

# **FCC Test Report**

Product Name	Mobile Computer
Model No	RS35
FCC ID.	Q3N-RS35

Applicant	Cipherlab Co, Ltd.
Address	12F, NO.333, SEC.2, DUNHUA S. RD., TAIPEI, TAIWAN, R.O.C.

Date of Receipt	June 08, 2020
Issue Date	July 02, 2020
Report No.	2060284R-E3032110119
Report Version	V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

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The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Report No.: 2060284R-E3032110119



# Test Report

Issue Date: July 02, 2020

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Product Name	Mobile Computer
Applicant	Cipherlab Co, Ltd.
Address	12F, NO.333, SEC.2, DUNHUA S. RD., TAIPEI, TAIWAN, R.O.C.
Manufacturer	Cipherlab Co, Ltd.
Model No.	RS35
FCC ID.	Q3N-RS35
EUT Rated Voltage	AC 100-240V, 50-60Hz or DC 5V by USB or DC 3.8V by battery
EUT Test Voltage	AC 120V / 60Hz
Trade Name	CIPHERLAB
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C
	ANSI C63.4: 2014, ANSI C63.10: 2013
Test Result	Complied

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Approved By	:	Stands
		( Director / Vincent Lin )



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Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs



## **Revision History**

Report No. Version		Description	<b>Issued Date</b>
2060284R-E3032110119	V1.0	Initial issue of report.	2020-07-02

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## 1. GENERAL INFORMATION

## 1.1. EUT Description

Product Name	Mobile Computer
Trade Name	CIPHERLAB
Model No.	RS35
FCC ID.	Q3N-RS35
Frequency Range	2412-2462MHz for 802.11b/g/n-20BW, 2422-2452MHz for 802.11n-40BW
Number of Channels	802.11b/g/n-20MHz: 11, n-40MHz: 7
Data Speed	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 150Mbps
Channel separation	802.11b/g/n: 5 MHz
Type of Modulation	802.11b:DSSS (DBPSK, DQPSK, CCK)
	802.11g/n:OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	PIFA Antenna
Antenna Gain	Refer to the table "Antenna List"
Channel Control	Auto
USB to Type-C Cable	Shielded, 1m
USB Docking Cable	Shielded, 1.5m, with one ferrite core boned.
Power Adapter	MFR: SUNNY, M/N: SYS1561-1005
	Input: AC 100-240V, 50-60Hz
	Output: 5V==2A

## Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Auden	RS35	PIFA Antenna	0.1dBi for 2.4GHz

Note: The antenna of EUT is conforming to FCC 15.203.



## 802.11b/g/n-20MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz		

## 802.11n-40MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 03:	2422 MHz	Channel 04:	2427 MHz	Channel 05:	2432 MHz	Channel 06:	2437 MHz
Channel 07:	2442 MHz	Channel 08:	2447 MHz	Channel 09:	2452 MHz		

- 1. The EUT is a Mobile Computer with a built-in 2.4 GHz and 5 GHz WLAN and Bluetooth V4.0, V3.0, V2.1+EDR transceiver, this report for 2.4GHz WLAN.
- 2. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
- 3. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 4. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps \ 802.11g is 6Mbps \ 802.11n(20M-BW) is 7.2Mbps and 802.11n(40M-BW) is 15Mbps)
- 5. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)



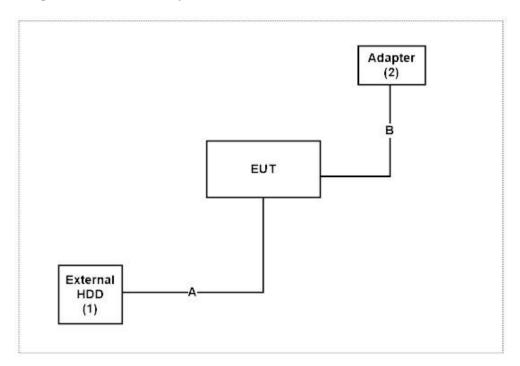
## **1.3.** Tested System Details

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

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	External HDD	Transcend	TS1TSJ25H3B	F21786-0125	N/A
2	Adapter	SUNNY	SYS1561-1005	N/A	N/A

Signal Cable Type		Signal cable Description
A USB to Type-C Cable		Shielded, 1m
В	USB Docking Cable	Shielded, 1.5m, with one ferrite core boned.

## 1.4. Configuration of Tested System



## 1.5. EUT Exercise Software

- 1. Setup the EUT as shown in Section 1.4.
- 2. Execute software "QRCT v3.0.271.0" on the EUT.
- 3. Configure the test mode, the test channel, and the data rate.
- 4. Press "OK" to start the continuous Transmit.
- 5. Verify that the EUT works properly.



## 1.6. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
	Temperature (°C)	10~40 °C	26.1 °C
Conducted Emission	Humidity (%RH)	10~90 %	45 %
D 11 / 15 / 1	Temperature (°C)	10~40 °C	25.8 °C
Radiated Emission	Humidity (%RH)	10~90 %	73 %
	Temperature (°C)	10~40 °C	23.4 °C
Conductive	Humidity (%RH)	10~90 %	71.9 %

**USA** : FCC Registration Number: TW3023

Canada: IC Registration Number: 4075A

Site Description: Accredited by TAF

Accredited Number: 3023

Test Laboratory: DEKRA Testing and Certification Co., Ltd

Address: No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451,

Taiwan, R.O.C.

Phone number: 886-2-8601-3788
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Email address: info.tw@dekra.com
Website: http://www.dekra.com.tw



## 1.7. List of Test Item and Equipment

## For Conducted measurements /CB3/SR8

	Equipment Manufacturer		Model No.	Serial No.	Cali. Date	Due. Date
	Temperature Chamber	WIT GROUP	TH-1S-B	EQ-201-00146	2020/04/06	2021/04/05
X	Spectrum Analyzer	Agilent	N9010A	MY53470892	2019/09/25	2020/09/24
X	Peak Power Analyzer	Keysight	8990B	MY51000410	2019/07/30	2020/07/29
X	Wideband Power Sensor	Keysight	N1923A	MY56080003	2019/07/30	2020/07/29
X	Wideband Power Sensor	Keysight	N1923A	MY56080004	2019/07/30	2020/07/29
X	EMI Test Receiver	R&S	ESCS 30	100369	2019/11/27	2020/11/26
X	LISN	R&S	ENV216	101105	2020/04/27	2021/04/26
X	LISN	SN R&S		836679/014	2020/04/26	2021/04/25
X	Coaxial Cable	DEKRA	RG 400	LC018-RG	2020/06/19	2021/06/18

- 1. All equipments are calibrated every one year.
- 2. The test instruments marked with "X" are used to measure the final test results.
- 3. Test Software version : DEKRA Conduction Test SystemV9.0.5.



## For Radiated measurements /Site3/CB8

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Date	Due. Date
X	Test Receiver	R&S	ESR7	101602	2019/12/16	2020/12/15
X	Signal Analyzer	R&S	FSV40	101869	2019/07/04	2020/07/03
X	Loop Antenna	Teseq	HLA6121	37133	2019/10/15	2021/10/14
X	Bilog Antenna	Schaffner Chase	CBL6112B	2916	2020/01/20	2021/01/19
X	Coaxial Cable	DEKRA	L1907-001C	280280.F141.1000D	2019/07/10	2020/07/09
X	Amplifier	EMCI	EMC001330	980254	2019/08/22	2020/08/21
X	Horn Antenna	ETS-LINDGREN	3117	00228113	2020/05/28	2021/05/27
X	Coaxial Cable	DEKRA	L1907-002C	280280.F141.1000D	2019/07/10	2020/07/09
X	Amplifier	EMCI	EMC05820SE	980362	2020/06/30	2021/06/29
X	Amplifier	EMCI	EMC051845SE	980632	2019/08/08	2020/08/07
	Horn Antenna	Com-Power	AH-1840	101101	2019/10/31	2020/10/30
	Amplifier + Cable	EMCI	EMC184045SE	980369	2020/04/23	2021/04/22
	Bilog Antenna	Schaffner Chase	CBL6112B	2925	2020/02/20	2021/02/19
	Coaxial Cable	DEKRA	L1907-003C	00100A1B3A120M	2019/07/10	2020/07/09
	Amplifier	EMCI	EMC001330	980255	2020/03/17	2021/03/16
X	Filter	MICRO-TRONICS	BRM50702	G270	2019/08/08	2020/08/07
	Filter	MICRO-TRONICS	BRM50716	G196	2019/08/08	2020/08/07

- Loop Antenna is calibrated every two years, the other equipments are calibrated every one year. The test instruments marked with "X" are used to measure the final test results. 1.
- 2.
- Test Software version: DEKRA Test SystemV1.1. 3.



## 1.8. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document, and is described in each test chapter of this report.

The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

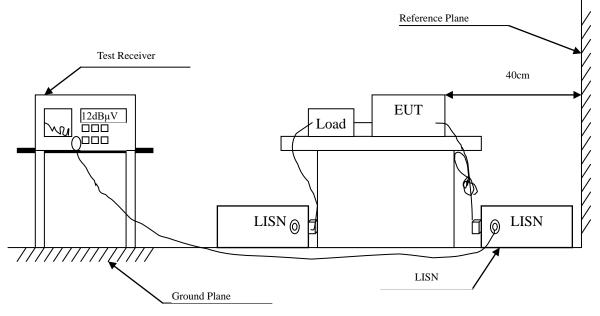
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item	Uncertainty				
Conducted Emission	±3.42dB				
Deals Danier Outrant	Power Meter	Spectrum Analyzer			
Peak Power Output	±0.89dB	±2.06dB			
	9kHz~30M	IHz: ±3.88dB			
	30MHz~10	GHz: ±4.06dB			
Radiated Emission	1GHz~18C	6Hz: ±3.71dB			
Radiated Emission	18GHz~400	GHz: ±3.73dB			
	40GHz~500	GHz: ±3.75dB			
	50GHz~325GHz: ±4.39dB				
RF antenna conducted test	±2.06dB				
	9kHz~30M	IHz: ±3.88dB			
	30MHz~10	GHz: ±4.06dB			
Dand Edge	1GHz~18C	GHz: ±3.71dB			
Band Edge	18GHz~400	GHz: ±3.73dB			
	40GHz~500	GHz: ±3.75dB			
	50GHz~325	GHz: ±4.39dB			
6dB Bandwidth	±154	4.74Hz			
Power Density	±2.06dB				
Duty Cycle (2.4GHz)	±2.3	1msec			



