



TEST REPORT

Report Number: C21T00009-EMC01-V00

Applicant	Shanghai Sunmi Technology Co.,Ltd.
Product Name	Wireless data POS System
Model Name	T5930
Brand Name	SUNMI
FCC ID	2AH25V2

Industrial Internet Innovation Center (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in FCC Part 15, Subpart B, ANSI C63.4-2014.

Prepared by

Reviewed by

Approved by

Issue Date

2021-03-18

Industrial Internet Innovation Center (Shanghai) Co., Ltd.

NOTE

1. This report is invalid without the signature of the writer, reviewer and authorizer.
2. This report is invalid if altered.
3. For the benefit of clients, if you have any objection to the report, please inform the testing laboratory within 15 days from the date of receiving this report.
4. Samples in the test report are provided by the client. The test results are only applicable to the samples received by the laboratory. The source information of samples (such as sample sender, manufacturer, etc.) in the test report is provided by the client, and the laboratory is not responsible for its authenticity and the measurement accuracy.
5. The test report does not represent the identification of a product by a certification body or an authorized body.
6. This report is only valid as a whole, and no part of the report can be reproduced without the written approval of Industrial Internet Innovation Center (Shanghai) Co., Ltd.
7. Without the written permission of testing institutions and accreditation bodies, this report cannot be used in part or in whole for publicity or product introduction.
8. "N/A" is used in this report to indicate that it is not applicable or available.
9. Industrial Internet Innovation Center (Shanghai) Co., Ltd. assumes the legal responsibility for the report.
10. The measurement uncertainty is not taken into account when deciding conformity, and the results of measurement (or the average of measurement results) are directly used as the criterion for the stating conformity.

Test Laboratory:

Industrial Internet Innovation Center (Shanghai) Co., Ltd.

Add: Building 4, No. 766 Jingang Rd, Pudong, Shanghai, China

Tel: +86 21 63843300



Revision Version

Report Number	Revision	Date	Memo
C21T00009-EMC01-V00	00	2021-03-18	Initial creation of test report

CONTENTS

1. TEST LABORATORY	6
1.1. TESTING LOCATION	6
1.2. TESTING ENVIRONMENT	6
1.3. PROJECT INFORMATION	6
2. CLIENT INFORMATION	7
2.1. APPLICANT INFORMATION	7
2.2. MANUFACTURER INFORMATION	7
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)	8
3.1. ABOUT EUT	8
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST	8
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST	8
4. REFERENCE DOCUMENTS	10
4.1. REFERENCE DOCUMENTS FOR TESTING	10
5. TEST SUMMARY	11
5.1. SUMMARY OF TEST RESULTS	11
5.2. STATEMENTS	11
5.3. DECISION OF FINAL TEST MODE	12
5.4. EUT CONNECTION DIAGRAM OF TEST SYSTEM	13
6. MEASUREMENT RESULTS	14
6.1. RADIATED EMISSION 30MHZ-18GHZ	14
6.2. AC CONDUCTED EMISSION	21
7. TEST EQUIPMENT LIST	25
7.1. RADIATED EMISSION EQUIPMENT LIST	25
7.2. AC CONDUCTED EMISSION EQUIPMENT LIST	25



ANNEX A: MEASUREMENT UNCERTAINTY	26
ANNEX B: ACCREDITATION CERTIFICATE.....	27

1. Test Laboratory

1.1. Testing Location

Primary Lab:

Company Name	Industrial Internet Innovation Center (Shanghai) Co., Ltd.
Address	Building 4, No. 766 Jingang Rd, Pudong, Shanghai, China
FCC Registration No.	958356
FCC Designation No.	CN1177

Subcontracting Lab #1:

Company Name	N/A
Address	N/A

1.2. Testing Environment

Normal Temperature	15°C~35°C
Relative Humidity	30%RH~60%RH
Supply Voltage	120V/60Hz

1.3. Project Information

Project Leader	Lu Fang
Testing Start Date	2021-03-04
Testing End Date	2021-03-16

2. Client Information

2.1. Applicant Information

Company Name	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505, KIC Plaza, No.388 Song Hu Road, Yang Pu District, Shanghai, China
Telephone	+86 18721763396

2.2. Manufacturer Information

Company Name	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505, KIC Plaza, No.388 Song Hu Road, Yang Pu District, Shanghai, China
Telephone	+86 18721763396

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

3.1. About EUT

Product Name	Wireless data POS System
Model name	T5930
Supported Radio Technology and Bands	GSM850/GSM900/GSM1800/GSM1900 WCDMA Band I / II / IV / V LTE Band 2/3/4/7/17/28 BT4.0 BLE WLAN 802.11a,b,g,n GPS
Hardware Version	V3
Software Version	ZAP1522_769_DEV_dailybuild_20181205071714_userdebug_DCC
FCC ID	2AH25V2

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of Receipt
N08(Main Supply)	861741048621863	V3	ZAP1522_769_DEV_dailybuild_20181205071714_userdebug_DCC	2021-02-04
N05(Secondary Supply)	861741048621921	V3	ZAP1522_769_DEV_dailybuild_20181205071714_userdebug_DCC	2021-03-03

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

3.3. Internal Identification of AE used during the test

AE ID*	Description	Model	SN/Remark
CA08	Adapter	TPA-23A050200UU01	N/A
UA08	USB Cable	T05000156	N/A
UA02	USB Cable	T05000189	N/A
AE1	Notebook PC	DELL Latitude E6510	N/A
AE2	Desktop PC	OptiPlex 790 DT	X8RP1 A01 APCC
AE3	LAN Cable	N/A	N/A
AE4	VGA Cable	N/A	N/A

AE5	RS232 Cable	N/A	N/A
AE6	Keyboard	KB212-B	CN-0Y88XT-65890-12I-005Q-A00
AE7	Mouse	MS111-P	CN-011D3V-71581-19J-1A64
AE8	Monitor	Dell E1709Wc	N/A

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

*The AE is provided by the lab/client.

4. Reference Documents

4.1. Reference Documents for testing

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

Reference	Title	Version
FCC Part 15, Subpart B	Radio frequency devices	2019/10/01
ANSI C63.4	Method of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2014

5. Test Summary

5.1. Summary of Test Results

Items	Test List	Clause in FCC rules	Verdict
1	Radiated Emission	15.109(a)	Pass
2	AC Conducted Emission	15.107(a)	Pass

5.2. Statements

T5930, manufactured by Shanghai Sunmi Technology Co.,Ltd. is a variant product for testing.

This project with two sets of configured sample N08 (Main Supply) and N05 (Secondary Supply) is a variant project based on the original report I18D00236-EMC01 issued by ECIT, it changes the CPU and updates the standards based on the original report, the difference between N08 (Main Supply) and N05 (Secondary Supply) is battery. We mainly test N08 (Main Supply) and N05 (Secondary Supply) test the worst mode of N08.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. only performed test cases which identified with Pass/Fail/Inc result in section 5.1.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. has verified that the compliance of the tested device specified in section 3 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 4 of this test report.

