

FCC 47 CFR PART 15 SUBPART C
CERTIFICATION TEST REPORT

For

Power Tray Alarm Table Clock Gray

MODEL NUMBER: CA-55W (DPCI:074-10-9395)

FCC ID: 2ADLI-CA-55W

REPORT NUMBER: 4791019301-RF-1

ISSUE DATE: October 30, 2023

Prepared for

Koda Electronics (HK) Co., Ltd
2/F Mandarin Comm Hse, 38 Morrison Hill Road, Wanchai Hong Kong

Prepared by

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China

Tel: +86 769 22038881

Fax: +86 769 33244054

Website: www.ul.com

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V0	10/30/2023	Initial Issue	

Summary of Test Results		
Description of Test Item	Standard	Results
Radiated Emission Test	FCC 15.209	PASS
20dB Bandwidth	FCC 15.215	PASS
AC Power Line Conducted Emission	FCC Part 15.207	Pass

Note 1: This test report is only published to and used by the applicant, and it is not for evidence purpose in China.

Note 2: The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 15 SUBPART C > when <Accuracy Method> decision rule is applied

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS.....	5
2. TEST METHODOLOGY.....	6
3. FACILITIES AND ACCREDITATION.....	6
4. CALIBRATION AND UNCERTAINTY	7
4.1. <i>MEASURING INSTRUMENT CALIBRATION</i>	<i>7</i>
4.2. <i>MEASUREMENT UNCERTAINTY.....</i>	<i>7</i>
5. EQUIPMENT UNDER TEST	8
5.1. <i>DESCRIPTION OF EUT</i>	<i>8</i>
5.2. <i>TEST MODE.....</i>	<i>8</i>
5.3. <i>ACCESSORY</i>	<i>9</i>
5.4. <i>MEASURING INSTRUMENT LIST.....</i>	<i>10</i>
6. 20dB BANDWIDTH TEST	11
7. RADIATED EMISSION TEST	13
7.1. <i>SPURIOUS EMISSIONS BELOW 30 MHz.....</i>	<i>17</i>
7.2. <i>SPURIOUS EMISSIONS 30 MHz ~ 1 GHz</i>	<i>23</i>
8. AC POWER LINE CONDUCTED EMISSION	27

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Koda Electronics (HK) Co., Ltd
Address: 2/F Mandarin Comm Hse, 38 Morrison Hill Road, Wanchai Hong Kong

Manufacturer Information

Company Name: Dongguan Kenuo Electronic Co., Ltd
Address: Room301, No.6 Jingfu Road, Hengli Town, Dongguan City, Guangdong Province, China

EUT Information

EUT Name: Power Tray Alarm Table Clock Gray
Model: CA-55W (DPCI:074-10-9395)
Model Difference: /
Brand: Capello
Sample Received Date: October 16, 2023
Sample Status: Normal
Sample ID: 6542126
Date of Tested: October 18, 2023 ~ October 30, 2023

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 FCC PART 15 SUBPART C	PASS

Prepared By:



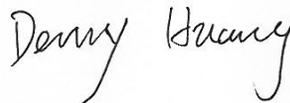
Kebo Zhang
Senior Project Engineer

Approved By:



Stephen Guo
Laboratory Manager

Checked By:



Denny Huang
Senior Project Engineer

2. TEST METHODOLOGY

All tests were performed in accordance with the standard FCC CFR 47 Part 2, KDB 414788 D01 Radiated Test Site v01r01, CFR 47 FCC Part 15, ANSI C63.10-2013.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p>A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p>FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules</p> <p>ISED (Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046.</p> <p>VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011</p>
---------------------------	--

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30 MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30 MHz had been correlated to measurements performed on an OFS.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Conduction Emission	3.62 dB
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB
DTS and 99% Occupied Bandwidth	±0.0196%

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	Power Tray Alarm Table Clock Gray	
Model	CA-55W (DPCI:074-10-9395)	
Product Description	Operation Frequency	111 ~ 205 kHz
Rated Output Power	5 W	
Antenna type	Coil	
Ratings	DC 3 V by battery DC 5 V by adapter	

Note: Wireless charging was not support while powered by battery.

5.2. TEST MODE

Test Mode	Description
Mode 1	Charging with 5 W wireless charging load (Full Load)
Mode 2	Charging with 5 W wireless charging load (Half Load)
Mode 3	Charging with 5 W wireless charging load (No Load)

Note: All the modes had been tested, but only the worst data was recorded in the report.

5.3. ACCESSORY

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Series No.
1	Wireless charger RX artificial load	/	/	/
2	Load	/	/	/

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	Type C	Unshielded	1.0	/
2	DC	/	Unshielded	1.5	/

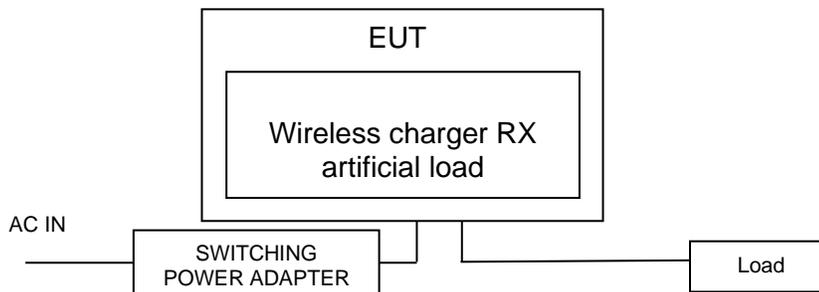
ACCESSORY

Item	Accessory	Brand Name	Model Name	Description
1	SWITCHING POWER ADAPTER	/	GJ15WD-0500240UW	Input: 100-240 V ~, 50/60 Hz 0.5 A Output: DC 5 V, 2.4 A
2	SWITCHING POWER ADAPTER	/	OBL-0502400U	Input: 100-240 V ~, 50/60 Hz 0.5 A Max Output: DC 5 V, 2.4 A

TEST SETUP

The EUT support wireless charging.

SETUP DIAGRAM FOR TEST



5.4. MEASURING INSTRUMENT LIST

Conducted Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
EMI Test Receiver	R&S	ESR3	101961	Oct.13, 2023	Oct.12, 2024
Two-Line V-Network	R&S	ENV216	101983	Oct.13, 2023	Oct.12, 2024
Artificial Mains Networks	Schwarzbeck	NSLK 8126	8126465	Oct.13, 2023	Oct.12, 2024
Software					
Description		Manufacturer	Name	Version	
Test Software for Conducted Emissions		Farad	EZ-EMC	Ver. UL-3A1	

Radiated Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Oct.12, 2023	Oct.11, 2024
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130959	Aug.02, 2021	Aug.01, 2024
Preamplifier	HP	8447D	2944A09099	Oct.12, 2023	Oct.11, 2024
Loop antenna	Schwarzbeck	1519B	00008	Dec.14, 2021	Dec.13, 2024
Preamplifier	TDK	PA-02-001-3000	TRS-302-00050	Oct.12, 2023	Oct.11, 2024
Software					
Description		Manufacturer	Name	Version	
Test Software for Radiated Emissions		Farad	EZ-EMC	Ver. UL-3A1	

Other Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
<input checked="" type="checkbox"/>	Spectrum Analyzer	Keysight	N9020A	MY49100060	Oct.12, 2023	Oct.11, 2024

6. 20dB BANDWIDTH TEST

LIMITS

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.215, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

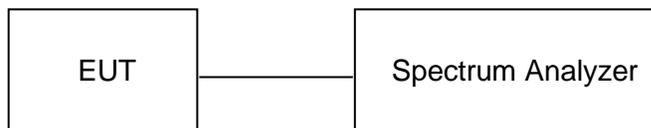
TEST PROCEDURE

Connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	1% to 5% of the bandwidth
VBW	approximately 3×RBW
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 99%/20 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP

