

## TEST REPORT

**Report Number: HK11010731-1**

Application  
for

Original Grant of 47 CFR Part 15 Certification  
Single New of RSS-210 Issue 8 Equipment Certification

2.4GHz Frequency Hopping Spread Spectrum Baby Monitor - Parent Unit

**FCC ID: BMWTFY7294P**

**IC: 6195A-TFY7294P**

Prepared and Checked by:



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Koo Wai Ip  
Lead Engineer  
February 17, 2011

Approved by:



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Supervisor  
February 17, 2011

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### GENERAL INFORMATION

<b>Applicant Name:</b>	Learning Curve Brands, Inc.
<b>Applicant Address:</b>	1111 W. 22 <sup>nd</sup> Street, Suite 320 Oak Brook, Illinois 60523 United States.
<b>FCC Specification Standard:</b>	FCC Part 15, October 1, 2009 Edition
<b>FCC ID:</b>	BMWTFY7294P
<b>FCC Model(s):</b>	Y7294P
<b>IC Specification Standard:</b>	RSS-210 Issue 8, December 2010 RSS-Gen Issue 3, December 2010 RSS-102 Issue 4, March 2010 RSS-310 Issue 3, December 2010
<b>IC:</b>	6195A-TFY7294P
<b>IC Model(s):</b>	Y7294P
<b>Type of EUT:</b>	Transceiver / Class B Personal Computers and Peripherals
<b>Description of EUT:</b>	2.4GHz Frequency Hopping Spread Spectrum Baby Monitor - Parent Unit
<b>Serial Number:</b>	N/A
<b>Sample Receipt Date:</b>	December 13, 2010
<b>Date of Test:</b>	December 13, 2010 to February 17, 2011
<b>Report Date:</b>	February 17, 2011
<b>Environmental Conditions:</b>	Temperature: +10 to 40°C Humidity: 10 to 90%

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## Table of Contents

<b>1.0 Test Results Summary &amp; Statement of Compliance</b> .....	4
1.1 Summary of Test Results .....	4
1.2 Statement of Compliance .....	4
<b>2.0 General Description</b> .....	6
2.1 Product Description .....	6
2.2 Test Methodology .....	6
2.3 Test Facility .....	6
<b>3.0 System Test Configuration</b> .....	8
3.1 Justification .....	8
3.2 EUT Exercising Software .....	9
3.3 Details of EUT and Description of Accessories .....	10
3.4 Measurement Uncertainty .....	10
<b>4.0 Test Results</b> .....	12
4.1 Field Strength Calculation .....	12
4.2 Radiated Emissions .....	13
4.2.1 Radiated Emission Configuration Photograph .....	13
4.2.2 Radiated Emission Data .....	13
4.2.3 Transmitter Duty Cycle Calculation .....	14
4.3 Radiated Emissions from Receiver .....	19
4.3.1 Radiated Emission Configuration Photograph .....	19
4.3.2 Radiated Emission Data .....	19
4.4 Radiated Emission on the Bandedge .....	21
4.5 AC Power Line Conducted Emission .....	22
4.5.1 AC Power Line Conducted Emission Configuration Photograph .....	22
4.5.2 AC Power Line Conducted Emission Data .....	22
4.6 Radio Frequency Exposure Compliance .....	29
<b>5.0 Equipment List</b> .....	31

## Appendix – Exhibits for Application of Certification

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### **EXHIBIT 1 TEST RESULTS SUMMARY & STATEMENT OF COMPLIANCE**

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### 1.0 Test Results Summary & Statement of Compliance

#### 1.1 Summary of Test Results

Test Items	FCC Part 15 Section	RSS-210/ RSS-Gen <sup>#</sup> / RSS-310 <sup>^</sup> Section	Results	Details see section
Antenna Requirement	15.203	7.1.2 <sup>#</sup>	Pass	2.1
Radiated Emission	15.249(a), 209, & 109	A2.9(a)	Pass	4.2
Radiated Emission on the Bandedge	15.249(d)	A2.9(b)	Pass	4.4
Radiated Emission in Restricted Bands	15.205	2.2	Pass	4.2
Radiated Emission from Receiver	N/A	3.1 <sup>^</sup>	Pass	4.3
AC Power Line Conducted Emission	15.207 & 15.107	7.2.4 <sup>#</sup>	Pass	4.5
Radiated Emission from Class B Personal Computers and Peripherals	15.109	ICES-003	Pass	4.2
AC Power Line Conducted Emission	15.107	ICES-003	Pass	4.5
Radio Frequency Exposure Compliance	N/A	RSS-102	Pass	4.6

Note: Pursuant to FCC Part 15 Section 15.215(c), the 20dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over expected variations in temperature and supply voltage were considered.

