

Dates of Tests: Dec 27~31, 2010  
Test Report S/N: LR500111012M  
Test Site : LTA CO., LTD.

## CERTIFICATION OF COMPLIANCE

FCC ID.

**YI7IHD2E100T0W**

APPLICANT

**eZEX Corporation**

|                           |   |                                              |
|---------------------------|---|----------------------------------------------|
| Equipment Class           | : | Digital Transmission System (DTS)            |
| Manufacturing Description | : | Color In-home Display                        |
| Manufacturer              | : | eZEX Corporation                             |
| Brand name                | : | General Electric (GE)                        |
| Model name                | : | IHD2E100T0WW                                 |
| Test Device Serial No.:   | : | Identical prototype                          |
| Rule Part(s)              | : | FCC Part 15.247 Subpart C ; ANSI C-63.4-2003 |
| Frequency Range           | : | 2405MHz ~ 2480MHz                            |
| Max. Output Power         | : | Max 20.04dBm – Conducted                     |
| Data of issue             | : | January 5, 2011                              |

This test report is issued under the authority of:

The test was supervised by:



Kyung-Taek LEE, Technical Manager

Hyun-Chae You, Test Engineer

This test result only responds to the tested sample. It is not allowed to copy this report even partly without the allowance of the test laboratory. This report must not be used by the applicant to claim product endorsement by any agency.



NVLAP LAB Code.: 200723-0

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## 1. General information's

### **1-1 Test Performed**

Company name : LTA Co., Ltd.  
 Address : 243, Jubug-ri, Yangji-Myeon, Youngin-Si, Kyunggi-Do, Korea. 449-822  
 Web site : <http://www.ltalab.com>  
 E-mail : [chahn@ltalab.com](mailto:chahn@ltalab.com)  
 Telephone : +82-31-323-6008  
 Facsimile : +82-31-323-6010

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competents of calibration and testing laboratory”.

### **1-2 Accredited agencies**

LTA Co., Ltd. is approved to perform EMC testing by the following agencies:

| Agency | Country | Accreditation No. | Validity   | Reference           |
|--------|---------|-------------------|------------|---------------------|
| NVLAP  | U.S.A   | 200723-0          | 2011-09-30 | ECT accredited Lab. |
| RRL    | KOREA   | KR0049            | 2011-09-01 | EMC accredited Lab. |
| FCC    | U.S.A   | 610755            | 2011-04-22 | FCC filing          |
| VCCI   | JAPAN   | R2133, C2307      | 2011-06-21 | VCCI registration   |
| IC     | CANADA  | IC5799            | 2012-05-14 | IC filing           |

## 2. Information's about test item

### 2-1 Applicant & Manufacturer

Company name : eZEX Corporation  
 Address : Rm 508, Ssangyong IT Twin-tower 2, 442-5, Sangdaewon-dong, Jungwon-gu,  
 Seongnam-si, Gyeonggi-do, South Korea  
 Tel / Fax : TEL No : +82-31 - 608 - 4700 / FAX No : +82-31-608 - 4701

### 2-2 Equipment Under Test (EUT)

Trade name : Color In-home Display  
 FCC ID : YI7IHD2E100T0W  
 Brand name : General Electric (GE)  
 Model name : IHD2E100T0WW  
 Serial number : Identical prototype  
 Date of receipt : December 24, 2010  
 EUT condition : Pre-production, not damaged  
 Antenna type : Chip antenna with Max. 4.37dBi gain  
 Frequency Range : 2405MHz ~ 2480MHz (DSSS)  
 RF output power : Max 20.04dBm - Conducted  
 Number of channels : 16  
 Type of Modulation : O-QPSK  
 Channel spacing : 5MHz  
 Power Source : 5Vdc by adapter  
 Power Source for Adapter : DC 5V, 0.7A (M/N : GELVPS-1)

### 2-3 Tested frequency

|                 | LOW  | MID  | HIGH |
|-----------------|------|------|------|
| Frequency (MHz) | 2405 | 2445 | 2480 |

### 2-4 Ancillary Equipment

| Equipment | Model No.                      | Serial No.  | Manufacturer |
|-----------|--------------------------------|-------------|--------------|
| PC        | HP Compaq dx7400<br>Microtower | CNG8330J9R  | HP           |
| MONITOR   | HPL1710                        | CNC816QH92  | HP           |
| KEYBOARD  | SK-8115                        | 68A-04Q6    | DELL         |
| MOUSE     | MO56UOA                        | LNB33130022 | DELL         |
| PRINTER   | STYLUS C65                     | FXSY002205  | EPSON        |

### 3. Test Report

#### 3.1 Summary of tests

| FCC Part Section(s) | Parameter                          | Limit         | Test Condition | Status (note 1) |
|---------------------|------------------------------------|---------------|----------------|-----------------|
| 15.247(a)           | 6 dB Bandwidth                     | > 500kHz      | Conducted      | C               |
| 15.247(b)           | Transmitter Peak Output Power      | < 1Watt       |                | C               |
| 15.247(d)           | Transmitter Power Spectral Density | < 8dBm @ 3kHz |                | C               |
| 15.247(d)           | Band Edge & Spurious               | > 20 dBc      |                | C               |
| 15.209              | Field Strength of Harmonics        | Emission      | Radiated       | C               |
| 15.207              | AC Conducted Emissions             | Emissions     | Conducted      | C               |
| 15.203              | Antenna requirement                | -             | -              | C               |

Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

Note 2: The data in this test report are traceable to the national or international standards.

#### → Antenna Requirement

This unit complies with the requirement of §15.203.

The antenna is connected to inside of EUT. And type is Chip antenna.

The sample was tested according to the following specification:

FCC Parts 15.247; ANSI C-63.4-2003

## 3.2 Technical Characteristics Test

### 3.2.1 6 dB Bandwidth

#### Procedure:

The bandwidth at 6dB below the highest in-band spectral density was measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate frequencies.

After the trace being stable, Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 6dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is ( as close as possible to ) even with the reference marker level. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 100 kHz

Span = 30 MHz

VBW = 100 kHz (VBW  $\geq$  RBW)

Sweep = auto

Trace = max hold

Detector function = peak

#### Measurement Data:

| Frequency<br>(MHz) | Test Results             |          |
|--------------------|--------------------------|----------|
|                    | Measured Bandwidth (MHz) | Result   |
| 2405               | 1.662                    | Complies |
| 2445               | 1.599                    | Complies |
| 2480               | 1.570                    | Complies |

- See next pages for actual measured spectrum plots.

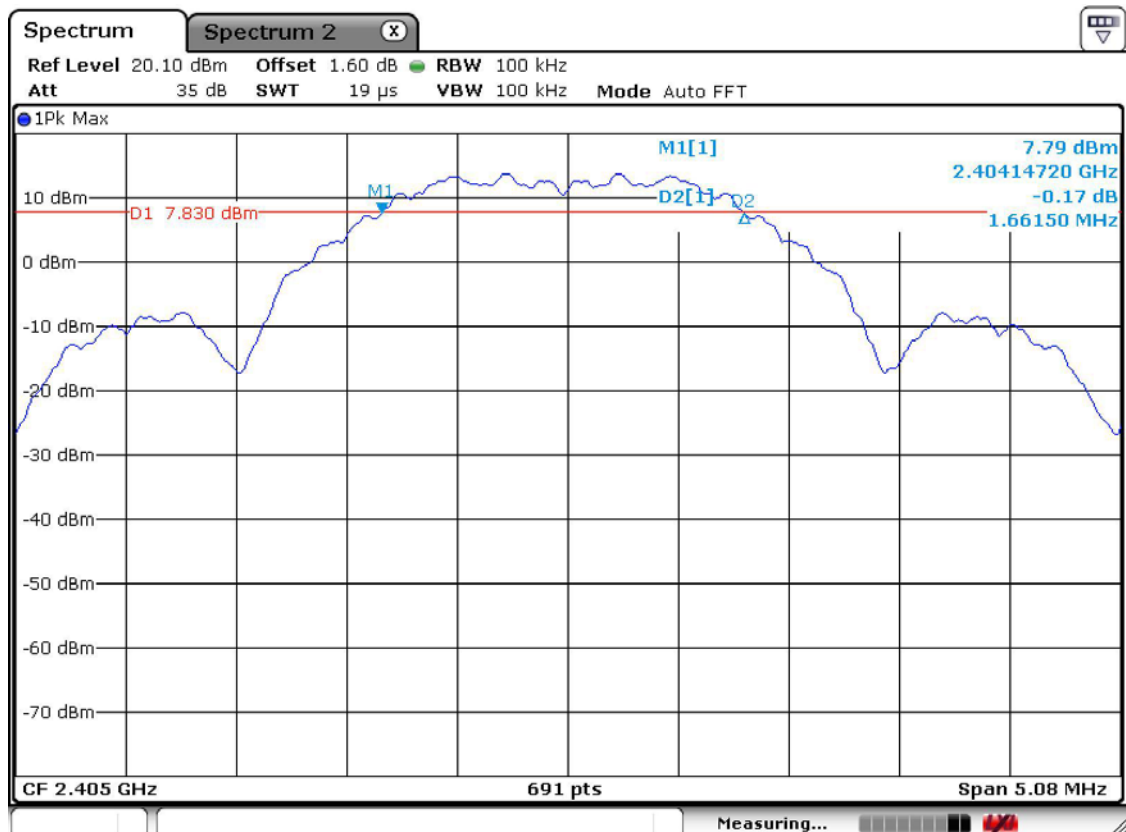
#### Minimum Standard:

