

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)

Report No.: RFCCOG-WTW-P22060454A R1

FCC ID: 2AH7L-UPSB

Product: EcoStruxure™ Panel Server Universal

Brand: Schneider Electric

Model No.: PAS600L

Series Model: PAS600, PAS600T

Received Date: 2024/8/12

Test Date: 2024/9/4

Issued Date: 2025/8/5

Applicant: Schneider Electric Industries SAS

Address: Electropole Site - 38EQ1, 31 rue Pierre Mendes France, Eybens - 38050 Grenoble cedex 9

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location: No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)

FCC Registration / 281270 / TW0032

Designation Number:



Approved by:

Jeremy Lin / Project Engineer

, **Date:**

2025/8/5

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Prepared by : Gina Liu / Specialist

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Table of Contents

Release Control Record	3
1 Certificate.....	4
2 Summary of Test Results	5
2.1 Measurement Uncertainty	5
2.2 Supplementary Information	5
3 General Information	6
3.1 General Description.....	6
3.2 Antenna Description of EUT	7
3.3 Channel List.....	8
3.4 Test Mode Applicability and Tested Channel Detail.....	8
3.5 Test Program Used and Operation Descriptions	9
3.6 Connection Diagram of EUT and Peripheral Devices	9
3.7 Configuration of Peripheral Devices and Cable Connections	9
4 Test Instruments	10
4.1 Unwanted Emissions below 1 GHz	10
5 Limits of Test Items.....	11
5.1 Unwanted Emissions below 1 GHz	11
6 Test Arrangements.....	12
6.1 Unwanted Emissions below 1 GHz	12
6.1.1 Test Setup	12
6.1.2 Test Procedure	13
7 Test Results of Test Item	14
7.1 Unwanted Emissions below 1 GHz	14
8 Pictures of Test Arrangements	18
9 Information of the Testing Laboratories	19

Release Control Record

Issue No.	Description	Date Issued
RFCCOG-WTW-P22060454A	Original release.	2024/12/18
RFCCOG-WTW-P22060454A R1	Revised desquption from supplementary report to C2PC report.	2025/8/4

1 Certificate

Product: EcoStruxure™ Panel Server Universal

Brand: Schneider Electric

Test Model: PAS600L

Series Model: PAS600, PAS600T

Sample Status: Engineering sample

Applicant: Schneider Electric Industries SAS

Test Date: 2024/9/4

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)

Measurement

procedure: ANSI C63.10-2013

KDB 558074 D01 15.247 Meas Guidance v05r02

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Standard / Clause	Test Item	Result	Remark
15.247(b)	RF Output Power	N/A	Refer to Note
15.247(e)	Power Spectral Density	N/A	Refer to Note
15.247(a)(2)	6 dB Bandwidth	N/A	Refer to Note
15.247(d)	Conducted Out of Band Emissions	N/A	Refer to Note
15.207	AC Power Conducted Emissions	N/A	Refer to Note
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -3.9 dB at 48.43 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	N/A	Refer to Note
15.203	Antenna Requirement	Pass	Antenna Connector is RP-SMA male not a standard connector.

Note:

- Only Unwanted Emissions below 1 GHz test were verified and recorded in this report. Other testing data please refer to report no.: RFCCOG-WTW-P22060454-1.
- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Specification	Expanded Uncertainty (k=2) (\pm)
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3 dB
	30 MHz ~ 1 GHz	2.93 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description

Product	EcoStruxure™ Panel Server Universal
Brand	Schneider Electric
Test Model	PAS600L
Series Model	PAS600, PAS600T
Status of EUT	Engineering sample
Power Supply Rating	24Vdc for PAS600L 110-240Vac, 50-60Hz and 240Vdc for PAS600T 110-277Vac, 50-60Hz and 277Vdc for PAS600
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS, OFDM
Transfer 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 150.0 Mbps
Operating Frequency	2412 ~ 2462 MHz
Number of Channel	Client mode: 11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40) AP mode: 802.11n (HT20): 11

Note:

1. This report is issued as a C2PC report to the original BV CPS report no.: RFCCOG-WTW-P22060454-1. The difference compared with original report is updating 2.4GHz Access Point Mode thru F/W. However, RF power configuration: Internal Antenna-Reduced power with BV CPS report no.: RFBHBQ-WTW-P21030022-1, External Antenna-Higher power with BV CPS report no.: RF200605C50-1 for both Client and AP modes. Therefore, only Unwanted Emissions below 1 GHz test were verified and recorded in this report.