#### 1.2 Statement of Compliance

The equipment under test is found to be complying with the following standards:

FCC Part 15, October 1, 2009 Edition  
RSS-210 Issue 8, December 2010  
RSS-Gen Issue 3, December 2010  
RSS-102 Issue 4, March 2010  
RSS-310 Issue 3, December 2010

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### **EXHIBIT 2 GENERAL DESCRIPTION**

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### 2.0 General Description

#### 2.1 Product Description

The Equipment Under Test (EUT) is a 2.4GHz Frequency Hopping Spread Spectrum Baby Monitor - Parent Unit. It operates at frequency range of 2407.500MHz to 2475.000MHz, and there are total 21 channels, and 21 channels are used for the communication environment. The EUT is powered by a 100-240VAC to 6VDC 500mA switching AC adaptor and/or a 3.6V 1300mAh "Ni-MH" type rechargeable battery pack.

The antenna used in Parent Unit is integral, and the test sample is a prototype.

The circuit description is attached in the Appendix and saved with filename: descri.pdf.

#### 2.2 Test Methodology

Both AC power line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2003). Preliminary radiated scans and all radiated measurements were performed in Open Area Test Sites. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

#### 2.3 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data and conducted data are at Roof Top and 2<sup>nd</sup> Floor respectively of Intertek Testing Services Hong Kong Ltd., which is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. This test facility and site measurement data have been fully placed on file with the FCC and the Industry Canada.

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### **EXHIBIT 3 SYSTEM TEST CONFIGURATION**



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### 3.0 **System Test Configuration**

#### 3.1 Justification

For radiated emissions testing, the equipment under test (EUT) was setup to transmit / receive continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables (if any) were manipulated to produce worst case emissions.

The EUT was powered by a 100-240VAC to 6VDC 500mA adaptor.

For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable. If the EUT attached to peripherals, they were connected and operational to simulate typical use.

The signal was maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization were varied during the search for maximum signal level. The antenna height was varied from 1 to 4 meters. Radiated emissions were taken at three meters unless the signal level was too low for measurement at that distance. If necessary, a pre-amplifier was used and/or the test was conducted at a closer distance.

For any intentional radiator powered by AC power line, measurements of the radiated signal level of the fundamental frequency component of the emission was performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.

For transmitter radiated measurement, the spectrum analyzer resolution bandwidth was 100 kHz for frequencies below 1000 MHz. The resolution bandwidth was 1 MHz for frequencies above 1000 MHz.

For receiver radiated measurement, the spectrum analyzer resolution bandwidth was 1MHz for measurement above 1GHz while 100kHz for measurement from 30MHz to 1GHz.

Radiated emission measurement for transmitter was performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. Receiver was performed from 30MHz to the fifth harmonic of the highest frequency or 40GHz, whichever is lower.

Emission that are directly caused by digital circuits and Class B personal computers and peripherals in the transmit path and transmitter portion were measured, and the limit are according to FCC Part 15 Section 15.109.

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### 3.1 Justification - Cont'd

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in Exhibit 4.2.3.

Determination of pulse desensitization was made according to *Hewlett Packard Application Note 150-2, Spectrum Analysis... Pulsed RF*. The effective period (Teff) was referred to Exhibit 4.2.3. With the resolution bandwidth 1MHz and spectrum analyzer IF bandwidth 3dB, the pulse desensitization factor was 0dB.

For AC line conducted emission test, the EUT along with its peripherals were placed on a 1.0m(W)x1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT power cord connected to one LISN (Line impedance stabilization network), which provided 50ohm coupling impedance for measuring instrument. Meanwhile, the peripheral or support equipment power cords connected to a separate LISN. The ac power for all LISNs were obtained from the same power source. The LISN housing, measuring instrument case, reference ground plane, and vertical ground plane were bounded together. The excess power cable between the EUT and the LISN was bundled. Power cords of non-EUT equipment (peripherals) were not bundled. AC power cords of peripheral equipments draped over the rear edge of the table, and routed them down onto the floor of the ac powerline conducted emission test site to the second LISN.

All connecting cables of EUT and peripherals were manipulated to find the maximum emission.

All relevant operation modes have been tested, and the worst case data is included in this report.

### 3.2 EUT Exercising Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use.

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### 3.3 Details of EUT and Description of Accessories

#### Details of EUT:

An AC adaptor and/or a battery (provided with the unit) were used to power the device. Their description are listed below.

- (1) An AC adaptor (100-240VAC to 6VDC 500mA, Model: S004LU0600050) (Supplied by Client)
- (2) Battery: A "Ni-MH" type rechargeable battery pack (3.6V, 1300mAh) (Supplied by Client)

#### Description of Accessories:

- (1) Telephone Headset (Supplied by Intertek)
- (2) HP Notebook, Model: CPQ NC2400, S/N: CNF638276D (Supplied by Intertek)
- (3) Smartdrive External Hard Disk, Model: HD3-SU2FW, S/N: 0800261, DoC Product (Supplied by Intertek)
- (4) 1 x USB cable with 0.7 meter long (Supplied by Intertek)
- (5) 1 x USB cable with 0.57 meter long (Supplied by Client)
- (6) 1 x 1394 cable with 0.8 meter long (Supplied by Intertek)

### 3.4 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

Uncertainty and Compliance - Unless the standard specifically states that measured values are to be extended by the measurement uncertainty in determining compliance, all compliance determinations are based on the actual measured value.

