



TEST REPORT

No. I22Z70451-EMC12

for

Samsung Electronics Co., Ltd.

Notebook PC

Model name: NP750XFG, NP754XFG, NP750XFT, NP754XFT

With

FCC ID: ZCANP750XFG

Hardware Version: REV1.0

Software Version: Windows 11

Issued Date: 2022-12-08

Note:

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The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22Z70451-EMC12	Rev.0	1 st edition	2022-12-08

Note: the latest revision of the test report supersedes all previous versions.



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1. Test Laboratory

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2017 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (ISED#: 24849). The detail accreditation scope can be found on NVLAP website.

1.2. Testing Location

CTTL (Huayuan North Road)

Address: No. 52 Huayuan North Road, Haidian District, Beijing 100191, P.R.
China

1.3. Testing Environment

Normal Temperature: 15-35°C
Relative Humidity: 20-75%

1.4. Project data

Testing Start Date: 2022-11-01
Testing End Date: 2022-12-06

1.5. Signature



Li Yan

(Prepared this test report)



Zhang Ying

(Reviewed this test report)



Zhang Xia

Deputy Director of the laboratory

(Approved this test report)



2. Client Information

2.1. Applicant Information

Company Name: Samsung Electronics Co., Ltd.
Address: 19 Chapin Rd., Building D Pine Brook, NJ 07058
City: /
Postal Code: /
Country: /
Contact: Jenni Chun
Email: j1.chun@samsung.com
Telephone: +1-201-937-4203

2.2. Manufacturer Information

Company Name: Samsung Electronics. Co., Ltd.
Address: Samsung R5, Maetan dong 129, Samsung ro
Youngtong gu, Suwon city 443 742, Korea
City: /
Postal Code: /
Country: /
Contact: Sunghoon Cho
Email: ggobi.cho@samsung.com
Telephone: +82-10-2722-4159

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	Notebook PC
Model name	NP750XFG, NP754XFG, NP750XFT, NP754XFT
FCC ID	ZCANP750XFG

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of CTTL, Telecommunication Technology Labs, CAICT.

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI/SN	HW Version	SW Version
EUT1	2270451UT12a	REV1.0	Windows 11
EUT2	2270451UT13a	REV1.0	Windows 11
EUT3	2270451UT26a	REV1.0	Windows 11
EUT4	2270451UT31a	REV1.0	Windows 11

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN	Remarks
AE1	Adapter1	/	EP-TA845/ SOLUM CO.,LTD.
AE2	Adapter2	/	EP-TA845/ DONGYANG E&P Inc
AE3	HDMI Cable	/	/
AE4	Display	/	/
AE5	Mobile HD	/	USB
AE6	Mobile HD	/	USB
AE7	Mobile HD	/	Type-C
AE8	SD card	/	/
AE9	Headset	/	/
AE10	Data Cable	/	/
AE11	Battery	/	inbuilt

Note: The USB cables are shielded.

3.4. General Description

Equipment under Test (EUT) is a model of Notebook PC with integrated antenna.

It consists of normal options: lithium battery and charger.

Samples undergoing test were selected by the client.

The differences in the model names are only for different marketing purposes.

Manual and specifications of the EUT were provided to fulfil the test.

For more EUT information please refers to the manufacturer's specifications or user's manual.

3.5. Key component list

Item	Spec.	Vendor	Vendor Model
CPU	Intel 13th Gen Raptor lake-U i7,U15	Intel	INTEL(R) CORE(TM) PROCESSOR i7-1355U
	Intel 13th Gen Raptor lake-U i5,U15		INTEL(R) CORE(TM) PROCESSOR i5-1335U
	Intel 13th Gen Raptor lake-U i3,U15		INTEL(R) CORE(TM) PROCESSOR i3-1315U
WLAN	802.11 ax 2x2		AX201D2W
Memory	LPDDR4x 8GB	Samsung Electronics Co.,Ltd. (SAMSUNG)	K4U6E3S4AB-MGCL
	LPDDR4x 16GB	Samsung Electronics Co.,Ltd. (SAMSUNG)	K4UBE3D4AB-MGCL
SSD	256G M.2 2280 PCIe(NVMe)	SOLID STATES STORAGE TECHNOLOGY CORPORATION	CL1-8D256
	512G M.2 2230 PCIe(NVMe)	Samsung Electronics Co.,Ltd. (SAMSUNG)	MZ9LQ512HBLU-00BKN
	1TB M.2 2280 PCIe(NVMe)	Western Digital (WD)	SDBPNPZ-1T00
LCD	15.6" FHD IPS	BOE Optoelectronics Technology Co., Ltd	NE156FHM-NS0
		BengBu K&D Technology Co.,Ltd (K&D)	KD156N20-30NI-A003.
Battery	54W	SDI	AA-PBSN4AT
Mouse	Black	Acrox	AA-MW1D5WB
Antenna	/	INNOWAVE	/
	/	SPEED	/

Note: EUT1, EUT2, EUT3 and EUT4 correspond to the configurations of different key components.

3.6. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT1+AE1 +AE3+AE4+AE5+AE6+AE7+AE8+AE9+AE10	EUT1+ Adapter1
Set.2	EUT2+AE1 +AE3+AE4+AE5+AE6+AE7+AE8+AE9+AE10	EUT2+ Adapter1
Set.3	EUT3+AE1 +AE3+AE4+AE5+AE6+AE7+AE8+AE9+AE10	EUT3+ Adapter1
Set.4	EUT4+AE1 +AE3+AE4+AE5+AE6+AE7+AE8+AE9+AE10	EUT4+ Adapter1
Set.5	EUT1+AE2 +AE3+AE4+AE5+AE6+AE7+AE8+AE9+AE10	EUT1+ Adapter2

4. Reference Documents

4.1. Documents supplied by applicant

EUT parameters are supplied by the client or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC 47 CFR Part 15, Subpart B	Radio frequency devices - Unintentional Radiators	2020
ANSI C63.4	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2014

Note: The test methods have no deviation with standards.

5. LABORATORY ENVIRONMENT

Semi-anechoic chamber SAC did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω
Normalised site attenuation (NSA)	< ± 4 dB, 3m distance, from 30 to 1000 MHz
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz

Shielded room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz, >60dB; 1MHz – 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω

6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	P	Pass
	NA	Not applicable
	F	Fail
	BR	Re-use test data from basic model report.

Items	Test Name	Clause in FCC rules	Section in this report	Verdict	Test Location
1	Radiated Emission	15.109(a)	A.1	P	CTTL(Huayuan North Road)
2	Conducted Emission	15.107(a)	A.2	P	CTTL(Huayuan North Road)

7. Test Equipments Utilized

Test Equipment

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATION INTERVAL
1	Test Receiver	ESCI3	100344	R&S	2023-02-21	1 year
2	LISN	ENV216	101200	R&S	2023-05-30	1 year
3	Test Receiver	ESW44	103015	R&S	2023-02-23	1 year
4	Test Receiver	ESU26	100235	R&S	2023-03-08	1 year
5	EMI Antenna	3115	00167250	R&S	2023-06-20	1 year
6	EMI Antenna	VULB9163	01223	Schwarzbeck	2023-07-25	1 Year

Test Software

Test Item	Test Software and Version	Software Vendor
Radiated Continuous Emission	EMC32 V10.60.20	R&S
Conducted Emission	EMC32 V10.60.20	R&S

ANNEX A: MEASUREMENT RESULTS

A.1 Radiated Emission

Reference

FCC: CFR Part 15.109(a).

