

Test Report For

Archos SA.

Tablet PC

Trademark: Archos

Model No.: AC79BNE

FCC ID: SOVAC79BNE

Prepared for : Archos SA.
Address : 12 Rue Ampere, Igny 91430, France

Prepared by : SHENZHEN EMTEK CO., LTD.
Address : Bldg 69, Majialong Industry Zone,
Nanshan District, Shenzhen, Guangdong, China

Tel: (0755) 26954280
Fax: (0755) 26954282

Report Number : ES140331270E4
Date of Test : March 31, 2014 to April 11, 2014
Date of Report : April 11, 2014

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TEST REPORT DESCRIPTION

Applicant : Archos SA.
Manufacturer : Archos SA.
Trade Mark : Archos
EUT : Tablet PC
Model No. : AC79BNE
Power Supply : 3.7V internal rechargeable lithium battery or DC 5V from USB adapter or DC 5V from PC

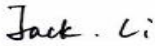
Measurement Procedure Used:

FCC Rules and Regulations Part 15: 2013 Subpart B Class B FCC / ANSI C63.4-2009

The device described above is tested by SHENZHEN EMTEK CO., LTD. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and SHENZHEN EMTEK CO., LTD. is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of SHENZHEN EMTEK CO., LTD.

Date of Test : March 31, 2014 to April 11, 2014

Prepared by : 
Jack Li/Editor

Reviewer : 
June Xie /Supervisor

Approved & Authorized Signer : 
Lisa Wang/Manager

Modified History

Rev.	Summary	Date of Rev.	Report No.
V1.0	Original Report	2014-04-11	ES140331270E4

1. SUMMARY OF TEST RESULT

EMISSION		
Description of Test Item	Standard & Limits	Results
Conducted Disturbance at Mains Terminals	FCC Part 15, Subpart B, Class B ANSI C63.4: 2009	Pass
Radiated Disturbance	FCC Part 15, Subpart B, Class B ANSI C63.4: 2009	Pass
Note: N/A is an abbreviation for Not Applicable.		

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT	:	Tablet PC
Model Number	:	AC79BNE
Test Voltage	:	AC 120V, 60Hz
Adapter: Model	:	HNEB050200WX Input: AC 100-240V, 50/60Hz, 0. 35A Output: DC 5.0V, 2A
Operation Frequency	:	2412-2462MHz for 802.11b/g/n HT20; 2422-2452MHz for 802.11n HT40; 2402-2480MHz for Bluetooth; 1575.42MHz for GPS Receiver;
Modulation	:	OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n HT20/HT40, DSSS with DBPSK/DQPSK/CCK for 802.11b; GFSK ,1/4Π-DQPSK, 8DPSK for Bluetooth4.0 DSS GFSK for Bluetooth 4.0 DTS
Number of Channel	:	802.11b/g/n(HT20) : 11 Channels; 802.11n(HT40) : 7 Channels; Bluetooth DSS: 79 Channels; Bluetooth DTS: 40 Channels;
RF Output Power	:	9.77dBm(802.11b), 9.54dBm(802.11g), 9.28dBm(802.11n(HT20)); 8.23dBm(802.11n(HT40)); Bluetooth4.0 DSS: 4.67dBm MAX; Bluetooth4.0 DTS: 3.85dBm MAX;
Antenna Type	:	Chip antenna
Antenna GAIN	:	2dBi
Applicant	:	Archos SA.
Address	:	12 Rue Ampere, Igny 91430, France
Manufacturer	:	Archos SA.
Address	:	12 Rue Ampere, Igny 91430, France
Date of Received	:	March 31, 2014
Date of Test	:	March 31, 2014 to April 11, 2014

This EUT is a composite System, were conducted to determine the final configuration from all possible combinations. This Report Records GPS Receiver function test data.

2.2. Description of Test Facility

Site Description

EMC Lab.

: Accredited by CNAS, 2013.10.29

The certificate is valid until 2016.10.28

The Laboratory has been assessed and proved to be in compliance with
CNAS-CL01:2006 (identical to ISO/IEC 17025:2005)

The Certificate Registration Number is L2291.

Accredited by TUV Rheinland Shenzhen 2010.5.25

The Laboratory has been assessed according to the requirements
ISO/IEC 17025.

Accredited by FCC, April 17, 2010

The Certificate Registration Number is 709623.

Accredited by Industry Canada, November 15, 2010

The Certificate Registration Number is 46405-4480.