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### **EXHIBIT 4 TEST RESULTS**

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### 4.0 Test Results

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

#### 4.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

$$FS = RA + AF + CF - AG + PD + AV$$

where      FS = Field Strength in dB $\mu$ V/m  
              RA = Receiver Amplitude (including preamplifier) in dB $\mu$ V  
              CF = Cable Attenuation Factor in dB  
              AF = Antenna Factor in dB  
              AG = Amplifier Gain in dB  
              PD = Pulse Desensitization in dB  
              AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

$$FS = RA + AF + CF - AG + PD + AV$$

#### Example

Assume a receiver reading of 62.0 dB $\mu$ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dB $\mu$ V/m. This value in dB $\mu$ V/m was converted to its corresponding level in  $\mu$ V/m.

$$\begin{aligned} RA &= 62.0 \text{ dB}\mu\text{V} \\ AF &= 7.4 \text{ dB} \\ CF &= 1.6 \text{ dB} \\ AG &= 29 \text{ dB} \\ PD &= 0 \text{ dB} \\ AV &= -10 \text{ dB} \\ FS &= 62 + 7.4 + 1.6 - 29 + 0 + (-10) = 32 \text{ dB}\mu\text{V/m} \end{aligned}$$

$$\text{Level in } \mu\text{V/m} = \text{Common Antilogarithm } [(32 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$$

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### 4.2 Radiated Emissions

#### 4.2.1 Radiated Emission Configuration Photograph

Worst Case Radiated Emission  
at

195.024 MHz

The worst case radiated emission configuration photographs are attached in the Appendix and saved with filename: config photos.pdf

#### 4.2.2 Radiated Emission Data

The data in tables 1-4 list the significant emission frequencies, the limit and the margin of compliance.

Judgement -

Passed by 1.3 dB margin

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### 4.2.3 Transmitter Duty Cycle Calculation

$$\begin{aligned}\text{Duty Cycle (DC)} &= \text{Maximum On time in 100ms/100ms} \\ &= 495.6 \mu\text{s} / 100\text{ms} \\ &= 4.956 \times 10^{-3}\end{aligned}$$

$$\begin{aligned}\text{Average Factor (AF)} &= 20 \log_{10} (4.956 \times 10^{-3}) \\ &= -46 \text{ dB}\end{aligned}$$

The sample plot shows the bit timing is attached in the Appendix and saved with filename: timing.pdf

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Mode: TX-Channel 01

Table 1

### Radiated Emission Data

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2407.500	113.2	33	29.4	46	63.6	94.0	-30.4
<b>V</b>	<b>4815.000</b>	<b>58.0</b>	<b>33</b>	<b>34.9</b>	<b>46</b>	<b>13.9</b>	<b>54.0</b>	<b>-40.1</b>
V	7222.500	54.7	33	37.9	46	13.6	54.0	-40.4
V	9630.000	50.8	33	40.4	46	12.2	54.0	-41.8
<b>H</b>	<b>12037.500</b>	<b>50.5</b>	<b>33</b>	<b>40.5</b>	<b>46</b>	<b>12.0</b>	<b>54.0</b>	<b>-42.0</b>
H	14445.000	50.6	33	40.0	46	11.6	54.0	-42.4

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
V	2407.500	113.2	33	29.4	109.6	114.0	-4.4
<b>V</b>	<b>4815.000</b>	<b>58.0</b>	<b>33</b>	<b>34.9</b>	<b>59.9</b>	<b>74.0</b>	<b>-14.1</b>
V	7222.500	54.7	33	37.9	59.6	74.0	-14.4
V	9630.000	50.8	33	40.4	58.2	74.0	-15.8
<b>H</b>	<b>12037.500</b>	<b>50.5</b>	<b>33</b>	<b>40.5</b>	<b>58.0</b>	<b>74.0</b>	<b>-16.0</b>
H	14445.000	50.6	33	40.0	57.6	74.0	-16.4

- NOTES:
1. Peak detector is used for the emission measurement.
  2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
  3. Negative value in the margin column shows emission below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. Emission (the row indicated by **bold italic**) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.



