

FCC PART 15.247

TEST REPORT

For

SZ DJI TECHNOLOGY CO., LTD

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Nanshan, Shenzhen, Guangdong, China

FCC ID: SS3-GL300N1801

Report Type: Original Report	Product Name: C1
Report Number: RDG180101012-00A	
Report Date: 2018-02-08	
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Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp.(Dongguan).

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

EUT Name:	C1
Equipment Type:	Remote Controller
EUT Model:	GL300N
FCC ID:	SS3-GL300N1801
Rated Input Voltage:	DC7.6V from battery
External Dimension:	16.7 cm(L)*20.0 cm(W)*20.0 cm(H)
Serial Number:	180101012
EUT Received Date:	2018.01.01

Objective

This report is prepared on behalf of **SZ DJI TECHNOLOGY CO., LTD** in accordance with Part 2, Subpart J, Part 15, Subparts A and C of the Federal Communications Commission's rules.

The tests were performed in order to determine the compliance of the EUT with FCC Rules Part 15-Subpart C, section 15.203, 15.205, 15.209 and 15.247 rules.

Related Submittal(s)/Grant(s)

FCC Part 15E NII and Part 15B JBP submissions with FCC ID: SS3-GL300N1801.
Part of system submissions with FCC ID: SS3-MG1P1801.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices. And KDB 558074 D01 DTS Meas Guidance v04.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Dongguan).

Measurement Uncertainty

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 dB
Unwanted Emissions, radiated	30M~200MHz: 4.58 dB for Horizontal, 4.59 dB for Vertical 200M~1GHz: 4.83 dB for Horizontal, 5.85 dB for Vertical 1G~6GHz: 4.45 dB, 6G~26.5GHz: 5.23 dB
Unwanted Emissions, conducted	±1.5 dB
Temperature	±1 °C
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	3.12 dB (150 kHz to 30 MHz)

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 897218, the FCC Designation No. : CN1220.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062D.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in Engineering Mode, which was provided by the manufacturer.

The device supports 1.4MHz mode, 10MHz mode and 802.11 b/g/n ht20 modes in 2.4GHz band. And the EUT has 2 antennas, for 1.4MHz mode and 10MHz mode, the system configure 1T1R depending on better performance by the system automatically recognizes. For 802.11b/g/n ht20 modes, the device supports SISO and MIMO modes.

For 1.4MHz mode, total 38 channels are provided:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2403.5	20	2441.5
2	2405.5	...	...
...	...	37	2475.5
19	2439.5	38	2477.5

For 10MHz, total 73 channels are provided:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2405.5	37	2441.5
2	2406.5	...	...
...	...	72	2476.5
36	2440.5	73	2477.5

For 802.11b/g/n ht20 modes, total 11 channels are provided:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437	/	/

EUT Exercise Software

The software “DjiRfCertConsole_V1.3.0.51” was used for testing, which was provided by manufacturer.

For 1.4MHz and 10MHz mode, The maximum power with maximum duty cycle was configured as default setting, Per pretest the conducted output power, 10MHz mode's power in difference power level, all test items performed at Low, Middle and High Channel, radiation bandedge test and output power were tested with additional channels according to the pretest output power test results.

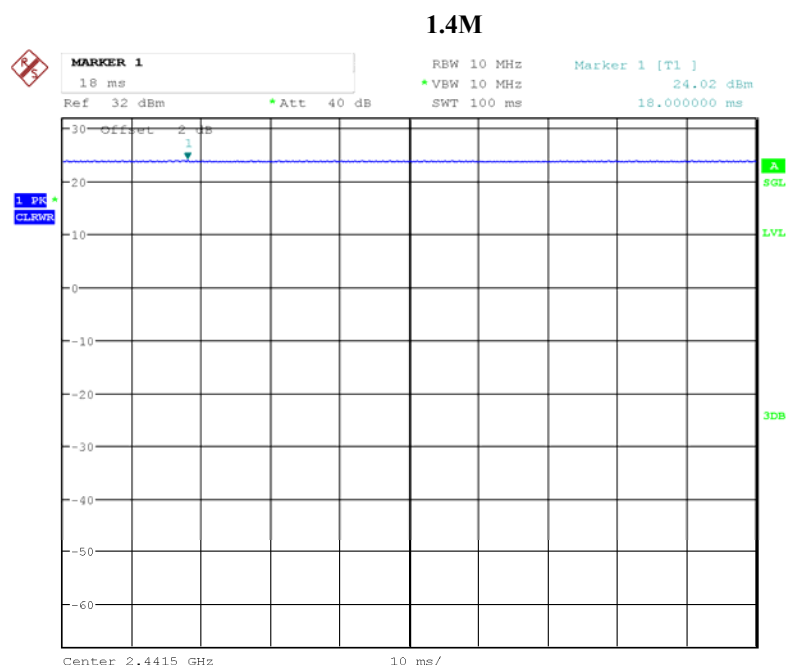
For 802.11b/g/n ht20 mode, the worst-case data rates are determined to be as follows for each mode based upon investigations by measuring the average power and PSD across all data rates bandwidths, and modulations. The power setting configured as below table, which was provided by manufacturer:

Test Mode	Test Software Version	RF Certification.exe		
802.11b	Test Frequency	2412MHz~2462MHz		
	Data Rate	1Mbps		
	Power Level Setting Chain0&1	11		
802.11g	Test Frequency	2412MHz	2417MHz~2457MHz	2462MHz
	Data Rate	6Mbps	6Mbps	6Mbps
	Power Level Setting 0&1	7	12	7
802.11n ht20	Test Frequency	2412MHz	2417MHz~2457MHz	2462MHz
	Data Rate	MCS0	MCS0	MCS0
	Power Level Setting 0&1	7	12	7

All test items performed at Low, Middle and High Channel, radiation bandedge test and output power were tested with additional channels according to the pretest output power test results. pretest SISO and MIMO mode, the MIMO mode was the worst and reported.

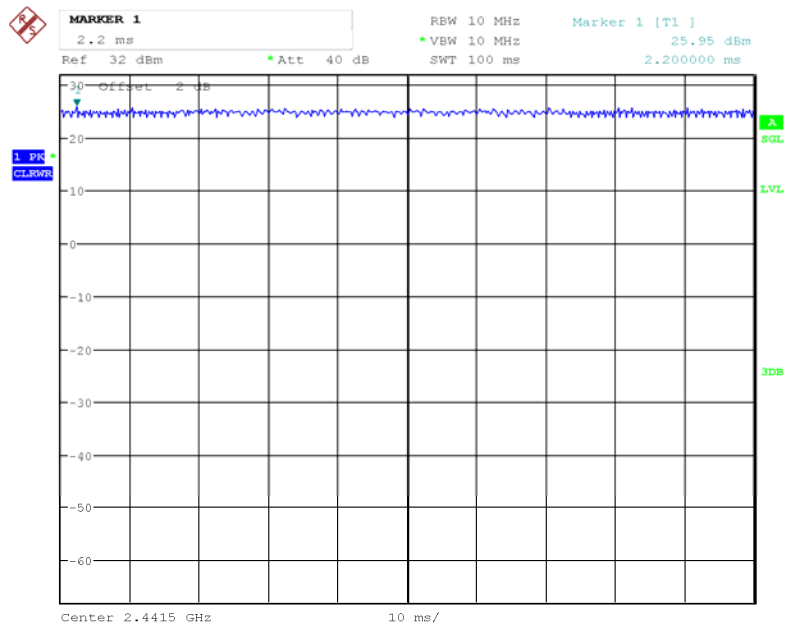
The maximum duty cycle as following table:

Test mode	T _{on} (ms)	T _{on+off} (ms)	Duty Cycle (%)
1.4MHz	100	100	100
10MHz	100	100	100
802.11b	100	100	100
802.11g	2.083	2.147	97.1
802.11n ht20	1.923	1.987	96.8



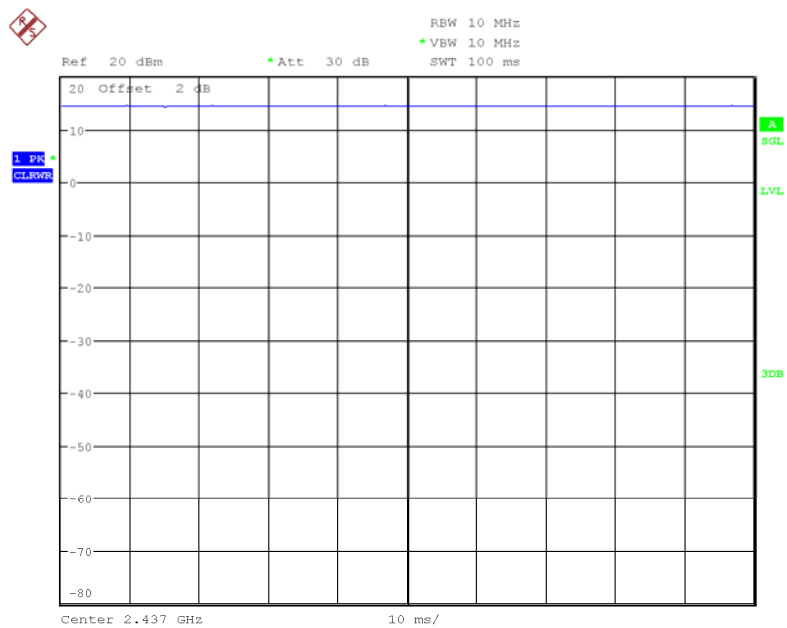
Date: 5.FEB.2018 18:22:35

10M



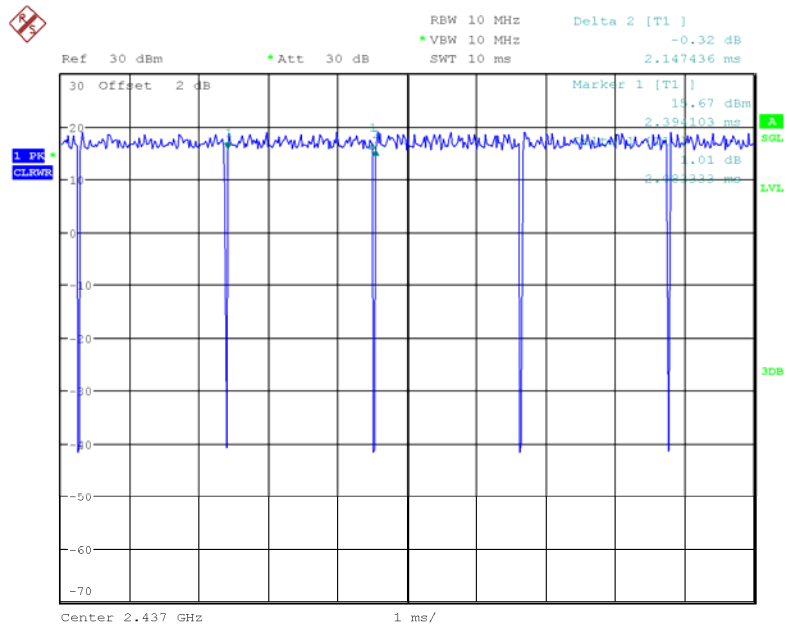
Date: 5.FEB.2018 18:22:57

802.11b



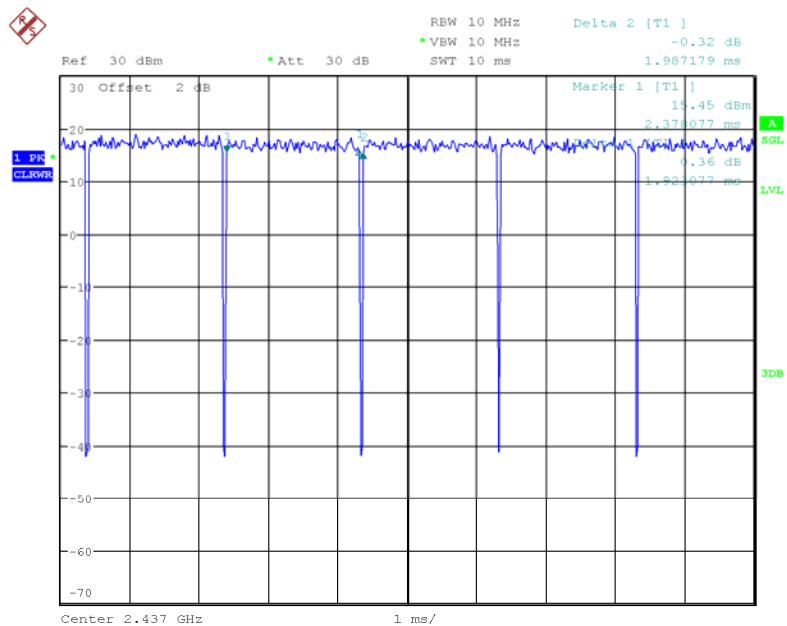
Date: 5.FEB.2018 21:50:46

802.11g



Date: 5.FEB.2018 21:53:18

802.11n ht20



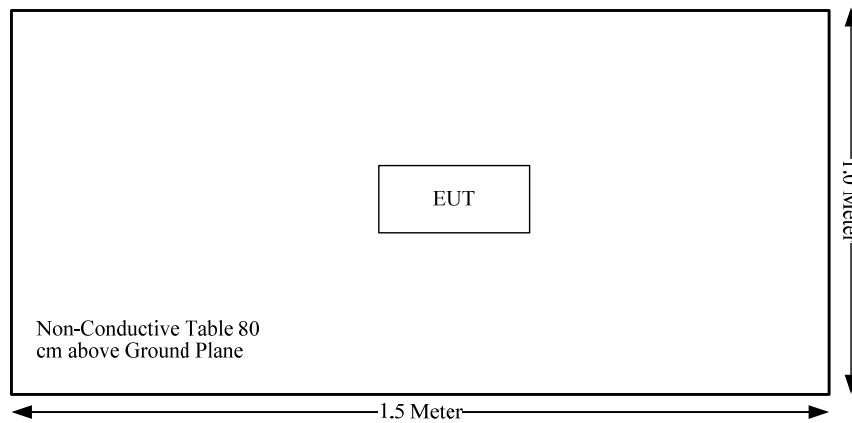
Date: 5.FEB.2018 21:52:36

Equipment Modifications

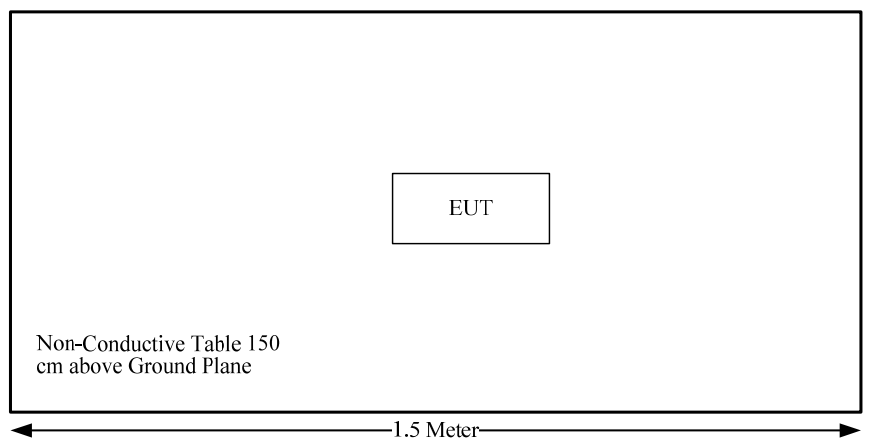
No modification was made to the EUT.

Block Diagram of Test Setup

Below 1G:



Above 1G:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.247 (i) & §1.1310 & §2.1093	RF Exposure	Compliance
§15.203	Antenna Requirement	Compliance
§15.207 (a)	AC Line Conducted Emissions	Not Acceptable
§15.205, §15.209, §15.247(d)	Spurious Emissions	Compliance
§15.247 (a)(2)	6 dB Bandwidth	Compliance
§15.247(b)(3)	Maximum Conducted Output Power	Compliance
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliance
§15.247(e)	Power Spectral Density	Compliance

Note:

Not Acceptable: the device was powered by battery.

FCC §15.247 (i) & §1.1310 & §2.1093- RF EXPOSURE

Applicable Standard

According to §15.247(i), §1.1310 and §2.1093.

Test Result

Compliant, please refer to the SAR report: RDG180101012-20.

FCC §15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.
- c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

Antenna Connector Construction

The EUT has 2 un-detachable external antennas arrangement for 1.4MHz/10MHz mode, the antenna gain are 3.69dBi@ 2.4GHz band and 4.34dBi@5.8GHz, and 2 internal antennas for 802.11b/g/n ht20 mode, the antenna gain are 4.62dBi @ 2.4GHz band and 5.96 dBi @5.8GHz band, that fulfill the requirement of the item. Please refer to the EUT photos.

Result: Compliance.

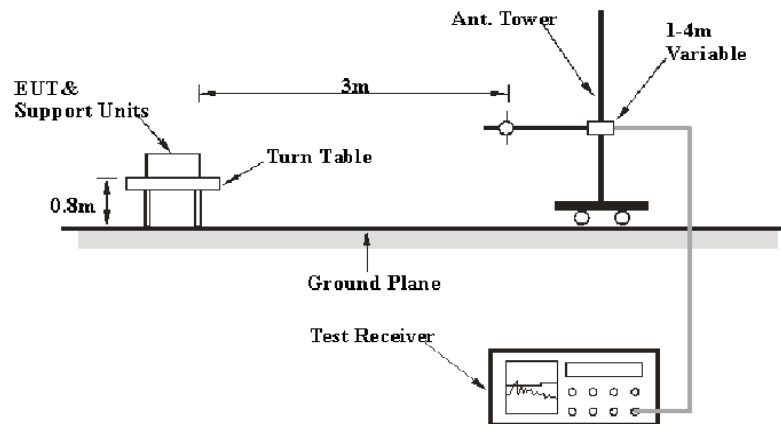
FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS

Applicable Standard

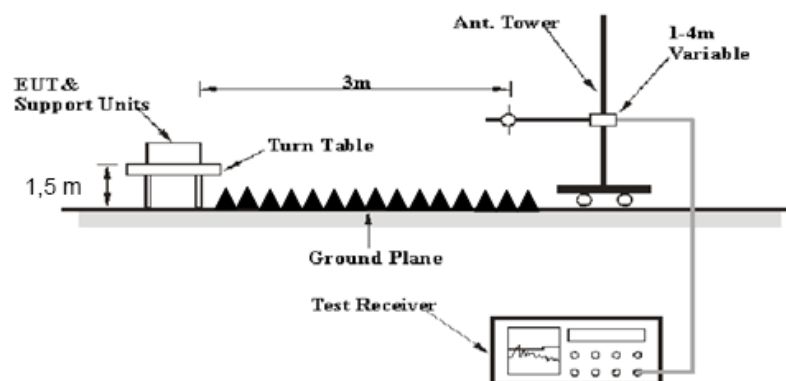
FCC §15.247 (d); §15.209; §15.205;

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests were performed in the 3 meters distance, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247 limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

30MHz-1000MHz:

Measurement	RBW	Video B/W	IF B/W
QP	120 kHz	300 kHz	120kHz

1GHz- 25GHz:

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
AV	>98%	1MHz	10 Hz
	<98%	1MHz	1/T

Note: T is minimum transmission duration

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1 GHz, peak and Average detection modes for frequencies above 1 GHz.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2017-12-11	2018-12-11
Sunol Sciences	Antenna	JB3	A060611-1	2017-11-10	2020-11-10
HP	Amplifier	8447D	2727A05902	2017-09-05	2018-09-05
N/A	Coaxial Cable	C-2.4J2.4J-50	C-0700-01	2017-06-27	2018-06-27
N/A	Coaxial Cable	C-NJNJ-50	C-0400-01	2017-09-05	2018-09-05
N/A	Coaxial Cable	C-NJNJ-50	C-0075-01	2017-09-05	2018-09-05
N/A	Coaxial Cable	C-NJNJ-50	C-1000-01	2017-09-05	2018-09-05
Agilent	Spectrum Analyzer	E4440A	SG43360054	2018-01-04	2019-01-04
ETS-Lindgren	Horn Antenna	3115	000 527 35	2016-01-05	2019-01-05
MITEQ	Amplifier	AFS42-00101800-25-S-42	2001271	2017-09-05	2018-09-05
Quinstar	Amplifier	QLW-18405536-JO	15964001001	2017-06-27	2018-06-27
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-02 1304	2017-06-16	2020-06-15
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A
Chengdu OuLi	Bandrejector Filter	2400-2483.5	001	2017-09-05	2018-09-05

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data**Environmental Conditions**

Temperature:	19.5~21.3°C
Relative Humidity:	38~40 %
ATM Pressure:	101.6~102.2 kPa

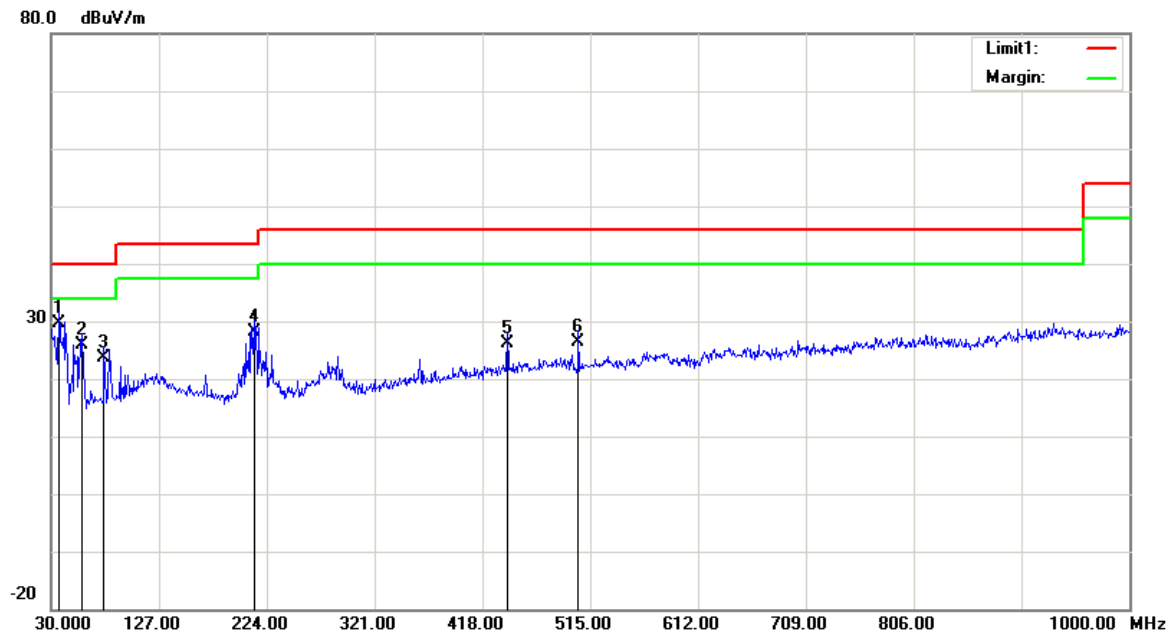
The testing was performed by Sunny Cen & Steven Zuo from 2018-01-16 ~2018-01-18.

Test Result: Compliance, please Refer to the following data

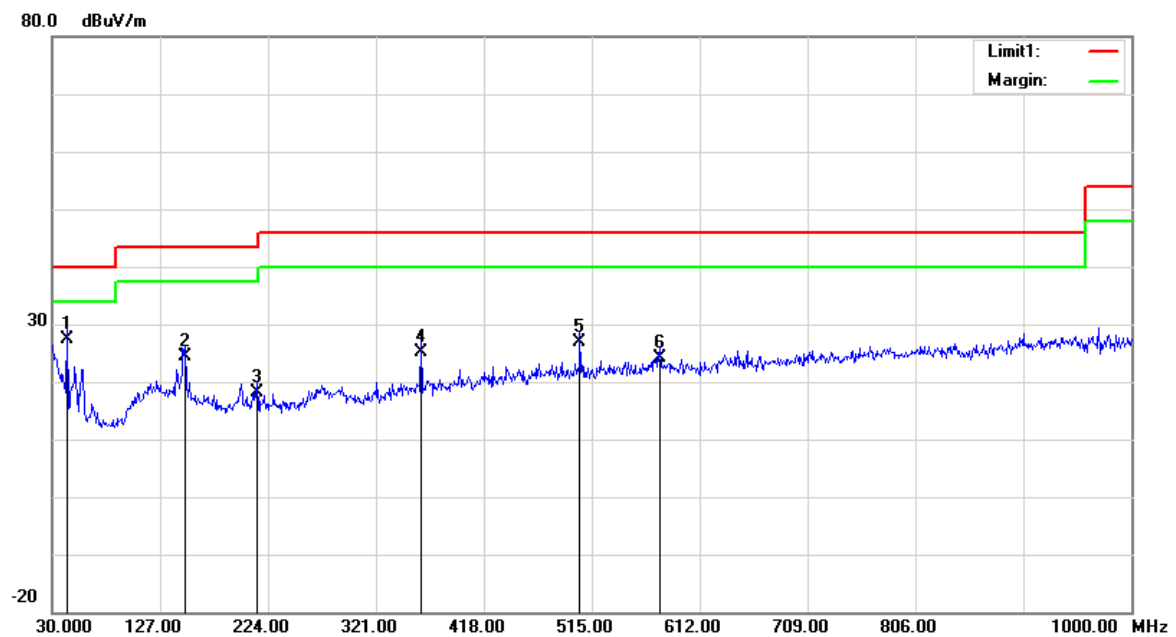
Test Mode: Transmitting

1) 30MHz-1GHz(2.4GHz 1.4MHz middle channel+ 5.8GHz a mode middle channel was the worst)

Horizontal



Frequency (MHz)	Receiver Reading (dBμV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
36.7900	34.07	QP	-4.47	29.60	40.00	10.40
57.1600	39.22	QP	-13.32	25.90	40.00	14.10
77.5300	35.67	QP	-12.07	23.60	40.00	16.40
212.3600	37.37	QP	-9.17	28.20	43.50	15.30
440.3100	30.40	QP	-4.30	26.10	46.00	19.90
504.3300	30.34	QP	-3.94	26.40	46.00	19.60

Vertical

Frequency (MHz)	Receiver Reading (dB μ V)	Detector	Correction Factor (dB/m)	Cord. Amp. (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
43.5800	36.88	QP	-9.48	27.40	40.00	12.60
149.3100	32.24	QP	-7.94	24.30	43.50	19.20
214.3000	27.25	QP	-9.05	18.20	43.50	25.30
361.7400	30.40	QP	-5.30	25.10	46.00	20.90
504.3300	30.74	QP	-3.94	26.80	46.00	19.20
576.1100	26.62	QP	-2.52	24.10	46.00	21.90

2) 1-25GHz**1.4MHz Mode, Chain 0:**

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
Low Channel: 2403.5 MHz									
2403.50	80.29	PK	H	28.11	1.80	0.00	110.20	N/A	N/A
2403.50	70.63	AV	H	28.11	1.80	0.00	100.54	N/A	N/A
2403.50	92.13	PK	V	28.11	1.80	0.00	122.04	N/A	N/A
2403.50	82.72	AV	V	28.11	1.80	0.00	112.63	N/A	N/A
2390.00	24.98	PK	V	28.08	1.80	0.00	54.86	74.00	19.14
2390.00	13.27	AV	V	28.08	1.80	0.00	43.15	54.00	10.85
4807.00	48.35	PK	V	32.91	3.17	37.20	47.23	74.00	26.77
4807.00	35.66	AV	V	32.91	3.17	37.20	34.54	54.00	19.46
7210.50	47.73	PK	V	35.75	4.81	37.24	51.05	74.00	22.95
7210.50	34.49	AV	V	35.75	4.81	37.24	37.81	54.00	16.19
Middle Channel: 2441.5 MHz									
2441.50	80.83	PK	H	28.18	1.82	0.00	110.83	N/A	N/A
2441.50	70.56	AV	H	28.18	1.82	0.00	100.56	N/A	N/A
2441.50	92.59	PK	V	28.18	1.82	0.00	122.59	N/A	N/A
2441.50	82.76	AV	V	28.18	1.82	0.00	112.76	N/A	N/A
4883.00	48.27	PK	V	33.07	3.28	37.21	47.41	74.00	26.59
4883.00	35.62	AV	V	33.07	3.28	37.21	34.76	54.00	19.24
7324.50	47.48	PK	V	36.04	4.62	37.38	50.76	74.00	23.24
7324.50	34.74	AV	V	36.04	4.62	37.38	38.02	54.00	15.98
High Channel: 2477.5 MHz									
2477.50	80.93	PK	H	28.26	1.84	0.00	111.03	N/A	N/A
2477.50	70.87	AV	H	28.26	1.84	0.00	100.97	N/A	N/A
2477.50	91.54	PK	V	28.26	1.84	0.00	121.64	N/A	N/A
2477.50	81.63	AV	V	28.26	1.84	0.00	111.73	N/A	N/A
2483.50	26.78	PK	V	28.27	1.84	0.00	56.89	74.00	17.11
2483.50	13.36	AV	V	28.27	1.84	0.00	43.47	54.00	10.53
4955.00	48.52	PK	V	33.21	3.23	37.24	47.72	74.00	26.28
4955.00	35.75	AV	V	33.21	3.23	37.24	34.95	54.00	19.05
7432.50	47.75	PK	V	36.32	4.43	37.51	50.99	74.00	23.01
7432.50	34.51	AV	V	36.32	4.43	37.51	37.75	54.00	16.25

