

FCC Test Report

Product Name : FiberGateway
Trade Name : ALTICE, ALTICE LABS
Model No. : GR140DG
FCC ID : 2ACJF-FGW-GR140DG

Applicant : Altice Labs, S.A.

Address : Rua Eng. Ferreira Pinto Basto, 3810-106, Aveiro, Portugal

Date of Receipt : Jul. 23, 2020
Issued Date : Nov. 27, 2020
Report No. : 2070864R-E3032110114
Report Version : V1.0



The test results relate only to the samples tested.

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Test Report Certification

Issued Date : Nov. 27, 2020

Report No.: 2070864R-E3032110114



Product Name : FiberGateway
Applicant : Altice Labs, S.A.
Address : Rua Eng. Ferreira Pinto Basto, 3810-106, Aveiro, Portugal
Manufacturer : Altice Labs, S.A.
Address : Rua Eng. Ferreira Pinto Basto, 3810-106, Aveiro, Portugal
Model No. : GR140DG
FCC ID : 2ACJF-FGW-GR140DG
EUT Test Voltage : AC 100~240V, 50/60Hz
Testing Voltage : AC 120V/60Hz
Trade Name : ALTICE, ALTICE LABS
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,
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TEL: +886-3-582-8001 / FAX: +886-3-582-8958
Test Result : Complied

Documented By :



(Carol Tsai / Senior Engineering Adm. Specialist)

Tested By :



(Elwin Lin / Engineer)

Approved By :



(Louis Hsu / Deputy Manager)

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Nov. 27, 2020

TABLE OF CONTENTS

Description	Page
1. General Information.....	6
1.1. EUT Description	6
1.2. Test Mode	9
1.3. Tested System Details	11
1.4. Configuration of tested System	11
1.5. EUT Exercise Software	11
1.6. Comments and Remarks.....	12
1.7. Test Facility.....	13
1.8. List of Test Equipment	14
1.9. Duty Cycle	17
1.10. Uncertainty	20
2. Conducted Emission	21
2.1. Test Setup	21
2.2. Limits	21
2.3. Test Procedure	22
2.4. Test Specification.....	22
2.5. Test Result.....	23
3. Maximum peak conducted output power.....	25
3.1. Test Setup	25
3.2. Test procedures	25
3.3. Limits	25
3.4. Test Specification.....	25
3.5. Test Result.....	26
4. Radiated Emission	29
4.1. Test Setup	29
4.2. Limits	29
4.3. Test Procedure	30
4.4. Test Specification.....	30
4.5. Test Result.....	31
5. RF antenna conducted test	79
5.1. Test Setup	79
5.2. Limits	79
5.3. Test Procedure	79
5.4. Test Specification.....	79
5.5. Test Result.....	80
6. Radiated Emission Band Edge.....	164
6.1. Test Setup	164
6.2. Limits	164
6.3. Test Procedure	164

6.4.	Test Specification.....	164
6.5.	Test Result.....	165
7.	DTS Bandwidth.....	237
7.1.	Test Setup	237
7.2.	Test Procedures	237
7.3.	Limits	237
7.4.	Test Specification.....	237
7.5.	Test Result.....	238
8.	Occupied Bandwidth.....	280
8.1.	Test Setup	280
8.2.	Test Procedures	280
8.3.	Limits	280
8.4.	Test Specification.....	280
8.5.	Test Result.....	281
9.	Power Density	323
9.1.	Test Setup	323
9.2.	Limits	323
9.3.	Test Procedures	323
9.4.	Test Specification.....	323
9.5.	Test Result.....	324
Attachment 1		336
	Test Setup Photograph	336
Attachment 2		339
	EUT External Photograph.....	339

1. General Information

1.1. EUT Description

Product Name	FiberGateway	
Trade Name	ALTICE, ALTICE LABS	
Model No.	GR140DG	
Frequency Range/ Channel Number	IEEE 802.11b/g	2412~2462MHz / 11 Channels
	IEEE 802.11n/ax (20MHz)	
	IEEE 802.11n/ax (40MHz)	2422~2452MHz / 7 Channels
Type of Modulation	IEEE 802.11b	Direct Sequence Spread Spectrum
	IEEE 802.11g/n/ax	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 32 and bandwidth defined in 802.11n
	IEEE 802.11ax	Support a subset of the combination of GI, MCS 0~MCS 11 and bandwidth defined in 802.11ax

Antenna Information				
Ant. No.	Model No.	Brand	Ant. Type	Ant. Gain
1	02102140-06825-1	Galtronics USA, Inc.	PIFA Antenna	2.4GHz: 1.3dBi 5GHz: 4.5dBi
2	02102140-06825-2	Galtronics USA, Inc.	PIFA Antenna	2.4GHz: 1.1dBi 5GHz: 4.1dBi
3	02102140-06825-3	Galtronics USA, Inc.	PIFA Antenna	2.4GHz: 1.7dBi 5GHz: 4.7dBi
4	02102140-06825-4	Galtronics USA, Inc.	PIFA Antenna	2.4GHz: 1.5dBi 5GHz: 4.4dBi

Accessories Information	
Power Adapter	APD (Asian Power Devices Inc.); WA-36N12FU I/P: AC 100~240V 50/60Hz 0.9A O/P: DC 12V $\approx$ 3A Cable Out: Non-Shielded, 1.8m

ANT-TX / RX & Bandwidth

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

IEEE 802.11b/g & IEEE 802.11n/ax(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/ax40MHz)

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/ax and 5GHz a/n/ac/ax transmitting and receiving functions.
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247.
3. 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.
4. 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: SISO Mode (802.11b/g) Mode 2: CDD Mode (802.11n/ax)
-----------	--

Test Items	Modulation	Channel	Antenna	Result
Conducted Emission	11ax(40MHz)	6	0+1+2+3	Complies
Maximum peak conducted output power	11b	1/6/11	0/1/2/3	Complies
	11g	1/6/11	0/1/2/3	Complies
	11n/ax(20MHz)	1/6/11	0+1+2+3	Complies
	11n/ax(40MHz)	3/6/9	0+1+2+3	Complies
Radiated Emission	11b	1/6/11	0	Complies
	11g	1/6/11	0+1+2+3	Complies
	11n/ax(20MHz)	1/6/11	0+1+2+3	Complies
	11n/ax(40MHz)	3/6/9	0+1+2+3	Complies
RF antenna conducted test	11b	1/6/11	0	Complies
	11g	1/6/11	0/1/2/3	Complies
	11n/ax(20MHz)	1/6/11	0/1/2/3	Complies
	11n/ax(40MHz)	3/6/9	0/1/2/3	Complies
Radiated Emission Band Edge	11b	1/6/11	0	Complies
	11g	1/6/11	0+1+2+3	Complies
	11n/ax(20MHz)	1/6/11	0+1+2+3	Complies
	11n/ax(40MHz)	3/6/9	0+1+2+3	Complies
DTS Bandwidth	11b	1/6/11	0	Complies
	11g	1/6/11	0/1/2/3	Complies
	11n/ax(20MHz)	1/6/11	0/1/2/3	Complies
	11n/ax(40MHz)	3/6/9	0/1/2/3	Complies

Test Items	Modulation	Channel	Antenna	Result
Occupied Bandwidth	11b	1/6/11	0	Complies
	11g	1/6/11	0/1/2/3	Complies
	11n/ax(20MHz)	1/6/11	0/1/2/3	Complies
	11n/ax(40MHz)	3/6/9	0/1/2/3	Complies
Power Density	11b	1/6/11	0	Complies
	11g	1/6/11	0/1/2/3	Complies
	11n/ax(20MHz)	1/6/11	0+1+2+3	Complies
	11n/ax(40MHz)	3/6/9	0+1+2+3	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).

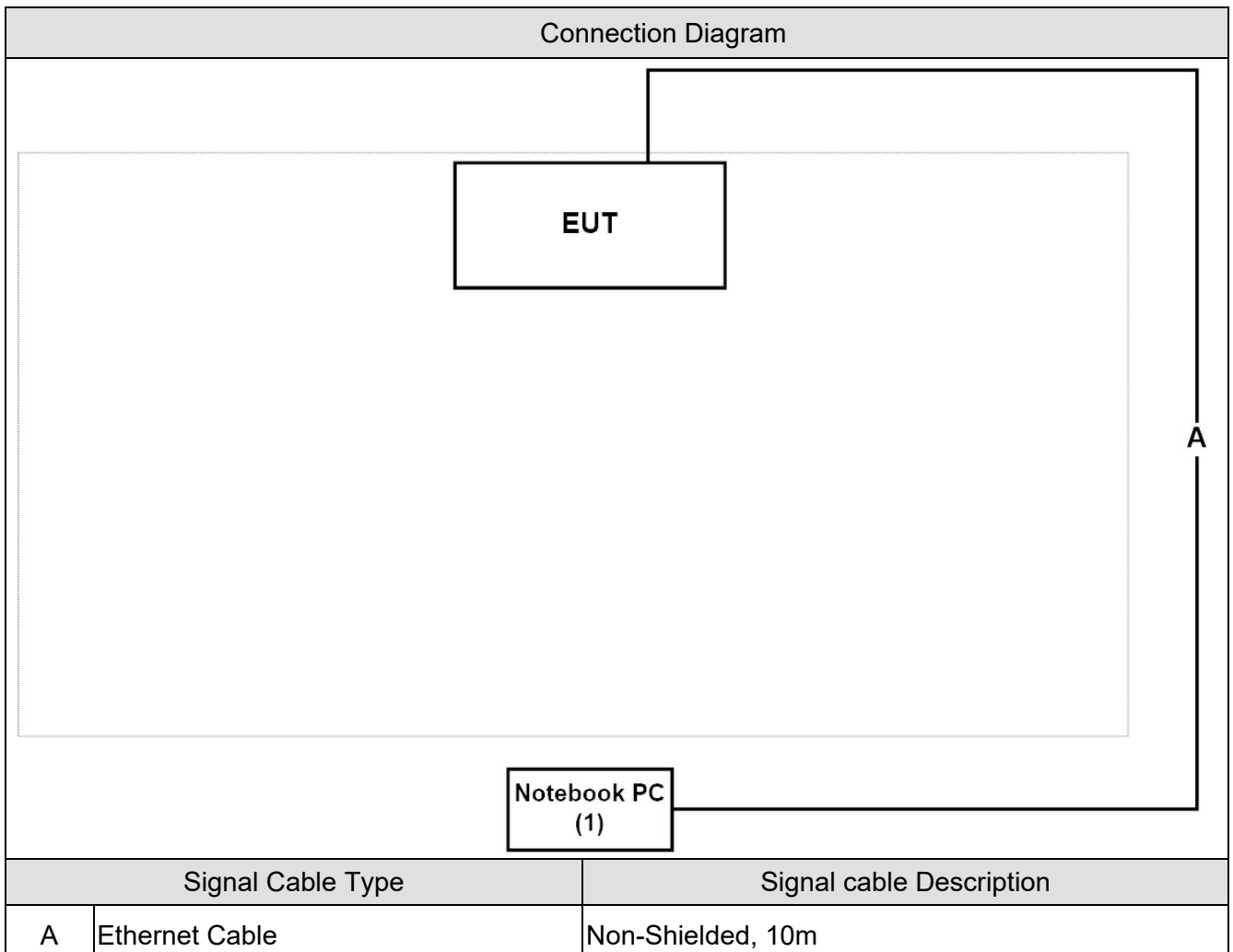
Note 2: Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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	80XL	PF0SXXY1	DoC	Shielded, 2m

1.4. Configuration of tested System



1.5. EUT Exercise Software

1	Setup the EUT as shown in Section 1.4.
2	Execute the Broadcom command.
3	Configure the test mode, the test channel, and the data rate.
4	Press "Start TX" to start the continuous receiving.
5	Verify that the EUT works 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 Conducted Emission	15 - 35	2
Humidity (%RH)		25 - 75	
Temperature (°C)	FCC PART 15 C 15.247 Maximum peak conducted output power	15 - 35	1
Humidity (%RH)		25 - 75	
Temperature (°C)	FCC PART 15 C 15.247 Radiated Emission	15 - 35	1
Humidity (%RH)		25 - 75	
Temperature (°C)	FCC PART 15 C 15.247 RF antenna conducted test	15 - 35	1
Humidity (%RH)		25 - 75	
Temperature (°C)	FCC PART 15 C 15.247 Radiated Emission Band Edge	15 - 35	1
Humidity (%RH)		25 - 75	
Temperature (°C)	FCC PART 15 C 15.247 Occupied Bandwidth & DTS Bandwidth	15 - 35	1
Humidity (%RH)		25 - 75	
Temperature (°C)	FCC PART 15 C 15.247 Power Density	15 - 35	1
Humidity (%RH)		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 / CB4-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2019/10/21	2020/10/20
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	2019/09/24	2020/09/23
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	2019/10/25	2020/10/24
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(10m)	Suhner	SF102_SF104	CB4-H	2020/04/25	2021/04/24
EMI system	DEKRA	Version 1.0	CB4-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 / CB4-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2019/10/21	2020/10/20
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	2019/09/24	2020/09/23
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	2019/10/25	2020/10/24
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(10m)	Suhner	SF102_SF104	CB4-H	2020/04/25	2021/04/24
EMI system	DEKRA	Version 1.0	CB4-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

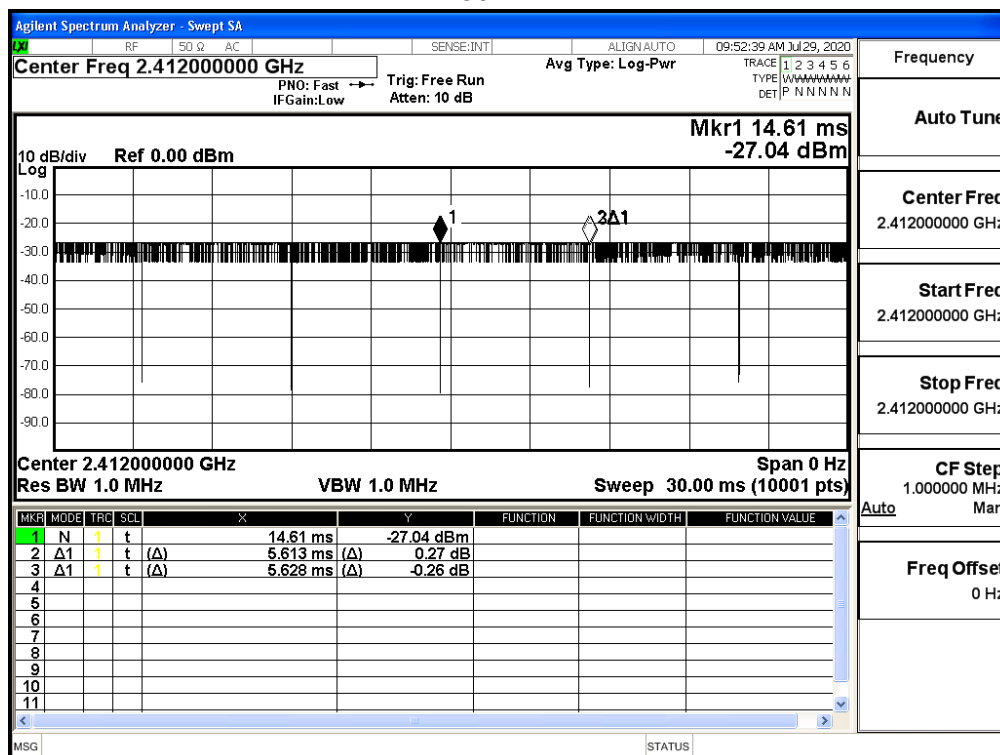
Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Spectrum Analyzer	Agilent	N9010A	US47140172	2020/06/18	2021/06/17
Signal & Spectrum Analyzer	R&S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

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

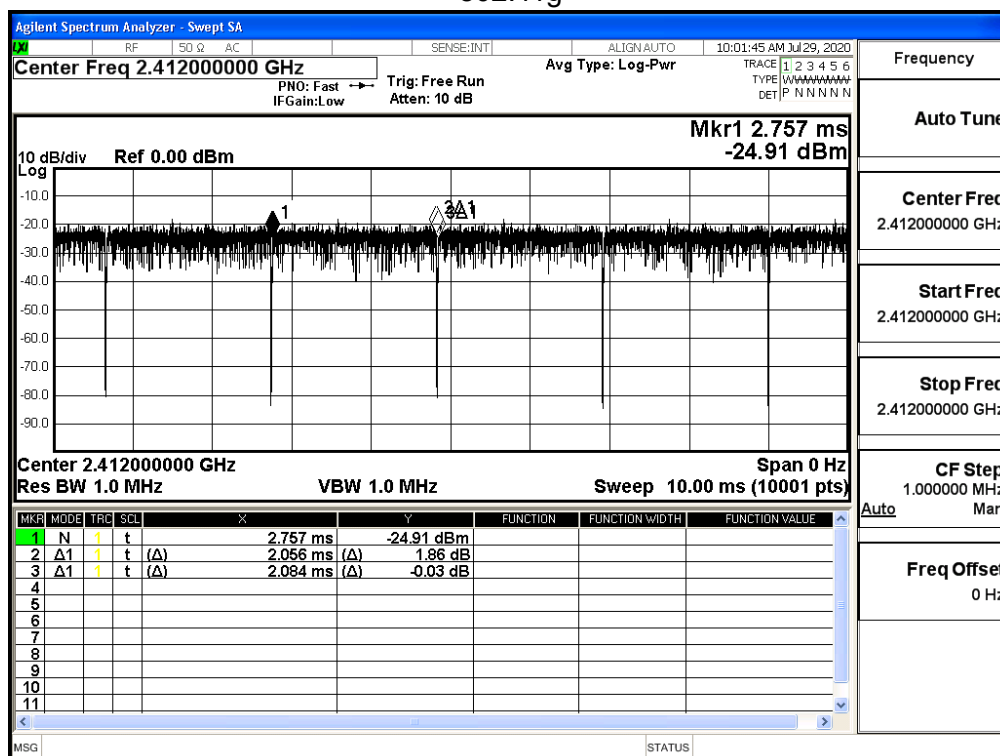
1.9. Duty Cycle

Mode	On Time(ms)	On+Off Time(ms)	Duty Cycle(%)	Duty Factor(dB) linear voltage	Duty Factor(dB) Power	1/T Minimum VBW (kHz)
11b (SISO Mode)	5.613	5.628	99.73%	0.023181	0.01	0.010
11g (SISO Mode)	2.056	2.084	98.66%	0.117492	0.06	0.010

802.11b

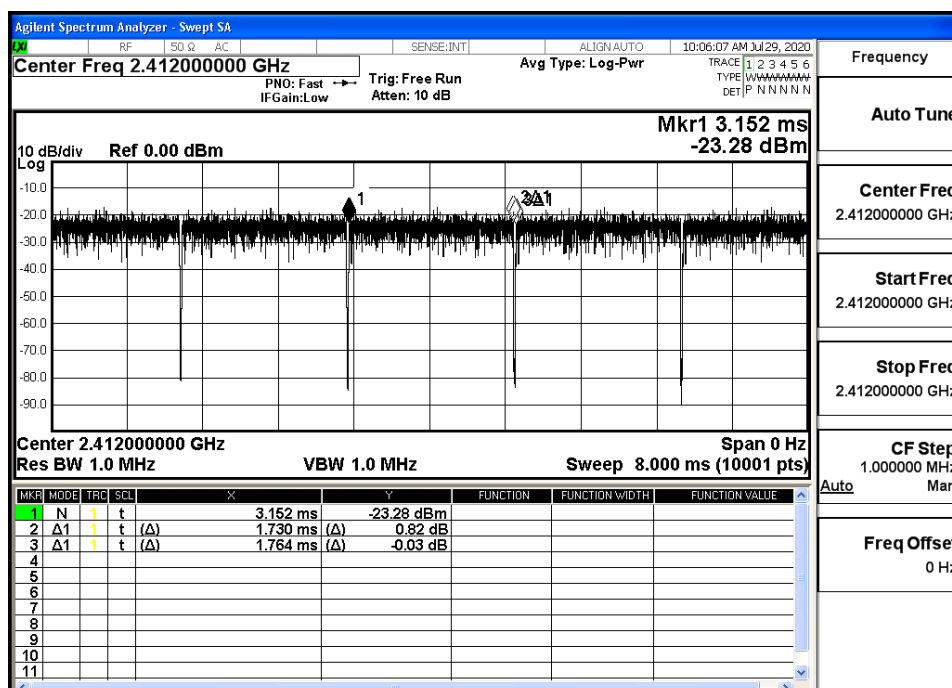


802.11g

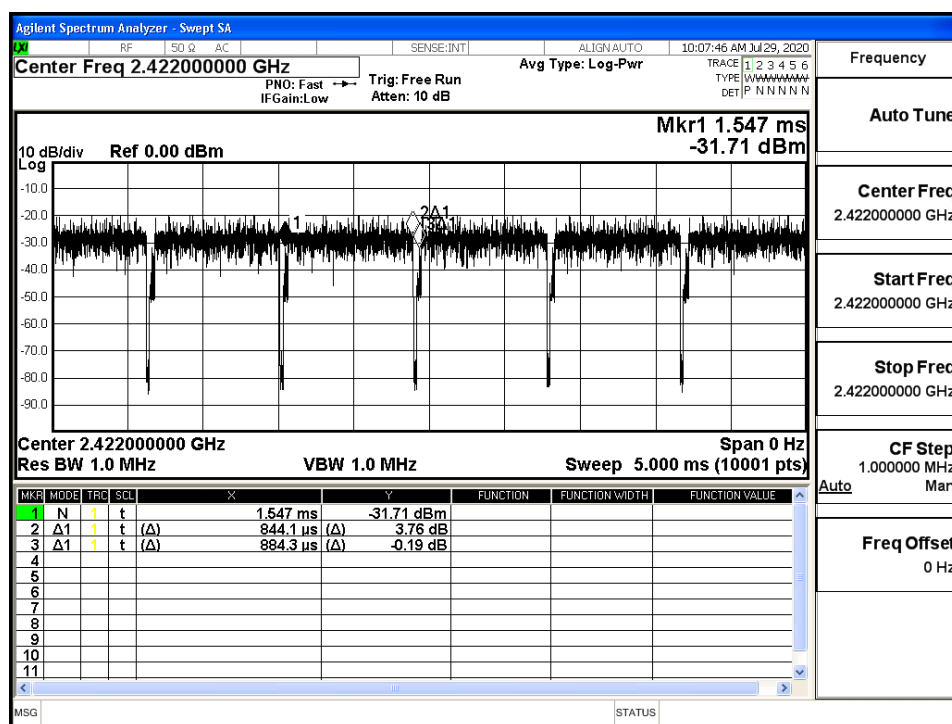


Mode	On Time(ms)	On+Off Time(ms)	Duty Cycle(%)	Duty Factor(dB) linear voltage	Duty Factor(dB) Power	1/T Minimum VBW (kHz)
HT20 (CDD Mode)	1.730	1.764	98.07%	0.169050	0.08	0.010
HT40 (CDD Mode)	0.844	0.884	95.45%	0.404114	0.20	1.185
HE20 (CDD Mode)	1.566	1.608	97.39%	0.229886	0.11	0.639
HE40 (CDD Mode)	0.813	0.851	95.52%	0.397944	0.20	1.230

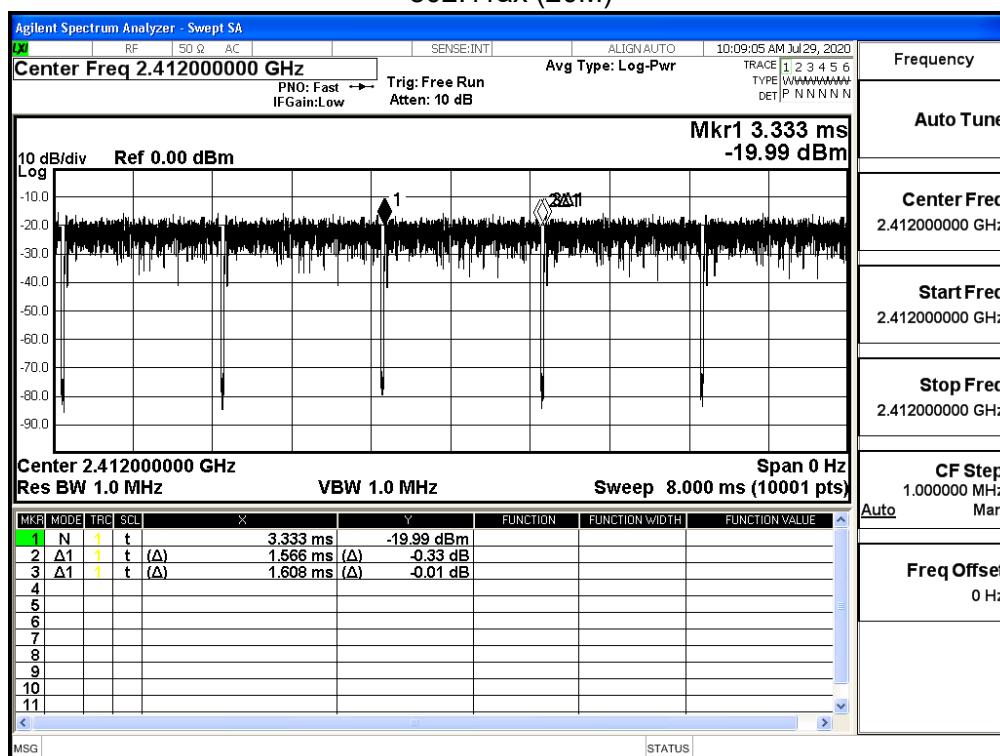
802.11n (20M)



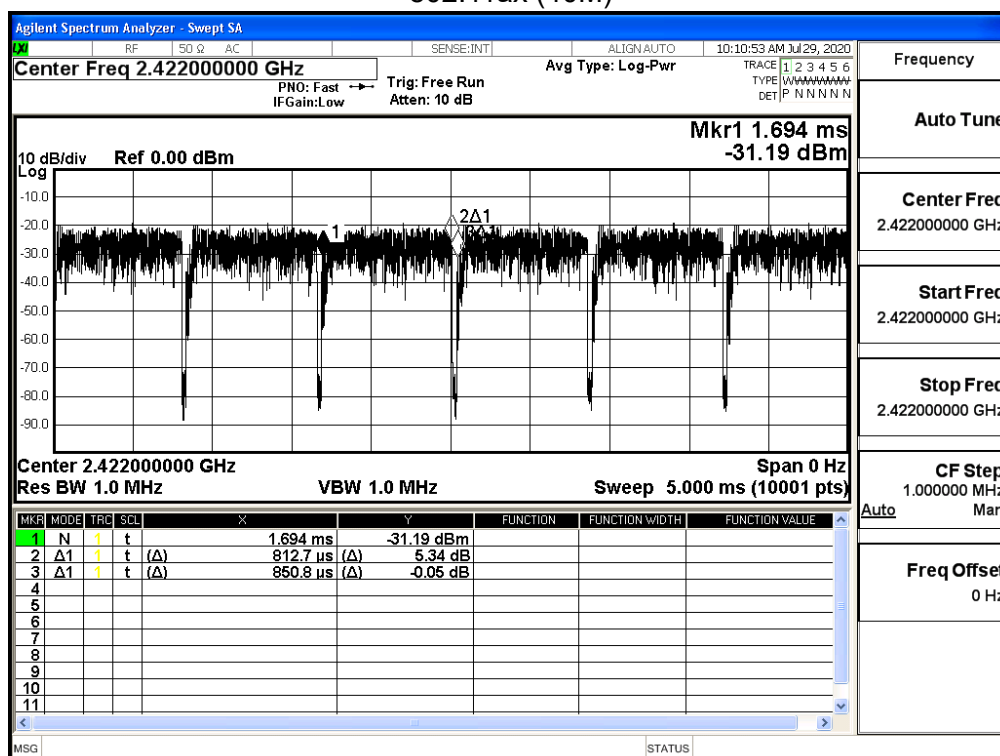
802.11n (40M)



802.11ax (20M)



802.11ax (40M)

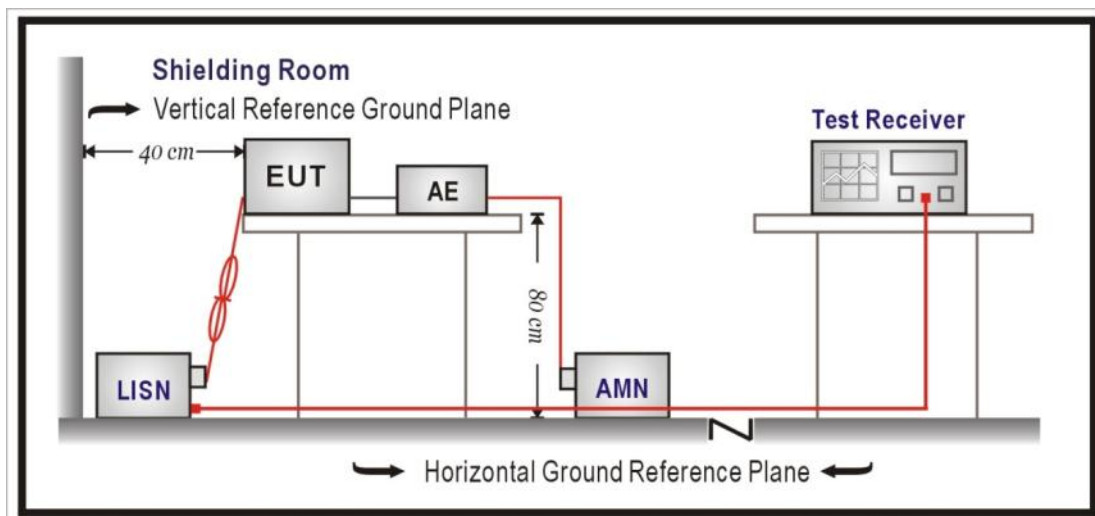


1.10. Uncertainty

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.

