

FCC Test Report

Report No.: RFBGMK-WTW-P24040513

FCC ID: K7SWIB007

Test Model: WIB007

Received Date: 2024/5/7

Test Date: 2024/5/16 ~ 2024/5/21

Issued Date: 2024/6/5

Applicant: Belkin International, Inc.

Address: 555 S. Aviation Blvd., Suite 180, El Segundo, CA 90245, USA

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

**FCC Registration /
Designation Number:** 198487 / TW2021



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Release Control Record

Issue No.	Description	Date Issued
RFBGMK-WTW-P24040513	Original release.	2024/6/5

1 Certificate of Conformity

Product: BoostCharge Magnetic Wireless Charging Stand With Qi2

Brand: belkin

Test Model: WIB007

Sample Status: Engineering sample

Applicant: Belkin International, Inc.

Test Date: 2024/5/16 ~ 2024/5/21

Standards: 47 CFR FCC Part 15, Subpart C (Section 15.209)
ANSI C63.10:2013

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

Prepared by :

Annie Chang

Date: 2024/6/5

Annie Chang / Senior Specialist

Approved by :

Jeremy Lin

Date: 2024/6/5

Jeremy Lin / Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.209)

FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	Pass	Meet the requirement of limit. Minimum passing margin is -10.69dB at 0.19510MHz
15.209	Radiated Emission Test	Pass	Meet the requirement of limit. Minimum passing margin is -5.2dB at 66.42MHz
15.215 (c)	Emission Bandwidth	-	Reference only

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	Frequency	Expanded Uncertainty (k=2) ($\pm$)
Conducted Emissions	9kHz ~ 40GHz	2.63 dB
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.9 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	2.85 dB
	30MHz ~ 1000MHz	5.7 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	BoostCharge Magnetic Wireless Charging Stand With Qi2
Brand	belkin
Test Model	WIB007
Sample Status	Engineering sample
Power Supply Rating	120Vac
Modulation Type	FSK
Operating Frequency	127.7kHz & 360kHz
Antenna Type	Coil antenna
Field Strength	-10.0dBuV/m (@300m) (AV)
Accessory Device	Refer to note as below
Data Cable Supplied	N/A
Maximum Power Output from the Charging Coil	15W

Note:

1. The EUT has following accessories:

Item	Brand	Model No.	Spec.
AC Adapter	belkin	A784-120167C-US1	AC Input: 100-240V, 50/60Hz, 0.5A DC Output: 5V/3A; 9V/2.23A; 12V/1.67A; 5-11V/2.2A; 20.0W
Type C to C cable	-	-	Shielded 1.5m

2. Due to radiated measurements are made and the antenna gain is already accounted for this device, so provide an antenna datasheet and/or antenna measurement report is not required. The antenna dimensions and pictures (include antenna wire length if have) are stated in EUT photo exhibit.

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

3.2 Channel List

2 channels are provided for EUT:

Channel	Frequency (kHz)
1	127.7
2	360

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT can be used in the following ways: Standing/ lie flat Charging . Pre-scan these ways and find the worst case as a representative test condition 2. For Unwanted Emission 9KHz-30MHz has (A)Connect the EUT to the Adapter with USB cable and attach iPhone 11 PRO(127.7kHz) (B)Connect the EUT to the Laptop with USB cable and attach iPhone 11 PRO(127.7kHz) (C)Connect the EUT to the Adapter with USB cable and attach iPhone 15 PRO(360kHz) (D)Connect the EUT to the Laptop with USB cable and attach iPhone 15 PRO(360kHz) Pre-scan these modes and find the worst case as a representative test condition.
Worst Case:	1. Standing is Worst Condition 2. For Unwanted Emission 9KHz-30MHz A,C mode is the worst mode

Test Item	EUT Configure Mode	Tested Channel	Modulation
20dB Bandwidth	A	PTx_127.7kHz	FSK
	C	PTx_360kHz	FSK
AC Power Conducted Emission	A	PTx_127.7kHz	FSK
	B	PTx_127.7kHz	FSK
	C	PTx_360kHz	FSK
	D	PTx_360kHz	FSK
Radiated Emission Test	A	PTx_127.7kHz	FSK
	C	PTx_360kHz	FSK
EUT Configure Mode:	A	Connect the EUT to the Adapter with USB cable and attach iPhone 11 PRO(127.7kHz)	
	B	Connect the EUT to the Laptop with USB cable and attach iPhone 11 PRO(127.7kHz)	
	C	Connect the EUT to the Adapter with USB cable and attach iPhone 15 PRO(360kHz)	
	D	Connect the EUT to the Laptop with USB cable and attach iPhone 15 PRO(360kHz)	

3.4 Description of Support Units

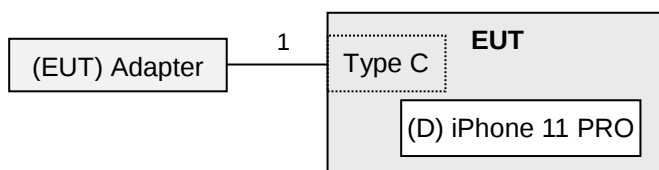
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	NB	Dell	P90F	N/A	N/A	Provided by Lab
B	NB Adapter	Dell	LA65NS2-01	N/A	N/A	Provided by Lab
C	iPhone 15 PRO	APPLE	A3102	N/A	N/A	Provided by Lab
D	iPhone 11 PRO	APPLE	A2215	N/A	N/A	Provided by Lab

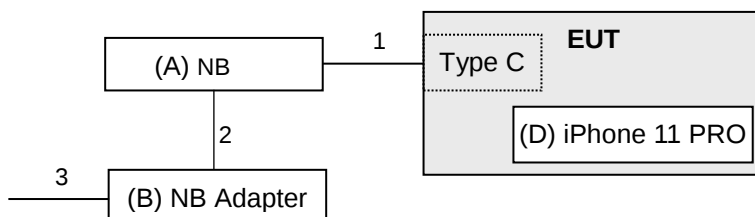
ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	Type C to C cable	1	1.5	Y	0	Supplied by applicant
2	DC cable	1	1.8	N	0	Provided by Lab
3	AC cable	1	0.9	N	0	Provided by Lab

3.4.1 Configuration of System under Test

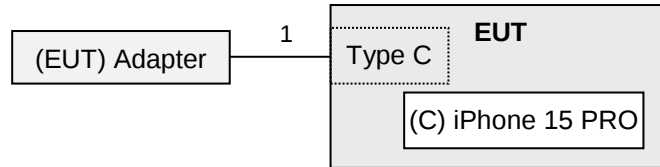
Mode A



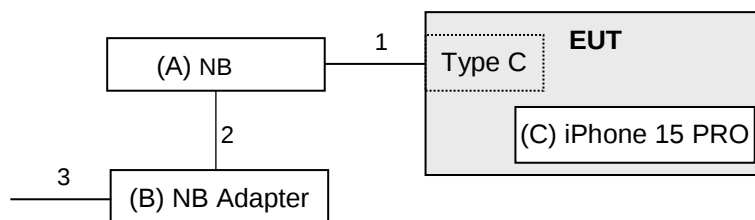
Mode B



Mode C



Mode D



3.5 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

47 CFR FCC Part 15, Subpart C (Section 15.209)

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

For Frequency Below 30MHz

Frequency (MHz)	Field Strength (dBuV/m)		Measurement Distance (meters)
	uV/m	dBuV/m	
0.009 – 0.490	2400 / F (kHz)	48.52-13.80	300
0.490 – 1.705	24000 / F (kHz)	33.80-22.97	30
1.705 – 30.0	30	29.54	30

For Frequency Between 30-1000MHz

Frequency (MHz)	Field Strength (dBuV/m)		Measurement Distance (meters)
	uV/m	dBuV/m	
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

4.1.2 Test Instruments

Description & Manufacturer	Model no.	Serial No.	Calibrated Date	Calibrated Until
MXE EMI Receiver Agilent	N9038A	MY51210129	2024/3/22	2025/3/21
MXE EMI Receiver Agilent	N9038A	MY51210137	2023/6/5	2024/6/4
Signal Analyzer R&S	FSV40	101042	2023/9/5	2024/9/4
Preamplifier Agilent	8447D	2944A11064	2024/2/15	2025/2/14
Preamplifier EMCI	EMC001340	980269	2023/6/27	2024/6/26
Bi_Log Antenna Schwarzbeck	VULB 9168	137	2023/10/13	2024/10/12
Loop Antenna EMCI	LPA600	270	2023/9/4	2024/9/3
RF Coaxial Cable Pacific	8D-FB	Cable-CH6-02	2023/6/27	2024/6/26
Coupling / Decoupling Network Schwarzbeck	CDNE-M2	00097	2023/5/25	2024/5/24
Coupling / Decoupling Network Schwarzbeck	CDNE-M3	00091	2023/5/25	2024/5/24
Turn Table ADT	TT100	0306	NA	NA
Tower ADT	AT100	0306	NA	NA
Software BVADT	Radiated_V8.7.08	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 Linkou 966 Chamber 6 (CH 6).
3. Tested Date: 2024/5/16 ~ 2024/5/21

4.1.3 Test Procedures

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9kHz-90kHz, 110kHz-490kHz) set to average detect function and peak detect function.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200Hz at frequency range 9kHz to 150kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency range 150kHz to 30MHz.

