Test Report

Verified code: 710178

Report No.: E20240527499701-2

Customer:	Nanjing Mindray Bio-Medical Electronics Co., Ltd.
Address:	666 Middle Zhengfang Road, Jiangning, 211111 Nanjing, Jiangsu,China
Sample Name:	Mobile Charging Station
Sample Model:	MCSU-III
Receive Sample Date:	Jun.13,2024
Test Date:	Jun.15,2024 ~ Jun.25,2024
Reference Document:	CFR 47, FCC Part 15 Subpart C
Test Result:	Pass

Prepared by: Wen Wenwen Reviewed by: Wu Haoting Approved by: Xiao Liang

GRG METROLOGY & TEST GROUP CO., LTD.

Issued Date: 2024-08-19

GRG METROLOGY & TEST GROUP CO., LTD.
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2. The sample information is provided by the client and responsible for its authenticity; The content of the report is only valid for the samples sent this time.

3. When there are reports in both Chinese and English, the Chinese version will prevail when the language problems are inconsistent.

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5. This testing report is only for scientific research, teaching, internal quality control, etc.

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REPORT ISSUED HISTORY

Report Version	Report No.	Description	Compile Date
1.0	E20240527499701-2	Original Issue	2024-07-10

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1. TEST RESULT SUMMARY

Technical Requirements		
CFR 47, FCC Part 15 Subpart C, ANSI C63.10-2020		
Item	**FCC Standard Chapter**	**Result**
Antenna requirements	§15.203	Complied
Radiated Spurious Emissions	§15.209 & §15.205	Complied
20dB Bandwidth	§15.215	Complied
AC Conducted Emission	§15.207	Complied

Note: The EUT wireless charger antenna is coil antenna, which accordance 15.203 is considered sufficient to comply with the provisions of this section.

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2. GENERAL DESCRIPTION OF EUT

2.1 APPLICANT

Name:	Nanjing Mindray Bio-Medical Electronics Co., Ltd.
Address:	666 Middle Zhengfang Road, Jiangning, 211111 Nanjing, Jiangsu,China

2.2 MANUFACTURER

Name:	Nanjing Mindray Bio-Medical Electronics Co., Ltd.
Address:	666 Middle Zhengfang Road, Jiangning, 211111 Nanjing, Jiangsu,China

2.3 FACTORY

Name:	Nanjing Mindray Bio-Medical Electronics Co., Ltd.
Address:	666 Middle Zhengfang Road, Jiangning, 211111 Nanjing, Jiangsu,China

2.4 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Product Name:	Mobile Charging Station
Product Model:	MCSU-III
Adding Model:	/
Trade Name:	mindray
Adapter:	Input: AC 100-240V, 50/60Hz, 0.3A Max Output: DC 5V 2.4A Model: MANGO12SC-05B-MR
Working frequency:	110.6kHz ~ 114.4kHz, 176.6kHz ~ 206.9kHz
Maximum field strength:	83.91dBμV/m@3m
FCC ID:	2BHFC-MCS3
Antenna Type:	Coil Antenna
Modulation type:	AM
Sample submitting way:	■Provided by customer □Sampling
Sample No:	E20240527499701-0001
Temperature Range:	+5℃ ~ +40℃
Hardware version:	3.0
Software version:	0.0

Note: The basic description of the EUT is provided by the applicant. This report is made Solel yon the basis of such data and/or information.We accept no responsibility for the authenticity and completeness of the above data and information and the validity of the results and/or conclusions.

2.5 TEST MODE

Mode No.	Description of the modes
Mode 1	EUT charging mode + RX load(5W)
Mode 2	EUT charging mode + V07XXU RX load
Mode 3	EUT standby mode

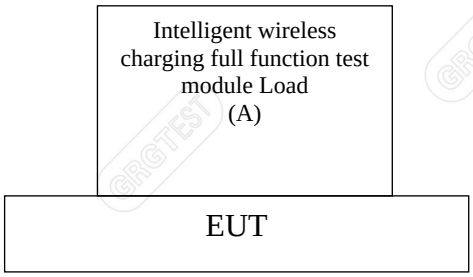
Note: mode 1 working frequency is 110.6kHz ~ 114.4kHz, mode 2 working frequency is 176.6kHz ~ 206.9kHz, mode 3 working frequency is 176.6kHz.

2.6 LOCAL SUPPORTIVE INSTRUMENTS

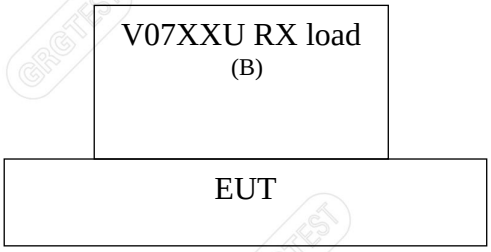
No.	Name of Equipment	Manufacturer	Model	Serial Number
A	Intelligent wireless charging full function test module Load	/	/	/
B	V07XXU RX load	Nanjing Mindray Bio-Medical Electronics Co., Ltd.	/	/

2.7 CONFIGURATION OF SYSTEM UNDER TEST

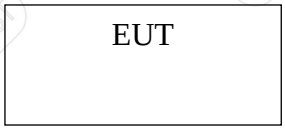
Mode 1:



Mode 2:



Mode 3:



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3. LABORATORY AND MEASUREMENT UNCERTAINTY

3.1 LABORATORY

The tests & measurements refer to this report were performed by Shenzhen EMC Laboratory of GRG METROLOGY & TEST GROUP CO., LTD.

Add	:	No.1301 Guanguang Road Xinlan Community, Guanlan Street, Longhua District Shenzhen, 518110, People's Republic of China
P.C.	:	518110
Tel	:	0755-61180008
Fax	:	0755-61180008

3.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	A2LA(Certificate#:2861.01)

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada	ISED (Company Number: 24897, CAB identifier:CN0069)
USA	FCC (Registration Number: 759402, Designation Number:CN1198)

Copies of granted accreditation certificates are available for downloading from our web site, http://www.grgtest.com

3.3 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	Uncertainty
RF frequency	6.00×10^{-6}
Humidity	6.00%
Temperature	2.00℃

Measurement		Frequency	Uncertainty
Radiated Emission	X polarity	9kHz～30MHz	4.4dB
	Y polarity	9kHz～30MHz	4.4dB
	Z polarity	9kHz～30MHz	4.4dB
	Horizontal	30MHz～200MHz	4.6dB
	Horizontal	200MHz～1000MHz	4.8dB
	Vertical	30MHz～200MHz	4.7dB
	Vertical	200MHz～1000MHz	4.7dB
Conduction Emission		150kHz～30MHz	3.3dB

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95%.

This uncertainty represents an expanded uncertainty factor of k=2.

4. LIST OF USED TEST EQUIPMENT AT GRGT

4.1 LIST OF USED TEST EQUIPMENT

Name of equipment	Manufacturer	Model	Serial number	Calibration due
Radiated Spurious Emissions & 20dB Bandwidth				
Receiver	R&S	ESR26	101758	2024-09-22
Spectrum Analyzer	Keysight	N9020A	MY50510140	2024-09-08
Loop Antenna	schwarzbeck	FMZB 1513-60	1513-60-56	2024-07-15
Bi-log Antenna	schwarzbeck	VULB 9160	VULB9160-3402	2024-10-06
Preamplifiers	SHIRONG ELECTRONIC	DLNA-30M1G-G40	20200928001	2025-01-30
Test Software	Tonscend	JS32-RE/2.5.1.5		
Conduction Emission				
Test software	EZ	CCS-3A1-CE	/	/
Test Receiver	R&S	ESCI	100783	2024-08-11
LISN(EUT)	R&S	ENV216	101543	2024-08-03

Note: The calibration interval of the test instruments is 12 months. The Preamplifiers frequency range in this report is 30MHz to 1GHz only.

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5. RADIATED SPURIOUS EMISSIONS

5.1 LIMITS

Frequency (MHz)	Quasi-peak(μV/m)	Measurement distance(m)	Quasi-peak(dBμV/m)@distance 3m
0.009-0.490	2400/F(kHz)	300	128.5~93.8
0.490-1.705	24000/F(kHz)	30	73.8~63
1.705-30.0	30	30	69.5
30 ~ 88	100	3	40
88~216	150	3	43.5
216 ~ 960	200	3	46
Above 960	500	3	54

NOTE: (1) The lower limit shall apply at the transition frequencies.

5.2 TEST PROCEDURES

1) Sequence of testing 9kHz to 30MHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0 °to 360 °.

--- The antenna height is 1 meter.

--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:

--- Identified emissions during the pre measurement the software maximizes by rotating the turntable position (0 °to 360 °) and by rotating the elevation axes (0 °to 360 °).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QP detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement and the limit will be stored.