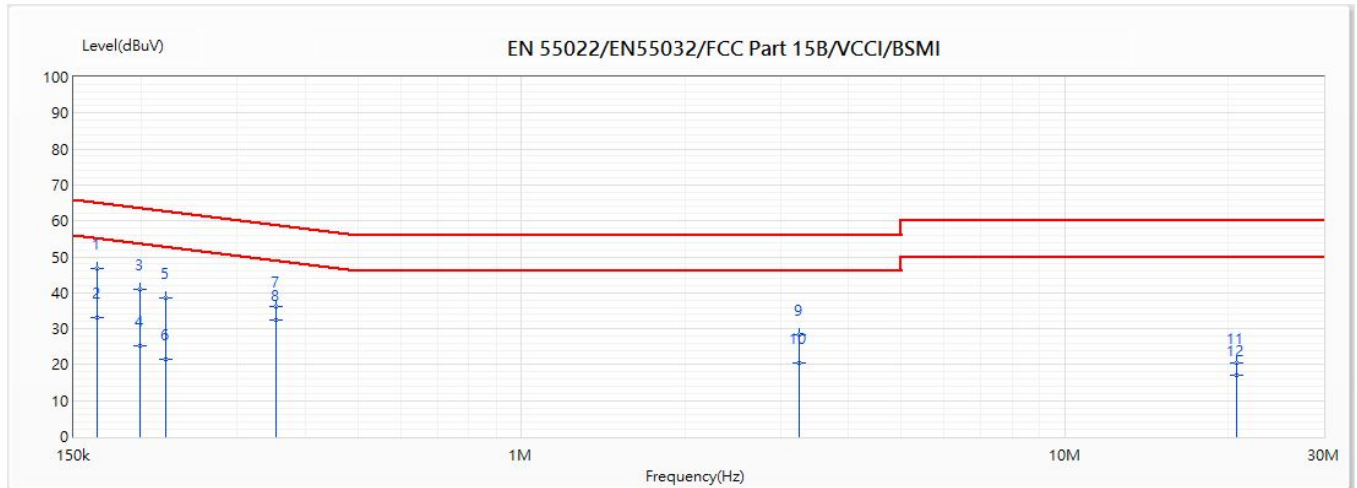
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.207: 2019

2.5. Test Result

Model No	GR140DG	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/25
Test Mode	Mode 2: CDD Mode	Engineer	Lion
Phase	L1	Temperature (°C)	23
Test Condition	802.11ax(40M)_Ch6_2.437G	Humidity (%RH)	54

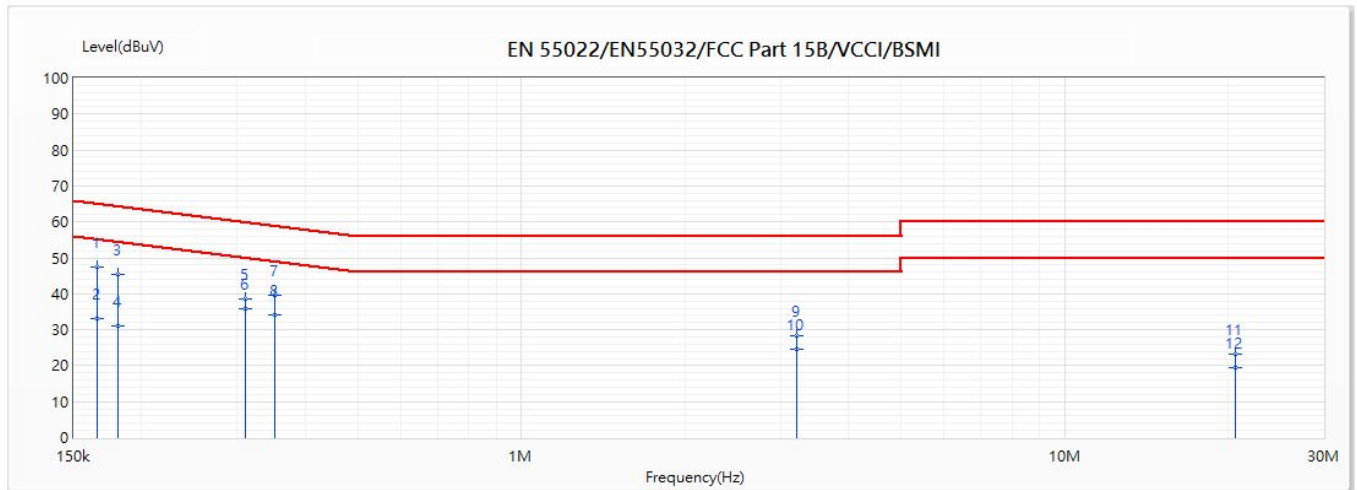


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.165	46.74	65.19	-18.45	37.08	9.66	QP
2	0.165	33.05	55.19	-22.14	23.39	9.66	AV
3	0.199	40.83	63.66	-22.83	31.18	9.65	QP
4	0.199	25.35	53.66	-28.31	15.70	9.65	AV
5	0.221	38.47	62.78	-24.31	28.81	9.65	QP
6	0.221	21.54	52.78	-31.24	11.88	9.65	AV
7	0.354	36.18	58.86	-22.68	26.51	9.67	QP
*8	0.354	32.35	48.86	-16.51	22.68	9.67	AV
9	3.256	28.38	56.00	-27.62	18.52	9.86	QP
10	3.256	20.61	46.00	-25.39	10.75	9.86	AV
11	20.74	20.47	60.00	-39.53	10.05	10.42	QP
12	20.74	16.93	50.00	-33.07	6.51	10.42	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	GR140DG	Site	SR2-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/25
Test Mode	Mode 2: CDD Mode	Engineer	Lion
Phase	N	Temperature (°C)	23
Test Condition	802.11ax(40M)_Ch6_2.437G	Humidity (%RH)	54



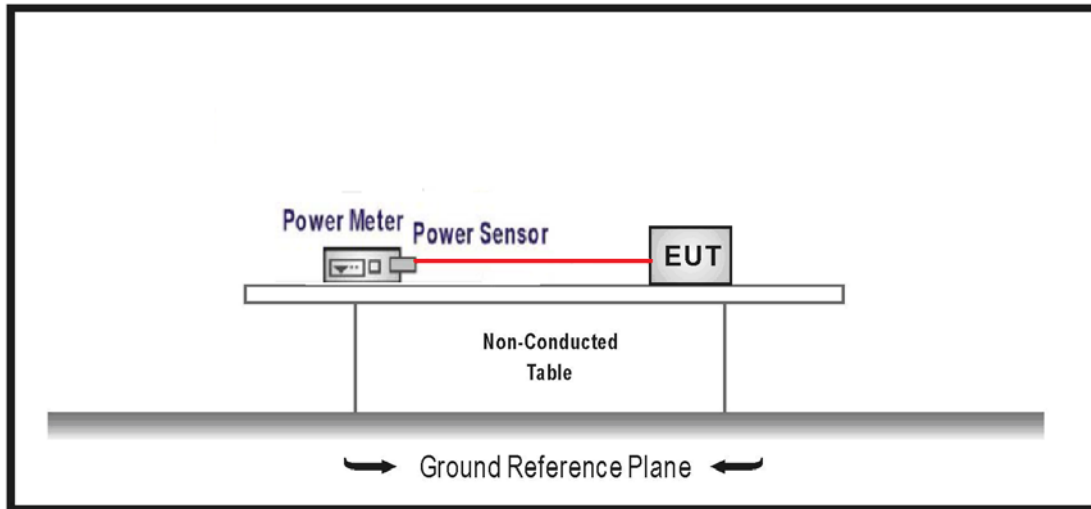
No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.165	47.47	65.19	-17.72	37.82	9.65	QP
2	0.165	33.23	55.19	-21.96	23.58	9.65	AV
3	0.181	45.37	64.45	-19.08	35.72	9.64	QP
4	0.181	31.16	54.45	-23.29	21.51	9.64	AV
5	0.31	38.65	59.97	-21.32	29.00	9.66	QP
*6	0.31	35.68	49.97	-14.29	26.03	9.66	AV
7	0.352	39.70	58.91	-19.21	30.04	9.66	QP
8	0.352	34.20	48.91	-14.71	24.54	9.66	AV
9	3.214	28.46	56.00	-27.54	18.61	9.84	QP
10	3.214	24.60	46.00	-21.40	14.75	9.84	AV
11	20.648	23.34	60.00	-36.66	12.76	10.58	QP
12	20.648	19.61	50.00	-30.39	9.03	10.58	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	FiberGateway		
Test Item	Maximum peak conducted output power		
Test Mode	Mode 1: SISO Mode		
Date of Test	2020/08/18	Test Site	SR12-H
Test Temperature	25.0°C	Test Humidity	69.0%

11b						
Channel No.	Frequency (MHz)	Maximum peak conducted output power (dBm)				Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	
1	2412	26.950	26.680	26.560	26.860	≤ 30
6	2437	28.300	28.060	27.880	28.190	≤ 30
11	2462	26.040	25.790	25.630	25.920	≤ 30

The worst emission of data rate is 1 Mbps

11g						
Channel No.	Frequency (MHz)	Maximum peak conducted output power (dBm)				Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	
1	2412	19.430	18.480	18.430	19.090	≤ 30
6	2437	24.000	23.060	22.650	23.770	≤ 30
11	2462	19.370	18.430	18.270	19.300	≤ 30

The worst emission of data rate is 6Mbps

Product	FiberGateway		
Test Item	Maximum peak conducted output power		
Test Mode	Mode 2: CDD Mode		
Date of Test	2020/08/18	Test Site	SR12-H
Test Temperature	25.0°C	Test Humidity	69.0%

11n(20M)							
Channel No.	Frequency (MHz)	Maximum peak conducted output power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
1	2412	19.320	18.460	18.300	19.240	24.874	≤ 30
6	2437	24.090	23.080	22.710	23.910	29.505	≤ 30
11	2462	18.410	17.570	17.530	18.200	23.965	≤ 30

The worst emission of data rate is MCS 0

11n(40M)							
Channel No.	Frequency (MHz)	Maximum peak conducted output power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
3	2422	18.170	17.450	17.660	17.910	23.826	≤ 30
6	2437	20.710	19.850	19.780	20.450	26.236	≤ 30
9	2452	15.830	14.740	14.880	15.430	21.263	≤ 30

The worst emission of data rate is MCS 0

Product	FiberGateway		
Test Item	Maximum peak conducted output power		
Test Mode	Mode 2: CDD Mode		
Date of Test	2020/08/18	Test Site	SR12-H
Test Temperature	25.0°C	Test Humidity	69.0%

11ax(20M)							
Channel No.	Frequency (MHz)	Maximum peak conducted output power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
1	2412	19.450	18.640	18.500	19.350	25.026	≤ 30
6	2437	24.250	23.180	22.910	24.000	29.641	≤ 30
11	2462	18.760	17.760	17.640	18.580	24.233	≤ 30

The worst emission of data rate is MCS 0

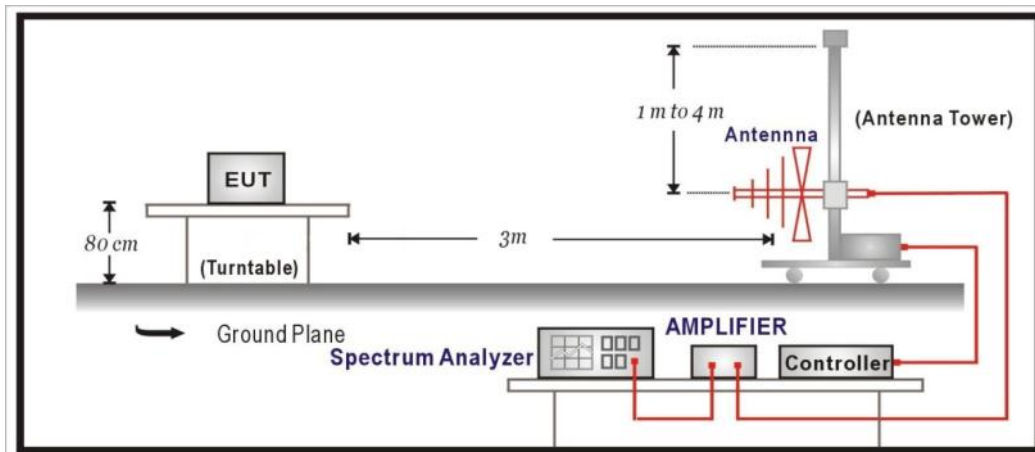
11ax(40M)							
Channel No.	Frequency (MHz)	Maximum peak conducted output power (dBm)					Limit (dBm)
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Total	
3	2422	17.250	16.610	16.780	16.950	22.925	≤ 30
6	2437	20.640	19.750	19.880	20.360	26.193	≤ 30
9	2452	15.840	14.960	15.090	15.390	21.354	≤ 30

The worst emission of data rate is MCS 0

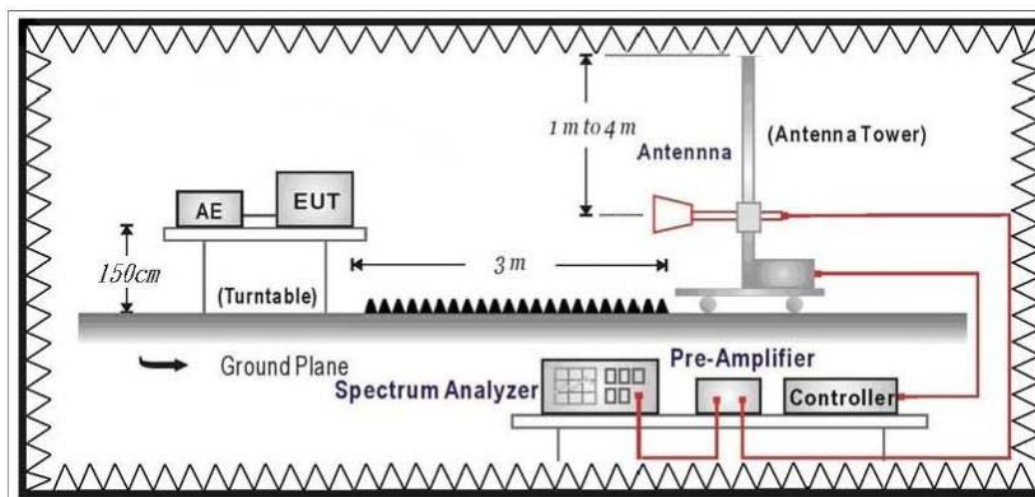
4. Radiated Emission

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.

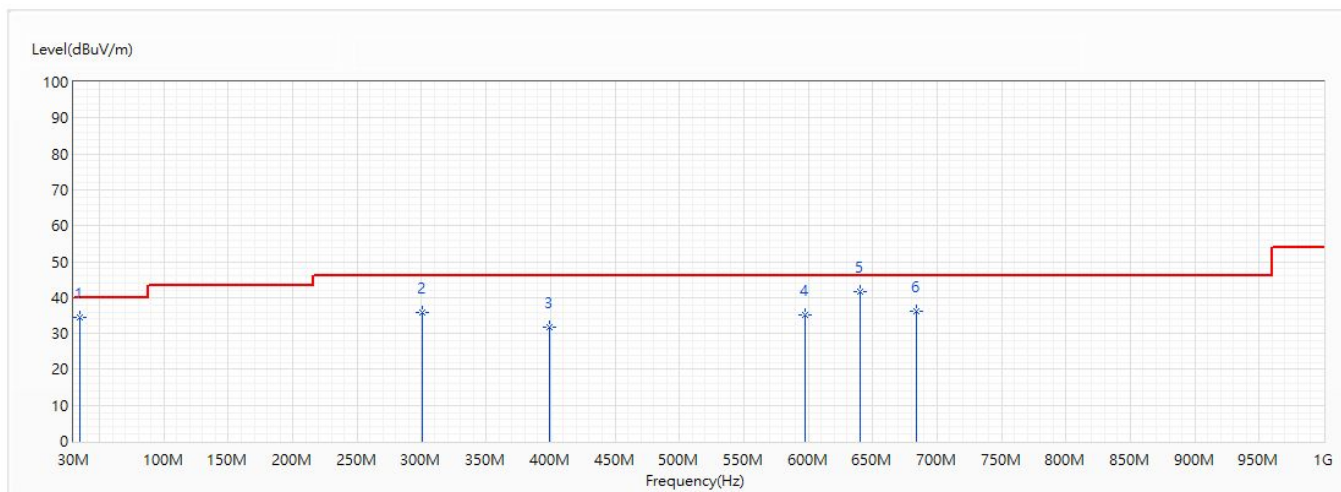
4.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2019

4.5. Test Result

30MHz-1GHz Spurious

Model No	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11b_Ch6_2.437G	Humidity (%RH)	56.0

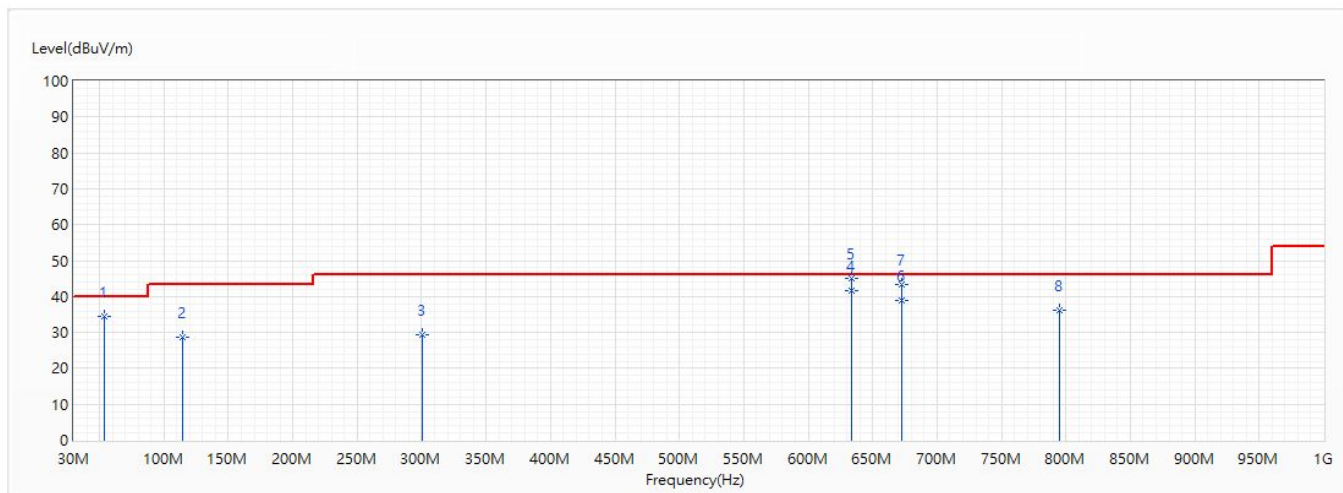


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	34.365	34.52	40.00	-5.48	32.31	2.21	QP
2	300.145	35.69	46.00	-10.31	37.09	-1.40	QP
3	399.57	31.86	46.00	-14.14	30.21	1.65	QP
4	597.935	35.14	46.00	-10.86	30.29	4.85	QP
* 5	640.615	41.67	46.00	-4.33	35.99	5.68	QP
6	684.265	36.34	46.00	-9.66	30.54	5.80	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11b_Ch6_2.437G	Humidity (%RH)	56.0

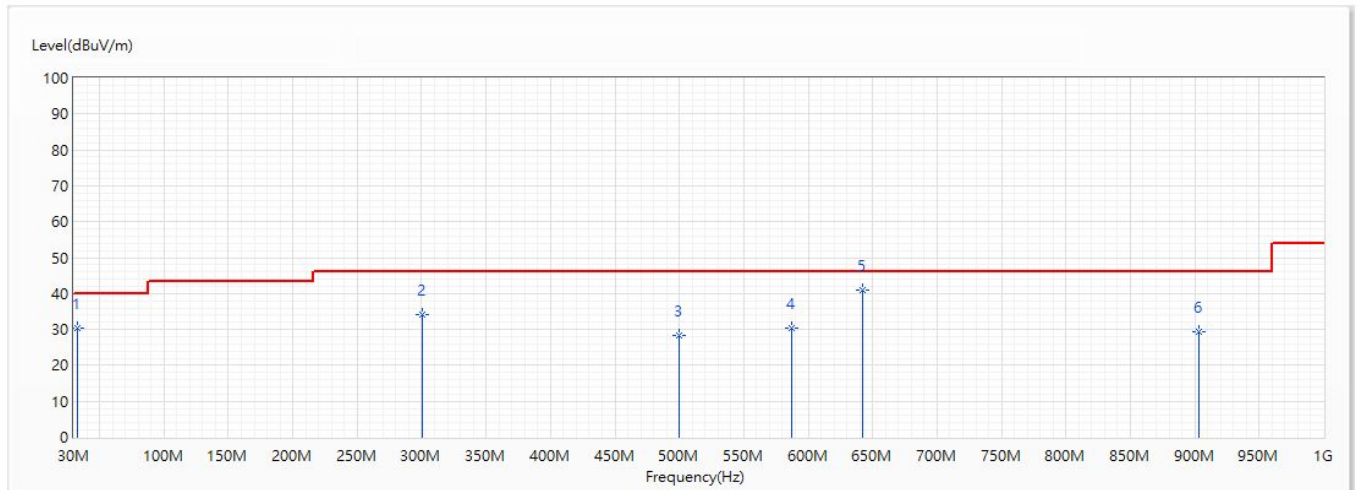


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	53.28	34.39	40.00	-5.61	42.15	-7.76	QP
2	114.875	28.71	43.50	-14.79	31.42	-2.71	QP
3	300.145	29.33	46.00	-16.67	30.73	-1.40	QP
4	633.825	41.61	46.00	-4.39	36.20	5.41	QP
* 5	633.825	45.11	46.00	-0.89	39.70	5.41	QP
6	672.14	38.83	46.00	-7.17	33.00	5.83	QP
7	672.14	43.34	46.00	-2.66	37.51	5.83	QP
8	794.845	36.25	46.00	-9.75	29.18	7.07	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11g_Ch6_2.437G	Humidity (%RH)	56.0

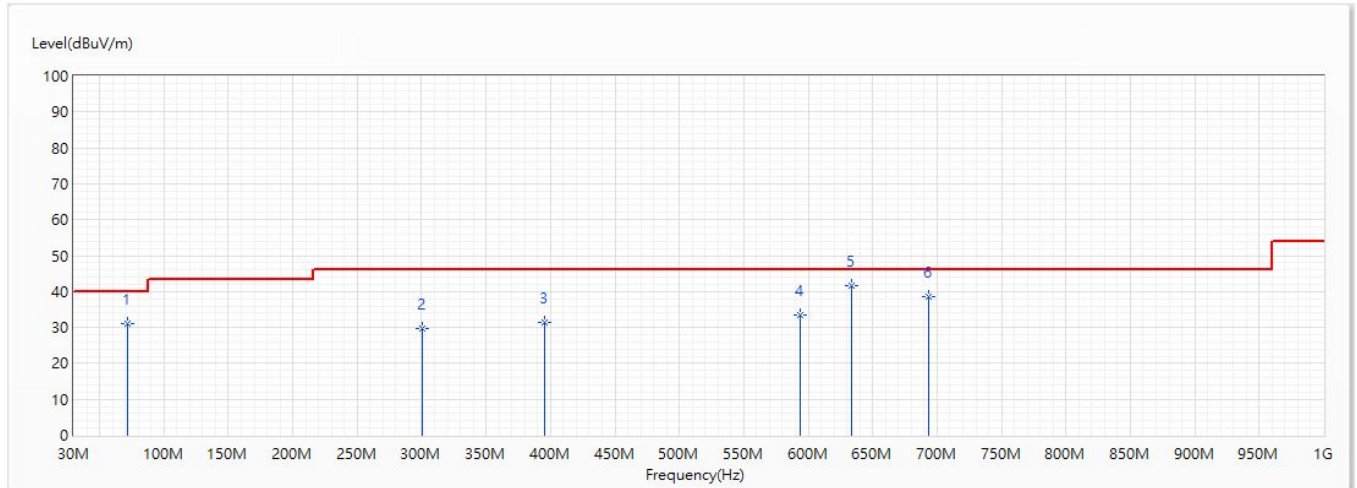


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	32.91	30.41	40.00	-9.59	27.30	3.11	QP
2	300.145	34.29	46.00	-11.71	35.69	-1.40	QP
3	499.965	28.39	46.00	-17.61	25.16	3.23	QP
4	586.78	30.30	46.00	-15.70	25.37	4.93	QP
* 5	642.07	41.01	46.00	-4.99	35.36	5.65	QP
6	903.485	29.42	46.00	-16.58	20.96	8.46	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11g_Ch6_2.437G	Humidity (%RH)	56.0

