TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart B, Class A** **ANSI C63.4–2014** **ANSI C63.4a–2017**
Report No.:	FDBCIC-WTW-P24100659A
FCC ID:	U8G-P1MT01
Product:	Peplink Pepwave Wireless Product
Brand:	peplink PEPWAVE
Model No.:	MAX BR1 Mini
Series Model:	MAX-BR1-MINI-LTE-US-T-PRM, MAX-BR1-MINI-LTEA-US-T-PRM, MAX-BR1-MINI-LTE-US-DC-T-PRM, MAX-BR1-MINI-LTEA-US-DC-T-PRM, AP One Rugged, APO-AC-RUG, MAX BR1 Mini 5G, MAX-BR1-MINI-5GN-T-PRM, MAX-BR1-MINI-5GN-DC-T-PRM (refer to item 3.1 for more details)
Received Date:	2024/12/27
Test Date:	2025/1/6 ~ 2025/1/8
Issued Date:	2025/1/20
Applicant:	PISMO LABS TECHNOLOGY LIMITED
Address:	A8, 5/F, HK Spinners Industrial Building, Phase 6, 481 Castle Peak Road, Cheung Sha Wan, Hong Kong
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., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	328930 / TW1050

Approved by: Leo Hsu , **Date:** 2025/1/20

Leo Hsu / Project Engineer

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Prepared by : Lena Wang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
FDBCIC-WTW-P24100659A	Original release.	2025/1/20

1 Certificate

Product:	Peplink Pepwave Wireless Product
Brand:	peplink PEPWAVE
Test Model:	MAX BR1 Mini
Series Model:	MAX-BR1-MINI-LTE-US-T-PRM, MAX-BR1-MINI-LTEA-US-T-PRM, MAX-BR1-MINI-LTE-US-DC-T-PRM, MAX-BR1-MINI-LTEA-US-DC-T-PRM, AP One Rugged, APO-AC-RUG, MAX BR1 Mini 5G, MAX-BR1-MINI-5GN-T-PRM, MAX-BR1-MINI-5GN-DC-T-PRM (refer to item 3.1 for more details)
Sample Status:	Prototype
Applicant:	PISMO LABS TECHNOLOGY LIMITED
Test Date:	2025/1/6 ~ 2025/1/8
Standard:	47 CFR FCC Part 15, Subpart B, Class A 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 A margin is -20.44 dB at 0.34578 MHz
FCC Part 15.109	Radiated Emissions up to 1 GHz	Pass	Minimum passing Class A margin is -6.65 dB at 147.40 MHz
FCC Part 15.109	Radiated Emissions above 1 GHz	Pass	Minimum passing Class A margin is -23.04 dB at 5240.14 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	2.90 dB	3.4 dB (U_{cispr})
Radiated Emissions up to 1 GHz	30 MHz ~ 1 GHz	4.63 dB	6.3 dB (U_{cispr})
Radiated Emissions above 1 GHz	1 GHz ~ 6 GHz	4.91 dB	5.2 dB (U_{cispr})
	6 GHz ~ 18 GHz	4.42 dB	5.5 dB (U_{cispr})
	18 GHz ~ 40 GHz	4.52 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	Peplink Pepwave Wireless Product
Brand	peplink PEPWAVE
Test Model	MAX BR1 Mini
Series Model	MAX-BR1-MINI-LTE-US-T-PRM, MAX-BR1-MINI-LTEA-US-T-PRM, MAX-BR1-MINI-LTE-US-DC-T-PRM, MAX-BR1-MINI-LTEA-US-DC-T-PRM, AP One Rugged, APO-AC-RUG, MAX BR1 Mini 5G, MAX-BR1-MINI-5GN-T-PRM, MAX-BR1-MINI-5GN-DC-T-PRM
Model Difference	Refer to Note as below
Sample Status	Prototype
Power Supply Rating	Refer to Note as below

Note:

1. This report is issued as a supplementary report to BV CPS report no.: FDBCIC-WTW-P24100659 R2. The differences compared with original report are listed as below. Therefore, the EUT is re-tested in this report.
   - Adding WWAN Module: Quectel / RM520N-GL.
   - Adding Models: MAX BR1 Mini 5G, MAX-BR1-MINI-5GN-T-PRM, MAX-BR1-MINI-5GN-DC-T-PRM for 5G.
   - Adding New appearance (WWAN antenna connector*4, GPS cancel).
2. All models are listed as below. (New models are marked in gray)

Brand	Model	Difference
peplink PEPWAVE	MAX BR1 Mini	For marketing purpose (with Cellular & GPS feature)
	MAX-BR1-MINI-LTE-US-T-PRM	
	MAX-BR1-MINI-LTEA-US-T-PRM	
	MAX-BR1-MINI-LTE-US-DC-T-PRM	
	MAX-BR1-MINI-LTEA-US-DC-T-PRM	
	AP One Rugged	For marketing purpose (without Cellular & GPS feature)
	APO-AC-RUG	
	MAX BR1 Mini 5G	For marketing purpose (without GPS feature)
	MAX-BR1-MINI-5GN-T-PRM	
	MAX-BR1-MINI-5GN-DC-T-PRM	

3. The EUT uses following accessories.

Item	Brand	Model	AC Input	DC Output	DC Output Cable
Adapter	LEI	MU24D1120200-A1	100-240Vac 50/60Hz 0.7A	12Vdc 2.0A	Non-Shielded, 1.5m

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 5.85 GHz, provided by PISMO LABS TECHNOLOGY LIMITED, 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 PISMO LABS TECHNOLOGY LIMITED, for detailed feature description, please refer to the manufacturer's specifications or user's manual.
Please refer to appendix of the report if the applicant has provided additional descriptions of the EUT.

