

TEST REPORT

REPORT NUMBER: I21W00039-EMC

ON

Type of Equipment: Wireless communication module

Type of Designation: SLM900

Brand Name: MEIG Link

Manufacturer: MeiG Smart Technology Co., Ltd

FCC ID: 2APJ4-SLM900

ACCORDING TO

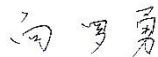
Subpart B, PART 15, RADIO FREQUENCY DEVICES

Chongqing Academy of Information and Communications Technology

Month date, year

Dec 02, 2021

Signature



Xiang Luoyong

Director

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of Chongqing Academy of Information and Communications Technology.



Report No.: I21W00039

Revision Version

Report Number	Revision	Date	Memo
I21W00039-EMC	00	2021-12-02	Initial creation of test report

Chongqing Academy of Information and Communication Technology

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1. Test Laboratory

1.1. Testing Location

Name:	Chongqing Academy of Information and Communications Technology
FCC Registration Number:	CN1239
Address:	Building C, Technology Innovation Center, No.8, Yuma Road, Chayuan New Area, Nan'an District, Chongqing, People's Republic of China
	No.19 East Road, Xiantao Big-data Valley, Yubei District, Chongqing, People's Republic of China
Postal Code:	401336
Telephone:	0086-23-88069965
Fax:	0086-23-88608777

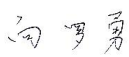
1.2. Testing Environment

Normal Temperature:	15-35°C
Relative Humidity:	30-60%

1.3. Project data

Testing Start Date:	2021-10-27
Testing End Date:	2021-11-17

1.4. Signature

	2021-12-02
Tan Haoyue (Prepared this test report)	Date
	2021-12-02
Xiao Yu (Reviewed this test report)	Date
	2021-12-02
Xiang Luoyong Director of the laboratory (Approved this test report)	Date

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2. Client Information

2.1. Applicant Information

Company Name:	MeiG Smart Technology Co., Ltd
Address /Post:	Free Trade Zone No.33, No.17 building 6H Xiya Road,shanghai
City:	Shanghai
Country:	CHINA
Telephone:	021-54278676
Fax:	--
Email:	louxinwei@meigsmart.com
Contact Person:	louxinwei

2.2. Manufacturer Information

Company Name:	MeiG Smart Technology Co., Ltd
Address /Post:	Free Trade Zone No.33, No.17 building 6H Xiya Road,shanghai
City:	Shanghai
Country:	CHINA
Telephone:	021-54278676
Fax:	--
Email:	louxinwei@meigsmart.com
Contact Person:	louxinwei

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

3.1. About EUT

EUT Description	Wireless communication module
Model name	SLM900
Brand name	MEIG Link
GSM Frequency Band	GSM 850/PCS 1900
WCDMA Band	II/IV/V
LTE Band	2/4/5/7/12/13/17/25/26

Note: Photographs of EUT are shown in ANNEX B of this test report.

3.2. Internal Identification of EUT used during the test

EUT ID	SN or IMEI	HW Version	SW Version	Date of receipt
S1	865171050693525	SLM900_MB_V 1.01_PCB	SLM900A_EQ000_277 4.1F29708.FDF14BA_2 10831_100_V01_T04	2021-10-27

*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
--	--	--

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

dB*: is provided customer.

4. Reference Documents

4.1. Reference Documents for testing

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

Reference	Title	Version
FCC CFR Part 15, Subpart B,	RADIO FREQUENCY DEVICES	August 24, 2018

5. Test Equipments Utilized

No.	Equipment	Model	SN	HW Version	SW Version	Manufacture	Cal.Due Date
1	Test Receiver	ESU 26	100350	01	4.43 SP3	R&S	2022-06-11
2	Trilog Antenna	VULB9163	01392	--	--	Schwarzbeck	2023-03-04
3	Double Ridged Guide Antenna	HF907	100357	--	--	Schwarzbeck	2023-02-10
4	Fully-Anechoic Chamber	FACT3-2	--	--	--	ETS	2023-06-25
5	Test Receiver	ESR 3	102477	03	3.48 SP2	R&S	2022-06-11
6	Artificial Main Network	ENV 216	102368	--	--	R&S	2022-06-11