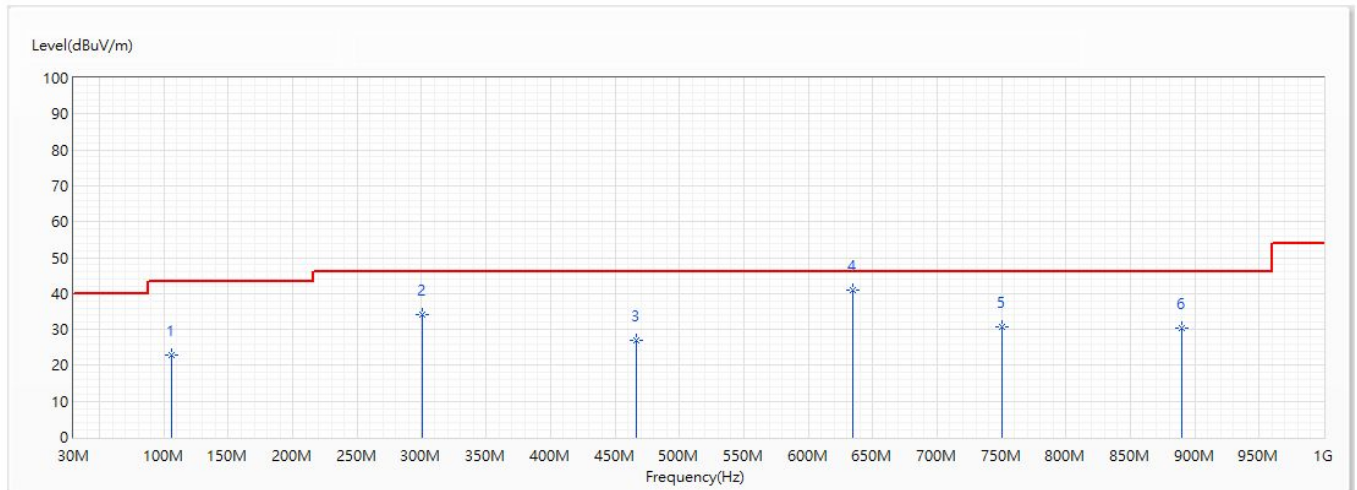


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	72.195	30.93	40.00	-9.07	39.83	-8.90	QP
2	300.145	29.71	46.00	-16.29	31.11	-1.40	QP
3	395.69	31.56	46.00	-14.44	30.15	1.41	QP
4	594.055	33.35	46.00	-12.65	28.52	4.83	QP
* 5	633.82	41.69	46.00	-4.31	36.28	5.41	QP
6	692.995	38.67	46.00	-7.33	32.67	6.00	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11n(20M)_Ch6_2.437G	Humidity (%RH)	56.0

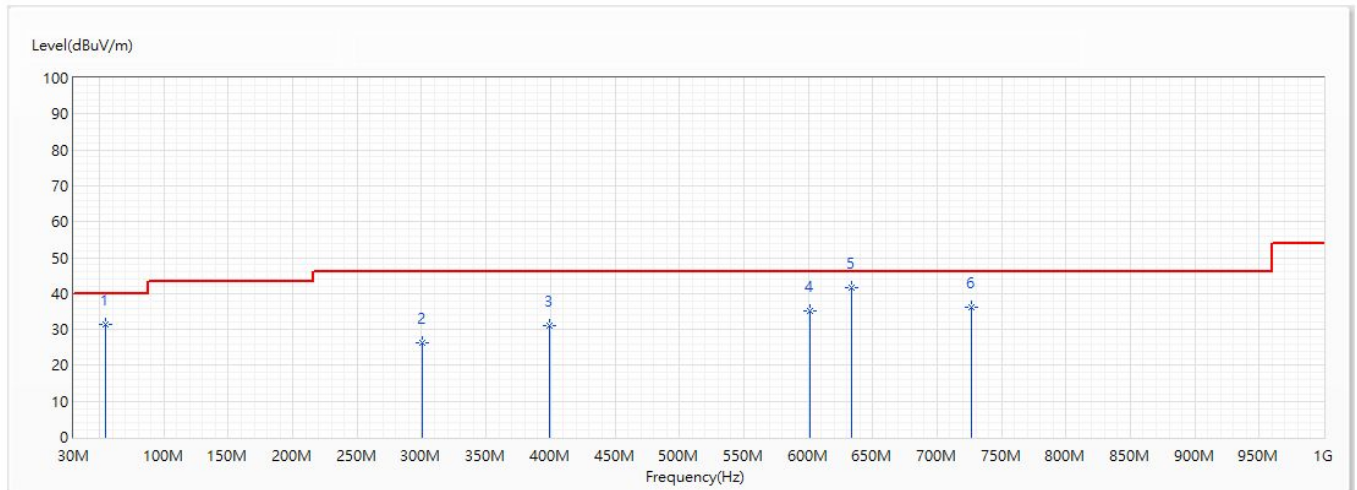


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	105.66	23.01	43.50	-20.49	26.38	-3.37	QP
2	300.145	33.96	46.00	-12.04	35.36	-1.40	QP
3	466.985	27.12	46.00	-18.88	24.56	2.56	QP
* 4	634.31	41.08	46.00	-4.92	35.65	5.43	QP
5	750.225	30.88	46.00	-15.12	24.55	6.33	QP
6	889.905	30.41	46.00	-15.59	22.09	8.32	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11n(20M)_Ch6_2.437G	Humidity (%RH)	56.0

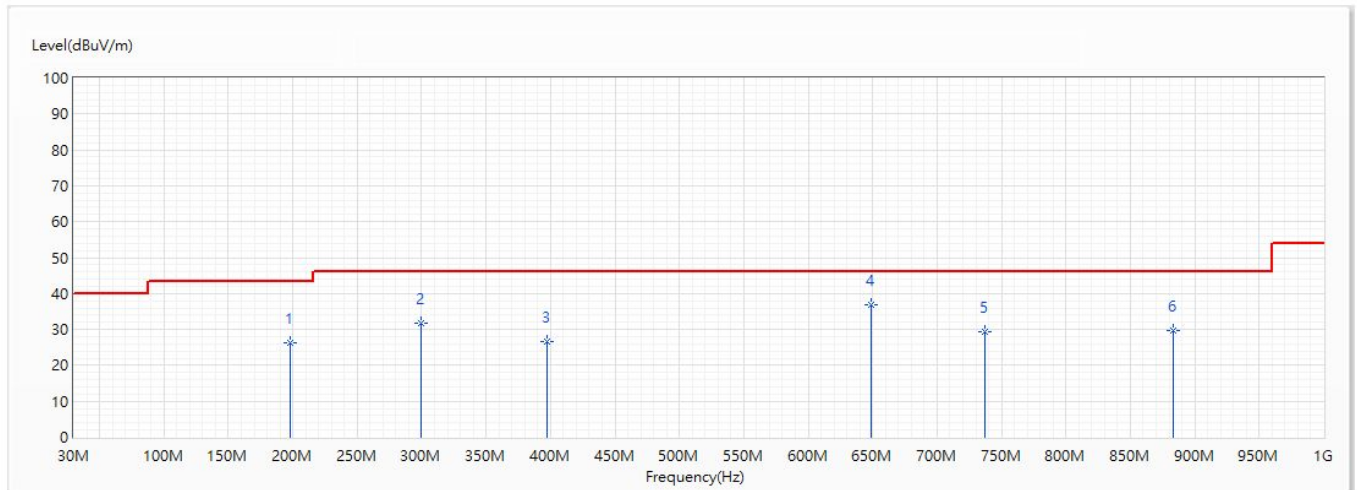


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	54.735	31.41	40.00	-8.59	39.54	-8.13	QP
2	300.145	26.16	46.00	-19.84	27.56	-1.40	QP
3	399.57	30.94	46.00	-15.06	29.29	1.65	QP
4	601.33	35.18	46.00	-10.82	30.27	4.91	QP
* 5	633.921	41.48	46.00	-4.52	36.06	5.42	QP
6	726.945	36.27	46.00	-9.73	30.12	6.15	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11n(40M)_Ch6_2.437G	Humidity (%RH)	56.0

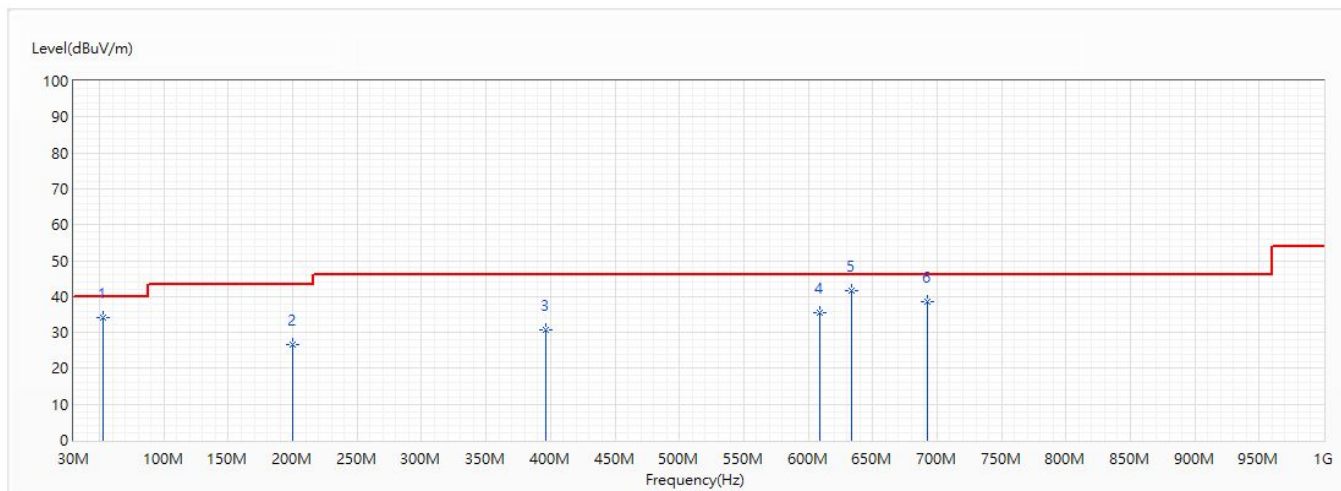


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	198.295	26.15	43.50	-17.35	31.35	-5.20	QP
2	299.66	31.74	46.00	-14.26	33.15	-1.41	QP
3	397.145	26.62	46.00	-19.38	25.12	1.50	QP
* 4	648.86	36.98	46.00	-9.02	31.43	5.55	QP
5	736.645	29.51	46.00	-16.49	22.92	6.59	QP
6	883.115	29.82	46.00	-16.18	21.66	8.16	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11n(40M)_BW40M_Ch6_2.437G	Humidity (%RH)	56.0

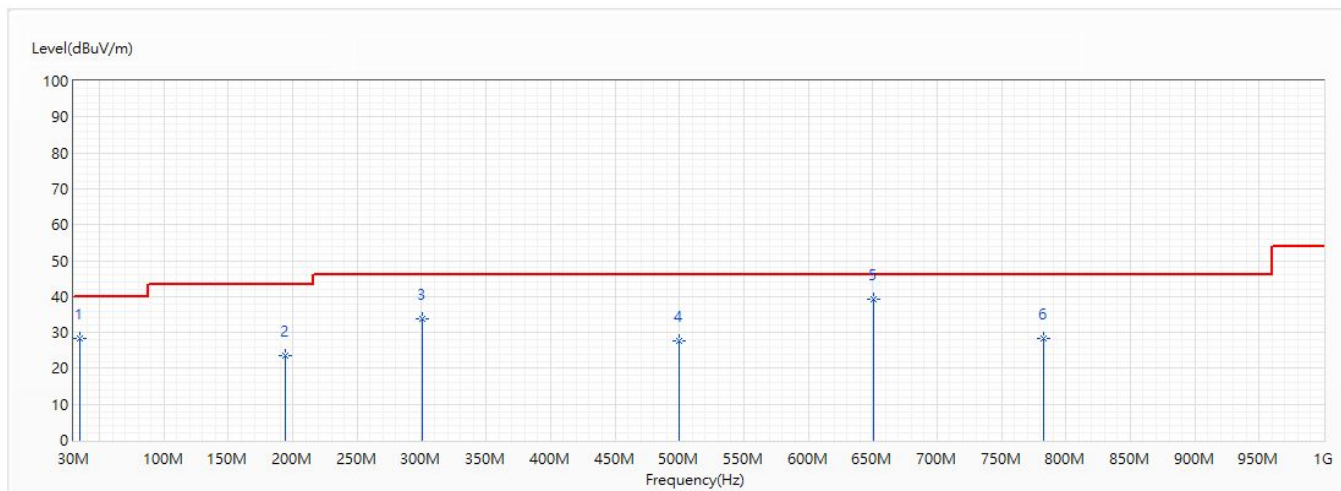


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	52.31	34.22	40.00	-5.78	41.70	-7.48	QP
2	200.235	26.60	43.50	-16.90	31.61	-5.01	QP
3	396.175	30.74	46.00	-15.26	29.30	1.44	QP
4	609.09	35.49	46.00	-10.51	30.32	5.17	QP
* 5	633.79	41.70	46.00	-4.30	36.29	5.41	QP
6	692.51	38.73	46.00	-7.27	32.74	5.99	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11ax(20M)_Ch6_2.437G	Humidity (%RH)	56.0

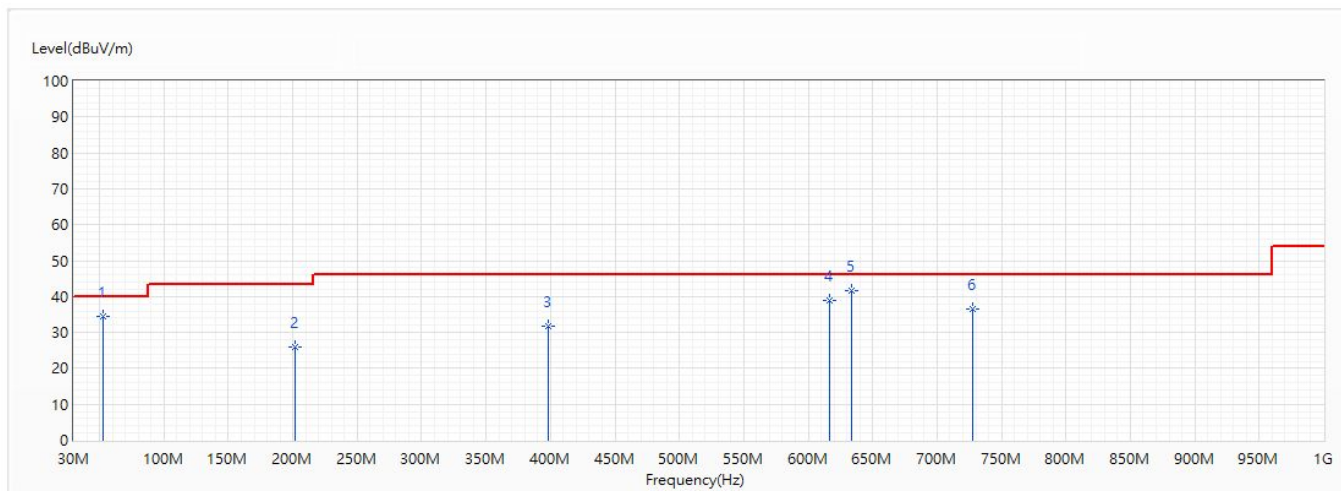


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	34.365	28.40	40.00	-11.60	26.19	2.21	QP
2	194.415	23.45	43.50	-20.05	29.19	-5.74	QP
3	300.145	33.76	46.00	-12.24	35.16	-1.40	QP
4	499.965	27.62	46.00	-18.38	24.39	3.23	QP
* 5	650.315	39.12	46.00	-6.88	33.58	5.54	QP
6	782.72	28.25	46.00	-17.75	21.43	6.82	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11ax(20M)_Ch6_2.437G	Humidity (%RH)	56.0

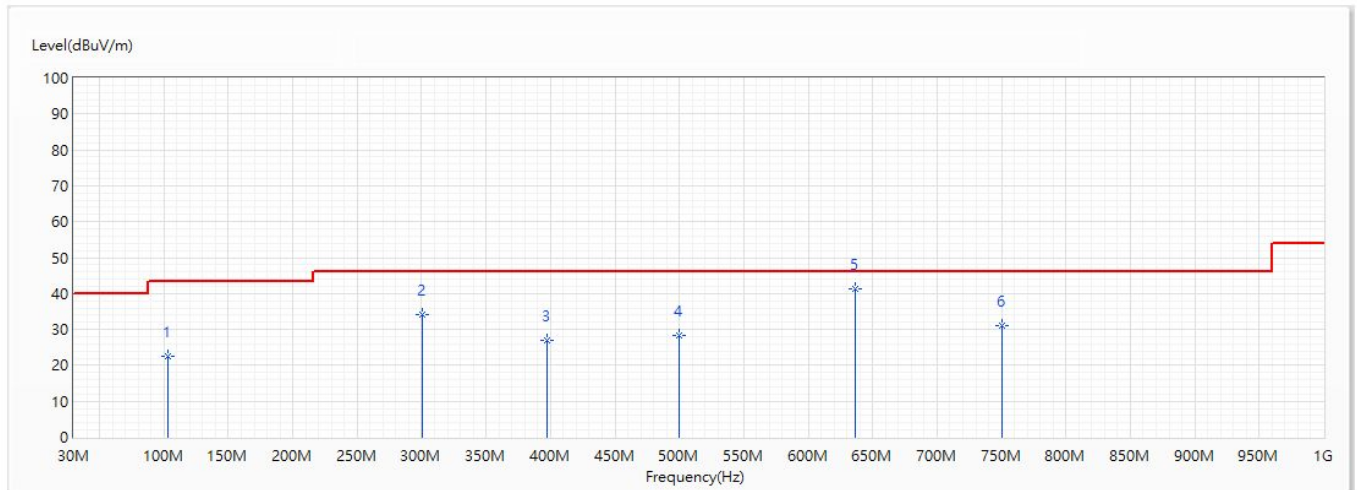


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	52.31	34.58	40.00	-5.42	42.06	-7.48	QP
2	201.69	25.92	43.50	-17.58	30.84	-4.92	QP
3	398.6	31.77	46.00	-14.23	30.17	1.60	QP
4	616.365	38.90	46.00	-7.10	33.62	5.28	QP
* 5	633.829	41.56	46.00	-4.44	36.15	5.41	QP
6	727.43	36.44	46.00	-9.56	30.27	6.17	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11ax(40M)_Ch6_2.437G	Humidity (%RH)	56.0

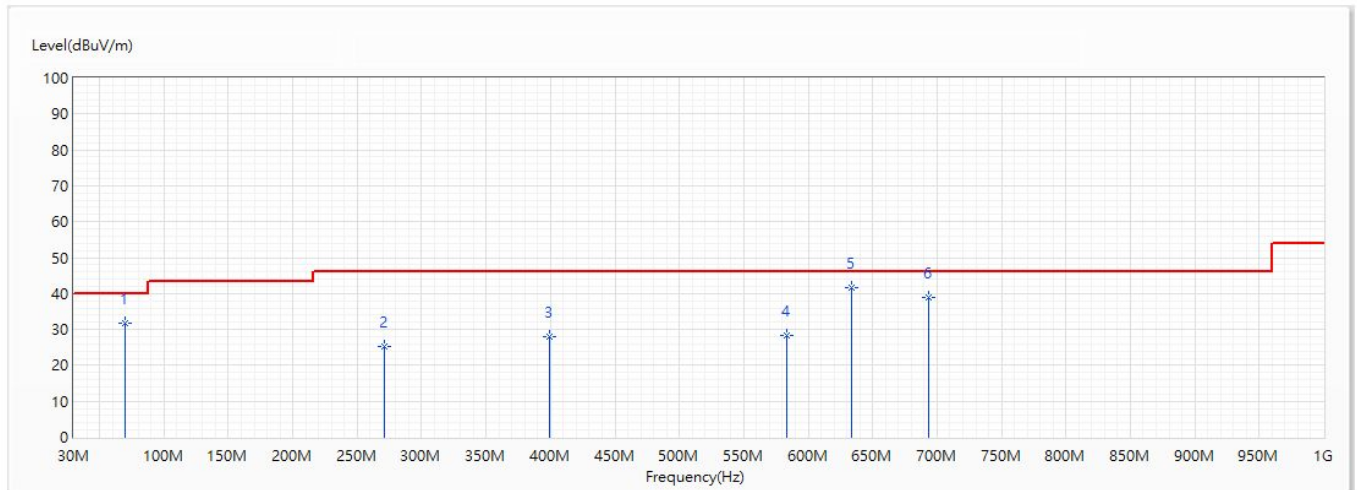


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	103.235	22.52	43.50	-20.98	26.22	-3.70	QP
2	300.145	34.18	46.00	-11.82	35.58	-1.40	QP
3	397.145	27.08	46.00	-18.92	25.58	1.50	QP
4	499.965	28.44	46.00	-17.56	25.21	3.23	QP
* 5	636.25	41.44	46.00	-4.56	35.92	5.52	QP
6	750.225	31.10	46.00	-14.90	24.77	6.33	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11ax(40M)_Ch6_2.437G	Humidity (%RH)	56.0



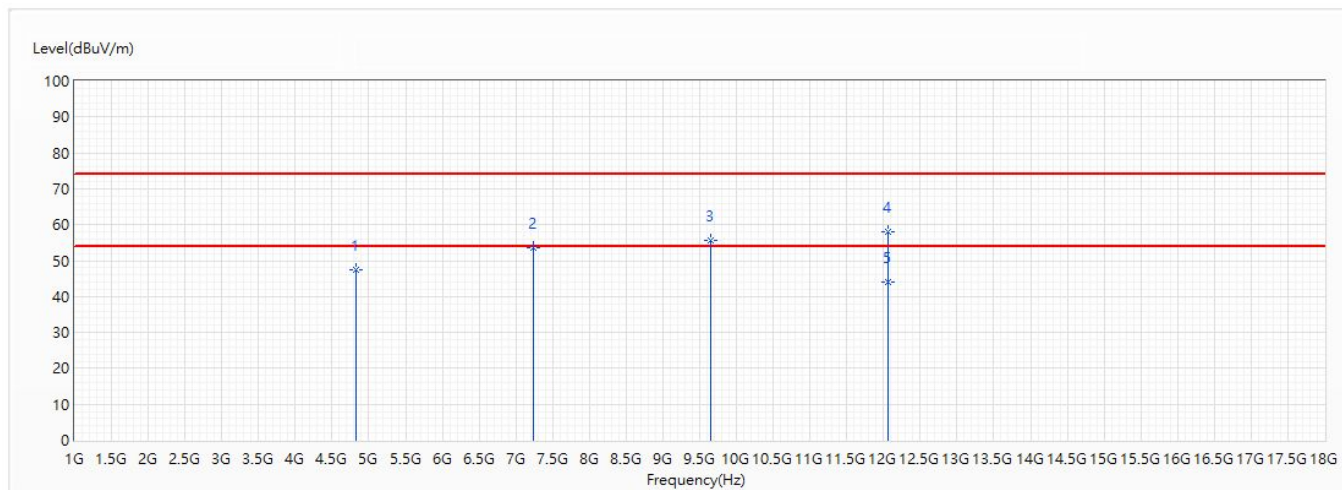
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	69.77	31.72	40.00	-8.28	40.95	-9.23	QP
2	271.53	25.20	46.00	-20.80	27.05	-1.85	QP
3	399.085	28.08	46.00	-17.92	26.45	1.63	QP
4	582.9	28.36	46.00	-17.64	23.37	4.99	QP
* 5	633.85	41.61	46.00	-4.39	36.20	5.41	QP
6	692.995	39.06	46.00	-6.94	33.06	6.00	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11b_Ch1_2.412G	Humidity (%RH)	56.0

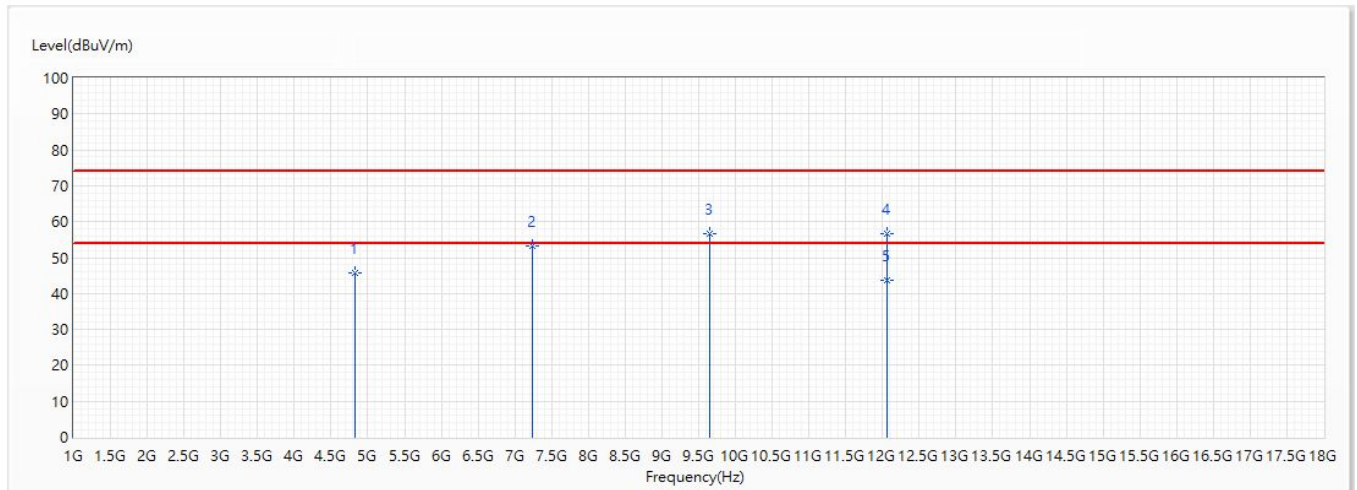


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4824	47.57	74.00	-26.43	49.10	-1.53	PK
2	7236	53.43	74.00	-20.57	47.26	6.17	PK
3	9648	55.76	74.00	-18.24	44.39	11.37	PK
4	12060	57.92	74.00	-16.08	44.43	13.49	PK
* 5	12060	43.94	54.00	-10.06	30.45	13.49	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11b_Ch1_2.412G	Humidity (%RH)	56.0