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	Radiated Emissions up to 1 GHz
1	**Model(MAX-BR1-MINI-5GN-T-PRM (Laying-flat)) + LAN 1-2(1Gbps) + WAN(1Gbps) + SIM(Slot A(RM520N-GL) + e-sim(MFXS-M006b-MFOCMW)) + WWAN(LTE Band 5) + WiFi(2.4G + 5G) + EUT power(12 Vdc from Adapter) + Adapter(MU24D1120200-A1) + Input Power(120 Vac, 60 Hz)**
2	Model(MAX-BR1-MINI-5GN-T-PRM (Laying-flat)) + LAN 1-2(1Gbps) + WAN(1Gbps) + SIM(Slot A(RM520N-GL) + e-sim(MFXS-M006b-MFOCMW)) + WWAN(5G n41) + WiFi(2.4G + 5G) + EUT power(12 Vdc from Adapter) + Adapter(MU24D1120200-A1) + Input Power(120 Vac, 60 Hz)
Notes: 1. Device has Support AP and Client mode, use AP mode for testing. 2. The worst case is mode 1 shown in bold.	

Test modes are presented in the report as below.

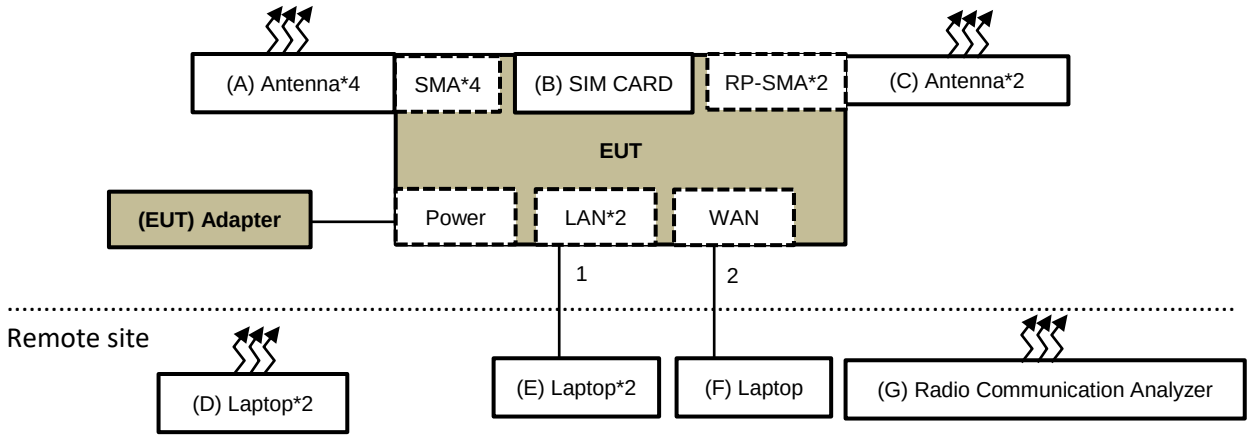
Test Condition	
Mode	Conducted Emissions from Power Ports
A	Model(MAX-BR1-MINI-5GN-T-PRM (Laying-flat)) + LAN 1-2(1Gbps) + WAN(1Gbps) + SIM(Slot A(RM520N-GL) + e-sim(MFXS-M006b-MFOCMW)) + WWAN(LTE Band 5) + WiFi(2.4G + 5G) + EUT power(12 Vdc from Adapter) + Adapter(MU24D1120200-A1) + Input Power(120 Vac, 60 Hz)
Note: The Conduction Configuration From RE Below 1GHz.	
Mode	Radiated Emissions up to 1 GHz
A	Model(MAX-BR1-MINI-5GN-T-PRM (Laying-flat)) + LAN 1-2(1Gbps) + WAN(1Gbps) + SIM(Slot A(RM520N-GL) + e-sim(MFXS-M006b-MFOCMW)) + WWAN(LTE Band 5) + WiFi(2.4G + 5G) + EUT power(12 Vdc from Adapter) + Adapter(MU24D1120200-A1) + Input Power(120 Vac, 60 Hz)
Mode	Radiated Emissions above 1 GHz
A	Model(MAX-BR1-MINI-5GN-T-PRM (Laying-flat)) + LAN 1-2(1Gbps) + WAN(1Gbps) + SIM(Slot A(RM520N-GL) + e-sim(MFXS-M006b-MFOCMW)) + WWAN(LTE Band 5) + WiFi(2.4G + 5G) + EUT power(12 Vdc from Adapter) + Adapter(MU24D1120200-A1) + Input Power(120 Vac, 60 Hz)

Note: Test modes are presented in the report as above according to original test report.