Test software

No.	Name	version	SN	Manufacture
1	EMC32	V8.51.0	--	R&S
2	EMC32	V10.20.10	--	R&S

6. Test Results

6.1. Summary of Test Results

FCC Rules	Name of Test	Result
15.109	Radiated Emission	Pass
15.107	Conducted Emission	Pass
Note: --		

7. Test Results

7.1. Radiated Emission

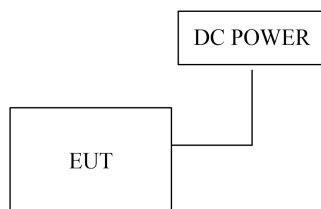
Specifications:	15.109
Date of Tests	2021-10-27
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Operation Mode	Normal
Test Results:	Pass

Limit Level Construction(Except for Class A digital devices):

Frequency Range (MHz)	Quasi-Peak (dBuV/m)
30-88	40
88-216	43.5
216-960	46
Above 960	54

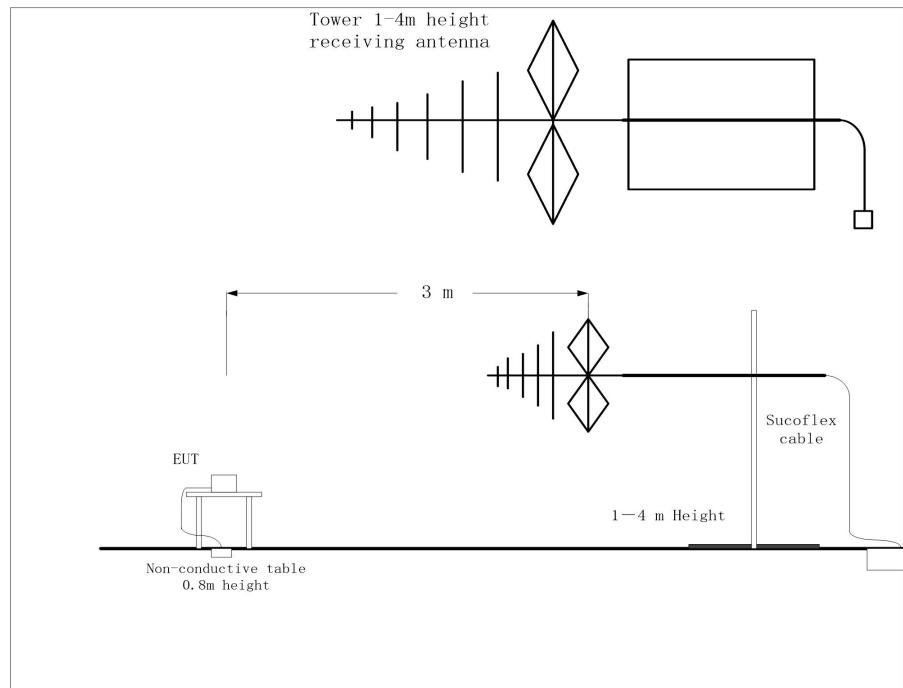
Frequency Range (MHz)	Peak (dBuV/m)	Average (dBuV/m)
Above 1000	74	54

EUT Setup:



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Test Method:

For 30-1000MHz, the EUT was placed on the top of a rotating 0.8m table above the ground at a semi-anechoic chamber. The distance between the EUT and the received antenna was 3 meters. The table was rotated 360 degree and the received antenna mounted on a variable-height antenna tower was varied from 1m to 4m to find the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement. Tested in accordance with the procedures of ANSI C63.4-2014, section 8.3.

For 1000-18000MHz, the maximal emission value was acquired by adjusting the antenna height, and the table was rotated 360 degree to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement.

Uncertainty Measurement:

The measurement uncertainty (30MHz-1000MHz) is 5.15 dB ($k=2$).

The measurement uncertainty (1000MHz-6000MHz) is 4.68 dB ($k=2$).

