

Prüfbericht-Nr.: Test report no.:	CN212BVU (P15C-WiFi) 001	Auftrags-Nr.: Order no.:	238494114	Seite 1 von 24 Page 1 of 24
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2020-11-12	
Auftraggeber: Client:	AURES TECHNOLOGIES S.A. 24 bis rue Léonard de Vinci 91090 Lisses FRANCE			
Prüfgegenstand: Test item:	7" Integrated Handy POS			
Bezeichnung / Typ-Nr.: Identification / Type no.:	TMC7200			
Auftrags-Inhalt: Order content:	FCC Part 15C Test report (WiFi 2.4GHz)			
Prüfgrundlage: Test specification:	FCC 47CFR Part 15: Subpart C Section 15.247			
Wareneingangsdatum: Date of sample receipt:	2021-08-04			
Prüfmuster-Nr.: Test sample no.:	A003104126-001			
Prüfzeitraum: Testing period:	2021-08-19 - 2021-09-01			
Ort der Prüfung: Place of testing:	EMC/RF Taipei Testing Site			
Prüflaboratorium: Testing laboratory:	Taipei Testing Laboratories			
Prüfergebnis*: Test result*:	Pass			
überprüft von: compiled by:			genehmigt von: authorized by:	
Datum: Date:	2021-09-08	Ausstellungsdatum: Issue date:	2021-09-08	
Stellung / Position:	Senior Project Manager	Stellung / Position:	Senior Project Manager	
Sonstiges / Other:	This report only evaluated Output Power, RSE and Mains Conducted Emissions tests. The other test results are referred to the module report no.: CN210UH4 (P15C-WiFi) 001.			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable
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. 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.				

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	N/A (Note 1)
-	2.1049	99% Occupied Bandwidth	N/A (Note 1)
-	15.247(e)	Power Spectral Density	N/A (Note 1)
-	15.247(d)	Conducted Spurious Emissions and Band Edges	N/A (Note 1)
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:

1. Refer to module report no.: CN210UH4 (P15C-WiFi) 001 for the details.
2. 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**

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Test Report No.

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HISTORY OF THIS TEST REPORT

Report No.	Description	Date Issued
CN212BVU (P15C-WiFi) 001	Original Release	2021-09-08

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
KDB 662911 D01 Multiple Transmitter Output v02r01

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)	± 1.15 dB
Radiated Emission (30 MHz ~ 200 MHz)	± 1.32 dB
Radiated Emission (200 MHz ~ 1 GHz)	± 1.31 dB
Radiated Emission (1 GHz ~ 18 GHz)	± 1.53 dB
Radiated Emission (18 GHz ~ 40 GHz)	± 2.50 dB
Mains Conducted Emission	± 1.65 dB

3. General Product Information

3.1 Product Function and Intended Use

The EUT is a 7" Integrated Handy POS. 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	7" Integrated Handy POS
Type Identification	TMC7200
FCC ID	2AMRAP-WFBT-AP6356

Technical Specification of EUT

Item	EUT information
Operating Frequency	2412 MHz ~ 2462 MHz
Channel Number	802.11b/g/n HT20: 11
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	3.85 Vdc
Modulation	DSSS (DBPSK, DQPSK, CCK) OFDM (BPSK, QPSK, 16QAM, 64QAM)
Maximum Output Power (mW)	802.11b: 207.49 802.11g: 392.64 802.11n HT20: 384.59
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	70	1	63	1	62
6	70	6	70	6	70
11	63	11	57	11	60

4.2 Carrier Frequency and Channel

802.11b, 802.11g and 802.11n HT20:

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 is a windows systems which makes it possible to control them through a test software installed on it.

It was used to enable the operation modes listed as below.

Test Software	wl.exe
---------------	--------

The samples were used as follows:

A003104126-001

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

The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers.

Modulation Mode	Tx Function
802.11b	2TX (MIMO)
802.11g	2TX (MIMO)
802.11n HT20	2TX (MIMO)

EUT Configure Mode	Applicable To				Description
	Output Power	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 **X-plane**.
2. "-" means no effect.
3. The NFC is enable.