2. All models are listed as below. Model: PAS600L is the representative for final test.

Brand	Model	Difference
Schneider Electric	PAS600L	Power Supply Rating: 24Vdc
	PAS600T	(1) Power Supply Rating: 110-240Vac/dc with +/-10% tolerance (2) Without digital input
	PAS600	(1) Power Supply Rating: 110 -277Vac/dc with +/-10% tolerance (2) Without digital input

3. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Type	Ant. Type	Connector	Brand	Model	Gain (dBi)
External	Dipole	RP-SMA	Schneider Electric	PASA-ANT1	2.54
Internal	PCB	-	Schneider Electric	U31_1	2.14

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

* PCB antenna is original report RFCCOG-WTW-P22060454-1 only use in reduce power.

2. The EUT incorporates a SISO function:

2.4 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11b	1TX	1RX
802.11g	1TX	1RX
802.11n (HT20)	1TX	1RX
802.11n (HT40)	1TX	1RX

3.3 Channel List

Client mode:

11 channels are provided for 802.11b, 802.11g, 802.11n (HT20):

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

7 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
3	2422 MHz	7	2442 MHz
4	2427 MHz	8	2447 MHz
5	2432 MHz	9	2452 MHz
6	2437 MHz		

AP mode:

11 channels are provided for 802.11n (HT20):

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

3.4 Test Mode Applicability and Tested Channel Detail

Worst Case:	1. Worst Condition: Z-axis
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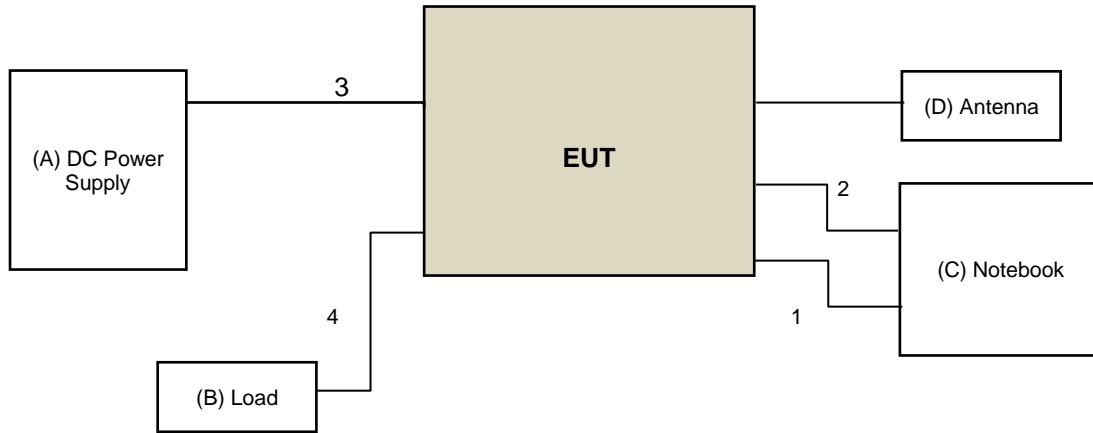
Following channel(s) was (were) selected for the final test as listed below:

Test Item	EUT Configure Mode	Mode	Tested Channel	Modulation	Data Rate Parameter
Unwanted Emissions below 1 GHz	A	802.11b	6	DBPSK	1Mb/s
	B	802.11n (HT20)	6	BPSK	MCS0
EUT Configure Mode:	A	External antenna (Dipole)			
	B	Internal antenna (PCB)			

3.5 Test Program Used and Operation Descriptions

Controlling software RTTT Version2.0.0.55 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.6 Connection Diagram of EUT and Peripheral Devices



Under Table

Remote Site

3.7 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	DC Power Supply	GWINSTEK	GPS-3030DD	N/A	N/A	Provided by Lab
B	Load	N/A	N/A	N/A	N/A	Provided by Lab
C	NB	Dell	L470	N/A	N/A	Provided by Lab
D	Antenna	Schneider Electric	PASA-ANT1	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	Console Cable	1	1	NO	0	Provided by Lab
2	Console Cable	1	1	NO	0	Supplied by applicant
3	DC Cable	1	2	NO	0	Supplied by applicant
4	RJ-45 Cable	2	1.5	NO	0	Provided by Lab

