FCC Test Report

Product Name ： Beta+

Trade Name ： Raptor

Model No. ： EV1000A-00

FCC ID. ： 2AH97-EVG1

Applicant ： Everysight Ltd.

Address ： Andrei Sakharov 9, Advance Technology Center, Building 3, Haifa 3508409, Israel

Date of Receipt ： May 08, 2017

Issued Date ： Aug. 23, 2017

Report No. ： 1750190R-RFUSP26V00

Report Version ： V1.0

Testing Laboratory

3024

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Test Report Certification

Issued Date : Aug. 23, 2017
Report No. : 1750190R-RFUSP26V00

Product Name	:	Beta+
Applicant	:	Everysight Ltd.
Address	:	Andrei Sakharov 9, Advance Technology Center, Building 3, Haifa 3508409, Israel
Manufacturer	:	Everysight Ltd.
Model No.	:	EV1000A-00
FCC ID.	:	2AH97-EVG1
EUT Voltage	:	Mode 1: DC 5V Mode 2: AC 120V/60Hz
Testing Voltage	:	Mode 1: DC 5V Mode 2: AC 120V/60Hz
Trade Name	:	Raptor
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2015 ANSI C63.10: 2013
Laboratory Name	:	Hsin Chu Laboratory
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Test Result	:	Complied

Documented By : Demi Chang

(Demi Chang / Senior Engineering Adm. Specialist)

Tested By : Elwin Lin

(Elwin Lin / Assistant Engineer)

Approved By : Roy Wang

(Roy Wang / Director)

Revision History

Report No.	Version	Description	Issued Date
1750190R-RFUSP26V00	V1.0	Initial issue of report	Aug. 23, 2017

Laboratory Information

We, **DEKRA Testing and Certification Co., Ltd.**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

Taiwan R.O.C.	**:**	**TAF, Accreditation Number: 3024**
USA	**:**	**FCC, Registration Number: TW3024**
Canada	**:**	**IC, Submission No: 181665 /** **IC Registration Number: 22397-1 / 22397-2 / 22397-3**

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site :

http://www.dekra.com.tw/english/about/certificates.aspx?bval=5

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site : http://www.dekra.com.tw/index_en.aspx

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1. General Information

1.1. EUT Description

Product Name	Beta+	
Trade Name	Raptor	
Model No.	EV1000A-00	
Frequency Range/ Channel Number	IEEE 802.11b/g IEEE 802.11n (20MHz)	2412~2462MHz / 11 Channels
Type of Modulation	IEEE 802.11b	Direct Sequence Spread Spectrum
	IEEE 802.11g/n	Orthogonal Frequency Division Multiplexing
Data Speed	IEEE 802.11b	1, 2, 5.5, 11Mbps
	IEEE 802.11g	6, 9, 12,18, 24, 36, 48,54Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS 0~MCS 7 and bandwidth defined in 802.11n

Antenna Information	
Antenna Type	PCB Antenna
Antenna Gain	2.32dBi

Accessories Information	
USB Cable	Shielded, 1m
Power Adapter	PHIHONG, PSA05A-050QL6 I/P : 100-240V~0.2A 50-60Hz O/P : 5V ⎓ 1A

ANT-TX / RX & Bandwidth

ANT-TX / RX	TX	RX
Mode/ Channel Bandwidth	20MHz	20MHz
IEEE802.11b	✓	✓
IEEE802.11g	✓	✓
IEEE802.11n	✓	✓

IEEE 802.11n

MCS Index	Modulation	R	N_{BPSCS}	N_{CBPS}		N_{DBPS}		Data Rate(Mb/s)			
								800ns GI		400ns GI	
				20MHz	40MHz	20MHz	40MHz	20MHz	40MHz	20MHz	40MHz
0	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.2	15.0
1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.4	30.0
2	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.7	45.0
3	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.9	60.0
4	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.3	90.0
5	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.8	120.0
6	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.0	135.0
7	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.2	150.0
Note 1: Support of 400ns GI is optional on transmit and receive.											

Table 1 – MCS parameters for TX Antenna number = 1

Symbol	Explanation
R	Code rate
N_{BPSC}	Number of coded bits per single carrier
N_{CBPS}	Number of coded bits per symbol
N_{DBPS}	Number of data bits per symbol
GI	guard interval

IEEE 802.11b/g & IEEE 802.11n (20MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
001	2412 MHz	002	2417 MHz	003	2422 MHz	004	2427 MHz
005	2432 MHz	006	2437 MHz	007	2442 MHz	008	2447 MHz
009	2452 MHz	010	2457 MHz	011	2462 MHz		

Note:

1. This device is a Beta+ including 2.4GHz b/g/n (1x1), BT2.0, BT4.0 and ANT+ transmitting and receiving function.
2. Regards to the frequency band operation; the lowest、middle and highest frequency of channel were selected to perform the test, and then shown on this report.

1.2. Test Mode

DEKRA has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

TX	Mode 1: Transmit-Power by PC Mode 2: Transmit-Power by Adapter

Test Items	Modulation	Channel	Antenna	Result
Conducted Emission	11n(20MHz)	6	0	Complies
Peak Power Output	11b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
Radiated Emission	11b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
RF antenna conducted test	11b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
Radiated Emission Band Edge	11b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
DTS Bandwidth	11b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
Occupied Bandwidth	11b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
Power Density	11b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies

1.3. Tested System Details

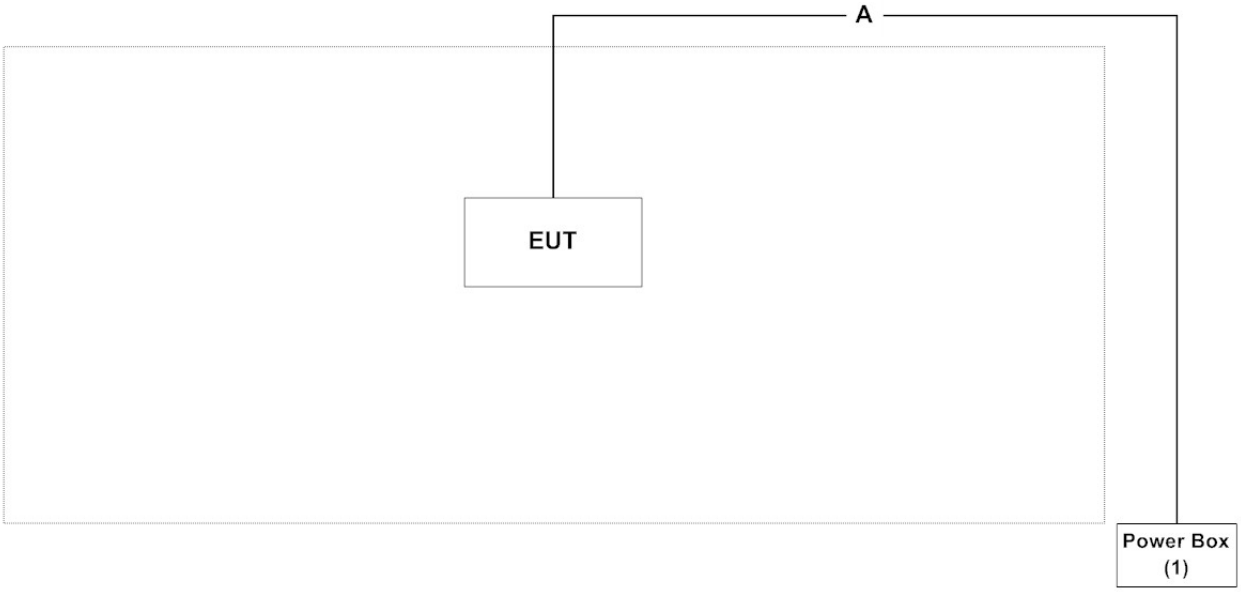
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Test Mode		Mode 1: Transmit-Power by PC				
Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Notebook PC	Lenovo	B590	WB1529782	DoC	Non-Shielded, 1.8m, one ferrite core bonded
Test Mode		Mode 2: Transmit-Power by Adapter				
Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
N/A						

1.4. Configuration of tested System

Test Mode	Mode 1: Transmit-Power by PC

Connection Diagram



Signal Cable Type		Signal cable Description
A	USB Cable	Shielded, 1.5m

Test Mode	Mode 2: Transmit-Power by Adapter
Connection Diagram	

1.5. EUT Exercise Software

1	Setup the EUT as shown in Section 1.4.
2	Execute the test program “QRCT”.
3	Configure the test mode, the test channel, and the data rate.
4	Press “Start TX” to start the continuous transmitting.
5	Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual	Test Site
Temperature (°C)	FCC PART 15 C 15.207 Conducted Emission	15 - 35	20°C	3
Humidity (%RH)		25 - 75	50%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Peak Power Output	15 - 35	25°C	3
Humidity (%RH)		25 - 75	45%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Radiated Emission	15 - 35	25°C	2
Humidity (%RH)		25 - 75	65%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 RF antenna conducted test	15 - 35	25°C	3
Humidity (%RH)		25 - 75	45%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Band Edge	15 - 35	25°C	2
Humidity (%RH)		25 - 75	48%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 DTS Bandwidth	15 - 35	25°C	3
Humidity (%RH)		25 - 75	45%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Occupied Bandwidth	15 - 35	25°C	3
Humidity (%RH)		25 - 75	45%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Power Density	15 - 35	25°C	3
Humidity (%RH)		25 - 75	45%RH	
Barometric pressure (mbar)		860 - 1060	950-1000	

Note: Test site information refers to Laboratory Information.

2. Conducted Emission

2.1. Test Equipment

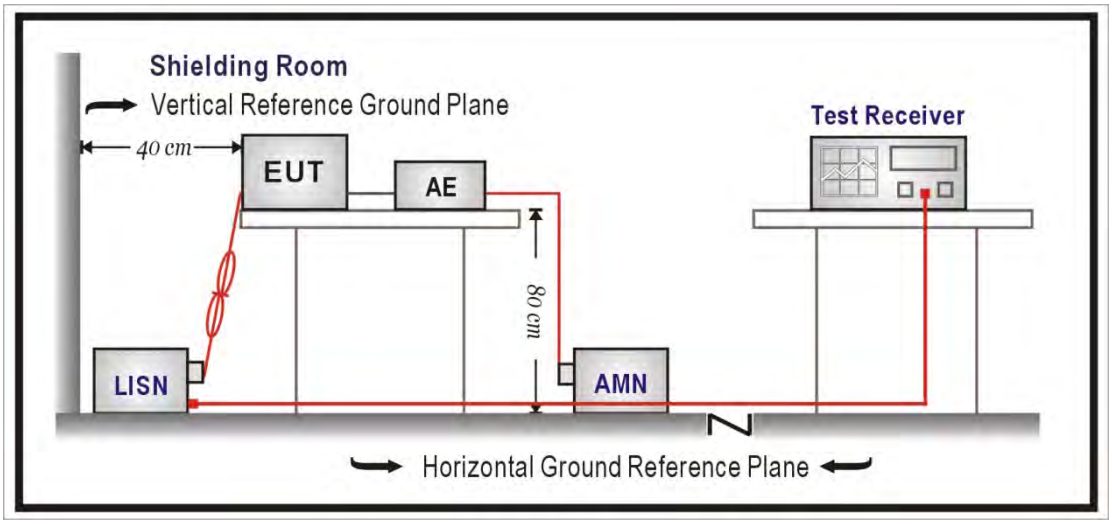
The following test equipments are used during the test:

Conducted Emission / SR2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2017/02/06	2018/02/05
Test Receiver	R&S	ESCS 30	836858/022	2017/04/12	2018/04/11
LISN	R&S	ENV216	100092	2017/07/31	2018/07/30

Note: All equipments that need to calibrate are with calibration period of 1 year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency MHz	QP	AV
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remark: In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)
Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.5. Test Specification

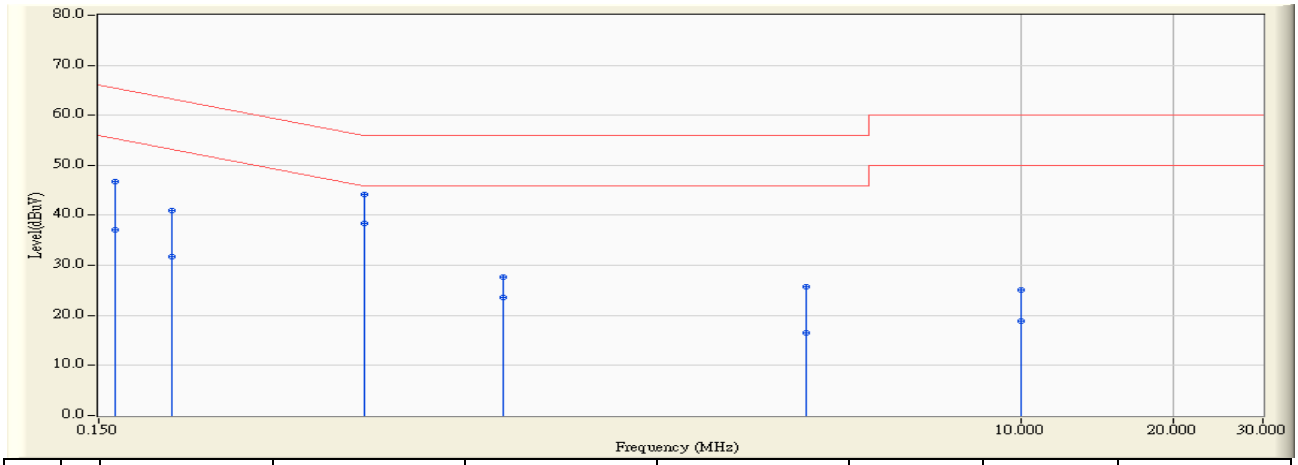
According to FCC Part 15 Subpart C Paragraph 15.207: 2015

2.6. Uncertainty

The measurement uncertainty is defined as ± 2.26 dB.

2.7. Test Result

Site : SR2-H	**Time : 2017/08/17**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-6_0712 - Line1	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2437MHz**

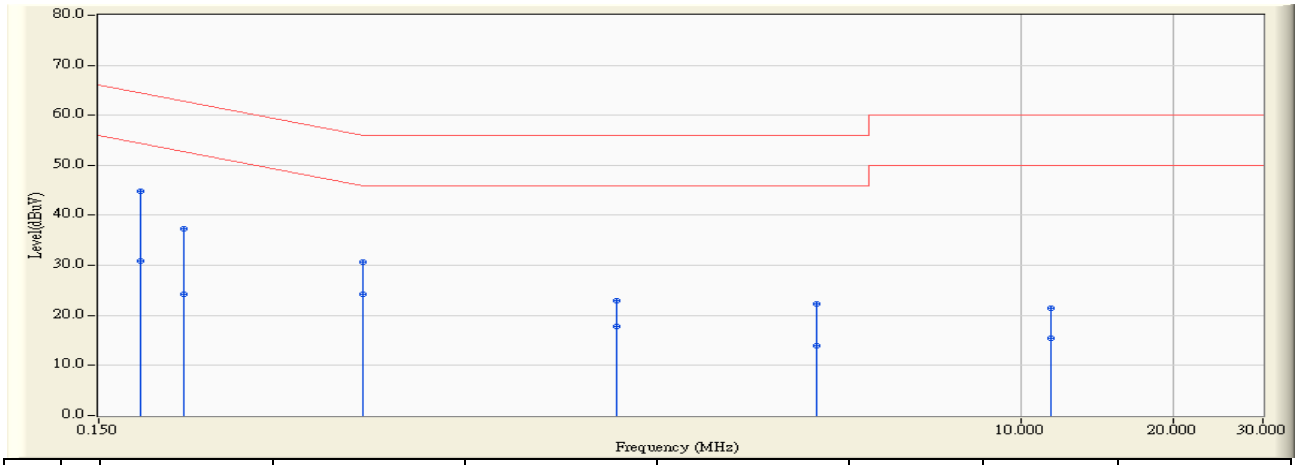


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.162	9.754	37.060	46.814	-18.561	65.375	QUASIPEAK
2		0.162	9.754	27.300	37.054	-18.321	55.375	AVERAGE
3		0.209	9.749	31.320	41.069	-22.192	63.261	QUASIPEAK
4		0.209	9.749	22.080	31.829	-21.432	53.261	AVERAGE
5		0.502	9.729	34.550	44.280	-11.720	56.000	QUASIPEAK
6	*	0.502	9.729	28.650	38.380	-7.620	46.000	AVERAGE
7		0.943	9.809	17.870	27.679	-28.321	56.000	QUASIPEAK
8		0.943	9.809	13.710	23.519	-22.481	46.000	AVERAGE
9		3.755	9.913	15.730	25.643	-30.357	56.000	QUASIPEAK
10		3.755	9.913	6.500	16.413	-29.587	46.000	AVERAGE
11		9.959	10.128	14.900	25.028	-34.972	60.000	QUASIPEAK
12		9.959	10.128	8.700	18.828	-31.172	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	**Time : 2017/08/17**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-6_0712 - Line2	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2437MHz**

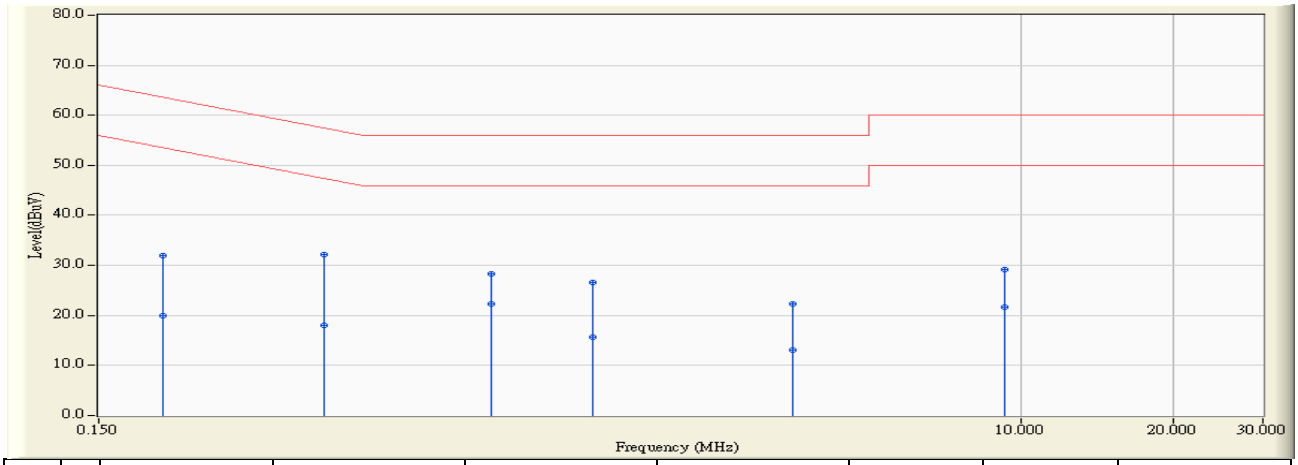


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.181	9.752	35.020	44.772	-19.656	64.428	QUASIPEAK
2		0.181	9.752	21.180	30.932	-23.496	54.428	AVERAGE
3		0.220	9.750	27.620	37.370	-25.437	62.807	QUASIPEAK
4		0.220	9.750	14.410	24.160	-28.647	52.807	AVERAGE
5		0.498	9.746	20.840	30.586	-25.453	56.039	QUASIPEAK
6		0.498	9.746	14.400	24.146	-21.893	46.039	AVERAGE
7		1.580	9.837	13.110	22.947	-33.053	56.000	QUASIPEAK
8		1.580	9.837	7.980	17.817	-28.183	46.000	AVERAGE
9		3.931	9.840	12.480	22.320	-33.680	56.000	QUASIPEAK
10		3.931	9.840	4.080	13.920	-32.080	46.000	AVERAGE
11		11.412	10.195	11.350	21.545	-38.455	60.000	QUASIPEAK
12		11.412	10.195	5.210	15.405	-34.595	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	**Time : 2017/08/17**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-6_0712 - Line1	**Power : AC 120V/60Hz**
EUT : Beta+	**Note : Mode 2: Transmit-Power by Adapter_ 802.11n(20M)_2437MHz**

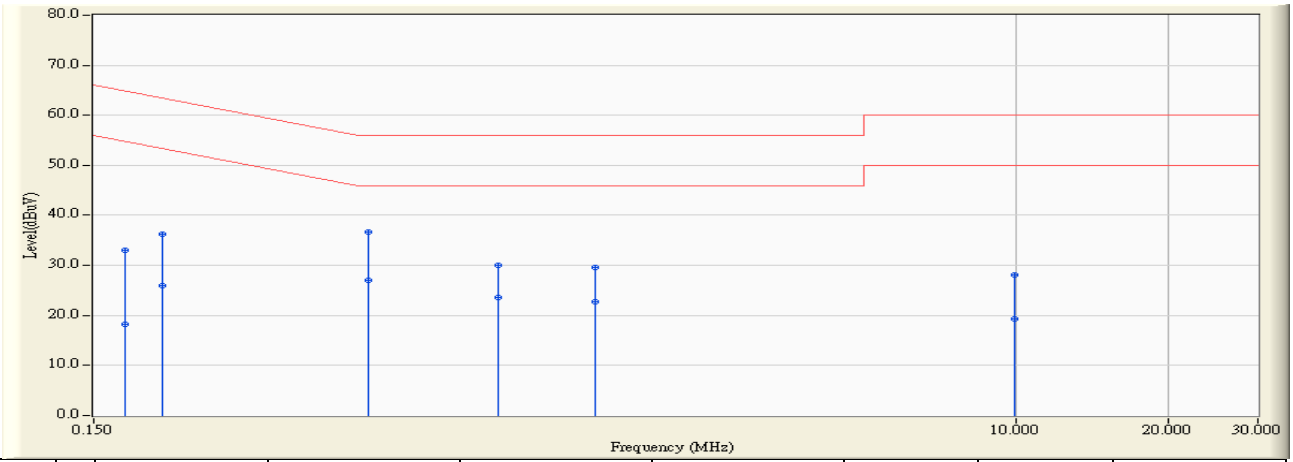


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.201	9.750	22.210	31.960	-31.618	63.578	QUASIPEAK
2		0.201	9.750	10.120	19.870	-33.708	53.578	AVERAGE
3		0.420	9.730	22.480	32.210	-25.248	57.457	QUASIPEAK
4		0.420	9.730	8.180	17.910	-29.548	47.457	AVERAGE
5		0.896	9.801	18.510	28.311	-27.689	56.000	QUASIPEAK
6	*	0.896	9.801	12.510	22.311	-23.689	46.000	AVERAGE
7		1.423	9.837	16.780	26.617	-29.383	56.000	QUASIPEAK
8		1.423	9.837	5.830	15.667	-30.333	46.000	AVERAGE
9		3.529	9.906	12.380	22.286	-33.714	56.000	QUASIPEAK
10		3.529	9.906	3.110	13.016	-32.984	46.000	AVERAGE
11		9.248	10.099	19.140	29.239	-30.761	60.000	QUASIPEAK
12		9.248	10.099	11.470	21.569	-28.431	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	**Time : 2017/08/17**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-6_0712 - Line2	**Power : AC 120V/60Hz**
EUT : Beta+	**Note : Mode 2: Transmit-Power by Adapter_ 802.11n(20M)_2437MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.173	9.753	23.270	33.023	-31.771	64.794	QUASIPEAK
2		0.173	9.753	8.420	18.173	-36.621	54.794	AVERAGE
3		0.205	9.751	26.530	36.281	-27.138	63.418	QUASIPEAK
4		0.205	9.751	16.190	25.941	-27.478	53.418	AVERAGE
5		0.525	9.749	26.930	36.679	-19.321	56.000	QUASIPEAK
6	*	0.525	9.749	17.230	26.979	-19.021	46.000	AVERAGE
7		0.947	9.812	20.310	30.122	-25.878	56.000	QUASIPEAK
8		0.947	9.812	13.760	23.572	-22.428	46.000	AVERAGE
9		1.474	9.834	19.830	29.664	-26.336	56.000	QUASIPEAK
10		1.474	9.834	12.860	22.694	-23.306	46.000	AVERAGE
11		9.896	10.144	17.950	28.094	-31.906	60.000	QUASIPEAK
12		9.896	10.144	9.120	19.264	-30.736	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

3. Peak Power Output

3.1. Test Equipment

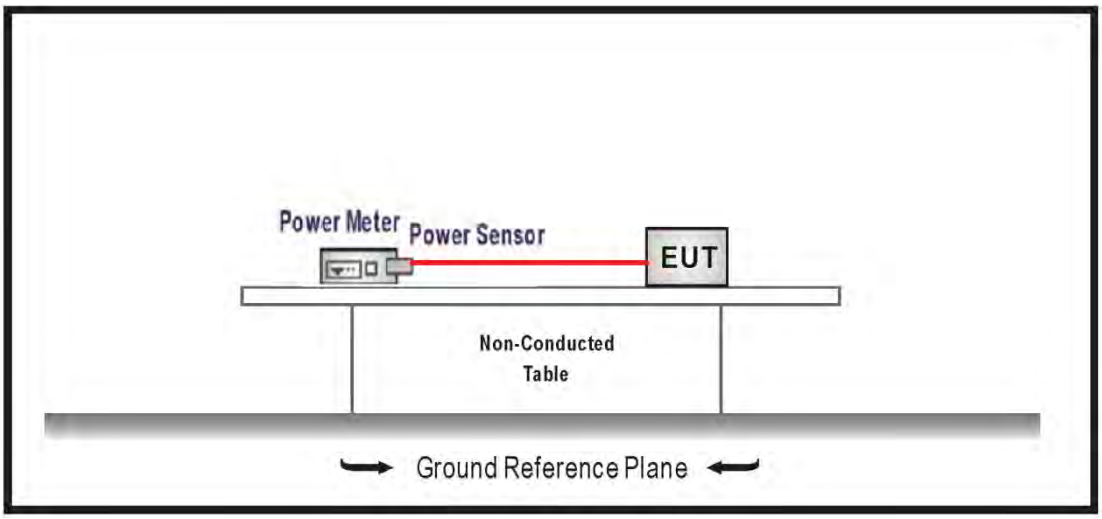
The following test equipments are used during the test:

Peak Power Output / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Power Meter	Agilent	N1911A	MY45101353	2016/09/30	2017/09/29
Power Sensor	Agilent	N1921A	MY45241670	2016/09/29	2017/09/28
USB Power Sensor	Keysight	U2021XA	MY54070005	N/A	N/A

Note: All equipments that need to calibrate are with calibration period of 1 year.

3.2. Test Setup



3.3. Test procedures

The EUT was tested according to DTS test procedure section 9.1.2 of KDB558074 D01 V04 measurement to FCC 47CFR 15.247 requirements.

3.4. Limits

The maximum peak power shall be less 1 Watt.

3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

3.6. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB.

3.7. Test Result

Product	Beta+		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/08/09	Test Site	SR10-H

IEEE 802.11b (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
1	2412	20.315	≦30
6	2437	20.394	≦30
11	2462	20.335	≦30

The worst emission of data rate is 1Mbps

Peak Power Output (dBm)						
Channel No	Frequency (MHz)	Data Rate (Mbps)				Required Limit
		1	2	5.5	11	
1	2412	20.315	--	--	--	≦30
6	2437	20.394	20.068	19.727	19.398	≦30
11	2462	20.335	--	--	--	≦30

Product	Beta+		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/04/08	Test Site	SR10-H

IEEE 802.11g (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
1	2412	21.042	≦30
6	2437	23.126	≦30
11	2462	21.964	≦30

The worst emission of data rate is 6Mbps

Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate (Mbps)							Required Limit
		6	12	18	24	36	48	54	
1	2412	21.042	--	--	--	--	--	--	≦30
6	2437	23.126	22.782	22.438	22.098	21.759	21.413	21.074	≦30
11	2462	21.964	--	--	--	--	--	--	≦30

Product	Beta+		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/04/08	Test Site	SR10-H

IEEE 802.11n20 (ANT 0)			
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)
1	2412	20.886	≦30
6	2437	23.119	≦30
11	2462	21.394	≦30

The worst emission of data rate Is MCS 0

Peak Power Output (dBm)										
Channel No	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		0	1	2	3	4	5	6	7	
1	2412	20.886	--	--	--	--	--	--	--	≦30
6	2437	23.119	22.772	22.118	21.796	21.457	21.129	20.803	20.477	≦30
11	2462	21.394	--	--	--	--	--	--	--	≦30

4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the test:

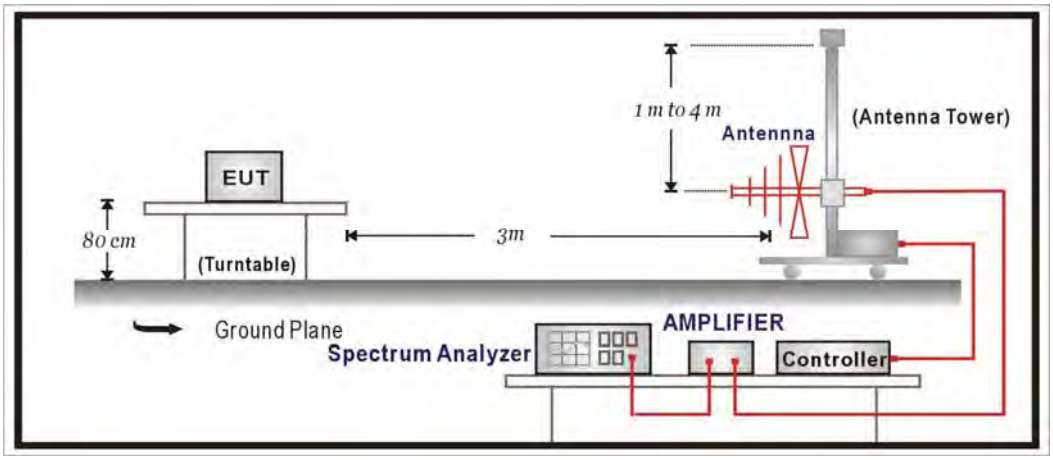
Radiated Emission / CB4-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2016/11/28	2017/11/27
Signal & Spectrum Analyzer	R&S	FSV40	101049	2017/01/23	2018/01/22
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
Bilog Antenna	Teseq	CBL6112D	23191	2017/06/28	2018/06/27
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2017/06/14	2018/06/13
Horn Antenna	Schwarzbeck	BBHA 9170	203	2016/08/29	2017/08/28
Pre-Amplifier	RF Bay Inc.	LNA-1330	12162511	2017/03/09	2018/03/08
Pre-Amplifier	EMCI	EMCI 1830I	980366	2017/01/23	2018/01/22
Pre-Amplifier	MITEQ	JS44-45-8P	2014754	2016/12/26	2017/12/25

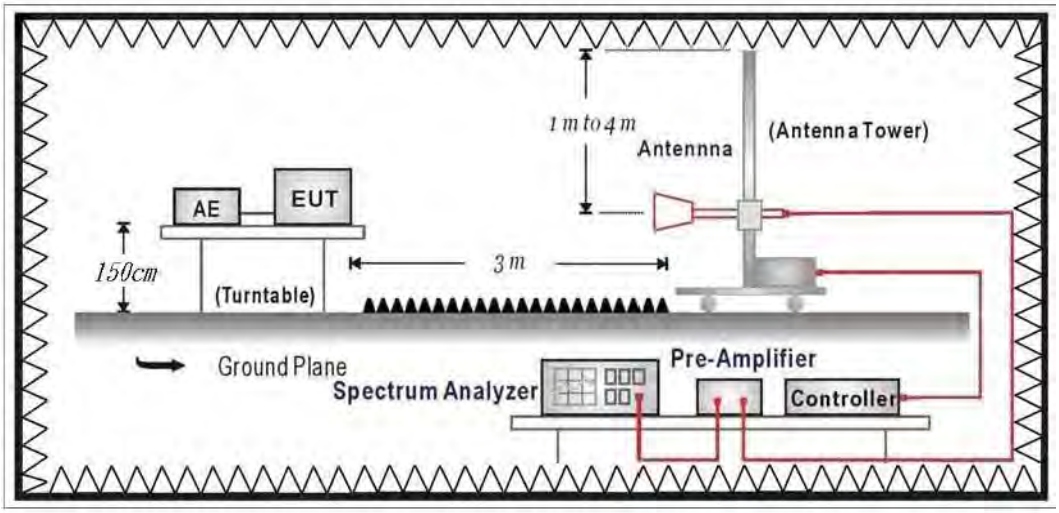
Note: All equipments that need to calibrate are with calibration period of 1 year.

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	dBuV/m	dBuV/m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.10:2013 and tested according to DTS test procedure of KDB558074 D01 V04 for compliance to FCC 47CFR 15.247 requirements.
The EUT and its simulators are placed on a turn table which is 1.5 meter above ground(under 1GHz) or 1.5 meter above ground (above 1GHz). The turn table can rotate 360 degrees to determine the position of the maximum emission level.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10 on radiated measurement.
On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

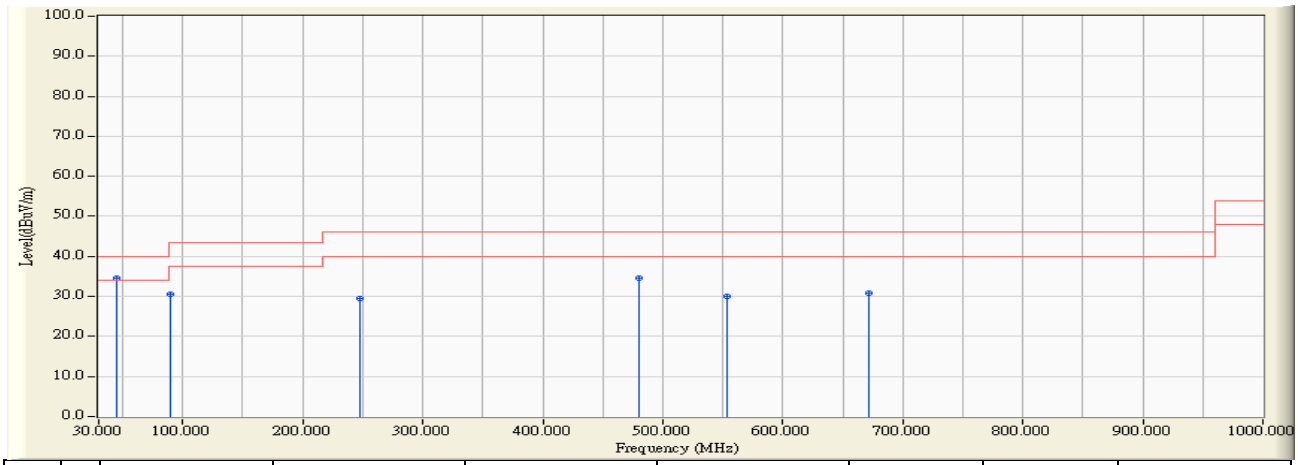
4.6. Uncertainty

The measurement uncertainty
30MHz～1GHz as ±3.43dB
1GHz～26.5Ghz as ±3.65dB

4.7. Test Result

30MHz-1GHz Spurious

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11b_2437MHz**

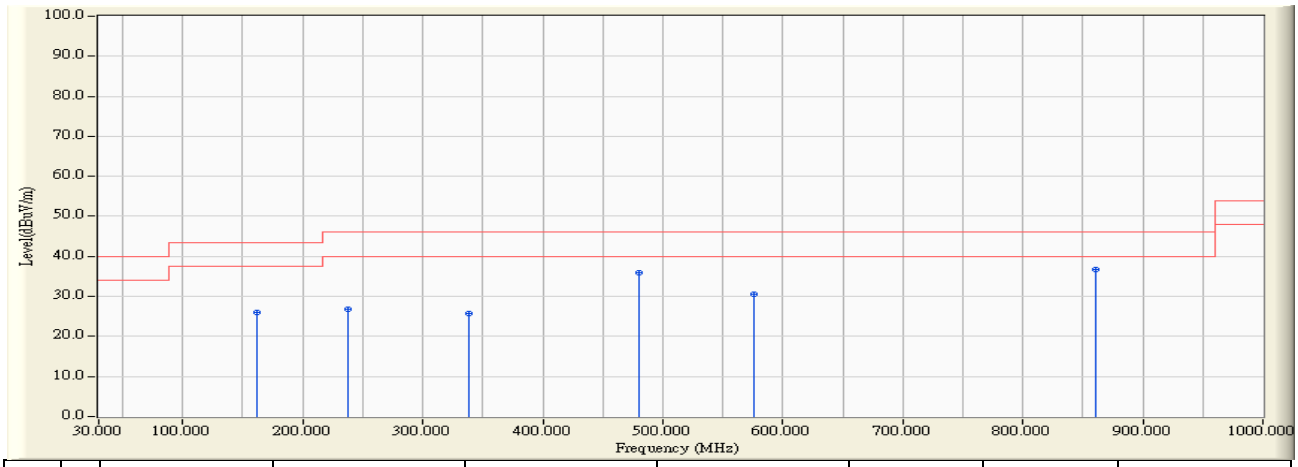


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	45.035	-18.736	53.286	34.550	-5.450	40.000	QUASIPEAK
2		89.170	-22.427	52.882	30.455	-13.045	43.500	QUASIPEAK
3		247.765	-18.012	47.574	29.562	-16.438	46.000	QUASIPEAK
4		480.080	-13.181	47.774	34.593	-11.407	46.000	QUASIPEAK
5		553.315	-12.052	42.070	30.017	-15.983	46.000	QUASIPEAK
6		672.140	-10.732	41.490	30.758	-15.242	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11b_2437MHz**

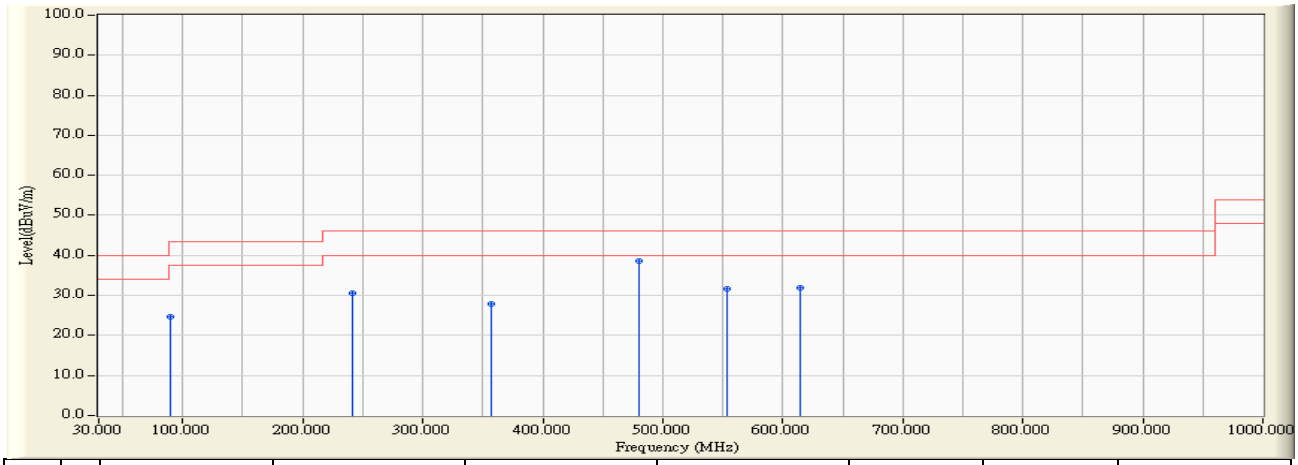


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		162.405	-20.287	46.381	26.093	-17.407	43.500	QUASIPEAK
2		237.580	-18.657	45.560	26.903	-19.097	46.000	QUASIPEAK
3		337.975	-15.890	41.638	25.748	-20.252	46.000	QUASIPEAK
4		480.080	-13.181	49.183	36.002	-9.998	46.000	QUASIPEAK
5		576.110	-12.164	42.672	30.508	-15.492	46.000	QUASIPEAK
6	*	860.320	-9.777	46.631	36.854	-9.146	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11g_2437MHz**

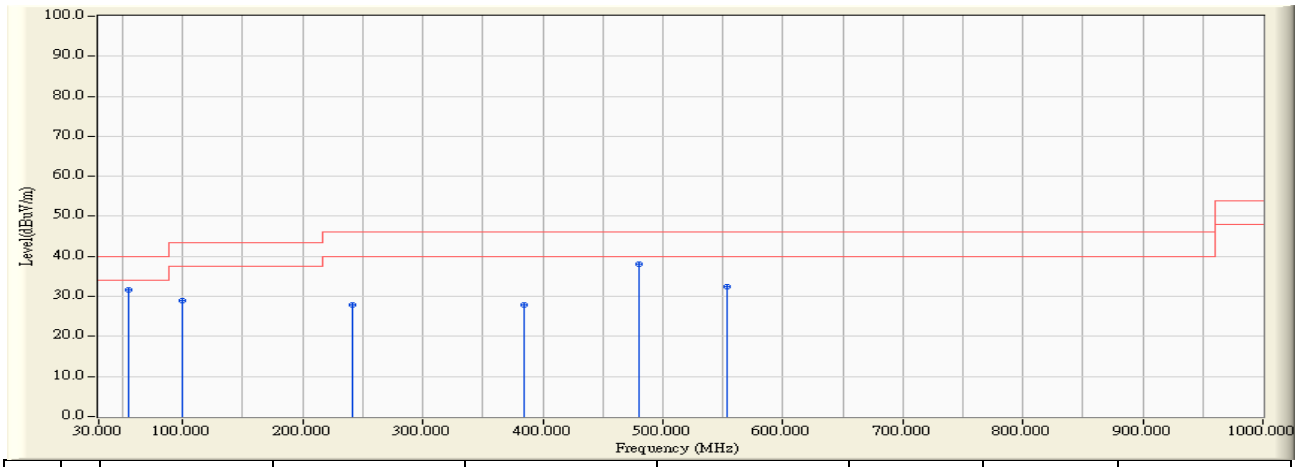


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		89.170	-22.427	47.184	24.757	-18.743	43.500	QUASIPEAK
2		241.460	-18.436	49.054	30.618	-15.382	46.000	QUASIPEAK
3		356.890	-15.428	43.356	27.928	-18.072	46.000	QUASIPEAK
4	*	480.080	-13.181	51.897	38.716	-7.284	46.000	QUASIPEAK
5		553.315	-12.052	43.816	31.763	-14.237	46.000	QUASIPEAK
6		614.425	-11.134	43.129	31.994	-14.006	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11g_2437MHz**

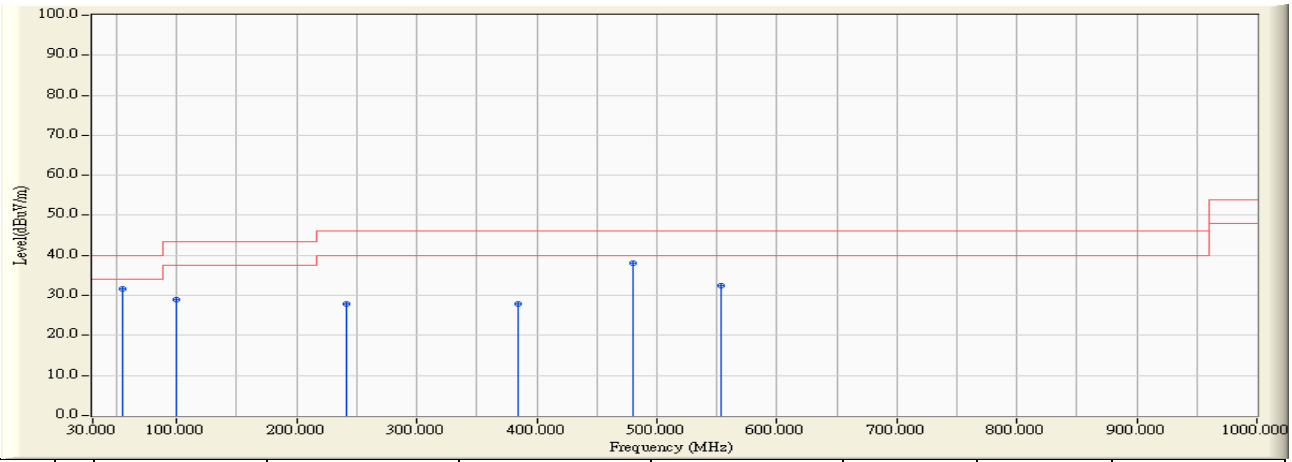


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		55.220	-23.439	55.192	31.753	-8.247	40.000	QUASIPEAK
2		99.355	-20.407	49.363	28.956	-14.544	43.500	QUASIPEAK
3		240.975	-18.469	46.290	27.821	-18.179	46.000	QUASIPEAK
4		384.050	-14.766	42.700	27.935	-18.065	46.000	QUASIPEAK
5	*	480.080	-13.181	51.198	38.017	-7.983	46.000	QUASIPEAK
6		553.315	-12.052	44.421	32.368	-13.632	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2437MHz**

