FCC Test Report

Product Name	:	Active Ethernet Fiber 802.11ac Gateway with VoIP
Trade Name	:	BEC, Billion
Model No.	:	BEC 9900VA
FCC ID	:	QI3BEC-9900VA

Applicant	:	Billion Electric Co., Ltd.
Address	:	8F., No.192, Sec. 2, Zhongxing Rd., Xindian Dist., New Taipei City 231, Taiwan (R.O.C.)

Date of Receipt	:	Sep. 16, 2020
Issued Date	:	Nov. 11, 2020
Report No.	:	2090564R-E3032110113
Report Version	:	V1.0

Testing Laboratory
3024

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Test Report Certification

Issued Date : Nov. 11, 2020
Report No.: 2090564R-E3032110113

Product Name	:	Active Ethernet Fiber 802.11ac Gateway with VoIP
Applicant	:	Billion Electric Co., Ltd.
Address	:	8F., No.192, Sec. 2, Zhongxing Rd., Xindian Dist., New Taipei City 231, Taiwan (R.O.C.)
Manufacturer	:	Billion Electric Co., Ltd.
Address	:	8F., No.192, Sec. 2, Zhongxing Rd., Xindian Dist., New Taipei City 231, Taiwan (R.O.C.)
Model No.	:	BEC 9900VA
FCC ID	:	QI3BEC-9900VA
EUT Test Voltage	:	AC 100-240V, 50/60Hz
Testing Voltage	:	AC 120V/60Hz
Trade Name	:	BEC, Billion
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2019 ANSI C63.10: 2013
Laboratory Name	:	Hsin Chu Laboratory
Address	:	No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan, R.O.C. TEL: +886-3-582-8001 / FAX: +886-3-582-8958
Test Result	:	Complied

Documented By :

(Carol Tsai / Senior Engineering Adm. Specialist)

Tested By :

(Scott Chang / Senior Engineer)

Approved By :

(Louis Hsu / Deputy Manager)

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Nov. 11, 2020

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1. General Information

1.1. EUT Description

Product Name	Active Ethernet Fiber 802.11ac Gateway with VoIP	
Trade Name	BEC, Billion	
Model No.	BEC 9900VA	
Frequency Range/ Channel Number	IEEE 802.11b/g IEEE 802.11n (20MHz)	2412~2462MHz / 11 Channels
	IEEE 802.11n (40MHz)	2422~2452MHz / 7 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, 12, 18, 24, 36, 48, 54Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS 0~MCS 15 and bandwidth defined in 802.11n

Antenna Information

Frequency	No.	Brand	Model No.	Ant. Type	Ant. Gain
2.4G	0	Master Wave Technology Co., Ltd.	98612PRSX000	Diople	2.56 dBi
	1	Master Wave Technology Co., Ltd.	98612PRSX000	Diople	2.56 dBi
5G	0	Master Wave Technology Co., Ltd.	98612PRSX000	Diople	3.54 dBi
	1	Master Wave Technology Co., Ltd.	98612PRSX000	Diople	3.54 dBi
	2	Master Wave Technology Co., Ltd.	98612PRSX000	Diople	3.54 dBi
	3	Master Wave Technology Co., Ltd.	98612PRSX000	Diople	3.54 dBi

Accessories Information

Ethernet Cable	Non-Shielded, 1.8m
Power Adapter	MFR: BILLION, M/N: BA040-150200EXU Input: 100-240V~1.0A 50/60Hz Output: DC 15V ⎓ 2.0A Cable Out: Non-Shielded, 1.58m

ANT-TX / RX & Bandwidth

ANT-TX / RX	TX			RX		
Mode/ Channel Bandwidth	20MHz	40MHz	80MHz	20MHz	40MHz	80MHz
IEEE802.11b	✓			✓		
IEEE802.11g	✓			✓		
IEEE802.11n	✓	✓		✓	✓	

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	-	-

IEEE 802.11n(40MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
003	2422 MHz	004	2427 MHz	005	2432 MHz	006	2437 MHz
007	2442 MHz	008	2447 MHz	009	2452 MHz	-	-

Note:

1. This device including 2.4GHz b/g/n and 5GHz a/n/ac transmitting and receiving functions.
2. The device supports diversity function in 802.11b/g modes, and the maximum power of Ant. 0 is higher than Ant. 1. So Ant. 0 is selected as the worst case to perform for all test items in 802.11b/g modes.
3. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247.
4. 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.
5. The EUT description is from the customer declaration.

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.

Test Mode	Mode 1: Transmit Mode

Test Items	Modulation	Channel	Antenna	Result
Conducted Emission	11b	6	0	Complies
	11g	6	0	Complies
	11n(20MHz)	6	0+1	Complies
	11n(40MHz)	6	0+1	Complies
Maximum peak conducted output power	11b	1/6/11	0/1	Complies
	11g	1/6/11	0/1	Complies
	11n(20MHz)	1/6/11	0+1	Complies
	11n(40MHz)	3/6/9	0+1	Complies
Radiated Emission	11b	1/6/11	0	Complies
	11g	1/6/11	0	Complies
	11n(20MHz)	1/6/11	0+1	Complies
	11n(40MHz)	3/6/9	0+1	Complies
RF antenna conducted test	11b	1/6/11	0	Complies
	11g	1/6/11	0	Complies
	11n(20MHz)	1/6/11	0/1	Complies
	11n(40MHz)	3/6/9	0/1	Complies
Radiated Emission Band Edge	11b	1/6/11	0	Complies
	11g	1/6/11	0	Complies
	11n(20MHz)	1/6/11	0+1	Complies
	11n(40MHz)	3/6/9	0+1	Complies
DTS Bandwidth	11b	1/6/11	0	Complies
	11g	1/6/11	0	Complies
	11n(20MHz)	1/6/11	0/1	Complies
	11n(40MHz)	3/6/9	0/1	Complies

Test Items	Modulation	Channel	Antenna	Result
Occupied Bandwidth	11b	1/6/11	0	Complies
	11g	1/6/11	0	Complies
	11n(20MHz)	1/6/11	0/1	Complies
	11n(40MHz)	3/6/9	0/1	Complies
Power Density	11b	1/6/11	0	Complies
	11g	1/6/11	0	Complies
	11n(20MHz)	1/6/11	0+1	Complies
	11n(40MHz)	3/6/9	0+1	Complies

Note 1: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Note 2: Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

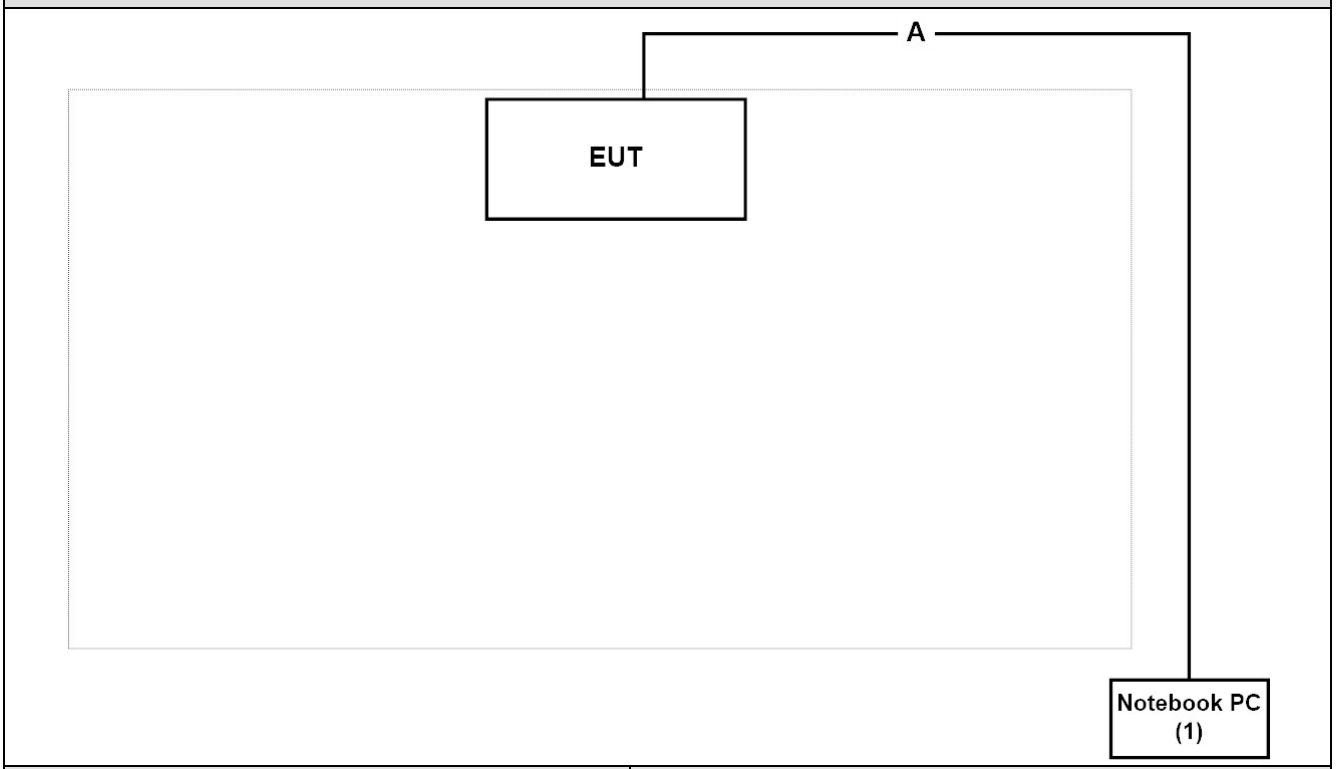
1.3. Tested System Details

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

Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Notebook PC	Lenove	Lenovo Ideapad 110 15IBR	PF01EUZD	DoC	Non-Shielded, 1.8 m

1.4. Configuration of tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	Ethernet Cable	Non-Shielded, 8m

1.5. EUT Exercise Software

1	Setup the EUT as shown in Section 1.4.
2	Open the control software QATool
3	Configure test mode, test channel and data rate.
4	Let the EUT start transmitting signal continuously.
5	Verify that device is working properly.

1.6. Comments and Remarks

The product specification and testing instructions for the EUT declared in the report are provided by the manufacturer who will take all responsibilities for the accuracy.

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required	Test Site
Temperature (°C)	FCC PART 15 C 15.207	15 - 35	2
Humidity (%RH)	Conducted Emission	25 - 75	
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	1
Humidity (%RH)	Maximum peak conducted output power	25 - 75	
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	1
Humidity (%RH)	Radiated Emission	25 - 75	
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	1
Humidity (%RH)	RF antenna conducted test	25 - 75	
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	1
Humidity (%RH)	Radiated Emission Band Edge	25 - 75	
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	1
Humidity (%RH)	Occupied Bandwidth & DTS Bandwidth	25 - 75	
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	1
Humidity (%RH)	Power Density	25 - 75	

Note: Test site information refers to Laboratory Information.

Laboratory Information

USA	**:**	**FCC Registration Number: TW3024**
Canada	**:**	**IC Registration Number: 22397-1 / 22397-2 / 22397-3**

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

If you have any comments, please don't hesitate to contact us. Our test sites as below:

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
Address	1. No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. 2. No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
Phone number	1. +886-3-582-8001 2. +886-3-582-8001
Fax number	1. +886-3-582-8958 2. +886-3-582-8958
Email address	info.tw@dekra.com
Website	http://www.dekra.com.tw

1.8. List of Test Equipment

Conducted Emission / SR2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2020/01/08	2021/01/07
Test Receiver	R&S	ESCS 30	836858/022	2020/02/25	2021/02/24
LISN	R&S	ENV216	100092	2020/06/22	2021/06/21

Maximum peak conducted output power / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2019/12/02	2020/12/01
Pulse Power Sensor	Anritsu	MA2411B	1531043	2019/12/02	2020/12/01
Pulse Power Sensor	Anritsu	MA2411B	1531044	2019/12/02	2020/12/01
Power Meter	Keysight	8990B	MY51000248	2020/05/20	2021/05/19
Power Sensor	Keysight	N1923A	MY57240005	2020/05/20	2021/05/19

Radiated Emission / CB2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2020/10/12	2021/10/11
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2020/02/21	2021/02/20
Bilog Antenna	Teseq	CBL6112D	23191	2020/06/12	2021/06/11
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2020/06/04	2021/06/03
Horn Antenna	Schwarzbeck	BBHA 9170	202	2019/12/27	2020/12/26
Pre-Amplifier	DEKRA	AP-025C	12183122	2020/09/03	2021/09/02
Pre-Amplifier	EMCI	EMC11830I	980366	2019/12/03	2020/12/02
Pre-Amplifier	DEKRA	AP-400C	201801231	2019/12/03	2020/12/02
Horn Antenna	Schwarzbeck	BBHA 9120D	01656	2020/10/14	2021/10/13
Band Reject Filter	Micro-Tronics	BRM50702	G192	2020/03/09	2021/03/08
Signal Analyzer	R&S	FSV40	101435	2020/06/24	2021/06/23
Coaxial Cable(13m)	Huber+Suhner	SF104	CB2-H	2020/07/25	2021/07/24
DEKRA Testing System	DEKRA	Version 1.2	CB2-H	NA	NA

RF antenna conducted test / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Spectrum Analyzer	Agilent	N9010A	US47140172	2020/06/18	2021/06/17
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29

Radiated Emission Band Edge / CB2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2020/10/12	2021/10/11
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2020/02/21	2021/02/20
Bilog Antenna	Teseq	CBL6112D	23191	2020/06/12	2021/06/11
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2020/06/04	2021/06/03
Horn Antenna	Schwarzbeck	BBHA 9170	202	2019/12/27	2020/12/26
Pre-Amplifier	DEKRA	AP-025C	12183122	2020/09/03	2021/09/02
Pre-Amplifier	EMCI	EMC11830I	980366	2019/12/03	2020/12/02
Pre-Amplifier	DEKRA	AP-400C	201801231	2019/12/03	2020/12/02
Horn Antenna	Schwarzbeck	BBHA 9120D	01656	2020/10/14	2021/10/13
Band Reject Filter	Micro-Tronics	BRM50702	G192	2020/03/09	2021/03/08
Signal Analyzer	R&S	FSV40	101435	2020/06/24	2021/06/23
Coaxial Cable(13m)	Huber+Suhner	SF104	CB2-H	2020/07/25	2021/07/24
DEKRA Testing System	DEKRA	Version 1.2	CB2-H	NA	NA

DTS Bandwidth / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Spectrum Analyzer	Agilent	N9010A	US47140172	2020/06/18	2021/06/17
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29

Occupied Bandwidth / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Spectrum Analyzer	Agilent	N9010A	US47140172	2020/06/18	2021/06/17
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29

Power Density / SR12-H

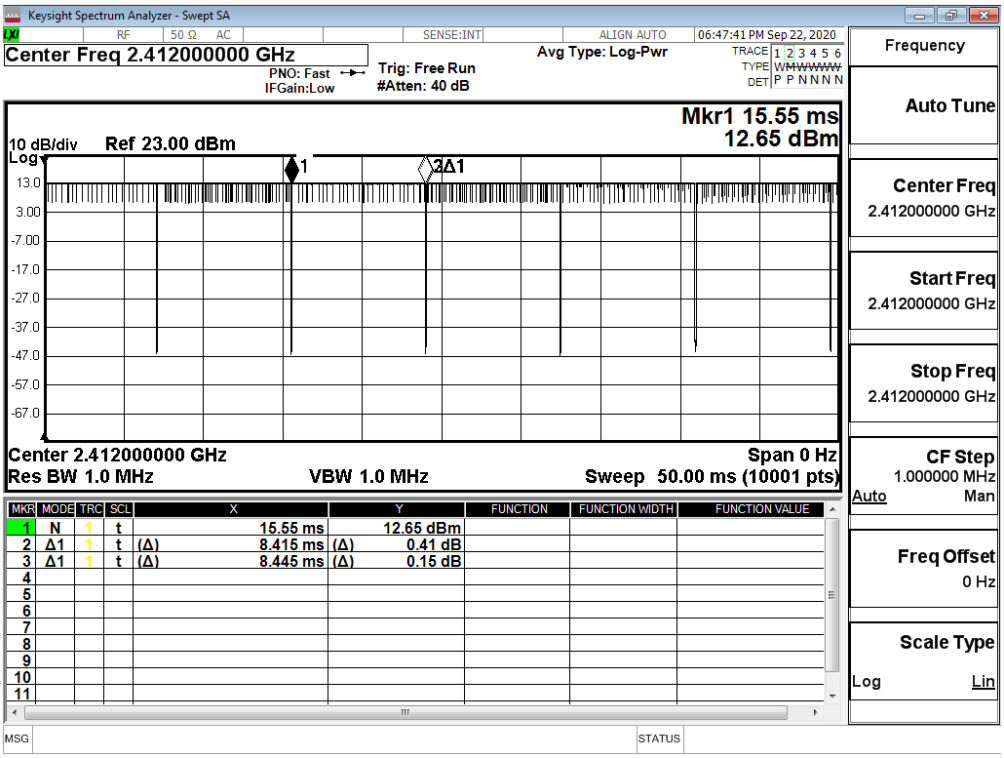
Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Spectrum Analyzer	Agilent	N9010A	US47140172	2020/06/18	2021/06/17
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

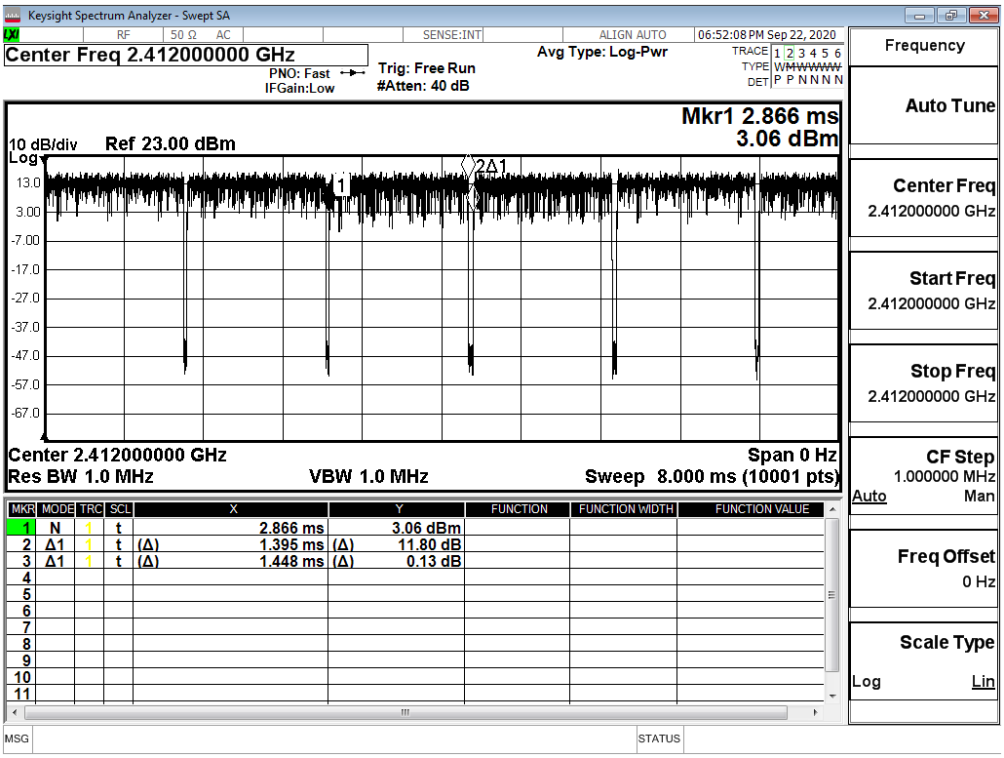
1.9. Duty Cycle

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor(dB) linear voltage	Duty Factor(dB) Power	1/T Minimum VBW (kHz)
802.11b (SISO)	8.415	8.445	99.64%	0.030911	0.02	0.010
802.11g (SISO)	1.395	1.448	96.34%	0.323887	0.16	0.717
802.11n 20 (MIMO)	0.676	0.774	87.41%	1.168826	0.58	1.479
802.11n 40 (MIMO)	0.348	0.428	81.47%	1.779653	0.89	2.871

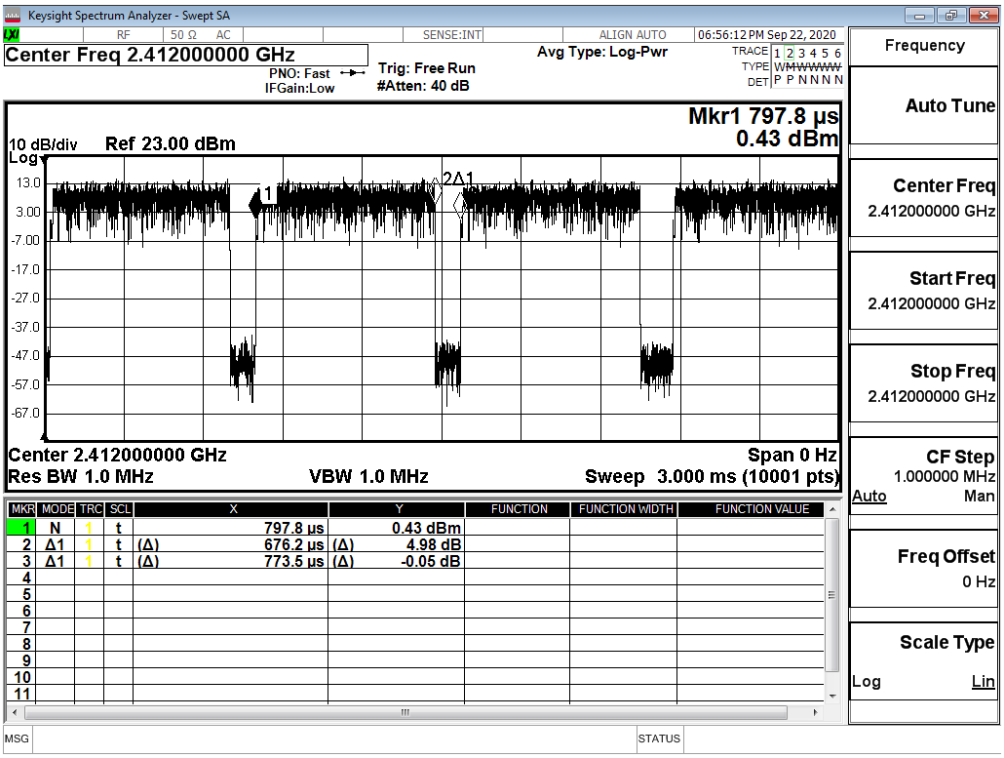
802.11b



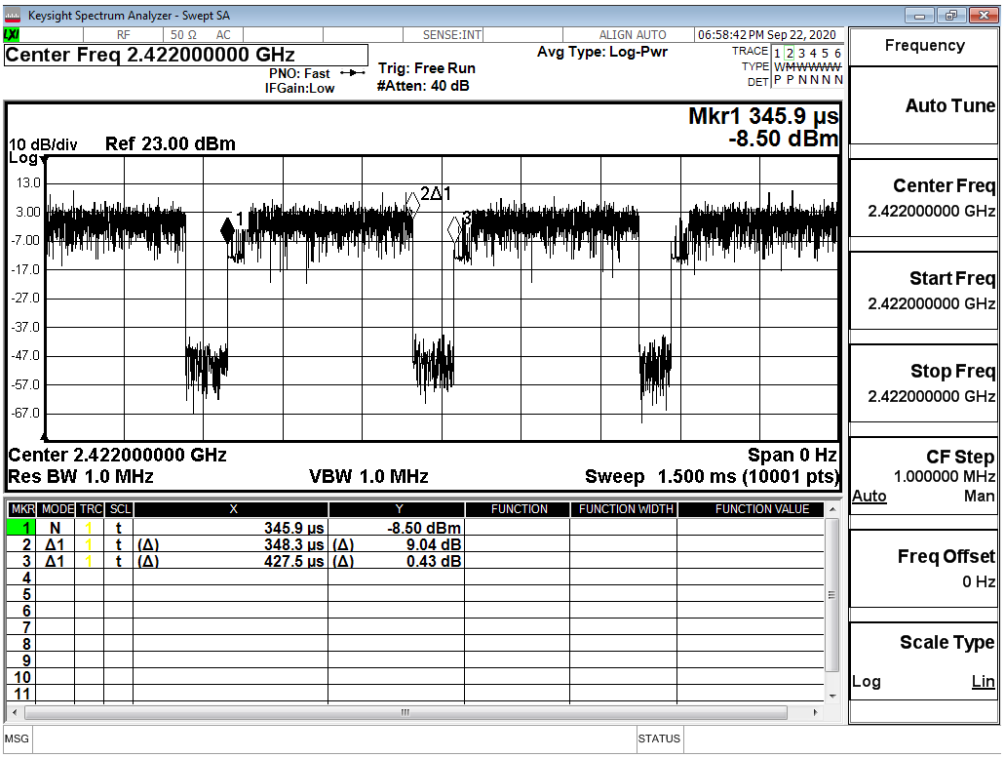
802.11g



802.11n (20M)



802.11n (40M)

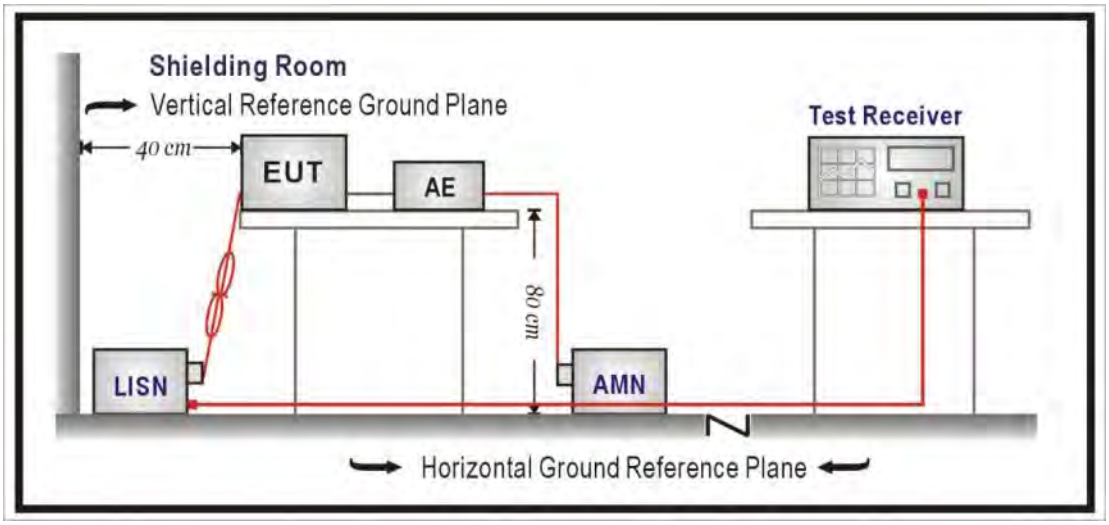


1.10. Uncertainty

Test item	Uncertainty
Conducted Emission	± 2.26 dB
Maximum peak conducted output power	± 1.27 dB
Radiated Emission	30MHz~1GHz as ±3.43 dB 1GHz~26.5GHz as ±3.65 dB
RF antenna conducted test	± 1.27 dB
Radiated Emission Band Edge	± 3.9 dB
DTS Bandwidth	± 50 Hz
Occupied Bandwidth	± 50 Hz
Power Density	±1.27 dB

2. Conducted Emission

2.1. Test Setup



2.2. 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

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

2.3. Test Procedure

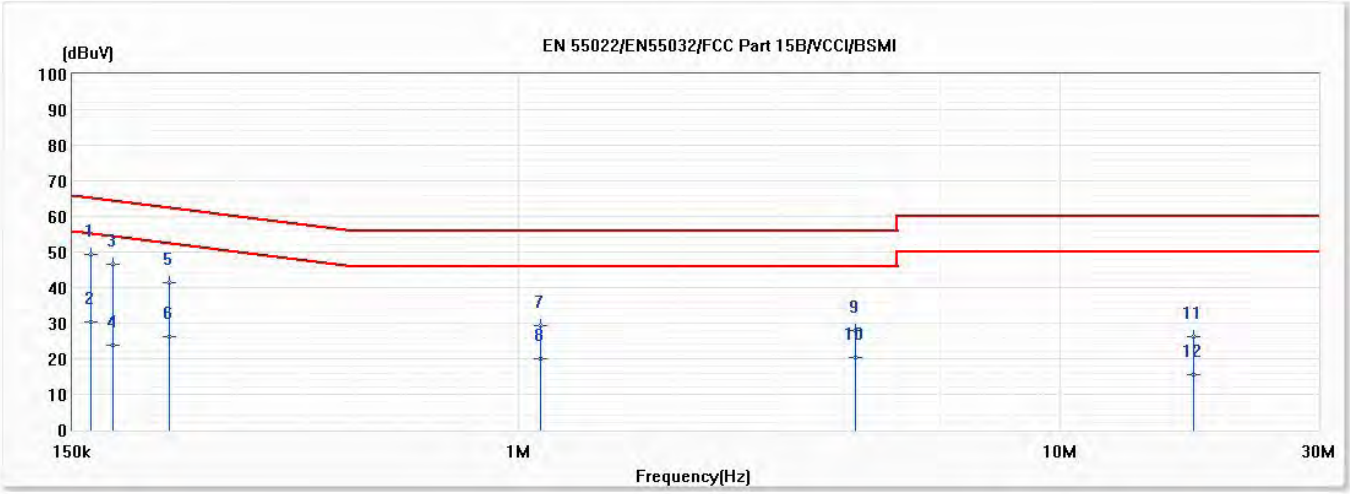
The EUT was setup according to ANSI C63.4: 2013 and tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 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.

2.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.207: 2019

2.5. Test Result

Model No	BEC 9900VA	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/11/3
Test Mode	Mode 1: Transmit Mode	Engineer	Lion Wang
Phase	N	Temperature (℃)	23
Test Condition	802.11n_20M_2437MHz	Humidity (%RH)	54

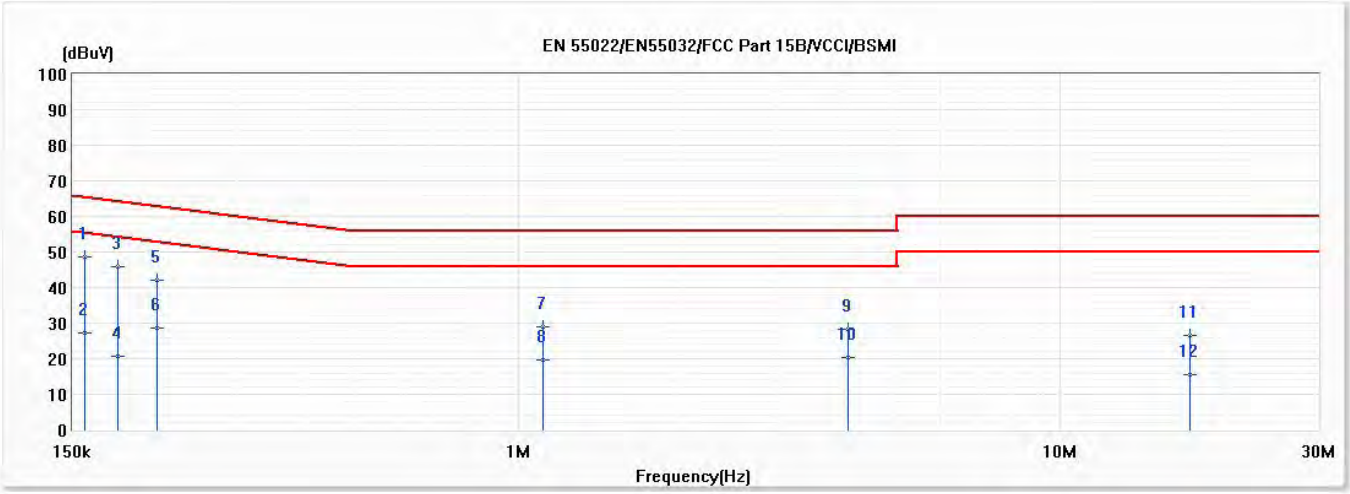


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.162	49.17	65.37	-16.20	39.54	9.64	QP
2	0.162	30.41	55.37	-24.96	20.77	9.64	AV
3	0.178	46.66	64.56	-17.90	37.02	9.63	QP
4	0.178	23.93	54.56	-30.62	14.30	9.63	AV
5	0.226	41.24	62.59	-21.35	31.60	9.64	QP
6	0.226	26.11	52.59	-26.48	16.47	9.64	AV
7	1.096	29.44	56.00	-26.56	19.71	9.72	QP
8	1.096	20.17	46.00	-25.83	10.45	9.72	AV
9	4.196	27.80	56.00	-28.20	17.91	9.89	QP
10	4.196	20.27	46.00	-25.73	10.38	9.89	AV
11	17.589	26.32	60.00	-33.68	15.88	10.44	QP
12	17.589	15.54	50.00	-34.46	5.10	10.44	AV

Remark:

1. "*" means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor (Correct Factor = LISN Insertion Loss + Cable Loss).
3. Margin = Emission Level - Limit.

Model No	BEC 9900VA	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/11/3
Test Mode	Mode 1: Transmit Mode	Engineer	Lion Wang
Phase	L	Temperature (℃)	23
Test Condition	802.11n_20M_2437MHz	Humidity (%RH)	54



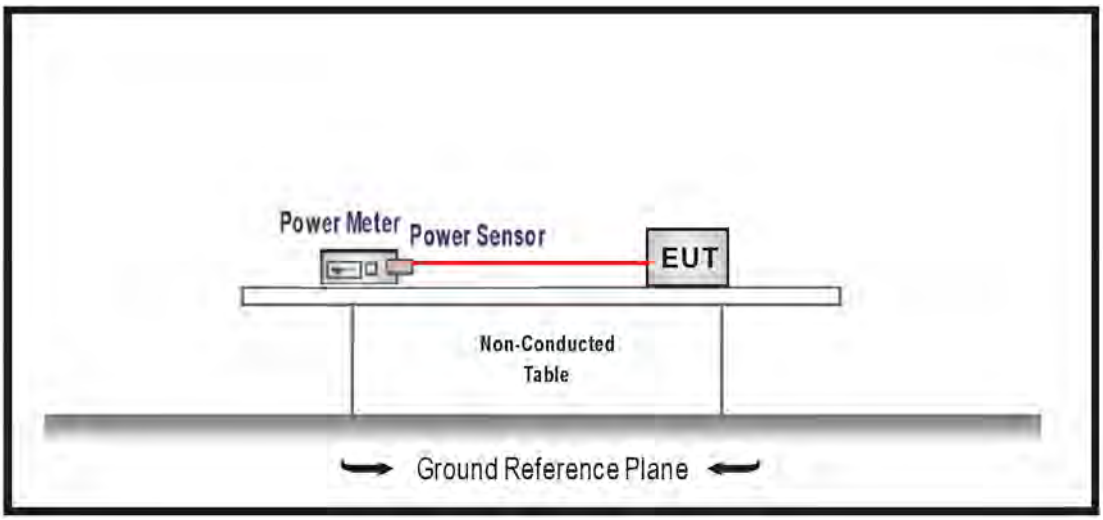
No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
*1	0.158	48.75	65.58	-16.83	39.10	9.65	QP
2	0.158	27.25	55.58	-28.33	17.60	9.65	AV
3	0.182	45.79	64.40	-18.61	36.14	9.64	QP
4	0.182	20.57	54.40	-33.83	10.92	9.64	AV
5	0.214	42.19	63.03	-20.84	32.54	9.65	QP
6	0.214	28.60	53.03	-24.44	18.95	9.65	AV
7	1.108	28.94	56.00	-27.06	19.20	9.75	QP
8	1.108	19.70	46.00	-26.30	9.95	9.75	AV
9	4.066	28.22	56.00	-27.78	18.33	9.89	QP
10	4.066	20.20	46.00	-25.80	10.31	9.89	AV
11	17.399	26.50	60.00	-33.50	16.18	10.32	QP
12	17.399	15.62	50.00	-34.38	5.30	10.32	AV

Remark:

1. "*" means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor (Correct Factor = LISN Insertion Loss + Cable Loss).
3. Margin = Emission Level - Limit.

3. Maximum peak conducted output power

3.1. Test Setup



3.2. Test procedures

The EUT was tested according to DTS test procedure section 8.3.1.3 of KDB 558074 D01 v05r02 & Subclause 11.9.1.3 of ANSI C63.10 Measurement to FCC 47CFR 15.247 requirements.

3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2019

3.5. Test Result

Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	Maximum peak conducted output power		
Test Mode	Mode 1: Transmit Mode (SISO)		
Date of Test	2020/10/26	Test Site	SR12-H
Temperature(°C)	22	Humidity (%RH)	55

IEEE 802.11b				
Channel No.	Frequency (MHz)	Maximum peak conducted output power (dBm)		Limit (dBm)
		Ant. 0	Ant. 1	
1	2412	15.010	14.750	≦30
6	2437	15.940	15.560	≦30
11	2462	17.360	16.680	≦30

The worst emission of data rate is 1 Mbps

IEEE 802.11g				
Channel No.	Frequency (MHz)	Maximum peak conducted output power (dBm)		Limit (dBm)
		Ant. 0	Ant. 1	
1	2412	17.990	17.760	≦30
6	2437	17.820	17.750	≦30
11	2462	17.010	16.430	≦30

The worst emission of data rate is 6Mbps

Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	Maximum peak conducted output power		
Test Mode	Mode 1: Transmit Mode (MIMO)		
Date of Test	2020/10/26	Test Site	SR12-H
Temperature(°C)	22	Humidity (%RH)	55

IEEE 802.11n (20M)					
Channel No.	Frequency (MHz)	Maximum peak conducted output power (dBm)			Limit (dBm)
		Ant. 0	Ant. 1	Total	
1	2412	17.060	16.950	20.016	≦30
6	2437	17.030	17.020	20.035	≦30
11	2462	12.530	11.840	15.209	≦30

The worst emission of data rate is MCS 0

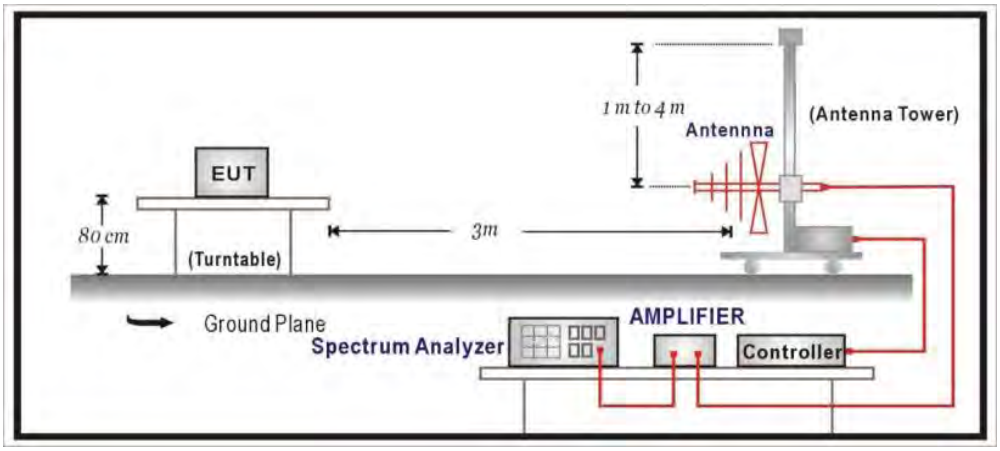
IEEE 802.11n (40M)					
Channel No.	Frequency (MHz)	Maximum peak conducted output power (dBm)			Limit (dBm)
		Ant. 0	Ant. 1	Total	
3	2422	12.710	12.320	15.530	≦30
6	2437	12.500	12.430	15.475	≦30
9	2452	12.150	11.960	15.066	≦30

The worst emission of data rate is MCS 0

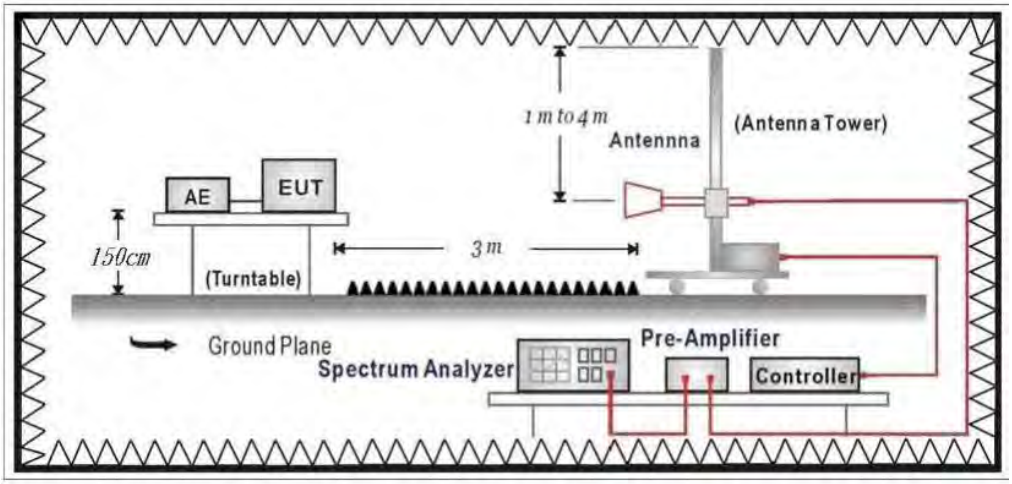
4. Radiated Emission

4.1. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.2. 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)

4.3. Test Procedure

The EUT was setup according to ANSI C63.10:2013 and tested according to DTS test procedure of KDB 558074 D01 v05r02 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 C63.10:2013 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.

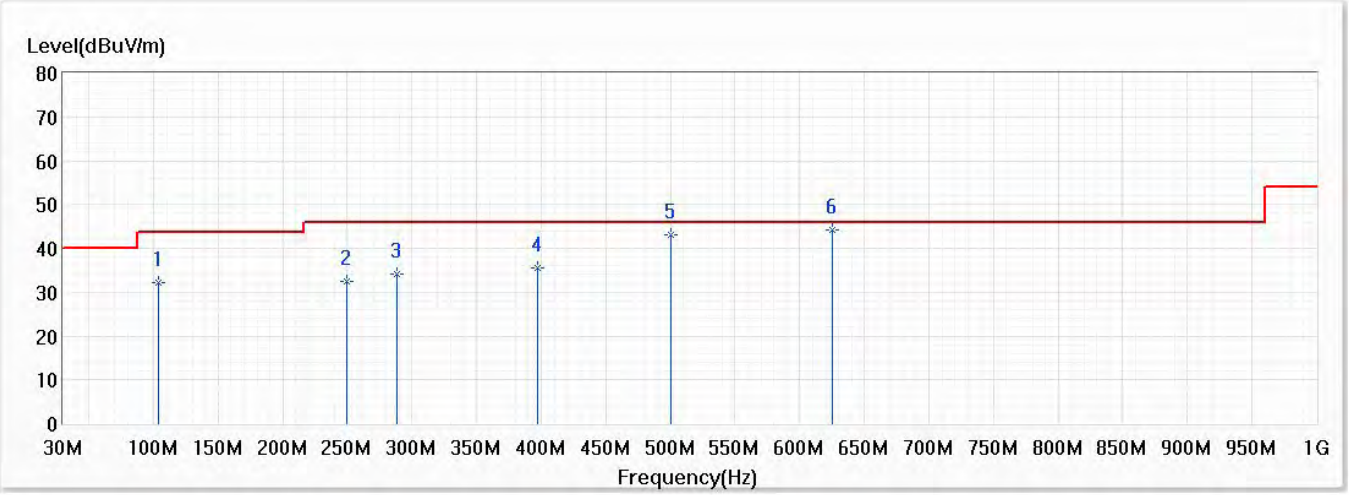
4.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2019

4.5. Test Result

30MHz-1GHz Spurious

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/22
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch6,2.437G,BW20M	Humidity (%RH)	55.0

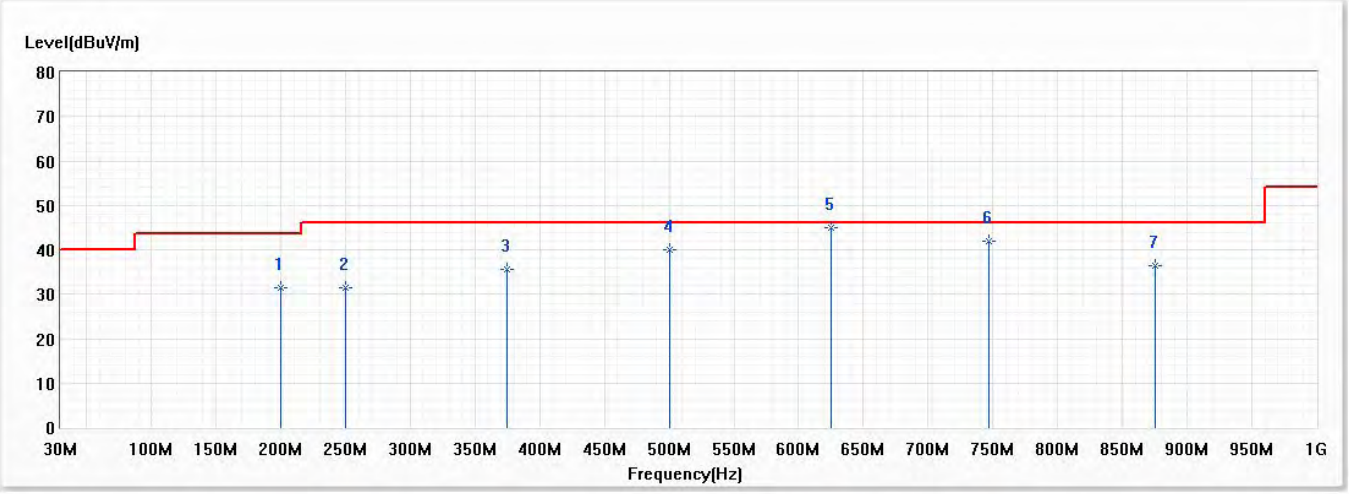


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	103.720	32.15	43.50	-11.35	36.13	-3.98	QP
2	249.705	32.55	46.00	-13.45	34.64	-2.09	QP
3	288.020	34.04	46.00	-11.96	35.46	-1.42	QP
4	397.630	35.52	46.00	-10.48	33.57	1.95	QP
5	499.965	43.18	46.00	-2.82	39.40	3.78	QP
* 6	625.095	44.16	46.00	-1.84	38.82	5.34	QP

Note:

1. All reading levels is Quasi-Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor
4. The emission under 30MHz were not included is because their levels are lower than 20dB from limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/22
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch6,2.437G,BW20M	Humidity (%RH)	55.0



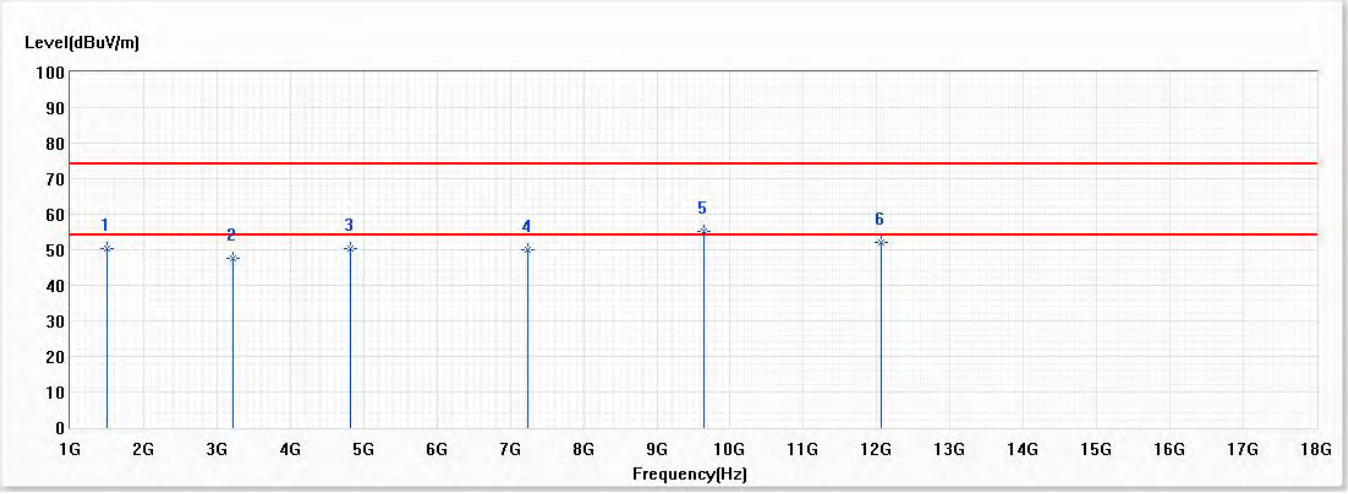
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	199.750	31.52	43.50	-11.98	36.37	-4.85	QP
2	249.705	31.56	46.00	-14.44	33.65	-2.09	QP
3	374.835	35.66	46.00	-10.34	34.45	1.21	QP
4	499.965	39.97	46.00	-6.03	36.19	3.78	QP
* 5	625.095	45.03	46.00	-0.97	39.69	5.34	QP
6	747.315	41.85	46.00	-4.15	35.16	6.69	QP
7	875.355	36.44	46.00	-9.56	28.15	8.29	QP

Note:

1. All reading levels is Quasi-Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor
4. The emission under 30MHz were not included is because their levels are lower than 20dB from limit.

