Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial Zone, Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China

TEST REPORT

FCC ID: RRB-WM-5000GT

Applicant：JWM Hi-tech Development Co.,Ltd

Address: No.22 shiji Road Hunnan National Hi-tech Industrial Zone，Shenyang City, Liaoning, China

Equipment Under Test(EUT):

Name	:	GUARD TOUR SYSTEM
Model	:	WM-5000P5+;WM-5000PH4+; WM-5000L5; WM-5000L6+

In Accordance with: FCC CFR47 Part 15 Section 15C: 2012

Report No : STE130107009

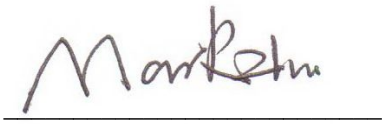
Date of Test : Jan. 23—23. 2013

Date of Issue : Jan .24.2013

Test Result: **PASS**

In the configuration tested, the EUT complied with the standards specified above

Authorized Signature



(Mark Zhu)

General Manager

The manufacture should ensure that all the products in series production are in conformity with the product sample detailed in this report. 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. Any mention of Shenzhen Certification Technology Service Co., Ltd. Or test done by Shenzhen Certification Technology Service Co., Ltd. Approvals in connection with, distribution or use of the product described in this report must be approved by Shenzhen Certification Technology Service Co., Ltd. Approvals in writing.

Contents

1. General Information

1.1. Description of Device (EUT)

EUT	:	GUARD TOUR SYSTEM
Model No.	:	WM-5000P5+; WM-5000PH4+; WM-5000L5; WM-5000L6+
Difference of model No	:	Only appearance difference.
Power supply	:	DC 3.7V from battery and DC 4.7V from power adapter.
Radio Technology	:	RFID,GPRS/EDGE,UMTS/HSDPA
Operation frequency	:	RFID:125KHz, GPRS/EDGE: Band 850 and Band 1900; WCDMA/HSDPA: Band II and Band V
Antenna Type and Gain	:	RFID: Integrated loop antenna, PK Gain: 0dBi GSM850/WCDMA Band V: Integrated Patch antenna, PK gain -3.82dBi PCS1900/WCSMA Band II: Integrated Patch antenna, PK gain -3.85dBi
Applicant	:	JWM Hi-tech Development Co.,Ltd
Address	:	No.22 shiji Road Hunnan National Hi-tech Industrial Zone，Shenyang City, Liaoning, China
Manufacturer	:	JWM Hi-tech Development Co.,Ltd
Address	:	No.22 shiji Road Hunnan National Hi-tech Industrial Zone，Shenyang City, Liaoning, China

Note: For RFID was tested and reported in another test report.

1.2. Accessories of device (EUT)

Accessories 1	:	Power adapter
M/N	:	HNA047100U
Accessories 2	:	USB cable
Type	:	1m, unshield

1.3. Test Lab information

Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial Zone,
Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
FCC Registered No.:197647

2. Summary of test

2.1. Summary of test result

Description of Test Item	Standard	Results
Conducted Output power	FCC PART 2: 2.1046 FCC PART 22H: 22.913 (a) FCC PART 24E: 24.232 (b)	PASS
Radiated Output power(erp/eirp)	FCC PART 22H:22.913 (a) FCC PART 24E:24.232(c)	PASS
Occupied bandwidth	FCC PART 2: 2.1049 FCC PART 22H: 22.917 (b) FCC PART 24E: 24.238 (b)	N/A
Frequency stability	FCC PART 2: 2.1055 FCC PART 22H: 22.355 FCC PART 24E: 24.235	N/A
Conducted spurious emission (Antenna terminal)	FCC PART 2: 2.1051 FCC PART 22H: 22.917 FCC PART 24E: 24.238	N/A
Radiated spurious emissions	FCC PART 2: 2.1053 FCC PART 22H: 22.917 FCC PART 24E: 24.238	PASS
Block edge compliance	FCC PART 22H: 22.917 (b) FCC PART 24E: 24.238 (b)	N/A
Power Line Conducted Emission Test	FCC Part 15: 15.207 ANSI C63.4: 2003	PASS

Note: This device contains a 3G module and that module have been tested and reported in another test report have certificated follow FCC module approval, it's FCC ID number is UDV-1103022011008, report No is: 112S009R-HP-US-P07V01.

2.2. Assistant equipment used for test

N/A

2.3. Block Diagram

2.4. Test mode

During all testing, EUT is in link mode with base station emulator at maximum power level in each test mode and channel as below:

Mode	Channel	Frequency(MHz)
GSM 850 GPRS	128	824.2
	189	836.4
	251	848.8
PCS 1900 GPRS	512	1850.2
	661	1880.0
	810	1909.8
GSM850 EDGE	128	824.2
	189	836.4
	251	848.8
PCS 1900 EDGE	512	1850.2
	661	1880.0
	810	1909.8
WCDMA Band II	9262	1852.40
	9400	1880.0
	9538	1907.60
WCDAM Band V	4132	826.40
	4182	836.40
	4233	846.60
HSDPA Band II	9262	1852.40
	9400	1880.0
	9538	1907.60
HSDPA Band V	4132	826.40
	4182	836.40
	4233	846.60

2.5. Test Conditions

Temperature range	21-25℃
Humidity range	40-75%
Pressure range	86-106kPa

2.6. Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Power line Conduction emission test	2.94dB (9KHz-150KHz)
	2.44dB (150KHz-30MHz)
Uncertainty for disturbance power test (30MHz-300MHz)	2.0dB
Uncertainty for Radiation Emission test (9KHz-150KHz)	3.41dB
Uncertainty for Radiation Emission test (150KHz-30MHz)	3.12dB
Uncertainty for Radiation Emission test (30MHz-1GHz)	3.14 dB (Antenna Polarize: V)
	3.16 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1GHz to 25GHz)	2.08dB(Antenna Polarize: V)
	2.56dB (Antenna Polarize: H)
Uncertainty for radio frequency	1×10-9
Uncertainty for conducted RF Power	0.65dB

