

FCC Test Report

Report No.: FDBHAA-WTW-P20070391

Test Model: AL-T51A2-1

Received Date: Jul. 20, 2020

Test Date: Aug. 03 ~ Aug. 04, 2020

Issued Date: Aug. 05, 2020

Applicant: Kyocera Corporation

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

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33383, TAIWAN

FCC Registration / 328930 / TW1050

Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
FDBHAA-WTW-P20070391	Original release.	Aug. 05, 2020

1 Certificate of Conformity

Product: Telematics Module

Brand: Kyocera

Test Model: AL-T51A2-1

Sample Status: Engineering sample

Applicant: Kyocera Corporation

Test Date: Aug. 03 ~ Aug. 04, 2020

Standards: 47 CFR FCC Part 15, Subpart B, Class B
ANSI C63.4:2014

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 EMC characteristics under the conditions specified in this report.

Prepared by : , **Date:** Aug. 05, 2020
Vida Chen / Specialist

Approved by : , **Date:** Aug. 05, 2020
Mitch Jen / Assistant Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart B, Class B

ANSI C63.4:2014

FCC Clause	Test Item	Result/Remarks	Verdict
15.107	AC Power Line Conducted Emissions	Minimum passing Class B margin is -27.04 dB at 0.37659 MHz	Pass
15.109	Radiated Emissions up to 1 GHz	Minimum passing Class B margin is -4.57 dB at 67.83 MHz	Pass
	Radiated Emissions above 1 GHz	Minimum passing Class B margin is -18.93 dB at 5804.66 MHz	Pass

Note:

1. There is no deviation to the applied test methods and requirements covered by the scope of this report.
2. 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:

Measurement	Frequency	Expanded Uncertainty (k=2) (\pm)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.94 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	4.14 dB
Radiated Emissions above 1 GHz	Above 1GHz	5.04 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Telematics Module
Brand	Kyocera
Test Model	AL-T51A2-1
Sample Status	Engineering sample
Operating Software	NA
Power Supply Rating	5Vdc
Accessory Device	NA
Cable Supplied	0.08m module cable

3.2 Features of EUT

The tests reported herein were performed according to the method specified by Kyocera Corporation, for detailed feature description, please refer to the manufacturer's specifications or user's manual.

3.3 Operating Modes of EUT and Determination of Worst Case Operating Mode

For radiated emission up to 1GHz test, the EUT has been pre-tested under the following test modes and test mode 2 was the worst case for final test.

Mode	Test Condition
1	WCDMA band 2 Link + GPS
2	LTE band 2 Link + GPS

Test modes are presented in the report as below.

Mode	Test Condition
Conducted emission test	
-	LTE band 2 Link + GPS
Radiated emission up to 1GHz test	
-	LTE band 2 Link + GPS
Radiated emission above 1GHz test	
-	LTE band 2 Link + GPS

3.4 Test Program Used and Operation Descriptions

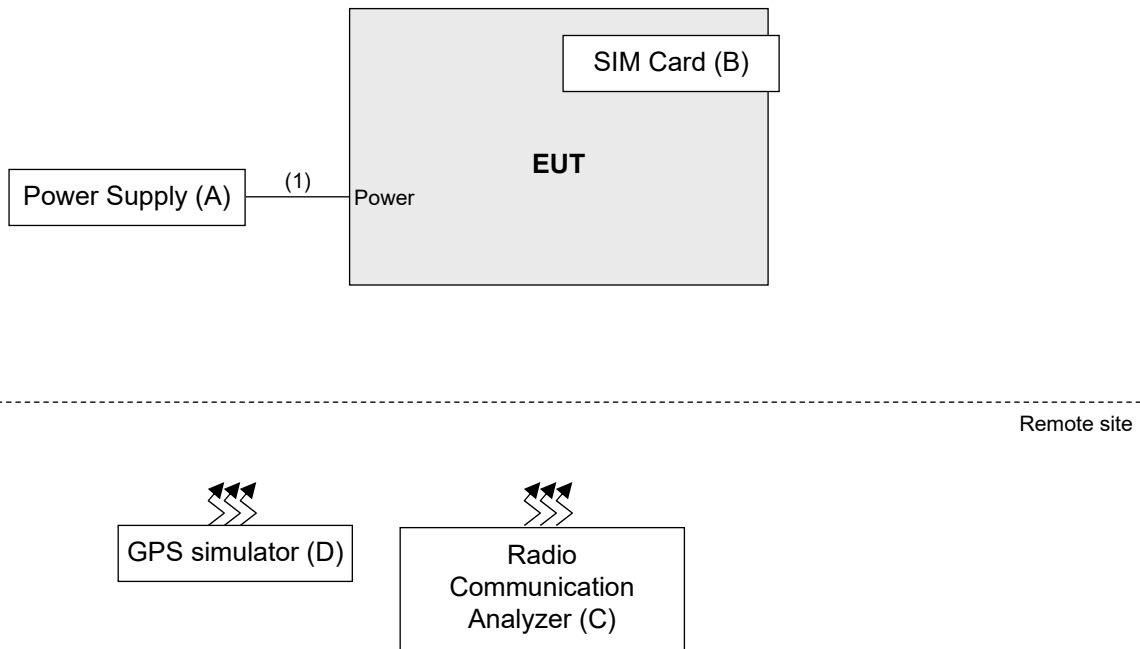
- a. EUT linked with radio communication analyzer and GPS simulator, acted as communication a partner, through WWAN / GPS.