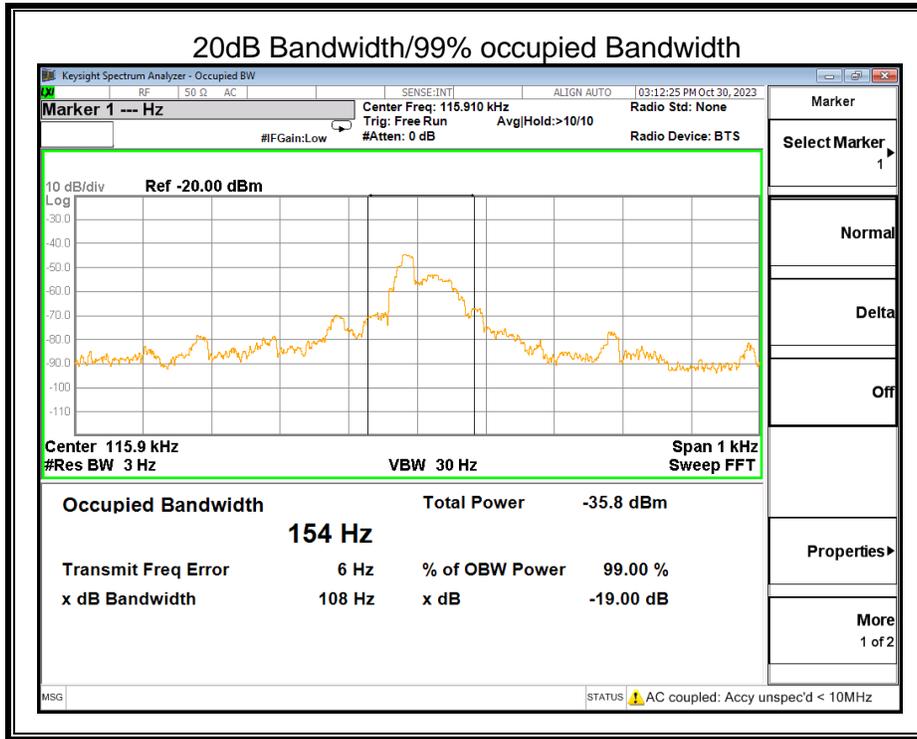


TEST ENVIRONMENT

Temperature	24.1 °C	Relative Humidity	68 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V, 60 Hz

RESULTS

Frequency (kHz)	20dB Bandwidth (Hz)	99% occupied Bandwidth (Hz)
115.9	108	154



7. RADIATED EMISSION TEST

LIMITS

Please refer to CFR 47 FCC §15.205 and §15.209.

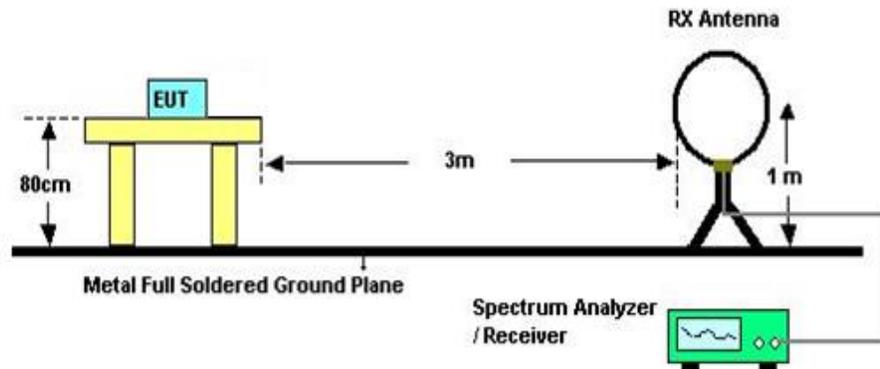
Radiated emissions limits for FCC (Class B) (9 kHz ~ 1 GHz)

Emissions radiated outside of the specified frequency bands above 30 MHz			
Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m	
		Quasi-Peak	
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	
Above 960	500	54	
Above 1000	500	Peak	Average
		74	54

Emissions radiated outside of the specified frequency bands below 30 MHz		
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30

TEST SETUP AND PROCEDURE

Below 30 MHz

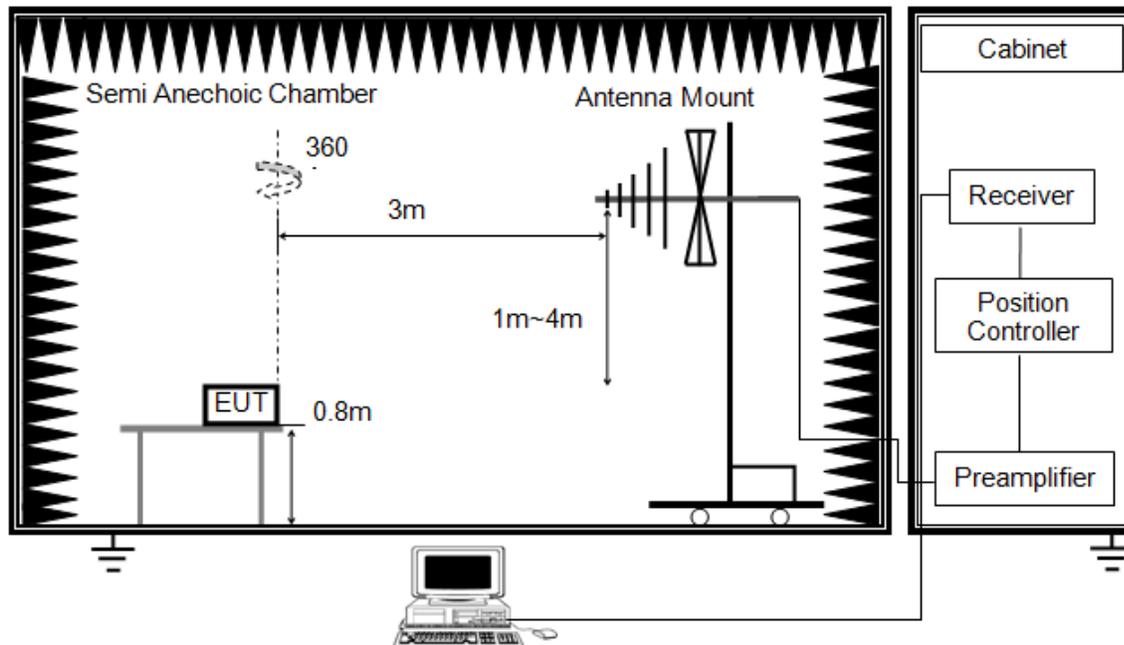


The setting of the spectrum analyser

RBW	200 Hz (From 9 kHz to 0.15 MHz) / 9 kHz (From 0.15 MHz to 30 MHz)
VBW	200 Hz (From 9 kHz to 0.15 MHz) / 9 kHz (From 0.15 MHz to 30 MHz)
Sweep	Auto
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.4.
2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 80cm above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1 m height antenna tower.
5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.
6. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak and average detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak and average detector and reported.
7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30 m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field site based on KDB 414788.

Below 1 GHz and above 30 MHz



The setting of the spectrum analyser

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.5.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 80 cm above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

TEST ENVIRONMENT

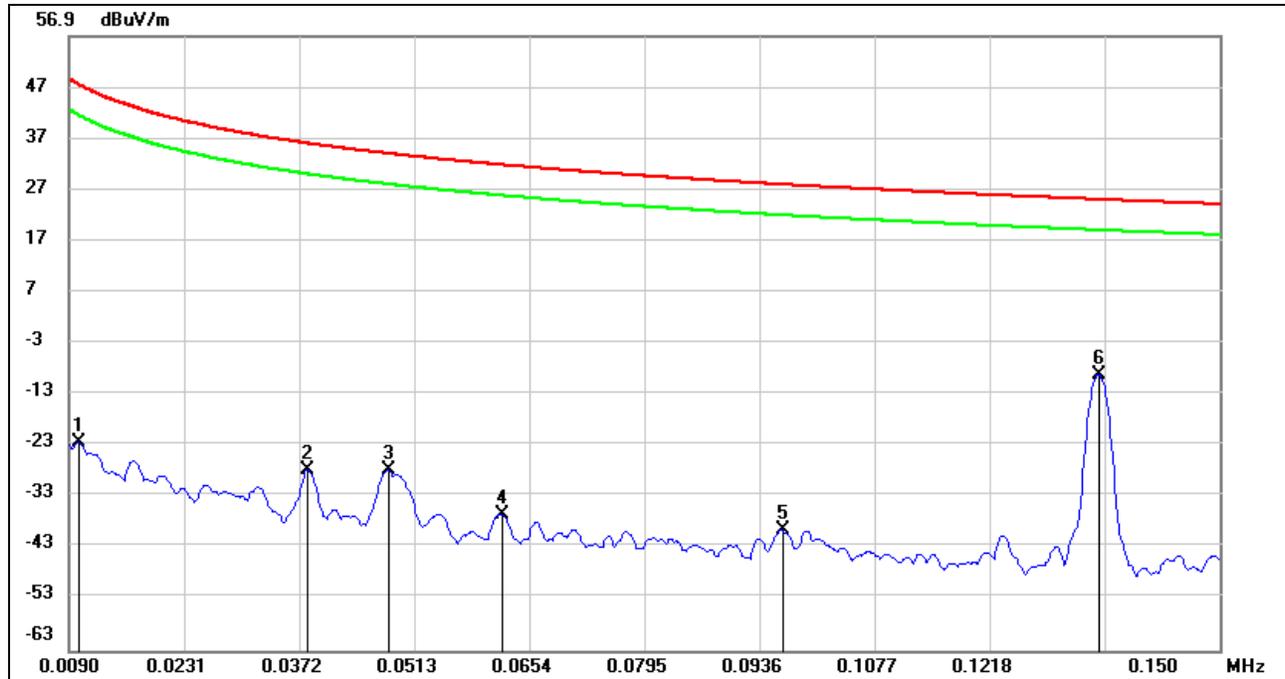
Temperature	24.1 °C	Relative Humidity	68 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V, 60 Hz