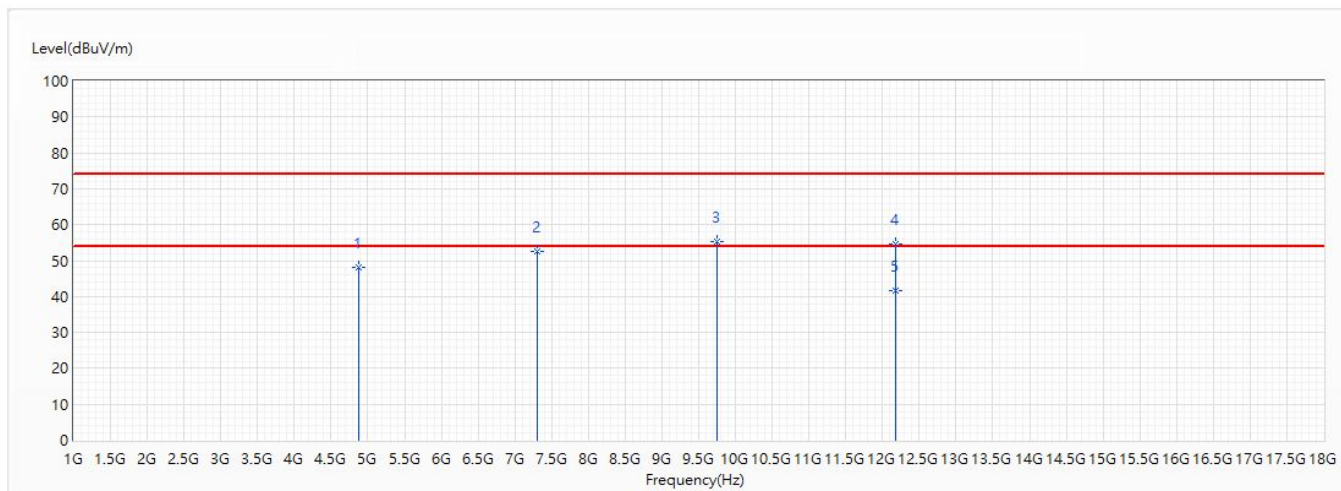


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4824	45.75	74.00	-28.25	47.28	-1.53	PK
2	7236	53.16	74.00	-20.84	46.99	6.17	PK
3	9648	56.50	74.00	-17.50	45.13	11.37	PK
4	12060	56.81	74.00	-17.19	43.32	13.49	PK
* 5	12060	43.72	54.00	-10.28	30.23	13.49	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11b_Ch6_2.437G	Humidity (%RH)	56.0

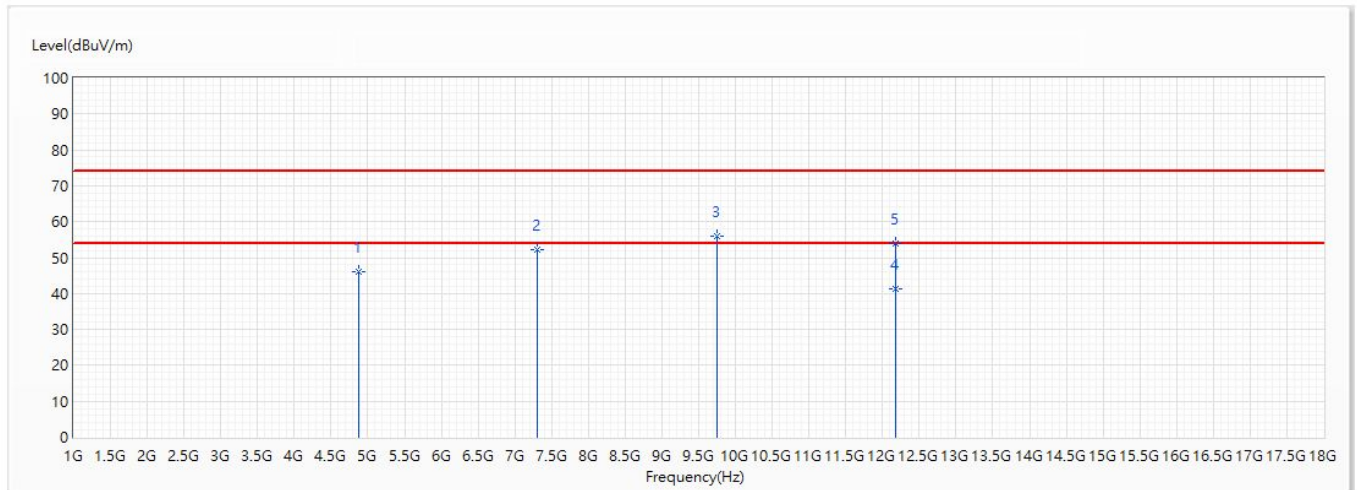


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4874	48.06	74.00	-25.94	49.39	-1.33	PK
2	7311	52.44	74.00	-21.56	46.02	6.42	PK
3	9748	55.25	74.00	-18.75	43.76	11.49	PK
4	12185	54.67	74.00	-19.33	41.39	13.28	PK
* 5	12185	41.55	54.00	-12.45	28.27	13.28	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11b_Ch6_2.437G	Humidity (%RH)	56.0

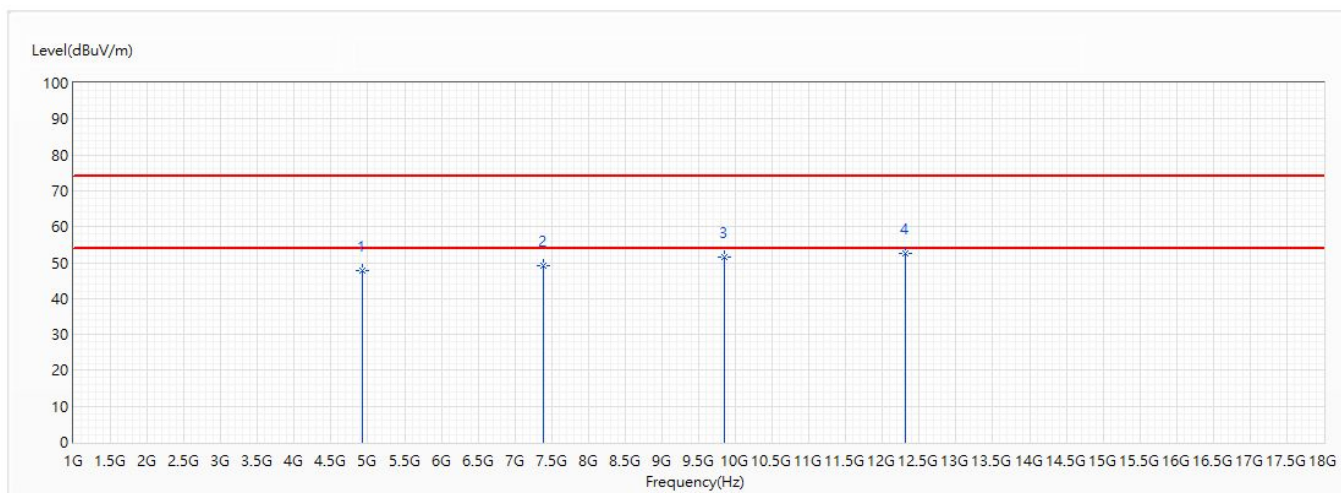


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4874	46.24	74.00	-27.76	47.57	-1.33	PK
2	7311	52.07	74.00	-21.93	45.65	6.42	PK
3	9748	55.99	74.00	-18.01	44.50	11.49	PK
* 4	12185	41.33	54.00	-12.67	28.05	13.28	AV
5	12185	54.05	74.00	-19.95	40.77	13.28	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11b_Ch11_2.462G	Humidity (%RH)	56.0

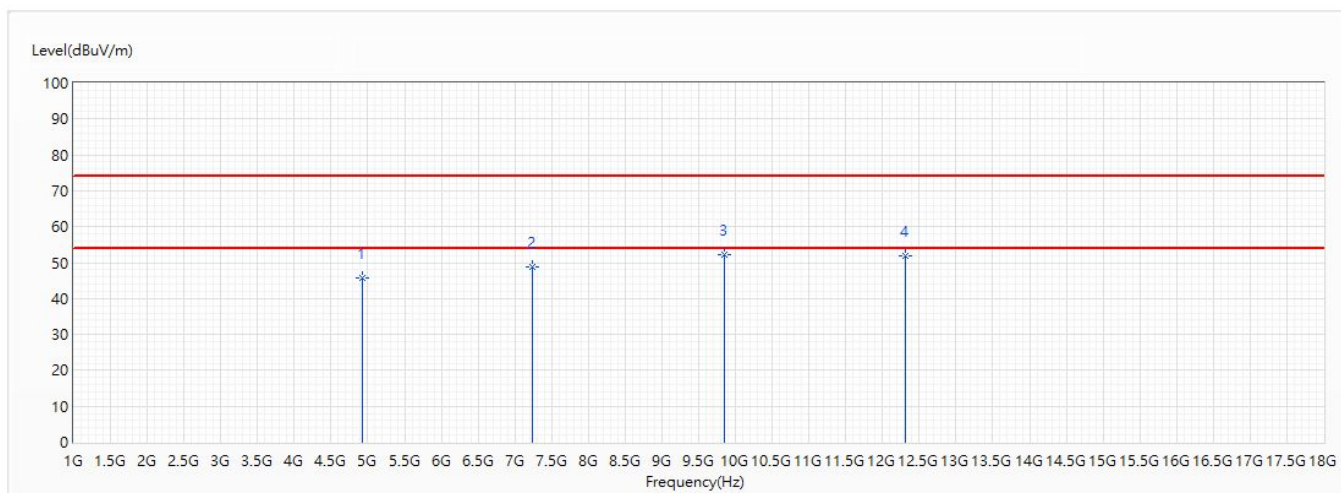


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4924	47.65	74.00	-26.35	48.78	-1.13	PK
2	7386	49.13	74.00	-24.87	42.47	6.66	PK
3	9848	51.54	74.00	-22.46	39.99	11.55	PK
* 4	12310	52.49	74.00	-21.51	39.44	13.05	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11b_Ch11_2.462G	Humidity (%RH)	56.0

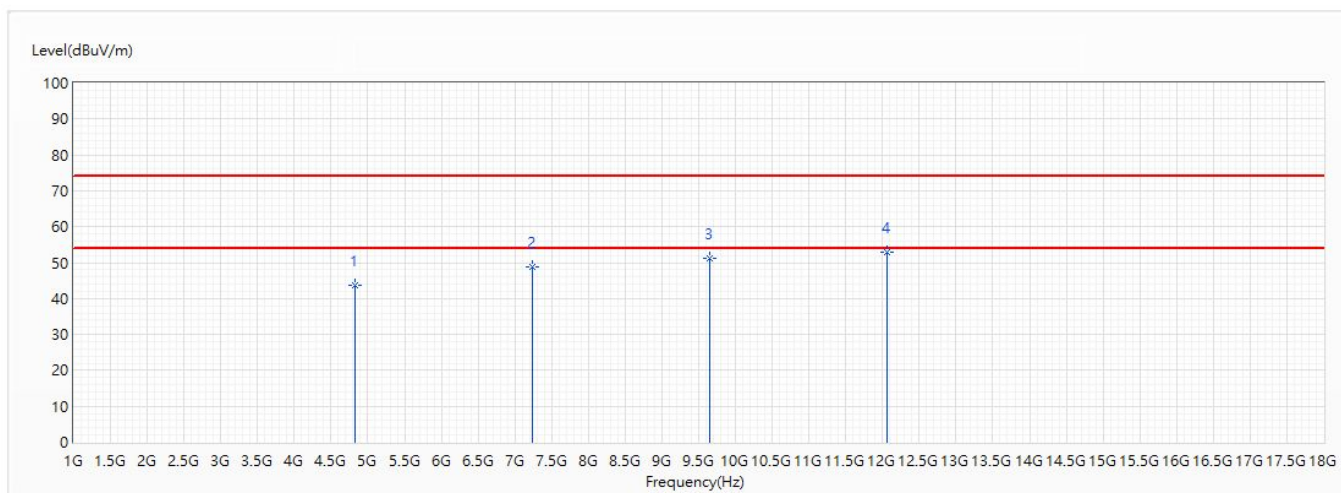


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4924	45.89	74.00	-28.11	47.02	-1.13	PK
2	7236	48.91	74.00	-25.09	42.74	6.17	PK
* 3	9848	52.28	74.00	-21.72	40.73	11.55	PK
4	12310	51.96	74.00	-22.04	38.91	13.05	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11g_Ch1_2.412G	Humidity (%RH)	56.0

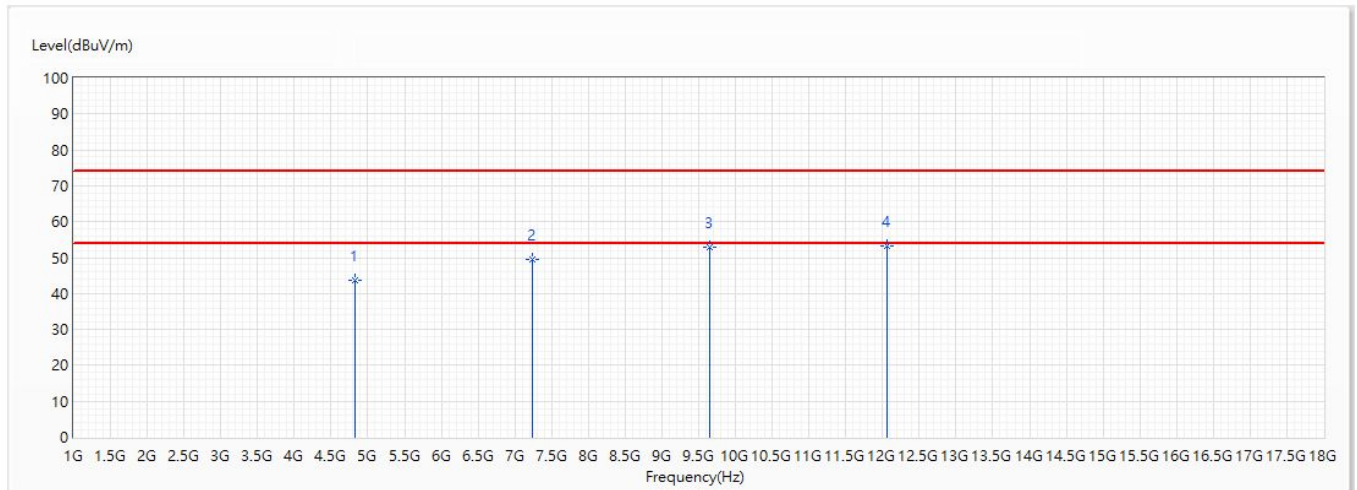


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4824	43.65	74.00	-30.35	45.18	-1.53	PK
2	7236	48.86	74.00	-25.14	42.69	6.17	PK
3	9648	51.29	74.00	-22.71	39.92	11.37	PK
* 4	12060	52.95	74.00	-21.05	39.46	13.49	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11g_Ch1_2.412G	Humidity (%RH)	56.0

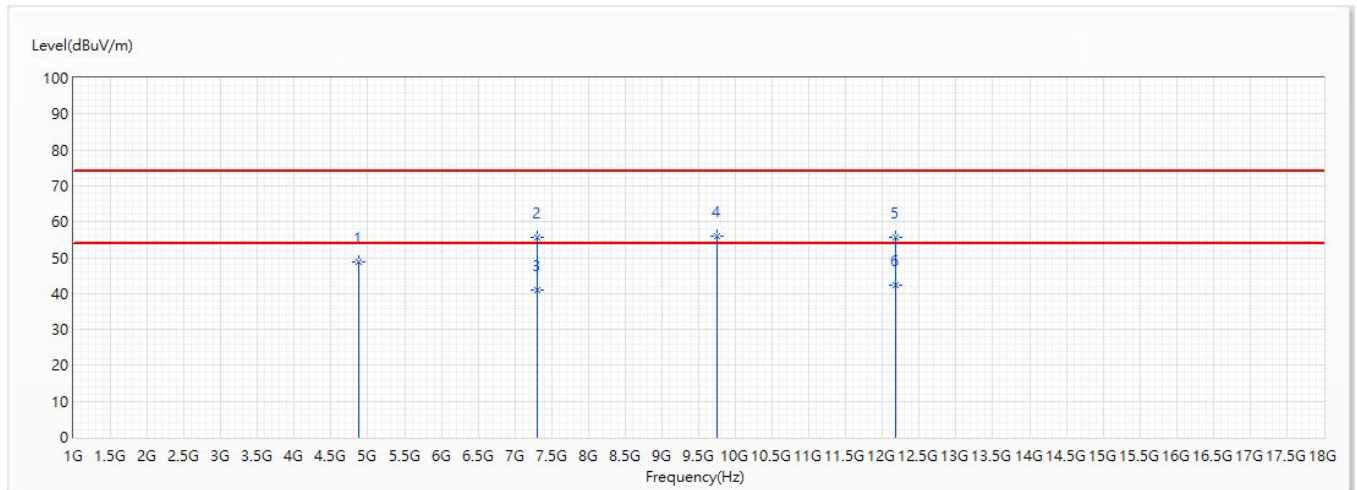


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4824	43.66	74.00	-30.34	45.19	-1.53	PK
2	7236	49.46	74.00	-24.54	43.29	6.17	PK
3	9648	52.96	74.00	-21.04	41.59	11.37	PK
* 4	12060	53.18	74.00	-20.82	39.69	13.49	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11g_Ch6_2.437G	Humidity (%RH)	56.0

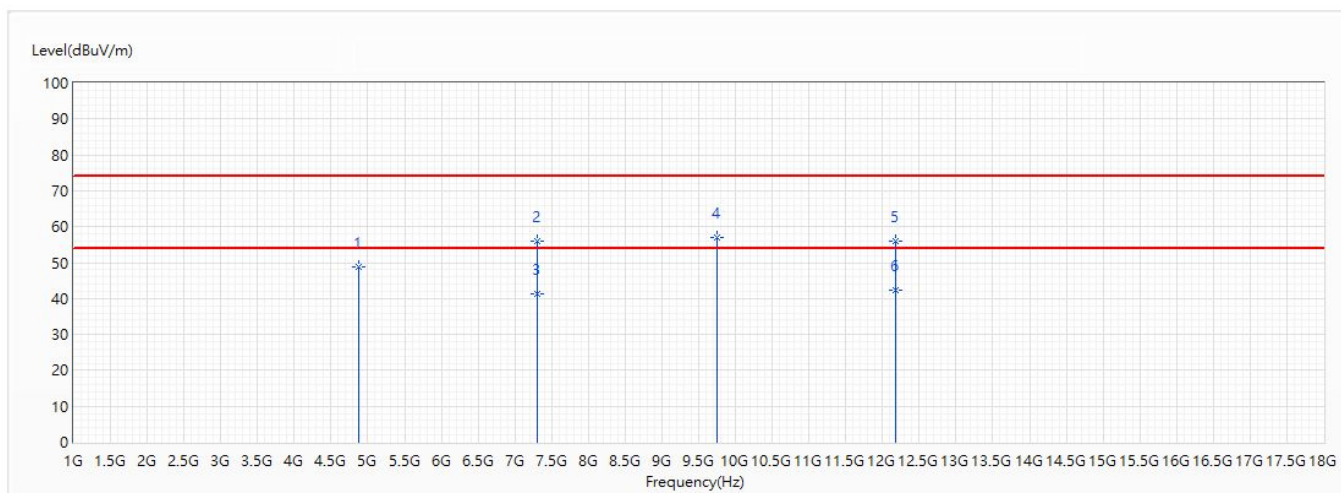


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4874	48.70	74.00	-25.30	50.03	-1.33	PK
2	7311	55.52	74.00	-18.48	49.10	6.42	PK
3	7311	41.03	54.00	-12.97	34.61	6.42	AV
4	9748	56.07	74.00	-17.93	44.58	11.49	PK
5	12185	55.58	74.00	-18.42	42.30	13.28	PK
* 6	12185	42.35	54.00	-11.65	29.07	13.28	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11g_Ch6_2.437G	Humidity (%RH)	56.0

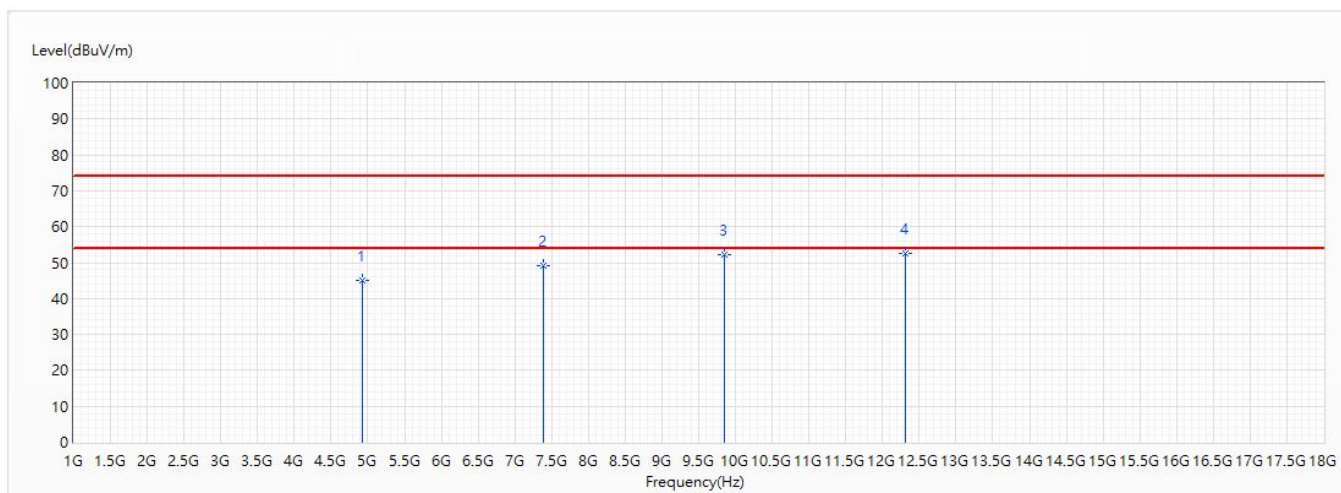


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4874	48.95	74.00	-25.05	50.28	-1.33	PK
2	7311	55.96	74.00	-18.04	49.54	6.42	PK
3	7311	41.23	54.00	-12.77	34.81	6.42	AV
4	9748	57.08	74.00	-16.92	45.59	11.49	PK
5	12185	55.96	74.00	-18.04	42.68	13.28	PK
* 6	12185	42.38	54.00	-11.62	29.10	13.28	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11g_Ch11_2.462G	Humidity (%RH)	56.0

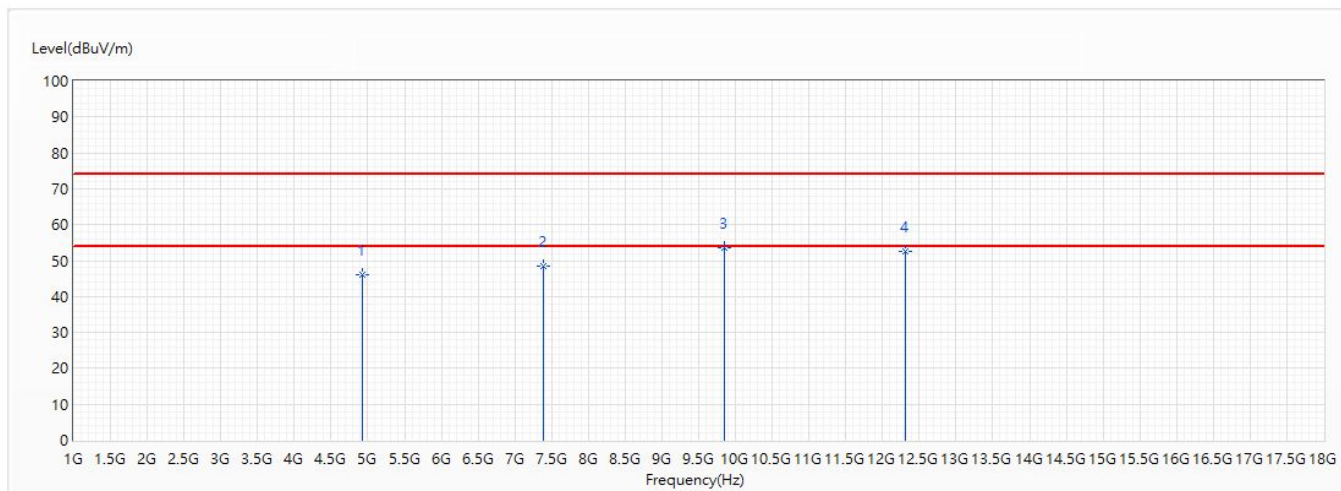


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4924	44.99	74.00	-29.01	46.12	-1.13	PK
2	7386	49.08	74.00	-24.92	42.42	6.66	PK
3	9848	52.24	74.00	-21.76	40.69	11.55	PK
* 4	12310	52.65	74.00	-21.35	39.60	13.05	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 1: SISO Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11g_Ch11_2.462G	Humidity (%RH)	56.0

