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CNASL1225

FCC TEST REPORT

47 CFR FCC Part 15 Subpart B

Report Reference No......:	**TRE1308011605 R/C: 91639**
FCC ID......**:**	**Q34-C902**
Compiled by (position+printed name+signature)..:	File administrators Eric Wang
Supervised by (position+printed name+signature)..:	Test Engineer Yuchao Wang
Approved by (position+printed name+signature)..:	Manager Wenliang Li
Date of issue.....:	Sep 23, 2013
Testing Laboratory Name .....:	**Shenzhen Huatongwei International Inspection Co., Ltd**
Address .....:	Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China
Applicant's name.....:	**Star Computer Group**
Address .....:	2175 NORTHWEST 115TH AVE. DORAL FL 33172, USA
Test specification:	
Standard .....:	**47 CFR FCC Part 15 Subpart B - Unintentional Radiators**
	ANSI C63.4: 2009
TRF Originator.....:	Shenzhen Huatongwei International Inspection CO., Ltd
Master TRF.....:	Dated 2006-06

Test item description .....:	Mobile phone
Trade Mark .....:	Argom
Model/Type reference.....:	C902
Listed Models .....:	/
Manufacturer .....:	**Star Computer Group**
Rating .....:	DC 3.70V
Hardware version .....:	V1.0
Software version .....:	V1.0
Result.....:	**Positive**

T E S T R E P O R T

Test Report No. :	TRE1308011604	Sep 23, 2013 Date of issue

Equipment under Test	:	Mobile Phone
Model /Type	:	C902
Listed Models	:	/
Applicant	:	**Star Computer Group**
Address	:	2175 NORTHWEST 115TH AVE. DORAL FL 33172, USA
Manufacturer		**Star Computer Group**
Address	:	2175 NORTHWEST 115TH AVE. DORAL FL 33172, USA

Test Result according to the standards on page 4:	**Positive**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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1. TEST STANDARDS

The tests were performed according to following standards:

47 CFR FCC Part 15 Subpart B - Unintentional Radiators

ANSI C63.4: 2009 – American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the
Range of 9 kHz to 40GHz

2 . SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	Aug 21, 2013
Testing commenced on	:	Aug 21, 2013
Testing concluded on	:	Sep 23,2013

2.2. Product Description

The **Star Computer Group**'s Model: C902 or the "EUT" as referred to in this report; more general information as follows, for more details, refer to the user's manual of the EUT.

Name of EUT	Mobile Phone
Model Number	C902
FCC ID	Q34-C902
Modilation Type	GMSK for GPRS and EDGE
Antenna Type	External
GSM/EDGE/GPRS	Supported GPRS/EDGE
Extreme temp. Tolerance	-30°C to +60°C
Extreme vol. Limits	3.33VDC to 4.20VDC (nominal: 3.70VDC)
GSM/GPRS Operation Frequency Band	GSM 850MHz/ PCS 1900MHz
GSM Release Version	R99
GPRS operation mode	Class B
GPRS Multislot Class	12
EGPRS Multislot Class	12

2.3. Equipment Under Test

Power supply system utilised

Power supply voltage	:	○	120V / 60 Hz	○	115V / 60Hz
		○	12 V DC	○	24 V DC
		●	Other (specified in blank below)		

DC 3.70V

2.4. Short description of the Equipment under Test (EUT)

2.4GHz (Mobile Phone (M/N:C902))

For more details, refer to the user's manual of

the EUT. Serial number: Prototype

2.5. EUT operation mode

The EUT has been tested under typical operating condition.

2.6. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: Q34-C902** filing to comply with the FCC Part 15, Subpart B Rules.

2.7. Internal Identification of AE used during the test

AE ID*	Description
AE1	Battery
AE2	Charger

AE1
Model:C902
Manufacturer: Star Computer Group
Capacitance:650mAh
Nominal Voltage:3.70V
AE2:
Model: S400
Manufacturer: HECHO EN

*AE ID: is used to identify the test sample in the lab internally.

2.8. Modifications

No modifications were implemented to meet testing criteria.

2.9. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

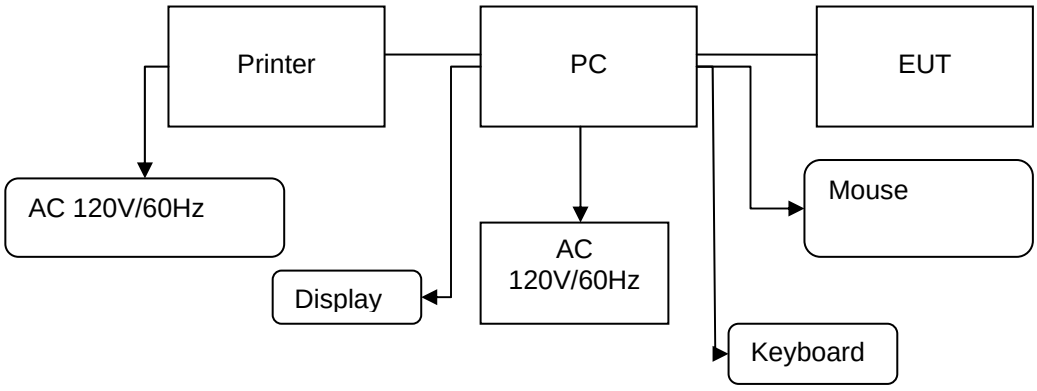
● - supplied by the manufacturer

○ - supplied by the lab

○	Power Cable	Length (m) :	/
		Shield :	/
		Detachable :	/
○	Multimeter	Manufacturer :	/
		Model No. :	/

