

APPLICATION CERTIFICATION FCC Part 15C
On Behalf of

Skannex AS

SkanFlexi
Model No.: QuickScan II, X500

FCC ID: 2AD7E-X500

Prepared for : Skannex AS
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Report No. : ATE20172157
Date of Test : Nov. 3-Nov. 11, 2017
Date of Report : Nov. 17, 2017

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Test Report Certification

Applicant : Skannex AS
Manufacturer : Wuxi Opulen Technology Co., Ltd
Product : SkanFlexi
Model No. : QuickScan II, X500
Trade name : N/A

Measurement Procedure Used:

**FCC Rules and Regulations Part 15 Subpart C Section 15.247: 2017
ANSI C63.10: 2013**

The EUT was tested according to DTS test procedure of Apr 05, 2017 KDB558074 D01 DTS Meas Guidance v04 for compliance to FCC 47CFR 15.247 requirements

The device described above is tested by Shenzhen Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.247 limits. The measurement results are contained in this test report and Shenzhen Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Accurate Technology Co., Ltd.

Date of Test :	Nov. 3-Nov. 11, 2017
Date of Report :	Nov. 17, 2017

Prepared by :



Approved & Authorized Signer :

(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	SkanFlexi
Model Number	:	QuickScan II, X500 (Note: We hereby state that these models are identical in interior structure, electrical circuits and components, Just Model name is different. Therefore only model QuickScan II is for tests.)
Frequency Range	:	802.11b/g/n(20MHz): 2412-2462MHz 802.11n(40MHz): 2422-2452MHz
Number of Channels	:	802.11b/g/n (20MHz):11 802.11n (40MHz): 7
Antenna Gain	:	2dBi
Type of Antenna	:	Integral antenna
Power Supply	:	DC 24V=2.5A (Powered by adapter)
AC/DC Switching Adapter	:	Model No.: GS60A24 Input: AC 110-240V, 50/60Hz 1.4A Output: 24V=2.5A, 60W MAX
Data Rate	:	802.11b: 11, 5.5, 2, 1 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11n: up to 150Mbps
Modulation Type	:	DSSS, OFDM
Applicant Address	:	Skannex AS Gaustadalleen 21, Oslo, 0349, Norway
Manufacturer Address	:	Wuxi Opulen Technology Co., Ltd 3 rd floor, Building 10, Dicui Road No.100, Liyuan Development Zone, Wuxi
Date of sample received	:	Nov. 1, 2017
Date of Test	:	Nov. 3-Nov. 11, 2017
Sample number	:	1701790

1.2.Carrier Frequency of Channels

802.11b, 802.11g, 802.11n (20MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
01	2412	07	2442
02	2417	08	2447
03	2422	09	2452
04	2427	10	2457
05	2432	11	2462
06	2437	---	---

802.11n (40MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
---	---	07	2442
---	---	08	2447
03	2422	09	2452
04	2427	---	---
05	2432	---	---
06	2437	---	---

1.3.Accessory and Auxiliary Equipment

N/A

1.4. Description of Test Facility

- EMC Lab : Recognition of accreditation by Federal Communications Commission (FCC)
The Designation Number is CN1189
The Registration Number is 708358
- Listed by Innovation, Science and Economic Development Canada (ISED)
The Registration Number is 5077A-2
- Accredited by China National Accreditation Service for Conformity Assessment (CNAS)
The Registration Number is CNAS L3193
- Accredited by American Association for Laboratory Accreditation (A2LA)
The Certificate Number is 4297.01
- Name of Firm : Shenzhen Accurate Technology Co., Ltd.
Site Location : 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

1.5. Measurement Uncertainty

- Conducted Emission Expanded Uncertainty = 2.23dB, k=2
- Radiated emission expanded uncertainty (9kHz-30MHz) = 3.08dB, k=2
- Radiated emission expanded uncertainty (30MHz-1000MHz) = 4.42dB, k=2
- Radiated emission expanded uncertainty (Above 1GHz) = 4.06dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 07, 2017	1 Year
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 07, 2017	1 Year
Spectrum Analyzer	Rohde&Schwarz	FSV-40	101495	Jan. 07, 2017	1 Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 07, 2017	1 Year
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 07, 2017	1 Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 13, 2017	1 Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 13, 2017	1 Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 13, 2017	1 Year
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 13, 2017	1 Year
Open Switch and Control Unit	Rohde&Schwarz	OSP120 + OSP-B157	101244 + 100866	Jan. 07, 2017	1 Year
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 07, 2017	1 Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 07, 2017	1 Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 07, 2017	1 Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 07, 2017	1 Year

3. OPERATION OF EUT DURING TESTING

3.1. Operating Mode

The mode is used: **1.802.11b Transmitting mode**

Low Channel: 2412MHz
Middle Channel: 2437MHz
High Channel: 2462MHz

2.802.11g Transmitting mode

Low Channel: 2412MHz
Middle Channel: 2437MHz
High Channel: 2462MHz

3.802.11n (20MHz) Transmitting mode

Low Channel: 2412MHz
Middle Channel: 2437MHz
High Channel: 2462MHz

4.802.11n (40MHz) Transmitting mode

Low Channel: 2422MHz
Middle Channel: 2437MHz
High Channel: 2452MHz

3.2. Configuration and peripherals

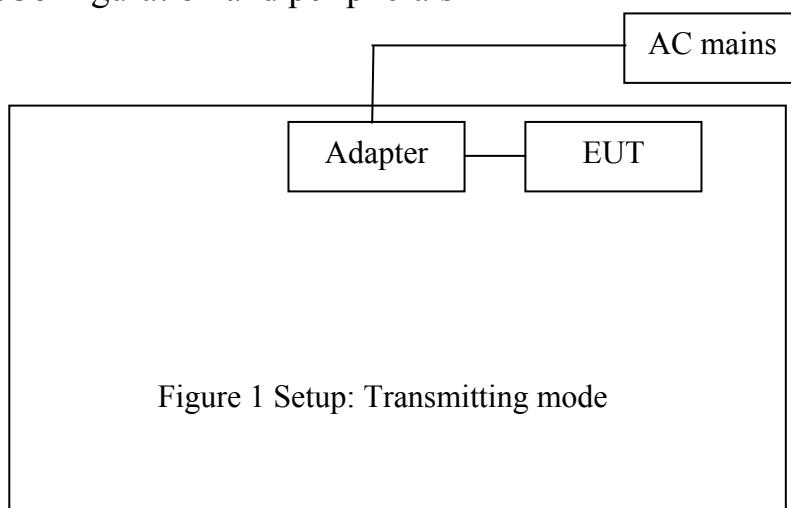


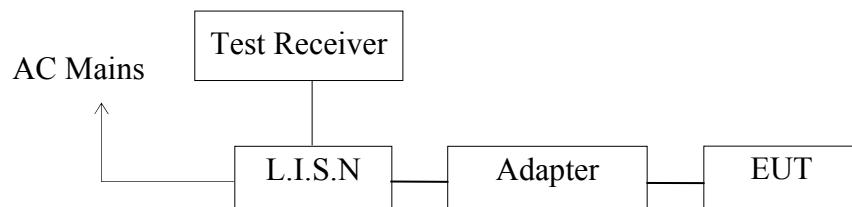
Figure 1 Setup: Transmitting mode

4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.207	Power Line Conducted Emission	Compliant
Section 15.247(a)(2)	6dB Bandwidth Test	Compliant
KDB558074 D01 DTS Meas Guidance v04	Duty cycle	Compliant
KDB558074 D01 DTS Meas Guidance v04	99% Occupied Bandwidth	Compliant
Section 15.247(e)	Power Spectral Density Test	Compliant
Section 15.247(b)(3)	Maximum average Output Power Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.247(d) Section 15.209	Radiated Spurious Emission Test	Compliant
Section 15.203	Antenna Requirement	Compliant

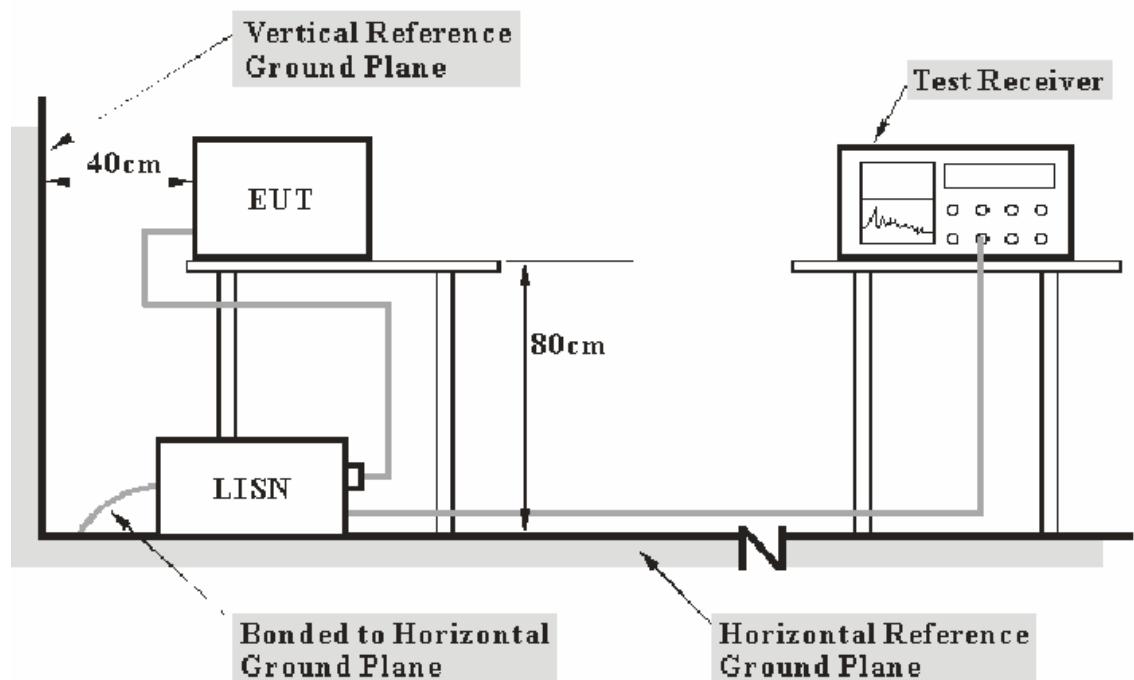
5. POWER LINE CONDUCTED MEASUREMENT

5.1. Block Diagram of Test Setup



(EUT: SkanFlexi)

5.1.1. Test System Setup



- Note:
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

5.2. Power Line Conducted Emission Measurement Limits

Frequency (MHz)	Limit dB(μV)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

NOTE1: The lower limit shall apply at the transition frequencies.
NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

5.3. Configuration of EUT on Measurement

The equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

5.4. Operating Condition of EUT

5.4.1. Setup the EUT and simulator as shown as Section 5.1.

5.4.2. Turn on the power of all equipment.

5.4.3. Let the EUT work in test mode and measure it.

5.5. Test Procedure

The EUT is put on the plane 0.8 m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

5.6.Data Sample

Frequency (MHz)	Transducer value (dB)	QuasiPeak Level (dB μ V)	Average Level (dB μ V)	QuasiPeak Limit (dB μ V)	Average Limit (dB μ V)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
X.XX	10.5	51.1	34.2	56.0	46.0	4.9	11.8	Pass

Frequency(MHz) = Emission frequency in MHz

Transducer value(dB) = Insertion loss of LISN + Cable Loss

Level(dB μ V) = Quasi-peak Reading/Average Reading + Transducer value

Limit (dB μ V) = Limit stated in standard

Margin = Limit (dB μ V) - Level (dB μ V)

Calculation Formula:

Margin = Limit (dB μ V) - Level (dB μ V)

5.7.Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Maximizing procedure was performed on the six (6) highest emissions of the EUT. Emissions attenuated more than 20 dB below the permissible value are not reported.

All data was recorded in the Quasi-peak and average detection mode.

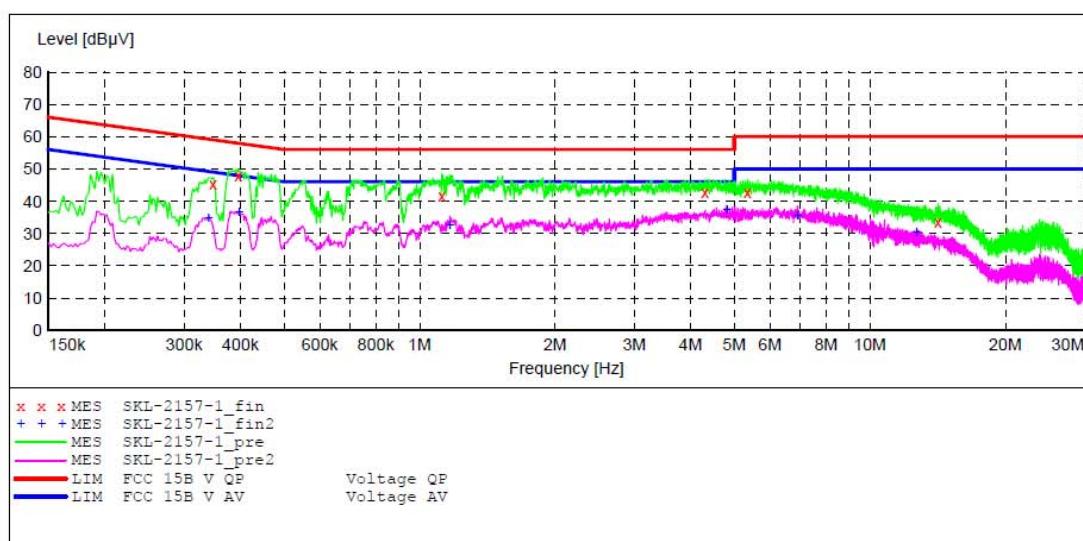
The spectral diagrams are attached as below.

ACCURATE TECHNOLOGY CO., LTD**CONDUCTED EMISSION STANDARD FCC PART 15 B**

EUT: SkanFlexi M/N:QuickScan II
 Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD
 Operating Condition: WIFI communication
 Test Site: 1#Shielding Room
 Operator: Frank
 Test Specification: N 120V/60Hz
 Comment: Report NO.:ATE20172157
 Start of Test: 2017-11-3 / 9:07:16

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average

**MEASUREMENT RESULT: "SKL-2157-1_fin"**

2017-11-3 9:09	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dB μ V	dB	dB μ V	dB			
	0.348000	45.50	10.9	59	13.5	QP	N	GND
	0.396000	48.00	11.0	58	9.9	QP	N	GND
	1.122000	41.80	11.2	56	14.2	QP	N	GND
	4.310000	42.80	11.4	56	13.2	QP	N	GND
	5.355000	42.80	11.5	60	17.2	QP	N	GND
	14.165000	33.50	11.6	60	26.5	QP	N	GND

MEASUREMENT RESULT: "SKL-2157-1_fin2"

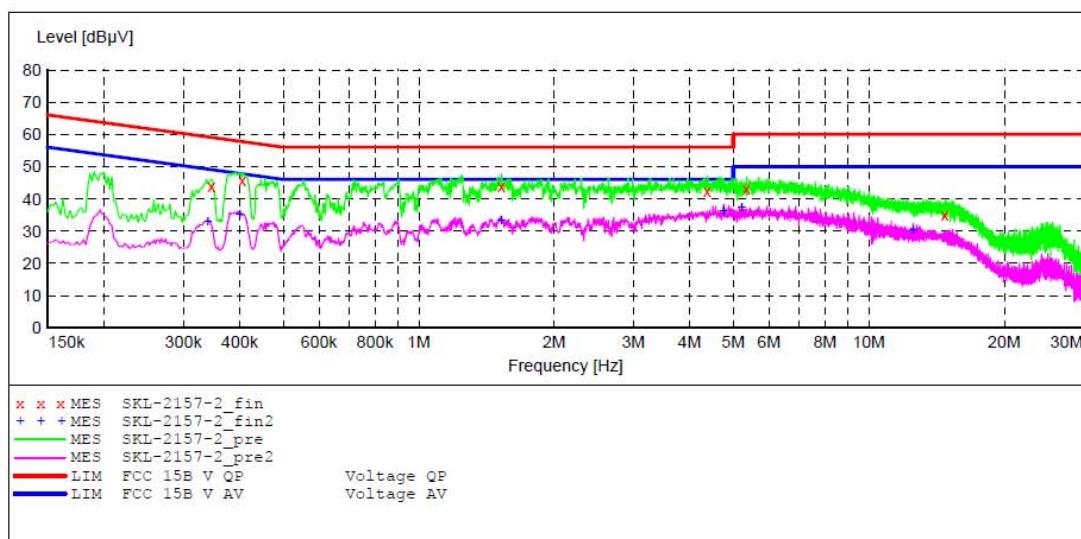
2017-11-3 9:09	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dB μ V	dB	dB μ V	dB			
	0.340000	34.90	10.9	49	14.3	AV	N	GND
	0.398000	36.80	11.0	48	11.1	AV	N	GND
	1.168000	33.00	11.2	46	13.0	AV	N	GND
	4.820000	37.80	11.4	46	8.2	AV	N	GND
	6.905000	35.80	11.5	50	14.2	AV	N	GND
	12.715000	30.50	11.6	50	19.5	AV	N	GND

ACCURATE TECHNOLOGY CO., LTD**CONDUCTED EMISSION STANDARD FCC PART 15 B**

EUT: SkanFlexi M/N:QuickScan II
 Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD
 Operating Condition: WIFI communication
 Test Site: 1#Shielding Room
 Operator: Frank
 Test Specification: L 120V/60Hz
 Comment: Report NO.:ATE20172157
 Start of Test: 2017-11-3 / 9:09:55

SCAN TABLE: "V 150K-30MHz fin"

Short Description: -SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average

**MEASUREMENT RESULT: "SKL-2157-2_fin"**

2017-11-3 9:12	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dB μ V	dB	dB μ V	dB			
	0.346000	43.90	10.9	59	15.2	QP	L1	GND
	0.406000	45.70	11.0	58	12.0	QP	L1	GND
	1.528000	43.80	11.2	56	12.2	QP	L1	GND
	4.380000	42.30	11.4	56	13.7	QP	L1	GND
	5.355000	43.00	11.5	60	17.0	QP	L1	GND
	14.760000	35.10	11.6	60	24.9	QP	L1	GND

MEASUREMENT RESULT: "SKL-2157-2_fin2"

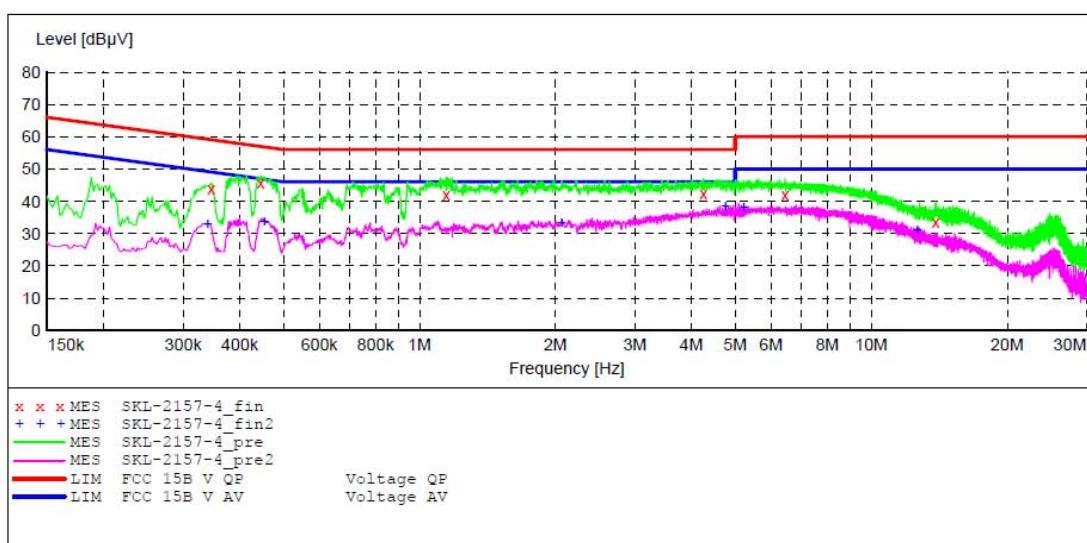
2017-11-3 9:12	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dB μ V	dB	dB μ V	dB			
	0.340000	33.30	10.9	49	15.9	AV	L1	GND
	0.400000	35.50	11.0	48	12.4	AV	L1	GND
	1.526000	33.70	11.2	46	12.3	AV	L1	GND
	4.755000	36.60	11.4	46	9.4	AV	L1	GND
	5.220000	37.50	11.4	50	12.5	AV	L1	GND
	12.545000	30.70	11.6	50	19.3	AV	L1	GND

ACCURATE TECHNOLOGY CO., LTD**CONDUCTED EMISSION STANDARD FCC PART 15 B**

EUT: SkanFlexi M/N:QuickScan II
 Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD
 Operating Condition: WIFI communication
 Test Site: 1#Shielding Room
 Operator: Frank
 Test Specification: L 240V/60Hz
 Comment: Report NO.:ATE20172157
 Start of Test: 2017-11-3 / 9:17:09

SCAN TABLE: "V 150K-30MHz fin"

Start Frequency	Stop Frequency	Step Width	Detector	Meas.	IF Time	Transducer Bandw.
150.0 kHz	30.0 MHz	4.5 kHz	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008 Average

**MEASUREMENT RESULT: "SKL-2157-4_fin"**

2017-11-3 9:19

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.346000	43.90	10.9	59	15.2	QP	L1	GND
0.446000	45.60	11.0	57	11.3	QP	L1	GND
1.148000	42.20	11.2	56	13.8	QP	L1	GND
4.255000	42.50	11.4	56	13.5	QP	L1	GND
6.445000	42.00	11.5	60	18.0	QP	L1	GND
13.895000	33.70	11.6	60	26.3	QP	L1	GND

MEASUREMENT RESULT: "SKL-2157-4_fin2"

2017-11-3 9:19

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.340000	33.30	10.9	49	15.9	AV	L1	GND
0.454000	34.00	11.0	47	12.8	AV	L1	GND
2.065000	33.60	11.3	46	12.4	AV	L1	GND
4.755000	38.60	11.4	46	7.4	AV	L1	GND
5.220000	38.40	11.4	50	11.6	AV	L1	GND
12.650000	31.50	11.6	50	18.5	AV	L1	GND

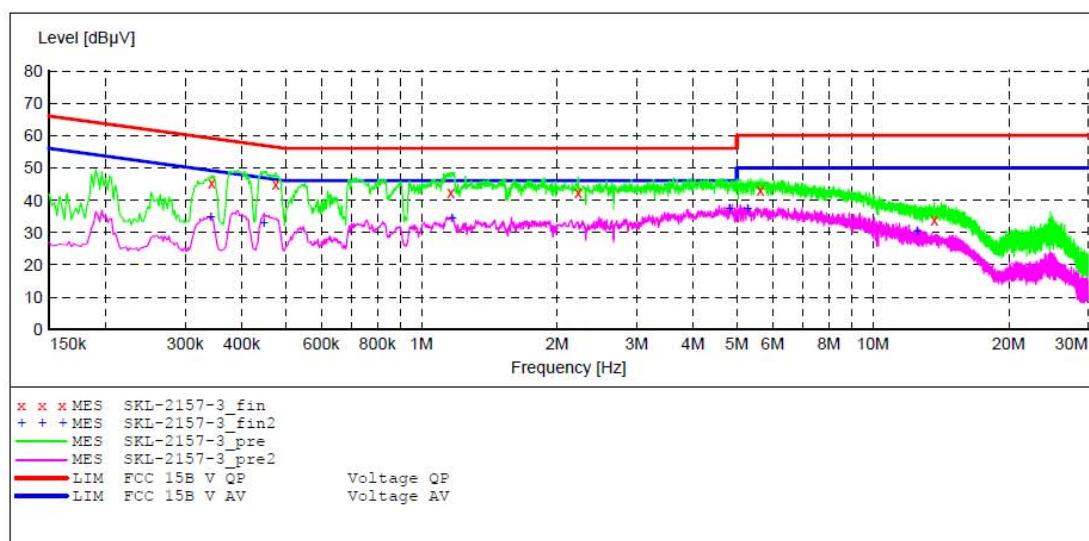
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: SkanFlexi M/N:QuickScan II
 Manufacturer: WUXI OPULEN TECHNOLOGY CO., LTD
 Operating Condition: WIFI communication
 Test Site: 1#Shielding Room
 Operator: Frank
 Test Specification: N 240V/60Hz
 Comment: Report NO.:ATE20172157
 Start of Test: 2017-11-3 / 9:19:51

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average

**MEASUREMENT RESULT: "SKL-2157-3_fin"**

2017-11-3 9:21	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dB μ V	dB	dB μ V	dB			
	0.344000	45.50	10.9	59	13.6	QP	N	GND
	0.476000	44.80	11.0	56	11.6	QP	N	GND
	1.164000	42.50	11.2	56	13.5	QP	N	GND
	2.225000	42.40	11.3	56	13.6	QP	N	GND
	5.635000	43.20	11.5	60	16.8	QP	N	GND
	13.690000	34.00	11.6	60	26.0	QP	N	GND

MEASUREMENT RESULT: "SKL-2157-3_fin2"

2017-11-3 9:21	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dB μ V	dB	dB μ V	dB			
	0.342000	34.90	10.9	49	14.3	AV	N	GND
	0.448000	33.20	11.0	47	13.7	AV	N	GND
	1.170000	34.70	11.2	46	11.3	AV	N	GND
	4.820000	37.50	11.4	46	8.5	AV	N	GND
	5.285000	37.50	11.4	50	12.5	AV	N	GND
	12.550000	30.60	11.6	50	19.4	AV	N	GND

6. 6DB BANDWIDTH MEASUREMENT

6.1. Block Diagram of Test Setup



6.2. The Requirement For Section 15.247(a)(2)

Section 15.247(a)(2): Systems using digital modulation techniques may operate in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

6.3. EUT Configuration on Measurement

The equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.4. Operating Condition of EUT

6.4.1. Setup the EUT and simulator as shown as Section 6.1.

6.4.2. Turn on the power of all equipment.

6.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462 and 2422-2452MHz. We select 2412MHz, 2437MHz, 2462MHz and 2422MHz, 2437MHz, 2452MHz TX frequency to transmit.