2.7. Test Equipment

Equipment	Manufacture	Model No.	Serial No.	Last cal.	Cal Interval
3m Semi-Anechoic	ETS-LINDGREN	N/A	SEL0017	05.08, 2012	1Year
Spectrum analyzer	Agilent	E4443A	MY46185649	05.08, 2012	1Year
Receiver	R&S	ESCI	100492	05.08, 2012	1Year
Receiver	R&S	ESCI	101202	05.08, 2012	1Year
Bilog Antenna	Sunol	JB3	A121206	05.08, 2012	1Year
Horn Antenna	EMCO	3115	640201028-06	05.08, 2012	1Year
Power Meter	Anritsu	ML2487A	6K00001491	05.08, 2012	1Year
ETS Horn Antenna	ETS	3160	SEL0076	05.08, 2012	1Year
Active Loop Antenna	Beijing Daze	ZN30900A	SEL0097	05.08, 2012	1Year
Cable	Resenberger	N/A	No.1	05.08, 2012	1Year
Cable	SCHWARZBECK	N/A	No.2	05.08, 2012	1Year
Cable	SCHWARZBECK	N/A	No.3	05.08, 2012	1Year
Pre-amplifier	R&S	AFS42-00101800-25-S-42	SEL0081	05.08, 2012	1Year
Pre-amplifier	R&S	AFS33-18002650-30-8P-44	SEL0080	05.08, 2012	1Year
Base station	Agilent	E5515C	GB44300243	05.08, 2012	1 Year
Temperature controller	Terchy	MHQ	120	05.08, 2012	1Year
Power divider	Anritsu	K240C	020346	05.08, 2012	1 Year
Signal Generator	HP	83732B	VS3449051	05.08, 2012	1 Year
Attenuator	Agilent	8491B	MY39262165	05.08, 2012	1 Year

3. Conducted Output power

3.1. Block Diagram of Test Setup

3.2. Limit

For FCC Part 22.913(a)(2)	For FCC Part 24.232(b)
38.5dBm(ERP)	33dBm(EIRP)

3.3. Test Procedure

(1) The EUT's RF output port was connected to base station.
(2) A call is set up by the SS according to the generic call set up procedure
(3) Set EUT at maximum power level through base station by power level command
(4) Measure the maximum output power of EUT at each frequency band and mode by base station.

3.4. Test Result

EUT: GUARD TOUR SYSTEM M/N: WM-5000P5+ Power: DC 4.7V from adapter						
Ambient Temperature:24℃		Relative Humidity: 62%				
Test date: 2013-01-23		Test site: RF site Tested by: TaTa_Chen				
Conclusion: PASS						
Mode	Channel	PK Output Power(dBm)	ERP (dBm)	EIRP (dBm)	Limit	
					ERP(dBm)	EIRP(dBm)
GSM 850 GPRS	128	33.31	27.34	/	38.5	/
	189	33.10	27.13	/	38.5	/
	251	32.67	26.70	/	38.5	/
PCS 1900 GPRS	512	29.34	/	25.49	/	33
	661	29.11	/	25.26	/	33
	810	29.02	/	25.17	/	33
GSM 850 EDGE	128	27.40	21.43	/	38.5	/
	189	27.23	21.26	/	38.5	/
	251	27.01	21.04	/	38.5	/
PCS 1900 EDGE	512	25.67	/	21.82	/	33
	661	25.65	/	21.80	/	33
	810	25.56	/	21.71	/	33
Note: EIRP=PK output power +Antenna Gain(-3.85dBi); ERP=PK output power + Antenna Gain(-3.82dBi) -2.15						

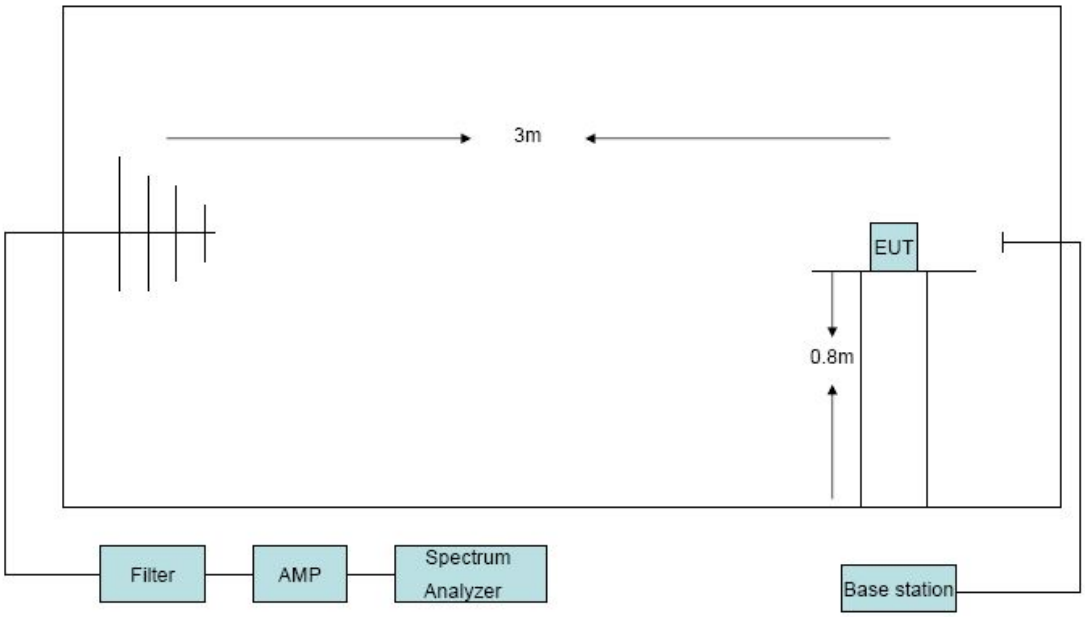
WCDMA/HSDPA

Mode	3GPP Subtest	Band II(1900MHz) Channel			MPR
		Average Conducted Power(dBm)			
		9262	9400	9538	
WCDMA R99	1	22.21	22.45	22.10	N/A
Rel 5 HSDPA	1	22.20	22.32	22.15	0
	2	22.30	22.12	22.10	0
	3	22.10	21.89	21.78	0.5
	4	21.67	22.01	22.21	0.5

Mode	3GPP Subtest	Band V(850MHz) Channel			MPR
		Average Conducted Power(dBm)			
		4132	4182	4233	
WCDMA R99	1	23.67	22.96	23.23	N/A
Rel 5 HSDPA	1	23.56	23.10	23.21	0
	2	23.50	29.89	29.95	0
	3	23.20	22.70	22.85	0.5
	4	23.20	22.63	22.50	0.5

4. Radiated Spurious emissions

4.1. Block Diagram of Test Setup



4.2. Limit

The mean power of emissions must be attenuated below the mean power of the unmodulated carrier (P) on any frequency outside the frequency band by at least (43 + 10 log P) dB, in this case, -13dBm.