Output Power

- ☒ 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)
-	802.11n HT20	1 to 11	6	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)
-	802.11n HT20	1 to 11	6	MCS0

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)
-	802.11n HT20	1 to 11	6	MCS0

Test Condition

Test Item	Ambient Temperature	Relative Humidity	Tested by
Output Power	25 °C	60 %	Chun Wu
Radiated Spurious Emissions above 1 GHz	20.5-23.3 °C	59.3-63.1 %	Simon Tsai
Radiated Spurious Emissions below 1 GHz	20.5-23.3 °C	59.3-63.1 %	Simon Tsai
Mains Conducted Emission	21.9 °C	59 %	Simon Tsai

4.4 Special Accessories and Auxiliary Equipment

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

Accessory of EUT

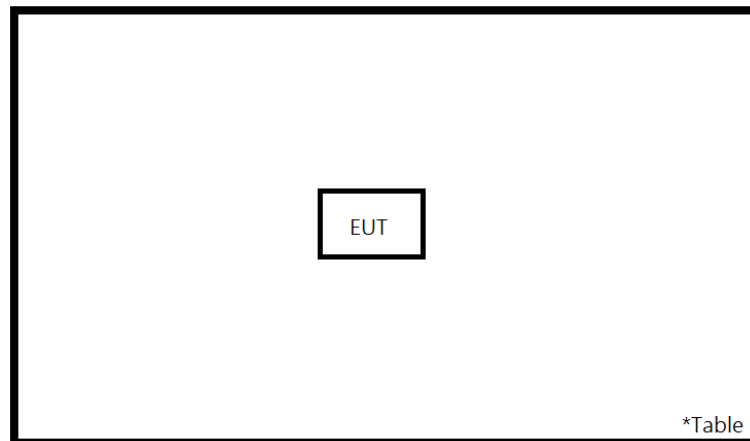
No.	Product	Brand	Model	Description
A	Adapter	TUE	GQ-24-120200-AX	I/P: 100-240 Vac, 1000 mA O/P: 12 Vdc, 2000 A 150cm non-shielded cable w/o core
B	Charger	AURES	TMC7000-Charger	--
-	Battery	APACK TECHNOLOGY CO., LTD.	APP00272	3.85 Vdc, 7400 mAh

Support Unit

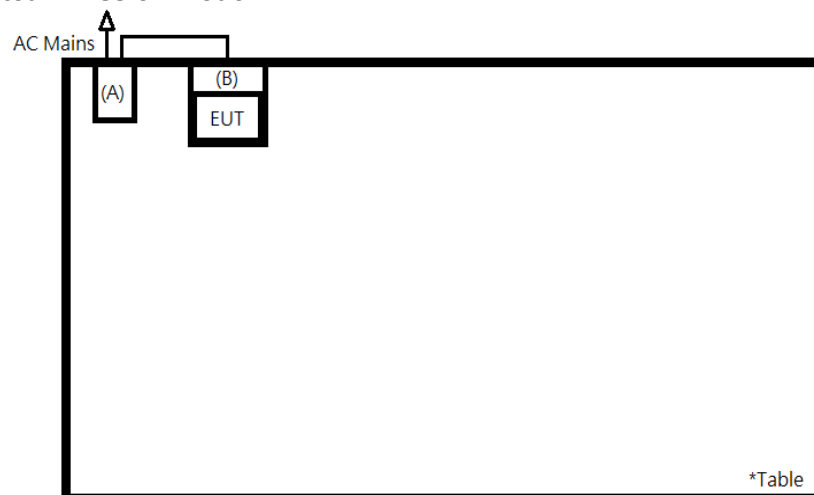
None

4.5 Test Setup Diagram

<Radiated Spurious Emissions mode>



<Mains Conducted Emission 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 antenna information is as listed below. The antenna is with no possibility of replacement with a non-approved antenna by the end-user. Therefore, the EUT is considered to comply with this provision.