2.10. Configuration of Tested System

Configuration of Tested System



Equipment Used in Tested System

No.	Equipment	Manufacturer	Model No.	Serial No.	Length	shielded/unshielded	Notes
1	PC	DELL	DIMENSION E520	1RNN42X	/	/	DOC
2	Printer	ESPOn	C3990	C3990A	/	/	DOC
3	Mouse	DELL	MO56UOA	G0E02SY7	1.00m	unshielded	DOC
4	Display	DELL	1707FPt	CN-OFC237-71618-65G-AAKC	/	/	DOC
5	Keyboard	DELL	L100	CNRH65665890726009L	/	/	DOC
6	USB Cable (EUT to PC)	Genshuo	USB 2.0	N/A	0.60m	unshielded	N/A
7	USB Cable (Printer to PC)	Genshuo	USB 2.0	N/A	1.20m	unshielded	N/A
8	Power line	/	/	N/A	1.00m	unshielded	N/A

2.11. NOTE

1. The EUT is a Mobile Phone with WLAN and Bluetooth fuction,The functions of the EUT listed as below:

	Test Standards	Reference Report
GSM/GPRS	FCC Part 22/FCC Part 24	TRE1308011601
WLAN	FCC Part 15 C 15.247	TRE1308011602
Bluetooth	FCC Part 15 C 15.247	TRE1308011603
USB Port	FCC Part 15 B	TRE1308011604
SAR	FCC Part 2 §2.1093	TRE1308011605

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen Huatongwei International Inspection Co., Ltd
Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China
Phone: 86-755-26715686 Fax: 86-755-26748089

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 (2003) and CISPR Publication 22.

3.2. Test Facility

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

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories, Date of Registration: Mar. 29, 2012. Valid time is until Feb. 28, 2015.

A2LA-Lab Cert. No. 2243.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is until Sept. 30, 2013.

FCC-Registration No.: 662850

Shenzhen Huatongwei International Inspection 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 our files. Registration 662850, Renewal date June. 01, 2012, valid time is until June. 01, 2015.

IC-Registration No.: 5377A

The 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377A on Jan. 25, 2011, valid time is until Jan. 24, 2014.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

VCCI

The 3m Semi-anechoic chamber (12.2m×7.95m×6.7m) and Shielded Room (8m×4m×3m) of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-292. Date of Registration: Dec. 24, 2010. Valid time is until Dec. 23, 2013.

Main Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-2726. Date of Registration: Dec. 20, 2009. Valid time is until Dec. 19, 2012.

Telecommunication Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: T-1837. Date of Registration: May 07, 2010. Valid time is until May 06, 2013.

DNV

Shenzhen Huatongwei International Inspection Co., Ltd. has been found to comply with the requirements of DNV towards subcontractor of EMC and safety testing services in conjunction with the EMC and Low voltage Directives and in the voluntary field. The acceptance is based on a formal quality Audit and follow-ups

according to relevant parts of ISO/IEC Guide 17025 (2005), in accordance with the requirements of the DNV Laboratory Quality Manual towards subcontractors. Valid time is until Aug. 24, 2016.

3.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 950-1050mbar

3.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.24 dB	(1)
Radiated Emission	1~18GHz	5.16 dB	(1)
Radiated Emission	18-40GHz	5.54 dB	(1)
Conducted Disturbance	0.15~30MHz	3.39 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.5. Equipments Used during the Test

Conducted Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI TEST RECEIVER	Rohde & Schwarz	ESCI	100106	2012/10/27
2	ARTIFICIAL MAINS	Rohde & Schwarz	ESH2-Z5	100028	2012/10/27
3	PULSE LIMITER	Rohde & Schwarz	ESHSZ2	100044	2012/10/27
4	EMI TEST SOFTWARE	Rohde & Schwarz	ES-K1	N/A	N/A

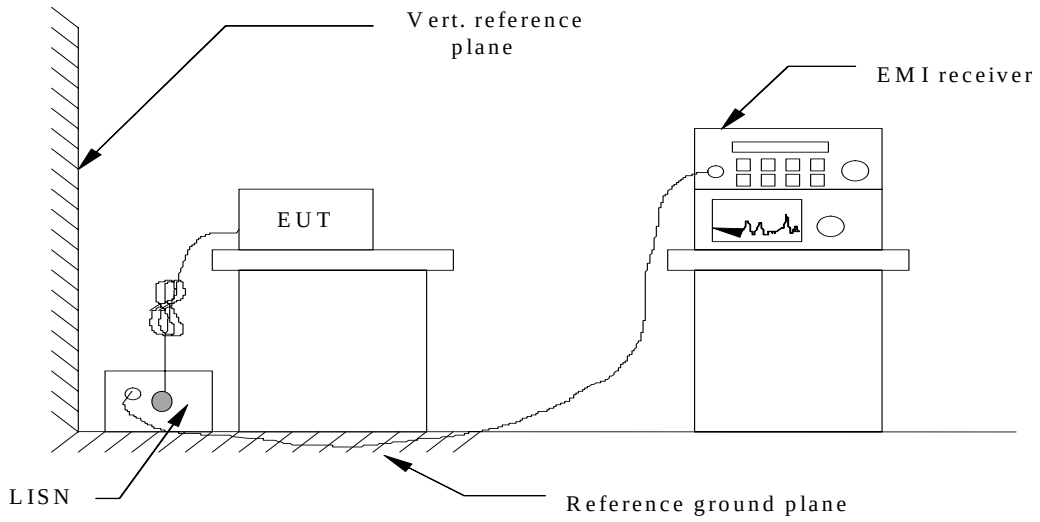
Radiated Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ULTRA-BROADBAND ANTENNA	ShwarzBeck	VULB9163	538	2012/10/27
2	EMI TEST RECEIVER	Rohde & Schwarz	ESI 26	100009	2012/10/27
3	EMI TEST OFTWARE	Audix	E3	N/A	N/A
4	TURNTABLE	MATURO	TT2.0	----	N/A
5	ANTENNA MAST	MATURO	TAM-4.0-P	----	N/A
6	EMI TEST OFTWARE	Rohde & Schwarz	ESK1	N/A	N/A
7	HORN ANTENNA	ShwarzBeck	9120D	1011	2012/10/27
8	Amplifer	Sonoma	310N	E009-13	2012/10/27
9	JS amplifer	Rohde & Schwarz	JS4-00101800-28-5A	F201504	2012/10/27

The calibration interval was one year.

