

FCC TEST REPORT

47 CFR FCC Part 15 Subpart B

FCC ID.....: **YH5-850T**

Report Reference No......: A1211086019-3

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Date of issue.....: Nov 20, 2012

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Testing Laboratory Name: DTT Services Co.,Ltd

Address: 1F,2 Block,Jiaquan Building,Guanlan High-tech Park,Bao'an District, Shenzhen,Guangdong,China. 518110

Applicant's name.....: **Kobian Canada INC.**

Address: 560 Denison Street, Unit 5,Markham, Ontario, L3R 2M8,Canada

Test specification:

Standard: **47 CFR FCC Part 15 Subpart B - Unintentional Radiators**
ANSI C63.4: 2009

TRF Originator.....: Shenzhen CTL Electron Technology Co., Ltd.

Master TRF.....: Dated 2012-06

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Test item description: Wireless universal dock for iphone/ipod

Trade Mark: /

Model/Type reference.....: HS-IPWSP850

Listed Models: /

Operation Frequency.....: From 2403MHz to 2478MHz

Modulation Type: GFSK

Result.....: **Positive**

TEST REPORT

Test Report No. : A1211086019-3	Nov 20, 2012
	Date of issue

Equipment under Test : Wireless universal dock for iphone/ipod

Model /Type : HS-IPWSP850

Listed Models : /

Applicant : **Kobian Canada INC.**

Address : 560 Denison Street, Unit 5, Markham, Ontario, L3R 2M8, Canada

Manufacturer **E-CORE TECHNOLOGY (CHINA) CO., LTD.**

Address : 3rd Building, Weidonglong Industry, Heping East Road, LongHua, Shenzhen, China

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

Contents

<u>1.</u>	<u>TEST STANDARDS</u>	<u>4</u>
<u>2.</u>	<u>SUMMARY</u>	<u>5</u>
2.1.	General Remarks	5
2.2.	Equipment Under Test	5
2.3.	Short description of the Equipment under Test (EUT)	5
2.4.	EUT operation mode	5
2.5.	Related Submittal(s) / Grant (s)	5
2.6.	Modifications	5
2.7.	Configuration of Tested System	6
2.8.	NOTE	6
<u>3.</u>	<u>TEST ENVIRONMENT</u>	<u>7</u>
3.1.	Address of the test laboratory	7
3.2.	Test Facility	7
3.3.	Environmental conditions	7
3.4.	Statement of the measurement uncertainty	7
3.5.	Equipments Used during the Test	8
<u>4.</u>	<u>TEST CONDITIONS AND RESULTS</u>	<u>9</u>
4.1.	Conducted Emissions Test	9
4.2.	Radiated Emission Test	12
<u>5.</u>	<u>TEST SETUP PHOTOS OF THE EUT</u>	<u>18</u>

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	:	Nov 12,2012
Testing commenced on	:	Nov 12,2012
Testing concluded on	:	Nov 20,2012

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)	

Internal Battery 3.7 V

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

2.4GHz (Wireless universal dock for iphone/ipod)

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

Serial number: Prototype

2.4. EUT operation mode

The EUT has been tested under typical operating condition.

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

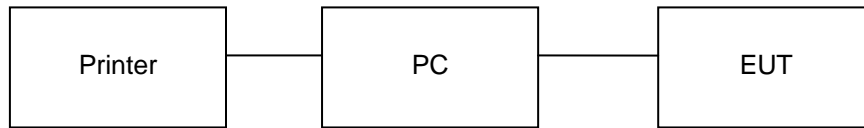
This submittal(s) (test report) is intended for **FCC ID: YH5-HS-IPWSP850T** filing to comply with the FCC Part 15, Subpart B Rules.

2.6. Modifications

No modifications were implemented to meet testing criteria.