ANT	Brand	Product No.	Product Name	Antenna Gain (dBi)	Antenna Type	Antenna Position	Remark
ANT1	Radiation Technology, Inc.	C0486-ANG0016	MT-5750 2.4G/5G Antenna	2.5	PIFA	Main Antenna	Tested antenna
ANT2	Joymax Electronics Co., Ltd.	TBF-RT03MPB-W70	MT-5751 WiFi/BT Antenna B	2.24	PIFA	Aux. Antenna	-

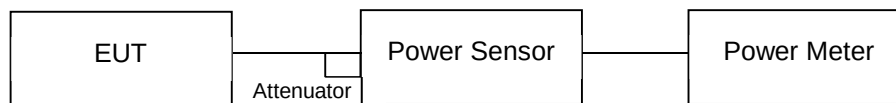
Refer to EUT photo for details.

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	2021/3/24	2022/3/23	2021/9/1	2021/9/1
Power Sensor	Anritsu	MA2411B	1725269	2021/3/24	2022/3/23	2021/9/1	2021/9/1

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 (dBm)		Total Power		Limit (dBm)
		Ant 1	Ant 2	(dBm)	(mW)	
1	2412	19.61	19.68	22.66	184.50	30
6	2437	20.07	20.25	23.17	207.49	30
11	2462	18.33	18.16	21.26	133.66	30

<802.11g>

Channel	Channel Frequency (MHz)	Peak Output Power (dBm)		Total Power		Limit (dBm)
		Ant 1	Ant 2	(dBm)	(mW)	
1	2412	20.93	20.81	23.88	244.34	30
6	2437	22.78	23.08	25.94	392.64	30
11	2462	20.28	20.58	23.44	220.80	30

<802.11n HT20>

Channel	Channel Frequency (MHz)	Peak Output Power (dBm)		Total Power		Limit (dBm)
		Ant 1	Ant 2	(dBm)	(mW)	
1	2412	20.67	20.11	23.41	219.28	30
6	2437	22.71	22.96	25.85	384.59	30
11	2462	20.85	20.11	23.51	224.39	30

Average Power
<802.11b>

Channel	Channel Frequency (MHz)	Average Power (dBm)		Total Power	
		Ant 1	Ant 2	(dBm)	(mW)
1	2412	16.66	16.63	19.66	92.90
6	2437	17.15	17.33	20.25	105.93
11	2462	15.13	14.92	18.04	65.46

<802.11g>

Channel	Channel Frequency (MHz)	Average Power (dBm)		Total Power	
		Ant 1	Ant 2	(dBm)	(mW)
1	2412	14.64	14.67	17.67	120.50
6	2437	18.03	18.45	21.26	203.24
11	2462	13.59	13.85	16.73	114.29

<802.11n HT20>

Channel	Channel Frequency (MHz)	Average Power (dBm)		Total Power	
		Ant 1	Ant 2	(dBm)	(mW)
1	2412	14.38	14.79	17.60	102.57
6	2437	18.21	18.93	21.60	197.70
11	2462	14.41	14.55	17.49	102.57

5.1.3 Radiated Spurious Emissions and Band Edges

Limit

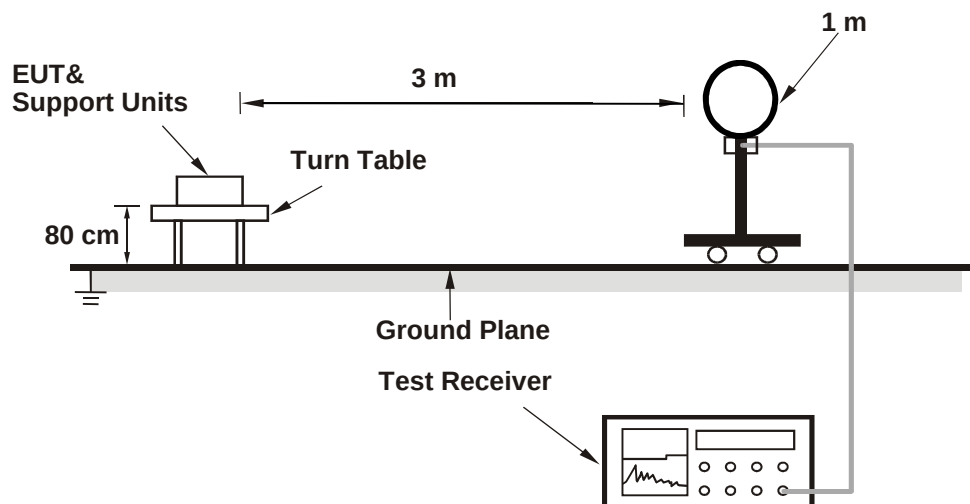
Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must comply with the radiated emission limits specified in §15.209(a).

