

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Telephone: +86 (0) 21 6191 5666

Fax: +86 (0) 21 6191 5678

ee.shanghai@sgs.com

Report No.: SHEMA180500385201

Page: 1 of 26

TEST REPORT

Application No.: SHEMA1805003852CR
FCC ID: 2AP9U-Z01
Applicant: Hanergy Mobile Energy Holding Group Limited
Address of Applicant: Room 107, The 2nd Building, Olympic Street Office Area, Chaoyang District, Beijing
Manufacturer: Hanergy Mobile Energy Holding Group Limited
Address of Manufacturer: Room 107, The 2nd Building, Olympic Street Office Area, Chaoyang District, Beijing
Factory: Hanergy Mobile Energy Holding Group Limited
Address of Factory: Room 107, The 2nd Building, Olympic Street Office Area, Chaoyang District, Beijing
Equipment Under Test (EUT):
EUT Name: Hanerbank
Model No.: HZ-G012011C
Standard(s) : 47 CFR Part 18
Date of Receipt: 2018-05-21
Date of Test: 2018-06-20 to 2018-06-26
Date of Issue: 2018-06-26

Test Result:	Pass*
---------------------	--------------

* In the configuration tested, the EUT complied with the standards specified above.

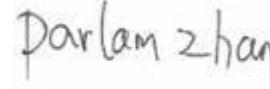


Parlam Zhan
E&E Section Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Revision Record			
Version	Description	Date	Remark
00	Original	2018-06-26	/

Authorized for issue by:				
				
		Vincent Zhu /Project Engineer		
				
		Parlam /Reviewer		

2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at Mains Terminals (150kHz-30MHz)	47 CFR Part 18	FCC OST/MP-5:1986	Class B	Pass
Radiated Emissions (30MHz-1GHz)	47 CFR Part 18	FCC OST/MP-5:1986	Class B	Pass
Radiated Emissions (Magnetic field Strength)(9kHz-30MHz)	47 CFR Part 18	FCC OST/MP-5:1986	Class B	Pass

3 Contents

	Page
1 COVER PAGE	1
2 TEST SUMMARY	3
3 CONTENTS	4
4 GENERAL INFORMATION	5
4.1 DETAILS OF E.U.T	5
4.2 DESCRIPTION OF SUPPORT UNITS	5
4.3 MEASUREMENT UNCERTAINTY	5
4.4 TEST LOCATION	6
4.5 TEST FACILITY	6
4.6 DEVIATION FROM STANDARDS	6
4.7 ABNORMALITIES FROM STANDARD CONDITIONS	6
5 EQUIPMENT LIST	7
6 EMISSION TEST RESULTS	8
6.1 CONDUCTED EMISSIONS AT MAINS TERMINALS (150kHz-30MHz)	8
6.1.1 E.U.T. Operation	8
6.1.2 Test Setup Diagram	8
6.1.3 Measurement Data	8
6.2 RADIATED EMISSIONS (30MHz-1GHz)	15
6.2.1 E.U.T. Operation	15
6.2.2 Test Setup Diagram	15
6.2.3 Measurement Data	15
6.3 RADIATED EMISSIONS (MAGNETIC FIELD STRENGTH)(9kHz-30MHz)	22
6.3.1 E.U.T. Operation	22
6.3.2 Test Setup Diagram	22
6.3.3 Measurement Data	22
7 TEST SETUP PHOTOGRAPHS	26
8 EUT CONSTRUCTIONAL DETAILS	26

4 General Information

4.1 Details of E.U.T.

Battery:	Built-in lithium-ion rechargeable battery 2960mAh
Charger input:	5V-2.1A(I) 5V-2A(PI)
USB Output:	DC 5V, 2.1A
Wireless Output:	DC 5V, 1A
Operation frequency:	110-205 kHz
Antenna type:	Inductive Loop Coil Antenna

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Load	Client	5Ω (DC 5V/1A) 10Ω (DC 5V/0.5A) 100Ω (DC 5V/ 0A)	/

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Conducted Emission at mains port using AMN	3.2dB (9kHz to 150kHz)
		3.0dB (150kHz to 30MHz)
2	Conducted Emission at mains port using VP	1.9 dB(9kHz to 30MHz)
3	Conducted Emission at telecommunication port using AAN	2.4 dB(150kHz to 30MHz)
4	Radiated Power	3.5dB
5	Radiated emission	4.4dB (30MHz-1GHz)
		4.6dB (1GHz-6GHz)

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

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. E&E Lab

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666 Fax: +86 21 6191 5678

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **NVLAP (Certificate No. 201034-0)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program(NVLAP). Certificate No. 201034-0.

- **FCC –Designation Number: CN5033**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

Designation Number: CN5033. Test Firm Registration Number: 479755.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868,C-4336,T-12221,G-10830 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Conducted Emissions at Mains Terminals (150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI test receiver	Rohde & Schwarz	ESR7	SHEM162-1	2017-12-20	2018-12-19
Line impedance stabilization network	SCHWARZBECK	NSLK8127	SHEM061-1	2017-12-20	2018-12-19
Line impedance stabilization network	EMCO	3816/2	SHEM019-1	2017-12-20	2018-12-19
Pulse limiter	Rohde & Schwarz	ESH3-Z2	SHEM029-1	2017-12-20	2018-12-19
Shielding Room	ZHONGYU	8*4*3M	SHEM079-2	2017-12-20	2018-12-19
CE test Cable	/	/	CE01	2017-12-26	2018-12-25

Radiated Emissions (30MHz-1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI test receiver	Rohde & Schwarz	ESU40	SHEM051-1	2017-09-26	2018-09-25
CONTROLLER	INNCO	CO200	SHEM047-1	N/A	N/A
ANTENNA MAST	INNCO	MA400-EP	SHEM047-2	N/A	N/A
TURN DEVICE	INNCO	DE 3600-RH	SHEM047-3	N/A	N/A
Broadband UHF-VHF ANTENNA	SCHWARZBECK	VULB9168	SHEM048-1	2017-02-28	2020-02-27
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2017-07-22	2018-07-21
Low Amplifier	CLAVIIO	BDLNA-0001-412010	SHEM164-1	2017-08-22	2018-08-21

Radiated Emissions (Magnetic field Strength)(150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI test receiver	Rohde & Schwarz	ESU40	SHEM051-1	2017-09-26	2018-09-25
CONTROLLER	INNCO	CO200	SHEM047-1	N/A	N/A
ANTENNA MAST	INNCO	MA400-EP	SHEM047-2	N/A	N/A
TURN DEVICE	INNCO	DE 3600-RH	SHEM047-3	N/A	N/A
Loop antenna	Schwarzbeck - Mess-Elektronik	FMZB1519	SHEM135-1	2017-04-10	2020-04-09
Low Amplifier	CLAVIIO	BDLNA-0001-412010	SHEM164-1	2017-08-22	2018-08-21

General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Digital pressure meter	YONGZHI	DYM3-01	SHEM082-1	2018-01-25	2019-01-24
Temperature&humidity recorder	ShangHai weather meter work	ZJ 1-2B	SHEM042-1~6	2017-09-13	2018-09-12
Digital Multimeter	FLUKE	17B	SHEM043-3	2017-09-11	2018-09-10
Autoformer regulator	Guangzhou bao de	TDGC2-5KVA	SHEM150-1	N/A	N/A
Multi-purpose tong tester	FLUKE	316	SHEM001-1	2017-12-20	2018-12-19

