



FCC & IC TEST REPORT

FCC Part 15.249 and RSS-210 A2.9

Report Reference No......: **TRE13090121 R/C:10852**

FCC ID.....: **P2F-DIRC505B**

IC.....: **10574A-DIRC505B**

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Date of issue.....: Nov 04, 2013

Testing Laboratory Name: **Shenzhen Huatongwei International Inspection Co., Ltd**

Address.....: Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China

Applicant's name.....: **Drift Innovation Ltd**

Address.....: The Light Box Unit 125, 111 Power Road ,London,UK.

Test specification:

FCC Part 15.249: Operation within the bands 902–928 MHz, 2400–2483.5 MHz, 5725–5875 MHz, and 24.0–24.25 GHz.

Standard: **RSS-210**

RSS-Gen

TRF Originator.....: Shenzhen Huatongwei International Inspection CO., Ltd

Master TRF.....: Dated 2006-06

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Equipment Under Test: Drift 2-way Remote Control

Trade Mark: 

Model/Type reference.....: DI-RC505B

Listed Models: /

Modulation: GFSK

Manufacturer: **Foxda Technology Industrial(Shenzhen) Co.,Ltd**

Operation Frequency.....: 2430MHz

Rating: DC 3.70V/DC 5.0V from USB

Result.....: **PASS**

TEST REPORT

Test Report No. :	TRE13090121	Nov 04, 2013 Date of issue
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Equipment under Test : Drift 2-way Remote Control

Model /Type : DI-RC505B

Listed Models : /

Applicant : **Drift Innovation Ltd**

Address : The Light Box Unit 125, 111 Power Road ,London,UK.

Manufacturer : **Foxda Technology Industrial(Shenzhen) Co.,Ltd**

Address : 1F of 1st Building&1F-3F of 2nd Building, Foxda Industrial Zone,North of Lanzhu Road,Pingshan New District,Shenzhen City,Guangdong Province,P.R.China

Test Result:	PASS
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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 Rules Part 15.249:2012](#): Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, 5725-5850 MHz and 24.0 - 24.25 GHz.

[ANSI C63.10: 2009](#) – American National Standard for Testing Unlicensed Wireless Devices

[RSS-210 Issue 8 December 2010](#) – Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment

[RSS-Gen Issue 3 December 2010](#) – General Requirements and Information for the Certification of Radio Apparatus

2. SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	Sep 29, 2013
Testing commenced on	:	Oct 08, 2013
Testing concluded on	:	Nov 04, 2013

2.2. Equipment Under Test

Power supply system utilised

Power supply voltage	:	<input type="radio"/> 120V / 60 Hz	<input type="radio"/> 115V / 60Hz
		<input type="radio"/> 12 V DC	<input type="radio"/> 24 V DC
		<input checked="" type="radio"/> Other (specified in blank below)	

DC3.70V/DC5.0V from USB

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

The EUT (Drift 2-way Remote Control (M/N:DI-RC505B)).

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

2.4. EUT operation mode

The EUT has been tested under typical operating condition.

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

This submittal(s) (test report) is intended for **FCC ID:P2F-DIRC505B** and **IC:10574A-DIRC505B** filing to comply with Section 15.249 of the FCC Part 15, Subpart C Rules and RSS-210 A2.9 Rules.

2.6. Modifications

No modifications were implemented to meet testing criteria.

2.7. NOTE

1. The EUT equipped an 2.4GHz Remote Control module ,The functions of the EUT listed as below:

Function	Test Standards	Reference Report
2.4G Remote Control	FCC Part 15 Subpart C 15.249 RSS-210 A2.9	TRE13090121

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 (2009) 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. 01, 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, 2015.

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 Jun. 01, 2012, valid time is until Jun. 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, 2015.

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, 2012. Valid time is until Dec. 19, 2015.

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, 2015.

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, 2015.

FCC ID: P2F-DIRC505B IC: 10574A-DIRC505B

3.3. 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.

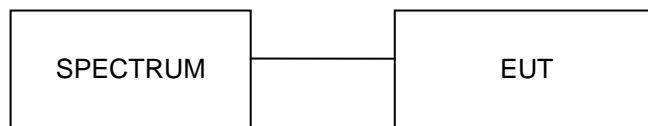
Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.57 dB	(1)
Transmitter power Radiated	2.20 dB	(1)
Conducted spurious emission 9KHz-40 GHz	1.60 dB	(1)
Radiated spurious emission 9KHz-40 GHz	2.20 dB	(1)
Conducted Emission 9KHz-30MHz	3.39 dB	(1)
Radiated Emission 30~1000MHz	4.65 dB	(1)
Radiated Emissio 1~18GHz	5.16 dB	(1)
Radiated Emissio 18-40GHz	5.54 dB	(1)
Occupied Bandwidth	-----	(1)

- (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

3.4. Configuration of Tested System

Fig. 2-1 Configuration of Tested System



Equipment Used in Tested System

3.5. Summary of standards and result

Test specification clause		Test case	Verdict
FCC Part 15.207	RSS-Gen 7.2.4	AC Power Conducted Emission	PASS
FCC Part 15.109/ 15.205/ 15.209/15.249 (a)	RSS-Gen 7.2.5/RSS-Gen 7.2.2/RSS-Gen A2.9 (a)	Radiated Emission	PASS
FCC Part 15.249(d)	RSS-210 A2.9 (b)	Band Edge	PASS
FCC Part 15. 215	RSS-Gen 4.6.1	20dB Bandwidth	PASS
FCC Part 15.203/15.247 (b)	RSS-Gen 7.12	Antenna Requirement	PASS

- NOTE: 1. The detailed test result please see section 4.
 2. The test report merely corresponds to the test sample.
 3. It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

3.6. Environmental conditions

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

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 950-1050mbar

3.7. Equipments Used during the Test

Radiated Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Ultra-Broadband Antenna	ShwarzBeck	VULB9163	538	2013/10/26
2	EMI TEST RECEIVER	Rohde&Schwarz	ESI 26	100009	2013/10/26
3	EMI TEST SOFTWARE	Audix	E3	N/A	2013/10/26
4	TURNTABLE	ETS	2088	2149	N/A
5	ANTENNA MAST	ETS	2075	2346	N/A
6	EMI TEST Software	Rohde&Schwarz	ESK1	N/A	N/A
7	HORN ANTENNA	ShwarzBeck	9120D	1011	2013/10/26
8	Amplifer	Sonoma	310N	E009-13	2013/10/26
9	JS amplifer	Rohde&Schwarz	JS4-00101800-28-5A	F201504	2013/10/26
10	High pass filter	Compliance Direction systems	BSU-6	34202	2013/10/26
11	HORN ANTENNA	ShwarzBeck	9120D	1012	2013/10/26
12	Amplifer	Compliance Direction systems	PAP1-4060	120	2013/10/26
13	Loop Antenna	Rohde&Schwarz	HFH2-Z2	100020	2013/10/26
14	TURNTABLE	MATURO	TT2.0	----	N/A
15	ANTENNA MAST	MATURO	TAM-4.0-P	----	N/A
16	Horn Antenna	SCHWARZBECK	BBHA9170	25841	2013/10/26
17	EMI TEST Software	Audix	E3	N/A	N/A

20dB Bandwidth					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Spectrum Analyzer	Rohde&Schwarz	FSP	1164.4391.40	2013/10/26

The Calibration Interval was one year.

