# **FCC Test Report**

Report No.: AGC06P120802F1

FCC ID : UOSAM507

**PRODUCT** 

**DESIGNATION** : mobile phone

**BRAND NAME** : AMGOO

**MODEL NAME** : AM507

**CLIENT**: Amgoo Telecom Co., Ltd.

**DATE OF ISSUE** : Aug.20, 2012

**STANDARD(S)** : FCC Part 15 Rules

**REPORT VERSION**: V1.0

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

CAUTION: This report shall not be reproduced except in full without the written permission of the test laboratory and shall not be quoted out of context.

Page 1 of 22

## **TABLE OF CONTENTS**

1. VERIFICATION OF COMPLIANCE	2
2. PRODUCT INFORMATION	3
3. TEST FACILITY	4
4. SUPPORT EQUIPMENT LIST	5
5. SYSTEM DESCRIPTION	5
6. TEST MODE	5
7. SUMMARY OF TEST RESULTS	6
8. MEASUREMENT UNCERTAINTY	6
9. FCC LINE CONDUCTED EMISSION TEST	7
9.1 TEST EQUIPMENT OF LINE CONDUCTED EMISSION TEST	<del>7</del>
9.2 LIMITS OF LINE CONDUCTED EMISSION TEST	<del>7</del>
9.3 BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST	<del>7</del>
9.4 PROCEDURE OF LINE CONDUCTED EMISSION TEST	8
9.5 TEST RESULT OF LINE CONDUCTED EMISSION TEST	
10. FCC RADIATED EMISSION TEST	11
10.1 TEST EQUIPMENT OF RADIATED EMISSION	11
10.2 LIMITS OF RADIATED EMISSION TEST	11
10.3 BLOCK DIAGRAM OF RADIATED EMISSION TEST	11
10.4 PROCEDURE OF RADIATED EMISSION TEST	12
10.5 TEST RESULT OF RADIATED EMISSION TEST	13
APPENDIX 1	15
PHOTOGRAPHS OF TEST SETUP	15
APPENDIX 2	16
DUOTOGD A DUS OF FUT	16

Page 2 of 22

## 1. VERIFICATION OF COMPLIANCE

	Amgoo Telecom Co., Ltd.
Applicant:	6/F,Block 3,Tongjian Building,Middle Shennan Rd, Futian District,
	Shenzhen, China
	Topology Communication Technology (Shenzhen) CO., LTD.
Manufacturer:	KaiXinDa Technology Park, No.49 ZhouShi Road, Shiyan County,
	Bao'an District, Shenzhen, China
Product Designation:	mobile phone
Brand name:	AMGOO
Test Model:	AM507
FCC ID:	UOSAM507
Measurement Procedure:	ANSI C63.4: 2003
File Number:	AGC06P120802F1
Date of test:	Aug.09, 2012 to Aug.15, 2012
Deviation:	None
Condition of Test Sample:	Normal

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, the measurement procedure according to ANSI C63.4:2003. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.

Tested By:

Bart Xie Aug.20, 2012

Forrest Lei Aug.20, 2012

Approved By:

Solger Zhang Aug.20, 2012

Page 3 of 22

## 2. PRODUCT INFORMATION

Housing Type: Plastic

**EUT Rating Voltage:** DC 3.7V by battery

Adapter Input AC100~240V,50/60Hz,

Adapter Output DC5.0V,500mA

I/O Port Information (⊠Applicable ☐Not Applicable)

I/O Port of EUT									
I/O Port Type Q'TY Cable Tested with									
USB port 1 1.0 m, unshielded 1									

Page 4 of 22

## 3. TEST FACILITY

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

2/F., Building 2, No.1-No.4, Chaxi Sanwei Technical Industrial Park, Gushu, Location:

Xixiang, Bao'an District, Shenzhen, Guangdong, China

The test site is constructed and calibrated to meet the FCC requirements in **Description:** 

documents ANSI C63.4:2003.

Site Filing: The FCC Registration Number is 259865

All measuring equipment is in accord with ANSI C63.4 requirements that meet Instrument Tolerance:

industry regulatory agency and accreditation agency requirement.

