TEST REPORT

CERTIFICATE OF CONFORMITY

Standards:	**47 CFR FCC Part 15, Subpart B, Class A** **ANSI C63.4:2014**
Report No.:	FDBDBO-WTW-P21050983
Model No.:	MIG-2000
Series Model:	MIG-2 XXXXXXXXXXXXXXX ("X" can be 0-9, A-Z or blank for marketing purposes)
Received Date:	May 26, 2021
Test Date:	May 31 to Jun. 4, 2021
Issued Date:	Jun. 11, 2021
Applicant:	Vecow Co., Ltd.
Address:	3F., No.10, Jiankang Rd., Zhonghe Dist., New Taipei City 23586, Taiwan
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. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
FCC Registration / Designation Number:	418586 / TW1078

Approved by : Jim Hsiang , **Date:** Jun. 11, 2021

Jim Hsiang / Associate Technical Manager

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Prepared by : Vivian Chen / Specialist

Certificate #4327.01

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Release Control Record

Issue No.	Description	Date Issued
FDBDBO-WTW-P21050983	Original release.	Jun. 11, 2021

1 Certification

Product:	GPU Computing System
Brand:	Vecow
Test Model:	MIG-2000
Series Model:	MIG-2 XXXXXXXXXXXXXXX (“X” can be 0-9, A-Z or blank for marketing purposes)
Sample Status:	Engineering sample
Applicant:	Vecow Co., Ltd.
Test Date:	May 31 to Jun. 4, 2021
Standards:	47 CFR FCC Part 15, Subpart B, Class A 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.

2 Summary of Test Results

The test items that the EUT needs to perform according to its interfaces and functions evaluation are as follows:

FCC Part 15 Clause	Test Item	Result/Remarks	Verdict
15.107	Conducted Emissions from Power Ports	Minimum passing Class A margin is -21.23 dB at 0.15391 MHz	Pass
15.109	Radiated Emissions up to 1 GHz	Minimum passing Class A margin is -2.85 dB at 297.01 MHz	Pass
	Radiated Emissions above 1 GHz	Minimum passing Class A margin is -7.45 dB at 5400.04 MHz	Pass

Note: 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) (±)
Conducted Emissions from Power Ports	150kHz ~ 30MHz	2.94 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	4.30 dB
Radiated Emissions above 1 GHz	Above 1GHz	4.96 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 Description of EUT

Product	GPU Computing System
Brand	Vecow
Test Model	MIG-2000
Series Model	MIG-2 XXXXXXXXXXXXXXX ("X" can be 0-9, A-Z or blank for marketing purposes)
Model Difference	For marketing purpose
Sample Status	Engineering sample
Operating Software	Windows 10, Burnintest
Power Supply Rating	DC from Adapter
Accessory Device	N/A
Data Cable Supplied	N/A

Note:

The EUT uses following adapter.

Brand	LITEON
Model	PA-1181-28
Input Power	100-240Vac, 2.34A, 50-60Hz
Output Power	24Vdc, 7.5A, 180W
Power Line	AC 3Pin Non-shielded DC cable (1.65m) with two ferrite cores.

3.2 Primary Clock Frequencies of Internal Source

The highest frequency generated or used within the EUT or on which the EUT operates or tunes is 2.9GHz, provided by Vecow Co., Ltd., for detailed internal source, please refer to the manufacturer's specifications.

3.3 Features of EUT

1. The tests reported herein were performed according to the method specified by Vecow Co., Ltd., for detailed feature description, please refer to the manufacturer's specifications or user's manual.
2. The EUT configured with the following key components:

Components	Brand	Model	Specification
CPU	Intel	Intel core i7-10700E	2.9GHz
RAM	Innodisk	-	8GB 2666 SODIMM
SSD	-	-	MEMXPRO 2.5"
SSD	-	-	ET30 128GB WT

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

1. The EUT is designed with AC power of rating 100-240Vac, 50-60Hz.
   For radiated emission evaluation, 230Vac/50Hz (for EN 50155), 120Vac/60Hz (for FCC Part 15) had been covered during the pre-test. The worst data was found at **230Vac/50Hz** and recorded in the applied test report.
2. EUT has been pre-tested under following test modes, and test **mode 1** was the worst case for final test.

Mode	Test Condition
1	HDMI 1: 3840*2160, 60Hz + HDMI 2: 3840*2160, 60Hz
2	HDMI 1: 3840*2160, 60Hz + HDMI 3: 3840*2160, 60Hz