## 2. Conducted Emission

## 2.1. Test Setup



## 2.2. Limits

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

## 2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.

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



## 2.4. Test Result of Conducted Emission

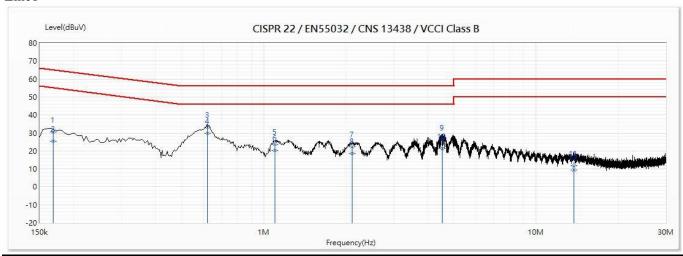
Product : Mobile Computer

Test Item : Conducted Emission Test

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Test Date : 2020/06/29

## Line1



No	Frequency	Emission Level	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	(dBuV)	(dBuV) (dB)		(dBuV)	(dB)	Type
1	0.168	30.57	65.05	-34.48	20.76	9.81	QP
2	0.168	25.30	55.05	-29.75	15.49	9.81	AV
3	0.622	33.08	56.00	-22.92	23.28	9.80	QP
*4	0.622	29.75	46.00	-16.25	19.95	9.80	AV
5	1.097	23.52	56.00	-32.48	13.71	9.80	QP
6	1.097	20.27	46.00	-25.73	10.47	9.80	AV
7	2.107	22.18	56.00	-33.82	12.33	9.85	QP
8	2.107	18.53	46.00	-27.47	8.68	9.85	AV
9	4.53	26.16	56.00	-29.84	16.23	9.93	QP
10	4.53	21.23	46.00	-24.77	11.30	9.93	AV
11	13.792	11.80	60.00	-48.20	1.68	10.12	QP
12	13.792	9.38	50.00	-40.62	-0.75	10.12	AV

#### Remark:

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

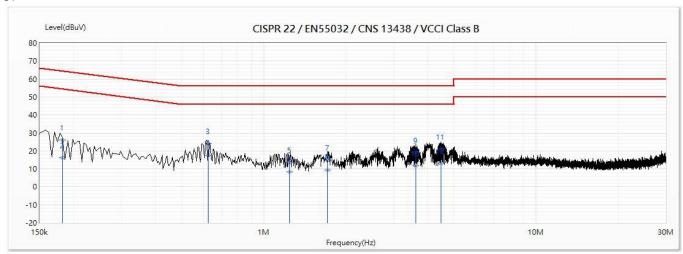


Test Item : Conducted Emission Test

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Test Date : 2020/06/29

N



No	Frequency	Emission Level	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	(dBuV)	(dBuV) (dB)		(dBuV)	(dB)	Туре
1	0.182	26.10	64.41	-38.31	16.31	9.78	QP
2	0.182	16.13	54.41	-38.27	6.35	9.78	AV
3	0.623	24.06	56.00	-31.94	14.27	9.79	QP
*4	0.623	17.43	46.00	-28.57	7.64	9.79	AV
5	1.243	13.55	56.00	-42.45	3.75	9.80	QP
6	1.243	8.34	46.00	-37.66	-1.46	9.80	AV
7	1.717	14.65	56.00	-41.35	4.82	9.83	QP
8	1.717	9.30	46.00	-36.70	-0.52	9.83	AV
9	3.619	18.98	56.00	-37.02	9.09	9.89	QP
10	3.619	11.85	46.00	-34.15	1.97	9.89	AV
11	4.48	21.04	56.00	-34.96	11.13	9.92	QP
12	4.48	13.23	46.00	-32.77	3.31	9.92	AV

## Remark:

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



## 3. Peak Power Output

## 3.1. Test Setup



## 3.2. Limits

The maximum peak power shall be less 1 Watt.

## 3.3. Test Procedure

The EUT was tested according to C63.10:2013 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using C63.10:2013 Section 11.9.1.3 PKPM1 Peak power meter method. The maximum average conducted output power using C63.10:2013 Section 11.9.2.3 Measurement using a power meter (PM). (Measurement using a gated RF average-reading power meter).



## 3.4. Test Result of Peak Power Output

Product : Mobile Computer

Test Item : Peak Power Output Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Test Date : 2020/06/10

Channel No	Frequency	For d	•	e Power ata Rate (M	Peak Power	Required	D a sult	
	(MHz)	1	2	5.5	11	1	Limit	Result
			Measur	ement Lev	vel (dBm)			
01	2412	18.86				21.47	<30dBm	Pass
06	2437	18.57	18.48	18.43	18.35	21.29	<30dBm	Pass
11	2462	18.8				21.26	<30dBm	Pass



Test Item : Peak Power Output Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Test Date : 2020/06/10

	Eraguanay		F		Average erent Da			s)		Peak Power	Required	
Channel No	Frequency (MHz)	6	9	12	18	24	36	48	54	6	Limit	Result
			Measurement Level (dBm)									
01	2412	17.45								25.12	<30dBm	Pass
06	2437	17.69	17.64	17.58	17.48	17.38	17.35	17.31	17.21	25.87	<30dBm	Pass
11	2462	15.66								23.6	<30dBm	Pass



Test Item : Peak Power Output Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Test Date : 2020/06/10

Channel No	Emaguanav		Average Power Peak For different Data Rate (Mbps) Power								Daguinad	
	Frequency (MHz)	7.2	14.4	21.7	28.9	43.3	57.8	65	72.2	7.2	Required Limit	Result
			Measurement Level (dBm)									
01	2412	16.37			1	1	1	1	1	24.65	<30dBm	Pass
06	2437	16.31	16.21	16.13	16.12	16.12	16.06	16.05	16.05	25.12	<30dBm	Pass
11	2462	13.81								22.7	<30dBm	Pass



Test Item : Peak Power Output Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Test Date : 2020/06/10

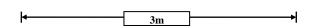
	Emaguanav	Average Power Peak For different Data Rate (Mbps) Power									Daguinad	
Channel No	Frequency (MHz)	15	30	45	60	90	120	135	150	15	Required Limit	Result
			Measurement Level (dBm)									
03	2422	16.06	-	-	-				1	25.44	<30dBm	Pass
06	2437	16.49	16.35	16.33	16.33	16.31	16.27	16.22	16.18	25.53	<30dBm	Pass
09	2452	14.44								24.16	<30dBm	Pass

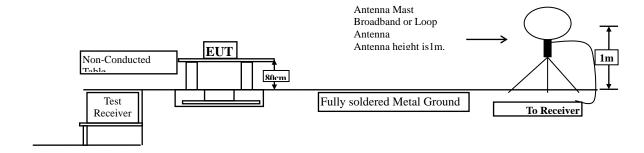


## 4. Radiated Emission

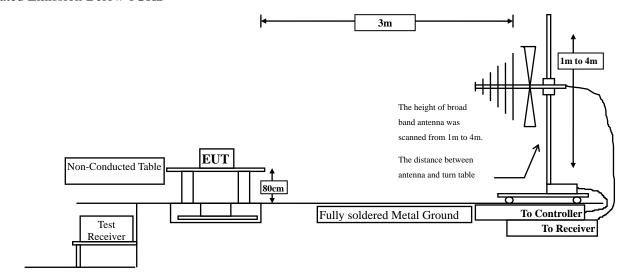
## 4.1. Test Setup

Radiated Emission Under 30MHz

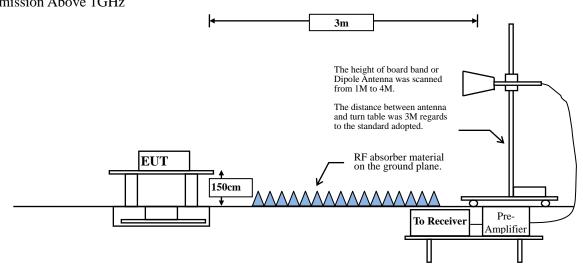




Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



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## 4.2. Limits

#### **▶** General Radiated Emission 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 1	5.209 Limits
Frequency MHz	Field strength	Measurement distance
IVIII	(microvolts/meter)	(meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks:

- 1. RF Voltage  $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.



#### 4.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to C63.10:2013 Section 11.12.1 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 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 is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.



## **RBW** and **VBW** Parameter setting:

According to C63.10 Section 11.12.2.4 Peak measurement procedure.

RBW = as specified in Table 1.

 $VBW \ge 3 \times RBW$ .

Table 1 —RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

According to C63.10 Section 11.12.2.5 Average measurement procedure.

RBW = 1MHz.

VBW = 10Hz, when duty cycle  $\geq$  98 %

 $VBW \ge 1/T$ , when duty cycle < 98 %

( T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

				<u> </u>
2.4GHz band	Duty Cycle	Т	1/T	VBW
	(%)	(ms)	(Hz)	(Hz)
802.11b	100.00	8.9196	112	10
802.11g	98.23	2.0145	496	10
802.11n20	96.20	1.8341	545	1000
802.11n40	98.48	3.7471	267	10

Note: Duty Cycle Refer to Section 9



#### 4.4. Test Result of Radiated Emission

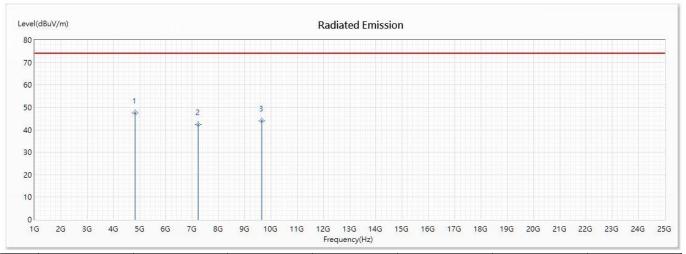
Product : Mobile Computer

Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Test Date : 2020/06/16

#### Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	4824	47.48	74.00	-26.52	59.47	-11.99	PK
2	7236	42.39	74.00	-31.61	55.19	-12.80	PK
3	9648	43.86	74.00	-30.14	56.86	-13.00	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

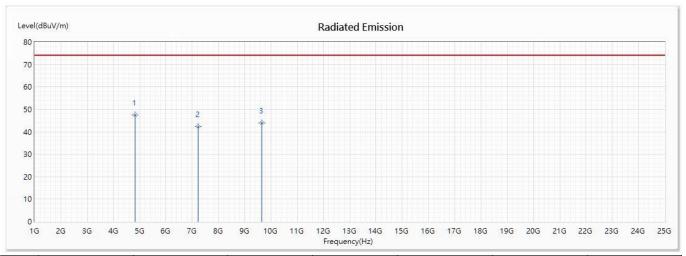


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Test Date : 2020/06/16

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	4824	47.45	74.00	-26.55	59.44	-11.99	PK
2	7236	42.35	74.00	-31.65	55.15	-12.80	PK
3	9648	43.92	74.00	-30.08	56.92	-13.00	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