Name of Firm

: SHENZHEN EMTEK CO., LTD.

Site Location

: Bldg 69, Majialong Industry Zone,
Nanshan District, Shenzhen, Guangdong, China

2.3. Description of Support Device

2.4. Measurement Uncertainty

Test Item	Uncertainty
Conducted Emission Uncertainty	: 2.96dB(9k~150kHz Conduction 1#) 2.74dB(150k-30MHz Conduction 1#)
Radiated Emission Uncertainty	: 3.78dB (30M~1GHz Polarize: H) 4.27dB (30M~1GHz Polarize: V)

3. MEASURING DEVICE AND TEST EQUIPMENT

3.1. For Power Line Conducted Emission Measurement

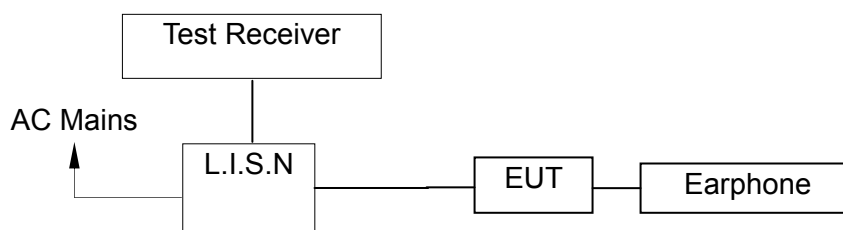
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒	Test Receiver	Rohde & Schwarz	ESCS30	828985/018	May 29, 2013	1 Year
☒	L.I.S.N.	Schwarzbeck	NNLK8129	8129-203	May 29, 2013	1 Year
☒	L.I.S.N.	ROHDE & SCHWARZ	ESH3-Z6	100011	May 29, 2013	1 Year
☐	L.I.S.N.	ROHDE & SCHWARZ	ESH3-Z6	100253	May 29, 2013	1 Year
☐	L.I.S.N.	ROHDE & SCHWARZ	ESH3-Z5	100191	May 29, 2013	1 Year
☒	50Ω Coaxial Switch	Anritsu	MP59B	M20531	N/A	N/A
☒	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	May 29, 2013	1 Year
☐	Current probe	Rohde & Schwarz	EZ-17	0816.2063.02	May 29, 2013	1 Year

3.2. For Radiated Emission Measurement

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒	EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	May 29, 2013	1 Year
☒	Pre-Amplifier	HP	8447D	2944A07999	May 29, 2013	1 Year
☒	Bilog Antenna	Schwarzbeck	VULB9163	142	May 11, 2013	1 Year
☐	Loop Antenna	Schwarzbeck	FMZB 1519	012	May 11, 2013	1 Year
☐	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170399	May 11, 2013	1 Year
☐	Horn Antenna	Schwarzbeck	BBHA 9120	D143	May 11, 2013	1 Year
☒	Cable	Schwarzbeck	AK9513	ACRX1	May 29, 2013	1 Year
☒	Cable	Rosenberger	N/A	FP2RX2	May 29, 2013	1 Year
☒	Cable	Schwarzbeck	AK9513	CRPX1	May 29, 2013	1 Year
☒	Cable	Schwarzbeck	AK9513	CRRX2	May 29, 2013	1 Year
☐	Pre-Amplifier	A.H.	PAM-0126	1415261	May 29, 2013	1 Year

4. POWER LINE CONDUCTED EMISSION MEASUREMENT

4.1. Block Diagram of Test Setup



(EUT: Tablet PC)

4.2. Measuring Standard

FCC Part 15, Subpart B, Class B ANSI C63.4: 2009

4.3. Power Line Conducted Emission Limits (Class B)

Frequency (MHz)	Limit (dB μ V)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *
0.50 ~ 5.00	56.0	46.0
5.00 ~ 30.00	60.0	50.0

NOTE1-The lower limit shall apply at the transition frequencies.
 NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

4.4. EUT Configuration on Measurement

The following equipments are installed on Conducted Emission Measurement to meet FCC requirements and operating in a manner which tends to maximize its emission characteristics in a normal application.

EUT : Tablet PC
 Model Number : AC79BNE

4.5. Operating Condition of EUT

4.5.1. Setup the EUT as shown on Section 4.1.

4.5.2. Turn on the power of all equipments.

4.5.3. Let the EUT work in measuring mode (GPS Receiver) and measure it.

4.6. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and connected to the AC mains through Line Impedance Stability Network (L.I.S.N). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are investigated to find out the maximum conducted emission according to the FCC regulations during conducted emission measurement.