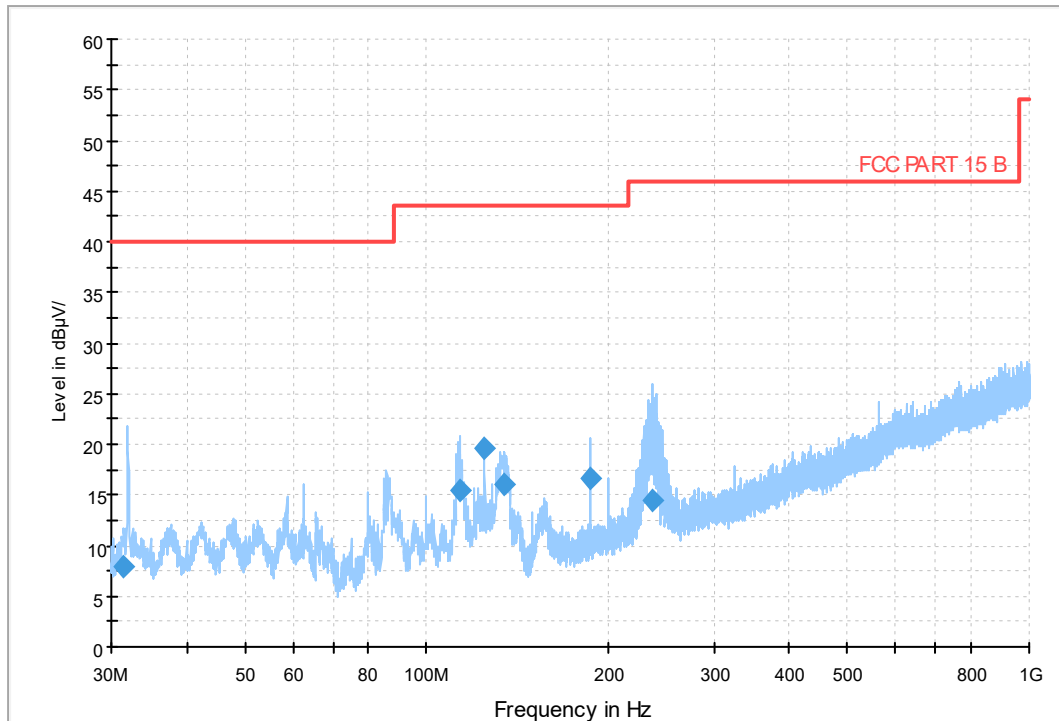
The measurement uncertainty (6000MHz-18000MHz) is 3.91 dB ($k=2$).