Chain 1:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
Low Channel: 2403.5 MHz									
2403.50	84.83	PK	H	28.11	1.80	0.00	114.74	N/A	N/A
2403.50	74.52	AV	H	28.11	1.80	0.00	104.43	N/A	N/A
2403.50	90.58	PK	V	28.11	1.80	0.00	120.49	N/A	N/A
2403.50	80.46	AV	V	28.11	1.80	0.00	110.37	N/A	N/A
2390.00	26.73	PK	V	28.08	1.80	0.00	56.61	74.00	17.39
2390.00	13.56	AV	V	28.08	1.80	0.00	43.44	54.00	10.56
4807.00	48.36	PK	V	32.91	3.17	37.20	47.24	74.00	26.76
4807.00	35.68	AV	V	32.91	3.17	37.20	34.56	54.00	19.44
7210.50	47.58	PK	V	35.75	4.81	37.24	50.90	74.00	23.10
7210.50	34.79	AV	V	35.75	4.81	37.24	38.11	54.00	15.89
Middle Channel: 2441.5 MHz									
2441.50	81.83	PK	H	28.18	1.82	0.00	111.83	N/A	N/A
2441.50	71.77	AV	H	28.18	1.82	0.00	101.77	N/A	N/A
2441.50	90.53	PK	V	28.18	1.82	0.00	120.53	N/A	N/A
2441.50	80.46	AV	V	28.18	1.82	0.00	110.46	N/A	N/A
4883.00	48.35	PK	V	33.07	3.28	37.21	47.49	74.00	26.51
4883.00	35.62	AV	V	33.07	3.28	37.21	34.76	54.00	19.24
7324.50	47.55	PK	V	36.04	4.62	37.38	50.83	74.00	23.17
7324.50	34.65	AV	V	36.04	4.62	37.38	37.93	54.00	16.07
High Channel: 2477.5 MHz									
2477.50	80.75	PK	H	28.26	1.84	0.00	110.85	N/A	N/A
2477.50	70.66	AV	H	28.26	1.84	0.00	100.76	N/A	N/A
2477.50	89.39	PK	V	28.26	1.84	0.00	119.49	N/A	N/A
2477.50	79.64	AV	V	28.26	1.84	0.00	109.74	N/A	N/A
2483.50	26.55	PK	V	28.27	1.84	0.00	56.66	74.00	17.34
2483.50	13.37	AV	V	28.27	1.84	0.00	43.48	54.00	10.52
4955.00	48.26	PK	V	33.21	3.23	37.24	47.46	74.00	26.54
4955.00	35.74	AV	V	33.21	3.23	37.24	34.94	54.00	19.06
7432.50	47.69	PK	V	36.32	4.43	37.51	50.93	74.00	23.07
7432.50	34.79	AV	V	36.32	4.43	37.51	38.03	54.00	15.97

10MHz Mode Chain 0:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
2405.5 MHz									
2405.50	71.84	PK	H	28.11	1.80	0.00	101.75	N/A	N/A
2405.50	61.42	AV	H	28.11	1.80	0.00	91.33	N/A	N/A
2405.50	76.92	PK	V	28.11	1.80	0.00	106.83	N/A	N/A
2405.50	66.85	AV	V	28.11	1.80	0.00	96.76	N/A	N/A
2390.00	27.57	PK	V	28.08	1.80	0.00	57.45	74.00	16.55
2390.00	14.54	AV	V	28.08	1.80	0.00	44.42	54.00	9.58
4811.00	48.57	PK	V	32.92	3.18	37.20	47.47	74.00	26.53
4811.00	38.44	AV	V	32.92	3.18	37.20	37.34	54.00	16.66
7216.50	46.45	PK	V	35.76	4.80	37.24	49.77	74.00	24.23
7216.50	35.67	AV	V	35.76	4.80	37.24	38.99	54.00	15.01
2406.5 MHz									
2406.50	77.56	PK	V	28.11	1.80	0.00	107.47	N/A	N/A
2406.50	67.48	AV	V	28.11	1.80	0.00	97.39	N/A	N/A
2390.00	27.63	PK	V	28.08	1.80	0.00	57.51	74.00	16.49
2390.00	14.45	AV	V	28.08	1.80	0.00	44.33	54.00	9.67
2407.5 MHz									
2407.50	78.96	PK	V	28.12	1.80	0.00	108.88	N/A	N/A
2407.50	68.84	AV	V	28.12	1.80	0.00	98.76	N/A	N/A
2390.00	27.83	PK	V	28.08	1.80	0.00	57.71	74.00	16.29
2390.00	14.57	AV	V	28.08	1.80	0.00	44.45	54.00	9.55
2408.5 MHz									
2408.50	79.72	PK	V	28.12	1.80	0.00	109.64	N/A	N/A
2408.50	69.56	AV	V	28.12	1.80	0.00	99.48	N/A	N/A
2390.00	26.84	PK	V	28.08	1.80	0.00	56.72	74.00	17.28
2390.00	14.23	AV	V	28.08	1.80	0.00	44.11	54.00	9.89
2409.5 MHz									
2409.50	79.95	PK	V	28.12	1.80	0.00	109.87	N/A	N/A
2409.50	69.87	AV	V	28.12	1.80	0.00	99.79	N/A	N/A
2390.00	27.42	PK	V	28.08	1.80	0.00	57.30	74.00	16.70
2390.00	14.64	AV	V	28.08	1.80	0.00	44.52	54.00	9.48
2410.5 MHz									
2410.50	80.32	PK	V	28.12	1.81	0.00	110.25	N/A	N/A
2410.50	70.24	AV	V	28.12	1.81	0.00	100.17	N/A	N/A
2390.00	27.79	PK	V	28.08	1.80	0.00	57.67	74.00	16.33
2390.00	15.01	AV	V	28.08	1.80	0.00	44.89	54.00	9.11
2411.5 MHz									
2411.50	80.59	PK	V	28.12	1.81	0.00	110.52	N/A	N/A
2411.50	70.61	AV	V	28.12	1.81	0.00	100.54	N/A	N/A
2390.00	27.16	PK	V	28.08	1.80	0.00	57.04	74.00	16.96
2390.00	14.38	AV	V	28.08	1.80	0.00	44.26	54.00	9.74
2412.5 MHz									
2412.50	80.76	PK	V	28.13	1.81	0.00	110.70	N/A	N/A
2412.50	70.98	AV	V	28.13	1.81	0.00	100.92	N/A	N/A
2390.00	27.53	PK	V	28.08	1.80	0.00	57.41	74.00	16.59
2390.00	14.75	AV	V	28.08	1.80	0.00	44.63	54.00	9.37

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
2413.5 MHz									
2413.50	81.84	PK	V	28.13	1.81	0.00	111.78	N/A	N/A
2413.50	71.72	AV	V	28.13	1.81	0.00	101.66	N/A	N/A
2390.00	28.27	PK	V	28.08	1.80	0.00	58.15	74.00	15.85
2390.00	14.49	AV	V	28.08	1.80	0.00	44.37	54.00	9.63
2414.5 MHz									
2414.50	82.21	PK	V	28.13	1.81	0.00	112.15	N/A	N/A
2414.50	72.09	AV	V	28.13	1.81	0.00	102.03	N/A	N/A
2390.00	28.64	PK	V	28.08	1.80	0.00	58.52	74.00	15.48
2390.00	13.86	AV	V	28.08	1.80	0.00	43.74	54.00	10.26
2415.5 MHz									
2415.50	82.36	PK	V	28.13	1.81	0.00	112.30	N/A	N/A
2415.50	72.09	AV	V	28.13	1.81	0.00	102.03	N/A	N/A
2390.00	27.64	PK	V	28.08	1.80	0.00	57.52	74.00	16.48
2390.00	13.56	AV	V	28.08	1.80	0.00	43.44	54.00	10.56
2416.5 MHz									
2416.50	82.65	PK	V	28.13	1.81	0.00	112.59	N/A	N/A
2416.50	72.42	AV	V	28.13	1.81	0.00	102.36	N/A	N/A
2390.00	27.41	PK	V	28.08	1.80	0.00	57.29	74.00	16.71
2390.00	13.57	AV	V	28.08	1.80	0.00	43.45	54.00	10.55
2417.5 MHz									
2417.50	83.73	PK	V	28.14	1.81	0.00	113.68	N/A	N/A
2417.50	72.46	AV	V	28.14	1.81	0.00	102.41	N/A	N/A
2390.00	28.01	PK	V	28.08	1.80	0.00	57.89	74.00	16.11
2390.00	13.93	AV	V	28.08	1.80	0.00	43.81	54.00	10.19
2441.5 MHz									
2441.50	80.49	PK	H	28.18	1.82	0.00	110.49	N/A	N/A
2441.50	70.53	AV	H	28.18	1.82	0.00	100.53	N/A	N/A
2441.50	84.95	PK	V	28.18	1.82	0.00	114.95	N/A	N/A
2441.50	74.66	AV	V	28.18	1.82	0.00	104.66	N/A	N/A
4883.00	47.58	PK	V	33.07	3.28	37.21	46.72	74.00	27.28
4883.00	36.52	AV	V	33.07	3.28	37.21	35.66	54.00	18.34
7324.50	46.51	PK	V	36.04	4.62	37.38	49.79	74.00	24.21
7324.50	36.23	AV	V	36.04	4.62	37.38	39.51	54.00	14.49
2457.5 MHz									
2457.50	83.38	PK	V	28.22	1.83	0.00	113.43	N/A	N/A
2457.50	70.24	AV	V	28.22	1.83	0.00	100.29	N/A	N/A
2483.50	27.36	PK	V	28.27	1.84	0.00	57.47	74.00	16.53
2483.50	14.24	AV	V	28.27	1.84	0.00	44.35	54.00	9.65
2458.5 MHz									
2458.50	81.04	PK	V	28.22	1.83	0.00	111.09	N/A	N/A
2458.50	70.68	AV	V	28.22	1.83	0.00	100.73	N/A	N/A
2483.50	28.27	PK	V	28.27	1.84	0.00	58.38	74.00	15.62
2483.50	14.74	AV	V	28.27	1.84	0.00	44.85	54.00	9.15
2459.5 MHz									
2459.50	80.57	PK	V	28.22	1.83	0.00	110.62	N/A	N/A
2459.50	69.64	AV	V	28.22	1.83	0.00	99.69	N/A	N/A
2483.50	27.88	PK	V	28.27	1.84	0.00	57.99	74.00	16.01
2483.50	14.65	AV	V	28.27	1.84	0.00	44.76	54.00	9.24

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
2460.5 MHz									
2460.50	79.81	PK	V	28.22	1.83	0.00	109.86	N/A	N/A
2460.50	69.14	AV	V	28.22	1.83	0.00	99.19	N/A	N/A
2483.50	27.80	PK	V	28.27	1.84	0.00	57.91	74.00	16.09
2483.50	14.59	AV	V	28.27	1.84	0.00	44.70	54.00	9.30
2461.5 MHz									
2461.50	78.85	PK	V	28.22	1.83	0.00	108.90	N/A	N/A
2461.50	68.32	AV	V	28.22	1.83	0.00	98.37	N/A	N/A
2483.50	27.90	PK	V	28.27	1.84	0.00	58.01	74.00	15.99
2483.50	14.97	AV	V	28.27	1.84	0.00	45.08	54.00	8.92
2462.5 MHz									
2462.50	78.21	PK	V	28.23	1.83	0.00	108.27	N/A	N/A
2462.50	67.46	AV	V	28.23	1.83	0.00	97.52	N/A	N/A
2483.50	27.40	PK	V	28.27	1.84	0.00	57.51	74.00	16.49
2483.50	14.90	AV	V	28.27	1.84	0.00	45.01	54.00	8.99
2463.5 MHz									
2463.50	77.53	PK	V	28.23	1.83	0.00	107.59	N/A	N/A
2463.50	66.24	AV	V	28.23	1.83	0.00	96.30	N/A	N/A
2483.50	27.75	PK	V	28.27	1.84	0.00	57.86	74.00	16.14
2483.50	14.32	AV	V	28.27	1.84	0.00	44.43	54.00	9.57
2464.5 MHz									
2464.50	76.87	PK	V	28.23	1.83	0.00	106.93	N/A	N/A
2464.50	65.45	AV	V	28.23	1.83	0.00	95.51	N/A	N/A
2483.50	28.19	PK	V	28.27	1.84	0.00	58.30	74.00	15.70
2483.50	14.83	AV	V	28.27	1.84	0.00	44.94	54.00	9.06
2465.5 MHz									
2465.50	76.24	PK	V	28.23	1.83	0.00	106.30	N/A	N/A
2465.50	65.07	AV	V	28.23	1.83	0.00	95.13	N/A	N/A
2483.50	27.21	PK	V	28.27	1.84	0.00	57.32	74.00	16.68
2483.50	14.30	AV	V	28.27	1.84	0.00	44.41	54.00	9.59
2466.5 MHz									
2466.50	75.66	PK	V	28.23	1.83	0.00	105.72	N/A	N/A
2466.50	64.85	AV	V	28.23	1.83	0.00	94.91	N/A	N/A
2483.50	27.65	PK	V	28.27	1.84	0.00	57.76	74.00	16.24
2483.50	14.47	AV	V	28.27	1.84	0.00	44.58	54.00	9.42
2467.5 MHz									
2467.50	74.82	PK	V	28.24	1.83	0.00	104.89	N/A	N/A
2467.50	63.57	AV	V	28.24	1.83	0.00	93.64	N/A	N/A
2483.50	27.38	PK	V	28.27	1.84	0.00	57.49	74.00	16.51
2483.50	13.79	AV	V	28.27	1.84	0.00	43.90	54.00	10.10
2468.5 MHz									
2468.50	74.33	PK	V	28.24	1.83	0.00	104.40	N/A	N/A
2468.50	62.94	AV	V	28.24	1.83	0.00	93.01	N/A	N/A
2483.50	28.01	PK	V	28.27	1.84	0.00	58.12	74.00	15.88
2483.50	14.72	AV	V	28.27	1.84	0.00	44.83	54.00	9.17
2469.5 MHz									
2469.50	72.64	PK	V	28.24	1.83	0.00	102.71	N/A	N/A
2469.50	61.52	AV	V	28.24	1.83	0.00	91.59	N/A	N/A
2483.50	27.47	PK	V	28.27	1.84	0.00	57.58	74.00	16.42
2483.50	13.65	AV	V	28.27	1.84	0.00	43.76	54.00	10.24

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
2470.5 MHz									
2470.50	71.38	PK	V	28.24	1.84	0.00	101.46	N/A	N/A
2470.50	60.84	AV	V	28.24	1.84	0.00	90.92	N/A	N/A
2483.50	27.31	PK	V	28.27	1.84	0.00	57.42	74.00	16.58
2483.50	13.57	AV	V	28.27	1.84	0.00	43.68	54.00	10.32
2471.5 MHz									
2471.50	70.64	PK	V	28.24	1.84	0.00	100.72	N/A	N/A
2471.50	60.18	AV	V	28.24	1.84	0.00	90.26	N/A	N/A
2483.50	27.18	PK	V	28.27	1.84	0.00	57.29	74.00	16.71
2483.50	14.76	AV	V	28.27	1.84	0.00	44.87	54.00	9.13
2472.5 MHz									
2472.50	69.48	PK	V	28.25	1.84	0.00	99.57	N/A	N/A
2472.50	69.48	AV	V	28.25	1.84	0.00	99.57	N/A	N/A
2483.50	27.80	PK	V	28.27	1.84	0.00	57.91	74.00	16.09
2483.50	14.68	AV	V	28.27	1.84	0.00	44.79	54.00	9.21
2473.5 MHz									
2473.50	68.87	PK	V	28.25	1.84	0.00	98.96	N/A	N/A
2473.50	58.21	AV	V	28.25	1.84	0.00	88.30	N/A	N/A
2483.50	27.97	PK	V	28.27	1.84	0.00	58.08	74.00	15.92
2483.50	14.51	AV	V	28.27	1.84	0.00	44.62	54.00	9.38
2474.5 MHz									
2474.50	67.73	PK	V	28.25	1.84	0.00	97.82	N/A	N/A
2474.50	57.75	AV	V	28.25	1.84	0.00	87.84	N/A	N/A
2483.50	27.82	PK	V	28.27	1.84	0.00	57.93	74.00	16.07
2483.50	14.04	AV	V	28.27	1.84	0.00	44.15	54.00	9.85
2475.5 MHz									
2475.50	66.81	PK	V	28.25	1.84	0.00	96.90	N/A	N/A
2475.50	56.24	AV	V	28.25	1.84	0.00	86.33	N/A	N/A
2483.50	27.02	PK	V	28.27	1.84	0.00	57.13	74.00	16.87
2483.50	14.55	AV	V	28.27	1.84	0.00	44.66	54.00	9.34
2476.5 MHz									
2476.50	65.76	PK	V	28.25	1.84	0.00	95.85	N/A	N/A
2476.50	55.34	AV	V	28.25	1.84	0.00	85.43	N/A	N/A
2483.50	27.45	PK	V	28.27	1.84	0.00	57.56	74.00	16.44
2483.50	14.31	AV	V	28.27	1.84	0.00	44.42	54.00	9.58
2477.5 MHz									
2477.50	45.86	PK	H	28.26	1.84	0.00	75.96	N/A	N/A
2477.50	35.67	AV	H	28.26	1.84	0.00	65.77	N/A	N/A
2477.50	49.13	PK	V	28.26	1.84	0.00	79.23	N/A	N/A
2477.50	39.42	AV	V	28.26	1.84	0.00	69.52	N/A	N/A
2483.50	28.34	PK	V	28.27	1.84	0.00	58.45	74.00	15.55
2483.50	14.69	AV	V	28.27	1.84	0.00	44.80	54.00	9.20
4955.00	46.35	PK	V	33.21	3.23	37.24	45.55	74.00	28.45
4955.00	36.12	AV	V	33.21	3.23	37.24	35.32	54.00	18.68
7432.50	46.21	PK	V	36.32	4.43	37.51	49.45	74.00	24.55
7432.50	35.87	AV	V	36.32	4.43	37.51	39.11	54.00	14.89

Chain 1:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
2405.5 MHz									
2405.50	73.05	PK	H	28.11	1.80	0.00	102.96	N/A	N/A
2405.50	62.45	AV	H	28.11	1.80	0.00	92.36	N/A	N/A
2405.50	76.90	PK	V	28.11	1.80	0.00	106.81	N/A	N/A
2405.50	65.63	AV	V	28.11	1.80	0.00	95.54	N/A	N/A
2390.00	25.15	PK	V	28.08	1.80	0.00	55.03	74.00	18.97
2390.00	14.26	AV	V	28.08	1.80	0.00	44.14	54.00	9.86
4811.00	48.75	PK	V	32.92	3.18	37.20	47.65	74.00	26.35
4811.00	38.62	AV	V	32.92	3.18	37.20	37.52	54.00	16.48
7216.50	46.72	PK	V	35.76	4.80	37.24	50.04	74.00	23.96
7216.50	36.22	AV	V	35.76	4.80	37.24	39.54	54.00	14.46
2406.5 MHz									
2406.50	77.13	PK	V	28.11	1.80	0.00	107.04	N/A	N/A
2406.50	67.11	AV	V	28.11	1.80	0.00	97.02	N/A	N/A
2390.00	25.74	PK	V	28.08	1.80	0.00	55.62	74.00	18.38
2390.00	13.44	AV	V	28.08	1.80	0.00	43.32	54.00	10.68
2407.5 MHz									
2407.50	77.85	PK	V	28.12	1.80	0.00	107.77	N/A	N/A
2407.50	67.56	AV	V	28.12	1.80	0.00	97.48	N/A	N/A
2390.00	24.98	PK	V	28.08	1.80	0.00	54.86	74.00	19.14
2390.00	13.97	AV	V	28.08	1.80	0.00	43.85	54.00	10.15
2408.5 MHz									
2408.50	78.65	PK	V	28.12	1.80	0.00	108.57	N/A	N/A
2408.50	68.34	AV	V	28.12	1.80	0.00	98.26	N/A	N/A
2390.00	25.02	PK	V	28.08	1.80	0.00	54.90	74.00	19.10
2390.00	14.63	AV	V	28.08	1.80	0.00	44.51	54.00	9.49
2409.5 MHz									
2409.50	79.36	PK	V	28.12	1.80	0.00	109.28	N/A	N/A
2409.50	69.64	AV	V	28.12	1.80	0.00	99.56	N/A	N/A
2390.00	25.51	PK	V	28.08	1.80	0.00	55.39	74.00	18.61
2390.00	13.24	AV	V	28.08	1.80	0.00	43.12	54.00	10.88
2410.5 MHz									
2410.50	81.21	PK	V	28.12	1.81	0.00	111.14	N/A	N/A
2410.50	70.34	AV	V	28.12	1.81	0.00	100.27	N/A	N/A
2390.00	25.78	PK	V	28.08	1.80	0.00	55.66	74.00	18.34
2390.00	14.80	AV	V	28.08	1.80	0.00	44.68	54.00	9.32
2411.5 MHz									
2411.50	82.10	PK	V	28.12	1.81	0.00	112.03	N/A	N/A
2411.50	72.15	AV	V	28.12	1.81	0.00	102.08	N/A	N/A
2390.00	25.67	PK	V	28.08	1.80	0.00	55.55	74.00	18.45
2390.00	13.96	AV	V	28.08	1.80	0.00	43.84	54.00	10.16
2412.5 MHz									
2412.50	82.84	PK	V	28.13	1.81	0.00	112.78	N/A	N/A
2412.50	72.69	AV	V	28.13	1.81	0.00	102.63	N/A	N/A
2390.00	25.11	PK	V	28.08	1.80	0.00	54.99	74.00	19.01
2390.00	13.91	AV	V	28.08	1.80	0.00	43.79	54.00	10.21

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
2413.5 MHz									
2413.50	83.11	PK	V	28.13	1.81	0.00	113.05	N/A	N/A
2413.50	73.21	AV	V	28.13	1.81	0.00	103.15	N/A	N/A
2390.00	25.07	PK	V	28.08	1.80	0.00	54.95	74.00	19.05
2390.00	14.22	AV	V	28.08	1.80	0.00	44.10	54.00	9.90
2414.5 MHz									
2414.50	83.67	PK	V	28.13	1.81	0.00	113.61	N/A	N/A
2414.50	73.85	AV	V	28.13	1.81	0.00	103.79	N/A	N/A
2390.00	25.22	PK	V	28.08	1.80	0.00	55.10	74.00	18.90
2390.00	13.54	AV	V	28.08	1.80	0.00	43.42	54.00	10.58
2415.5 MHz									
2415.50	83.94	PK	V	28.13	1.81	0.00	113.88	N/A	N/A
2415.50	74.15	AV	V	28.13	1.81	0.00	104.09	N/A	N/A
2390.00	25.67	PK	V	28.08	1.80	0.00	55.55	74.00	18.45
2390.00	14.53	AV	V	28.08	1.80	0.00	44.41	54.00	9.59
2416.5 MHz									
2416.50	84.50	PK	V	28.13	1.81	0.00	114.44	N/A	N/A
2416.50	74.25	AV	V	28.13	1.81	0.00	104.19	N/A	N/A
2390.00	25.54	PK	V	28.08	1.80	0.00	55.42	74.00	18.58
2390.00	14.05	AV	V	28.08	1.80	0.00	43.93	54.00	10.07
2417.5 MHz									
2417.50	84.72	PK	V	28.14	1.81	0.00	114.67	N/A	N/A
2417.50	74.52	AV	V	28.14	1.81	0.00	104.47	N/A	N/A
2390.00	24.85	PK	V	28.08	1.80	0.00	54.73	74.00	19.27
2390.00	14.09	AV	V	28.08	1.80	0.00	43.97	54.00	10.03
2441.5 MHz									
2441.50	79.21	PK	H	28.18	1.82	0.00	109.21	N/A	N/A
2441.50	69.54	AV	H	28.18	1.82	0.00	99.54	N/A	N/A
2441.50	84.48	PK	V	28.18	1.82	0.00	114.48	N/A	N/A
2441.50	74.32	AV	V	28.18	1.82	0.00	104.32	N/A	N/A
4883.00	49.78	PK	V	33.07	3.28	37.21	48.92	74.00	25.08
4883.00	39.64	AV	V	33.07	3.28	37.21	38.78	54.00	15.22
7324.50	47.85	PK	V	36.04	4.62	37.38	51.13	74.00	22.87
7324.50	37.55	AV	V	36.04	4.62	37.38	40.83	54.00	13.17
2457.5 MHz									
2457.50	83.56	PK	V	28.22	1.83	0.00	113.61	N/A	N/A
2457.50	73.25	AV	V	28.22	1.83	0.00	103.30	N/A	N/A
2483.50	25.82	PK	V	28.27	1.84	0.00	55.93	74.00	18.07
2483.50	15.08	AV	V	28.27	1.84	0.00	45.19	54.00	8.81
2458.5 MHz									
2458.50	80.31	PK	V	28.22	1.83	0.00	110.36	N/A	N/A
2458.50	69.69	AV	V	28.22	1.83	0.00	99.74	N/A	N/A
2483.50	24.85	PK	V	28.27	1.84	0.00	54.96	74.00	19.04
2483.50	13.85	AV	V	28.27	1.84	0.00	43.96	54.00	10.04
2459.5 MHz									
2459.50	79.86	PK	V	28.22	1.83	0.00	109.91	N/A	N/A
2459.50	69.35	AV	V	28.22	1.83	0.00	99.40	N/A	N/A
2483.50	25.70	PK	V	28.27	1.84	0.00	55.81	74.00	18.19
2483.50	14.36	AV	V	28.27	1.84	0.00	44.47	54.00	9.53

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
2460.5 MHz									
2460.50	79.24	PK	V	28.22	1.83	0.00	109.29	N/A	N/A
2460.50	68.82	AV	V	28.22	1.83	0.00	98.87	N/A	N/A
2483.50	25.56	PK	V	28.27	1.84	0.00	55.67	74.00	18.33
2483.50	14.03	AV	V	28.27	1.84	0.00	44.14	54.00	9.86
2461.5 MHz									
2461.50	78.01	PK	V	28.22	1.83	0.00	108.06	N/A	N/A
2461.50	68.54	AV	V	28.22	1.83	0.00	98.59	N/A	N/A
2483.50	25.54	PK	V	28.27	1.84	0.00	55.65	74.00	18.35
2483.50	13.69	AV	V	28.27	1.84	0.00	43.80	54.00	10.20
2462.5 MHz									
2462.50	77.58	PK	V	28.23	1.83	0.00	107.64	N/A	N/A
2462.50	67.87	AV	V	28.23	1.83	0.00	97.93	N/A	N/A
2483.50	25.09	PK	V	28.27	1.84	0.00	55.20	74.00	18.80
2483.50	13.23	AV	V	28.27	1.84	0.00	43.34	54.00	10.66
2463.5 MHz									
2463.50	76.89	PK	V	28.23	1.83	0.00	106.95	N/A	N/A
2463.50	67.14	AV	V	28.23	1.83	0.00	97.20	N/A	N/A
2483.50	24.59	PK	V	28.27	1.84	0.00	54.70	74.00	19.30
2483.50	13.62	AV	V	28.27	1.84	0.00	43.73	54.00	10.27
2464.5 MHz									
2464.50	76.54	PK	V	28.23	1.83	0.00	106.60	N/A	N/A
2464.50	66.56	AV	V	28.23	1.83	0.00	96.62	N/A	N/A
2483.50	24.68	PK	V	28.27	1.84	0.00	54.79	74.00	19.21
2483.50	13.95	AV	V	28.27	1.84	0.00	44.06	54.00	9.94
2465.5 MHz									
2465.50	76.01	PK	V	28.23	1.83	0.00	106.07	N/A	N/A
2465.50	66.13	AV	V	28.23	1.83	0.00	96.19	N/A	N/A
2483.50	25.16	PK	V	28.27	1.84	0.00	55.27	74.00	18.73
2483.50	14.60	AV	V	28.27	1.84	0.00	44.71	54.00	9.29
2466.5 MHz									
2466.50	75.75	PK	V	28.23	1.83	0.00	105.81	N/A	N/A
2466.50	65.57	AV	V	28.23	1.83	0.00	95.63	N/A	N/A
2483.50	25.20	PK	V	28.27	1.84	0.00	55.31	74.00	18.69
2483.50	14.18	AV	V	28.27	1.84	0.00	44.29	54.00	9.71
2467.5 MHz									
2467.50	75.32	PK	V	28.24	1.83	0.00	105.39	N/A	N/A
2467.50	64.85	AV	V	28.24	1.83	0.00	94.92	N/A	N/A
2483.50	24.69	PK	V	28.27	1.84	0.00	54.80	74.00	19.20
2483.50	14.23	AV	V	28.27	1.84	0.00	44.34	54.00	9.66
2468.5 MHz									
2468.50	73.53	PK	V	28.24	1.83	0.00	103.60	N/A	N/A
2468.50	63.44	AV	V	28.24	1.83	0.00	93.51	N/A	N/A
2483.50	25.42	PK	V	28.27	1.84	0.00	55.53	74.00	18.47
2483.50	14.58	AV	V	28.27	1.84	0.00	44.69	54.00	9.31
2469.5 MHz									
2469.50	71.82	PK	V	28.24	1.83	0.00	101.89	N/A	N/A
2469.50	61.15	AV	V	28.24	1.83	0.00	91.22	N/A	N/A
2483.50	24.39	PK	V	28.27	1.84	0.00	54.50	74.00	19.50
2483.50	13.26	AV	V	28.27	1.84	0.00	43.37	54.00	10.63