3.5 Primary Clock Frequencies of Internal Source

The highest frequency generated or used within the EUT or on which the EUT operates or tunes is 1980MHz, provided by Kyocera Corporation, for detailed internal source, please refer to the manufacturer's specifications.

4 Configuration and Connections with EUT

4.1 Connection Diagram of EUT and Peripheral Devices



4.2 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Power Supply	Inspower	DC400-20D	212004	FCC DoC Approved	Provided by manufacturer Input:100-240Vac, 0.4A, 50-60Hz Output: 5Vdc, 3A
B.	SIM Card	R&S	NA	NA	NA	Provided by manufacturer
C.	Radio Communication Analyzer	Anritsu	MT8820C	6201010284	NA	-
D.	GPS simulator	PENDULUM	GSG-54	191121	NA	-

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item C-D acted as a communication partner to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC cable	1	1.75	N	0	Provided by manufacturer

5 Conducted Emissions at Mains Ports

5.1 Limits

Frequency (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

Notes: 1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases linearly with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

5.2 Test Instruments

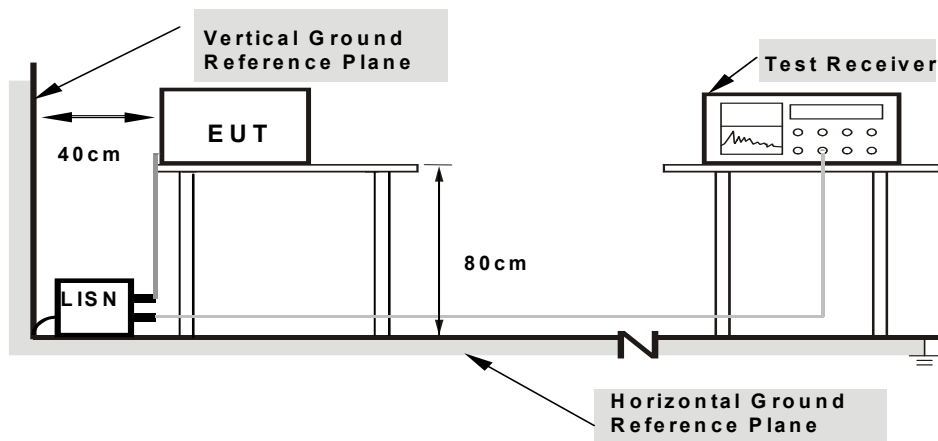
Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESR3	102412	Feb. 17, 2020	Feb. 16, 2021
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 05, 2019	Sep. 04, 2020
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Jan. 20, 2020	Jan. 19, 2021
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 13, 2019	Aug. 12, 2020
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 2 (Conduction 2).
 3. The VCCI Site Registration No. is C-12047.

5.3 Test Arrangement

- 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/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The test results of conducted emissions at mains ports are recorded of six worst margins for quasi-peak (mandatory) [and average (if necessary)] values against the limits at frequencies of interest unless the margin is 20 dB or greater.

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



- Note: 1.Support units were connected to second LISN.
 2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

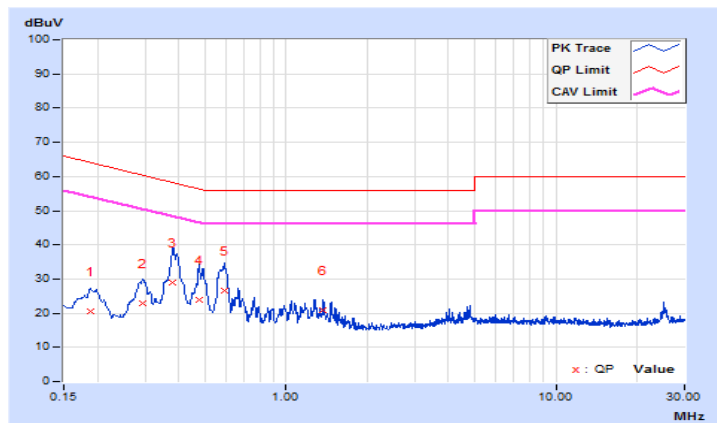
5.4 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz (System)	Environmental Conditions	25°C, 62%RH
Tested by	Daniel Lin	Test Date	2020/8/3