3.5 Test Program Used and Operation Descriptions

a. The EUT powered by Adapter.
b. The EUT linked with Laptop, which acted as a communication partners via LAN cable and WLAN.
c. The communication partners sent data to the EUT via LAN and WLAN and transmission.
d. The EUT communicated data with the Radio Communication Analyzer which acted as a communication partner.

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	Antenna*4	pepwave PEPWAVE	04-410188-00	N/A	N/A	Supplied by applicant
B	SIM CARD	R&S	CMW-Z05	N/A	N/A	Provided by Lab
C	Antenna*2	WIESON	ARY121-1976-001-00	N/A	N/A	Supplied by applicant
D	Laptop*2	DELL	Latitude 5420	C6F33F3	N/A	Provided by Lab
		DELL	Latitude 5420	6RS33F3	N/A	Provided by Lab
E	Laptop*2	DELL	Latitude 5501	F42VP13	N/A	Provided by Lab
		DELL	E6440	FMLNM32	N/A	Provided by Lab
F	Laptop	DELL	Vostro 14-5459	6N9D2D2	N/A	Provided by Lab
G	Radio Communication Analyzer	Anritsu	MT8820C	6201010284	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	Cat.5e	2	10	No	0	Provided by Lab
2	Cat.5e	1	10	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 Conducted Emissions from Power Ports

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance HUBER+SUHNER	E1-011277	02	2024/10/25	2025/10/24
	E1-011313	11	2024/2/1	2025/1/31
	E1-011595	21	2024/3/8	2025/3/7
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2024/11/5	2025/11/4
EMI Test Receiver R&S	ESR3	102783	2024/12/17	2025/12/16
Fixed Attenuator STI	BNC5W10dB	PAD-COND2-01	2024/8/25	2025/8/24
LISN R&S	ESH2-Z5	100100	2024/3/6	2025/3/5
	ESH3-Z5	100312	2024/9/9	2025/9/8
RF Coaxial Cable Woken	5D-FB	Cable-cond2-01	2024/8/25	2025/8/24
Software BVADT	BVADT_Cond_ V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2024/8/28	2025/8/27

Notes:

1. The test was performed in HY - Conduction 2.
2. The VCCI Site Registration No. is C-12047.
3. Tested Date: 2025/1/6

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	2024/12/4	2025/12/3
		9168-156	2024/12/4	2025/12/3
Controller (H)	MF7802	08093	N/A	N/A
Controller (V)	MF7802	074	N/A	N/A
EMI Test Receiver R&S	ESR7	101240	2024/11/11	2025/11/10
		101264	2024/4/16	2025/4/15
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-CH(H)-01	2024/8/25	2025/8/24
		PAD-CH(V)-01	2024/8/25	2025/8/24
Preamplifier Sonoma	310N	352923	2024/5/1	2025/4/30
		352924	2024/5/1	2025/4/30
RF Coaxial Cable TIMES	LMR-600(11.8M)+LMR-400 (7M)	CABLE-CH1(HOR)-01	2024/8/25	2025/8/24
	LMR-600(18M)+LMR-400 (7M)	CABLE-CH1(VER)-01	2024/8/25	2025/8/24
Software	ADT_Radiated_V8.8.09	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: 2024/7/27 (NSA)
2. The VCCI Site Registration No. is R-11893.
3. Tested Date: 2025/1/6

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
Controller BVADT	SC100	SC93021702	N/A	N/A
Fix tool for Boresight antenna tower BV	BAF-01	2	N/A	N/A
Fixed Attenuator Mini-Circuits	BW-K3-2W44+	PAD-CH1-03	2024/8/25	2025/8/24
	BW-N4W5+	PAD-CH2-02	2025/1/5	2026/1/4
Horn Antenna ETS-Lindgren	3117	00034126	2024/10/18	2025/10/17
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-405	2024/11/10	2025/11/9
	BBHA 9170	148	2024/11/10	2025/11/9
Notch Filter Micro-Tronics	BRM17690-01	003	2024/8/25	2025/8/24
	BRM50716-01	G011	2024/8/25	2025/8/24
Preamplifier Agilent	8449B	3008A01961	2024/8/25	2025/8/24
Preamplifier EMCI	EMC012645SE	980338	2024/5/1	2025/4/30
	EMC184045B	980175	2024/8/25	2025/8/24
	EMC184045SE	980610	2024/5/1	2025/4/30
PSA Spectrum Analyzer Agilent	E4446A	MY51100039	2024/12/18	2025/12/17
RF Coaxial Cable ATK+EMC	EM104-SMSM-600&EM104-SMSM-500	Cable-CH2-02	2025/1/5	2026/1/4
RF Coaxial Cable EMCI	EM102-KMKM-1M	#01	2024/8/25	2025/8/24
	EM102-KMKM-3M	#01	2024/8/25	2025/8/24
	EMC102-KM-KM-1000	170820	2025/1/5	2026/1/4
RF Coaxial Cable Rosnol	K1K50-UP0279-K1K50-3000	181129-2	2025/1/5	2026/1/4
Software BVADT	ADT_Radiated_V8.8.09	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 1. The test site validated date: 2024/11/23 (VSWR)
2. The VCCI Site Registration No. is G-10018.
3. Tested Date: 2025/1/8