5.3. Decision of final test mode

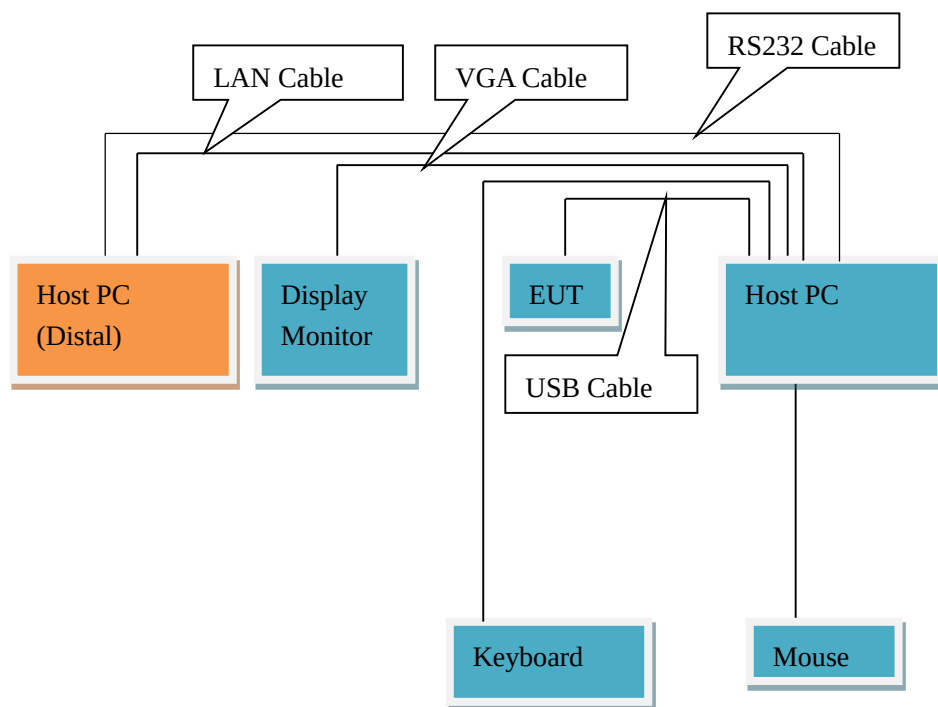
N08 Sample (Main Supply)

Test Item	Function Type
AC Conducted Emission	Mode 1: Adapter charging+ G850 receiver mode UA08 <Figure 2> Mode 2: Adapter charging+ G850 receiver mode+UA02 <Figure 2> Mode 3: USB cable (Data Link with PC)+UA08 <Figure 1> Mode 4: USB cable (Data Link with PC)+UA02 <Figure 1> Mode 5: GPS mode <Figure 2>
Radiated Emission	Mode 1: Adapter charging+ G850 receiver mode+UA08 <Figure 2> Mode 2: Adapter charging+ G850 receiver mode+UA02 <Figure 2> Mode 3: USB cable (Data Link with PC)+UA08 <Figure 1> Mode 4: USB cable (Data Link with PC)+UA02 <Figure 1> Mode 5: GPS mode <Figure 2>
Remark: 1. All test modes are performed, only the worst cases test data are recorded in this report. 2. After laboratory verification, GSM850 is the worst mode among all receiving modes of 2G/3G/4G and is recorded in the report. 3. Data Link with PC means data application transferred mode between EUT and PC. 4. EUT and GPS simulator (SMBV100A) connection is established.	

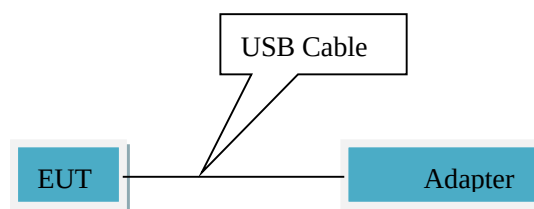
N05 Sample (Secondary Supply)

Test Item	Function Type
AC Conducted Emission	Mode 1: Adapter charging+ G850 receiver mode UA08 <Figure 2>
Radiated Emission	Mode 2: Adapter charging+ G850 receiver mode+UA02 <Figure 2>
Remark: 1. All test modes are performed, only the worst cases test data are recorded in this report. 2. After laboratory verification, GSM850 is the worst mode among all receiving modes of 2G/3G/4G and is recorded in the report.	

5.4. EUT Connection Diagram of Test System



<Figure 1>



<Figure 2>

6. Measurement Results

Only the worst test result was shown in this report.

6.1. Radiated Emission 30MHz-18GHz

Method of Measurement

For 30MHz -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 1000MHz-18000MHz, The maximal emission value was acquired by adjusting the antenna height, 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.

Limits for Radiated Emission at a measuring distance of 3m

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

Test conditions

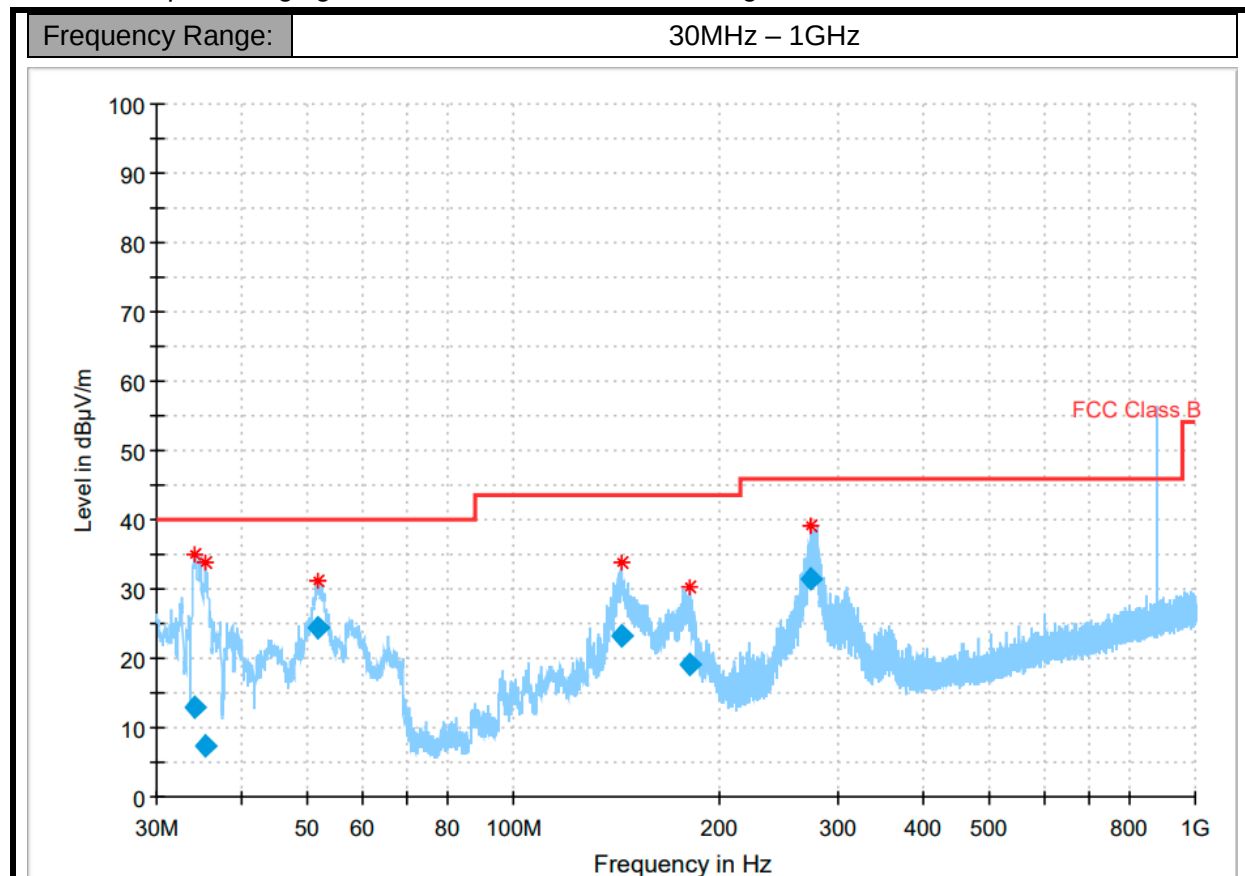
Frequency Range (MHz)	RBW/VBW	Sweep Time (s)
30-1000	120kHz/300kHz	Auto
1000-18000	1MHz/3MHz	Auto