A.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator at distances of 10 meters (for 30MHz-1GHz) and 3 meters (for above 1GHz) is tested. Tested in accordance with the procedures of ANSI C63.4 – 2014, section 8.3.

The EUT was placed on a non-conductive table and arranged in a typical configuration in accordance with ANSI C63.4-2014 and manipulated to obtain worst case emissions. The measurement antenna was placed at a distance of 3 /10 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT.

For the test setup photographs please see the test setup photos document.

A.1.2 EUT Operating Mode

The EUT exercise program was tested using the Burn-in test program for windows.

The system was configured for testing in a typical mode that a customer would normal use.

Cables were attached to each of the available I/O ports. Where applicable, peripherals were attached to the I/O cables. All the external I/O ports were exercised.

LABTM software is used to let the EUT to continuously copy data to external (Hard Disk & SD card) storage media, read and erase the data after copy action was finished. During the test, the a pattern of "H" characters was written to display on the LCD panel; the camera was in video mode; the music was repetitively played through the headset; the WIFI and BT function was on and worked in receiver mode.

A.1.3 Measurement Limit

Frequency range (MHz)	Field strength limit ($\mu\text{V/m}$)		
	Quasi-peak	Average	Peak
30-88	100		
88-216	150		
216-960	200		
960-1000	500		
>1000		500	5000

Note: the above limit is for 3 meters test distance. 10 meters' limit is got by converting.

Limit (10m) = limit (3m) + 20(log (3/10))

A.1.4 Test Condition

Voltage (V)	Frequency (Hz)
120	60

Frequency range (MHz)	RBW/VBW	Sweep Time (s)	Detector
30-1000	120kHz (IF Bandwidth)	5	Peak/Quasi-peak
Above 1000	1MHz/3MHz	15	Peak, Average

A.1.5 Measurement Results

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss". It includes the antenna factor of receive antenna and the path loss.

The measurement results are obtained as described below:

$$\text{Result} = P_{\text{Mea}} + A_{\text{Rpl}} = P_{\text{Mea}} + G_A + G_{\text{PL}}$$

Where

G_A : Antenna factor of receive antenna

G_{PL} : Path Loss

P_{Mea} : Measurement result on receiver.

Measurement uncertainty (worst case): 30MHz-1GHz: 5.15dB, 1GHz-18GHz: 5.54dB, $k=2$.

Set.1

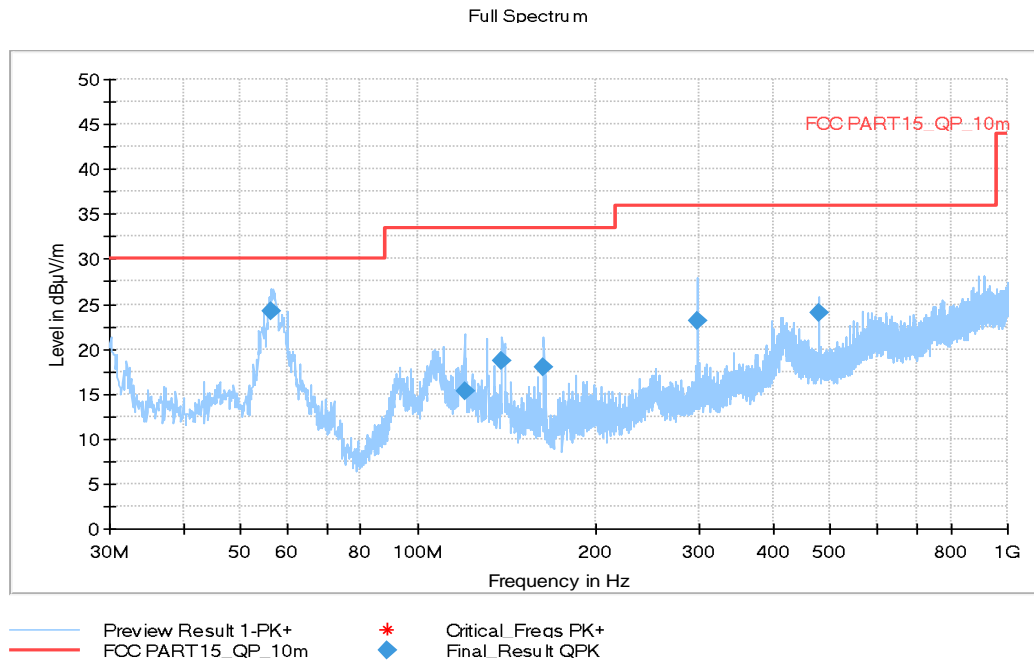


Figure A.1 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)
56.28700	24.14	30.00	5.86	120.000	108.0	V	315.0
119.91900	15.31	33.52	18.21	120.000	125.0	V	239.0
138.9310	18.71	33.52	14.81	120.000	100.0	V	252.0
163.5690	18.00	33.52	15.52	120.000	107.0	V	-4.0
296.9440	23.22	36.02	12.80	120.000	100.0	V	-17.0
479.9830	23.97	36.02	12.05	120.000	323.0	V	45.0

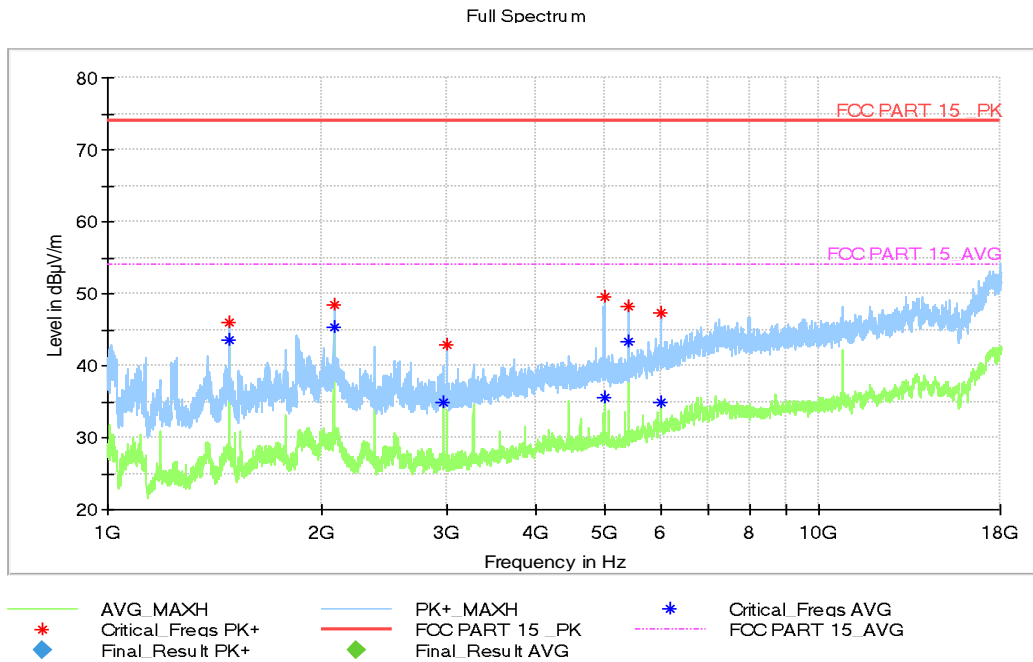


Figure A.2 Radiated Emission from 1GHz to 18GHz

Average detector result

Frequency (MHz)	Measurement Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
5399.940000	43.25	54.00	10.75	1000.000	100.0	V	90.0
5989.160000	34.83	54.00	19.17	1000.000	100.0	V	180.0
2078.820000	45.25	54.00	8.75	1000.000	200.0	V	180.0
1484.840000	43.56	54.00	10.44	1000.000	100.0	V	90.0
4994.320000	35.61	54.00	18.39	1000.000	200.0	V	180.0
2969.960000	34.91	54.00	19.09	1000.000	100.0	V	270.0

