



TEST REPORT

No. I19D00137-EMC01

For

Client : Datalogic S.r.l.

Production : Smartphone

Model Name : MEMOR 10

Brand Name: Datalogic

FCC ID: U4GDL35US

IC ID: 3862E-DL35US

Hardware Version: V00 (US)

Software Version: 2.00.05.20190726

Issued date: 2019-08-21

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 East China Institute of Telecommunications
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:

East China Institute of Telecommunications

Add: 7-8F, G Area, No.668, Beijing East Road, Huangpu District, Shanghai, P. R. China

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Revision Version

| Report Number | Revision | Date | Memo |
|----------------------|-----------------|-------------|---------------------------------|
| I19D00137-EMC01 | 00 | 2019-08-21 | Initial creation of test report |

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1. Test Laboratory

1.1. Testing Location

| | |
|----------------------|---|
| Company Name: | ECIT Shanghai, East China Institute of Telecommunications |
| Address: | 7-8F, G Area, No. 668, Beijing East Road, Huangpu District, Shanghai, P. R. China |
| Postal Code: | 200001 |
| Telephone: | (+86)-021-63843300 |
| Fax: | (+86)-021-63843301 |
| FCC registration No: | 958356 |

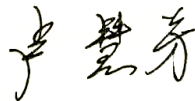
1.2. Testing Environment

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

1.3. Project data

| | |
|---------------------|------------|
| Project Leader: | Yu Anlu |
| Testing Start Date: | 2019-06-22 |
| Testing End Date: | 2019-07-18 |

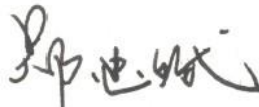
1.4. Signature



Lu Huifang
(Prepared this test report)



You Jinjun
(Reviewed this test report)



Zheng Zhongbin
(Approved this test report)

2. Client Information

2.1. Applicant Information

| | |
|--------------|---|
| Company Name | Datalogic S.r.l. |
| Address | Via San Vitalino no. 13, Calderara di Reno – 40012 (BO) - Italy |
| Telephone | +39 051 314 72 16 |
| Postcode | / |

2.2. Manufacturer Information

| | |
|--------------|---|
| Company Name | Datalogic S.r.l. |
| Address | Via San Vitalino no. 13, Calderara di Reno – 40012 (BO) - Italy |
| Telephone | +39 051 314 72 16 |
| Postcode | / |

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

3.1. About EUT

| | |
|-----------------------------------|---|
| Product Name | Smartphone |
| Model name | MEMOR 10 |
| GSM Frequency Band | GSM850/GSM900/GSM1800/GSM1900 |
| UMTS Frequency Band | Band I /Band II /BandIV/Band V /BandVIII |
| CDMA Frequency Band | BC0/BC1 |
| LTE Frequency Band | LTE 2/4/5/7/12/13/17/25/26 |
| LTE CA Frequency Band | CA_4A_4A/CA_4C/CA_7A-7A/CA_7C(Downlink Only) |
| Additional Communication Function | BT4.2, BLE; WiFi 802.11a,b,g,n,ac; NFC; GPS; GLONASS; WLC; Beidou; |

3.2. Internal Identification of EUT used during the test

| EUT ID* | SN or IMEI | HW Version | SW Version | Date of receipt |
|---------|-----------------|------------|------------------|-----------------|
| N01 | 359737090067954 | V00 (US) | 2.00.05.20190726 | 2019-06-21 |

*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 | S008ACM0500200 | NA |
| UA01 | USB Cable | USB2.0 A/M TO TYPE C/M CABLE 1.2M | NA |
| BA02 | Battery | BTDL35 | SCUDDL35E9030411089 |
| EA04 | Plug | NA | NA |
| AE1 | LAN Cable | NA | NA |
| AE2 | RS232 Cable | NA | NA |
| AE3 | VGA Cable | NA | NA |
| AE4 | Keyboard | KB212-B | CN-0Y88XT-65890-12I-005Q-A00 |
| AE5 | Mouse | MS111-P | CN-011D3V-71581-19J-1A64 |
| AE6 | Desktop PC | OptiPlex 790 DT | X8RP1 A01 APCC |
| AE7 | Notebook PC | DELL Latitude E6510 | NA |
| AE8 | SanDisk Ultra32GB | microSDHC UHS-I | 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 | 2019/6/21 |
| 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 |
| ICES-003 | Information Technology Equipment(Including Digital Apparatus)-Limits and Methods of Measurement | 2016 |

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 MEMOR 10, supporting GSM/WCDMA/LTE.etc, manufactured by Datalogic S.r.l. is a variant product for testing. ECIT only performed test cases which identified with Pass/Fail/Inc result in section 5.1.

