Report No: CCISE160608504

FCC REPORT

Applicant: AZUMI S.A

Avenida Aquilino de la Guardia con Calle 47, PH Ocean Plaza,

Address of Applicant: Piso 16 of. 16-01, Marbella, Ciudad de Panamá City, Rep.

Panamá

Equipment Under Test (EUT)

Product Name: Mobile Phone

Model No.: IRO A4 Q

Trade mark: Azumi

FCC ID: QRP-AZUMIIROA4Q

Applicable standards: FCC CFR Title 47 Part 15 Subpart B

Date of sample receipt: 07 Jul., 2016

Date of Test: 07 Jul., to 27 Jul., 2016

Date of report issued: 27 Jul., 2016

Test Result: Pass *

Authorized Signature:



Bruce Zhang Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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^{*} In the configuration tested, the EUT complied with the standards specified above.





2 Version

Version No.	Date	Description
00	27 Jul., 2016	Original

Tested by: Zora Lee Date: 27 Jul., 2016

Test Engineer

Reviewed by: On a Date: 27 Jul., 2016

Project Engireer





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4 Test Summary

Test Item	Section in CFR 47	Result	
Conducted Emission	Part 15.107	Pass	
Radiated Emission	Part 15.109	Pass	

Pass: The EUT complies with the essential requirements in the standard.



5 General Information

5.1 Client Information

Applicant:	AZUMI S.A		
Address of Applicant:	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		
Address of Manufacturer:	FLAT/RM 18 BLK 1 14/F GOLDEN INDUSTRIAL BUILDING 16-26 KWAI TAK STREET KWAI CHUNG, HK		
Factory:	RUIO Communication Technology Co., Ltd		
Factory Factory:	402, Tai'bang Tech High rise, South 8th Road, Science & Technology Park, NanShan District, ShenZhen, China		

5.2 General Description of E.U.T.

Product Name:	Mobile Phone	
Model No.: IRO A4 Q		
Power supply:	Rechargeable Li-ion Battery DC3.7V-1300mAh	
	Model: TPA-46D050060UU	
AC adapter :	Input: AC100-240V 50/60Hz 0.15A	
	Output: DC 5.0V, 600mA	

5.3 Test Mode

Operating mode	Detail description
PC mode	Keep the EUT in Downloading mode(Worst case)
Charging+Recording mode	Keep the EUT in Charging+Recording mode
Charging+Playing mode	Keep the EUT in Charging+Playing mode
FM mode	Keep the EUT in FM receiver mode
GPS mode	Keep the EUT in GPS receiver mode

The sample was placed 0.8m above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

5.4 Measurement Uncertainty

Items	Expanded Uncertainty (Confidence of 95%)
Conducted Emission (9kHz ~ 30MHz)	2.14 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	4.24 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	4.35 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	4.44 dB (k=2)
Radiated Emission (18GHz ~ 26.5GHz)	4.56 dB (k=2)

Report No: CCISE160608504

5.5 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
DELL	PC	OPTIPLEX745 N/A		DoC
DELL	MONITOR	E178FPC	N/A	DoC
DELL	KEYBOARD	D SK-8115 N/A		DoC
DELL	MOUSE	MOC5UO	N/A	DoC
HP	Printer	rinter CB495A 052		DoC
MERCURY	RCURY Wireless router		12922104015	FCC ID
NAKAMICHI	NAKAMICHI Bluetooth earphone		T8 N/A	

5.6 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

• FCC - Registration No.: 817957

Shenzhen Zhongjian Nanfang Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012.

• IC - Registration No.: 10106A-1

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

• CNAS - Registration No.: CNAS L6048

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

5.7 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,

Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-23118282 Fax: +86-755-23116366





5.8 Test Instruments list

Radiated Emission:								
Item Test Equipment		est Equipment Manufacturer Mo		Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)		
1	3m SAC	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	08-23-2014	08-22-2017		
2	BiConiLog Antenna	SCHWARZBECK	VULB9163	CCIS0005	03-25-2016	03-25-2017		
3	Horn Antenna	SCHWARZBECK	BBHA9120D	CCIS0006	03-25-2016	03-25-2017		
4	4 Pre-amplifier F (10kHz-1.3GHz)		8447D	CCIS0003	04-01-2016	03-31-2017		
5	Pre-amplifier (1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	04-01-2016	03-31-2017		
6	Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP30	CCIS0023	03-28-2016	03-28-2017		
7	EMI Test Receiver	Rohde & Schwarz	ESRP7	CCIS0167	03-28-2016	03-28-2017		
8	EMI Test Software	AUDIX	E3	N/A	N/A	N/A		

