

**Cyber Blue (HK) Limited**

Application  
For  
Certification

**FCC ID: UFDD302****IP CAMERA**

**Model: D302**  
**Additional Model (radioshack): 4900319**

**WiFi Transceiver**

Report No.: 140905011SZN-001

We hereby certify that the sample of the above item is considered to comply with the requirements of FCC Part 15, Subpart C for Intentional Radiator, mention 47 CFR [10-1-13]

Prepared and Checked by:

Approved by:

Sign on file

Hardy Suo  
Assistant Engineer

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Andy Yan  
Senior Project Engineer  
Date: October 10, 2014

- The test results reported in this test report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained.
- This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results referenced from this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.
- For Terms And Conditions of the services, it can be provided upon request.
- The evaluation data of the report will be kept for 3 years from the date of issuance.

TRF no.: FCC 15C\_Tx\_b

## INTERTEK TESTING SERVICE

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# INTERTEK TESTING SERVICES

## MEASUREMENT/TECHNICAL REPORT

### IP CAMERA

**Model: D302**  
**Additional Model (radioshack): 4900319**

**FCC ID: UFDD302**

This report concerns (check one)      Original Grant  Class II Change

Equipment Type: DTS - Part 15 Digital Transmission Systems (WiFi transmitter portion)

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)?      Yes       No

If yes, defer until : \_\_\_\_\_  
date

Company Name agrees to notify the Commission by: \_\_\_\_\_  
date

of the intended date of announcement of the product so that the grant can be issued on that date.

Transition Rules Request per 15.37?      Yes       No

If no, assumed Part 15, Subpart C for intentional radiator - the new 47 CFR [10-01-13] Edition] provision.

Report prepared by:

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# INTERTEK TESTING SERVICES

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### List of attached file

Exhibit type	File Description	Filename
Test Report	Test Report	report.pdf
Test Setup Photo	Radiated Emission	radiated photos.pdf
Test Setup Photo	Conducted Emission	conducted photos.pdf
External Photo	External Photo	external photos.pdf
Internal Photo	Internal Photo	internal photos.pdf
Block Diagram	Block Diagram	block.pdf
Schematics	Circuit Diagram	circuit.pdf
Operation Description	Technical Description	descri.pdf
ID Label/Location	Label Artwork and Location	label.pdf
User Manual	User Manual	manual.pdf
Cover Letter	Confidentiality Letter	request.pdf
Cover Letter	Letter of Agency	agency.pdf

# **INTERTEK TESTING SERVICES**

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## **EXHIBIT 1**

### **SUMMARY OF TEST RESULTS**

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## **1.0 Summary of Test results**

### **IP CAMERA**

**Model: D302**

**FCC ID: UFDD302**

TEST	REFERENCE	RESULTS
Max. Output power	15.247(b)(3)	Pass
6 dB Bandwidth	15.247(a)(2)	Pass
Max. Power Density	15.247(e)	Pass
Out of Band Antenna Conducted Emission	15.247(d)	Pass
Radiated Emission in Restricted Bands	15.247(d)	Pass
AC Conducted Emission	15.207	Pass
Antenna Requirement	15.203	Pass (See Notes)

Notes: The EUT uses an Integral Antenna which in accordance to Section 15.203 is considered sufficient to comply with the provisions of this section.

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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 IP CAMERA with WiFi function operating at 2412-2462MHz for 802.11b/g/n-HT20, 11 channels with 5MHz channel spacing and 2422-2452MHz for 802.11n-HT40, 9 channels with 5MHz channel spacing. The EUT was powered by AC/DC adapter with input of 100-240Vac, 50/60Hz, 0.4A and output of 5Vdc, 1000mA. For more detailed features description, please refer to the user's manual.

#### **Accessories:**

- (1) AC/DC Adapter      Model: SC050100-US  
                          Input: AC 100-240V, 50/60Hz, 0.4A  
                          Output: DC 5.0V, 1000mA
- (2) USB Cable          Unshielded, Length 304cm

The Model: 4900319 is the same as the Model: D302 in hardware aspect, the electrical part are the same, they are differences in appearance, model number and brand name as trading purpose.

Type of Modulation: BPSK, QPSK, 16QAM, 64QAM, CCK, DQPSK, DBPSK.

Antenna Type: Integral Antenna.

For electronic filing, the brief circuit description is saved with filename: descri.pdf.

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### **2.2 Related Submittal(s) Grants**

This is an application for certification of:

DTS- Part 15 Digital Transmission Systems (WiFi transmitter portion), and there is no corresponding unit for certification.

### **2.3 Test Methodology**

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2009) and KDB 558074. Radiated emission measurement was performed in semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application. All other measurements were made in accordance with the procedures in part 2 of CFR 47.

### **2.4 Test Facility**

The Semi-Anechoic chamber and shield room used to collect the radiated data and conducted data are **Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch** and located at 6F, Block D, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China. This test facility and site measurement data have been fully placed on file with the FCC (Registration Number: 242492).

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### **EXHIBIT 3**

#### **SYSTEM TEST CONFIGURATION**

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### **3.0 System Test Configuration**

#### **3.1 Justification**

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables were manipulated to produce worst case emissions. The EUT was powered by AC/DC Adapter (Input: 120Vac, 60Hz, Output: 5Vdc, 1000mA) during the testing. Only the worst case data was reported.

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

The rear of unit shall be flushed with the rear of the table.

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000 MHz. The resolution is 1 MHz or greater for frequencies above 1000 MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed 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.

#### **3.2 EUT Exercising Software**

The EUT exercise program (provided by client) used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. The worst case configuration is used in all specified testing.

The parameters of test software setting:

During the test, Channel and power controlling software provided by the applicant was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the application and is going to be fixed on the firmware of the end product.

Power Parameters of IEEE 802.11b/g/n

On 802.11n (20MHz & 40MHz) mode, only one antenna is used for transmission.

We test all data rate and only the worst – case data is shown in the report.

#### **3.3 Special Accessories**

N/A.

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## **INTERTEK TESTING SERVICES**

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### **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.

### **3.5 Equipment Modification**

Any modifications installed previous to testing by Cyber Blue (HK) Limited will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch.

### **3.6 Support Equipment List and Description**

This product was tested in the following configuration:

Refer List:

Description	Manufacturer	Model No.
USB Cable	Cyber Blue	Unshielded, Length 304cm
TF Card	SanDisk	4G
Adapter	Cyber Blue	SC050100-US Input: AC 100~240V, 50/60Hz, 0.4A; Output: DC 5.0V, 1000mA

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 4**

### **MEASUREMENT RESULTS**

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302

### 4.0 **Measurement Results**

#### 4.1 Maximum Conducted Output Power at Antenna Terminals, FCC Rules 15.247(b)(3):

The antenna power of the EUT was connected to the input of a broadband peak RF power meter. The power meter have a video bandwidth that is greater than DTS bandwidth and utilize a fast-responding diode detector. Power was read directly at the EUT antenna terminals with cable loss added.

For antennas with gains of 6 dBi or less, maximum allowed Transmitter output is 1 watt (+30 dBm).

IEEE 802.11b (Antenna Gain = 1.72dBi) (CCK, 1Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	14.30	26.92
Middle Channel: 2437	14.30	26.92
High Channel: 2462	14.70	29.51

IEEE 802.11g (Antenna Gain = 1.72dBi) (16QAM, 6Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	15.70	37.15
Middle Channel: 2437	16.30	42.66
High Channel: 2462	16.80	47.86

## INTERTEK TESTING SERVICES

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IEEE 802.11n-HT20 (Antenna Gain = 1.72dBi) (16QAM, 6.5Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	16.20	41.69
Middle Channel: 2437	16.70	46.77
High Channel: 2462	16.90	48.98

IEEE 802.11n-HT40 (Antenna Gain = 1.72dBi) (64QAM, 13.5Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2422	14.10	25.70
Middle Channel: 2437	14.30	26.92
High Channel: 2452	14.50	28.18

Cable loss: 0.5 dB    External Attenuation: 0 dB

Cable loss, external attenuation has been included in OFFSET function

EUT max. output level = 16.90dBm

For RF Exposure, the information is saved with filename: RF exposure.pdf.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited

Date of Test: September 24, 2014

Model: D302

### 4.2 Minimum 6 dB RF Bandwidth, FCC Rule 15.247(a)(2):

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 KHz according to FCC KDB 558074. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK output reading was taken, a DISPLAY line was drawn 6 dB lower than PEAK level. The 6dB bandwidth was determined from where the channel output spectrum intersected the display line.

Limit: The 6 dB Bandwidth is at least 500 kHz.

IEEE 802.11b (CCK, 1Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	10.029
2437	10.029
2462	10.550

IEEE 802.11g (16QAM, 6Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	16.585
2437	16.585
2462	16.411

IEEE 802.11n-HT20 (16QAM, 6.5Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	17.800
2437	17.800
2462	17.670

## INTERTEK TESTING SERVICES

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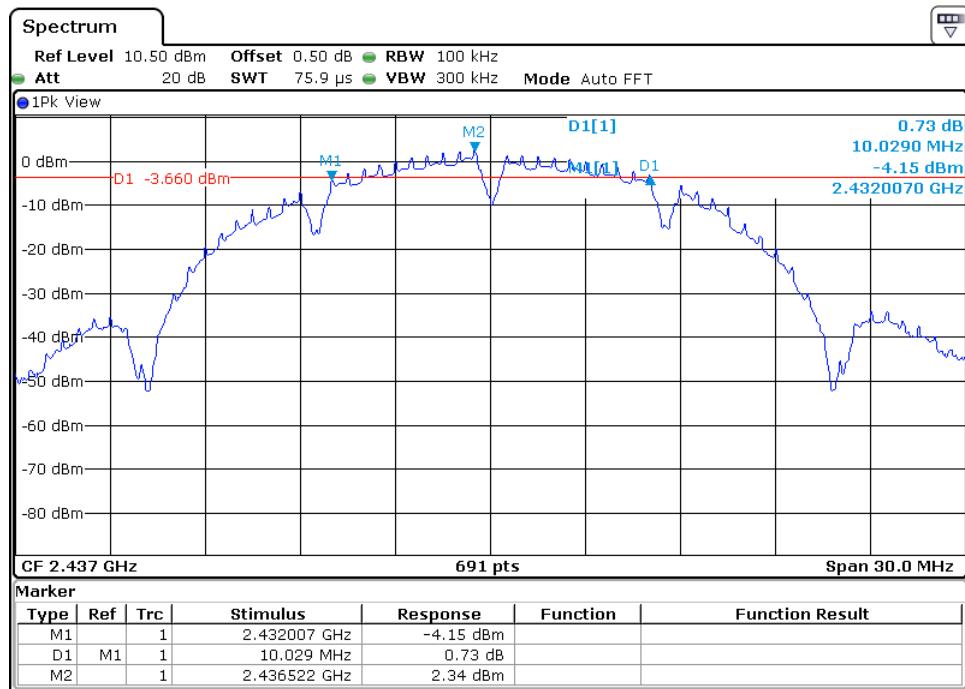
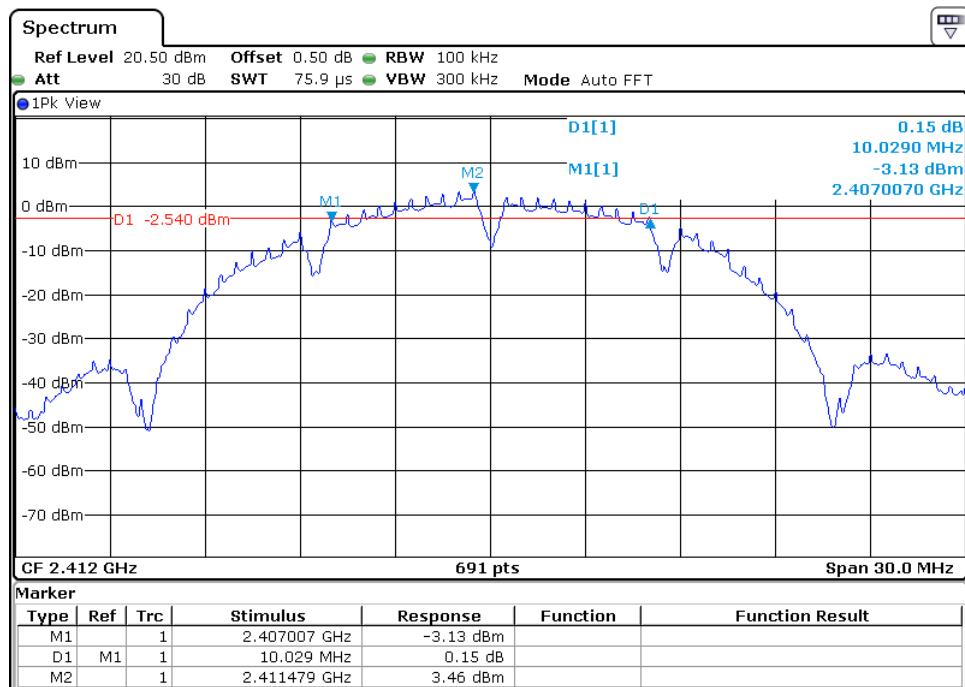
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IEEE 802.11n-HT40 (64QAM, 13.5Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2422	37.793
2437	37.699
2452	36.375

The test plots are attached as below.

# INTERTEK TESTING SERVICES

802.11b



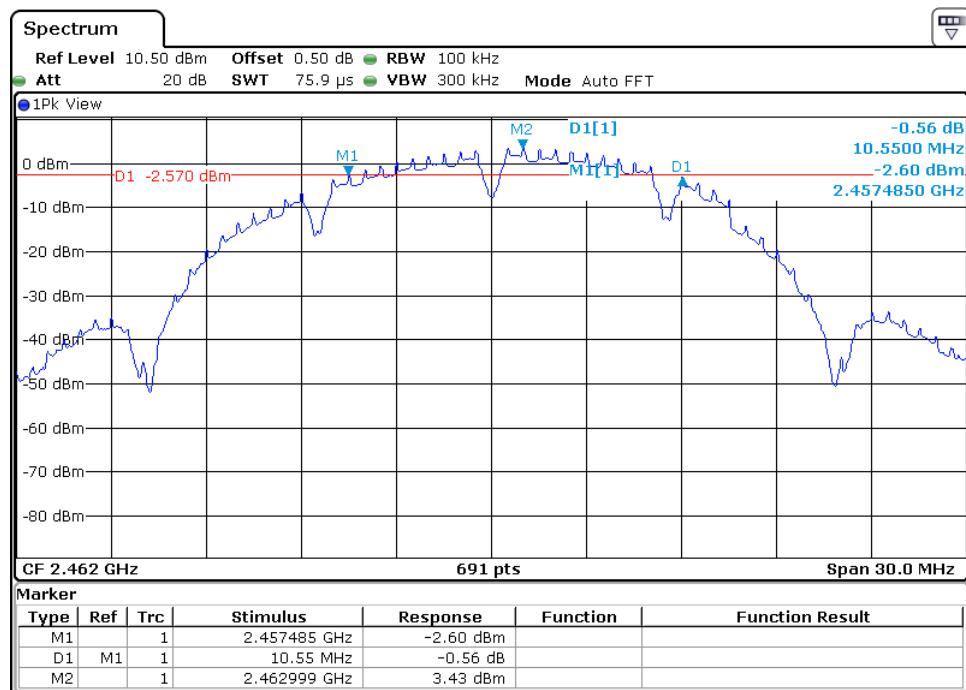
TRF no.: FCC 15C\_TX\_b

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# INTERTEK TESTING SERVICES

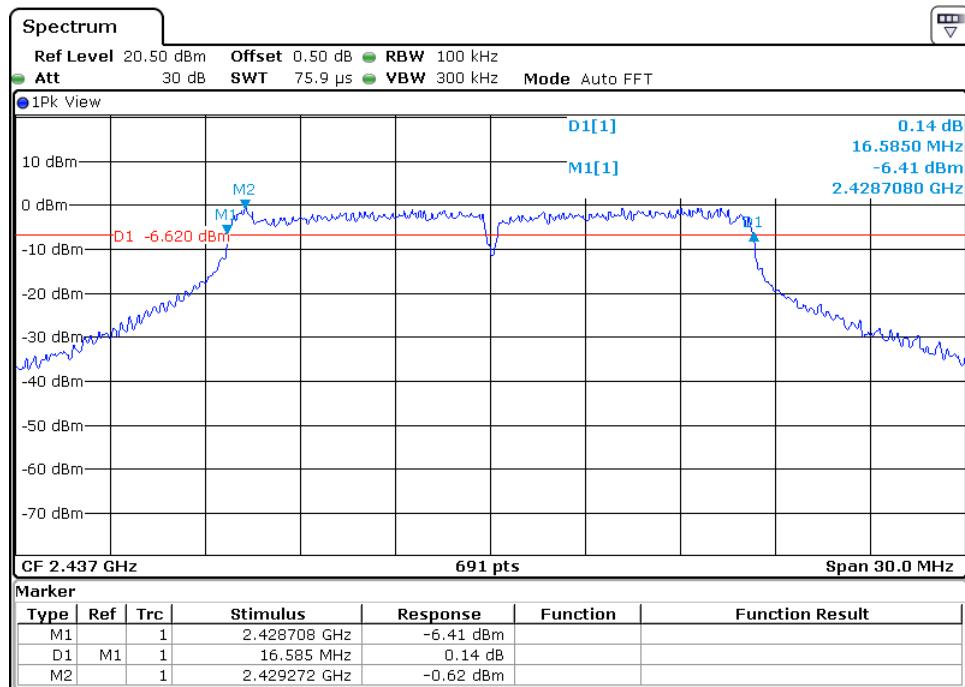
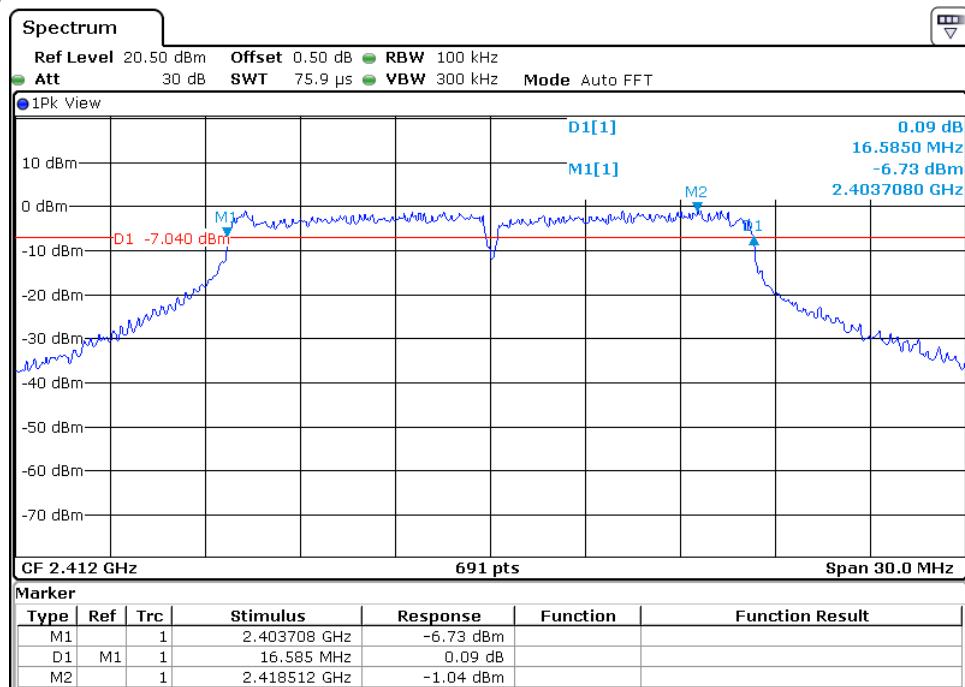
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TRF no.: FCC 15C\_TX\_b  
 FCC ID: UFDD302  
 Report No.: 140905011SZN-001