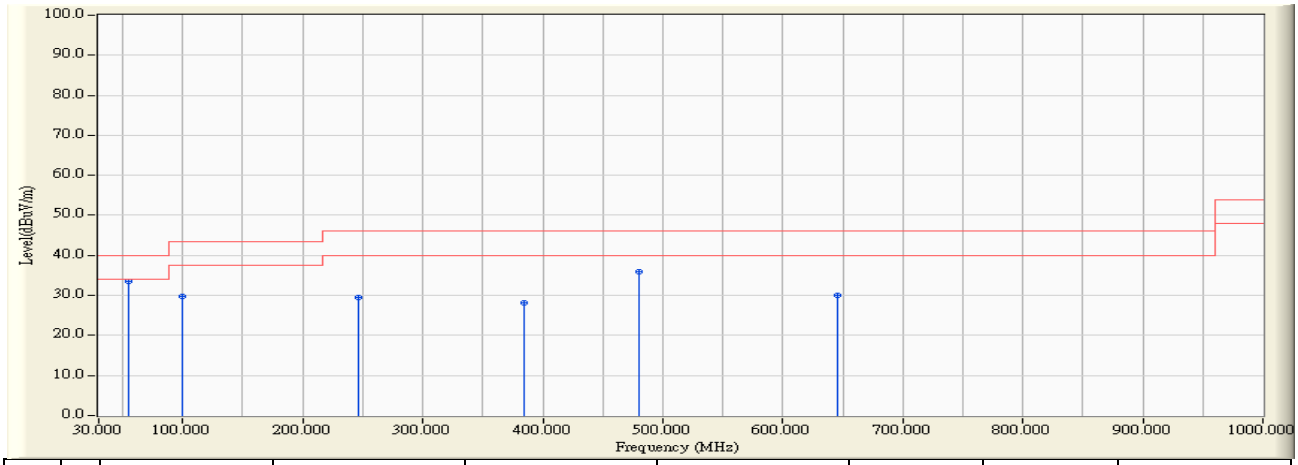


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		55.220	-23.439	55.192	31.753	-8.247	40.000	QUASIPEAK
2		99.355	-20.407	49.363	28.956	-14.544	43.500	QUASIPEAK
3		240.975	-18.469	46.290	27.821	-18.179	46.000	QUASIPEAK
4		384.050	-14.766	42.700	27.935	-18.065	46.000	QUASIPEAK
5	*	480.080	-13.181	51.198	38.017	-7.983	46.000	QUASIPEAK
6		553.315	-12.052	44.421	32.368	-13.632	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2437MHz**

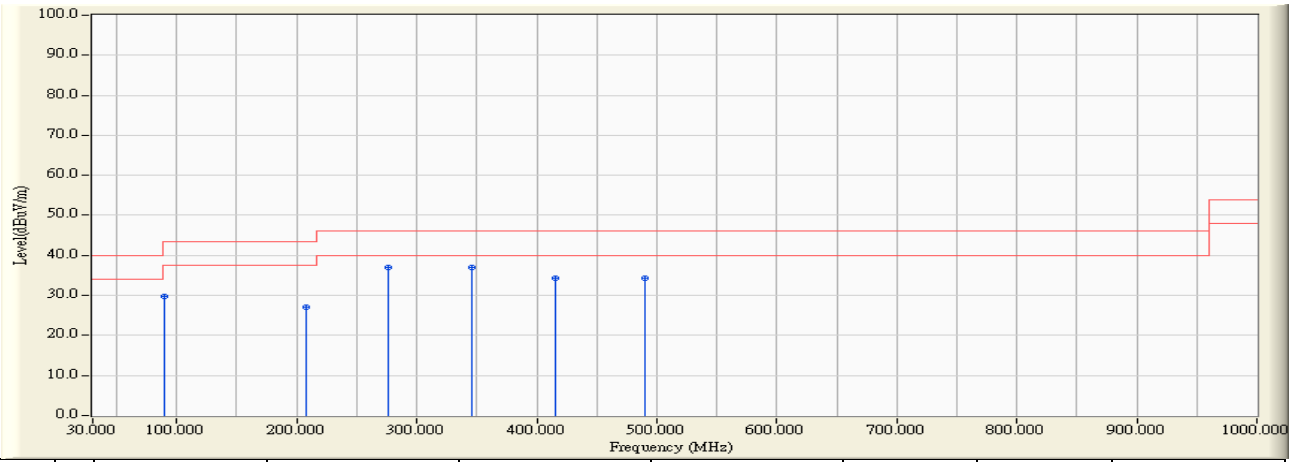


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	55.220	-23.439	56.850	33.411	-6.589	40.000	QUASIPEAK
2		99.355	-20.407	50.204	29.797	-13.703	43.500	QUASIPEAK
3		245.825	-18.142	47.500	29.357	-16.643	46.000	QUASIPEAK
4		384.050	-14.766	42.867	28.102	-17.898	46.000	QUASIPEAK
5		480.080	-13.181	49.027	35.846	-10.154	46.000	QUASIPEAK
6		645.465	-12.028	41.972	29.944	-16.056	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB4-H	**Time : 2017/08/19**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - HORIZONTAL	**Power : AC 120V / 60Hz**
EUT : Beta+	**Note : Mode 2: Transmit-Power by Adapter_ 802.11n(20M)_2437MHz**

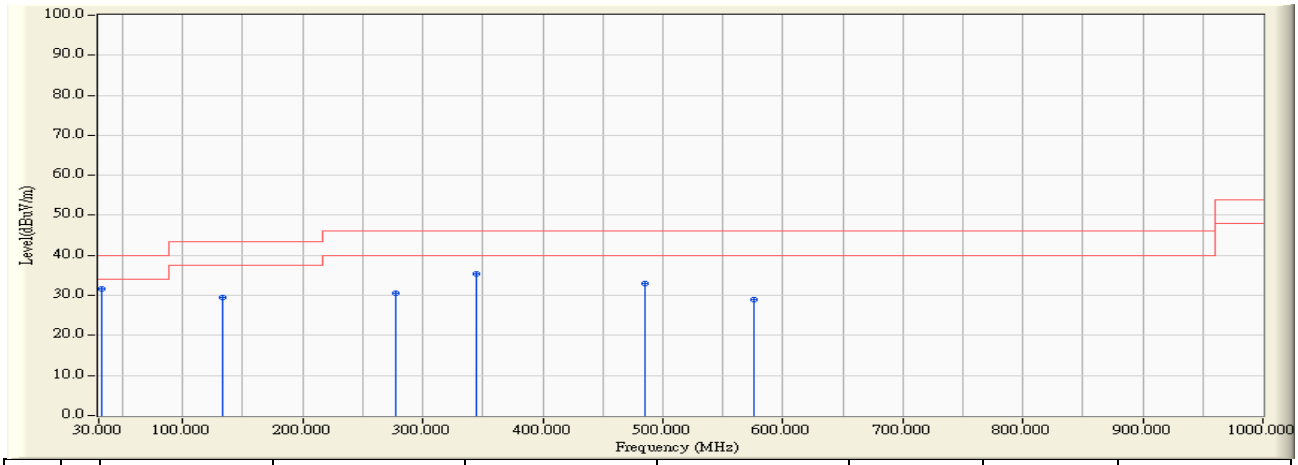


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		89.170	-25.645	55.373	29.728	-13.772	43.500	QUASIPEAK
2		207.995	-22.625	49.712	27.087	-16.413	43.500	QUASIPEAK
3	*	275.895	-19.608	56.522	36.915	-9.085	46.000	QUASIPEAK
4		345.735	-17.452	54.322	36.870	-9.130	46.000	QUASIPEAK
5		415.575	-15.702	49.893	34.191	-11.809	46.000	QUASIPEAK
6		490.265	-14.190	48.517	34.326	-11.674	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB4-H	**Time : 2017/08/19**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - VERTICAL	**Power : AC 120V / 60Hz**
EUT : Beta+	**Note : Mode 2: Transmit-Power by Adapter_ 802.11n(20M)_2437MHz**



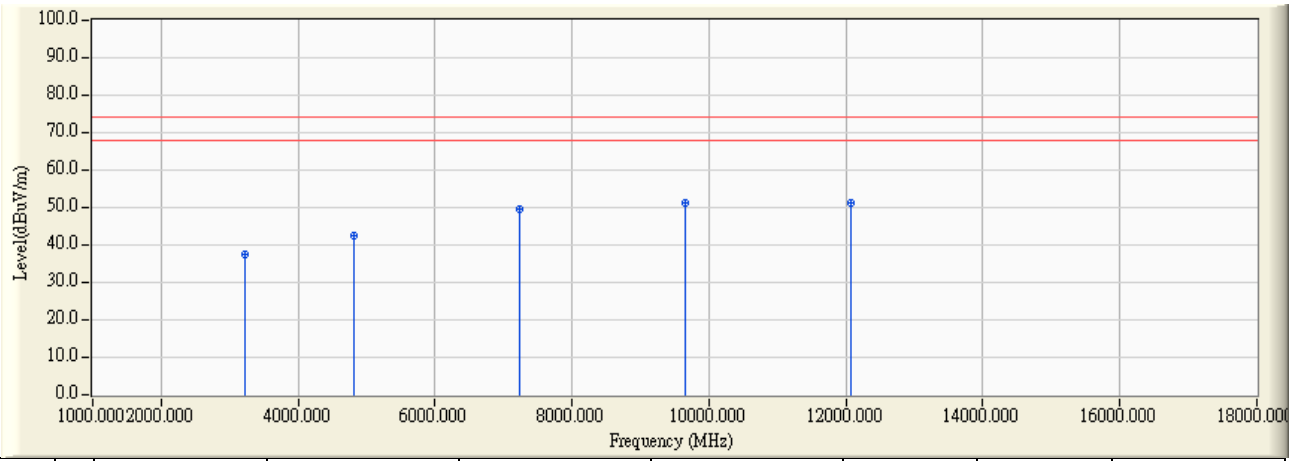
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	32.425	-16.709	48.253	31.545	-8.455	40.000	QUASIPEAK
2		133.305	-21.369	50.751	29.382	-14.118	43.500	QUASIPEAK
3		277.350	-19.514	50.052	30.539	-15.461	46.000	QUASIPEAK
4		344.765	-17.484	52.864	35.381	-10.619	46.000	QUASIPEAK
5		484.930	-14.356	47.445	33.089	-12.911	46.000	QUASIPEAK
6		576.110	-13.197	42.204	29.007	-16.993	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Above 1GHz Spurious

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11b_2412MHz**

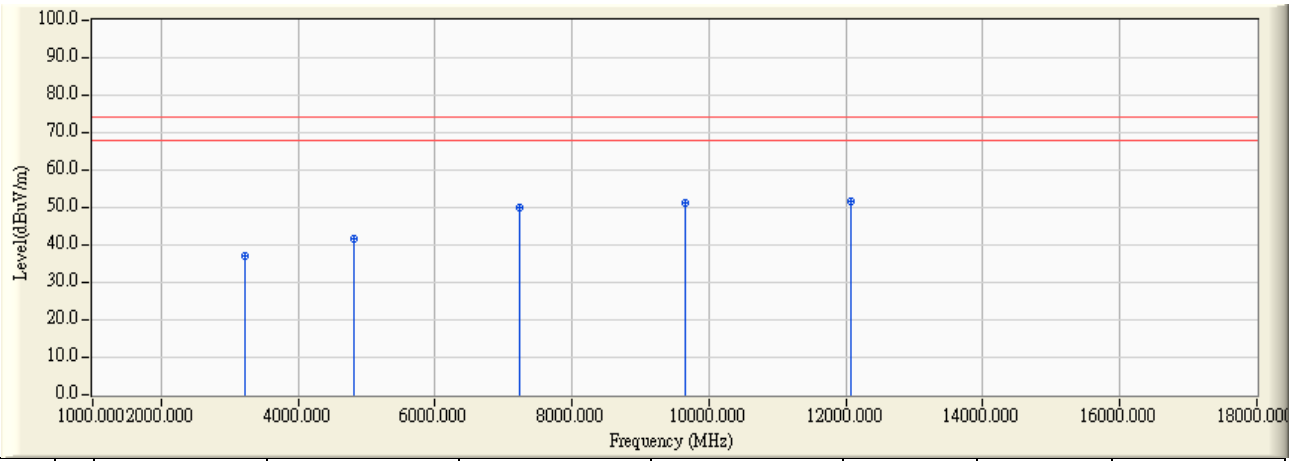


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3216.214	-5.236	42.790	37.555	-36.445	74.000	PEAK
2		4824.100	0.518	41.870	42.388	-31.612	74.000	PEAK
3		7234.960	8.857	40.690	49.547	-24.453	74.000	PEAK
4		9647.950	13.400	37.980	51.381	-22.619	74.000	PEAK
5	*	12061.315	18.164	33.240	51.404	-22.596	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11b_2412MHz**

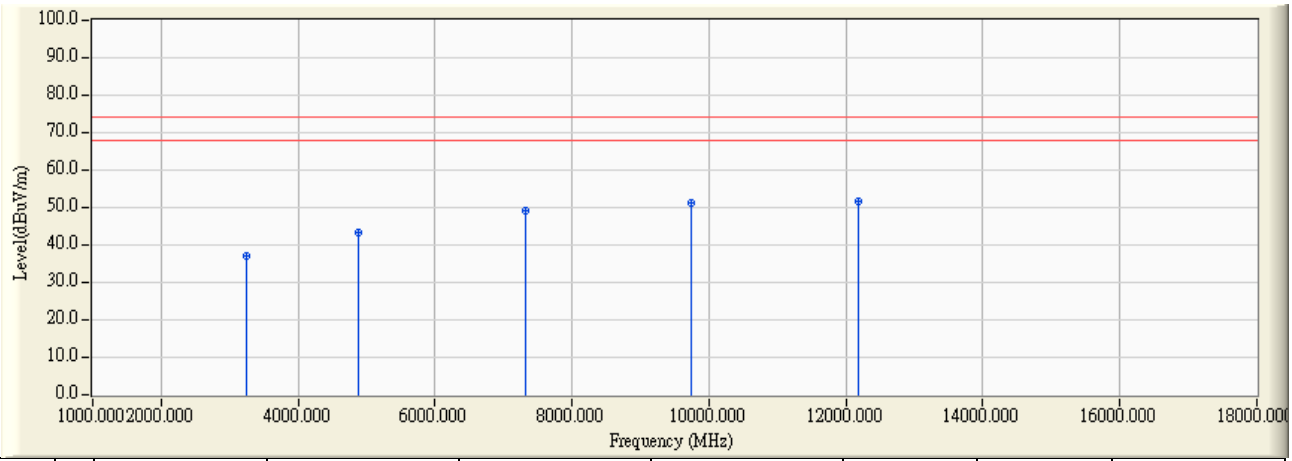


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3217.854	-5.232	42.440	37.207	-36.793	74.000	PEAK
2		4824.185	0.518	41.330	41.848	-32.152	74.000	PEAK
3		7235.050	8.857	41.110	49.967	-24.033	74.000	PEAK
4		9647.915	13.401	37.840	51.241	-22.759	74.000	PEAK
5	*	12061.341	18.164	33.520	51.684	-22.316	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11b_2437MHz**

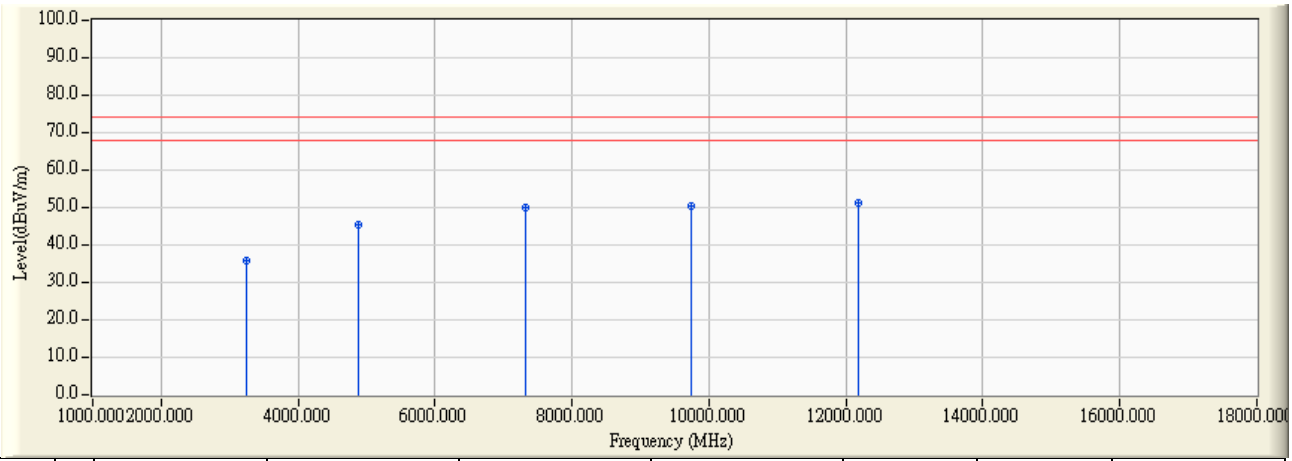


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3249.419	-5.179	42.290	37.111	-36.889	74.000	PEAK
2		4873.865	0.685	42.750	43.434	-30.566	74.000	PEAK
3		7311.521	9.195	39.820	49.015	-24.985	74.000	PEAK
4		9748.220	13.694	37.560	51.254	-22.746	74.000	PEAK
5	*	12184.430	17.954	33.670	51.623	-22.377	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11b_2437MHz**

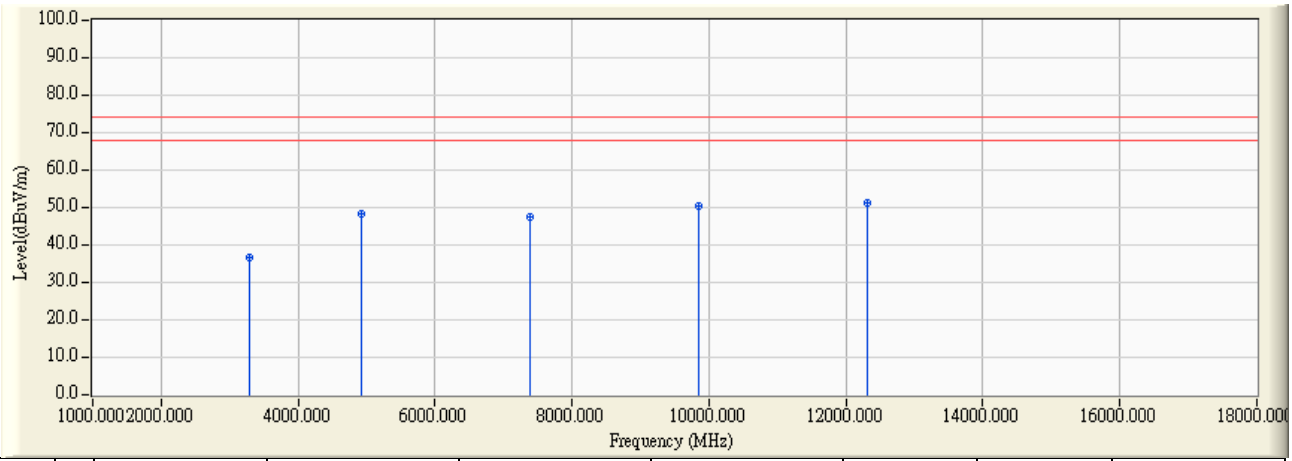


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3246.505	-5.183	40.900	35.717	-38.283	74.000	PEAK
2		4874.245	0.687	44.720	45.407	-28.593	74.000	PEAK
3		7311.421	9.195	40.890	50.084	-23.916	74.000	PEAK
4		9747.705	13.693	36.560	50.253	-23.747	74.000	PEAK
5	*	12186.155	17.950	33.350	51.300	-22.700	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11b_2462MHz**

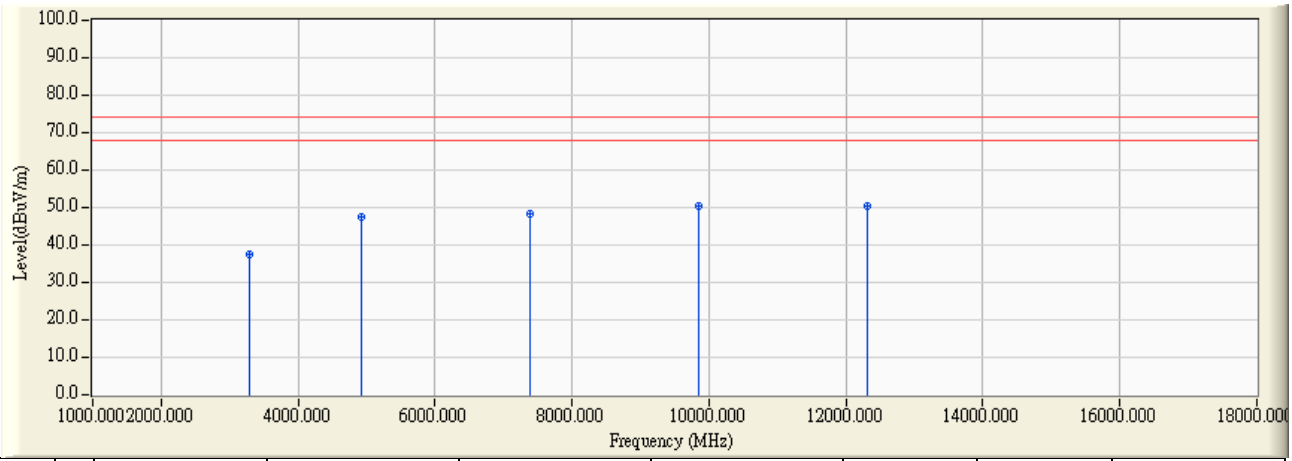


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3280.035	-5.132	41.720	36.588	-37.412	74.000	PEAK
2		4923.830	0.839	47.490	48.329	-25.671	74.000	PEAK
3		7386.012	9.513	38.080	47.593	-26.407	74.000	PEAK
4		9847.825	13.791	36.500	50.291	-23.709	74.000	PEAK
5	*	12310.458	17.718	33.650	51.368	-22.632	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11b_2462MHz**

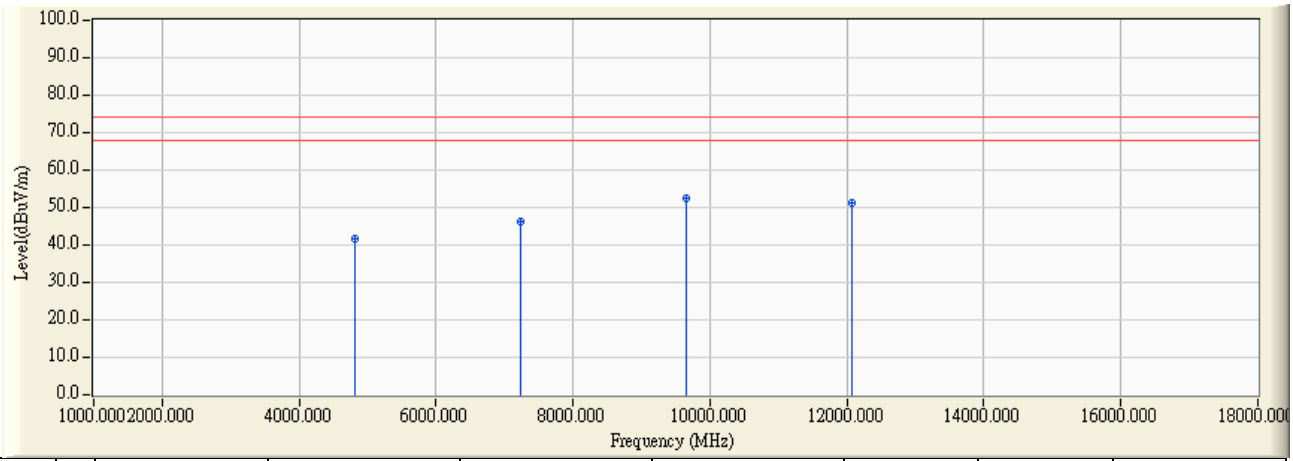


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3282.351	-5.129	42.770	37.642	-36.358	74.000	PEAK
2		4923.990	0.839	46.610	47.449	-26.551	74.000	PEAK
3		7386.622	9.517	38.910	48.426	-25.574	74.000	PEAK
4		9847.840	13.791	36.650	50.441	-23.559	74.000	PEAK
5	*	12307.500	17.725	32.890	50.614	-23.386	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11g_2412MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4823.925	0.518	41.020	41.538	-32.462	74.000	PEAK
2		7235.940	8.857	37.480	46.338	-27.662	74.000	PEAK
3	*	9647.865	13.401	39.110	52.511	-21.489	74.000	PEAK
4		12062.035	18.163	33.150	51.313	-22.687	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
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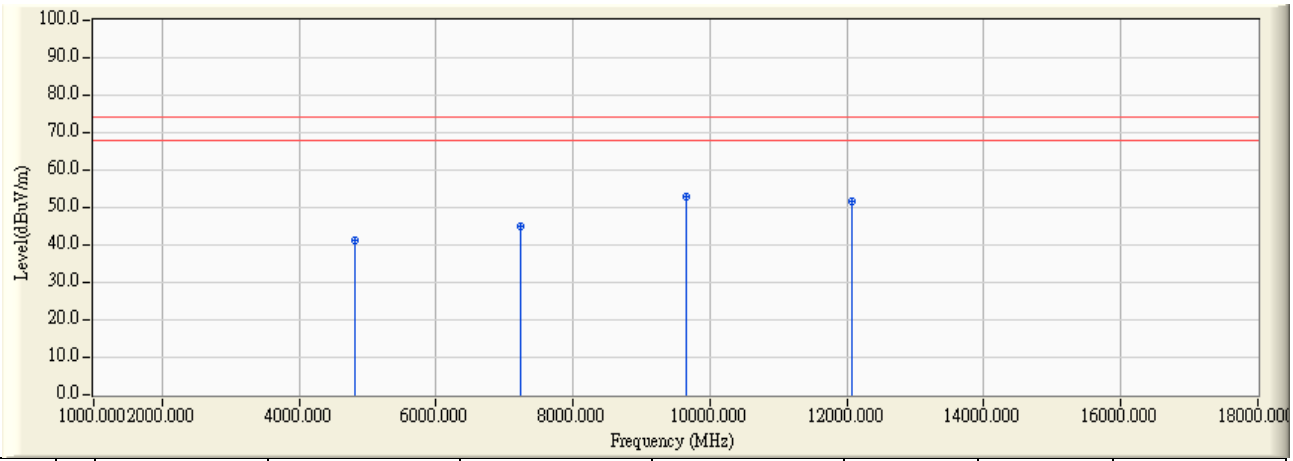
Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11g_2412MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4823.685	0.518	40.860	41.378	-32.622	74.000	PEAK
2		7236.052	8.858	36.324	45.182	-28.818	74.000	PEAK
3	*	9647.775	13.401	39.370	52.771	-21.229	74.000	PEAK
4		12064.143	18.159	33.400	51.559	-22.441	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
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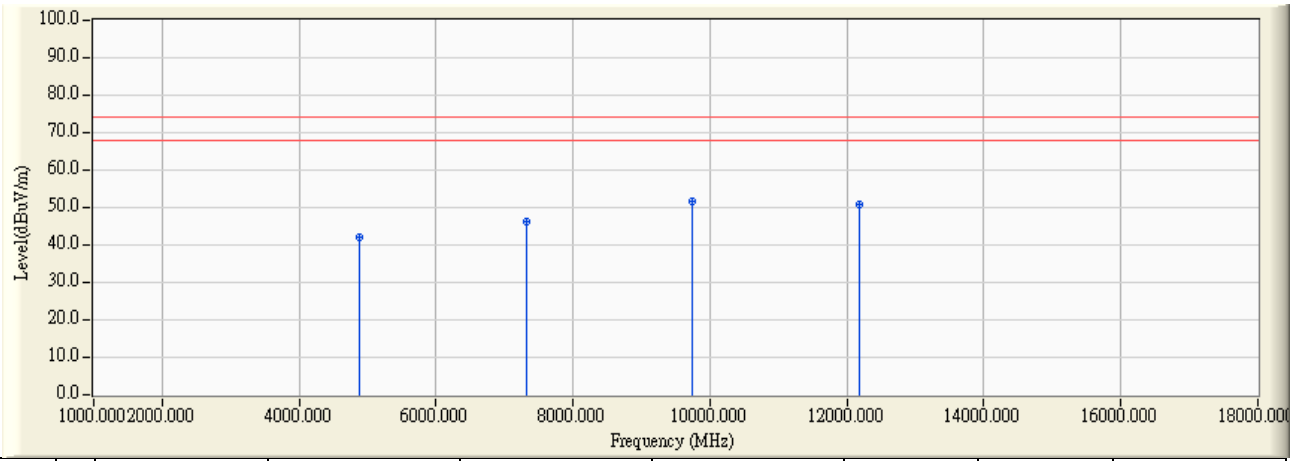
Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11g_2437MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4873.830	0.684	41.350	42.034	-31.966	74.000	PEAK
2		7311.658	9.196	36.860	46.055	-27.945	74.000	PEAK
3	*	9747.845	13.693	37.970	51.663	-22.337	74.000	PEAK
4		12186.233	17.950	33.020	50.970	-23.030	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
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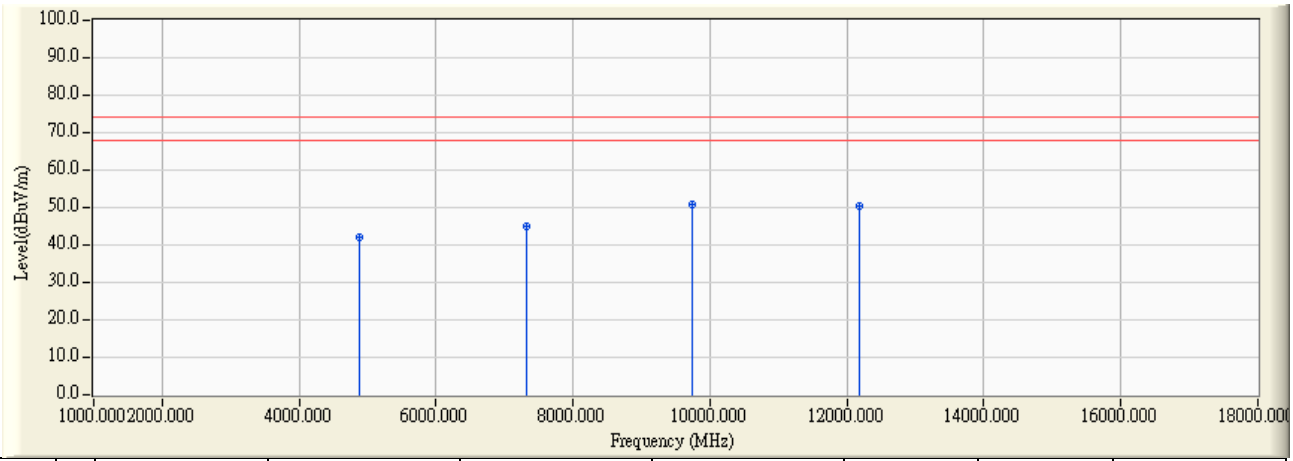
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11g_2437MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4874.300	0.687	41.420	42.107	-31.893	74.000	PEAK
2		7311.524	9.195	35.960	45.155	-28.845	74.000	PEAK
3	*	9747.950	13.693	37.210	50.903	-23.097	74.000	PEAK
4		12184.697	17.953	32.560	50.513	-23.487	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
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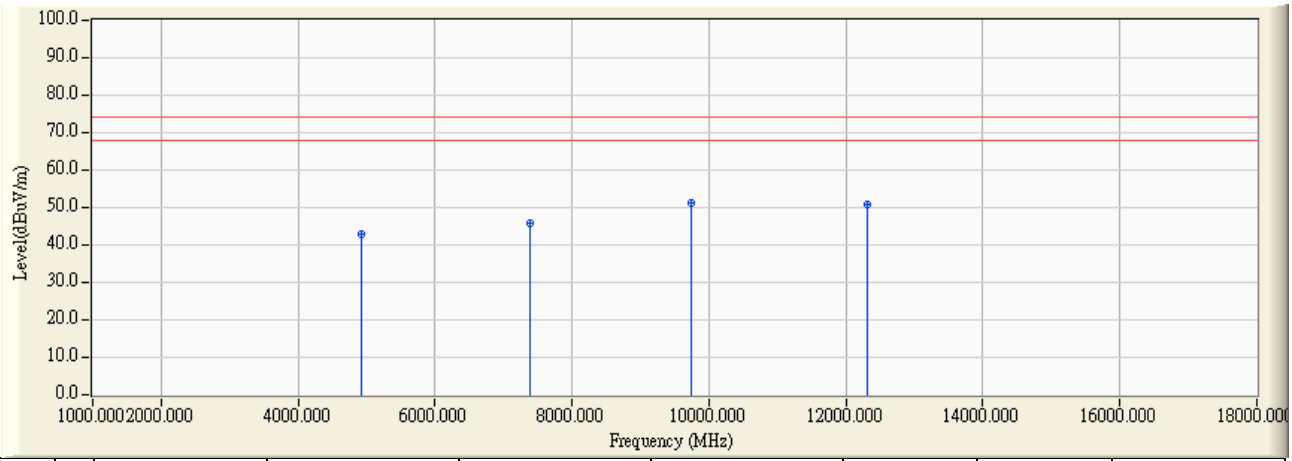
Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11g_2462MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4924.055	0.839	41.930	42.769	-31.231	74.000	PEAK
2		7387.260	9.519	36.420	45.939	-28.061	74.000	PEAK
3	*	9747.950	13.693	37.680	51.373	-22.627	74.000	PEAK
4		12313.095	17.713	33.090	50.803	-23.197	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
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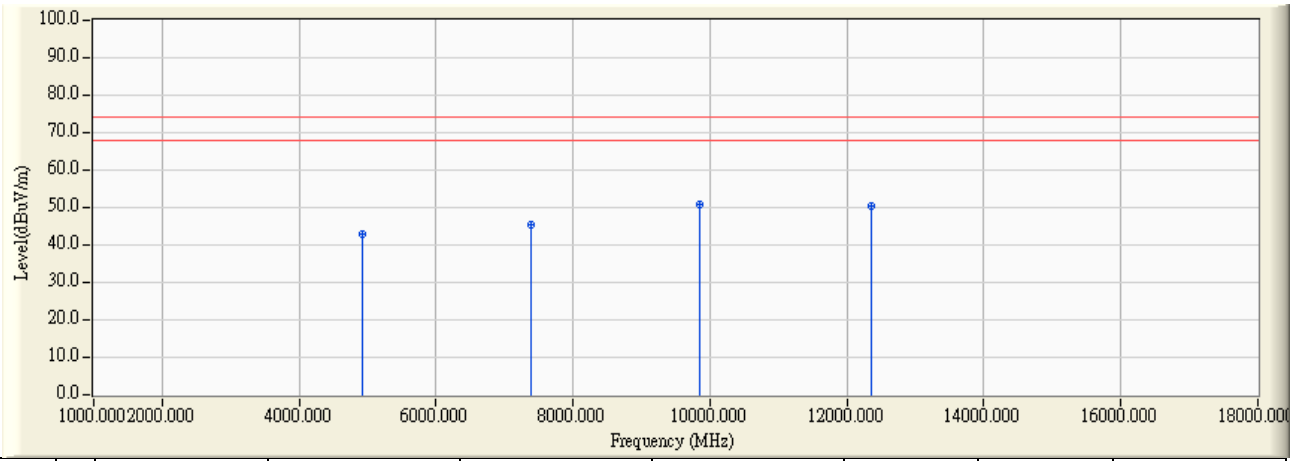
Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_802.11g_2462MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4924.165	0.839	41.950	42.790	-31.210	74.000	PEAK
2		7386.069	9.514	35.710	45.224	-28.776	74.000	PEAK
3	*	9847.940	13.792	37.060	50.852	-23.148	74.000	PEAK
4		12345.742	17.647	32.690	50.337	-23.663	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
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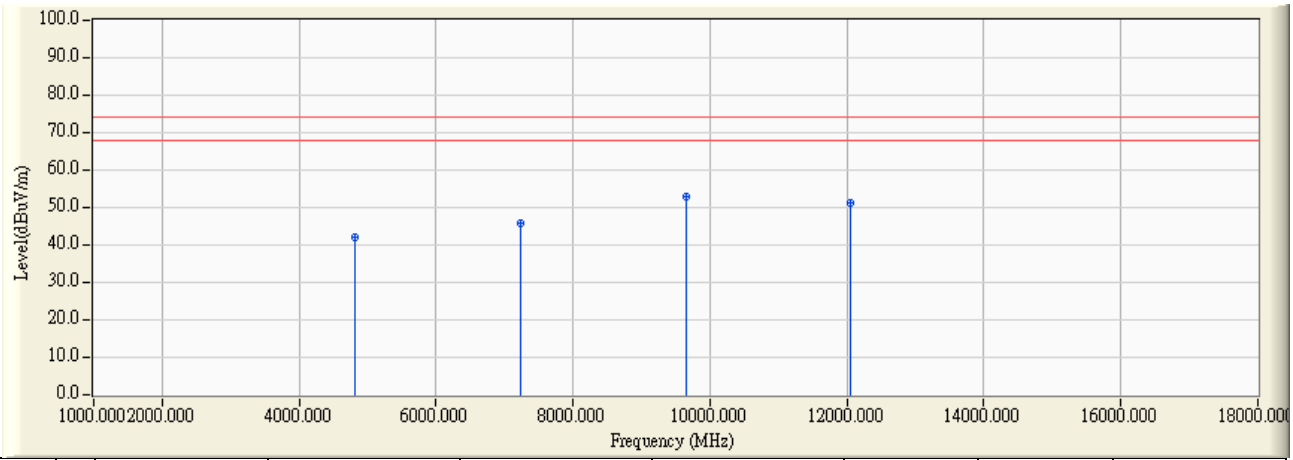
Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2412MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4824.253	0.518	41.570	42.088	-31.912	74.000	PEAK
2		7236.258	8.857	36.780	45.638	-28.362	74.000	PEAK
3	*	9647.645	13.402	39.420	52.822	-21.178	74.000	PEAK
4		12057.967	18.170	33.243	51.413	-22.587	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
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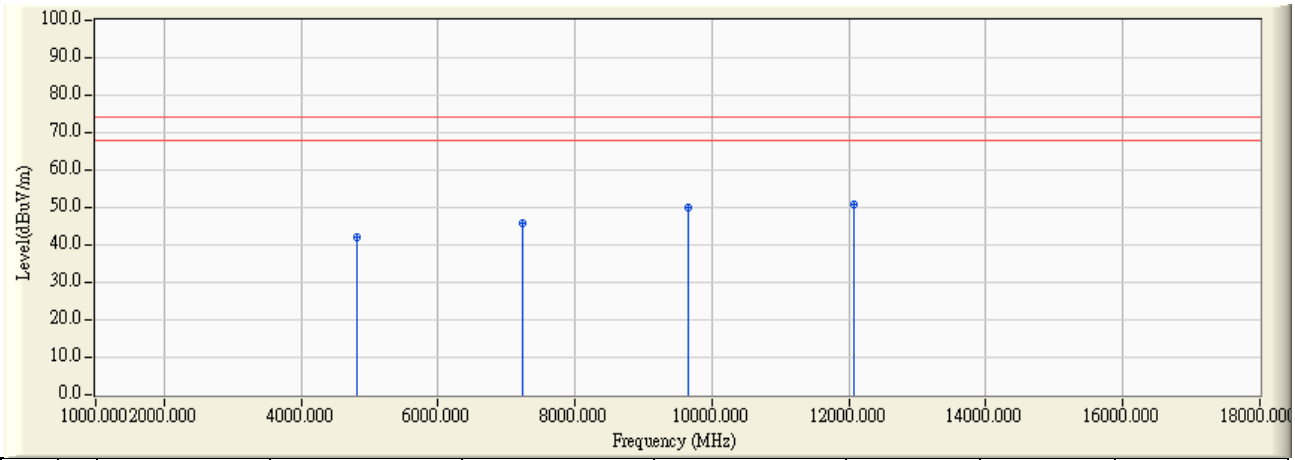
Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2412MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4823.680	0.518	41.400	41.918	-32.082	74.000	PEAK
2		7236.650	8.859	36.890	45.748	-28.252	74.000	PEAK
3		9647.870	13.401	36.450	49.851	-24.149	74.000	PEAK
4	*	12062.244	18.163	32.810	50.972	-23.028	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
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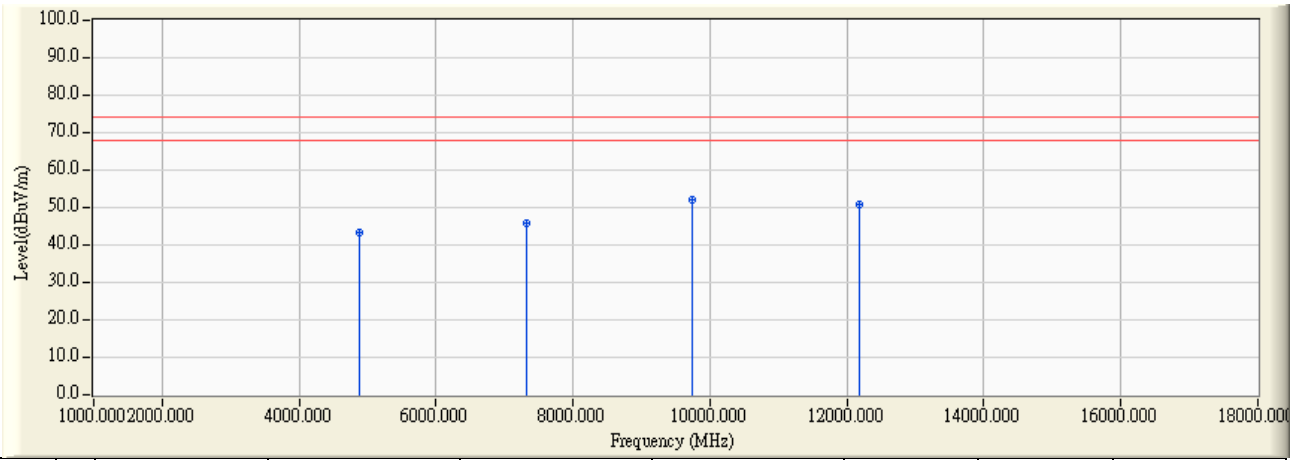
Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2437MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4873.975	0.686	42.770	43.455	-30.545	74.000	PEAK
2		7311.342	9.195	36.560	45.754	-28.246	74.000	PEAK
3	*	9747.665	13.693	38.390	52.083	-21.917	74.000	PEAK
4		12185.410	17.952	32.890	50.842	-23.158	74.000	PEAK

Note:

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2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
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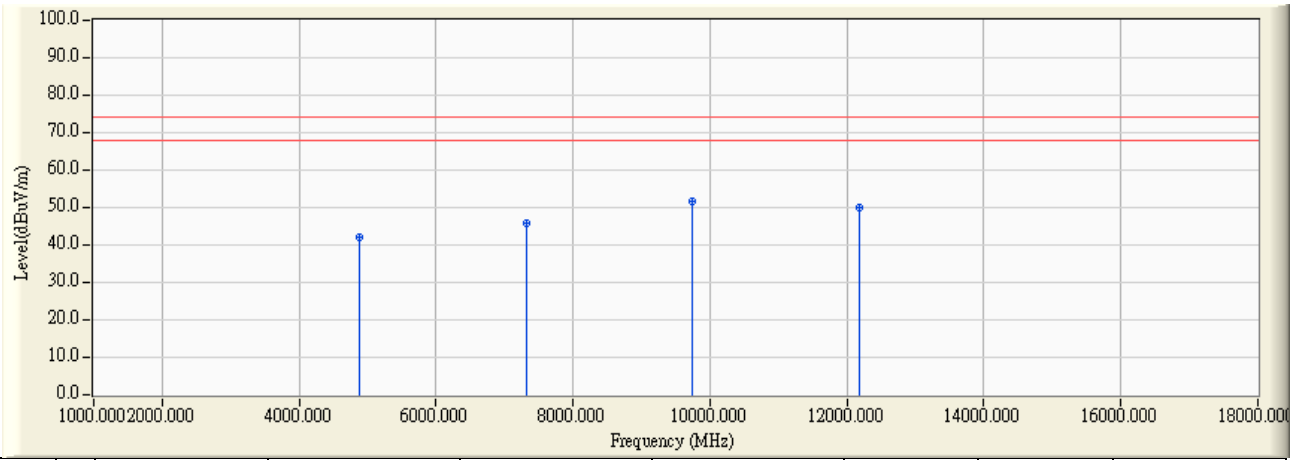
Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2437MHz**

