

FCC TEST REPORT

FCC ID NO. : SJ8RX160

Applicant : **RDI Technology (Shenzhen) Co., Ltd.**
Building C1 Xingtang Industrial Park, East Baishixia, Fuyong, Baoan,
Shenzhen, P.R.C.

Equipment Under Test (EUT) :

Product Name : Wireless Receiver

Model No. : RX 160

Standards : FCC Part 15 SUBPART B

Date of Test : August 18,2008

Test Engineer : Nunu.Deng

Reviewed By : 

PERPARED BY:

Waltek Services (Shenzhen) Co., Ltd.

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2 Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 5GHz)	FCC PART 15, SUBPART B: 2003	ANSI C63.4: 2003	Class B	PASS
Conducted Emission (150KHz to 30MHz)	FCC PART 15, SUBPART B: 2003	ANSI C63.4: 2003	Class B	PASS

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4 General Information

4.1 Client Information

Applicant: **RDI Technology (Shenzhen) Co., Ltd.**
Address of Applicant: Building C1 Xingtang Industrial Park, East Baishixia, Fuyong, Baoan, Shenzhen, P.R.C.
Manufacturer: RDI Technology (Shenzhen) Co., Ltd.
Address of Manufacturer: Building C1 Xingtang Industrial Park, East Baishixia, Fuyong, Baoan, Shenzhen, P.R.C.

4.2 General Description of E.U.T.

Product Name: Wireless Receiver
Model No.: RX160

4.3 Details of E.U.T.

Power Supply: Adapter input: AC 120V/60Hz
Adapter output: DC 9V

4.4 Description of Support Units

Compliance test was performed test in ON mode .
The customer requested FCC tests for a Wireless Receiver.
The standard used was FCC Part 15.107 & Part15.109, SUBPART B

4.5 Test Facility

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

- **IC – Registration No.:IC7760**

Waltek Services(Shenzhen) Co., Ltd. has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration IC7760,July 24,2008.

- **FCC – Registration No.: 880581**

Waltek Services(Shenzhen) Co., Ltd. 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 880581, June 24, 2008.

4.6 Test Location

All Emissions tests were performed at:-

1/F, Fukangtai Building, West Baima Rd., Songgang Street,
Baoan District, Shenzhen 518105, China.

5 Equipment Used during Test

5.1 Equipment Used during (Emission and Immunity Test)

Equipment	Brand Name	Model	Cal.Int Months	LastCal. Date
3m Anechoic chamber				
EMC Analyzer	Agilent	E7405A	12	Jan-08
Active Loop Antenna	Beijing Dazhi	ZN30900A	12	Jan-08
Trilog Broadband Antenna	SCHWARZBECK MESS-ELEKTROM	VULB9163	12	Jan-08
Broadband Preamplifier	SCHWARZBECK MESS-ELEKTROM	BBV 9718	12	Jan-08
10m Coaxial Cable with N-male Connectors usable,	SCHWARZBECK MESS-ELEKTROM	AK 9515 H	12	Jan-08
10m 50 Ohm Coaxial Cable with N-plug, individual length, usable up to 3(5)GHz, Connectors	SCHWARZBECK MESS-ELEKTROM	AK 9513	12	Jan-08
Positioning Controller	C&C LAB	CC-C-IF	12	Jan-08
Color Monitor	SUNSP0	SP-14C	12	Jan-08
EMI Shielded Room				
Test Receiver	ROHDE&SCHWARZ	ESPI	12	Jan-08
Two-Line V-Network	ROHDE&SCHWARZ	ENV216	12	Jan-08
Absorbing Clamp	ROHDE&SCHWARZ	MDS-21	12	Jan-08
10m 50 Ohm Coaxial Cable with N-plug individual length, usable up to 3(5)GHz, Connectors	SCHWARZBECK MESS-ELEKTROM	AK 9514	12	Jan-08

6 Conduction Emissions, 0.15MHz to 30MHz

Test Requirement:	FCC Part 15.107
Test Method:	ANSI C63.4: 2003
Test Date:	August 18,2008
Frequency Range:	150kHz to 30MHz
Class/Severity:	B
Limit:	66-56 dB μ V/m between 0.15MHz & 0.5MHz 56 dB μ V/m between 0.5MHz & 5MHz 60 dB μ V/m between 5MHz & 30MHz
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth) Quasi-Peak & Average if maximised peak within 6dB of Average Limit