The bandwidth of the field strength meter (R&S Test Receiver ESCS30) is set at 9kHz in 150kHz~30MHz and 200Hz in 9kHz~150kHz.

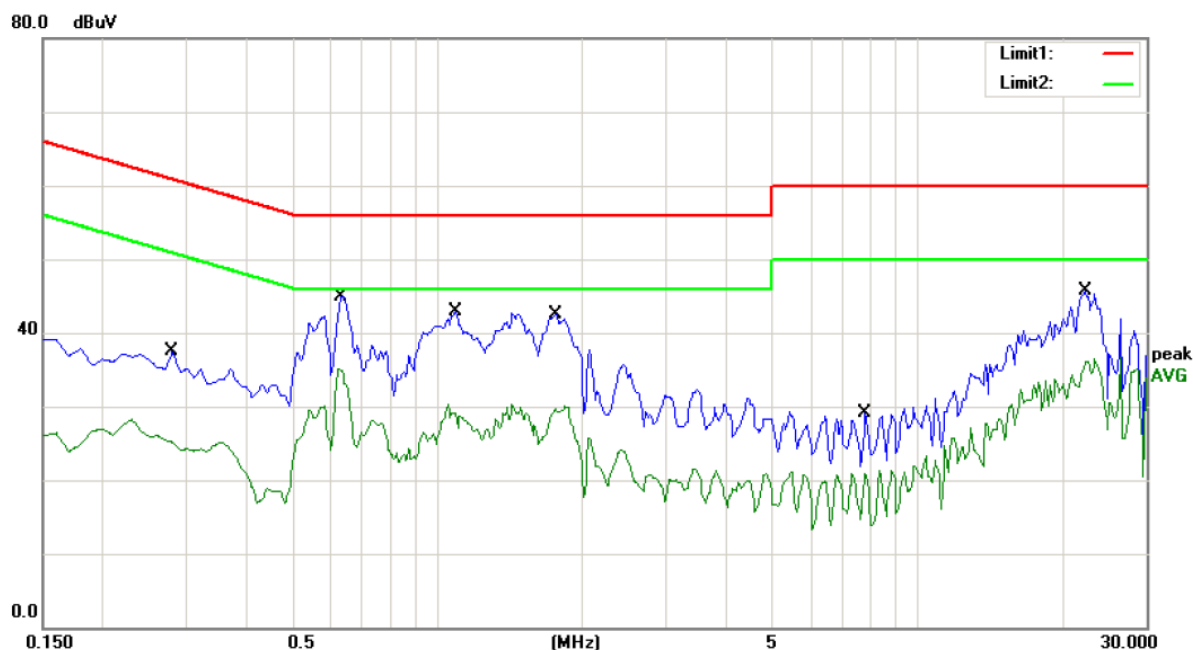
The frequency range from 150kHz to 30MHz is investigated.

All the scanning curves are attached the following pages.

4.7. Measuring Results

PASS.

Please refer to the following pages.