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18825	10.17	10.21	5.20	20.38	15.37	64.11	54.11	-43.73	-38.74
2	0.29382	10.18	12.55	5.57	22.73	15.75	60.42	50.42	-37.69	-34.67
3	0.37950	10.20	18.89	10.08	29.09	20.28	58.29	48.29	-29.20	-28.01
4	0.47625	10.21	13.74	2.94	23.95	13.15	56.40	46.40	-32.45	-33.25
5	0.59100	10.22	16.51	4.61	26.73	14.83	56.00	46.00	-29.27	-31.17
6	1.37175	10.27	10.60	7.45	20.87	17.72	56.00	46.00	-35.13	-28.28

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

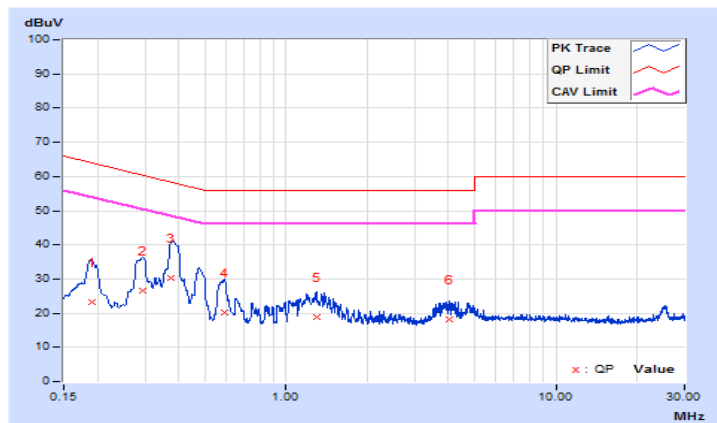


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz (System)	Environmental Conditions	25°C, 62%RH
Tested by	Daniel Lin	Test Date	2020/8/3

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19006	10.13	13.09	3.71	23.22	13.84	64.03	54.03	-40.81	-40.19
2	0.29304	10.15	16.37	8.32	26.52	18.47	60.44	50.44	-33.92	-31.97
3	0.37659	10.17	20.10	11.14	30.27	21.31	58.35	48.35	-28.08	-27.04
4	0.58875	10.20	9.95	5.20	20.15	15.40	56.00	46.00	-35.85	-30.60
5	1.29525	10.25	8.63	4.88	18.88	15.13	56.00	46.00	-37.12	-30.87
6	4.04025	10.39	7.96	5.87	18.35	16.26	56.00	46.00	-37.65	-29.74

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



6 Radiated Emissions up to 1 GHz

6.1 Limits

Emissions radiated outside of the specified bands, shall be according to the general radiated limits as following:

Radiated Emissions Limits at 10 meters (dB μ V/m)				
Frequencies (MHz)	FCC 15B, Class A	FCC 15B, Class B	CISPR 22, Class A	CISPR 22, Class B
30-88	39	29.5	40	30
88-216	43.5	33.1		
216-230	46.4	35.6		
230-960			47	37
960-1000	49.5	43.5		

Radiated Emissions Limits at 3 meters (dB μ V/m)				
Frequencies (MHz)	FCC 15B, Class A	FCC 15B, Class B	CISPR 22, Class A	CISPR 22, Class B
30-88	49.5	40	50.5	40.5
88-216	54	43.5		
216-230	56.9	46		
230-960			57.5	47.5
960-1000	60	54		

- Notes:
1. The lower limit shall apply at the transition frequencies.
 2. Emission level (dB μ V/m) = 20 log Emission level (uV/m).
 3. QP detector shall be applied if not specified.