6.1.1 E.U.T. Operation

Operating Environment:

Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1012 mbar

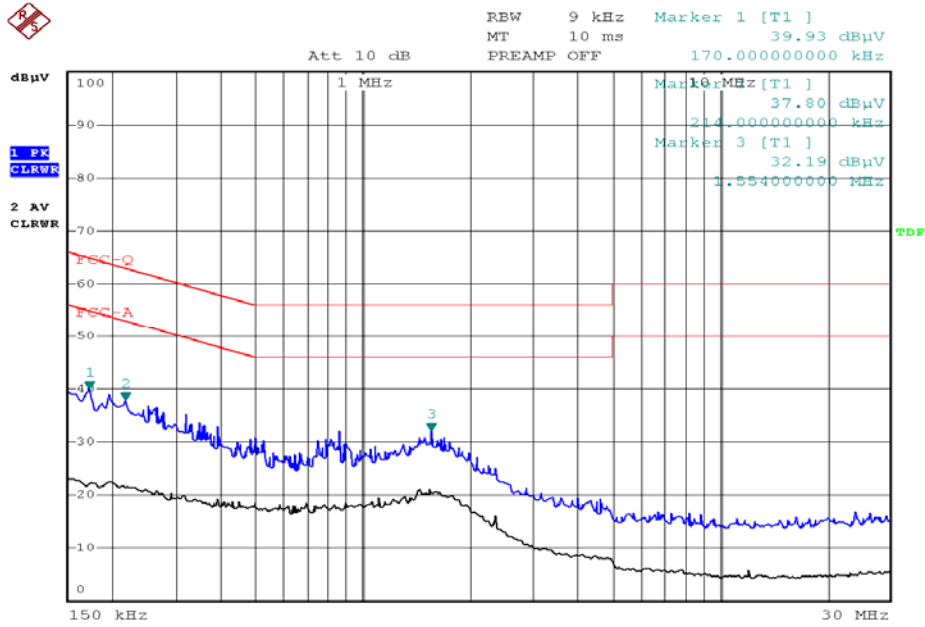
EUT Operation :

Compliance test was performed test in ON mode.

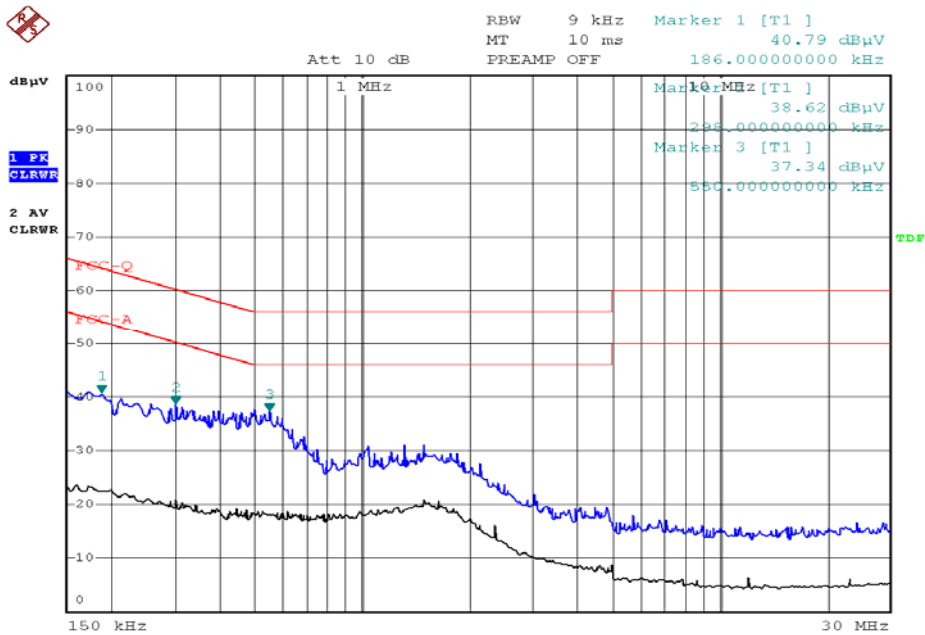
The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