Site Conduction #1

Phase: **L1**

Temperature: 26

Limit: (CE)FCC PART 15 class B_QP

Power: AC 120V/60Hz

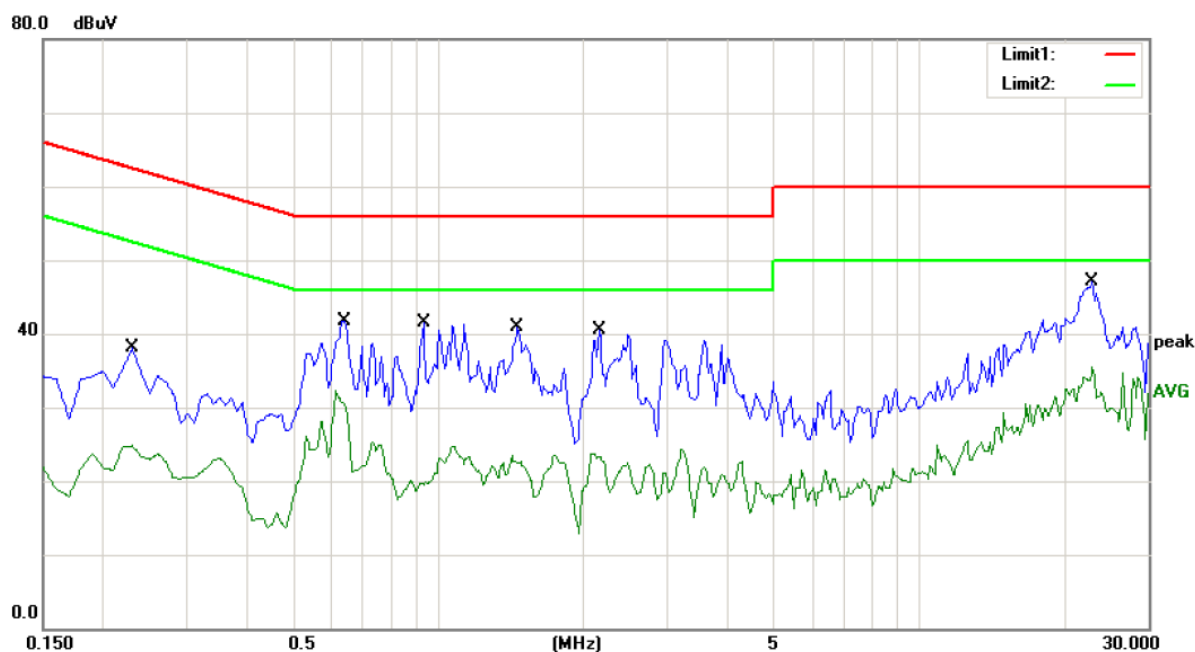
Humidity: 60 %

Mode: GPS Receiver

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.2800	37.44	0.00	37.44	60.82	-23.38	QP	
2		0.2800	25.25	0.00	25.25	50.82	-25.57	AVG	
3		0.6300	44.99	0.00	44.99	56.00	-11.01	QP	
4	*	0.6300	35.11	0.00	35.11	46.00	-10.89	AVG	
5		1.0900	42.81	0.00	42.81	56.00	-13.19	QP	
6		1.0900	29.14	0.00	29.14	46.00	-16.86	AVG	
7		1.7600	42.55	0.00	42.55	56.00	-13.45	QP	
8		1.7600	29.78	0.00	29.78	46.00	-16.22	AVG	
9		7.8000	29.06	0.00	29.06	60.00	-30.94	QP	
10		7.8000	20.89	0.00	20.89	50.00	-29.11	AVG	
11		22.4000	45.61	0.00	45.61	60.00	-14.39	QP	
12		22.4000	36.14	0.00	36.14	50.00	-13.86	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: YU



Site Conduction #1

Phase: **N**

Temperature: 26

Limit: (CE)FCC PART 15 class B_QP

Power: AC 120V/60Hz

Humidity: 60 %

Mode: GPS Receiver

Note:

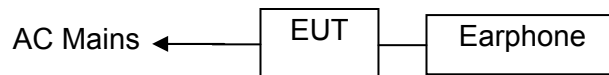
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2300	38.02	0.00	38.02	62.45	-24.43	QP	
2		0.2300	24.81	0.00	24.81	52.45	-27.64	AVG	
3		0.6400	41.63	0.00	41.63	56.00	-14.37	QP	
4		0.6400	30.16	0.00	30.16	46.00	-15.84	AVG	
5		0.9300	41.49	0.00	41.49	56.00	-14.51	QP	
6		0.9300	19.99	0.00	19.99	46.00	-26.01	AVG	
7		1.4600	40.88	0.00	40.88	56.00	-15.12	QP	
8		1.4600	22.70	0.00	22.70	46.00	-23.30	AVG	
9		2.1600	40.45	0.00	40.45	56.00	-15.55	QP	
10		2.1600	23.31	0.00	23.31	46.00	-22.69	AVG	
11	*	22.9500	47.05	0.00	47.05	60.00	-12.95	QP	
12		22.9500	35.52	0.00	35.52	50.00	-14.48	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: YU

