EMC TEST REPORT



Report No.: 17071425-FCC-E

Supersede Report No: N/A

Applicant	AZUMI S.A			
Product Name	Mobile phone			
Model No.	L3Z	L3Z		
Serial No.	N/A			
Test Standard	FCC Part 1	FCC Part 15 Subpart B Class B:2016, ANSI C63.4: 2014		
Test Date	December	December 19, 2017 to January 14, 2018		
Issue Date	January 15, 2018			
Test Result	Pass Fail			
Equipment complied with the specification				
Equipment did not comply with the specification				
mars. He David Huang				
Evans He David Huang				
Test Engineer Checked By				
This test report may be reproduced in full only				
Test result p	presented in f	his test report is applicable to	o 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



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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.

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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

Accreditations for Conformity Assessment



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1. Report Revision History

Report No.	Report Version	Description	Issue Date
17071425-FCC-E	NONE	Original	January 15, 2018

2. Customer information

Applicant Name	AZUMI S.A	
Applicant Add	Avenida Aquilino de la Guardia con Calle 47, PH Ocean Plaza, Piso 16 of. 16-01,	
	Marbella, Ciudad de Panamá City, Rep. Panamá	
Manufacturer	AZUMI HK LTD	
Manufacturer Add	FLAT/RM 18 BLK 1 14/F GOLDEN INDUSTRIAL BUILDING 16-26 KWAI TAK	
	STREET KWAI CHUNG,HK	

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES	
	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park	
Lab Address	South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China	
	518108	
FCC Test Site No.	535293	
IC Test Site No.	4842E-1	
Test Software of		
Radiated Emission	Radiated Emission Program-To Shenzhen v2.0	
Test Software of	EZ-EMC(ver.lcp-03A1)	
Conducted Emission		



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4. Equipment under Test (EUT) Information

Description of EUT:	Mobile phone	
Main Model:	L3Z	
Serial Model:	N/A	
Antenna Gain:	GSM850: 0.3dBi PCS1900: 1.2dBi Bluetooth: 1.5dBi	
Antenna Type:	GSM: PIFA antenna BT: monopole antenna	
Input Power:	Adapter: Model: K013A Input: 100-240Vcc~50/60Hz,0.15A Output: 5.0Vc-350mA Battery Model: L3Z Spec: 3.7Vcc, 600mAh 2.22Wh	
Equipment Category :	JBP	
Type of Modulation:	GSM / GPRS: GMSK Bluetooth: GFSK, π /4DQPSK, 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 Bluetooth: 2402-2480 MHz	
Number of Channels:	GSM 850: 124CH PCS1900: 299CH Bluetooth: 79CH	
Port:	USB Port, Earphone Port	
Trade Name :	AZUMI	



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FCC ID:

QRP-AZUMIL3Z

Date EUT received:

December 18, 2017

Test Date(s):

December 19, 2017 to January 14, 2018



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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
§15.107; ANSI C63.4: 2014	AC Power Line Conducted Emissions	Compliance
§15.109; ANSI C63.4: 2014	Radiated Emissions	Compliance

Measurement Uncertainty

Parameter	Uncertainty	
AC Power Line Conducted Emissions	±3.11dB	
(150kHz~30MHz)	±3.110B	
Radiated Emission(30MHz~1GHz)	±5.12dB	
Radiated Emission(1GHz~6GHz)	±5.34dB	



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6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

Temperature	25°C
Relative Humidity	57%
Atmospheric Pressure	1014mbar
Test date :	December 20, 2017
Tested By :	Evans He

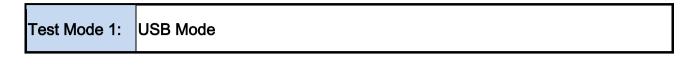
Requirement(s):