6.1.2 Measurement Result

Live Line



Neutral Line



6.1.3 Measurement Data

Freq. MHz	Line	QP Reading dBuV	FCC 15 Limit dBuV	Margin dB	AV Reading dBuV	FCC 15 Limit dBuV	Margin dB
0.170	Live	39.93	64.97	25.04	33.27	54.97	21.70
0.214	Live	37.8	63.07	25.27	31.52	53.07	21.55
1.554	Live	32.19	56.00	23.81	28.19	46.00	17.81
0.186	Neutral	40.19	64.22	24.03	34.73	54.22	19.49
0.298	Neutral	38.62	60.34	21.72	33.04	50.34	17.30
0.550	Neutral	37.34	56.00	18.66	32.86	46.00	13.14

7 Radiated Emissions, 30MHz to 5GHz

Test Requirement:	FCC Part 15.109
Test Method:	ANSI C63.4: 2003
Test Date:	August 18,2008
Frequency Range:	30MHz to 5GHz
Measurement Distance:	3m
Class:	Class B
Limit:	40.0 dB μ V/m between 30MHz & 88MHz 43.5 dB μ V/m between 88MHz & 216MHz 46.0 dB μ V/m between 216MHz & 960MHz 54.0 dB μ V/m zbove 960MHz
Detector:	Peak for pre-scan (120kHz resolution bandwidth) Quasi-Peak if maximised peak within 6dB of limit

7.1.1 E.U.T. Operation

Operating Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1012 mbar

EUT Operation :

Compliance test was performed test in ON mode.

7.1.2 EUT Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4: 2003, The specification used in this report was the FCC Part 15.109 Class B limits.

7.1.3 Spectrum Analyzer Setup

According to FCC Part 15.109 Class B Rules, the system was tested to 5000 MHz.

Start Frequency	30 MHz
Stop Frequency	5000 MHz
Sweep Speed	Auto
IF Bandwidth.....	1 MHz
Video Bandwidth.....	1 MHz
Quasi-Peak Adapter Bandwidth	120 kHz
Quasi-Peak Adapter Mode.....	Normal
Resolution Bandwidth	1MHz

7.1.4 Test procedure

For the radiated emissions test, since the EUT does not have a power source, there was no connection to AC outlets.

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT is compliant with all installation combinations.

All data was recorded in the peak detection mode. Quasi-peak readings were performed only when an emission was found to be marginal (within -4 dBμV of specification limits), and are distinguished with a "Qp" in the data table.

The EUT was under normal mode during the final qualification test and the configuration was used to represent the worst case results.

ANSI STANDARD C63.4-2003 12.1.1.2 OTHER TYPES OF RECEIVERS: A typical signal or an unmodulated CW signal at the operating frequency of the EUT shall be supplied to the EUT for all measurements. Such a signal may be supplied by either a signal generator and an antenna in close proximity to the EUT or directly conducted into the antenna terminals of the EUT. The signal level shall be sufficient to the local oscillator of the EUT.

7.1.5 Summary of Test Results

According to the data in section 7.1.6, the EUT complied with the FCC Part 15.109 Class B standards.

The test results: PASS.

7.1.6 Radiated Emissions Test Data

Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)	FCC 15 Subpart B Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Turntable Angle (°)
50.82	Horizontal	27.28	40.00	-12.72	1.2	150
101.53	Horizontal	26.58	43.50	-16.92	1.5	120
179.86	Horizontal	20.85	43.50	-22.65	1.4	100
944.70	Horizontal	41.20	46.00	-4.80	1.5	110
40.16	Vertical	27.33	40.00	-12.67	1.3	100
95.32	Vertical	26.96	43.50	-16.54	1.2	120
178.62	Vertical	20.84	43.50	-22.66	1.5	120
944.03	Vertical	41.26	46.00	-4.76	1.4	80