6 Emission Test Results

6.1 Conducted Emissions at Mains Terminals (150kHz-30MHz)

Test Requirement:	47 CFR Part 18
Test Method:	FCC OST/MP-5:1986
Frequency Range:	150kHz to 30MHz
Limit:	
0.15M-0.5MHz	66dB(μV)-56dB(μV) quasi-peak, 56dB(μV)-46dB(μV) average
0.5M-5MHz	56dB(μV) quasi-peak, 46dB(μV) average
5M-30MHz	60dB(μV) quasi-peak, 50dB(μV) average
Detector:	Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

6.1.1 E.U.T. Operation

Operating Environment:

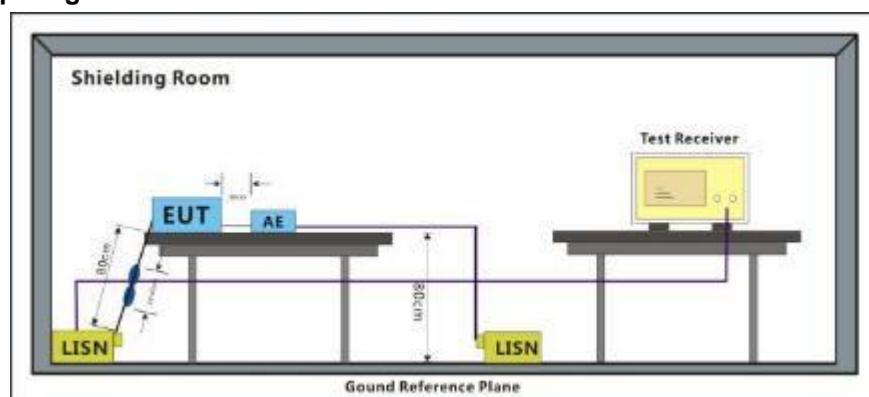
Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1010 mbar

Test mode c:Wireless charging mode 1_Keep EUT charging via adapter, keep the load charging via EUT. The load shall be set at empty load respectively.

d:Wireless charging mode 2_Keep EUT charging via adapter, keep the load charging via EUT. The load shall be set at half load respectively.

e:Wireless charging mode 3_Keep EUT charging via adapter, keep the load charging via EUT. The load shall be set at full load respectively.

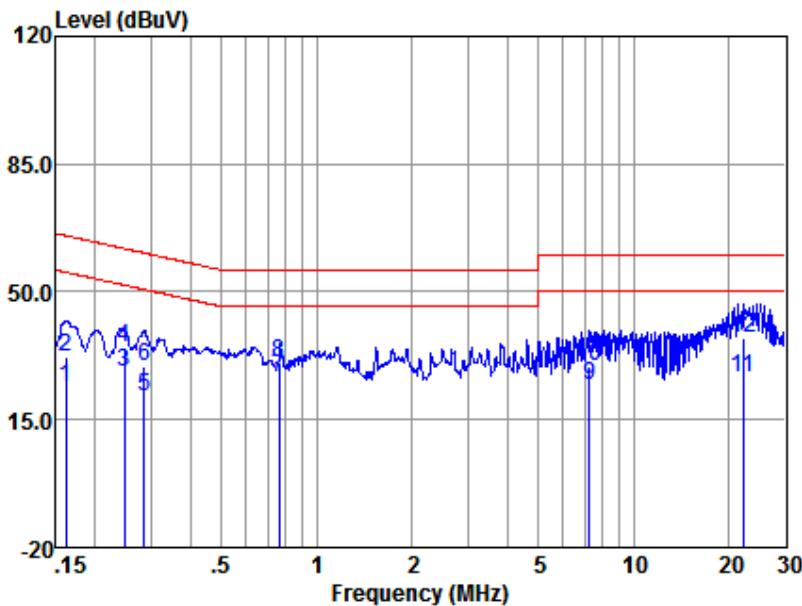
6.1.2 Test Setup Diagram



6.1.3 Measurement Data

An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

Mode:c; Line:Live Line

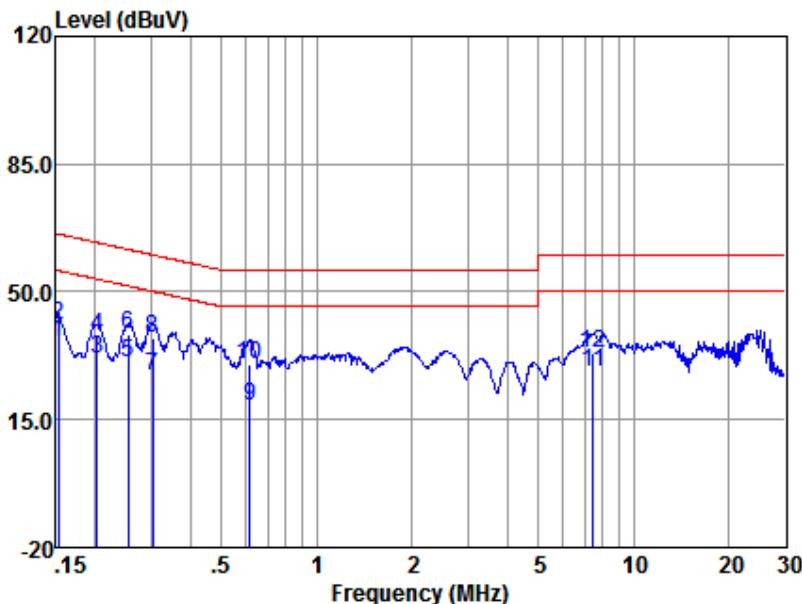


LISN : LINE
EUT/Project No : 3852CR
Test Mode : c-no load

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Over Limit (dBuV)	Over Limit (dB)	Remark
1	0.16	13.86	0.11	9.82	23.79	55.38	-31.59	Average
2	0.16	22.37	0.11	9.82	32.30	65.38	-33.08	QP
3	0.25	18.28	0.11	9.85	28.24	51.86	-23.62	Average
4	0.25	24.67	0.11	9.85	34.63	61.86	-27.23	QP
5	0.28	11.42	0.11	9.85	21.38	50.68	-29.30	Average
6	0.28	19.62	0.11	9.85	29.58	60.68	-31.10	QP
7	0.76	16.48	0.11	9.86	26.45	46.00	-19.55	Average
8	0.76	20.88	0.11	9.86	30.85	56.00	-25.15	QP
9	7.29	14.29	0.11	9.83	24.23	50.00	-25.77	Average
10	7.29	19.71	0.11	9.83	29.65	60.00	-30.35	QP
11	22.18	16.40	0.19	9.82	26.41	50.00	-23.59	Average
12	22.18	27.55	0.19	9.82	37.56	60.00	-22.44	QP