Test Results

Sweep the whole frequency band through the range from 30MHz to the 5th harmonic of the carrier, the Emissions in the frequency band 18GHz-40GHz is more than 20dB below the limit are not report.

N08 (Main Supply)

Mode 2: Adapter charging+ G850 receiver mode+UA02 <Figure 2>



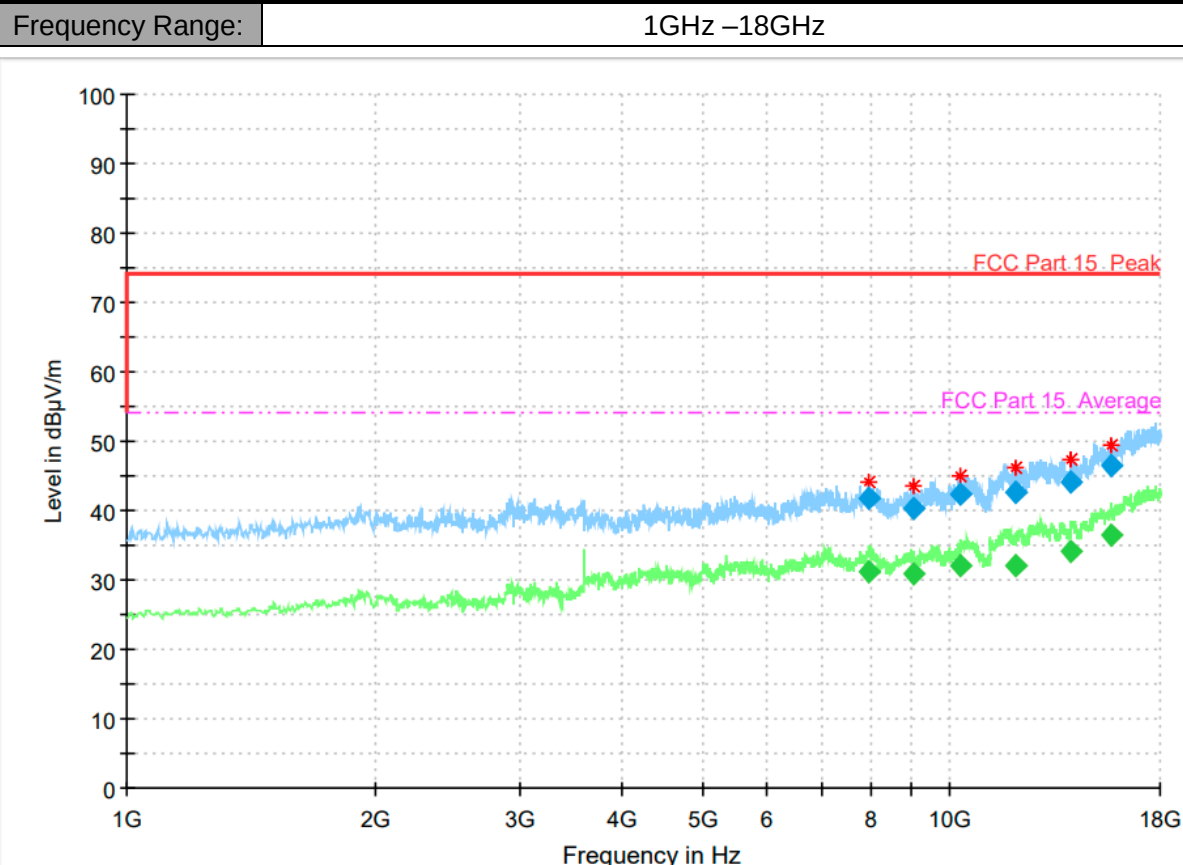
Final Result

Frequency (MHz)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
34.195059	12.89	40.00	27.11	1000.0	120.000	99.9	V	30.0	-18.1
35.319651	7.35	40.00	32.65	1000.0	120.000	100.0	V	265.0	-17.9
51.578523	24.40	40.00	15.60	1000.0	120.000	120.9	V	30.0	-15.4
143.770835	23.14	43.50	20.36	1000.0	120.000	225.0	H	-20.0	-19.7
181.556515	19.00	43.50	24.50	1000.0	120.000	178.9	H	66.0	-16.8
273.236421	31.56	46.00	14.44	1000.0	120.000	106.2	H	222.0	-13.3

Note:

1. Emission level(QP)=Raw value by receiver + Corr(Antenna factor + cable loss - preamplifier gain)
2. The raw value is used to calculate by software which is not shown in the sheet.
3. Margin=limit value – emission level.
4. The frequency over the limits is the main signal frequency.