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-1213	2023/10/13	2024/10/12
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Loop Antenna Electro-Metrics	EM-6879	269	2023/9/23	2024/9/22
Loop Antenna TESEQ	HLA 6121	45745	2024/8/21	2025/8/20
MXA Signal Analyzer Keysight	N9020B	MY60110513	2023/12/22	2024/12/21
Preamplifier EMCI	EMC330N	980782	2024/1/15	2025/1/14
	EMC001340	980201	2023/9/27	2024/9/26
RF Coaxial Cable EMCI	EMCCFD400-NM-NM- 500	201233	2024/1/15	2025/1/14
	EMCCFD400-NM-NM- 3000	201235	2024/1/15	2025/1/14
	EMCCFD400-NM-NM- 9000	201236(with PAD)	2024/1/15	2025/1/14
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2024/9/4

5 Limits of Test Items

5.1 Unwanted Emissions below 1 GHz

Radiated emissions up to 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 30 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Notes:

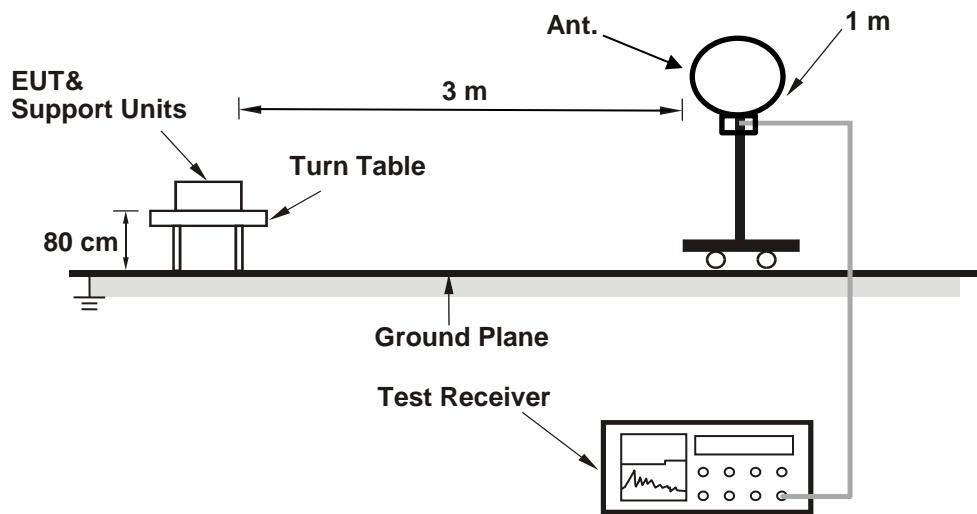
1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

6 Test Arrangements

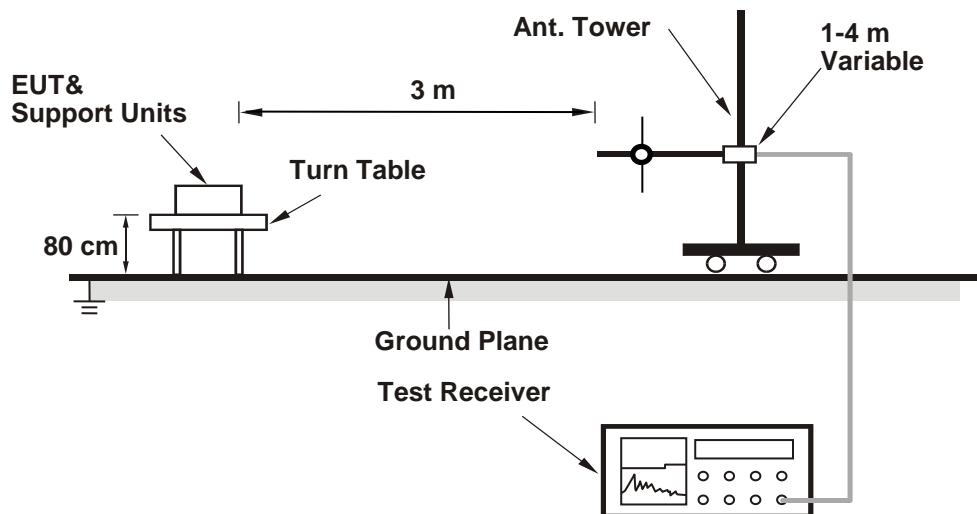
6.1 Unwanted Emissions below 1 GHz

6.1.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.1.2 Test Procedure

For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters 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. Parallel, perpendicular, and ground-parallel 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, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters 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.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