4.3. Test Procedure

1. The EUT was placed on an non-conductive rotating platform with 0.8 meter height in an anechoic chamber. The radiated spurious emissions from 30MHz to 10th harmonious of fundamental frequency were measured at 3m with a test antenna and a spectrum analyzer with RBW= 1MHz,VBW= 1MHz ,peak detector settings.
2. During the measurement, the EUT was enforced in maximum power and linked with a base station.All the spurious emissions(record as LVL) at 3m were measured by rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Final spurious emissions levels were measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (for frequency lelow 1GHz) or Horn antenna(for frequecny above 1GHz) at same location with same polarize of reveiver antenna and then a known power of each measure frequency from S.G. was applied into the dipole antenna or Horn antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in

dB) = S.G. - Tx Cable loss + Substitution antenna gain –Substitution antenna Loss(only for Dipole antenna) - Analyzer reading. Then final

spurious emissions were calculated with the correction factor, Result= LVL + Correction factor.

4.4. Test Result

EUT: GUARD TOUR SYSTEM M/N: WM-5000P5+						
Power: DC 4.7V from adapter						
Test Date: 2013-01-23	Test site: RF Chamber		Tested by: TaTa_Chen			
Ambient Temperature: 24℃	Relative Humidity: 60%					
Conclusion: PASS						
Test result						
Test Mode： GSM 850 GPRS CH128						
Frequency (MHz)	Antenna polarization	LVL (dBm)	Correction factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)
1648.4	H	-59.73	11.5	-48.23	-13	35.23
2472.6	H	-62.34	9.45	-52.89	-13	39.89
1648.4	V	-63.90	10.56	-53.34	-13	40.34
2472.6	V	-65.77	9.45	-56.32	-13	43.32
Test Mode： GSM 850 GPRS CH189						
1672.8	H	-57.97	11.67	-46.30	-13	33.30
2509.2	H	-63.79	9.89	-53.90	-13	40.90
1672.8	V	-65.23	10.93	-54.30	-13	41.30
2509.2	V	-62.09	9.79	-52.30	-13	39.30
Test mode: GSM 850 GPRS CH251						
1697.6	H	-60.54	11.98	-48.56	-13	35.56
2546.4	H	-65.87	9.97	-55.90	-13	42.90
1697.6	V	-65.45	11.32	-54.13	-13	41.13
2546.4	V	-63.99	10.54	-53.45	-13	40.45

Test Mode： GSM 1900 GPRS CH512						
Frequency (MHz)	Antenna polarization	LVL (dBm)	Correction factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)
3700.4	H	-62.89	8.57	-54.32	-13	41.32

5550.6	H	-56.24	7.9	-48.34	-13	35.34
3700.4	V	-61.49	8.37	-53.12	-13	40.12
5550.6	V	-60.00	7.68	-52.32	-13	39.32
Test Mode： GSM 1900 GPRS CH661						
3760	H	-61.46	8.90	-52.56	-13	39.56
5640	H	-59.34	8.10	-51.24	-13	38.24
3760	V	-64.69	8.46	-56.23	-13	43.23
5640	V	-52.57	7.23	-45.34	-13	32.34
Test mode: GSM 1900 GPRS CH810						
3819.6	H	-59.13	8.90	-50.23	-13	37.23
5729.4	H	-55.46	8.13	-47.33	-13	34.33
3819.6	V	-61.35	8.23	-53.12	-13	40.12
5729.4	V	-59.79	7.23	-52.56	-13	39.56

Test Mode：GSM 850 EDGE CH128						
Frequency (MHz)	Antenna polarization	LVL (dBm)	Correction factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)
1648.4	H	-63.82	11.5	-52.32	-13	39.32
2472.6	H	-63.26	9.45	-53.81	-13	40.81
1648.4	V	-68.93	10.56	-58.37	-13	45.37
2472.6	V	-67.23	9.45	-57.78	-13	44.78
Test Mode： GSM 850 EDGE CH189						
1672.8	H	-66.97	11.67	-55.30	-13	42.30
2509.2	H	-65.69	9.89	-55.80	-13	42.80
1672.8	V	-68.59	10.93	-57.66	-13	44.66
2509.2	V	-59.49	9.79	-49.70	-13	36.70
Test mode: GSM 850 EDGE CH251						
1697.6	H	-68.32	11.98	-56.34	-13	43.34
2546.4	H	-65.42	9.97	-55.45	-13	42.45
1697.6	V	-68.93	11.32	-57.61	-13	44.61
2546.4	V	-65.33	10.54	-54.79	-13	41.79

Test Mode：GSM 1900 EDGE CH512						
Frequency (MHz)	Antenna polarization	LVL (dBm)	Correction factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)
3700.4	H	-60.8	8.57	-52.23	-13	39.23
5550.6	H	-57.22	7.90	-49.32	-13	36.32
3700.4	V	-61.52	8.37	-53.15	-13	40.15
5550.6	V	-60.24	7.68	-52.56	-13	39.56
Test Mode： GSM 1900 EDGE CH661						
3760	H	-60.68	8.90	-51.78	-13	38.78
5640	H	-60.42	8.10	-52.32	-13	39.32
3760	V	-56.78	8.46	-48.32	-13	35.32
5640	V	-55.79	7.23	-48.56	-13	35.56
Test mode: GSM 1900 EDGE CH810						
3819.6	H	-64.35	8.90	-55.45	-13	42.45
5729.4	H	-55.63	8.13	-47.50	-13	34.50
3819.6	V	-56.57	8.23	-48.34	-13	35.34
5729.4	V	-56.79	7.23	-49.56	-13	36.56

Test Mode：WCDMA Band II CH9262						
Frequency (MHz)	Antenna polarization	LVL (dBm)	Correction factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)
3704.8	H	-45.53	8.55	-36.98	-13	23.98
5557.2	H	-60.51	7.78	-52.73	-13	39.73
3704.8	V	-46.51	8.32	-38.19	-13	25.19
5557.2	V	-61.23	7.69	-53.54	-13	40.54
Test Mode： WCDMA Band II CH9400						
3760	H	-45.19	8.90	-36.29	-13	23.29
5640	H	-59.41	8.10	-51.31	-13	38.31
3760	V	-49.01	8.46	-40.55	-13	27.55
5640	V	-59.13	7.23	-51.9	-13	38.9
Test mode: WCDMA Band II CH9538						

3815.2	H	-49.19	8.94	-40.25	-13	27.25
5722.8	H	-58.73	8.34	-50.39	-13	37.39
3815.2	V	-55.89	8.21	-47.68	-13	34.68
5722.8	V	-58.87	7.45	-51.42	-13	38.42