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Note:

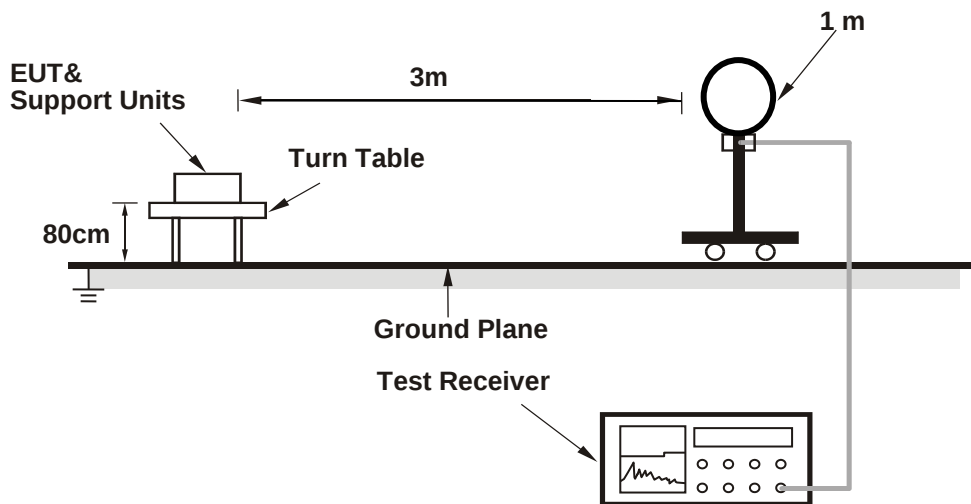
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

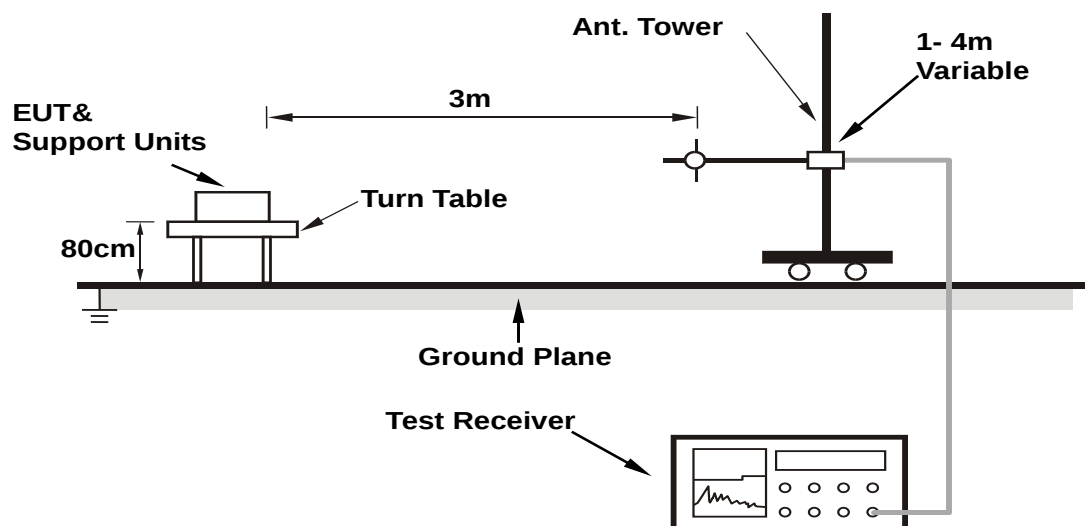
No deviation.

4.1.5 Test Set Up

For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



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

4.1.6 EUT Operating Conditions

Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

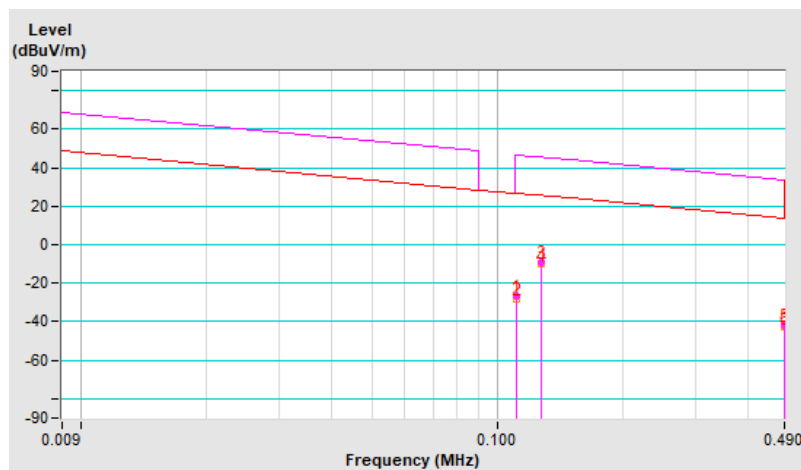
9 kHz ~ 490 kHz Data:

Test Mode	Mode A	Channel	CH 1 : 127.7 kHz
Frequency Range	9 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 200 Hz for Below 150 kHz; Peak (PK) / Average (AV), 9 kHz for 150 ~ 490 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity : Parallel								
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	0.1110	-26.6 PK	46.7	-73.3	1.00	169	33.5	-60.1
2	0.1110	-27.9 AV	26.7	-54.6	1.00	169	32.2	-60.1
3	*0.1277	-8.9 PK	45.5	-54.4	1.00	5	52.1	-61.0
4	*0.1277	-10.0 AV	25.5	-35.5	1.00	5	51.0	-61.0
5	0.4890	-41.7 PK	33.8	-75.5	1.00	247	29.5	-71.2
6	0.4890	-42.8 AV	13.8	-56.6	1.00	247	28.4	-71.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters. Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB
6. “ * ”: Fundamental frequency.

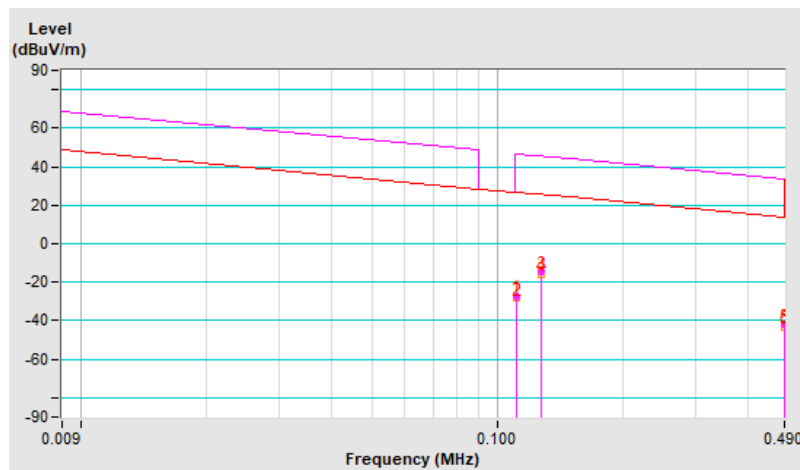


Test Mode	Mode A	Channel	CH 1 : 127.7 kHz
Frequency Range	9 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 200 Hz for Below 150 kHz; Peak (PK) / Average (AV), 9 kHz for 150 ~ 490 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity : Perpendicular								
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	0.1110	-27.1 PK	46.7	-73.8	1.00	228	33.0	-60.1
2	0.1110	-28.4 AV	26.7	-55.1	1.00	228	31.7	-60.1
3	*0.1277	-14.7 PK	45.5	-60.2	1.00	124	46.3	-61.0
4	*0.1277	-16.0 AV	25.5	-41.5	1.00	124	45.0	-61.0
5	0.4890	-42.1 PK	33.8	-75.9	1.00	208	29.1	-71.2
6	0.4890	-43.2 AV	13.8	-57.0	1.00	208	28.0	-71.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters. Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB
6. “ * “: Fundamental frequency.