4. TEST CONDITIONS AND RESULTS

4.1. ANTENNA REQUIREMENT

According to FCC Part 15C § 15.203, An intentional radiator shall be de-signed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

According to RSS-Gen 7.1.2: A transmitter can only be sold or operated with antennas with which it was approved. Transmitter may be approved with multiple antenna types. An antenna type comprises antennas having similar in-band and out-of-band radiation patterns. Testing shall be performed using the highest gain antenna of each combination of transmitter and antenna type for which approval is being sought, with the transmitter output power set at the maximum level. Any antenna of the same type having equal or lesser gain as an antenna that had been successfully tested with the transmitter, will also be considered approved with the transmitter, and may be used and marketed with the transmitter. For Category I transmitters, the manufacturer shall include with the application for certification a list of acceptable antenna types to be used with the transmitter.

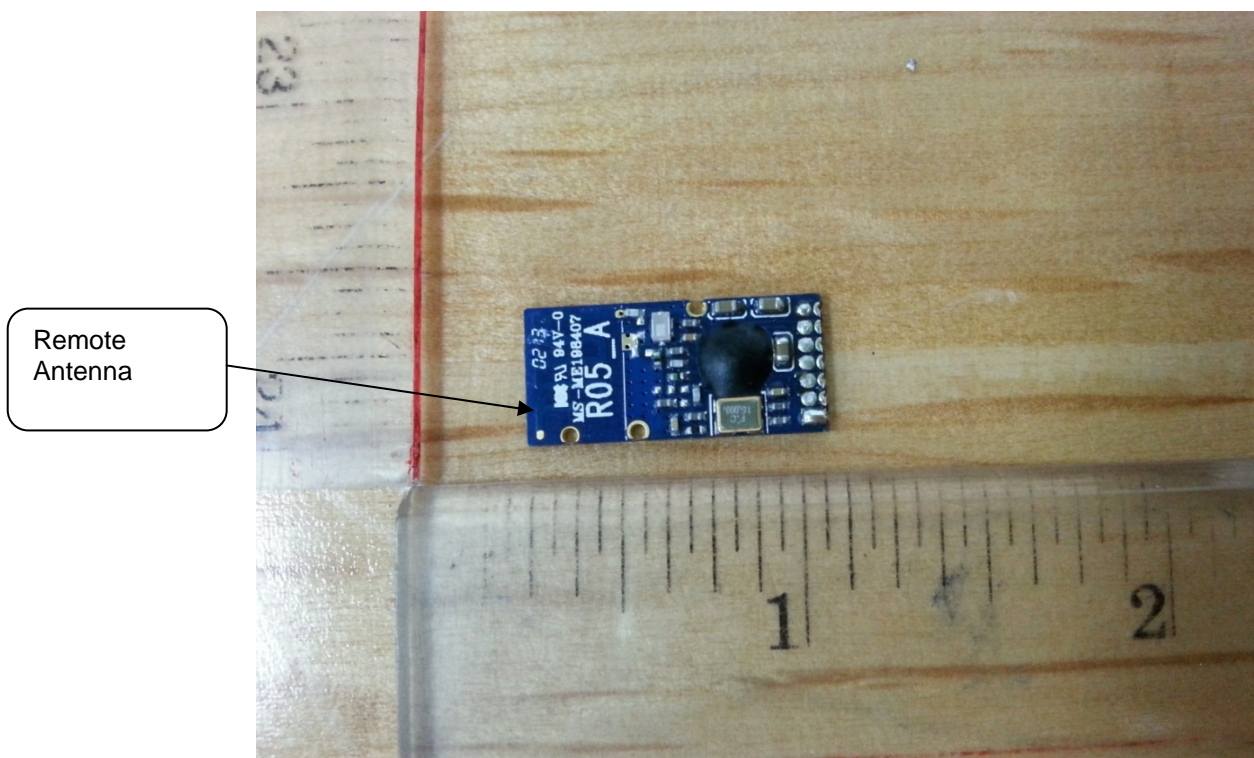
When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device's antenna shall be stated, based on measurement or on data from the antenna manufacturer. For transmitters of RF output power of 10 milliwatts or less, only the portion of the antenna gain that is in excess of 6 dBi (6 dB above isotropic gain) shall be added to the measured RF output power to demonstrate compliance with the radiated power limits specified in the applicable standard. For transmitters of output power greater than 10 milliwatts, the total antenna gain shall be added to the measured RF output power to demonstrate compliance to the specified radiated power limits.

Refer to statement below for compliance

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

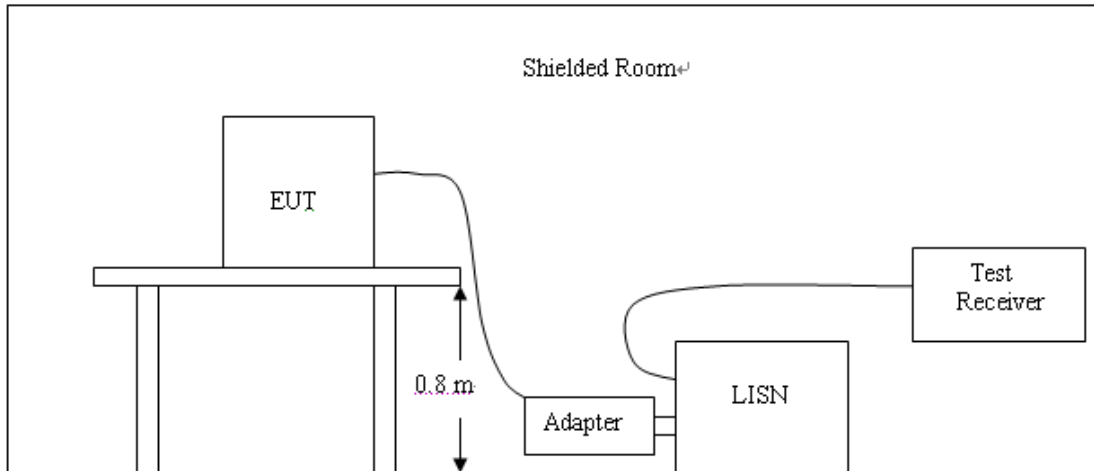
Antenna Connected Construction

The EUT complied the antenna requirement. The maximum Gain of the antenna only 1.50dBi.



