

### Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Report No: CCIS15090076305

# FCC REPORT (BLE)

**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.: A35S

FCC ID: QRP-AZUMIA35S

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: 28 Sep., 2015

**Date of Test:** 28 Sep., to 21 Oct., 2015

Date of report issued: 21 Oct., 2015

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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<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.





### 2 Version

Version No.	Date	Description
00	21 Oct., 2015	This report was amended on the report CCIS14050033905 following FCC Class II Permissive Change Procedure. The differences as below: Remove the GPS function and electrodynamics induction, and the camera pixel was changed, and the Bluetooth/WIFI antenna was changed. Base on the differences description, all data has been re-tested in this report.

Tested by:	Lora Lee	Date:	21 Oct., 2015	
	Test Engineer			
Reviewed by:	Dimer han	Date:	21 Oct., 2015	
•	1) may		•	

**Project Engineer** 

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
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## 4 Test Summary

Test Item	Section in CFR 47	Uncertainty	Result
Antenna requirement	15.203/15.247 (c)	/	Pass
AC Power Line Conducted Emission	15.207	±3.28dB	Pass
Conducted Peak Output Power	15.247 (b)(3)	±1.50dB	Pass
6dB Emission Bandwidth	15.247 (a)(2)	±1.50dB	Pass
Power Spectral Density	15.247 (e)	±1.50dB	Pass
Band Edge	15.247(d)	±1.50dB	Pass
Spurious Emission	15.205/15.209	±4.88dB	Pass

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



Report No: CCIS15090076305

### **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) Limited		
Address of Manufacturer:	RM 2309, 23/F HO KING COMM CTR, 2-16 FAYUEN ST, MONGKOK KOWLOON, HONG KONG		

### 5.2 General Description of E.U.T.

Product Name:	Mobile phone	
Model No.:	A35S	
Operation Frequency:	2402-2480 MHz	
Channel numbers:	40	
Channel separation:	2 MHz	
Modulation technology:	GFSK	
Data speed :	1Mbps	
Antenna Type:	Internal Antenna	
Antenna gain:	1.8 dBi	
Power supply:	Rechargeable Li-ion Battery DC3.8V,1450mAh	
AC adapter:	Model: A35S	
	Input:100-240V AC,50/60Hz 0.15A	
	Output:5.0V DC MAX 750mA	



Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
2	2406MHz	12	2426MHz	22	2446MHz	32	2466MHz
3	2408MHz	13	2428MHz	23	2448MHz	33	2468MHz
4	2410MHz	14	2430MHz	24	2450MHz	34	2470MHz
5	2412MHz	15	2432MHz	25	2452MHz	35	2472MHz
6	2414MHz	16	2434MHz	26	2454MHz	36	2474MHz
7	2416MHz	17	2436MHz	27	2456MHz	37	2476MHz
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz

#### Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	2402MHz
The middle channel	2442MHz
The Highest channel	2480MHz



5.3 Test environment and mode

Operating Environment:				
Temperature:	24.0 °C			
Humidity:	54 % RH			
Atmospheric Pressure:	1010 mbar			
Test mode:				
Operation mode	Keep the EUT in continuous transmitting with modulation			

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. Duty cycle setting during the transmission is 100% with maximum power setting for all modulations.

### 5.4 Description of Support Units

N/A

### 5.5 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.

### 5.6 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

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Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366

Report No: CCIS15090076305



### 5.7 Test Instruments list

Rad	Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)	
1	3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	08-23-2014	08-22-2017	
2	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	03-28-2015	03-28-2016	
3	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	03-28-2015	03-28-2016	
4	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	
5	Amplifier (10kHz-1.3GHz)	НР	8447D	CCIS0003	04-01-2015	03-31-2016	
6	Amplifier (1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	04-01-2015	03-31-2016	
7	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	04-01-2015	03-31-2016	
8	Horn Antenna	ETS-LINDGREN	3160	GTS217	04-01-2015	03-31-2016	
9	Printer	HP	HP LaserJet P1007	N/A	N/A	N/A	
10	Positioning Controller	UC	UC3000	CCIS0015	N/A	N/A	
11	Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP	CCIS0023	03-28-2015	03-28-2016	
12	EMI Test Receiver	Rohde & Schwarz	ESRP7	CCIS0167	03-28-2015	03-28-2016	
13	Loop antenna	Laplace instrument	RF300	EMC0701	04-01-2015	03-31-2016	
14	Universal radio communication tester	Rhode & Schwarz	CMU200	CCIS0069	03-28-2015	03-28-2016	
15	Signal Analyzer	Rohde & Schwarz	FSIQ3	CCIS0088	04-08-2015	04-08-2016	

Con	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	11-10-2012	11-09-2015	
2	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	03-28-2015	03-28-2016	
3	LISN	CHASE	MN2050D	CCIS0074	03-28-2015	03-28-2016	
4	Coaxial Cable	CCIS	N/A	CCIS0086	04-01-2015	03-31-2016	
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	



### 6 Test results and Measurement Data

### 6.1 Antenna requirement:

### Standard requirement: F(

FCC Part 15 C Section 15.203 /247(c)

15.203 requirement:

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, 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.