RESULTS

7.1. SPURIOUS EMISSIONS BELOW 30 MHz

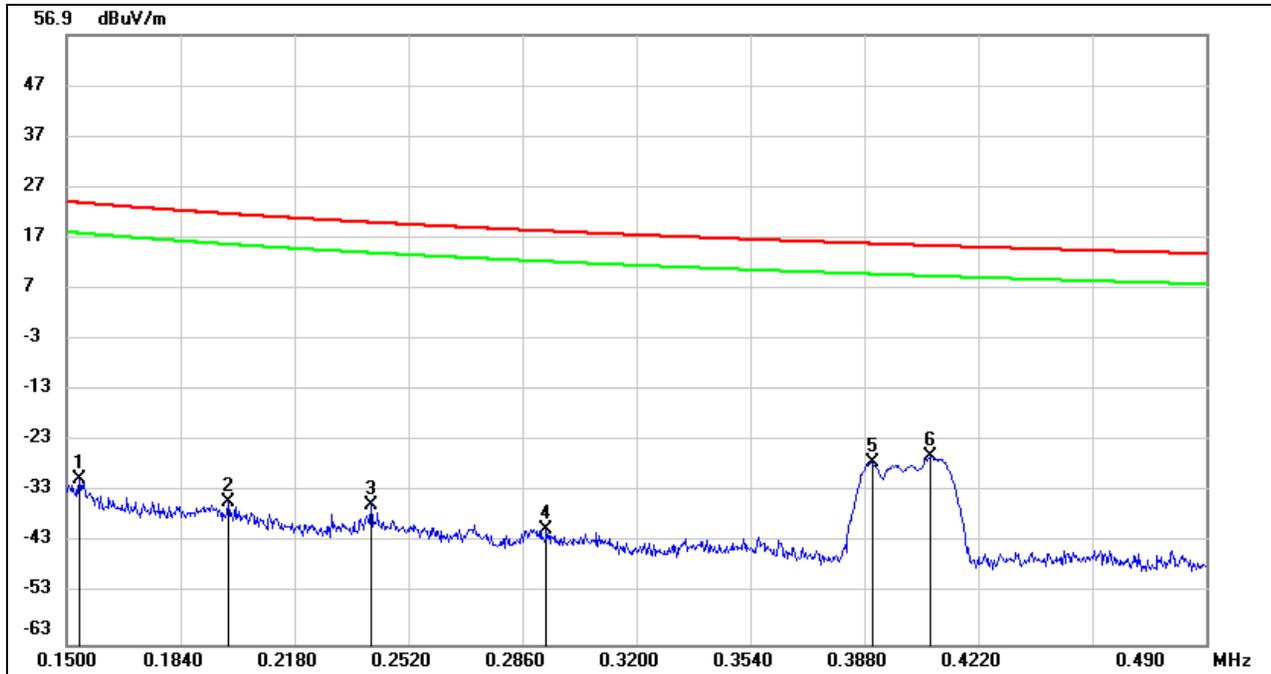
FCC PART 15C BELOW 30MHz SPURIOUS EMISSIONS FOR ADAPTER 1 (LOOP ANTENNA FACE ON TO THE EUT)

9 kHz ~ 150 kHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0101	65.41	-87.89	-22.48	47.51	-69.99	Peak
2	0.0382	60.63	-88.38	-27.75	35.96	-63.71	Peak
3	0.0481	60.63	-88.56	-27.93	33.96	-61.89	Peak
4	0.0619	51.85	-88.36	-36.51	31.77	-68.28	Peak
5	0.0963	48.78	-88.44	-39.66	27.93	-67.59	Peak
6	0.1352	79.74	-88.92	-9.18	24.99	-34.17	Fundamental

- Note: 1. Measurement = Reading Level + Correct Factor.
 2. If Peak Result complies with AV limit, AV Result are deemed to comply with AV limit.
 3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.
 4. The test was performed at 3 m test site, but we added the corresponding factor to extrapolated the result to the specified distance according to FCC 15.31(f)(2).

150 kHz ~ 490 kHz


No.	Frequency (MHz)	Reading (dBUV)	Correct (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Remark
1	0.1537	58.62	-89.10	-30.48	23.87	-54.35	Peak
2	0.1983	53.88	-89.05	-35.17	21.65	-56.82	Peak
3	0.2408	53.39	-89.01	-35.62	19.97	-55.59	Peak
4	0.2931	48.65	-88.98	-40.33	18.26	-58.59	Peak
5	0.3904	61.67	-88.94	-27.27	15.77	-43.04	Peak
6	0.4077	62.95	-88.94	-25.99	15.39	-41.38	Peak

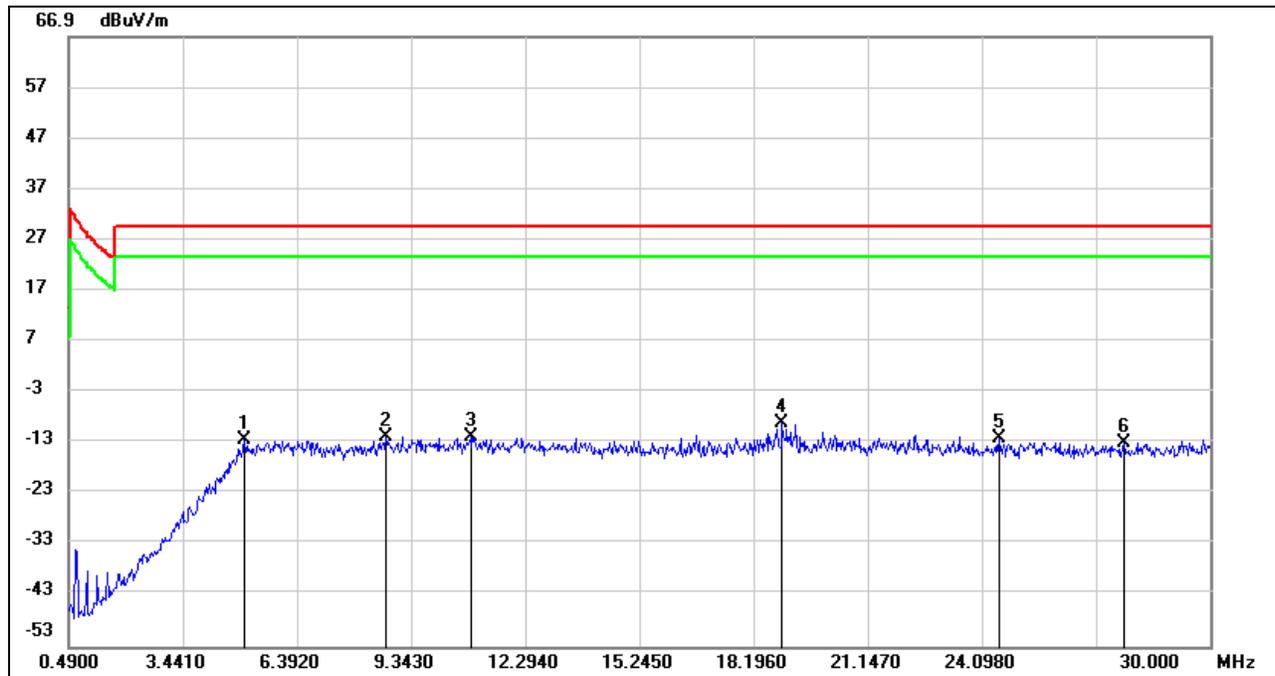
Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result are deemed to comply with AV limit.

3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

4. The test was performed at 3 m test site, but we added the corresponding factor to extrapolated the result to the specified distance according to FCC 15.31(f)(2).