Peak detector result

Frequency (MHz)	Measurement Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
2998.180000	42.90	74.00	31.10	1000.000	100.0	V	270.0
1484.840000	46.07	74.00	27.93	1000.000	100.0	V	90.0
5998.680000	47.35	74.00	26.65	1000.000	100.0	H	180.0
5400.620000	48.25	74.00	25.75	1000.000	100.0	V	90.0
2078.480000	48.39	74.00	25.61	1000.000	200.0	V	180.0
4997.380000	49.52	74.00	24.48	1000.000	200.0	V	180.0

Set.2

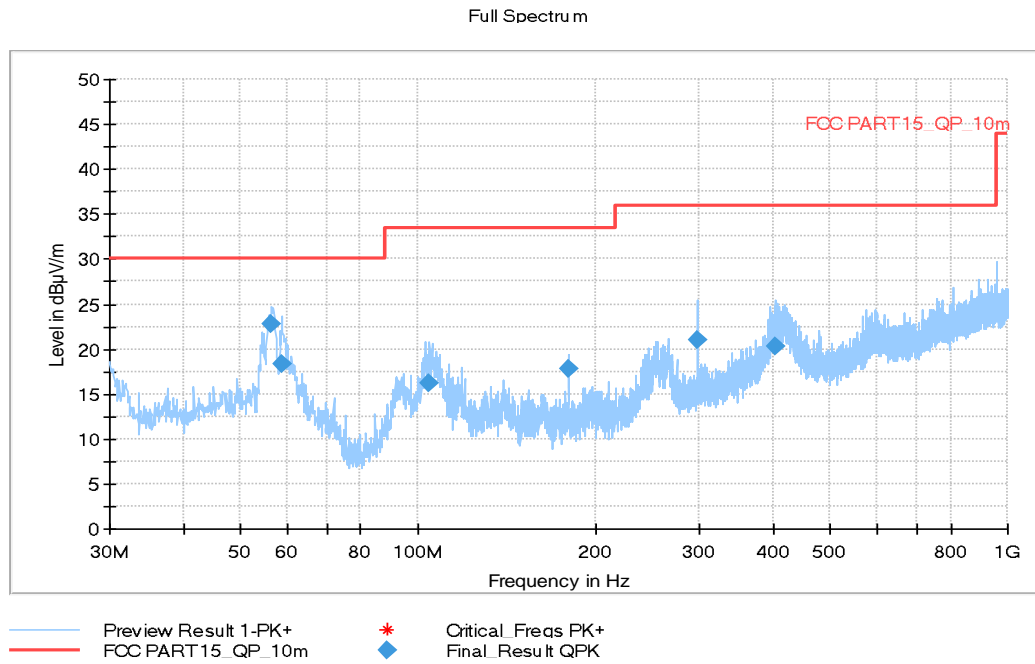


Figure A.3 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)
56.38400	22.73	30.00	7.27	120.000	100.0	V	296.0
58.71200	18.34	30.00	11.66	120.000	178.0	V	90.0
104.6900	16.16	33.52	17.36	120.000	125.0	V	-5.0
180.3500	17.73	33.52	15.79	120.000	100.0	V	203.0
296.9440	21.01	36.02	15.01	120.000	100.0	V	-4.0
404.4200	20.25	36.02	15.77	120.000	108.0	V	-17.0

Full Spectrum

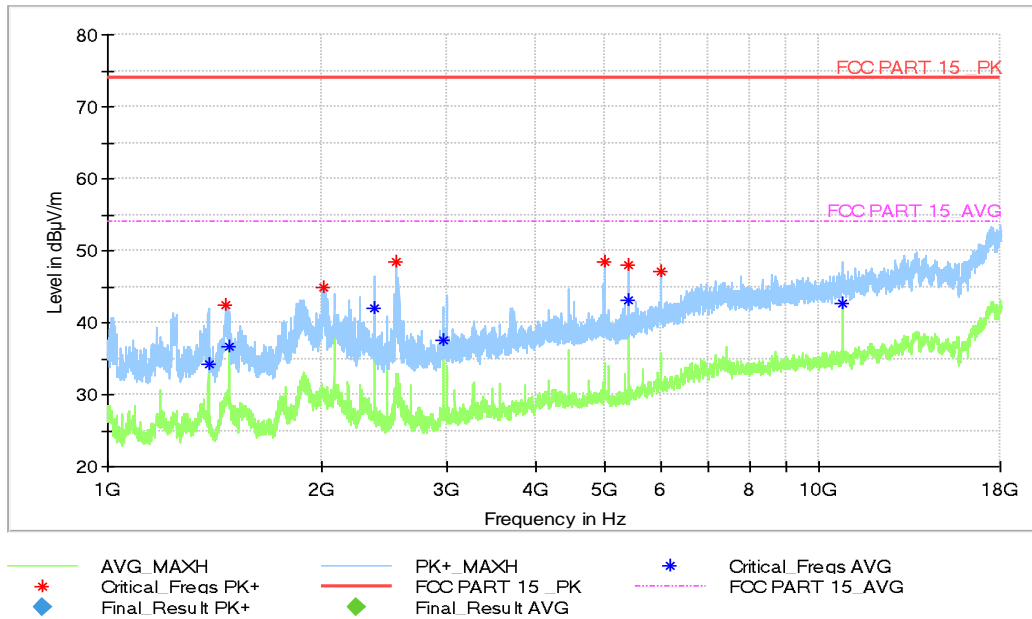


Figure A.4 Radiated Emission from 1GHz to 18GHz

Average detector result

Frequency (MHz)	Measurement Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
1484.840000	36.74	54.00	17.26	1000.000	100.0	H	0.0
1385.560000	34.16	54.00	19.84	1000.000	100.0	H	0.0
10801.860000	42.64	54.00	11.36	1000.000	100.0	V	90.0
2969.620000	37.61	54.00	16.39	1000.000	200.0	V	0.0
2375.640000	42.05	54.00	11.95	1000.000	200.0	V	270.0
5399.940000	43.06	54.00	10.94	1000.000	100.0	V	90.0

