

<b>Prüfbericht-Nr.:</b> <i>Test report no.:</i>	CN22J0TN(P15C-WiFi) 001	<b>Auftrags-Nr.:</b> <i>Order no.:</i>	238542284	Seite 1 von 24 Page 1 of 24
<b>Kunden-Referenz-Nr.:</b> <i>Client reference no.:</i>	N/A	<b>Auftragsdatum:</b> <i>Order date:</i>	2022-04-14	
<b>Auftraggeber:</b> <i>Client:</i>	Microchip Technology Inc. 2355 West Chandler Blvd. Chandler, Arizona 85224-6199, United States.			
<b>Prüfgegenstand:</b> <i>Test item:</i>	IEEE 802.11 b/g/n Network Controller Module with Integrated Bluetooth Low Energy 4.0			
<b>Bezeichnung / Typ-Nr.:</b> <i>Identification / Type no.:</i>	ATWINC3400-MR210CA			
<b>Auftrags-Inhalt:</b> <i>Order content:</i>	FCC Part 15C Test report (BLE)			
<b>Prüfgrundlage:</b> <i>Test specification:</i>	FCC 47CFR Part 15: Subpart C Section 15.247			
<b>Wareneingangsdatum:</b> <i>Date of sample receipt:</i>	2022-03-29			
<b>Prüfmuster-Nr.:</b> <i>Test sample no.:</i>	A003234841-004 A003234841-005			
<b>Prüfzeitraum:</b> <i>Testing period:</i>	2022-04-28 - 2022-05-07			
<b>Ort der Prüfung:</b> <i>Place of testing:</i>	EMC/RF Taipei Testing Site			
<b>Prüflaboratorium:</b> <i>Testing laboratory:</i>	Taipei Testing Laboratories			
<b>Prüfergebnis*:</b> <i>Test result*:</i>	Pass			
<b>zusammengestellt von:</b> <i>compiled by:</i>		<b>genehmigt von:</b> <i>authorized by:</i>		
<b>Datum:</b> <i>Date:</i>	2022-09-05	<b>Ausstellungsdatum:</b> <i>Issue date:</i>	2022-09-05	
<b>Stellung / Position:</b>	Senior Project Manager	<b>Stellung / Position:</b>	Senior Project Manager	
<b>Sonstiges / Other:</b>	This is only evaluated and verified the output power and RSE tests for the 2 <sup>nd</sup> source crystal and 2 <sup>nd</sup> source inductors change. The other test results are referred to report no. D50616R1.			
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend N/A = nicht anwendbar	4 = ausreichend N/T = nicht getestet
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory N/A = not applicable	4 = sufficient N/T = not tested
<b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b> <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

## TEST SUMMARY

Report Section	FCC Clause	Test Item	Result
5.1.1	15.247(b) & 15.203	Antenna Requirement	Pass
5.1.2	15.247(b)(3)	Peak Output Power	Pass
-	15.247(a)(2)	6 dB Bandwidth	Refer to report no. D50616R1
-	2.1049	99% Occupied Bandwidth	
-	15.247(e)	Power Spectral Density	
-	15.247(d)	Conducted Spurious Emissions and Band Edges	
5.1.3	15.247(d) & 15.205 & 15.209	Radiated Spurious Emissions and Band Edges	Pass
5.2.1	15.207	Mains Conducted Emission	Pass

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

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**APPENDIX A - TEST RESULT OF RADIATED EMISSIONS & MAINS CONDUCTED EMISSION**

**APPENDIX SP - PHOTOGRAPHS OF TEST SETUP**

**APPENDIX EP - PHOTOGRAPHS OF EUT**

## HISTORY OF THIS TEST REPORT

Revision	Description	Date Issued
00	Original Release	2022-06-07
01	Removed the note from page 9 and added the 2 <sup>nd</sup> source information in page 1.	2022-09-05

## 1. General Remarks

### 1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

**Appendix A - Test Result of Radiated Emissions & Mains Conducted Emission**

**Appendix SP - Photographs of Test Setup**

**Appendix EP - Photographs of EUT**

### Applied Standard and Test Levels

Radio
FCC 47CFR Part 15: Subpart C Section 15.247
FCC 47CFR Part 2: Subpart J Section 2.1049
ANSI C63.10:2013
KDB 558074 D01 15.247 Meas Guidance v05r02

### 1.2 Decision Rule of Conformity

The decision rule of conformity of this test report is following the requirements of the requested standard in the quotation, and agreed among testing laboratory and manufacturer (applicant) to exclude the consideration of Measurement Uncertainty, unless it is required by the specific standard.

## 2. Test Sites

### 2.1 Test Laboratory

Taipei Testing Laboratories

11F. No.758, Sec. 4, Bade Rd., Songshan Dist.  
Taipei City 105  
Taiwan (R.O.C.)

### 2.2 Test Facility

Taipei Testing Laboratories

No.458-18, Sec. 2, Fenliao Rd., Linkou Dist.,  
New Taipei City 244  
Taiwan (R.O.C.)  
FCC Registration No.: 226631  
ISED Registration No.: 25563

## 2.3 Traceability

All measurement equipment calibrations are traceable to NML(Taiwan)/NIST(USA) or where calibration is performed outside Taiwan, to equivalent nationally recognized standards organizations.

## 2.4 Calibration

Equipment requiring calibration is calibrated periodically in a suitably accredited Calibration Lab. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

## 2.5 Measurement Uncertainty

All measurement uncertainty values are shown with a coverage factor of  $k=2$  to indicate a 95% level of confidence.

### Emission Measurement Uncertainty

Parameter	Uncertainty
Radiated Emission (9 kHz ~ 30 MHz)	$\pm 1.15$ dB
Radiated Emission (30 MHz ~ 200 MHz)	$\pm 1.30$ dB
Radiated Emission (200 MHz ~ 1 GHz)	$\pm 1.30$ dB
Radiated Emission (1 GHz ~ 18 GHz)	$\pm 1.54$ dB
Radiated Emission (18 GHz ~ 40 GHz)	$\pm 2.52$ dB
Mains Conducted Emission	$\pm 1.65$ dB

### 3. General Product Information

#### 3.1 Product Function and Intended Use

The EUT is an IEEE 802.11 b/g/n Network Controller Module with Integrated Bluetooth Low Energy 4.0. It contains a WLAN compatible module enabling the user to communicate data through a Wireless interface.

For details refer to the User Guide, Data Sheet and Circuit Diagram.

#### 3.2 System Details and Ratings

##### Basic Information of EUT

Item	EUT information
Kind of Equipment/Test Item	IEEE 802.11 b/g/n Network Controller Module with Integrated Bluetooth Low Energy 4.0
Type Identification	ATWINC3400-MR210CA
FCC ID	2ADHKWINC3400

##### Technical Specification of EUT

Item	EUT information
Operating Frequency	2412 MHz ~ 2462 MHz
Channel Spacing	5 MHz
Channel Number	802.11b/g/n HT20: 11 802.11n HT40: 7
Data Rate	802.11b: 11.0 / 5.5 / 2.0 / 1.0 Mbps 802.11g: 54.0 / 48.0 / 36.0 / 24.0 / 18.0 / 12.0 / 9.0 / 6.0 Mbps 802.11n: up to MCS7
Operation Voltage	3.0Vdc~4.2Vdc, Typical = 3.3Vdc (Tested in 5Vdc(USB))
Modulation	802.11b: DSSS 802.11g/n: OFDM with BPSK, QPSK, QAM
Maximum Output Power (mW)	802.11b: 122.18 802.11g: 198.15 802.11n HT20: 211.84
Antenna Information	Refer to 5.1.1
Accessory Device	Refer to 4.4



### **3.3 Noise Generating and Noise Suppressing Parts**

Refer to the Circuit Diagram.

### **3.4 Submitted Documents**

- Circuit Diagram
- Instruction Manual
- Rating Label
- Technical Description

## 4. Test Set-up and Operation Modes

### 4.1 Principle of Configuration Selection

The test modes were adapted accordingly in reference to the instructions for use.

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output expected by the customer and is going to be fixed on the firmware of the final end product.

#### Table for Parameters of Test Software Setting

802.11b		802.11g		802.11n HT20	
Channel	Power Setting	Channel	Power Setting	Channel	Power Setting
1	15/18/-10	1	15/18/-9	1	15/18/-9
6	15/18/-10	6	15/18/-9	6	15/18/-8
11	15/18/-10	11	15/18/-9	11	15/18/-9

### 4.2 Carrier Frequency and Channel

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

### 4.3 Test Operation and Test Software

Setup for testing: Test samples are provided with a USB interface which makes it possible to control them through a test software installed on a notebook computer.

This software was running on the laptop computer connected to the EUT. It was used to enable the operation modes listed as below.

Test Software	MCHPRT2 V1.3
---------------	--------------

The samples were used as follows:

A003234841-004 for conducted test

A003234841-005 for radiated test

Full test was applied on all test modes, but only worst case was shown.

Modulation Mode	Tx Function
802.11b	1TX (SISO)
802.11g	1TX (SISO)
802.11n HT20	1TX (SISO)

EUT Configure Mode	Applicable To				Description
	Antenna Port Conducted Measurement	Radiated Spurious Emissions above 1 GHz	Radiated Spurious Emissions below 1 GHz	Mains Conducted Emission	
-	√	√	√	√	-

Note:

- The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when position on Z-plane.
- "-" means no effect.

