

APPLICATION CERTIFICATION FCC Part 15C
On Behalf of
Chuango Security Technology Corporation

UFO Panoramic WiFi HD Camera
Model No.: UFO, PT-180, PT-180H

FCC ID: RJY-UFO

Prepared for : Chuango Security Technology Corporation.
Address : Room 6-17, Overseas Students Pioneer Park,
No.108, Jiangbin East Road, Economic &
Technological Development Zone, Fuzhou 350015,
China.

Prepared by : ACCURATE TECHNOLOGY CO., LTD
Address : F1, Bldg. A&D, Chan Yuan New Material Port,
Keyuan Rd. Science & Industry Park, Nan Shan,
Shenzhen, Guangdong P.R. China
Tel: (0755) 26503290
Fax: (0755) 26503396

Report No. : ATE20170411
Date of Test : Apr. 01, 2017-May 14, 2017
Date of Report : May 15, 2017

TABLE OF CONTENTS

Description	Page
Test Report Certification	
1. GENERAL INFORMATION	5
1.1. Description of Device (EUT).....	5
1.2. Carrier Frequency of Channels	6
1.3. Accessory and Auxiliary Equipment	6
1.4. Description of Test Facility	7
1.5. Measurement Uncertainty.....	7
2. MEASURING DEVICE AND TEST EQUIPMENT	8
3. OPERATION OF EUT DURING TESTING	9
3.1. Operating Mode	9
3.2. Configuration and peripherals	9
4. TEST PROCEDURES AND RESULTS	10
5. POWER LINE CONDUCTED MEASUREMENT	11
5.1. Block Diagram of Test Setup.....	11
5.2. Power Line Conducted Emission Measurement Limits.....	11
5.3. Configuration of EUT on Measurement	11
5.4. Operating Condition of EUT	11
5.5. Test Procedure	12
5.6. Power Line Conducted Emission Measurement Results	12
6. 6DB BANDWIDTH MEASUREMENT	17
6.1. Block Diagram of Test Setup.....	17
6.2. The Requirement For Section 15.247(a)(2).....	17
6.3. EUT Configuration on Measurement	17
6.4. Operating Condition of EUT	17
6.5. Test Procedure	17
6.6. Test Result	18
7. DUTY CYCLE MEASUREMENT.....	25
7.1. Block Diagram of Test Setup.....	25
7.2. EUT Configuration on Measurement	25
7.3. Operating Condition of EUT	25
7.4. Test Procedure	25
7.5. Test Result	26
8. MAXIMUM CONDUCTED (AVERAGE) OUTPUT POWER	33
8.1. Block Diagram of Test Setup.....	33
8.2. The Requirement For Section 15.247(b)(3).....	33
8.3. EUT Configuration on Measurement	33
8.4. Operating Condition of EUT	33
8.5. Test Procedure	33
8.6. Test Result	34
9. POWER SPECTRAL DENSITY MEASUREMENT	41
9.1. Block Diagram of Test Setup.....	41
9.2. The Requirement For Section 15.247(e).....	41
9.3. EUT Configuration on Measurement	41

9.4.	Operating Condition of EUT	41
9.5.	Test Procedure	41
9.6.	Test Result	42
10.	BAND EDGE COMPLIANCE TEST	50
10.1.	Block Diagram of Test Setup.....	错误！未定义书签。
10.2.	The Requirement For Section 15.247(d)	50
10.3.	EUT Configuration on Measurement	50
10.4.	Operating Condition of EUT	50
10.5.	Test Procedure	50
10.6.	Test Result	51
11.	RADIATED SPURIOUS EMISSION TEST	73
11.1.	Block Diagram of Test Setup.....	73
11.2.	The Limit For Section 15.247(d)	74
11.3.	Restricted bands of operation	75
11.4.	Configuration of EUT on Measurement	75
11.5.	Operating Condition of EUT	76
11.6.	Test Procedure	76
11.7.	The Field Strength of Radiation Emission Measurement Results	77
12.	99% OCCUPIED BANDWIDTH	108
12.1.	Block Diagram of Test Setup.....	108
12.2.	EUT Configuration on Measurement	108
12.3.	Operating Condition of EUT	108
12.4.	Test Procedure	108
12.5.	Measurement Result	109
13.	ANTENNA REQUIREMENT.....	116
13.1.	The Requirement	116
13.2.	Antenna Construction	116

Test Report Certification

Applicant : Chuango Security Technology Corporation.
Address : Room 6-17, Overseas Students Pioneer Park, No.108, Jiangbin East Road, Economic & Technological Development Zone, Fuzhou 350015, China
Manufacturer : Chuango Security Technology Corporation
Address : Room 6-17, Overseas Students Pioneer Park, No.108, Jiangbin East Road, Economic & Technological Development Zone, Fuzhou 350015, China
Product : UFO Panoramic WiFi HD Camera
Model No. : UFO, PT-180, PT-180H
Trade name : smanos

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247: 2016
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 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 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 ACCURATE TECHNOLOGY CO. LTD.

Date of Test : Apr. 01, 2017-May 14, 2017
Date of Report: May 15, 2017

Prepared by :

(Tim Chang, Engineer)

Approved & Authorized Signer :

(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	UFO Panoramic WiFi HD Camera
Model Number	:	UFO, PT-180, PT-180H
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	:	0dBi
Type of Antenna	:	SISO Antenna
Power Supply	:	DC 5V(Powered by Adapter)
Adapter information	:	Model: SA-US5V Input: AC 100-240V~60Hz 0.3A Output: DC 5.0V 1.0A
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	:	Chuango Security Technology Corporation Room 6-17, Overseas Students Pioneer Park, No.108, Jiangbin East Road, Economic & Technological Development Zone, Fuzhou 350015, China.
Manufacturer Address	:	Chuango Security Technology Corporation Room 6-17, Overseas Students Pioneer Park, No.108, Jiangbin East Road, Economic & Technological Development Zone, Fuzhou 350015, China.
Date of sample received	:	Apr. 01, 2017
Date of Test	:	Apr. 01, 2017-May 14, 2017

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

PC

Manufacturer: LENOVO
M/N: 4290-RT8
S/N: R9-FW93G 11/08

1.4. Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen

Listed by FCC
The Registration Number is 752051

Listed by Industry Canada
The Registration Number is 5077A-2

Accredited by China National Accreditation Committee
for Laboratories
The Certificate Registration Number is L3193

Name of Firm : ACCURATE TECHNOLOGY CO. LTD
Site Location : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.
Science & Industry Park, Nanshan, Shenzhen, Guangdong
P.R. China

1.5. Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

Radiated emission expanded uncertainty = 3.08dB, k=2
(9kHz-30MHz)

Radiated emission expanded uncertainty = 4.42dB, k=2
(30MHz-1000MHz)

Radiated emission expanded uncertainty = 4.06dB, k=2
(Above 1GHz)

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

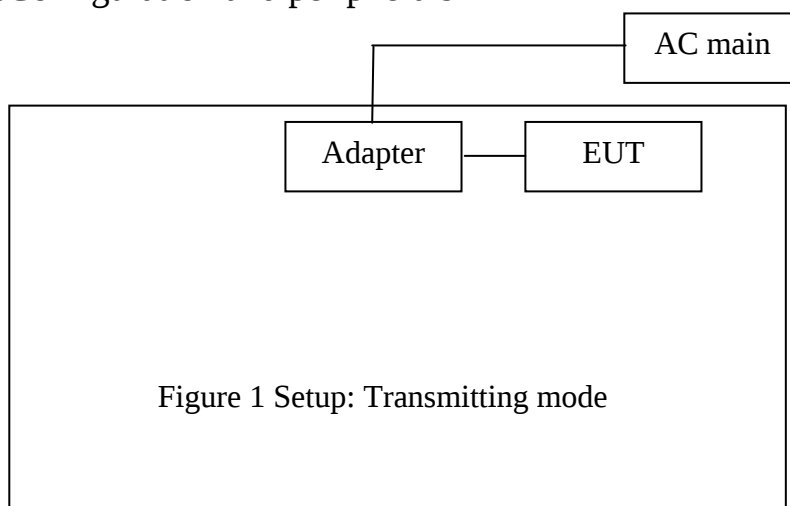


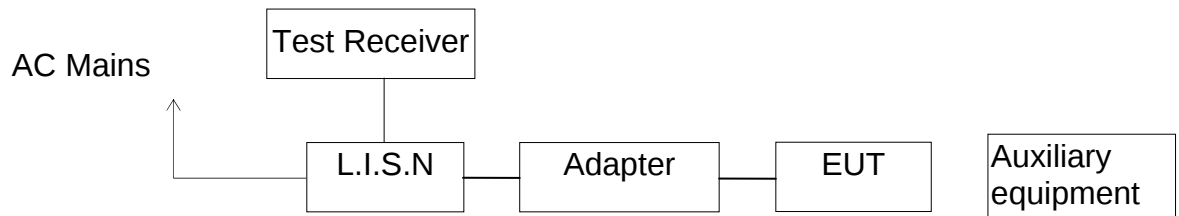
Figure 1 Setup: Transmitting mode

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	OBW	Compliant
Section 15.247(e)	Power Spectral Density Test	Compliant
Section 15.247(b)(3)	Maximum Peak 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: UFO Panoramic WiFi HD Camera)

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 following 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. Power Line Conducted Emission Measurement Results

PASS.

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

Emissions attenuated more than 20 dB below the permissible value are not reported.

The spectral diagrams are attached as below.

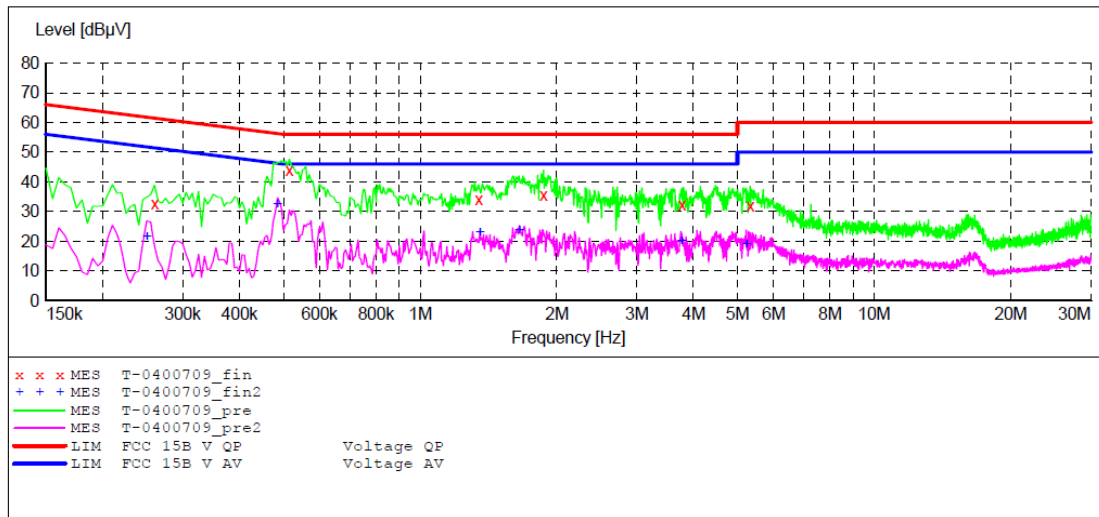
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: UFO Panoramic WiFi HD Camera M/N:PT-180H
Manufacturer: Chuango
Operating Condition: WiFi operation
Test Site: 1#Shielding Room
Operator: STAR
Test Specification: L 120V/60Hz
Comment: Report No.:ATE20170411
Start of Test: 4/6/2017 / 4:10:44PM

SCAN TABLE: "V 9K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
Start Stop Step Detector Meas. IF Transducer
Frequency Frequency Width Time Bandw.
9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz NSLK8126 2008
Average
150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
Average



MEASUREMENT RESULT: "T-0400709_fin"

4/6/2017 4:12PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.260000	32.60	10.6	61.4	28.8	QP	L1	GND
0.515000	43.90	10.7	56	12.1	QP	L1	GND
1.345000	34.00	10.9	56	22.0	QP	L1	GND
1.870000	35.50	11.0	56	20.5	QP	L1	GND
3.770000	32.10	11.1	56	23.9	QP	L1	GND
5.330000	31.70	11.2	60	28.3	QP	L1	GND

MEASUREMENT RESULT: "T-0400709_fin2"

4/6/2017 4:12PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.250000	21.80	10.6	51.8	30.0	AV	L1	GND
0.485000	32.40	10.7	46.1	13.9	AV	L1	GND
1.355000	23.00	10.9	46	23.0	AV	L1	GND
1.655000	23.80	10.9	46	22.2	AV	L1	GND
3.770000	20.10	11.1	46	25.9	AV	L1	GND
5.230000	19.00	11.2	50	31.0	AV	L1	GND

ACCURATE TECHNOLOGY CO., LTD

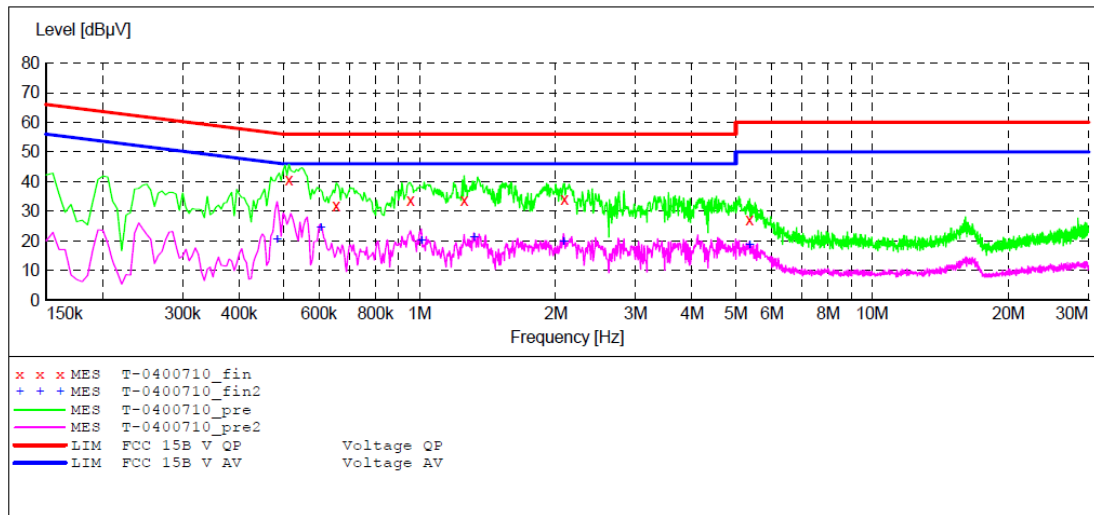
CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: UFO Panoramic WiFi HD Camera M/N:PT-180H
 Manufacturer: Chuango
 Operating Condition: WiFi operation
 Test Site: 1#Shielding Room
 Operator: STAR
 Test Specification: N 120V/60Hz
 Comment: Report No.:ATE20170411
 Start of Test: 4/6/2017 / 4:12:32PM

SCAN TABLE: "V 9K-30MHz fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	Average			
			QuasiPeak	1.0 s	9 kHz	NSLK8126 2008
			Average			



MEASUREMENT RESULT: "T-0400710_fin"

4/6/2017 4:16PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.515000	40.40	10.7	56	15.6	QP	N	GND
0.655000	32.00	10.8	56	24.0	QP	N	GND
0.955000	33.60	10.8	56	22.4	QP	N	GND
1.255000	33.50	10.9	56	22.5	QP	N	GND
2.090000	34.20	11.0	56	21.8	QP	N	GND
5.360000	27.10	11.2	60	32.9	QP	N	GND

MEASUREMENT RESULT: "T-0400710_fin2"

4/6/2017 4:16PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.485000	20.70	10.7	46.3	25.6	AV	N	GND
0.605000	24.40	10.7	46	21.6	AV	N	GND
1.010000	20.20	10.8	46	25.8	AV	N	GND
1.320000	21.20	10.9	46	24.8	AV	N	GND
2.080000	19.80	11.0	46	26.2	AV	N	GND
5.360000	18.60	11.2	50	31.4	AV	N	GND

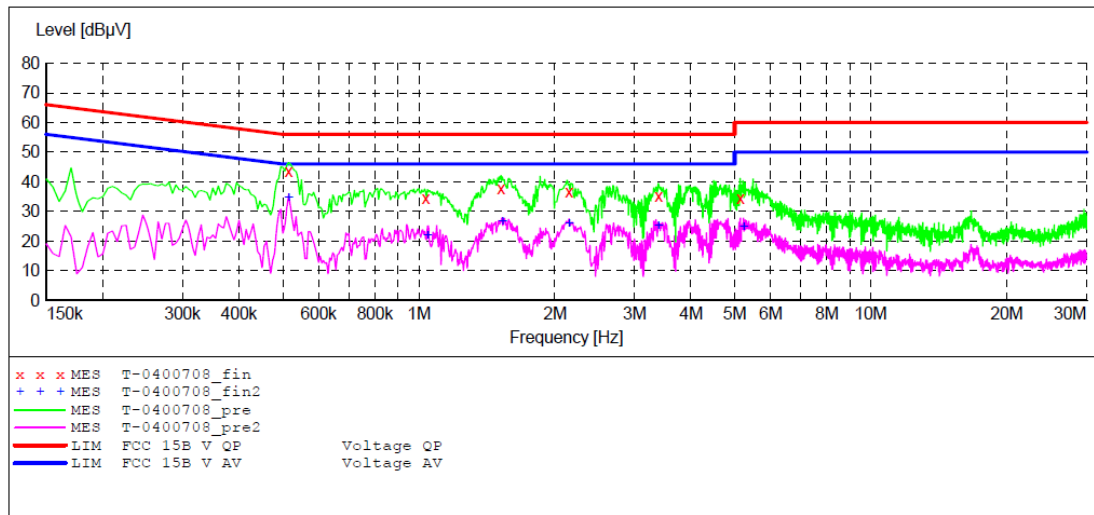
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: UFO Panoramic WiFi HD Camera M/N:PT-180H
 Manufacturer: Chuango
 Operating Condition: WiFi operation
 Test Site: 1#Shielding Room
 Operator: STAR
 Test Specification: L 240V/60Hz
 Comment: Report No.:ATE20170411
 Start of Test: 4/6/2017 / 4:02:00PM

SCAN TABLE: "V 9K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz NSLK8126 2008
 Average
 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "T-0400708_fin"

4/6/2017 4:05PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.515000	43.50	10.7	56	12.5	QP	L1	GND
1.035000	34.40	10.9	56	21.6	QP	L1	GND
1.520000	37.60	10.9	56	18.4	QP	L1	GND
2.150000	36.60	11.0	56	19.4	QP	L1	GND
3.390000	35.20	11.1	56	20.8	QP	L1	GND
5.140000	34.40	11.2	60	25.6	QP	L1	GND

MEASUREMENT RESULT: "T-0400708_fin2"

4/6/2017 4:05PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.515000	34.80	10.7	46	11.2	AV	L1	GND
1.045000	21.90	10.9	46	24.1	AV	L1	GND
1.530000	26.80	10.9	46	19.2	AV	L1	GND
2.150000	26.10	11.0	46	19.9	AV	L1	GND
3.390000	25.40	11.1	46	20.6	AV	L1	GND
5.230000	24.80	11.2	50	25.2	AV	L1	GND

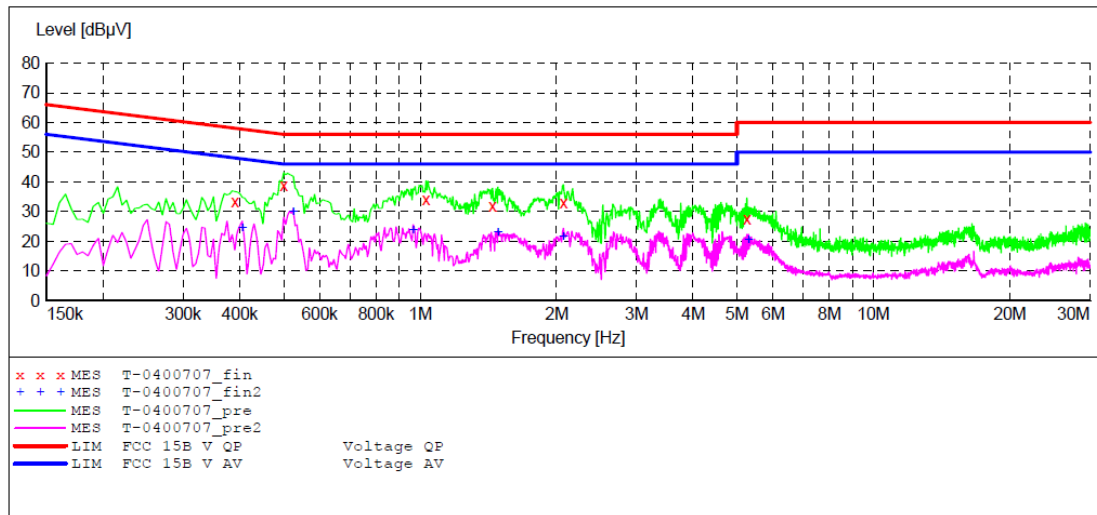
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: UFO Panoramic WiFi HD Camera M/N:PT-180H
 Manufacturer: Chuango
 Operating Condition: WiFi operation
 Test Site: 1#Shielding Room
 Operator: STAR
 Test Specification: N 240V/60Hz
 Comment: Report No.:ATE20170411
 Start of Test: 4/6/2017 / 3:57:31PM

SCAN TABLE: "V 9K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz NSLK8126 2008
 Average
 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "T-0400707_fin"

4/6/2017 4:01PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.390000	33.40	10.7	58.1	24.7	QP	N	GND
0.500000	38.60	10.7	56	17.4	QP	N	GND
1.030000	33.90	10.8	56	22.1	QP	N	GND
1.445000	31.80	10.9	56	24.2	QP	N	GND
2.070000	33.10	11.0	56	22.9	QP	N	GND
5.260000	27.50	11.2	60	32.5	QP	N	GND

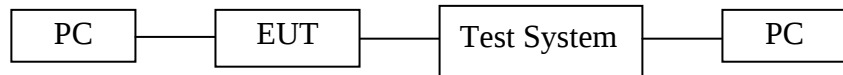
MEASUREMENT RESULT: "T-0400707_fin2"

4/6/2017 4:01PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.405000	24.50	10.7	47.8	23.3	AV	N	GND
0.525000	30.10	10.7	46	15.9	AV	N	GND
0.965000	23.70	10.8	46	22.3	AV	N	GND
1.485000	23.00	10.9	46	23.0	AV	N	GND
2.070000	21.80	11.0	46	24.2	AV	N	GND
5.300000	20.40	11.2	50	29.6	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	10.075	> 0.5MHz
Middle	2437	10.095	> 0.5MHz
High	2462	10.085	> 0.5MHz

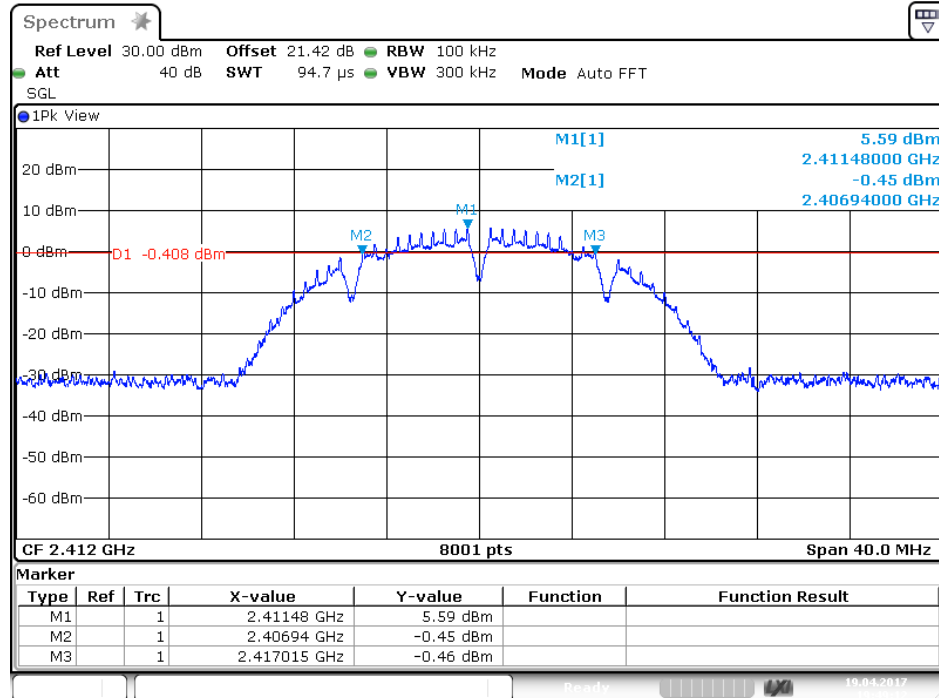
The test was performed with 802.11g			
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2412	16.345	> 0.5MHz
Middle	2437	16.405	> 0.5MHz
High	2462	16.345	> 0.5MHz

The test was performed with 802.11n (Bandwidth: 20 MHz)			
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2412	17.570	> 0.5MHz
Middle	2437	17.585	> 0.5MHz
High	2462	17.600	> 0.5MHz

The test was performed with 802.11n (Bandwidth: 40 MHz)			
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2422	36.050	> 0.5MHz
Middle	2437	35.730	> 0.5MHz
High	2452	35.450	> 0.5MHz

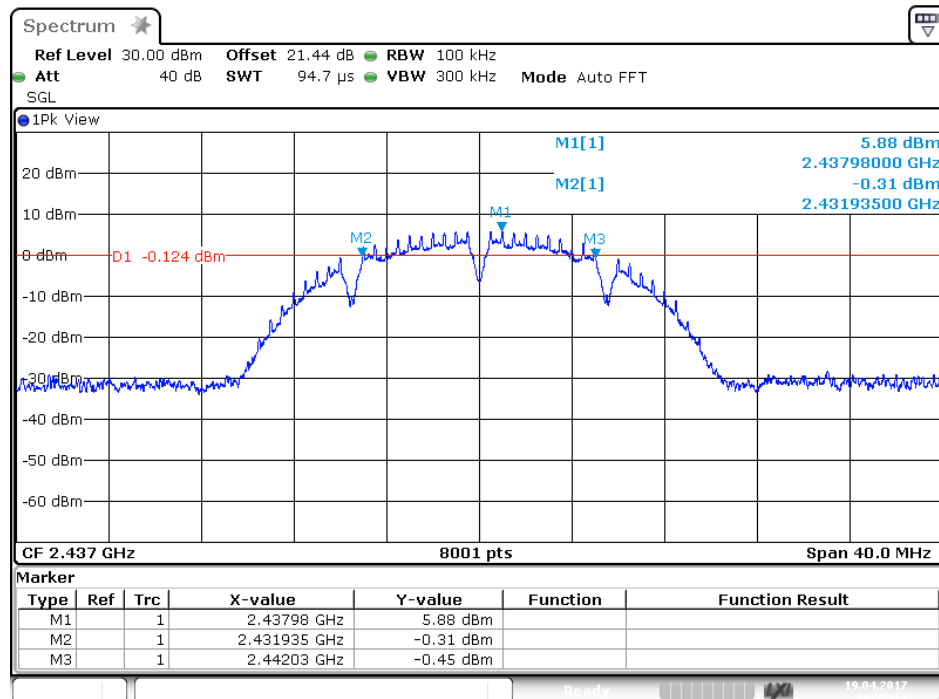
The spectrum analyzer plots are attached as below.