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Mode: TX-Channel 11

Table 2

### Radiated Emission Data

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2441.250	113.1	33	29.4	46	63.5	94.0	-30.5
<b>V</b>	<b>4882.500</b>	<b>57.7</b>	<b>33</b>	<b>34.9</b>	<b>46</b>	<b>13.6</b>	<b>54.0</b>	<b>-40.4</b>
<b>V</b>	<b>7323.750</b>	<b>54.5</b>	<b>33</b>	<b>37.9</b>	<b>46</b>	<b>13.4</b>	<b>54.0</b>	<b>-40.6</b>
V	9765.000	50.9	33	40.4	46	12.3	54.0	-41.7
<b>H</b>	<b>12206.250</b>	<b>50.7</b>	<b>33</b>	<b>40.5</b>	<b>46</b>	<b>12.2</b>	<b>54.0</b>	<b>-41.8</b>
H	14647.500	52.1	33	38.4	46	11.5	54.0	-42.5

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
V	2441.250	113.1	33	29.4	109.5	114.0	-4.5
<b>V</b>	<b>4882.500</b>	<b>57.7</b>	<b>33</b>	<b>34.9</b>	<b>59.6</b>	<b>74.0</b>	<b>-14.4</b>
<b>V</b>	<b>7323.750</b>	<b>54.5</b>	<b>33</b>	<b>37.9</b>	<b>59.4</b>	<b>74.0</b>	<b>-14.6</b>
V	9765.000	50.9	33	40.4	58.3	74.0	-15.7
<b>H</b>	<b>12206.250</b>	<b>50.7</b>	<b>33</b>	<b>40.5</b>	<b>58.2</b>	<b>74.0</b>	<b>-15.8</b>
H	14647.500	52.1	33	38.4	57.5	74.0	-16.5

- NOTES:
1. Peak detector is used for the emission measurement.
  2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
  3. Negative value in the margin column shows emission below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. Emission (the row indicated by **bold italic**) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

## INTERTEK TESTING SERVICES

Mode: TX-Channel 21

Table 3

### Radiated Emission Data

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2475.000	113.2	33	29.4	46	63.6	94.0	-30.4
<b>V</b>	<b>4950.000</b>	<b>57.5</b>	<b>33</b>	<b>34.9</b>	<b>46</b>	<b>13.4</b>	<b>54.0</b>	<b>-40.6</b>
<b>V</b>	<b>7425.000</b>	<b>54.3</b>	<b>33</b>	<b>37.9</b>	<b>46</b>	<b>13.2</b>	<b>54.0</b>	<b>-40.8</b>
V	9900.000	51.2	33	40.4	46	12.6	54.0	-41.4
<b>H</b>	<b>12375.000</b>	<b>50.7</b>	<b>33</b>	<b>40.5</b>	<b>46</b>	<b>12.2</b>	<b>54.0</b>	<b>-41.8</b>
H	14850.000	51.8	33	38.4	46	11.2	54.0	-42.8

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
V	2475.000	113.2	33	29.4	109.6	114.0	-4.4
<b>V</b>	<b>4950.000</b>	<b>57.5</b>	<b>33</b>	<b>34.9</b>	<b>59.4</b>	<b>74.0</b>	<b>-14.6</b>
<b>V</b>	<b>7425.000</b>	<b>54.3</b>	<b>33</b>	<b>37.9</b>	<b>59.2</b>	<b>74.0</b>	<b>-14.8</b>
V	9900.000	51.2	33	40.4	58.6	74.0	-15.4
<b>H</b>	<b>12375.000</b>	<b>50.7</b>	<b>33</b>	<b>40.5</b>	<b>58.2</b>	<b>74.0</b>	<b>-15.8</b>
H	14850.000	51.8	33	38.4	57.2	74.0	-16.8

- NOTES: 1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. Emission (the row indicated by **bold italic**) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

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## INTERTEK TESTING SERVICES

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Mode: Talk

Table 4

### Radiated Emission Data

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	36.000	38.2	16	10.0	32.2	40.0	-7.8
V	72.000	41.4	16	7.0	32.4	40.0	-7.6
H	144.000	35.9	16	14.0	33.9	43.5	-9.6
H	153.076	35.5	16	15.0	34.5	43.5	-9.0
H	177.089	37.0	16	19.0	40.0	43.5	-3.5
H	195.024	42.2	16	16.0	42.2	43.5	-1.3
H	209.354	41.1	16	17.0	42.1	43.5	-1.4
H	222.494	38.6	16	18.0	40.6	46.0	-5.4
<b><i>H</i></b>	<b><i>243.372</i></b>	<b><i>30.5</i></b>	<b><i>16</i></b>	<b><i>20.0</i></b>	<b><i>34.5</i></b>	<b><i>46.0</i></b>	<b><i>-11.5</i></b>

- NOTES:
1. Peak detector is used for the emission measurement.
  2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
  3. Negative value in the margin column shows emission below limit.
  4. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

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### 4.3 Radiated Emissions from Receiver

#### 4.3.1 Radiated Emission Configuration Photograph

Worst Case Radiated Emission  
at

2436.750 MHz

The worst case radiated emission configuration photographs are attached in the Appendix and saved with filename: config photos.pdf

#### 4.3.2 Radiated Emission Data

The data in tables 5 list the significant emission frequencies, the limit and the margin of compliance.