5. RADIATED EMISSION MEASUREMENT

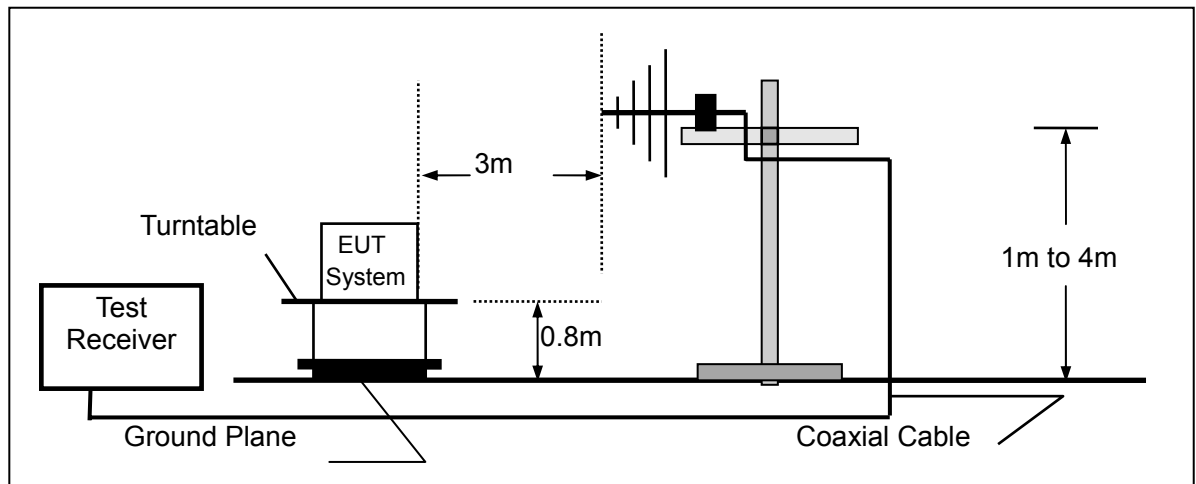
5.1. Block Diagram of Test Setup

5.1.1. Block diagram of EUT System



(EUT: Tablet PC)

5.1.2. Block diagram of test setup (In chamber)



(EUT: Tablet PC)

5.2. Measuring Standard

FCC Part 15, Subpart B, Class B ANSI C63.4: 2009

5.3. Radiated Emission Limits (Class B)

Frequency MHz	Distance Meters	Field Strengths Limit	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0

Remark: (1) Emission level $(\text{dB})\mu\text{V} = 20 \log \text{Emission level } \mu\text{V}/\text{m}$
 (2) The smaller limit shall apply at the cross point between two frequency bands.
 (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

5.4. EUT Configuration on Measurement

The FCC Class B regulations test method must be used to find the maximum emission during radiated emission measurement.

EUT : Tablet PC
Model Number : AC79BNE

5.5. Operating Condition of EUT

5.5.1. Setup the EUT as shown on Section 5.1.

5.5.2. Turn on the power of all equipments.

5.5.3. Let the EUT work in measuring mode (GPS Receiver) and measure it.

5.6. Test Procedure

The EUT is placed on a turn table which is 0.8 meter high above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Bilog antenna (calibrated by Dipole Antenna) is used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

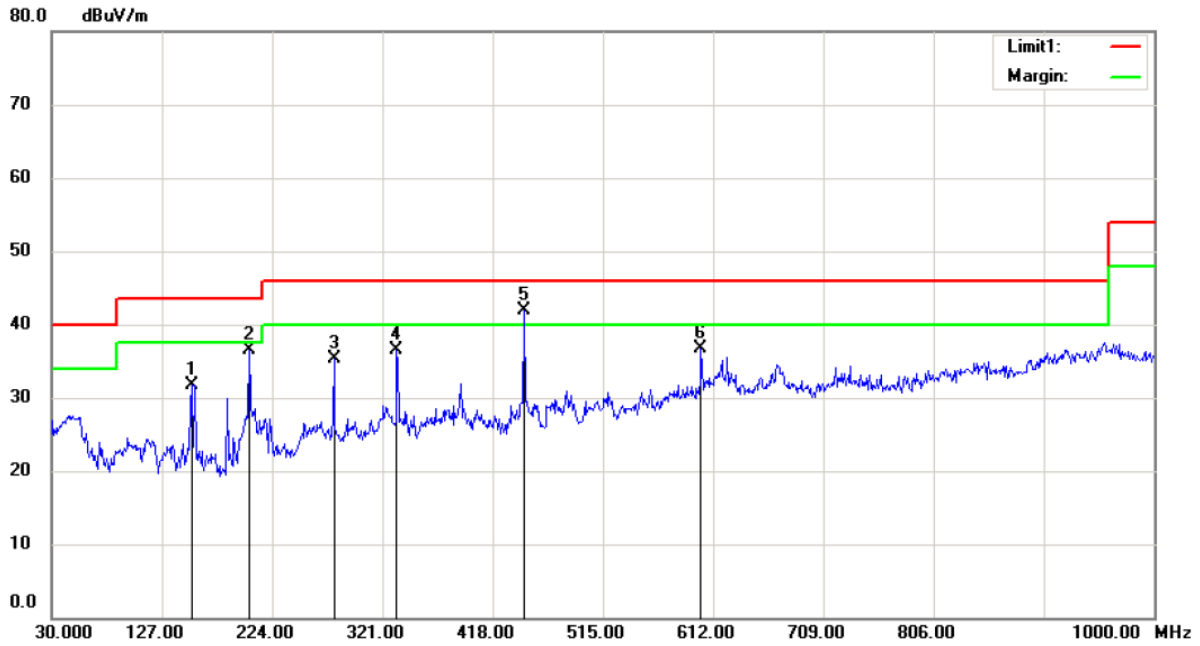
The bandwidth of the Receiver (ESU26) is set at 120kHz.
All the scanning curves are attached in the following pages.