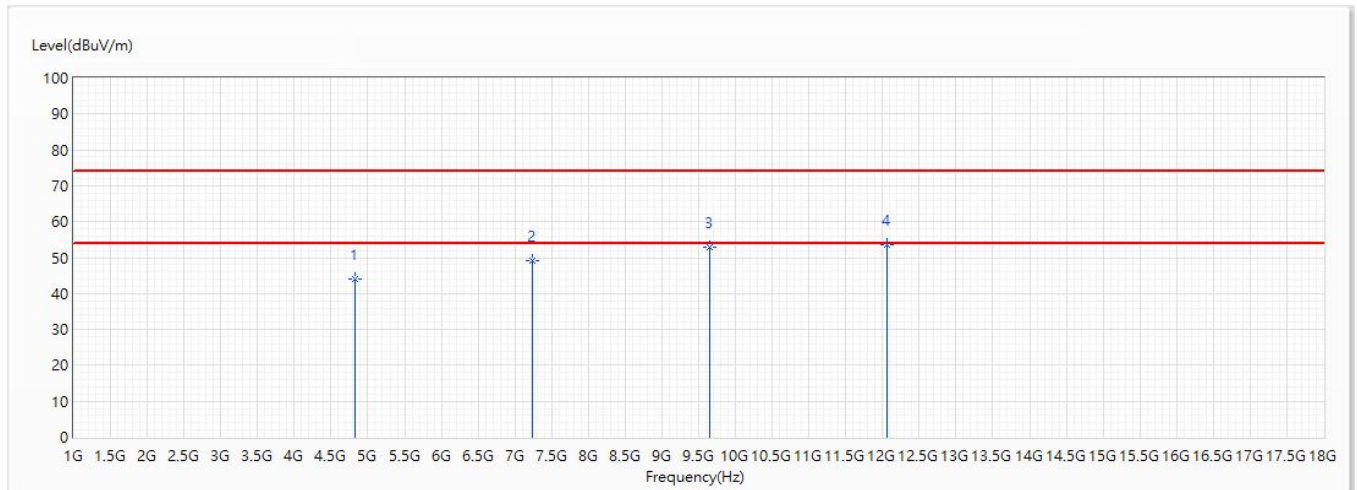


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4924	45.96	74.00	-28.04	47.09	-1.13	PK
2	7386	48.32	74.00	-25.68	41.66	6.66	PK
* 3	9848	53.71	74.00	-20.29	42.16	11.55	PK
4	12310	52.72	74.00	-21.28	39.67	13.05	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11n(20M)_Ch1_2.412G	Humidity (%RH)	56.0

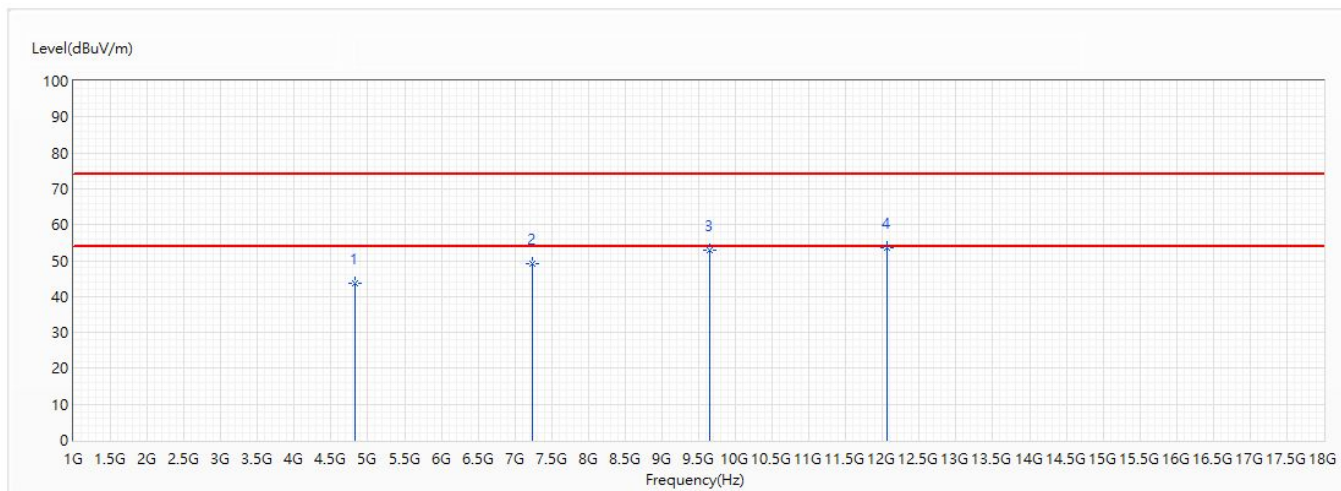


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4824	43.95	74.00	-30.05	45.48	-1.53	PK
2	7236	49.17	74.00	-24.83	43.00	6.17	PK
3	9648	52.97	74.00	-21.03	41.60	11.37	PK
* 4	12060	53.69	74.00	-20.31	40.20	13.49	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11n(20M)_Ch1_2.412G	Humidity (%RH)	56.0

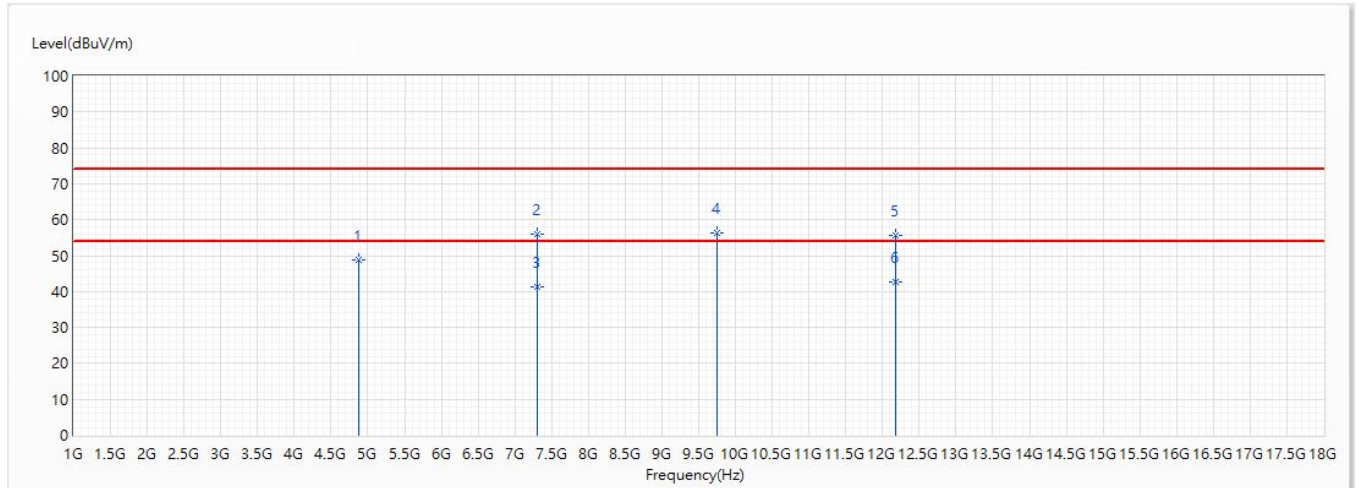


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4824	43.71	74.00	-30.29	45.24	-1.53	PK
2	7236	49.22	74.00	-24.78	43.05	6.17	PK
3	9648	52.84	74.00	-21.16	41.47	11.37	PK
* 4	12060	53.47	74.00	-20.53	39.98	13.49	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11n(20M)_Ch6_2.437G	Humidity (%RH)	56.0

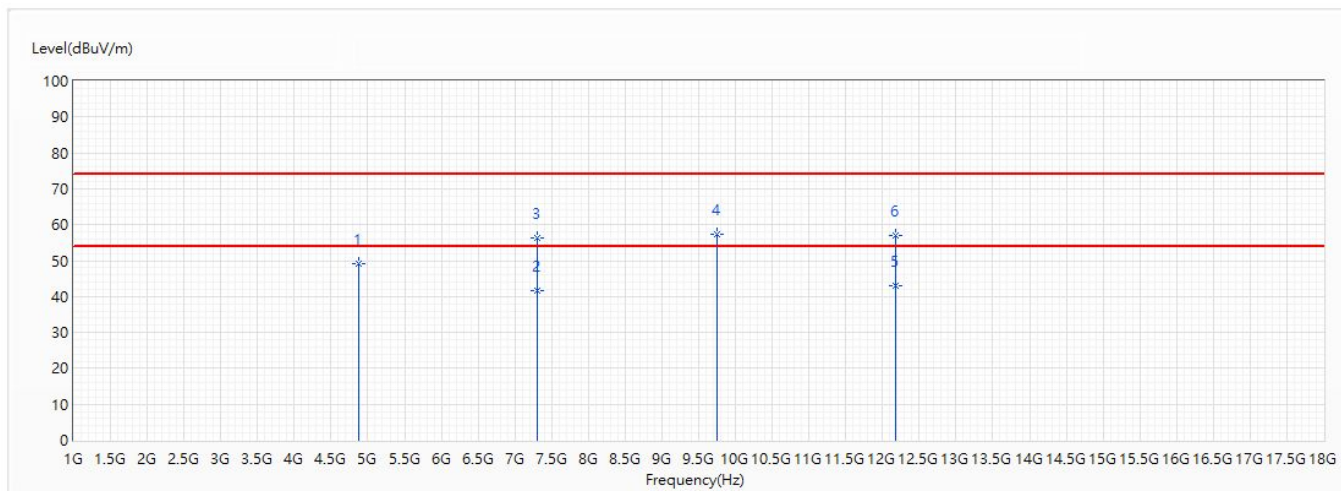


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4874	48.85	74.00	-25.15	50.18	-1.33	PK
2	7311	56.05	74.00	-17.95	49.63	6.42	PK
3	7311	41.28	54.00	-12.72	34.86	6.42	AV
4	9748	56.40	74.00	-17.60	44.91	11.49	PK
5	12185	55.66	74.00	-18.34	42.38	13.28	PK
* 6	12185	42.58	54.00	-11.42	29.30	13.28	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11n(20M)_Ch6_2.437G	Humidity (%RH)	56.0

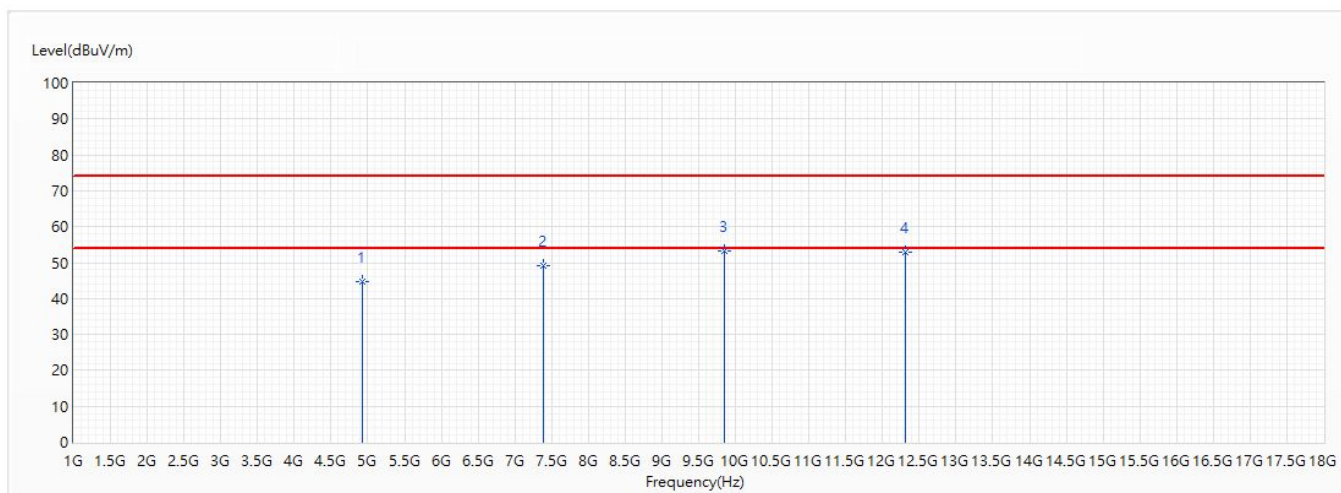


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4874	49.28	74.00	-24.72	50.61	-1.33	PK
2	7311	41.58	54.00	-12.42	35.16	6.42	AV
3	7311	56.17	74.00	-17.83	49.75	6.42	PK
4	9748	57.23	74.00	-16.77	45.74	11.49	PK
* 5	12185	42.93	54.00	-11.07	29.65	13.28	AV
6	12185	57.05	74.00	-16.95	43.77	13.28	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11n(20M)_Ch11_2.462G	Humidity (%RH)	56.0

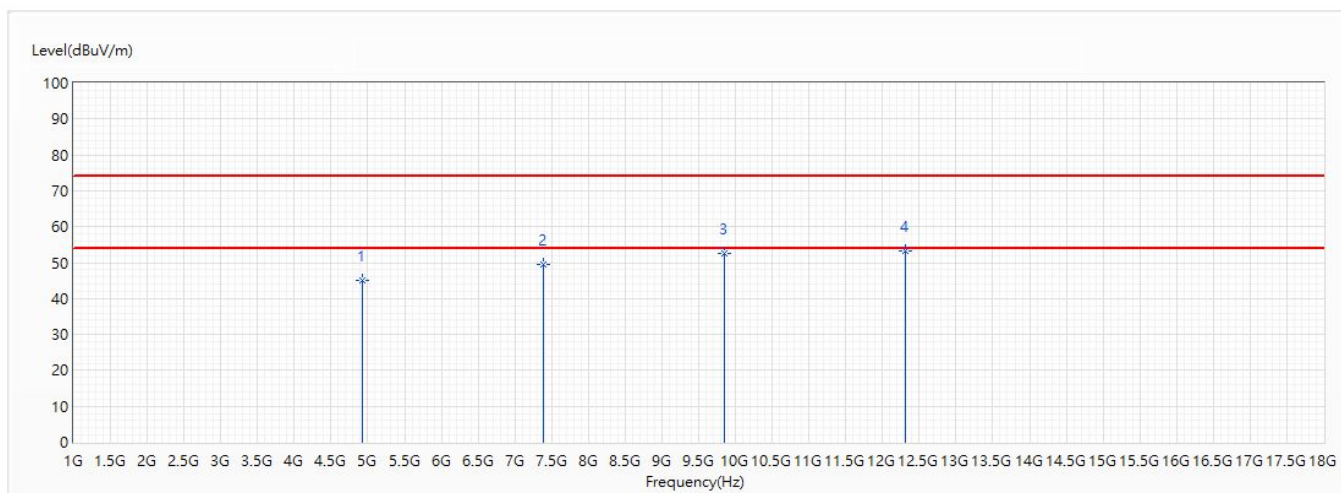


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4924	44.78	74.00	-29.22	45.91	-1.13	PK
2	7386	49.16	74.00	-24.84	42.50	6.66	PK
* 3	9848	53.13	74.00	-20.87	41.58	11.55	PK
4	12310	52.84	74.00	-21.16	39.79	13.05	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11n(20M)_Ch11_2.462G	Humidity (%RH)	56.0

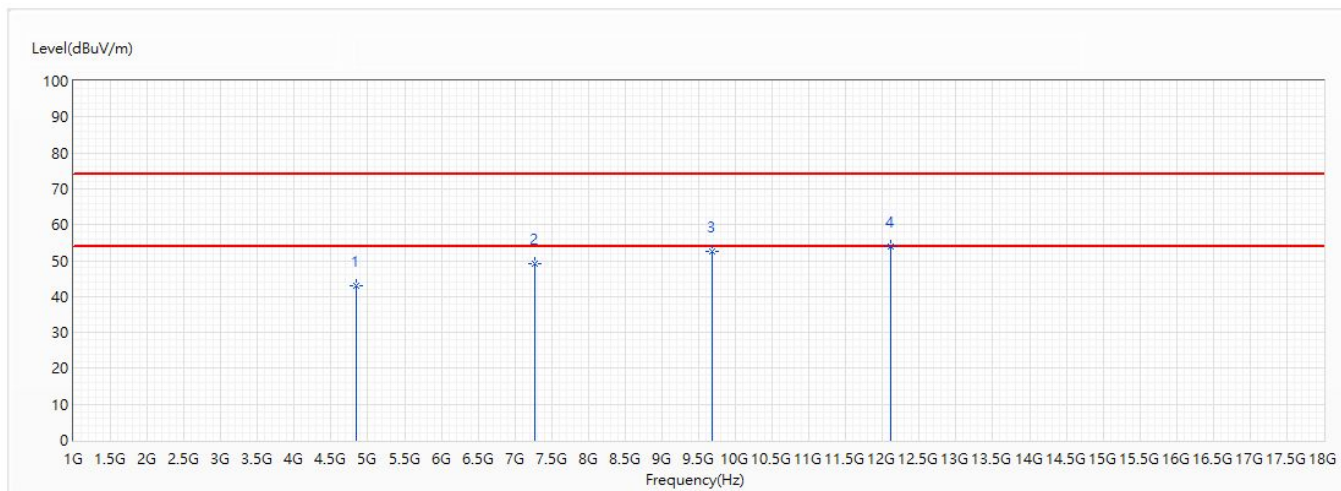


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4924	45.19	74.00	-28.81	46.32	-1.13	PK
2	7386	49.42	74.00	-24.58	42.76	6.66	PK
3	9848	52.70	74.00	-21.30	41.15	11.55	PK
* 4	12310	53.27	74.00	-20.73	40.22	13.05	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11n(40M)_Ch3_2.422G	Humidity (%RH)	56.0

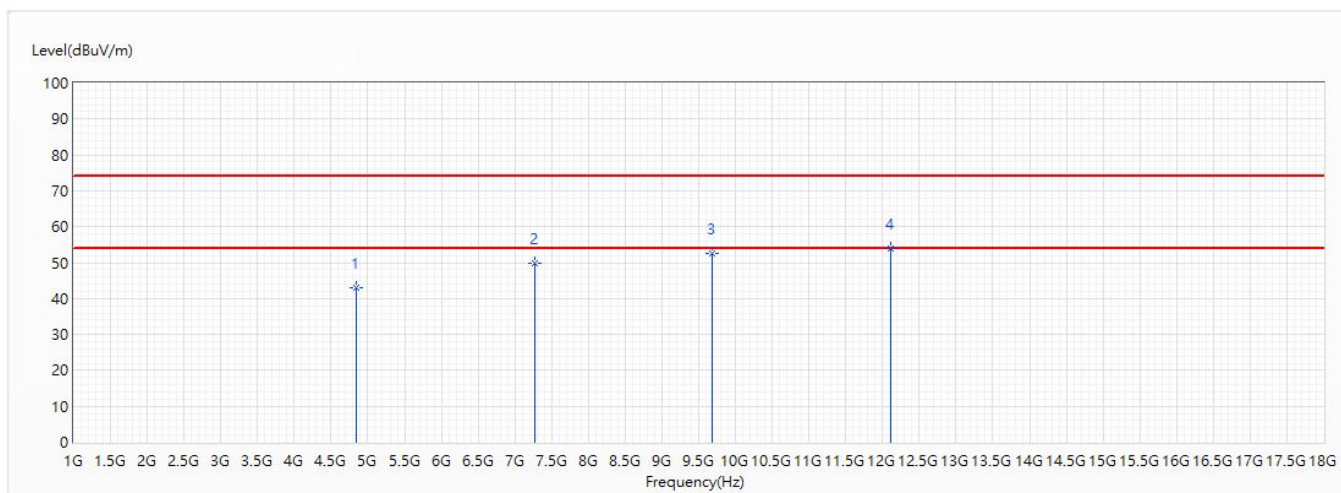


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4844	42.89	74.00	-31.11	44.33	-1.44	PK
2	7266	49.08	74.00	-24.92	42.81	6.27	PK
3	9688	52.42	74.00	-21.58	41.01	11.41	PK
* 4	12110	53.89	74.00	-20.11	40.48	13.41	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11n(40M)_Ch3_2.422G	Humidity (%RH)	56.0

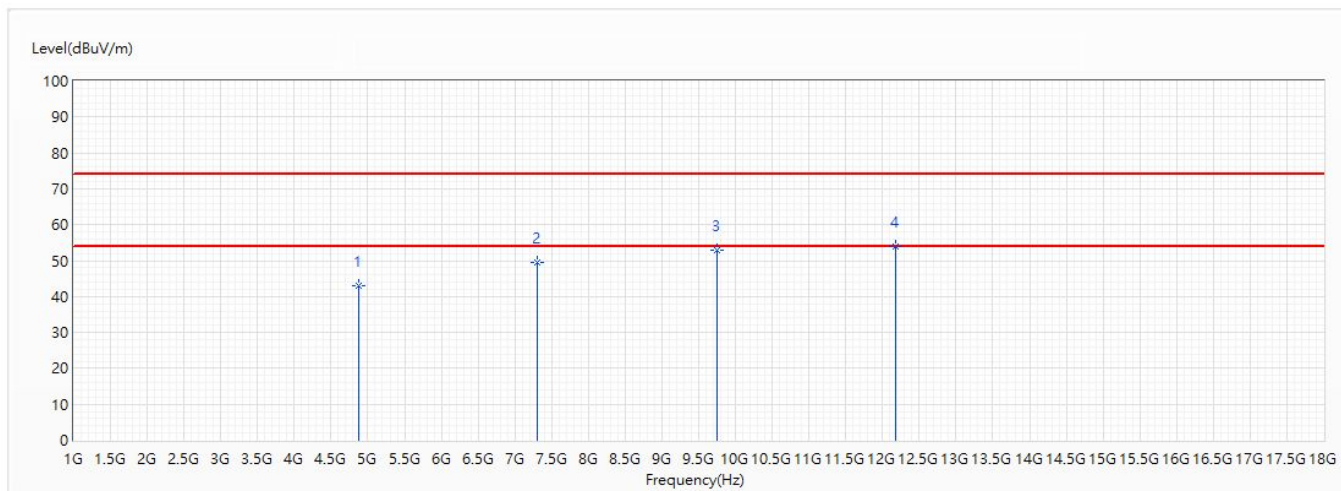


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4844	42.88	74.00	-31.12	44.32	-1.44	PK
2	7266	49.74	74.00	-24.26	43.47	6.27	PK
3	9688	52.66	74.00	-21.34	41.25	11.41	PK
* 4	12110	53.85	74.00	-20.15	40.44	13.41	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11n(40M)_Ch6_2.437G	Humidity (%RH)	56.0

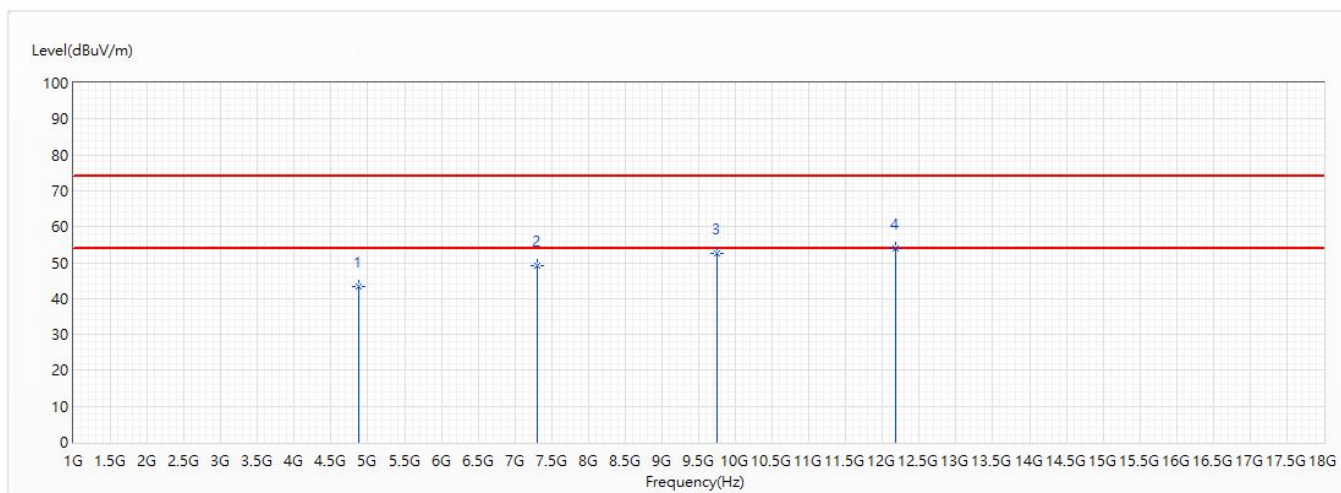


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4874	43.14	74.00	-30.86	44.47	-1.33	PK
2	7311	49.55	74.00	-24.45	43.13	6.42	PK
3	9748	52.74	74.00	-21.26	41.25	11.49	PK
* 4	12185	53.96	74.00	-20.04	40.68	13.28	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11n(40M)_Ch6_2.437G	Humidity (%RH)	56.0

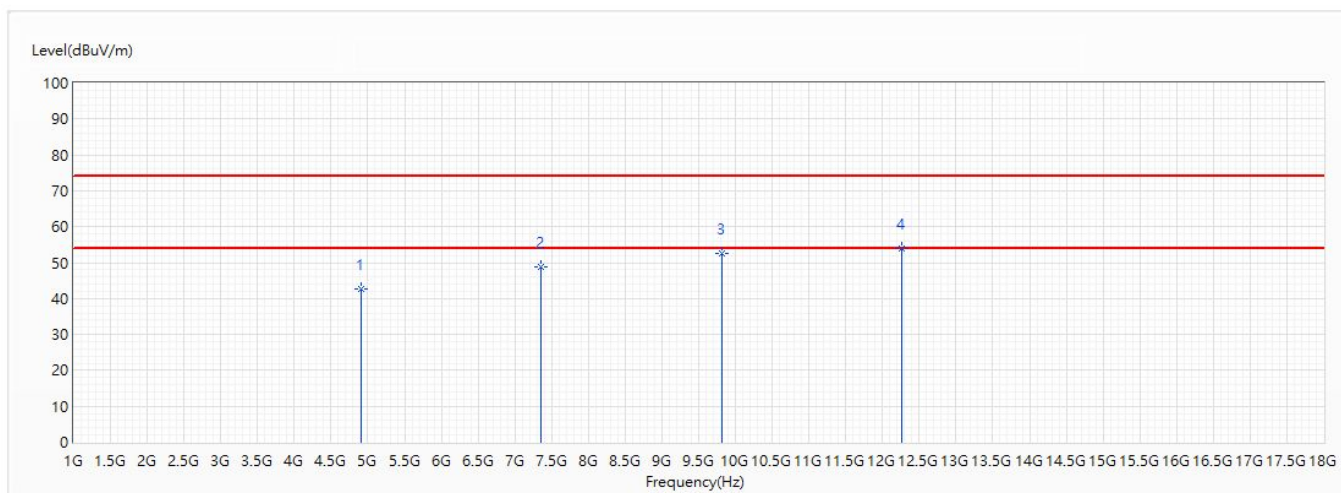


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4874	43.48	74.00	-30.52	44.81	-1.33	PK
2	7311	49.05	74.00	-24.95	42.63	6.42	PK
3	9748	52.63	74.00	-21.37	41.14	11.49	PK
* 4	12185	53.92	74.00	-20.08	40.64	13.28	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11n(40M)_Ch9_2.452G	Humidity (%RH)	56.0