# INTERTEK TESTING SERVICES

802.11g



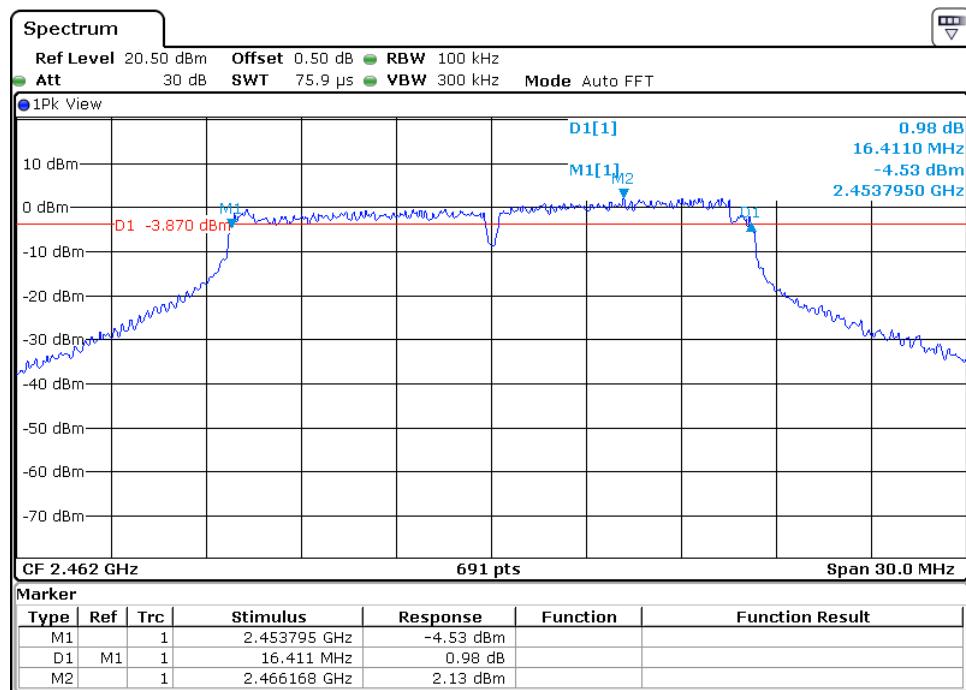
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FCC ID: UFDD302

Report No.: 140905011SZN-001

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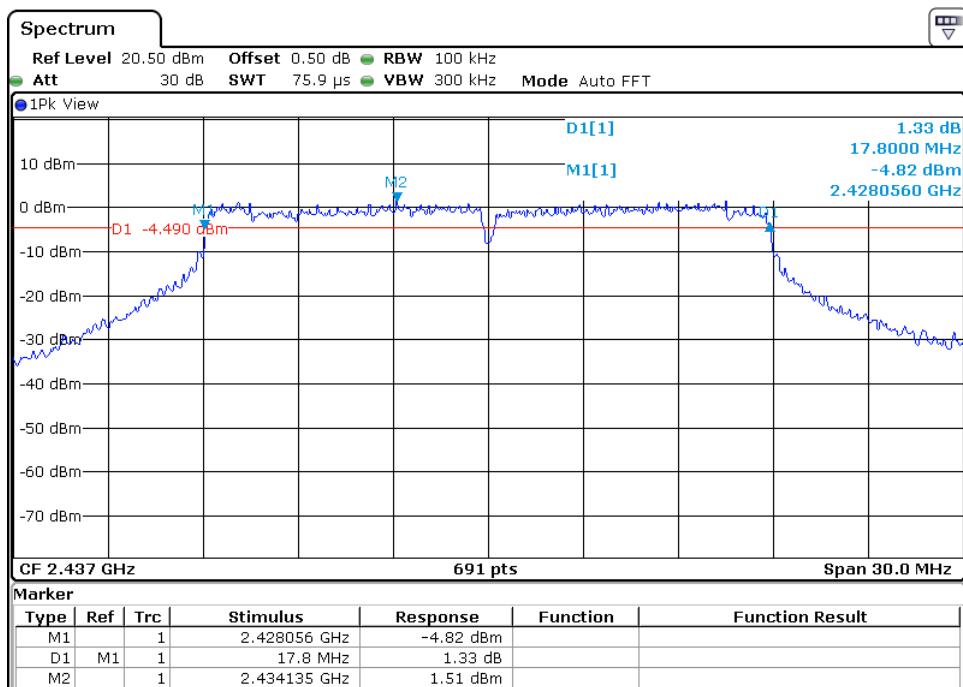
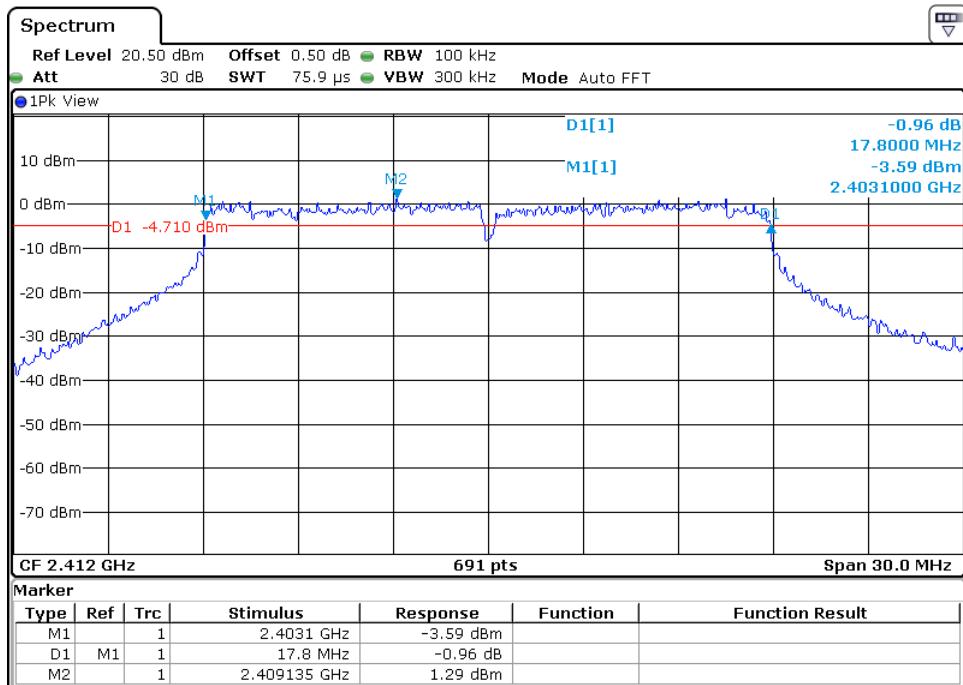
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 FCC ID: UFDD302  
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# INTERTEK TESTING SERVICES

## 802.11 n-HT20



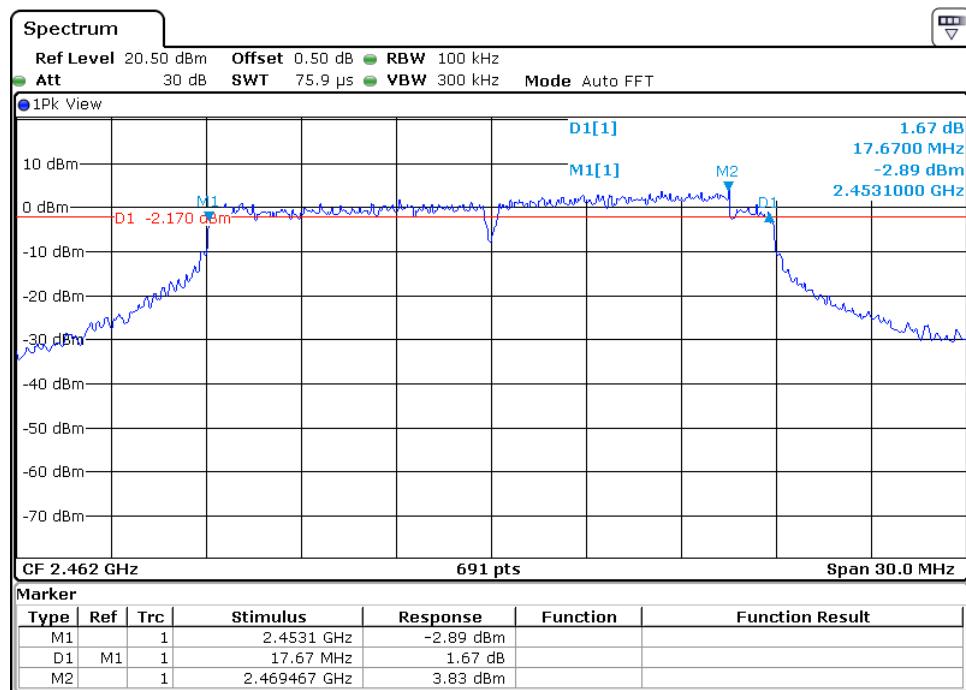
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FCC ID: UFDD302

Report No.: 140905011SZN-001

# INTERTEK TESTING SERVICES

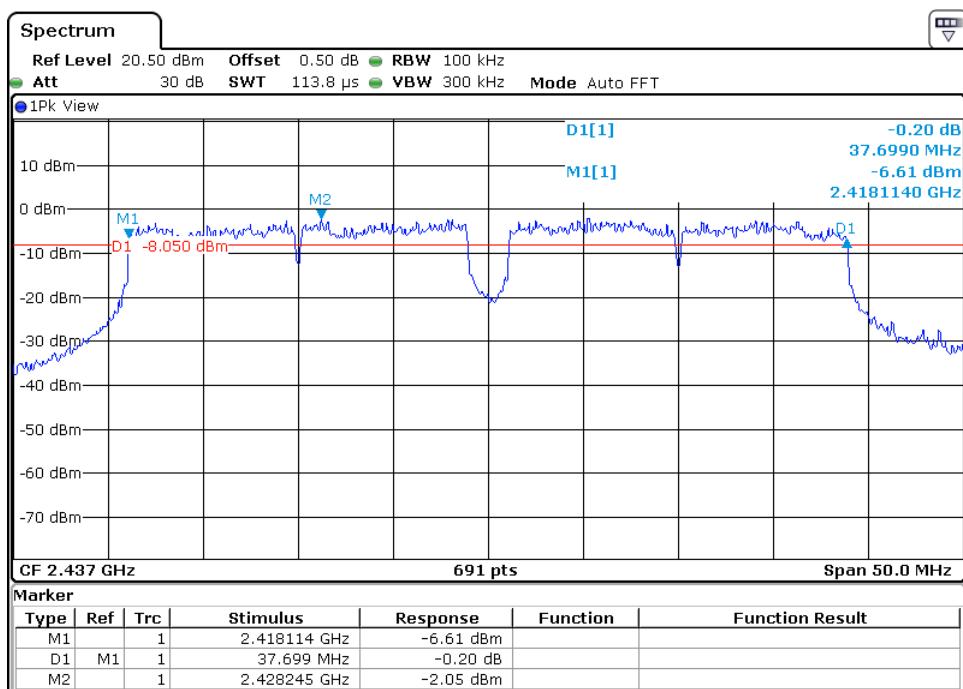
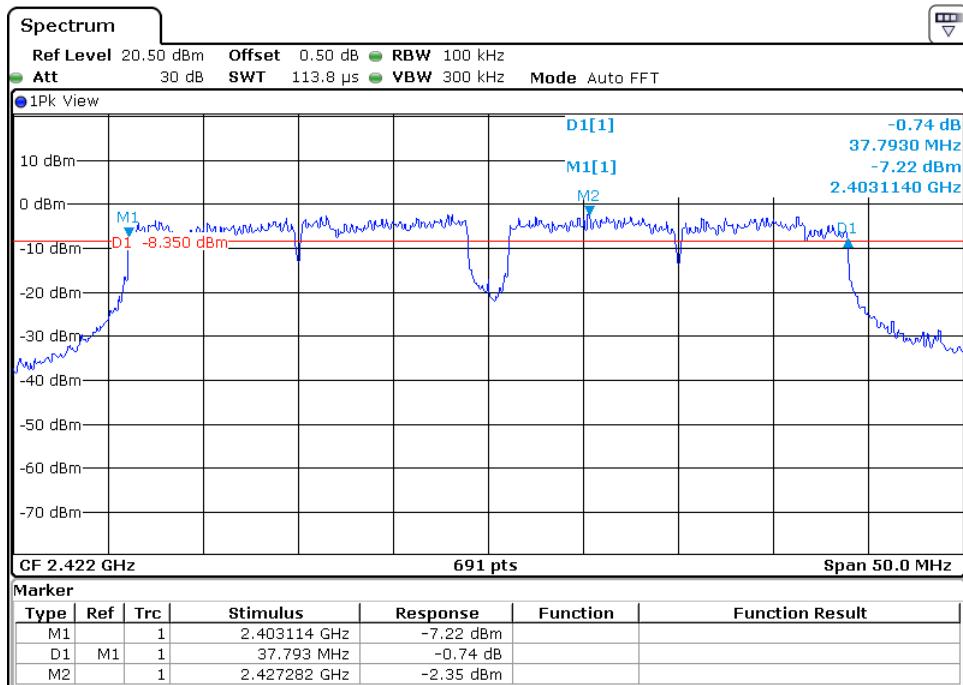
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TRF no.: FCC 15C\_TX\_b  
 FCC ID: UFDD302  
 Report No.: 140905011SZN-001

# INTERTEK TESTING SERVICES

## 802.11 n-HT40



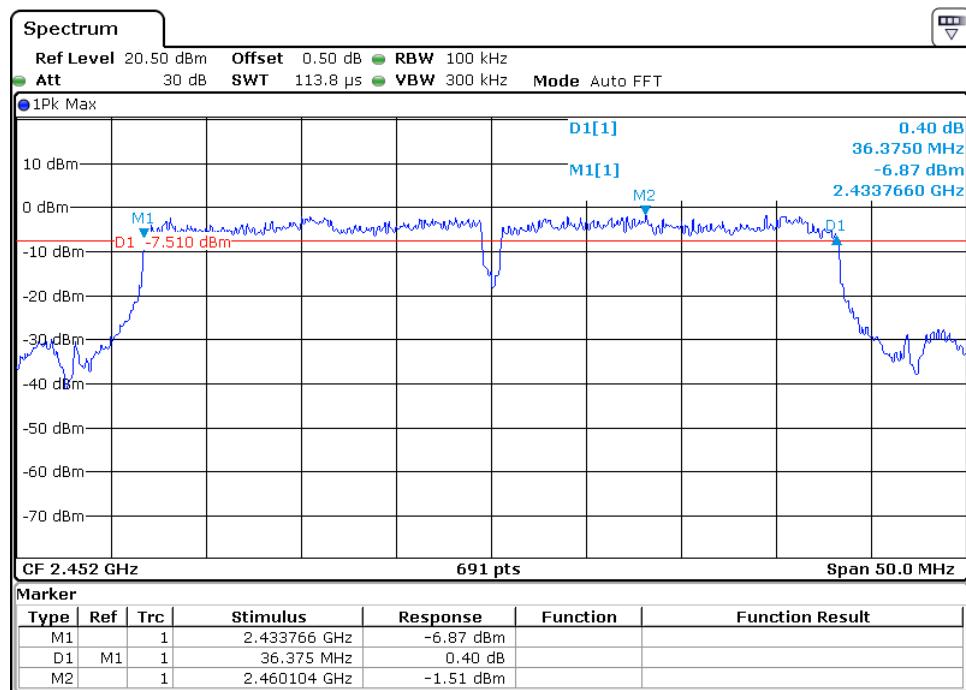
TRF no.: FCC 15C\_TX\_b

FCC ID: UFDD302

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# INTERTEK TESTING SERVICES

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TRF no.: FCC 15C\_TX\_b  
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## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited

Date of Test: September 24, 2014

Model: D302

### 4.3 Maximum Power Density Reading, FCC Rule 15.247(e):

The Measurement Procedure PKPSD was set according to the FCC KDB 558074.

Antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

Limit: The Power Density does not exceed 8dBm/3 kHz.

IEEE 802.11b (CCK, 1Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2412	2.72
2437	2.28
2462	3.14

IEEE 802.11g (16QAM, 6Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2412	-0.30
2437	0.24
2462	0.01

IEEE 802.11n-HT20 (16QAM, 6.5Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2412	0.77
2437	0.11
2462	-0.30

IEEE 802.11n-HT40 (64QAM, 13.5Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2422	-4.20
2437	-4.00
2452	-3.93

The test plots are attached as below.

TRF no.: FCC 15C\_TX\_b

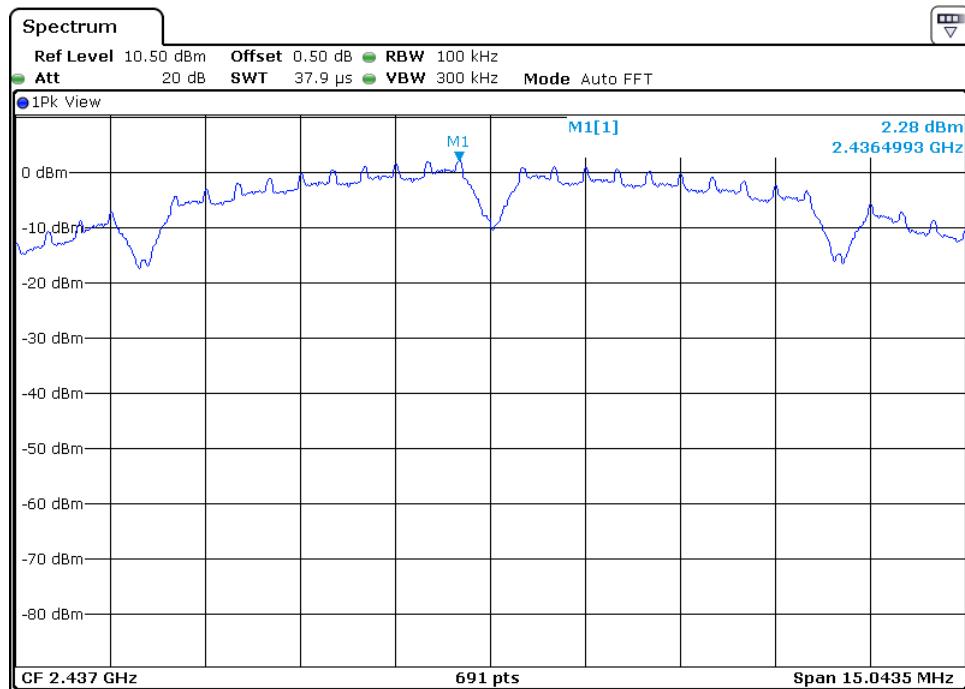
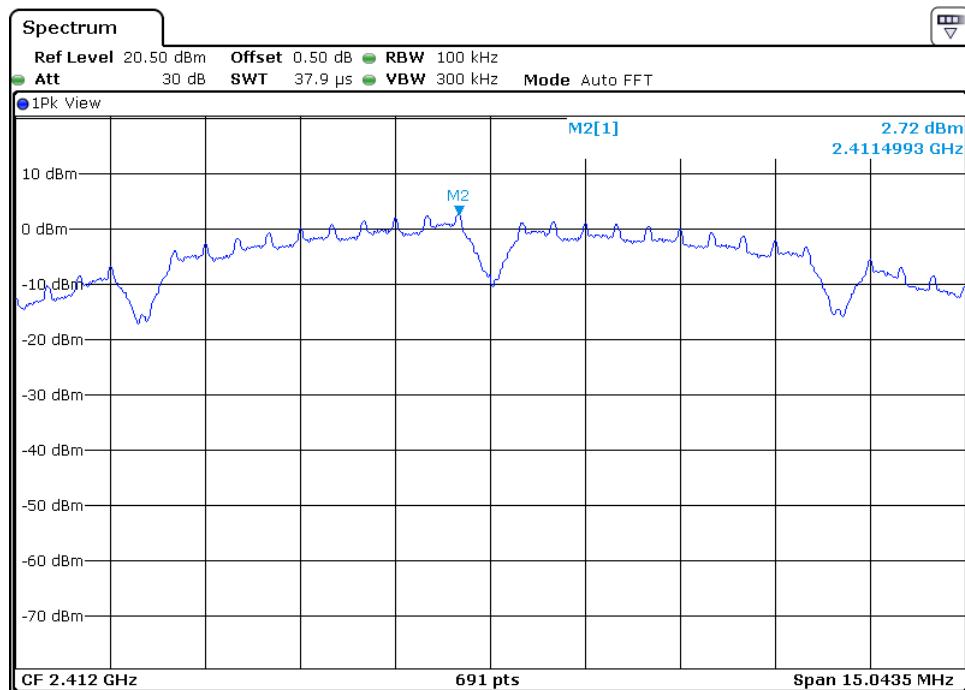
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Report No.: 140905011SZN-001

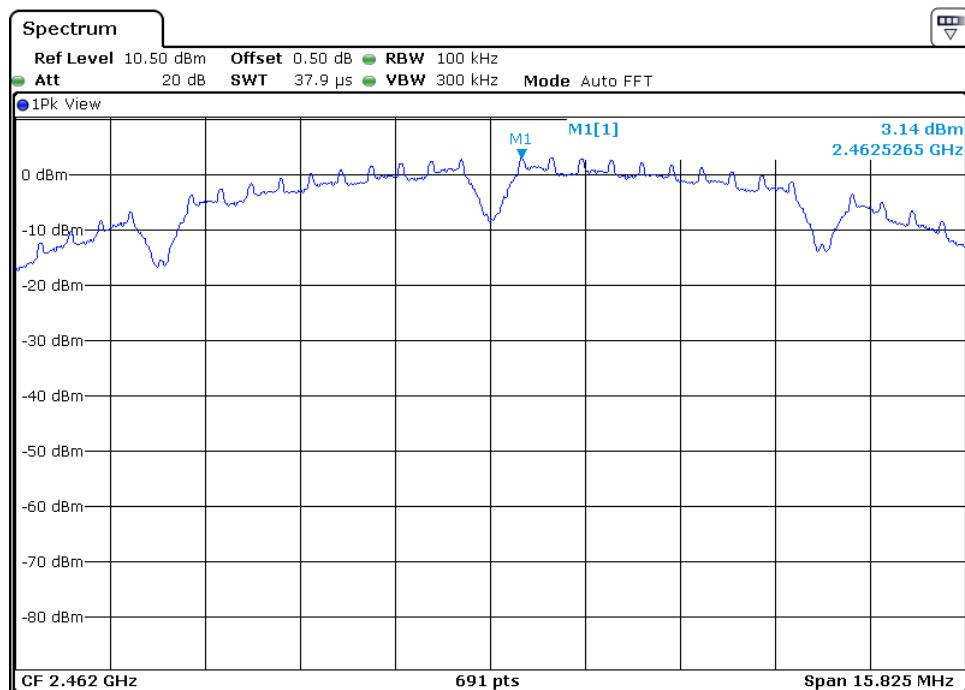
# INTERTEK TESTING SERVICES

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802.11b



# INTERTEK TESTING SERVICES

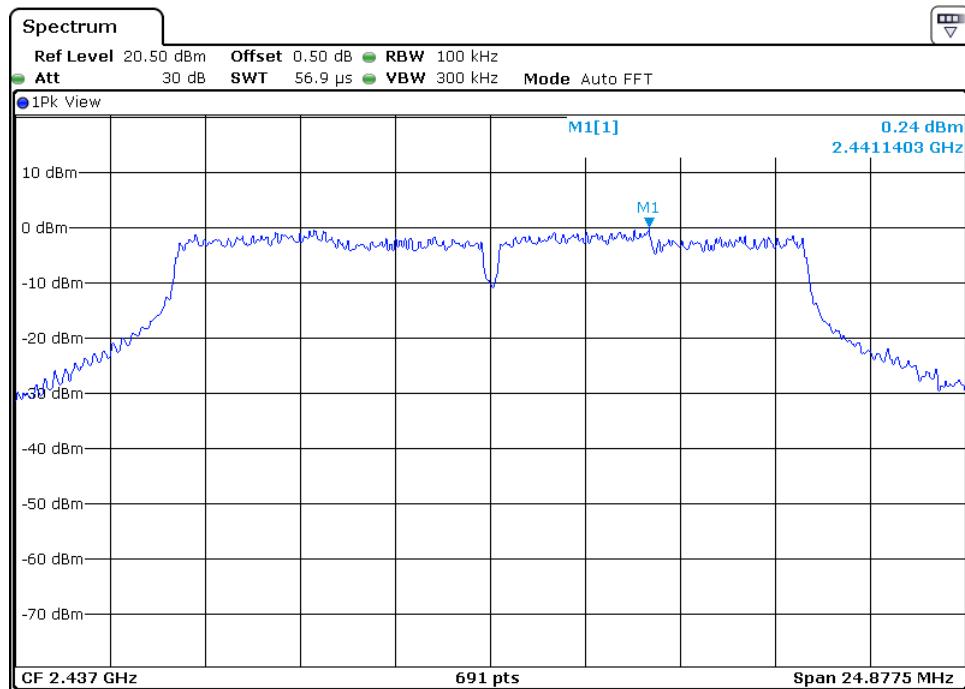
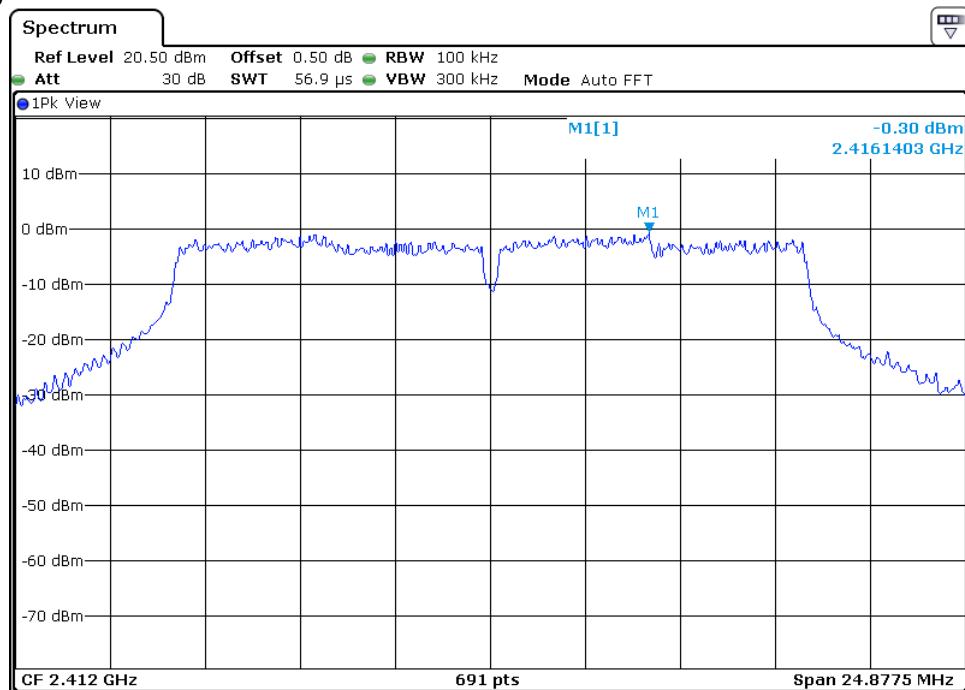


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FCC ID: UFDD302  
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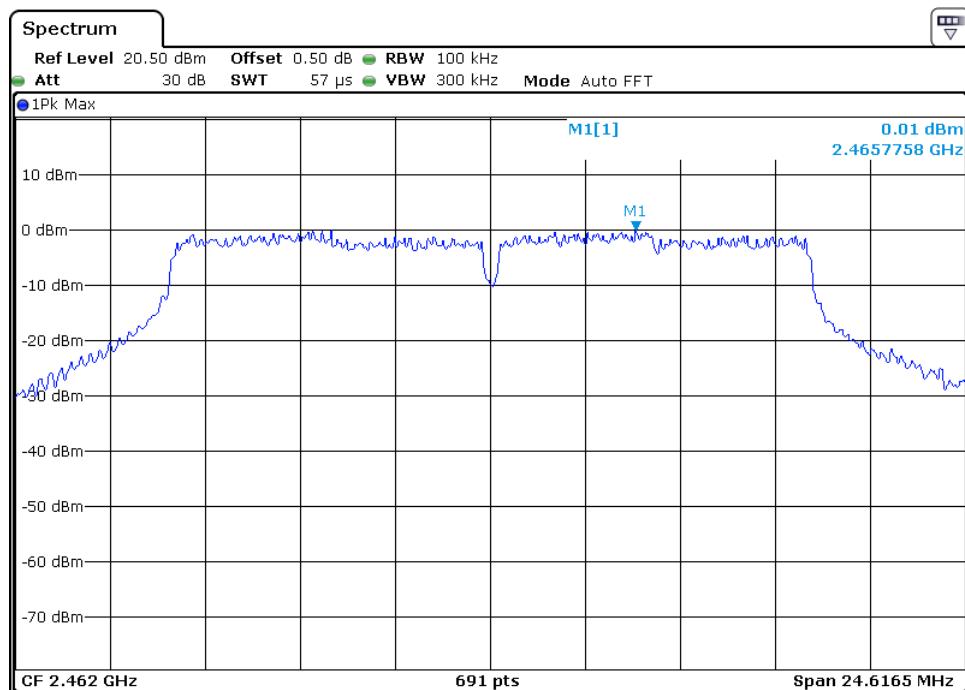
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802.11g



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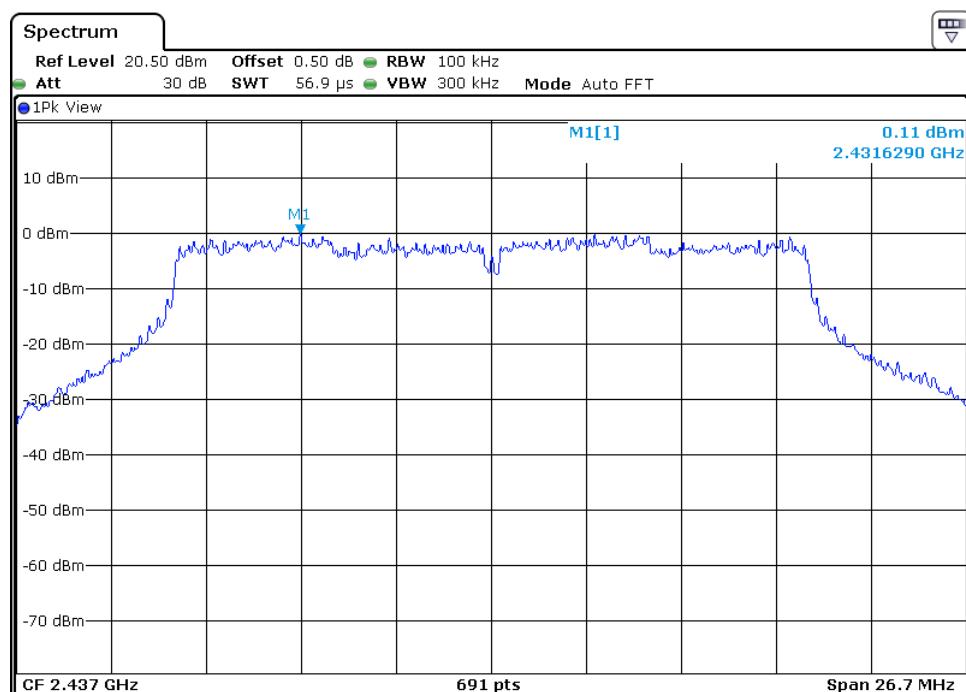
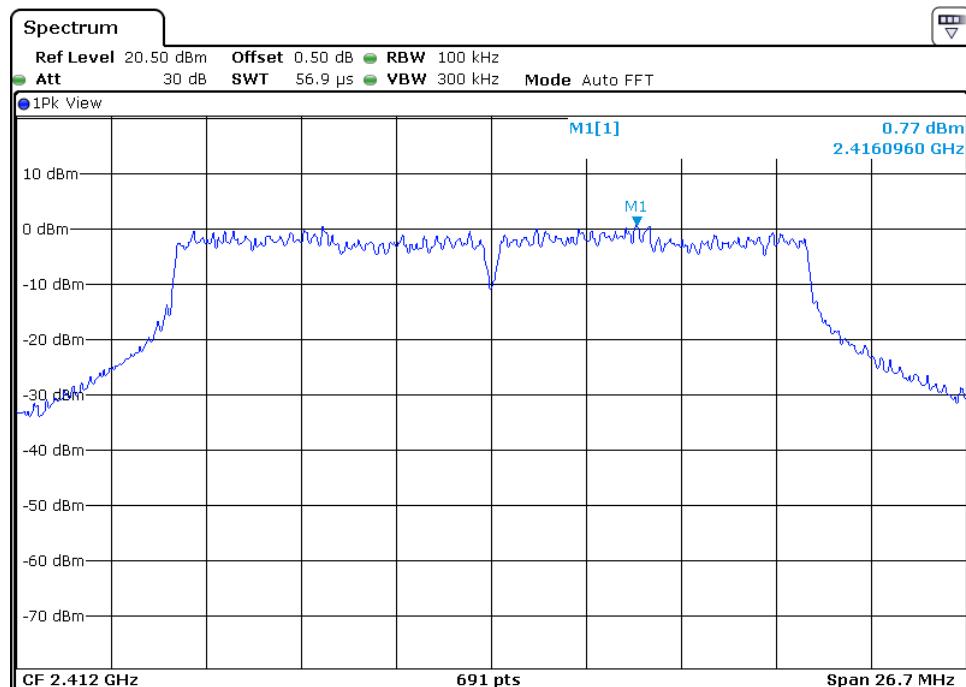