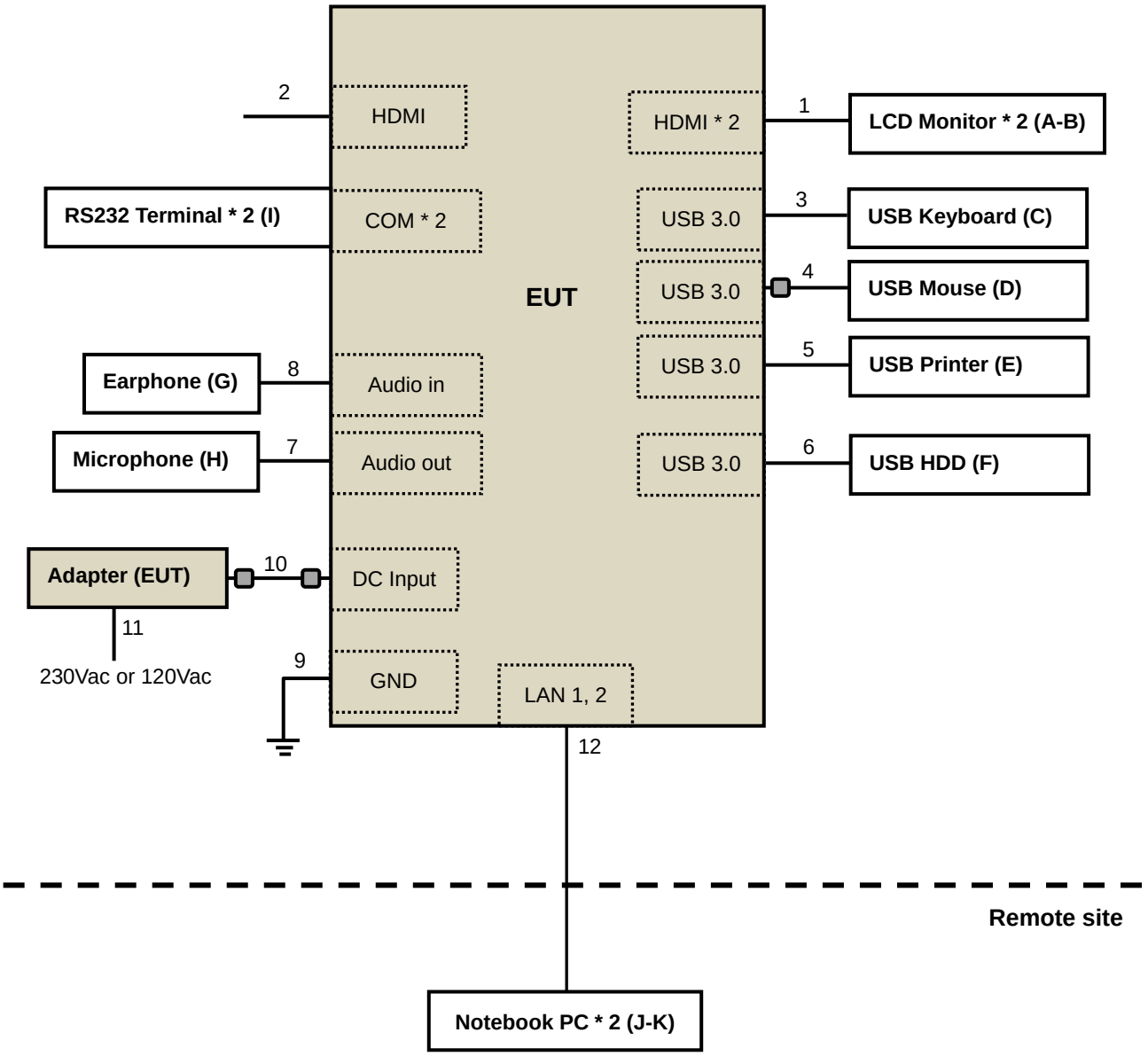
3. Test modes are presented in the report as below.

Mode	Test Condition	Input Power
Conducted emission test		
1	HDMI 1: 3840*2160, 60Hz + HDMI 2: 3840*2160, 60Hz	120Vac/ 60Hz
Radiated emission test		
1	HDMI 1: 3840*2160, 60Hz + HDMI 2: 3840*2160, 60Hz	230Vac/ 50Hz

3.5 Test Program Used and Operation Descriptions

a. Turned on the power of all equipment.
b. EUT ran a test program to enable all functions.
c. EUT read and wrote messages from/to SSD and ext. HDDs.
d. EUT sent and received messages to/from Notebook PCs (kept in a remote area) via two UTP LAN cables (10m each).
e. EUT sent “H” messages to ext. LCD Monitors. Then they displayed “H” messages on their screens simultaneously.
f. EUT sent messages to printer and printer printed them out.
g. EUT sent “1kHz” audio signal to earphone.
h. Steps c-g were repeated.

3.6 Connection Diagram of EUT and Peripheral Devices



3.7 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	LCD MONITOR	ASUS	MX27U	JBLMRS007843	NA	Provided by Lab
B.	LCD MONITOR	ASUS	MX27U	K1LMRS022990	NA	Provided by Lab
C.	USB Keyboard	Dell	KB216t	CN-0W33XP-LO300-7CL-1909	NA	Provided by Lab
D.	USB Mouse	Microsoft	1113	9170528318308	FCC DoC Approved	Provided by Lab
E.	USB Printer	HP	HP Officejet Pro 251dw	CN55FCV012	FCC DoC Approved	Provided by Lab
F.	USB-C Hard Disk	G-DRIVE	0G04878	620XJ67W	FCC DoC Approved	Provided by Lab
G.	EARPHONE	PHILIPS	SBC HL145	N/A	NA	Provided by Lab
H.	MICROPHONE	Labtec	mic-333	N/A	NA	Provided by Lab
I.	RS232 Terminal* 2	NA	NA	NA	NA	Supplied by client
J.	Notebook PC	LENOVO	T480	PF1EZSAW	NA	Provided by Lab
K.	Notebook PC	LENOVO	T480	PF1EZSA2	NA	Provided by Lab

Note:
1. All power cords of the above support units are non-shielded (1.8m).
2. Items J-K acted as communication partners to transfer data.

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	HDMI cable	2	1.8	Y	0	Provided by Lab
2.	HDMI cable	1	1.8	Y	0	Provided by Lab
3.	USB cable	1	1.8	Y	0	Provided by Lab
4.	USB cable	1	1.8	Y	1	Provided by Lab
5.	USB cable	1	1.8	Y	0	Provided by Lab
6.	USB cable	1	1.0	Y	0	Provided by Lab
7.	Audio cable	1	2.5	N	0	Provided by Lab
8.	Audio cable	1	1.2	N	0	Provided by Lab
9.	GND cable	1	1.5	N	0	Provided by Lab
10.	DC power cable	1	1.65	N	2	Supplied by client
11.	AC power cable	1	1.8	N	0	Supplied by client
12.	LAN cable	2	10	N	0	Provided by Lab (RJ45, Cat.5e)

Note: The core(s) is(are) originally attached to the cable(s).