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

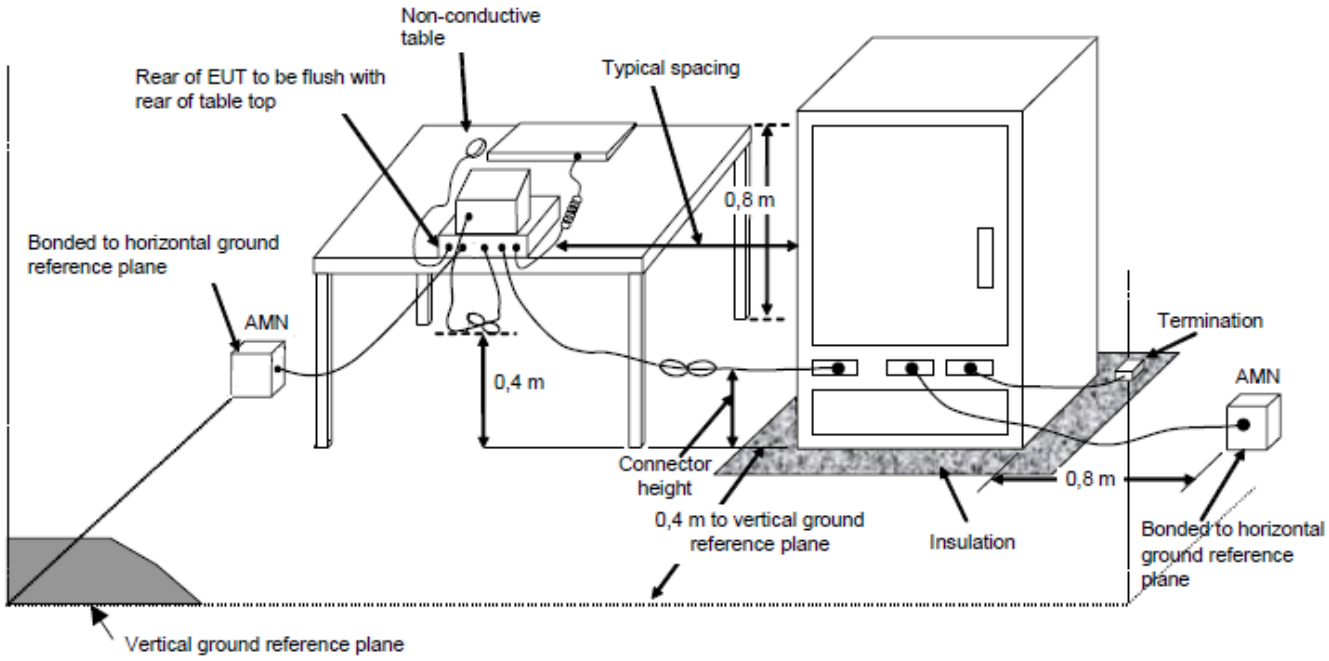
6.1 Conducted Emissions from Power Ports

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.

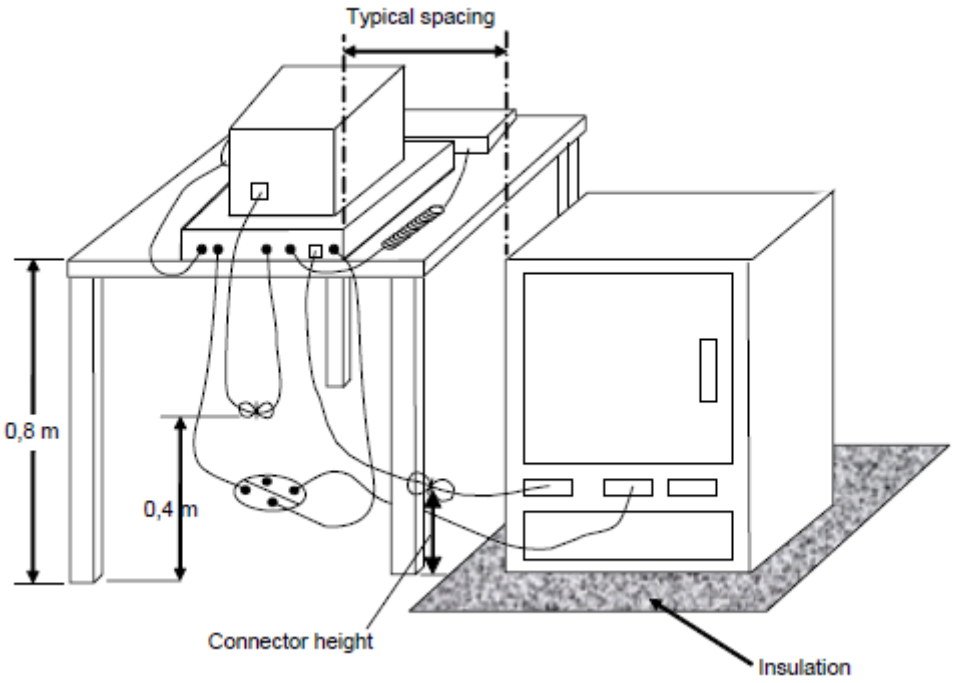


For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

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.

