Prüfbericht-Nr.: *Test report no.:*	CN22J0TN(P15C-WiFi) 001	**Auftrags-Nr.:** *Order no.*:	238542284	Seite 1 von 25 *Page 1 of 25*
Kunden-Referenz-Nr.: *Client reference no.:*	N/A	**Auftragsdatum:** *Order date:*	2022-04-14	
Auftraggeber: *Client:*	Microchip Technology Inc. 2355 West Chandler Blvd. Chandler, Arizona 85224-6199, United States.			
Prüfgegenstand: *Test item:*	IEEE 802.11 b/g/n Network Controller Module with Integrated Bluetooth Low Energy 4.0			
Bezeichnung / Typ-Nr.: *Identification / Type no.:*	ATWINC3400-MR210CA			
Auftrags-Inhalt: *Order content*:	FCC Part 15C Test report (BLE)			
Prüfgrundlage: *Test specification:*	FCC 47CFR Part 15: Subpart C Section 15.247			

Wareneingangsdatum: *Date of sample receipt:*	2022-03-29
Prüfmuster-Nr.: *Test sample no:*	A003234841-004 A003234841-005
Prüfzeitraum: *Testing period:*	2022-04-28 - 2022-05-07
Ort der Prüfung: *Place of testing:*	EMC/RF Taipei Testing Site
Prüflaboratorium: *Testing laboratory:*	Taipei Testing Laboratories
Prüfergebnis*: *Test result*:*	Pass

zusammengestellt von: *compiled by:*		**genehmigt von:** authorized by:	
Datum: *Date:* 2022-06-07		**Ausstellungsdatum:** *Issue date:* 2022-06-07	
Stellung / *Position:*	Ryan Chen Senior Project Manager	**Stellung** / *Position:*	Brenda Chen Senior Project Manager

Sonstiges / *Other:* This report is only evaluated and verified the output power and RSE tests for second source crystal change. The other test results are referred to report no. D50616R1.

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
** Legend:*	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

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.

Contents

HISTORY OF THIS TEST REPORT

Report No.	Description	Date Issued
CN22J0TN(P15C-WiFi) 001	Original Release	2022-06-07

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 basics 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)	± 1.15 dB
Radiated Emission (30 MHz ~ 200 MHz)	± 1.30 dB
Radiated Emission (200 MHz ~ 1 GHz)	± 1.30 dB
Radiated Emission (1 GHz ~ 18 GHz)	± 1.54 dB
Radiated Emission (18 GHz ~ 40 GHz)	± 2.52 dB
Mains Conducted Emission	± 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

Note: The 2nd source information:

Reference Designator	BOM2 (2nd Source)	Manufacturer	Manufacturer Part No.	Remarks
Y1	26MHz	TST	TZ1039PAAF32	Crystal 16MHz 2520 size
L8, L9, L14	3.3nH	Murata	LQP03TN3N3C02D	
L10	6.8nH	Murata	LQP03TN6N8J02	

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:
1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when position on Z-plane.
2. "-" 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

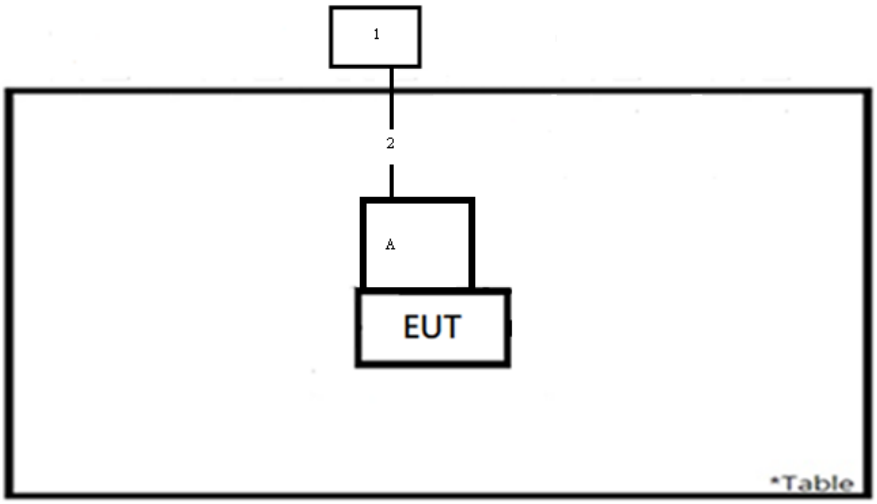
None.

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

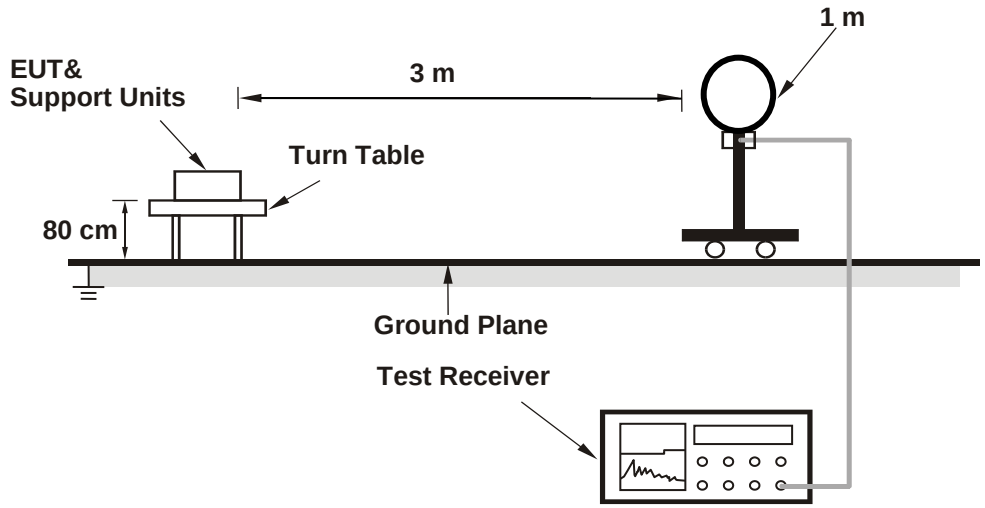
Limit

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).

