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## TEST REPORT

**Report No.: 13090970HKG-002**

**Sunflex Europe GmbH**

Application  
For  
Certification  
(Original Grant)  
**(FCC ID: 2AA95V01105)**  
**(IC: 11532A-V01105)**

Transceiver

Prepared and Checked by:

Approved by:

Signed On File  
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Date: December 2, 2013

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## INTERTEK TESTING SERVICES

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### GENERAL INFORMATION

**Sunflex Europe GmbH**  
**BRAND NAME: snakebyte Vyper**  
**MODEL: V01105, V906855, V01099, V908316, V908323, V907296, M7005**  
**FCC ID: 2AA95V01105**  
**IC: 11532A-V01105**

Grantee:	Sunflex Europe GmbH
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Manufacturer:	Sunflex Europe GmbH
Manufacturer Address:	Konrad-Zuse-Str.13 58239 Schwerte Germany
Brand Name:	snakebyte Vyper
Model:	V01105, V906855, V01099, V908316, V908323, V907296, M7005
Type of EUT:	Transceiver
Description of EUT:	7inch Tablet PC
Serial Number:	N/A
FCC ID / IC:	2AA95V01105 / 11532A-V01105
Date of Sample Submitted:	September 25, 2013
Date of Test:	September 25, 2013 to October 22, 2013
Report No.:	13090970HKG-002
Report Date:	December 2, 2013
Environmental Conditions:	Temperature: +10 to 40°C Humidity: 10 to 90%

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## INTERTEK TESTING SERVICES

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### SUMMARY OF TEST RESULT

**Sunflex Europe GmbH**  
**BRAND NAME: snakebyte Vyper**  
**MODEL: V01105, V906855, V01099, V908316, V908323, V907296, M7005**  
**FCC ID: 2AA95V01105**  
**IC: 11532A-V01105**

TEST SPECIFICATION	REFERENCE	RESULTS
Transmitter Power Line Conducted Emissions	15.207 / RSS-Gen 7.2.4	Pass
Transmitter Field Strength and Bandwidth Requirement	15.249 / RSS-210 A2.9	Pass
Digital Device Radiated Emissions	15.109 / RSS-210 2.5	Pass

The equipment under test is found to be complying with the following standards:  
FCC Part 15, October 1, 2012 Edition  
RSS-210 Issue 8, December 2010  
RSS-Gen Issue 3, December 2010

- Note: 1. The EUT uses a permanently attached antenna which, in accordance to section 15.203, is considered sufficient to comply with the provisions of this section.
2. Pursuant to FCC part 15 Section 15.215(c), the 20 dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over excepted variations in temperature and supply voltage were considered.

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## INTERTEK TESTING SERVICES

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### 1.0 General Description

#### 1.1 Product Description

The Equipment Under Test (EUT) is a tablet, equipped with HDMI, WiFi, Bluetooth 3.0/4.0, SD and USB Interface. The EUT operates in frequency range from 2412MHz to 2462MHz at 802.11b,g,n HT20 (11 channels with 5MHz spacing) and also operates in the frequency range 2402MHz to 2480MHz at Bluetooth 3.0 (79 channels with 1MHz spacing) while 2402MHz to 2480MHz at Bluetooth 4.0 (40 channels with 2MHz spacing). The EUT is powered by an external AC/DC adaptor or / and 3.7 VDC (1 x 3.7V 3400mAh rechargeable battery). The adaptor accepts 100-240VAC. WiFi and Bluetooth portions are in the same module that shares a single antenna. The applicant declared that the EUT is using non-adaptive frequency hopping in Bluetooth 3.0.

The Model: V906855, V01099, V908316, V908323, V907296 and M7005 are the same as the Model: V01105 in hardware aspect. The difference in model number serves as marketing strategy.

Antenna Type : Internal, Integral

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

#### 1.2 Related Submittal(s) Grants

This is a single application for certification of a transceiver.

The Declaration of the Conformity procedure of PC Connectivity for this transceiver (with FCC ID: 2AA95V01105) is being processed at the same time of this application.

#### 1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2009). All radiated measurements were performed in an Open Area Test Site. Preliminary scans were performed in the Open Area Test Site only to determine 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.

#### 1.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. This test facility and site measurement data have been placed on file with the FCC and IC.

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## INTERTEK TESTING SERVICES

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### 2.0 **System Test Configuration**

#### 2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.4 (2009).

The device was powered by 120VAC.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

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

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was mounted to a plastic stand if necessary and placed on the wooden turntable, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

All configuration (with and without PC connectivity, with and without docking during transceiver test) and setting of data rate for each 802.11b/g/n(HT20) mode had been considered, and worst case test data are shown on this test report.

#### 2.2 EUT Exercising Software

There was no special software to exercise the device. Once the unit is powered up, it transmits the RF signal continuously.

#### 2.3 Special Accessories

There are no special accessories necessary for compliance of this product.

#### 2.4 Equipment Modification

Any modifications installed previous to testing by Sunflex Europe GmbH will be incorporated in each production model sold/leased in the United States and Canada.

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### 2.5 Measurement Uncertainty

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

### 2.6 Support Equipment List and Description

1. 1 x 4GB Kingston SD Card
2. 1 x 4GB USB Flash Drive
3. 1 x 2m HDMI cable
4. HDMI Monitor
5. 1 x 2m long LAN cable (for termination only)  
(Provided by Intertek)
6. Notebook Computer
7. Software RF Test Tools
8. 1 x 1m USB cable
9. docking (Model:V01242; Additional Model: V908330)
10. AC/DC Adaptor  
(Model: HNB050200E; Input: 100-240VAC 50/60Hz 0.35A; Output: 5VDC 2.0A)  
(Provided by Applicant)

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### 3.0 Emission Results

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

#### 3.1 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any), Average Factor (optional) from the measured reading. The basic equation with a sample calculation is as follows:

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

where

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

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows:

$$FS = RR + LF$$

where

- FS = Field Strength in dB $\mu$ V/m
- RR = RA - AG - AV in dB $\mu$ V
- LF = CF + AF in dB

Assume a receiver reading of 52.0 dB $\mu$ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB are added. The amplifier gain of 29 dB and average factor of 5 dB are subtracted, giving a field strength of 27 dB $\mu$ V/m. This value in dB $\mu$ V/m was converted to its corresponding level in  $\mu$ V/m.

$$RA = 52.0 \text{ dB}\mu\text{V/m}$$

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

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

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

$$AV = 5.0 \text{ dB}$$

$$FS = RR + LF$$

$$FS = 18 + 9 = 27 \text{ dB}\mu\text{V/m}$$

$$RR = 18.0 \text{ dB}\mu\text{V}$$

$$LF = 9.0 \text{ dB}$$

$$\text{Level in } \mu\text{V/m} = \text{Common Antilogarithm } [(27 \text{ dB}\mu\text{V/m})/20] = 22.4 \mu\text{V/m}$$



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### 3.2 Radiated Emission Configuration Photograph

The worst case in radiated emission was found at 2412.000 MHz

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

### 3.3 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgment: Passed by 1.4 dB (radiated emission)  
Passed by 0.6 dB (bandedge)

### 3.4 Conducted Emission Configuration Photograph

The worst case in line-conducted emission was found at 0.402 MHz

For electronic filing, the worst case line-conducted configuration photographs are saved with filename: conducted photo.pdf.

### 3.5 Conducted Emission Data

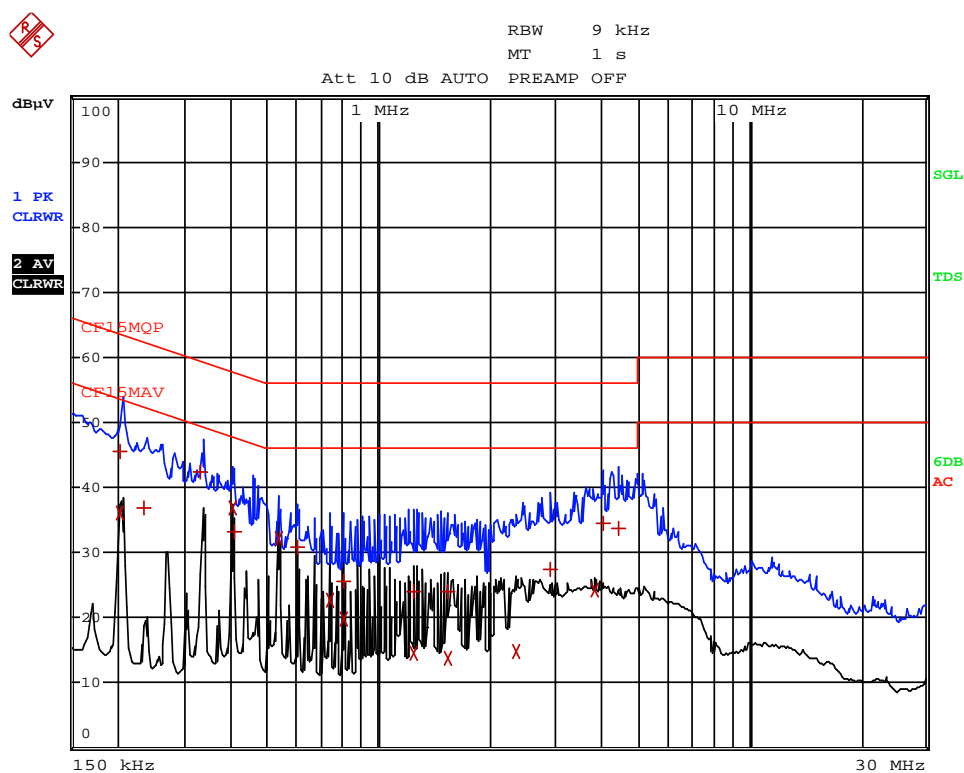
The graph data of conducted emission is shown as below;