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Test Data

RE 30MHz-1GHz



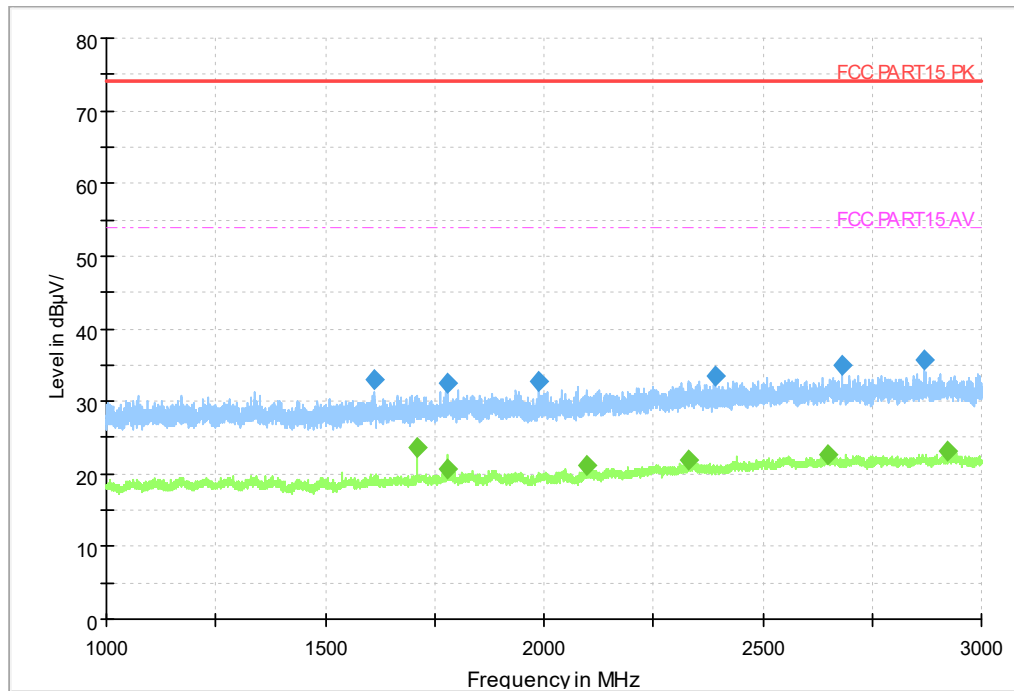
RE 30MHz-1GHz

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
31.440000	8.0	40.0	32.0	5000.0	120.000	115.0	V	180.0	-21.3
113.459500	15.4	43.5	28.1	5000.0	120.000	115.0	H	90.0	-18.7
125.011500	19.7	43.5	23.8	5000.0	120.000	115.0	H	180.0	-19.9
134.263000	16.1	43.5	27.4	5000.0	120.000	115.0	H	90.0	-20.6
187.479500	16.7	43.5	26.8	5000.0	120.000	100.0	V	180.0	-17.6
237.434500	14.4	46.0	31.6	5000.0	120.000	115.0	H	90.0	-16.9

Note: Both H polarization and V polarization are tested. The figure shows the maximum value of H polarization and V polarization synthesis

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RE 1GHz-3GHz

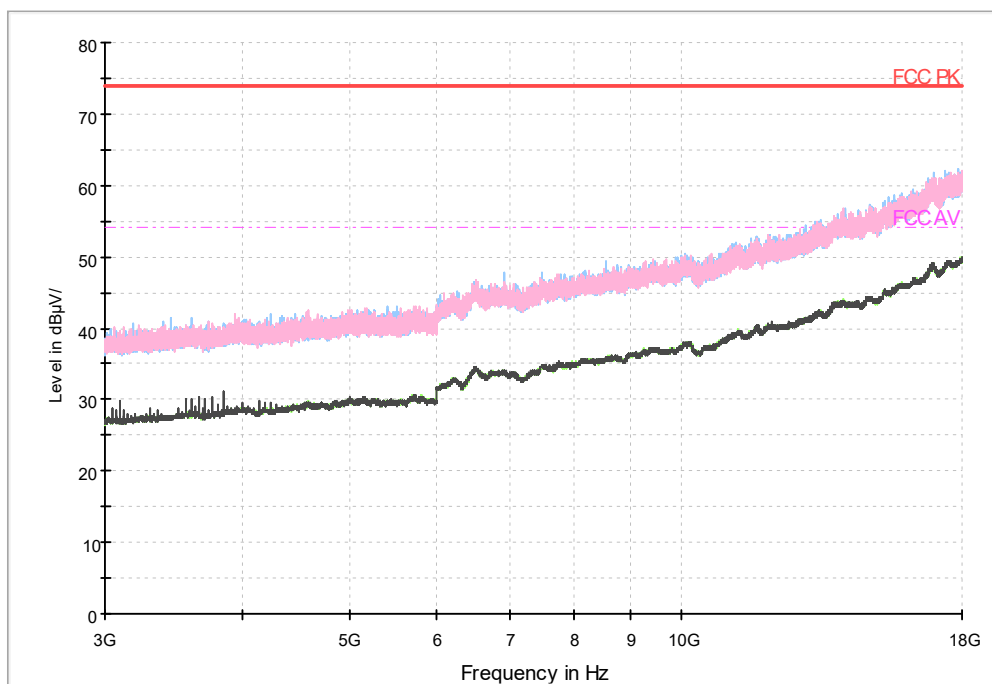
Final Result

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
1613.200000	32.93	---	74.00	41.07	50.0	1000.000	150.0	H	270.0
1710.800000	---	23.74	54.00	30.26	50.0	1000.000	150.0	H	90.0
1777.800000	32.55	---	74.00	41.45	50.0	1000.000	150.0	H	270.0
1778.400000	---	20.62	54.00	33.39	50.0	1000.000	150.0	V	0.0
1986.600000	32.78	---	74.00	41.22	50.0	1000.000	150.0	H	0.0
2099.800000	---	21.15	54.00	32.85	50.0	1000.000	150.0	H	180.0
2331.000000	---	22.02	54.00	31.98	50.0	1000.000	150.0	H	270.0
2390.000000	33.55	---	74.00	40.45	50.0	1000.000	150.0	V	270.0
2648.600000	---	22.76	54.00	31.24	50.0	1000.000	150.0	V	0.0
2682.600000	35.01	---	74.00	38.99	50.0	1000.000	150.0	H	0.0
2868.000000	35.63	---	74.00	38.37	50.0	1000.000	150.0	V	0.0
2923.800000	---	23.15	54.00	30.85	50.0	1000.000	150.0	V	270.0