4.2. Conducted Emissions Test (Not Applicable)

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 DC5V power from USB and USB connect to PC,the adapter 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 LIMIT

For intentional device, according to § 15.207(a) and RSS-Gen Section 7.2.4 for AC Power 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

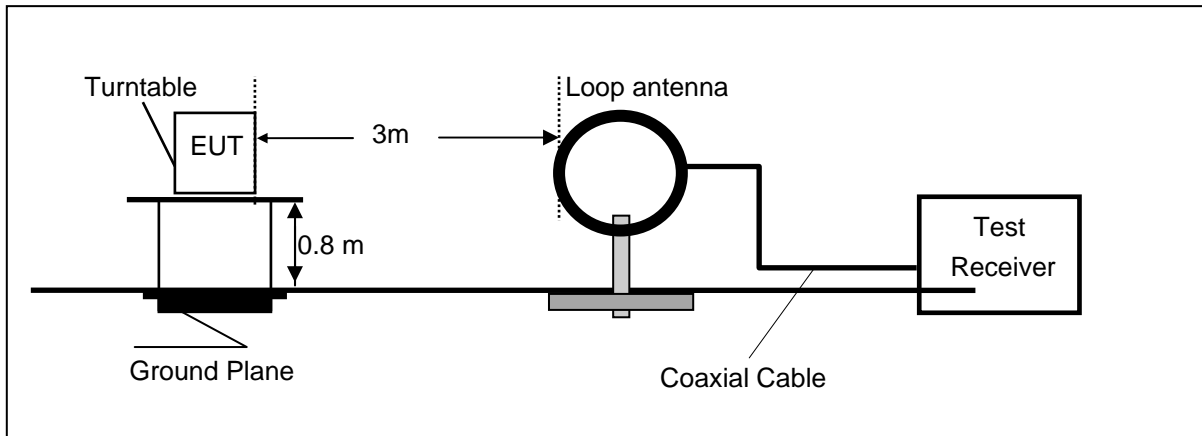
TEST RESULTS

Not Applicable (The Remote function can not open when USB connect to PC)

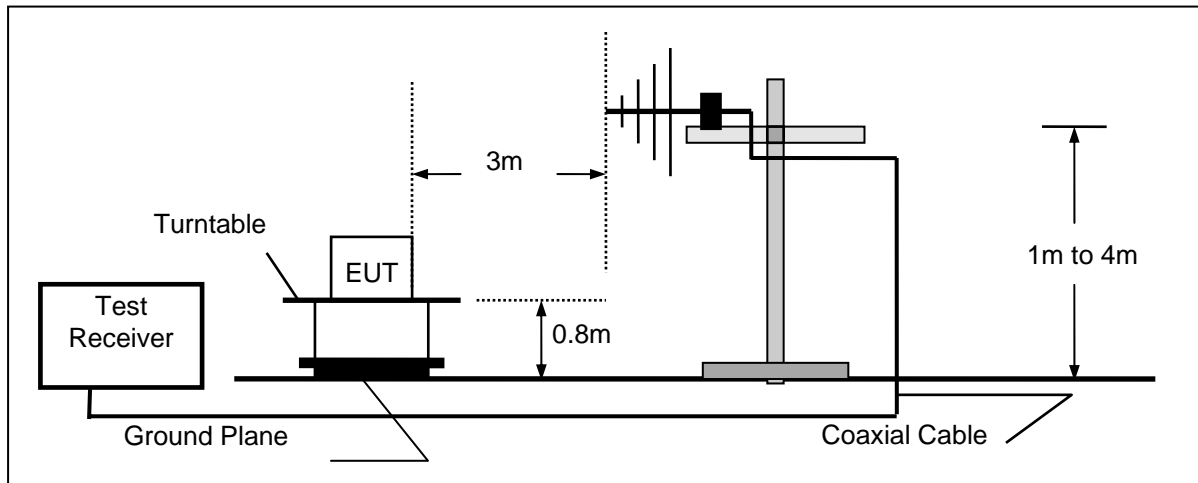
4.3. Radiated Emission Test

TEST CONFIGURATION

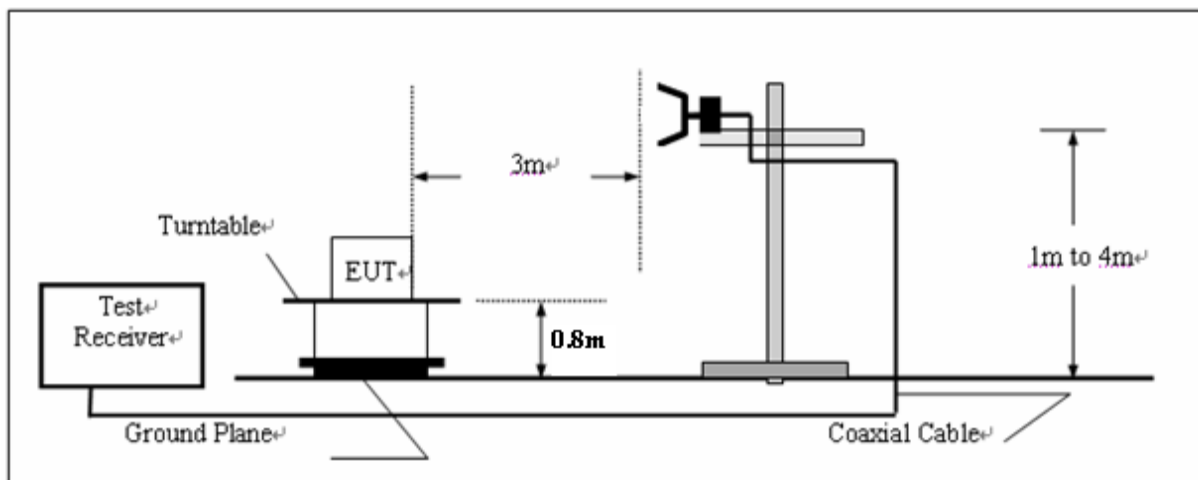
Frequency range 9KHz – 30MHz



Frequency range 30MHz – 100MHz



Frequency range above 1GHz-25GHz



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 fundamental frequency is 2.430GHz, So the radiation emissions frequency range were tested from 30MHz to 25GHz.

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	

RADIATION LIMIT

According to 15.249 (a): Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental		Field strength of harmonics	
	millivolts/ meter	dBuV/m	microvolts/ meter	dBuV/m
902-928MHz	50	94.00	500	54.00
2400-2483.5MHz	50	94.00	500	54.00
5725-5875 MHz	50	94.00	500	54.00
24.0-24.25 GHz	250	108.00	2500	68.00

According to RSS-210 A2.9 (a): The field strength measured at 3 metres shall not exceed the limits in the following table:

Fundamental frequency	Field strength of fundamental		Field strength of harmonics	
	millivolts/ meter	dBuV/m	microvolts/ meter	dBuV/m
902-928MHz	50	94.00	500	54.00
2400-2483.5MHz	50	94.00	500	54.00
5725-5875 MHz	50	94.00	500	54.00

Note: The limits shown in the above table are based on measurements using an average detector, except for the fundamental emission in the frequency band 902-928 MHz, which is based on measurements using a CISPR quasi-peak detector.

The frequency spectrum above 1 GHz for Transmitter was investigated. All emission not reported are much lower than the prescribed limits. Set the RBW=1MHz,VBW=3MHz for Peak Detector while the RBW=1MHz,VBW=10Hz for Average Detector,Readings are both peak and average values.

For intentional device, according to § 15.209(a) and RSS-gen section 7.2.5 Table 5 the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the following table.

Frequency(MHz)	Distance(Meters)	Radiated(dBμV/m)	Radiated(μV/m)
0.009-0.49	300	20log(2400/F(KHz))	2400/F(KHz)
0.49-1.705	30	20log(24000/F(KHz))	24000/F(KHz)
1.705-30	30	20log(30)	30
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

Remark:

1. ULTRA-BROADBAND ANTENNA for the radiation emission test below 1G.
2. HORN ANTENNA for the radiation emission test above 1G.
3. We tested three orientations,recored woest case for results.