Page 5 of 22

## 4. SUPPORT EQUIPMENT LIST

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable	
PC	DELL	INSPIRON		N/A	1.5m unshielded	

<sup>\*\*</sup>Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

## 5. SYSTEM DESCRIPTION

## **EUT** test procedure:

- 1. Connect EUT and peripheral devices (PC) through USB port.
- 2. Power on the EUT, use the software to transfer data between EUT and PC.
- 3. Make sure the EUT operates normally during the test.

## 6. TEST MODE

USB (connection for data transferring)

Other modes have been tested via the procedure of Verification of Conformity.

Page 6 of 22

## 7. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§15.107	Conduction Emission	Compliant
§15.109	Radiated Emission	Compliant

## 8. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

- Uncertainty of Conducted Emission,  $Uc = \pm 2.75dB$
- Uncertainty of Radiated Emission,  $Uc = \pm 3.2dB$

Page 7 of 22

## 9. FCC LINE CONDUCTED EMISSION TEST

## 9.1 TEST EQUIPMENT OF LINE CONDUCTED EMISSION TEST

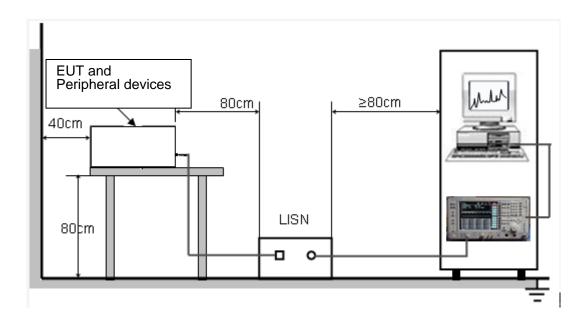
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due	
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	N/A	07/18/2012	07/17/2013	
LISN	R&S	ESH3-Z5	N/A	07/18/2012	07/17/2013	

## 9.2 LIMITS OF LINE CONDUCTED EMISSION TEST

_	Maximum RF Line Voltage						
Frequency	Q.P.( dBuV)	Average( dBuV)					
150kHz~500kHz	66-56	56-46					
500kHz~5MHz	56	46					
5MHz~30MHz	60	50					

<sup>\*\*</sup>Note: 1. The lower limit shall apply at the transition frequency.

## 9.3 BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



<sup>2.</sup> The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

Page 8 of 22

#### 9.4 PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, was placed as per ANSI C63.4.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- 4) The EUT connect to PC which received 120V/60Hz power from a LISN.
- 5) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 6) Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 7) During the above scans, the emissions were maximized by cable manipulation.
- 8) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions.
- 9) Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.

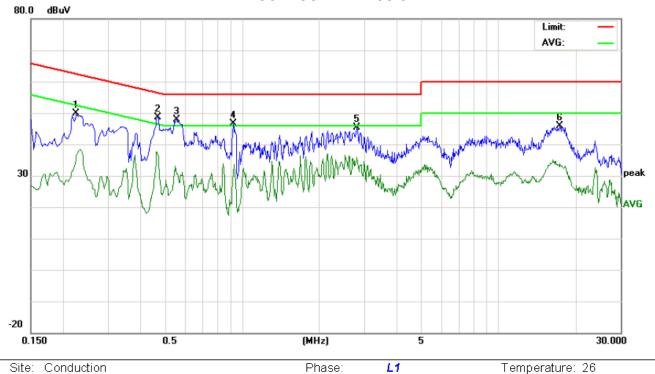
The test data of the worst case condition(s) was reported on the Summary Data page.