Test Mode：WCDMA Band V CH4132						
Frequency (MHz)	Antenna polarization	LVL (dBm)	Correction factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)
1652.8	H	-56.73	11.45	-45.28	-13	32.28
2479.2	H	-56.85	9.49	-47.36	-13	34.36
1652.8	V	-63.45	10.32	-53.13	-13	40.13
2479.2	V	-55.95	9.41	-46.54	-13	33.54
Test Mode：WCDMA Band V CH4182						
1672.8	H	-55.57	11.67	-43.9	-13	30.90
2509.2	H	-56.67	9.89	-46.78	-13	33.78
1672.8	V	-54.27	10.93	-43.34	-13	30.34
2509.2	V	-63.45	9.79	-53.66	-13	40.66
Test mode: WCDMA Band V CH4233						
1693.2	H	-55.14	11.91	-43.23	-13	30.23
2539.8	H	-56.51	9.95	-46.56	-13	33.56
1693.2	V	-63.63	11.21	-52.42	-13	39.42
2539.8	V	-57.08	10.51	-46.57	-13	33.57

Test Mode：HSDPA Band II CH9262						
Frequency (MHz)	Antenna polarization	LVL (dBm)	Correction factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)
3704.8	H	-46.51	8.55	-37.96	-13	24.96
5557.2	H	-60.68	7.78	-52.90	-13	39.90
3704.8	V	-47.75	8.32	-39.43	-13	26.43
5557.2	V	-60.05	7.69	-52.36	-13	39.36
Test Mode： HSDPA Band II CH9400						
3760	H	-45.44	8.90	-36.54	-13	23.54

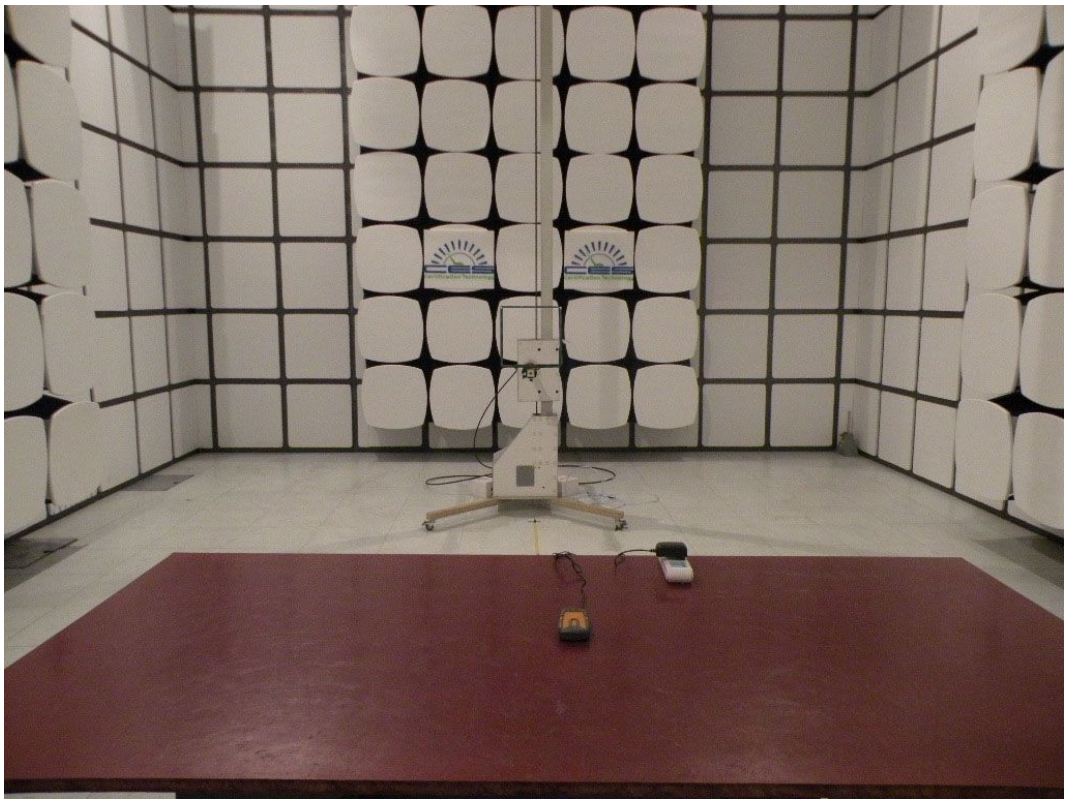
5640	H	-60.39	8.10	-52.29	-13	39.29
3760	V	-53.13	8.46	-44.67	-13	31.67
5640	V	-59.67	7.23	-52.44	-13	39.44
Test mode: HSDPA Band II CH9538						
3815.2	H	-49.17	8.94	-40.23	-13	27.23
5722.8	H	-60.88	8.34	-52.54	-13	39.54
3815.2	V	-56.1	8.21	-47.89	-13	34.89
5722.8	V	-60.72	7.45	-53.27	-13	40.27

Test Mode：HSDPA Band V CH4132						
Frequency (MHz)	Antenna polarization	LVL (dBm)	Correction factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)
1652.8	H	-55.34	11.45	-43.89	-13	30.89
2479.2	H	-55.94	9.49	-46.45	-13	33.45
1652.8	V	-63.64	10.32	-53.32	-13	40.32
2479.2	V	-55.97	9.41	-46.56	-13	33.56
Test Mode：HSDPA Band V CH4182						
1672.8	H	-54.94	11.67	-43.27	-13	30.27
2509.2	H	-56.67	9.89	-46.78	-13	33.78
1672.8	V	-55.36	10.93	-44.43	-13	31.43
2509.2	V	-66.46	9.79	-56.67	-13	43.67
Test mode: HSDPA Band V CH4233						
1693.2	H	-55.16	11.91	-43.25	-13	30.25
2539.8	H	-56.51	9.95	-46.56	-13	33.56
1693.2	V	-66.55	11.21	-55.34	-13	42.34
2539.8	V	-57.07	10.51	-46.56	-13	33.56