For 9KHz to 30MHz

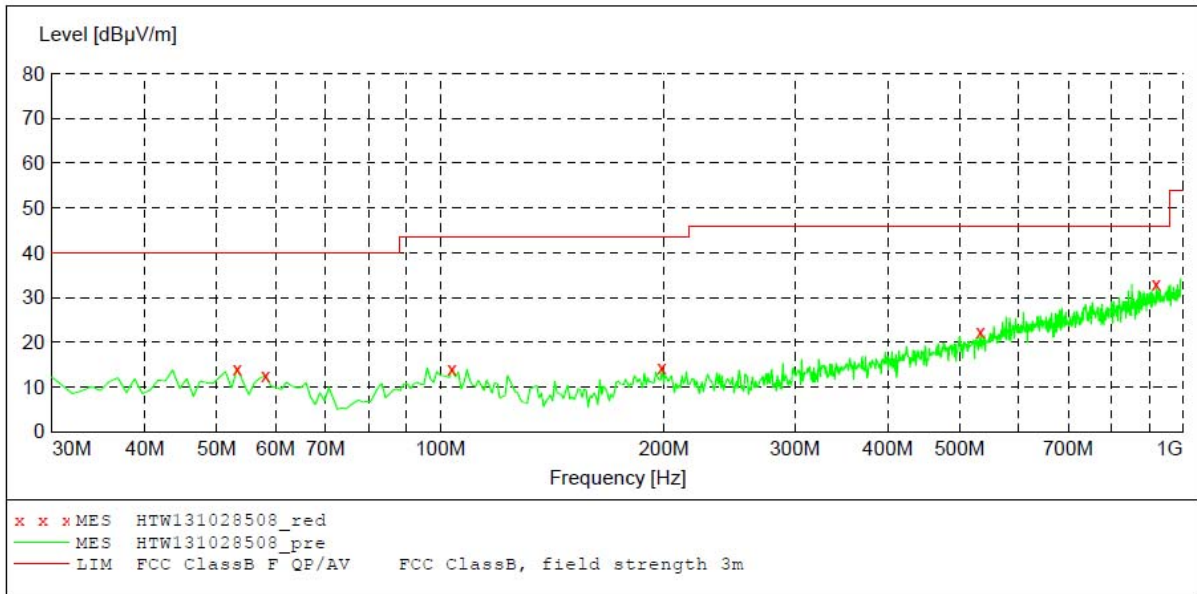
Frequency (MHz)	Corrected Reading (dBµV/m)@3m	FCC Limit (dBµV/m) @3m	Margin (dB)	Detector	Result
16.22	50.14	69.54	19.40	QP	PASS
28.45	51.45	69.54	18.09	QP	PASS