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FCC ID: UFDD302  
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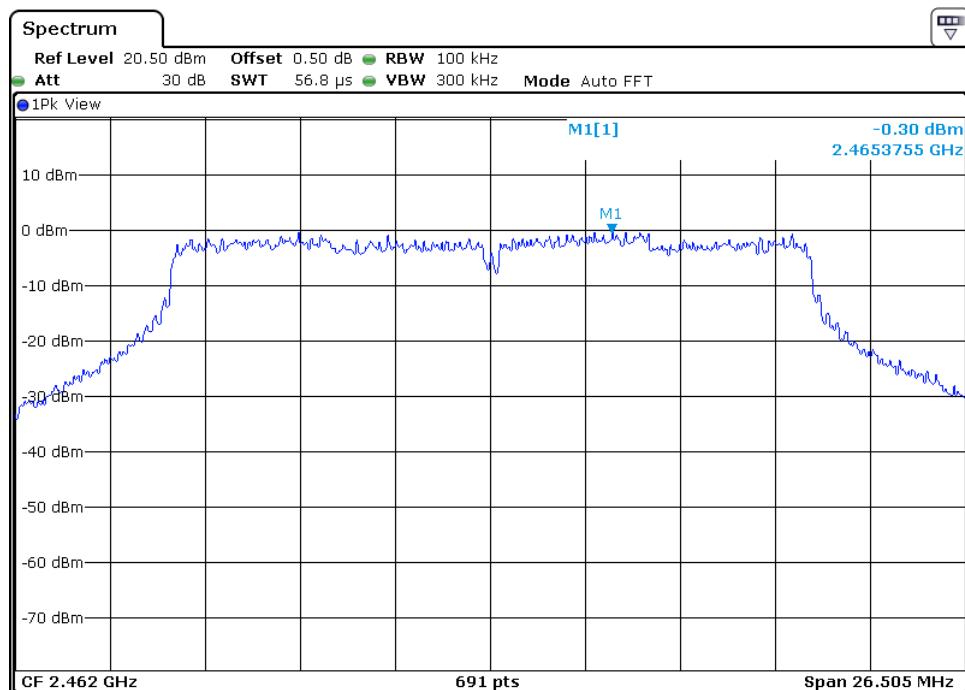
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802.11 n-HT20



TRF no.: FCC 15C\_TX\_b  
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# INTERTEK TESTING SERVICES

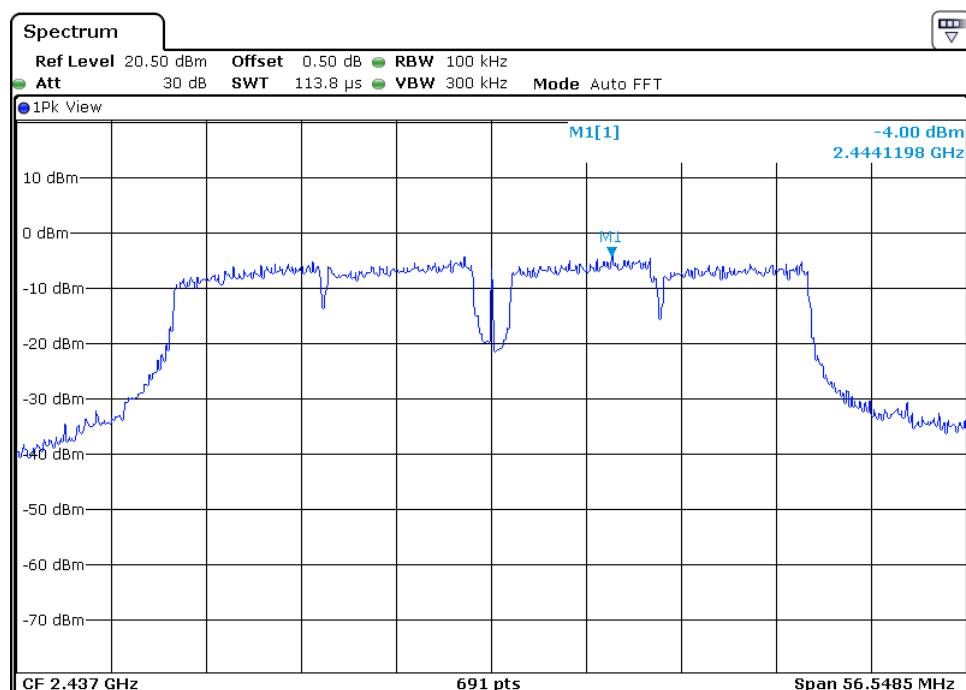
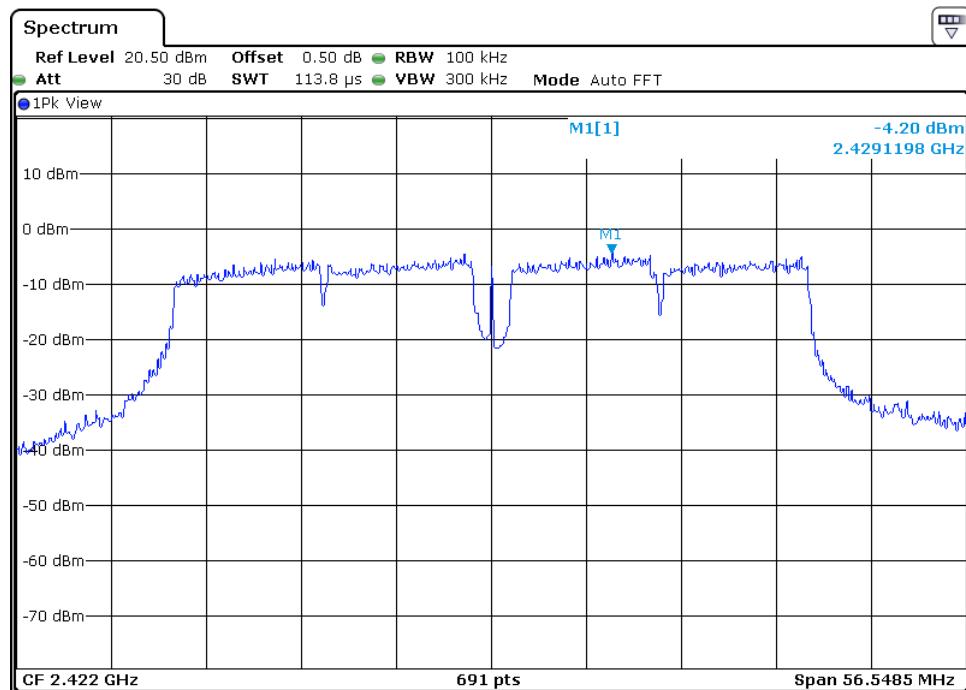


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# INTERTEK TESTING SERVICES

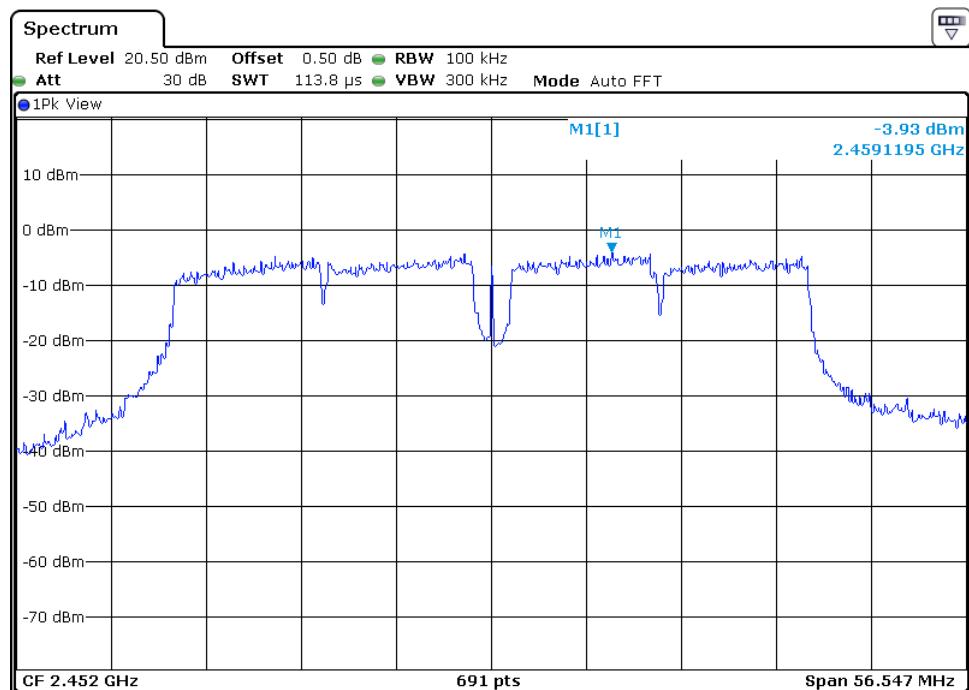
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802.11 n-HT40



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## **INTERTEK TESTING SERVICES**

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302

### **4.4 Out of Band Conducted Emissions, FCC Rule 15.247(d)**

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. The Measurement Procedure was set according to the FCC KDB 558074.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the passband.

Refer to the attached test plots for out of band conducted emissions data with rate of 1Mbps for 802.11b, 6Mbps for 802.11g, 6.5Mbps for 802.11n-HT20 and 13.5Mbps for 802.11n-HT40.

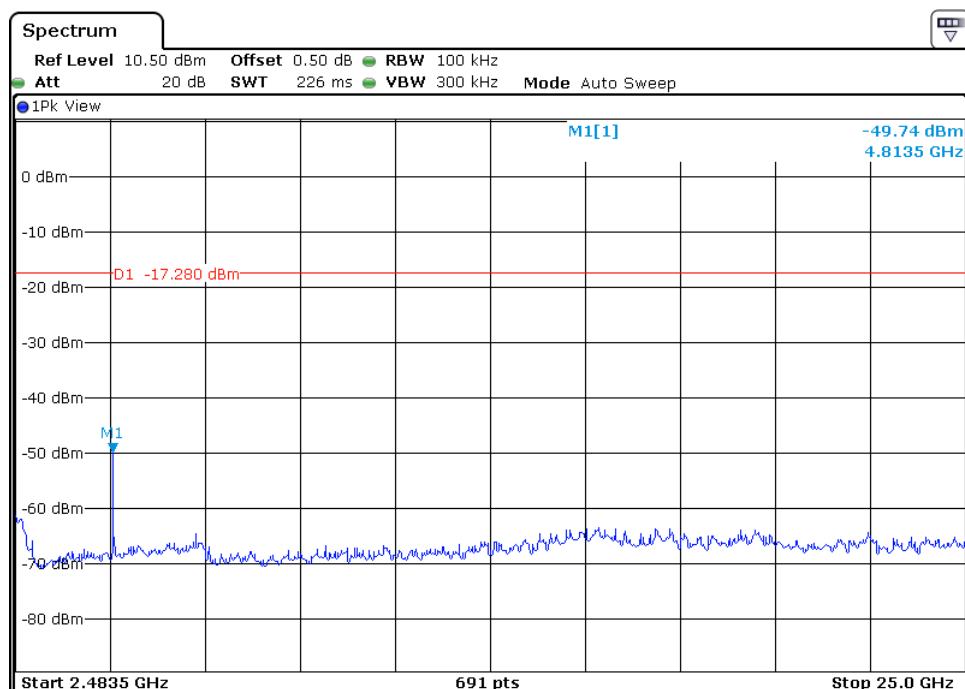
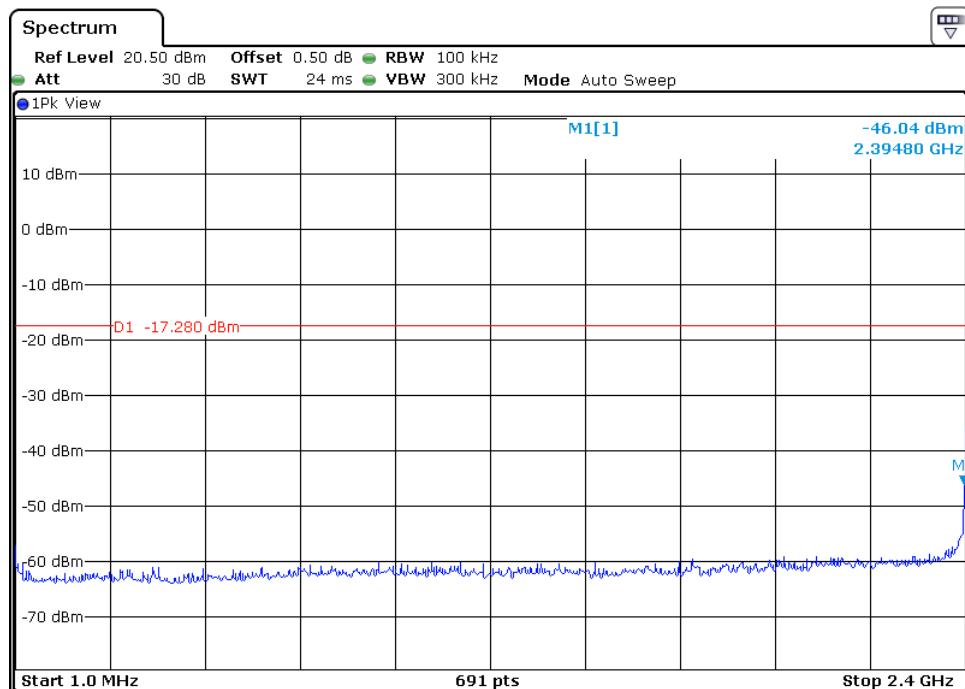
The test plots showed all spurious emission up to the tenth harmonic were measured and they were found to be at least 20 dB below the highest level of the desired power in the passband.

The test plots are attached as below.

# INTERTEK TESTING SERVICES

802.11b

Channel 01 (2412MHz) Reference Level: 2.72dBm



TRF no.: FCC 15C\_TX\_b

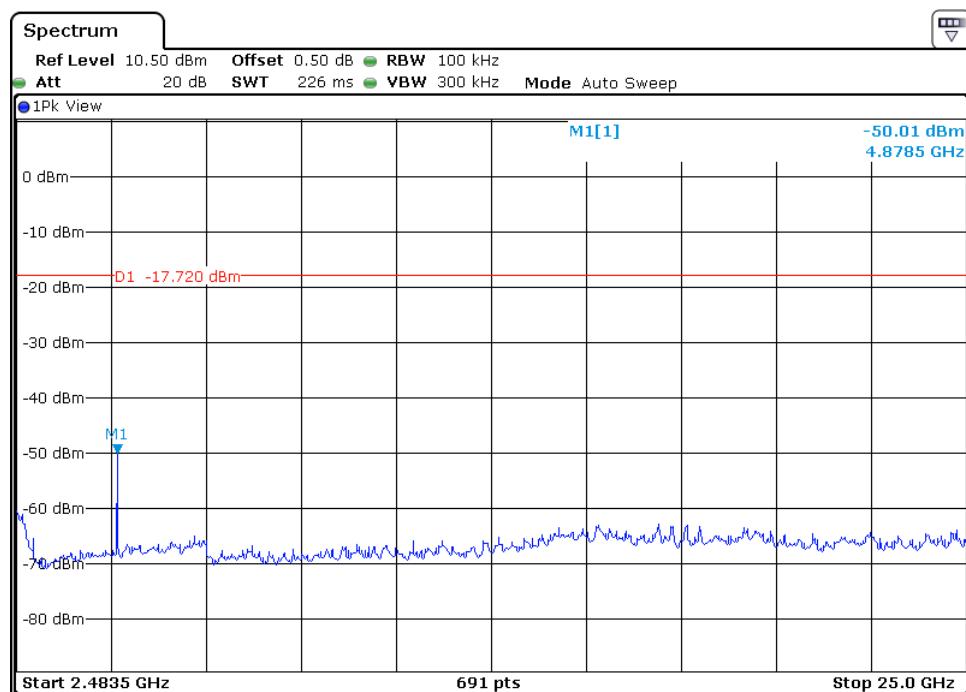
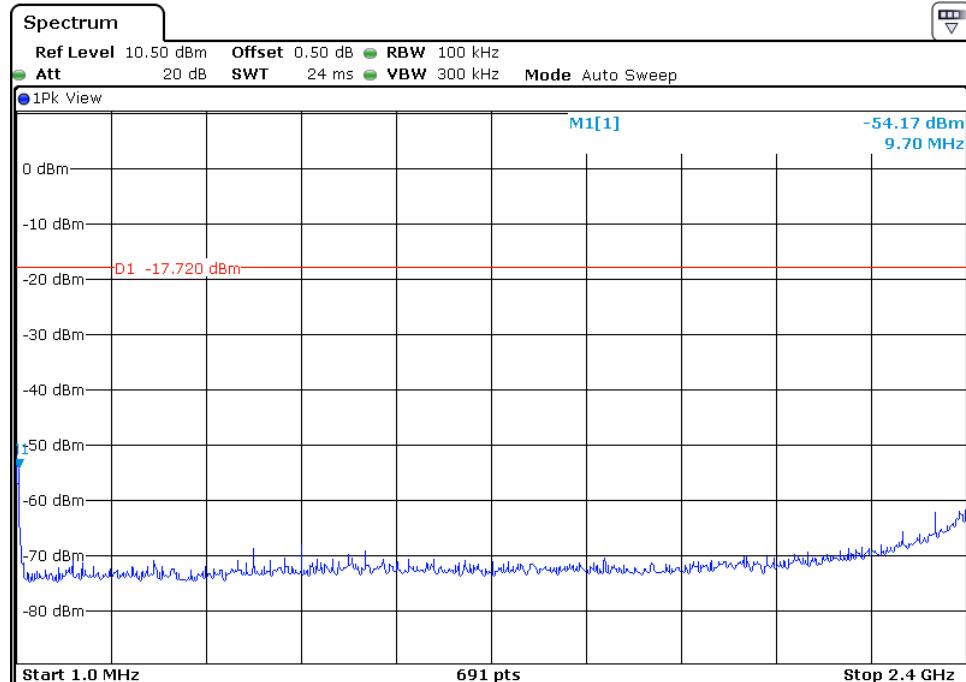
FCC ID: UFDD302