#### Antenna Port Conducted Measurement

- Pre-Scan full test was applied on all test modes, but only worst case was shown.
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Date Rate (Mbps)
-	802.11b	1 to 11	1, 6, 11	1.0
-	802.11g	1 to 11	1, 6, 11	6.0
-	802.11n HT20	1 to 11	1, 6, 11	MCS0

#### Radiated Spurious Emissions (Above 1 GHz)

- Pre-Scan full test was applied on all test modes, but only worst case was shown.
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Date Rate (Mbps)
-	802.11b	1 to 11	1, 6, 11	1.0
-	802.11g	1 to 11	1, 6, 11	6.0
-	802.11n HT20	1 to 11	1, 6, 11	MCS0

**Radiated Spurious Emissions (Below 1 GHz)**

- Pre-Scan full test was applied on all test modes, but only worst case was shown.
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Date Rate (Mbps)
-	802.11b	1 to 11	6	1.0

**Mains Conducted Emission**

- Pre-Scan full test was applied on all test modes, but only worst case was shown.
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Date Rate (Mbps)
-	802.11b	1 to 11	6	1.0

**Test Condition**

Test Item	Ambient Temperature	Relative Humidity	Tested by
Conducted Measurement	18-23 °C	50-65 %	xxx
Radiated Spurious Emissions above 1 GHz	23.3-24.1 °C	55-59 %	Chuan Chu
Radiated Spurious Emissions below 1 GHz	23.3-24.1 °C	55-59 %	Chuan Chu
Mains Conducted Emission	20.1-20.9 °C	53-57 %	Ray Huang

## 4.4 Special Accessories and Auxiliary Equipment

The product has been tested together with the following additional accessories:

### Accessory of EUT

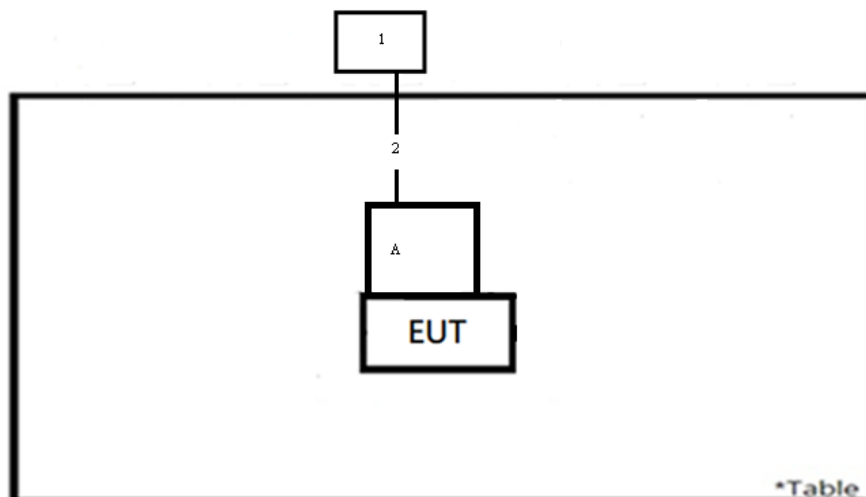
None.

### Support Unit

No.	Description	Brand	Model	S/N	Remark
Radiated Test					
A	Fixture01	Microchip	SAMD21	-	-
1	Notebook	Lenovo	81BL	MP1DCD6Y	-
2	Mirco USB Cable	TUV	TUV-01	-	200 cm non-shielded cable w/o core

## 4.5 Test Setup Diagram

<Radiated Spurious Emissions mode>



## 5. Test Results

### 5.1 Transmitter Requirement & Test Suites

#### 5.1.1 Antenna Requirement

**Requirement** Use of approved antennas only

According to the manufacturer declaration, the EUT has an antenna with a directional gain of 0.5 dBi. The antenna is a chip antenna with no possibility of replacement with a non-approved antenna by the end-user. Therefore, the EUT is considered to comply with this provision.

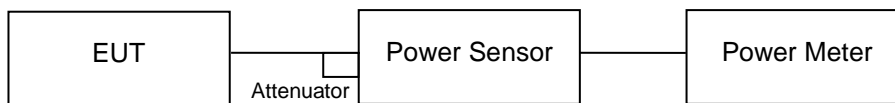
Refer to EUT photo for details.

### 5.1.2 Peak Output Power

**Limit** 1 watt (30 dBm)

**Kind of Test Site** Shielded room

**Test Setup**



**Test Instruments**

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date	Test Date	
						From	Until
Power Meter	Anritsu	ML2495A	1901008	2022/03/14	2023/03/13	2022/4/28	2022/4/29
Power Sensor	Anritsu	MA2411B	1725269	2022/03/14	2023/03/13	2022/4/28	2022/4/29

**Test Procedures**

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

**Test Result**
**Peak Output Power**
**<802.11b>**

Channel	Channel Frequency (MHz)	Peak Output Power		Limit (dBm)
		(dBm)	(mW)	
1	2412	20.87	122.18	30
6	2437	20.85	121.62	30
11	2462	20.68	116.95	30

**<802.11g>**

Channel	Channel Frequency (MHz)	Peak Output Power		Limit (dBm)
		(dBm)	(mW)	
1	2412	22.31	170.22	30
6	2437	22.97	198.15	30
11	2462	22.94	196.79	30

**<802.11n HT20>**

Channel	Channel Frequency (MHz)	Peak Output Power		Limit (dBm)
		(dBm)	(mW)	
1	2412	22.94	196.79	30
6	2437	23.26	211.84	30
11	2462	22.78	189.67	30



**Average Power****<802.11b>**

Channel	Channel Frequency (MHz)	Average Power	
		(dBm)	(mW)
1	2412	17.76	59.70
6	2437	17.69	58.75
11	2462	17.59	57.41

**<802.11g>**

Channel	Channel Frequency (MHz)	Average Power	
		(dBm)	(mW)
1	2412	15.41	34.75
6	2437	15.60	36.31
11	2462	15.52	35.65

**<802.11n HT20>**

Channel	Channel Frequency (MHz)	Average Power	
		(dBm)	(mW)
1	2412	15.41	34.75
6	2437	16.09	40.64
11	2462	15.33	34.12

### 5.1.3 Radiated Spurious Emissions and Band Edges

#### Limit

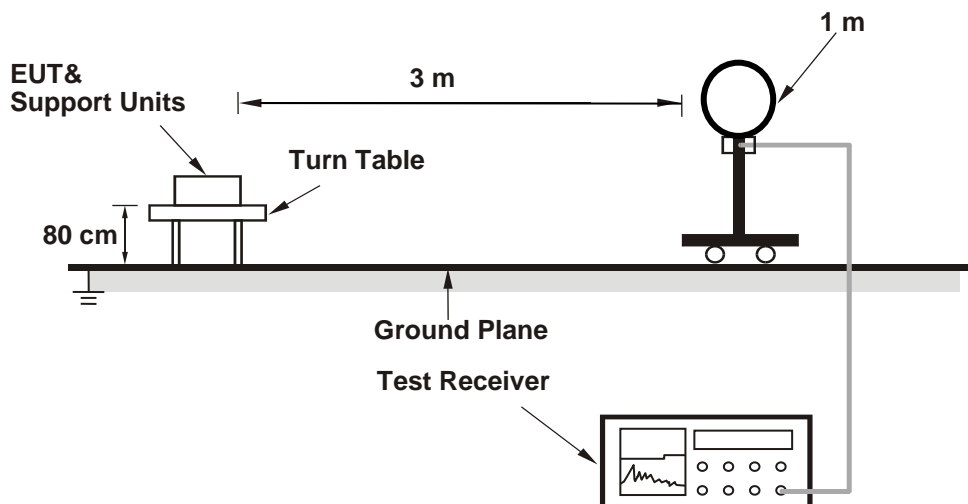
Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must comply with the radiated emission limits specified in §15.209(a).

Emissions radiated outside the restricted and authorized frequency bands must either comply with the radiated emission limits specified for the restricted bands or in §15.247(d).