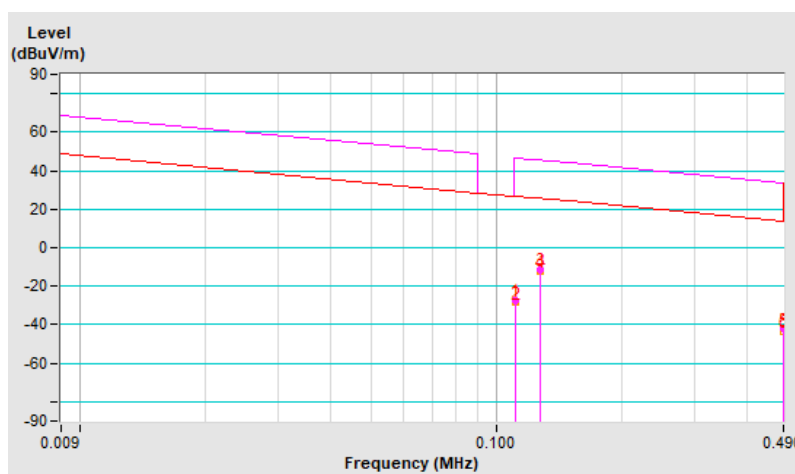


Test Mode	Mode A	Channel	CH 1 : 127.7 kHz
Frequency Range	9 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 200 Hz for Below 150 kHz; Peak (PK) / Average (AV), 9 kHz for 150 ~ 490 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity : Ground-parallel								
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	0.1110	-27.3 PK	46.7	-74.0	1.00	248	32.8	-60.1
2	0.1110	-28.4 AV	26.7	-55.1	1.00	248	31.7	-60.1
3	*0.1277	-11.4 PK	45.5	-56.9	1.00	289	49.6	-61.0
4	*0.1277	-12.2 AV	25.5	-37.7	1.00	289	48.8	-61.0
5	0.4890	-42.3 PK	33.8	-76.1	1.00	187	28.9	-71.2
6	0.4890	-43.5 AV	13.8	-57.3	1.00	187	27.7	-71.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters. Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB
6. “ * “: Fundamental frequency.

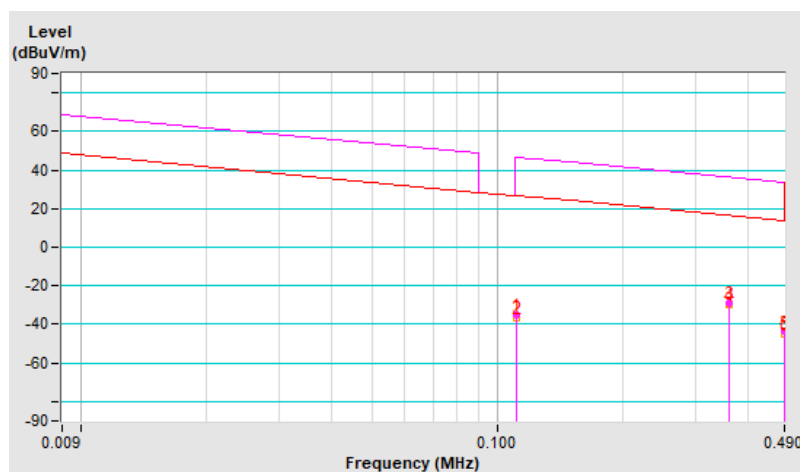


Test Mode	Mode C	Channel	CH 2 : 360 kHz
Frequency Range	9 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 200 Hz for Below 150 kHz; Peak (PK) / Average (AV), 9 kHz for 150 ~ 490 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity : Parallel								
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	0.1110	-35.0 PK	46.7	-81.7	1.00	128	25.1	-60.1
2	0.1110	-36.3 AV	26.7	-63.0	1.00	128	23.8	-60.1
3	*0.3600	-28.9 PK	36.5	-65.4	1.00	17	40.2	-69.1
4	*0.3600	-29.6 AV	16.5	-46.1	1.00	17	39.5	-69.1
5	0.4890	-43.8 PK	33.8	-77.6	1.00	248	27.4	-71.2
6	0.4890	-44.7 AV	13.8	-58.5	1.00	248	26.5	-71.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters. Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB
6. “ * “: Fundamental frequency.

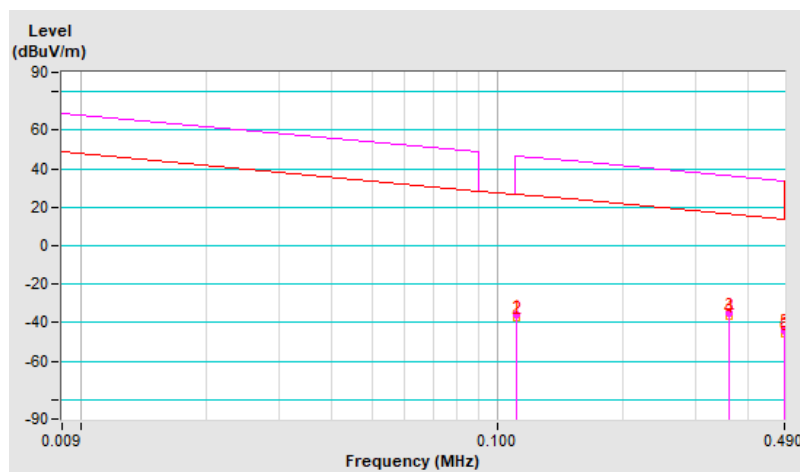


Test Mode	Mode C	Channel	CH 2 : 360 kHz
Frequency Range	9 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 200 Hz for Below 150 kHz; Peak (PK) / Average (AV), 9 kHz for 150 ~ 490 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity : Perpendicular								
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	0.1110	-36.1 PK	46.7	-82.8	1.00	258	24.0	-60.1
2	0.1110	-37.4 AV	26.7	-64.1	1.00	258	22.7	-60.1
3	*0.3600	-35.2 PK	36.5	-71.7	1.00	226	33.9	-69.1
4	*0.3600	-36.3 AV	16.5	-52.8	1.00	226	32.8	-69.1
5	0.4890	-44.2 PK	33.8	-78.0	1.00	115	27.0	-71.2
6	0.4890	-45.6 AV	13.8	-59.4	1.00	115	25.6	-71.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters. Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB
6. “ * “: Fundamental frequency.

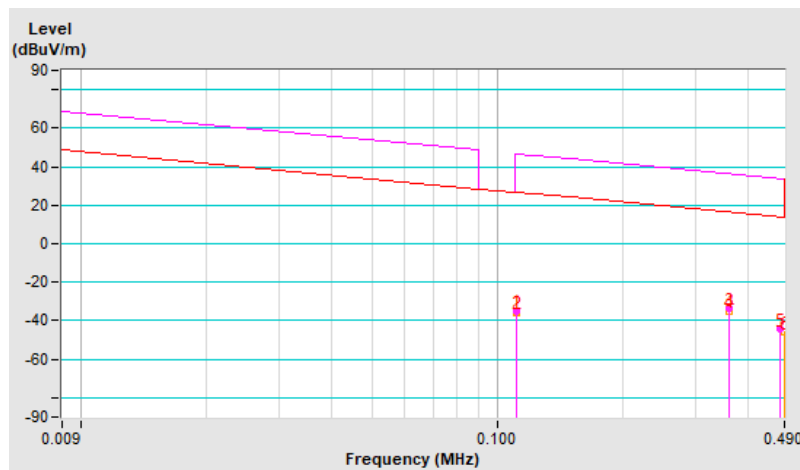


Test Mode	Mode C	Channel	CH 2 : 360 kHz
Frequency Range	9 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 200 Hz for Below 150 kHz; Peak (PK) / Average (AV), 9 kHz for 150 ~ 490 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity : Ground-parallel								
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	0.1110	-34.8 PK	46.7	-81.5	1.00	257	25.3	-60.1
2	0.1110	-35.7 AV	26.7	-62.4	1.00	257	24.4	-60.1
3	*0.3600	-33.8 PK	36.5	-70.3	1.00	303	35.3	-69.1
4	*0.3600	-35.1 AV	16.5	-51.6	1.00	303	34.0	-69.1
5	0.4800	-44.5 PK	34.0	-78.5	1.00	187	26.6	-71.1
6	0.4890	-45.9 AV	13.8	-59.7	1.00	187	25.3	-71.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters. Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB
6. “ * “: Fundamental frequency.