6 dB Bandwidth > 500kHz

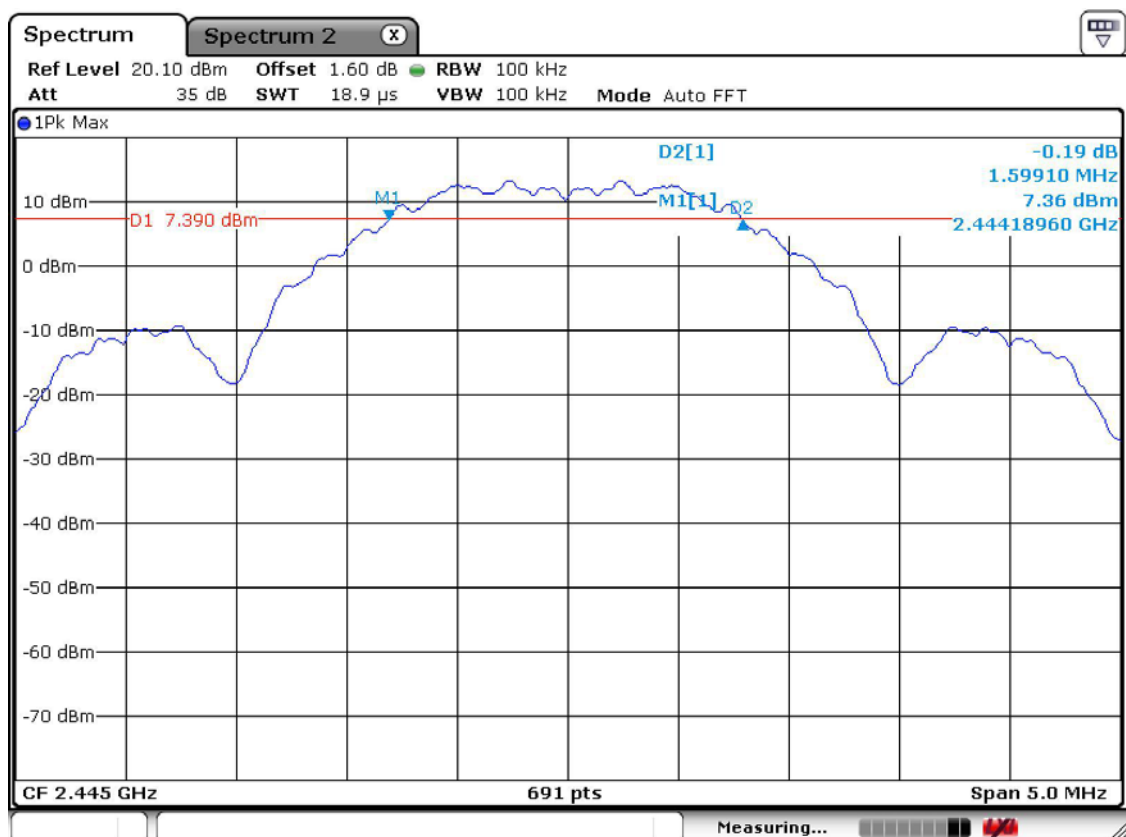
#### Measurement Setup

Same as the Chapter 3.2.1 (Figure 1)

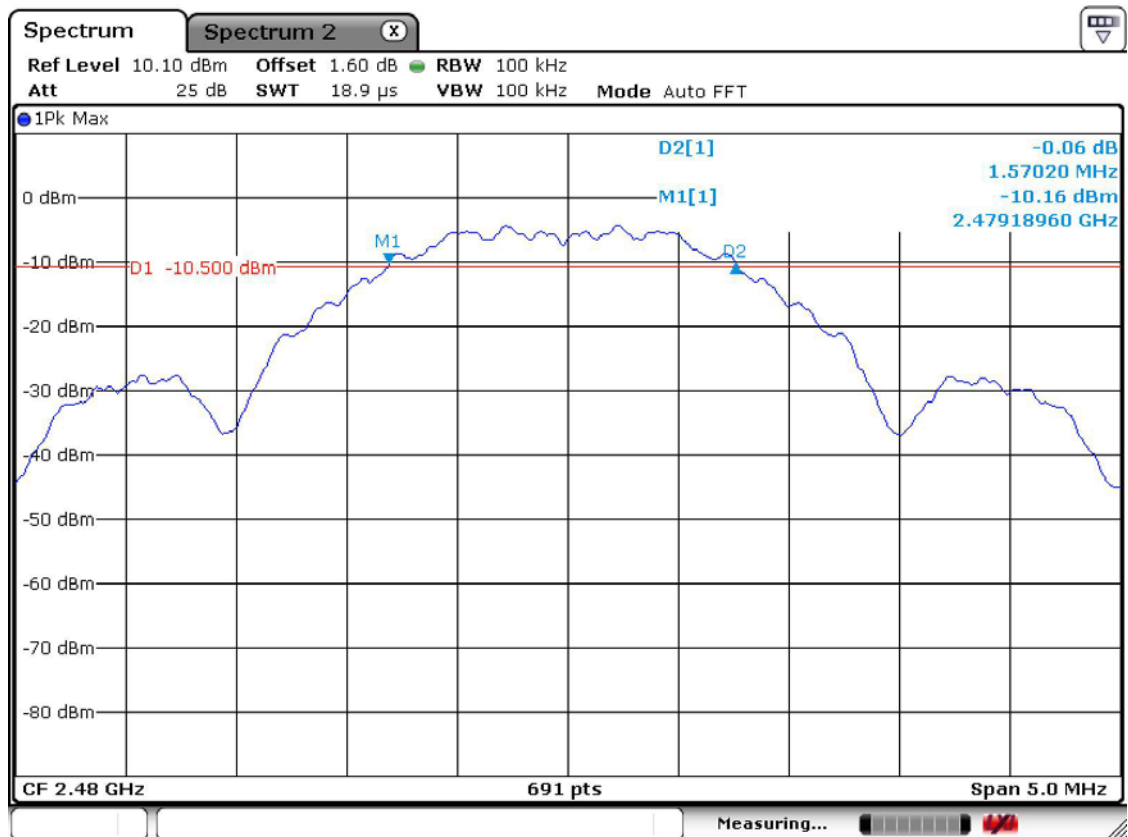
## Low Channel



## Mid Channel



High Channel



### 3.2.2 Peak Output Power Measurement

#### Procedure:

The maximum peak output power was measured with the spectrum analyzer connected to the antenna output of the EUT. The spectrum analyzer's internal channel power integration function is used to integrate the power over a bandwidth greater than or equal to the 99% bandwidth. The EUT was operating in transmit mode at the appropriate center frequency.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 1MHz

Span = auto

VBW = 1MHz (VBW  $\geq$  RBW)

Sweep = auto

Detector function = peak

#### Measurement Data:

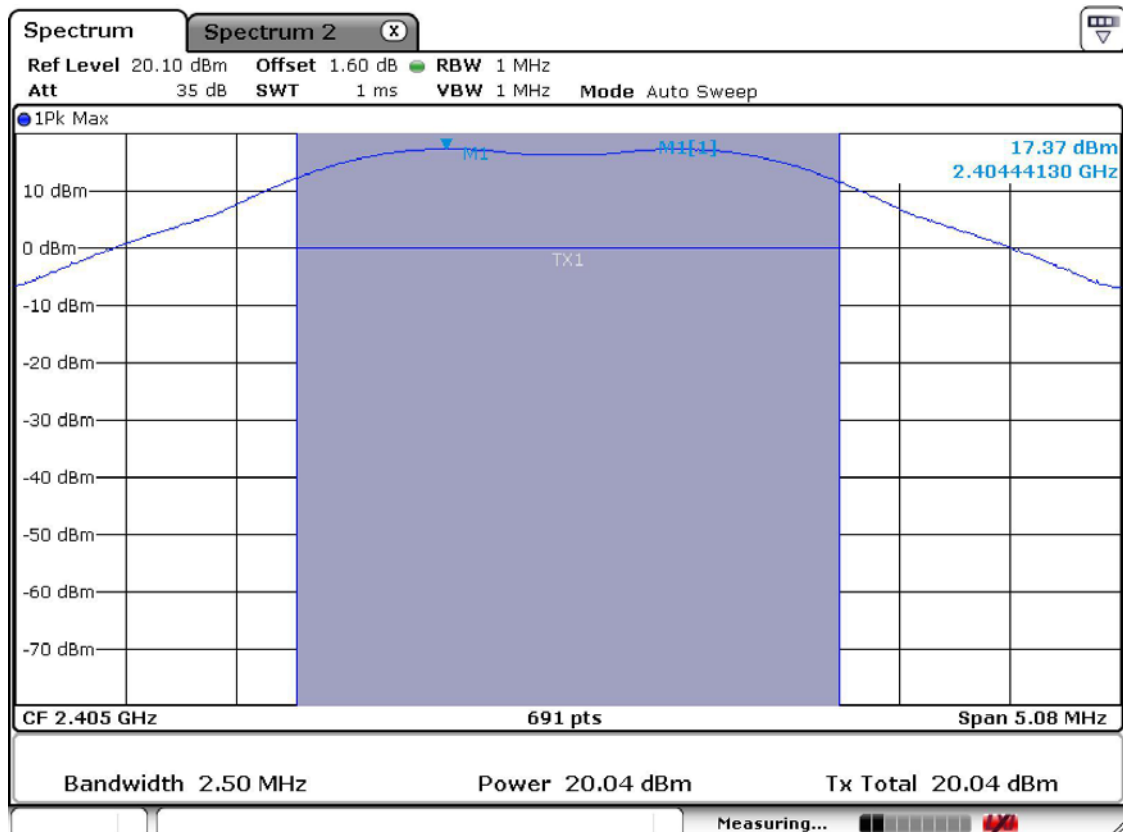
| Frequency<br>(MHz) | Test Results |        |          |
|--------------------|--------------|--------|----------|
|                    | dBm          | mW     | Result   |
| 2405               | 20.04        | 100.93 | Complies |
| 2445               | 19.59        | 90.99  | Complies |
| 2480               | 1.19         | 1.32   | Complies |

- See next pages for actual measured spectrum plots.

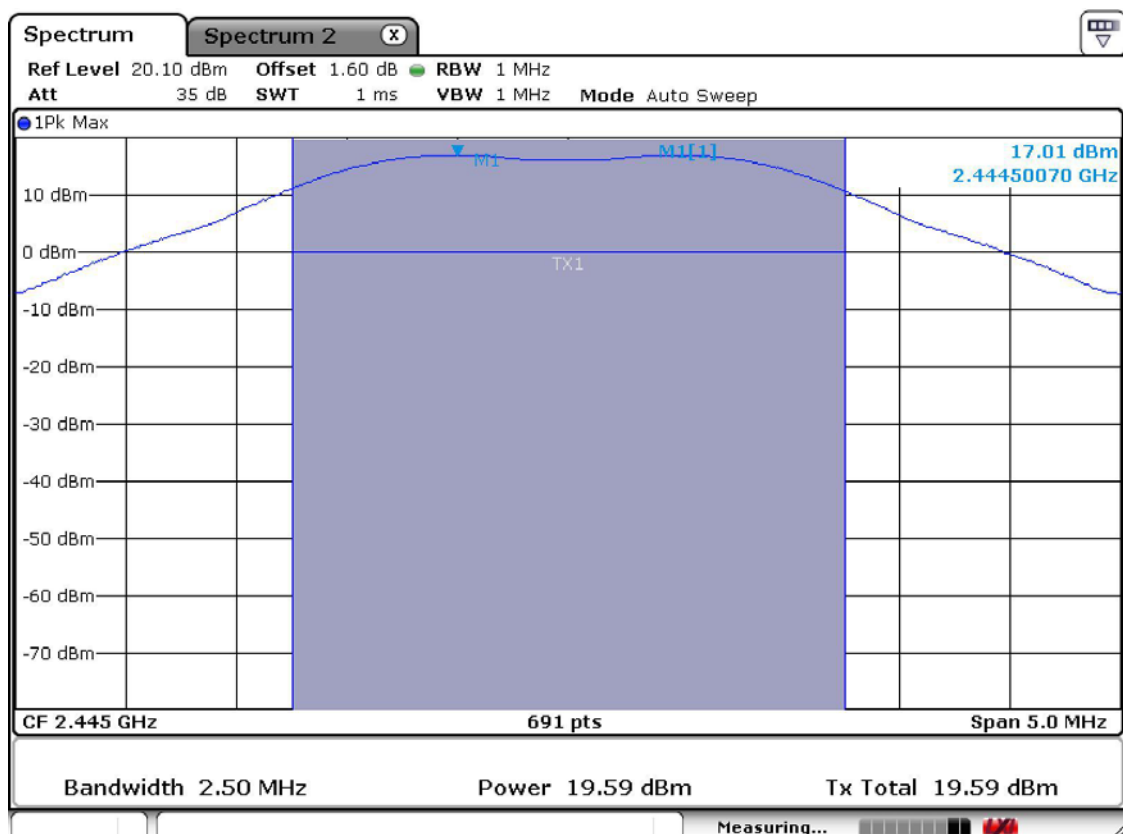
#### Minimum Standard:

|                   |      |
|-------------------|------|
| Peak output power | < 1W |
|-------------------|------|