Humidity: 60 %

Page 9 of 22

## 9.5 TEST RESULT OF LINE CONDUCTED EMISSION TEST

## LINE CONDUCTED EMISSION - L



Phase:

Power:

L1

AC 120V/60Hz

Limit: FCC Class B Conduction(QP)

EUT: mobile phone

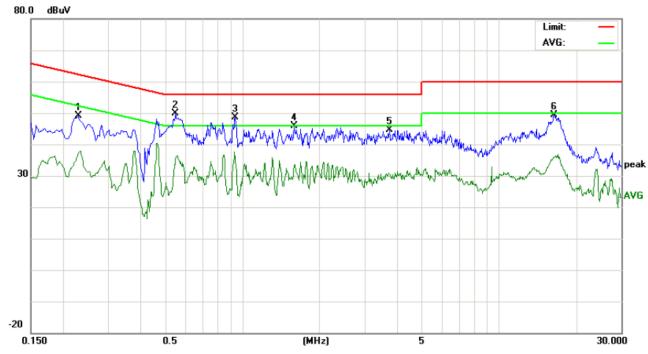
M/N: AM507 Mode: USB

Note:

No.	Freq.	ı	iding_L (dBuV)		Correct Factor	1	asuren (dBuV)			nit uV)	Mai (c	rgin IB)	P/F	Comment
	(MHz)	Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.2260	39.53		26.26	10.24	49.77		36.50	62.59	52.59	-12.82	-16.09	Р	
2	0.4700	38.33		26.18	10.38	48.71		36.56	56.51	46.51	-7.80	-9.95	Р	
3	0.5580	37.50		20.37	10.35	47.85		30.72	56.00	46.00	-8.15	-15.28	Р	
4	0.9260	36.15		21.23	10.40	46.55		31.63	56.00	46.00	-9.45	-14.37	Р	
5	2.8060	34.96		24.75	10.50	45.46		35.25	56.00	46.00	-10.54	-10.75	Р	
6	17.4180	35.65		23.64	10.13	45.78		33.77	60.00	50.00	-14.22	-16.23	Р	

Page 10 of 22

## LINE CONDUCTED EMISSION - N



Site: Conduction Phase: N Temperature: 26
Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 60 %

EUT: mobile phone M/N: AM507 Mode: USB

Note:

No.	Freq.	Rea	iding_L (dBuV)		Correct Factor	Measurem (dBuV)												-		rgin IB)	P/F	Comment
	(MHz)	Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG										
1	0.2300	38.94		27.19	10.25	49.19		37.44	62.45	52.45	-13.26	-15.01	Р									
2	0.5500	39.50		25.08	10.35	49.85		35.43	56.00	46.00	-6.15	-10.57	Р									
3	0.9420	38.14		25.02	10.39	48.53		35.41	56.00	46.00	-7.47	-10.59	Р									
4	1.5940	35.61		22.66	10.35	45.96		33.01	56.00	46.00	-10.04	-12.99	Р									
5	3.7500	34.17		20.11	10.47	44.64		30.58	56.00	46.00	-11.36	-15.42	Р									
6	16.4420	39.34		25.86	10.12	49.46		35.98	60.00	50.00	-10.54	-14.02	Р									

Page 11 of 22

## 10. FCC RADIATED EMISSION TEST

## **10.1 TEST EQUIPMENT OF RADIATED EMISSION**

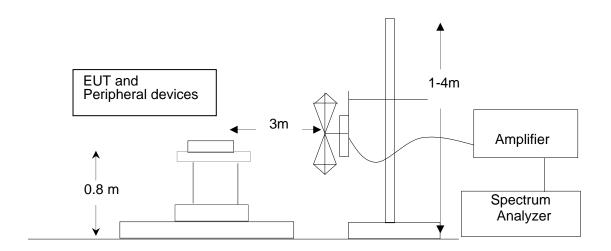
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due	
PSA SERIES	4 OU ENT	<b>5</b> 44404	110 44 40 4000	07/10/0010	07/17/00/10	
SPECTRUM ANALYZER	AGILENT	E4440A	US41421290	07/18/2012	07/17/2013	
ANTENNA	A.H.	SAS-521-4	128	07/18/2012	07/17/2013	
HORN ANTENNA	EM	EM-AH-10180	N/A	07/18/2012	07/17/2013	
AMPLIFIER	EM	EM30180	0607030	07/18/2012	07/17/2013	
POSITIONING						
CONTROLLER	MF	MF-7802	MF780208147	07/18/2012	07/17/2013	

## **10.2 LIMITS OF RADIATED EMISSION TEST**

Frequency (MHz)	Distance (m)	Maximum Field Strength Limit (dBuV/m/ Q.P.)
30~88	3	40.0
88~216	3	43.5
216~960	3	46.0
Above 960	3	54.0

<sup>\*\*</sup>Note: The lower limit shall apply at the transition frequency.

