

APPLICATION CERTIFICATION FCC Part 15C
On Behalf of
SSK CORPORATION.

Smart Home Storage
Model No.: SSM-F100

FCC ID: 2AKKJ-SSM-F100

Prepared for : SSK CORPORATION.
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Report No. : ATE20162362
Date of Test : Nov. 05, 2016--Feb. 22, 2017
Date of Report : Feb. 23, 2017

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Test Report Certification

Applicant : SSK CORPORATION.
Manufacturer : SHENGZHEN MAYA ELECTRONICS CREATION CO., LIMITED.
Product : Smart Home Storage
Model No. : SSM-F100
Trade Mark : **SSK**

Measurement Procedure Used:

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

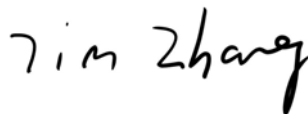
The EUT was tested according to DTS test procedure of Apr 08, 2016 KDB558074 D01 DTS Meas Guidance v03r05 for compliance to FCC 47CFR 15.247 requirements

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 : Nov. 05, 2016--Feb. 22, 2017
Date of Report: Feb. 23, 2017

Prepared by :


(Tim.zhang, Engineer)

Approved & Authorized Signer :


(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	Smart Home Storage
Model Number	:	SSM-F100
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
G _{ANT MAX}	:	3dBi(two antennas have the same gain)
Array Gain	:	For power spectral density (PSD) measurements on all devices, $\text{Array Gain} = 10 \log(N_{\text{ANT}}/N_{\text{SS}}) \text{ dB} = 10 \log(2/1) = 3.01$ devices can operate with one spatial stream ($N_{\text{SS}} = 1$), N_{ANT} = number of transmit antennas. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for $N_{\text{ANT}} \leq 4$
Directional gain	:	$G_{\text{ANT}} + \text{Array Gain} = 6.01$
Type of Antenna	:	Integral Antenna(MIMO)
Power Supply	:	DC 12V
Adapter information:	:	Model:HL-120/2000-QB6S-EE INPUT:100-240V 50/60Hz 680mA Max OUTPUT:12V 2.0A
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	:	CCK, OFDM
Applicant	:	SSK CORPORATION
Address	:	3F, M-10 centre of Hi-Tech Industrial district, Shenzhen, Guangdong, 518057, China.

Manufacturer : SHENGZHEN MAYA ELECTRONICS CREATION
CO., LIMITED

Address : B1, Xinjianxing Technology Industrial Park,
FengxinRd.,Loucun, Gongming Street Guangming New
Area, Shenzhen City, China.

Date of sample received : Nov. 05, 2016

Date of Test : Nov. 05, 2016--Feb. 22, 2017

1.2. 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

1.3. 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	Cal. Interval
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	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
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.Carrier Frequency of Channels

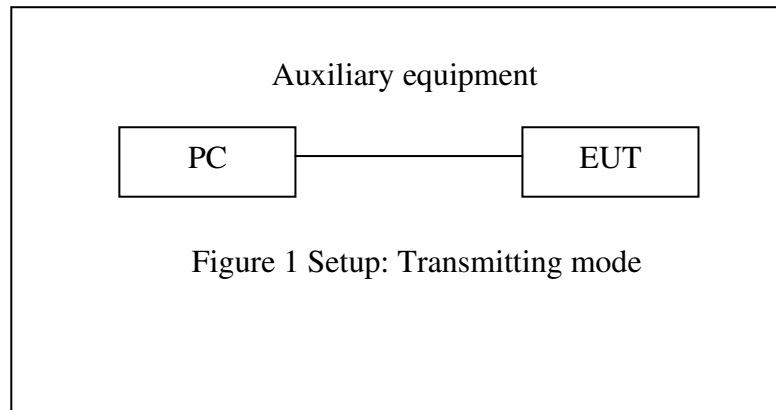
802.11b, 802.11g, 802.11n (20MHz)

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	---	---

3.3.Configuration and peripherals



(EUT: Smart Home Storage)

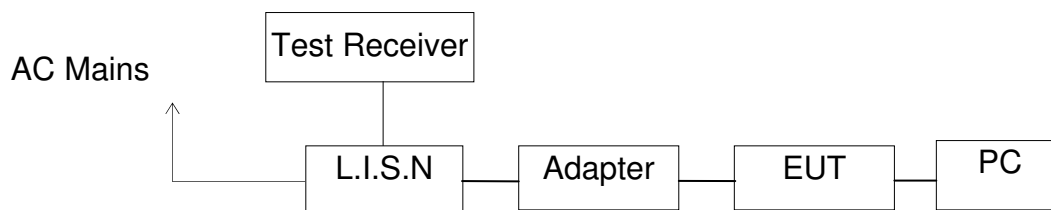
Note: The EUT have two antenna(1 and 2), They can transmit simultaneously,

4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.207	AC power Line Conducted Emission Test	Compliant
Section 15.247(a)(2)	6dB Occupied Bandwidth Test	Compliant
Section 15.247(b)(3)	Conducted Peak Output Power Test	Compliant
Section 15.247(e)	Power Spectral Density Test	Compliant
Section 15.205 Section 15.209	Radiated Spurious Emissions Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.203	Antenna Requirement	Compliant

5. POWER LINE CONDUCTED MEASUREMENT

5.1. Block Diagram of Test Setup



(EUT: Smart Home Storage)

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 0.8m 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.

Test mode : WIFI communicating(AC 120V/60Hz)

MEASUREMENT RESULT: "MY-1117-07_fin"

11/17/2016 6:53PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.185000	48.00	10.5	64	16.3	QP	L1	GND
0.475000	45.30	10.7	56	11.1	QP	L1	GND
1.360000	40.50	10.9	56	15.5	QP	L1	GND
4.270000	38.80	11.1	56	17.2	QP	L1	GND
7.130000	38.70	11.2	60	21.3	QP	L1	GND
15.985000	36.90	11.4	60	23.1	QP	L1	GND

MEASUREMENT RESULT: "MY-1117-07_fin2"

11/17/2016 6:53PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.190000	38.00	10.5	54	16.0	AV	L1	GND
0.395000	29.50	10.7	48	18.5	AV	L1	GND
1.300000	25.20	10.9	46	20.8	AV	L1	GND
2.830000	28.40	11.0	46	17.6	AV	L1	GND
9.810000	27.50	11.3	50	22.5	AV	L1	GND
15.685000	29.50	11.4	50	20.5	AV	L1	GND

MEASUREMENT RESULT: "MY-1117-08_fin"

11/17/2016 6:59PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.190000	44.10	10.5	64	19.9	QP	N	GND
0.455000	39.30	10.7	57	17.5	QP	N	GND
1.620000	35.30	10.9	56	20.7	QP	N	GND
2.830000	32.60	11.0	56	23.4	QP	N	GND
9.810000	36.40	11.3	60	23.6	QP	N	GND
16.480000	35.80	11.4	60	24.2	QP	N	GND

MEASUREMENT RESULT: "MY-1117-08_fin2"

11/17/2016 6:59PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.195000	32.10	10.5	54	21.7	AV	N	GND
0.455000	24.50	10.7	47	22.3	AV	N	GND
1.300000	19.90	10.9	46	26.1	AV	N	GND
3.540000	24.60	11.1	46	21.4	AV	N	GND
8.860000	24.30	11.3	50	25.7	AV	N	GND
16.120000	28.90	11.4	50	21.1	AV	N	GND

Test mode : WIFI communicating(AC 240V/60Hz)

MEASUREMENT RESULT: "MY-1117-10_fin"

11/17/2016 7:08PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.155000	47.90	10.5	66	17.8	QP	L1	GND
0.850000	46.40	10.8	56	9.6	QP	L1	GND
1.325000	44.80	10.9	56	11.2	QP	L1	GND
2.850000	41.70	11.0	56	14.3	QP	L1	GND
8.440000	40.20	11.3	60	19.8	QP	L1	GND
15.880000	40.30	11.4	60	19.7	QP	L1	GND

MEASUREMENT RESULT: "MY-1117-10_fin2"

11/17/2016 7:08PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.170000	39.90	10.5	55	15.1	AV	L1	GND
0.455000	33.70	10.7	47	13.1	AV	L1	GND
1.260000	34.80	10.9	46	11.2	AV	L1	GND
4.340000	33.40	11.1	46	12.6	AV	L1	GND
8.440000	32.30	11.3	50	17.7	AV	L1	GND
15.655000	35.00	11.4	50	15.0	AV	L1	GND

MEASUREMENT RESULT: "MY-1117-09_fin"

11/17/2016 7:03PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.295000	35.00	10.6	60	25.4	QP	N	GND
0.460000	36.80	10.7	57	19.9	QP	N	GND
1.840000	34.70	11.0	56	21.3	QP	N	GND
4.280000	34.40	11.1	56	21.6	QP	N	GND
7.240000	35.30	11.2	60	24.7	QP	N	GND
15.535000	38.80	11.4	60	21.2	QP	N	GND

MEASUREMENT RESULT: "MY-1117-09_fin2"

11/17/2016 7:03PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.175000	31.30	10.5	55	23.4	AV	N	GND
0.785000	23.30	10.8	46	22.7	AV	N	GND
1.260000	25.90	10.9	46	20.1	AV	N	GND
4.410000	27.50	11.1	46	18.5	AV	N	GND
7.430000	29.70	11.2	50	20.3	AV	N	GND
15.700000	33.10	11.4	50	16.9	AV	N	GND

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

The spectral diagrams are attached as below.

ACCURATE TECHNOLOGY CO., LTD

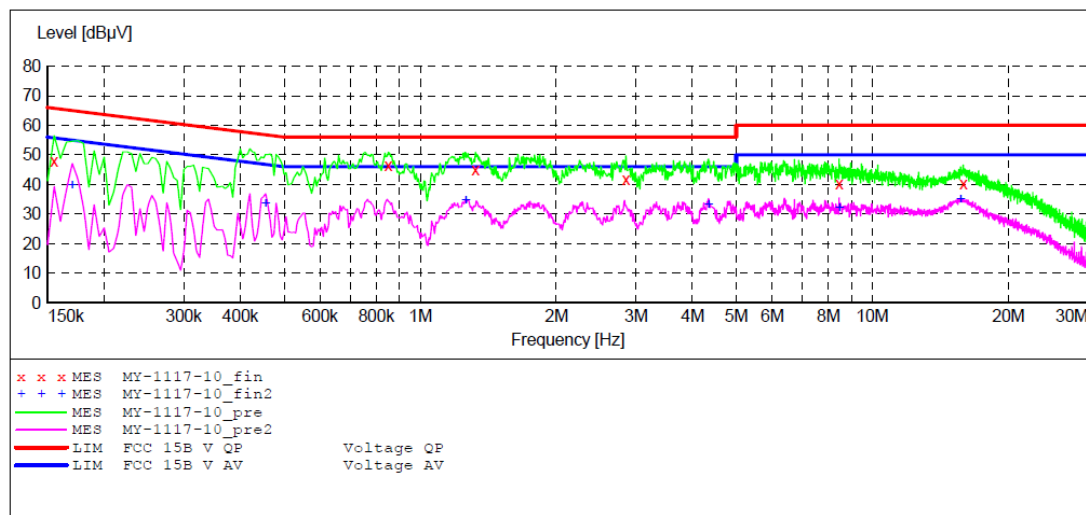
CONDUCTED EMISSION STANDARD FCC PART 15

EUT: Smart Home Storage M/N:SSM-F100
 Manufacturer: MAYA
 Operating Condition: WIFI operation
 Test Site: 1#Shielding Room
 Operator: DING
 Test Specification: L 240V/60Hz
 Comment: Report NO.:ATE20162362
 Start of Test: 11/17/2016 / 7:04:07PM

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: "MY-1117-10_fin"

11/17/2016 7:08PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.155000	47.90	10.5	66	17.8	QP	L1	GND
0.850000	46.40	10.8	56	9.6	QP	L1	GND
1.325000	44.80	10.9	56	11.2	QP	L1	GND
2.850000	41.70	11.0	56	14.3	QP	L1	GND
8.440000	40.20	11.3	60	19.8	QP	L1	GND
15.880000	40.30	11.4	60	19.7	QP	L1	GND

MEASUREMENT RESULT: "MY-1117-10_fin2"

11/17/2016 7:08PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.170000	39.90	10.5	55	15.1	AV	L1	GND
0.455000	33.70	10.7	47	13.1	AV	L1	GND
1.260000	34.80	10.9	46	11.2	AV	L1	GND
4.340000	33.40	11.1	46	12.6	AV	L1	GND
8.440000	32.30	11.3	50	17.7	AV	L1	GND
15.655000	35.00	11.4	50	15.0	AV	L1	GND

ACCURATE TECHNOLOGY CO., LTD

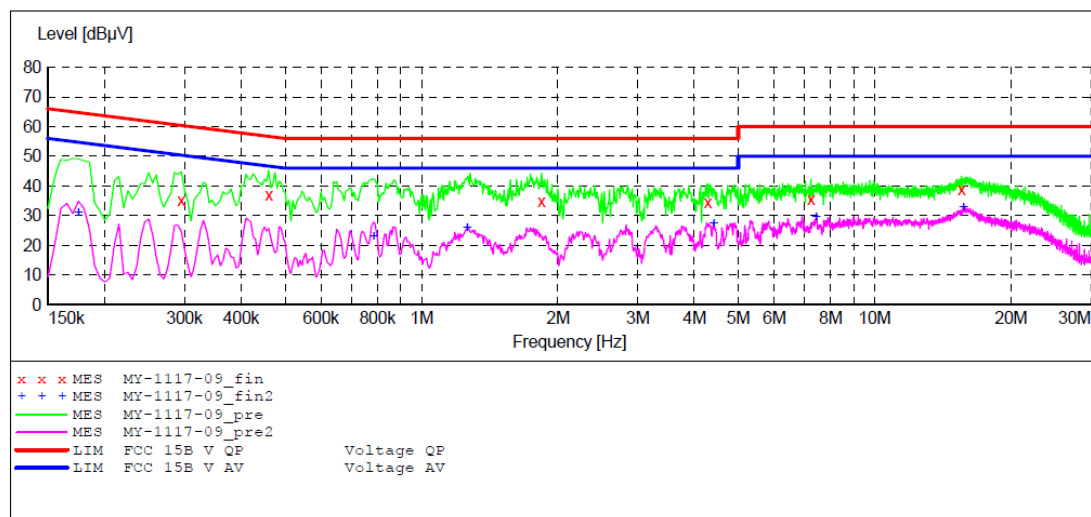
CONDUCTED EMISSION STANDARD FCC PART 15

EUT: Smart Home Storage M/N:SSM-F100
 Manufacturer: MAYA
 Operating Condition: WIFI operation
 Test Site: 1#Shielding Room
 Operator: DING
 Test Specification: N 240V/60Hz
 Comment: Report NO.:ATE20162362
 Start of Test: 11/17/2016 / 7:00:15PM

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

Short Description: SUB STD VTERM2 1.70

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
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: "MY-1117-09_fin"

11/17/2016 7:03PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.295000	35.00	10.6	60	25.4	QP	N	GND
0.460000	36.80	10.7	57	19.9	QP	N	GND
1.840000	34.70	11.0	56	21.3	QP	N	GND
4.280000	34.40	11.1	56	21.6	QP	N	GND
7.240000	35.30	11.2	60	24.7	QP	N	GND
15.535000	38.80	11.4	60	21.2	QP	N	GND

MEASUREMENT RESULT: "MY-1117-09_fin2"

11/17/2016 7:03PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.175000	31.30	10.5	55	23.4	AV	N	GND
0.785000	23.30	10.8	46	22.7	AV	N	GND
1.260000	25.90	10.9	46	20.1	AV	N	GND
4.410000	27.50	11.1	46	18.5	AV	N	GND
7.430000	29.70	11.2	50	20.3	AV	N	GND
15.700000	33.10	11.4	50	16.9	AV	N	GND

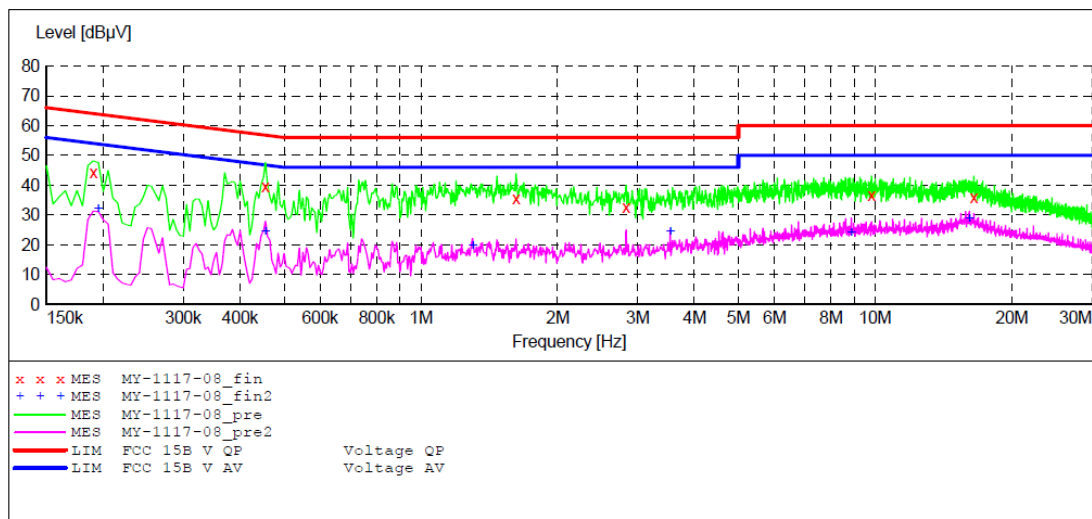
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15

EUT: Smart Home Storage M/N:SSM-F100
 Manufacturer: MAYA
 Operating Condition: WIFI operation
 Test Site: 1#Shielding Room
 Operator: DING
 Test Specification: N 120V/60Hz
 Comment: Report NO.:ATE20162362
 Start of Test: 11/17/2016 / 6:54:14PM

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: "MY-1117-08_fin"

11/17/2016 6:59PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.190000	44.10	10.5	64	19.9	QP	N	GND
0.455000	39.30	10.7	57	17.5	QP	N	GND
1.620000	35.30	10.9	56	20.7	QP	N	GND
2.830000	32.60	11.0	56	23.4	QP	N	GND
9.810000	36.40	11.3	60	23.6	QP	N	GND
16.480000	35.80	11.4	60	24.2	QP	N	GND

MEASUREMENT RESULT: "MY-1117-08_fin2"

11/17/2016 6:59PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.195000	32.10	10.5	54	21.7	AV	N	GND
0.455000	24.50	10.7	47	22.3	AV	N	GND
1.300000	19.90	10.9	46	26.1	AV	N	GND
3.540000	24.60	11.1	46	21.4	AV	N	GND
8.860000	24.30	11.3	50	25.7	AV	N	GND
16.120000	28.90	11.4	50	21.1	AV	N	GND

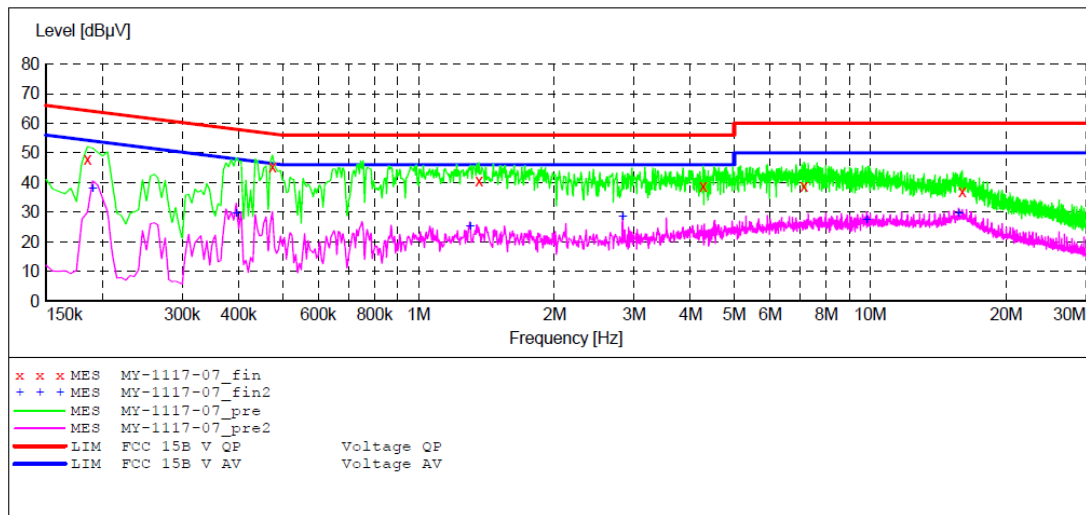
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15

EUT: Smart Home Storage M/N:SSM-F100
 Manufacturer: MAYA
 Operating Condition: WIFI operation
 Test Site: 1#Shielding Room
 Operator: DING
 Test Specification: L 120V/60Hz
 Comment: Report NO.:ATE20162362
 Start of Test: 11/17/2016 / 6:48:10PM

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
 150.0 kHz 30.0 MHz 5.0 kHz Average
 QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "MY-1117-07_fin"

11/17/2016 6:53PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.185000	48.00	10.5	64	16.3	QP	L1	GND
0.475000	45.30	10.7	56	11.1	QP	L1	GND
1.360000	40.50	10.9	56	15.5	QP	L1	GND
4.270000	38.80	11.1	56	17.2	QP	L1	GND
7.130000	38.70	11.2	60	21.3	QP	L1	GND
15.985000	36.90	11.4	60	23.1	QP	L1	GND

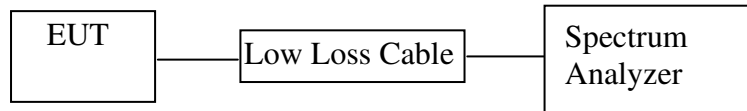
MEASUREMENT RESULT: "MY-1117-07_fin2"

11/17/2016 6:53PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.190000	38.00	10.5	54	16.0	AV	L1	GND
0.395000	29.50	10.7	48	18.5	AV	L1	GND
1.300000	25.20	10.9	46	20.8	AV	L1	GND
2.830000	28.40	11.0	46	17.6	AV	L1	GND
9.810000	27.50	11.3	50	22.5	AV	L1	GND
15.685000	29.50	11.4	50	20.5	AV	L1	GND

6. 6DB OCCUPIED BANDWIDTH TEST

6.1. Block Diagram of Test Setup



(EUT: Smart Home Storage)

6.2. The Requirement For Section 15.247(a)(1)

Section 15.247(a)(2): Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB band-width 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

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

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

6.5.3. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

6.6.Test Result

The test was performed with 802.11b				
Channel	Frequency (MHz)	6dB Bandwidth ANT 1 (MHz)	6dB Bandwidth ANT 2(MHz)	Limit (MHz)
Low	2412	9.08	9.08	> 0.5MHz
Middle	2437	9.12	9.12	> 0.5MHz
High	2462	9.04	9.04	> 0.5MHz

The test was performed with 802.11g				
Channel	Frequency (MHz)	6dB Bandwidth ANT 1 (MHz)	6dB Bandwidth ANT 2(MHz)	Limit (MHz)
Low	2412	16.48	16.48	> 0.5MHz
Middle	2437	16.54	16.54	> 0.5MHz
High	2462	16.52	16.56	> 0.5MHz

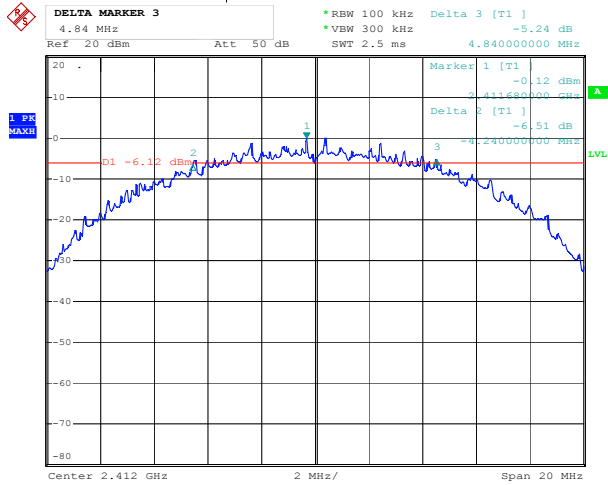
The test was performed with 802.11n (Bandwidth: 20 MHz)				
Channel	Frequency (MHz)	6dB Bandwidth ANT 1 (MHz)	6dB Bandwidth ANT 2(MHz)	Limit (MHz)
Low	2412	17.72	17.80	> 0.5MHz
Middle	2437	17.76	17.80	> 0.5MHz
High	2462	17.80	17.80	> 0.5MHz

The test was performed with 802.11n (Bandwidth: 40 MHz)				
Channel	Frequency (MHz)	6dB Bandwidth ANT 1 (MHz)	6dB Bandwidth ANT 2(MHz)	Limit (MHz)
Low	2422	35.52	35.52	> 0.5MHz
Middle	2437	35.40	35.40	> 0.5MHz
High	2452	35.44	35.44	> 0.5MHz

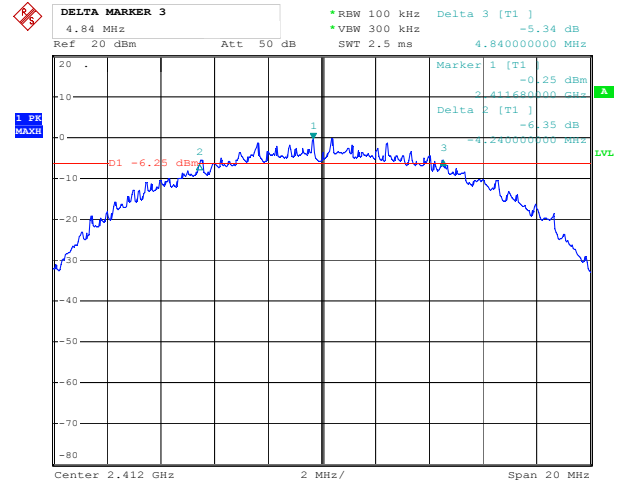
The spectrum analyzer plots are attached as below.