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 Conducted Emissions from Power Ports

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
ROHDE & SCHWARZ Test Receiver	ESCI	100424	Dec. 31, 2020	Dec. 30, 2021
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ENV216	101197	Jun. 10, 2020	Jun. 9, 2021
LISN With Adapter (for EUT)	101197	NA	Jun. 10, 2020	Jun. 9, 2021
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100218	Dec. 2, 2020	Dec. 1, 2021
SCHWARZBECK Artificial Mains Network (For EUT)	NNLK8129	8129229	May 20, 2021	May 19, 2022
SCHWARZBECK Artificial Mains Network (for EUT)	NNLK 8121	8121-808	Apr. 18, 2021	Apr. 17, 2022
Software	Cond_V7.3.7.4	NA	NA	NA
RF cable (JYEBAO) With 10dB PAD	5D-FB	Cable-C10.01	Feb. 10, 2021	Feb. 9, 2022
LYNICS Terminator (For ROHDE & SCHWARZ LISN)	0900510	E1-011484	May 25, 2021	May 24, 2022

Note: 1. The test was performed in Shielded Room No. 10. (Conduction 10)
2. The VCCI Site Registration No. C-11852.
3. Tested Date: May 31, 2021

4.2 Radiated Emissions up to 1 GHz

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
ROHDE & SCHWARZ TEST RECEIVER	ESCS 30	100292	Aug. 26, 2020	Aug. 25, 2021
Schwarzbeck Bilog Antenna	VULB9168	9168-303	Nov. 5, 2020	Nov. 4, 2021
Agilent Preamplifier	8447D	2944A08119	Feb. 18, 2021	Feb. 17, 2022
ADT. Turn Table	TT100	0205	NA	NA
ADT. Tower	AT100	0205	NA	NA
Software	Radiated_V7.6.15.9.5	NA	NA	NA
ADT RF Switches BOX	EMH-011	1001	Oct. 23, 2020	Oct. 22, 2021
Pacific RF cable With 5dB PAD	8D	CABLE-ST2-01	Oct. 23, 2020	Oct. 22, 2021

Note: 1. The test was performed in Open Site No. 2.
2. The VCCI Site Registration No. R-10237.
3. Tested Date: Jun. 3, 2021

4.3 Radiated Emissions above 1 GHz

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Agilent Spectrum	E4446A	MY51100009	Jun. 23, 2020	Jun. 22, 2021
R&S Test Receiver	ESR3	102412	Jan. 29, 2021	Jan. 28, 2022
EMCI Preamplifier	EMC0126545	980076	Feb. 19, 2021	Feb. 18, 2022
MITEQ Preamplifier	AMF-6F-260400-33-8P	892164	Feb. 19, 2021	Feb. 18, 2022
EMCI Preamplifier	EMC184045B	980235	Feb. 19, 2021	Feb. 18, 2022
ETS Preamplifier	3117-PA	00215857	Nov. 23, 2020	Nov. 22, 2021
Schwarzbeck Horn Antenna	BBHA-9170	212	Nov. 22, 2020	Nov. 21, 2021
EMCO Horn Antenna	3115	9312-4192	Nov. 22, 2020	Nov. 21, 2021
Max Full. Turn Table & Tower	MF7802	MF780208103	NA	NA
Software	Radiated_V8.7.08	NA	NA	NA
SUHNER RF cable With 3/4dB PAD	SF102	Cable-CH7-3.6m	Jul. 9, 2020	Jul. 8, 2021
MICRO-TRONICS Notch filter	BRC50703-01	010	May 28, 2021	May 27, 2022
MICRO-TRONICS Band Pass Filter	BRM17690	005	May 28, 2021	May 27, 2022

Note: 1. The test was performed in Chamber No. 7.
2. The VCCI Site Registration No. G-10039
3. Tested Date: Jun. 4, 2021

5 Limits of Test Items

5.1 Conducted Emissions from Power Ports

Frequency (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.5 - 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 Radiated Emissions up to 1 GHz

Radiated Emissions Limits at 10 meters (dBµV/m)				
Frequencies (MHz)	FCC Part 15B, Class A	FCC Part 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 (dBµV/m)				
Frequencies (MHz)	FCC Part 15B, Class A	FCC Part 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.

5.3 Radiated Emissions above 1 GHz

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

Radiated Emissions Limits at 3 meters (dBµV/m)		
Frequency range	Class A	Class B
Above 1GHz	Avg: 60 Peak: 80	Avg: 54 Peak: 74

Notes: 1. These limit levels apply for a measurement distance of 3 m. If using a different measurement distance, the measured levels shall be extrapolated to the 3 m limit distance using a factor of 20 dB per decade of distance. The measurement distance shall place the measurement antenna in the far field of the ITE or digital apparatus under test.