Peak detector result

Frequency (MHz)	Measurement Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
1466.140000	42.47	74.00	31.53	1000.000	100.0	V	90.0
2011.500000	44.92	74.00	29.08	1000.000	100.0	H	0.0
5989.500000	47.07	74.00	26.93	1000.000	100.0	V	180.0
5400.280000	47.93	74.00	26.07	1000.000	100.0	V	90.0
4996.360000	48.52	74.00	25.48	1000.000	200.0	V	0.0
2547.340000	48.52	74.00	25.48	1000.000	200.0	H	270.0

Set.3

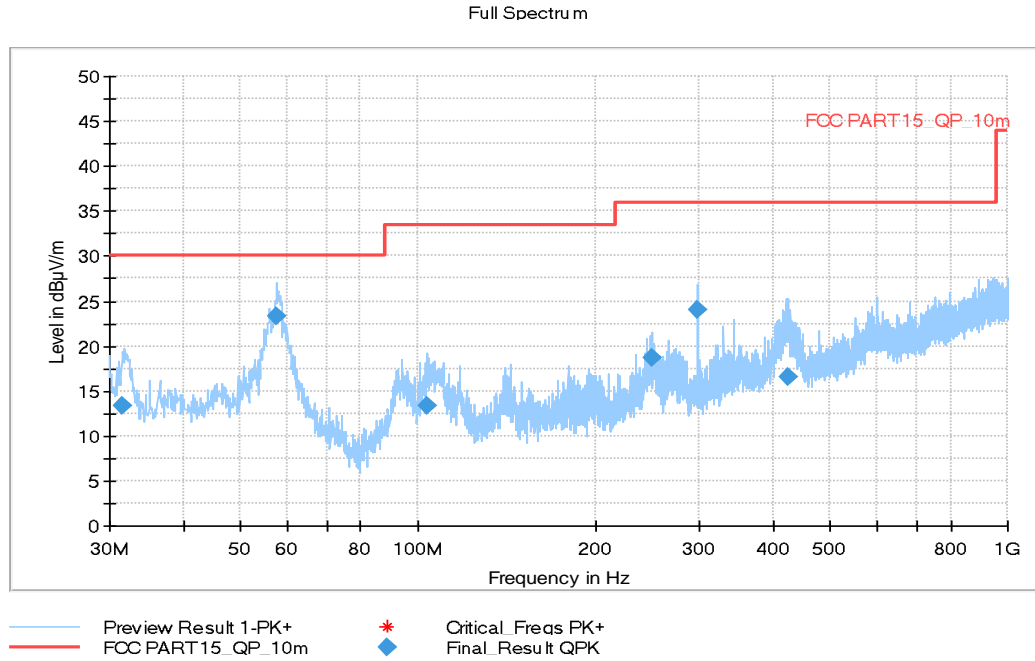


Figure A.5 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)
31.55200	13.30	30.00	16.70	120.000	225.0	V	225.0
57.54800	23.37	30.00	6.63	120.000	100.0	V	86.0
103.6230	13.41	33.52	20.11	120.000	100.0	V	-5.0
249.3170	18.77	36.02	17.25	120.000	100.0	V	-5.0
296.9440	23.94	36.02	12.08	120.000	100.0	V	-4.0
423.8200	16.53	36.02	19.49	120.000	100.0	V	162.0

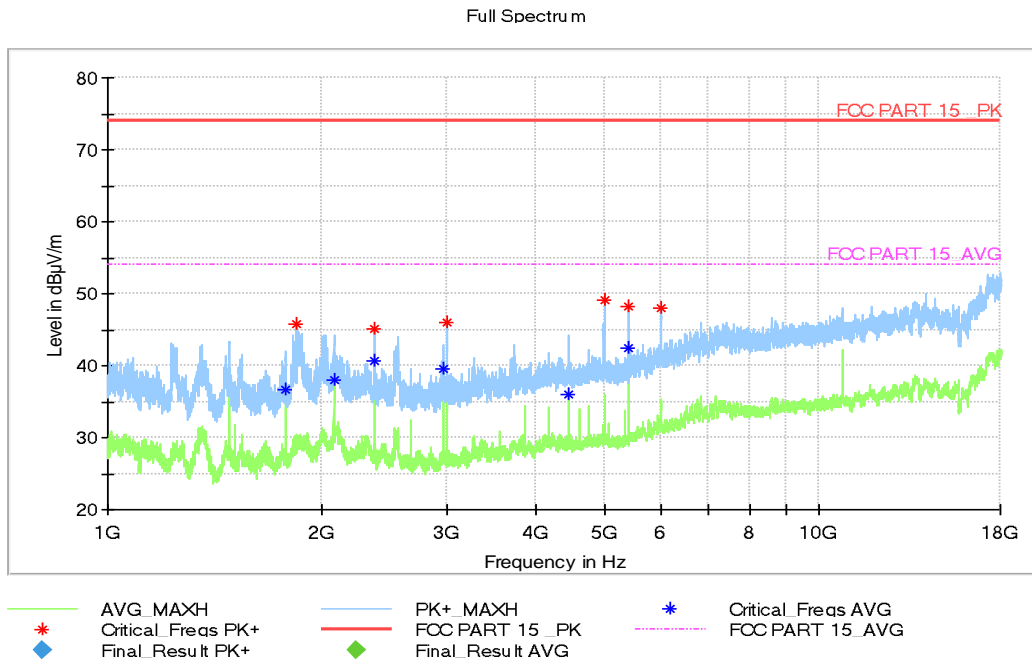


Figure A.6 Radiated Emission from 1GHz to 18GHz

Average detector result

Frequency (MHz)	Measurement Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
5399.940000	42.39	54.00	11.61	1000.000	100.0	V	90.0
4454.740000	36.10	54.00	17.90	1000.000	200.0	V	90.0
2078.820000	38.03	54.00	15.97	1000.000	200.0	V	180.0
1782.000000	36.65	54.00	17.35	1000.000	100.0	H	0.0
2969.960000	39.66	54.00	14.34	1000.000	100.0	H	90.0
2375.980000	40.65	54.00	13.35	1000.000	100.0	V	270.0

Peak detector result

Frequency (MHz)	Measurement Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
2375.980000	45.05	74.00	28.95	1000.000	100.0	V	270.0
1843.200000	45.82	74.00	28.18	1000.000	200.0	H	0.0
2994.780000	45.95	74.00	28.05	1000.000	100.0	V	270.0
5988.820000	48.10	74.00	25.90	1000.000	100.0	V	180.0
5400.280000	48.18	74.00	25.82	1000.000	100.0	V	90.0
4989.900000	49.06	74.00	24.94	1000.000	200.0	H	180.0