Judgment: Pass by 10.9 dB

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Worst-Case Operating Mode: WiFi + Bluetooth Transmitting, with docking

EDIT PEAK LIST (Final Measurement Results)				
Trace1:	CF15MQP			
Trace2:	CF15MAV			
Trace3:	---			
TRACE		FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1	Quasi Peak	204 kHz	45.48 L1	-17.95
2	CISPR Average	204 kHz	36.17 L1	-17.27
1	Quasi Peak	235.5 kHz	36.85 L1	-25.39
1	Quasi Peak	334.5 kHz	42.38 L1	-16.95
2	CISPR Average	402 kHz	36.88 L1	-10.92
1	Quasi Peak	406.5 kHz	33.16 L1	-24.55
2	CISPR Average	537 kHz	32.11 L1	-13.88
1	Quasi Peak	604.5 kHz	30.82 L1	-25.17
2	CISPR Average	739.5 kHz	22.64 L1	-23.35
1	Quasi Peak	807 kHz	25.51 L1	-30.48
2	CISPR Average	807 kHz	19.83 L1	-26.16
1	Quasi Peak	1.2435 MHz	24.07 L1	-31.92
2	CISPR Average	1.2435 MHz	14.46 L1	-31.53
1	Quasi Peak	1.545 MHz	23.98 L1	-32.02
2	CISPR Average	1.545 MHz	13.89 L1	-32.10
2	CISPR Average	2.3505 MHz	14.75 L1	-31.24
1	Quasi Peak	2.922 MHz	27.51 L1	-28.48
2	CISPR Average	3.8265 MHz	24.33 L1	-21.66
1	Quasi Peak	4.029 MHz	34.44 L1	-21.55
1	Quasi Peak	4.461 MHz	33.84 L1	-22.16



Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105

## INTERTEK TESTING SERVICES

Applicant: Sunflex Europe GmbH  
Model: V01105

Date of Test: October 22, 2013

Worst-Case Operating Mode: Standalone Transmitting (802.11b DSSS 11Mbps)

Table 1

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 01

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2412.000	96.2	33	29.4	92.6	94.0	-1.4
H	4824.000	43.9	33	34.9	45.8	54.0	-8.2
H	7236.000	40.2	33	37.9	45.1	54.0	-8.9
H	9648.000	37.9	33	40.4	45.3	54.0	-8.7
H	12060.000	37.7	33	40.5	45.2	54.0	-8.8
H	14472.000	37.6	33	40.0	44.6	54.0	-9.4

Channel 05

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2437.000	96.0	33	29.4	92.4	94.0	-1.6
H	4874.000	43.4	33	34.9	45.3	54.0	-8.7
H	7311.000	40.2	33	37.9	45.1	54.0	-8.9
H	9748.000	37.8	33	40.4	45.2	54.0	-8.8
H	12185.000	37.5	33	40.5	45.0	54.0	-9.0
H	14622.000	39.4	33	38.4	44.8	54.0	-9.2

Channel 11

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2462.000	95.8	33	29.4	92.2	94.0	-1.8
H	4924.000	43.7	33	34.9	45.6	54.0	-8.4
H	7386.000	40.4	33	37.9	45.3	54.0	-8.7
H	9848.000	38.1	33	40.4	45.5	54.0	-8.5
H	12310.000	37.7	33	40.5	45.2	54.0	-8.8
H	14772.000	39.2	33	38.4	44.6	54.0	-9.4

- NOTES:
1. Average Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

## INTERTEK TESTING SERVICES

Applicant: Sunflex Europe GmbH  
Model: V01105

Date of Test: October 22, 2013

Worst-Case Operating Mode: Standalone Transmitting (802.11b DSSS 11Mbps)

Table 2

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 01

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2412.000	106.4	33	29.4	102.8	114.0	-11.2
H	4824.000	52.9	33	34.9	54.8	74.0	-19.2
H	7236.000	47.2	33	37.9	52.1	74.0	-21.9
H	9648.000	43.5	33	40.4	50.9	74.0	-23.1
H	12060.000	43.5	33	40.5	51.0	74.0	-23.0
H	14472.000	43.6	33	40.0	50.6	74.0	-23.4

Channel 05

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2437.000	106.2	33	29.4	102.6	114.0	-11.4
H	4874.000	52.4	33	34.9	54.3	74.0	-19.7
H	7311.000	47.2	33	37.9	52.1	74.0	-21.9
H	9748.000	43.5	33	40.4	50.9	74.0	-23.1
H	12185.000	43.5	33	40.5	51.0	74.0	-23.0
H	14622.000	45.4	33	38.4	50.8	74.0	-23.2

Channel 11

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2462.000	106.0	33	29.4	102.4	114.0	-11.6
H	4924.000	52.3	33	34.9	54.2	74.0	-19.8
H	7386.000	49.7	33	37.9	54.6	74.0	-19.4
H	9848.000	43.9	33	40.4	51.3	74.0	-22.7
H	12310.000	43.8	33	40.5	51.3	74.0	-22.7
H	14772.000	45.2	33	38.4	50.6	74.0	-23.4

- NOTES:
1. Peak Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105

## INTERTEK TESTING SERVICES

Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Standalone Transmitting (802.11g OFDM 54Mbps)

Table 3

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 01

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2412.000	85.4	33	29.4	81.8	94.0	-12.2
H	4824.000	43.4	33	34.9	45.3	54.0	-8.7
H	7236.000	40.2	33	37.9	45.1	54.0	-8.9
H	9648.000	37.9	33	40.4	45.3	54.0	-8.7
H	12060.000	37.7	33	40.5	45.2	54.0	-8.8
H	14472.000	37.6	33	40.0	44.6	54.0	-9.4

Channel 05

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2437.000	85.2	33	29.4	81.6	94.0	-12.4
H	4874.000	43.4	33	34.9	45.3	54.0	-8.7
H	7311.000	40.2	33	37.9	45.1	54.0	-8.9
H	9748.000	37.8	33	40.4	45.2	54.0	-8.8
H	12185.000	37.5	33	40.5	45.0	54.0	-9.0
H	14622.000	39.2	33	38.4	44.6	54.0	-9.4

Channel 11

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2462.000	84.8	33	29.4	81.2	94.0	-12.8
H	4924.000	43.3	33	34.9	45.2	54.0	-8.8
H	7386.000	39.6	33	37.9	44.5	54.0	-9.5
H	9848.000	37.1	33	40.4	44.5	54.0	-9.5
H	12310.000	37.7	33	40.5	45.2	54.0	-8.8
H	14772.000	39.2	33	38.4	44.6	54.0	-9.4

- NOTES:
1. Average Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105

## INTERTEK TESTING SERVICES

Applicant: Sunflex Europe GmbH  
Model: V01105

Date of Test: October 22, 2013

Worst-Case Operating Mode: Standalone Transmitting (802.11g OFDM 54Mbps)

Table 4

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 01

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2412.000	104.8	33	29.4	101.2	114.0	-12.8
H	4824.000	50.5	33	34.9	52.4	74.0	-21.6
H	7236.000	47.2	33	37.9	52.1	74.0	-21.9
H	9648.000	43.5	33	40.4	50.9	74.0	-23.1
H	12060.000	43.5	33	40.5	51.0	74.0	-23.0
H	14472.000	43.6	33	40.0	50.6	74.0	-23.4

Channel 05

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2437.000	104.6	33	29.4	101.0	114.0	-13.0
H	4874.000	50.4	33	34.9	52.3	74.0	-21.7
H	7311.000	47.2	33	37.9	52.1	74.0	-21.9
H	9748.000	43.5	33	40.4	50.9	74.0	-23.1
H	12185.000	43.5	33	40.5	51.0	74.0	-23.0
H	14622.000	45.4	33	38.4	50.8	74.0	-23.2

Channel 11

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2462.000	104.0	33	29.4	100.4	114.0	-13.6
H	4924.000	52.7	33	34.9	54.6	74.0	-19.4
H	7386.000	49.0	33	37.9	53.9	74.0	-20.1
H	9848.000	43.9	33	40.4	51.3	74.0	-22.7
H	12310.000	43.8	33	40.5	51.3	74.0	-22.7
H	14772.000	45.2	33	38.4	50.6	74.0	-23.4

- NOTES:
1. Peak Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105

## INTERTEK TESTING SERVICES

Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Standalone Transmitting (802.11n HT20 mcs7 65Mbps)

Table 5

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 01

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2412.000	85.2	33	29.4	81.6	94.0	-12.4
H	4824.000	43.4	33	34.9	45.3	54.0	-8.7
H	7236.000	40.2	33	37.9	45.1	54.0	-8.9
H	9648.000	37.9	33	40.4	45.3	54.0	-8.7
H	12060.000	37.7	33	40.5	45.2	54.0	-8.8
H	14472.000	37.6	33	40.0	44.6	54.0	-9.4

Channel 05

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2437.000	85.0	33	29.4	81.4	94.0	-12.6
H	4874.000	43.4	33	34.9	45.3	54.0	-8.7
H	7311.000	40.2	33	37.9	45.1	54.0	-8.9
H	9748.000	37.8	33	40.4	45.2	54.0	-8.8
H	12185.000	37.5	33	40.5	45.0	54.0	-9.0
H	14622.000	39.2	33	38.4	44.6	54.0	-9.4

Channel 11

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2462.000	85.0	33	29.4	81.4	94.0	-12.6
H	4924.000	43.5	33	34.9	45.4	54.0	-8.6
H	7386.000	40.4	33	37.9	45.3	54.0	-8.7
H	9848.000	38.1	33	40.4	45.5	54.0	-8.5
H	12310.000	37.7	33	40.5	45.2	54.0	-8.8
H	14772.000	39.2	33	38.4	44.6	54.0	-9.4

- NOTES:
1. Average Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105

## INTERTEK TESTING SERVICES

Applicant: Sunflex Europe GmbH  
Model: V01105

Date of Test: October 22, 2013

Worst-Case Operating Mode: Standalone Transmitting (802.11n HT20 mcs7 65Mbps)