Judgement -

Passed by 13.5 dB margin

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## INTERTEK TESTING SERVICES

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Mode: Receiving – Middle Channel

Table 5

### Radiated Emissions Data

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
V	2436.750	44.1	33	29.4	40.5	54.0	-13.5
V	4873.500	38.5	33	34.9	40.4	54.0	-13.6
V	7310.250	35.3	33	37.9	40.2	54.0	-13.8
V	9747.000	32.4	33	40.4	39.8	54.0	-14.2
V	12183.750	32.0	33	40.5	39.5	54.0	-14.5

#### NOTES:

1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna is used for the emission over 1000MHz.

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## INTERTEK TESTING SERVICES

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### 4.4 Radiated Emission on the Bandedge

From the following plots, they show that the fundamental emissions are confined in the specified band (2400MHz and 2483.5MHz). In case of emissions up to two standard bandwidths away from the bandedge, the delta measurement technique is used for determining bandedge compliance. Standard bandwidth is the bandwidth specified by ANSI C63.4 (2003) for frequency being measured.

Emissions radiated outside of the specified frequency bands, except harmonics, are attenuated by 50 dB below the level of the fundamental or to the general radiated emission limits in FCC Part 15 Section 15.209 / Table 5 of RSS-Gen, whichever is the lesser attenuation, which meet the requirement of FCC Part 15 Section 15.249(d) / RSS-210 A2.9(b).

Radiated Emission on bandedge plots are attached in the Appendix and saved with filename: be.pdf

Bandedge compliance is determined by applying marker-delta method, i.e.

Resultant Field Strength = Fundamental Emissions - Delta from the plot

Resultant field strength for the lowest and/or highest channel(s), with corresponding average values are calculated as follows:

	Channel	Fundamental Emission (dBμV/m)	Delta from the Plot (dB)	Resultant Field Strength (dBμV/m)	Average Limit (dBμV/m)	Margin (dB)
Parent	Lowest	63.6	38.96	24.64	54	-29.36
	Highest	63.6	42.12	21.48	54	-32.52

	Channel	Fundamental Emission (dBμV/m)	Delta from the Plot (dB)	Resultant Field Strength (dBμV/m)	Peak Limit (dBμV/m)	Margin (dB)
Parent	Lowest	109.6	38.96	70.64	74	-3.36
	Highest	109.6	42.12	67.48	74	-6.52

The resultant field strength meets the general radiated emission limit in FCC Part 15 Section 15.209 / Table 5 of RSS-Gen, which does not exceed 74dBμV/m for peak limit and also 54dBμV/m for average limit.

## INTERTEK TESTING SERVICES

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### 4.5 AC Power Line Conducted Emission

- ☐ Not applicable – EUT is only powered by battery for operation.
- ☒ EUT connects to AC power line. Emission Data is listed in following pages.
- ☐ Base Unit connects to AC power line and has transmission. Handset connects to AC power line but has no transmission. Emission Data of Base Unit is listed in following pages.

#### 4.5.1 AC Power Line Conducted Emission Configuration Photograph

Worst Case Line-Conducted Configuration  
at

0.474 MHz

The worst case line conducted configuration photographs are attached in the Appendix and saved with filename: config photos.pdf