4. TEST CONDITIONS AND RESULTS

4.1. Conducted Emissions Test

TEST CONFIGURATION



TEST PROCEDURE

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. 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 C63.4-2009.
2. Support equipment, if needed, was placed as per ANSI C63.4-2009.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4-2009.
4. The EUT received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. 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.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.

CONDUCTED POWER LINE EMISSION LIMIT

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following：

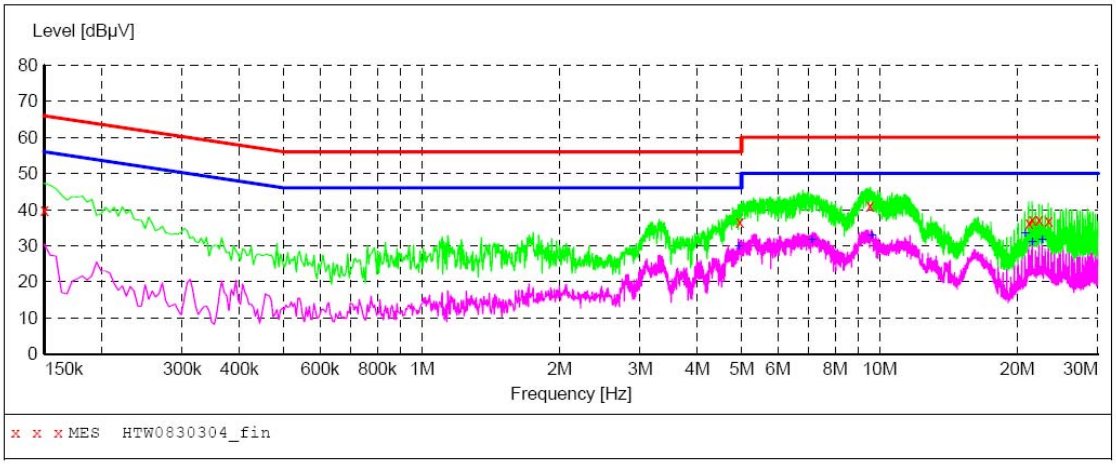
Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

TEST RESULTS

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "HTW0830304_fin"

8/30/2013 9:13AM

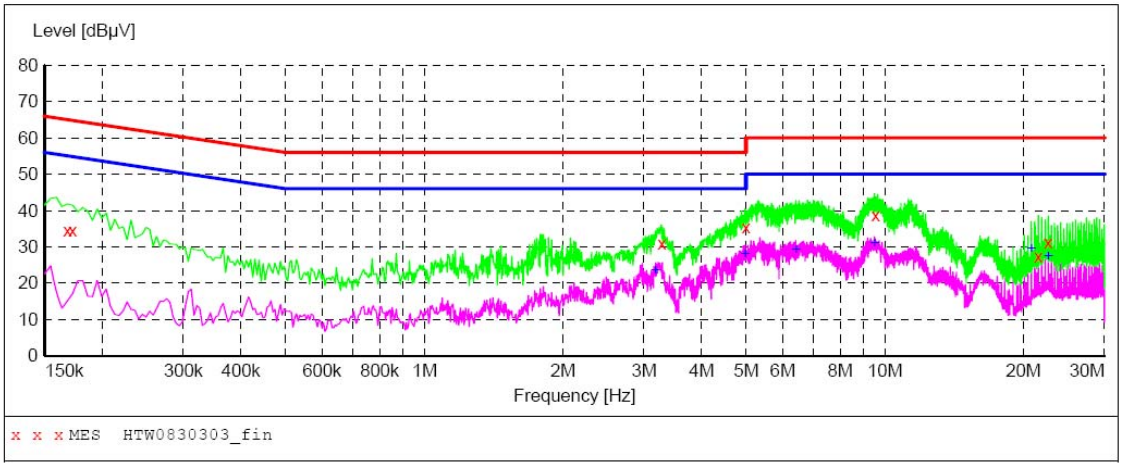
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	39.90	9.9	66	26.1	QP	L1	GND
4.951500	36.60	10.1	56	19.4	QP	L1	GND
9.541500	41.00	10.4	60	19.0	QP	L1	GND
21.219000	36.20	10.9	60	23.8	QP	L1	GND
21.583500	37.20	10.9	60	22.8	QP	L1	GND
22.321500	37.10	10.9	60	22.9	QP	L1	GND
23.406000	37.00	10.9	60	23.0	QP	L1	GND

MEASUREMENT RESULT: "HTW0830304_fin2"

8/30/2013 9:13AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
4.933500	29.70	10.1	46	16.3	AV	L1	GND
7.125000	31.40	10.2	50	18.6	AV	L1	GND
9.622500	32.70	10.4	50	17.3	AV	L1	GND
20.805000	33.30	10.9	50	16.7	AV	L1	GND
21.583500	31.00	10.9	50	19.0	AV	L1	GND
22.681500	31.40	10.9	50	18.6	AV	L1	GND

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "HTW0830303_fin"

8/30/2013 9:09AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.168000	34.60	9.9	65	30.5	QP	N	GND
0.172500	34.50	9.9	65	30.3	QP	N	GND
3.282000	30.80	10.1	56	25.2	QP	N	GND
4.996500	35.50	10.1	56	20.5	QP	N	GND
9.550500	38.70	10.4	60	21.3	QP	N	GND
21.547500	27.20	10.9	60	32.8	QP	N	GND
22.650000	31.30	10.9	60	28.7	QP	N	GND

MEASUREMENT RESULT: "HTW0830303_fin2"