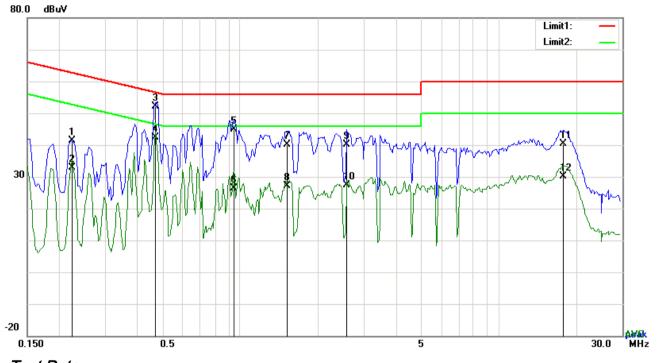
Spec	Item	Requirement Applica				
47CFR§15. 107	a)	For Low-power radio-fr connected to the public voltage that is conducted frequency or frequencies not exceed the limits in [mu] H/50 ohms line im lower limit applies at th Frequency ranges (MHz) 0.15 ~ 0.5	e utility (AC) power line ed back onto the AC po es, within the band 150 the following table, as pedance stabilization is e boundary between the Limit (QP 66 – 56	, the radio frequency ower line on any 0 kHz to 30 MHz, shall measured using a 50 network (LISN). The ne frequencies ranges. dBµV) Average 56 - 46	۲	
		0.5 ~ 5 5 ~ 30	56 60	46 50		
Test Setup	5~30 Vertical Ground Reference Plane UT 40 cm LISN Horizontal Ground Reference Plane Horizontal Ground Reference Plane					
Procedure	the 2. The	the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.				

3						
SĬE	MIC	Test Report	17071425-FCC-E			
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	3. The RF OUT of the El	JT LISN was co	nnected to the EMI test receiver via a low-loss			
	coaxial cable.					
	4. All other supporting ed	quipment were p	oowered separately from another main supply.			
	5. The EUT was switched on and allowed to warm up to its normal operating condition.					
	6. A scan was made on t	the NEUTRAL li	ne (for AC mains) or Earth line (for DC power)			
	over the required frequencies	uency range usi	ng an EMI test receiver.			
	7. High peaks, relative to	o the limit line, T	he EMI test receiver was then tuned to the			
	selected frequencies a	and the necessa	ry measurements made with a receiver bandwidth			
	setting of 10 kHz.					
	8. Step 7 was then repea	ated for the LIVE	E line (for AC mains) or DC line (for DC power).			
Remark						
Result	Pass Fa	ail				
Test Plot	Yes (See below)	N/A				
Test Mode 1:	USB Mode					
Test Mode 2:	MP4 Mode					
Test Mode 3:	Camera Mode					
Test Mode 4:	FM Mode					
Note: All mod	es were investigated, t	the results be	low show only the worst case(USB mode).			



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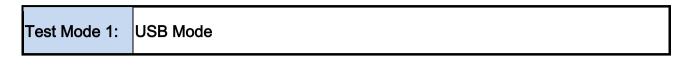
Test Data

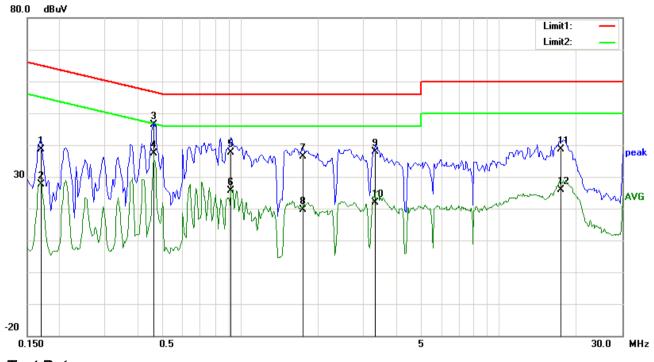
No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.2241	31.37	QP	10.03	41.40	62.67	-21.27
2	L1	0.2241	22.81	AVG	10.03	32.84	52.67	-19.83
3	L1	0.4698	42.12	QP	10.03	52.15	56.52	-4.37
4	L1	0.4698	32.38	AVG	10.03	42.41	46.52	-4.11
5	L1	0.9456	34.85	QP	10.03	44.88	56.00	-11.12
6	L1	0.9456	16.35	AVG	10.03	26.38	46.00	-19.62
7	L1	1.5189	30.02	QP	10.04	40.06	56.00	-15.94
8	L1	1.5189	17.10	AVG	10.04	27.14	46.00	-18.86
9	L1	2.5719	30.03	QP	10.05	40.08	56.00	-15.92
10	L1	2.5719	17.26	AVG	10.05	27.31	46.00	-18.69
11	L1	17.8434	30.23	QP	10.27	40.50	60.00	-19.50
12	L1	17.8434	19.75	AVG	10.27	30.02	50.00	-19.98