6dB Bandwidth 802.11b Channel Low 2412MHz



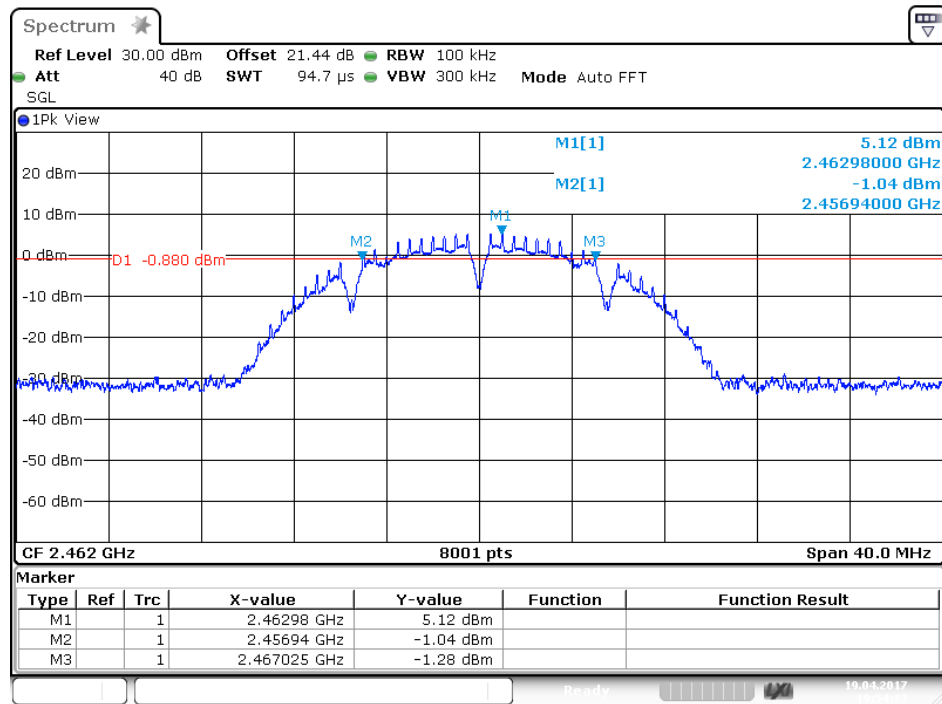
Date: 19.APR.2017 19:49:12

802.11b Channel Middle 2437MHz



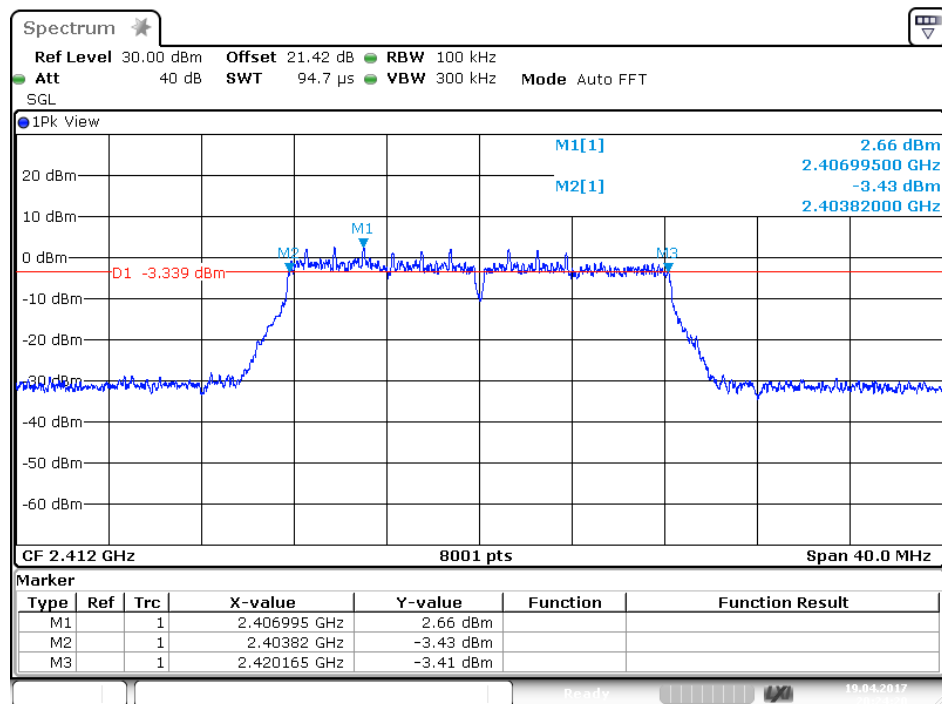
Date: 19.APR.2017 19:52:12

802.11b Channel High 2462MHz



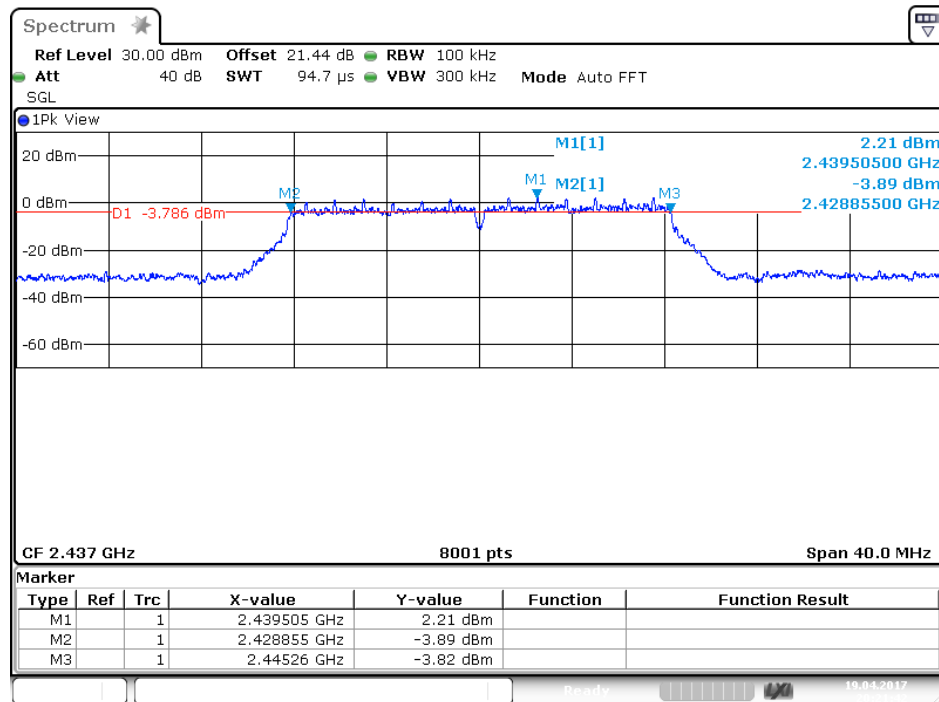
Date: 19.APR.2017 19:54:14

802.11g Channel Low 2412MHz



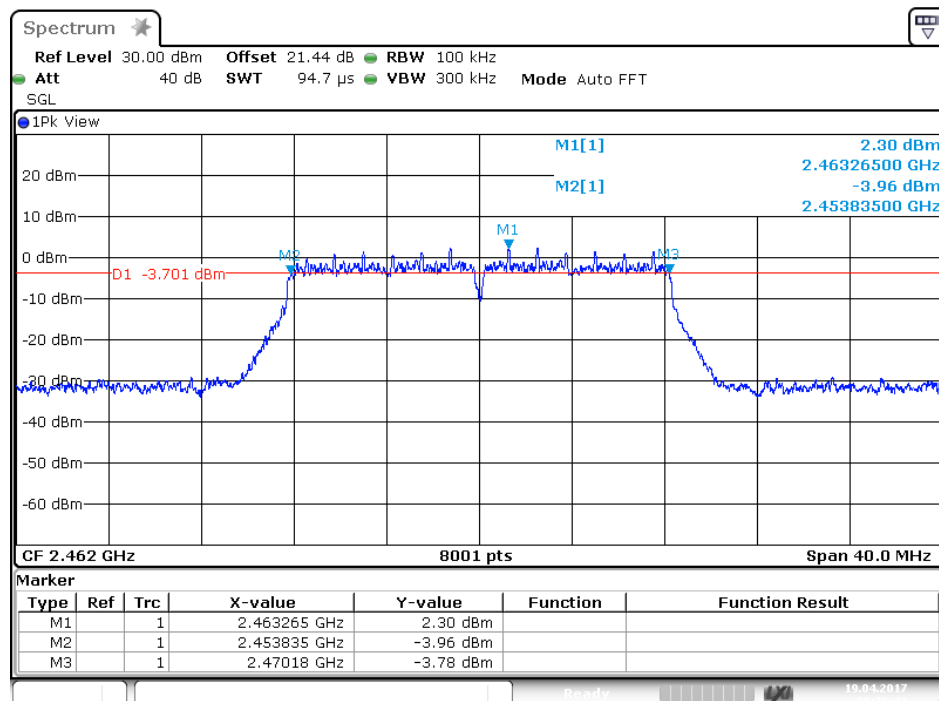
Date: 19.APR.2017 20:24:20

802.11g Channel Middle 2437MHz



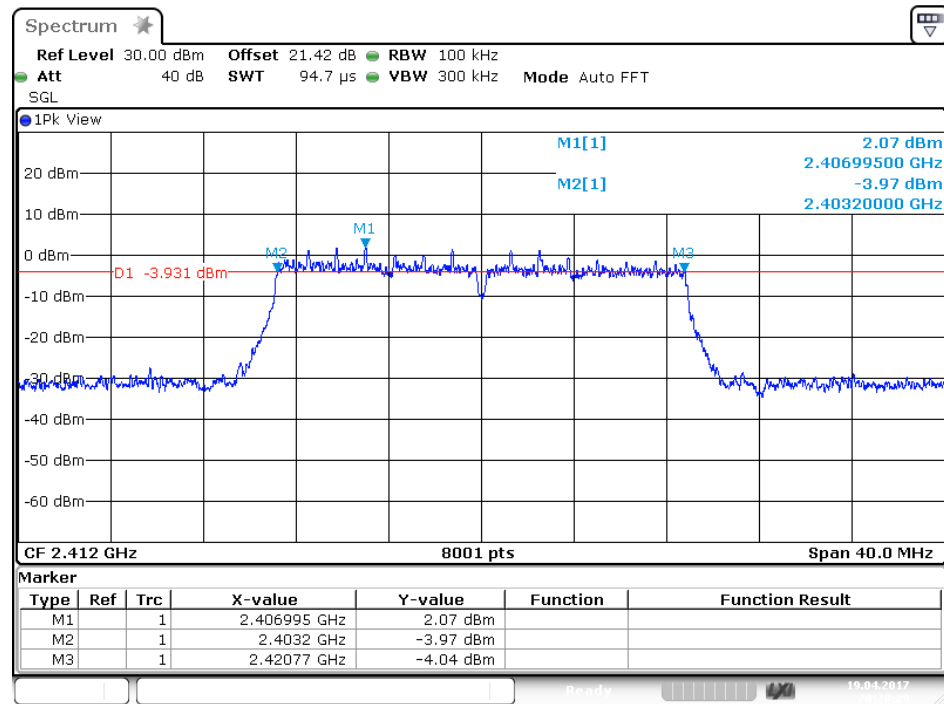
Date: 19.APR.2017 20:21:43

802.11g Channel High 2462MHz



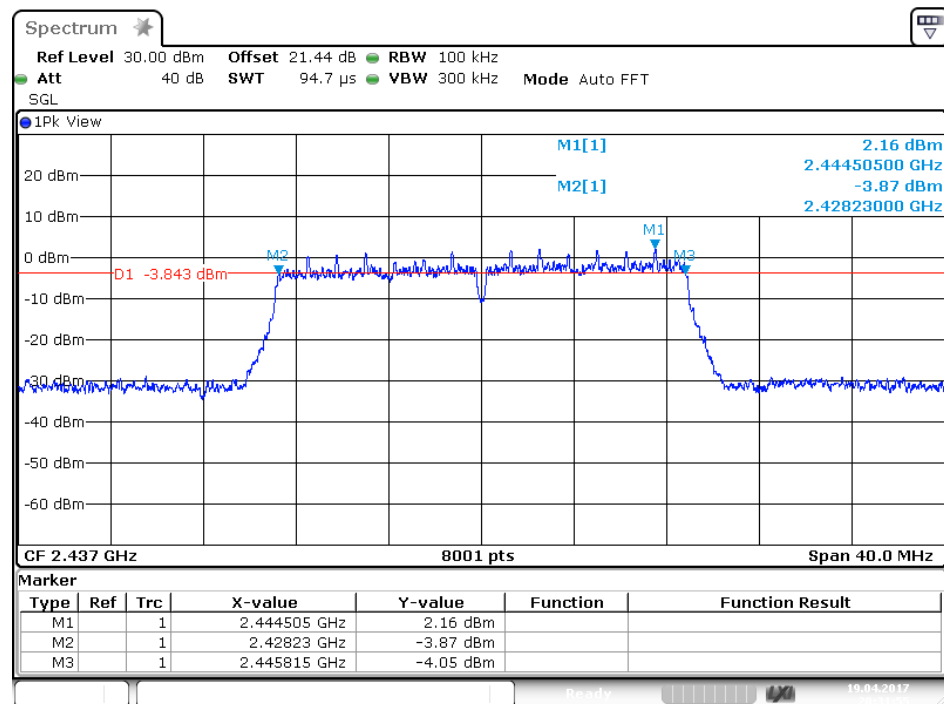
Date: 19.APR.2017 20:26:21

802.11n Channel Low 2412MHz (20MHz)



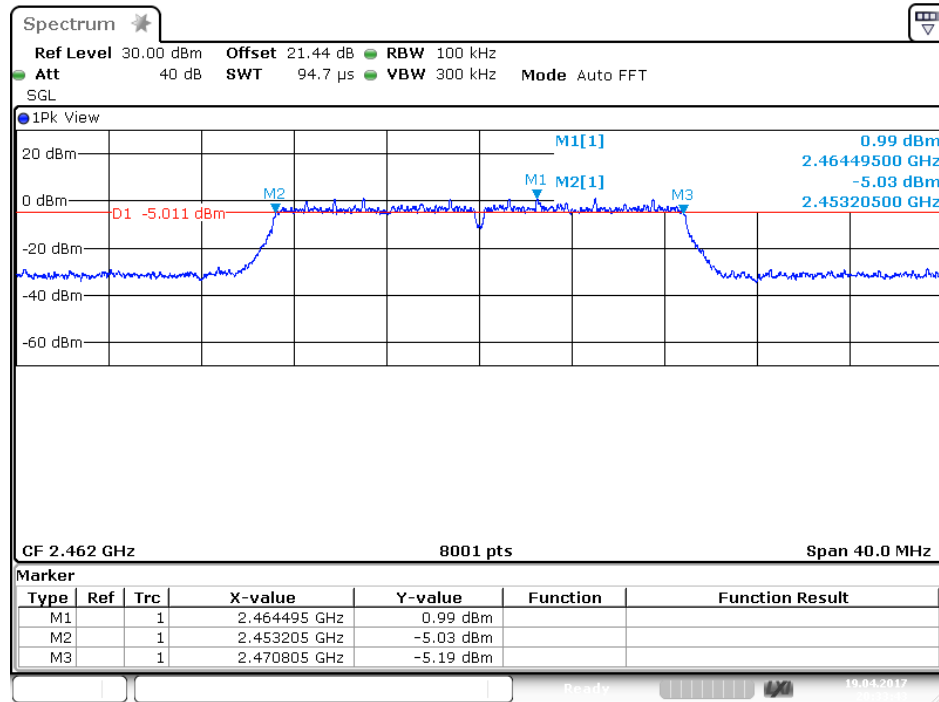
Date: 19.APR.2017 20:28:29

802.11n Channel Middle 2437MHz(20MHz)



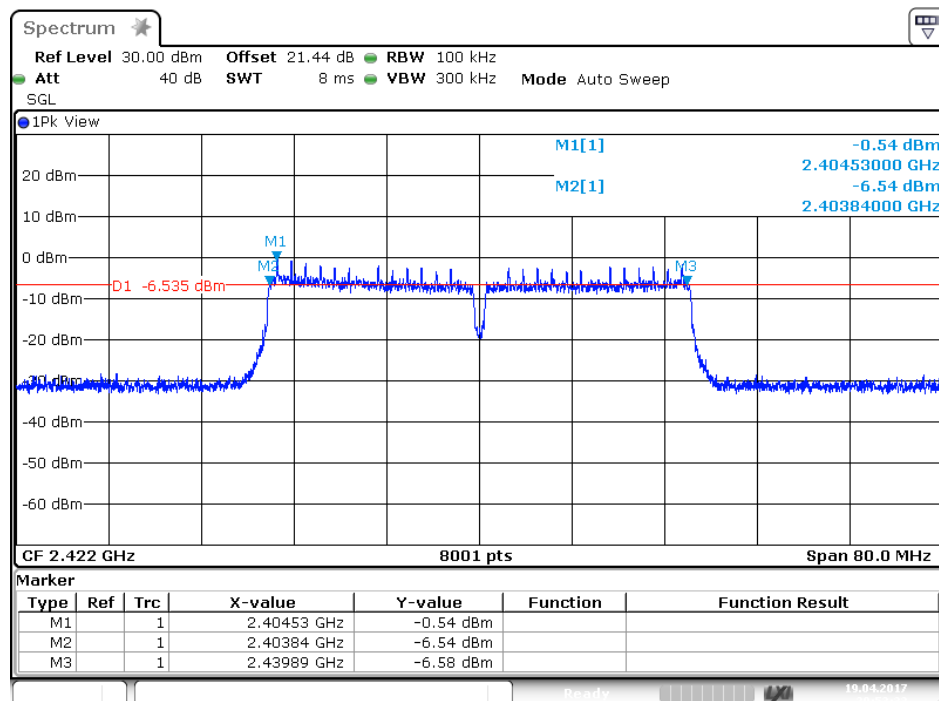
Date: 19.APR.2017 20:31:55

802.11n Channel High 2462MHz(20MHz)



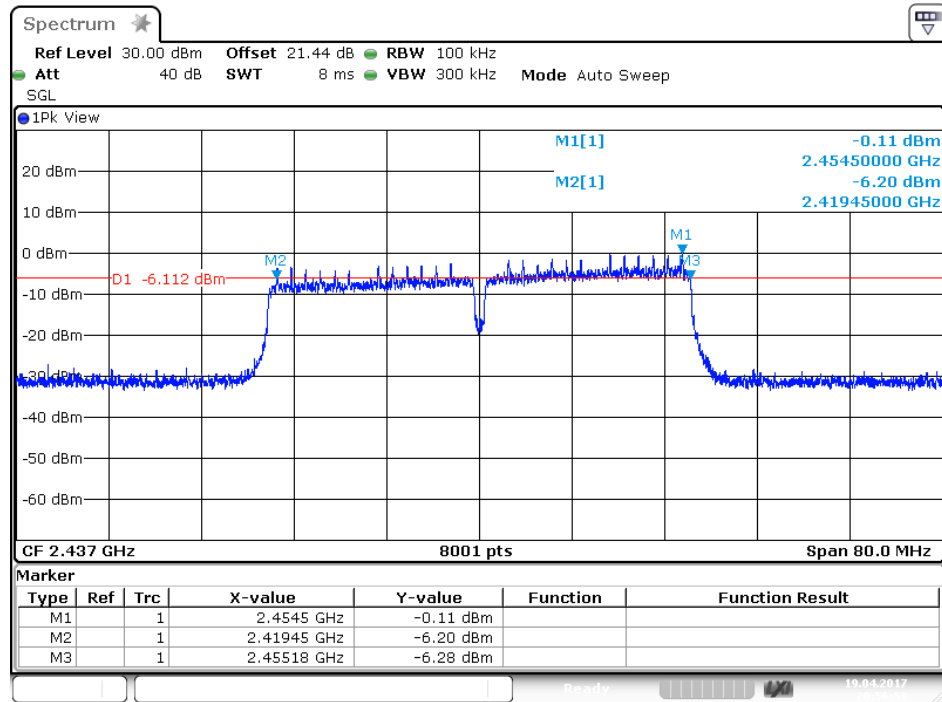
Date: 19.APR.2017 20:33:43

802.11n Channel Low 2422MHz (40MHz)



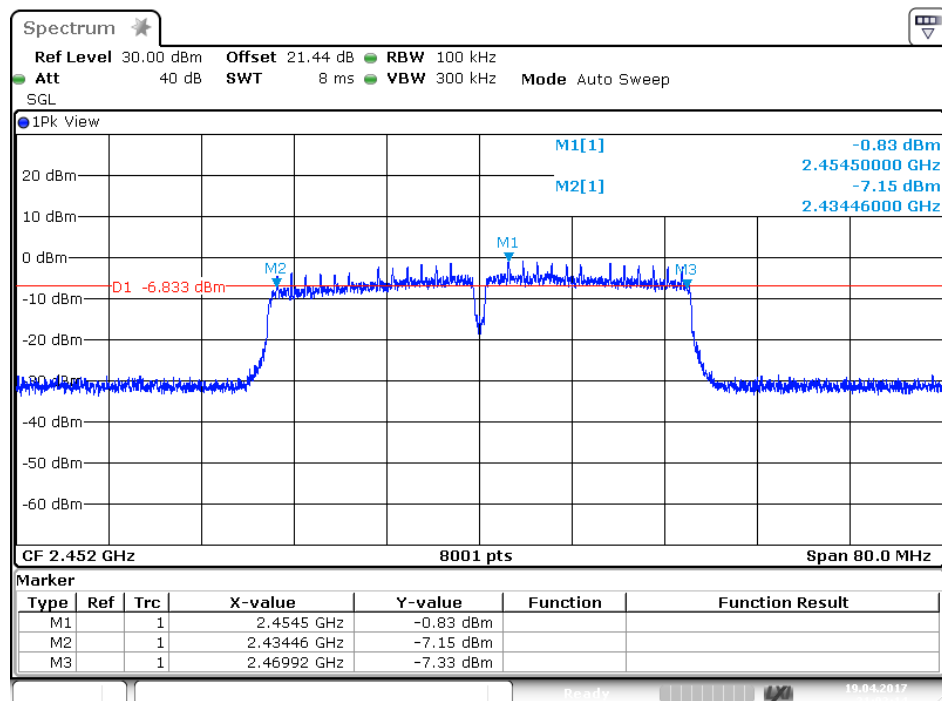
Date: 19.APR.2017 20:53:33

802.11n Channel Middle 2437MHz(40MHz)



Date: 19.APR.2017 20:57:00

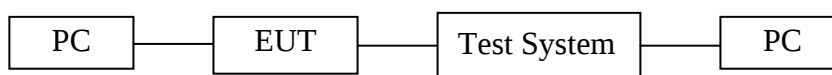
802.11n Channel High 2452MHz(40MHz)



Date: 19.APR.2017 21:02:14

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)	10log(1/x)
Low	2412	99.06%	0.04
Middle	2437	97.68%	0.10
High	2462	99.29%	0.03

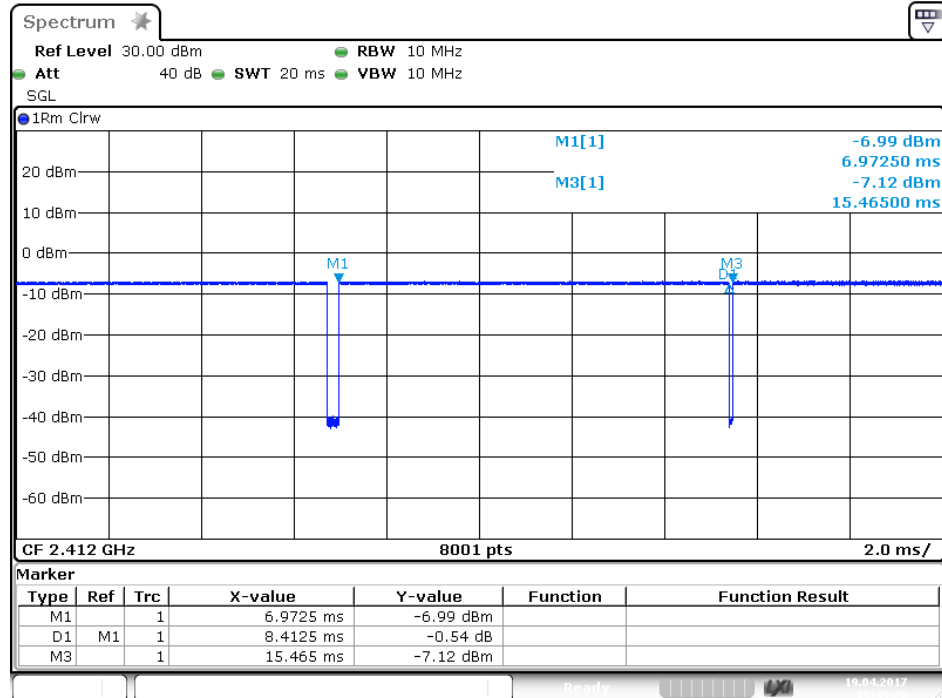
The test was performed with 802.11g			
Channel	Frequency (MHz)	duty cycle(x)	10log(1/x)
Low	2412	97.20%	0.12
Middle	2437	97.20%	0.12
High	2462	97.20%	0.12

The test was performed with 802.11n (Bandwidth: 20 MHz)			
Channel	Frequency (MHz)	duty cycle(x)	10log(1/x)
Low	2412	96.82%	0.14
Middle	2437	97.00%	0.13
High	2462	97.00%	0.13

The test was performed with 802.11n (Bandwidth: 40 MHz)			
Channel	Frequency (MHz)	duty cycle(x)	10log(1/x)
Low	2422	94.14%	0.26
Middle	2437	94.14%	0.26
High	2452	94.16%	0.26

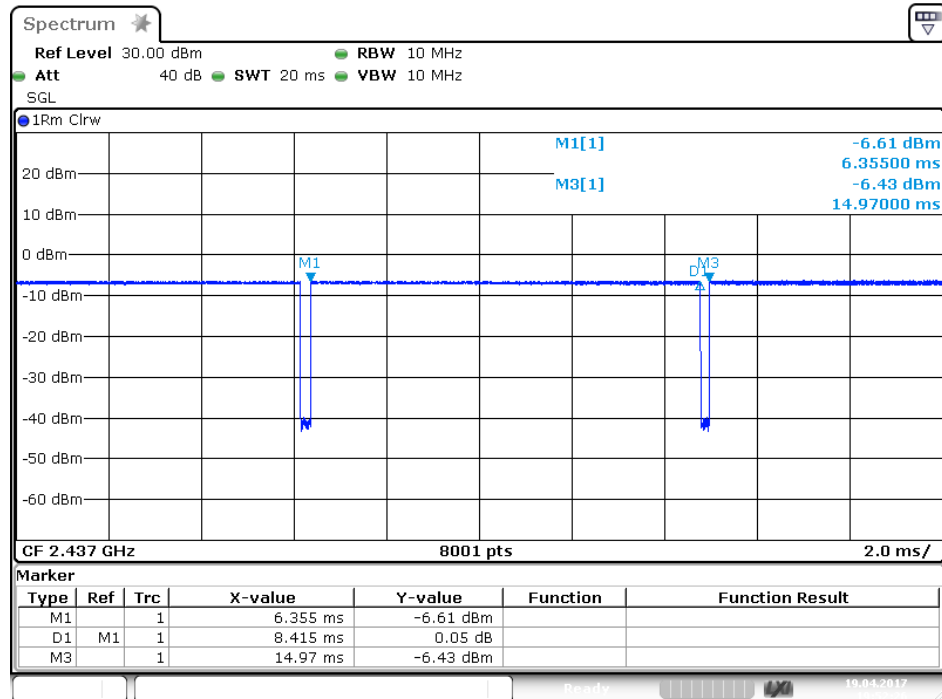
The spectrum analyzer plots are attached as below.

