TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart B, Class B** **ANSI C63.4–2014** **ANSI C63.4a–2017**
Report No.:	FDBFOK-WTW-P23090593
FCC ID:	RYQGP3
Product:	LTE smartphone
Brand:	Gabb
Model No.:	GP3
Received Date:	2023/9/26
Test Date:	2023/10/13 ~ 2023/10/16
Issued Date:	2023/11/24
Applicant:	FIH CO., LTD.
Address:	No.4, Minsheng St., Tu-Cheng Dist., New Taipei City 23679, 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. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kewi Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	328930 / TW1050

Approved by: Leo Hsu , **Date:** 2023/11/24

Leo Hsu / Project Engineer

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Prepared by : Vera Huang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
FDBFOK-WTW-P23090593	Original release.	2023/11/24

1 Certificate

Product:	LTE smartphone
Brand:	Gabb
Test Model:	GP3
Sample Status:	Engineering sample
Applicant:	FIH CO., LTD.
Test Date:	2023/10/13 ~ 2023/10/16
Standard:	47 CFR FCC Part 15, Subpart B, Class B ANSI C63.4–2014 ANSI C63.4a–2017

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 need to perform in accordance with its interfaces, evaluated functions, are as follows:

Standard / Clause	Test Item	Result	Remark
FCC Part 15.107	Conducted Emissions from Power Ports	Pass	Minimum passing Class B margin is -20.23 dB at 1.11400 MHz
FCC Part 15.109	Radiated Emissions up to 1 GHz	Pass	Minimum passing Class B margin is -3.24 dB at 36.02 MHz
FCC Part 15.109	Radiated Emissions above 1 GHz	Pass	Minimum passing Class B margin is -13.29 dB at 7601.10 MHz

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 as specified in CISPR 16-4-2:

Measurement	Specification	Expanded Uncertainty (k=2) (±)	Maximum allowable uncertainty (±)
Conducted Emissions from Power Ports	9 kHz ~ 30 MHz	2.88 dB	3.4 dB (U_{cispr})
Radiated Emissions up to 1 GHz	30 MHz ~ 1 GHz	4.69 dB	6.3 dB (U_{cispr})
Radiated Emissions above 1 GHz	1 GHz ~ 6 GHz	5.15 dB	5.2 dB (U_{cispr})
	6 GHz ~ 18 GHz	4.99 dB	5.5 dB (U_{cispr})
	18 GHz ~ 40 GHz	4.87 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	LTE smartphone
Brand	Gabb
Test Model	GP3
Sample Status	Engineering sample
Operating Software	N/A
Power Supply Rating	Refer to note
Accessory Device	Refer to note
Data Cable Supplied	Refer to note

Note:

1. The EUT uses following accessories.

Battery	Brand	Zhongshan Tianmao Battery Co.,Ltd.
	Model	HE401
	Rated Capacity	3400mAh/13.09Wh
	Typical Capacity	3500mAh/13.475Wh
	Rated Voltage	3.85V
AC Adapter	Brand	TRAVEL CHARGER
	Model	RT-C6
	AC Input	100-240V~ 50/60Hz 0.35A
	DC Output	5.0V / 2.0A 10.0W
	Manufacturer	RongTaiFeng Technology Co.,Ltd
USB 2.0 Type-C 2A Cable	Brand	RongTaiFeng Technology Co.,Ltd
	Model	20503007
	Line length	0.95m shielded cable w/o core

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 5 GHz, provided by FIH CO., LTD., for detailed internal source, please refer to the manufacturer's specifications.

3.3 Features of EUT

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

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

The EUT has been pre-tested under following test modes.