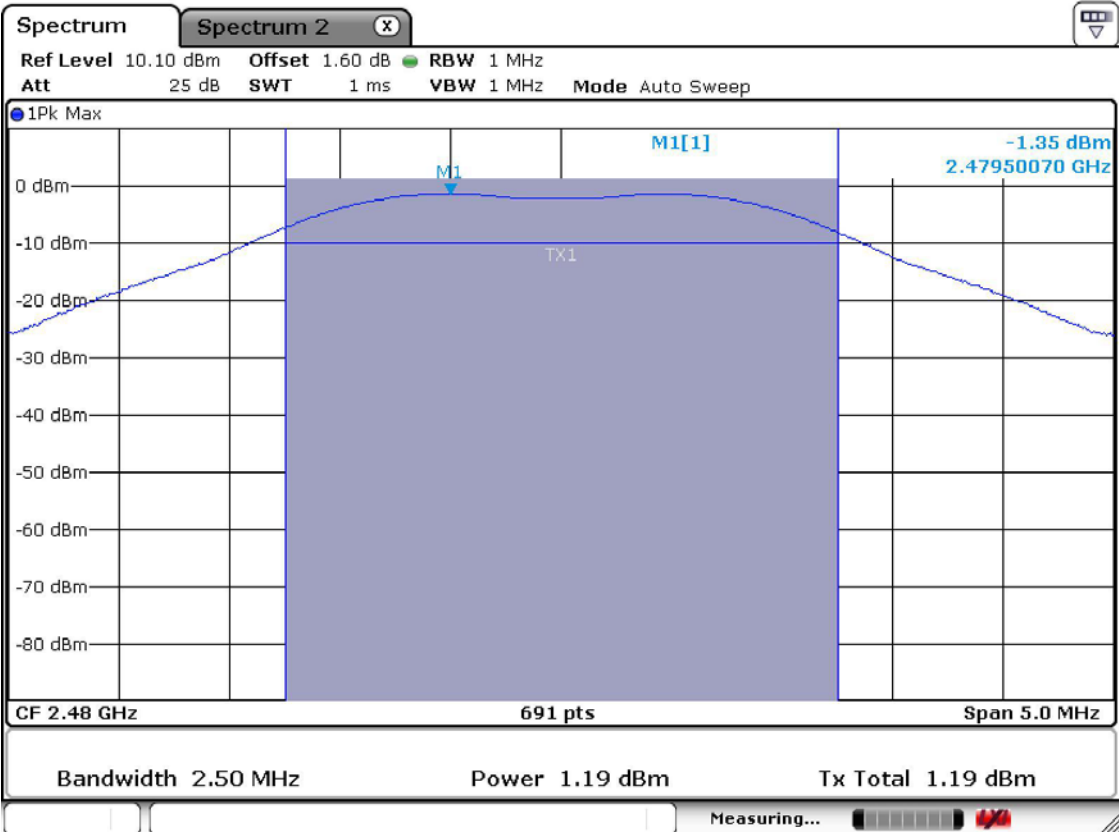
## Low Channel



## Mid Channel



High Channel



### 3.2.3 Power Spectral Density

#### Procedure:

The peak power density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

The spectrum analyzer is set to:

RBW = 3 kHz

Span = 300 kHz

VBW = 10 kHz

Sweep = 100 sec

Detector function = peak

Trace = max hold

#### Measurement Data:

| Frequency<br>(MHz) | Test Results |          |
|--------------------|--------------|----------|
|                    | dBm          | Result   |
| 2405               | 3.16         | Complies |
| 2445               | 2.37         | Complies |
| 2480               | -16.23       | Complies |

- See next pages for actual measured spectrum plots.

#### Minimum Standard:

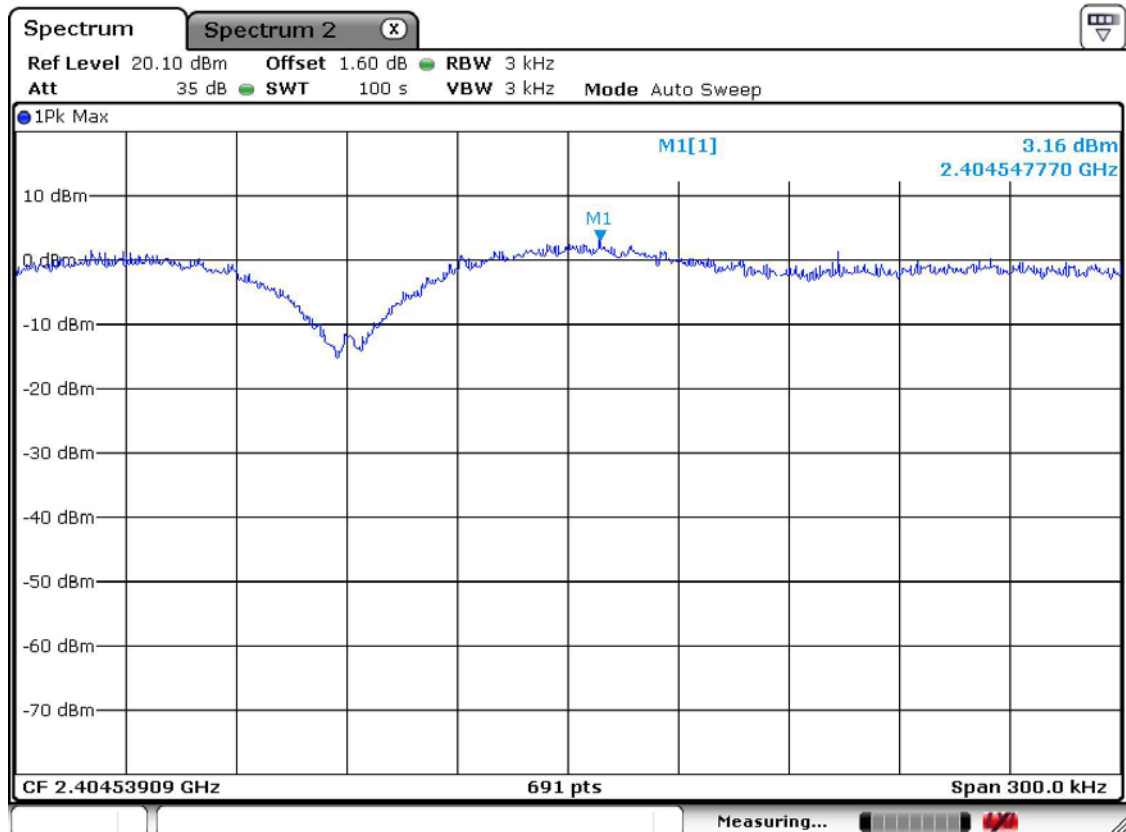
|                        |                  |
|------------------------|------------------|
| Power Spectral Density | < 8dBm @ 3kHz BW |
|------------------------|------------------|

#### Measurement Setup

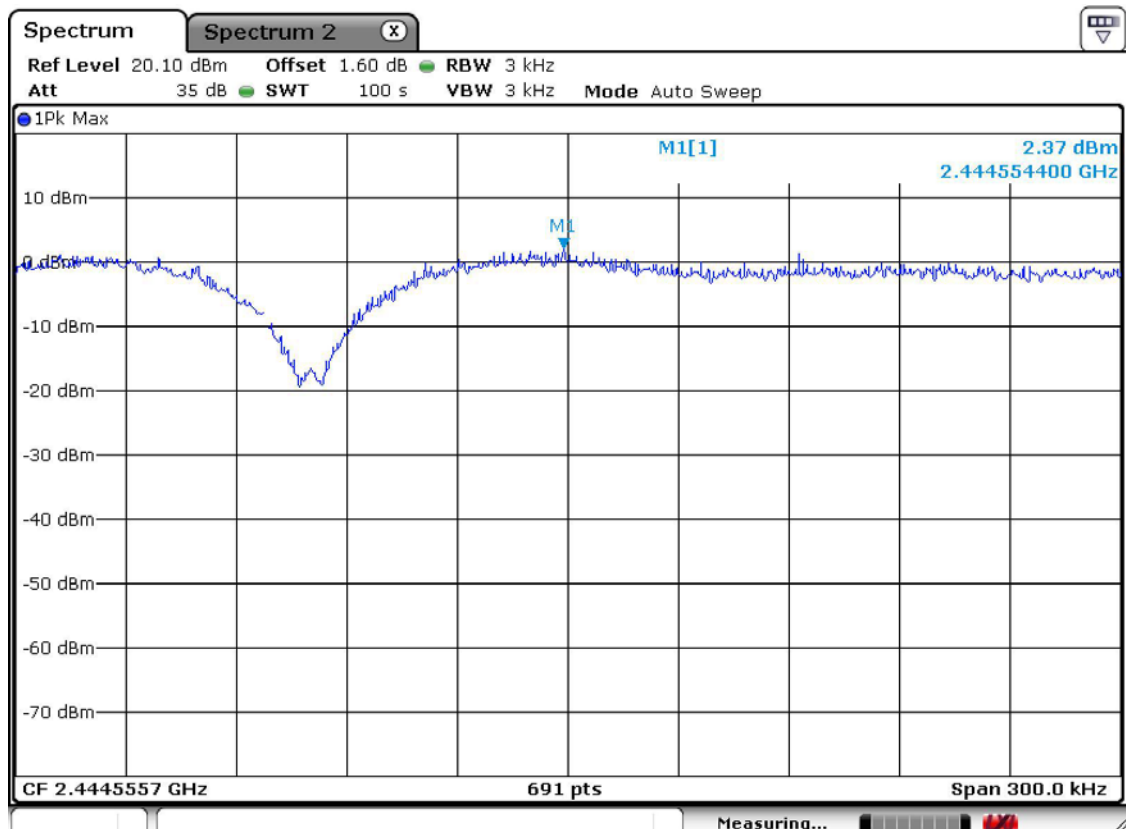
Same as the Chapter 3.2.1 (Figure 1)