490 kHz ~ 30 MHz

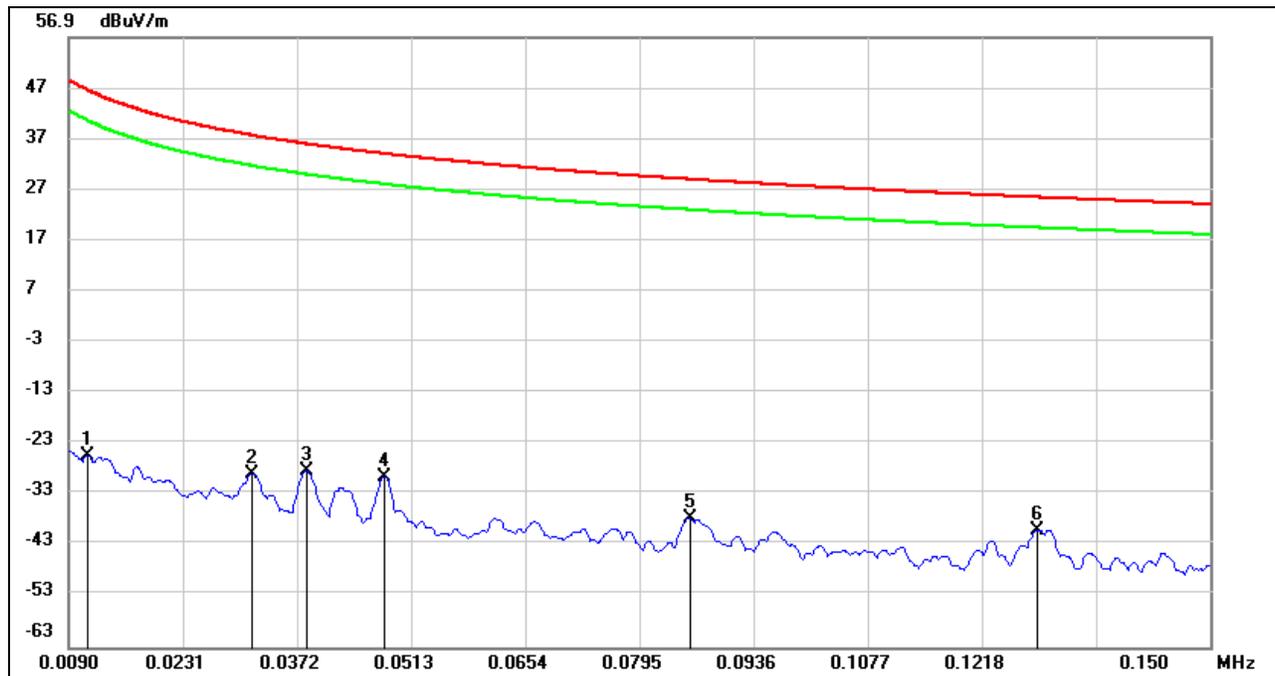


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5.0345	36.15	-48.59	-12.44	29.54	-41.98	Peak
2	8.6938	36.00	-47.73	-11.73	29.54	-41.27	Peak
3	10.8774	35.53	-47.41	-11.88	29.54	-41.42	Peak
4	18.9337	37.93	-46.94	-9.01	29.54	-38.55	Peak
5	24.5406	34.38	-46.66	-12.28	29.54	-41.82	Peak
6	27.7868	33.52	-46.45	-12.93	29.54	-42.47	Peak

- Note: 1. Measurement = Reading Level + Correct Factor.
 2. If Peak Result complies with AV limit, AV Result are deemed to comply with AV limit.
 3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.
 4. The test was performed at 3 m test site, but we added the corresponding factor to extrapolated the result to the specified distance according to FCC 15.31(f)(2).

FCC PART 15C BELOW 30MHz SPURIOUS EMISSIONS FOR ADAPTER 2 (LOOP ANTENNA FACE ON TO THE EUT)

9 kHz ~ 150 kHz



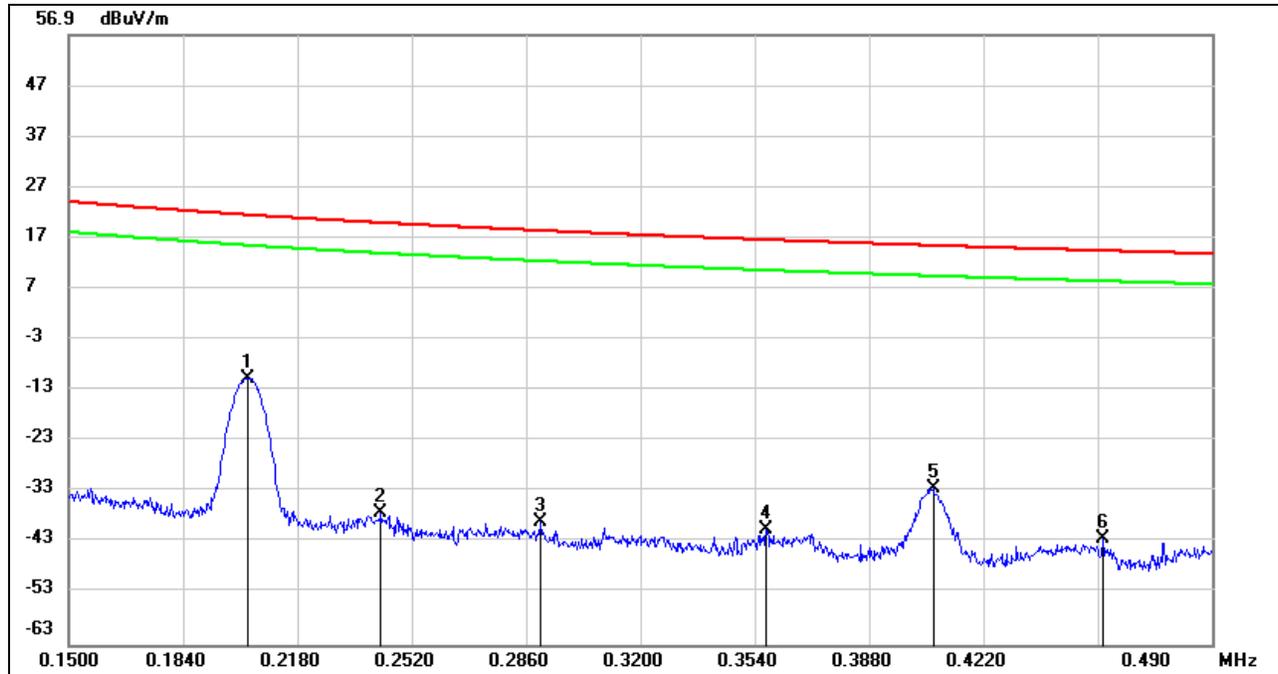
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0113	62.47	-87.87	-25.40	46.54	-71.94	Peak
2	0.0317	59.35	-88.27	-28.92	37.58	-66.50	Peak
3	0.0383	60.04	-88.38	-28.34	35.94	-64.28	Peak
4	0.0479	59.00	-88.56	-29.56	33.99	-63.55	Peak
5	0.0856	50.62	-88.27	-37.65	28.95	-66.60	Peak
6	0.1287	48.78	-88.85	-40.07	25.42	-65.49	Peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result are deemed to comply with AV limit.

3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

4. The test was performed at 3 m test site, but we added the corresponding factor to extrapolated the result to the specified distance according to FCC 15.31(f)(2).