2.7. Configuration of Tested System

Configuration of Tested System



Equipment Used in Tested System

No.	Equipment	Manufacturer	Model No.	Serial No.	Notes
1	PC	DELL	PP26L	CNG8390Q6X	DOC
2	Printer	HP	Laserjet 1007	Laserjet 1007	DOC

2.8. NOTE

1. The functions of the EUT are listed as below:

	Test Standards	Reference Report
Radio	FCC Part 15 Subpart C (Section15.249)& RSS-210	A1210096032-1
USB Port	FCC Part 15 Subpart B	A1210096032-3

2. The frequency bands used in this EUT are listed as follows:

Frequency Band(MHz)	2403-2478	5150-5350	5470-5725	5725-5850
EUT	√	—	—	—

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

DTT Services Co.,Ltd
1F,2 Block,Jiaquan Building,Guanlan High-tech Park,Bao'an District, Shenzhen,Guangdong,China.
518110

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:

IC Registration No.: 9783A

The 3m alternate test site of DTT Services Co.,Ltd EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Aug, 2011.

FCC-Registration No.: 214666

DTT Services 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 214666, Sep 19, 2011.

3.3. Environmental conditions

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

Temperature:	<u>15-35 ° C</u>
Humidity:	<u>30-60 %</u>
Atmospheric pressure:	<u>950-1050mbar</u>

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 DTT Services 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 DTT Services Co.,Ltd 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

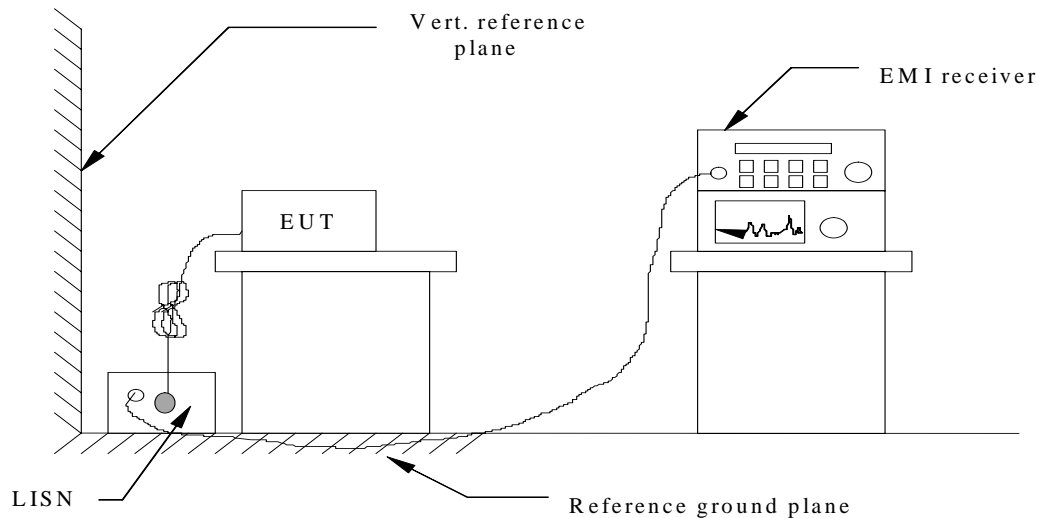
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Low Noise Pre Amplifier	HP	8447D	1937A03050	2012/7/12
2	Low Noise Pre Amplifier	EMCI	EMC051835	980075	2012/7/12
3	Test Receiver	R&S	ESCI	100920	2012/7/12
4	Test Receiver	R&S	ESCI	100658	2012/7/12
5	Bilog Antenna	Schwarzbeck	CBL6141A	4180	2012/7/12
6	Horn Antenna	Schwarzbeck	BBHA 9120D	647	2012/7/12
7	Horn Antenna	Schwarzbeck	BBHA 9120D	648	2012/7/12
8	Analyzer Spectrum	HP	8653E		2012/7/12
9	Bilog Antenna	R&S	HL562	100384	2012/7/12
10	Low Noise Pre Amplifier	Agilent	310N	186194	2012/7/12
11	LISN	R&S	ENV216	101112	2012/7/12
12	LISN	R&S	ENV216	101113	2012/7/12
13	Loop Antenna	Rohde&Schwarz	HFH2-Z2	100020	2012/7/12
14	Amplifer	Compliance Direction systems	PAP-1G-40	57	2012/7/12
15	Broad-Band Antenna Horn	Schwarzbeck	BBHA9170	495	2012/7/12

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.