Test Condition	
Mode	Conducted Emissions from Power Ports
1	WWAN (LTE B2 Link) + WLAN (2.4G Link) + BT(Link) + GPS Rx + Earphone + USB Cable + Adapter
2	**WWAN (LTE B4 Link) + WLAN (5G Link) + BT(Link) + Camera (front) + Earphone + USB Cable + Adapter**
3	WWAN (LTE B5 Link) + WLAN (5G Link) + BT(Link) + Camera (rear) + Earphone + USB Cable + Adapter
4	WWAN (LTE B12 Link) + WLAN (5G Link) + BT(Link) + MPEG4 + Earphone + USB Cable + USB Link NB
5	WWAN (LTE B13 Idle) + WLAN (5G Idle) + BT(Idle) + Camera (front) + Earphone + USB Cable + Adapter
6	WWAN (LTE B5 Rx (Low Channel)) + Earphone + USB Cable + Adapter
7	WWAN (LTE B5 Rx (Middle Channel)) + Earphone + USB Cable + Adapter
8	WWAN (LTE B5 Rx (High Channel)) + Earphone + USB Cable + Adapter
9	WWAN (LTE B12 Rx (Low Channel)) + Earphone + USB Cable + Adapter
10	WWAN (LTE B12 Rx (Middle Channel)) + Earphone + USB Cable + Adapter
11	WWAN (LTE B12 Rx (High Channel)) + Earphone + USB Cable + Adapter
12	WWAN (LTE B13 Rx (Low Channel)) + Earphone + USB Cable + Adapter
13	WWAN (LTE B13 Rx (Middle Channel)) + Earphone + USB Cable + Adapter
14	WWAN (LTE B13 Rx (High Channel)) + Earphone + USB Cable + Adapter
Notes: 1. There are both AC 240V/60Hz and AC 120V/60Hz to be pre-tested then AC 120V/60Hz has the highest emission value. 2. The worst case is that mode 2 is shown in bold.	
Mode	Radiated Emissions up to 1 GHz
1	WWAN (LTE B2 Link) + WLAN (2.4G Link) + BT(Link) + GPS Rx + Earphone + USB Cable + Adapter
2	WWAN (LTE B4 Link) + WLAN (5G Link) + BT(Link) + Camera (front) + Earphone + USB Cable + Adapter
3	**WWAN (LTE B5 Link) + WLAN (5G Link) + BT(Link) + Camera (rear) + Earphone + USB Cable + Adapter**
4	WWAN (LTE B12 Link) + WLAN (5G Link) + BT(Link) + MPEG4 + Earphone + USB Cable + USB Link NB
5	WWAN (LTE B13 Idle) + WLAN (5G Idle) + BT(Idle) + Camera (rear) + Earphone + USB Cable + Adapter
6	WWAN (LTE B5 Rx (Low Channel)) + Earphone + USB Cable + Adapter
7	WWAN (LTE B5 Rx (Middle Channel)) + Earphone + USB Cable + Adapter
8	WWAN (LTE B5 Rx (High Channel)) + Earphone + USB Cable + Adapter
9	WWAN (LTE B12 Rx (Low Channel)) + Earphone + USB Cable + Adapter
10	WWAN (LTE B12 Rx (Middle Channel)) + Earphone + USB Cable + Adapter
11	WWAN (LTE B12 Rx (High Channel)) + Earphone + USB Cable + Adapter
12	WWAN (LTE B13 Rx (Low Channel)) + Earphone + USB Cable + Adapter
13	WWAN (LTE B13 Rx (Middle Channel)) + Earphone + USB Cable + Adapter
14	WWAN (LTE B13 Rx (High Channel)) + Earphone + USB Cable + Adapter
15	WWAN (LTE B5 Link) + BT(Link) + Camera (rear) + Earphone + USB Cable + Adapter (X Axis)
16	WWAN (LTE B5 Link) + BT(Link) + Camera (rear) + Earphone + USB Cable + Adapter (Y Axis)
Note: The worst case is that mode 3 is shown in bold.	

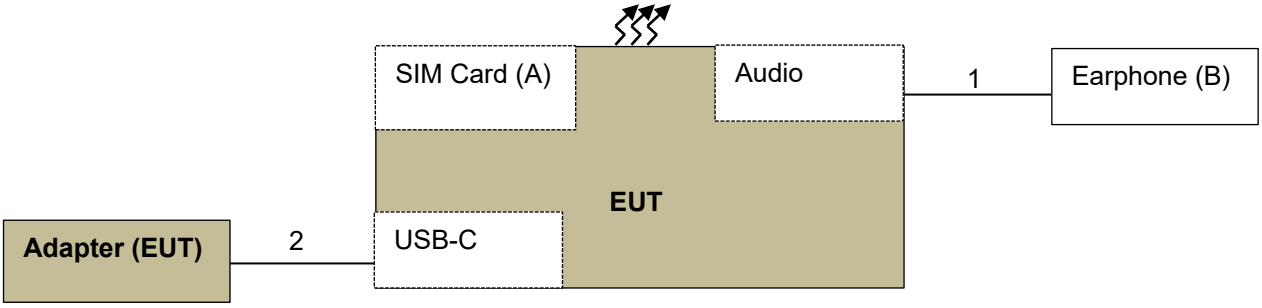
Test modes are presented in the report as below.

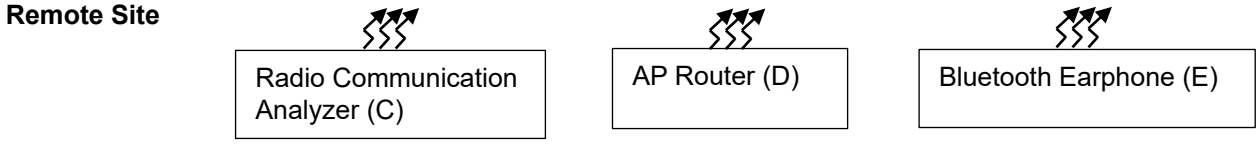
Test Condition	
Mode	Conducted Emissions from Power Ports
A	WWAN (LTE B4 Link) + WLAN (5G Link) + BT(Link) + Camera (front) + Earphone + USB Cable + Adapter
Mode	Radiated Emissions up to 1 GHz
A	WWAN (LTE B5 Link) + WLAN (5G Link) + BT(Link) + Camera (rear) + Earphone + USB Cable + Adapter
Mode	Radiated Emissions above 1 GHz
A	WWAN (LTE B5 Link) + WLAN (5G Link) + BT(Link) + Camera (rear) + Earphone + USB Cable + Adapter

3.5 Test Program Used and Operation Descriptions

a. The EUT is charged from Adapter.
b. The EUT opens the camera function.
c. The EUT connects to the remote Bluetooth earphone via Bluetooth.
d. The EUT connects to the remote AP router via WLAN.
e. The EUT communicated data with the Radio Communication Analyzer, which acted as communication partners.