150 kHz ~ 490 kHz


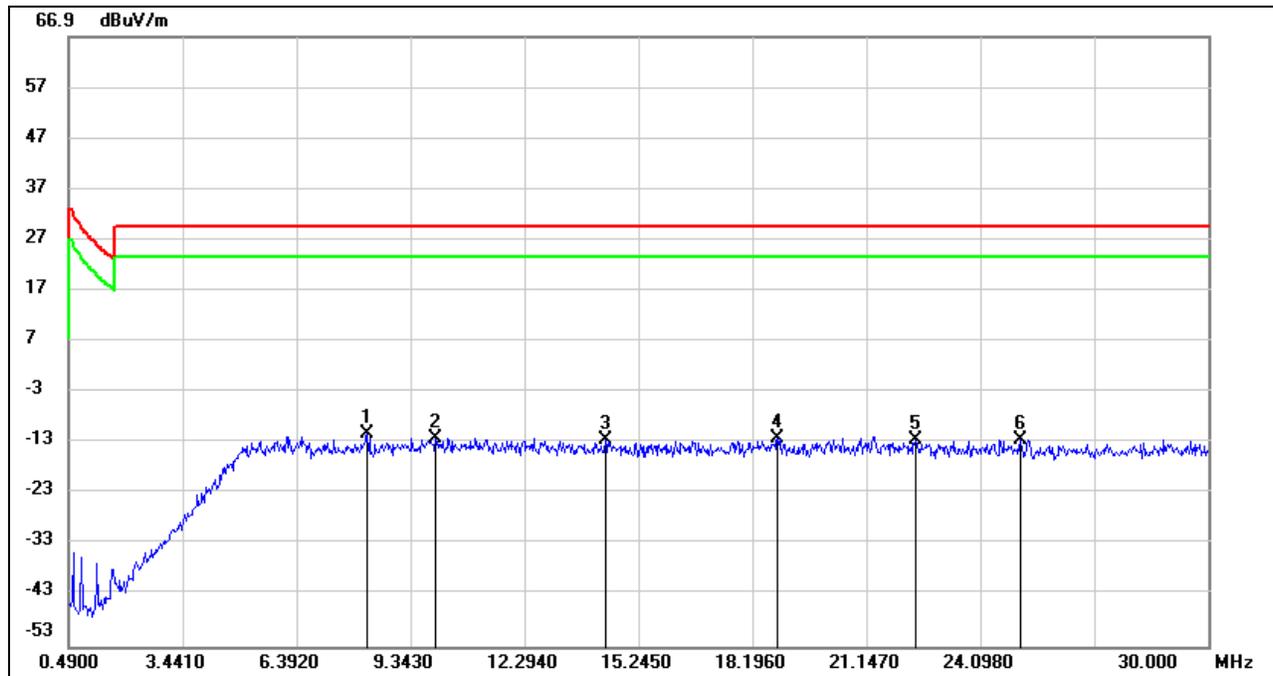
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2034	78.44	-89.05	-10.61	21.43	-32.04	Fundamental
2	0.2428	51.85	-89.01	-37.16	19.90	-57.06	Peak
3	0.2904	50.09	-88.98	-38.89	18.34	-57.23	Peak
4	0.3574	48.38	-88.96	-40.58	16.54	-57.12	Peak
5	0.4069	56.68	-88.94	-32.26	15.41	-47.67	Peak
6	0.4574	46.78	-88.92	-42.14	14.40	-56.54	Peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result are deemed to comply with AV limit.

3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

4. The test was performed at 3 m test site, but we added the corresponding factor to extrapolated the result to the specified distance according to FCC 15.31(f)(2).

490 kHz ~ 30 MHz


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8.2216	36.50	-47.85	-11.35	29.54	-40.89	Peak
2	9.9922	35.39	-47.40	-12.01	29.54	-41.55	Peak
3	14.3892	35.05	-47.45	-12.40	29.54	-41.94	Peak
4	18.8452	34.83	-46.95	-12.12	29.54	-41.66	Peak
5	22.4159	34.30	-46.73	-12.43	29.54	-41.97	Peak
6	25.1308	34.25	-46.64	-12.39	29.54	-41.93	Peak

Note: 1. Measurement = Reading Level + Correct Factor.

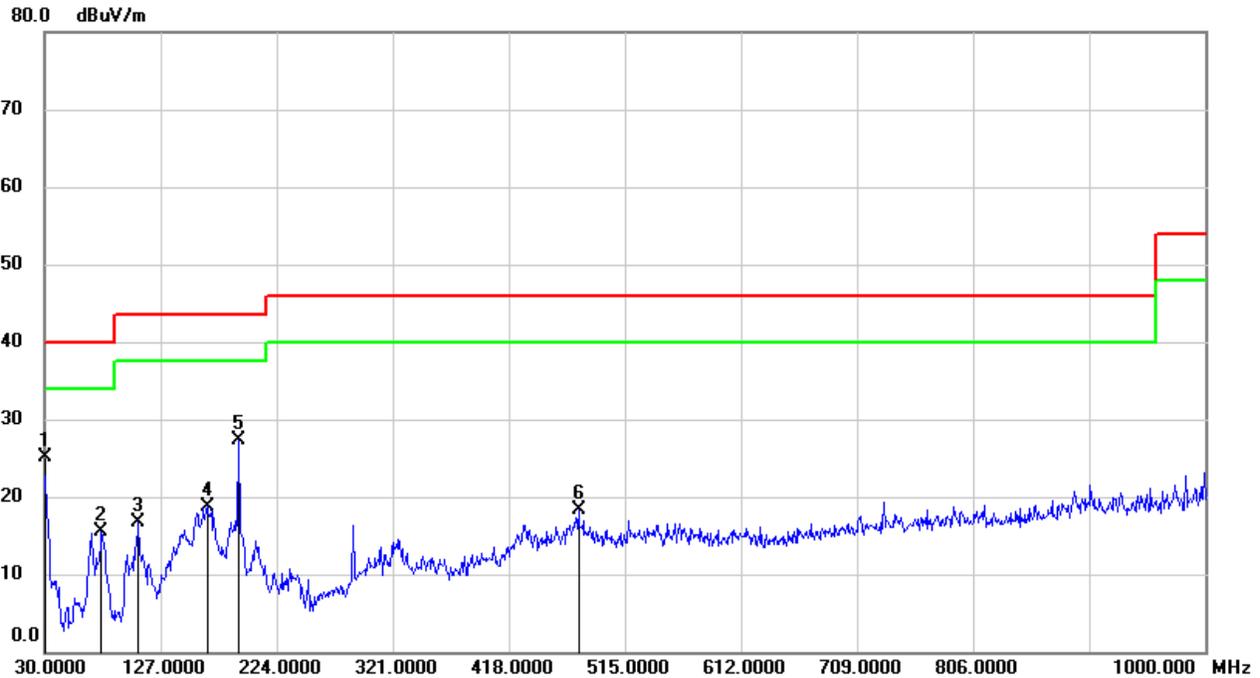
2. If Peak Result complies with AV limit, AV Result are deemed to comply with AV limit.

3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

4. The test was performed at 3 m test site, but we added the corresponding factor to extrapolated the result to the specified distance according to FCC 15.31(f)(2).

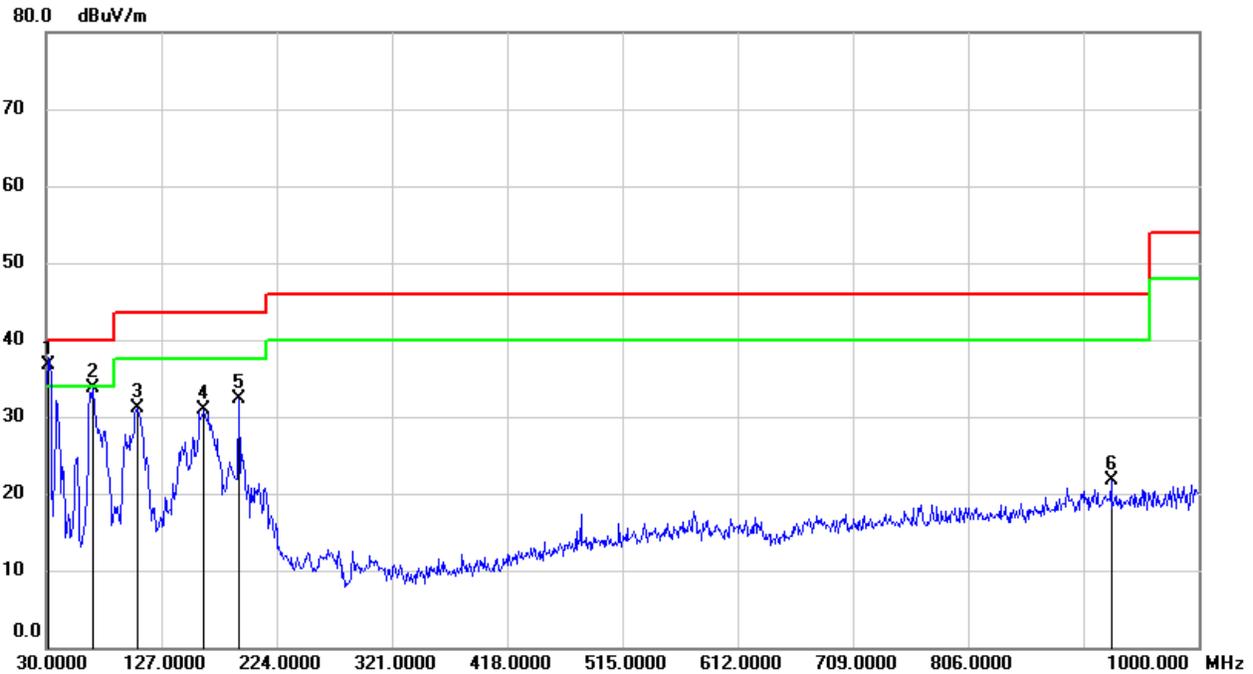
7.2. SPURIOUS EMISSIONS 30 MHz ~ 1 GHz

FCC PART15C SPURIOUS EMISSIONS FOR ADAPTER 1 (HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.0000	43.33	-18.24	25.09	40.00	-14.91	QP
2	77.5300	36.76	-21.34	15.42	40.00	-24.58	QP
3	108.5700	37.08	-20.43	16.65	43.50	-26.85	QP
4	165.8000	35.99	-17.19	18.80	43.50	-24.70	QP
5	191.9900	43.94	-16.68	27.26	43.50	-16.24	QP
6	476.2000	29.39	-11.15	18.24	46.00	-27.76	QP

Note: 1. Result Level = Read Level + Correct Factor.
 2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
 3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.
 4. All the noise are created from the digital circuit. It is not created by wireless charging circuit.