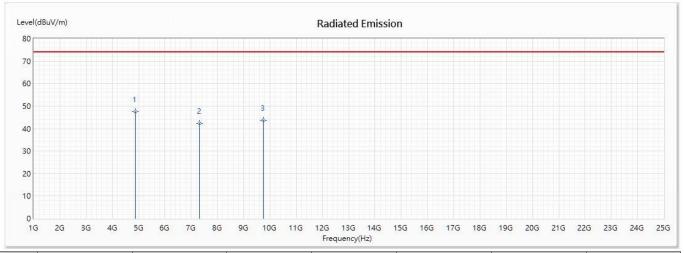


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Test Date : 2020/06/16

#### Horizontal



No	Frequency (MHz)	Emission Level	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
	(11112)	(dBuV/m)	(020,7,111)	(02)	(0201)	(02,111)	2) 10
* 1	4874	47.52	74.00	-26.48	59.01	-11.49	PK
2	7311	42.45	74.00	-31.55	55.83	-13.38	PK
3	9748	43.82	74.00	-30.18	56.01	-12.19	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

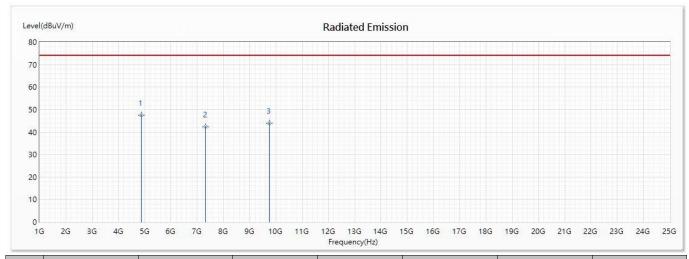


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Test Date : 2020/06/16

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	4874	47.56	74.00	-26.44	59.05	-11.49	PK
2	7311	42.33	74.00	-31.67	55.71	-13.38	PK
3	9748	43.95	74.00	-30.05	56.14	-12.19	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

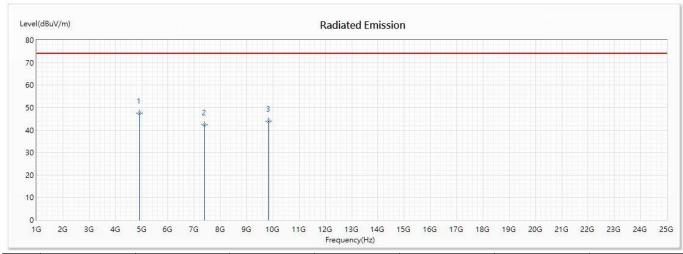


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

Test Date : 2020/06/16

#### Horizontal



]	No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
;	* 1	4924	47.61	74.00	-26.39	58.65	-11.04	PK
	2	7386	42.41	74.00	-31.59	56.41	-14.00	PK
	3	9848	44.01	74.00	-29.99	57.25	-13.24	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

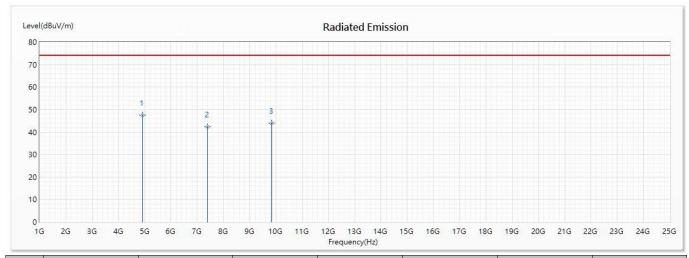


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

Test Date : 2020/06/16

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	4924	47.47	74.00	-26.53	58.51	-11.04	PK
2	7386	42.42	74.00	-31.58	56.42	-14.00	PK
3	9848	43.99	74.00	-30.01	57.23	-13.24	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

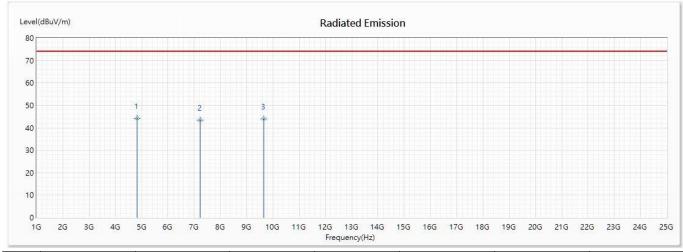


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Test Date : 2020/06/16

#### Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	4824	44.21	74.00	-29.79	56.20	-11.99	PK
2	7236	43.46	74.00	-30.54	56.26	-12.80	PK
3	9648	43.99	74.00	-30.01	56.99	-13.00	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

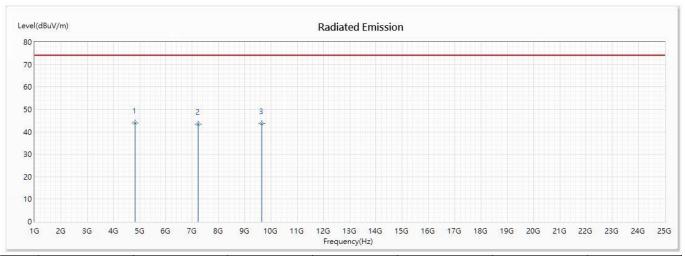


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Test Date : 2020/06/16

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	4824	44.08	74.00	-29.92	56.07	-11.99	PK
2	7236	43.35	74.00	-30.65	56.15	-12.80	PK
3	9648	43.72	74.00	-30.28	56.72	-13.00	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

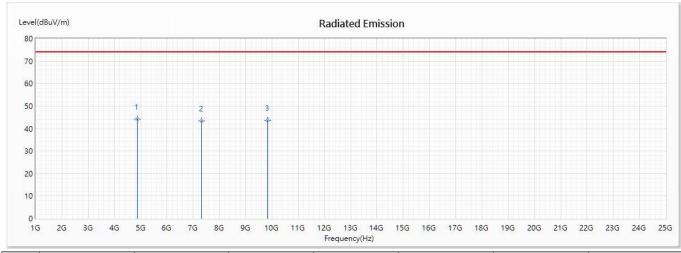


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Test Date : 2020/06/16

#### Horizontal



No	Frequency (MHz)	Emission Level	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
		(dBuV/m)					
* 1	4874	44.25	74.00	-29.75	55.74	-11.49	PK
2	7311	43.32	74.00	-30.68	56.70	-13.38	PK
3	9848	43.66	74.00	-30.34	56.90	-13.24	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

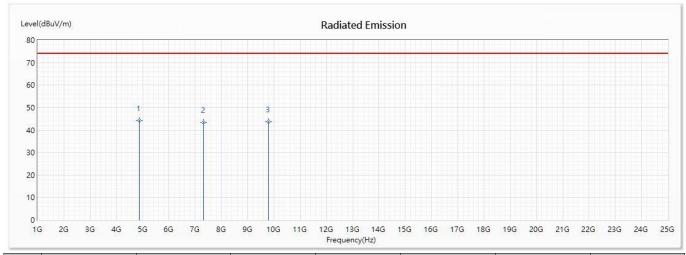


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Test Date : 2020/06/16

#### Vertical



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	4874	44.33	74.00	-29.67	55.82	-11.49	PK
2	7311	43.41	74.00	-30.59	56.79	-13.38	PK
3	9784	43.75	74.00	-30.25	56.30	-12.55	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

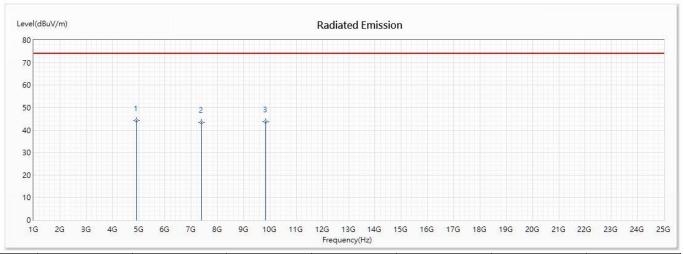


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

Test Date : 2020/06/16

#### Horizontal



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	4924	44.29	74.00	-29.71	55.33	-11.04	PK
2	7386	43.51	74.00	-30.49	57.51	-14.00	PK
3	9848	43.81	74.00	-30.19	57.05	-13.24	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

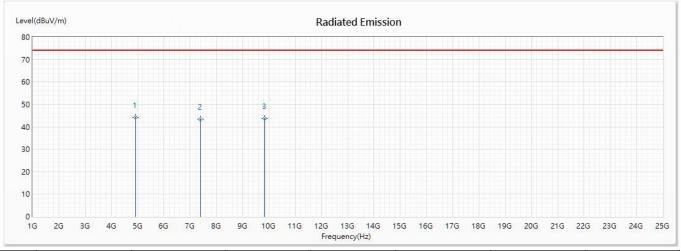


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

Test Date : 2020/06/16

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	4924	44.18	74.00	-29.82	55.22	-11.04	PK
2	7386	43.38	74.00	-30.62	57.38	-14.00	PK
3	9848	43.65	74.00	-30.35	56.89	-13.24	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

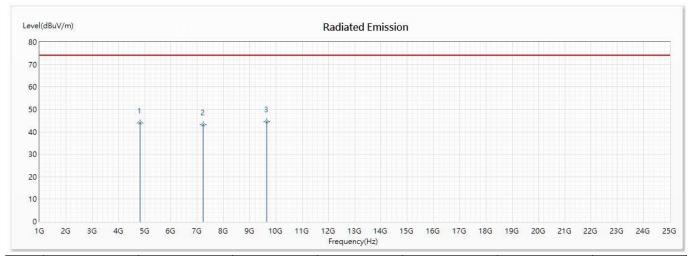


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Test Date : 2020/06/16

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	4824	43.99	74.00	-30.01	55.98	-11.99	PK
2	7236	43.25	74.00	-30.75	56.05	-12.80	PK
* 3	9648	44.43	74.00	-29.57	57.43	-13.00	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

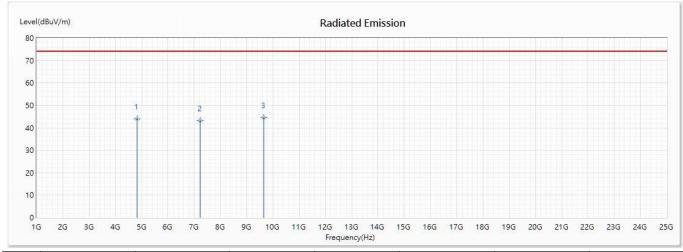


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Test Date : 2020/06/16

## Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	4824	43.92	74.00	-30.08	55.91	-11.99	PK
2	7236	43.18	74.00	-30.82	55.98	-12.80	PK
* 3	9648	44.41	74.00	-29.59	57.41	-13.00	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

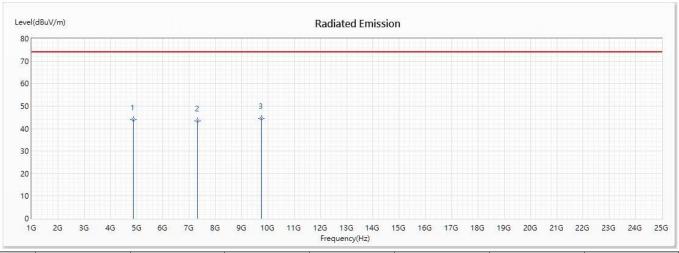


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437 MHz)