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	SIM Card	R&S	N/A	N/A	N/A	Provided by Lab
B	Earphone	Samsung	EHS64	N/A	N/A	Provided by Lab
C	Radio Communication Analyzer	Anritsu	MT8820C	6201010284	N/A	Provided by Lab
D	AP Router	D-LINK	DIR826L	QBQ91C9000416	N/A	Provided by Lab
E	Bluetooth Earphone	ELECOM	LBT-MPHS400	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	Audio Cable	1	1.2	No	0	Provided by Lab
2	USB Cable	1	0.95	Yes	0	Accessory of EUT

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.	Calibrated Date	Calibrated Until
50 ohm terminal resistance HUBER+SUHNER	E1-011315	13	2022/11/17	2023/11/16
50 ohm terminal resistance	E1-011280	05	2022/11/21	2023/11/20
	E1-011311	09	2022/11/17	2023/11/16
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2022/11/9	2023/11/8
EMI Test Receiver R&S	ESCI	100613	2022/12/5	2023/12/4
Fixed Attenuator Mini-Circuits	HAT-10+	PAD-COND1-01	2023/1/7	2024/1/6
LISN R&S	ENV216	101826	2023/3/23	2024/3/22
	ESH3-Z5	100311	2023/9/6	2024/9/5
RF Coaxial Cable Woken	5D-FB	Cable-cond1-01	2023/1/7	2024/1/6
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2023/8/31	2024/8/30

Notes:

1. The test was performed in HY - Conduction 1.
2. The VCCI Site Registration No. is C-12040.
3. Tested Date: 2023/10/13

4.2 Radiated Emissions up to 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower (H)	MFA-440	970705	N/A	N/A
Antenna Tower (V)	MFA-440	9707	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-148	2022/12/20	2023/12/19
		9168-156	2022/12/20	2023/12/19
Controller (H)	MF7802	08093	N/A	N/A
Controller (V)	MF7802	074	N/A	N/A
EMI Test Receiver R&S	ESR7	101240	2022/11/7	2023/11/6
		101264	2023/4/10	2024/4/9
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-CH(H)-01	2023/9/2	2024/9/1
		PAD-CH(V)-01	2023/9/2	2024/9/1
Preamplifier Sonoma	310N	352923	2023/5/7	2024/5/6
		352924	2023/5/7	2024/5/6
RF Coaxial Cable TIMES	LMR-600(11.8M)+LMR-400 (7M)	CABLE-CH1(HOR)-01	2023/9/2	2024/9/1
	LMR-600(18M)+LMR-400 (7M)	CABLE-CH1(VER)-01	2023/9/2	2024/9/1
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A
Turn Table	DS430	50303	N/A	N/A

Notes:

1. The test was performed in HY - 10M Chamber. The test site validated date: 2023/7/29 (NSA)
2. The VCCI Site Registration No. is R-11893.
3. Tested Date: 2023/10/13

4.3 Radiated Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower BVADT	AT100	AT93021702	N/A	N/A
Band Pass Filter Micro-Tronics	BRM17690-01	002	2023/9/2	2024/9/1
	BRM50716-01	G010	2023/9/2	2024/9/1
Boresight antenna tower fixture BV	BAF-02	3	N/A	N/A
Controller BVADT	SC100	SC93021702	N/A	N/A
Fixed Attenuator Mini-Circuits	BW-K3-2W44+	PAD-CH3-04	2023/7/8	2024/7/7
	BW-N4W5+	PAD-CH3-03	2023/7/8	2024/7/7
Horn Antenna Schwarzbeck	BBHA 9120D	209	2022/11/13	2023/11/12
	BBHA 9170	148	2022/11/13	2023/11/12
Preamplifier Agilent	8449B	3008A02465	2023/2/15	2024/2/14
Preamplifier EMCI	EMC012645SE	980338	2023/5/7	2024/5/6
	EMC184045SE	980610	2023/5/7	2024/5/6
		980856	2022/11/11	2023/11/10
PXA Signal Analyzer Keysight	N9030B	MY60070562	2023/2/22	2024/2/21
RF Coaxial Cable EMCI	EMC102-KM-KM-1000	200311	2023/7/8	2024/7/7
	EMC102-KM-KM-3000	200313	2023/7/8	2024/7/7
RF Coaxial Cable HUBER+SUHNER&EMCI	SUCOFLEX 104&EMC104-SM-SM-8000	Cable-CH3-03(309224+170907)	2023/7/8	2024/7/7
Software BVADT	ADT_Radiated_V8.7.08	N/A	N/A	N/A
Turn Table BVADT	TT100	TT93021702	N/A	N/A