For 30MHz to 1000MHz

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

```

Short Description:      Field Strength
Start      Stop      Detector Meas.   IF      Transducer
Frequency  Frequency
30.0 MHz   1.0 GHz   MaxPeak  Coupled  100 kHz  VULB9163
    
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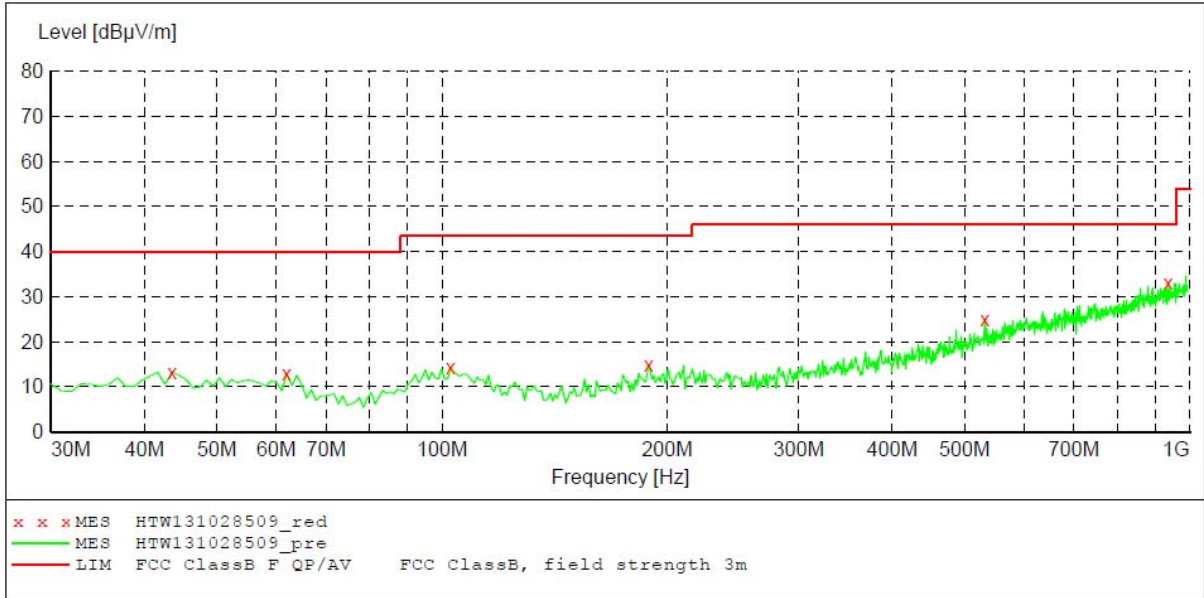
MEASUREMENT RESULT: "HTW131028508_red"

10/28/2013 10:28PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
53.280000	14.20	-15.3	40.0	25.8	PK	120.0	105.00	HORIZONTAL
58.130000	12.50	-15.5	40.0	27.5	PK	150.0	235.00	HORIZONTAL
103.720000	14.00	-14.0	43.5	29.5	PK	100.0	144.00	HORIZONTAL
198.780000	14.30	-14.5	43.5	29.2	PK	120.0	75.00	HORIZONTAL
533.430000	22.30	-5.9	46.0	23.7	PK	100.0	58.00	HORIZONTAL
919.490000	33.10	3.0	46.0	12.9	PK	100.0	60.00	HORIZONTAL

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

Short Description: Field Strength
 Start Stop Detector Meas. IF Transducer
 Frequency Frequency Time Bandw.
 30.0 MHz 1.0 GHz MaxPeak Coupled 100 kHz VULB9163



MEASUREMENT RESULT: "HTW131028509_red"

10/28/2013 10:29PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
43.580000	13.30	-15.0	40.0	26.7	PK	120.0	120.00	VERTICAL
62.010000	13.00	-16.4	40.0	27.0	PK	115.0	35.00	VERTICAL
102.750000	14.40	-13.9	43.5	29.1	PK	100.0	134.00	VERTICAL
189.080000	14.80	-14.9	43.5	28.7	PK	150.0	58.00	VERTICAL
532.460000	25.10	-5.9	46.0	20.9	PK	100.0	79.00	VERTICAL
935.980000	33.20	3.2	46.0	12.8	PK	100.0	121.00	VERTICAL

For 1GHz-25GHz

Mark	Frequency (MHz)	Level (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Reading Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Polarization	Detector
1	2429.98	92.03	3.83	27.45	36.55	97.30	114.00	21.97	Hor	Peak