6.2 Test Instruments

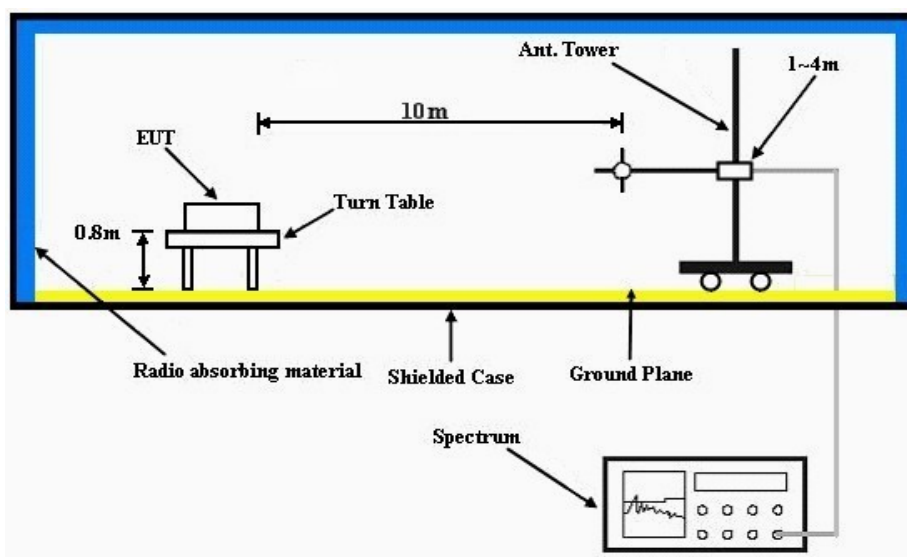
Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ (V)	ESR	101240	Oct. 31, 2019	Oct. 30, 2020
Test Receiver ROHDE & SCHWARZ (H)	ESR	101264	Apr. 16, 2020	Apr. 15, 2021
BILOG Antenna SCHWARZBECK (V)	VULB9168	9168-148	Nov. 08, 2019	Nov. 07, 2020
BILOG Antenna SCHWARZBECK (H)	VULB9168	9168-156	Nov. 08, 2019	Nov. 07, 2020
Preamplifier Sonoma (V)	310N	352924	Jun. 08, 2020	Jun. 07, 2021
Preamplifier Sonoma (H)	310N	352923	Jun. 08, 2020	Jun. 07, 2021
RF signal cable (with 5dB PAD) Times (V)	LMR-600 (18M) +LMR-400 (7M)	CABLE-CH1 (VER) -01	Sep. 05, 2019	Sep. 04, 2020
RF signal cable (with 5dB PAD) Times (H)	LMR-600 (11.8M) +LMR-400 (7M)	CABLE-CH1 (HOR) -01	Sep. 05, 2019	Sep. 04, 2020
Software BV ADT	BV ADT_Radiated_ V8.7.08	NA	NA	NA
Antenna Tower (V)	MFA-440	9707	NA	NA
Antenna Tower (H)	MFA-440	970705	NA	NA
Turn Table	DS430	50303	NA	NA
Controller (V)	MF7802	074	NA	NA
Controller (H)	MF7802	08093	NA	NA

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Chamber 1.
 3. The VCCI Site Registration No. is R-11893.

6.3 Test Arrangement

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited test facility. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna is a broadband antenna, and its height 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.
- 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.
- 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.

Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for quasi-peak detection (QP) at frequency below 1GHz.



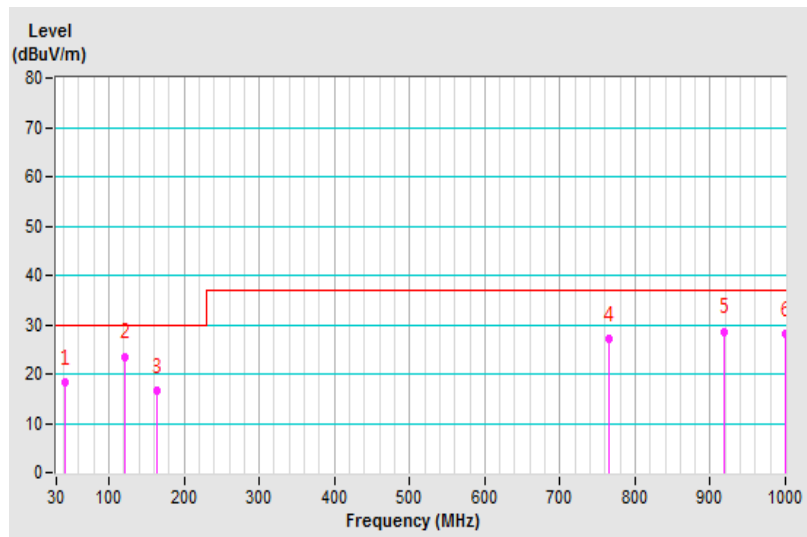
6.4 Test Results

Frequency Range	30MHz ~ 1GHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 120kHz
Input Power	120Vac, 60Hz (System)	Environmental Conditions	22°C, 69%RH
Tested by	Kai Chu	Test Date	2020/8/4