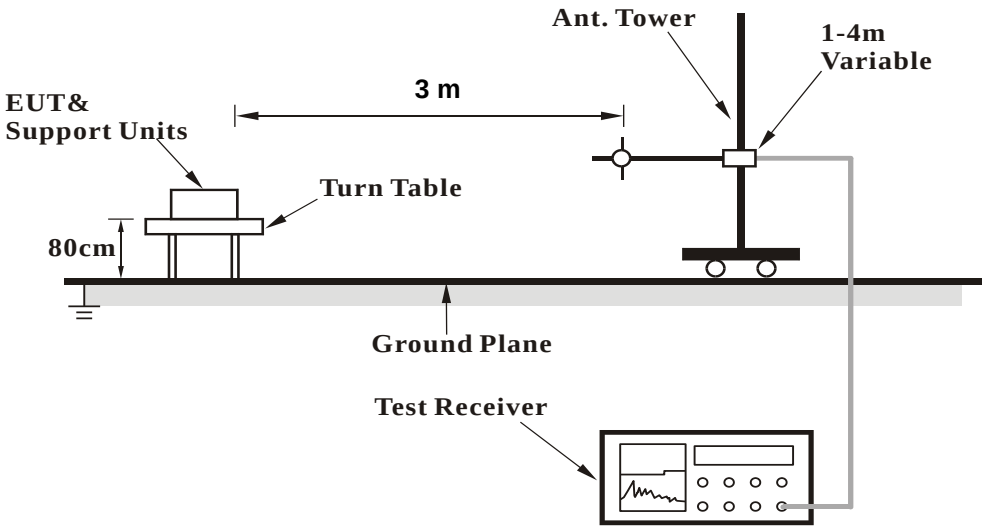
Kind of Test Site 3m Semi-Anechoic Chamber

Test Setup

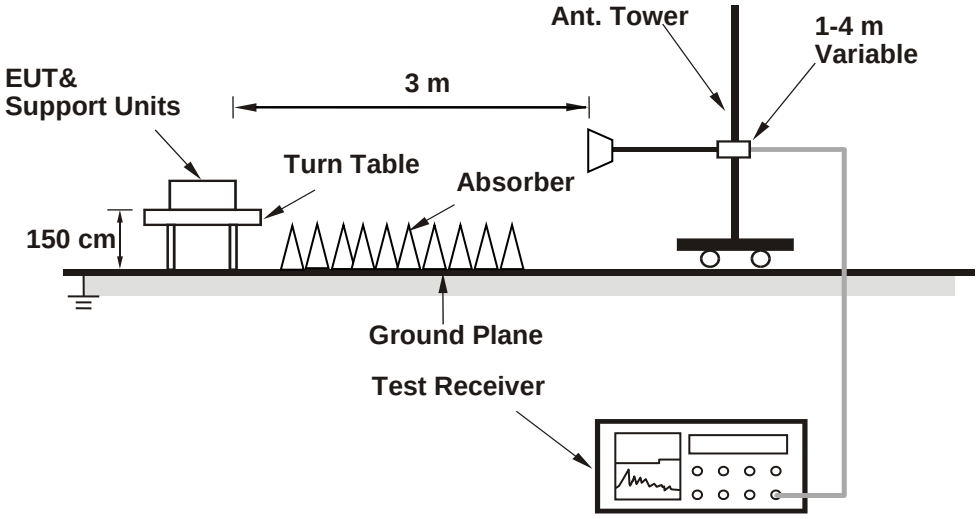
<Radiated Emissions below 30 MHz>



<Radiated Emissions 30 MHz to 1 GHz>



<Radiated Emissions above 1 GHz>



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 ≥ 1/T (Duty cycle < 98 %) or 10 Hz (Duty cycle ≥ 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.

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

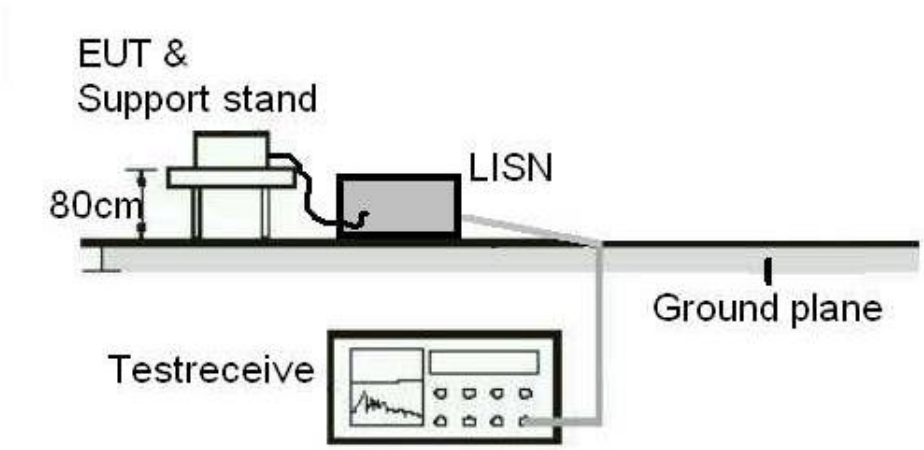
5.2.1 Mains Conducted Emission

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.

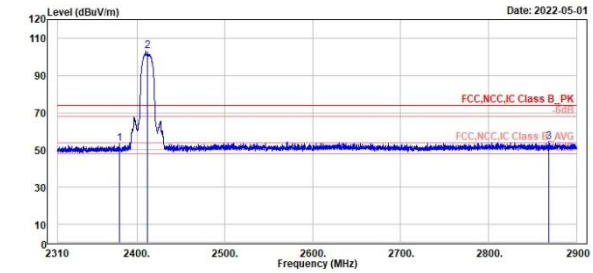
Appendix A: Test Results of Radiated Spurious Emissions & Mains

Conducted Emission Test

Band Edges, 2.31GHz ~ 2.9GHz

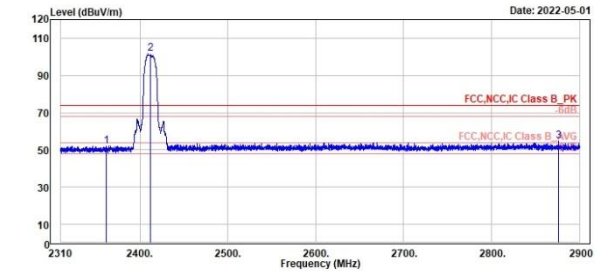
802.11b	
Low Channel (Horizontal) Peak	**Low Channel (Vertical) Peak**

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao., Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	2380.21	53.26	15.73	37.53	74.00	-20.74	100	53	Peak	Horizontal	
2 *	2412.00	103.12	65.47	37.65	74.00	29.12	100	53	Peak	Horizontal	
3	2868.26	54.19	15.94	38.25	74.00	-19.81	100	53	Peak	Horizontal	

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao., Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322