ECIT 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 is a variant of I18D00022-EMC01 original report. We tested the worst mode of original report. For other information, please refer to the original report.

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 | CMU200 | 123126 | R&S | 2019-05-10 | 1 year |
| 2 | Test Receiver | ESU40 | 100307 | R&S | 2019-05-10 | 1 year |
| 3 | Trilog Antenna | VULB9163 | VULB9163-5 15 | Schwarzbeck | 2017-02-25 | 3 years |
| 4 | Double Ridged Guide | ETS-3117 | 00135885 | ETS | 2017-01-11 | 3 years |
| 5 | EMI Test Software | EMC32 V9.15 | NA | R&S | NA | NA |

6.1 AC Conducted Emission Equipment list

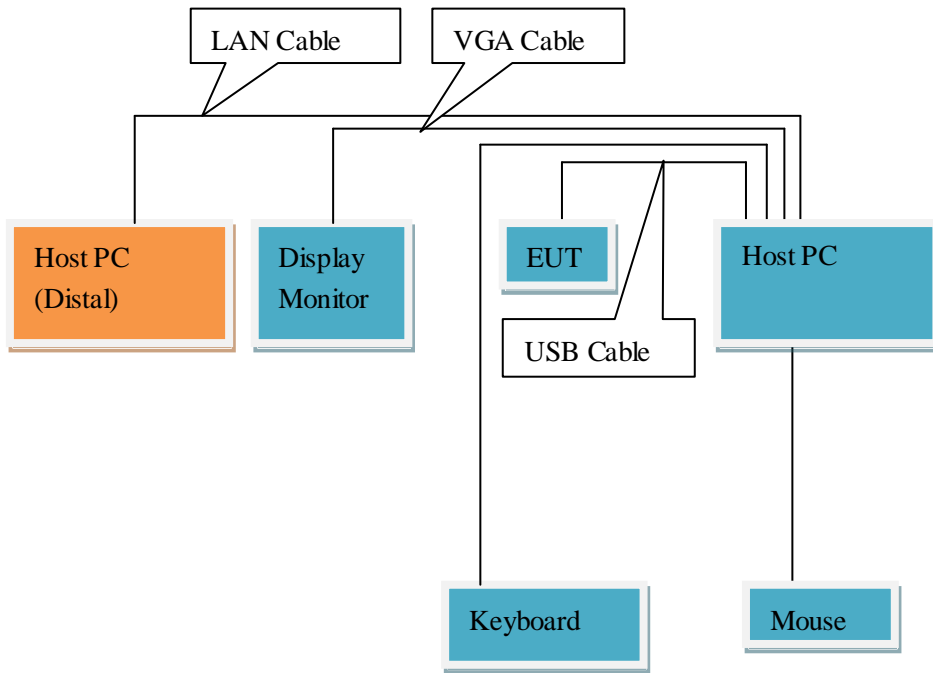
| Item | Instrument Name | Type | Serial Number | Manufacturer | Cal. Date | Cal. interval |
|------|-------------------------------|--------------------|---------------|--------------|------------|---------------|
| 1 | Universal Radio Communication | CMU200 | 123123 | R&S | 2019-05-10 | 1 year |
| 2 | Test Receiver | ESCI | 101235 | R&S | 2019-05-10 | 1 year |
| 3 | 2-Line V-Network | ENV216 | 101380 | R&S | 2019-05-10 | 1 year |
| 4 | EMI Test Software | EMC32 V10.35.02 | NA | R&S | NA | NA |

7. System Configuration during Test

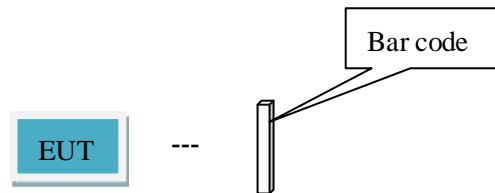
7.1 Test Mode

| Test Item | Function Type |
|--|---|
| AC Conducted Emission | Mode 1: USB cable (Data Link with PC) <Figure 1> |
| Radiated Emission | Mode 1: USB cable (Data Link with PC) <Figure 1> Mode 2: Scan mode<Figure 2> |
| Remark: <ol style="list-style-type: none">1. All test modes are performed, only the worst cases test data are recorded in this report.2. Data Link with PC means data application transferred mode between EUT and PC.3. Scan mode: Open SCAN HEAD to scan bar code | |