Table 6

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 01

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2412.000	104.5	33	29.4	100.9	114.0	-13.1
H	4824.000	50.5	33	34.9	52.4	74.0	-21.6
H	7236.000	47.2	33	37.9	52.1	74.0	-21.9
H	9648.000	43.4	33	40.4	50.8	74.0	-23.2
H	12060.000	43.5	33	40.5	51.0	74.0	-23.0
H	14472.000	43.6	33	40.0	50.6	74.0	-23.4

Channel 05

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2437.000	104.2	33	29.4	100.6	114.0	-13.4
H	4874.000	50.4	33	34.9	52.3	74.0	-21.7
H	7311.000	47.2	33	37.9	52.1	74.0	-21.9
H	9748.000	43.5	33	40.4	50.9	74.0	-23.1
H	12185.000	43.5	33	40.5	51.0	74.0	-23.0
H	14622.000	45.4	33	38.4	50.8	74.0	-23.2

Channel 11

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2462.000	104.0	33	29.4	100.4	114.0	-13.6
H	4924.000	52.0	33	34.9	53.9	74.0	-20.1
H	7386.000	50.2	33	37.9	55.1	74.0	-18.9
H	9848.000	43.9	33	40.4	51.3	74.0	-22.7
H	12310.000	43.8	33	40.5	51.3	74.0	-22.7
H	14772.000	45.2	33	38.4	50.6	74.0	-23.4

- NOTES:
1. Peak Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105



## INTERTEK TESTING SERVICES

Applicant: Sunflex Europe GmbH  
Model: V01105

Date of Test: October 22, 2013

Worst-Case Operating Mode: Standalone Transmitting (Bluetooth 4.0)

Table 7

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249 Requirement

#### Lowest Channel

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2402.000	90.5	33	29.4	86.9	94.0	-7.1
V	4804.000	44.9	33	34.9	46.8	54.0	-7.2
H	7206.000	41.4	33	37.9	46.3	54.0	-7.7
H	9608.000	38.8	33	40.4	46.2	54.0	-7.8
H	12010.000	38.3	33	40.5	45.8	54.0	-8.2
H	14412.000	38.5	33	40.0	45.5	54.0	-8.5

#### Middle Channel

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2442.000	90.4	33	29.4	86.8	94.0	-7.2
V	4884.000	44.7	33	34.9	46.6	54.0	-7.4
H	7326.000	41.4	33	37.9	46.3	54.0	-7.7
H	9768.000	39.1	33	40.4	46.5	54.0	-7.5
H	12210.000	38.3	33	40.5	45.8	54.0	-8.2
H	14652.000	40.1	33	38.4	45.5	54.0	-8.5

#### Highest Channel

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2480.000	90.4	33	29.4	86.8	94.0	-7.2
V	4960.000	44.7	33	34.9	46.6	54.0	-7.4
H	7440.000	41.5	33	37.9	46.4	54.0	-7.6
H	9920.000	38.8	33	40.4	46.2	54.0	-7.8
H	12400.000	38.4	33	40.5	45.9	54.0	-8.1
H	14880.000	39.9	33	38.4	45.3	54.0	-8.7

- NOTES:
1. Average Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

## INTERTEK TESTING SERVICES

Applicant: Sunflex Europe GmbH  
Model: V01105

Date of Test: October 22, 2013

Worst-Case Operating Mode: Standalone Transmitting (Bluetooth 4.0)

Table 8

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249 Requirement

#### Lowest Channel

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
V	2402.000	106.6	33	29.4	103.0	114.0	-11.0
V	4804.000	49.7	33	34.9	51.6	74.0	-22.4
H	7206.000	45.7	33	37.9	50.6	74.0	-23.4
H	9608.000	42.8	33	40.4	50.2	74.0	-23.8
H	12010.000	42.0	33	40.5	49.5	74.0	-24.5
H	14412.000	42.3	33	40.0	49.3	74.0	-24.7

#### Middle Channel

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
V	2442.000	106.0	33	29.4	102.4	114.0	-11.6
V	4884.000	49.3	33	34.9	51.2	74.0	-22.8
H	7326.000	45.5	33	37.9	50.4	74.0	-23.6
H	9768.000	42.8	33	40.4	50.2	74.0	-23.8
H	12210.000	42.0	33	40.5	49.5	74.0	-24.5
H	14652.000	43.9	33	38.4	49.3	74.0	-24.7

#### Highest Channel

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
V	2480.000	105.8	33	29.4	102.2	114.0	-11.8
V	4960.000	49.4	33	34.9	51.3	74.0	-22.7
H	7440.000	45.4	33	37.9	50.3	74.0	-23.7
H	9920.000	42.1	33	40.4	49.5	74.0	-24.5
H	12400.000	41.9	33	40.5	49.4	74.0	-24.6
H	14880.000	43.9	33	38.4	49.3	74.0	-24.7

- NOTES:
1. Peak Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105

## INTERTEK TESTING SERVICES

Applicant: Sunflex Europe GmbH  
Model: V01105

Date of Test: October 22, 2013

Worst-Case Operating Mode: Standalone Transmitting (Bluetooth 3.0)

Table 9

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249 Requirement

**Lowest Channel**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2402.000	101.4	33	29.4	97.8	30.1	67.7	94.0	-26.3
V	4804.000	49.7	33	34.9	51.6	30.1	21.5	54.0	-32.5
H	7206.000	45.7	33	37.9	50.6	30.1	20.5	54.0	-33.5
H	9608.000	42.8	33	40.4	50.2	30.1	20.1	54.0	-33.9
H	12010.000	42.0	33	40.5	49.5	30.1	19.4	54.0	-34.6
H	14412.000	42.3	33	40.0	49.3	30.1	19.2	54.0	-34.8

**Middle Channel**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2442.000	101.0	33	29.4	97.4	30.1	67.3	94.0	-26.7
V	4884.000	49.3	33	34.9	51.2	30.1	21.1	54.0	-32.9
H	7326.000	45.5	33	37.9	50.4	30.1	20.3	54.0	-33.7
H	9768.000	42.8	33	40.4	50.2	30.1	20.1	54.0	-33.9
H	12210.000	42.0	33	40.5	49.5	30.1	19.4	54.0	-34.6
H	14652.000	43.9	33	38.4	49.3	30.1	19.2	54.0	-34.8

**Highest Channel**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2480.000	99.6	33	29.4	96.0	30.1	65.9	94.0	-28.1
V	4960.000	49.4	33	34.9	51.3	30.1	21.2	54.0	-32.8
H	7440.000	45.4	33	37.9	50.3	30.1	20.2	54.0	-33.8
H	9920.000	42.1	33	40.4	49.5	30.1	19.4	54.0	-34.6
H	12400.000	41.9	33	40.5	49.4	30.1	19.3	54.0	-34.7
H	14880.000	43.9	33	38.4	49.3	30.1	19.2	54.0	-34.8

- NOTES:
1. Average Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105

## INTERTEK TESTING SERVICES

Applicant: Sunflex Europe GmbH  
Model: V01105

Date of Test: October 22, 2013

Worst-Case Operating Mode: Standalone Transmitting (Bluetooth 3.0)

Table 10

### Radiated Emissions Pursuant to FCC Part 15 Section 15.249 Requirement

**Lowest Channel**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
V	2402.000	101.4	33	29.4	97.8	114.0	-16.2
V	4804.000	49.7	33	34.9	51.6	74.0	-22.4
H	7206.000	45.7	33	37.9	50.6	74.0	-23.4
H	9608.000	42.8	33	40.4	50.2	74.0	-23.8
H	12010.000	42.0	33	40.5	49.5	74.0	-24.5
H	14412.000	42.3	33	40.0	49.3	74.0	-24.7

**Middle Channel**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
V	2442.000	101.0	33	29.4	97.4	114.0	-16.6
V	4884.000	49.3	33	34.9	51.2	74.0	-22.8
H	7326.000	45.5	33	37.9	50.4	74.0	-23.6
H	9768.000	42.8	33	40.4	50.2	74.0	-23.8
H	12210.000	42.0	33	40.5	49.5	74.0	-24.5
H	14652.000	43.9	33	38.4	49.3	74.0	-24.7

**Highest Channel**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
V	2480.000	99.6	33	29.4	96.0	114.0	-18.0
V	4960.000	49.4	33	34.9	51.3	74.0	-22.7
H	7440.000	45.4	33	37.9	50.3	74.0	-23.7
H	9920.000	42.1	33	40.4	49.5	74.0	-24.5
H	12400.000	41.9	33	40.5	49.4	74.0	-24.6
H	14880.000	43.9	33	38.4	49.3	74.0	-24.7

- NOTES:
1. Peak Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105

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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Simultaneous Transmitting (802.11b DSSS 11Mbps and Bluetooth 4.0)

Table 11

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.249 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2402.000	73.4	33	29.4	69.8	94.0	-24.2
H	2412.000	91.8	33	29.4	88.2	94.0	-5.8
H	2437.000	91.4	33	29.4	87.8	94.0	-6.2
H	2442.000	72.4	33	29.4	68.8	94.0	-25.2
H	2462.000	91.0	33	29.4	87.4	94.0	-6.6
H	2480.000	72.0	33	29.4	68.4	94.0	-25.6
H	4814.000	42.9	33	34.9	44.8	54.0	-9.2
H	4839.000	42.7	33	34.9	44.6	54.0	-9.4
H	4854.000	43.3	33	34.9	45.2	54.0	-8.8
H	4864.000	43.5	33	34.9	45.4	54.0	-8.6
H	4879.000	43.1	33	34.9	45.0	54.0	-9.0
H	4892.000	42.3	33	34.9	44.2	54.0	-9.8
H	4904.000	42.9	33	34.9	44.8	54.0	-9.2
H	4917.000	42.1	33	34.9	44.0	54.0	-10.0
H	4942.000	42.7	33	34.9	44.6	54.0	-9.4