5.7. Measuring Results

PASS.

The frequency range from 30MHz to 1000MHz is investigated.

Please refer to the following pages.

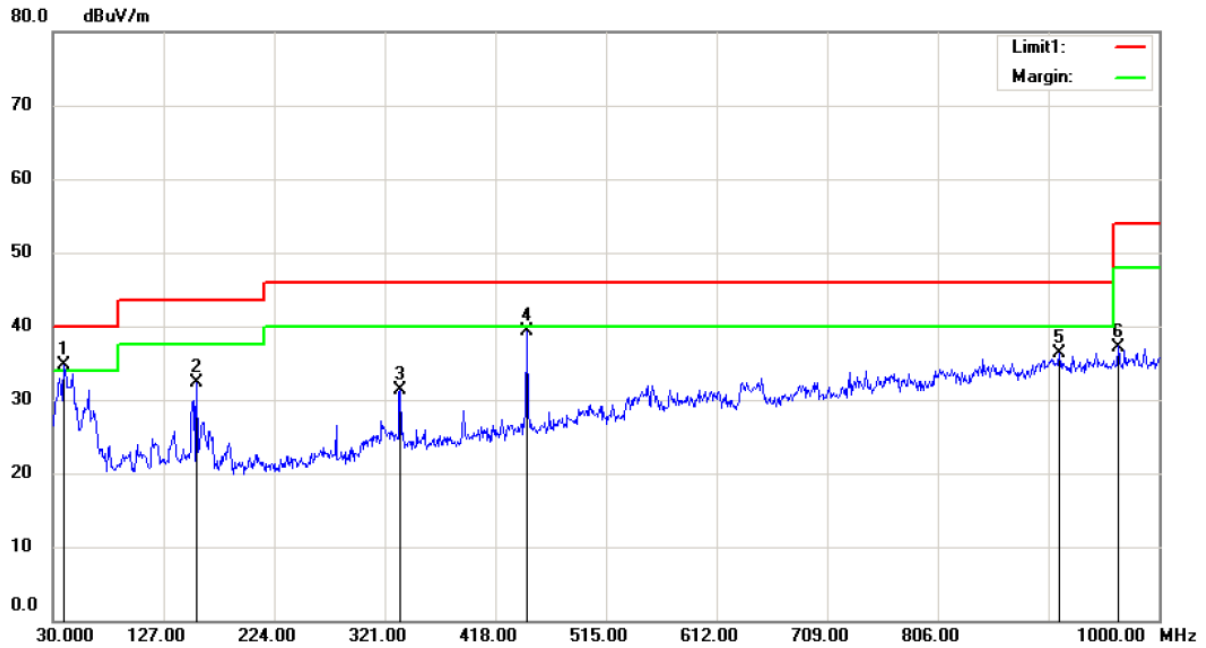


Site site #1 Polarization: **Horizontal** Temperature: 24
Limit: FCC Part15 Class B 3M Radiation Power: AC 120V/60Hz Humidity: 53 %
Mode:GPS Receiver
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		153.1900	42.67	-10.97	31.70	43.50	-11.80	QP		
2		203.6300	43.98	-7.46	36.52	43.50	-6.98	QP		
3		278.3200	40.76	-5.52	35.24	46.00	-10.76	QP		
4		333.6100	40.83	-4.36	36.47	46.00	-9.53	QP		
5	*	446.1300	44.02	-2.05	41.97	46.00	-4.03	QP		
6		601.3300	35.35	1.37	36.72	46.00	-9.28	QP		