Above 1GHz Spurious

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch1,2.412G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1500.000	50.45	74.00	-23.55	74.74	-24.29	PK
2	3216.000	47.47	74.00	-26.53	64.70	-17.23	PK
3	4824.000	50.27	74.00	-23.73	62.25	-11.98	PK
4	7236.000	49.85	74.00	-24.15	54.45	-4.60	PK
* 5	9648.000	55.34	74.00	-18.66	56.65	-1.31	PK
6	12060.000	52.11	74.00	-21.89	49.36	2.75	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

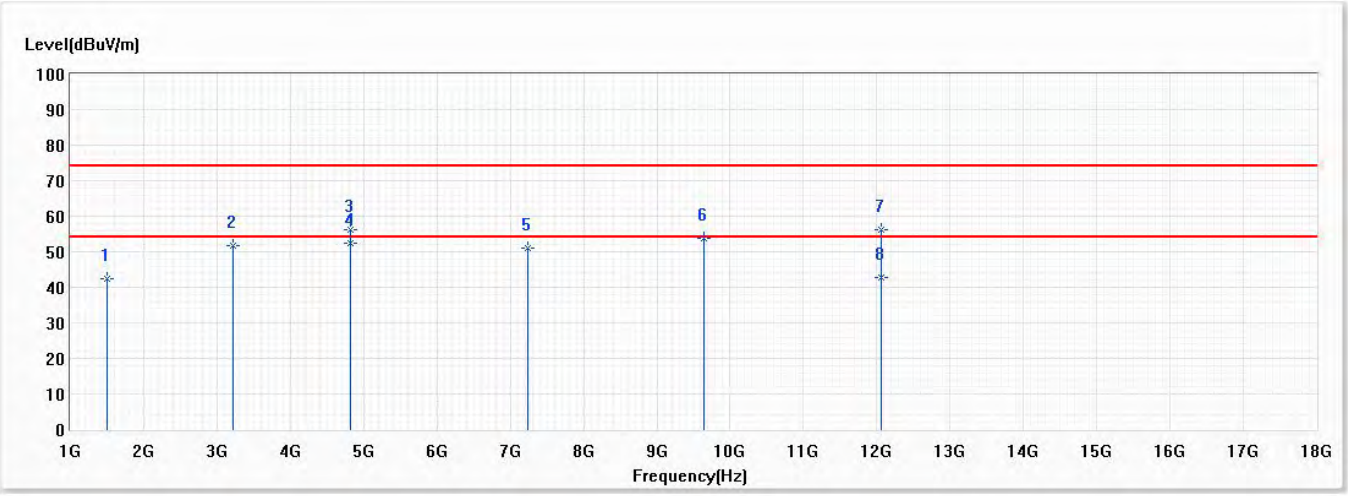
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch1,2.412G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1500.000	42.35	74.00	-31.65	66.64	-24.29	PK
2	3216.000	51.81	74.00	-22.19	69.04	-17.23	PK
3	4824.000	56.24	74.00	-17.76	68.22	-11.98	PK
* 4	4824.000	52.46	54.00	-1.54	64.44	-11.98	AV
5	7236.000	51.00	74.00	-23.00	55.60	-4.60	PK
6	9648.000	53.72	74.00	-20.28	55.03	-1.31	PK
7	12060.000	56.32	74.00	-17.68	53.57	2.75	PK
8	12060.000	42.80	54.00	-11.20	40.05	2.75	AV

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

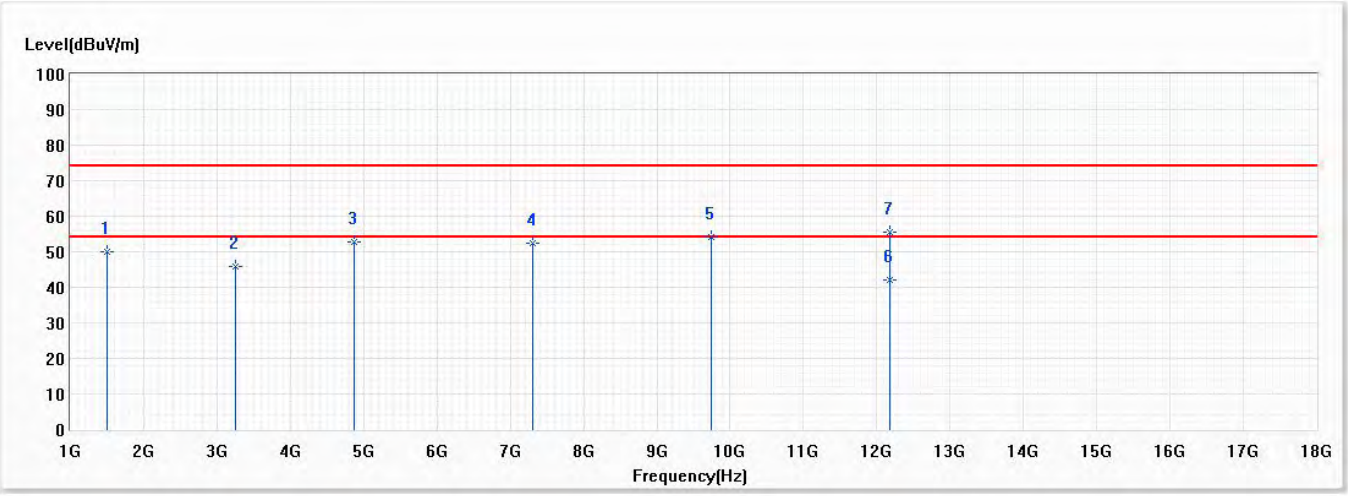
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch6,2.437G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1501.500	50.15	74.00	-23.85	74.44	-24.29	PK
2	3249.330	45.98	74.00	-28.02	63.16	-17.18	PK
3	4874.000	52.65	74.00	-21.35	64.49	-11.84	PK
4	7311.000	52.40	74.00	-21.60	56.78	-4.38	PK
5	9748.000	54.30	74.00	-19.70	55.57	-1.27	PK
* 6	12185.000	42.10	54.00	-11.90	39.50	2.60	AV
7	12185.000	55.62	74.00	-18.38	53.02	2.60	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

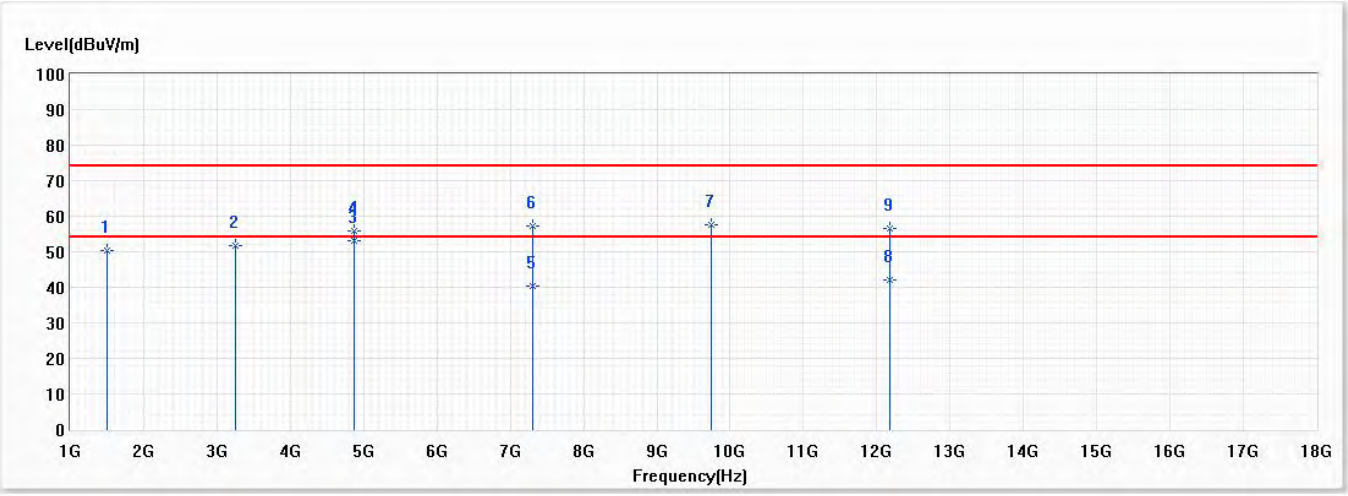
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch6,2.437G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1501.000	50.41	74.00	-23.59	74.70	-24.29	PK
2	3249.330	51.57	74.00	-22.43	68.75	-17.18	PK
* 3	4874.000	53.11	54.00	-0.89	64.95	-11.84	AV
4	4874.000	56.02	74.00	-17.98	67.86	-11.84	PK
5	7311.000	40.33	54.00	-13.67	44.71	-4.38	AV
6	7311.000	57.15	74.00	-16.85	61.53	-4.38	PK
7	9748.000	57.57	74.00	-16.43	58.84	-1.27	PK
8	12185.000	41.99	54.00	-12.01	39.39	2.60	AV
9	12185.000	56.56	74.00	-17.44	53.96	2.60	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

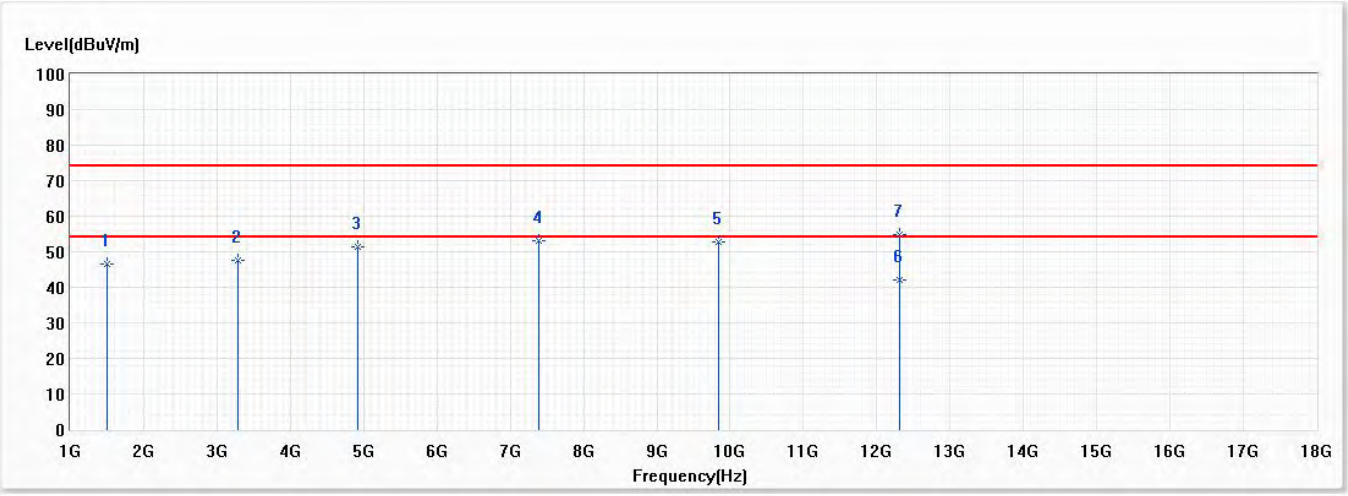
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch11,2.462G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1500.000	46.55	74.00	-27.45	70.84	-24.29	PK
2	3282.660	47.54	74.00	-26.46	64.66	-17.12	PK
3	4924.000	51.51	74.00	-22.49	63.21	-11.70	PK
4	7386.000	53.14	74.00	-20.86	57.31	-4.17	PK
5	9848.000	52.88	74.00	-21.12	54.10	-1.22	PK
* 6	12310.000	42.15	54.00	-11.85	39.69	2.46	AV
7	12310.000	54.73	74.00	-19.27	52.27	2.46	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

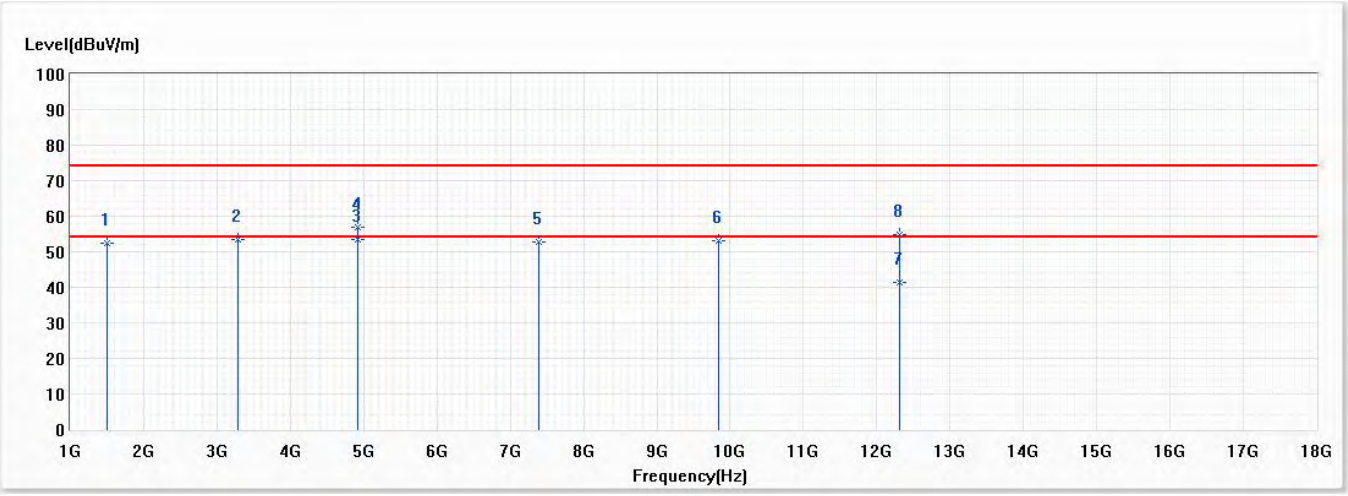
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch11,2.462G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1501.500	52.33	74.00	-21.67	76.62	-24.29	PK
2	3282.660	53.55	74.00	-20.45	70.67	-17.12	PK
* 3	4924.000	53.59	54.00	-0.41	65.29	-11.70	AV
4	4924.000	56.74	74.00	-17.26	68.44	-11.70	PK
5	7386.000	52.79	74.00	-21.21	56.96	-4.17	PK
6	9848.000	53.18	74.00	-20.82	54.40	-1.22	PK
7	12310.000	41.39	54.00	-12.61	38.93	2.46	AV
8	12310.000	54.73	74.00	-19.27	52.27	2.46	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

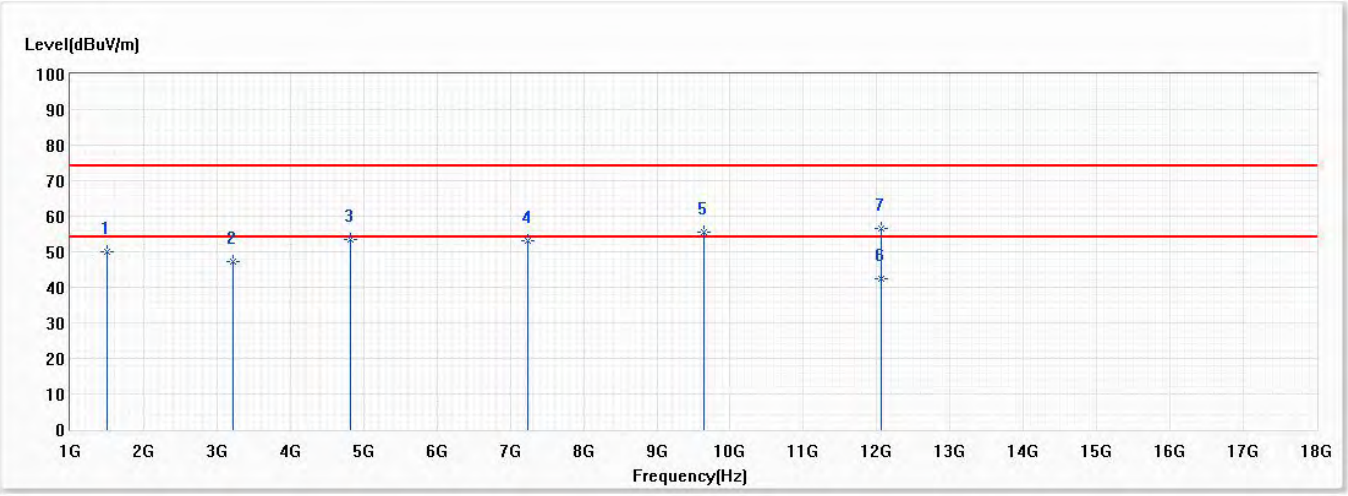
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch1,2.412G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1500.000	49.85	74.00	-24.15	74.14	-24.29	PK
2	3216.000	47.33	74.00	-26.67	64.56	-17.23	PK
3	4824.000	53.33	74.00	-20.67	65.31	-11.98	PK
4	7236.000	53.11	74.00	-20.89	57.71	-4.60	PK
5	9648.000	55.41	74.00	-18.59	56.72	-1.31	PK
* 6	12060.000	42.25	54.00	-11.75	39.50	2.75	AV
7	12060.000	56.42	74.00	-17.58	53.67	2.75	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

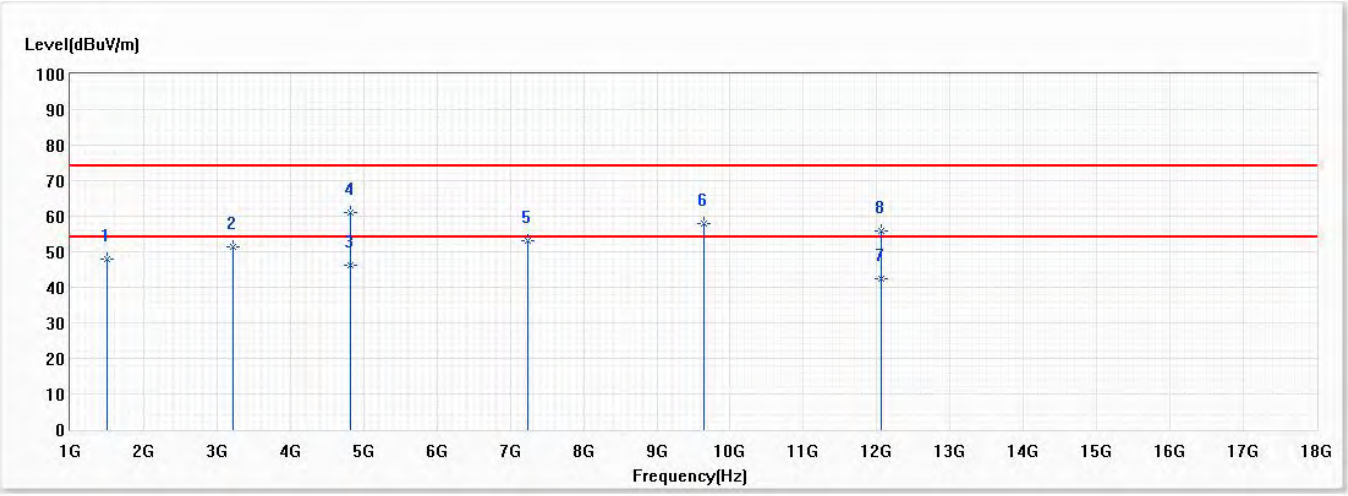
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch1,2.412G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1501.500	47.85	74.00	-26.15	72.14	-24.29	PK
2	3216.000	51.25	74.00	-22.75	68.48	-17.23	PK
* 3	4824.000	46.13	54.00	-7.87	58.11	-11.98	AV
4	4824.000	61.14	74.00	-12.86	73.12	-11.98	PK
5	7236.000	53.16	74.00	-20.84	57.76	-4.60	PK
6	9648.000	58.03	74.00	-15.97	59.34	-1.31	PK
7	12060.000	42.40	54.00	-11.60	39.65	2.75	AV
8	12060.000	55.86	74.00	-18.14	53.11	2.75	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

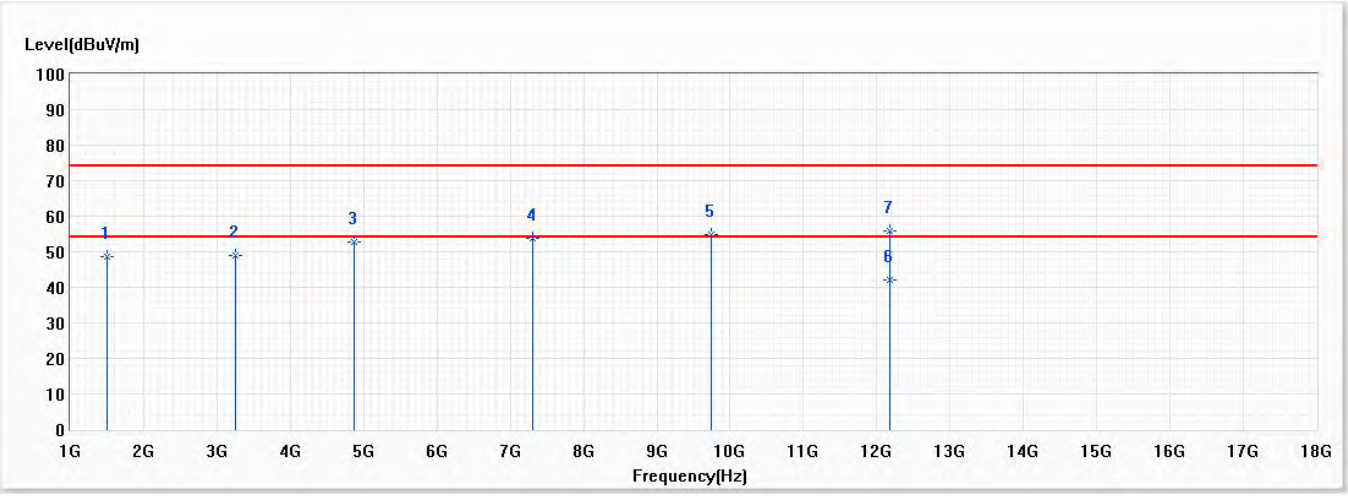
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch6,2.437G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1500.000	48.56	74.00	-25.44	72.85	-24.29	PK
2	3249.330	48.99	74.00	-25.01	66.17	-17.18	PK
3	4874.000	52.88	74.00	-21.12	64.72	-11.84	PK
4	7311.000	53.71	74.00	-20.29	58.09	-4.38	PK
5	9748.000	54.77	74.00	-19.23	56.04	-1.27	PK
* 6	12185.000	42.20	54.00	-11.80	39.60	2.60	AV
7	12185.000	55.76	74.00	-18.24	53.16	2.60	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

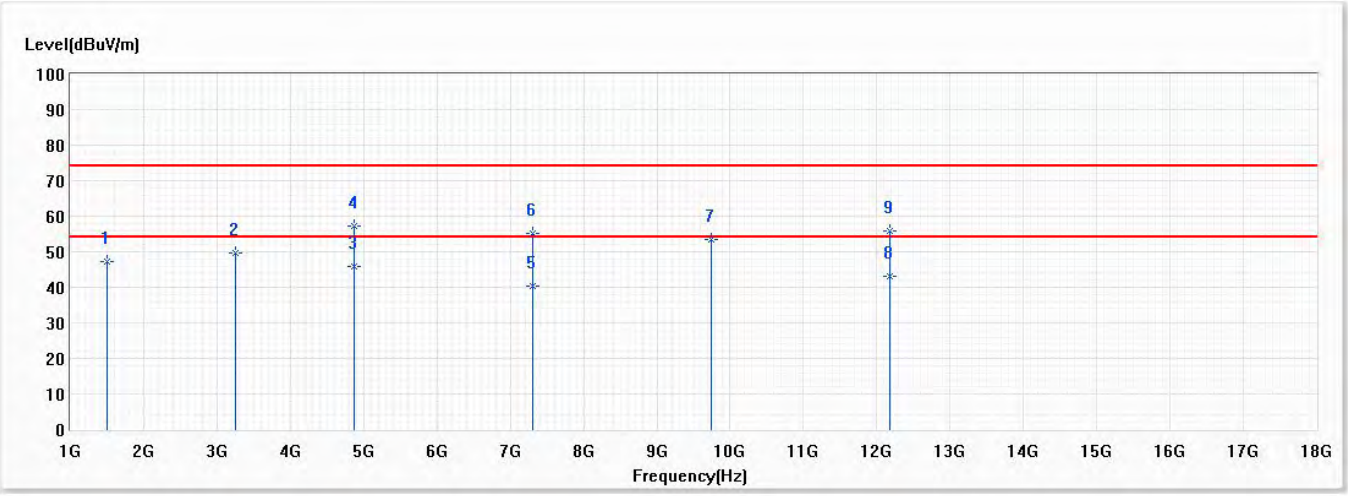
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch6,2.437G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1500.000	47.30	74.00	-26.70	71.59	-24.29	PK
2	3249.330	49.63	74.00	-24.37	66.81	-17.18	PK
* 3	4874.000	45.77	54.00	-8.23	57.61	-11.84	AV
4	4874.000	57.11	74.00	-16.89	68.95	-11.84	PK
5	7311.000	40.35	54.00	-13.65	44.73	-4.38	AV
6	7311.000	55.10	74.00	-18.90	59.48	-4.38	PK
7	9747.000	53.44	74.00	-20.56	54.71	-1.27	PK
8	12185.000	43.15	54.00	-10.85	40.55	2.60	AV
9	12185.000	55.73	74.00	-18.27	53.13	2.60	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

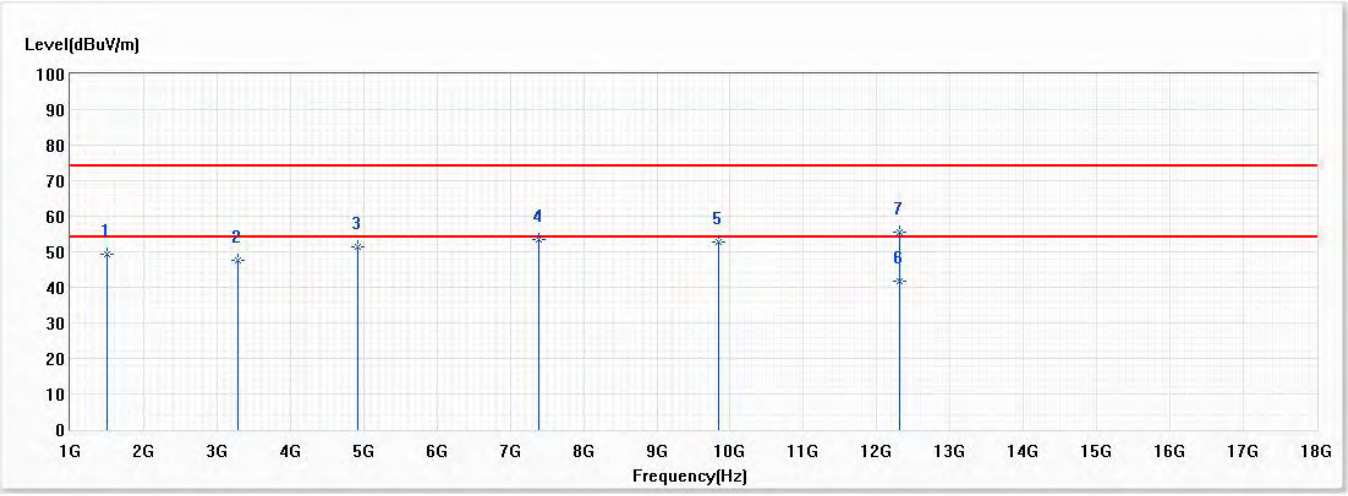
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch11,2.462G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1500.000	49.15	74.00	-24.85	73.44	-24.29	PK
2	3282.660	47.70	74.00	-26.30	64.82	-17.12	PK
3	4924.000	51.55	74.00	-22.45	63.25	-11.70	PK
4	7386.000	53.28	74.00	-20.72	57.45	-4.17	PK
5	9848.000	52.80	74.00	-21.20	54.02	-1.22	PK
* 6	12310.000	41.57	54.00	-12.43	39.11	2.46	AV
7	12310.000	55.37	74.00	-18.63	52.91	2.46	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

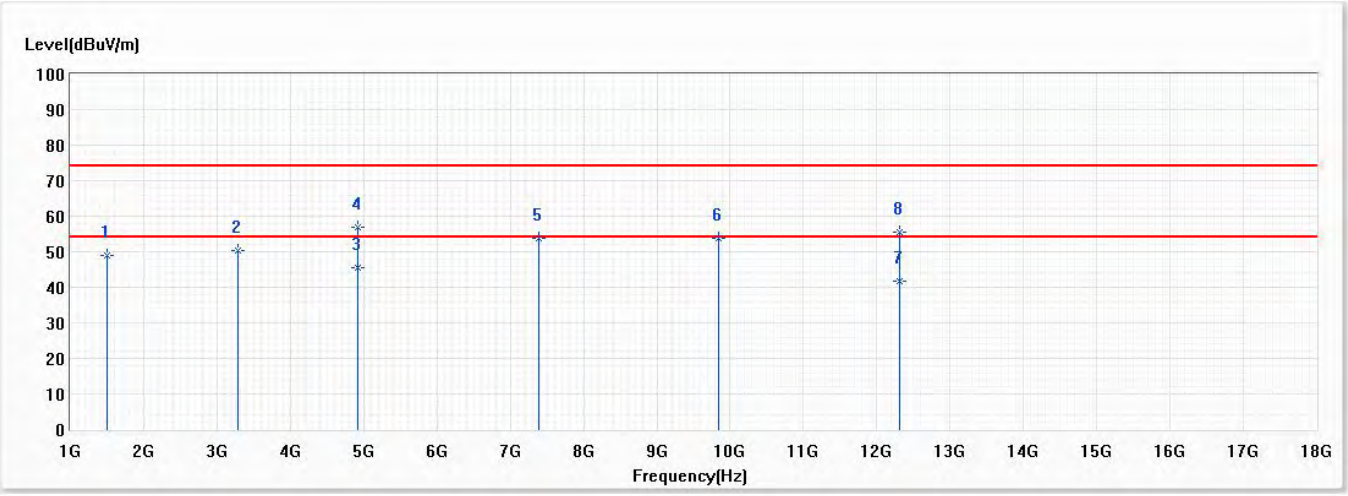
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch11,2.462G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1500.000	48.89	74.00	-25.11	73.18	-24.29	PK
2	3282.660	50.23	74.00	-23.77	67.35	-17.12	PK
* 3	4924.000	45.66	54.00	-8.34	57.36	-11.70	AV
4	4924.000	56.83	74.00	-17.17	68.53	-11.70	PK
5	7386.000	53.89	74.00	-20.11	58.06	-4.17	PK
6	9848.000	53.64	74.00	-20.36	54.86	-1.22	PK
7	12310.000	41.60	54.00	-12.40	39.14	2.46	AV
8	12310.000	55.38	74.00	-18.62	52.92	2.46	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

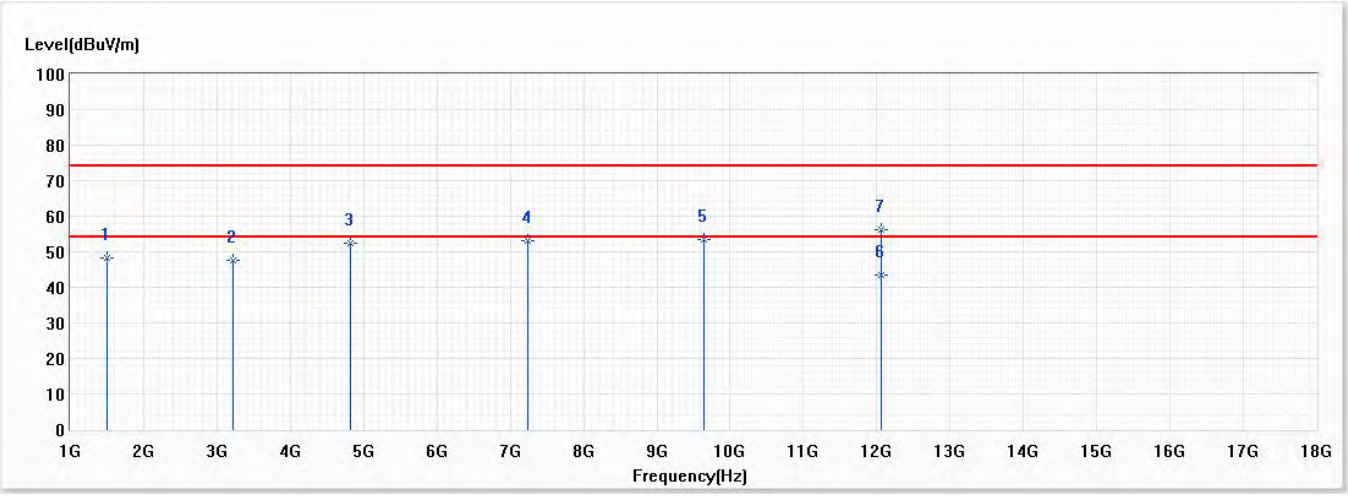
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch1,2.412G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1500.000	48.35	74.00	-25.65	72.64	-24.29	PK
2	3216.000	47.75	74.00	-26.25	64.98	-17.23	PK
3	4824.000	52.37	74.00	-21.63	64.35	-11.98	PK
4	7236.000	53.15	74.00	-20.85	57.75	-4.60	PK
5	9648.000	53.48	74.00	-20.52	54.79	-1.31	PK
* 6	12060.000	43.38	54.00	-10.62	40.63	2.75	AV
7	12060.000	56.13	74.00	-17.87	53.38	2.75	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

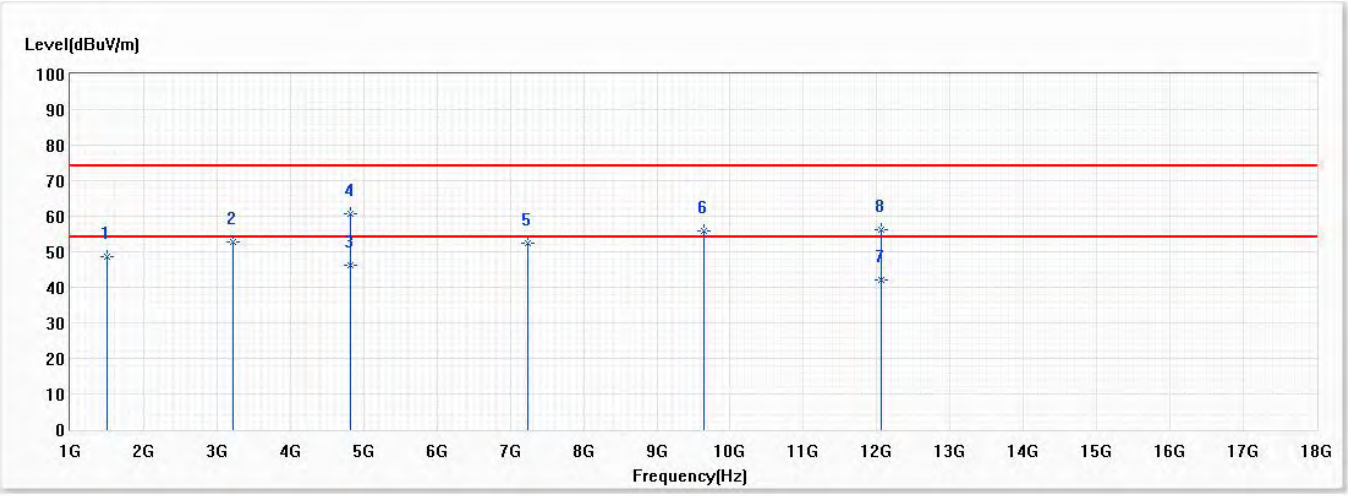
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch1,2.412G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1500.000	48.77	74.00	-25.23	73.06	-24.29	PK
2	3216.000	52.80	74.00	-21.20	70.03	-17.23	PK
* 3	4822.621	46.11	54.00	-7.89	58.09	-11.98	AV
4	4824.000	60.55	74.00	-13.45	72.53	-11.98	PK
5	7236.000	52.35	74.00	-21.65	56.95	-4.60	PK
6	9648.000	55.85	74.00	-18.15	57.16	-1.31	PK
7	12060.000	42.18	54.00	-11.82	39.43	2.75	AV
8	12060.000	56.28	74.00	-17.72	53.53	2.75	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

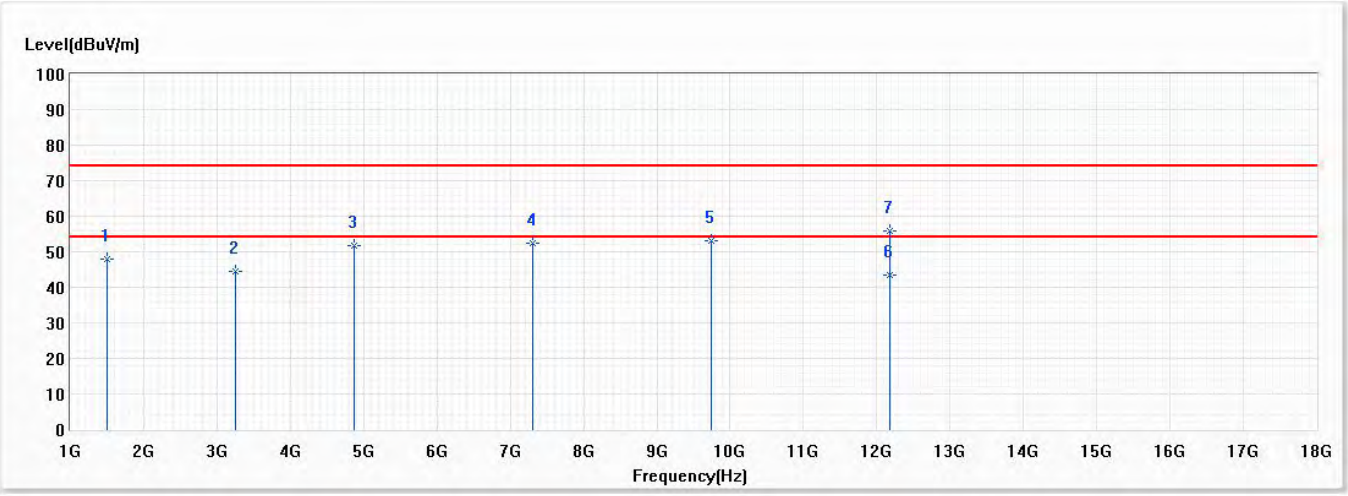
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch6,2.437G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1501.500	47.88	74.00	-26.12	72.17	-24.29	PK
2	3249.330	44.57	74.00	-29.43	61.75	-17.18	PK
3	4874.000	51.71	74.00	-22.29	63.55	-11.84	PK
4	7311.000	52.45	74.00	-21.55	56.83	-4.38	PK
5	9748.000	53.23	74.00	-20.77	54.50	-1.27	PK
* 6	12185.000	43.44	54.00	-10.56	40.84	2.60	AV
7	12185.000	55.90	74.00	-18.10	53.30	2.60	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

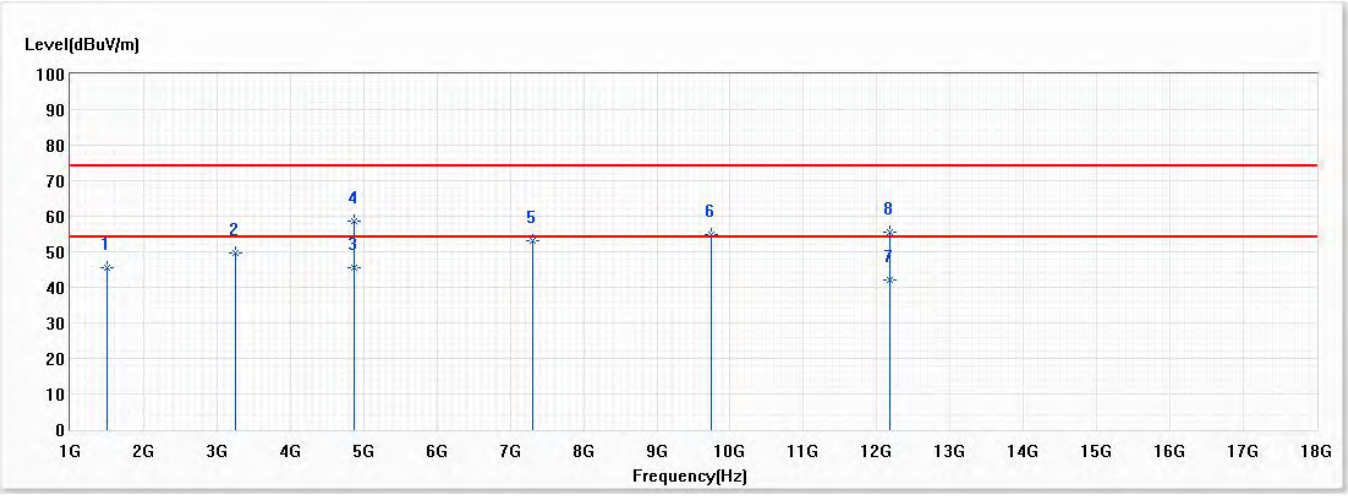
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch6,2.437G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1501.500	45.50	74.00	-28.50	69.79	-24.29	PK
2	3249.330	49.74	74.00	-24.26	66.92	-17.18	PK
* 3	4874.000	45.62	54.00	-8.38	57.46	-11.84	AV
4	4874.000	58.67	74.00	-15.33	70.51	-11.84	PK
5	7311.000	53.09	74.00	-20.91	57.47	-4.38	PK
6	9748.000	54.81	74.00	-19.19	56.08	-1.27	PK
7	12185.000	42.10	54.00	-11.90	39.50	2.60	AV
8	12185.000	55.37	74.00	-18.63	52.77	2.60	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

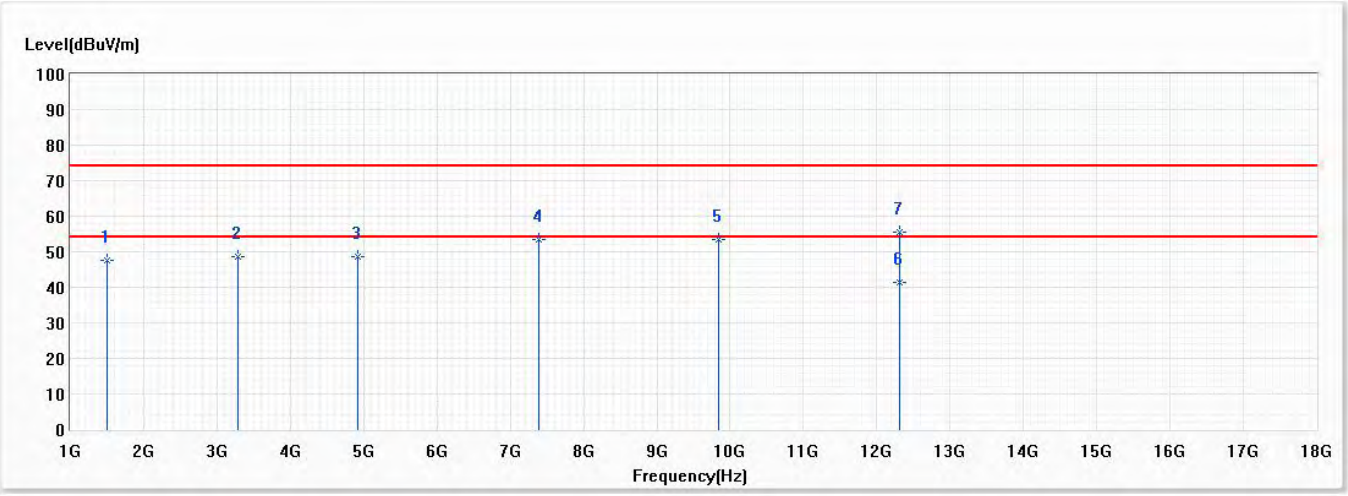
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch11,2.462G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1501.500	47.66	74.00	-26.34	71.95	-24.29	PK
2	3282.660	48.55	74.00	-25.45	65.67	-17.12	PK
3	4924.000	48.65	74.00	-25.35	60.35	-11.70	PK
4	7386.000	53.55	74.00	-20.45	57.72	-4.17	PK
5	9848.000	53.31	74.00	-20.69	54.53	-1.22	PK
* 6	12310.000	41.43	54.00	-12.57	38.97	2.46	AV
7	12310.000	55.36	74.00	-18.64	52.90	2.46	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

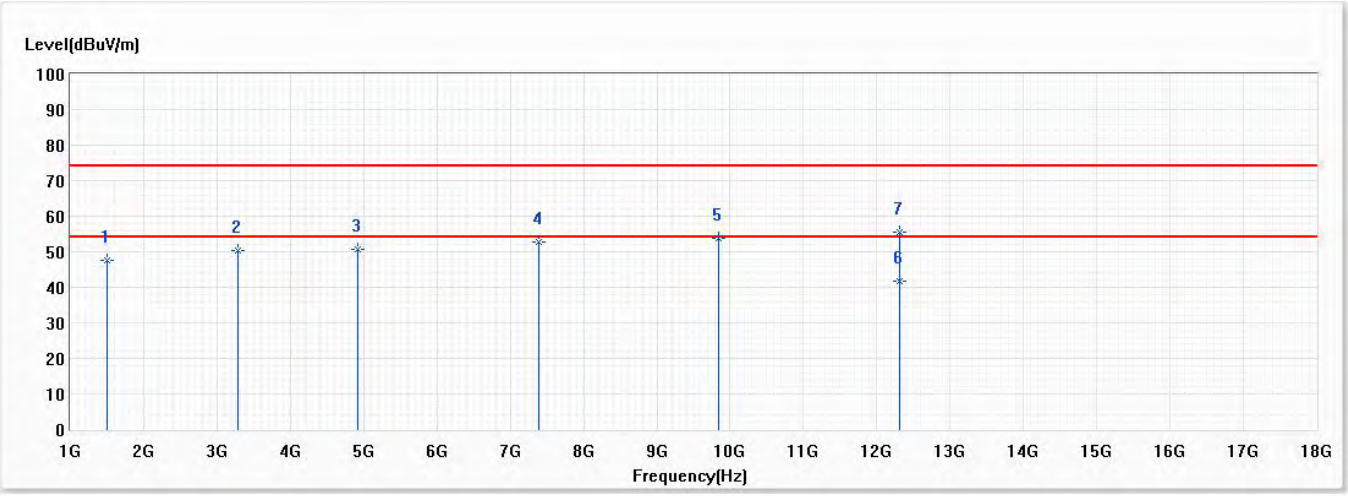
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch11,2.462G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1501.500	47.61	74.00	-26.39	71.90	-24.29	PK
2	3282.660	50.25	74.00	-23.75	67.37	-17.12	PK
3	4924.000	50.81	74.00	-23.19	62.51	-11.70	PK
4	7386.000	52.67	74.00	-21.33	56.84	-4.17	PK
5	9848.000	53.80	74.00	-20.20	55.02	-1.22	PK
* 6	12310.000	41.60	54.00	-12.40	39.14	2.46	AV
7	12310.000	55.47	74.00	-18.53	53.01	2.46	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