2) Sequence of testing 30MHz to 1GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0 °to 360 °.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 4 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable rotates from 0 °to 360 °and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization(X,Y,Z), turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

MEASURING INSTRUMENTS SETTING

9kHz to 150kHz

Receiver parameters	Setting
RBW	200Hz
VBW	200Hz
Start frequency	9kHz
Stop frerquency	150kHz
Sweep time	Auto
Detector	QP
Trace mode	Max Hold

150kHz to 30MHz

Receiver parameters	Setting
RBW	9kHz
VBW	10kHz
Start frequency	150kHz
Stop frerquency	30MHz
Sweep time	Auto
Detector	QP
Trace mode	Max Hold

30MHz to 1GHz

Receiver parameters	Setting
RBW	100kHz
VBW	300kHz
Start frequency	30MHz
Stop frerquency	1GHz
Sweep time	Auto
Detector	QP
Trace mode	Max Hold

5.3 TEST SETUP

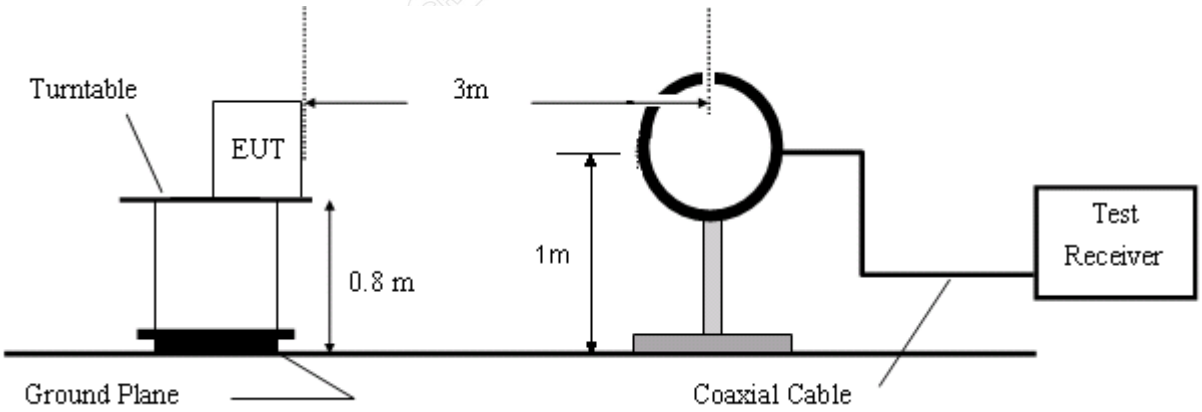

Figure 1. 9kHz to 30MHz radiated emissions test configuration

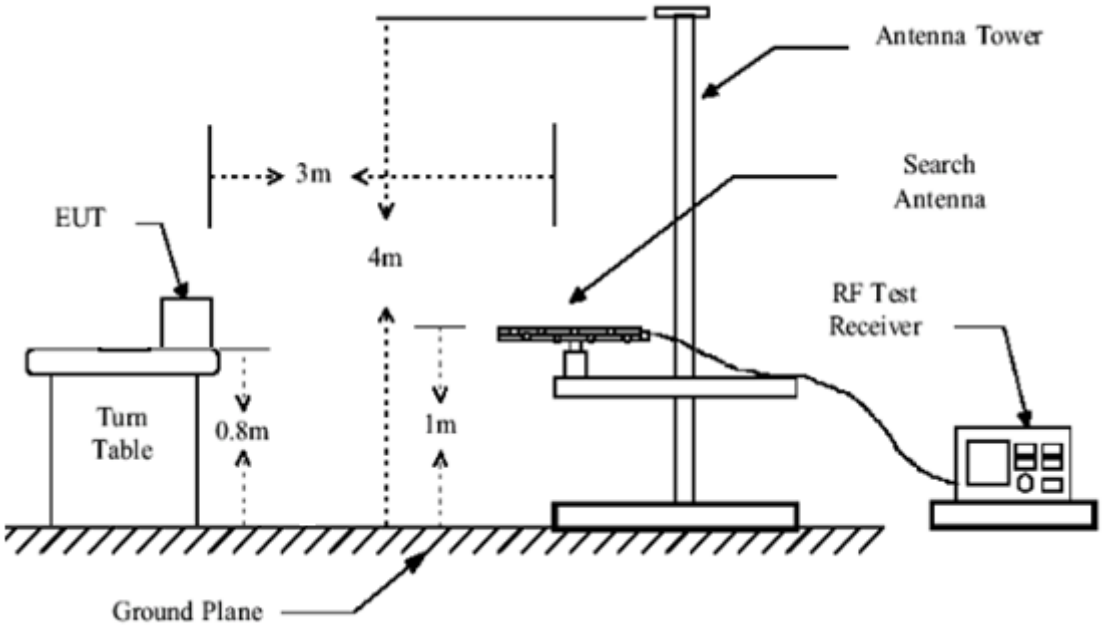

Figure 2. 30MHz to 1GHz radiated emissions test configuration

5.4 DATA SAMPLE

0.009MHz to 30MHz

NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	XXX	28.60	50.34	21.74	112.63	62.29	PK	100	93	X	PASS
2	XXX	29.88	51.89	22.01	107.25	55.36	PK	100	93	X	PASS

Frequency (MHz) = Emission frequency in MHz

Ant.Pol. (X,Y,Z) = Antenna polarization

Reading (dBuV/m) = Uncorrected Analyzer / Receiver reading

Factor (dB) = Antenna factor + Cable loss – Amplifier gain

Level (dBuV/m) = Reading (dBuV/m) + Factor (dB)

Limit (dBuV/m) = Limit stated in standard

Margin (dB) = Limit (dBuV/m) – Level (dBuV/m)

PK = Peak Reading

30MHz to 1GHz

Suspected Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Level [dBµV/m]**	**Factor [dB]**	**Limit [dBµV/m]**	**Margin [dB]**	**Trace**	**Height [cm]**	**Angle [°]**	**Polarity**
xxxx	xxxx	62.87	34.23	-28.64	40.00	5.77	PK	200	351	Horizontal

Final Data List									
NO.	**Freq. [MHz]**	**Factor [dB]**	**QP Reading [dBµV/m]**	**Level [dBµV/m]**	**QP Limit [dBµV/m]**	**QP Margin [dB]**	**Height [cm]**	**Angle [°]**	**Polarity**
xxxx	xxxx	-28.64	54.02	25.38	40.00	14.62	100	196	Horizontal

Frequency (MHz) = Emission frequency in MHz

Reading (dBuV/m) = Uncorrected Analyzer / Receiver reading

Level (dBuV/m) = Reading (dBuV/m) + Factor (dB)

Limit (dBuV/m) = Limit stated in standard

Margin (dB) = Limit(dBuV/m)- Level(dBuV/m)

QP = Quasi-peak Reading

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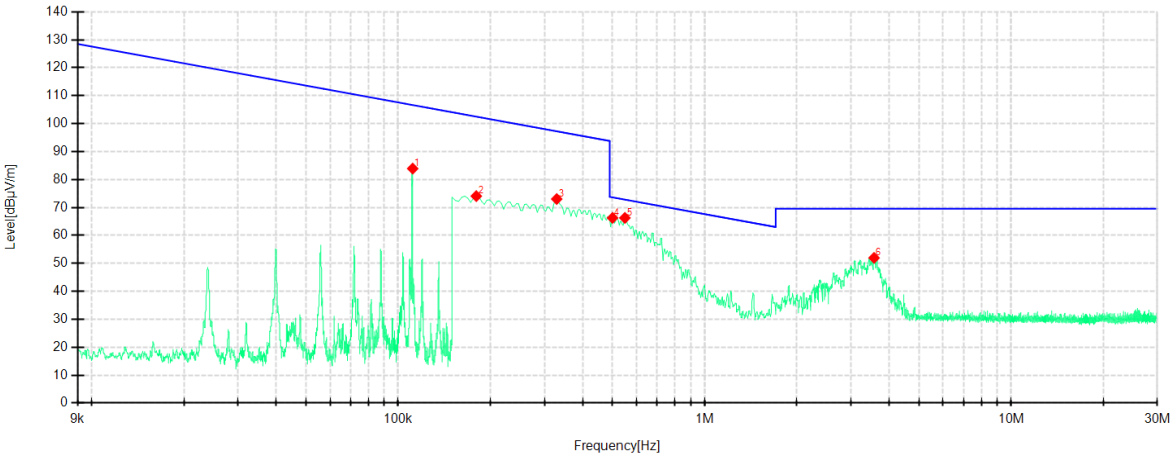
5.5 TEST RESULTS

9kHz-30MHz

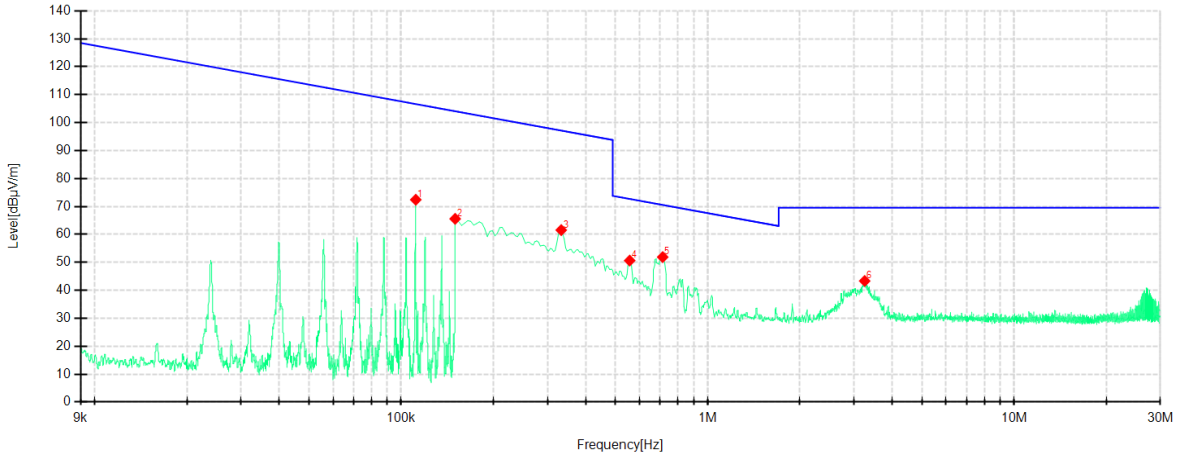
Note: If the margin of the pre-test results is greater than 6dB, it meets the requirements of quasi peak or average values, and final testing is no longer required.