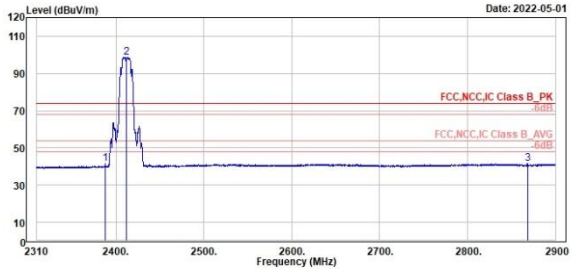


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2362.16	52.09	14.65	37.44	74.00	-21.91	390	119	Peak	Vertical	
2 *	2412.00	101.59	63.94	37.65	74.00	27.59	390	119	Peak	Vertical	
3	2876.28	54.62	16.32	38.30	74.00	-19.38	390	119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

802.11b

Low Channel (Horizontal) Average

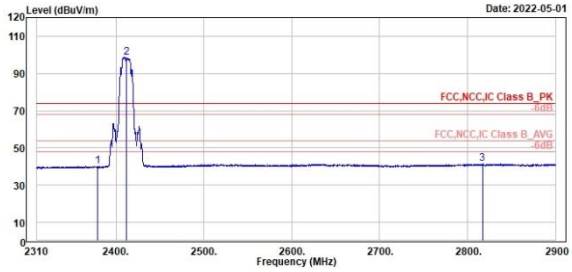
TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	2388.00	41.64	4.07	37.57	54.00	-12.36	100	53	Average	Horizontal	
2 *	2412.00	98.73	61.08	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	

Low Channel (Vertical) Average

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322

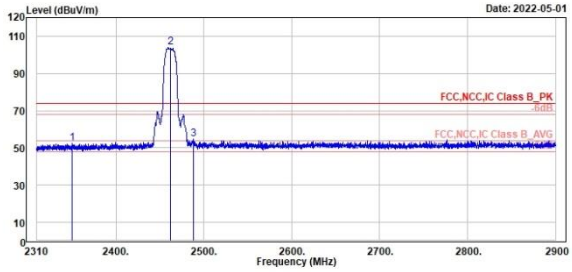


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2379.38	40.31	2.78	37.53	54.00	-13.69	390	119	Average	Vertical	
2 *	2412.00	98.60	60.95	37.65	54.00	44.60	390	119	Average	Vertical	
3	2816.81	41.43	3.24	38.19	54.00	-12.57	390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

802.11b

High Channel (Horizontal) Peak

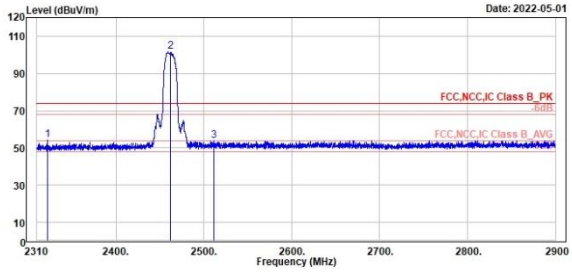
TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	2350.00	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	

High Channel (Vertical) Peak

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322

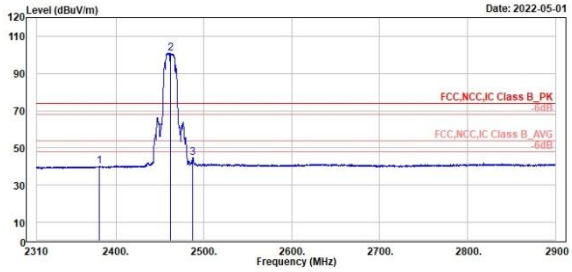


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2322.15	54.14	16.86	37.28	74.00	-19.86	336	68	Peak	Vertical	
2 *	2462.00	101.63	63.90	37.73	74.00	27.63	336	68	Peak	Vertical	
3	2511.66	54.06	16.20	37.86	74.00	-19.94	336	68	Peak	Vertical	

802.11b

High Channel (Horizontal) Average

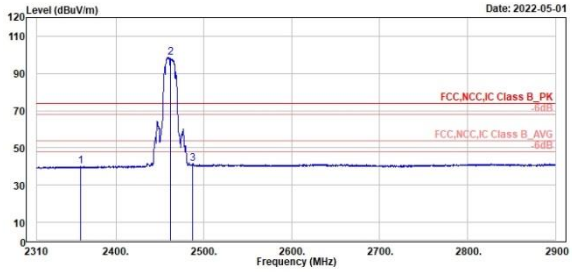
TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	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	

High Channel (Vertical) Average

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322

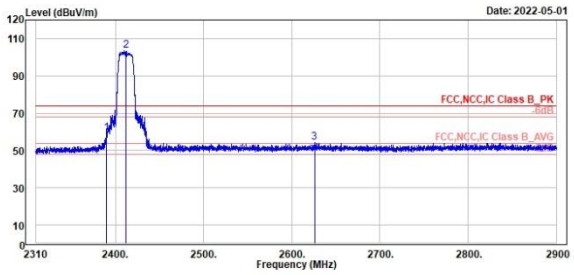


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2359.68	40.02	2.60	37.42	54.00	-13.98	336	68	Average	Vertical	
2 *	2462.00	98.68	60.95	37.73	54.00	44.68	336	68	Average	Vertical	
3	2487.59	41.54	3.72	37.82	54.00	-12.46	336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

802.11g

Low Channel (Horizontal) Peak

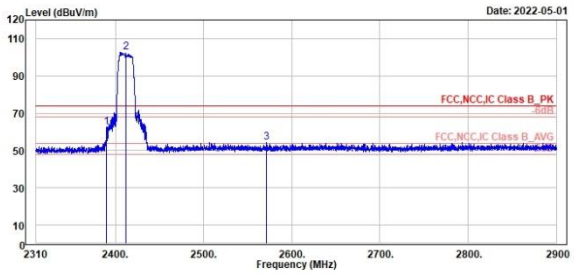
TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	2390.00	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	

Low Channel (Vertical) Peak

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	2390.00	62.71	25.13	37.58	74.00	-11.29	390	121	Peak	Vertical	
2 *	2412.00	102.82	65.17	37.65	74.00	28.82	390	121	Peak	Vertical	
3	2570.90	54.15	16.22	37.93	74.00	-19.85	390	121	Peak	Vertical	