Mode 2: Adapter charging+ G850 receiver mode+UA02 <Figure 2>

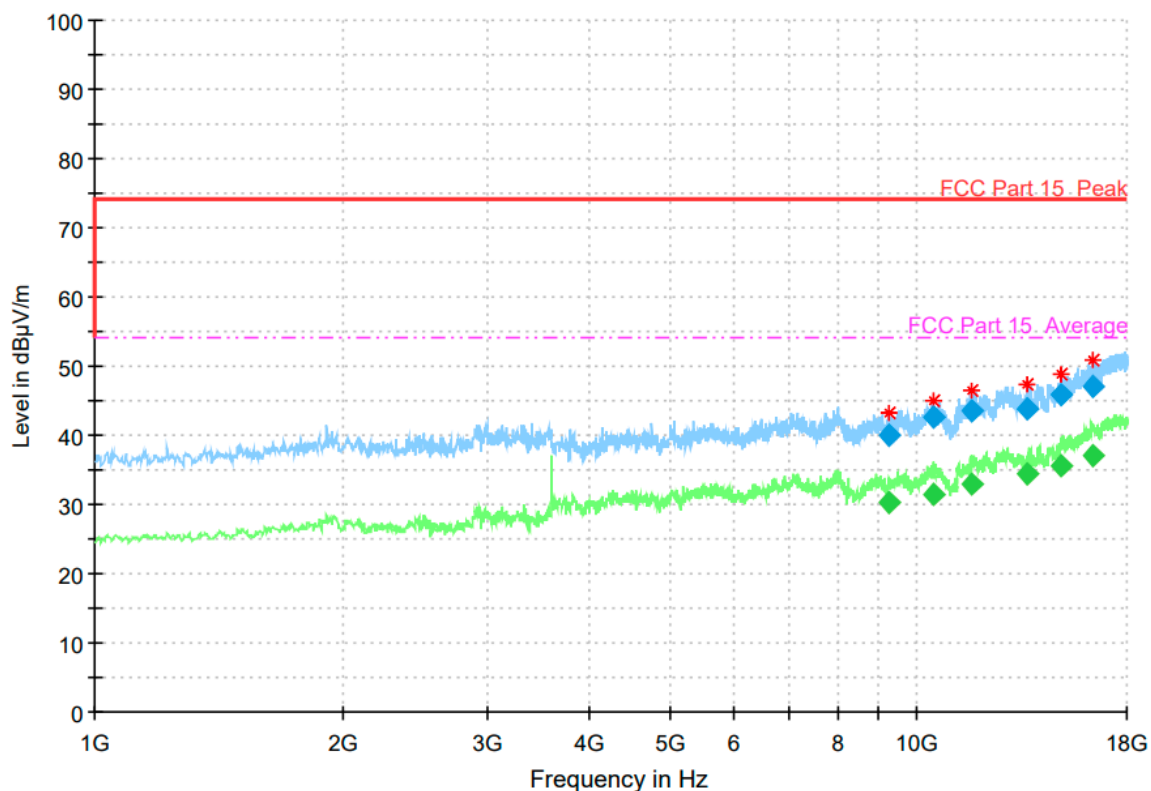


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Band width	Height	Po l	Azimu th	Corr. (dB)
7956.200000	41.71	---	74.00	32.29	1.0	1000.	100.1	H	11.0	5.4
7956.200000	---	31.06	54.00	22.94	1.0	1000.	100.1	H	11.0	5.4
9040.800000	---	30.78	54.00	23.22	1.0	1000.	100.1	H	98.0	5.3
9040.800000	40.43	---	74.00	33.57	1.0	1000.	100.1	H	98.0	5.3
10319.800000	---	32.19	54.00	21.81	1.0	1000.	199.9	H	17.0	8.0
10319.800000	42.37	---	74.00	31.63	1.0	1000.	199.9	H	17.0	8.0
11991.600000	42.51	---	74.00	31.49	1.0	1000.	100.1	H	0.0	10.4
11991.600000	---	32.05	54.00	21.95	1.0	1000.	100.1	H	0.0	10.4
14005.800000	44.23	---	74.00	29.77	1.0	1000.	100.1	H	304.0	12.7
14005.800000	---	34.16	54.00	19.84	1.0	1000.	100.1	H	304.0	12.7
15681.800000	46.48	---	74.00	27.52	1.0	1000.	100.1	H	170.0	15.7
15681.800000	---	36.42	54.00	17.58	1.0	1000.	100.1	H	170.0	15.7

Note:

1. Emission level(peak or average)=Raw value by receiver + Corr(Antenna factor+ cable loss - preamplifier gain)
2. The raw value is used to calculate by software which is not shown in the sheet.
3. Margin=limit value – emission level.



Final Result

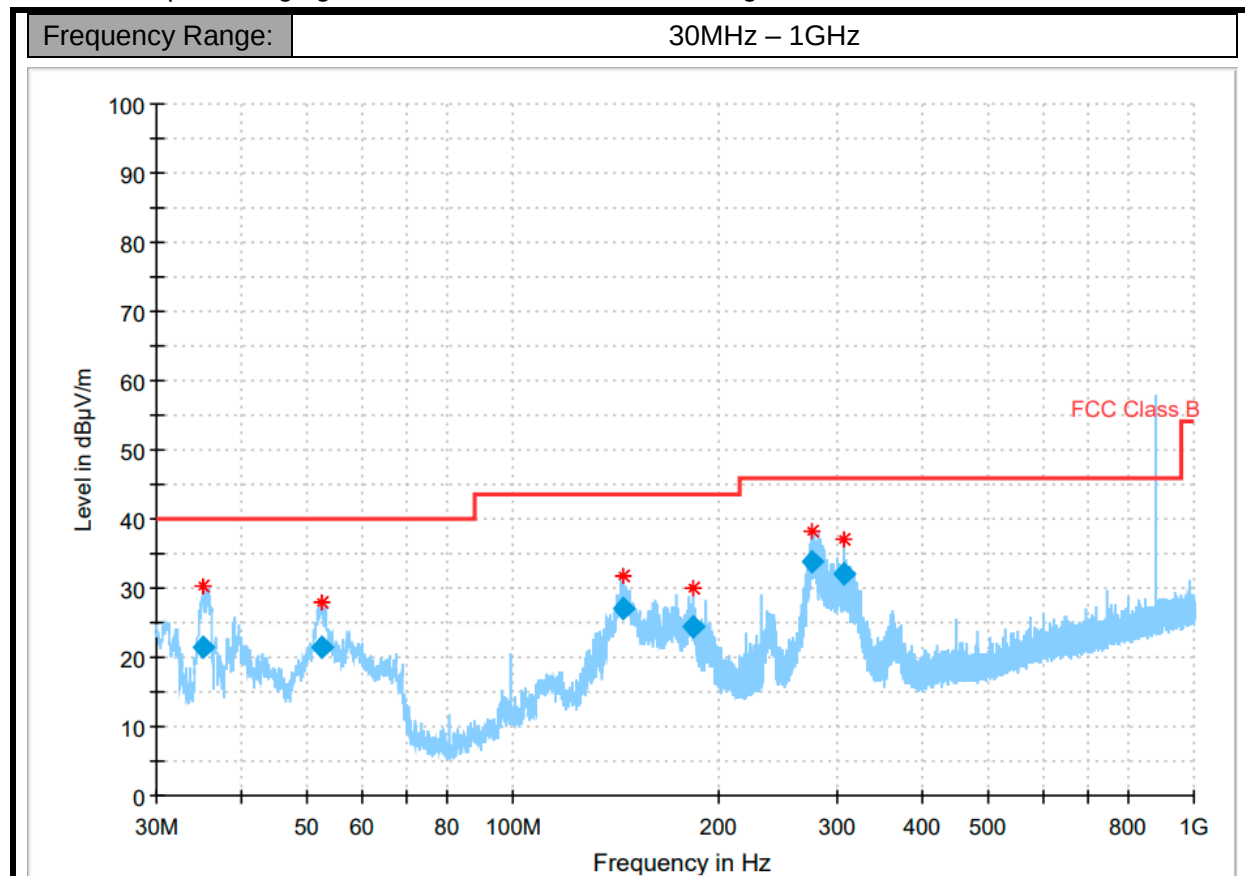
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (Hz)	Height (m)	Polarization	Azimuth (°)	Correction (dB)
9269.000000	---	30.38	54.00	23.62	1.0	1000.00	100.1	V	284.0	5.7
9269.000000	40.02	---	74.00	33.98	1.0	1000.00	100.1	V	284.0	5.7
10480.000000	---	31.37	54.00	22.63	1.0	1000.00	199.9	V	243.0	7.9
10480.000000	42.53	---	74.00	31.47	1.0	1000.00	199.9	V	243.0	7.9
11648.200000	43.50	---	74.00	30.50	1.0	1000.00	100.1	V	80.0	10.4
11648.200000	---	33.06	54.00	20.94	1.0	1000.00	100.1	V	80.0	10.4
13615.000000	43.90	---	74.00	30.10	1.0	1000.00	199.9	V	126.0	11.9
13615.000000	---	34.34	54.00	19.66	1.0	1000.00	199.9	V	126.0	11.9
14964.000000	---	35.56	54.00	18.44	1.0	1000.00	199.9	V	140.0	14.6
14964.000000	45.96	---	74.00	28.04	1.0	1000.00	199.9	V	140.0	14.6
16340.400000	---	37.19	54.00	16.81	1.0	1000.00	100.1	V	169.0	17.4
16340.400000	47.16	---	74.00	26.84	1.0	1000.00	100.1	V	169.0	17.4