7 Test Results of Test Item

7.1 Unwanted Emissions below 1 GHz

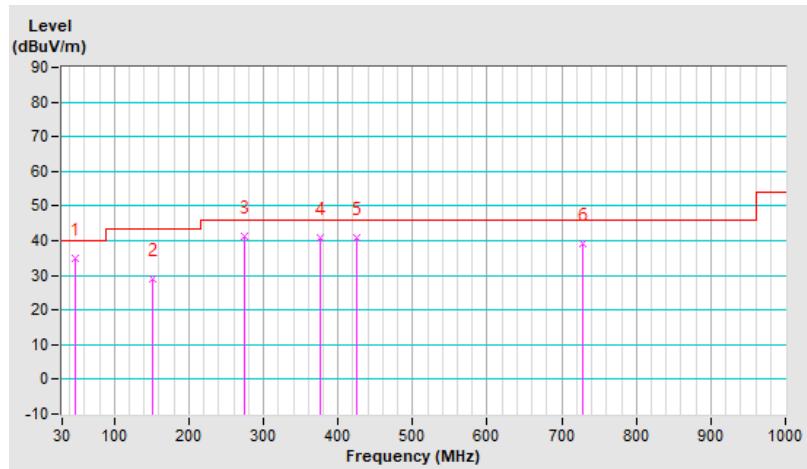
Mode A

RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	24 Vdc	Environmental Conditions	23 °C, 67 % RH
Tested By	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	48.43	35.0 QP	40.0	-5.0	1.53 H	224	48.0	-13.0
2	150.28	29.0 QP	43.5	-14.5	1.78 H	152	41.8	-12.8
3	275.41	41.1 QP	46.0	-4.9	1.30 H	94	54.3	-13.2
4	375.32	40.9 QP	46.0	-5.1	1.66 H	184	51.3	-10.4
5	424.79	41.0 QP	46.0	-5.0	1.77 H	209	50.3	-9.3
6	728.40	39.1 QP	46.0	-6.9	1.31 H	129	42.3	-3.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

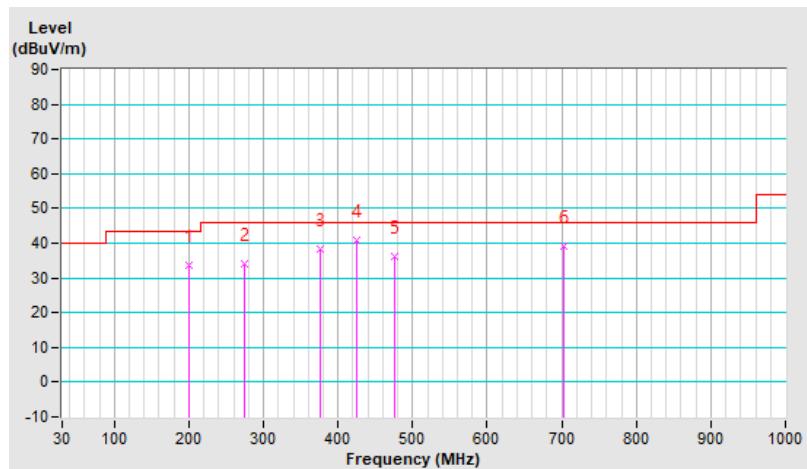


RF Mode	802.11b	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	24 Vdc	Environmental Conditions	23 °C, 67 % RH
Tested By	Karl Lee		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	199.75	33.8 QP	43.5	-9.7	1.86 V	253	50.4	-16.6
2	275.41	34.0 QP	46.0	-12.0	1.77 V	242	47.2	-13.2
3	375.32	38.2 QP	46.0	-7.8	1.53 V	82	48.6	-10.4
4	424.79	41.0 QP	46.0	-5.0	1.12 V	149	50.3	-9.3
5	475.23	36.3 QP	46.0	-9.7	1.83 V	227	44.2	-7.9
6	702.21	39.2 QP	46.0	-6.8	1.49 V	293	42.9	-3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