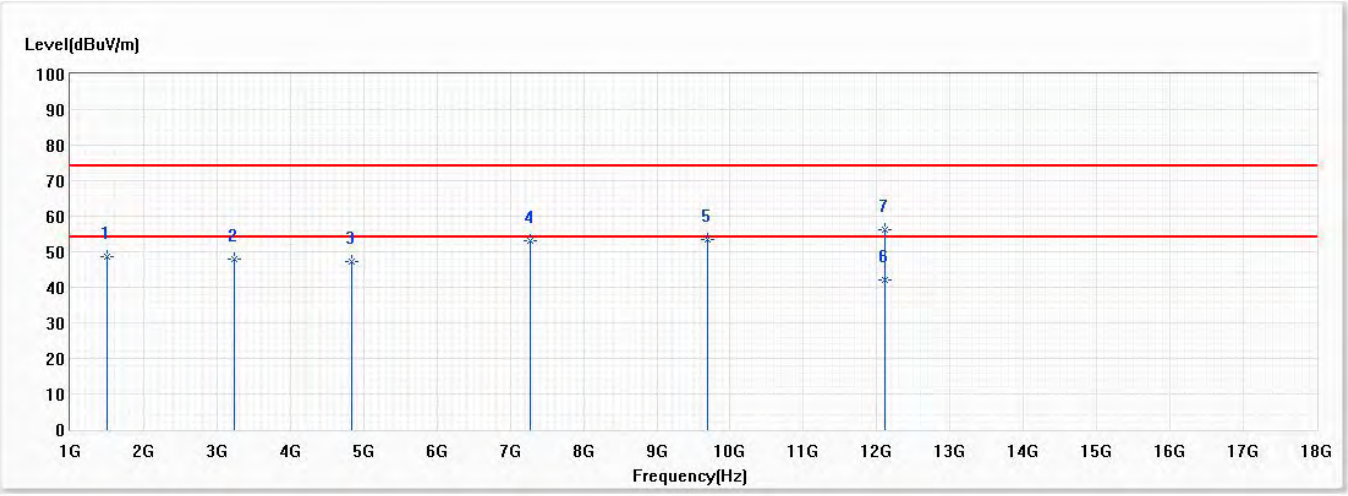
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch3,2.422G,BW40M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1500.000	48.53	74.00	-25.47	72.82	-24.29	PK
2	3229.330	47.90	74.00	-26.10	65.10	-17.20	PK
3	4844.000	47.23	74.00	-26.77	59.16	-11.93	PK
4	7266.000	53.25	74.00	-20.75	57.76	-4.51	PK
5	9688.000	53.33	74.00	-20.67	54.63	-1.30	PK
* 6	12110.000	42.24	54.00	-11.76	39.56	2.68	AV
7	12110.000	56.15	74.00	-17.85	53.47	2.68	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

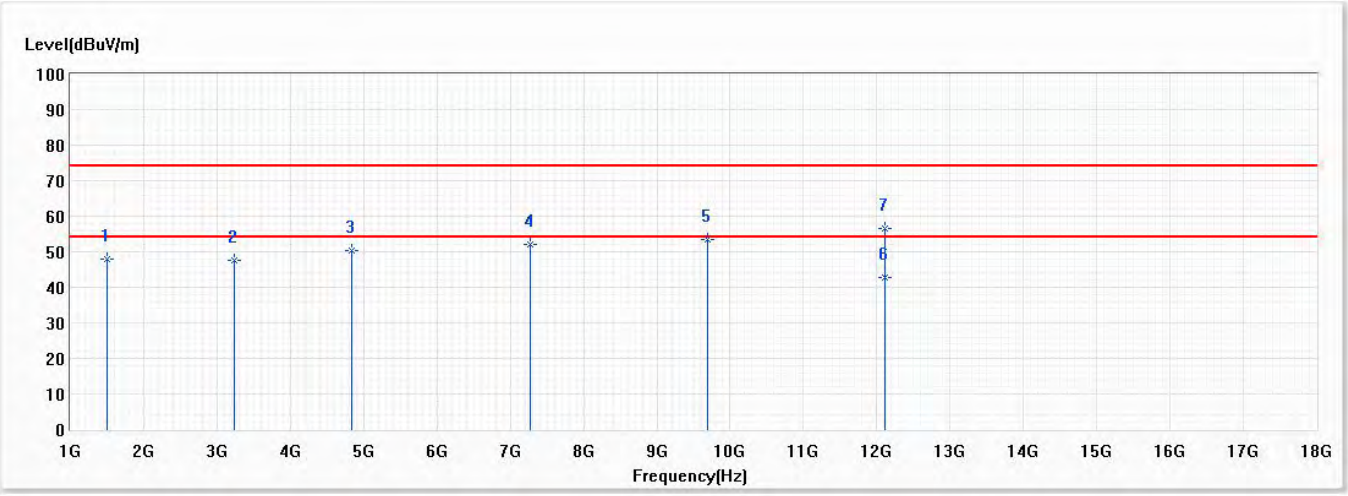
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch3,2.422G,BW40M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1500.000	47.76	74.00	-26.24	72.05	-24.29	PK
2	3229.330	47.63	74.00	-26.37	64.83	-17.20	PK
3	4844.000	50.25	74.00	-23.75	62.18	-11.93	PK
4	7266.000	51.95	74.00	-22.05	56.46	-4.51	PK
5	9688.000	53.37	74.00	-20.63	54.67	-1.30	PK
* 6	12110.000	42.85	54.00	-11.15	40.17	2.68	AV
7	12110.000	56.55	74.00	-17.45	53.87	2.68	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

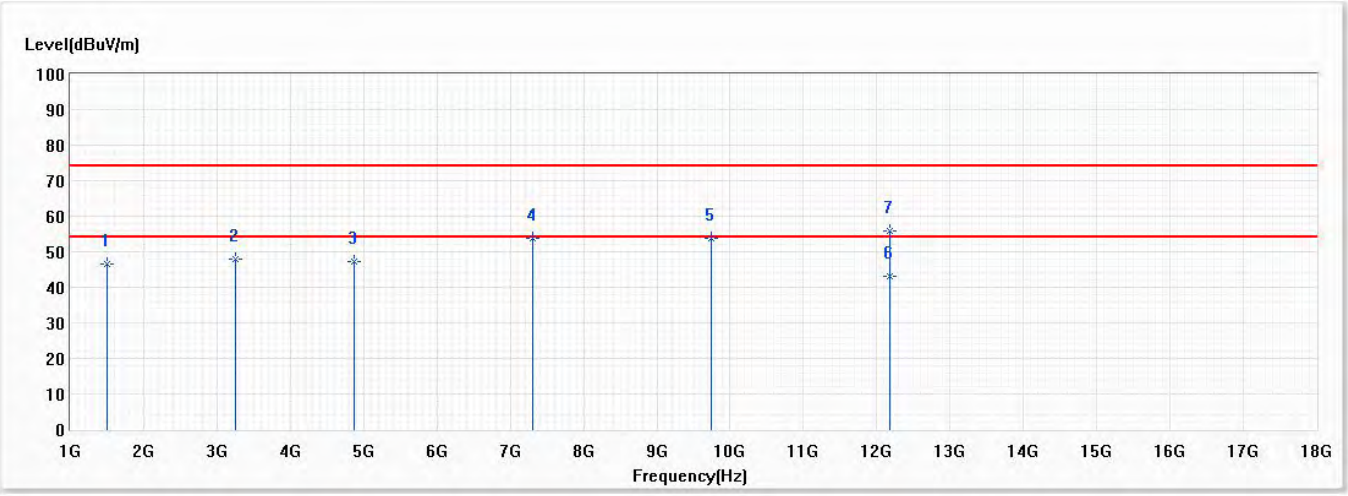
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch6,2.437G,BW40M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1501.500	46.55	74.00	-27.45	70.84	-24.29	PK
2	3249.330	47.81	74.00	-26.19	64.99	-17.18	PK
3	4874.000	47.13	74.00	-26.87	58.97	-11.84	PK
4	7311.000	53.77	74.00	-20.23	58.15	-4.38	PK
5	9748.000	53.64	74.00	-20.36	54.91	-1.27	PK
* 6	12185.000	43.15	54.00	-10.85	40.55	2.60	AV
7	12185.000	55.86	74.00	-18.14	53.26	2.60	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

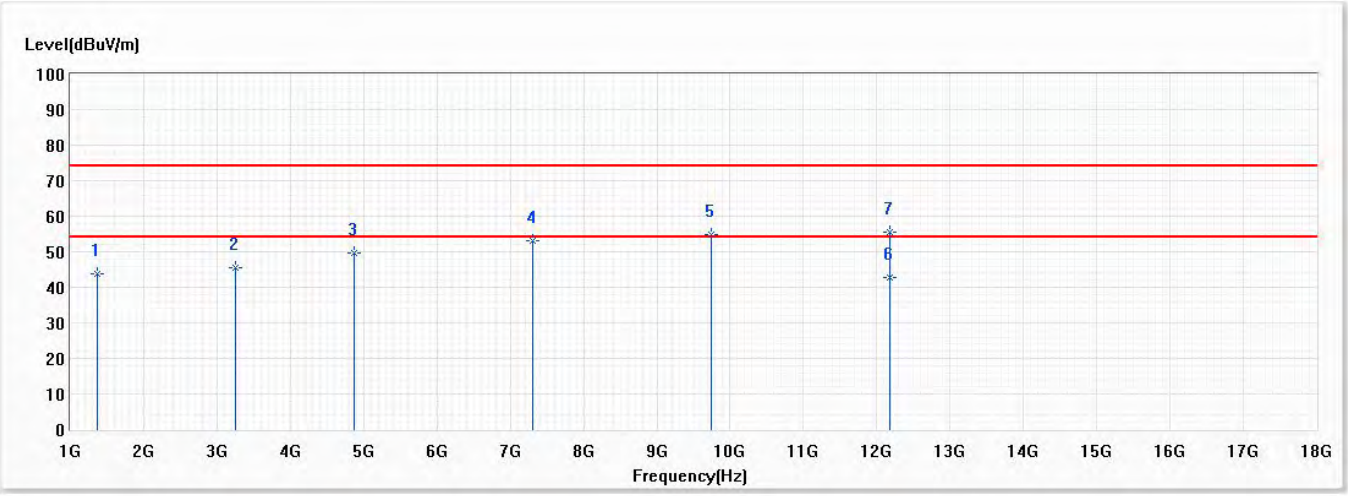
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch6,2.437G,BW40M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1375.000	43.82	74.00	-30.18	68.76	-24.94	PK
2	3249.330	45.63	74.00	-28.37	62.81	-17.18	PK
3	4874.000	49.62	74.00	-24.38	61.46	-11.84	PK
4	7311.000	53.20	74.00	-20.80	57.58	-4.38	PK
5	9748.000	54.77	74.00	-19.23	56.04	-1.27	PK
* 6	12185.000	42.85	54.00	-11.15	40.25	2.60	AV
7	12185.000	55.59	74.00	-18.41	52.99	2.60	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

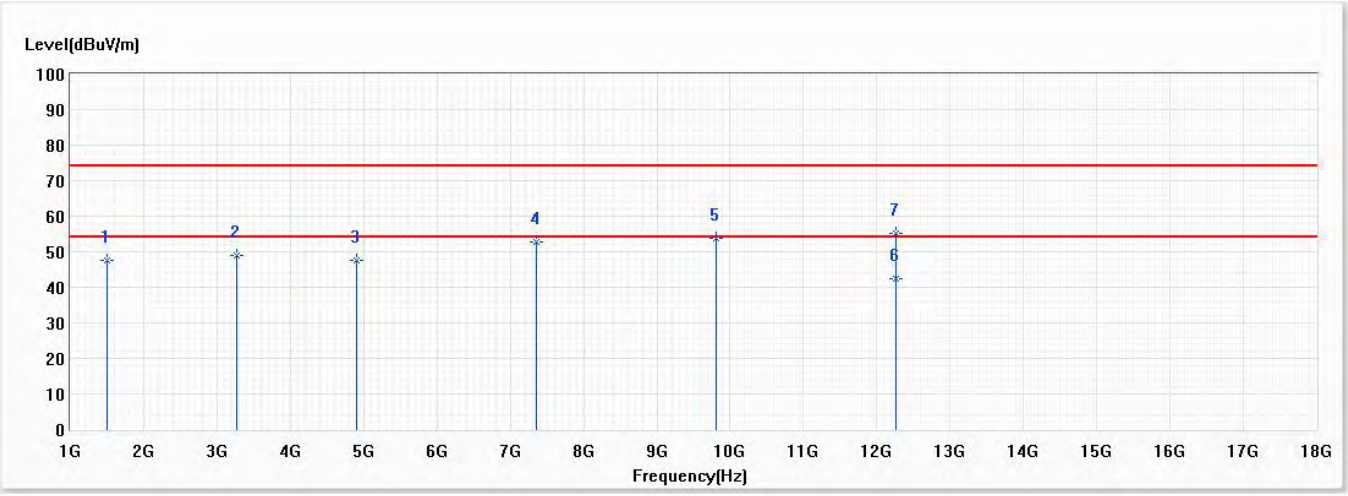
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch9,2.452G,BW40M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1501.500	47.66	74.00	-26.34	71.95	-24.29	PK
2	3269.330	48.80	74.00	-25.20	65.95	-17.15	PK
3	4904.000	47.52	74.00	-26.48	59.28	-11.76	PK
4	7356.000	52.76	74.00	-21.24	57.01	-4.25	PK
5	9808.000	53.64	74.00	-20.36	54.88	-1.24	PK
* 6	12260.000	42.55	54.00	-11.45	40.04	2.51	AV
7	12260.000	55.13	74.00	-18.87	52.62	2.51	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

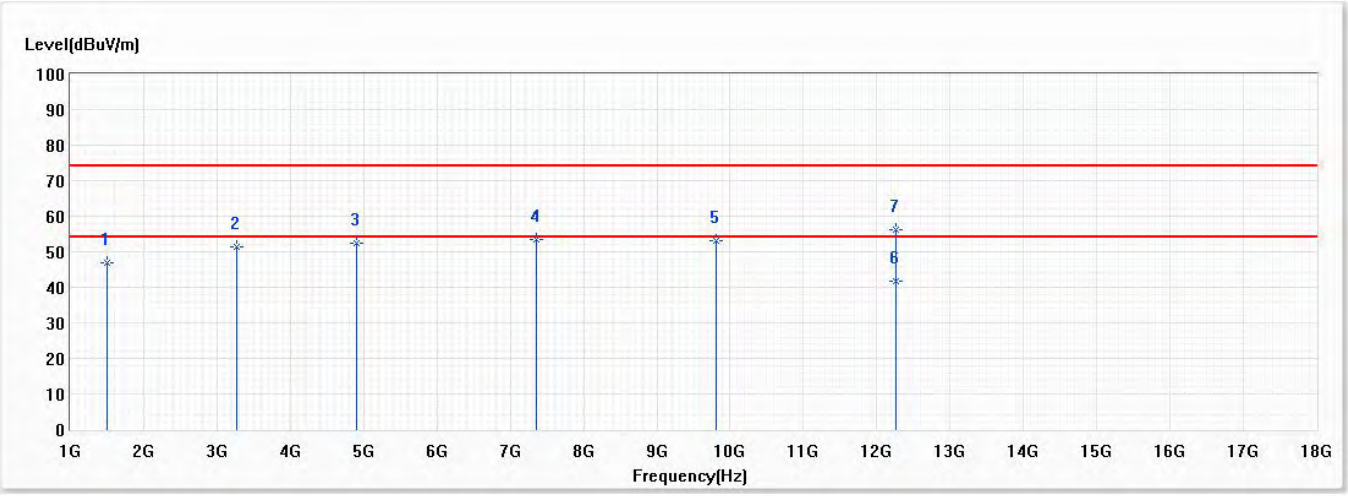
2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

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

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch9,2.452G,BW40M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1501.500	46.75	74.00	-27.25	71.04	-24.29	PK
2	3269.330	51.22	74.00	-22.78	68.37	-17.15	PK
3	4904.000	52.33	74.00	-21.67	64.09	-11.76	PK
4	7356.000	53.29	74.00	-20.71	57.54	-4.25	PK
5	9808.000	53.24	74.00	-20.76	54.48	-1.24	PK
* 6	12260.000	41.61	54.00	-12.39	39.10	2.51	AV
7	12260.000	56.04	74.00	-17.96	53.53	2.51	PK

Note:

1.All reading above 1GHz is performed with peak and/or average measurements as necessary.

2. “ * ”, means this data is the worst value.

3.Emission Level = Reading Level + Correct Factor.

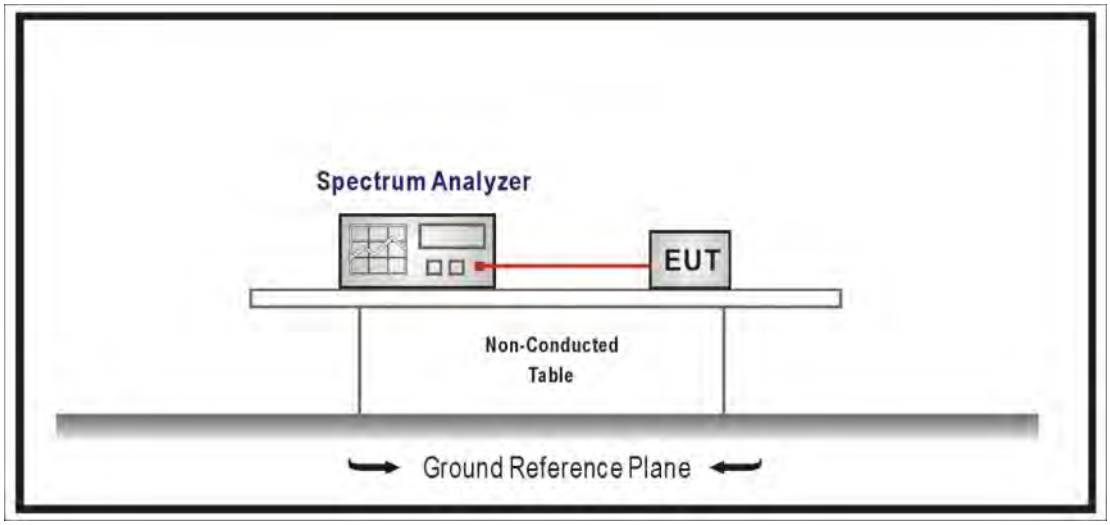
4.The average measurement was not performed when the peak measured data under the limit of average detection.

5.The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

5. RF antenna conducted test

5.1. Test Setup

RF Antenna Conducted Measurement:



5.2. 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)).

5.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure section 11.2 of KDB 558074 D01 v05r02 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.4. Test Specification

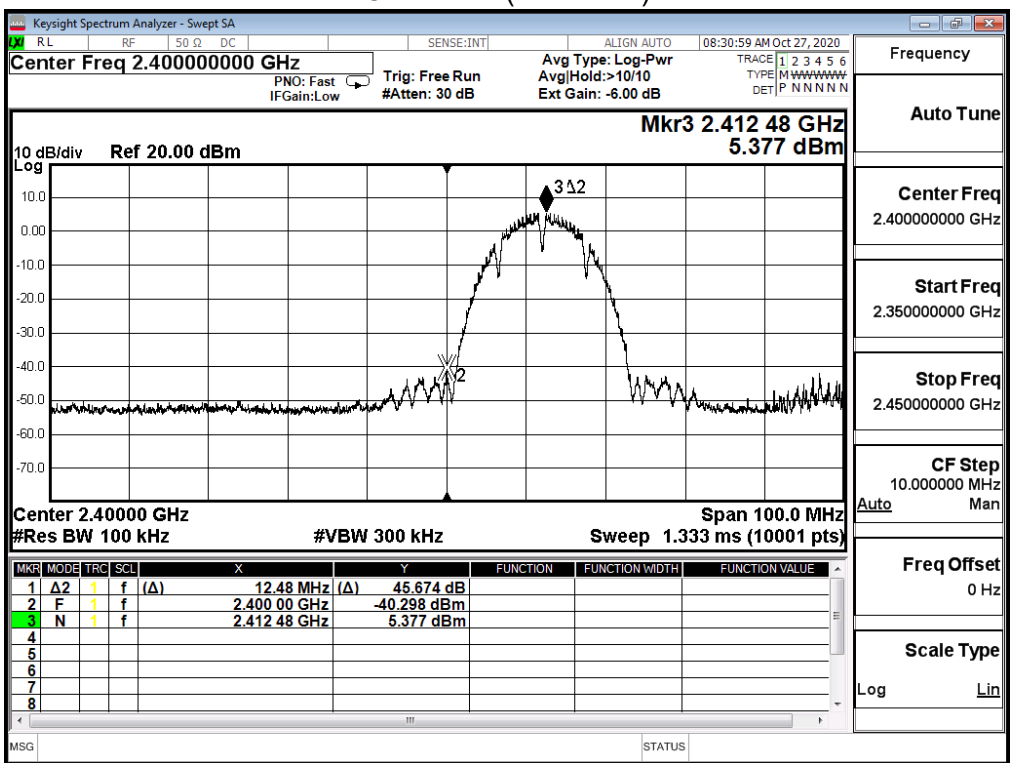
According to FCC Part 15 Subpart C Paragraph 15.247: 2019

5.5. Test Result

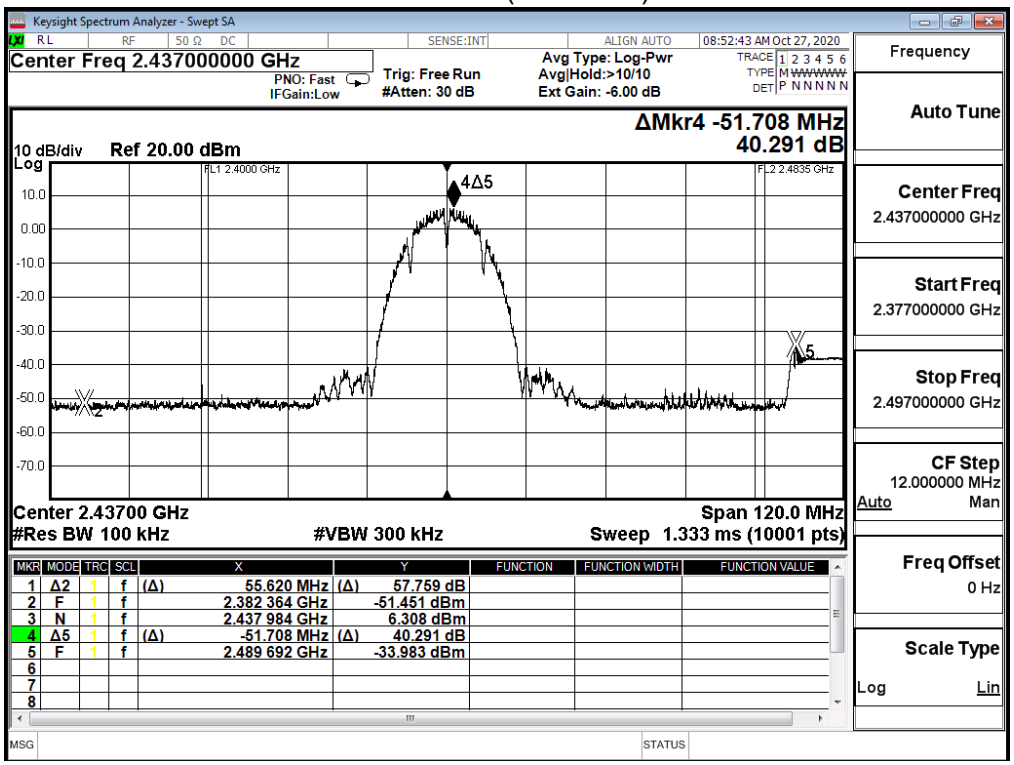
Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit Mode (SISO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

IEEE 802.11b (ANT 0)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	45.674	≧30	Pass
6	2437	40.291	≧30	Pass
11	2462	41.130	≧30	Pass

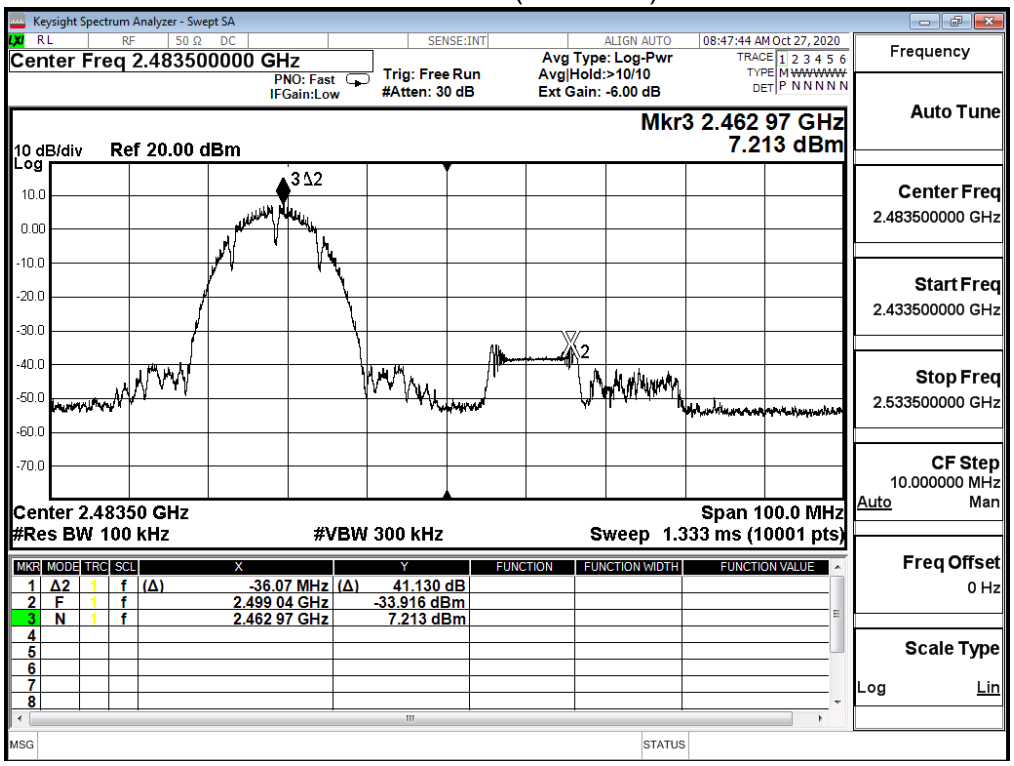
Channel 1 (2412MHz)



Channel 6 (2437MHz)



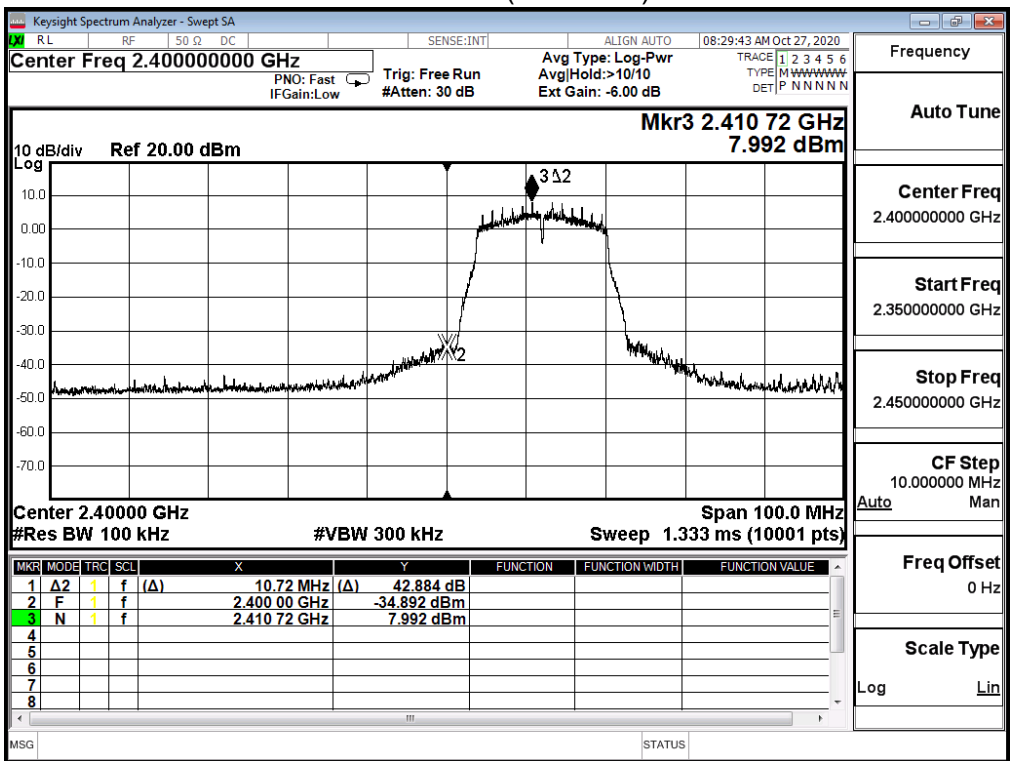
Channel 11 (2462MHz)



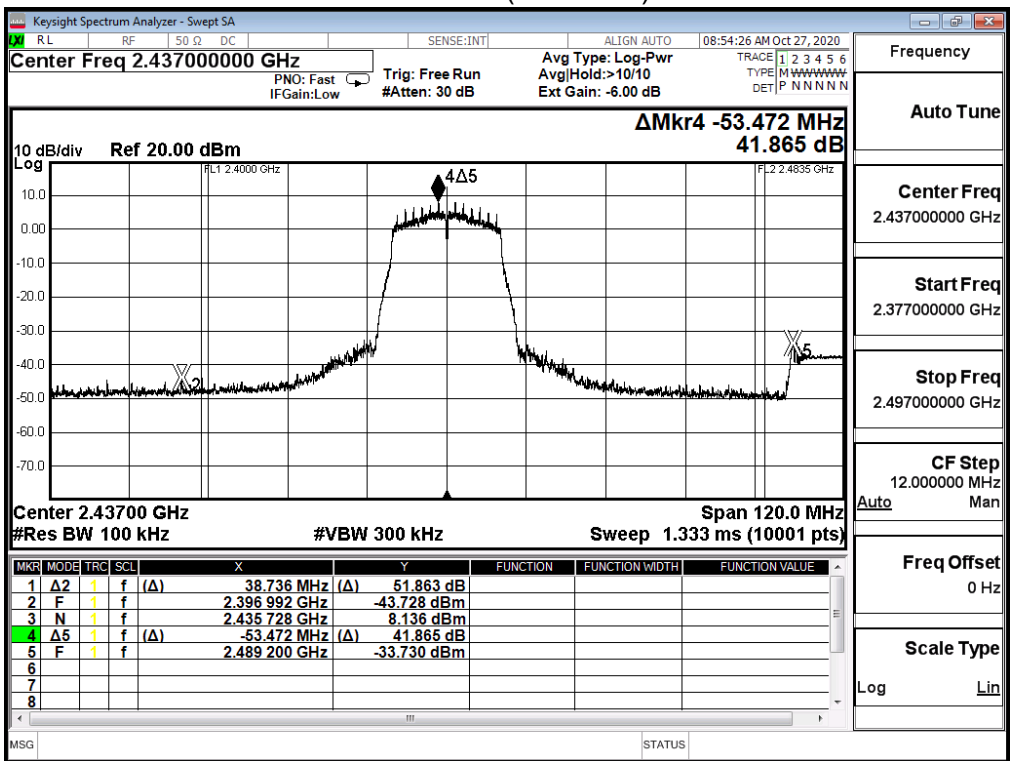
Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit Mode (SISO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

IEEE 802.11g (ANT 0)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	42.884	≧30	Pass
6	2437	41.865	≧30	Pass
11	2462	39.439	≧30	Pass

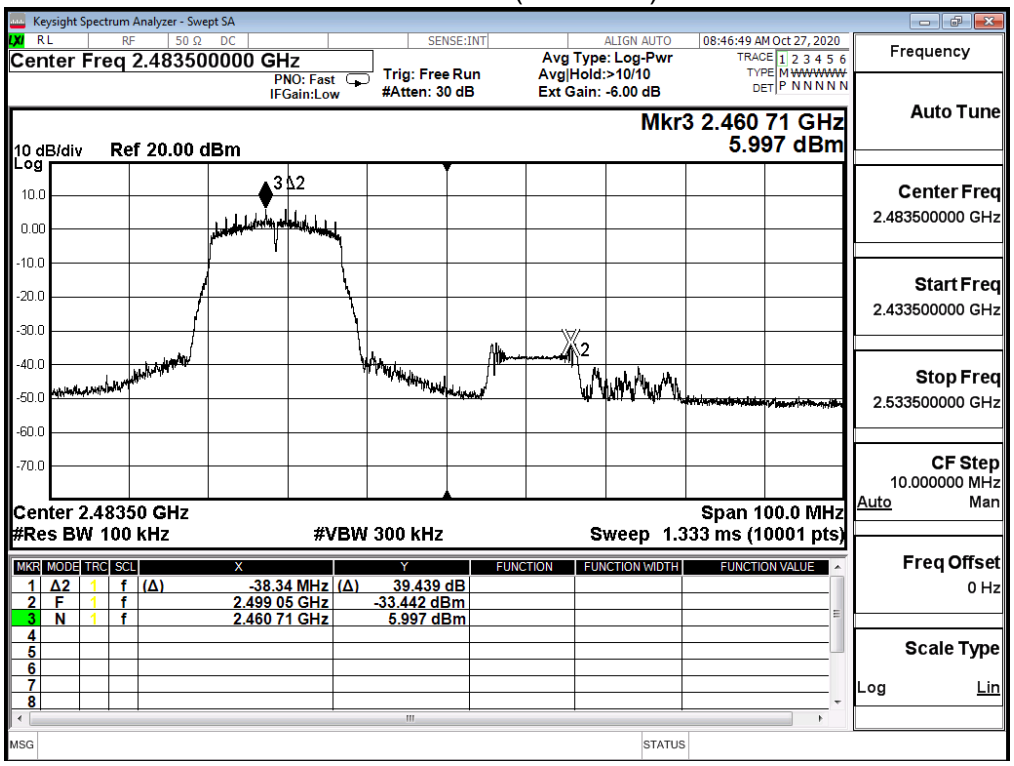
Channel 1 (2412MHz)



Channel 6 (2437MHz)



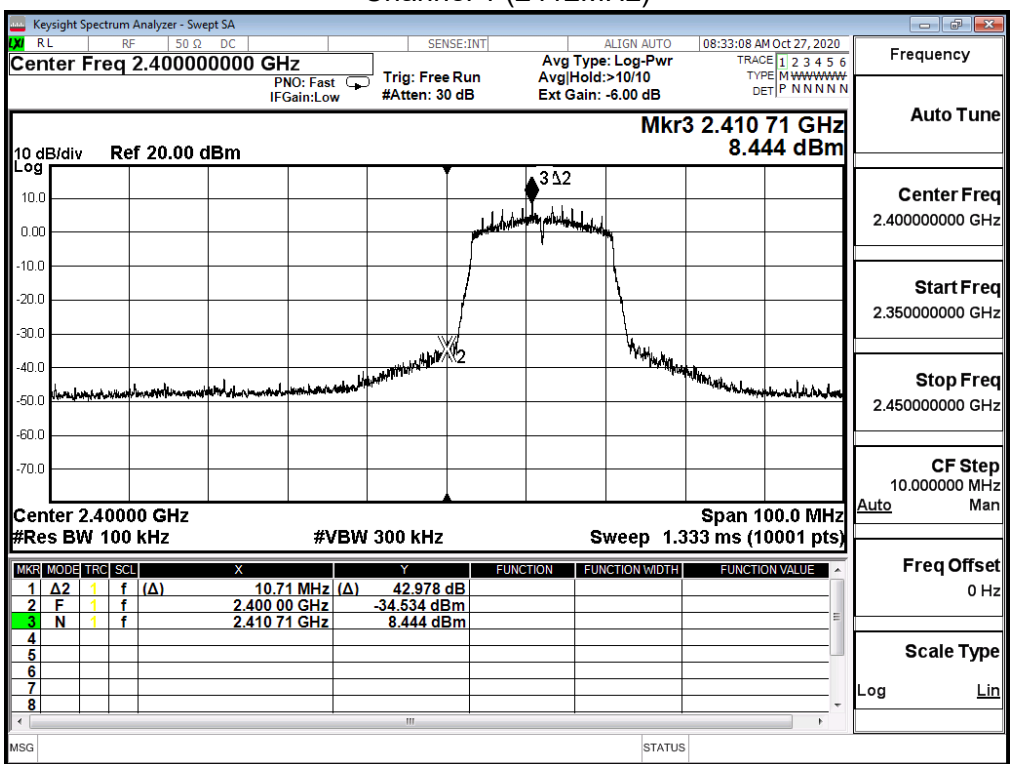
Channel 11 (2462MHz)



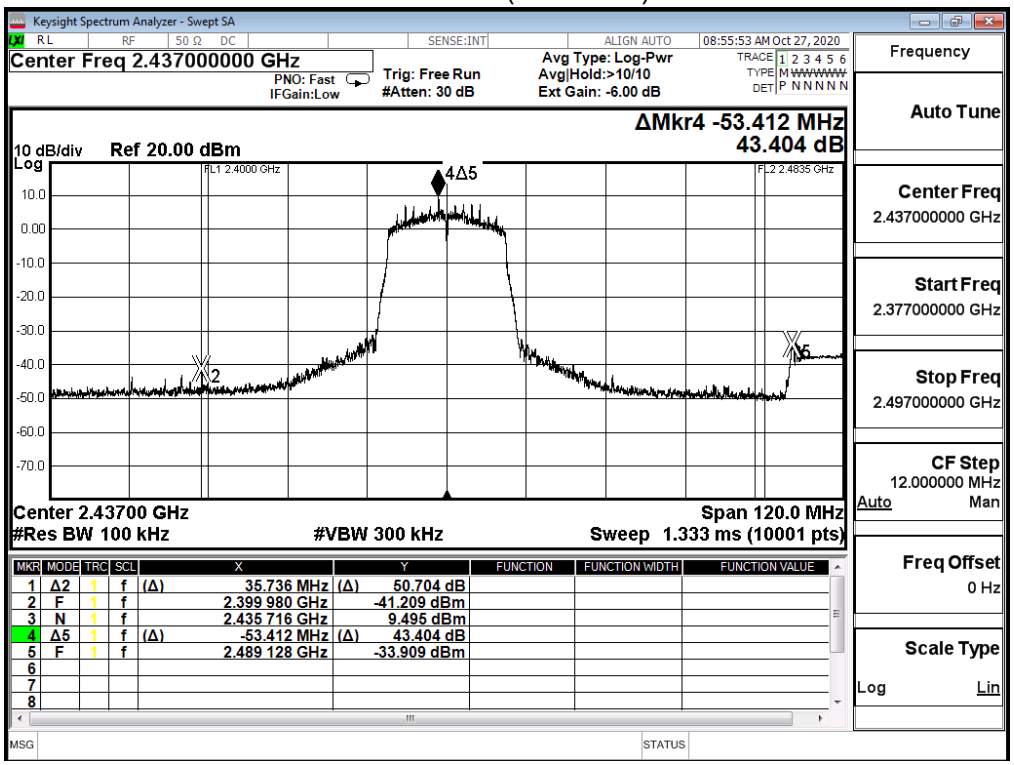
Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit Mode (MIMO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

IEEE 802.11n(20M)(ANT 0)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	42.978	≧30	Pass
6	2437	43.404	≧30	Pass
11	2462	36.481	≧30	Pass

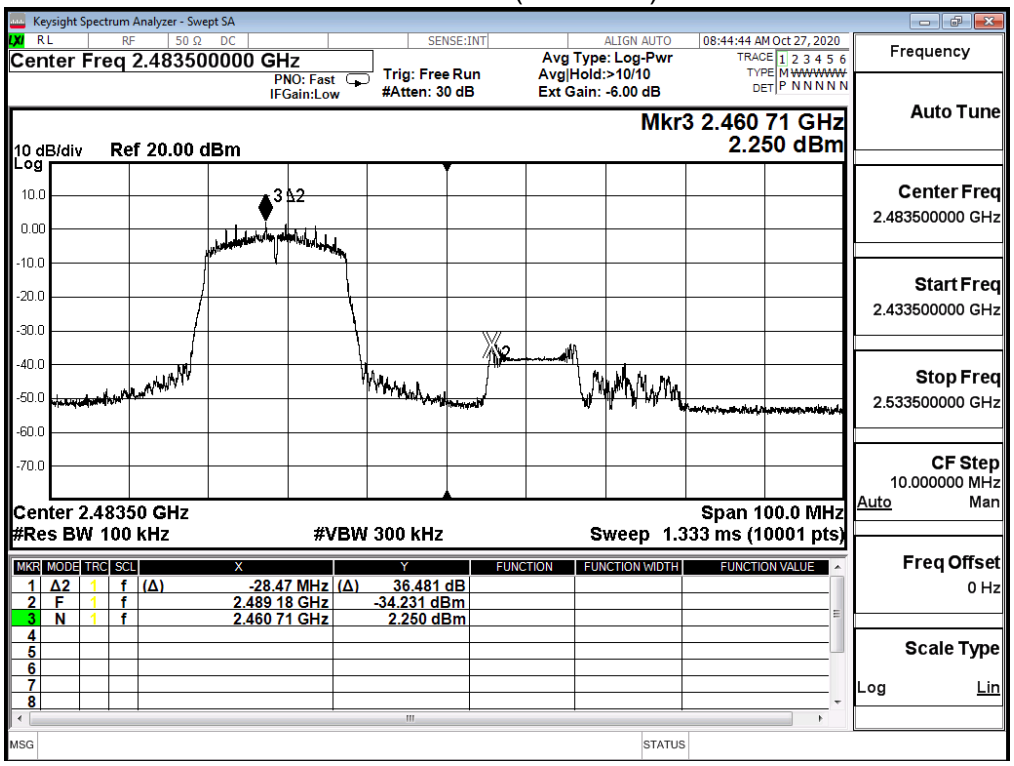
Channel 1 (2412MHz)



Channel 6 (2437MHz)



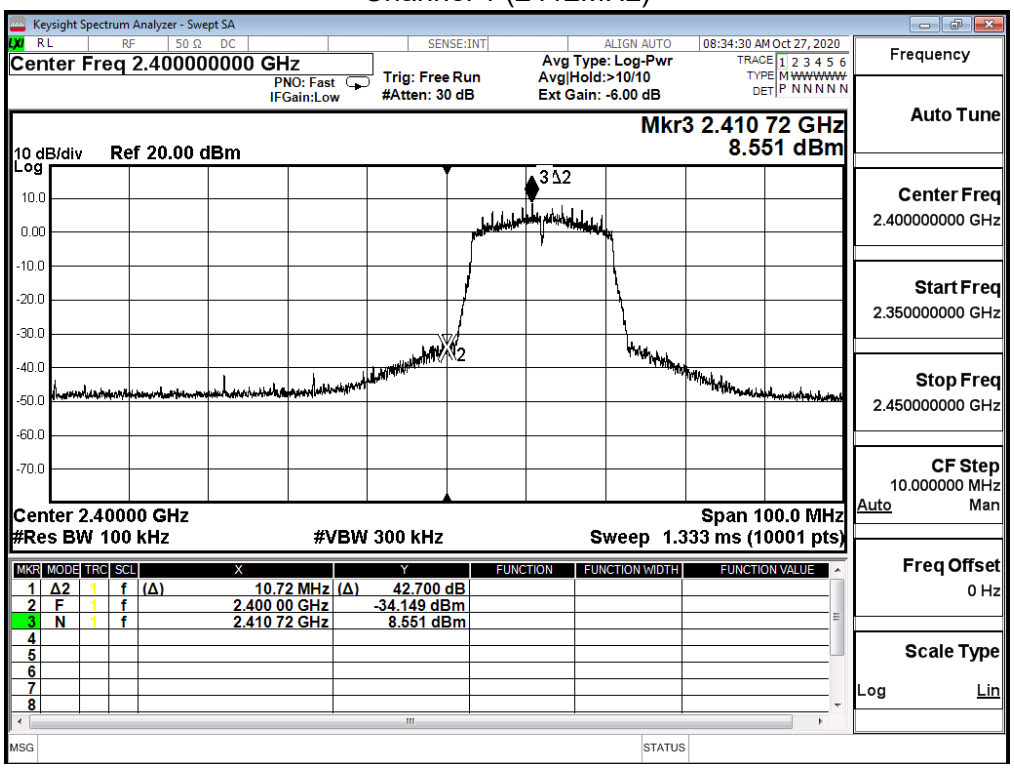
Channel 11 (2462MHz)



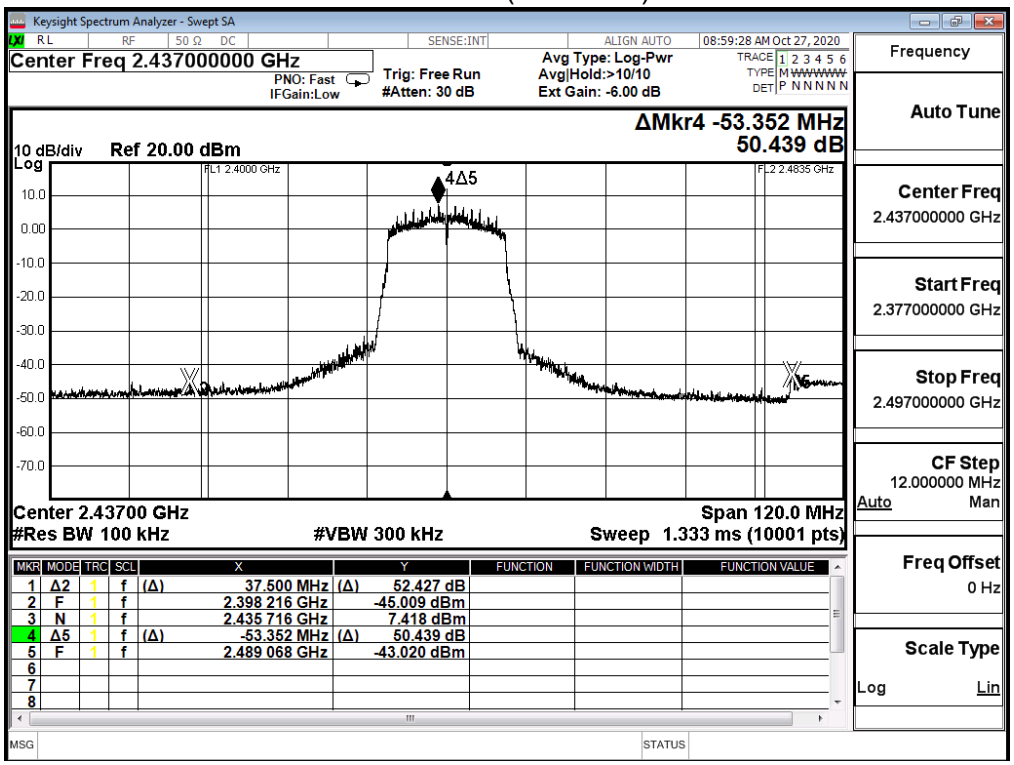
Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit Mode (MIMO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

IEEE 802.11n(20M)(ANT 1)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	42.700	≧30	Pass
6	2437	50.439	≧30	Pass
11	2462	43.873	≧30	Pass