6dB Bandwidth

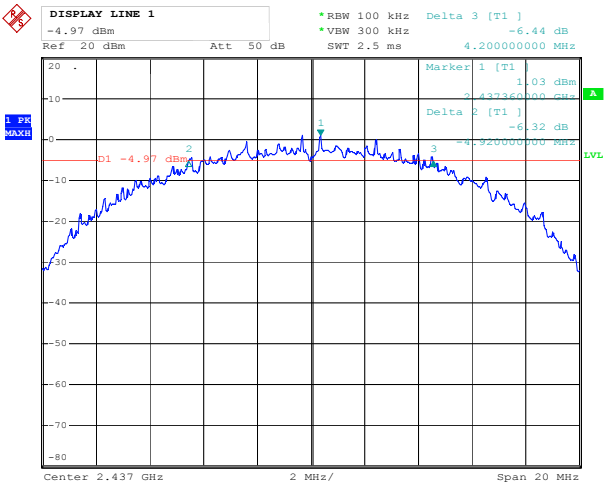
ANT 1(802.11b)



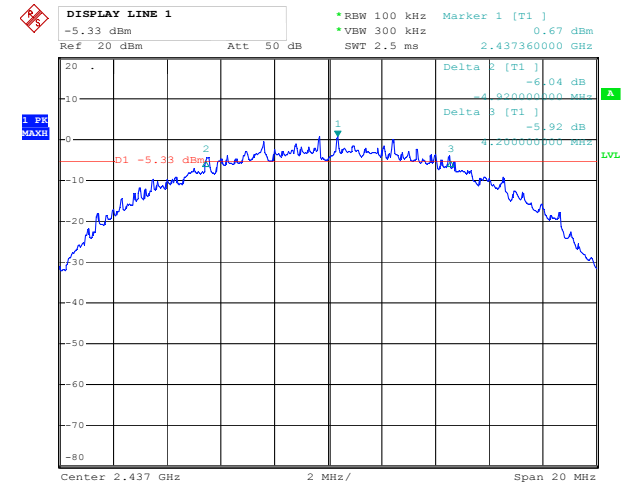
ANT 2(802.11b)



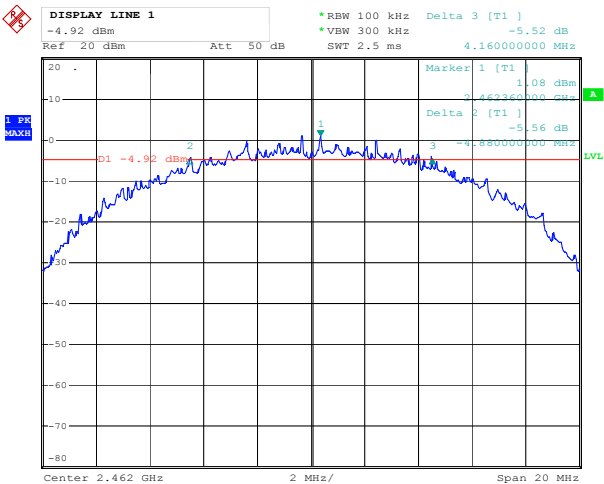
Date: 10.FEB.2017 14:00:41



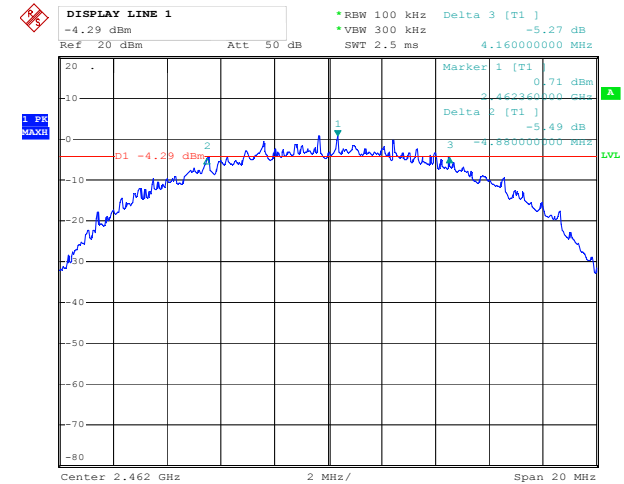
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Date: 10.FEB.2017 14:06:13



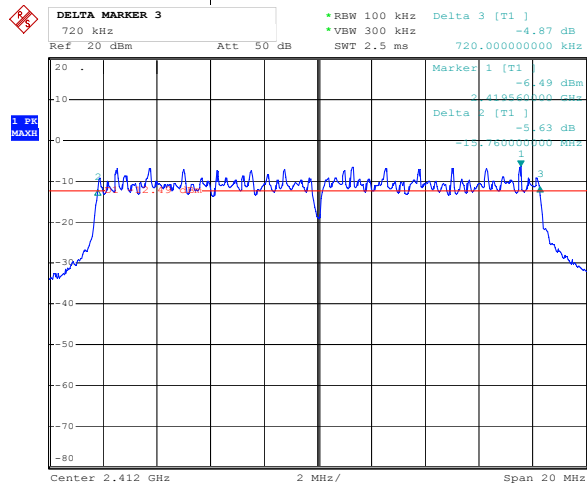
Date: 10.FEB.2017 14:07:25



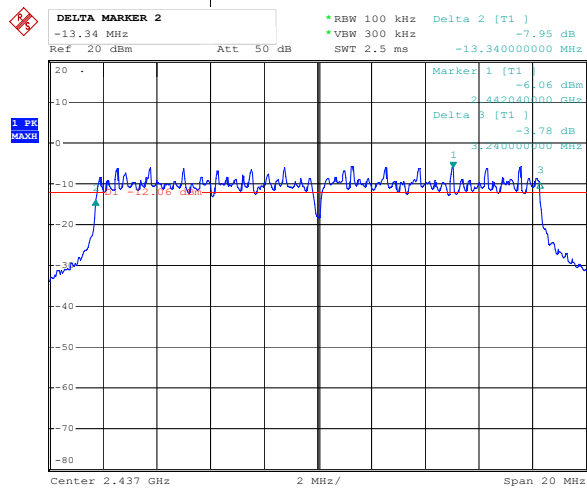
Date: 10.FEB.2017 14:09:37

Date: 10.FEB.2017 14:10:31

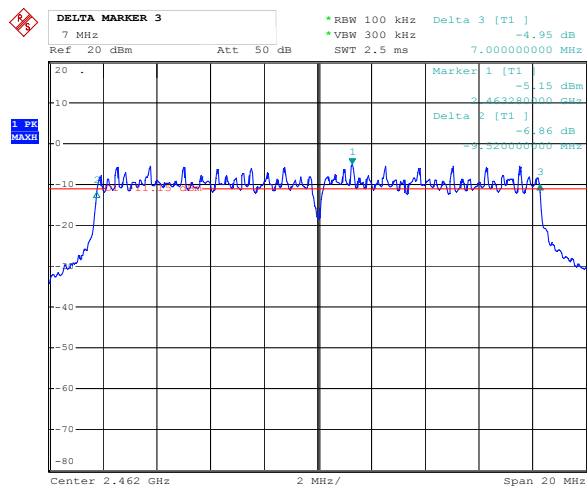
ANT 1(802.11g)



Date: 10.FEB.2017 14:17:41

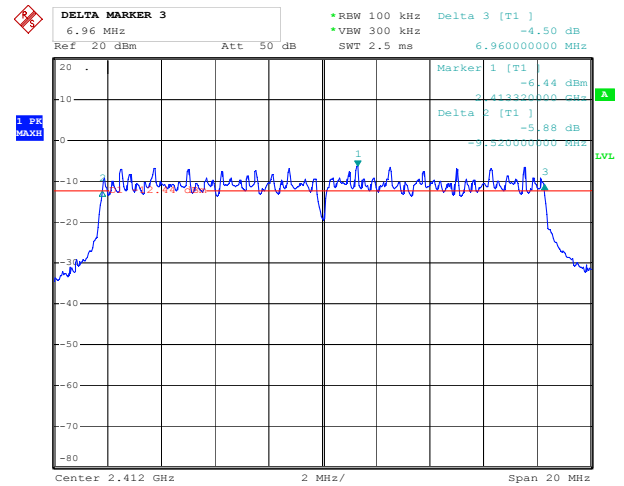


Date: 10.FEB.2017 14:22:11

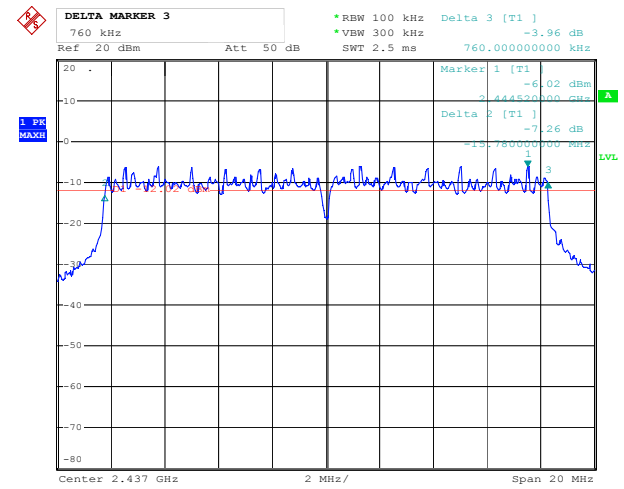


Date: 10.FEB.2017 14:24:45

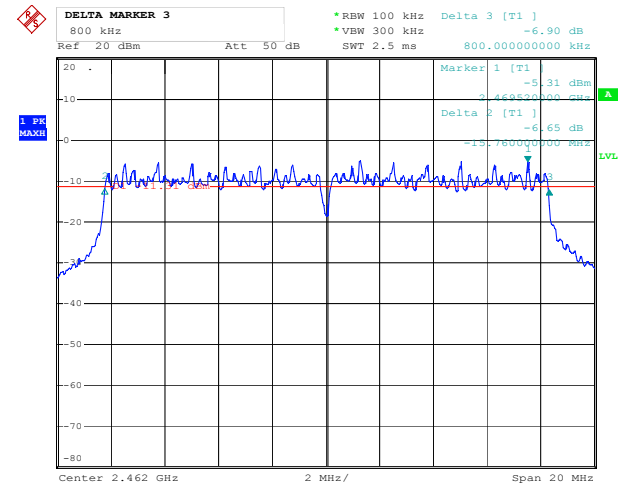
ANT 2(802.11g)



Date: 10.FEB.2017 14:19:01

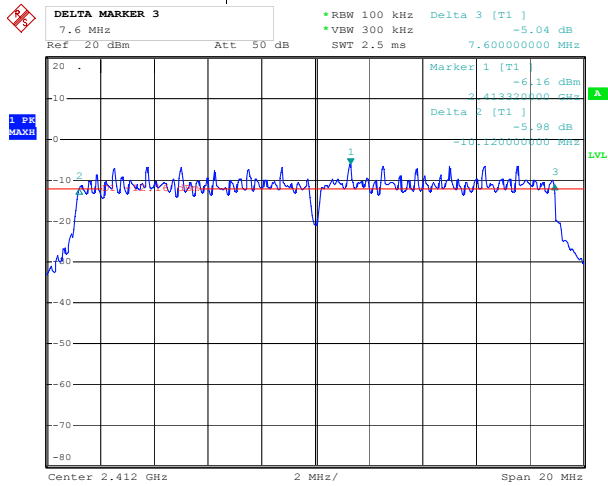


Date: 10.FEB.2017 14:23:04

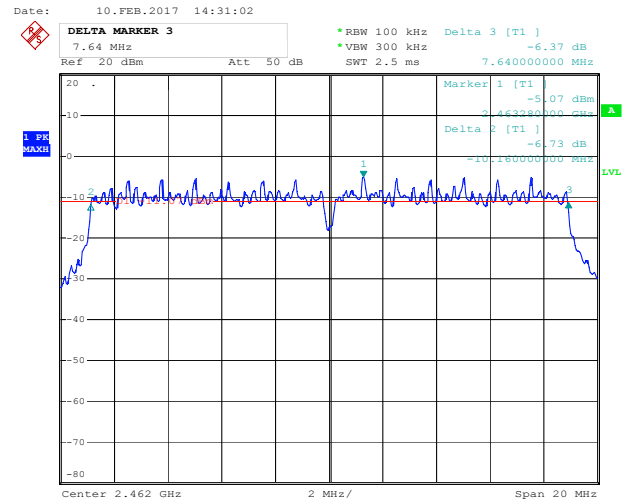
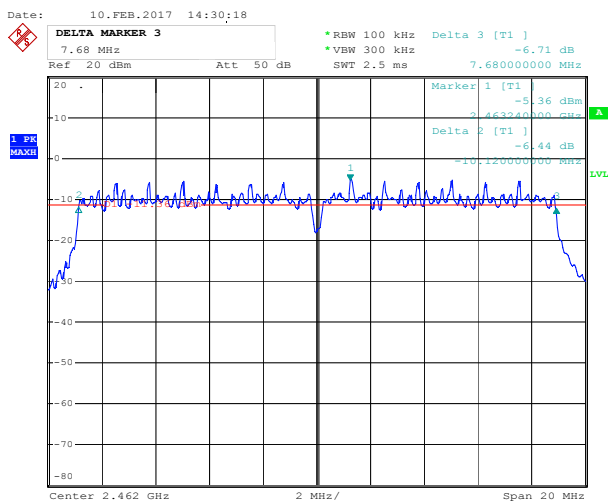
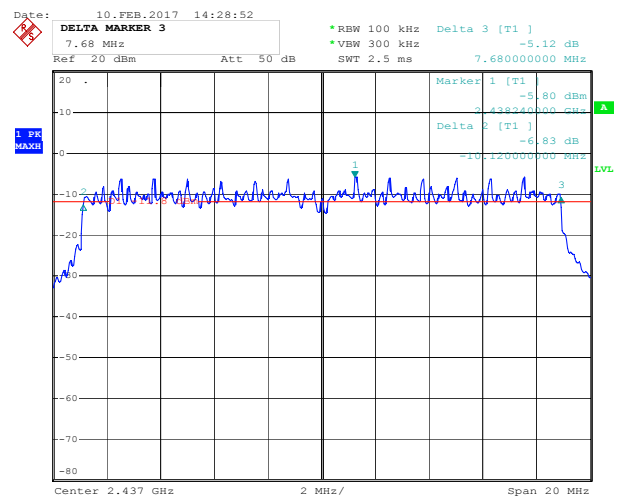
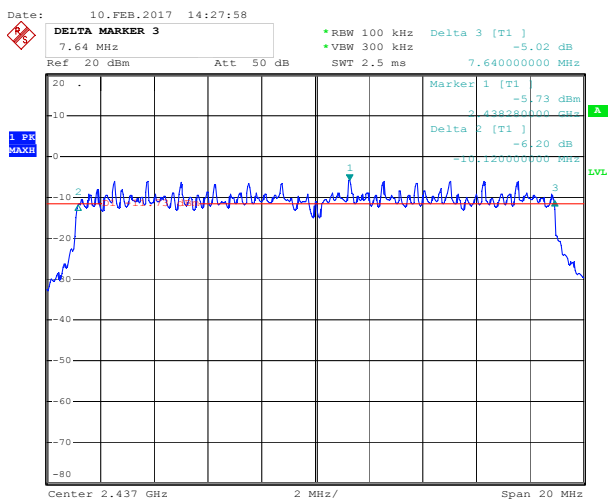
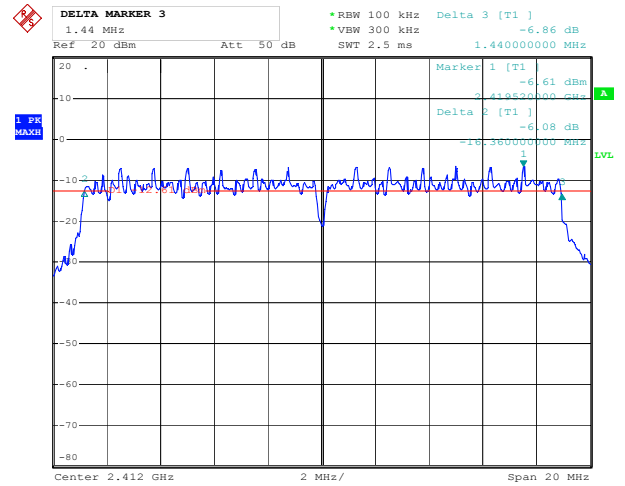


Date: 10.FEB.2017 14:25:48

ANT 1(802.11n20)



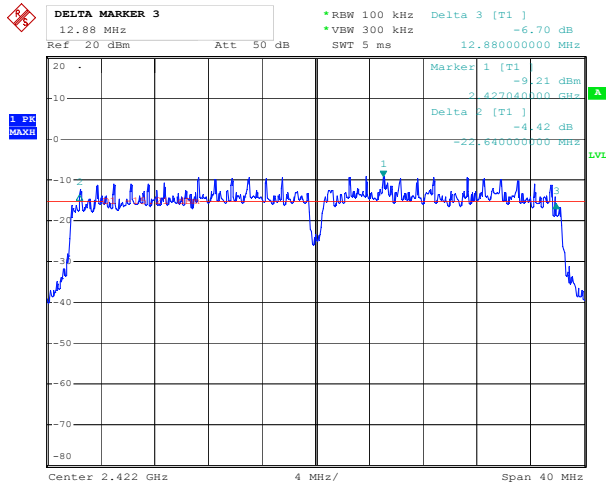
ANT 2(802.11 n20)



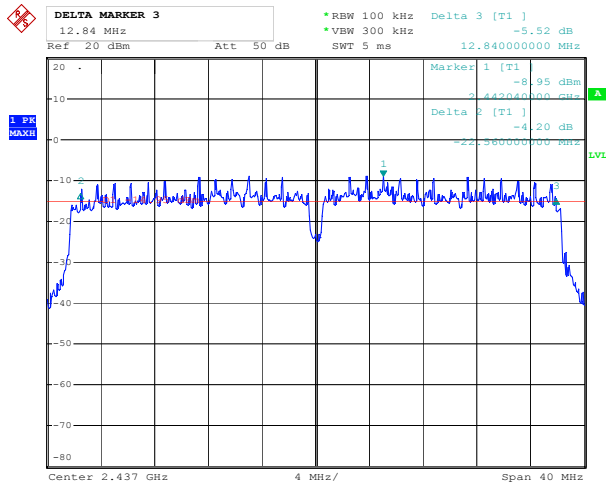
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Date: 10.FEB.2017 14:33:40

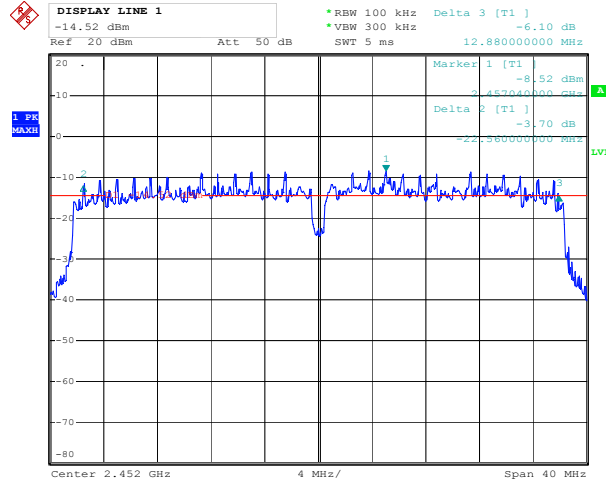
ANT 1(802.11n40)