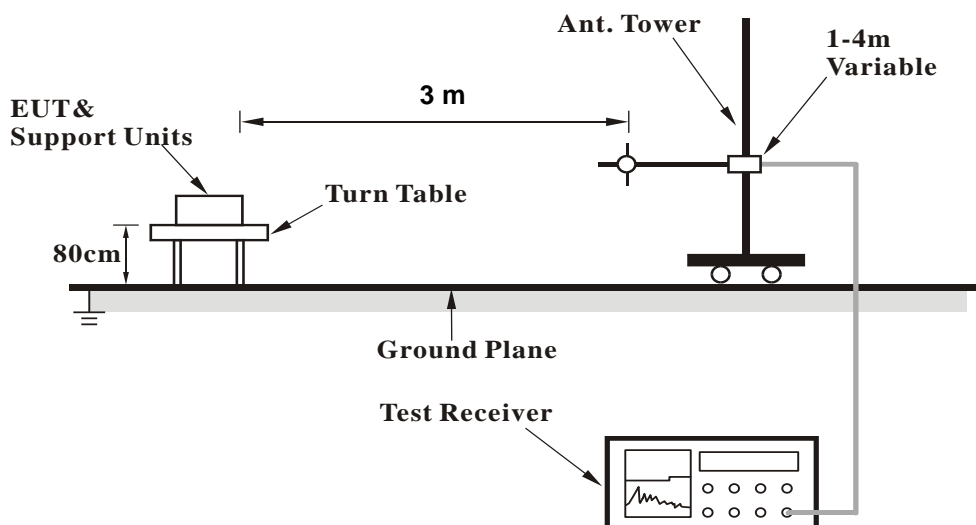
**Kind of Test Site**                      3m Semi-Anechoic Chamber

#### Test Setup

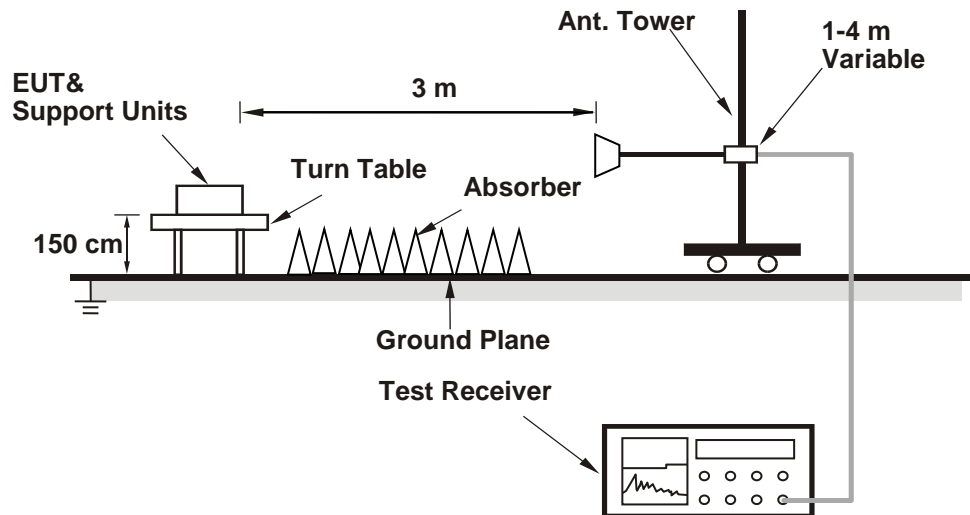
<Radiated Emissions below 30 MHz>



<Radiated Emissions 30 MHz to 1 GHz>



## &lt;Radiated Emissions above 1 GHz&gt;



For the actual test configuration, please refer to the attached file (Test Setup Photo).

**Test Instruments**

Below 30MHz: 2022/5/3

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date
Receiver	R&S	ESR7	102109	2022/2/25	2023/2/24
Microwave Cable	SUCOFLEX 104EA	800056/4EA	804680/4	2022/3/22	2023/3/21
Loop Antenna	SCHWARZBECK	FMZB 1519B	00215	2021/12/8	2022/12/7

30MHz-1GHz: 2022/5/3

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date
Receiver	R&S	ESR7	102109	2022/2/25	2023/2/24
Bilog Antenna	SCHWARZBECK	VULB-9168	00949	2021/5/30	2022/5/29
LF-AMP	Agilent	8447D	2727A05146	2022/2/16	2023/2/15

Above 1GHz: 2022/5/1 – 2022/5/2

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV40	101513	2021/5/28	2022/5/27
Horn Antenna	ETS-Lindgren	3117	00218929	2021/11/25	2022/11/24
HF-AMP + AC source	EMCI	EMC051845SE	980635	2022/1/20	2023/1/19
HF-AMP + AC source	EMCI	EMC184045SE	980656	2022/1/20	2023/1/19
Horn Antenna	SCHWARZBECK	BBHA 9170	00887	2022/3/29	2023/3/28

**Test Procedures****For Radiated Emissions below 30 MHz**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel (OPEN), perpendicular (CLOSE), and ground-parallel (GROUND) orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

## Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz at frequency below 30 MHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

**For Radiated Emissions above 30 MHz**

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

## Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98 %) or 10 Hz (Duty cycle  $\geq 98$  %) for Average detection (AV) at frequency above 1 GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.
5. The Radiated Emissions testing was performed in the X(E1), Y(H) and Z(E2) axis orientation. The worst-case Axis orientation is recorded in this test report.

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**Test Results**

Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)  
Level (dBuV/m) = Reading (dBuV) + Factor (dB/m)

Please refer to Appendix A.

## 5.2 Mains Emission

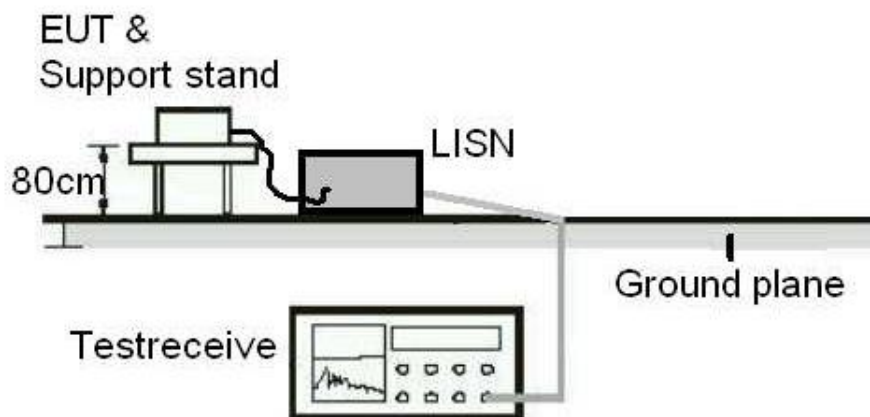
### 5.2.1 Mains Conducted Emission

#### Limit

Mains Conducted Emission as defined in §15.207 must comply with the mains conducted emission limits.

**Kind of Test Site**                      Shielded room

#### Test Setup



#### Test Instruments

Test Date: 2022/5/7

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date
Two-Line V-Network	Rohde & Schwarz	ENV216	101938	2021/9/23	2022/9/22
EMI Test Receiver	R&S	ESCI	1816063	2021/11/15	2022/11/14

#### **Test Procedures**

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/50 uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz – 30 MHz.

#### **Test Results**

Please refer to Appendix A.



# Appendix A: Test Results of Radiated Spurious Emissions & Mains Conducted Emission Test

## Band Edges, 2.31GHz ~ 2.9GHz

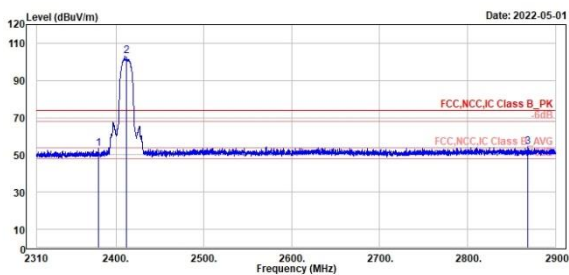
### 802.11b

#### Low Channel (Horizontal) Peak

#### Low Channel (Vertical) Peak



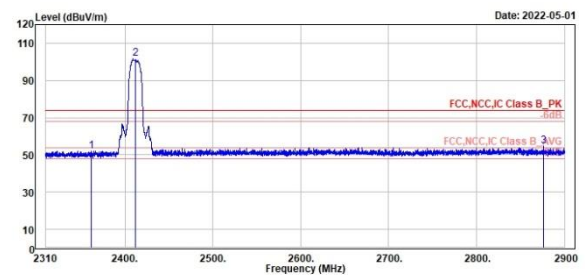
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1	2	3							
Freq	Level	Read	Limit	Over	Apos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
2388.21	53.26	15.73	37.53	74.00	-20.74	100	53 Peak	Horizontal	
2412.00	103.12	65.47	37.65	74.00	29.12	100	53 Peak	Horizontal	
2868.26	54.19	15.94	38.25	74.00	-19.81	100	53 Peak	Horizontal	



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1	2	3							
Freq	Level	Read	Limit	Over	Apos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
2362.16	52.09	14.65	37.44	74.00	-21.91	390	119 Peak	Vertical	
2412.00	101.59	63.94	37.65	74.00	27.59	390	119 Peak	Vertical	
2876.28	54.62	16.32	38.30	74.00	-19.38	390	119 Peak	Vertical	

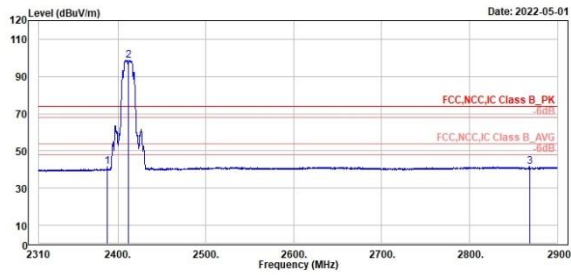
802.11b

Low Channel (Horizontal) Average

Low Channel (Vertical) Average



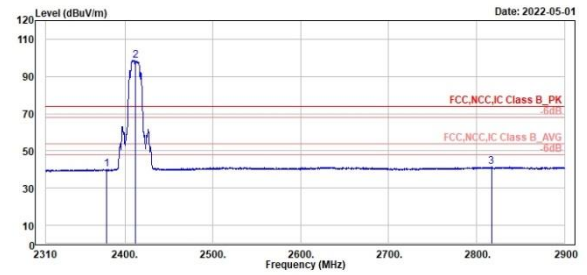
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2388.00	41.64	4.07	37.57	54.00	-12.36	100	53	Average	Horizontal	
2 *	2412.00	98.73	61.88	37.65	54.00	44.73	100	53	average	Horizontal	
3	2868.02	41.70	3.45	38.25	54.00	-12.30	100	53	Average	Horizontal	