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).

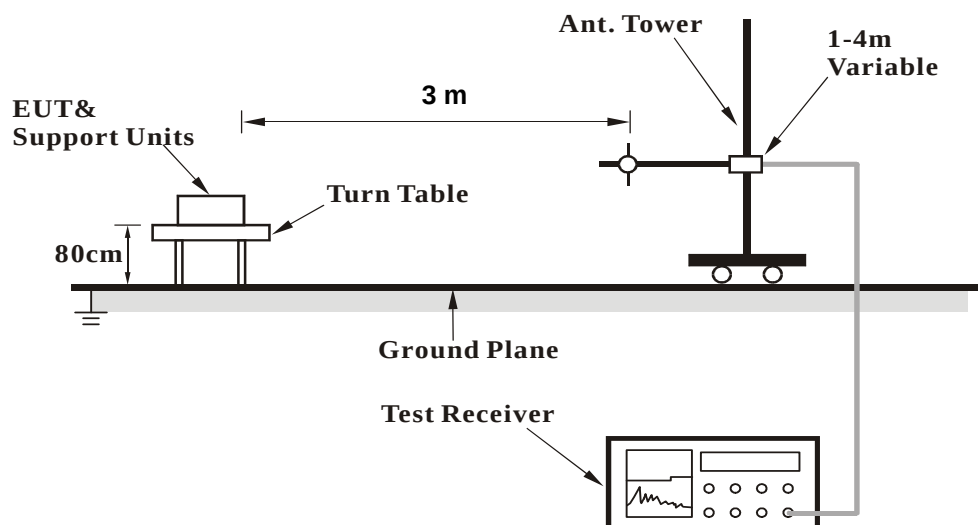
Kind of Test Site 3m Semi-Anechoic Chamber