Note:

1. Emission level(peak or average)=Raw value by receiver + Corr(Antenna factor+ cable loss - preamplifier gain)
2. The raw value is used to calculate by software which is not shown in the sheet.
3. Margin=limit value – emission level.

N05 (Secondary Supply)

Mode 2: Adapter charging+ G850 receiver mode+UA02 <Figure 2>



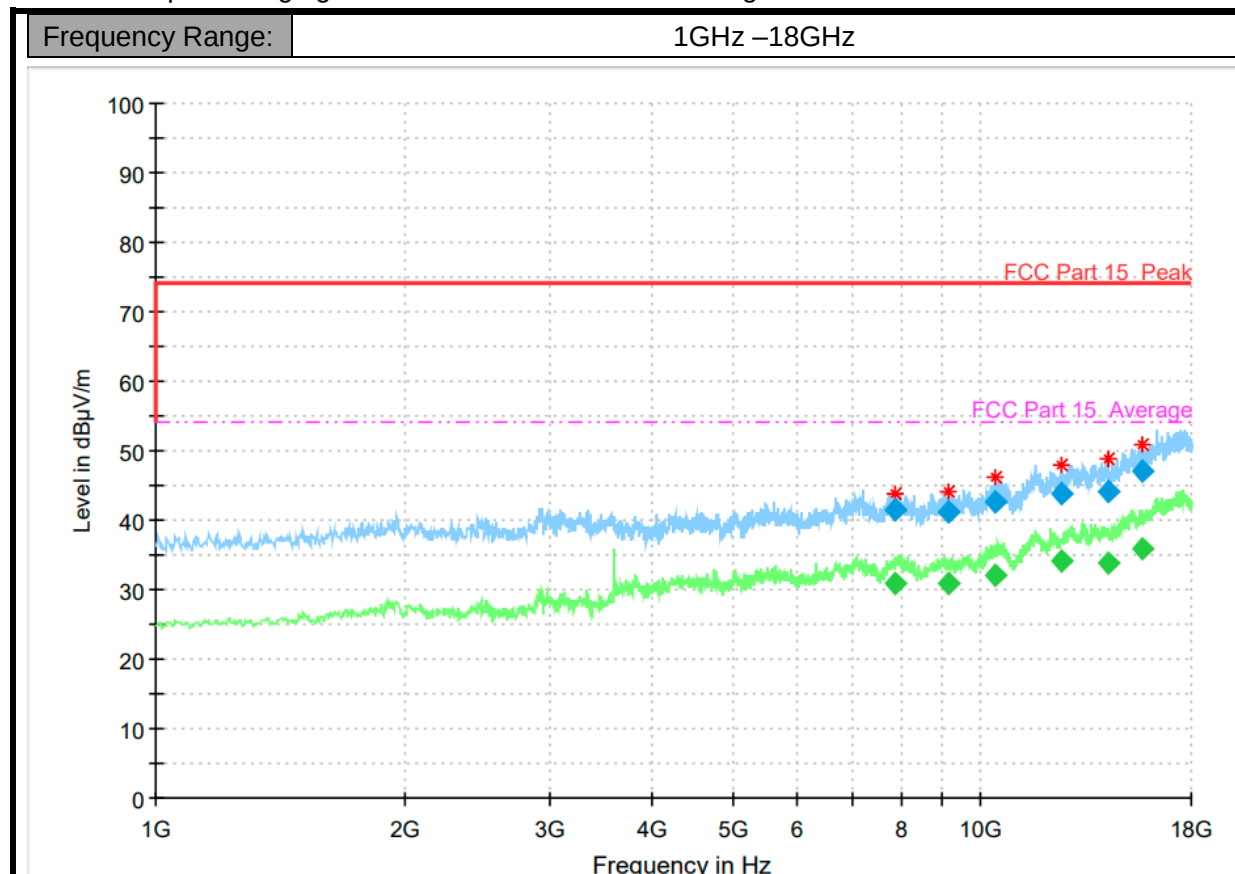
Final Result

Frequency (MHz)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
35.191189	21.42	40.00	18.58	1000.0	120.000	103.3	V	239.0	-17.9
52.333891	21.33	40.00	18.67	1000.0	120.000	174.9	V	230.0	-15.5
145.738723	26.99	43.50	16.51	1000.0	120.000	225.0	H	-15.0	-19.7
184.255717	24.45	43.50	19.05	1000.0	120.000	120.2	V	262.0	-16.6
275.771816	33.93	46.00	12.07	1000.0	120.000	125.0	H	-20.0	-13.2
305.443683	32.09	46.00	13.91	1000.0	120.000	125.0	H	204.0	-12.4

Note:

1. Emission level(QP)=Raw value by receiver + Corr(Antenna factor + cable loss - preamplifier gain)
2. The raw value is used to calculate by software which is not shown in the sheet.
3. Margin=limit value – emission level.
4. The frequency over the limits is the main signal frequency.