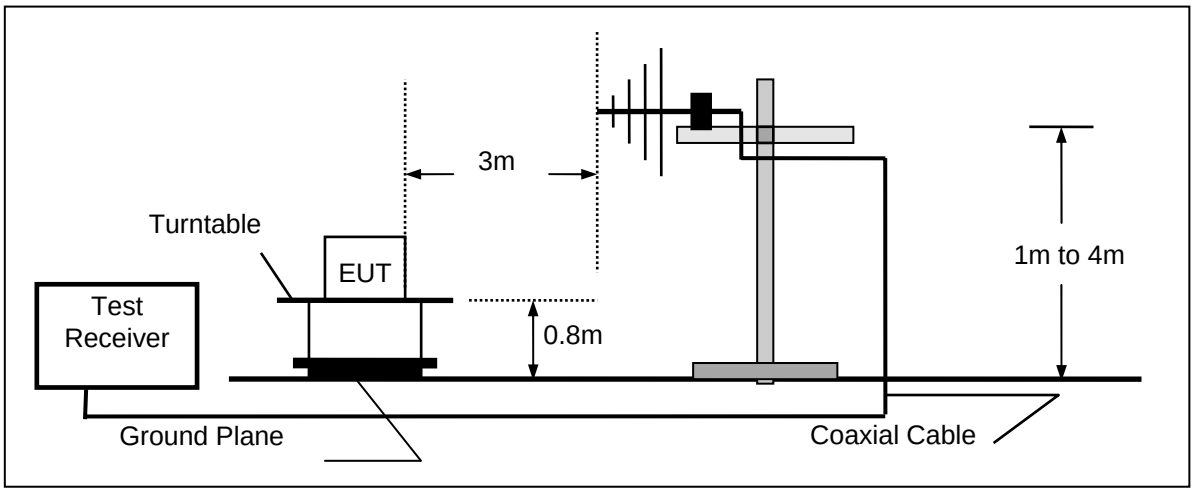
8/30/2013 9:09AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
3.178500	23.30	10.1	46	22.7	AV	N	GND
4.983000	28.00	10.1	46	18.0	AV	N	GND
6.423000	29.10	10.2	50	20.9	AV	N	GND
9.510000	31.00	10.4	50	19.0	AV	N	GND
20.809500	29.30	10.9	50	20.7	AV	N	GND
22.659000	27.40	10.9	50	22.6	AV	N	GND

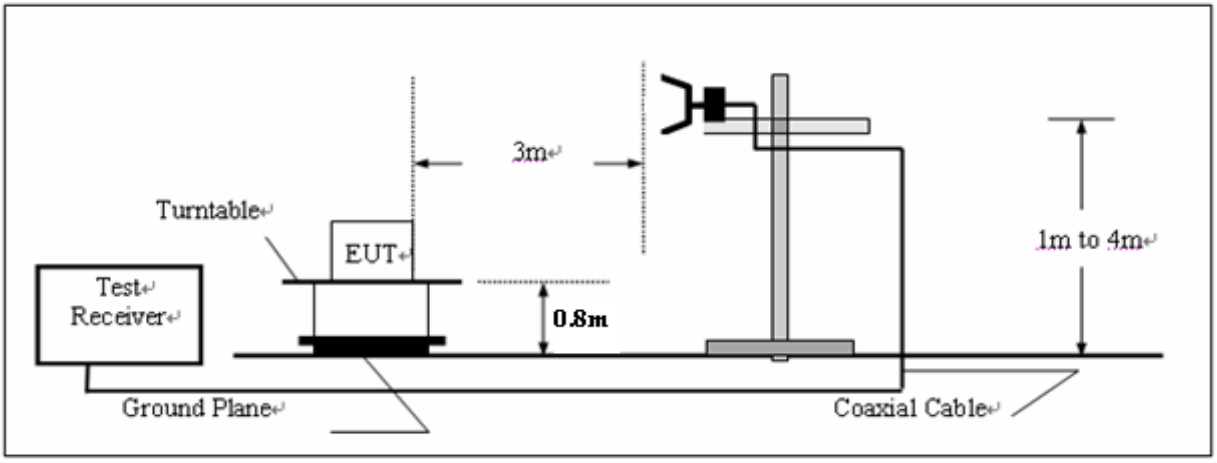
4.2. Radiated Emission Test

TEST CONFIGURATION

a) Radiated Emission Test Set-Up, Frequency below 1000MHz



b) Radiated Emission Test Set-Up, Frequency above 1000MHz



TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The maximum operation frequency was 512MHz,the radiated emission test frequency from 30MHz to 6GHz.

FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

For example

Frequency (MHz)	FS (dBμV/m)	RA (dBμV/m)	AF (dB)	CL (dB)	AG (dB)	Transd (dB)
300.00	40	58.1	12.2	1.6	31.90	-18.1