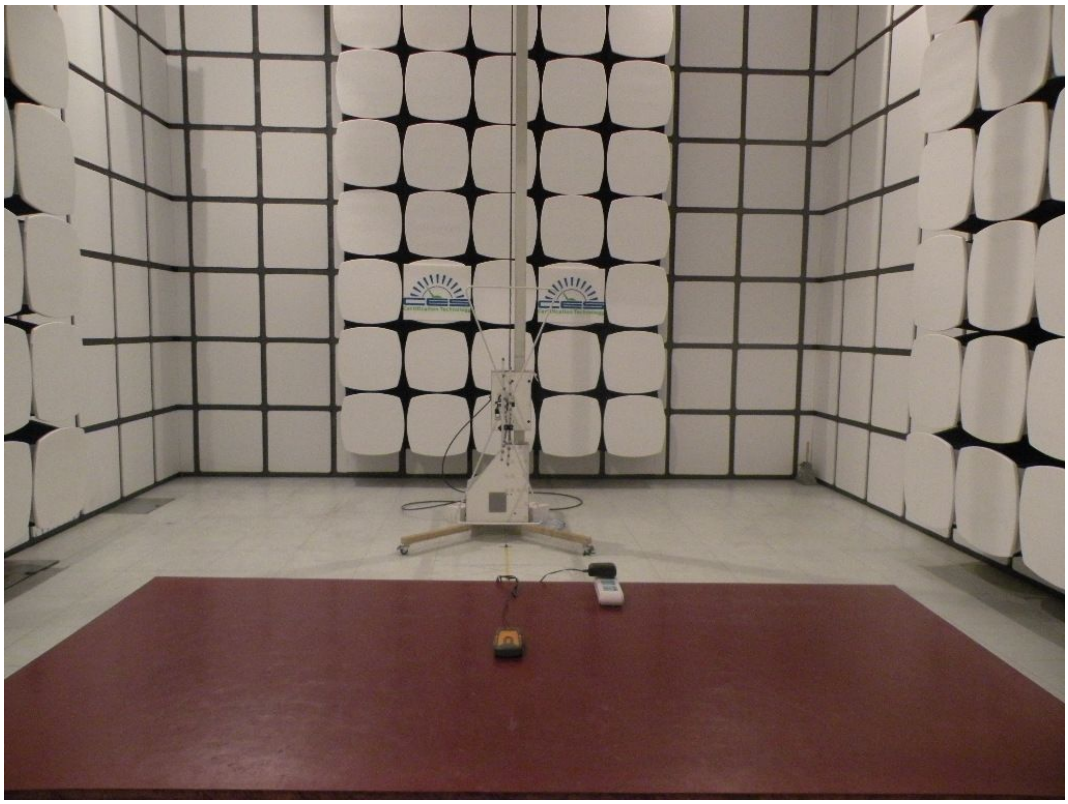
5. Test setup photo

Photographs-Radiated Emission Test Setup in Chamber

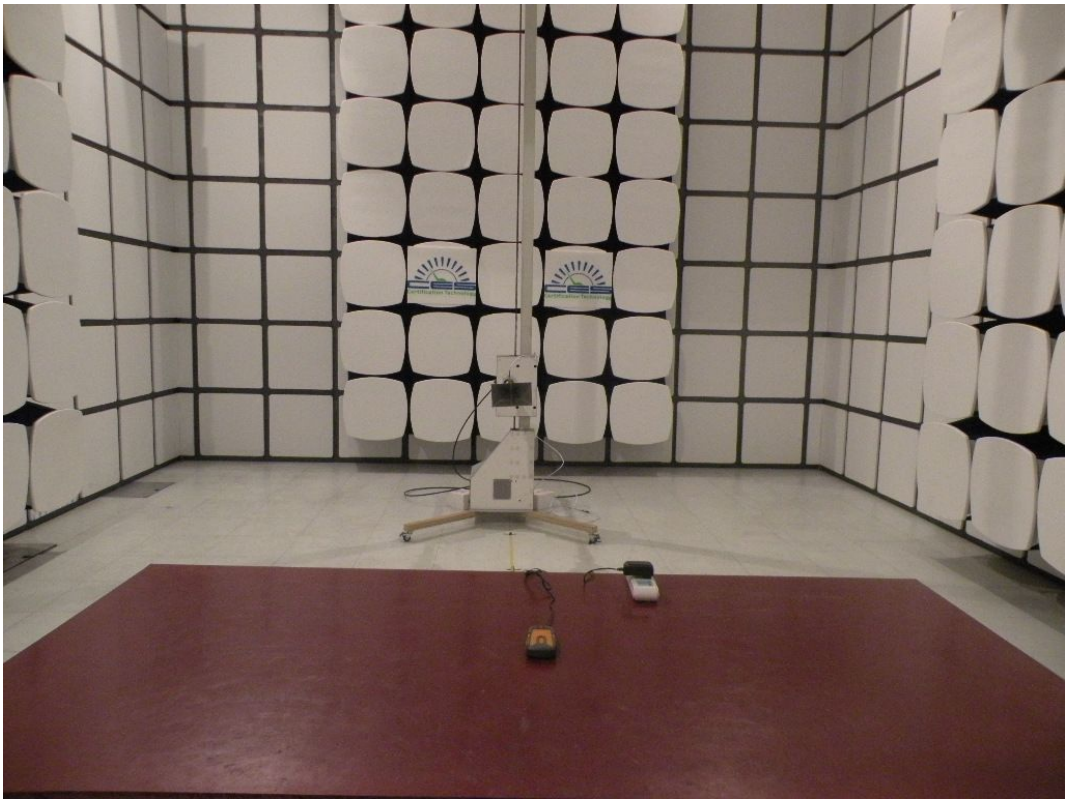
Below 30M



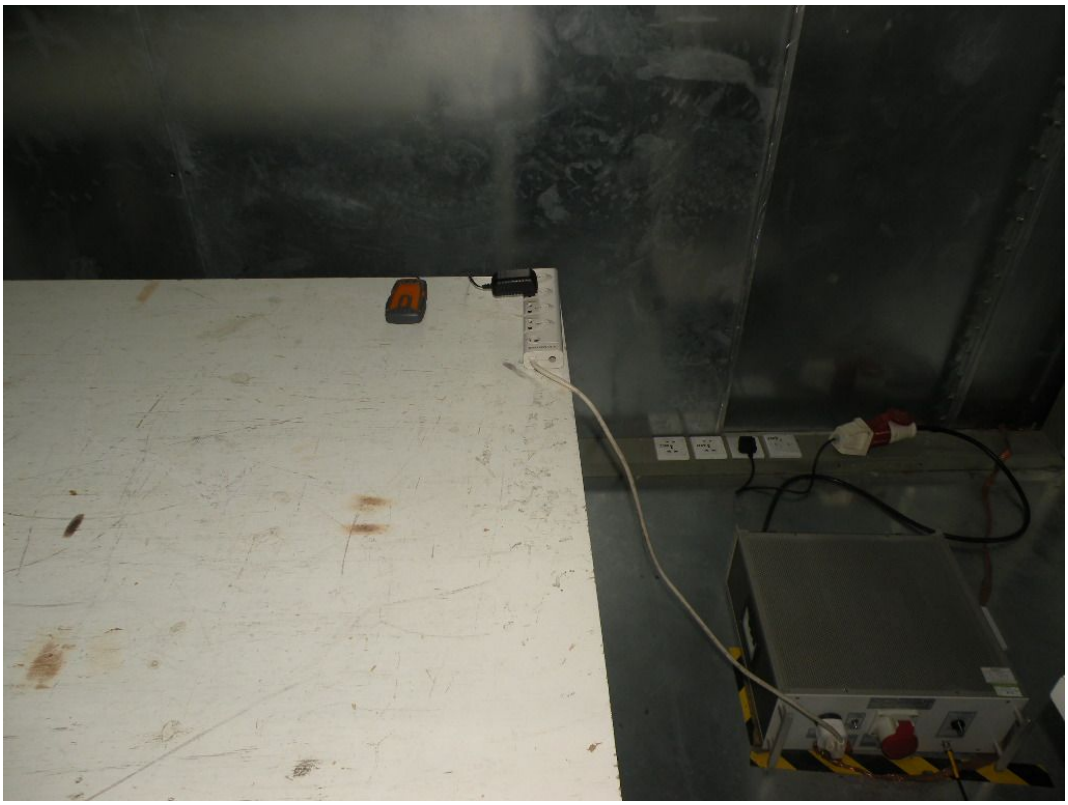