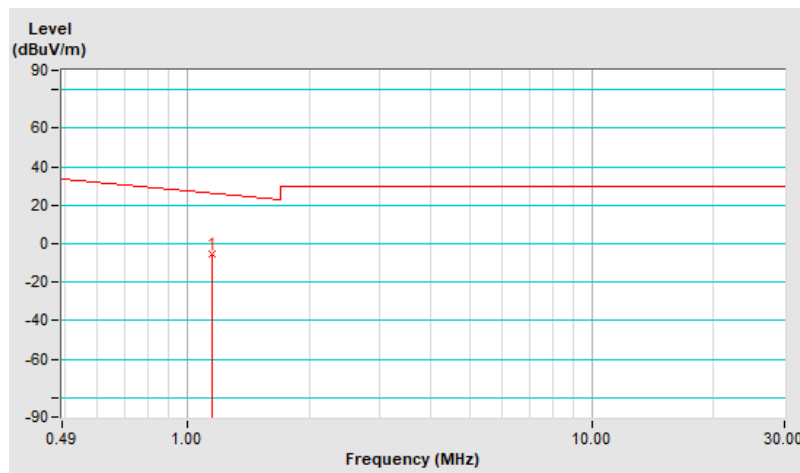
490 kHz ~ 30 MHz Data:

Test Mode	Mode A	Channel	CH 1 : 127.7 kHz
Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity : Parallel								
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	1.1493	-5.2 QP	26.4	-31.6	1.00	176	30.3	-35.5

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) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters. Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

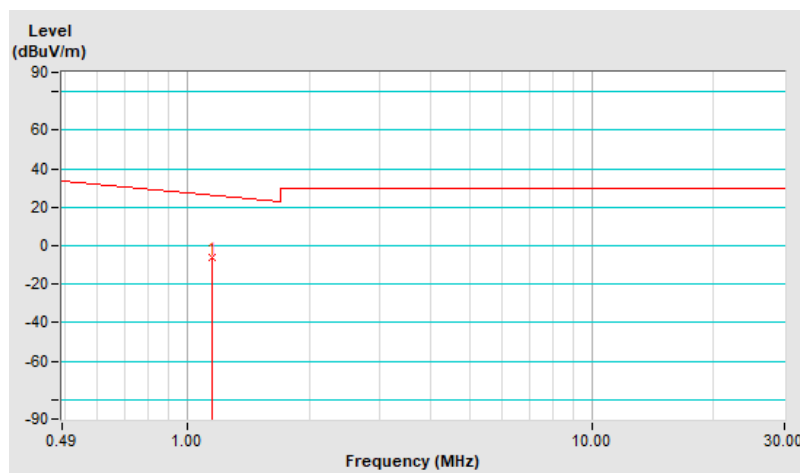


Test Mode	Mode A	Channel	CH 1 : 127.7 kHz
Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity : Perpendicular								
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	1.1493	-6.4 QP	26.4	-32.8	1.00	207	29.1	-35.5

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) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters. Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

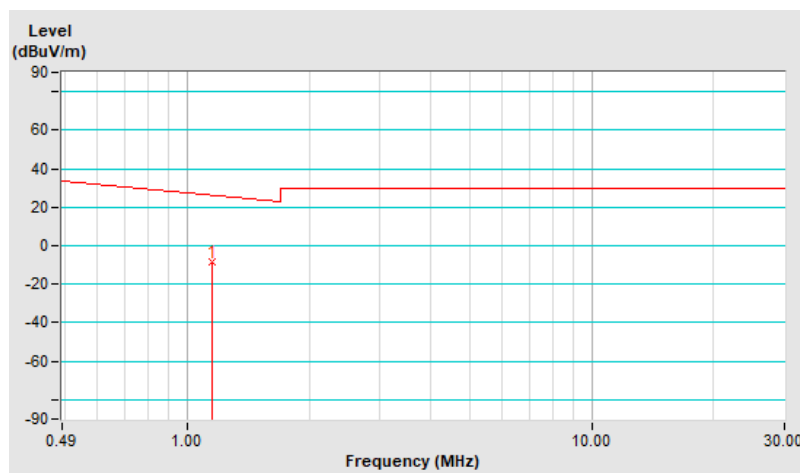


Test Mode	Mode A	Channel	CH 1 : 127.7 kHz
Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity : Ground-parallel								
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	1.1493	-8.2 QP	26.4	-34.6	1.00	315	27.3	-35.5

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) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters. Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

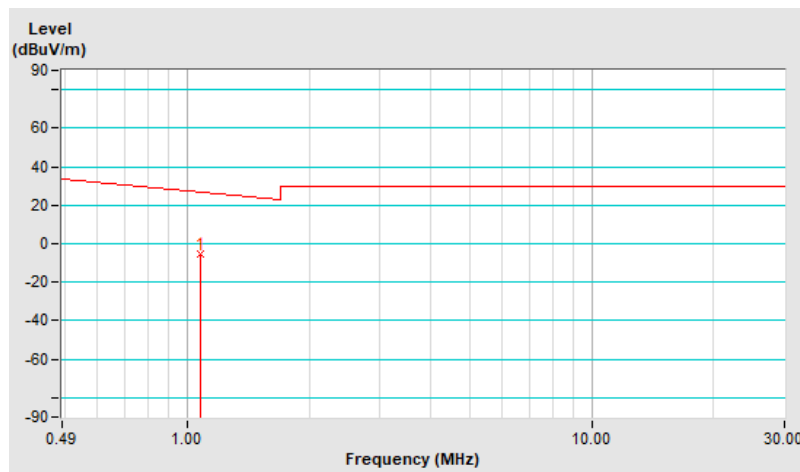


Test Mode	Mode C	Channel	CH 2 : 360 kHz
Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity : Parallel								
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	1.0800	-5.2 QP	26.9	-32.1	1.00	205	30.1	-35.3

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) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters. Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

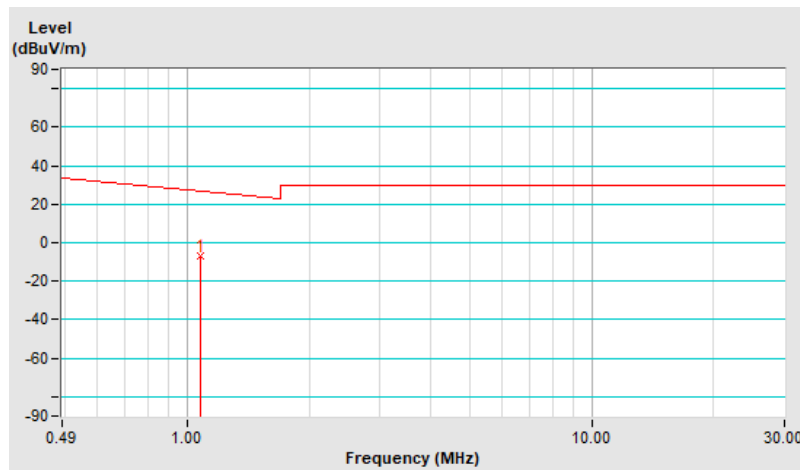


Test Mode	Mode C	Channel	CH 2 : 360 kHz
Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity : Perpendicular								
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	1.0800	-6.8 QP	26.9	-33.7	1.00	185	28.5	-35.3

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) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters. Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

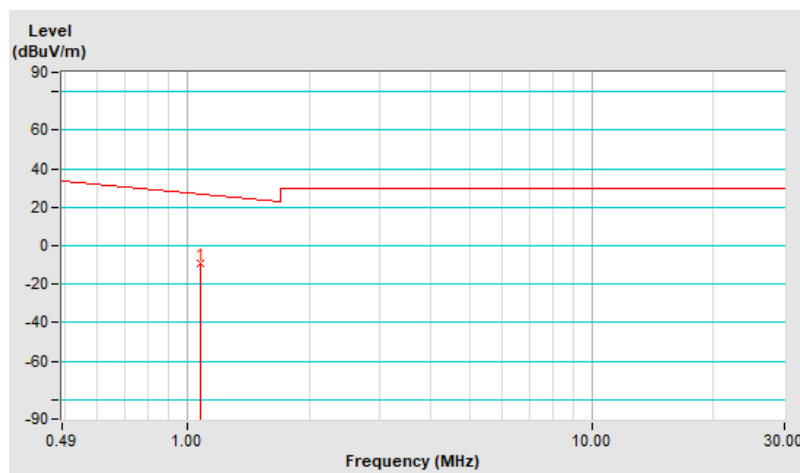


Test Mode	Mode C	Channel	CH 2 : 360 kHz
Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity : Ground-parallel								
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	1.0800	-9.4 QP	26.9	-36.3	1.00	246	25.9	-35.3

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) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters. Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB



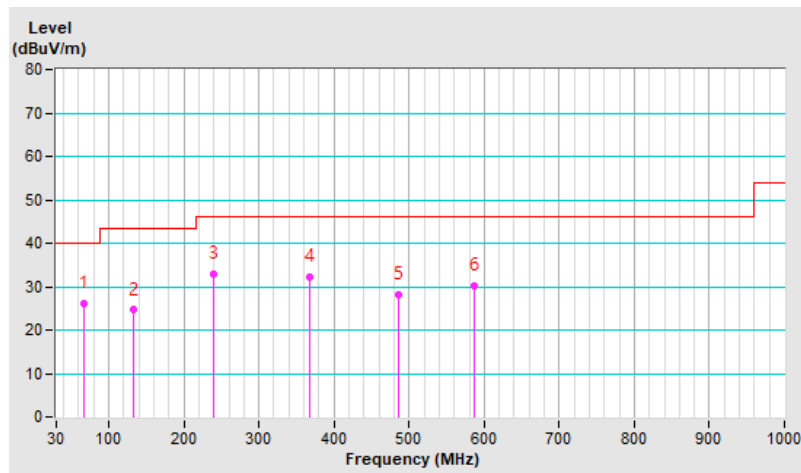
Above 30MHz Data:

Test Mode	Mode A	Channel	CH 1 : 127.7 kHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

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	66.47	26.2 QP	40.0	-13.8	1.69 H	119	36.2	-10.0
2	132.82	24.6 QP	43.5	-18.9	1.24 H	104	33.8	-9.2
3	240.05	32.9 QP	46.0	-13.1	1.37 H	235	41.5	-8.6
4	367.37	32.3 QP	46.0	-13.7	1.85 H	202	36.7	-4.4
5	486.09	28.1 QP	46.0	-17.9	1.21 H	60	29.9	-1.8
6	586.39	30.2 QP	46.0	-15.8	1.97 H	212	29.6	0.6

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.