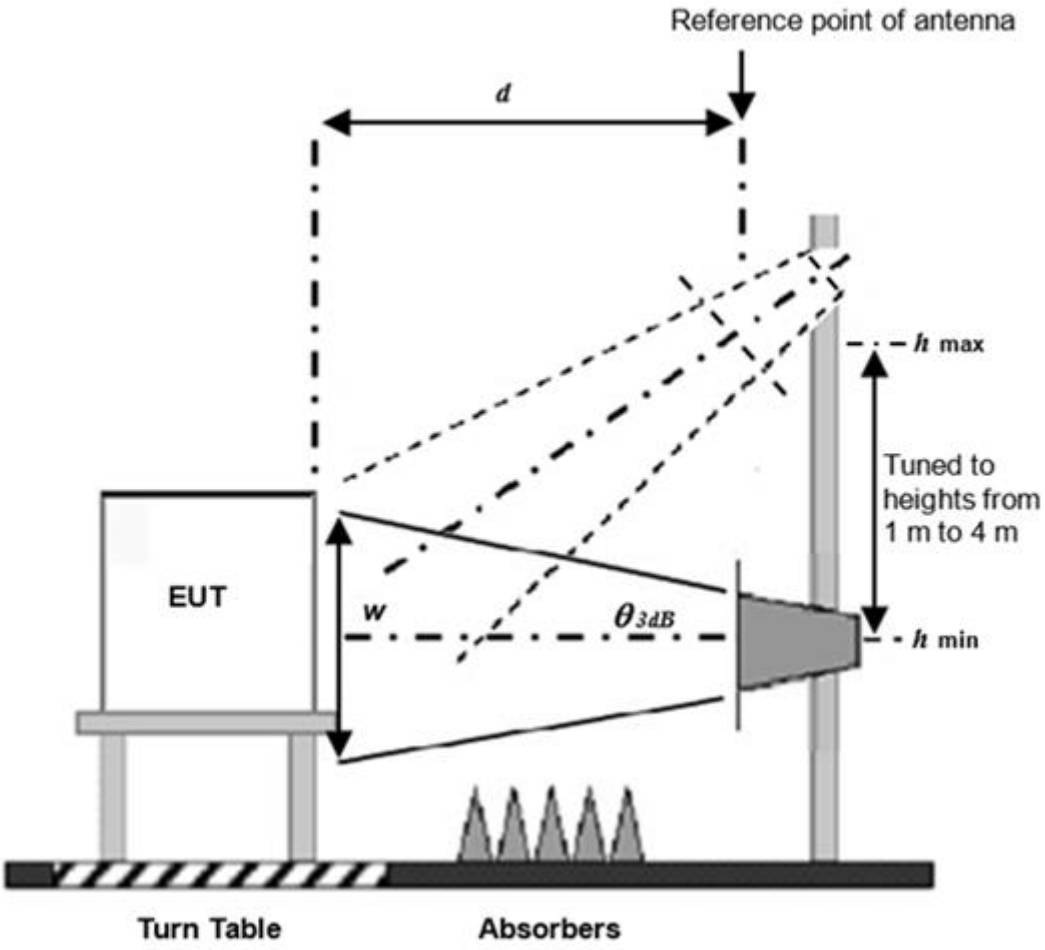


For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

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

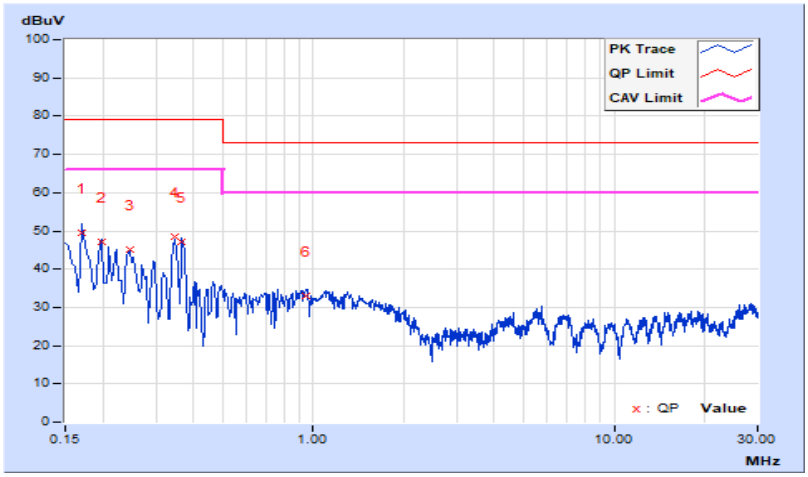
Mode A

Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	17 °C, 63 % RH, 993.361345 mbar
Tested by	Jim Lee		