2	4859.98	55.16	7.57	31.06	36.50	53.03	74.00	18.84	Hor	Peak
3	7305.12	50.24	9.22	35.83	34.11	39.30	74.00	23.76	Hor	Peak
4	9725.22	49.28	9.98	38.86	35.82	36.26	74.00	24.72	Hor	Peak
5	11500.20	52.05	12.51	39.80	36.18	35.92	74.00	21.95	Hor	Peak

Mark	Frequency (MHz)	Level (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Reading Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Polarization	Detector
1	2429.98	70.45	3.83	27.45	36.55	75.72	94.00	23.55	Hor	Average
2	4859.98	47.82	7.57	31.06	36.50	45.69	54.00	6.18	Hor	Average
3	7305.12	41.33	9.22	35.83	34.11	30.39	54.00	12.67	Hor	Average
4	9725.22	40.04	9.98	38.86	35.82	27.02	54.00	13.96	Hor	Average
5	11500.20	42.63	12.51	39.80	36.18	26.50	54.00	11.37	Hor	Average

Mark	Frequency (MHz)	Level (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Reading Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Polarization	Detector
1	2429.98	88.19	3.83	27.45	36.55	93.46	114.00	25.81	Ver	Peak
2	4859.98	59.28	7.57	31.06	36.50	57.15	74.00	14.72	Ver	Peak
3	7305.12	53.52	9.22	35.83	34.11	42.58	74.00	20.48	Ver	Peak
4	9725.22	50.08	9.98	38.86	35.82	37.06	74.00	23.92	Ver	Peak

Mark	Frequency (MHz)	Level (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Reading Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Polarization	Detector
1	2429.98	69.03	3.83	27.45	36.55	74.30	94.00	24.97	Ver	Average
2	4859.98	48.34	7.57	31.06	36.50	46.21	54.00	5.66	Ver	Average
3	7305.12	40.97	9.22	35.83	34.11	30.03	54.00	13.03	Ver	Average
4	9725.22	41.16	9.98	38.86	35.82	28.14	54.00	12.84	Ver	Average

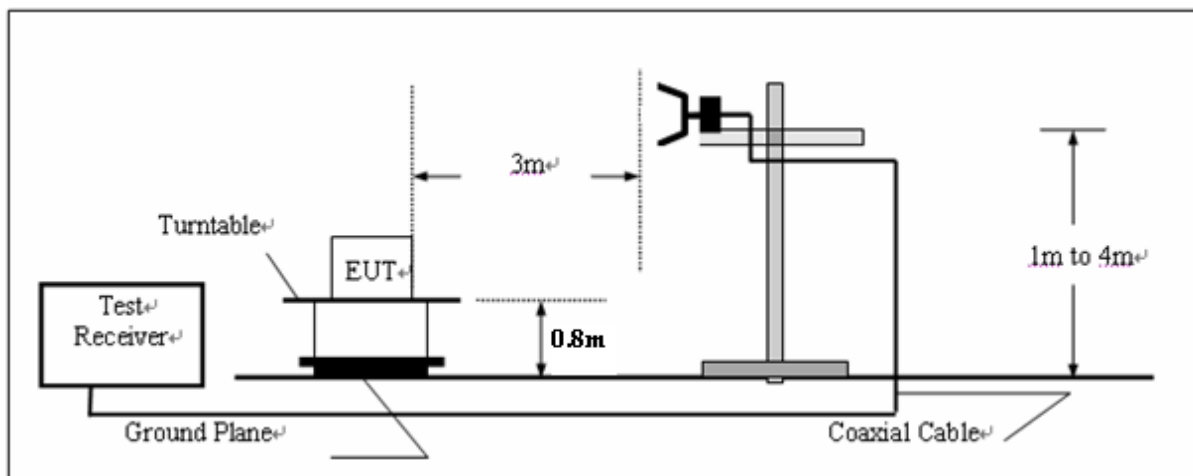
- REMARKS:**
1. Emission level (dBuV/m)=Raw Value(dBuV)+Correction Factor(dB/m)
 2. Correction Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