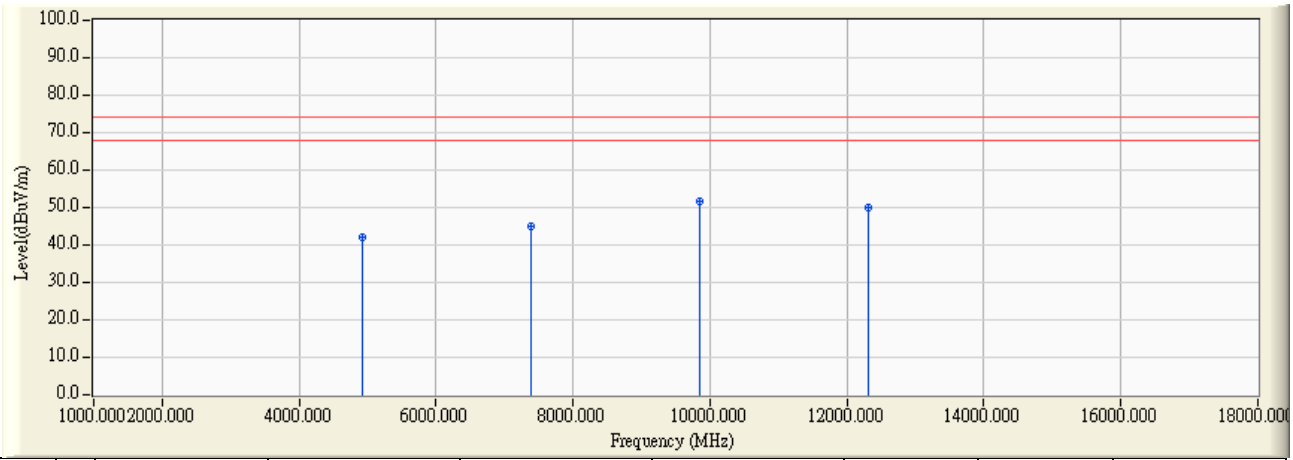


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4873.750	0.683	41.470	42.153	-31.847	74.000	PEAK
2		7310.952	9.193	36.530	45.722	-28.278	74.000	PEAK
3	*	9747.945	13.693	38.080	51.773	-22.227	74.000	PEAK
4		12185.263	17.952	32.050	50.002	-23.998	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2462MHz**

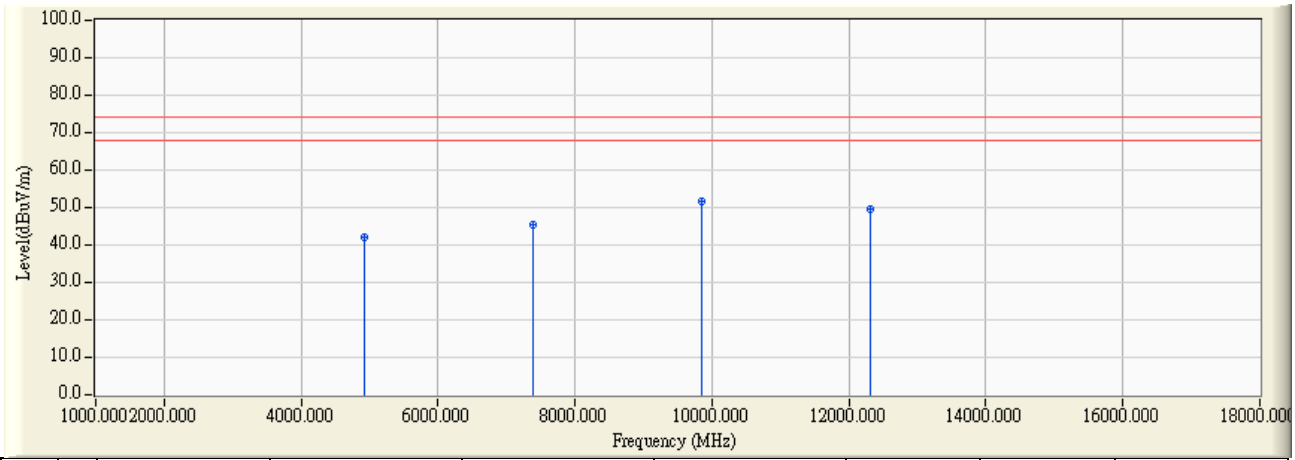


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4923.785	0.839	41.450	42.289	-31.711	74.000	PEAK
2		7382.420	9.498	35.630	45.128	-28.872	74.000	PEAK
3	*	9847.865	13.791	37.930	51.721	-22.279	74.000	PEAK
4		12310.905	17.717	32.470	50.188	-23.812	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2462MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4924.050	0.839	41.350	42.189	-31.811	74.000	PEAK
2		7385.415	9.510	35.780	45.291	-28.709	74.000	PEAK
3	*	9847.859	13.791	37.900	51.691	-22.309	74.000	PEAK
4		12309.185	17.720	31.960	49.681	-24.319	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

5. RF antenna conducted test

5.1. Test Equipment

The following test equipments are used during the test:

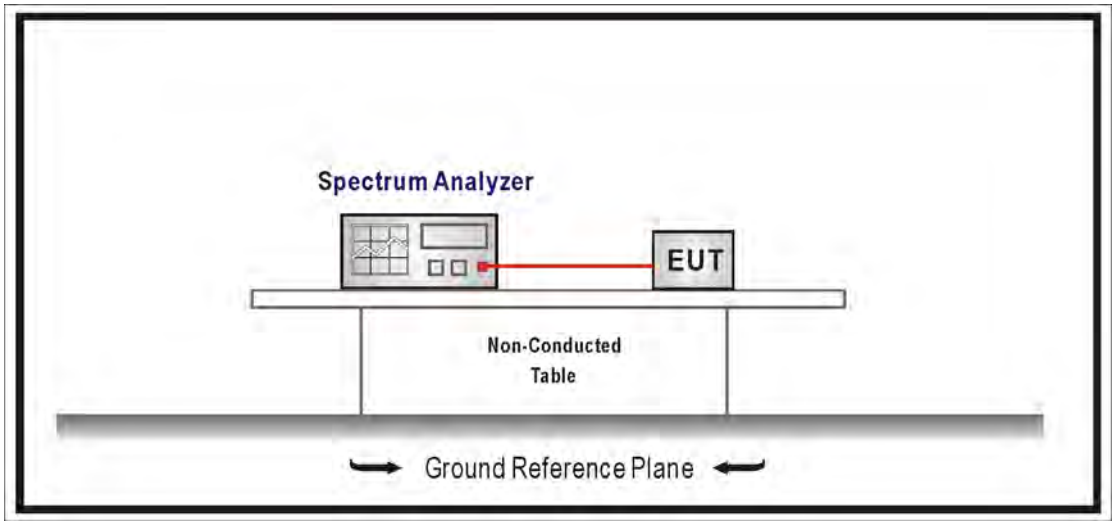
RF antenna conducted test / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2017/01/23	2018/01/22
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12

Note: All equipments that need to calibrate are with calibration period of 1 year.

5.2. Test Setup

RF Antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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 an RF conducted or radiated measurement. 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) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure section 11.2 of KDB558074 D01 V04 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

5.6. Uncertainty

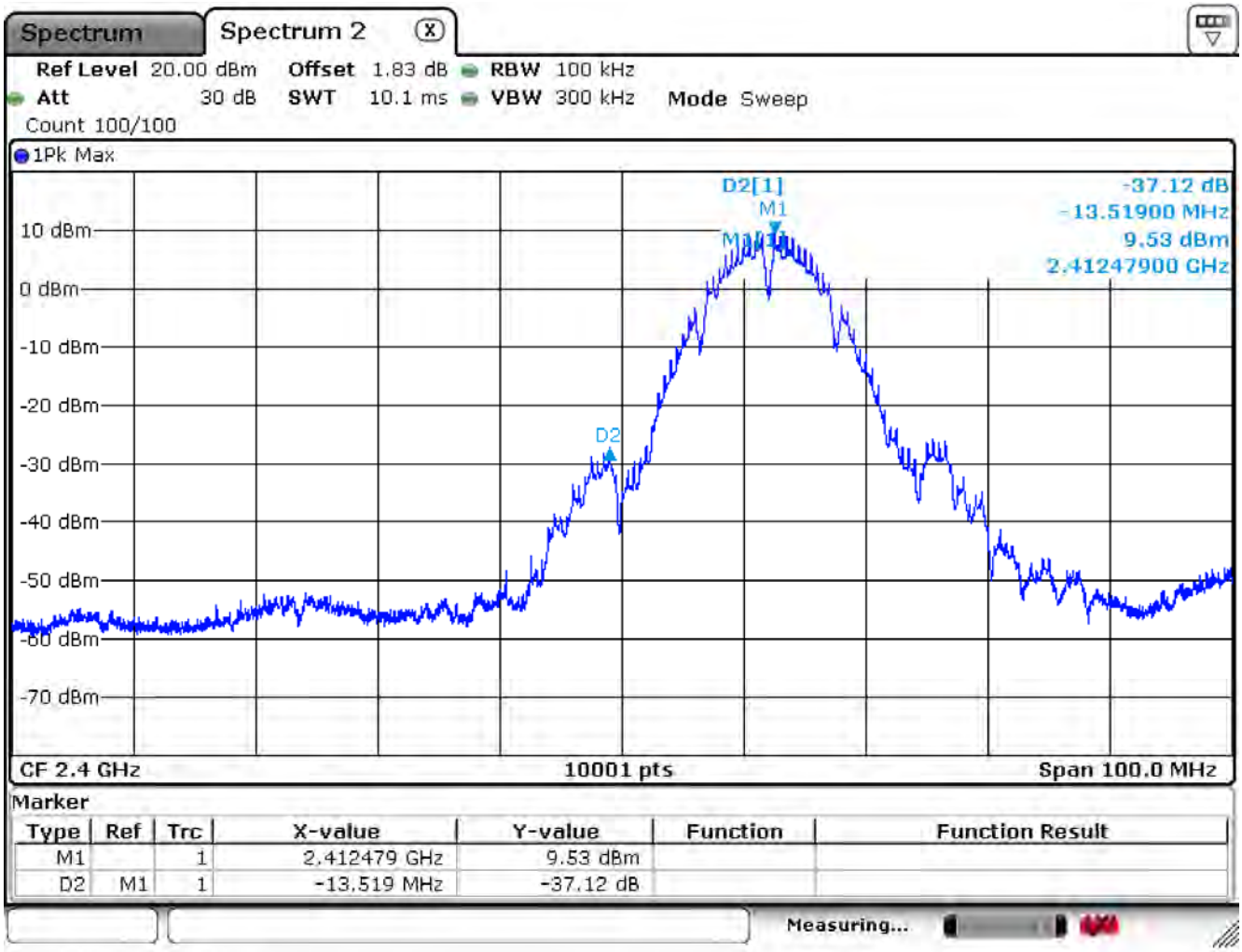
Conducted is defined as ± 1.27dB

5.7. Test Result

Product	Beta+		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/08/09	Test Site	SR10-H

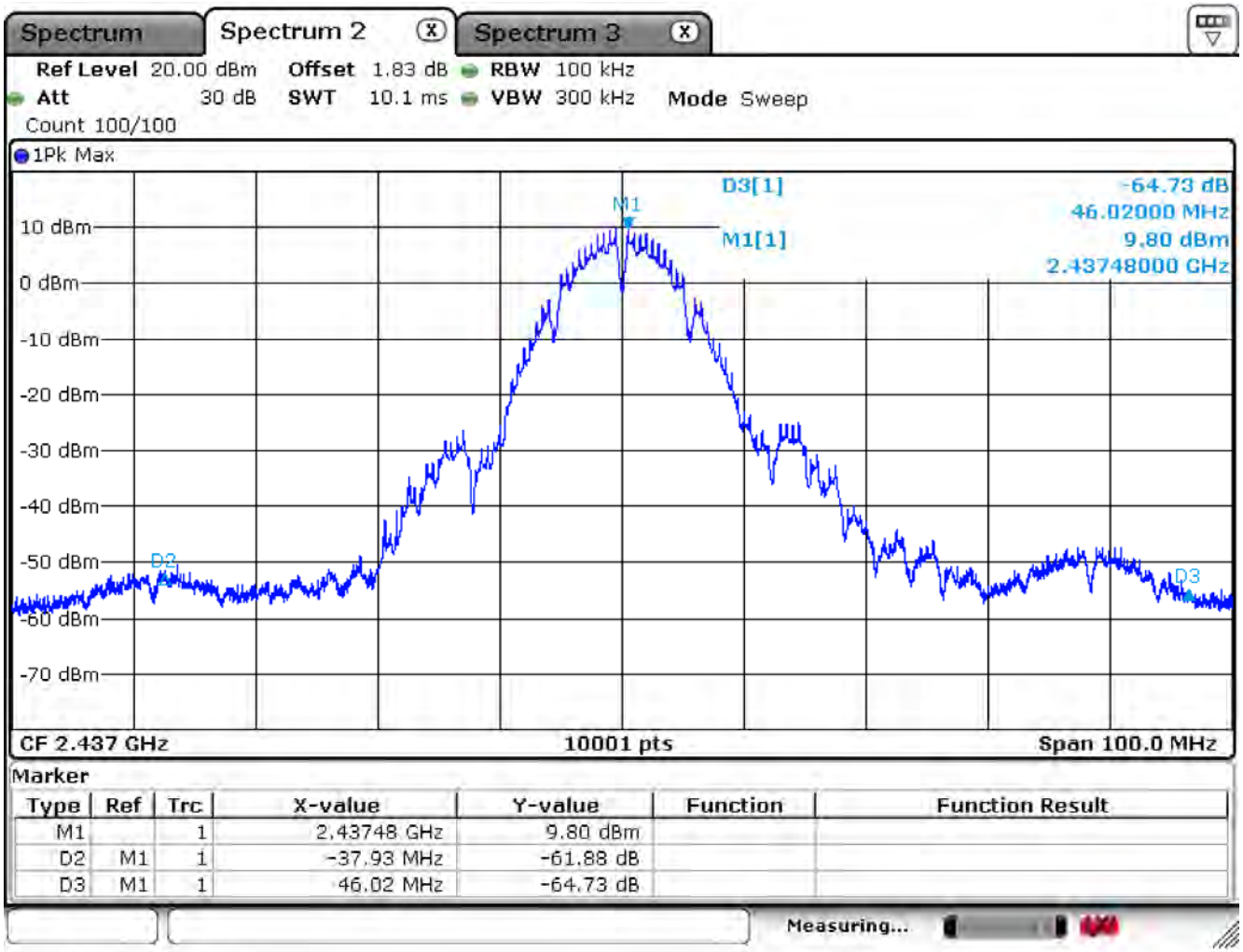
IEEE 802.11b (ANT 0)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	37.120	≧20	Pass
6	2437	61.880	≧20	Pass
11	2462	56.490	≧20	Pass

Channel 1



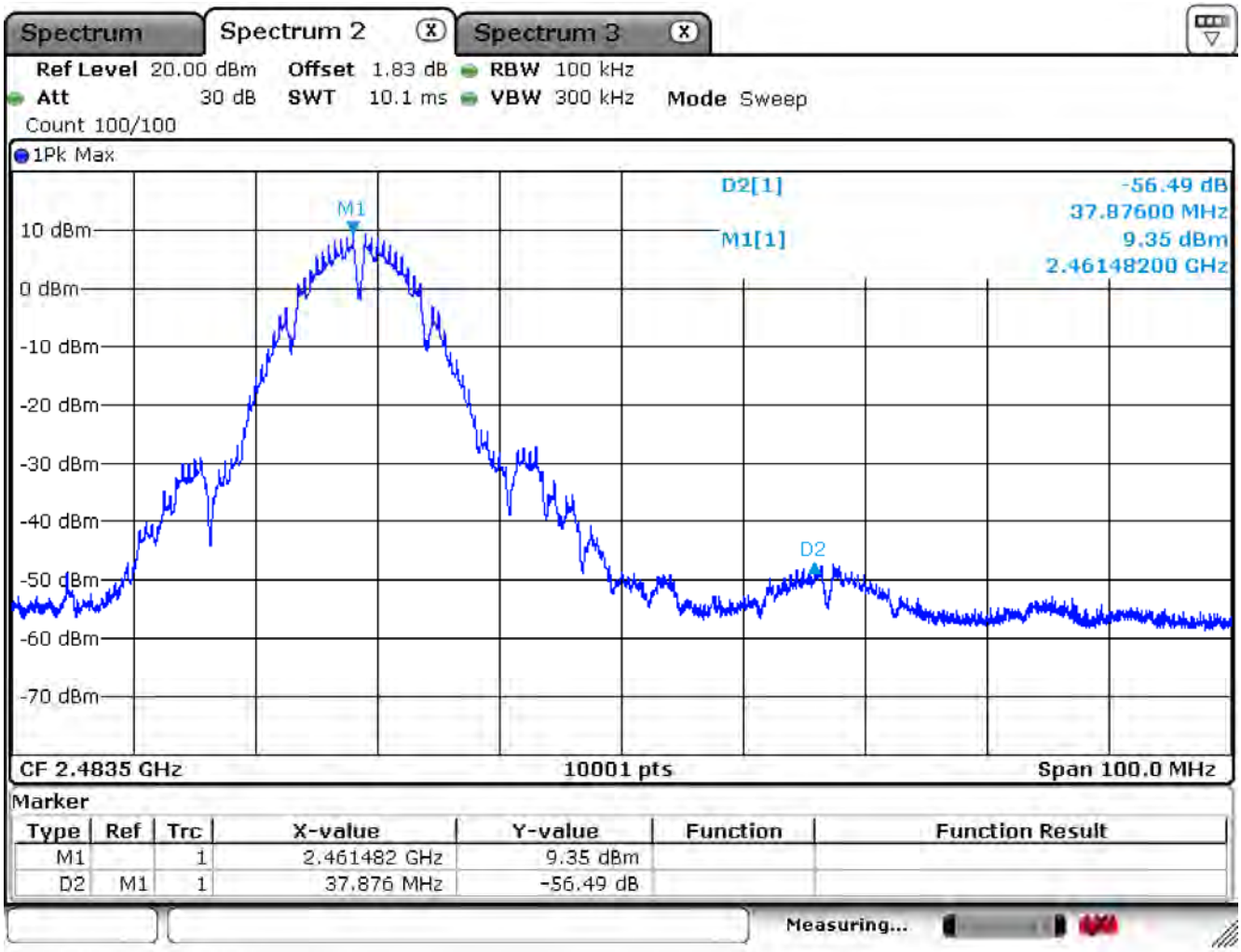
Date: 9.AUG.2017 03:44:15

Channel 6



Date: 9.AUG.2017 03:48:53

Channel 11

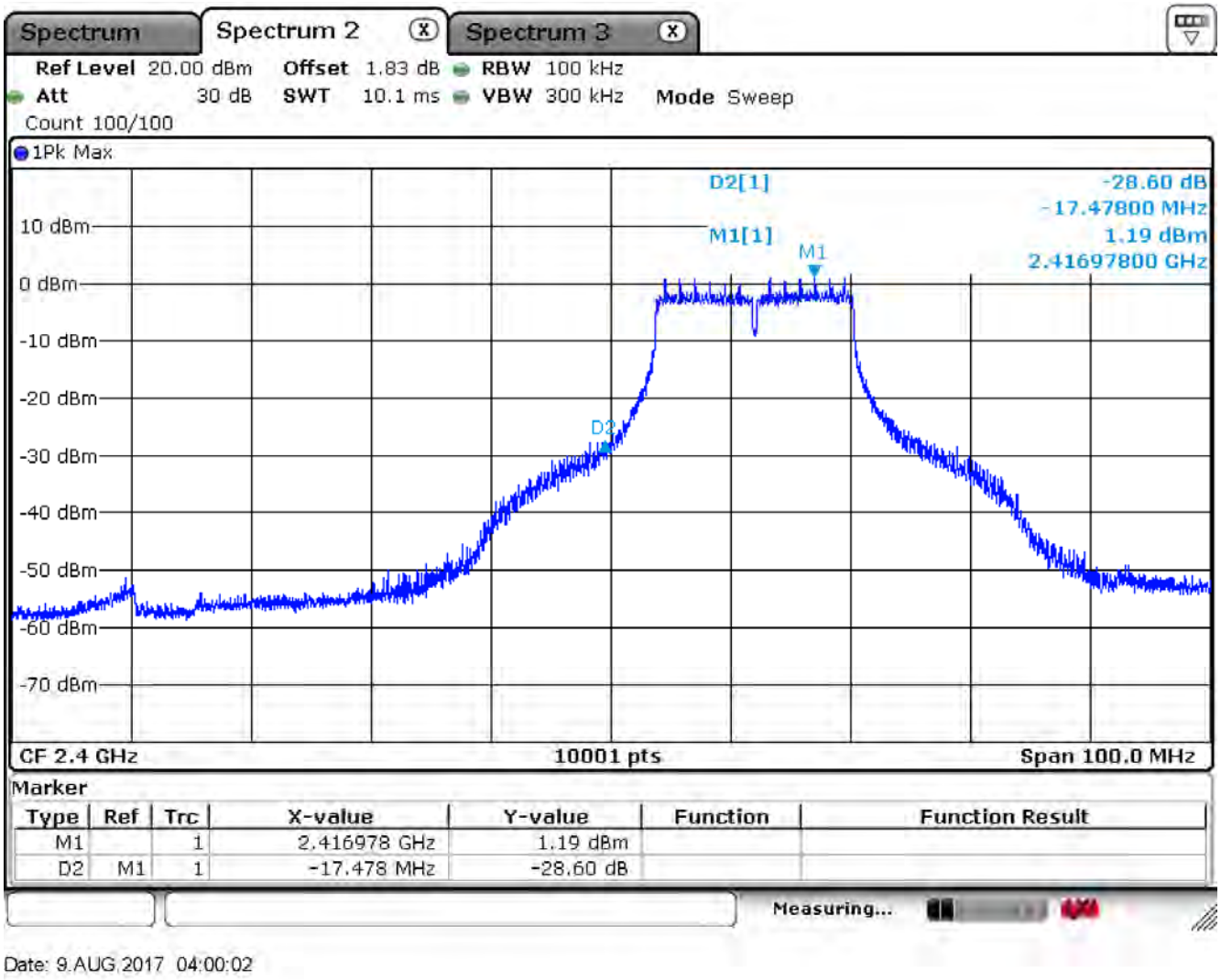


Date: 9.AUG.2017 03:51:04

Product	Beta+		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/08/09	Test Site	SR10-H

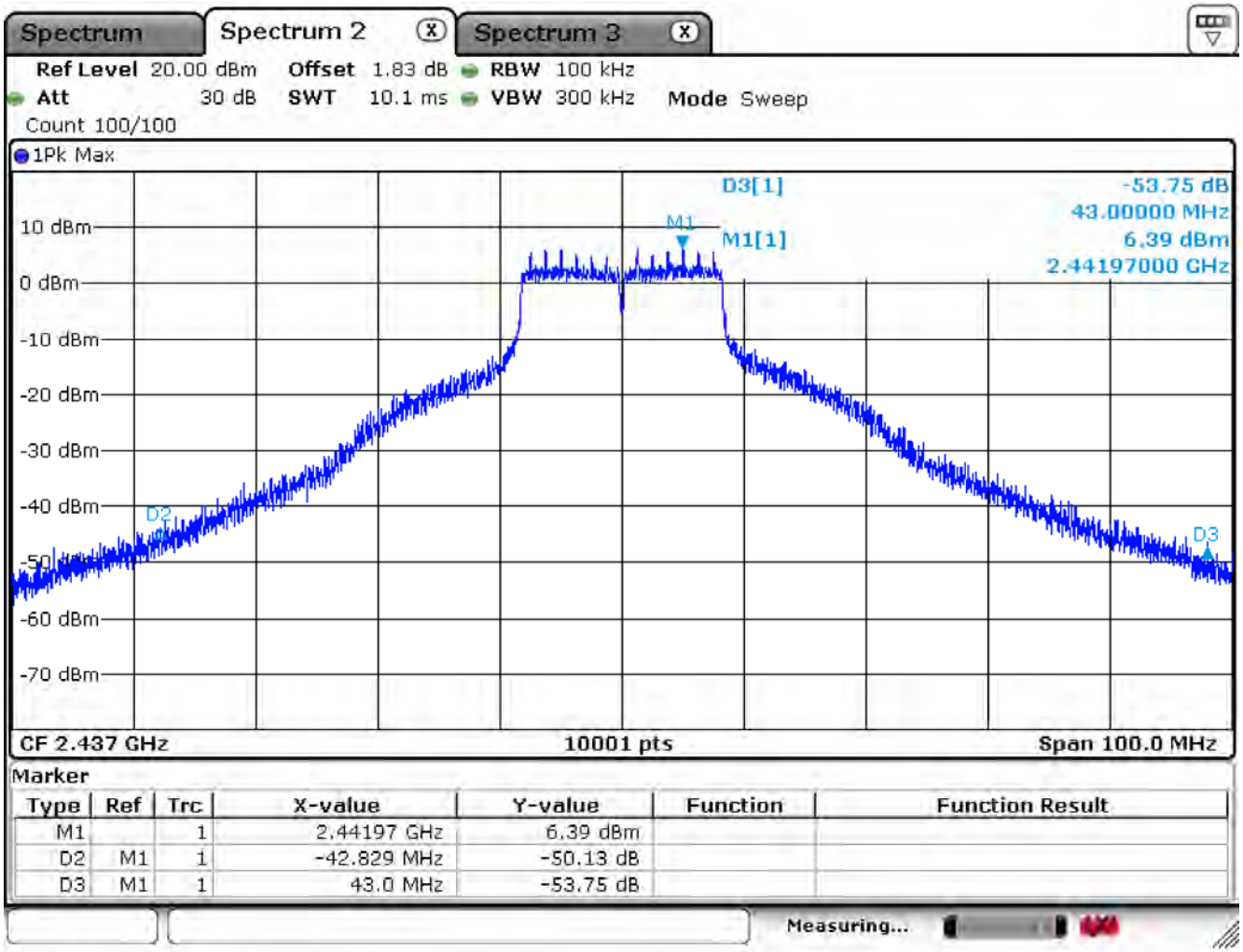
IEEE 802.11g (ANT 0)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	28.600	≧20	Pass
6	2437	50.130	≧20	Pass
11	2462	39.720	≧20	Pass

Channel 1



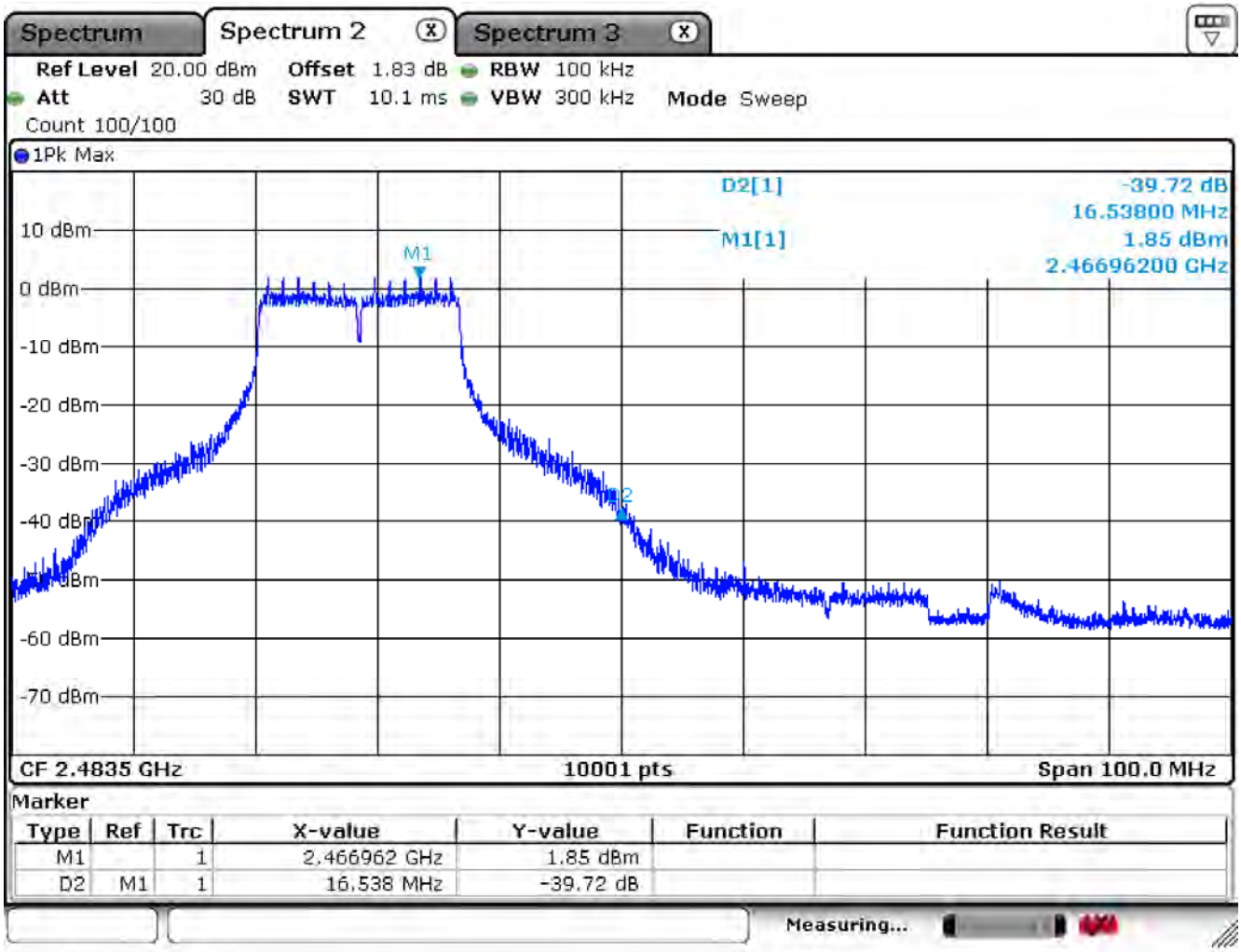
Date: 9.AUG.2017 04:00:02

Channel 6



Date: 9.AUG.2017 04:02:30

Channel 11

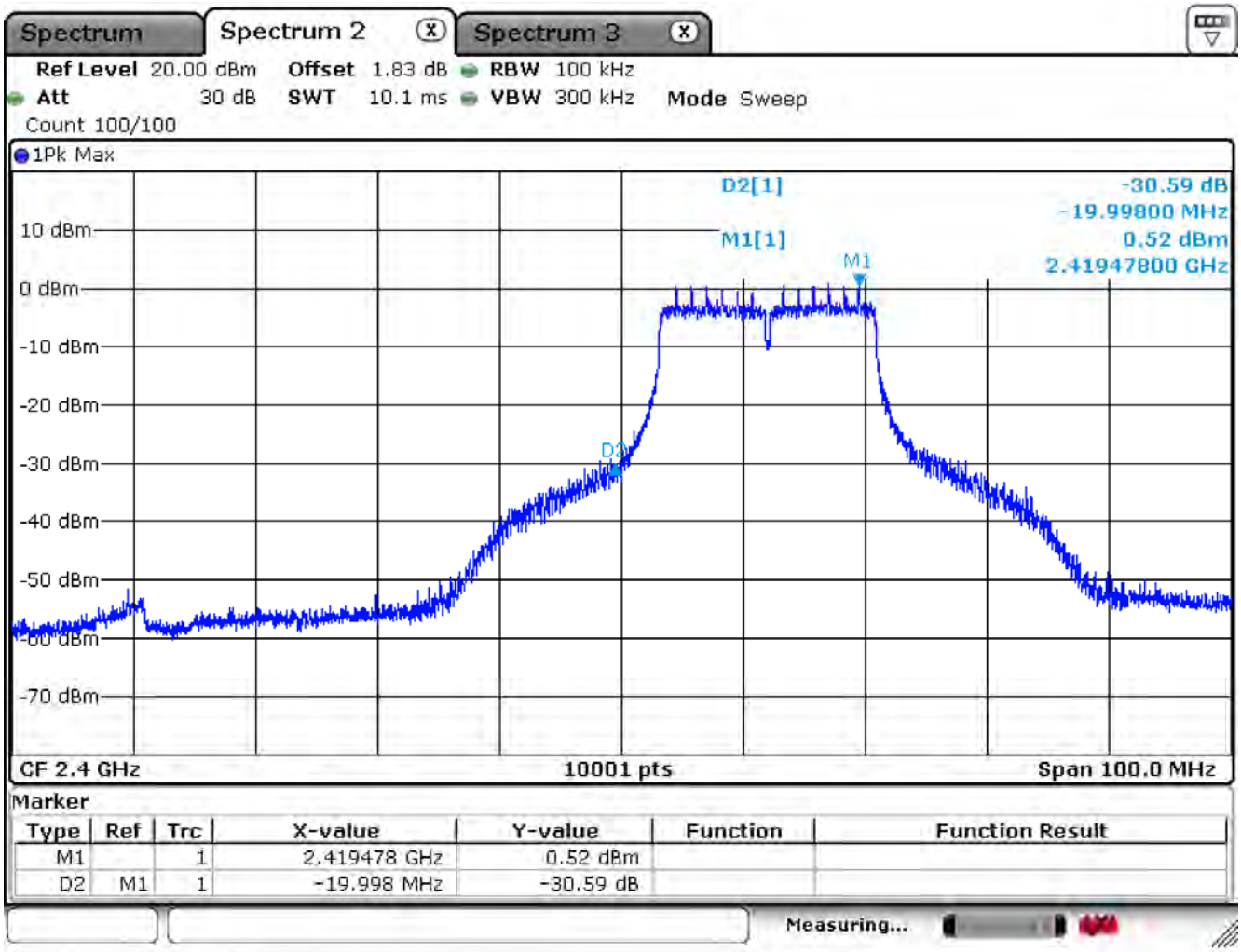


Date: 9.AUG.2017 03:54:08

Product	Beta+		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/08/09	Test Site	SR10-H

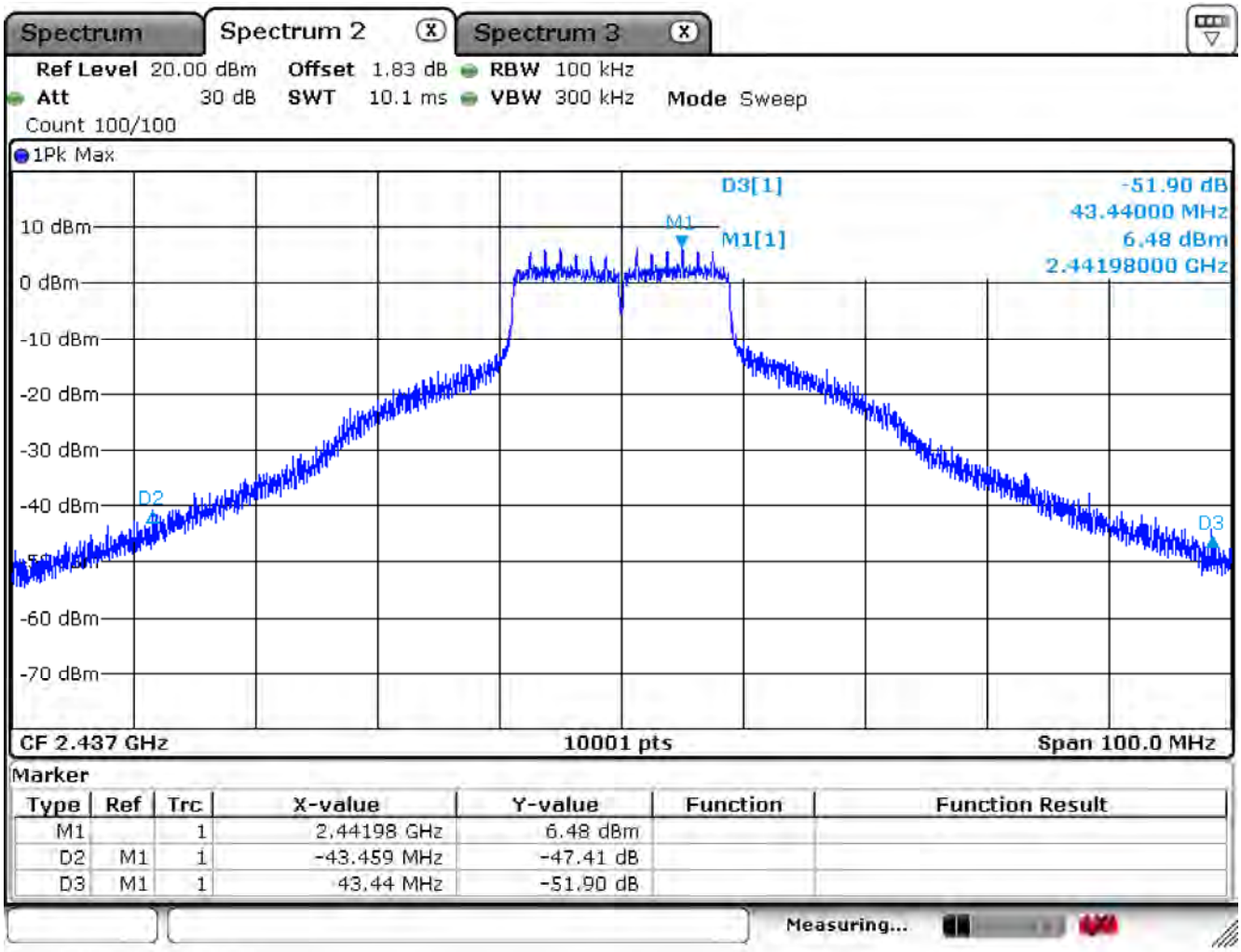
IEEE 802.11n_20M (ANT 0)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	30.590	≧20	Pass
6	2437	47.410	≧20	Pass
11	2462	38.840	≧20	Pass

Channel 1



Date: 9.AUG.2017 04:10:20

Channel 6



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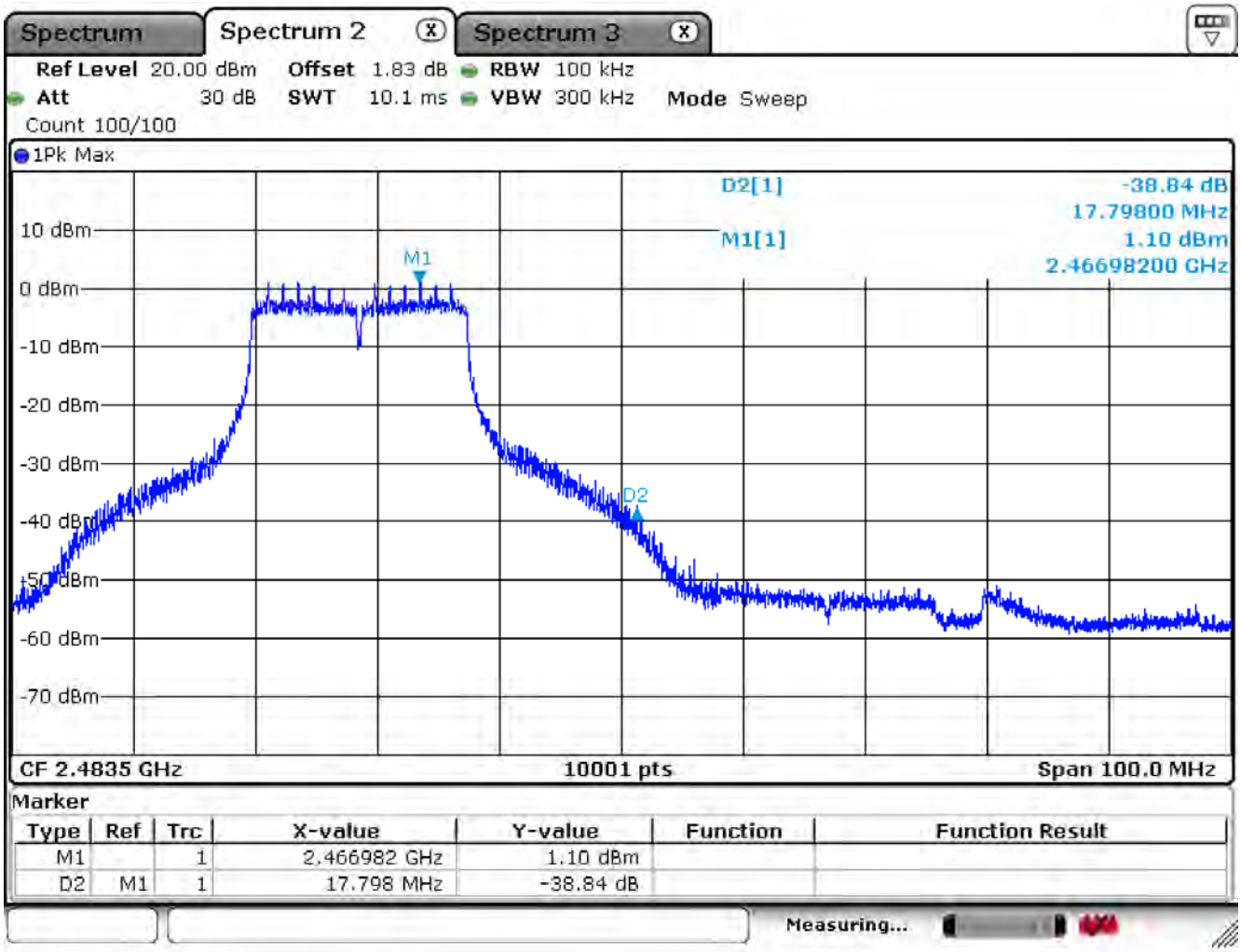
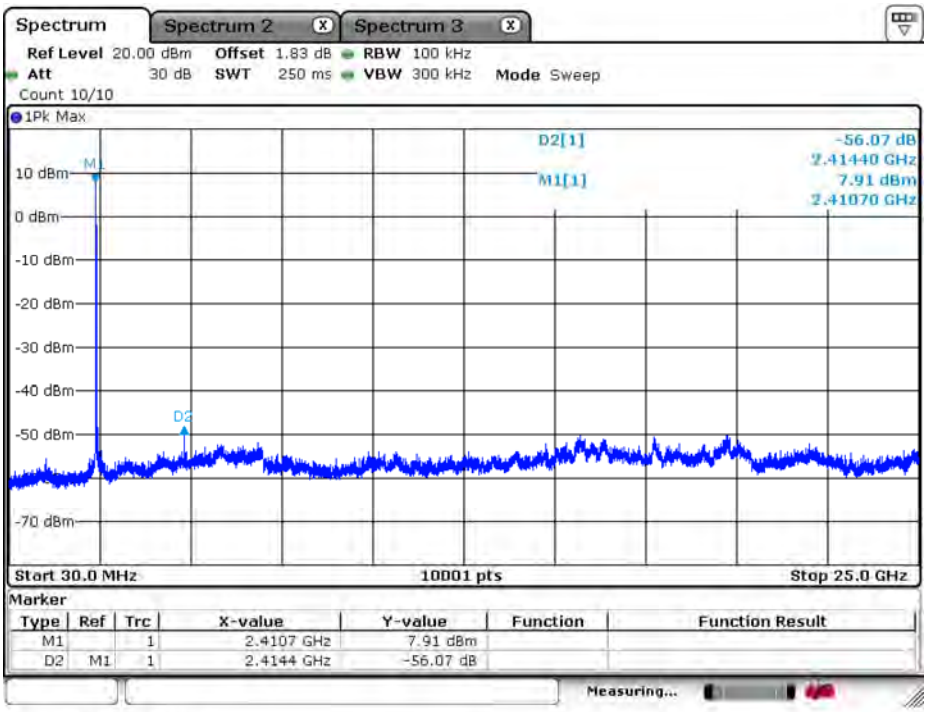
Channel 11



Date: 9.AUG.2017 04:07:01

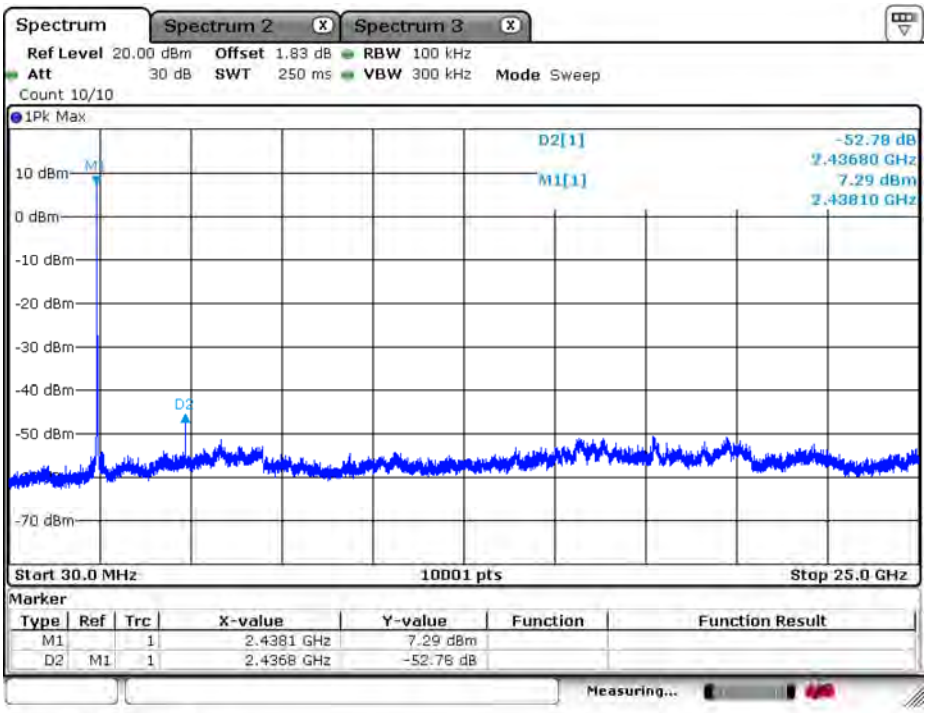
Product	Beta+		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/08/09	Test Site	SR10-H