802.11g

Low Channel (Horizontal) Average

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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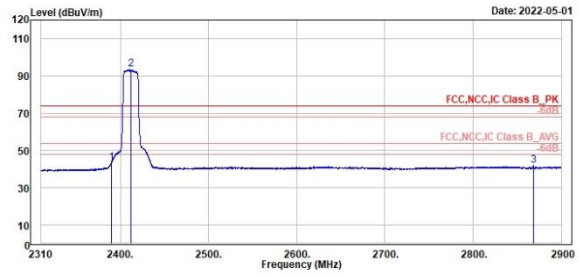
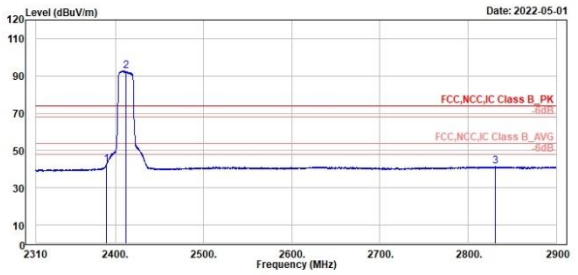


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2389.77	43.37	5.79	37.58	54.00	-10.63	100	54	Average	Horizontal	
2 *	2412.00	93.36	55.71	37.65	54.00	39.36	100	54	Average	Horizontal	
3	2868.14	42.17	3.92	38.25	54.00	-11.83	100	54	Average	Horizontal	

Low Channel (Vertical) Average

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	2390.00	42.41	4.83	37.58	54.00	-11.59	390	121	Average	Vertical	
2 *	2412.00	92.67	55.02	37.65	54.00	38.67	390	121	Average	Vertical	
3	2830.50	41.46	3.28	38.18	54.00	-12.54	390	121	Average	Vertical	

802.11g

High Channel (Horizontal) Peak

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No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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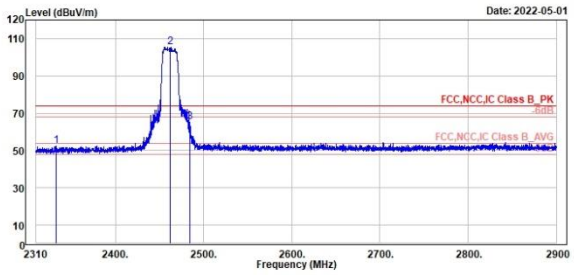
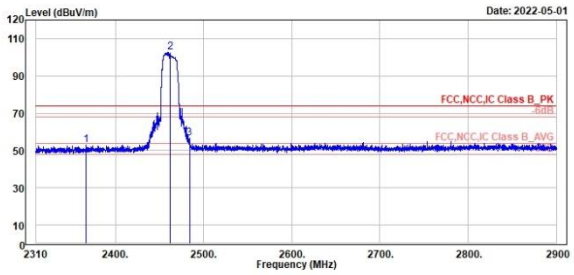


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2333.36	52.67	15.35	37.32	74.00	-21.33	122	54	Peak	Horizontal	
2 *	2462.00	105.40	67.67	37.73	74.00	31.40	122	54	Peak	Horizontal	
3	2484.88	65.34	27.54	37.80	74.00	-8.66	122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

High Channel (Vertical) Peak

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322

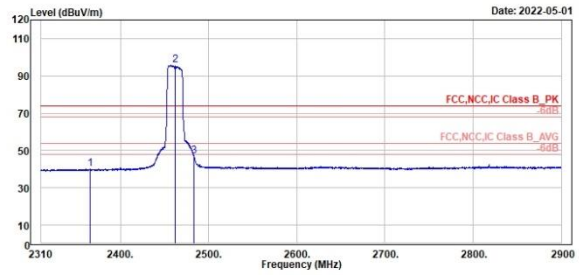


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2366.52	52.83	15.37	37.46	74.00	-21.17	378	64	Peak	Vertical	
2 *	2462.00	102.87	65.14	37.73	74.00	28.87	378	64	Peak	Vertical	
3	2483.93	56.61	18.81	37.80	74.00	-17.39	378	64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

802.11g

High Channel (Horizontal) Average

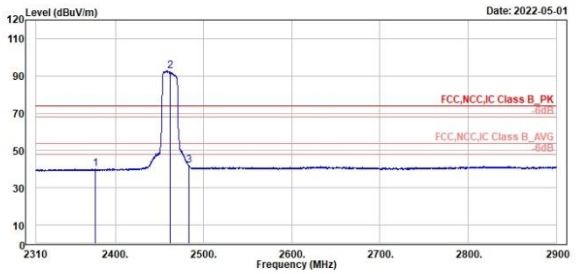
TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	

High Channel (Vertical) Average

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322

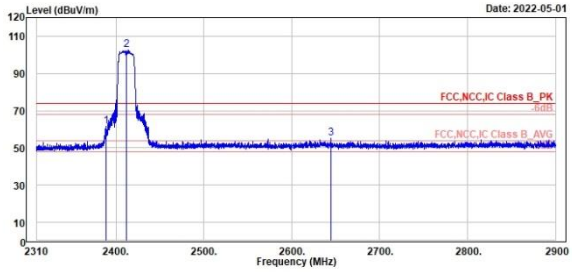


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2377.50	39.99	2.47	37.52	54.00	-14.01	378	64	Average	Vertical	
2 *	2462.00	92.57	54.84	37.73	54.00	38.57	378	64	Average	Vertical	
3	2483.81	41.77	3.97	37.80	54.00	-12.23	378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

802.11n HT20

Low Channel (Horizontal) Peak

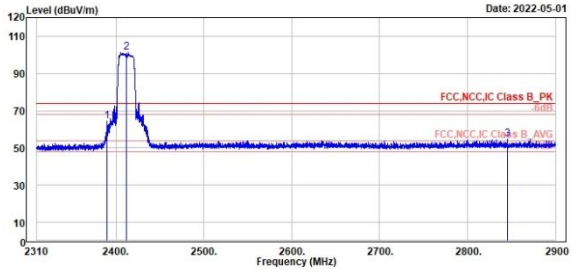
TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist. ,New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	2389.30	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	

Low Channel (Vertical) Peak

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist. ,New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322

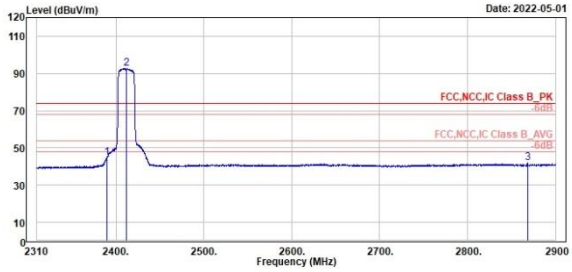


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2390.00	64.28	26.70	37.58	74.00	-9.72	388	121	Peak	Vertical	
2 *	2412.00	101.18	63.53	37.65	74.00	27.18	388	121	Peak	Vertical	
3	2845.25	54.53	16.36	38.17	74.00	-19.47	388	121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