## Power Density Measurement

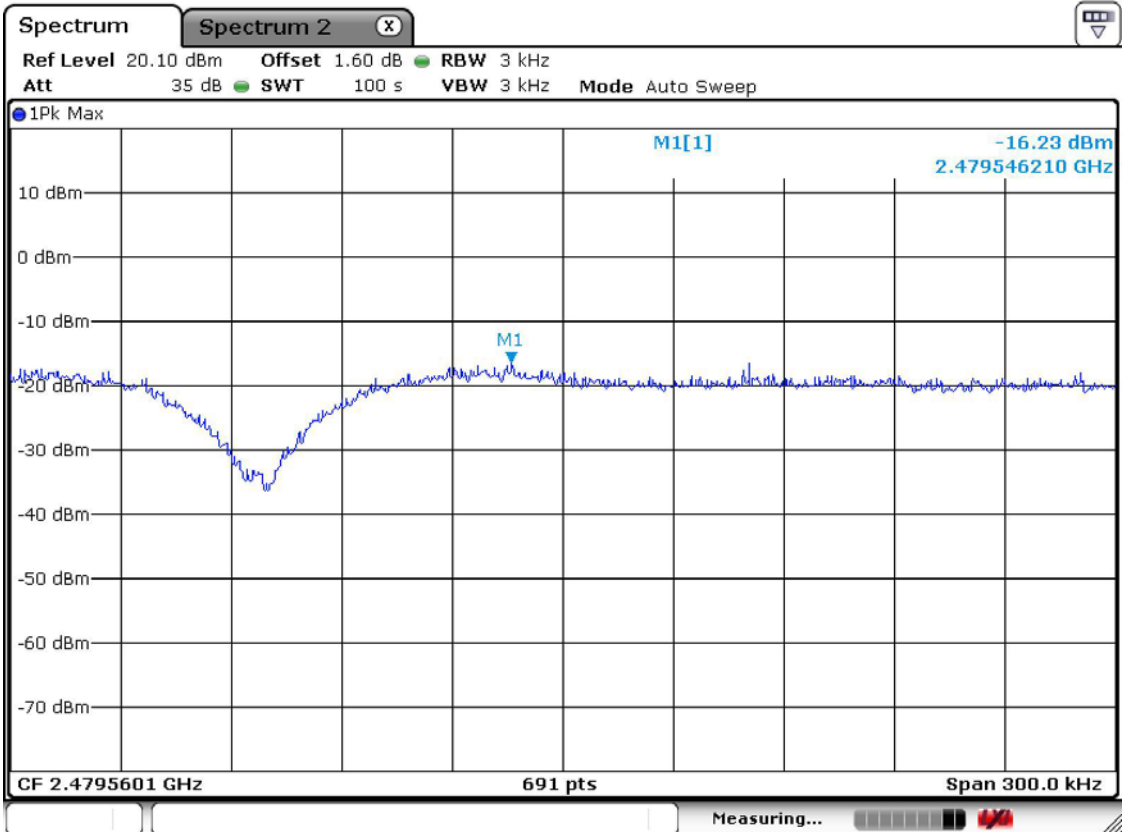
### Low Channel



### Mid Channel



High Channel



### 3.2.4 Band - edge & Spurious

#### Procedure:

The bandwidth at 20dB down from the highest inband spectral density is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate frequencies.

After the trace being stable, Use the marker-to-peak function to measure 20 dB down both sides of the intentional emission.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 100 kHz

VBW = 100 kHz

Span = 50 MHz

Detector function = peak

Trace = max hold

Sweep = auto

Radiated emissions which fall in the restricted bands, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a)

The spectrum analyzer is set to:

Center frequency = the highest, the lowest channels

PEAK:

RBW = VBW = 1MHz, Sweep=Auto

Average:

RBW = 1MHz, VBW=10Hz, Sweep=Auto

Measurement Distance:

3m

Polarization:

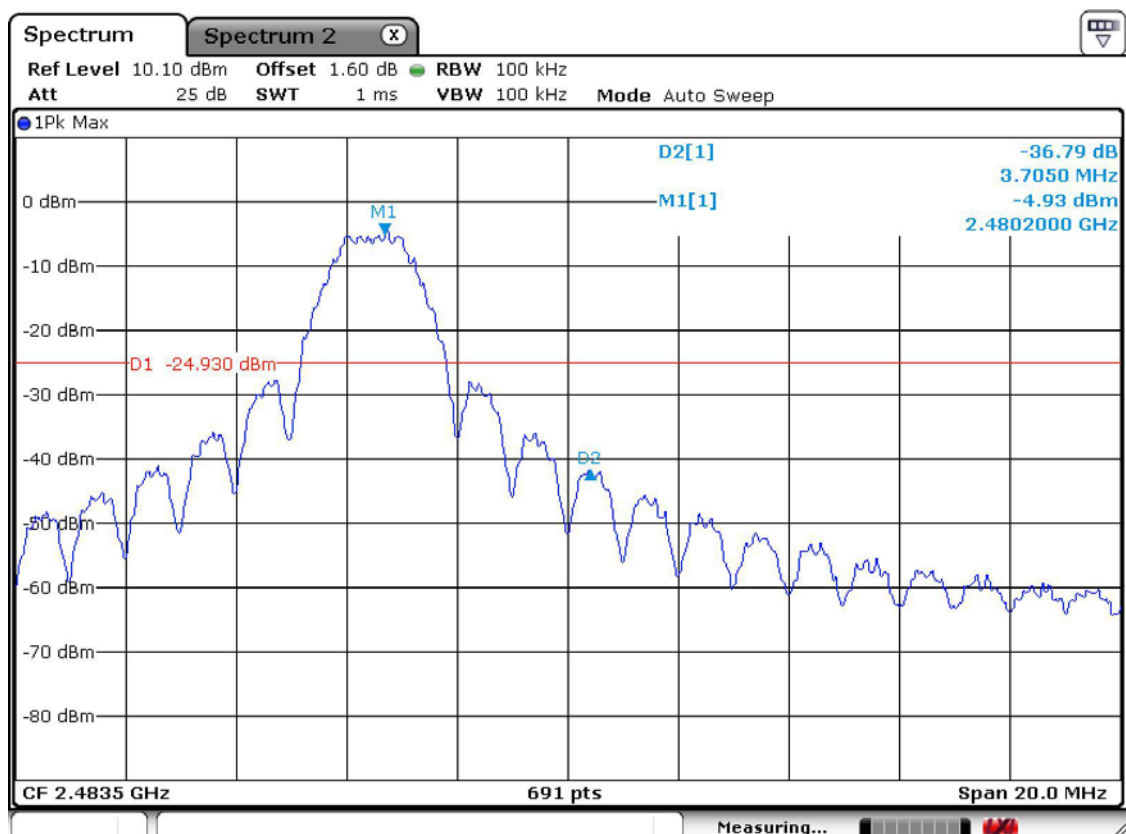
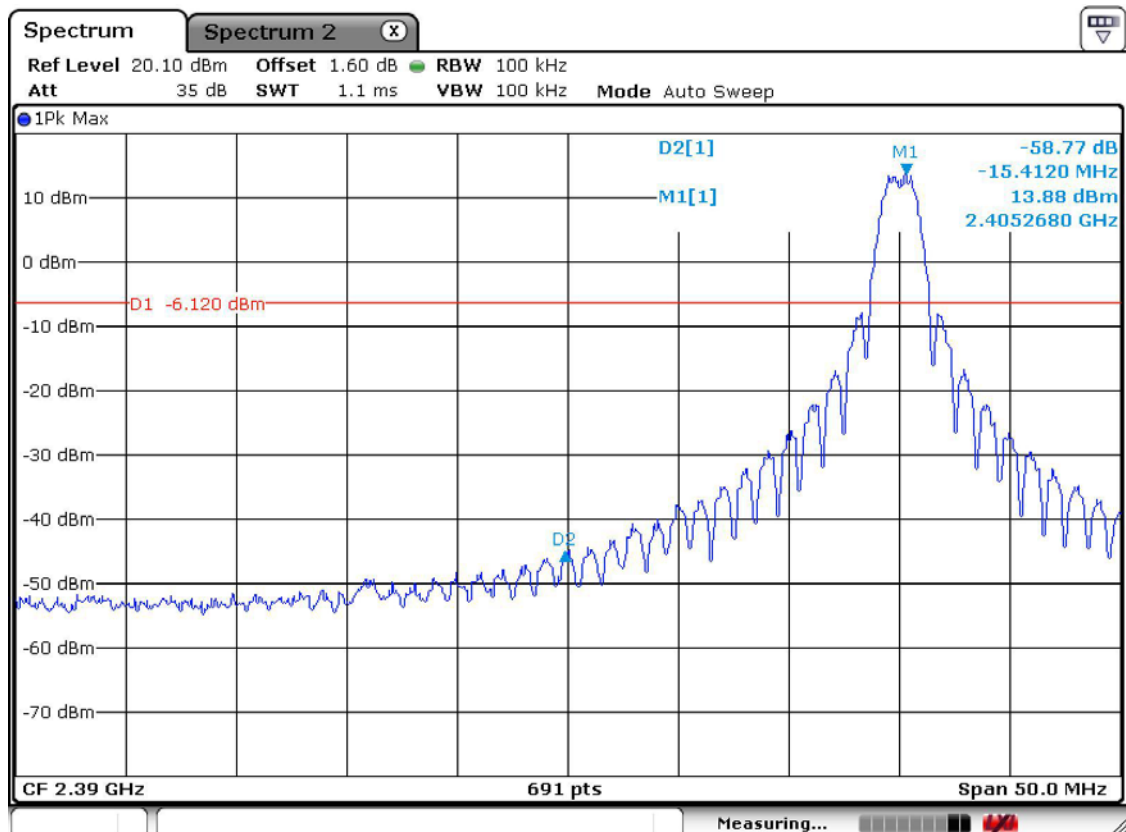
Horizontal / Vertical

#### Measurement Data: Complies

- All conducted emission in any 100kHz bandwidth outside of the spread spectrum band was at least 20dB lower than the highest inband spectral density. Therefore the applying equipment meets the requirement.
- See next pages for actual measured spectrum plots.

|                          |          |
|--------------------------|----------|
| <b>Minimum Standard:</b> | > 20 dBc |
|--------------------------|----------|