Test Setup

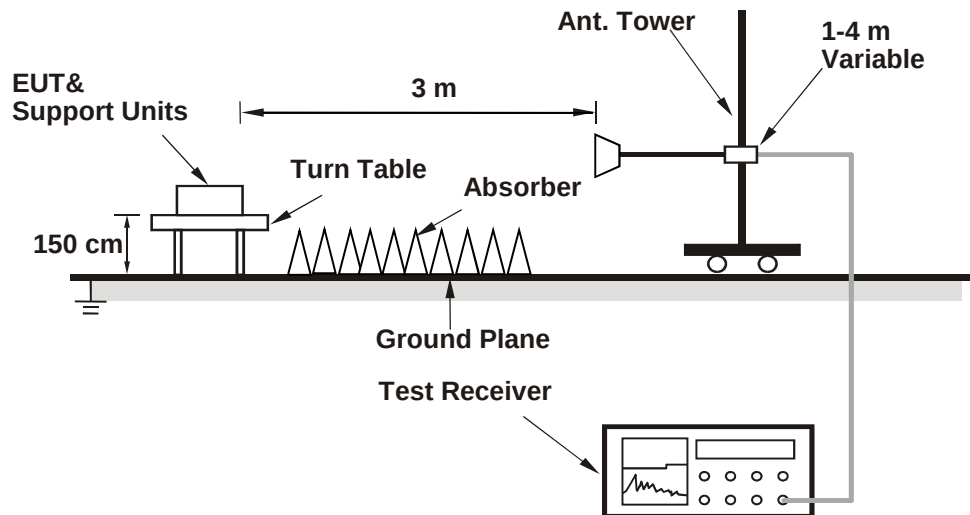
<Radiated Emissions below 30 MHz>



<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

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV40	101509	2021/3/24	2022/3/23
Receiver	R&S	ESR7	102108	2021/3/17	2022/3/16
Bilog Antenna	SCHWARZBECK	VULB-9168	00950	2021/1/25	2022/1/24
Horn Antenna	ETS-Lindgren	3117	00218929	2020/11/6	2021/11/5
LF-AMP	Agilent	8447D	2727A05146	2021/2/1	2022/1/31
HF-AMP + AC source	EMCI	EMC051845SE	980635	2021/2/1	2022/1/31
HF-AMP + AC source	EMCI	EMC184045SE	980656	2021/2/9	2022/2/8
Horn Antenna	SCHWARZBECK	BBHA 9170	00890	2021/4/14	2022/4/13
Microwave Cable	HUBER+SUHNER	SUCOFLEX 104EA	800057/4EA	2021/4/14	2022/4/13
Microwave Cable	HUBER+SUHNER	SUCOFLEX 104	802244/4	2021/4/14	2022/4/13
Microwave Cable	HUBER+SUHNER	SUCOFLEX 104	MY37203/4	2021/4/14	2022/4/13
Microwave Cable	HUBER+SUHNER	SUCOFLEX 102EA	800897/2EA	2021/3/11	2022/3/10
Microwave Cable	HUBER+SUHNER	SUCOFLEX 102EA	800902/2EA	2021/3/11	2022/3/10
Microwave Cable	HUBER+SUHNER	SUCOFLEX 102EA	801026/2EA	2021/3/11	2022/3/10
Loop Antenna	Chance Most	EMCILPA600 +calibration	287	2021/1/18	2022/1/17

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 ≥ 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

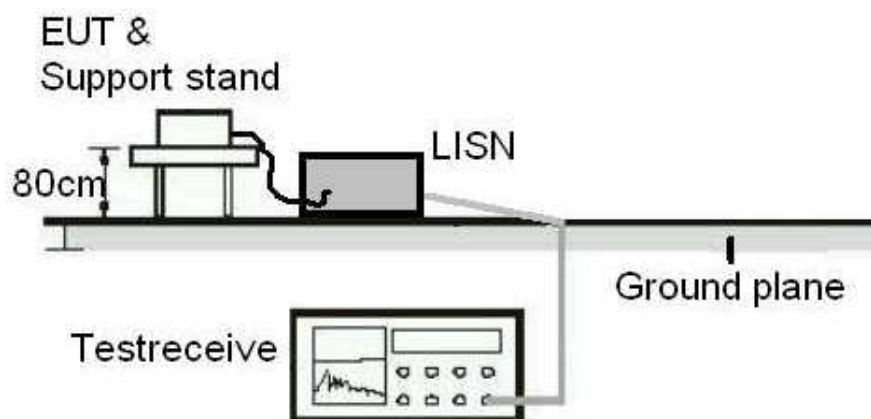
5.2.1 Mains Conducted Emission

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

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date
TWO-LINE V-NETWORK	R&S	ENV216	1816064	2020/9/10	2021/9/9
EMI Test Receiver	R&S	ESCI	1816063	2020/11/17	2021/11/16
RF Cable	N/A	N/A	EMC-003	2020/11/15	2021/11/14

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 B: Test Results of Radiated Emissions & Mains Conducted Emission Test

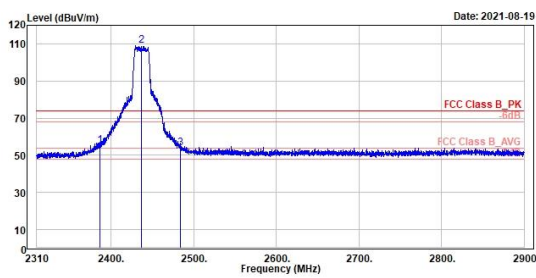
Band Edges, 2.31GHz ~ 2.9GHz

802.11n HT20

Middle Channel (Horizontal) Peak



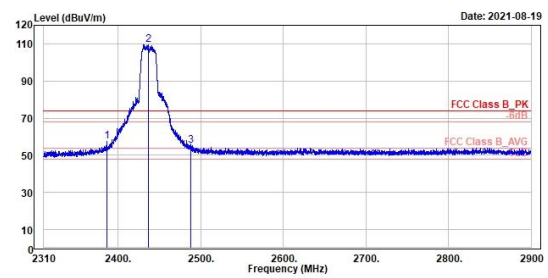
TÜV Rheinland Taiwan Ltd.
 No. 458-18, Sec. 2, Fenhiao, Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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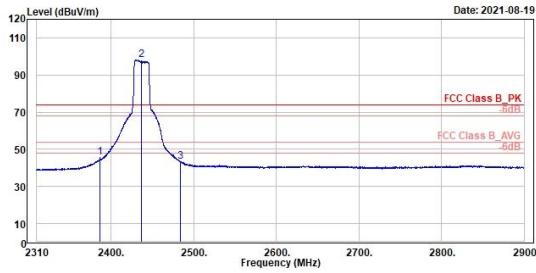
Middle Channel (Vertical) Peak