Phase Line Plot at 120Vac, 60Hz



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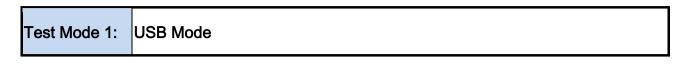
Test Data

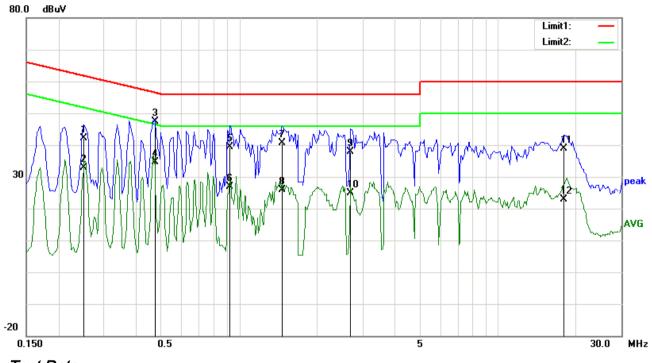
No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	Ν	0.1695	28.49	QP	10.03	38.52	64.98	-26.46
2	Ν	0.1695	17.48	AVG	10.03	27.51	54.98	-27.47
3	Ν	0.4620	36.36	QP	10.03	46.39	56.66	-10.27
4	Ν	0.4620	27.34	AVG	10.03	37.37	46.66	-9.29
5	Ν	0.9222	27.60	QP	10.03	37.63	56.00	-18.37
6	Ν	0.9222	15.72	AVG	10.03	25.75	46.00	-20.25
7	Ν	1.7490	26.27	QP	10.04	36.31	56.00	-19.69
8	Ν	1.7490	9.50	AVG	10.04	19.54	46.00	-26.46
9	Ν	3.3354	27.94	QP	10.06	38.00	56.00	-18.00
10	Ν	3.3354	11.90	AVG	10.06	21.96	46.00	-24.04
11	Ν	17.3715	28.27	QP	10.26	38.53	60.00	-21.47
12	Ν	17.3715	15.51	AVG	10.26	25.77	50.00	-24.23

Phase Neutral Plot at 120Vac, 60Hz



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Test	Data
1001	Duiu

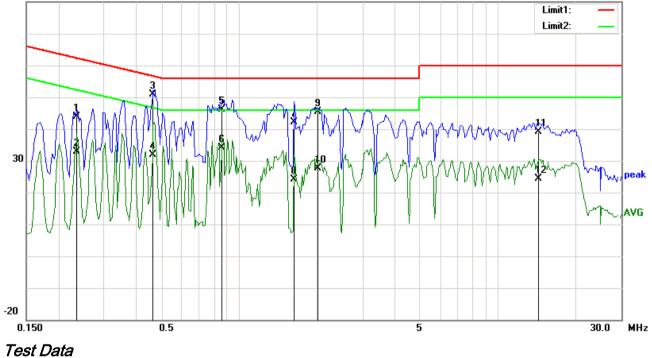
No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.2514	32.03	QP	10.03	42.06	61.71	-19.65
2	L1	0.2514	22.88	AVG	10.03	32.91	51.71	-18.80
3	L1	0.4737	37.25	QP	10.03	47.28	56.45	-9.17
4	L1	0.4737	24.71	AVG	10.03	34.74	46.45	-11.71
5	L1	0.9222	29.25	QP	10.03	39.28	56.00	-16.72
6	L1	0.9222	16.95	AVG	10.03	26.98	46.00	-19.02
7	L1	1.4643	30.60	QP	10.04	40.64	56.00	-15.36
8	L1	1.4643	15.77	AVG	10.04	25.81	46.00	-20.19
9	L1	2.6889	27.79	QP	10.05	37.84	56.00	-18.16
10	L1	2.6889	14.90	AVG	10.05	24.95	46.00	-21.05
11	L1	17.9799	28.73	QP	10.27	39.00	60.00	-21.00
12	L1	17.9799	12.56	AVG	10.27	22.83	50.00	-27.17