Project Information			
Mode:	Mode 1	Voltage:	AC 120V/60Hz
Environment:	Temp: 24.6℃; Humi: 58%; 101.0kPa	Engineer:	Wen wenwen
Tested Date:	2024-06-25	/	/



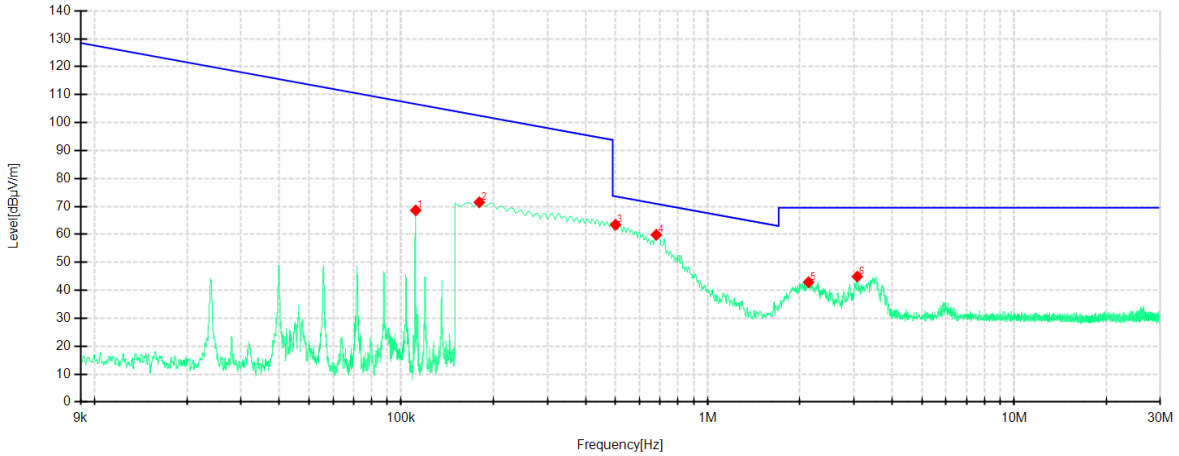
Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	0.1115	64.24	83.91	19.67	106.65	22.74	PK	100	184	X	PASS
2	0.1799	54.49	74.06	19.57	102.50	28.44	PK	100	360	X	PASS
3	0.3291	53.56	73.01	19.45	97.26	24.25	PK	100	360	X	PASS
4	0.5007	46.00	66.27	20.27	73.61	7.34	PK	100	360	X	PASS
5	0.5492	46.10	66.26	20.16	72.81	6.55	PK	100	358	X	PASS
6	3.5716	31.71	51.95	20.24	69.54	17.59	PK	100	360	X	PASS

Note:NO.1 is the fundamental frequency point.



Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	0.1116	52.73	72.40	19.67	106.65	34.25	PK	100	262	Y	PASS
2	0.1500	45.96	65.57	19.61	104.08	38.51	PK	100	317	Y	PASS
3	0.3328	42.08	61.54	19.46	97.16	35.62	PK	100	266	Y	PASS
4	0.5567	30.50	50.64	20.14	72.69	22.05	PK	100	317	Y	PASS
5	0.7134	32.08	51.89	19.81	70.55	18.66	PK	100	317	Y	PASS
6	3.2544	23.26	43.34	20.08	69.54	26.20	PK	100	360	Y	PASS

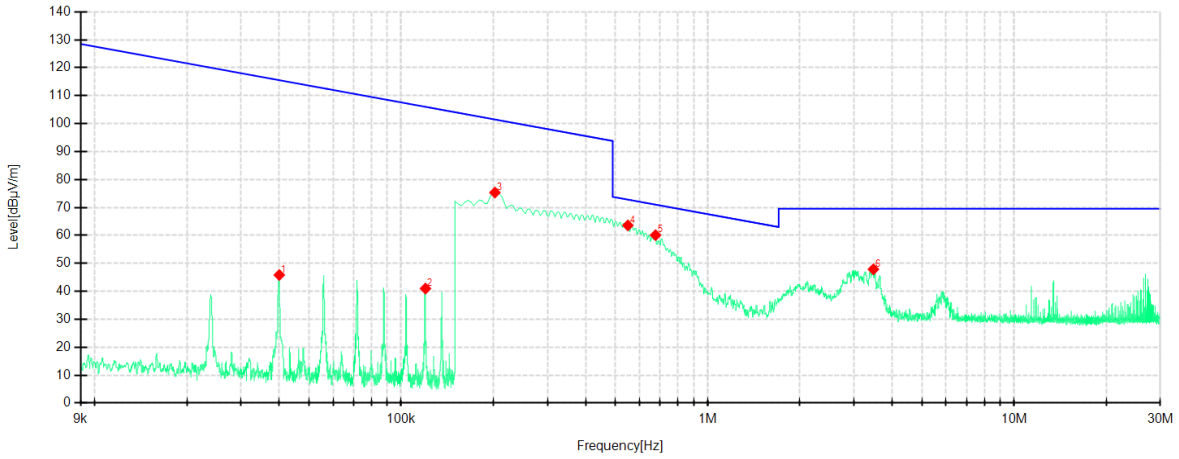
Note:NO.1 is the fundamental frequency point.



Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	0.1116	48.94	68.61	19.67	106.65	38.04	PK	100	171	Z	PASS
2	0.1799	51.91	71.48	19.57	102.50	31.02	PK	100	240	Z	PASS
3	0.5007	43.16	63.43	20.27	73.61	10.18	PK	100	240	Z	PASS
4	0.6798	39.97	59.85	19.88	70.96	11.11	PK	100	254	Z	PASS
5	2.1350	23.32	42.91	19.59	69.54	26.63	PK	100	240	Z	PASS
6	3.0790	24.89	44.91	20.02	69.54	24.63	PK	100	215	Z	PASS

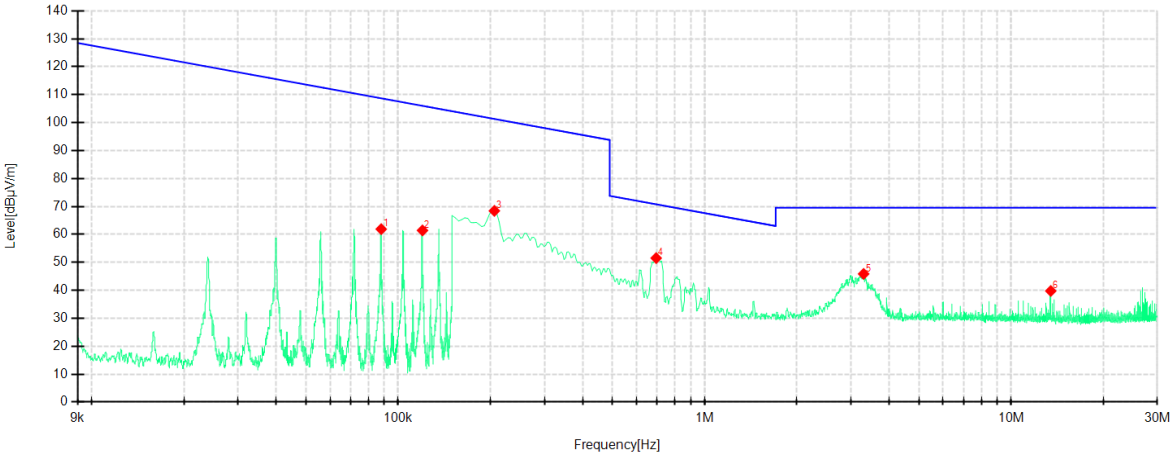
Note:NO.1 is the fundamental frequency point.