6 Test Arrangements

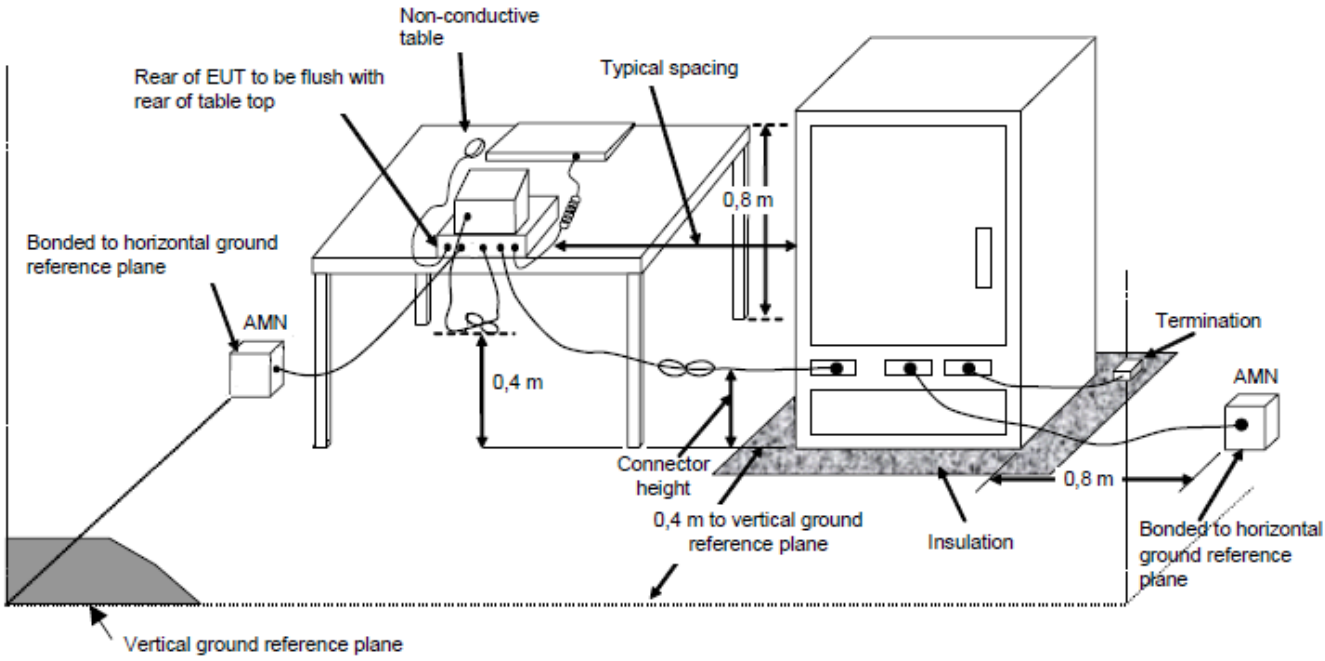
6.1 Conducted Emissions from Power Ports

a. For the table-top EUT is placed on a 0.8 meter to the top of rotating table; for the the floor standing EUT shall be insulated (by insulation of 12 mm) from the horizontal reference ground plane. The EUT is 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 are connected to the power mains through another LISN. They provide 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 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.

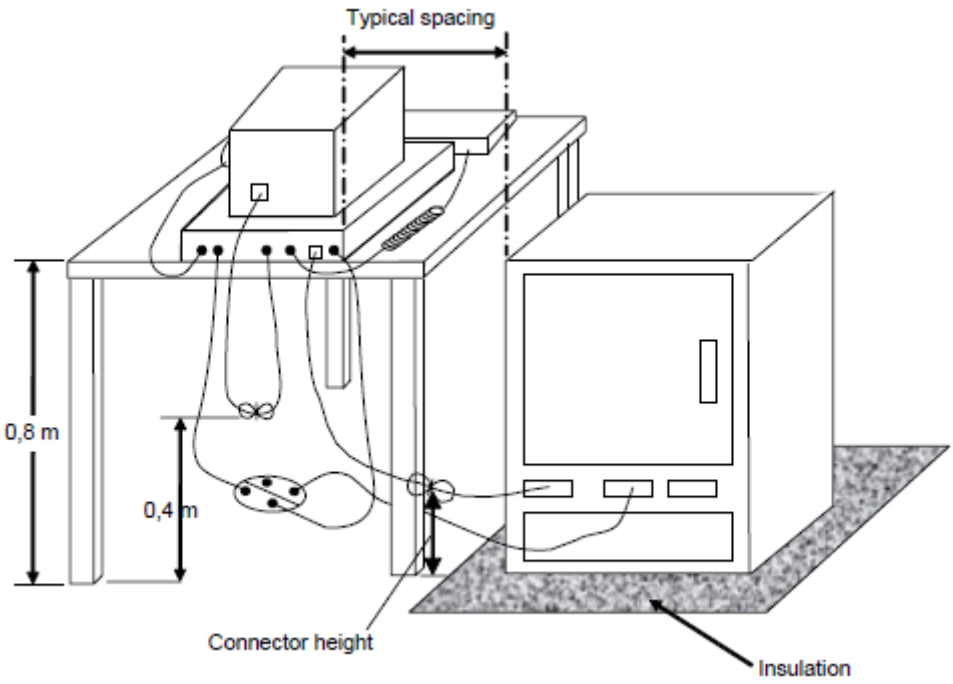


For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

6.2 Radiated Emissions up to 1 GHz

a. For the table-top EUT is placed on a 0.8 meter to the top of rotating table; for the the floor standing EUT shall be insulated (by insulation of 12 mm) from the horizontal reference ground plane. The rotating table is rotated 360 degrees to determine the position of the highest radiation. If the equipment requires a dedicated ground connection, this shall be provided and bonded to the RGP.
b. The EUT was set 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. 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.
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 up to 1 GHz.