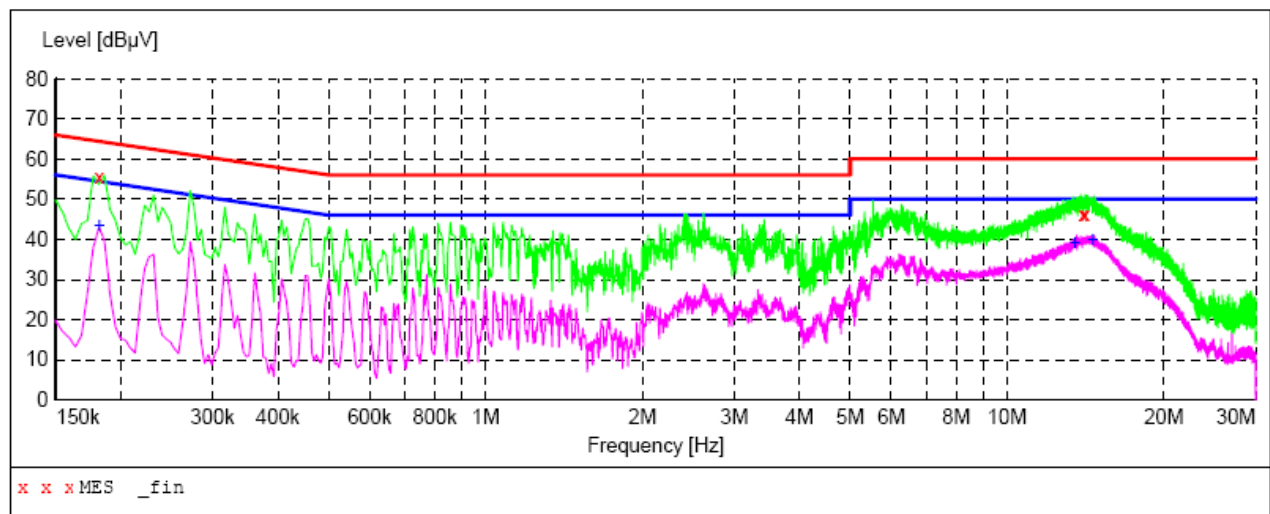
CONDUCTED POWER LINE EMISSION LIMIT

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

TEST RESULTS**SCAN TABLE: "Voltage (150K-30M) FIN"**

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT:**

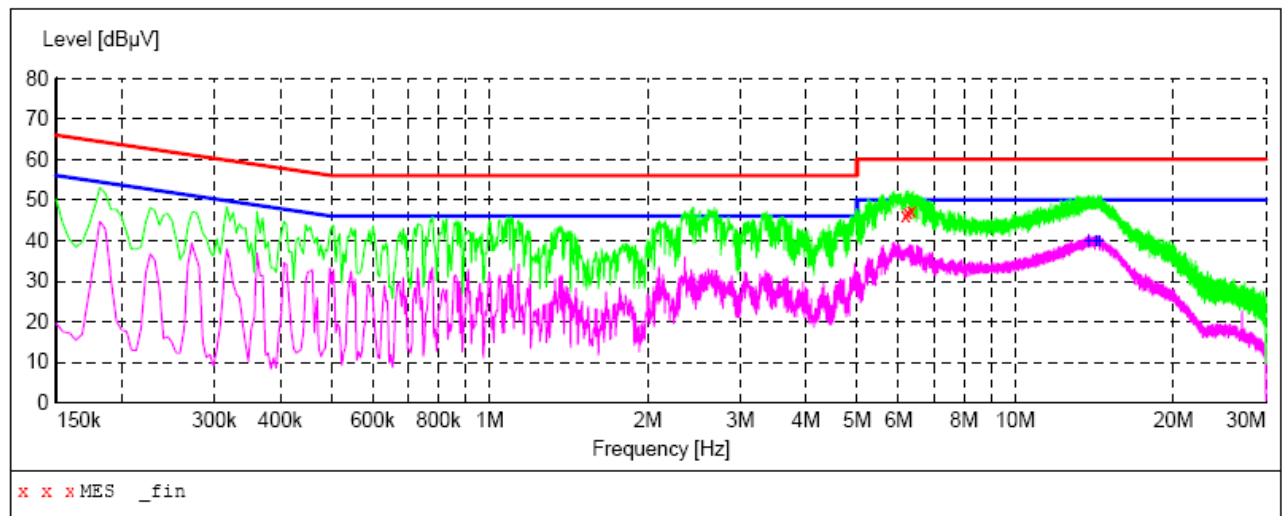
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.181500	55.60	11.0	64	8.8	QP	N	GND
14.001000	46.40	10.5	60	13.6	QP	N	GND
14.131500	46.30	10.5	60	13.7	QP	N	GND