Conducted Emission:									
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)			
1	Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	08-23-2014	08-22-2017			
2	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	03-24-2016	03-24-2017			
3	LISN	CHASE	MN2050D	CCIS0074	03-26-2016	03-26-2017			
4	Coaxial Cable	CCIS	N/A	CCIS0086	04-01-2016	03-31-2017			
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A			



6 Test results and Measurement Data

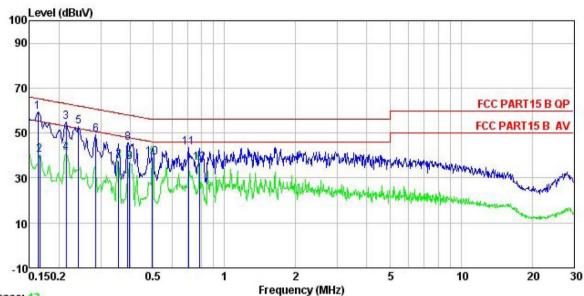
6.1 Conducted Emission

Test Requirement:	FCC Part 15 B Section 15.107						
Test Method:	ANSI C63.4:2014						
Test Frequency Range:	150kHz to 30MHz	150kHz to 30MHz					
Class / Severity:	Class B						
Receiver setup:	RBW=9kHz, VBW=30kHz						
Limit:	Fraguesia ranga (MIII-)	Limit (dBµV)				
	Frequency range (MHz)	Quasi-peak	Average				
	0.15-0.5	66 to 56*	56 to 46*				
	0.5-5	56	46				
	0.5-30	60	50				
	* Decreases with the logarith	nm of the frequency.					
Test setup:	Reference Plan	ne	_				
	AUX Equipment E.U.T EMI Receiver Remark E.U.T Equipment Under Test LISN Line Impedence Stabilization Network Test table height=0.8m						
Test procedure	 The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement. 						
Test environment:	Temp.: 23 °C Hun	nid.: 56% Pre	ess.: 101kPa				
Test Instruments:	Refer to section 5.7 for details						
Test mode:	Refer to section 5.3 for details						
Test results:	Pass						



Measurement data:

Line:



Trace: 13

Site

: CCIS Shielding Room : FCC PART15 B QP LISN LINE Condition

EUT : Mobile Phone Model : IRO A4Q Test Mode : PC mode Power Rating : AC120/60Hz

Environment : Temp: 23 °C Huni:56% Atmos:101KPa

Test Engineer: Zora

Remark

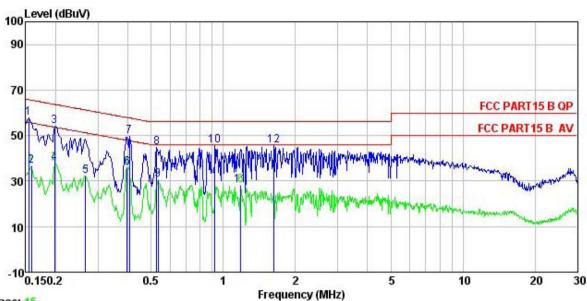
Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line		Remark
MHz	dBu∜	<u>dB</u>	<u>ab</u>	dBu∀	dBu∜	<u>ab</u>	
0.162	48.52	0.14	10.77	59.43	65.34	-5.91	QP
0.166	29.62	0.14	10.77	40.53	55.16	-14.63	Average
0.214	44.07	0.15	10.76	54.98	63.05	-8.07	QP
0.214	30.23	0.15	10.76	41.14	53.05	-11.91	Average
0.242	42.08	0.15	10.75	52.98	62.04	-9.06	QP
0.286	38.40	0.16	10.74	49.30	60.63	-11.33	QP
0.358	26.56	0.21	10.73	37.50	48.78	-11.28	Average
0.389	34.52	0.23	10.72	45.47	58.08	-12.61	QP
0.398	25.94	0.24	10.72	36.90	47.90	-11.00	Average
0.497	28.19	0.24	10.76	39.19			
0.705	32.38	0.32	10.77	43.47	56.00	-12.53	QP
0.783	25.58	0.30	10.81	36.69	46.00	-9.31	Average
	MHz 0.162 0.166 0.214 0.214 0.242 0.286 0.358 0.358 0.398 0.398 0.497 0.705	Freq Level MHz dBuV 0.162 48.52 0.166 29.62 0.214 44.07 0.214 30.23 0.242 42.08 0.286 38.40 0.358 26.56 0.389 34.52 0.398 25.94 0.497 28.19 0.705 32.38	Freq Level Factor MHz dBuV dB 0.162 48.52 0.14 0.166 29.62 0.14 0.214 44.07 0.15 0.214 30.23 0.15 0.242 42.08 0.15 0.286 38.40 0.16 0.358 26.56 0.21 0.389 34.52 0.23 0.398 25.94 0.24 0.497 28.19 0.24 0.705 32.38 0.32	MHz dBuV dB dB 0.162 48.52 0.14 10.77 0.166 29.62 0.14 10.77 0.214 44.07 0.15 10.76 0.214 30.23 0.15 10.76 0.242 42.08 0.15 10.75 0.286 38.40 0.16 10.74 0.358 26.56 0.21 10.73 0.389 34.52 0.23 10.72 0.497 28.19 0.24 10.76 0.705 32.38 0.32 10.77	MHz dBuV dB dB dBuV 0.162 48.52 0.14 10.77 59.43 0.166 29.62 0.14 10.77 40.53 0.214 44.07 0.15 10.76 54.98 0.214 30.23 0.15 10.76 41.14 0.242 42.08 0.15 10.75 52.98 0.286 38.40 0.16 10.74 49.30 0.358 26.56 0.21 10.73 37.50 0.389 34.52 0.23 10.72 45.47 0.398 25.94 0.24 10.72 36.90 0.497 28.19 0.24 10.76 39.19 0.705 32.38 0.32 10.77 43.47	MHz dBuV dB dB dBuV dBuV dBuV 0.162 48.52 0.14 10.77 59.43 65.34 0.166 29.62 0.14 10.77 40.53 55.16 0.214 44.07 0.15 10.76 54.98 63.05 0.214 30.23 0.15 10.76 41.14 53.05 0.242 42.08 0.15 10.75 52.98 62.04 0.286 38.40 0.16 10.74 49.30 60.63 0.358 26.56 0.21 10.73 37.50 48.78 0.389 34.52 0.23 10.72 45.47 58.08 0.398 25.94 0.24 10.76 39.19 46.05 0.705 32.38 0.32 10.77 43.47 56.00	Freq Level Factor Loss Level Line Limit MHz

Notes:

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level = Receiver Read level + LISN Factor + Cable Loss.



Neutral:



Trace: 15

Site

: CCIS Shielding Room : FCC PART15 B QP LISN NEUTRAL Condition

EUT Mobile Phone Model : IRO A4Q Test Mode : PC mode
Power Rating : AC120/60Hz
Environment : Temp: 23 C Huni:56% Atmos:101KPa

Test Engineer: Zora

Remark	: Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBu∀	dB	dB	dBu∀	dBu∜	dВ	
1	0.154	47.00	0.12	10.78	57.90	65.78	-7.88	QP
2	0.158	25.83	0.13	10.78	36.74	55.56	-18.82	Average
3	0.198	43.27	0.15	10.76	54.18	63.71	-9.53	QP
4	0.198	26.89	0.15	10.76	37.80	53.71	-15.91	Average
1 2 3 4 5 6 7 8	0.266	21.48	0.18	10.75	32.41	51.25	-18.84	Average
6	0.398	24.84	0.23	10.72	35.79	47.90	-12.11	Average
7	0.406	38.83	0.23	10.72	49.78	57.73	-7.95	QP
8	0.527	33.89	0.25	10.76	44.90	56.00	-11.10	QP
9	0.535	19.64	0.26	10.76	30.66	46.00	-15.34	Average
10	0.923	34.30	0.28	10.85	45.43	56.00	-10.57	QP
11	1.184	17.06	0.26	10.89	28.21	46.00	-17.79	Average
12	1.628	34.30	0.26	10.93	45.49	56.00	-10.51	QP

Notes:

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level = Receiver Read level + LISN Factor + Cable Loss.