Date: 10.FEB.2017 14:37:48

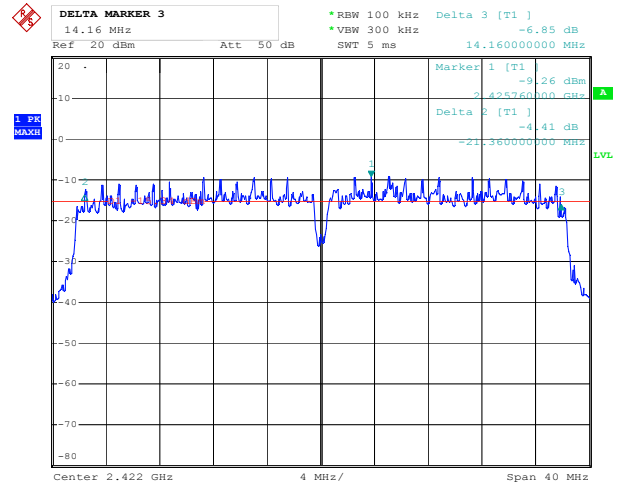


Date: 10.FEB.2017 14:40:21

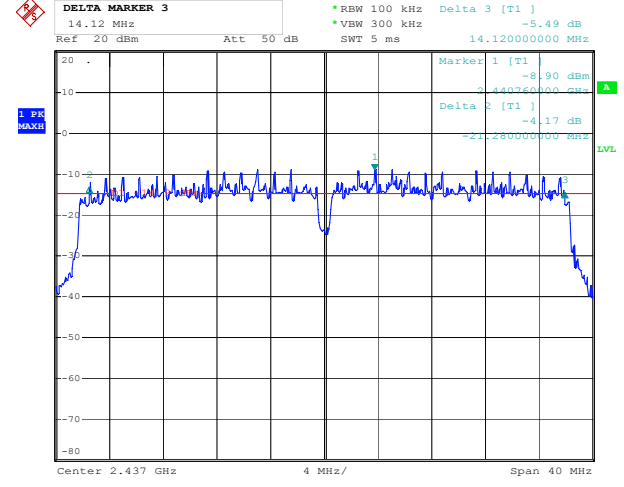


Date: 10.FEB.2017 14:42:51

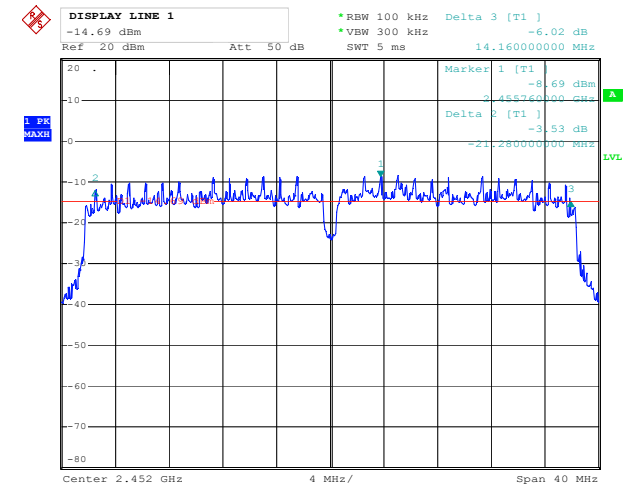
ANT 2(802.11n40)



Date: 10.FEB.2017 14:39:03



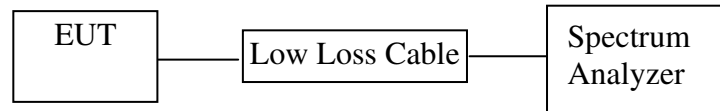
Date: 10.FEB.2017 14:41:16



Date: 10.FEB.2017 14:43:48

7. 20DB BANDWIDTH 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

1. Set resolution bandwidth (RBW) = 1%-5% OBW.
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. Once the reference level is established, the equipment is conditioned with typical modulating signals to produce the worst-case (i.e., the widest) bandwidth. Unless otherwise specified for an unlicensed wireless device, measure the bandwidth at the - 20 dB levels with respect to the reference level

7.5. Test Result

The test was performed with 802.11b			
Channel	Frequency (MHz)	20dB Bandwidth ANT1 (MHz)	20dB Bandwidth ANT2 (MHz)
Low	2412	17.44	17.44
Middle	2437	17.52	17.36
High	2462	17.28	17.44

The test was performed with 802.11g			
Channel	Frequency (MHz)	20dB Bandwidth ANT1 (MHz)	20dB Bandwidth ANT2 (MHz)
Low	2412	19.36	19.28
Middle	2437	19.20	19.12
High	2462	19.28	19.20

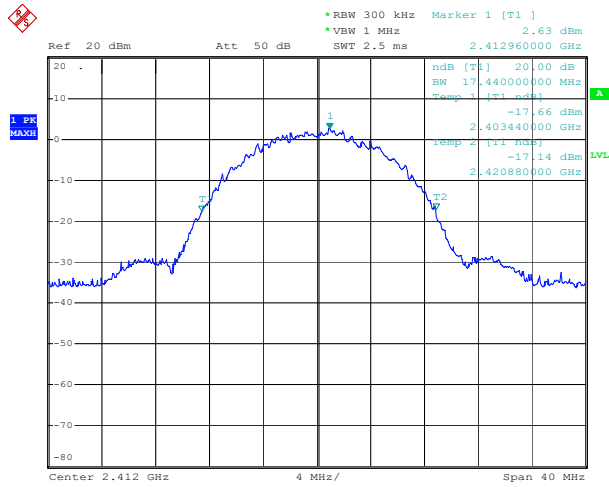
The test was performed with 802.11n20			
Channel	Frequency (MHz)	20dB Bandwidth ANT1 (MHz)	20dB Bandwidth ANT2 (MHz)
Low	2412	20.25	20.25
Middle	2437	20.43	20.25
High	2462	20.34	20.34

The test was performed with 802.11n40			
Channel	Frequency (MHz)	20dB Bandwidth ANT1 (MHz)	20dB Bandwidth ANT2 (MHz)
Low	2412	39.84	39.84
Middle	2437	39.96	39.96
High	2462	39.72	39.72

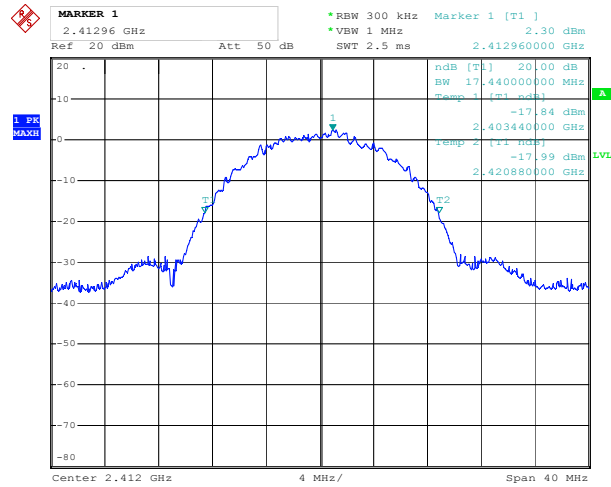
The spectrum analyzer plots are attached as below.

20dB Bandwidth

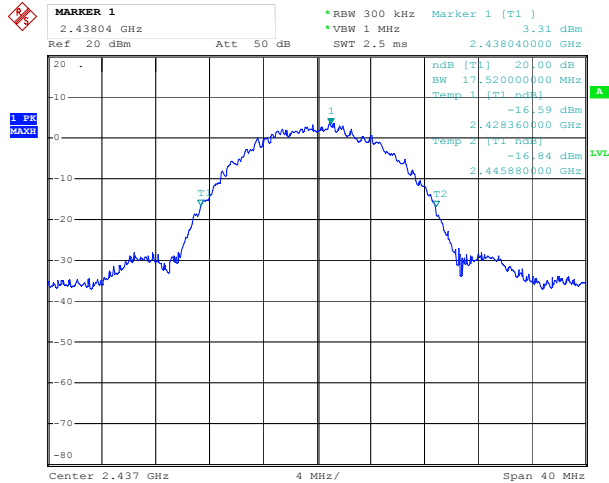
ANT 1(802.11b)



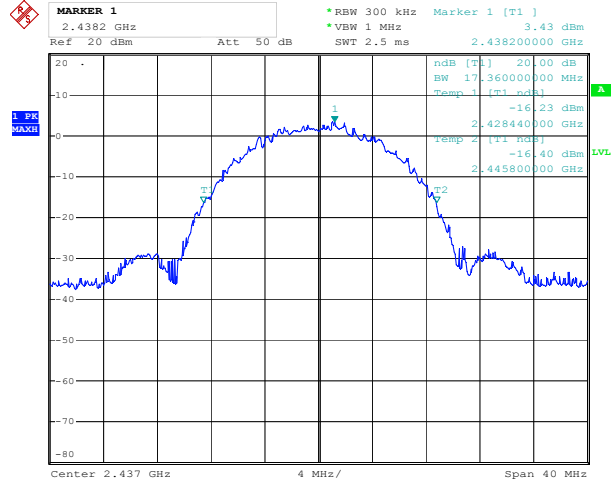
ANT 2(802.11b)



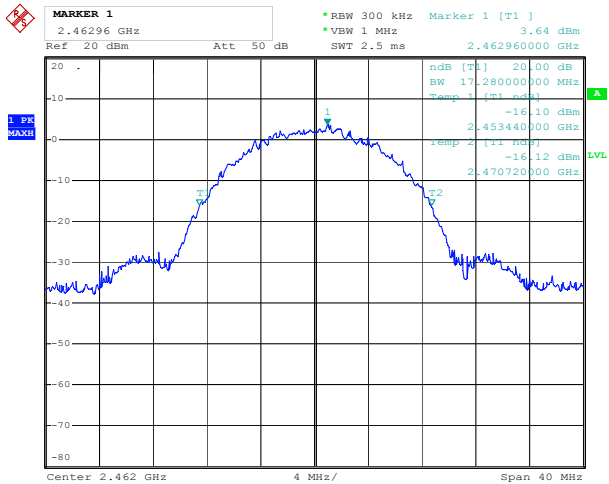
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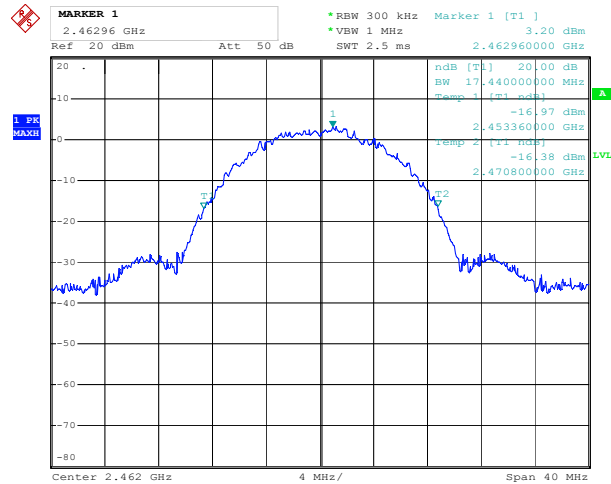
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Date: 10.FEB.2017 14:47:58



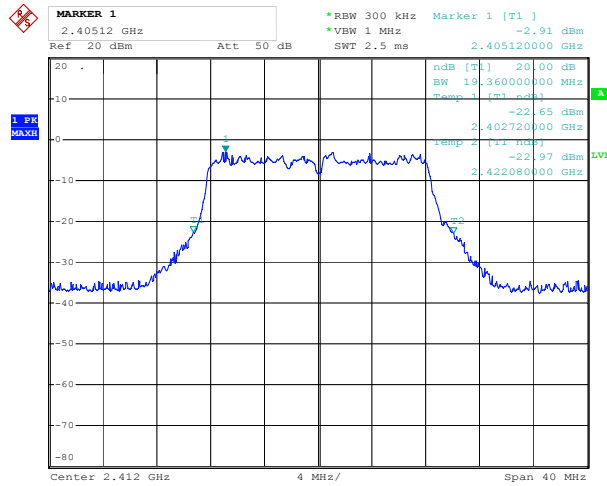
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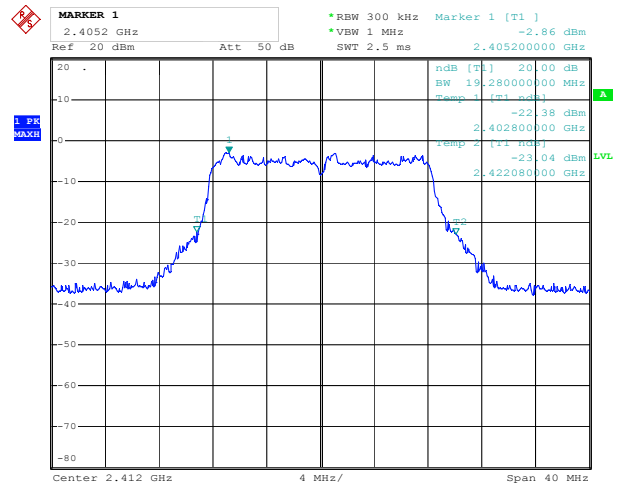
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Date: 10.FEB.2017 14:49:25

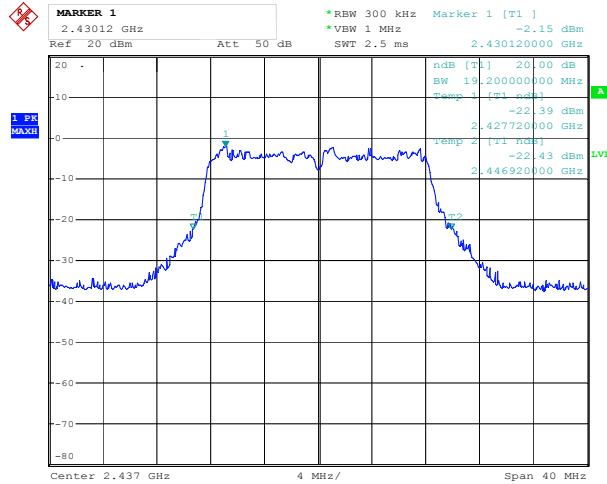
ANT 1(802.11g)



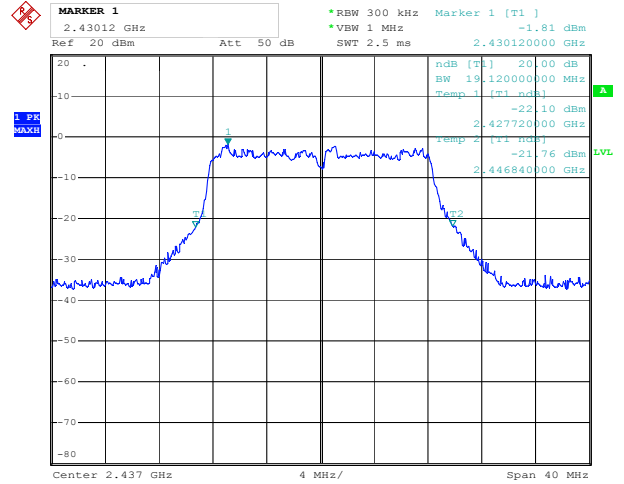
ANT 2(802.11g)



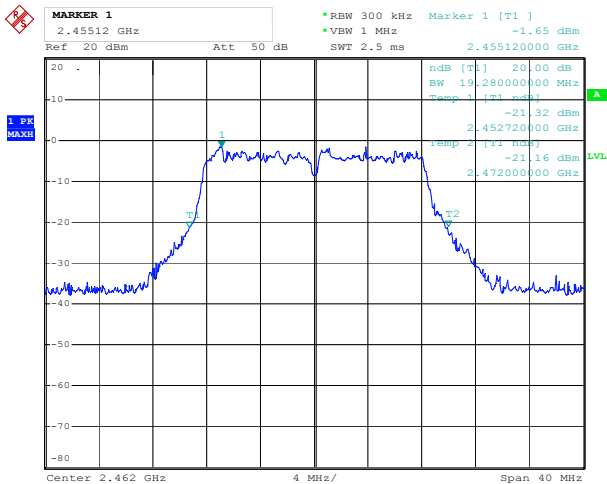
Date: 10.FEB.2017 14:52:30



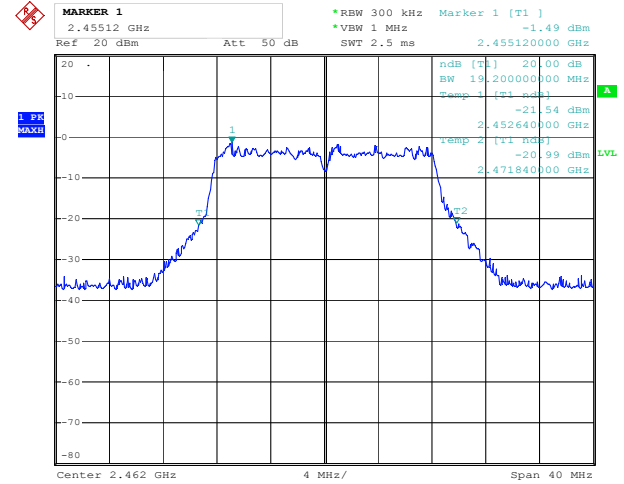
Date: 10.FEB.2017 14:53:07



Date: 10.FEB.2017 14:54:05



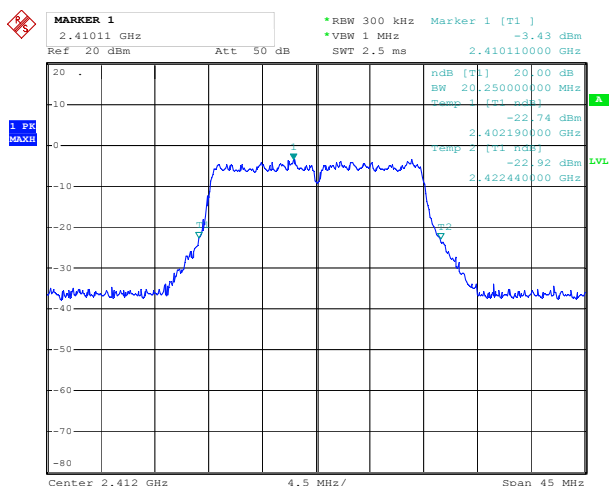
Date: 10.FEB.2017 14:54:47



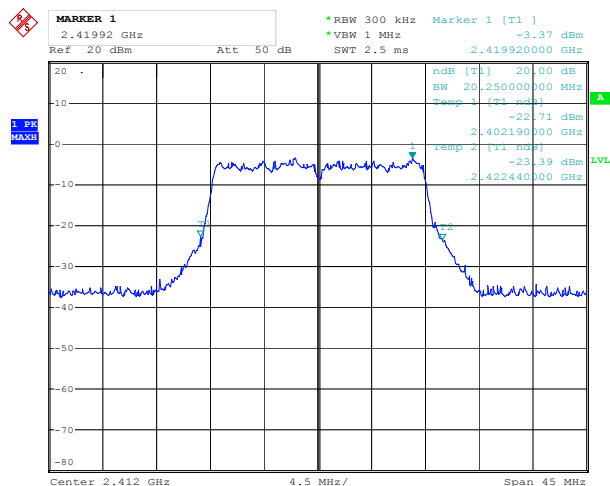
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Date: 10.FEB.2017 14:56:03

ANT 1(802.11n20)

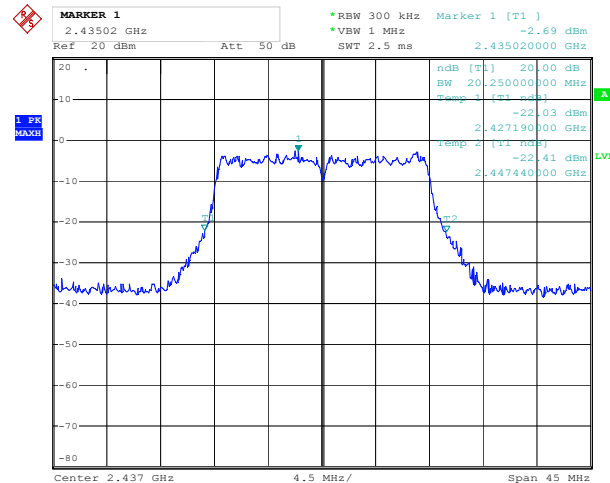
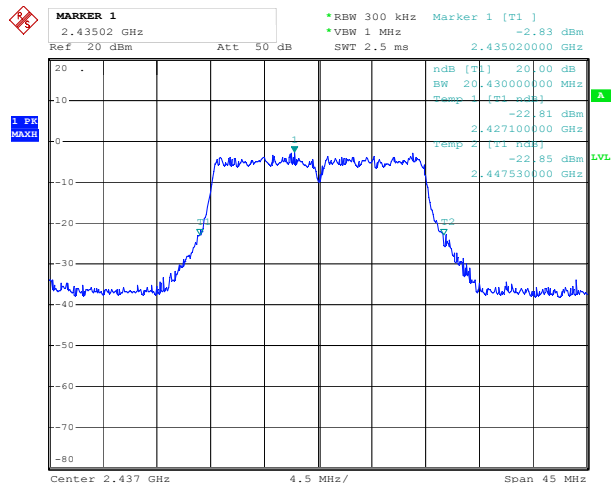


ANT 2(802.11 n20)



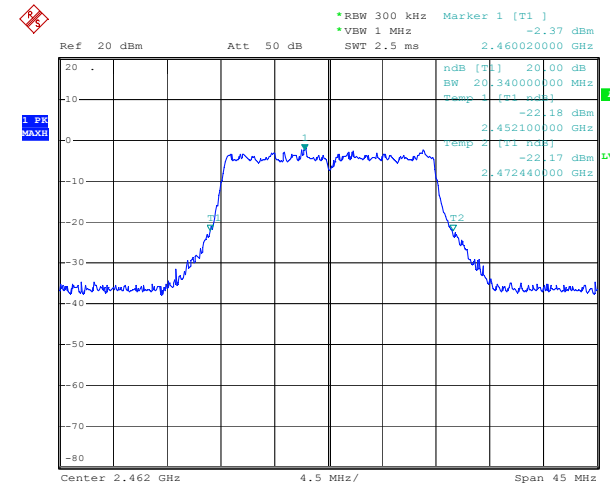
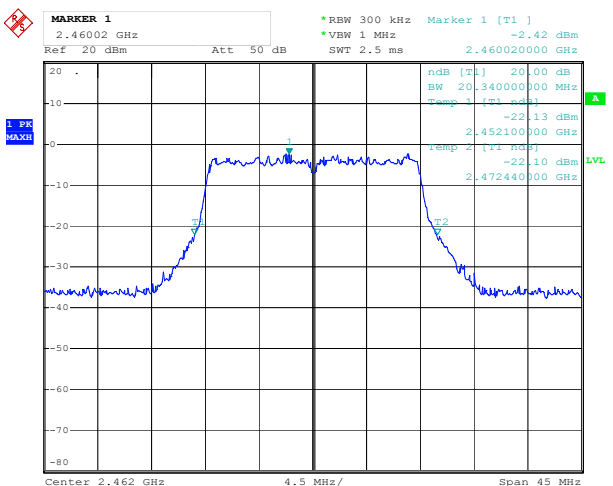
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Date: 10.FEB.2017 15:00:42