6.5. Test Procedure

1. Set resolution bandwidth (RBW) = 100 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.6. Test Result

The test was performed with 802.11b			
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2412	9.570	> 0.5MHz
Middle	2437	9.585	> 0.5MHz
High	2462	9.095	> 0.5MHz

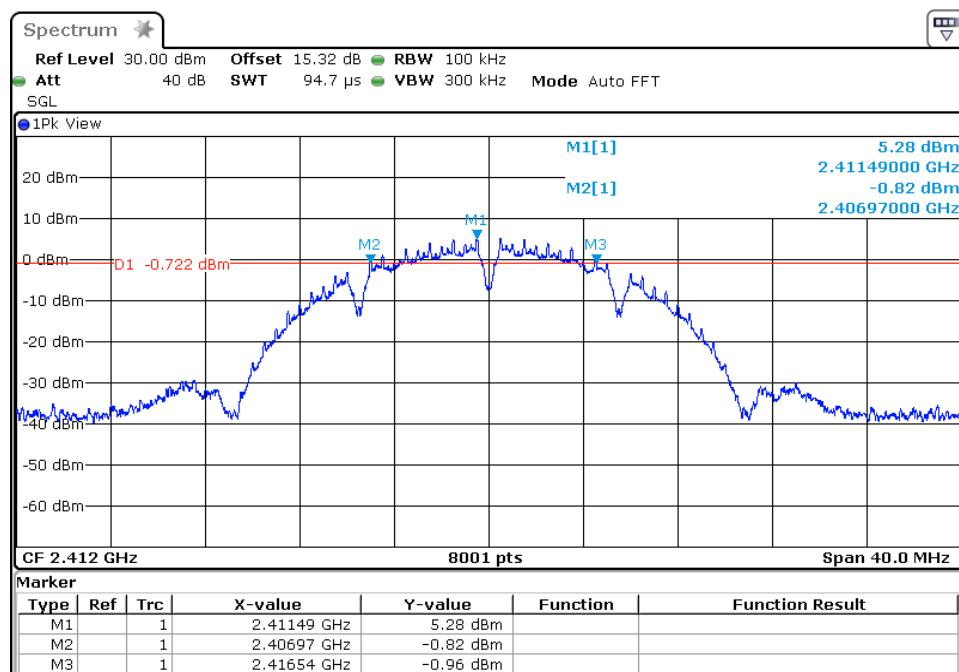
The test was performed with 802.11g			
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2412	16.335	> 0.5MHz
Middle	2437	16.340	> 0.5MHz
High	2462	16.340	> 0.5MHz

The test was performed with 802.11n (Bandwidth: 20 MHz)			
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2412	17.585	> 0.5MHz
Middle	2437	17.580	> 0.5MHz
High	2462	17.590	> 0.5MHz

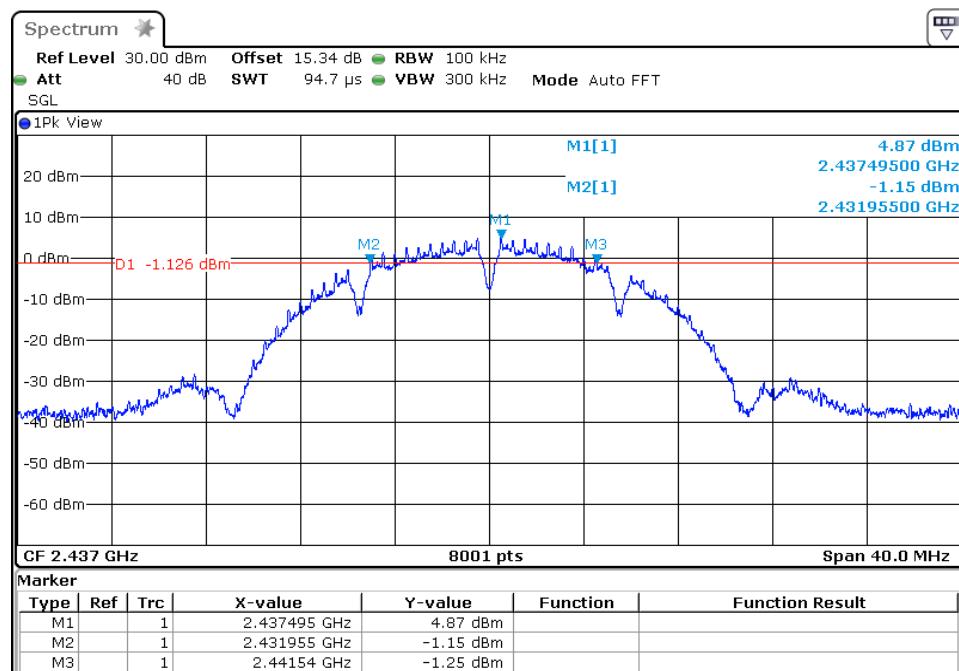
The test was performed with 802.11n (Bandwidth: 40 MHz)			
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2422	35.690	> 0.5MHz
Middle	2437	35.720	> 0.5MHz
High	2452	35.720	> 0.5MHz

The spectrum analyzer plots are attached as below.

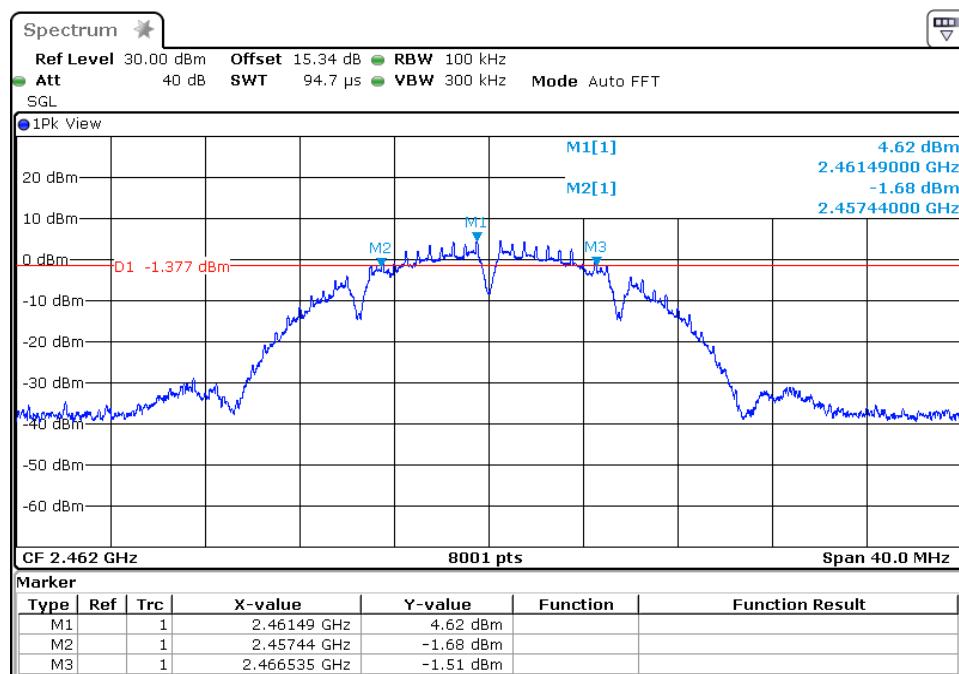
802.11b Channel Low 2412MHz



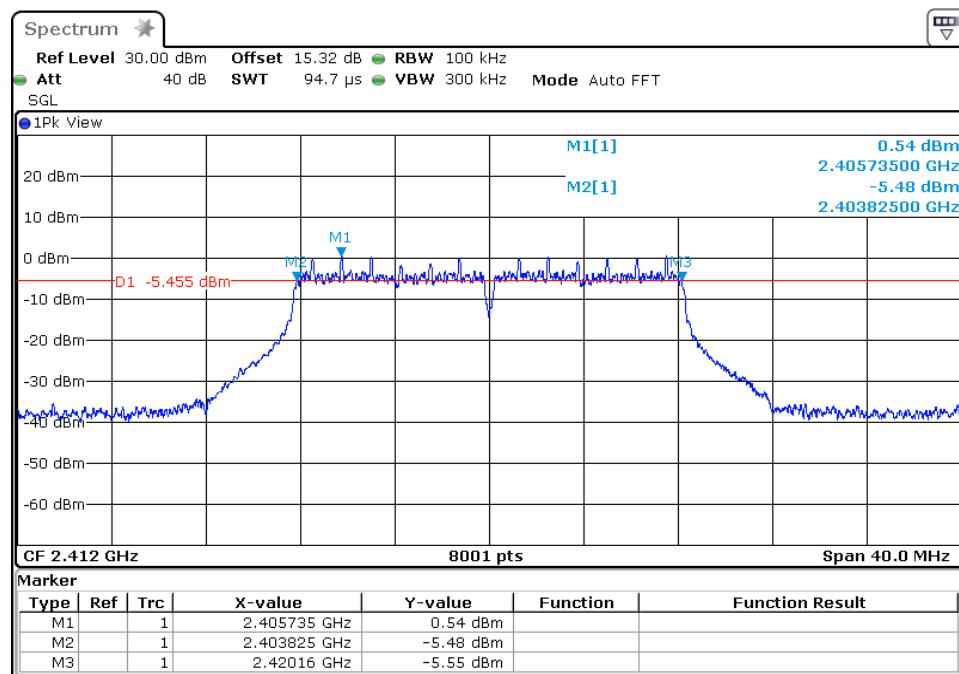
802.11b Channel Middle 2437MHz



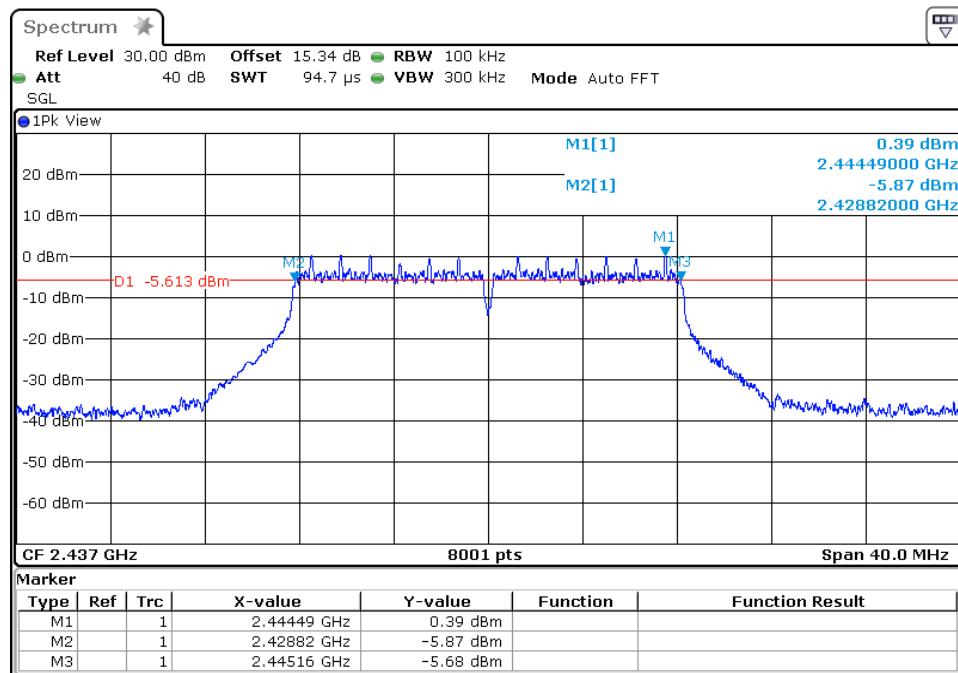
802.11b Channel High 2462MHz



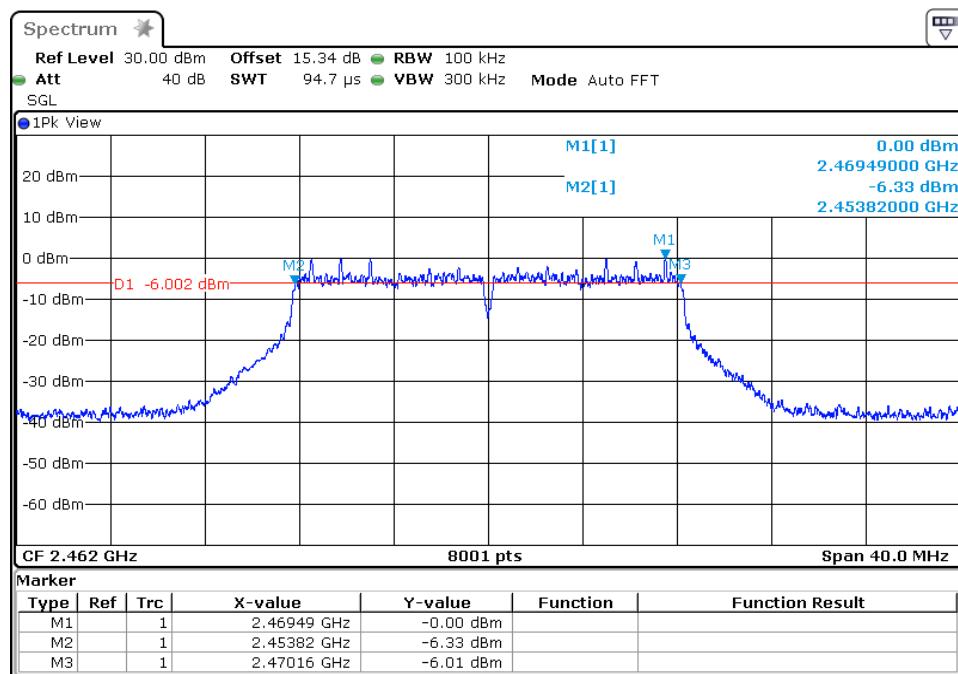
802.11g Channel Low 2412MHz



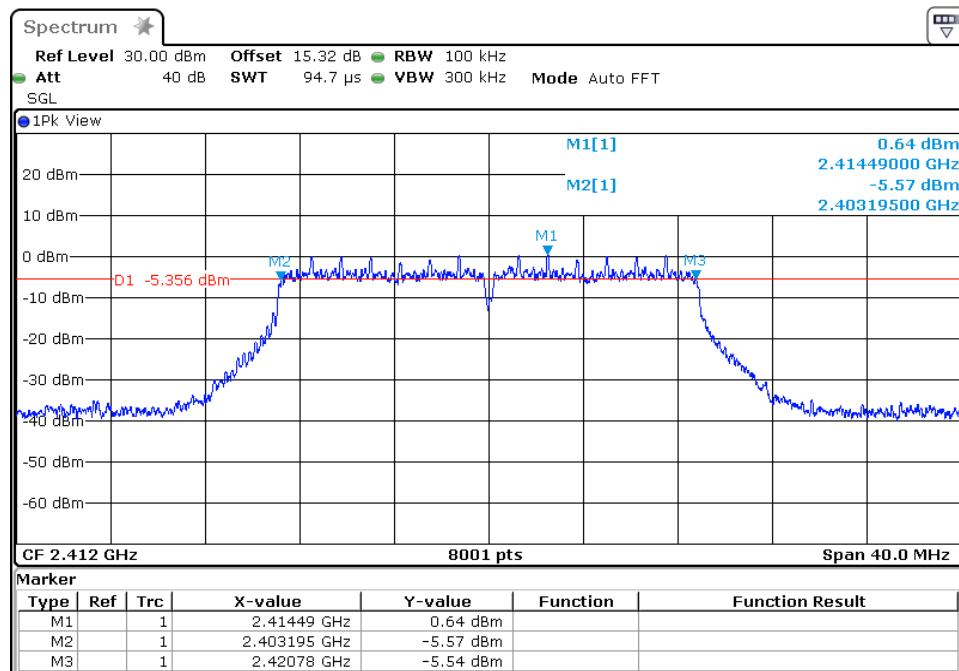
802.11g Channel Middle 2437MHz



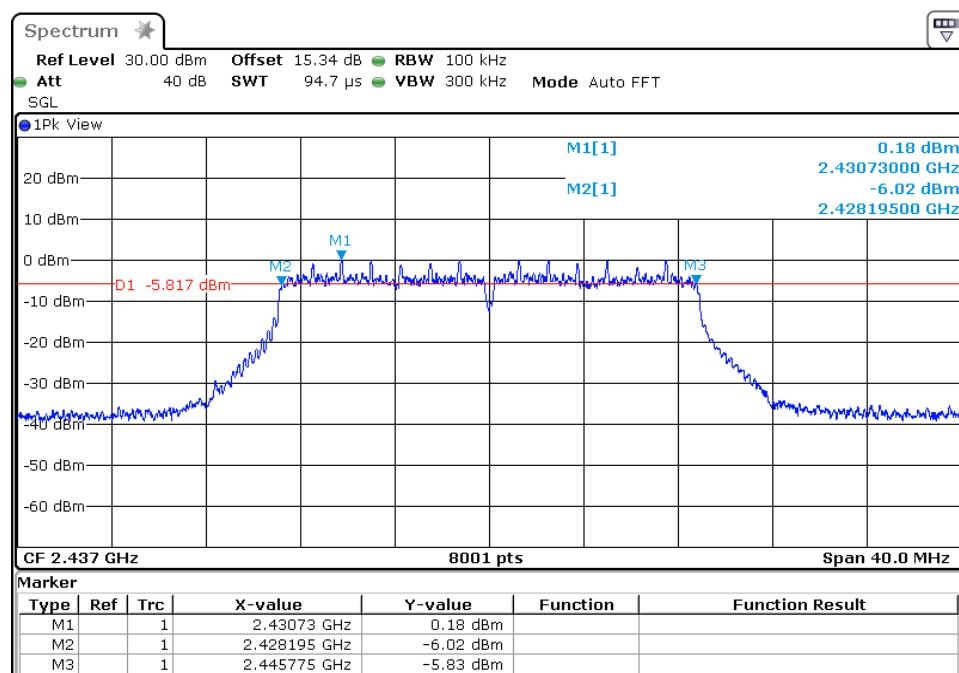
802.11g Channel High 2462MHz



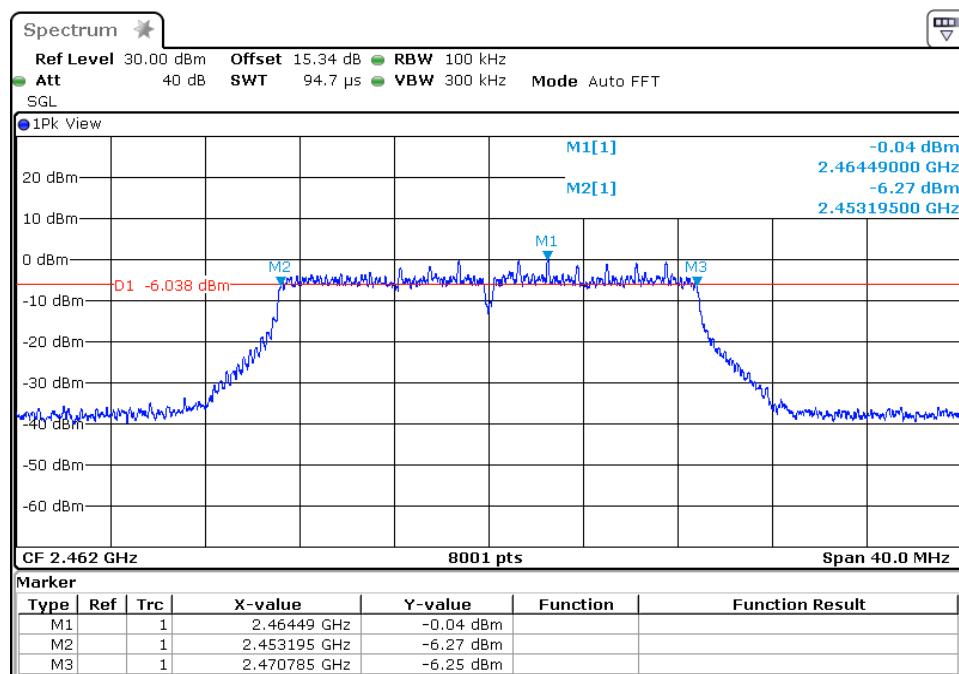
802.11n Channel Low 2412MHz (20MHz)



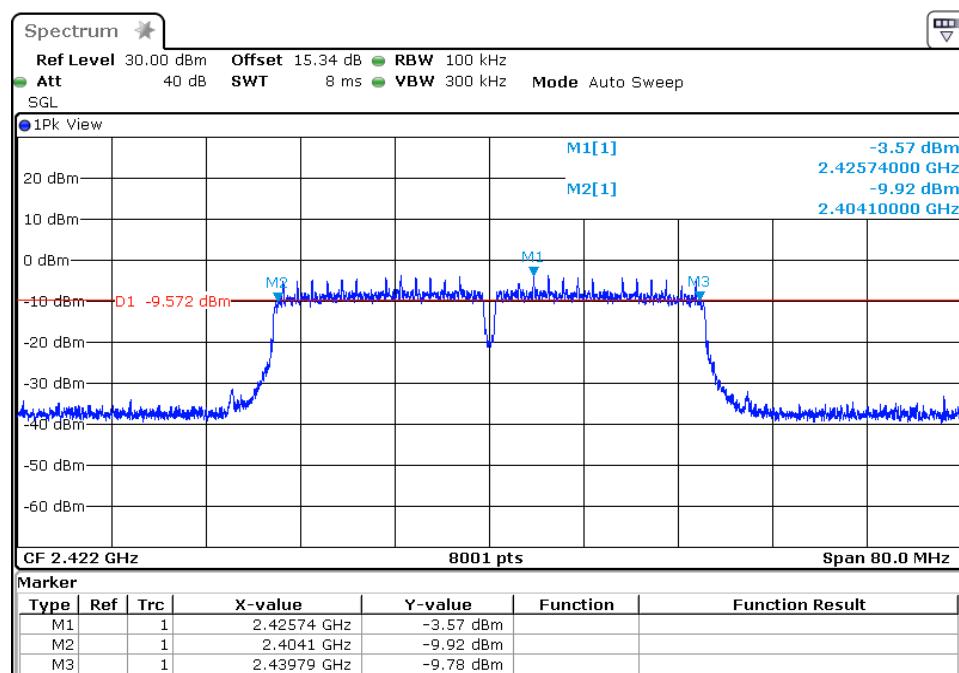
802.11n Channel Middle 2437MHz(20MHz)



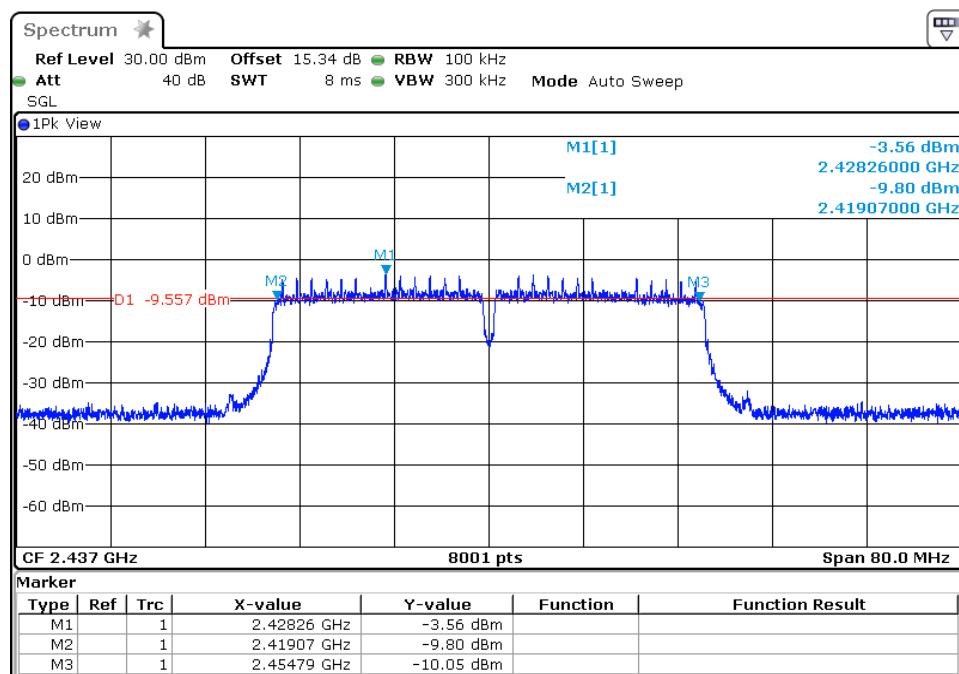
802.11n Channel High 2462MHz(20MHz)



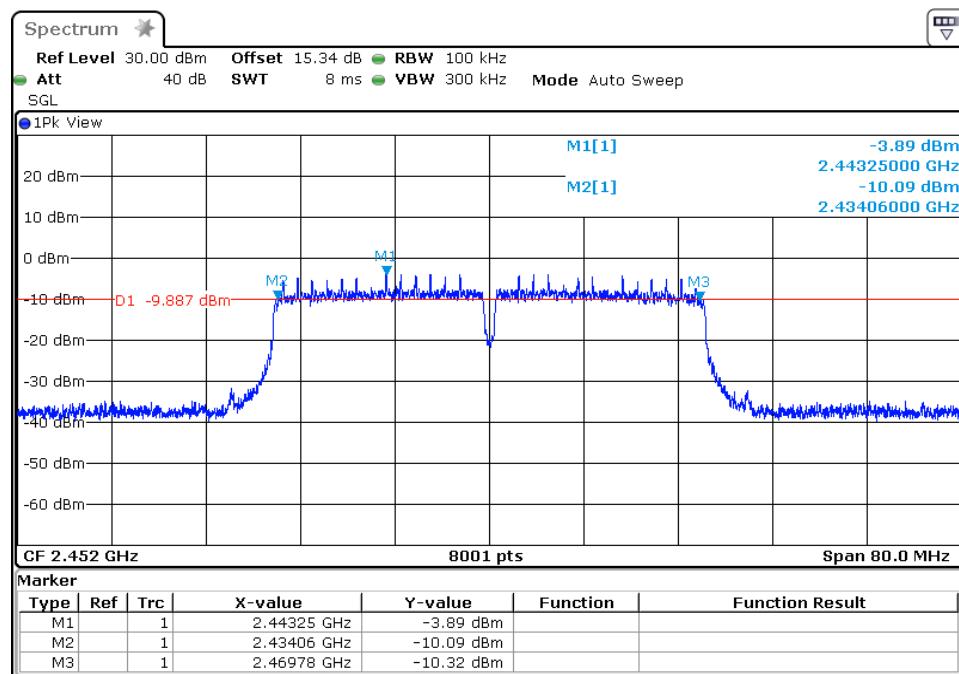
802.11n Channel Low 2422MHz (40MHz)



802.11n Channel Middle 2437MHz(40MHz)



802.11n Channel High 2452MHz(40MHz)



7. DUTY CYCLE MEASUREMENT

7.1. Block Diagram of Test Setup



7.2. EUT Configuration on Measurement

The equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

7.3. Operating Condition of EUT

7.3.1. Setup the EUT and simulator as shown as Section 7.1.

7.3.2. Turn on the power of all equipment.

7.3.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462 and 2422-2452MHz. We select 2412MHz, 2437MHz, 2462MHz and 2422MHz, 2437MHz, 2452MHz TX frequency to transmit.