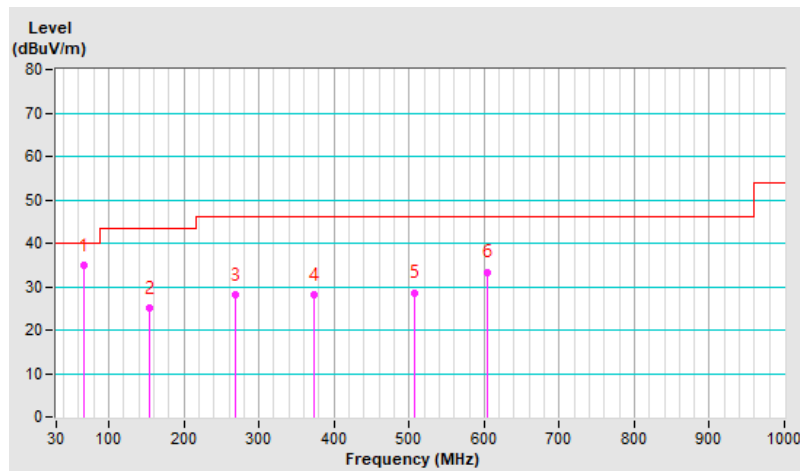


Test Mode	Mode A	Channel	CH 1 : 127.7 kHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

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	66.42	34.8 QP	40.0	-5.2	1.25 V	278	44.8	-10.0
2	153.38	25.0 QP	43.5	-18.5	1.58 V	187	32.9	-7.9
3	268.09	28.0 QP	46.0	-18.0	1.69 V	185	35.0	-7.0
4	373.38	28.0 QP	46.0	-18.0	1.73 V	275	32.2	-4.2
5	507.68	28.6 QP	46.0	-17.4	1.93 V	235	30.0	-1.4
6	604.97	33.2 QP	46.0	-12.8	1.05 V	337	32.0	1.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

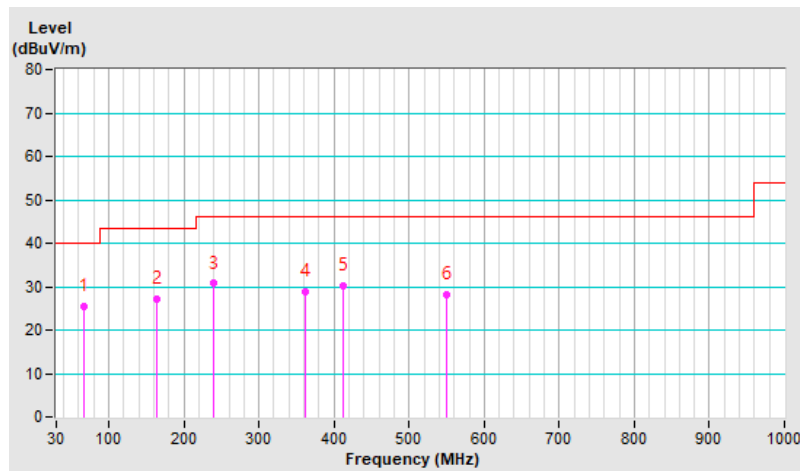


Test Mode	Mode C	Channel	CH 2 : 360 kHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

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	66.57	25.4 QP	40.0	-14.6	1.72 H	282	35.4	-10.0
2	163.76	27.1 QP	43.5	-16.4	1.35 H	76	35.0	-7.9
3	240.00	30.7 QP	46.0	-15.3	1.14 H	253	39.3	-8.6
4	361.64	28.8 QP	46.0	-17.2	1.86 H	126	33.3	-4.5
5	411.99	30.1 QP	46.0	-15.9	1.29 H	212	33.8	-3.7
6	549.87	28.1 QP	46.0	-17.9	1.04 H	13	28.9	-0.8

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.

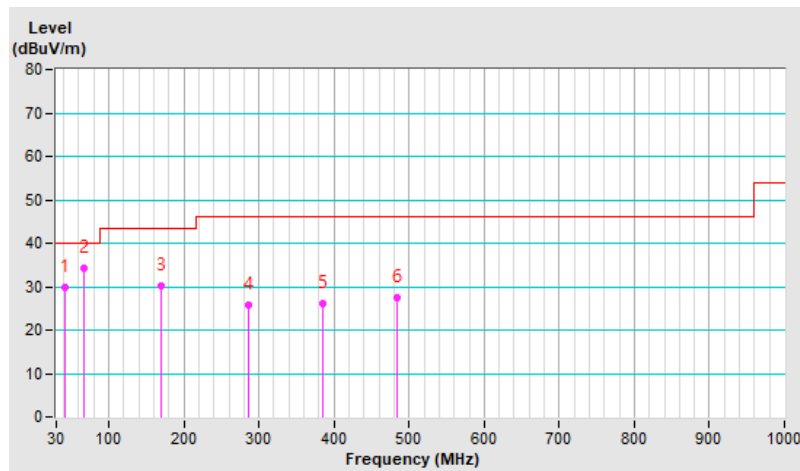


Test Mode	Mode C	Channel	CH 2 : 360 kHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

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	42.12	30.0 QP	40.0	-10.0	1.96 V	239	39.0	-9.0
2	66.57	34.2 QP	40.0	-5.8	1.72 V	93	44.2	-10.0
3	169.87	30.1 QP	43.5	-13.4	1.46 V	182	38.2	-8.1
4	285.74	25.7 QP	46.0	-20.3	1.25 V	182	31.9	-6.2
5	385.36	26.1 QP	46.0	-19.9	1.38 V	11	30.2	-4.1
6	484.74	27.6 QP	46.0	-18.4	1.18 V	242	29.4	-1.8

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.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model no.	Serial No.	Calibrated Date	Calibrated Until
EMI Test Receiver R&S	ESR3	102414	2023/12/12	2024/12/11
EMI Test Receiver R&S	ESCS 30	100276	2024/4/24	2025/4/23
EMI Test Receiver R&S	ESCI	100412	2023/8/23	2024/8/22
LISN R&S	ESH2-Z5	100104	2023/12/12	2024/12/11
LISN Schwarzbeck	NNLK 8121	8121-00759	2023/8/21	2024/8/20
LISN Schwarzbeck	NNLK 8121	8121-731	2023/6/9	2024/6/8
LISN Schwarzbeck	NNLK 8129	8129229	2023/6/27	2024/6/26
LISN R&S	ESH3-Z5	847265/023	2023/10/23	2024/10/22
RF Coaxial Cable PEWC	5D-FB	Cable-CO9-01	2023/7/17	2024/7/16
Fixed Attenuator STI	STI02-2200-10	NO.2	2023/7/17	2024/7/16
50 ohm terminal resistance LYNICS	0900510	E1-01-299	2024/1/3	2025/1/2
50 ohm terminal resistance LYNICS	0900510	E1-011286	2023/9/21	2024/9/20
Software BVADT	Cond_V7.4.1.0	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 Linkou Conduction 9.

3. The VCCI Site Registration No. C-11312.

4. Tested Date: 2024/5/21

4.2.3 Test Procedures

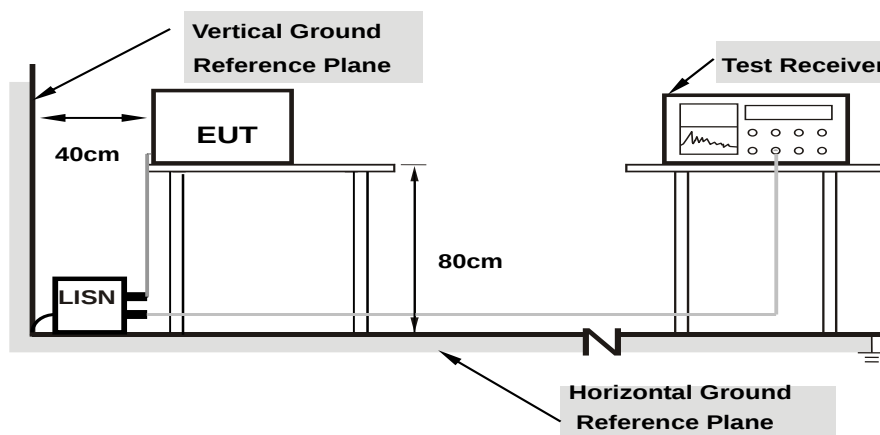
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

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.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: Support units were connected to second LISN.