MEASUREMENT RESULT:

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.181500	43.40	11.0	54	11.0	AV	N	GND
13.506000	39.20	10.5	50	10.8	AV	N	GND
14.595000	39.90	10.5	50	10.1	AV	N	GND

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

Short Description: 150K-30M Voltage

**MEASUREMENT RESULT:**

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
6.184500	46.20	10.4	60	13.8	QP	L1	GND
6.243000	47.10	10.4	60	12.9	QP	L1	GND
6.346500	47.30	10.4	60	12.7	QP	L1	GND

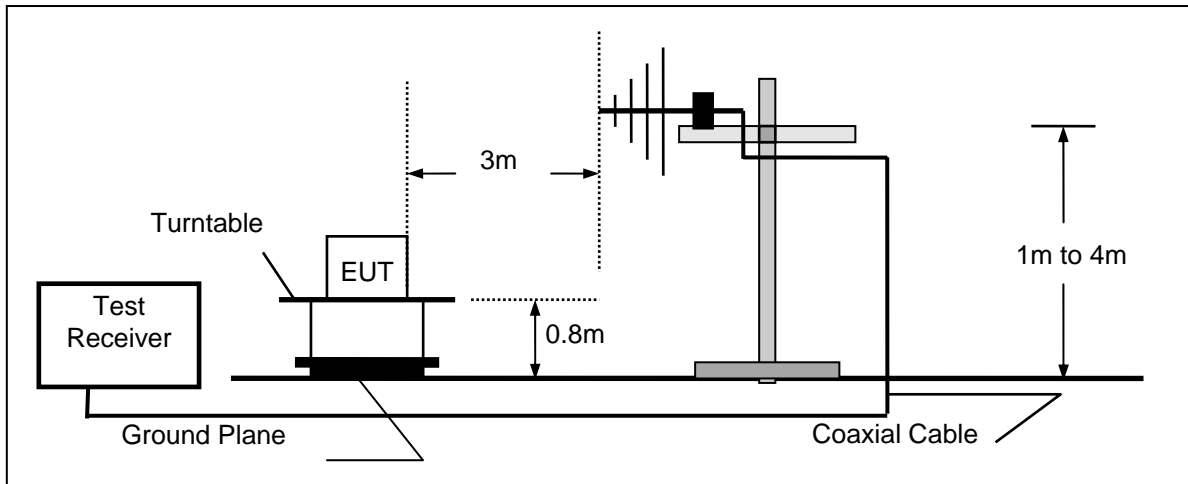
MEASUREMENT RESULT:

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
13.816500	39.80	10.5	50	10.2	AV	L1	GND
14.244000	40.00	10.5	50	10.0	AV	L1	GND
14.469000	39.80	10.5	50	10.2	AV	L1	GND