## 10.3 BLOCK DIAGRAM OF RADIATED EMISSION TEST



Page 12 of 22

#### 10.4 PROCEDURE OF RADIATED EMISSION TEST

1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.

- 2) Support equipment, if needed, was placed as per ANSI C63.4.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- 4) The EUT connect to PC which received 120V/60Hz power from socket under the turntable.
- 5) The antenna was placed at 3 meter away from the EUT as stated in FCC Part 15. The antenna connected to the Analyzer via a cable and at times a pre-amplifier would be used.
- 6) The Analyzer / Receiver quickly scanned from 30MHz to 1000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- 7) The test mode(s) were scanned during the test.
- 8) Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and Q.P./Peak reading is presented.

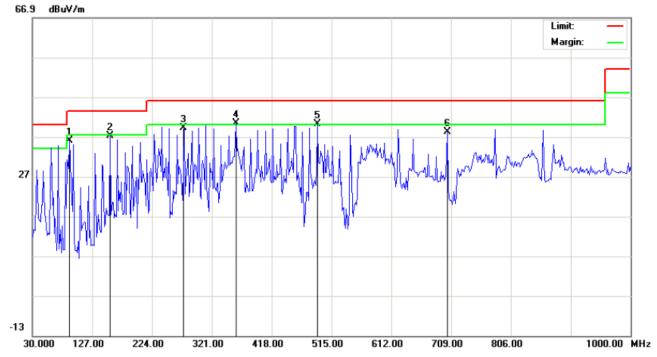
Temperature: 26

Humidity: 60 %

Page 13 of 22

## 10.5 TEST RESULT OF RADIATED EMISSION TEST

## Radiated Emission Test -Horizontal -3m



Site: site #1 Polarization: Horizontal
Limit: FCC Class B 3M Radiation Power: AC 120V/60Hz

EUT: mobile phone Distance: 3m

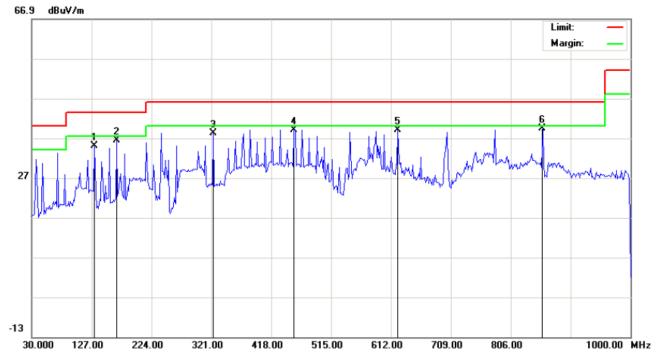
M/N: AM507 Mode: USB

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		89.8164	18.93	17.11	36.04	43.50	-7.46	peak			
2		156.0998	23.41	13.74	37.15	43.50	-6.35	peak			
3		275.7332	21.96	17.20	39.16	46.00	-6.84	peak			
4	*	359.8000	21.36	19.11	40.47	46.00	-5.53	peak			
5	İ	492.3666	17.65	22.47	40.12	46.00	-5.88	peak			
6		702.5333	15.31	22.82	38.13	46.00	-7.87	peak			

Page 14 of 22

## Radiated Emission Test -Vertical -3m



Site: site #1 Polarization: Vertical Temperature: 26 Limit: FCC Class B 3M Radiation Power: AC 120V/60Hz Humidity: 60 %

EUT: mobile phone Distance: 3m

M/N: AM507 Mode: USB Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		131.8499	20.94	14.04	34.98	43.50	-8.52	peak			
2		167.4166	24.65	11.69	36.34	43.50	-7.16	peak			
3		324.2332	19.77	18.45	38.22	46.00	-7.78	peak			
4		455.1832	17.57	21.51	39.08	46.00	-6.92	peak			
5		623.3166	14.07	25.01	39.08	46.00	-6.92	peak			_
6	*	857.7332	9.98	29.36	39.34	46.00	-6.66	peak			

