



TEST REPORT

No. C20T00033-EMC01

For

Client: MobiWire SAS

Production: 4G Smart Phone

Model Name: Mobiwire Honaw,Altice S33

Brand Name: MobiWire,Altice

FCC ID: QPN-HONAW

Hardware Version: V00B

Software Version: Honaw32_V02

Issued date: 2020-12-25

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

NOTE

1. The test results in this test report relate only to the devices specified in this report.
2. This report shall not be reproduced except in full without the written approval of Industrial Internet Innovation Center (Shanghai) Co., Ltd.
3. 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.

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Revision Version

Report Number	Revision	Date	Memo
C20T00033-EMC01	00	2020-12-25	Initial creation of test report



CONTENTS

1. TEST LABORATORY	6
1.1. TESTING LOCATION	6
1.2. TESTING ENVIRONMENT	6
1.3. PROJECT DATA	6
1.4. SIGNATURE	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.....	9
4.1 REFERENCE DOCUMENTS FOR TESTING	9
5. TEST RESULTS.....	10
5.1 SUMMARY OF TEST RESULTS	10
5.2 STATEMENTS.....	10
6. TEST EQUIPMENT UTILIZED	11
6.1 RADIATED EMISSION EQUIPMENT LIST	11
6.2 AC CONDUCTED EMISSION EQUIPMENT LIST	11
7. SYSTEM CONFIGURATION DURING TEST	12
7.1 TEST MODE.....	12
7.2 CONNECTION DIAGRAM OF TEST SYSTEM.....	13
8. MEASUREMENT RESULTS	14
8.1 RADIATED EMISSION 30MHZ-18GHZ.....	14



8.2 AC CONDUCTED EMISSION.....	18
ANNEX A ACCREDITATION CERTIFICATE	20



1. Test Laboratory

1.1. Testing Location

Company Name:	Industrial Internet Innovation Center (Shanghai) Co., Ltd.
Address:	Building 4, No.766, Jingang Road, Pudong New District, Shanghai, P. R. China
Postal Code:	201206
Telephone:	+86 21 63843300
FCC registration No:	958356
FCC designation No:	CN1177

1.2. Testing Environment

Normal Temperature:	15-35℃
Relative Humidity:	30-60% RH
Supply Voltage	120V/60Hz

1.3. Project data

Project Leader:	Xu Yuting
Testing Start Date:	2020-12-07
Testing End Date:	2020-12-10

1.4. Signature

Lin Ling

(Prepared this test report)

Qin Yabin

(Reviewed this test report)

Song Kaihua

(Approved this test report)



2. Client Information

2.1. Applicant Information

Company Name	MobiWire SAS
Address	79 avenue Francois Arago, 92017 NANTERRE France
Telephone	0625 028 368-33
Postcode	/

2.2. Manufacturer Information

Company Name	MobiWire SAS
Address	79 avenue Francois Arago, 92017 NANTERRE France
Telephone	0625 028 368-33
Postcode	/

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

3.1. About EUT

Product Name	4G Smart Phone
Model name	Mobiwire Honaw,Altice S33
GSM Frequency Band	GSM850/GSM900/GSM1800/GSM1900
UMTS Frequency Band	WCDMA Band I/II/V/ VIII
LTE Frequency Band	LTE 1/2/3/7/8/20
Additional Communication Function	BT5.1;WLAN 802.11b,g,n;GPS;GLONASS;FM

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
N01	356290110440960/ 356290110440978	V00B	Honaw32_V02	2020-11-24

*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	Model	SN
CA01	Adapter	A31A-050100U-US1	NA
UA01	USB Cable	AM MICRO5P	NA
AA01	Earphone	JWEP0957-M01R	NA
BA01	Battery	178171351	NA
AE1	Notebook PC	DELL Latitude E6510	NA
AE2	Desktop PC	OptiPlex 790 DT	X8RP1 A01 APCC
AE3	LAN Cable	NA	NA
AE4	VGA Cable	NA	NA
AE5	RS232 Cable	NA	NA
AE6	Keyboard	KB212-B	CN-0Y88XT-65890-12I-005Q-A00
AE7	Mouse	MS111-P	CN-011D3V-71581-19J-1A64
AE8	Monitor	Dell E1709Wc	NA
AE9	Micro SD Card	Kingston SDC4/4GB 77	NA

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

*The AE were provided by the lab.