Test Date : 2020/06/16

#### Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	4874	44.05	74.00	-29.95	55.54	-11.49	PK
2	7311	43.33	74.00	-30.67	56.71	-13.38	PK
* 3	9748	44.49	74.00	-29.51	56.68	-12.19	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

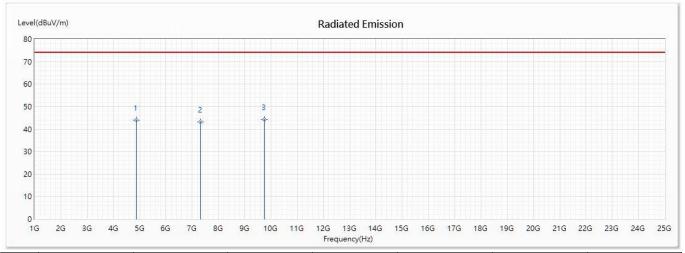


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437 MHz)

Test Date : 2020/06/16

## Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	4874	43.96	74.00	-30.04	55.45	-11.49	PK
2	7311	43.21	74.00	-30.79	56.59	-13.38	PK
* 3	9748	44.35	74.00	-29.65	56.54	-12.19	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

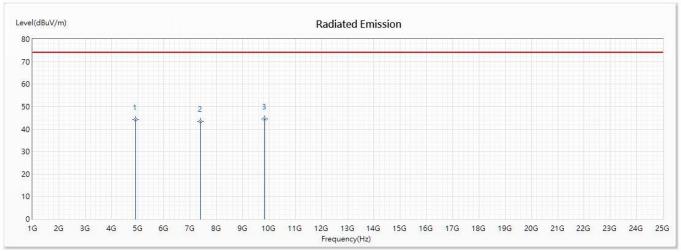


Test Item : Harmonic Radiated Emission Data

Test Mode: Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)

Test Date : 2020/06/16

#### Horizontal



ľ	No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
	1	4924	44.11	74.00	-29.89	55.15	-11.04	PK
	2	7386	43.37	74.00	-30.63	57.37	-14.00	PK
*	° 3	9848	44.55	74.00	-29.45	57.79	-13.24	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

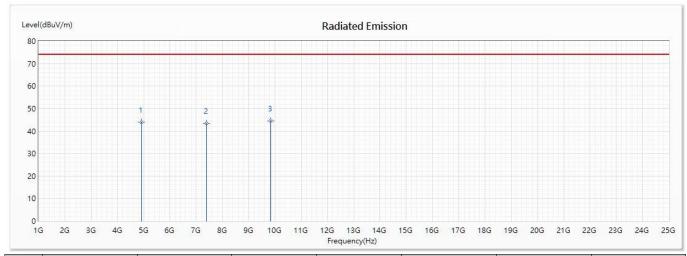


Test Item : Harmonic Radiated Emission Data

Test Mode: Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)

Test Date : 2020/06/16

## Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	4924	43.98	74.00	-30.02	55.02	-11.04	PK
2	7386	43.31	74.00	-30.69	57.31	-14.00	PK
* 3	9848	44.39	74.00	-29.61	57.63	-13.24	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

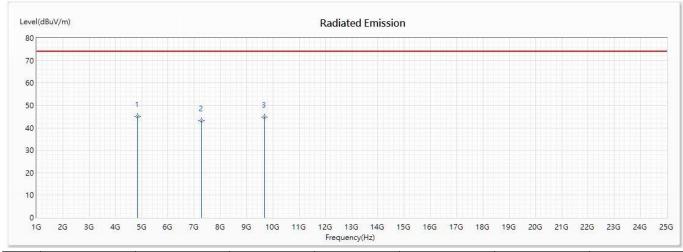


Test Item : Harmonic Radiated Emission Data

Test Mode: Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

Test Date : 2020/06/16

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	4844	44.95	74.00	-29.05	56.70	-11.75	PK
2	7266	43.09	74.00	-30.91	56.02	-12.93	PK
3	9688	44.86	74.00	-29.14	57.54	-12.68	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

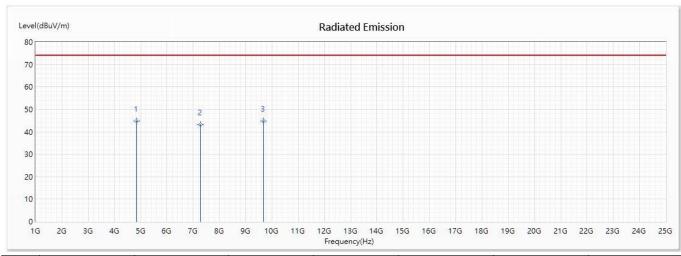


Test Item : Harmonic Radiated Emission Data

Test Mode: Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

Test Date : 2020/06/16

## Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	4844	44.89	74.00	-29.11	56.64	-11.75	PK
2	7266	43.05	74.00	-30.95	55.98	-12.93	PK
3	9688	44.81	74.00	-29.19	57.49	-12.68	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

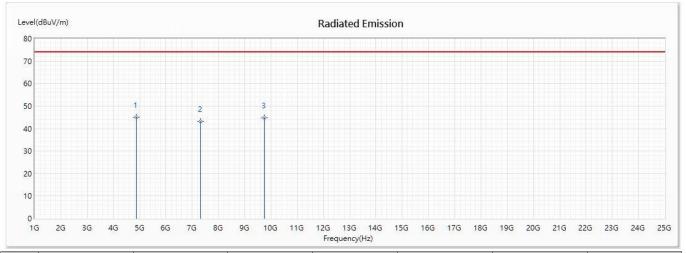


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437 MHz)

Test Date : 2020/06/16

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	4874	44.92	74.00	-29.08	56.41	-11.49	PK
2	7311	43.05	74.00	-30.95	56.43	-13.38	PK
3	9748	44.82	74.00	-29.18	57.01	-12.19	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

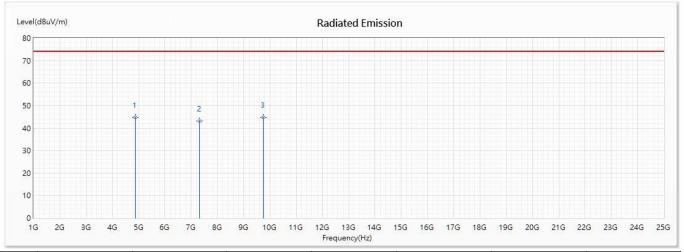


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437 MHz)

Test Date : 2020/06/16

#### Vertical



No	Frequency (MHz)	Emission Level	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
	(141112)	(dBuV/m)	(aba v/iii)	(GD)	(dDu v)	(GD/III)	1,700
* 1	4874	44.85	74.00	-29.15	56.34	-11.49	PK
2	7311	43.02	74.00	-30.98	56.40	-13.38	PK
3	9748	44.77	74.00	-29.23	56.96	-12.19	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

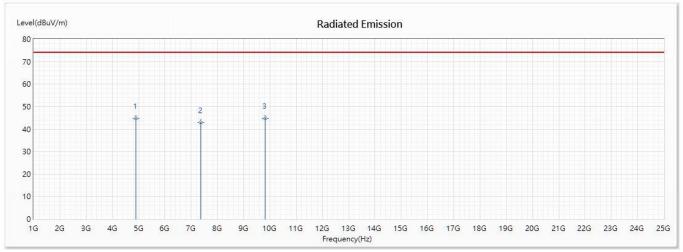


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452 MHz)

Test Date : 2020/06/16

#### Horizontal



No	Frequency (MHz)	Emission Level	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
		(dBuV/m)					• •
* 1	4904	44.89	74.00	-29.11	56.13	-11.24	PK
2	7356	42.99	74.00	-31.01	56.73	-13.74	PK
3	9808	44.83	74.00	-29.17	57.63	-12.80	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

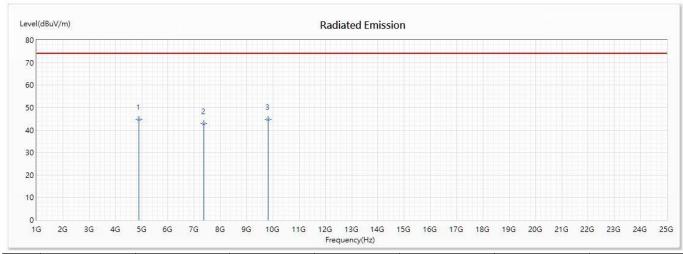


Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452 MHz)

Test Date : 2020/06/16

## Vertical



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	4904	44.82	74.00	-29.18	56.06	-11.24	PK
2	7356	42.92	74.00	-31.08	56.66	-13.74	PK
3	9808	44.75	74.00	-29.25	57.55	-12.80	PK

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The average measurement was not performed when the peak measured data under the limit of average detection.
- 5. The emission levels of other frequencies are very lower than the limit and not show in test report.

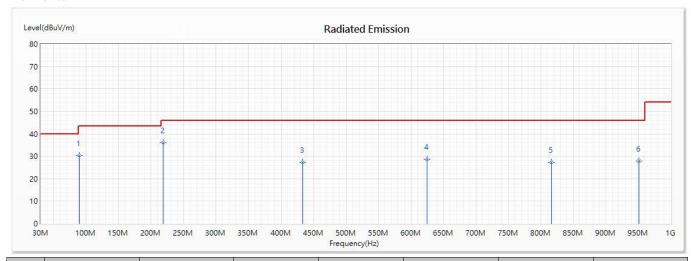


Test Item : General Radiated Emission Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz)

Test Date : 2020/06/17

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	89.043	30.24	43.50	-13.26	39.69	-9.45	QP
* 2	218.377	36.00	46.00	-10.00	47.66	-11.66	QP
3	433.464	27.34	46.00	-18.66	31.40	-4.06	QP
4	624.652	28.80	46.00	-17.20	30.74	-1.94	QP
5	815.841	27.28	46.00	-18.72	30.10	-2.82	QP
6	950.797	27.85	46.00	-18.15	30.03	-2.18	QP

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 5. No emission found between lowest internal used/generated frequency to 30MHz.

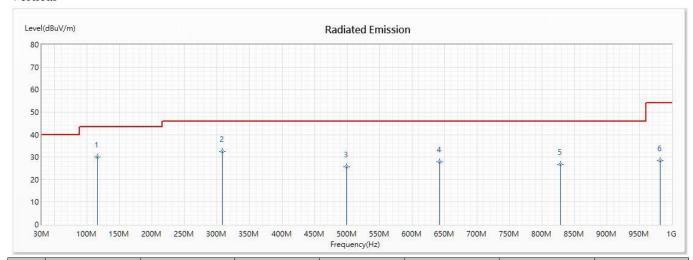


Test Item : General Radiated Emission Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz)

Test Date : 2020/06/17

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	115.754	29.90	43.50	-13.60	39.70	-9.80	QP
* 2	308.348	32.56	46.00	-13.44	40.56	-8.00	QP
3	499.536	25.75	46.00	-20.25	30.24	-4.49	QP
4	642.928	27.84	46.00	-18.16	30.61	-2.77	QP
5	828.493	26.80	46.00	-19.20	29.37	-2.57	QP
6	981.725	28.44	54.00	-25.56	30.04	-1.60	QP

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 5. No emission found between lowest internal used/generated frequency to 30MHz.