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

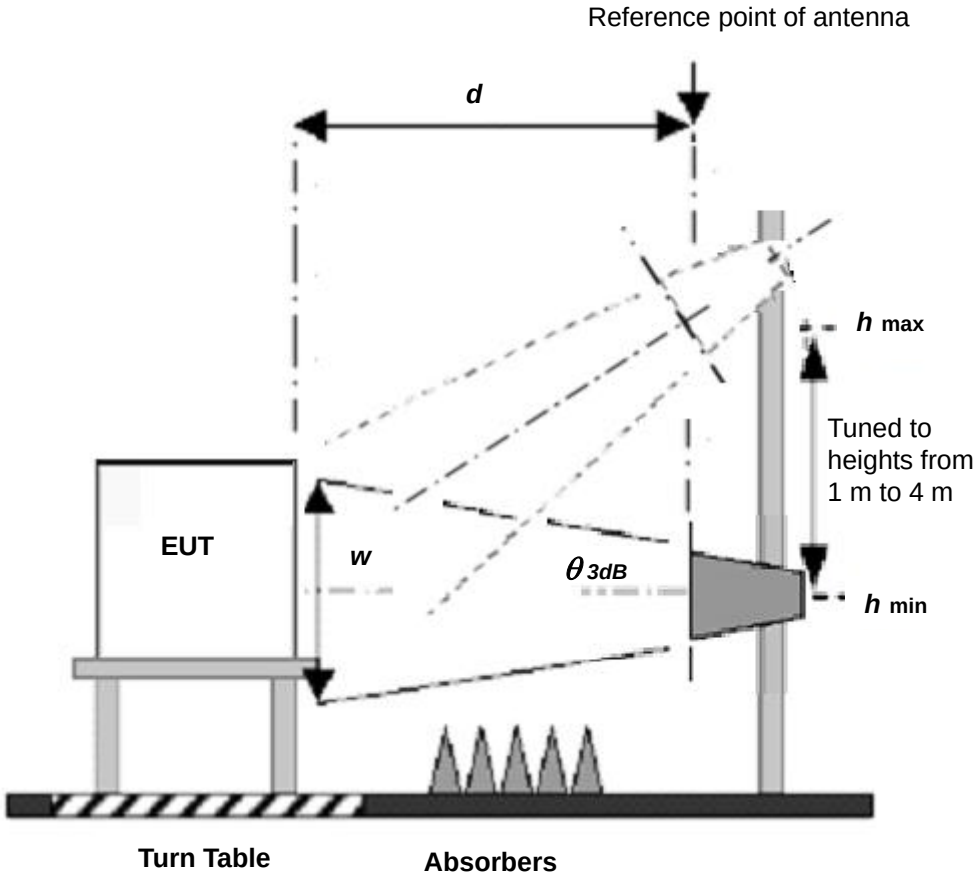


For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

6.3 Radiated Emissions above 1 GHz

a. For the table-top EUT is placed on a 0.8 meter to the top of rotating table; for the the floor standing EUT shall be insulated (by insulation of 12 mm) from the horizontal reference ground plane. The rotating table is rotated 360 degrees to determine the position of the highest radiation. If the equipment requires a dedicated ground connection, this shall be provided and bonded to the RGP.
b. The EUT was set *d* = 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 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.
d. 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.
e. The spectrum analyzer system was set to peak and average detects 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.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

7 Test Results

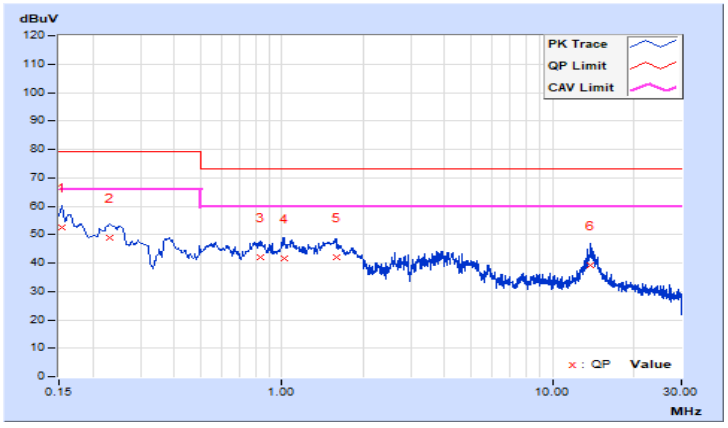
7.1 Conducted Emissions from Power Ports

Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	22℃, 74%RH
Tested by	Ken Lee	**Test Date**	2021/5/31
Test Mode	Mode 1		

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	**0.15391**	**9.72**	**42.81**	**35.05**	**52.53**	**44.77**	**79.00**	**66.00**	**-26.47**	**-21.23**
2	0.23094	9.72	39.30	28.13	49.02	37.85	79.00	66.00	-29.98	-28.15
3	0.83635	9.74	32.34	22.15	42.08	31.89	73.00	60.00	-30.92	-28.11
4	1.02016	9.75	31.87	22.18	41.62	31.93	73.00	60.00	-31.38	-28.07
5	1.59899	9.77	32.10	23.78	41.87	33.55	73.00	60.00	-31.13	-26.45
6	13.85059	9.97	29.02	21.79	38.99	31.76	73.00	60.00	-34.01	-28.24

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

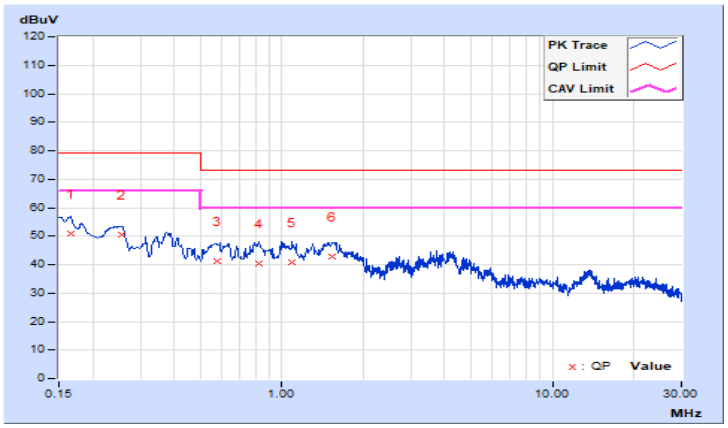


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	22℃, 74%RH
Tested by	Ken Lee	**Test Date**	2021/5/31
Test Mode	Mode 1		