15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

#### E.U.T Antenna:

The BLE antenna is an internal antenna which cannot replace by end-user, the best case gain of the antenna is 1.8 dBi.





### 6.2 Conducted Emission

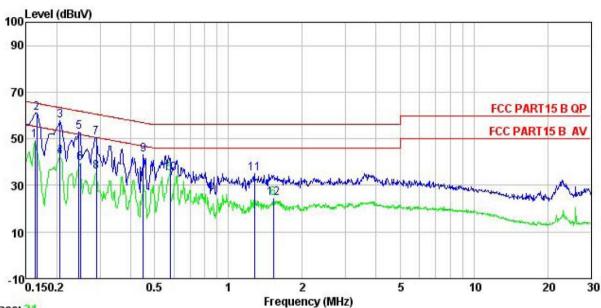
Toot Degrainement	FCC Dark 45 C Caption 45 205	7		
Test Requirement:	FCC Part 15 C Section 15.207			
Test Method:	ANSI C63.4: 2009			
Test Frequency Range:	150 kHz to 30 MHz			
Class / Severity:	Class B			
Receiver setup:	RBW=9kHz, VBW=30kHz			
Limit:	Frequency range (MHz)	Limit (c Quasi-peak	dBuV) Average	
	0.15-0.5	66 to 56*	56 to 46*	
	0.5-5	56	46	
	5-30	60	50	
	* Decreases with the logarithm	n of the frequency.		
	<ol> <li>The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which provides a 50ohm/50uH coupling impedance for the measuring equipment.</li> <li>The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).</li> <li>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: 2009 on conducted measurement.</li> </ol>			
Test setup:	Reference Plane			
	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 Instruments:	Refer to section 5.7 for details			
Test mode:	Refer to section 5.3 for details			
Test results:	Passed			

### **Measurement Data**





### Neutral:



Trace: 21

Site

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

EUT Model : A35S Test Mode : BLE mode

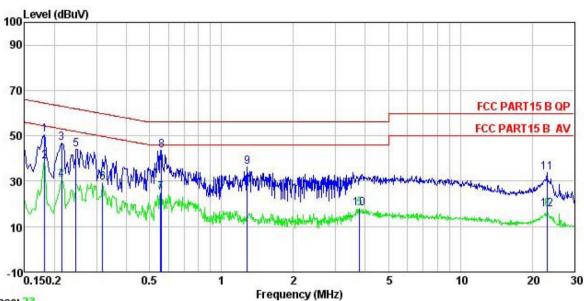
Power Rating: AC120/60Hz Environment: Temp: 23 °C Huni:56% Atmos:101KPa

Test Engineer: Zora

Kemark	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	
	MHz	dBu₹	<u>dB</u>		dBu₹	—dBu₹	āB		
1	0.162	38.33	0.25	10.77	49.35	55.34	-5.99	Average	
2	0.166	50.05	0.25	10.77	61.07	65.16	-4.09	QP	
3	0.206	46.74	0.25	10.76	57.75	63.36	-5.61	QP	
1 2 3 4 5 6 7 8 9	0.206	31.33	0.25	10.76	42.34	53.36	-11.02	Average	
5	0.246	41.76	0.26	10.75	52.77	61.91			
6	0.249	28.47	0.26	10.75	39.48	51.78	-12.30	Average	
7	0.289	39.51	0.26	10.74	50.51	60.54	-10.03	QP	
8	0.289	24.83	0.26	10.74	35.83	50.54	-14.71	Average	
9	0.449	32.10	0.27	10.74	43.11	56.89	-13.78	QP	
10	0.579	24.09	0.24	10.77	35.10	46.00	-10.90	Average	
11	1.276	23.96	0.24	10.90	35.10	56.00	-20.90	QP	
12	1.527	13.31	0.26	10.93	24.50	46.00	-21.50	Average	



### Line:



Trace: 23

Site

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

EUT : Mobile phone Model : A35S

Test Mode : BLE 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∀	<u>d</u> B	dB	dBu₹	dBu√	<u>dB</u>	
1	0.182	39.40	0.28	10.77	50.45	64.42	-13.97	QP
2	0.182	27.52	0.28	10.77	38.57	54.42	-15.85	Average
3	0.214	35.96	0.28	10.76	47.00	63.05	-16.05	QP
2 3 4 5 6 7 8 9	0.214	19.48	0.28	10.76	30.52	53.05	-22.53	Average
5	0.246	32.91	0.27	10.75	43.93	61.91	-17.98	QP
6	0.318	18.43	0.26	10.74	29.43	49.75	-20.32	Average
7	0.555	14.01	0.27	10.77	25.05	46.00	-20.95	Average
8	0.561	32.68	0.27	10.77	43.72	56.00	-12.28	QP
9	1.282	25.09	0.25	10.90	36.24	56.00	-19.76	QP
10	3.779	6.65	0.28	10.90	17.83	46.00	-28.17	Average
11	23.018	22.54	0.45	10.89	33.88	60.00	-26.12	QP
12	23.140	6.37	0.46	10.89	17.72	50.00	-32.28	Average