Set.4

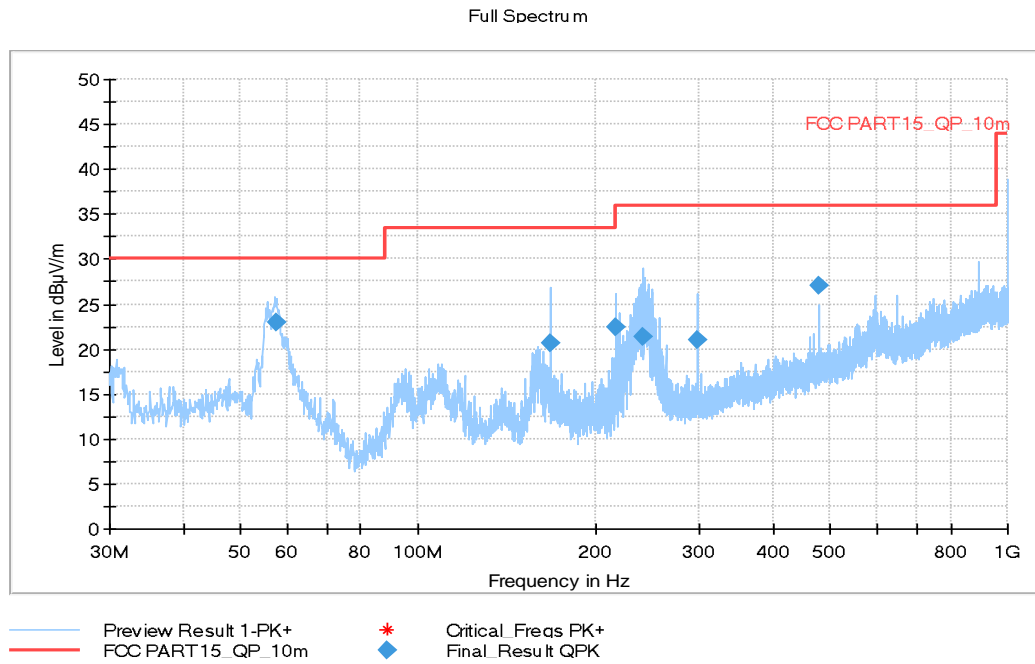


Figure A.7 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)
57.64500	23.03	30.00	6.97	120.000	283.0	V	99.0
167.9340	20.73	33.52	12.79	120.000	125.0	V	9.0
215.9490	22.34	33.52	11.18	120.000	287.0	H	149.0
241.2660	21.38	36.02	14.64	120.000	100.0	V	-5.0
296.9440	21.04	36.02	14.98	120.000	100.0	V	-4.0
479.9830	27.02	36.02	9.00	120.000	100.0	V	9.0

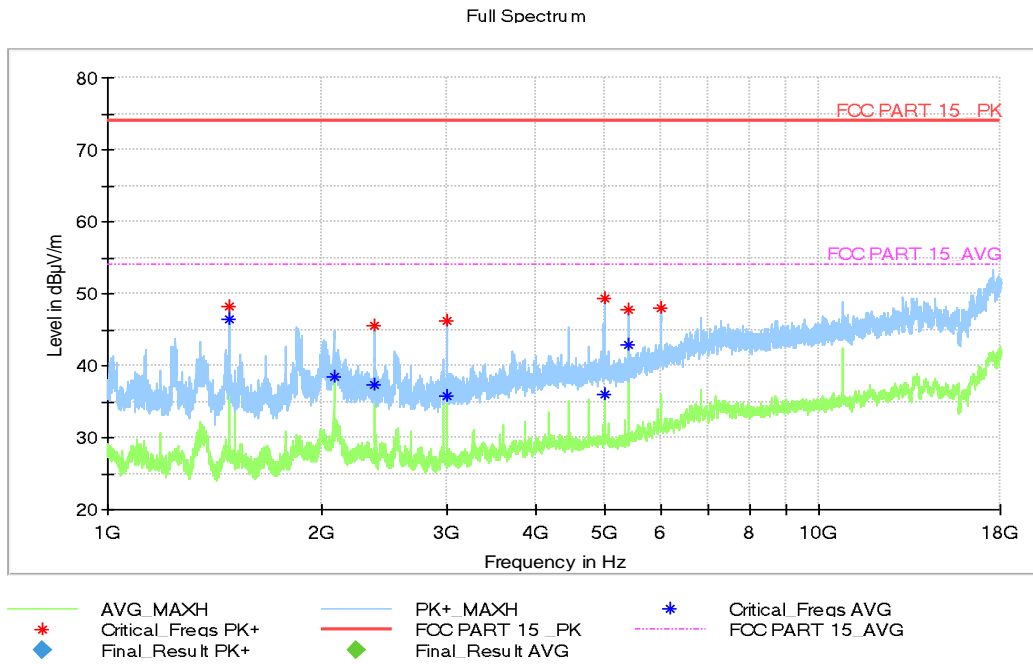


Figure A.8 Radiated Emission from 1GHz to 18GHz

Average detector result

Frequency (MHz)	Measurement Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
5399.940000	43.00	54.00	11.00	1000.000	100.0	V	43.00
4993.300000	35.91	54.00	18.09	1000.000	200.0	H	35.91
2375.640000	37.35	54.00	16.65	1000.000	200.0	V	37.35
2078.820000	38.50	54.00	15.50	1000.000	100.0	H	38.50
2996.140000	35.67	54.00	18.33	1000.000	100.0	V	35.67
1484.840000	46.38	54.00	7.62	1000.000	200.0	H	46.38

Peak detector result

Frequency (MHz)	Measurement Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
2376.320000	45.64	74.00	28.36	1000.000	100.0	V	270.0
2994.440000	46.24	74.00	27.76	1000.000	100.0	V	270.0
5400.280000	47.74	74.00	26.26	1000.000	100.0	V	90.0
5989.500000	47.93	74.00	26.07	1000.000	100.0	V	180.0
1484.840000	48.31	74.00	25.69	1000.000	200.0	H	270.0
4997.380000	49.34	74.00	24.66	1000.000	200.0	H	180.0

Set.5

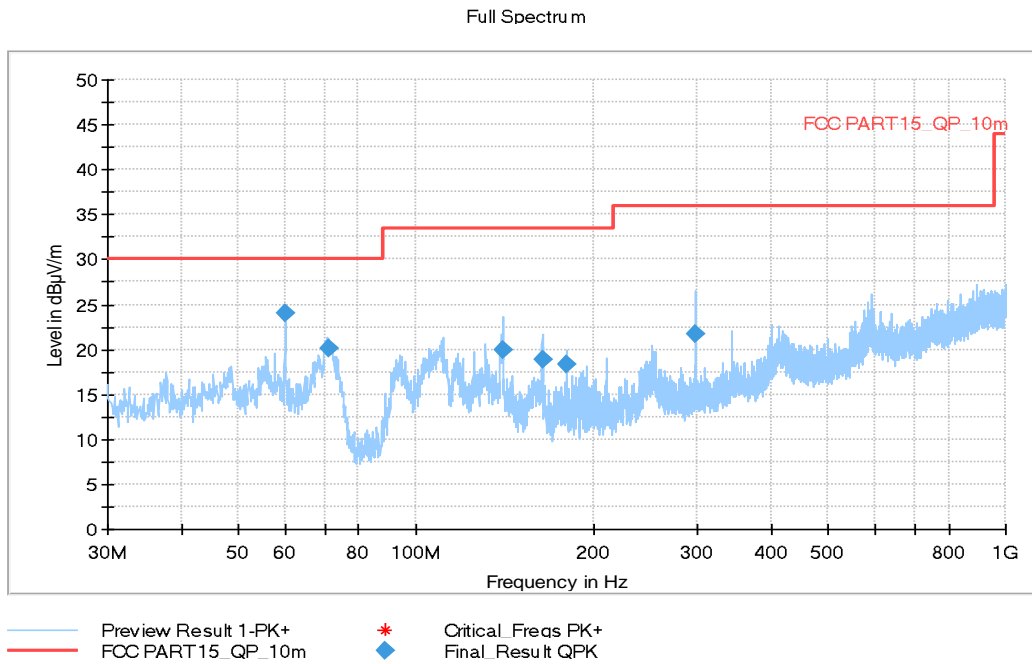


Figure A.9 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)
59.97300	24.04	30.00	5.96	120.000	275.0	V	-43.0
71.03100	20.12	30.00	9.88	120.000	286.0	H	59.0
140.2890	19.99	33.52	13.53	120.000	100.0	V	292.0
163.6660	18.87	33.52	14.65	120.000	100.0	V	-5.0
180.3500	18.41	33.52	15.11	120.000	100.0	V	189.0
296.9440	21.65	36.02	14.37	120.000	125.0	V	-1.0