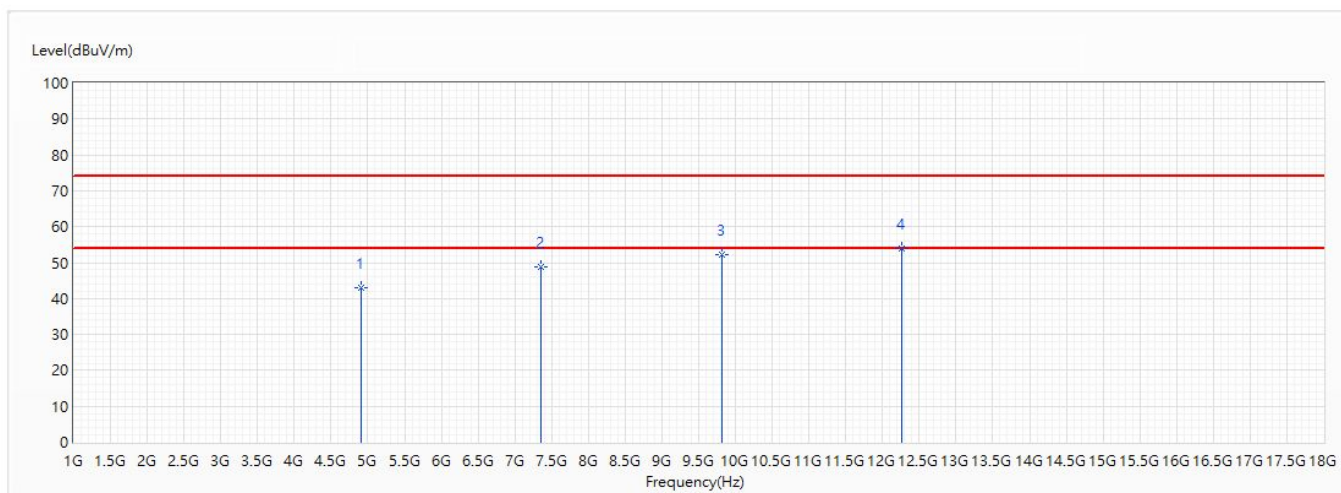


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4904	42.64	74.00	-31.36	43.85	-1.21	PK
2	7356	48.89	74.00	-25.11	42.33	6.56	PK
3	9808	52.59	74.00	-21.41	41.07	11.52	PK
* 4	12260	53.84	74.00	-20.16	40.69	13.15	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11n(40M)_Ch9_2.452G	Humidity (%RH)	56.0

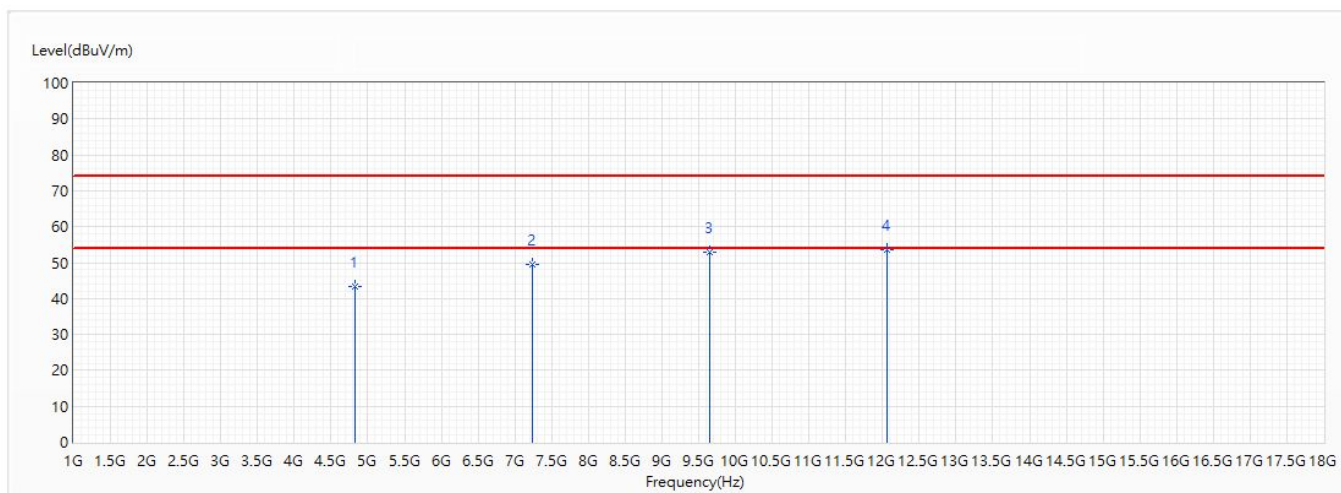


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4904	43.07	74.00	-30.93	44.28	-1.21	PK
2	7356	48.89	74.00	-25.11	42.33	6.56	PK
3	9808	52.19	74.00	-21.81	40.67	11.52	PK
* 4	12260	53.87	74.00	-20.13	40.72	13.15	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11ax(20M)_Ch1_2.412G	Humidity (%RH)	56.0

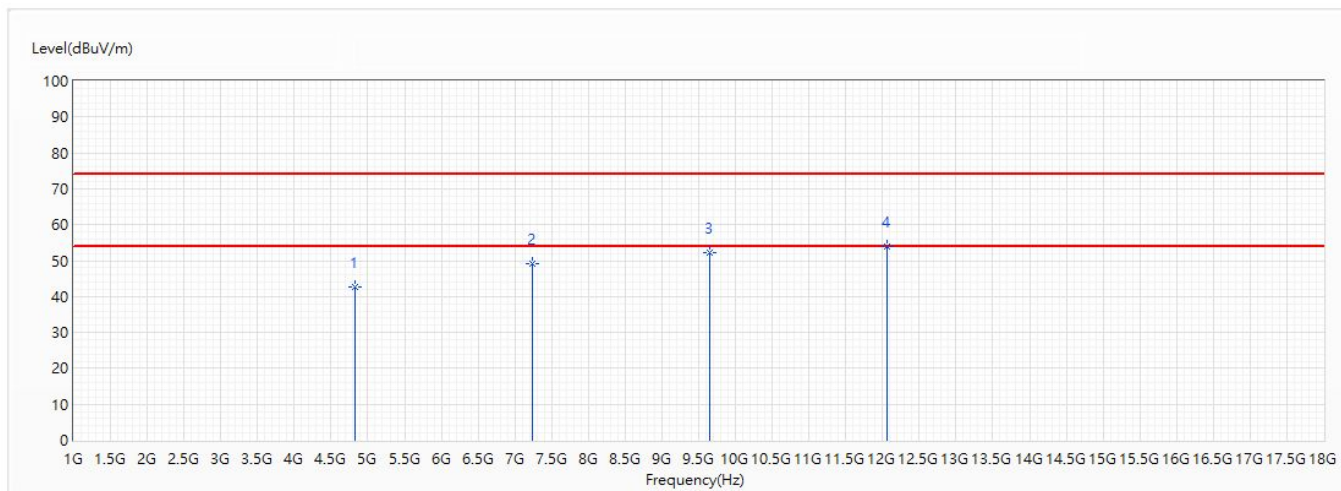


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4824	43.19	74.00	-30.81	44.72	-1.53	PK
2	7236	49.50	74.00	-24.50	43.33	6.17	PK
3	9648	52.76	74.00	-21.24	41.39	11.37	PK
* 4	12060	53.47	74.00	-20.53	39.98	13.49	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11ax(20M)_Ch1_2.412G	Humidity (%RH)	56.0

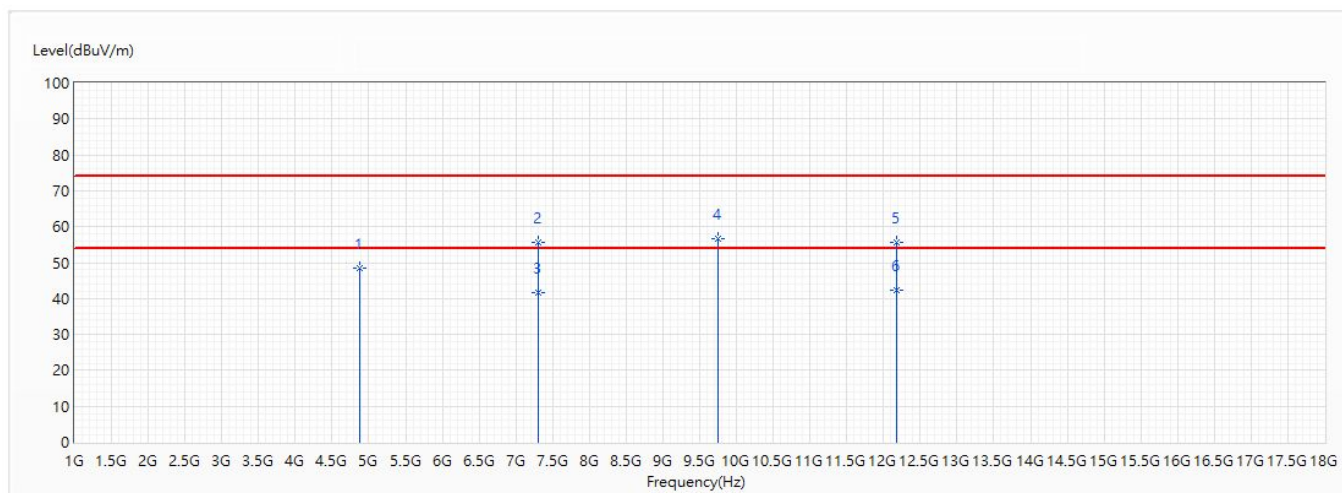


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4824	42.80	74.00	-31.20	44.33	-1.53	PK
2	7236	49.04	74.00	-24.96	42.87	6.17	PK
3	9648	52.38	74.00	-21.62	41.01	11.37	PK
* 4	12060	53.82	74.00	-20.18	40.33	13.49	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11ax(20M)_Ch6_2.437G	Humidity (%RH)	56.0

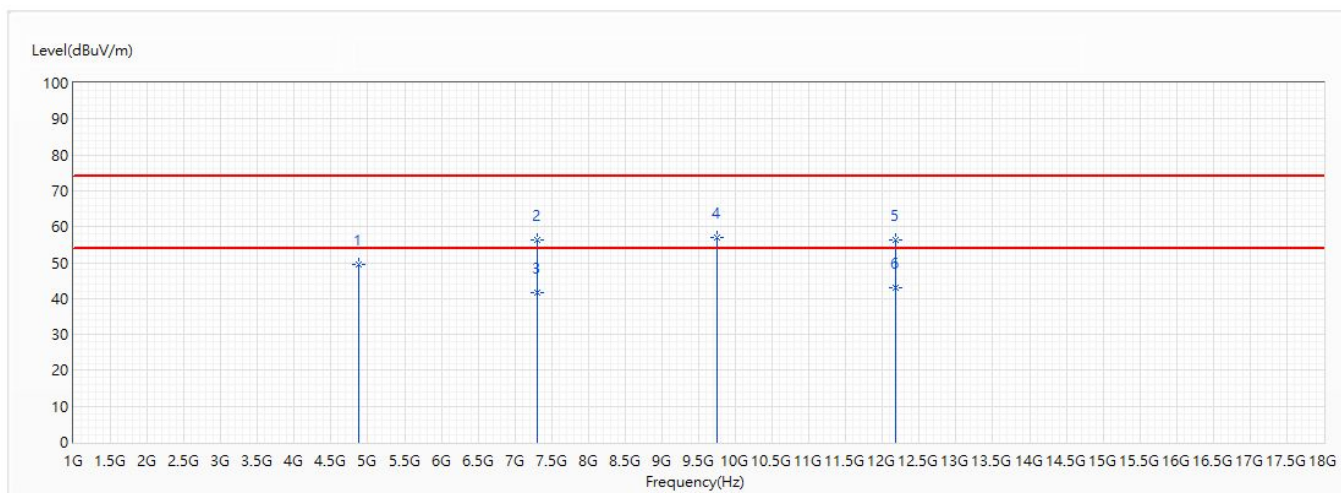


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4874	48.60	74.00	-25.40	49.93	-1.33	PK
2	7311	55.78	74.00	-18.22	49.36	6.42	PK
3	7311	41.60	54.00	-12.40	35.18	6.42	AV
4	9748	56.55	74.00	-17.45	45.06	11.49	PK
5	12185	55.73	74.00	-18.27	42.45	13.28	PK
* 6	12185	42.23	54.00	-11.77	28.95	13.28	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11ax(20M)_Ch6_2.437G	Humidity (%RH)	56.0

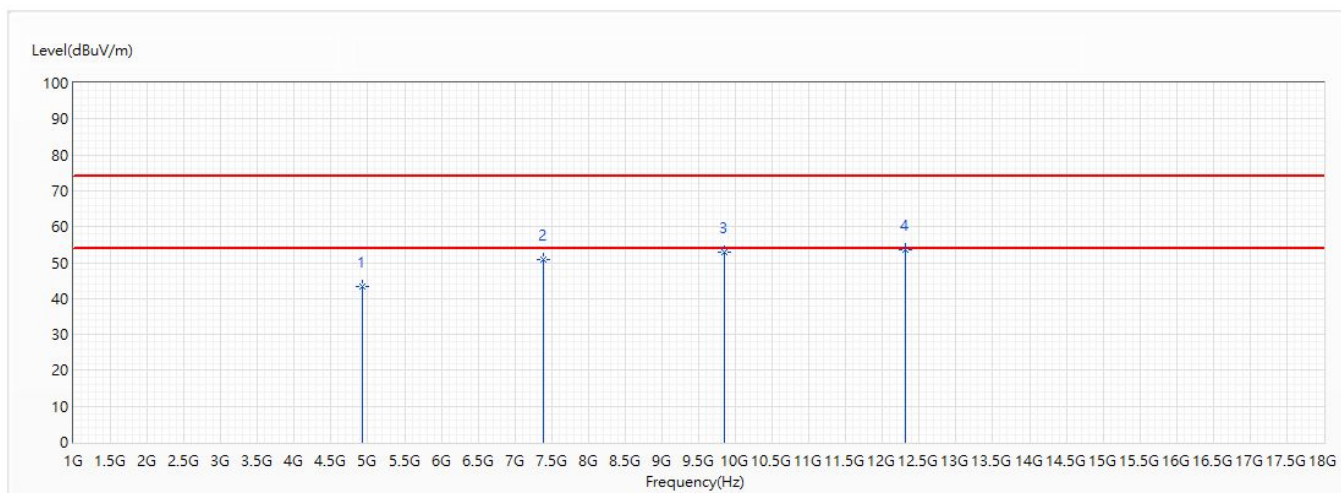


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4874	49.37	74.00	-24.63	50.70	-1.33	PK
2	7311	56.20	74.00	-17.80	49.78	6.42	PK
3	7311	41.60	54.00	-12.40	35.18	6.42	AV
4	9748	57.10	74.00	-16.90	45.61	11.49	PK
5	12185	56.48	74.00	-17.52	43.20	13.28	PK
* 6	12185	42.85	54.00	-11.15	29.57	13.28	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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11ax(20M)_Ch11_2.462G	Humidity (%RH)	56.0

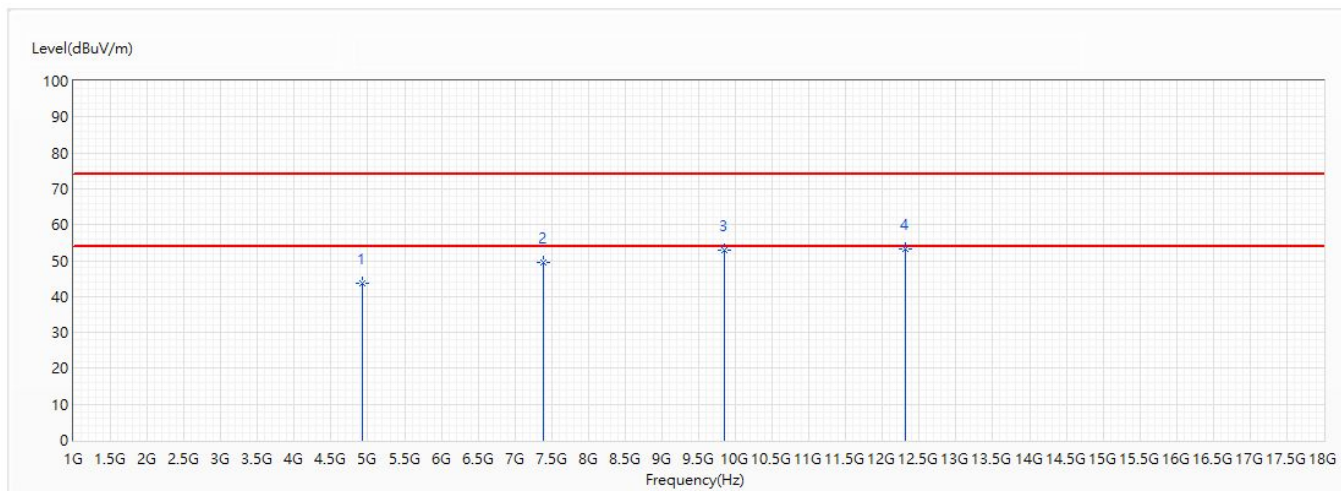


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4924	43.46	74.00	-30.54	44.59	-1.13	PK
2	7386	50.73	74.00	-23.27	44.07	6.66	PK
3	9848	52.75	74.00	-21.25	41.20	11.55	PK
* 4	12310	53.66	74.00	-20.34	40.61	13.05	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11ax(20M)_Ch11_2.462G	Humidity (%RH)	56.0

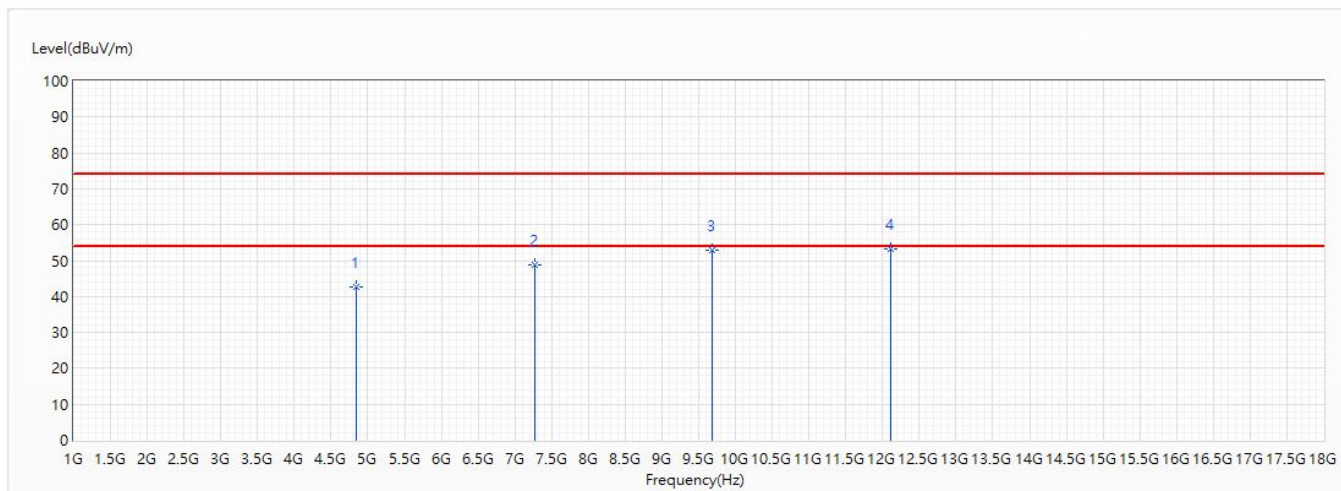


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4924	43.56	74.00	-30.44	44.69	-1.13	PK
2	7386	49.52	74.00	-24.48	42.86	6.66	PK
3	9848	52.77	74.00	-21.23	41.22	11.55	PK
* 4	12310	53.11	74.00	-20.89	40.06	13.05	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11ax(40M)_Ch3_2.422G	Humidity (%RH)	56.0

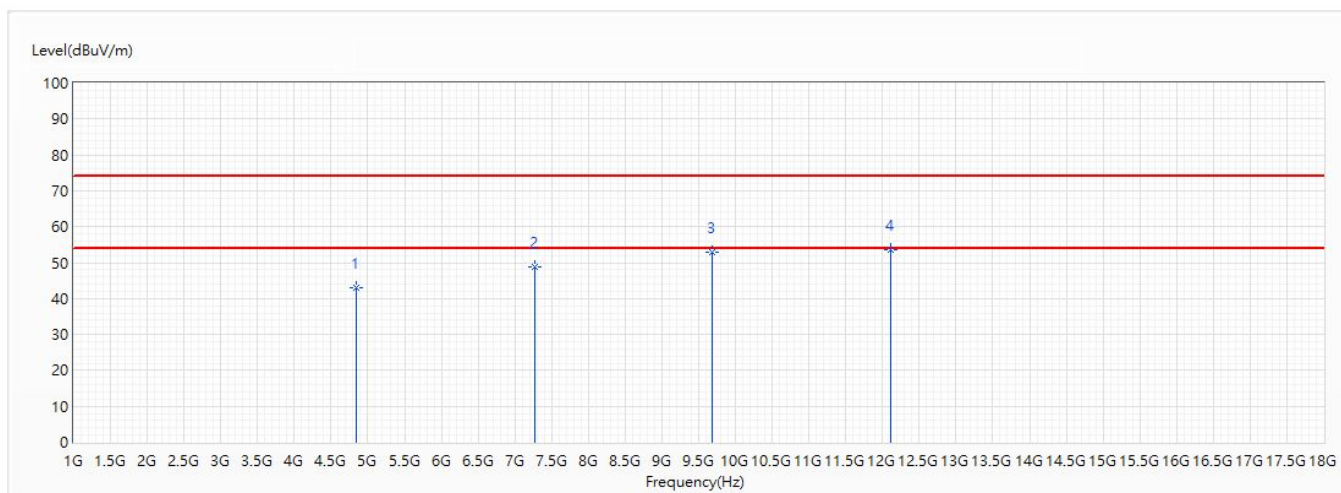


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4844	42.69	74.00	-31.31	44.13	-1.44	PK
2	7266	48.77	74.00	-25.23	42.50	6.27	PK
3	9688	52.94	74.00	-21.06	41.53	11.41	PK
* 4	12110	53.28	74.00	-20.72	39.87	13.41	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11ax(40M)_Ch3_2.422G	Humidity (%RH)	56.0

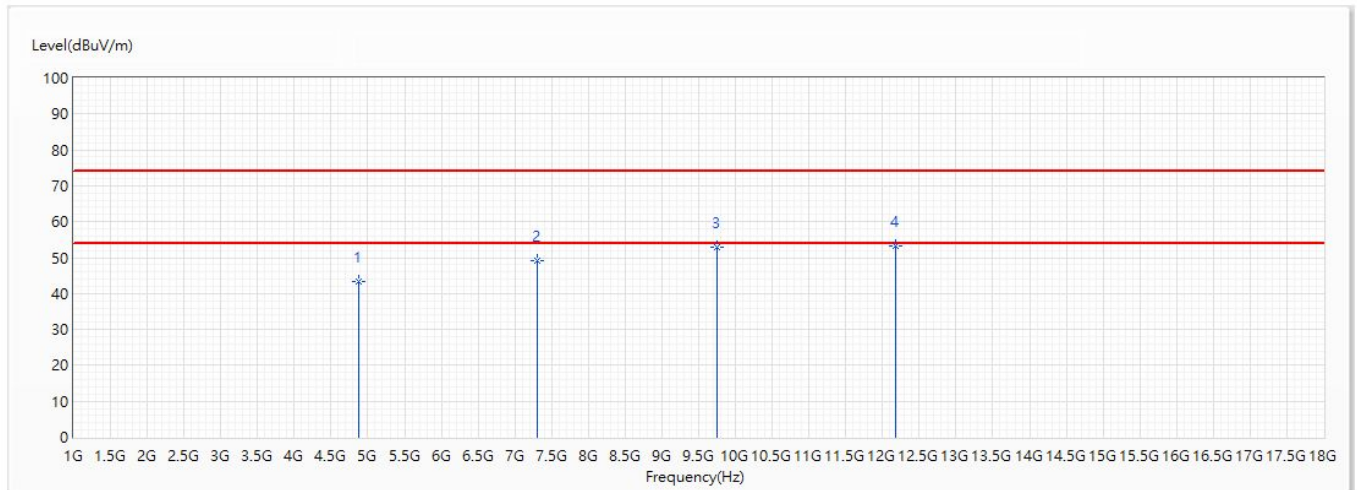


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4844	42.91	74.00	-31.09	44.35	-1.44	PK
2	7266	48.72	74.00	-25.28	42.45	6.27	PK
3	9688	53.03	74.00	-20.97	41.62	11.41	PK
* 4	12110	53.47	74.00	-20.53	40.06	13.41	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11ax(40M)_Ch6_2.437G	Humidity (%RH)	56.0

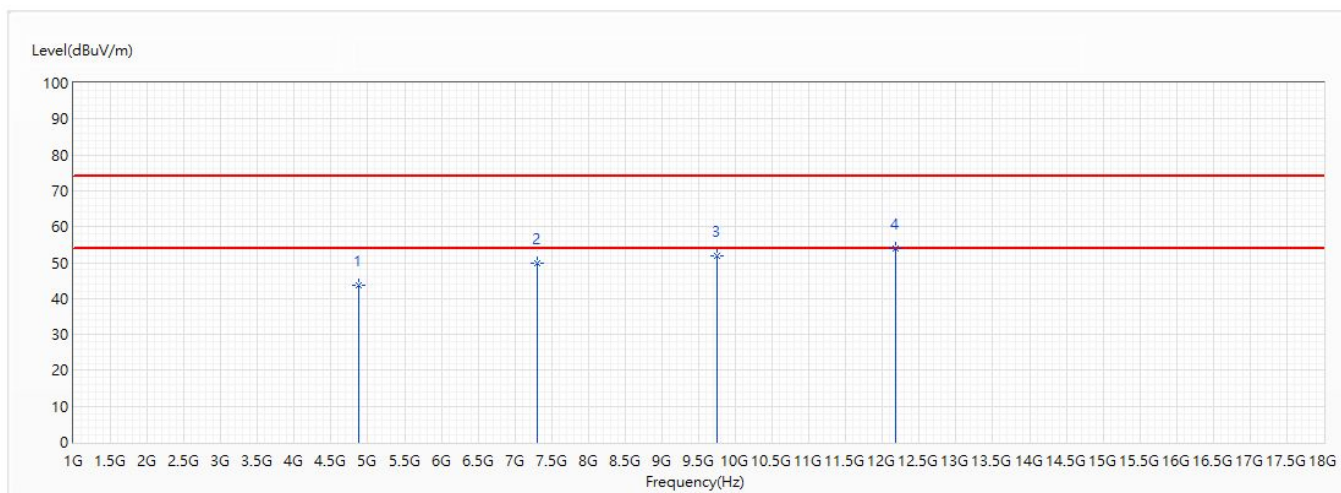


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4874	43.28	74.00	-30.72	44.61	-1.33	PK
2	7311	49.23	74.00	-24.77	42.81	6.42	PK
3	9748	52.76	74.00	-21.24	41.27	11.49	PK
* 4	12185	53.28	74.00	-20.72	40.00	13.28	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11ax(40M)_Ch6_2.437G	Humidity (%RH)	56.0