Date: 10.FEB.2017 15:01:25

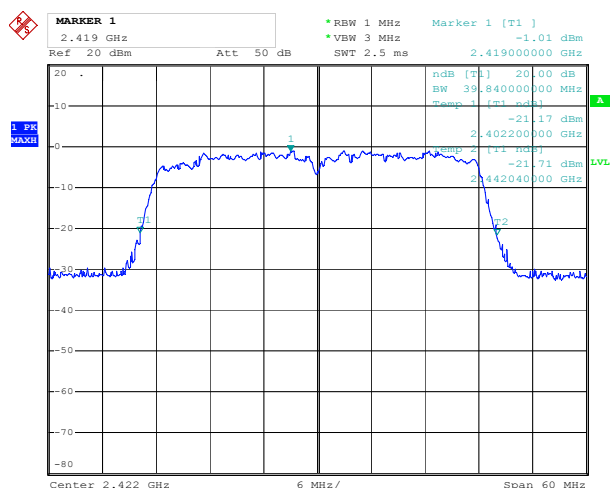
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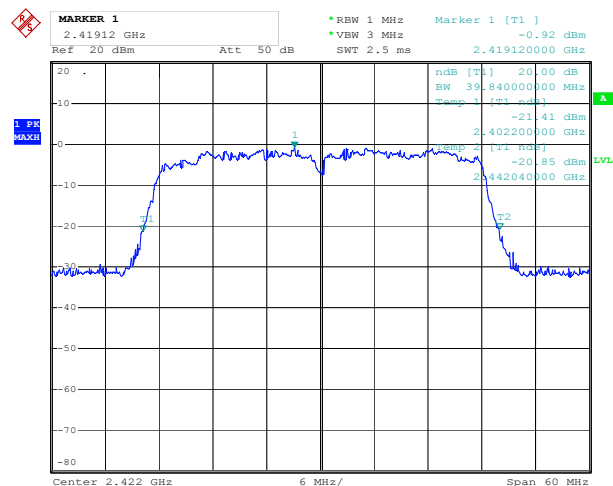
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Date: 10.FEB.2017 15:03:28

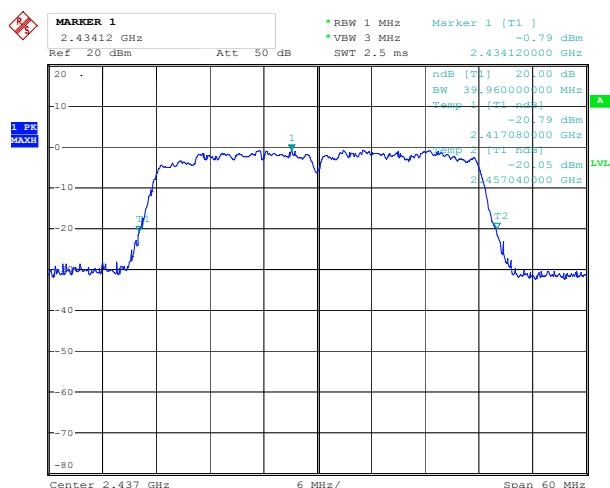
ANT 1(802.11n40)



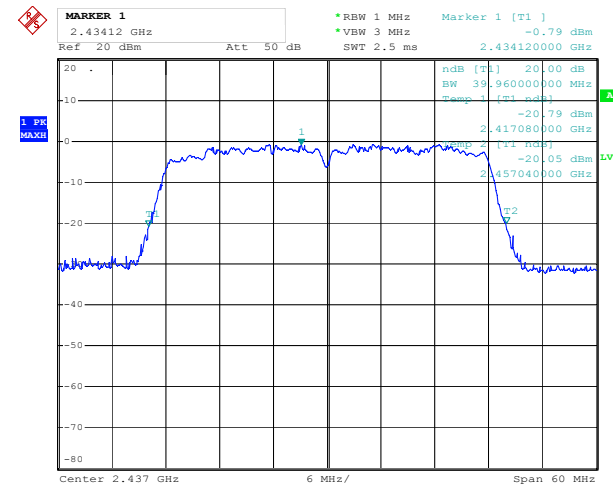
ANT 2(802.11n40)



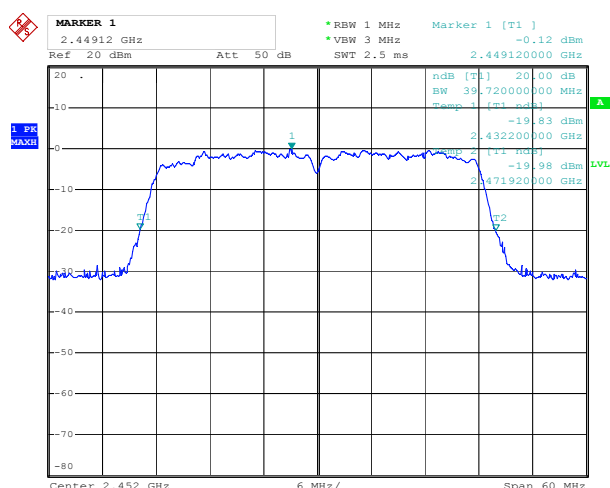
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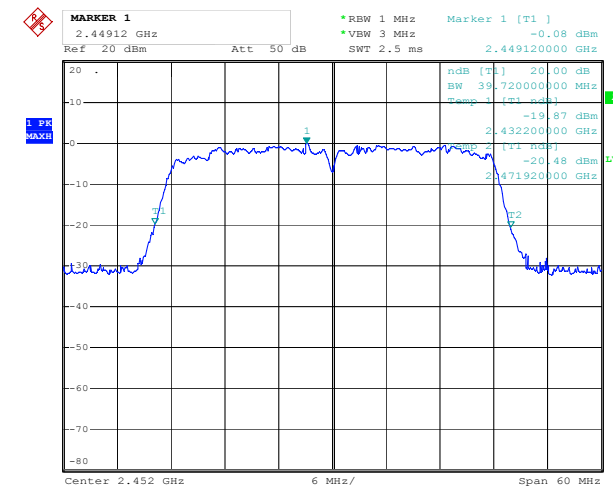
Date: 10.FEB.2017 15:05:32



Date: 10.FEB.2017 15:07:26



Date: 10.FEB.2017 15:07:26

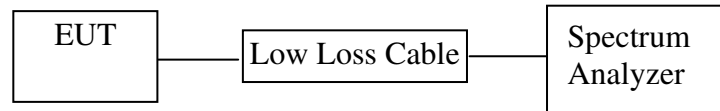


Date: 10.FEB.2017 15:08:43

Date: 10.FEB.2017 15:09:10

8. POWER SPECTRAL DENSITY TEST

8.1. Block Diagram of Test Setup



8.2. 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.

8.3. 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.

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

8.5.2. Measurement Procedure PKPSD:

This procedure must be used if maximum peak conducted output power was used to demonstrate compliance to the fundamental output power limit, and is optional if the maximum (average) conducted output power was used to demonstrate compliance.

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW $3\text{ kHz} \leq \text{RBW} \leq 100\text{ kHz}$.

4. Set the VBW $\geq 3 \times$ RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

8.5.3.Measurement the maximum power spectral density.

8.6.Test Result

The test was performed with 802.11b(SISO)				
Channel	Frequency (MHz)	Power Spectral Density ANT 1(dBm)	Power Spectral Density ANT 2(dBm)	Limits (dBm)
Low	2412	-20.74	-23.87	8 dBm
Middle	2437	-20.95	-23.15	8 dBm
High	2462	-22.76	-22.94	8 dBm

The test was performed with 802.11g(SISO)				
Channel	Frequency (MHz)	Power Spectral Density ANT 1(dBm)	Power Spectral Density ANT 2(dBm)	Limits (dBm)
Low	2412	-29.99	-29.88	8 dBm
Middle	2437	-27.82	-25.88	8 dBm
High	2462	-28.96	-29.23	8 dBm

The test was performed with 802.11n20(SISO)				
Channel	Frequency (MHz)	Power Spectral Density ANT 1(dBm)	Power Spectral Density ANT 2(dBm)	Limits (dBm)
Low	2412	-29.57	-29.56	8 dBm
Middle	2437	-28.67	-29.36	8 dBm
High	2462	-28.35	-28.37	8 dBm

The test was performed with 802.11n40(SISO)				
Channel	Frequency (MHz)	Power Spectral Density ANT 1(dBm)	Power Spectral Density ANT 2(dBm)	Limits (dBm)
Low	2422	-35.01	-35.35	8 dBm
Middle	2437	-34.68	-35.28	8 dBm
High	2452	-34.77	-34.05	8 dBm

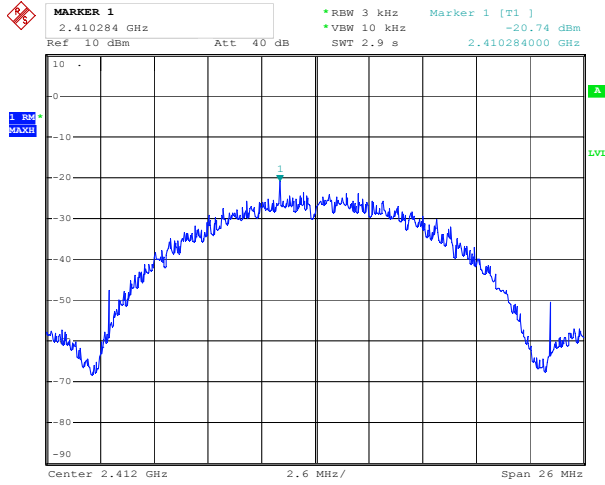
The test was performed with 802.11n20(MIMO)					
Channel	Frequency (MHz)	Power Spectral Density ANT 1(dBm)	Power Spectral Density ANT 2(dBm)	Power Spectral Density total(dBm)	Limits (dBm)
Low	2412	-36.46	-36.82	-33.63	8 dBm
Middle	2437	-36.60	-35.51	-33.01	8 dBm
High	2462	-34.93	-36.40	-32.59	8 dBm

The test was performed with 802.11n40(MIMO)					
Channel	Frequency (MHz)	Power Spectral Density ANT 1(dBm)	Power Spectral Density ANT 2(dBm)	Power Spectral Density total(dBm)	Limits (dBm)
Low	2422	-43.21	-41.86	-39.47	8 dBm
Middle	2437	-42.65	-42.24	-39.43	8 dBm
High	2452	-41.54	-41.54	-38.53	8 dBm

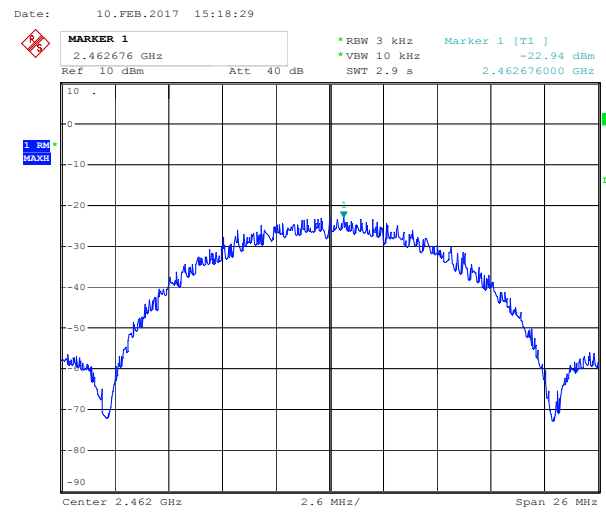
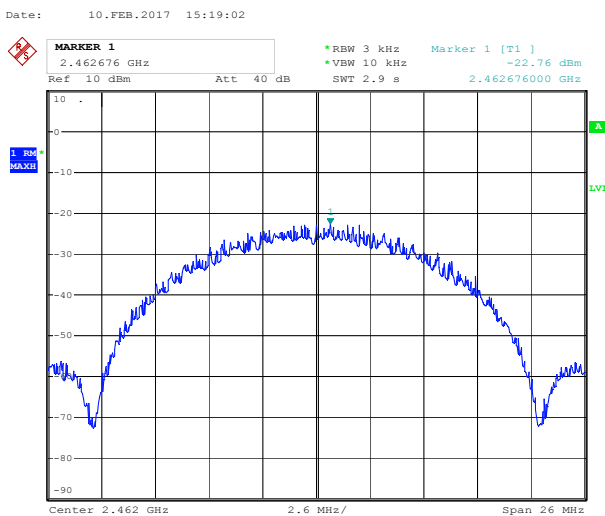
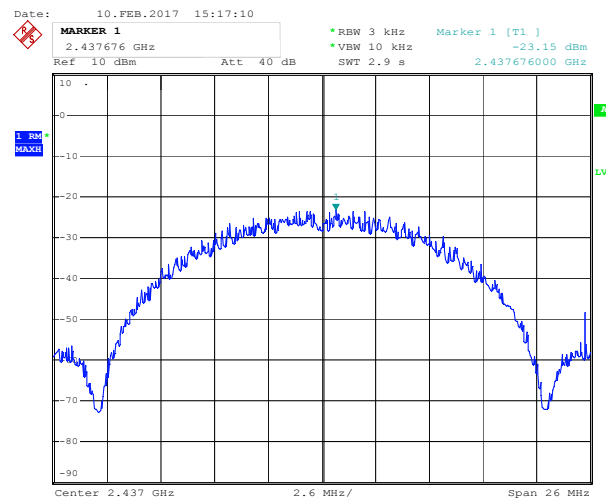
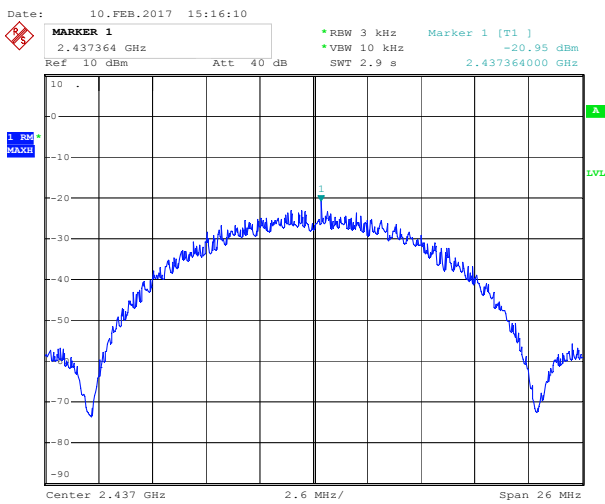
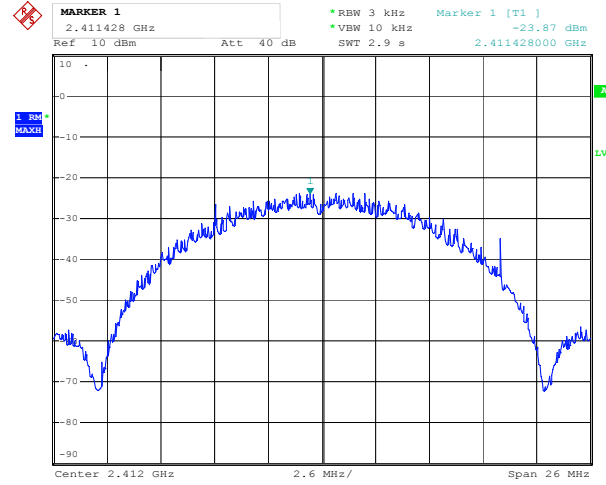
Test mode: SISO

The spectrum analyzer plots are attached as below.

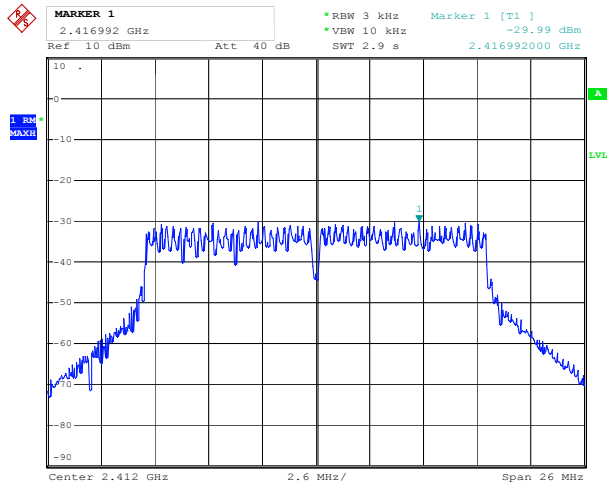
ANT 1(802.11b)



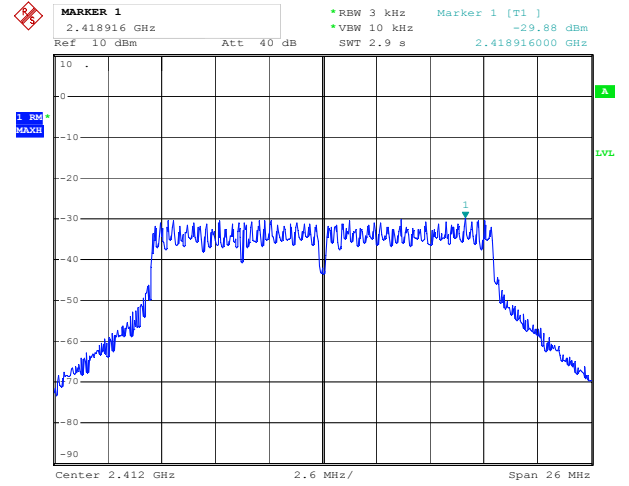
ANT 2(802.11b)



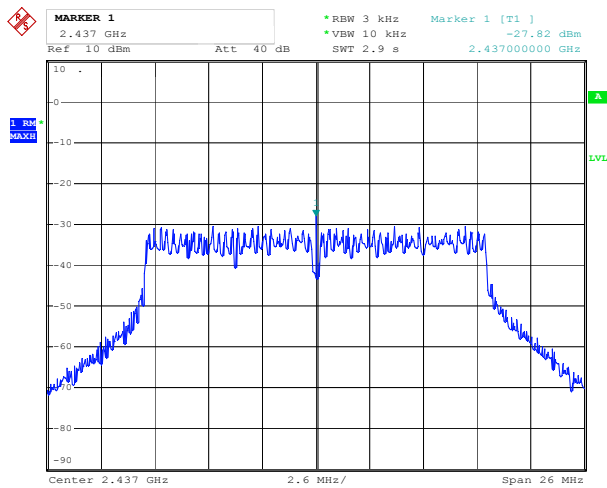
ANT 1(802.11g)



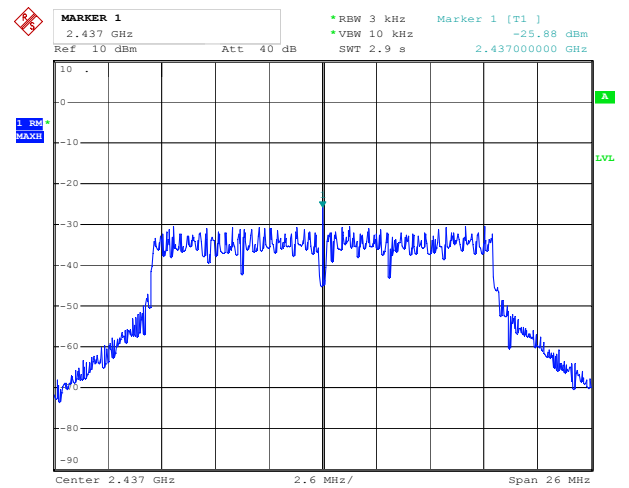
ANT 2(802.11g)



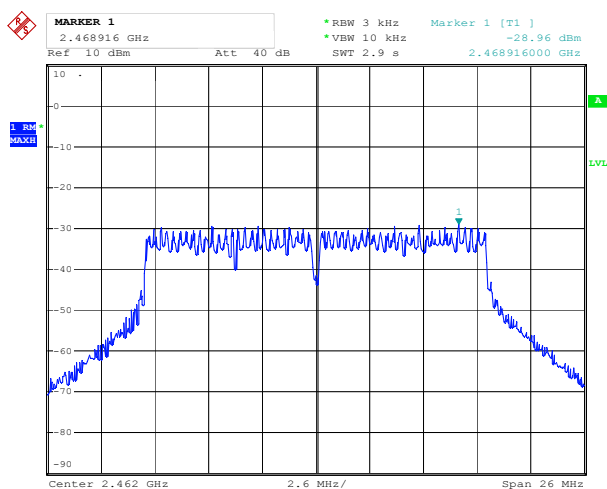
Date: 10.FEB.2017 15:23:54



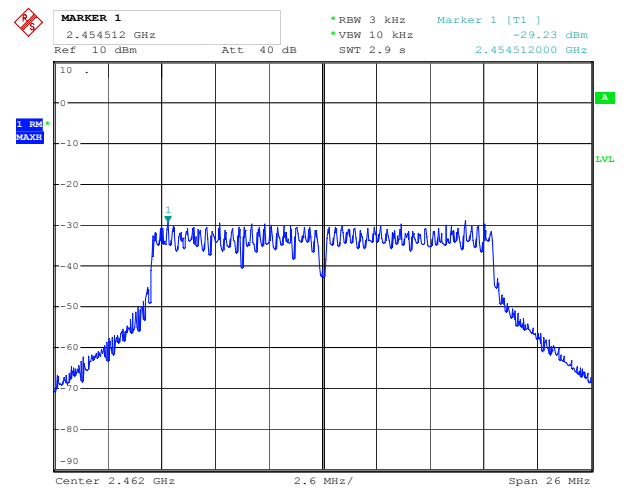
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Date: 10.FEB.2017 15:26:21



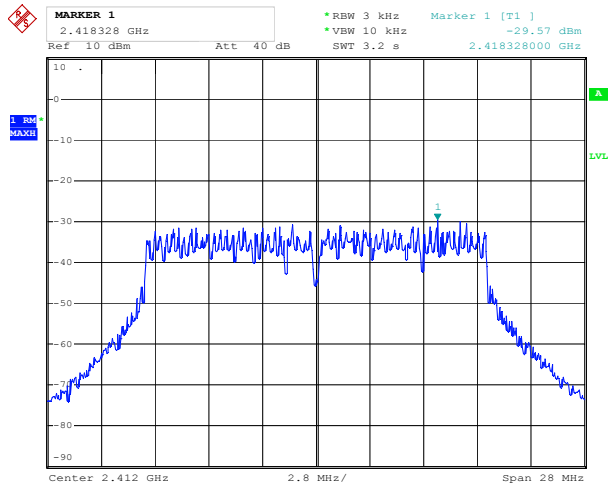
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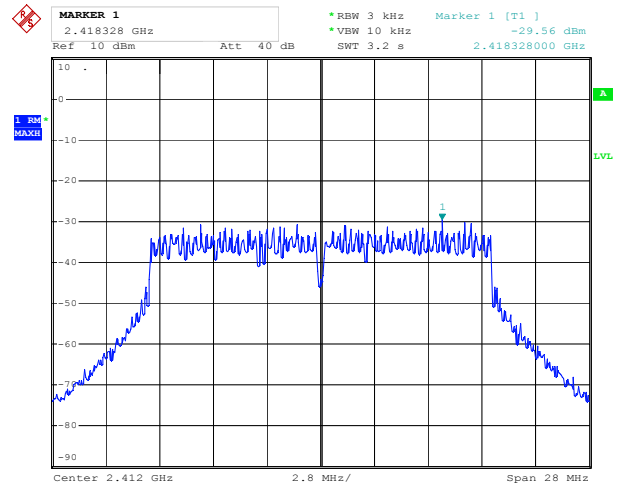
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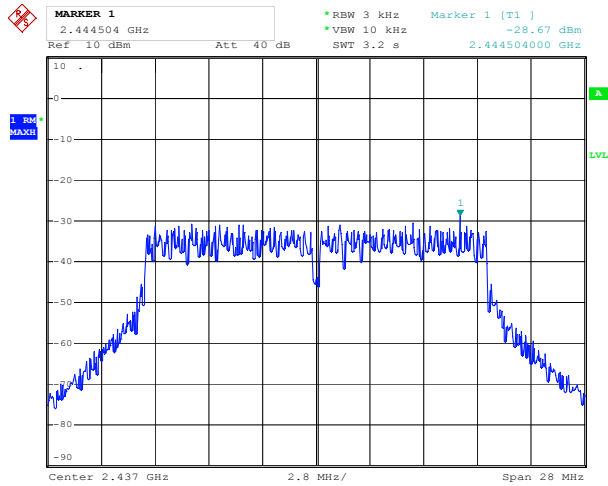
ANT 1(802.11n20)