Below 30M-1G



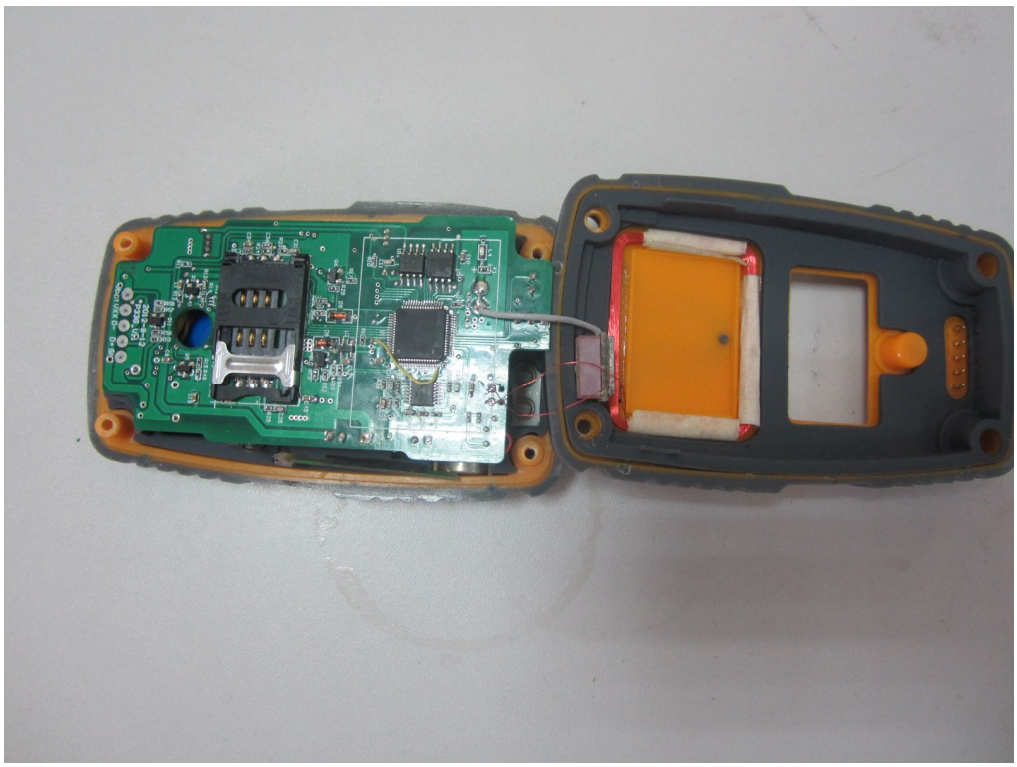
Above 1G

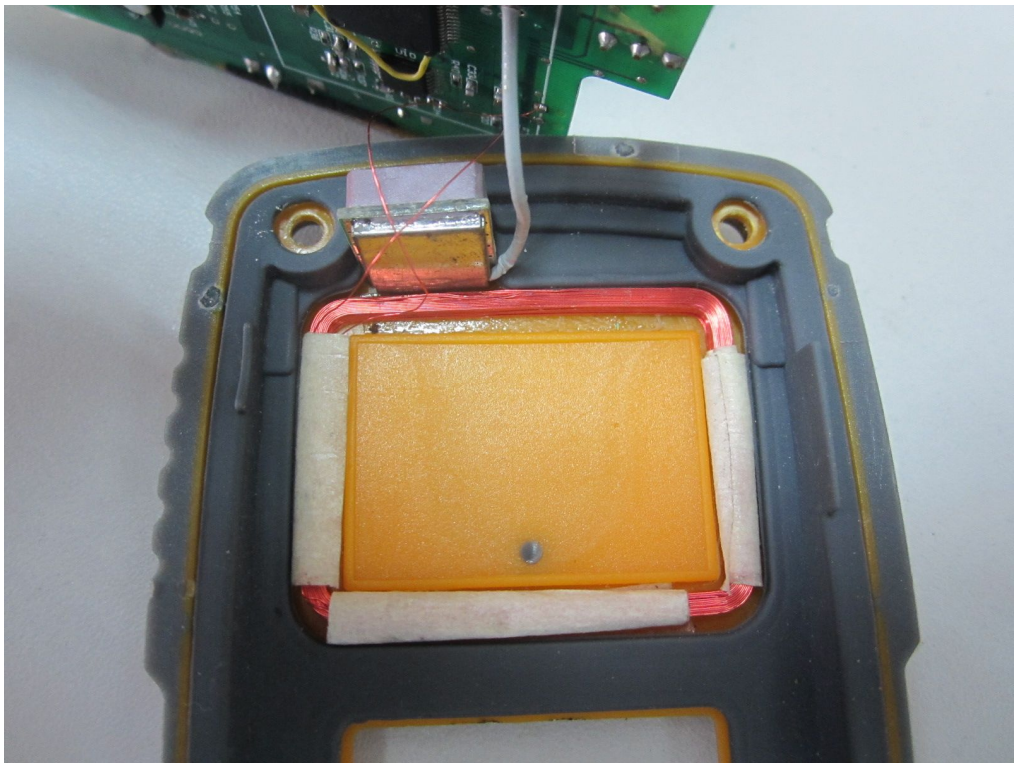


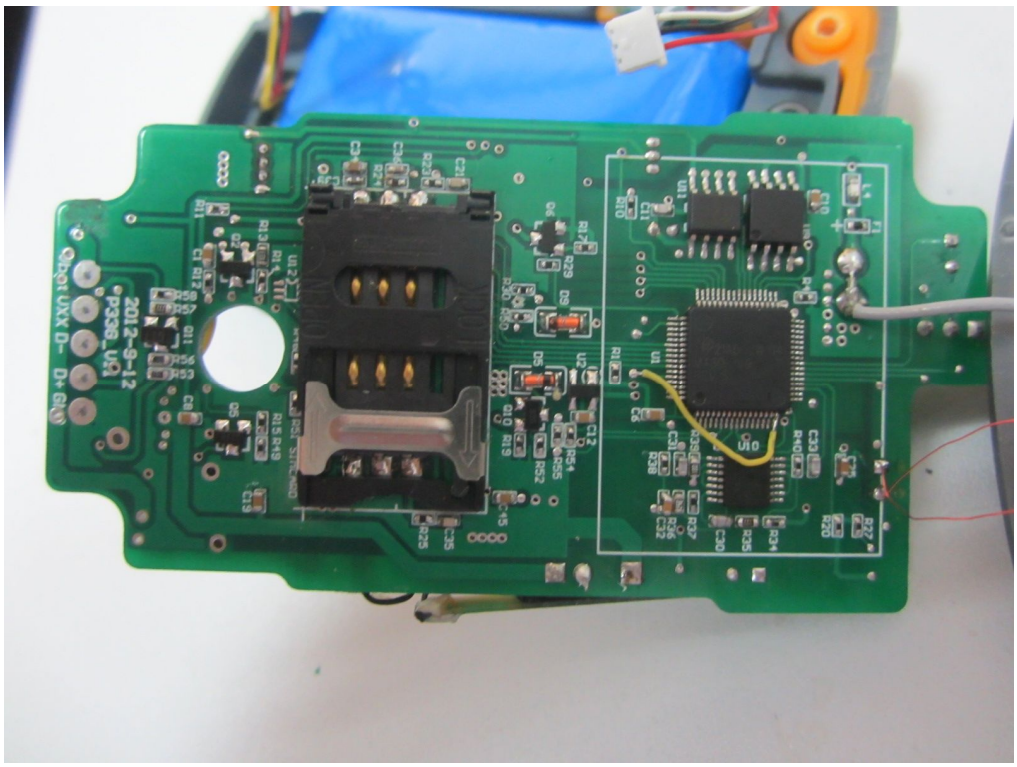
Photographs-Conducted Emission Test Setup