Notes: Emission Level = Read Level +LISN Factor + Cable loss

Mode:c; Line:Neutral Line

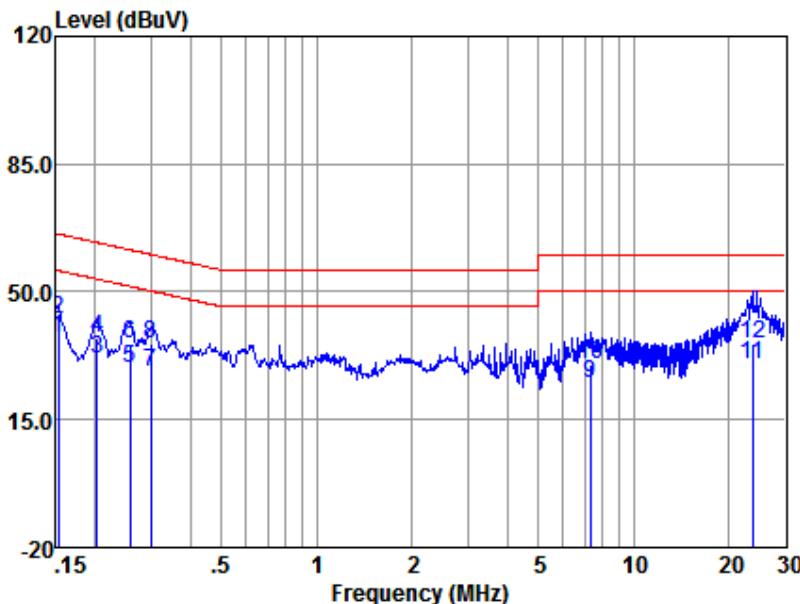


LISN : NEUTRAL
EUT/Project No : 3852CR
Test Mode : c-no load

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Limit (dBuV)	Over Limit (dB)	Remark
1	0.15	26.43	0.12	9.82	36.37	55.87	-19.50	Average
2	0.15	31.26	0.12	9.82	41.20	65.87	-24.67	QP
3	0.20	21.47	0.12	9.83	31.42	53.54	-22.12	Average
4	0.20	28.03	0.12	9.83	37.98	63.54	-25.56	QP
5	0.25	20.47	0.11	9.85	30.43	51.64	-21.21	Average
6	0.25	28.28	0.11	9.85	38.24	61.64	-23.40	QP
7	0.30	17.27	0.11	9.84	27.22	50.15	-22.93	Average
8	0.30	27.31	0.11	9.84	37.26	60.15	-22.89	QP
9	0.61	8.99	0.11	9.78	18.88	46.00	-27.12	Average
10	0.61	20.46	0.11	9.78	30.35	56.00	-25.65	QP
11	7.45	17.88	0.13	9.84	27.85	50.00	-22.15	Average
12	7.45	23.14	0.13	9.84	33.11	60.00	-26.89	QP

Notes: Emission Level = Read Level +LISN Factor + Cable loss

Mode:d; Line:Live Line

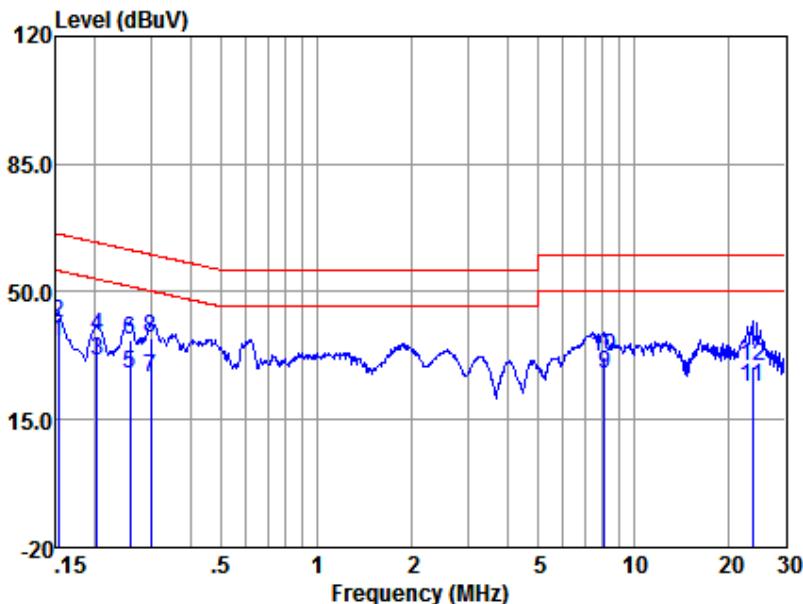


LISN : LINE
EUT/Project No : 3852CR
Test Mode : d-Half Load

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Limit (dBuV)	Over Limit (dB)	Remark
1	0.15	27.36	0.11	9.82	37.29	55.87	-18.58	Average
2	0.15	32.58	0.11	9.82	42.51	65.87	-23.36	QP
3	0.20	21.90	0.11	9.83	31.84	53.54	-21.70	Average
4	0.20	27.32	0.11	9.83	37.26	63.54	-26.28	QP
5	0.26	18.89	0.11	9.85	28.85	51.51	-22.66	Average
6	0.26	26.00	0.11	9.85	35.96	61.51	-25.55	QP
7	0.30	18.27	0.11	9.85	28.23	50.24	-22.01	Average
8	0.30	26.00	0.11	9.85	35.96	60.24	-24.28	QP
9	7.33	14.81	0.11	9.83	24.75	50.00	-25.25	Average
10	7.33	20.13	0.11	9.83	30.07	60.00	-29.93	QP
11	23.76	19.73	0.20	9.98	29.91	50.00	-20.09	Average
12	23.76	25.55	0.20	9.98	35.73	60.00	-24.27	QP

Notes: Emission Level = Read Level +LISN Factor + Cable loss

Mode:d; Line:Neutral Line

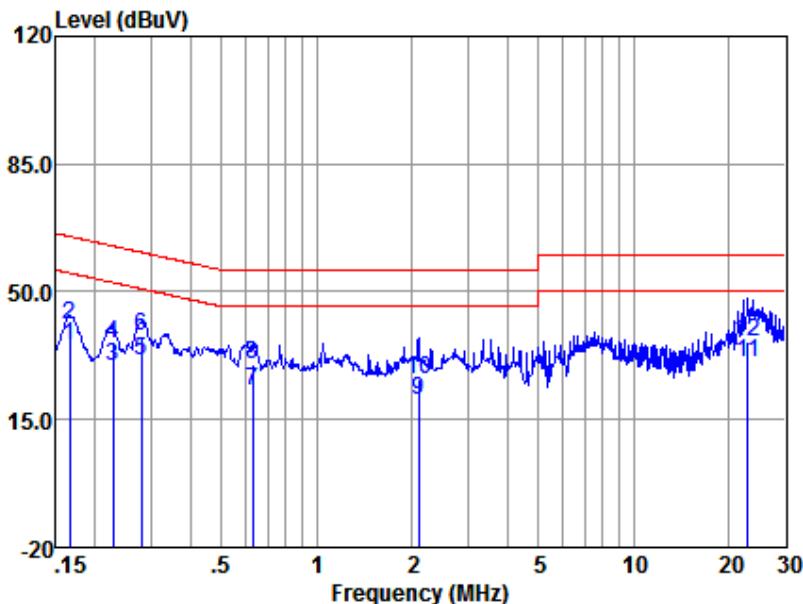


LISN : NEUTRAL
EUT/Project No : 3852CR
Test Mode : d-Half Load

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Limit (dBuV)	Over Limit (dB)	Remark
1	0.15	26.51	0.12	9.82	36.45	55.87	-19.42	Average
2	0.15	31.52	0.12	9.82	41.46	65.87	-24.41	QP
3	0.20	21.24	0.12	9.83	31.19	53.54	-22.35	Average
4	0.20	27.80	0.12	9.83	37.75	63.54	-25.79	QP
5	0.26	17.60	0.11	9.85	27.56	51.51	-23.95	Average
6	0.26	26.67	0.11	9.85	36.63	61.51	-24.88	QP
7	0.30	16.66	0.11	9.85	26.62	50.24	-23.62	Average
8	0.30	27.21	0.11	9.85	37.17	60.24	-23.07	QP
9	8.11	17.45	0.13	9.88	27.46	50.00	-22.54	Average
10	8.11	21.96	0.13	9.88	31.97	60.00	-28.03	QP
11	23.76	13.82	0.22	9.98	24.02	50.00	-25.98	Average
12	23.76	19.15	0.22	9.98	29.35	60.00	-30.65	QP