## Band-edge



**Band-edges in the restricted band 2310-2390 MHz measurement**

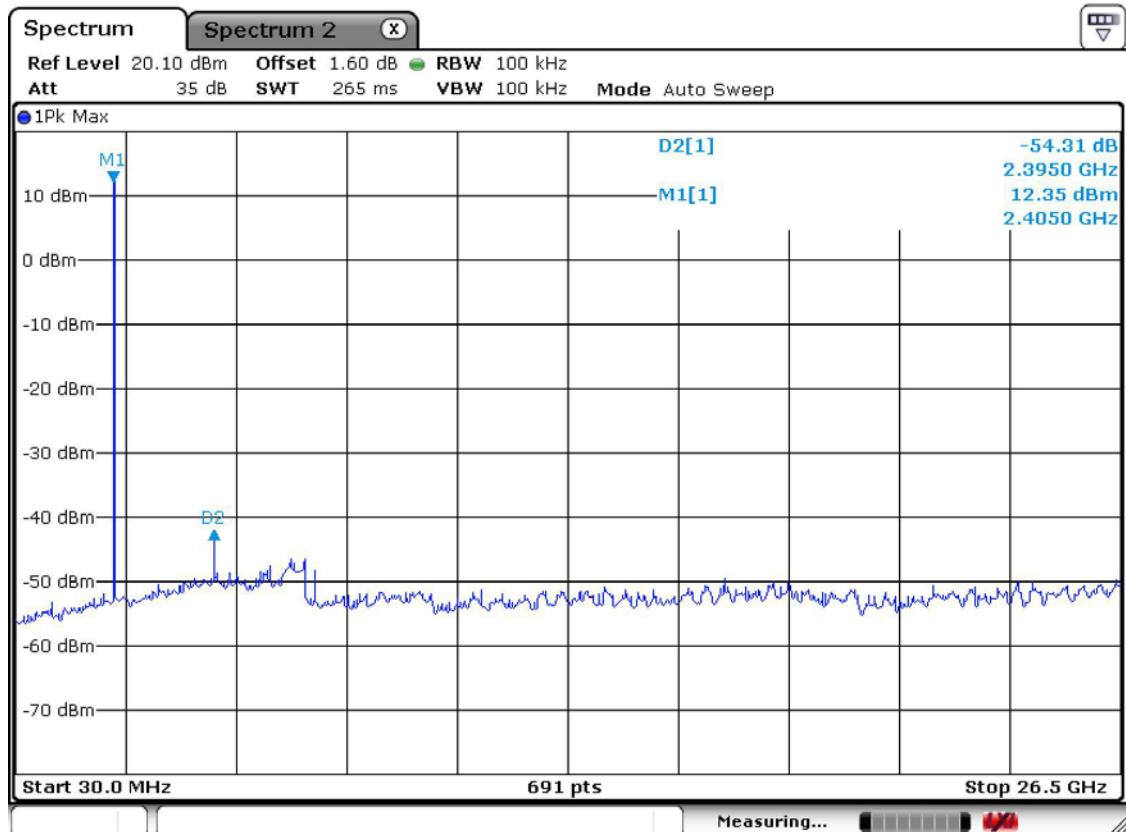
| Frequency | Reading    |      | Pol. | Correction |              |       | Limits     |      | Result     |      | Margin    |      |
|-----------|------------|------|------|------------|--------------|-------|------------|------|------------|------|-----------|------|
|           | [dBuV / m] |      |      | Factor     |              |       | [dBuV / m] |      | [dBuV / m] |      | [dB]      |      |
| [MHz]     | AV / Peak  |      |      | Antenna    | Amp.<br>Gain | Cable | AV / Peak  |      | AV / Peak  |      | AV / Peak |      |
| 2390      | 52.9       | 64.5 | V    | 26.0       | 36.0         | 8.2   | 54.0       | 74.0 | 51.1       | 62.7 | 2.9       | 11.3 |

**Band-edges in the restricted band 2483.5-2500 MHz measurement**

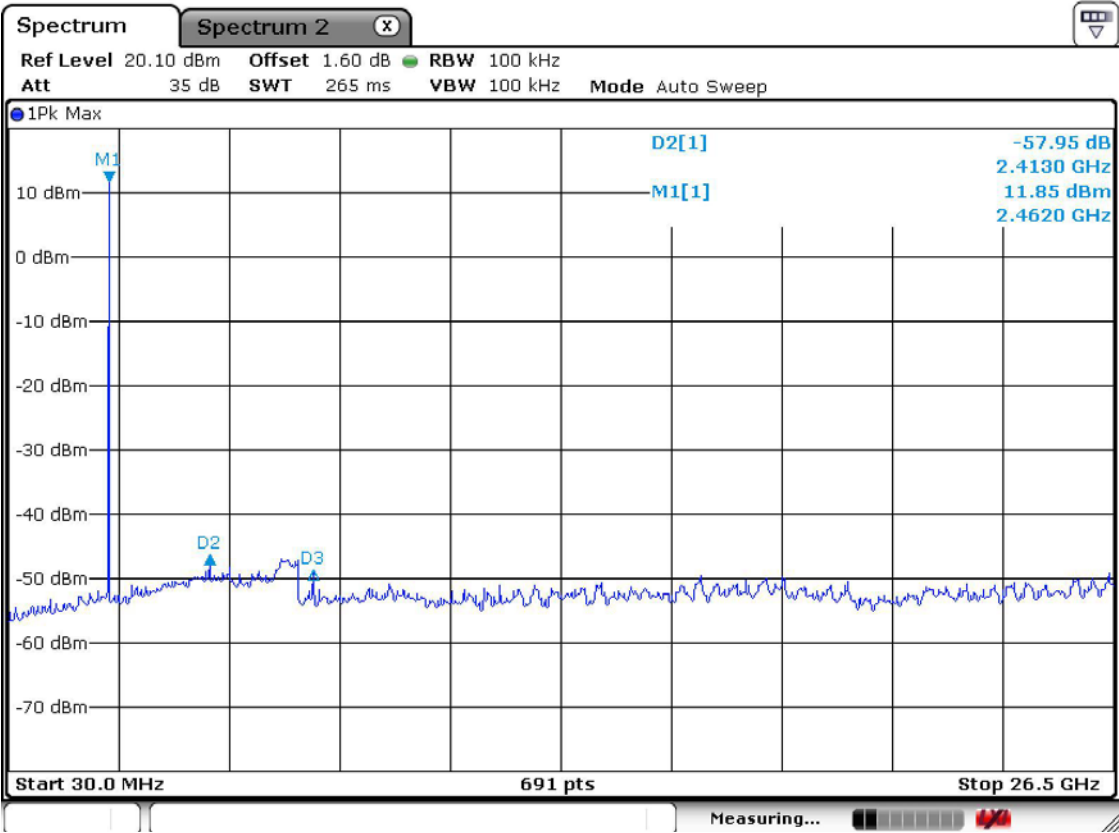
| Frequency | Reading    |      | Pol. | Correction |              |       | Limits     |      | Result     |      | Margin    |      |
|-----------|------------|------|------|------------|--------------|-------|------------|------|------------|------|-----------|------|
|           | [dBuV / m] |      |      | Factor     |              |       | [dBuV / m] |      | [dBuV / m] |      | [dB]      |      |
| [MHz]     | AV / Peak  |      |      | Antenna    | Amp.<br>Gain | Cable | AV / Peak  |      | AV / Peak  |      | AV / Peak |      |
| 2483.5    | 54.1       | 65.3 | V    | 26.0       | 36.0         | 8.2   | 54.0       | 74.0 | 52.3       | 63.5 | 1.7       | 10.5 |

**Note :** This EUT was tested in 3 orthogonal positions and the worst-case data was presented.

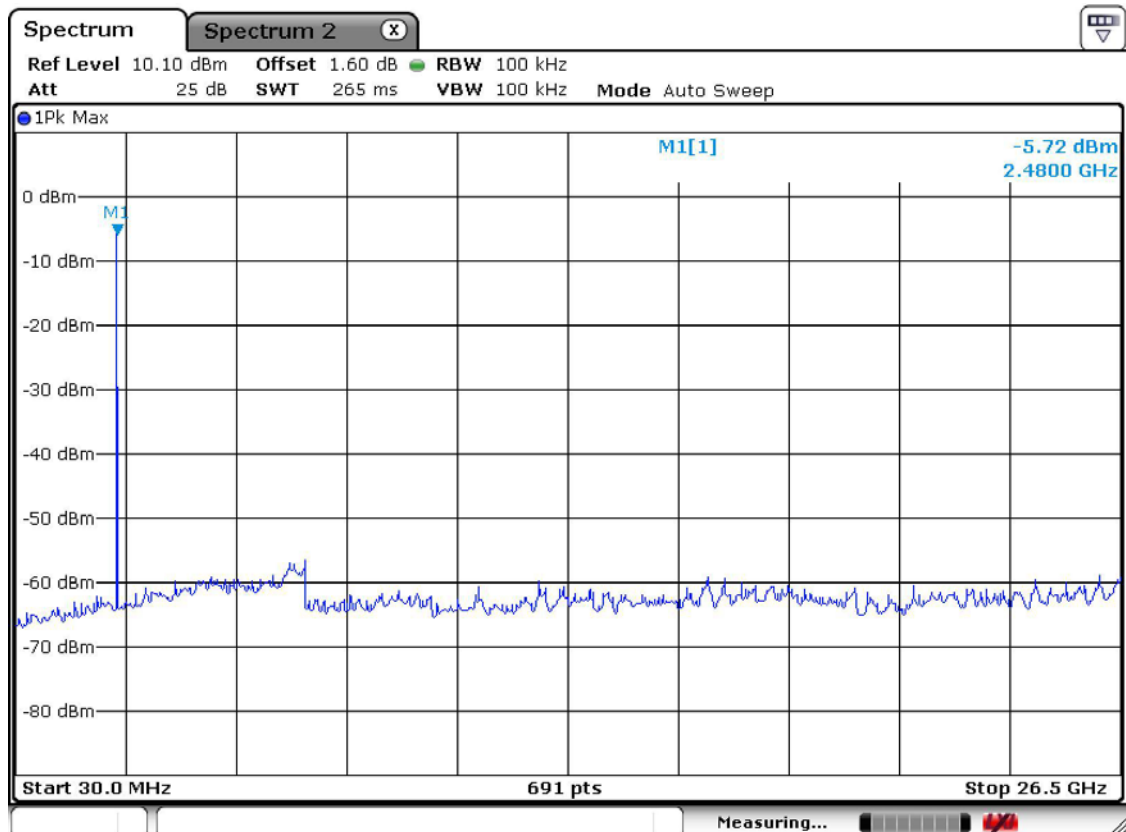
## Low channel

Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic.

Mid channel  
Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic.



**High channel**  
**Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic.**



### 3.2.5 Field Strength of Harmonics

#### Procedure:

The EUT was placed on a 0.8m high wooden table inside a shielded enclosure. An antenna was placed near the EUT and measurements of frequencies and amplitudes of field strengths were recorded for reference during final measurements. For final radiated testing, measurements were performed in OATS. Measurements were performed with the EUT oriented in 3 orthogonal axis and rotated 360 degrees to determine worst-case orientation for maximum emissions. In case of the air temperature of the test site is out of the range is 10 to 40°C before the testing proceeds the warm-up time of EUT maintain adequately

The spectrum analyzer is set to:

Center frequency = the worst channel

Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic.