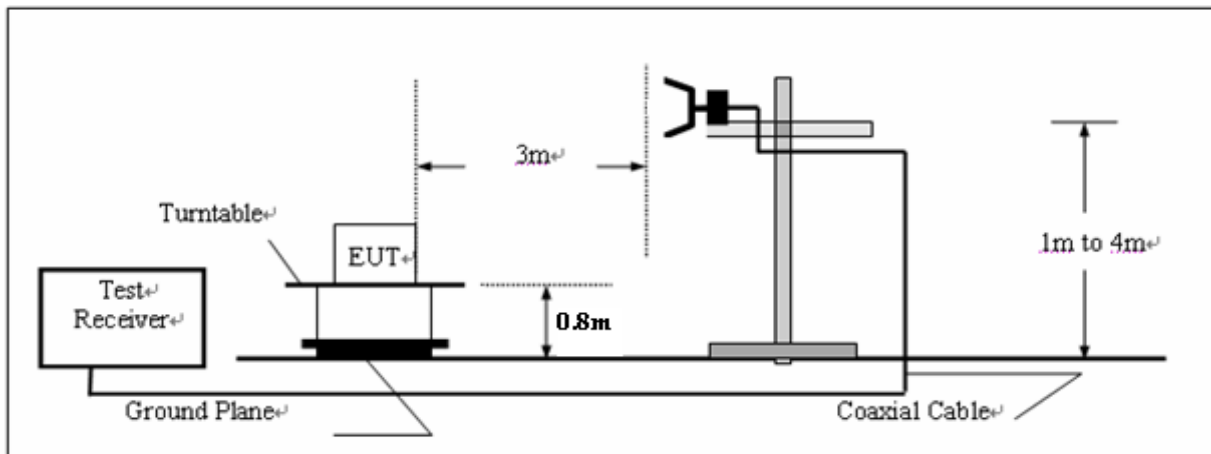
4.2. Radiated Emission Test

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.

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

$$\text{Transd} = \text{AF} + \text{CL} - \text{AG}$$

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:

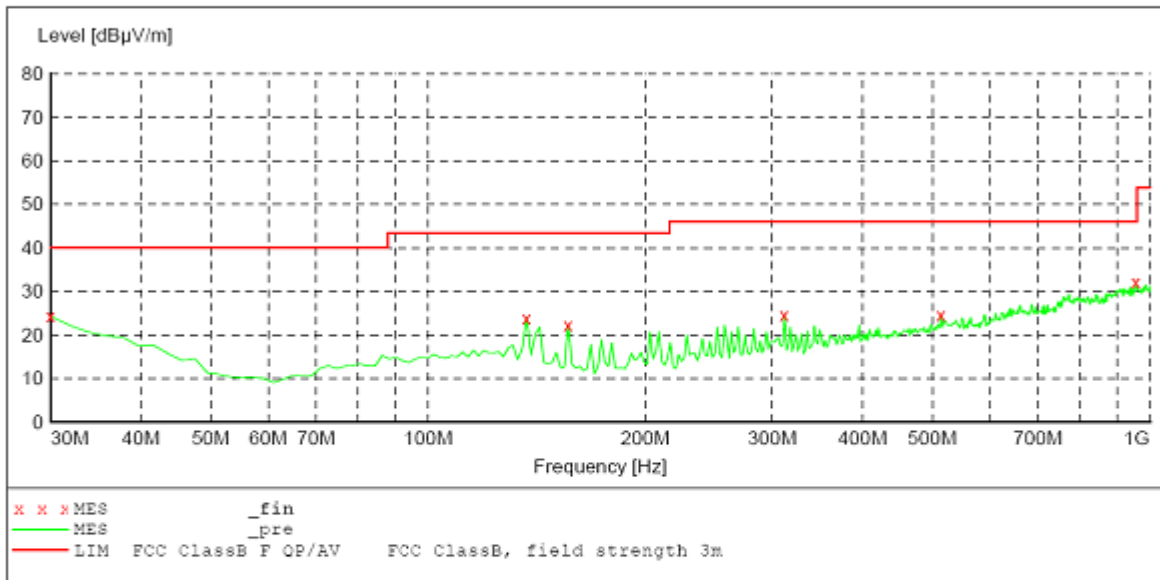
Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

TEST CONDITION

TEST RESULTS***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	120 kHz	HL562 2011

***MEASUREMENT RESULT:***

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
30.000000	24.30	21.1	40.0	15.7	QP	300.0	111.00	HORIZONTAL
136.910000	24.00	10.7	43.5	19.5	QP	300.0	0.00	HORIZONTAL
156.350000	22.30	9.0	43.5	21.2	QP	300.0	158.00	HORIZONTAL
311.860000	24.70	14.4	46.0	21.3	QP	300.0	133.00	HORIZONTAL
514.020000	24.70	19.1	46.0	21.3	QP	100.0	63.00	HORIZONTAL
957.230000	32.10	25.9	46.0	13.9	QP	300.0	59.00	HORIZONTAL

REMARKS :