Project Information			
Mode:	Mode 2	Voltage:	AC 120V/60Hz
Environment:	Temp: 24.6℃; Humi: 58%; 101.0kPa	Engineer:	Wen wenwen
Tested Date:	2024-06-25	/	/



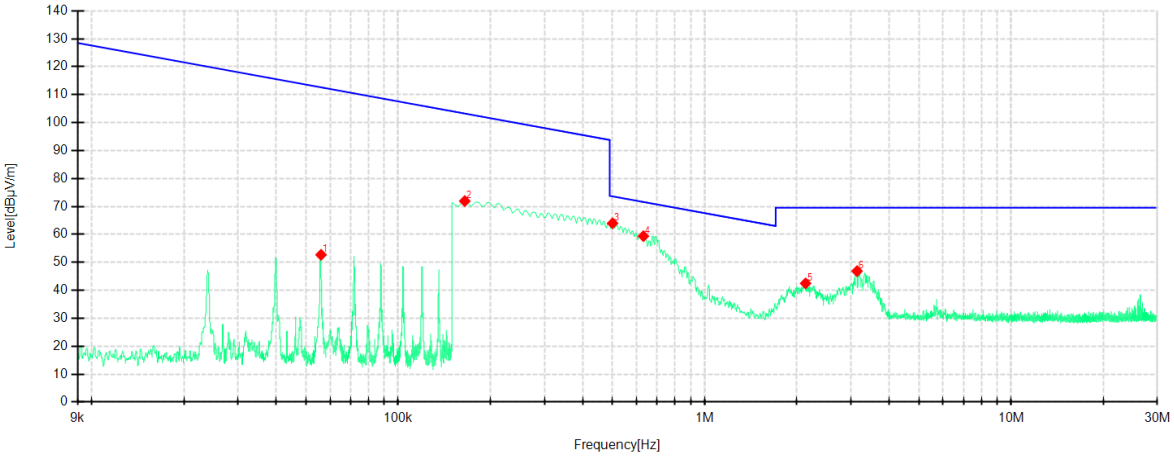
Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0400	26.18	45.83	19.65	115.55	69.72	PK	100	17	X	PASS
2	0.1200	21.33	40.99	19.66	106.01	65.02	PK	100	5	X	PASS
3	0.2022	55.81	75.34	19.53	101.48	26.14	PK	100	334	X	PASS
4	0.5492	43.42	63.58	20.16	72.81	9.23	PK	100	334	X	PASS
5	0.6761	40.20	60.09	19.89	71.01	10.92	PK	100	322	X	PASS
6	3.4745	27.68	47.88	20.20	69.54	21.66	PK	100	308	X	PASS

Note:NO.3 is the fundamental frequency point.



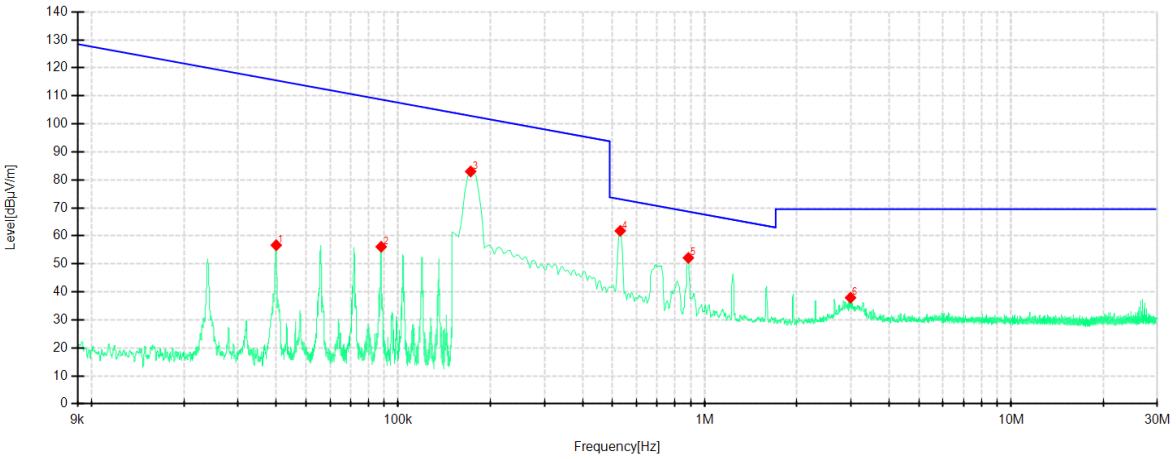
Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0880	42.07	61.89	19.82	108.70	46.81	PK	100	235	Y	PASS
2	0.1200	41.76	61.42	19.66	106.01	44.59	PK	100	235	Y	PASS
3	0.2060	48.90	68.43	19.53	101.32	32.89	PK	100	270	Y	PASS
4	0.6948	31.66	51.52	19.86	70.78	19.26	PK	100	111	Y	PASS
5	3.3029	25.76	45.86	20.10	69.54	23.68	PK	100	230	Y	PASS
6	13.4743	18.94	39.76	20.82	69.54	29.78	PK	100	137	Y	PASS

Note:NO.3 is the fundamental frequency point.



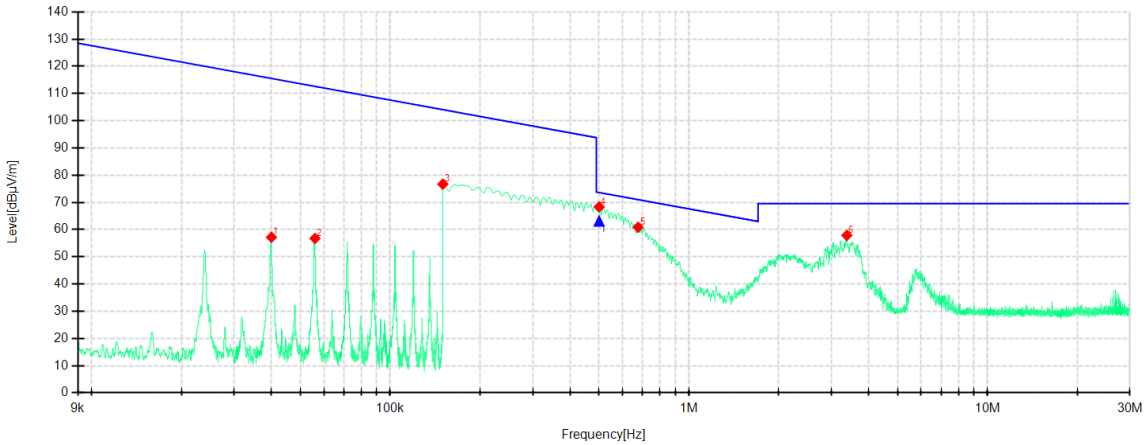
Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0560	32.95	52.69	19.74	112.63	59.94	PK	100	224	Z	PASS
2	0.1649	52.34	71.93	19.59	103.25	31.32	PK	100	257	Z	PASS
3	0.5007	43.71	63.98	20.27	73.61	9.63	PK	100	257	Z	PASS
4	0.6313	39.40	59.38	19.98	71.60	12.22	PK	100	257	Z	PASS
5	2.1350	22.89	42.48	19.59	69.54	27.06	PK	100	270	Z	PASS
6	3.1425	26.80	46.85	20.05	69.54	22.69	PK	100	244	Z	PASS

Project Information			
Mode:	Mode 3	Voltage:	AC 120V/60Hz
Environment:	Temp: 24.6℃; Humi: 58%; 101.0kPa	Engineer:	Wen wenwen
Tested Date:	2024-06-25	/	/



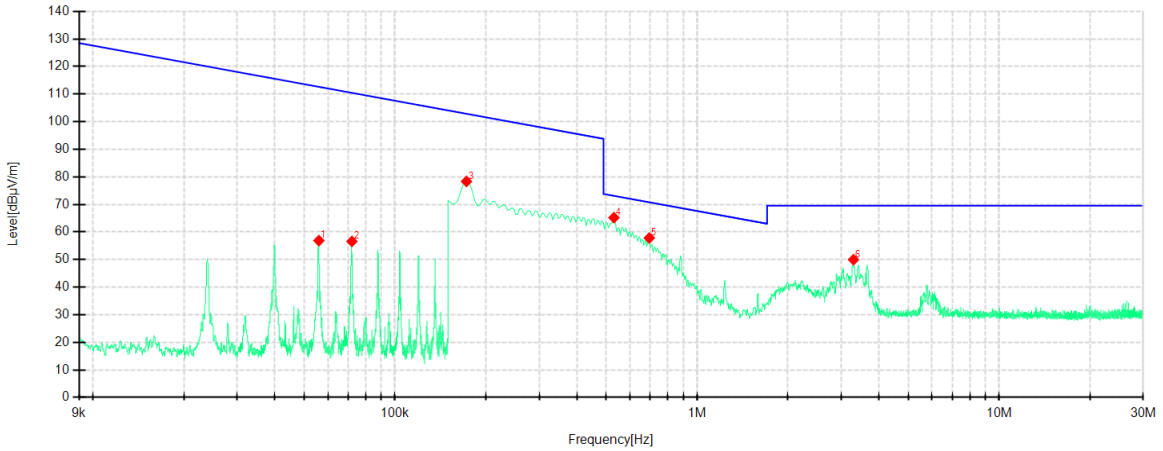
Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0400	37.03	56.68	19.65	115.55	58.87	PK	100	0	X	PASS
2	0.0880	36.29	56.11	19.82	108.70	52.59	PK	100	54	X	PASS
3	0.1766	63.43	83.01	19.58	102.87	19.86	PK	100	188	X	PASS
4	0.5306	41.60	61.80	20.20	73.11	11.31	PK	100	188	X	PASS
5	0.8851	32.36	52.14	19.78	68.68	16.54	PK	100	188	X	PASS
6	2.9932	17.92	37.91	19.99	69.54	31.63	PK	100	298	X	PASS

Note:NO.3 is the fundamental frequency point.



Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0400	37.52	57.17	19.65	115.55	58.38	PK	100	40	Y	PASS
2	0.0560	37.00	56.74	19.74	112.63	55.89	PK	100	92	Y	PASS
3	0.1500	57.08	76.69	19.61	104.08	27.39	PK	100	280	Y	PASS
4	0.5007	48.06	68.33	20.27	73.61	5.28	PK	100	280	Y	PASS
5	0.6761	40.98	60.87	19.89	71.01	10.14	PK	100	280	Y	PASS
6	3.3813	37.72	57.86	20.14	69.54	11.68	PK	100	240	Y	PASS

Final Data List										
NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBµV/m]	Level [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	0.5005	20.27	42.84	63.11	73.62	10.51	100	236.9	Y	PASS



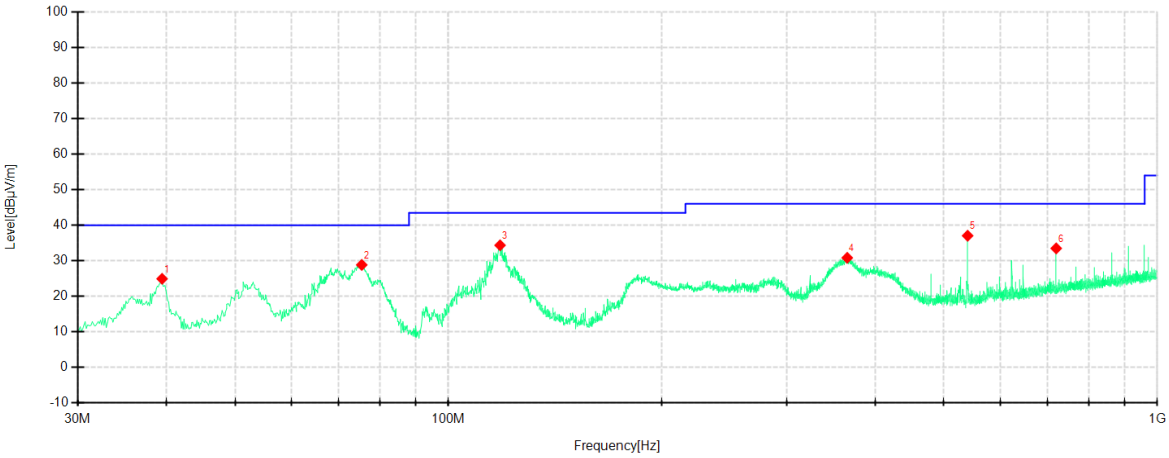
Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0560	37.13	56.87	19.74	112.63	55.76	PK	100	290	Z	PASS
2	0.0720	36.75	56.60	19.85	110.45	53.85	PK	100	290	Z	PASS
3	0.1766	58.76	78.34	19.58	102.87	24.53	PK	100	193	Z	PASS
4	0.5306	44.99	65.19	20.20	73.11	7.92	PK	100	193	Z	PASS
5	0.6948	37.96	57.82	19.86	70.78	12.96	PK	100	206	Z	PASS
6	3.2954	29.87	49.97	20.10	69.54	19.57	PK	100	193	Z	PASS

Note:NO.3 is the fundamental frequency point.

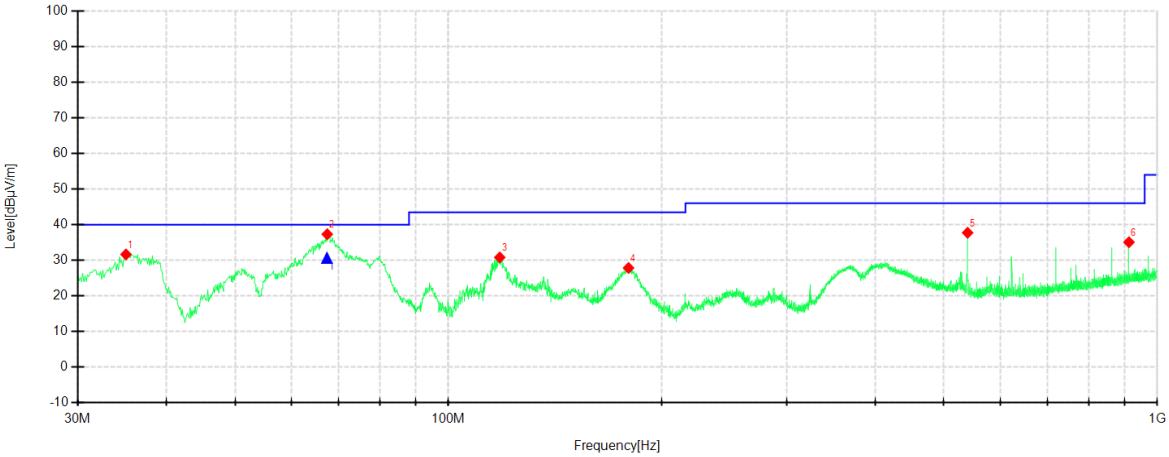
30MHz-1GHz

Note: If the margin of the pre test results is greater than 6db, it meets the requirements of quasi peak or average values, and final testing is no longer required.

Project Information			
Mode:	Mode 1	Voltage:	AC 120V/60Hz
Environment:	Temp: 24.3℃; Humi: 59%; 101.0kPa	Engineer:	Wen wenwen
Tested Date:	2024-06-15	/	/



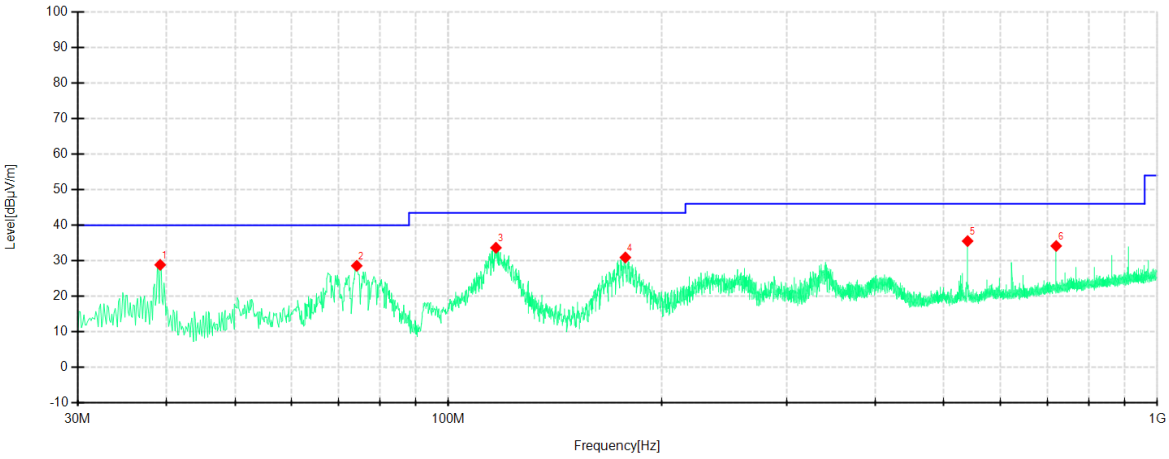
Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	39.4587	54.28	24.95	-29.33	40.00	15.05	PK	100	340	Horizontal	PASS
2	75.4744	61.35	28.85	-32.50	40.00	11.15	PK	200	162	Horizontal	PASS
3	118.2810	64.58	34.36	-30.22	43.50	9.14	PK	200	175	Horizontal	PASS
4	365.2982	56.08	30.84	-25.24	46.00	15.16	PK	100	53	Horizontal	PASS
5	540.0413	57.55	37.05	-20.50	46.00	8.95	PK	100	340	Horizontal	PASS
6	720.1200	51.03	33.49	-17.54	46.00	12.51	PK	100	142	Horizontal	PASS



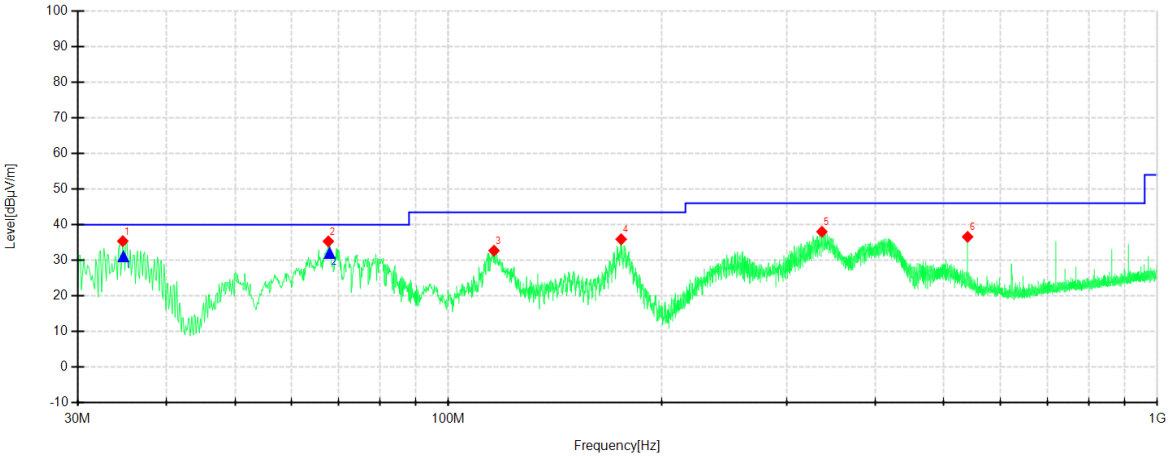
Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	35.0931	61.27	31.66	-29.61	40.00	8.34	PK	100	340	Vertical	PASS
2	67.4709	67.98	37.33	-30.65	40.00	2.67	PK	100	156	Vertical	PASS
3	118.1598	61.04	30.82	-30.22	43.50	12.68	PK	100	156	Vertical	PASS
4	179.5199	57.80	27.86	-29.94	43.50	15.64	PK	100	66	Vertical	PASS
5	540.0413	58.24	37.74	-20.50	46.00	8.26	PK	100	156	Vertical	PASS
6	912.2040	50.40	35.09	-15.31	46.00	10.91	PK	200	18	Vertical	PASS