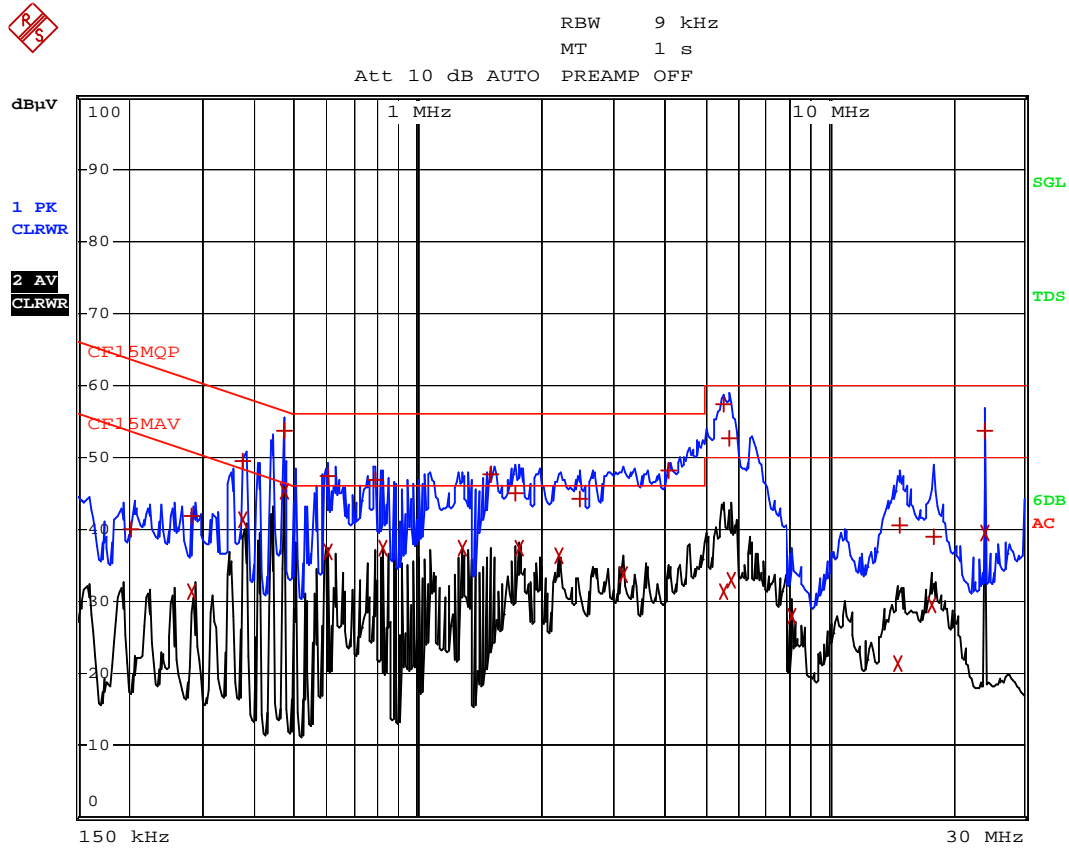
#### 4.5.2 AC Power Line Conducted Emission Data

The plot(s) and data in the following pages list the significant emission frequencies, the limit and the margin of compliance.

Passed by 0.57 dB margin compare with average limit

# INTERTEK TESTING SERVICES

Worst Case: RX with PC Link (EUT's AC mains)



Date: 17.FEB.2011 19:02:05



## INTERTEK TESTING SERVICES

Worst Case: RX with PC Link (EUT's AC mains)

EDIT PEAK LIST (Final Measurement Results)					
Trace1:	CF15MQP				
Trace2:	CF15MAV				
Trace3:	---				
TRACE	FREQUENCY	LEVEL			DELTA LIMIT dB
1 Quasi Peak	204 kHz	40.11	L1	gnd	-23.33
1 Quasi Peak	285 kHz	41.92	L1	gnd	-18.74
2 CISPR Average	285 kHz	31.48	L1	gnd	-19.18
2 CISPR Average	379.5 kHz	41.35	L1	gnd	-6.93
1 Quasi Peak	379.5 kHz	49.59	L1	gnd	-8.69
2 CISPR Average	474 kHz	45.27	L1	gnd	-1.17
1 Quasi Peak	474 kHz	53.68	L1	gnd	-2.75
1 Quasi Peak	600 kHz	47.38	L1	gnd	-8.61
2 CISPR Average	600 kHz	36.89	L1	gnd	-9.10
1 Quasi Peak	789 kHz	46.81	L1	gnd	-9.18
2 CISPR Average	820.5 kHz	37.29	L1	gnd	-8.70
2 CISPR Average	1.2885 MHz	37.45	L1	gnd	-8.54
1 Quasi Peak	1.509 MHz	47.58	L1	gnd	-8.41
1 Quasi Peak	1.725 MHz	45.11	L1	gnd	-10.88
2 CISPR Average	1.761 MHz	37.51	L1	gnd	-8.48
2 CISPR Average	2.202 MHz	36.42	L1	gnd	-9.58
1 Quasi Peak	2.472 MHz	44.14	L1	gnd	-11.85
2 CISPR Average	3.174 MHz	33.76	N	gnd	-12.23
1 Quasi Peak	4.0965 MHz	48.26	L1	gnd	-7.73
1 Quasi Peak	5.5455 MHz	57.47	L1	gnd	-2.53