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 Results

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

The Mobiwire Honaw,Altice S33, supporting GSM/WCDMA/LTE .etc, manufactured by MobiWire SAS is a variant product for testing. 3IN only performed test cases which identified with Pass/Fail/Inc result in section 5.1.

3IN 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.

Note: This project add second CPU supplier model based on the original report of I20D00050-EMC01 and we only test the worst mode of original report, and refer to the original report for other information.



6. Test Equipment Utilized

6.1 Radiated Emission Equipment list

Item	Instrument 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	2020-05-10	1 year
4	Trilog Antenna	VULB9163	VULB9163-515	Schwarzbeck	2020-02-28	2 years
5	Double Ridged Guide	ETS-3117	00135890	ETS	2020-02-28	2 years
6	Signal Generator	SMF 100A	102314	R&S	2020-05-10	1 year
7	EMI Test Software	EMC32 V9.15	NA	R&S	NA	NA

6.2 AC Conducted Emission Equipment list

Item	Instrument 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	2020-05-10	1 year
4	2-Line V-Network	ENV216	101380	R&S	2020-03-17	1 year
5	EMI Test Software	EMC32 V10.35.02	NA	R&S	NA	NA

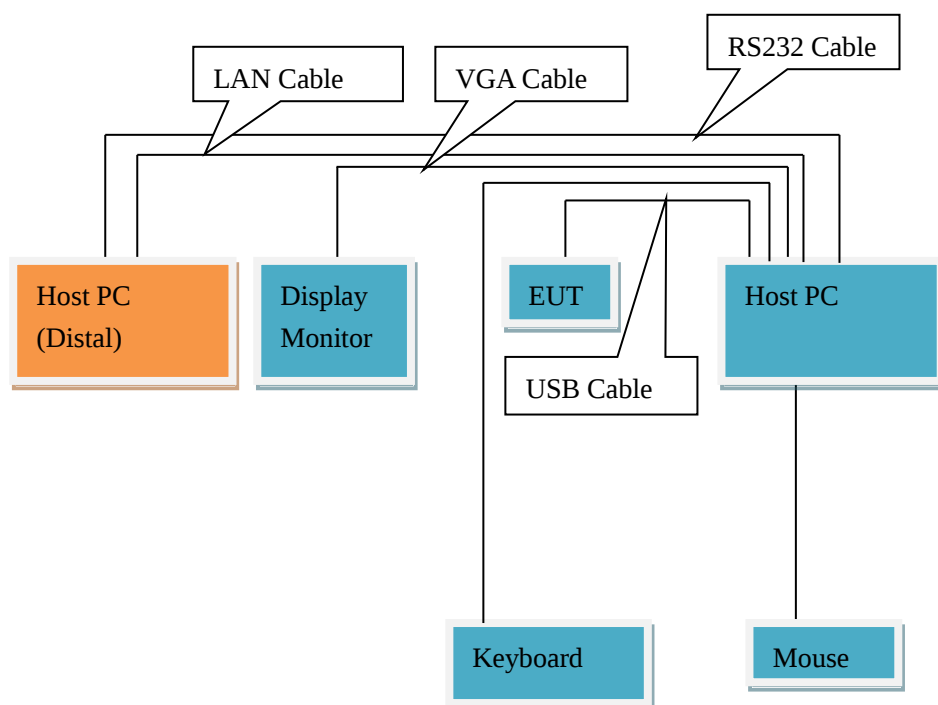


7. System Configuration during Test

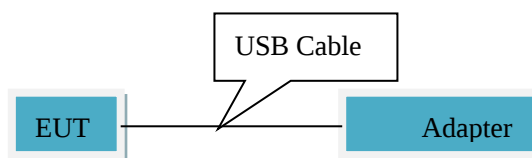
7.1 Test Mode

Test Item	Function Type
AC Conducted Emission	Mode 1: Adapter charging +G850 receiver +UA01<Figure 2> Mode 2: USB Cable (Data Link with PC) +UA01<Figure 1>
Radiated Emission	Mode 1: Adapter charging+ G850 receiver +UA01<Figure 2> Mode 2: USB Cable (Data Link with PC) +UA01<Figure 1>
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.	

7.2 Connection Diagram of Test System



<Figure 1>



<Figure 2>

8. Measurement Results

Only the worst test result was shown in this report.

8.1 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

Uncertainty Measurement

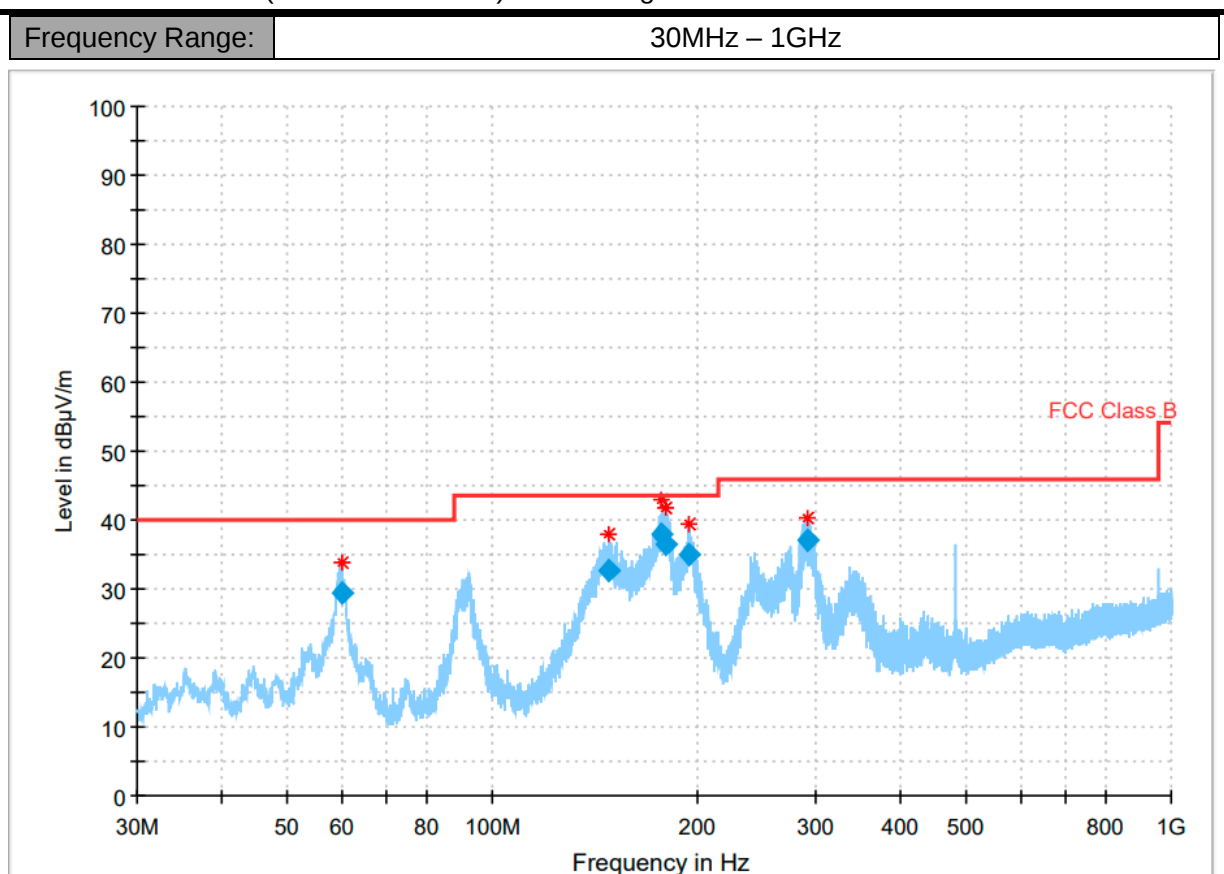
The measurement uncertainty (30MHz-1000MHz) is 4.82 dB (k=2).