Final Data List										
NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBµV/m]	Level [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	67.3977	-30.65	61.29	30.64	40.00	9.36	120	273.4	Vertical	PASS

Project Information			
Mode:	Mode 2	Voltage:	AC 120V/60Hz
Environment:	Temp: 24.3℃; Humi: 59%; 101.0kPa	Engineer:	Wen wenwen
Tested Date:	2024-06-15	/	/



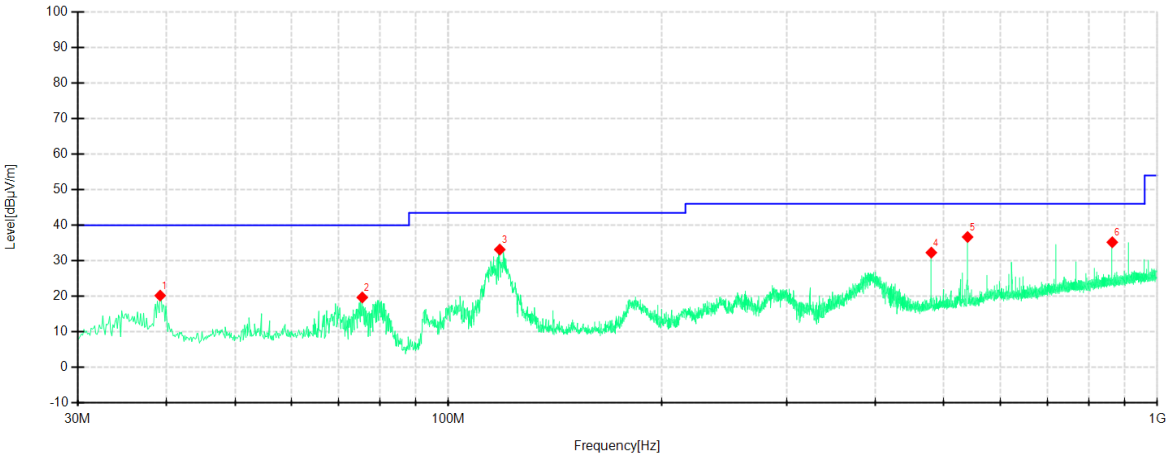
Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	39.2162	58.22	28.87	-29.35	40.00	11.13	PK	100	19	Horizontal	PASS
2	74.2618	60.78	28.60	-32.18	40.00	11.40	PK	200	118	Horizontal	PASS
3	116.7046	63.95	33.67	-30.28	43.50	9.83	PK	200	15	Horizontal	PASS
4	177.7010	60.70	30.94	-29.76	43.50	12.56	PK	200	224	Horizontal	PASS
5	540.0413	56.05	35.55	-20.50	46.00	10.45	PK	200	224	Horizontal	PASS
6	720.1200	51.71	34.17	-17.54	46.00	11.83	PK	100	19	Horizontal	PASS



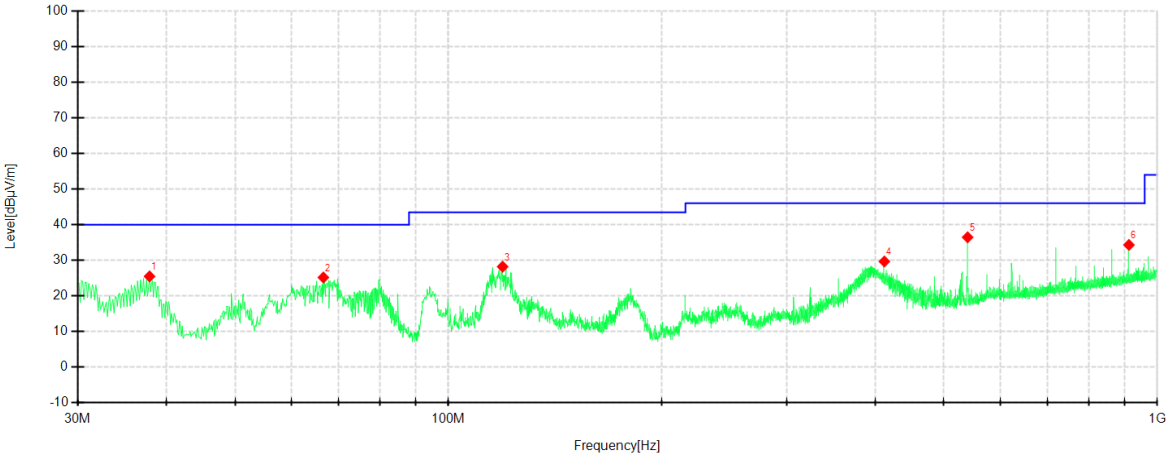
Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	34.7293	65.04	35.39	-29.65	40.00	4.61	PK	200	176	Vertical	PASS
2	67.7135	66.03	35.34	-30.69	40.00	4.66	PK	100	324	Vertical	PASS
3	115.9770	63.03	32.72	-30.31	43.50	10.78	PK	100	116	Vertical	PASS
4	175.2757	65.43	35.92	-29.51	43.50	7.58	PK	100	91	Vertical	PASS
5	336.4371	64.24	38.04	-26.20	46.00	7.96	PK	100	182	Vertical	PASS
6	540.0413	57.09	36.59	-20.50	46.00	9.41	PK	200	137	Vertical	PASS

Final Data List										
NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBµV/m]	Level [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	34.7982	-29.65	60.73	31.08	40.00	8.92	147	359.9	Vertical	PASS
2	68.0065	-30.69	62.70	32.01	40.00	7.99	141	278.3	Vertical	PASS

Project Information			
Mode:	Mode 3	Voltage:	AC 120V/60Hz
Environment:	Temp: 24.3℃; Humi: 59%; 101.0kPa	Engineer:	Wen wenwen
Tested Date:	2024-06-15	/	/



Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	39.2162	49.57	20.22	-29.35	40.00	19.78	PK	100	300	Horizontal	PASS
2	75.5957	52.24	19.71	-32.53	40.00	20.29	PK	200	202	Horizontal	PASS
3	118.1598	63.38	33.16	-30.22	43.50	10.34	PK	200	360	Horizontal	PASS
4	480.0150	54.09	32.30	-21.79	46.00	13.70	PK	100	248	Horizontal	PASS
5	540.0413	57.20	36.70	-20.50	46.00	9.30	PK	100	0	Horizontal	PASS
6	864.0618	51.20	35.22	-15.98	46.00	10.78	PK	200	360	Horizontal	PASS



Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	37.8822	54.94	25.50	-29.44	40.00	14.50	PK	100	176	Vertical	PASS
2	66.6221	55.71	25.19	-30.52	40.00	14.81	PK	100	21	Vertical	PASS
3	119.2512	58.39	28.22	-30.17	43.50	15.28	PK	200	261	Vertical	PASS
4	412.1065	53.34	29.68	-23.66	46.00	16.32	PK	200	43	Vertical	PASS
5	540.0413	56.97	36.47	-20.50	46.00	9.53	PK	100	138	Vertical	PASS
6	912.0828	49.64	34.33	-15.31	46.00	11.67	PK	200	339	Vertical	PASS

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6. 20DB BANDWIDTH

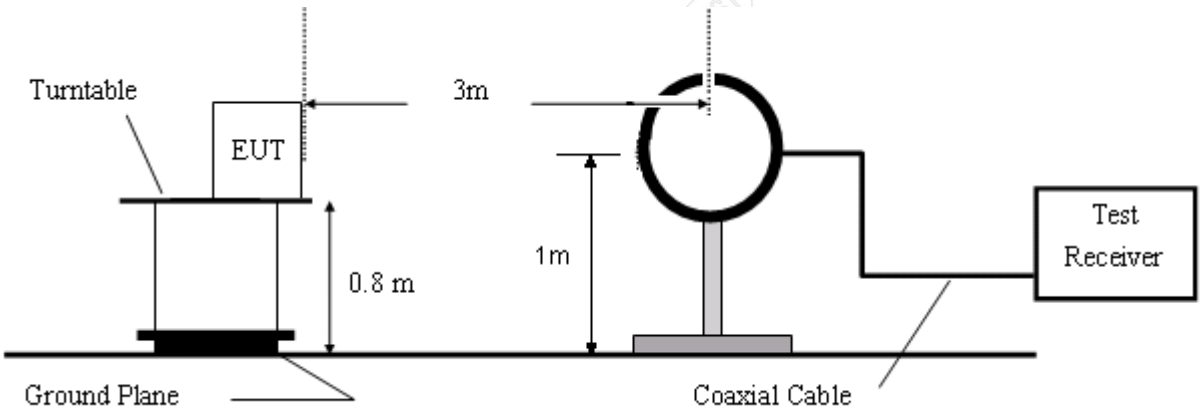
6.1 LIMITS

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in subpart E of this part, 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. In the case of intentional radiators operating under the provisions of subpart E, the emission bandwidth may span across multiple contiguous frequency bands identified in that subpart. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

6.2 TEST PROCEDURES

1) The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
2) If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.
3) If the EUT is a floor standing device, it is placed on the ground.
4) Auxiliary equipment and cables were positioned to simulate normal operation conditions.
5) The measurement distance is 3 meter.
6) The EUT was set into operation.
7) Adjust the test instrument for the following setting.
   RBW: 1Hz or other frequency, according to the EUT characteristic.
   VBW: ≥RBW.
   Detector: Peak.
   Sweep time: Auto.
8) Allow trace to fully stabilize.