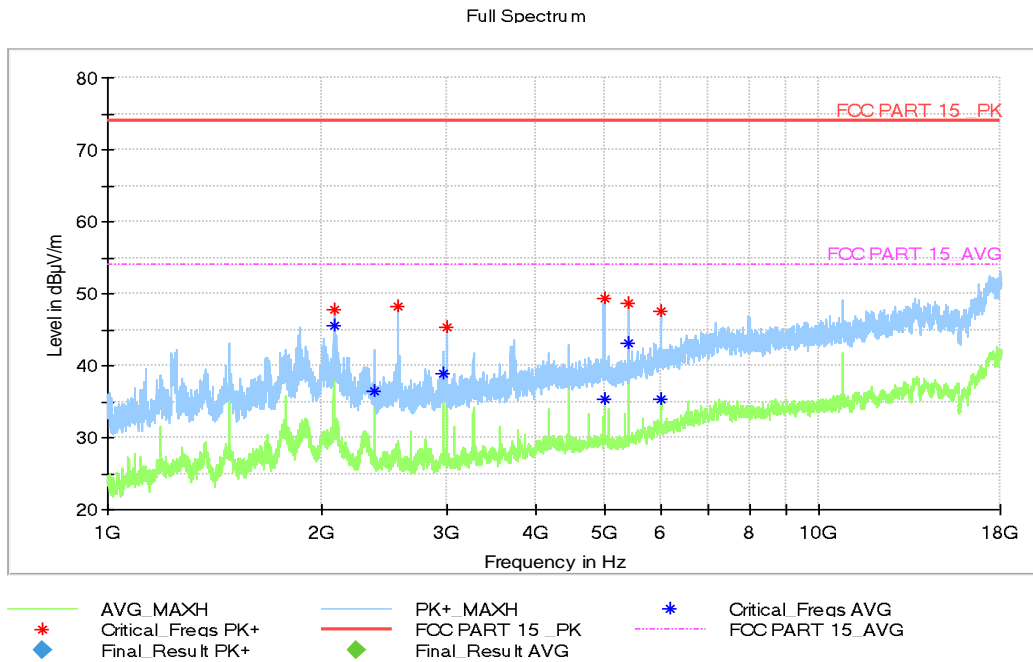


Figure A.10 Radiated Emission from 1GHz to 18GHz

Average detector result

Frequency (MHz)	Measurement Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
5399.940000	43.08	54.00	10.92	1000.000	100.0	V	90.0
5989.840000	35.34	54.00	18.66	1000.000	100.0	V	180.0
2375.980000	36.49	54.00	17.51	1000.000	100.0	H	0.0
2078.820000	45.64	54.00	8.36	1000.000	200.0	V	180.0
4991.940000	35.31	54.00	18.69	1000.000	100.0	H	90.0
2969.960000	38.85	54.00	15.15	1000.000	200.0	V	0.0

Peak detector result

Frequency (MHz)	Measurement Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
2994.780000	45.35	74.00	28.65	1000.000	100.0	V	270.0
5992.560000	47.63	74.00	26.37	1000.000	100.0	V	180.0
2078.820000	47.85	74.00	26.15	1000.000	200.0	V	180.0
2558.560000	48.29	74.00	25.71	1000.000	100.0	V	270.0
5400.280000	48.56	74.00	25.44	1000.000	100.0	V	90.0
4993.300000	49.31	74.00	28.65	1000.000	100.0	V	270.0

A.2 Conducted Emission

Reference

FCC: CFR Part 15.107(a).

A.2.1 Method of measurement

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits. Tested in accordance with the procedures of ANSI C63.4 – 2014, section 7.3.

For the test setup photographs please see the test setup photos document.

A.2.2 EUT Operating Mode

The EUT exercise program was tested using the Burn-in test program for windows.

The system was configured for testing in a typical mode that a customer would normal use.

Cables were attached to each of the available I/O ports. Where applicable, peripherals were attached to the I/O cables. All the external I/O ports were exercised.

LABTM software is used to let the EUT to continuously copy data to external (Hard Disk & SD card) storage media, read and erase the data after copy action was finished. During the test, the a pattern of “H” characters was written to display on the LCD panel; the camera was in video mode; the music was repetitively played through the headset; the WIFI and BT function was on and worked in receiver mode.

A.2.3 Measurement Limit

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency

A.2.4 Test Condition in charging mode

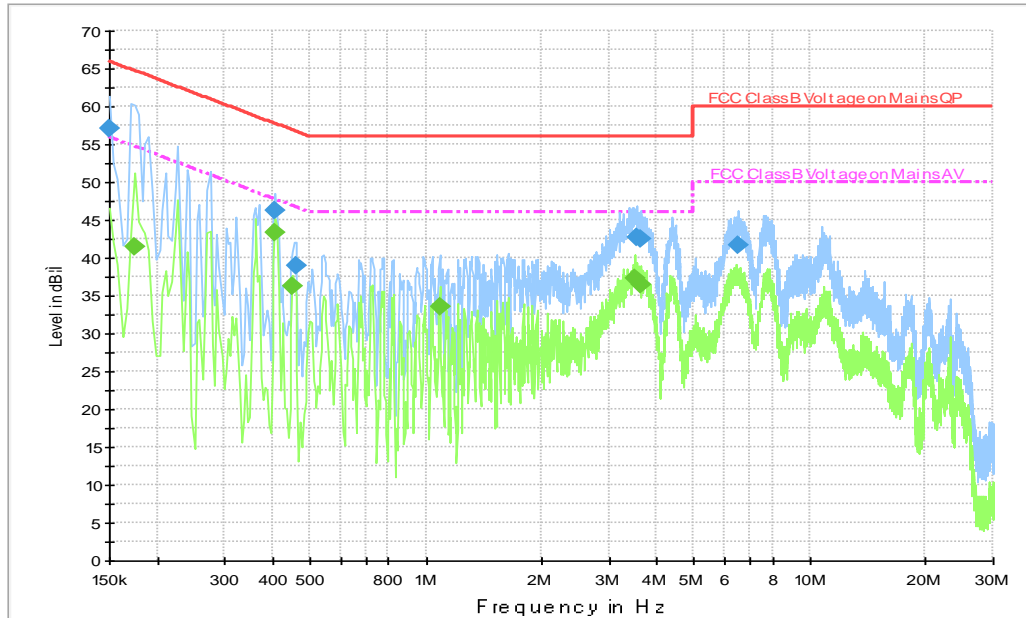
Voltage (V)	Frequency (Hz)
120	60

RBW/IF bandwidth	Sweep Time(s)
9kHz	1

A.2.5 Measurement Results

Measurement uncertainty: $U= 3.08 \text{ dB}$, $k=2$.