Notes:

1. The test was performed in HY - 966 Chamber 2. The test site validated date: 2023/4/29 (VSWR)
2. The VCCI Site Registration No. is G-20126.
3. Tested Date: 2023/10/16

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
0.50 - 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 Radiated Emissions up to 1 GHz

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

Radiated Emissions Limits at 10 meters (dBμV/m)				
Frequencies (MHz)	FCC 15B, Class A	FCC 15B, Class B	CISPR 22, Class A	CISPR 22, Class B
30-88	39.1	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 15B, Class A	FCC 15B, Class B	CISPR 22, Class A	CISPR 22, Class B
30-88	49.5	40.0	50.5	40.5
88-216	54.0	43.5		
216-230	56.9	46.0		
230-960			57.5	47.5
960-1000	60.0	54.0		

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

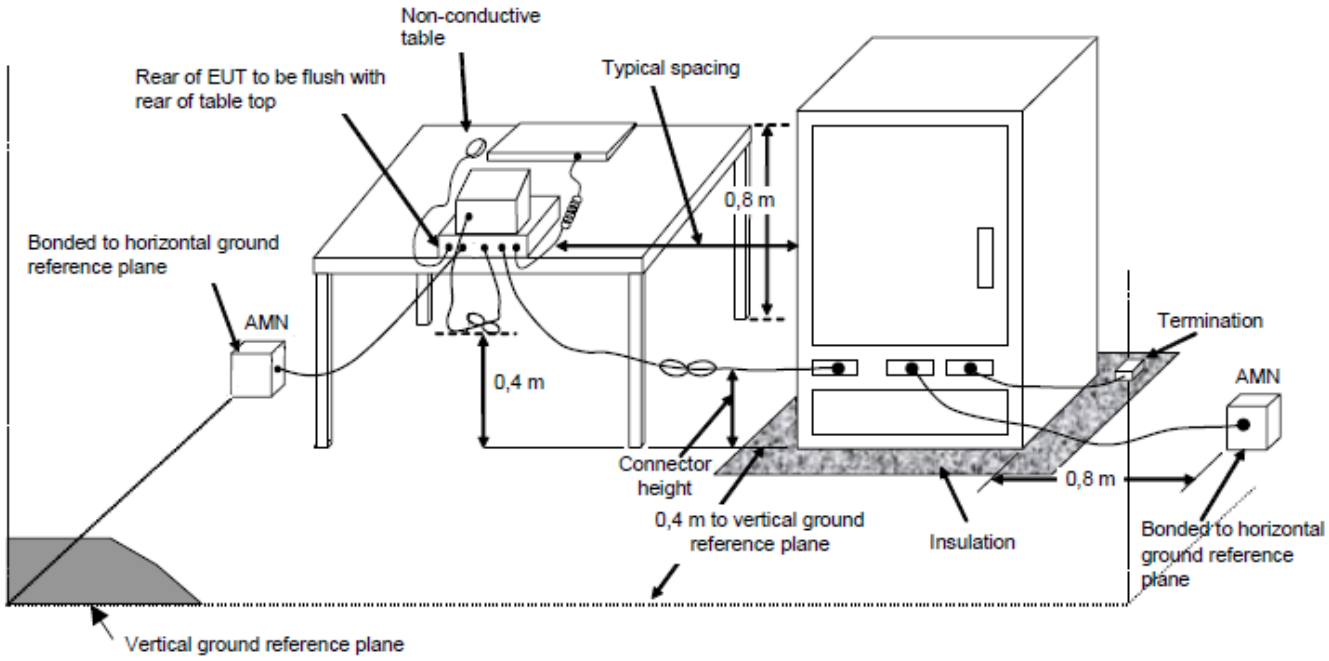
6.1 Conducted Emissions from Power Ports

a. For the table-top EUT is placed on a 0.8 meter insulation table; for 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.