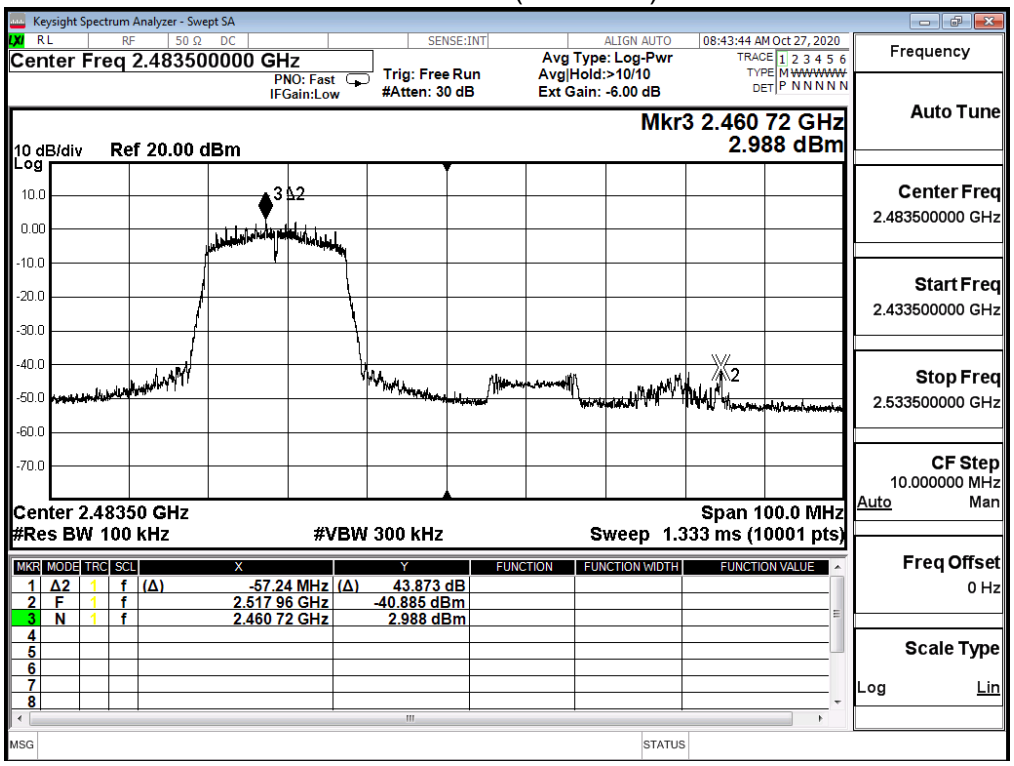
Channel 1 (2412MHz)



Channel 6 (2437MHz)



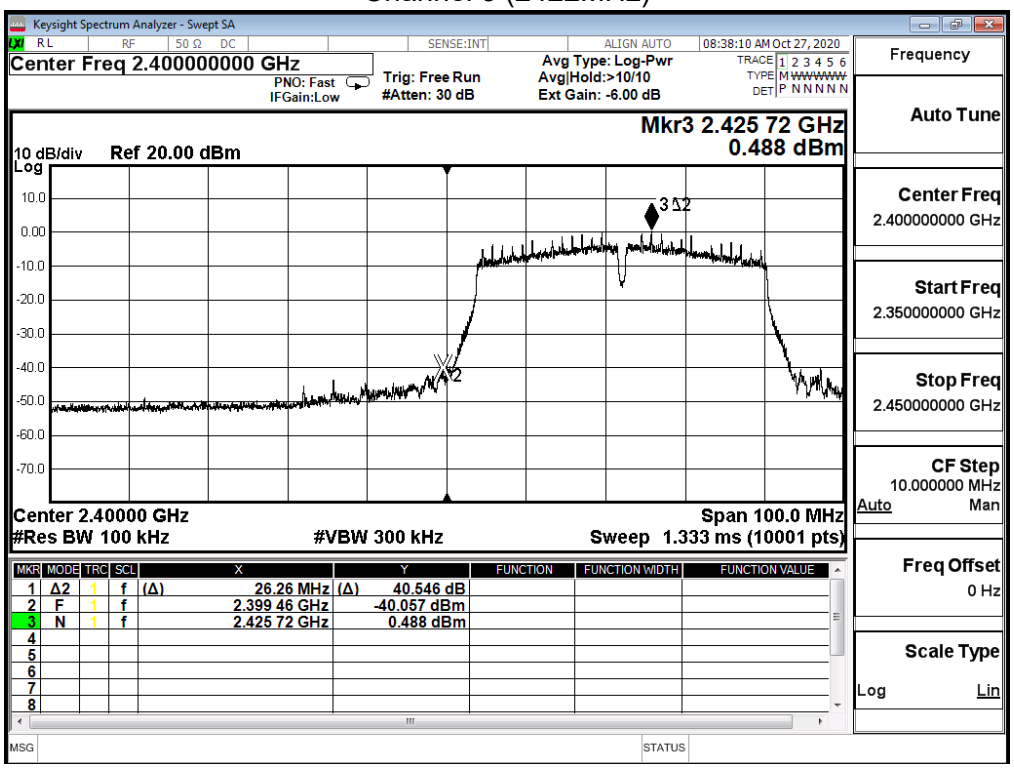
Channel 11 (2462MHz)



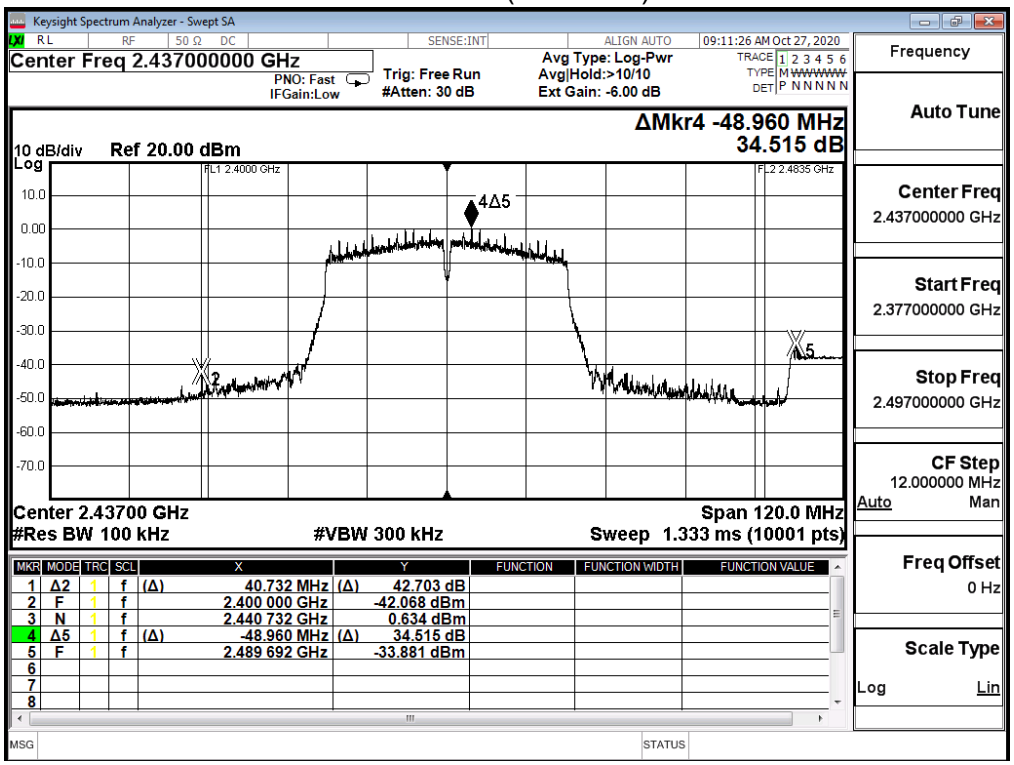
Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit Mode (MIMO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

IEEE 802.11n(40M)(ANT 0)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
3	2422	40.546	≧30	Pass
6	2437	34.515	≧30	Pass
9	2452	33.486	≧30	Pass

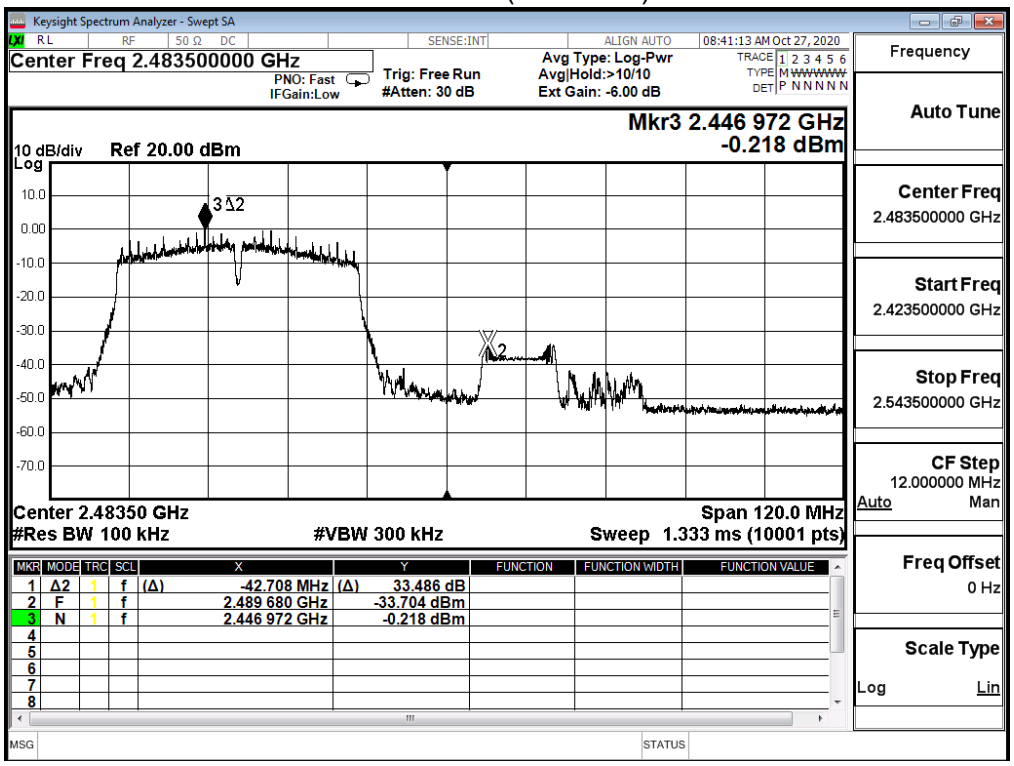
Channel 3 (2422MHz)



Channel 6 (2437MHz)



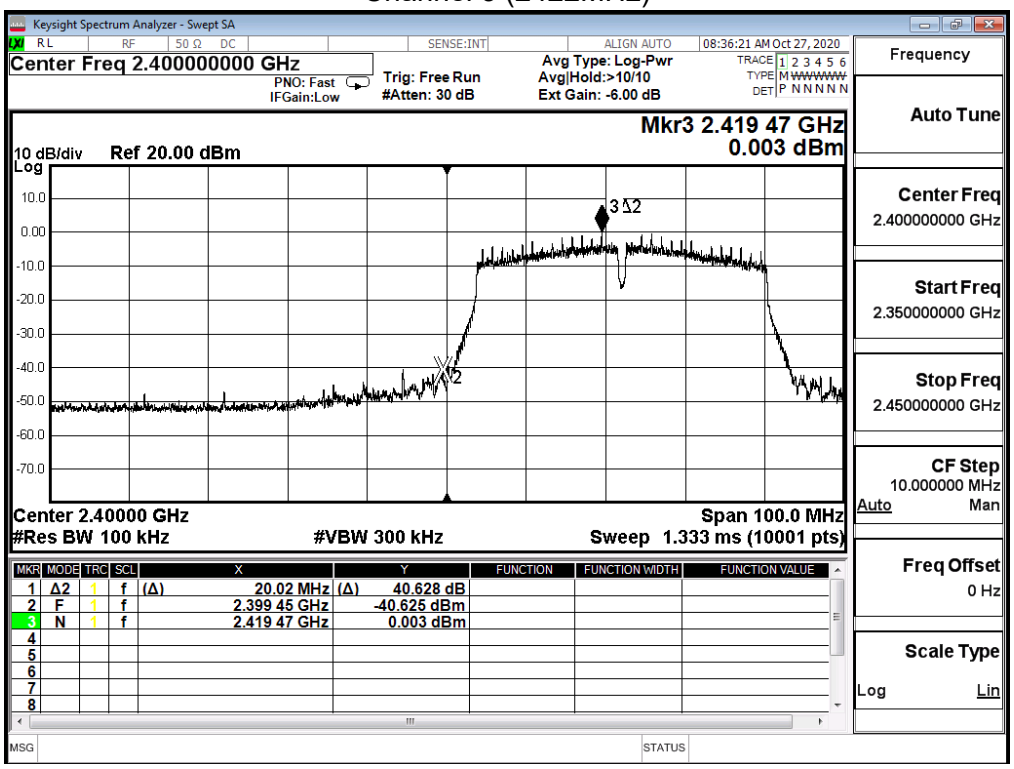
Channel 9 (2452MHz)



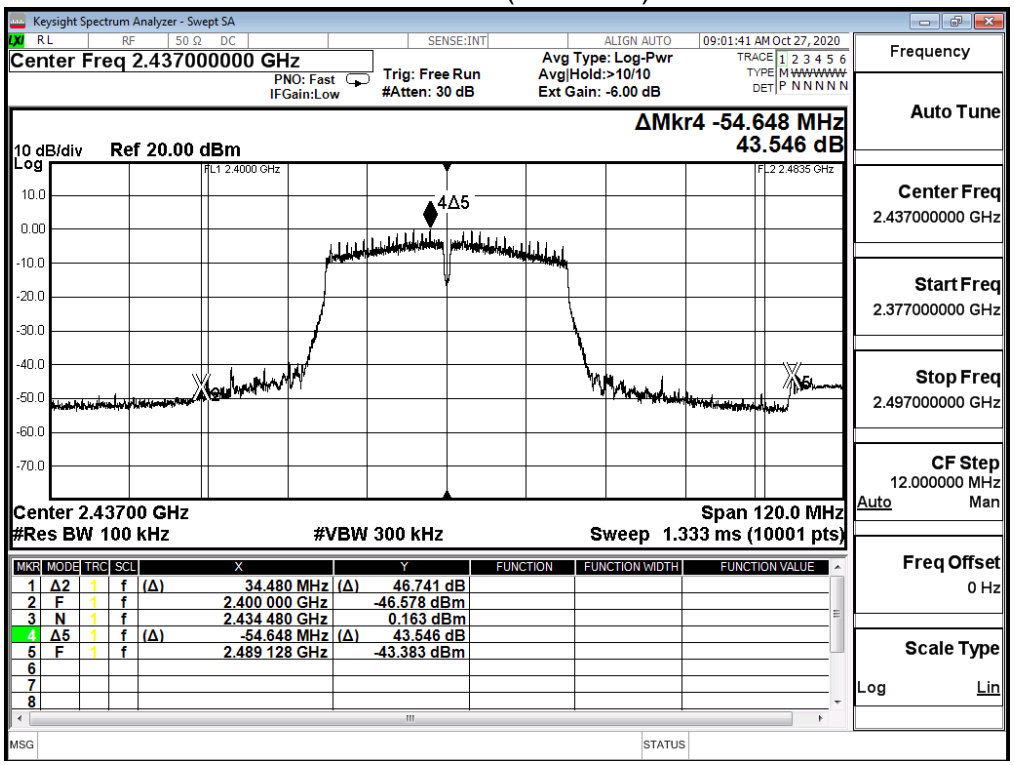
Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit Mode (MIMO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

IEEE 802.11n(40M)(ANT 1)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
3	2422	40.628	≧30	Pass
6	2437	43.546	≧30	Pass
9	2452	41.987	≧30	Pass

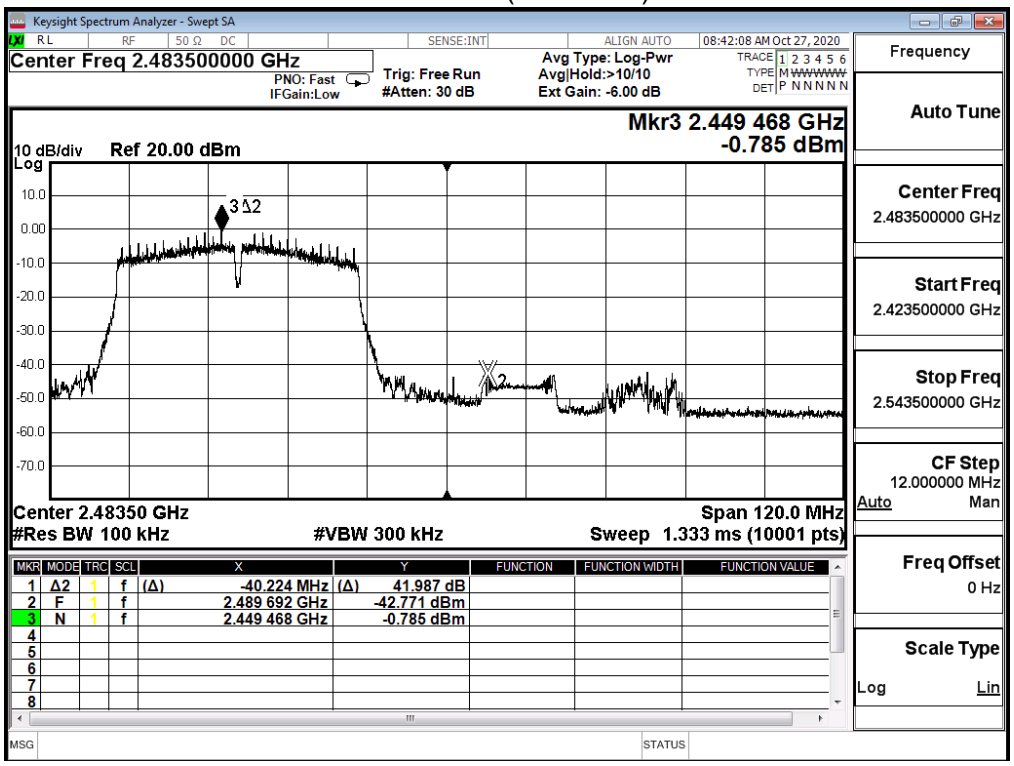
Channel 3 (2422MHz)



Channel 6 (2437MHz)

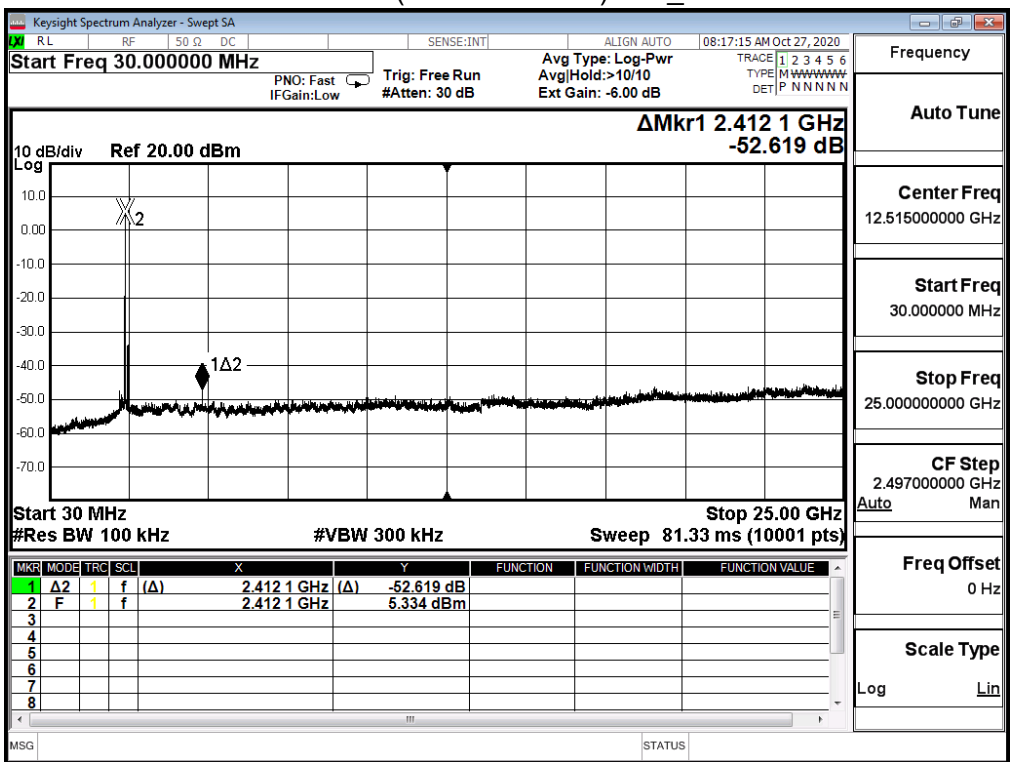


Channel 9 (2452MHz)

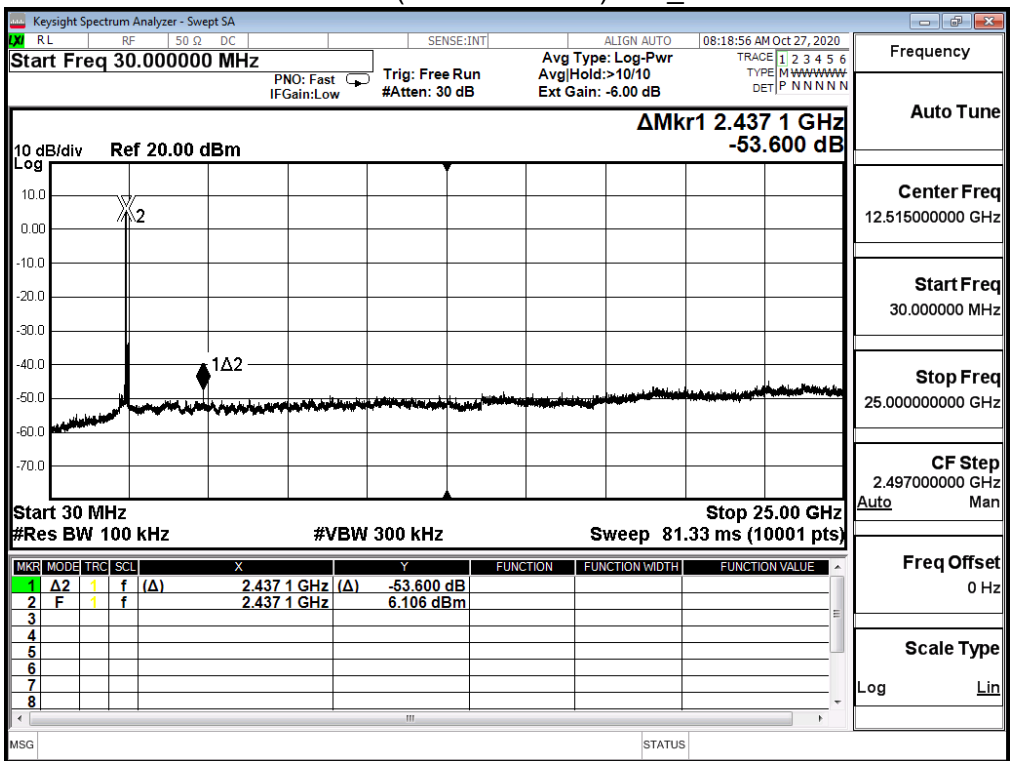


Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit Mode (SISO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