duty cycle 802.11b Channel Low 2412MHz



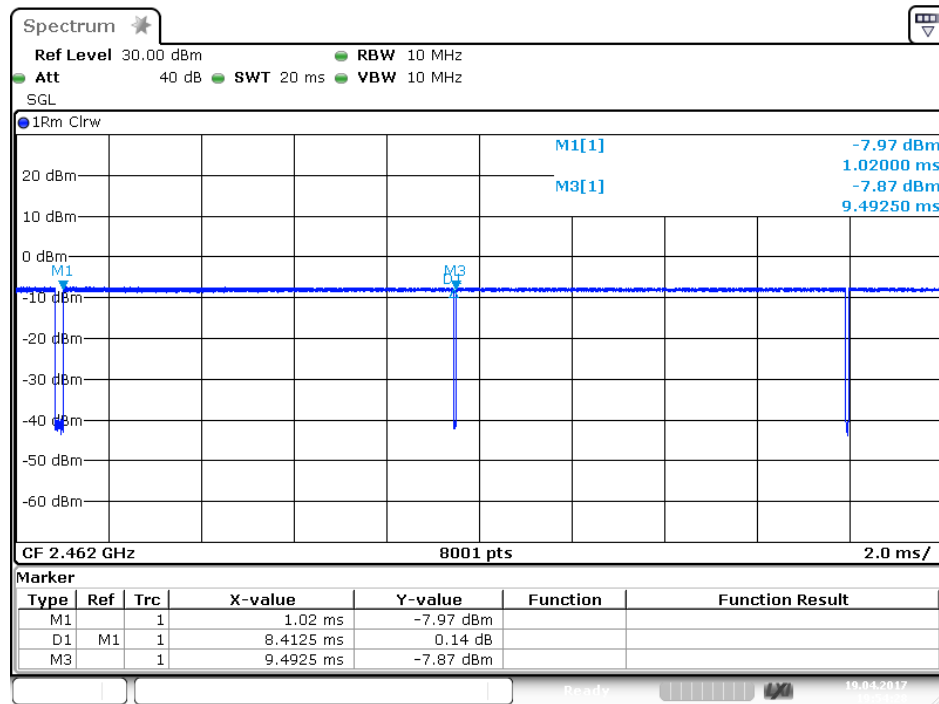
Date: 19.APR.2017 19:49:26

802.11b Channel Middle 2437MHz



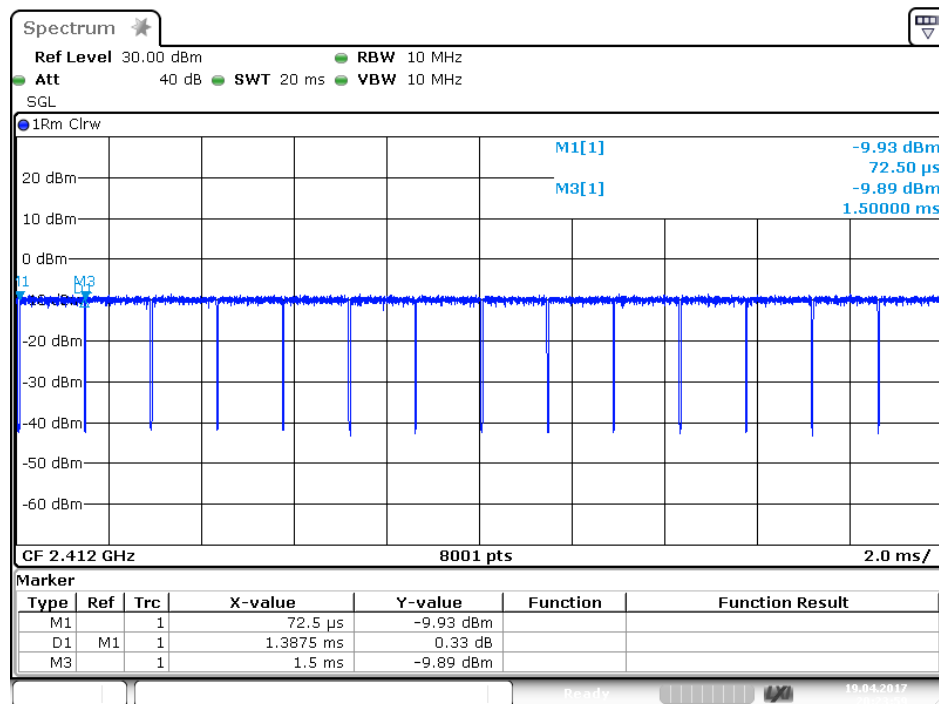
Date: 19.APR.2017 19:52:26

802.11b Channel High 2462MHz



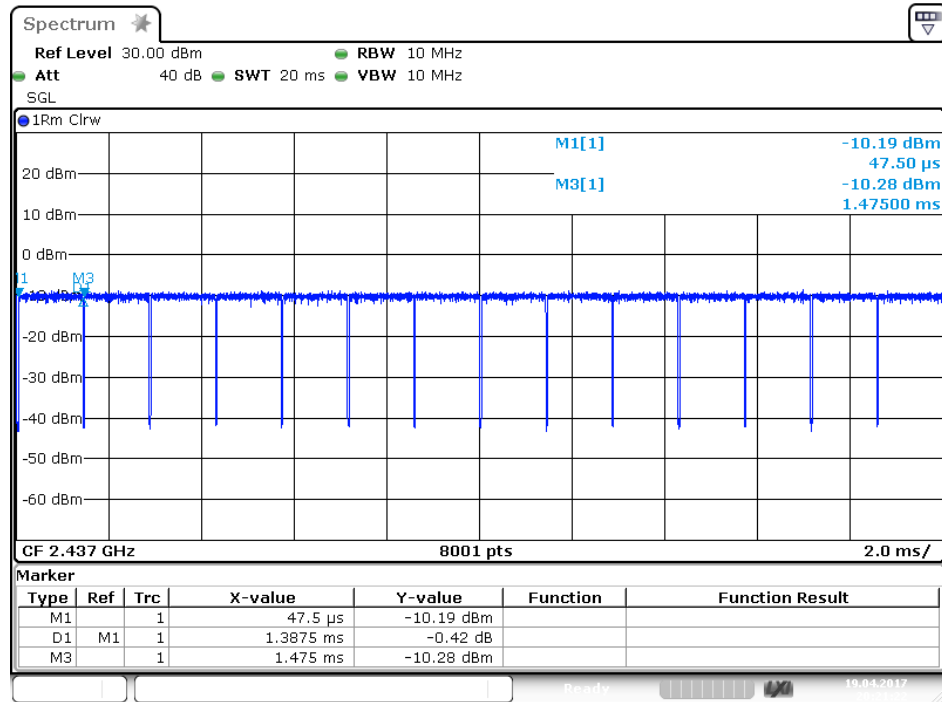
Date: 19.APR.2017 19:54:28

802.11g Channel Low 2412MHz



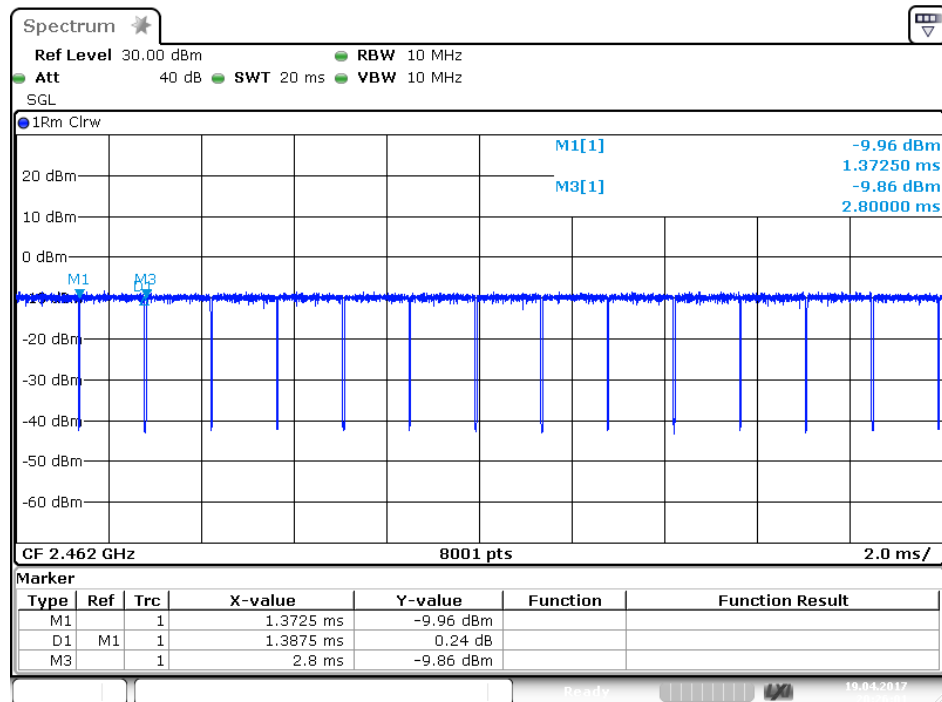
Date: 19.APR.2017 20:24:00

802.11g Channel Middle 2437MHz



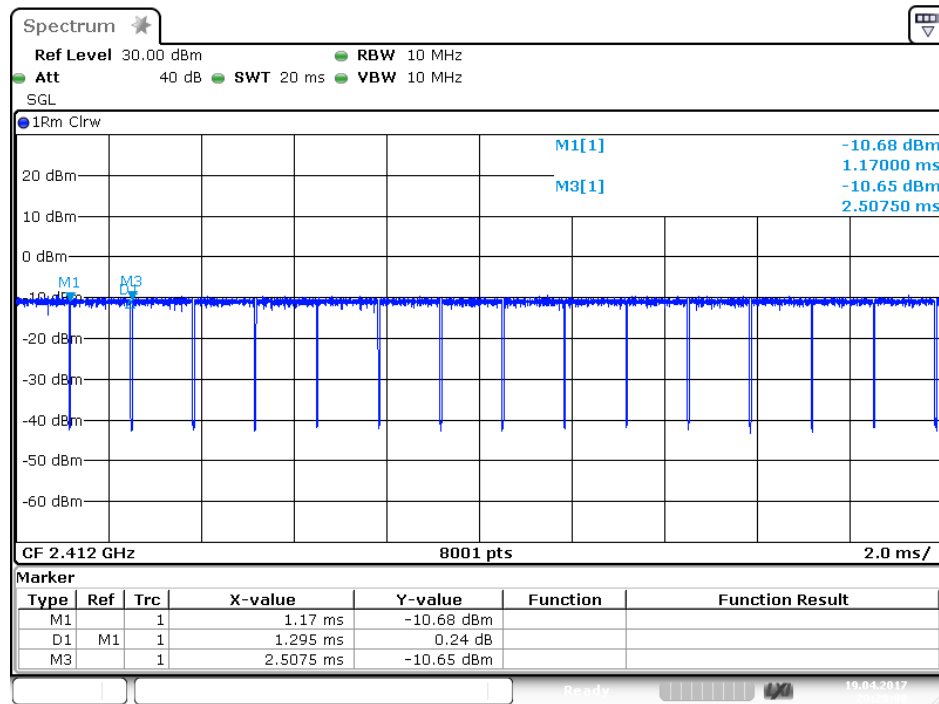
Date: 19.APR.2017 20:21:22

802.11g Channel High 2462MHz



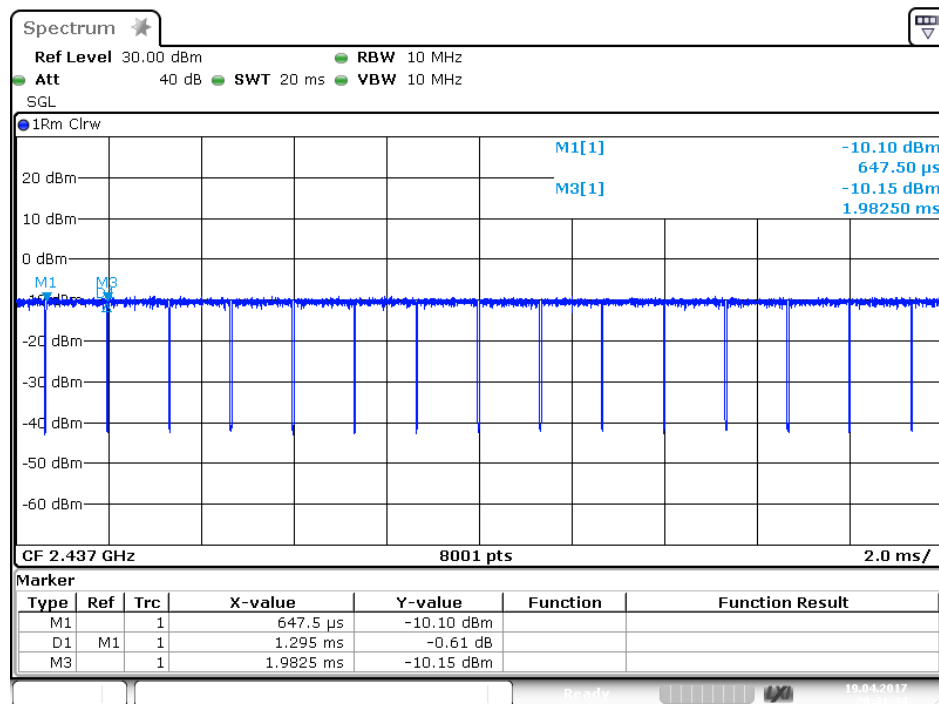
Date: 19.APR.2017 20:26:01

802.11n Channel Low 2412MHz (20MHz)



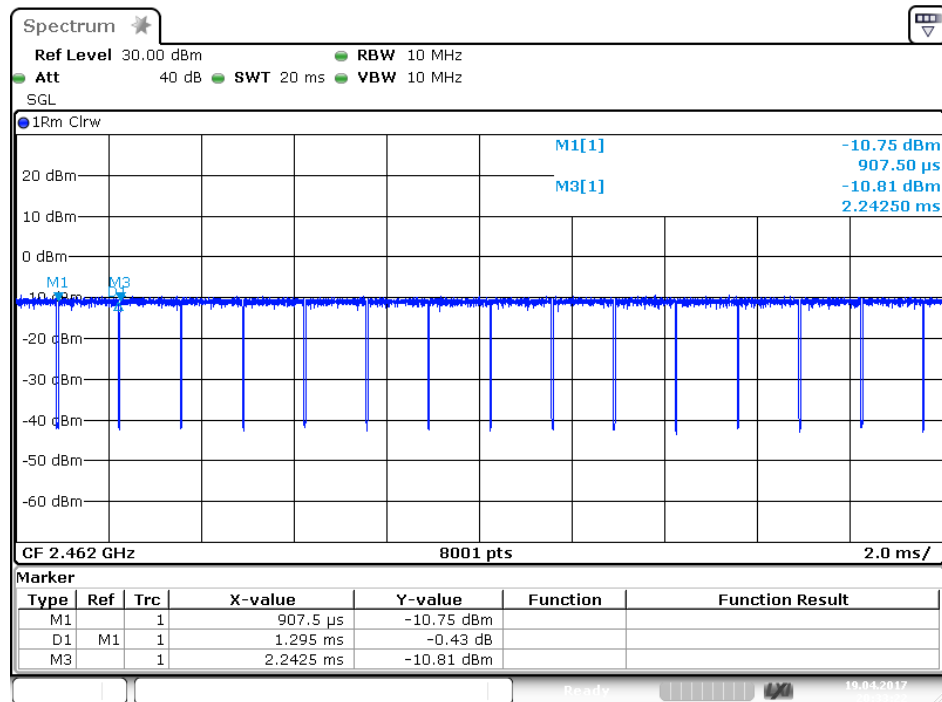
Date: 19.APR.2017 20:28:09

802.11n Channel Middle 2437MHz(20MHz)



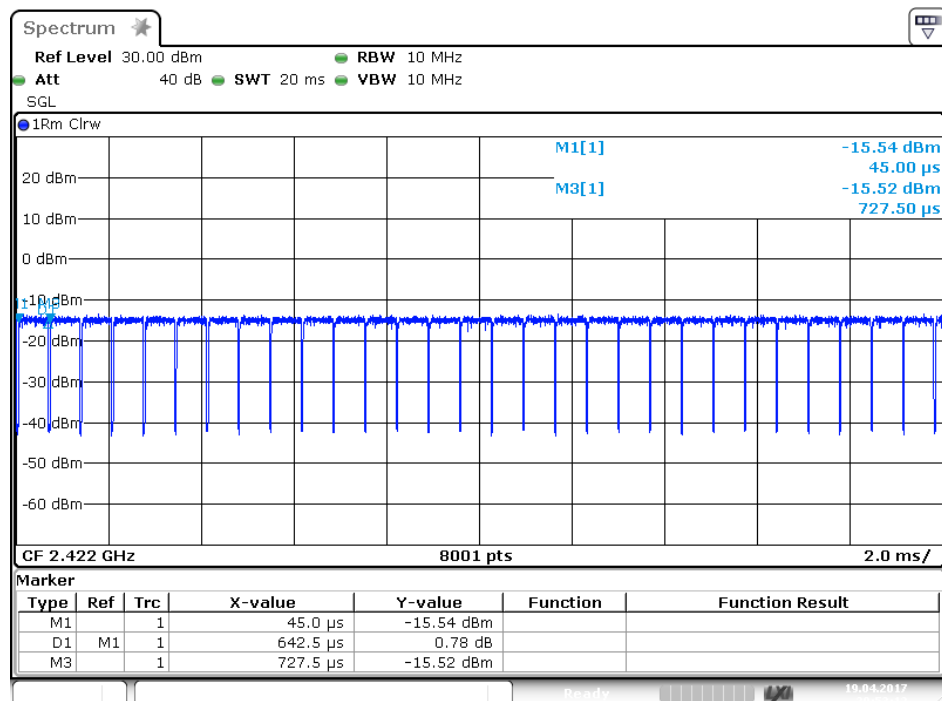
Date: 19.APR.2017 20:31:35

802.11n Channel High 2462MHz(20MHz)



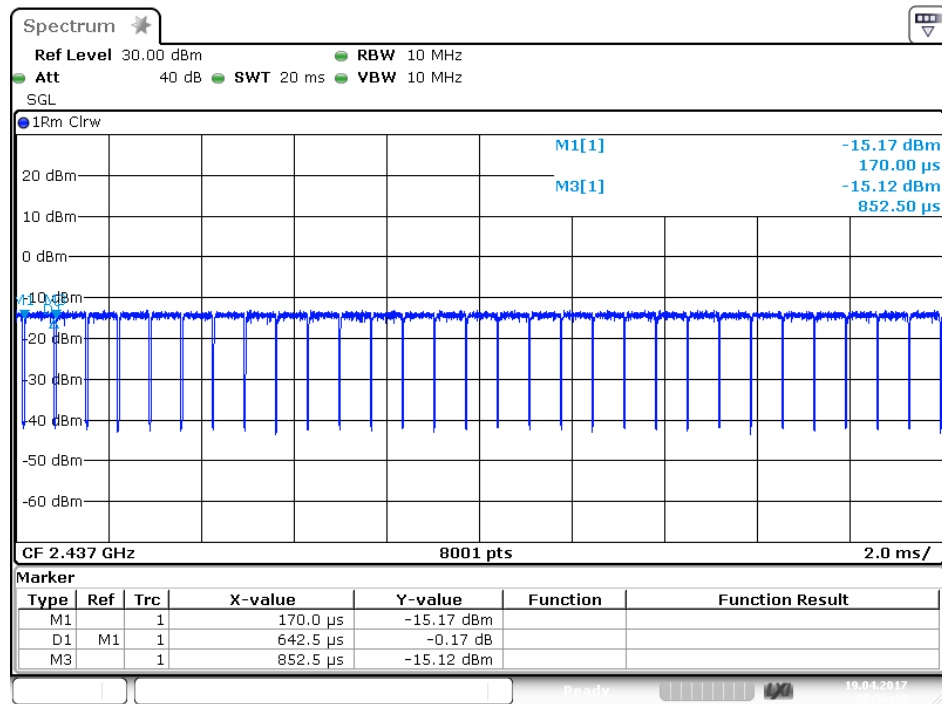
Date: 19.APR.2017 20:33:22

802.11n Channel Low 2422MHz (40MHz)



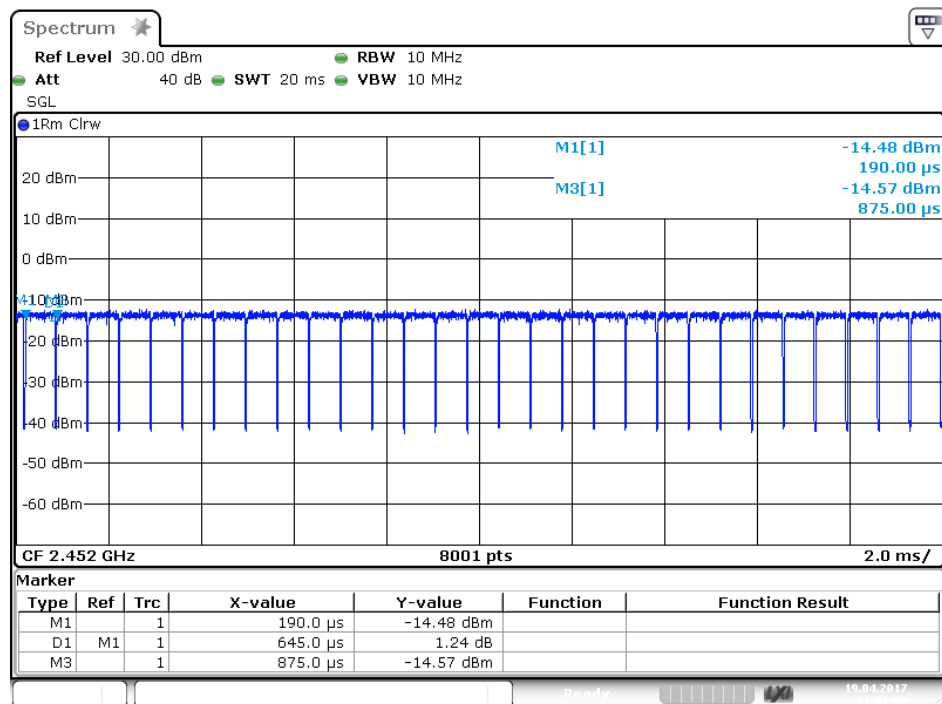
Date: 19.APR.2017 20:53:13

802.11n Channel Middle 2437MHz(40MHz)



Date: 19.APR.2017 20:56:39

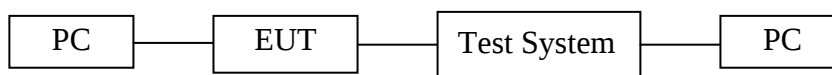
802.11n Channel High 2452MHz(40MHz)



Date: 19.APR.2017 21:01:54

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 KDB5580 74 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 $\geq 3 \times$ 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	15.78	0.04	15.82	38.19	30 dBm / 1 W
Middle	2437	16.28	0.10	16.38	43.45	30 dBm / 1 W
High	2462	15.09	0.03	15.12	32.51	30 dBm / 1 W

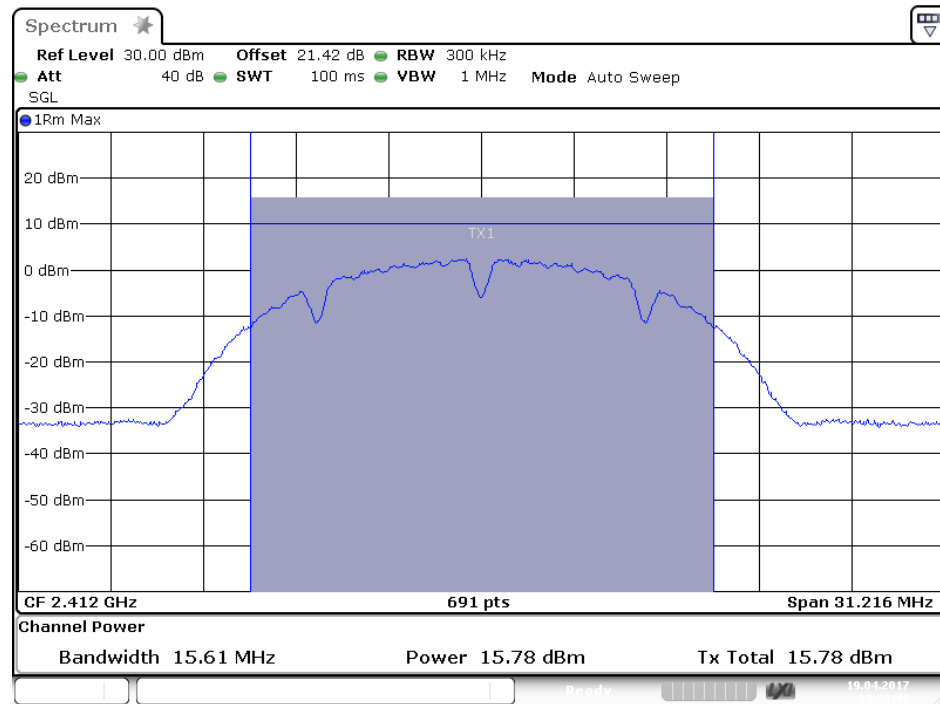
The test was performed with 802.11g						
Channel	Frequency (MHz)	Ave output power (dBm)	10log(1/ duty cycle)	Final power (dBm)	Final power (mW)	Limits dBm / W
Low	2412	14.19	0.12	14.31	26.98	30 dBm / 1 W
Middle	2437	13.92	0.12	14.04	25.35	30 dBm / 1 W
High	2462	14.21	0.12	14.33	27.10	30 dBm / 1 W

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	13.49	0.14	13.63	23.07	30 dBm / 1 W
Middle	2437	13.95	0.13	14.08	25.59	30 dBm / 1 W
High	2462	13.35	0.13	13.48	22.28	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	12.87	0.26	13.13	20.59	30 dBm / 1 W
Middle	2437	13.20	0.26	13.46	22.18	30 dBm / 1 W
High	2452	13.16	0.26	13.42	21.98	30 dBm / 1 W

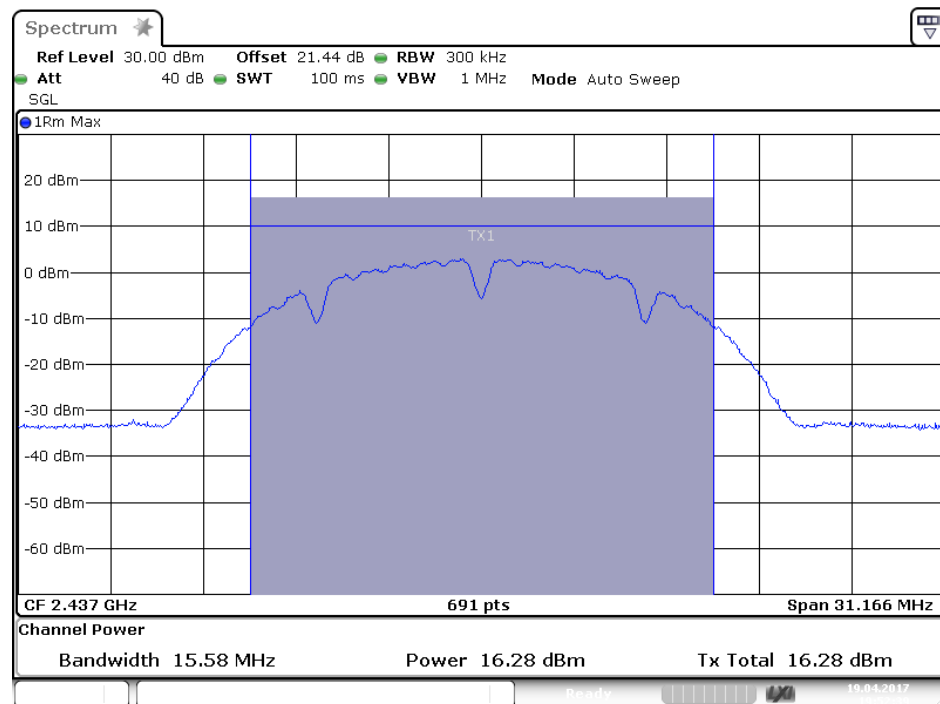
The spectrum analyzer plots are attached as below.