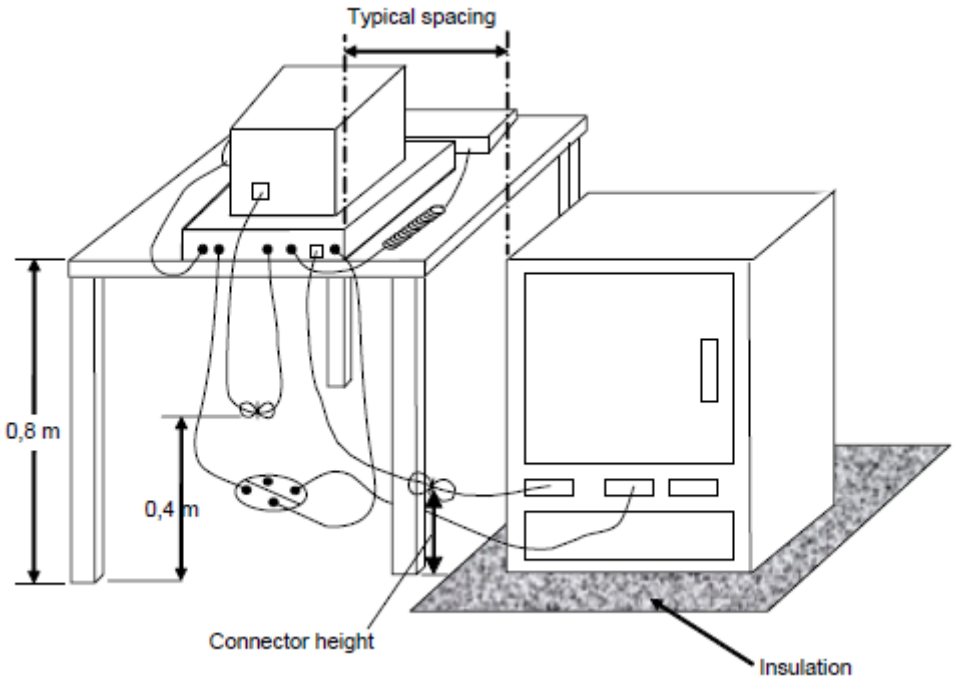


For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

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 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.

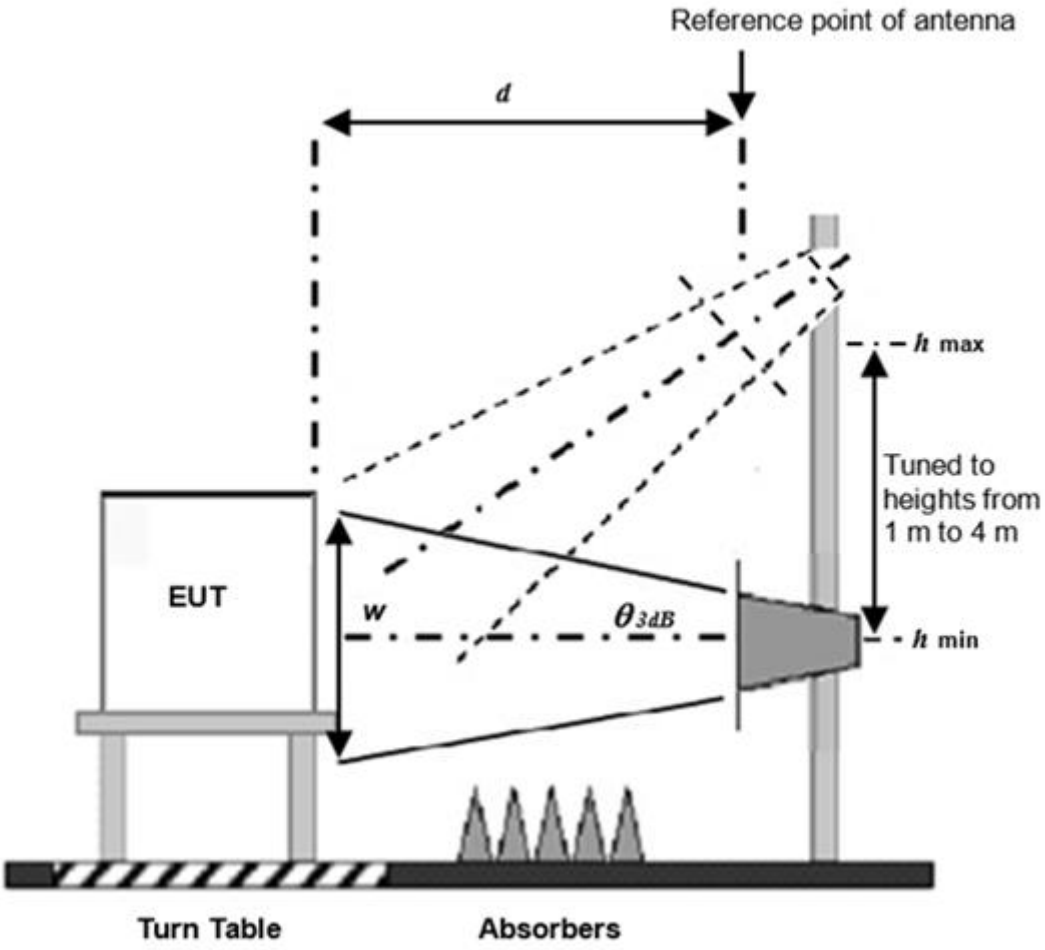


For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

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 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 for 1 GHz to 18 GHz and *d* = 1.5 meters for 18 GHz to 40 GHz 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 of Test Item