2412MHz (30MHz-25GHz)-802.11b (ANT 0)



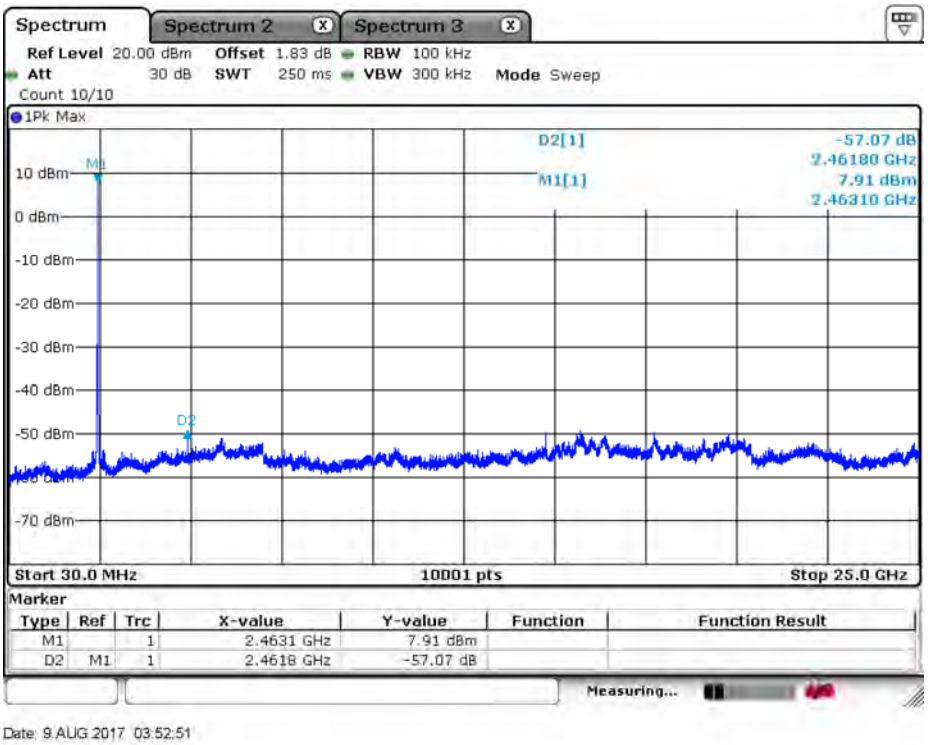
Date: 9.AUG.2017 03:47:37

2437MHz (30MHz-25GHz)-802.11b (ANT 0)

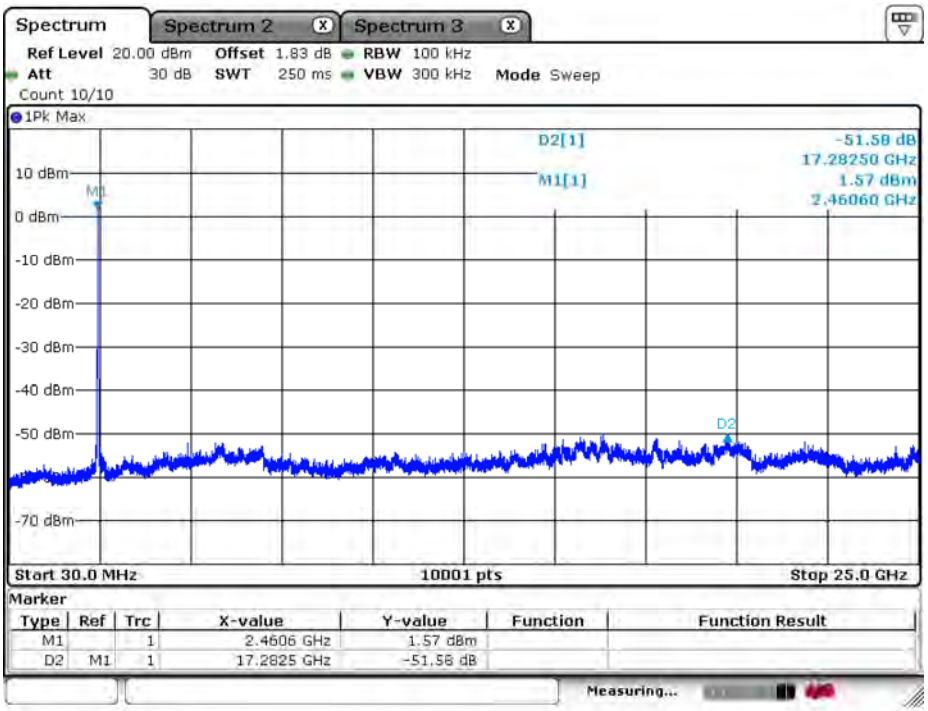


Date: 9.AUG.2017 03:48:13

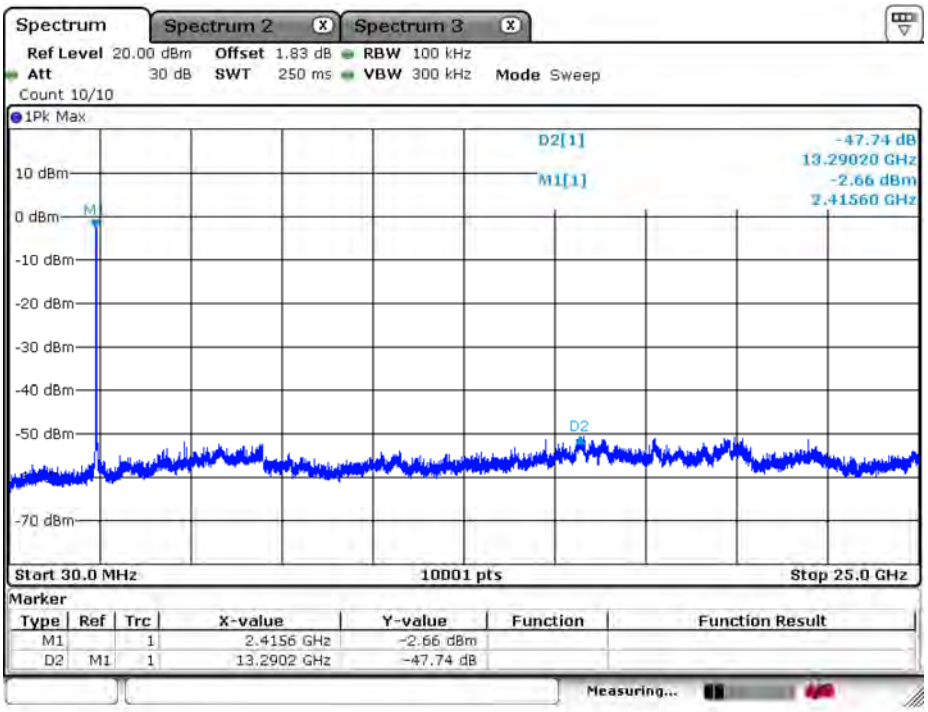
2462MHz (30MHz-25GHz)-802.11b (ANT 0)



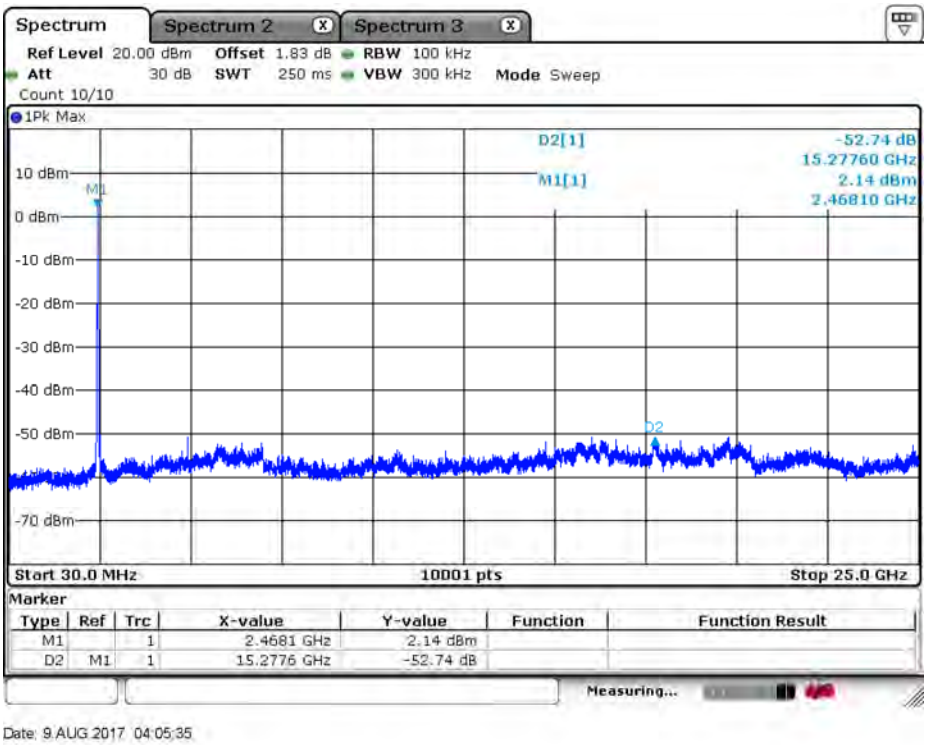
2412MHz (30MHz-25GHz)-802.11g (ANT 0)



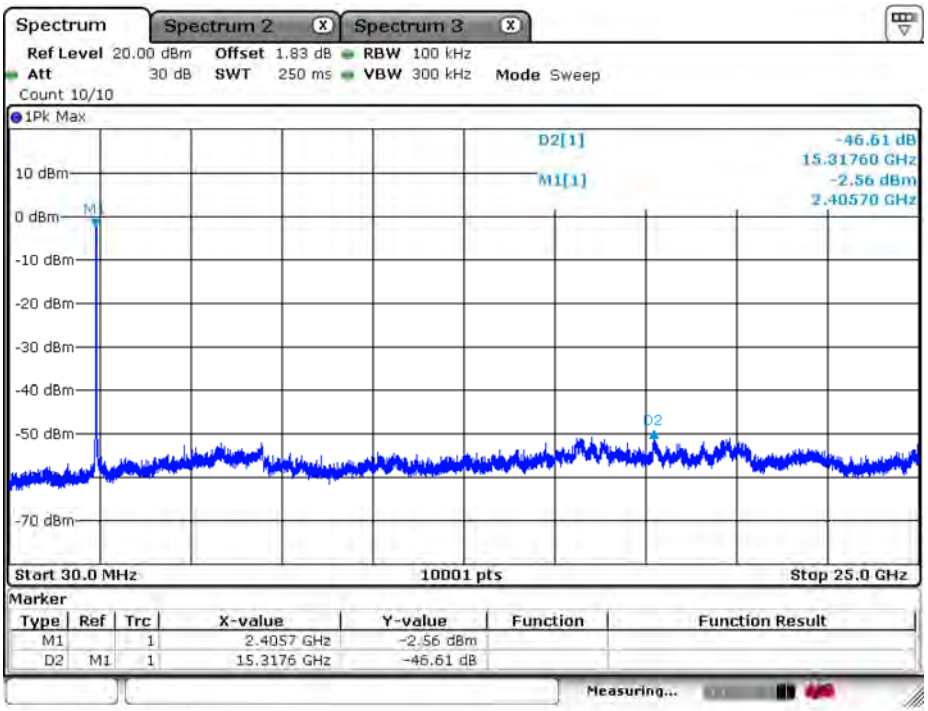
2437MHz (30MHz-25GHz)-802.11 g (ANT 0)



2462MHz (30MHz-25GHz)-802.11g (ANT 0)

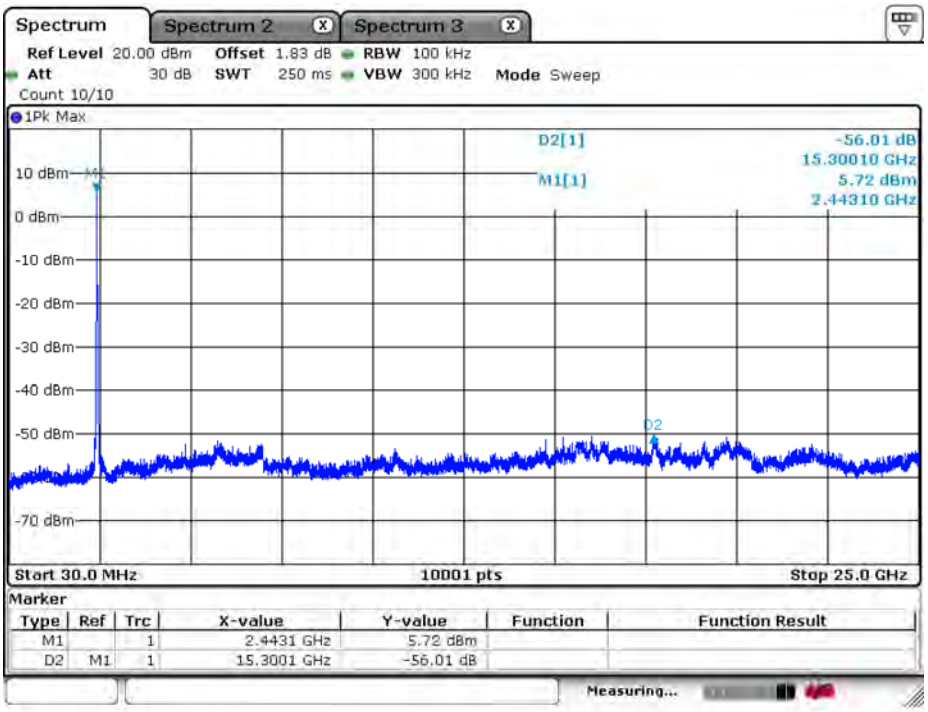


2412MHz (30MHz-25GHz)- IEEE802.11n 20MHz (ANT 0)



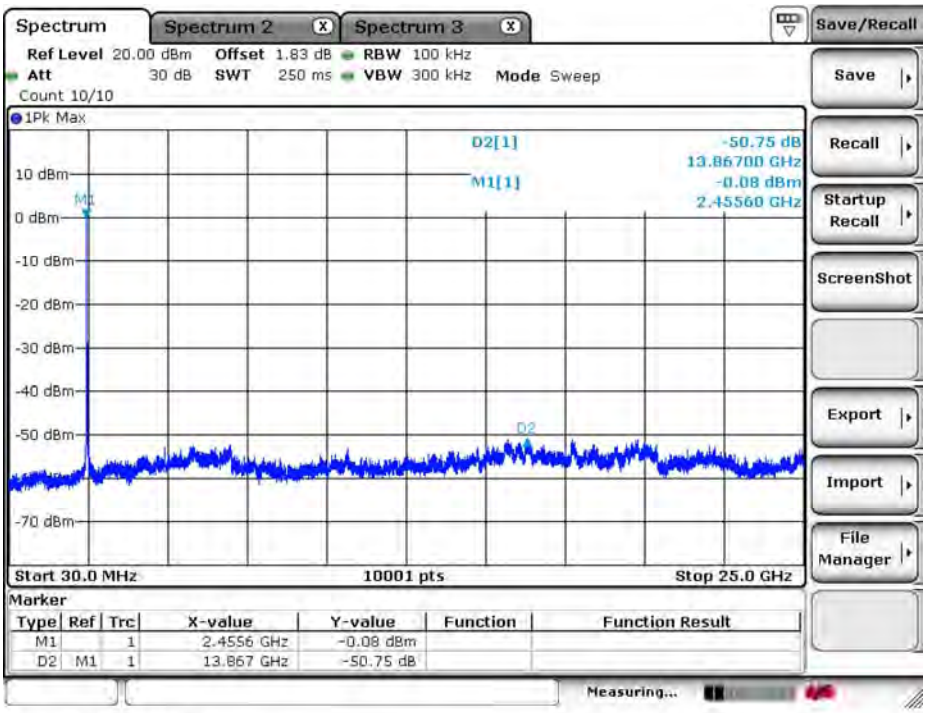
Date: 9.AUG.2017 04:10:50

2437MHz (30MHz-25GHz)- IEEE802.11n 20MHz (ANT 0)



Date: 9.AUG.2017 04:04:14

2462MHz (30MHz-25GHz)- IEEE802.11n 20MHz (ANT 0)



6. Band Edge

6.1. Test Equipment

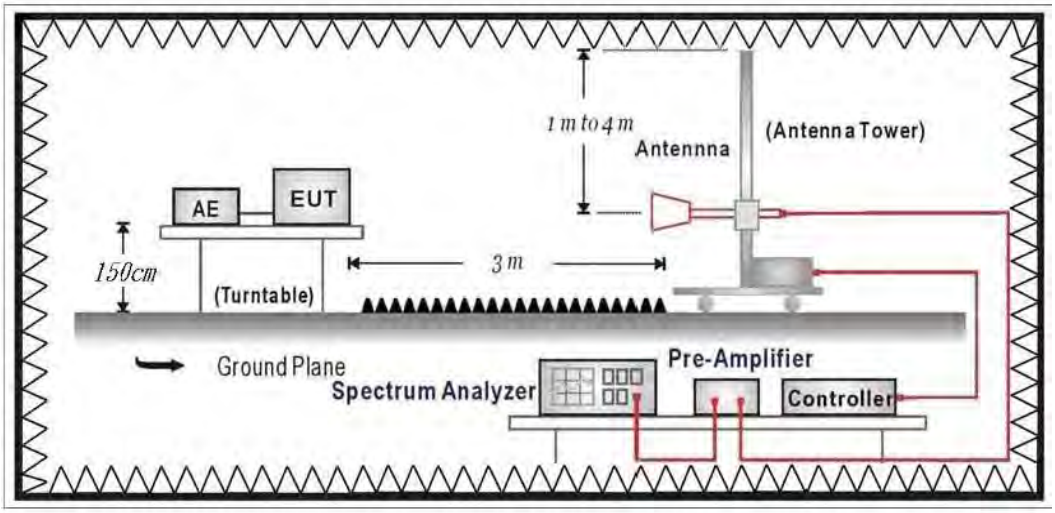
The following test equipments are used during the test:

Band Edge / CB4-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2016/11/28	2017/11/27
Signal & Spectrum Analyzer	R&S	FSV40	101049	2017/01/23	2018/01/22
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
Bilog Antenna	Teseq	CBL6112D	23191	2017/06/28	2018/06/27
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2017/06/14	2018/06/13
Horn Antenna	Schwarzbeck	BBHA 9170	203	2016/08/29	2017/08/28
Pre-Amplifier	RF Bay Inc.	LNA-1330	12162511	2017/03/09	2018/03/08
Pre-Amplifier	EMCI	EMCI 1830I	980366	2017/01/23	2018/01/22
Pre-Amplifier	MITEQ	JS44-45-8P	2014754	2016/12/26	2017/12/25

Note: All equipments that need to calibrate are with calibration period of 1 year.

6.2. Test Setup



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.10:2013 and tested according to DTS test procedure of KDB558074 D01 V04 for compliance to FCC 47CFR 15.247 requirements.
The EUT and its simulators are placed on a turn table which is 1.5 meter above ground.
The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.

6.5. Test Specification

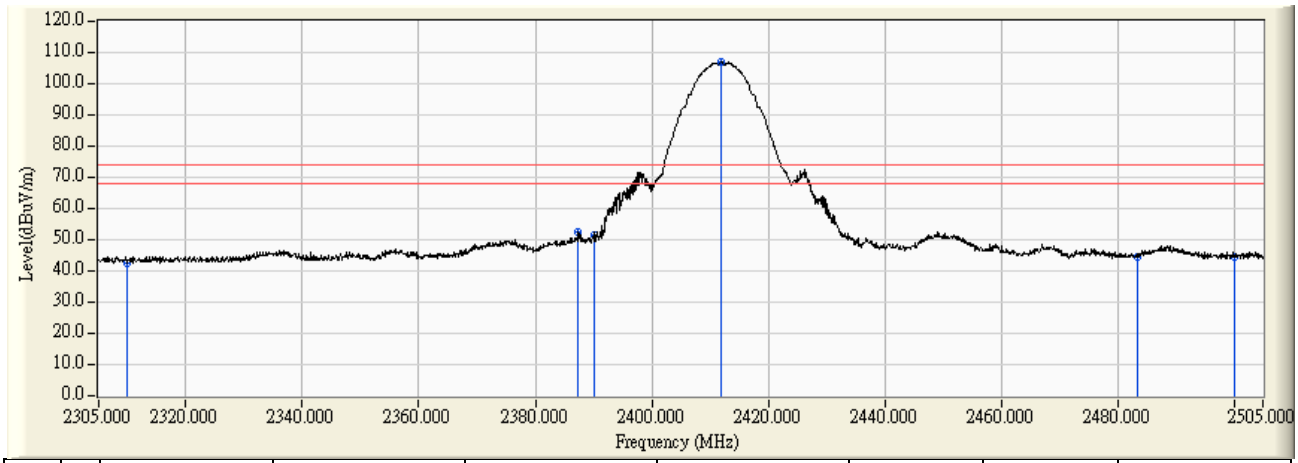
According to FCC Part 15 Subpart C Paragraph 15.247: 2015

6.6. Uncertainty

The measurement uncertainty
± 3.9 dB above 1GHz

6.7. Test Result

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11b_2412MHz**

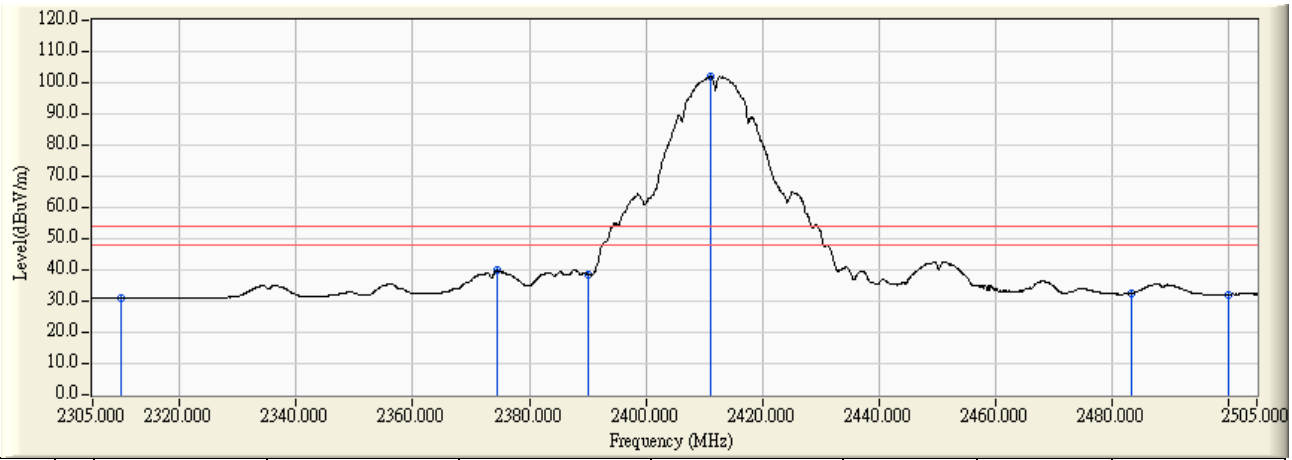


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	28.955	42.622	-31.378	74.000	PEAK
2		2387.400	14.113	38.368	52.481	-21.519	74.000	PEAK
3		2390.000	14.128	37.308	51.436	-22.564	74.000	PEAK
4	*	2412.000	14.254	92.823	107.077	33.077	74.000	PEAK
5		2483.500	14.658	29.643	44.302	-29.698	74.000	PEAK
6		2500.000	14.751	29.727	44.478	-29.522	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11b_2412MHz**

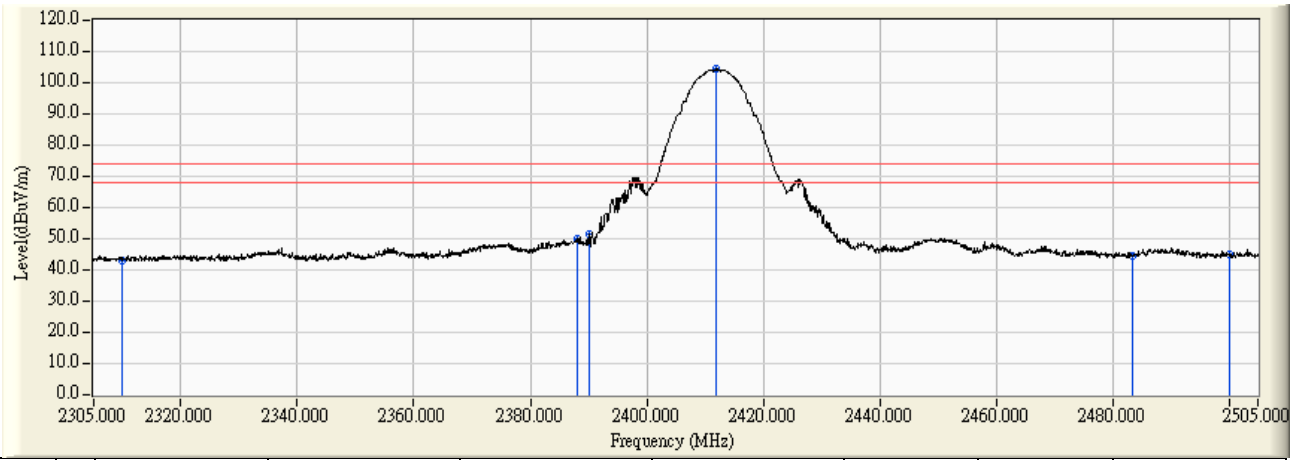


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	17.284	30.951	-23.049	54.000	AVERAGE
2		2374.500	14.039	25.797	39.836	-14.164	54.000	AVERAGE
3		2390.000	14.128	24.555	38.683	-15.317	54.000	AVERAGE
4	*	2411.200	14.249	87.969	102.218	48.218	54.000	AVERAGE
5		2483.500	14.658	17.838	32.497	-21.503	54.000	AVERAGE
6		2500.000	14.751	17.426	32.177	-21.823	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11b_2412MHz**

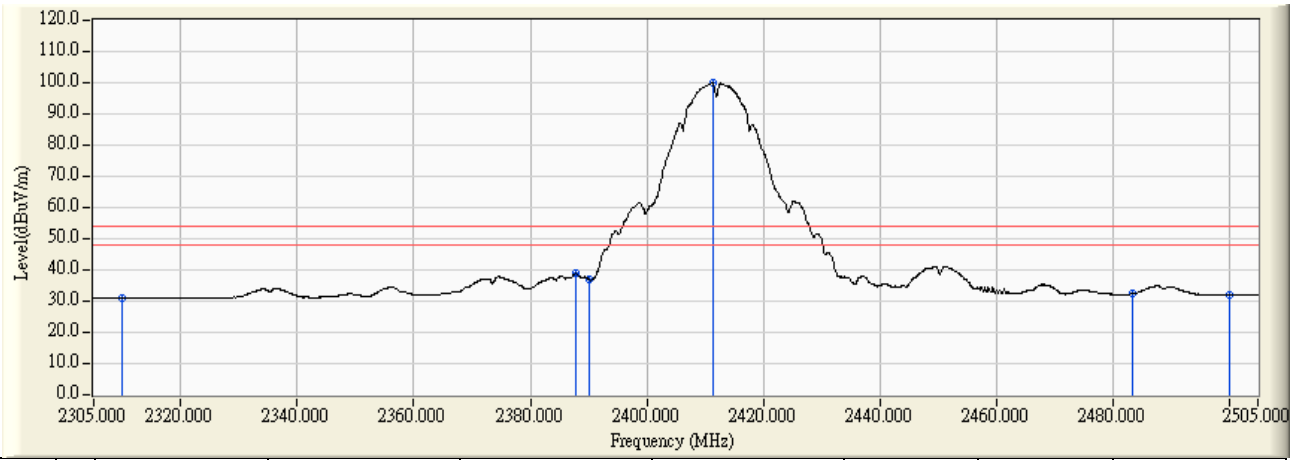


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	29.285	42.952	-31.048	74.000	PEAK
2		2388.100	14.116	35.919	50.036	-23.964	74.000	PEAK
3		2390.000	14.128	37.148	51.276	-22.724	74.000	PEAK
4	*	2412.000	14.254	90.080	104.334	30.334	74.000	PEAK
5		2483.500	14.658	29.757	44.416	-29.584	74.000	PEAK
6		2500.000	14.751	30.074	44.825	-29.175	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11b_2412MHz**

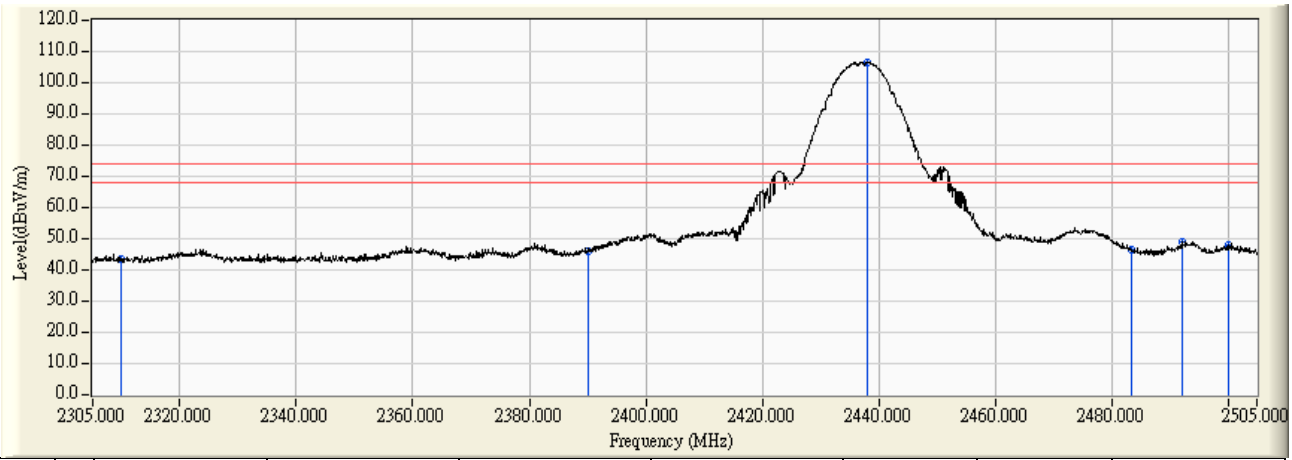


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	17.189	30.856	-23.144	54.000	AVERAGE
2		2387.700	14.115	24.662	38.777	-15.223	54.000	AVERAGE
3		2390.000	14.128	22.981	37.109	-16.891	54.000	AVERAGE
4	*	2411.300	14.249	85.734	99.984	45.984	54.000	AVERAGE
5		2483.500	14.658	17.684	32.343	-21.657	54.000	AVERAGE
6		2500.000	14.751	17.302	32.053	-21.947	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11b_2437MHz**

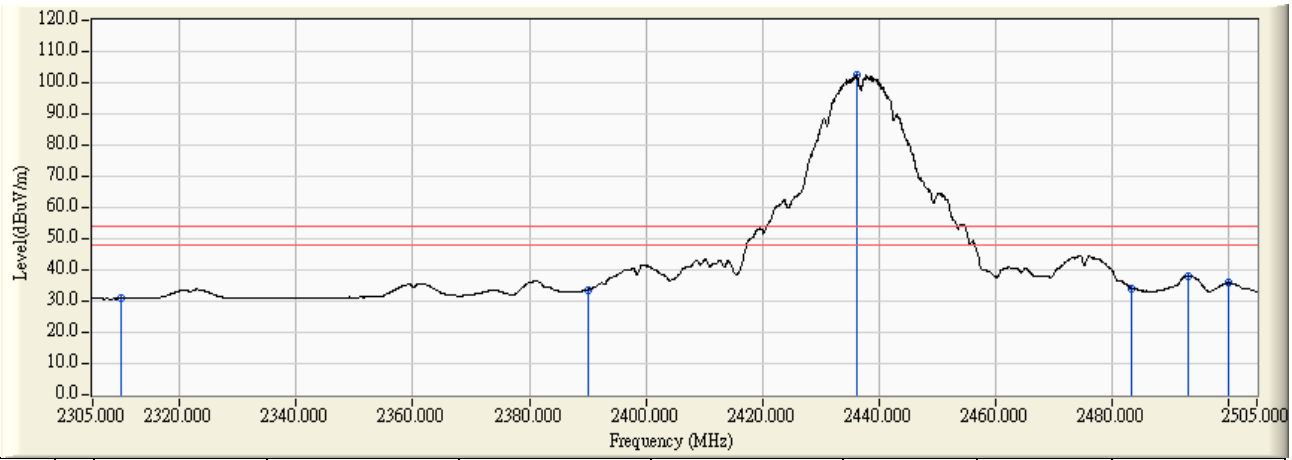


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	29.614	43.281	-30.719	74.000	PEAK
2		2390.000	14.128	31.825	45.953	-28.047	74.000	PEAK
3	*	2438.200	14.403	92.186	106.588	32.588	74.000	PEAK
4		2483.500	14.658	31.853	46.512	-27.488	74.000	PEAK
5		2492.200	14.708	34.140	48.848	-25.152	74.000	PEAK
6		2500.000	14.751	33.127	47.878	-26.122	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11b_2437MHz**

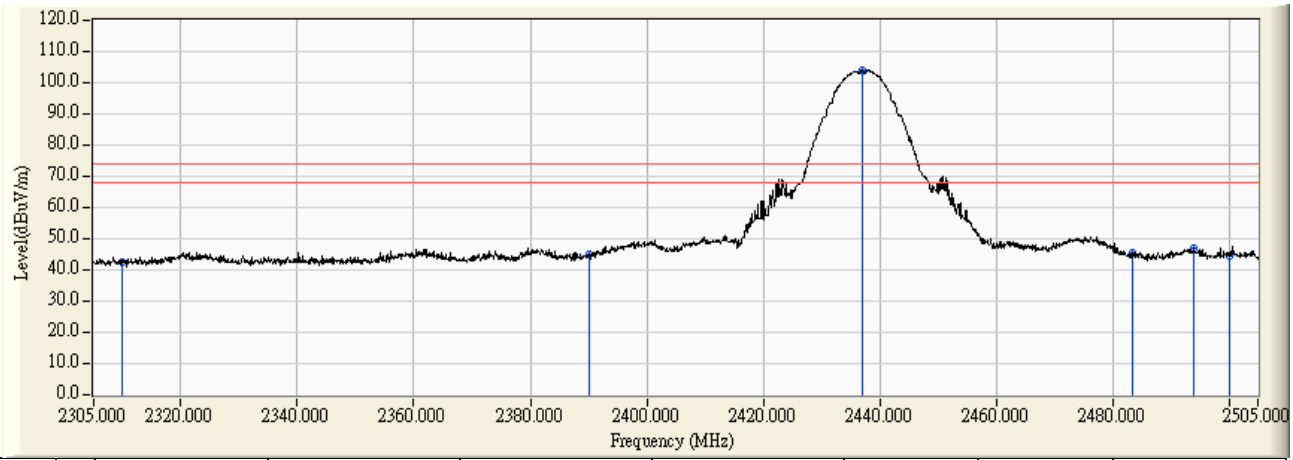


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	17.101	30.768	-23.232	54.000	AVERAGE
2		2390.000	14.128	19.542	33.670	-20.330	54.000	AVERAGE
3	*	2436.200	14.391	88.019	102.410	48.410	54.000	AVERAGE
4		2483.500	14.658	19.496	34.155	-19.845	54.000	AVERAGE
5		2493.100	14.713	23.279	37.992	-16.008	54.000	AVERAGE
6		2500.000	14.751	21.080	35.831	-18.169	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11b_2437MHz**

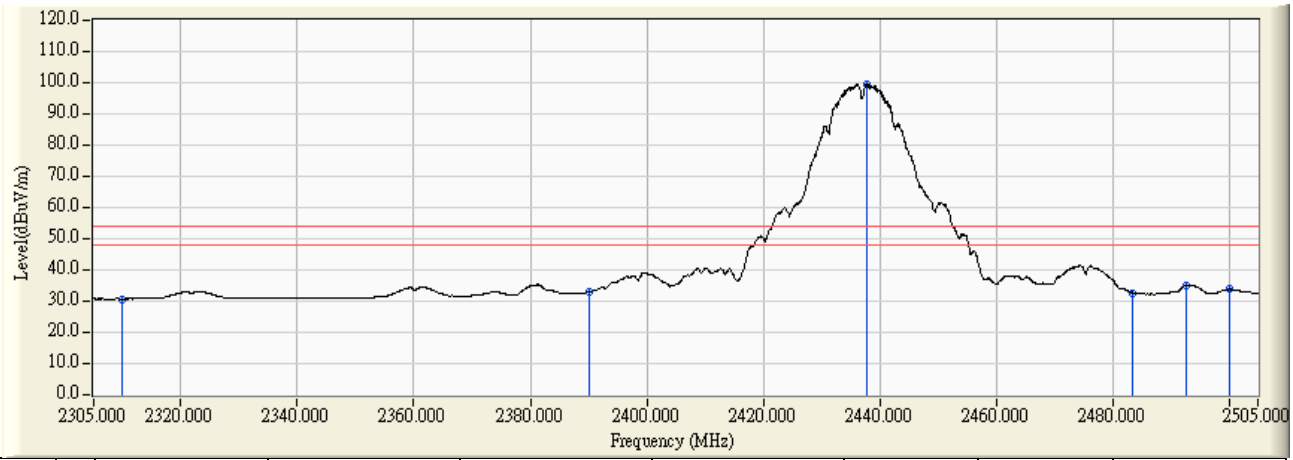


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	28.832	42.499	-31.501	74.000	PEAK
2		2390.000	14.128	30.813	44.941	-29.059	74.000	PEAK
3	*	2437.000	14.396	89.515	103.910	29.910	74.000	PEAK
4		2483.500	14.658	30.665	45.324	-28.676	74.000	PEAK
5		2494.000	14.718	32.440	47.158	-26.842	74.000	PEAK
6		2500.000	14.751	29.761	44.512	-29.488	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11b_2437MHz**

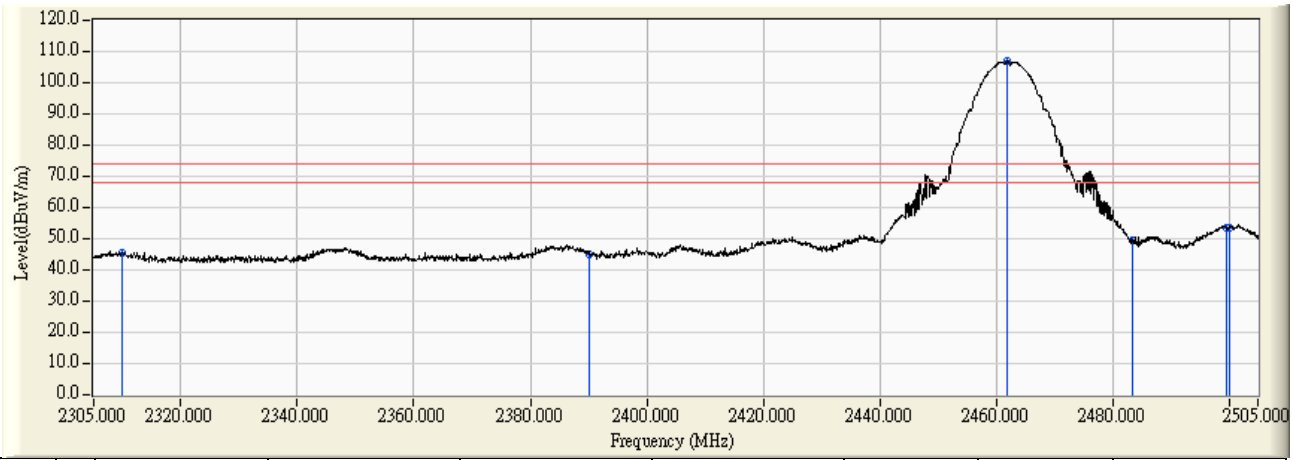


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	17.049	30.716	-23.284	54.000	AVERAGE
2		2390.000	14.128	18.774	32.902	-21.098	54.000	AVERAGE
3	*	2437.700	14.399	85.293	99.692	45.692	54.000	AVERAGE
4		2483.500	14.658	17.998	32.657	-21.343	54.000	AVERAGE
5		2492.600	14.710	20.167	34.877	-19.123	54.000	AVERAGE
6		2500.000	14.751	19.009	33.760	-20.240	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11b_2462MHz**

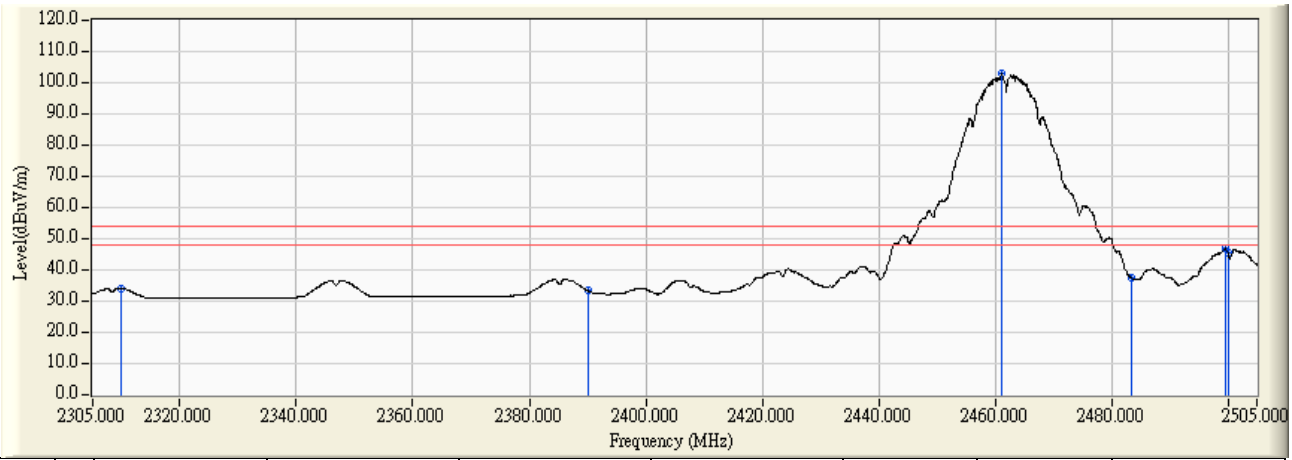


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	31.768	45.435	-28.565	74.000	PEAK
2		2390.000	14.128	30.912	45.040	-28.960	74.000	PEAK
3	*	2462.000	14.538	92.274	106.811	32.811	74.000	PEAK
4		2483.500	14.658	34.732	49.391	-24.609	74.000	PEAK
5		2499.500	14.748	38.851	53.600	-20.400	74.000	PEAK
6		2500.000	14.751	38.829	53.580	-20.420	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11b_2462MHz**