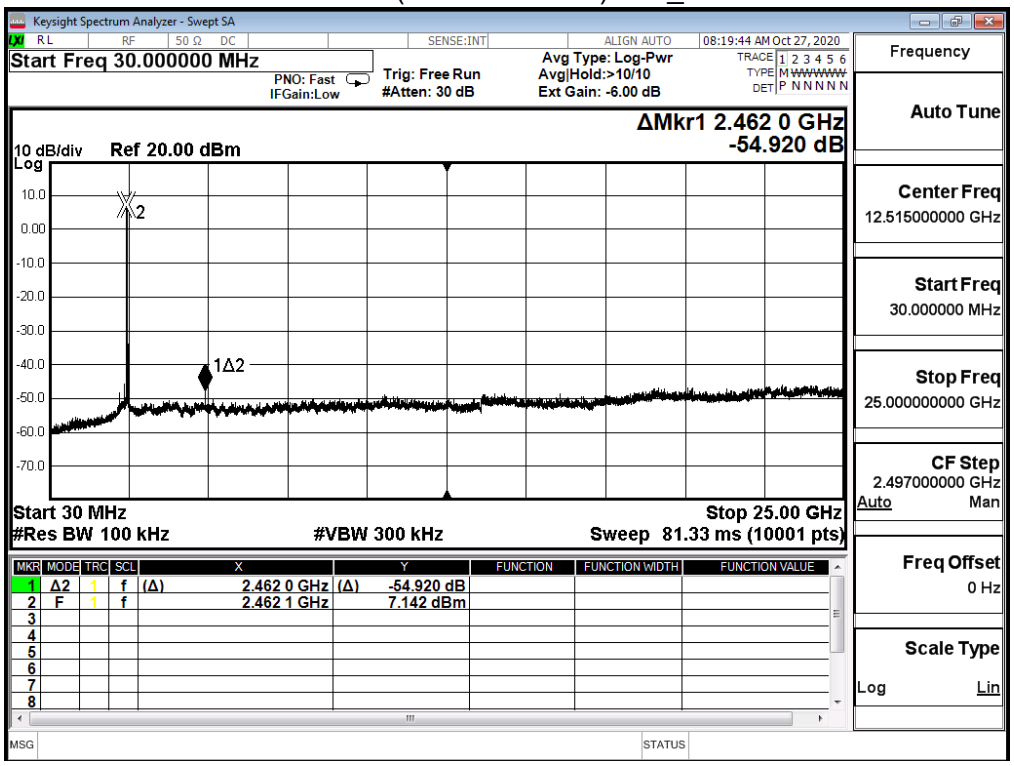
2412MHz (30MHz-25GHz)-11b_Ant 0



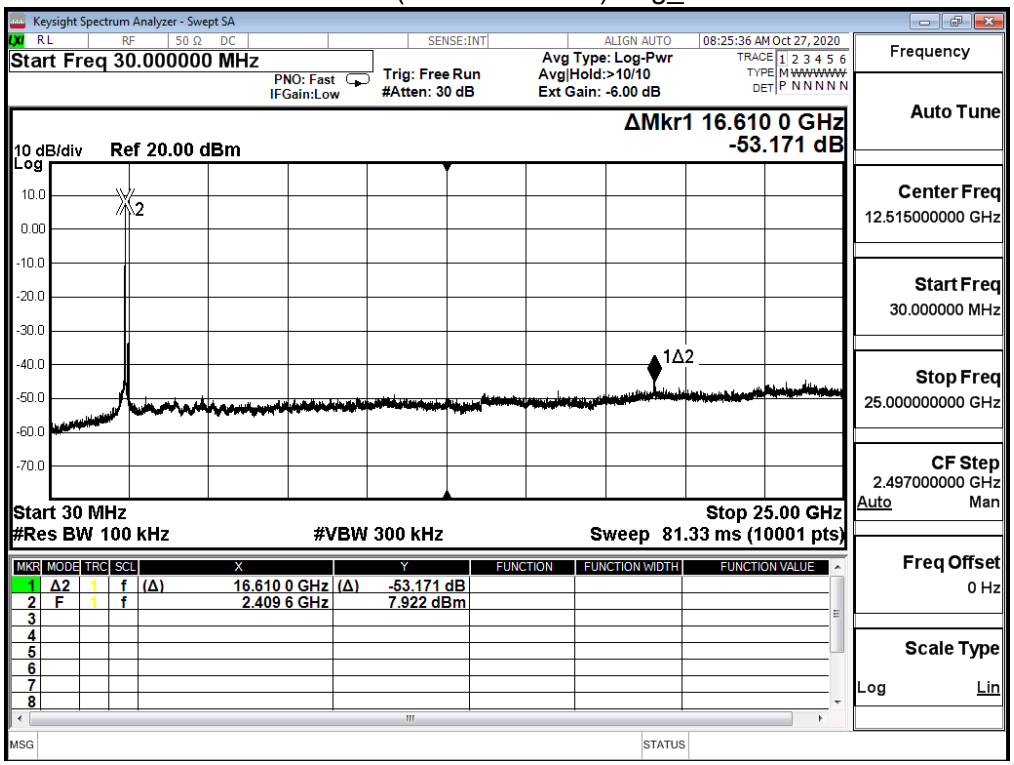
2437MHz (30MHz-25GHz)-11b_Ant 0



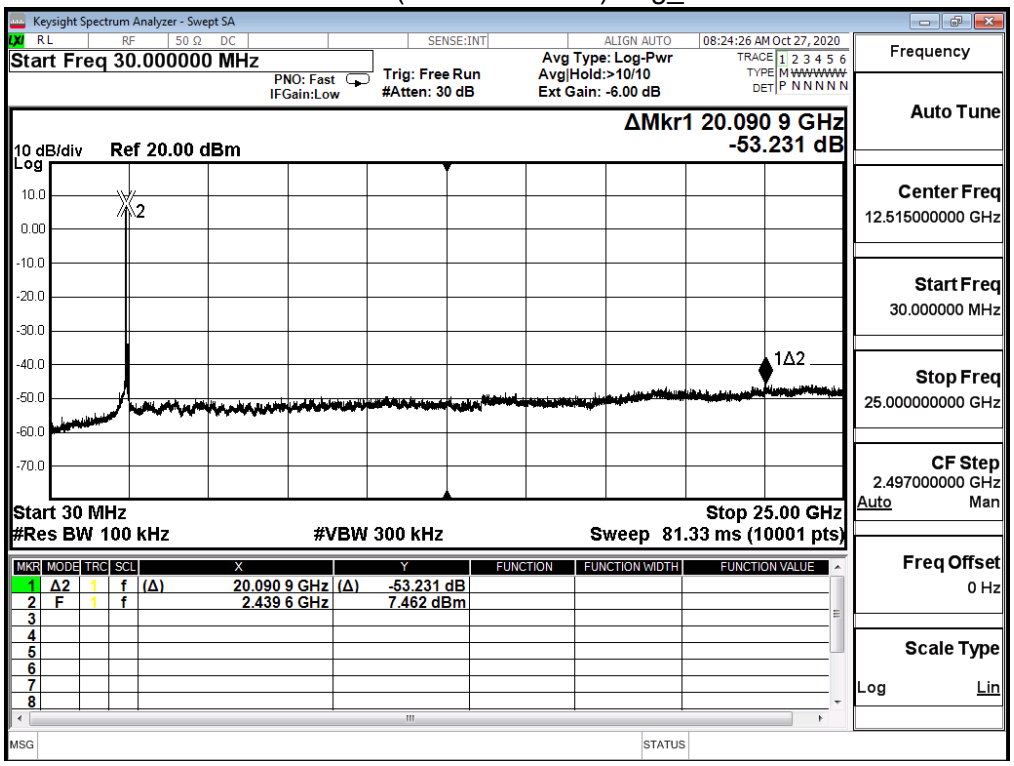
2462MHz (30MHz-25GHz)-11b_Ant 0



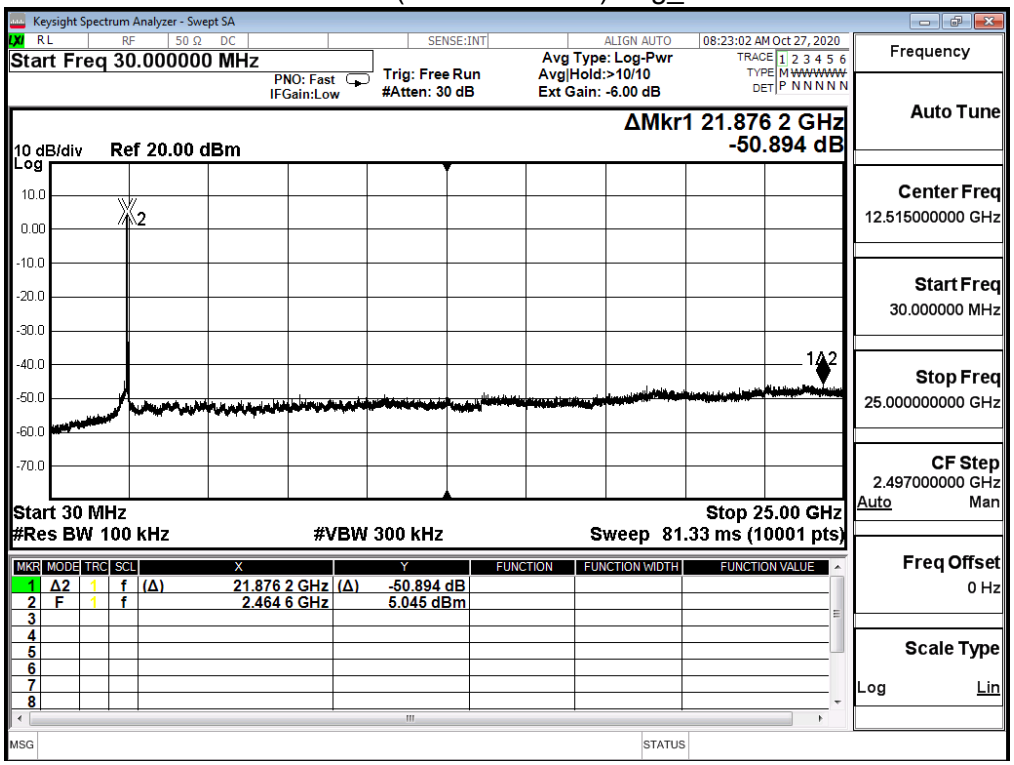
2412MHz (30MHz-25GHz)-11g_Ant 0



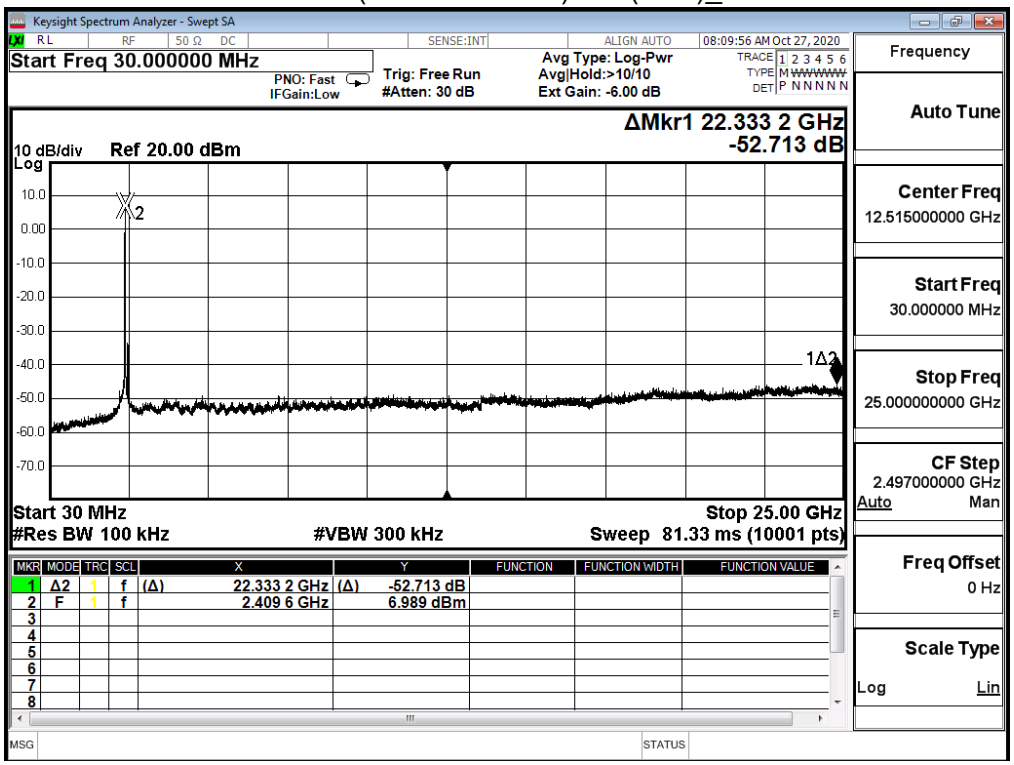
2437MHz (30MHz-25GHz)-11g_Ant 0



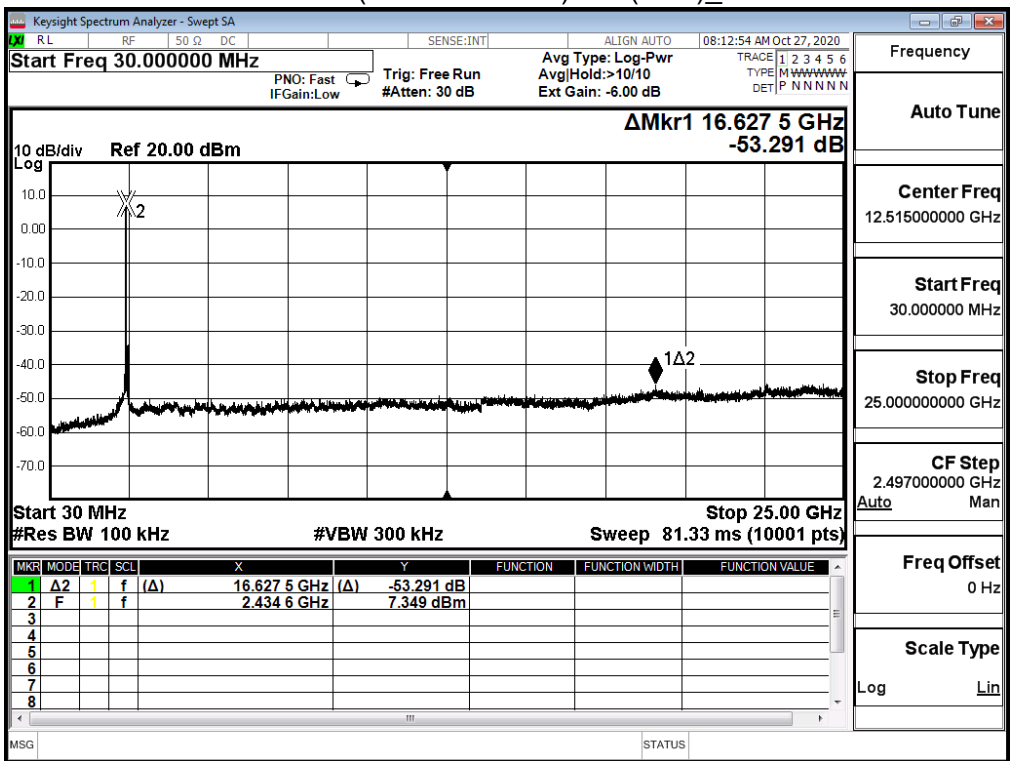
2462MHz (30MHz-25GHz)-11g_Ant 0



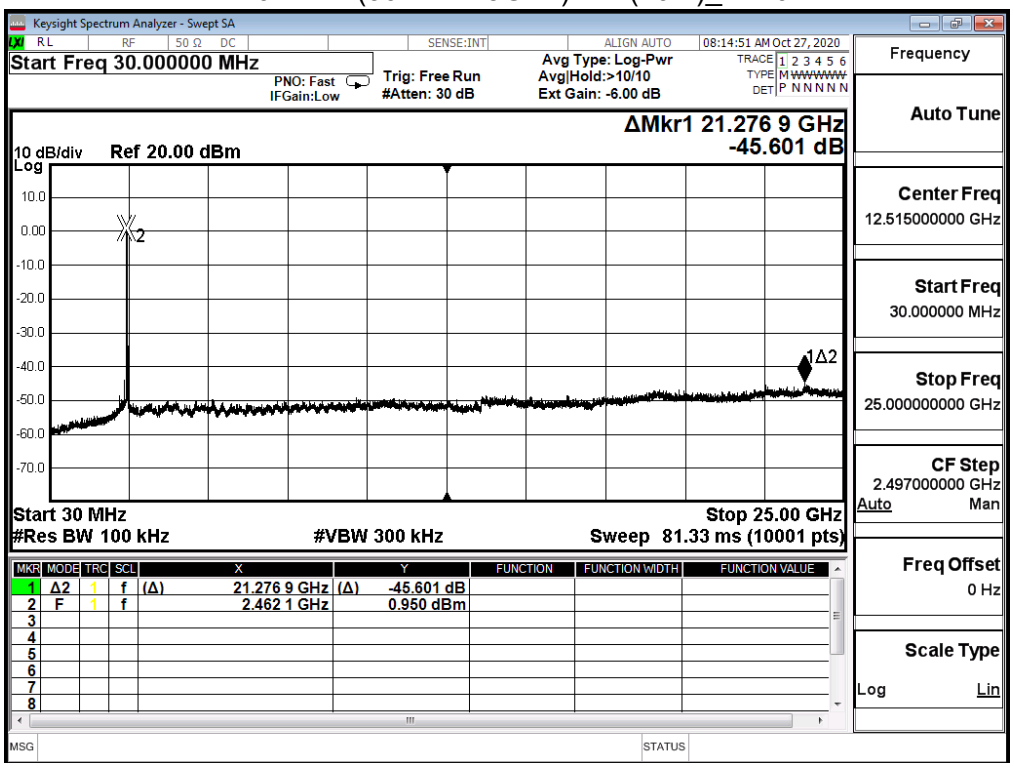
2412MHz (30MHz-25GHz)-11n(20M)_Ant 0



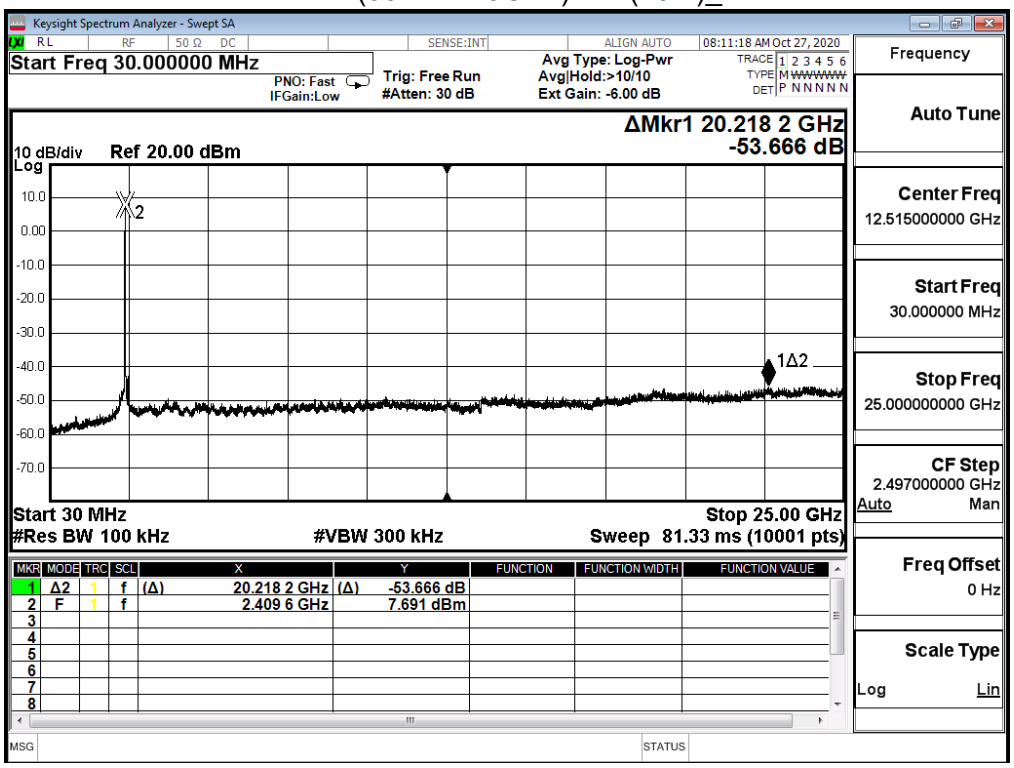
2437MHz (30MHz-25GHz)-11n(20M)_Ant 0



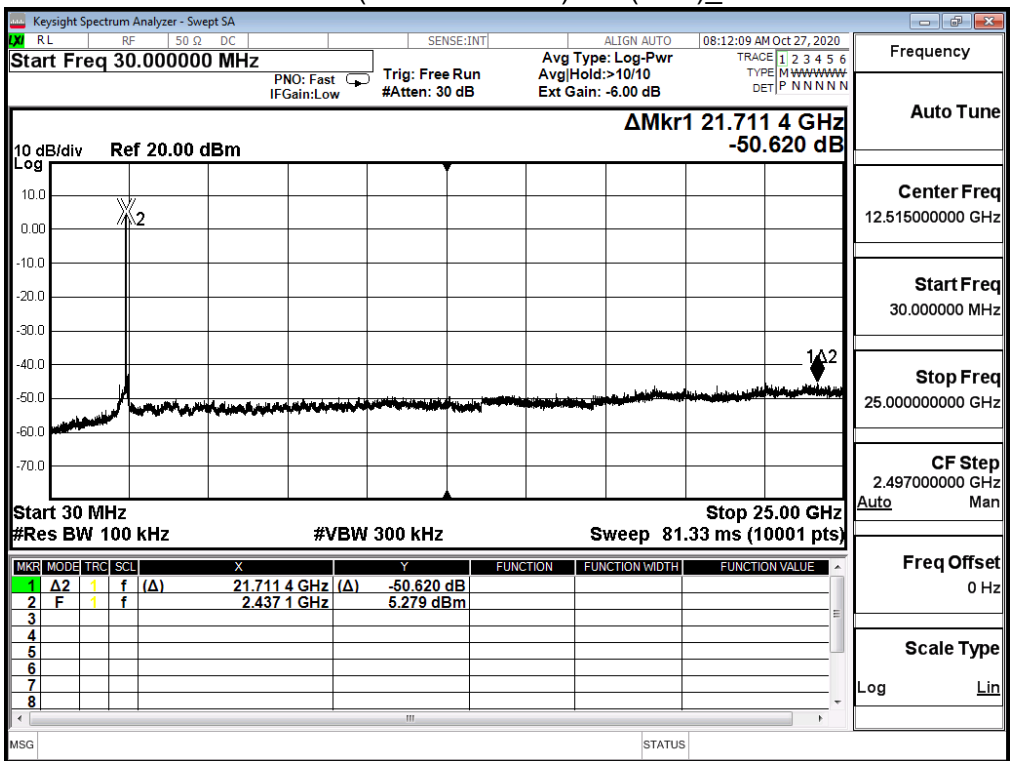
2462MHz (30MHz-25GHz)-11n(20M)_Ant 0



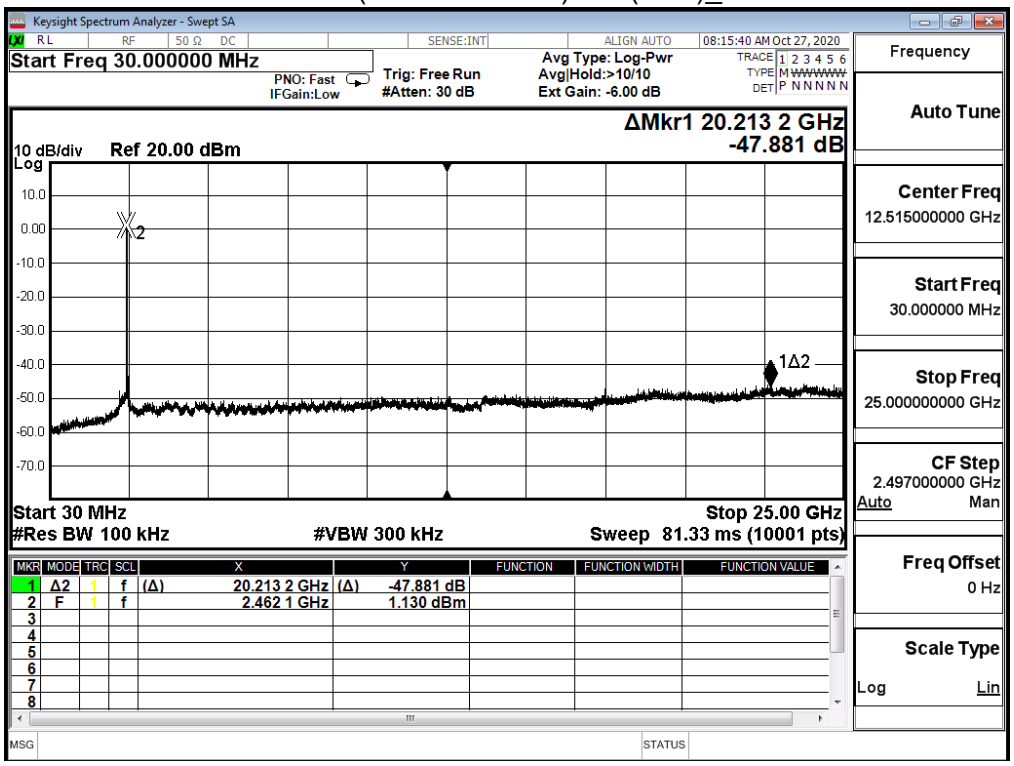
2412MHz (30MHz-25GHz)-11n(20M)_Ant 1



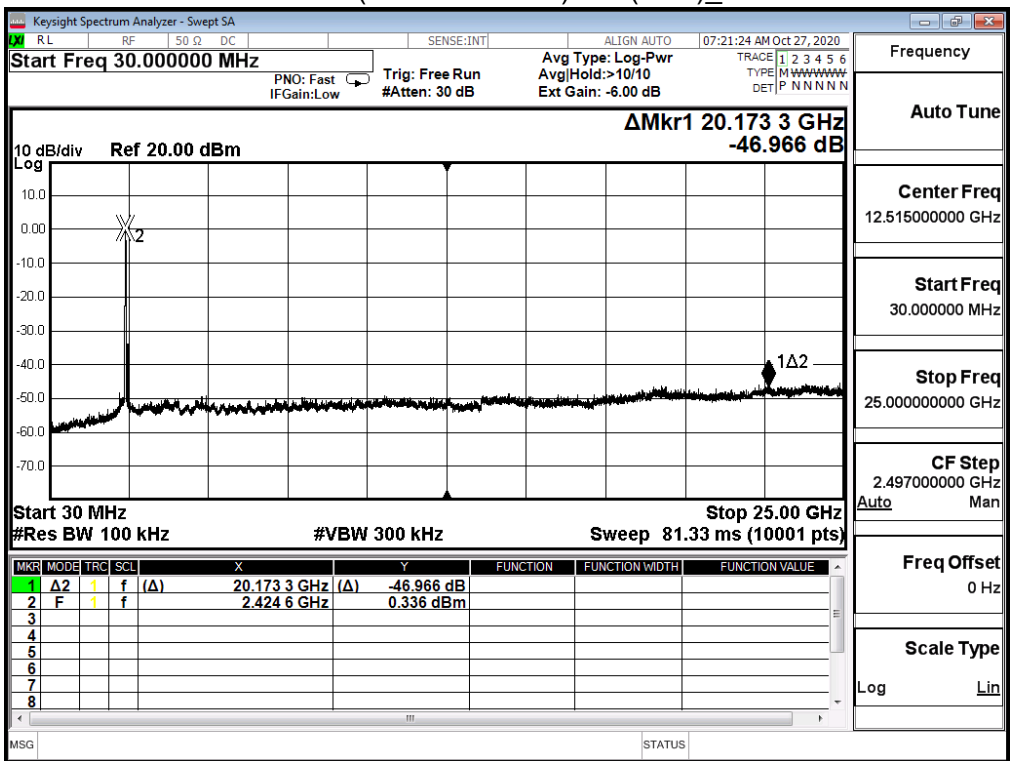
2437MHz (30MHz-25GHz)-11n(20M)_Ant 1



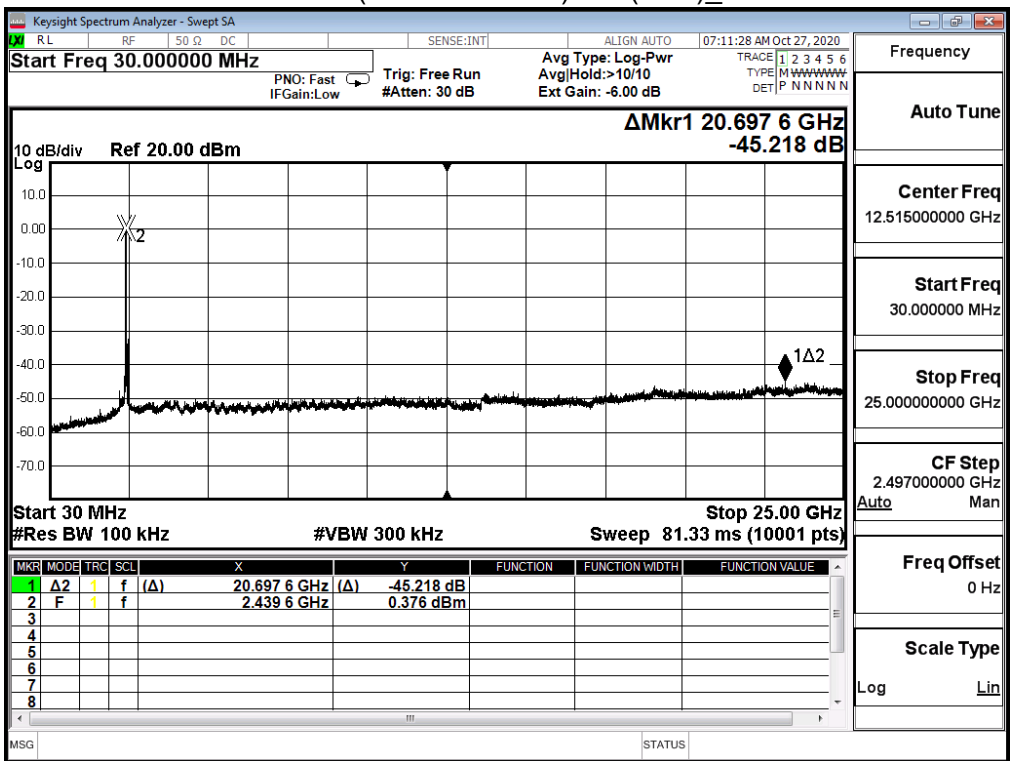
2462MHz (30MHz-25GHz)-11n(20M)_Ant 1



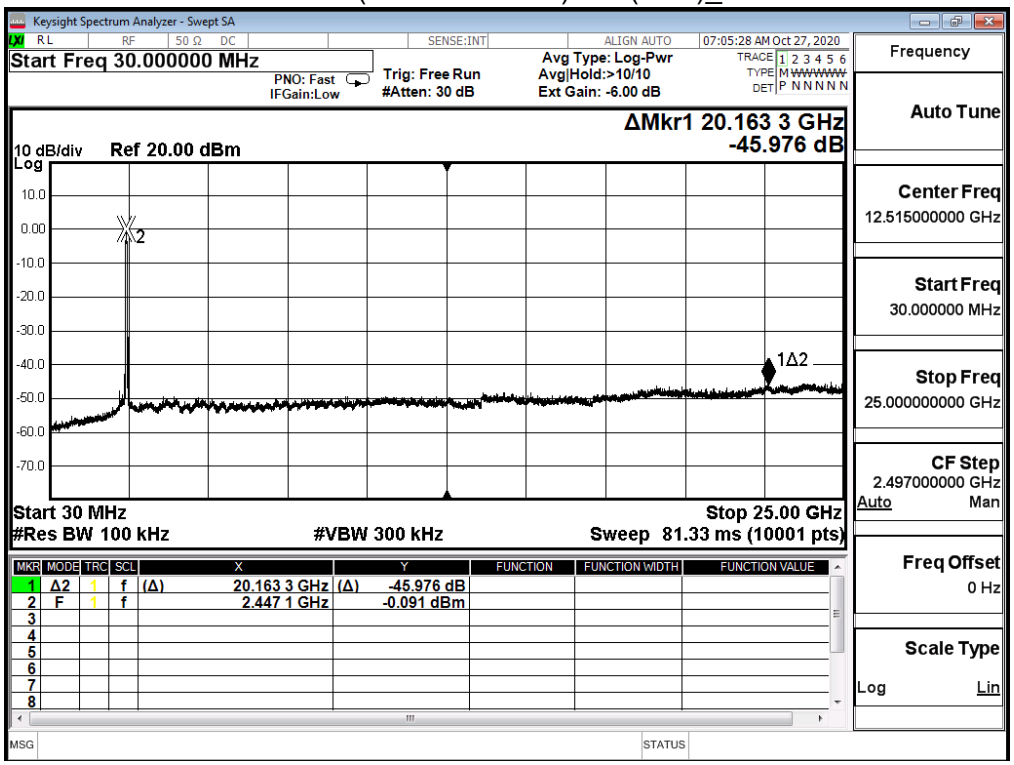
2422MHz (30MHz-25GHz)-11n(40M)_Ant 0



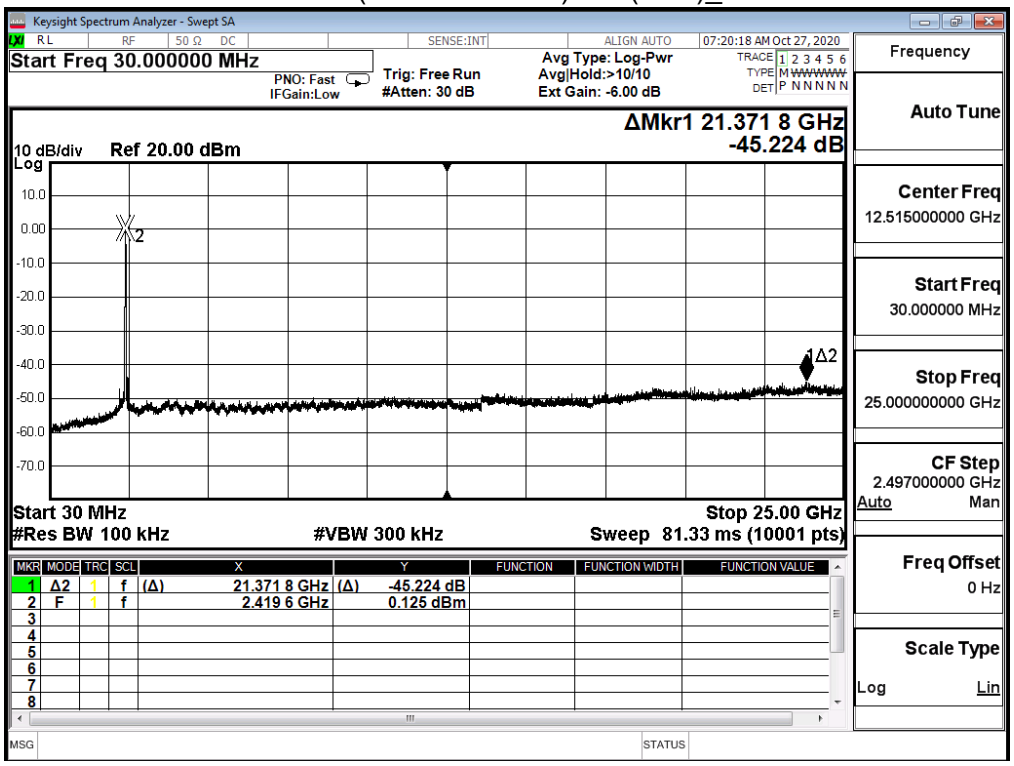
2437MHz (30MHz-25GHz)-11n(40M)_Ant 0



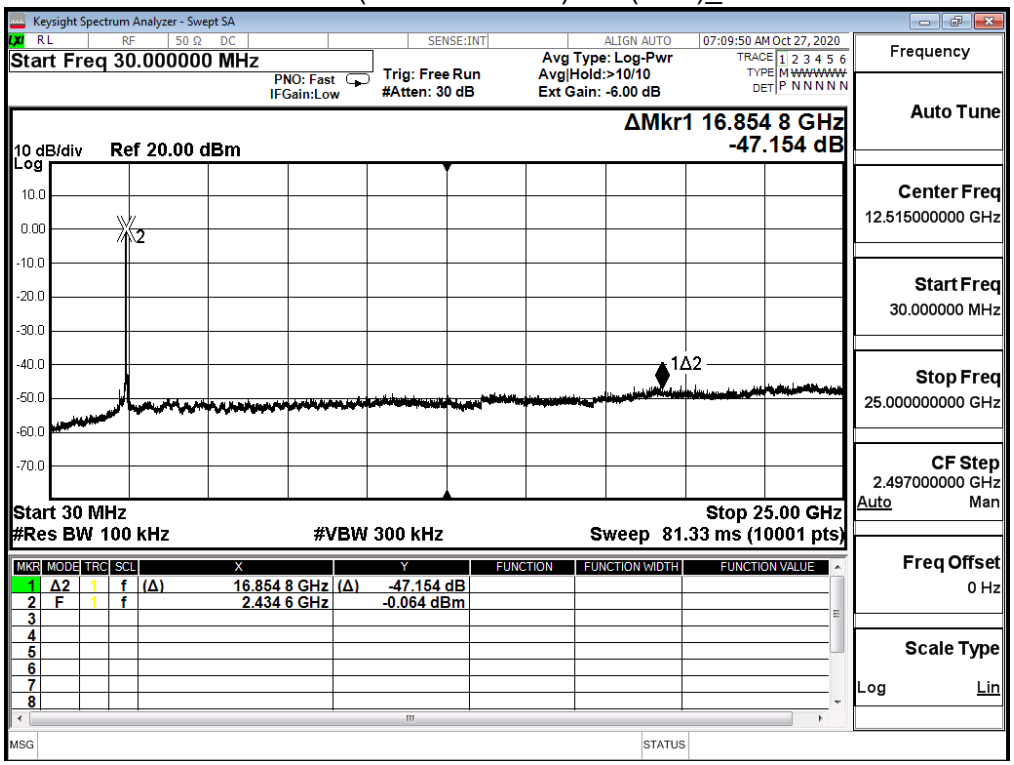
2452MHz (30MHz-25GHz)-11n(40M)_Ant 0



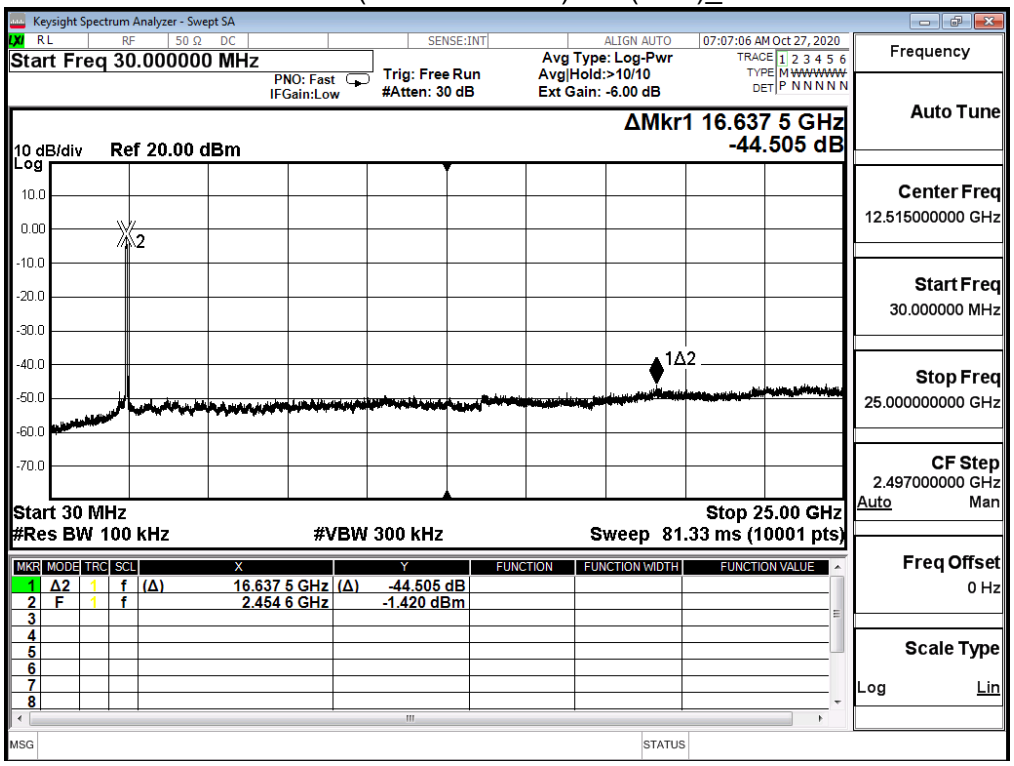
2422MHz (30MHz-25GHz)-11n(40M)_Ant 1



2437MHz (30MHz-25GHz)-11n(40M)_Ant 1

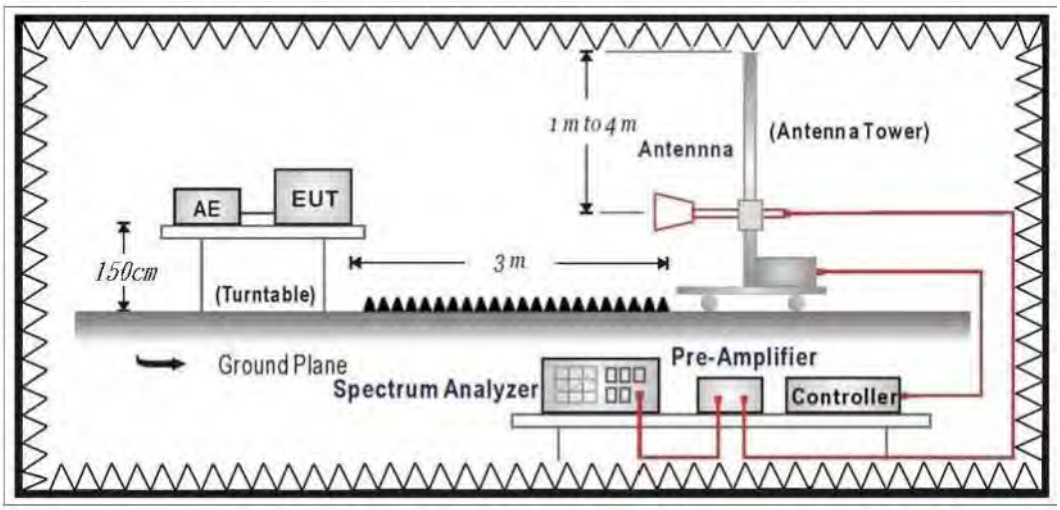


2452MHz (30MHz-25GHz)-11n(40M)_Ant 1



6. Radiated Emission Band Edge

6.1. Test Setup



6.2. 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.

6.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB 558074 D01 v05r02 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.

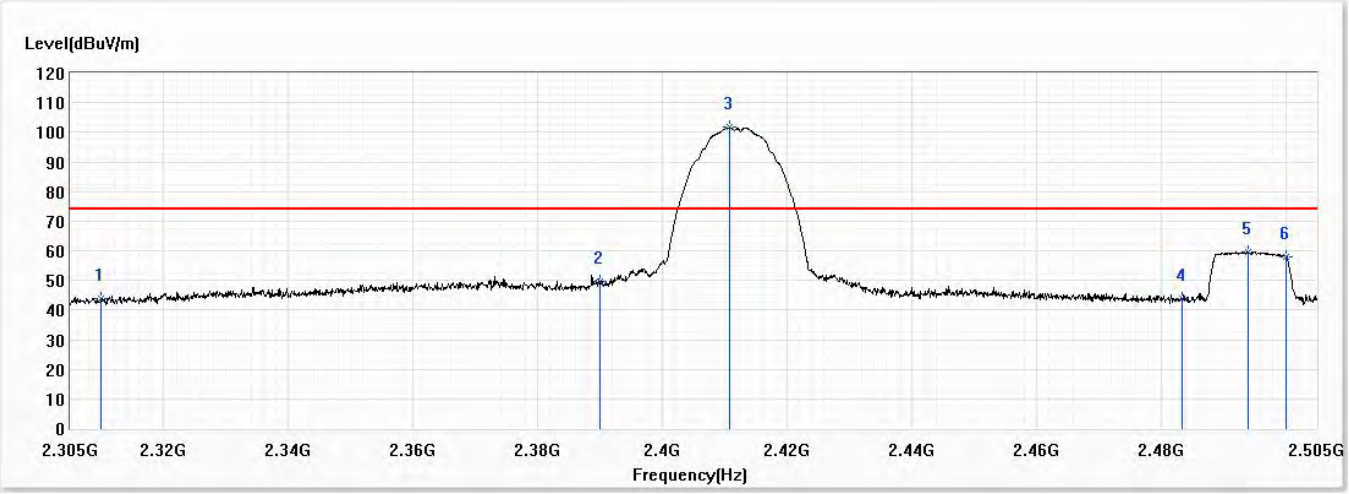
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

6.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2019

6.5. Test Result

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch1,2.412G,BW20M	Humidity (%RH)	55.0

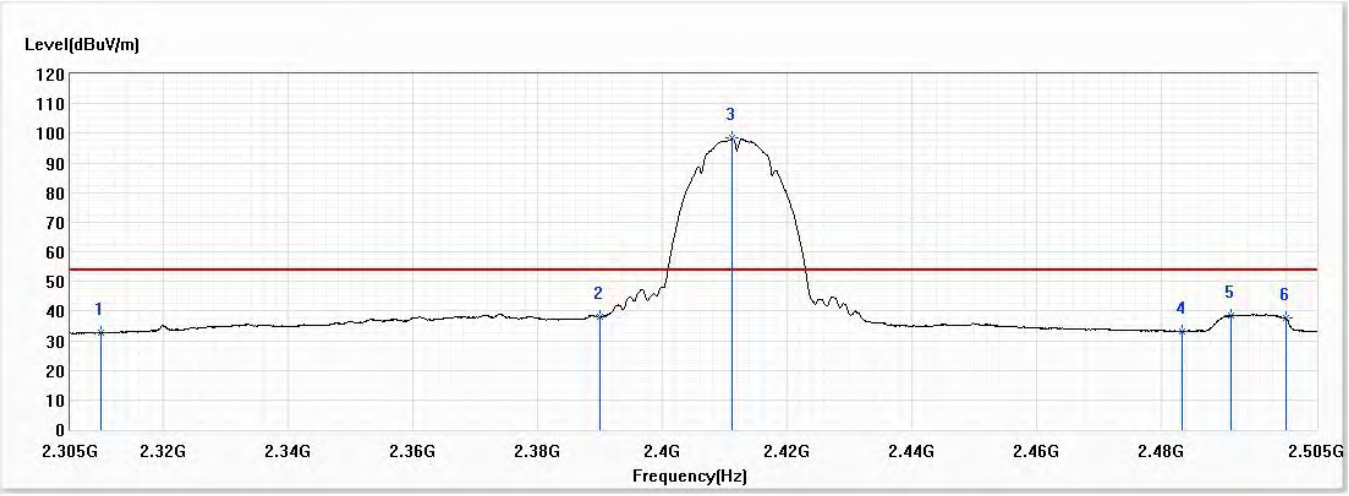


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	43.75	74.00	-30.25	30.60	13.15	PK
2	2390.000	49.46	74.00	-24.54	35.76	13.70	PK
! 3	2410.800	101.59	74.00	27.59	87.74	13.85	PK
4	2483.500	43.78	74.00	-30.22	29.42	14.36	PK
5	2494.000	59.71	74.00	-14.29	45.27	14.44	PK
6	2500.000	58.11	74.00	-15.89	43.63	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch1,2.412G,BW20M	Humidity (%RH)	55.0

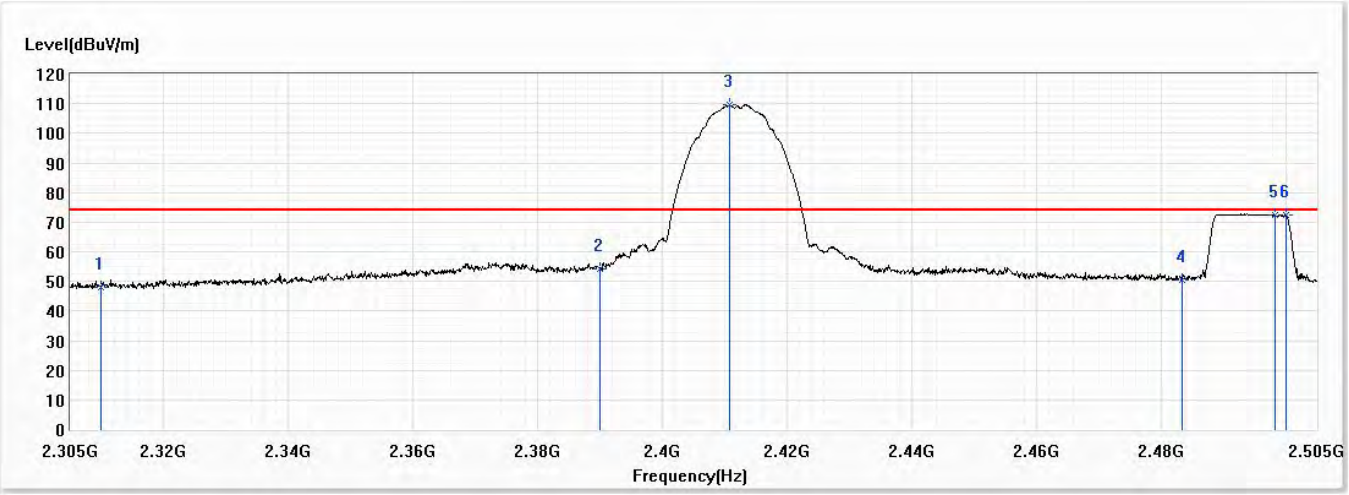


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	32.68	54.00	-21.32	19.53	13.15	AV
2	2390.000	38.13	54.00	-15.87	24.43	13.70	AV
! 3	2411.200	98.28	54.00	44.28	84.43	13.85	AV
4	2483.500	33.01	54.00	-20.99	18.65	14.36	AV
5	2491.200	38.31	54.00	-15.69	23.90	14.41	AV
6	2500.000	37.59	54.00	-16.41	23.11	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch1,2.412G,BW20M	Humidity (%RH)	55.0

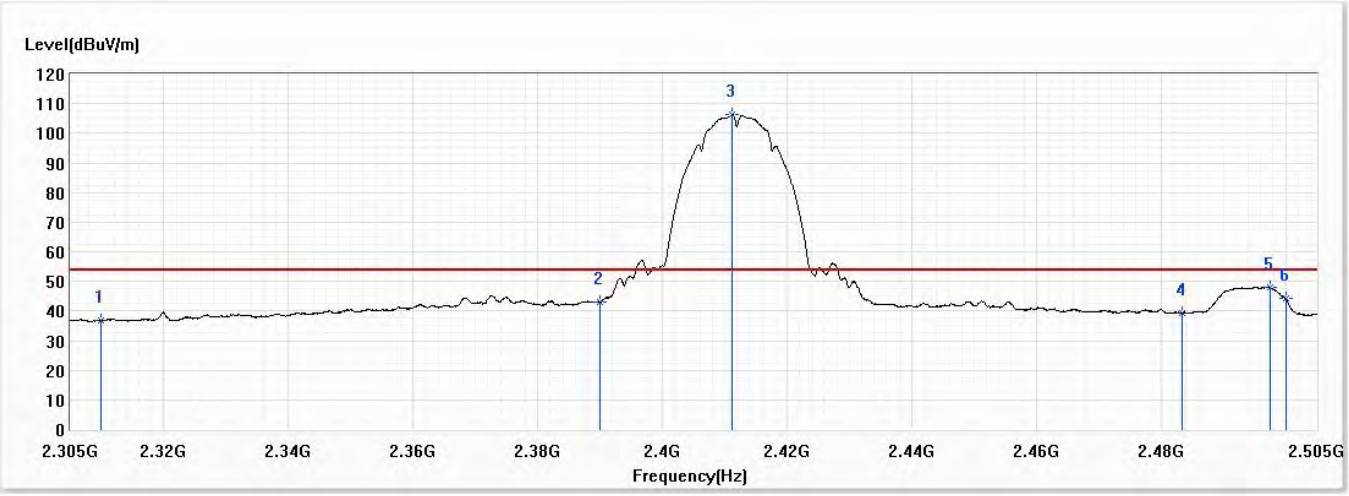


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	47.82	74.00	-26.18	34.67	13.15	PK
2	2390.000	54.08	74.00	-19.92	40.38	13.70	PK
! 3	2410.800	109.48	74.00	35.48	95.63	13.85	PK
4	2483.500	50.38	74.00	-23.62	36.02	14.36	PK
5	2498.300	72.24	74.00	-1.76	57.77	14.47	PK
6	2500.000	72.36	74.00	-1.64	57.88	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch1,2.412G,BW20M	Humidity (%RH)	55.0

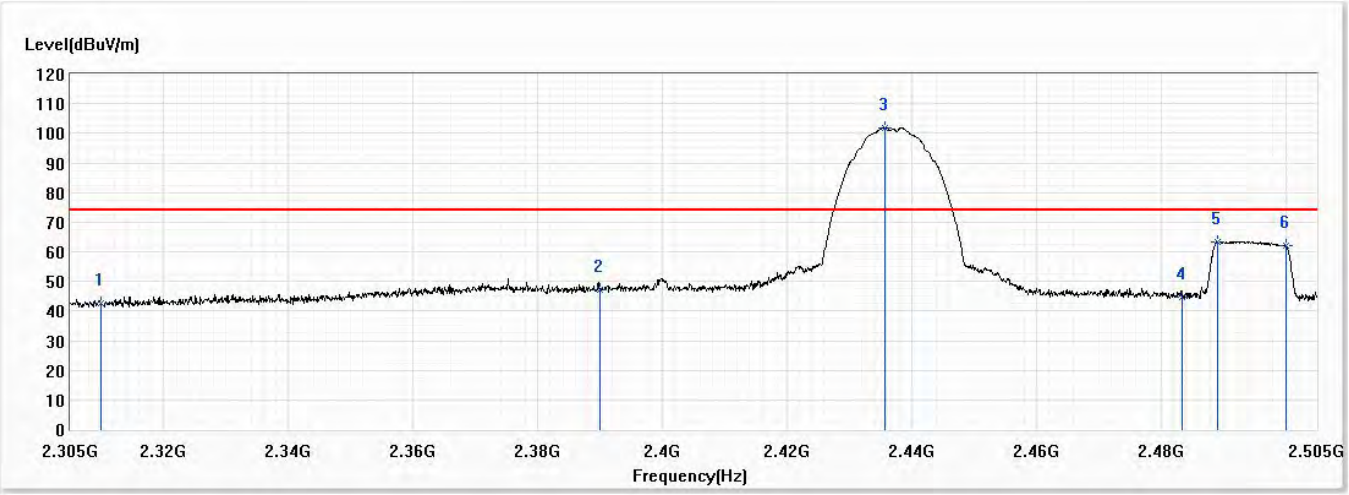


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	36.93	54.00	-17.07	23.78	13.15	AV
2	2390.000	43.04	54.00	-10.96	29.34	13.70	AV
! 3	2411.200	106.19	54.00	52.19	92.34	13.85	AV
4	2483.500	39.39	54.00	-14.61	25.03	14.36	AV
5	2497.600	47.87	54.00	-6.13	33.41	14.46	AV
6	2500.000	44.21	54.00	-9.79	29.73	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch6,2.437G,BW20M	Humidity (%RH)	55.0

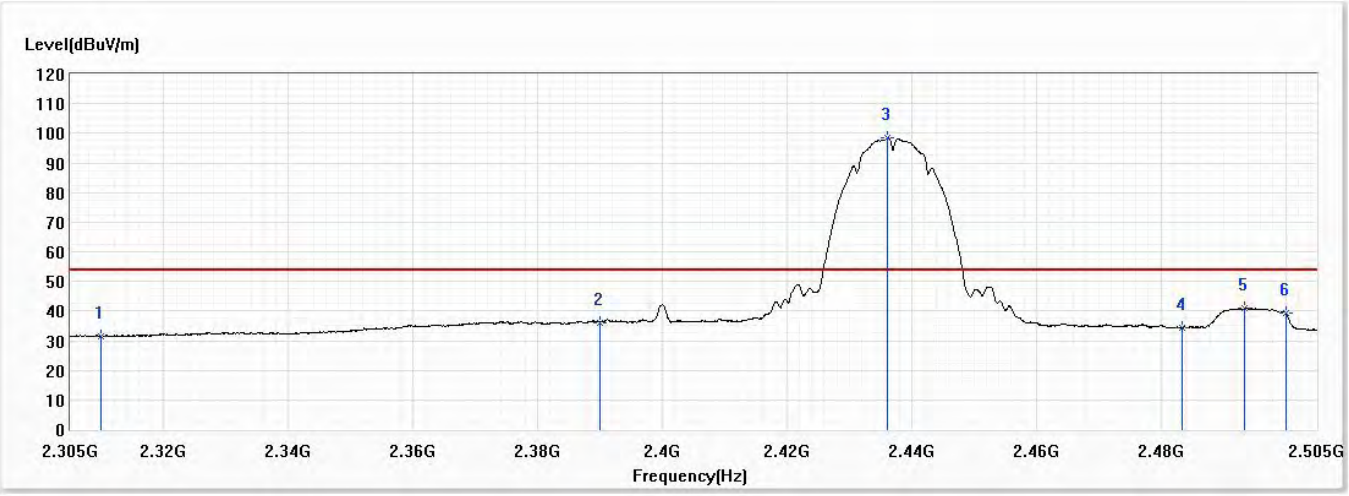


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	42.52	74.00	-31.48	29.37	13.15	PK
2	2390.000	47.19	74.00	-26.81	33.49	13.70	PK
! 3	2435.700	101.95	74.00	27.95	87.93	14.02	PK
4	2483.500	44.87	74.00	-29.13	30.51	14.36	PK
5	2489.100	63.46	74.00	-10.54	49.06	14.40	PK
6	2500.000	61.93	74.00	-12.07	47.45	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch6,2.437G,BW20M	Humidity (%RH)	55.0

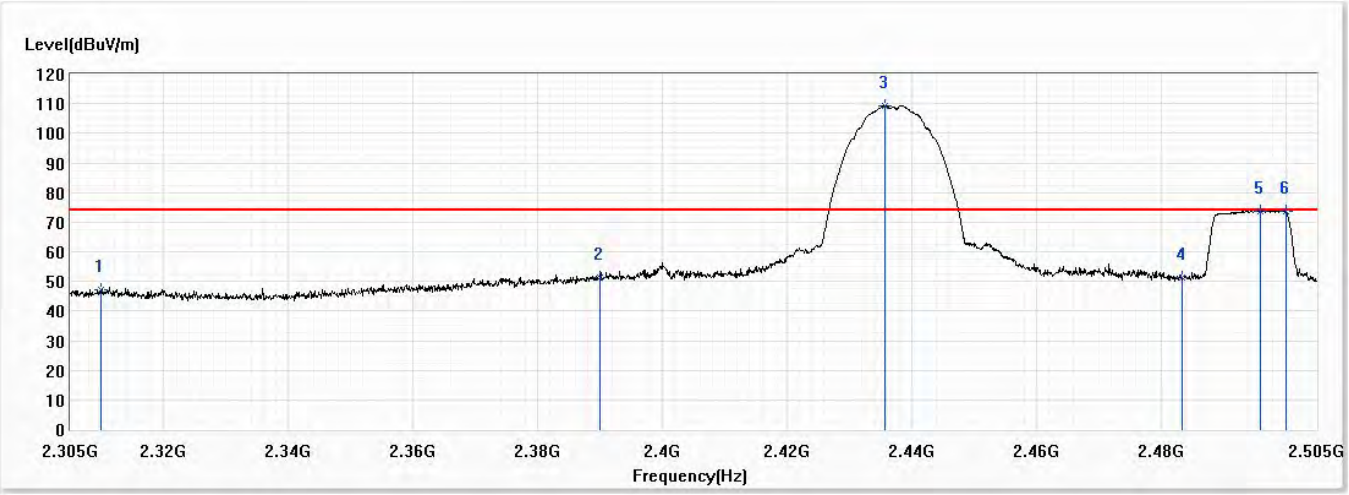


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	31.48	54.00	-22.52	18.33	13.15	AV
2	2390.000	36.20	54.00	-17.80	22.50	13.70	AV
! 3	2436.200	98.45	54.00	44.45	84.41	14.04	AV
4	2483.500	34.29	54.00	-19.71	19.93	14.36	AV
5	2493.500	40.98	54.00	-13.02	26.54	14.44	AV
6	2500.000	39.41	54.00	-14.59	24.93	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch6,2.437G,BW20M	Humidity (%RH)	55.0

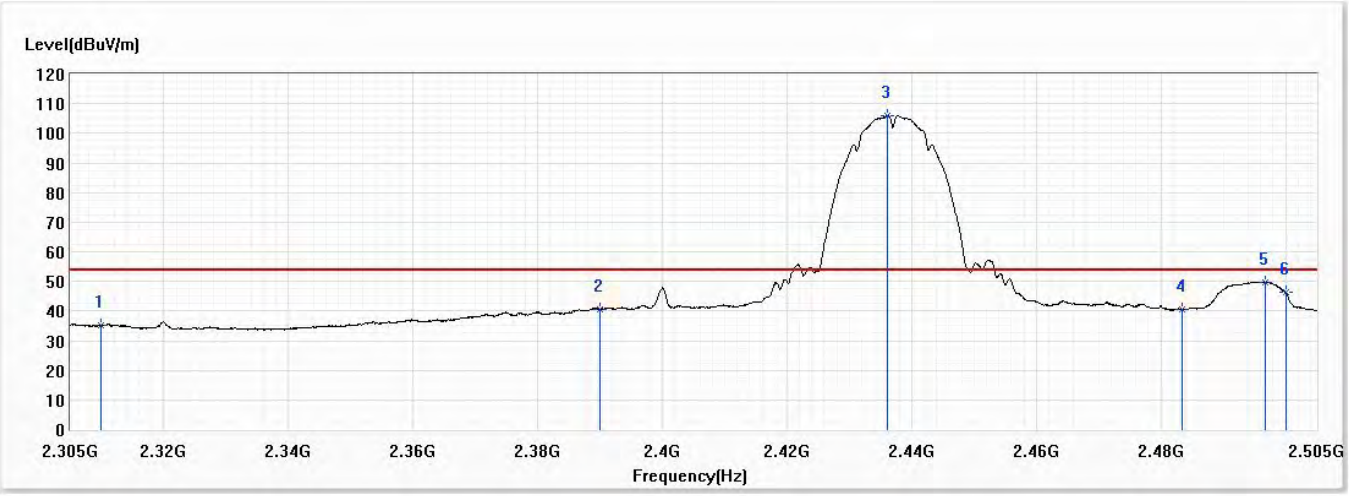


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	47.06	74.00	-26.94	33.91	13.15	PK
2	2390.000	51.12	74.00	-22.88	37.42	13.70	PK
! 3	2435.700	109.28	74.00	35.28	95.26	14.02	PK
4	2483.500	51.30	74.00	-22.70	36.94	14.36	PK
5	2495.900	73.80	74.00	-0.20	59.35	14.45	PK
6	2500.000	73.54	74.00	-0.46	59.06	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch6,2.437G,BW20M	Humidity (%RH)	55.0

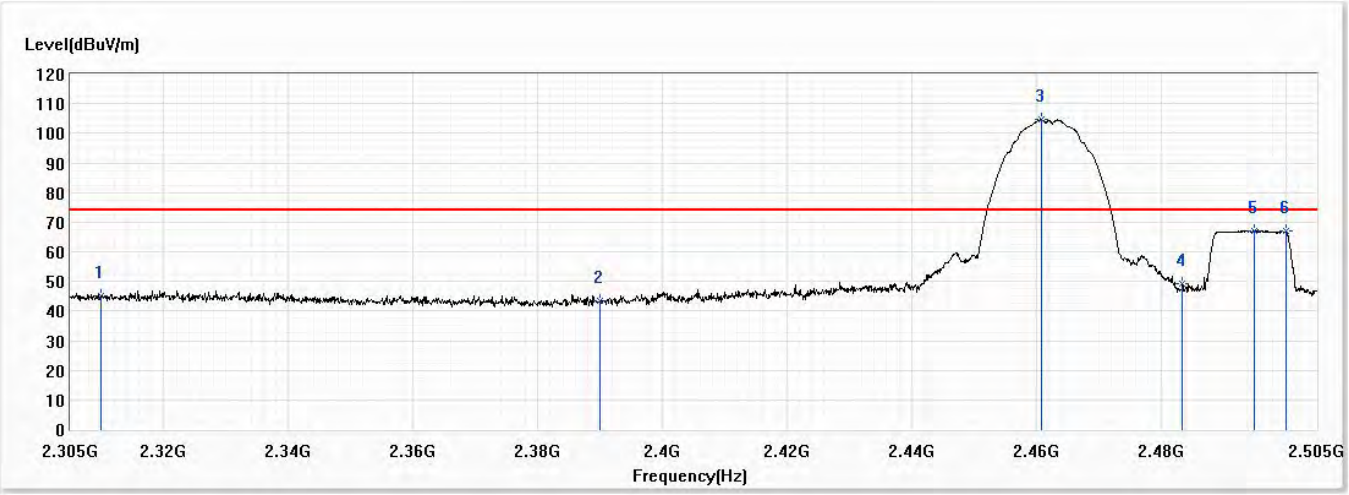


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	35.19	54.00	-18.81	22.04	13.15	AV
2	2390.000	40.43	54.00	-13.57	26.73	13.70	AV
! 3	2436.200	106.03	54.00	52.03	91.99	14.04	AV
4	2483.500	40.41	54.00	-13.59	26.05	14.36	AV
5	2496.800	49.80	54.00	-4.20	35.35	14.45	AV
6	2500.000	46.21	54.00	-7.79	31.73	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch11,2.462G,BW20M	Humidity (%RH)	55.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	45.01	74.00	-28.99	31.86	13.15	PK
2	2390.000	43.62	74.00	-30.38	29.92	13.70	PK
! 3	2460.800	104.51	74.00	30.51	90.30	14.21	PK
4	2483.500	49.21	74.00	-24.79	34.85	14.36	PK
5	2495.000	67.20	74.00	-6.80	52.76	14.44	PK
6	2500.000	66.90	74.00	-7.10	52.42	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
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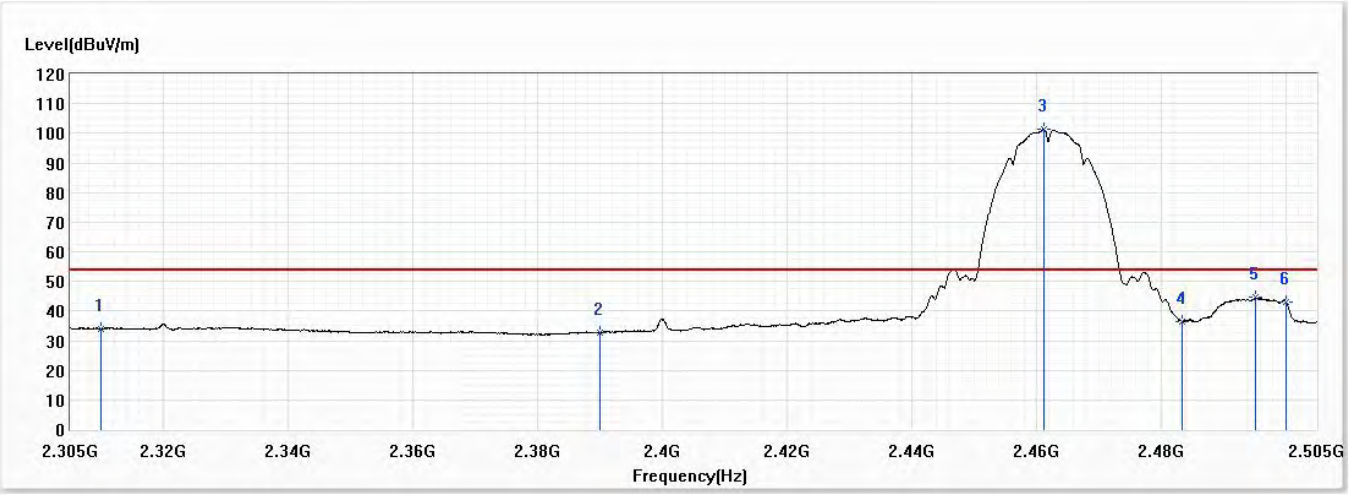
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch11,2.462G,BW20M	Humidity (%RH)	55.0

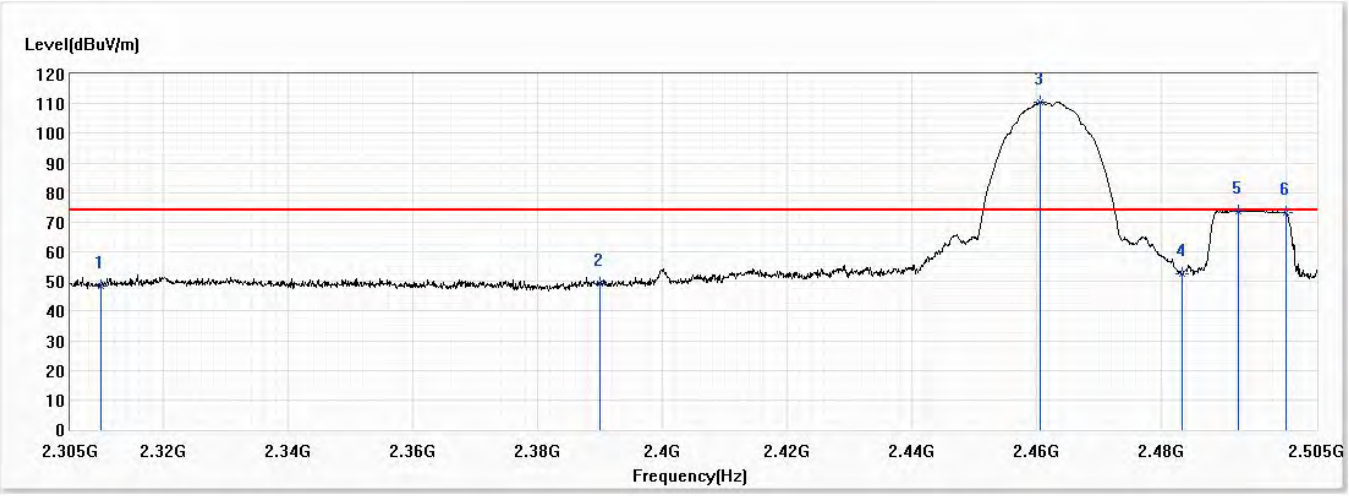


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	34.09	54.00	-19.91	20.94	13.15	AV
2	2390.000	32.76	54.00	-21.24	19.06	13.70	AV
! 3	2461.200	101.28	54.00	47.28	87.07	14.21	AV
4	2483.500	36.50	54.00	-17.50	22.14	14.36	AV
5	2495.200	44.62	54.00	-9.38	30.18	14.44	AV
6	2500.000	43.17	54.00	-10.83	28.69	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch11,2.462G,BW20M	Humidity (%RH)	55.0

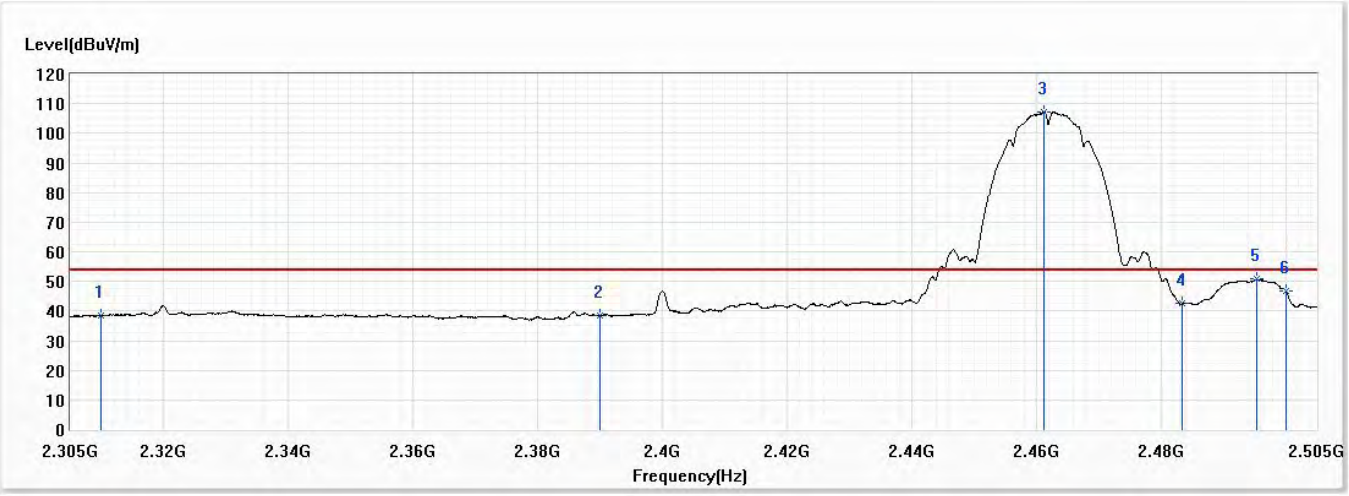


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	48.62	74.00	-25.38	35.47	13.15	PK
2	2390.000	49.29	74.00	-24.71	35.59	13.70	PK
! 3	2460.700	110.49	74.00	36.49	96.29	14.20	PK
4	2483.500	52.53	74.00	-21.47	38.17	14.36	PK
5	2492.400	73.85	74.00	-0.15	59.42	14.43	PK
6	2500.000	73.36	74.00	-0.64	58.88	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/21
Test Mode	Mode 1: Transmit Mode	Engineer	Scott Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11b,Ant0,Ch11,2.462G,BW20M	Humidity (%RH)	55.0