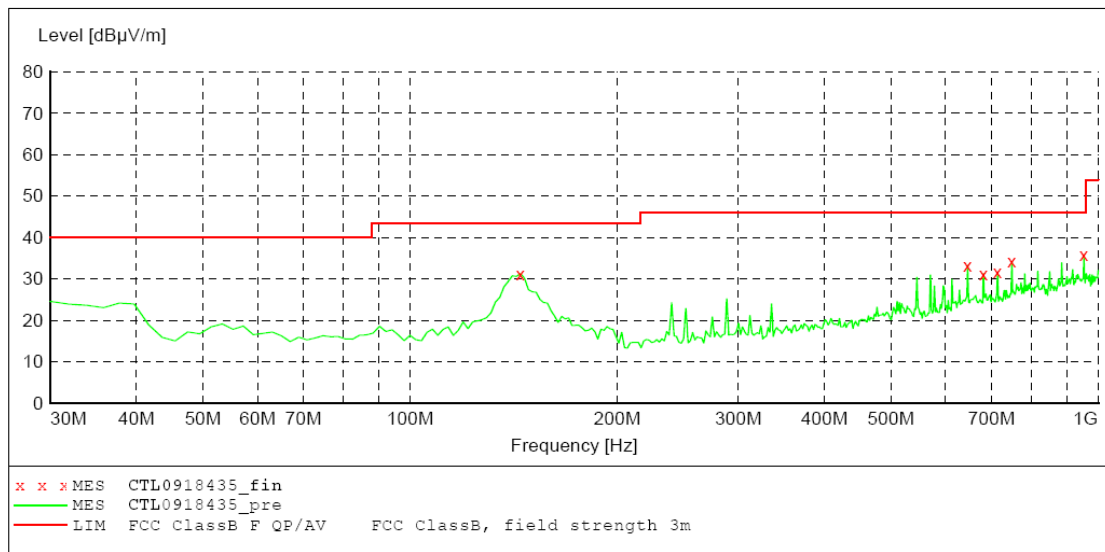
1. *Undetectable
2. The IF bandwidth of EMI Test Receiver was 120KHz for measuring from 30 MHz to 1 GHz and 1 MHz for measuring above 1 GHz
3. The Transd=Cabel loss +Antenna factor -pre-amplifier factor
4. The pre-test have done for the EUT in three axes and found the worst emission at position shown in test setup photos. The worst case data is recorded in the report.

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

Short Description:		Field Strength			
Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	

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	120 kHz	HL562 2011

**MEASUREMENT RESULT: "CTL0918435_fin"**

9/18/2012 12:54AM

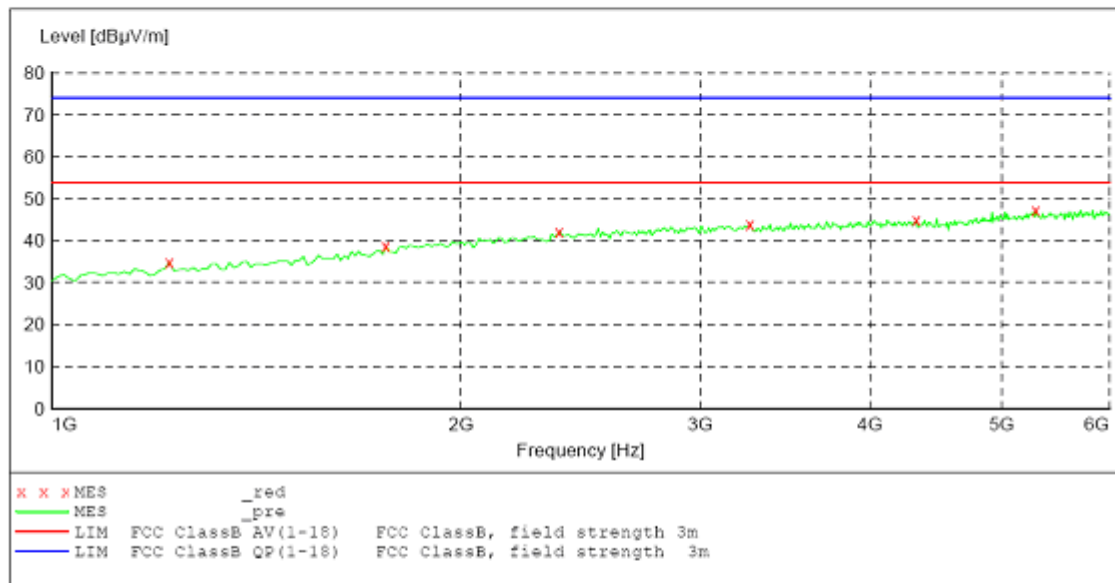
Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
144.680000	31.30	9.9	43.5	12.2	QP	100.0	131.00	VERTICAL
646.210000	33.30	21.7	46.0	12.7	QP	100.0	80.00	VERTICAL
681.200000	31.30	22.0	46.0	14.7	QP	100.0	360.00	VERTICAL
714.240000	31.60	22.1	46.0	14.4	QP	100.0	353.00	VERTICAL
749.230000	34.20	23.2	46.0	11.8	QP	100.0	280.00	VERTICAL
953.340000	35.80	25.9	46.0	10.2	QP	100.0	203.00	VERTICAL