6.3 TEST SETUP

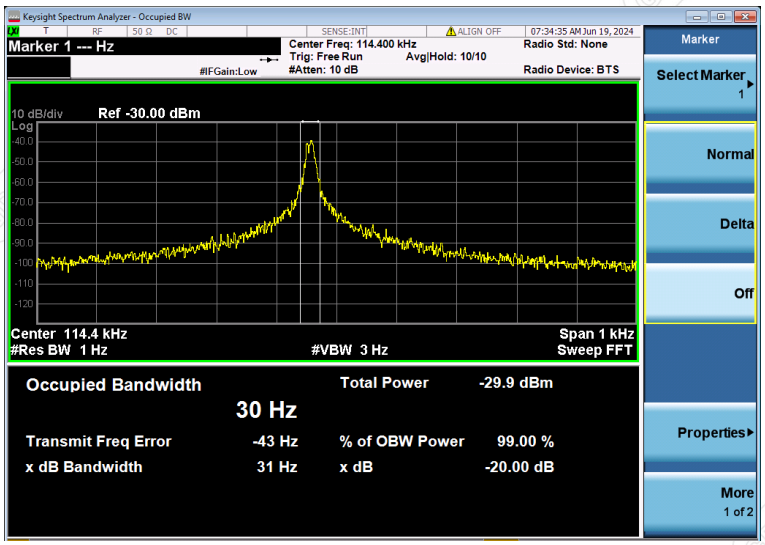


6.4 TEST RESULTS

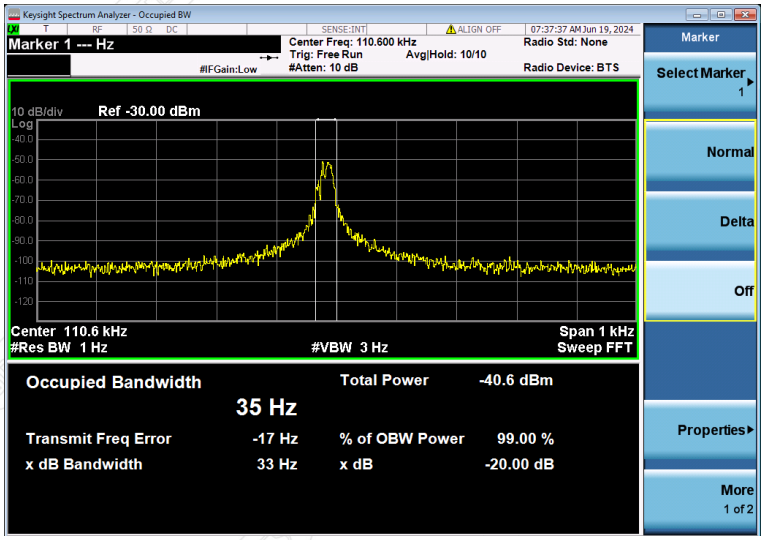
Project Information			
Environment:	Temp: 24.6℃; Humi: 58%; 101.0kPa	Voltage:	AC 120V/60Hz
Tested Date:	2024-06-19 to 2024-06-25	Engineer:	Wen wenwen

Note: Pre-test X/Y/Z axis of loop antenna,recorded the worst X-axis data in this report.
Mode 1:

Frequency (kHz)	20dB Bandwidth (Hz)	limit	Test Result
114.4	31	N/A	Complied

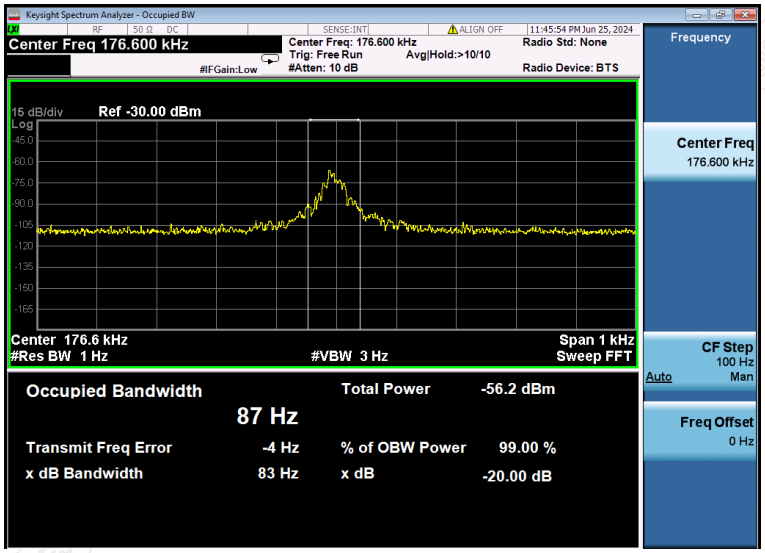


Frequency (kHz)	20dB Bandwidth (Hz)	limit	Test Result
110.6	33	N/A	Complied

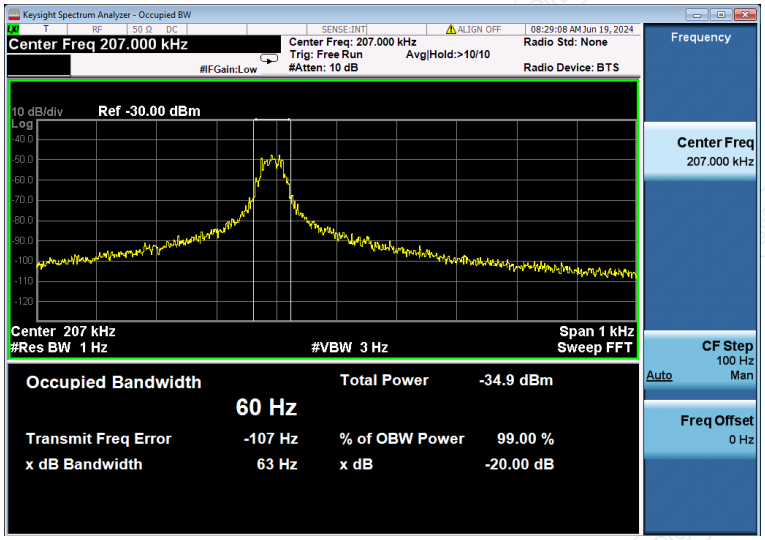


Mode 2:

Frequency (kHz)	20dB Bandwidth (Hz)	limit	Test Result
176.6	83	N/A	Complied

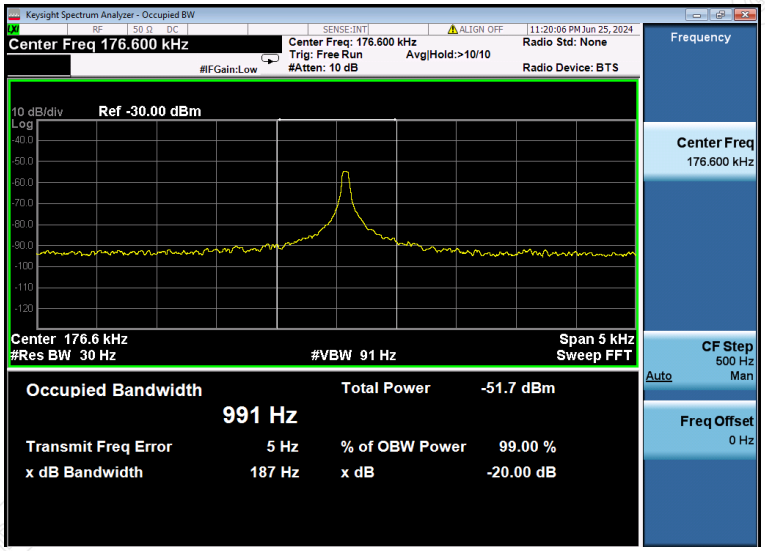


Frequency (kHz)	20dB Bandwidth (Hz)	limit	Test Result
206.9	63	N/A	Complied



Mode 3:

Frequency (kHz)	20dB Bandwidth (Hz)	limit	Test Result
176.6	187	N/A	Complied



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7. CONDUCTED EMISSION MEASUREMENT

7.1 LIMITS

Frequency range	Limits (dBμV)	
	Quasi-peak	Average
150kHz ～ 0.5MHz	66～56	56～46
0.5 MHz ～ 5 MHz	56	46
5 MHz ～ 30 MHz	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 150 kHz to 0.5MHz.