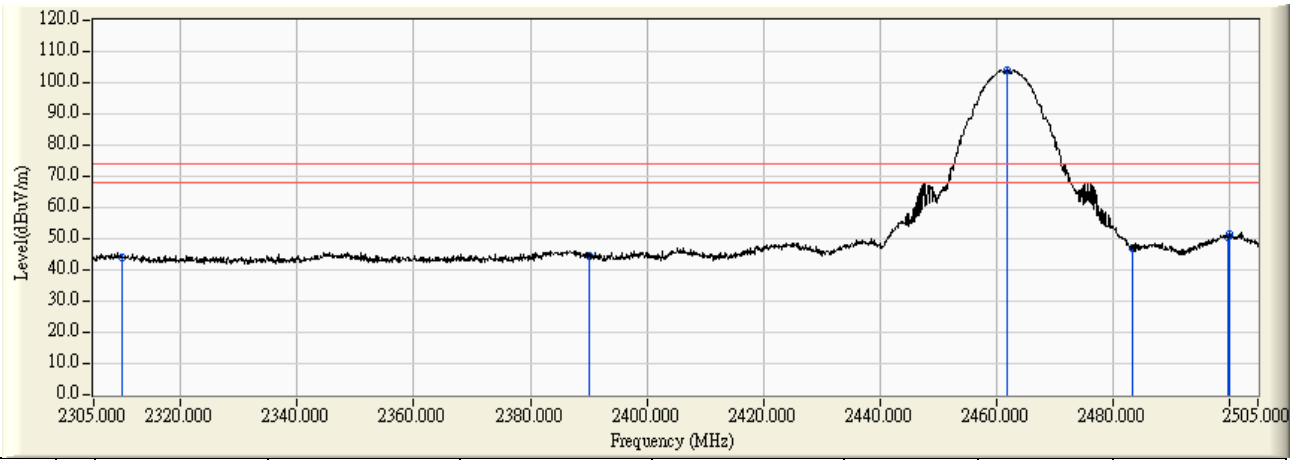


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	20.390	34.057	-19.943	54.000	AVERAGE
2		2390.000	14.128	19.286	33.414	-20.586	54.000	AVERAGE
3	*	2461.200	14.532	88.260	102.792	48.792	54.000	AVERAGE
4		2483.500	14.658	22.736	37.395	-16.605	54.000	AVERAGE
5		2499.700	14.750	32.006	46.756	-7.244	54.000	AVERAGE
6		2500.000	14.751	30.899	45.650	-8.350	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11b_2462MHz**

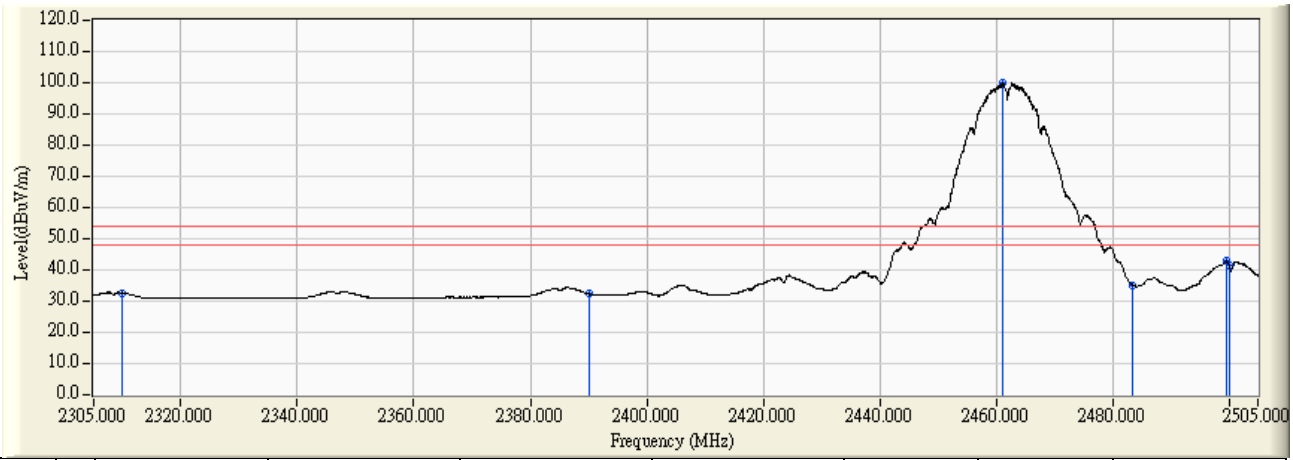


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	30.355	44.022	-29.978	74.000	PEAK
2		2390.000	14.128	30.574	44.702	-29.298	74.000	PEAK
3	*	2462.000	14.538	89.433	103.970	29.970	74.000	PEAK
4		2483.500	14.658	32.186	46.845	-27.155	74.000	PEAK
5		2499.800	14.750	35.518	50.268	-23.732	74.000	PEAK
6		2500.000	14.751	36.908	51.659	-22.341	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11b_2462MHz**

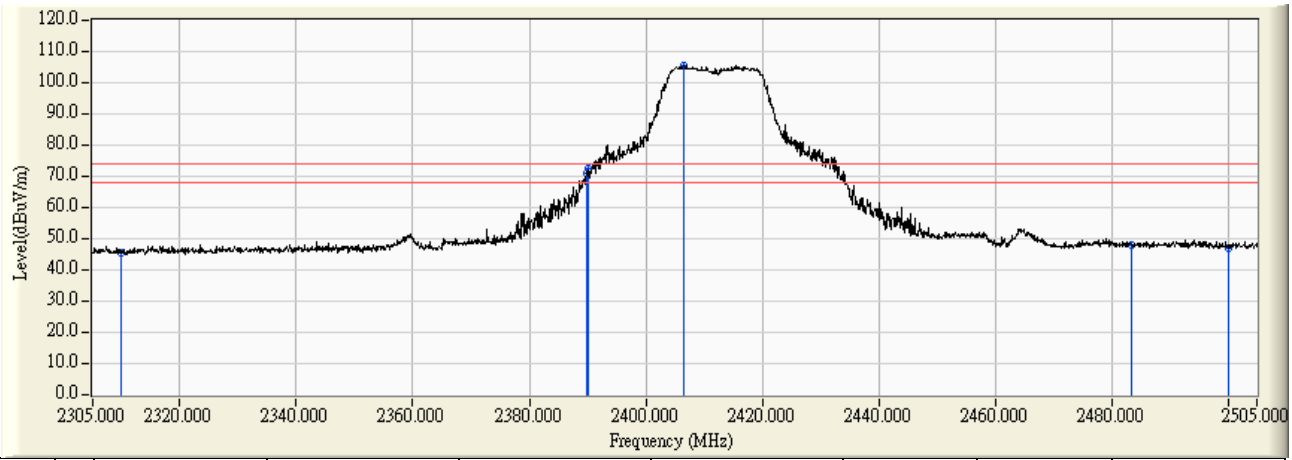


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.054	32.721	-21.279	54.000	AVERAGE
2		2390.000	14.128	18.232	32.360	-21.640	54.000	AVERAGE
3	*	2461.100	14.532	85.430	99.962	45.962	54.000	AVERAGE
4		2483.500	14.658	20.543	35.202	-18.798	54.000	AVERAGE
5		2499.600	14.749	28.020	42.769	-11.231	54.000	AVERAGE
6		2500.000	14.751	26.946	41.697	-12.303	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11g_2412MHz**

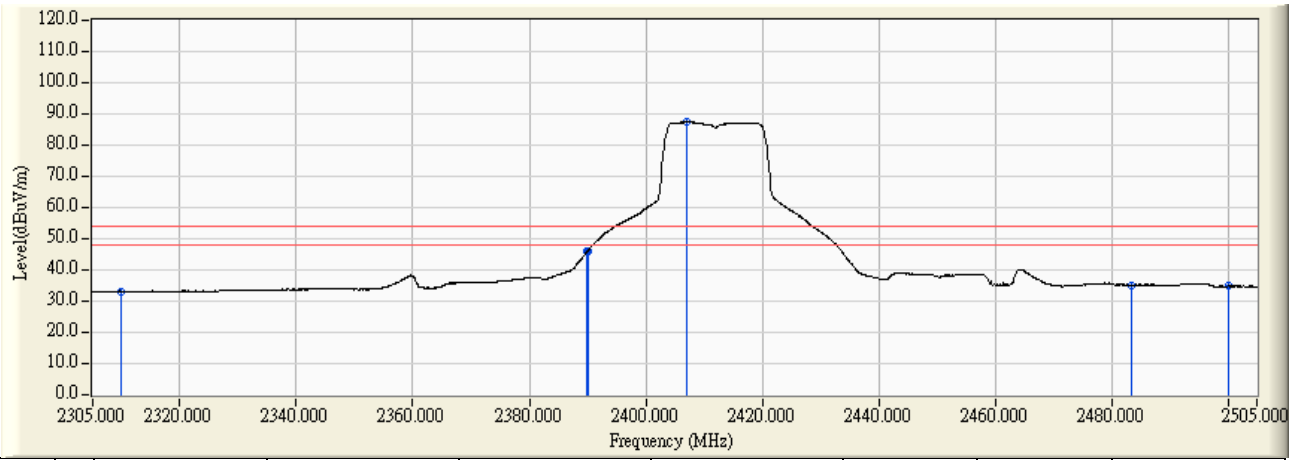


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	31.864	45.531	-28.469	74.000	PEAK
2		2389.800	14.128	56.773	70.900	-3.100	74.000	PEAK
3		2390.000	14.128	58.258	72.386	-1.614	74.000	PEAK
4	*	2406.600	14.223	91.413	105.636	31.636	74.000	PEAK
5		2483.500	14.658	33.321	47.980	-26.020	74.000	PEAK
6		2500.000	14.751	32.487	47.238	-26.762	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11g_2412MHz**

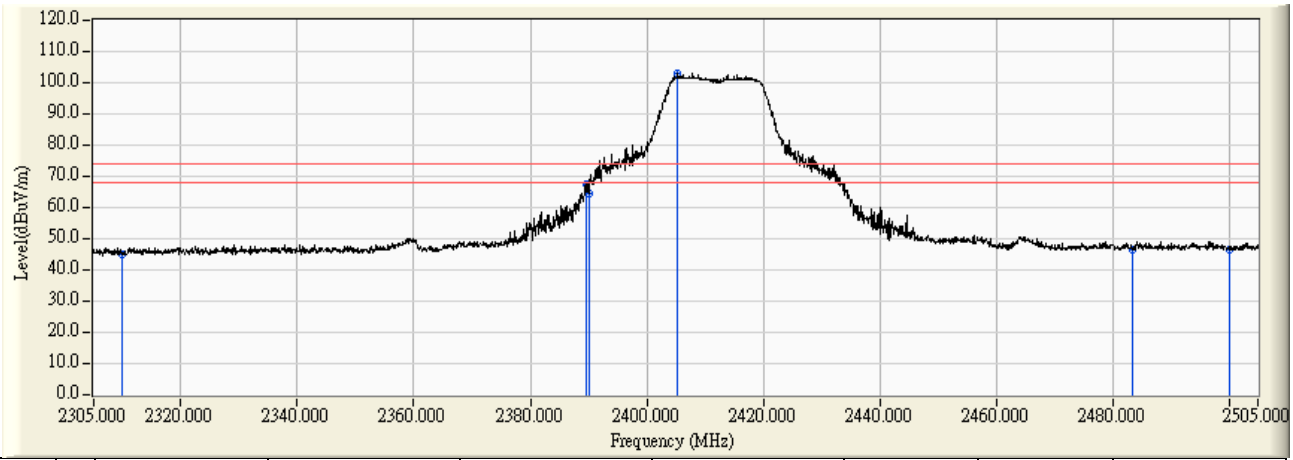


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.563	33.230	-20.770	54.000	AVERAGE
2		2389.900	14.128	31.648	45.776	-8.224	54.000	AVERAGE
3		2390.000	14.128	31.855	45.983	-8.017	54.000	AVERAGE
4	*	2407.100	14.226	73.165	87.391	33.391	54.000	AVERAGE
5		2483.500	14.658	20.490	35.149	-18.851	54.000	AVERAGE
6		2500.000	14.751	20.001	34.752	-19.248	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11g_2412MHz**

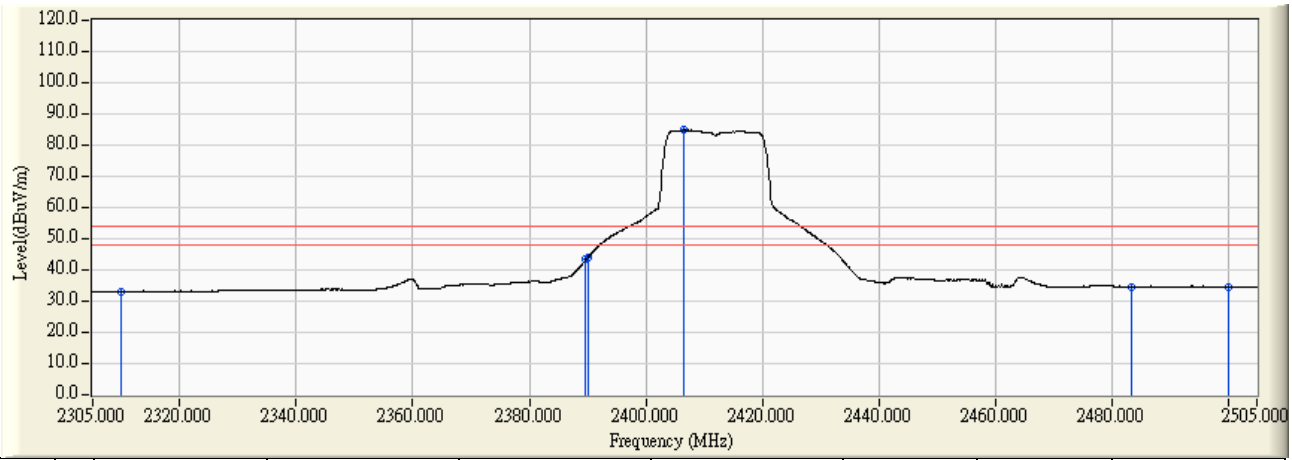


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	31.322	44.989	-29.011	74.000	PEAK
2		2389.500	14.125	53.150	67.275	-6.725	74.000	PEAK
3		2390.000	14.128	50.597	64.725	-9.275	74.000	PEAK
4	*	2405.300	14.217	88.665	102.881	28.881	74.000	PEAK
5		2483.500	14.658	31.838	46.497	-27.503	74.000	PEAK
6		2500.000	14.751	31.914	46.665	-27.335	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11g_2412MHz**

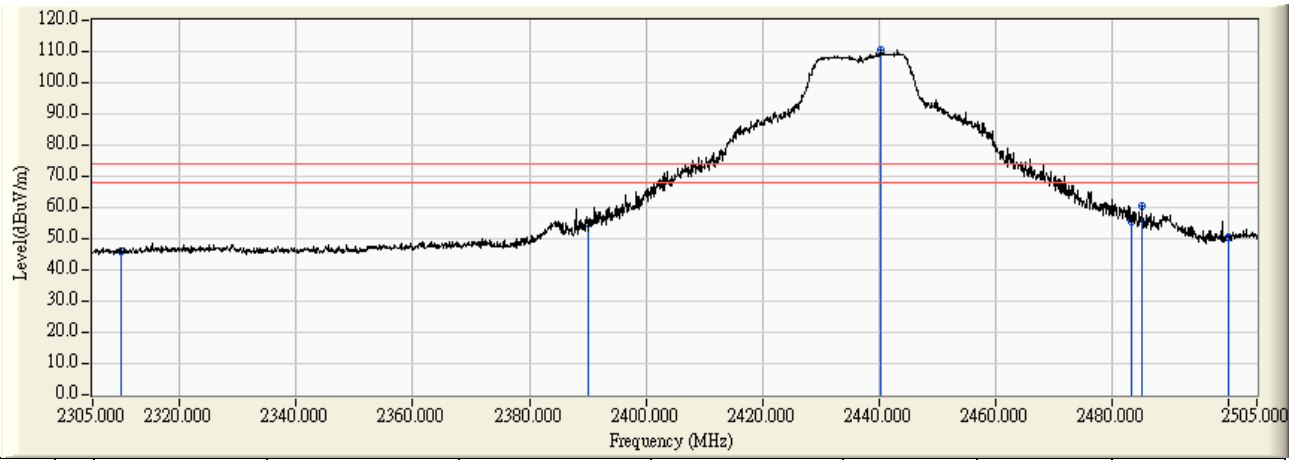


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.430	33.097	-20.903	54.000	AVERAGE
2		2389.700	14.126	29.154	43.280	-10.720	54.000	AVERAGE
3		2390.000	14.128	29.773	43.901	-10.099	54.000	AVERAGE
4	*	2406.500	14.223	70.575	84.798	30.798	54.000	AVERAGE
5		2483.500	14.658	20.024	34.683	-19.317	54.000	AVERAGE
6		2500.000	14.751	19.687	34.438	-19.562	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11g_2437MHz**

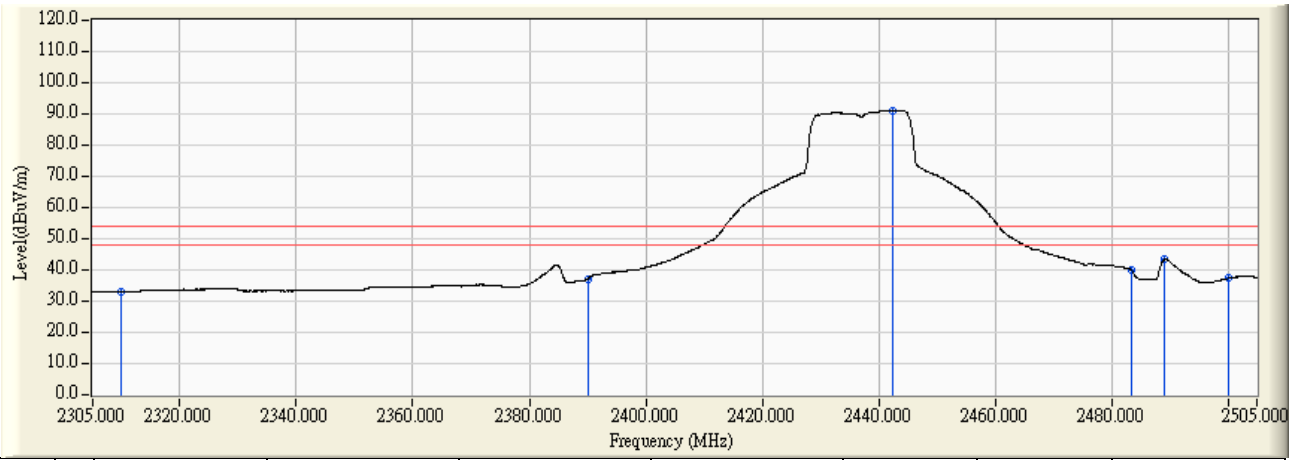


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	32.136	45.803	-28.197	74.000	PEAK
2		2390.000	14.128	40.830	54.958	-19.042	74.000	PEAK
3	*	2440.500	14.415	95.913	110.328	36.328	74.000	PEAK
4		2483.500	14.658	40.721	55.380	-18.620	74.000	PEAK
5		2485.300	14.670	45.679	60.348	-13.652	74.000	PEAK
6		2500.000	14.751	35.663	50.414	-23.586	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11g_2437MHz**

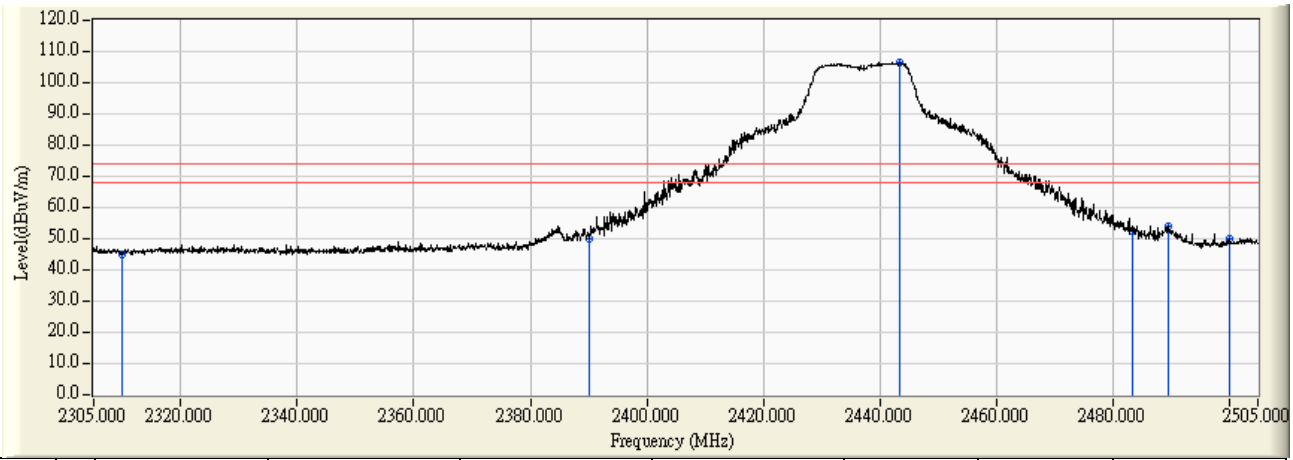


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.459	33.126	-20.874	54.000	AVERAGE
2		2390.000	14.128	23.037	37.165	-16.835	54.000	AVERAGE
3	*	2442.400	14.426	76.728	91.154	37.154	54.000	AVERAGE
4		2483.500	14.658	25.184	39.843	-14.157	54.000	AVERAGE
5		2489.100	14.690	28.639	43.329	-10.671	54.000	AVERAGE
6		2500.000	14.751	22.507	37.258	-16.742	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11g_2437MHz**

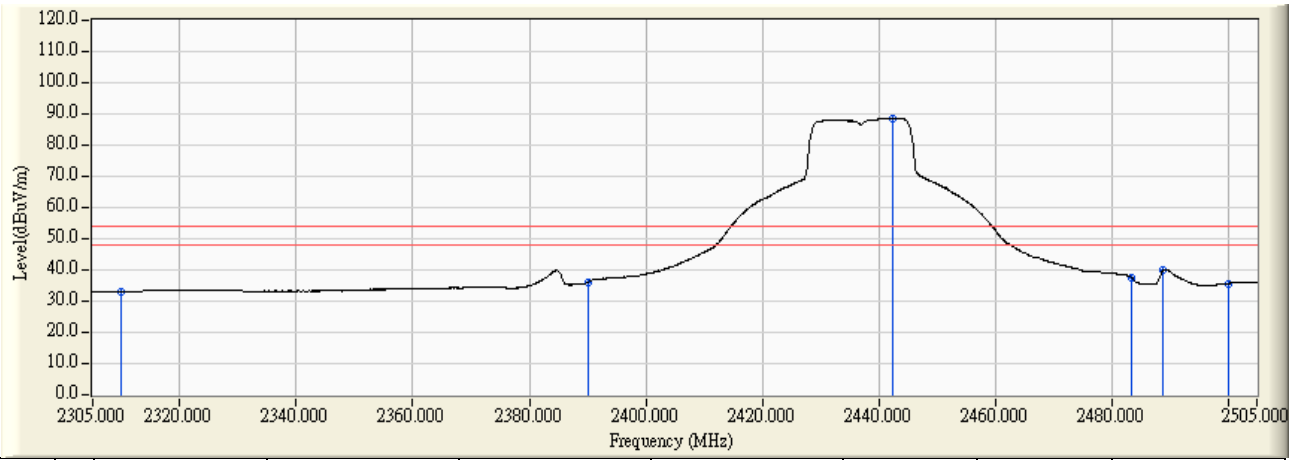


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	31.246	44.913	-29.087	74.000	PEAK
2		2390.000	14.128	35.942	50.070	-23.930	74.000	PEAK
3	*	2443.500	14.432	92.263	106.695	32.695	74.000	PEAK
4		2483.500	14.658	37.944	52.603	-21.397	74.000	PEAK
5		2489.600	14.693	39.179	53.872	-20.128	74.000	PEAK
6		2500.000	14.751	35.107	49.858	-24.142	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11g_2437MHz**

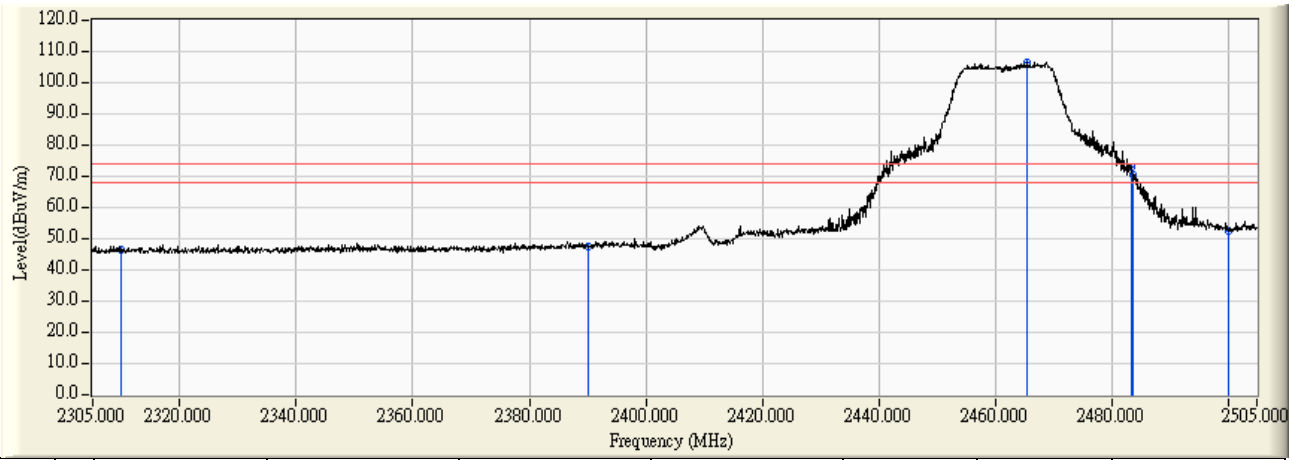


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.391	33.058	-20.942	54.000	AVERAGE
2		2390.000	14.128	21.817	35.945	-18.055	54.000	AVERAGE
3	*	2442.400	14.426	74.137	88.563	34.563	54.000	AVERAGE
4		2483.500	14.658	22.874	37.533	-16.467	54.000	AVERAGE
5		2488.900	14.689	25.154	39.843	-14.157	54.000	AVERAGE
6		2500.000	14.751	20.981	35.732	-18.268	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11g_2462MHz**

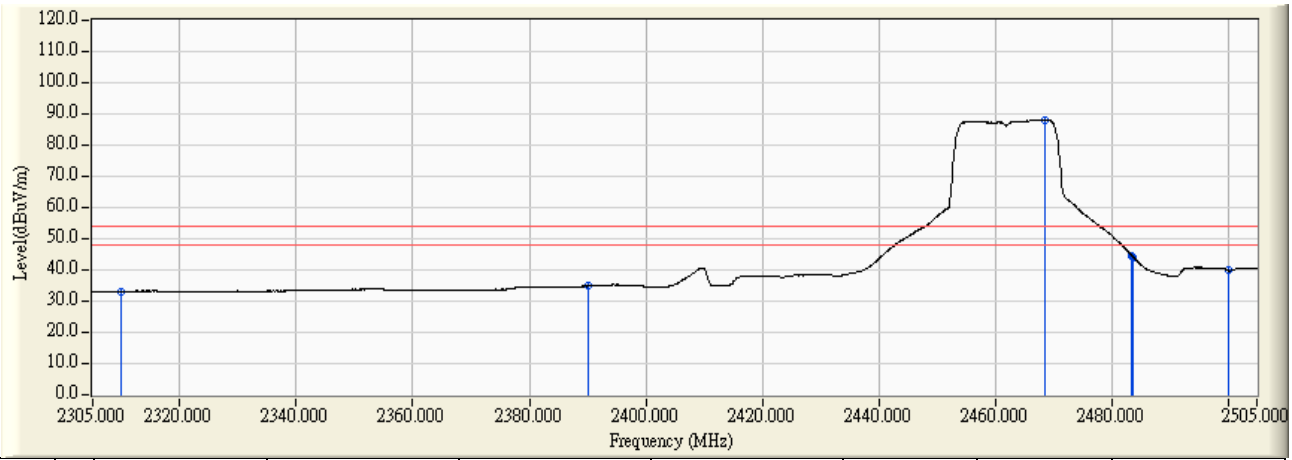


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	32.723	46.390	-27.610	74.000	PEAK
2		2390.000	14.128	33.528	47.656	-26.344	74.000	PEAK
3	*	2465.500	14.557	91.967	106.524	52.524	54.000	PEAK
4		2483.500	14.658	58.326	72.985	-1.015	74.000	PEAK
5		2483.700	14.660	55.938	70.598	-3.402	74.000	PEAK
6		2500.000	14.751	37.555	52.306	-21.694	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11g_2462MHz**

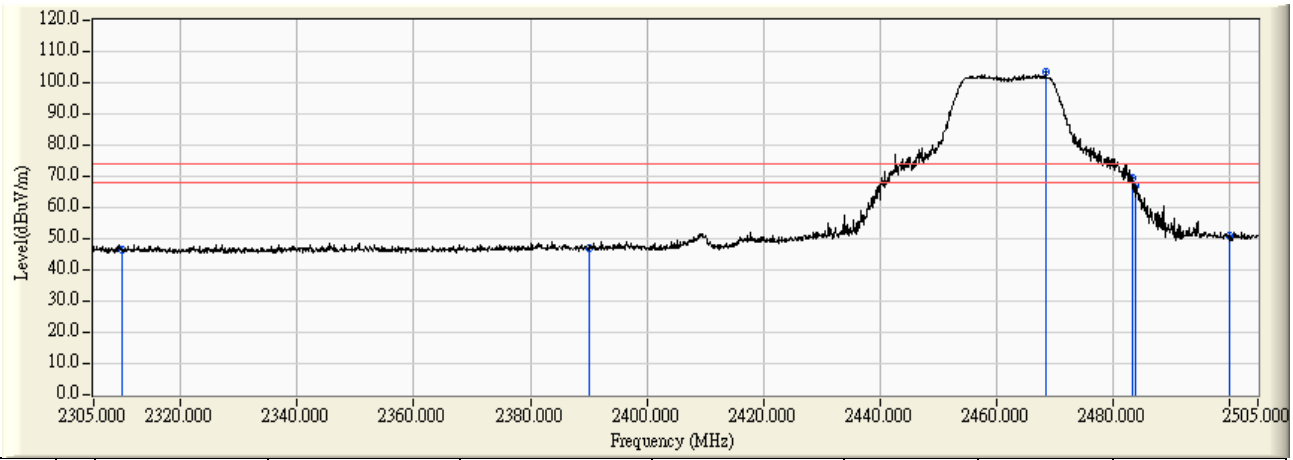


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.547	33.214	-20.786	54.000	AVERAGE
2		2390.000	14.128	20.681	34.809	-19.191	54.000	AVERAGE
3	*	2468.600	14.574	73.482	88.056	34.056	54.000	AVERAGE
4		2483.500	14.658	29.871	44.530	-9.470	54.000	AVERAGE
5		2483.700	14.660	29.558	44.218	-9.782	54.000	AVERAGE
6		2500.000	14.751	25.132	39.883	-14.117	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11g_2462MHz**

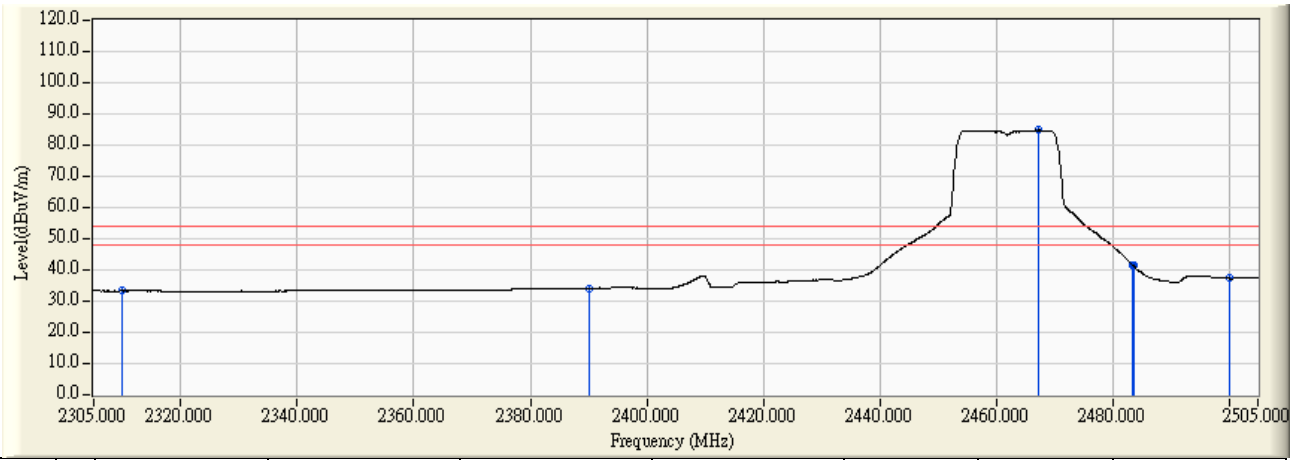


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	33.043	46.710	-27.290	74.000	PEAK
2		2390.000	14.128	32.864	46.992	-27.008	74.000	PEAK
3	*	2468.600	14.574	88.776	103.350	29.350	74.000	PEAK
4		2483.500	14.658	54.680	69.339	-4.661	74.000	PEAK
5		2484.000	14.662	52.172	66.834	-7.166	74.000	PEAK
6		2500.000	14.751	36.230	50.981	-23.019	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11g_2462MHz**

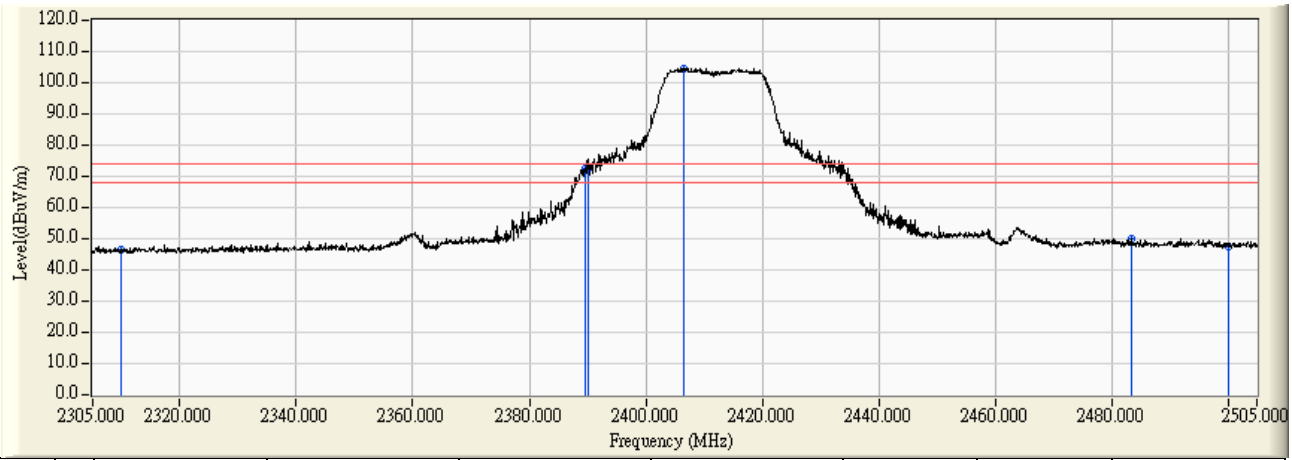


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.605	33.272	-20.728	54.000	AVERAGE
2		2390.000	14.128	19.951	34.079	-19.921	54.000	AVERAGE
3	*	2467.400	14.567	70.193	84.761	30.761	54.000	AVERAGE
4		2483.500	14.658	26.937	41.596	-12.404	54.000	AVERAGE
5		2483.600	14.659	26.796	41.455	-12.545	54.000	AVERAGE
6		2500.000	14.751	22.527	37.278	-16.722	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2412MHz**

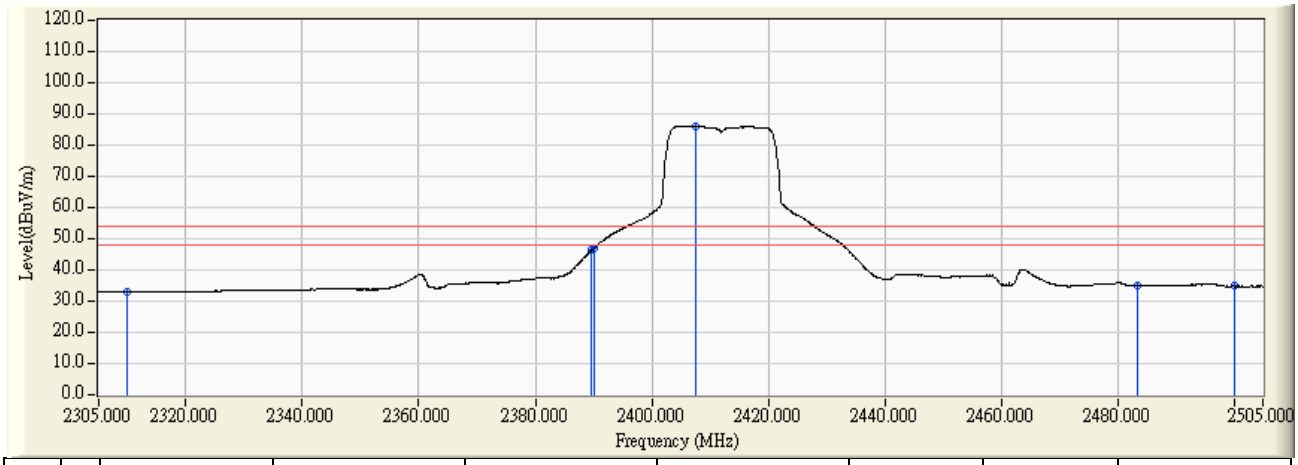


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	32.848	46.515	-27.485	74.000	PEAK
2		2389.500	14.125	58.368	72.493	-1.507	74.000	PEAK
3		2390.000	14.128	58.273	72.401	-1.599	74.000	PEAK
4	*	2406.500	14.223	90.387	104.610	30.610	74.000	PEAK
5		2483.500	14.658	35.170	49.829	-24.171	74.000	PEAK
6		2500.000	14.751	32.997	47.748	-26.252	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2412MHz**

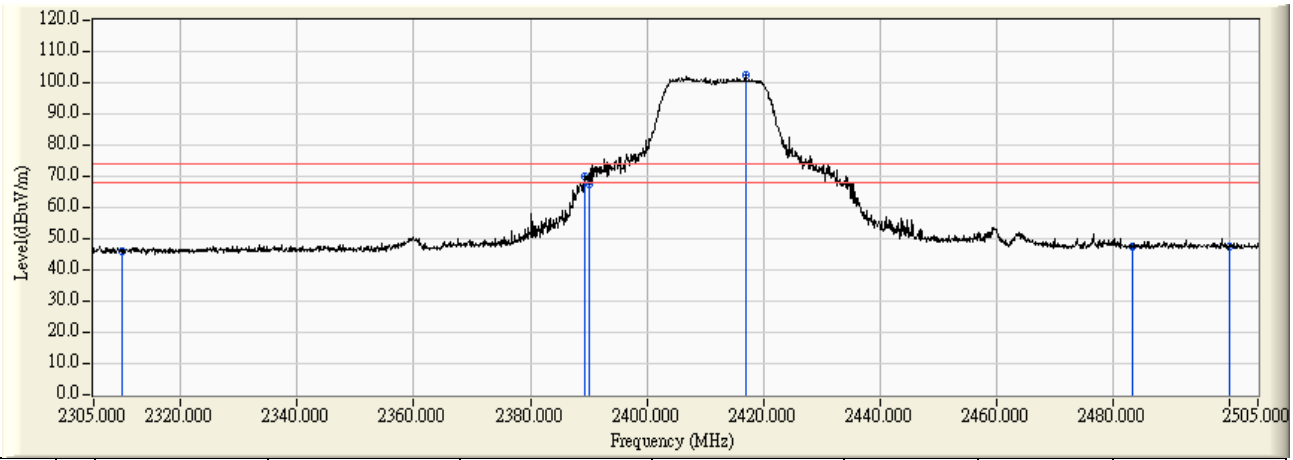


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.443	33.110	-20.890	54.000	AVERAGE
2		2389.700	14.126	32.189	46.315	-7.685	54.000	AVERAGE
3		2390.000	14.128	32.702	46.830	-7.170	54.000	AVERAGE
4	*	2407.600	14.229	71.906	86.135	32.135	54.000	AVERAGE
5		2483.500	14.658	20.358	35.017	-18.983	54.000	AVERAGE
6		2500.000	14.751	19.999	34.750	-19.250	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2412MHz**

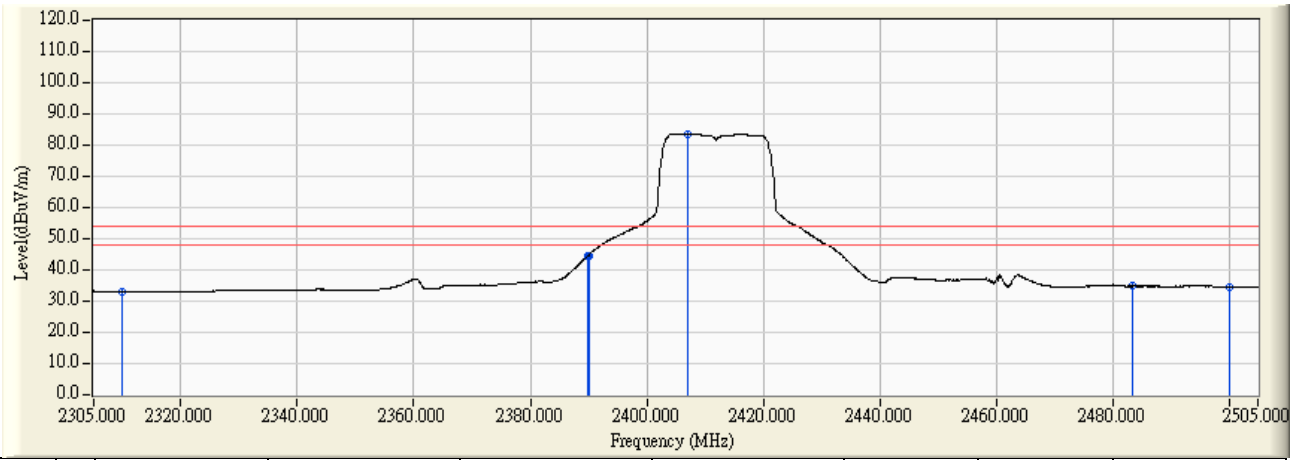


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	32.454	46.121	-27.879	74.000	PEAK
2		2389.300	14.124	55.858	69.982	-4.018	74.000	PEAK
3		2390.000	14.128	53.333	67.461	-6.539	74.000	PEAK
4	*	2417.000	14.283	88.084	102.366	28.366	74.000	PEAK
5		2483.500	14.658	32.768	47.427	-26.573	74.000	PEAK
6		2500.000	14.751	32.515	47.266	-26.734	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2412MHz**

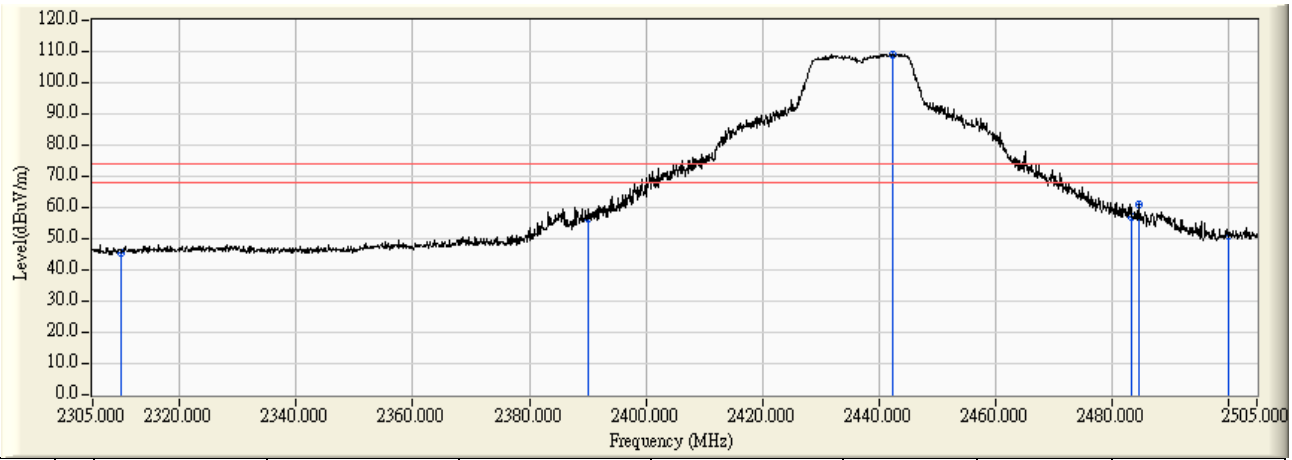


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.405	33.072	-20.928	54.000	AVERAGE
2		2389.800	14.128	30.209	44.336	-9.664	54.000	AVERAGE
3		2390.000	14.128	30.557	44.685	-9.315	54.000	AVERAGE
4	*	2407.000	14.226	69.457	83.682	29.682	54.000	AVERAGE
5		2483.500	14.658	20.112	34.771	-19.229	54.000	AVERAGE
6		2500.000	14.751	19.800	34.551	-19.449	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2437MHz**