- 1. An initial pre-scan was performed on the live 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



## **6.3 Conducted Output Power**

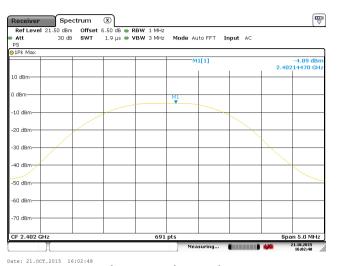
Test Requirement:	FCC Part 15 C Section 15.247 (b)(3)				
Test Method:	ANSI C63.10:2009 and KDB558074v03r03 section 9.2.2				
Limit:	30dBm				
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane				
Test Instruments:	Refer to section 5.7 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Passed				

### Measurement Data

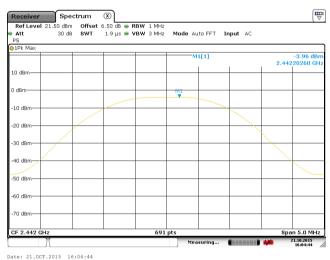
Test CH	Maximum Conducted Output Power (dBm)	Limit(dBm)	Result
Lowest	-4.89		
Middle	-3.96	30.00	Pass
Highest	-4.29		

Test plot as follows:

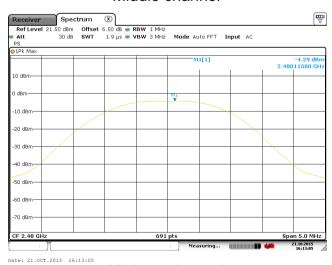




### Lowest channel



### Middle channel



Highest channel



### 6.4 Occupy Bandwidth

Test Requirement:	FCC Part 15 C Section 15.247 (a)(2)					
Test Method:	ANSI C63.10:2009 and KDB558074v03r03 section 8.1					
Limit:	>500kHz					
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane					
Test Instruments:	Refer to section 5.7 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Passed					

### Measurement Data

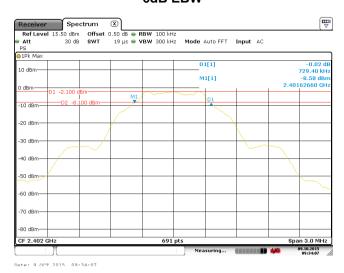
Test CH	6dB Emission Bandwidth (MHz)	Limit(kHz)	Result	
Lowest	0.73			
Middle	0.73	>500	Pass	
Highest	0.73			

Test CH	99% Occupy Bandwidth (MHz)	Limit(kHz)	Result
Lowest	1.03		
Middle	1.03	N/A	N/A
Highest	1.03		

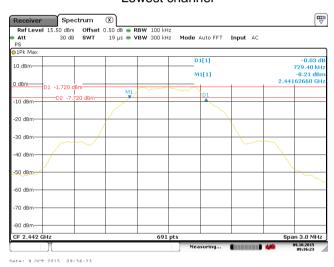
Test plot as follows:



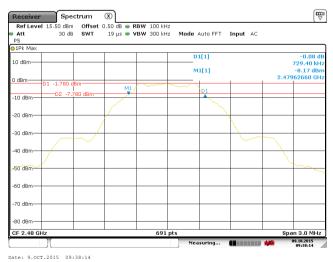
#### 6dB EBW



### Lowest channel



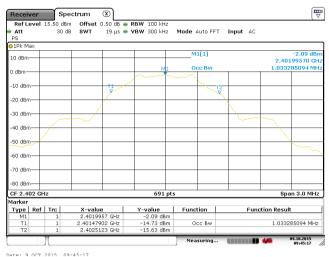
### Middle channel



Highest channel

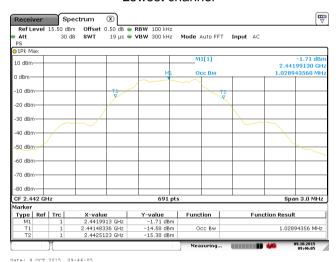


#### 99% OBW

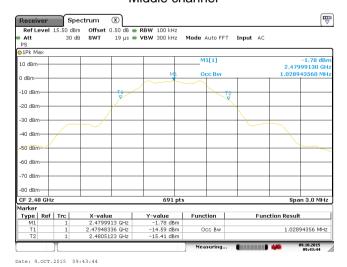


ate: 9.0CT.2015 09:45:17

#### Lowest channel



Middle channel



Highest channel



## 6.5 Power Spectral Density

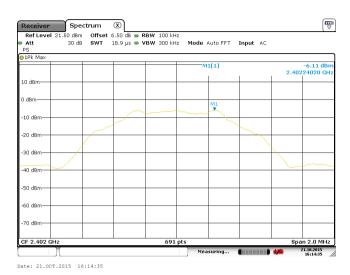
Test Requirement:	FCC Part 15 C Section 15.247 (e)					
Test Method:	ANSI C63.10:2009 and KDB558074v03r03 section 10.2					
Limit:	8 dBm					
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane					
Test Instruments:	Refer to section 5.7 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Passed					