Phase Line Plot at 240Vac, 60Hz



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Phase Neutral Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	Ν	0.2358	33.81	QP	10.02	43.83	62.24	-18.41
2	Ν	0.2358	22.97	AVG	10.02	32.99	52.24	-19.25
3	Ν	0.4659	40.98	QP	10.02	51.00	56.59	-5.59
4	Ν	0.4659	21.98	AVG	10.02	32.00	46.59	-14.59
5	Ν	0.8598	35.99	QP	10.03	46.02	56.00	-9.98
6	N	0.8598	24.10	AVG	10.03	34.13	46.00	-11.87
7	Ν	1.6320	31.99	QP	10.04	42.03	56.00	-13.97
8	Ν	1.6320	14.00	AVG	10.04	24.04	46.00	-21.96
9	Ν	2.0142	35.44	QP	10.04	45.48	56.00	-10.52
10	Ν	2.0142	17.63	AVG	10.04	27.67	46.00	-18.33
11	Ν	14.3178	28.88	QP	10.19	39.07	60.00	-20.93
12	Ν	14.3178	14.15	AVG	10.19	24.34	50.00	-25.66



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6.2 Radiated Emissions

Temperature	25°C
Relative Humidity	57%
Atmospheric Pressure	1014mbar
Test date :	December 20, 2017
Tested By :	Evans He

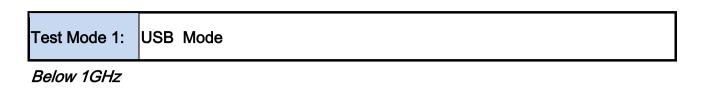
Requirement(s):

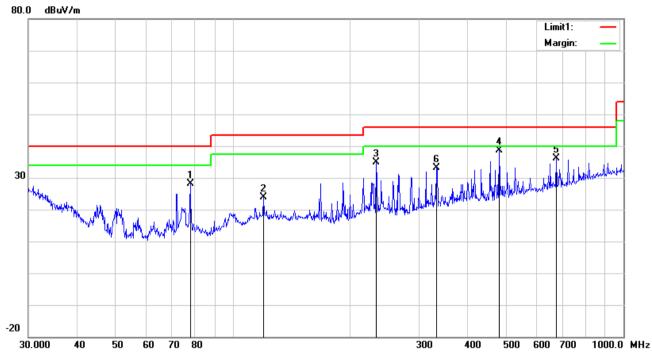
Spec	Item	Item Requirement				
47CFR§15. 109(d)	a)	Frequency range (MHz) Field Strength (μV/m) 30 - 88 100 88 - 216 150 216 - 960 200 Above 960 500				
Test Setup	Above 960 500 Ant. Tower UT& 3m Support Units Turn Table Socm Ground Plane Test Receiver					
Procedure	 The EUT was switched on and allowed to warm up to its normal operating condition. 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 manner: Vertical or horizontal polarization (whichever gave the higher emission level 					