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	0.16526	9.72	41.20	19.60	50.92	29.32	79.00	66.00	-28.08	-36.68
2	0.25560	9.72	40.69	28.95	50.41	38.67	79.00	66.00	-28.59	-27.33
3	0.57822	9.73	31.51	20.02	41.24	29.75	73.00	60.00	-31.76	-30.25
4	0.82070	9.74	30.68	20.81	40.42	30.55	73.00	60.00	-32.58	-29.45
5	1.09018	9.75	31.05	21.47	40.80	31.22	73.00	60.00	-32.20	-28.78
6	1.54033	9.77	33.08	25.04	42.85	34.81	73.00	60.00	-30.15	-25.19

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



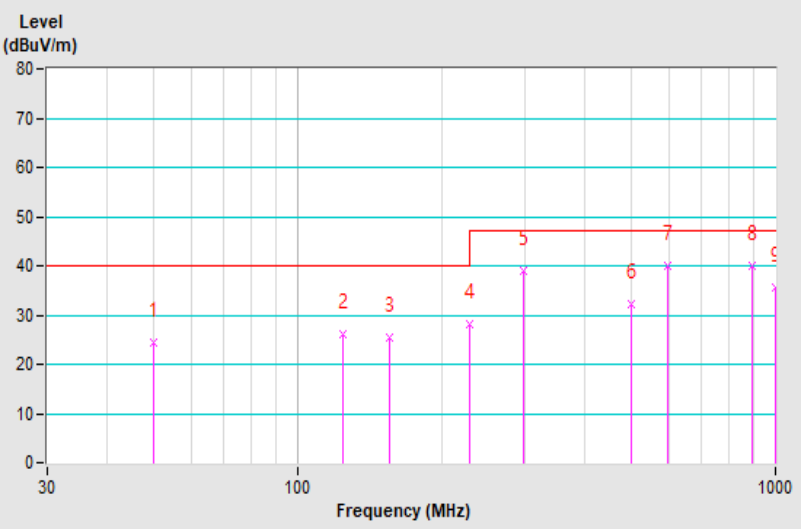
7.2 Radiated Emissions up to 1 GHz

Frequency Range	30MHz ~ 1GHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP), 120kHz
Tested By	Paul Chen	**Environmental Conditions**	26.0℃, 76.0%RH
Test Mode	Mode 1	**Test Date**	2021/6/3

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	50.16	24.36 QP	40.00	-15.64	4.00 H	118	34.19	-9.83
2	125.00	26.22 QP	40.00	-13.78	4.00 H	311	37.41	-11.19
3	155.44	25.34 QP	40.00	-14.66	4.00 H	194	34.58	-9.24
4	228.59	28.27 QP	40.00	-11.73	4.00 H	303	39.86	-11.59
5	297.00	38.87 QP	47.00	-8.13	3.55 H	208	46.76	-7.89
6	500.00	32.37 QP	47.00	-14.63	2.01 H	70	35.85	-3.48
7	594.01	39.98 QP	47.00	-7.02	1.79 H	139	41.22	-1.24
8	891.01	40.00 QP	47.00	-7.00	1.00 H	250	35.30	4.70
9	999.99	35.73 QP	47.00	-11.27	1.00 H	190	29.13	6.60

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

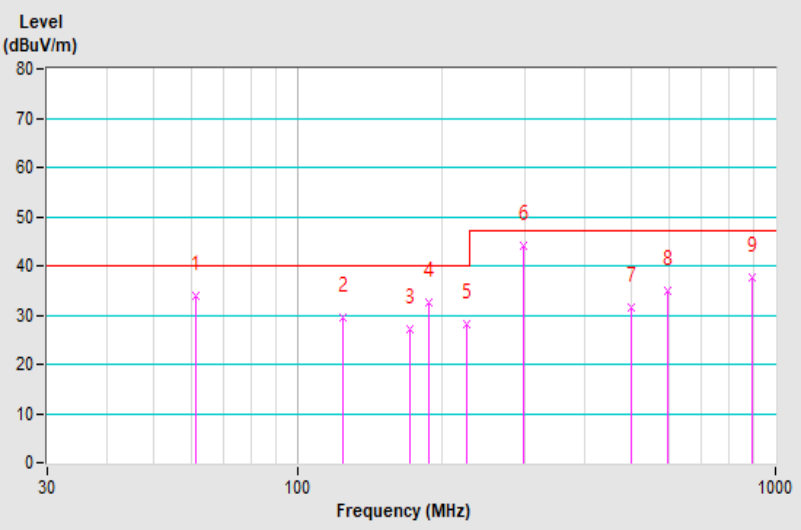


Frequency Range	30MHz ~ 1GHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 120kHz
Tested By	Paul Chen	Environmental Conditions	26.0℃, 76.0%RH
Test Mode	Mode 1	Test Date	2021/6/3

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	61.47	34.02 QP	40.00	-5.98	1.54 V	308	45.01	-10.99
2	124.96	29.64 QP	40.00	-10.36	1.00 V	127	40.84	-11.20
3	171.52	27.07 QP	40.00	-12.93	1.00 V	290	36.65	-9.58
4	187.98	32.51 QP	40.00	-7.49	1.00 V	233	44.16	-11.65
5	226.47	28.11 QP	40.00	-11.89	1.00 V	292	39.82	-11.71
6	**297.01**	**44.15 QP**	**47.00**	**-2.85**	**1.00 V**	**208**	**52.04**	**-7.89**
7	500.03	31.58 QP	47.00	-15.42	1.00 V	90	35.06	-3.48
8	594.02	35.05 QP	47.00	-11.95	3.28 V	147	36.29	-1.24
9	891.01	37.74 QP	47.00	-9.26	2.27 V	72	33.04	4.70