Notes: Emission Level = Read Level +LISN Factor + Cable loss

Mode:e; Line:Live Line

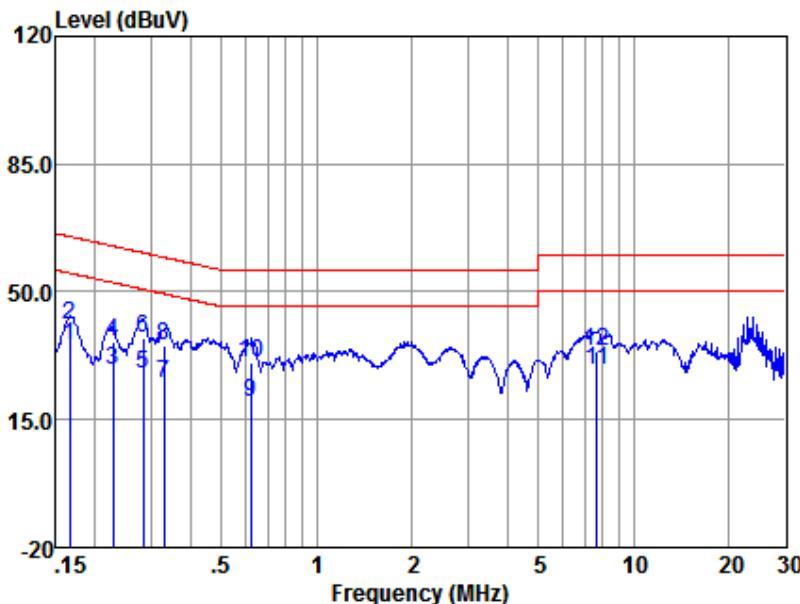


LISN : LINE
EUT/Project No : 3852CR
Test Mode : e-Full Load

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Limit (dBuV)	Over Limit (dB)	Remark
1	0.17	25.40	0.11	9.83	35.34	55.16	-19.82	Average
2	0.17	31.12	0.11	9.83	41.06	65.16	-24.10	QP
3	0.23	19.57	0.11	9.84	29.52	52.57	-23.05	Average
4	0.23	25.93	0.11	9.84	35.88	62.57	-26.69	QP
5	0.28	20.96	0.11	9.85	30.92	50.81	-19.89	Average
6	0.28	27.96	0.11	9.85	37.92	60.81	-22.89	QP
7	0.63	12.99	0.11	9.80	22.90	46.00	-23.10	Average
8	0.63	20.26	0.11	9.80	30.17	56.00	-25.83	QP
9	2.10	10.42	0.12	9.89	20.43	46.00	-25.57	Average
10	2.10	15.72	0.12	9.89	25.73	56.00	-30.27	QP
11	23.02	20.42	0.20	9.93	30.55	50.00	-19.45	Average
12	23.02	26.20	0.20	9.93	36.33	60.00	-23.67	QP

Notes: Emission Level = Read Level +LISN Factor + Cable loss

Mode:e; Line:Neutral Line



LISN : NEUTRAL
EUT/Project No : 3852CR
Test Mode : e-Full Load

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Limit (dBuV)	Over Limit (dB)	Remark
1	0.17	25.15	0.12	9.83	35.10	55.16	-20.06	Average
2	0.17	31.05	0.12	9.83	41.00	65.16	-24.16	QP
3	0.23	18.58	0.11	9.84	28.53	52.57	-24.04	Average
4	0.23	26.32	0.11	9.84	36.27	62.57	-26.30	QP
5	0.28	17.56	0.11	9.85	27.52	50.72	-23.20	Average
6	0.28	27.31	0.11	9.85	37.27	60.72	-23.45	QP
7	0.33	14.82	0.11	9.84	24.77	49.44	-24.67	Average
8	0.33	25.44	0.11	9.84	35.39	59.44	-24.05	QP
9	0.62	9.98	0.11	9.79	19.88	46.00	-26.12	Average
10	0.62	20.48	0.11	9.79	30.38	56.00	-25.62	QP
11	7.69	18.32	0.13	9.87	28.32	50.00	-21.68	Average
12	7.69	23.83	0.13	9.87	33.83	60.00	-26.17	QP

Notes: Emission Level = Read Level +LISN Factor + Cable loss

6.2 Radiated Emissions (30MHz-1GHz)

Test Requirement: 47 CFR Part 18
Test Method: FCC OST/MP-5:1986
Frequency Range: 30MHz to 1GHz
Measurement Distance: 3m

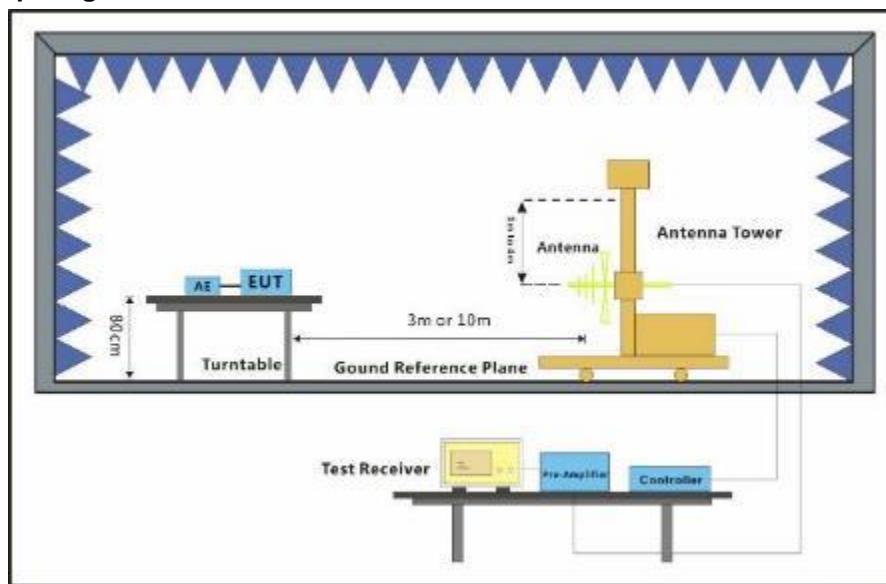
6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar
Test mode
c:Wireless charging mode 1_Keep EUT charging via adapter, keep the load charging via EUT. The load shall be set at empty load respectively.
d:Wireless charging mode 2_Keep EUT charging via adapter, keep the load charging via EUT. The load shall be set at half load respectively.
e:Wireless charging mode 3_Keep EUT charging via adapter, keep the load charging via EUT. The load shall be set at full load respectively.
f:Wireless charging mode 4_Keep EUT charging via solar energy, keep the load charging via EUT. The load shall be set at empty load respectively.
g:Wireless charging mode 5_Keep EUT charging via solar energy, keep the load charging via EUT. The load shall be set at half load respectively.
h:Wireless charging mode 6_Keep EUT charging via solar energy, keep the load charging via EUT. The load shall be set at full load respectively.
i:Wireless charging mode 7_keep the load charging via EUT. The load shall be set at empty load respectively.
j:Wireless charging mode 8_keep the load charging via EUT. The load shall be set at half load respectively.
k:Wireless charging mode 9 keep the load charging via EUT. The load shall be set at full load respectively.