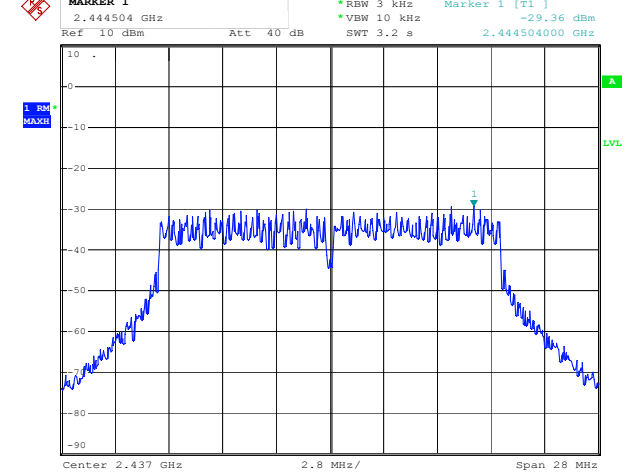
ANT 2(802.11 n20)



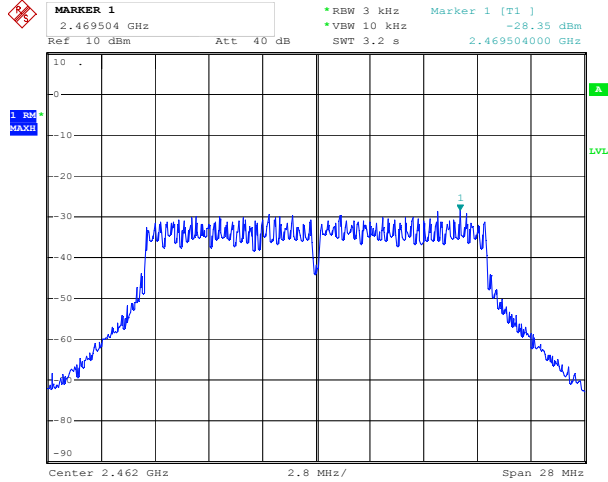
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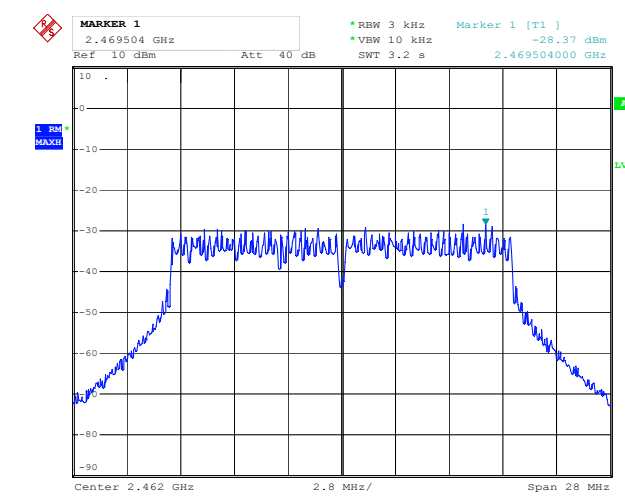
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Date: 10.FEB.2017 15:37:10



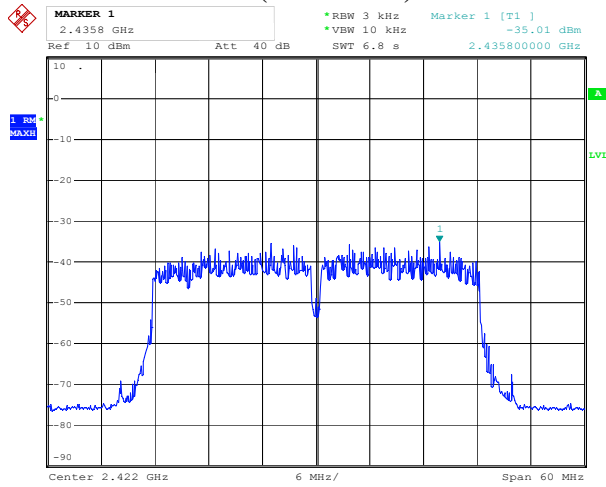
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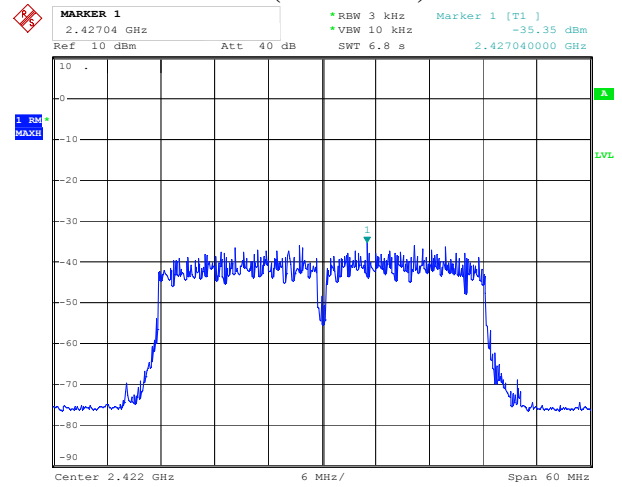
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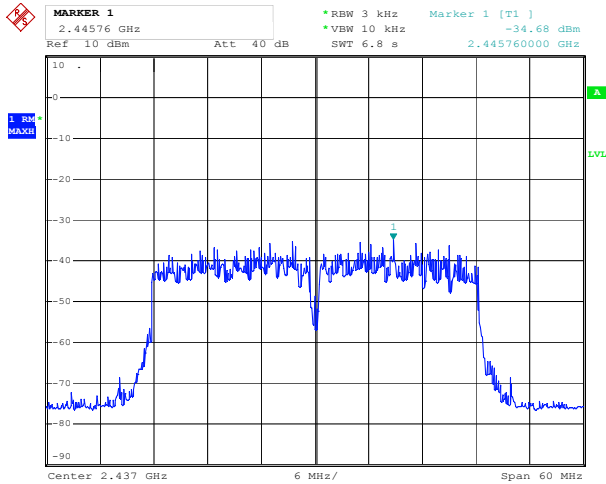
ANT 1(802.11n40)



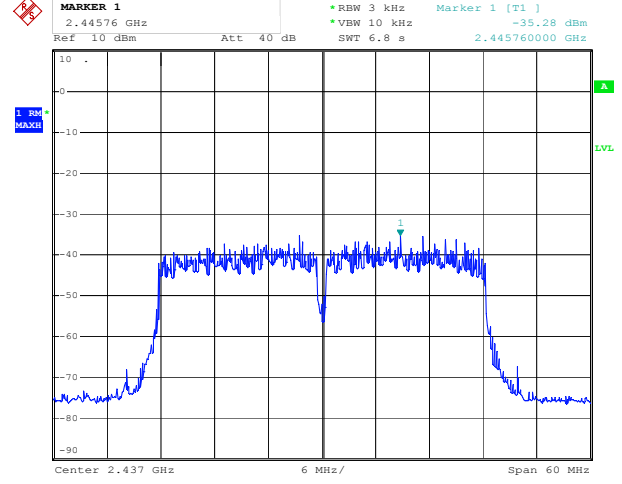
ANT 2(802.11n40)



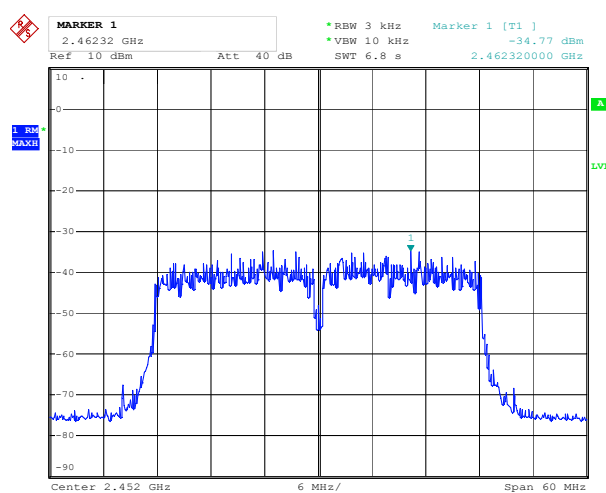
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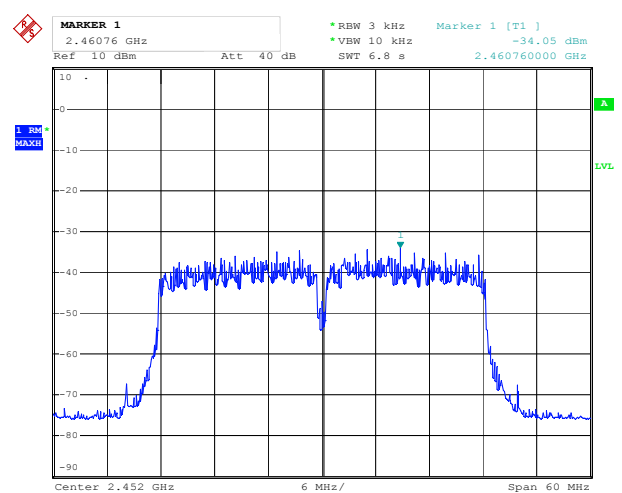
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Date: 10.FEB.2017 15:48:17



Date: 10.FEB.2017 15:50:09



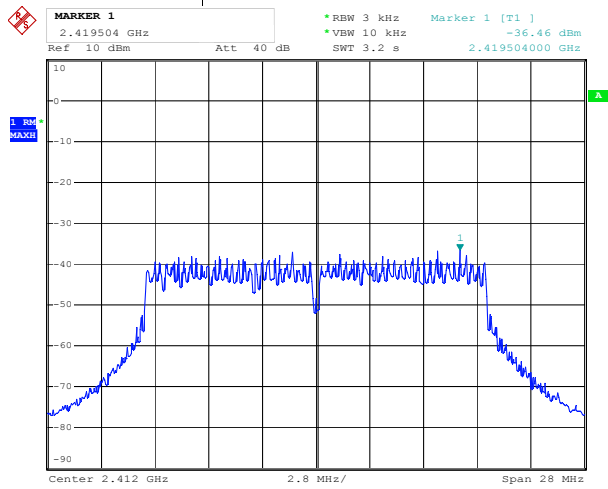
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Date: 10.FEB.2017 15:54:28

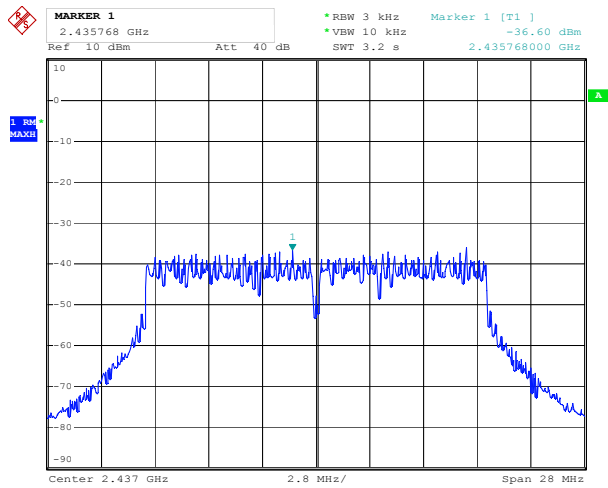
Test mode: MIMO

The spectrum analyzer plots are attached as below.

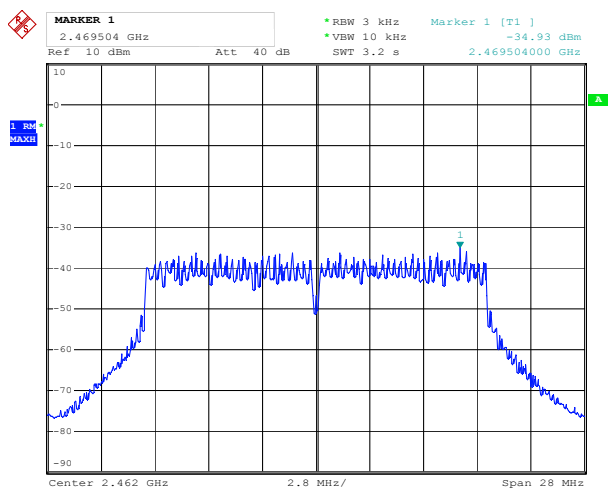
ANT 1(802.11n20)



Date: 22.FEB.2017 09:00:54

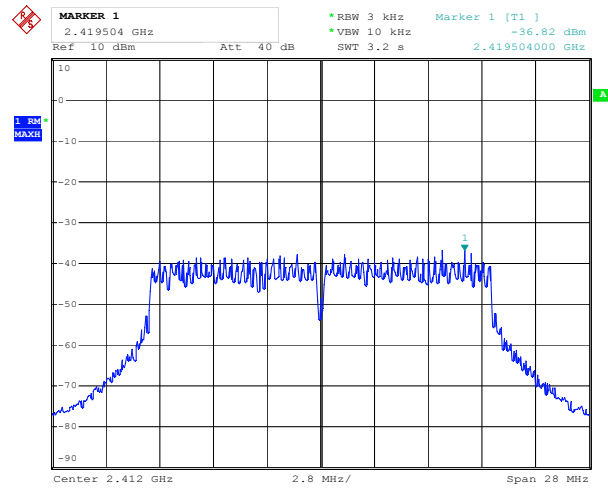


Date: 22.FEB.2017 09:08:20

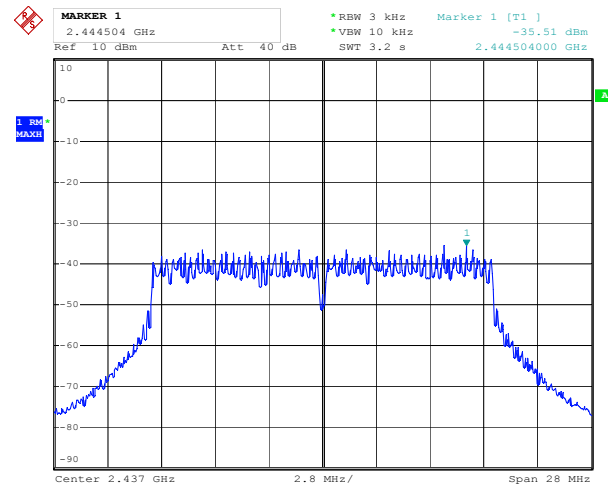


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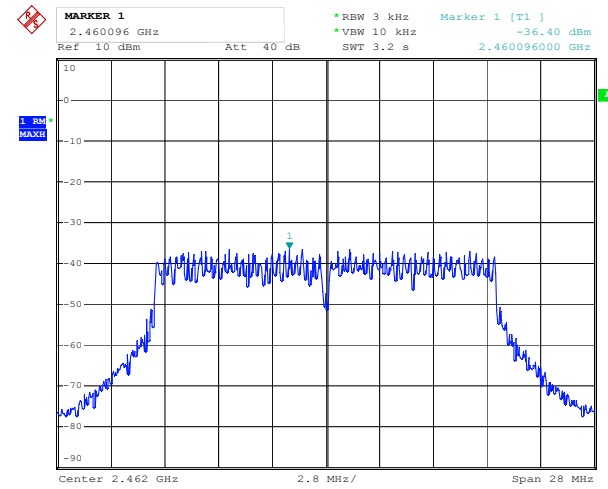
ANT 2(802.11 n20)



Date: 22.FEB.2017 09:06:58

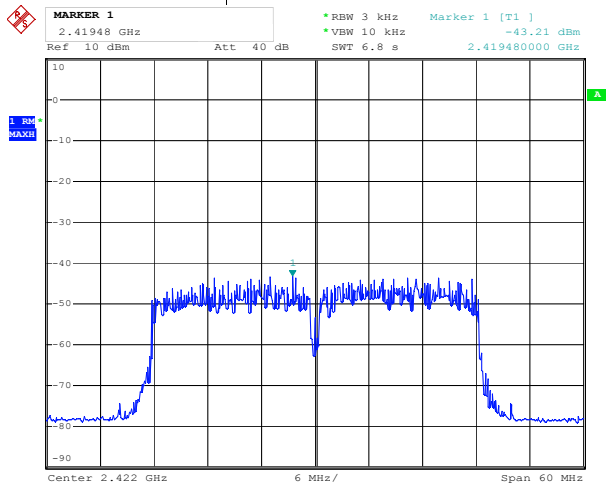


Date: 22.FEB.2017 09:12:21

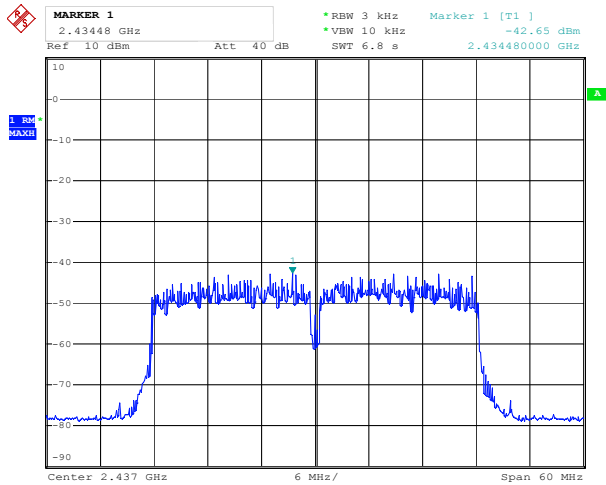


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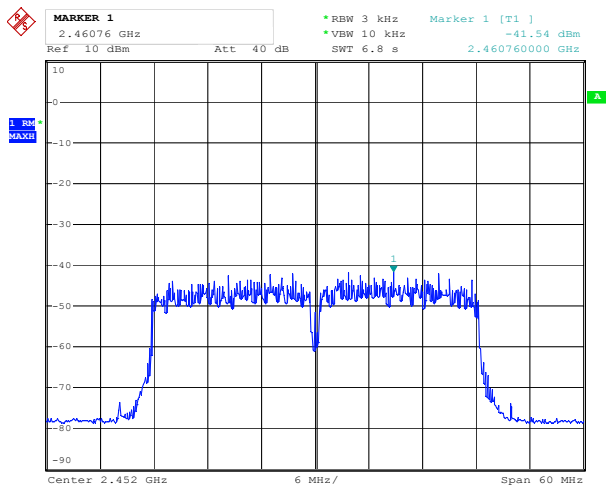
ANT 1(802.11n40)



Date: 22.FEB.2017 09:17:51

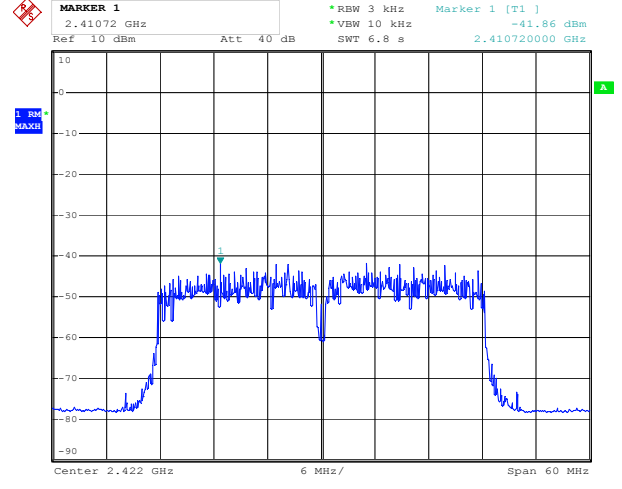


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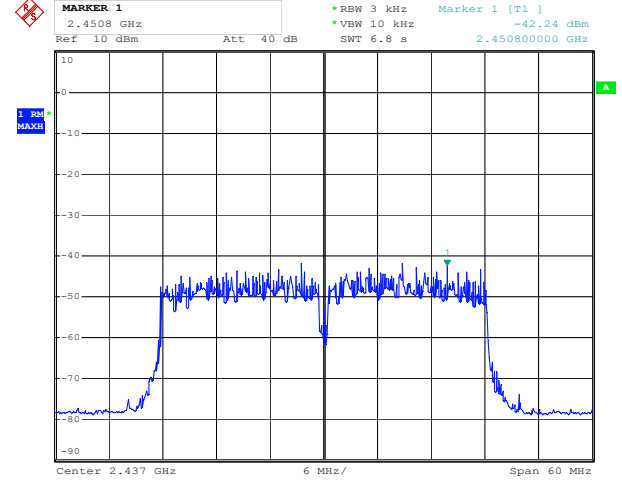


Date: 22.FEB.2017 09:36:21

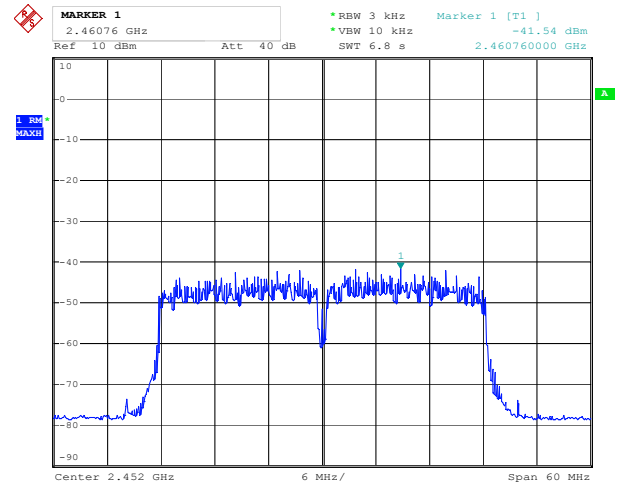
ANT 2(802.11n40)



Date: 22.FEB.2017 09:28:28



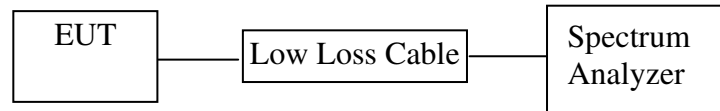
Date: 22.FEB.2017 09:33:43



Date: 22.FEB.2017 09:36:21

9. MAXIMUM CONDUCTED (AVERAGE) OUTPUT POWER

9.1. Block Diagram of Test Setup



9.2. 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.

9.3. 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.

