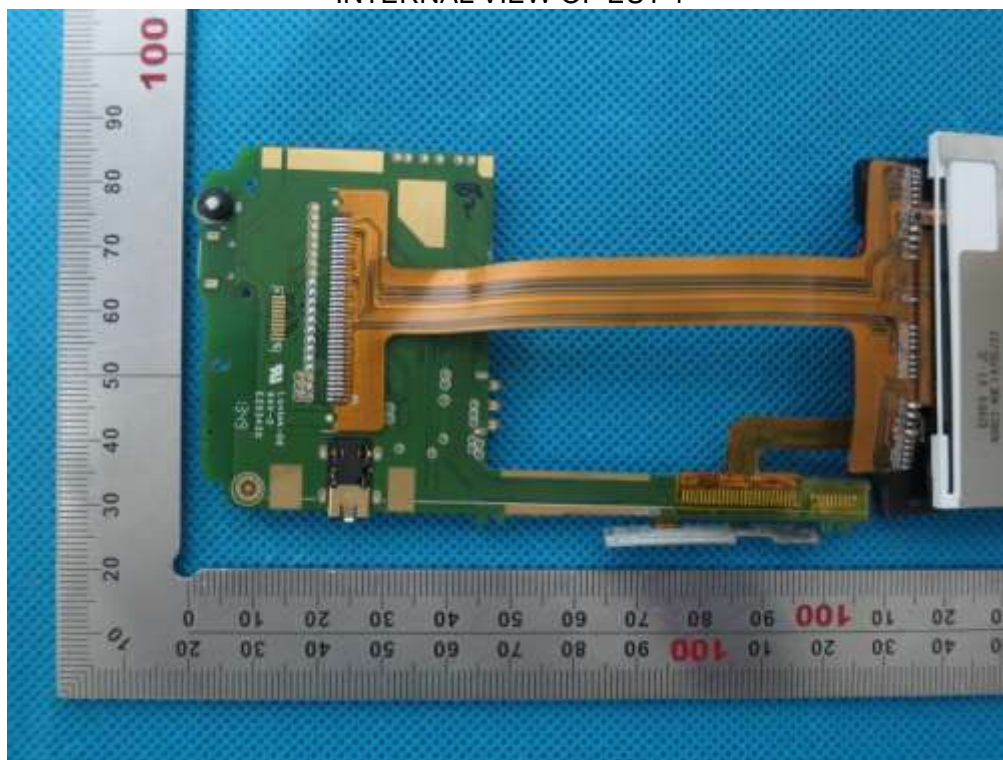
OPEN VIEW OF EUT-1



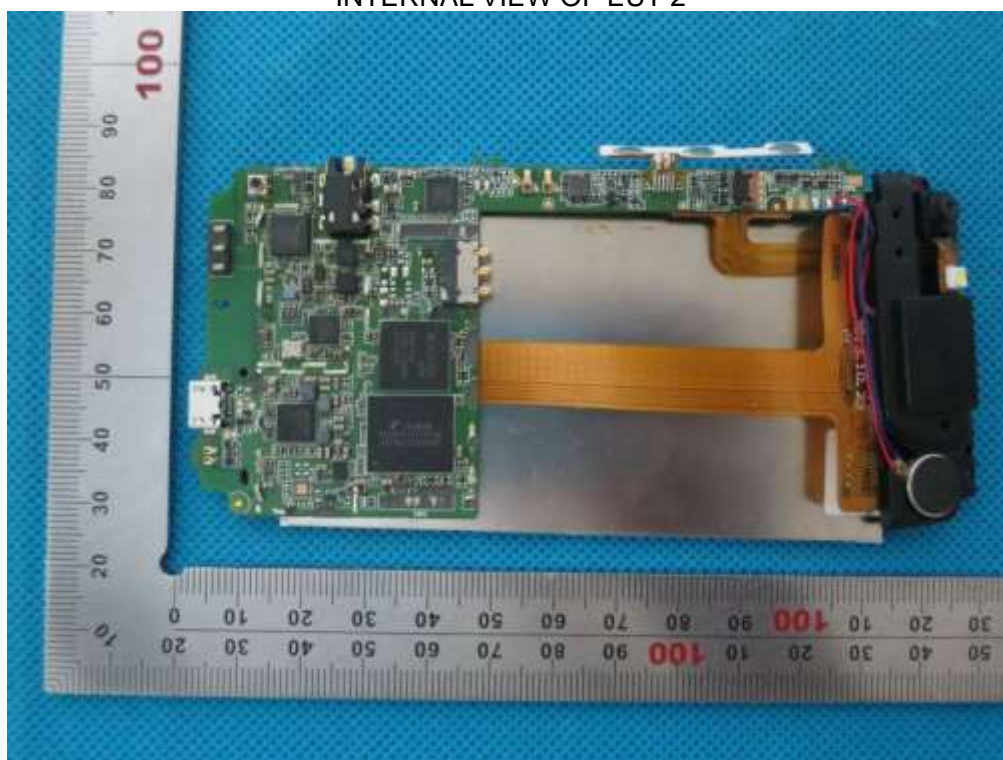
OPEN VIEW OF EUT-2



INTERNAL VIEW OF EUT-1



INTERNAL VIEW OF EUT-2



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