802.11b Channel Low 2412MHz



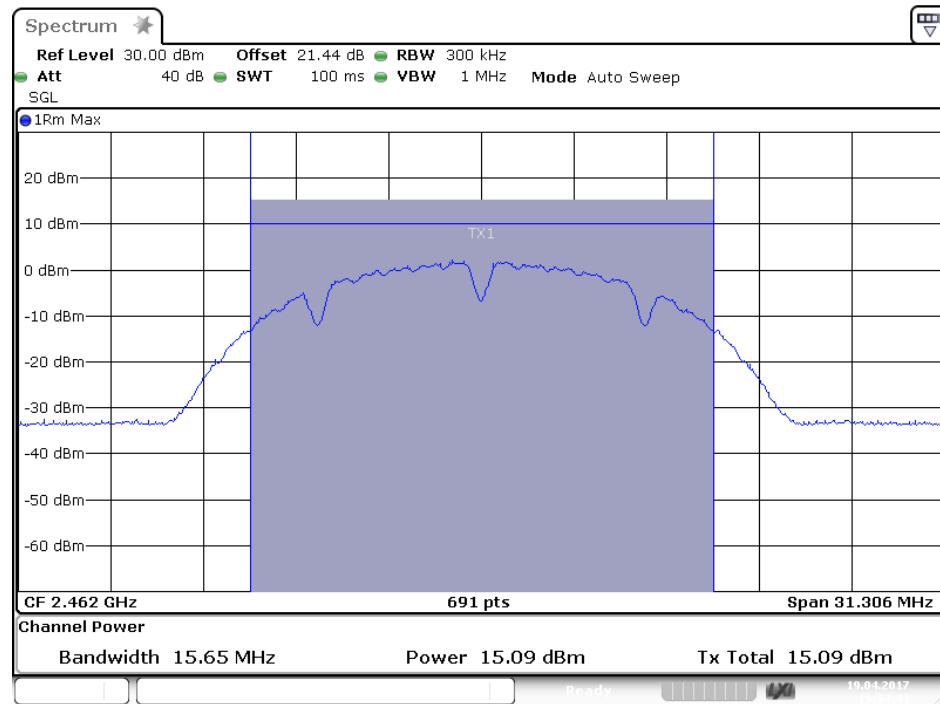
Date: 19.APR.2017 19:49:40

802.11b Channel Middle 2437MHz



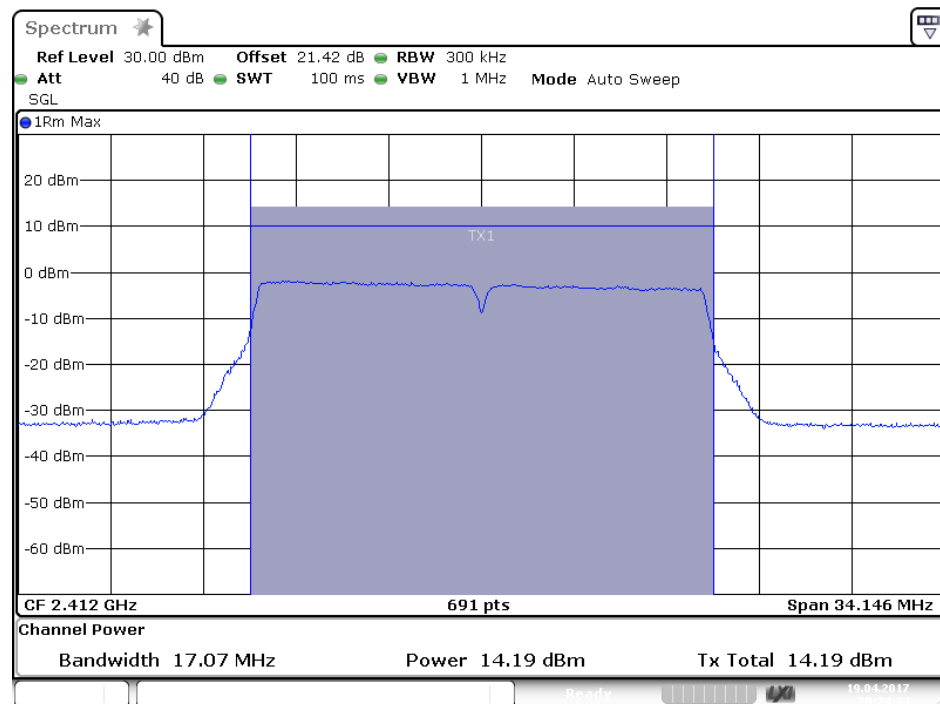
Date: 19.APR.2017 19:52:40

802.11b Channel High 2462MHz



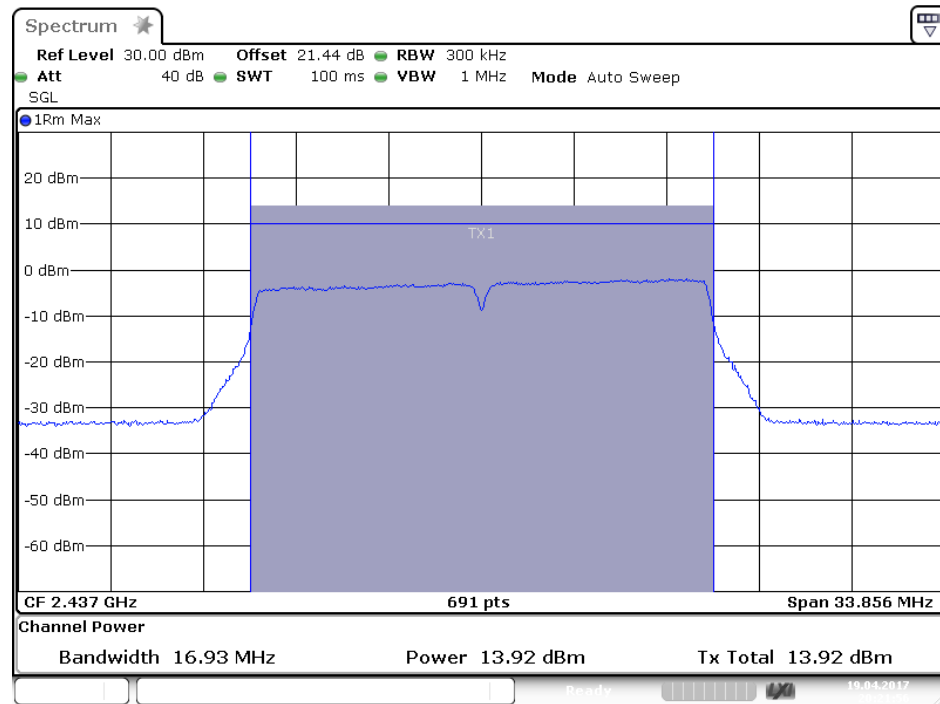
Date: 19.APR.2017 19:54:42

802.11g Channel Low 2412MHz



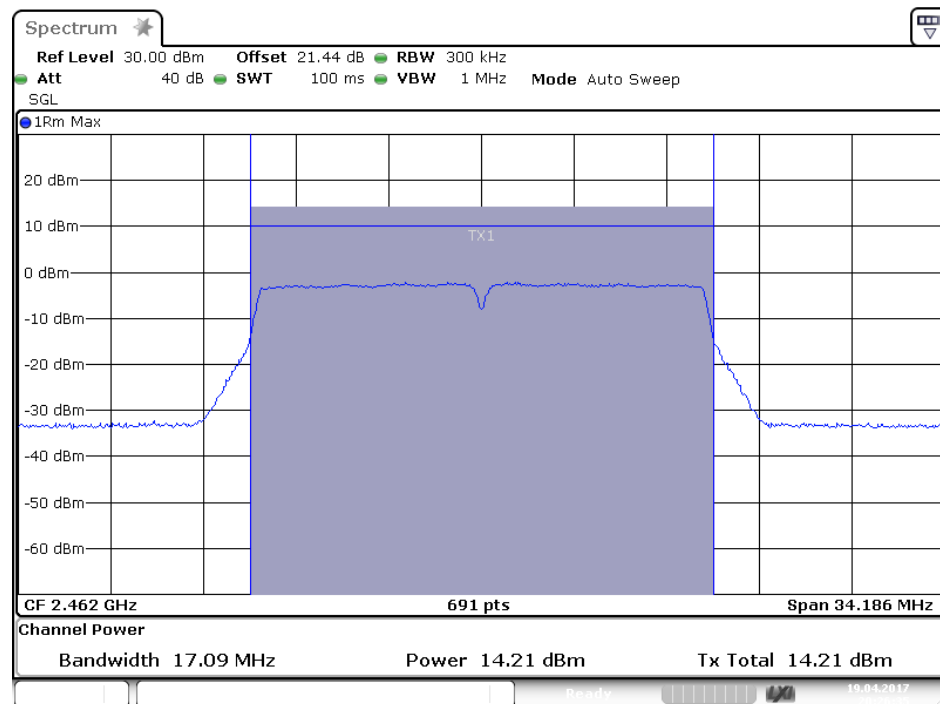
Date: 19.APR.2017 20:24:34

802.11g Channel Middle 2437MHz



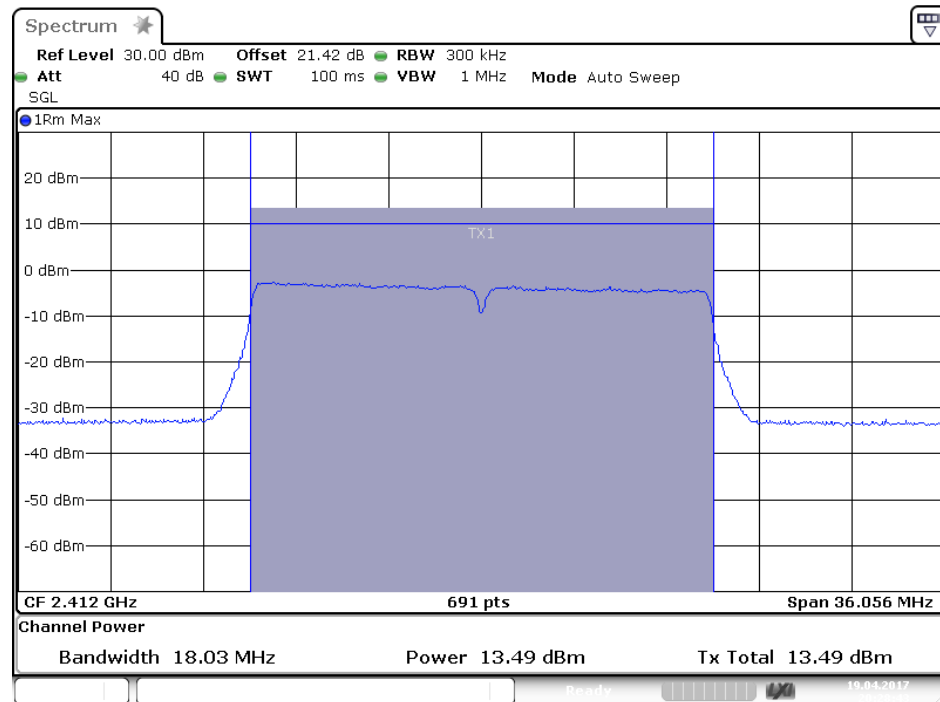
Date: 19.APR.2017 20:21:56

802.11g Channel High 2462MHz



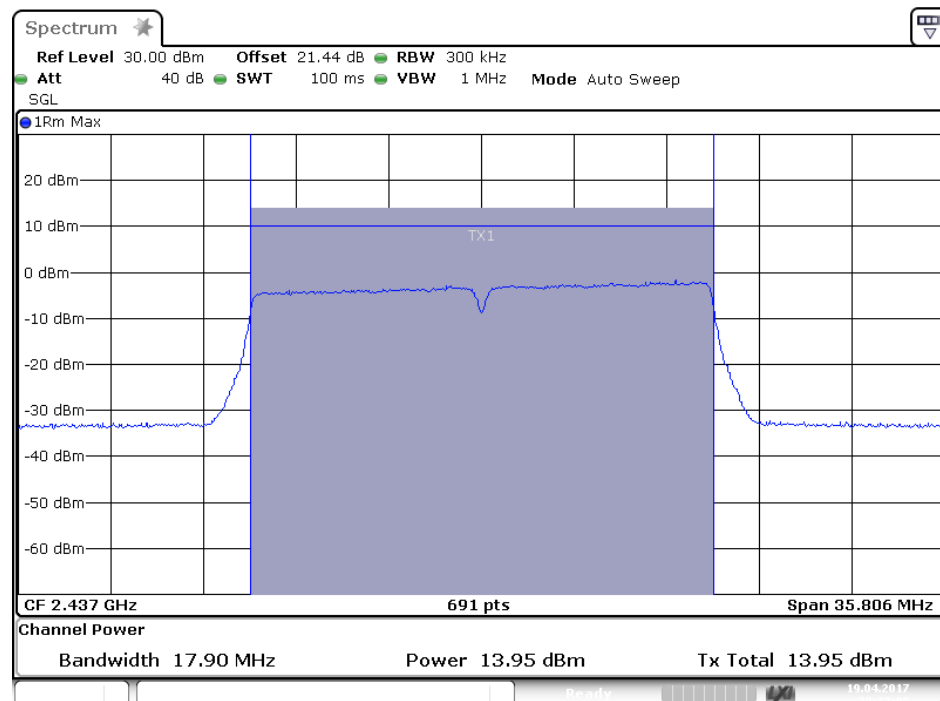
Date: 19.APR.2017 20:26:35

802.11n Channel Low 2412MHz (20MHz)



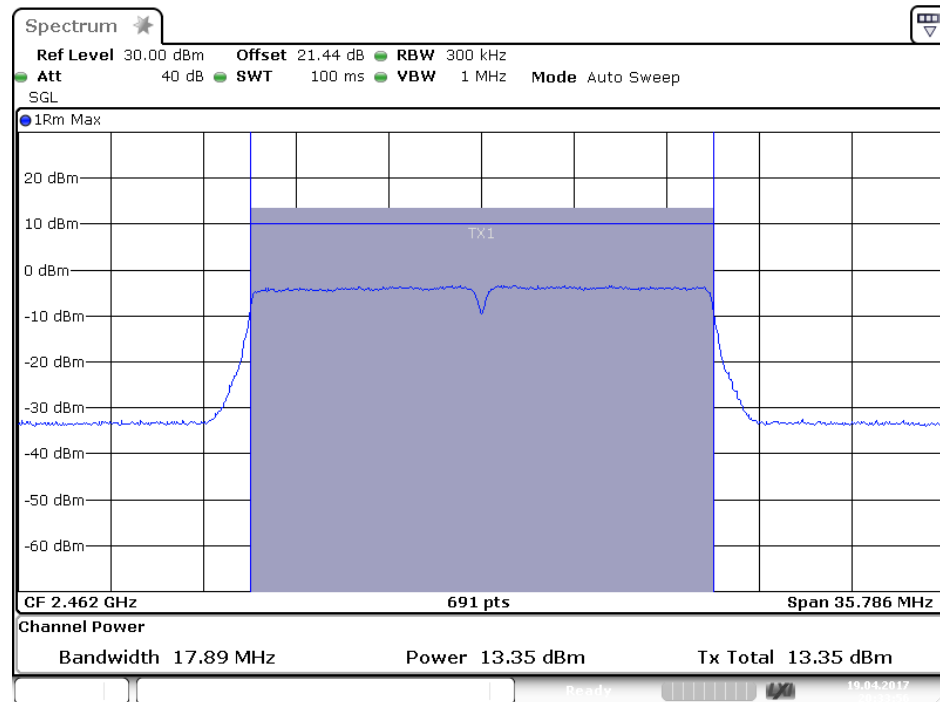
Date: 19.APR.2017 20:28:43

802.11n Channel Middle 2437MHz (20MHz)



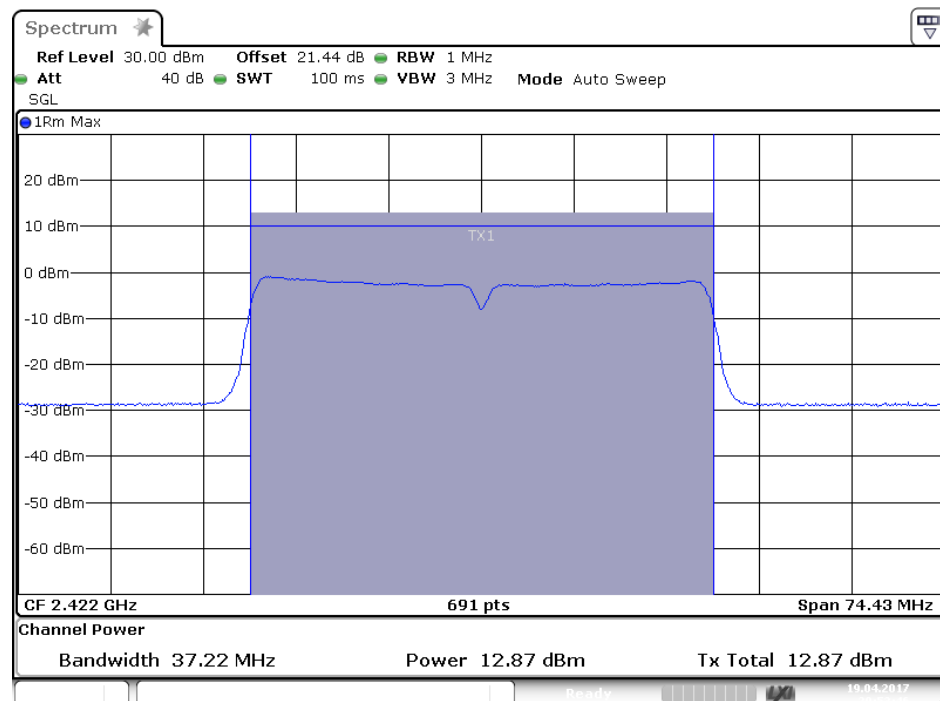
Date: 19.APR.2017 20:32:08

802.11n Channel High 2462MHz (20MHz)



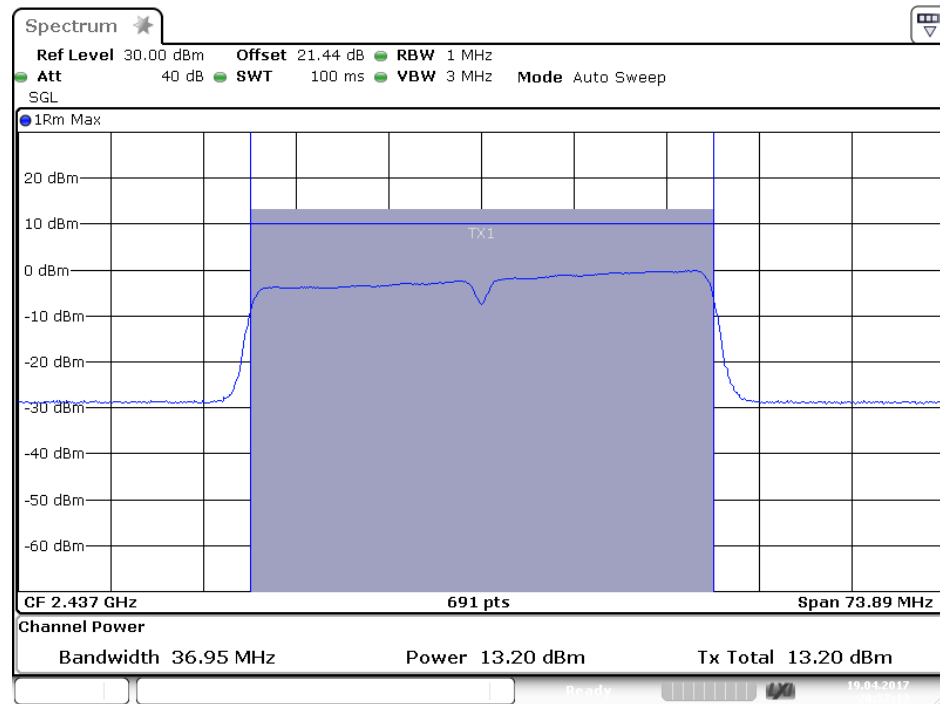
Date: 19.APR.2017 20:33:57

802.11n Channel Low 2422MHz (40MHz)



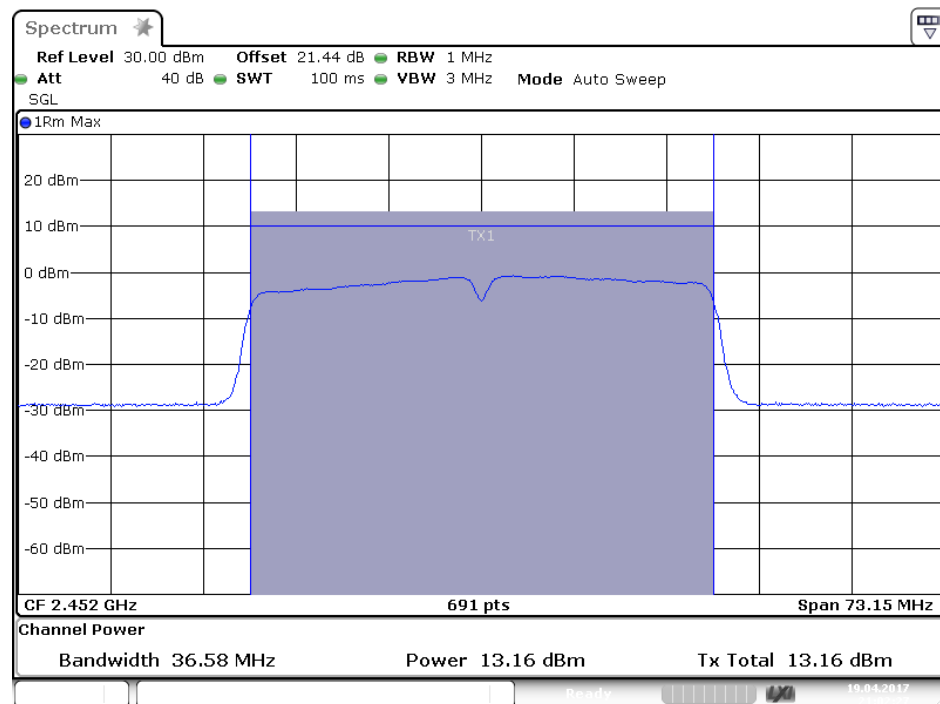
Date: 19.APR.2017 20:53:46

802.11n Channel Middle 2437MHz (40MHz)



Date: 19.APR.2017 20:57:13

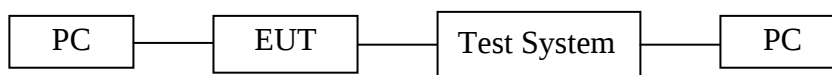
802.11n Channel High 2452MHz (40MHz)



Date: 19.APR.2017 21:02:27

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	-8.40	0.04	-8.36	8 dBm
Middle	2437	-8.63	0.10	-8.53	8 dBm
High	2462	-9.97	0.03	-9.94	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	-11.74	0.12	-11.62	8 dBm
Middle	2437	-10.67	0.12	-10.55	8 dBm
High	2462	-12.42	0.12	-12.30	8 dBm

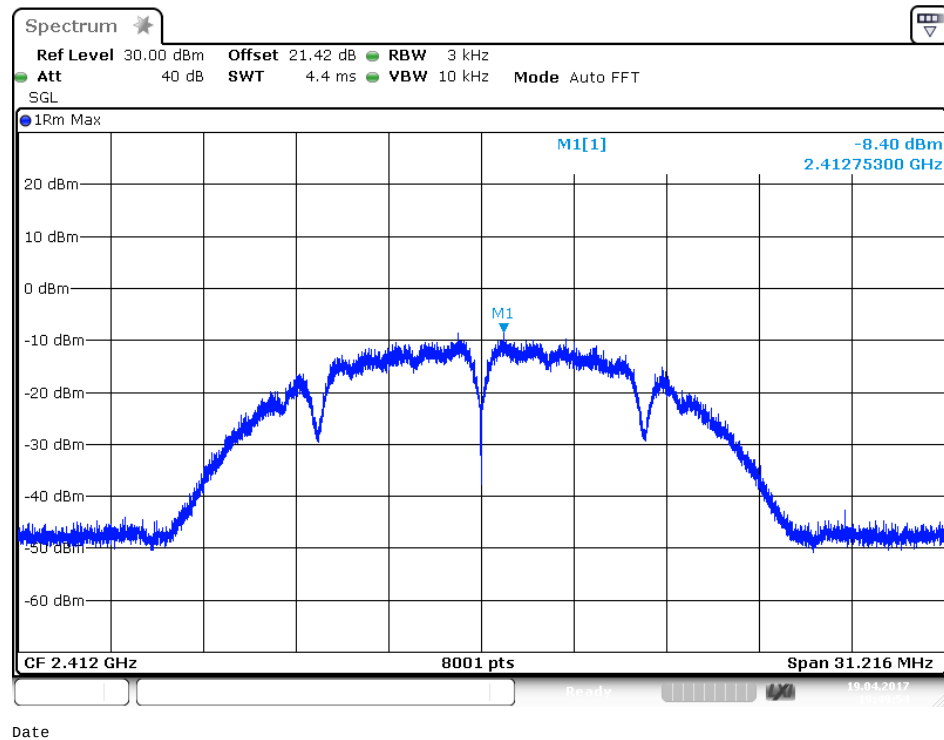
The test was performed with 802.11n (20MHz)					
Channel	Frequency (MHz)	AVG Power Spectral Density (dBm)	$10\log(1/\text{duty cycle})$	Final Power Spectral Density (dBm)	Limits (dBm)
Low	2412	-13.28	0.14	-13.14	8 dBm
Middle	2437	-12.84	0.13	-12.71	8 dBm
High	2462	-12.91	0.13	-12.78	8 dBm

The test was performed with 802.11n (40MHz)

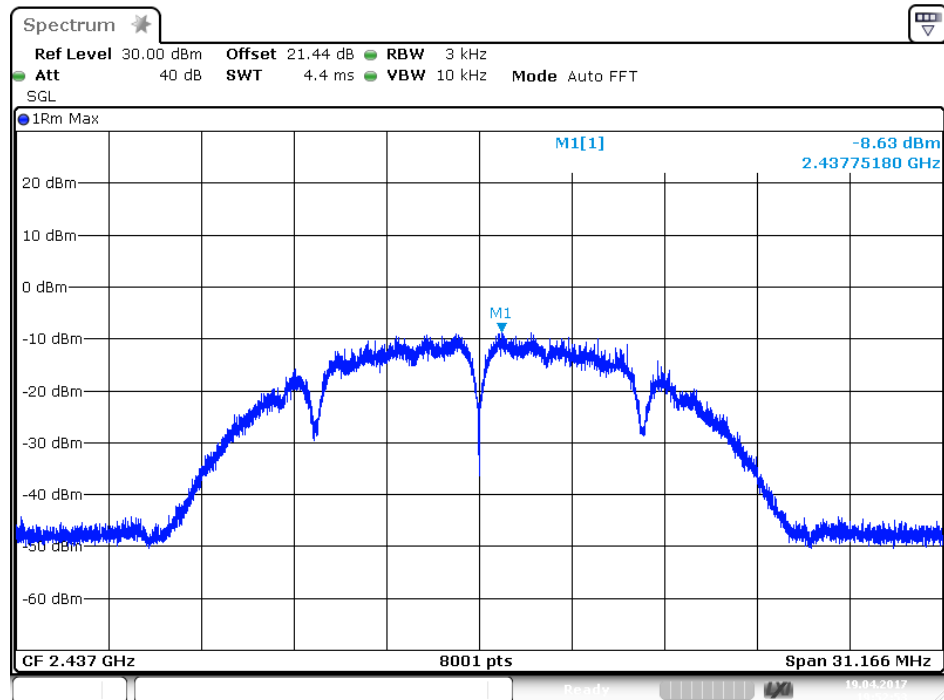
Channel	Frequency (MHz)	AVG Power Spectral Density (dBm)	10log(1/ duty cycle)	Final Power Spectral Density (dBm)	Limits (dBm)
Low	2422	-18.12	0.26	-17.86	8 dBm
Middle	2437	-16.34	0.26	-17.08	8 dBm
High	2452	-16.57	0.26	-17.31	8 dBm

The spectrum analyzer plots are attached as below.