Antenna Polarity & Test Distance : Horizontal at 10 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	41.79	18.19 QP	30.00	-11.81	1.50 H	55	31.91	-13.72
2	121.33	23.49 QP	30.00	-6.51	2.50 H	24	38.86	-15.37
3	163.72	16.48 QP	30.00	-13.52	2.50 H	145	29.95	-13.47
4	764.71	26.95 QP	37.00	-10.05	2.00 H	149	29.41	-2.46
5	917.59	28.43 QP	37.00	-8.57	1.00 H	41	28.14	0.29
6	999.22	28.00 QP	37.00	-9.00	3.00 H	34	26.50	1.50

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. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value

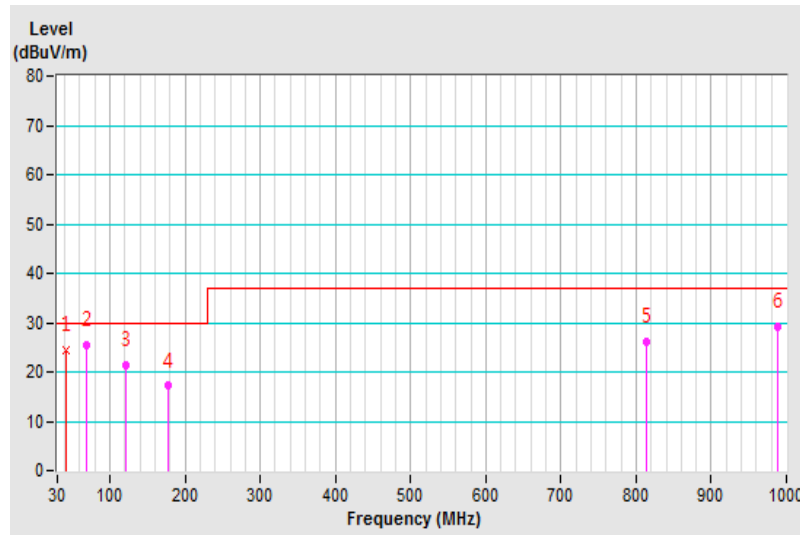


Frequency Range	30MHz ~ 1GHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 120kHz
Input Power	120Vac, 60Hz (System)	Environmental Conditions	22°C, 69%RH
Tested by	Kai Chu	Test Date	2020/8/4

Antenna Polarity & Test Distance : Vertical at 10 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	41.70	24.39 QP	30.00	-5.61	1.00 V	14	38.39	-14.00
2	67.83	25.43 QP	30.00	-4.57	3.50 V	75	40.67	-15.24
3	121.52	21.49 QP	30.00	-8.51	1.00 V	161	37.27	-15.78
4	177.59	17.20 QP	30.00	-12.80	1.00 V	185	32.02	-14.82
5	813.70	26.24 QP	37.00	-10.76	4.00 V	216	28.34	-2.10
6	988.80	29.08 QP	37.00	-7.92	2.50 V	340	27.37	1.71

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. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value



7 Radiated Emissions above 1 GHz

7.1 Limits

Emissions radiated outside of the specified bands, shall be according to the general radiated limits as following:

Radiated Emissions Limits at 10 meters (dB μ V/m)				
Frequencies (MHz)	FCC 15B, Class A	FCC 15B, Class B	CISPR 22, Class A	CISPR 22, Class B
1000-3000	Avg: 49.5	Avg: 43.5	Not defined	Not defined
Above 3000	Peak: 69.5	Peak: 63.5	Not defined	Not defined

Radiated Emissions Limits at 3 meters (dB μ V/m)				
Frequencies (MHz)	FCC 15B, Class A	FCC 15B, Class B	CISPR 22, Class A	CISPR 22, Class B
1000-3000	Avg: 60	Avg: 54	Avg: 56 Peak: 76	Avg: 50 Peak: 70
Above 3000	Peak: 80	Peak: 74	Avg: 60 Peak: 80	Avg: 54 Peak: 74

- Notes:
1. The lower limit shall apply at the transition frequencies.
 2. Emission level (dB μ V/m) = 20 log Emission level (μ V/m).
 3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Frequency Range (For unintentional radiators)

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or 40GHz, whichever is lower