Report No.: 140905011SZN-001

# INTERTEK TESTING SERVICES

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Channel 06 (2437MHz) Reference Level: 2.28dBm



TRF no.: FCC 15C\_TX\_b

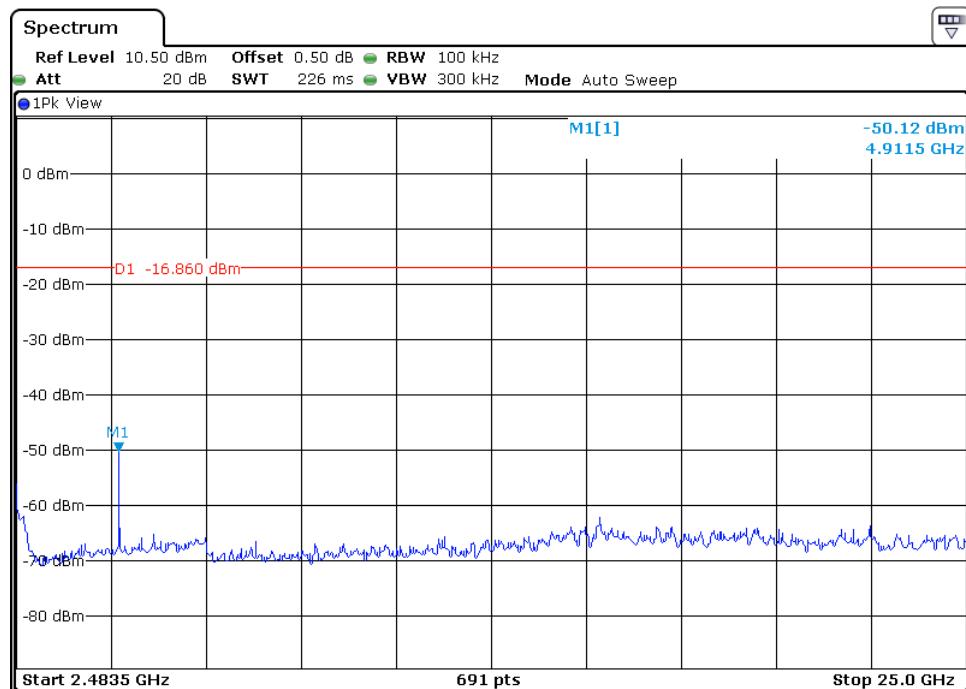
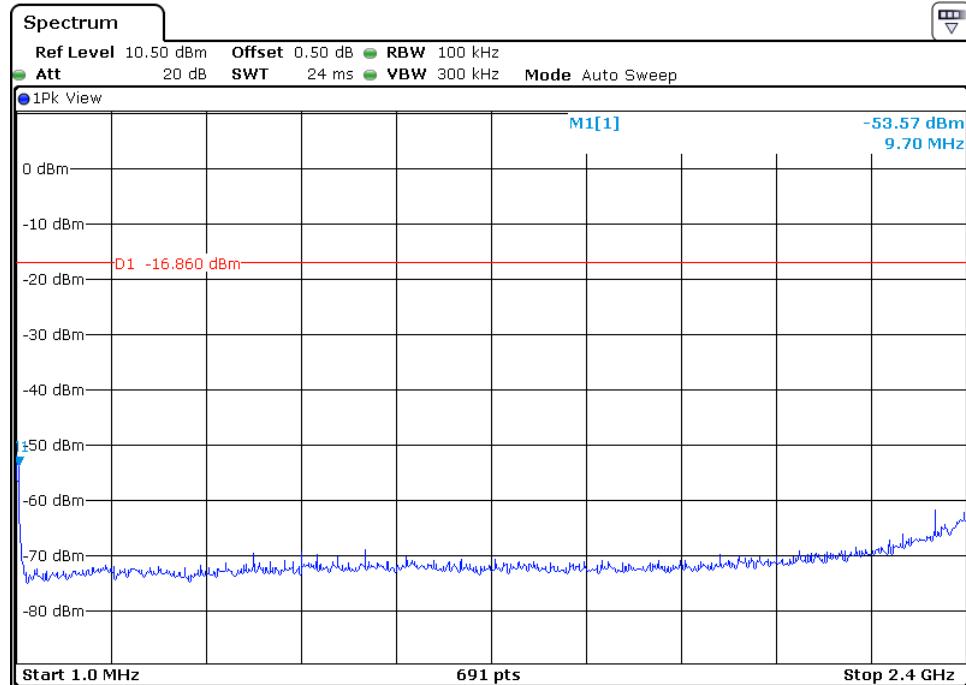
FCC ID: UFDD302

Report No.: 140905011SZN-001

# INTERTEK TESTING SERVICES

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Channel 11 (2462MHz) Reference Level: 3.14dBm



TRF no.: FCC 15C\_TX\_b

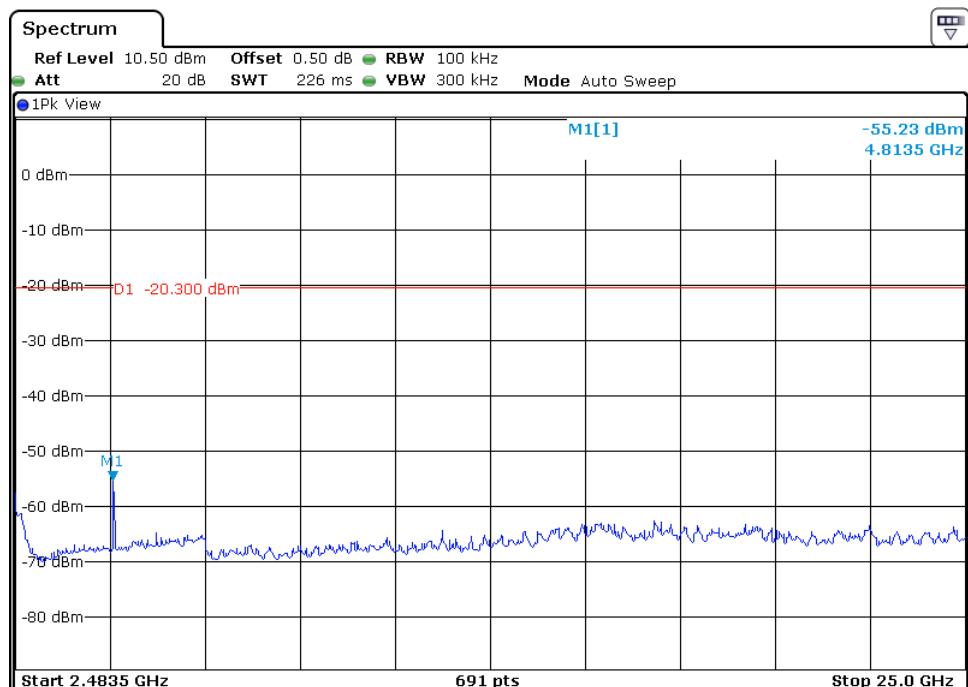
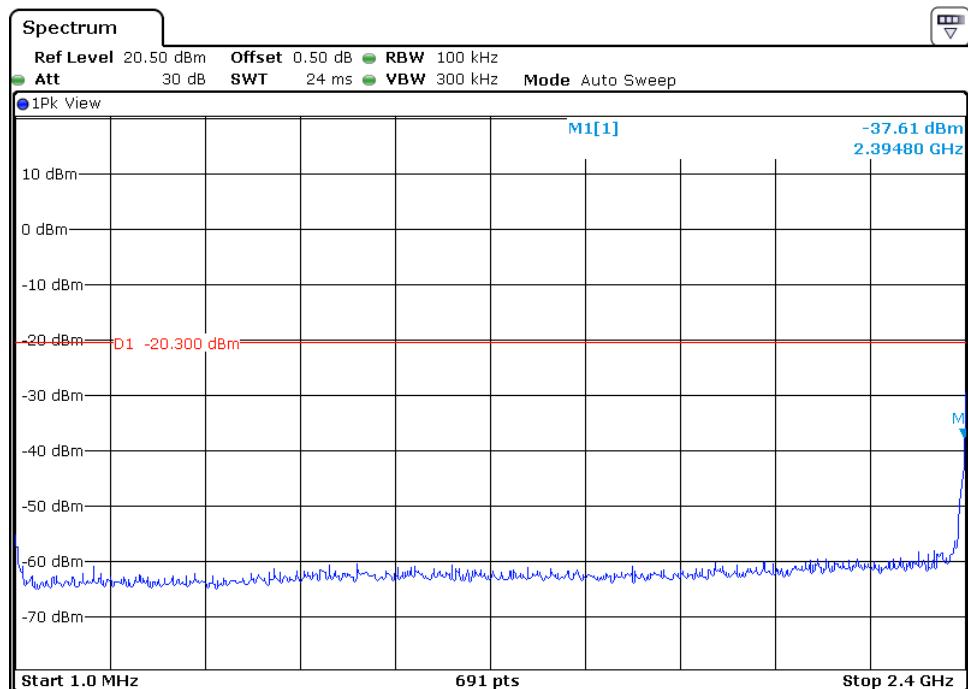
FCC ID: UFDD302

Report No.: 140905011SZN-001

# INTERTEK TESTING SERVICES

802.11g

Channel 01 (2412MHz) Reference Level: -0.30dBm



TRF no.: FCC 15C\_TX\_b

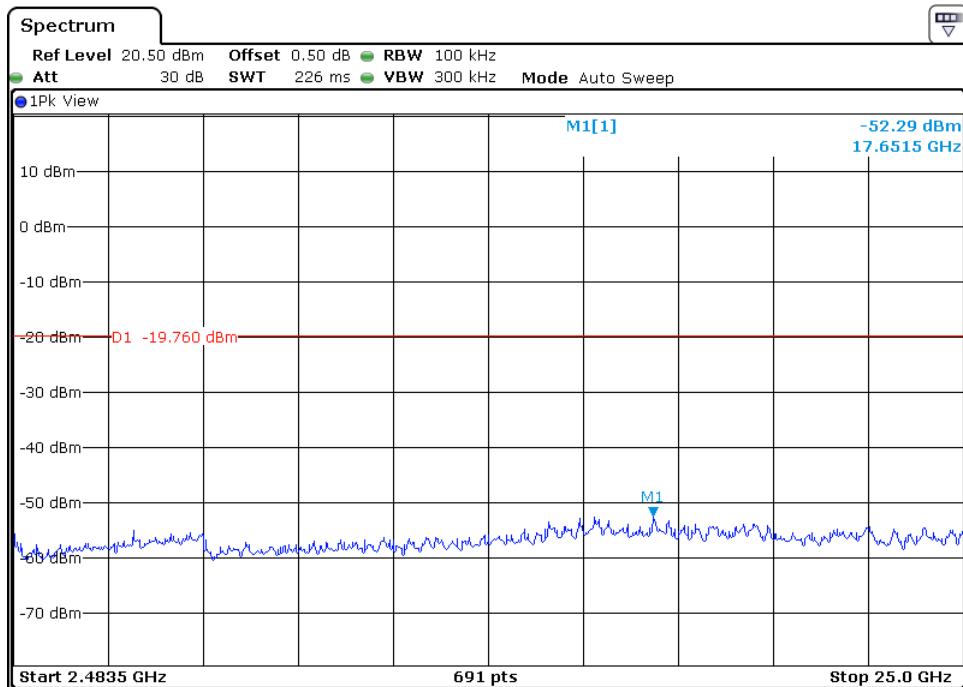
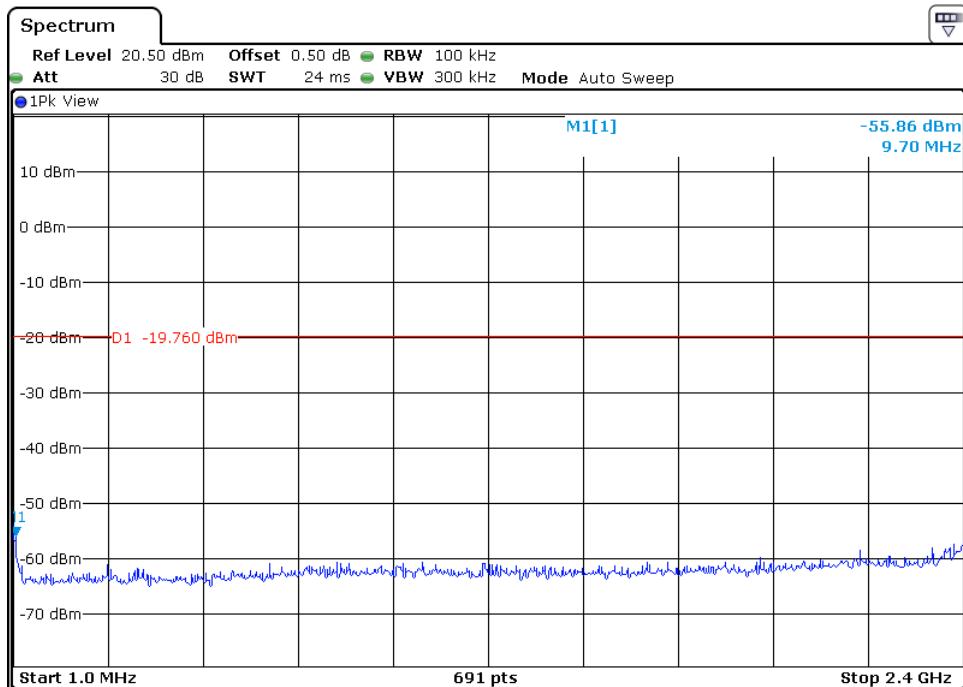
FCC ID: UFDD302

Report No.: 140905011SZN-001

# INTERTEK TESTING SERVICES

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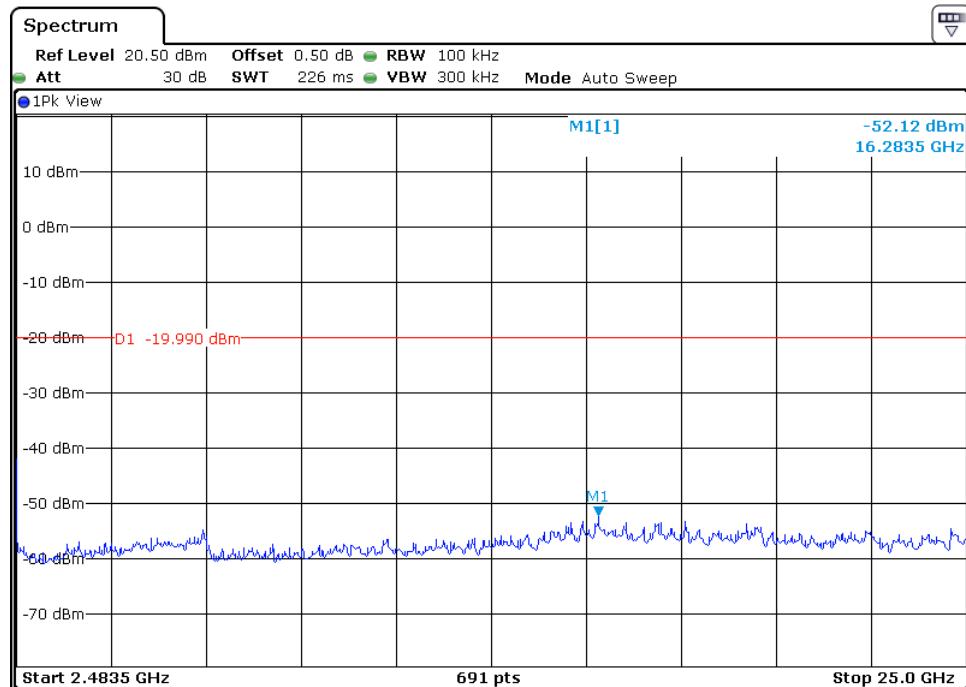
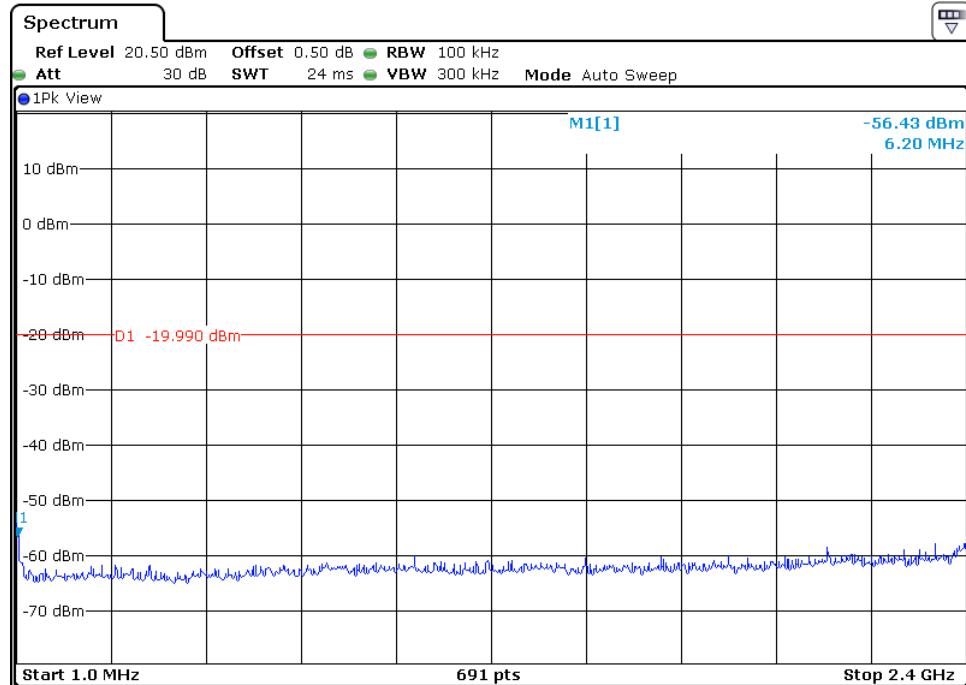
Channel 06 (2437MHz) Reference Level: 0.24dBm