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
2470.5 MHz									
2470.50	68.76	PK	V	28.24	1.84	0.00	98.84	N/A	N/A
2470.50	57.82	AV	V	28.24	1.84	0.00	87.90	N/A	N/A
2483.50	24.49	PK	V	28.27	1.84	0.00	54.60	74.00	19.40
2483.50	14.02	AV	V	28.27	1.84	0.00	44.13	54.00	9.87
2471.5 MHz									
2471.50	66.82	PK	V	28.24	1.84	0.00	96.90	N/A	N/A
2471.50	55.77	AV	V	28.24	1.84	0.00	85.85	N/A	N/A
2483.50	24.84	PK	V	28.27	1.84	0.00	54.95	74.00	19.05
2483.50	14.38	AV	V	28.27	1.84	0.00	44.49	54.00	9.51
2472.5 MHz									
2472.50	66.24	PK	V	28.25	1.84	0.00	96.33	N/A	N/A
2472.50	55.78	AV	V	28.25	1.84	0.00	85.87	N/A	N/A
2483.50	25.64	PK	V	28.27	1.84	0.00	55.75	74.00	18.25
2483.50	13.77	AV	V	28.27	1.84	0.00	43.88	54.00	10.12
2473.5 MHz									
2473.50	65.88	PK	V	28.25	1.84	0.00	95.97	N/A	N/A
2473.50	54.97	AV	V	28.25	1.84	0.00	85.06	N/A	N/A
2483.50	24.88	PK	V	28.27	1.84	0.00	54.99	74.00	19.01
2483.50	14.04	AV	V	28.27	1.84	0.00	44.15	54.00	9.85
2474.5 MHz									
2474.50	64.55	PK	V	28.25	1.84	0.00	94.64	N/A	N/A
2474.50	53.57	AV	V	28.25	1.84	0.00	83.66	N/A	N/A
2483.50	25.36	PK	V	28.27	1.84	0.00	55.47	74.00	18.53
2483.50	14.16	AV	V	28.27	1.84	0.00	44.27	54.00	9.73
2475.5 MHz									
2475.50	63.84	PK	V	28.25	1.84	0.00	93.93	N/A	N/A
2475.50	52.64	AV	V	28.25	1.84	0.00	82.73	N/A	N/A
2483.50	25.93	PK	V	28.27	1.84	0.00	56.04	74.00	17.96
2483.50	13.94	AV	V	28.27	1.84	0.00	44.05	54.00	9.95
2476.5 MHz									
2476.50	62.87	PK	V	28.25	1.84	0.00	92.96	N/A	N/A
2476.50	52.18	AV	V	28.25	1.84	0.00	82.27	N/A	N/A
2483.50	25.63	PK	V	28.27	1.84	0.00	55.74	74.00	18.26
2483.50	14.60	AV	V	28.27	1.84	0.00	44.71	54.00	9.29
2477.5 MHz									
2477.50	46.01	PK	H	28.26	1.84	0.00	76.11	N/A	N/A
2477.50	36.32	AV	H	28.26	1.84	0.00	66.42	N/A	N/A
2477.50	48.85	PK	V	28.26	1.84	0.00	78.95	N/A	N/A
2477.50	38.28	AV	V	28.26	1.84	0.00	68.38	N/A	N/A
2483.50	25.75	PK	V	28.27	1.84	0.00	55.86	74.00	18.14
2483.50	14.39	AV	V	28.27	1.84	0.00	44.50	54.00	9.50
4955.00	45.34	PK	V	33.21	3.23	37.24	44.54	74.00	29.46
4955.00	35.24	AV	V	33.21	3.23	37.24	34.44	54.00	19.56
7432.50	46.72	PK	V	36.32	4.43	37.51	49.96	74.00	24.04
7432.50	36.27	AV	V	36.32	4.43	37.51	39.51	54.00	14.49

802.11b Mode(MIMO was the worst):

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
Low Channel: 2412 MHz									
2412.00	74.26	PK	H	28.12	1.81	0.00	104.19	N/A	N/A
2412.00	70.43	AV	H	28.12	1.81	0.00	100.36	N/A	N/A
2412.00	72.35	PK	V	28.12	1.81	0.00	102.28	N/A	N/A
2412.00	68.54	AV	V	28.12	1.81	0.00	98.47	N/A	N/A
2390.00	25.96	PK	H	28.08	1.80	0.00	55.84	74.00	18.16
2390.00	13.84	AV	H	28.08	1.80	0.00	43.72	54.00	10.28
4824.00	47.63	PK	H	32.95	3.19	37.20	46.57	74.00	27.43
4824.00	35.28	AV	H	32.95	3.19	37.20	34.22	54.00	19.78
7236.00	46.57	PK	H	35.81	4.77	37.27	49.88	74.00	24.12
7236.00	34.35	AV	H	35.81	4.77	37.27	37.66	54.00	16.34
Middle Channel: 2437 MHz									
2437.00	73.56	PK	H	28.17	1.82	0.00	103.55	N/A	N/A
2437.00	69.37	AV	H	28.17	1.82	0.00	99.36	N/A	N/A
2437.00	71.18	PK	V	28.17	1.82	0.00	101.17	N/A	N/A
2437.00	67.25	AV	V	28.17	1.82	0.00	97.24	N/A	N/A
4874.00	47.67	PK	H	33.05	3.26	37.21	46.77	74.00	27.23
4874.00	35.31	AV	H	33.05	3.26	37.21	34.41	54.00	19.59
7311.00	46.59	PK	H	36.01	4.64	37.36	49.88	74.00	24.12
7311.00	34.44	AV	H	36.01	4.64	37.36	37.73	54.00	16.27
High Channel: 2462 MHz									
2462.00	74.26	PK	H	28.22	1.83	0.00	104.31	N/A	N/A
2462.00	70.75	AV	H	28.22	1.83	0.00	100.80	N/A	N/A
2462.00	72.46	PK	V	28.22	1.83	0.00	102.51	N/A	N/A
2462.00	67.98	AV	V	28.22	1.83	0.00	98.03	N/A	N/A
2483.50	27.42	PK	H	28.27	1.84	0.00	57.53	74.00	16.47
2483.50	14.63	AV	H	28.27	1.84	0.00	44.74	54.00	9.26
4924.00	47.69	PK	H	33.15	3.27	37.22	46.89	74.00	27.11
4924.00	35.16	AV	H	33.15	3.27	37.22	34.36	54.00	19.64
7386.00	46.62	PK	H	36.20	4.51	37.46	49.87	74.00	24.13
7386.00	34.22	AV	H	36.20	4.51	37.46	37.47	54.00	16.53

802.11g Mode(MIMO was the worst):

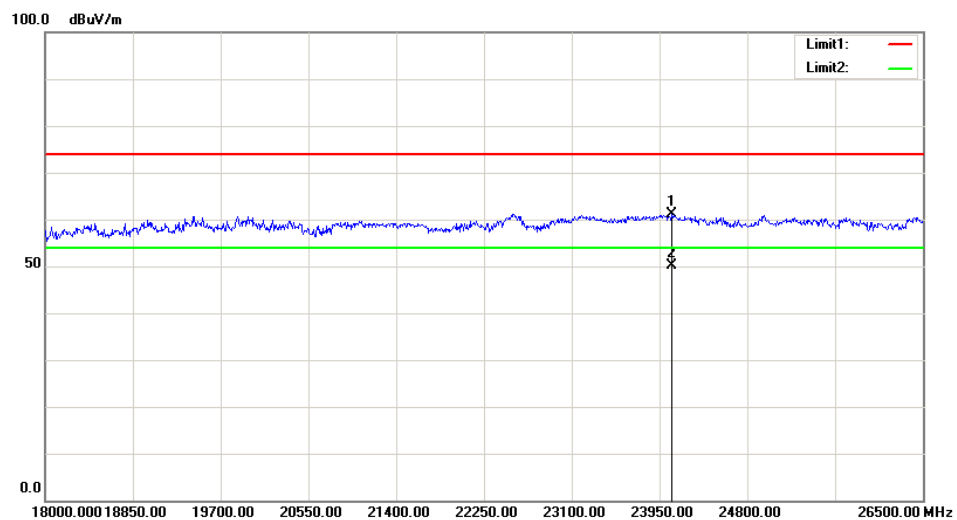
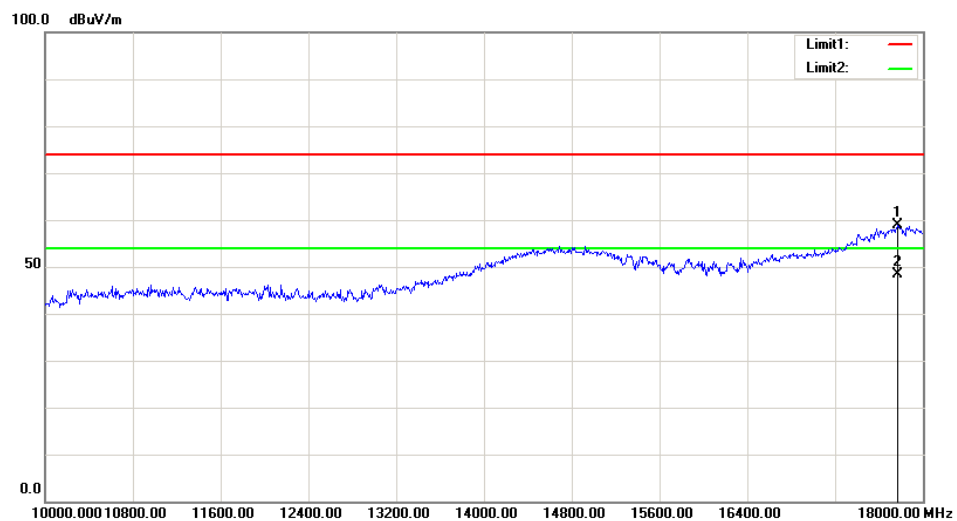
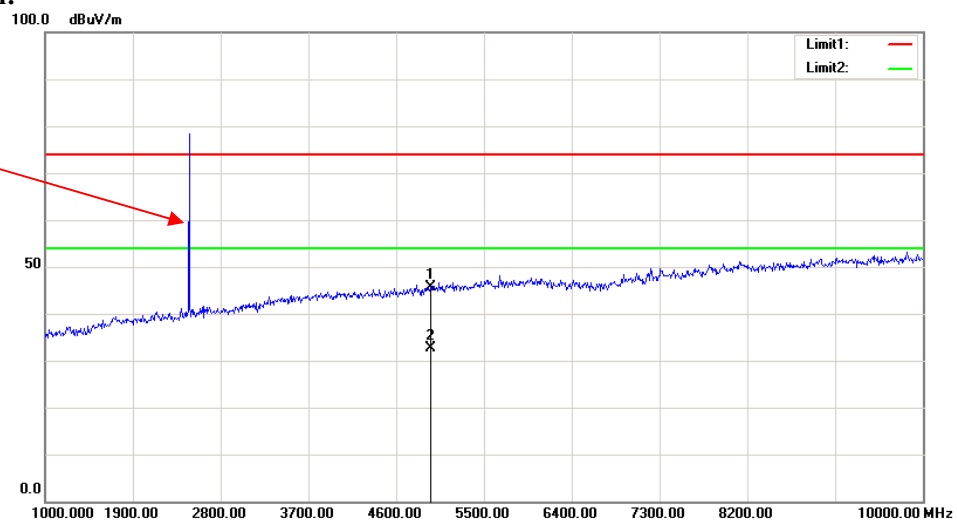
Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
Low Channel: 2412 MHz									
2412.00	74.82	PK	H	28.12	1.81	0.00	104.75	N/A	N/A
2412.00	64.56	AV	H	28.12	1.81	0.00	94.49	N/A	N/A
2412.00	71.73	PK	V	28.12	1.81	0.00	101.66	N/A	N/A
2412.00	61.24	AV	V	28.12	1.81	0.00	91.17	N/A	N/A
2390.00	29.33	PK	H	28.08	1.80	0.00	59.21	74.00	14.79
2390.00	14.85	AV	H	28.08	1.80	0.00	44.73	54.00	9.27
4824.00	47.82	PK	H	32.95	3.19	37.20	46.76	74.00	27.24
4824.00	35.22	AV	H	32.95	3.19	37.20	34.16	54.00	19.84
7236.00	46.61	PK	H	35.81	4.77	37.27	49.92	74.00	24.08
7236.00	34.55	AV	H	35.81	4.77	37.27	37.86	54.00	16.14
Additional Channel:2417 MHz									
2417.00	77.83	PK	H	28.13	1.81	0.00	107.77	N/A	N/A
2417.00	67.54	AV	H	28.13	1.81	0.00	97.48	N/A	N/A
2390.00	28.64	PK	H	28.08	1.80	0.00	58.52	74.00	15.48
2390.00	14.37	AV	H	28.08	1.80	0.00	44.25	54.00	9.75
Middle Channel:2437 MHz									
2437.00	78.84	PK	H	28.17	1.82	0.00	108.83	N/A	N/A
2437.00	68.73	AV	H	28.17	1.82	0.00	98.72	N/A	N/A
2437.00	76.52	PK	V	28.17	1.82	0.00	106.51	N/A	N/A
2437.00	66.48	AV	V	28.17	1.82	0.00	96.47	N/A	N/A
4874.00	47.62	PK	H	33.05	3.26	37.21	46.72	74.00	27.28
4874.00	35.23	AV	H	33.05	3.26	37.21	34.33	54.00	19.67
7311.00	46.51	PK	H	36.01	4.64	37.36	49.80	74.00	24.20
7311.00	34.34	AV	H	36.01	4.64	37.36	37.63	54.00	16.37
Additional Channel:2457 MHz									
2457.00	78.16	PK	H	28.21	1.83	0.00	108.20	N/A	N/A
2457.00	68.42	AV	H	28.21	1.83	0.00	98.46	N/A	N/A
2483.50	27.73	PK	H	28.27	1.84	0.00	57.84	74.00	16.16
2483.50	14.69	AV	H	28.27	1.84	0.00	44.80	54.00	9.20
Low Channel:2462 MHz									
2462.00	73.98	PK	H	28.22	1.83	0.00	104.03	N/A	N/A
2462.00	63.85	AV	H	28.22	1.83	0.00	93.90	N/A	N/A
2462.00	71.49	PK	V	28.22	1.83	0.00	101.54	N/A	N/A
2462.00	61.62	AV	V	28.22	1.83	0.00	91.67	N/A	N/A
2483.50	31.11	PK	H	28.27	1.84	0.00	61.22	74.00	12.78
2483.50	15.48	AV	H	28.27	1.84	0.00	45.59	54.00	8.41
4924.00	47.46	PK	H	33.15	3.27	37.22	46.66	74.00	27.34
4924.00	35.14	AV	H	33.15	3.27	37.22	34.34	54.00	19.66
7386.00	46.54	PK	H	36.20	4.51	37.46	49.79	74.00	24.21
7386.00	34.48	AV	H	36.20	4.51	37.46	37.73	54.00	16.27

802.11n ht20 Mode(MIMO was the worst):

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Factor (dB/m)					
Low Channel: 2412 MHz									
2412.00	75.58	PK	H	28.12	1.81	0.00	105.51	N/A	N/A
2412.00	63.64	AV	H	28.12	1.81	0.00	93.57	N/A	N/A
2412.00	72.34	PK	V	28.12	1.81	0.00	102.27	N/A	N/A
2412.00	60.57	AV	V	28.12	1.81	0.00	90.50	N/A	N/A
2390.00	34.42	PK	H	28.08	1.80	0.00	64.30	74.00	9.70
2390.00	15.71	AV	H	28.08	1.80	0.00	45.59	54.00	8.41
4824.00	47.55	PK	H	32.95	3.19	37.20	46.49	74.00	27.51
4824.00	35.25	AV	H	32.95	3.19	37.20	34.19	54.00	19.81
7236.00	46.43	PK	H	35.81	4.77	37.27	49.74	74.00	24.26
7236.00	34.37	AV	H	35.81	4.77	37.27	37.68	54.00	16.32
Additional Channel: 2417 MHz									
2417.00	78.73	PK	H	28.13	1.81	0.00	108.67	N/A	N/A
2417.00	66.85	AV	H	28.13	1.81	0.00	96.79	N/A	N/A
2390.00	27.86	PK	H	28.08	1.80	0.00	57.74	74.00	16.26
2390.00	14.39	AV	H	28.08	1.80	0.00	44.27	54.00	9.73
Middle channel: 2437 MHz									
2437.00	78.19	PK	H	28.17	1.82	0.00	108.18	N/A	N/A
2437.00	66.32	AV	H	28.17	1.82	0.00	96.31	N/A	N/A
2437.00	76.45	PK	V	28.17	1.82	0.00	106.44	N/A	N/A
2437.00	64.57	AV	V	28.17	1.82	0.00	94.56	N/A	N/A
4874.00	47.62	PK	H	33.05	3.26	37.21	46.72	74.00	27.28
4874.00	35.17	AV	H	33.05	3.26	37.21	34.27	54.00	19.73
7311.00	46.67	PK	H	36.01	4.64	37.36	49.96	74.00	24.04
7311.00	34.36	AV	H	36.01	4.64	37.36	37.65	54.00	16.35
Additional Channel:2457 MHz									
2457.00	77.96	PK	H	28.21	1.83	0.00	108.00	N/A	N/A
2457.00	66.15	AV	H	28.21	1.83	0.00	96.19	N/A	N/A
2483.50	27.13	PK	H	28.27	1.84	0.00	57.24	74.00	16.76
2483.50	14.37	AV	H	28.27	1.84	0.00	44.48	54.00	9.52
High Channel: 2462 MHz									
2462.00	77.64	PK	H	28.22	1.83	0.00	107.69	N/A	N/A
2462.00	65.73	AV	H	28.22	1.83	0.00	95.78	N/A	N/A
2462.00	75.76	PK	V	28.22	1.83	0.00	105.81	N/A	N/A
2462.00	63.45	AV	V	28.22	1.83	0.00	93.50	N/A	N/A
2483.50	31.82	PK	H	28.27	1.84	0.00	61.93	74.00	12.07
2483.50	16.65	AV	H	28.27	1.84	0.00	46.76	54.00	7.24
4924.00	47.58	PK	H	33.15	3.27	37.22	46.78	74.00	27.22
4924.00	35.28	AV	H	33.15	3.27	37.22	34.48	54.00	19.52
7386.00	46.62	PK	H	36.20	4.51	37.46	49.87	74.00	24.13
7386.00	34.45	AV	H	36.20	4.51	37.46	37.70	54.00	16.30

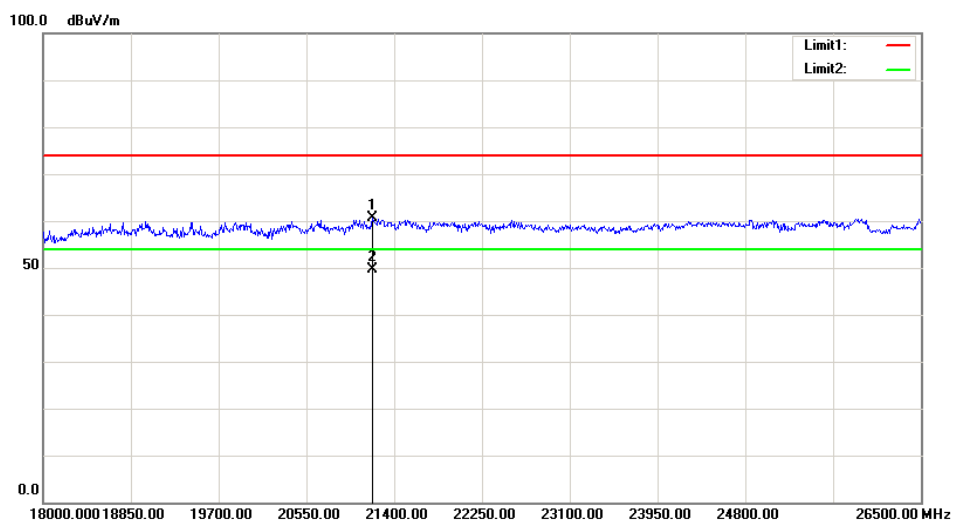
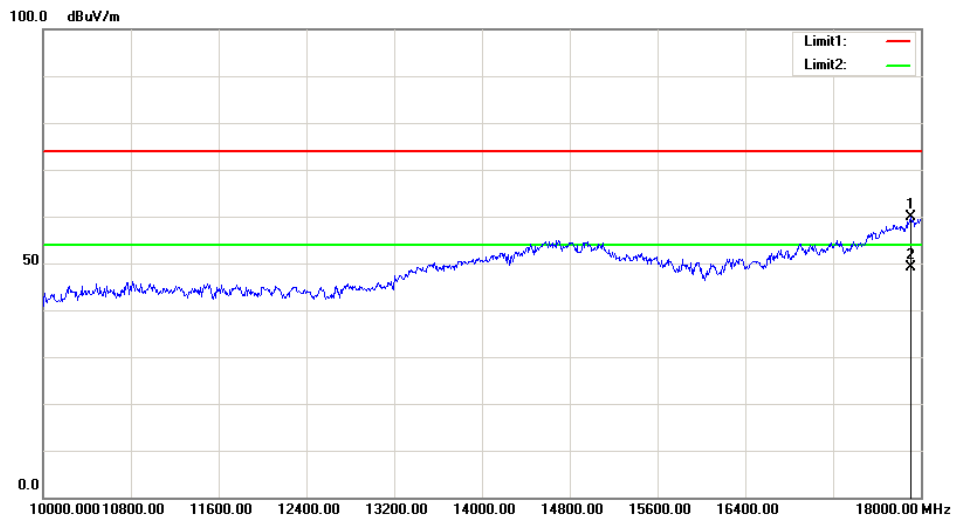
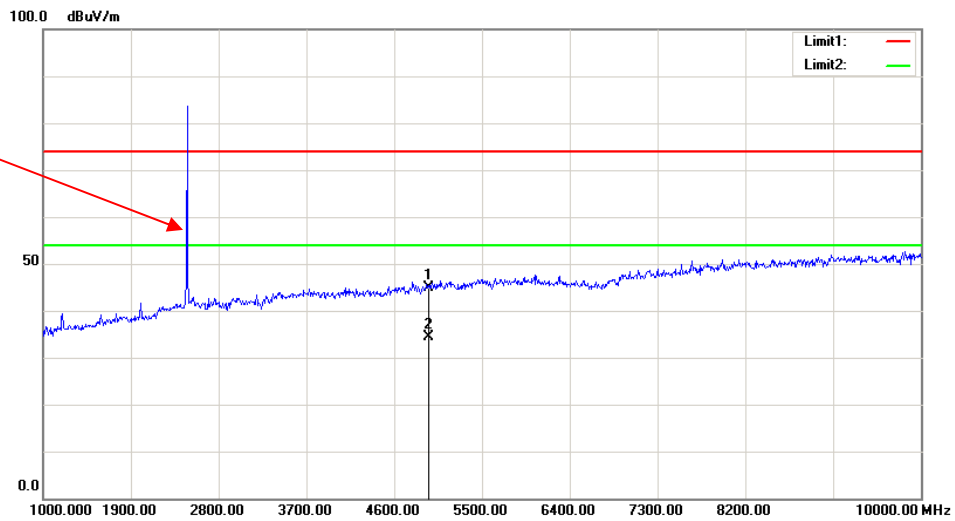
Worst Test plots:
For 1.4MHz/10MHz mode(1.4MHz Mode Middle channel was the worst)
Horizontal:

Fundamental
Test with Band
Rejection Filter



Vertical:

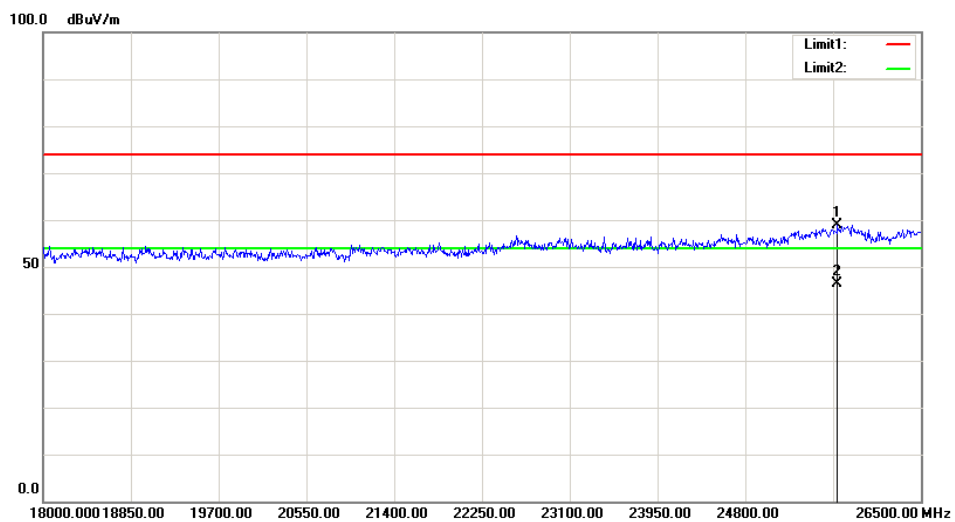
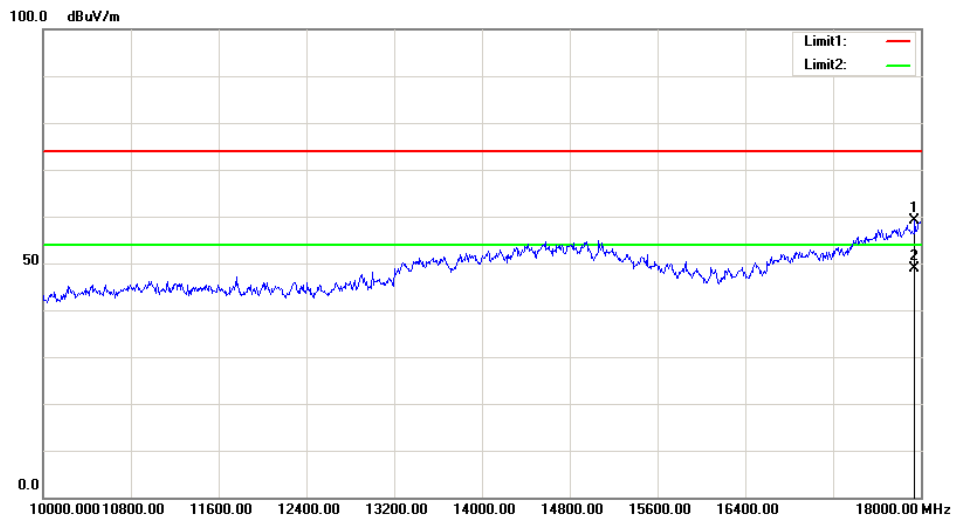
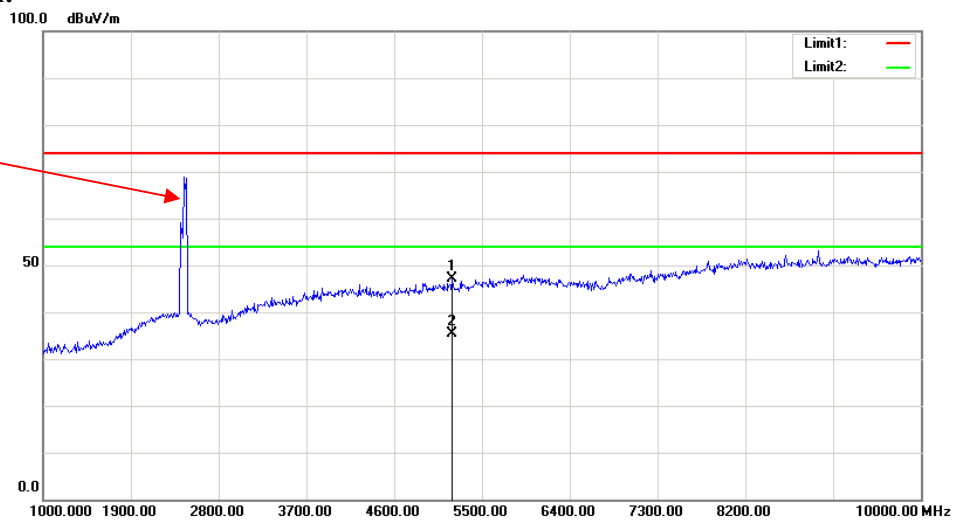
Fundamental
Test with Band
Rejection Filter



For 802.11b/g/n ht20 mode (802.11b mode middle channel was the worst case)

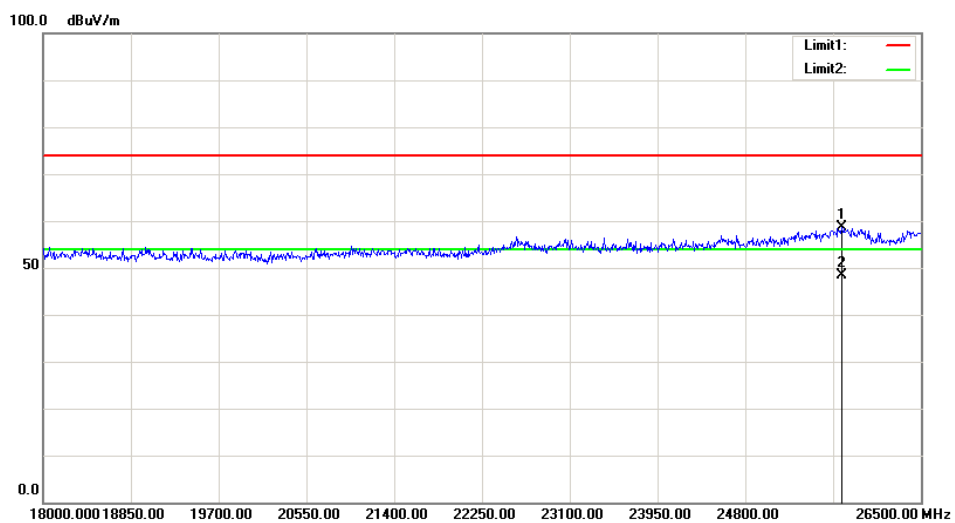
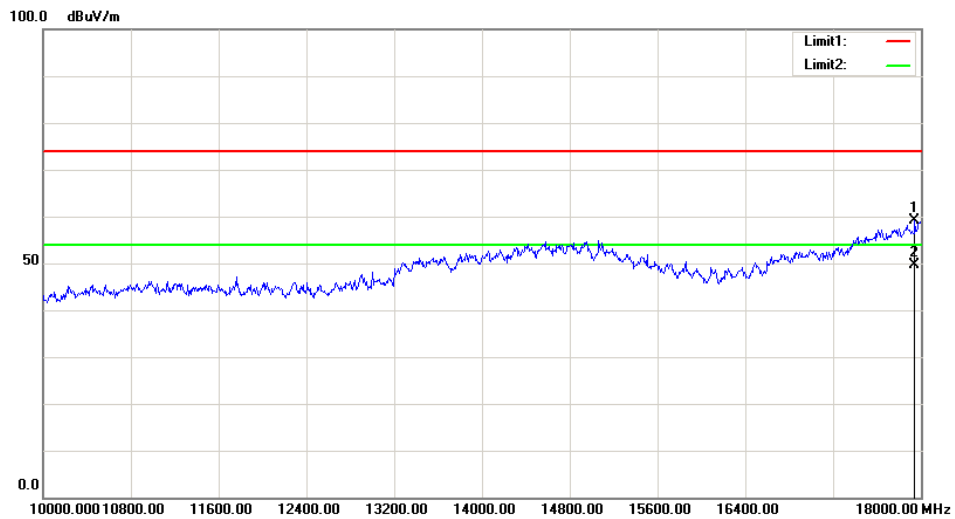
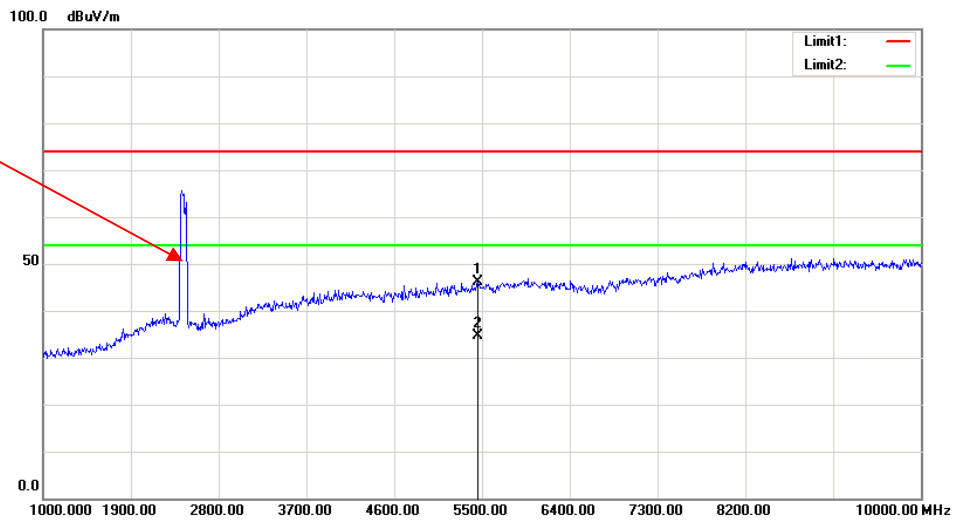
Horizontal:

Fundamental
Test with Band
Rejection Filter



Vertical:

Fundamental
Test with Band
Rejection Filter



FCC §15.247(a) (2)–6 dB EMISSION BANDWIDTH

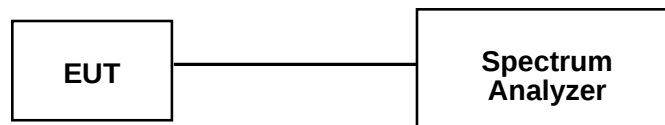
Applicable Standard

According to FCC §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 bandwidth shall be at least 500 kHz.