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

4.2.6 EUT Operating Conditions

Same as item 4.1.6.

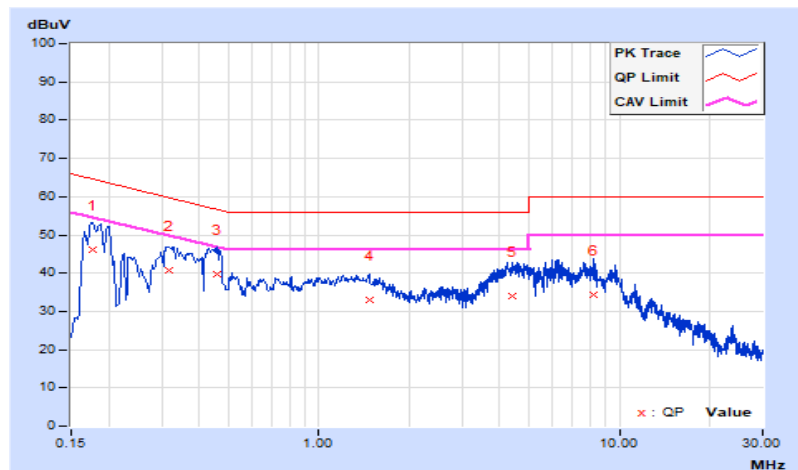
4.2.7 Test Results

Test Mode	Mode A	Channel	CH 1 : 127.7 kHz
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	25 °C, 75 % RH
Tested By	Ian Chang		

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	0.17605	9.99	36.23	15.76	46.22	25.75	64.67	54.67	-18.45	-28.92
2	0.31817	10.02	30.76	11.84	40.78	21.86	59.75	49.75	-18.97	-27.89
3	0.45697	10.05	29.80	13.18	39.85	23.23	56.75	46.75	-16.90	-23.52
4	1.46993	10.15	22.70	11.45	32.85	21.60	56.00	46.00	-23.15	-24.40
5	4.40318	10.35	23.65	14.10	34.00	24.45	56.00	46.00	-22.00	-21.55
6	8.23440	10.53	23.94	16.50	34.47	27.03	60.00	50.00	-25.53	-22.97

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

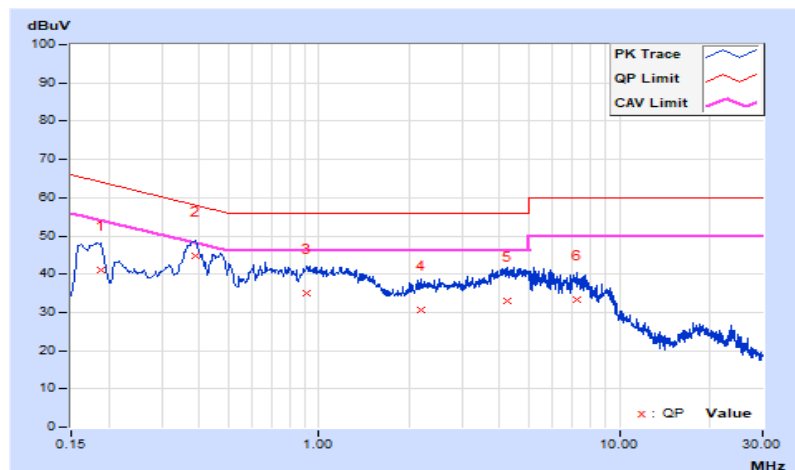


Test Mode	Mode A	Channel	CH 1 : 127.7 kHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

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	0.18853	10.00	31.05	16.09	41.05	26.09	64.10	54.10	-23.05	-28.01
2	0.38809	10.04	34.67	20.98	44.71	31.02	58.10	48.10	-13.39	-17.08
3	0.91457	10.09	24.76	12.51	34.85	22.60	56.00	46.00	-21.15	-23.40
4	2.20128	10.20	20.28	11.80	30.48	22.00	56.00	46.00	-25.52	-24.00
5	4.23501	10.33	22.71	13.89	33.04	24.22	56.00	46.00	-22.96	-21.78
6	7.19798	10.46	22.71	14.84	33.17	25.30	60.00	50.00	-26.83	-24.70

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

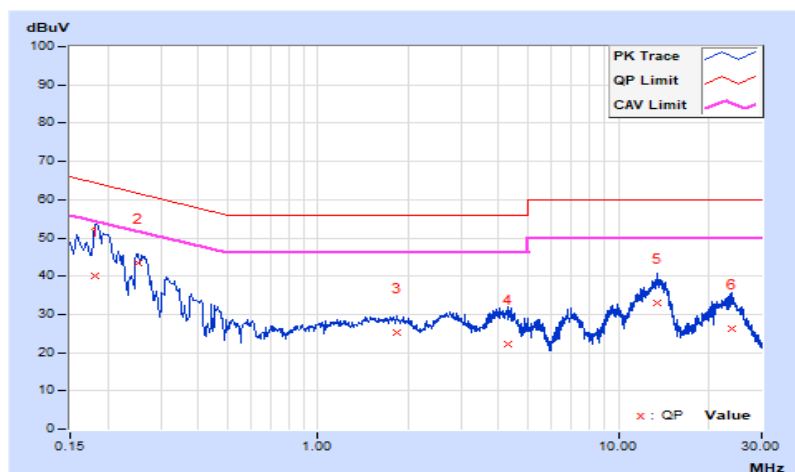


Test Mode	Mode B	Channel	CH 1 : 127.7 kHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

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	0.18129	9.99	30.24	10.09	40.23	20.08	64.43	54.43	-24.20	-34.35
2	0.25126	10.00	33.55	14.79	43.55	24.79	61.72	51.72	-18.17	-26.93
3	1.82974	10.18	14.95	5.61	25.13	15.79	56.00	46.00	-30.87	-30.21
4	4.29758	10.34	11.72	4.28	22.06	14.62	56.00	46.00	-33.94	-31.38
5	13.49860	10.67	22.33	15.37	33.00	26.04	60.00	50.00	-27.00	-23.96
6	23.78062	10.65	15.69	9.80	26.34	20.45	60.00	50.00	-33.66	-29.55

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

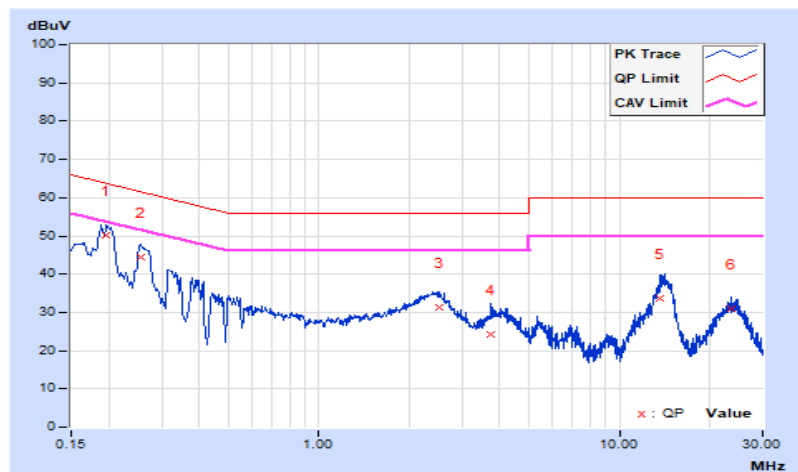


Test Mode	Mode B	Channel	CH 1 : 127.7 kHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

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	0.19693	10.00	40.22	26.43	50.22	36.43	63.74	53.74	-13.52	-17.31
2	0.25526	10.01	34.38	19.93	44.39	29.94	61.58	51.58	-17.19	-21.64
3	2.51417	10.22	21.06	11.54	31.28	21.76	56.00	46.00	-24.72	-24.24
4	3.72657	10.30	13.92	5.70	24.22	16.00	56.00	46.00	-31.78	-30.00
5	13.65113	10.65	22.91	16.20	33.56	26.85	60.00	50.00	-26.44	-23.15
6	23.63983	10.61	20.20	15.23	30.81	25.84	60.00	50.00	-29.19	-24.16