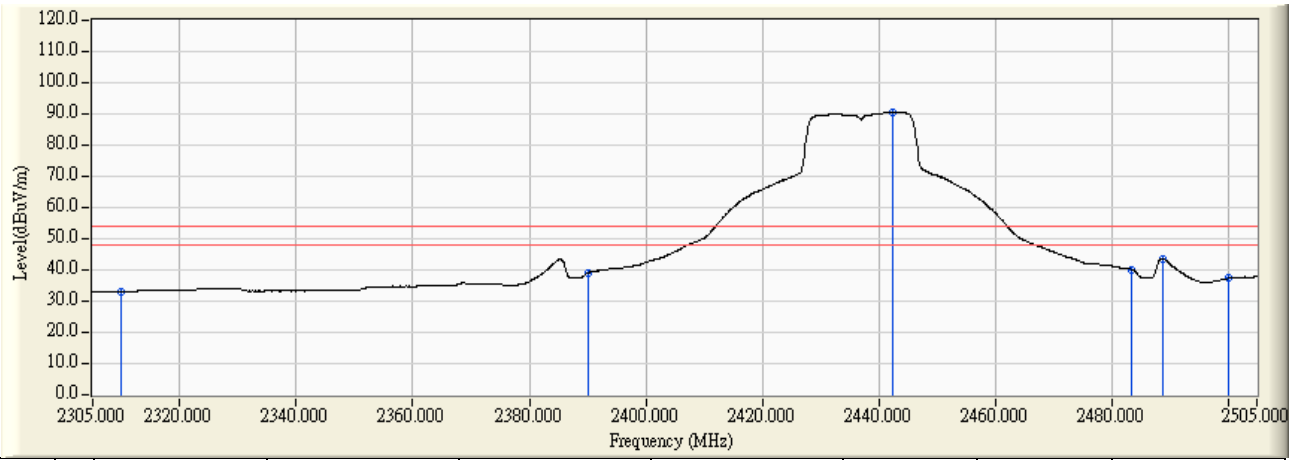


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	32.058	45.725	-28.275	74.000	PEAK
2		2390.000	14.128	42.387	56.515	-17.485	74.000	PEAK
3	*	2442.500	14.427	94.636	109.063	35.063	74.000	PEAK
4		2483.500	14.658	42.176	56.835	-17.165	74.000	PEAK
5		2484.800	14.667	46.473	61.139	-12.861	74.000	PEAK
6		2500.000	14.751	36.100	50.851	-23.149	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2437MHz**

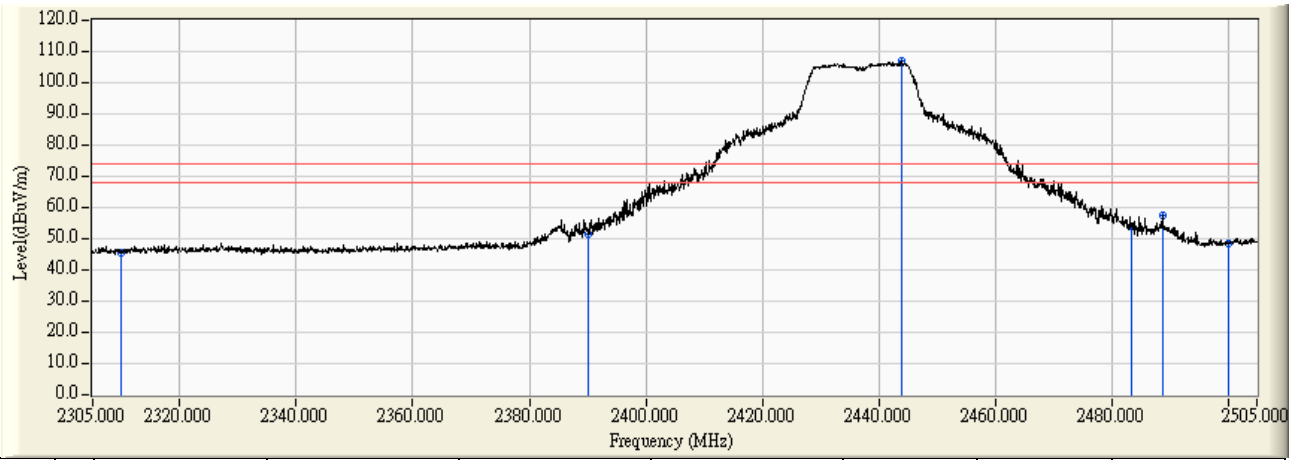


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.384	33.051	-20.949	54.000	AVERAGE
2		2390.000	14.128	24.842	38.970	-15.030	54.000	AVERAGE
3	*	2442.400	14.426	75.972	90.398	36.398	54.000	AVERAGE
4		2483.500	14.658	25.528	40.187	-13.813	54.000	AVERAGE
5		2488.800	14.689	28.931	43.620	-10.380	54.000	AVERAGE
6		2500.000	14.751	22.506	37.257	-16.743	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2437MHz**

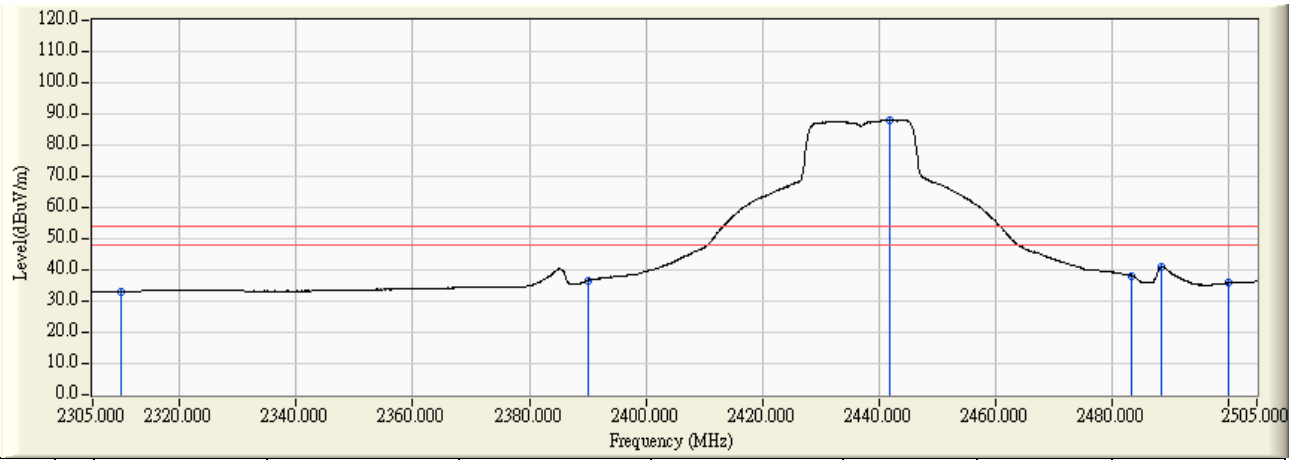


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	32.033	45.700	-28.300	74.000	PEAK
2		2390.000	14.128	37.432	51.560	-22.440	74.000	PEAK
3	*	2443.900	14.434	92.462	106.896	32.896	74.000	PEAK
4		2483.500	14.658	39.569	54.228	-19.772	74.000	PEAK
5		2488.800	14.689	42.661	57.350	-16.650	74.000	PEAK
6		2500.000	14.751	33.835	48.586	-25.414	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2437MHz**

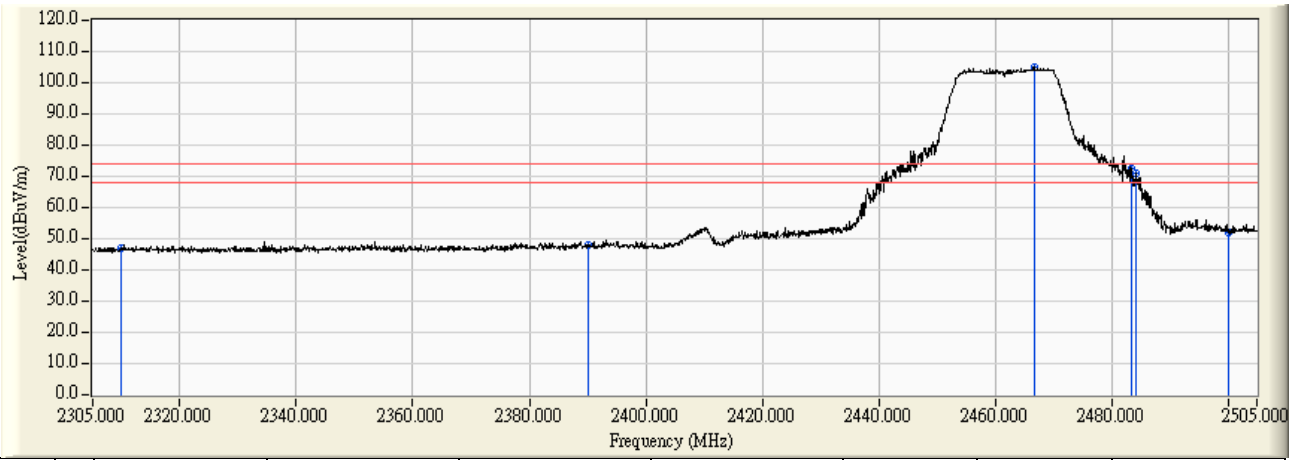


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.423	33.090	-20.910	54.000	AVERAGE
2		2390.000	14.128	22.567	36.695	-17.305	54.000	AVERAGE
3	*	2441.800	14.422	73.507	87.930	33.930	54.000	AVERAGE
4		2483.500	14.658	23.510	38.169	-15.831	54.000	AVERAGE
5		2488.500	14.686	26.159	40.846	-13.154	54.000	AVERAGE
6		2500.000	14.751	21.088	35.839	-18.161	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2462MHz**

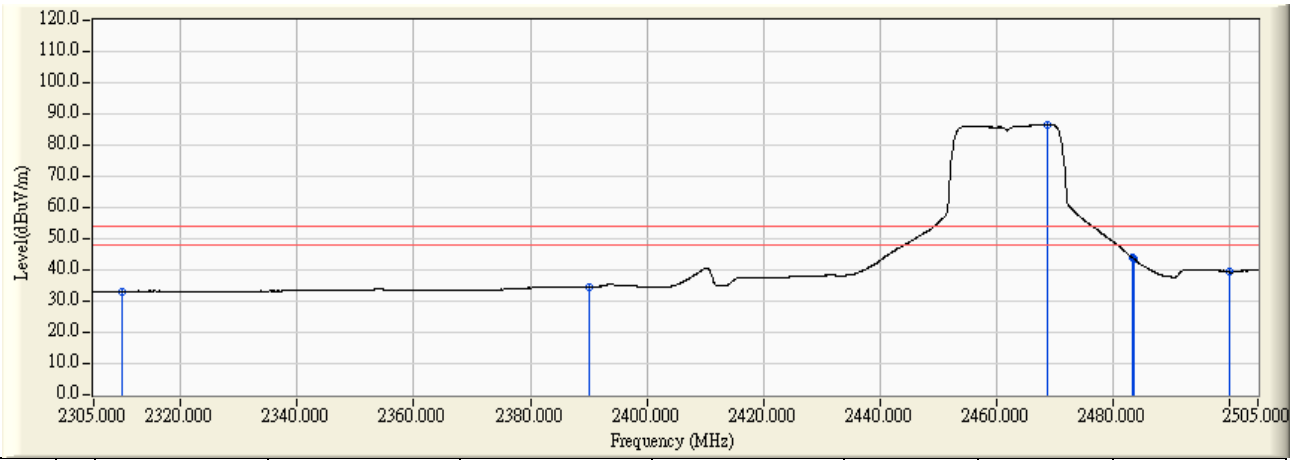


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	33.162	46.829	-27.171	74.000	PEAK
2		2390.000	14.128	33.785	47.913	-26.087	74.000	PEAK
3	*	2466.700	14.563	90.303	104.867	30.867	74.000	PEAK
4		2483.500	14.658	57.911	72.570	-1.430	74.000	PEAK
5		2484.300	14.663	56.560	71.223	-2.777	74.000	PEAK
6		2500.000	14.751	37.031	51.782	-22.218	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2462MHz**

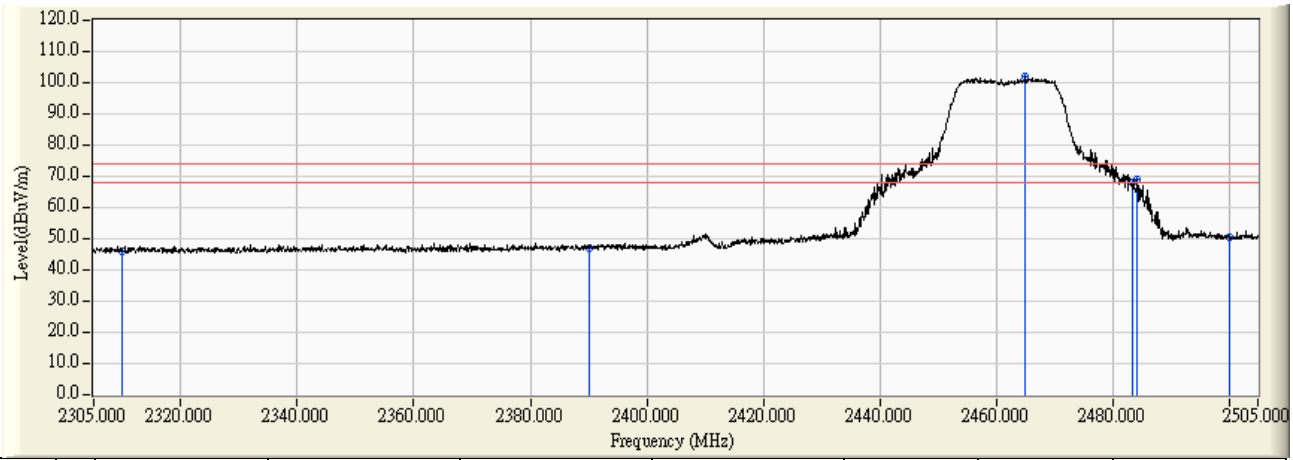


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.499	33.166	-20.834	54.000	AVERAGE
2		2390.000	14.128	20.519	34.647	-19.353	54.000	AVERAGE
3	*	2468.800	14.576	71.919	86.494	32.494	54.000	AVERAGE
4		2483.500	14.658	29.125	43.784	-10.216	54.000	AVERAGE
5		2483.600	14.659	28.994	43.653	-10.347	54.000	AVERAGE
6		2500.000	14.751	24.512	39.263	-14.737	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2462MHz**

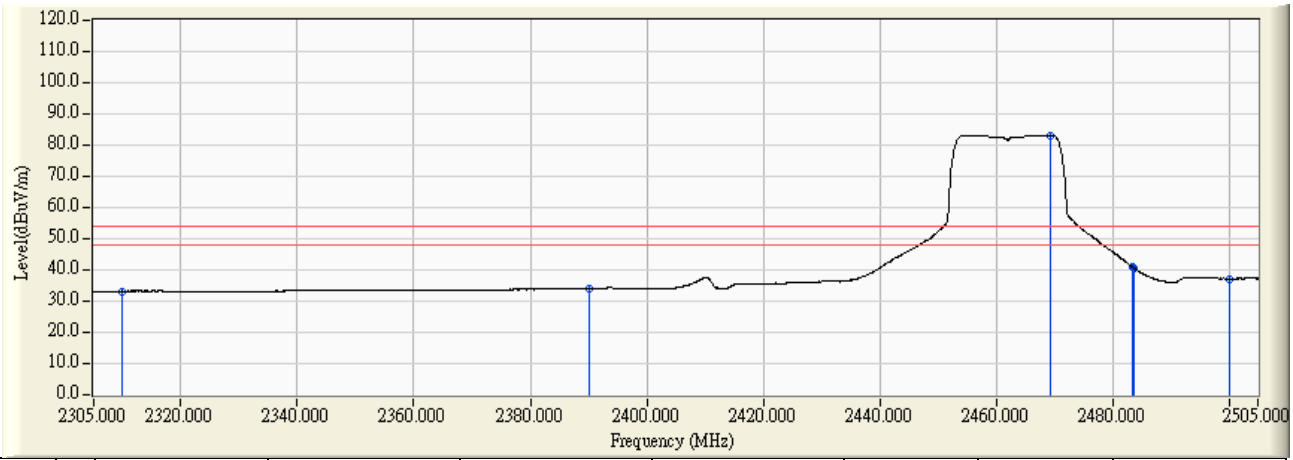


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	32.208	45.875	-28.125	74.000	PEAK
2		2390.000	14.128	32.732	46.860	-27.140	74.000	PEAK
3	*	2465.100	14.554	87.246	101.801	27.801	74.000	PEAK
4		2483.500	14.658	53.206	67.865	-6.135	74.000	PEAK
5		2484.300	14.663	54.389	69.052	-4.948	74.000	PEAK
6		2500.000	14.751	35.681	50.432	-23.568	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/08**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	**Power : DC 5V**
EUT : Beta+	**Note : Mode 1: Transmit-Power by PC_ 802.11n(20M)_2462MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	13.667	19.564	33.231	-20.769	54.000	AVERAGE
2		2390.000	14.128	19.805	33.933	-20.067	54.000	AVERAGE
3	*	2469.400	14.579	68.540	83.119	29.119	54.000	AVERAGE
4		2483.500	14.658	26.285	40.944	-13.056	54.000	AVERAGE
5		2483.600	14.659	26.024	40.683	-13.317	54.000	AVERAGE
6		2500.000	14.751	22.209	36.960	-17.040	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

7. DTS Bandwidth

7.1. Test Equipment

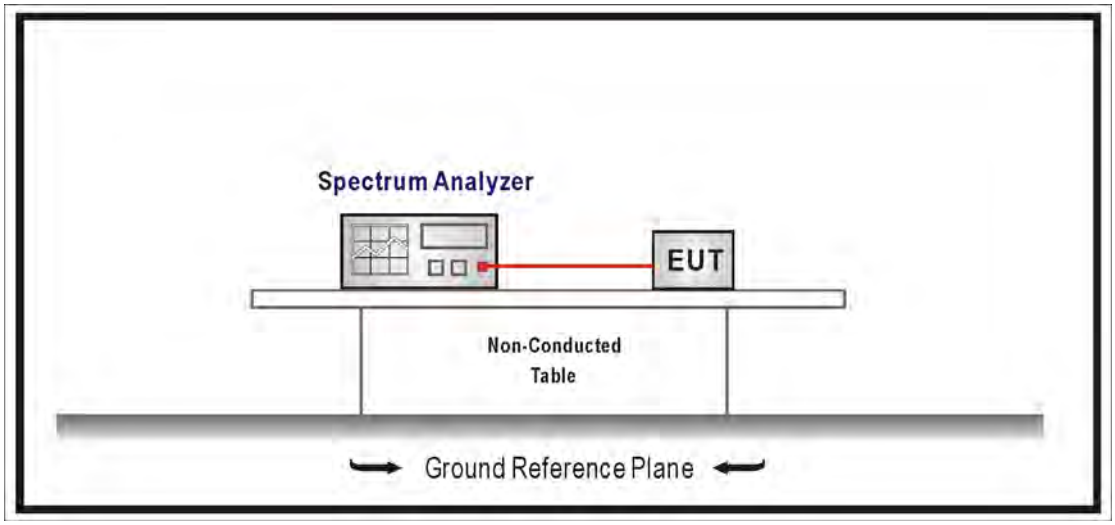
The following test equipments are used during the test:

DTS Bandwidth / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/07/26	2018/07/25

Note: All equipments that need to calibrate are with calibration period of 1 year.

7.2. Test Setup



7.3. Test Procedures

The EUT was setup according to ANSI C63.10:2013; tested procedure section 8.1 of KDB558074 D01 V04 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 100KHz, Set the VBW≧3xRBW, Sweep Time=Auto, Set Peak Detector.

7.4. Limits

The 6 dB bandwidth must be greater than 500 kHz.

7.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

7.6. Uncertainty

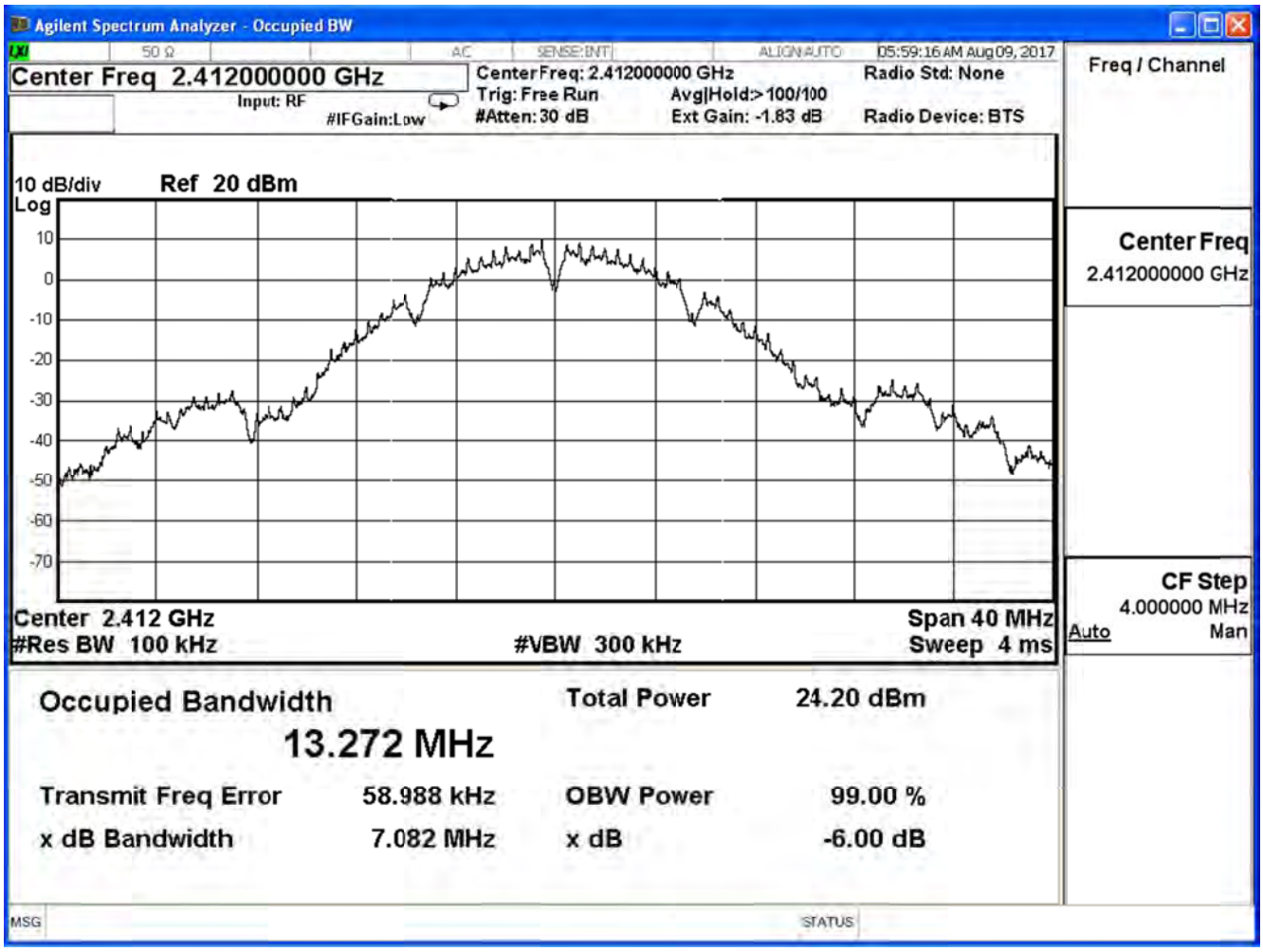
The measurement uncertainty is defined as ±150Hz

7.7. Test Result

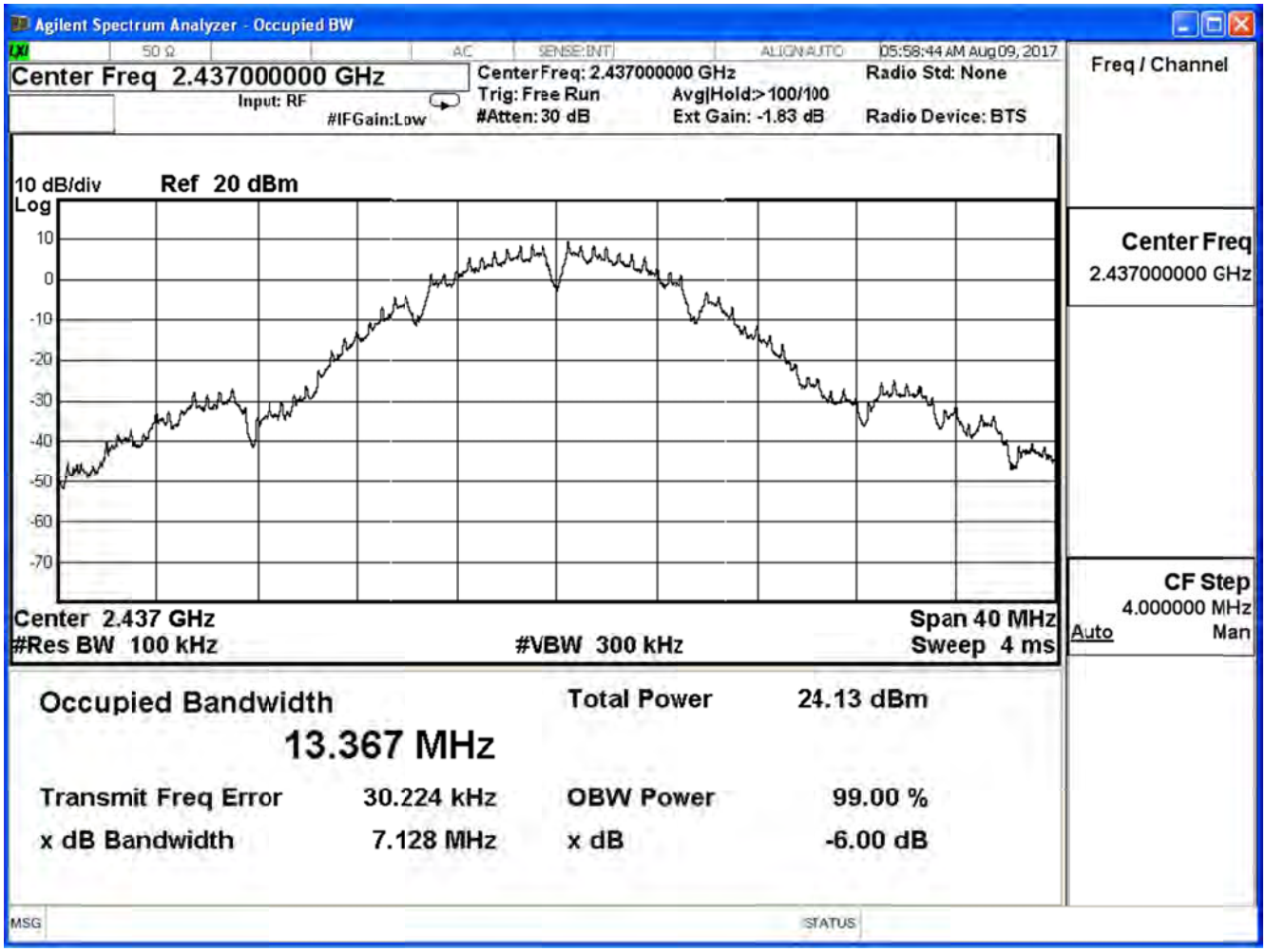
Product	Beta+		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/08/09	Test Site	SR10-H

802.11 b (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
1	2412	7.082	≧0.5	Pass
6	2437	7.128	≧0.5	Pass
11	2462	7.561	≧0.5	Pass

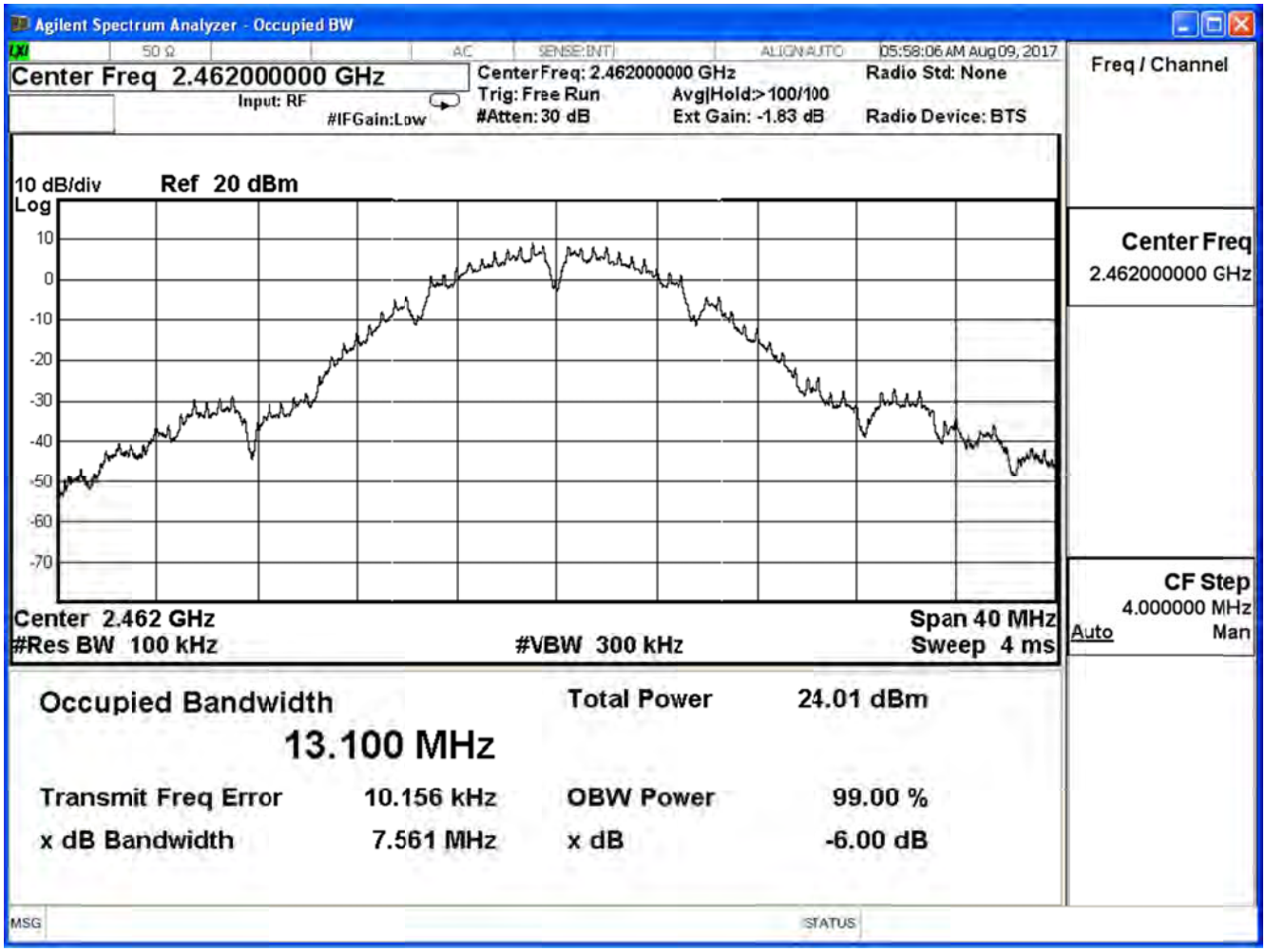
Channel 1



Channel 6


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
05:58:44 AM Aug 09, 2017
Center Freq 2.437000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.437000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.83 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.437000000 GHz
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 4 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
13.367 MHz
Total Power
24.13 dBm
Transmit Freq Error
30.224 kHz
OBW Power
99.00 %
x dB Bandwidth
7.128 MHz
x dB
-6.00 dB
MSG
STATUS

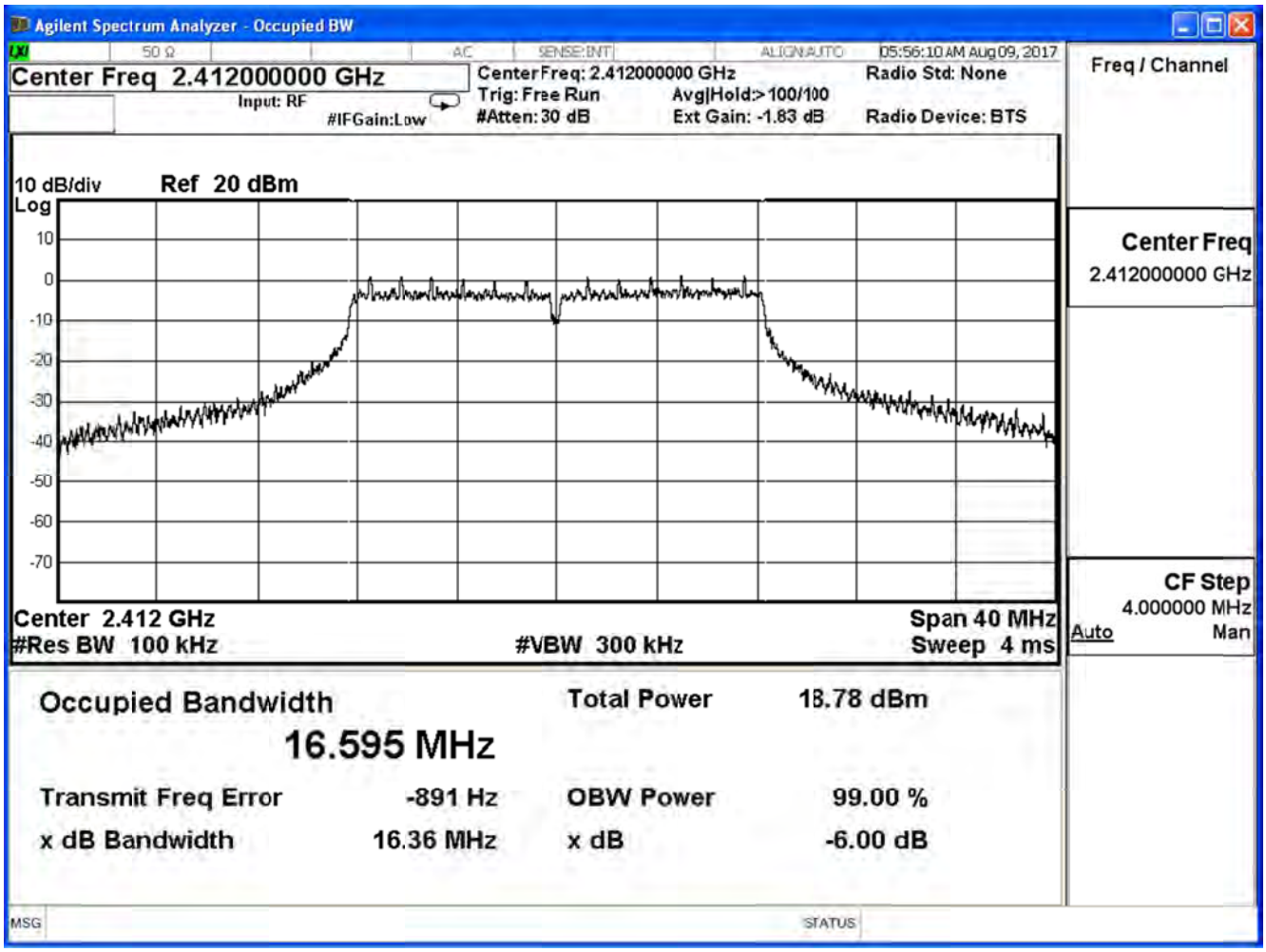
Channel 11


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
05:58:06 AM Aug 09, 2017
Center Freq 2.462000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.462000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.83 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.462000000 GHz
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 4 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
13.100 MHz
Total Power
24.01 dBm
Transmit Freq Error
10.156 kHz
OBW Power
99.00 %
x dB Bandwidth
7.561 MHz
x dB
-6.00 dB
MSG
STATUS

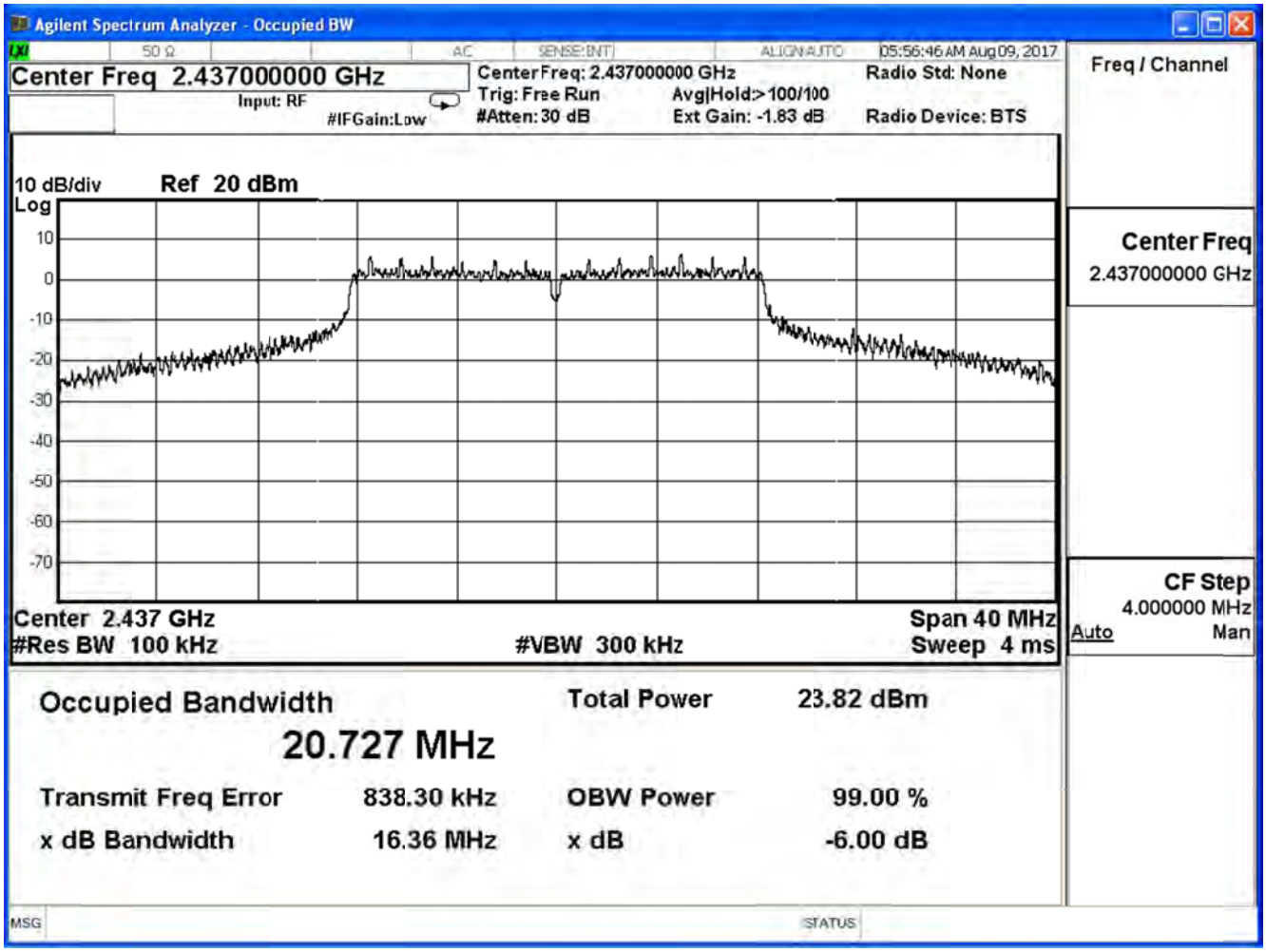
Product	Beta+		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/04/06	Test Site	SR10-H

802.11 g (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
1	2412	16.360	≧0.5	Pass
6	2437	16.360	≧0.5	Pass
11	2462	16.370	≧0.5	Pass

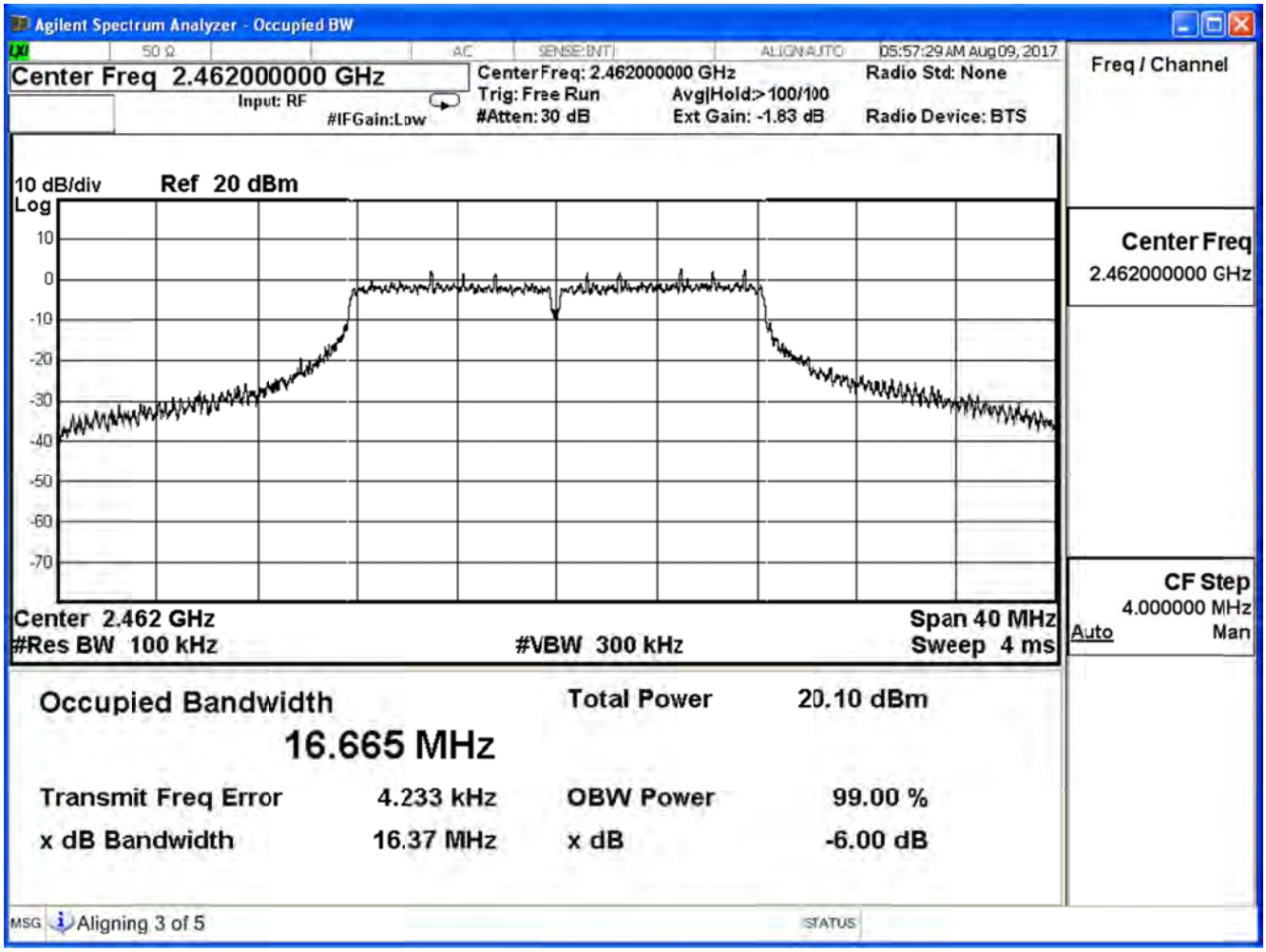
Channel 1



Channel 6


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
05:56:46 AM Aug 09, 2017
Center Freq 2.437000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.437000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.83 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.437000000 GHz
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 4 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
20.727 MHz
Total Power
23.82 dBm
Transmit Freq Error
838.30 kHz
OBW Power
99.00 %
x dB Bandwidth
16.36 MHz
x dB
-6.00 dB
MSG
STATUS