### Measurement Data

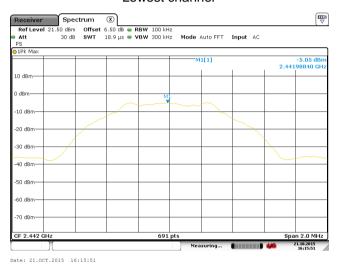
Test CH	Power Spectral Density (dBm)	Limit(dBm)	Result
Lowest	-6.11		
Middle	-5.05	8.00	Pass
Highest	-5.44		

Test plots as follow:

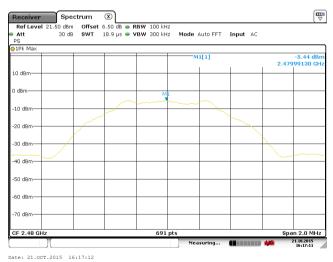




#### Lowest channel



### Middle channel



Highest channel





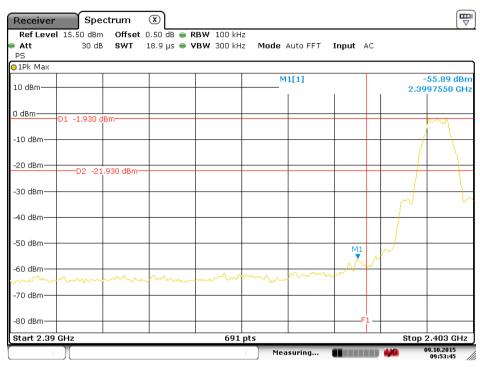
### 6.6 Band Edge

### 6.6.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)				
Test Method:	ANSI C63.10:2009 and KDB558074v03r03 section 13				
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.				
Test setup:					
	Spectrum Analyzer  E.U.T  Non-Conducted Table				
	Ground Reference Plane				
Test Instruments:	Refer to section 5.7 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Passed				

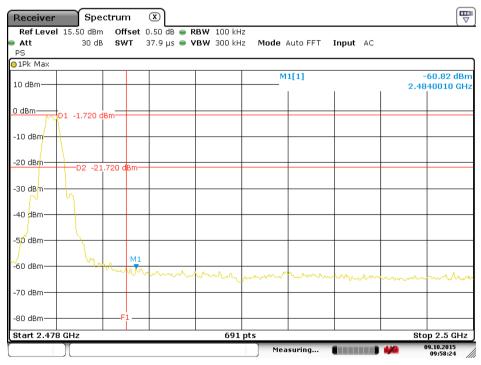
Test plots as follow:





Date: 9.OCT.2015 09:53:45

Lowest channel



Date: 9.OCT.2015 09:58:24

Highest channel



### 6.6.2 Radiated Emission Method

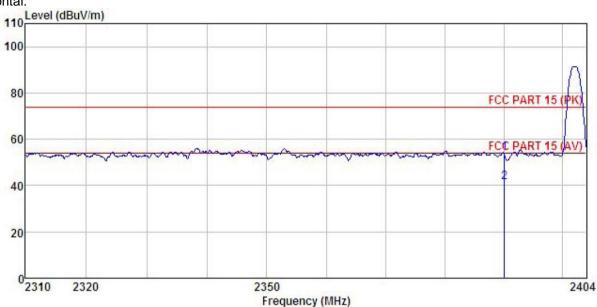
Test Requirement: FCC Part 15 C Section 15.209 and 15.205 Test Method: ANSI C63.10: 2009 and KDB 558074v03r03 section 12.1 Test Frequency Range: 2.3GHz to 2.5GHz Test site: Measurement Distance; 3m Receiver setup: Frequency Detector RBW VBW Remark Above 1GHz Peak 1MHz 3MHz Peak Value RMS 1MHz 3MHz Average Value Frequency Limit (dBuVm @3m) Remark Above 1GHz Frequency Limit (dBuVm @3m) Remark Test Procedure:  1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. 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 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 10 dB lower than the limit specified, then testing could be stopped and the peak value of the EUT may be one using peak, quas peak or average method as specified and then reported in a data sheet.  Test setup:  Test setup:  Test Instruments: Refer to section 5.7 for details  Feat mode: Refer to section 5.3 for details										
Test site: Measurement Distance: 3m  Receiver setup: Frequency Detector RBW VBW Remark Above 1GHz RMS 1MHz 3MHz Peak Value Above 1GHz RMS 1MHz 3MHz Average Value Frequency Limit (BUV/m @3m) Remark Above 1GHz 74.00 Peak Value  Frequency Limit (BUV/m @3m) Remark Above 1GHz 74.00 Peak Value  Test Procedure:  1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.  2. 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 rotal 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 10 dB lower than the limit specified, then testing could be stopped and the peak value of the EUT would be re-tested one by one using peak, quas peak or average method as specified and then reported in a data sheet.  Test setup:  Test Instruments: Refer to section 5.7 for details Refer to section 5.3 for details	Test Requirement:	FCC Part 15 C								
Test site: Measurement Distance: 3m  Receiver setup: Frequency Detector RBW VBW Remark Above 1GHz Peak 1MHz 3MHz Average Value  RMS 1MHz 3MHz Average Value  Frequency Limit (dBuV/m @3m) Remark Above 1GHz 74.00 Peak Value  Test Procedure: 1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.  2. 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 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 10 dB lower than the limit specified, then testing could be stopped and the peak value of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quas peak or average method as specified and then reported in a data sheet.  Test setup:  Test Instruments: Refer to section 5.7 for details  Refer to section 5.3 for details	Test Method:	ANSI C63.10:	2009 and KD	B 558074v	03r0	3 section 2	12.1			
Receiver setup:    Frequency	Test Frequency Range:	2.3GHz to 2.50	GHz							
Limit:   Peak   1MHz   3MHz   Peak Value   RMS   1MHz   3MHz   Average Value   Frequency   Limit (BBUV/m @3m)   Remark   Above 1GHz   74.00   Peak Value   Test Procedure:   1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.   2. 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 meters do a meters and the rota 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 10 dB lower than the limit specified, then testing could be stopped and the peak value of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quase peak or average method as specified and then reported in a data sheet.   Test setup:   Test setup:   Refer to section 5.7 for details   Refer to section 5.3 for details   Refer	Test site:	Measurement	Distance: 3m							
Limit:    Frequency   Limit (dBut//m @3m)   Remark     Above 1GHz   54.00   Average Value     Above 1GHz   54.00   Average Value     Test Procedure:   1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.	Receiver setup:	Frequency								
Limit:    Frequency		Above 1GHz		-						
Test Procedure:  1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.  2. 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 rota 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 10 dB lower than the limit specified, then testing could be stopped and the peak value of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quas peak or average method as specified and then reported in a data sheet.  Test setup:  Test setup:  Refer to section 5.7 for details  Refer to section 5.3 for details	I imit <sup>.</sup>	Frequ	*	•						
Test Procedure:  1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.  2. 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 rota 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 10 dB lower than the limit specified, then testing could be stopped and the peak value of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quas peak or average method as specified and then reported in a data sheet.  Test setup:  Test setup:  Refer to section 5.7 for details  Refer to section 5.3 for details			•	5	4.00	0	Average Value			
the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.  2. 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 rota 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 10 dB lower than the limit specified, then testing could be stopped and the peak value of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quas peak or average method as specified and then reported in a data sheet.  Test setup:  Test Instruments:  Refer to section 5.7 for details  Refer to section 5.3 for details										
Test Instruments:  Refer to section 5.7 for details  Test mode:  Refer to section 5.3 for details		the groun to determ  2. The EUT antenna, tower.  3. The anter the groun Both horiz make the  4. For each case and meters are to find the  5. The test-r Specified  6. If the emist the limit sof the EU have 10 depeak or are	d at a 3 meter ine the position was set 3 met which was mound in a height is very d to determine contal and very measurement suspected emaximum read the rota table maximum read the rota table maximu	camber. To he highers away from the defendant of the maximulation of the maximulation of the maximulation of the EUT in testing couported. Oth ld be re-testing the properties of the maximulation of the EUT in testing couported. Oth ld be re-testing the properties of the maximulation of the EUT in testing couported. Oth ld be re-testing the properties of the maximulation of the latest the maximulation of the latest the maximulation of the latest th	he tale he	able was rot radiation. the interfer op of a variation meter to for value of the automatic heights from 0 degreak Detect old Mode. It was arranged mode was estopped agise the emit one by one	rence-receiving able-height antenna our meters above the field strength. Intenna are set to a			
Test mode: Refer to section 5.3 for details	Test setup:	AE EUT  Ground Reference Plane								
	Test Instruments:	Refer to section	n 5.7 for detai	ls						
Test results: Passed	Test mode:	Refer to section	n 5.3 for detai	ls						
	Test results:	Passed								





Test channel: Lowest

Horizontal:



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

EUT Model : A35S

Test mode : BLE-L Mode Power Rating : AC 120V/60Hz

Environment: Temp: 25.5°C Huni: 55%

Test Engineer: Zora REMARK :