Remark: Pretest all modes; choose the worst data of Data Communication mode record in the report.

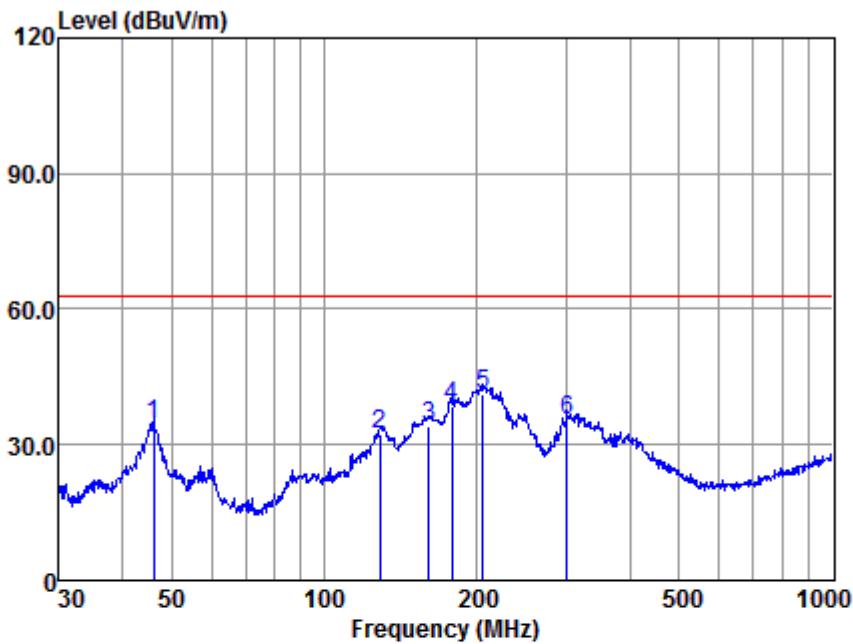
6.2.2 Test Setup Diagram



6.2.3 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

Mode:c; Polarization:Horizontal

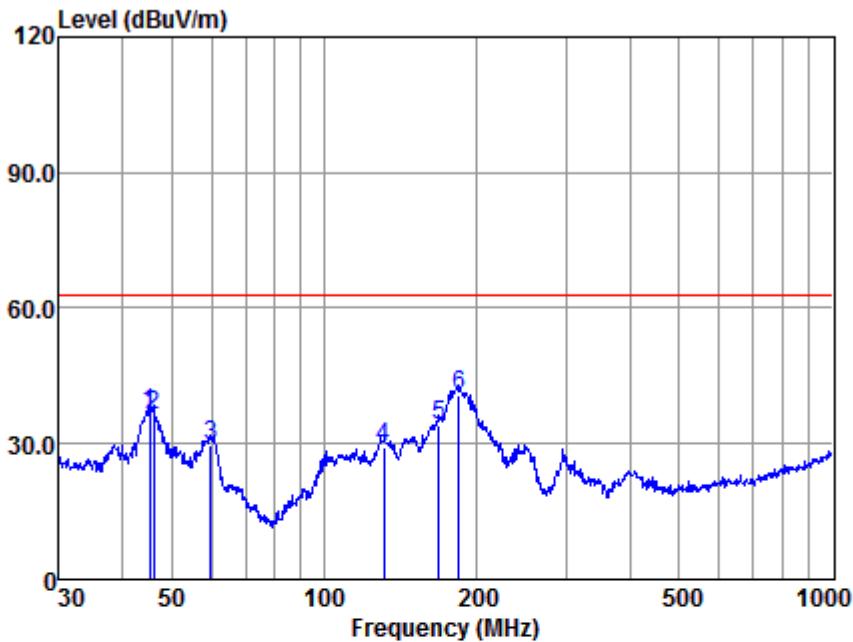


Antenna Polarity :HORIZONTAL
EUT/Project :3852CR
Test mode :c

	Read Freq	Antenna Level	Cable Factor	Preamp Loss	Emission Factor	Limit Level	Over Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	46.02	63.98	12.74	0.24	42.63	34.33	63.00	-28.67	QP
2	128.56	61.82	12.43	0.57	42.66	32.16	63.00	-30.84	QP
3	160.35	63.20	13.02	0.64	42.59	34.27	63.00	-28.73	QP
4	178.76	68.58	11.86	0.66	42.56	38.54	63.00	-24.46	QP
5	204.96	73.39	9.63	0.70	42.52	41.20	63.00	-21.80	QP
6	300.37	63.87	13.20	0.84	42.40	35.51	63.00	-27.49	QP

Note: Emission Level=Read Level+Antenna Factor+Cable loss+Preamp Factor

Mode:c; Polarization:Vertical



Antenna Polarity : VERTICAL

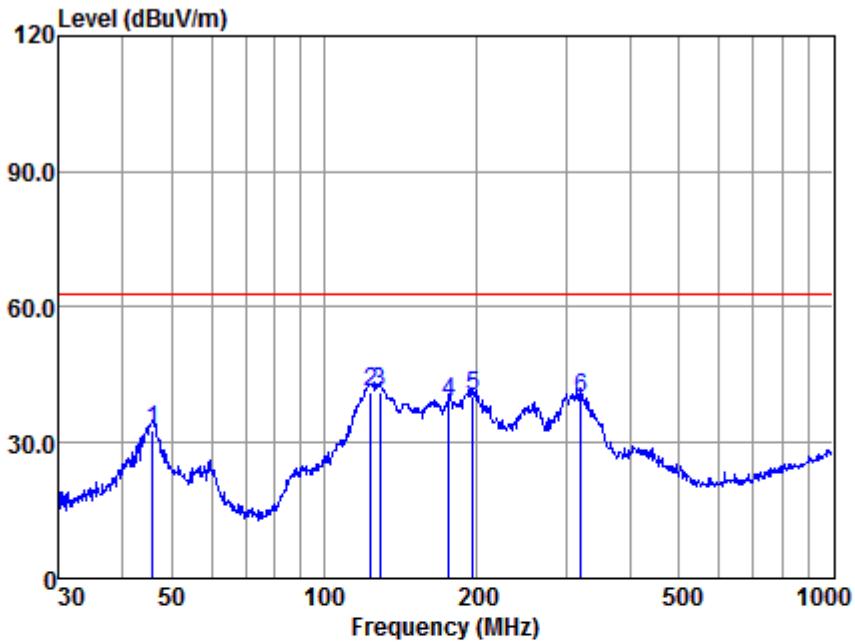
EUT/Project : 3852CR

Test mode : c

Freq	Read	Antenna	Cable	Preamp	Emission	Limit	Over	Remark
	Level	Factor	Loss	Factor	Level	Line	Limit	
	MHz	dBuv	dB/m	dB	dBuv/m	dBuv/m	dB	
1	45.22	65.88	13.18	0.24	42.63	36.67	63.00	-26.33 QP
2	46.02	66.15	12.74	0.24	42.63	36.50	63.00	-26.50 QP
3	59.86	59.61	12.56	0.30	42.65	29.82	63.00	-33.18 QP
4	131.30	58.85	12.59	0.58	42.65	29.37	63.00	-33.63 QP
5	168.41	64.36	11.85	0.65	42.58	34.28	63.00	-28.72 QP
6	184.49	71.48	11.15	0.67	42.55	40.75	63.00	-22.25 QP