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 EUT was tested according to DTS test procedure of Apr 08, 2016 KDB558074 D01 DTS Meas Guidance v03r05 for compliance to FCC 47CFR 15.247 requirements.

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

9.5.3. 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.

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

9.6.Test Result

The test was performed with 802.11b						
Channel	Frequency (MHz)	Ave output power ANT 1(dBm)	Ave output power ANT 2 (dBm)	Ave output power ANT 1(mW)	Ave output power ANT 2 (mW)	Limits dBm / W
Low	2412	14.34	14.44	27.16	27.80	30 dBm / 1 W
Middle	2437	14.77	14.87	29.99	30.69	30 dBm / 1 W
High	2462	15.03	15.01	31.84	31.70	30 dBm / 1 W

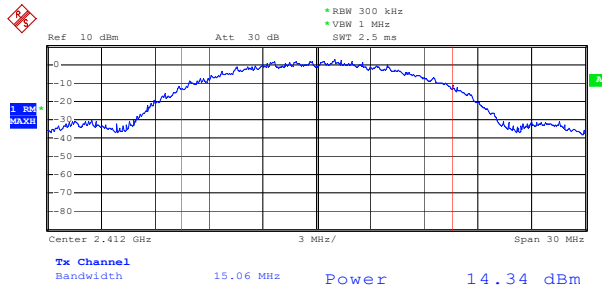
The test was performed with 802.11g						
Channel	Frequency (MHz)	Ave output power ANT 1(dBm)	Ave output power ANT 2 (dBm)	Ave output power ANT 1(mW)	Ave output power ANT 2 (mW)	Limits dBm / W
Low	2412	11.47	11.54	14.03	14.26	30 dBm / 1 W
Middle	2437	12.08	12.09	16.14	16.18	30 dBm / 1 W
High	2462	12.29	12.20	16.94	16.60	30 dBm / 1 W

The test was performed with 802.11n20						
Channel	Frequency (MHz)	Ave output power ANT 1(dBm)	Ave output power ANT 2 (dBm)	Ave output Total power (dBm)	Ave output Total power (mW)	Limits dBm / W
Low	2412	10.19	10.22	13.22	20.967	30 dBm / 1 W
Middle	2437	10.72	10.77	13.76	23.743	30 dBm / 1 W
High	2462	11.25	11.30	14.29	26.825	30 dBm / 1 W

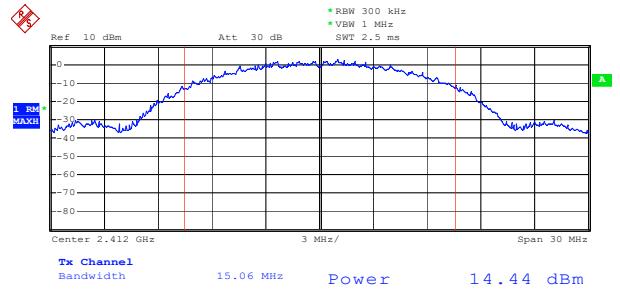
The test was performed with 802.11n40						
Channel	Frequency (MHz)	Ave output power ANT 1(dBm)	Ave output power ANT 2 (dBm)	Ave output Total power (dBm)	Ave output Total power (mW)	Limits dBm / W
Low	2422	8.70	8.76	11.74	14.929	30 dBm / 1 W
Middle	2437	8.99	9.07	12.04	15.997	30 dBm / 1 W
High	2452	9.43	9.47	12.46	17.621	30 dBm / 1 W

The spectrum analyzer plots are attached as below.

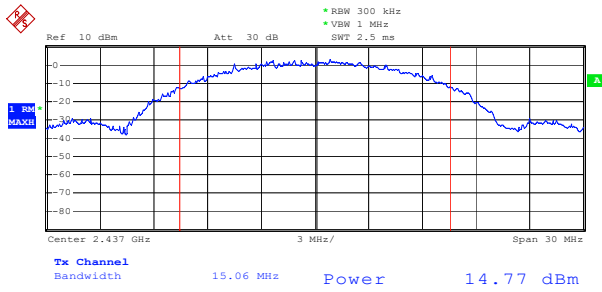
ANT 1(802.11b)



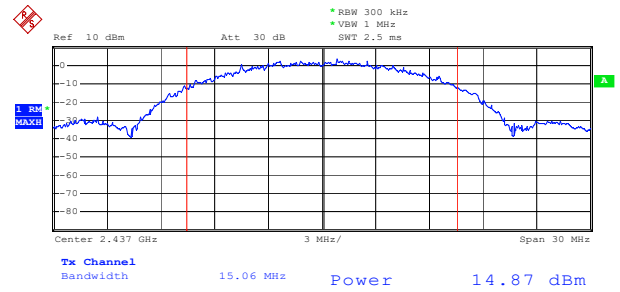
ANT 2(802.11b)



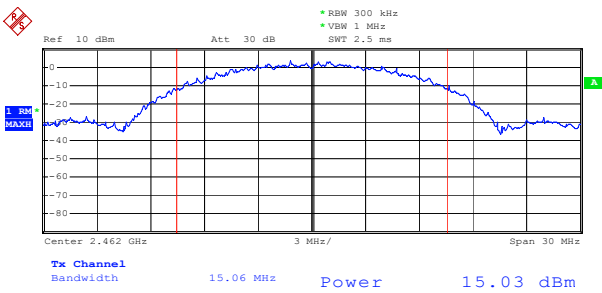
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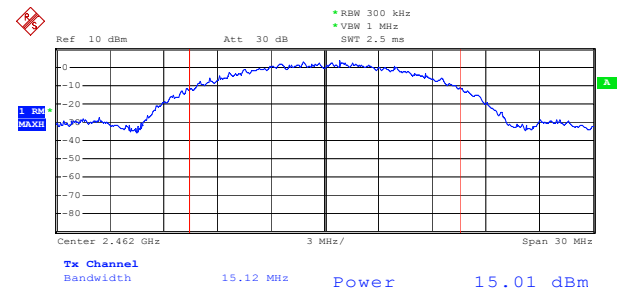
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Date: 22.FEB.2017 12:45:06



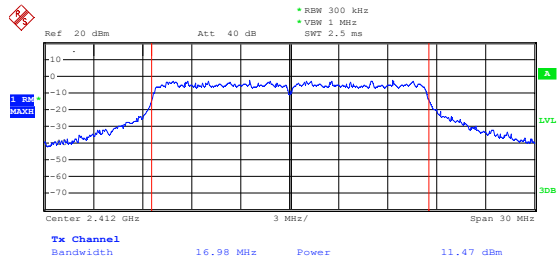
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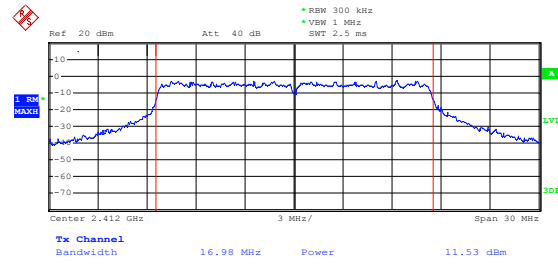
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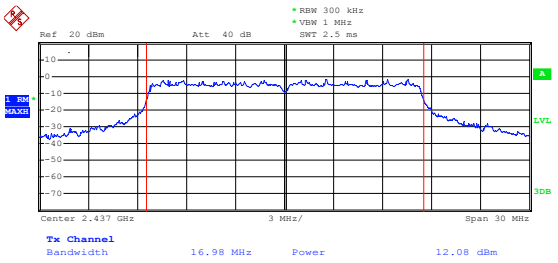
ANT 1(802.11g)



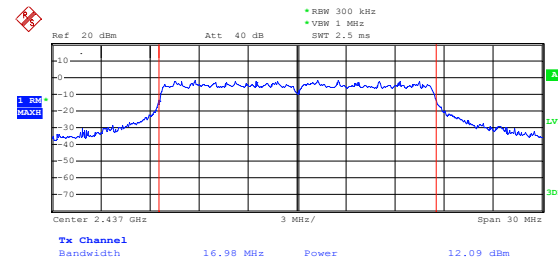
ANT 2(802.11g)



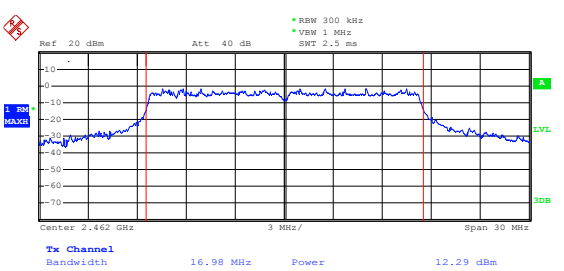
Date: 22.FEB.2017 17:10:14



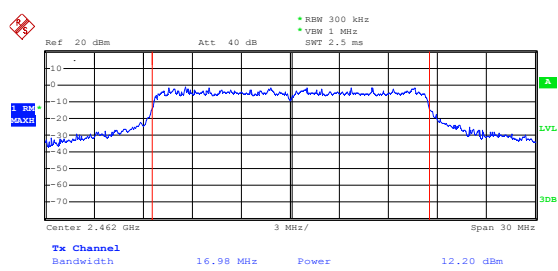
Date: 22.FEB.2017 17:10:34



Date: 22.FEB.2017 17:08:40



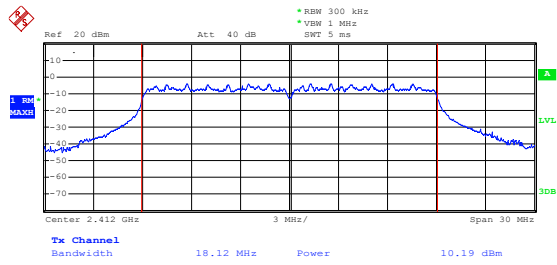
Date: 22.FEB.2017 17:09:01



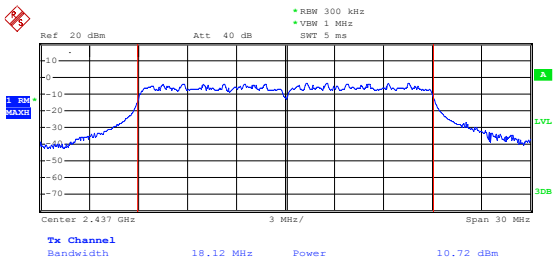
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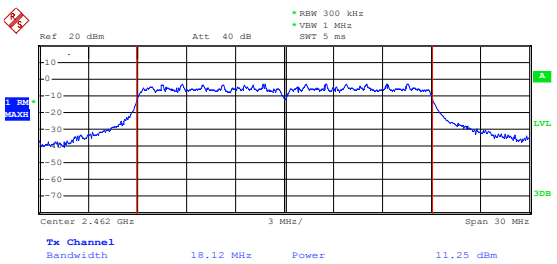
ANT 1(802.11n20)



Date: 22.FEB.2017 17:17:58

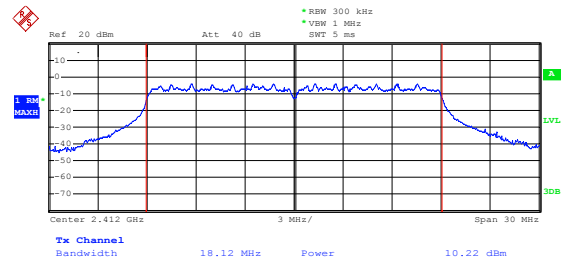


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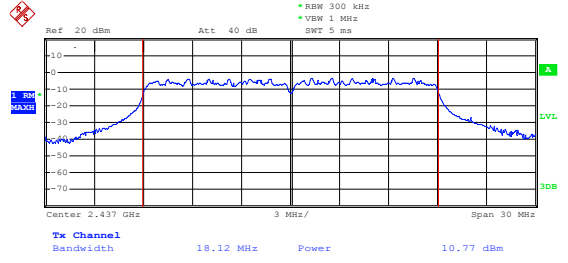


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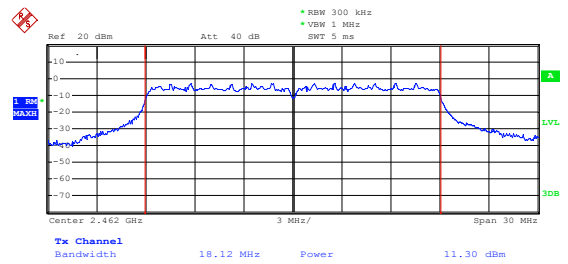
ANT 2(802.11 n20)



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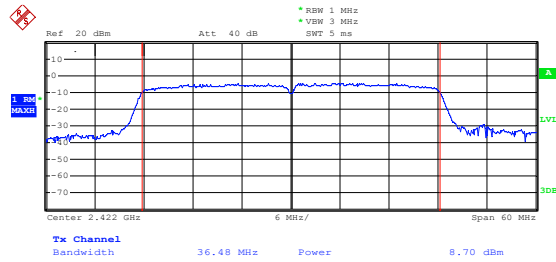


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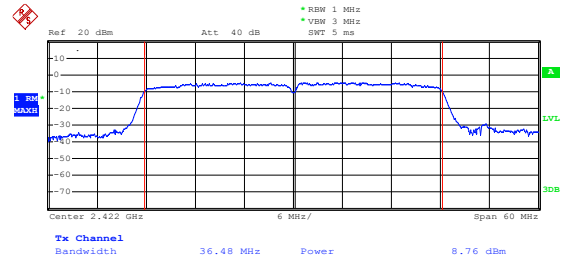


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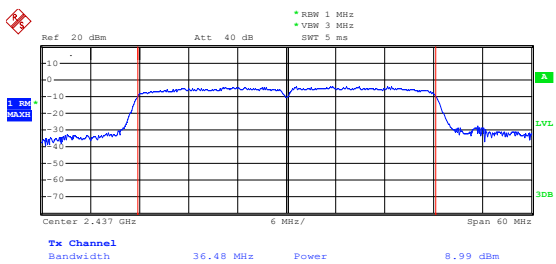
ANT 1(802.11n40)



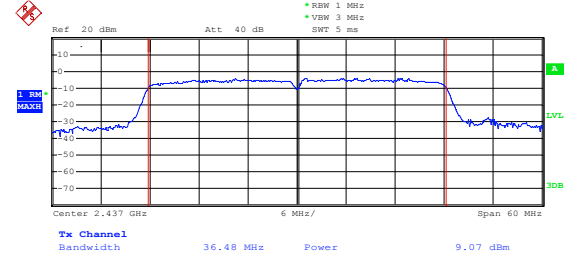
ANT 2(802.11n40)



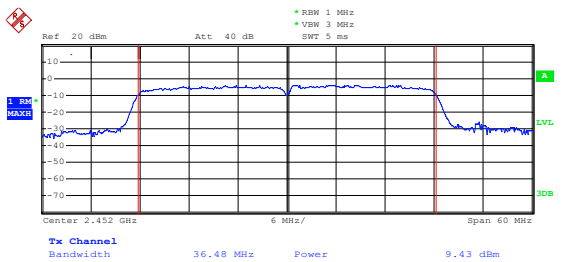
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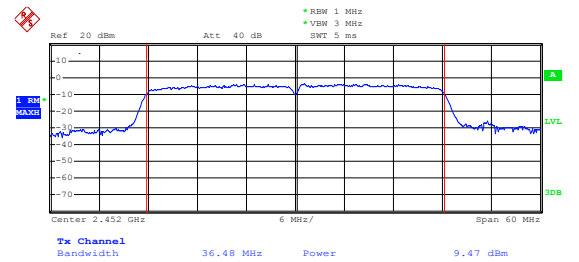
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Date: 22.FEB.2017 17:24:15



Date: 22.FEB.2017 17:24:25



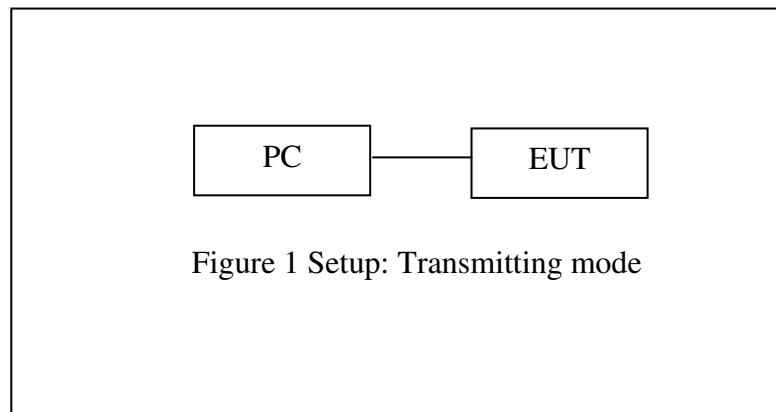
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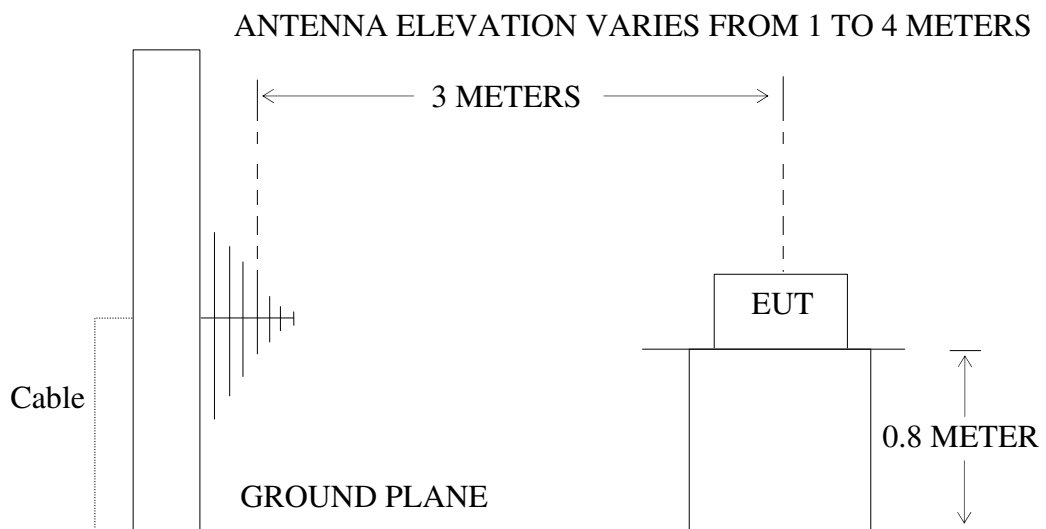
10. RADIATED SPURIOUS EMISSION TEST

10.1. Block Diagram of Test Setup

10.1.1. Block diagram of connection between the EUT and peripherals



10.1.2. Semi-Anechoic Chamber Test Setup Diagram



10.2. 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).

10.3.Restricted bands of operation

10.3.1.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.

10.4.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.

10.5. Operating Condition of EUT

10.5.1. Setup the EUT and simulator as shown as Section 10.1.

10.5.2. Turn on the power of all equipment.

10.5.3. 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.

10.6. 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.

10.7.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 fundamental radiated emissions were reduced by Band Reject Filter in the attached plots.

4. The EUT is tested radiation emission at each test mode (802.11b/g/n) in three axes. Besides, We have tested the single antenna transmit mode and the dual antenna emission mode. The worst emissions(the dual antenna emission mode) are reflected in the following plots.

5. The radiation emissions from 18-25GHz are not reported, because the test values lower than the limits of 20dB

6. The average measurement was not performed when peak measured data under the limit of average detection.

Below 1G



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Job No.: ding11 #471

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2412MHz(802.11b)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Horizontal

Power Source: AC 120V/60Hz

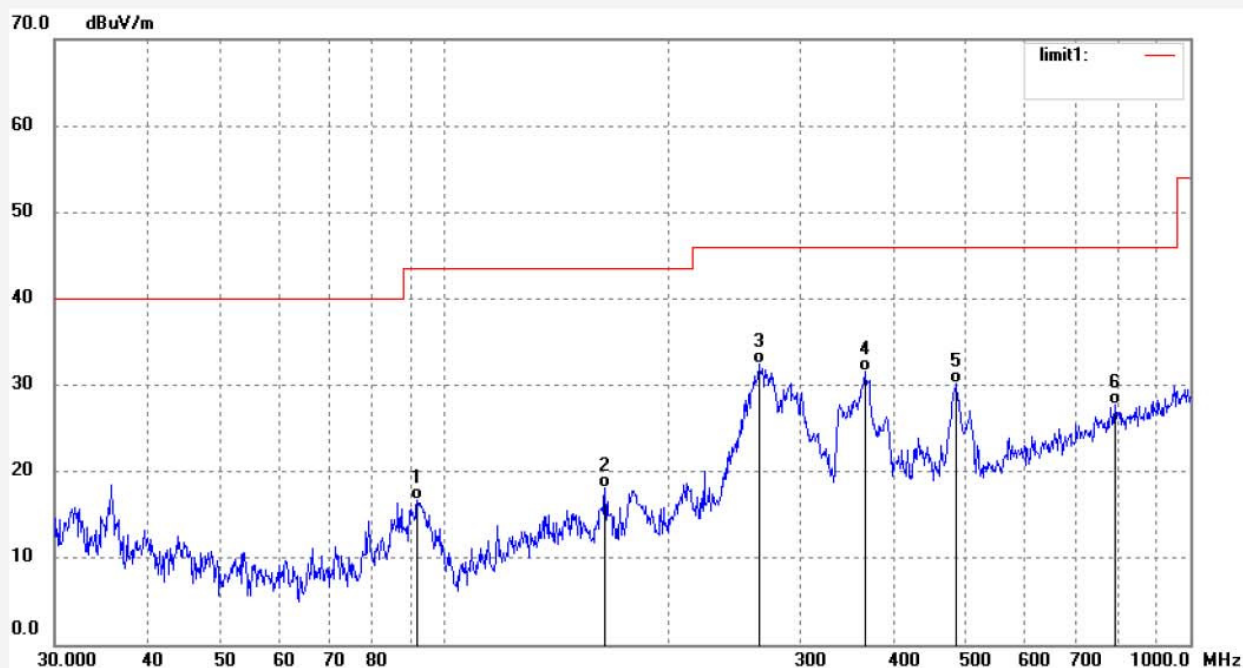
Date: 2017/02/08

Time: 14:15:23

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	92.0223	38.55	-21.92	16.63	43.50	-26.87	QP			
2	164.3129	39.08	-20.91	18.17	43.50	-25.33	QP			
3	264.0416	49.73	-17.30	32.43	46.00	-13.57	QP			
4	366.0866	44.98	-13.39	31.59	46.00	-14.41	QP			
5	486.6136	41.31	-11.12	30.19	46.00	-15.81	QP			
6	793.0281	31.99	-4.27	27.72	46.00	-18.28	QP			

Job No.: ding11 #470

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2412MHz(802.11b)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Vertical