Test Procedure

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



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU 26	200256	2018-01-04	2019-01-04
N/A	Coaxial Cable	C-SJ00-0010	C0010/01	Each Time	/

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	22.8~26.3 °C
Relative Humidity:	31~44 %
ATM Pressure:	101.2~101.3 kPa

* The testing was performed by Nami Quan from 2018-01-07 to 2018-01-13.

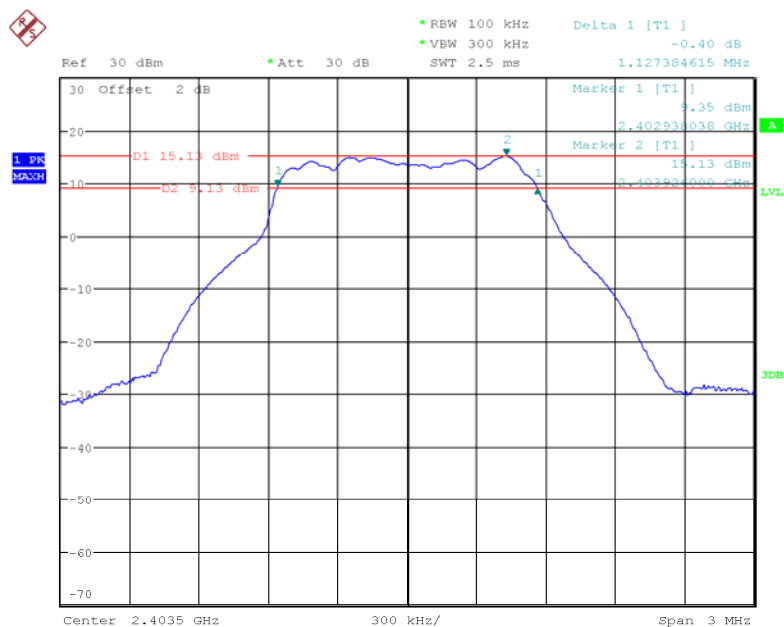
Test Mode: Transmitting (Test was performed at chain 0)

Test Result: Compliant. Please refer to the following table and plots

Test mode	Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit (MHz)
1.4MHz	Low	2403.5	1.13	1.12	≥ 0.5
	Middle	2441.5	1.12	1.12	≥ 0.5
	High	2477.5	1.13	1.12	≥ 0.5
10MHz	Low	2405.5	9.053	9.12	≥ 0.5
	Middle	2441.5	9.076	9.12	≥ 0.5
	High	2477.5	9.023	9.16	≥ 0.5
802.11b	Low	2412	9.62	14.00	≥ 0.5
	Middle	2437	9.86	14.00	≥ 0.5
	High	2462	9.94	14.00	≥ 0.5
802.11g	Low	2412	16.19	17.76	≥ 0.5
	Middle	2437	16.19	17.84	≥ 0.5
	High	2462	16.19	17.76	≥ 0.5
802.11n ht20	Low	2412	17.23	18.72	≥ 0.5
	Middle	2437	17.39	18.72	≥ 0.5
	High	2462	17.31	18.72	≥ 0.5

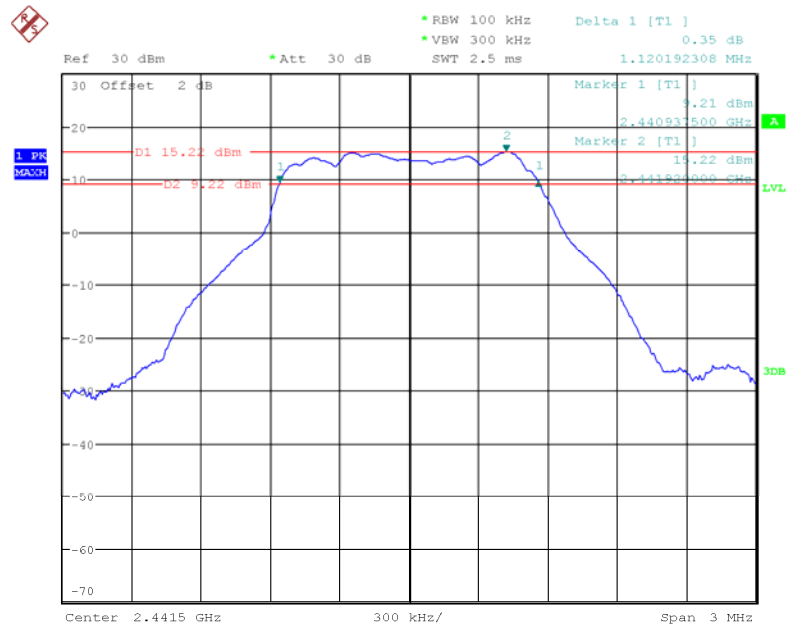
6dB bandwidth:

1.4M Low Channel



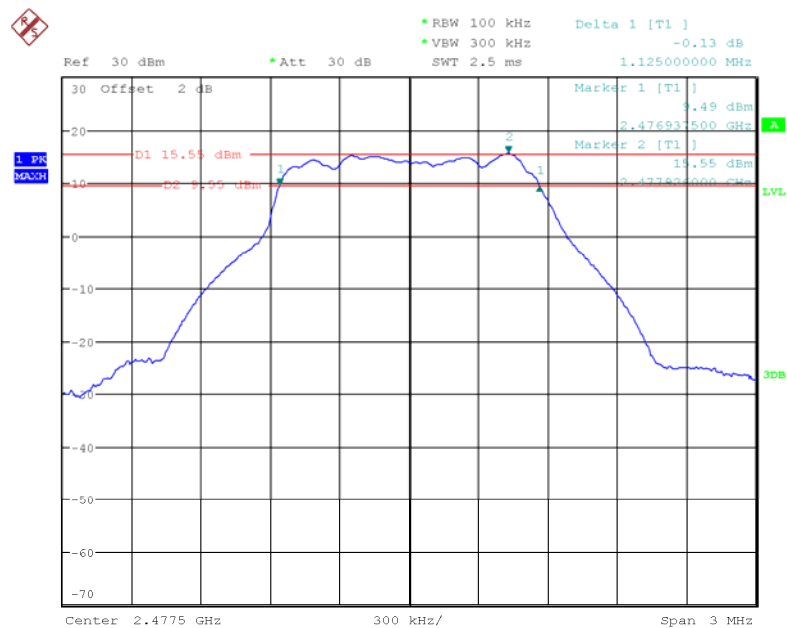
Date: 7.JAN.2018 09:33:54

1.4M Middle Channel



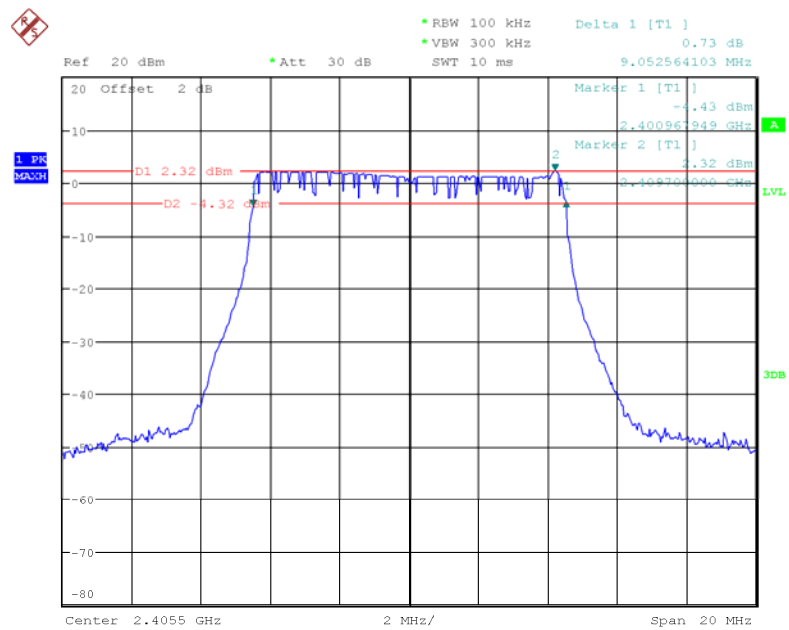
Date: 7.JAN.2018 09:34:53

1.4M High Channel



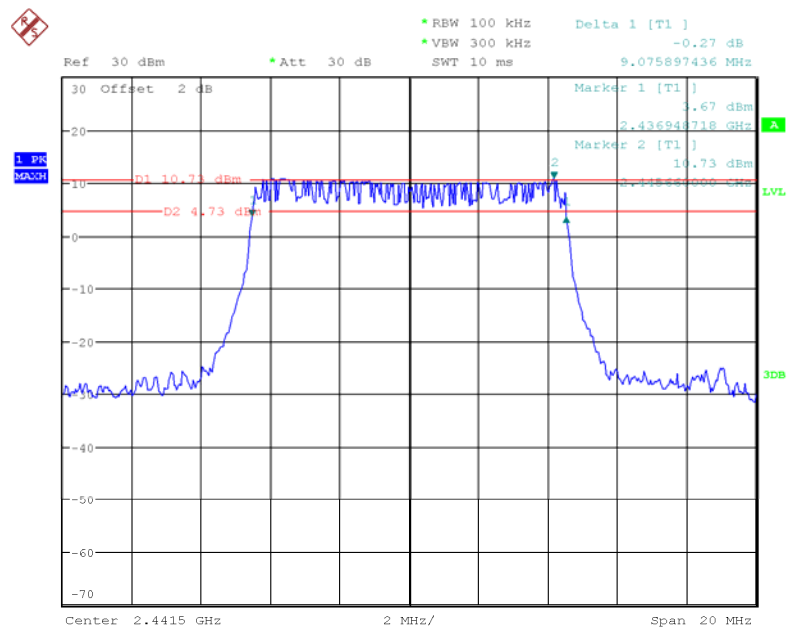
Date: 7.JAN.2018 09:35:58

10M Low Channel



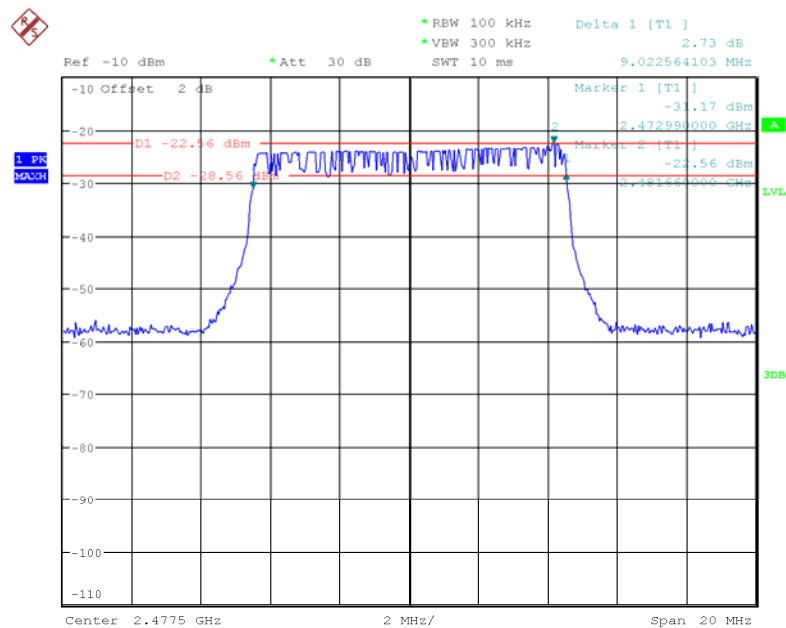
Date: 7.JAN.2018 10:45:06

10M Middle Channel



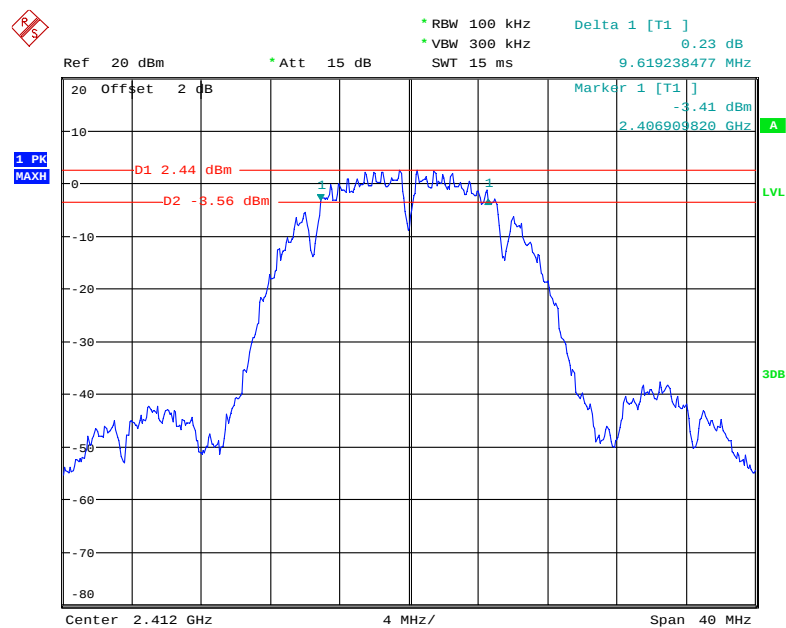
Date: 7.JAN.2018 10:46:12

10M High Channel



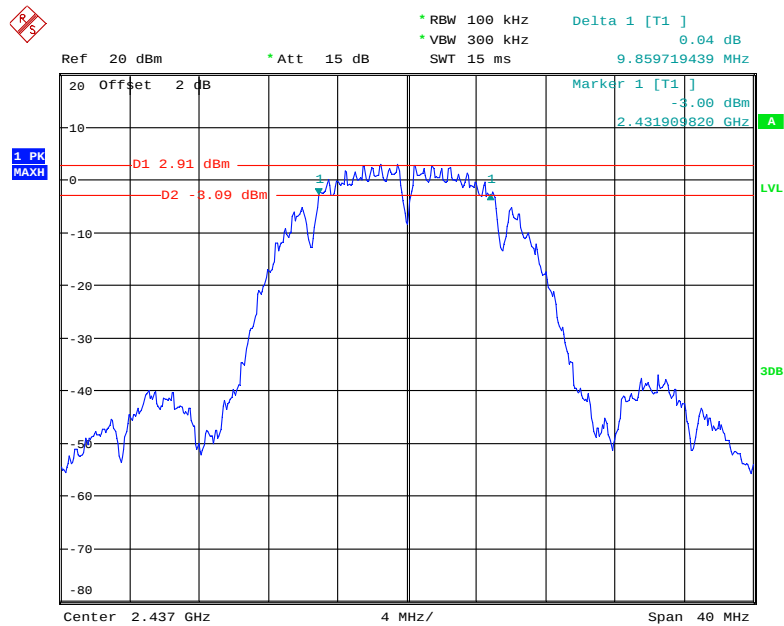
Date: 7.JAN.2018 10:54:09

802.11b Low Channel



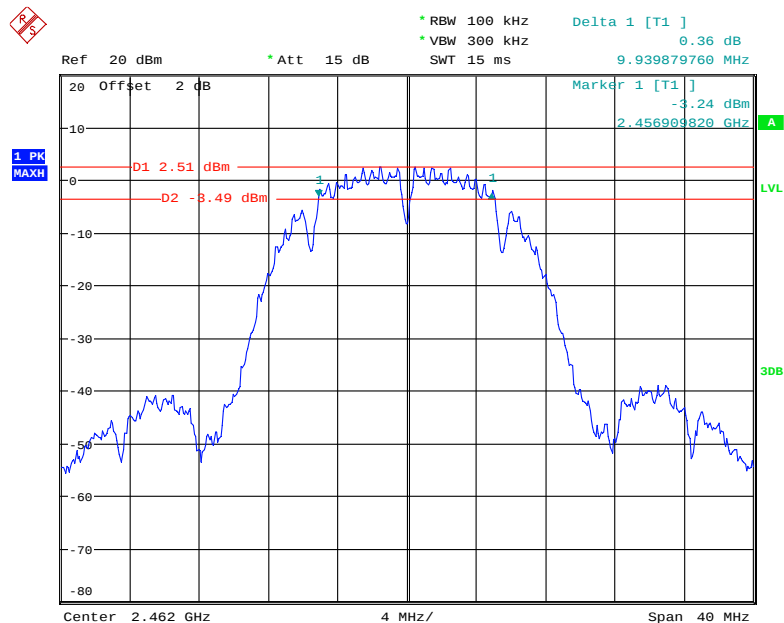
Date: 12.JAN.2018 23:25:29

802.11b Middle Channel



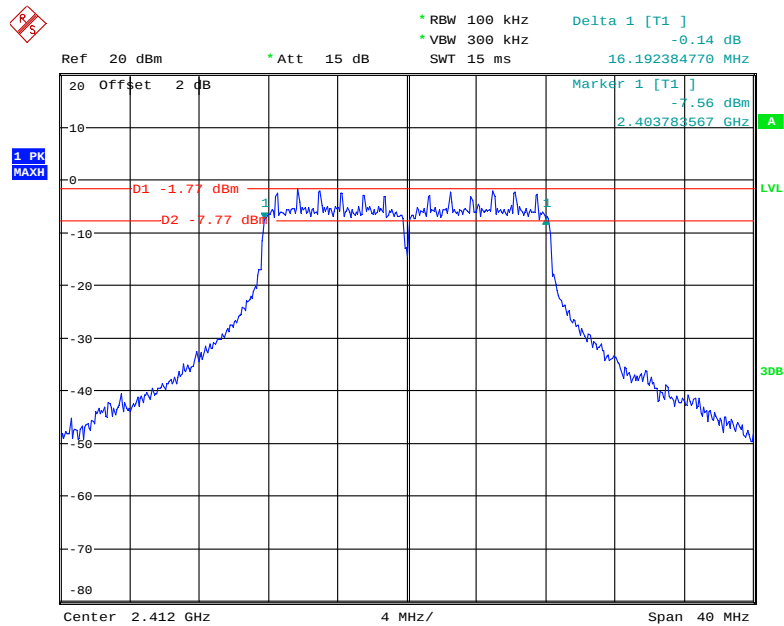
Date: 12.JAN.2018 23:23:01

802.11b High Channel



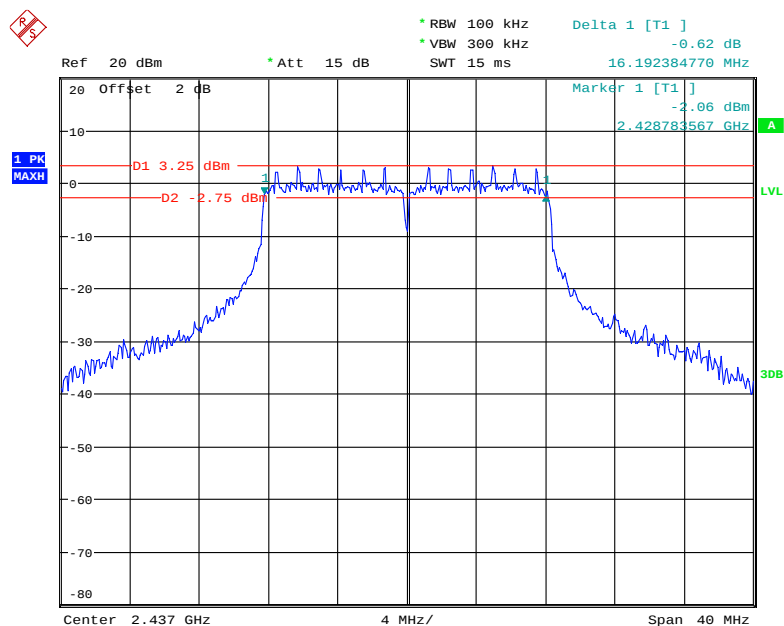
Date: 12.JAN.2018 23:20:46

802.11g Low Channel



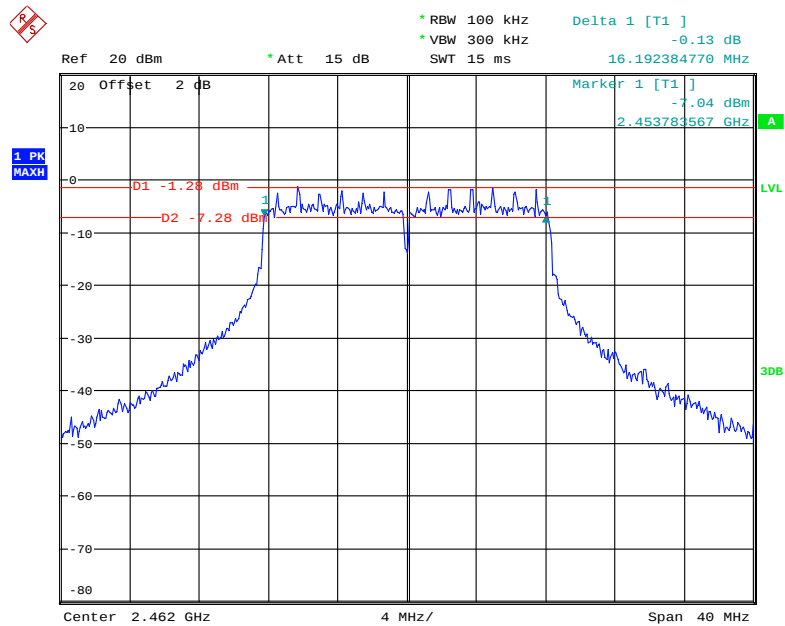
Date: 12.JAN.2018 23:28:41

802.11g Middle Channel



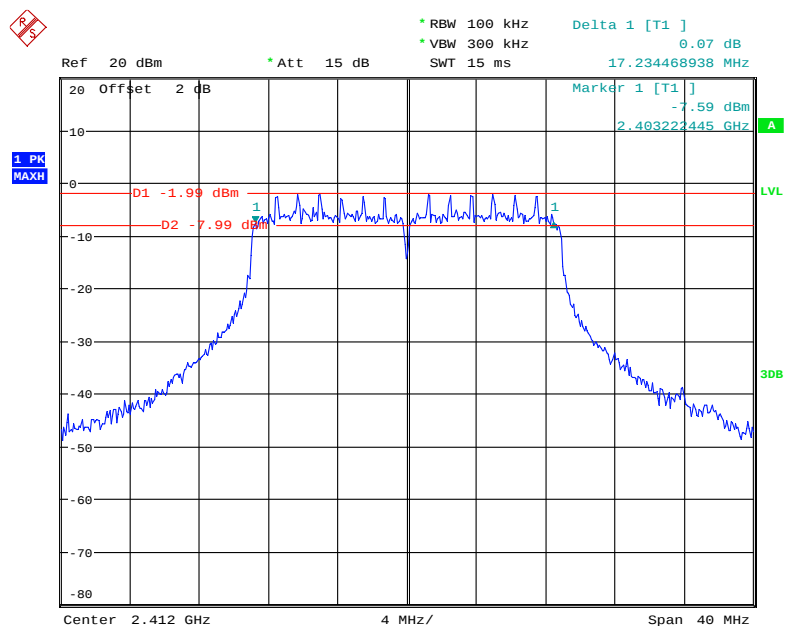
Date: 12.JAN.2018 23:31:44

802.11g High Channel



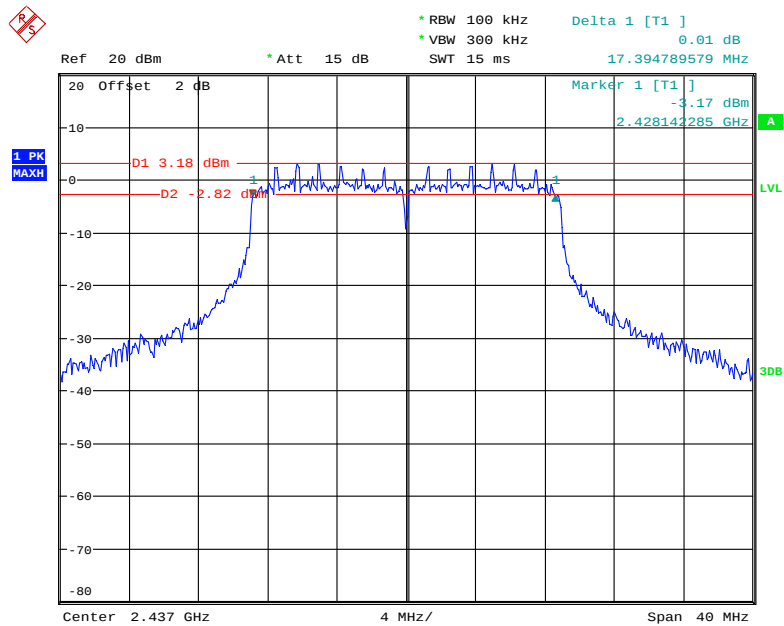
Date: 12.JAN.2018 23:34:04

802.11n ht20 Low Channel



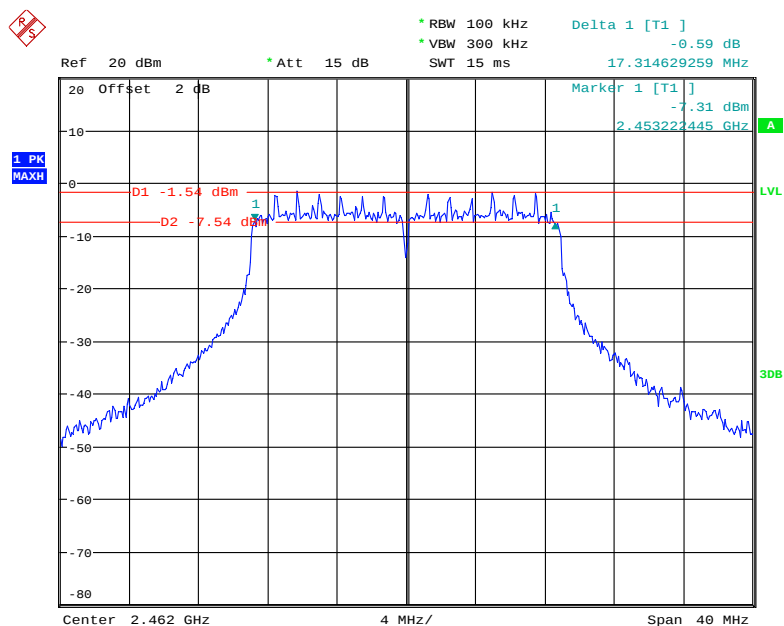
Date: 13.JAN.2018 00:03:14

802.11n ht20 Middle Channel



Date: 13.JAN.2018 00:00:36

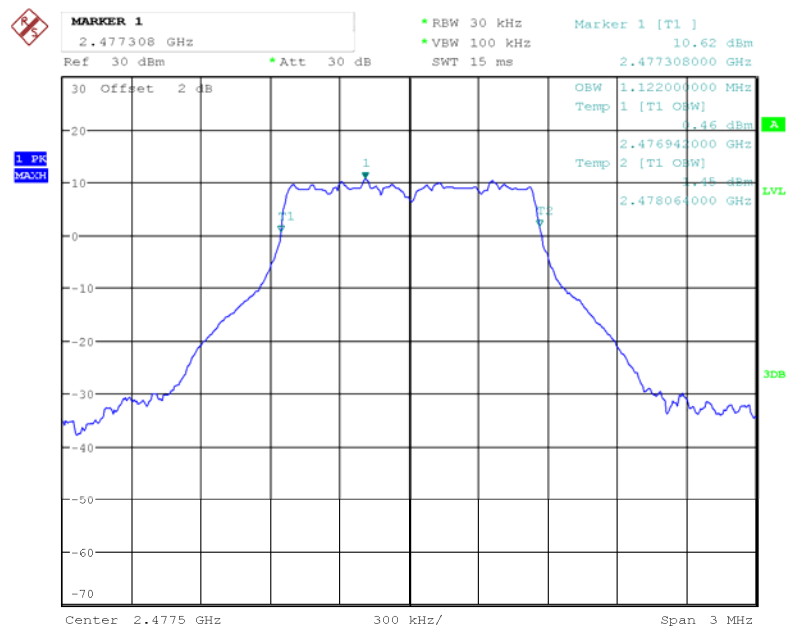
802.11n ht20 High Channel



Date: 12.JAN.2018 23:57:45

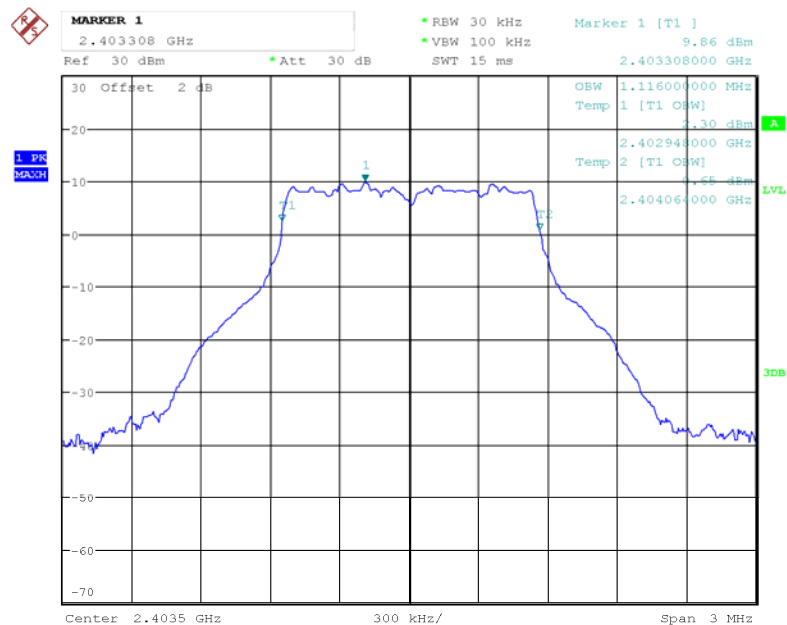
99% Occupied bandwidth:

1.4M Low Channel

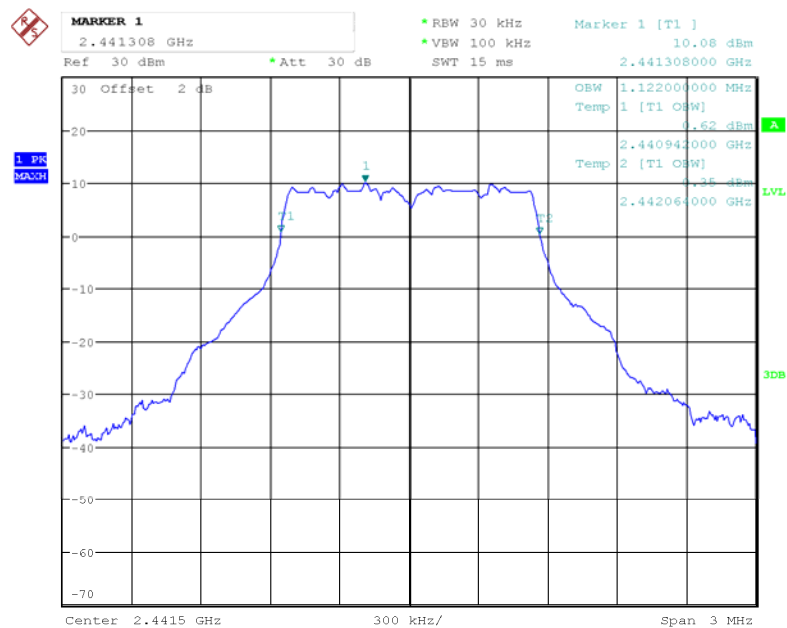


Date: 7.JAN.2018 09:39:31

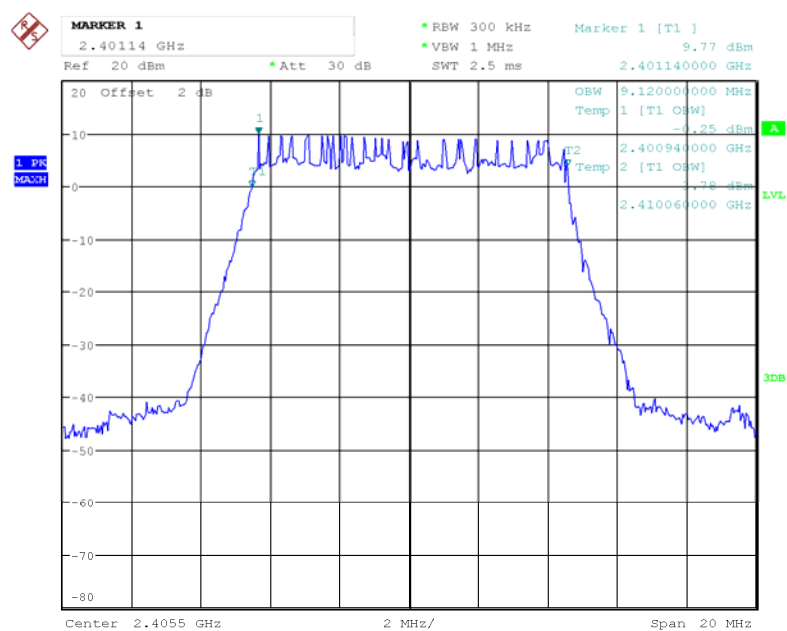
1.4M Middle Channel



Date: 7.JAN.2018 09:38:30

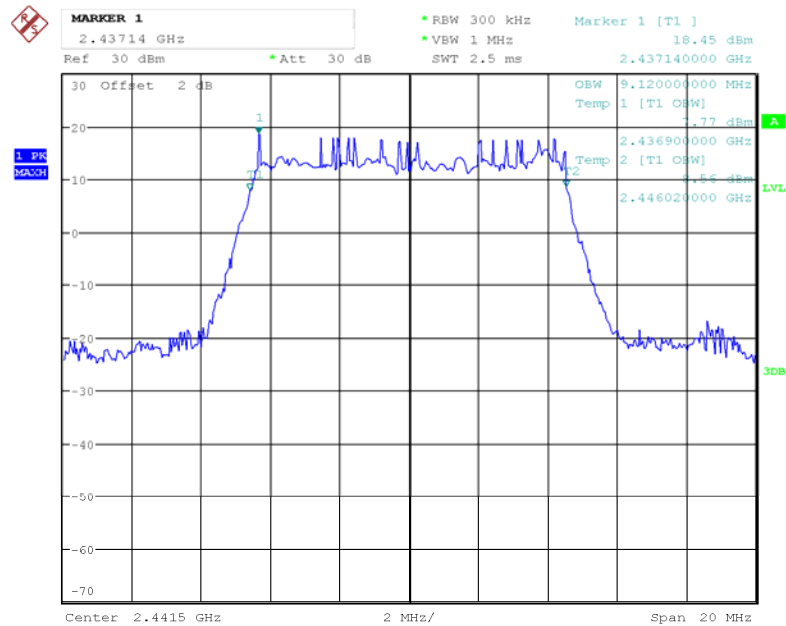
1.4M High Channel

Date: 7.JAN.2018 09:38:49

10M Low Channel

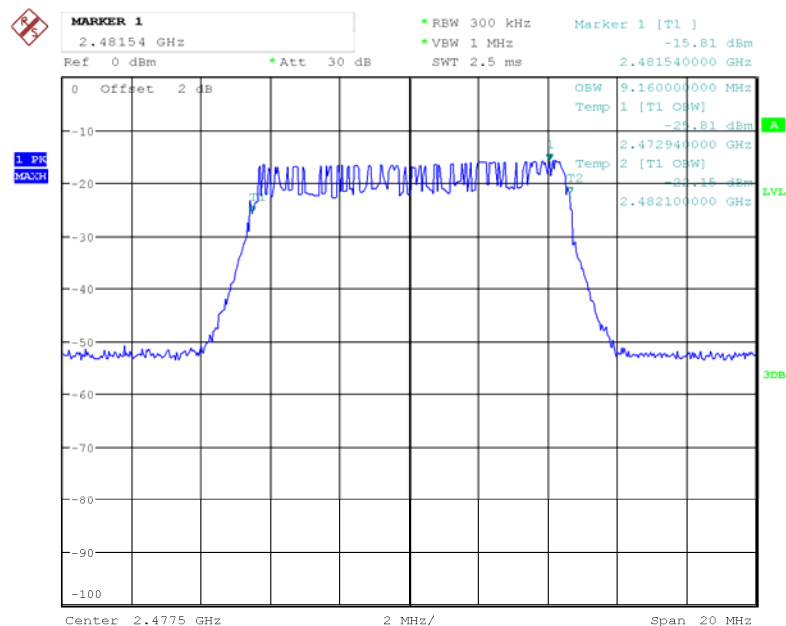
Date: 7.JAN.2018 10:50:24

10M Middle Channel



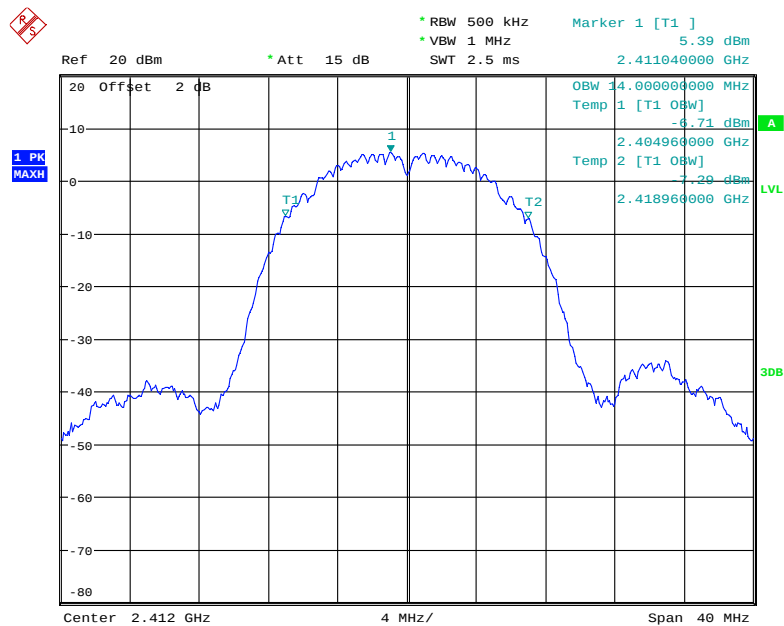
Date: 7.JAN.2018 10:50:45

10M High Channel



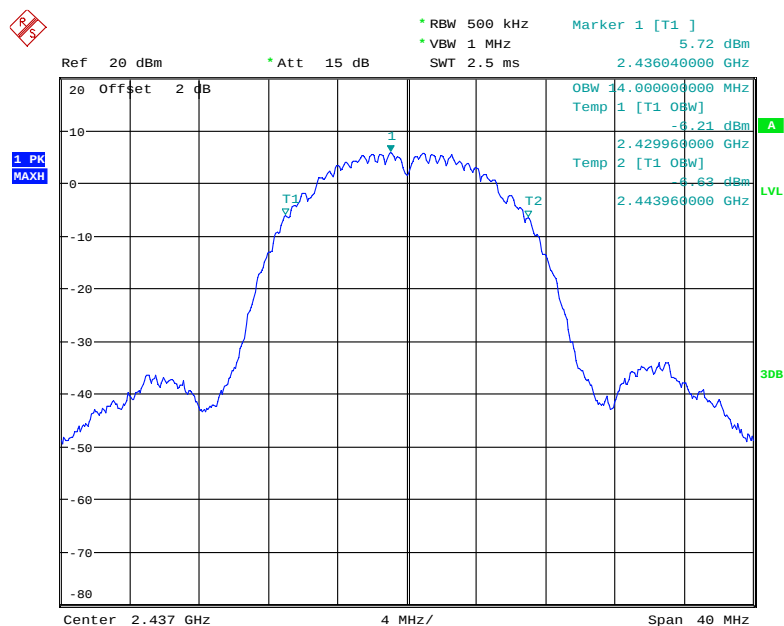
Date: 7.JAN.2018 10:51:56

802.11b Low Channel

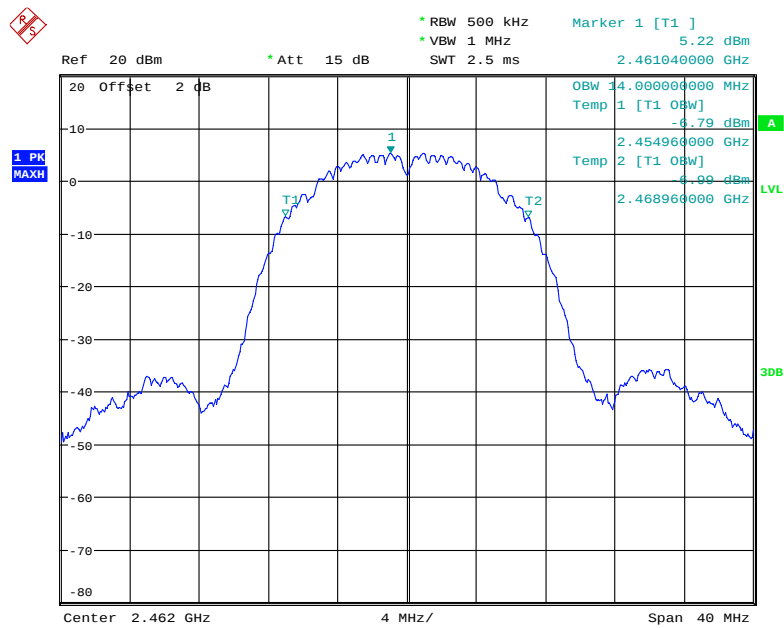


Date: 12.JAN.2018 23:25:45

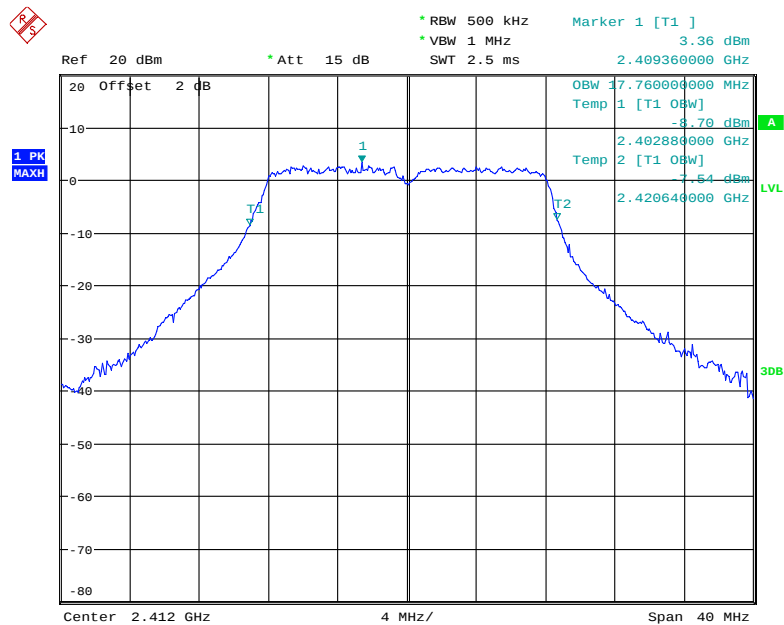
802.11b Middle Channel



Date: 12.JAN.2018 23:23:15

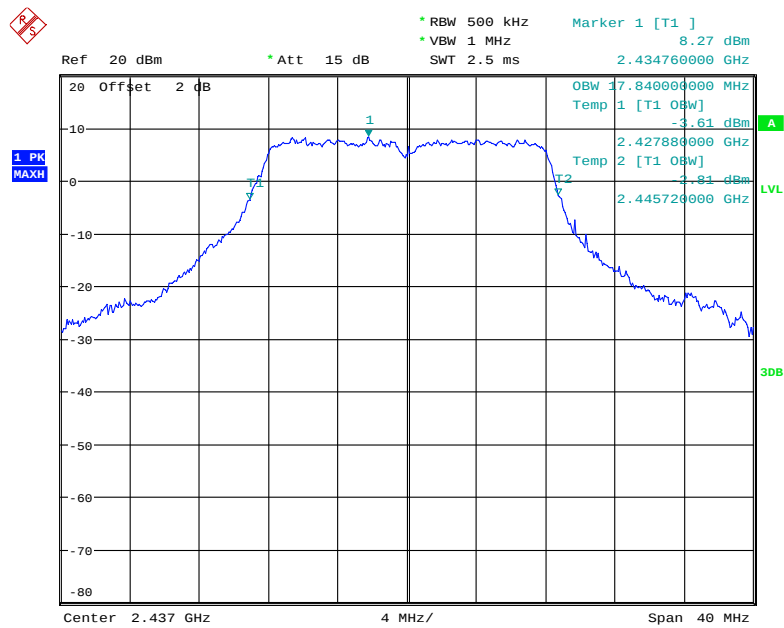
802.11b High Channel

Date: 12.JAN.2018 23:21:00

802.11g Low Channel

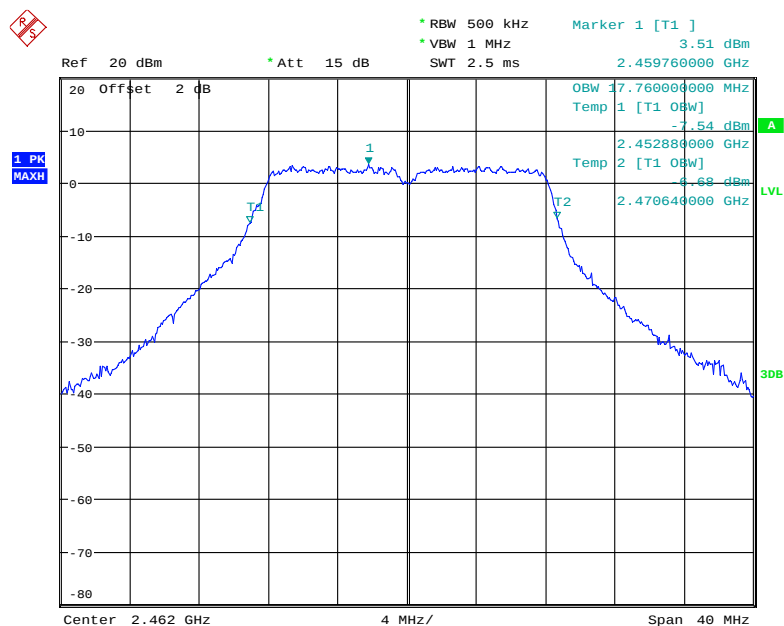
Date: 12.JAN.2018 23:29:01

802.11g Middle Channel



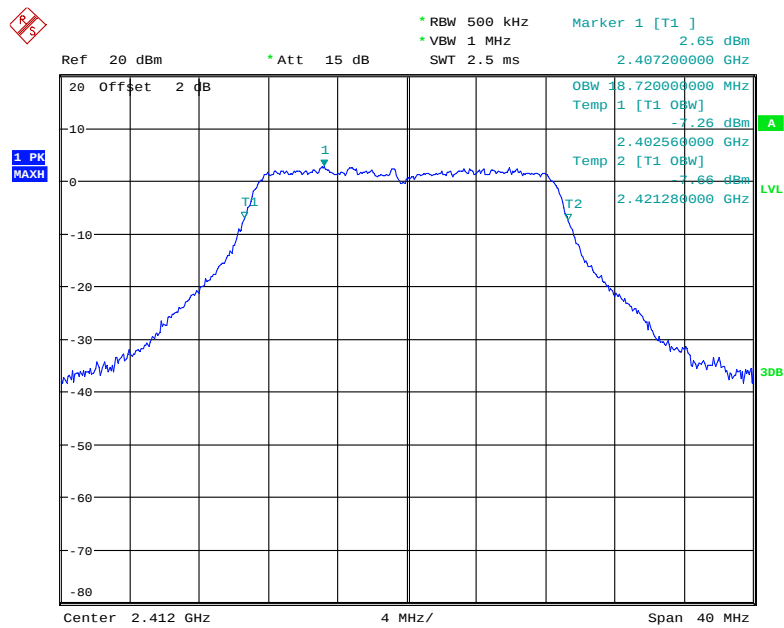
Date: 12.JAN.2018 23:32:07

802.11g High Channel



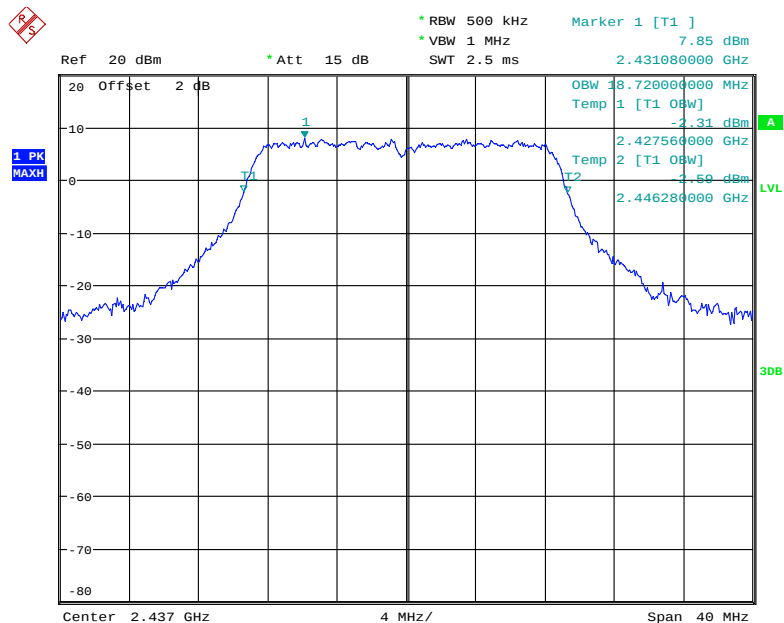
Date: 12.JAN.2018 23:34:27

802.11n ht20 Low Channel



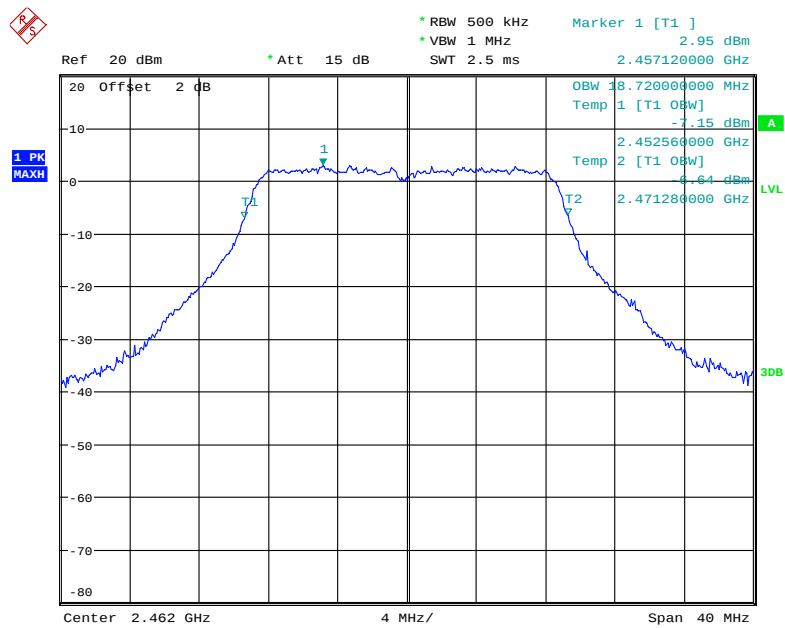
Date: 13.JAN.2018 00:03:37

802.11n ht20 Middle Channel



Date: 13.JAN.2018 00:00:56

802.11n ht20 High Channel



Date: 12.JAN.2018 23:58:04

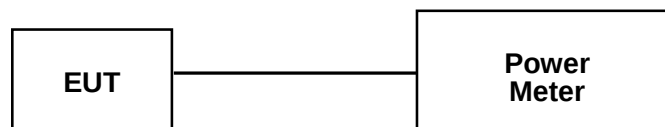
FCC §15.247(b) (3) - MAXIMUM PEAK CONDUCTED OUTPUT POWER

Applicable Standard

According to FCC §15.247(b) (3), for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

Test Procedure

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to test equipment.
3. Add a correction factor to the display.
4. Set the power Meter to test Peak output power, record the result as peak power.
5. Set the power meter to test average output power, record the result as average power.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	USB Wideband Power Sensor	U2022XA	MY5417006	2017-12-11	2018-12-11
N/A	Coaxial Cable	C-SJ00-0010	C0010/01	Each Time	/

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	25.4 °C
Relative Humidity:	43 %
ATM Pressure:	100.8 kPa

* The testing was performed by Nami Quan on 2018-01-08.

Test Mode: Transmitting

Test Result: Compliant. Please refer to the following table.