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



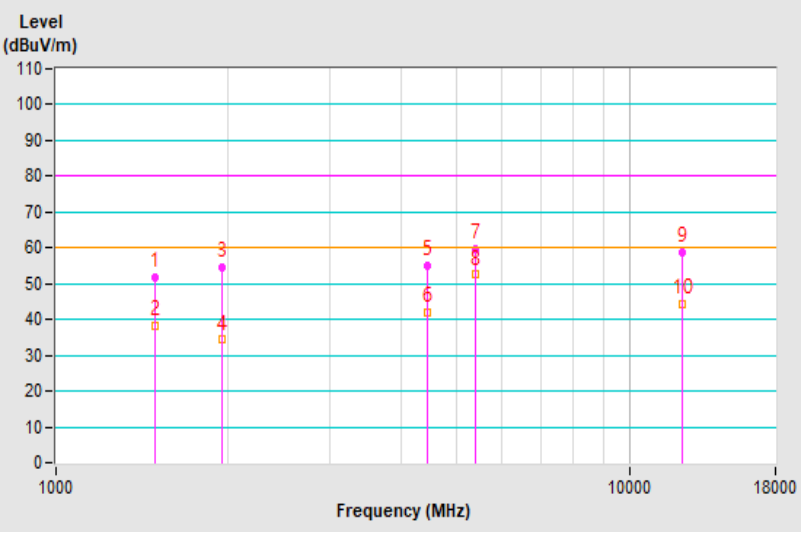
7.3 Radiated Emissions above 1 GHz

Frequency Range	1GHz ~ 14.5GHz	**Detector Function & Resolution Bandwidth**	Peak (PK) / Average (AV), 1MHz
Tested By	Vincent Lin	**Environmental Conditions**	25.0℃, 65.0%RH
Test Mode	Mode 1	**Test Date**	2021/6/4

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	1485.01	51.96 PK	80.00	-28.04	1.52 H	118	55.38	-3.42
2	1485.01	38.45 AV	60.00	-21.55	1.52 H	118	41.87	-3.42
3	1952.10	54.55 PK	80.00	-25.45	2.53 H	185	54.54	0.01
4	1952.10	34.26 AV	60.00	-25.74	2.53 H	185	34.25	0.01
5	4455.04	55.15 PK	80.00	-24.85	1.00 H	211	50.82	4.33
6	4455.04	42.12 AV	60.00	-17.88	1.00 H	211	37.79	4.33
7	5400.04	59.62 PK	80.00	-20.38	1.67 H	123	52.55	7.07
8	**5400.04**	**52.55 AV**	**60.00**	**-7.45**	**1.67 H**	**123**	**45.48**	**7.07**
9	12353.02	58.78 PK	80.00	-21.22	2.50 H	2	44.85	13.93
10	12353.02	44.47 AV	60.00	-15.53	2.50 H	2	30.54	13.93

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

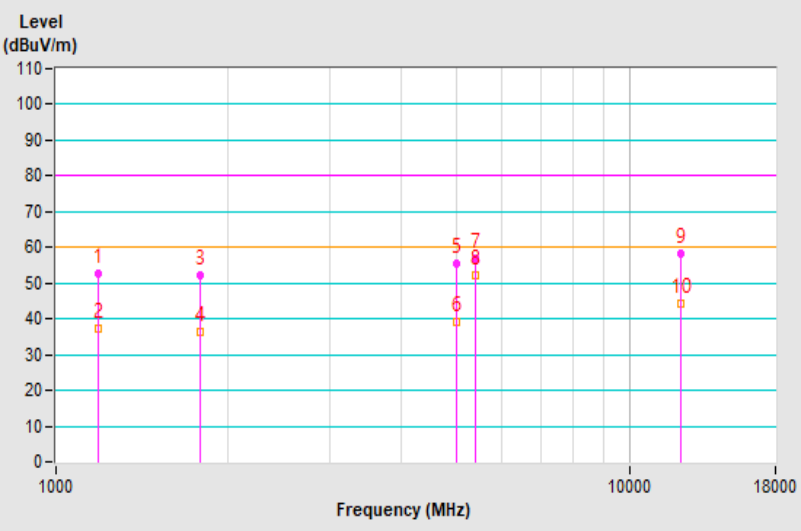


Frequency Range	1GHz ~ 14.5GHz	Detector Function & Resolution Bandwidth	Peak (PK) / Average (AV), 1MHz
Tested By	Vincent Lin	Environmental Conditions	25.0℃, 65.0%RH
Test Mode	Mode 1	Test Date	2021/6/4

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	1188.06	52.79 PK	80.00	-27.21	2.04 V	170	56.47	-3.68
2	1188.06	37.29 AV	60.00	-22.71	2.04 V	170	40.97	-3.68
3	1782.03	52.42 PK	80.00	-27.58	1.50 V	156	54.39	-1.97
4	1782.03	36.47 AV	60.00	-23.53	1.50 V	156	38.44	-1.97
5	4996.88	55.58 PK	80.00	-24.42	2.50 V	227	49.88	5.70
6	4996.88	39.26 AV	60.00	-20.74	2.50 V	227	33.56	5.70
7	5399.98	56.90 PK	80.00	-23.10	1.45 V	107	49.83	7.07
8	5399.98	52.14 AV	60.00	-7.86	1.45 V	107	45.07	7.07
9	12272.27	58.18 PK	80.00	-21.82	1.00 V	107	44.61	13.57
10	12272.27	44.38 AV	60.00	-15.62	1.00 V	107	30.81	13.57