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	0.17000	10.16	39.44	30.01	49.60	40.17	79.00	66.00	-29.40	-25.83
2	0.19780	10.17	36.90	28.80	47.07	38.97	79.00	66.00	-31.93	-27.03
3	0.24485	10.17	34.91	30.21	45.08	40.38	79.00	66.00	-33.92	-25.62
4	**0.34578**	**10.18**	**38.45**	**35.38**	**48.63**	**45.56**	**79.00**	**66.00**	**-30.37**	**-20.44**
5	0.36600	10.18	36.87	34.44	47.05	44.62	79.00	66.00	-31.95	-21.38
6	0.94200	10.23	22.92	15.48	33.15	25.71	73.00	60.00	-39.85	-34.29

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

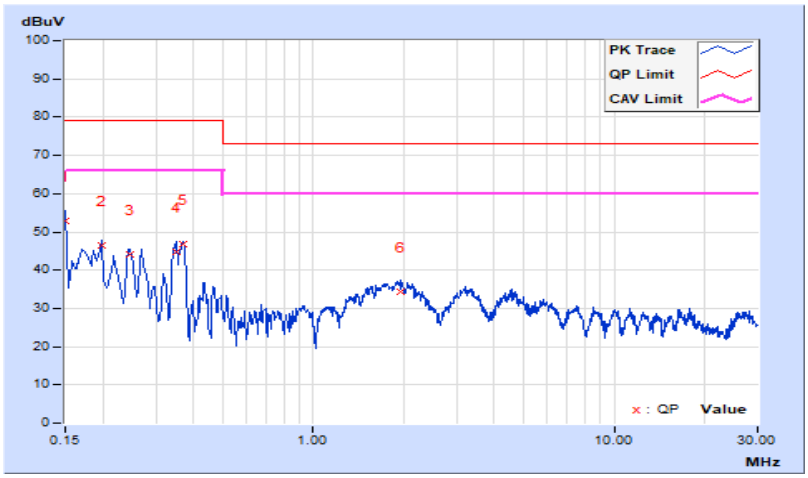


Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	17 °C, 63 % RH, 993.361345 mbar
Tested by	Jim Lee		

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	0.15000	10.18	42.71	30.77	52.89	40.95	79.00	66.00	-26.11	-25.05
2	0.19780	10.20	36.20	26.86	46.40	37.06	79.00	66.00	-32.60	-28.94
3	0.24600	10.20	33.91	29.37	44.11	39.57	79.00	66.00	-34.89	-26.43
4	0.35000	10.21	34.69	27.35	44.90	37.56	79.00	66.00	-34.10	-28.44
5	0.36932	10.21	36.43	34.13	46.64	44.34	79.00	66.00	-32.36	-21.66
6	1.94200	10.33	23.89	15.52	34.22	25.85	73.00	60.00	-38.78	-34.15

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

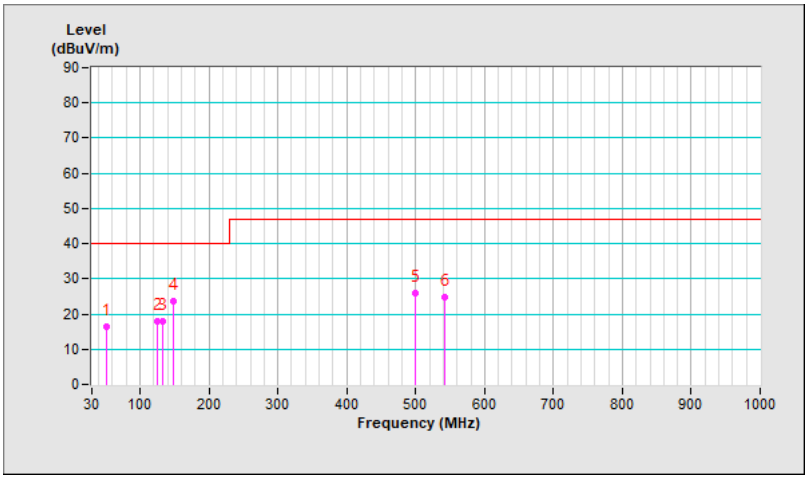
Mode A

Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP), 120 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22 °C, 70 % RH, 1000 mbar
Tested By	Brian Kuo		

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	51.83	16.44 QP	40.00	-23.56	1.00 H	19	28.90	-12.46
2	124.96	18.06 QP	40.00	-21.94	4.00 H	312	33.23	-15.17
3	133.47	17.94 QP	40.00	-22.06	3.00 H	294	32.28	-14.34
4	147.40	23.52 QP	40.00	-16.48	2.00 H	156	36.40	-12.88
5	500.00	26.03 QP	47.00	-20.97	2.00 H	224	33.22	-7.19
6	541.97	24.70 QP	47.00	-22.30	2.00 H	147	31.25	-6.55

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.