# INTERTEK TESTING SERVICES

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Channel 11 (2462MHz) Reference Level: 0.01dBm

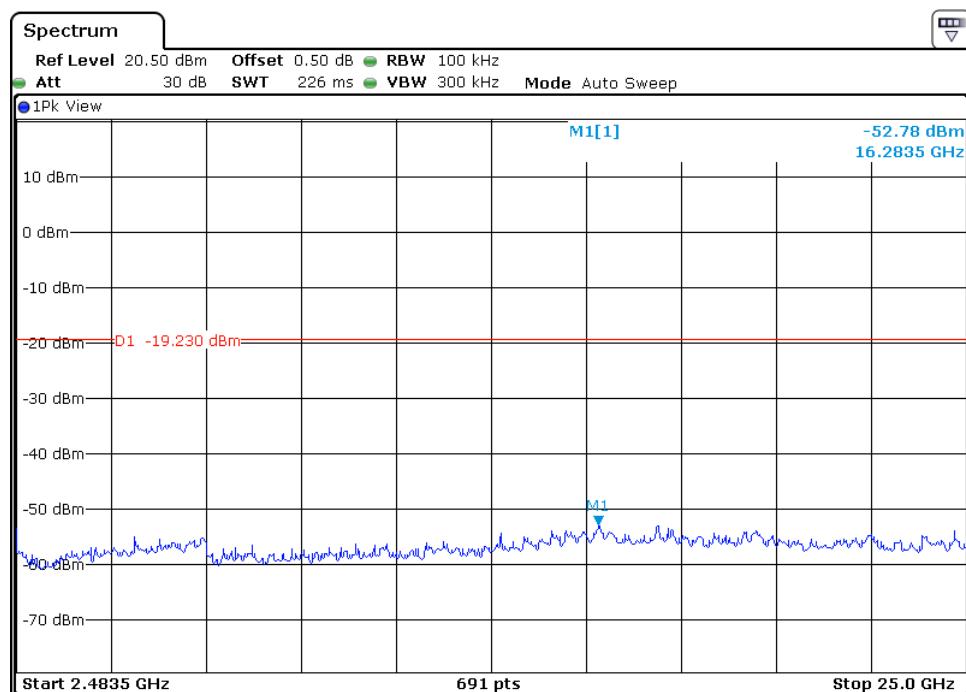
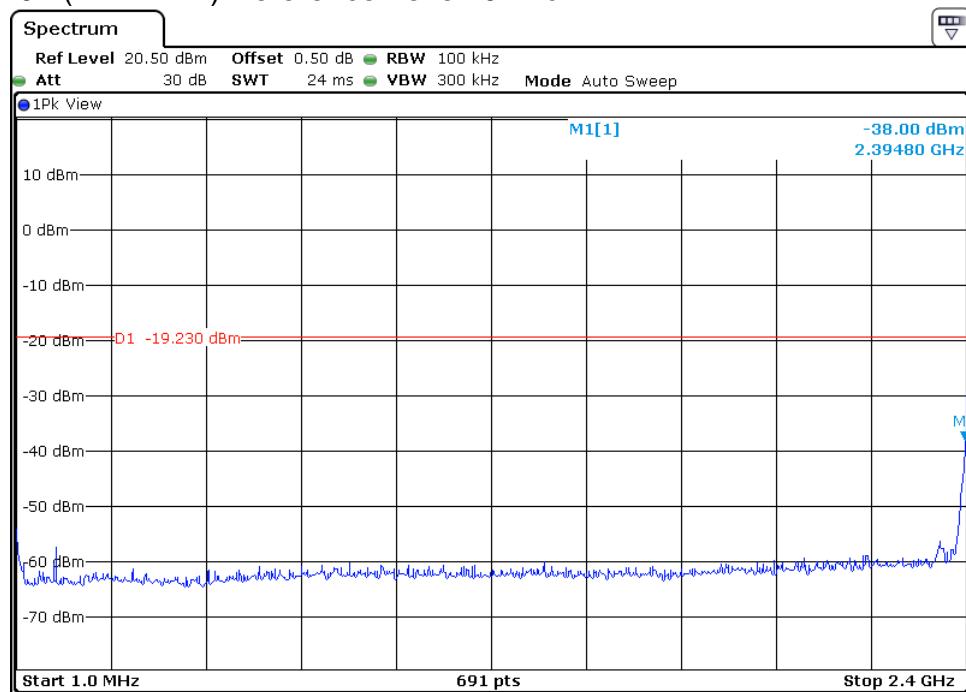


# INTERTEK TESTING SERVICES

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802.11 n-HT20

Channel 01 (2412MHz) Reference Level: 0.77dBm



TRF no.: FCC 15C\_TX\_b

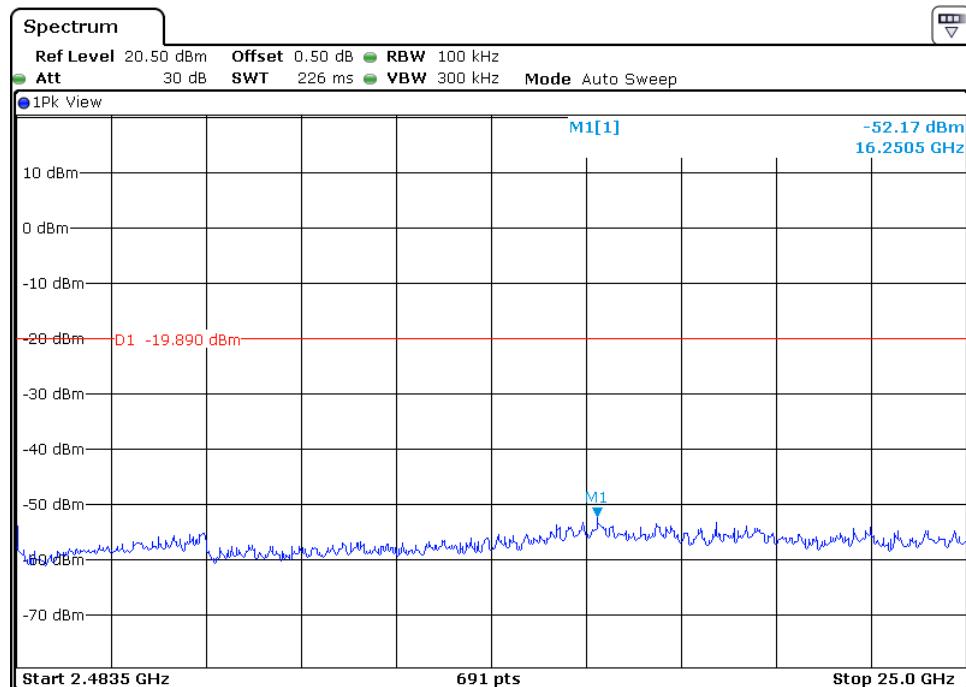
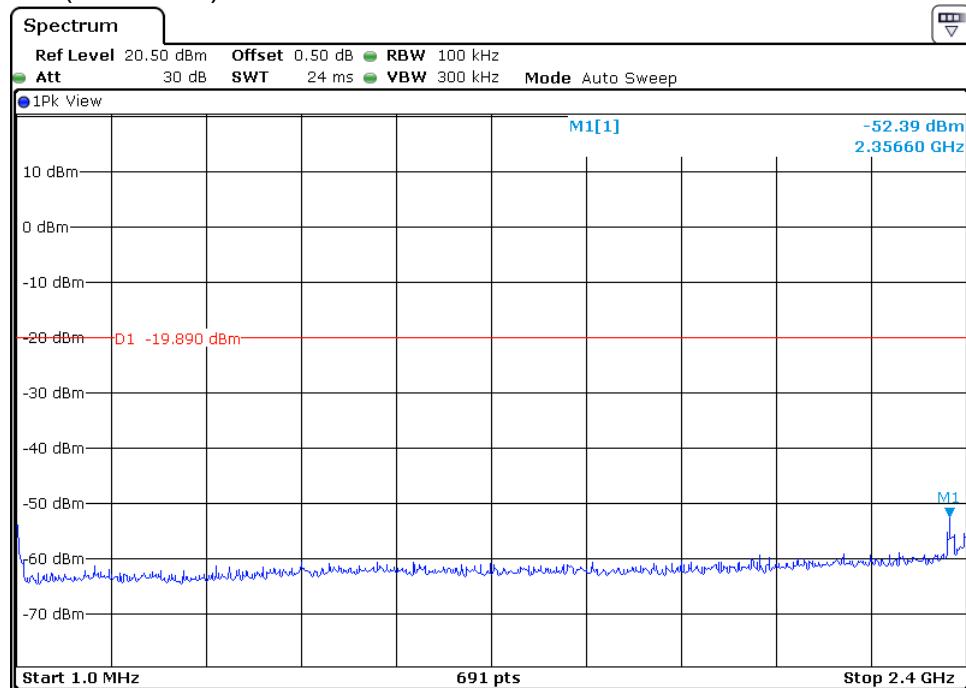
FCC ID: UFDD302

Report No.: 140905011SZN-001

# INTERTEK TESTING SERVICES

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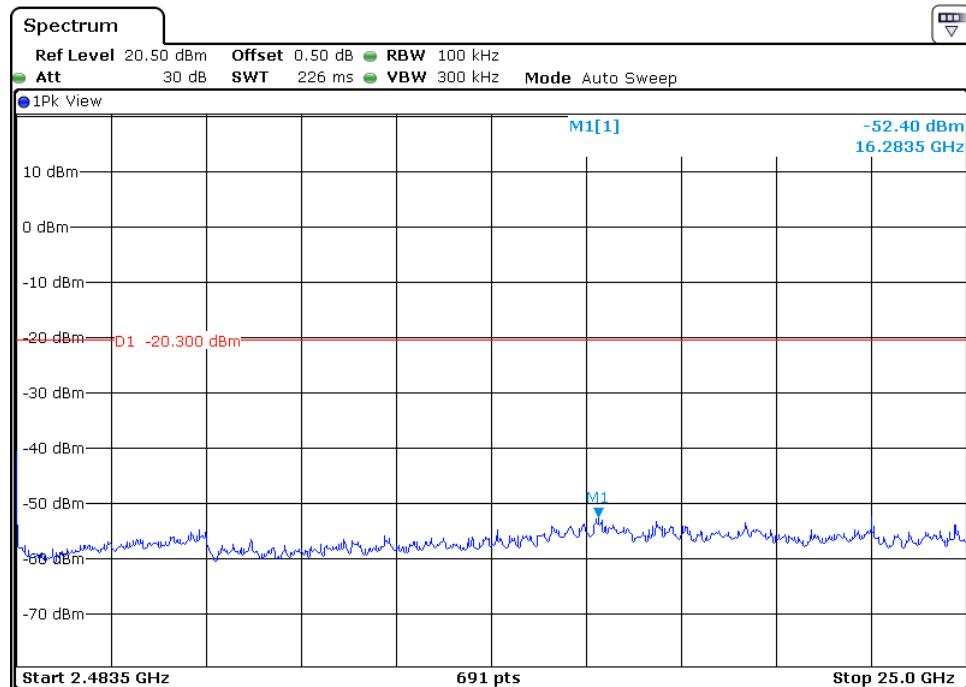
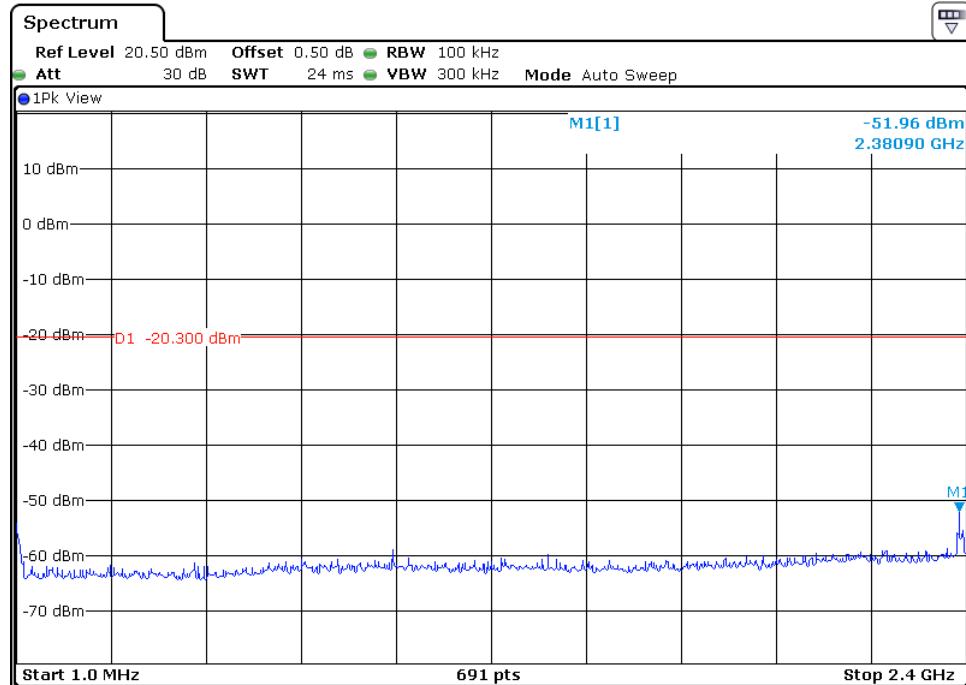
Channel 06 (2437MHz) Reference Level: 0.11dBm



# INTERTEK TESTING SERVICES

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Channel 11 (2462MHz) Reference Level: -0.30dBm

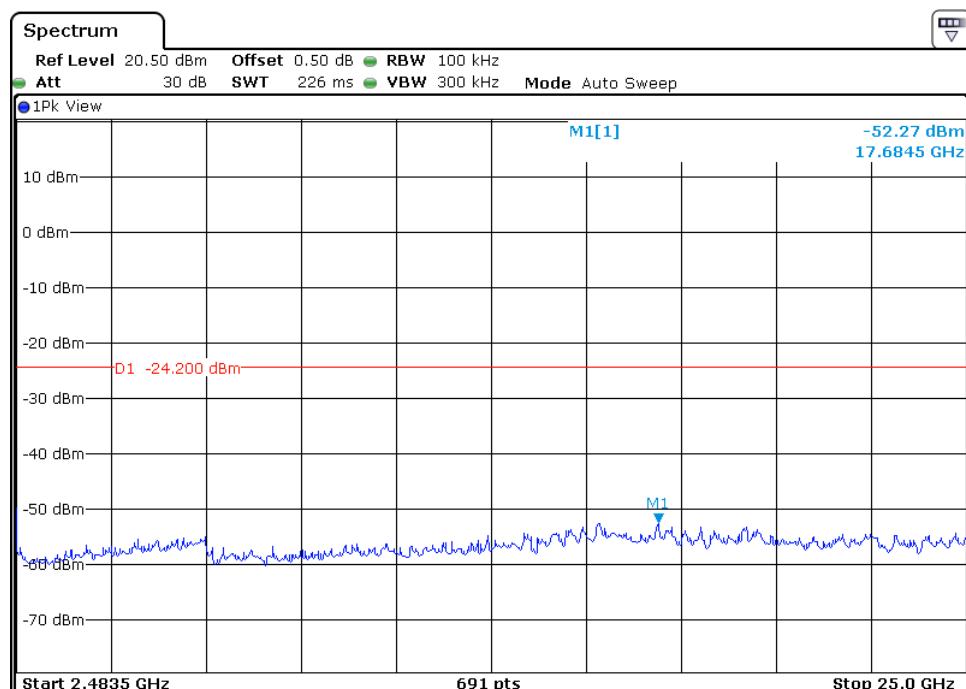
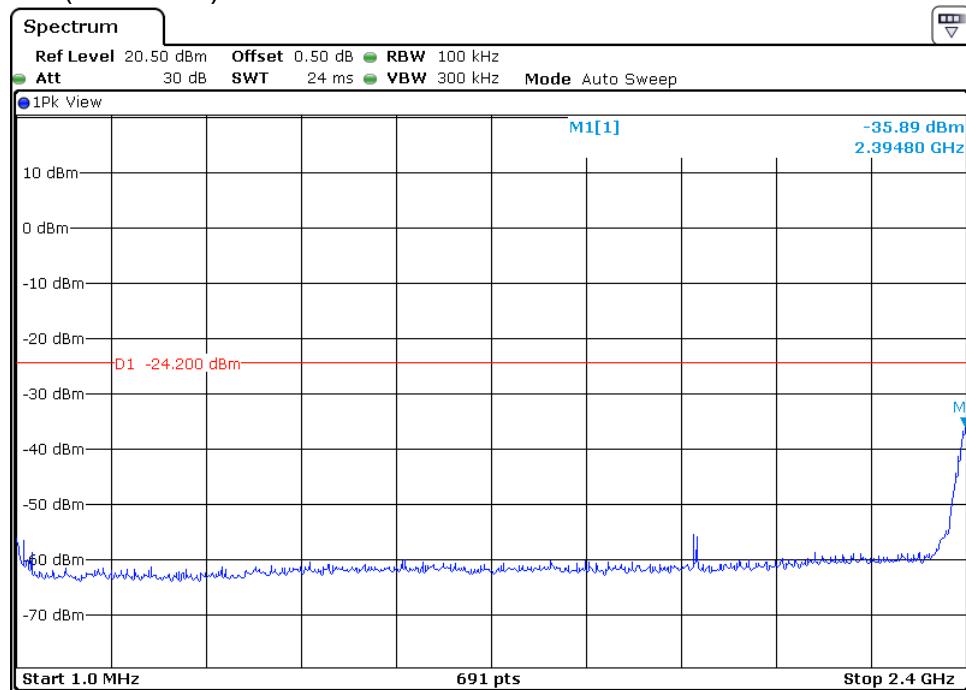