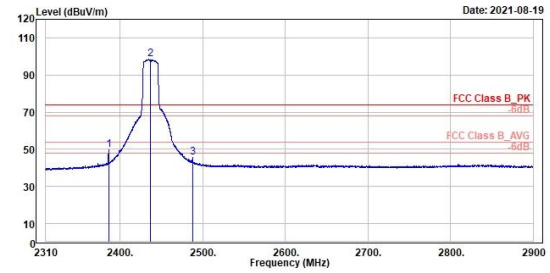


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Middle Channel (Horizontal) Average

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Middle Channel (Vertical) Average

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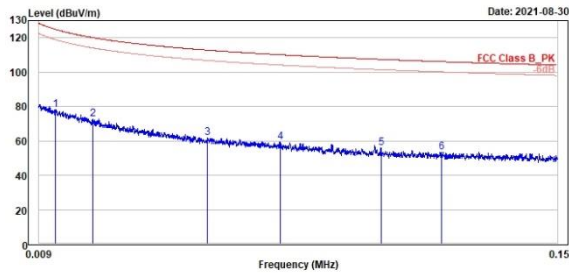
Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

802.11n20

Middle Channel (open) 9kHz~150kHz



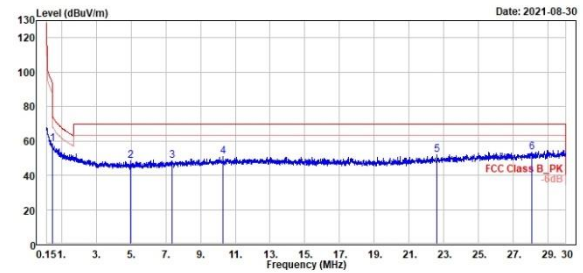
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	cm	deg			
1	0.01	78.17	2.85	75.32	124.95	-46.78	100	249	QP	Open		
2	0.02	72.51	1.21	71.30	120.13	-47.62	100	185	QP	Open		
3	0.05	61.73	-1.49	63.22	112.82	-51.09	100	304	QP	Open		
4	0.07	59.18	-1.41	60.59	110.13	-50.95	100	312	QP	Open		
5	0.10	55.84	-1.33	57.17	107.42	-51.58	100	60	QP	Open		
6	0.12	53.44	-3.03	56.47	106.13	-52.69	100	278	QP	Open		



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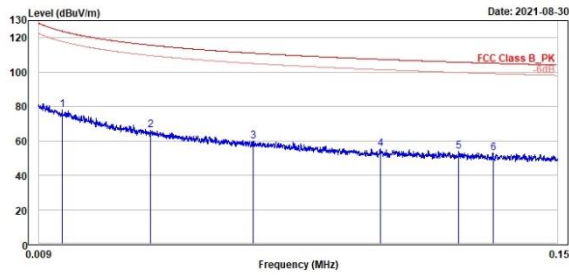
	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	cm	deg			
1	0.48	58.48	13.01	45.39	94.01	-35.61	100	327	QP	Open		
2	4.96	48.44	12.08	36.36	69.50	-21.06	100	265	QP	Open		
3	7.37	48.63	11.42	37.21	69.50	-20.87	100	272	QP	Open		
4	10.29	50.68	12.52	38.16	69.50	-18.82	100	264	QP	Open		
5	22.59	51.95	13.29	38.66	69.50	-17.55	100	270	QP	Open		
6	28.07	53.21	11.99	41.22	69.50	-16.29	100	42	QP	Open		

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Middle Channel (Close) 9kHz~150kHz