7.4. Test Procedure

Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

1. A diode detector and an oscilloscope that together have sufficiently short response time to permit accurate measurements of the on- and off-times of the transmitted signal.
2. The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on- and off-times of the transmitted signal
 - a. Set the center frequency of the instrument to the centre frequency of the transmission
 - b. Set $RBW \geq OBW$ if possible; otherwise, set RBW to the largest available value(10MHz).
 - c. Set detector = Peak or average.
- d. The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100.
(For example, if VBW and/or RBW are limited to 3MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

7.5. Test Result

The test was performed with 802.11b

Channel	Frequency (MHz)	duty cycle(x)	$10\log(1/x)$
Middle	2437	97.68%	0.10

The test was performed with 802.11g

Channel	Frequency (MHz)	duty cycle(x)	$10\log(1/x)$
Middle	2437	97.20%	0.12

The test was performed with 802.11n (Bandwidth: 20 MHz)

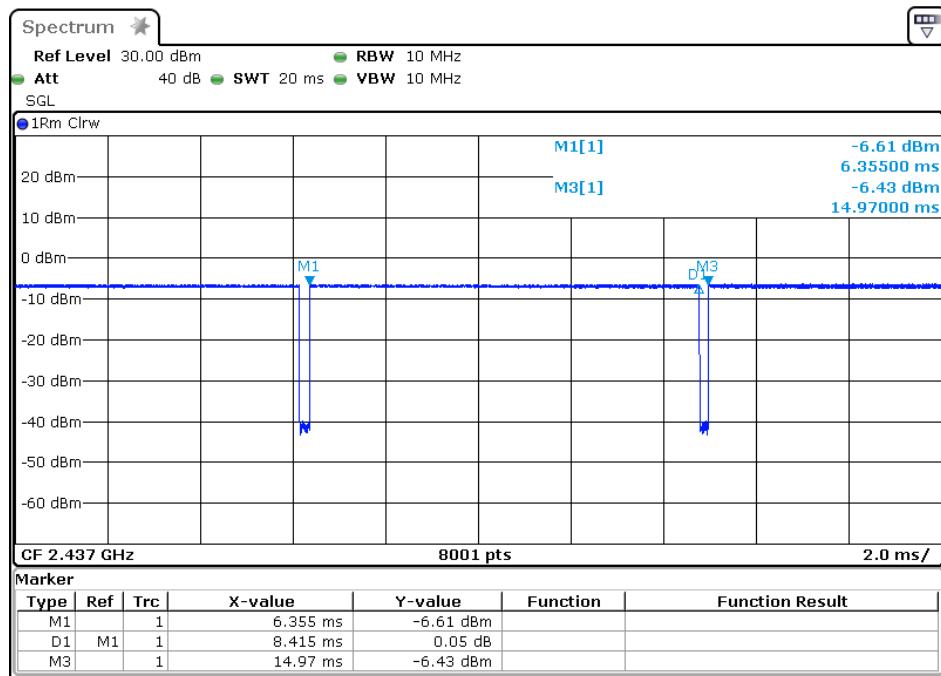
Channel	Frequency (MHz)	duty cycle(x)	$10\log(1/x)$
Middle	2437	97.00%	0.13

The test was performed with 802.11n (Bandwidth: 40 MHz)

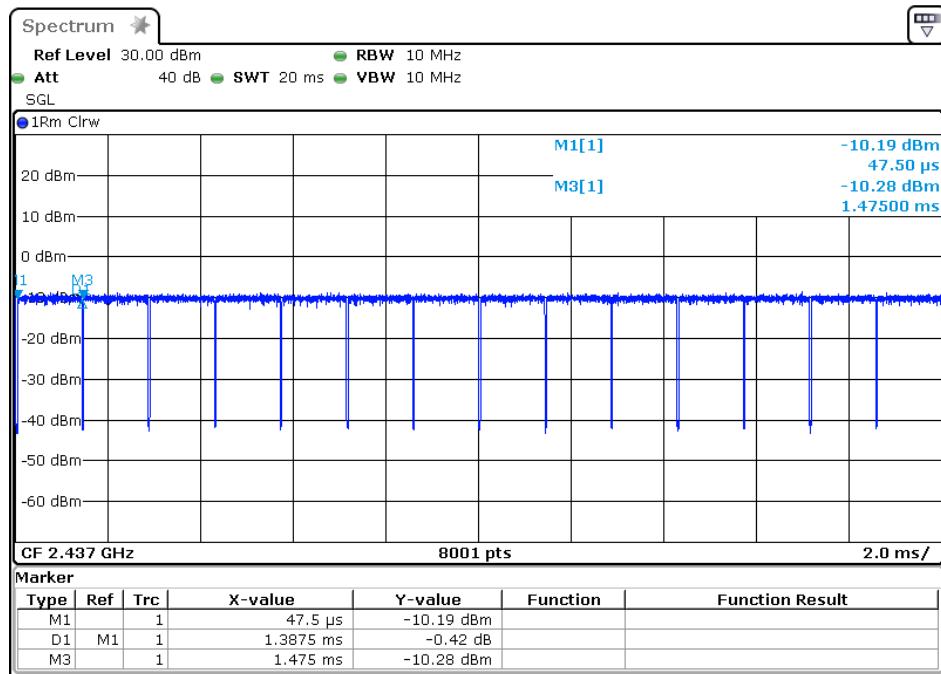
Channel	Frequency (MHz)	duty cycle(x)	$10\log(1/x)$
Middle	2437	94.14%	0.26

The spectrum analyzer plots are attached as below.

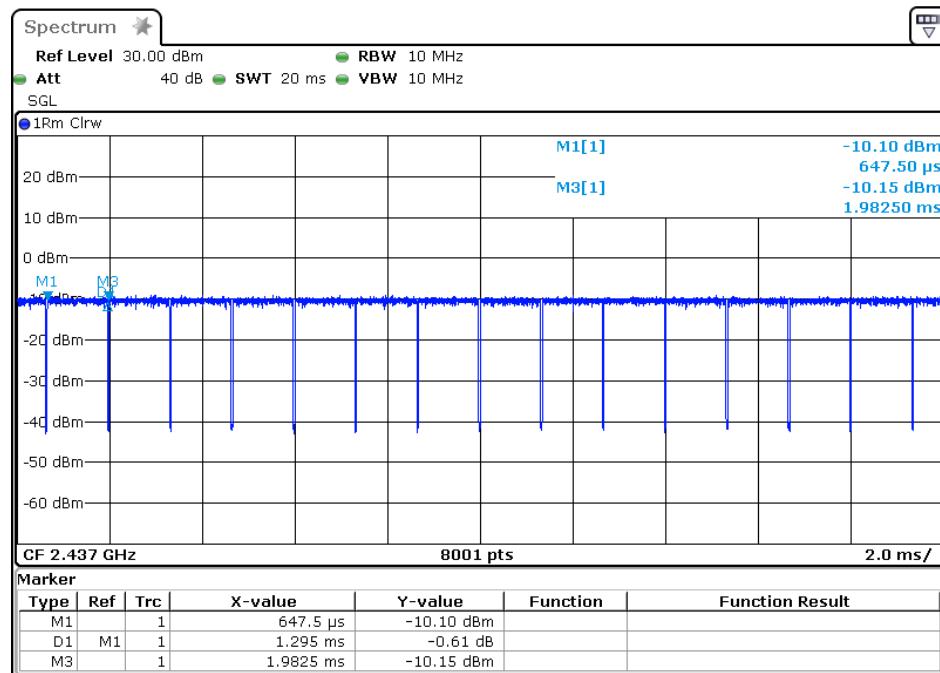
802.11b Channel Middle 2437MHz



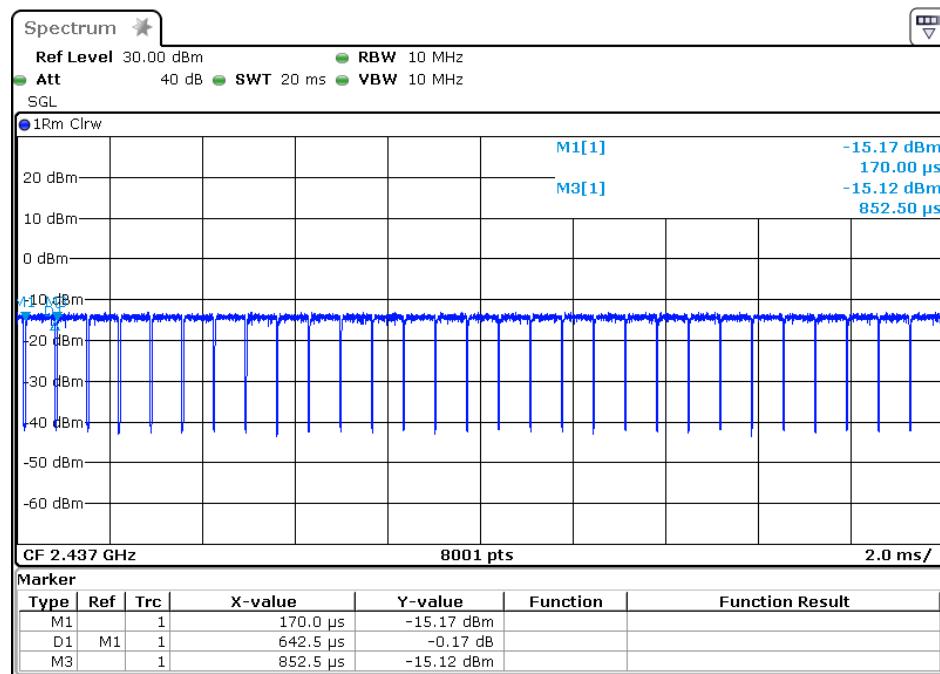
802.11g Channel Middle 2437MHz



802.11n Channel Middle 2437MHz(20MHz)



802.11n Channel Middle 2437MHz(40MHz)



8. MAXIMUM CONDUCTED (AVERAGE) OUTPUT POWER

8.1. Block Diagram of Test Setup



8.2. The Requirement For Section 15.247(b)(3)

Section 15.247(b)(3): For systems using digital modulation in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands: 1 Watt.

8.3. EUT Configuration on Measurement

The equipment is installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

8.4. Operating Condition of EUT

8.4.1. Setup the EUT and simulator as shown as Section 8.1.

8.4.2. Turn on the power of all equipment.

8.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462 and 2422-2452MHz. We select 2412MHz, 2437MHz, 2462MHz and 2422MHz, 2437MHz, 2452MHz TX frequency to transmit.

8.5. Test Procedure

8.5.1. The EUT was tested according to DTS test procedure of Apr 05, 2017 KDB558 074 D01 DTS Meas Guidance v04 for compliance to FCC 47CFR 15.247 requirements.

8.5.2. The transmitter output was connected to the spectrum analyzer through a low loss cable.

8.5.3. Set RBW = 1-5% of the OBW, not to exceed 1 MHz, VBW \geq 3 x RBW, Sweep time = auto, Set span to at least 1.5 times the OBW, Detector = RMS.

8.5.4. Measurement the Maximum conducted (average) output power.

8.6. Test Result

Final power= Ave output power+10log(1/ duty cycle)

The test was performed with 802.11b						
Channel	Frequency (MHz)	Ave output power (dBm)	10log(1/ duty cycle)	Final power (dBm)	Final power (mW)	Limits dBm / W
Low	2412	9.18	0.10	9.28	8.47	30 dBm / 1 W
Middle	2437	9.30	0.10	9.40	8.71	30 dBm / 1 W
High	2462	9.24	0.10	9.34	8.59	30 dBm / 1 W

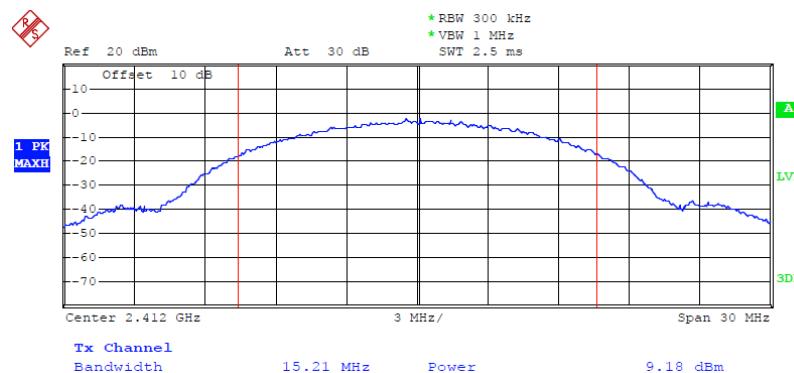
The test was performed with 802.11g						
Channel	Frequency (MHz)	Ave output power (dBm)	10log(1/ duty cycle)	Final power (dBm)	Final power (mW)	Limits dBm / W
Low	2412	8.39	0.12	8.51	7.10	30 dBm / 1 W
Middle	2437	8.74	0.12	8.86	7.69	30 dBm / 1 W
High	2462	8.85	0.12	8.97	7.89	30 dBm / 1 W

The test was performed with 802.11n (20MHz)						
Channel	Frequency (MHz)	Ave output power (dBm)	10log(1/ duty cycle)	Final power (dBm)	Final power (mW)	Limits dBm / W
Low	2412	8.86	0.13	8.99	7.93	30 dBm / 1 W
Middle	2437	8.73	0.13	8.86	7.69	30 dBm / 1 W
High	2462	8.42	0.13	8.55	7.16	30 dBm / 1 W

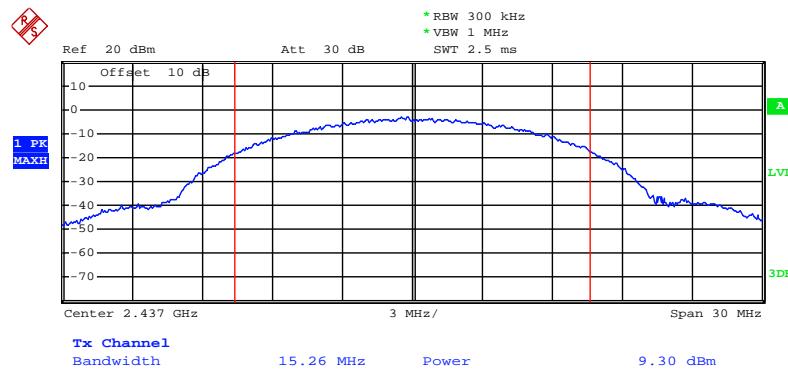
The test was performed with 802.11n (40MHz)						
Channel	Frequency (MHz)	Ave output power (dBm)	10log(1/ duty cycle)	Final power (dBm)	Final power (mW)	Limits dBm / W
Low	2422	7.20	0.26	7.46	5.57	30 dBm / 1 W
Middle	2437	7.03	0.26	7.29	5.36	30 dBm / 1 W
High	2452	7.11	0.26	7.37	5.46	30 dBm / 1 W

The spectrum analyzer plots are attached as below.

802.11b Channel Low 2412MHz



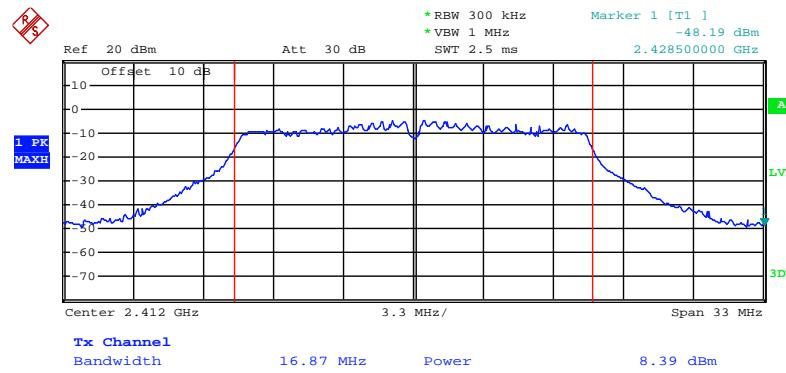
802.11b Channel Middle 2437MHz



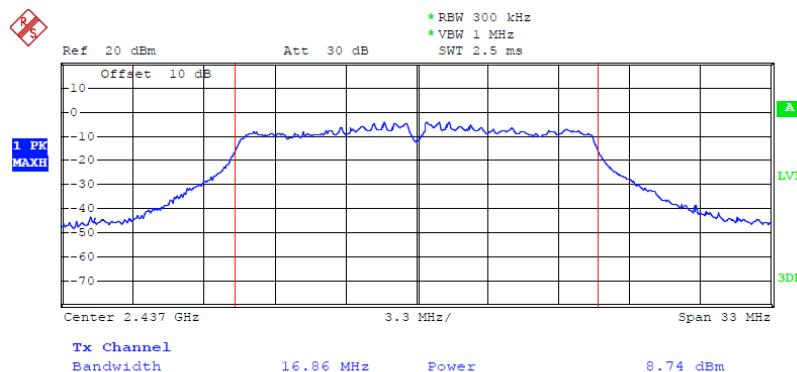
802.11b Channel High 2462MHz



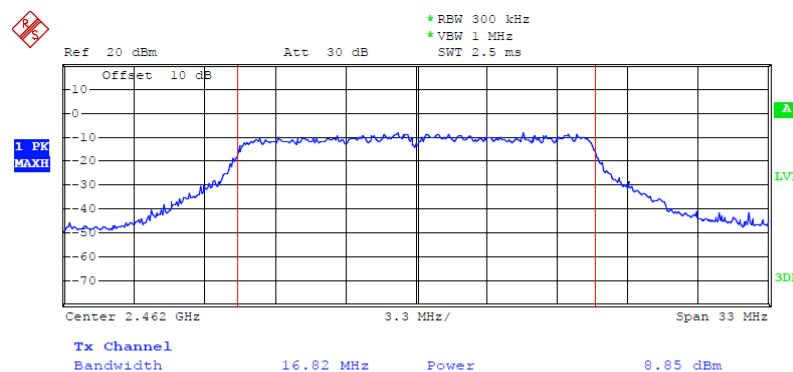
802.11g Channel Low 2412MHz



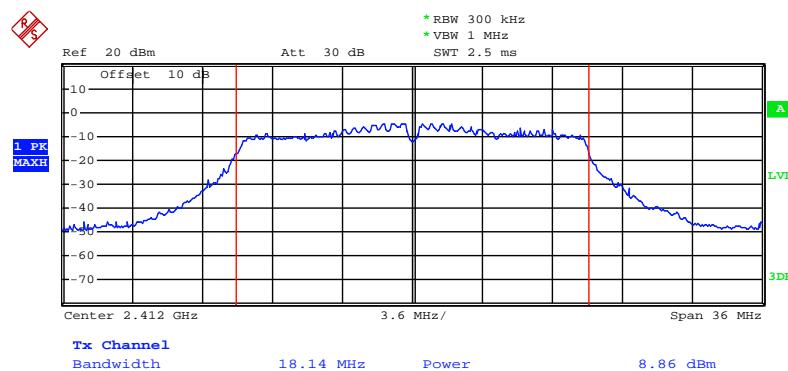
802.11g Channel Middle 2437MHz



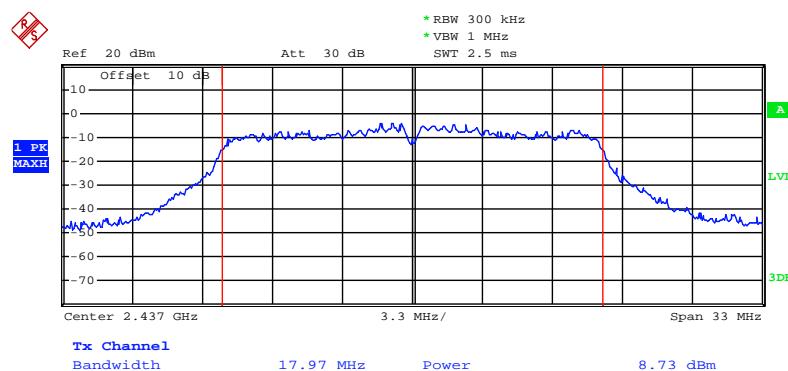
802.11g Channel High 2462MHz



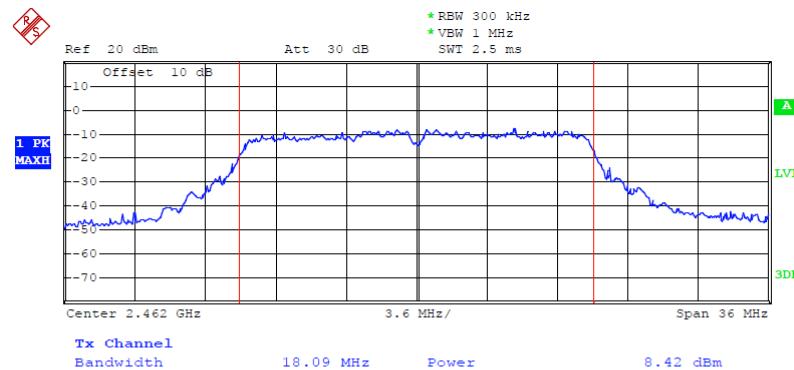
802.11n Channel Low 2412MHz (20MHz)



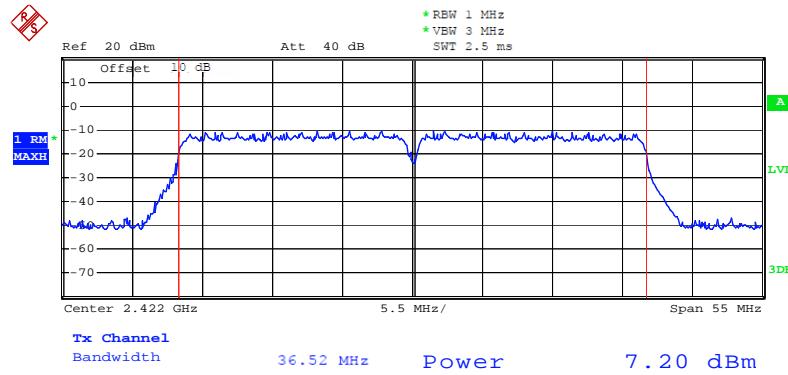
802.11n Channel Middle 2437MHz (20MHz)



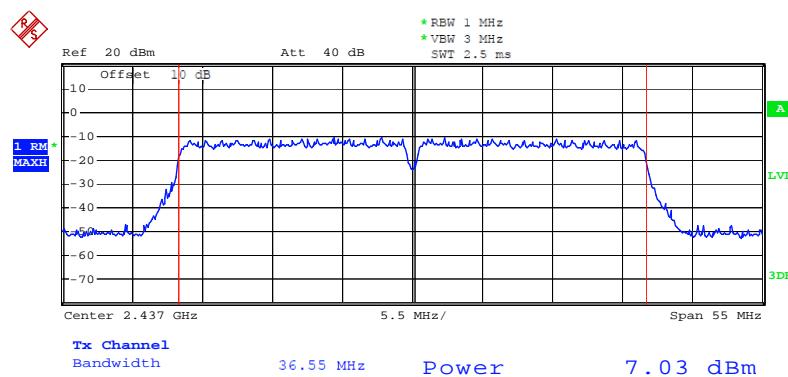
802.11n Channel High 2462MHz (20MHz)



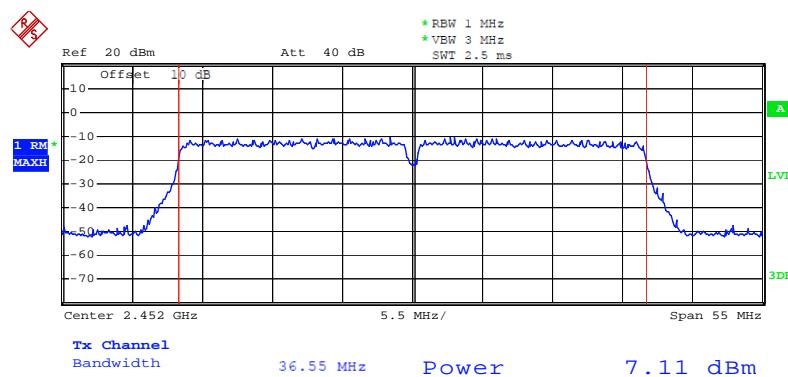
802.11n Channel Low 2422MHz (40MHz)



802.11n Channel Middle 2437MHz (40MHz)



802.11n Channel High 2452MHz (40MHz)



9. POWER SPECTRAL DENSITY MEASUREMENT

9.1. Block Diagram of Test Setup



9.2. The Requirement For Section 15.247(e)

Section 15.247(e): For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

9.3. EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

9.4. Operating Condition of EUT

9.4.1. Setup the EUT and simulator as shown as Section 9.1.

9.4.2. Turn on the power of all equipment.

9.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462 and 2422-2452MHz. We select 2412MHz, 2437MHz, 2462MHz and 2422MHz, 2437MHz, 2452MHz TX frequency to transmit.

9.5. Test Procedure

9.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

9.5.2. Measurement Procedure AVGPSD-2:

This procedure is applicable when the EUT cannot be configured to transmit continuously(i.e., duty cycle<98%), and when sweep triggering/signal gating cannot be used to measure only when the EUT is transmitting at its maximum power control level, and when the transmission duty is constant(i.e., duty cycle variations are less than $\pm 2\%$):

Measure the duty cycle(x) of the transmitter output signal as described in Section 6.0.