Note: Emission Level = Read Level + Antenna Factor + Cable loss - Preamp Factor

Mode:d; Polarization:Horizontal

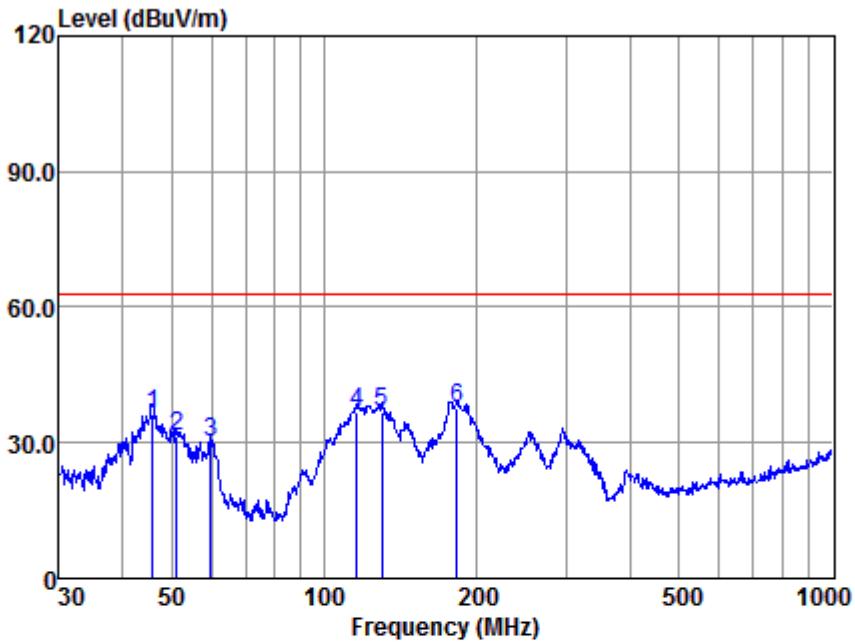


Antenna Polarity :HORIZONTAL
EUT/Project :3852CR
Test mode :d

	Read Freq	Antenna Level	Cable Factor	Preamp Loss	Emission Factor	Limit Level	Over Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	45.86	62.54	12.83	0.24	42.63	32.98	63.00	-30.02	QP
2	123.70	72.18	11.10	0.55	42.67	41.16	63.00	-21.84	QP
3	128.56	70.94	12.43	0.57	42.66	41.28	63.00	-21.72	QP
4	175.65	68.92	11.77	0.66	42.56	38.79	63.00	-24.21	QP
5	196.51	72.29	9.70	0.69	42.53	40.15	63.00	-22.85	QP
6	319.94	67.82	13.62	0.87	42.34	39.97	63.00	-23.03	QP

Note: Emission Level=Read Level+Antenna Factor+Cable loss+Preamp Factor

Mode:d; Polarization:Vertical

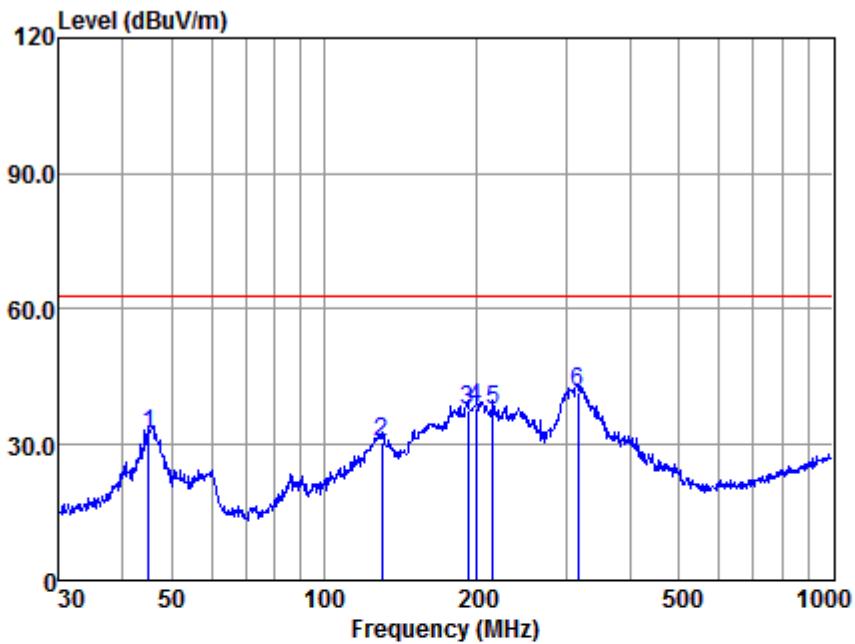


Antenna Polarity :VERTICAL
EUT/Project :3852CR
Test mode :d

	Read Freq	Antenna Level	Cable Factor	Preamp Loss	Emission Factor	Limit Level	Over Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	45.86	66.05	12.83	0.24	42.63	36.49	63.00	-26.51	QP
2	51.30	62.88	10.87	0.26	42.64	31.37	63.00	-31.63	QP
3	59.86	59.72	12.56	0.30	42.65	29.93	63.00	-33.07	QP
4	116.13	69.05	9.85	0.52	42.69	36.73	63.00	-26.27	QP
5	129.92	66.22	12.80	0.58	42.65	36.95	63.00	-26.05	QP
6	182.56	68.00	11.47	0.67	42.55	37.59	63.00	-25.41	QP