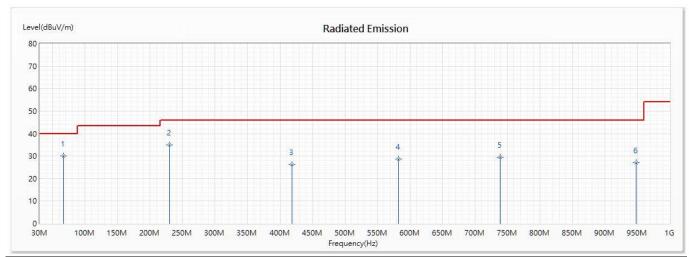


Test Item : General Radiated Emission Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz)

Test Date : 2020/06/17

#### Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	66.551	29.98	40.00	-10.02	43.72	-13.74	QP
2	229.623	35.07	46.00	-10.93	46.27	-11.20	QP
3	418	26.25	46.00	-19.75	31.83	-5.58	QP
4	582.478	28.63	46.00	-17.37	29.57	-0.94	QP
5	738.522	29.39	46.00	-16.61	28.96	0.43	QP
6	947.986	27.13	46.00	-18.87	29.31	-2.18	QP

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 5. No emission found between lowest internal used/generated frequency to 30MHz.

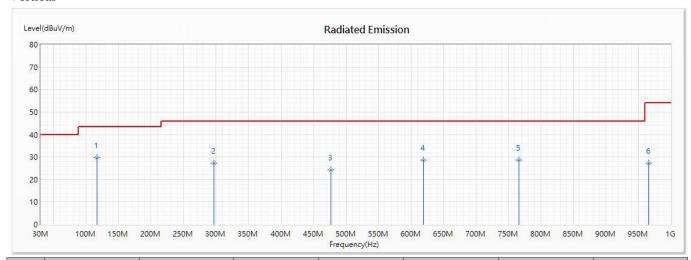


Test Item : General Radiated Emission Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz)

Test Date : 2020/06/17

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	117.159	29.64	43.50	-13.86	39.47	-9.83	QP
2	297.101	27.30	46.00	-18.70	36.23	-8.93	QP
3	477.043	24.42	46.00	-21.58	29.90	-5.48	QP
4	619.029	28.75	46.00	-17.25	30.40	-1.65	QP
5	766.638	28.75	46.00	-17.25	30.60	-1.85	QP
6	966.261	27.38	54.00	-26.62	29.36	-1.98	QP

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 5. No emission found between lowest internal used/generated frequency to 30MHz.

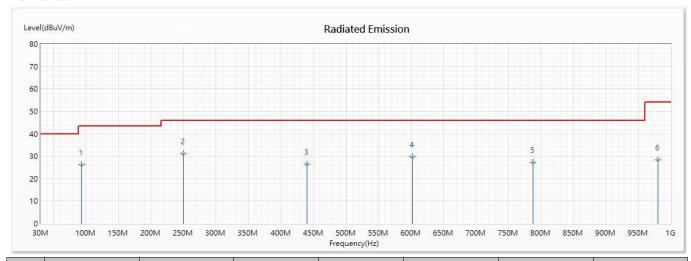


Test Item : General Radiated Emission Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2437 MHz)

Test Date : 2020/06/17

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	93.261	26.17	43.50	-17.33	35.45	-9.28	QP
* 2	249.304	31.21	46.00	-14.79	42.65	-11.44	QP
3	440.493	26.41	46.00	-19.59	29.86	-3.45	QP
4	602.159	29.75	46.00	-16.25	30.07	-0.32	QP
5	787.725	27.41	46.00	-18.59	29.88	-2.47	QP
6	980.319	28.26	54.00	-25.74	29.84	-1.58	QP

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 5. No emission found between lowest internal used/generated frequency to 30MHz.

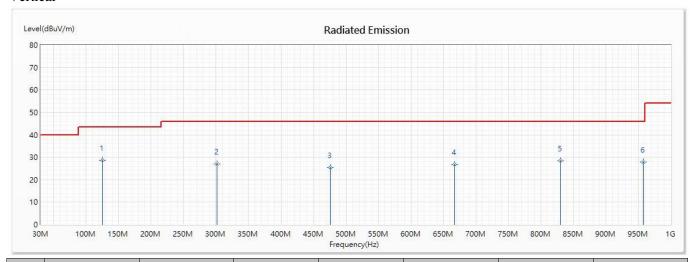


Test Item : General Radiated Emission Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2437 MHz)

Test Date : 2020/06/17

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	125.594	28.73	43.50	-14.77	38.33	-9.60	QP
2	301.319	27.14	46.00	-18.86	35.30	-8.16	QP
3	475.638	25.31	46.00	-20.69	30.68	-5.37	QP
4	666.826	26.72	46.00	-19.28	30.33	-3.61	QP
5	829.899	28.31	46.00	-17.69	30.83	-2.52	QP
6	957.826	27.73	46.00	-18.27	29.88	-2.15	QP

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 5. No emission found between lowest internal used/generated frequency to 30MHz.

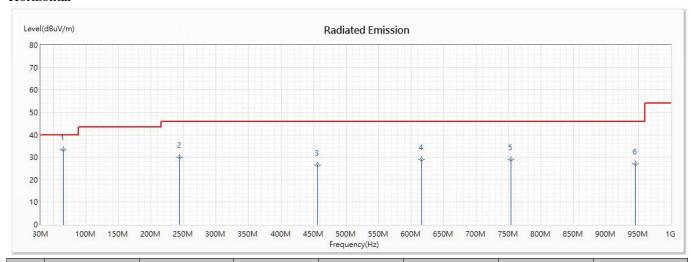


Test Item : General Radiated Emission Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2437 MHz)

Test Date : 2020/06/17

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	65.145	33.35	40.00	-6.65	47.02	-13.67	QP
2	243.681	29.94	46.00	-16.06	41.80	-11.86	QP
3	455.957	26.35	46.00	-19.65	30.35	-4.00	QP
4	616.217	28.95	46.00	-17.05	30.38	-1.43	QP
5	753.986	29.01	46.00	-16.99	29.93	-0.92	QP
6	945.174	27.10	46.00	-18.90	29.28	-2.18	QP

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 5. No emission found between lowest internal used/generated frequency to 30MHz.

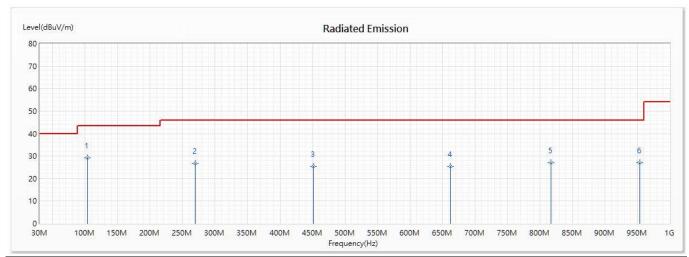


Test Item : General Radiated Emission Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2437 MHz)

Test Date : 2020/06/17

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
* 1	103.101	29.08	43.50	-14.42	37.90	-8.82	QP
2	268.986	26.68	46.00	-19.32	39.07	-12.39	QP
3	451.739	25.46	46.00	-20.54	29.31	-3.85	QP
4	662.609	25.44	46.00	-20.56	29.23	-3.79	QP
5	817.246	27.13	46.00	-18.87	29.96	-2.83	QP
6	953.609	27.06	46.00	-18.94	29.24	-2.18	QP

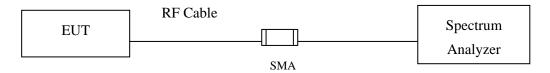
- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.
- 3. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 4. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 5. No emission found between lowest internal used/generated frequency to 30MHz.



## 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 either an RF conducted or a 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 tested according to C63.10:2013 Section 11.11 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.



## 5.4. Test Result of RF antenna conducted test

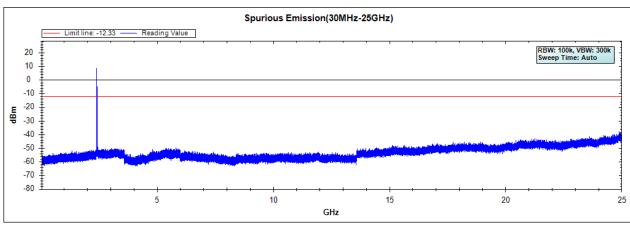
Product : Mobile Computer

Test Item : RF antenna conducted test

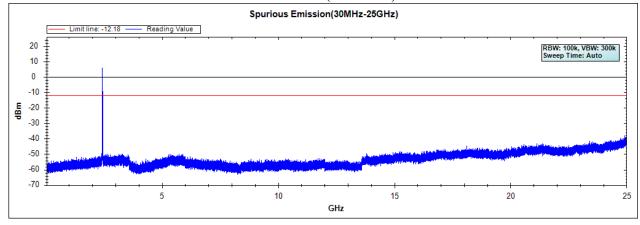
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Test Date : 2020/07/01

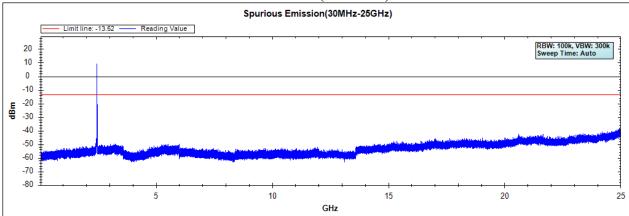
## **Channel 01 (2412MHz)**



## **Channel 06 (2437MHz)**



## **Channel 11 (2462MHz)**

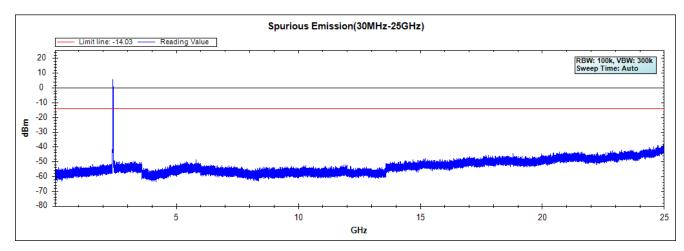




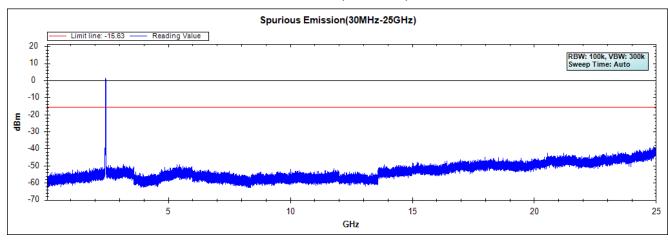
Test Item : RF Antenna Conducted Spurious
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Test Date : 2020/07/01