7.1 Conducted Emissions from Power Ports

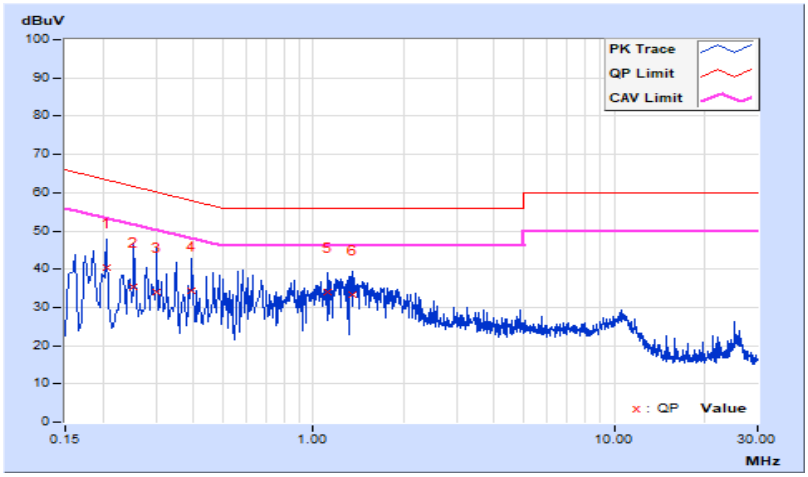
Mode A

Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 71% RH
Tested by	Rene Chen		

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	0.20600	9.70	30.57	16.70	40.27	26.40	63.37	53.37	-23.10	-26.97
2	0.25400	9.72	25.62	18.08	35.34	27.80	61.63	51.63	-26.29	-23.83
3	0.30200	9.75	24.16	17.00	33.91	26.75	60.19	50.19	-26.28	-23.44
4	0.39400	9.79	24.59	8.18	34.38	17.97	57.98	47.98	-23.60	-30.01
5	**1.11400**	**9.86**	**24.09**	**15.91**	**33.95**	**25.77**	**56.00**	**46.00**	**-22.05**	**-20.23**
6	1.34998	9.87	23.31	11.84	33.18	21.71	56.00	46.00	-22.82	-24.29

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

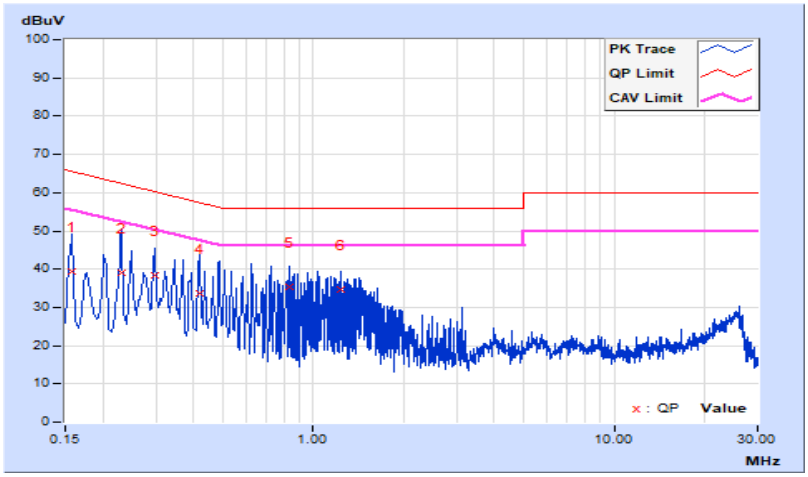


Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 71% RH
Tested by	Rene Chen		

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	0.15800	9.67	29.81	18.07	39.48	27.74	65.57	55.57	-26.09	-27.83
2	0.23000	9.71	29.27	13.85	38.98	23.56	62.45	52.45	-23.47	-28.89
3	0.29800	9.73	28.75	19.66	38.48	29.39	60.30	50.30	-21.82	-20.91
4	0.41799	9.77	23.93	12.11	33.70	21.88	57.49	47.49	-23.79	-25.61
5	0.83800	9.82	25.47	13.07	35.29	22.89	56.00	46.00	-20.71	-23.11
6	1.23400	9.85	24.67	12.11	34.52	21.96	56.00	46.00	-21.48	-24.04

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

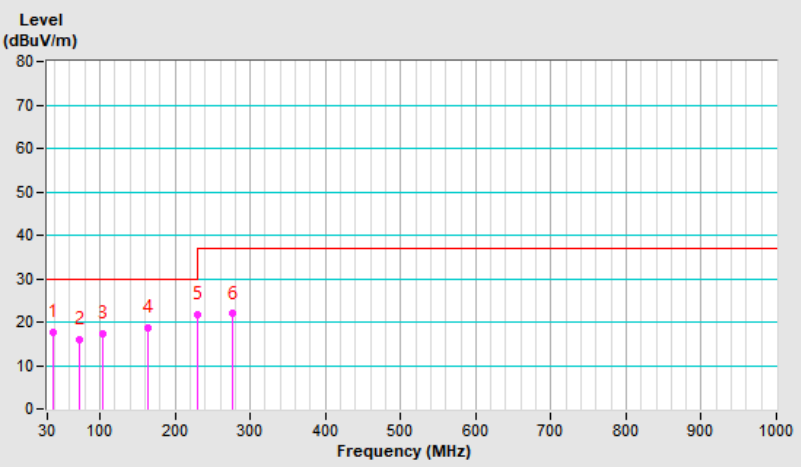
Mode A

Frequency Range	30 MHz ~ 1 GHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 120 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Mick Chou		

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	37.08	17.60 QP	30.00	-12.40	2.50 H	258	31.42	-13.82
2	72.68	16.09 QP	30.00	-13.91	3.00 H	95	31.58	-15.49
3	103.04	17.26 QP	30.00	-12.74	4.00 H	294	34.72	-17.46
4	163.38	18.68 QP	30.00	-11.32	4.00 H	191	31.99	-13.31
5	230.21	21.67 QP	37.00	-15.33	4.00 H	161	37.54	-15.87
6	276.22	21.90 QP	37.00	-15.10	4.00 H	289	34.92	-13.02

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.