3			
SIE	MIC	Test Report	17071425-FCC-E
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	over a full	rotation of the El	UT) was chosen.
			to the direction that gave the maximum
	emission.		-
	c. Finally, th emission.	e antenna height	was adjusted to the height that gave the maximum
		ndwidth and video	b bandwidth of test receiver/spectrum analyzer is
			at frequency below 1GHz.
	4. The resolution ban	dwidth of test rec	eiver/spectrum analyzer is 1MHz and video
	bandwidth is 3MH 1GHz.	z with Peak detec	ction for Peak measurement at frequency above
		indwidth of test re	eceiver/spectrum analyzer is 1MHz and the video
			Average Measurement as below at frequency
	above 1GHz.		
		cle < 98%) □ 10	Hz (Duty cycle > 98%)
			e next frequency point, until all selected frequency
	points were meas	-	
Remark			
Result	Pass	Fail	
	Yes Yes (See below)	N/A N/A	
Test Mode 1	: USB Mode		
Test Mode 2	: MP4 Mode		
Test Mode 3	: Camera Mode		
Test Mode 4	: FM Mode		
Note: All mod	des were investigated,	the results bel	low show only the worst case(USB mode).



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Test Data

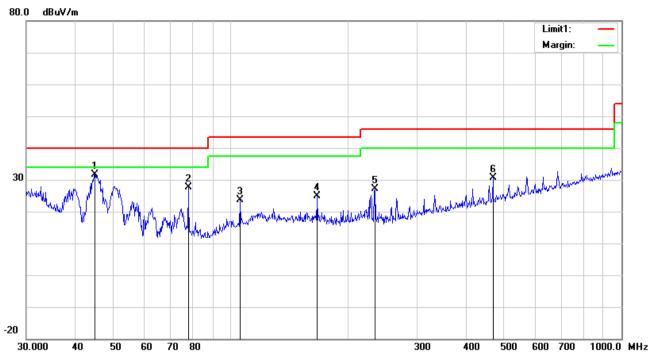
Horizontal Polarity Plot @3m

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	Η	77.8654	42.01	AVG	7.64	22.41	1.01	28.25	40.00	-11.75	100	156
2	Н	119.8556	31.31	peak	13.87	22.36	1.16	23.98	43.50	-19.52	100	48
3	Н	233.3487	44.01	peak	11.63	22.32	1.65	34.97	46.00	-11.03	100	91
4	Н	480.5276	40.76	peak	17.31	21.85	2.31	38.53	46.00	-7.47	200	55
5	Н	672.8445	35.02	peak	19.90	21.42	2.59	36.09	46.00	-9.91	100	86
6	Н	332.5187	39.11	peak	14.28	22.20	1.95	33.14	46.00	-12.86	100	219



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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	44.9006	42.62	peak	10.67	22.29	0.75	31.75	40.00	-8.25	100	18
2	V	77.8654	41.39	peak	7.64	22.41	1.01	27.63	40.00	-12.37	200	306
3	V	105.6415	33.52	peak	11.39	22.33	1.15	23.73	43.50	-19.77	100	42
4	V	166.6514	33.62	peak	12.07	22.26	1.37	24.80	43.50	-18.70	100	22
5	V	234.1684	36.26	peak	11.62	22.32	1.65	27.21	46.00	-18.79	100	206
6	V	468.8762	33.24	peak	17.08	21.87	2.24	30.69	46.00	-15.31	100	357



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Above 1GHz

Frequency	Read_level	Azimuth	Height	Polarity	Level	Factors	Limit	Margin	Detector
(MHz)	(dBµV/m)	Azimuti	(cm)	(H/V)	(dBµV/m)	(dB)	(dBµV/m)	(dB)	(PK/AV)
1922.98	63.75	129	100	V	-15.1	48.65	74	-25.35	PK
2811.28	58.8	130	100	V	-12.57	46.23	74	-27.77	PK
4592.46	54.17	307	100	V	-6.32	47.85	74	-26.15	PK
1419.76	65.06	115	100	Н	-19.17	45.89	74	-28.11	PK
2385.67	62.87	270	100	Н	-14.3	48.57	74	-25.43	PK
4223.73	55.26	243	100	Н	-9.01	46.25	74	-27.75	PK

Note1: The highest frequency of the EUT is 2480 MHz, so the testing has been conformed to 5*2480MHz

=12,400MHz.