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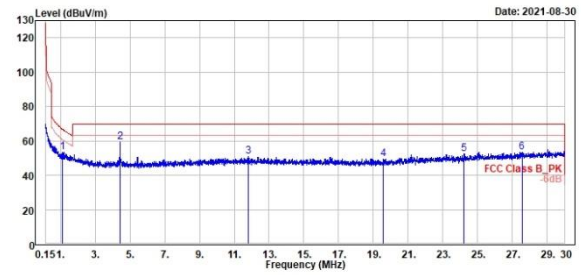


Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	0.02	78.31	3.72	74.59	123.85	-45.54	100	327 QP	Close		
2	0.04	66.28	-0.16	66.44	115.68	-49.40	100	182 QP	Close		
3	0.07	59.63	-1.93	61.56	111.02	-51.39	100	169 QP	Close		
4	0.10	55.45	-1.73	57.18	107.44	-51.99	100	241 QP	Close		
5	0.12	53.71	-2.56	56.27	105.79	-52.08	100	251 QP	Close		
6	0.13	52.87	-3.00	55.87	105.16	-52.29	100	8 QP	Close		

Middle Channel (Close) 150kHz~30MHz



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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	1.11	53.53	12.65	40.88	66.69	-13.16	100	352 QP	Close		
2	4.44	59.36	22.85	36.51	69.50	-10.14	100	199 QP	Close		
3	11.79	50.92	12.87	38.05	69.50	-18.58	100	168 QP	Close		
4	19.55	49.65	12.16	37.49	69.50	-19.05	100	19 QP	Close		
5	24.23	52.19	12.77	39.42	69.50	-17.31	100	209 QP	Close		
6	27.55	53.26	12.28	40.98	69.50	-16.24	100	313 QP	Close		

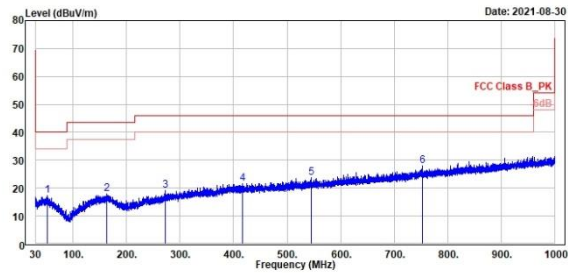
Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

802.11n20

Middle Channel (Horizontal)



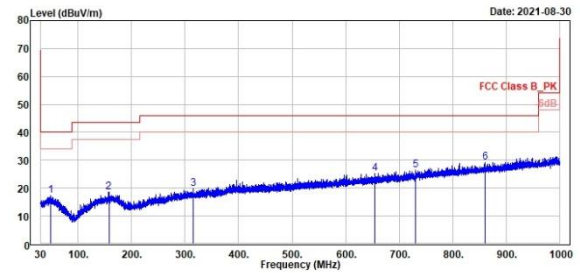
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	51.63	17.25	24.86	-7.61	40.00	-22.75	236	89	QP	Horizontal	
2	162.31	18.06	25.19	-7.13	43.50	-25.44	211	56	QP	Horizontal	
3	272.69	19.13	26.39	-7.26	46.00	-26.87	136	256	QP	Horizontal	
4	416.93	21.47	25.65	-4.18	46.00	-24.53	233	56	QP	Horizontal	
5	544.97	23.69	25.90	-2.21	46.00	-22.31	111	79	QP	Horizontal	
6	752.94	28.12	26.77	1.35	46.00	-17.88	100	89	QP	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	48.24	17.49	25.20	-7.71	40.00	-22.51	100	23	QP	Vertical	
2	157.36	18.45	25.74	-7.29	43.50	-25.05	200	36	QP	Vertical	
3	315.08	19.06	25.98	-6.12	46.00	-26.14	133	89	QP	Vertical	
4	654.49	25.18	25.66	-0.48	46.00	-20.82	300	89	QP	Vertical	
5	738.63	26.38	25.58	0.80	46.00	-19.62	122	96	QP	Vertical	
6	861.39	29.28	26.47	2.81	46.00	-16.72	122	44	QP	Vertical	

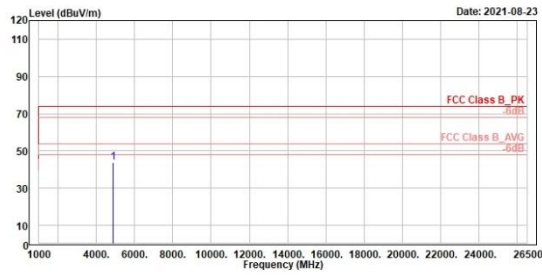
Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