- NOTES:
1. Average Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Simultaneous Transmitting (802.11b DSSS 11Mbps and Bluetooth 4.0)

Table 12

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.249 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2402.000	88.4	33	29.4	84.8	114.0	-29.2
H	2412.000	102.4	33	29.4	98.8	114.0	-15.2
H	2437.000	102.0	33	29.4	98.4	114.0	-15.6
H	2442.000	87.8	33	29.4	84.2	114.0	-29.8
H	2462.000	101.2	33	29.4	97.6	114.0	-16.4
H	2480.000	87.2	33	29.4	83.6	114.0	-30.4
H	4814.000	48.3	33	34.9	50.2	74.0	-23.8
H	4839.000	48.5	33	34.9	50.4	74.0	-23.6
H	4854.000	48.9	33	34.9	50.8	74.0	-23.2
H	4864.000	48.5	33	34.9	50.4	74.0	-23.6
H	4879.000	48.1	33	34.9	50.0	74.0	-24.0
H	4892.000	48.3	33	34.9	50.2	74.0	-23.8
H	4904.000	48.3	33	34.9	50.2	74.0	-23.8
H	4917.000	48.1	33	34.9	50.0	74.0	-24.0
H	4942.000	48.5	33	34.9	50.4	74.0	-23.6

- NOTES:
1. Peak Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Simultaneous Transmitting (802.11g OFDM 54Mbps and Bluetooth 4.0)

Table 13

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.249 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2402.000	72.2	33	29.4	68.6	94.0	-25.4
H	2412.000	89.8	33	29.4	86.2	94.0	-7.8
H	2437.000	89.6	33	29.4	86.0	94.0	-8.0
H	2442.000	72.2	33	29.4	68.6	94.0	-25.4
H	2462.000	91.4	33	29.4	87.8	94.0	-6.2
H	2480.000	71.6	33	29.4	68.0	94.0	-26.0
H	4814.000	42.7	33	34.9	44.6	54.0	-9.4
H	4839.000	42.9	33	34.9	44.8	54.0	-9.2
H	4854.000	43.5	33	34.9	45.4	54.0	-8.6
H	4864.000	43.3	33	34.9	45.2	54.0	-8.8
H	4879.000	43.3	33	34.9	45.2	54.0	-8.8
H	4892.000	42.5	33	34.9	44.4	54.0	-9.6
H	4904.000	42.7	33	34.9	44.6	54.0	-9.4
H	4917.000	42.3	33	34.9	44.2	54.0	-9.8
H	4942.000	42.3	33	34.9	44.2	54.0	-9.8

- NOTES:
1. Average Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Simultaneous Transmitting (802.11g OFDM 54Mbps and Bluetooth 4.0)

Table 14

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.249 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2402.000	86.4	33	29.4	82.8	114.0	-31.2
H	2412.000	101.0	33	29.4	97.4	114.0	-16.6
H	2437.000	100.8	33	29.4	97.2	114.0	-16.8
H	2442.000	85.8	33	29.4	82.2	114.0	-31.8
H	2462.000	100.4	33	29.4	96.8	114.0	-17.2
H	2480.000	86.0	33	29.4	82.4	114.0	-31.6
H	4814.000	48.5	33	34.9	50.4	74.0	-23.6
H	4839.000	48.3	33	34.9	50.2	74.0	-23.8
H	4854.000	48.5	33	34.9	50.4	74.0	-23.6
H	4864.000	48.3	33	34.9	50.2	74.0	-23.8
H	4879.000	48.3	33	34.9	50.2	74.0	-23.8
H	4892.000	48.5	33	34.9	50.4	74.0	-23.6
H	4904.000	48.3	33	34.9	50.2	74.0	-23.8
H	4917.000	48.3	33	34.9	50.2	74.0	-23.8
H	4942.000	48.3	33	34.9	50.2	74.0	-23.8

- NOTES:
1. Peak Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.



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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Simultaneous Transmitting (802.11n HT20 mcs7 65Mbps and Bluetooth 4.0)

Table 15

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.249 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2402.000	71.4	33	29.4	67.8	94.0	-26.2
H	2412.000	85.8	33	29.4	82.2	94.0	-11.8
H	2437.000	85.6	33	29.4	82.0	94.0	-12.0
H	2442.000	71.0	33	29.4	67.4	94.0	-26.6
H	2462.000	85.4	33	29.4	81.8	94.0	-12.2
H	2480.000	70.8	33	29.4	67.2	94.0	-26.8
H	4814.000	42.4	33	34.9	44.3	54.0	-9.7
H	4839.000	42.6	33	34.9	44.5	54.0	-9.5
H	4854.000	43.3	33	34.9	45.2	54.0	-8.8
H	4864.000	43.3	33	34.9	45.2	54.0	-8.8
H	4879.000	43.5	33	34.9	45.4	54.0	-8.6
H	4892.000	42.3	33	34.9	44.2	54.0	-9.8
H	4904.000	42.7	33	34.9	44.6	54.0	-9.4
H	4917.000	42.1	33	34.9	44.0	54.0	-10.0
H	4942.000	42.3	33	34.9	44.2	54.0	-9.8

- NOTES:
1. Average Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Simultaneous Transmitting (802.11n HT20 mcs7 65Mbps and Bluetooth 4.0)

Table 16

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.249 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2402.000	85.4	33	29.4	81.8	114.0	-32.2
H	2412.000	100.0	33	29.4	96.4	114.0	-17.6
H	2437.000	99.8	33	29.4	96.2	114.0	-17.8
H	2442.000	84.8	33	29.4	81.2	114.0	-32.8
H	2462.000	99.4	33	29.4	95.8	114.0	-18.2
H	2480.000	84.6	33	29.4	81.0	114.0	-33.0
H	4814.000	48.3	33	34.9	50.2	74.0	-23.8
H	4839.000	48.1	33	34.9	50.0	74.0	-24.0
H	4854.000	48.4	33	34.9	50.3	74.0	-23.7
H	4864.000	48.5	33	34.9	50.4	74.0	-23.6
H	4879.000	48.1	33	34.9	50.0	74.0	-24.0
H	4892.000	48.3	33	34.9	50.2	74.0	-23.8
H	4904.000	48.1	33	34.9	50.0	74.0	-24.0
H	4917.000	48.1	33	34.9	50.0	74.0	-24.0
H	4942.000	48.3	33	34.9	50.2	74.0	-23.8

- NOTES:
1. Peak Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Simultaneous Transmitting (802.11b DSSS 11Mbps and Bluetooth 3.0)

Table 17

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.249 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	2402.000	72.4	33	29.4	68.8	94.0	-25.2
V	2412.000	91.6	33	29.4	88.0	94.0	-6.0
V	2437.000	91.2	33	29.4	87.6	94.0	-6.4
H	2442.000	71.9	33	29.4	68.3	94.0	-25.7
H	2462.000	90.8	33	29.4	87.2	94.0	-6.8
H	2480.000	71.8	33	29.4	68.2	94.0	-25.8
H	4814.000	42.7	33	34.9	44.6	54.0	-9.4
H	4839.000	42.6	33	34.9	44.5	54.0	-9.5
H	4854.000	43.2	33	34.9	45.1	54.0	-8.9
H	4864.000	43.3	33	34.9	45.2	54.0	-8.8
H	4879.000	43.5	33	34.9	45.4	54.0	-8.6
H	4892.000	42.5	33	34.9	44.4	54.0	-9.6
H	4904.000	42.3	33	34.9	44.2	54.0	-9.8
H	4917.000	42.5	33	34.9	44.4	54.0	-9.6
H	4942.000	42.5	33	34.9	44.4	54.0	-9.6

- NOTES:
1. Average Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Simultaneous Transmitting (802.11b DSSS 11Mbps and Bluetooth 3.0)

Table 18

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.249 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2402.000	86.2	33	29.4	82.6	114.0	-31.4
H	2412.000	102.3	33	29.4	98.7	114.0	-15.3
H	2437.000	102.0	33	29.4	98.4	114.0	-15.6
H	2442.000	85.7	33	29.4	82.1	114.0	-31.9
H	2462.000	101.1	33	29.4	97.5	114.0	-16.5
H	2480.000	85.6	33	29.4	82.0	114.0	-32.0
H	4814.000	48.1	33	34.9	50.0	74.0	-24.0
H	4839.000	48.3	33	34.9	50.2	74.0	-23.8
H	4854.000	48.3	33	34.9	50.2	74.0	-23.8
H	4864.000	48.3	33	34.9	50.2	74.0	-23.8
H	4879.000	48.4	33	34.9	50.3	74.0	-23.7
H	4892.000	48.2	33	34.9	50.1	74.0	-23.9
H	4904.000	48.2	33	34.9	50.1	74.0	-23.9
H	4917.000	48.1	33	34.9	50.0	74.0	-24.0
H	4942.000	48.3	33	34.9	50.2	74.0	-23.8

- NOTES:
1. Peak Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Simultaneous Transmitting (802.11g OFDM 54Mbps and Bluetooth 3.0)

Table 19

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.249 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2402.000	72.0	33	29.4	68.4	94.0	-25.6
H	2412.000	89.6	33	29.4	86.0	94.0	-8.0
H	2437.000	89.6	33	29.4	86.0	94.0	-8.0
H	2442.000	71.8	33	29.4	68.2	94.0	-25.8
H	2462.000	91.2	33	29.4	87.6	94.0	-6.4
H	2480.000	71.6	33	29.4	68.0	94.0	-26.0
H	4814.000	42.3	33	34.9	44.2	54.0	-9.8
H	4839.000	42.3	33	34.9	44.2	54.0	-9.8
H	4854.000	43.3	33	34.9	45.2	54.0	-8.8
H	4864.000	43.4	33	34.9	45.3	54.0	-8.7
H	4879.000	43.3	33	34.9	45.2	54.0	-8.8
H	4892.000	42.4	33	34.9	44.3	54.0	-9.7
H	4904.000	42.2	33	34.9	44.1	54.0	-9.9
H	4917.000	42.1	33	34.9	44.0	54.0	-10.0
H	4942.000	42.1	33	34.9	44.0	54.0	-10.0