802.11n HT20

Low Channel (Horizontal) Average

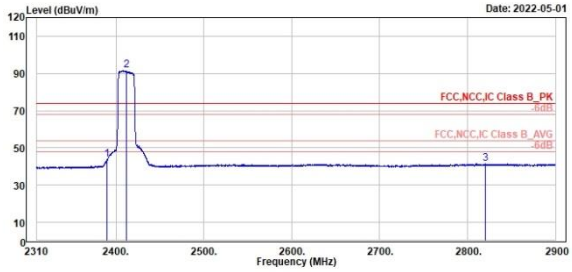
TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	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	

Low Channel (Vertical) Average

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322

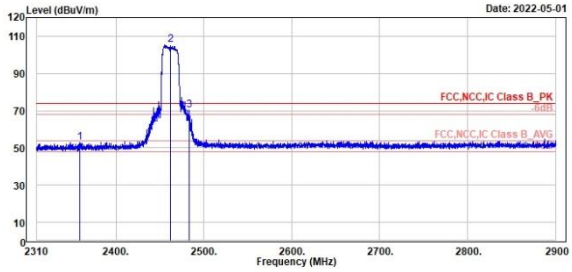


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2390.00	43.87	6.29	37.58	54.00	-10.13	388	121	Average	Vertical	
2 *	2412.00	91.50	53.85	37.65	54.00	37.50	388	121	Average	Vertical	
3	2819.88	41.36	3.17	38.19	54.00	-12.64	388	121	Average	Vertical	

802.11n HT20

High Channel (Horizontal) Peak

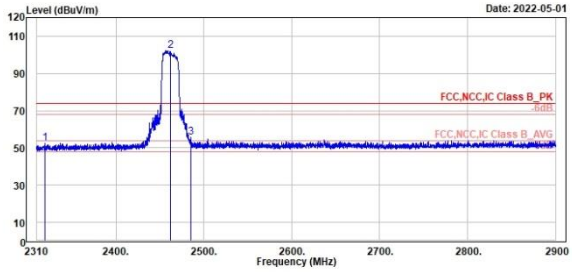
TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	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	

High Channel (Vertical) Peak

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	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

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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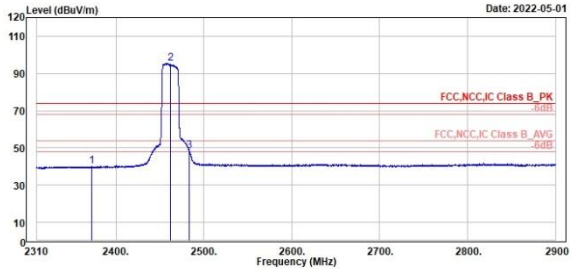
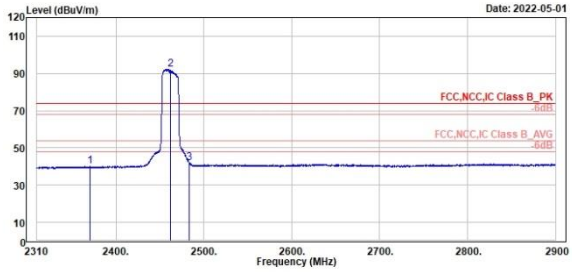


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2372.89	40.05	2.56	37.49	54.00	-13.95	122	54	Average	Horizontal	
2 *	2462.00	95.25	57.52	37.73	54.00	41.25	122	54	Average	Horizontal	
3 !	2483.46	48.35	10.55	37.80	54.00	-5.65	122	54	Average	Horizontal	

High Channel (Vertical) Average

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



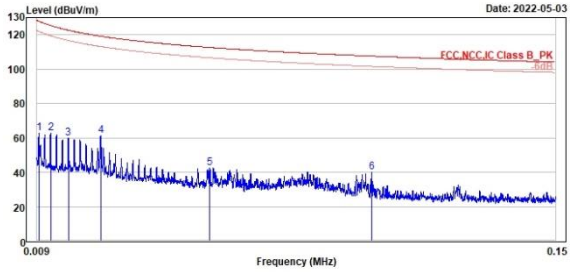
	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2371.01	39.96	2.48	37.48	54.00	-14.04	379	64	Average	Vertical	
2 *	2462.00	92.26	54.53	37.73	54.00	38.26	379	64	Average	Vertical	
3	2483.58	42.08	4.28	37.80	54.00	-11.92	379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

Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

802.11b

Low Channel 9kHz~150kHz(Open)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	0.01	62.59	44.76	17.83	127.95	-65.36	100	138	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	

Low Channel 150kHz~30MHz(Open)

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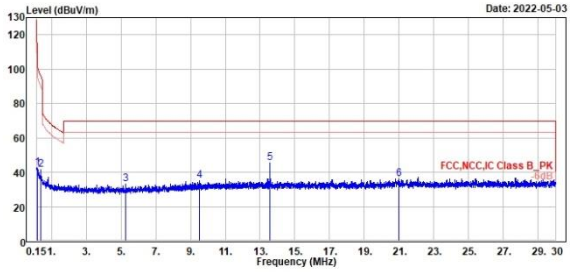
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	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)

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No. 458-18, Sec 2, Fenliao. .Linkou Dist. .New Taipei City 244. Taiwan(R.O.C.)
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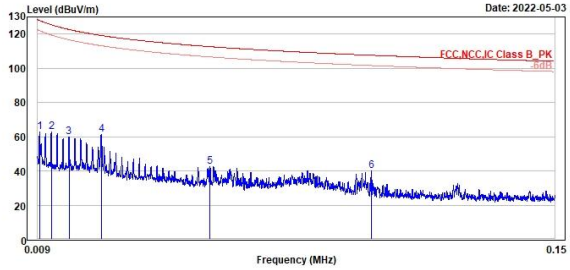
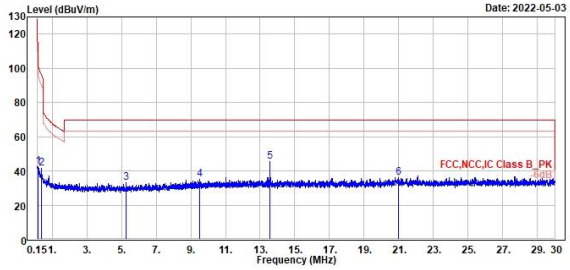