Mode 2: Adapter charging+ G850 receiver mode+UA02 <Figure 2>

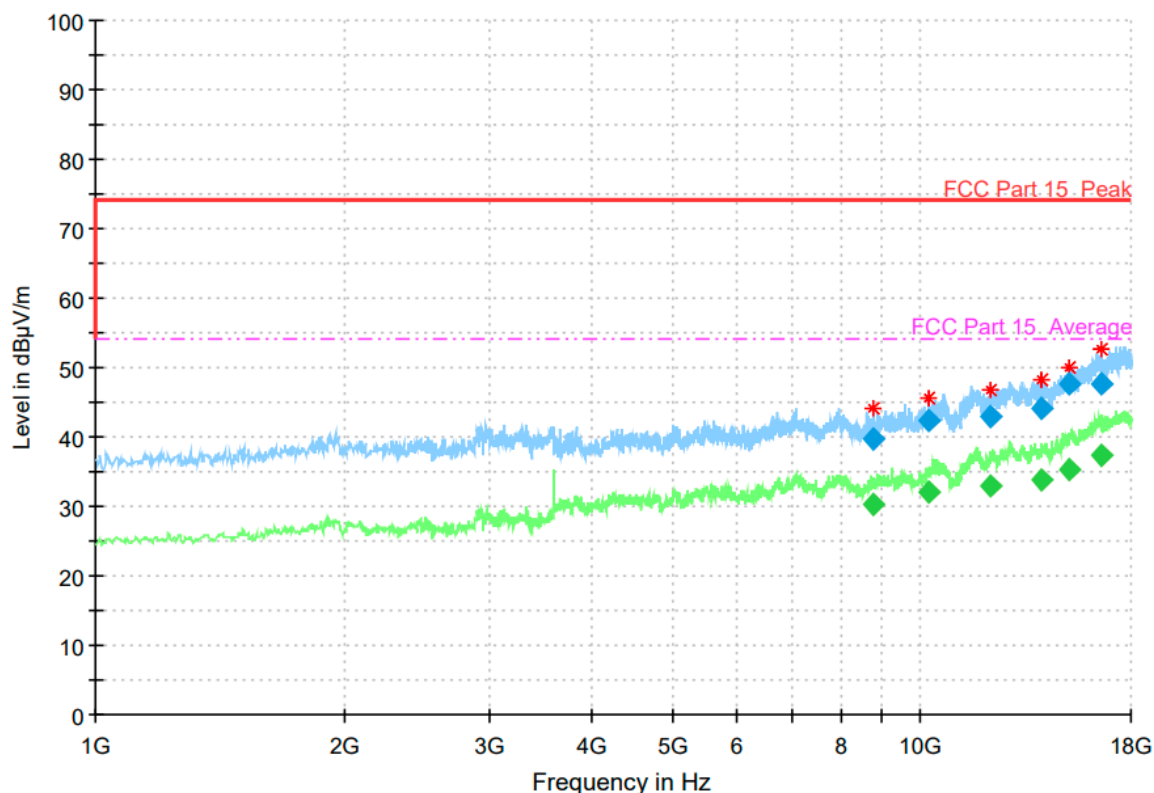


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Band width	Height	Po l	Azimu th	Corr. (dB)
7857.200000	---	30.91	54.00	23.09	1.0	1000.	100.1	H	32.0	4.8
7857.200000	41.45	---	74.00	32.55	1.0	1000.	100.1	H	32.0	4.8
9136.400000	---	30.84	54.00	23.16	1.0	1000.	100.1	H	38.0	5.4
9136.400000	41.22	---	74.00	32.78	1.0	1000.	100.1	H	38.0	5.4
10397.200000	42.71	---	74.00	31.29	1.0	1000.	100.1	H	255.0	8.1
10397.200000	---	32.18	54.00	21.82	1.0	1000.	100.1	H	255.0	8.1
12487.800000	---	34.17	54.00	19.83	1.0	1000.	100.1	H	60.0	11.0
12487.800000	43.82	---	74.00	30.18	1.0	1000.	100.1	H	60.0	11.0
14239.800000	---	33.91	54.00	20.09	1.0	1000.	100.1	H	129.0	12.8
14239.800000	44.09	---	74.00	29.91	1.0	1000.	100.1	H	129.0	12.8
15725.400000	47.15	---	74.00	26.85	1.0	1000.	199.9	H	76.0	15.8
15725.400000	---	35.96	54.00	18.04	1.0	1000.	199.9	H	76.0	15.8

Note:

- 1.Emission level(peak or average)=Raw value by receiver + Corr(Antenna factor+ cable loss - preamplifier gain)
- 2.The raw value is used to calculate by software which is not shown in the sheet.
- 3.Margin=limit value – emission level.



Final Result

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwi dth	Heigh t	Po l	Azimu th	Corr. (dB)
8779.000000	39.71	---	74.00	34.29	1.0	1000.00	100.1	V	92.0	4.7
8779.000000	---	30.21	54.00	23.79	1.0	1000.00	100.1	V	92.0	4.7
10247.600000	42.34	---	74.00	31.66	1.0	1000.00	199.9	V	225.0	7.7
10247.600000	---	32.12	54.00	21.88	1.0	1000.00	199.9	V	225.0	7.7
12166.600000	42.86	---	74.00	31.14	1.0	1000.00	199.9	V	117.0	11.2
12166.600000	---	32.98	54.00	21.02	1.0	1000.00	199.9	V	117.0	11.2
14012.200000	---	33.89	54.00	20.11	1.0	1000.00	100.1	V	48.0	12.7
14012.200000	44.24	---	74.00	29.76	1.0	1000.00	100.1	V	48.0	12.7
15175.000000	47.79	---	74.00	26.21	1.0	1000.00	199.9	V	351.0	14.7
15175.000000	---	35.43	54.00	18.57	1.0	1000.00	199.9	V	351.0	14.7
16538.400000	---	37.37	54.00	16.63	1.0	1000.00	100.1	V	77.0	17.9
16538.400000	47.77	---	74.00	26.23	1.0	1000.00	100.1	V	77.0	17.9

Note:

- 1.Emission level(peak or average)=Raw value by receiver + Corr(Antenna factor+ cable loss - preamplifier gain)
- 2.The raw value is used to calculate by software which is not shown in the sheet.
- 3.Margin=limit value – emission level.

6.2. AC Conducted Emission

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 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