Note: Emission Level=Read Level+Antenna Factor+Cable loss+Preamp Factor

Mode:e; Polarization:Horizontal

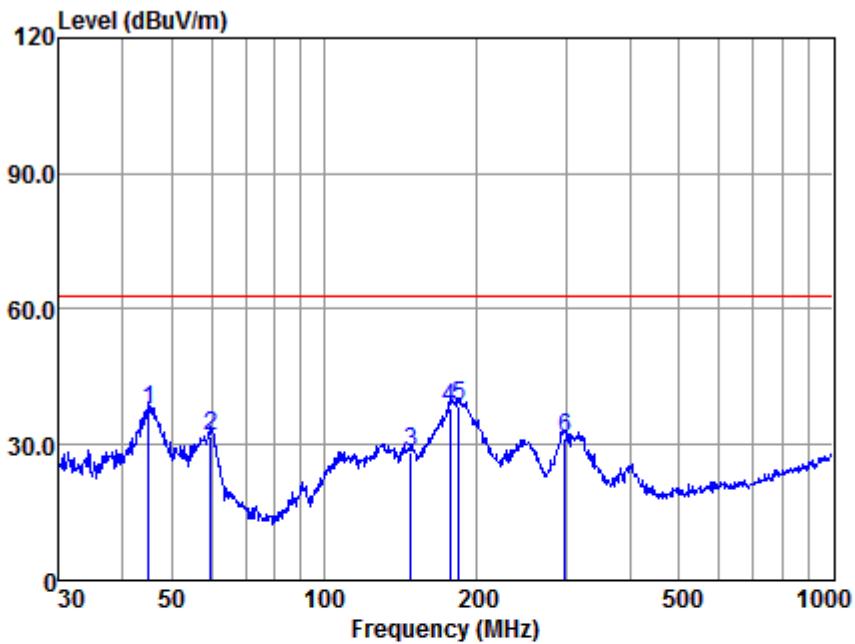


Antenna Polarity :HORIZONTAL
EUT/Project :3852CR
Test mode :e

	Read Freq	Antenna Level	Cable Factor	Preamp Loss	Emission Factor	Limit Level	Over Line	Over Limit	Remark
	MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
1	45.06	61.31	13.27	0.24	42.63	32.19	63.00	-30.81	QP
2	129.92	59.84	12.80	0.58	42.65	30.57	63.00	-32.43	QP
3	191.75	69.52	10.12	0.68	42.54	37.78	63.00	-25.22	QP
4	199.29	70.60	9.46	0.69	42.52	38.23	63.00	-24.77	QP
5	214.51	69.46	10.06	0.72	42.50	37.74	63.00	-25.26	QP
6	316.59	69.39	13.55	0.87	42.34	41.47	63.00	-21.53	QP

Note: Emission Level=Read Level+Antenna Factor+Cable loss+Preamp Factor

Mode:e; Polarization:Vertical



Antenna Polarity :VERTICAL

EUT/Project :3852CR

Test mode :e

	Read Freq	Antenna Level	Cable Factor	Preamp Loss	Emission Factor	Limit Level	Over Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dBuV/m	dB	
1	45.06	66.55	13.27	0.24	42.63	37.43	63.00	-25.57	QP
2	59.65	61.74	12.52	0.30	42.65	31.91	63.00	-31.09	QP
3	147.92	58.51	11.78	0.62	42.61	28.30	63.00	-34.70	QP
4	176.89	68.36	11.81	0.66	42.56	38.27	63.00	-24.73	QP
5	184.49	69.14	11.15	0.67	42.55	38.41	63.00	-24.59	QP
6	298.27	59.70	13.13	0.84	42.40	31.27	63.00	-31.73	QP

Note: Emission Level=Read Level+Antenna Factor+Cable loss+Preamp Factor

6.3 Radiated Emissions (Magnetic field Strength)(9kHz-30MHz)

Test Requirement: 47 CFR Part 18

Test Method: FCC OST/MP-5:1986

Frequency Range: 9kHz to 30MHz

Measurement Distance: 3m

6.3.1 E.U.T. Operation

Operating Environment:

Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar

Test mode c:Wireless charging mode 1_Keep EUT charging via adapter, keep the load charging via EUT. The load shall be set at empty load respectively.

d:Wireless charging mode 2_Keep EUT charging via adapter, keep the load charging via EUT. The load shall be set at half load respectively.

e:Wireless charging mode 3_Keep EUT charging via adapter, keep the load charging via EUT. The load shall be set at full load respectively.

f:Wireless charging mode 4_Keep EUT charging via solar energy, keep the load charging via EUT. The load shall be set at empty load respectively.

g:Wireless charging mode 5_Keep EUT charging via solar energy, keep the load charging via EUT. The load shall be set at half load respectively.

h:Wireless charging mode 6_Keep EUT charging via solar energy, keep the load charging via EUT. The load shall be set at full load respectively.

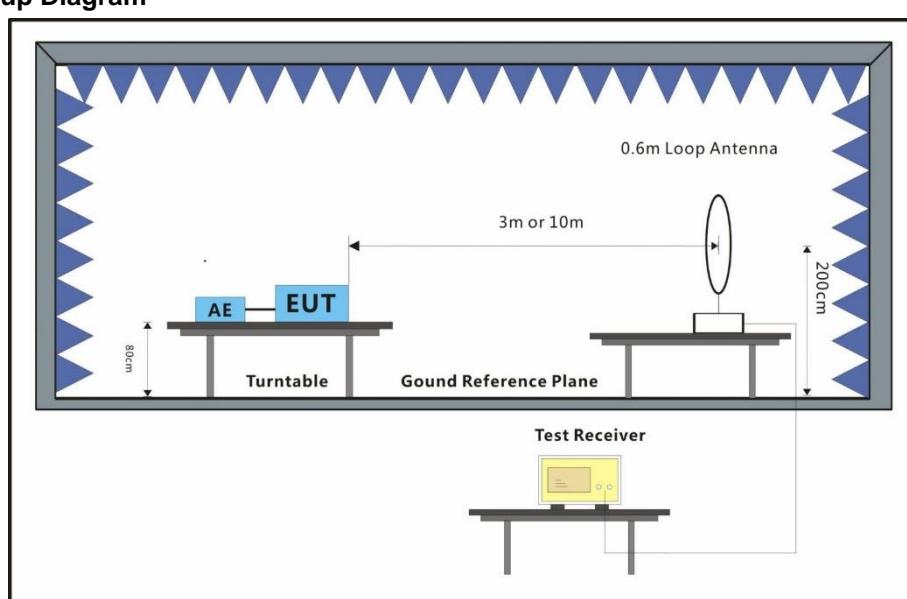
i:Wireless charging mode 7_ keep the load charging via EUT. The load shall be set at empty load respectively.

j:Wireless charging mode 8_keep the load charging via EUT. The load shall be set at half load respectively.

k:Wireless charging mode 9 keep the load charging via EUT. The load shall be set at full load respectively.

Remark: Pretest all modes; choose the worst data of Data Communication mode record in the report.