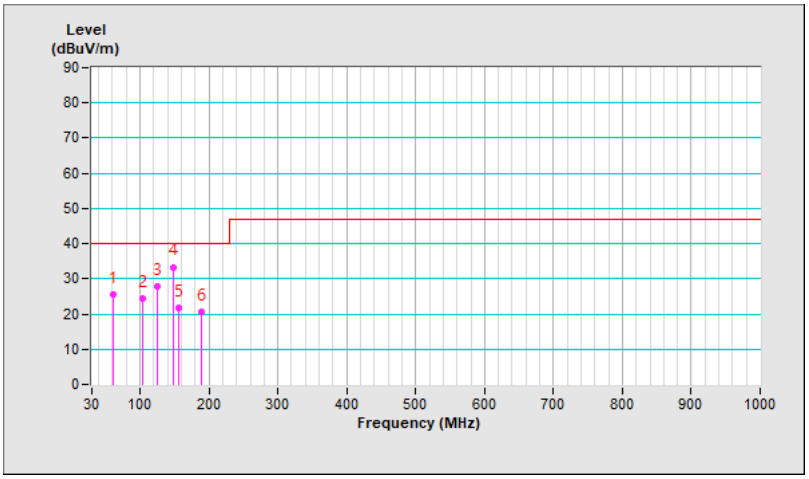


Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP), 120 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22 °C, 70 % RH, 1000 mbar
Tested By	Brian Kuo		

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	60.26	25.57 QP	40.00	-14.43	3.00 V	154	38.78	-13.21
2	103.53	24.38 QP	40.00	-15.62	2.50 V	84	41.74	-17.36
3	125.00	27.71 QP	40.00	-12.29	1.50 V	284	43.15	-15.44
4	**147.40**	**33.35 QP**	**40.00**	**-6.65**	**2.00 V**	**98**	**46.52**	**-13.17**
5	155.36	21.78 QP	40.00	-18.22	1.00 V	30	34.71	-12.93
6	188.56	20.69 QP	40.00	-19.31	1.00 V	243	36.29	-15.60

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



7.3 Radiated Emissions above 1 GHz

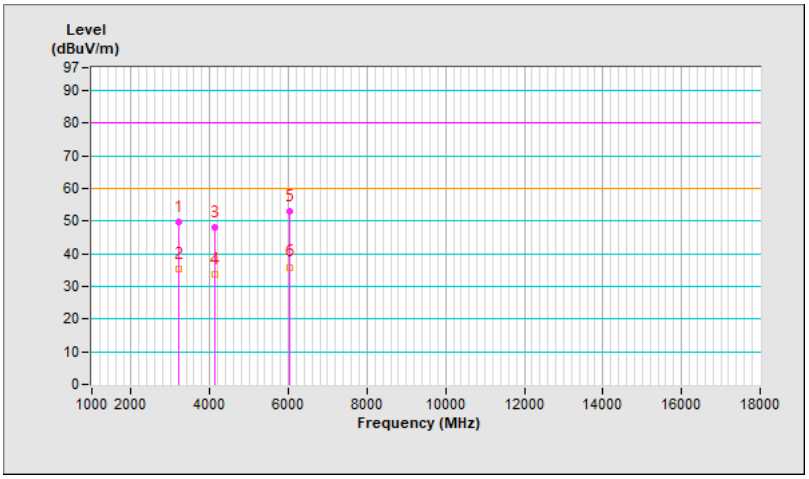
Mode A

Frequency Range	1 GHz ~ 18 GHz	**Detector Function & Resolution Bandwidth**	Peak (PK) / Average (AV), 1 MHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22 °C, 65 % RH, 990.9 mbar
Tested By	Scott Yang		

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	3216.58	49.60 PK	80.00	-30.40	1.00 H	278	44.97	4.63
2	3216.58	35.15 AV	60.00	-24.85	1.00 H	278	30.52	4.63
3	4115.25	47.91 PK	80.00	-32.09	2.00 H	113	40.30	7.61
4	4115.25	33.69 AV	60.00	-26.31	2.00 H	113	26.08	7.61
5	6026.74	52.86 PK	80.00	-27.14	2.00 H	337	41.45	11.41
6	6026.74	35.96 AV	60.00	-24.04	2.00 H	337	24.55	11.41

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.