Transd=AF +CL-AG

RADIATION LIMIT

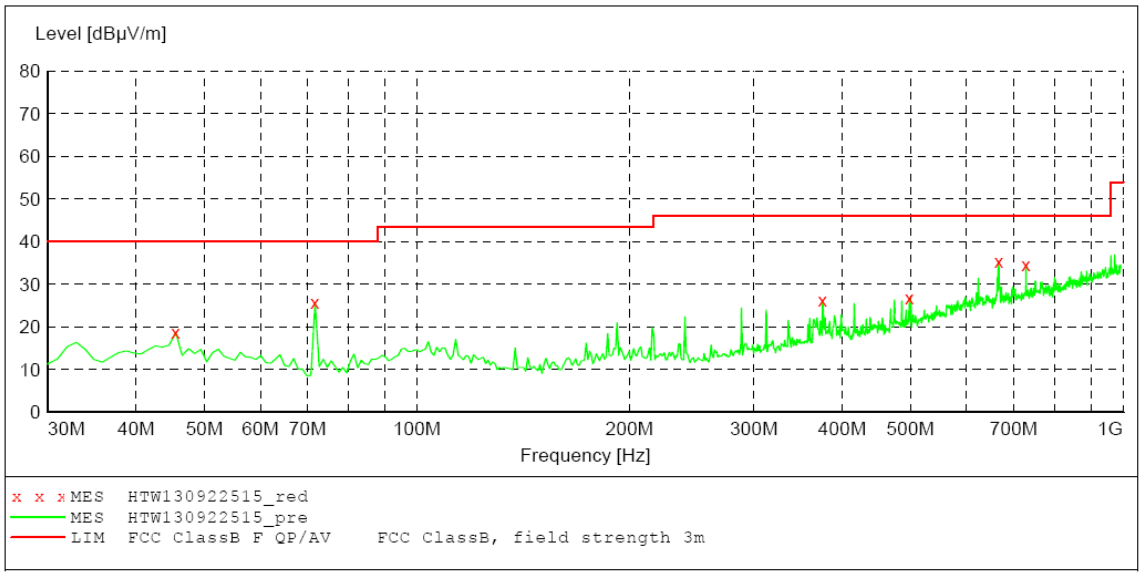
For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values：

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

TEST RESULTS

SWEEP TABLE: "test (30M-1G)"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.1 GHz	MaxPeak	Coupled	100 kHz	VULB9163



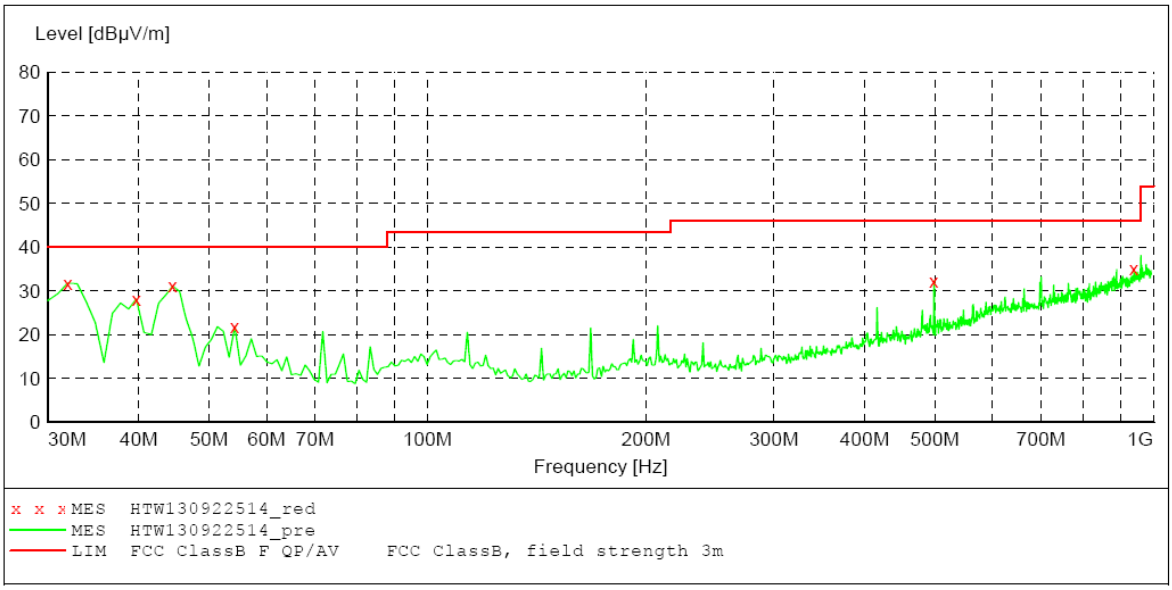
MEASUREMENT RESULT: "HTW130922515_red"

9/22/2013 3:50PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
45.520000	18.70	-15.0	40.0	21.3	Peak	100.0	354.00	HORIZONTAL
71.710000	25.70	-19.6	40.0	14.3	Peak	100.0	144.00	HORIZONTAL
375.320000	26.30	-11.6	46.0	19.7	Peak	100.0	191.00	HORIZONTAL
498.510000	26.90	-7.2	46.0	19.1	Peak	100.0	274.00	HORIZONTAL
666.320000	35.50	-2.2	46.0	10.5	Peak	100.0	226.00	HORIZONTAL
728.400000	34.50	-0.8	46.0	11.5	Peak	100.0	109.00	HORIZONTAL

SWEEP TABLE: "test (30M-1G)"

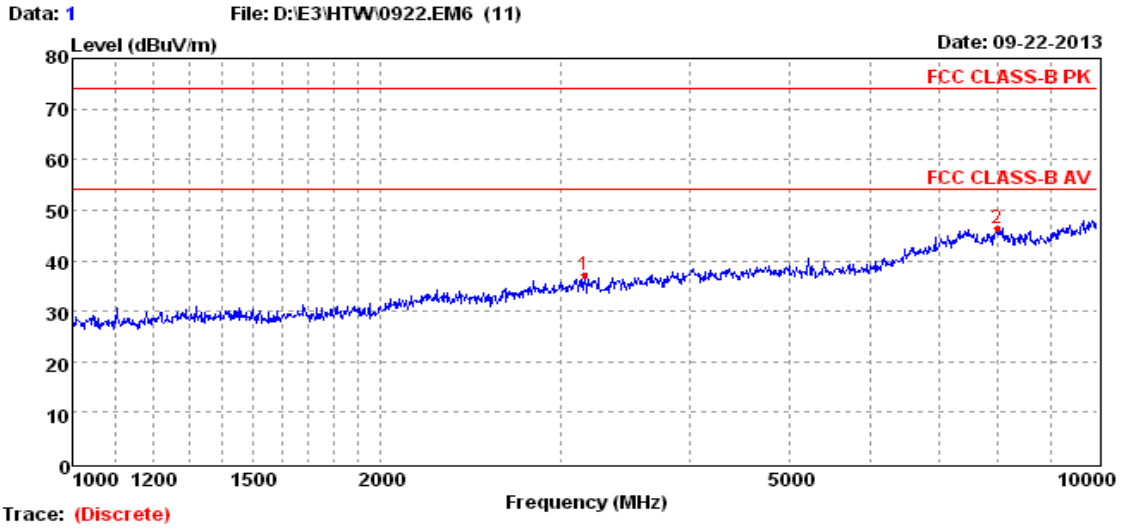
Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.1 GHz	MaxPeak	Coupled	100 kHz	VULB9163