Mode B

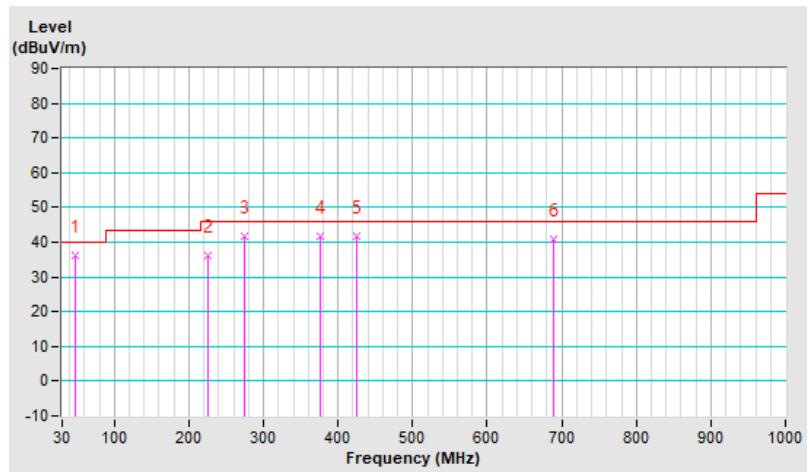
RF Mode	802.11n (HT20)	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	24 Vdc	Environmental Conditions	23 °C, 67 % RH
Tested By	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	48.43	36.1 QP	40.0	-3.9	2.35 H	148	49.1	-13.0
2	224.97	36.0 QP	46.0	-10.0	1.82 H	165	52.3	-16.3
3	275.41	41.8 QP	46.0	-4.2	1.94 H	108	55.0	-13.2
4	375.32	41.9 QP	46.0	-4.1	2.36 H	141	52.3	-10.4
5	424.79	41.8 QP	46.0	-4.2	1.89 H	253	51.1	-9.3
6	689.60	40.7 QP	46.0	-5.3	1.20 H	148	44.7	-4.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

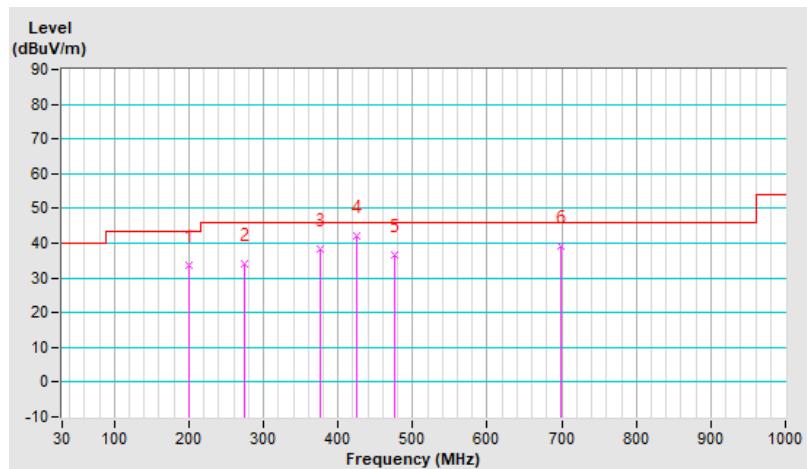


RF Mode	802.11n (HT20)	Channel	CH 6 : 2437 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	24 Vdc	Environmental Conditions	23 °C, 67 % RH
Tested By	Karl Lee		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	199.75	33.5 QP	43.5	-10.0	1.22 V	127	50.1	-16.6
2	275.41	33.9 QP	46.0	-12.1	1.63 V	259	47.1	-13.2
3	375.32	38.3 QP	46.0	-7.7	1.84 V	112	48.7	-10.4
4	424.79	42.0 QP	46.0	-4.0	2.71 V	185	51.3	-9.3
5	475.23	36.4 QP	46.0	-9.6	1.66 V	208	44.3	-7.9
6	698.33	39.2 QP	46.0	-6.8	1.70 V	146	42.9	-3.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab

Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@bureauveritas.com

Web Site: <http://ee.bureauveritas.com.tw>

The address and road map of all our labs can be found in our web site also.

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