Date: 17.FEB.2011 19:01:28

## INTERTEK TESTING SERVICES

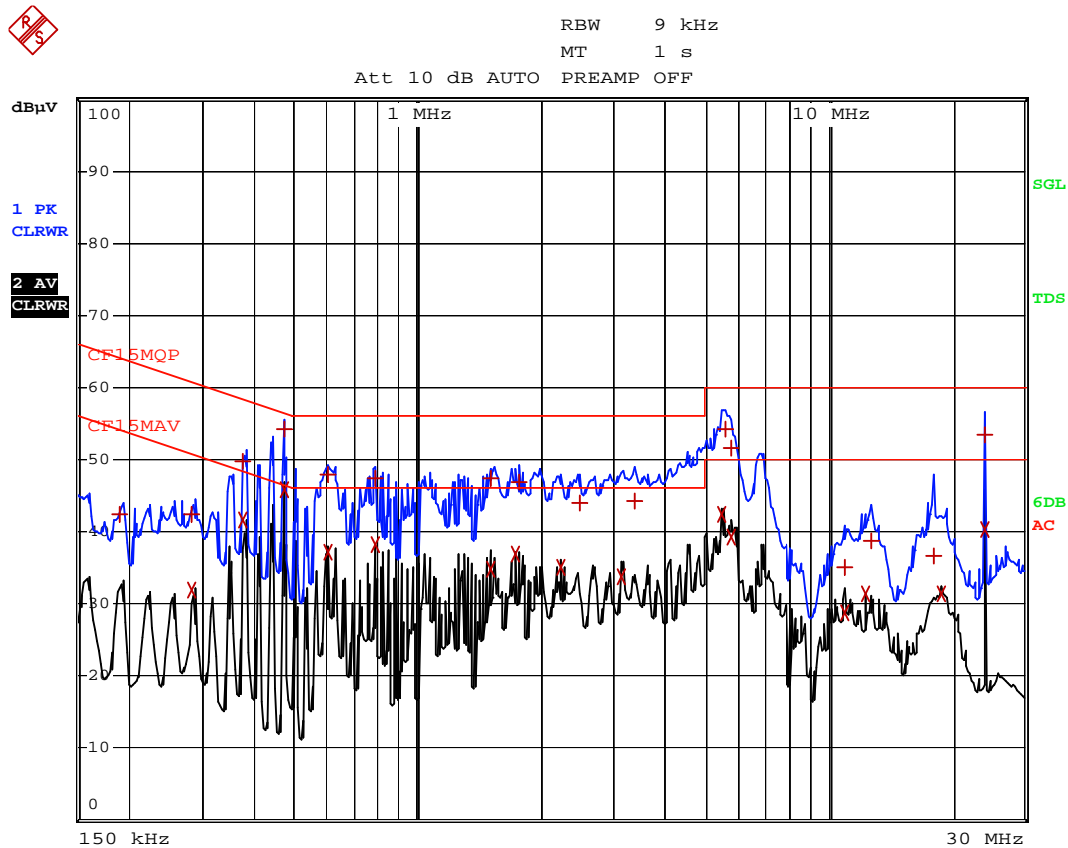
Worst Case: RX with PC Link (EUT's AC mains)

EDIT PEAK LIST (Final Measurement Results)					
Trace1:	CF15MQP				
Trace2:	CF15MAV				
Trace3:	---				
TRACE	FREQUENCY	LEVEL	dB $\mu$ V	DELTA	LIMIT dB
2 CISPR Average	5.559 MHz	31.47	L1 gnd	-18.52	
1 Quasi Peak	5.7525 MHz	52.54	L1 gnd	-7.45	
2 CISPR Average	5.784 MHz	33.02	L1 gnd	-16.97	
2 CISPR Average	8.106 MHz	27.90	L1 gnd	-22.09	
2 CISPR Average	14.703 MHz	21.51	L1 gnd	-28.48	
1 Quasi Peak	14.928 MHz	40.42	L1 gnd	-19.57	
2 CISPR Average	17.817 MHz	29.57	L1 gnd	-20.42	
1 Quasi Peak	18.006 MHz	38.90	N gnd	-21.09	
1 Quasi Peak	24 MHz	53.61	L1 gnd	-6.38	
2 CISPR Average	24 MHz	39.57	L1 gnd	-10.42	

Date: 17.FEB.2011 19:01:43

## INTERTEK TESTING SERVICES

Worst Case: TX with PC Link (EUT's AC mains)



Date: 17.FEB.2011 18:48:12

## INTERTEK TESTING SERVICES

Worst Case: TX with PC Link (EUT's AC mains)

EDIT PEAK LIST (Final Measurement Results)					
Trace1:	CF15MQP				
Trace2:	CF15MAV				
Trace3:	---				
TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB	
1 Quasi Peak	190.5 kHz	42.31	L1 gnd	-21.69	
1 Quasi Peak	285 kHz	42.39	L1 gnd	-18.27	
2 CISPR Average	285 kHz	31.87	L1 gnd	-18.79	
2 CISPR Average	379.5 kHz	41.54	L1 gnd	-6.74	
1 Quasi Peak	379.5 kHz	49.84	L1 gnd	-8.44	
1 Quasi Peak	469.5 kHz	54.23	L1 gnd	-2.28	
2 CISPR Average	474 kHz	45.86	L1 gnd	-0.57	
1 Quasi Peak	600 kHz	48.01	L1 gnd	-7.98	
2 CISPR Average	600 kHz	37.02	L1 gnd	-8.97	
2 CISPR Average	789 kHz	38.17	L1 gnd	-7.83	
1 Quasi Peak	789 kHz	47.39	L1 gnd	-8.60	
1 Quasi Peak	1.5135 MHz	47.42	L1 gnd	-8.57	
2 CISPR Average	1.5135 MHz	34.89	L1 gnd	-11.10	
2 CISPR Average	1.734 MHz	36.79	L1 gnd	-9.20	
1 Quasi Peak	1.761 MHz	46.90	L1 gnd	-9.09	
2 CISPR Average	2.238 MHz	34.96	L1 gnd	-11.03	
1 Quasi Peak	2.472 MHz	44.05	L1 gnd	-11.94	
2 CISPR Average	3.1515 MHz	33.66	L1 gnd	-12.34	
1 Quasi Peak	3.3855 MHz	44.30	L1 gnd	-11.69	
2 CISPR Average	5.514 MHz	42.37	L1 gnd	-7.62	