RBW = 100 kHz ( 30MHz ~ 1 GHz)

VBW ≥ RBW

= 1 MHz (1 GHz ~ 10<sup>th</sup> harmonic )

Span = 100 MHz

Detector function = peak

Trace = max hold

Sweep = auto

#### Measurement Data: Complies

- See next pages for actual measured data.
- The warm-up time of the EUT is 20min.

#### Minimum Standard: FCC Part 15.209(a)

| Frequency (MHz) | Limit (uV/m) @ 3m |
|-----------------|-------------------|
| 30 ~ 88         | 100 **            |
| 88 ~ 216        | 150 **            |
| 216 ~ 960       | 200 **            |
| Above 960       | 500               |

\*\* Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88MHz, 174-216MHz or 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

**Measurement Data:**

| Frequency | Reading    |      | Pol. | Correction |           |       | Limits     |      | Result     |      | Margin    |      |
|-----------|------------|------|------|------------|-----------|-------|------------|------|------------|------|-----------|------|
|           | [dBuV / m] |      |      | Factor     |           |       | [dBuV / m] |      | [dBuV / m] |      | [dB]      |      |
| [MHz]     | AV / Peak  |      |      | Antenna    | Amp. Gain | Cable | AV / Peak  |      | AV / Peak  |      | AV / Peak |      |
| 4810.0    | 46.2       | 58.3 | V    | 31.4       | 34.6      | 8.7   | 54.0       | 74.0 | 51.7       | 63.8 | 2.3       | 10.3 |
| -         | -          | -    | -    | -          | -         | -     | -          | -    | -          | -    | -         | -    |
| -         | -          | -    | -    | -          | -         | -     | -          | -    | -          | -    | -         | -    |
| -         | -          | -    | -    | -          | -         | -     | -          | -    | -          | -    | -         | -    |
| Frequency | Reading    |      | Pol. | Correction |           |       | Limits     |      | Result     |      | Margin    |      |
|           | [dBuV / m] |      |      | Factor     |           |       | [dBuV / m] |      | [dBuV / m] |      | [dB]      |      |
| [MHz]     | AV / Peak  |      |      | Antenna    | Amp. Gain | Cable | AV / Peak  |      | AV / Peak  |      | AV / Peak |      |
| 4890.0    | 45.8       | 57.6 | V    | 31.4       | 34.6      | 8.7   | 54.0       | 74.0 | 51.3       | 63.1 | 2.8       | 11.0 |
| -         | -          | -    | -    | -          | -         | -     | -          | -    | -          | -    | -         | -    |
| -         | -          | -    | -    | -          | -         | -     | -          | -    | -          | -    | -         | -    |
| -         | -          | -    | -    | -          | -         | -     | -          | -    | -          | -    | -         | -    |
| Frequency | Reading    |      | Pol. | Correction |           |       | Limits     |      | Result     |      | Margin    |      |
|           | [dBuV / m] |      |      | Factor     |           |       | [dBuV / m] |      | [dBuV / m] |      | [dB]      |      |
| [MHz]     | AV / Peak  |      |      | Antenna    | Amp. Gain | Cable | AV / Peak  |      | AV / Peak  |      | AV / Peak |      |
| -         | -          | -    | -    | -          | -         | -     | -          | -    | -          | -    | -         | -    |
| -         | -          | -    | -    | -          | -         | -     | -          | -    | -          | -    | -         | -    |
| -         | -          | -    | -    | -          | -         | -     | -          | -    | -          | -    | -         | -    |
| -         | -          | -    | -    | -          | -         | -     | -          | -    | -          | -    | -         | -    |

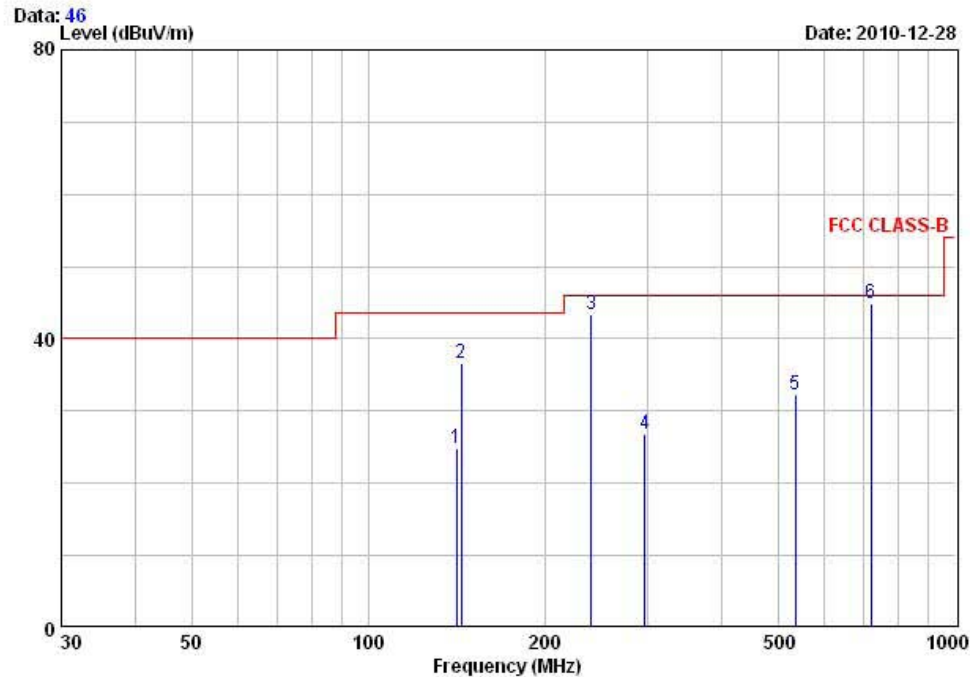
No other emissions were detected at a level greater than 20dB below limit.

Radiated Emissions – Firmware update mode



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EUT/Model No.: IHD2E100T0WW TEST MODE: Firmware Update mode  
Temp Humi : 6 / 32 Tested by: PARK.H.W



| Freq     | Reading | C.F    | Result | Limit  | Margin | Height | Angle | Polarity   |
|----------|---------|--------|--------|--------|--------|--------|-------|------------|
| MHz      | dBuV/m  | dB/m   | dBuV/m | dBuV/m | dB     | cm     | deg   |            |
| 1 141.56 | 37.00   | -12.09 | 24.91  | 43.50  | 18.59  | 224    | 330   | HORIZONTAL |
| 2 144.00 | 48.50   | -11.92 | 36.58  | 43.50  | 6.92   | 225    | 321   | HORIZONTAL |
| 3 240.00 | 54.00   | -10.67 | 43.33  | 46.00  | 2.67   | 141    | 110   | HORIZONTAL |
| 4 295.78 | 35.40   | -8.65  | 26.75  | 46.00  | 19.25  | 114    | 0     | HORIZONTAL |
| 5 534.00 | 36.50   | -4.33  | 32.17  | 46.00  | 13.83  | 127    | 62    | HORIZONTAL |
| 6 720.00 | 45.50   | -0.64  | 44.86  | 46.00  | 1.14   | 144    | 73    | HORIZONTAL |

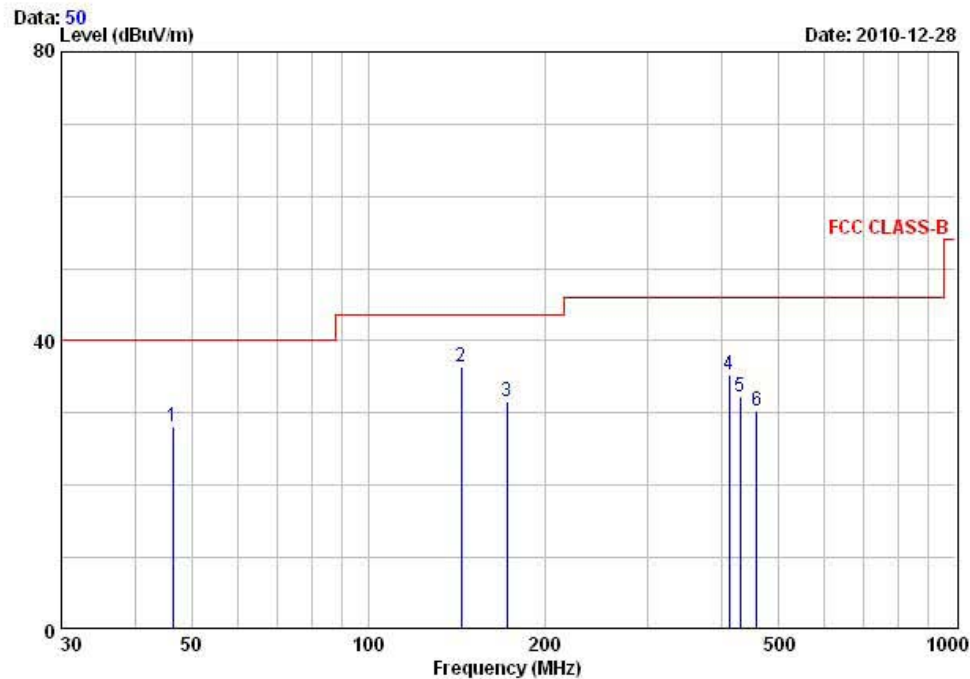
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions – Zigbee mode



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EUT/Model No.: IHD2E100T0WW TEST MODE: Zigbee mode  
Temp Humi : 6 / 32 Tested by: PARK.H.W



| Freq     | Reading | C.F    | Result | Limit | Margin | Height | Angle | Polarity   |
|----------|---------|--------|--------|-------|--------|--------|-------|------------|
| MHz      | dBuV/m  | dB/m   | dBuV/m | QP    | dB     | cm     | deg   |            |
| 1 46.53  | 41.60   | -13.56 | 28.04  | 40.00 | 11.96  | 100    | 209   | VERTICAL   |
| 2 144.01 | 48.30   | -11.92 | 36.38  | 43.50 | 7.12   | 210    | 324   | HORIZONTAL |
| 3 172.22 | 43.40   | -11.70 | 31.70  | 43.50 | 11.80  | 240    | 163   | HORIZONTAL |
| 4 412.02 | 41.80   | -6.54  | 35.26  | 46.00 | 10.74  | 112    | 267   | VERTICAL   |
| 5 430.26 | 38.50   | -6.26  | 32.24  | 46.00 | 13.76  | 122    | 54    | VERTICAL   |
| 6 460.12 | 36.20   | -5.82  | 30.38  | 46.00 | 15.62  | 120    | 215   | VERTICAL   |

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

### 3.2.6 AC Conducted Emissions

#### Procedure:

The conducted emissions are measured in the shielded room with a spectrum analyzer in peak hold. While the measurement, EUT had its hopping function disabled at the middle channels in line with Section 15.31(m). Emissions closest to the limit are measured in the quasi-peak mode (QP) with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation and Exerciser operation. The highest emissions relative to the limit are listed.