6.2 Radiated Emission

0.2 Radiated Ellission									
Test Requirement:	FCC Part 15 B Section 15.109								
Test Method:	ANSI C63.4:201	14							
Test Frequency Range:	30MHz to 6000I	MHz							
Test site:	Measurement D	istance:	3m (Se	mi-Anechoi	c Chan	nber)			
Receiver setup:	Frequency	Dete		RBW	VB\		Remark		
	30MHz-1GHz	Quasi-		120kHz	300kHz		Quasi-peak Value		
	Above 1GHz	Above 1GHz Peak RMS		1MHz 1MHz	3MF		Peak Value		
Limit:	Frequenc	RMS			<u> </u>	72	Average Value Remark		
Liffiit.		30MHz-88MHz			<i>(</i> 3111)	(Quasi-peak Value		
							Quasi-peak Value		
				43.5 46.0			Quasi-peak Value		
	960MHz-1G			54.0			Quasi-peak Value		
				54.0			Average Value		
	Above 1GI	HZ		74.0			Peak Value		
	EUT	3m 4m 1m 1m A			_ Antenna _ Searc Anten RF Test Receiver -	h			
	SOCM SOCM	E EUT	G Test Recei	3m round Reference Plant	Horn Antenn	Contro	ontenna Tower		





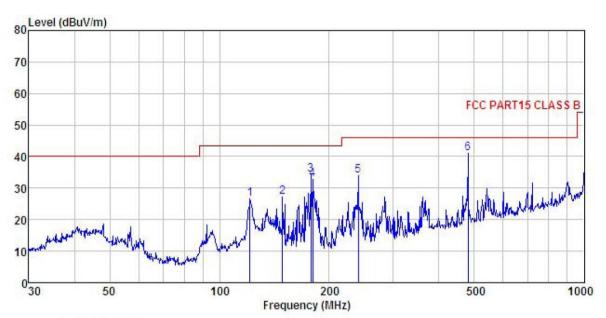
Test Procedure:	 The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 							
	3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.							
	4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.							
	5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.							
	6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.							
Test environment:	Temp.: 25 °C Humid.: 55% Press.: 1 01kPa							
Test Instruments:	Refer to section 5.7 for details							
Test mode:	Refer to section 5.3 for details							
Test results:	Passed							



Measurement Data:

Below 1GHz

Horizontal:



Site

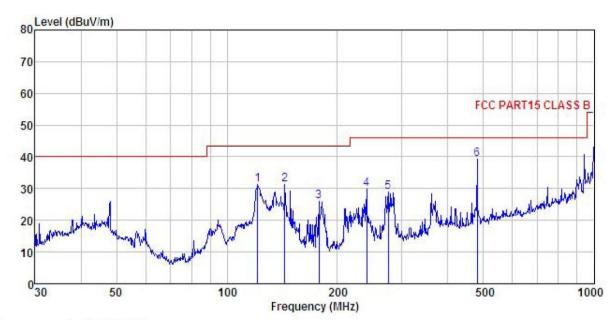
: 3m chamber : FCC PART15 CLASS B 3m VULB9163(30M3G) HORIZONTAL : Mobile Phone Condition

: 1KO A4Q
Test mode : PC mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5°C Huni:55% 101KPa
Test Engineer: Zora
REMARK : EUT

	Freq		Intenna Factor				Limit Line	Over Limit	Remark
<u>~</u>	MHz	dBu₹	<u>dB</u> /m	<u>d</u> B	āĒ	dBuV/m	dBuV/m	āB	
1	121.123	41.89	11.86	2.18	29.38	26.55	43.50	-16.95	QP
2	148.963	43.14	10.77	2.51	29.23	27.19	43.50	-16.31	QP
2 3 4 5	178.133	51.31	9.30	2.71	28.99	34.33	43.50	-9.17	QP
4	180.017	49.83	9.20	2.73	28.97	32.79	43.50	-10.71	QP
5	239.987	47.83	11.80	2.82	28.59	33.86	46.00	-12.14	QP
6	480.528	50.07	16.57	3.46	28.92	41.18	46.00	-4.82	QP



Vertical:



Site

: 3m chamber : FCC PART15 CLASS B 3m VULB9163(30M3G) VERTICAL Condition

: Mobile Phone

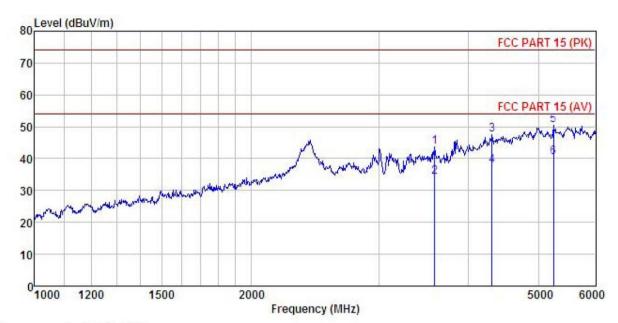
Model : IRO A4Q
Test mode : PC mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5°C Huni:55% 101KPa
Test Engineer: Zora
REMARK :

LIMMAL		Read.	Antenna	Cable	Preamn		Limit	Over		
	Freq		Factor						Remark	
_	MHz	dBu₹	<u>dB</u> /m	₫B	<u>dB</u>	dBuV/m	dBuV/m	<u>dB</u>		
1	121.123	46.76	11.86	2.18	29.38	31.42	43.50	-12.08	QP	
1 2 3	143.830	46.69	11.34	2.44	29.25	31.22	43.50	-12.28	QP	
3	178.133	43.08	9.30	2.71	28.99	26.10	43.50	-17.40	QP	
4	239.987	43.91	11.80	2.82	28.59	29.94	46.00	-16.06	QP	
5	275.157	42.50	12.15	2.87	28.49	29.03	46.00	-16.97	QP	
6	480.528	48.26	16.57	3.46	28.92	39.37	46.00	-6.63	QP	



Above 1GHz

Horizontal:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL Condition

: Mobile Phone

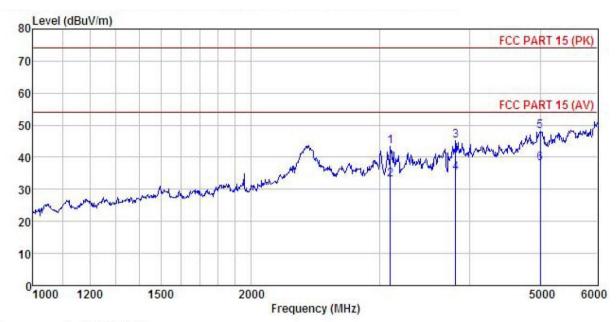
Model : IRO A4Q
Test mode : PC mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5°C Huni:55% 101KPa
Test Engineer: Zora
REMARK :

TITALIT										
	Freq		Antenna Factor				Limit Line	Over Limit	Remark	
-	MHz	dBu∇	<u>dB</u> /m	<u>d</u> B	<u>dB</u>	dBuV/m	dBuV/m	<u>dB</u>		
1	3591.116	46.40	28.66	8.94	40.21	43.79	74.00	-30.21	Peak	
2	3591.116	36.97	28.66	8.94	40.21	34.36	54.00	-19.64	Average	
3	4311.899	44.61	33.73	10.01	40.85	47.50	74.00	-26.50	Peak	
4	4311.899	34.88	33.73	10.01	40.85	37.77	54.00	-16.23	Average	
5	5248.359	43.88	35.77	11.08	40.12	50.61	74.00	-23.39	Peak	
6	5248.359	33.68	35.77	11.08	40.12	40.41	54.00	-13.59	Average	





Vertical:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL Condition

. INU A4Q
Test mode : PC mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5°C Huni:55% 101KPa
Test Engineer: Zora
REMARK : EUT : Mobile Phone

	3.000		and the second second					447000		
	Freq		Antenna Factor				Limit Line		Remark	
-	MHz	dBu∜	<u>dB</u> /m		<u>dB</u>	dBu√/m	dBuV/m	<u>dB</u>		-
1	3109.511	49.94	26.10	8.04	40.62	43.46	74.00	-30.54	Peak	
2	3109.511	39.57	26.10	8.04	40.62	33.09	54.00	-20.91	Average	
3	3821.840	45.74	30.77	9.33	40.63			-28.79		
4	3821.840	35.67	30.77	9.33	40.63	35.14			Average	
5	4999.149	40.50	36.90	10.78	39.98	48.20	74.00	-25.80	Peak	
6	4999, 149	30, 27	36, 90	10.78	39, 98	37.97	54,00	-16.03	Average	