*:Maximum data x:Over limit !:over margin

Operator: Wang



Site site #1

Polarization: **Vertical**

Temperature: 24

Limit: FCC Part15 Class B 3M Radiation
Mode:GPS Receiver

Power: AC 120V/60Hz

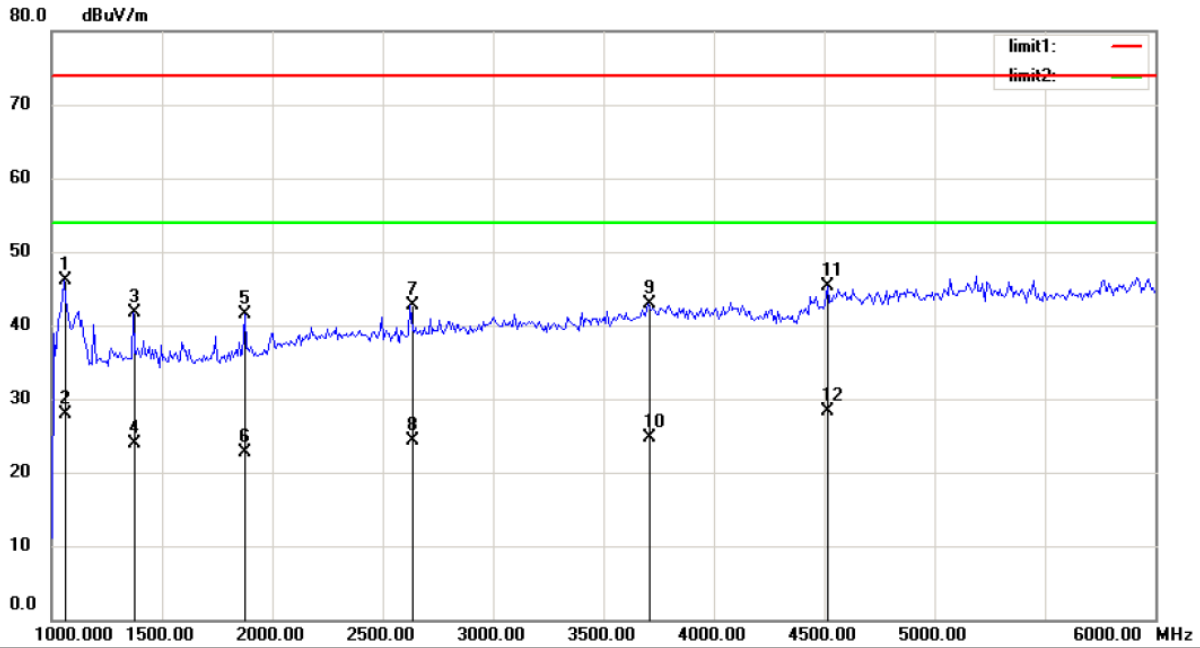
Humidity: 53 %

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	39.7000	42.05	-7.30	34.75	40.00	-5.25	QP		
2		156.1000	43.12	-10.86	32.26	43.50	-11.24	QP		
3		334.5800	35.55	-4.34	31.21	46.00	-14.79	QP		
4		445.1600	41.29	-2.07	39.22	46.00	-6.78	QP		
5		912.7000	29.87	6.41	36.28	46.00	-9.72	QP		
6		964.1100	29.82	7.38	37.20	54.00	-16.80	QP		