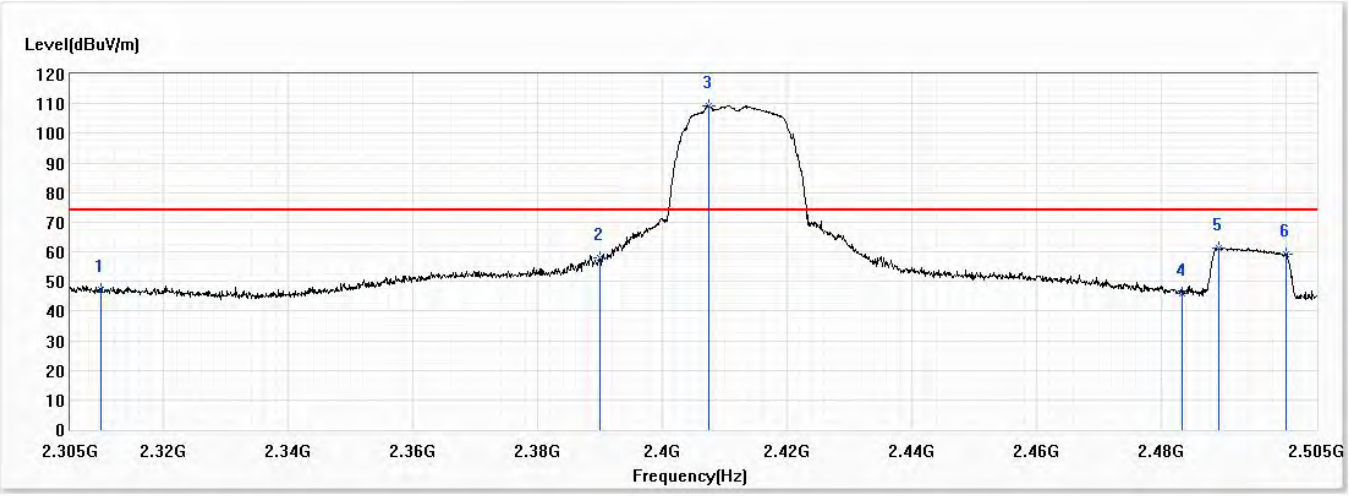


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	38.43	54.00	-15.57	25.28	13.15	AV
2	2390.000	38.40	54.00	-15.60	24.70	13.70	AV
! 3	2461.300	107.25	54.00	53.25	93.04	14.21	AV
4	2483.500	42.45	54.00	-11.55	28.09	14.36	AV
5	2495.300	50.72	54.00	-3.28	36.28	14.44	AV
6	2500.000	46.83	54.00	-7.17	32.35	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch1,2.412G,BW20M	Humidity (%RH)	55.0

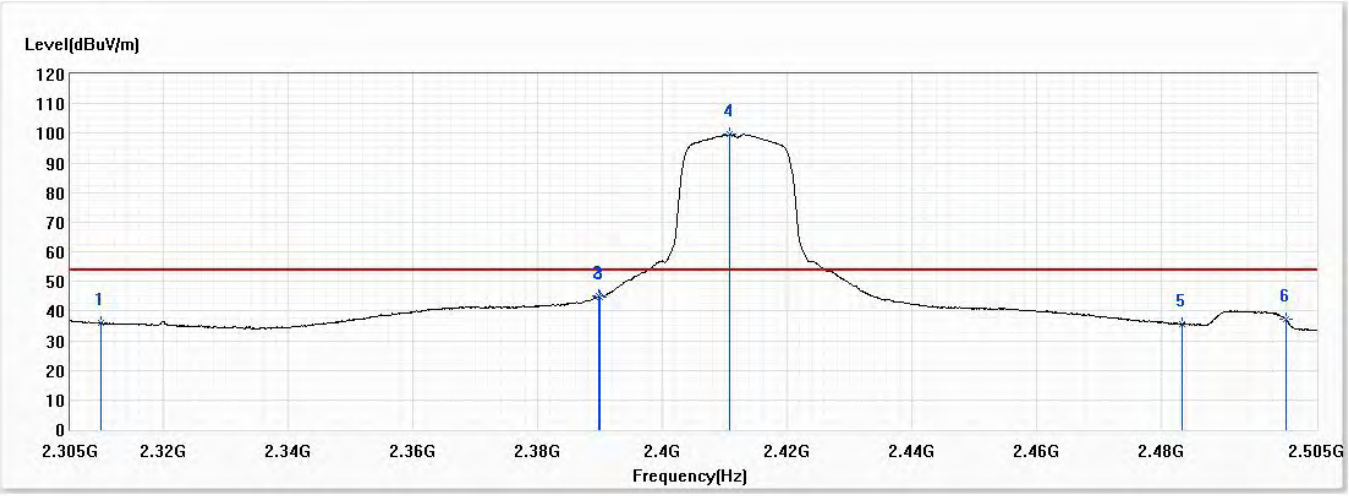


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	47.36	74.00	-26.64	34.21	13.15	PK
2	2390.000	57.85	74.00	-16.15	44.15	13.70	PK
! 3	2407.500	109.42	74.00	35.42	95.59	13.83	PK
4	2483.500	45.98	74.00	-28.02	31.62	14.36	PK
5	2489.300	61.34	74.00	-12.66	46.94	14.40	PK
6	2500.000	59.01	74.00	-14.99	44.53	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch1,2.412G,BW20M	Humidity (%RH)	55.0

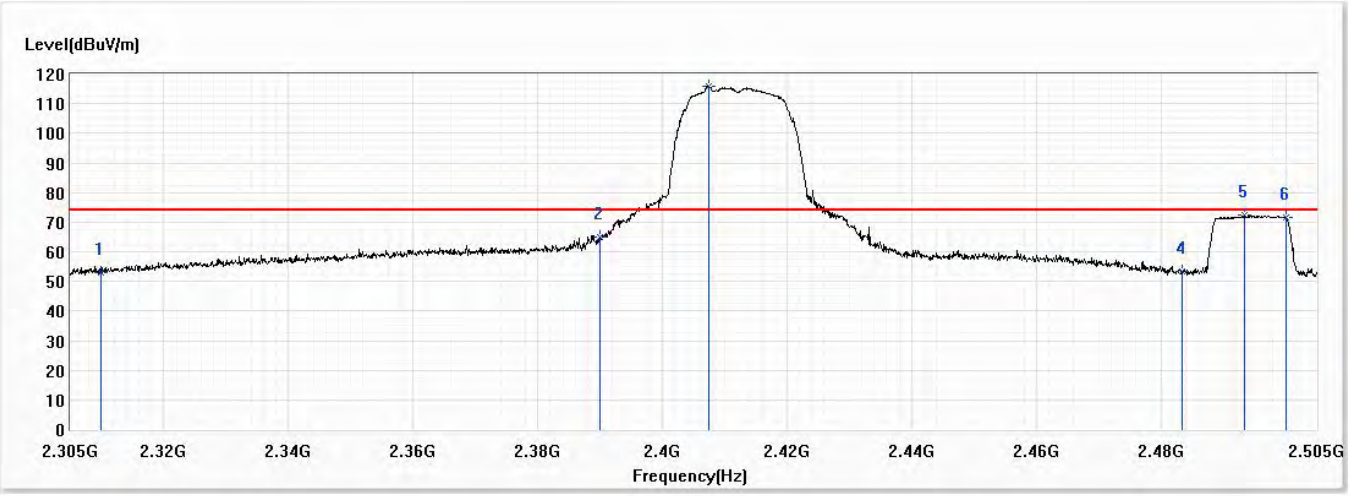


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	35.83	54.00	-18.17	22.68	13.15	AV
2	2389.700	44.93	54.00	-9.07	31.23	13.70	AV
3	2390.000	44.88	54.00	-9.12	31.18	13.70	AV
! 4	2410.800	99.67	54.00	45.67	85.82	13.85	AV
5	2483.500	35.56	54.00	-18.44	21.20	14.36	AV
6	2500.000	37.42	54.00	-16.58	22.94	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch1,2.412G,BW20M	Humidity (%RH)	55.0

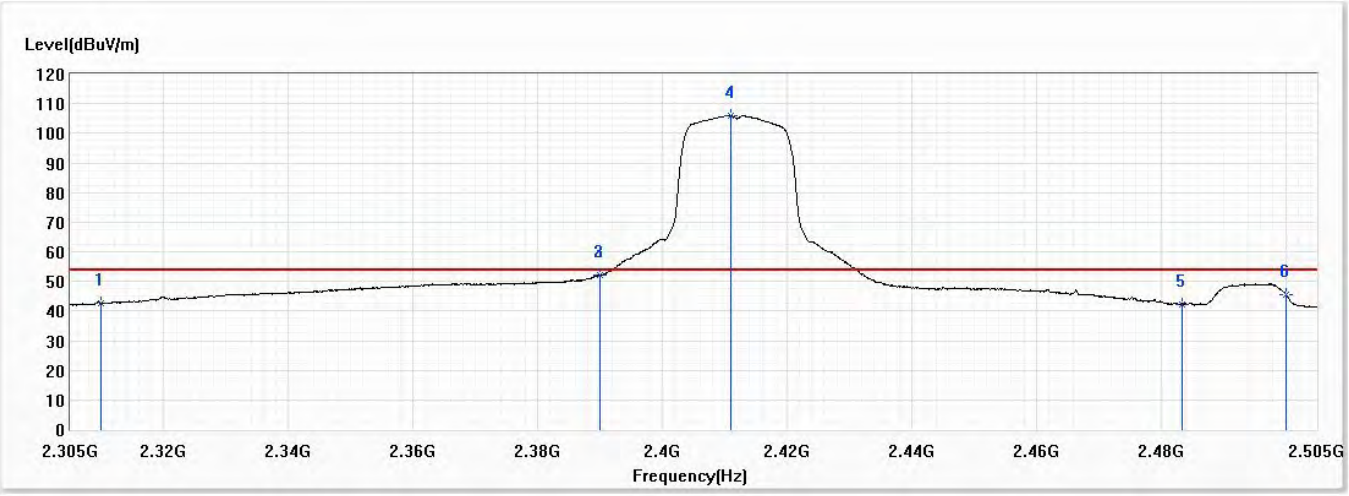


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	53.14	74.00	-20.86	39.99	13.15	PK
2	2390.000	64.92	74.00	-9.08	51.22	13.70	PK
! 3	2407.400	115.93	74.00	41.93	102.10	13.83	PK
4	2483.500	53.55	74.00	-20.45	39.19	14.36	PK
5	2493.500	72.24	74.00	-1.76	57.80	14.44	PK
6	2500.000	71.56	74.00	-2.44	57.08	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch1,2.412G,BW20M	Humidity (%RH)	55.0

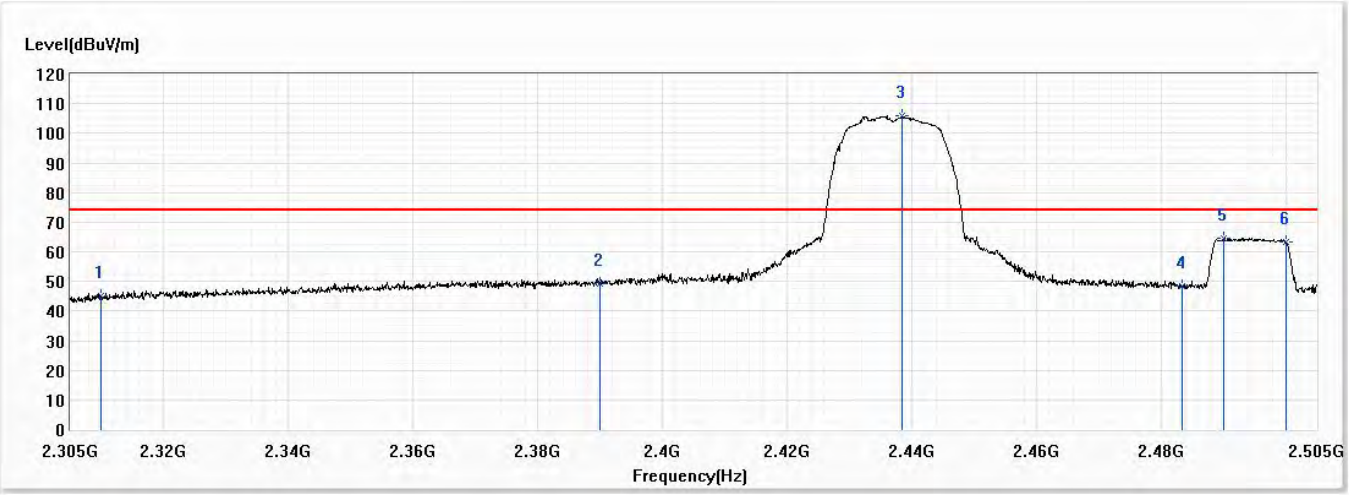


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	42.57	54.00	-11.43	29.42	13.15	AV
2	2389.900	52.07	54.00	-1.93	38.37	13.70	AV
3	2390.000	52.16	54.00	-1.84	38.46	13.70	AV
! 4	2410.900	106.12	54.00	52.12	92.27	13.85	AV
5	2483.500	42.15	54.00	-11.85	27.79	14.36	AV
6	2500.000	45.72	54.00	-8.28	31.24	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch 6,2.437G,BW20M	Humidity (%RH)	55.0

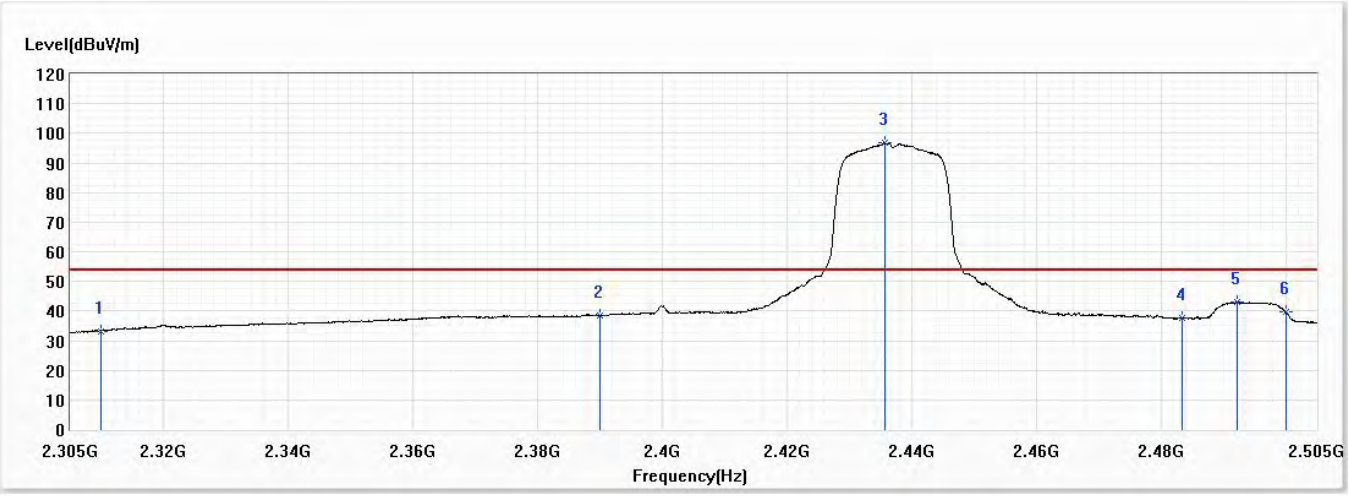


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	44.92	74.00	-29.08	31.77	13.15	PK
2	2390.000	49.43	74.00	-24.57	35.73	13.70	PK
! 3	2438.500	105.81	74.00	31.81	91.76	14.05	PK
4	2483.500	48.48	74.00	-25.52	34.12	14.36	PK
5	2490.100	64.68	74.00	-9.32	50.28	14.40	PK
6	2500.000	63.47	74.00	-10.53	48.99	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch 6,2.437G,BW20M	Humidity (%RH)	55.0

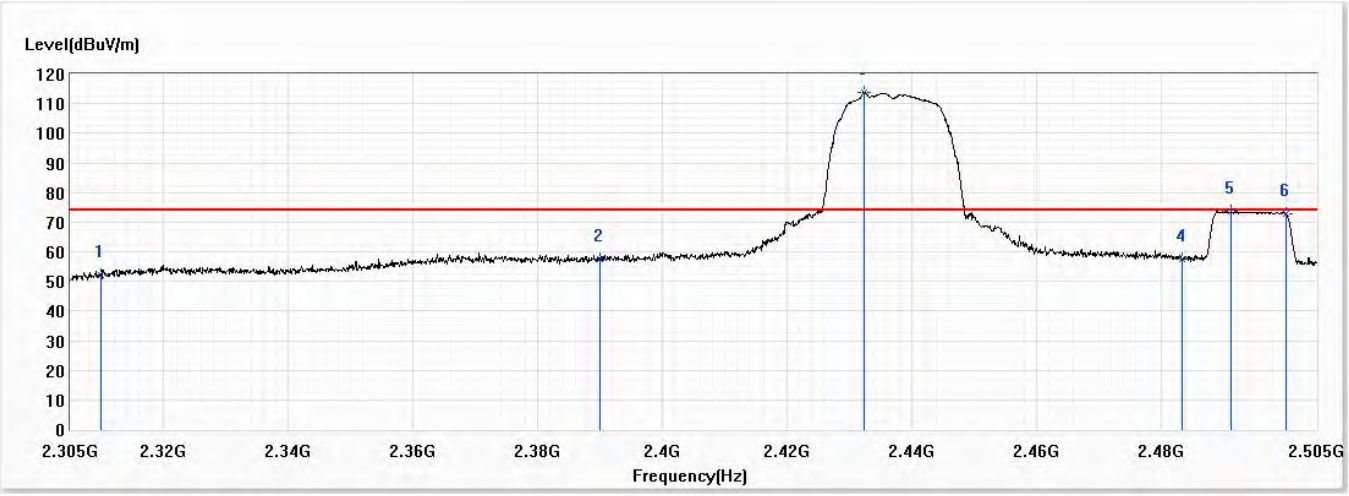


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	33.30	54.00	-20.70	20.15	13.15	AV
2	2390.000	38.58	54.00	-15.42	24.88	13.70	AV
! 3	2435.700	96.79	54.00	42.79	82.77	14.02	AV
4	2483.500	37.68	54.00	-16.32	23.32	14.36	AV
5	2492.300	42.91	54.00	-11.09	28.48	14.43	AV
6	2500.000	39.63	54.00	-14.37	25.15	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch6,2.437G,BW20M	Humidity (%RH)	55.0

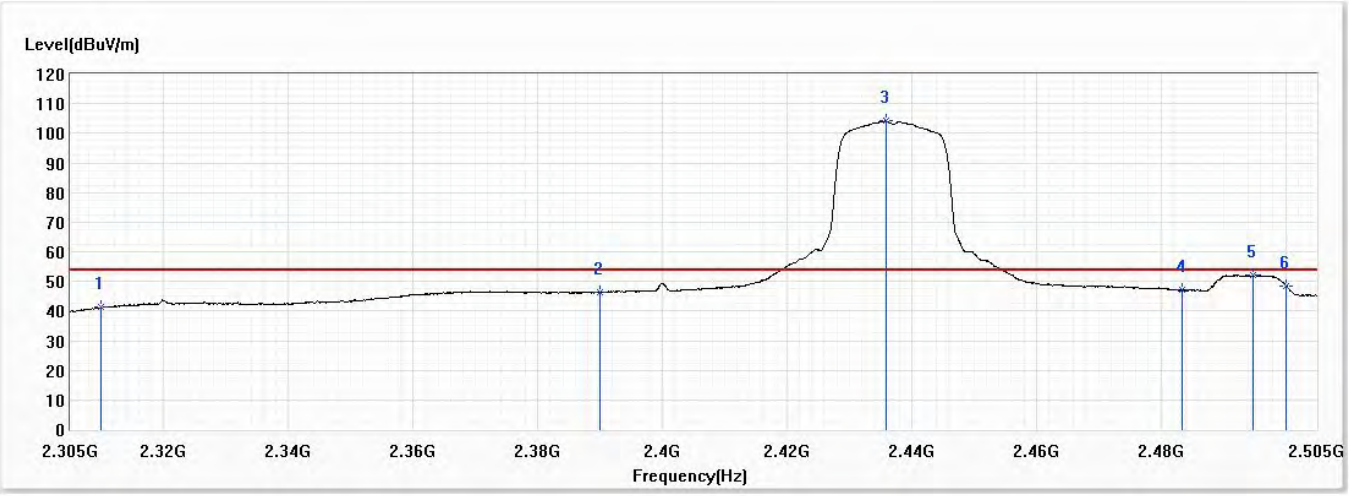


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	52.15	74.00	-21.85	39.00	13.15	PK
2	2390.000	57.51	74.00	-16.49	43.81	13.70	PK
! 3	2432.400	113.72	74.00	39.72	99.71	14.01	PK
4	2483.500	57.67	74.00	-16.33	43.31	14.36	PK
5	2491.200	73.45	74.00	-0.55	59.04	14.41	PK
6	2500.000	72.77	74.00	-1.23	58.29	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch 6,2.437G,BW20M	Humidity (%RH)	55.0

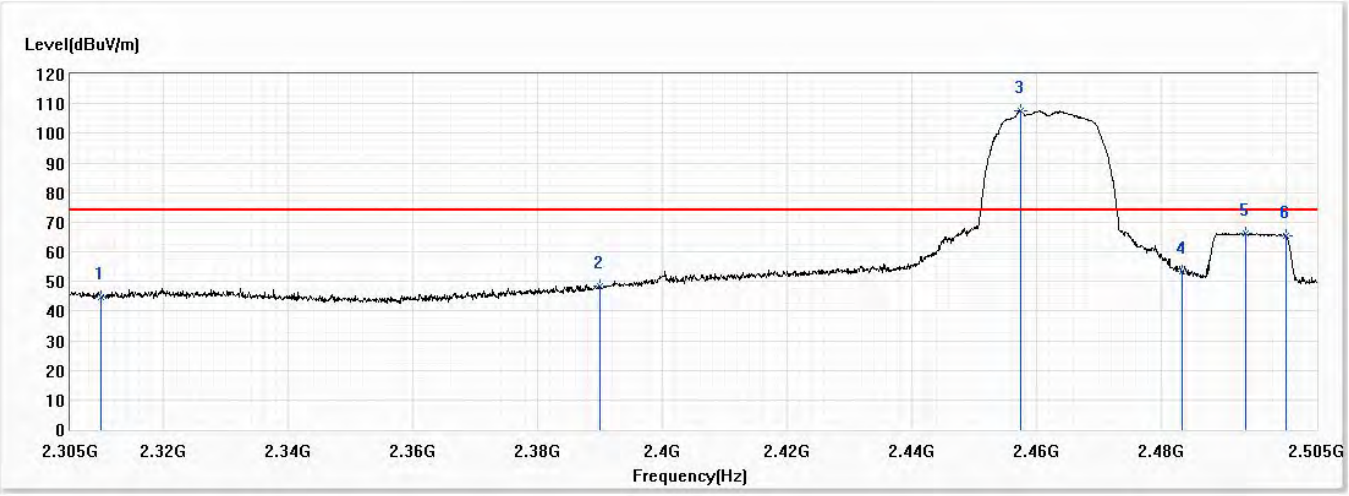


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	41.26	54.00	-12.74	28.11	13.15	AV
2	2390.000	46.33	54.00	-7.67	32.63	13.70	AV
! 3	2435.900	104.19	54.00	50.19	90.17	14.02	AV
4	2483.500	47.11	54.00	-6.89	32.75	14.36	AV
5	2494.800	52.14	54.00	-1.86	37.70	14.44	AV
6	2500.000	48.60	54.00	-5.40	34.12	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch 11,2.462G,BW20M	Humidity (%RH)	55.0

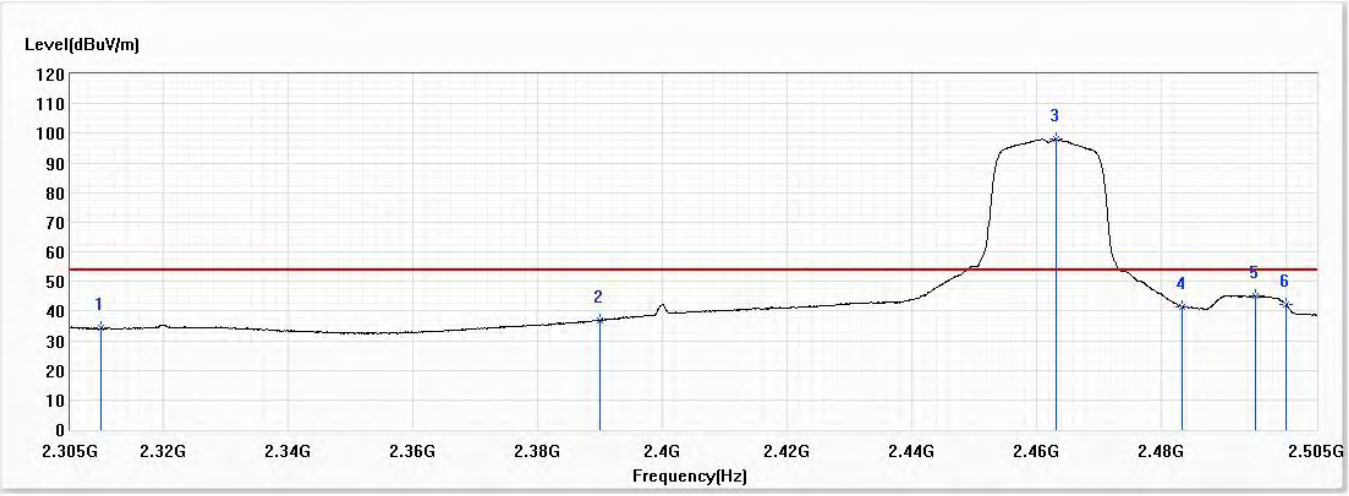


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	44.80	74.00	-29.20	31.65	13.15	PK
2	2390.000	48.35	74.00	-25.65	34.65	13.70	PK
! 3	2457.500	107.61	74.00	33.61	93.43	14.18	PK
4	2483.500	53.31	74.00	-20.69	38.95	14.36	PK
5	2493.600	66.11	74.00	-7.89	51.67	14.44	PK
6	2500.000	65.56	74.00	-8.44	51.08	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch 11,2.462G,BW20M	Humidity (%RH)	55.0

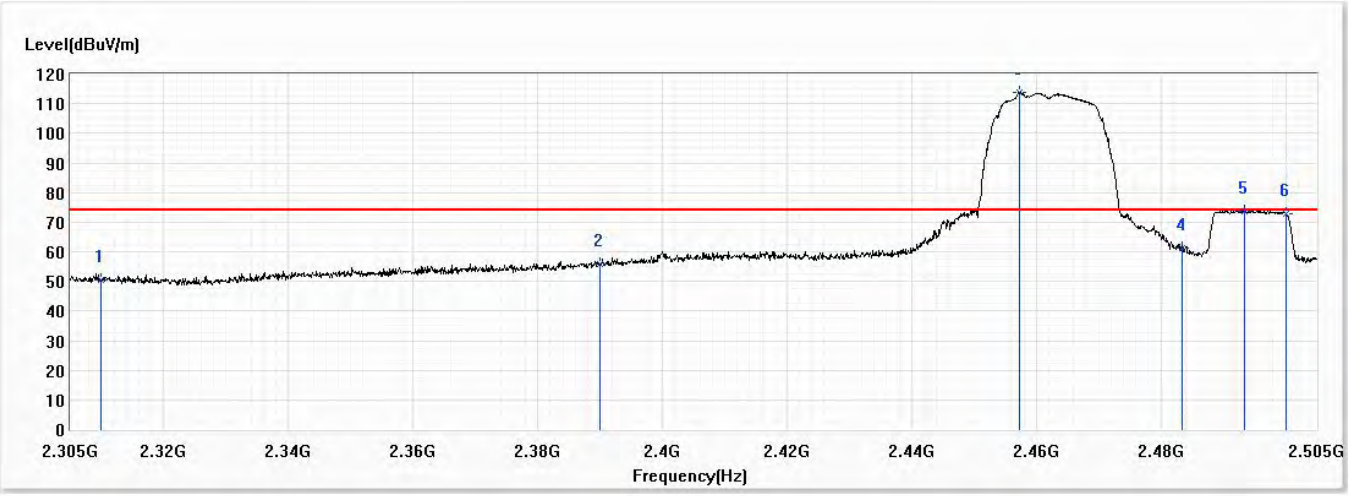


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	34.14	54.00	-19.86	20.99	13.15	AV
2	2390.000	36.82	54.00	-17.18	23.12	13.70	AV
! 3	2463.100	98.02	54.00	44.02	83.80	14.22	AV
4	2483.500	41.51	54.00	-12.49	27.15	14.36	AV
5	2495.100	45.01	54.00	-8.99	30.57	14.44	AV
6	2500.000	42.26	54.00	-11.74	27.78	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch 11,2.462G,BW20M	Humidity (%RH)	55.0

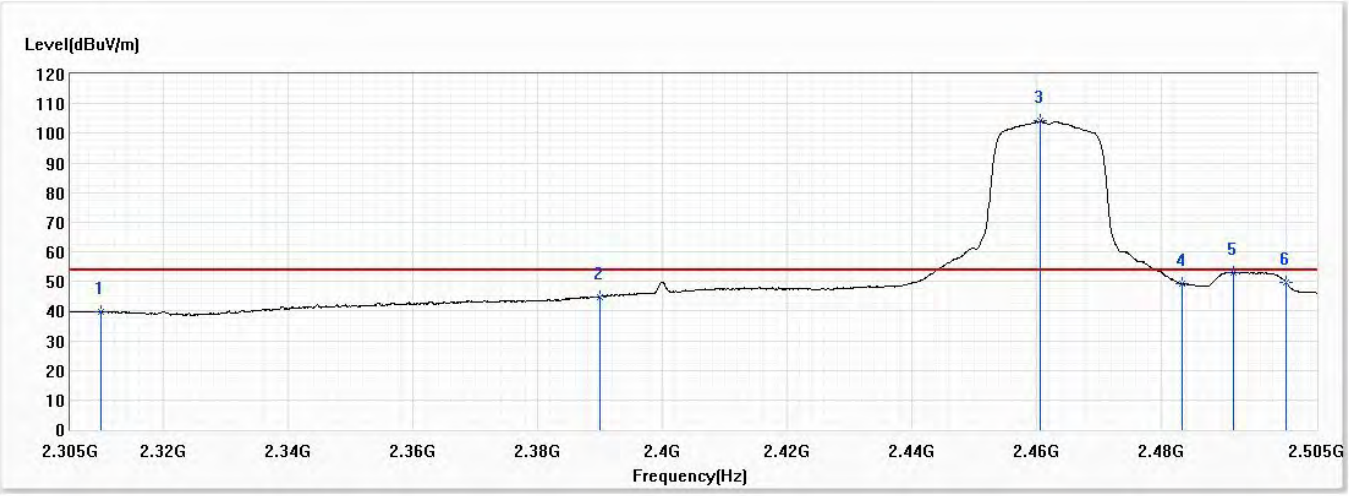


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	50.50	74.00	-23.50	37.35	13.15	PK
2	2390.000	55.90	74.00	-18.10	42.20	13.70	PK
! 3	2457.300	113.74	74.00	39.74	99.56	14.18	PK
4	2483.500	61.27	74.00	-12.73	46.91	14.36	PK
5	2493.500	73.61	74.00	-0.39	59.17	14.44	PK
6	2500.000	72.99	74.00	-1.01	58.51	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11g,Ant0,Ch 11,2.462G,BW20M	Humidity (%RH)	55.0

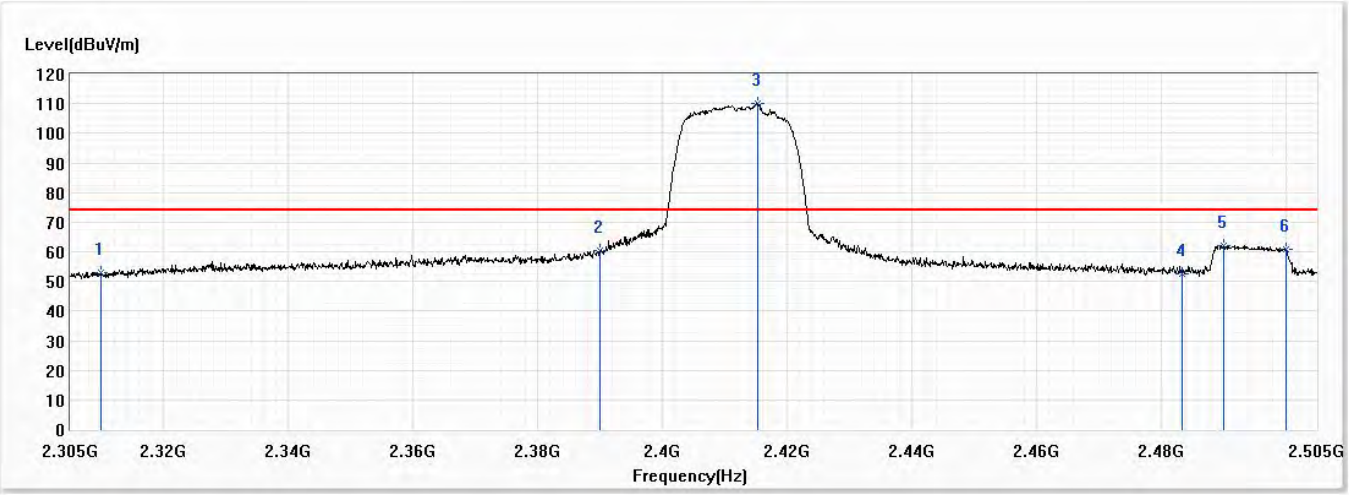


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	39.60	54.00	-14.40	26.45	13.15	AV
2	2390.000	44.86	54.00	-9.14	31.16	13.70	AV
! 3	2460.700	104.12	54.00	50.12	89.92	14.20	AV
4	2483.500	49.12	54.00	-4.88	34.76	14.36	AV
5	2491.600	53.10	54.00	-0.90	38.68	14.42	AV
6	2500.000	49.76	54.00	-4.24	35.28	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 1,2.412G,BW20M	Humidity (%RH)	55.0

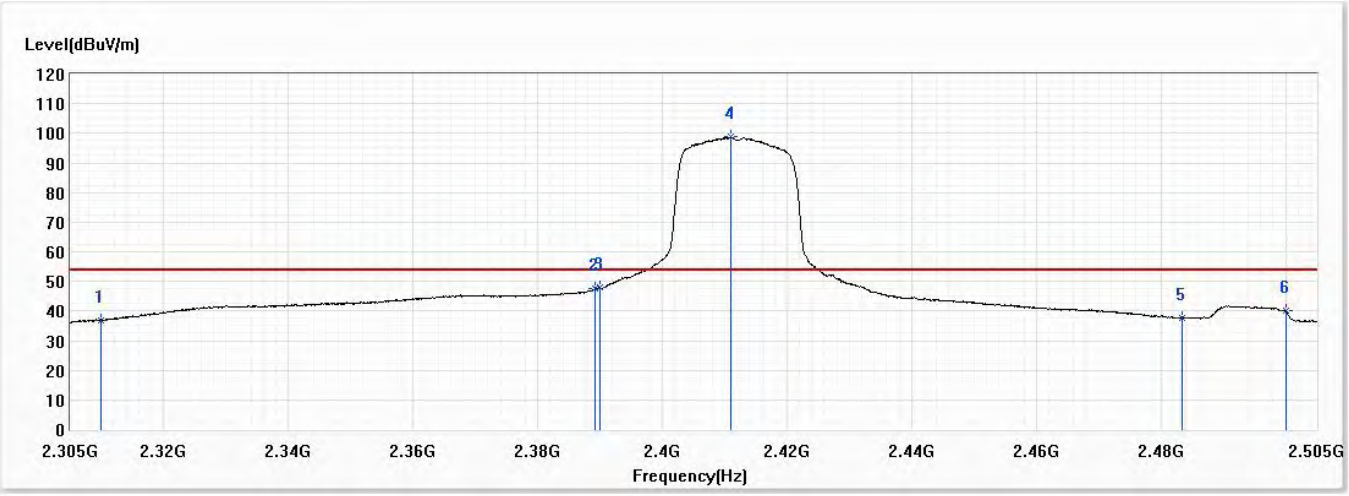


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	52.91	74.00	-21.09	39.76	13.15	PK
2	2390.000	60.26	74.00	-13.74	46.56	13.70	PK
! 3	2415.300	109.97	74.00	35.97	96.08	13.89	PK
4	2483.500	52.68	74.00	-21.32	38.32	14.36	PK
5	2490.100	62.22	74.00	-11.78	47.82	14.40	PK
6	2500.000	60.88	74.00	-13.12	46.40	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 1,2.412G,BW20M	Humidity (%RH)	55.0

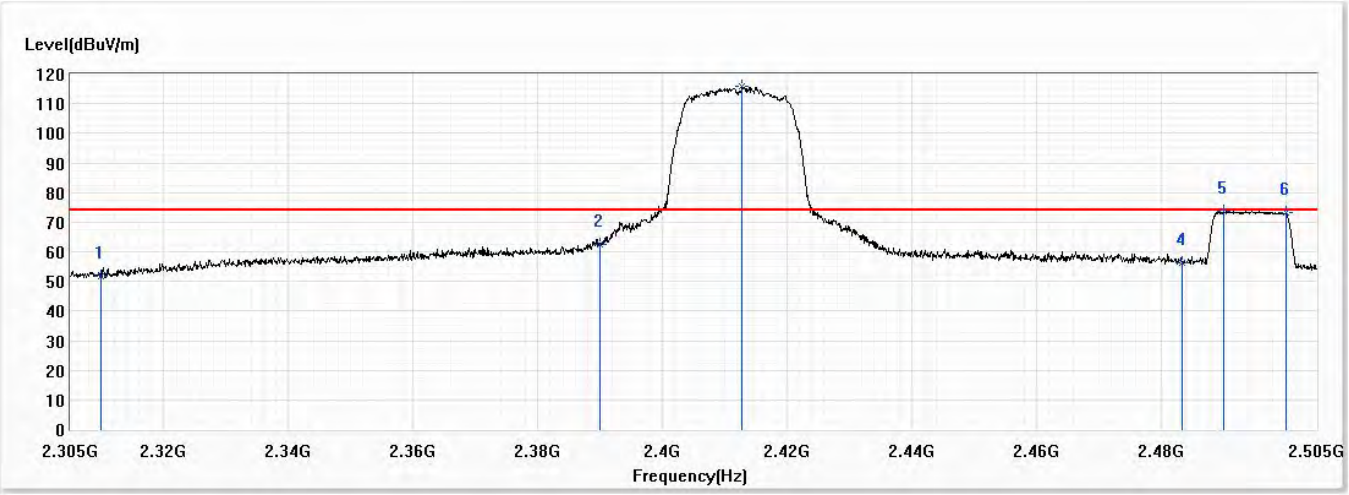


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	37.01	54.00	-16.99	23.86	13.15	AV
2	2389.200	47.46	54.00	-6.54	33.76	13.70	AV
3	2390.000	47.84	54.00	-6.16	34.14	13.70	AV
! 4	2411.000	98.69	54.00	44.69	84.84	13.85	AV
5	2483.500	37.61	54.00	-16.39	23.25	14.36	AV
6	2500.000	40.05	54.00	-13.95	25.57	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 1,2.412G,BW20M	Humidity (%RH)	55.0

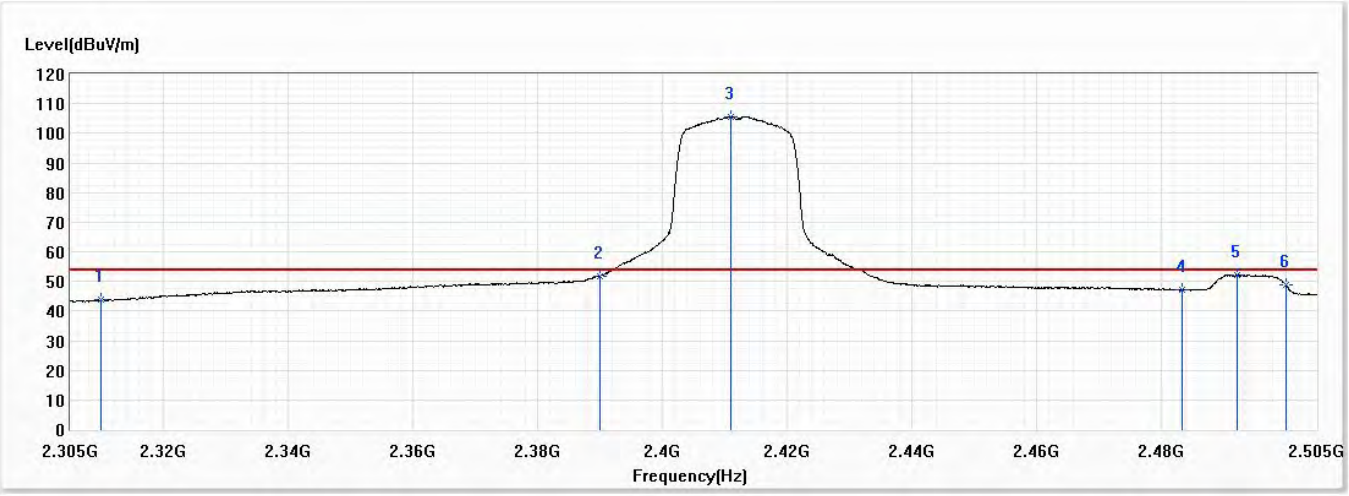


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	51.77	74.00	-22.23	38.62	13.15	PK
2	2390.000	62.31	74.00	-11.69	48.61	13.70	PK
! 3	2412.800	115.69	74.00	41.69	101.82	13.87	PK
4	2483.500	56.20	74.00	-17.80	41.84	14.36	PK
5	2490.000	73.69	74.00	-0.31	59.29	14.40	PK
6	2500.000	73.25	74.00	-0.75	58.77	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/15
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	SISO,802.11n,Ant0+1,Ch 1,2.412G,BW20M	Humidity (%RH)	55.0

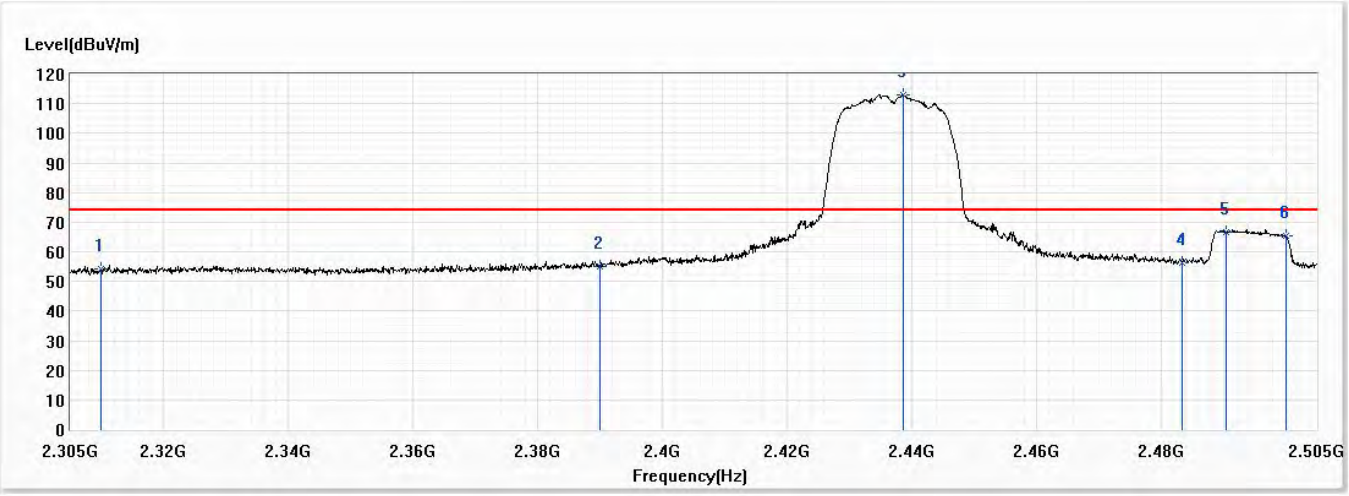


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	43.66	54.00	-10.34	30.49	13.17	AV
2	2390.000	51.90	54.00	-2.10	38.14	13.76	AV
! 3	2410.900	105.72	54.00	51.72	91.81	13.91	AV
4	2483.500	47.20	54.00	-6.80	32.75	14.45	AV
5	2492.300	52.29	54.00	-1.71	37.76	14.53	AV
6	2500.000	48.84	54.00	-5.16	34.26	14.58	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/16
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 6,2.437G,BW20M	Humidity (%RH)	55.0

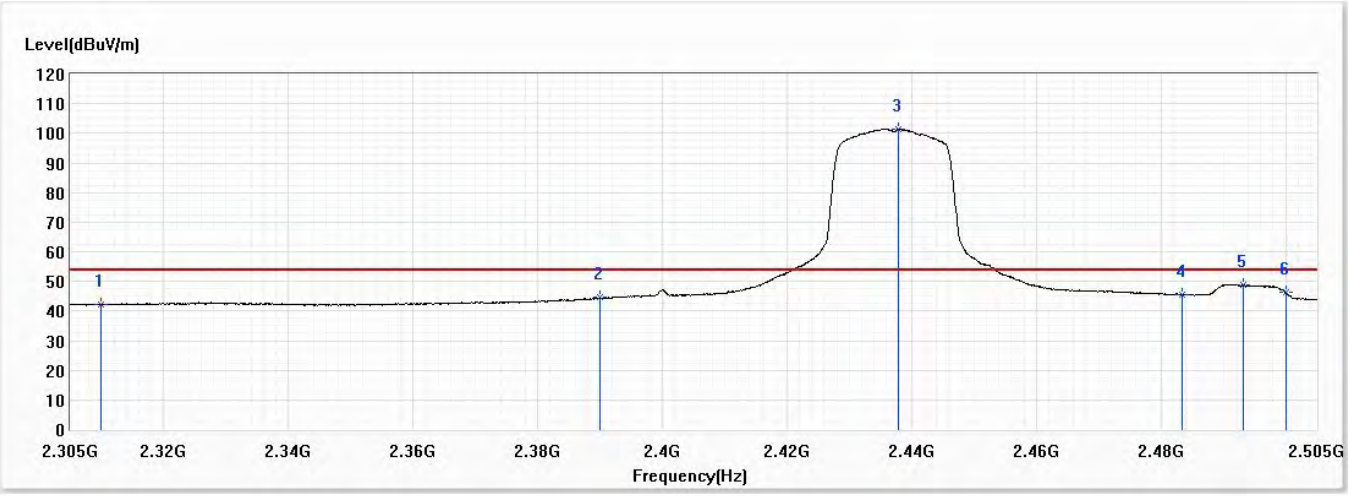


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	54.09	74.00	-19.91	40.94	13.15	PK
2	2390.000	55.12	74.00	-18.88	41.42	13.70	PK
! 3	2438.600	113.07	74.00	39.07	99.02	14.05	PK
4	2483.500	56.33	74.00	-17.67	41.97	14.36	PK
5	2490.500	66.76	74.00	-7.24	52.35	14.41	PK
6	2500.000	65.28	74.00	-8.72	50.80	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/16
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 6,2.437G,BW20M	Humidity (%RH)	55.0