Set.1



Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Figure A.11 Conducted Emission

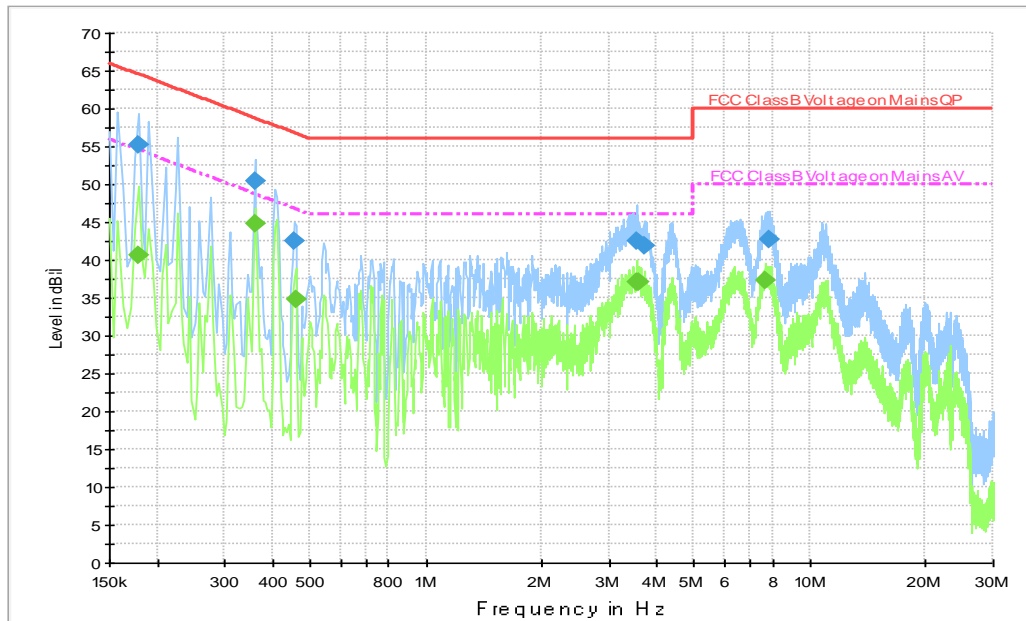
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	57.2	2000.0	9.000	On	L1	20.0	8.8	66.0
0.406000	46.3	2000.0	9.000	On	L1	19.7	11.4	57.7
0.458000	38.9	2000.0	9.000	On	L1	19.7	17.8	56.7
3.538000	42.8	2000.0	9.000	On	N	19.6	13.2	56.0
3.634000	42.4	2000.0	9.000	On	L1	19.6	13.6	56.0
6.474000	41.7	2000.0	9.000	On	L1	19.6	18.3	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	41.6	2000.0	9.000	On	L1	19.7	13.2	54.8
0.406000	43.4	2000.0	9.000	On	L1	19.7	4.4	47.7
0.450000	36.2	2000.0	9.000	On	N	19.7	10.7	46.9
1.086000	33.5	2000.0	9.000	On	L1	19.7	12.5	46.0
3.514000	37.3	2000.0	9.000	On	N	19.6	8.7	46.0
3.622000	36.5	2000.0	9.000	On	L1	19.6	9.5	46.0

Set.2



Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Figure A.12 Conducted Emission

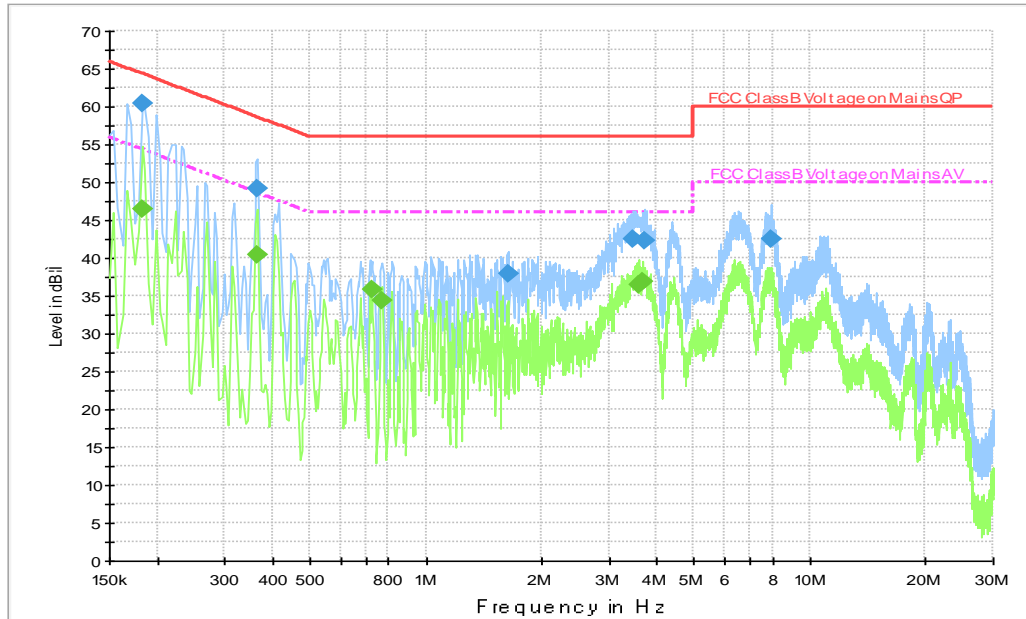
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.178000	55.2	2000.0	9.000	On	L1	19.7	9.4	64.6
0.358000	50.5	2000.0	9.000	On	N	19.7	8.3	58.8
0.454000	42.5	2000.0	9.000	On	N	19.7	14.3	56.8
3.550000	42.5	2000.0	9.000	On	L1	19.6	13.5	56.0
3.694000	41.8	2000.0	9.000	On	L1	19.6	14.2	56.0
7.846000	42.6	2000.0	9.000	On	L1	19.7	17.4	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.178000	40.6	2000.0	9.000	On	L1	19.7	14.0	54.6
0.358000	44.7	2000.0	9.000	On	N	19.7	4.0	48.8
0.458000	34.8	2000.0	9.000	On	N	19.7	11.9	46.7
3.550000	37.1	2000.0	9.000	On	L1	19.6	8.9	46.0
3.606000	37.0	2000.0	9.000	On	L1	19.6	9.0	46.0
7.626000	37.4	2000.0	9.000	On	L1	19.6	12.6	50.0

Set.3



Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Figure A.13 Conducted Emission