FCC PART15C SPURIOUS EMISSIONS FOR ADAPTER 1 (VERTICAL)


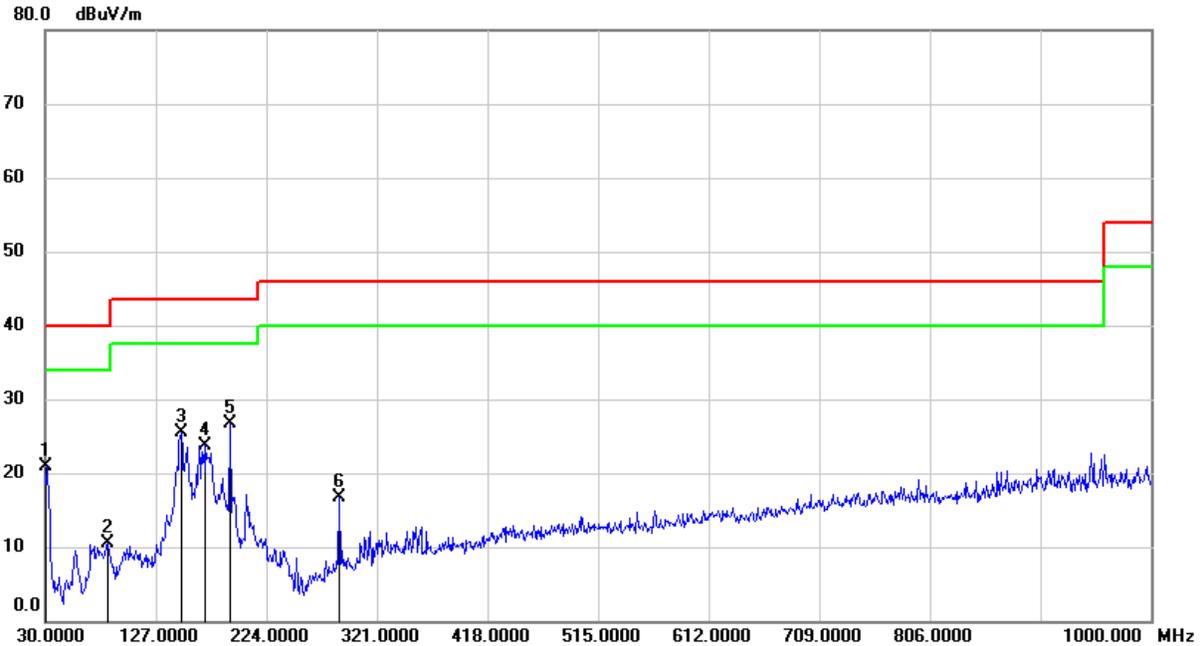
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	31.9400	55.20	-18.55	36.65	40.00	-3.35	QP
2	68.8000	54.38	-20.71	33.67	40.00	-6.33	QP
3	106.6300	51.79	-20.61	31.18	43.50	-12.32	QP
4	162.8900	48.28	-17.37	30.91	43.50	-12.59	QP
5	191.9900	49.01	-16.68	32.33	43.50	-11.17	QP
6	926.2800	26.48	-4.72	21.76	46.00	-24.24	QP

Note: 1. Result Level = Read Level + Correct Factor.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

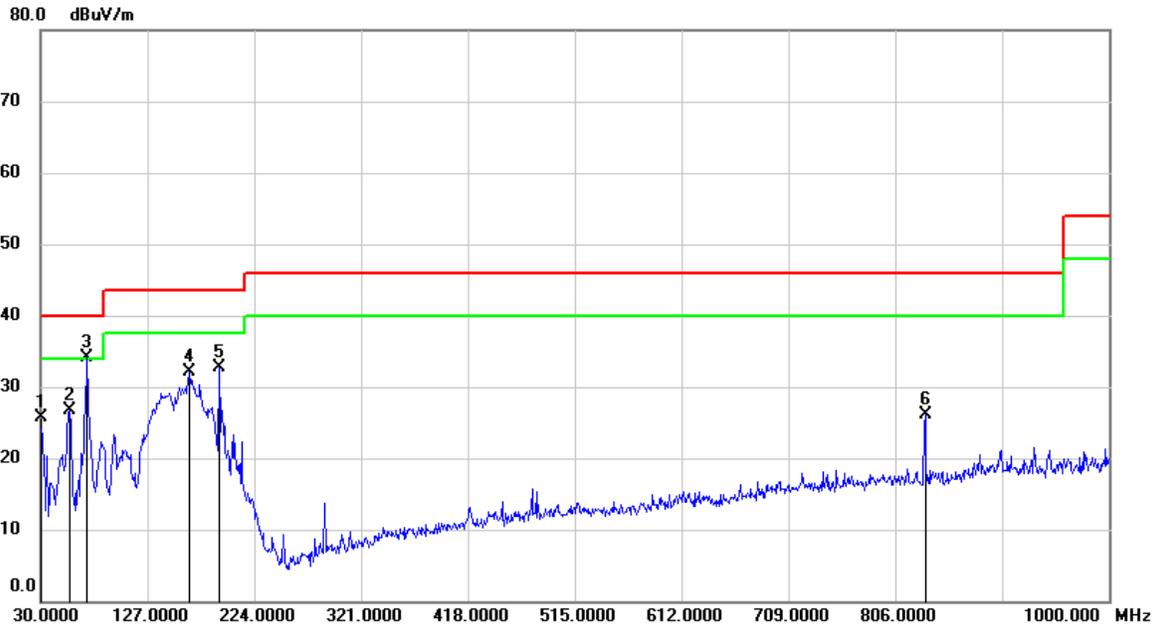
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto

4. All the noise are created from the digital circuit. It is not created by wireless charging circuit.

FCC PART15C SPURIOUS EMISSIONS FOR ADAPTER 2 (HORIZONTAL)


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.0000	39.20	-18.24	20.96	40.00	-19.04	QP
2	84.3200	32.26	-21.83	10.43	40.00	-29.57	QP
3	149.3100	43.99	-18.40	25.59	43.50	-17.91	QP
4	170.6500	40.69	-16.89	23.80	43.50	-19.70	QP
5	191.9900	43.30	-16.68	26.62	43.50	-16.88	QP
6	288.0200	32.73	-16.01	16.72	46.00	-29.28	QP

Note: 1. Result Level = Read Level + Correct Factor.
 2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
 3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.
 4. All the noise are created from the digital circuit. It is not created by wireless charging circuit.