# INTERTEK TESTING SERVICES

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802.11 n-HT40

Channel 03 (2422MHz) Reference Level: -4.20dBm



TRF no.: FCC 15C\_TX\_b

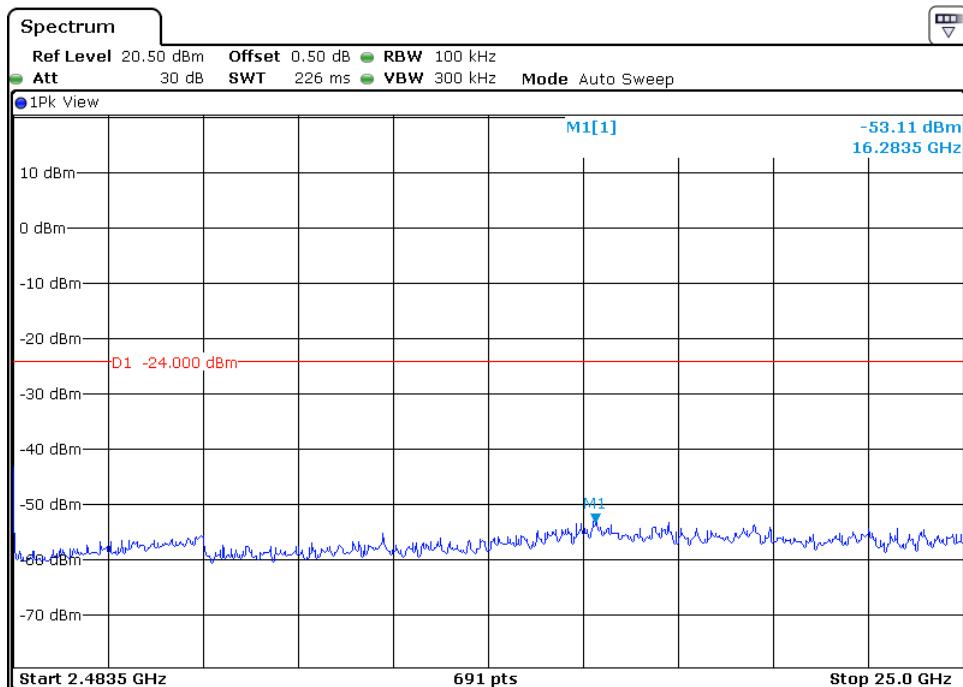
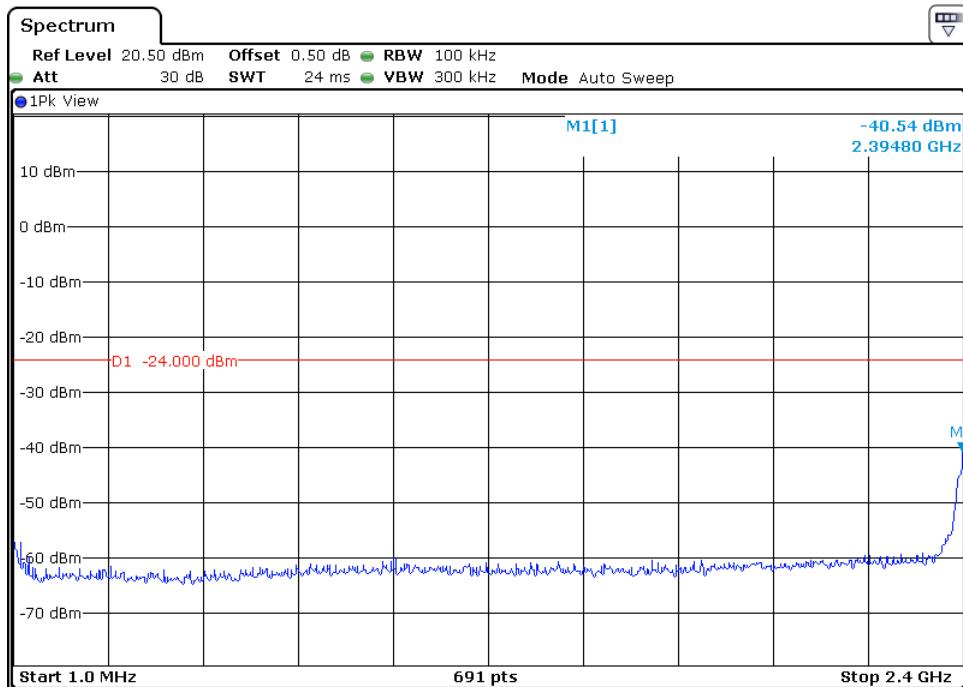
FCC ID: UFDD302

Report No.: 140905011SZN-001

# INTERTEK TESTING SERVICES

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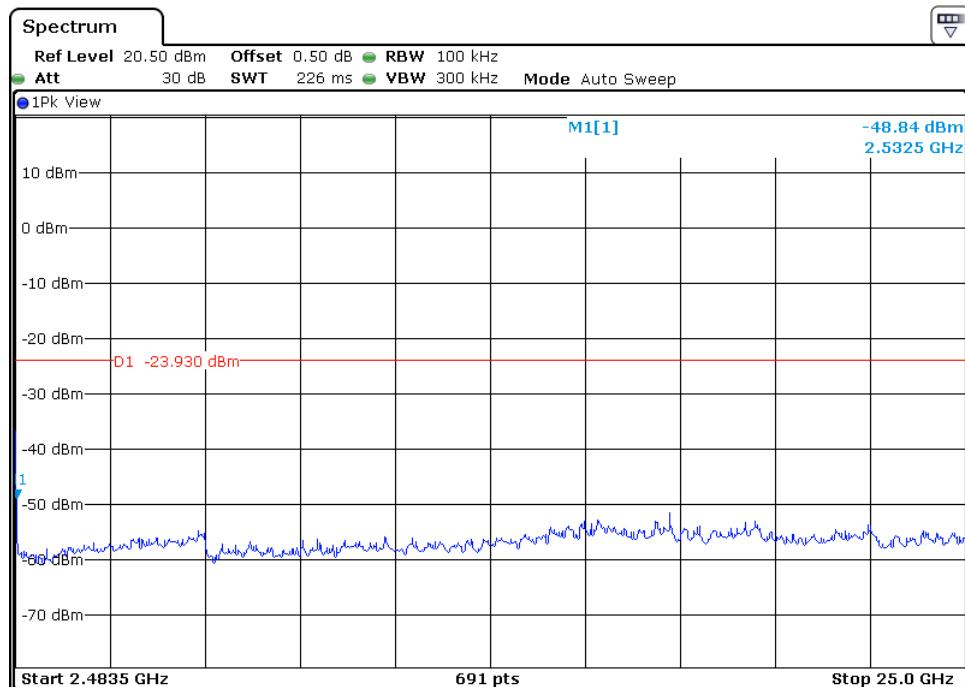
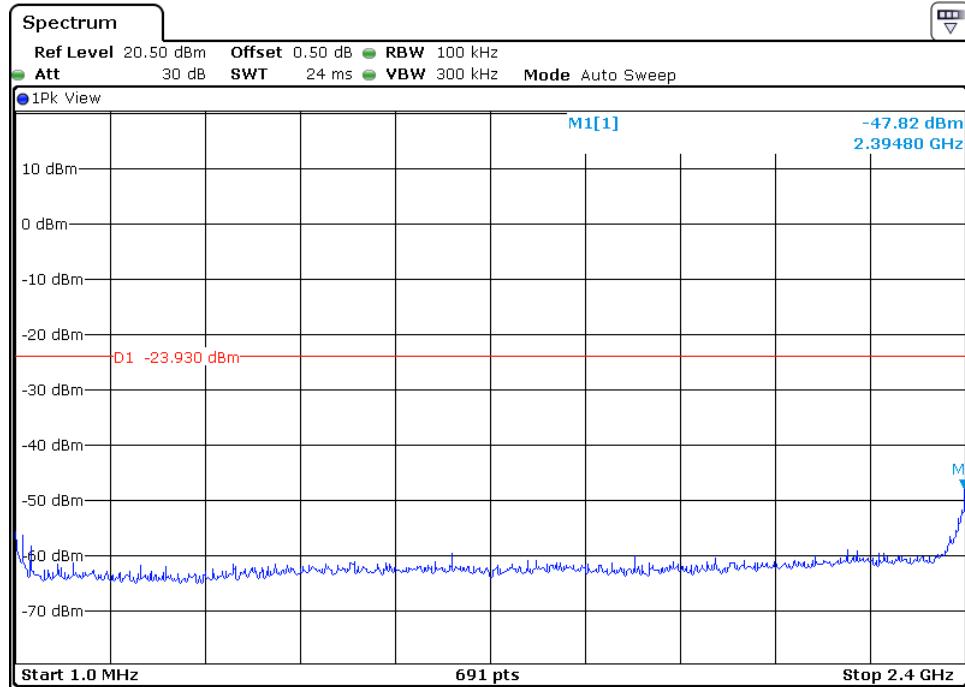
Channel 06 (2437MHz) Reference Level: -4.00dBm



# INTERTEK TESTING SERVICES

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Channel 9 (2452MHz) Reference Level: -3.93dBm



## **INTERTEK TESTING SERVICES**

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302

**4.5 Out of Band Radiated Emissions (for emissions in 4.4 above that are less than 20dB below carrier), FCC Rule 15.247(d):**

For out of band emissions that are close to or that exceed the 20dB attenuation requirement described in the specification, radiated measurements were performed at a 3m separation distance to determine whether these emissions complied with the general radiated emission requirement.

- Not required, since all emissions are more than 20dB below fundamental  
 See attached data sheet

## **INTERTEK TESTING SERVICES**

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302

### **4.6 Transmitter Radiated Emissions in Restricted Bands, FCC Rule 15.35(b), (c):**

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. All measurements were performed with peak detection unless otherwise specified.

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited

Date of Test: September 24, 2014

Model: D302

### 4.7 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.

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

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

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:

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

#### 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. 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.

$$RA = 62.0 \text{ dB}\mu\text{V}$$

$$AF = 7.4 \text{ dB}$$

$$CF = 1.6 \text{ dB}$$

$$AG = 29.0 \text{ dB}$$

$$PD = 0 \text{ dB}$$

$$FS = 62 + 7.4 + 1.6 - 29 + 0 = 42 \text{ dB}\mu\text{V}/\text{m}$$

Level in mV/m = Common Antilogarithm [(42 dB $\mu$ V/m)/20] = 125.9  $\mu$ V/m

TRF no.: FCC 15C\_TX\_b

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Report No.: 140905011SZN-001

## **INTERTEK TESTING SERVICES**

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302

### **4.8 Radiated Spurious Emission**

Worst Case Radiated Spurious Emission (802.11 b) at 4924.000MHz is passed by 4.6 dB margin.

For the electronic filing, the worst case radiated emission configuration photographs are saved with filename: radiated photos.pdf.

# INTERTEK TESTING SERVICES

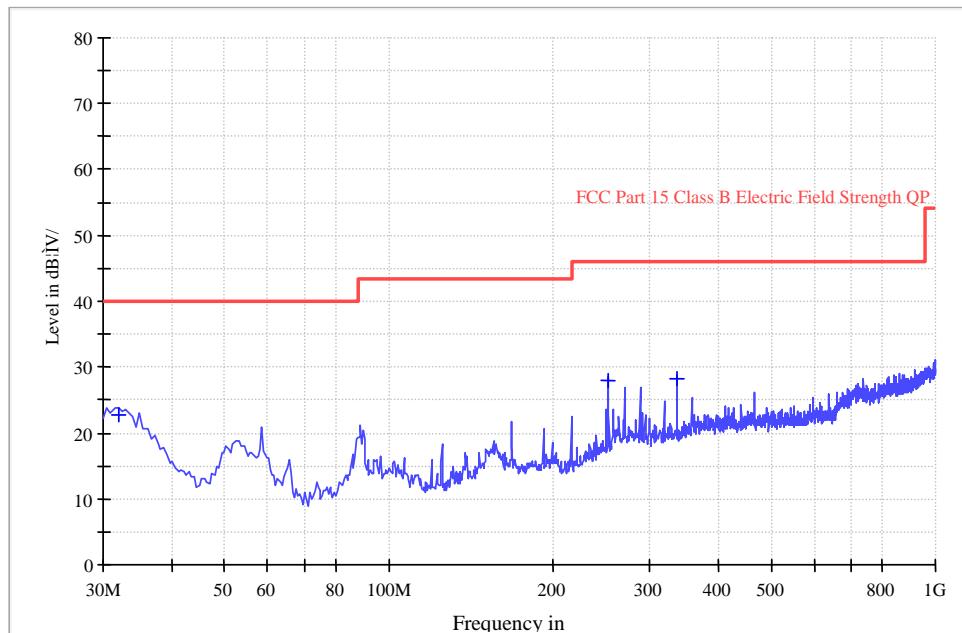
Applicant: Cyber Blue (HK) Limited

Date of Test: September 24, 2014

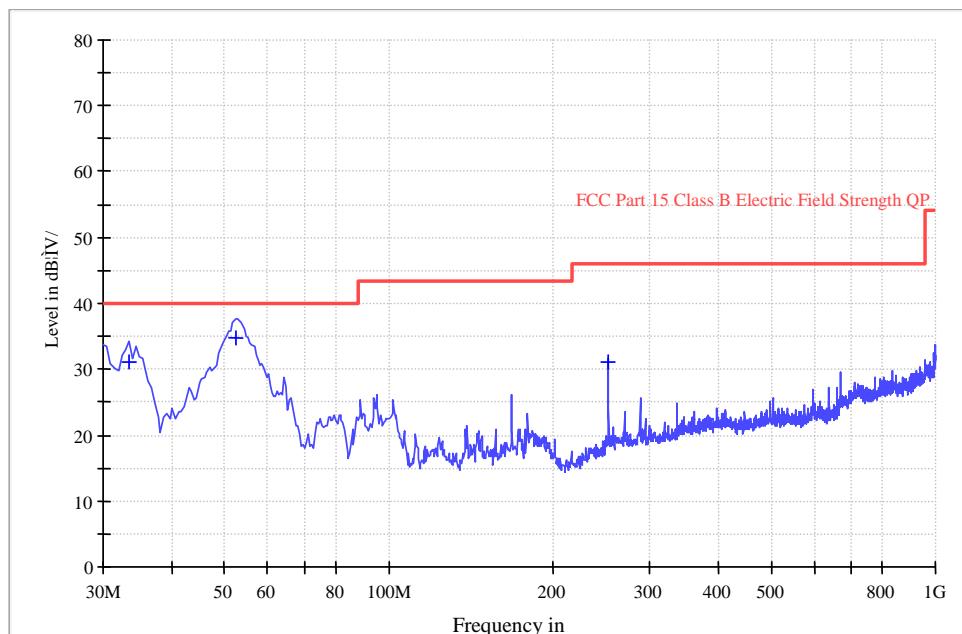
Model: D302

Worst Case Operating Mode: 802.11 n-HT20 (TX-Channel 01)

Horizontal



Vertical



TRF no.: FCC 15C\_TX\_b

FCC ID: UFDD302

Report No.: 140905011SZN-001

## INTERTEK TESTING SERVICES

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### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	31.920	36.5	20.0	6.1	22.6	40.0	-17.4
Horizontal	252.120	37.7	20.0	10.3	28.0	46.0	-18.0
Horizontal	336.060	34.4	20.0	13.9	28.3	46.0	-17.7
Vertical	33.420	41.2	20.0	9.8	31.0	40.0	-9.0
Vertical	52.320	48.0	20.0	6.8	34.8	40.0	-5.2
Vertical	252.120	34.9	20.0	16.3	31.2	46.0	-14.8

- NOTES:
1. Quasi-Peak detector is used except for others stated.
  2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances 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 harmonic 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. All emissions are below the QP limit.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302  
Mode: 802.11b (TX-Channel 01)

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4824.000	53.1	36.1	34.2	51.2	74.0	-22.8
Horizontal	*7236.000	56.0	36.8	36.9	56.1	74.0	-17.9
Horizontal	*2387.870	61.6	36.2	28.2	53.6	74.0	-20.4

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4824.000	46.3	36.1	34.2	44.4	54.0	-9.6
Horizontal	*7236.000	42.5	36.8	36.9	42.6	54.0	-11.4
Horizontal	*2387.870	49.7	36.2	28.2	41.7	54.0	-12.3

- NOTES:
1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
  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 used for the emission over 1000MHz.
- \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302  
Mode: 802.11b (TX-Channel 06)

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4874.000	56.2	36.1	34.6	54.7	74.0	-19.3
Horizontal	*7311.000	55.8	35.6	37.1	57.3	74.0	-16.7

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4874.000	47.2	36.1	34.6	45.7	54.0	-8.3
Horizontal	*7311.000	42.1	35.6	37.1	43.6	54.0	-10.4

- NOTES:
1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
  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 used for the emission over 1000MHz.
    - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited  
 Date of Test: September 24, 2014  
 Model: D302  
 Mode: 802.11b (TX-Channel 11)

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4924.000	56.9	36.1	34.6	55.4	74.0	-18.6
Horizontal	*7386.000	54.6	35.6	37.2	56.2	74.0	-17.8
Horizontal	*2485.130	61.4	36.3	28.0	53.1	74.0	-20.9

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4924.000	50.9	36.1	34.6	49.4	54.0	-4.6
Horizontal	*7386.000	40.8	35.6	37.2	42.4	54.0	-11.6
Horizontal	*2485.130	51.0	36.3	28.0	42.7	54.0	-11.3