Limit of Conducted Emission

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		

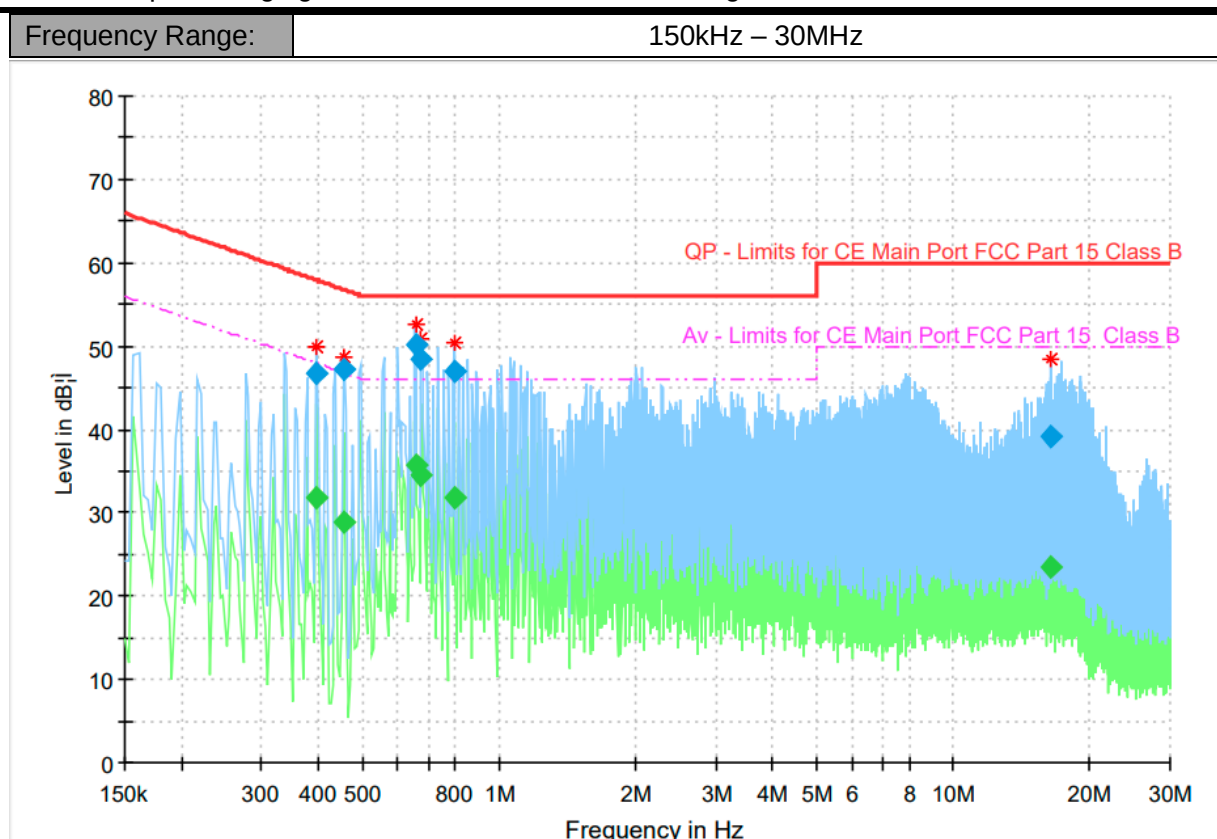
Test Condition in Charging Mode

Voltage (V)	Frequency (Hz)	RBW	Sweep Time (s)
120	60	9 kHz	Auto

Test Results

N08(Main Supply)

Mode 1: Adapter charging+ G850 receiver mode+UA08 <Figure 2>

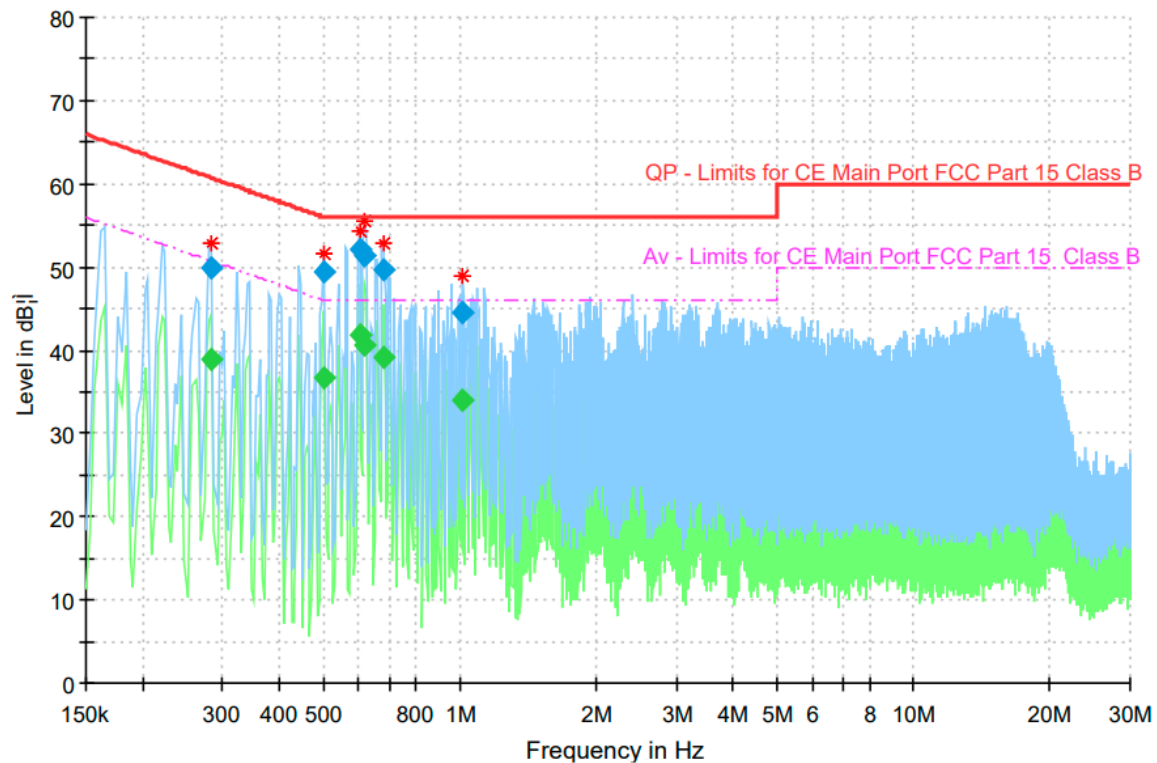


Final Result

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.396263	---	31.88	47.93	16.05	15000.	9.000	L1	ON	9.6
0.396263	46.75	---	57.93	11.18	15000.	9.000	L1	ON	9.6
0.455963	---	28.92	46.77	17.84	15000.	9.000	L1	ON	9.6
0.455963	47.22	---	56.77	9.54	15000.	9.000	L1	ON	9.6
0.657450	---	35.71	46.00	10.29	15000.	9.000	L1	ON	9.6
0.657450	50.13	---	56.00	5.87	15000.	9.000	L1	ON	9.6
0.672375	---	34.46	46.00	11.54	15000.	9.000	L1	ON	9.6
0.672375	48.56	---	56.00	7.44	15000.	9.000	L1	ON	9.6
0.795506	---	31.75	46.00	14.25	15000.	9.000	L1	ON	9.6
0.795506	46.92	---	56.00	9.08	15000.	9.000	L1	ON	9.6
16.377206	---	23.49	50.00	26.51	15000.	9.000	L1	ON	10.1
16.377206	39.11	---	60.00	20.89	15000.	9.000	L1	ON	10.1

Note:

- 1.Emission level(quasi-peak or Average peak)=Raw value by receiver + Corr(Insertion loss+ cable loss)
- 2.The raw value is used to calculate by software which is not shown in the sheet.
- 3.Margin=limit value – emission level.