*:Maximum data x:Over limit !:over margin

Operator: Wang



Site site #1

Polarization: **Horizontal**

Temperature: 24

Limit: (RE)FCC PART 15 CLASS B

Power: AC 120V/60Hz

Humidity: 53 %

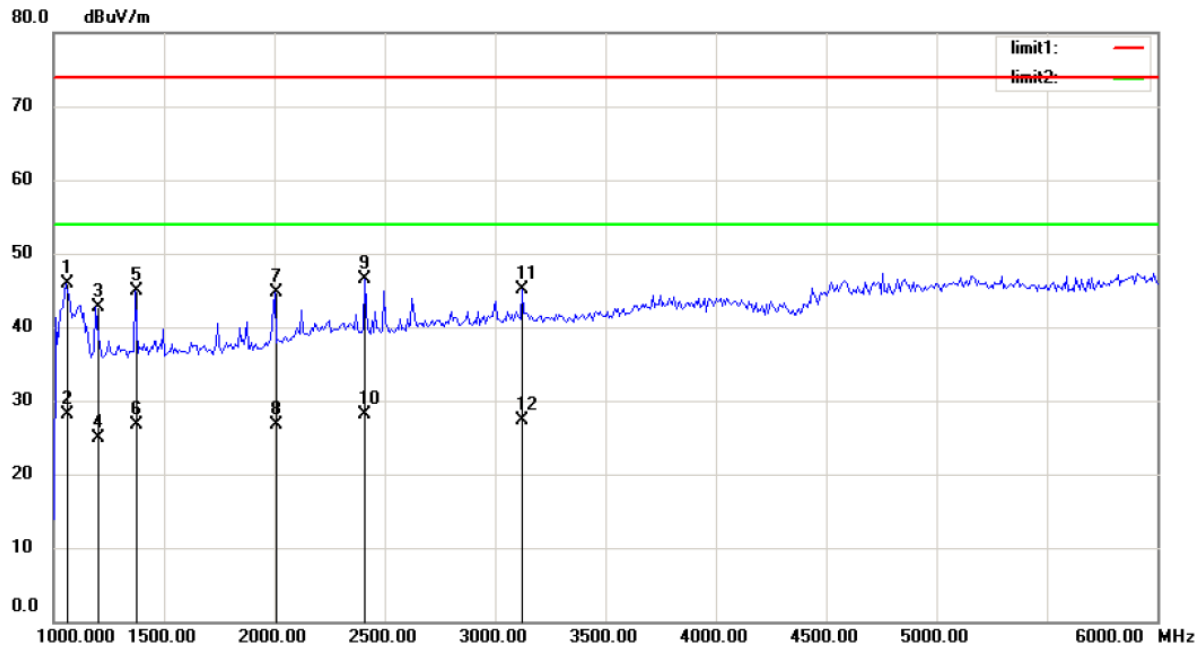
Mode:GPS Receiver

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		1056.090	59.44	-13.24	46.20	74.00	-27.80	peak		
2		1056.090	41.20	-13.24	27.96	54.00	-26.04	AVG		
3		1368.590	53.48	-11.82	41.66	74.00	-32.34	peak		
4		1368.590	35.80	-11.82	23.98	54.00	-30.02	AVG		
5		1873.397	52.60	-11.19	41.41	74.00	-32.59	peak		
6		1873.397	33.90	-11.19	22.71	54.00	-31.29	AVG		
7		2626.603	50.85	-8.19	42.66	74.00	-31.34	peak		
8		2626.603	32.40	-8.19	24.21	54.00	-29.79	AVG		
9		3700.321	49.28	-6.46	42.82	74.00	-31.18	peak		
10		3700.321	31.20	-6.46	24.74	54.00	-29.26	AVG		
11		4517.628	50.27	-4.91	45.36	74.00	-28.64	peak		
12	*	4517.628	33.30	-4.91	28.39	54.00	-25.61	AVG		

*:Maximum data x:Over limit !:over margin

Operator: KK



Site site #1

Polarization: **Vertical**

Temperature: 24

Limit: (RE)FCC PART 15 CLASS B

Power: AC 120V/60Hz

Humidity: 53 %

Mode:GPS Receiver

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		1056.090	59.23	-13.25	45.98	74.00	-28.02	peak		
2		1056.090	41.30	-13.25	28.05	54.00	-25.95	AVG		
3		1192.308	55.06	-12.42	42.64	74.00	-31.36	peak		
4		1192.308	37.30	-12.42	24.88	54.00	-29.12	AVG		
5		1368.590	56.79	-11.83	44.96	74.00	-29.04	peak		
6		1368.590	38.50	-11.83	26.67	54.00	-27.33	AVG		
7		2001.603	55.22	-10.53	44.69	74.00	-29.31	peak		
8		2001.603	37.20	-10.53	26.67	54.00	-27.33	AVG		
9		2410.256	55.26	-8.70	46.56	74.00	-27.44	peak		
10	*	2410.256	36.80	-8.70	28.10	54.00	-25.90	AVG		
11		3123.397	52.17	-7.11	45.06	74.00	-28.94	peak		
12		3123.397	34.50	-7.11	27.39	54.00	-26.61	AVG		

*:Maximum data x:Over limit !:over margin

Operator: KK