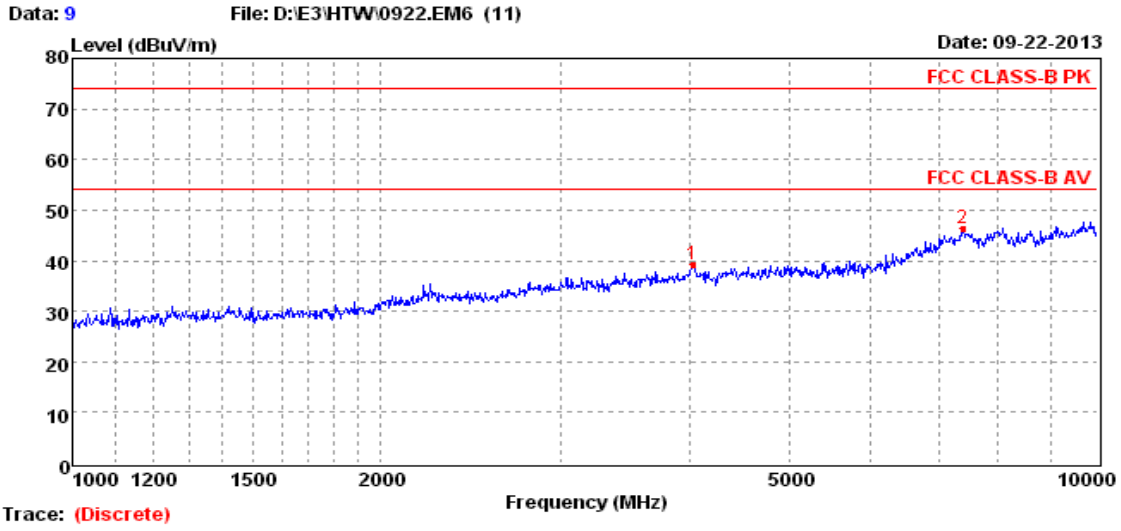
MEASUREMENT RESULT: "HTW130922514_red"

9/22/2013 3:48PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
31.940000	31.80	-16.3	40.0	8.2	Peak	100.0	118.00	VERTICAL
39.700000	28.20	-15.1	40.0	11.8	Peak	100.0	52.00	VERTICAL
44.550000	31.10	-15.0	40.0	8.9	Peak	100.0	232.00	VERTICAL
54.250000	21.90	-15.4	40.0	18.1	Peak	100.0	181.00	VERTICAL
498.510000	32.30	-7.2	46.0	13.7	Peak	100.0	166.00	VERTICAL
939.860000	35.00	3.3	46.0	11.0	Peak	100.0	359.00	VERTICAL



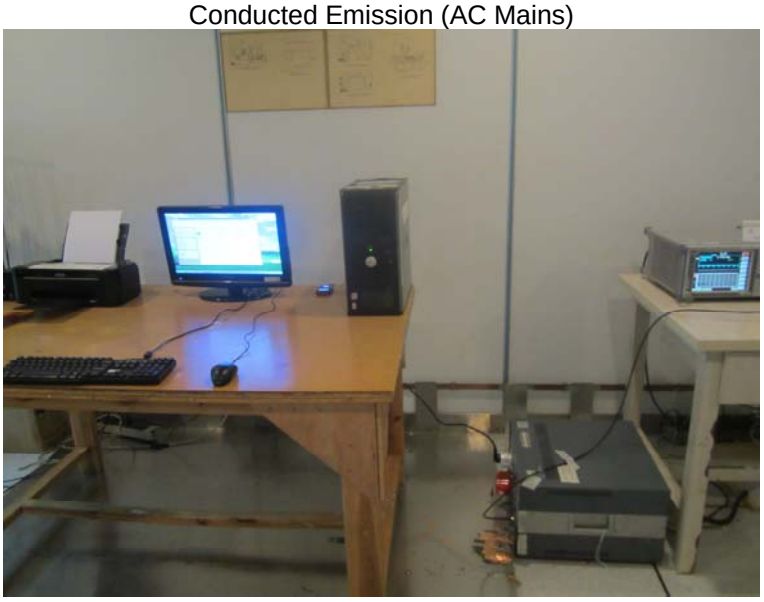
Mark	Frequency MHz	Level dBuV/m	Factor dB	Reading dBuV/m	Limit dBuV/m	Margin dB	Polarization	Det.
1	3162.28	37.29	-2.81	40.10	74.00	36.71	VERTICAL	Peak
2	7979.95	46.42	12.04	34.38	74.00	27.58	VERTICAL	Peak