Set instrument center frequency to DTS channel center frequency.
 Set span to at least $1.5 \times \text{OBW}$.
 Set RBW to: $3\text{kHz} \leq \text{RBW} \leq 100\text{kHz}$.
 Set VBW $\geq 3 \times \text{RBW}$
 Detector=power averaging(RMS) or sample detector(when RMS not available).
 Ensure that the number of measurement points in sweep $\geq 2 \times \text{span/RBW}$.
 Sweep time=auto couple.
 Do not use sweep triggering. Allow sweep to “free run”.
 Employ trace averaging(RMS) mode over a minimum of 100 traces.
 Use the peak maker function to determine the maximum amplitude level.
 Add $10\log(1/x)$, where x is the duty cycle measured in step(a, to the measured PSD to compute the average PSD during the actual transmission time.
 If resultant value exceeds the limit, then reduce RBW(no less than 3kHz) and repeat(note that this may require zooming in on the emission of interest and reducing the span in order to meet the minimum measurement point requirement as the RBW is reduced).

9.6. Test Result

The test was performed with 802.11b

Channel	Frequency (MHz)	AVG Power Spectral Density (dBm)	$10\log(1/\text{duty cycle})$	Final Power Spectral Density (dBm)	Limits (dBm)
Low	2412	-2.26	0.10	-2.16	8 dBm
Middle	2437	-3.89	0.10	-3.79	8 dBm
High	2462	-4.03	0.10	-3.93	8 dBm

The test was performed with 802.11g

Channel	Frequency (MHz)	AVG Power Spectral Density (dBm)	$10\log(1/\text{duty cycle})$	Final Power Spectral Density (dBm)	Limits (dBm)
Low	2412	-16.01	0.12	-15.89	8 dBm
Middle	2437	-17.33	0.12	-17.21	8 dBm
High	2462	-16.86	0.12	-16.74	8 dBm

The test was performed with 802.11n (20MHz)

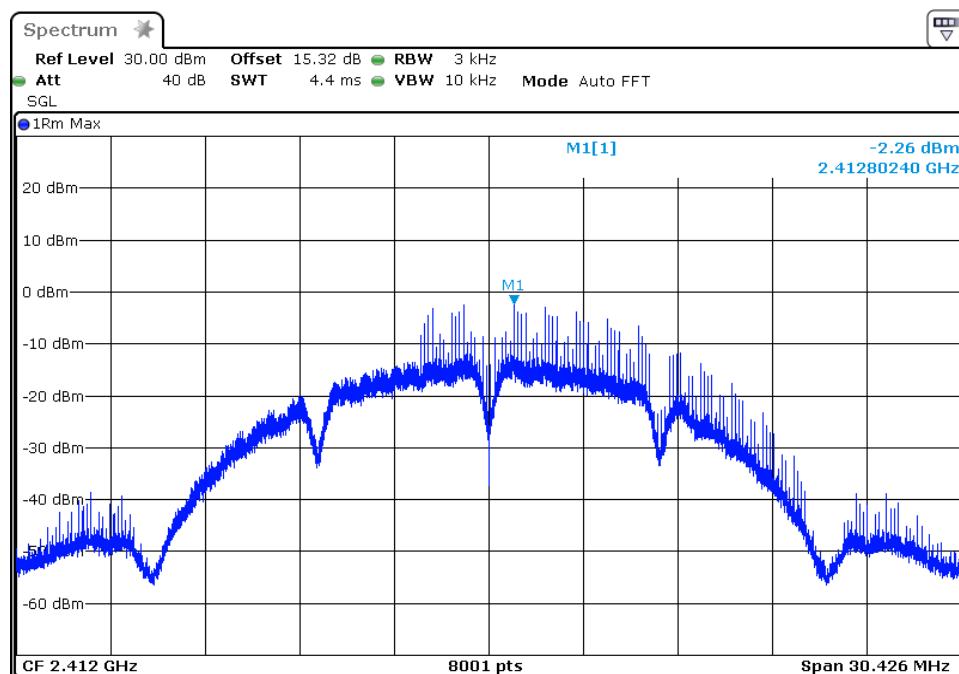
Channel	Frequency (MHz)	AVG Power Spectral Density (dBm)	$10\log(1/\text{duty cycle})$	Final Power Spectral Density (dBm)	Limits (dBm)
Low	2412	-16.43	0.13	-16.30	8 dBm
Middle	2437	-16.29	0.13	-16.16	8 dBm
High	2462	-16.86	0.13	-16.73	8 dBm

The test was performed with 802.11n (40MHz)

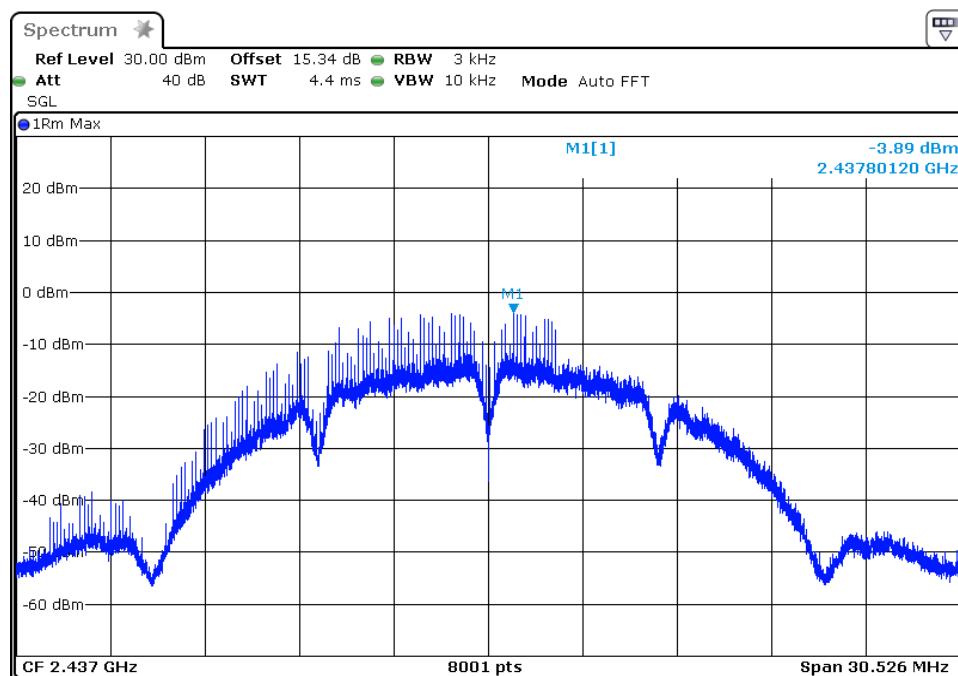
Channel	Frequency (MHz)	AVG Power Spectral Density (dBm)	10log(1/ duty cycle)	Final Power Spectral Density (dBm)	Limits (dBm)
Low	2422	-21.11	0.26	-20.85	8 dBm
Middle	2437	-21.21	0.26	-20.95	8 dBm
High	2452	-21.25	0.26	-20.99	8 dBm

The spectrum analyzer plots are attached as below.

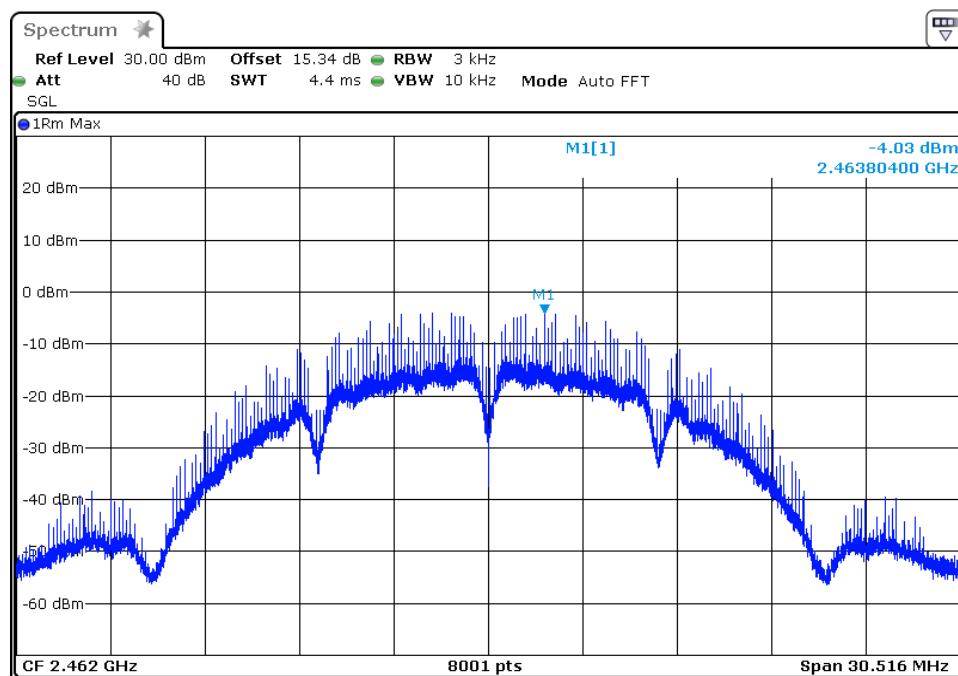
802.11b Channel Low 2412MHz



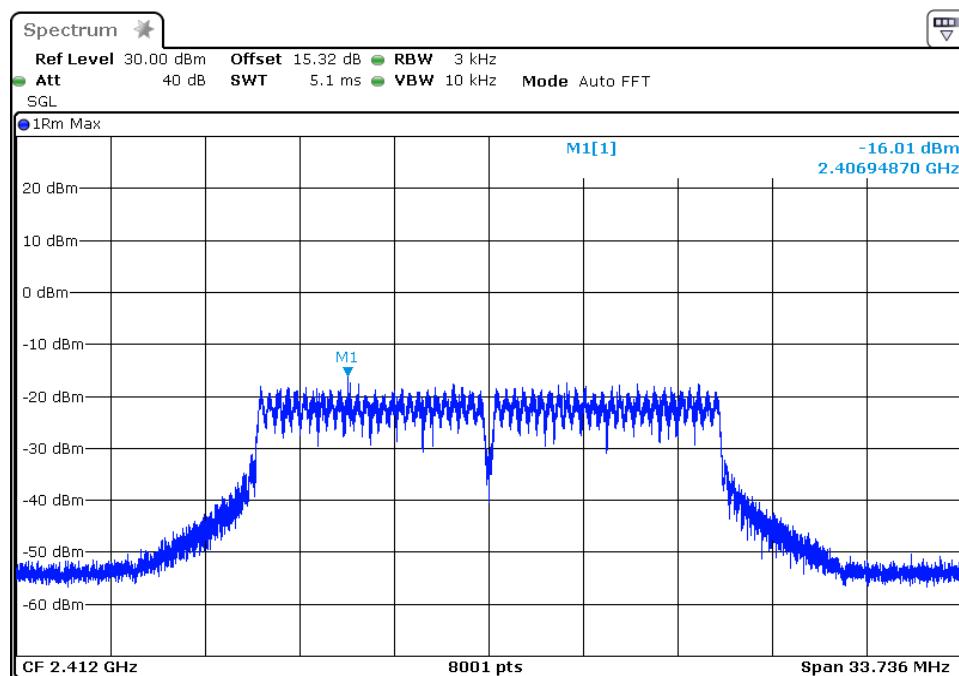
802.11b Channel Middle 2437MHz



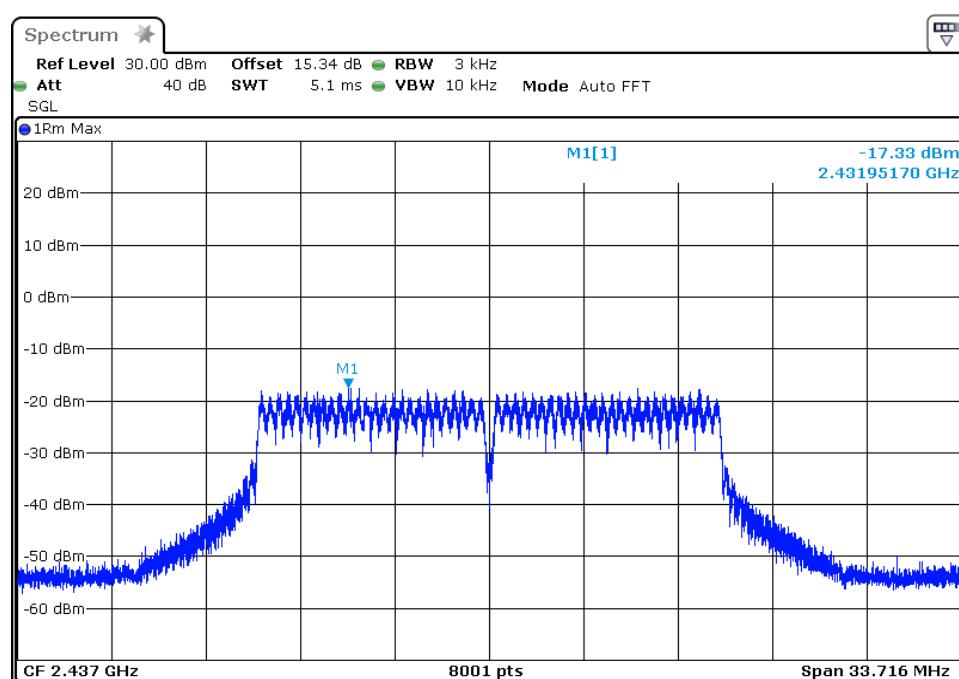
802.11b Channel High 2462MHz



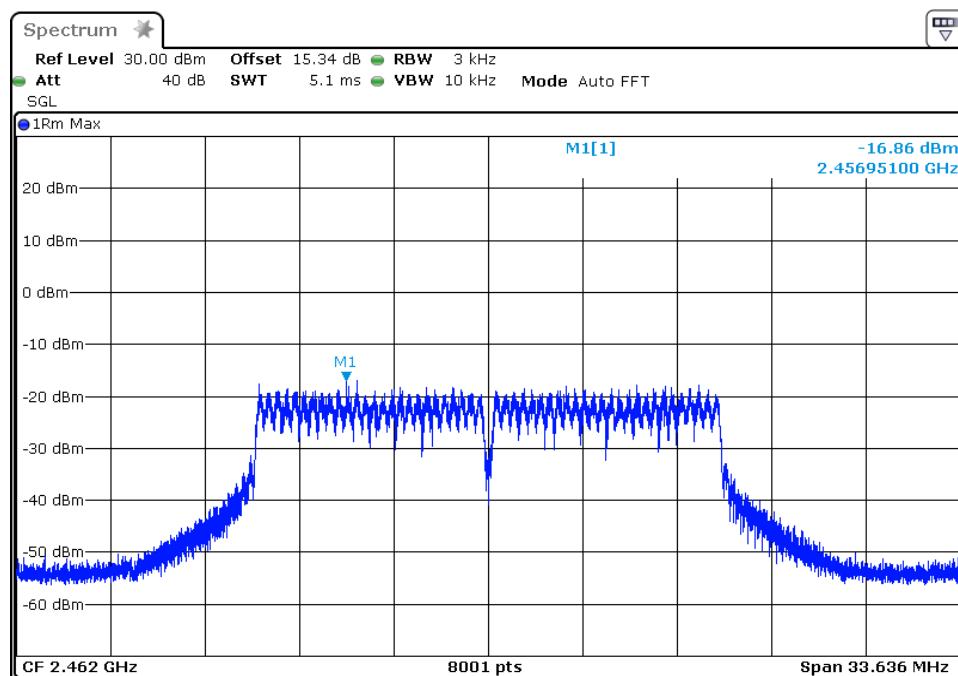
802.11g Channel Low 2412MHz



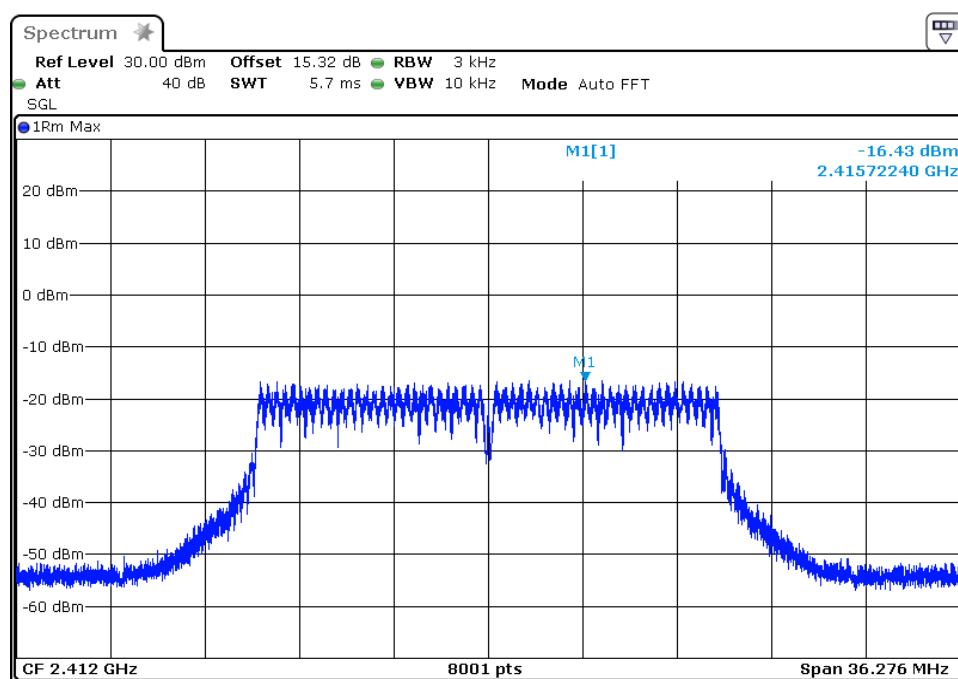
802.11g Channel Middle 2437MHz



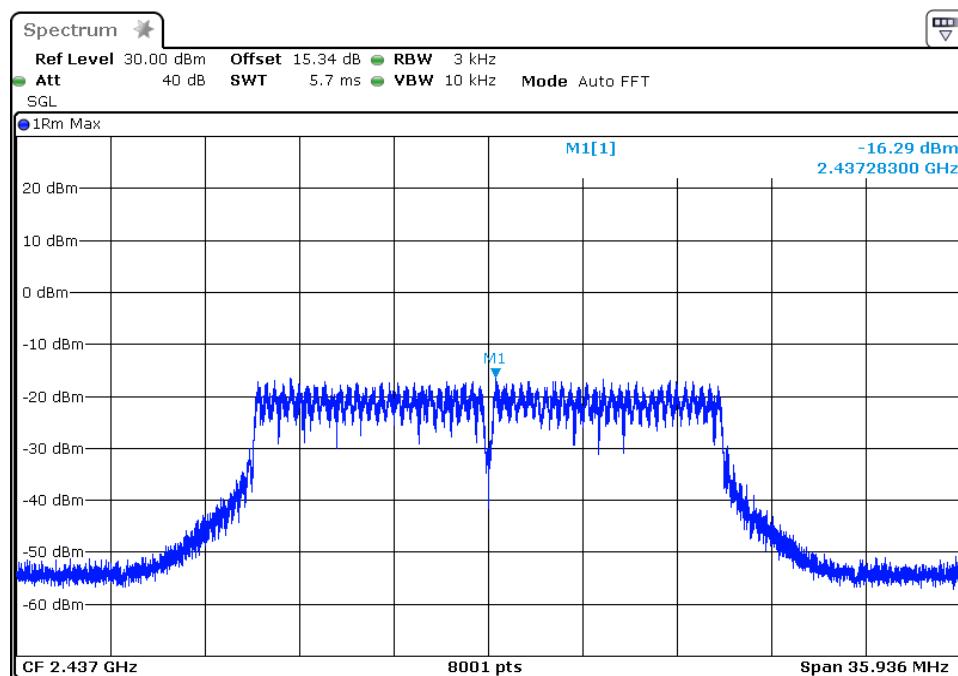
802.11g Channel High 2462MHz



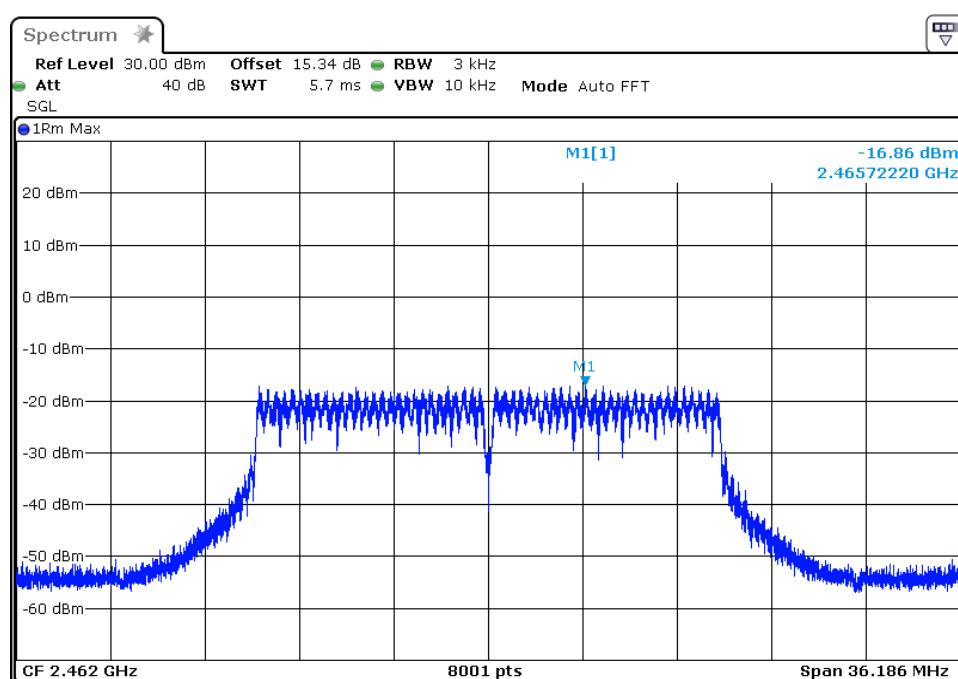
802.11n Channel Low 2412MHz (20MHz)



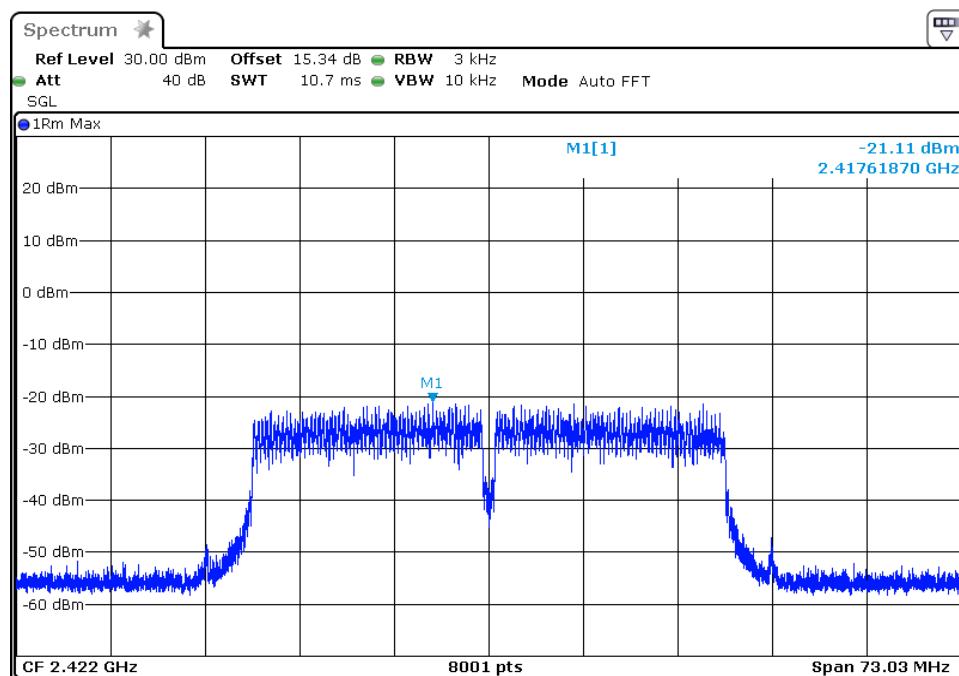
802.11n Channel Middle 2437MHz (20MHz)



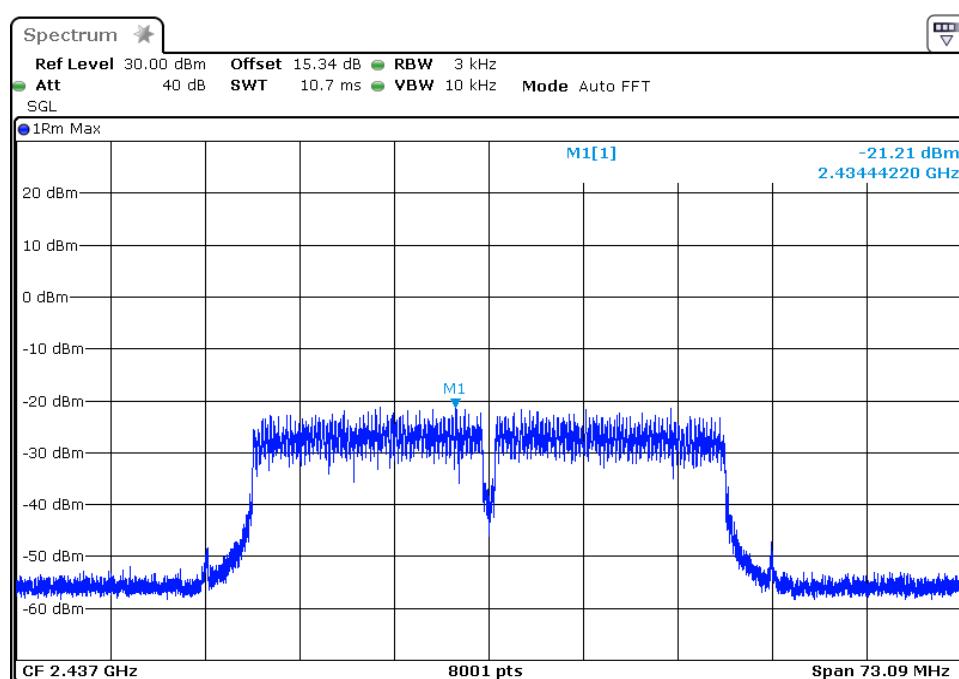
802.11n Channel High 2462MHz(20MHz)



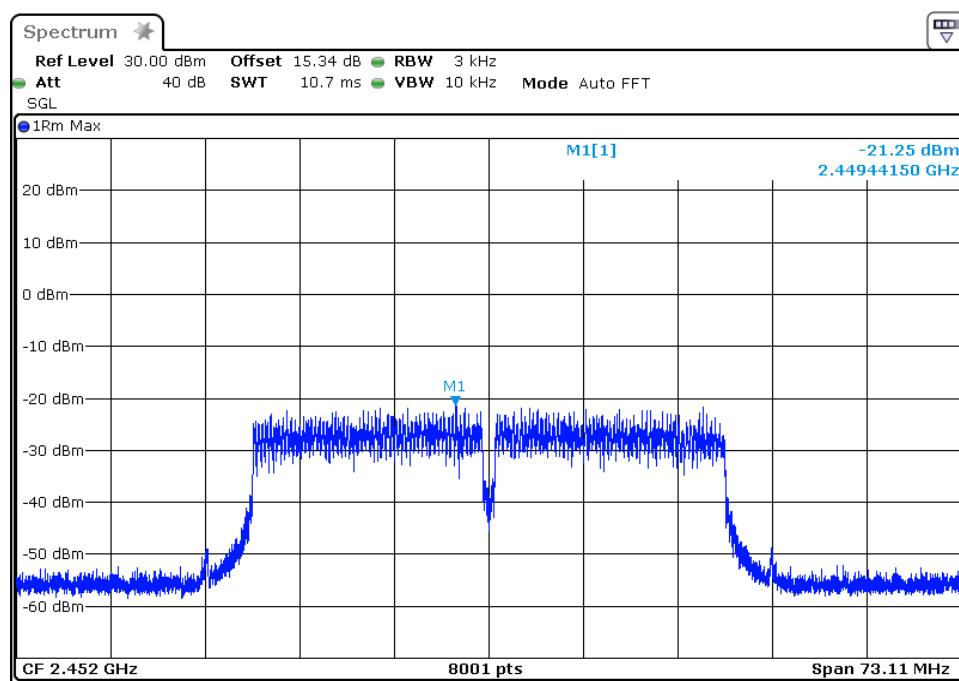
802.11n Channel Low 2422MHz (40MHz)



802.11n Channel Middle 2437MHz(40MHz)



802.11n Channel High 2452MHz(40MHz)



10.BAND EDGE COMPLIANCE TEST

10.1.Block Diagram of Test Setup



10.2.The Requirement For Section 15.247(d)

Section 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

10.3.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

10.4.Operating Condition of EUT

10.4.1.Setup the EUT and simulator as shown as Section 9.1.