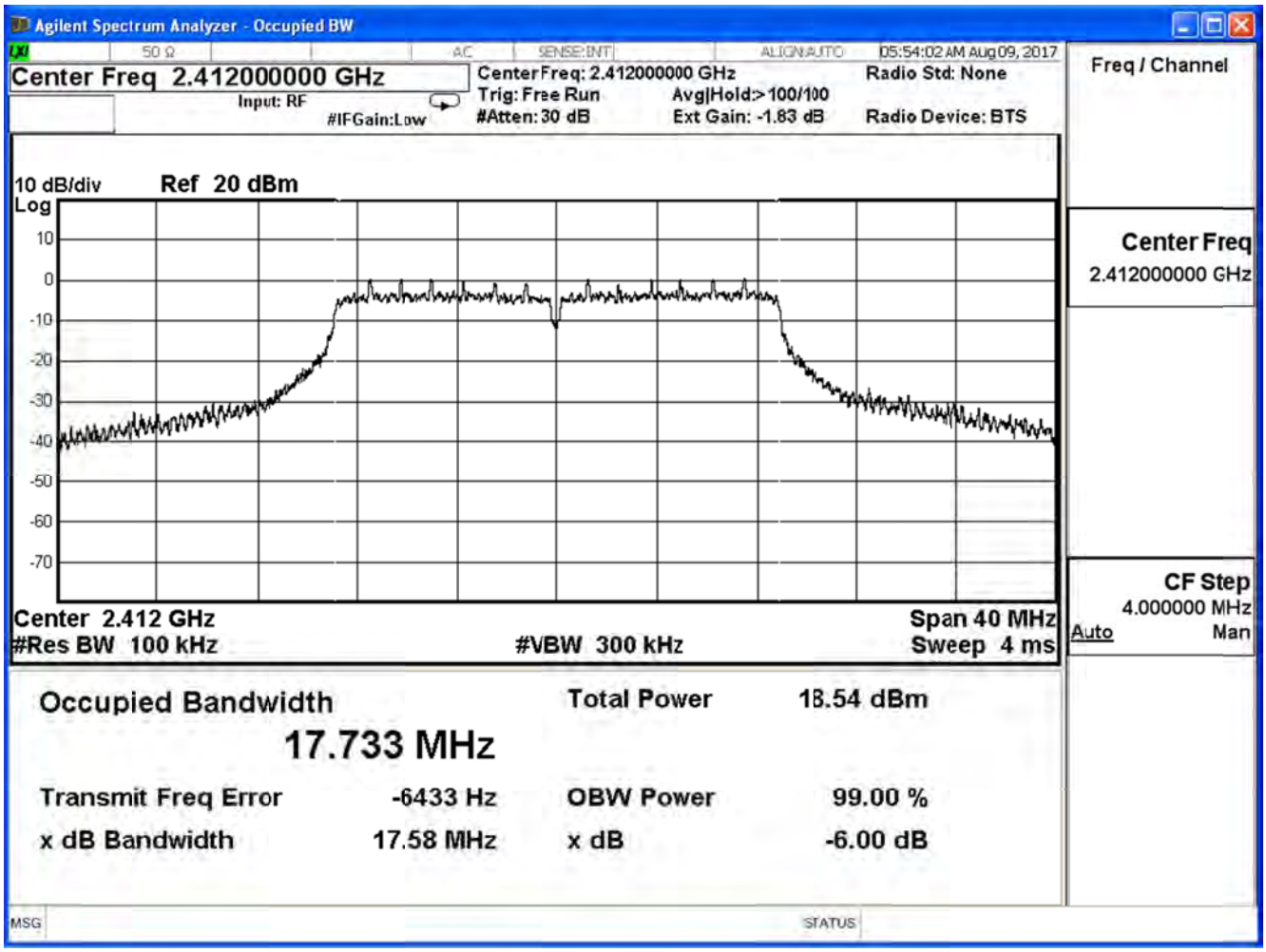
Channel 11


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
05:57:29 AM Aug 09, 2017
Center Freq 2.462000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.462000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.83 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.462000000 GHz
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 4 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
16.665 MHz
Total Power
20.10 dBm
Transmit Freq Error
4.233 kHz
OBW Power
99.00 %
x dB Bandwidth
16.37 MHz
x dB
-6.00 dB
MSG
Aligning 3 of 5
STATUS

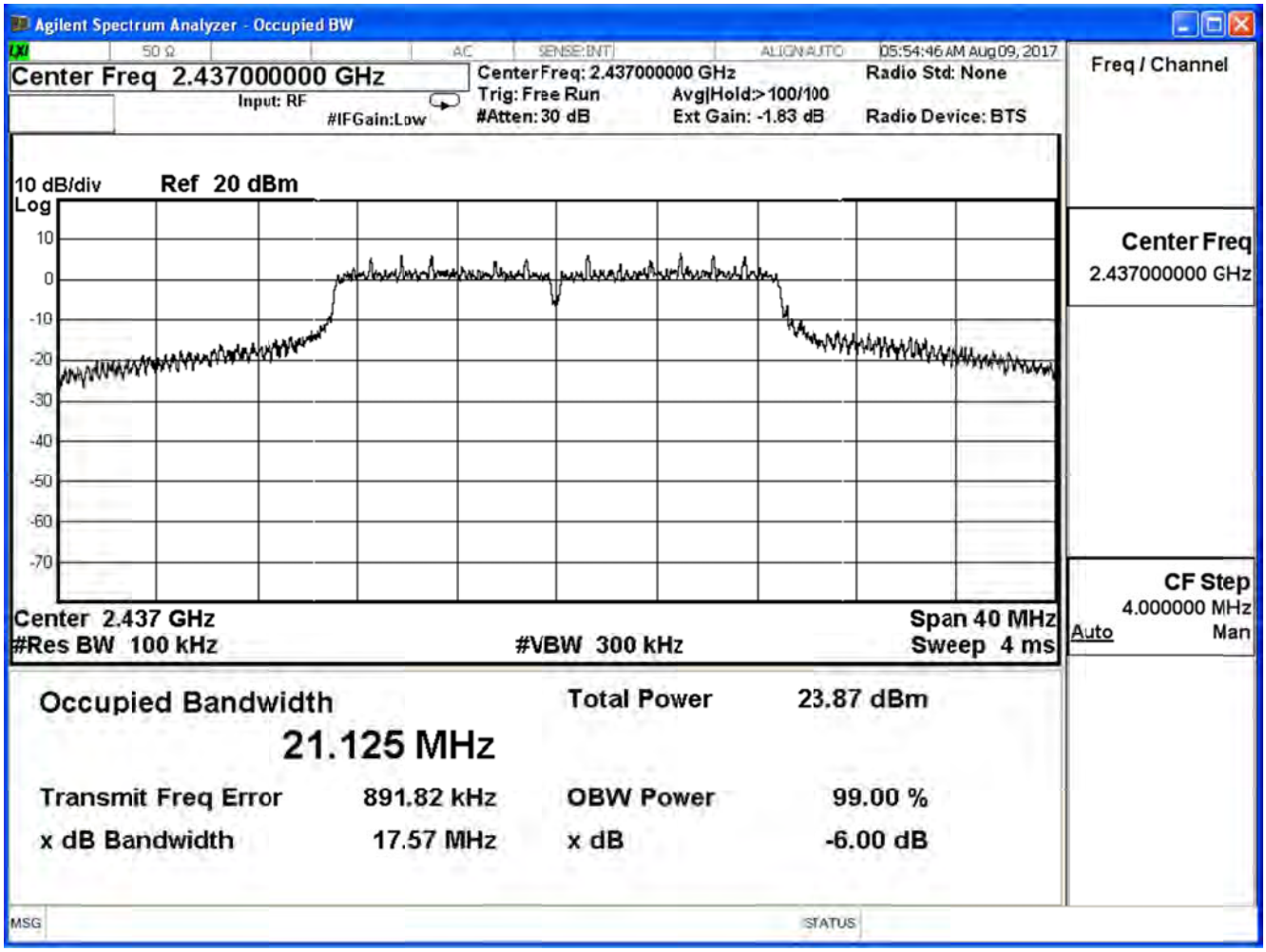
Product	Beta+		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/04/14	Test Site	SR10-H

IEEE 802.11n_20M (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
1	2412	17.580	≧0.5	Pass
6	2437	17.570	≧0.5	Pass
11	2462	17.580	≧0.5	Pass

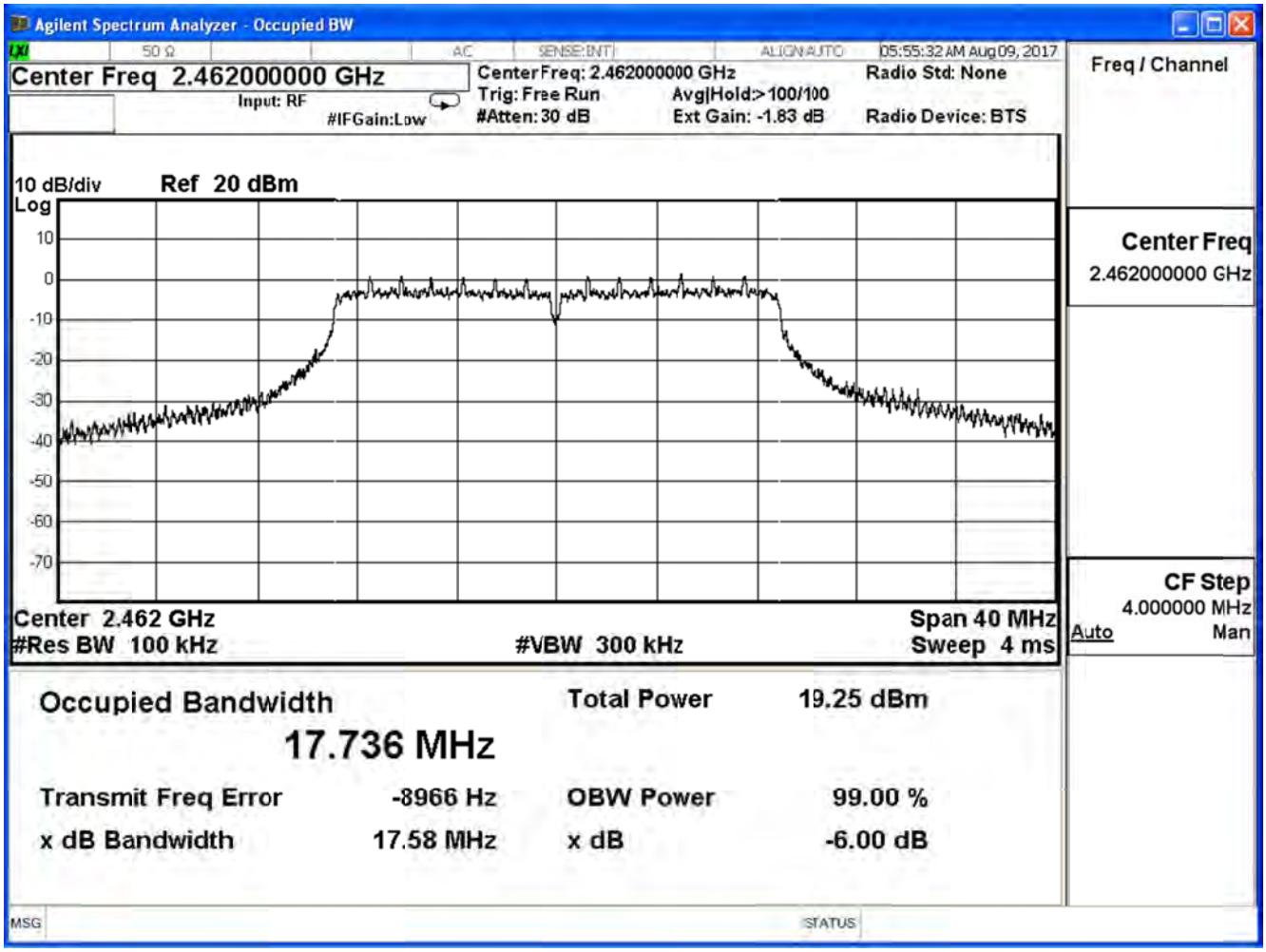
Channel 1



Channel 6


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
05:54:46 AM Aug 09, 2017
Center Freq 2.437000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.437000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.83 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.437000000 GHz
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 4 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
21.125 MHz
Total Power
23.87 dBm
Transmit Freq Error
891.82 kHz
OBW Power
99.00 %
x dB Bandwidth
17.57 MHz
x dB
-6.00 dB
MSG
STATUS

Channel 11


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
05:55:32 AM Aug 09, 2017
Center Freq 2.462000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.462000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.83 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.462000000 GHz
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 4 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
17.736 MHz
Total Power
19.25 dBm
Transmit Freq Error
-8966 Hz
OBW Power
99.00 %
x dB Bandwidth
17.58 MHz
x dB
-6.00 dB
MSG
STATUS

8. Occupied Bandwidth

8.1. Test Equipment

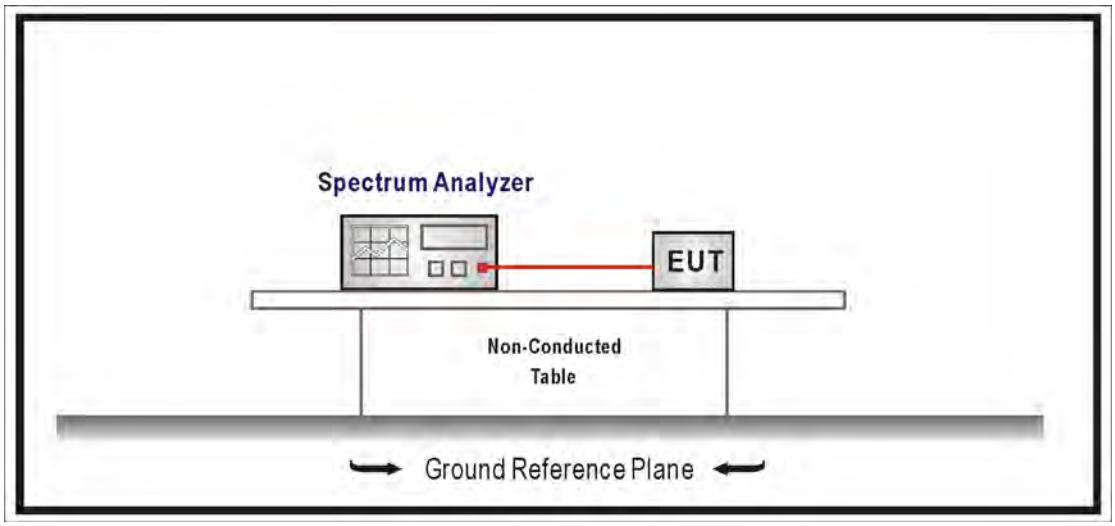
The following test equipments are used during the test:

Occupied Bandwidth / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/07/26	2018/07/25

Note: All equipments that need to calibrate are with calibration period of 1 year.

8.2. Test Setup



8.3. Test Procedures

The EUT was setup according to ANSI C63.10:2013; tested according to DTS test procedure of KDB558074 D01 V04 for compliance to FCC 47CFR 15.247 requirements.
Set RBW = 1-5% of the OBW, Set the VBW≧3xRBW, Sweep Time=Auto.

8.4. Limits

NA

8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

8.6. Uncertainty

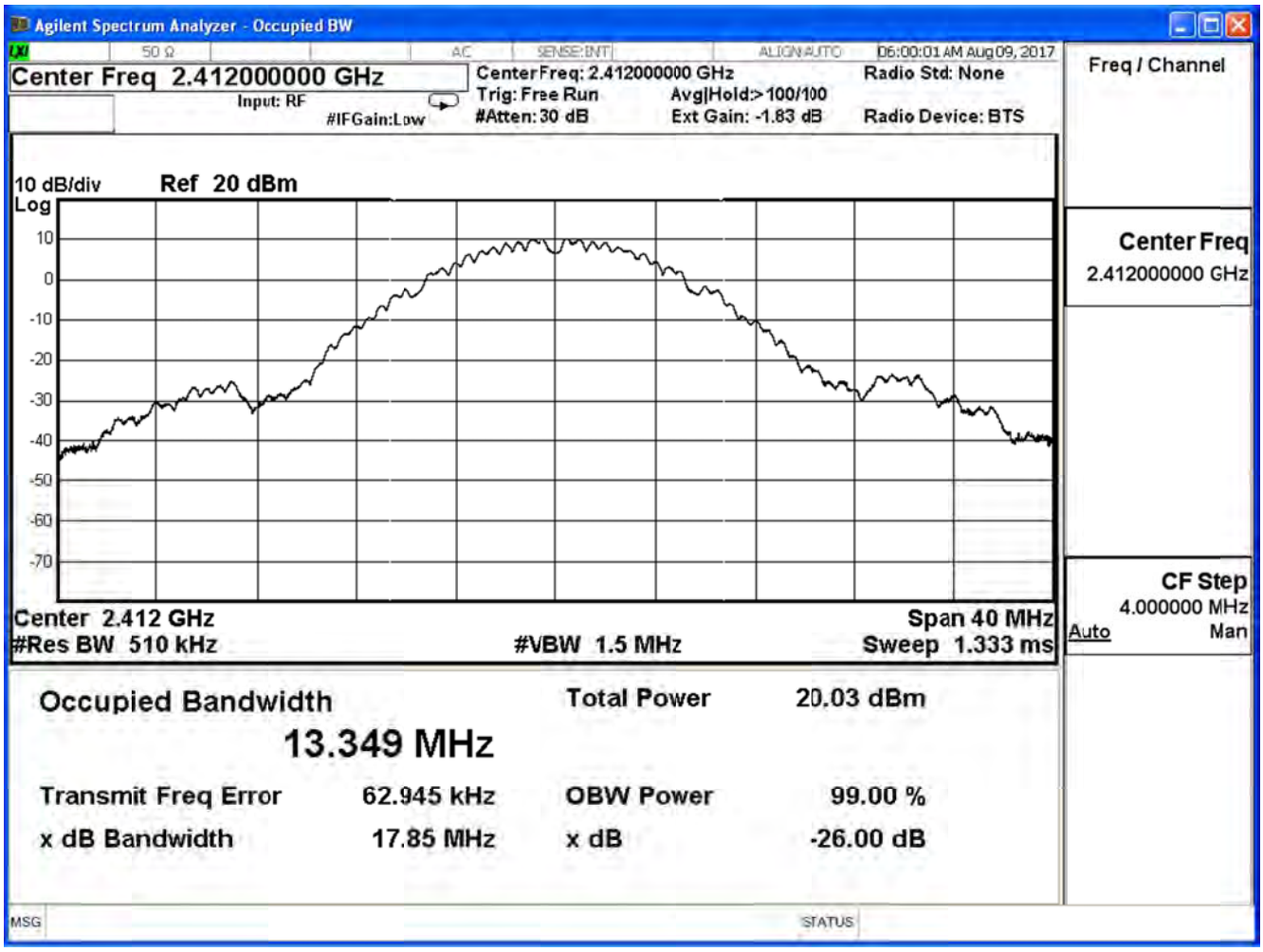
The measurement uncertainty is defined as ±150Hz

8.7. Test Result

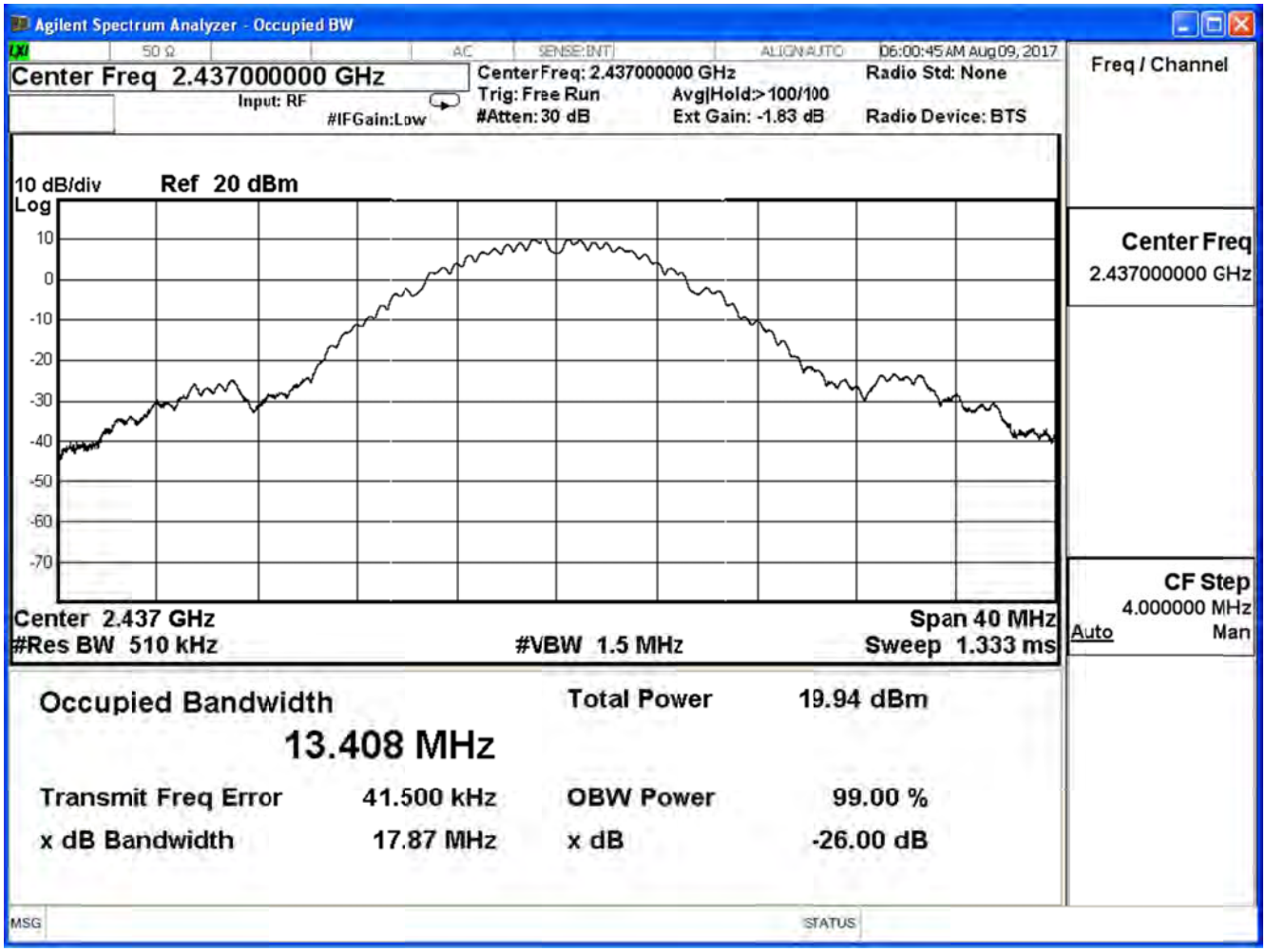
Product	Beta+		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/08/09	Test Site	SR10-H

802.11 b (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level(MHz)	Limit (MHz)	Result
1	2412	13.349	--	Pass
6	2437	13.408	--	Pass
11	2462	13.148	--	Pass

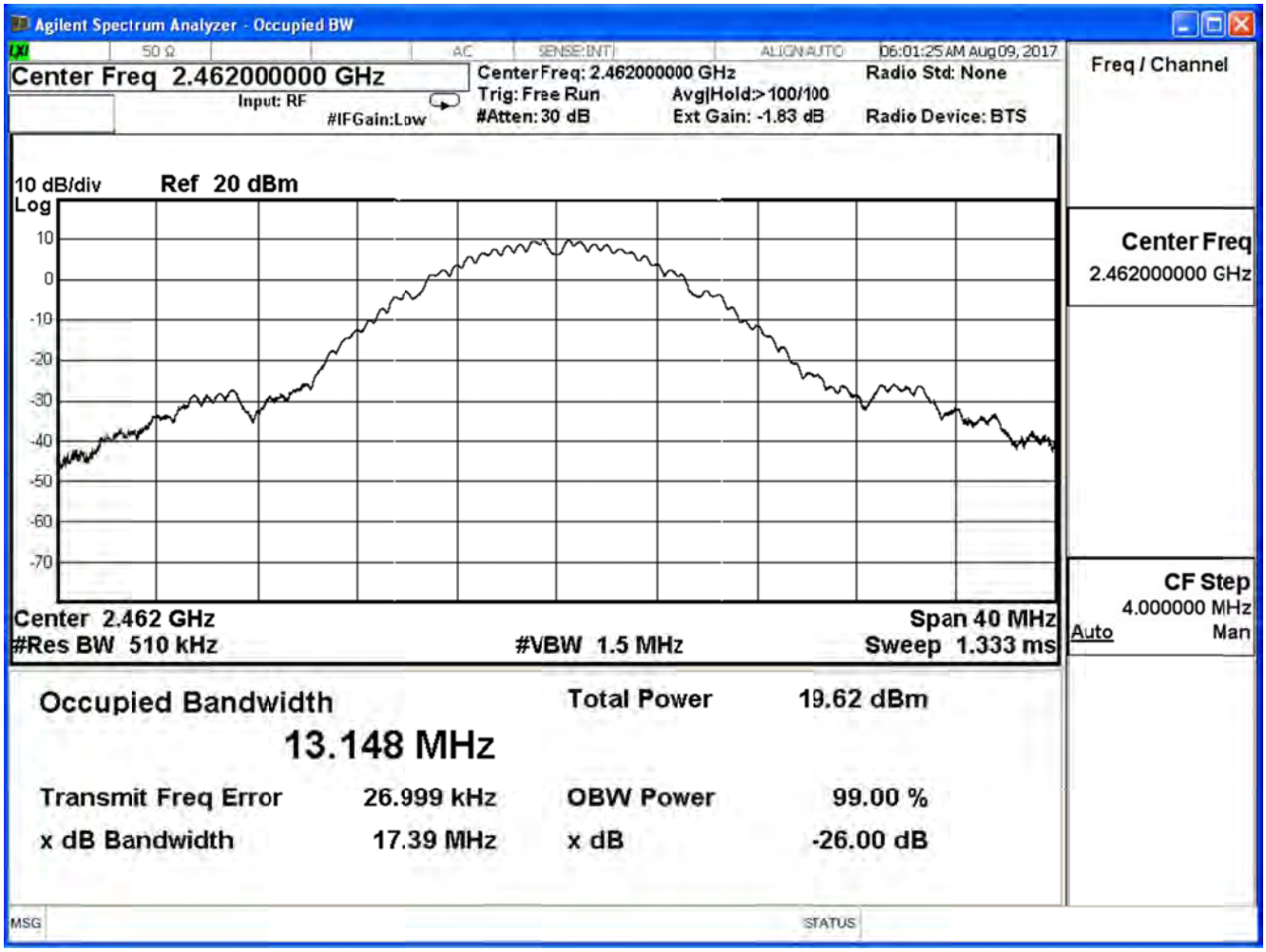
Channel 1



Channel 6


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
06:00:45 AM Aug 09, 2017
Center Freq 2.437000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.437000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.83 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.437000000 GHz
Center 2.437 GHz
#Res BW 510 kHz
#VBW 1.5 MHz
Span 40 MHz
Sweep 1.333 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
13.408 MHz
Total Power
19.94 dBm
Transmit Freq Error
41.500 kHz
OBW Power
99.00 %
x dB Bandwidth
17.87 MHz
x dB
-26.00 dB
MSG
STATUS

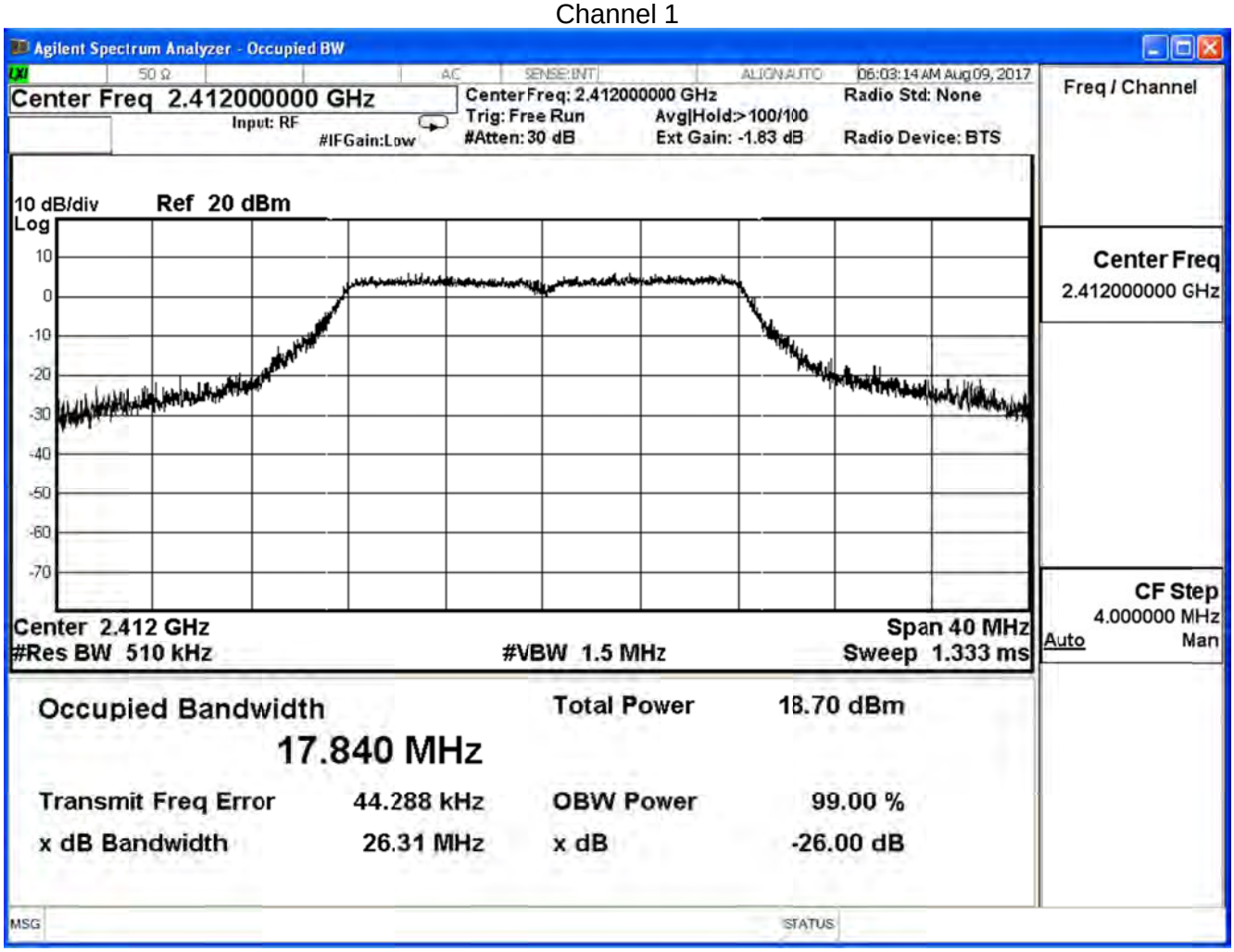
Channel 11


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
06:01:25 AM Aug 09, 2017
Center Freq 2.462000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.462000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.83 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.462000000 GHz
Center 2.462 GHz
#Res BW 510 kHz
#VBW 1.5 MHz
Span 40 MHz
Sweep 1.333 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
13.148 MHz
Total Power
19.62 dBm
Transmit Freq Error
26.999 kHz
OBW Power
99.00 %
x dB Bandwidth
17.39 MHz
x dB
-26.00 dB
MSG
STATUS

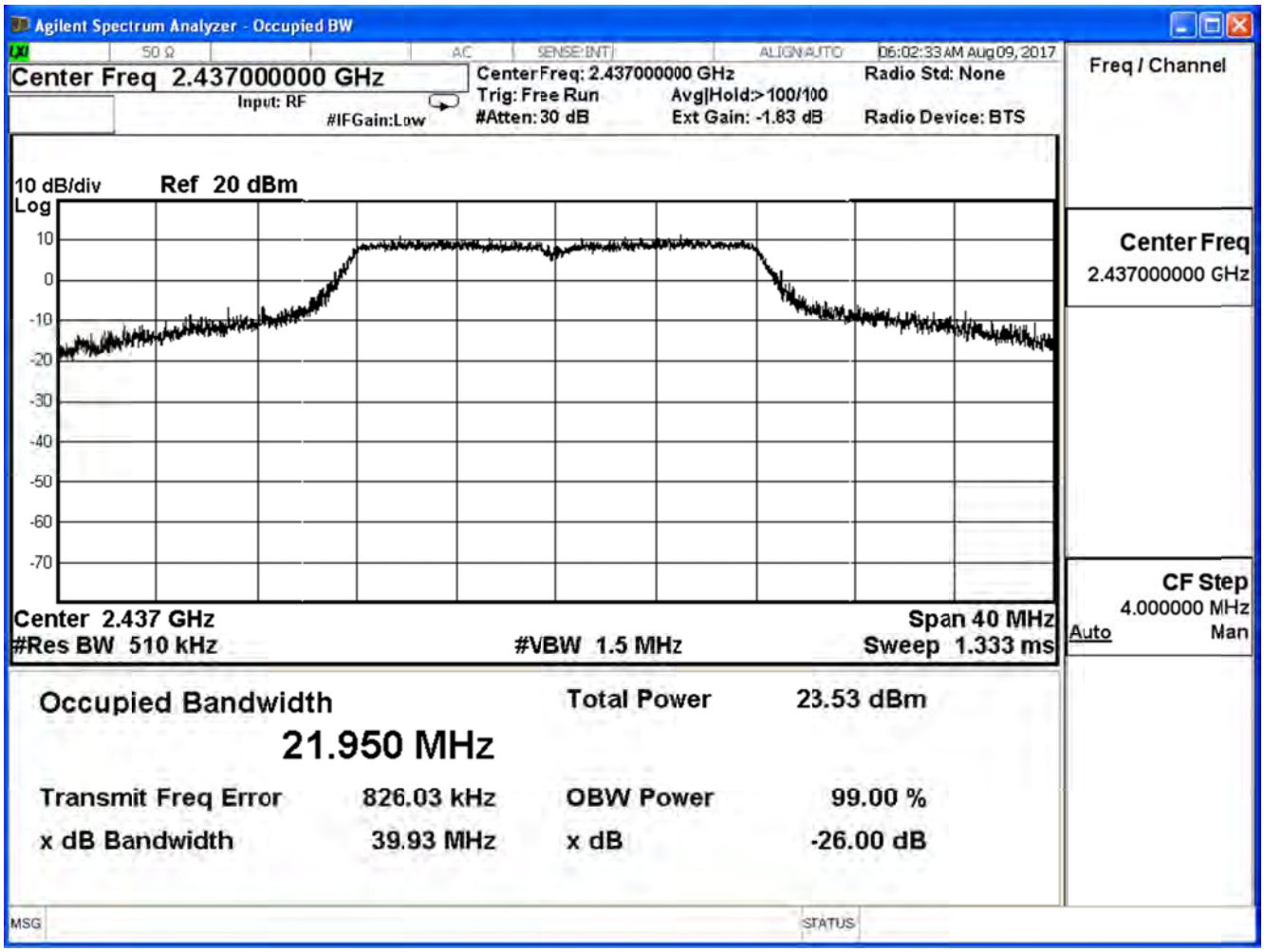
Product	Beta+		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/08/09	Test Site	SR10-H

802.11 g (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level(MHz)	Limit (MHz)	Result
1	2412	17.840	--	Pass
6	2437	21.950	--	Pass
11	2462	17.881	--	Pass

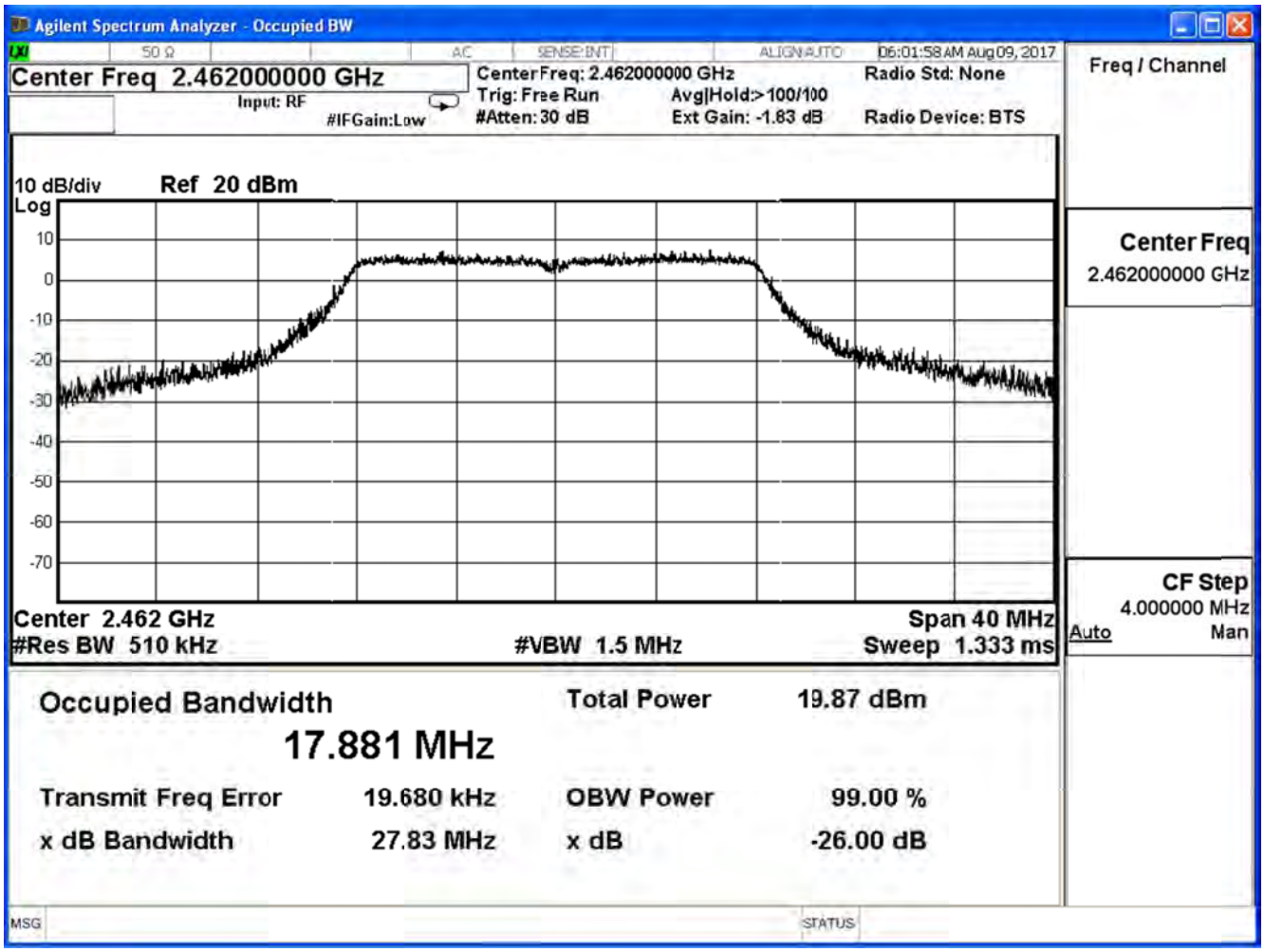
Channel 1



Channel 6


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
06:02:33 AM Aug 09, 2017
Center Freq 2.437000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.437000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.83 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Ref 20 dBm
Log
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.437000000 GHz
Center 2.437 GHz
#Res BW 510 kHz
#VBW 1.5 MHz
Span 40 MHz
Sweep 1.333 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
21.950 MHz
Total Power
23.53 dBm
Transmit Freq Error
826.03 kHz
OBW Power
99.00 %
x dB Bandwidth
39.93 MHz
x dB
-26.00 dB
MSG
STATUS

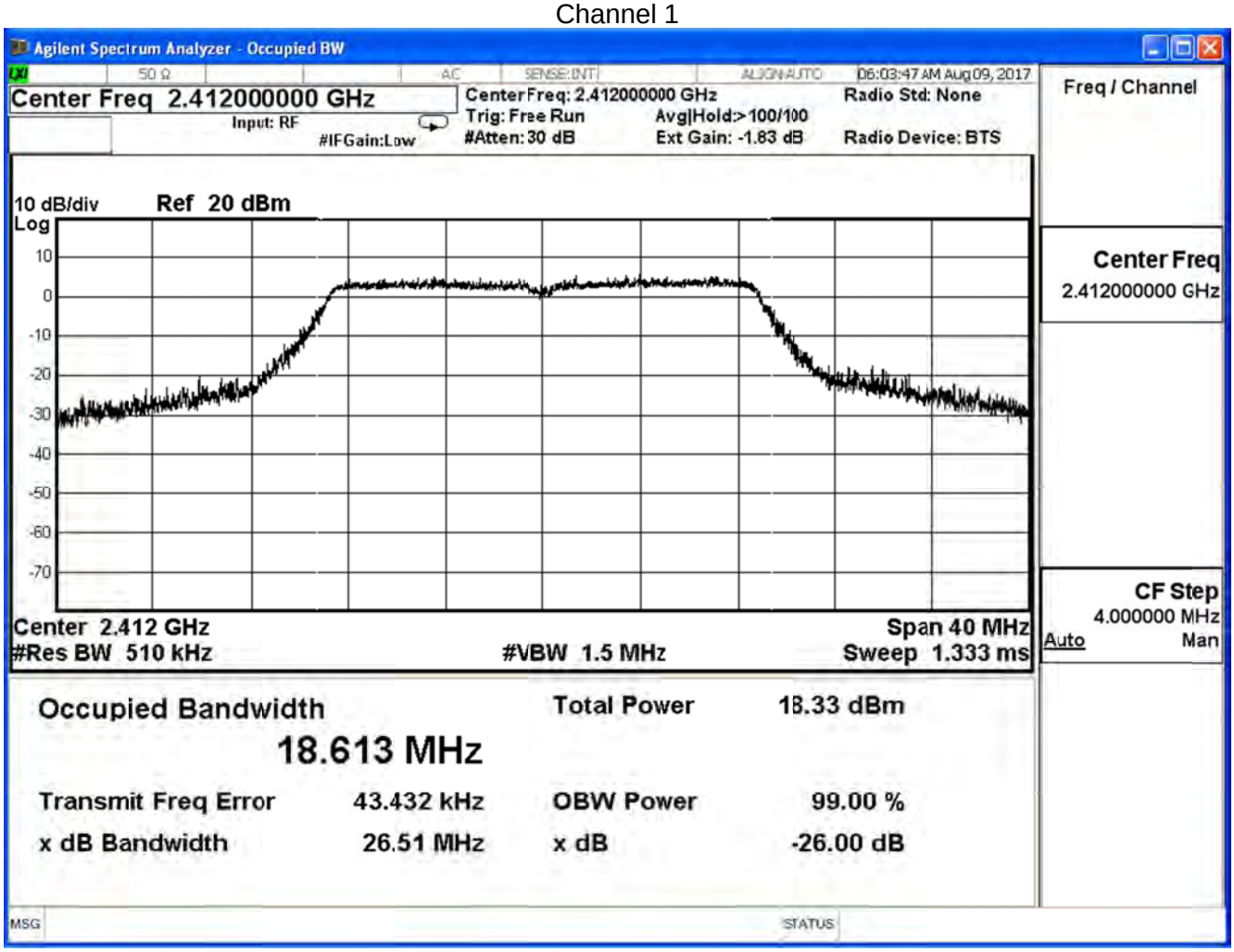
Channel 11


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.462000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.462000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.83 dB
Radio Std: None
Radio Device: BTS
06:01:58 AM Aug 09, 2017
Freq / Channel
10 dB/div
Ref 20 dBm
Log
Center Freq
2.462000000 GHz
Center 2.462 GHz
#Res BW 510 kHz
#VBW 1.5 MHz
Span 40 MHz
Sweep 1.333 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
17.881 MHz
Total Power
19.87 dBm
Transmit Freq Error
19.680 kHz
OBW Power
99.00 %
x dB Bandwidth
27.83 MHz
x dB
-26.00 dB
MSG
STATUS