Final Result

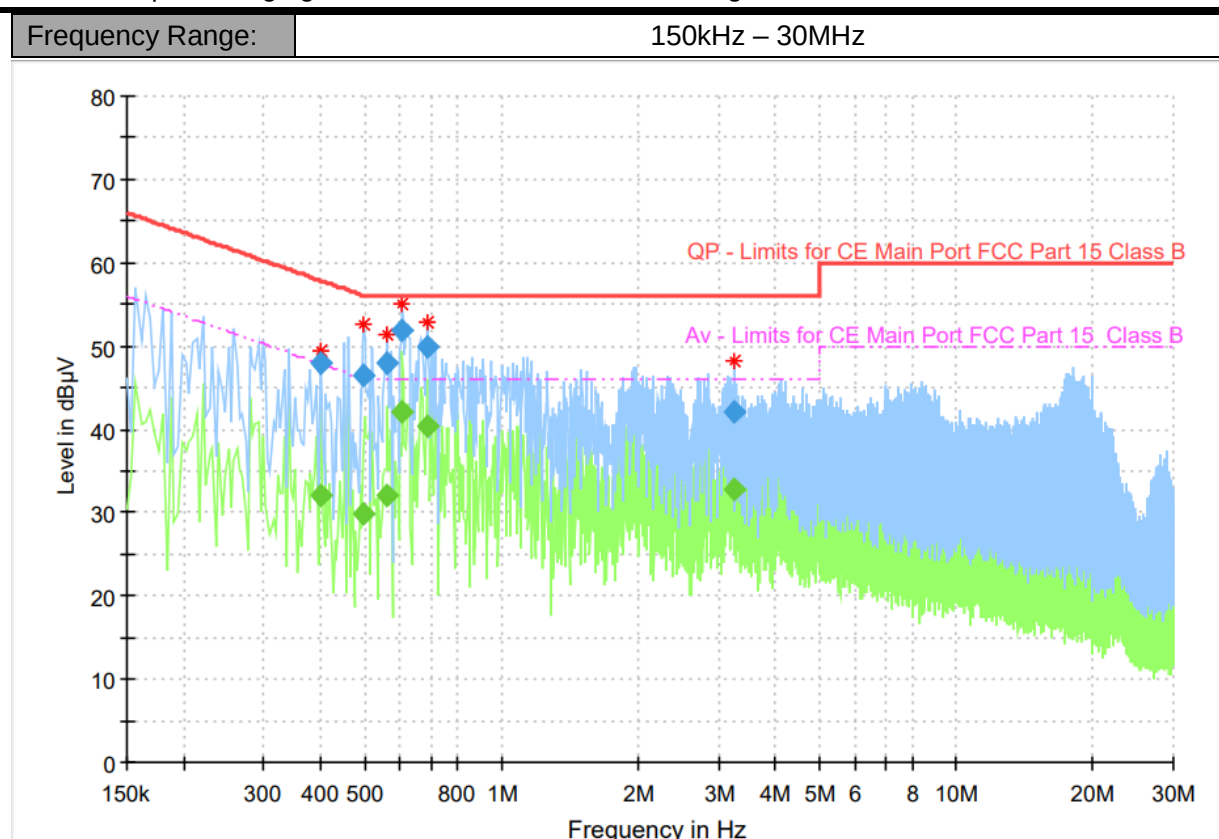
Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.284325	---	38.82	50.69	11.87	15000.	9.000	N	ON	9.7
0.284325	49.88	---	60.69	10.81	15000.	9.000	N	ON	9.7
0.500738	---	36.78	46.00	9.22	15000.	9.000	N	ON	9.8
0.500738	49.53	---	56.00	6.47	15000.	9.000	N	ON	9.8
0.601481	---	41.92	46.00	4.08	15000.	9.000	N	ON	9.8
0.601481	52.22	---	56.00	3.78	15000.	9.000	N	ON	9.8
0.616406	---	40.61	46.00	5.39	15000.	9.000	N	ON	9.8
0.616406	51.32	---	56.00	4.68	15000.	9.000	N	ON	9.8
0.676106	---	39.05	46.00	6.95	15000.	9.000	N	ON	9.8
0.676106	49.67	---	56.00	6.33	15000.	9.000	N	ON	9.8
1.015650	---	34.10	46.00	11.90	15000.	9.000	N	ON	9.8
1.015650	44.61	---	56.00	11.39	15000.	9.000	N	ON	9.8

Note:

- 1.Emission level(quasi-peak or Average peak)=Raw value by receiver + Corr(Insertion loss+ cable loss)
- 2.The raw value is used to calculate by software which is not shown in the sheet.
- 3.Margin=limit value – emission level.

N05(Secondary Supply)

Mode 1: Adapter charging+ G850 receiver mode+UA08 <Figure 2>



Final Result

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.399994	---	32.13	47.85	15.72	15000.	9.000	L1	ON	9.9
0.399994	47.89	---	57.85	9.97	15000.	9.000	L1	ON	9.9
0.497006	---	29.75	46.05	16.30	15000.	9.000	L1	ON	9.9
0.497006	46.57	---	56.05	9.48	15000.	9.000	L1	ON	9.9
0.560438	---	31.95	46.00	14.05	15000.	9.000	L1	ON	9.9
0.560438	48.07	---	56.00	7.93	15000.	9.000	L1	ON	9.9
0.605213	---	41.98	46.00	4.02	15000.	9.000	N	ON	9.8
0.605213	51.88	---	56.00	4.12	15000.	9.000	N	ON	9.8
0.687300	---	40.44	46.00	5.56	15000.	9.000	N	ON	9.8
0.687300	49.87	---	56.00	6.13	15000.	9.000	N	ON	9.8
3.250669	---	32.83	46.00	13.17	15000.	9.000	N	ON	9.9
3.250669	42.04	---	56.00	13.96	15000.	9.000	N	ON	9.9

Note:

- 1.Emission level(quasi-peak or Average peak)=Raw value by receiver + Corr(Insertion loss+ cable loss)
- 2.The raw value is used to calculate by software which is not shown in the sheet.
- 3.Margin=limit value – emission level.
- 4.L1 and N line is all have been tested, the result of them is synthesized in the above data diagram.

7. Test Equipment List

7.1. Radiated Emission Equipment list

Item	Equipment Name	Type	Serial Number	Manufacturer	Cal. Date	Cal. Interval
1	Universal Radio Communication Tester	CMU200	123126	R&S	2020-05-10	1 year
2	Universal Radio Communication Tester	CMW500	104178	R&S	2020-05-10	1 year
3	Test Receiver	ESU40	100307	R&S	2021-03-03	1 year
4	Trilog Antenna	VULB9163	VULB9163-515	Schwarzbeck	2021-02-03	2 years
5	Double Ridged Guide Antenna	ETS-3117	00135890	ETS	2020-02-28	2 years
6	Signal Generator	SMBV100A	257984	R&S	2021-03-03	1 year
7	EMI Test Software	EMC32 V9.15	N/A	R&S	N/A	N/A

7.2. AC Conducted Emission Equipment list

Item	Equipment Name	Type	Serial Number	Manufacturer	Cal. Date	Cal. Interval
1	Universal Radio Communication Tester	CMU200	123123	R&S	2020-05-10	1 year
2	Universal Radio Communication Tester	CMW500	104178	R&S	2020-05-10	1 year
3	Test Receiver	ESCI	101235	R&S	2021-03-03	1 year
4	2-Line V-Network	ENV216	101380	R&S	2020-05-10	1 year
5	Signal Generator	SMBV100A	257984	R&S	2021-03-03	1 year
6	EMI Test Software	EMC32 V10.35.02	N/A	R&S	N/A	N/A

Annex A: Measurement Uncertainty

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

Case	Uncertainty
Radiated Emission 30MHz-1000MHz	4.96dB
Radiated Emission 1000MHz-18000MHz	5.18 dB
AC Conducted Emission	3.66 dB

Annex B: Accreditation Certificate



Accredited Laboratory

A2LA has accredited

Industrial Internet Innovation Center (Shanghai) Co., Ltd.
Shanghai, People's Republic of China

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This laboratory also meets the requirements of any additional program requirements in the «field» field. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 6th day of May 2019.



Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3682.01
Valid to April 30, 2021
Revised February 17, 2021

For the tests to which this accreditation applies, please refer to the laboratory's Electrical «field» Scope of Accreditation.

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