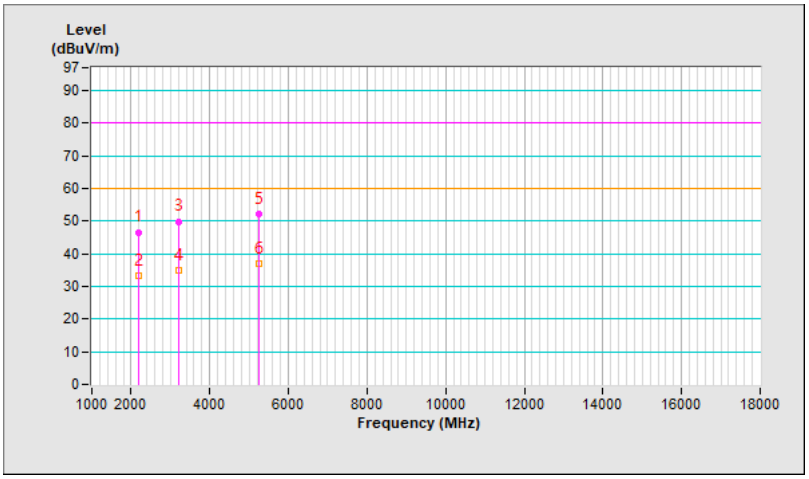


Frequency Range	1 GHz ~ 18 GHz	**Detector Function & Resolution Bandwidth**	Peak (PK) / Average (AV), 1 MHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22 °C, 65 % RH, 990.8 mbar
Tested By	Scott Yang		

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	2193.38	46.59 PK	80.00	-33.41	1.50 V	167	43.37	3.22
2	2193.38	33.36 AV	60.00	-26.64	1.50 V	167	30.14	3.22
3	3216.58	49.94 PK	80.00	-30.06	2.00 V	163	45.31	4.63
4	3216.58	34.89 AV	60.00	-25.11	2.00 V	163	30.26	4.63
5	5240.14	52.03 PK	80.00	-27.97	1.50 V	267	41.97	10.06
6	**5240.14**	**36.96 AV**	**60.00**	**-23.04**	**1.50 V**	**267**	**26.90**	**10.06**

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.

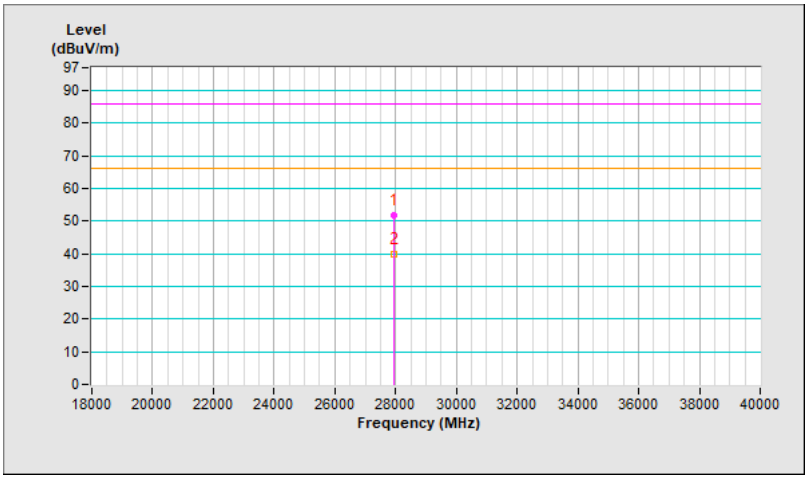


Frequency Range	18 GHz ~ 40 GHz	**Detector Function & Resolution Bandwidth**	Peak (PK) / Average (AV), 1 MHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22 °C, 65 % RH, 991 mbar
Tested By	Scott Yang		

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	27935.12	51.59 PK	86.00	-34.41	1.00 H	258	43.76	7.83
2	27935.12	39.97 AV	66.00	-26.03	1.00 H	258	32.14	7.83

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.

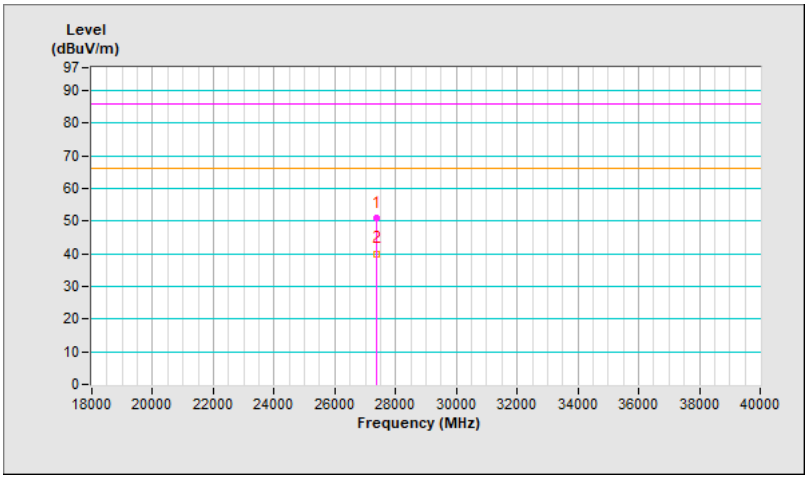


Frequency Range	18 GHz ~ 40 GHz	**Detector Function & Resolution Bandwidth**	Peak (PK) / Average (AV), 1 MHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22 °C, 65 % RH, 991 mbar
Tested By	Scott Yang		

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	27351.36	51.08 PK	86.00	-34.92	1.00 V	163	42.66	8.42
2	27351.36	40.02 AV	66.00	-25.98	1.00 V	163	31.60	8.42

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.



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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