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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2379.38	40.31	2.78	37.53	54.00	-13.69	390	119	Average	Vertical	
2 *	2412.00	98.60	60.95	37.65	54.00	44.60	390	119	Average	Vertical	
3	2816.81	41.43	3.24	38.19	54.00	-12.57	390	119	Average	Vertical	

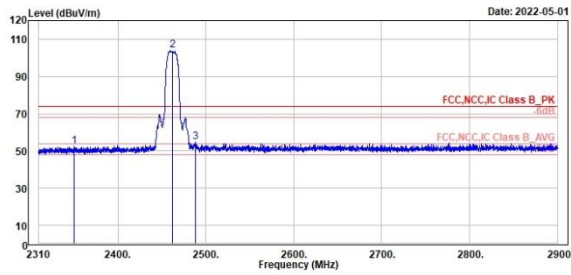
802.11b

High Channel (Horizontal) Peak

High Channel (Vertical) Peak



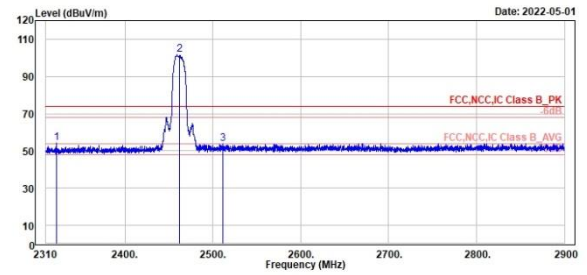
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2358.00	52.26	14.89	37.37	74.00	-21.74	120	54	Peak	Horizontal	
2 *	2462.00	103.85	66.12	37.73	74.00	29.85	120	54	Peak	Horizontal	
3	2488.06	54.59	16.77	37.82	74.00	-19.41	120	54	Peak	Horizontal	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2322.15	54.14	16.86	37.28	74.00	-19.86	336	68	Peak	Vertical	
2 *	2462.00	101.63	63.99	37.73	74.00	27.63	336	68	Peak	Vertical	
3	2511.66	54.06	16.20	37.86	74.00	-19.94	336	68	Peak	Vertical	

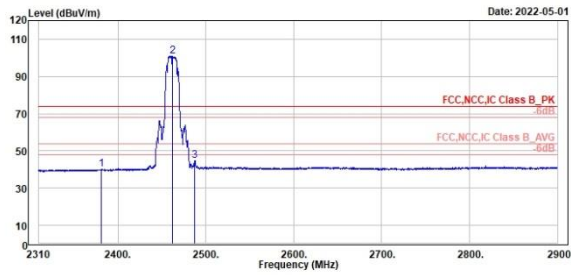
802.11b

High Channel (Horizontal) Average

High Channel (Vertical) Average



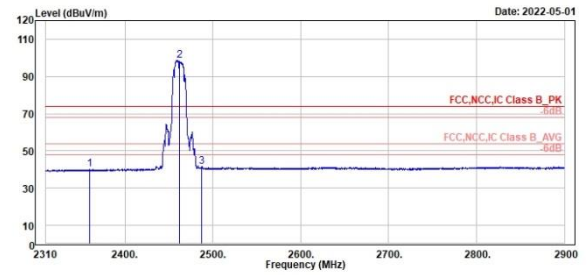
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2381.15	40.09	2.56	37.53	54.00	-13.91	120	54	Average	Horizontal	
2 *	2462.00	100.85	63.12	37.73	54.00	46.85	120	54	Average	Horizontal	
3	2487.71	44.59	6.77	37.82	54.00	-9.41	120	54	Average	Horizontal	



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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2359.68	40.02	2.60	37.42	54.00	-13.98	336	68	Average	Vertical	
2 *	2462.00	98.68	60.95	37.73	54.00	44.68	336	68	Average	Vertical	
3	2487.59	41.54	3.72	37.82	54.00	-12.46	336	68	Average	Vertical	

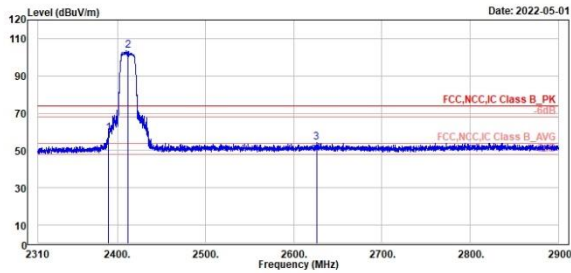
802.11g

Low Channel (Horizontal) Peak

Low Channel (Vertical) Peak



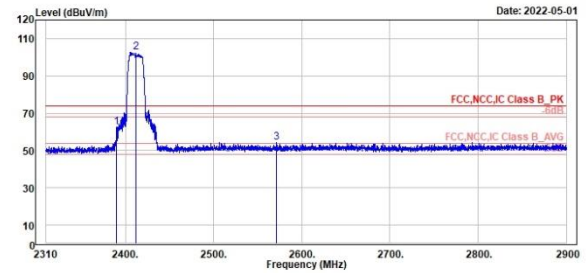
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2398.00	59.34	21.76	37.58	74.00	-14.66	100	54 Peak	Horizontal
2 *	2412.00	103.77	66.12	37.65	74.00	29.77	100	54 Peak	Horizontal
3	2625.77	54.18	16.18	38.00	74.00	-19.82	100	54 Peak	Horizontal



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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2398.00	62.71	25.13	37.58	74.00	-11.29	398	121 Peak	Vertical
2 *	2412.00	102.82	65.17	37.65	74.00	28.82	398	121 Peak	Vertical
3	2578.90	54.15	16.22	37.93	74.00	-19.85	398	121 Peak	Vertical

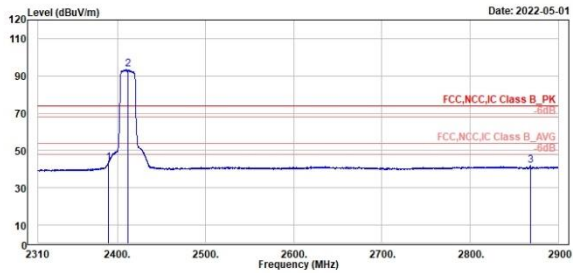
802.11g

Low Channel (Horizontal) Average

Low Channel (Vertical) Average



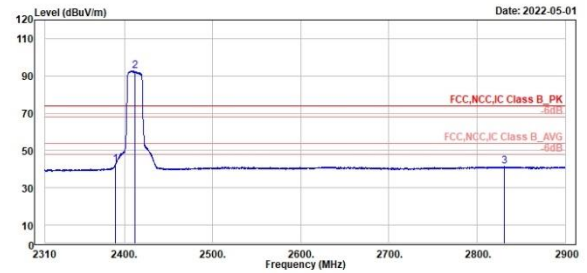
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1	2	3								
Level	Level	Level								
Factor	Factor	Factor								
Limit	Limit	Limit								
Over	Over	Over								
Line	Line	Line								
Limit	Limit	Limit								
Apos	Apos	Apos								
Tpos	Tpos	Tpos								
Remark	Remark	Remark								
Pol/Phase	Pol/Phase	Pol/Phase								
Note	Note	Note								
2389.77	43.37	5.79	37.58	54.00	-18.63	100	54	Average	Horizontal	
2412.00	93.36	55.71	37.65	54.00	39.36	100	54	Average	Horizontal	
2868.14	42.17	3.92	38.25	54.00	-11.83	100	54	Average	Horizontal	



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1	2	3								
Level	Level	Level								
Factor	Factor	Factor								
Limit	Limit	Limit								
Over	Over	Over								
Line	Line	Line								
Limit	Limit	Limit								
Apos	Apos	Apos								
Tpos	Tpos	Tpos								
Remark	Remark	Remark								
Pol/Phase	Pol/Phase	Pol/Phase								
Note	Note	Note								
2390.00	42.41	4.83	37.58	54.00	-11.59	390	121	Average	Vertical	
2412.00	92.67	55.02	37.65	54.00	38.67	390	121	Average	Vertical	
2830.50	41.46	3.28	38.18	54.00	-12.54	390	121	Average	Vertical	