REMARKS :

1. *Undetectable
2. The IF bandwidth of EMI Test Receiver was 120KHz for measuring from 30 MHz to 1 GHz and 1 MHz for measuring above 1 GHz
3. The Transd=Cabel loss +Antenna factor -pre-amplifier factor
4. The pre-test have done for the EUT in three axes and found the worst emission at position shown in test setup photos. The worst case data is recorded in the report.

SWEEP TABLE: "test (1G-18G) P"

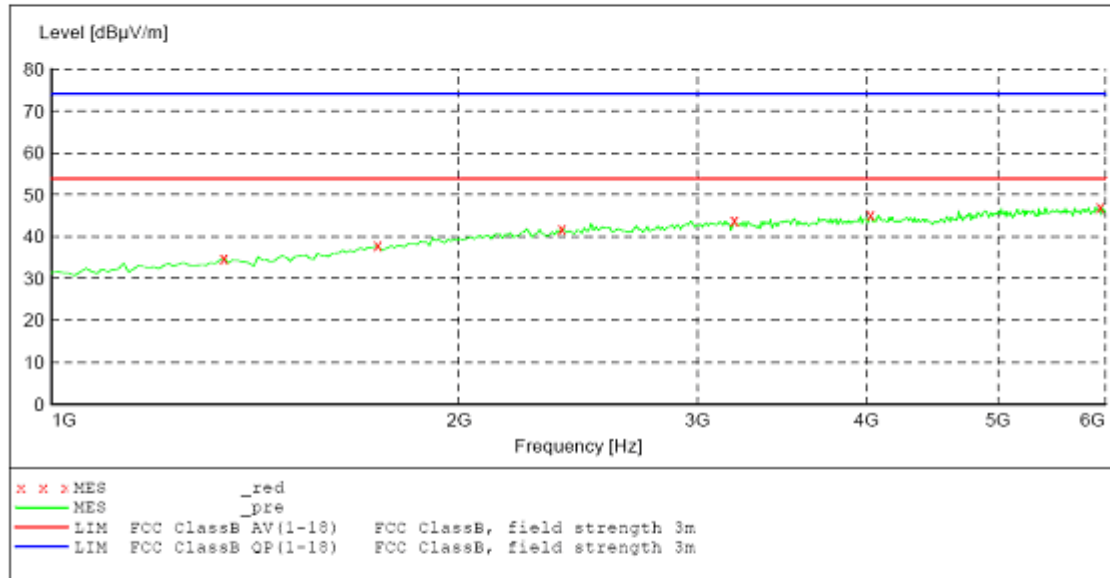
Short Description: EN 55022 Field Strength
 Start Stop Detector Meas. IF Transducer
 Frequency Frequency Time Bandw.
 1.0 GHz 18.0 GHz MaxPeak 500.0 ms 1 MHz HF906 2011

***MEASUREMENT RESULT:***

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1220.440882	34.80	-7.9	53.9	19.1	PK	100.0	122.00	HORIZONTAL
1761.523046	38.70	-3.4	53.9	15.2	PK	100.0	100.00	HORIZONTAL
2362.725451	42.10	0.3	53.9	11.8	PK	100.0	80.00	HORIZONTAL
3264.529058	44.00	2.4	53.9	9.9	PK	100.0	170.00	HORIZONTAL
4326.653307	44.90	3.5	53.9	9.0	PK	100.0	285.00	HORIZONTAL
5298.597194	47.30	6.2	53.9	6.6	PK	100.0	194.00	HORIZONTAL