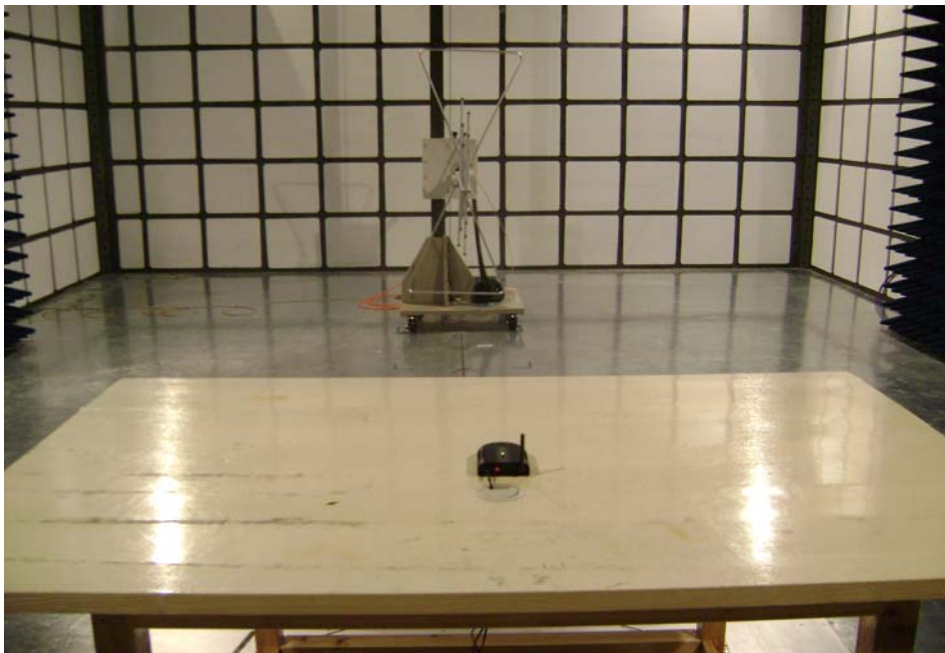
8 Photographs - Test Setup

8.1 Conduction Emissions Test Setup

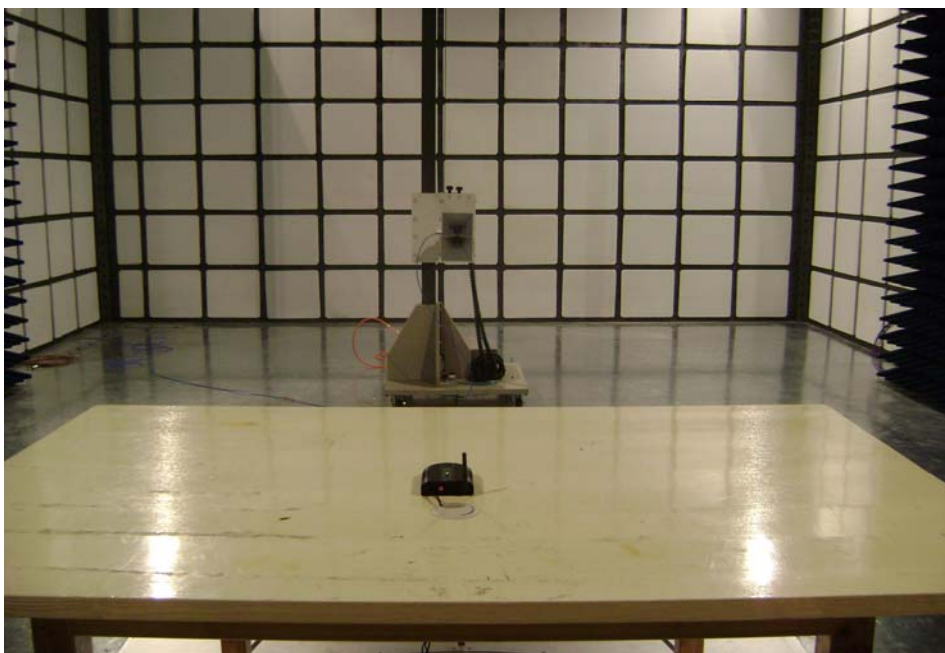


8.2 Radiated Emissions Test Setup

8.2.1 Radiation Emission Test View For 30MHz-1000MHz



8.2.2 Radiation Emission Test View For 1GHz-5GHz



9 Photographs - Constructional Details

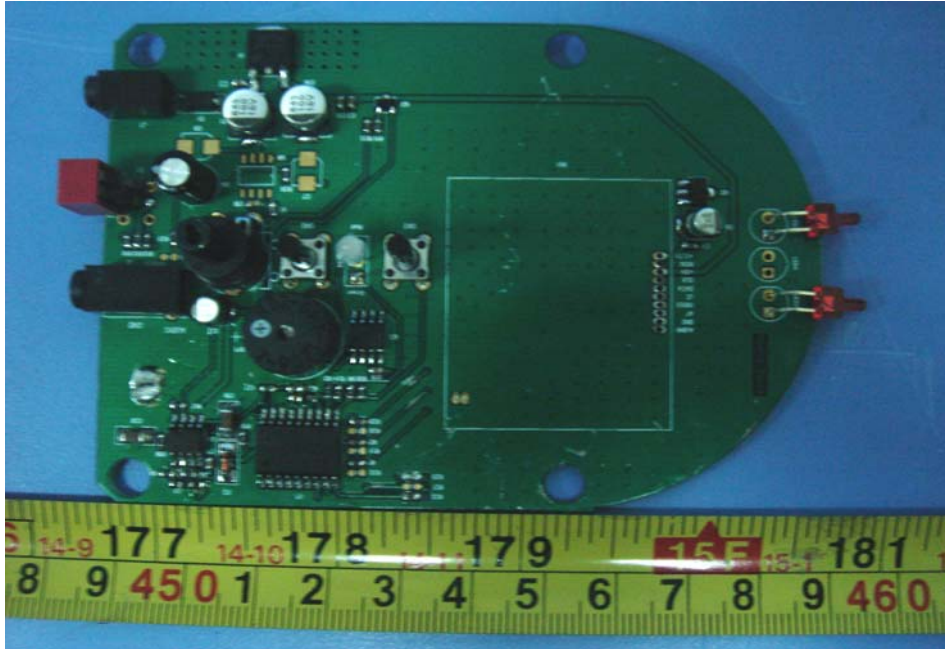