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.01	62.59	44.76	17.83	127.95	-65.36	100	138	QP	Close	
2	0.01	62.71	44.75	17.96	125.45	-62.74	100	144	QP	Close	
3	0.02	59.72	41.33	18.39	122.68	-62.96	100	144	QP	Close	
4	0.03	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	

Low Channel 150kHz~30MHz(Close)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. .Linkou Dist. .New Taipei City 244. Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



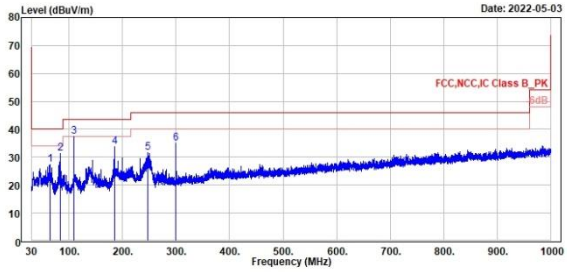
	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.17	42.47	24.00	18.47	102.94	-60.47	100	104	QP	Close	
2	0.39	41.40	22.45	18.95	95.88	-54.48	100	209	QP	Close	
3	5.27	33.18	13.70	19.48	69.50	-36.32	100	312	QP	Close	
4	9.52	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)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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	64.63	27.47	35.33	-7.86	40.00	-12.53	300	79	QP	Horizontal	
2	83.93	31.39	42.74	-11.35	40.00	-8.61	200	235	QP	Horizontal	
3	108.47	37.29	47.02	-9.73	43.50	-6.21	100	111	QP	Horizontal	
4	184.52	33.77	41.73	-7.96	43.50	-9.73	100	72	QP	Horizontal	
5	246.70	31.61	38.23	-6.62	46.00	-14.39	200	178	QP	Horizontal	
6	298.98	34.98	39.72	-4.74	46.00	-11.02	300	10	QP	Horizontal	

Low Channel (Vertical)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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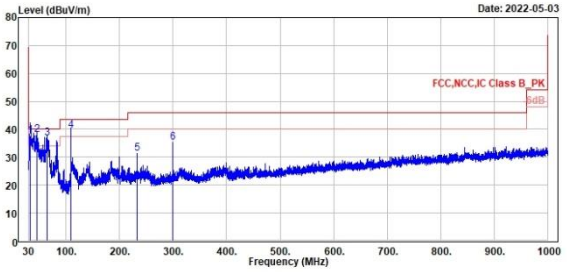

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1 !	33.59	37.86	45.20	-7.34	40.00	-2.14	100	174	QP	Vertical	
2 !	45.33	37.94	43.94	-6.00	40.00	-2.06	100	174	QP	Vertical	
3 !	64.63	36.69	44.55	-7.86	40.00	-3.31	100	145	QP	Vertical	
4 !	108.47	39.54	49.27	-9.73	43.50	-3.96	100	185	QP	Vertical	
5	232.54	31.41	38.42	-7.01	46.00	-14.59	100	82	QP	Vertical	
6	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)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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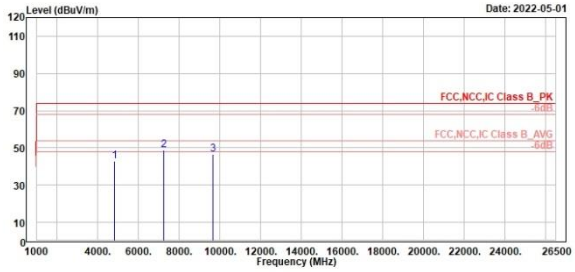

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4824.00	42.74	52.55	-9.81	74.00	-31.26	100	359	Peak	Horizontal	
2	7236.00	49.04	56.37	-7.33	74.00	-24.96	100	256	Peak	Horizontal	
3	9648.00	46.45	51.33	-4.88	74.00	-27.55	400	147	Peak	Horizontal	

Low Channel (Vertical)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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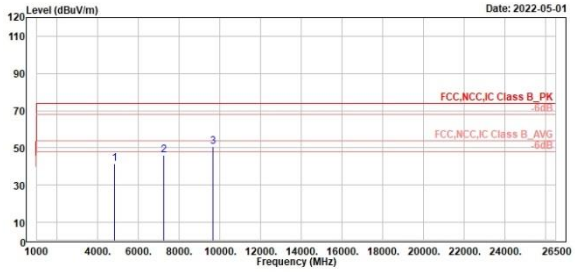

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4824.00	41.47	51.28	-9.81	74.00	-32.53	272	1	Peak	Vertical	
2	7236.00	46.18	53.51	-7.33	74.00	-27.82	400	215	Peak	Vertical	
3	9648.00	50.83	55.71	-4.88	74.00	-23.17	300	279	Peak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

802.11b

Middle Channel (Horizontal)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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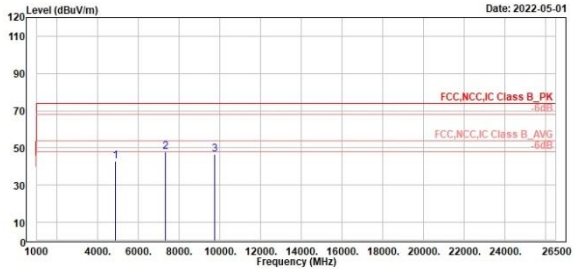

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4874.00	43.05	52.82	-9.77	74.00	-30.95	300	251	Peak	Horizontal	
2	7311.00	47.96	55.47	-7.51	74.00	-26.04	100	254	Peak	Horizontal	
3	9748.00	46.43	51.14	-4.71	74.00	-27.57	400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

Middle Channel (Vertical)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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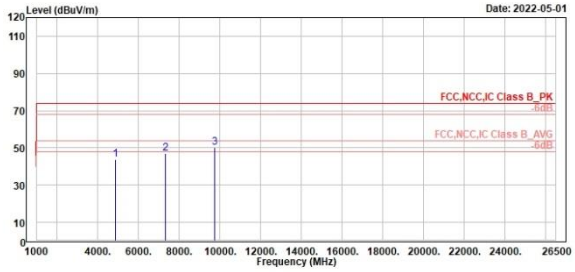

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4874.00	43.72	53.49	-9.77	74.00	-30.28	300	347	Peak	Vertical	
2	7311.00	46.90	54.41	-7.51	74.00	-27.10	300	216	Peak	Vertical	
3	9748.00	50.38	55.09	-4.71	74.00	-23.62	100	279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