1.4MHz/10MHz modes:

Test Mode	Frequency (MHz)	Maximum Conducted Average Output Power (dBm)		Limit (dBm)
		Chain 0	Chain 1	
1.4MHz	2403.5	17.21	17.13	30
	2441.5	17.3	17.27	30
	2477.5	17.81	17.72	30
10MHz	2405.5	9.16	9.28	30
	2406.5	10.28	10.25	30
	2407.5	11.27	11.58	30
	2408.5	12.78	12.8	30
	2409.5	13.9	13.99	30
	2410.5	14.02	13.78	30
	2411.5	14.99	14.89	30
	2412.5	15.24	15.2	30
	2413.5	16.21	16.26	30
	2414.5	16.56	16.15	30
	2415.5	17.36	17.2	30
	2416.5	17.55	17.29	30
	2417.5	18.3	18.2	30
	2441.5	17.6	17.69	30
	2457.5	17.51	17.1	30
	2458.5	15.36	15.13	30
	2459.5	15.35	15.14	30
	2460.5	14.39	14.43	30
	2461.5	14.32	14.21	30
	2462.5	13.03	13.01	30
	2463.5	12.92	12.94	30
	2464.5	12.05	12.12	30
	2465.5	11.9	12	30
	2466.5	10.9	11.05	30
	2467.5	10.79	10.97	30
	2468.5	9.92	10.13	30
	2469.5	7.94	8.22	30
	2470.5	6.07	6.28	30
	2471.5	4.16	4.36	30
	2472.5	2.34	2.6	30
	2473.5	1.33	1.67	30
	2474.5	0.53	0.81	30
	2475.5	0.51	0.81	30
	2476.5	-0.36	-0.05	30
	2477.5	-16.55	-16.6	30

802.11b/g/n ht20 modes:

Test Mode	Frequency (MHz)	Maximum Conducted Average Output Power (dBm)			Limit (dBm)
		Chain 0	Chain 1	Total	
802.11b	2412	13.14	12.32	15.76	30
	2437	13.09	12.02	15.6	30
	2462	12.94	11.7	15.37	30
802.11g	2412	9.25	8.58	11.94	30
	2417	13.34	12.49	15.95	30
	2437	14.24	12.79	16.59	30
	2457	13.61	11.96	15.87	30
	2462	9.3	8.05	11.73	30
802.11n ht20	2412	9.17	8.77	11.98	30
	2417	13.28	12.4	15.87	30
	2437	14.19	12.59	16.47	30
	2457	13.59	11.96	15.86	30
	2462	9.07	7.89	11.53	30

Note: the maximum antenna gain is 4.62 dBi, the device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

So:

Directional gain = $G_{ANT} + \text{Array Gain} = 4.62 \text{ dBi}$

FCC §15.247(d)– 100 kHz BANDWIDTH OF FREQUENCY BAND EDGE

Applicable Standard

According to FCC§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 §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU 26	200256	2018-01-04	2019-01-04
N/A	Coaxial Cable	C-SJ00-0010	C0010/01	Each Time	/

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	22.9~26.3 °C
Relative Humidity:	36~44 %
ATM Pressure:	101.1~101.2 kPa

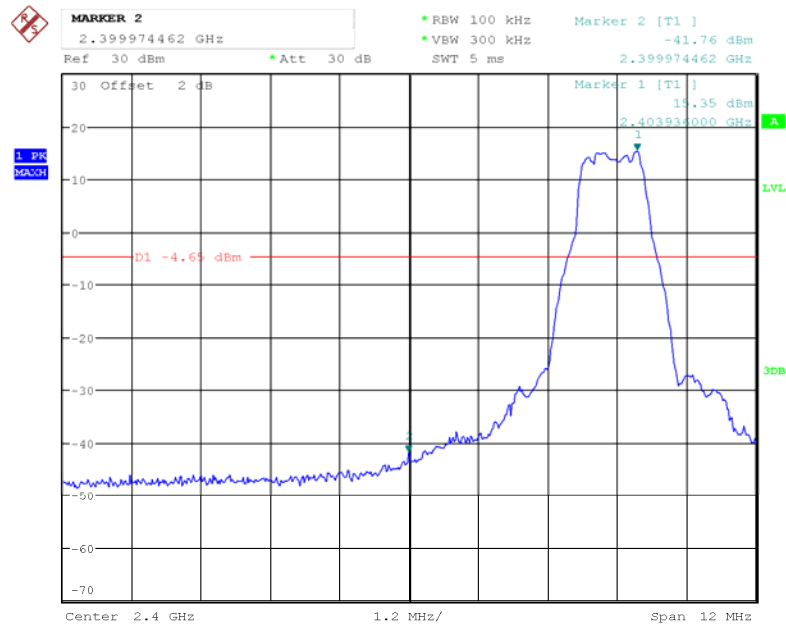
* The testing was performed by Nami Quan from 2018-01-07 to 2018-01-13.

Test mode: Transmitting

Test Result: Compliant. All emissions user the fundamental more than 30dBc, please refer to following plots.

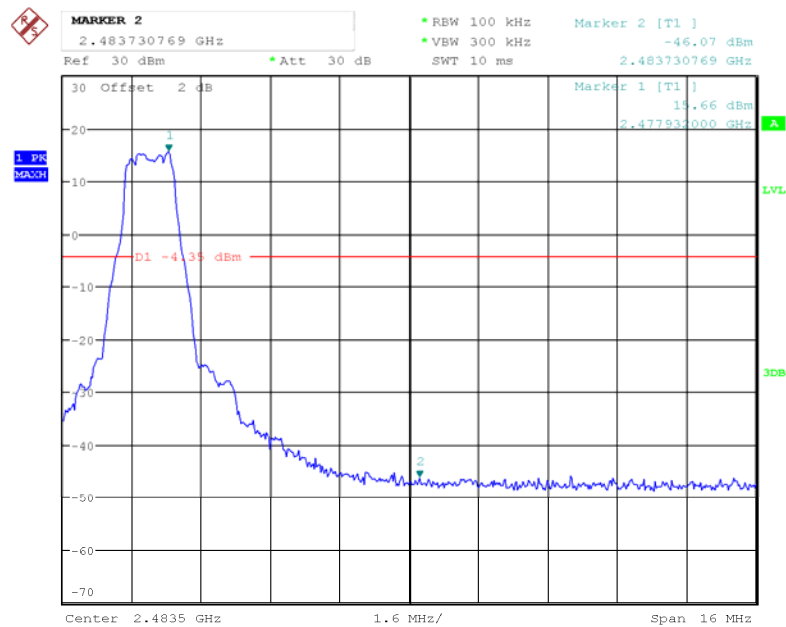
1.4MHz Mode:

Chain 0, Band Edge, Left Side



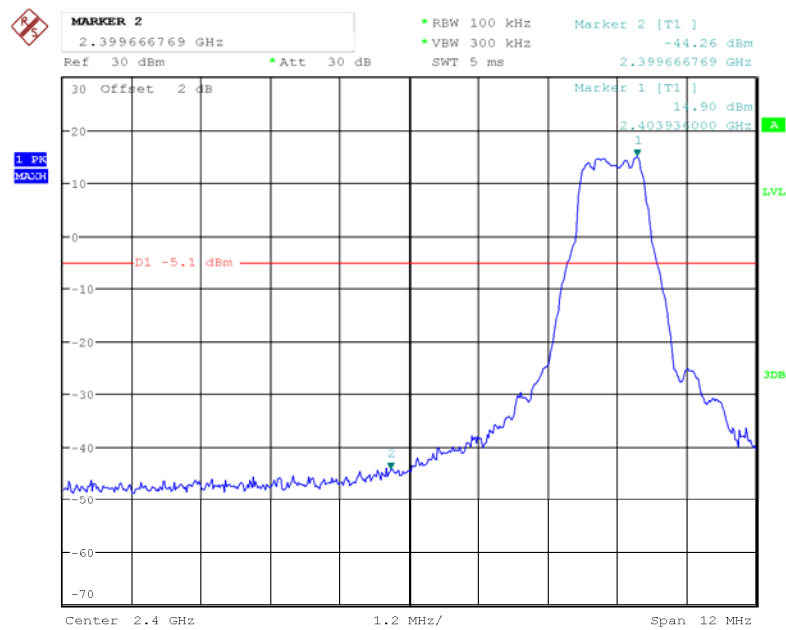
Date: 7.JAN.2018 10:05:23

Chain 0, Band Edge, Right Side



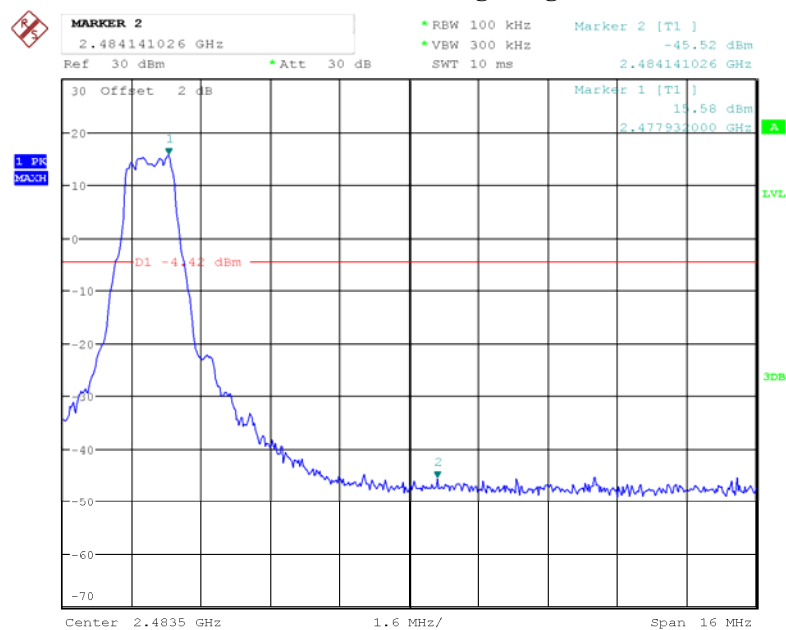
Date: 7.JAN.2018 10:06:25

Chain 1, Band Edge, Left Side



Date: 7.JAN.2018 10:22:49

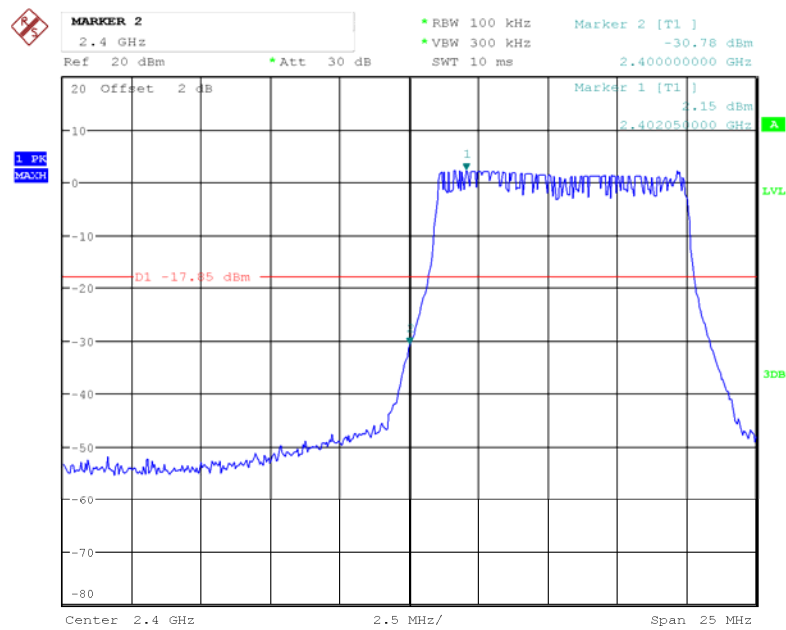
Chain 1, Band Edge, Right Side



Date: 7.JAN.2018 10:23:36

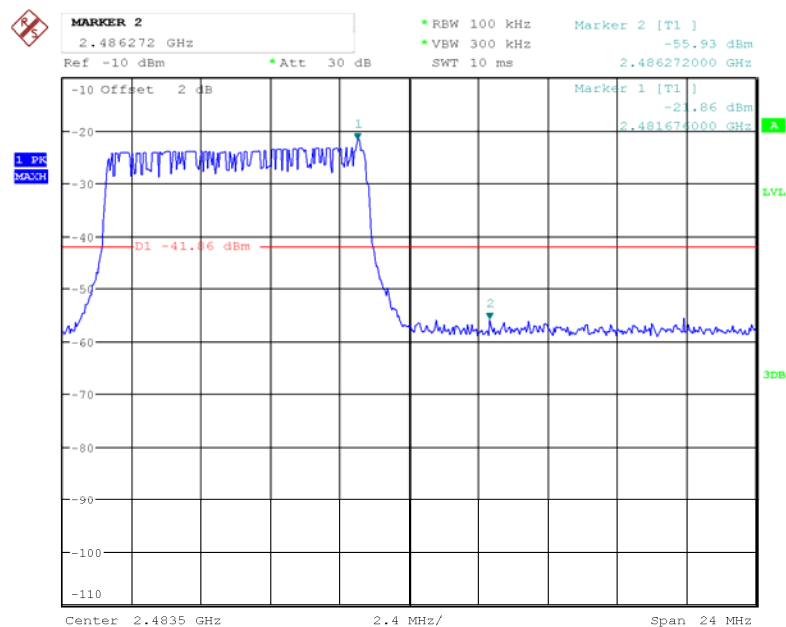
10MHz Mode:

Chain 0, Band Edge, 2405.5MHz



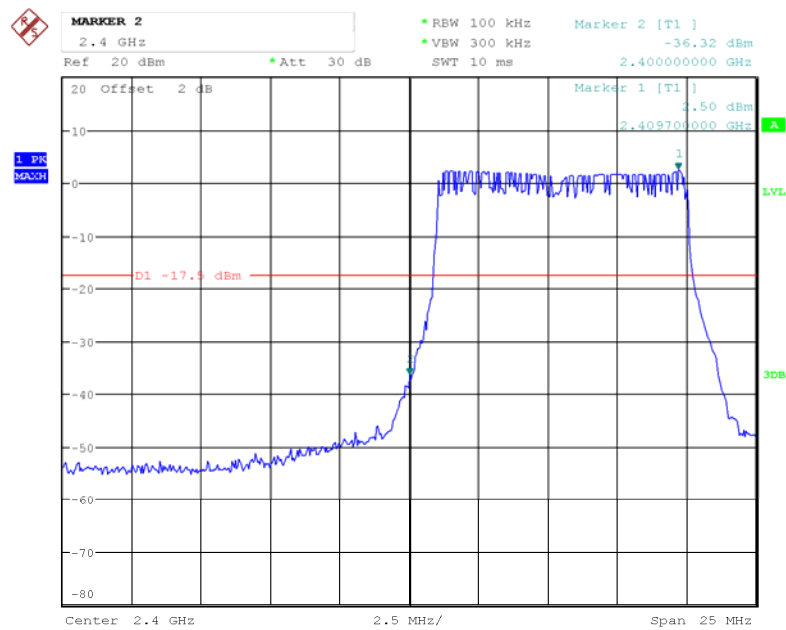
Date: 7.JAN.2018 11:10:34

Chain 0, Band Edge, 2477.5MHz



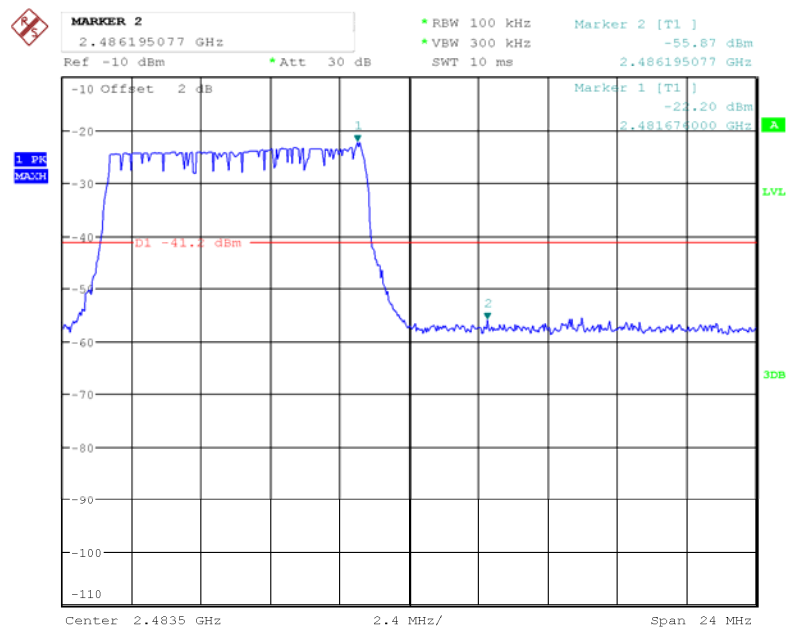
Date: 7.JAN.2018 11:44:39

Chain 1, Band Edge, 2405.5MHz



Date: 7.JAN.2018 13:44:04

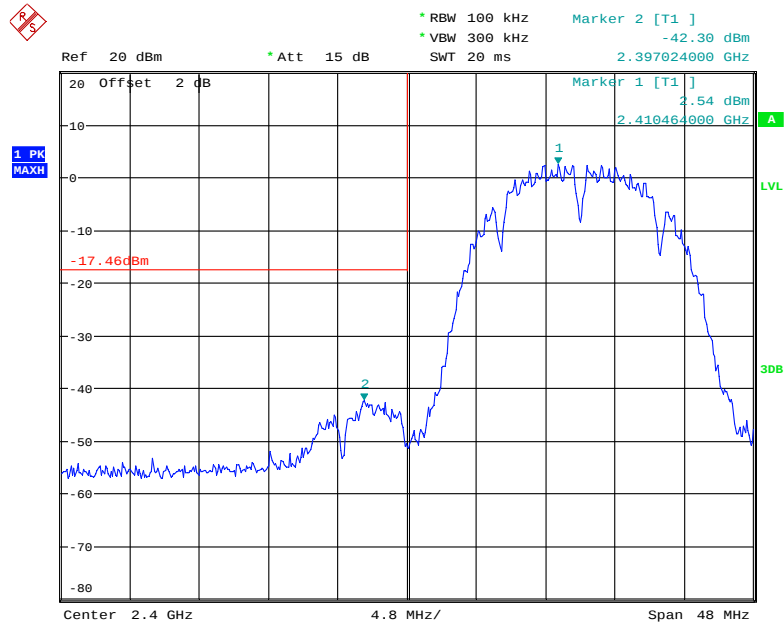
Chain 1, Band Edge, 2477.5MHz



Date: 7.JAN.2018 14:07:40

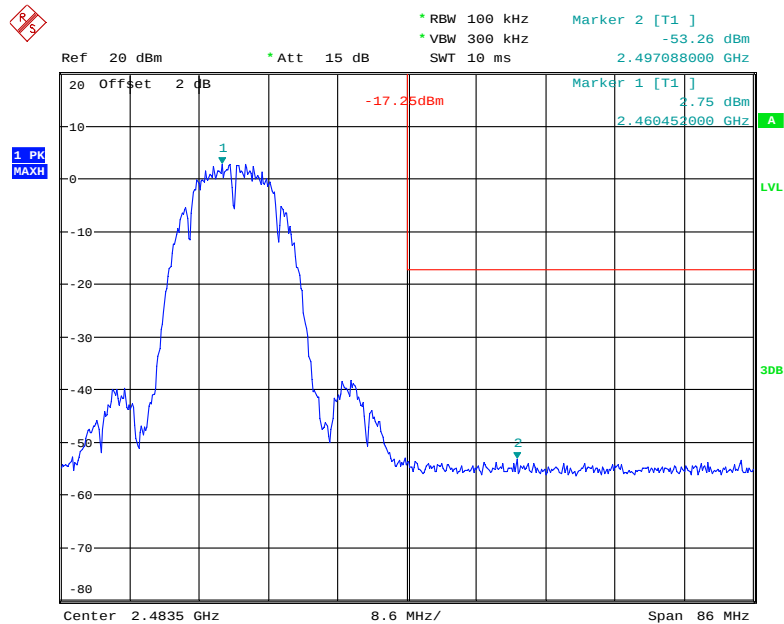
802.11b:

Chain 0, Band Edge, Left Side



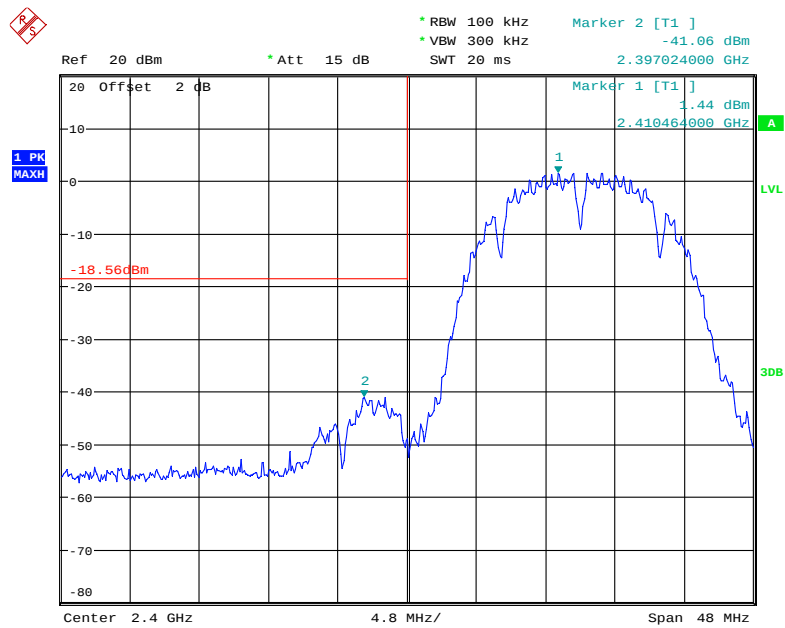
Date: 12.JAN.2018 23:27:10

Chain 0, Band Edge, Right Side



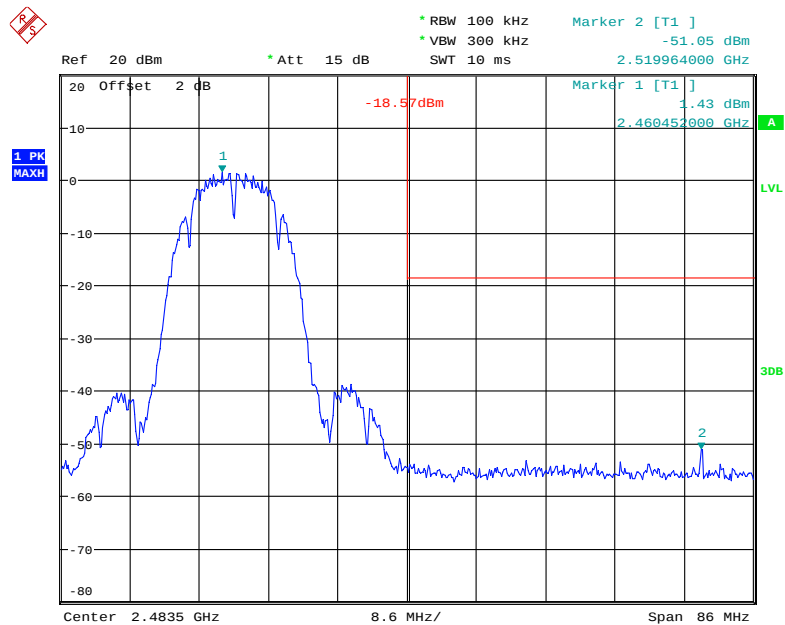
Date: 12.JAN.2018 23:22:30

Chain 1,Band Edge, Left Side



Date: 12.JAN.2018 23:10:12

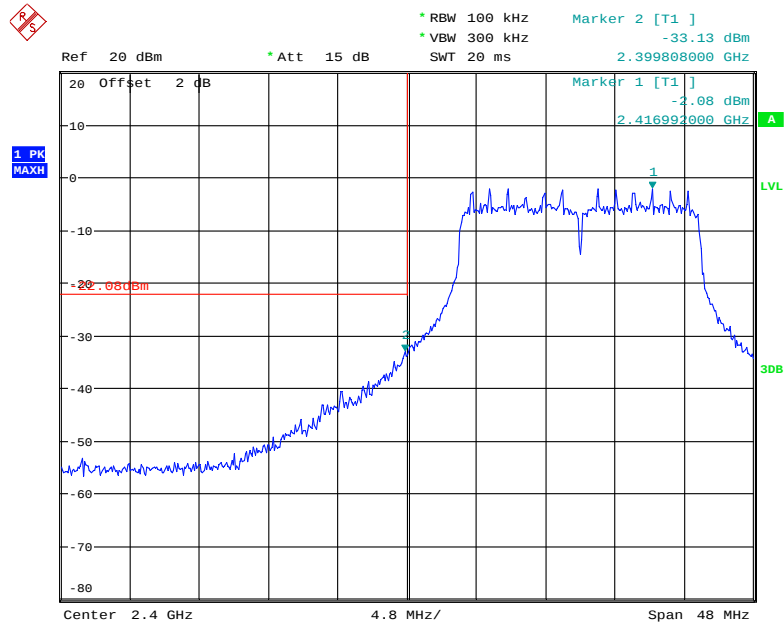
Chain 1,Band Edge, Right Side



Date: 12.JAN.2018 23:19:36

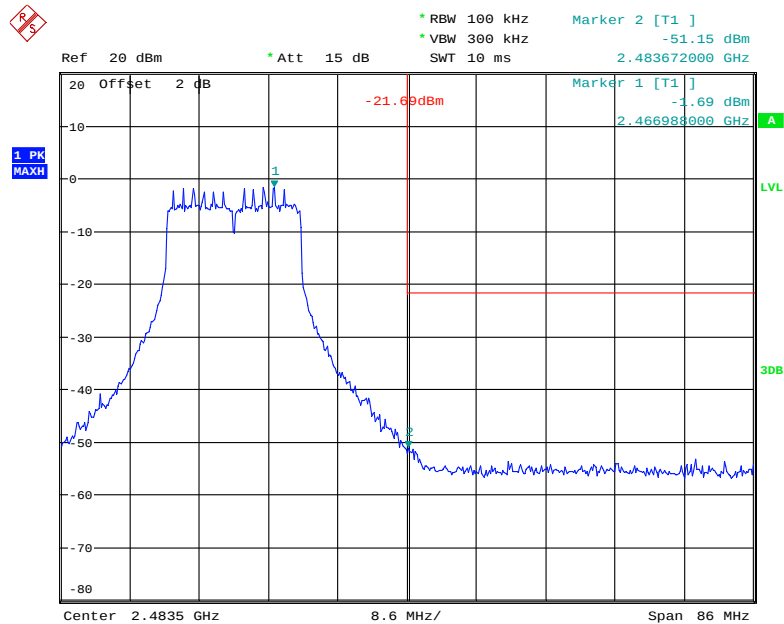
802.11g:

Chain 0, Band Edge, 2412MHz



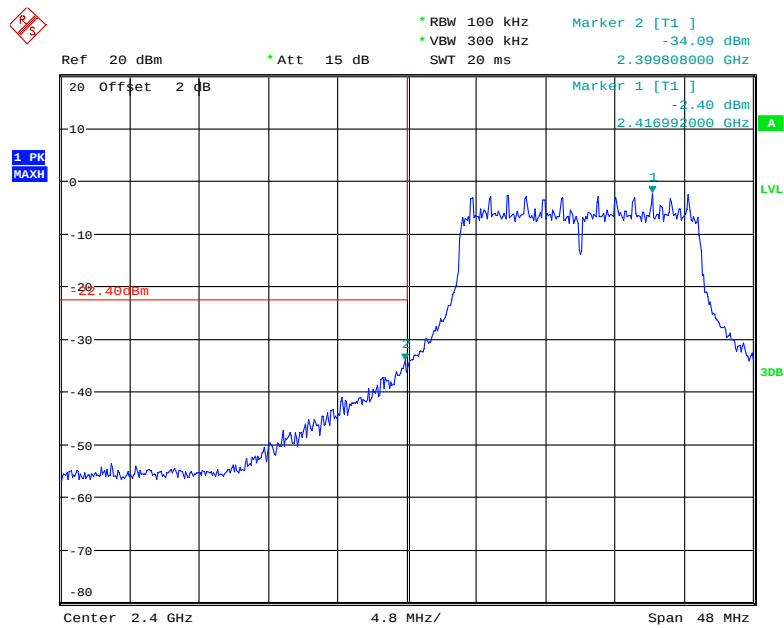
Date: 12.JAN.2018 23:30:52

Chain 0, Band Edge, 2462MHz



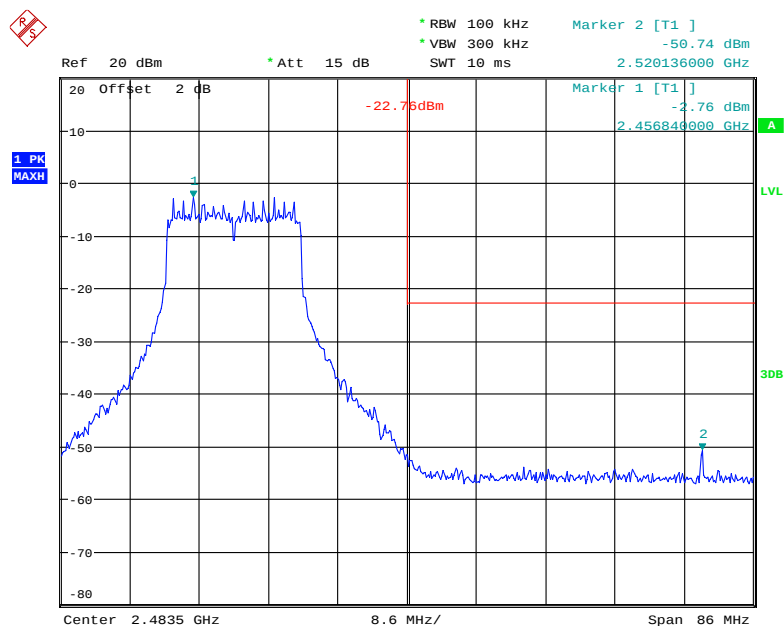
Date: 12.JAN.2018 23:36:18

Chain 1, Band Edge, 2412MHz



Date: 12.JAN.2018 23:47:35

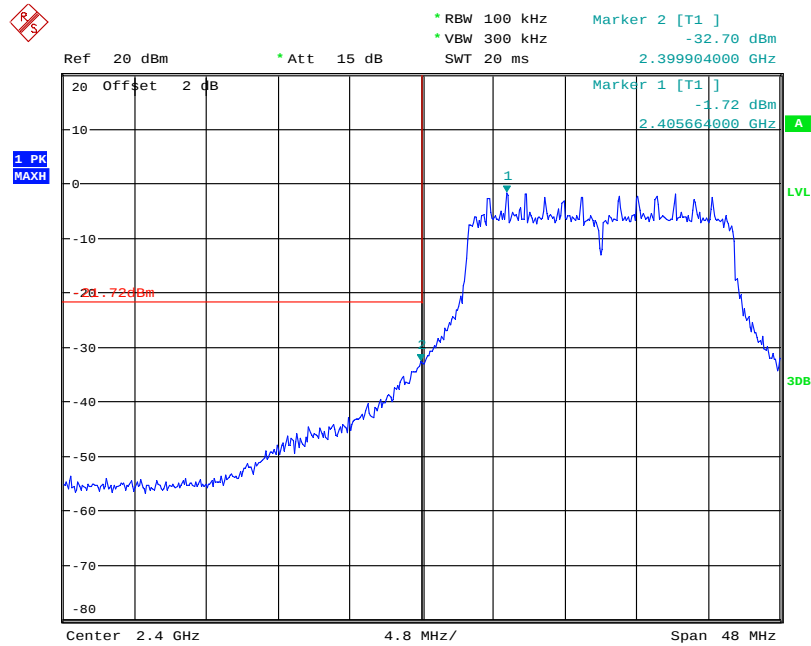
Chain 1, Band Edge, 2462MHz



Date: 12.JAN.2018 23:42:32

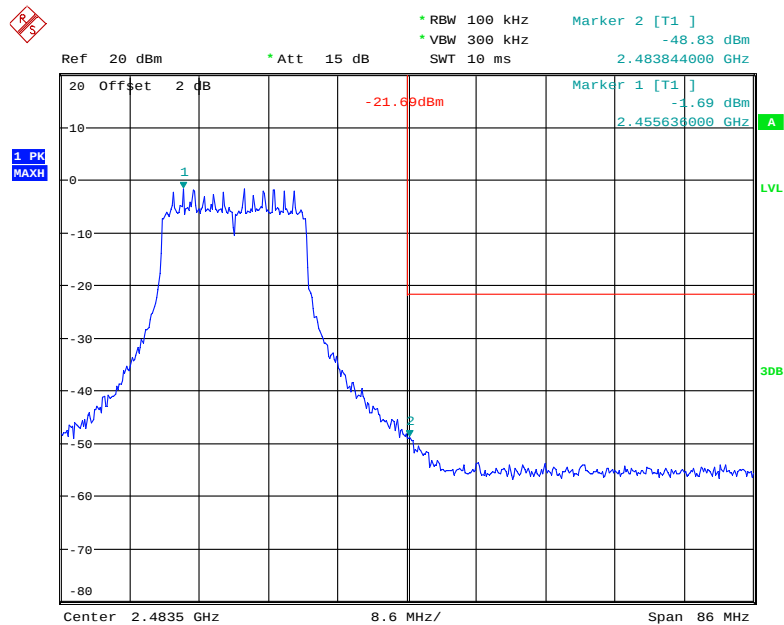
802.11n ht20:

Chain 0, Band Edge, 2412MHz



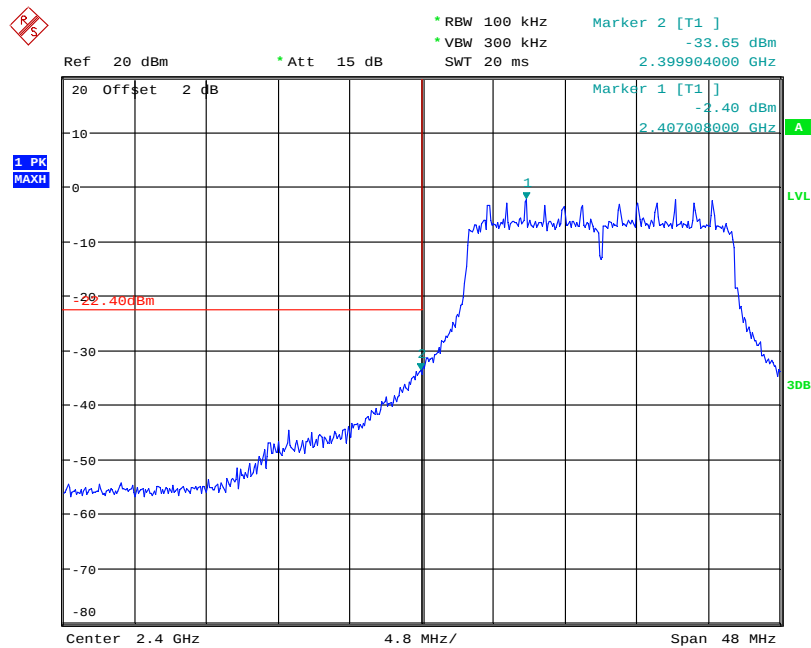
Date: 13.JAN.2018 00:05:39

Chain 0, Band Edge, 2462MHz



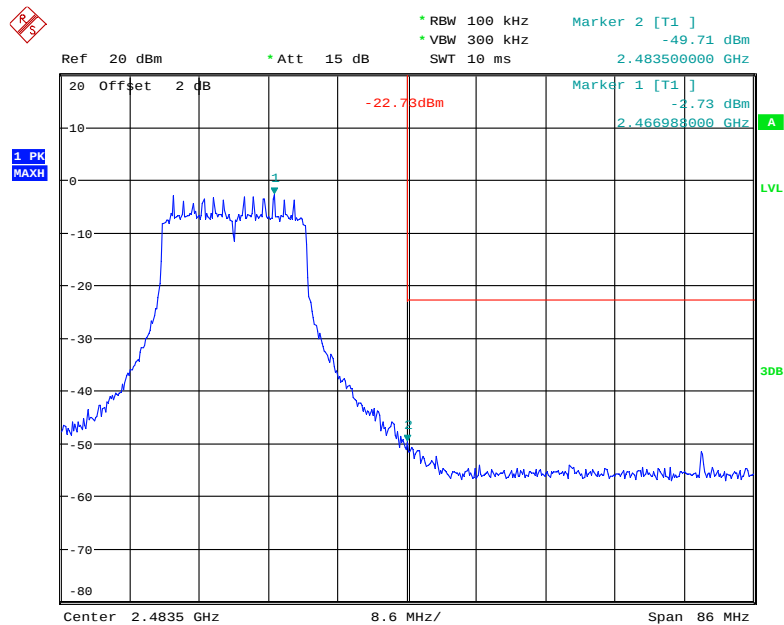
Date: 13.JAN.2018 00:00:06

Chain 1, Band Edge, 2412MHz



Date: 12.JAN.2018 23:51:27

Chain 1, Band Edge, 2462MHz



Date: 12.JAN.2018 23:56:49

FCC §15.247(e) - POWER SPECTRAL DENSITY

Applicable Standard

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. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT was set without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set the RBW = 3 kHz, VBW = 10 kHz, Set the span to 1.5 times the DTS bandwidth.
4. Use the peak marker function to determine the maximum amplitude level.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU 26	200256	2018-01-04	2019-01-04
N/A	Coaxial Cable	C-SJ00-0010	C0010/01	Each Time	/

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	22.9~26.3 °C
Relative Humidity:	36~44 %
ATM Pressure:	101.1~101.2 kPa

* The testing was performed by Nami Quan from 2018-01-07 to 2018-01-13.

Test Result: Compliance

Test Mode: Transmitting

Test Result: Compliant. Please refer to the following table and plots

1.4MHz/10MHz modes:

Test mode	Channel	Frequency (MHz)	PSD (dBm/3kHz)		Limit (dBm/3kHz)
			Chain 0	Chain 1	
1.4MHz	Low	2403.5	0.9	0.72	≤8
	Middle	2441.5	1.04	1.18	≤8
	High	2477.5	0.98	1.36	≤8
10MHz	Low	2405.5	-16.17	-15.19	≤8
	Middle	2441.5	-7.26	-7.37	≤8
	High	2477.5	-41.76	-41.59	≤8

802.11b/g/n ht20 modes

Test mode	Channel	Frequency (MHz)	PSD (dBm/3kHz)			Limit (dBm/3kHz)
			Chain 0	Chain 1	Total	
802.11b	Low	2412	-12.79	-13.18	-9.97	≤6.38
	Middle	2437	-12.11	-12.8	-9.43	≤6.38
	High	2462	-13.17	-13.36	-10.25	≤6.38
802.11g	Low	2412	-16.77	-18.51	-14.54	≤6.38
	Middle	2437	-13.06	-13.05	-10.04	≤6.38
	High	2462	-16.64	-18.26	-14.36	≤6.38
802.11n ht20	Low	2412	-17.39	-17.29	-14.33	≤6.38
	Middle	2437	-9.94	-11.97	-7.83	≤6.38
	High	2462	-15.01	-18.77	-13.48	≤6.38

Note: the maximum antenna gain is 4.62 dBi, the device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:

$$\text{Array Gain} = 10 \log(N_{\text{ANT}}/N_{\text{SS}}) \text{ dB.}$$

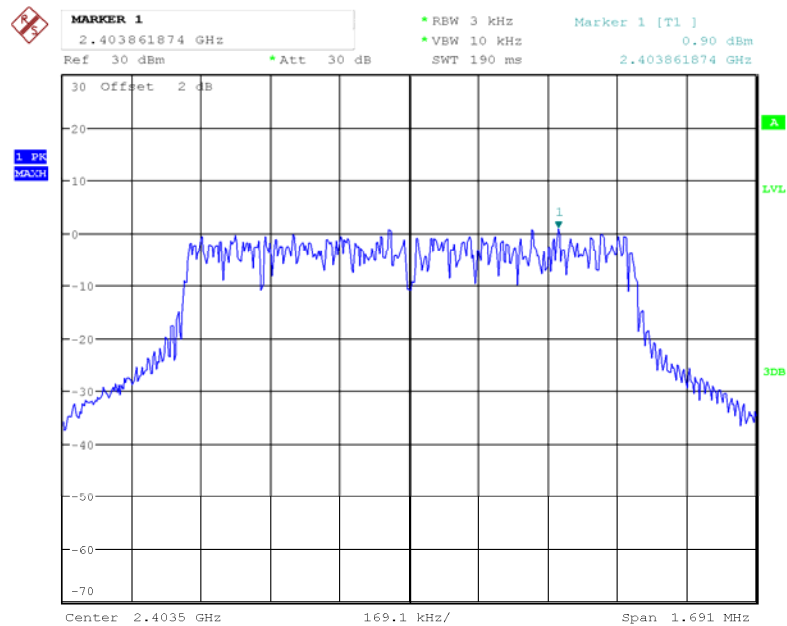
So:

$$\text{Directional gain} = \text{GANT} + \text{Array Gain} = 4.62 + 10 \cdot \log(2) = 7.62 \text{ dBi}$$

The limit should be reduced by 1.62dB.

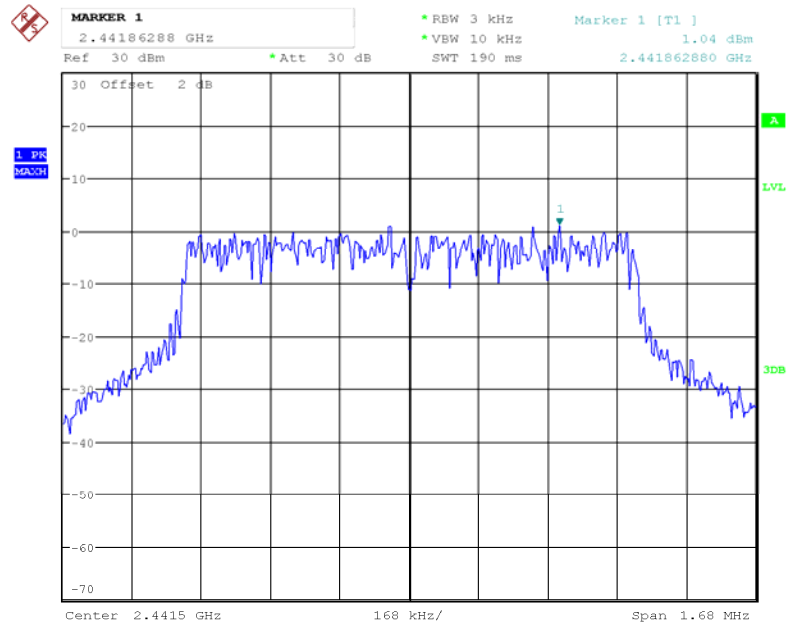
1.4MHz Mode:

Chain 0, Power Spectral Density, Low Channel



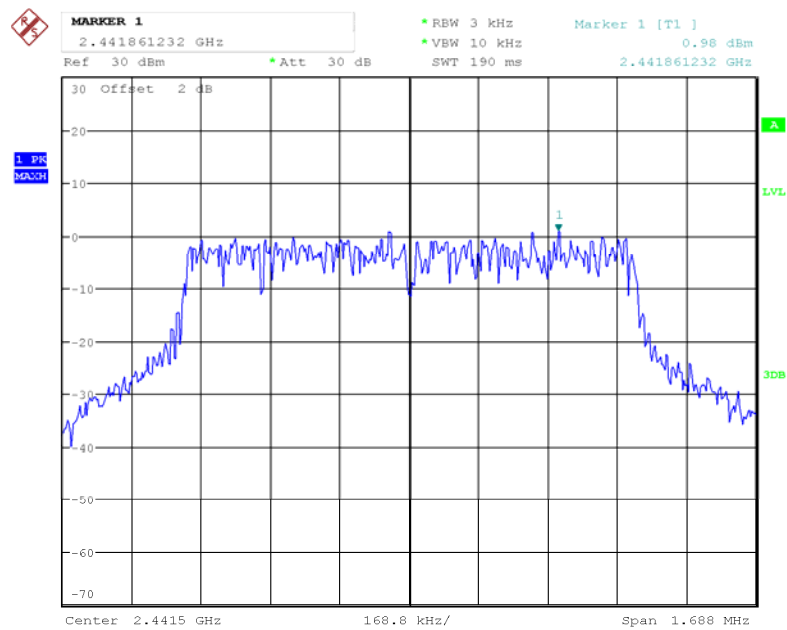
Date: 7.JAN.2018 09:55:53

Chain 0, Power Spectral Density, Middle Channel



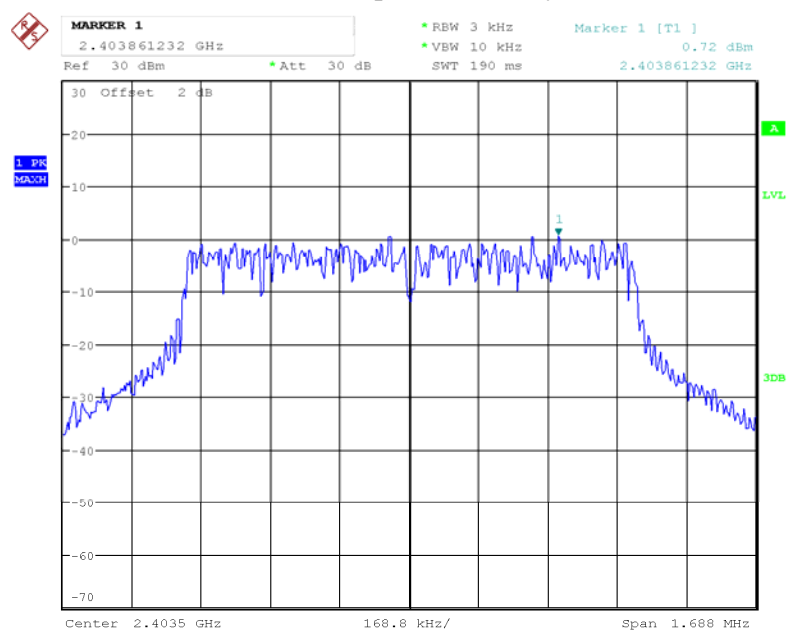
Date: 7.JAN.2018 09:56:29

Chain 0,Power Spectral Density, High Channel



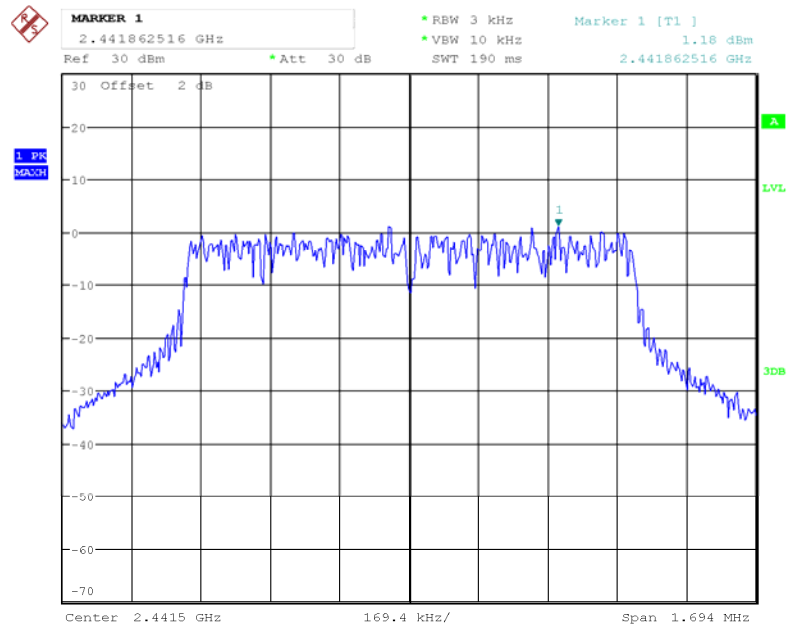
Date: 7.JAN.2018 09:57:06

Chain 1,Power Spectral Density, Low Channel



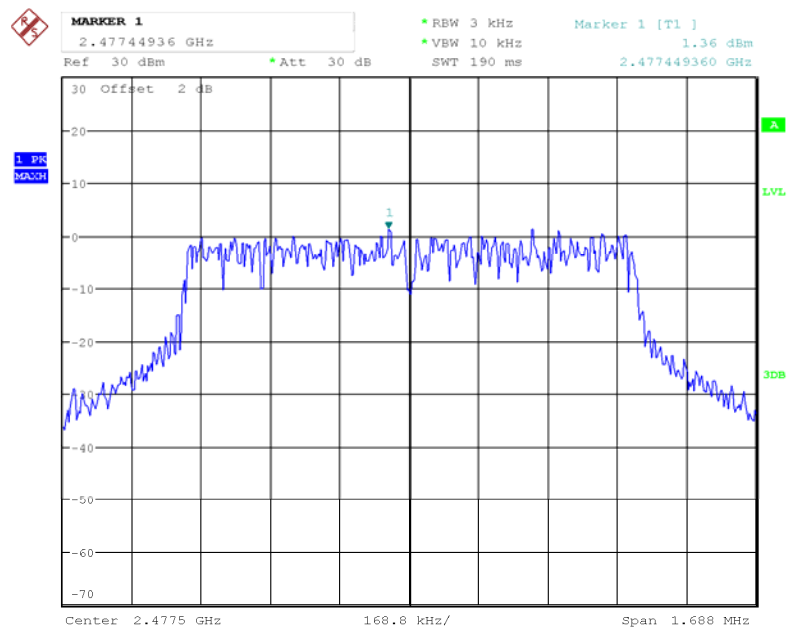
Date: 7.JAN.2018 10:20:10

Chain 1,Power Spectral Density, Middle Channel

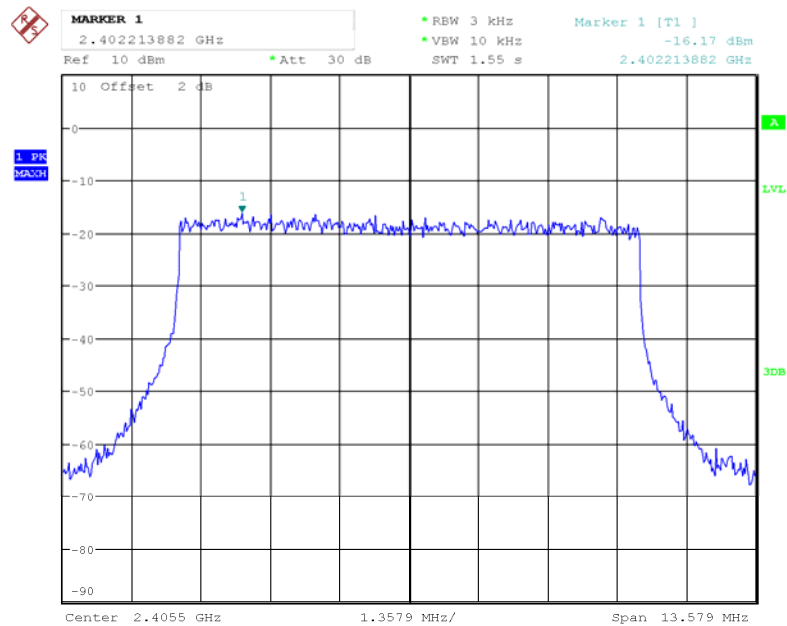


Date: 7.JAN.2018 10:20:58

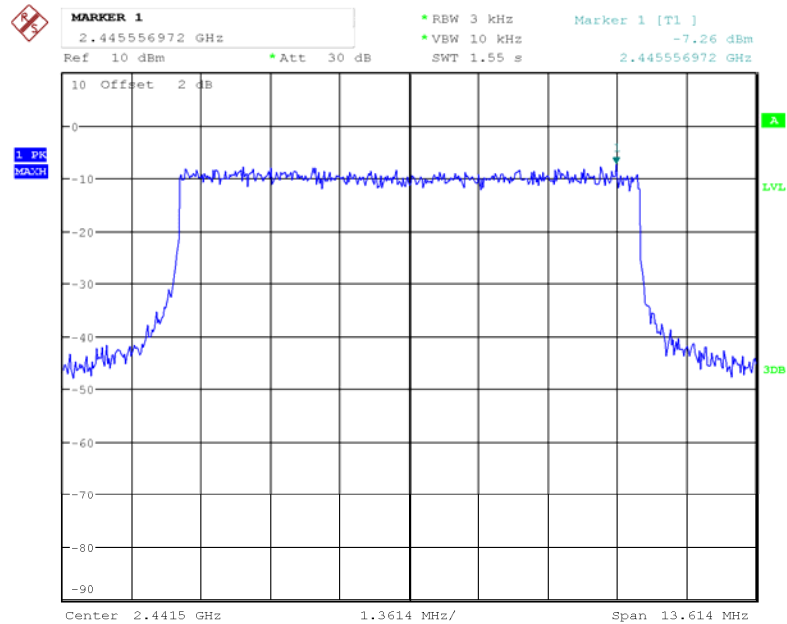
Chain 1,Power Spectral Density, High Channel



Date: 7.JAN.2018 10:21:42

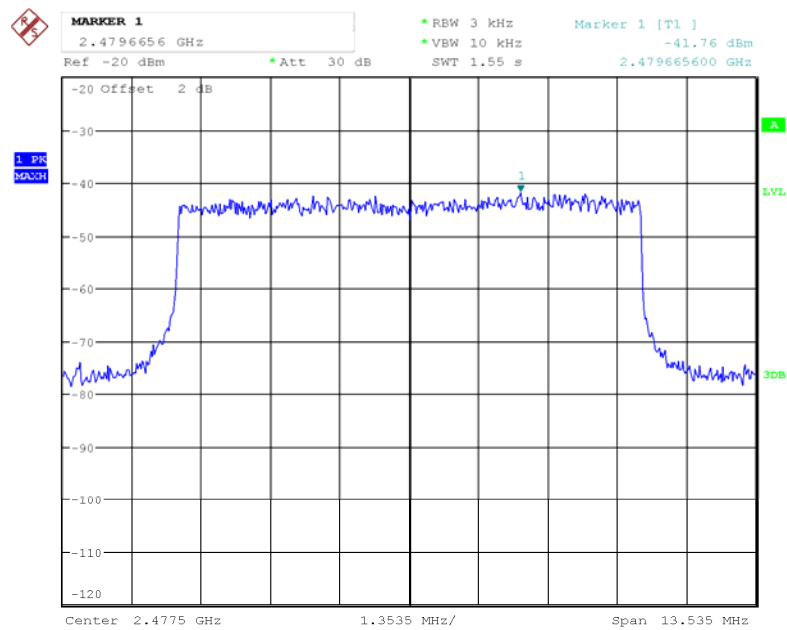
10MHz Mode:**Chain 0,Power Spectral Density, Low Channel**

Date: 7.JAN.2018 10:59:19

Chain 0,Power Spectral Density, Middle Channel

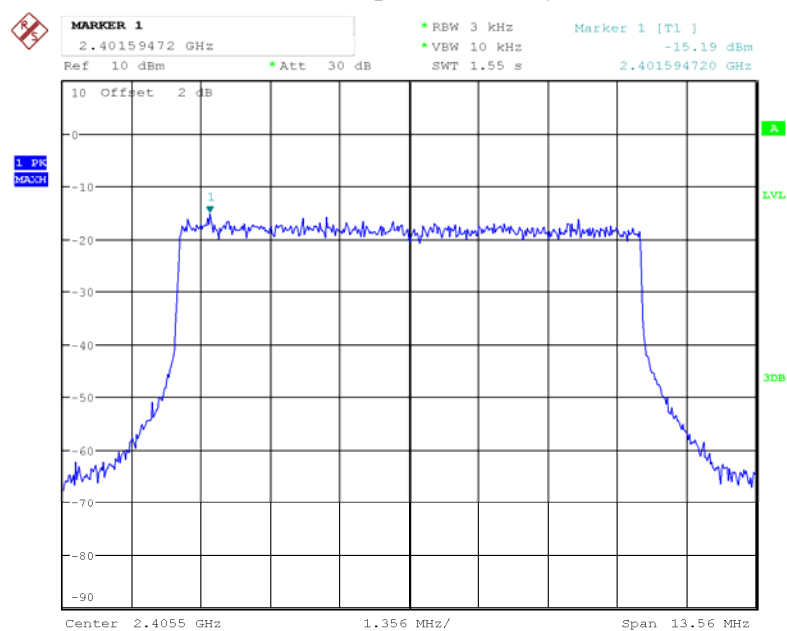
Date: 7.JAN.2018 11:00:10

Chain 0,Power Spectral Density, High Channel



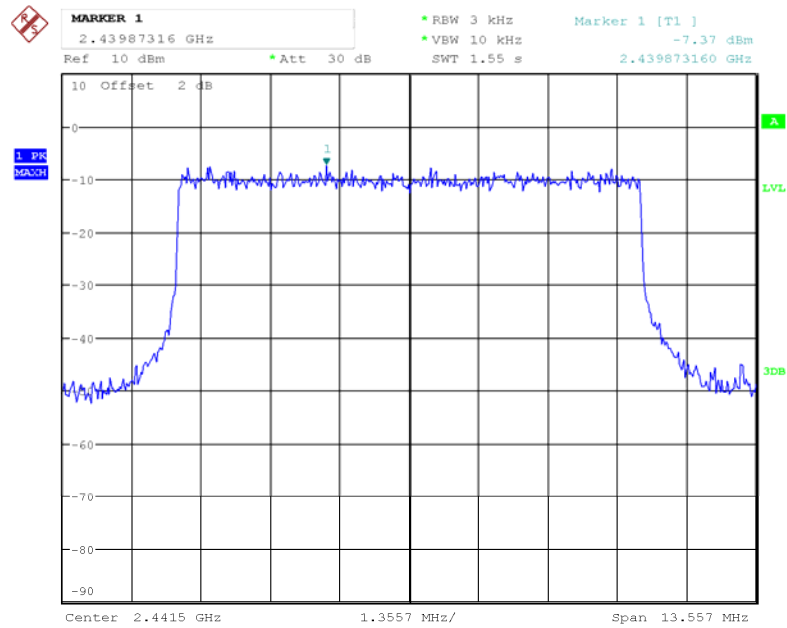
Date: 7.JAN.2018 11:01:13

Chain 1,Power Spectral Density, Low Channel



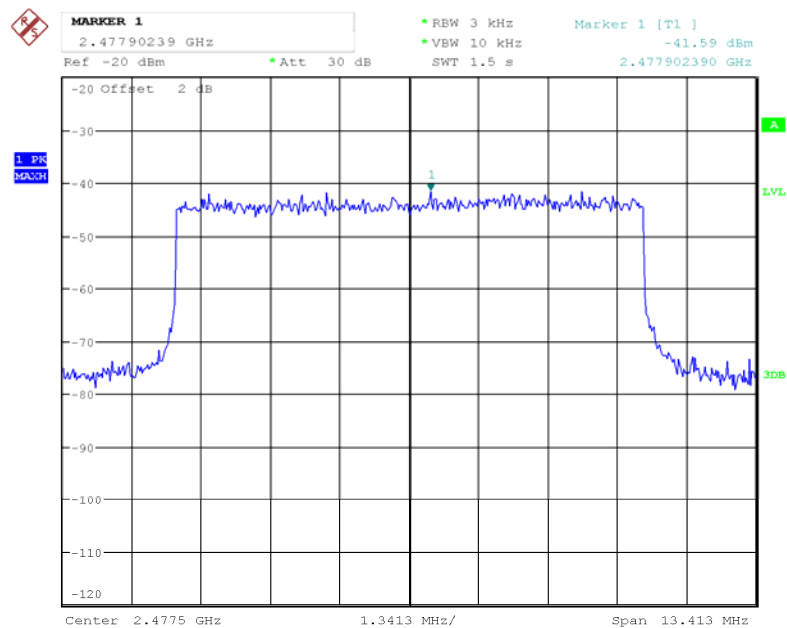
Date: 7.JAN.2018 13:37:35

Chain 1,Power Spectral Density, Middle Channel



Date: 7.JAN.2018 13:39:26

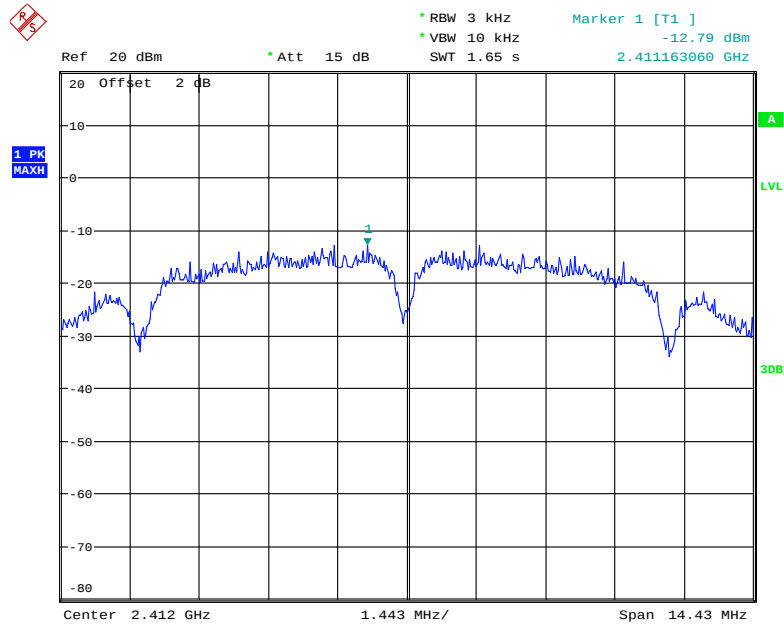
Chain 1,Power Spectral Density, High Channel