The measurement uncertainty (1000MHz-18000MHz) is 5.08 dB (k=2).

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.

Mode 2: USB Cable (Data Link with PC) +UA01<Figure 1>



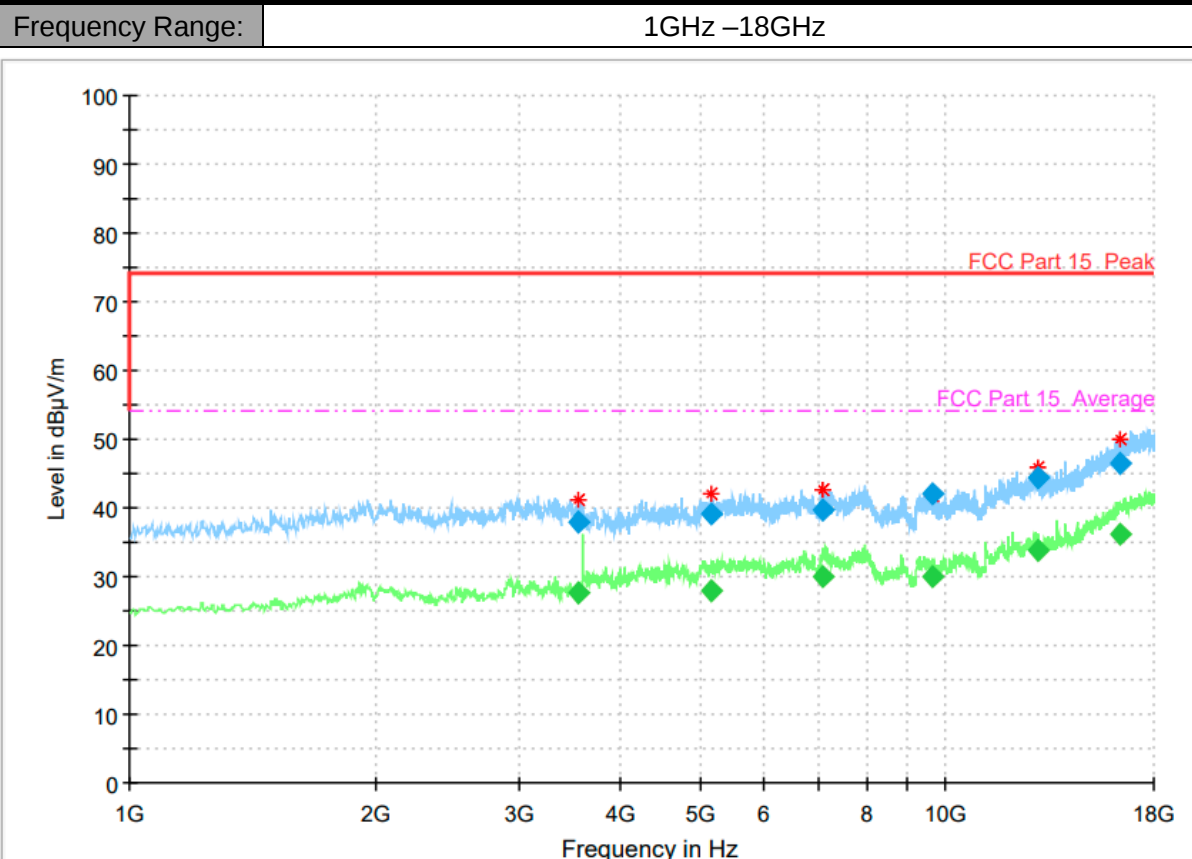
Final Result

Frequency (MHz)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
60.040155	29.39	40.00	10.61	1000.0	120.000	125.0	V	326.0	-15.3
148.021939	32.73	43.50	10.77	1000.0	120.000	225.0	H	256.0	-17.8
178.194205	37.92	43.50	5.58	1000.0	120.000	120.5	V	331.0	-16.2
179.805424	36.50	43.50	7.00	1000.0	120.000	195.0	H	73.0	-16.1
194.910704	35.03	43.50	8.47	1000.0	120.000	178.3	H	253.0	-15.4
291.214235	37.02	46.00	8.98	1000.0	120.000	113.9	H	242.0	-12.0

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.