10.4.2.Turn on the power of all equipment.

10.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462 and 2422-2452MHz MHz. We select 2412MHz, 2462MHz and 2422MHz, 2452MHz TX frequency to transmit.

10.5.Test Procedure

Conducted Band Edge:

10.5.1.The transmitter output was connected to the spectrum analyzer via a low loss cable.

10.5.2. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz.

Radiate Band Edge:

10.5.3. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.

10.5.4. The turntable was rotated for 360 degrees to determine the position of maximum emission level.

10.5.5. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

10.5.6. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

10.5.7. RBW=1MHz, VBW=1MHz

10.5.8. The band edges were measured and recorded.

10.6. Test Result

The test was performed with 802.11b

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2400	36.37	> 30dBc
2483.5	43.34	> 30dBc

The test was performed with 802.11g

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2400	38.00	> 30dBc
2483.5	36.75	> 30dBc

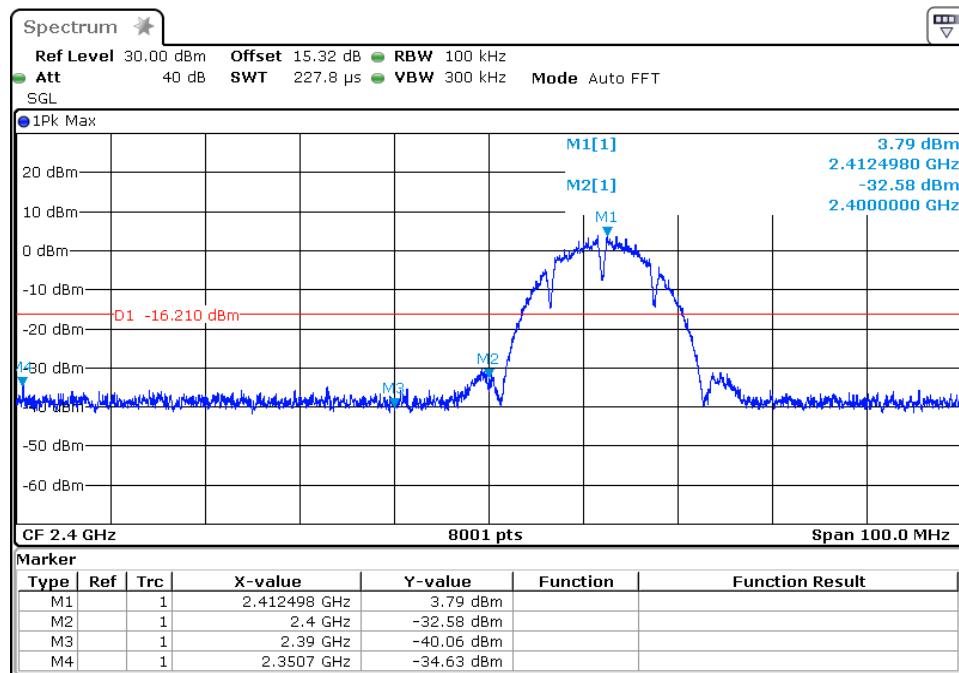
The test was performed with 802.11n (20MHz)

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2400	37.19	> 30dBc
2483.5	38.84	> 30dBc

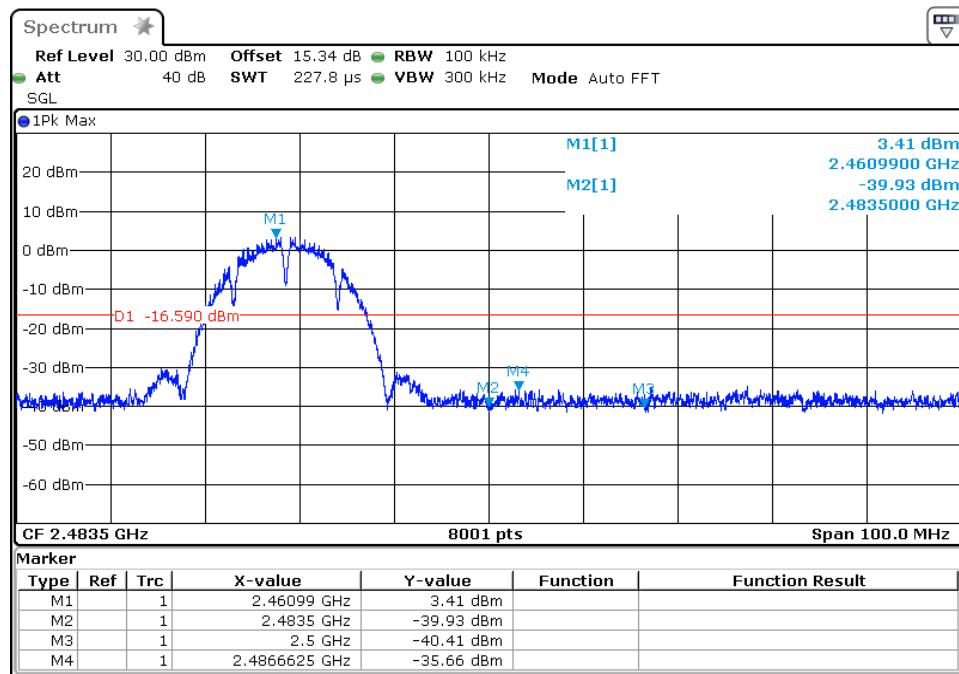
The test was performed with 802.11n (40MHz)

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2400	32.68	> 30dBc
2483.5	37.39	> 30dBc

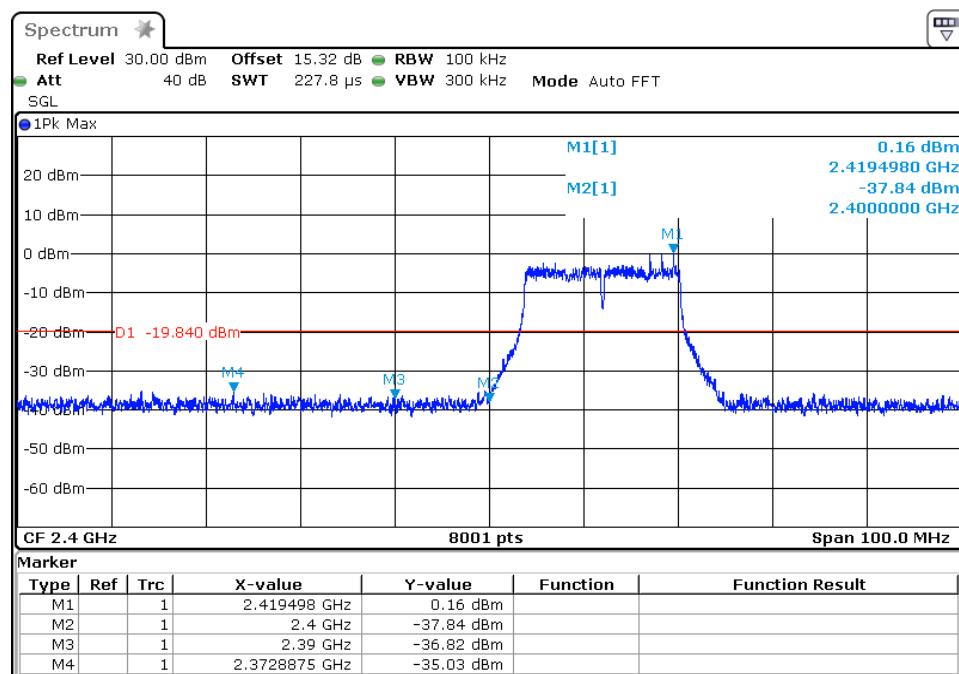
802.11b Channel Low 2412MHz



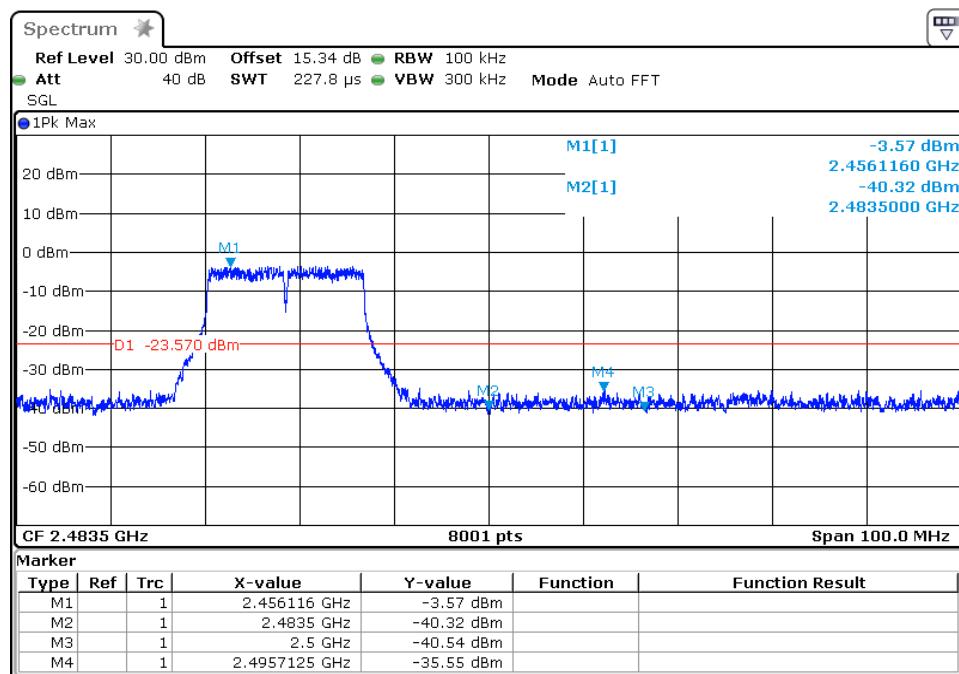
802.11b Channel High 2462MHz



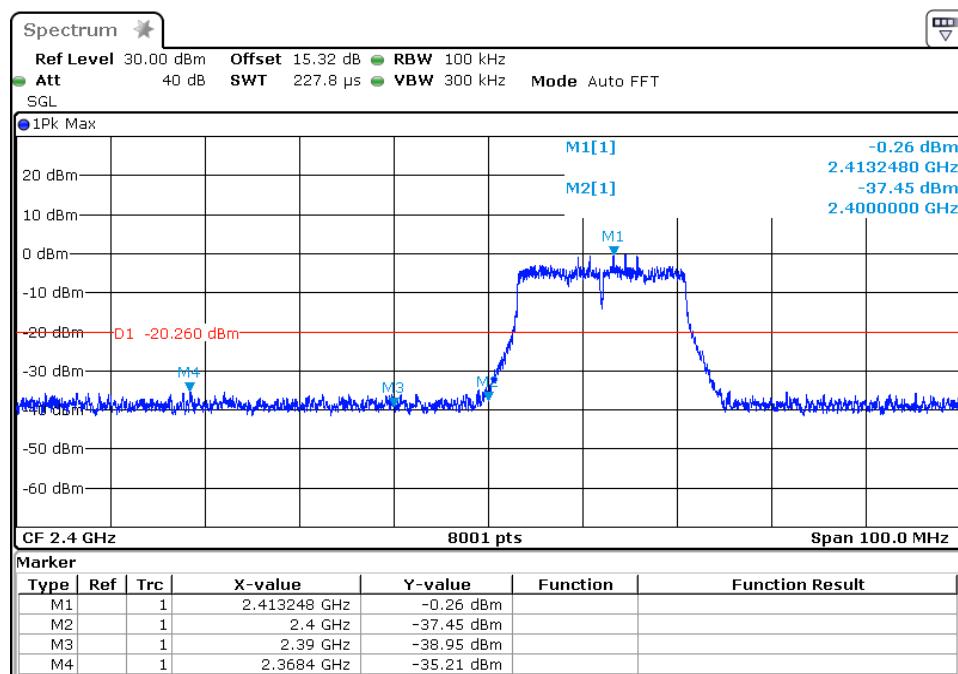
802.11g Channel Low 2412MHz



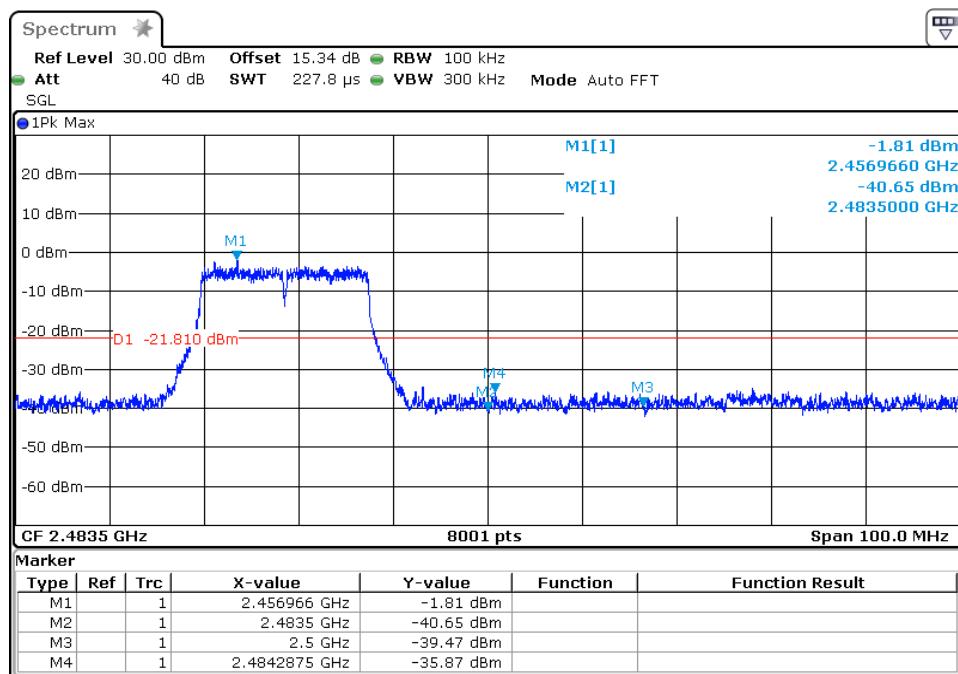
802.11g Channel High 2462MHz



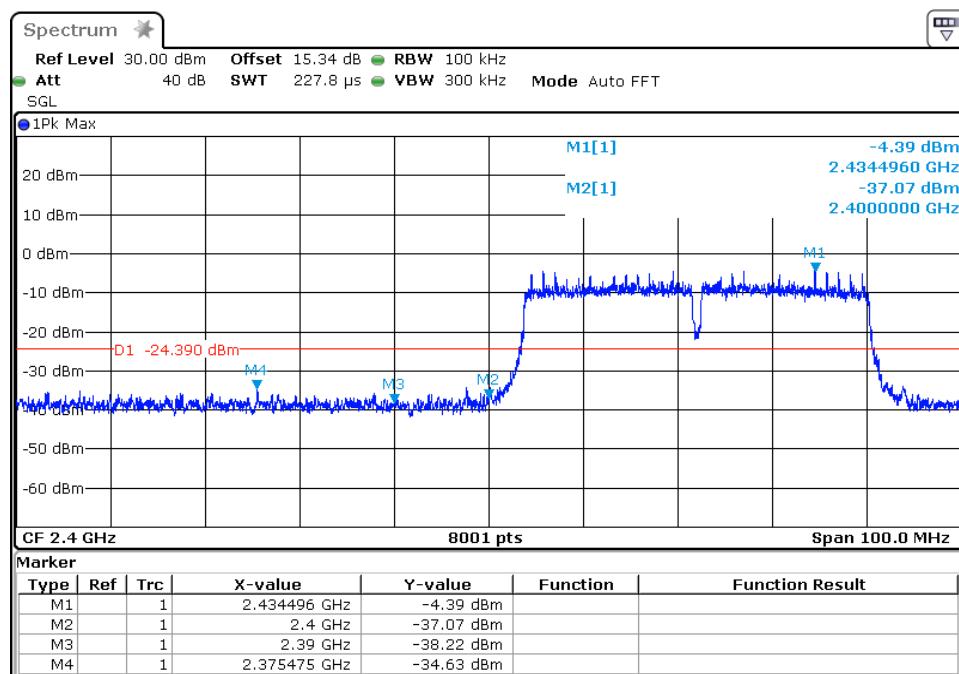
802.11n Channel Low 2412MHz (20MHz)



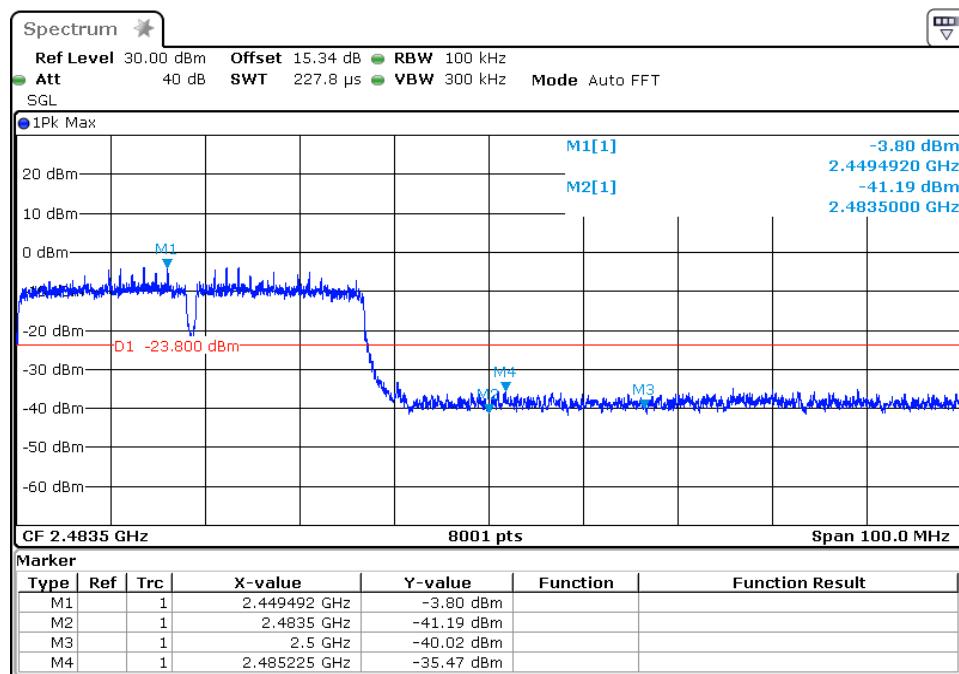
802.11n Channel High 2462MHz (20MHz)



802.11n Channel Low 2422MHz (40MHz)



802.11n Channel High 2452MHz (40MHz)



Radiated Band Edge Result

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:
Result = Reading + Corrected Factor
3. Display the measurement of peak values.

Test Procedure:

The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

Let the EUT work in TX modes then measure it.

We select 2412MHz, 2462MHz TX frequency to transmit(802.11b/g/n20 mode).

We select 2422MHz, 2452MHz TX frequency to transmit(802.11n40 mode).

During the radiated emission test, the spectrum analyzer was set with the following configurations:

- 1.The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
- 2.The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
- 3.All modes of operation were investigated and the worst-case emissions are reported.



ACCURATE TECHNOLOGY CO., LTD.

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Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR2017 #31

Polarization: Horizontal

Standard: FCC PK

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 17/11/11/

Temp.(C)/Hum.(%) 25 C / 55 %

Time: 16/07/12

EUT: SkanFlexi

Engineer Signature: star

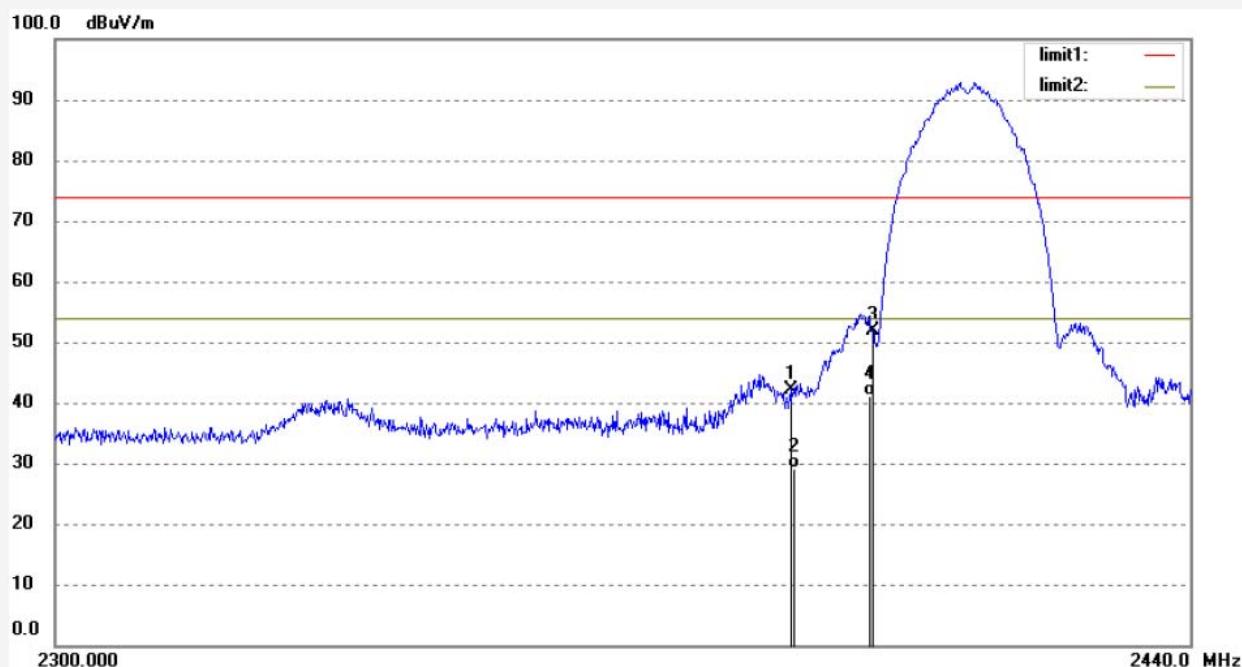
Mode: TX Channel 1(802.11b)

Distance: 3m

Model: QuickScan II

Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD

Note: Report No.:ATE20172157



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	48.12	-5.89	42.23	74.00	-31.77	peak			
2	2390.000	35.14	-5.89	29.25	54.00	-24.75	AVG	250	112	
3	2400.000	57.74	-5.80	51.94	74.00	-22.06	peak			
4	2400.000	46.97	-5.80	41.17	54.00	-12.83	AVG	250	327	



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Site: 1# Chamber
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Job No.: STAR2017 #32