Note2: The frequency that above 3GHz is mainly from the environment noise.

Note3: The AV measurement performed, more than 20dB below limit so AV test data was not presented.



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Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
AC Line Conducted Emis	ssions			1	
EMI test receiver	ESCS30	8471241027	09/15/2017	09/14/2018	K
Line Impedance Stabilization Network	LI-125A	191106	09/23/2017	09/22/2018	۲
Line Impedance Stabilization Network	LI-125A	191107	09/23/2017	09/22/2018	K
LISN	ISN T800	34373	09/23/2017	09/22/2018	•
Transient Limiter	LIT-153	531118	08/30/2017	08/29/2018	•
Radiated Emissions					
EMI test receiver	ESL6	100262	09/15/2017	09/14/2018	
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/30/2017	08/29/2018	V
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/23/2017	03/22/2018	K
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/19/2017	09/18/2018	Z
Double Ridge Horn Antenna	AH-118	71259	09/22/2017	09/21/2018	Z



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Annex B. EUT And Test Setup Photographs

Annex B.i. Photograph: EUT External Photo

 Whole Package View

Adapter - Lable View





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EUT - Front View



EUT - Rear View





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EUT - Top View



EUT - Bottom View





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EUT - Left View



EUT - Right View





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Annex B.ii. Photograph: EUT Internal Photo



Cover Off - Top View 2



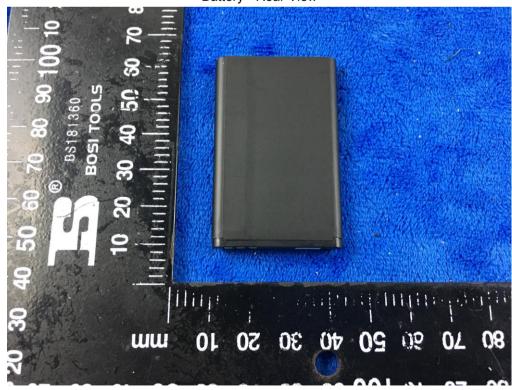


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Battery - Front View



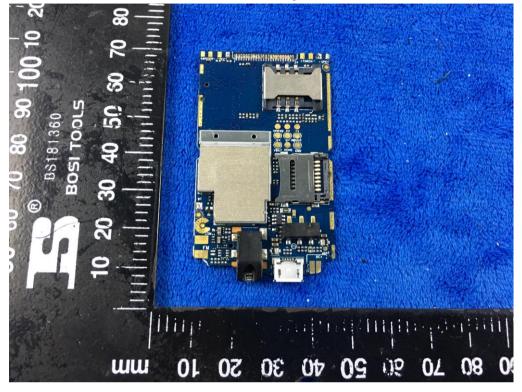
Battery - Rear View



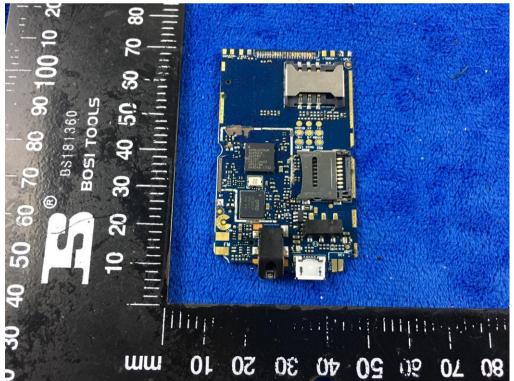


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Mainboard with Shielding - Front View