- NOTES:
1. Average Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH  
Model: V01105

Date of Test: October 22, 2013

Worst-Case Operating Mode: Simultaneous Transmitting (802.11g OFDM 54Mbps and Bluetooth 3.0)

Table 20

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.249 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2402.000	86.0	33	29.4	82.4	114.0	-31.6
H	2412.000	100.7	33	29.4	97.1	114.0	-16.9
H	2437.000	100.6	33	29.4	97.0	114.0	-17.0
H	2442.000	85.7	33	29.4	82.1	114.0	-31.9
H	2462.000	100.0	33	29.4	96.4	114.0	-17.6
H	2480.000	85.7	33	29.4	82.1	114.0	-31.9
H	4814.000	48.3	33	34.9	50.2	74.0	-23.8
H	4839.000	48.4	33	34.9	50.3	74.0	-23.7
H	4854.000	48.4	33	34.9	50.3	74.0	-23.7
H	4864.000	48.2	33	34.9	50.1	74.0	-23.9
H	4879.000	48.2	33	34.9	50.1	74.0	-23.9
H	4892.000	48.4	33	34.9	50.3	74.0	-23.7
H	4904.000	48.2	33	34.9	50.1	74.0	-23.9
H	4917.000	48.2	33	34.9	50.1	74.0	-23.9
H	4942.000	48.1	33	34.9	50.0	74.0	-24.0

- NOTES:
1. Peak Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Simultaneous Transmitting (802.11n HT20 mcs7 65Mbps and Bluetooth 3.0)

Table 21

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.249 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2402.000	71.2	33	29.4	67.6	94.0	-26.4
H	2412.000	85.7	33	29.4	82.1	94.0	-11.9
H	2437.000	85.6	33	29.4	82.0	94.0	-12.0
H	2442.000	70.8	33	29.4	67.2	94.0	-26.8
H	2462.000	85.3	33	29.4	81.7	94.0	-12.3
H	2480.000	70.7	33	29.4	67.1	94.0	-26.9
H	4814.000	42.3	33	34.9	44.2	54.0	-9.8
H	4839.000	42.3	33	34.9	44.2	54.0	-9.8
H	4854.000	43.2	33	34.9	45.1	54.0	-8.9
H	4864.000	43.3	33	34.9	45.2	54.0	-8.8
H	4879.000	43.4	33	34.9	45.3	54.0	-8.7
H	4892.000	42.2	33	34.9	44.1	54.0	-9.9
H	4904.000	42.7	33	34.9	44.6	54.0	-9.4
H	4917.000	42.2	33	34.9	44.1	54.0	-9.9
H	4942.000	42.3	33	34.9	44.2	54.0	-9.8

- NOTES:
1. Average Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.

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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: Simultaneous Transmitting (802.11n HT20 mcs7 65Mbps and Bluetooth 3.0)

Table 22

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.249 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2402.000	84.8	33	29.4	81.2	114.0	-32.8
H	2412.000	99.9	33	29.4	96.3	114.0	-17.7
H	2437.000	99.7	33	29.4	96.1	114.0	-17.9
H	2442.000	84.7	33	29.4	81.1	114.0	-32.9
H	2462.000	99.2	33	29.4	95.6	114.0	-18.4
H	2480.000	84.6	33	29.4	81.0	114.0	-33.0
H	4814.000	48.2	33	34.9	50.1	74.0	-23.9
H	4839.000	48.1	33	34.9	50.0	74.0	-24.0
H	4854.000	48.2	33	34.9	50.1	74.0	-23.9
H	4864.000	48.3	33	34.9	50.2	74.0	-23.8
H	4879.000	48.3	33	34.9	50.2	74.0	-23.8
H	4892.000	48.2	33	34.9	50.1	74.0	-23.9
H	4904.000	48.1	33	34.9	50.0	74.0	-24.0
H	4917.000	48.3	33	34.9	50.2	74.0	-23.8
H	4942.000	48.3	33	34.9	50.2	74.0	-23.8

- NOTES:
1. Peak Detector is used for emission measurement.
  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 sign in the column shows value below limit.
  4. Horn antenna is used for the emission over 1000MHz.
  5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
  6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.



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## INTERTEK TESTING SERVICES

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Applicant: Sunflex Europe GmbH

Date of Test: October 22, 2013

Model: V01105

Worst-Case Operating Mode: WiFi + Bluetooth On with Docking

Table 23

**Radiated Emissions**  
**Pursuant to FCC Part 15 Section 15.109 Requirement**

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
V	48.126	39.6	16	11.0	34.6	40.0	-5.4
V	100.025	38.8	16	12.0	34.8	43.5	-8.7
V	187.025	35.3	16	16.0	35.3	43.5	-8.2
H	242.189	38.8	16	19.0	41.8	46.0	-4.2
H	302.503	34.2	16	22.0	40.2	46.0	-5.8
H	333.541	28.9	16	24.0	36.9	46.0	-9.1
H	593.971	25.5	16	29.0	38.5	46.0	-7.5
H	742.463	26.5	16	30.0	40.5	46.0	-5.5
H	973.256	25.2	16	33.0	42.2	54.0	-11.8

NOTES: 1. Peak Detector Data unless otherwise 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 sign in the column shows value below limit.

4. Horn antenna is used for the emission over 1000MHz.

## INTERTEK TESTING SERVICES

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### 4.0 **Equipment Photographs**

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

### 5.0 **Product Labelling**

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

### 6.0 **Technical Specifications**

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

### 7.0 **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 and Canada.

## INTERTEK TESTING SERVICES

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### 8.0 **Miscellaneous Information**

The miscellaneous information includes details of the test procedure and measured bandwidth / calculation of factor such as pulse desensitization and averaging factor.

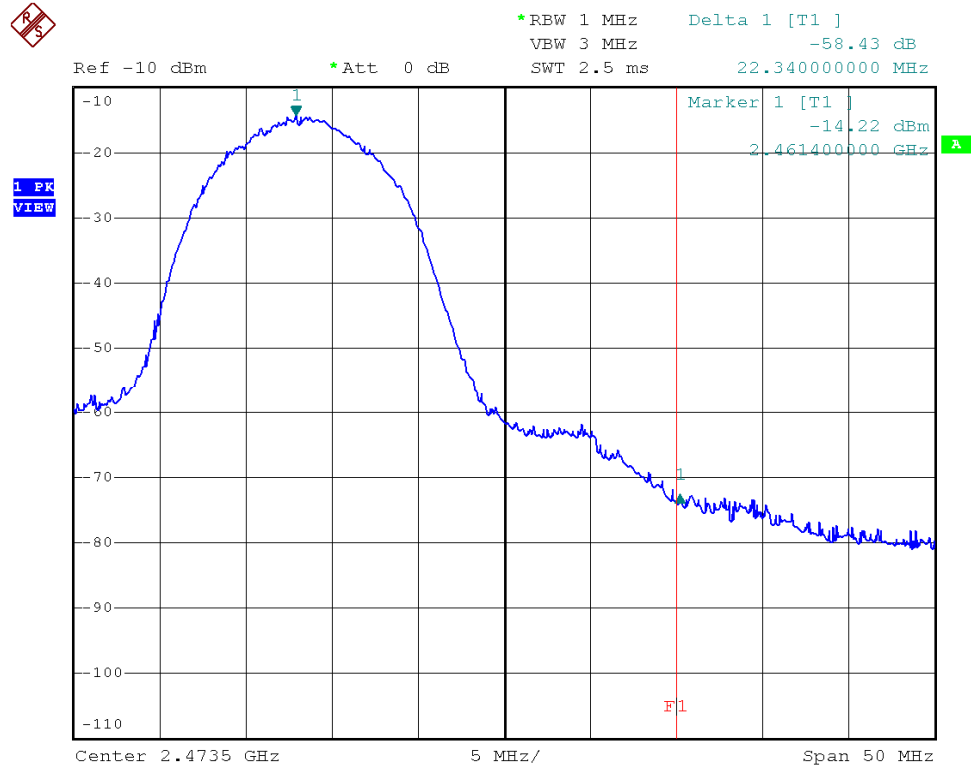
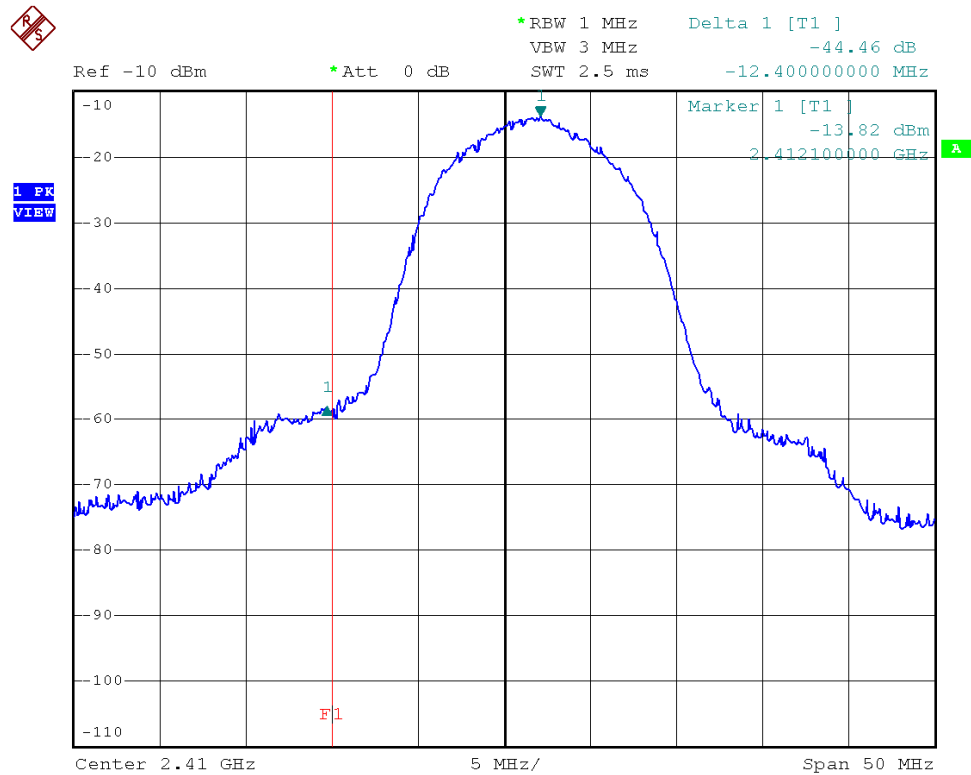
#### 8.1 Measured Bandwidth

From the following plots, they show that the fundamental emissions are confined in the specified band (2400MHz to 2483.5MHz). In case of the fundamental emissions are within two standard bandwidths from the bandedge, the delta measurement technique is used for determining bandedge compliance. Standard bandwidth is the bandwidth specified by ANSI C63.4 (2009) for frequency being measured.