Polarization: Vertical

Standard: FCC PK

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 17/11/11/

Temp.(C)/Hum.(%) 25 C / 55 %

Time: 16/08/41

EUT: SkanFlexi

Engineer Signature: star

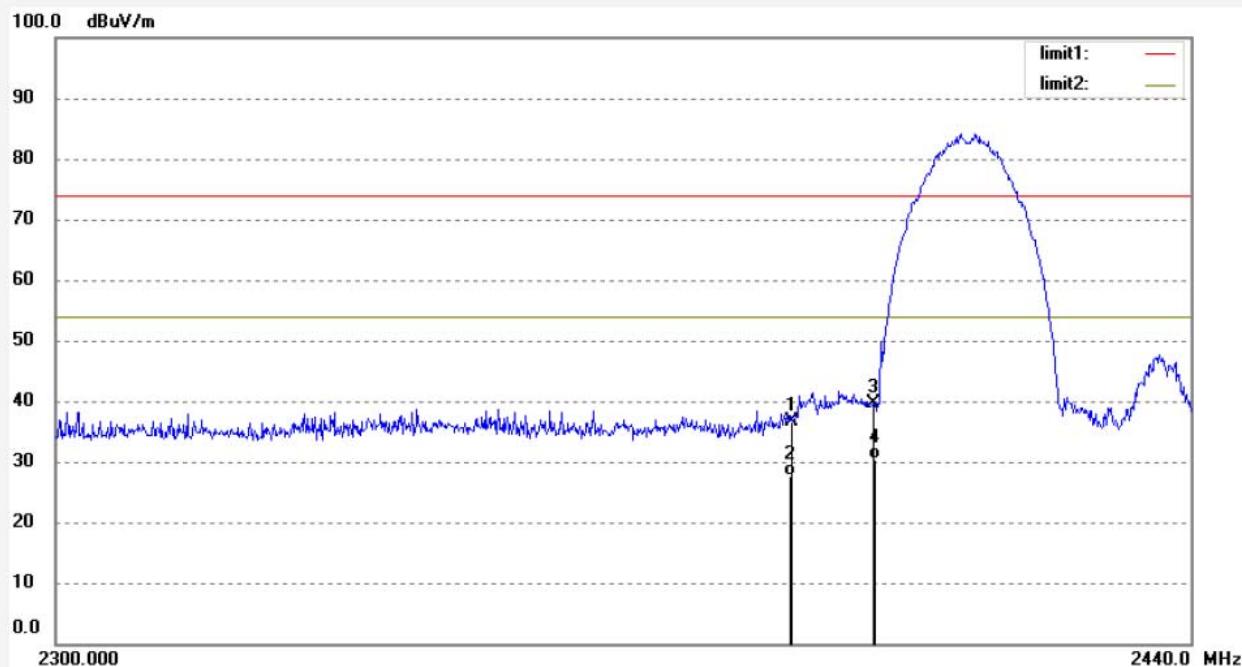
Mode: TX Channel 1(802.11b)

Distance: 3m

Model: QuickScan II

Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD

Note: Report No.:ATE20172157



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	42.58	-5.89	36.69	74.00	-37.31	peak			
2	2390.000	33.57	-5.89	27.68	54.00	-26.32	AVG	150	207	
3	2400.000	45.36	-5.80	39.56	74.00	-34.44	peak			
4	2400.000	36.17	-5.80	30.37	54.00	-23.63	AVG	150	349	



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Site: 1# Chamber
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Job No.: STAR2017 #34

Polarization: Horizontal

Standard: FCC PK

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 17/11/11/

Temp.(C)/Hum.(%) 25 C / 55 %

Time: 16/12/06

EUT: SkanFlexi

Engineer Signature: star

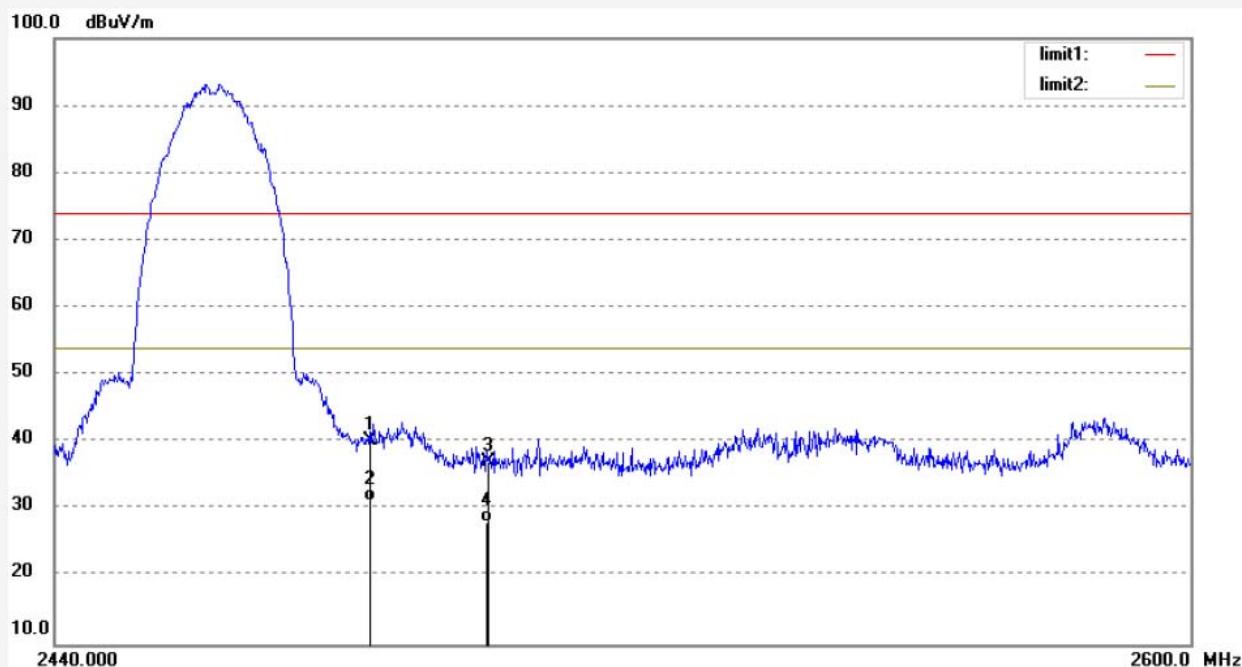
Mode: TX Channel 11(802.11b)

Distance: 3m

Model: QuickScan II

Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD

Note: Report No.:ATE20172157



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	45.69	-5.51	40.18	74.00	-33.82	peak			
2	2483.500	36.70	-5.51	31.19	54.00	-22.81	AVG	250	221	
3	2500.000	42.71	-5.50	37.21	74.00	-36.79	peak			
4	2500.000	33.69	-5.50	28.19	54.00	-25.81	AVG	300	182	

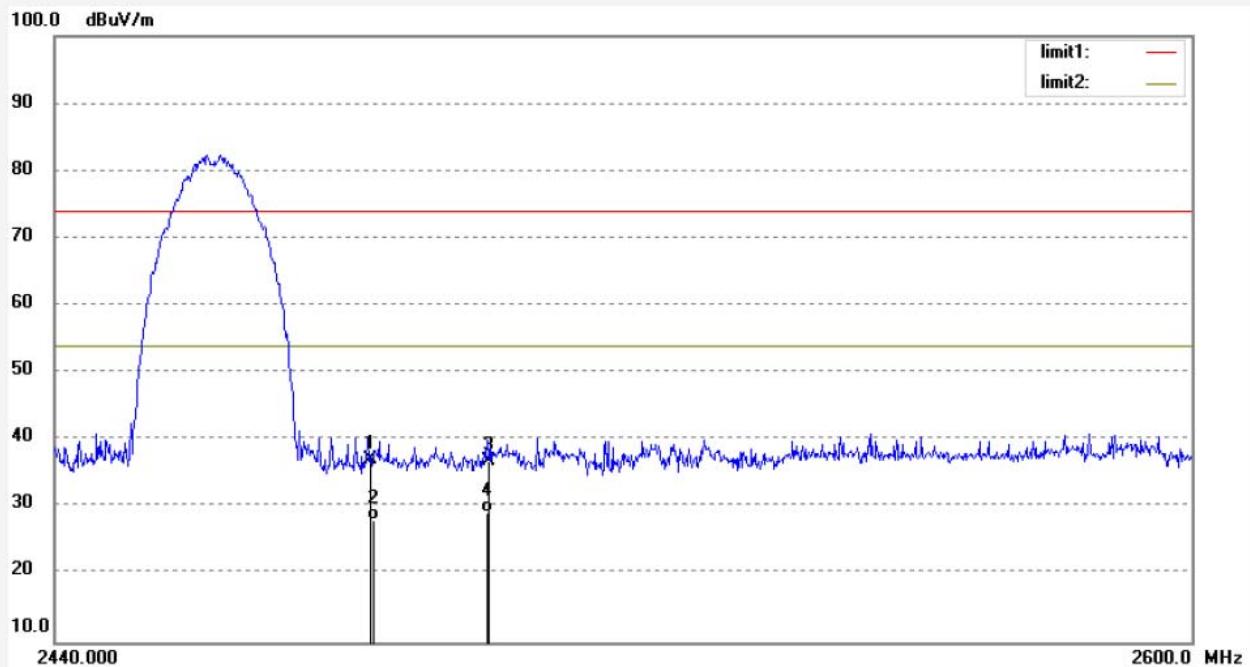


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Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.:	STAR2017 #33	Polarization:	Vertical
Standard:	FCC PK	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	17/11/11/
Temp.(C)/Hum.(%)	25 C / 55 %	Time:	16/10/41
EUT:	SkanFlexi	Engineer Signature:	star
Mode:	TX Channel 11(802.11b)	Distance:	3m
Model:	QuickScan II		
Manufacturer:	WUXI OPULEN TECHNOLOGY CO.,LTD		
Note:	Report No.:ATE20172157		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	42.64	-5.51	37.13	74.00	-36.87	peak			
2	2483.500	33.70	-5.51	28.19	54.00	-25.81	AVG	150	278	
3	2500.000	42.45	-5.50	36.95	74.00	-37.05	peak			
4	2500.000	34.72	-5.50	29.22	54.00	-24.78	AVG	150	215	



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Site: 1# Chamber

Tel:+86-0755-26503290

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Job No.: STAR2017 #38

Polarization: Horizontal

Standard: FCC PK

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 17/11/11/

Temp.(C)/Hum.(%) 25 C / 55 %

Time: 16/18/55

EUT: SkanFlexi

Engineer Signature: star

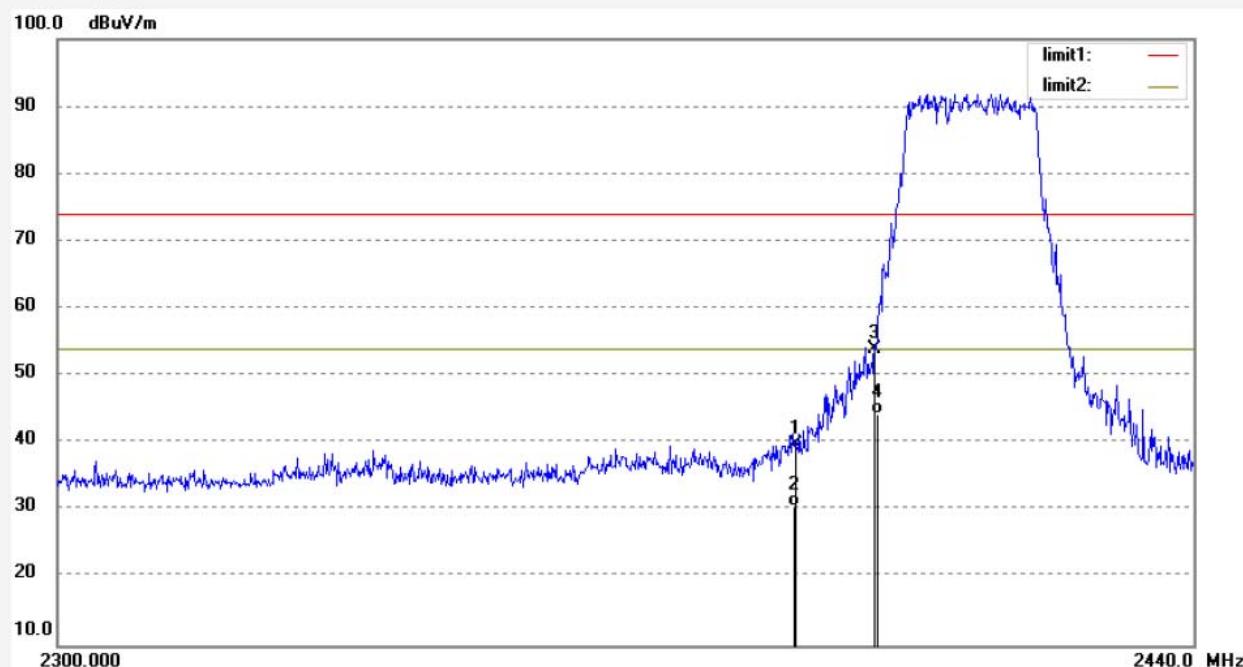
Mode: TX Channel 1(802.11g)

Distance: 3m

Model: QuickScan II

Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD

Note: Report No.:ATE20172157



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	45.62	-5.89	39.73	74.00	-34.27	peak			
2	2390.000	36.44	-5.89	30.55	54.00	-23.45	Avg	250	357	
3	2400.000	59.69	-5.80	53.89	74.00	-20.11	peak			
4	2400.000	50.10	-5.80	44.30	54.00	-9.70	Avg	250	103	



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Site: 1# Chamber

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Job No.: STAR2017 #37

Polarization: Vertical

Standard: FCC PK

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 17/11/11/

Temp.(C)/Hum.(%) 25 C / 55 %

Time: 16/17/19

EUT: SkanFlexi

Engineer Signature: star

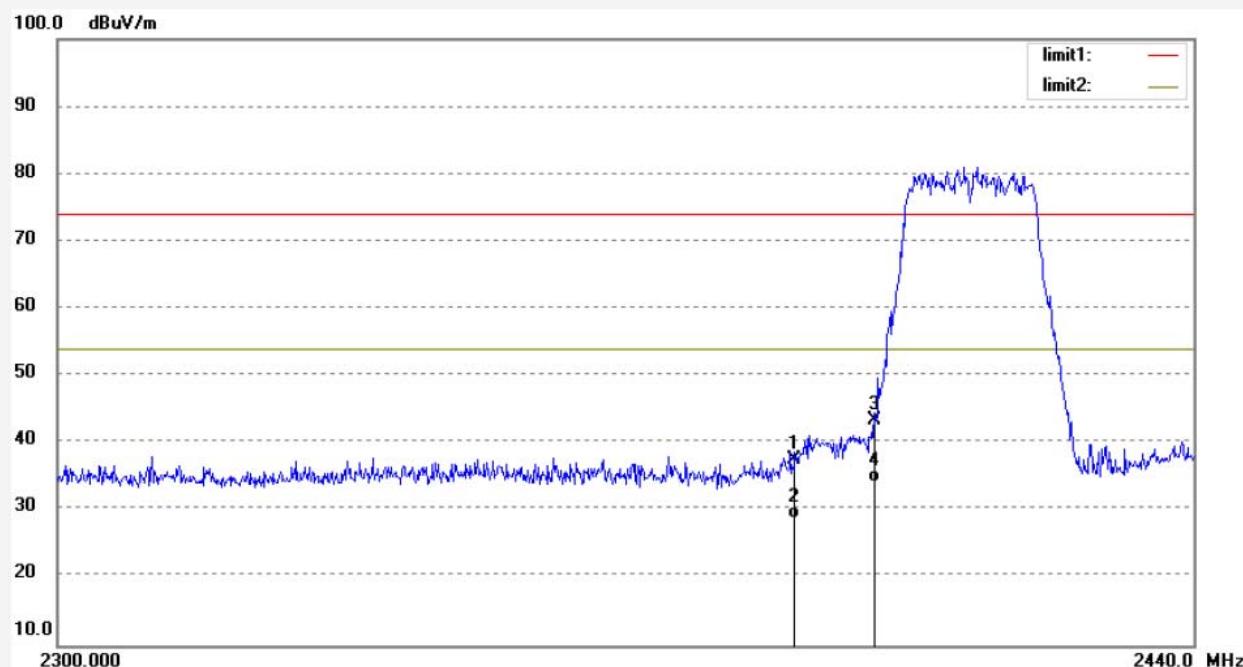
Mode: TX Channel 1(802.11g)

Distance: 3m

Model: QuickScan II

Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD

Note: Report No.:ATE20172157



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	43.35	-5.89	37.46	74.00	-36.54	peak			
2	2390.000	34.67	-5.89	28.78	54.00	-25.22	AVG	150	212	
3	2400.000	49.31	-5.80	43.51	74.00	-30.49	peak			
4	2400.000	40.10	-5.80	34.30	54.00	-19.70	AVG	150	222	



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Site: 1# Chamber
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Job No.: STAR2017 #35

Polarization: Horizontal

Standard: FCC PK

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 17/11/11/

Temp.(C)/Hum.(%) 25 C / 55 %

Time: 16/13/26

EUT: SkanFlexi

Engineer Signature: star

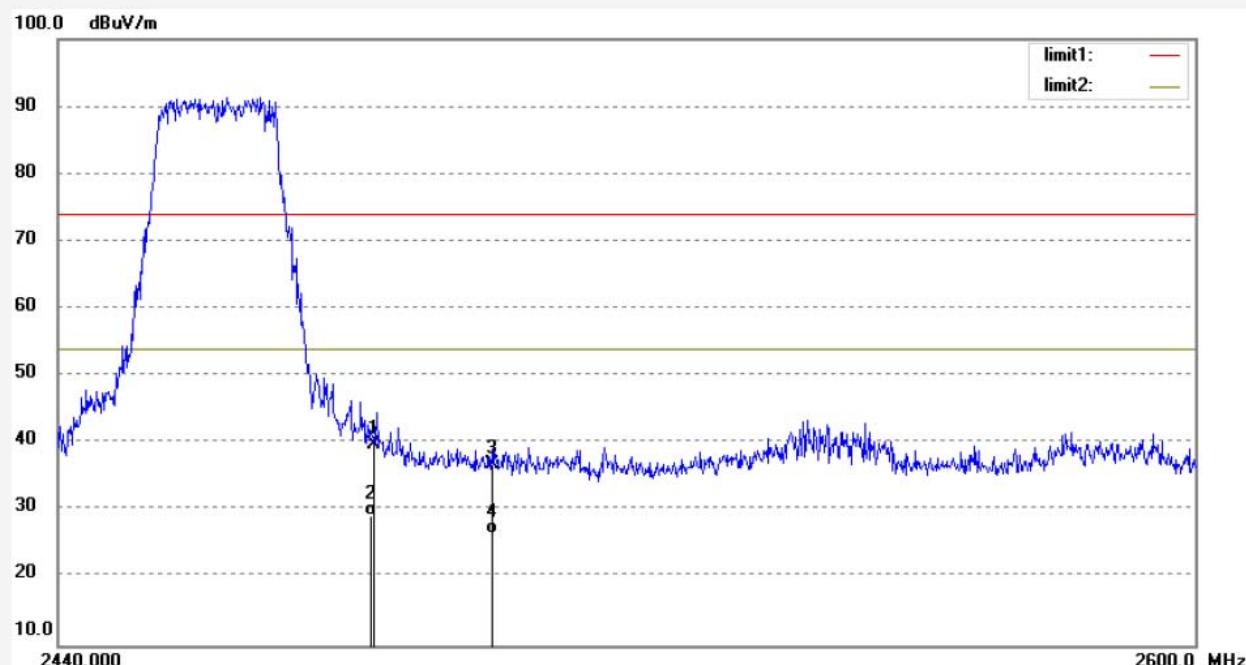
Mode: TX Channel 11(802.11g)

Distance: 3m

Model: QuickScan II

Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD

Note: Report No.:ATE20172157



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	45.24	-5.51	39.73	74.00	-34.27	peak			
2	2483.500	34.70	-5.51	29.19	54.00	-24.81	AVG	250	202	
3	2500.000	42.36	-5.50	36.86	74.00	-37.14	peak			
4	2500.000	32.14	-5.50	26.64	54.00	-27.36	AVG	250	123	

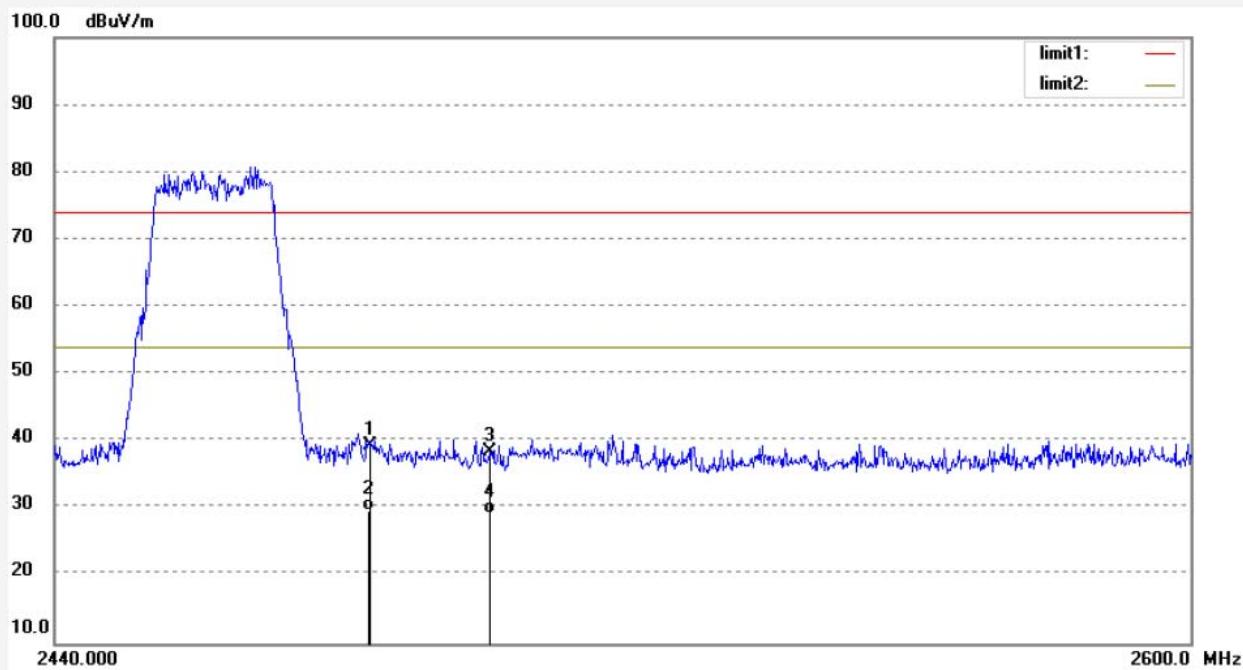


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Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.:	STAR2017 #36	Polarization:	Vertical
Standard:	FCC PK	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	17/11/11/
Temp.(C)/Hum.(%)	25 C / 55 %	Time:	16/15/24
EUT:	SkanFlexi	Engineer Signature:	star
Mode:	TX Channel 11(802.11g)	Distance:	3m
Model:	QuickScan II		
Manufacturer:	WUXI OPULEN TECHNOLOGY CO.,LTD		
Note:	Report No.:ATE20172157		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	44.78	-5.51	39.27	74.00	-34.73	peak			
2	2483.500	35.14	-5.51	29.63	54.00	-24.37	AVG	150	212	
3	2500.000	43.87	-5.50	38.37	74.00	-35.63	peak			
4	2500.000	34.68	-5.50	29.18	54.00	-24.82	AVG	150	348	



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Site: 1# Chamber
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Fax:+86-0755-26503396

Job No.: STAR2017 #39

Polarization: Horizontal

Standard: FCC PK

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 17/11/11/

Temp.(C)/Hum.(%) 25 C / 55 %

Time: 16/21/05

EUT: SkanFlexi

Engineer Signature: star

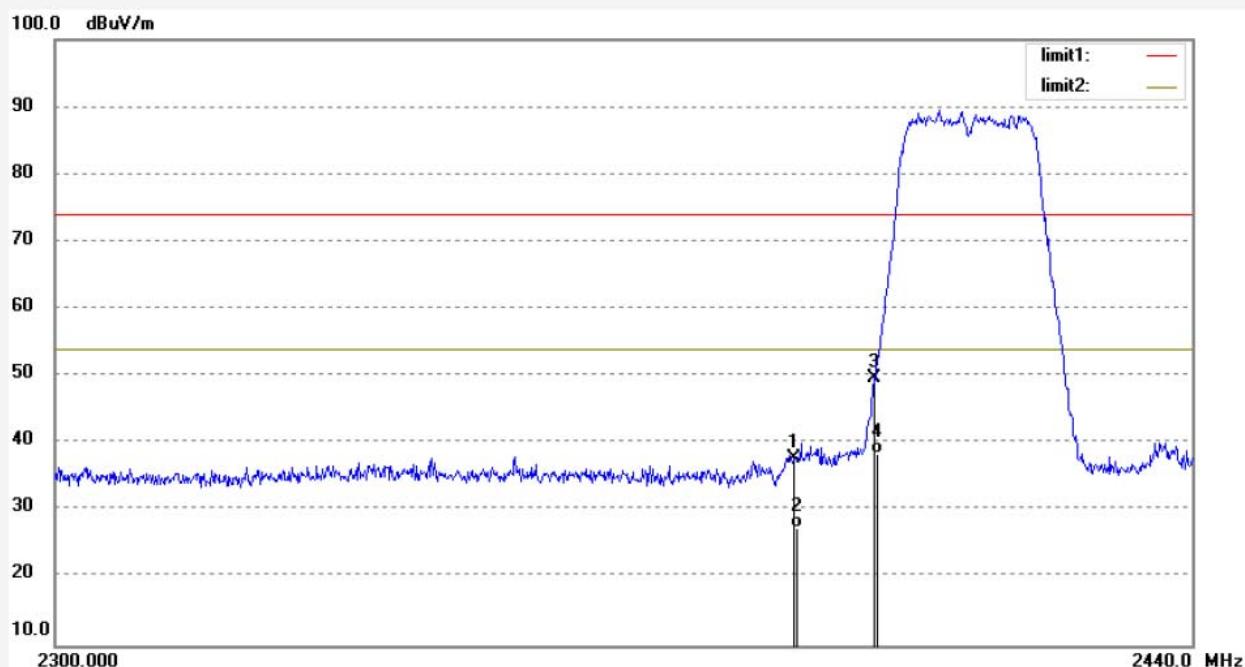
Mode: TX Channel 1(802.11n)

Distance: 3m

Model: QuickScan II

Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD

Note: Report No.:ATE20172157



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	43.63	-5.89	37.74	74.00	-36.26	peak			
2	2390.000	33.40	-5.89	27.51	54.00	-26.49	AVG	250	84	
3	2400.000	55.57	-5.80	49.77	74.00	-24.23	peak			
4	2400.000	44.20	-5.80	38.40	54.00	-15.60	AVG	250	178	



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Site: 1# Chamber
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Job No.: STAR2017 #40