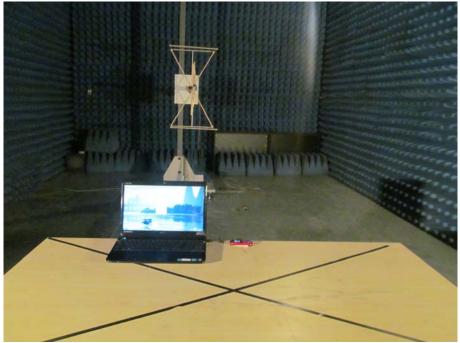
Page 15 of 22

## APPENDIX 1 PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP



Page 16 of 22

## APPENDIX 2 PHOTOGRAPHS OF EUT

TOP VIEW OF SAMPLE



**BOTTOM VIEW OF SAMPLE** 



Page 17 of 22

LEFT VIEW OF SAMPLE



RIGHT VIEW OF SAMPLE



Page 18 of 22

FRONT VIEW OF SAMPLE



**BACK VEIW OF SAMPLE** 



Page 19 of 22

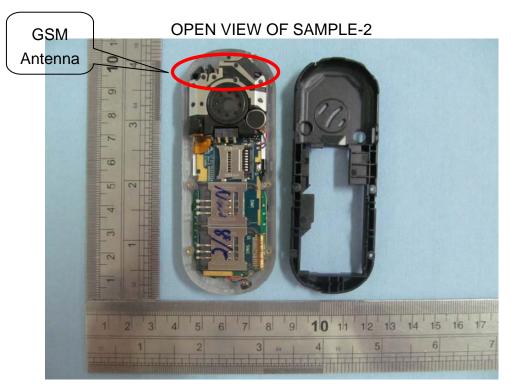
ALL VIEW OF SAMPLE



**OPEN VIEW OF SAMPLE-1** 



Page 20 of 22

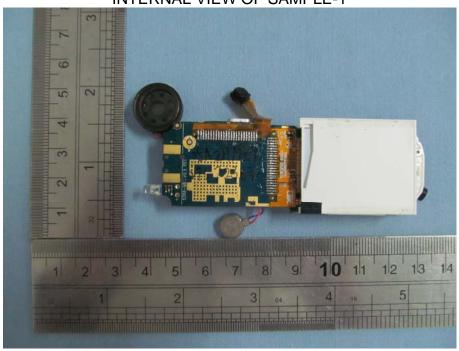


**OPEN VIEW OF SAMPLE-3** 

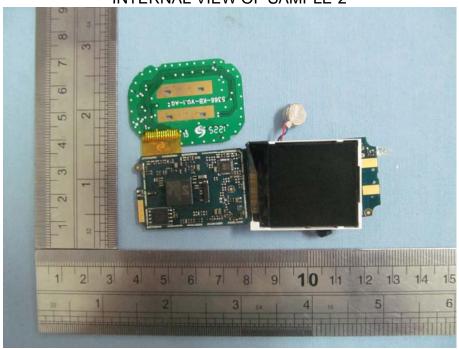


Page 21 of 22

**INTERNAL VIEW OF SAMPLE-1** 

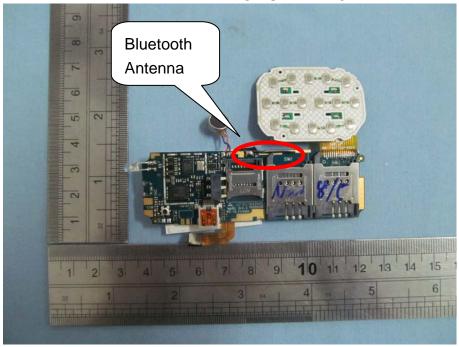


INTERNAL VIEW OF SAMPLE-2



Page 22 of 22





----END OF REPORT----