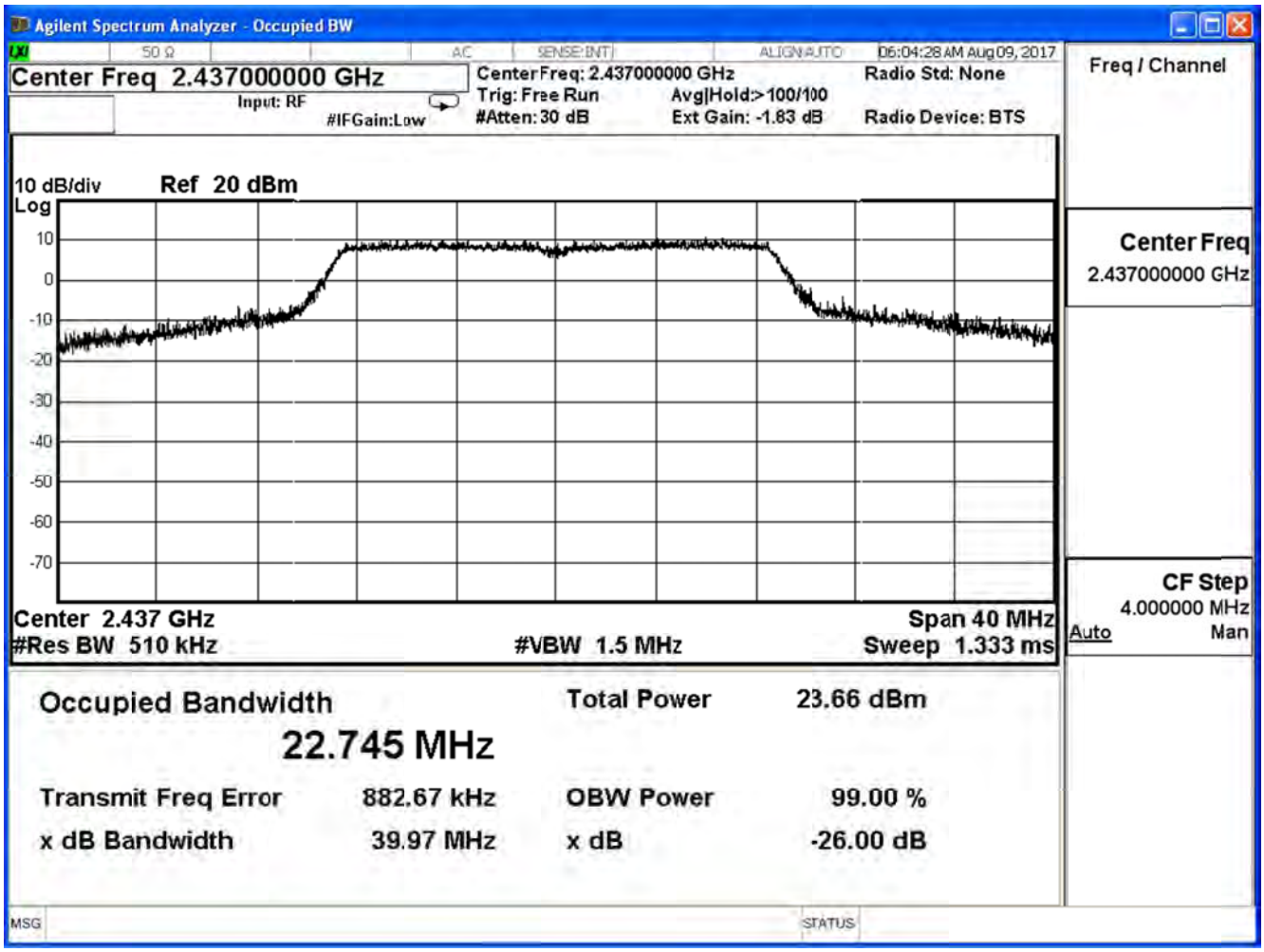
Product	Beta+		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/08/09	Test Site	SR10-H

IEEE802.11n 20MHz (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level(MHz)	Limit (MHz)	Result
1	2412	18.613	--	Pass
6	2437	22.745	--	Pass
11	2462	18.602	--	Pass

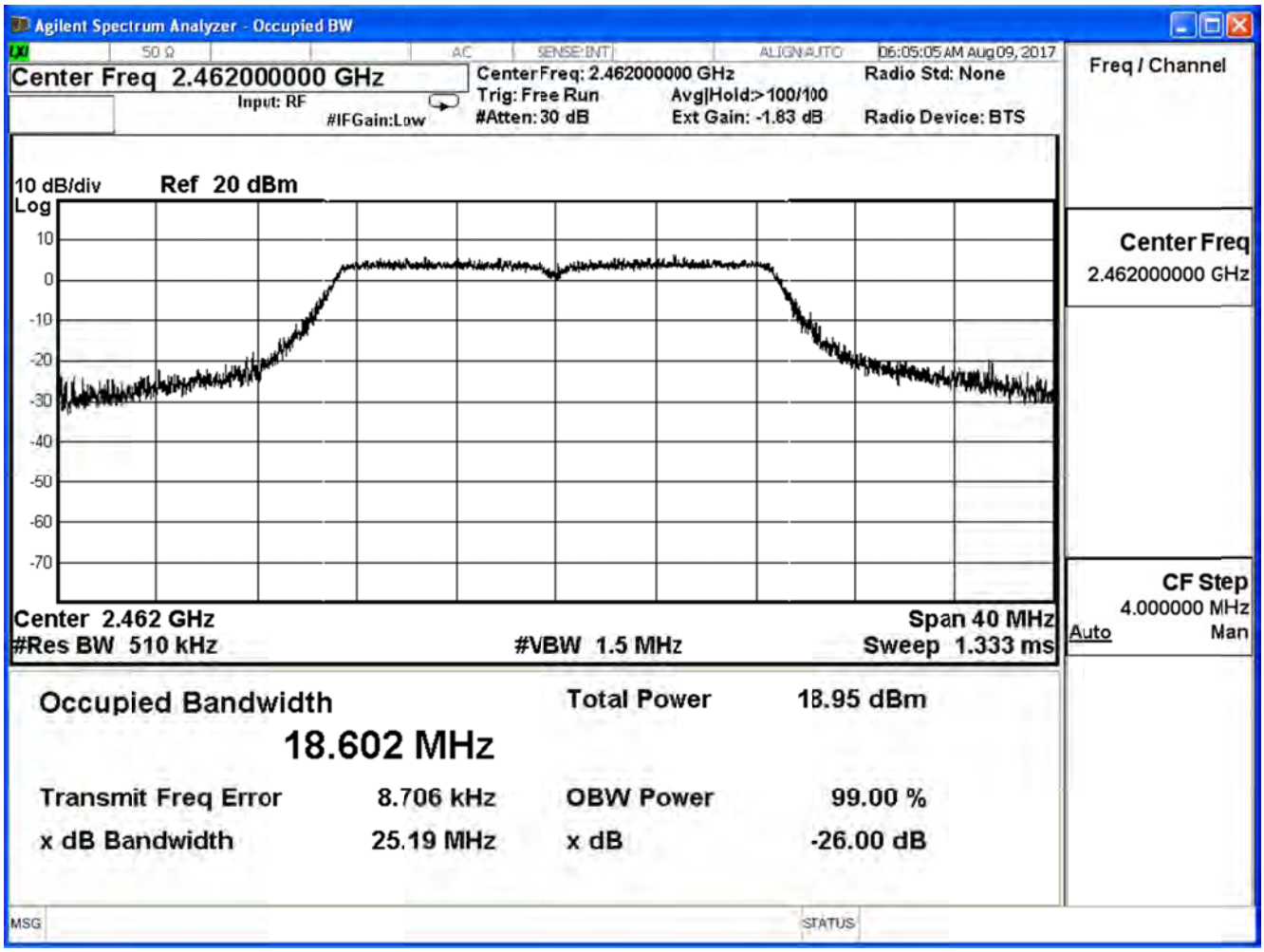
Channel 1



Channel 6


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
06:04:28 AM Aug 09, 2017
Center Freq 2.437000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.437000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.83 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Ref 20 dBm
Log
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.437000000 GHz
Center 2.437 GHz
#Res BW 510 kHz
#VBW 1.5 MHz
Span 40 MHz
Sweep 1.333 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
22.745 MHz
Total Power
23.66 dBm
Transmit Freq Error
882.67 kHz
OBW Power
99.00 %
x dB Bandwidth
39.97 MHz
x dB
-26.00 dB
MSG
STATUS

Channel 11


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.462000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.462000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.83 dB
Radio Std: None
Radio Device: BTS
06:05:05 AM Aug 09, 2017
Freq / Channel
10 dB/div
Ref 20 dBm
Log
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.462000000 GHz
Center 2.462 GHz
#Res BW 510 kHz
#VBW 1.5 MHz
Span 40 MHz
Sweep 1.333 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
18.602 MHz
Total Power
18.95 dBm
Transmit Freq Error
8.706 kHz
OBW Power
99.00 %
x dB Bandwidth
25.19 MHz
x dB
-26.00 dB
MSG
STATUS

9. Power Density

9.1. Test Equipment

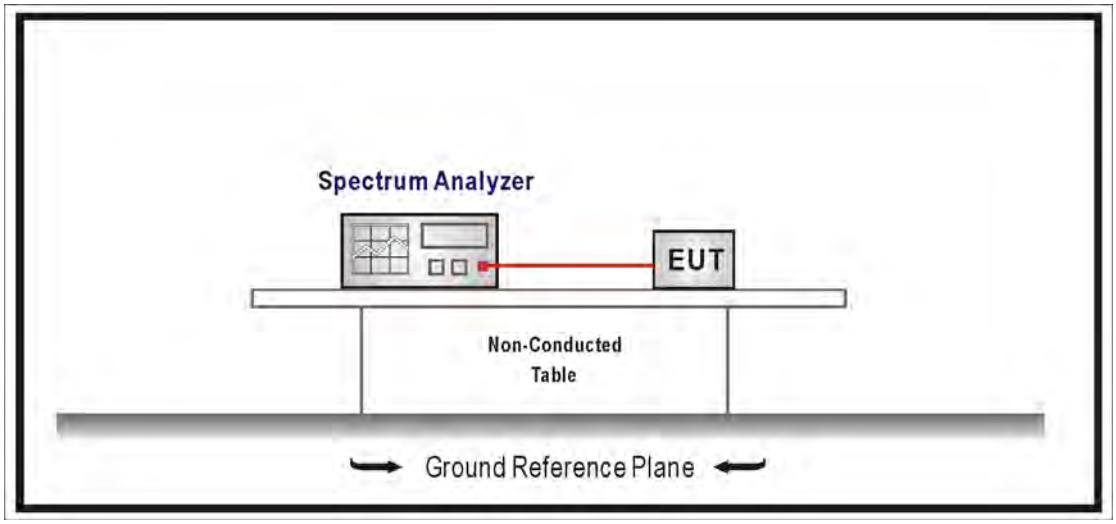
The following test equipment is used during the test:

Power Density / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2017/01/23	2018/01/22
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12

Note: All equipments that need to calibrate are with calibration period of 1 year.

9.2. Test Setup



9.3. Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8dBm in any 3kHz band during any time interval of continuous transmission.

9.4. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure section 10.2 of KDB558074 D01 V04 for compliance to FCC 47CFR 15.247 requirements.
Set 3KHz ≦RBW≦100 kHz, Set VBW≧3xRBW, Sweep time=Auto, Set Peak detector.

9.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

9.6. Uncertainty

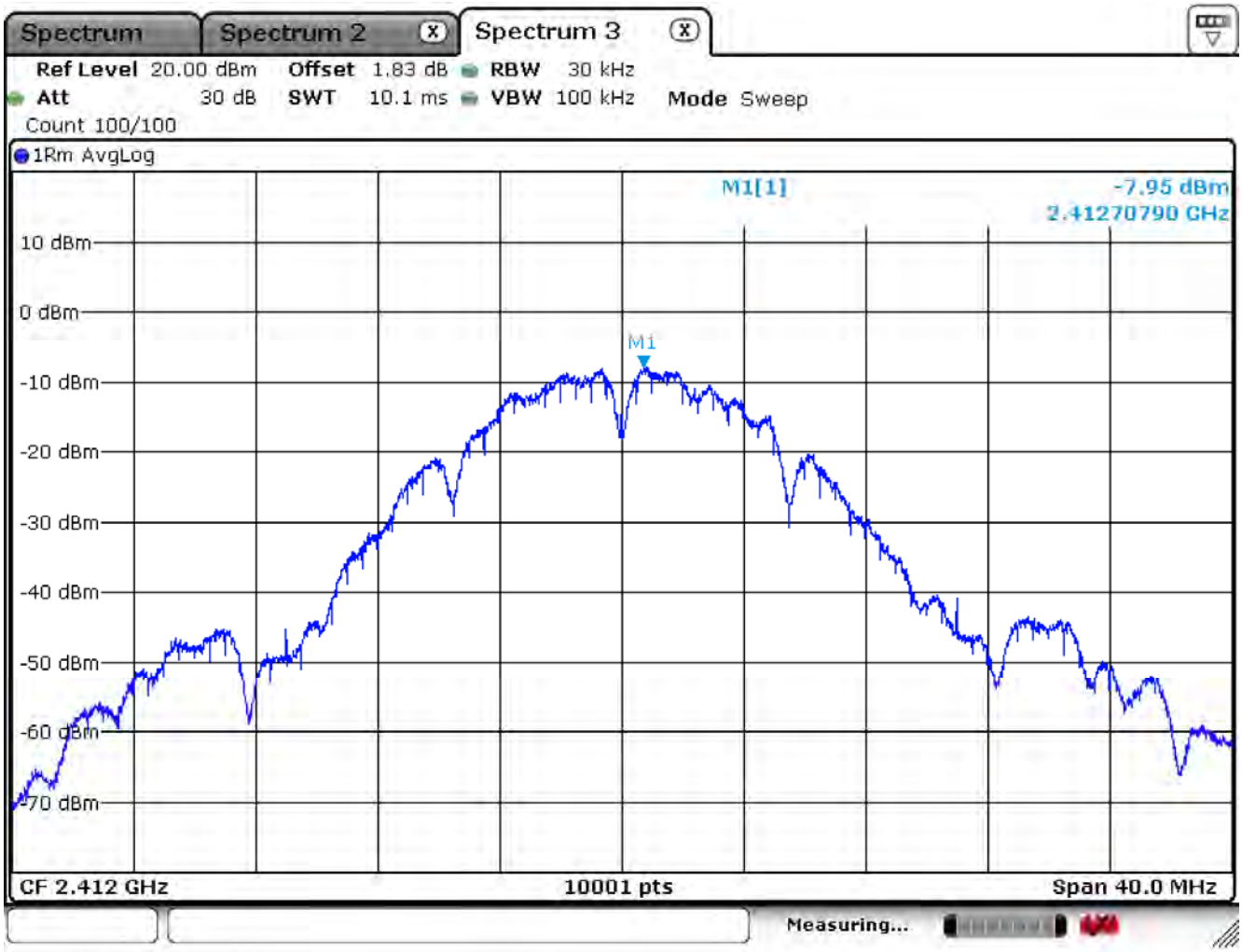
The measurement uncertainty is defined as ±1.27dB.

9.7. Test Result

Product	Beta+		
Test Item	Power Density		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/08/09	Test Site	SR10-H

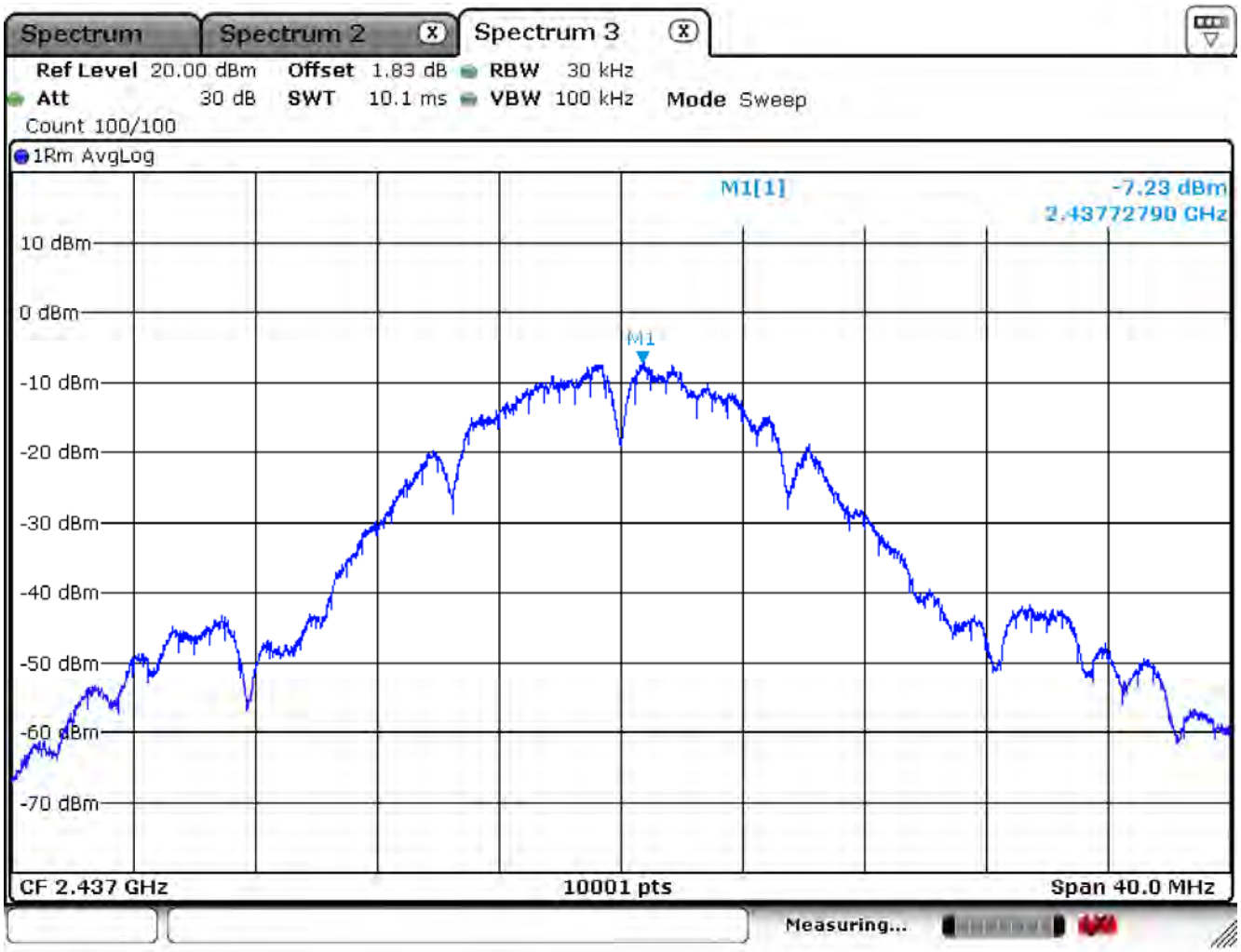
IEEE 802.11b (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	2412	-7.950	8.00	Pass
6	2437	-7.230	8.00	Pass
11	2462	-7.980	8.00	Pass

Channel 1



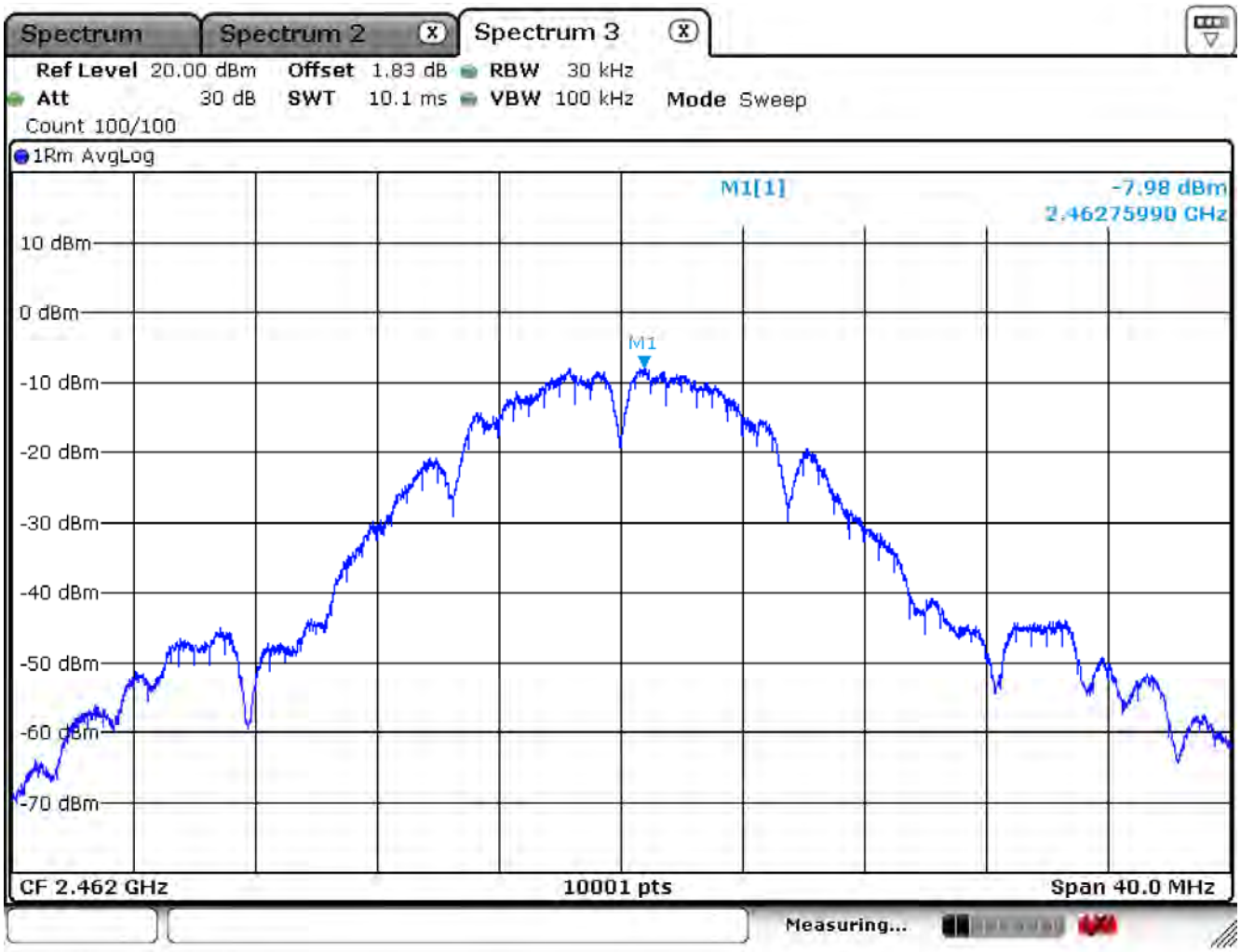
Date: 9.AUG.2017 03:47:01

Channel 6



Date: 9.AUG.2017 03:49:27

Channel 11

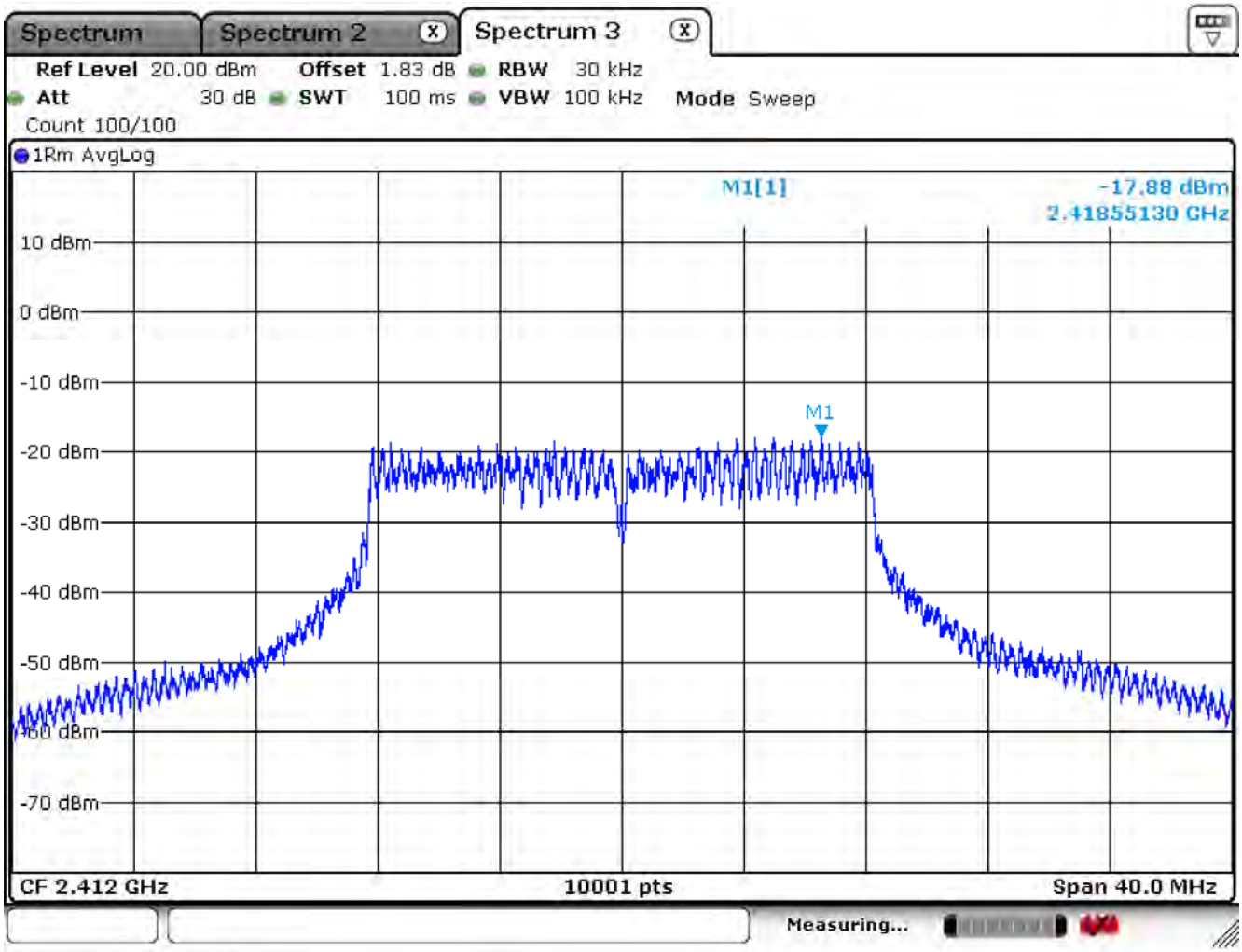


Date: 9.AUG.2017 03:49:57

Product	Beta+		
Test Item	Power Density		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/08/09	Test Site	SR10-H

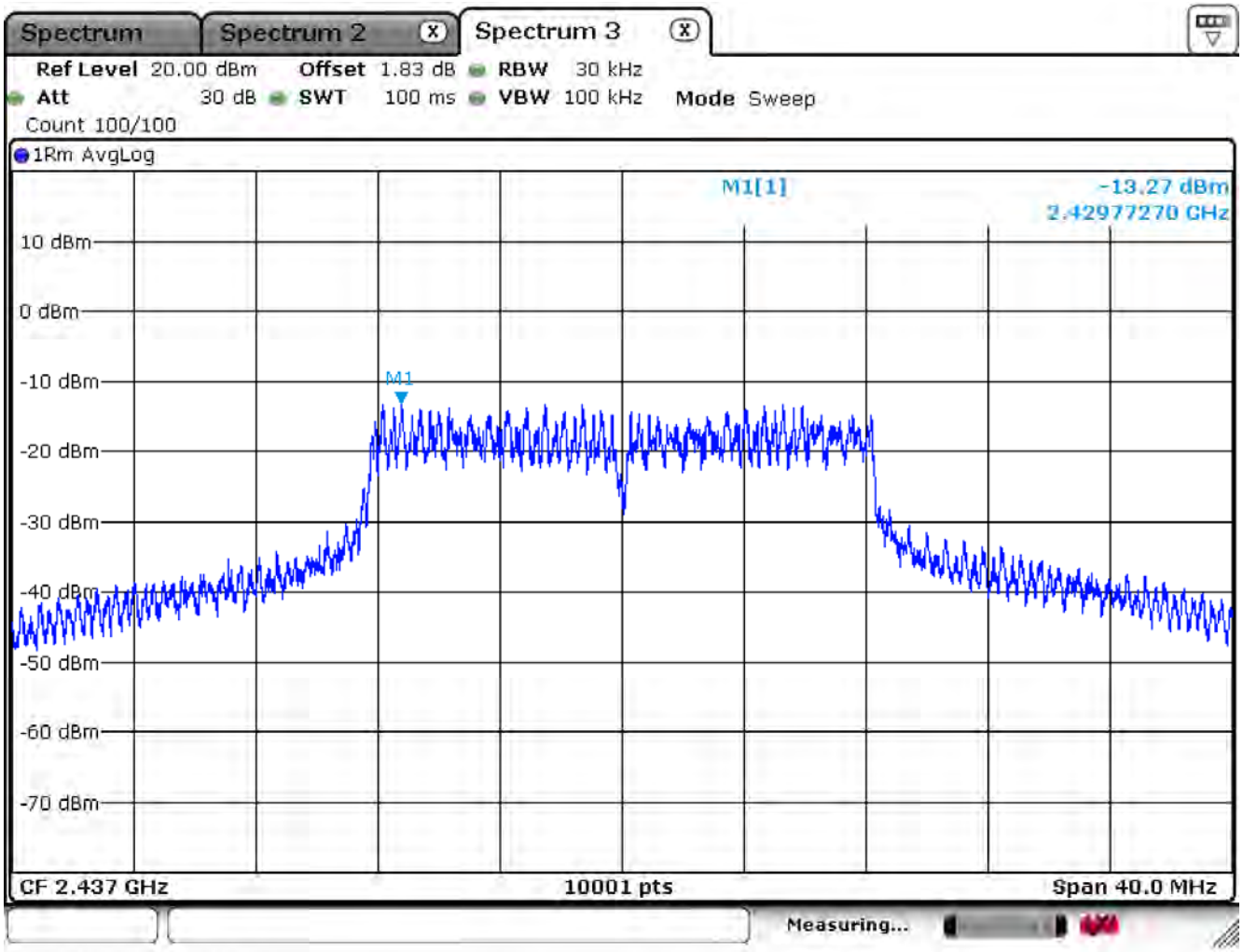
IEEE 802.11g (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	2412	-17.880	8.00	Pass
6	2437	-13.270	8.00	Pass
11	2462	-17.070	8.00	Pass

Channel 1



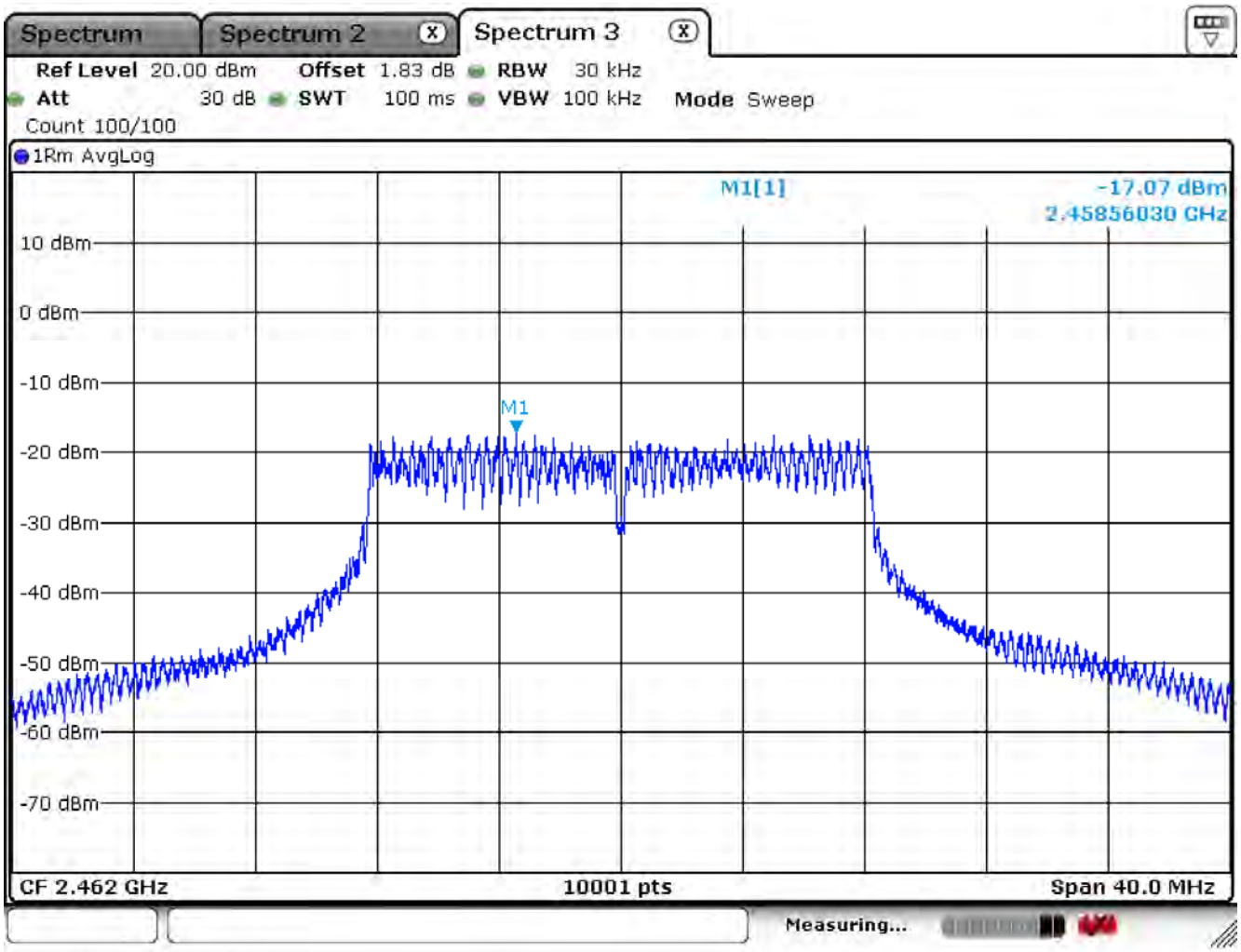
Date: 9.AUG.2017 04:00:57

Channel 6



Date: 9.AUG.2017 04:01:53

Channel 11

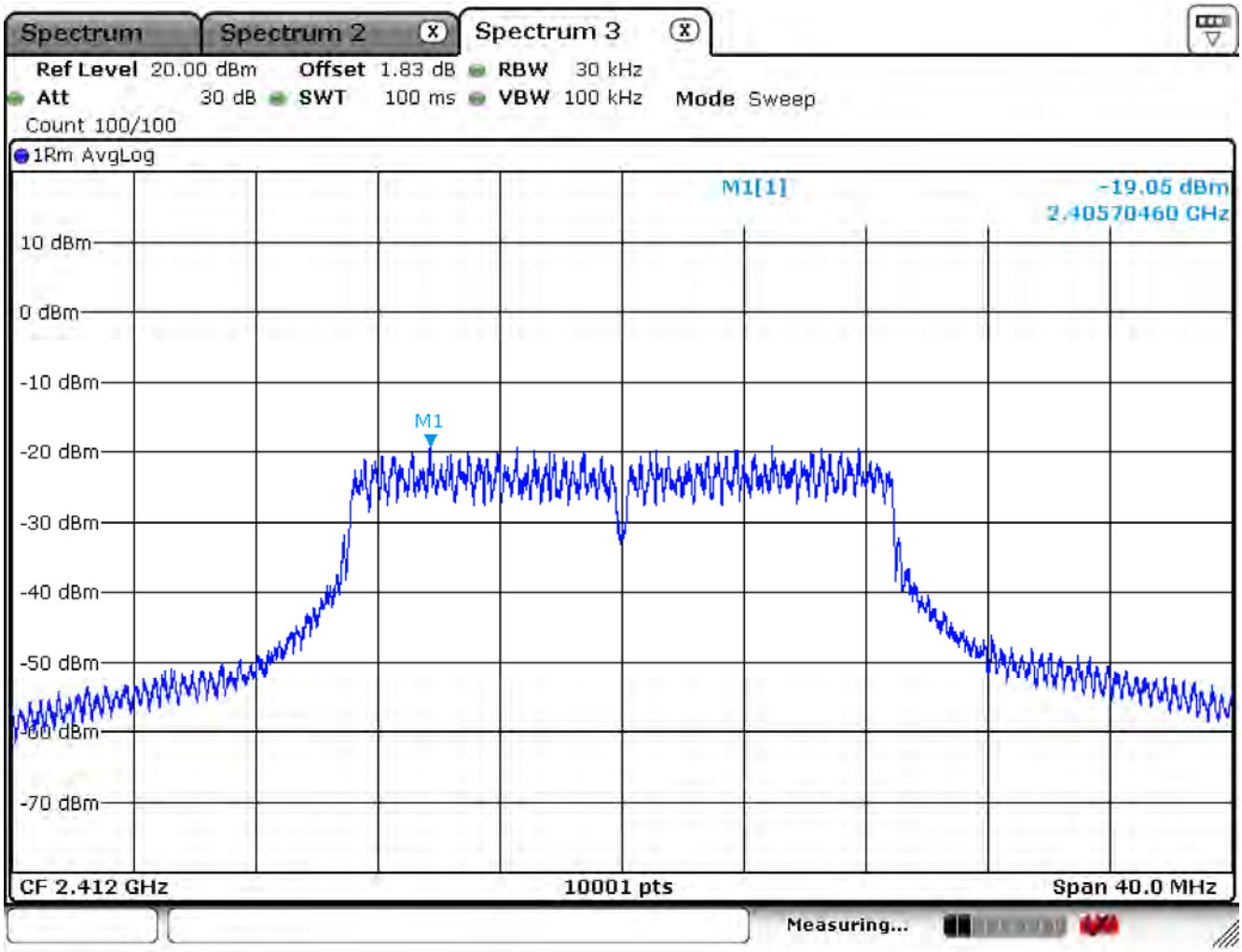


Date: 9.AUG.2017 03:55:09

Product	Beta+		
Test Item	Power Density		
Test Mode	Mode 1: Transmit-Power by PC		
Date of Test	2017/08/09	Test Site	SR10-H

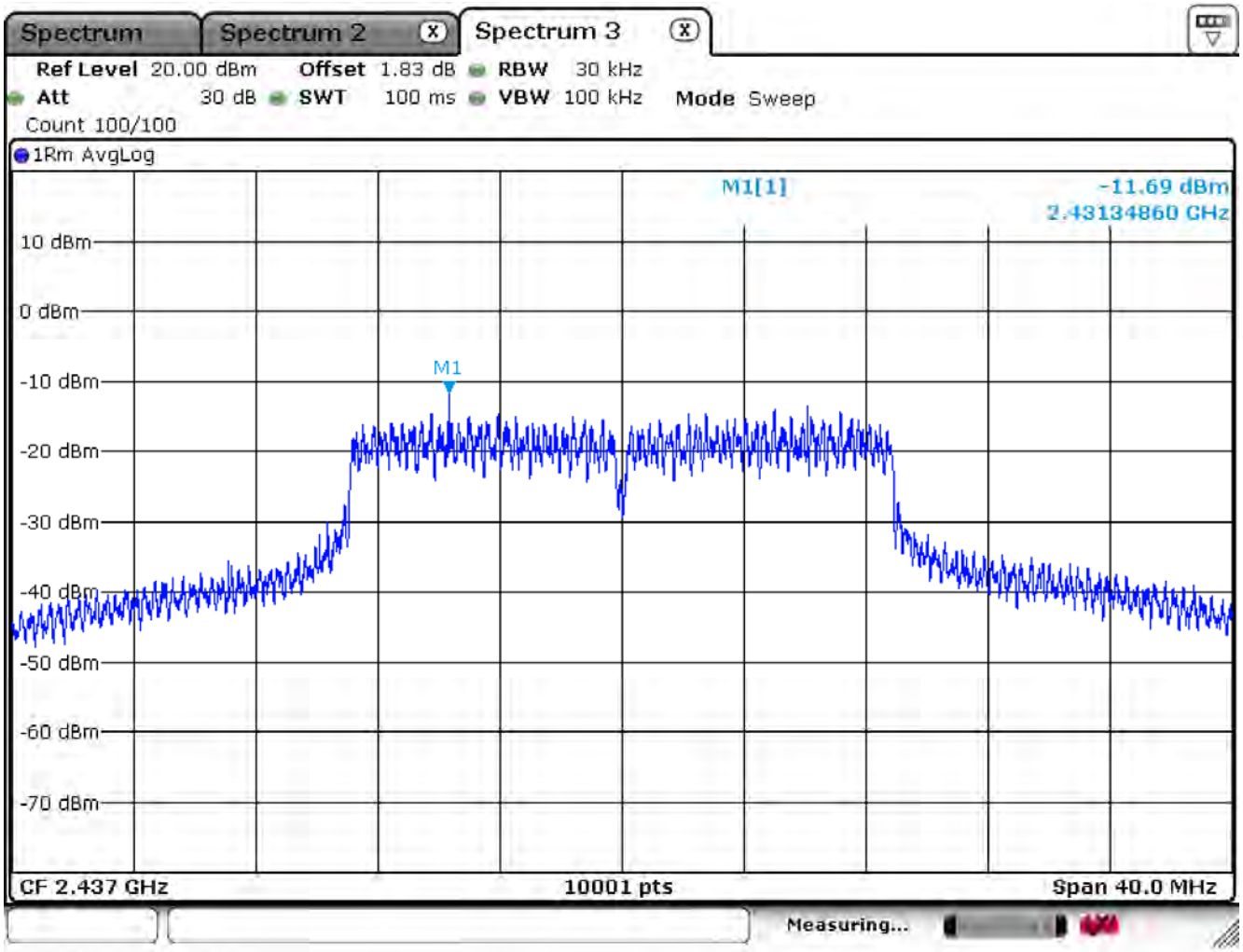
IEEE802.11n 20MHz (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	2412	-19.050	8.00	Pass
6	2437	-11.690	8.00	Pass
11	2462	-16.970	8.00	Pass

Channel 1



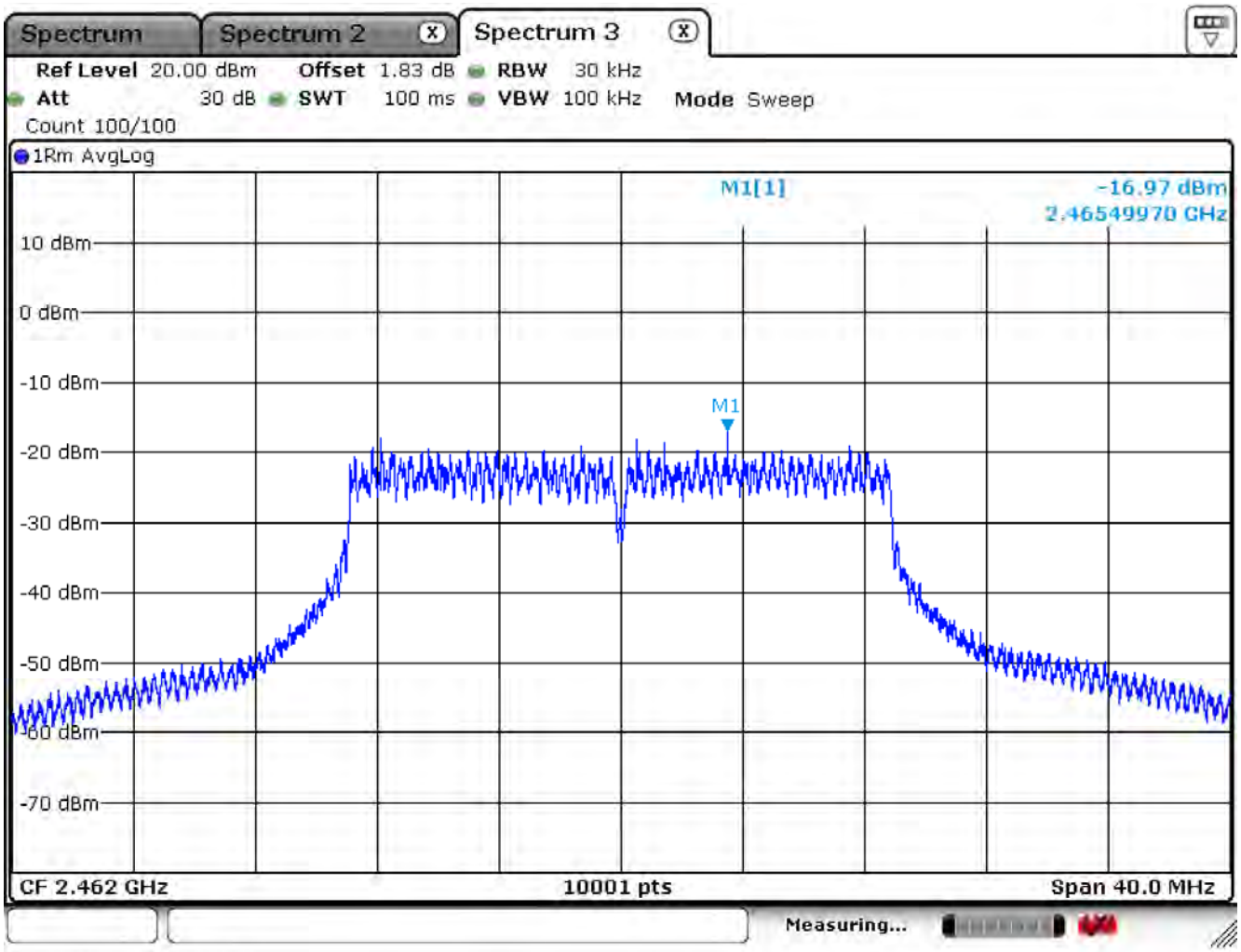
Date: 9.AUG.2017 04:17:18

Channel 6



Date: 9.AUG.2017 04:04:57

Channel 11



Date: 9.AUG.2017 04:07:40