Mainboard without Shielding - Front View



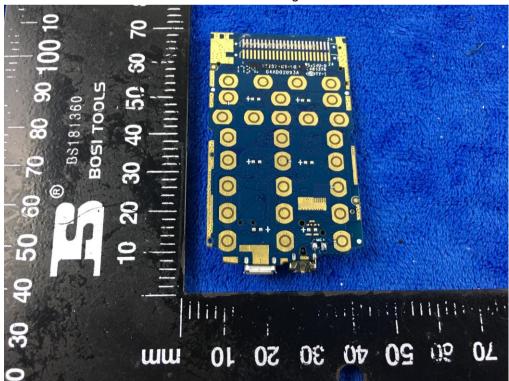


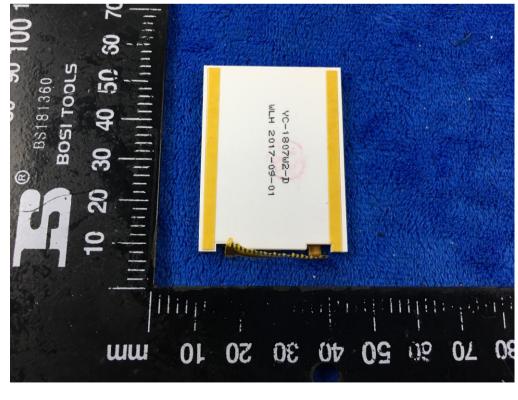
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80 3 60 70 80 90 1 BOSI TOOLS 50 BS181360 30 40 . . C 20 200 ilit 1111 20 40 110 OL 08 50 30 աա 10

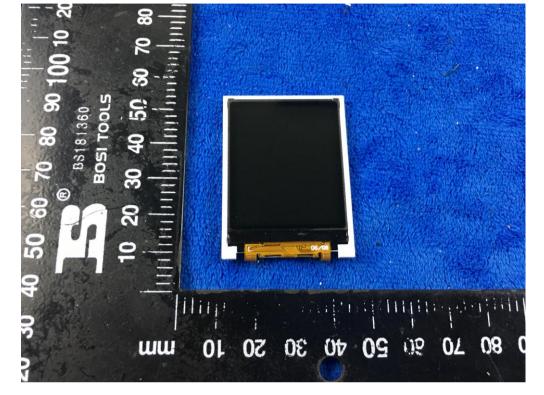
Mainboard with Shielding - Rear View

Mainboard without Shielding - Rear View





LCD - Rear View



LCD – Front View

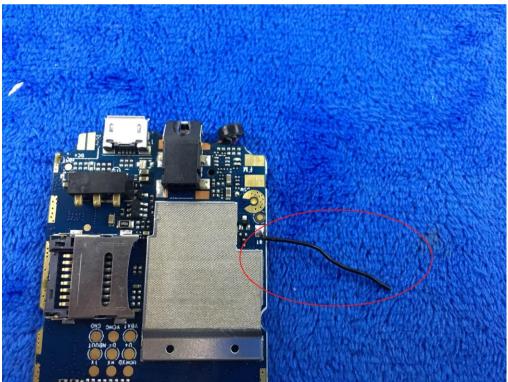
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GSM/PCS Antenna View

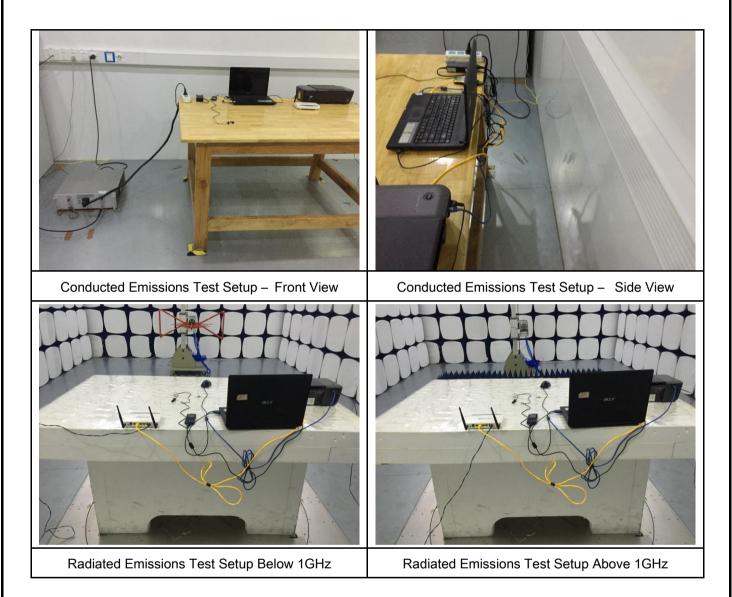
BT - Antenna View





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Annex B.iii. Photograph: Test Setup Photo