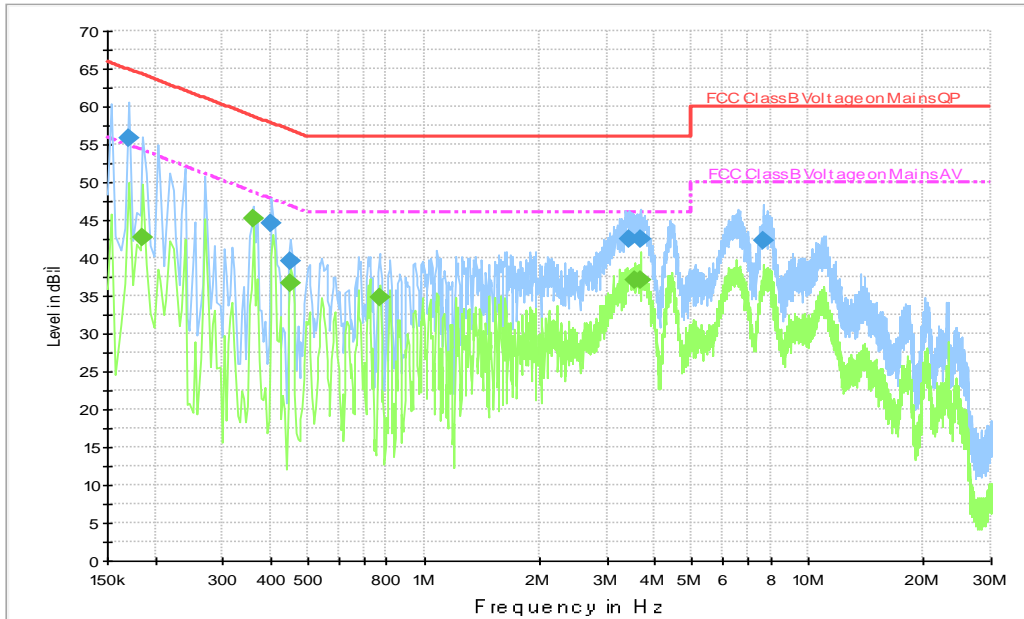
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	60.5	2000.0	9.000	On	N	19.7	3.9	64.4
0.366000	49.2	2000.0	9.000	On	N	19.7	9.4	58.6
1.646000	38.0	2000.0	9.000	On	L1	19.6	18.0	56.0
3.482000	42.4	2000.0	9.000	On	L1	19.6	13.6	56.0
3.702000	42.3	2000.0	9.000	On	L1	19.6	13.7	56.0
7.950000	42.6	2000.0	9.000	On	L1	19.7	17.4	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	46.5	2000.0	9.000	On	N	19.7	7.9	54.4
0.366000	40.4	2000.0	9.000	On	N	19.7	8.2	48.6
0.722000	35.9	2000.0	9.000	On	L1	19.7	10.1	46.0
0.770000	34.3	2000.0	9.000	On	L1	19.7	11.7	46.0
3.578000	36.4	2000.0	9.000	On	N	19.6	9.6	46.0
3.674000	37.0	2000.0	9.000	On	L1	19.6	9.0	46.0

Set.4



Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Figure A.14 Conducted Emission

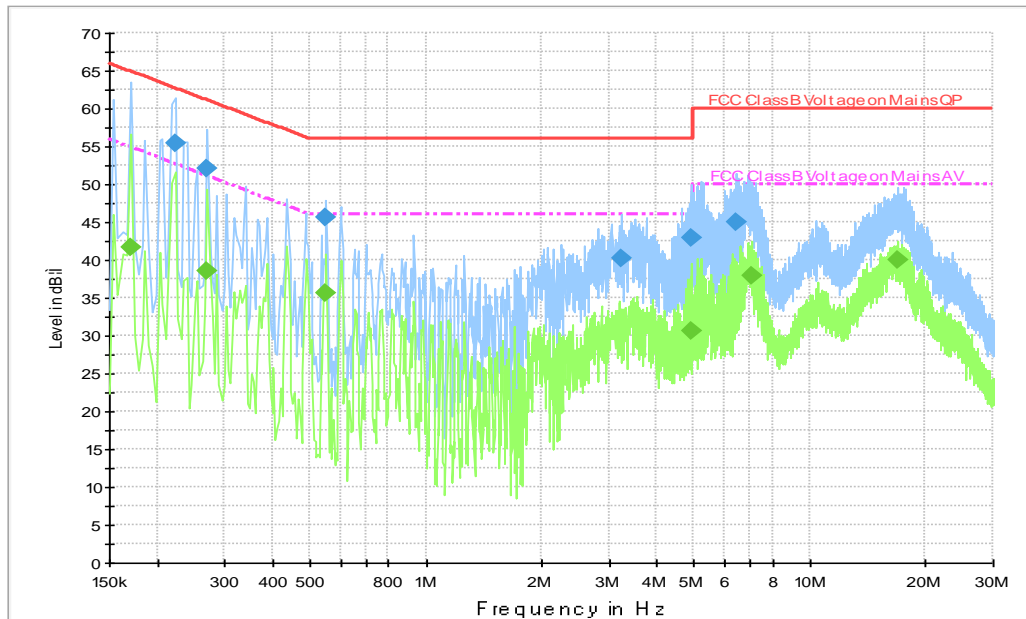
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.170000	55.8	2000.0	9.000	On	L1	19.7	9.2	65.0
0.402000	44.5	2000.0	9.000	On	N	19.6	13.3	57.8
0.450000	39.7	2000.0	9.000	On	N	19.7	17.2	56.9
3.438000	42.5	2000.0	9.000	On	L1	19.6	13.5	56.0
3.686000	42.5	2000.0	9.000	On	N	19.6	13.5	56.0
7.674000	42.2	2000.0	9.000	On	L1	19.7	17.8	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186000	42.7	2000.0	9.000	On	N	19.7	11.6	54.2
0.362000	45.2	2000.0	9.000	On	L1	19.7	3.5	48.7
0.450000	36.7	2000.0	9.000	On	L1	19.7	10.2	46.9
0.770000	34.8	2000.0	9.000	On	N	19.7	11.2	46.0
3.538000	37.1	2000.0	9.000	On	N	19.6	8.9	46.0
3.686000	37.2	2000.0	9.000	On	N	19.6	8.8	46.0

Set.5



Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Figure A.15 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.222000	55.5	2000.0	9.000	On	L1	19.7	7.3	62.7
0.270000	52.2	2000.0	9.000	On	N	19.7	9.0	61.1
0.550000	45.7	2000.0	9.000	On	N	19.7	10.3	56.0
3.234000	40.2	2000.0	9.000	On	L1	19.6	15.8	56.0
4.890000	43.0	2000.0	9.000	On	L1	19.6	13.0	56.0
6.410000	44.9	2000.0	9.000	On	L1	19.6	15.1	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.170000	41.7	2000.0	9.000	On	N	19.7	13.2	55.0
0.270000	38.5	2000.0	9.000	On	L1	19.7	12.7	51.1
0.550000	35.6	2000.0	9.000	On	N	19.7	10.4	46.0
4.890000	30.6	2000.0	9.000	On	N	19.6	15.4	46.0
7.062000	37.9	2000.0	9.000	On	L1	19.7	12.1	50.0
16.858000	39.9	2000.0	9.000	On	L1	19.7	10.1	50.0



ANNEX B: Persons involved in this testing

Test Item	Tester
Radiated Emission	DING Zai, ZHANG Tianli, LI Pengfei, Yan Hanchen
Conducted Emission	ZHANG Tianli, Chen Tianwei

*****END OF REPORT*****