7.2 Test Instruments

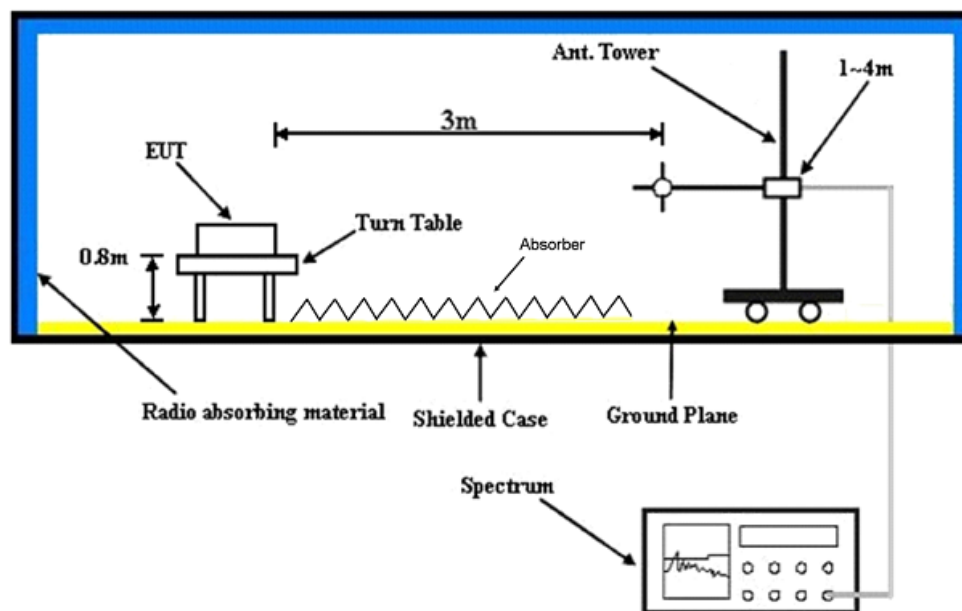
Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ (Above 1GHz)	ESR7	101471	Mar. 11, 2020	Mar. 10, 2021
Spectrum Analyzer Agilent	E4446A	MY51100039	Sep. 05, 2019	Sep. 04, 2020
BILOG Antenna SCHWARZBECK	VULB9168	9168-149	Nov. 07, 2019	Nov. 06, 2020
RF signal cable (with 5dB PAD) Times	LMR-400 (18M)	CABLE-CH2-01	Mar. 23, 2020	Mar. 22, 2021
HORN Antenna (with 4dB PAD) SCHWARZBECK	BBHA 9120 D	9120D-405	Nov. 24, 2019	Nov. 23, 2020
Pre-Amplifier Agilent (Above 1GHz)	8449B	3008A01961	Sep. 05, 2019	Sep. 04, 2020
Software BV ADT	BV ADT_Radiated_ V8.7.08	NA	NA	NA
Antenna Tower BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Controller BV ADT	SC100	SC93021702	NA	NA
BandPass Filter (2.4G) MICRO-TRONICS	BRM17690-01	003	Sep. 05, 2019	Sep. 04, 2020
BandPass Filter (5G) MICRO-TRONICS	BRM50716-01	G011	Sep. 05, 2019	Sep. 04, 2020
RF Coaxial Cable EMCI	EMC102-KM-KM-1000	170819	Oct. 08, 2019	Oct. 07, 2020
RF Coaxial Cable Rosnol	K1K50-UP0279-K1K50 -3000	181129-1	Oct. 08, 2019	Oct. 07, 2020
RF Coaxial Cable JUNFLON+EMC	JUNFLON+EMC104-S M-SM-6000	Cable-CH2-02(M WX3221308G003 +130710)	Jan. 18, 2020	Jan. 17, 2021
Fix tool for Boresight antenna	BAF-01	2	NA	NA

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Chamber 2 (966 Chamber 1).
 3. The VCCI Site Registration No. is G-10018.

7.3 Test Arrangement

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The height of antenna can be varied from one meter to four meters, the height of adjustment depends on the EUT height and the antenna 3dB beamwidth both, to detect the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The spectrum analyzer system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.

Note: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection (PK) at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz for Average detection (AV) at frequency above 1GHz.