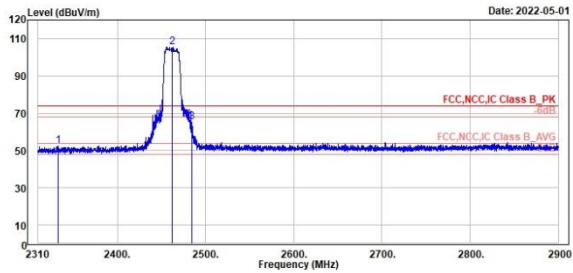
802.11g

High Channel (Horizontal) Peak

High Channel (Vertical) Peak



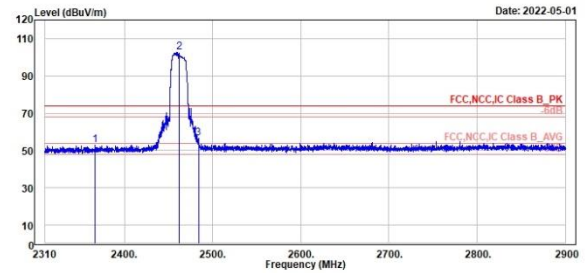
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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2333.36	52.67	15.35	37.32	74.00	-21.33	122		54 Peak	Horizontal	
2 *	2462.00	105.40	67.67	37.73	74.00	31.40	122		54 Peak	Horizontal	
3	2484.88	65.34	27.54	37.80	74.00	-8.66	122		54 Peak	Horizontal	



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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2366.52	52.83	15.37	37.46	74.00	-21.17	378		64 Peak	Vertical	
2 *	2462.00	102.87	65.14	37.73	74.00	28.87	378		64 Peak	Vertical	
3	2483.93	56.61	18.81	37.80	74.00	-17.39	378		64 Peak	Vertical	

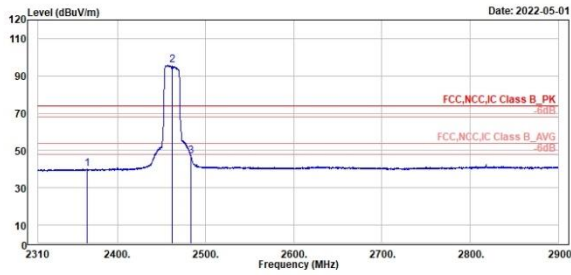
802.11g

High Channel (Horizontal) Average

High Channel (Vertical) Average



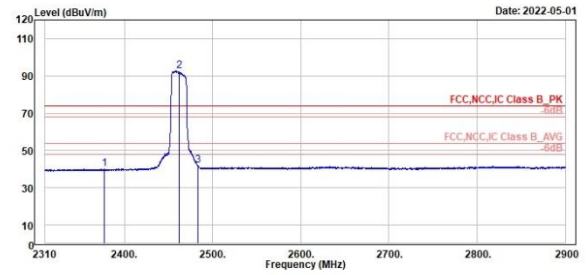
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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2365.46	40.15	2.70	37.45	54.00	-13.85	122	54 Average	Horizontal	
2 *	2462.00	95.66	57.93	37.73	54.00	41.66	122	54 Average	Horizontal	
3	2483.46	47.13	9.33	37.80	54.00	-6.87	122	54 Average	Horizontal	



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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2377.50	39.99	2.47	37.52	54.00	-14.01	378	64 Average	Vertical	
2 *	2462.00	92.57	54.84	37.73	54.00	38.57	378	64 Average	Vertical	
3	2483.81	41.77	3.97	37.80	54.00	-12.23	378	64 Average	Vertical	



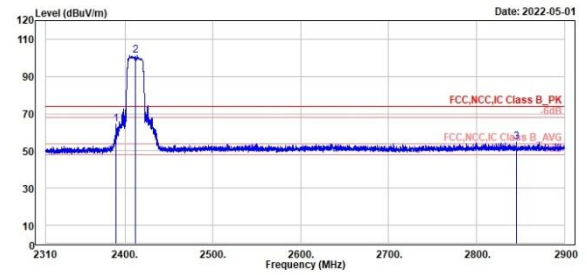
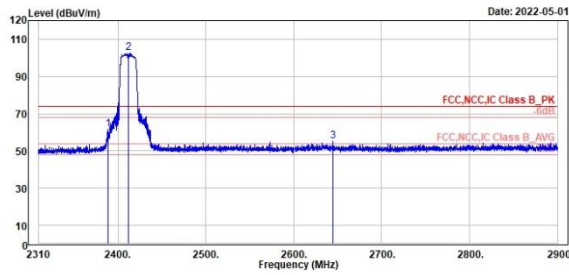
802.11n HT20

Low Channel (Horizontal) Peak

Low Channel (Vertical) Peak

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Peak	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2389.38	61.78	24.20	37.58	74.00	-12.22	100	54	Peak	Horizontal		
2 *	2412.00	102.54	64.89	37.65	74.00	28.54	100	54	Peak	Horizontal		
3	2644.88	55.35	17.33	38.02	74.00	-18.65	100	54	Peak	Horizontal		

Peak	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2390.00	64.28	26.70	37.58	74.00	-9.72	388	121	Peak	Vertical		
2 *	2412.00	101.18	63.53	37.65	74.00	27.18	388	121	Peak	Vertical		
3	2845.25	54.53	16.36	38.17	74.00	-19.47	388	121	Peak	Vertical		

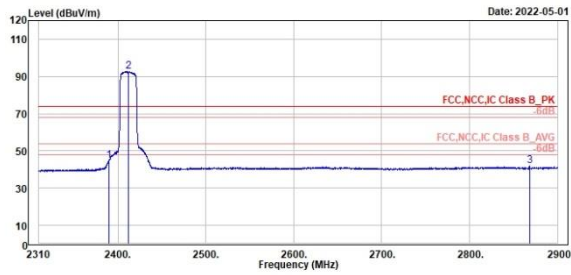
802.11n HT20

Low Channel (Horizontal) Average

Low Channel (Vertical) Average



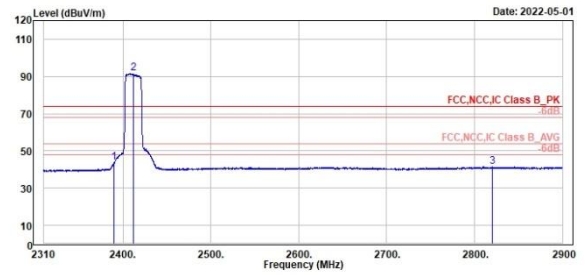
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2389.89	44.57	6.99	37.58	54.00	-9.43	100	54 Average	Horizontal
2 *	2412.00	92.69	55.04	37.65	54.00	38.69	100	54 Average	Horizontal
3	2868.02	42.04	3.79	38.25	54.00	-11.96	100	54 Average	Horizontal



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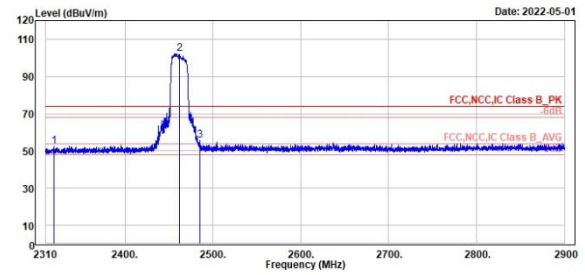
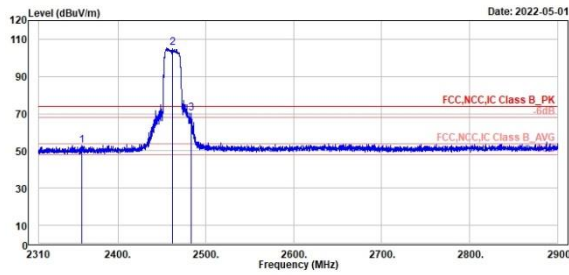


Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2390.00	43.87	6.29	37.58	54.00	-10.13	388	121 Average	Vertical
2 *	2412.00	91.50	53.05	37.65	54.00	37.50	388	121 Average	Vertical
3	2819.88	41.36	3.17	38.19	54.00	-12.64	388	121 Average	Vertical

802.11n HT20

High Channel (Horizontal) Peak

High Channel (Vertical) Peak



Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2359.44	53.00	15.58	37.42	74.00	-21.00	122	54	Peak	Horizontal	
2 *	2462.00	105.21	67.48	37.73	74.00	31.21	122	54	Peak	Horizontal	
3 †	2483.81	70.23	32.43	37.80	74.00	-3.77	122	54	Peak	Horizontal	

Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2319.79	52.59	15.31	37.28	74.00	-21.41	379	64	Peak	Vertical	
2 *	2462.00	102.18	64.45	37.73	74.00	28.18	379	64	Peak	Vertical	
3	2485.35	55.63	17.83	37.80	74.00	-18.37	379	64	Peak	Vertical	

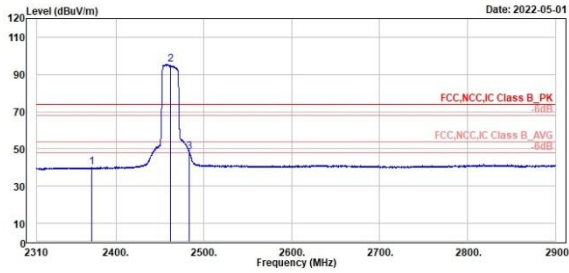
802.11n HT20

High Channel (Horizontal) Average

High Channel (Vertical) Average



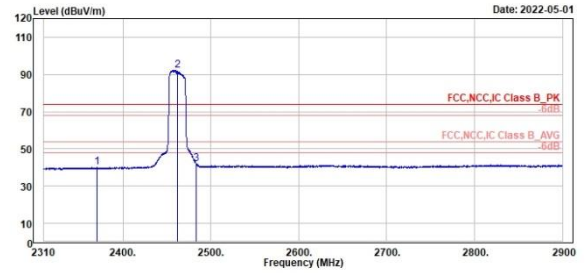
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2372.89	48.05	2.56	37.49	54.00	-13.95	122	54	Average	Horizontal	
2 *	2462.00	95.25	57.52	37.73	54.00	41.25	122	54	Average	Horizontal	
3 !	2483.46	48.35	10.55	37.80	54.00	-5.65	122	54	Average	Horizontal	