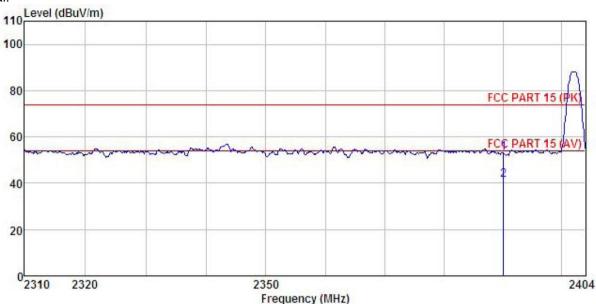
	Freq		Antenna Factor				Limit Line		Remark
	MHz	dBu∜	<u>dB</u> /m	dB	<u>dB</u>	dBuV/m	dBuV/m	<u>dB</u>	
1 2	2390.000 2390.000				0.00 0.00				





Test channel: Lowest

Vertical:



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

EUT : Mobile phone Model : A35S

Test mode : BLE-L Mode Power Rating : AC 120V/60Hz Environment : Temp:25.5°C Huni:55%

Test Engineer: Zora REMARK

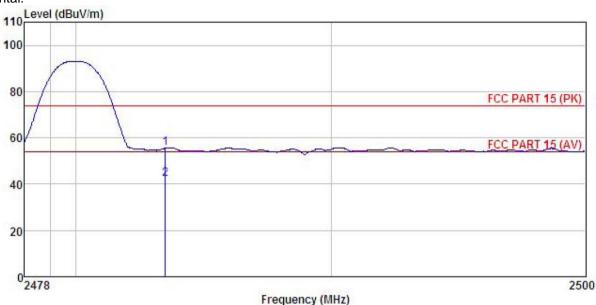
PIICTO		Read	Ant enna	Cable	Preamn		Limit	Over	
	Freq		Factor						
2	MHz	dBu∇	<u>dB</u> /m	<u>dB</u>	<u>dB</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1	2390.000	18.91	27.58	6.63	0.00	53.12	74.00	-20.88	Peak
2	2390,000	7.21	27.58	6.63	0.00	41.42	54.00	-12.58	Average





Test channel: Highest

Horizontal:



Site

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

Model : A35S Test mode : BLE-H Mode Power Rating : AC 120V/60Hz

Environment : Temp: 25.5°C Huni: 55% Test Engineer: Zora REMARK :

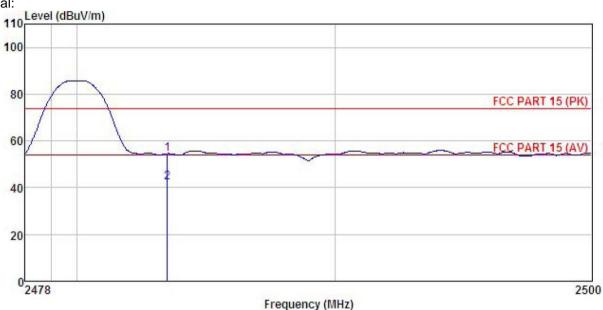
JICH			Antenna Factor						Remark
	MHz	dBuV	<u>dB</u> /m	<u>dB</u>	<u>dB</u>	dBuV/m	dBuV/m	<u>d</u> B	
	2483.500 2483.500								





Test channel: Highest

Vertical:



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

EUT Model : A35S

: BLE-H Mode Test mode Power Rating: AC 120V/60Hz Environment: Temp:25.5°C Huni:55% Test Engineer: Zora REMARK:

	Freq		Antenna Factor						
,	MHz	dBu₹	$\overline{dB/m}$	<u>d</u> B	<u>d</u> B	dBuV/m	$\overline{dBuV/m}$	<u>dB</u>	
	2483.500 2483.500					54.59 42.19			



### 6.7 Spurious Emission

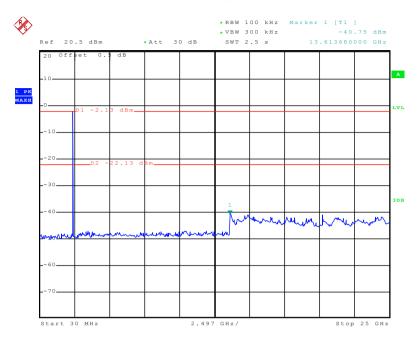
### 6.7.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)						
Test Method:	ANSI C63.10:2009 and KDB558074 section 11						
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.						
Test setup:							
	Spectrum Analyzer						
	E.U.T						
	Non-Conducted Table						
	Ground Reference Plane						
Test Instruments:	Refer to section 5.7 for details						
Test mode:	Refer to section 5.3 for details						
Test results:	Passed						

Test plot as follows:



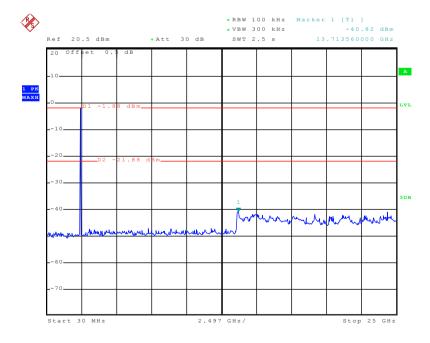
#### Lowest channel



Date: 10.0CT.2015 17:52:15

#### 30MHz~25GHz

### Middle channel

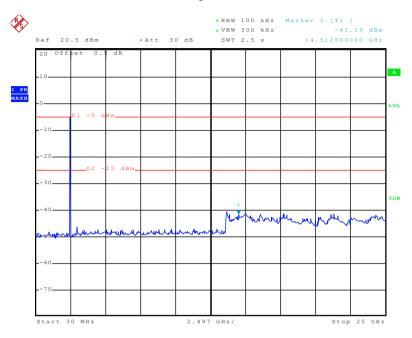


Date: 10.0CT.2015 17:53:01

30MHz~25GHz



### Highest channel



Date: 10.0CT.2015 17:54:02

30MHz~25GHz



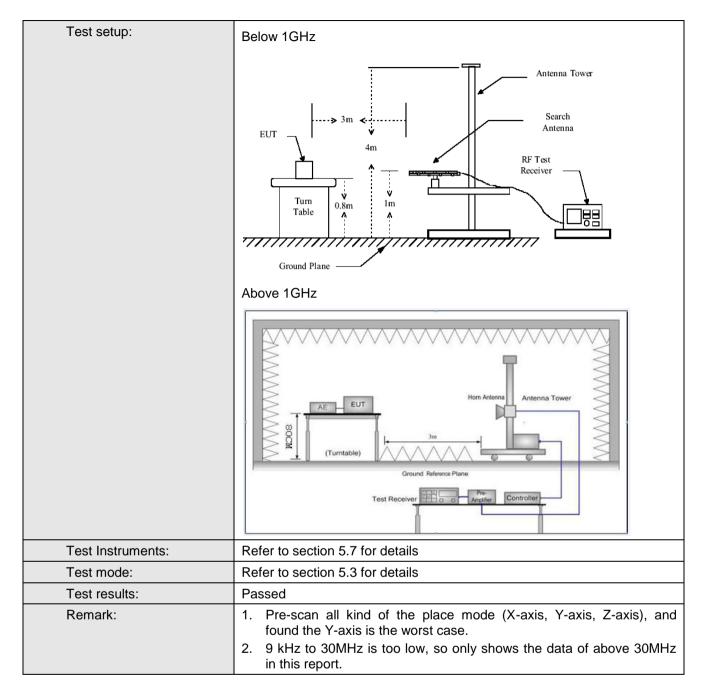


### 6.7.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C Section 15.209 and 15.205							
Test Method:	ANSI C63.10:2009							
Test Frequency Range:	9KHz to 25GHz							
Test site:	Measurement D	istance: 3m						
Receiver setup:	Frequency Detector RBW VBW Remark							
	30MHz-1GHz Quasi-peak 120KHz 300KHz Quasi-peak Value							
	Above 1GHz	Peak	1MHz	3MHz	Peak Value			
	Above 10112	RMS	1MHz	3MHz	Average Value			
Limit:	Frequency		Limit (dBuV/m	@3m)	Remark			
	30MHz-88MHz		40.0		Quasi-peak Value			
	88MHz-216MHz		43.5		Quasi-peak Value			
	216MHz-960MH	z	46.0		Quasi-peak Value			
	960MHz-1GHz		54.0		Quasi-peak Value			
	Above 1GHz		54.0		Average Value			
			74.0		Peak Value			
Test Procedure:	the ground to determin 2. The EUT antenna, we tower.  3. The antenre the ground Both horizon make the make the make the meters and to find the meters and the meters and to find the meters and the	at a 3 meter the the position was set 3 meter was set 3 meter was more to determine the anter the anter the anter the rota table maximum read the rota table the rota table maximum read the rota table the rota table maximum read the rota table the	camber. The nof the highest teters away funted on the training of the maximulatical polarization. The example of the maximulatical polarization was turned ding. The example of the EUT in period of the ported. Otherwood be re-tested to the ported of the ported of the post of the ported of the por	table was a st radiation. Tom the in op of a variance meter to um value or ions of the EUT was and to height from 0 degrate Deak Dold Mode. The stopped wise the end one by one	le 0.8 meters above rotated 360 degrees terference-receiving able-height antenna of four meters above of the field strength, antenna are set to tranged to its worst is from 1 meter to 4 rees to 360 degrees etect Function and as 10 dB lower than and the peak values missions that did not e using peak, quasing reported in a data			