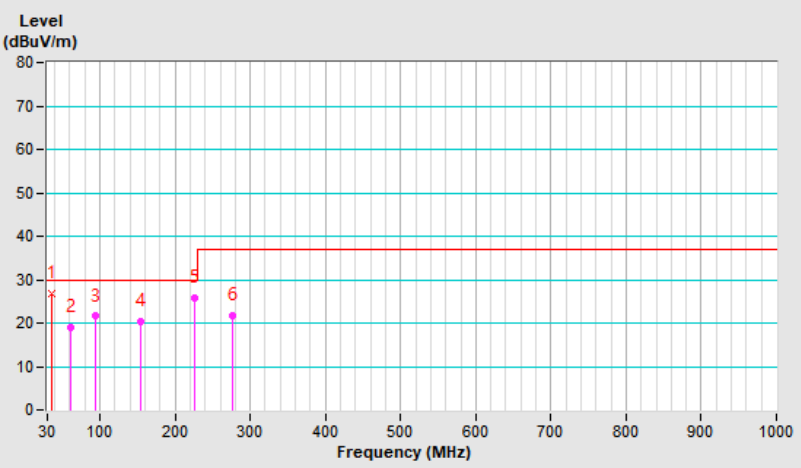


Frequency Range	30 MHz ~ 1 GHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 120 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Mick Chou		

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	**36.02**	**26.76 QP**	**30.00**	**-3.24**	**1.00 V**	**228**	**40.99**	**-14.23**
2	61.46	19.15 QP	30.00	-10.85	1.50 V	1	32.52	-13.37
3	94.89	21.56 QP	30.00	-8.44	1.50 V	73	39.98	-18.42
4	153.38	20.30 QP	30.00	-9.70	1.50 V	280	33.46	-13.16
5	226.00	25.72 QP	30.00	-4.28	1.00 V	344	41.80	-16.08
6	276.38	21.82 QP	37.00	-15.18	1.00 V	52	34.91	-13.09

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.



7.3 Radiated Emissions above 1 GHz

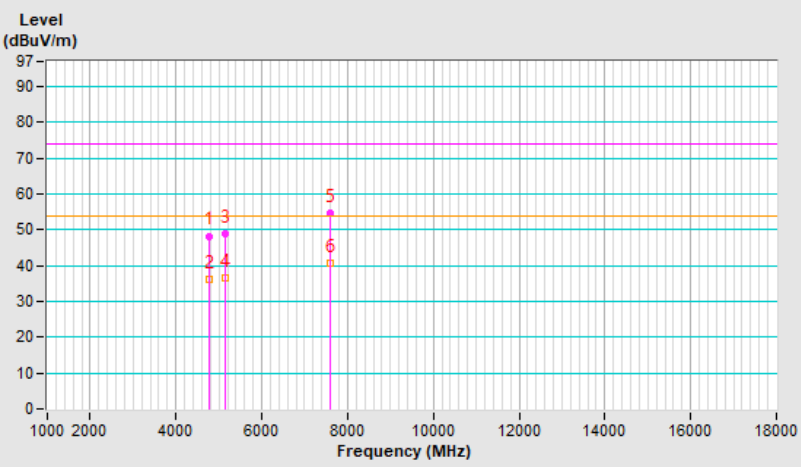
Mode A

Frequency Range	1 GHz ~ 18 GHz	Detector Function & Resolution Bandwidth	Peak (PK) / Average (AV), 1MHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 69% RH
Tested By	Brian Kuo		

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	4789.87	48.24 PK	74.00	-25.76	1.14 H	67	41.01	7.23
2	4789.87	36.23 AV	54.00	-17.77	1.14 H	67	29.00	7.23
3	5151.97	48.71 PK	74.00	-25.29	1.00 H	338	40.81	7.90
4	5151.97	36.54 AV	54.00	-17.46	1.00 H	338	28.64	7.90
5	7601.10	54.55 PK	74.00	-19.45	1.71 H	24	40.18	14.37
6	**7601.10**	**40.71 AV**	**54.00**	**-13.29**	**1.71 H**	**24**	**26.34**	**14.37**

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.