Emissions radiated outside of the specified frequency bands, except harmonics, are attenuated by 50dB below the level of the fundamental or to the general radiated emissions limits in Section 15.209, whichever is the lesser attenuation, which meet the requirement of part 15.249(d).

# INTERTEK TESTING SERVICES

## Peak Measurement (802.11b DSSS 11Mbps)



Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105

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## INTERTEK TESTING SERVICES

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### Peak Measurement (802.11b DSSS 11Mbps)

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

Lower bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=102.8 dB $\mu$ V/m - 44.5 dB

=58.3 dB $\mu$ V/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

=92.6 dB $\mu$ V/m - 44.5 dB

=48.1 dB $\mu$ V/m

Upper bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=102.4 dB $\mu$ V/m - 58.4 dB

=44.0 dB $\mu$ V/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

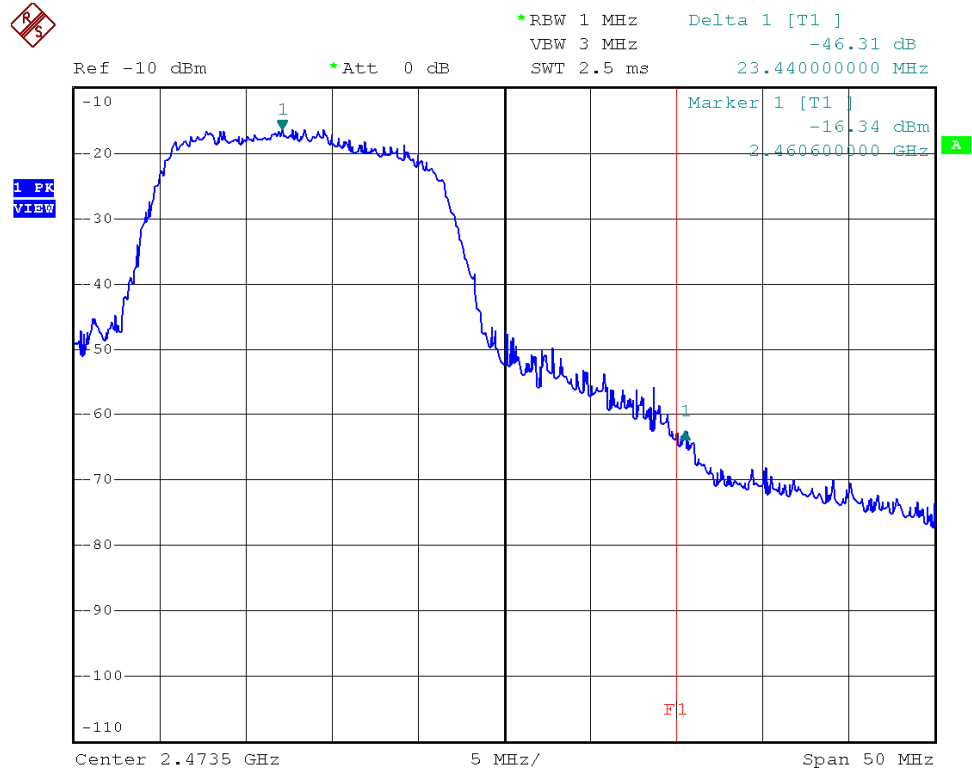
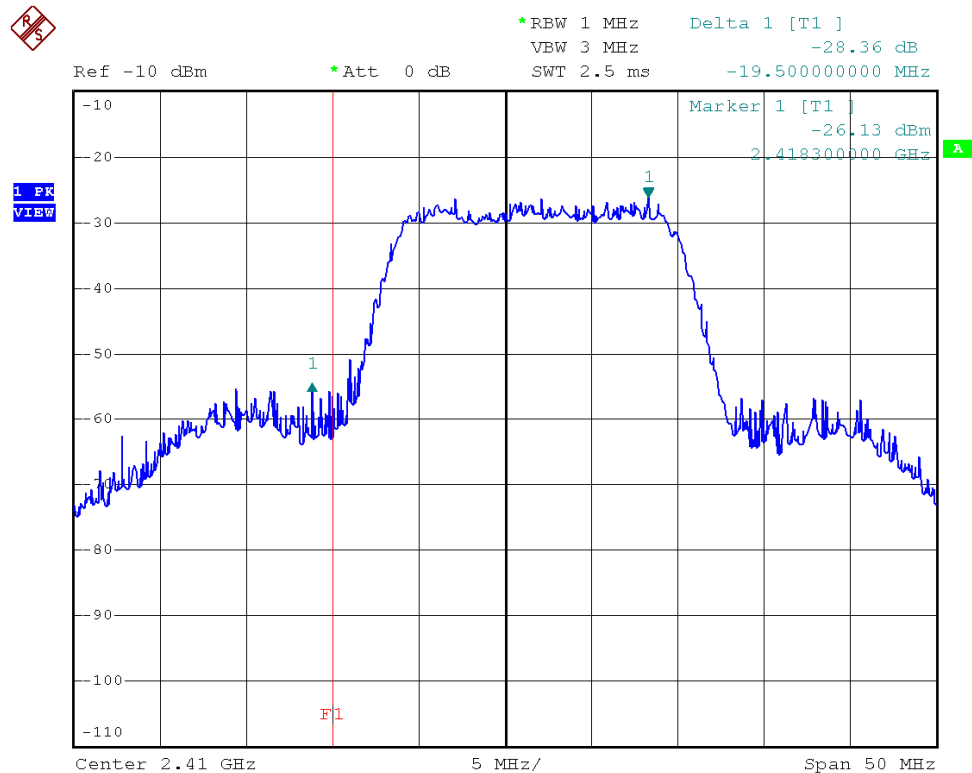
=92.2 dB $\mu$ V/m - 58.4 dB

=33.8 dB $\mu$ V/m

The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74 dB $\mu$ V/m (Peak Limit) and 54 dB $\mu$ V/m (Average Limit).

## INTERTEK TESTING SERVICES

### Peak Measurement (802.11g OFDM 54Mbps)



Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105

## INTERTEK TESTING SERVICES

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### Peak Measurement (802.11g OFDM 54Mbps)

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

Lower bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=101.2 dB $\mu$ V/m - 28.4 dB

=72.8 dB $\mu$ V/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

=81.8 dB $\mu$ V/m - 28.4 dB

=53.4 dB $\mu$ V/m

Upper bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=100.4 dB $\mu$ V/m - 46.3 dB