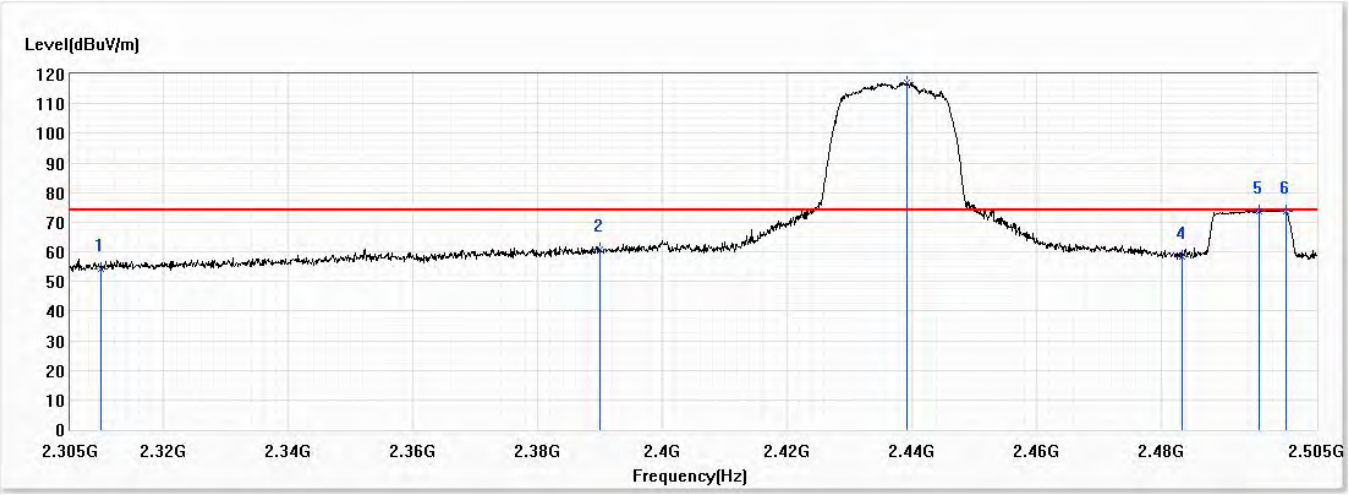


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	42.17	54.00	-11.83	29.02	13.15	AV
2	2390.000	44.51	54.00	-9.49	30.81	13.70	AV
! 3	2437.900	101.53	54.00	47.53	87.48	14.05	AV
4	2483.500	45.46	54.00	-8.54	31.10	14.36	AV
5	2493.300	48.77	54.00	-5.23	34.33	14.44	AV
6	2500.000	46.22	54.00	-7.78	31.74	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/16
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 6,2.437G,BW20M	Humidity (%RH)	55.0

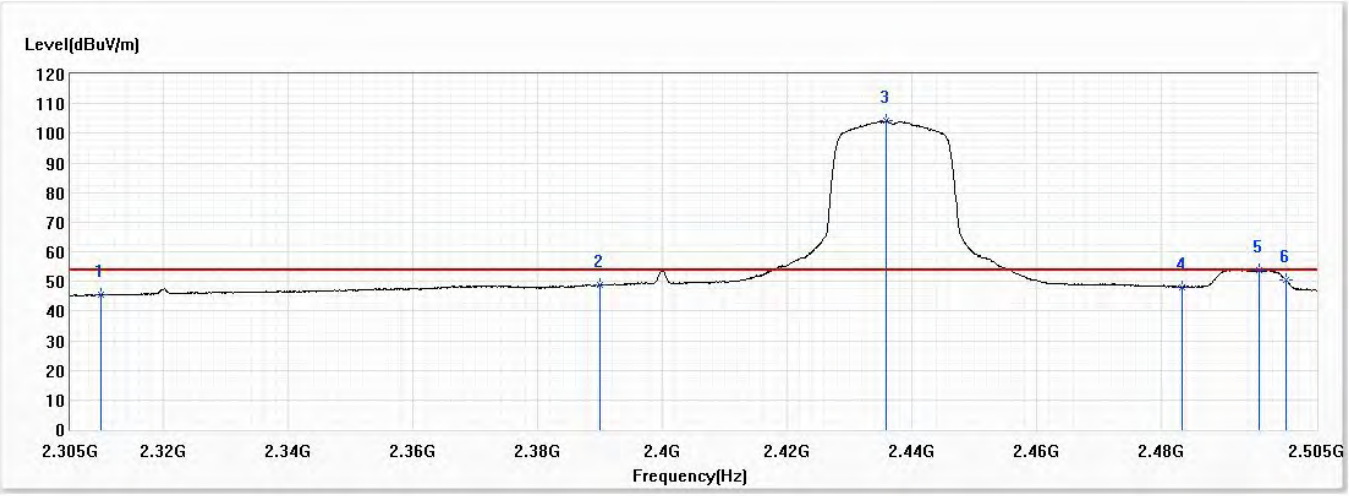


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	54.38	74.00	-19.62	41.21	13.17	PK
2	2390.000	60.88	74.00	-13.12	47.12	13.76	PK
! 3	2439.300	116.95	74.00	42.95	102.82	14.13	PK
4	2483.500	58.38	74.00	-15.62	43.93	14.45	PK
5	2495.800	73.78	74.00	-0.22	59.24	14.54	PK
6	2500.000	73.77	74.00	-0.23	59.19	14.58	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/16
Test Mode	Mode 1: Transmit Mode	Engineer	Marisa Chen
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 6,2.437G,BW20M	Humidity (%RH)	55.0

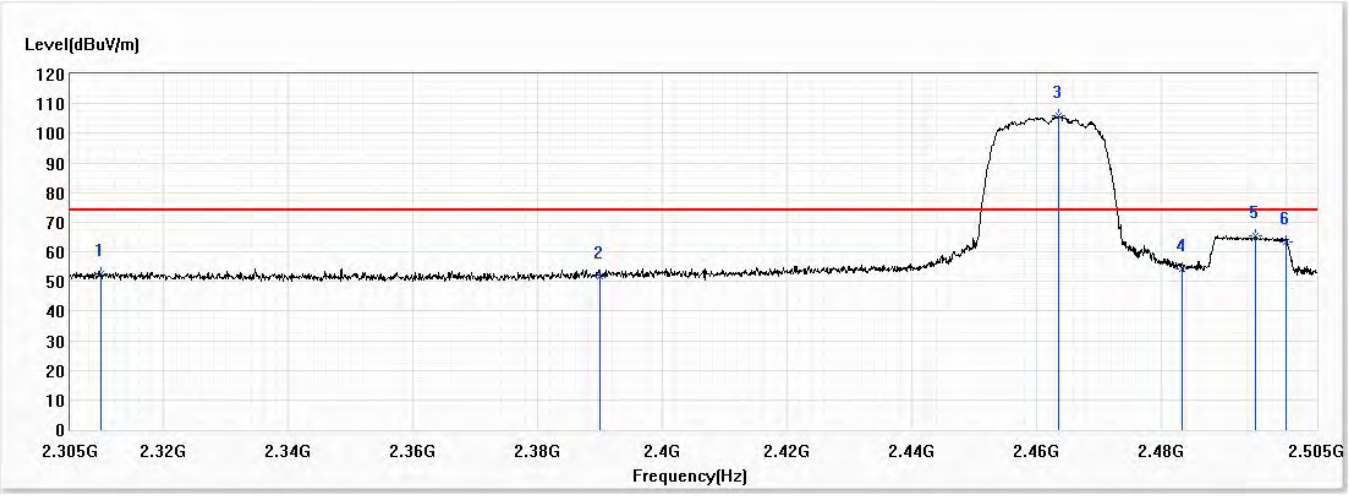


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	45.41	54.00	-8.59	32.24	13.17	AV
2	2390.000	48.78	54.00	-5.22	35.02	13.76	AV
! 3	2435.900	104.20	54.00	50.20	90.11	14.09	AV
4	2483.500	48.02	54.00	-5.98	33.57	14.45	AV
5	2495.700	53.97	54.00	-0.03	39.43	14.54	AV
6	2500.000	50.65	54.00	-3.35	36.07	14.58	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/16
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 11,2.462G,BW20M	Humidity (%RH)	55.0

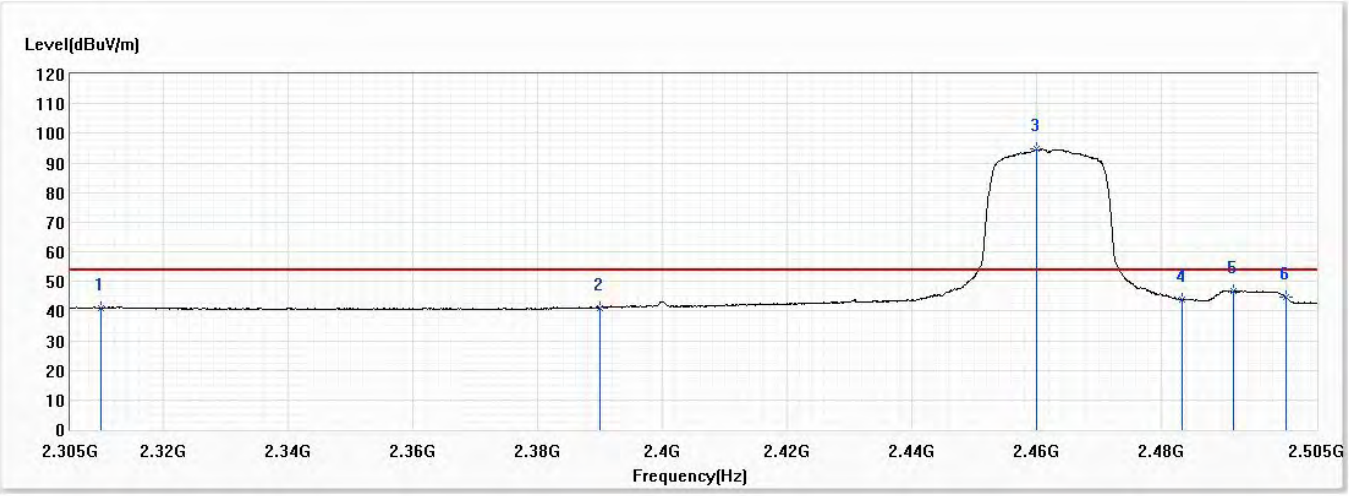


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	52.67	74.00	-21.33	39.52	13.15	PK
2	2390.000	51.70	74.00	-22.30	38.00	13.70	PK
! 3	2463.500	106.02	74.00	32.02	91.80	14.22	PK
4	2483.500	54.11	74.00	-19.89	39.75	14.36	PK
5	2495.200	65.35	74.00	-8.65	50.91	14.44	PK
6	2500.000	63.29	74.00	-10.71	48.81	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/16
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 11,2.462G,BW20M	Humidity (%RH)	55.0

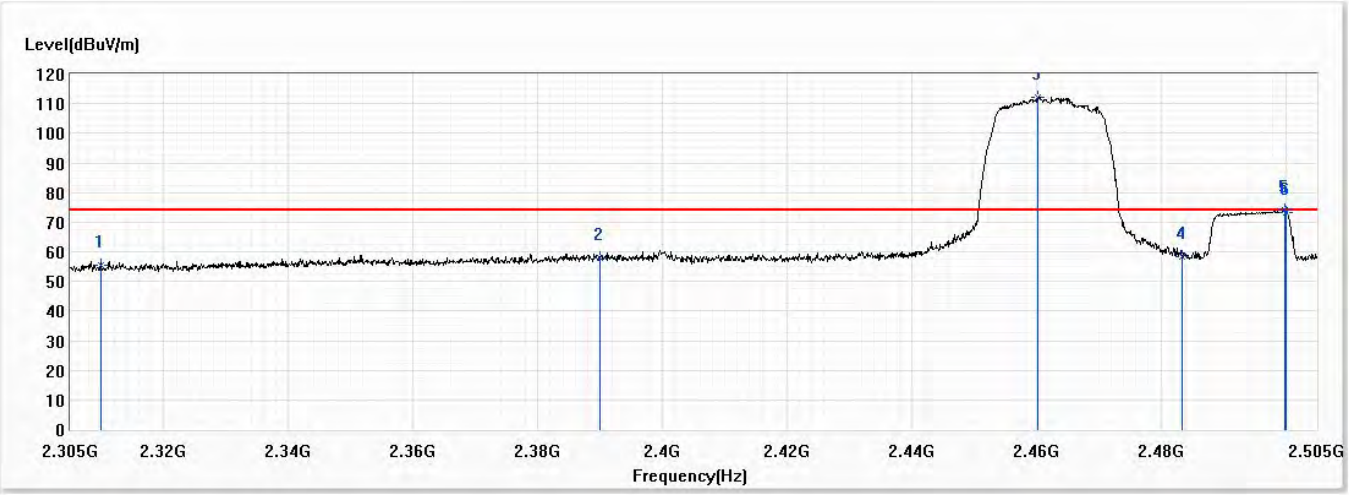


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	41.07	54.00	-12.93	27.92	13.15	AV
2	2390.000	40.99	54.00	-13.01	27.29	13.70	AV
! 3	2460.100	94.65	54.00	40.65	80.45	14.20	AV
4	2483.500	43.68	54.00	-10.32	29.32	14.36	AV
5	2491.700	46.74	54.00	-7.26	32.31	14.43	AV
6	2500.000	44.76	54.00	-9.24	30.28	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/16
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 11,2.462G,BW20M	Humidity (%RH)	55.0

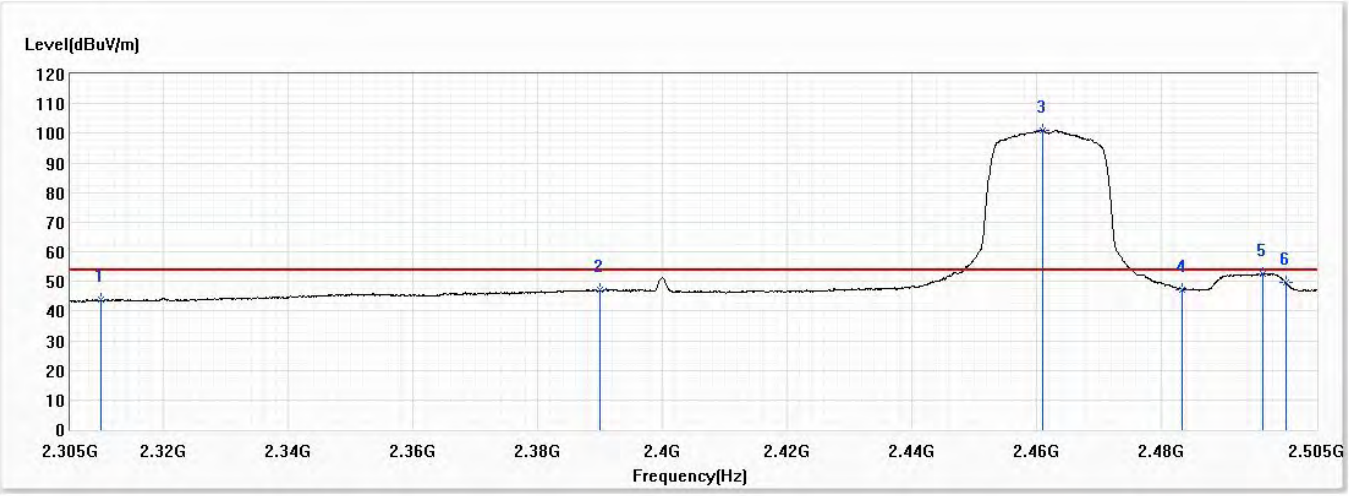


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	55.35	74.00	-18.65	42.20	13.15	PK
2	2390.000	57.94	74.00	-16.06	44.24	13.70	PK
! 3	2460.200	112.20	74.00	38.20	98.00	14.20	PK
4	2483.500	58.38	74.00	-15.62	44.02	14.36	PK
5	2499.800	73.87	74.00	-0.13	59.39	14.48	PK
6	2500.000	73.41	74.00	-0.59	58.93	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/16
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 11,2.462G,BW20M	Humidity (%RH)	55.0

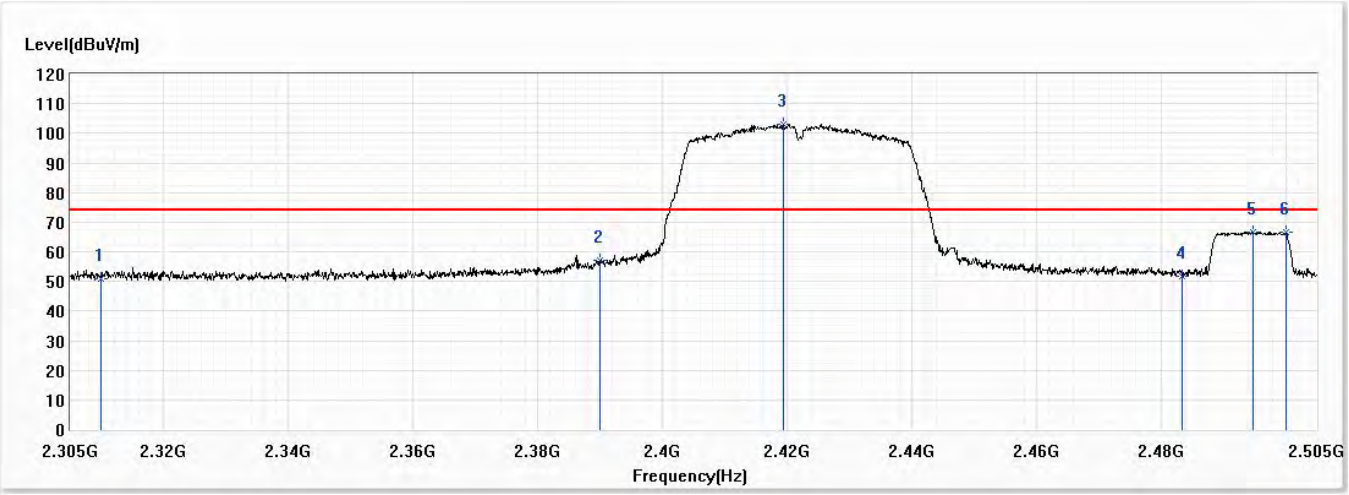


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	43.72	54.00	-10.28	30.57	13.15	AV
2	2390.000	47.00	54.00	-7.00	33.30	13.70	AV
! 3	2461.100	101.12	54.00	47.12	86.91	14.21	AV
4	2483.500	47.23	54.00	-6.77	32.87	14.36	AV
5	2496.400	52.51	54.00	-1.49	38.06	14.45	AV
6	2500.000	49.82	54.00	-4.18	35.34	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/16
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 3,2.422G,BW40M	Humidity (%RH)	55.0

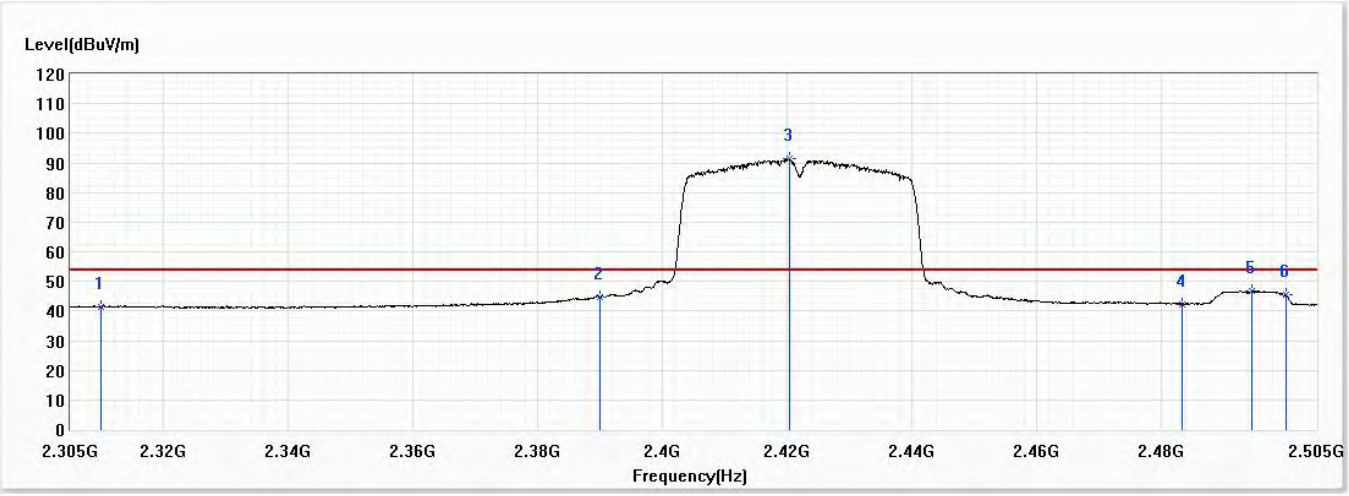


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	50.97	74.00	-23.03	37.82	13.15	PK
2	2390.000	57.14	74.00	-16.86	43.44	13.70	PK
! 3	2419.400	102.91	74.00	28.91	89.00	13.91	PK
4	2483.500	51.83	74.00	-22.17	37.47	14.36	PK
5	2494.800	66.73	74.00	-7.27	52.29	14.44	PK
6	2500.000	66.46	74.00	-7.54	51.98	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/16
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 3,2.422G,BW40M	Humidity (%RH)	55.0

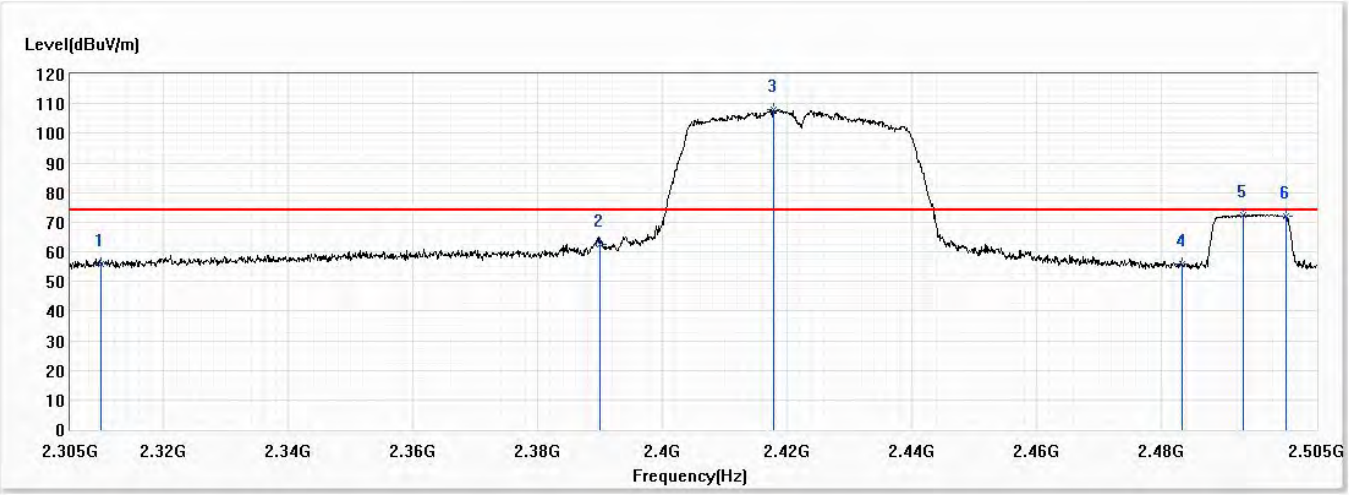


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	41.42	54.00	-12.58	28.27	13.15	AV
2	2390.000	44.82	54.00	-9.18	31.12	13.70	AV
! 3	2420.500	91.33	54.00	37.33	77.41	13.92	AV
4	2483.500	42.40	54.00	-11.60	28.04	14.36	AV
5	2494.600	46.88	54.00	-7.12	32.44	14.44	AV
6	2500.000	45.40	54.00	-8.60	30.92	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/16
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 3,2.422G,BW40M	Humidity (%RH)	55.0

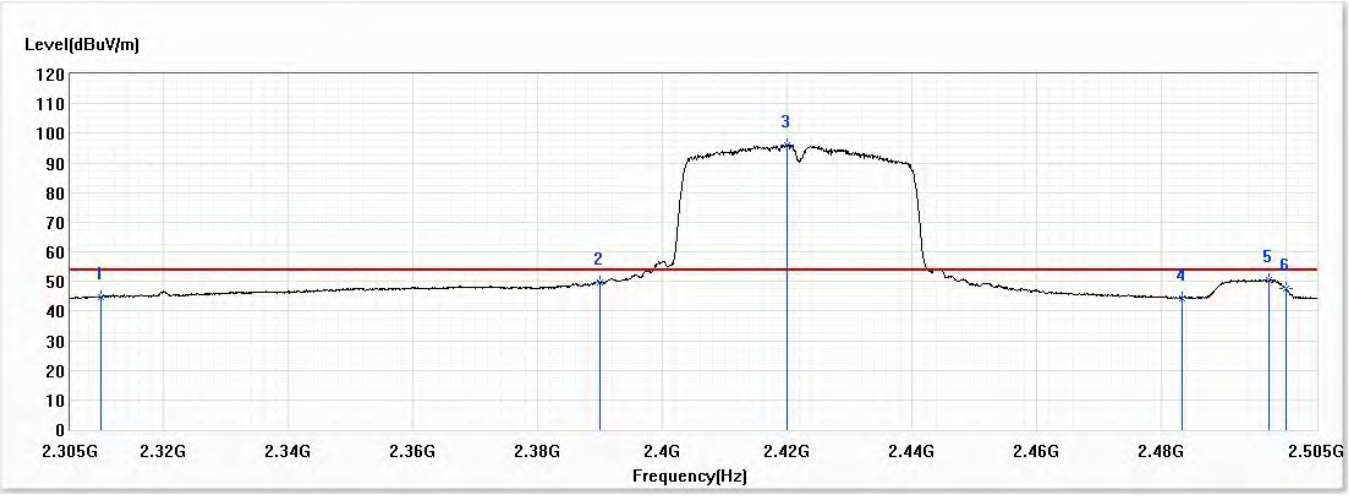


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	55.92	74.00	-18.08	42.77	13.15	PK
2	2390.000	62.67	74.00	-11.33	48.97	13.70	PK
! 3	2417.800	107.99	74.00	33.99	94.09	13.90	PK
4	2483.500	55.99	74.00	-18.01	41.63	14.36	PK
5	2493.300	72.50	74.00	-1.50	58.06	14.44	PK
6	2500.000	72.05	74.00	-1.95	57.57	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/16
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 3,2.422G,BW40M	Humidity (%RH)	55.0

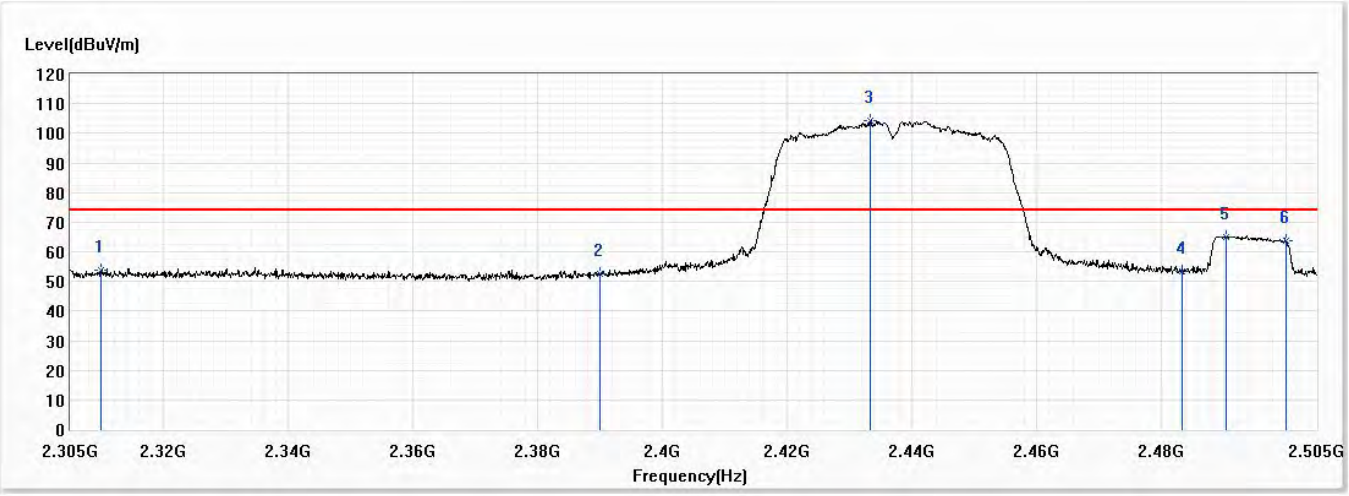


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	44.76	54.00	-9.24	31.61	13.15	AV
2	2390.000	49.77	54.00	-4.23	36.07	13.70	AV
! 3	2420.000	96.18	54.00	42.18	82.26	13.92	AV
4	2483.500	44.28	54.00	-9.72	29.92	14.36	AV
5	2497.400	50.57	54.00	-3.43	36.11	14.46	AV
6	2500.000	47.56	54.00	-6.44	33.08	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 6,2.437G,BW40M	Humidity (%RH)	55.0

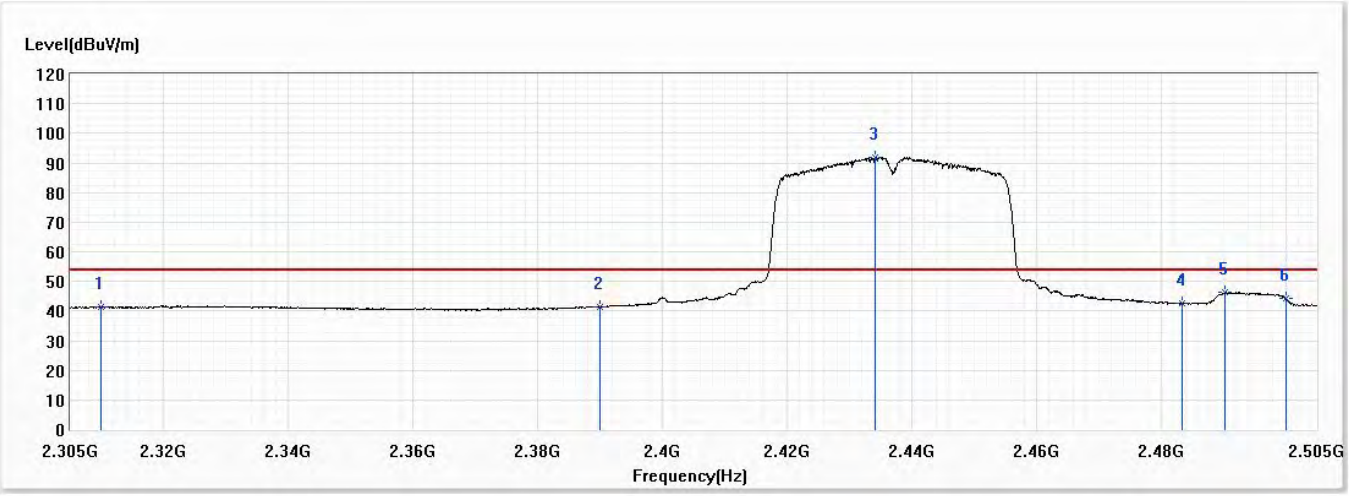


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	53.86	74.00	-20.14	40.71	13.15	PK
2	2390.000	52.68	74.00	-21.32	38.98	13.70	PK
! 3	2433.400	104.24	74.00	30.24	90.23	14.01	PK
4	2483.500	53.50	74.00	-20.50	39.14	14.36	PK
5	2490.500	65.17	74.00	-8.83	50.76	14.41	PK
6	2500.000	63.64	74.00	-10.36	49.16	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 6,2.437G,BW40M	Humidity (%RH)	55.0

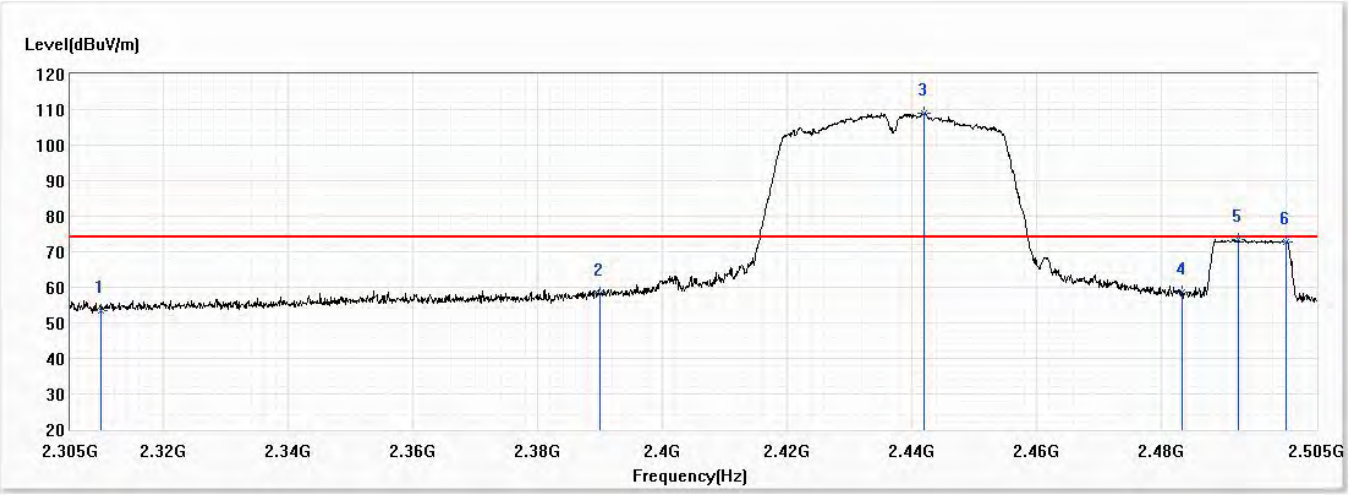


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	41.33	54.00	-12.67	28.18	13.15	AV
2	2390.000	41.27	54.00	-12.73	27.57	13.70	AV
! 3	2434.200	91.96	54.00	37.96	77.95	14.01	AV
4	2483.500	42.42	54.00	-11.58	28.06	14.36	AV
5	2490.300	46.22	54.00	-7.78	31.81	14.41	AV
6	2500.000	44.11	54.00	-9.89	29.63	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 6,2.437G,BW40M	Humidity (%RH)	55.0

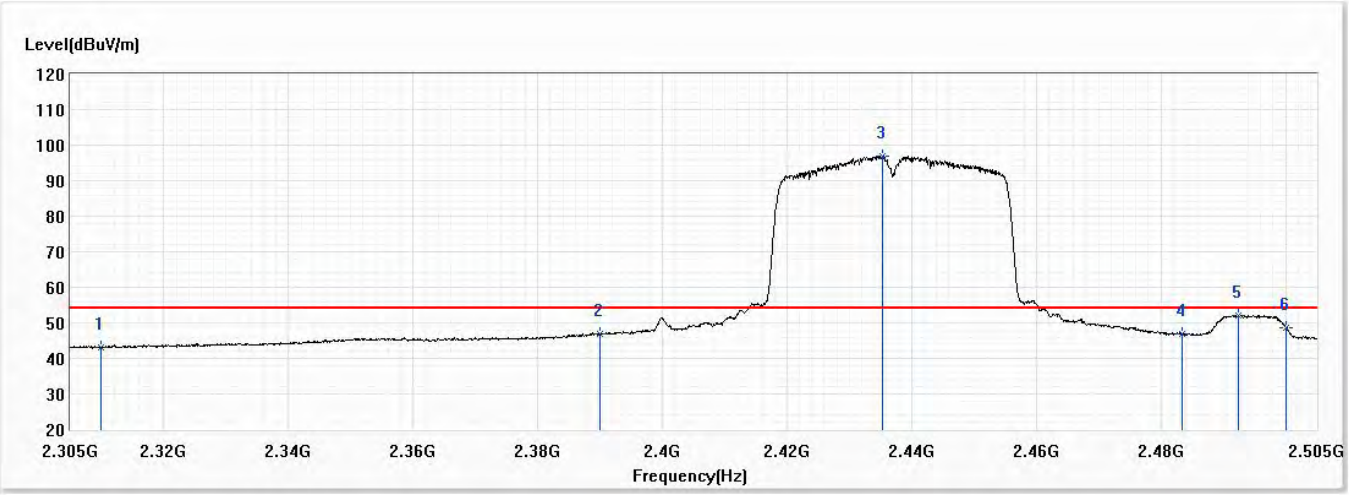


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	53.49	74.00	-20.51	40.34	13.15	PK
2	2390.000	58.39	74.00	-15.61	44.69	13.70	PK
! 3	2442.000	109.11	74.00	35.11	95.04	14.07	PK
4	2483.500	58.68	74.00	-15.32	44.32	14.36	PK
5	2492.400	73.50	74.00	-0.50	59.07	14.43	PK
6	2500.000	72.72	74.00	-1.28	58.24	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 6,2.437G,BW40M	Humidity (%RH)	55.0

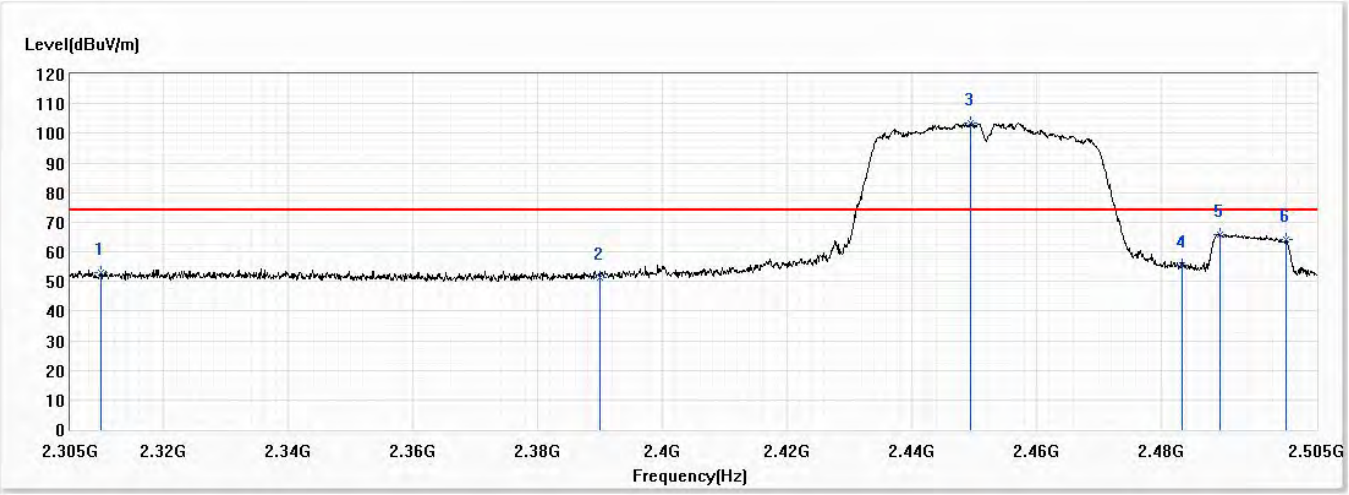


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	43.07	54.00	-10.93	29.92	13.15	AV
2	2390.000	46.80	54.00	-7.20	33.10	13.70	AV
! 3	2435.400	97.04	54.00	43.04	83.02	14.02	AV
4	2483.500	46.80	54.00	-7.20	32.44	14.36	AV
5	2492.500	52.16	54.00	-1.84	37.73	14.43	AV
6	2500.000	48.78	54.00	-5.22	34.30	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 9,2.452G,BW40M	Humidity (%RH)	55.0

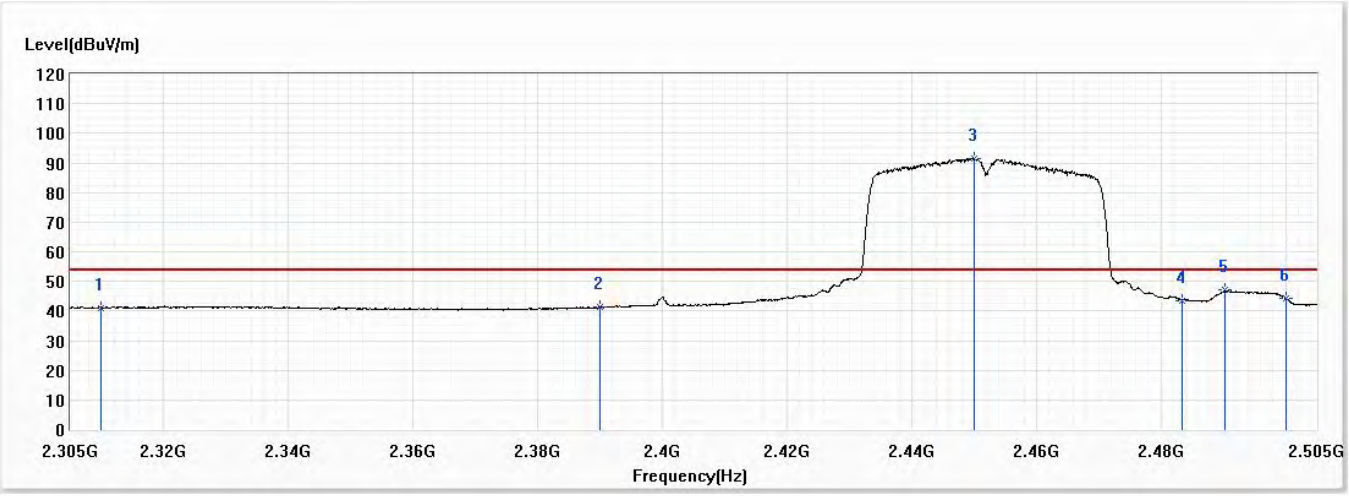


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	53.11	74.00	-20.89	39.96	13.15	PK
2	2390.000	51.48	74.00	-22.52	37.78	13.70	PK
! 3	2449.400	103.60	74.00	29.60	89.47	14.13	PK
4	2483.500	55.54	74.00	-18.46	41.18	14.36	PK
5	2489.400	65.84	74.00	-8.16	51.44	14.40	PK
6	2500.000	64.02	74.00	-9.98	49.54	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Horizontal	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 9,2.452G,BW40M	Humidity (%RH)	55.0

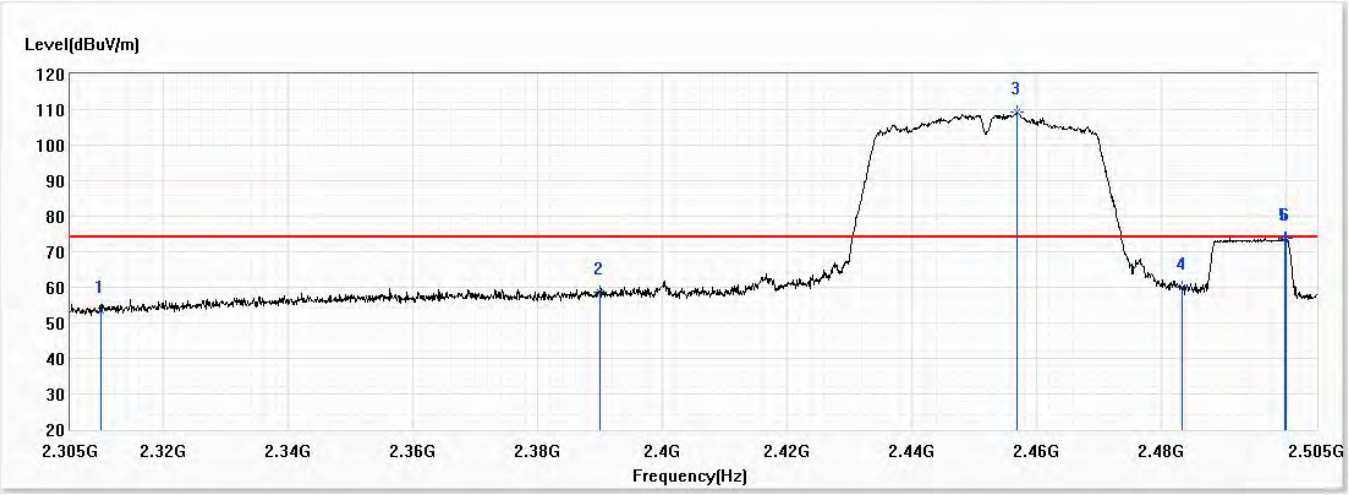


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	41.09	54.00	-12.91	27.94	13.15	AV
2	2390.000	41.35	54.00	-12.65	27.65	13.70	AV
! 3	2450.000	91.51	54.00	37.51	77.38	14.13	AV
4	2483.500	43.58	54.00	-10.42	29.22	14.36	AV
5	2490.200	47.04	54.00	-6.96	32.64	14.40	AV
6	2500.000	44.39	54.00	-9.61	29.91	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 9,2.452G,BW40M	Humidity (%RH)	55.0

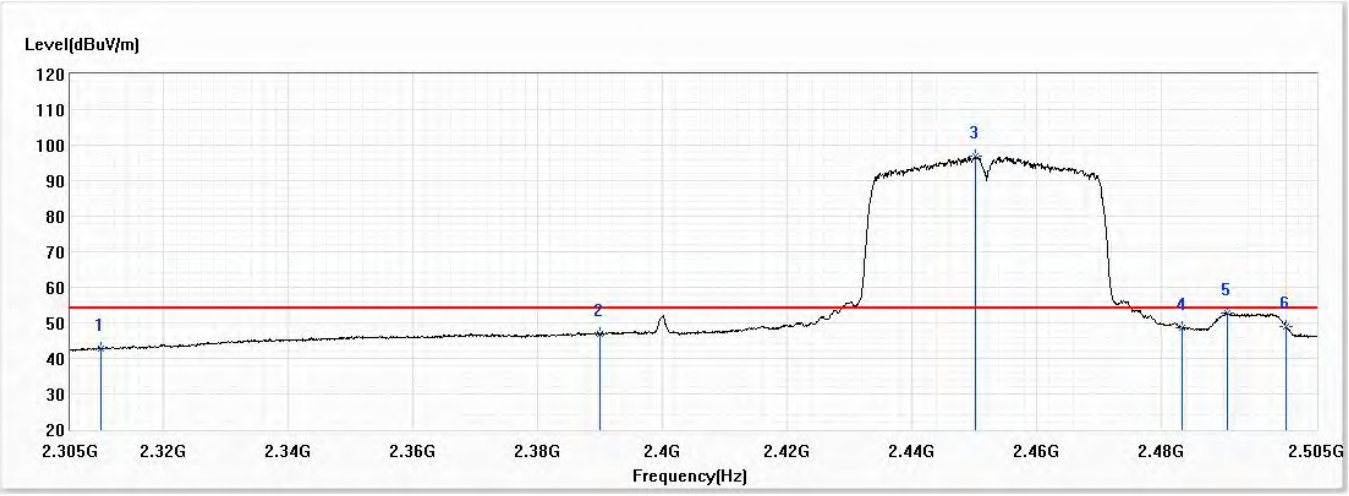


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	53.34	74.00	-20.66	40.19	13.15	PK
2	2390.000	58.47	74.00	-15.53	44.77	13.70	PK
! 3	2457.000	109.18	74.00	35.18	95.00	14.18	PK
4	2483.500	60.01	74.00	-13.99	45.65	14.36	PK
5	2499.900	73.83	74.00	-0.17	59.35	14.48	PK
6	2500.000	73.82	74.00	-0.18	59.34	14.48	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BEC 9900VA	Site	CB2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/10/19
Test Mode	Mode 1: Transmit Mode	Engineer	Rueyyan Lin
Polarity	Vertical	Temperature (℃)	24.0
Test Condition	MIMO,802.11n,Ant0+1,Ch 9,2.452G,BW40M	Humidity (%RH)	55.0



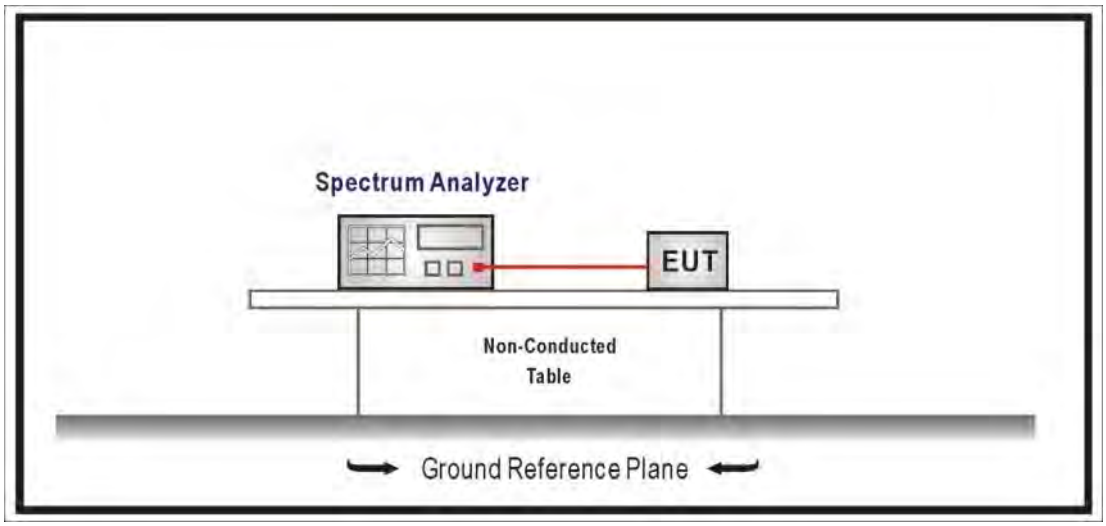
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	42.91	54.00	-11.09	29.76	13.15	AV
2	2390.000	46.88	54.00	-7.12	33.18	13.70	AV
! 3	2450.200	96.74	54.00	42.74	82.61	14.13	AV
4	2483.500	48.64	54.00	-5.36	34.28	14.36	AV
5	2490.700	52.74	54.00	-1.26	38.33	14.41	AV
6	2500.000	49.11	54.00	-4.89	34.63	14.48	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

7. DTS Bandwidth

7.1. Test Setup



7.2. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested procedure section 8.1 of KDB 558074 D01 v05r02 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 100KHz, Set the VBW≧3xRBW, Sweep Time=Auto, Set Peak Detector.