Power Source: AC 120V/60Hz

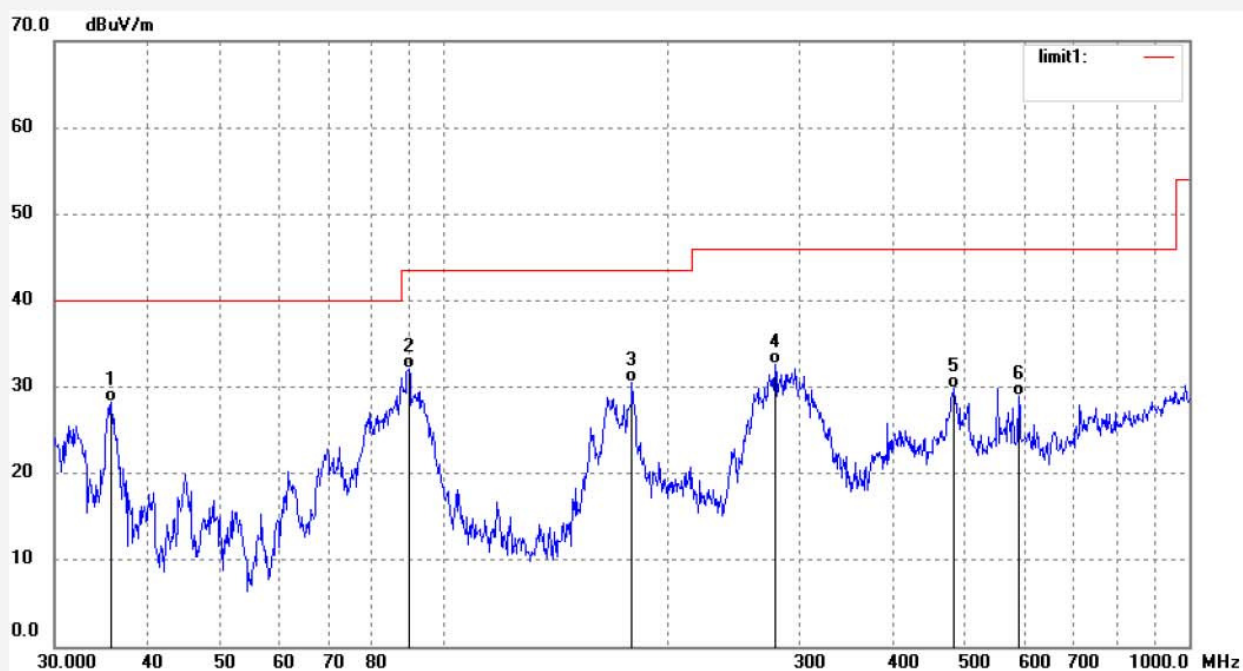
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Time: 14:13:54

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.7617	44.45	-16.27	28.18	40.00	-11.82	QP			
2	89.7866	53.98	-21.91	32.07	43.50	-11.43	QP			
3	178.7697	51.02	-20.45	30.57	43.50	-12.93	QP			
4	278.3308	49.38	-16.71	32.67	46.00	-13.33	QP			
5	483.2061	40.95	-11.17	29.78	46.00	-16.22	QP			
6	590.3511	37.58	-8.63	28.95	46.00	-17.05	QP			

Job No.: ding11 #472

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2437MHz(802.11b)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Horizontal

Power Source: AC 120V/60Hz

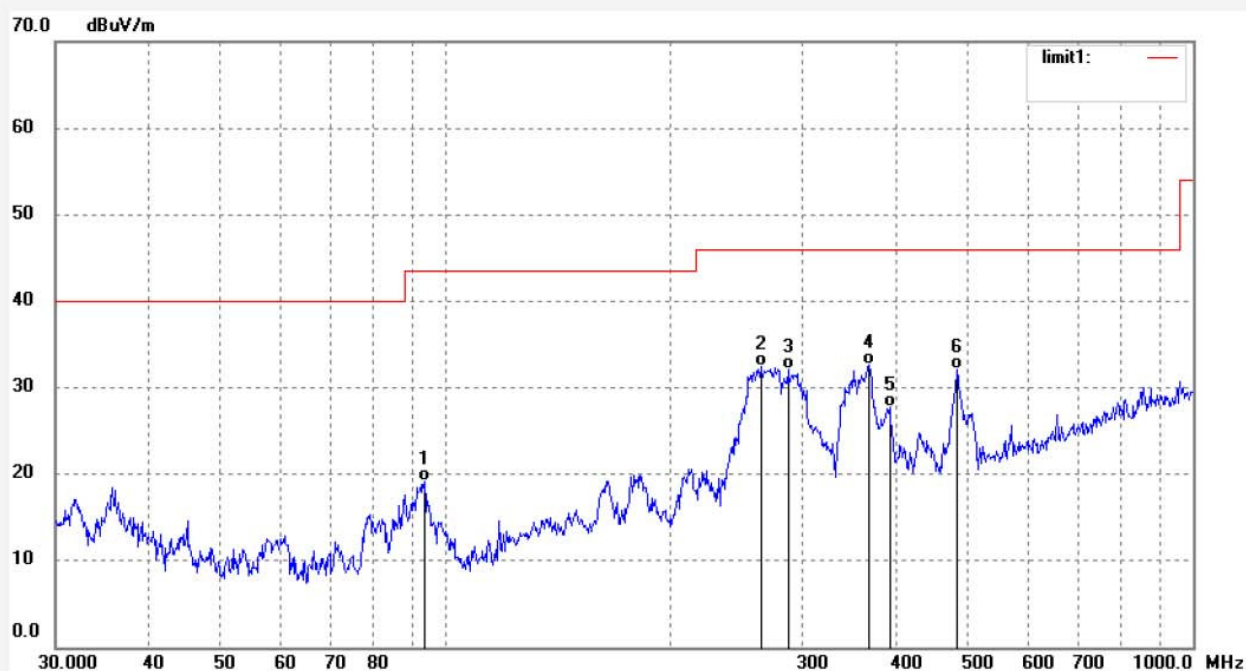
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Time: 14:16:27

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	93.6532	41.01	-21.92	19.09	43.50	-24.41	QP			
2	264.0416	49.72	-17.30	32.42	46.00	-13.58	QP			
3	287.2729	48.43	-16.29	32.14	46.00	-13.86	QP			
4	368.6681	46.01	-13.36	32.65	46.00	-13.35	QP			
5	392.7376	40.90	-13.10	27.80	46.00	-18.20	QP			
6	483.2061	43.22	-11.17	32.05	46.00	-13.95	QP			

Job No.: ding11 #473

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2437MHz(802.11b)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Vertical

Power Source: AC 120V/60Hz

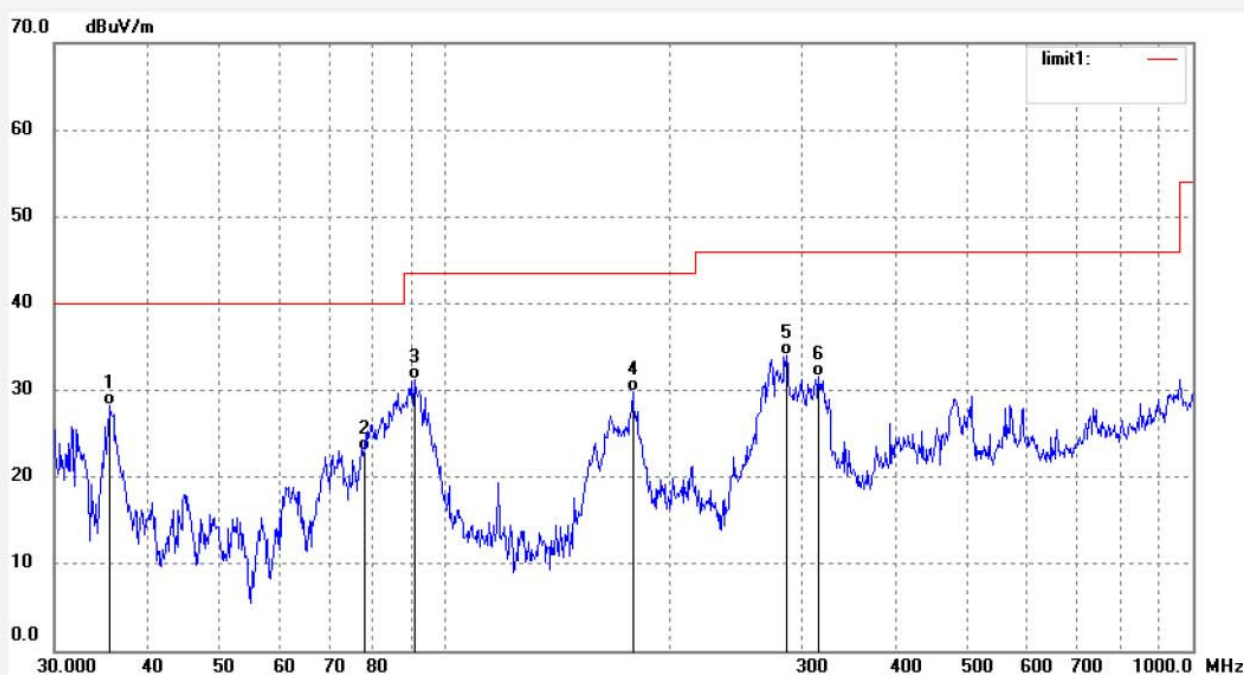
Date: 2017/02/08

Time: 14:19:00

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.6362	44.49	-16.22	28.27	40.00	-11.73	QP			
2	77.1963	45.19	-22.17	23.02	40.00	-16.98	QP			
3	91.0574	53.16	-21.91	31.25	43.50	-12.25	QP			
4	178.1426	50.40	-20.51	29.89	43.50	-13.61	QP			
5	286.2653	50.43	-16.32	34.11	46.00	-11.89	QP			
6	315.8601	46.86	-15.26	31.60	46.00	-14.40	QP			

Job No.: ding11 #475

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2462MHz(802.11b)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Horizontal

Power Source: AC 120V/60Hz

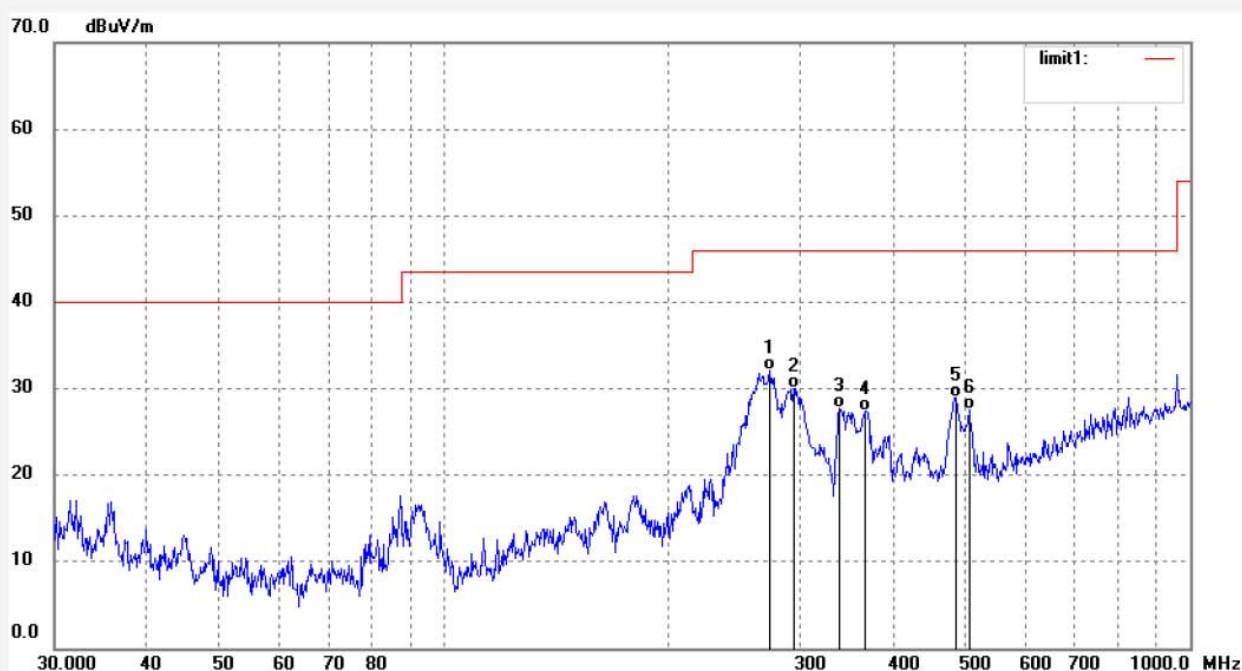
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Time: 14:21:16

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	273.4838	49.08	-16.94	32.14	46.00	-13.86	QP			
2	294.4260	46.02	-15.95	30.07	46.00	-15.93	QP			
3	338.8546	42.05	-14.29	27.76	46.00	-18.24	QP			
4	367.3752	40.69	-13.37	27.32	46.00	-18.68	QP			
5	486.6136	40.10	-11.12	28.98	46.00	-17.02	QP			
6	505.7891	38.30	-10.77	27.53	46.00	-18.47	QP			

Job No.: ding11 #474

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2462MHz(802.11b)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Vertical

Power Source: AC 120V/60Hz

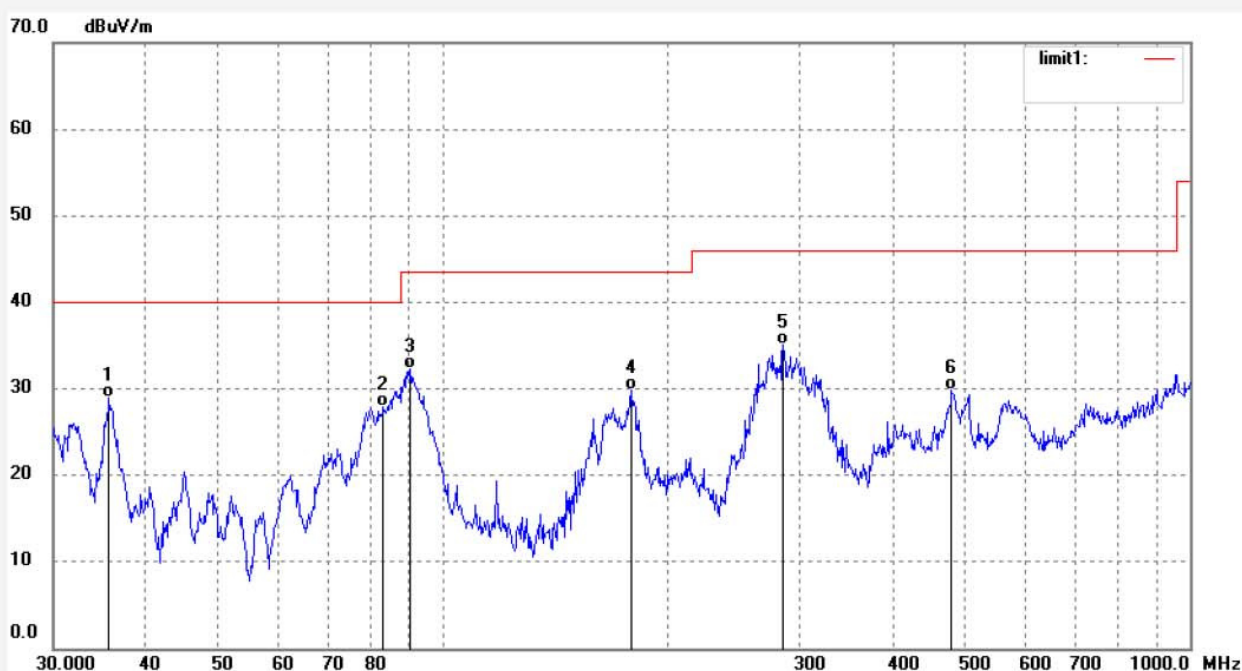
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Time: 14:19:42

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.6362	45.13	-16.22	28.91	40.00	-11.09	QP			
2	83.1076	49.85	-21.98	27.87	40.00	-12.13	QP			
3	90.4198	54.22	-21.92	32.30	43.50	-11.20	QP			
4	178.1426	50.40	-20.51	29.89	43.50	-13.61	QP			
5	285.2611	51.39	-16.37	35.02	46.00	-10.98	QP			
6	479.8224	41.01	-11.23	29.78	46.00	-16.22	QP			

Above 1G



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Job No.: DING11 #517

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2412MHz(802.11b)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Horizontal

Power Source: AC 120V/60Hz

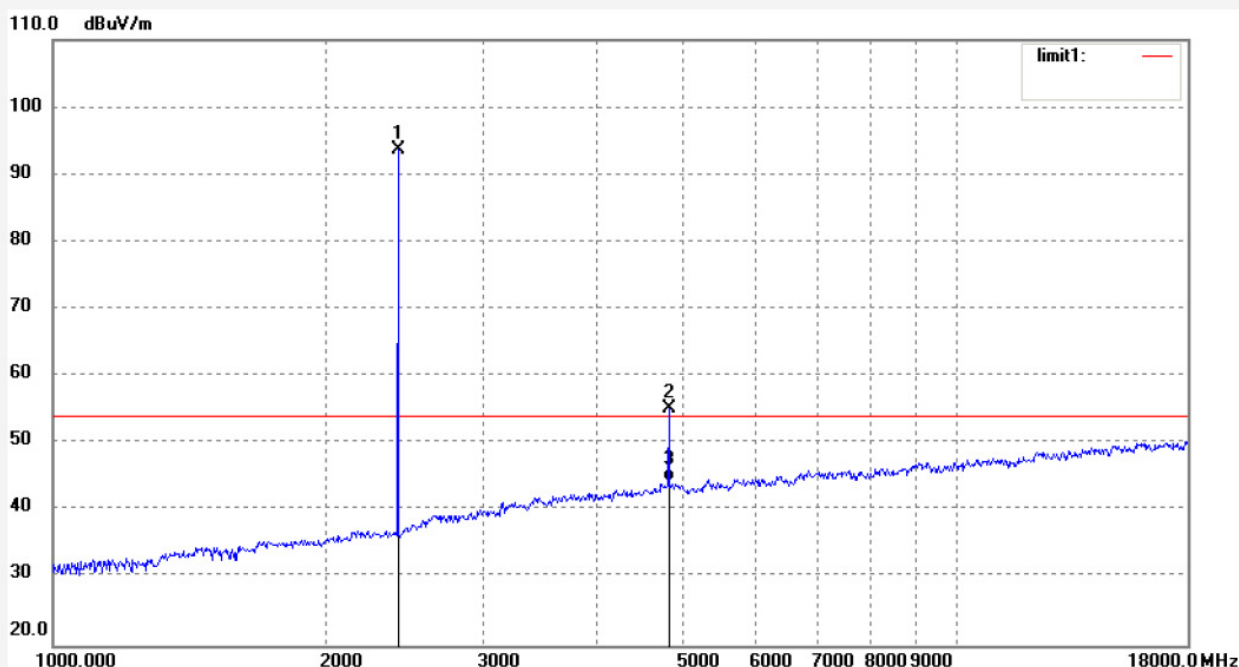
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Time: 12/38/38

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.014	99.39	-5.76	93.63			peak			
2	4824.028	51.61	3.53	55.14	74.00	-18.86	peak			
3	4824.028	40.97	3.53	44.50	54.00	-9.50	AVG			

Job No.: DING11 #516

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2412MHz(802.11b)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Vertical

Power Source: AC 120V/60Hz

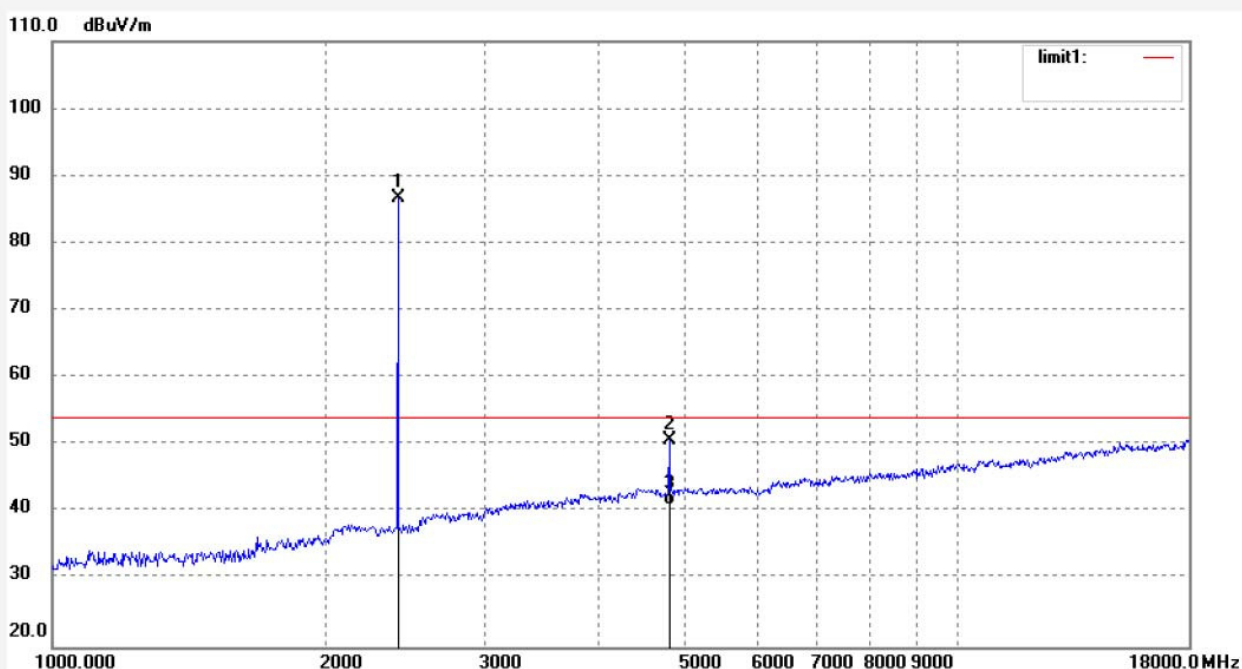
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Time: 12/37/14

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.014	92.39	-5.76	86.63			peak			
2	4824.028	47.11	3.53	50.64	74.00	-23.36	peak			
3	4824.028	37.56	3.53	41.09	54.00	-12.91	AVG			

Job No.: DING11 #514

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2437MHz(802.11b)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Horizontal