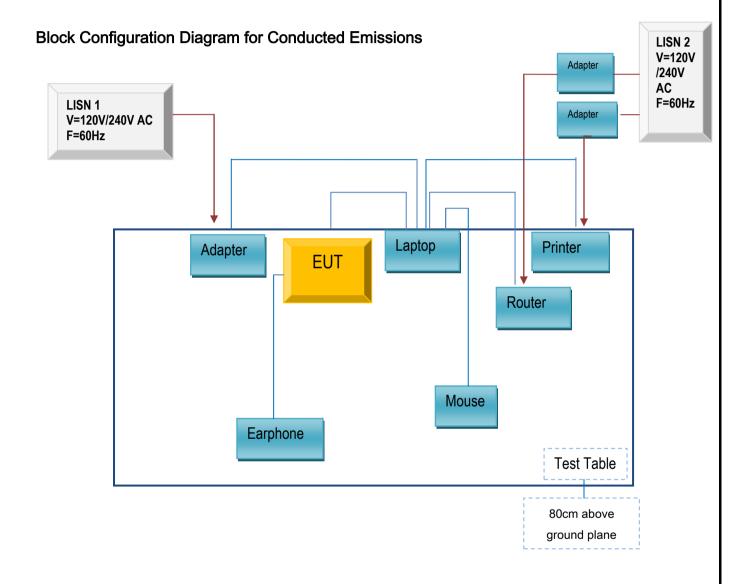


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Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

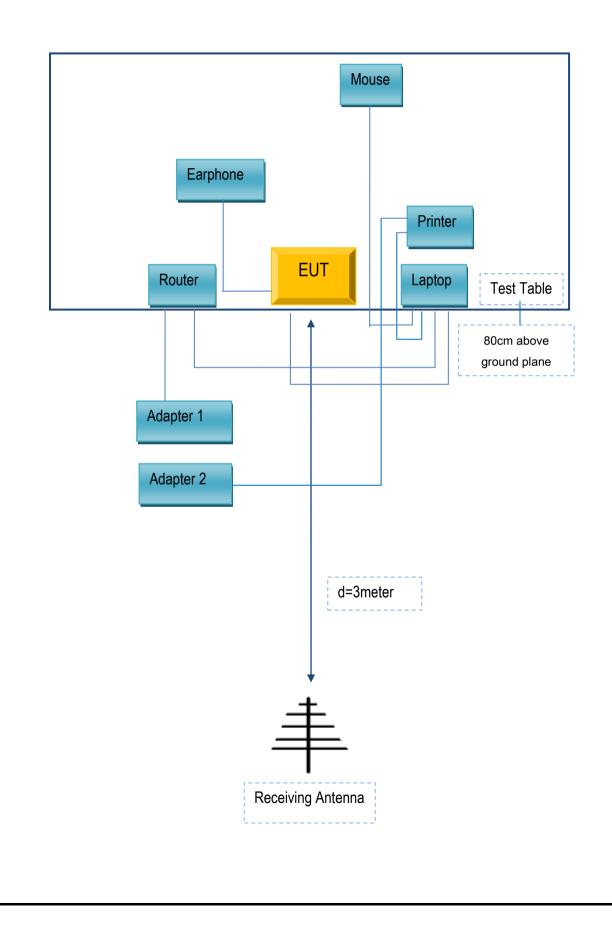
Annex C.ii. TEST SET UP BLOCK





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Block Configuration Diagram for Radiated Emissions





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Annex C. il. 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
N/A	Earphone	N/A	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



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

Please see the attachment



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Annex E. DECLARATION OF SIMILARITY

N/A