802.11b

High Channel (Horizontal)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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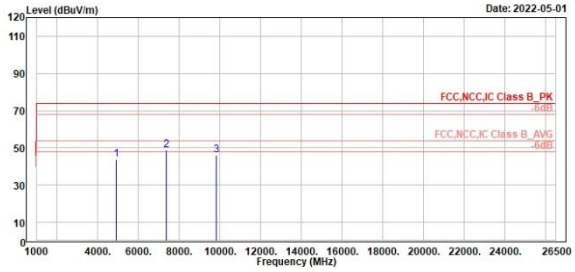

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4924.00	43.66	53.34	-9.68	74.00	-30.34	400	246	Peak	Horizontal	
2	7386.00	48.79	56.22	-7.43	74.00	-25.21	100	111	Peak	Horizontal	
3	9848.00	45.93	50.47	-4.54	74.00	-28.07	300	251	Peak	Horizontal	

High Channel (Vertical)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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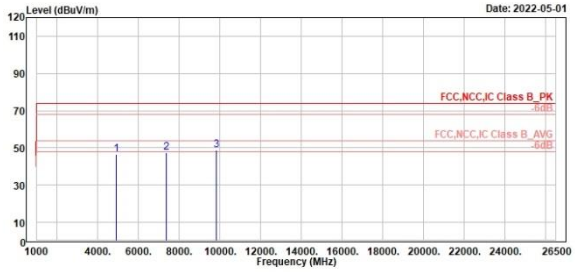

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4924.00	46.47	56.15	-9.68	74.00	-27.53	278	331	Peak	Vertical	
2	7386.00	47.23	54.66	-7.43	74.00	-26.77	400	223	Peak	Vertical	
3	9848.00	48.97	53.51	-4.54	74.00	-25.03	200	272	Peak	Vertical	

802.11g

Low Channel (Horizontal)

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No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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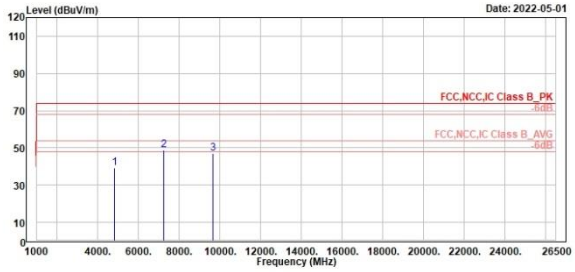

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	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4824.00	39.15	48.96	-9.81	74.00	-34.85	149	360	Peak	Horizontal	
2	7236.00	48.72	56.05	-7.33	74.00	-25.28	100	96	Peak	Horizontal	
3	9648.00	47.01	51.89	-4.88	74.00	-26.99	400	146	Peak	Horizontal	

Low Channel (Vertical)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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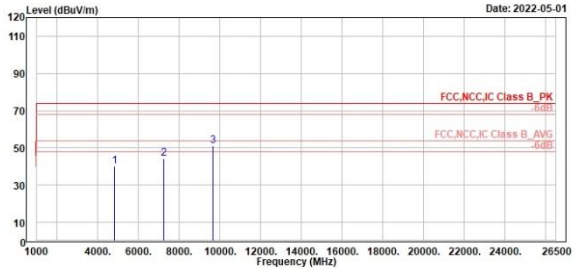

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4824.00	40.14	49.95	-9.81	74.00	-33.86	100	146	Peak	Vertical	
2	7236.00	44.32	51.65	-7.33	74.00	-29.68	300	91	Peak	Vertical	
3	9648.00	51.15	56.03	-4.88	74.00	-22.85	100	281	Peak	Vertical	

802.11g

Middle Channel (Horizontal)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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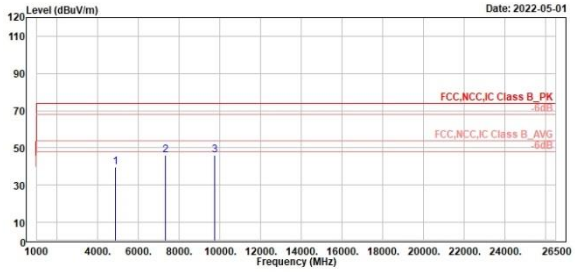

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4874.00	39.48	49.25	-9.77	74.00	-34.52	100	275	Peak	Horizontal	
2	7311.00	45.96	53.47	-7.51	74.00	-28.04	100	50	Peak	Horizontal	
3	9748.00	46.22	50.93	-4.71	74.00	-27.78	300	359	Peak	Horizontal	

Middle Channel (Vertical)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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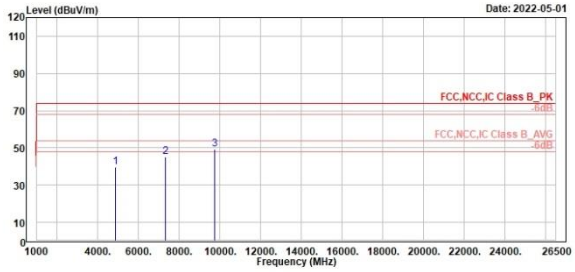

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4874.00	39.84	49.61	-9.77	74.00	-34.16	118	360	Peak	Vertical	
2	7311.00	45.15	52.66	-7.51	74.00	-28.85	300	1	Peak	Vertical	
3	9748.00	49.45	54.16	-4.71	74.00	-24.55	200	281	Peak	Vertical	

802.11g

High Channel (Horizontal)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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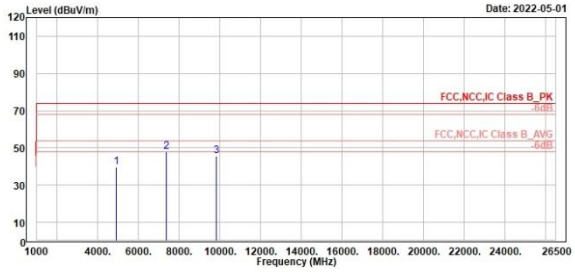
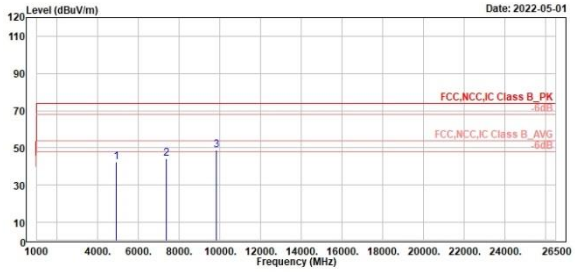


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4924.00	39.82	49.50	-9.68	74.00	-34.18	200	273	Peak	Horizontal	
2	7386.00	48.02	55.45	-7.43	74.00	-25.98	100	289	Peak	Horizontal	
3	9848.00	45.64	50.18	-4.54	74.00	-28.36	300	360	Peak	Horizontal	