=54.1 dB $\mu$ V/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

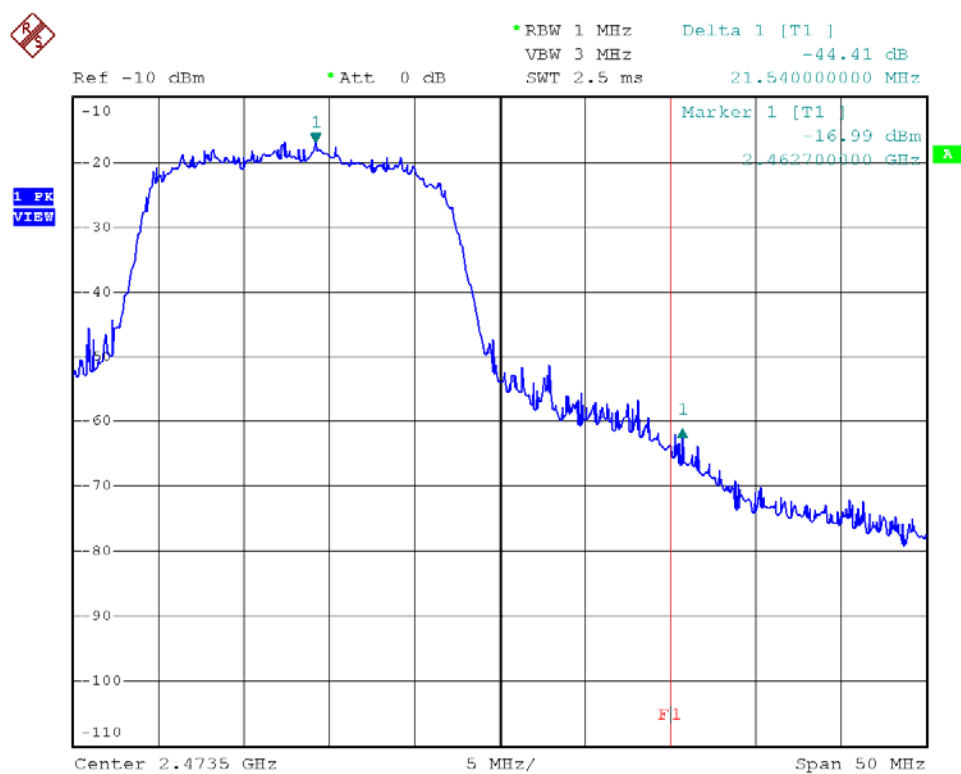
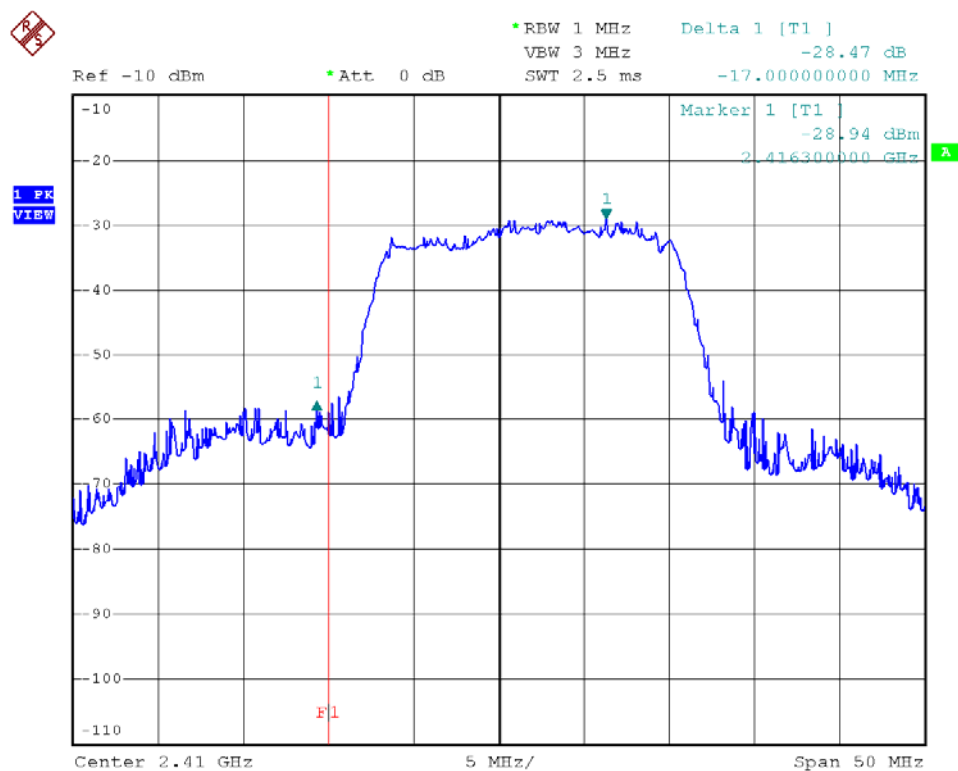
=81.2 dB $\mu$ V/m - 46.3 dB

=34.9 dB $\mu$ V/m

The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74 dB $\mu$ V/m (Peak Limit) and 54 dB $\mu$ V/m (Average Limit).

## INTERTEK TESTING SERVICES

### Peak Measurement (802.11n HT20 mcs7 65Mbps)



Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105



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## INTERTEK TESTING SERVICES

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### Peak Measurement (802.11n HT20 mcs7 65Mbps)

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

Lower bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=100.9 dB $\mu$ V/m - 28.5 dB

=72.4 dB $\mu$ V/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

=81.6 dB $\mu$ V/m - 28.5 dB

=53.1 dB $\mu$ V/m

Upper bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=100.4 dB $\mu$ V/m - 44.4 dB

=56.0 dB $\mu$ V/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

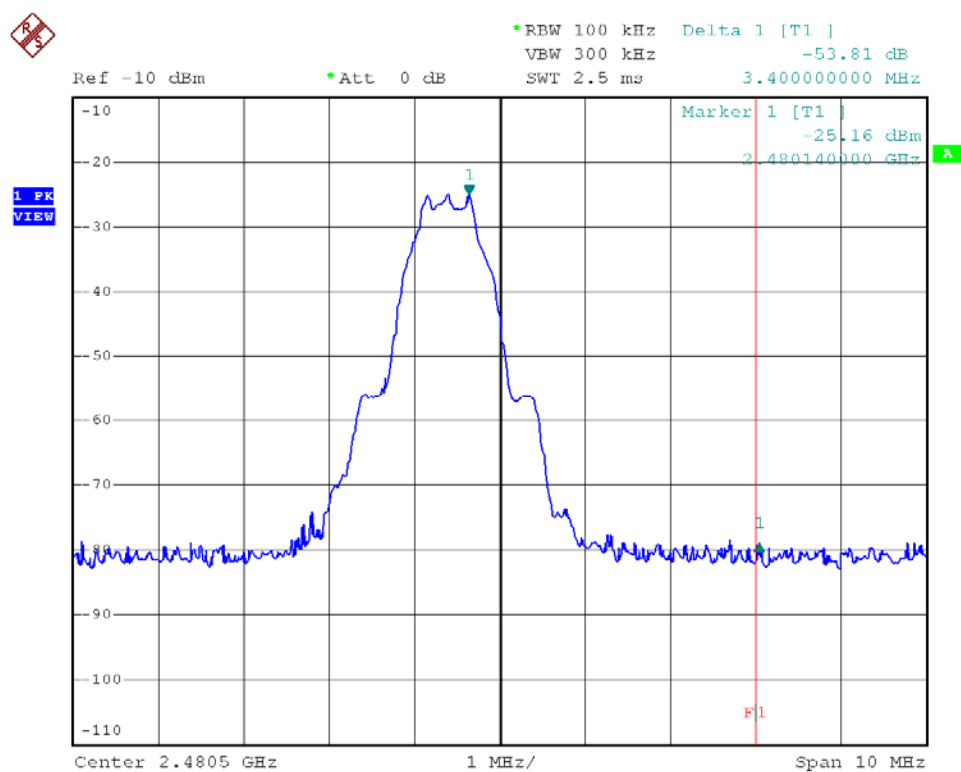
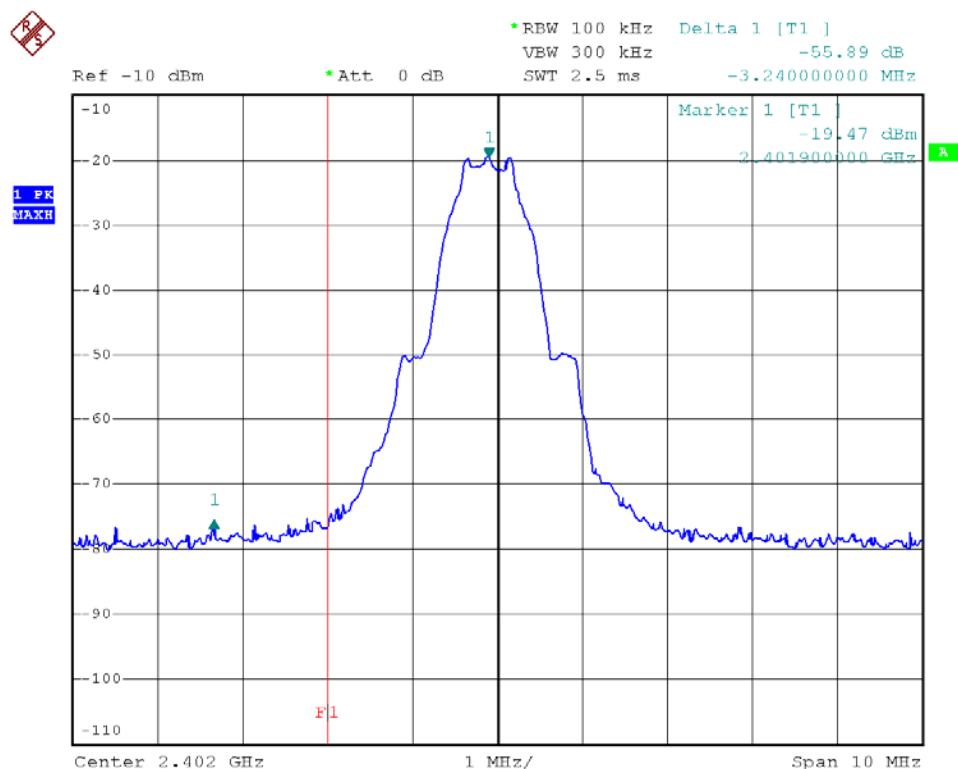
=81.4 dB $\mu$ V/m - 44.4 dB

=37.0 dB $\mu$ V/m

The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74 dB $\mu$ V/m (Peak Limit) and 54 dB $\mu$ V/m (Average Limit).