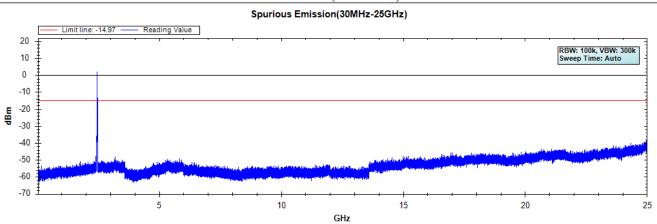
## **Channel 01 (2412MHz)**



## **Channel 06 (2437MHz)**



## **Channel 11 (2462MHz)**



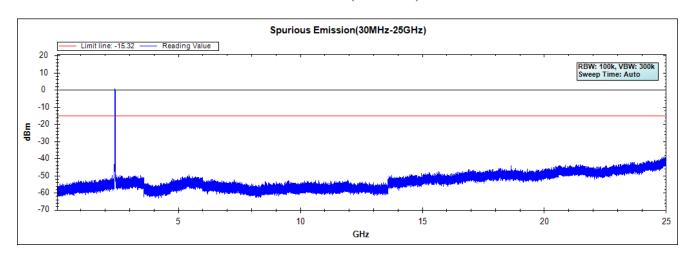


Test Item : RF Antenna Conducted Spurious

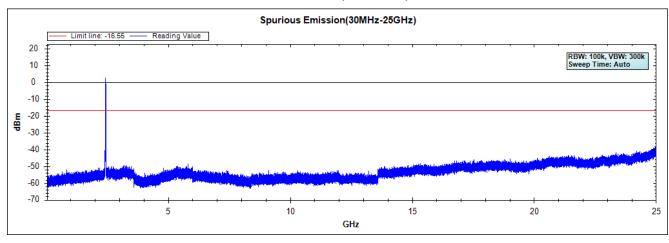
Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Test Date : 2020/07/01

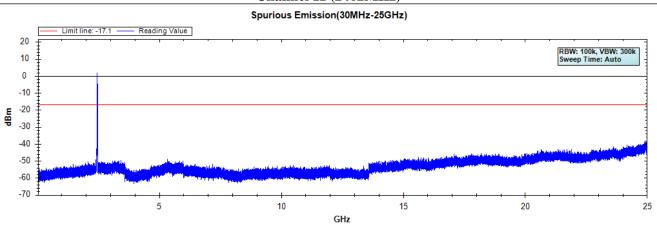
## **Channel 01 (2412MHz)**



## **Channel 06 (2437MHz)**



## **Channel 11 (2462MHz)**



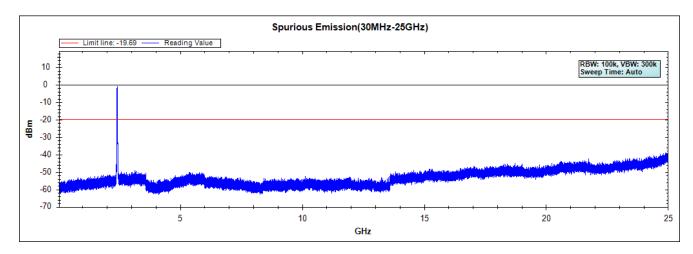


Test Item : RF Antenna Conducted Spurious

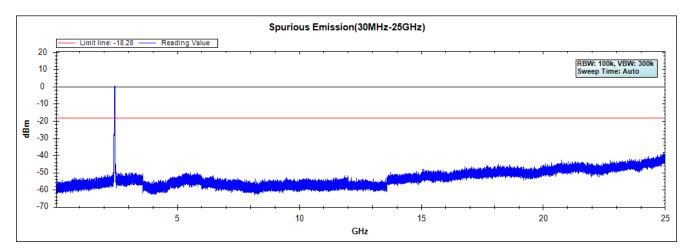
Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Test Date : 2020/07/01

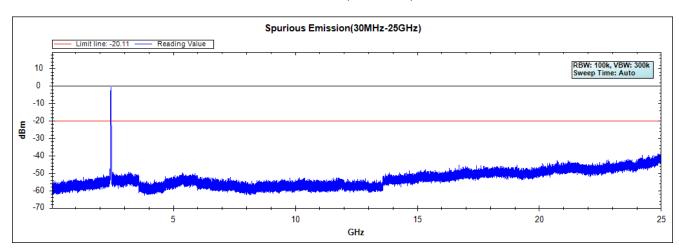
## **Channel 03 (2422MHz)**



# **Channel 06 (2437MHz)**



# **Channel 09 (2452MHz)**

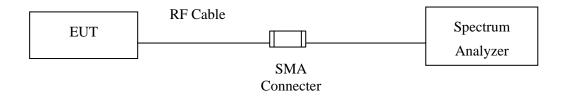




# 6. Band Edge

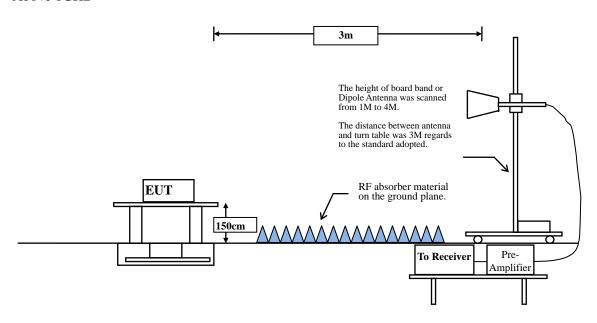
# 6.1. Test Setup

# **RF Conducted Measurement**



## **RF Radiated Measurement:**

# Above 1GHz





## 6.2. Limits

According to FCC Section 15.247(d). In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

#### **6.3.** Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to C63.10:2013 Section 11.12.1 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 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 is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.



# **RBW** and **VBW** Parameter setting:

According to C63.10 Section 11.12.2.4 Peak measurement procedure.

RBW = as specified in Table 1.

 $VBW \ge 3 \times RBW$ .

Table 1 —RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

According to C63.10 Section 11.12.2.5 Average measurement procedure.

RBW = 1MHz.

VBW = 10Hz, when duty cycle  $\geq$  98 %

 $VBW \ge 1/T$ , when duty cycle < 98 %

( T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

2.4GHz band	Duty Cycle	Т	1/T	VBW
	(%)	(ms)	(Hz)	(Hz)
802.11b	100.00	8.9196	112	10
802.11g	98.23	2.0145	496	10
802.11n20	96.20	1.8341	545	1000
802.11n40	98.48	3.7471	267	10

Note: Duty Cycle Refer to Section 9



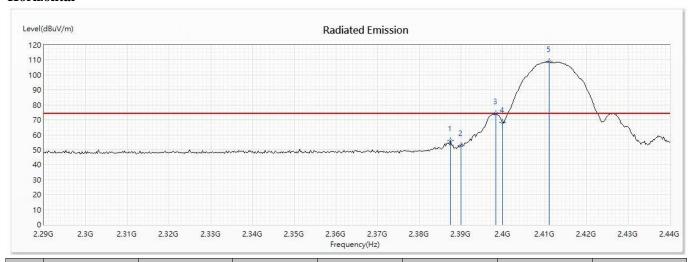
# 6.4. Test Result of Band Edge

Product : Mobile Computer Test Item : Band Edge Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Test Date : 2020/06/15

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2387.391	56.10	74.00	-17.90	43.25	12.85	PK
2	2390	52.70	74.00	-21.30	39.83	12.87	PK
! 3	2398.261	74.07			61.12	12.95	PK
4	2400	68.41	-		55.45	12.96	PK
! 5	2411.087	108.91	-		95.90	13.01	PK

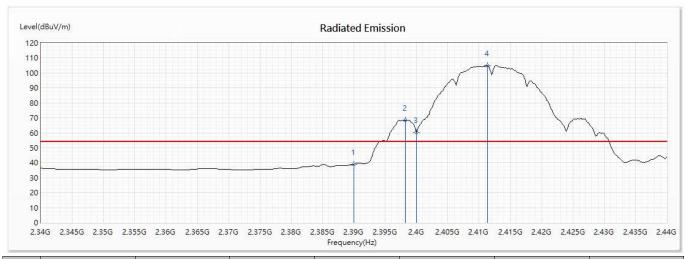
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Test Date : 2020/06/15

## **Horizontal**



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2390	39.03	54.00	-14.97	26.16	12.87	AV
! 2	2398.261	68.57			55.62	12.95	AV
! 3	2400	60.27	-		47.31	12.96	AV
! 4	2411.304	105.00			91.98	13.02	AV

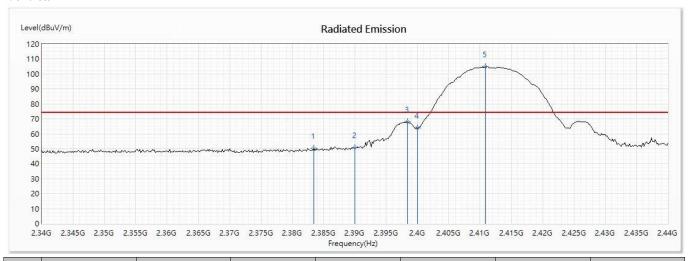
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Test Date : 2020/06/15

## **Vertical**



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2383.478	50.54	74.00	-23.46	37.71	12.83	PK
2	2390	50.95	74.00	-23.05	38.08	12.87	PK
3	2398.406	67.86			54.91	12.95	PK
4	2400	63.84			50.88	12.96	PK
! 5	2410.87	104.78			91.77	13.01	PK

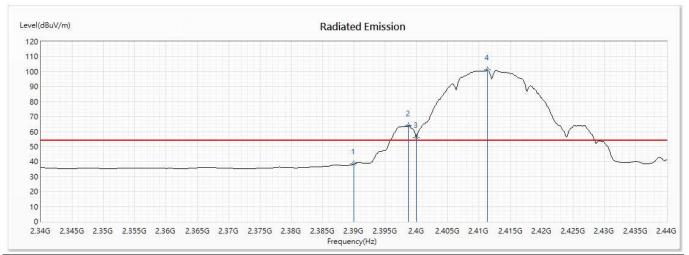
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Test Date : 2020/06/15

## Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2390	38.47	54.00	-15.53	25.60	12.87	AV
! 2	2398.696	63.83			50.88	12.95	AV
! 3	2400	56.30			43.34	12.96	AV
! 4	2411.304	100.98			87.96	13.02	AV