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RE 3GHz-18GHz



RE 3GHz-18GHz

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7.2. Conducted Emission

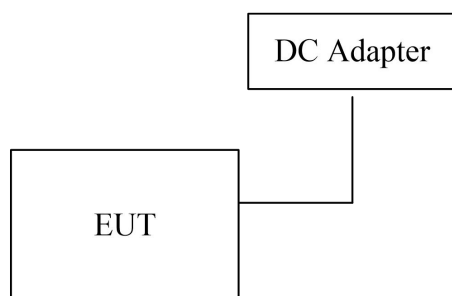
Specifications:	15.107
Date of Tests	2021-11-17
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Operation Mode	Normal
Test Results:	Pass

Limit Level Construction:

Frequency Range (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

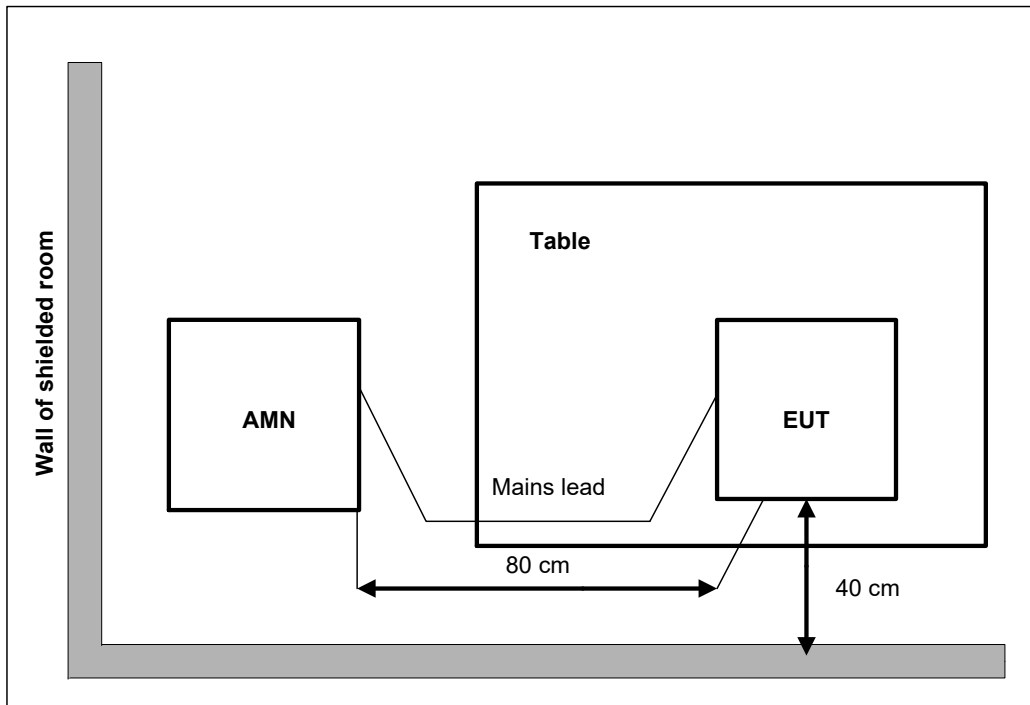
*Decreases with the logarithm of the frequency

EUT Setup:



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Test Method:

For equipment that is designed to be connected to the public utility (DC) power line, the radio frequency voltage that is conducted back onto the DC power line on any frequency or frequencies with the band 150 kHz to 30MHz shall not exceed the limits. Both lines of the power mains connected to the EUT were checked for maximum conducted interference. Tested in accordance with the procedures of ANSI C63.4-2014, section 7.3