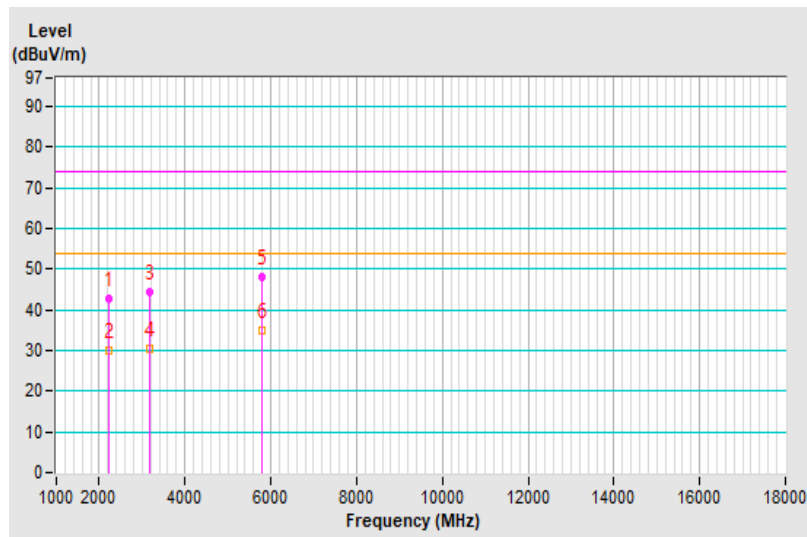
7.4 Test Results

Frequency Range	1GHz ~ 14GHz	Detector Function & Resolution Bandwidth	Peak (PK) / Average (AV), 1MHz
Input Power	120Vac, 60Hz (System)	Environmental Conditions	22°C, 68%RH
Tested by	Slash Huang	Test Date	2020/8/3

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	2230.74	42.72 PK	74.00	-31.28	1.75 H	351	40.96	1.76
2	2230.74	30.14 AV	54.00	-23.86	1.75 H	351	28.38	1.76
3	3177.15	44.48 PK	74.00	-29.52	2.00 H	26	41.70	2.78
4	3177.15	30.49 AV	54.00	-23.51	2.00 H	26	27.71	2.78
5	5804.66	47.90 PK	74.00	-26.10	1.00 H	144	38.92	8.98
6	5804.66	35.07 AV	54.00	-18.93	1.00 H	144	26.09	8.98

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. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value

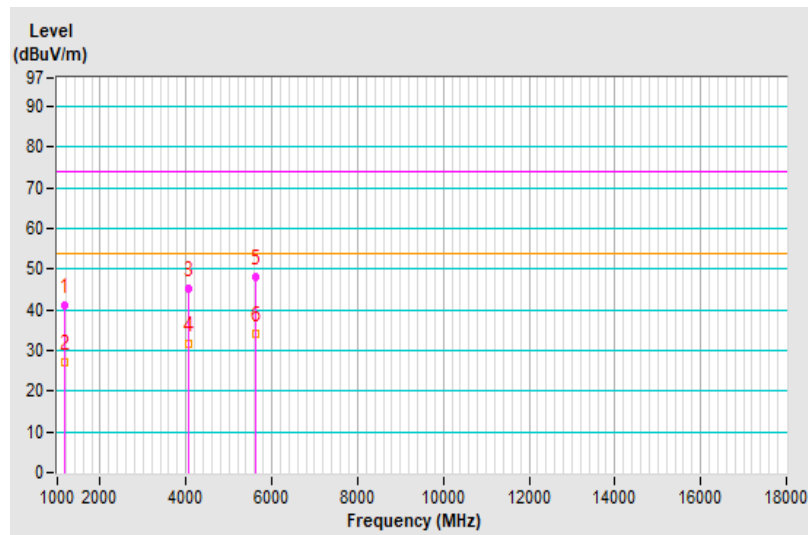


Frequency Range	1GHz ~ 14GHz	Detector Function & Resolution Bandwidth	Peak (PK) / Average (AV), 1MHz
Input Power	120Vac, 60Hz (System)	Environmental Conditions	22°C, 68%RH
Tested by	Slash Huang	Test Date	2020/8/3

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	1178.49	41.21 PK	74.00	-32.79	1.00 V	2	44.73	-3.52
2	1178.49	27.23 AV	54.00	-26.77	1.00 V	2	30.75	-3.52
3	4044.68	45.03 PK	74.00	-28.97	1.50 V	156	40.48	4.55
4	4044.68	31.56 AV	54.00	-22.44	1.50 V	156	27.01	4.55
5	5628.25	47.89 PK	74.00	-26.11	1.75 V	315	39.43	8.46
6	5628.25	34.24 AV	54.00	-19.76	1.75 V	315	25.78	8.46

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. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value