802.11n HT20

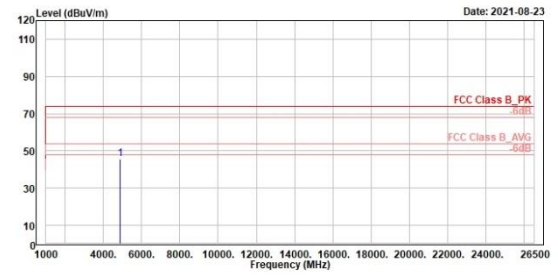
Middle Channel (Horizontal)



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Mains Conducted Emission, 150kHz ~ 30MHz

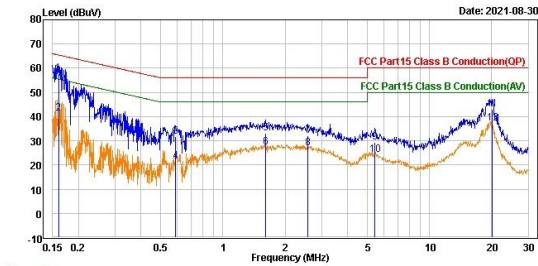
Worst Band

(Line)

(Neutral)



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Tel: +886-2172-1000 Fax: +886-2172-1322

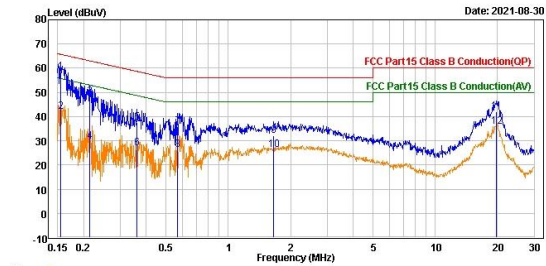


Trace: 1

	Freq	Read Level	Factor	Limit Line	Over Limit	Remark	Pol/Phase	Note
	MHz	dBuV	dB	dBuV	dB			
1	0.160	48.21	9.66	65.46	-7.59	QP	line1	
2	0.160	31.71	9.66	55.46	-14.09	Average	line1	
3	0.588	21.97	9.65	56.00	-24.38	QP	line1	
4	0.588	11.96	9.65	46.00	-24.39	Average	line1	
5	1.609	23.43	9.67	56.00	-22.90	QP	line1	
6	1.609	17.47	9.67	46.00	-18.86	Average	line1	
7	2.570	22.35	9.68	56.00	-23.97	QP	line1	
8	2.570	17.18	9.68	46.00	-19.14	Average	line1	
9	5.428	19.77	9.72	60.00	-30.51	QP	line1	
10	5.428	14.48	9.72	50.00	-25.80	Average	line1	
11	20.035	33.16	9.73	60.00	-17.11	QP	line1	
12	20.035	27.39	9.73	50.00	-12.88	Average	line1	



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Trace: 1

	Freq	Read Level	Factor	Limit Line	Over Limit	Remark	Pol/Phase	Note
	MHz	dBuV	dB	dBuV	dB			
1	0.155	48.63	9.68	65.71	-7.40	QP	neutral	
2	0.155	32.48	9.68	55.71	-13.55	Average	neutral	
3	0.215	38.43	9.67	63.02	-14.92	QP	neutral	
4	0.215	20.06	9.67	53.02	-23.29	Average	neutral	
5	0.362	27.96	9.66	58.67	-21.05	QP	neutral	
6	0.362	17.21	9.66	48.67	-21.80	Average	neutral	
7	0.568	26.07	9.66	56.00	-20.27	QP	neutral	
8	0.568	16.61	9.66	46.00	-19.73	Average	neutral	
9	1.658	22.34	9.69	56.00	-23.97	QP	neutral	
10	1.658	16.61	9.69	46.00	-19.70	Average	neutral	
11	19.737	32.04	9.82	60.00	-18.14	QP	neutral	
12	19.737	26.18	9.82	50.00	-14.00	Average	neutral	