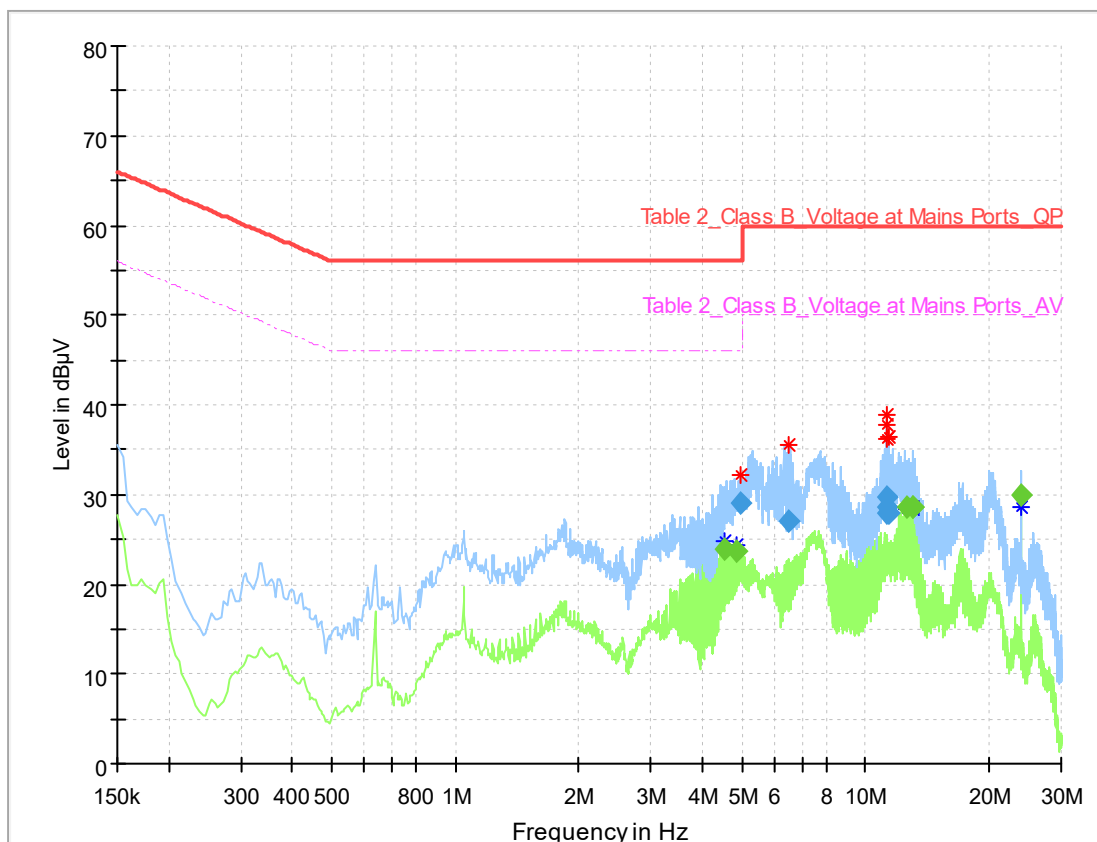
Uncertainty Measurement:

The measurement uncertainty is 1.97 dB (k=2).