Polarization: Vertical

Standard: FCC PK

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 17/11/11/

Temp.(C)/Hum.(%) 25 C / 55 %

Time: 16/22/56

EUT: SkanFlexi

Engineer Signature: star

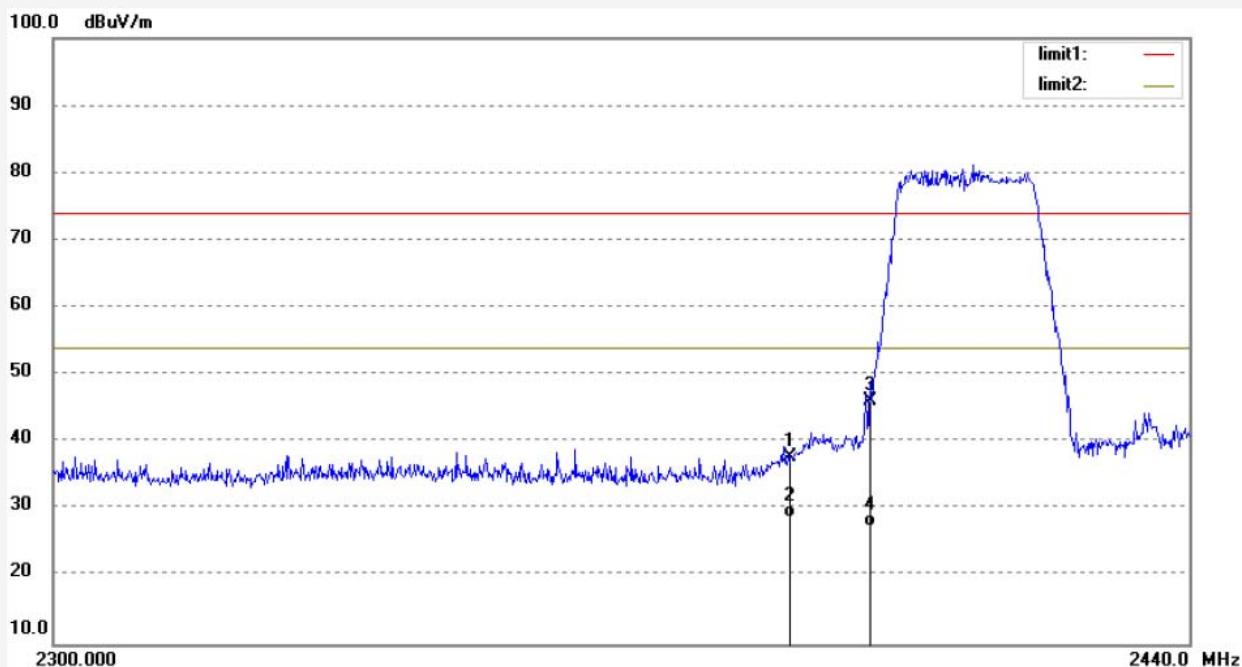
Mode: TX Channel 1(802.11n)

Distance: 3m

Model: QuickScan II

Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD

Note: Report No.:ATE20172157



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	43.59	-5.89	37.70	74.00	-36.30	peak			
2	2390.000	34.68	-5.89	28.79	54.00	-25.21	Avg	150	357	
3	2400.000	52.00	-5.80	46.20	74.00	-27.80	peak			
4	2400.000	33.14	-5.80	27.34	54.00	-26.66	Avg	150	278	



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Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR2017 #42

Polarization: Horizontal

Standard: FCC PK

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 17/11/11/

Temp.(C)/Hum.(%) 25 C / 55 %

Time: 16/26/08

EUT: SkanFlexi

Engineer Signature: star

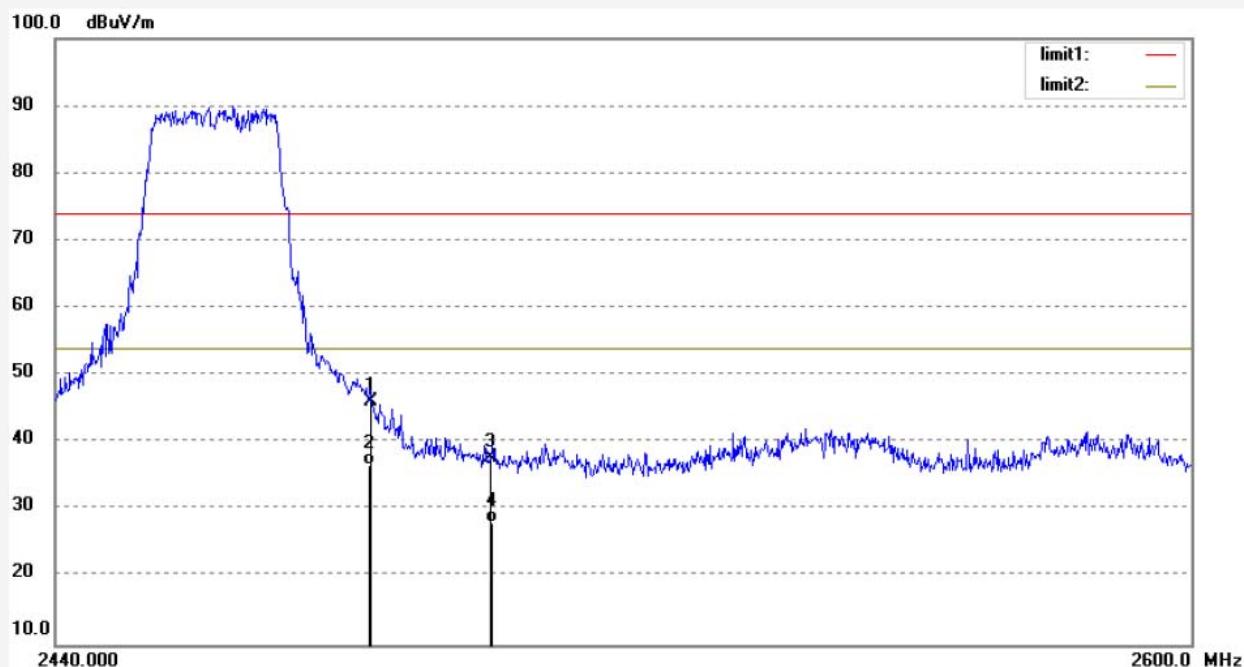
Mode: TX Channel 11(802.11n)

Distance: 3m

Model: QuickScan II

Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD

Note: Report No.:ATE20172157



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	51.61	-5.51	46.10	74.00	-27.90	peak			
2	2483.500	42.10	-5.51	36.59	54.00	-17.41	AVG	250	279	
3	2500.000	43.20	-5.50	37.70	74.00	-36.30	peak			
4	2500.000	33.67	-5.50	28.17	54.00	-25.83	AVG	250	183	



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Site: 1# Chamber
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Fax:+86-0755-26503396

Job No.: STAR2017 #41

Polarization: Vertical

Standard: FCC PK

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 17/11/11/

Temp.(C)/Hum.(%) 25 C / 55 %

Time: 16/24/24

EUT: SkanFlexi

Engineer Signature: star

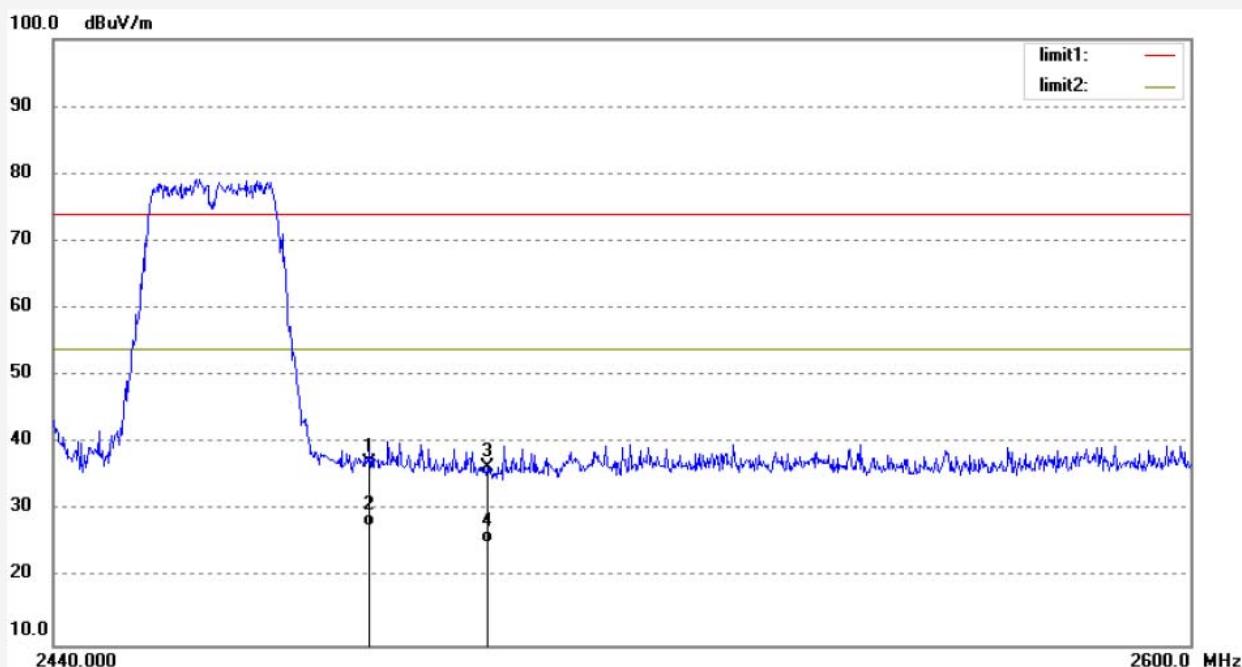
Mode: TX Channel 11(802.11n)

Distance: 3m

Model: QuickScan II

Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD

Note: Report No.:ATE20172157



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	42.61	-5.51	37.10	74.00	-36.90	peak			
2	2483.500	33.10	-5.51	27.59	54.00	-26.41	AVG	150	247	
3	2500.000	41.93	-5.50	36.43	74.00	-37.57	peak			
4	2500.000	30.80	-5.50	25.30	54.00	-28.70	AVG	150	237	

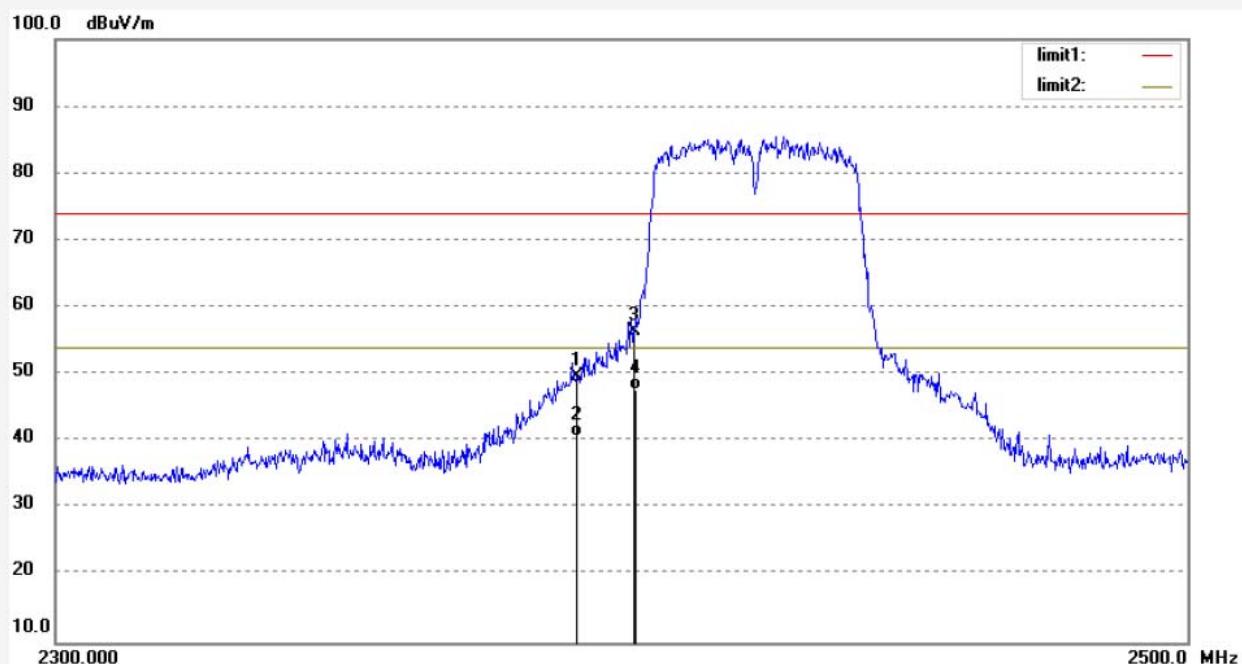


ACCURATE TECHNOLOGY CO., LTD.

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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.:	STAR2017 #43	Polarization:	Horizontal
Standard:	FCC PK	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	17/11/11/
Temp.(C)/Hum.(%)	25 C / 55 %	Time:	16/28/29
EUT:	SkanFlexi	Engineer Signature:	star
Mode:	TX Channel 3(802.11n)40MHz	Distance:	3m
Model:	QuickScan II		
Manufacturer:	WUXI OPULEN TECHNOLOGY CO.,LTD		
Note:	Report No.:ATE20172157		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	55.65	-5.89	49.76	74.00	-24.24	peak			
2	2390.000	46.71	-5.89	40.82	54.00	-13.18	AVG	250	278	
3	2400.000	62.18	-5.80	56.38	74.00	-17.62	peak			
4	2400.000	53.40	-5.80	47.60	54.00	-6.40	AVG	200	113	



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Site: 1# Chamber
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Job No.: STAR2017 #44

Polarization: Vertical

Standard: FCC PK

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 17/11/11/

Temp.(C)/Hum.(%) 25 C / 55 %

Time: 16/30/30

EUT: SkanFlexi

Engineer Signature: star

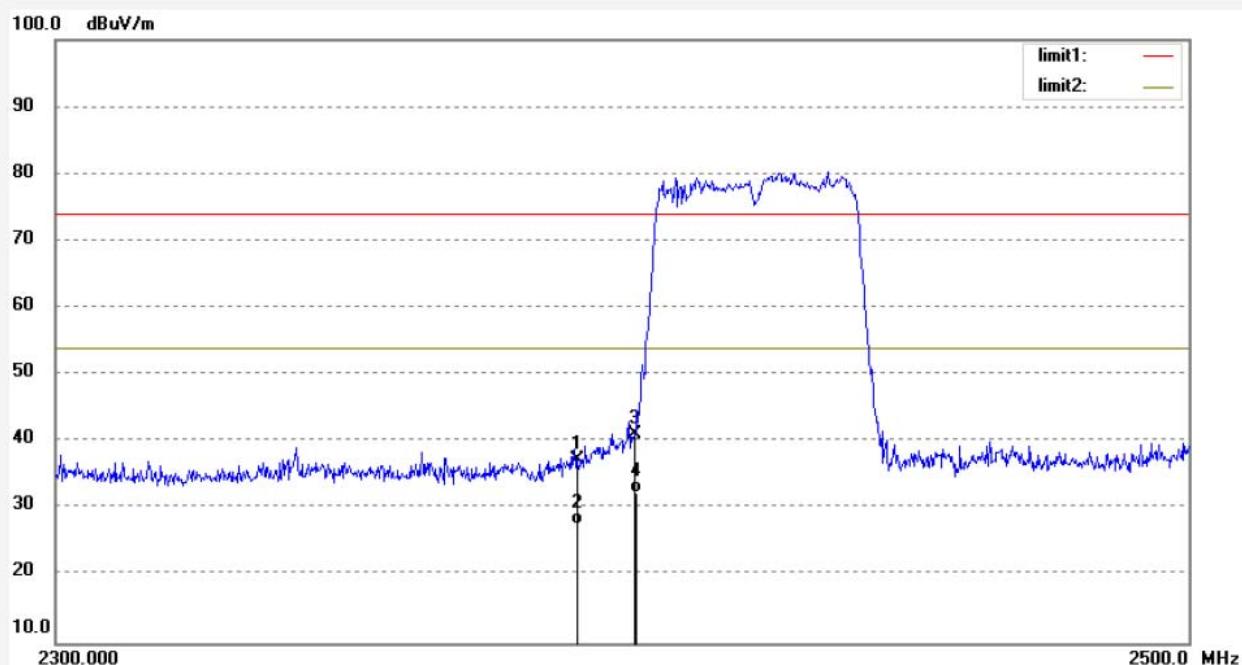
Mode: TX Channel 3(802.11n)40MHz

Distance: 3m

Model: QuickScan II

Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD

Note: Report No.:ATE20172157



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	43.15	-5.89	37.26	74.00	-36.74	peak			
2	2390.000	33.65	-5.89	27.76	54.00	-26.24	AVG	150	304	
3	2400.000	47.05	-5.80	41.25	74.00	-32.75	peak			
4	2400.000	38.10	-5.80	32.30	54.00	-21.70	AVG	150	122	

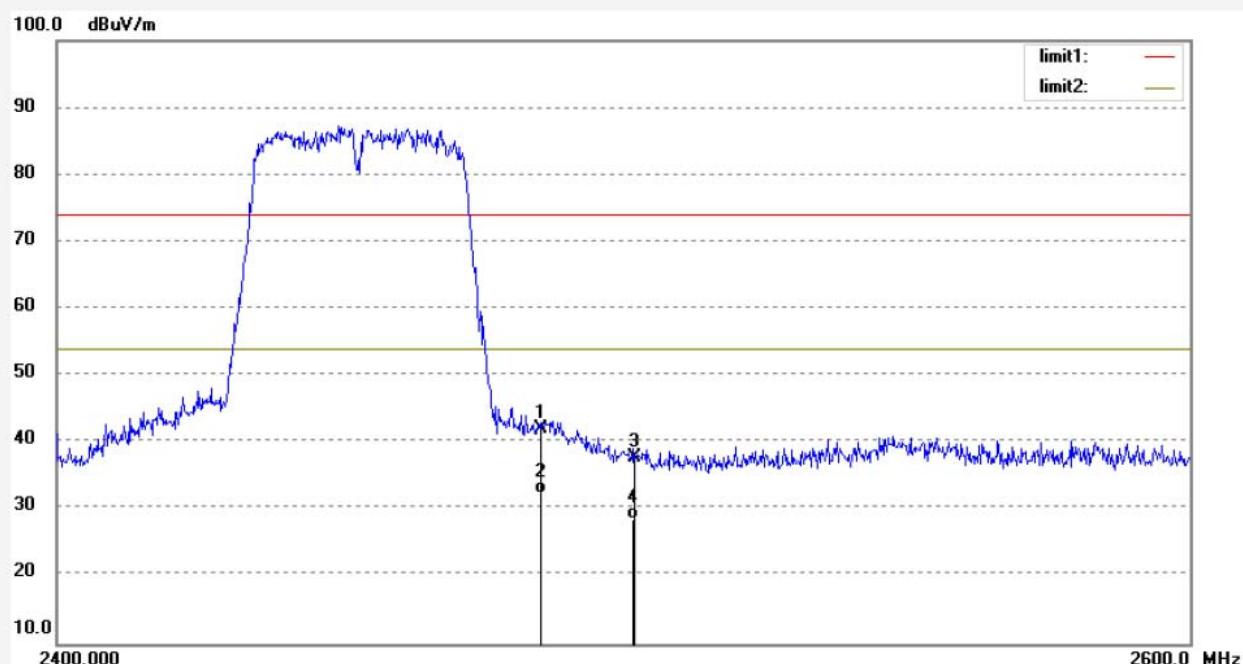


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Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.:	STAR2017 #46	Polarization:	Horizontal
Standard:	FCC PK	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	17/11/11/
Temp.(C)/Hum.(%)	25 C / 55 %	Time:	16/38/22
EUT:	SkanFlexi	Engineer Signature:	star
Mode:	TX Channel 9(802.11n)40MHz	Distance:	3m
Model:	QuickScan II		
Manufacturer:	WUXI OPULEN TECHNOLOGY CO.,LTD		
Note:	Report No.:ATE20172157		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	47.47	-5.51	41.96	74.00	-32.04	peak			
2	2483.500	38.00	-5.51	32.49	54.00	-21.51	AVG	250	122	
3	2500.000	43.38	-5.50	37.88	74.00	-36.12	peak			
4	2500.000	34.07	-5.50	28.57	54.00	-25.43	AVG	300	210	

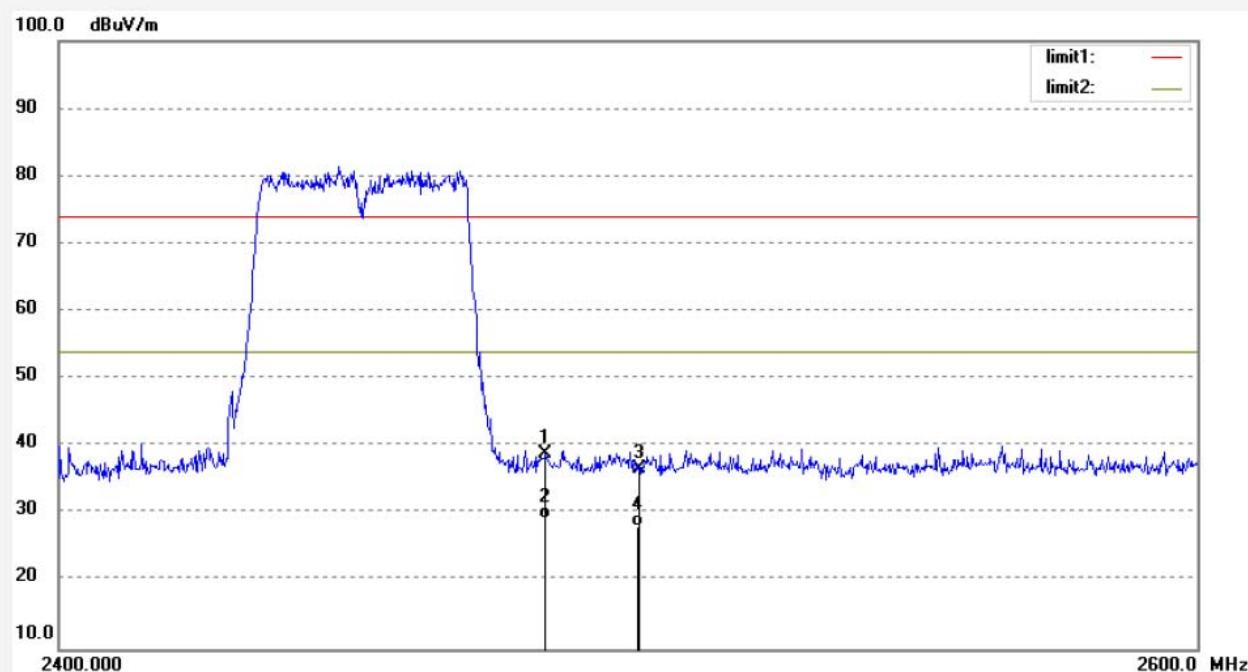


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Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.:	STAR2017 #45	Polarization:	Vertical
Standard:	FCC PK	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	17/11/11/
Temp.(C)/Hum.(%)	25 C / 55 %	Time:	16/36/05
EUT:	SkanFlexi	Engineer Signature:	star
Mode:	TX Channel 9(802.11n)40MHz	Distance:	3m
Model:	QuickScan II		
Manufacturer:	WUXI OPULEN TECHNOLOGY CO.,LTD		
Note:	Report No.:ATE20172157		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	44.41	-5.51	38.90	74.00	-35.10	peak			
2	2483.500	34.70	-5.51	29.19	54.00	-24.81	AVG	150	74	
3	2500.000	42.23	-5.50	36.73	74.00	-37.27	peak			
4	2500.000	33.67	-5.50	28.17	54.00	-25.83	AVG	150	123	

11.RADIATED SPURIOUS EMISSION TEST

11.1.Block Diagram of Test Setup

11.1.1.Block diagram of connection between the EUT and peripherals

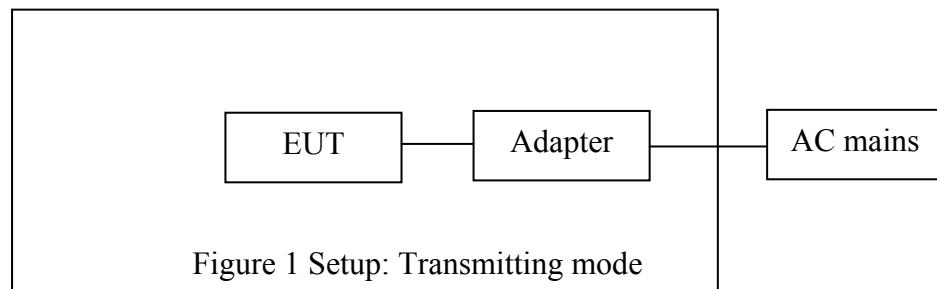
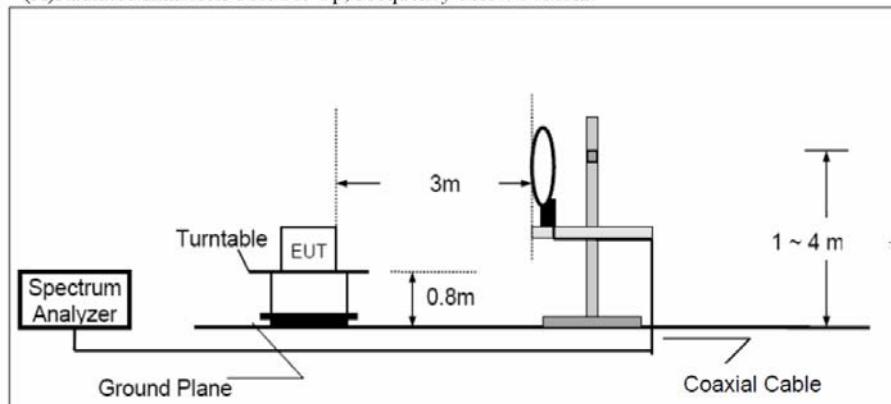


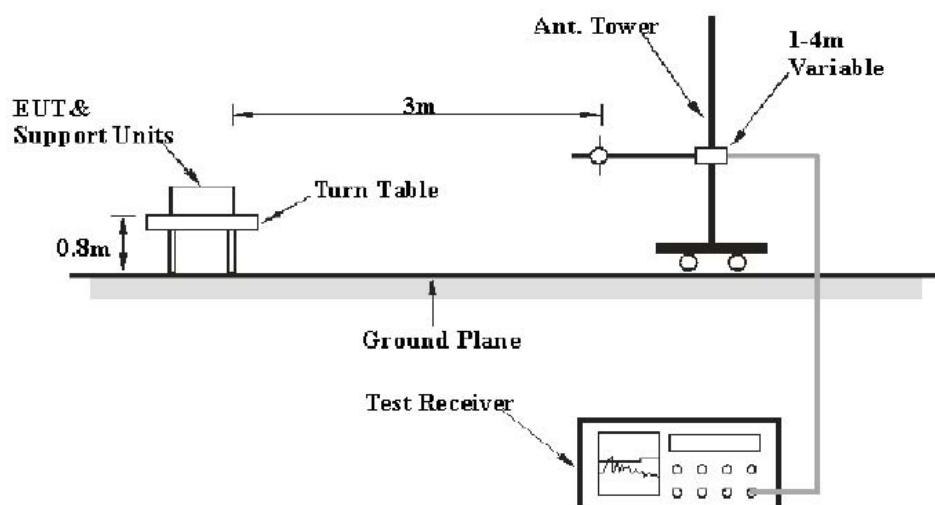
Figure 1 Setup: Transmitting mode

11.1.2.Semi-Anechoic Chamber Test Setup Diagram

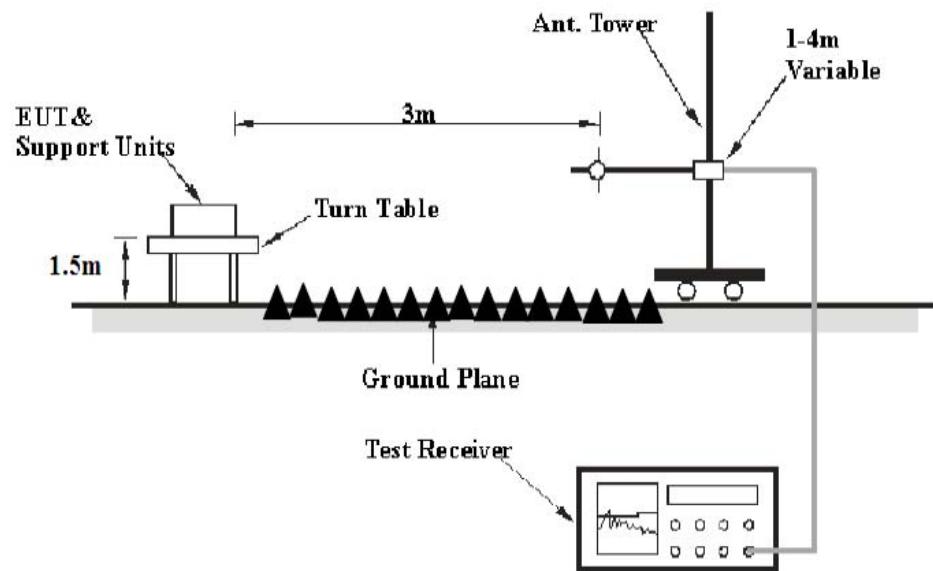
(A)Radiated Emission Test Set-Up, Frequency below 30MHz



(B)Radiated Emission Test Set-Up, Frequency 30MHz-1GHz



(C) Radiated Emission Test Set-Up, Frequency above 1GHz



11.2.The Limit For Section 15.247(d)

Section 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

11.3. Restricted bands of operation

11.3.1. FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510

²Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

11.4. Configuration of EUT on Measurement

The equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

11.5. Operating Condition of EUT

11.5.1. Setup the EUT and simulator as shown as Section 11.1.

11.5.2. Turn on the power of all equipment.

11.5.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462 and 2422-2452MHz. We select 2412MHz, 2437MHz, 2462MHz and 2422MHz, 2437MHz, 2452MHz TX frequency to transmit.