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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2371.01	39.96	2.48	37.48	54.00	-14.04	379	64	Average	Vertical	
2 *	2462.00	92.26	54.53	37.73	54.00	38.26	379	64	Average	Vertical	
3	2483.58	42.08	4.28	37.80	54.00	-11.92	379	64	Average	Vertical	

Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

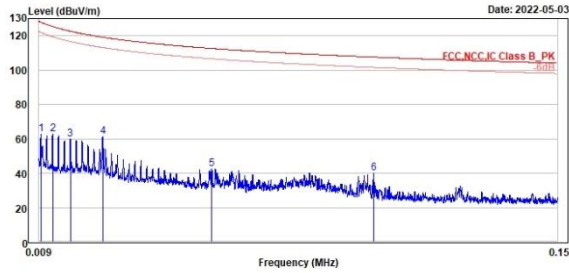
802.11b

Low Channel 9kHz~150kHz(Open)

Low Channel 150kHz~30MHz(Open)



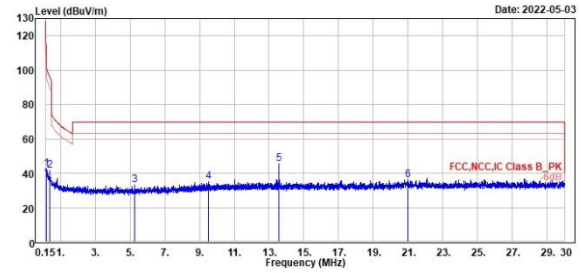
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Freq	Level	Read	Limit	Over	Apos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.01	62.59	44.76	17.83	127.95	-65.36	100	130 QP	Close
2	0.01	62.71	44.75	17.96	125.45	-62.74	100	144 QP	Close
3	0.02	59.72	41.33	18.39	122.68	-62.96	100	144 QP	Close
4	0.03	61.53	42.35	19.18	119.16	-57.63	100	124 QP	Close
5	0.06	42.71	23.53	19.18	112.62	-69.91	100	138 QP	Close
6	0.10	40.05	21.03	18.22	107.59	-67.54	100	156 QP	Close



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Freq	Level	Read	Limit	Over	Apos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.17	42.47	24.00	18.47	102.94	-60.47	100	104 QP	Close
2	0.39	41.40	22.45	18.95	95.88	-54.48	100	209 QP	Close
3	5.27	33.18	13.70	19.48	69.50	-36.32	100	312 QP	Close
4	9.52	35.12	13.85	21.27	69.50	-34.38	100	267 QP	Close
5	13.56	45.54	23.79	21.75	69.50	-23.96	100	77 QP	Close
6	20.96	36.03	13.79	22.24	69.50	-33.47	100	108 QP	Close

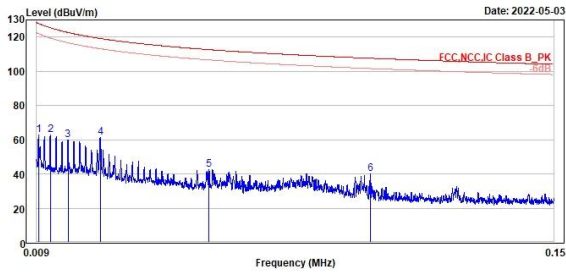
802.11b

Low Channel 9kHz~150kHz(Close)

Low Channel 150kHz~30MHz(Close)



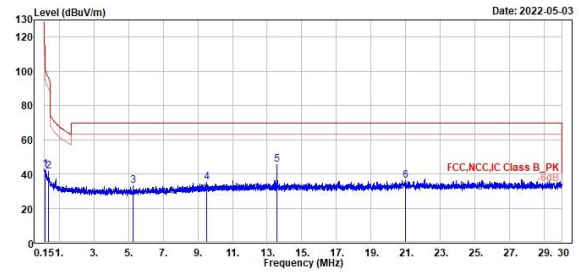
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Freq	Level	Read	Limit	Over	Apos	Tpos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.01	62.59	44.76	17.83	127.95	-65.36	100	130 QP	Close
2	0.01	62.71	44.75	17.96	125.45	-62.74	100	144 QP	Close
3	0.02	59.72	41.33	18.39	122.68	-62.96	100	144 QP	Close
4	0.03	61.53	42.35	19.18	119.16	-57.63	100	124 QP	Close
5	0.06	42.71	23.53	19.18	112.62	-69.91	100	138 QP	Close
6	0.10	40.05	21.83	18.22	107.59	-67.54	100	156 QP	Close

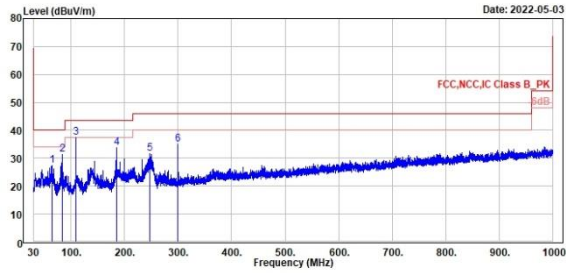


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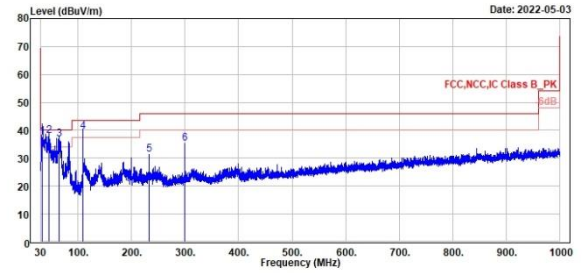


Freq	Level	Read	Limit	Over	Apos	Tpos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.17	42.47	24.00	18.47	102.94	-60.47	100	104 QP	Close
2	0.39	41.40	22.45	18.95	95.88	-54.48	100	209 QP	Close
3	5.27	33.18	13.70	19.48	69.50	-36.32	100	312 QP	Close
4	9.52	35.12	13.85	21.27	69.50	-34.38	100	267 QP	Close
5	13.56	45.54	23.79	21.75	69.50	-23.96	100	77 QP	Close
6	20.96	36.03	13.79	22.24	69.50	-33.47	100	108 QP	Close

**Spurious Emissions, Tx Mode, 30MHz ~ 1GHz**
**802.11b**
**Low Channel (Horizontal)**
**Low Channel (Vertical)**

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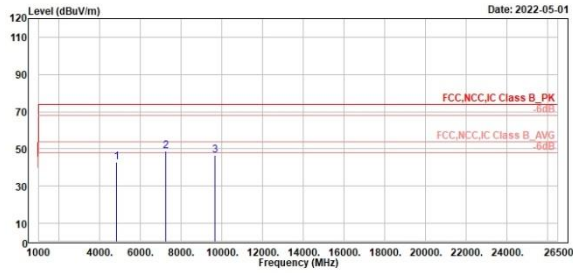
1	2	3	4	5	6				
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
64.63	27.47	35.33	-7.86	40.00	-12.53	300	79 QP	Horizontal	
83.93	31.39	42.74	-11.35	40.00	-8.61	200	235 QP	Horizontal	
108.47	37.29	47.02	-9.73	43.50	-6.21	100	111 QP	Horizontal	
184.52	33.77	41.73	-7.96	43.50	-9.73	100	72 QP	Horizontal	
246.70	31.61	38.23	-6.62	46.00	-14.39	200	178 QP	Horizontal	
298.98	34.98	39.72	-4.74	46.00	-11.02	300	10 QP	Horizontal	


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1	2	3	4	5	6				
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
33.59	37.06	45.20	-7.34	40.00	-2.14	100	174 QP	Vertical	
45.33	37.94	43.94	-6.00	40.00	-2.06	100	174 QP	Vertical	
64.63	36.69	44.55	-7.86	40.00	-3.31	100	145 QP	Vertical	
108.47	39.54	49.27	-9.73	43.50	-3.96	100	185 QP	Vertical	
232.54	31.41	38.42	-7.01	46.00	-14.59	100	82 QP	Vertical	
298.98	35.32	40.06	-4.74	46.00	-10.68	100	1 QP	Vertical	

**Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz**
**802.11b**
**Low Channel (Horizontal)**
**Low Channel (Vertical)**

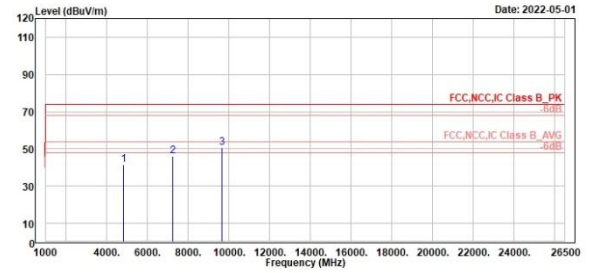

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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	4824.00	42.74	52.55	-9.81	74.00	-31.26	180	359 Peak	Horizontal
2	7236.00	49.04	56.37	-7.33	74.00	-24.96	180	256 Peak	Horizontal
3	9648.00	46.45	51.33	-4.88	74.00	-27.55	400	147 Peak	Horizontal