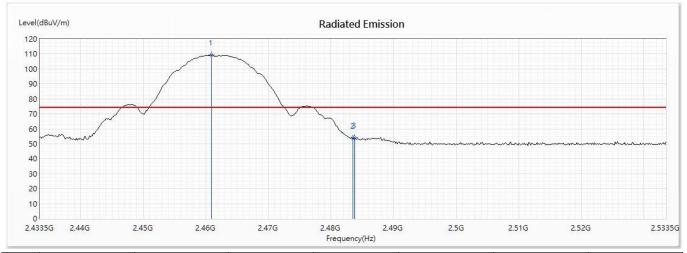
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Test Date : 2020/06/15

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
! 1	2460.891	109.32			96.02	13.30	PK
2	2483.5	53.62	74.00	-20.38	40.14	13.48	PK
3	2483.79	54.25	74.00	-19.75	40.77	13.48	PK

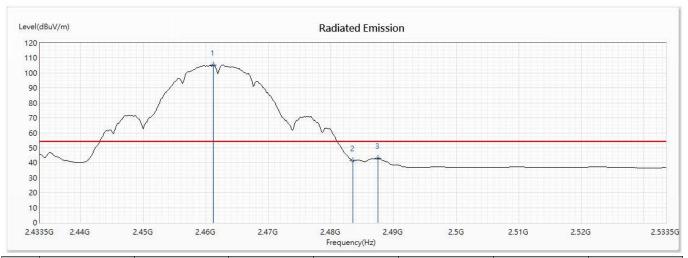
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Test Date : 2020/06/15

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
! 1	2461.181	105.41			92.10	13.31	AV
2	2483.5	41.43	54.00	-12.57	27.95	13.48	AV
3	2487.558	42.89	54.00	-11.11	29.38	13.51	AV

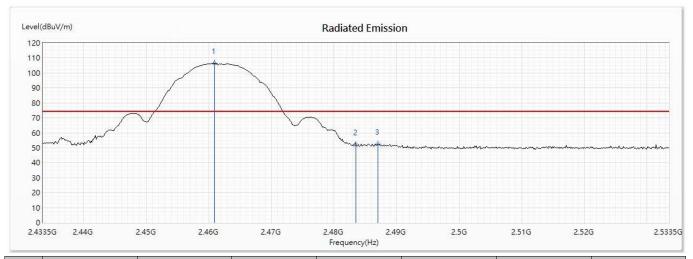
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Test Date : 2020/06/15

## Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
! 1	2460.891	106.47			93.17	13.30	PK
2	2483.5	51.84	74.00	-22.16	38.36	13.48	PK
3	2486.978	52.52	74.00	-21.48	39.02	13.50	PK

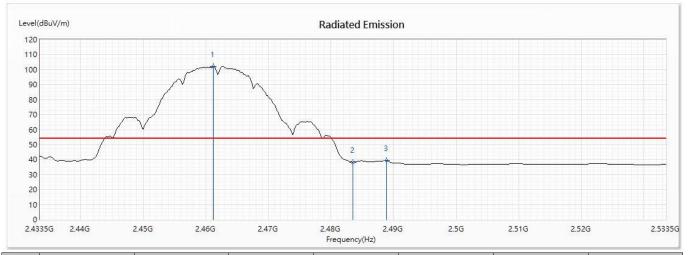
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Test Date : 2020/06/15

# Vertical



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
! 1	2461.181	102.14			88.83	13.31	AV
2	2483.5	38.25	54.00	-15.75	24.77	13.48	AV
3	2488.862	39.36	54.00	-14.64	25.84	13.52	AV

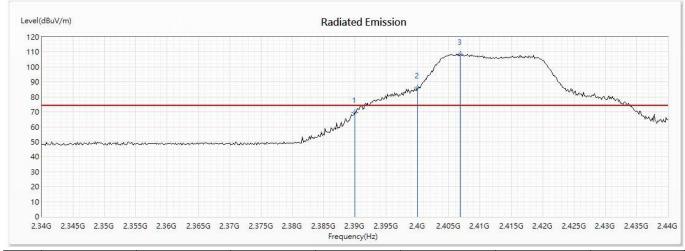
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Test Date : 2020/06/15

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2390	69.47	74.00	-4.53	56.60	12.87	PK
! 2	2400	86.03			73.07	12.96	PK
! 3	2406.812	108.69			95.70	12.99	PK

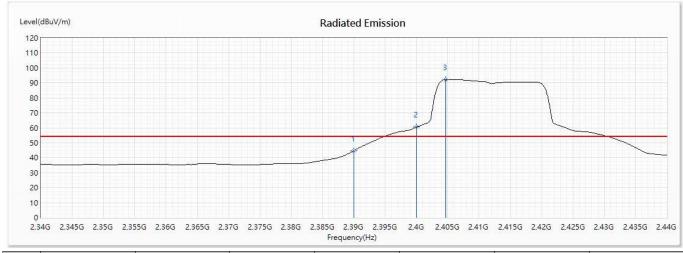
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Test Date : 2020/06/15

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2390	44.73	54.00	-9.27	31.86	12.87	AV
! 2	2400	60.45			47.49	12.96	AV
! 3	2404.638	92.12			79.14	12.98	AV

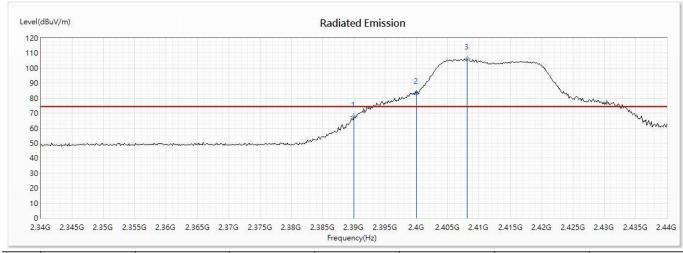
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Test Date : 2020/06/15

## Vertical



No		Emission	Limit	Margin		Correct Factor	
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2390	67.75	74.00	-6.25	54.88	12.87	PK
! 2	2400	82.99			70.03	12.96	PK
! 3	2408.116	105.95			92.95	13.00	PK

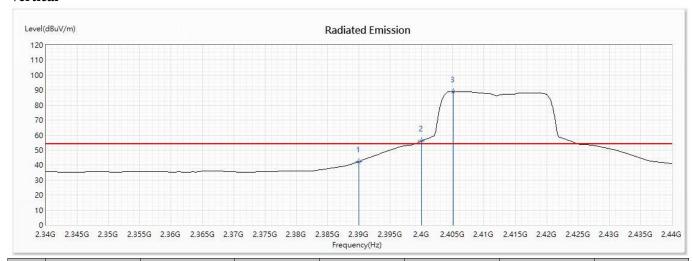
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Test Date : 2020/06/15

## Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2390	42.29	54.00	-11.71	29.42	12.87	AV
! 2	2400	55.94			42.98	12.96	AV
! 3	2405.072	89.05			76.07	12.98	AV

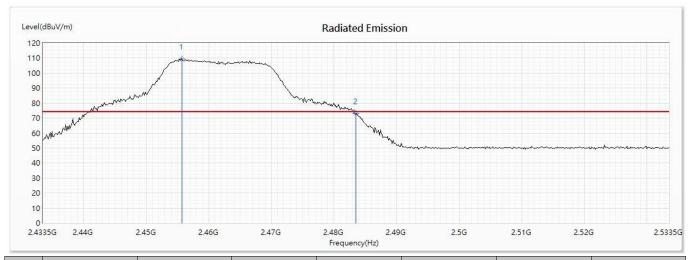
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Test Date : 2020/06/15

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
! 1	2455.674	109.53			96.26	13.27	PK
2	2483.5	72.86	74.00	-1.14	59.38	13.48	PK

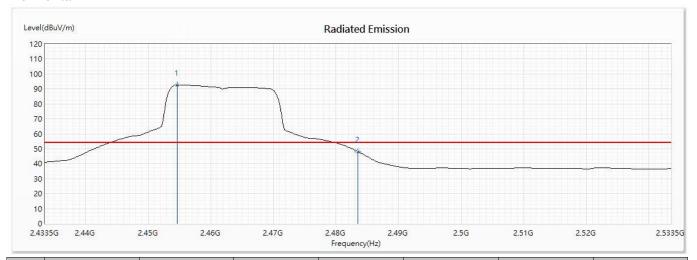
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Test Date : 2020/06/15

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
! 1	2454.659	92.62			79.36	13.26	AV
2	2483.5	48.07	54.00	-5.93	34.59	13.48	AV

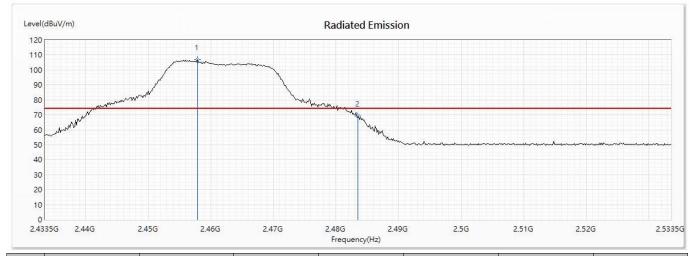
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Test Date : 2020/06/15

## Vertical



N	lo	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
		(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
			(dBuV/m)					
!	1	2457.848	106.78			93.49	13.29	PK
2	2	2483.5	69.11	74.00	-4.89	55.63	13.48	PK

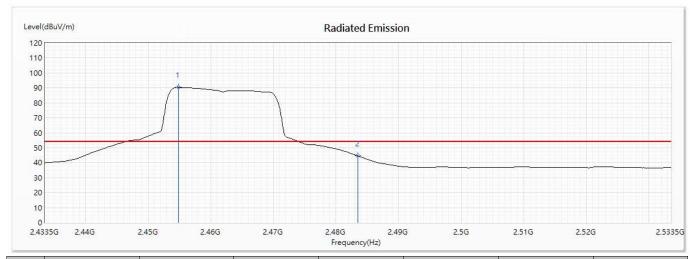
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Test Date : 2020/06/15

## Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
! 1	2454.804	90.32			77.06	13.26	AV
2	2483.5	44.58	54.00	-9.42	31.10	13.48	AV

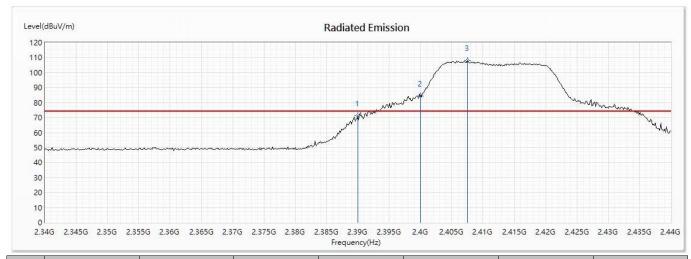
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Test Date : 2020/06/15

#### **Horizontal**



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2390	71.07	74.00	-2.93	58.20	12.87	PK
! 2	2400	84.57			71.61	12.96	PK
! 3	2407.536	108.14			95.14	13.00	PK