Mode 1: Adapter charging+ G850 receiver +UA01<Figure 2>

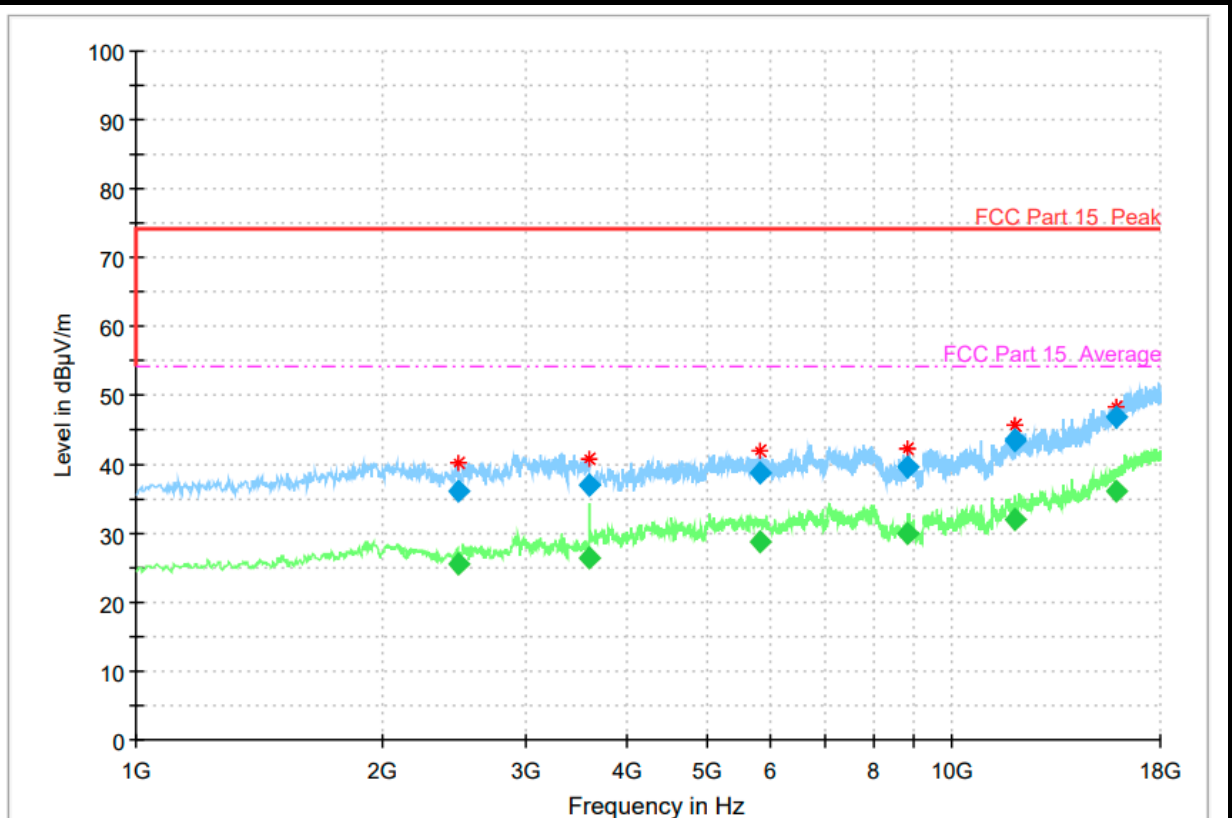


Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Band width	Height	Po l	Azimu th	Corr. (dB)
3559.200000	---	27.66	54.00	26.34	1.0	1000.	100.0	H	0.0	1.9
3559.200000	37.83	---	74.00	36.17	1.0	1000.	100.0	H	0.0	1.9
5147.600000	39.01	---	74.00	34.99	1.0	1000.	200.0	H	109.0	4.2
5147.600000	---	27.98	54.00	26.02	1.0	1000.	200.0	H	109.0	4.2
7079.400000	39.85	---	74.00	34.15	1.0	1000.	100.0	H	0.0	4.9
7079.400000	---	30.03	54.00	23.97	1.0	1000.	100.0	H	0.0	4.9
9626.400000	42.17	---	74.00	31.83	1.0	1000.	100.0	H	283.0	6.2
9626.400000	---	30.04	54.00	23.96	1.0	1000.	100.0	H	283.0	6.2
12951.000000	---	33.76	54.00	20.24	1.0	1000.	100.0	H	134.0	11.9
12951.000000	44.48	---	74.00	29.52	1.0	1000.	100.0	H	134.0	11.9
16407.800000	46.36	---	74.00	27.64	1.0	1000.	200.0	H	178.0	17.6
16407.800000	---	36.17	54.00	17.83	1.0	1000.	200.0	H	178.0	17.6