- NOTES:
1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
  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 used for the emission over 1000MHz.
- \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited  
 Date of Test: September 24, 2014  
 Model: D302  
 Mode: 802.11g (TX-Channel 01)

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4824.000	57.0	36.1	34.2	55.1	74.0	-18.9
Horizontal	*7236.000	55.1	36.8	36.9	55.2	74.0	-18.8
Horizontal	*2389.900	68.4	35.6	27.8	60.6	74.0	-13.4

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4824.000	46.8	36.1	34.2	44.9	54.0	-9.1
Horizontal	*7236.000	42.2	36.8	36.9	42.3	54.0	-11.7
Horizontal	*2389.900	54.6	35.6	27.8	46.8	54.0	-7.2

- NOTES:
1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
  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 used for the emission over 1000MHz.
- \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302  
Mode: 802.11g (TX-Channel 06)

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4874.000	58.7	36.1	34.6	57.2	74.0	-16.8
Horizontal	*7311.000	56.0	35.6	37.1	57.5	74.0	-16.5

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4874.000	45.3	36.1	34.6	43.8	54.0	-10.2
Horizontal	*7311.000	42.1	35.6	37.1	43.6	54.0	-10.4

- NOTES: 1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
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 used for the emission over 1000MHz.
- \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited

Date of Test: September 24, 2014

Model: D302

Mode: 802.11g (TX-Channel 11)

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4924.000	59.1	36.1	34.6	57.6	74.0	-16.4
Horizontal	*7386.000	53.8	35.6	37.2	55.4	74.0	-18.6
Horizontal	*2483.900	69.8	35.6	28.0	62.2	74.0	-11.8

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4924.000	47.9	36.1	34.6	46.4	54.0	-7.6
Horizontal	*7386.000	40.6	35.6	37.2	42.2	54.0	-11.8
Horizontal	*2483.900	54.9	35.6	28.0	47.3	54.0	-6.7

- NOTES:
1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
  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 used for the emission over 1000MHz.
- \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited  
 Date of Test: September 24, 2014  
 Model: D302  
 Mode: 802.11 n-HT20 (TX-Channel 01)

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4824.000	56.4	36.1	34.2	54.5	74.0	-19.5
Horizontal	*7236.000	52.5	36.8	36.9	52.6	74.0	-21.4
Horizontal	*2389.890	68.9	35.6	27.8	61.1	74.0	-12.9

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4824.000	43.3	36.1	34.2	41.4	54.0	-12.6
Horizontal	*7236.000	42.1	36.8	36.9	42.2	54.0	-11.8
Horizontal	*2389.890	55.4	35.6	27.8	47.6	54.0	-6.4

- NOTES:
1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
  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 used for the emission over 1000MHz.
- \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302  
Mode: 802.11 n-HT20 (TX-Channel 06)

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4874.000	59.5	36.1	34.2	57.6	74.0	-16.4
Horizontal	*7311.000	52.5	35.6	37.1	54.0	74.0	-20.0

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4874.000	47.5	36.1	34.2	45.6	54.0	-8.4
Horizontal	*7311.000	40.9	35.6	37.1	42.4	54.0	-11.6

- NOTES:
1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
  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 used for the emission over 1000MHz.
    - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited  
 Date of Test: September 24, 2014  
 Model: D302  
 Mode: 802.11 n-HT20 (TX-Channel 11)

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4924.000	56.8	36.1	34.6	55.3	74.0	-18.7
Horizontal	*7386.000	52.8	35.6	37.2	54.4	74.0	-19.6
Horizontal	*2483.820	70.3	35.6	27.8	62.5	74.0	-11.5

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4924.000	43.4	36.1	34.6	41.9	54.0	-12.1
Horizontal	*7386.000	40.7	35.6	37.2	42.3	54.0	-11.7
Horizontal	*2483.820	55.7	35.6	27.8	47.9	54.0	-6.1

- NOTES:
1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
  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 used for the emission over 1000MHz.
- \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited

Date of Test: September 24, 2014

Model: D302

Mode: 802.11 n-HT40 (TX-Channel 03)

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4844.000	52.7	36.1	34.2	50.8	74.0	-23.2
Horizontal	*7266.000	56.7	36.8	37.1	57.0	74.0	-17.0
Horizontal	*2389.860	71.2	35.6	27.7	63.3	74.0	-10.7

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4844.000	42.3	36.1	34.2	40.4	54.0	-13.6
Horizontal	*7266.000	42.9	36.8	37.1	43.2	54.0	-10.8
Horizontal	*2389.860	56.1	35.6	27.7	48.2	54.0	-5.8

- NOTES:
1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
  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 used for the emission over 1000MHz.
    - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302  
Mode: 802.11 n-HT40 (TX-Channel 06)

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4874.000	55.8	36.1	34.2	53.9	74.0	-20.1
Horizontal	*7311.000	55.7	35.6	37.1	57.2	74.0	-16.8

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4874.000	45.1	36.1	34.2	43.2	54.0	-10.8
Horizontal	*7311.000	41.9	35.6	37.1	43.4	54.0	-10.6

- NOTES:
1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
  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 used for the emission over 1000MHz.
- \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

## INTERTEK TESTING SERVICES

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302  
Mode: 802.11 n-HT40 (TX-Channel 9)

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4904.000	54.5	36.1	34.6	53.0	74.0	-21.0
Horizontal	*7356.000	55.6	35.6	37.0	57.0	74.0	-17.0
Horizontal	*2485.380	72.1	35.6	28.0	64.5	74.0	-9.5

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4904.000	45.0	36.1	34.6	43.5	54.0	-10.5
Horizontal	*7356.000	41.9	35.6	37.0	43.3	54.0	-10.7
Horizontal	*2485.380	55.9	35.6	28.0	48.3	54.0	-5.7

- NOTES:
1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
  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 used for the emission over 1000MHz.
    - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

## **INTERTEK TESTING SERVICES**

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### **4.9 Conducted Emission**

Worst Case Conducted emission at 0.454MHz is Passed by 10.6 dB margin

For electronic filing, the worst case conducted emission configuration photograph is saved with filename: conducted photos.pdf.

# INTERTEK TESTING SERVICES

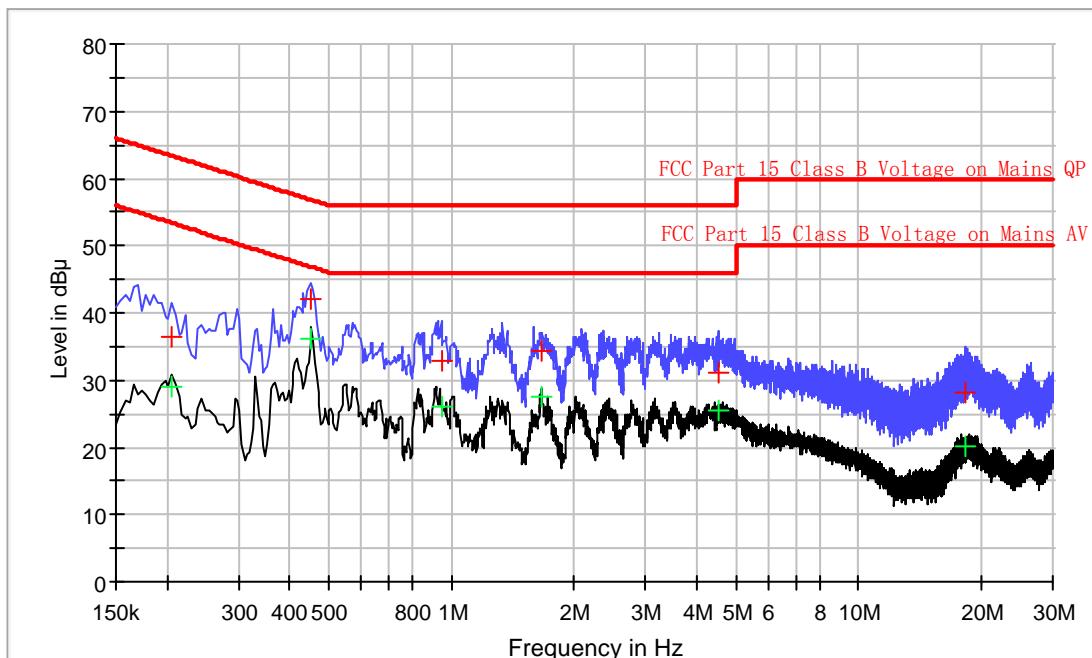
Applicant: Cyber Blue (HK) Limited

Date of Test: September 24, 2014

Model: D302

Worst Case Operating Mode: 802.11 n-HT20 (TX-Channel 01)

## Conducted Emission Test - FCC



## Result Table QP

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.206	36.5	L1	9.8	26.9	63.4
0.454	42.1	L1	9.8	14.7	56.8
0.946	32.9	L1	9.9	23.1	56.0
1.666	34.3	L1	9.9	21.7	56.0
4.510	31.2	L1	9.8	26.9	63.4
18.338	28.2	L1	9.8	14.7	56.8

## Result Table AV

Frequency (MHz)	Average (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.206	28.9	L1	9.8	24.5	53.4
0.454	36.2	L1	9.8	10.6	46.8
0.946	26.2	L1	9.9	19.8	46.0
1.666	27.7	L1	9.9	18.3	46.0
4.510	25.3	L1	10.0	20.7	46.0
18.338	20.1	L1	10.3	29.9	50.0

TRF no.: FCC 15C\_TX\_b

FCC ID: UFDD302

Report No.: 140905011SZN-001

# INTERTEK TESTING SERVICES

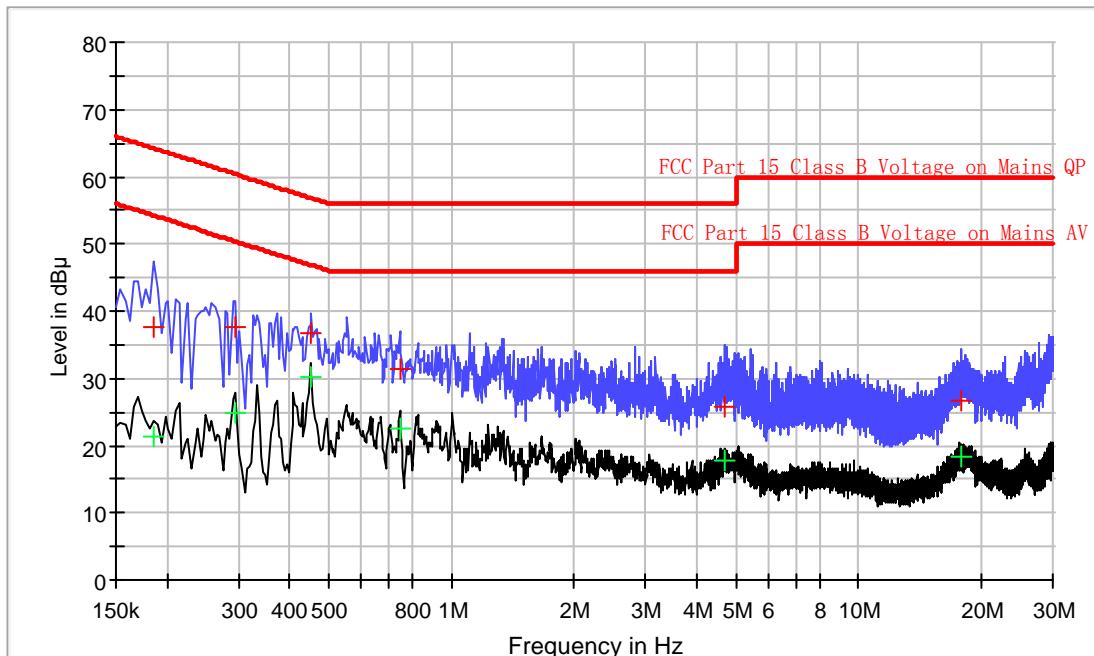
Applicant: Cyber Blue (HK) Limited

Date of Test: September 24, 2014

Model: D302

Worst Case Operating Mode: 802.11n-HT20 (TX-Channel 01)

## Conducted Emission Test - FCC



### Result Table QP

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.186	37.5	N	10.0	26.7	64.2
0.294	37.6	N	10.1	22.8	60.4
0.450	36.7	N	10.1	20.2	56.9
0.746	31.3	N	10.2	24.7	56.0
4.686	25.9	N	10.3	30.1	56.0
17.974	26.6	N	10.5	33.4	60.0

### Result Table AV

Frequency (MHz)	Average (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.186	21.3	N	10.0	32.9	54.2
0.294	24.8	N	10.1	25.6	50.4
0.450	30.1	N	10.1	16.8	46.9
0.746	22.6	N	10.2	23.4	46.0
4.686	17.6	N	10.3	28.4	46.0
17.974	18.5	N	10.5	31.5	50.0

TRF no.: FCC 15C\_TX\_b

FCC ID: UFDD302

Report No.: 140905011SZN-001

## **INTERTEK TESTING SERVICES**

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302

4.10 Radiated Emissions from Digital Section of Transceiver, FCC Ref: 15.109

- [ ] Not required - No digital part
- [ ] Test results are attached
- [ x ] Included in the separated report.

## **INTERTEK TESTING SERVICES**

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Applicant: Cyber Blue (HK) Limited  
Date of Test: September 24, 2014  
Model: D302

### 4.11 Transmitter Duty Cycle Calculation and Measurements, FCC Rule 15.35(b), (c)

The EUT antenna output port was connected to the input of the spectrum analyzer. The analyzer center frequency was set to EUT RF channel carrier. The SWEP function on the analyzer was set to ZERO SPAN. The Transmitter ON time was determined from the resultant time-amplitude display:

	See attached spectrum analyzer chart (s) for Transmitter timing
	See Transmitter timing diagram provided by manufacturer
x	Not applicable, duty cycle was not used.

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 5**

#### **EQUIPMENT PHOTOGRAPHS**

## **INTERTEK TESTING SERVICES**

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### **5.0 Equipment Photographs**

For electronic filing, the photographs are saved with filename: external photos.doc & internal photos.pdf.

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 6**

### **PRODUCT LABELLING**

## **INTERTEK TESTING SERVICES**

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### **6.0 Product Labeling**

For electronic filing, the FCC ID label artwork and location is saved with filename: label.pdf.

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 7**

### **TECHNICAL SPECIFICATIONS**

## **INTERTEK TESTING SERVICES**

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### **7.0 Technical Specifications**

For electronic filing, the block diagram and circuit diagram are saved with filename: block.pdf and circuit.pdf respectively.

# **INTERTEK TESTING SERVICES**

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## **EXHIBIT 8**

## **INSTRUCTION MANUAL**

## **INTERTEK TESTING SERVICES**

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### **8.0 Instruction Manual**

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

This manual will be provided to the end-user with each unit sold/leased in the United States.

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 9**

### **CONFIDENTIALITY REQUEST**

## **INTERTEK TESTING SERVICES**

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### **9.0 Confidentiality Request**

For electronic filing, the confidentiality request of the tested EUT is saved with filename: request.pdf.

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 10**

#### **MISCELLANEOUS INFORMATION**

## **INTERTEK TESTING SERVICES**

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### **10.0 Discussion of Pulse Desensitization**

The determination of pulse desensitivity was made in accordance with Hewlett Packard Application Note 150-2, *Spectrum Analysis ... Pulsed RF*.

Pulse desensitivity is not applicable for this device since the transmitter transmits the RF signal continuously.

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 11**

### **TEST EQUIPMENT LIST**

## INTERTEK TESTING SERVICES

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### 11.0 Test Equipment List

<b>Equipment No.</b>	<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Date</b>	<b>Due Date</b>
SZ182-02	RF Power Meter	Anritsu	ML2496A	1302005	21-May-2014	21-May-2015
SZ182-02-01	Power Sensor	Anritsu	MA2411B	1207429	21-May-2014	21-May-2015
SZ061-03	BiConiLog Antenna	ETS	3142C	00066460	28-Jun-2014	28-Jun-2015
SZ185-01	EMI Receiver	R&S	ESCI	100547	10-Mar-2014	10-Mar-2015
SZ061-09	Horn Antenna	ETS	3115	00092346	16-Nov-2013	16-Nov-2014
SZ061-07	Pyramidal Horn Antenna	ETS	3160-09	00083067	03-Sep-2014	03-Sep-2015
SZ061-06	Active Loop Antenna	Electro-Metrics	EM-6876	217	29-Apr-2014	29-Apr-2015
EM031-03	EXA Spectrum Analyzer	R&S	FSV40	101506	09-Jun-2014	09-Jun-2015
SZ181-04	Preamplifier	Agilent	8449B	3008A024 74	10-Mar-2014	10-Mar-2015
SZ188-01	Anechoic Chamber	ETS	RFD-F/A-100	4102	19-Apr-2014	19-Apr-2015
SZ062-02	RF Cable	RADIALL	RG 213U	--	19-Apr-2014	19-Oct-2014
SZ062-05	RF Cable	RADIALL	0.04-26.5GHz	--	19-Apr-2014	19-Oct-2014
SZ062-12	RF Cable	RADIALL	0.04-26.5GHz	--	19-Apr-2014	19-Oct-2014
SZ067-04	Notch Filter	Micro-Tronics	BRM5070 2-02	--	21-May-2014	21-May-2015
SZ185-02	EMI Test Receiver	R&S	ESCI	100692	09-Nov-2013	09-Nov-2014
SZ187-01	Two-Line V-Network	R&S	ENV216	100072	09-Nov-2013	09-Nov-2014
SZ187-02	Two-Line V-Network	R&S	ENV216	100073	09-Nov-2013	09-Nov-2014
SZ188-03	Shielding Room	ETS	RFD-100	4100	23-Aug-2013	23-Aug-2014

TRF no.: FCC 15C\_TX\_b

FCC ID: UFDD302

Report No.: 140905011SZN-001