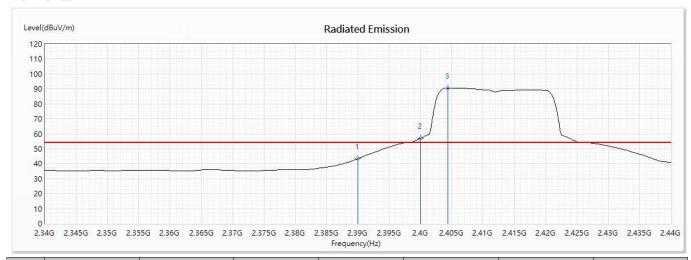
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Test Date : 2020/06/15

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2390	43.39	54.00	-10.61	30.52	12.87	AV
! 2	2400	57.04		-	44.08	12.96	AV
! 3	2404.348	90.58			77.60	12.98	AV

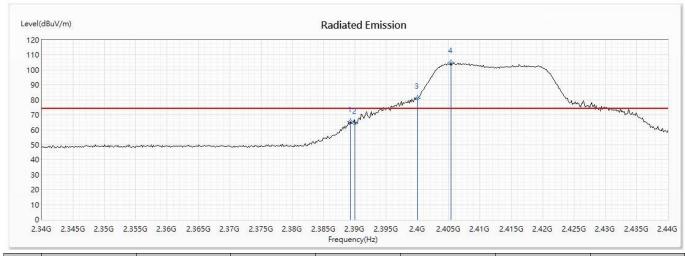
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Test Date : 2020/06/15

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2389.275	65.73	74.00	-8.27	52.86	12.87	PK
2	2390	64.12	74.00	-9.88	51.25	12.87	PK
! 3	2400	81.07			68.11	12.96	PK
! 4	2405.362	104.96			91.98	12.98	PK

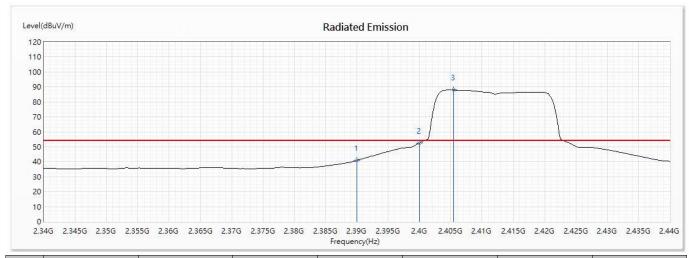
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Test Date : 2020/06/15

## Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2390	40.82	54.00	-13.18	27.95	12.87	AV
2	2400	52.47	-		39.51	12.96	AV
! 3	2405.507	87.89			74.90	12.99	AV

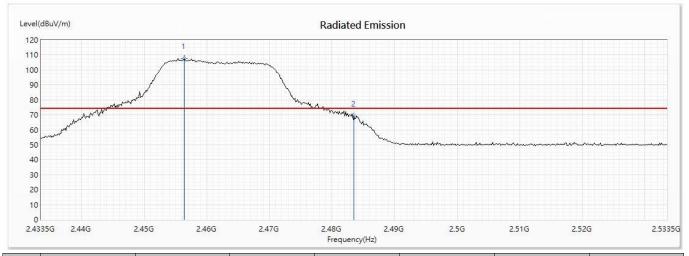
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Test Date : 2020/06/15

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
! 1	2456.399	107.86			94.59	13.27	PK
2	2483.5	69.06	74.00	-4.94	55.58	13.48	PK

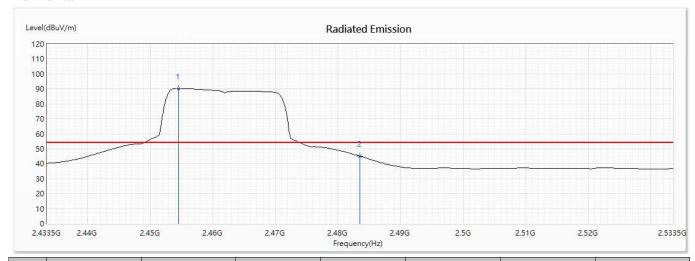
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Test Date : 2020/06/15

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
! 1	2454.514	90.21			76.95	13.26	AV
2	2483.5	45.03	54.00	-8.97	31.55	13.48	AV

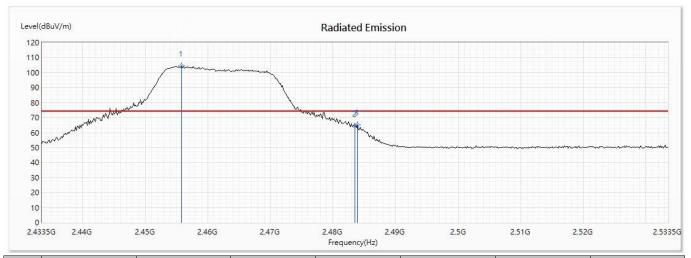
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Test Date : 2020/06/15

## Vertical



N	lo	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
		(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
			(dBuV/m)					
!	1	2455.819	104.33			91.06	13.27	PK
2	2	2483.5	64.40	74.00	-9.60	50.92	13.48	PK
3	3	2483.935	65.15	74.00	-8.85	51.67	13.48	PK

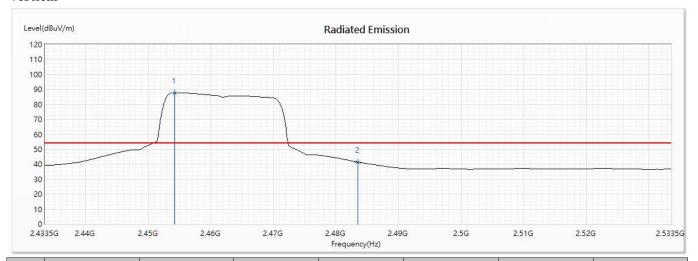
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Test Date : 2020/06/15

#### Vertical



	No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
		(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
			(dBuV/m)					
	! 1	2454.225	87.80			74.54	13.26	AV
Ī	2	2483.5	41.39	54.00	-12.61	27.91	13.48	AV

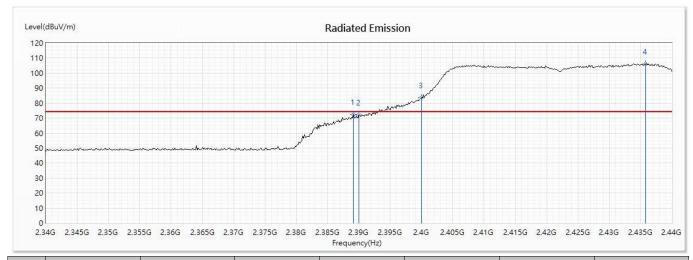
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

Test Date : 2020/06/15

## Horizontal



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2389.13	72.51	74.00	-1.49	59.64	12.87	PK
2	2390	72.20	74.00	-1.80	59.33	12.87	PK
! 3	2400	83.72			70.76	12.96	PK
! 4	2435.797	106.18			93.04	13.14	PK

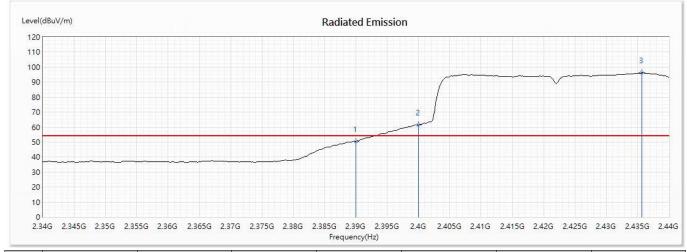
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

Test Date : 2020/06/15

## Horizontal



No	Frequency (MHz)	Emission Level	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
		(dBuV/m)					
1	2390	50.39	54.00	-3.61	37.52	12.87	AV
! 2	2400	61.63			48.67	12.96	AV
! 3	2435.652	96.11			82.97	13.14	AV

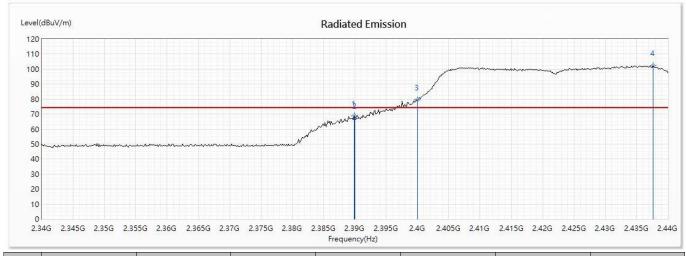
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

Test Date : 2020/06/15

## Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2389.855	68.61	74.00	-5.39	55.74	12.87	PK
2	2390	67.27	74.00	-6.73	54.40	12.87	PK
! 3	2400	79.32		-	66.36	12.96	PK
! 4	2437.681	102.31			89.15	13.16	PK

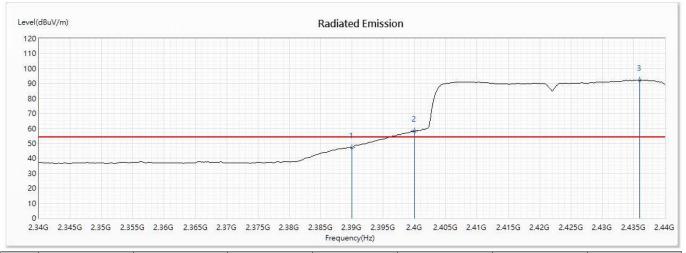
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

Test Date : 2020/06/15

#### Vertical



No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
	(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
		(dBuV/m)					
1	2390	47.19	54.00	-6.81	34.32	12.87	AV
! 2	2400	58.14	-	-	45.18	12.96	AV
! 3	2435.942	92.22			79.08	13.14	AV

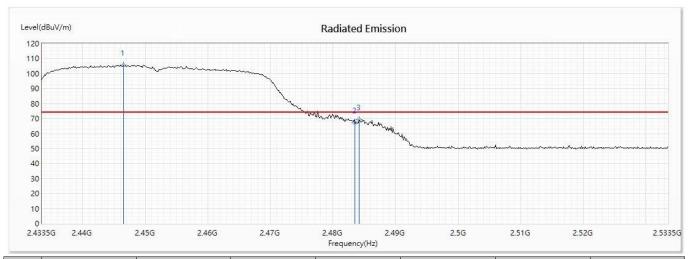
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.



Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452MHz)

Test Date : 2020/06/15

#### **Horizontal**



ı	No	Frequency	Emission	Limit	Margin	Reading Level	Correct Factor	Detector
ı		(MHz)	Level	(dBuV/m)	(dB)	(dBuV)	(dB/m)	Type
			(dBuV/m)					
	! 1	2446.543	105.69			92.48	13.21	PK
	2	2483.5	67.16	74.00	-6.84	53.68	13.48	PK
	3	2484.225	69.12	74.00	-4.88	55.63	13.49	PK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Emission Level = Reading Level + Correct Factor.