802.11b Channel Low 2412MHz

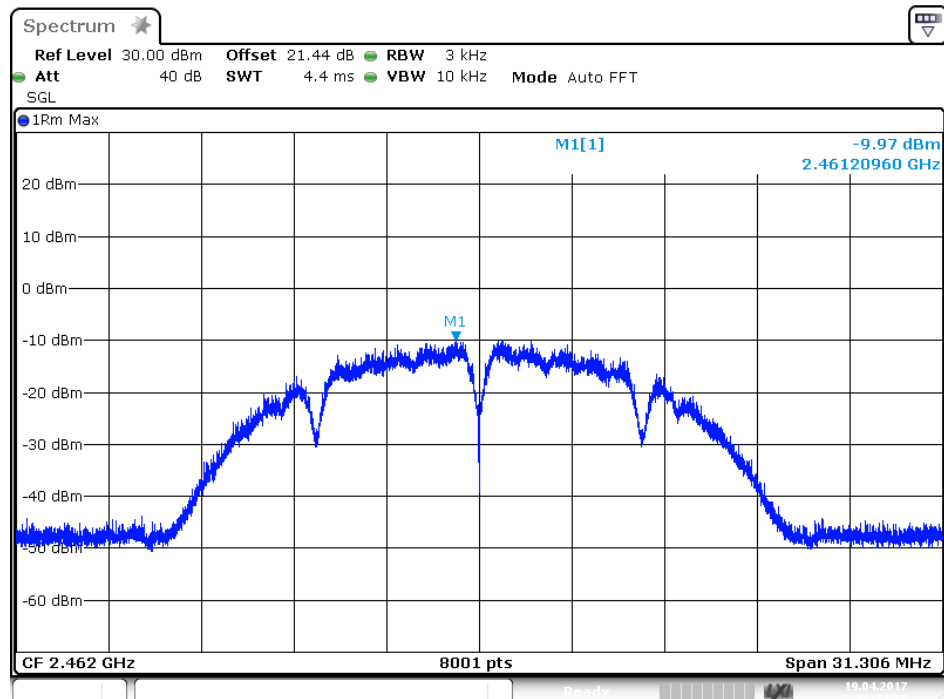


802.11b Channel Middle 2437MHz



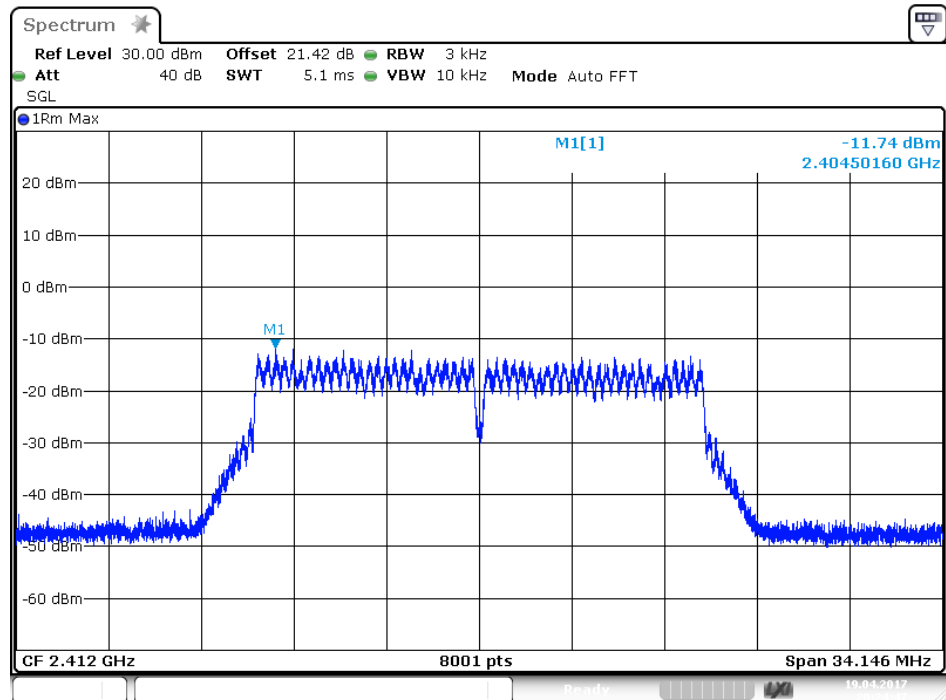
Date

802.11b Channel High 2462MHz



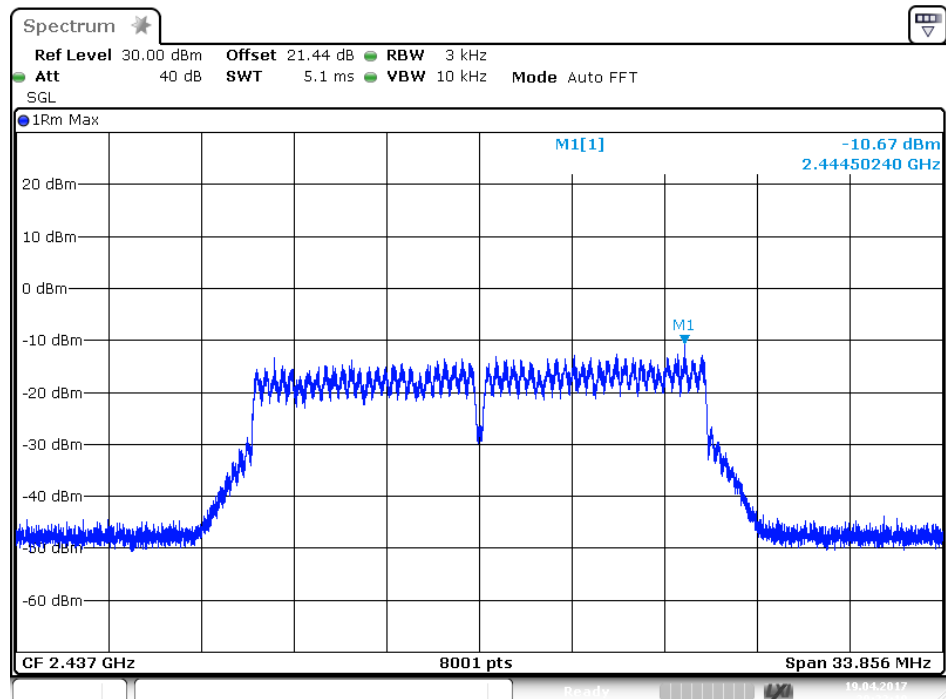
Date

802.11g Channel Low 2412MHz



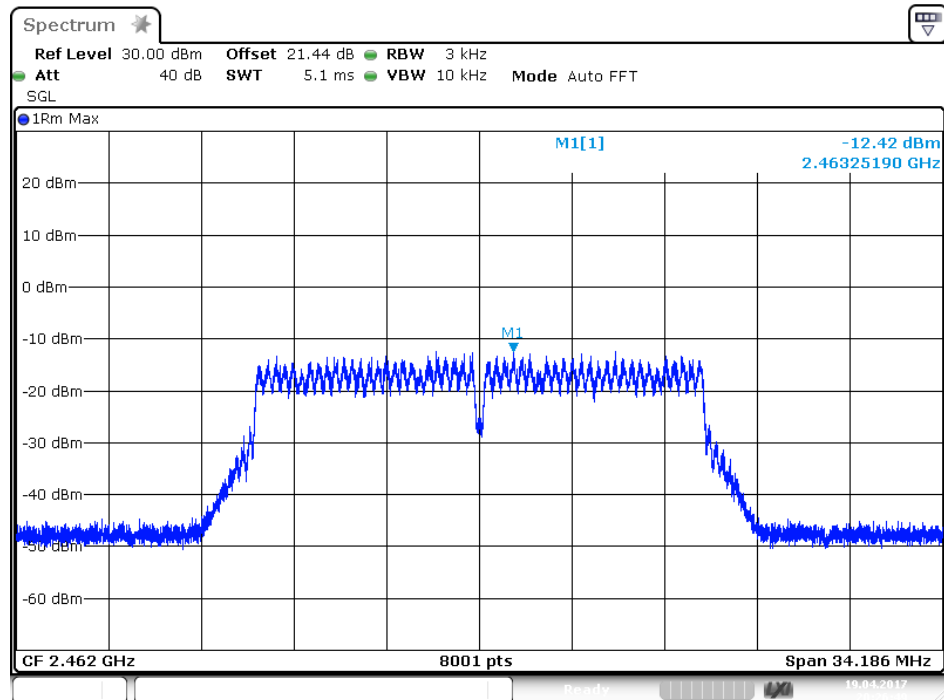
Date

802.11g Channel Middle 2437MHz



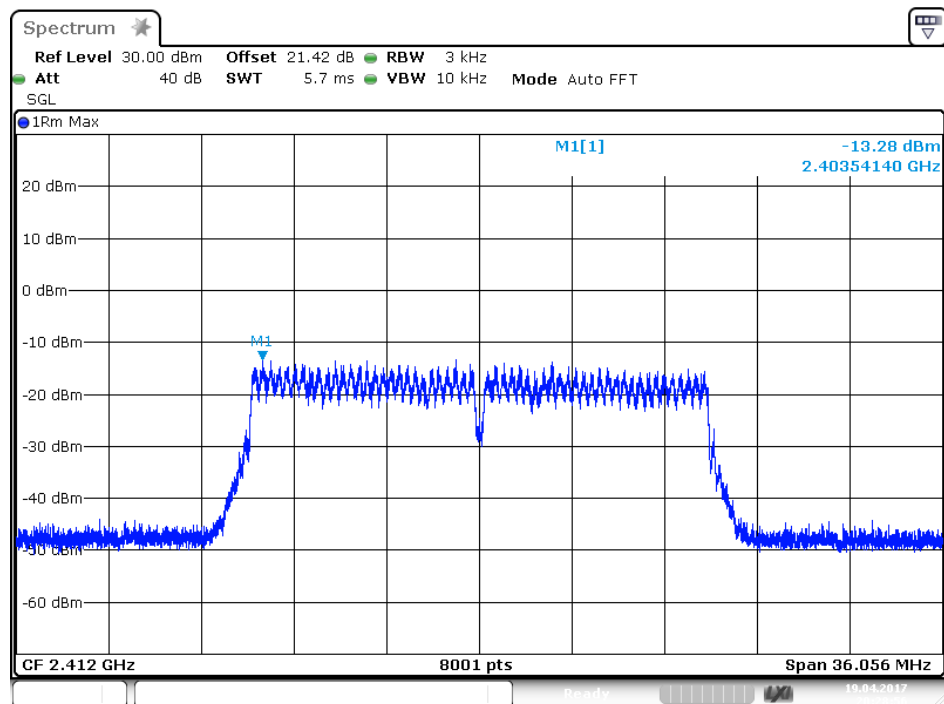
Date

802.11g Channel High 2462MHz



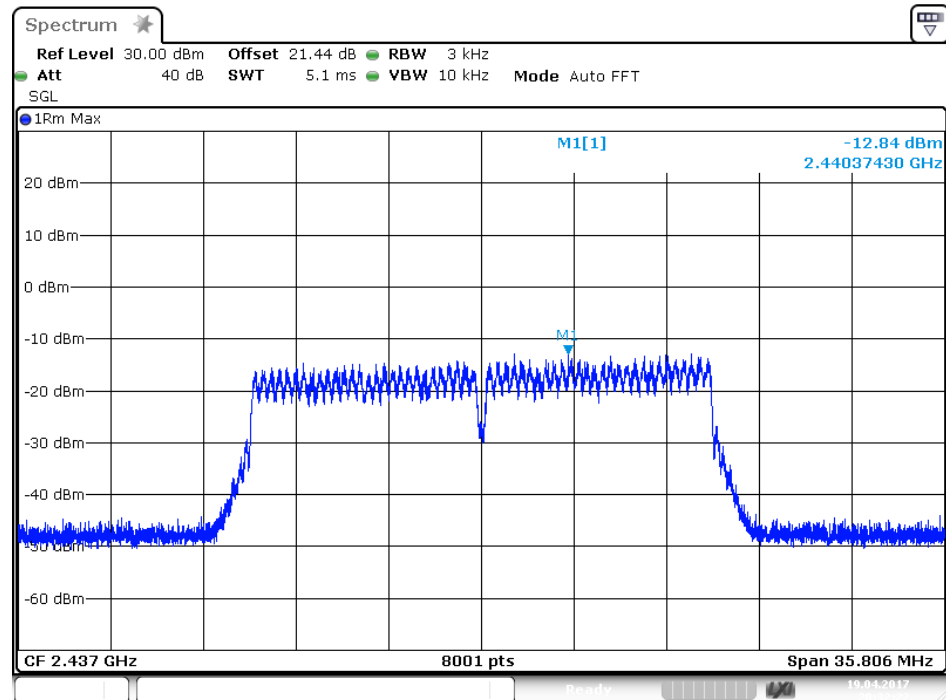
Date

802.11n Channel Low 2412MHz (20MHz)



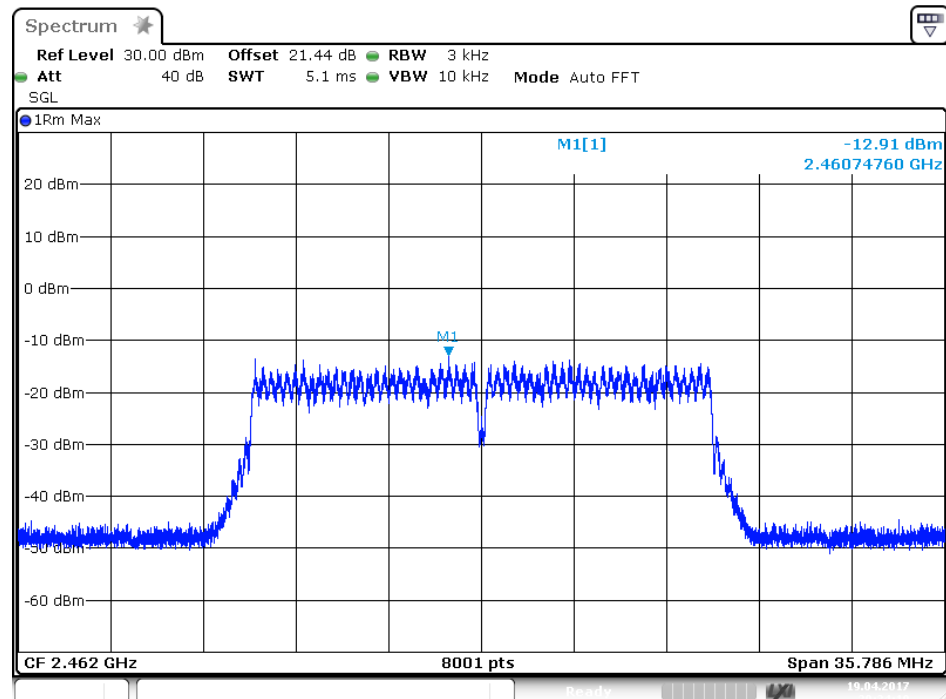
Date

802.11n Channel Middle 2437MHz (20MHz)



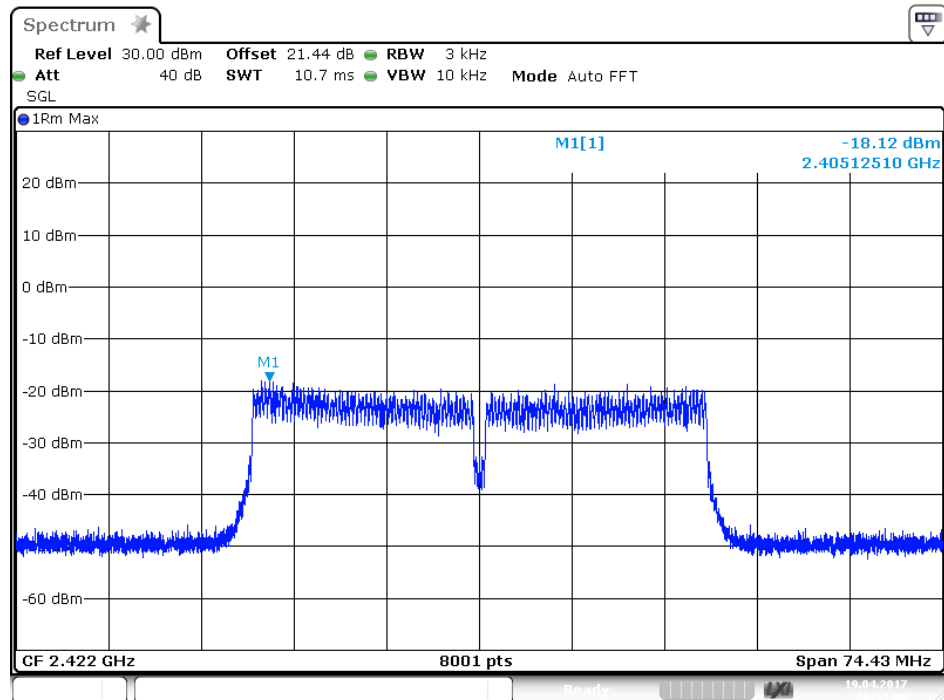
Date

802.11n Channel High 2462MHz(20MHz)



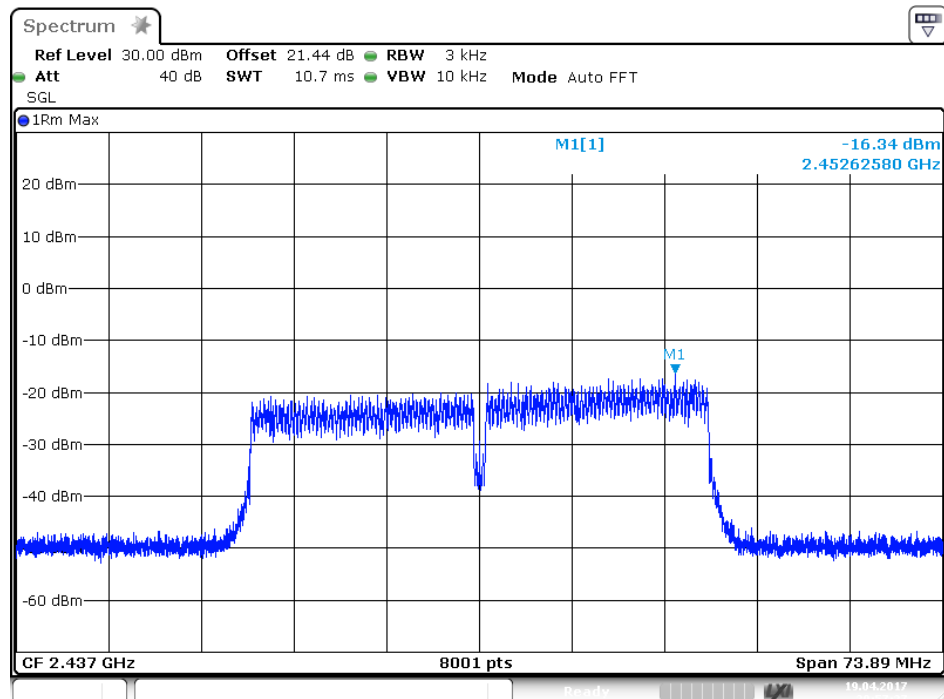
Date

802.11n Channel Low 2422MHz (40MHz)



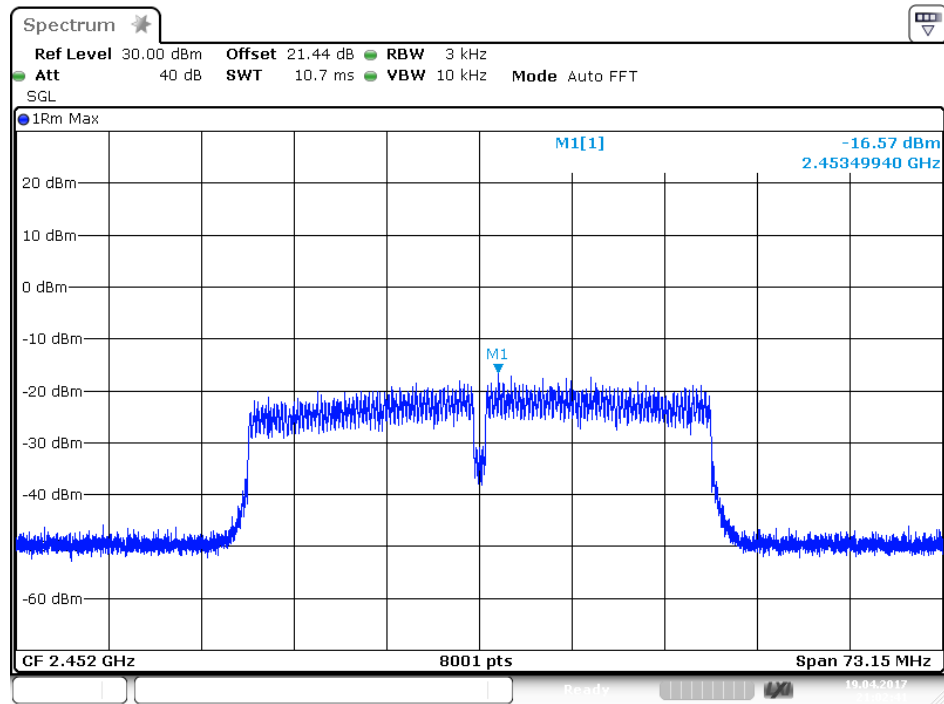
Date

802.11n Channel Middle 2437MHz(40MHz)



Date

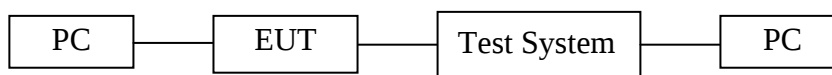
802.11n Channel High 2452MHz(40MHz)



Date

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

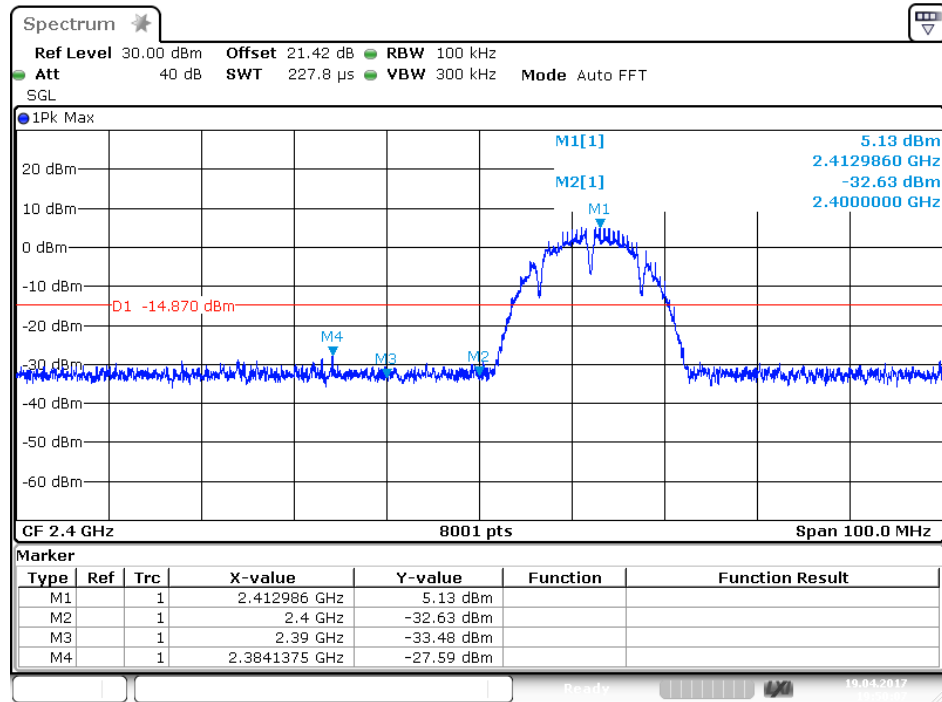
The test was performed with 802.11b		
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2400	37.76	> 30dBc
2483.5	37.03	> 30dBc

The test was performed with 802.11g		
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2400	34.94	> 30dBc
2483.5	35.06	> 30dBc

The test was performed with 802.11n (20MHz)		
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2400	37.55	> 30dBc
2483.5	36.72	> 30dBc

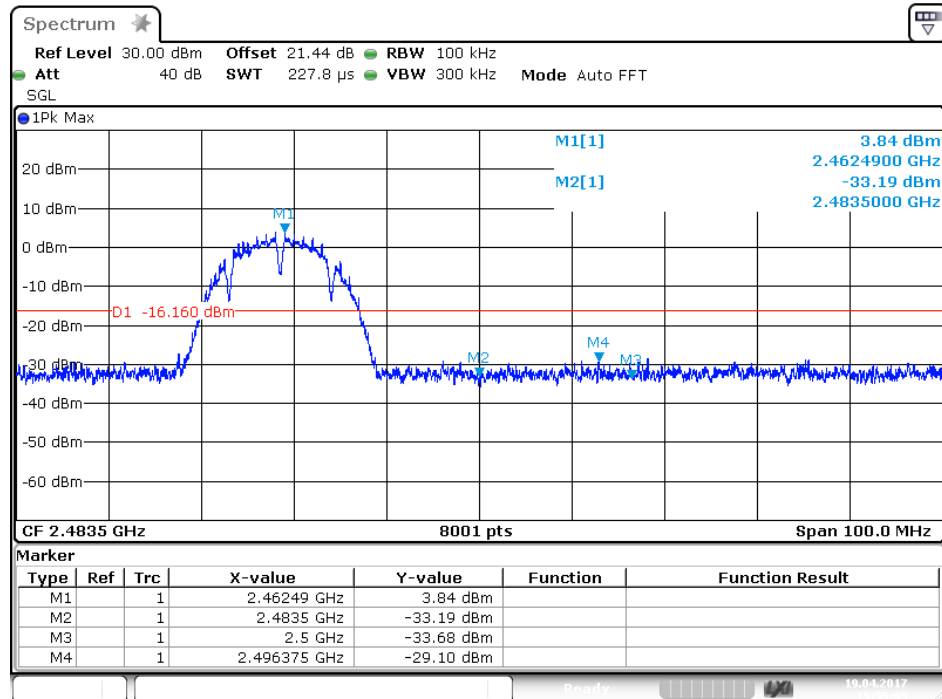
The test was performed with 802.11n (40MHz)		
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2400	31.58	> 30dBc
2483.5	31.86	> 30dBc

802.11b Channel Low 2412MHz



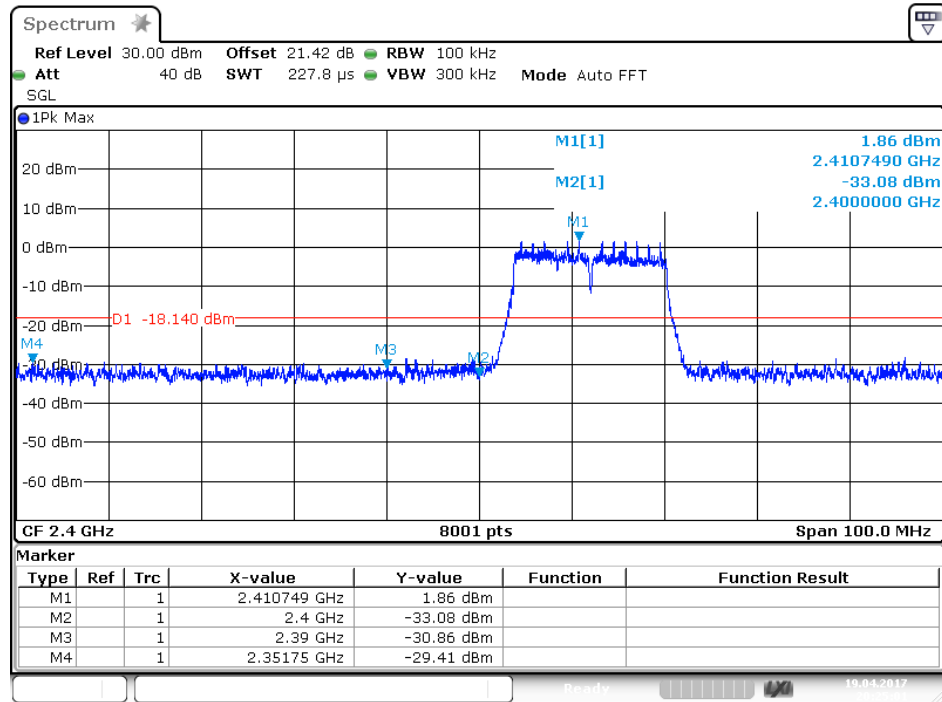
Date: 19.APR.2017 19:50:08

802.11b Channel High 2462MHz



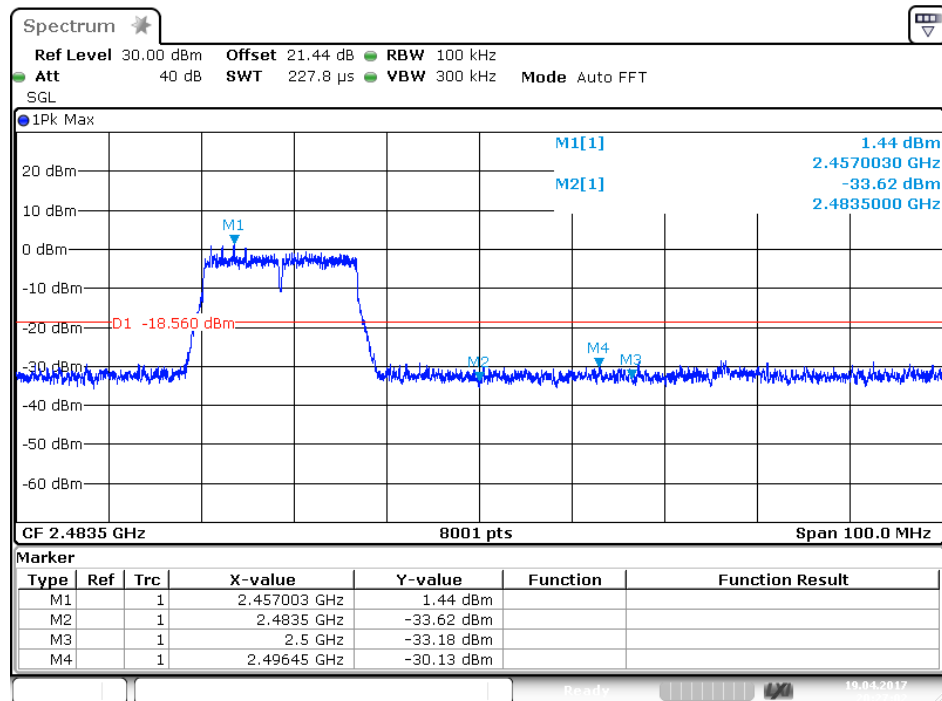
Date: 19.APR.2017 19:55:09

802.11g Channel Low 2412MHz



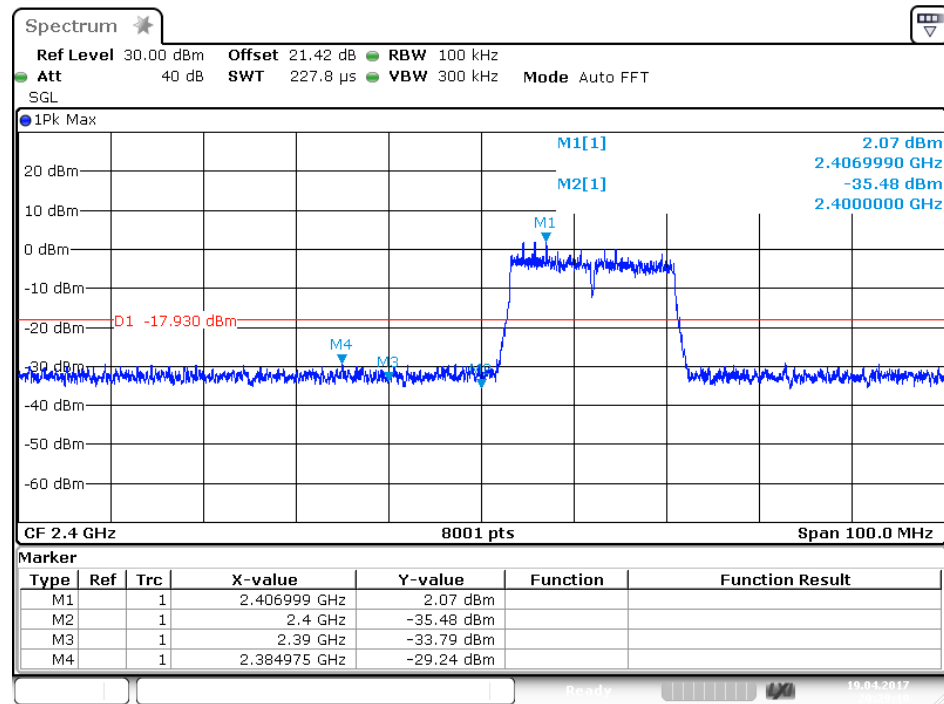
Date: 19.APR.2017 20:25:01

802.11g Channel High 2462MHz



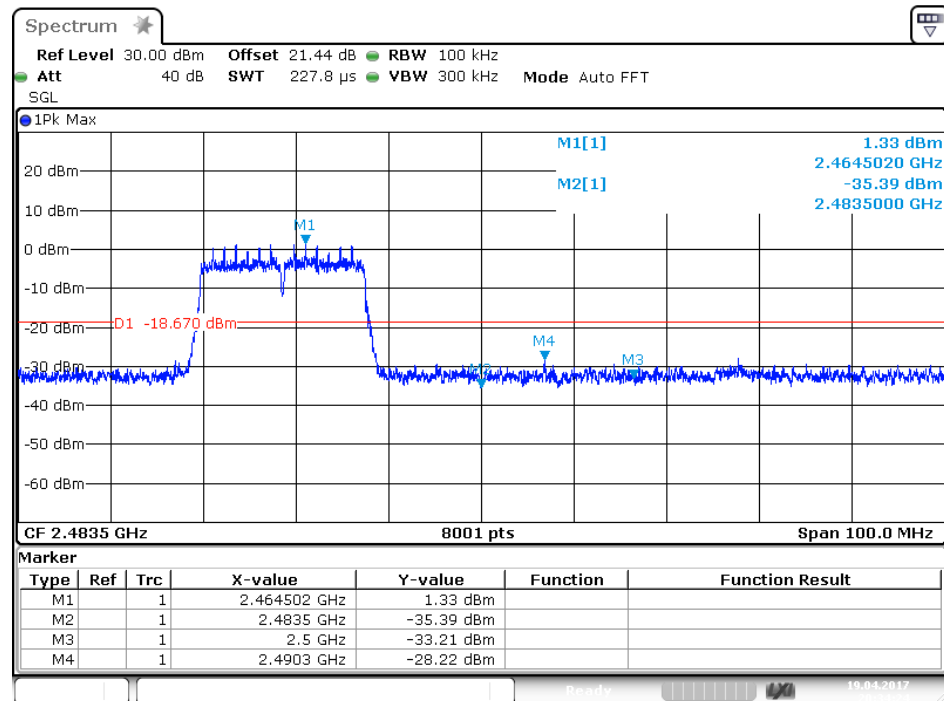
Date: 19.APR.2017 20:27:02

802.11n Channel Low 2412MHz (20MHz)