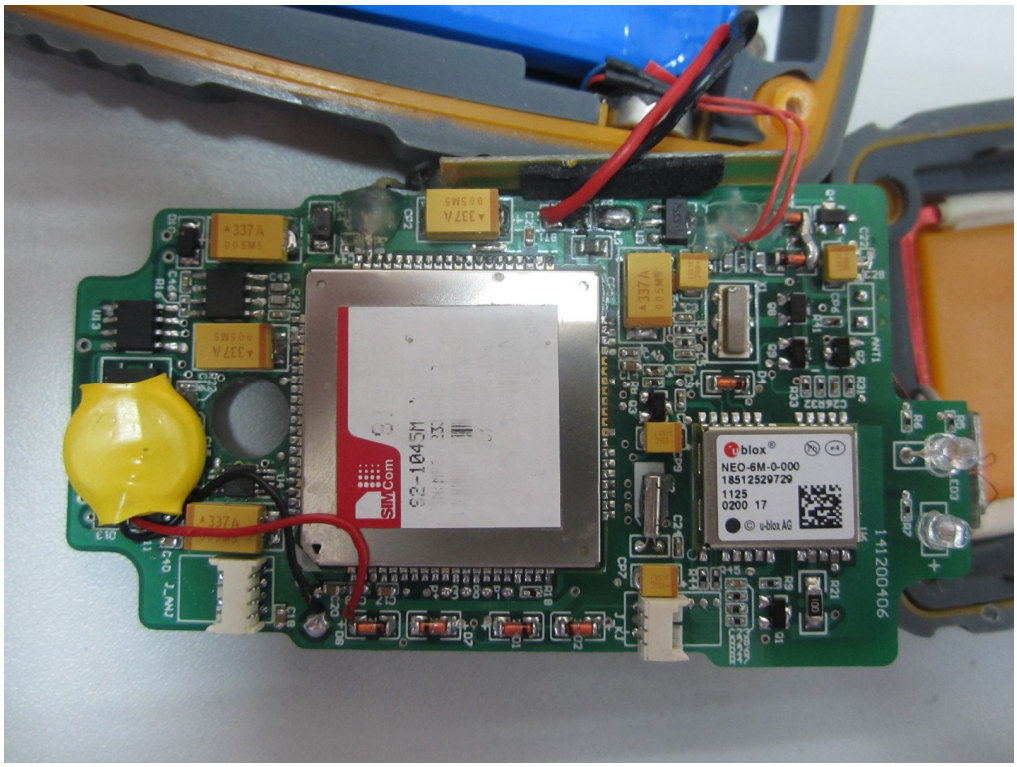


6. Photos of EUT





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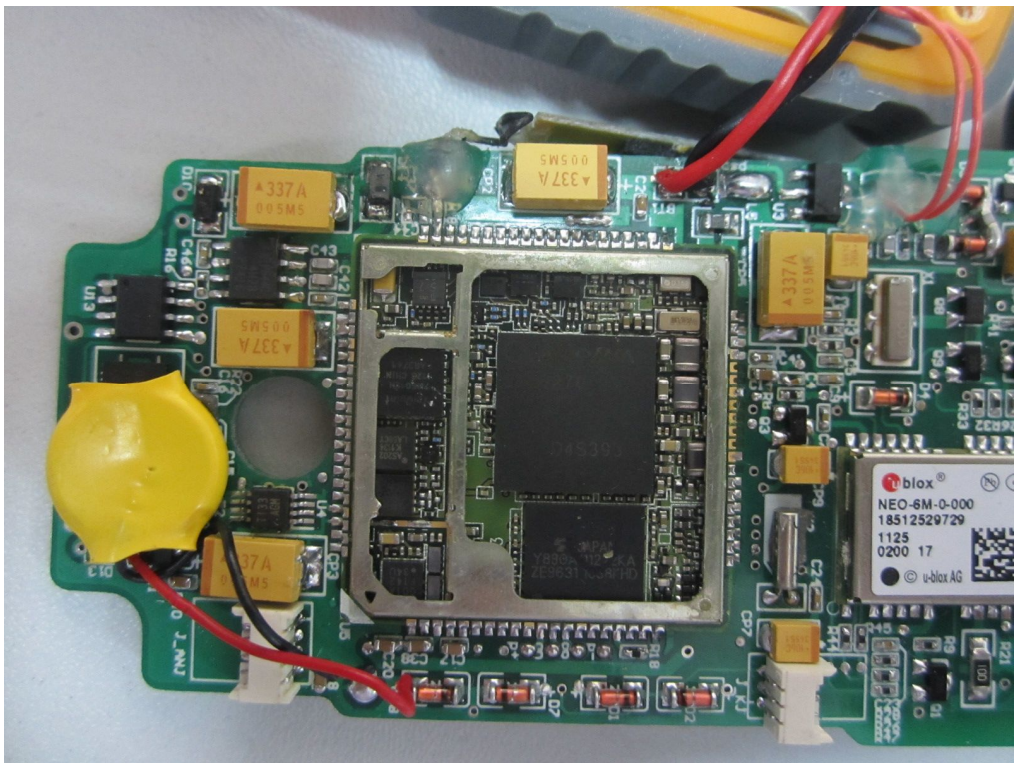