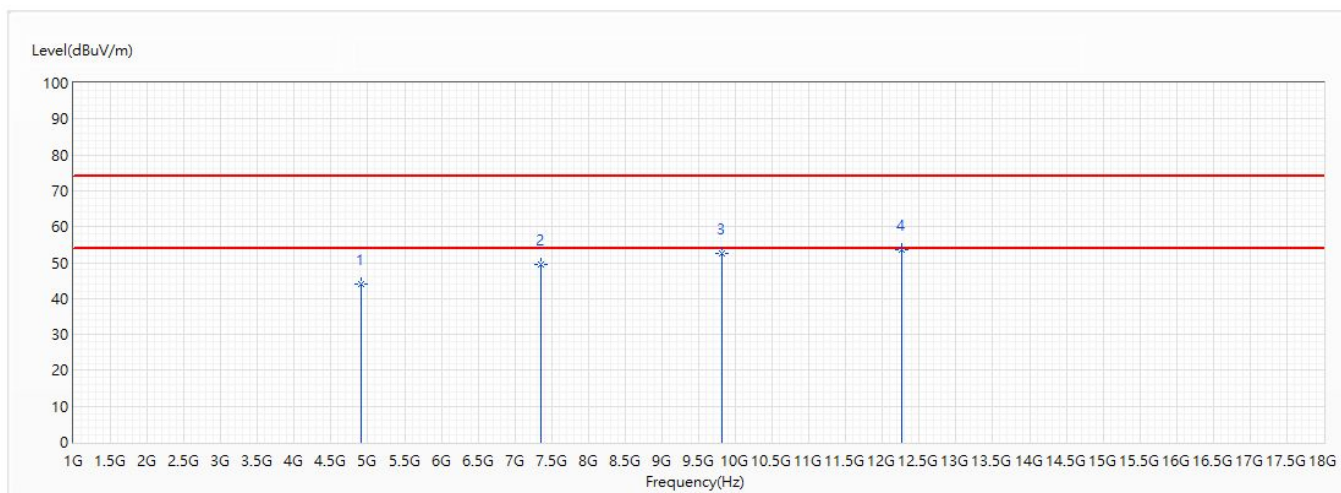


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4874	43.82	74.00	-30.18	45.15	-1.33	PK
2	7311	49.71	74.00	-24.29	43.29	6.42	PK
3	9748	52.04	74.00	-21.96	40.55	11.49	PK
* 4	12185	53.76	74.00	-20.24	40.48	13.28	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Horizontal	Temperature (°C)	23.5
Test Condition	802.11ax(40M)_Ch9_2.452G	Humidity (%RH)	56.0

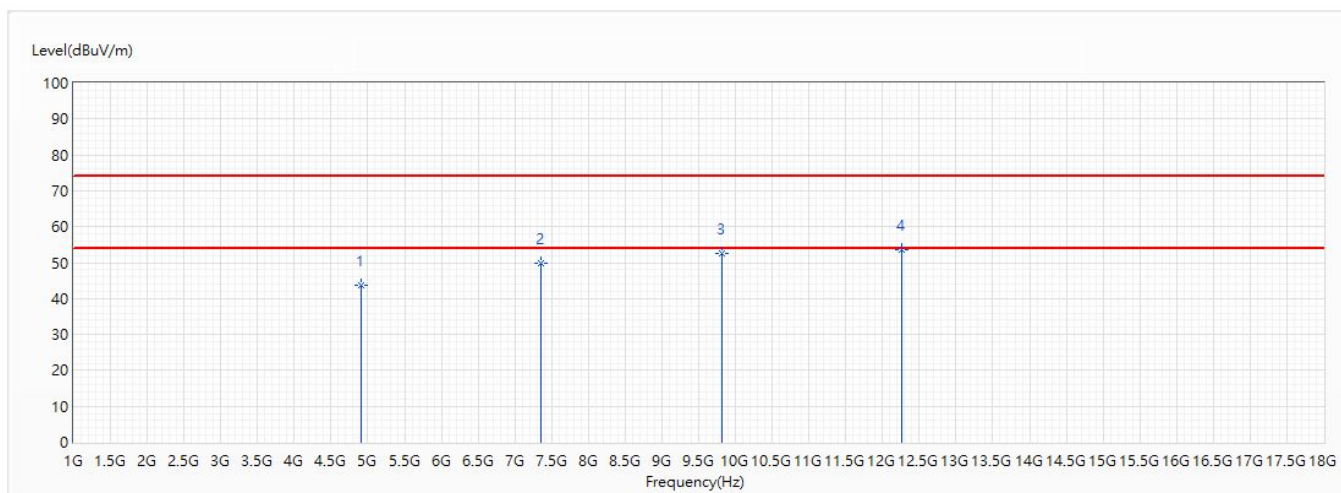


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4904	44.06	74.00	-29.94	45.27	-1.21	PK
2	7356	49.50	74.00	-24.50	42.94	6.56	PK
3	9808	52.58	74.00	-21.42	41.06	11.52	PK
* 4	12260	53.45	74.00	-20.55	40.30	13.15	PK

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	GR140DG	Site	CB4-H
Test Voltage	AC 120V/60Hz	Test Date	2020/8/17
Test Mode	Mode 2: CDD Mode	Engineer	Elwin
Polarity	Vertical	Temperature (°C)	23.5
Test Condition	802.11ax(40M)_Ch9_2.452G	Humidity (%RH)	56.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4904	43.54	74.00	-30.46	44.75	-1.21	PK
2	7356	49.72	74.00	-24.28	43.16	6.56	PK
3	9808	52.56	74.00	-21.44	41.04	11.52	PK
* 4	12260	53.49	74.00	-20.51	40.34	13.15	PK

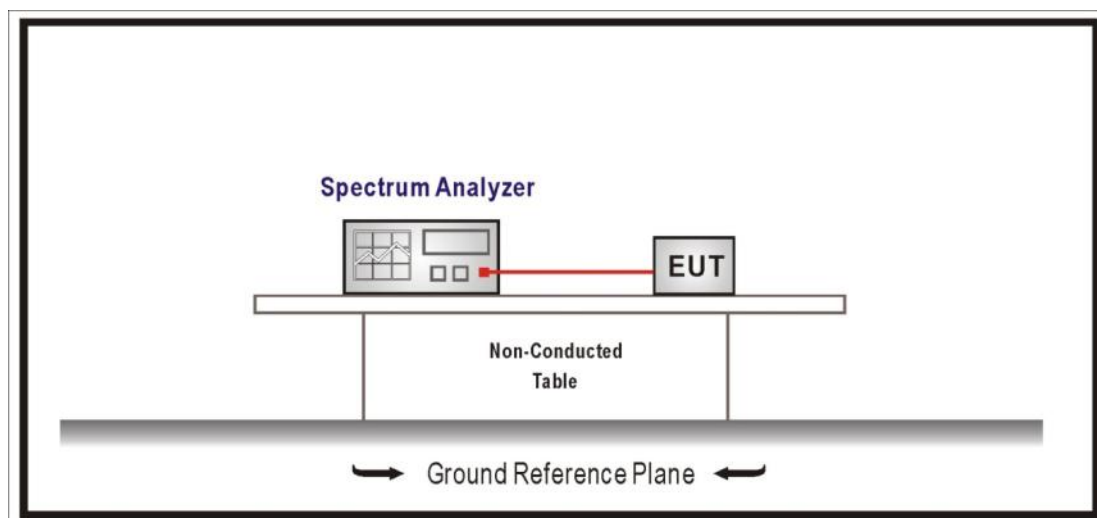
Note:

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

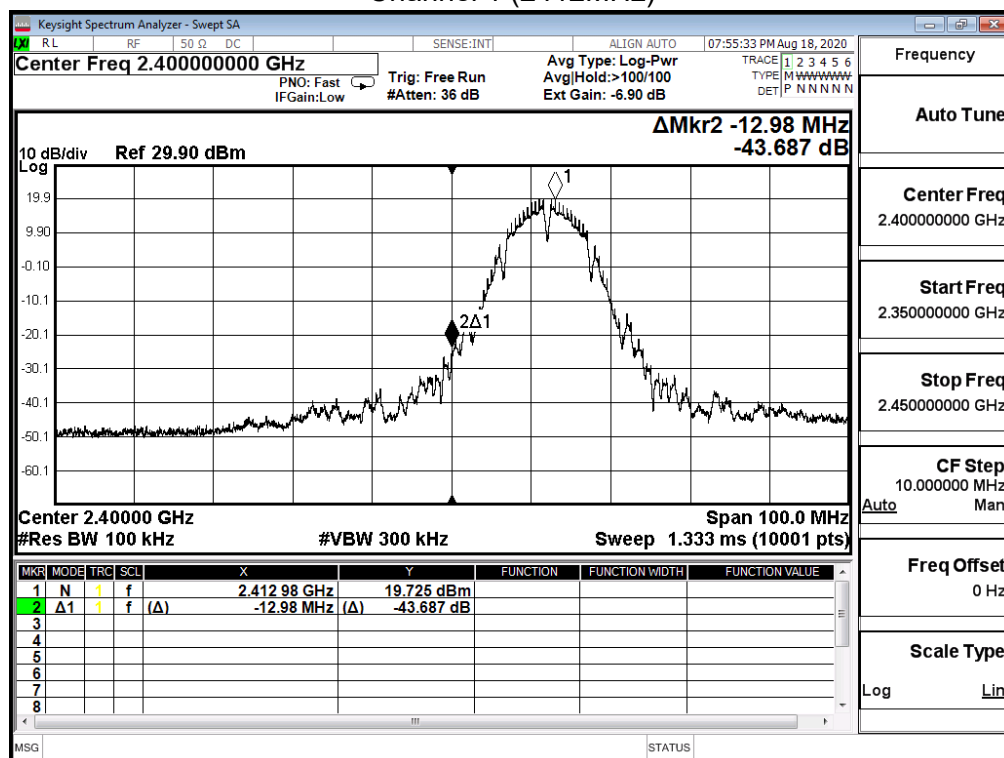
According to FCC Part 15 Subpart C Paragraph 15.247: 2019

5.5. Test Result

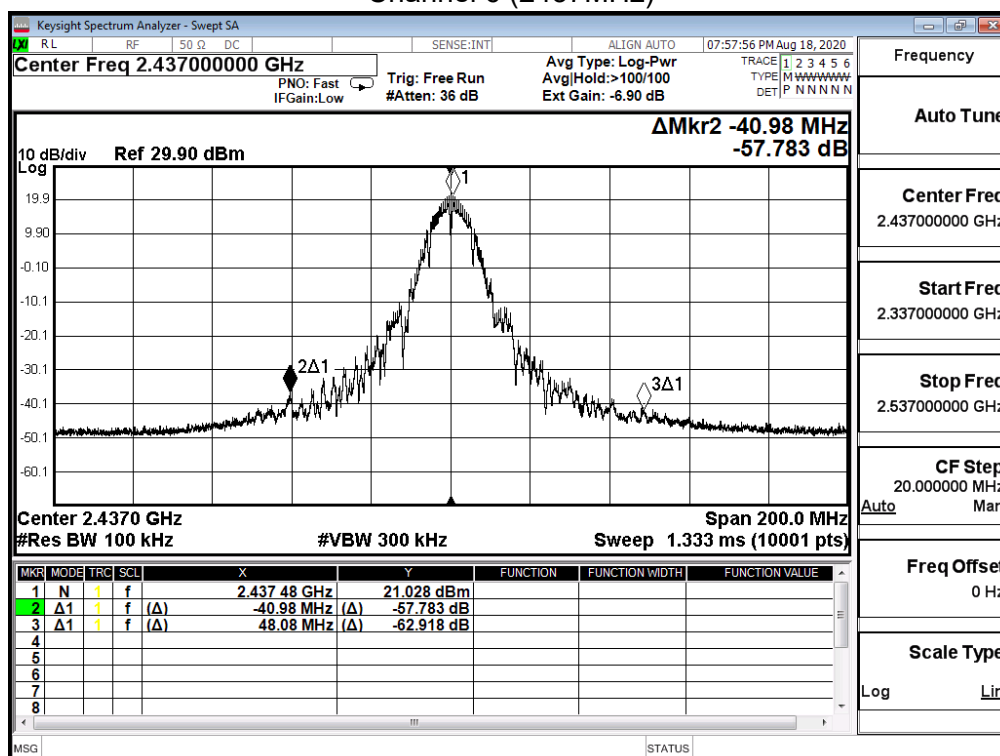
Product	FiberGateway		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: SISO Mode		
Date of Test	2020/08/18	Test Site	SR12-H
Test Temperature	25.0°C	Test Humidity	69.0%

IEEE 802.11b (ANT 0)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	43.687	≥ 30	Pass
6	2437	57.783	≥ 30	Pass
11	2462	58.681	≥ 30	Pass

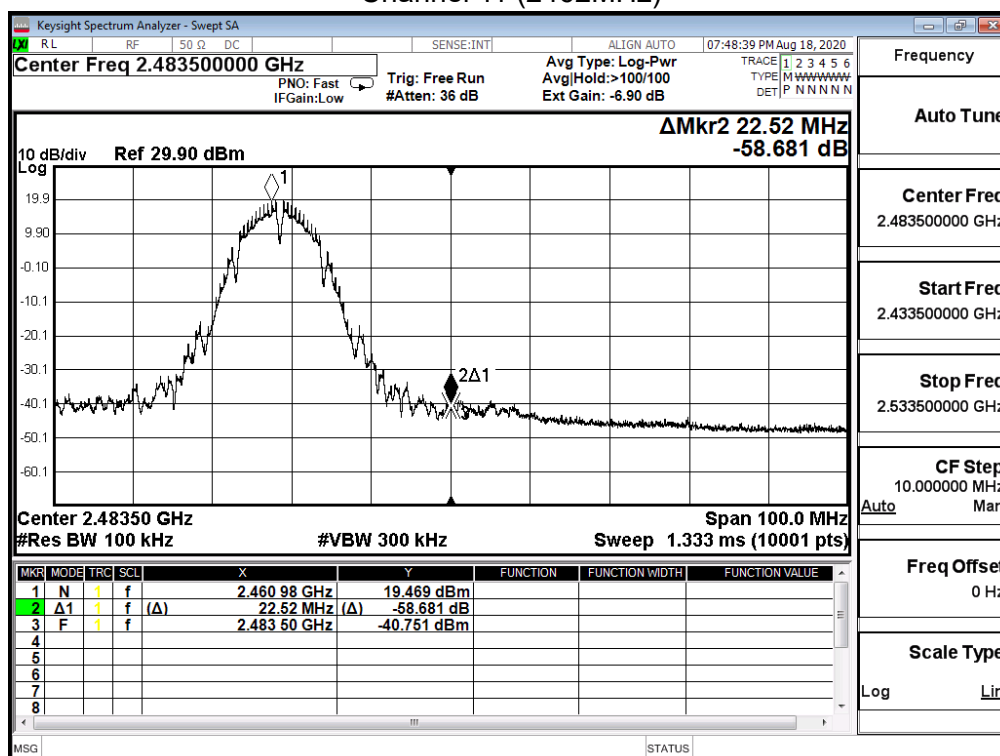
Channel 1 (2412MHz)



Channel 6 (2437MHz)



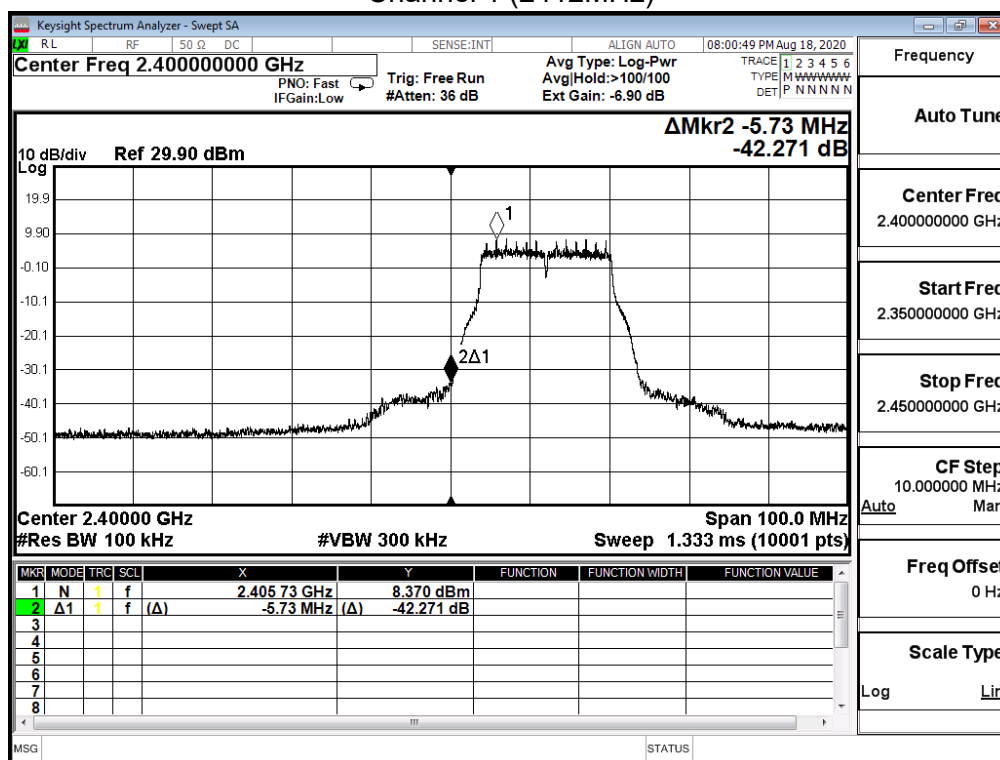
Channel 11 (2462MHz)



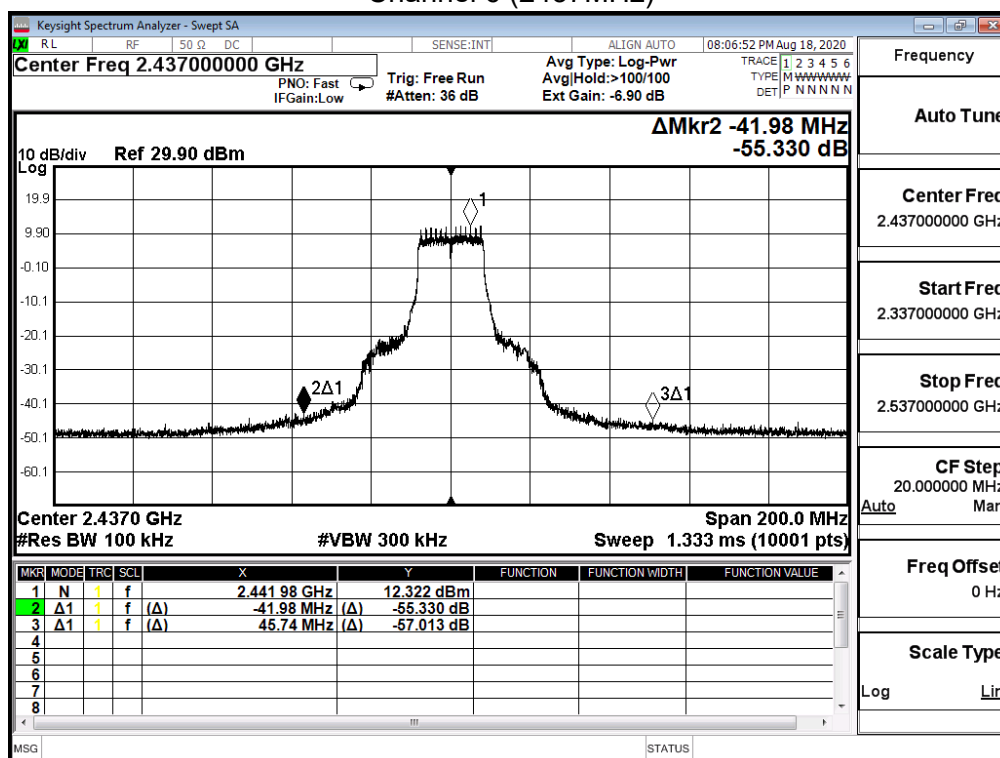
Product	FiberGateway		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: SISO Mode		
Date of Test	2020/08/18	Test Site	SR12-H
Test Temperature	25.0°C	Test Humidity	69.0%

IEEE 802.11g (ANT 0)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	42.271	≥ 30	Pass
6	2437	53.803	≥ 30	Pass
11	2462	44.426	≥ 30	Pass

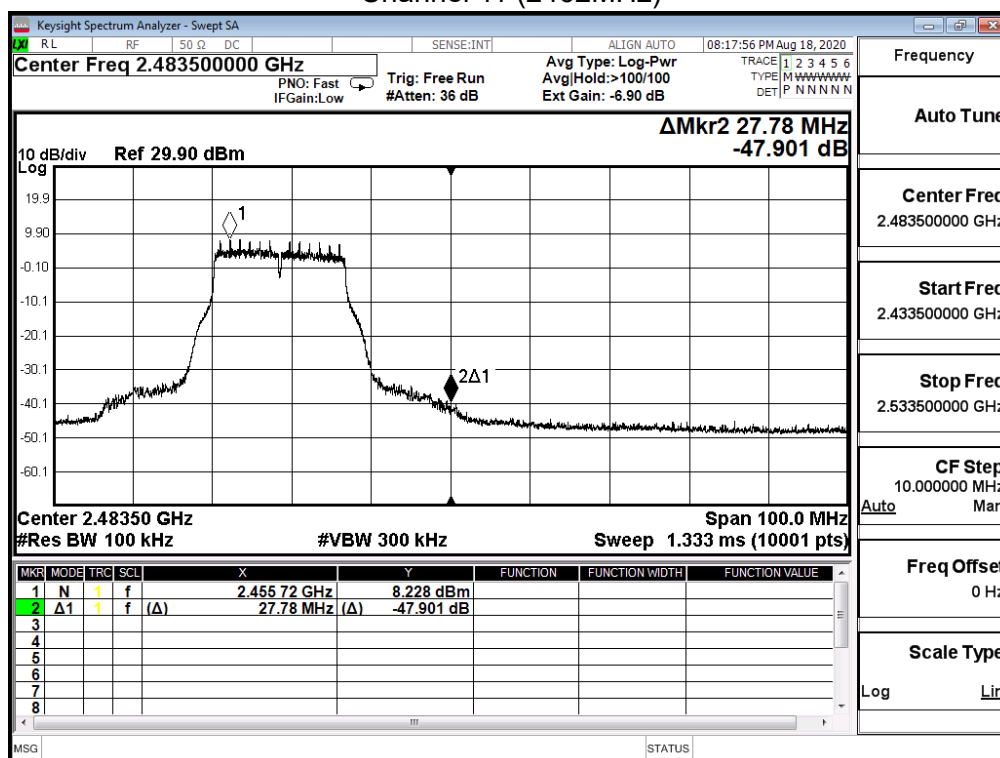
Channel 1 (2412MHz)



Channel 6 (2437MHz)



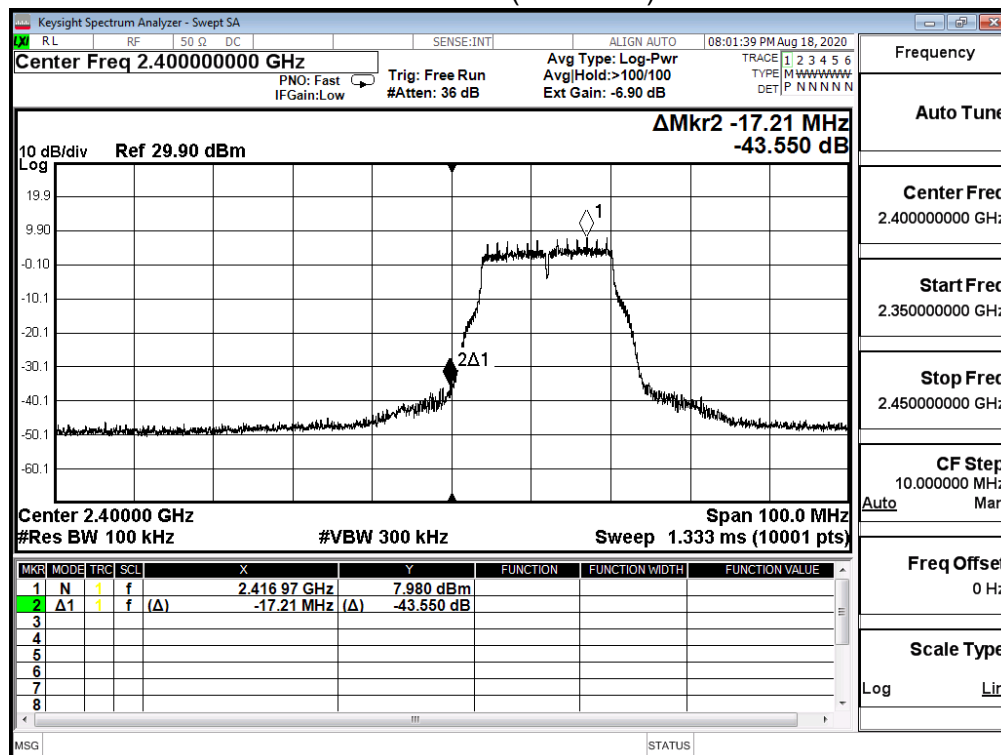
Channel 11 (2462MHz)



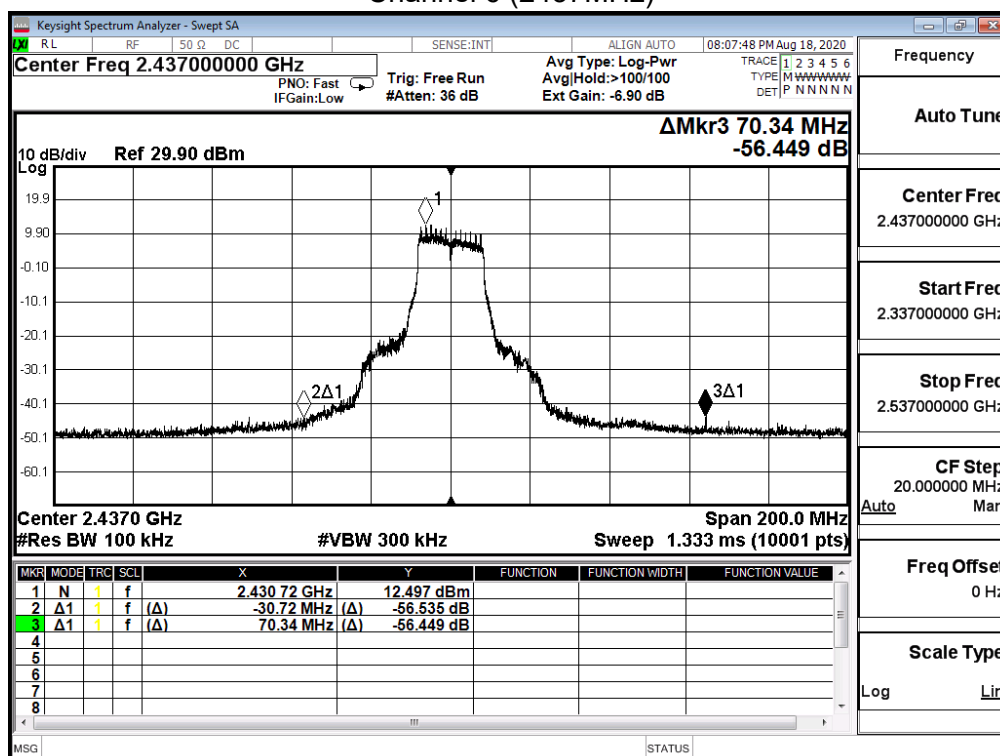
Product	FiberGateway		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: SISO Mode		
Date of Test	2020/08/18	Test Site	SR12-H
Test Temperature	25.0°C	Test Humidity	69.0%