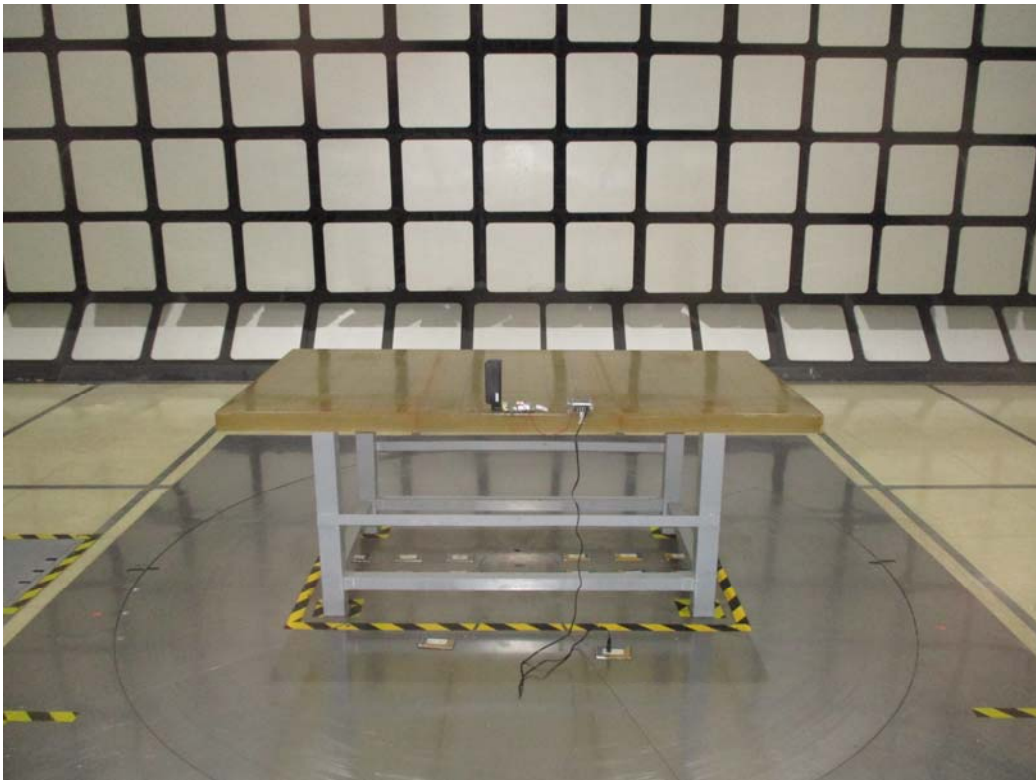


8 Pictures of Test Arrangements

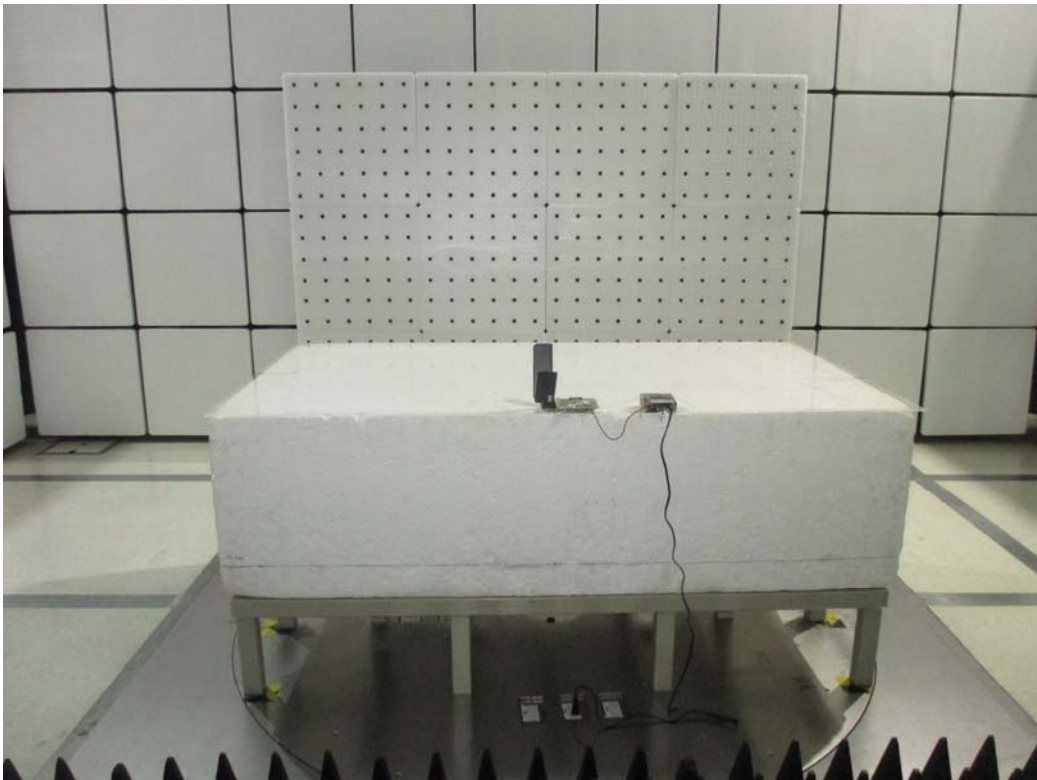
8.1 Conducted Emissions at Mains Ports



8.2 Radiated Emissions up to 1 GHz



8.3 Radiated Emissions above 1 GHz



Appendix – 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 and approved according to ISO/IEC 17025.

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Web Site: www.bureauveritas-adt.com

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

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