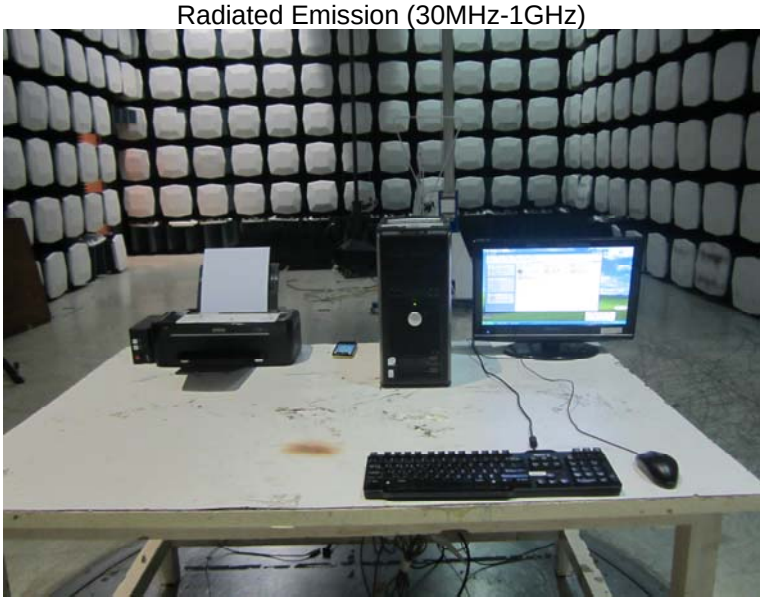
Mark	Frequency MHz	Level dBuV/m	Factor dB	Reading dBuV/m	Limit dBuV/m	Margin dB	Polarization	Det.
1	4027.17	39.35	-0.33	39.68	74.00	34.65	HORIZONTAL	Peak
2	7396.05	46.33	11.44	34.89	74.00	27.67	HORIZONTAL	Peak

5. Test Setup Photos of the EUT

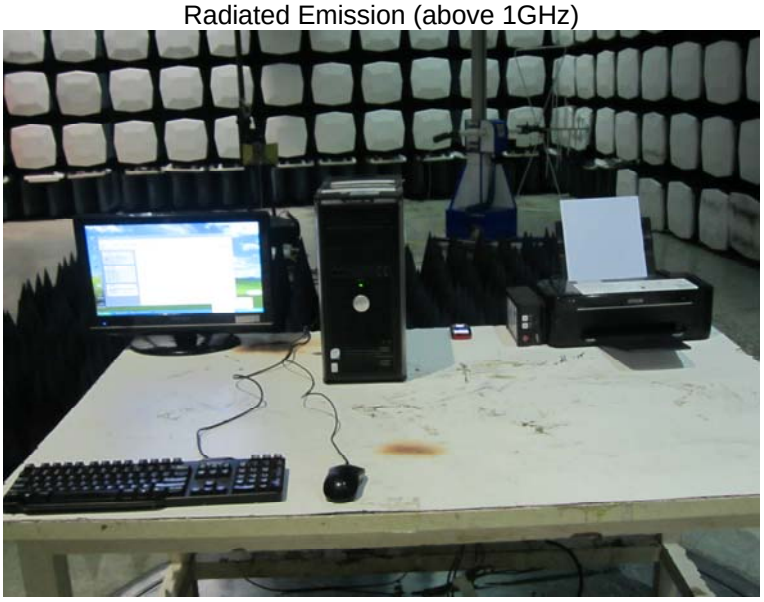
Conducted Emission (AC Mains)



Radiated Emission (30MHz-1GHz)



Radiated Emission (above 1GHz)