IEEE 802.11g (ANT 1)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	43.550	≥ 30	Pass
6	2437	51.511	≥ 30	Pass
11	2462	44.426	≥ 30	Pass

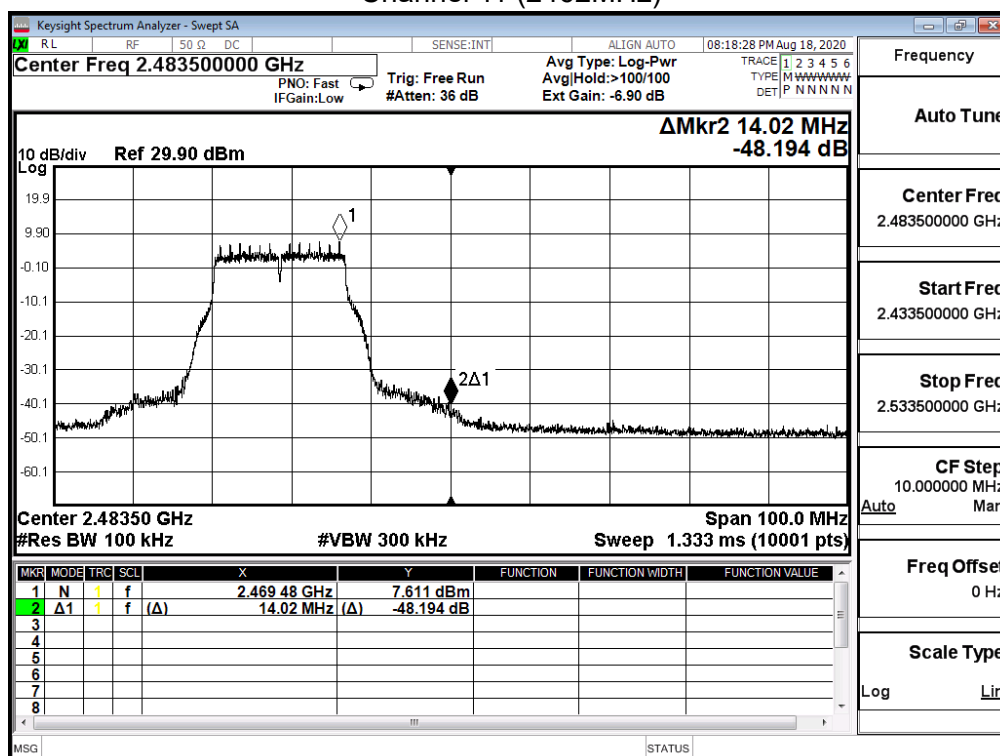
Channel 1 (2412MHz)



Channel 6 (2437MHz)



Channel 11 (2462MHz)

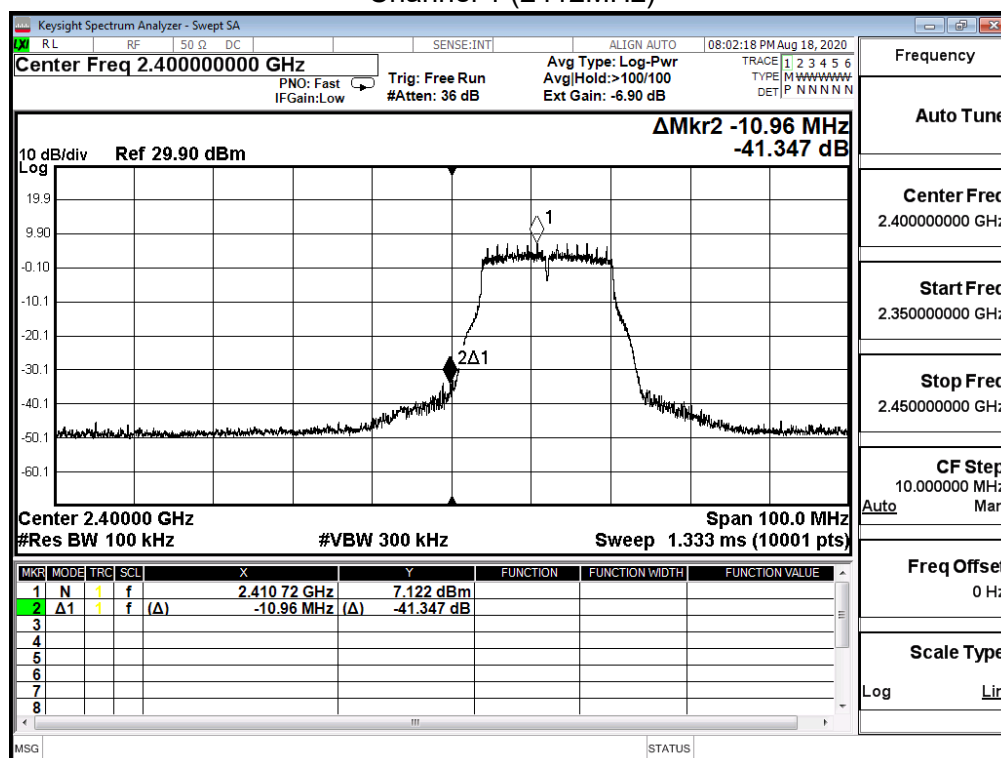


Product	FiberGateway		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: SISO Mode		
Date of Test	2020/08/18	Test Site	SR12-H
Test Temperature	25.0°C	Test Humidity	69.0%

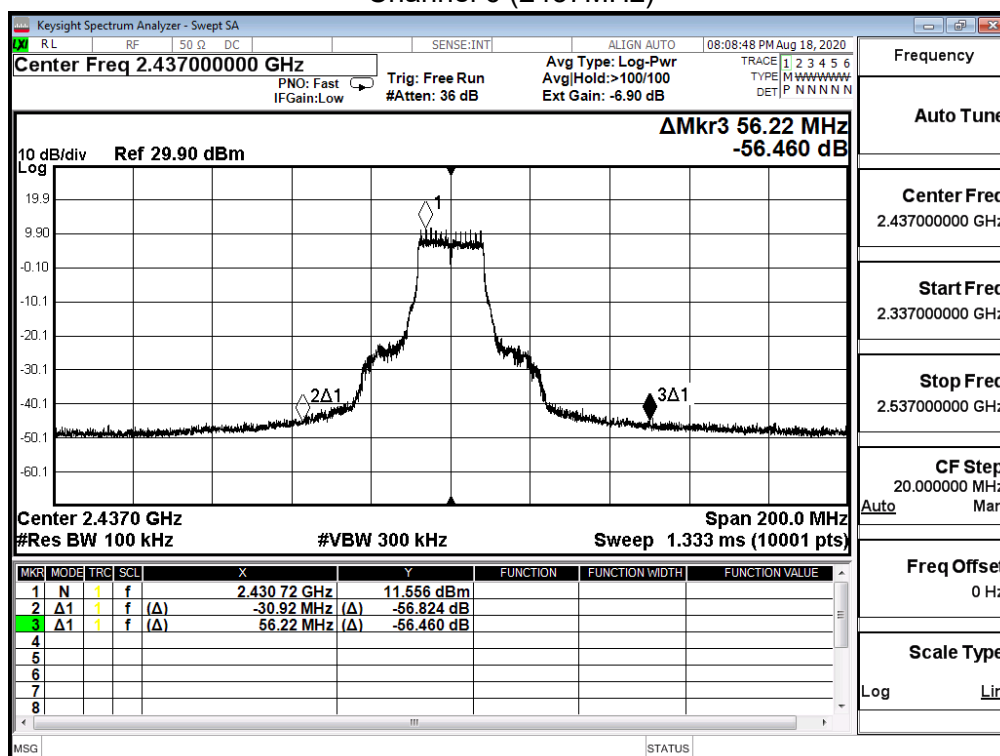
IEEE 802.11g (ANT 2)

Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	41.347	≥ 30	Pass
6	2437	48.506	≥ 30	Pass
11	2462	44.426	≥ 30	Pass

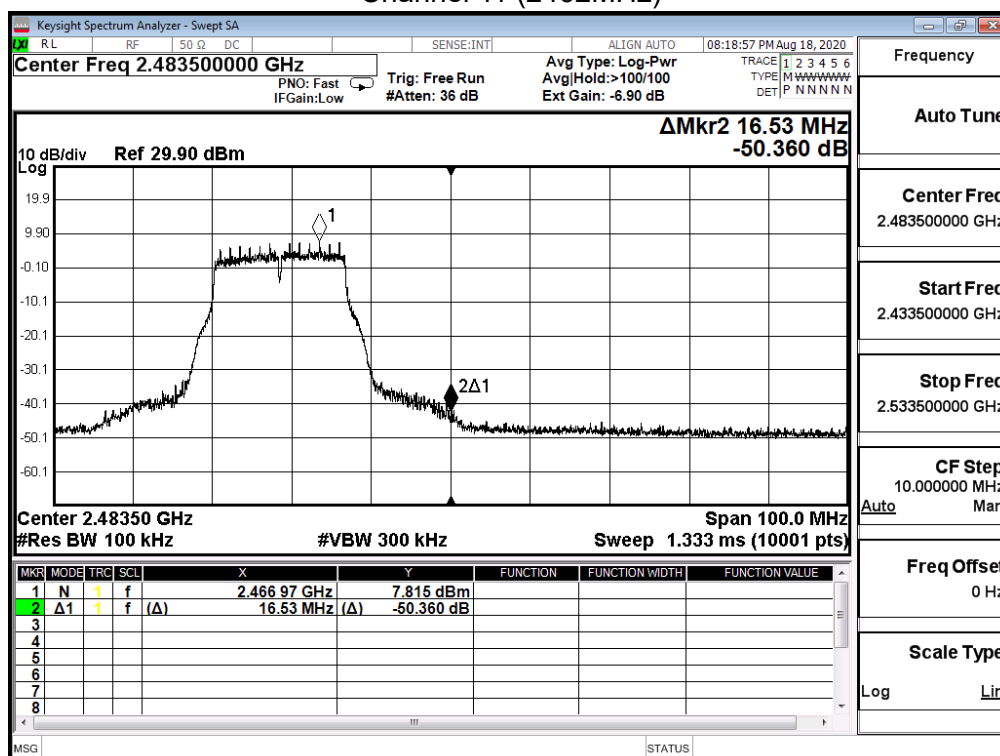
Channel 1 (2412MHz)



Channel 6 (2437MHz)



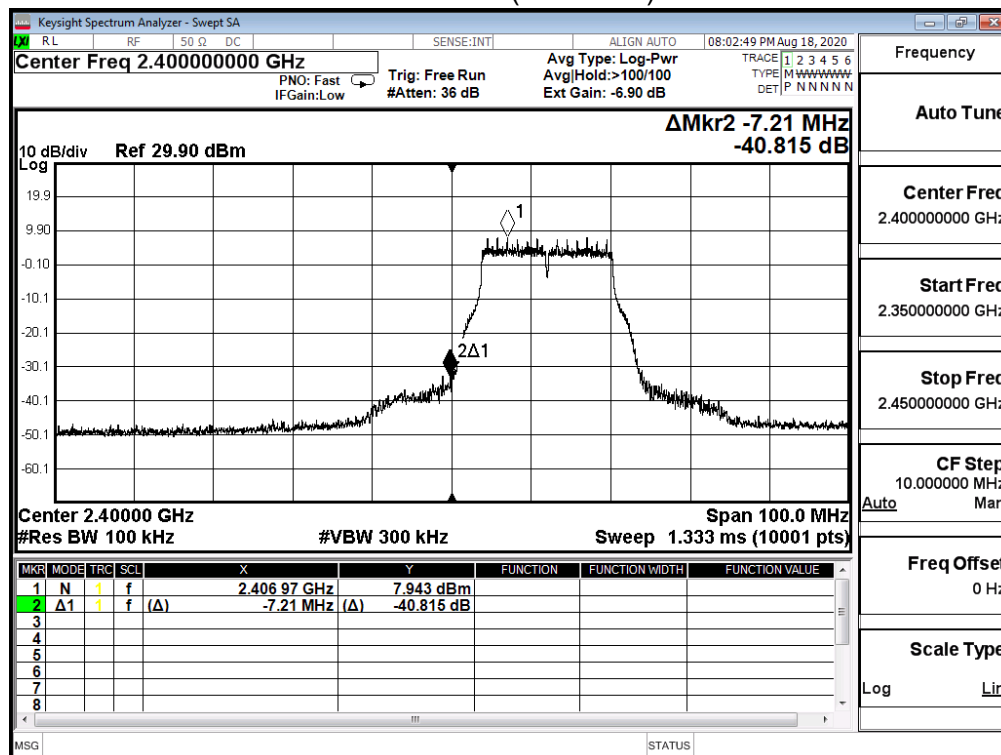
Channel 11 (2462MHz)



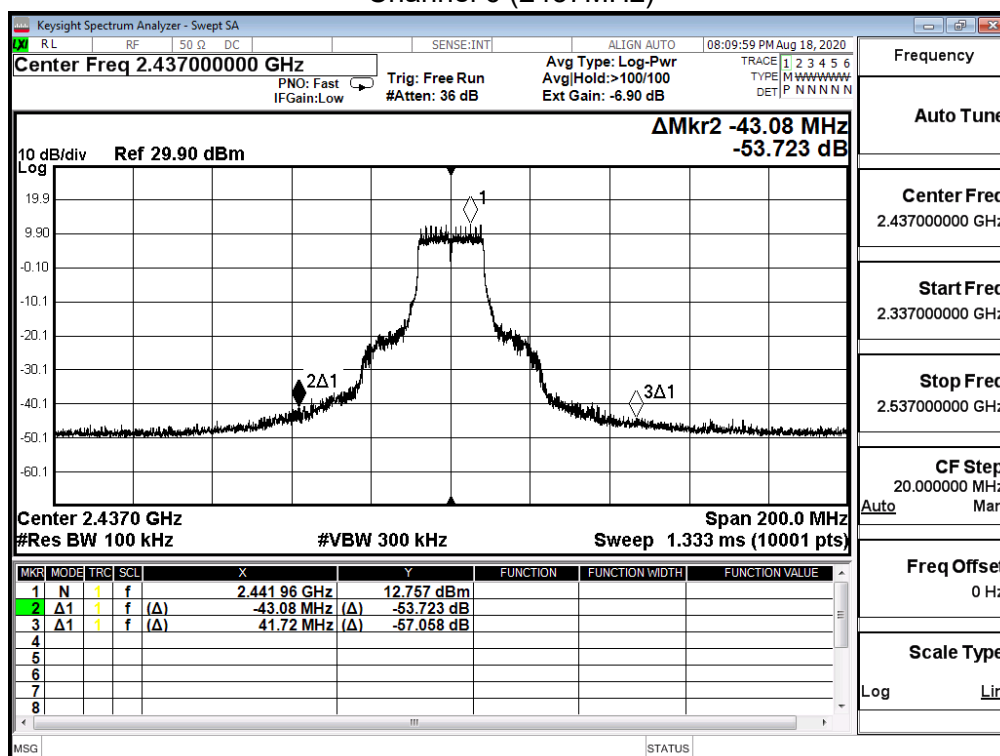
Product	FiberGateway		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: SISO Mode		
Date of Test	2020/08/18	Test Site	SR12-H
Test Temperature	25.0°C	Test Humidity	69.0%

IEEE 802.11g (ANT 3)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	40.815	≥ 30	Pass
6	2437	51.459	≥ 30	Pass
11	2462	45.881	≥ 30	Pass

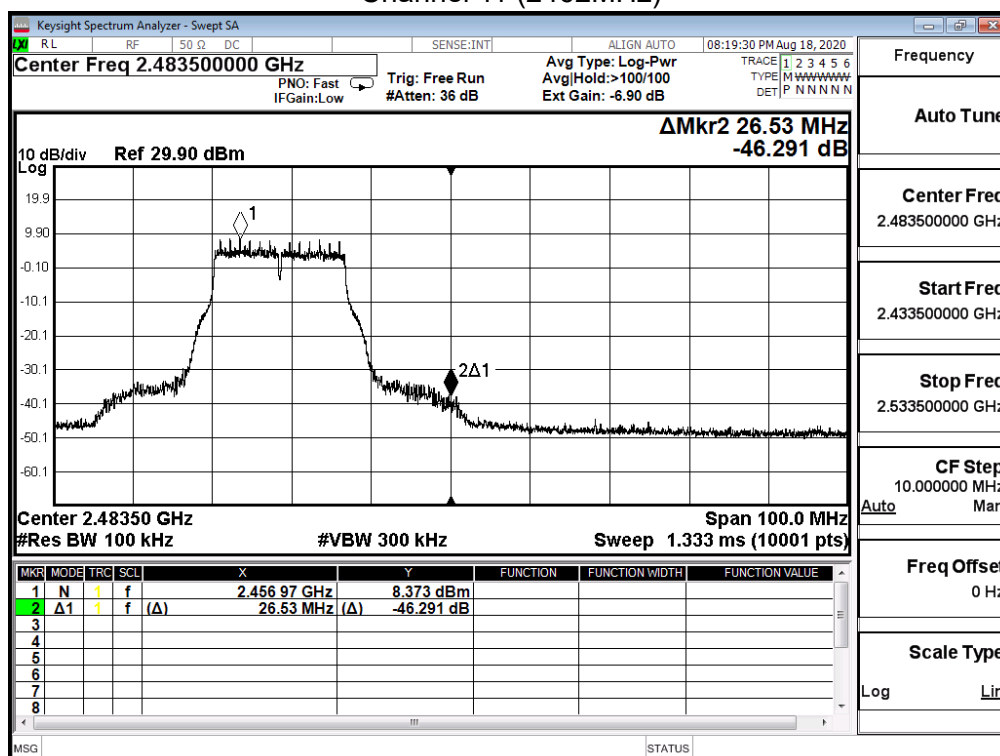
Channel 1 (2412MHz)



Channel 6 (2437MHz)



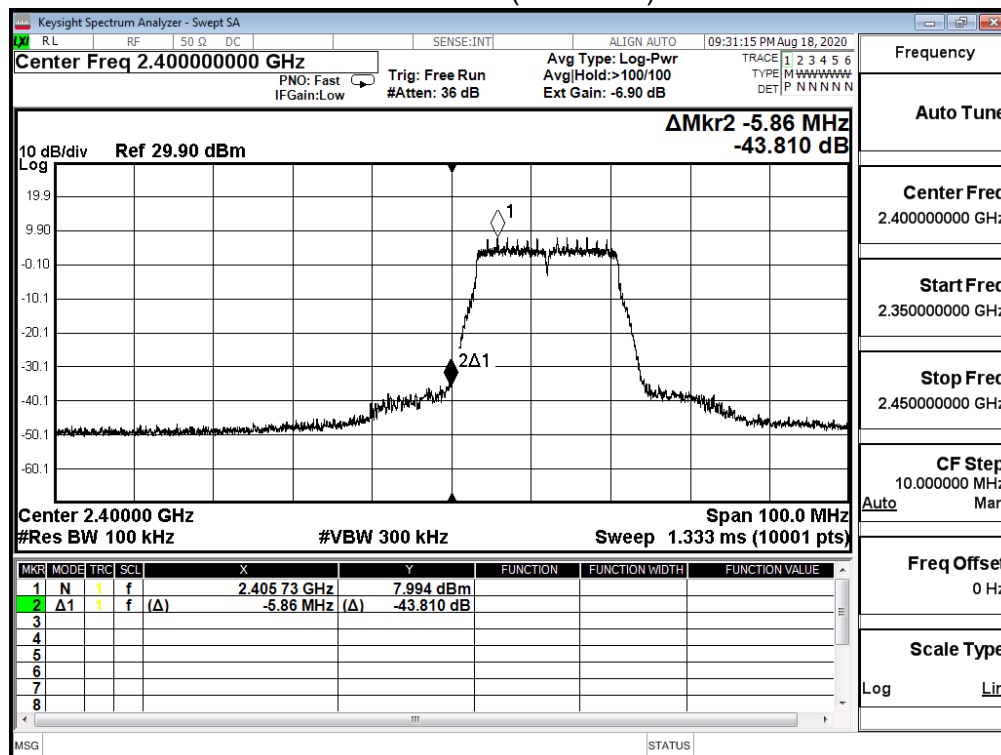
Channel 11 (2462MHz)



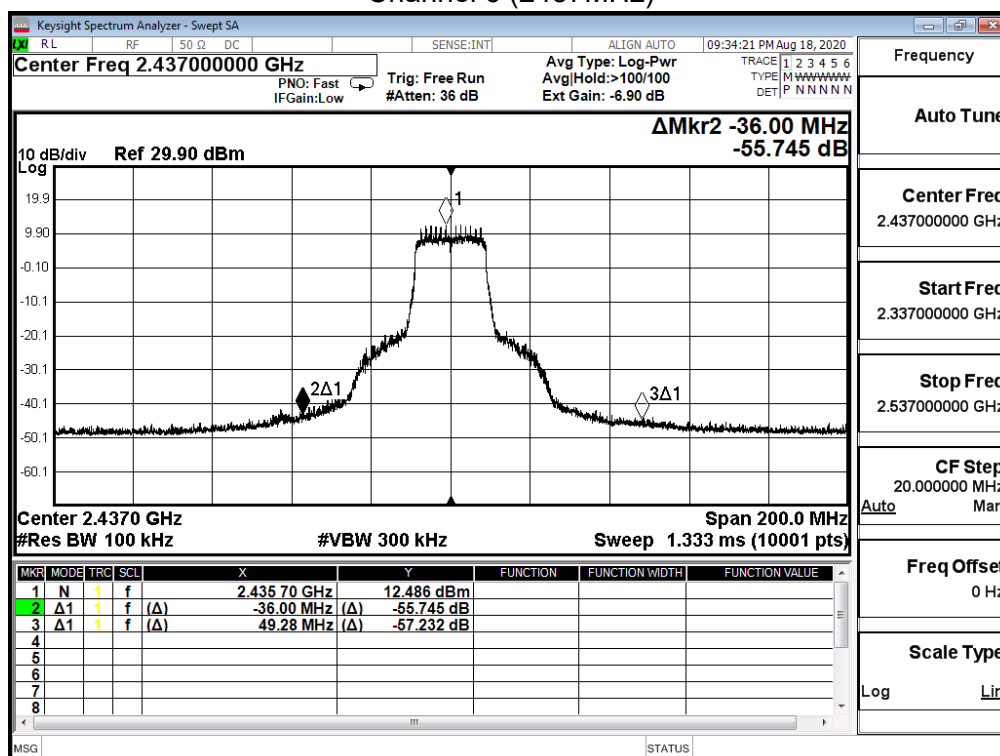
Product	FiberGateway		
Test Item	RF antenna conducted test		
Test Mode	Mode 2: CDD Mode		
Date of Test	2020/08/18	Test Site	SR12-H
Test Temperature	25.0°C	Test Humidity	69.0%

IEEE 802.11n(20M)(ANT 0)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	43.810	≥ 30	Pass
6	2437	50.636	≥ 30	Pass
11	2462	47.509	≥ 30	Pass

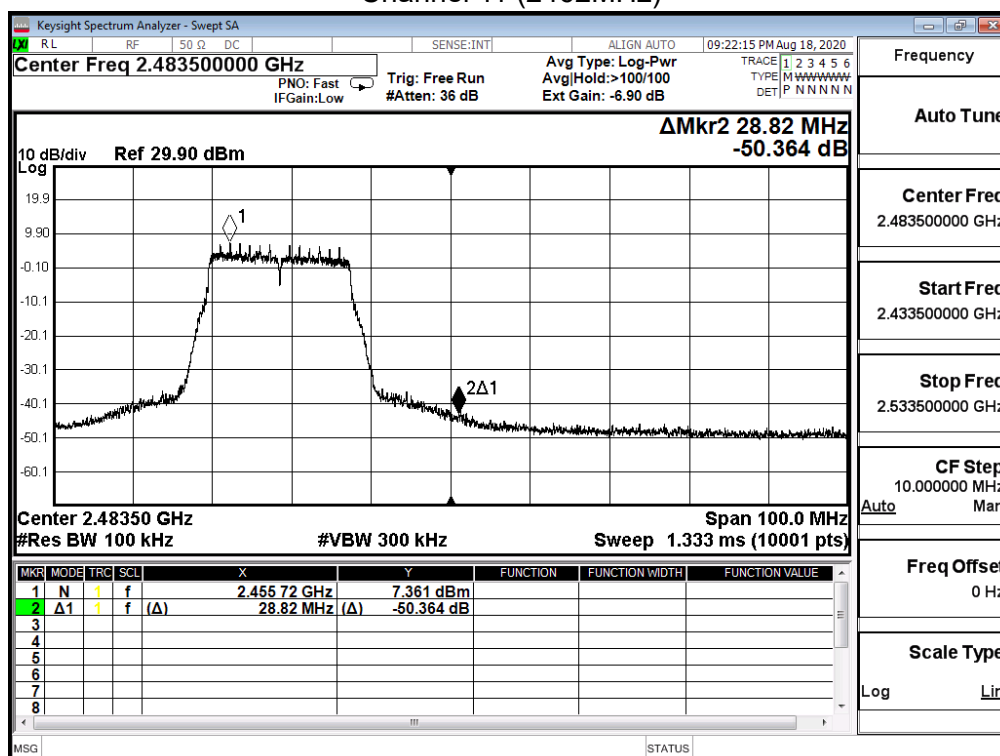
Channel 1 (2412MHz)



Channel 6 (2437MHz)



Channel 11 (2462MHz)



Product	FiberGateway		
Test Item	RF antenna conducted test		
Test Mode	Mode 2: CDD Mode		
Date of Test	2020/08/18	Test Site	SR12-H
Test Temperature	25.0°C	Test Humidity	69.0%

IEEE 802.11n(20M)(ANT 1)				
Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	45.547	≥ 30	Pass
6	2437	50.636	≥ 30	Pass
11	2462	47.029	≥ 30	Pass

Channel 1 (2412MHz)