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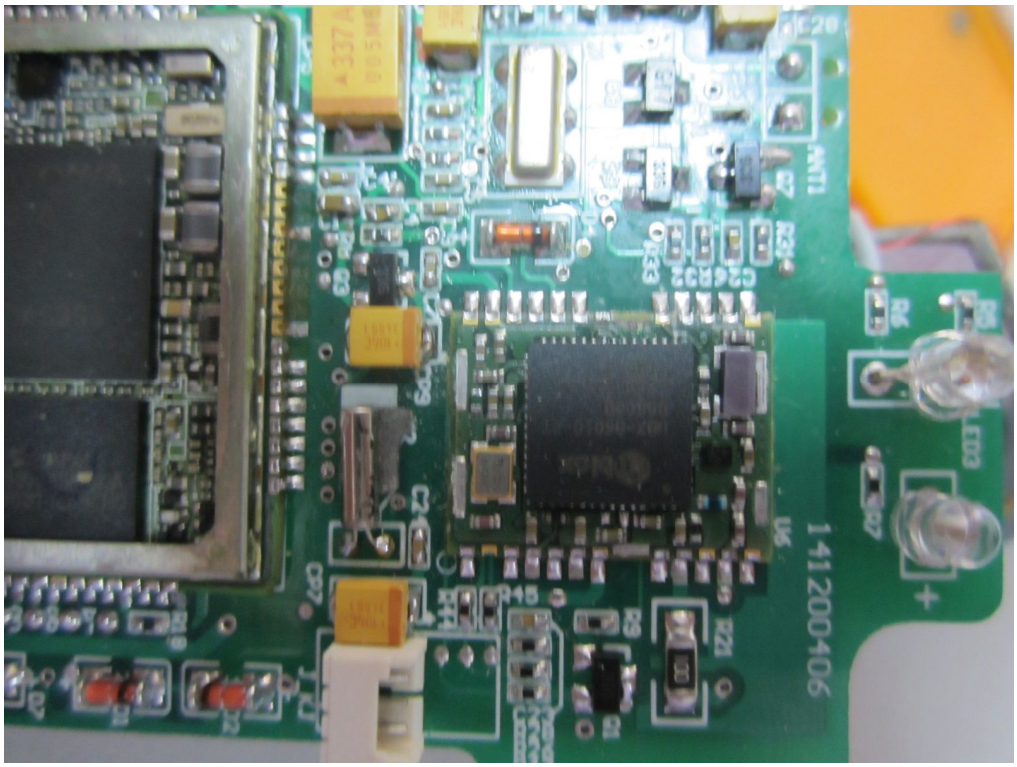

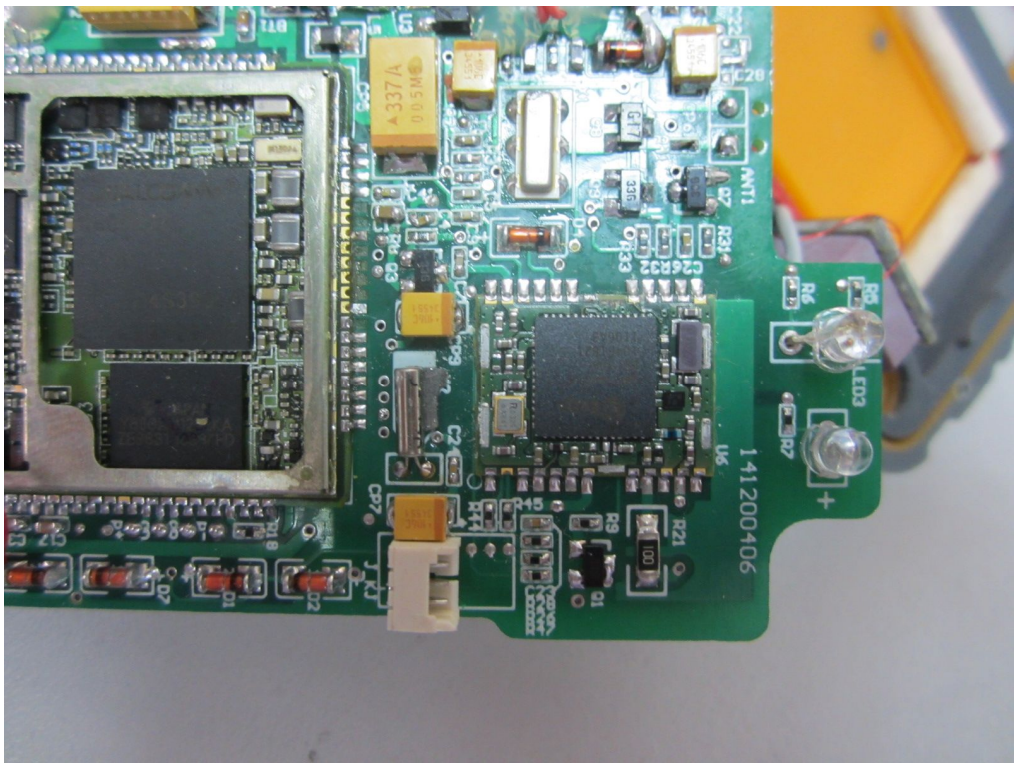

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