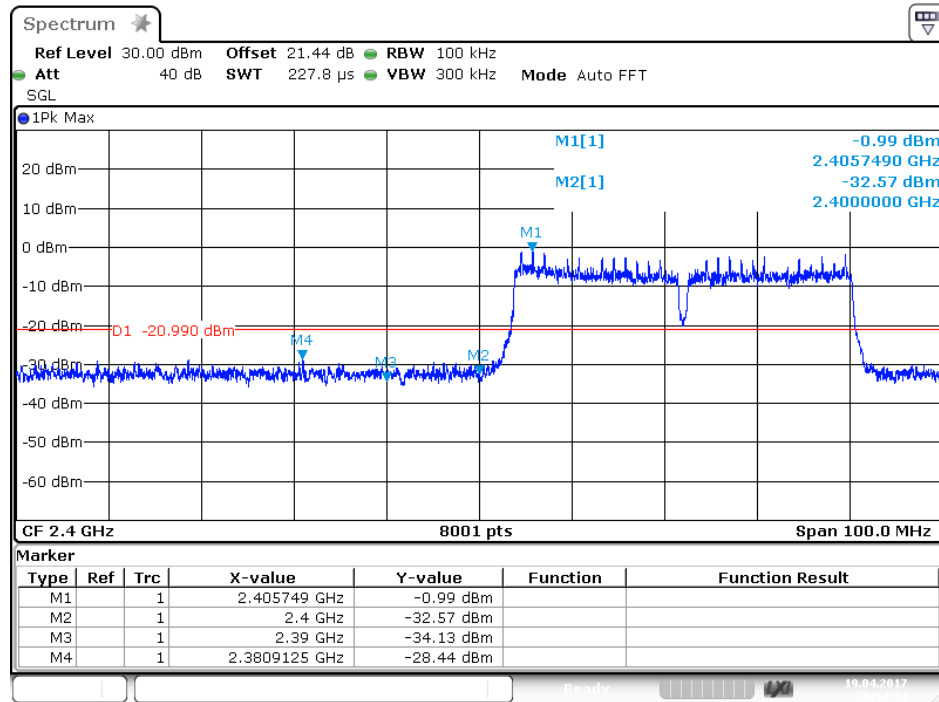
Date: 19.APR.2017 20:29:10

802.11n Channel High 2462MHz (20MHz)

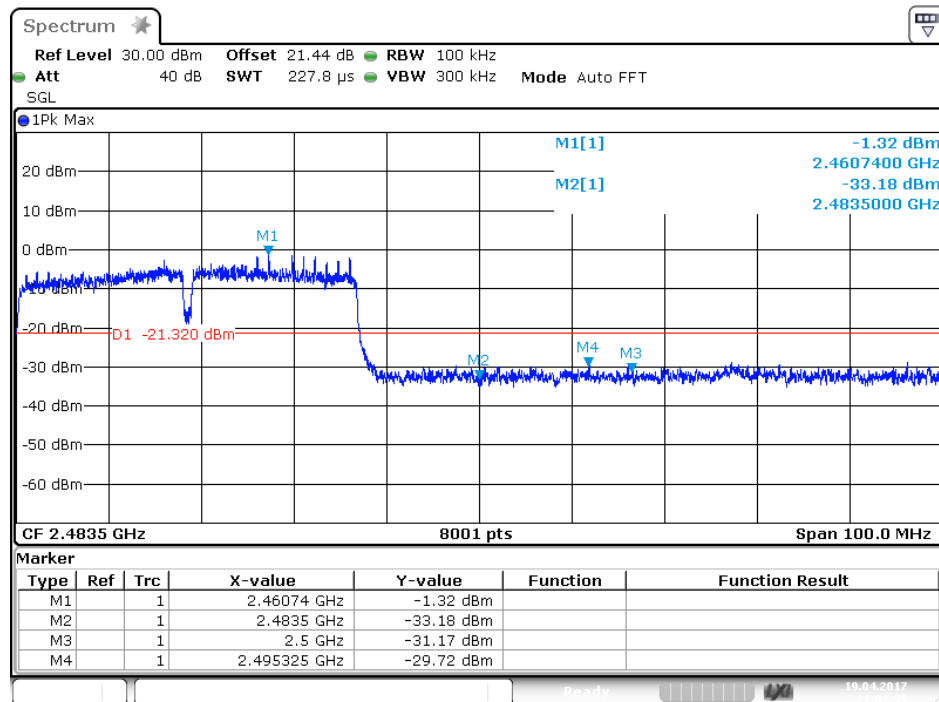


Date: 19.APR.2017 20:34:24

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:
$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$
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.

Job No.: star2016 #2044

Standard: FCC PK

Test item: Radiation Test

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

EUT: UFO Panoramic WiFi HD Camera

Mode: TX Channel 1(802.11b)

Model: PT-180H

Manufacturer: Chuango

Polarization: Horizontal

Power Source: AC 120V/60Hz

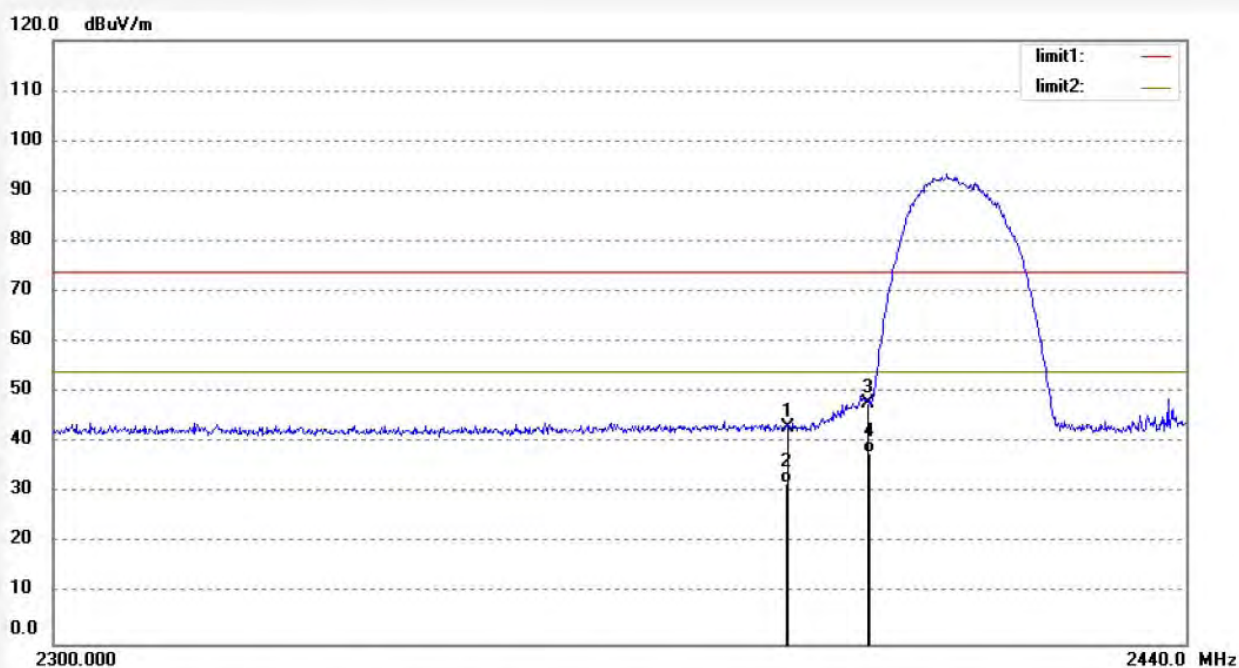
Date: 17/04/17/

Time: 9/10/14

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20170411



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	6.26	36.73	42.99	74.00	-31.01	peak			
2	2390.000	-4.68	36.73	32.05	54.00	-21.95	AVG			
3	2400.000	10.99	36.78	47.77	74.00	-26.23	peak			
4	2400.000	1.27	36.78	38.05	54.00	-15.95	AVG			

Job No.: star2016 #2045

Standard: FCC PK

Test item: Radiation Test

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

EUT: UFO Panoramic WiFi HD Camera

Mode: TX Channel 1(802.11b)

Model: PT-180H

Manufacturer: Chuango

Polarization: Vertical

Power Source: AC 120V/60Hz

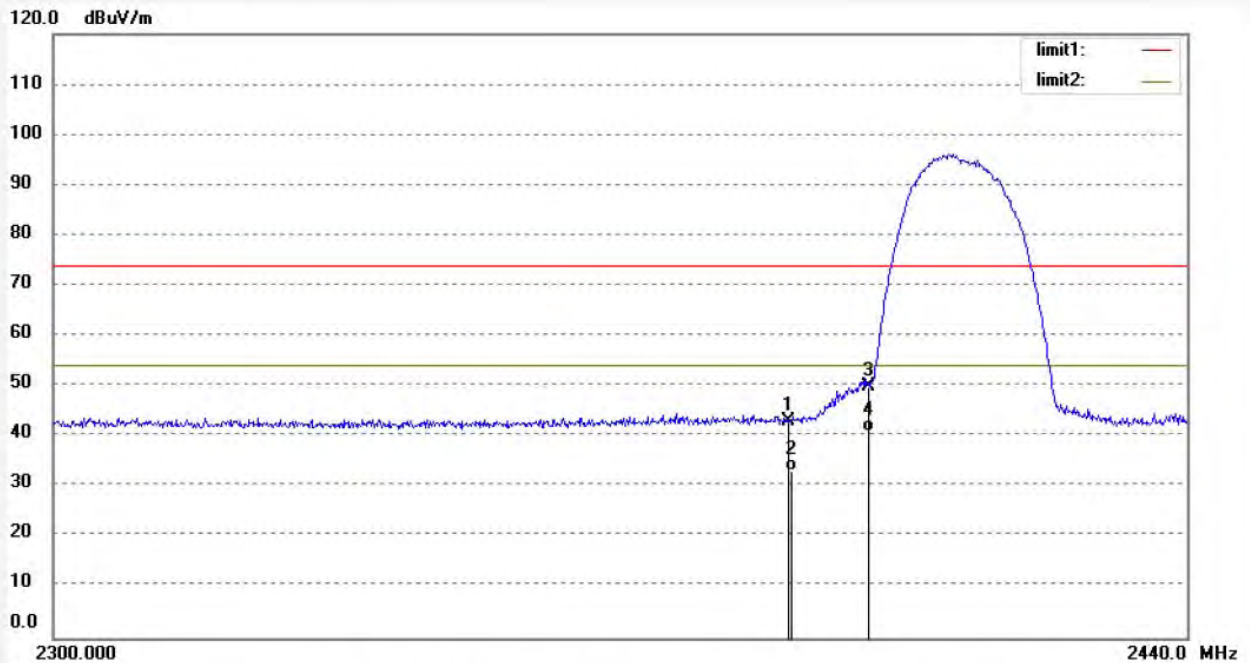
Date: 17/04/17/

Time: 9/11/14

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20170411



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	6.33	36.73	43.06	74.00	-30.94	peak			
2	2390.000	-3.49	36.73	33.24	54.00	-20.76	AVG			
3	2400.000	13.24	36.78	50.02	74.00	-23.98	peak			
4	2400.000	4.27	36.78	41.05	54.00	-12.95	AVG			

Job No.: star2016 #2043

Standard: FCC PK

Test item: Radiation Test

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

EUT: UFO Panoramic WiFi HD Camera

Mode: TX Channel 11(802.11b)

Model: PT-180H

Manufacturer: Chuango

Polarization: Horizontal

Power Source: AC 120V/60Hz

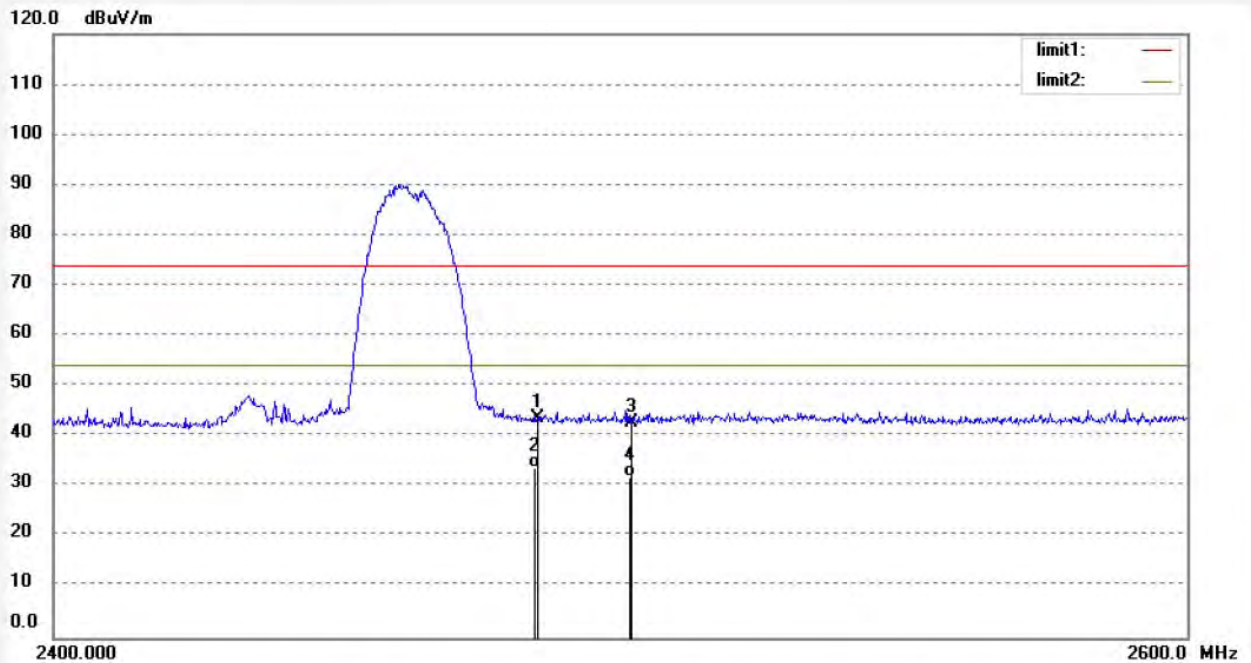
Date: 17/04/17/

Time: 9/08/32

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20170411



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	6.66	37.13	43.79	74.00	-30.21	peak			
2	2483.500	-3.27	37.13	33.86	54.00	-20.14	AVG			
3	2500.000	5.68	37.20	42.88	74.00	-31.12	peak			
4	2500.000	-5.28	37.20	31.92	54.00	-22.08	AVG			

Job No.: star2016 #2042

Standard: FCC PK

Test item: Radiation Test

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

EUT: UFO Panoramic WiFi HD Camera

Mode: TX Channel 11(802.11b)

Model: PT-180H

Manufacturer: Chuango

Polarization: Vertical

Power Source: AC 120V/60Hz

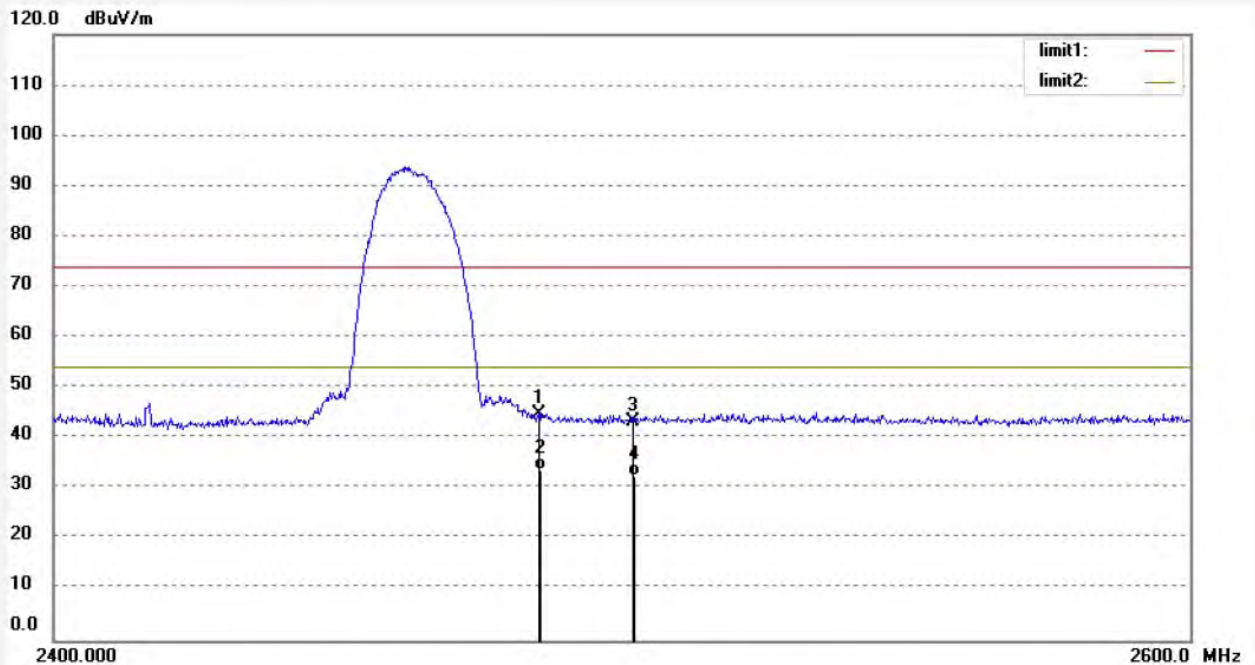
Date: 17/04/17/

Time: 9/07/33

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20170411

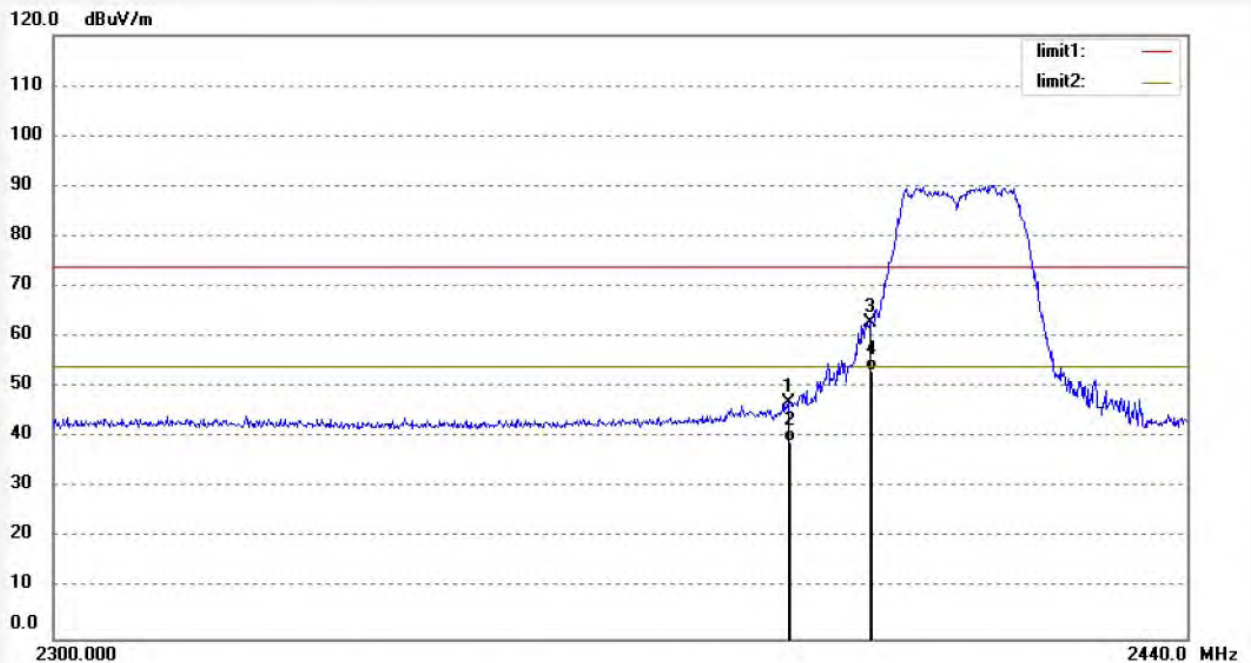


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	7.65	37.13	44.78	74.00	-29.22	peak			
2	2483.500	-3.40	37.13	33.73	54.00	-20.27	AVG			
3	2500.000	6.04	37.20	43.24	74.00	-30.76	peak			
4	2500.000	-4.59	37.20	32.61	54.00	-21.39	AVG			

Job No.: star2016 #2038
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: UFO Panoramic WiFi HD Camera
Mode: TX Channel 1(802.11g)
Model: PT-180H
Manufacturer: Chuango

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/04/17/
Time: 8/58/43
Engineer Signature: star
Distance: 3m

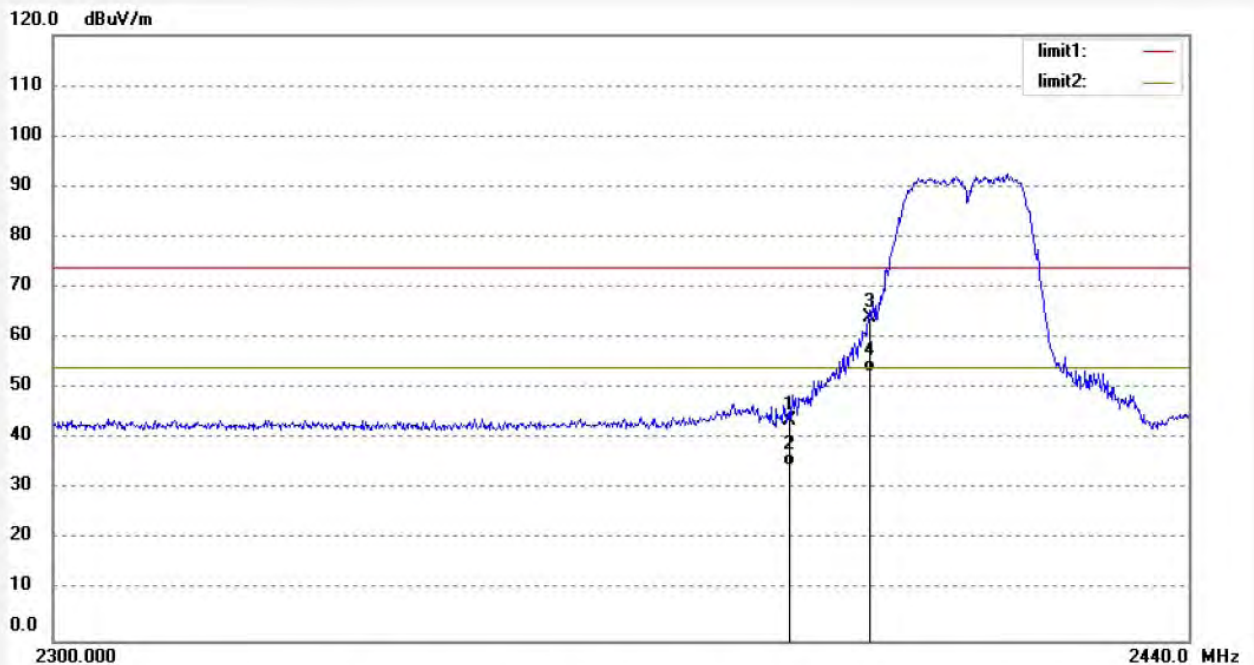
Note: Report No.:ATE20170411



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	10.32	36.73	47.05	74.00	-26.95	peak			
2	2390.000	2.39	36.73	39.12	54.00	-14.88	AVG			
3	2400.000	26.06	36.78	62.84	74.00	-11.16	peak			
4	2400.000	16.34	36.78	53.12	54.00	-0.88	AVG			

Job No.: star2016 #2037	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/04/17/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 8/57/41
EUT: UFO Panoramic WiFi HD Camera	Engineer Signature: star
Mode: TX Channel 1(802.11g)	Distance: 3m
Model: PT-180H	
Manufacturer: Chuango	

Note: Report No.:ATE20170411

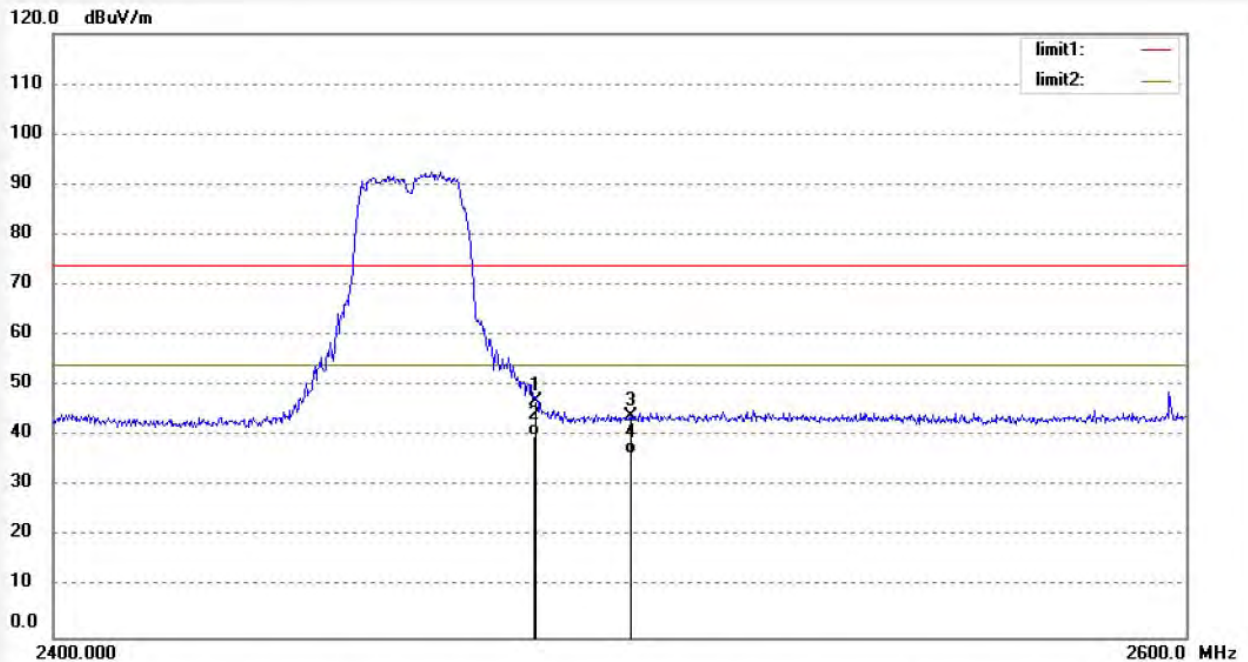


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	6.88	36.73	43.61	74.00	-30.39	peak			
2	2390.000	-2.00	36.73	34.73	54.00	-19.27	AVG			
3	2400.000	27.35	36.78	64.13	74.00	-9.87	peak			
4	2400.000	16.47	36.78	53.25	54.00	-0.75	AVG			

Job No.: star2016 #2040
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: UFO Panoramic WiFi HD Camera
Mode: TX Channel 11(802.11g)
Model: PT-180H
Manufacturer: Chuango

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/04/17/
Time: 9/03/09
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20170411



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	9.88	37.13	47.01	74.00	-26.99	peak			
2	2483.500	2.81	37.13	39.94	54.00	-14.06	AVG			
3	2500.000	6.78	37.20	43.98	74.00	-30.02	peak			
4	2500.000	-0.83	37.20	36.37	54.00	-17.63	AVG			

Job No.: star2016 #2041

Standard: FCC PK

Test item: Radiation Test

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

EUT: UFO Panoramic WiFi HD Camera

Mode: TX Channel 11(802.11g)