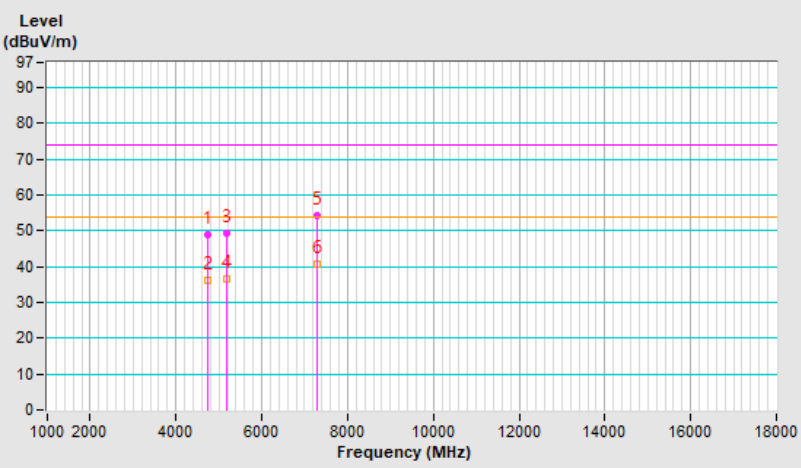


Frequency Range	1 GHz ~ 18 GHz	Detector Function & Resolution Bandwidth	Peak (PK) / Average (AV), 1MHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 69% RH
Tested By	Brian Kuo		

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	4737.17	48.71 PK	74.00	-25.29	1.35 V	282	41.67	7.04
2	4737.17	35.97 AV	54.00	-18.03	1.35 V	282	28.93	7.04
3	5174.63	49.44 PK	74.00	-24.56	1.14 V	338	41.50	7.94
4	5174.63	36.51 AV	54.00	-17.49	1.14 V	338	28.57	7.94
5	7290.57	54.28 PK	74.00	-19.72	1.39 V	231	39.70	14.58
6	7290.57	40.59 AV	54.00	-13.41	1.39 V	231	26.01	14.58

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.

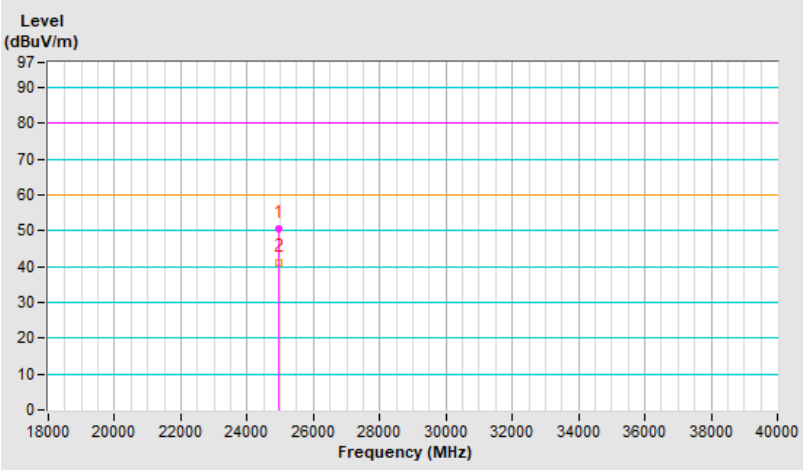


Frequency Range	18 GHz ~ 40 GHz	Detector Function & Resolution Bandwidth	Peak (PK) / Average (AV), 1MHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 69% RH
Tested By	Brian Kuo		

Antenna Polarity & Test Distance : Horizontal at 1.5 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	24940.17	50.64 PK	80.00	-29.36	1.00 H	229	56.06	-5.42
2	24940.17	41.09 AV	60.00	-18.91	1.00 H	229	46.51	-5.42

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.

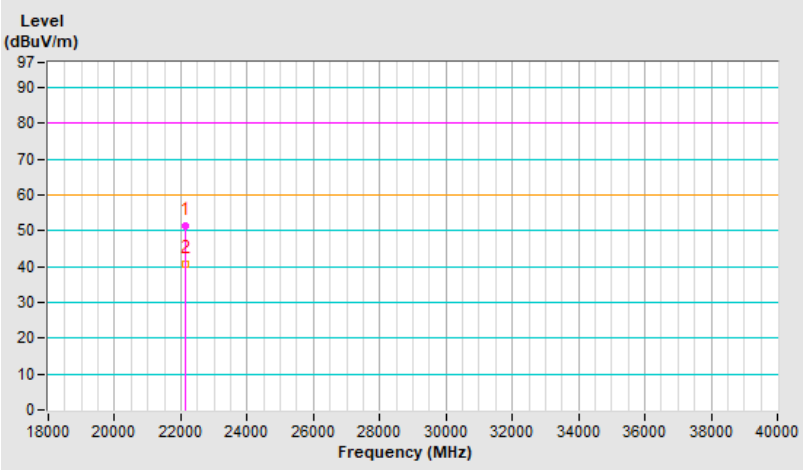


Frequency Range	18 GHz ~ 40 GHz	Detector Function & Resolution Bandwidth	Peak (PK) / Average (AV), 1MHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 69% RH
Tested By	Brian Kuo		

Antenna Polarity & Test Distance : Vertical at 1.5 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	22157.41	51.44 PK	80.00	-28.56	1.16 V	338	58.44	-7.00
2	22157.41	40.62 AV	60.00	-19.38	1.16 V	338	47.62	-7.00

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.



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.

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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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