 3. The other emission levels were very low against the limit.
 4. Margin value = Limit value-Emission level.
 5. The limit value is defined as per 15.249

4.4. Out of band emissions

TEST PROCEDURE

The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.4 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW to 1MHz and VBM to 3MHz to measure the peak field strength and set RBW to 1MHz and VBW to 10Hz to measure the average radiated field strength. The conducted RF band edge was measured by using a spectrum analyzer. Set span wide enough to capture the highest in-band emission and the emission at the band edge. Set RBW to 100 KHz and VBM to 300 KHz, to measure the conducted peak band edge.

TEST CONFIGURATION

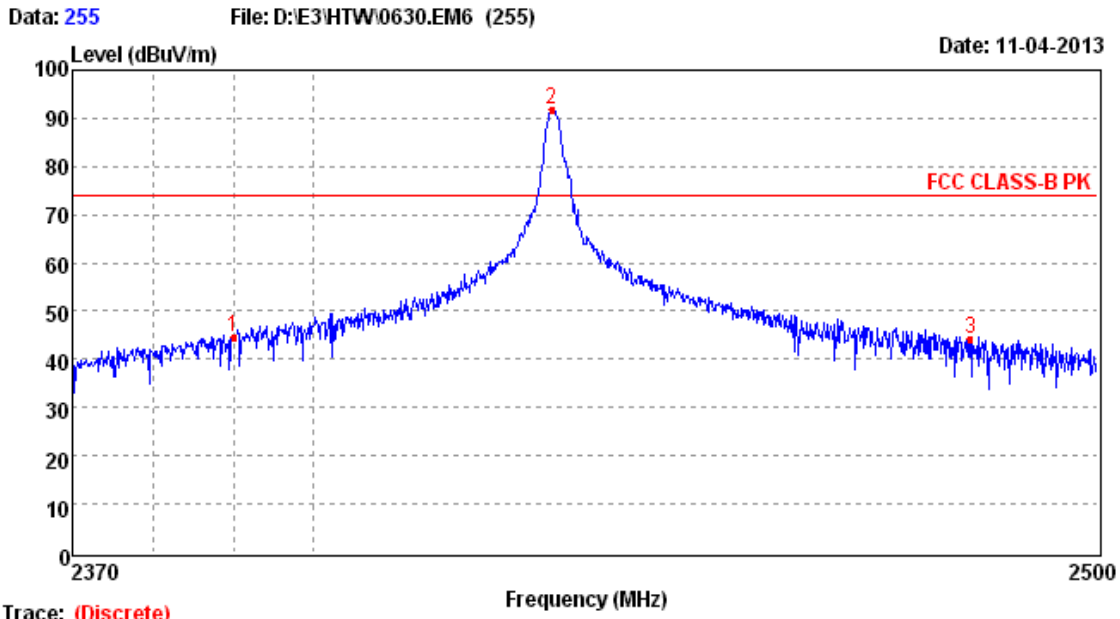


LIMIT

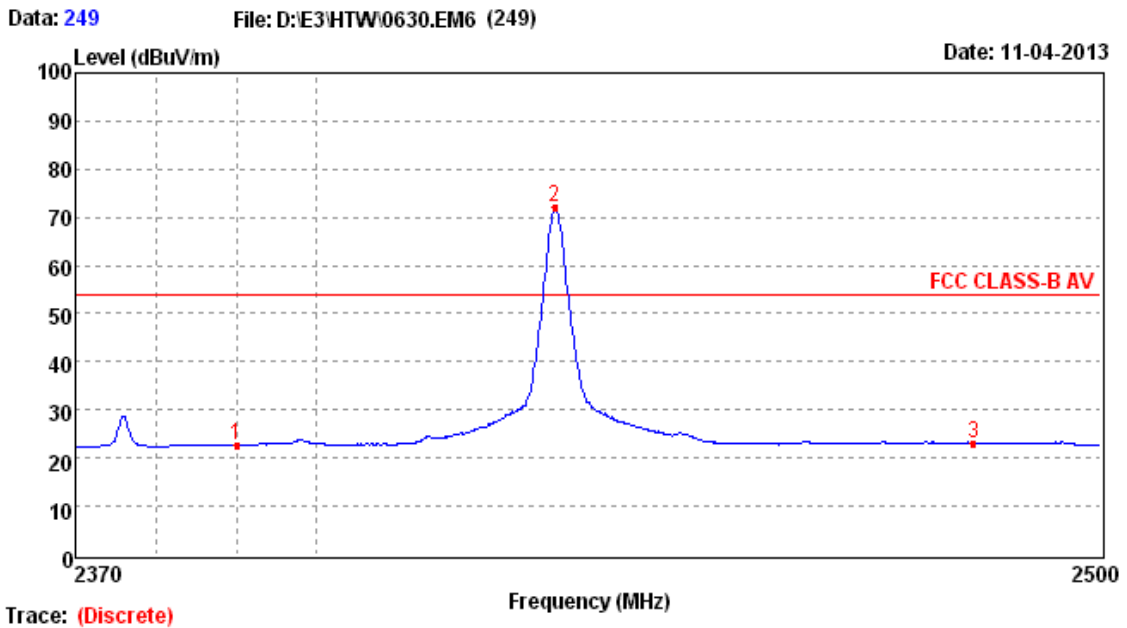
FCC PART 15.249(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

According to RSS-210 A2.9 (b): Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general field strength limits listed in RSS-Gen, whichever is less stringent.

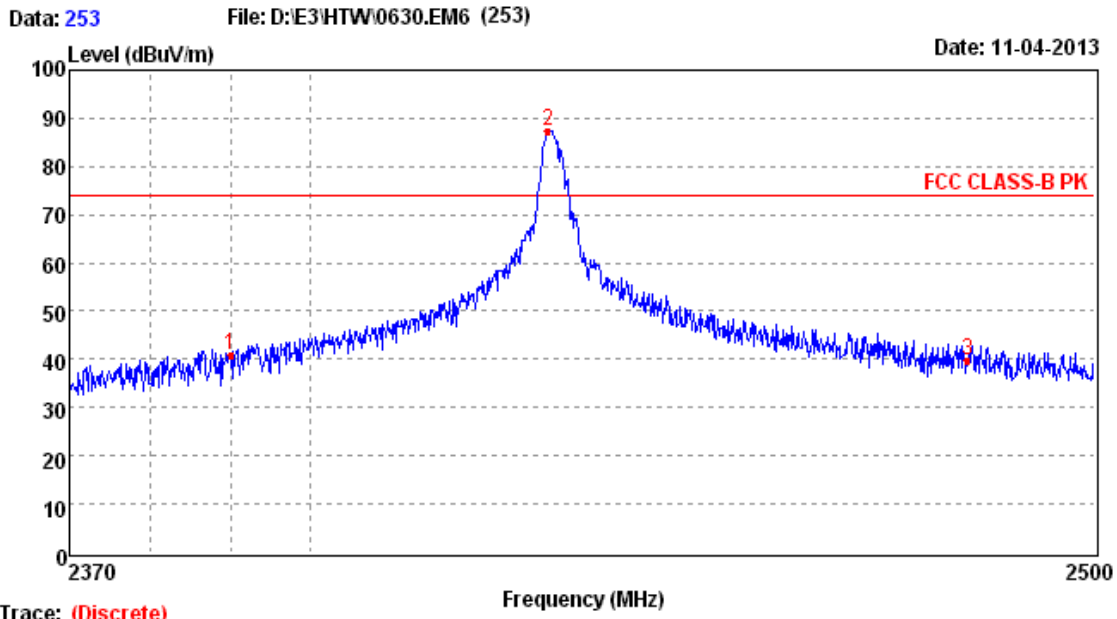
TEST RESULTS



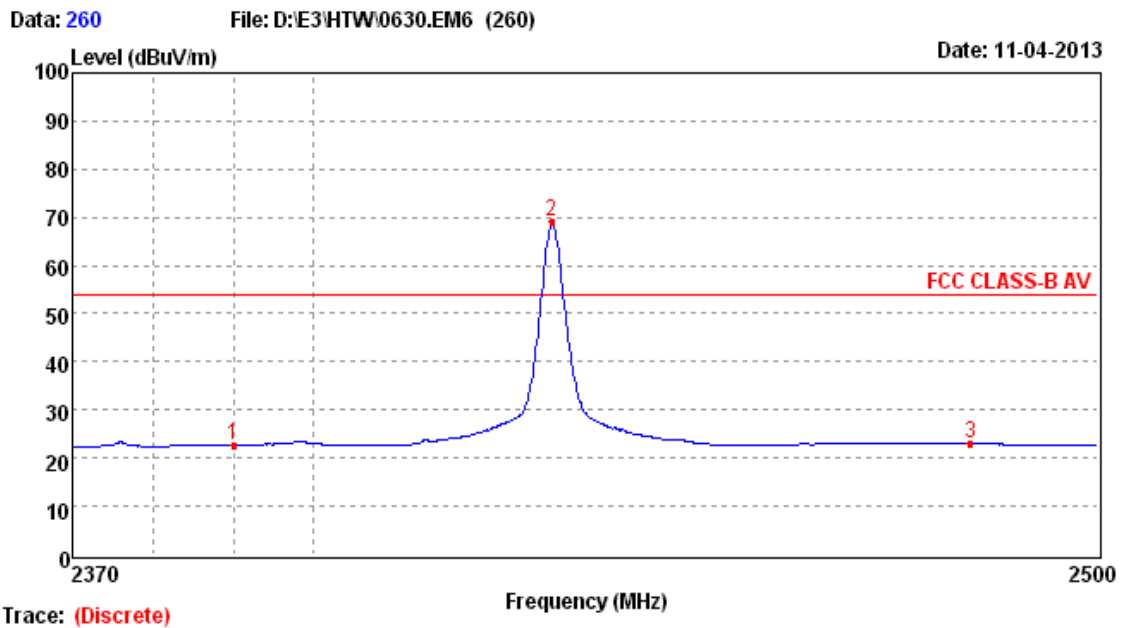
Mark	Frequency (MHz)	Level (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Reading Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Polarization	Detector
1	2390.00	45.37	3.79	27.45	36.55	50.68	74.00	28.63	Hor	Peak
2	2429.98	92.03	3.83	27.45	36.55	97.30	114.00	21.97	Hor	Peak
3	2483.50	43.79	3.88	27.45	36.55	49.01	74.00	30.21	Hor	Peak



Mark	Frequency (MHz)	Level (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Reading Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Polarization	Detector
1	2390.00	21.99	3.79	27.45	36.55	27.30	54.00	32.01	Hor	Average
2	2429.98	70.45	3.83	27.45	36.55	75.72	94.00	23.55	Hor	Average