7.3. Limits

The 6 dB bandwidth must be greater than 500 kHz.

7.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2019

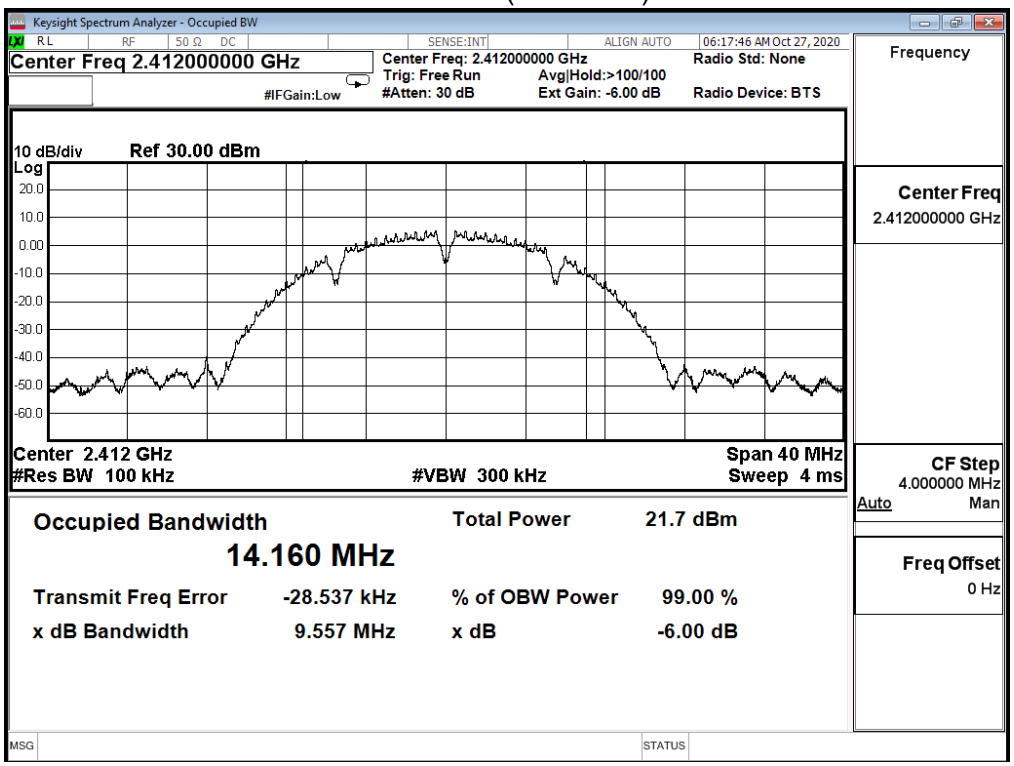
7.5. Test Result

Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit Mode (SISO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

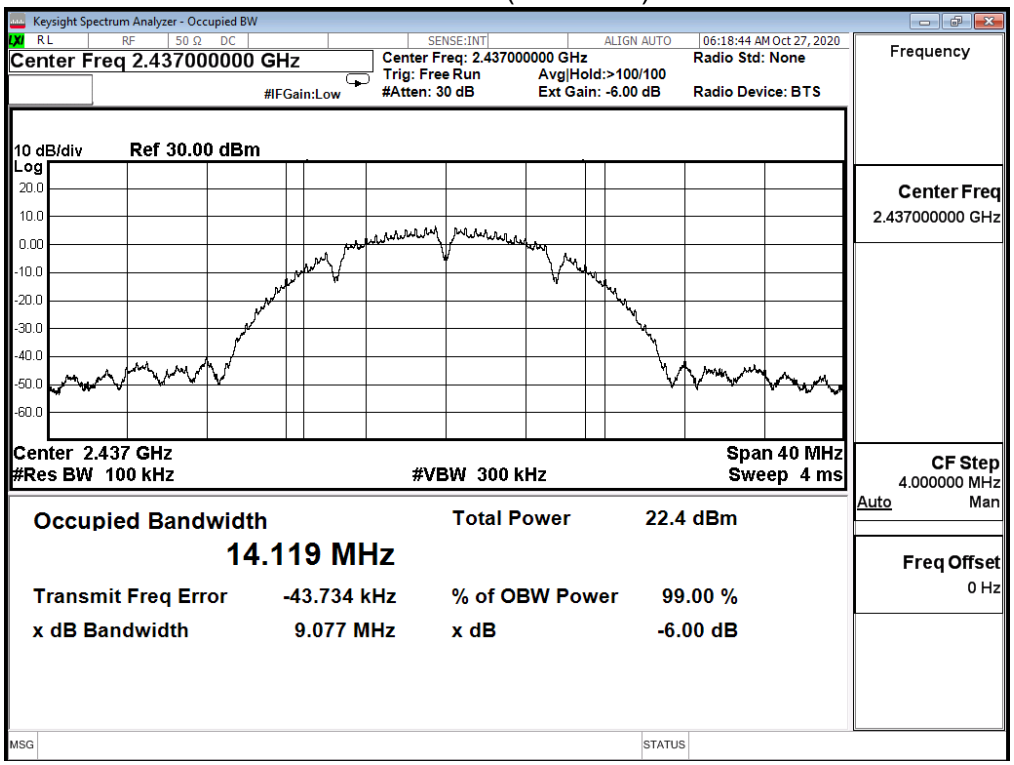
802.11b(ANT 0)

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
1	2412	9.557	≧0.5	Pass
6	2437	9.077	≧0.5	Pass
11	2462	9.561	≧0.5	Pass

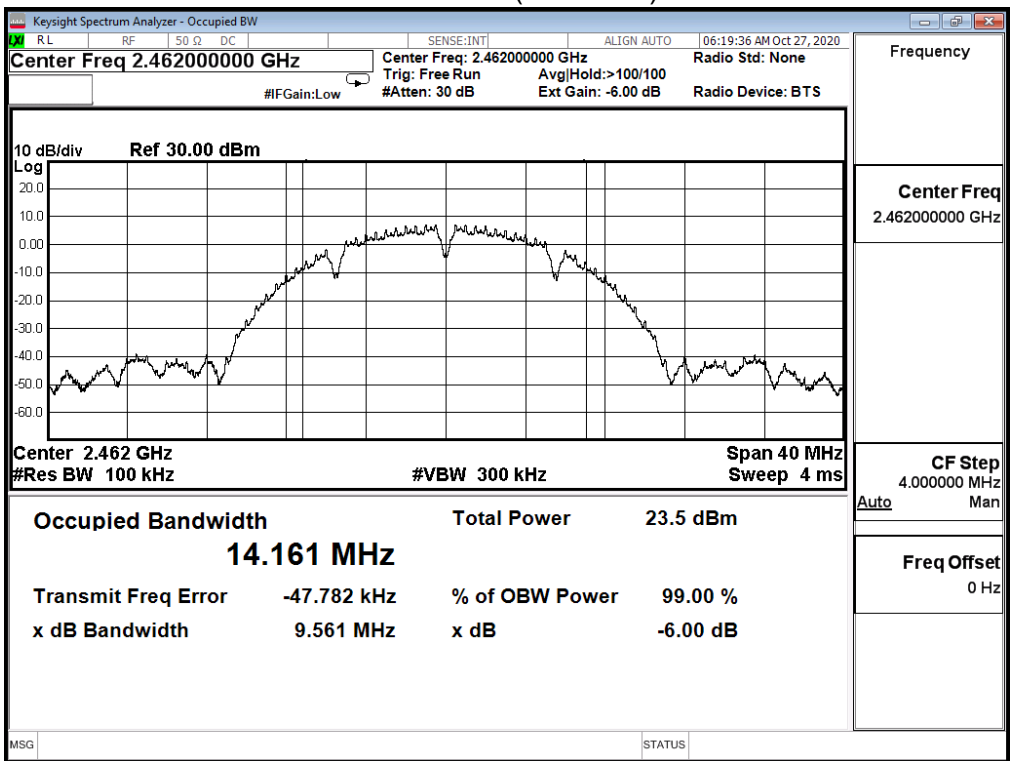
Channel 1 (2412MHz)



Channel 6 (2437MHz)



Channel 11 (2462MHz)

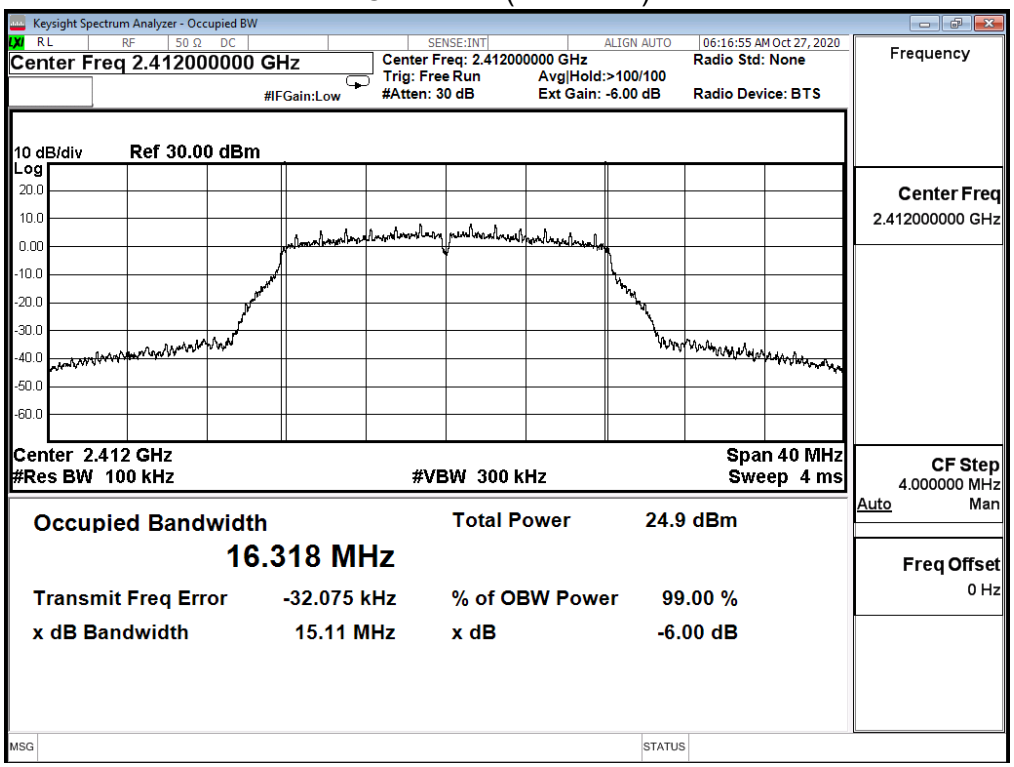


Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit Mode (SISO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

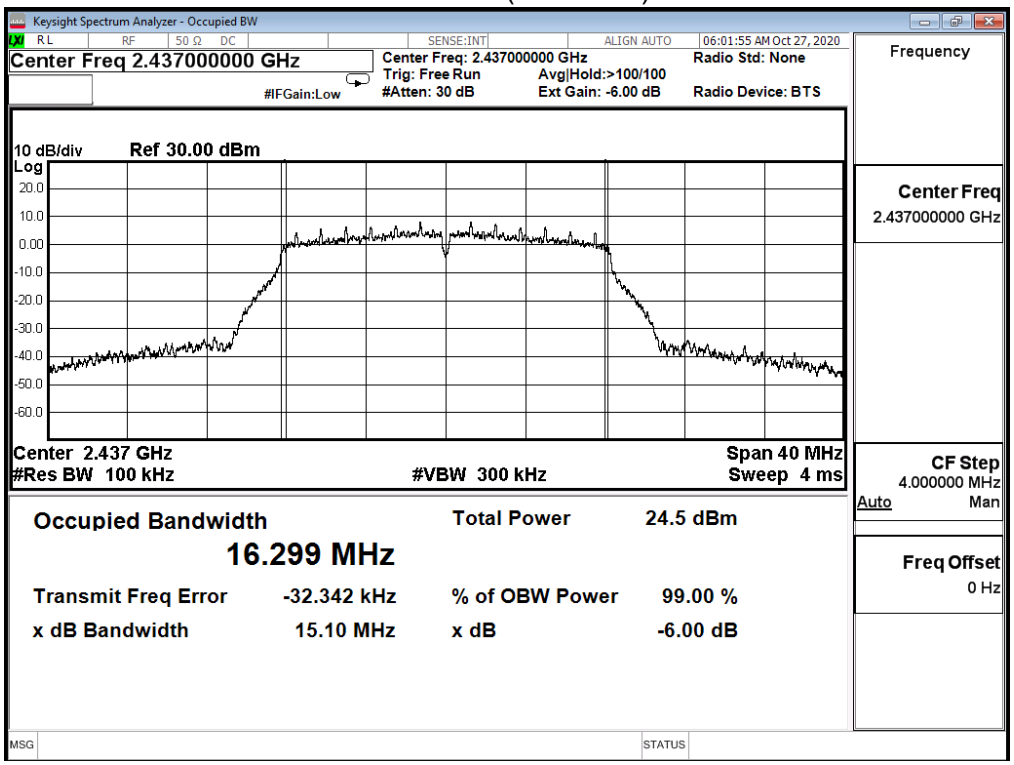
802.11g (SISO) (ANT 0)

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
1	2412	15.110	≧0.5	Pass
6	2437	15.100	≧0.5	Pass
11	2462	15.110	≧0.5	Pass

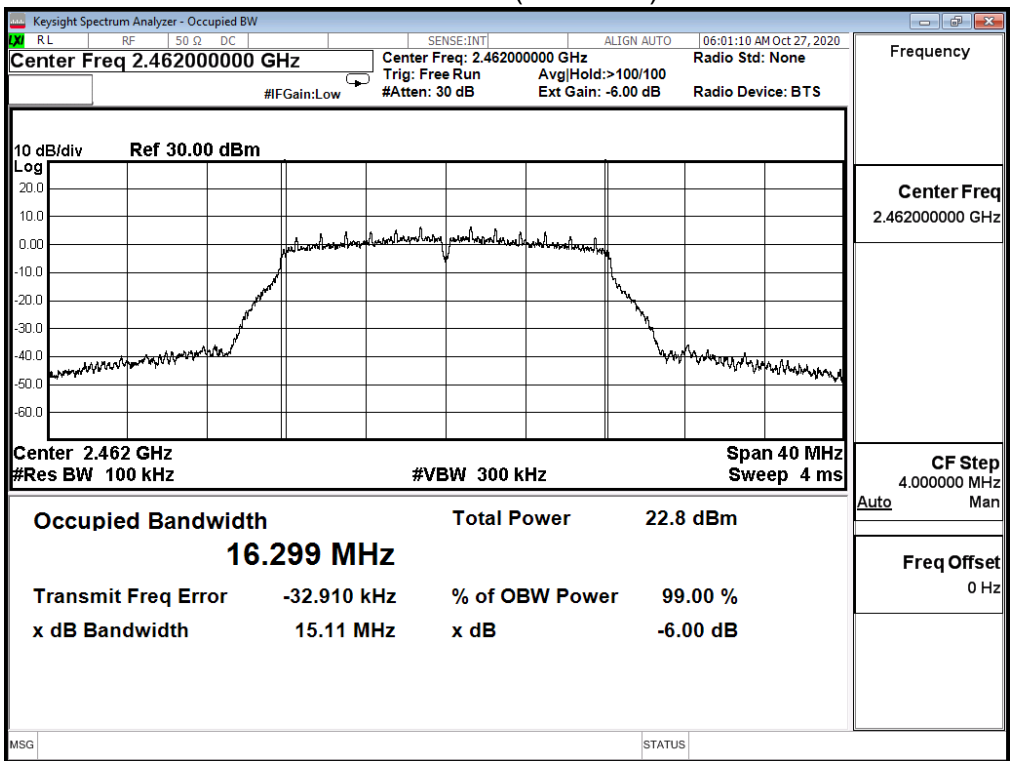
Channel 1 (2412MHz)



Channel 6 (2437MHz)



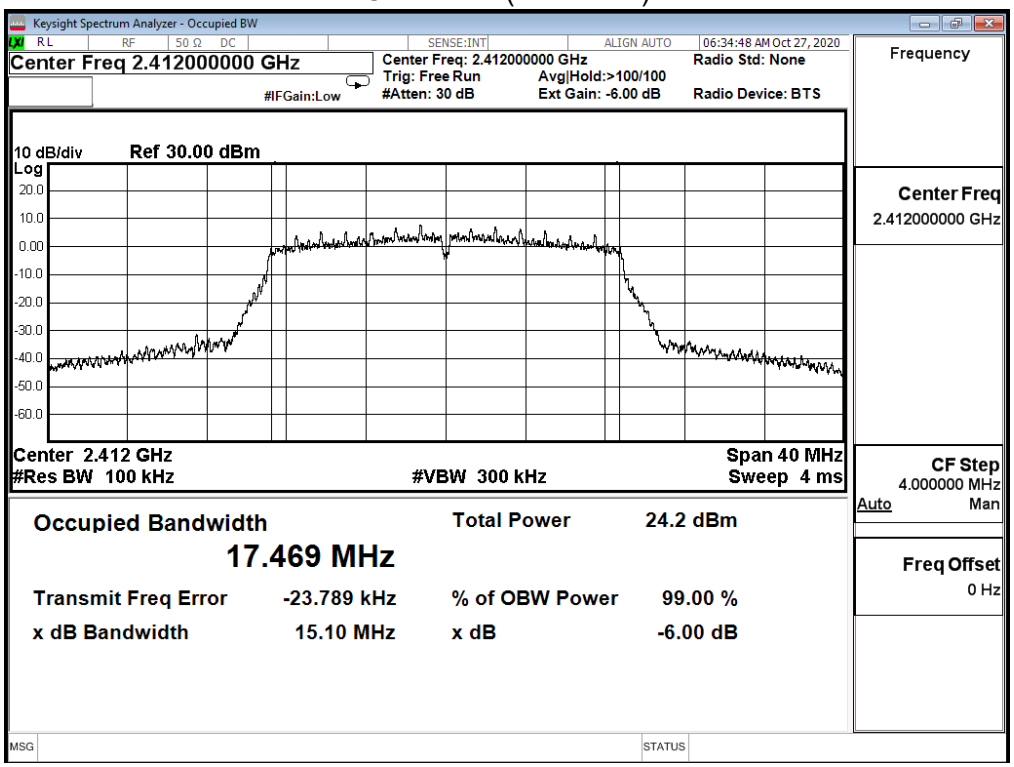
Channel 11 (2462MHz)



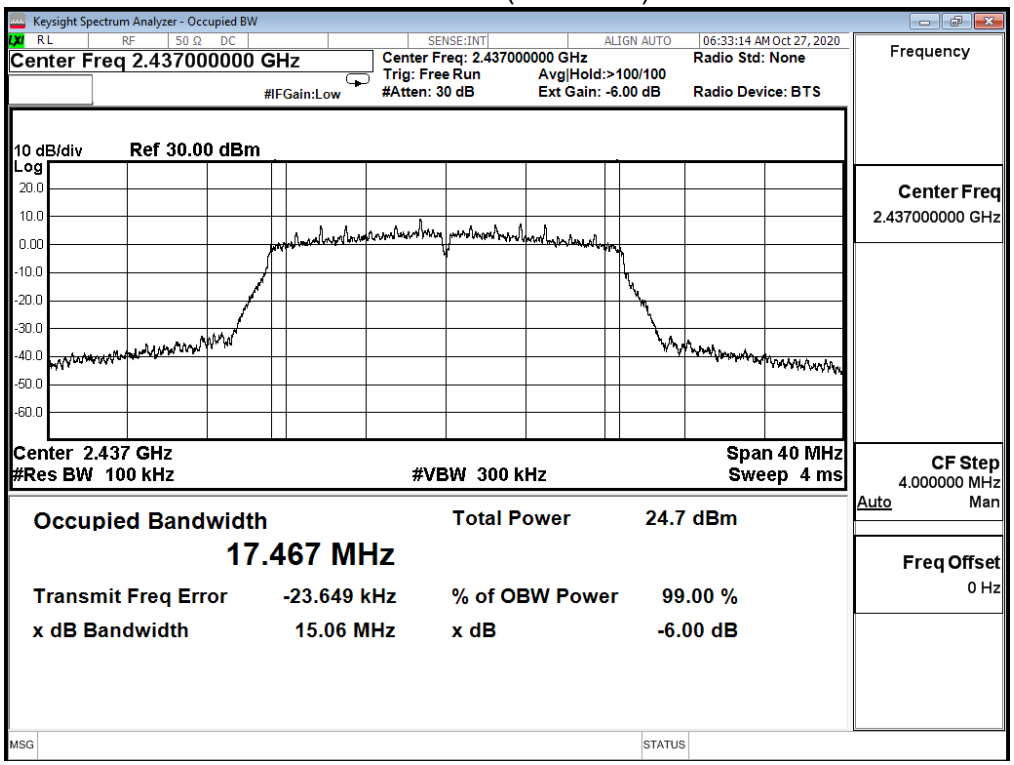
Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit Mode (MIMO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

IEEE 802.11n(20M)(ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
1	2412	15.100	≧0.5	Pass
6	2437	15.060	≧0.5	Pass
11	2462	15.060	≧0.5	Pass

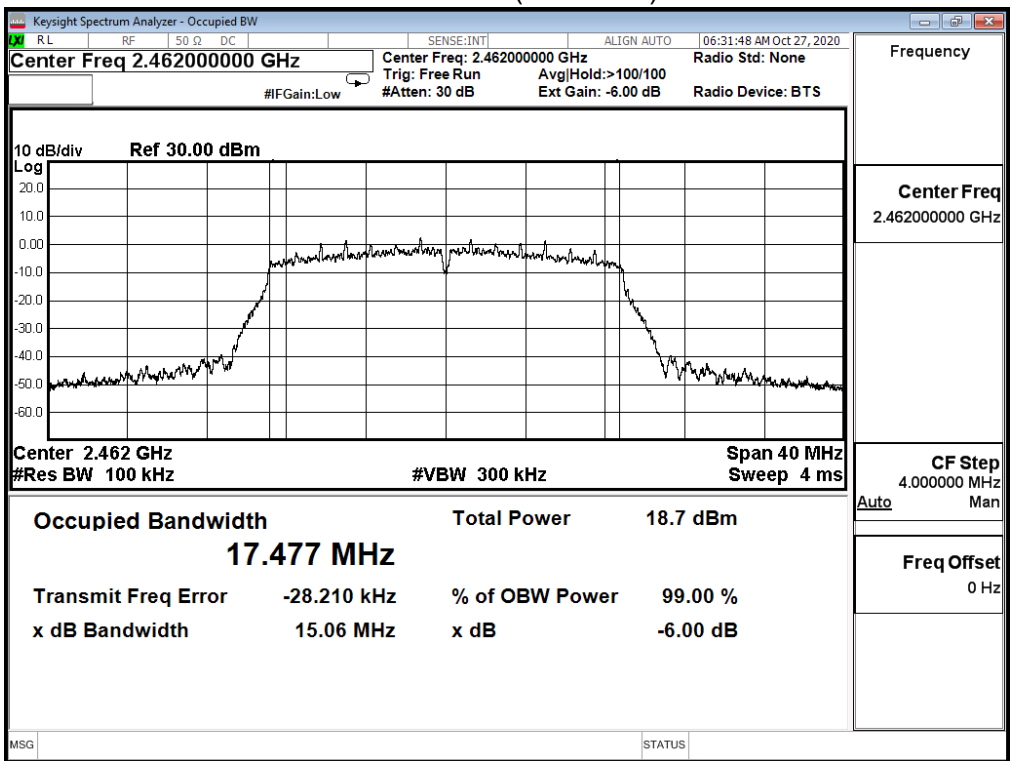
Channel 1 (2412MHz)



Channel 6 (2437MHz)



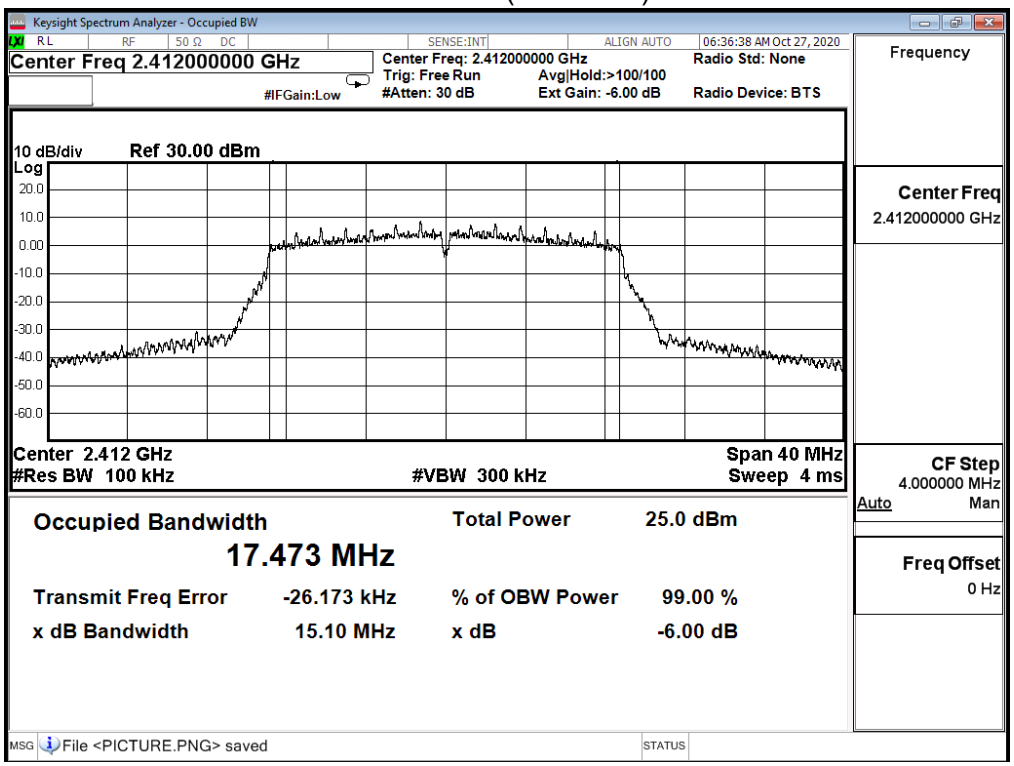
Channel 11 (2462MHz)



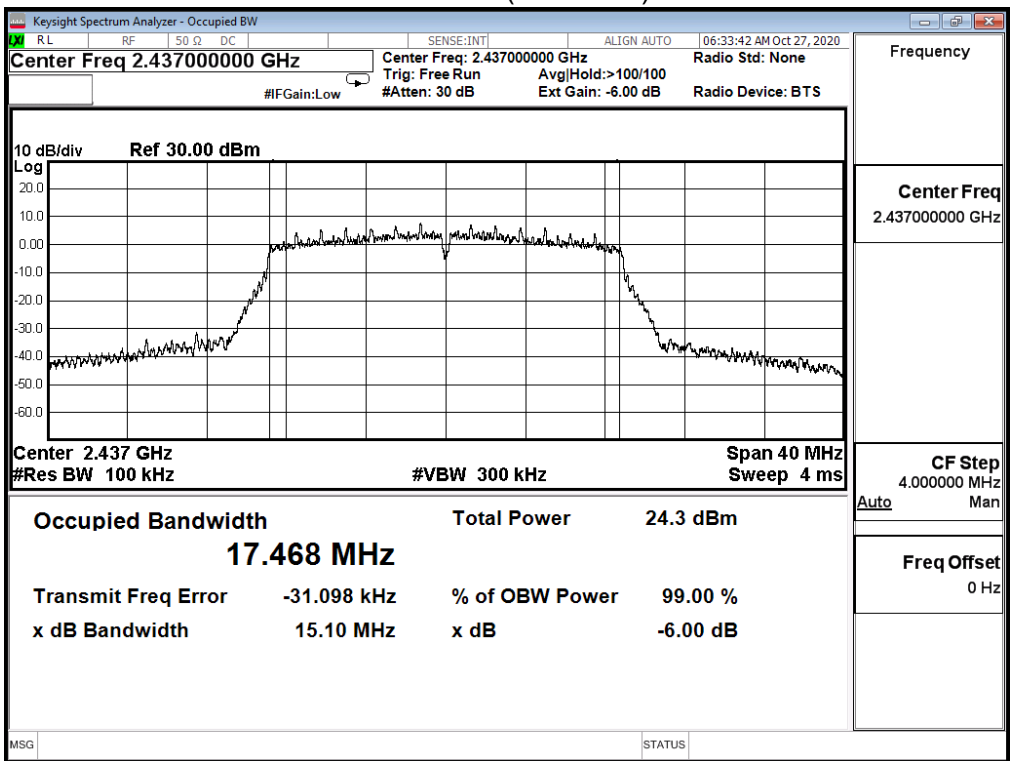
Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit Mode (MIMO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

IEEE 802.11n(20M)(ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
1	2412	15.100	≧0.5	Pass
6	2437	15.100	≧0.5	Pass
11	2462	15.090	≧0.5	Pass

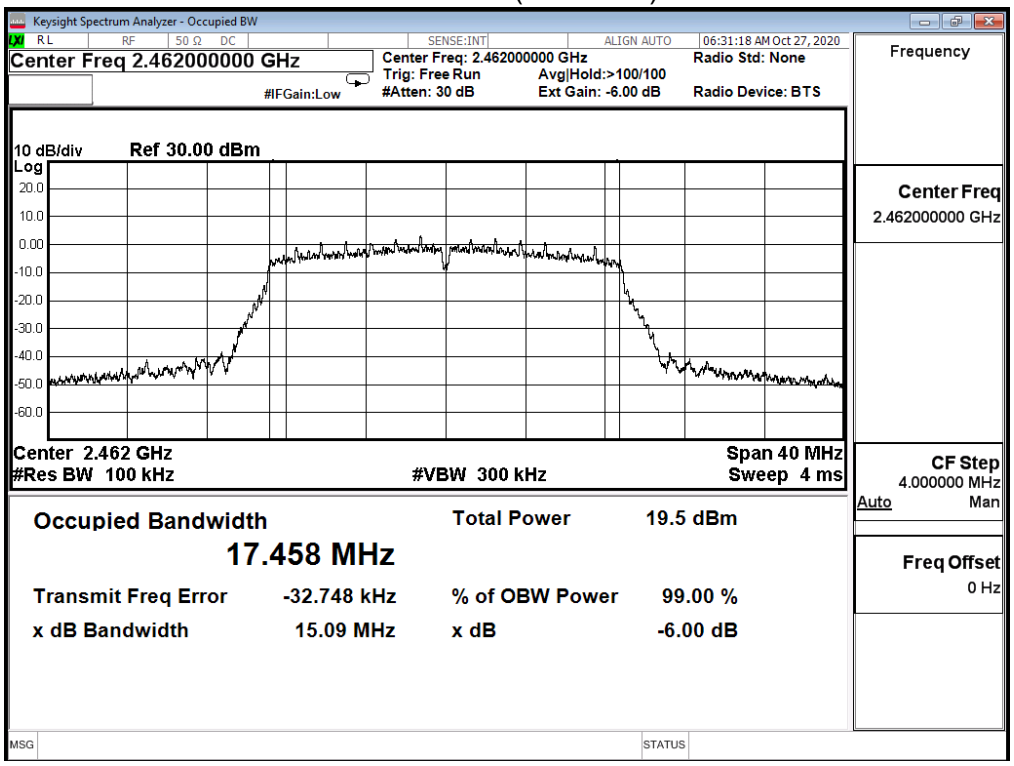
Channel 1 (2412MHz)



Channel 6 (2437MHz)



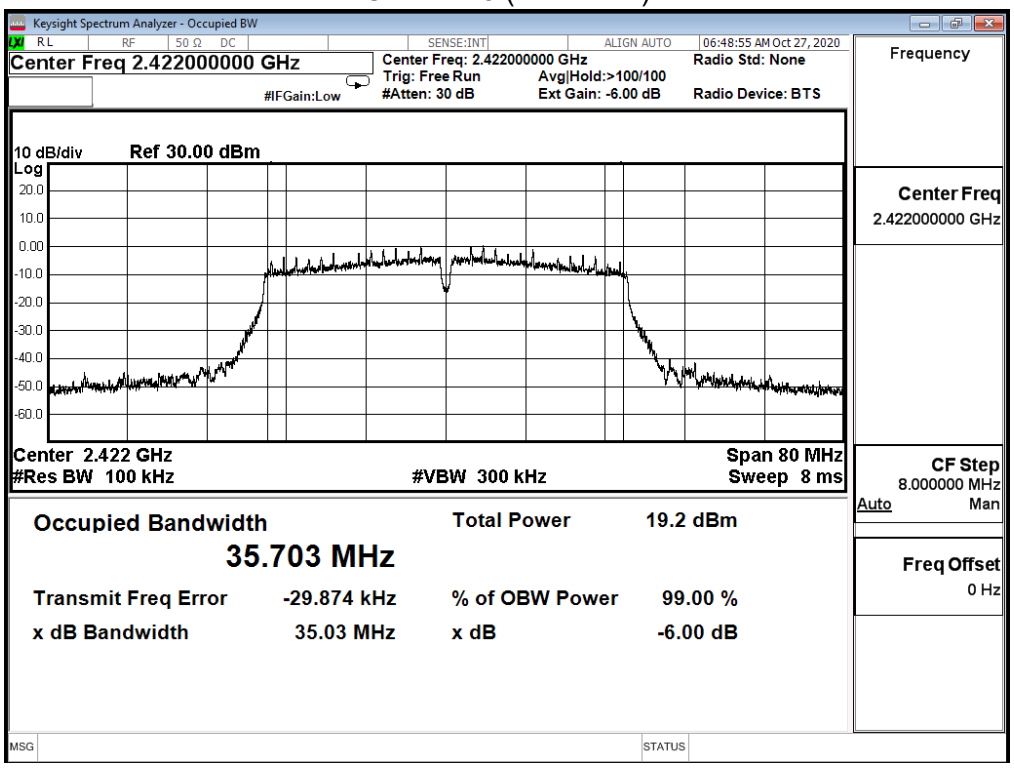
Channel 11 (2462MHz)



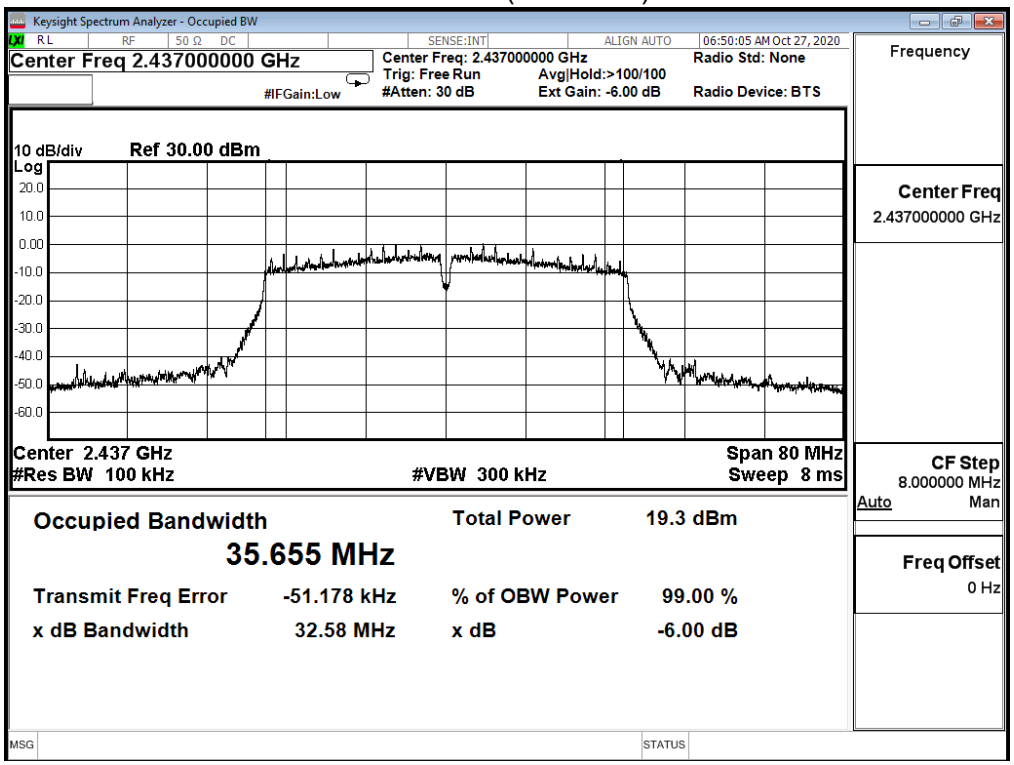
Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit Mode (MIMO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

IEEE 802.11n(40M)(ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
3	2422	35.030	≧0.5	Pass
6	2437	32.580	≧0.5	Pass
9	2452	33.800	≧0.5	Pass

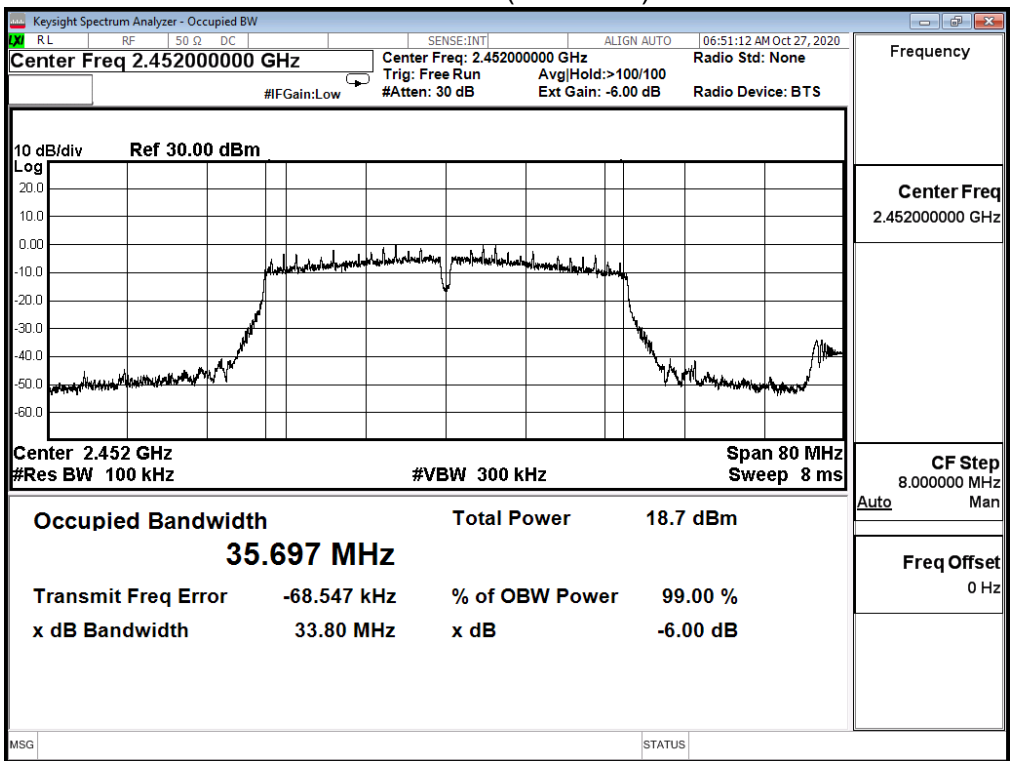
Channel 3 (2422MHz)



Channel 6 (2437MHz)



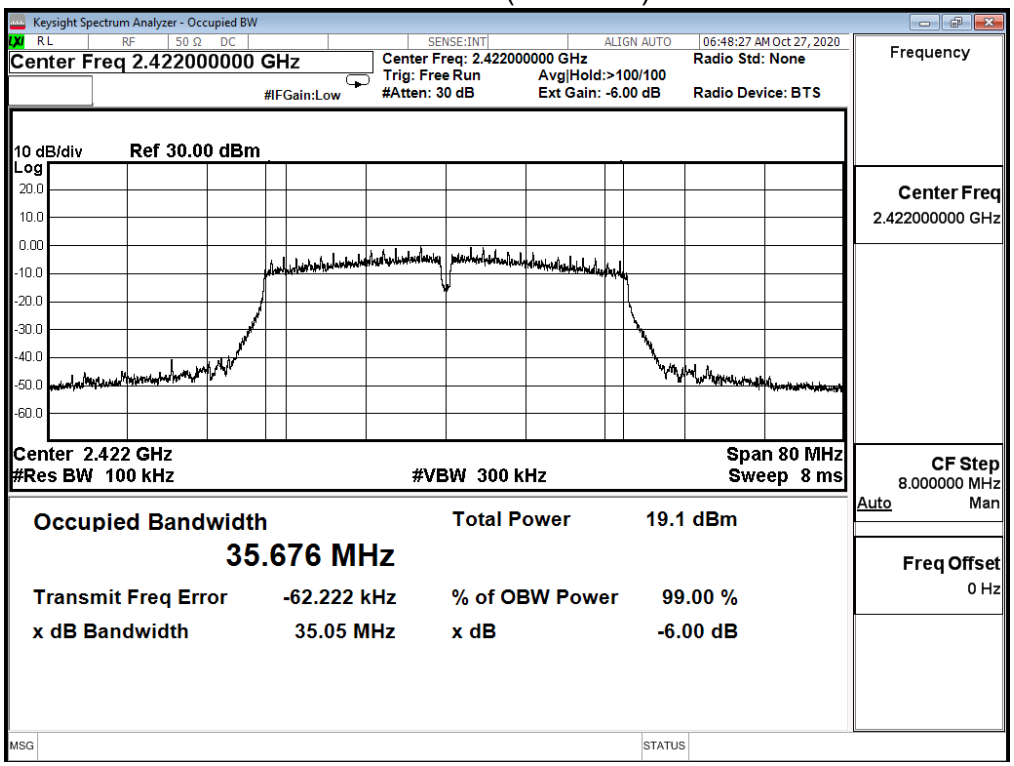
Channel 9 (2452MHz)



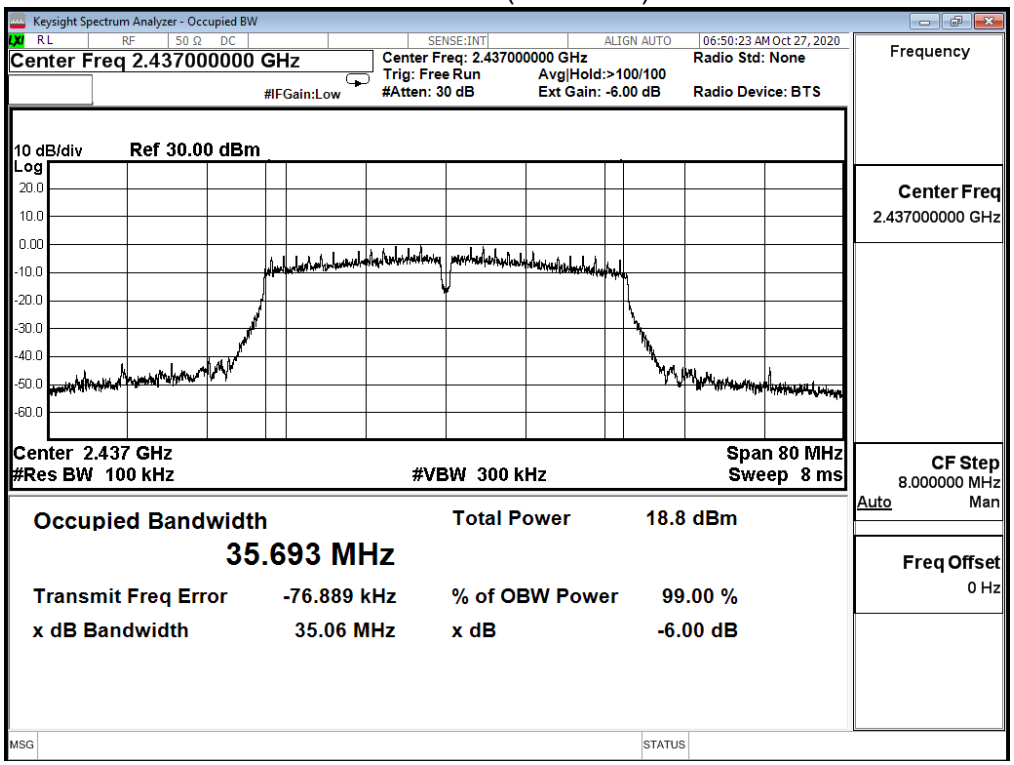
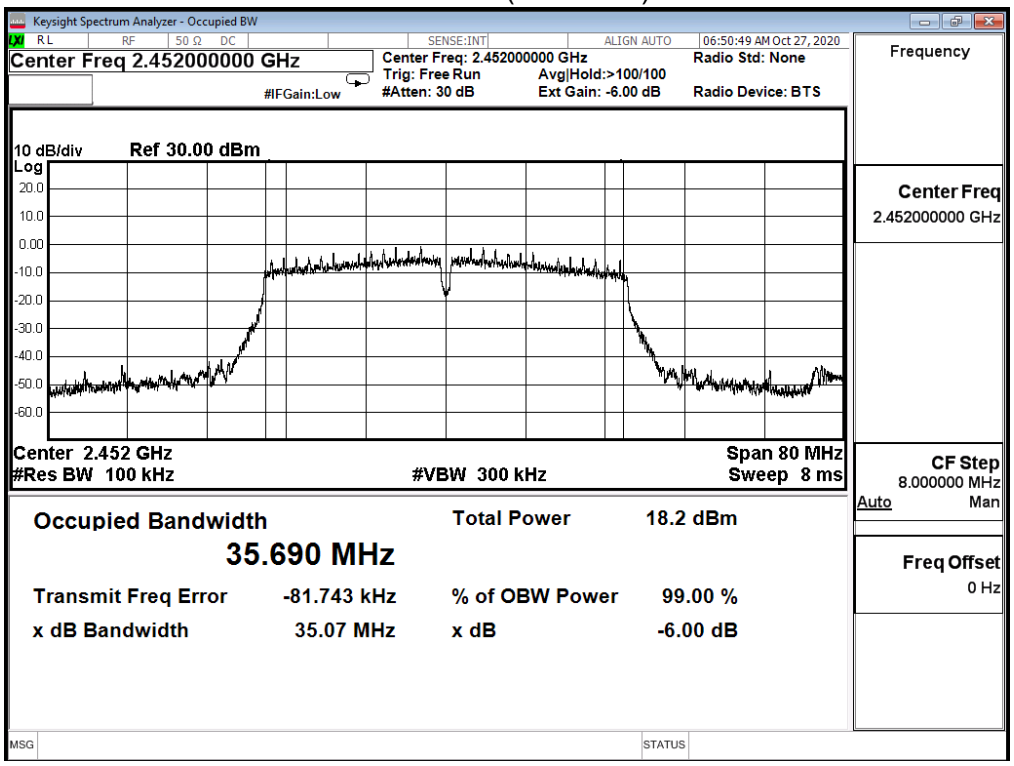
Product	Active Ethernet Fiber 802.11ac Gateway with VoIP		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit Mode (MIMO)		
Date of Test	2020/10/27	Test Site	SR12-H
Temperature(°C)	24	Humidity (%RH)	62

IEEE 802.11n(40M)(ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
3	2422	35.050	≧0.5	Pass
6	2437	35.060	≧0.5	Pass
9	2452	35.070	≧0.5	Pass

Channel 3 (2422MHz)



Channel 6 (2437MHz)



Channel 9 (2452MHz)