11.6. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground(Below 1GHz). The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The worst-case data rate for this channel to be 1Mbps for 802.11b mode and 6Mbps for 802.11g mode and 150Mbps for 802.11n mode, based on previous with 802.11 WLAN product design architectures.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

11.7.Data Sample

Frequency (MHz)	Reading (dB μ V)	Factor (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Remark
X.XX	48.69	-13.35	35.34	46	-10.66	QP

Frequency(MHz) = Emission frequency in MHz

Reading(dB μ V) = Uncorrected Analyzer/Receiver reading

Factor (dB/m) = Antenna factor + Cable Loss – Amplifier gain

Result(dB μ V/m) = Reading(dB μ V) + Factor(dB/m)

Limit (dB μ V/m) = Limit stated in standard

Margin (dB) = Result(dB μ V/m) - Limit (dB μ V/m)

QP = Quasi-peak Reading

Calculation Formula:

Margin(dB) = Result (dB μ V/m)–Limit(dB μ V/m)

Result(dB μ V/m)= Reading(dB μ V)+ Factor(dB/m)

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit.

11.8.The Field Strength of Radiation Emission Measurement Results

PASS.

- Note:
1. Emissions attenuated more than 20 dB below the permissible value are not reported.
 2. *: Denotes restricted band of operation.
 3. The EUT is tested radiation emission at each test mode (802.11 b/g/n) in three axes. The worst emissions are reported in all test mode and channels.
 4. The radiation emissions from 18-25GHz and 9KHz-30MHz are not reported, because the test values lower than the limits of 20dB.
 5. We tested 802.11b,g,n mode and recorded the worst case data(802.11b) for radiated emission test below 1GHz.

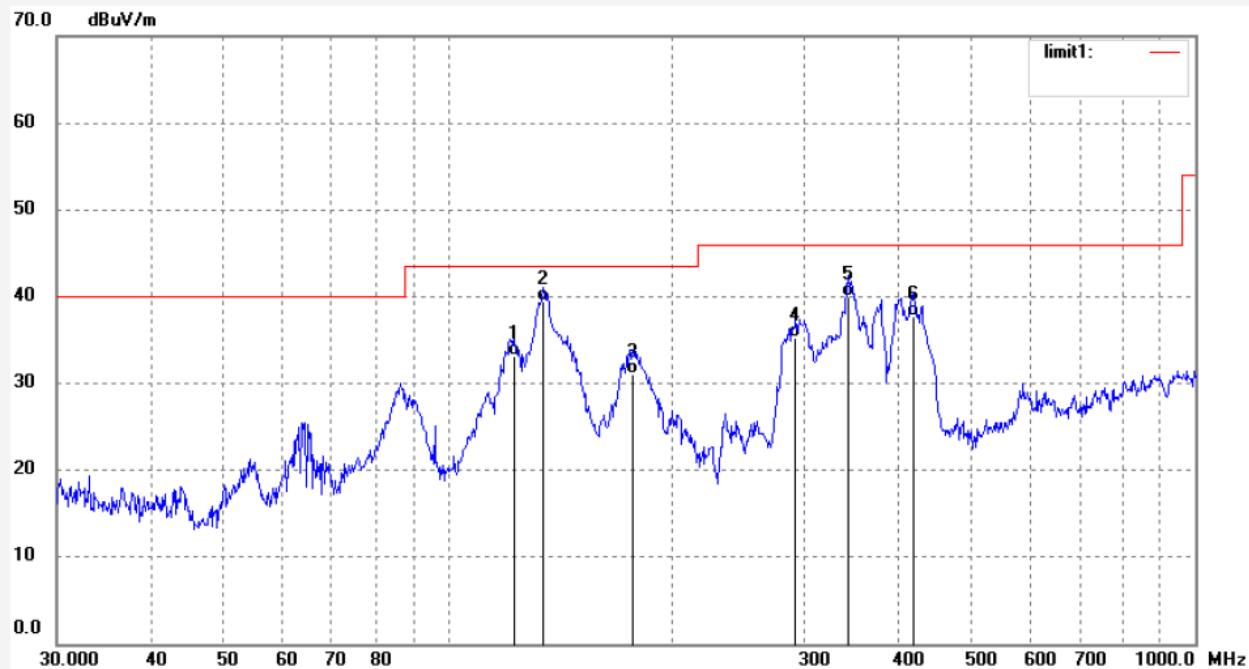
Below 1G



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Job No.: Frank2017 #331	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/11/11/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 11/10/54
EUT: SkanFlexi	Engineer Signature:
Mode: TX Channel 1(802.11b)	Distance: 3m
Model: QuickScan II	
Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD	
Note: Report NO.:ATE20172157	



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	122.8340	46.45	-13.37	33.08	43.50	-10.42	QP	200	123	
2	134.0882	53.45	-13.92	39.53	43.50	-3.97	QP	200	82	
3	176.8877	44.45	-13.42	31.03	43.50	-12.47	QP	200	43	
4	292.0582	44.54	-9.23	35.31	46.00	-10.69	QP	200	126	
5	343.1800	47.56	-7.63	39.93	46.00	-6.07	QP	200	144	
6	419.1080	43.45	-5.79	37.66	46.00	-8.34	QP	200	345	

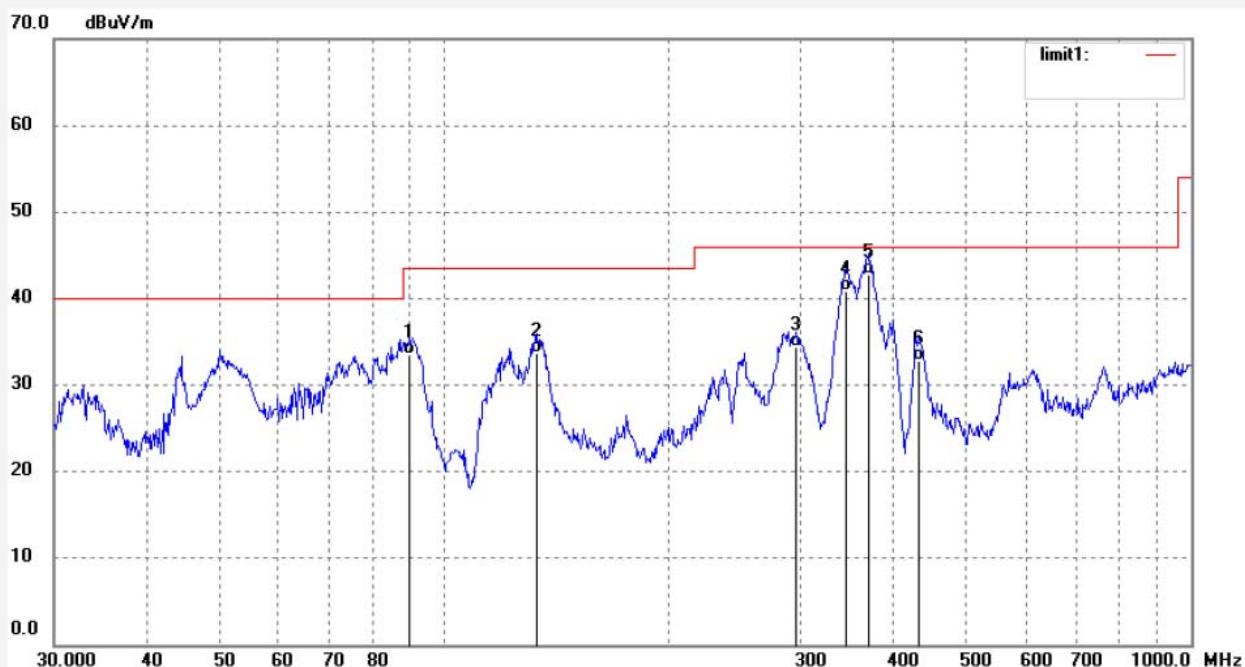


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Site: 2# Chamber
Tel:+86-0755-26503290
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Job No.: Frank2017 #330	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/11/11/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 11/10/34
EUT: SkanFlexi	Engineer Signature:
Mode: TX Channel 1(802.11b)	Distance: 3m
Model: QuickScan II	
Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD	
Note: Report NO.:ATE20172157	



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	89.9047	48.45	-15.01	33.44	43.50	-10.06	QP	100	123	
2	132.6850	47.48	-13.87	33.61	43.50	-9.89	QP	100	121	
3	296.1836	43.54	-9.09	34.45	46.00	-11.55	QP	100	248	
4	345.5951	48.45	-7.53	40.92	46.00	-5.08	QP	100	234	
5	369.4045	50.00	-7.16	42.84	46.00	-3.16	QP	100	157	
6	431.0316	38.45	-5.60	32.85	46.00	-13.15	QP	100	245	

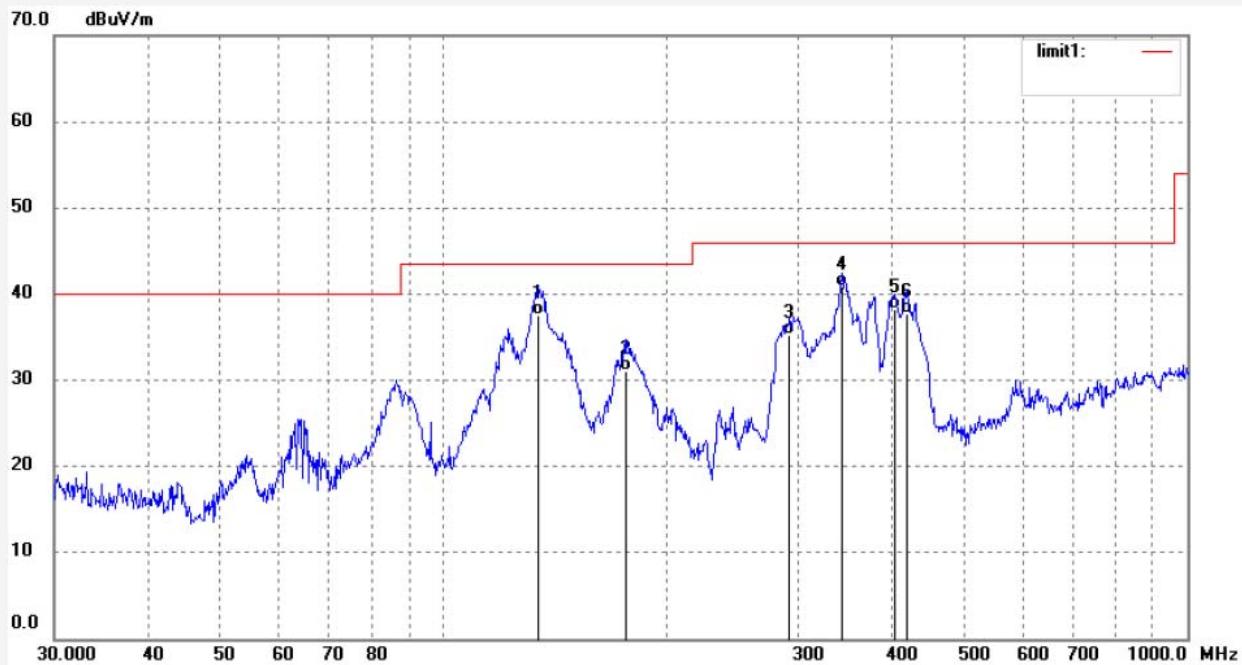


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Job No.:	Frank2017 #332	Polarization:	Horizontal
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	17/11/11/
Temp.(C)/Hum.(%)	23 C / 48 %	Time:	11/10/57
EUT:	SkanFlexi	Engineer Signature:	
Mode:	TX Channel 6(802.11b)	Distance:	3m
Model:	QuickScan II		
Manufacturer:	WUXI OPULEN TECHNOLOGY CO.,LTD		
Note:	Report NO.:ATE20172157		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	134.0882	51.45	-13.92	37.53	43.50	-5.97	QP	200	359	
2	175.6516	44.45	-13.47	30.98	43.50	-12.52	QP	200	115	
3	292.0581	44.45	-9.23	35.22	46.00	-10.78	QP	200	234	
4	343.1800	48.45	-7.63	40.82	46.00	-5.18	QP	200	123	
5	404.6664	44.50	-6.34	38.16	46.00	-7.84	QP	200	145	
6	419.1080	43.45	-5.79	37.66	46.00	-8.34	QP	200	312	

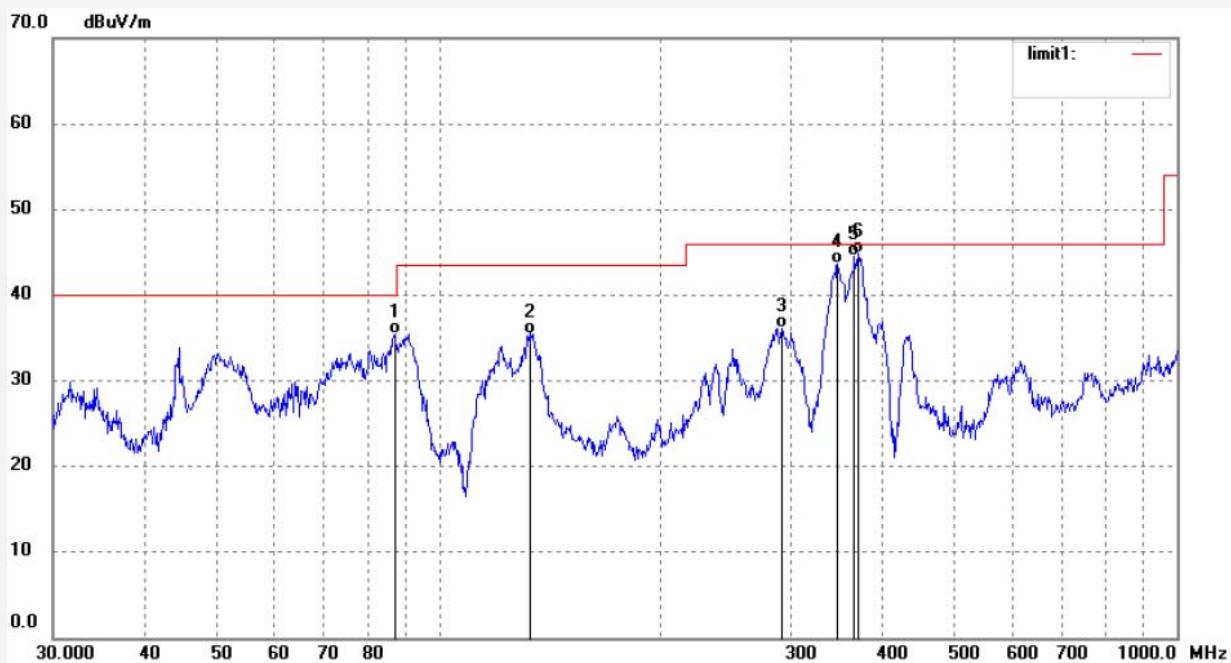


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Site: 2# Chamber
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Fax:+86-0755-26503396

Job No.: Frank2017 #333	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/11/11/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 11/11/17
EUT: SkanFlexi	Engineer Signature:
Mode: TX Channel 6(802.11b)	Distance: 3m
Model: QuickScan II	
Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD	
Note: Report NO.:ATE20172157	



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	87.1115	50.69	-15.20	35.49	40.00	-4.51	QP	100	147	
2	134.0882	49.30	-13.92	35.38	43.50	-8.12	QP	100	163	
3	292.0581	45.44	-9.23	36.21	46.00	-9.79	QP	100	76	
4	346.8091	51.10	-7.50	43.60	46.00	-2.40	QP	100	139	
5	365.5391	51.77	-7.21	44.56	46.00	-1.44	QP	100	241	
6	370.7022	52.01	-7.15	44.86	46.00	-1.14	QP	100	196	



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Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: Frank2017 #335

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 17/11/11/

Temp.(C)/Hum.(%) 23 C / 48 %

Time: 11/13/12

EUT: SkanFlexi

Engineer Signature:

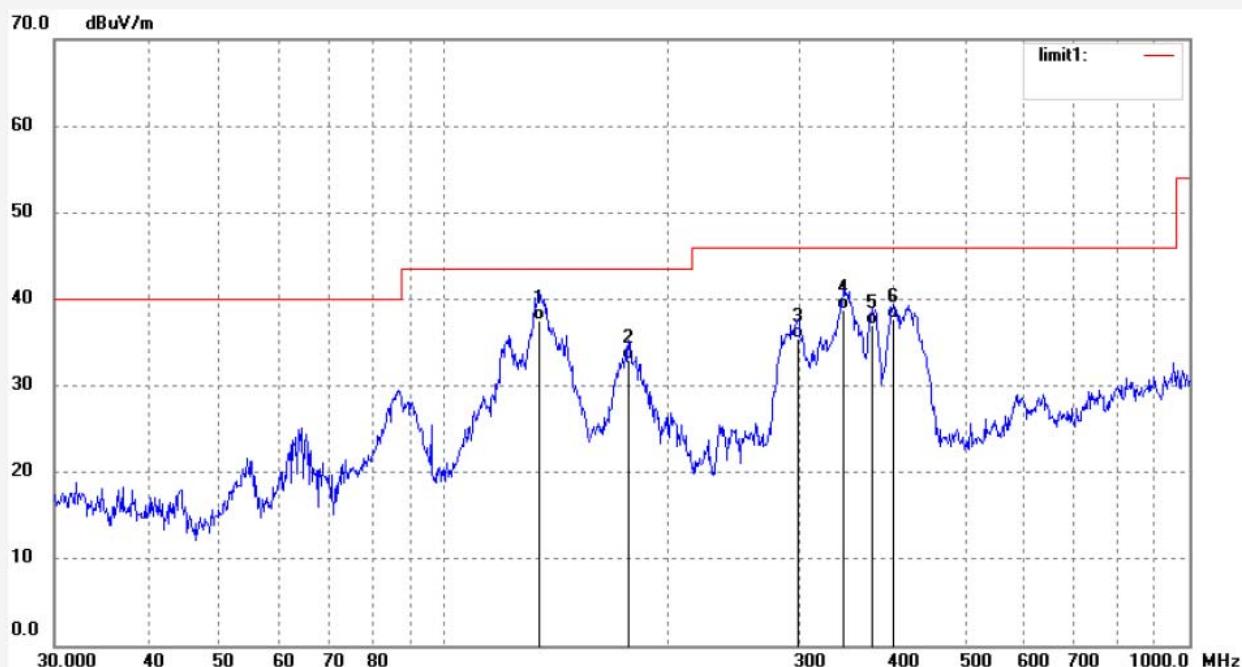
Mode: TX Channel 11(802.11b)

Distance: 3m

Model: QuickScan II

Manufacturer: WUXI OPULEN TECHNOLOGY CO.,LTD

Note: Report NO.:ATE20172157



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	134.0882	51.44	-13.92	37.52	43.50	-5.98	QP	200	287	
2	176.8878	46.45	-13.42	33.03	43.50	-10.47	QP	200	354	
3	298.2681	44.47	-9.04	35.43	46.00	-10.57	QP	200	183	
4	343.1800	46.45	-7.63	38.82	46.00	-7.18	QP	200	247	
5	374.6225	44.12	-7.08	37.04	46.00	-8.96	QP	200	134	
6	400.4319	44.15	-6.42	37.73	46.00	-8.27	QP	200	12	

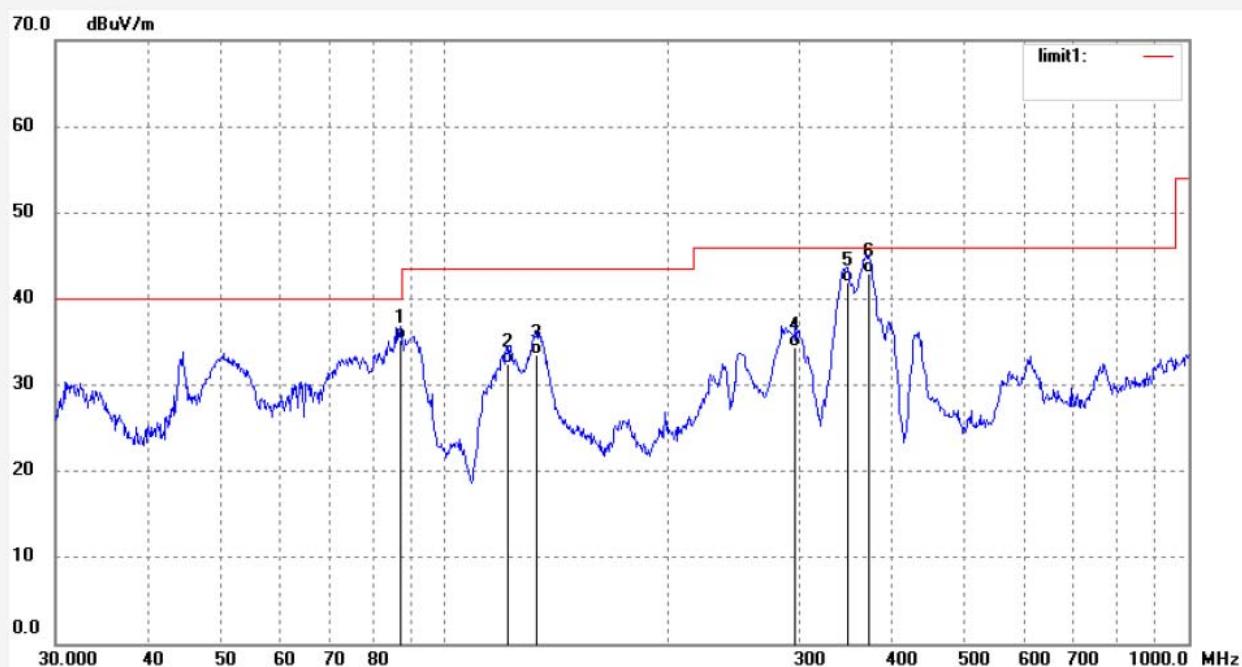


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Site: 2# Chamber
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Job No.:	Frank2017 #334	Polarization:	Vertical
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	17/11/11/
Temp.(C)/Hum.(%)	23 C / 48 %	Time:	11/12/38
EUT:	SkanFlexi	Engineer Signature:	
Mode:	TX Channel 11(802.11b)	Distance:	3m
Model:	QuickScan II		
Manufacturer:	WUXI OPULEN TECHNOLOGY CO.,LTD		
Note:	Report NO.:ATE20172157		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	87.1116	50.45	-15.19	35.26	40.00	-4.74	QP	100	121	
2	121.5485	45.64	-13.23	32.41	43.50	-11.09	QP	100	241	
3	132.6850	47.45	-13.87	33.58	43.50	-9.92	QP	100	294	
4	296.1836	43.50	-9.09	34.41	46.00	-11.59	QP	100	360	
5	346.8091	49.45	-7.50	41.95	46.00	-4.05	QP	100	270	
6	372.0045	50.12	-7.13	42.99	46.00	-3.01	QP	100	181	