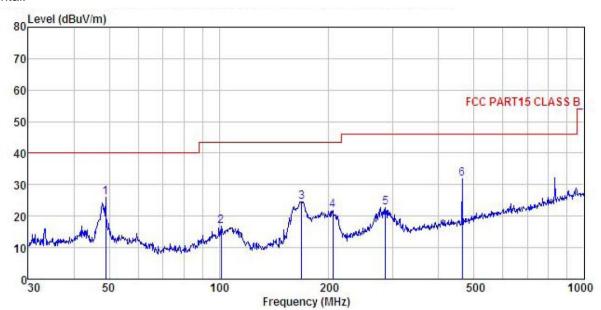






### **Below 1GHz**

Horizontal:



Site

: 3m chamber : FCC PART15 CLASS B 3m VULB9163(30M1G) HORIZONTAL : Mobile phone Condition

EUT

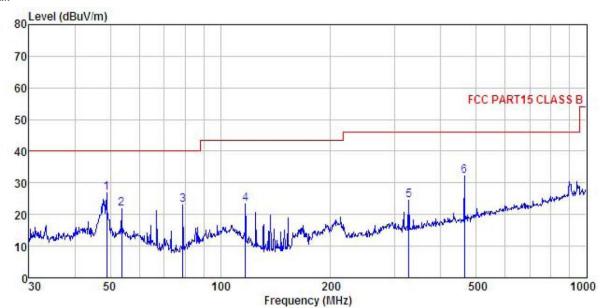
Model : A35S
Test mode : BLE Mode
Power Rating : AC 120V/60Hz
Environment : Temp:25.5°C Huni:55%
Test Engineer: Zora

CHICATUR.									
	Freq		Antenna Factor				Limit Line	Over Limit	Remark
	MHz	dBu∜	$\overline{dB/m}$		<u>ab</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1	48.843	41.90	13.32	0.60	29.83	25.99	40.00	-14.01	QP
2	101.289	32.36	13.02	0.97	29.52	16.83	43.50	-26.67	QP
3	168.414	43.43	8.92	1.34	29.06	24.63	43.50	-18.87	QP
4	204.955	38.60	10.74	1.41	28.80	21.95	43.50	-21.55	QP
5 6	285.978	36.63	12.78	1.73	28.47	22.67	46.00	-23.33	QP
6	463.970	42.70	15.71	2.30	28.89	31.82	46.00	-14.18	QP





### Vertical:



Site

: 3m chamber : FCC PART15 CLASS B 3m VULB9163(30M1G) VERTICAL : Mobile phone Condition

EUT

Model : A35S
Test mode : BLE Mode
Power Rating : AC 120V/60Hz

Environment : Temp: 25.5°C Huni: 55%

Test Engineer: Zora

REMARK

	Freq		Antenna Factor						Remark
	MHz	dBu∜			<u>dB</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1	48.843	42.92	13.32	0.60	29.83	27.01	40.00	-12.99	QP
2	53.693	38.06	13.09	0.64	29.81	21.98	40.00	-18.02	QP
3	78.965	43.48	8.43	0.84	29.65	23.10	40.00	-16.90	QP
2 3 4 5 6	116.950	40.69	11.00	1.10	29.41	23.38	43.50	-20.12	QP
5	326.740	37.60	13.59	1.86	28.51	24.54	46.00	-21.46	QP
6	463.970	43.09	15.71	2.30	28.89	32.21	46.00	-13.79	QP



### **Above 1GHz**

Т	Test channel:			Lowest		vel:	Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4804.00	44.52	31.53	10.57	40.24	46.38	74.00	-27.62	Vertical
4804.00	44.63	31.53	10.57	40.24	46.49	74.00	-27.51	Horizontal

Т	Test channel:			Lowest		vel:	Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4804.00	35.85	31.53	10.57	40.24	37.71	54.00	-16.29	Vertical
4804.00	35.91	31.53	10.57	40.24	37.77	54.00	-16.23	Horizontal

Т	Test channel:			Middle		vel:	Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4884.00	44.12	31.58	10.66	40.15	46.21	74.00	-27.79	Vertical
4884.00	44.58	31.58	10.66	40.15	46.67	74.00	-27.33	Horizontal

Т	Test channel:			Middle		vel:	Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4884.00	35.62	31.58	10.66	40.15	37.71	54.00	-16.29	Vertical
4884.00	35.48	31.58	10.66	40.15	37.57	54.00	-16.43	Horizontal

Т	Test channel:			Highest		vel:	Peak	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4960.00	44.17	31.69	10.73	40.03	46.56	74.00	-27.44	Vertical
4960.00	44.56	31.69	10.73	40.03	46.95	74.00	-27.05	Horizontal

Test channel:			Highest		Level:		Average	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4960.00	35.72	31.69	10.73	40.03	38.11	54.00	-15.89	Vertical
4960.00	35.19	31.69	10.73	40.03	37.58	54.00	-16.42	Horizontal

#### Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.

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