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)
2478.200000	---	25.53	54.00	28.47	1.0	1000.00	200.0	V	207.0	3.6
2478.200000	36.23	---	74.00	37.77	1.0	1000.00	200.0	V	207.0	3.6
3589.800000	36.93	---	74.00	37.07	1.0	1000.00	100.0	V	2.0	1.9
3589.800000	---	26.39	54.00	27.61	1.0	1000.00	100.0	V	2.0	1.9
5824.600000	38.83	---	74.00	35.17	1.0	1000.00	200.0	V	355.0	2.9
5824.600000	---	28.71	54.00	25.29	1.0	1000.00	200.0	V	355.0	2.9
8798.600000	39.72	---	74.00	34.28	1.0	1000.00	100.0	V	5.0	4.7
8798.600000	---	30.05	54.00	23.95	1.0	1000.00	100.0	V	5.0	4.7
11941.400000	---	32.04	54.00	21.96	1.0	1000.00	200.0	V	359.0	10.1
11941.400000	43.51	---	74.00	30.49	1.0	1000.00	200.0	V	359.0	10.1
15851.200000	46.77	---	74.00	27.23	1.0	1000.00	100.0	V	171.0	16.3
15851.200000	---	36.03	54.00	17.97	1.0	1000.00	100.0	V	171.0	16.3

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.