9.1.1 EUT - Front View



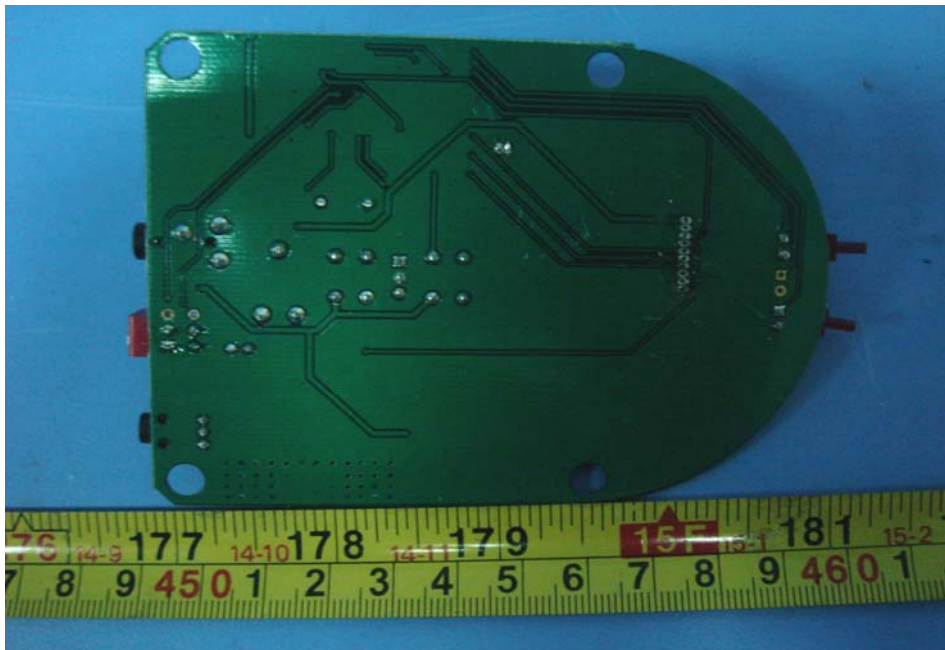
9.1.2 EUT - Back View



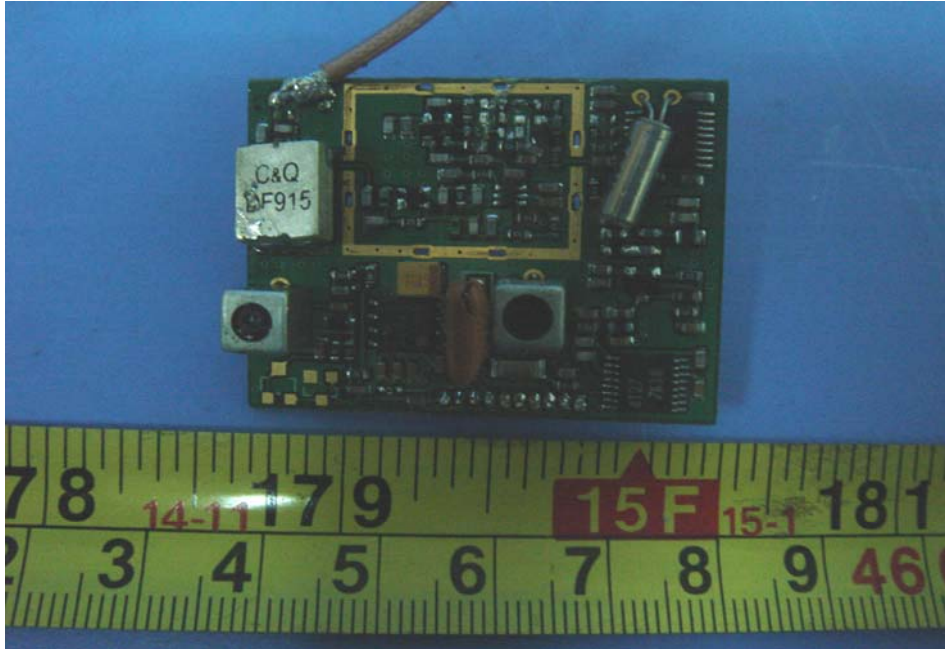
9.1.3 PCB1 - Front View



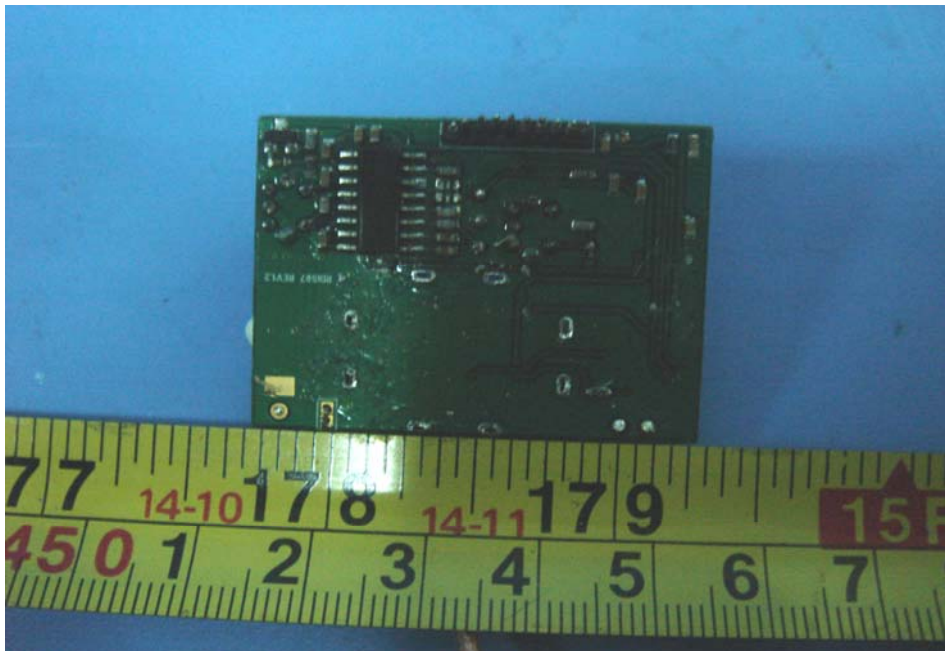
9.1.4 PCB1 - Back View



9.1.5 PCB2 - Front View



9.1.6 PCB2 - Back View



10 FCC ID Label

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1)this device may not cause harmful interference,and (2) this device must accept any interference received, including interference that may cause undesired operation.

The Label must not be a stick-on paper. The Label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Proposed Label Location on EUT
EUT Top View/ proposed FCC Label Location