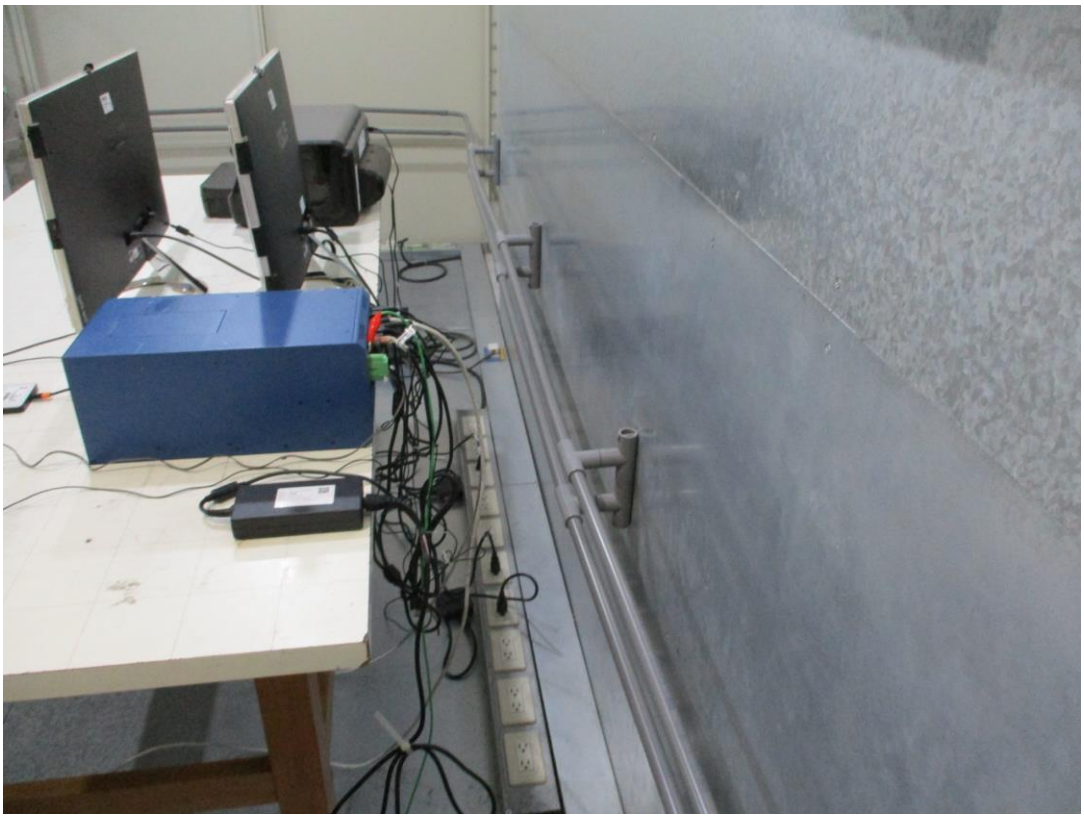
Remarks:

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



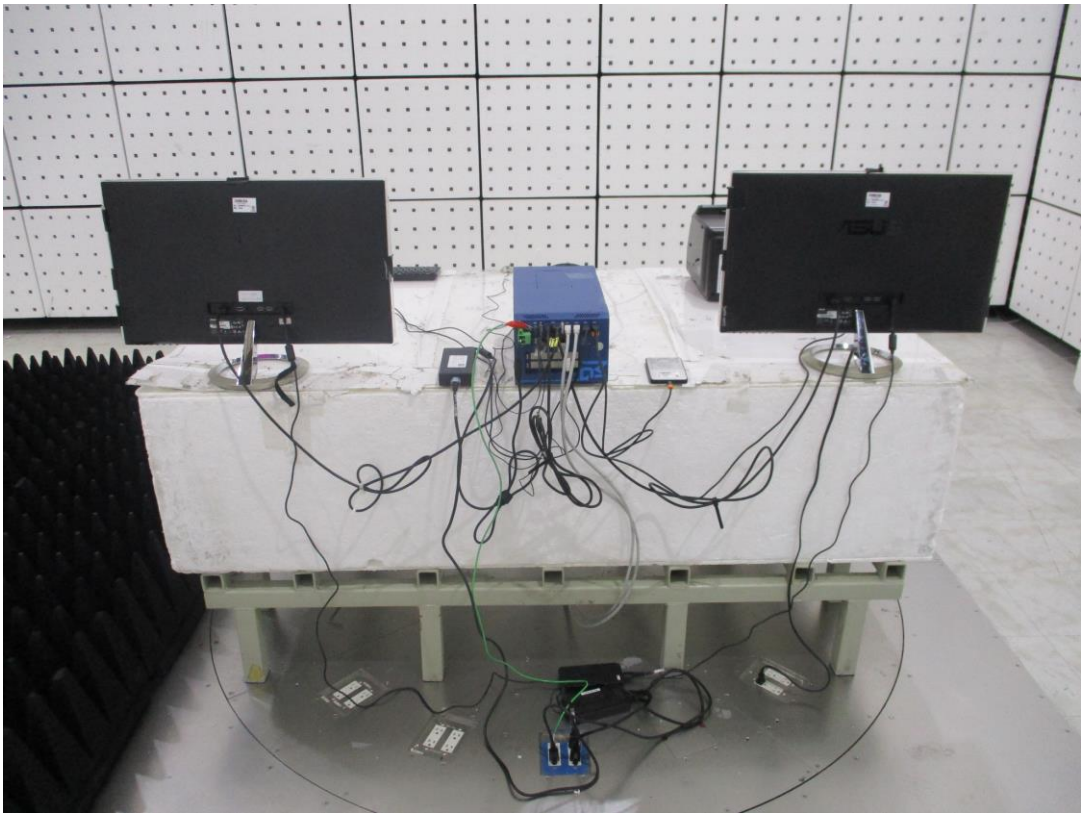
8 Pictures of Test Arrangements

8.1 Conducted Emissions from Power Ports



8.2 Radiated Emissions up to 1 GHz

8.3 Radiated Emissions above 1 GHz



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 accredited and approved according to ISO/IEC 17025.

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

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