#### Measurement Data: Complies

- See next pages for actual measured spectrum plots.
- No emissions were detected at a level greater than 20dB below limit.

#### Minimum Standard: FCC Part 15.207(a)/EN 55022

| Frequency Range<br>(MHz) | Conducted Limit (dBuV) |            |
|--------------------------|------------------------|------------|
|                          | Quasi-Peak             | Average    |
| 0.15 ~ 0.5               | 66 to 56 *             | 56 to 46 * |
| 0.5 ~ 5                  | 56                     | 46         |
| 5 ~ 30                   | 60                     | 50         |

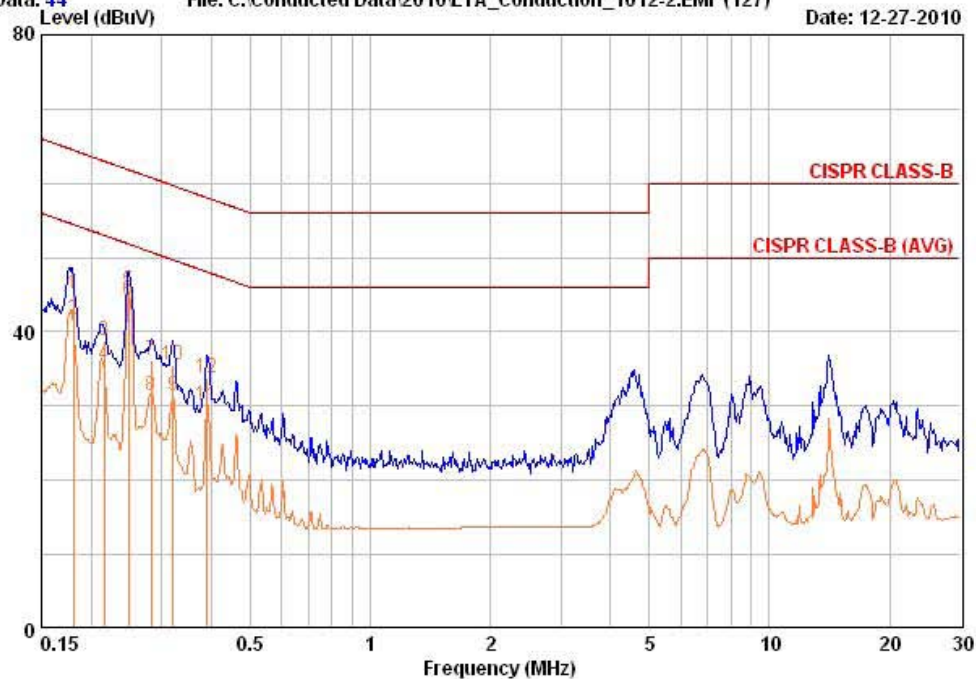
\* Decreases with the logarithm of the frequency

**AC Conducted Emissions – Firmware update – Line**

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Fax:+82-31-3236010

|                   |                      |                 |          |
|-------------------|----------------------|-----------------|----------|
| EUT / Model No. : | IHD2E100T0WW         | Phase :         | LINE     |
| Test Mode :       | Firmware Update mode | Test Power :    | 120 / 60 |
| Temp./Humi. :     | 18 / 37              | Test Engineer : | PARK.H.W |

Data: 44 File: C:\Conducted Data\2010\LTA\_Conduction\_1012-2.EMI (127) Date: 12-27-2010



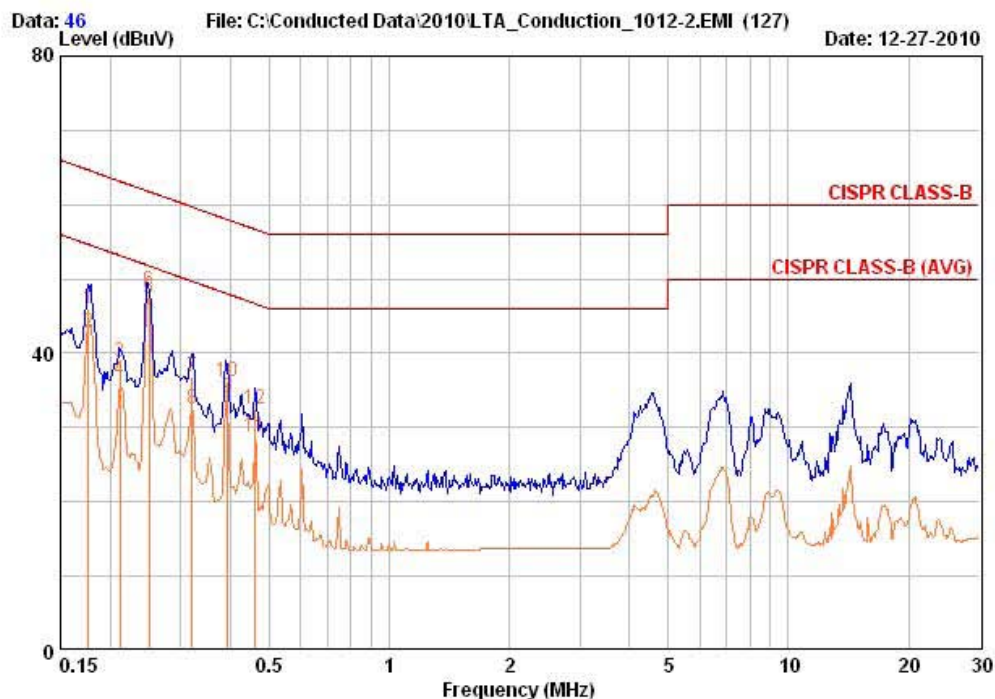
| Freq  | RD    | RD    | C.F  | Result | Result | Limit | Limit | Margin | Margin |
|-------|-------|-------|------|--------|--------|-------|-------|--------|--------|
| MHz   | QP    | AV    | dB   | QP     | AV     | QP    | AV    | QP     | AV     |
|       | dBuV  | dBuV  |      | dBuV   | dBuV   | dBuV  | dBuV  | dB     | dB     |
| 0.180 | 35.56 | 31.96 | 9.65 | 45.21  | 41.61  | 64.49 | 54.49 | 19.28  | 12.88  |
| 0.215 | 29.26 | 25.86 | 9.65 | 38.91  | 35.51  | 63.01 | 53.01 | 24.10  | 17.50  |
| 0.248 | 34.65 | 35.85 | 9.66 | 44.31  | 45.51  | 61.82 | 51.82 | 17.51  | 6.31   |
| 0.283 | 26.56 | 21.66 | 9.65 | 36.21  | 31.31  | 60.73 | 50.73 | 24.52  | 19.42  |
| 0.321 | 25.96 | 21.66 | 9.65 | 35.61  | 31.31  | 59.68 | 49.68 | 24.07  | 18.37  |
| 0.389 | 24.15 | 20.35 | 9.67 | 33.82  | 30.02  | 58.09 | 48.09 | 24.27  | 18.07  |

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss

**AC Conducted Emissions – Firmware update – Neutral**

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|                   |                      |                 |          |
|-------------------|----------------------|-----------------|----------|
| EUT / Model No. : | IHD2E100T0WW         | Phase :         | NEUTRAL  |
| Test Mode :       | Firmware Update mode | Test Power :    | 120 / 60 |
| Temp./Humi. :     | 18 / 37              | Test Engineer : | PARK.H.W |



| Freq  | RD    | RD    | C.F  | Result | Result | Limit | Limit | Margin | Margin |
|-------|-------|-------|------|--------|--------|-------|-------|--------|--------|
| MHz   | QP    | AV    | dB   | QP     | AV     | QP    | AV    | QP     | AV     |
|       | dBuV  | dBuV  |      | dBuV   | dBuV   | dBuV  | dBuV  | dB     | dB     |
| 0.176 | 36.36 | 33.16 | 9.66 | 46.02  | 42.82  | 64.67 | 54.67 | 18.66  | 11.86  |
| 0.211 | 29.06 | 26.66 | 9.66 | 38.72  | 36.32  | 63.17 | 53.17 | 24.45  | 16.85  |
| 0.250 | 38.65 | 37.55 | 9.66 | 48.31  | 47.21  | 61.76 | 51.76 | 13.45  | 4.55   |
| 0.321 | 27.26 | 22.86 | 9.66 | 36.92  | 32.52  | 59.68 | 49.68 | 22.76  | 17.16  |
| 0.393 | 26.55 | 24.35 | 9.66 | 36.21  | 34.01  | 58.00 | 48.00 | 21.79  | 13.99  |
| 0.462 | 22.85 | 19.15 | 9.66 | 32.51  | 28.81  | 56.66 | 46.66 | 24.15  | 17.85  |

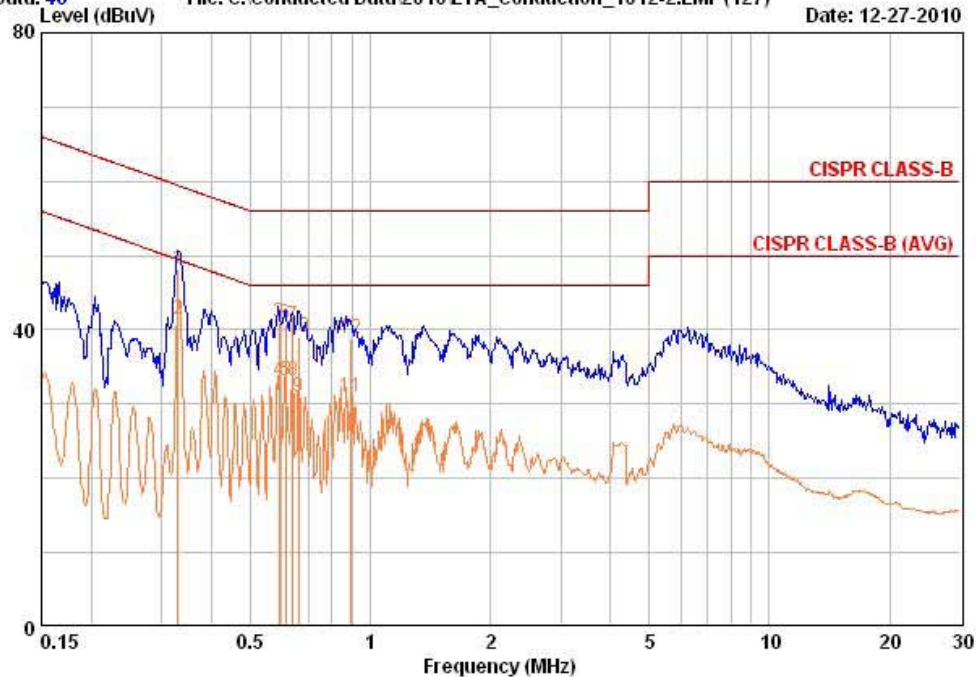
Remarks: C.F (Correction Factor) = Insertion loss + Cable loss