Date: 17.FEB.2011 18:47:37

## INTERTEK TESTING SERVICES

Worst Case: TX with PC Link (EUT's AC mains)

EDIT PEAK LIST (Final Measurement Results)				
Trace1:	CF15MQP			
Trace2:	CF15MAV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB	
1 Quasi Peak	5.6265 MHz	54.29 L1 gnd	-5.70	
2 CISPR Average	5.7705 MHz	39.32 L1 gnd	-10.67	
1 Quasi Peak	5.7885 MHz	51.45 L1 gnd	-8.54	
2 CISPR Average	10.905 MHz	28.63 L1 gnd	-21.36	
1 Quasi Peak	10.9365 MHz	34.96 L1 gnd	-25.03	
2 CISPR Average	12.3225 MHz	31.32 L1 gnd	-18.68	
1 Quasi Peak	12.732 MHz	38.66 L1 gnd	-21.33	
1 Quasi Peak	17.997 MHz	36.54 N gnd	-23.45	
2 CISPR Average	18.7575 MHz	31.26 L1 gnd	-18.73	
1 Quasi Peak	24 MHz	53.50 L1 gnd	-6.49	
2 CISPR Average	24 MHz	40.37 L1 gnd	-9.63	

Date: 17.FEB.2011 18:47:53

## INTERTEK TESTING SERVICES

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### 4.6 Radio Frequency Exposure Compliance

The Routine RF Exposure Evaluation, Routine SAR Evaluation and Declaration of RF Exposure Compliance are saved as filename: RF exposure.pdf

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 5 EQUIPMENT LIST**

## INTERTEK TESTING SERVICES

### 5.0 Equipment List

#### 1) Radiated Emissions Test

Equipment	Biconical Antenna	Spectrum Analyzer	Log Periodic Antenna
Registration No.	EW-0954	EW-2188	EW-0446
Manufacturer	EMCO	AGILENTTECH	EMCO
Model No.	3104C	E4407B	3146
Calibration Date	Apr. 14, 2010	Dec. 25, 2009	Apr. 26, 2010
Calibration Due Date	Oct. 14, 2011	Dec. 31, 2010	Oct. 26, 2011

Equipment	EMI Test Receiver	Spectrum Analyzer 40GHz	Digital Multimeter
Registration No.	EW-2251	EW-2253	EW-1237
Manufacturer	R&S	ROHDESCHWARZ	FLUKE
Model No.	ESCI	FSP40	179
Calibration Date	Oct. 22, 2009	Jun. 10, 2010	Sep. 01, 2010
Calibration Due Date	Apr. 22, 2011	Jun. 10, 2011	Oct. 01, 2011

Equipment	Double Ridged Guide Antenna	Broad-Band Horn Antenna with frequency range 14G - 40GHz
Registration No.	EW-1015	EW-1679
Manufacturer	EMCO	SCHWARZBECK
Model No.	3115	BBHA9170
Calibration Date	Feb. 09, 2010	Feb. 17, 2010
Calibration Due Date	Aug. 09, 2011	Feb. 17, 2011

#### 2) Conducted Emissions Test

Equipment	LISN	Artificial Mains	EMI Test Receiver
Registration No.	EW-0090	EW-0192	EW-2666
Manufacturer	R&S	R&S	R&S
Model No.	ESH3-Z5	ESH3-Z5	ESCI7
Calibration Date	Feb. 05, 2010	Nov. 30, 2010	Oct. 12, 2010
Calibration Due Date	May 05, 2011	Nov. 30, 2011	Oct. 12, 2011

Equipment	Pulse Limiter	EMI Test Receiver
Registration No.	EW-0699	EW-2500
Manufacturer	R&S	ROHDESCHWARZ
Model No.	ESH3-Z2	ESCI
Calibration Date	Dec. 24, 2009	Jan. 25, 2011
Calibration Due Date	Jun. 24, 2011	Jan. 25, 2012

**END OF TEST REPORT**