FCC PART15C SPURIOUS EMISSIONS FOR ADAPTER 2 (VERTICAL)


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.0000	44.00	-18.24	25.76	40.00	-14.24	QP
2	56.1900	47.18	-20.41	26.77	40.00	-13.23	QP
3	71.7100	54.96	-20.90	34.06	40.00	-5.94	QP
4	164.8300	49.42	-17.25	32.17	43.50	-11.33	QP
5	191.9900	49.42	-16.68	32.74	43.50	-10.76	QP
6	833.1599	32.56	-6.38	26.18	46.00	-19.82	QP

Note: 1. Result Level = Read Level + Correct Factor.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto

4. All the noise are created from the digital circuit. It is not created by wireless charging circuit.

8. AC POWER LINE CONDUCTED EMISSION

LIMITS

Please ISED RSS-Gen Clause 8.8

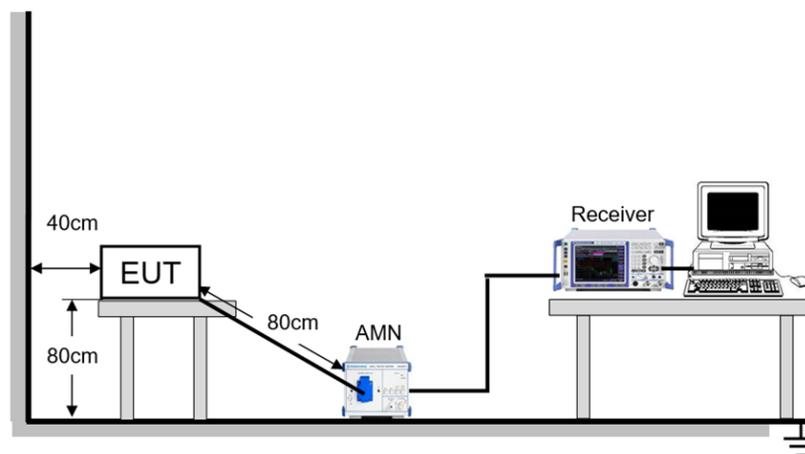
FREQUENCY (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

TEST PROCEDURE

The EUT is put on a table of non-conducting material that is 80 cm high. The vertical conducting wall of shielding is located 40 cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9 kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

TEST SETUP

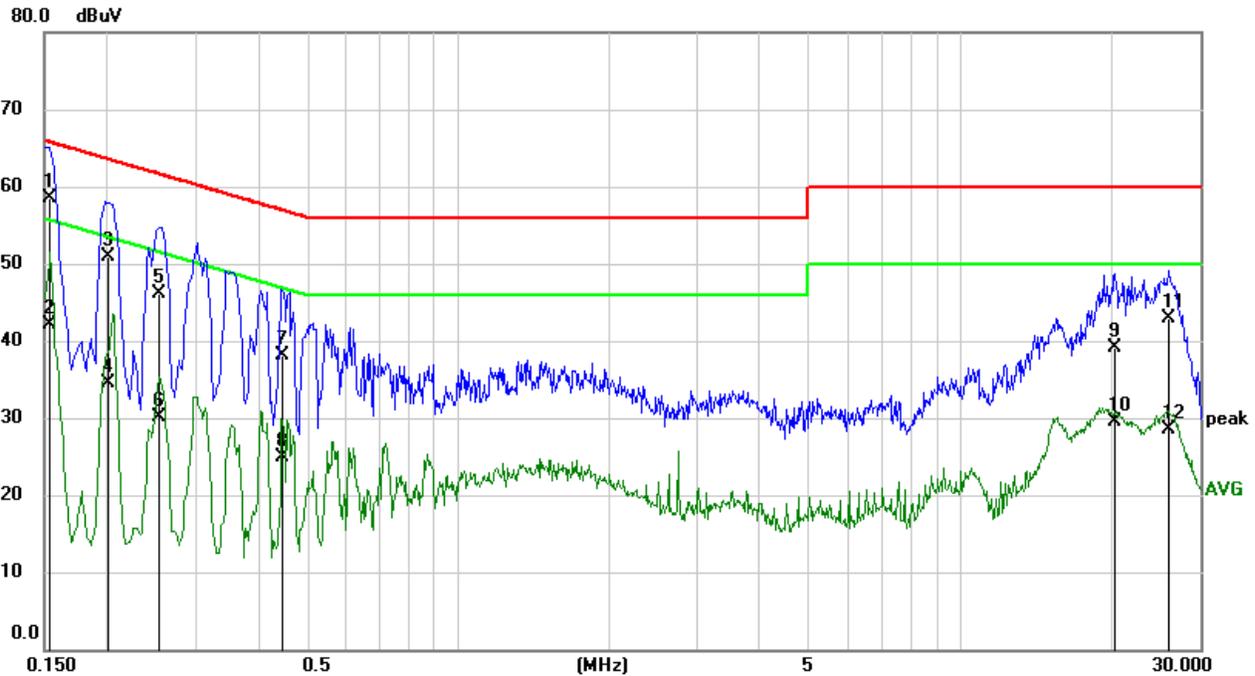


TEST ENVIRONMENT

Temperature	23.1 °C	Relative Humidity	56.4%
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V/60 Hz

TEST RESULTS FOR ADAPTER 1

Test Mode:	Mode 1	Test Voltage	AC 120 V/60 Hz
Line	L1		

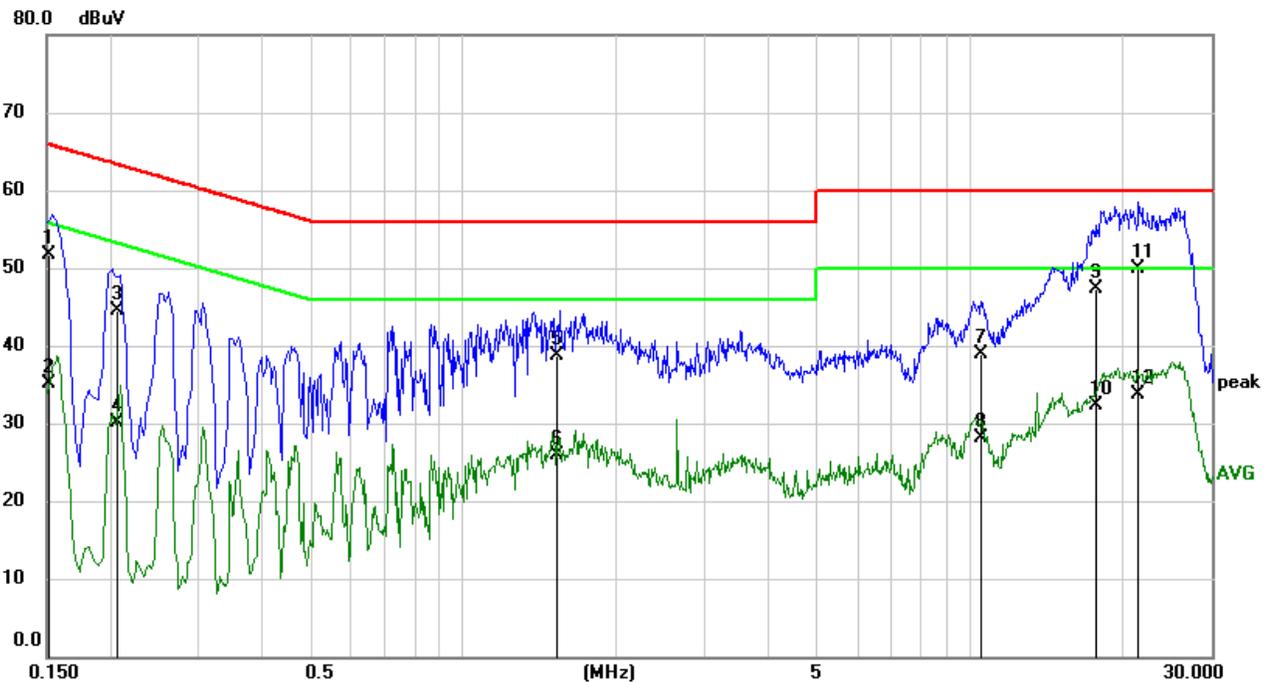


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1534	48.85	9.59	58.44	65.81	-7.37	QP
2	0.1534	32.53	9.59	42.12	55.81	-13.69	AVG
3	0.2017	41.39	9.59	50.98	63.54	-12.56	QP
4	0.2017	24.90	9.59	34.49	53.54	-19.05	AVG
5	0.2527	36.43	9.59	46.02	61.67	-15.65	QP
6	0.2527	20.48	9.59	30.07	51.67	-21.60	AVG
7	0.4497	28.55	9.60	38.15	56.88	-18.73	QP
8	0.4497	15.24	9.60	24.84	46.88	-22.04	AVG
9	20.2900	29.36	9.83	39.19	60.00	-20.81	QP
10	20.2900	19.66	9.83	29.49	50.00	-20.51	AVG
11	25.9344	33.14	9.73	42.87	60.00	-17.13	QP
12	25.9344	18.81	9.73	28.54	50.00	-21.46	AVG

Note:

1. Result = Reading + Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Test Mode:	Mode 1	Test Voltage	AC 120 V/60 Hz
Line	N		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1516	42.31	9.49	51.80	65.91	-14.11	QP
2	0.1516	25.64	9.49	35.13	55.91	-20.78	AVG
3	0.2066	34.82	9.59	44.41	63.34	-18.93	QP
4	0.2066	20.49	9.59	30.08	53.34	-23.26	AVG
5	1.5227	29.22	9.57	38.79	56.00	-17.21	QP
6	1.5227	16.29	9.57	25.86	46.00	-20.14	AVG
7	10.5595	29.29	9.63	38.92	60.00	-21.08	QP
8	10.5595	18.38	9.63	28.01	50.00	-21.99	AVG
9	17.6482	37.52	9.69	47.21	60.00	-12.79	QP
10	17.6482	22.64	9.69	32.33	50.00	-17.67	AVG
11	21.5063	40.11	9.73	49.84	60.00	-10.16	QP
12	21.5063	23.93	9.73	33.66	50.00	-16.34	AVG