Date: 7.JAN.2018 13:41:06

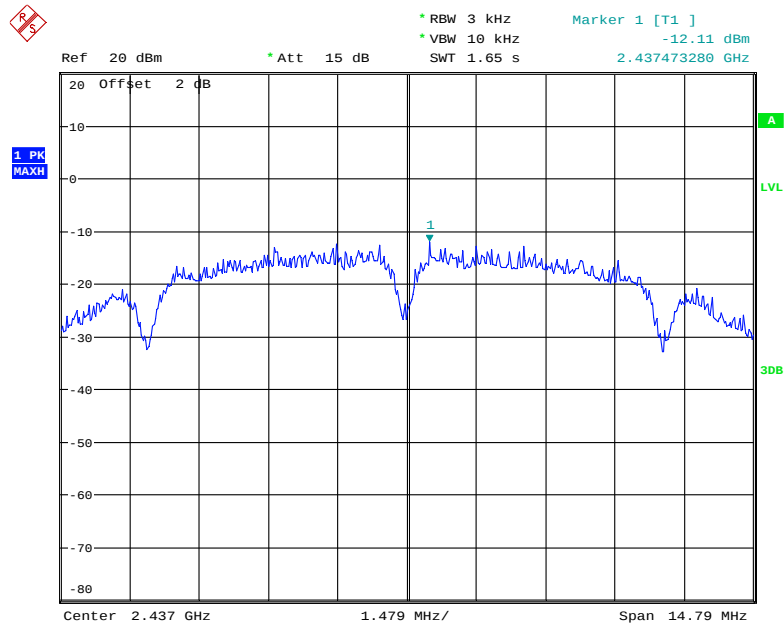
802.11b Mode:

Chain 0, Power Spectral Density, Low Channel



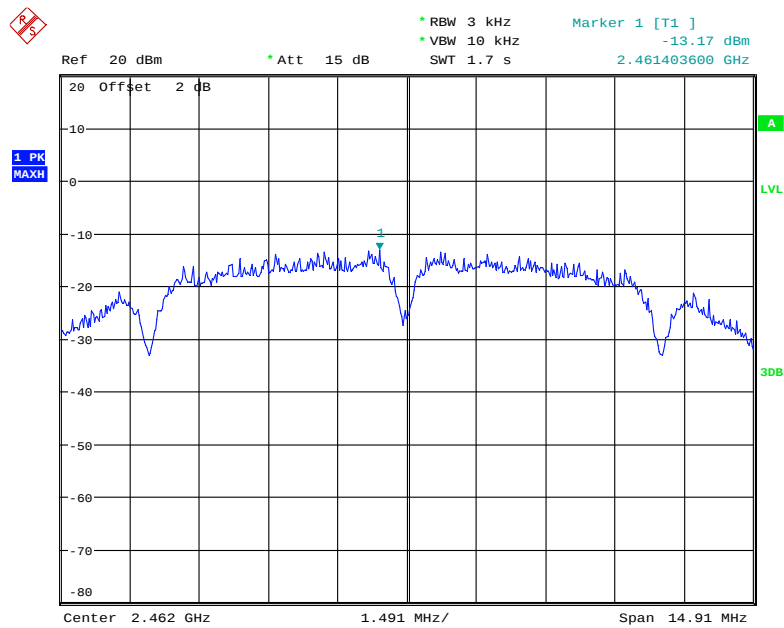
Date: 12.JAN.2018 23:26:53

Chain 0, Power Spectral Density, Middle Channel



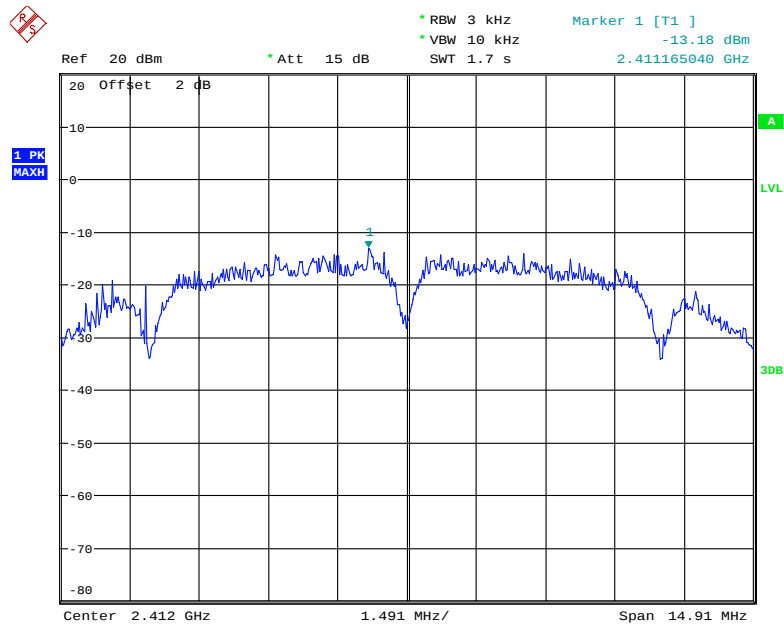
Date: 12.JAN.2018 23:24:28

Chain 0, Power Spectral Density, High Channel



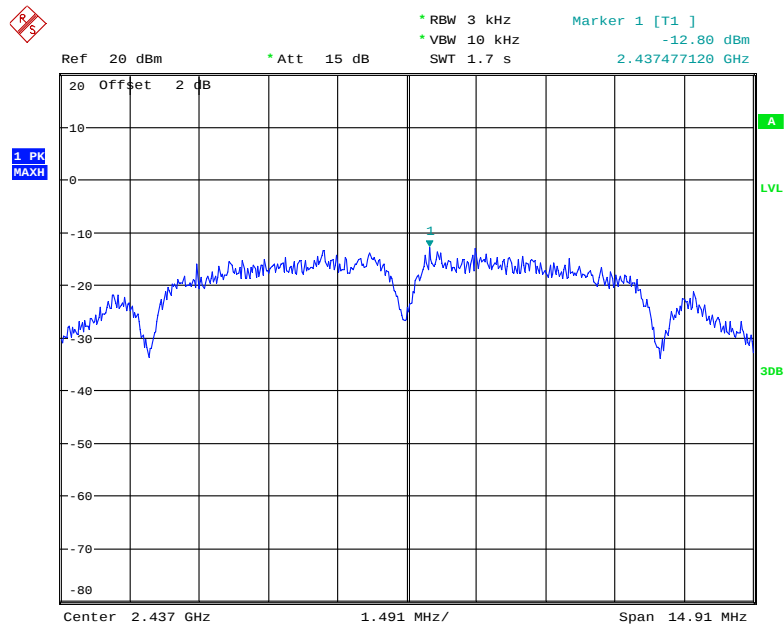
Date: 12.JAN.2018 23:21:58

Chain 1, Power Spectral Density, Low Channel



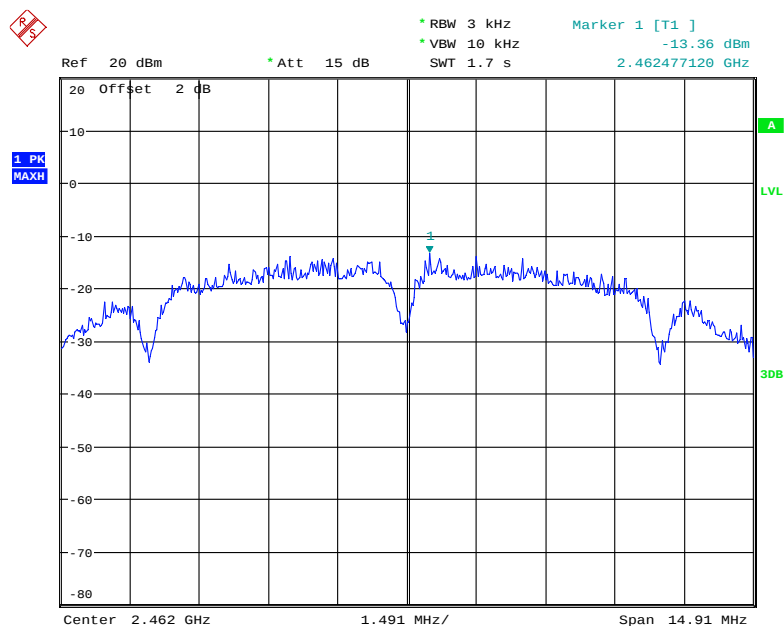
Date: 12.JAN.2018 23:09:49

Chain 1,Power Spectral Density, Middle Channel



Date: 12.JAN.2018 23:17:10

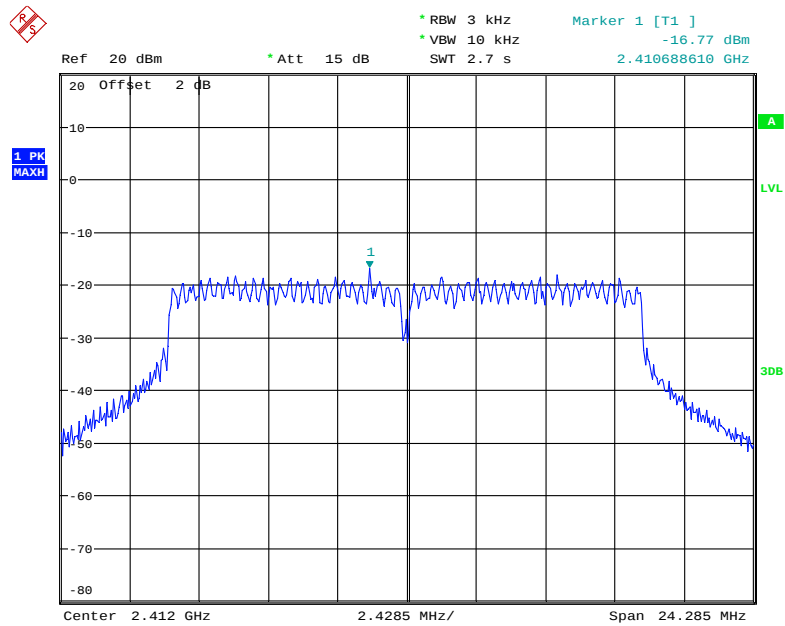
Chain 1,Power Spectral Density, High Channel



Date: 12.JAN.2018 23:19:10

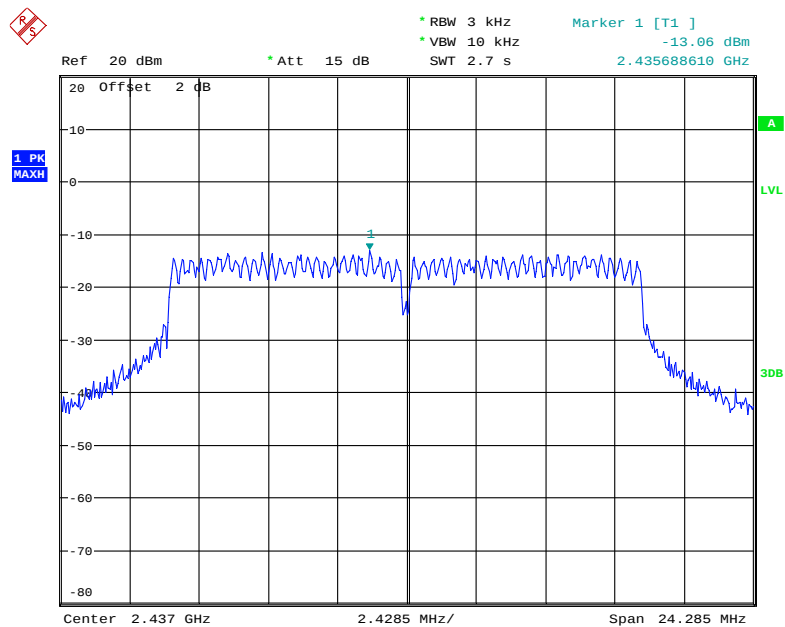
802.11g:

Chain 0, Power Spectral Density, Low Channel



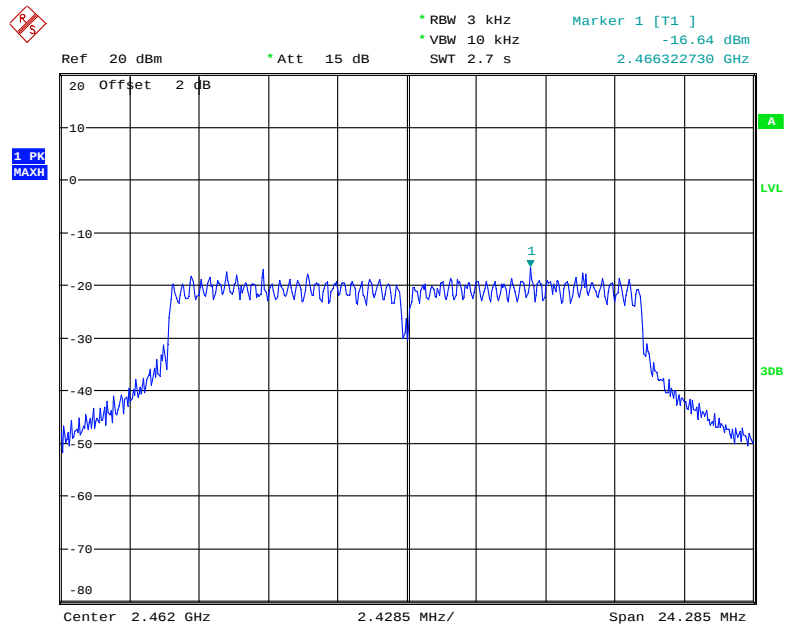
Date: 12.JAN.2018 23:30:23

Chain 0, Power Spectral Density, Middle Channel



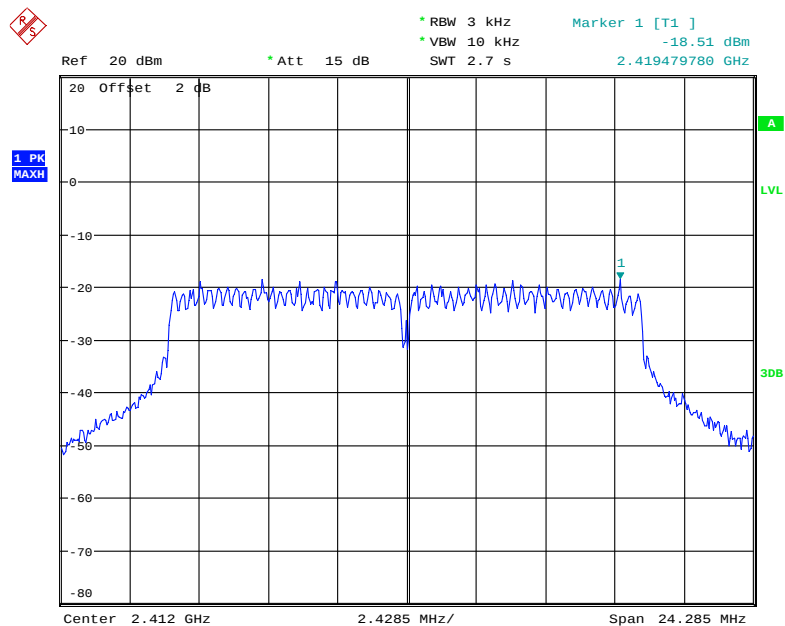
Date: 12.JAN.2018 23:33:21

Chain 0, Power Spectral Density, High Channel



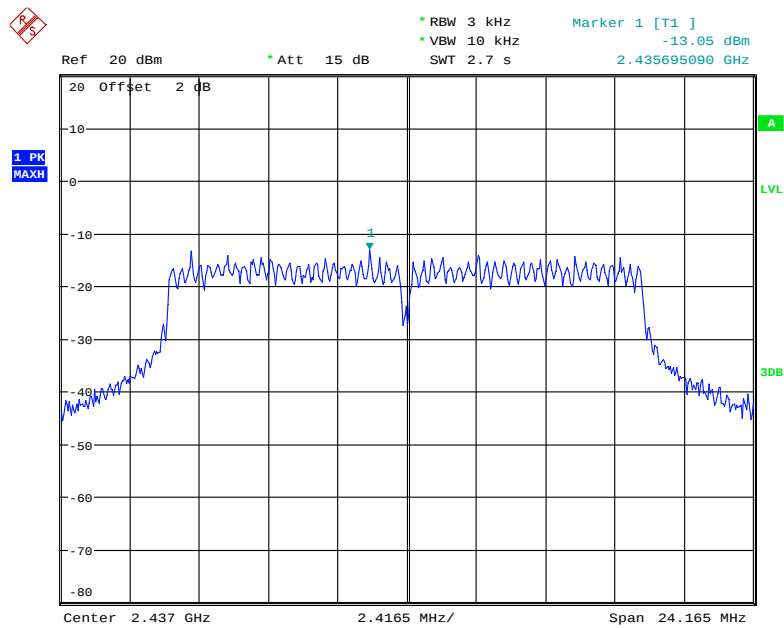
Date: 12.JAN.2018 23:35:58

Chain 1, Power Spectral Density, Low Channel



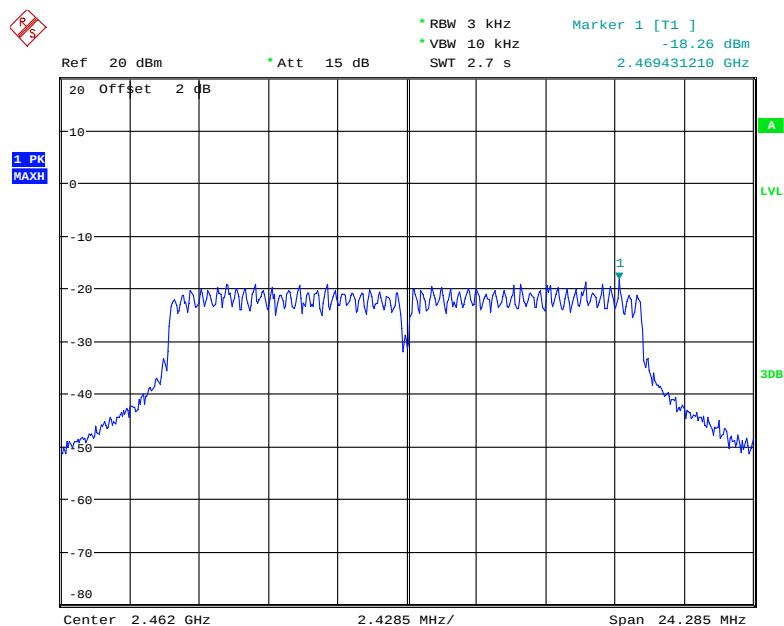
Date: 12.JAN.2018 23:47:12

Chain 1,Power Spectral Density, Middle Channel



Date: 12.JAN.2018 23:45:04

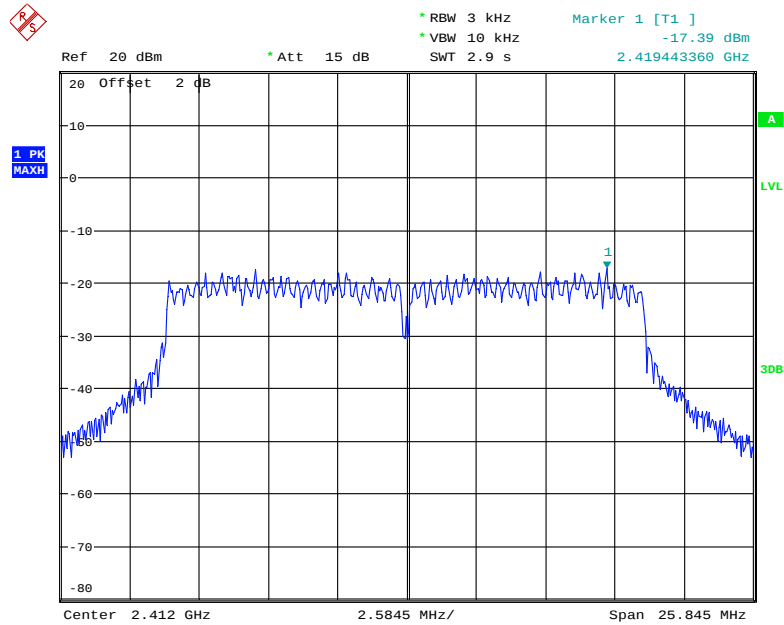
Chain 1,Power Spectral Density, High Channel



Date: 12.JAN.2018 23:42:12

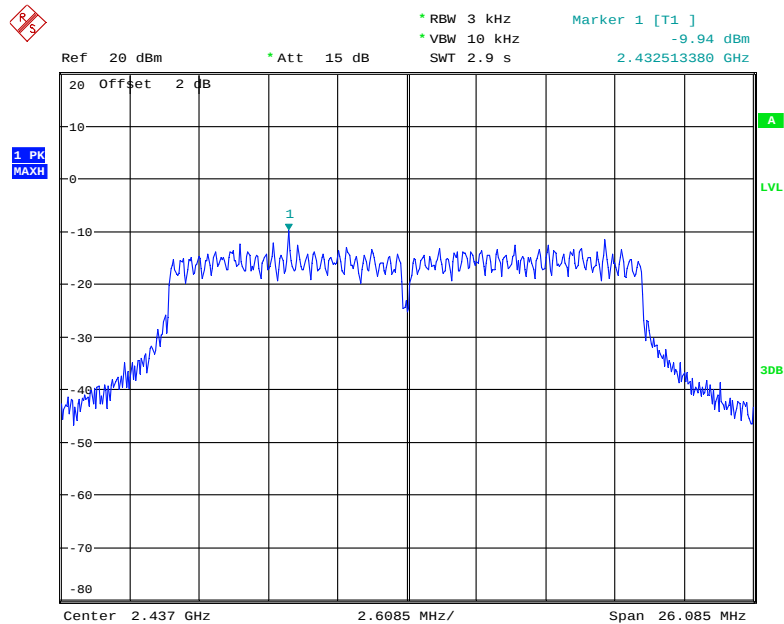
802.11n ht20

Chain 0, Power Spectral Density, Low Channel



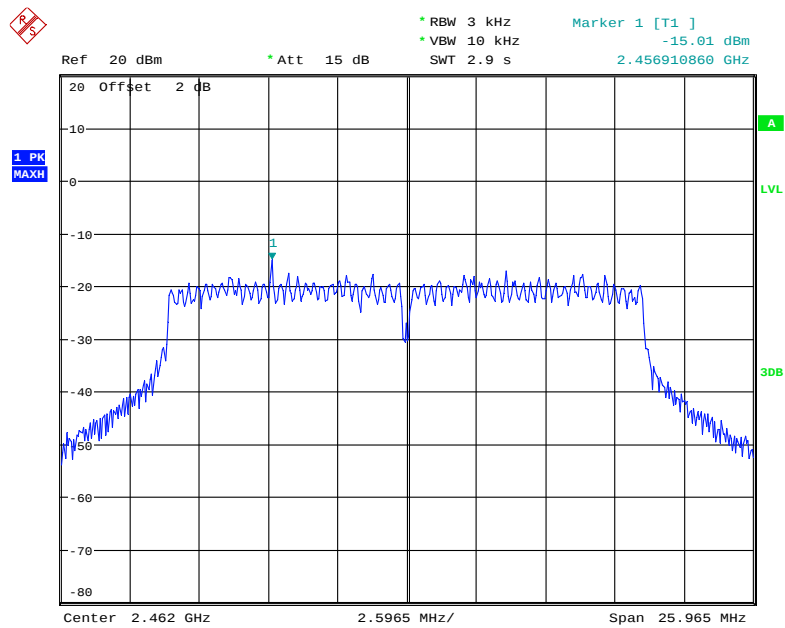
Date: 13.JAN.2018 00:05:13

Chain 0, Power Spectral Density, Middle Channel



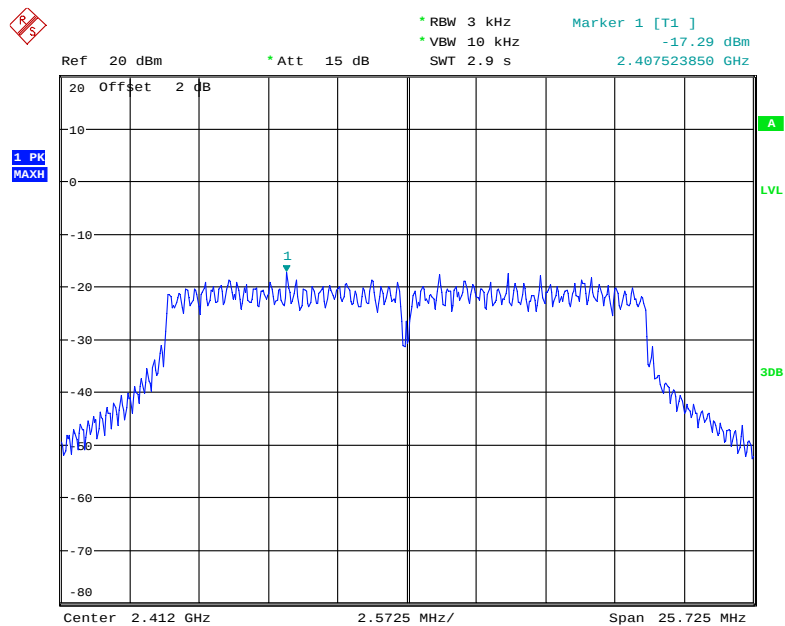
Date: 13.JAN.2018 00:02:41

Chain 0, Power Spectral Density, High Channel



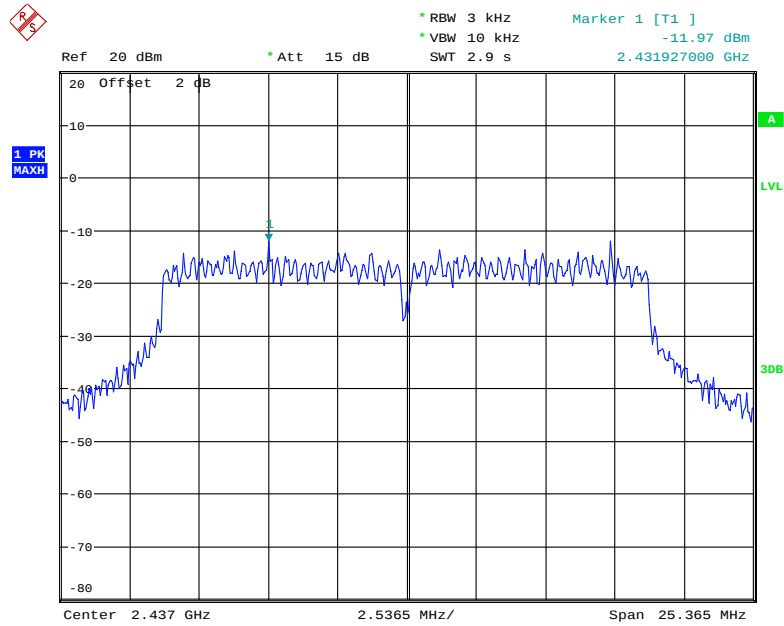
Date: 12.JAN.2018 23:59:40

Chain 1, Power Spectral Density, Low Channel



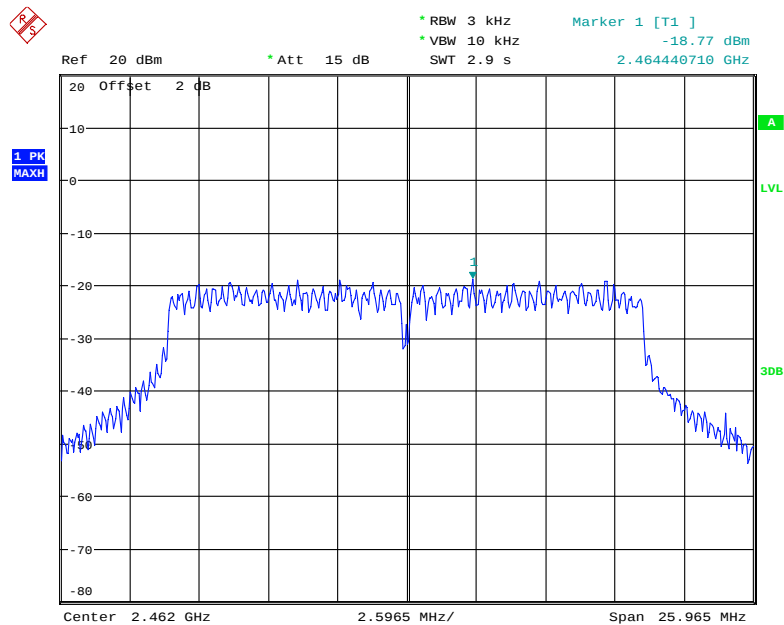
Date: 12.JAN.2018 23:51:04

Chain 1,Power Spectral Density, Middle Channel



Date: 12.JAN.2018 23:54:23

Chain 1,Power Spectral Density, High Channel



Date: 12.JAN.2018 23:56:27

***** END OF REPORT *****