3	2483.50	23.06	3.88	27.45	36.55	28.28	54.00	30.94	Hor	Average



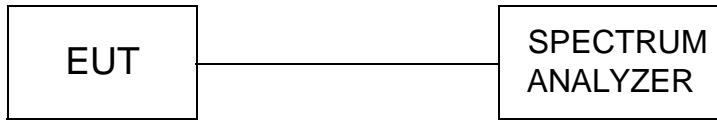
Mark	Frequency (MHz)	Level (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Reading Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Polarization	Detector
1	2390.00	40.01	3.79	27.45	36.55	45.32	74.00	33.99	Ver	Peak
2	2429.98	88.19	3.83	27.45	36.55	93.46	114.00	25.81	Ver	Peak
3	2483.50	37.03	3.88	27.45	36.55	42.25	74.00	36.97	Ver	Peak



Mark	Frequency (MHz)	Level (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Reading Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Polarization	Detector
1	2390.00	21.14	3.79	27.45	36.55	26.45	54.00	32.86	Ver	Average
2	2429.98	69.03	3.83	27.45	36.55	74.30	94.00	24.97	Ver	Average
3	2483.50	23.28	3.88	27.45	36.55	28.50	54.00	30.72	Ver	Average

4.5. 20dB Bandwidth Measurement

TEST CONFIGURATION



TEST PROCEDURE

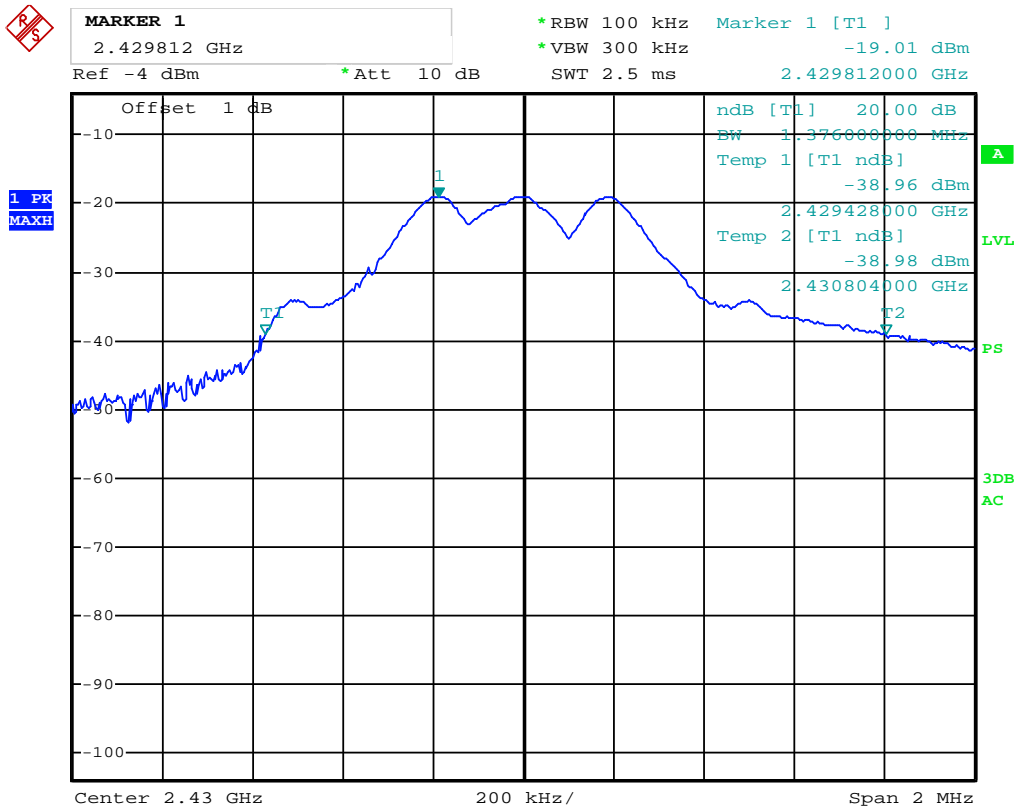
The transmitter output is connected to the spectrum analyzer. The spectrum analyzer center frequency is set to the transmitter frequency. The RBW is set to 100 KHz and VBW is set 300 KHz.

LIMIT

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

TEST RESULTS

Operating Frequency (MHz)	Measurement Results (MHz)	Limits (MHz)		Result
2430	1.076	>2400	<2483.5	PASS



Date: 28.OCT.2013 17:44:57

5. Test Setup Photos of the EUT

Radiated Emission (30MHz-1GHz)



Radiated Emission (1GHz-6GHz)



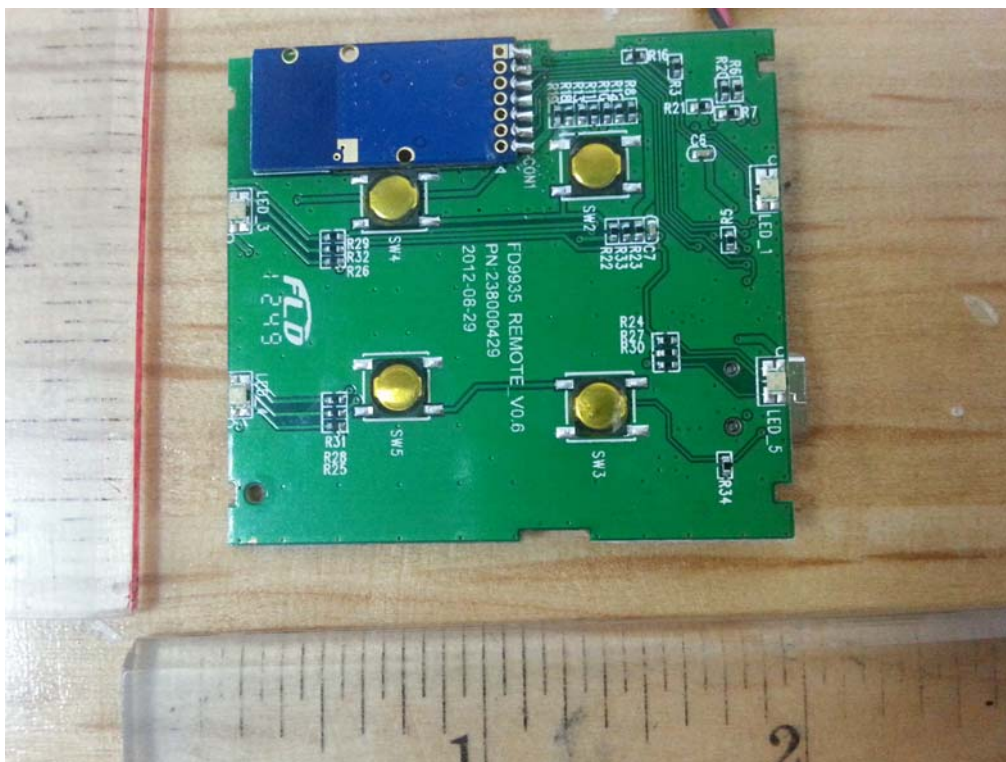
6. External and Internal Photos of the EUT

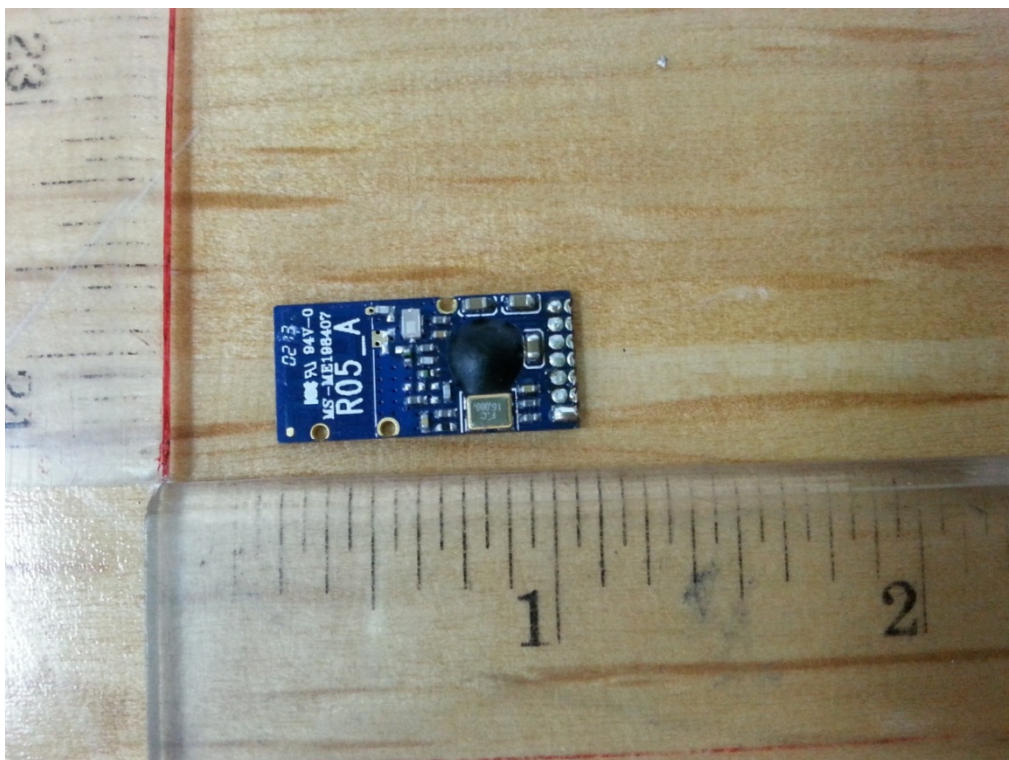
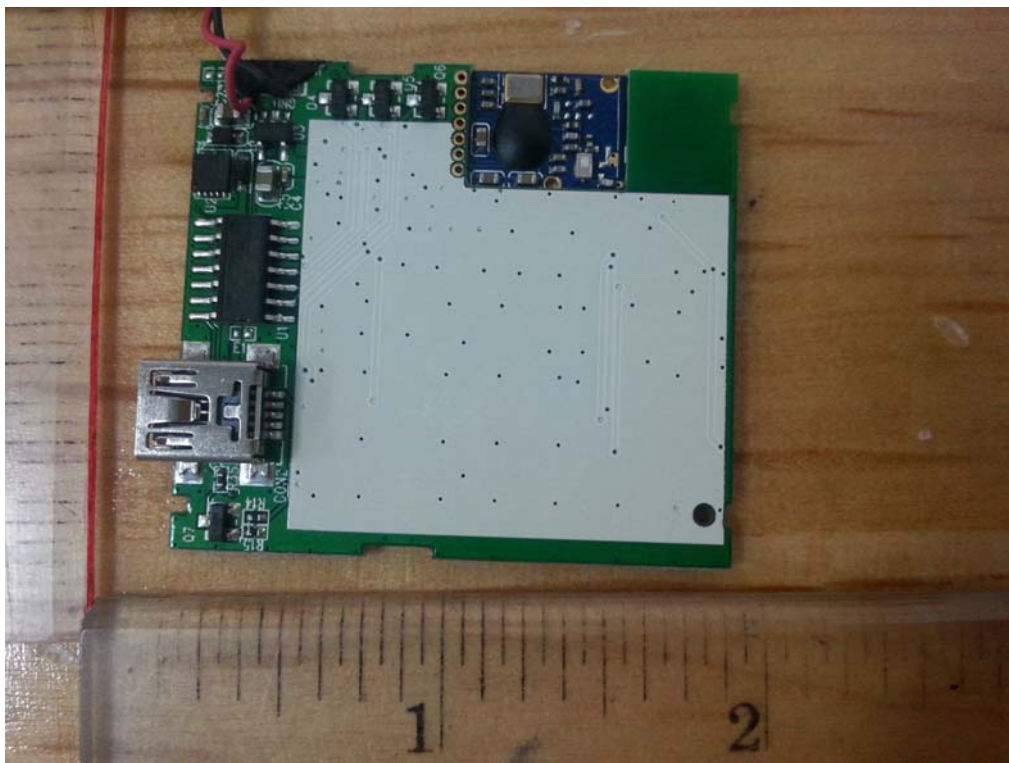
External Photos

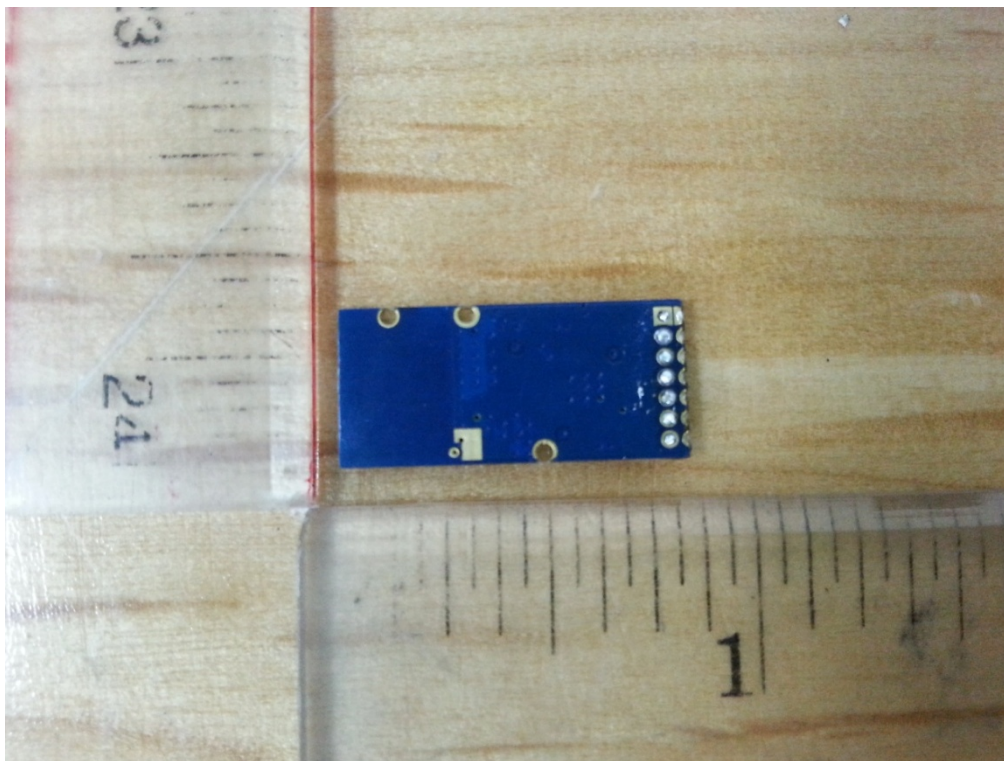




Internal Photos







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