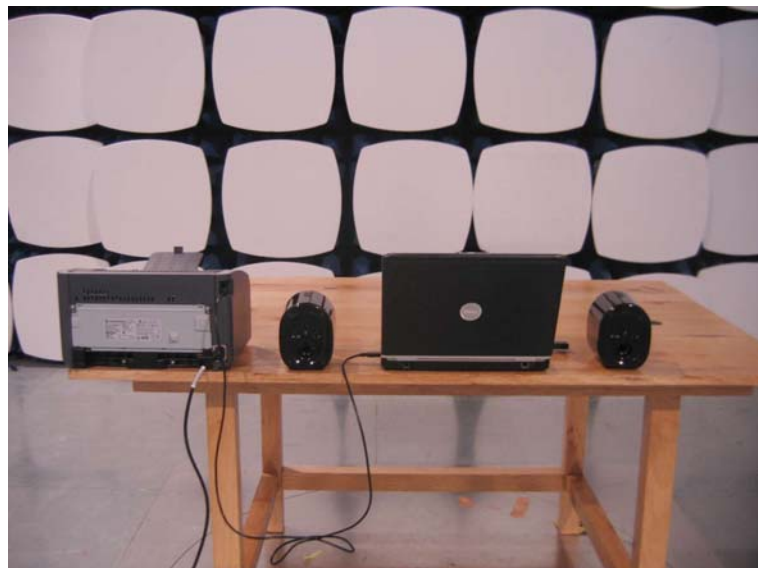
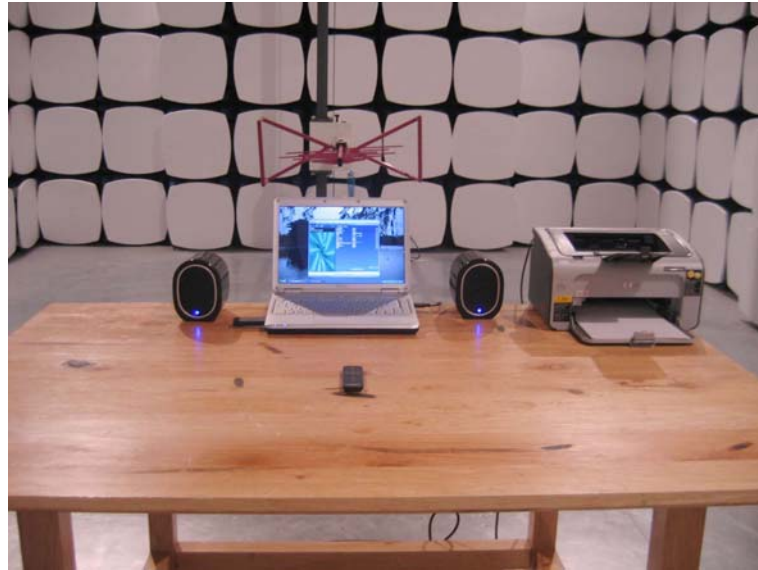
SWEEP TABLE: "test (1G-18G) P"

Short Description: EN 55022 Field Strength
 Start Stop Detector Meas. IF Transducer
 Frequency Frequency Time Bandw.
 1.0 GHz 18.0 GHz MaxPeak 500.0 ms 1 MHz HF906 2011

***MEASUREMENT RESULT:***

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
1340.681363	34.90	-7.0	53.9	19.0	PK	100.0	259.00	VERTICAL
1741.482966	37.90	-3.6	53.9	16.0	PK	100.0	301.00	VERTICAL
2382.765531	42.00	0.4	53.9	11.9	PK	100.0	278.00	VERTICAL
3194.388778	43.90	2.3	53.9	10.0	PK	100.0	49.00	VERTICAL
4026.052104	45.20	3.6	53.9	8.7	PK	100.0	63.00	VERTICAL
5949.899800	47.20	7.3	53.9	6.7	PK	100.0	63.00	VERTICAL

5. Test Setup Photos of the EUT



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