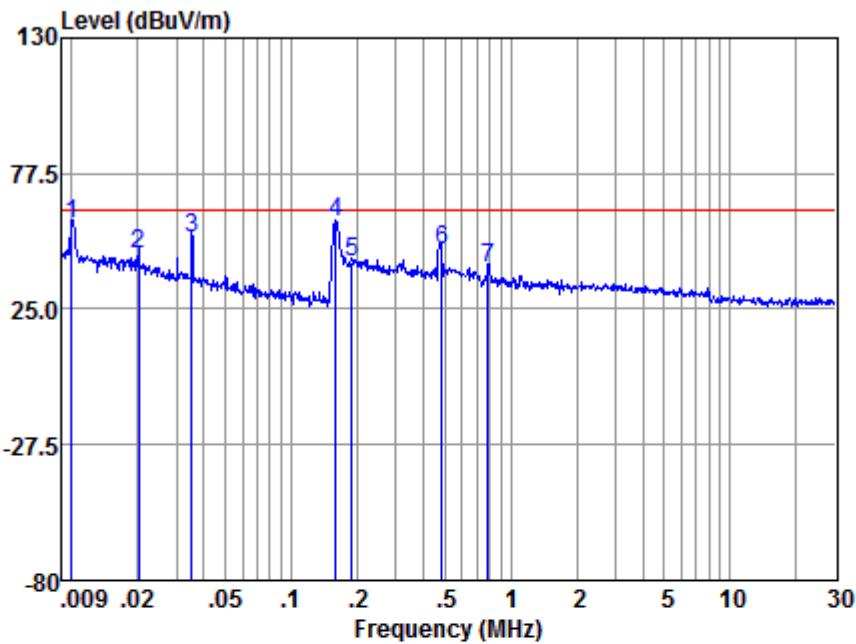
6.3.2 Test Setup Diagram



6.3.3 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

Mode:c; Polarization:Horizontal

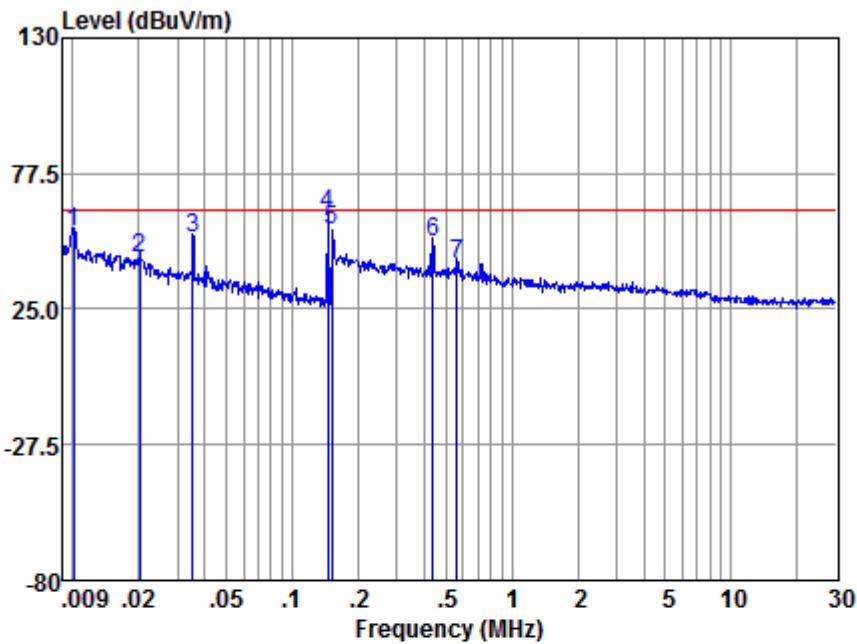


Antenna Polarity :HORIZONTAL
EUT/Project :3852CR
Test mode :c

Freq	Read	Antenna	Cable	Emission	Limit	Over	Remark
	Level	Factor	Loss	Level	Line	Limit	
	MHz	dBuv	dB/m	dB	dBuv/m	dBuv/m	dB
1	0.010	37.10	20.69	0.03	57.82	63.50	-5.68 QP
2	0.020	25.95	20.50	0.03	46.48	63.50	-17.02 QP
3	0.035	32.30	20.19	0.04	52.53	63.50	-10.97 QP
4	0.160	38.57	19.97	0.05	58.59	63.50	-4.91 QP
5	0.189	23.03	19.91	0.06	43.00	63.50	-20.50 QP
6	0.483	28.28	19.80	0.07	48.15	63.50	-15.35 QP
7	0.786	20.97	19.47	0.07	40.51	63.50	-22.99 QP

Note: Emission Level=Read Level+Antenna Factor+Cable loss+Preamp Factor

Mode:d; Polarization:Horizontal

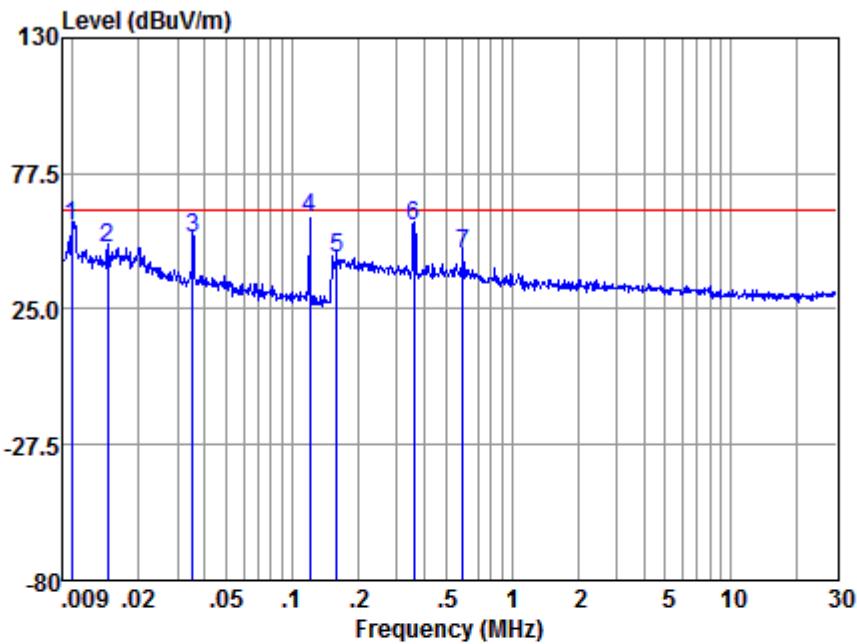


Antenna Polarity :HORIZONTAL
EUT/Project :3852CR
Test mode :d

Freq	Read	Antenna	Cable	Emission	Limit	Over	Remark
	Level	Factor	Loss	Level	Line	Limit	
	MHz	dBuv	dB/m	dB	dBuv/m	dBuv/m	dB
1	0.010	33.80	20.70	0.03	54.53	63.50	-8.97 QP
2	0.020	24.52	20.50	0.03	45.05	63.50	-18.45 QP
3	0.035	32.13	20.19	0.04	52.36	63.50	-11.14 QP
4	0.145	41.54	19.98	0.05	61.57	63.50	-1.93 QP
5	0.151	35.71	20.00	0.05	55.76	63.50	-7.74 QP
6	0.435	30.99	19.80	0.06	50.85	63.50	-12.65 QP
7	0.564	23.03	19.71	0.07	42.81	63.50	-20.69 QP

Note: Emission Level=Read Level+Antenna Factor+Cable loss+Preamp Factor

Mode:e; Polarization:Horizontal



Antenna Polarity :HORIZONTAL
EUT/Project :3852CR
Test mode :e

Freq	Read	Antenna	Cable	Emission	Limit	Over	Remark
	Level	Factor	Loss	Level	Line	Limit	
	MHz	dBuV	dB/m	dB	dBuV/m	dB	
1	0.010	36.27	20.68	0.03	56.98	63.50	-6.52 QP
2	0.014	27.77	20.59	0.03	48.39	63.50	-15.11 QP
3	0.035	32.33	20.19	0.04	52.56	63.50	-10.94 QP
4	0.120	40.50	19.89	0.05	60.44	63.50	-3.06 QP
5	0.159	24.85	19.98	0.05	44.88	63.50	-18.62 QP
6	0.358	36.94	19.80	0.06	56.80	63.50	-6.70 QP
7	0.596	26.73	19.67	0.07	46.47	63.50	-17.03 QP

Note: Emission Level=Read Level+Antenna Factor+Cable loss+Preamp Factor

7 Test Setup Photographs

Refer to the < Test Setup photos-FCC>.

8 EUT Constructional Details

Refer to the < External Photos > & < Internal Photos >.

- End of the Report -