**AC Conducted Emissions – Zigbee – Line**

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|                                |                          |
|--------------------------------|--------------------------|
| EUT / Model No. : IHD2E100T0WW | Phase : LINE             |
| Test Mode : Zigbee mode        | Test Power : 120 / 60    |
| Temp./Humi. : 18 / 37          | Test Engineer : PARK.H.W |

Data: 48 File: C:\Conducted Data\2010\LTA\_Conduction\_1012-2.EMI (127) Date: 12-27-2010



| Freq  | RD    | RD    | C.F  | Result | Result | Limit | Limit | Margin | Margin |
|-------|-------|-------|------|--------|--------|-------|-------|--------|--------|
| MHz   | QP    | AV    | dB   | QP     | AV     | QP    | AV    | QP     | AV     |
|       | dBuV  | dBuV  |      | dBuV   | dBuV   | dBuV  | dBuV  | dB     | dB     |
| 0.329 | 38.56 | 31.66 | 9.66 | 48.21  | 41.31  | 59.48 | 49.48 | 11.26  | 8.16   |
| 0.590 | 31.15 | 23.35 | 9.72 | 40.87  | 33.07  | 56.00 | 46.00 | 15.13  | 12.93  |
| 0.614 | 30.96 | 23.46 | 9.73 | 40.69  | 33.19  | 56.00 | 46.00 | 15.31  | 12.81  |
| 0.640 | 30.76 | 23.36 | 9.74 | 40.50  | 33.10  | 56.00 | 46.00 | 15.50  | 12.90  |
| 0.662 | 29.16 | 21.26 | 9.75 | 38.91  | 31.01  | 56.00 | 46.00 | 17.09  | 14.99  |
| 0.895 | 28.96 | 21.26 | 9.78 | 38.74  | 31.04  | 56.00 | 46.00 | 17.26  | 14.96  |

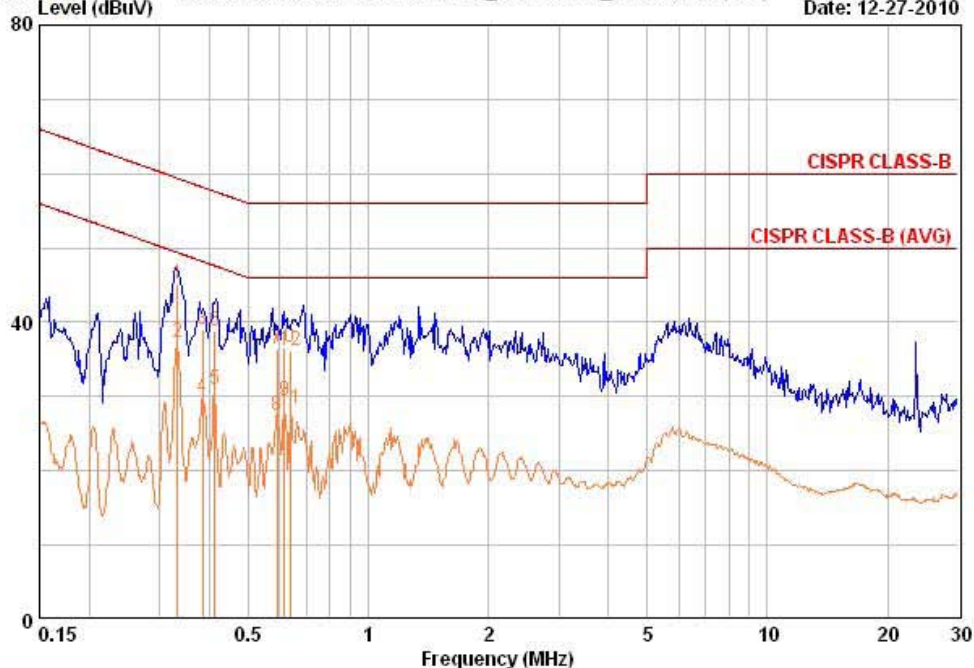
Remarks: C.F (Correction Factor) = Insertion loss + Cable loss

**AC Conducted Emissions – Zigbee – Neutral**

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|                                |                          |
|--------------------------------|--------------------------|
| EUT / Model No. : IHD2E100T0WW | Phase : NEUTRAL          |
| Test Mode : Zigbee mode        | Test Power : 120 / 60    |
| Temp./Humi. : 18 / 37          | Test Engineer : PARK.H.W |

Data: 50 Level (dBuV) File: C:\Conducted Data\2010\LTA\_Conduction\_1012-2.EMI (127) Date: 12-27-2010



| Freq  | RD    | RD    | C.F  | Result | Result | Limit | Limit | Margin | Margin |
|-------|-------|-------|------|--------|--------|-------|-------|--------|--------|
| MHz   | QP    | AV    | dB   | QP     | AV     | QP    | AV    | QP     | AV     |
|       | dBuV  | dBuV  |      | dBuV   | dBuV   | dBuV  | dBuV  | dB     | dB     |
| 0.332 | 35.56 | 27.56 | 9.66 | 45.22  | 37.22  | 59.40 | 49.40 | 14.18  | 12.18  |
| 0.384 | 29.25 | 20.15 | 9.66 | 38.91  | 29.81  | 58.19 | 48.19 | 19.28  | 18.38  |
| 0.412 | 29.05 | 21.25 | 9.66 | 38.71  | 30.91  | 57.61 | 47.61 | 18.90  | 16.70  |
| 0.591 | 26.65 | 17.85 | 9.71 | 36.37  | 27.57  | 56.00 | 46.00 | 19.63  | 18.43  |
| 0.616 | 26.86 | 19.76 | 9.73 | 36.58  | 29.48  | 56.00 | 46.00 | 19.42  | 16.52  |
| 0.641 | 26.46 | 18.56 | 9.74 | 36.20  | 28.30  | 56.00 | 46.00 | 19.80  | 17.70  |

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss

APPENDIX

**TEST EQUIPMENT USED FOR TESTS**

|    | Description                          | Model No.   | Serial No.    | Manufacturer  | Interval | Last Cal. Date |
|----|--------------------------------------|-------------|---------------|---------------|----------|----------------|
| 1  | Spectrum Analyzer                    | FSV-30      | 100757        | R&S           | 1 year   | 2010-02-01     |
| 2  | Spectrum Analyzer                    | 8563E       | 3425A02505    | HP            | 1 year   | 2010-03-29     |
| 3  | Spectrum Analyzer                    | 8594E       | 3710A04074    | HP            | 2 year   | 2009-10-12     |
| 4  | Signal Generator                     | 8648C       | 3623A02597    | HP            | 1 year   | 2010-03-30     |
| 5  | Signal Generator                     | 83711B      | US34490456    | HP            | 1 year   | 2010-03-30     |
| 6  | Attenuator (3dB)                     | 8491A       | 37822         | HP            | 1 year   | 2010-10-08     |
| 7  | Attenuator (10dB)                    | 8491A       | 63196         | HP            | 1 year   | 2010-10-08     |
| 8  | EMI Test Receiver                    | ESCI7       | 100722        | R&S           | 1 year   | 2010-10-08     |
| 9  | Horn Antenna(18 ~ 40GHz)             | SAS-574     | 154           | Schwarzbeck   | 2 year   | 2010-11-25     |
| 10 | Horn Antenna(18 ~ 40GHz)             | SAS-574     | 155           | Schwarzbeck   | 2 year   | 2010-11-25     |
| 11 | RF Amplifier                         | 8447D       | 2949A02670    | HP            | 2 year   | 2009-10-12     |
| 12 | RF Amplifier                         | 8449B       | 3008A02126    | HP            | 1 year   | 2010-03-29     |
| 13 | Test Receiver                        | ESHS10      | 828404/009    | R&S           | 1 year   | 2010-03-29     |
| 14 | TRILOG Antenna                       | VULB 9160   | 9160-3212     | SCHWARZBECK   | 2 year   | 2009-04-02     |
| 15 | Log Periodic Antenna                 | VULP 9118   | 9118 A 401    | SCHWARZBECK   | 2 year   | 2009-04-13     |
| 16 | Biconical Antenna                    | BBA 9106    | VHA 9103-2315 | SCHWARZBECK   | 2 year   | 2009-04-13     |
| 17 | Horn Antenna                         | 3115        | 00055005      | ETS LINDGREN  | 2 year   | 2009-03-16     |
| 18 | Horn Antenna                         | BBHA 9120D  | 9120D122      | SCHWARZBECK   | 2 year   | 2010-12-24     |
| 19 | Dipole Antenna                       | VHA9103     | 2116          | SCHWARZBECK   | 2 year   | 2010-11-25     |
| 20 | Dipole Antenna                       | VHA9103     | 2117          | SCHWARZBECK   | 2 year   | 2010-11-25     |
| 21 | Dipole Antenna                       | VHA9105     | 2261          | SCHWARZBECK   | 2 year   | 2010-11-25     |
| 22 | Dipole Antenna                       | VHA9105     | 2262          | SCHWARZBECK   | 2 year   | 2010-11-25     |
| 23 | Hygro-Thermograph                    | THB-36      | 0041557-01    | ISUZU         | 1 year   | 2010-04-12     |
| 24 | Splitter (SMA)                       | ZFSC-2-2500 | SF617800326   | Mini-Circuits | -        | -              |
| 25 | Power Divider                        | 11636A      | 6243          | HP            | 1 year   | 2010-10-08     |
| 26 | DC Power Supply                      | 6622A       | 3448A03079    | HP            | 1 year   | 2010-10-08     |
| 27 | Frequency Counter                    | 5342A       | 2826A12411    | HP            | 1 year   | 2010-03-30     |
| 28 | Power Meter                          | EPM-441A    | GB32481702    | HP            | 1 year   | 2010-03-29     |
| 29 | Power Sensor                         | 8481A       | US41030291    | HP            | 1 year   | 2010-10-08     |
| 30 | Audio Analyzer                       | 8903B       | 3729A18901    | HP            | 1 year   | 2010-10-08     |
| 31 | Modulation Analyzer                  | 8901B       | 3749A05878    | HP            | 1 year   | 2010-10-08     |
| 32 | TEMP & HUMIDITY Chamber              | YJ-500      | LTAS06041     | JinYoung Tech | 1 year   | 2010-10-08     |
| 33 | LOOP-ANTENNA                         | FMZB 1516   | 151602/94     | SCHWARZBECK   | 2 year   | 2009-03-02     |
| 34 | Stop Watch                           | HS-3        | 601Q09R       | CASIO         | 2 year   | 2010-03-31     |
| 35 | LISN                                 | ENV216      | 100408        | R&S           | 1 year   | 2010-10-08     |
| 36 | UNIVERSAL RADIO COMMUNICATION TESTER | CMU200      | 106243        | R&S           | 2 year   | 2010-05-13     |
| 37 | Attenuator (30dB)                    | 8498A       | 3318A10929    | HP            | 1 year   | 2011-01-05     |