7.2 TEST PROCEDURES

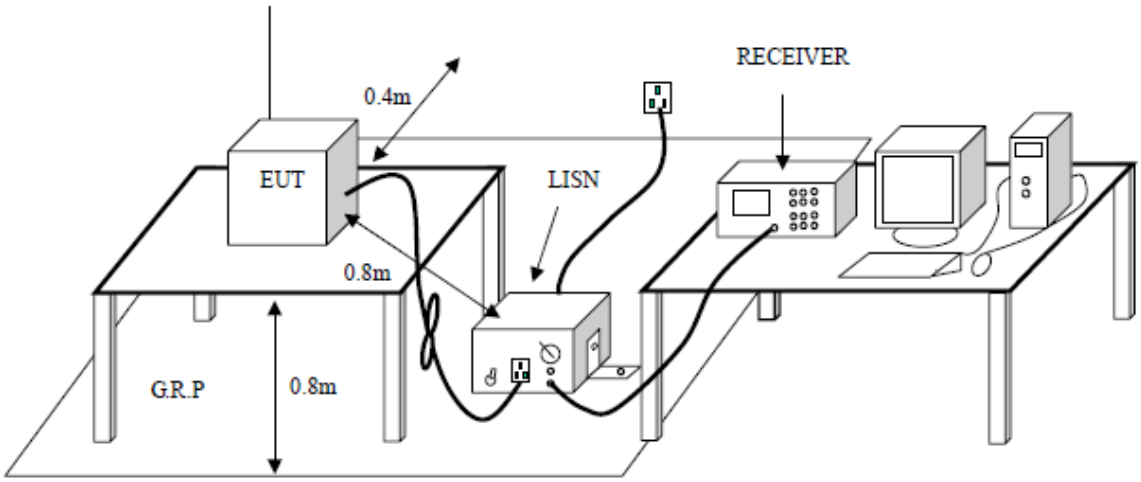
Procedure of Preliminary Test

For measurement of the disturbance voltage the equipment under test (EUT) is connected to the power supply mains and any other extended network via one or more artificial network(s). An EUT, whether intended to be grounded or not, and which is to be used on a table is configured as follows:
Either the bottom or the rear of the EUT shall be at a controlled distance of 40 cm from a reference ground plane. This ground plane is normally the wall or floor of a shielded room. It may also be a grounded metal plane of at least 2 m by 2 m. This is physically accomplished as follows:
1) place the EUT on a table of non-conducting material which is at least 80 cm high. Place the EUT so that it is 40 cm from the wall of the shielded room, or
2) place the EUT on a table of non-conducting material which is 40 cm high so that the bottom of the EUT is 40 cm above the ground plane;
All other conductive surfaces of the EUT shall be at least 80 cm from the reference ground plane;
The EUT are placed on the floor that one side of the housings is 40 cm from the vertical reference ground plane and other metallic parts;
Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth forming a bundle 30 cm to 40 cm long, hanging approximately in the middle between the ground plane and the table.
I/O cables that are connected to a peripheral shall be bundled in the centre. The end of the cable may be terminated if required using correct terminating impedance. The total length shall not exceed 1 m.
The test mode(s) described in Item 2.5 were scanned during the preliminary test. After the preliminary scan, we found the test mode described in Item 2.5 producing the highest emission level.The EUT configuration and cable configuration of the above highest emission levels were recorded for reference of the final test.

Procedure of Final Test

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test. A scan was taken on both power lines, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. The test data of the worst-case condition(s) was recorded.

7.3 TEST SETUP



7.4 DATA SAMPLE

Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
X.XXXX	32.69	25.65	11.52	44.21	37.17	65.78	55.79	-21.57	-18.62	Pass

Factor = Insertion loss of LISN + Cable Loss
Result = Quasi-peak Reading/ Average Reading + Factor
Limit = Limit stated in standard
Margin = Result (dBuV) – Limit (dBuV)

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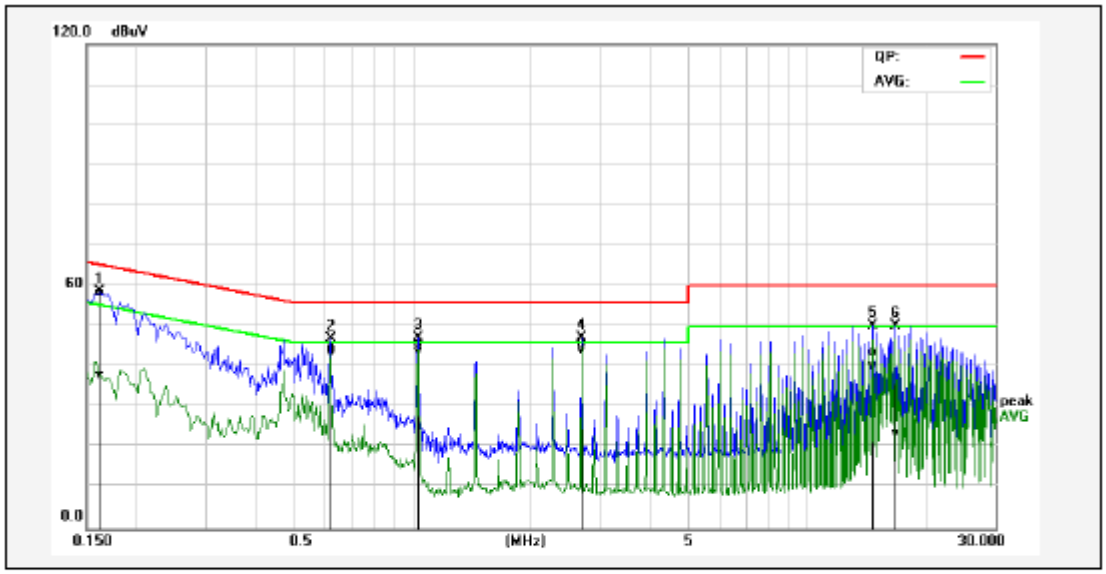
7.5 TEST RESULTS

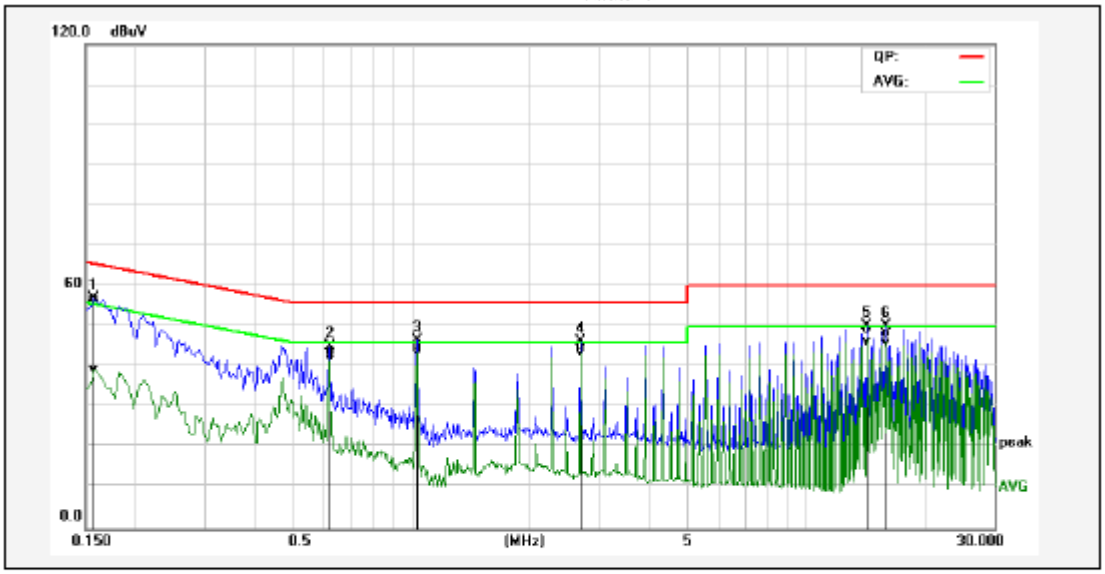
All test modes has been tested and recorded the worst case results in this report (mode 2).

Environmental Conditions	27.4℃/65.2%RH	**Test Mode**	Mode 2
Tested By	Wen wenwen	**Line**	L
Tested Date	2024-06-24	**Test Voltage**	AC120V/60Hz



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1	0.1620	48.91	28.36	9.64	58.55	38.00	65.36	55.36	-6.81	-17.36	Pass
2	0.6220	35.28	33.68	9.62	44.90	43.30	56.00	46.00	-11.10	-2.70	Pass
3	1.0339	36.19	34.39	9.61	45.80	44.00	56.00	46.00	-10.20	-2.00	Pass
4*	2.6900	36.32	34.52	9.78	46.10	44.30	56.00	46.00	-9.90	-1.70	Pass
5	14.6900	34.09	30.59	9.71	43.80	40.30	60.00	50.00	-16.20	-9.70	Pass
6	16.7620	22.52	13.82	9.78	32.30	23.60	60.00	50.00	-27.70	-26.40	Pass

Environmental Conditions	27.4℃/65.2%RH	**Test Mode**	Mode 2
Tested By	Wen wenwen	**Line**	N
Tested Date	2024-06-24	**Test Voltage**	AC120V/60Hz



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1	0.1580	47.64	29.93	9.61	57.25	39.54	65.56	55.57	-8.31	-16.03	Pass
2	0.6220	34.31	32.51	9.59	43.90	42.10	56.00	46.00	-12.10	-3.90	Pass
3*	1.0339	35.70	34.20	9.60	45.30	43.80	56.00	46.00	-10.70	-2.20	Pass
4	2.6900	35.44	33.84	9.76	45.20	43.60	56.00	46.00	-10.80	-2.40	Pass
5	14.2740	39.46	36.66	9.84	49.30	46.50	60.00	50.00	-10.70	-3.50	Pass
6	15.9260	38.71	36.21	9.89	48.60	46.10	60.00	50.00	-11.40	-3.90	Pass

8. PHOTOGRAPHS OF TEST SET-UP

Please refer to the attached document E20240527499701-test setup photo.

9. PHOTOGRAPHS OF THE EUT

Please refer to the attached document E20240527499701-EUT photo.

---------- End of Report ----------