# INTERTEK TESTING SERVICES

## Peak Measurement (Bluetooth 4.0)



Report No.: 13090970HKG-002

FCC ID: 2AA95V01105

IC: 11532A-V01105

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## INTERTEK TESTING SERVICES

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### Peak Measurement (Bluetooth 4.0)

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

Lower bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=103.0 dB $\mu$ V/m - 55.9 dB

=47.1 dB $\mu$ V/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

=86.9 dB $\mu$ V/m - 55.9 dB

=31.0 dB $\mu$ V/m

Upper bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=102.2 dB $\mu$ V/m - 53.8 dB

=48.4 dB $\mu$ V/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

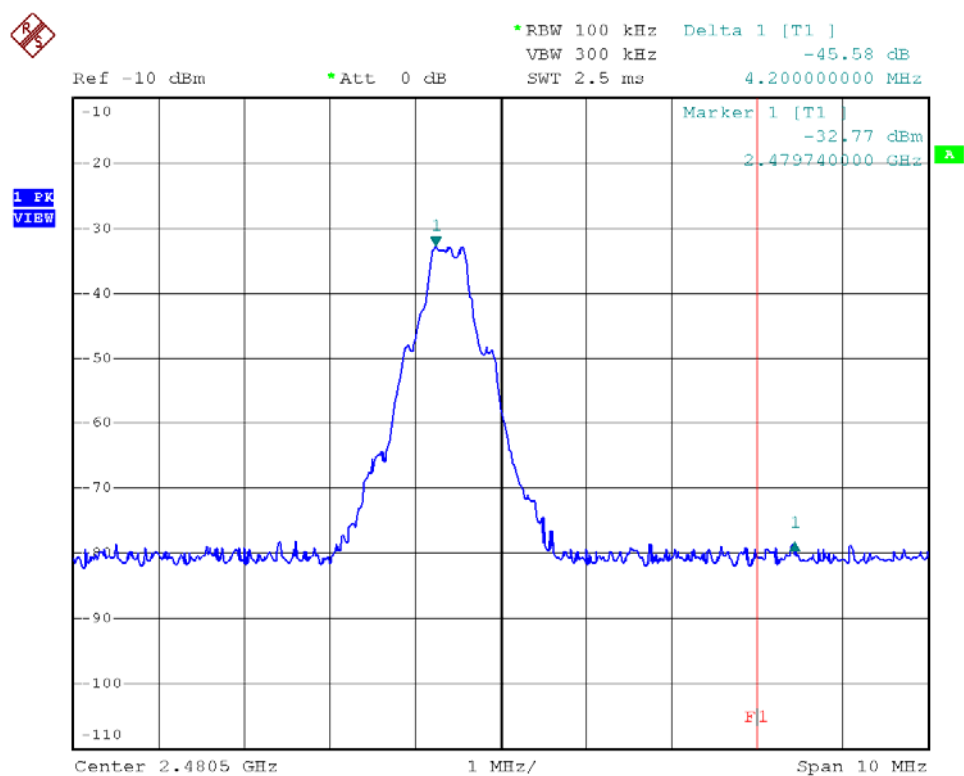
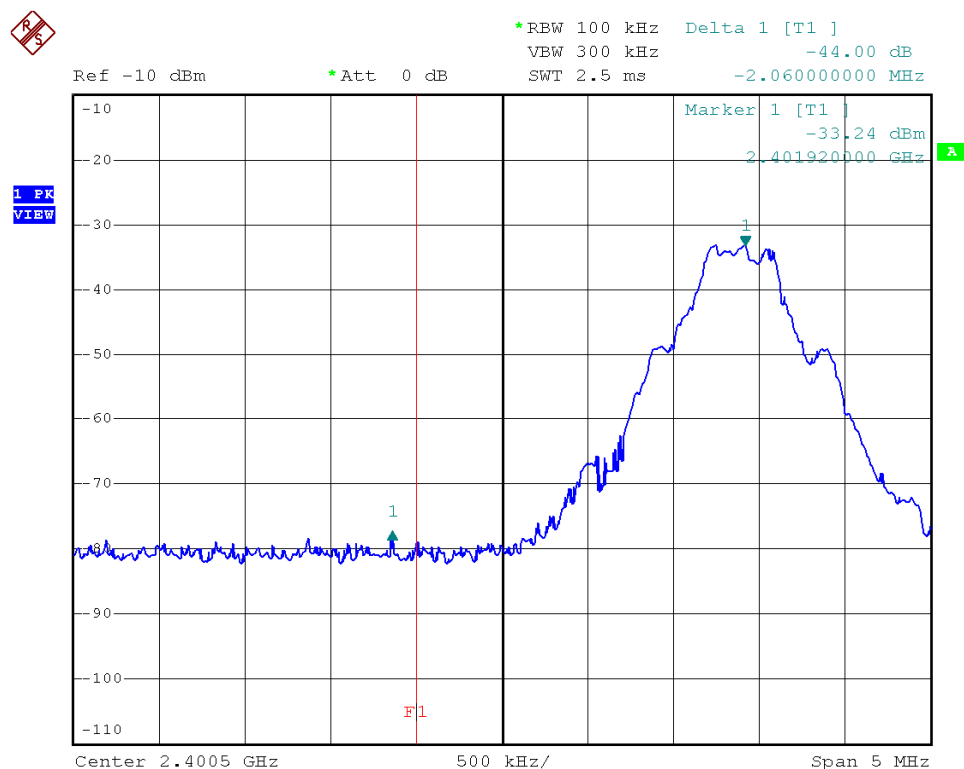
=86.8 dB $\mu$ V/m - 53.8 dB

=33.0 dB $\mu$ V/m

The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74 dB $\mu$ V/m (Peak Limit) and 54 dB $\mu$ V/m (Average Limit).

# INTERTEK TESTING SERVICES

## Peak Measurement (Bluetooth 3.0)



## INTERTEK TESTING SERVICES

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### Peak Measurement (Bluetooth 3.0)

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

Lower bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=97.8 dB $\mu$ V/m - 44.0 dB

=53.8 dB $\mu$ V/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

=67.7 dB $\mu$ V/m - 44.0 dB

=23.7 dB $\mu$ V/m

Upper bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=96.0 dB $\mu$ V/m - 45.6 dB

=50.4 dB $\mu$ V/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

=65.9 dB $\mu$ V/m - 45.6 dB

=20.3 dB $\mu$ V/m

The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74 dB $\mu$ V/m (Peak Limit) and 54 dB $\mu$ V/m (Average Limit).

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## INTERTEK TESTING SERVICES

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### 8.2 Discussion of Pulse Desensitization

For WiFi and Bluetooth 4.0: Pulse desensitivity is not applicable for this device. Since the transmitter transmits the RF signal continuously.

For Bluetooth 3.0: The effective period ( $T_{eff}$ ) is approximately 3.125ms for a digital "1" bit which illustrated on technical specification, with a resolution bandwidth (3dB) of 1MHz, so the pulse desensitivity factor is 0dB.

### 8.3 Calculation of Average Factor

For WiFi and Bluetooth 4.0: The average factor is not applicable for this device as the transmitted signal is a continuously signal.

For Bluetooth 3.0: Based on the Bluetooth Specification Version 3.0 + EDR, the transmitter ON time for each timeslot of Bluetooth is 625 $\mu$ s. DH5 has the maximum duty cycle, which consists of 5 continuous Tx slots and 1 Rx slot. Therefore one hopset take  $(5+1) \times 625\mu s = 3.75ms$ . For one period for a pseudo-random hopping through all 79 RF channels, it takes:  $79 \times 3.75ms = 296.25ms$ .

The dwell time for DH5 is  $5 \times 625\mu s = 3.125ms$ .

Therefore,

$$\begin{aligned}\text{Duty Cycle (DC)} &= \text{Maximum On time in } 100ms/100ms \\ &= 3.125ms/100ms \\ &= 0.03125\end{aligned}$$

$$\begin{aligned}\text{Average Factor (AF) of Bluetooth in dB} &= 20 \log_{10} (0.03125) \\ &= -30.1 \text{ dB}\end{aligned}$$

### 8.4 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services Hong Kong Ltd. in the measurements of transmitter operating under the Part 15, Subpart C rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.4 (2009). A typical or an unmodulated CW signal at the operating frequency of the EUT has been supplied to the EUT for all measurements. Such a signal is supplied by a signal generator and an antenna in close proximity to the EUT. The signal level is sufficient to stabilize the local oscillator of the EUT.

The transmitting equipment under test (EUT) is placed on a wooden turntable which is four feet in diameter and approximately one meter in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The EUT is adjusted through all three orthogonal axis to obtain maximum emission levels. The antenna height and polarization are also varied during the testing to search for maximum signal levels. The height of the antenna is varied from one to four meters.

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in Exhibit 8.3.

The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower. For line conducted emissions, the range scanned is 150 kHz to 30 MHz.

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## INTERTEK TESTING SERVICES

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### 8.4 Emissions Test Procedures (cont'd)

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

Conducted measurements were made as described in ANSI C63.4 (2009).

The IF bandwidth used for measurement of radiated signal strength was 100 kHz or greater when frequency is below 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. A discussion of whether pulse desensitivity is applicable to this unit is included in this report (See Exhibit 8.1). Above 1000 MHz, a resolution bandwidth of 1 MHz is used.

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the forbidden bands and above 1 GHz, signals are acquired at a distance of one meter or less. All measurements are extrapolated to three meters using inverse scaling, unless otherwise reported. Measurements taken at a closer distance are so marked.

### 9.0 **Confidentiality Request**

For electronic filing, a preliminary copy of the confidentiality request is saved with filename: request.pdf.



## INTERTEK TESTING SERVICES

### 10.0 Equipment List

#### 1) Radiated Emissions Test

Equipment	EMI Test Receiver	Biconical Antenna	Log Periodic Antenna
Registration No.	EW-2666	EW-0954	EW-0446
Manufacturer	R&S	EMCO	EMCO
Model No.	ESCI7	3104C	3146
Calibration Date	Jun. 20, 2013	Apr. 30, 2013	Apr. 30, 2013
Calibration Due Date	Jun. 20, 2014	Oct. 30, 2014	Oct. 30, 2014

Equipment	Spectrum Analyzer	Double Ridged Guide Antenna
Registration No.	EW-2188	EW-1015
Manufacturer	AGILENTTECH	EMCO
Model No.	E4407B	3115
Calibration Date	Nov. 05, 2012	Mar. 05, 2013
Calibration Due Date	Nov. 05, 2013	Sep. 05, 2014

#### 2) Conducted Emissions Test

Equipment	EMI Test Receiver	LISN
Registration No.	EW-2500	EW-2501
Manufacturer	R&S	R&S
Model No.	ESCI	ENV-216
Calibration Date	Mar. 22, 2013	Nov. 30, 2012
Calibration Due Date	Feb. 28, 2014	Nov. 30, 2013

#### 3) Bandedge Measurement

Equipment	Spectrum Analyzer
Registration No.	EW-2329
Manufacturer	R&S
Model No.	FSP3
Calibration Date	Jan. 30, 2013
Calibration Due Date	Jan. 30, 2014