8.2 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

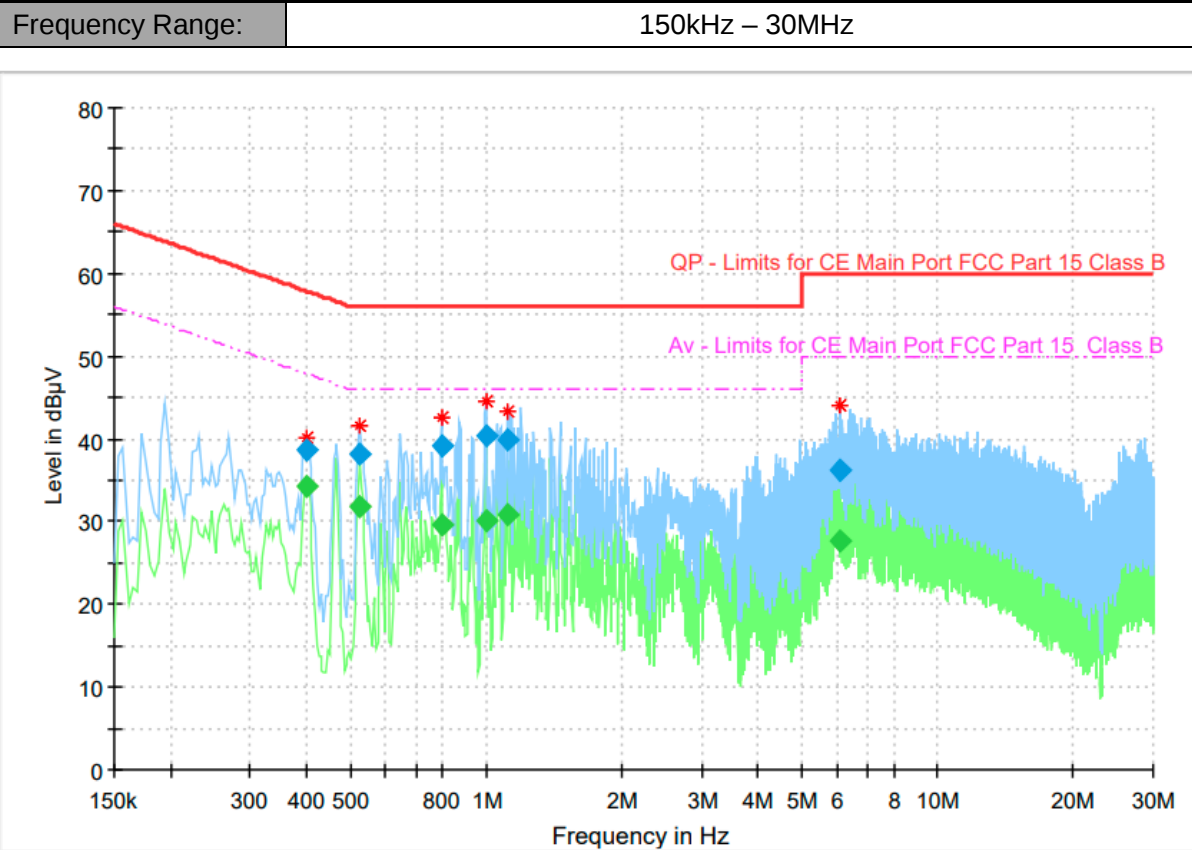
Voltage (V)	Frequency (Hz)	RBW	Sweep Time (s)
120	60	9 kHz	Auto

Uncertainty Measurement

The measurement uncertainty is 3.58dB (k=2).

Test Results

Mode 1: Adapter charging+ G850 receiver +UA01<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	---	34.19	47.85	13.66	15000.	9.000	L1	ON	9.6
0.399994	38.76	---	57.85	19.10	15000.	9.000	L1	ON	9.6
0.526856	38.08	---	56.00	17.92	15000.	9.000	N	ON	9.8
0.526856	---	31.87	46.00	14.13	15000.	9.000	N	ON	9.8
0.795506	39.20	---	56.00	16.80	15000.	9.000	N	ON	9.8
0.795506	---	29.63	46.00	16.37	15000.	9.000	N	ON	9.8
0.996994	40.32	---	56.00	15.68	15000.	9.000	N	ON	9.8
0.996994	---	30.15	46.00	15.85	15000.	9.000	N	ON	9.8
1.112663	39.96	---	56.00	16.04	15000.	9.000	N	ON	9.8
1.112663	---	30.78	46.00	15.22	15000.	9.000	N	ON	9.8
6.045375	---	27.56	50.00	22.44	15000.	9.000	L1	ON	9.8
6.045375	36.20	---	60.00	23.80	15000.	9.000	L1	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.
- 4.L1 and N line is all have been tested, the result of them is synthesized in the above data diagram.

Annex A Accreditation Certificate



Accredited Laboratory

A2LA has accredited

3IN (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 February 28, 2021

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

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