Power Source: AC 120V/60Hz

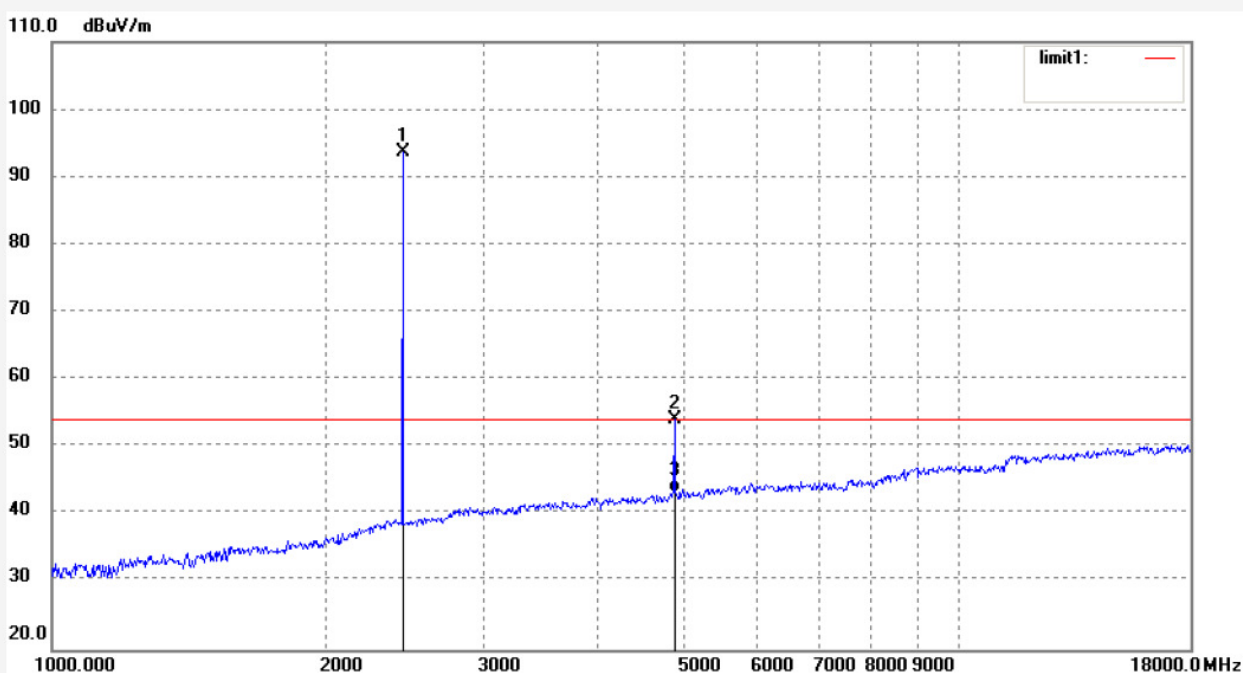
Date: 17/02/10/

Time: 12/33/52

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2437.007	99.32	-5.61	93.71			peak			
2	4874.014	49.94	4.06	54.00	74.00	-20.00	peak			
3	4874.014	39.21	4.06	43.27	54.00	-10.73	AVG			

Job No.: DING11 #515

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2437MHz(802.11b)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Vertical

Power Source: AC 120V/60Hz

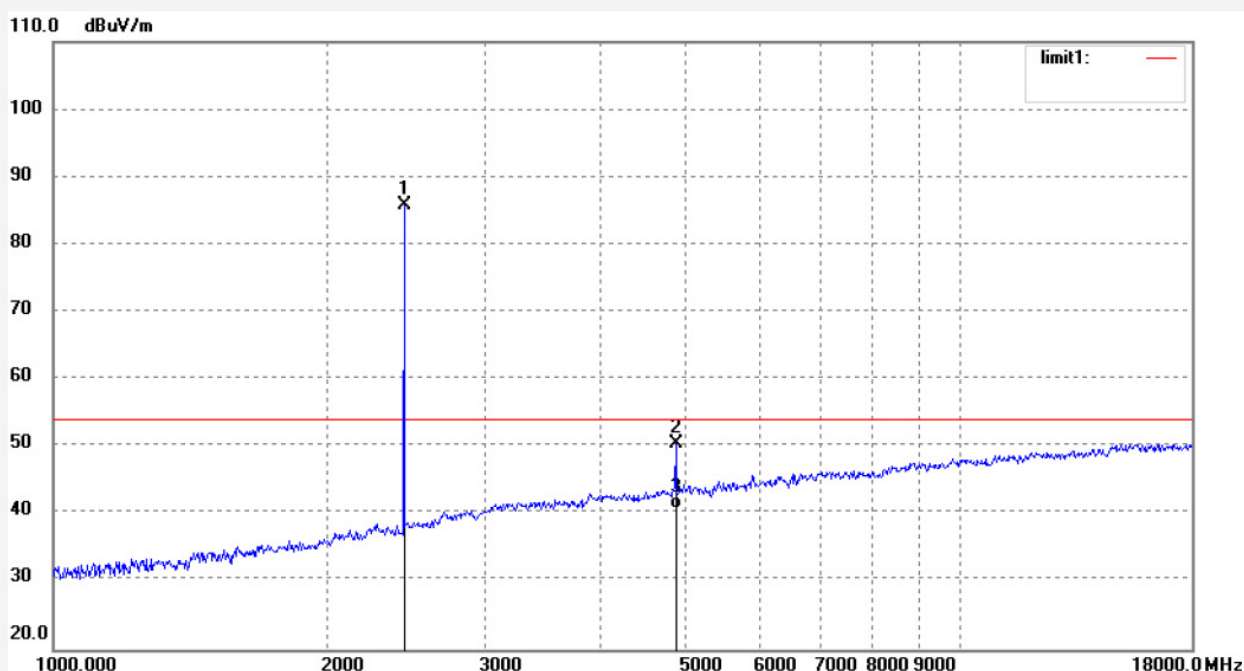
Date: 17/02/10/

Time: 12/36/17

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2437.007	91.32	-5.61	85.71			peak			
2	4874.014	46.44	4.06	50.50	74.00	-23.50	peak			
3	4874.014	36.84	4.06	40.90	54.00	-13.10	AVG			

Job No.: DING11 #513

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2462MHz(802.11b)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Horizontal

Power Source: AC 120V/60Hz

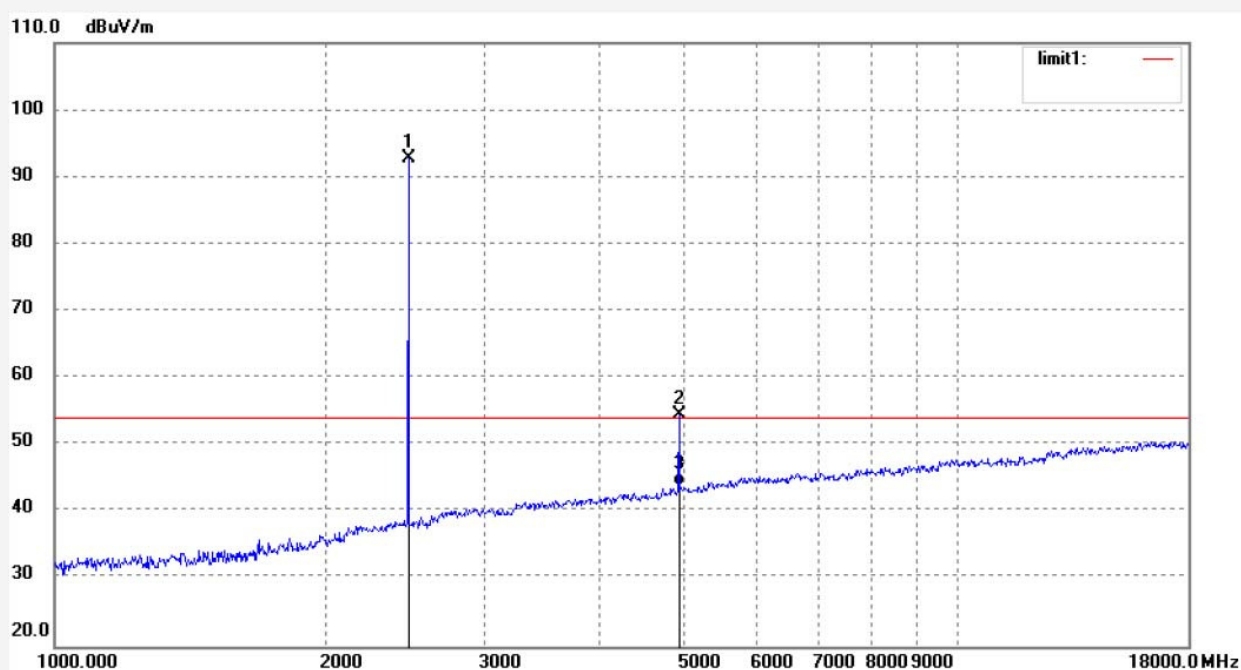
Date: 17/02/10/

Time: 12/32/34

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2462.005	98.36	-5.53	92.83			peak			
2	4924.010	49.95	4.54	54.49	74.00	-20.49	peak			
3	4924.010	39.42	4.54	43.96	54.00	-10.04	AVG			

Job No.: DING11 #512

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2462MHz(802.11b)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Vertical

Power Source: AC 120V/60Hz

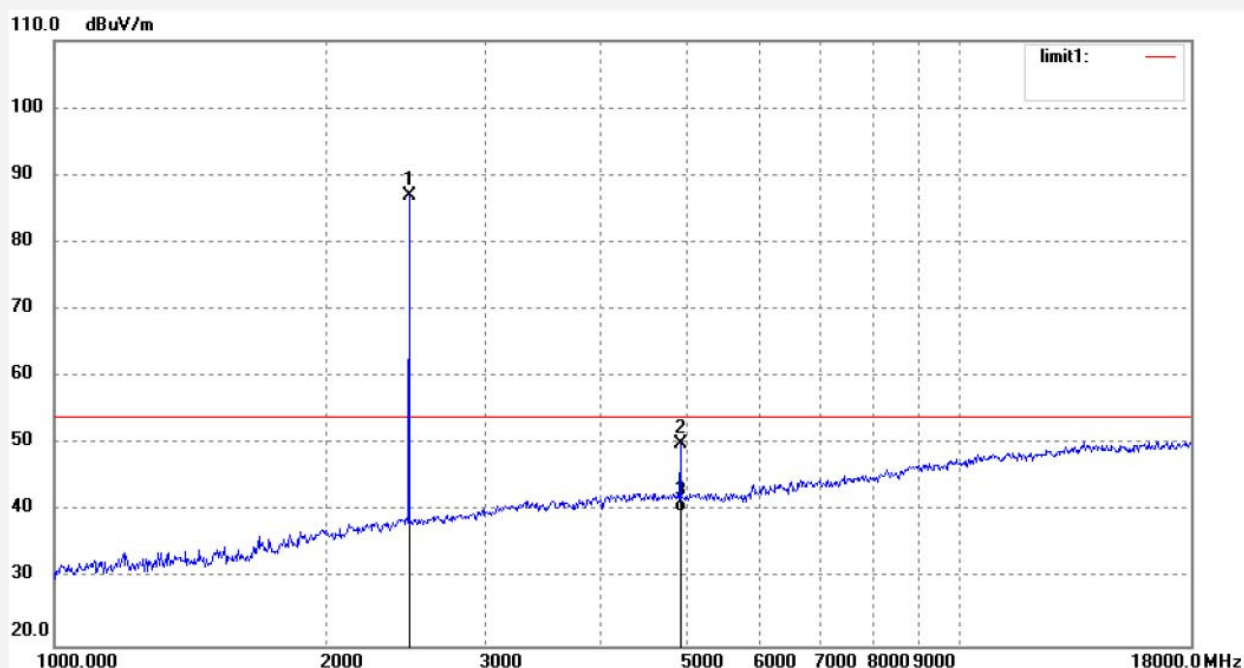
Date: 17/02/10/

Time: 12/30/55

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2462.005	92.36	-5.53	86.83			peak			
2	4924.010	45.45	4.54	49.99	74.00	-24.01	peak			
3	4924.010	35.42	4.54	39.96	54.00	-14.04	AVG			

Job No.: DING11 #506

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2412MHz(802.11g)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Horizontal

Power Source: AC 120V/60Hz

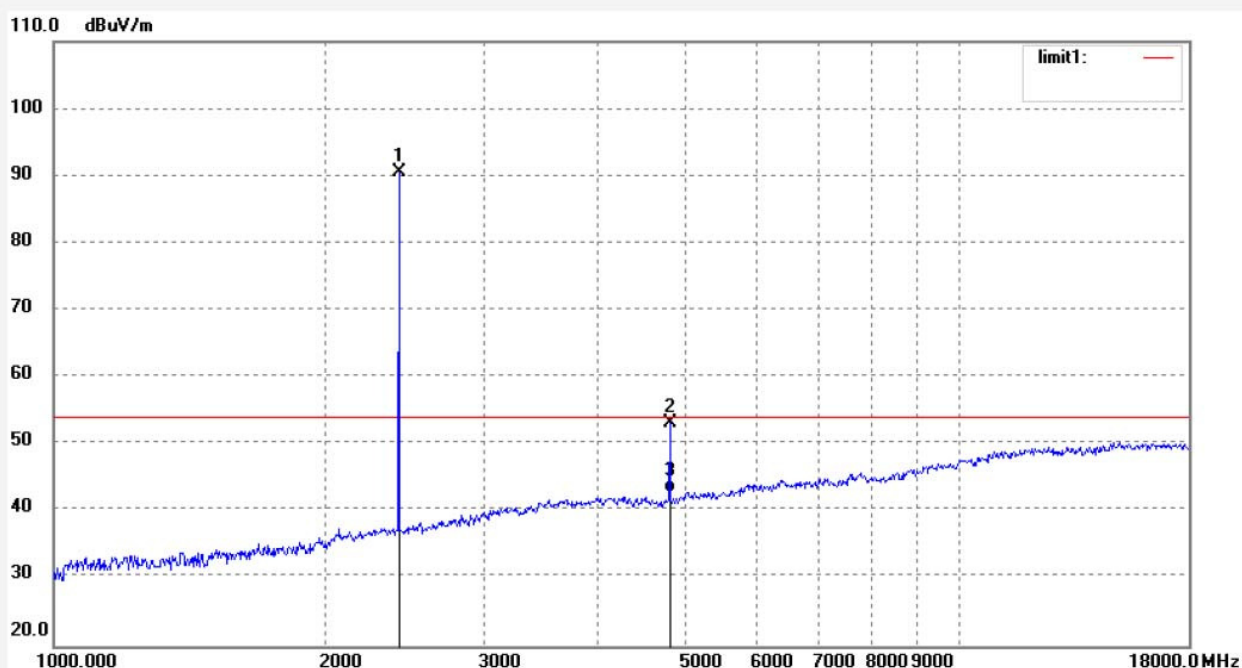
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Time: 12/20/42

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.100	96.39	-5.76	90.63			peak			
2	4824.228	49.70	3.53	53.23	74.00	-20.77	peak			
3	4824.228	39.24	3.53	42.77	54.00	-11.23	AVG			

Job No.: DING11 #507

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2412MHz(802.11g)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Vertical

Power Source: AC 120V/60Hz

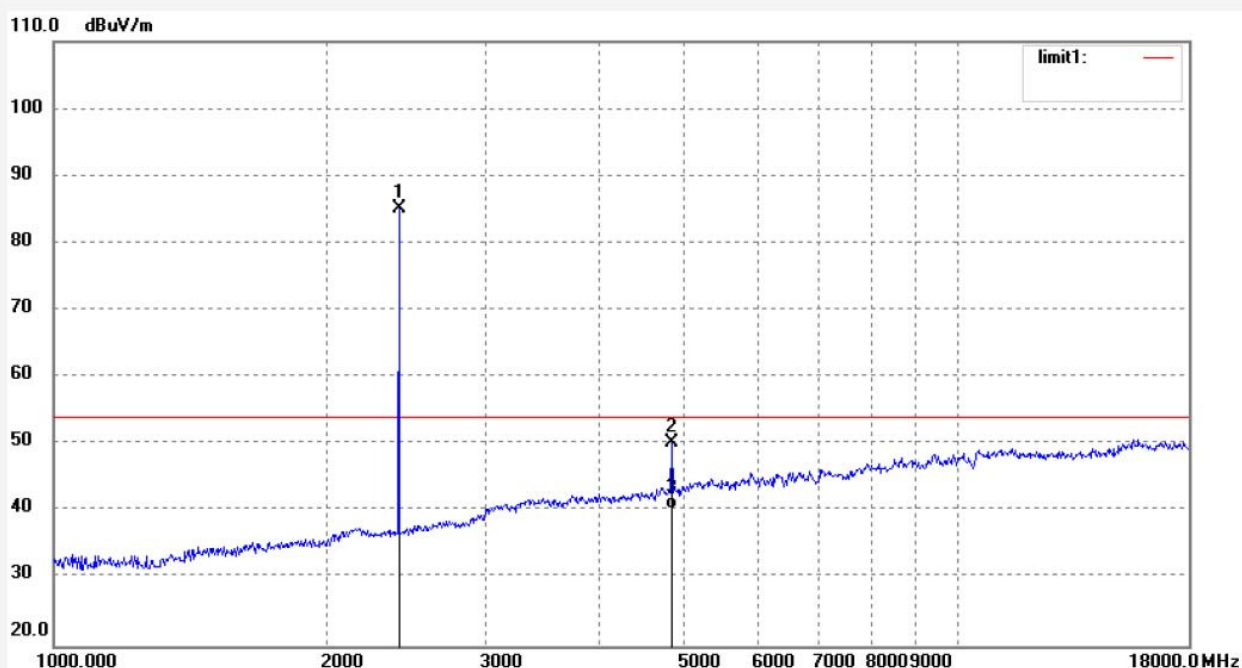
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Time: 12/22/20

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.100	90.89	-5.76	85.13			peak			
2	4824.261	46.47	3.80	50.27	74.00	-23.73	peak			
3	4824.261	36.51	3.80	40.31	54.00	-13.69	AVG			

Job No.: DING11 #509

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2437MHz(802.11g)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Horizontal

Power Source: AC 120V/60Hz

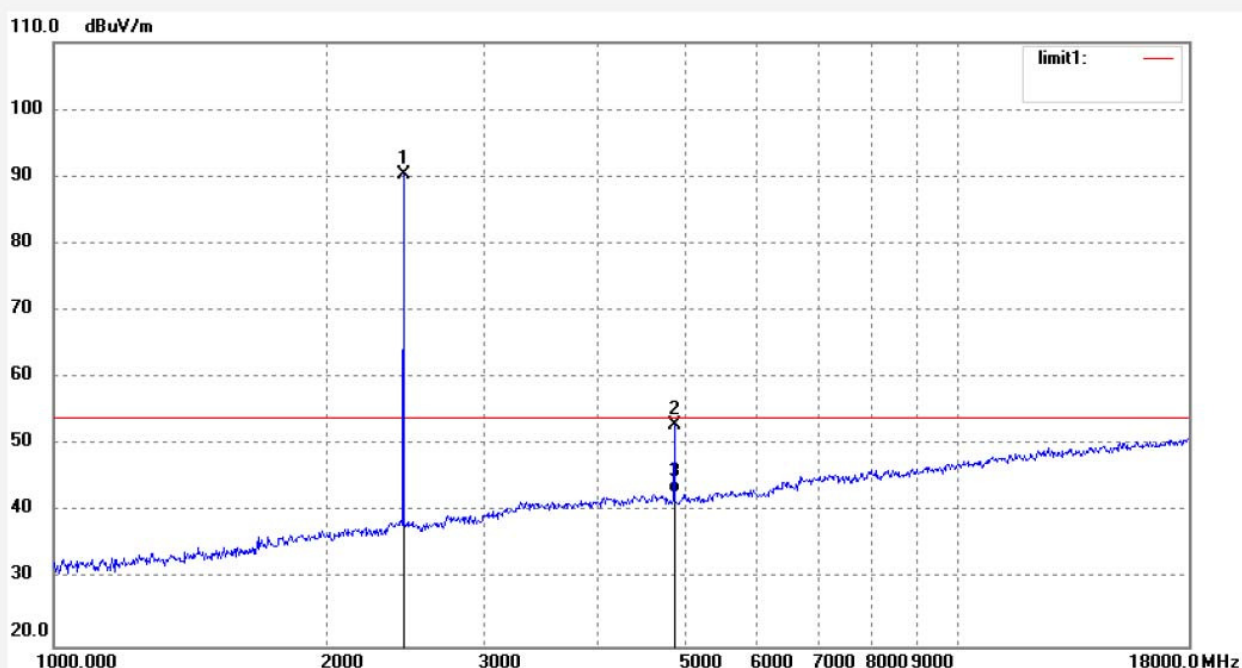
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Time: 12/27/11

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Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2437.107	95.82	-5.61	90.21			peak			
2	4874.257	48.94	4.06	53.00	74.00	-21.00	peak			
3	4874.257	38.72	4.06	42.78	54.00	-11.22	AVG			

Job No.: DING11 #508

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Smart Home Storage

Mode: TX 2437MHz(802.11g)

Model: SSM-F100

Manufacturer: MAYA

Polarization: Vertical

Power Source: AC 120V/60Hz

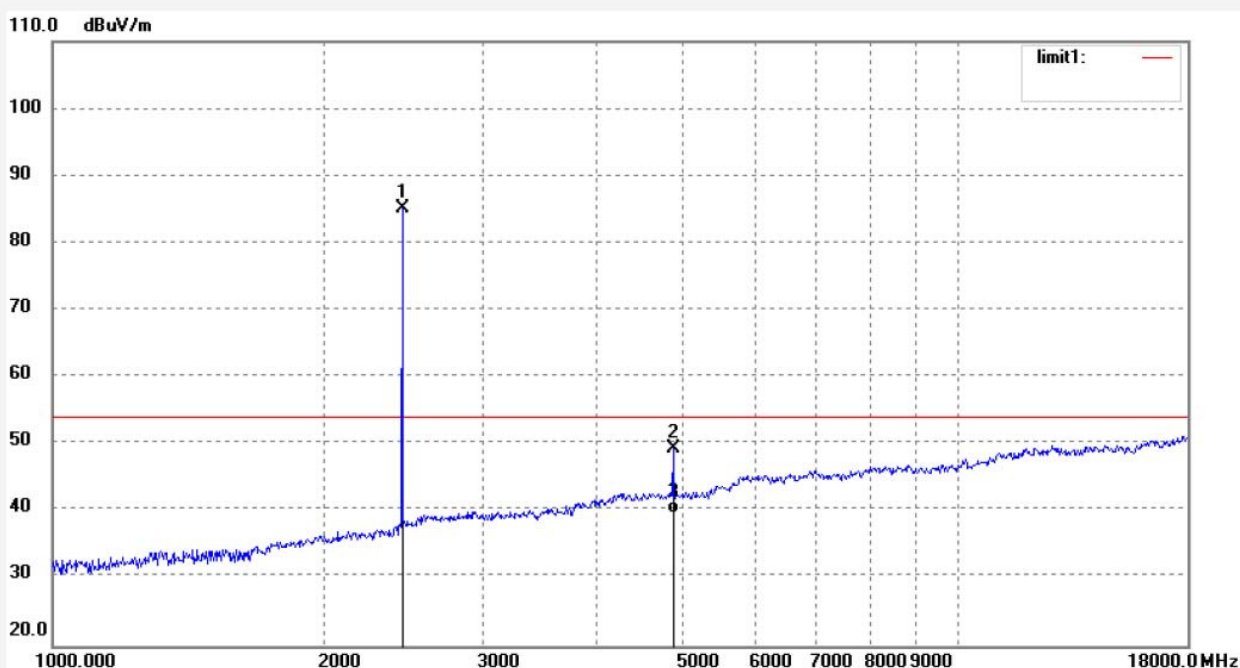
Date: 17/02/10/

Time: 12/23/52

Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162362



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2437.107	90.82	-5.61	85.21			peak			
2	4874.257	45.37	4.06	49.43	74.00	-24.57	peak			
3	4874.257	35.66	4.06	39.72	54.00	-14.28	AVG			