High Channel (Vertical)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	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)

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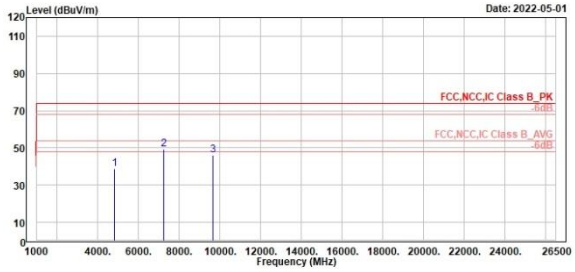

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4824.00	38.63	48.44	-9.81	74.00	-35.37	349	360	Peak	Horizontal	
2	7236.00	49.29	56.62	-7.33	74.00	-24.71	100	272	Peak	Horizontal	
3	9648.00	45.98	50.86	-4.88	74.00	-28.02	400	145	Peak	Horizontal	

Low Channel (Vertical)

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao. ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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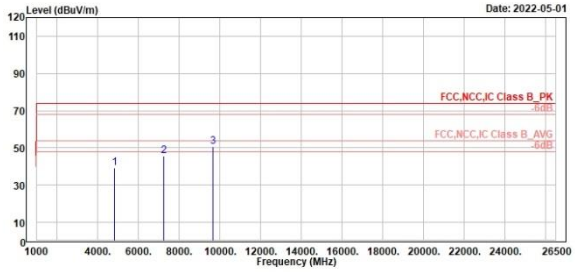

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4824.00	39.33	49.14	-9.81	74.00	-34.67	400	207	Peak	Vertical	
2	7236.00	45.57	52.90	-7.33	74.00	-28.43	300	104	Peak	Vertical	
3	9648.00	50.82	55.70	-4.88	74.00	-23.18	200	293	Peak	Vertical	

802.11n HT20

Middle Channel (Horizontal)

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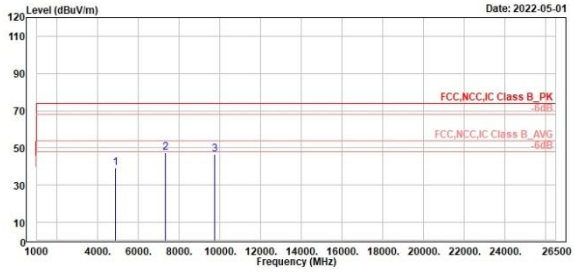

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4874.00	39.20	48.97	-9.77	74.00	-34.80	400	263	Peak	Horizontal	
2	7311.00	47.37	54.88	-7.51	74.00	-26.63	200	290	Peak	Horizontal	
3	9748.00	46.63	51.34	-4.71	74.00	-27.37	400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

Middle Channel (Vertical)

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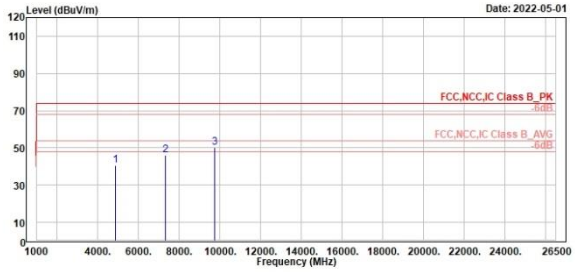

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4874.00	40.83	50.60	-9.77	74.00	-33.17	300	1	Peak	Vertical	
2	7311.00	46.03	53.54	-7.51	74.00	-27.97	243	331	Peak	Vertical	
3	9748.00	50.03	54.74	-4.71	74.00	-23.97	100	251	Peak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

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High Channel (Horizontal)

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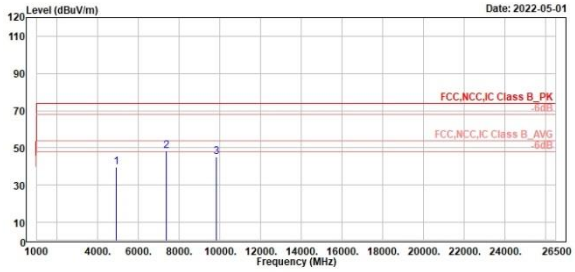

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4924.00	39.53	49.21	-9.68	74.00	-34.47	300	267	Peak	Horizontal	
2	7386.00	48.36	55.79	-7.43	74.00	-25.64	100	288	Peak	Horizontal	
3	9848.00	45.30	49.84	-4.54	74.00	-28.70	393	360	Peak	Horizontal	

High Channel (Vertical)

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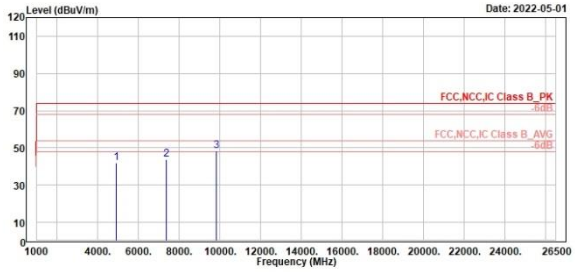

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4924.00	42.14	51.82	-9.68	74.00	-31.86	294	360	Peak	Vertical	
2	7386.00	43.71	51.14	-7.43	74.00	-30.29	400	247	Peak	Vertical	
3	9848.00	48.52	53.06	-4.54	74.00	-25.48	300	267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

Mains Conducted Emission, 150kHz ~ 30MHz

Worst Band

(Line)

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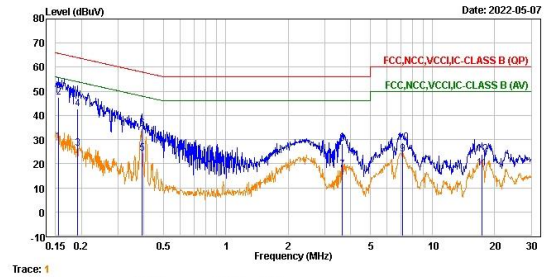

Trace: 1

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	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	

(Neutral)

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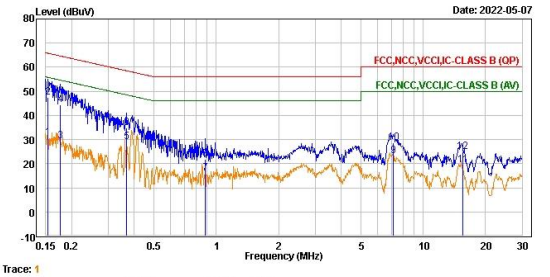

Trace: 1

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	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	