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

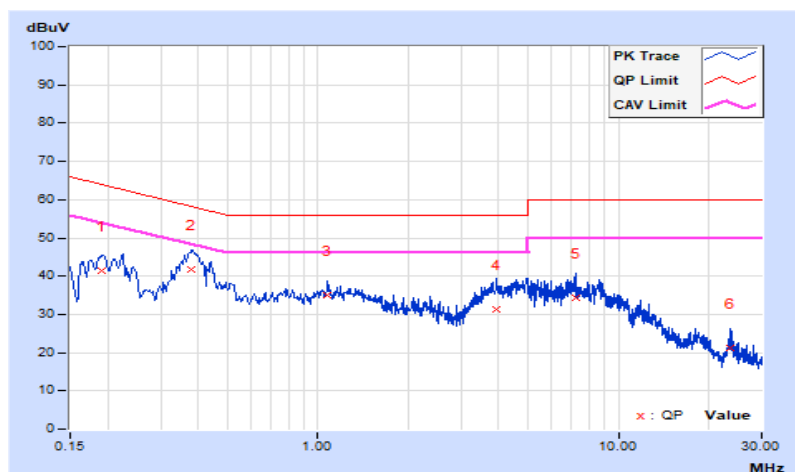


Test Mode	Mode C	Channel	CH 2 : 360 kHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

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	0.19053	9.99	31.57	15.24	41.56	25.23	64.01	54.01	-22.45	-28.78
2	0.38075	10.04	31.72	16.94	41.76	26.98	58.26	48.26	-16.50	-21.28
3	1.07880	10.11	24.76	17.48	34.87	27.59	56.00	46.00	-21.13	-18.41
4	3.92995	10.33	20.97	11.68	31.30	22.01	56.00	46.00	-24.70	-23.99
5	7.19798	10.48	23.93	16.54	34.41	27.02	60.00	50.00	-25.59	-22.98
6	23.49121	10.65	10.60	6.86	21.25	17.51	60.00	50.00	-38.75	-32.49

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

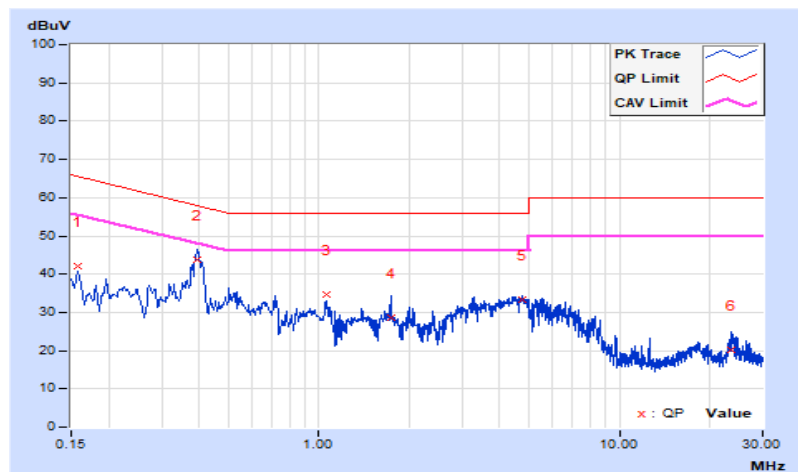


Test Mode	Mode C	Channel	CH 2 : 360 kHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

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	0.15782	9.98	32.26	14.42	42.24	24.40	65.58	55.58	-23.34	-31.18
2	0.39636	10.04	33.72	18.72	43.76	28.76	57.93	47.93	-14.17	-19.17
3	1.05536	10.10	24.43	13.36	34.53	23.46	56.00	46.00	-21.47	-22.54
4	1.74370	10.17	18.41	10.22	28.58	20.39	56.00	46.00	-27.42	-25.61
5	4.75126	10.35	22.91	13.84	33.26	24.19	56.00	46.00	-22.74	-21.81
6	23.65156	10.61	9.56	4.98	20.17	15.59	60.00	50.00	-39.83	-34.41

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

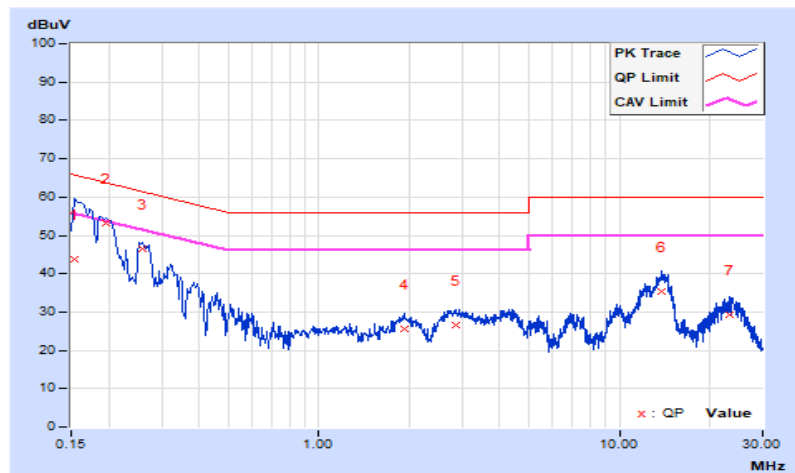


Test Mode	Mode D	Channel	CH 2 : 360 kHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

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	9.99	33.84	11.23	43.83	21.22	65.79	55.79	-21.96	-34.57
2	0.19510	9.99	43.14	28.38	53.13	38.37	63.82	53.82	-10.69	-15.45
3	0.25933	10.00	36.39	19.05	46.39	29.05	61.45	51.45	-15.06	-22.40
4	1.91969	10.19	15.30	7.29	25.49	17.48	56.00	46.00	-30.51	-28.52
5	2.85833	10.26	16.39	7.42	26.65	17.68	56.00	46.00	-29.35	-28.32
6	13.84277	10.68	24.63	18.20	35.31	28.88	60.00	50.00	-24.69	-21.12
7	23.30739	10.66	18.71	12.43	29.37	23.09	60.00	50.00	-30.63	-26.91

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

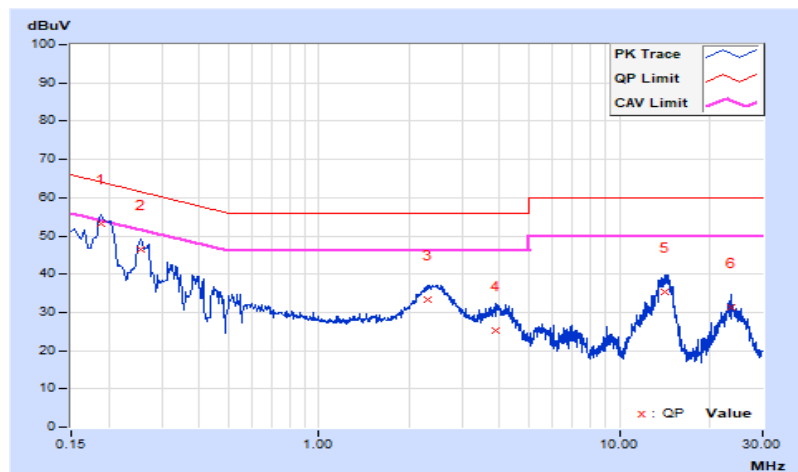


Test Mode	Mode D	Channel	CH 2 : 360 kHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

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	0.18853	10.00	43.36	26.28	53.36	36.28	64.10	54.10	-10.74	-17.82
2	0.25526	10.01	36.36	21.38	46.37	31.39	61.58	51.58	-15.21	-20.19
3	2.30297	10.21	23.21	14.20	33.42	24.41	56.00	46.00	-22.58	-21.59
4	3.86346	10.31	14.95	6.85	25.26	17.16	56.00	46.00	-30.74	-28.84
5	14.13610	10.66	24.66	18.19	35.32	28.85	60.00	50.00	-24.68	-21.15
6	23.48730	10.62	20.68	16.23	31.30	26.85	60.00	50.00	-28.70	-23.15

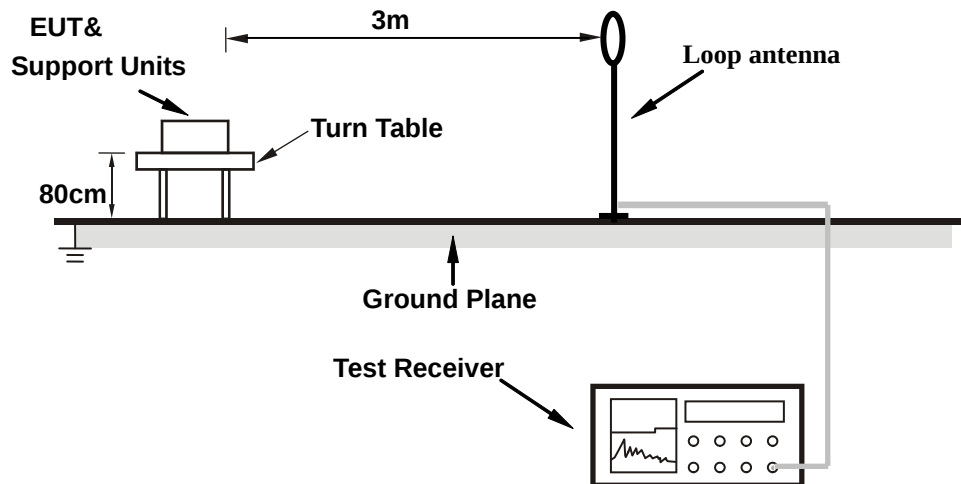
Remarks:

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



4.3 20dB Bandwidth Measurement

4.3.1 Test SetUp



4.3.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.3 Test Procedure

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter Semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation. Then the Loop antenna was rotated 360 degrees to determine the position of the highest radiation.
- The antenna is a broadband loop antenna, which is fixed of a 1m height above the ground, and set away from 3m to the EUT to find the disturbance reading on each frequency.
- The test-receiver system was set to Quasi-peak detect function and specified bandwidth.