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Test Data

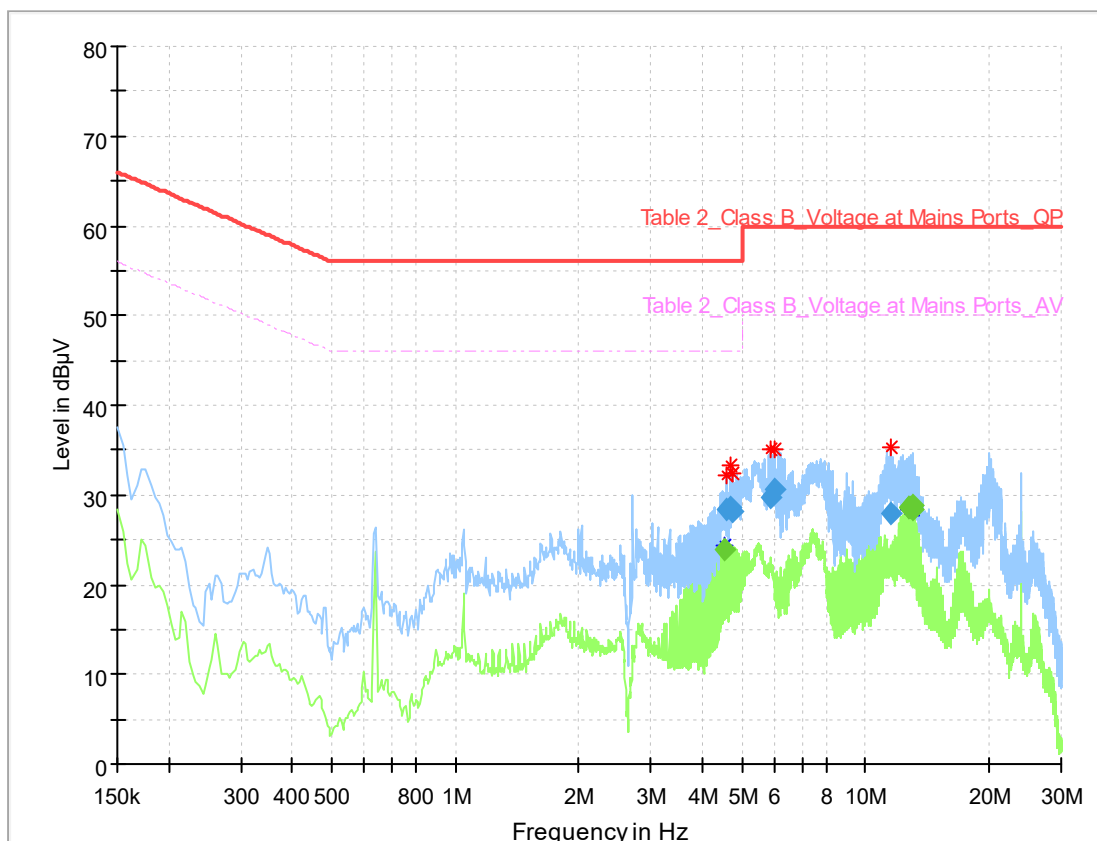


Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Meas. Time	Bandwidth h	Line
4.522147	---	23.80	46.00	22.20	100.0	9.000	+
4.855765	---	23.61	46.00	22.39	100.0	9.000	+
4.952338	29.00	---	56.00	27.00	100.0	9.000	+
6.532632	27.11	---	60.00	32.89	100.0	9.000	+
11.242787	28.68	---	60.00	31.32	100.0	9.000	+
11.286684	29.81	---	60.00	30.19	100.0	9.000	+
11.326191	27.93	---	60.00	32.07	100.0	9.000	+
11.370088	27.93	---	60.00	32.07	100.0	9.000	+
12.572868	---	28.60	50.00	21.40	100.0	9.000	+
13.046956	---	28.61	50.00	21.39	100.0	9.000	+
13.095243	---	28.56	50.00	21.44	100.0	9.000	+
23.999272	---	29.86	50.00	20.14	100.0	9.000	+

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Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Meas. Time	Bandwidth h	Line
4.522147	---	23.84	46.00	22.16	100.0	9.000	-
4.570434	28.44	---	56.00	27.56	100.0	9.000	-
4.667007	28.50	---	56.00	27.50	100.0	9.000	-
4.759191	28.13	---	56.00	27.87	100.0	9.000	-
5.896125	29.83	---	60.00	30.17	100.0	9.000	-
5.979529	30.54	---	60.00	29.46	100.0	9.000	-
11.493000	28.01	---	60.00	31.99	100.0	9.000	-
12.713338	---	28.65	50.00	21.35	100.0	9.000	-
12.809912	---	28.67	50.00	21.33	100.0	9.000	-
12.858199	---	28.71	50.00	21.29	100.0	9.000	-
13.046956	---	28.49	50.00	21.51	100.0	9.000	-
13.095243	---	28.77	50.00	21.23	100.0	9.000	-

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Annex A EUT Photos

See the document "I21W00039-External Photos".

See the document "I21W00039-Internal Photos".

Test photo See the document "I21W00039_EMC Test Setup Photos".

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ANNEX B Deviations from Prescribed Test Methods

No deviation from Prescribed Test Methods.

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