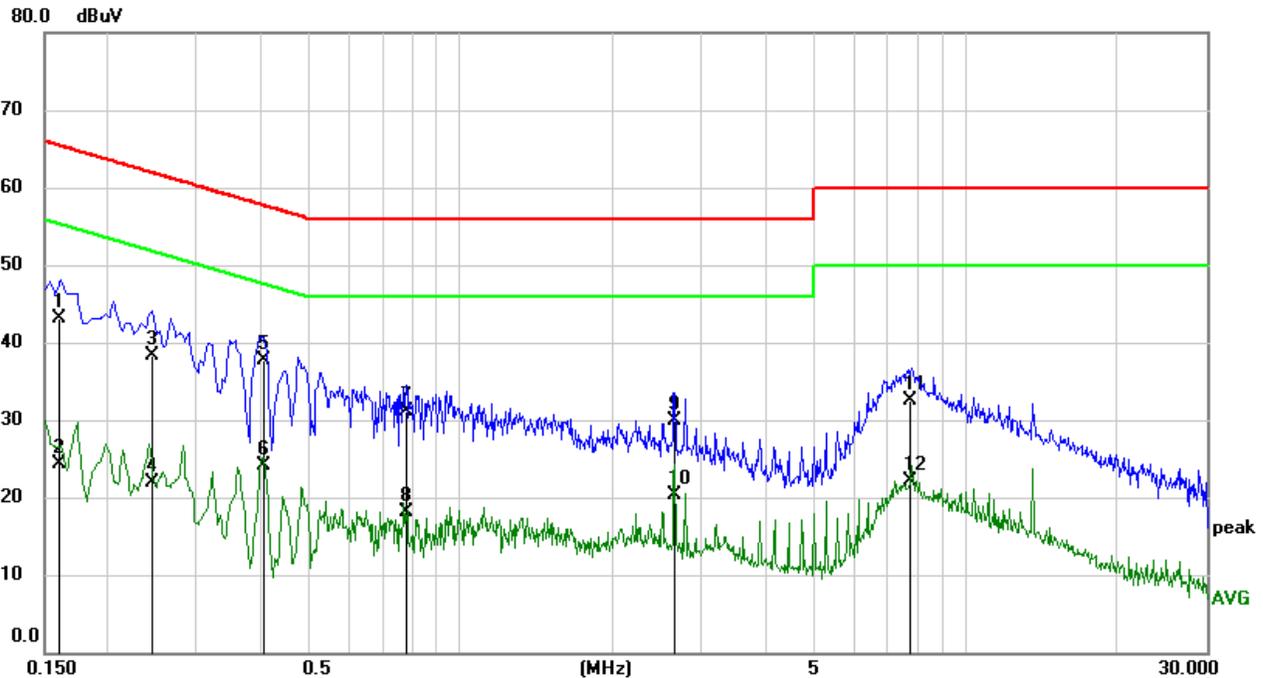
Note:

1. Result = Reading + Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes have been tested, only the worst data was recorded in the report.

TEST RESULTS FOR ADAPTER 2

Test Mode:	Mode 1	Test Voltage	AC 120 V/60 Hz
Line	L1		

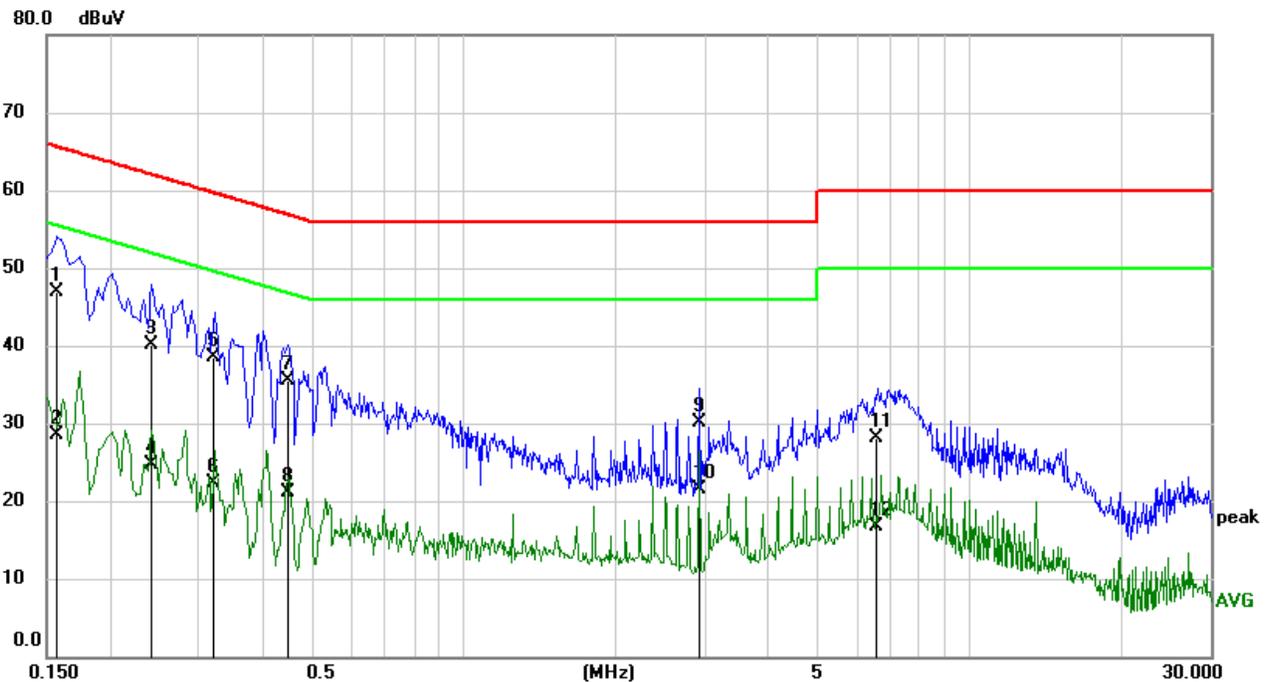


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1595	33.52	9.59	43.11	65.49	-22.38	QP
2	0.1595	14.76	9.59	24.35	55.49	-31.14	AVG
3	0.2441	28.80	9.59	38.39	61.96	-23.57	QP
4	0.2441	12.27	9.59	21.86	51.96	-30.10	AVG
5	0.4066	28.07	9.60	37.67	57.72	-20.05	QP
6	0.4066	14.41	9.60	24.01	47.72	-23.71	AVG
7	0.7811	21.44	9.60	31.04	56.00	-24.96	QP
8	0.7811	8.46	9.60	18.06	46.00	-27.94	AVG
9	2.6568	20.18	9.65	29.83	56.00	-26.17	QP
10	2.6568	10.67	9.65	20.32	46.00	-25.68	AVG
11	7.7591	22.71	9.72	32.43	60.00	-27.57	QP
12	7.7591	12.30	9.72	22.02	50.00	-27.98	AVG

Note:

1. Result = Reading + Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Test Mode:	Mode 1	Test Voltage	AC 120 V/60 Hz
Line	N		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1565	37.41	9.50	46.91	65.65	-18.74	QP
2	0.1565	19.05	9.50	28.55	55.65	-27.10	AVG
3	0.2421	30.44	9.58	40.02	62.02	-22.00	QP
4	0.2421	15.13	9.58	24.71	52.02	-27.31	AVG
5	0.3194	28.87	9.55	38.42	59.72	-21.30	QP
6	0.3194	12.71	9.55	22.26	49.72	-27.46	AVG
7	0.4508	25.91	9.52	35.43	56.86	-21.43	QP
8	0.4508	11.59	9.52	21.11	46.86	-25.75	AVG
9	2.9281	20.42	9.62	30.04	56.00	-25.96	QP
10	2.9281	11.83	9.62	21.45	46.00	-24.55	AVG
11	6.5564	18.49	9.63	28.12	60.00	-31.88	QP
12	6.5564	7.03	9.63	16.66	50.00	-33.34	AVG

Note:

1. Result = Reading + Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes have been tested, only the worst data was recorded in the report.

END OF REPORT