4.3.4 Deviation from Test Standard

No deviation.

4.3.5 EUT Operating Conditions

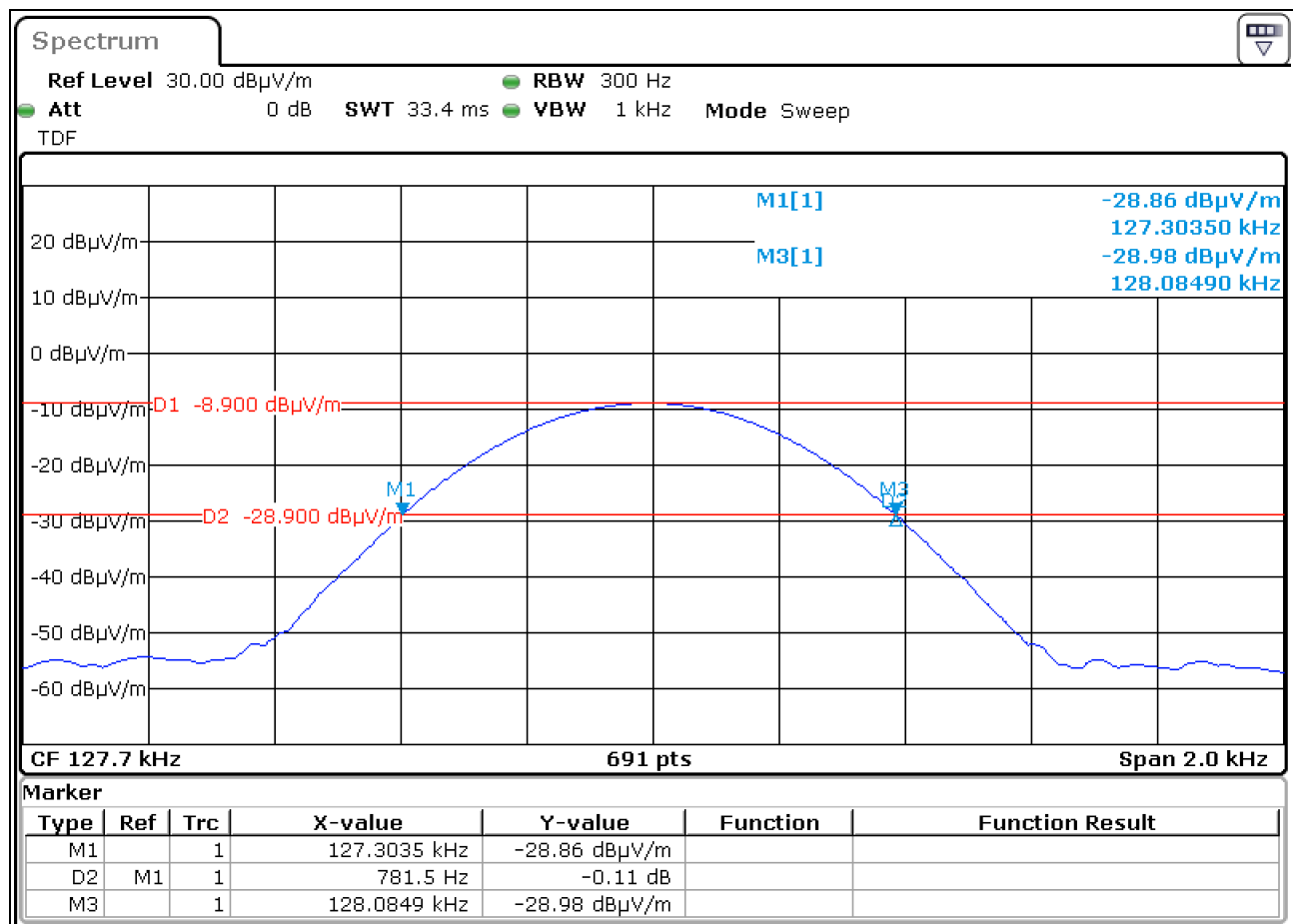
The software provided by client to enable the EUT under transmission condition continuously.

4.3.6 Test Results

Test Mode A

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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Frequency (kHz)	20dB Bandwidth (Hz)
127.7	781.5

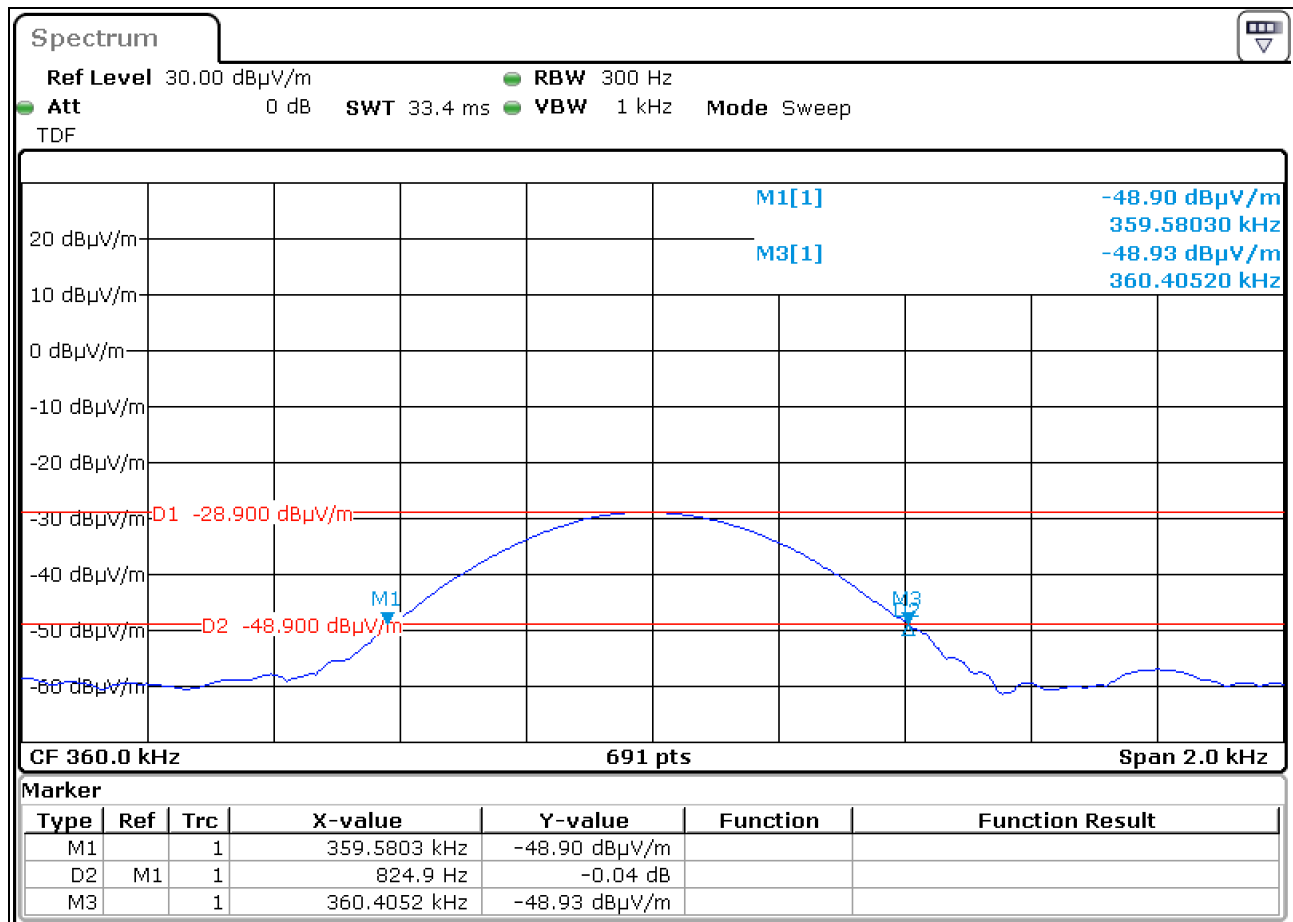


Note: The signal look like CW signal, so RBW can't be match 1~5 % OBW.

Test Mode C

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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Frequency (kHz)	20dB Bandwidth (Hz)
360	824.9



Note: The signal look like CW signal, so RBW can't be match 1~5 % OBW.

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

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.

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

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Email: service.adt@tw.bureauveritas.com

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

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

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