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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	4824.00	41.47	51.28	-9.81	74.00	-32.53	272	1 Peak	Vertical
2	7236.00	46.18	53.51	-7.33	74.00	-27.82	400	215 Peak	Vertical
3	9648.00	50.83	55.71	-4.88	74.00	-23.17	300	279 Peak	Vertical



802.11b

Middle Channel (Horizontal)

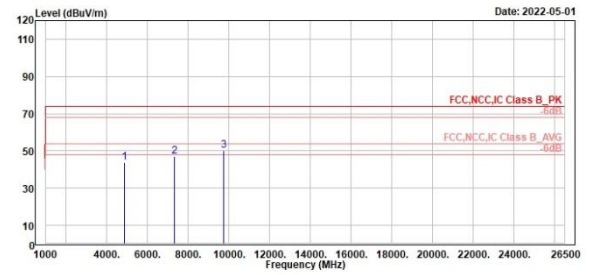
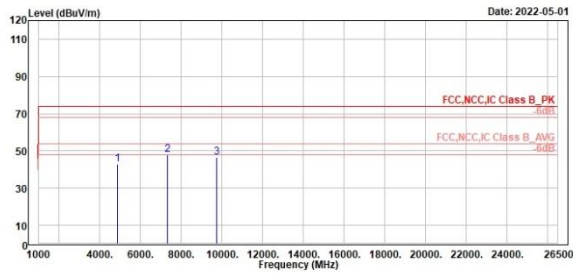
Middle Channel (Vertical)



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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4874.00	43.05	52.82	-9.77	74.00	-30.95	300	251	Peak	Horizontal	
2	7311.00	47.96	55.47	-7.51	74.00	-26.04	100	254	Peak	Horizontal	
3	9748.00	46.43	51.14	-4.71	74.00	-27.57	400	203	Peak	Horizontal	

Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4874.00	43.72	53.49	-9.77	74.00	-30.28	300	347	Peak	Vertical	
2	7311.00	46.90	54.41	-7.51	74.00	-27.10	300	216	Peak	Vertical	
3	9748.00	50.38	55.09	-4.71	74.00	-23.62	100	279	Peak	Vertical	

802.11b

High Channel (Horizontal)

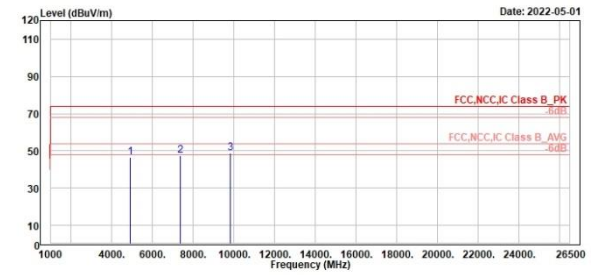
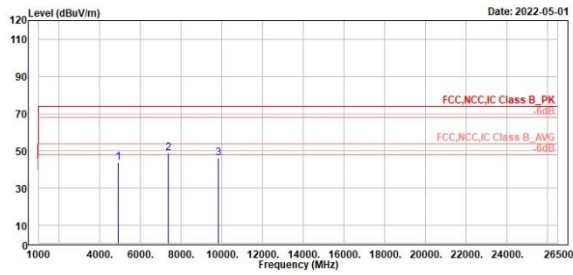
High Channel (Vertical)



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1	2	3
Peak	Peak	Peak
4924.00	7386.00	9848.00
43.66	48.79	45.93
53.34	56.22	50.47
-9.68	-7.43	-4.54
74.00	74.00	74.00
-30.34	-25.21	-28.07
490	190	300
246	111	251
Peak	Peak	Peak
Horizontal	Horizontal	Horizontal

1	2	3
Peak	Peak	Peak
4924.00	7386.00	9848.00
46.47	47.23	48.97
56.15	54.66	53.51
-9.68	-7.43	-4.54
74.00	74.00	74.00
-27.53	-26.77	-25.03
278	400	200
331	223	272
Peak	Peak	Peak
Vertical	Vertical	Vertical

802.11g

Low Channel (Horizontal)

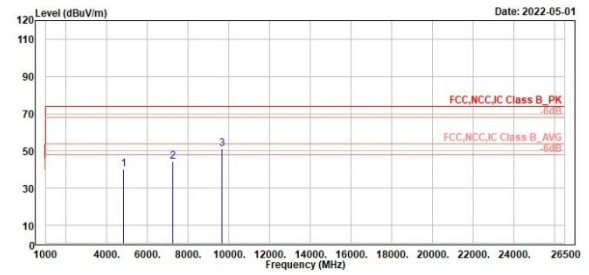
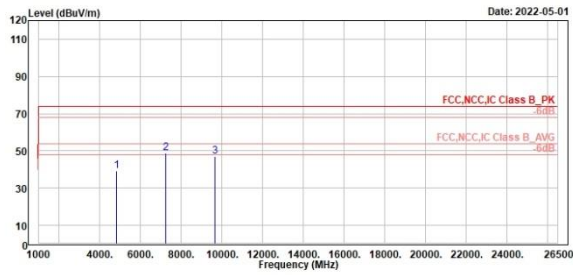
Low Channel (Vertical)



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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4824.00	39.15	48.96	-9.81	74.00	-34.85	149	368 Peak	Horizontal	
2	7236.00	48.72	56.05	-7.33	74.00	-25.28	180	96 Peak	Horizontal	
3	9648.00	47.01	51.89	-4.88	74.00	-26.99	400	146 Peak	Horizontal	

Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4824.00	40.14	49.95	-9.81	74.00	-33.86	180	146 Peak	Vertical	
2	7236.00	44.32	51.65	-7.33	74.00	-29.68	300	91 Peak	Vertical	
3	9648.00	51.15	56.03	-4.88	74.00	-22.85	180	281 Peak	Vertical	

802.11g

Middle Channel (Horizontal)

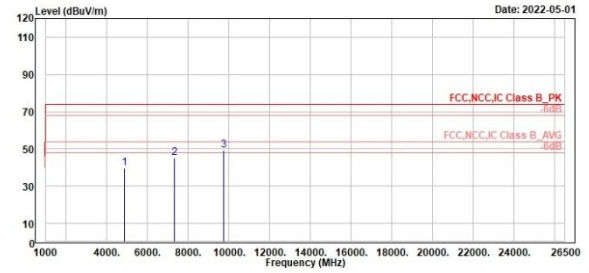
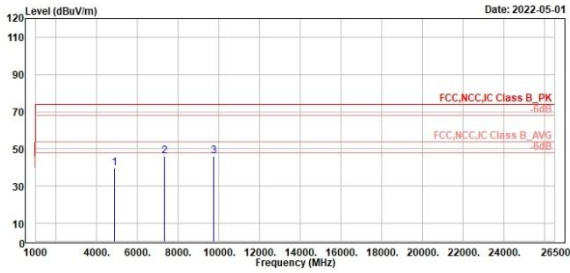
Middle Channel (Vertical)



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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4874.00	39.48	49.25	-9.77	74.00	-34.52	180	275 Peak	Horizontal	
2	7311.00	45.96	53.47	-7.51	74.00	-28.04	180	58 Peak	Horizontal	
3	9748.00	46.22	58.93	-4.71	74.00	-27.78	300	359 Peak	Horizontal	

Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4874.00	39.84	49.61	-9.77	74.00	-34.16	118	368 Peak	Vertical	
2	7311.00	45.15	52.66	-7.51	74.00	-28.85	300	1 Peak	Vertical	
3	9748.00	49.45	54.16	-4.71	74.00	-24.55	280	281 Peak	Vertical	

802.11g

High Channel (Horizontal)

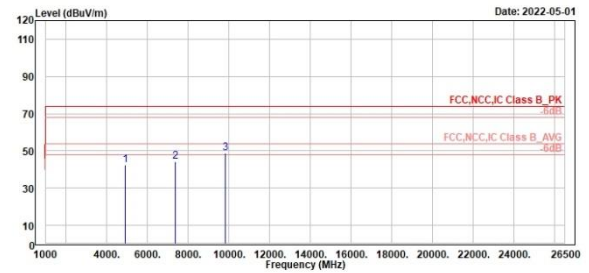
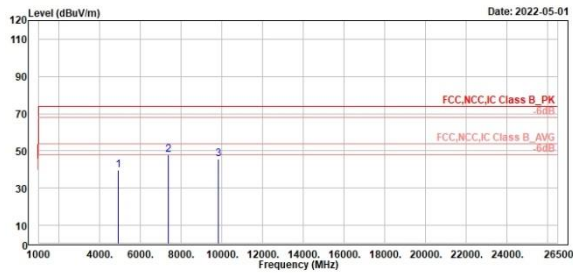
High Channel (Vertical)



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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4924.00	39.02	49.50	-9.68	74.00	-34.18	200	273	Peak	Horizontal	
2	7386.00	48.02	55.45	-7.43	74.00	-25.98	100	289	Peak	Horizontal	
3	9848.00	45.64	50.18	-4.54	74.00	-28.36	300	360	Peak	Horizontal	

Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4924.00	42.28	51.96	-9.68	74.00	-31.72	300	352	Peak	Vertical	
2	7386.00	44.46	51.89	-7.43	74.00	-29.54	100	1	Peak	Vertical	
3	9848.00	48.88	53.42	-4.54	74.00	-25.12	100	276	Peak	Vertical	

802.11n HT20

Low Channel (Horizontal)

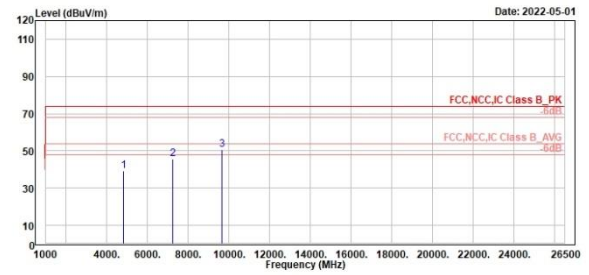
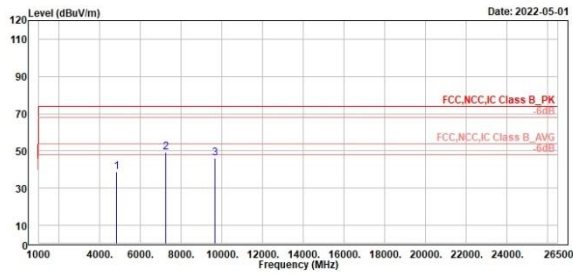
Low Channel (Vertical)



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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4824.00	38.63	48.44	-9.81	74.00	-35.37	349	368	Peak	Horizontal	
2	7236.00	49.29	56.62	-7.33	74.00	-24.71	180	272	Peak	Horizontal	
3	9648.00	45.98	50.86	-4.88	74.00	-28.02	400	145	Peak	Horizontal	

Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4824.00	39.33	49.14	-9.81	74.00	-34.67	400	207	Peak	Vertical	
2	7236.00	45.57	52.90	-7.33	74.00	-28.43	300	104	Peak	Vertical	
3	9648.00	50.62	55.70	-4.88	74.00	-23.18	200	293	Peak	Vertical	

802.11n HT20

Middle Channel (Horizontal)

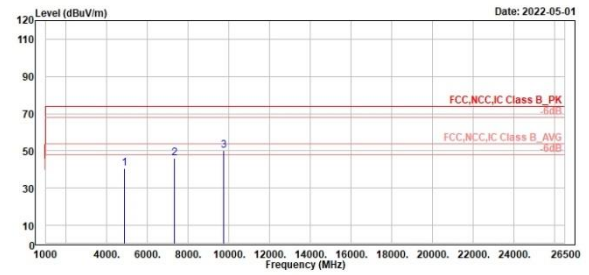
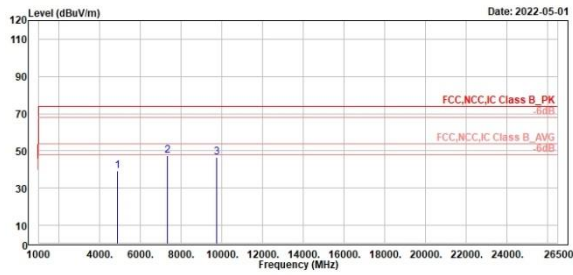
Middle Channel (Vertical)



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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4874.00	39.20	48.97	-9.77	74.00	-34.80	400	263	Peak	Horizontal	
2	7311.00	47.37	54.88	-7.51	74.00	-26.63	200	290	Peak	Horizontal	
3	9748.00	46.63	51.34	-4.71	74.00	-27.37	400	150	Peak	Horizontal	

Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4874.00	40.83	50.60	-9.77	74.00	-33.17	300	1	Peak	Vertical	
2	7311.00	46.03	53.54	-7.51	74.00	-27.97	243	331	Peak	Vertical	
3	9748.00	50.03	54.74	-4.71	74.00	-23.97	100	251	Peak	Vertical	

802.11n HT20

High Channel (Horizontal)

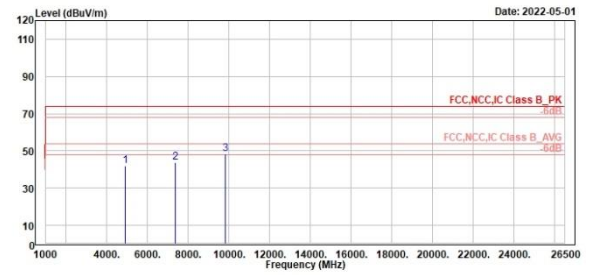
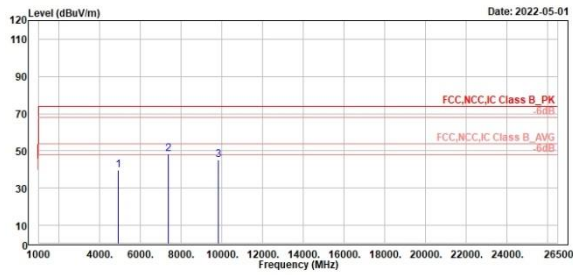
High Channel (Vertical)



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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4924.00	39.53	49.21	-9.68	74.00	-34.47	300	267 Peak	Horizontal	
2	7386.00	48.36	55.79	-7.43	74.00	-25.64	190	288 Peak	Horizontal	
3	9848.00	45.30	49.84	-4.54	74.00	-28.70	393	360 Peak	Horizontal	

Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4924.00	42.14	51.82	-9.68	74.00	-31.86	294	360 Peak	Vertical	
2	7386.00	43.71	51.14	-7.43	74.00	-30.29	400	247 Peak	Vertical	
3	9848.00	48.52	53.06	-4.54	74.00	-25.48	300	267 Peak	Vertical	

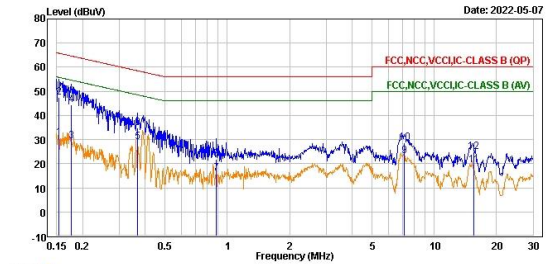
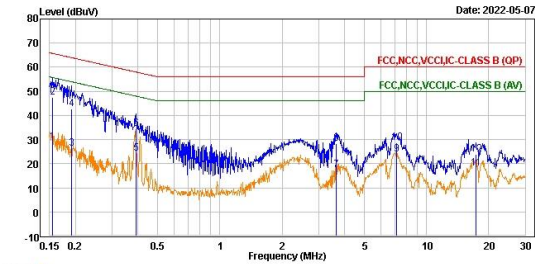


Mains Conducted Emission, 150kHz ~ 30MHz

Worst Band

(Line)

(Neutral)



Trace: 1

Line	Freq	Level	Read Level	Factor	Limit	Over	Remark	Pol/Phase	Note
	MHz	dBuV	dBuV	dB	dBuV	dB			
1	0.16	28.90	19.29	9.61	55.71	-26.81	Average	line1	
2	0.16	47.39	37.78	9.61	65.71	-18.32	QP	line1	
3	0.19	26.12	16.51	9.61	53.97	-27.85	Average	line1	
4	0.19	42.74	33.13	9.61	63.97	-21.23	QP	line1	
5	0.39	24.24	14.62	9.62	48.01	-23.77	Average	line1	
6	0.39	34.59	24.97	9.62	58.01	-23.42	QP	line1	
7	3.64	17.45	7.78	9.67	46.00	-28.55	Average	line1	
8	3.64	28.44	18.77	9.67	56.00	-27.56	QP	line1	
9	7.18	23.87	14.16	9.71	50.00	-26.13	Average	line1	
10	7.18	28.71	19.00	9.71	60.00	-31.29	QP	line1	
11	17.34	18.22	8.50	9.72	50.00	-31.78	Average	line1	
12	17.34	24.05	14.33	9.72	60.00	-35.95	QP	line1	

Trace: 1

Line	Freq	Level	Read Level	Factor	Limit	Over	Remark	Pol/Phase	Note
	MHz	dBuV	dBuV	dB	dBuV	dB			
1	0.15	30.62	21.03	9.59	55.79	-25.17	Average	neutral	
2	0.15	47.54	37.95	9.59	65.79	-18.25	QP	neutral	
3	0.18	29.19	19.60	9.59	54.63	-25.44	Average	neutral	
4	0.18	44.54	34.95	9.59	64.63	-20.09	QP	neutral	
5	0.37	29.05	19.45	9.60	48.55	-19.50	Average	neutral	
6	0.37	34.71	25.11	9.60	58.55	-23.84	QP	neutral	
7	0.88	16.09	6.49	9.60	46.00	-29.91	Average	neutral	
8	0.88	21.73	12.13	9.60	56.00	-34.27	QP	neutral	
9	7.14	23.24	13.53	9.71	50.00	-26.76	Average	neutral	
10	7.14	28.64	18.93	9.71	60.00	-31.36	QP	neutral	
11	15.46	19.48	9.70	9.78	50.00	-30.52	Average	neutral	
12	15.46	24.92	15.14	9.78	60.00	-35.08	QP	neutral	