Model: PT-180H

Manufacturer: Chuango

Polarization: Vertical

Power Source: AC 120V/60Hz

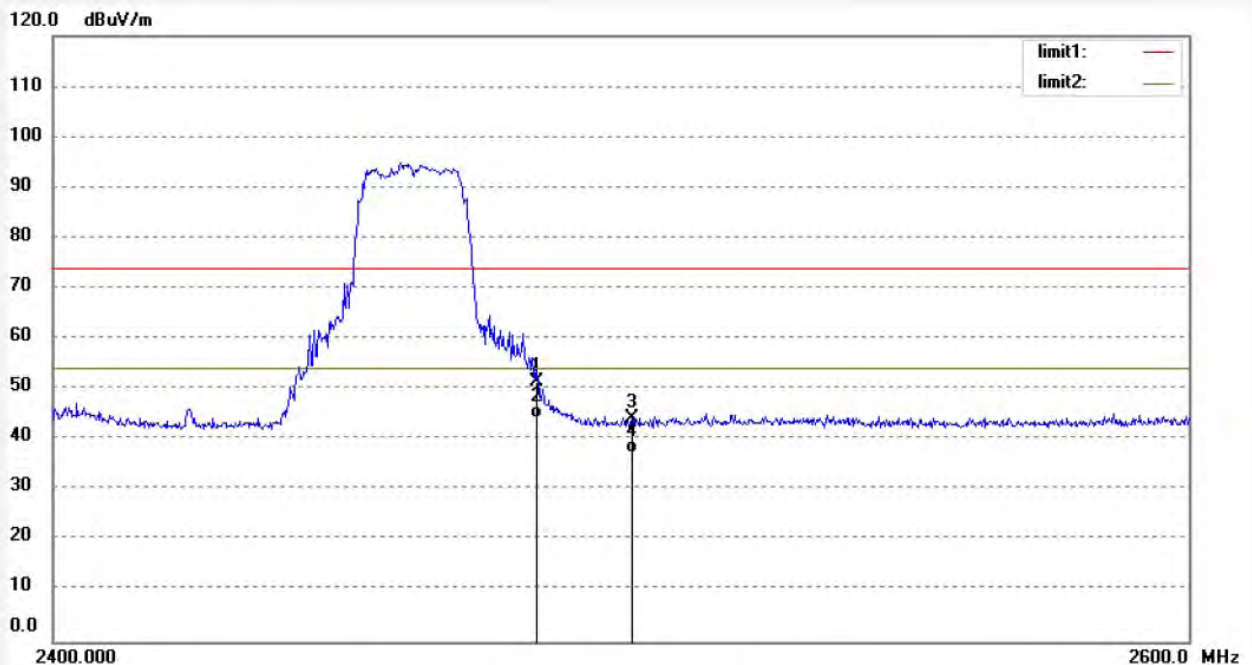
Date: 17/04/17/

Time: 9/04/10

Engineer Signature: star

Distance: 3m

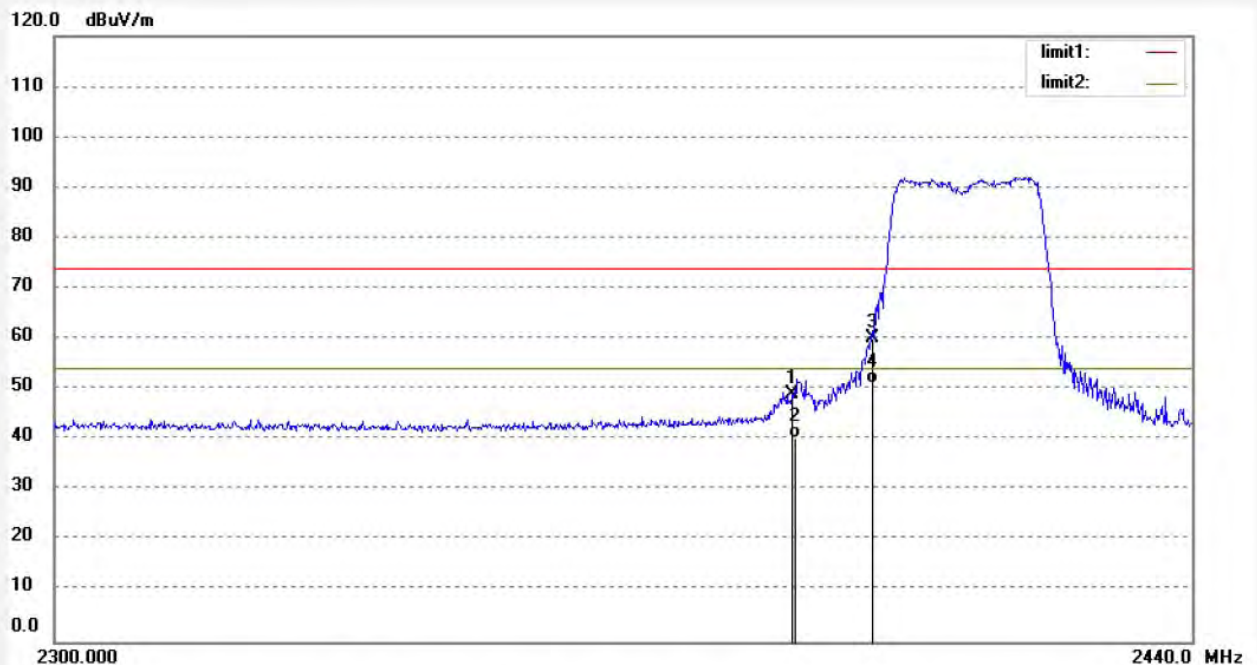
Note: Report No.:ATE20170411



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	14.31	37.13	51.44	74.00	-22.56	peak			
2	2483.500	7.14	37.13	44.27	54.00	-9.73	AVG			
3	2500.000	7.20	37.20	44.40	74.00	-29.60	peak			
4	2500.000	0.00	37.20	37.20	54.00	-16.80	AVG			

Job No.: star2016 #2047	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/04/17/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 9/14/55
EUT: UFO Panoramic WiFi HD Camera	Engineer Signature: star
Mode: TX Channel 1(802.11n) 20MHz	Distance: 3m
Model: PT-180H	
Manufacturer: Chuango	

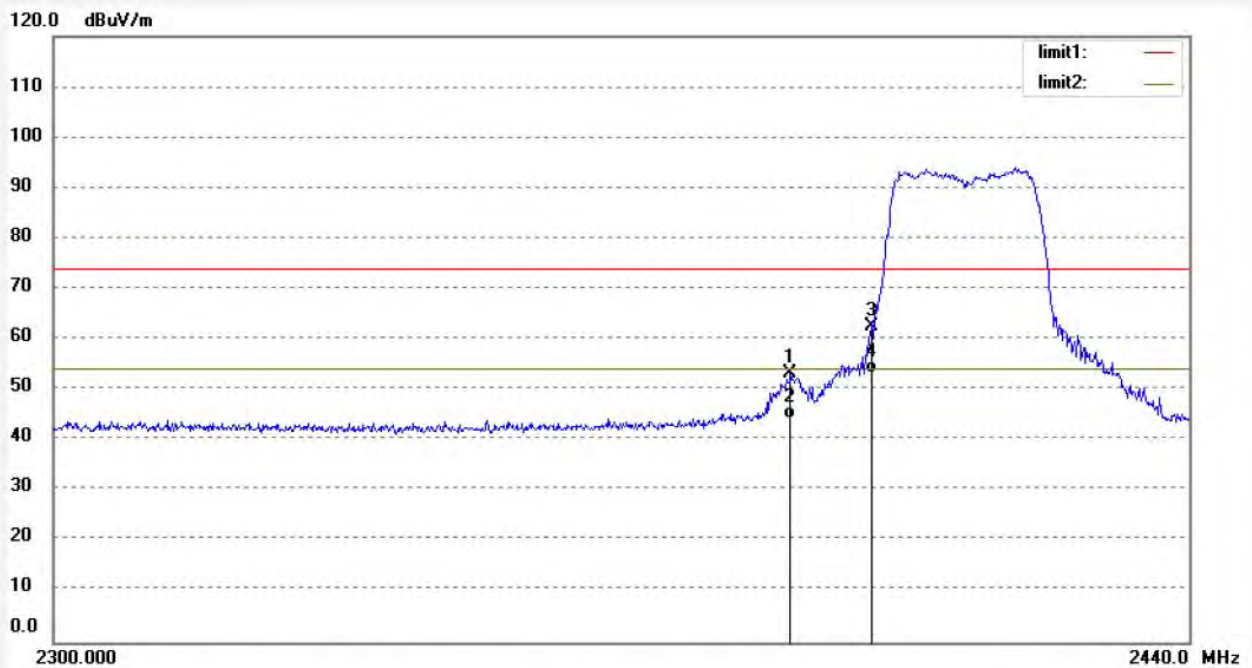
Note: Report No.:ATE20170411



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	12.31	36.73	49.04	74.00	-24.96	peak			
2	2390.000	3.59	36.73	40.32	54.00	-13.68	AVG			
3	2400.000	23.29	36.78	60.07	74.00	-13.93	peak			
4	2400.000	14.27	36.78	51.05	54.00	-2.95	AVG			

Job No.: star2016 #2046	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/04/17/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 9/13/23
EUT: UFO Panoramic WiFi HD Camera	Engineer Signature: star
Mode: TX Channel 1(802.11n) 20MHz	Distance: 3m
Model: PT-180H	
Manufacturer: Chuango	

Note: Report No.:ATE20170411



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	16.67	36.73	53.40	74.00	-20.60	peak			
2	2390.000	7.41	36.73	44.14	54.00	-9.86	AVG			
3	2400.000	25.64	36.78	62.42	74.00	-11.58	peak			
4	2400.000	16.47	36.78	53.25	54.00	-0.75	AVG			

Job No.: star2016 #2048

Standard: FCC PK

Test item: Radiation Test

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

EUT: UFO Panoramic WiFi HD Camera

Mode: TX Channel 11(802.11n) 20MHz

Model: PT-180H

Manufacturer: Chuango

Polarization: Horizontal

Power Source: AC 120V/60Hz

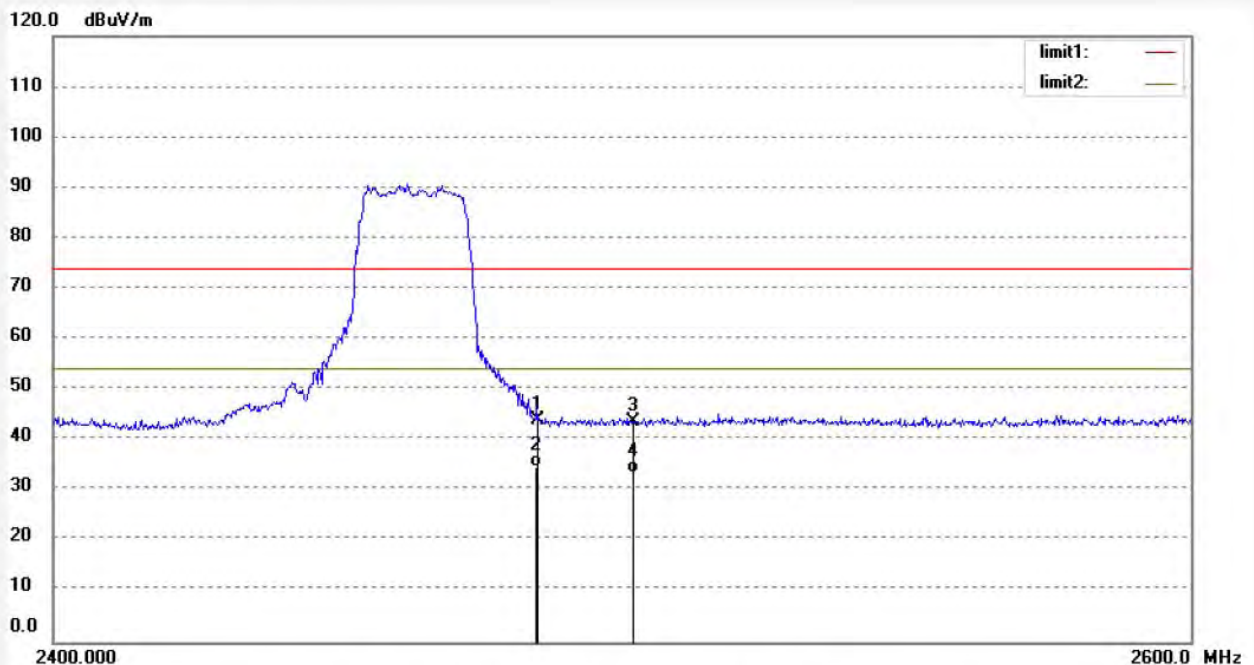
Date: 17/04/17/

Time: 9/17/20

Engineer Signature: star

Distance: 3m

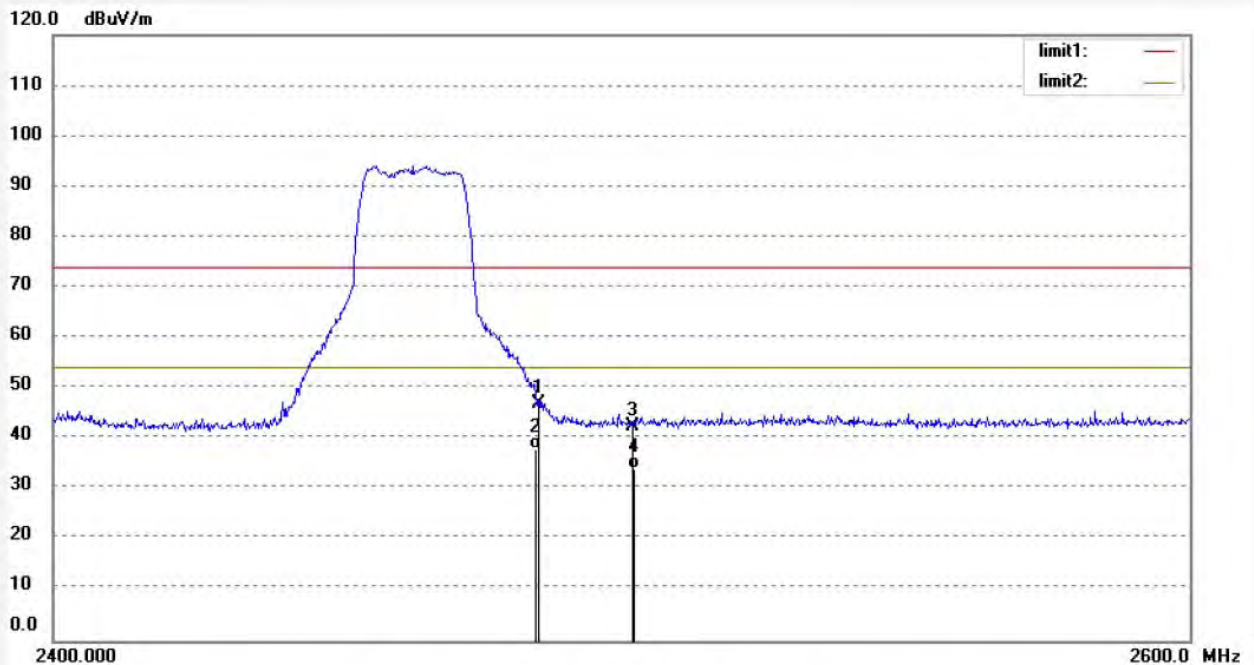
Note: Report No.:ATE20170411



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	6.68	37.13	43.81	74.00	-30.19	peak			
2	2483.500	-2.47	37.13	34.66	54.00	-19.34	AVG			
3	2500.000	6.53	37.20	43.73	74.00	-30.27	peak			
4	2500.000	-3.71	37.20	33.49	54.00	-20.51	AVG			

Job No.: star2016 #2049	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/04/17/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 9/18/04
EUT: UFO Panoramic WiFi HD Camera	Engineer Signature: star
Mode: TX Channel 11(802.11n) 20MHz	Distance: 3m
Model: PT-180H	
Manufacturer: Chuango	

Note: Report No.:ATE20170411

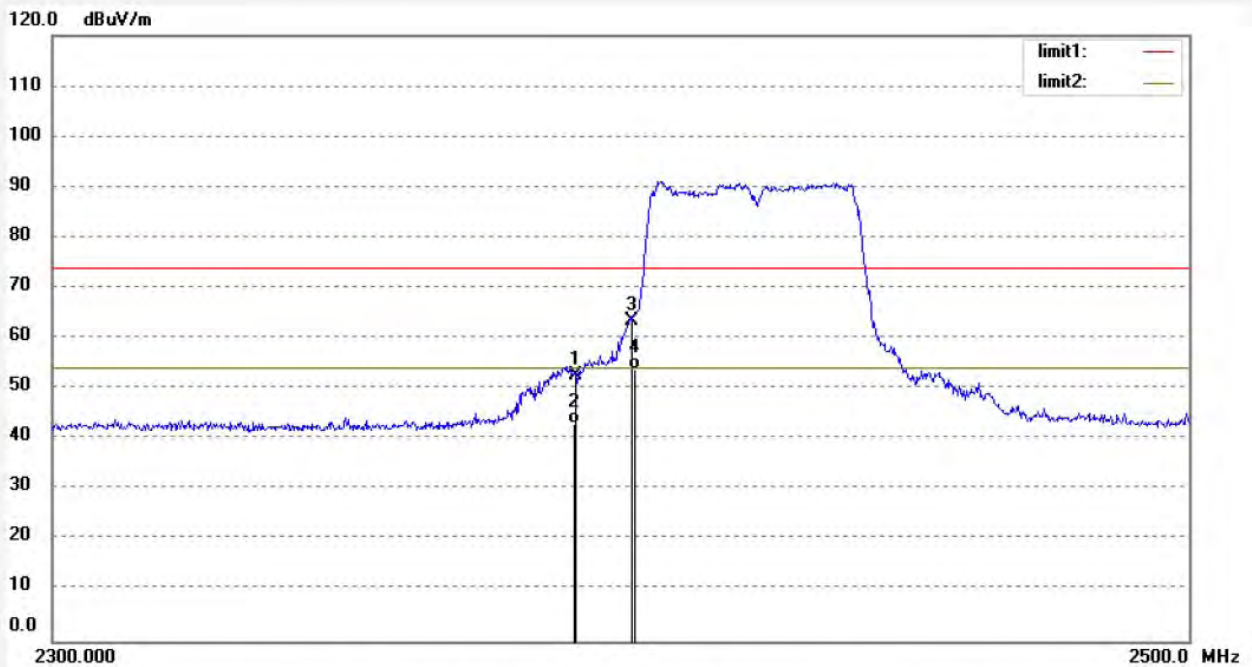


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	9.81	37.13	46.94	74.00	-27.06	peak			
2	2483.500	0.71	37.13	37.84	54.00	-16.16	AVG			
3	2500.000	5.33	37.20	42.53	74.00	-31.47	peak			
4	2500.000	-3.03	37.20	34.17	54.00	-19.83	AVG			

Job No.: star2016 #2052
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: UFO Panoramic WiFi HD Camera
Mode: TX Channel 3(802.11n)40MHz
Model: PT-180H
Manufacturer: Chuango

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/04/17/
Time: 9/30/29
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20170411



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	15.91	36.73	52.64	74.00	-21.36	peak			
2	2390.000	6.29	36.73	43.02	54.00	-10.98	AVG			
3	2400.000	26.81	36.78	63.59	74.00	-10.41	peak			
4	2400.000	17.14	36.78	53.92	54.00	-0.08	AVG			

Job No.: star2016 #2053

Standard: FCC PK

Test item: Radiation Test

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

EUT: UFO Panoramic WiFi HD Camera

Mode: TX Channel 3(802.11n)40MHz

Model: PT-180H

Manufacturer: Chuango

Polarization: Vertical

Power Source: AC 120V/60Hz

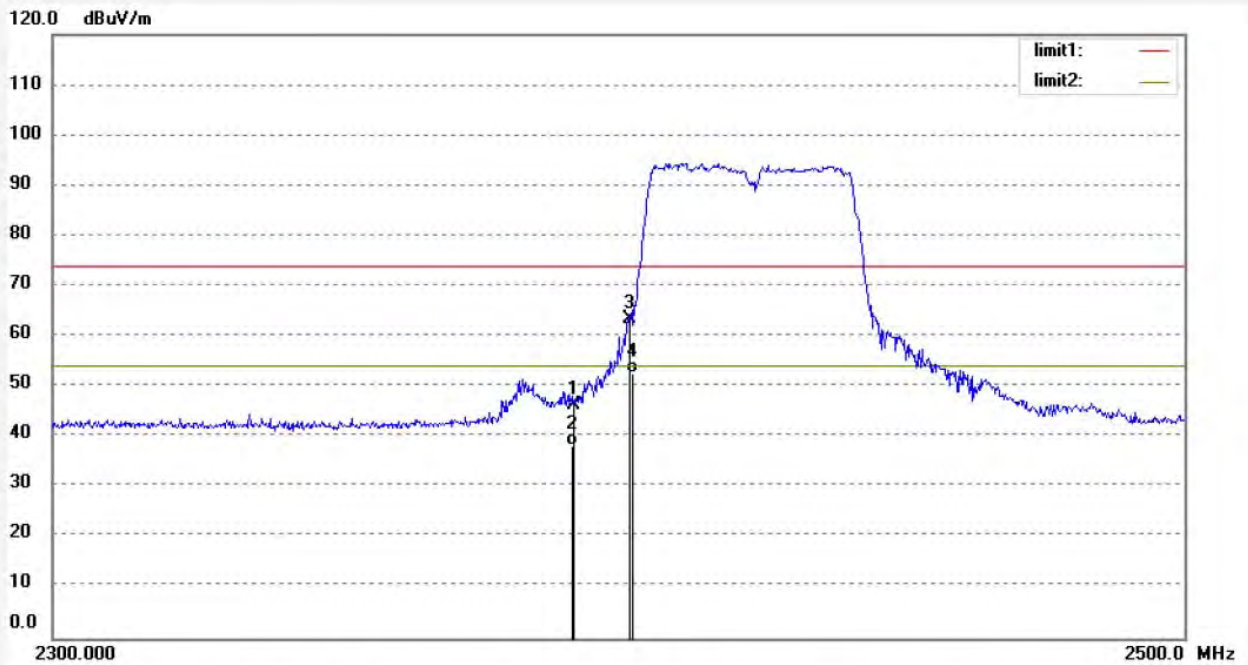
Date: 17/04/17/

Time: 9/31/24

Engineer Signature: star

Distance: 3m

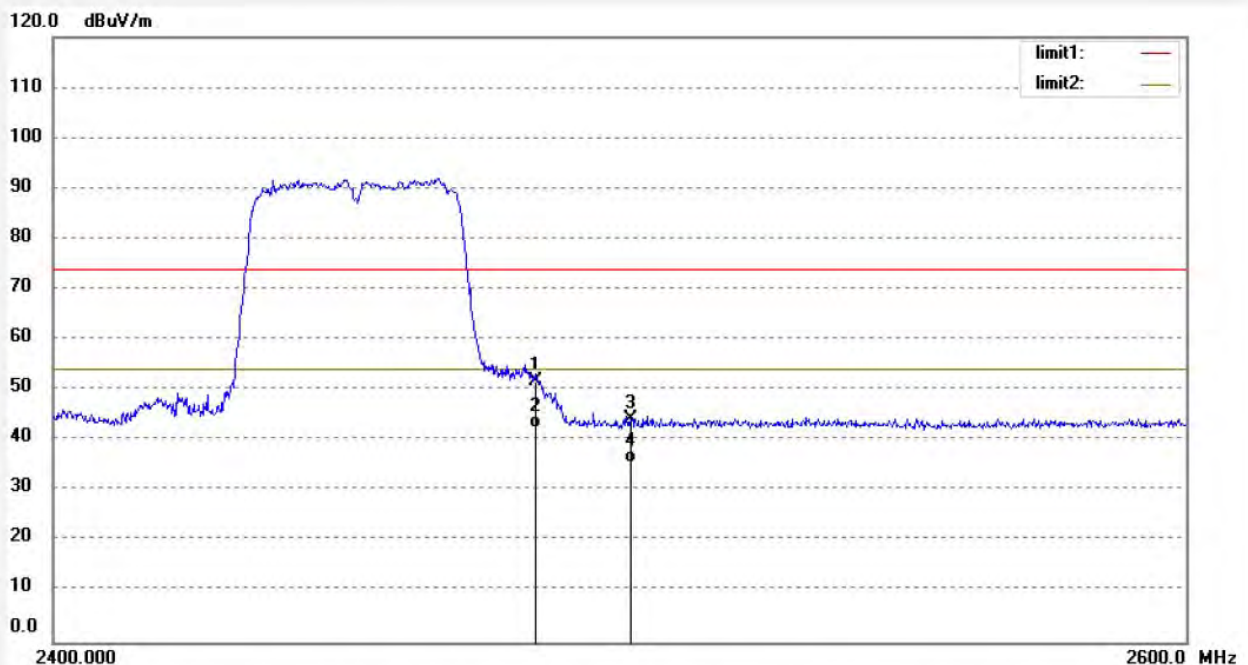
Note: Report No.:ATE20170411



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	9.58	36.73	46.31	74.00	-27.69	peak			
2	2390.000	1.55	36.73	38.28	54.00	-15.72	AVG			
3	2400.000	26.58	36.78	63.36	74.00	-10.64	peak			
4	2400.000	16.00	36.78	52.78	54.00	-1.22	AVG			

Job No.: star2016 #2055	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/04/17/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 9/34/01
EUT: UFO Panoramic WiFi HD Camera	Engineer Signature: star
Mode: TX Channel 9(802.11n)40MHz	Distance: 3m
Model: PT-180H	
Manufacturer: Chuango	

Note: Report No.:ATE20170411

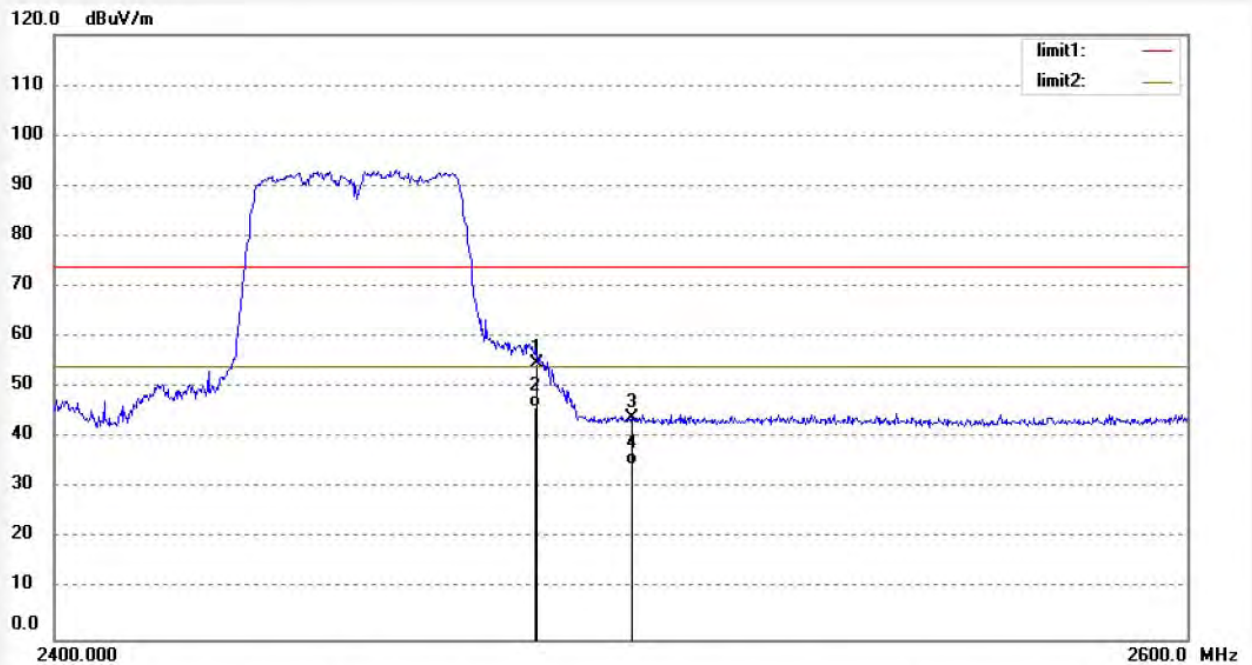


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	14.58	37.13	51.71	74.00	-22.29	peak			
2	2483.500	5.28	37.13	42.41	54.00	-11.59	AVG			
3	2500.000	7.01	37.20	44.21	74.00	-29.79	peak			
4	2500.000	-1.61	37.20	35.59	54.00	-18.41	AVG			

Job No.: star2016 #2054
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: UFO Panoramic WiFi HD Camera
Mode: TX Channel 9(802.11n)40MHz
Model: PT-180H
Manufacturer: Chuango

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/04/17/
Time: 9/33/04
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20170411

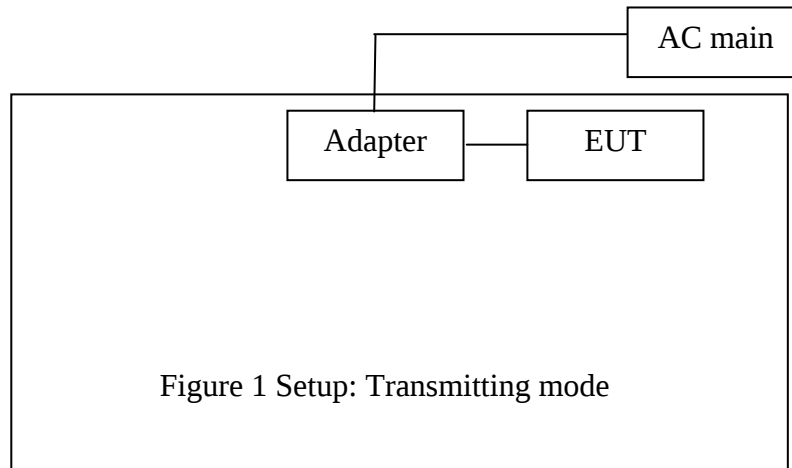


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	17.54	37.13	54.67	74.00	-19.33	peak			
2	2483.500	8.91	37.13	46.04	54.00	-7.96	AVG			
3	2500.000	6.84	37.20	44.04	74.00	-29.96	peak			
4	2500.000	-2.54	37.20	34.66	54.00	-19.34	AVG			

11.RADIATED SPURIOUS EMISSION TEST

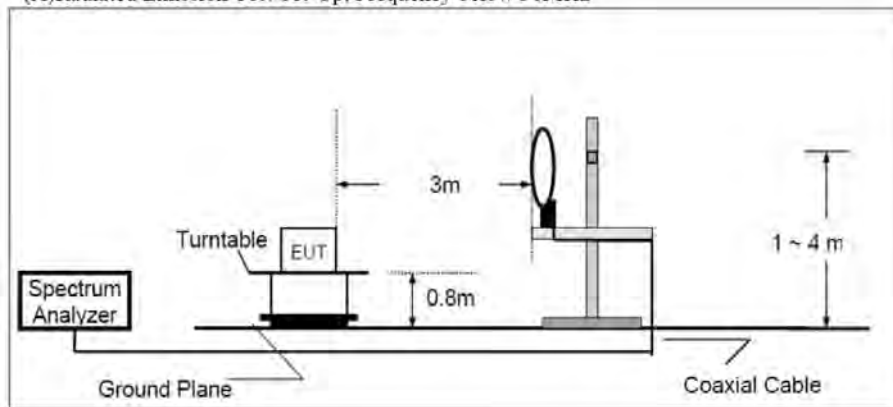
11.1.Block Diagram of Test Setup

11.1.1.Block diagram of connection between the EUT and peripherals

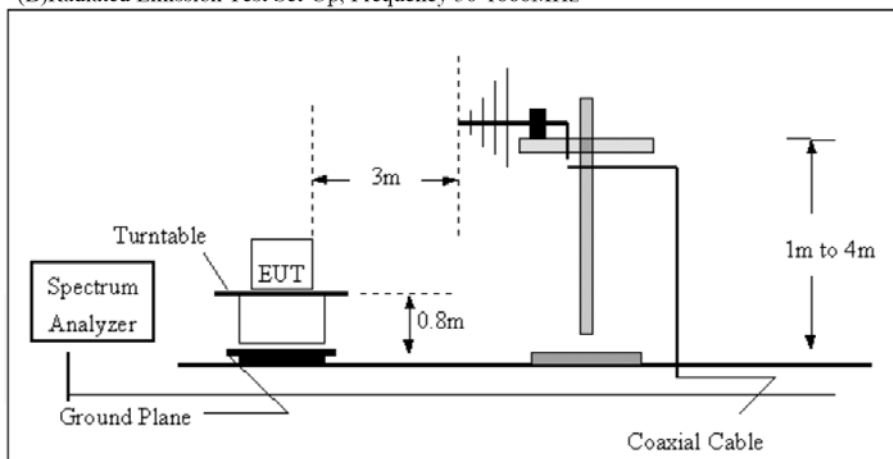


11.1.2.Semi-Anechoic Chamber Test Setup Diagram

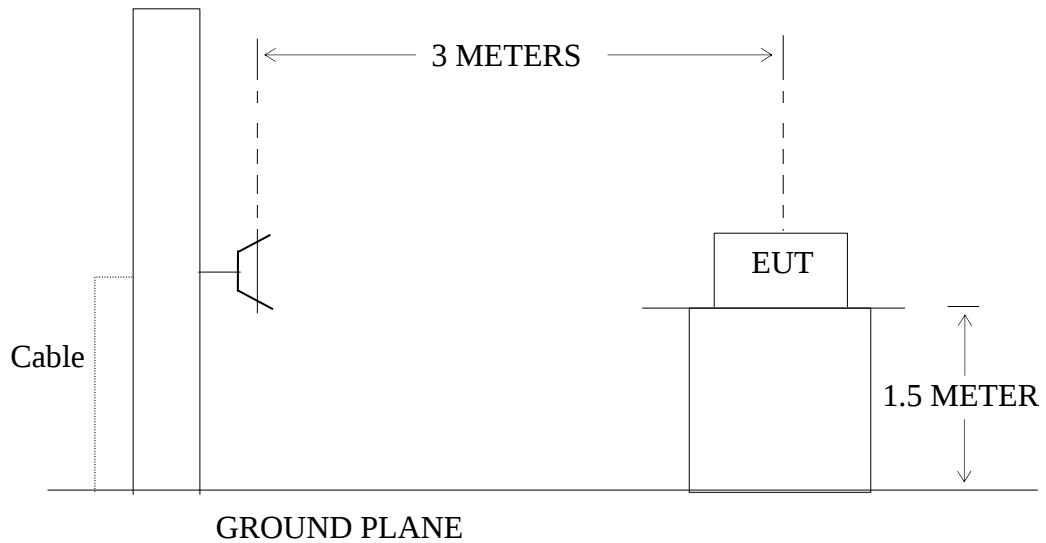
(A)Radiated Emission Test Set-Up, Frequency below 30MHz



(B)Radiated Emission Test Set-Up, Frequency 30-1000MHz



(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 10.1.