6. External and Internal Photos of the EUT

External photos of the EUT


ARGOM
TECH

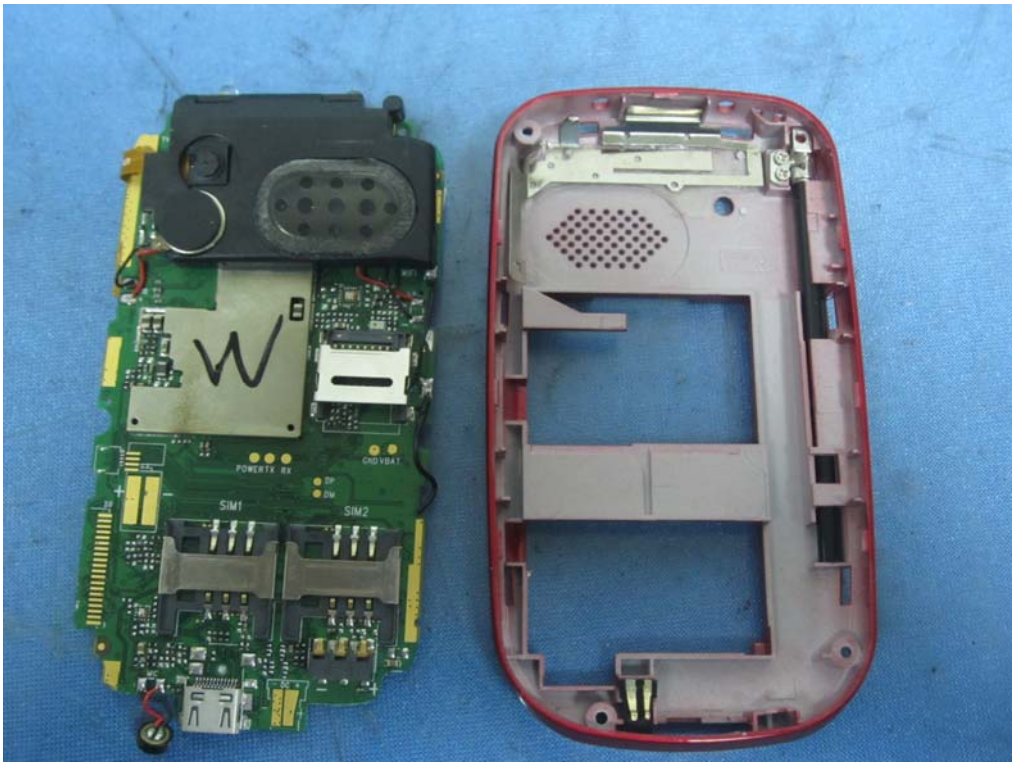

ARGOM
TECH

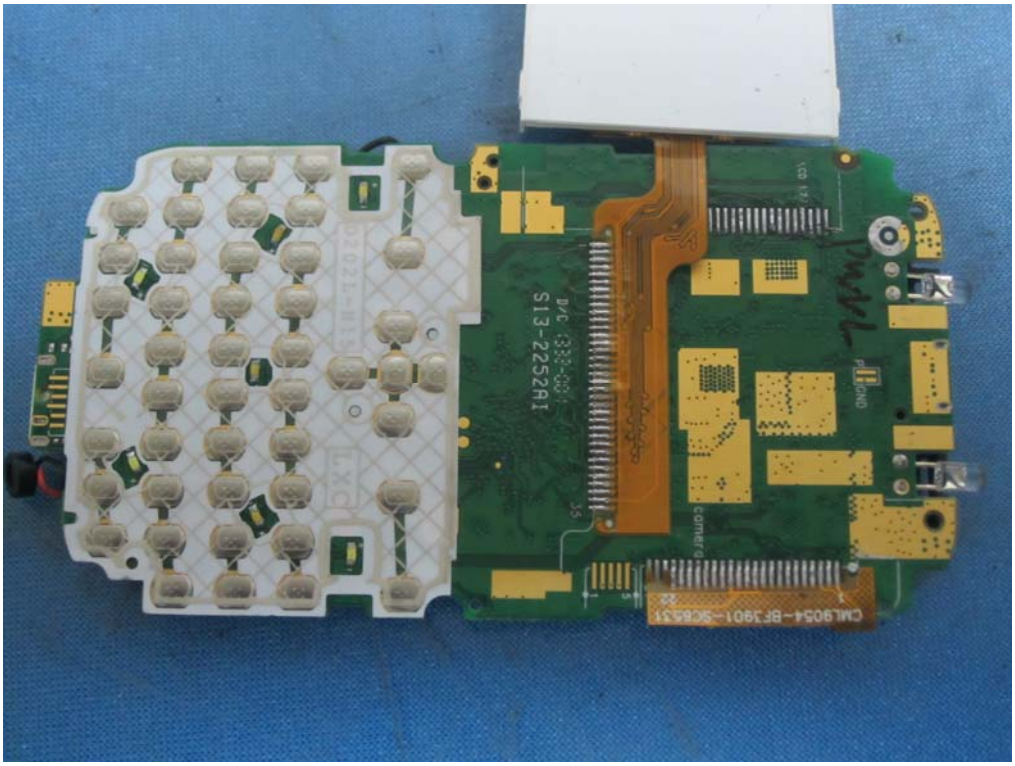

ARGOM

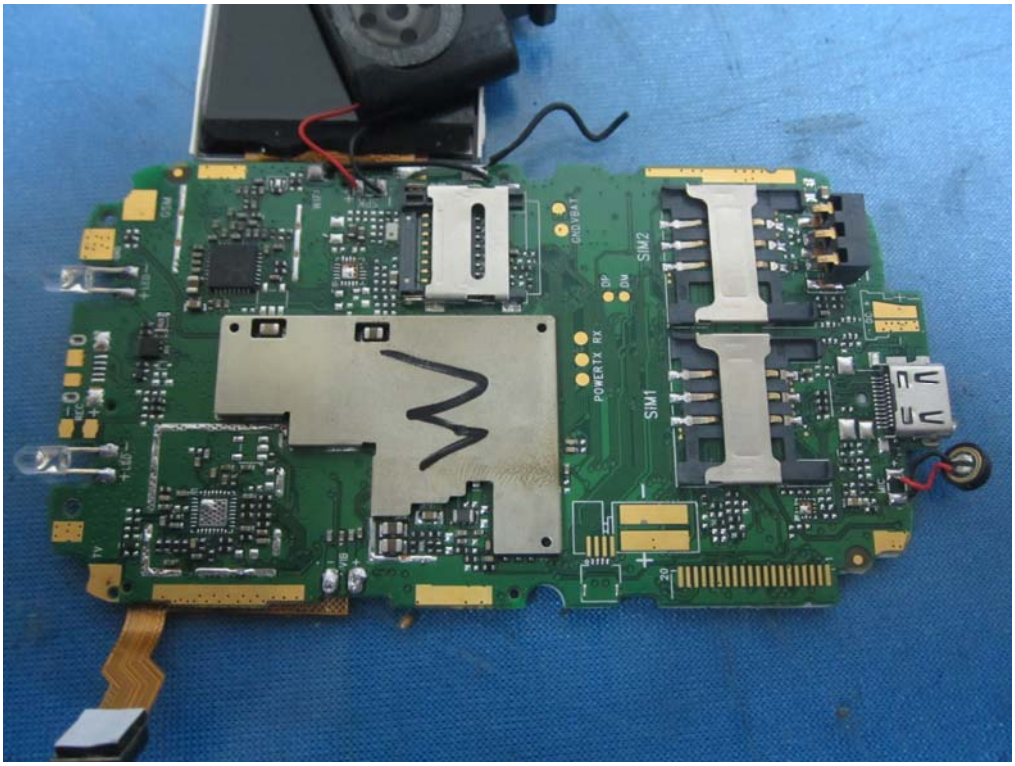

SENWA
Adaptador CA/CC


ARGOM
TECH
Bateria recargable Ion-Litio
MODELO:C902
Capacidad: 3. 7V/650mAh(3.33Wh)
Standard:GB/T18287-2000
Part Number:ARG-CP-C902
PRECAUCIONES DE USO:
·No abrir ni destruir
·Evite Corto Circuito
·Deséchese apropiadamente
·No exponer a temperaturas
elevadas(60°C/140°F)
·Solo use cargadores propios
de la marca
CAUTION:
· DO NOT DISASSEMBLE
· DO NOT SHORT-CIRCUIT
· DISPOSE OFTHE BATTERY PROPERLY
· DO NOT EXPOSE BATTERY TO HIGH
TEMPERATURES 140°F/60°C
Assembled in China
S/N:DRN121100000005

Internal photos of the EUT


SIM1
SIM2


S13-2252A1
camera



.....End of Report.....