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.

The frequency range from 30MHz to 25000MHz is checked.

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

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.The Field Strength of Radiation Emission Measurement Results

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



ACCURATE TECHNOLOGY CO., LTD.

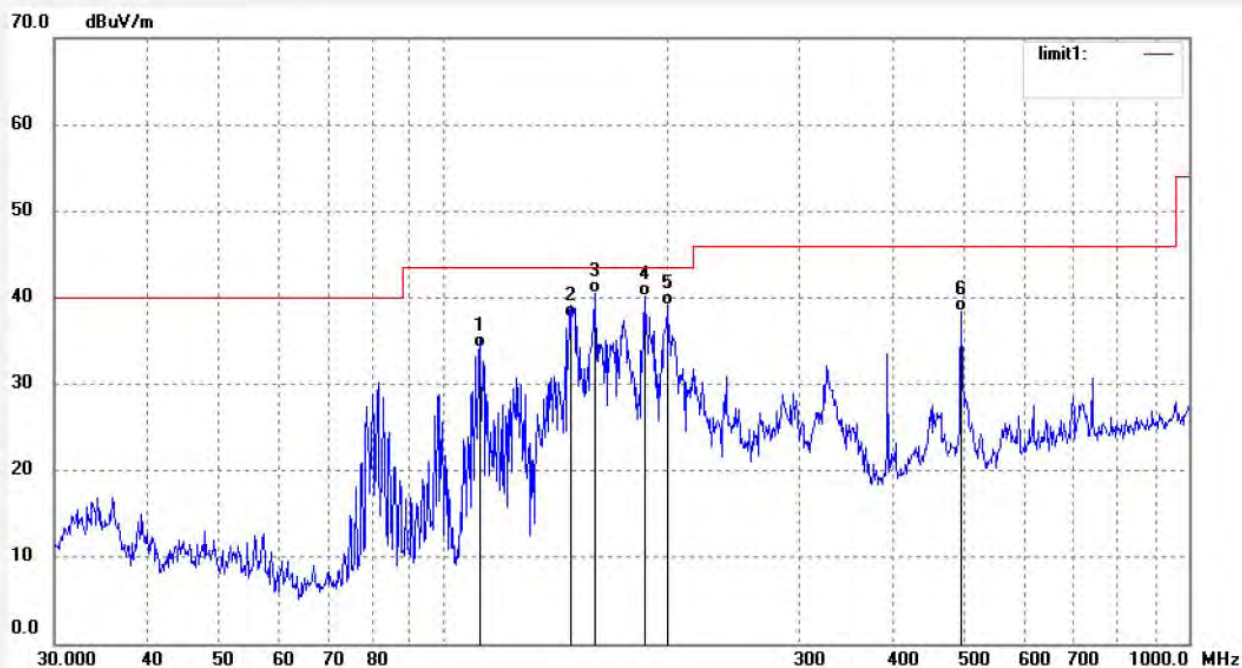
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: STAR2017 #403
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: UFO Panoramic WiFi HD Camera
Mode: TX Channel 1(802.11b)
Model: PT-180H
Manufacturer: Chuango

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/04/07/
Time: 9/32/12
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20170411

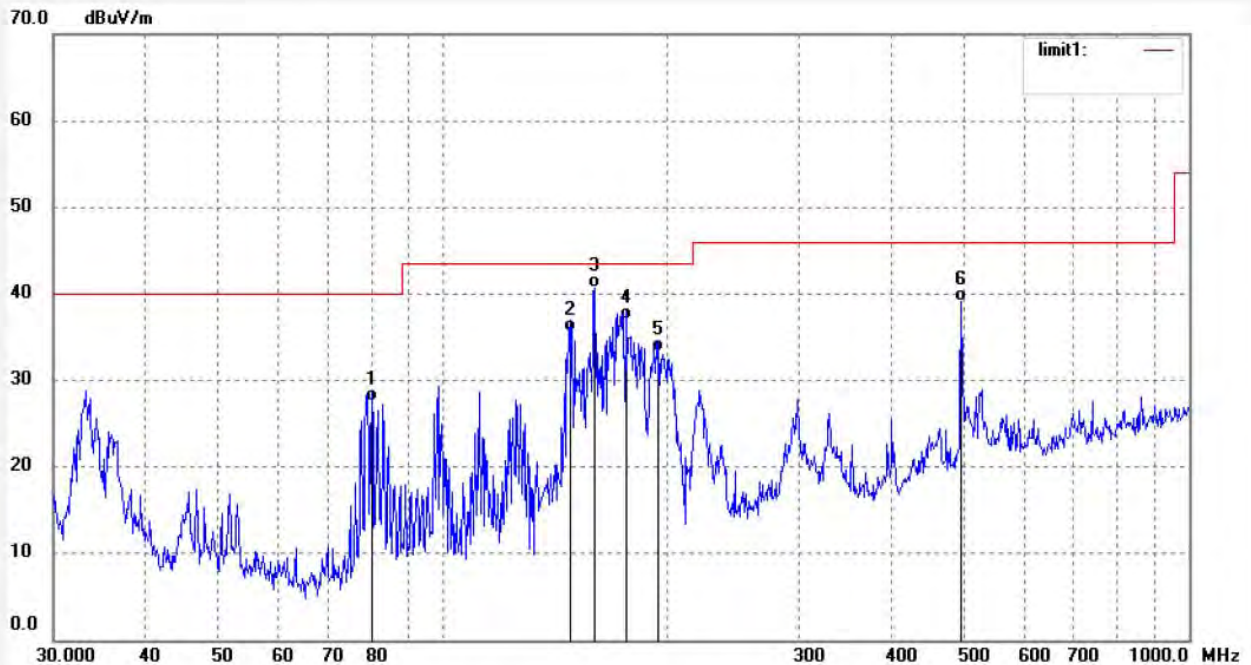


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	111.6398	54.33	-20.13	34.20	43.50	-9.30	QP			
2	148.3951	59.14	-21.51	37.63	43.50	-5.87	QP			
3	159.7586	61.40	-20.90	40.50	43.50	-3.00	QP			
4	185.8143	59.31	-19.21	40.10	43.50	-3.40	QP			
5	199.3416	58.16	-19.05	39.11	43.50	-4.39	QP			
6	495.2379	49.35	-11.01	38.34	46.00	-7.66	QP			

Job No.: STAR2017 #402
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: UFO Panoramic WiFi HD Camera
Mode: TX Channel 1(802.11b)
Model: PT-180H
Manufacturer: Chuango

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/04/07/
Time: 9/30/38
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20170411

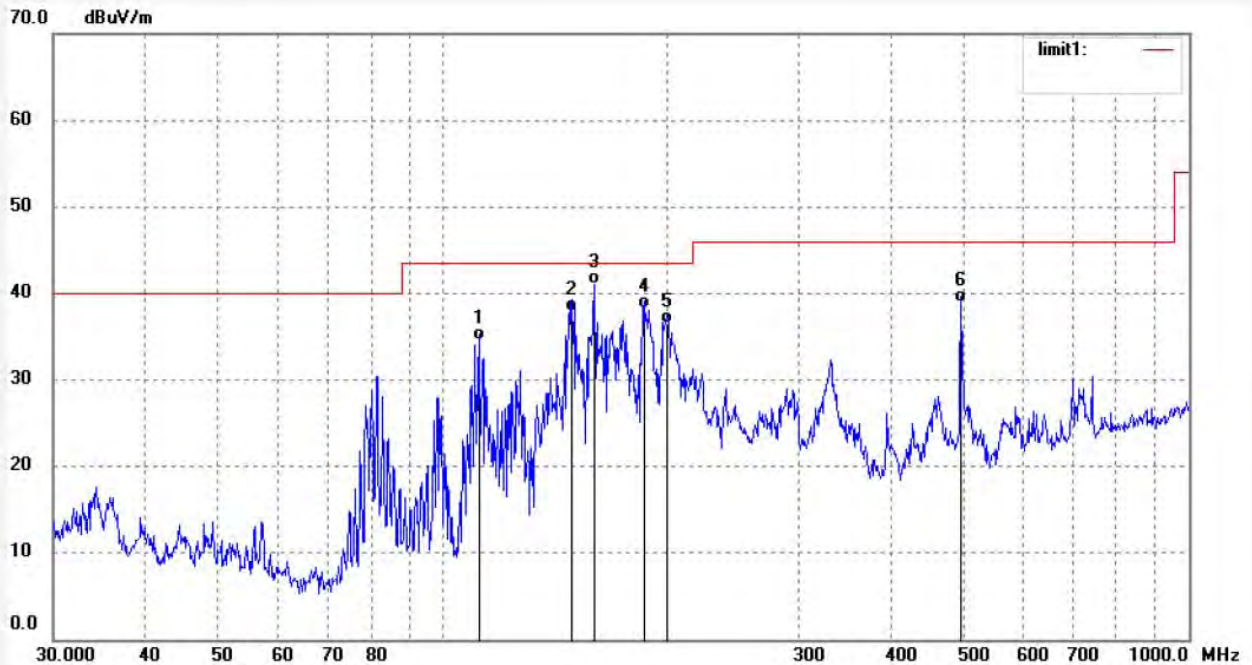


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	80.2382	50.79	-23.31	27.48	40.00	-12.52	QP			
2	147.8746	57.10	-21.52	35.58	43.50	-7.92	QP			
3	159.7586	61.60	-20.90	40.70	43.50	-2.80	QP			
4	175.6566	57.10	-20.06	37.04	43.50	-6.46	QP			
5	194.4985	52.33	-19.06	33.27	43.50	-10.23	QP			
6	495.2379	50.08	-11.01	39.07	46.00	-6.93	QP			

Job No.: STAR2017 #404
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: UFO Panoramic WiFi HD Camera
Mode: TX Channel 6(802.11b)
Model: PT-180H
Manufacturer: Chuango

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/04/07/
Time: 9/33/40
Engineer Signature: star
Distance: 3m

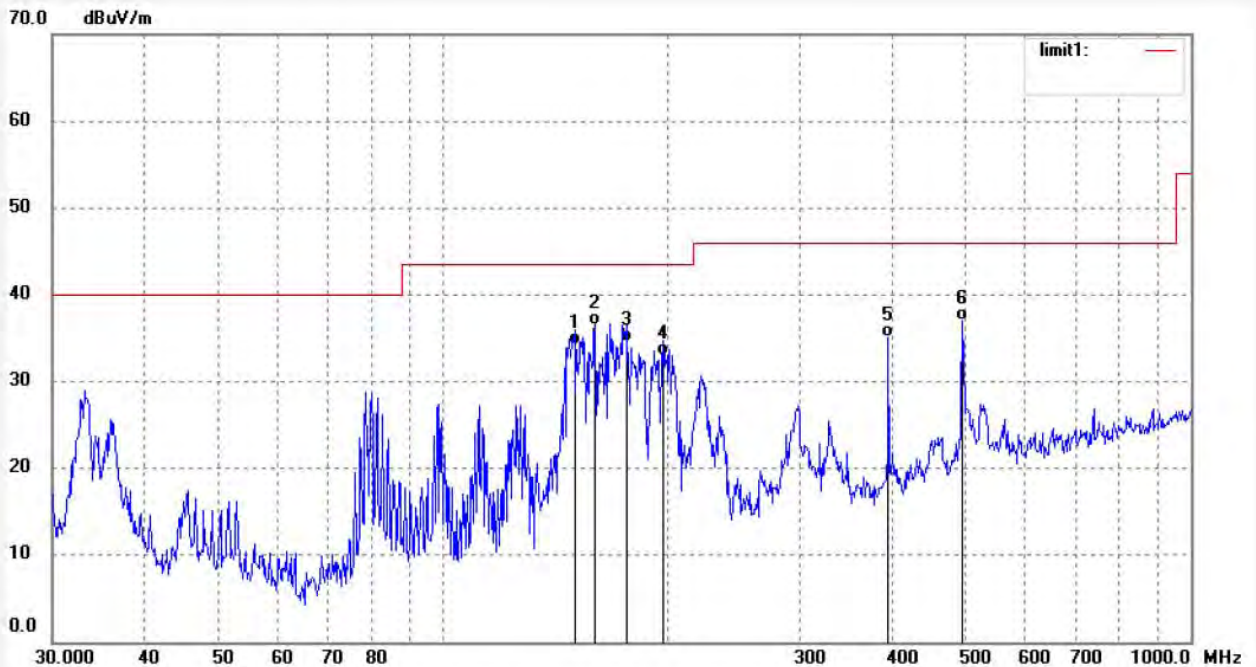
Note: Report No.:ATE20170411



Job No.: STAR2017 #405
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: UFO Panoramic WiFi HD Camera
Mode: TX Channel 6(802.11b)
Model: PT-180H
Manufacturer: Chuango

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/04/07/
Time: 9/34/26
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20170411

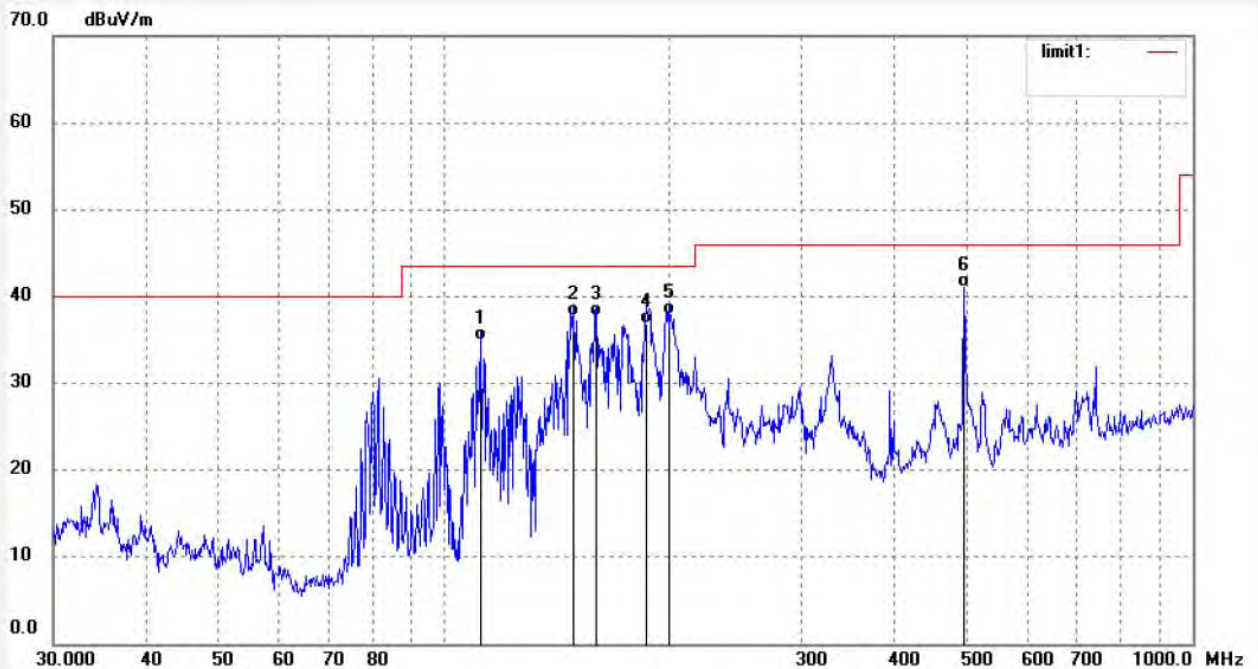


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	149.9676	55.74	-21.45	34.29	43.50	-9.21	QP			
2	159.7586	57.36	-20.90	36.46	43.50	-7.04	QP			
3	175.6565	54.59	-20.06	34.53	43.50	-8.97	QP			
4	197.2513	52.07	-19.05	33.02	43.50	-10.48	QP			
5	394.1198	48.56	-13.50	35.06	46.00	-10.94	QP			
6	495.2379	47.97	-11.01	36.96	46.00	-9.04	QP			

Job No.: STAR2017 #407
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: UFO Panoramic WiFi HD Camera
Mode: TX Channel 11(802.11b)
Model: PT-180H
Manufacturer: Chuango

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/04/07/
Time: 9/39/04
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20170411

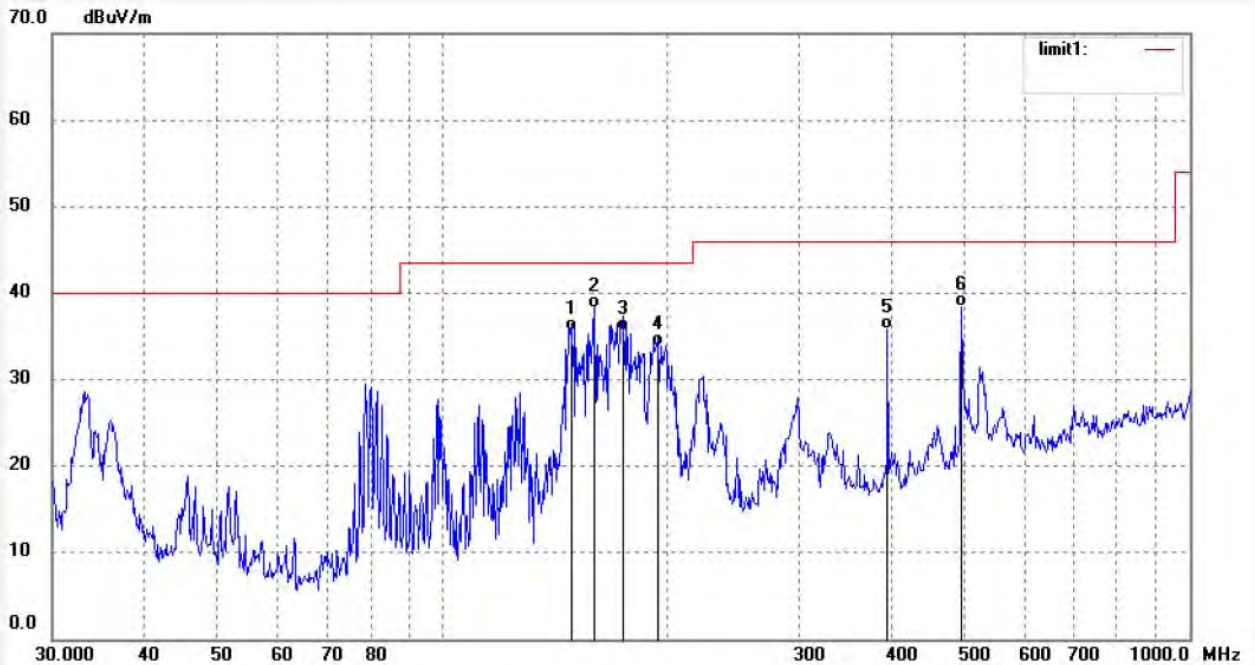


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	111.6399	55.10	-20.13	34.97	43.50	-8.53	QP			
2	148.9175	59.14	-21.49	37.65	43.50	-5.85	QP			
3	159.7586	58.67	-20.90	37.77	43.50	-5.73	QP			
4	185.8143	56.00	-19.21	36.79	43.50	-6.71	QP			
5	199.3416	57.00	-19.05	37.95	43.50	-5.55	QP			
6	495.2379	52.01	-11.01	41.00	46.00	-5.00	QP			

Job No.: STAR2017 #406
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: UFO Panoramic WiFi HD Camera
Mode: TX Channel 11(802.11b)
Model: PT-180H
Manufacturer: Chuango

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/04/07/
Time: 9/36/32
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20170411



Above 1G



ACCURATE TECHNOLOGY CO., LTD.

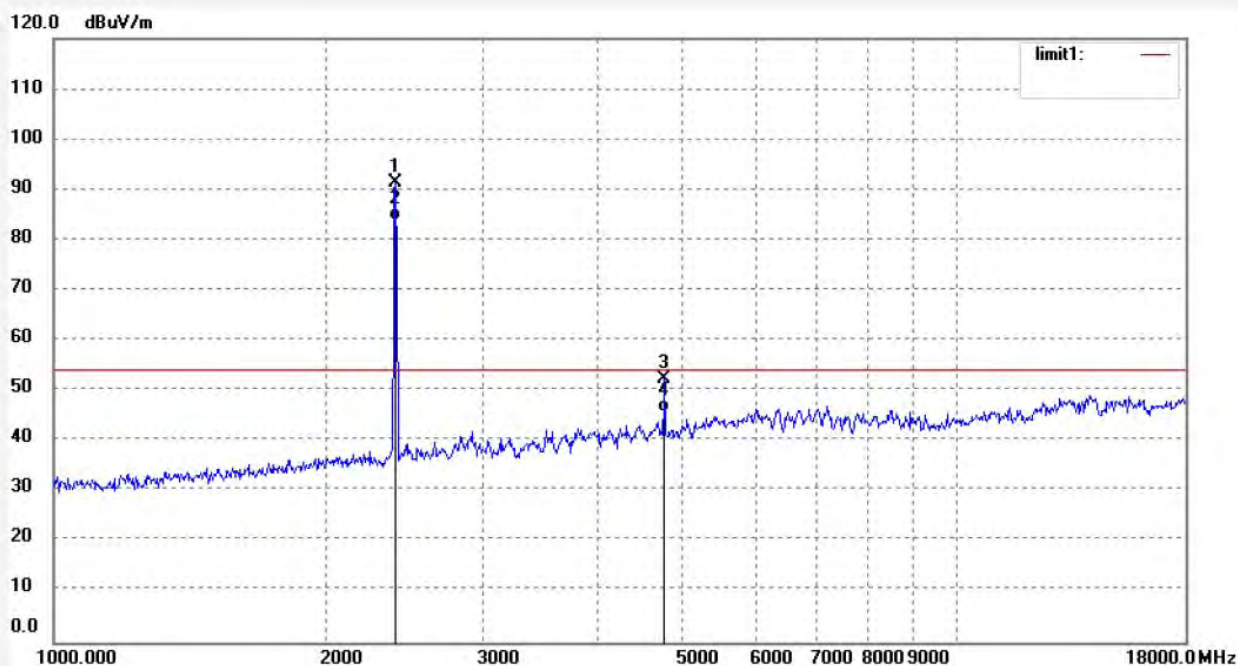
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: star2017 #482
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: UFO Panoramic WiFi HD Camera
Mode: TX Channel 1 (802.11b)
Model: PT-180H
Manufacturer: Chuango

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/04/14/
Time: 18/55/30
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20170411

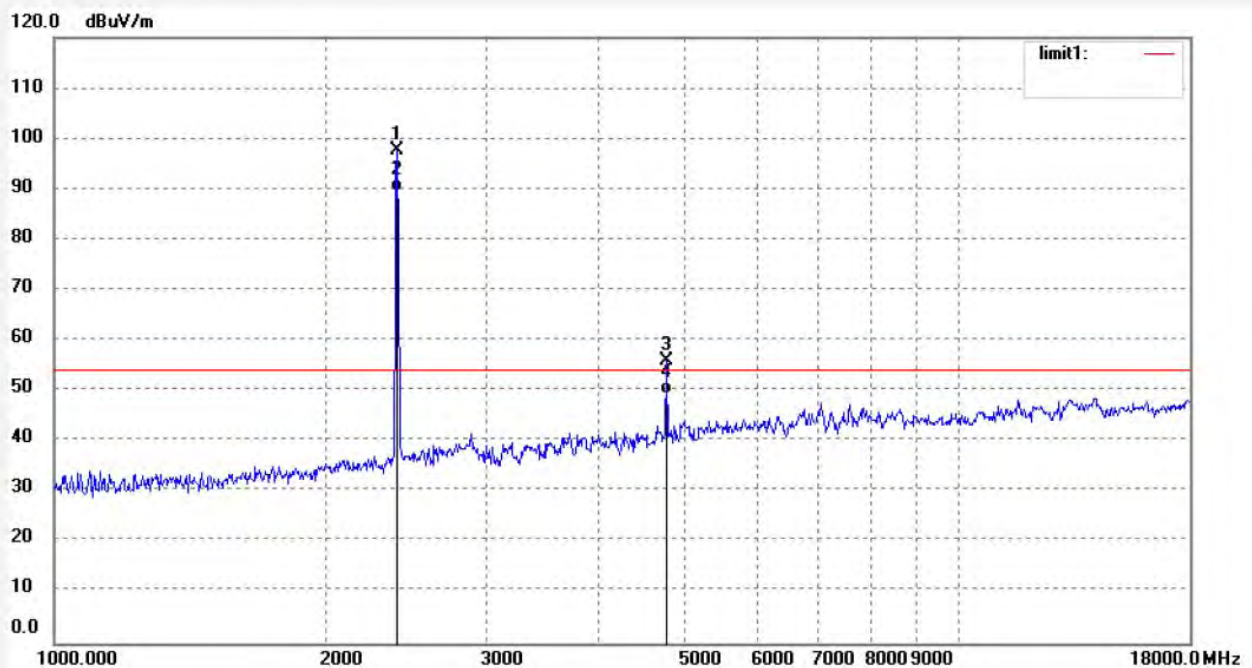


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.219	95.26	-3.93	91.33			peak			
2	2412.219	87.78	-3.93	83.85			AVG			
3	4824.438	48.89	3.58	52.47	74.00	-21.53	peak			
4	4824.438	42.17	3.58	45.75	54.00	-8.25	AVG			

Job No.: star2017 #484
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: UFO Panoramic WiFi HD Camera
Mode: TX Channel 1 (802.11b)
Model: PT-180H
Manufacturer: Chuango

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/04/14/
Time: 18/57/53
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20170411



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.219	101.49	-3.93	97.56			peak			
2	2412.219	93.47	-3.93	89.54			AVG			
3	4824.438	52.41	3.52	55.93	74.00	-18.07	peak			
4	4824.438	45.87	3.52	49.39	54.00	-4.61	AVG			