7.2 Connection Diagram of Test System



<Figure 1> Mode 1



<Figure 2> Mode 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

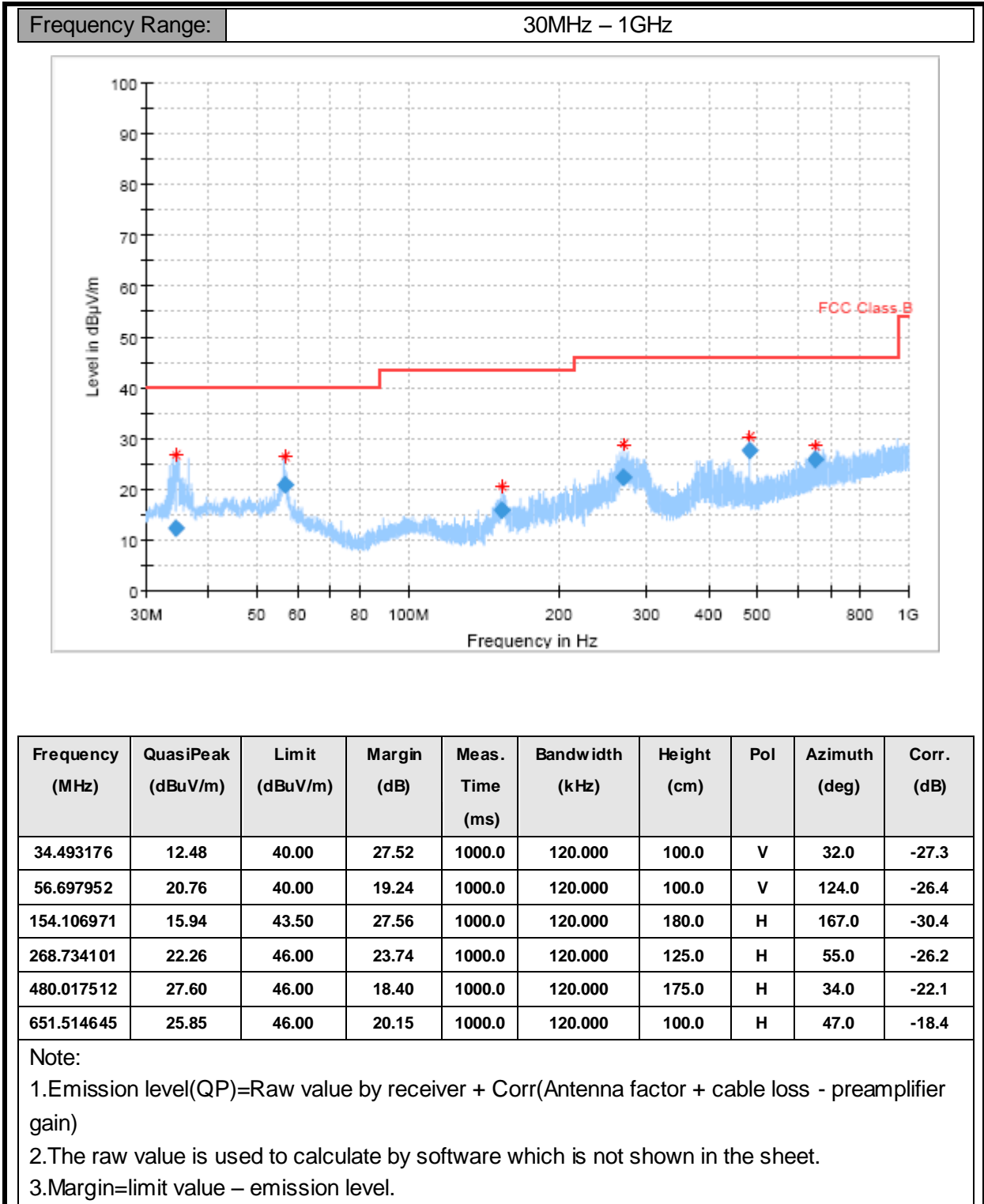
The measurement uncertainty (30MHz-1000MHz) is 4.98 dB (k=2).

The measurement uncertainty (1000MHz-18000MHz) is 5.06 dB (k=2).

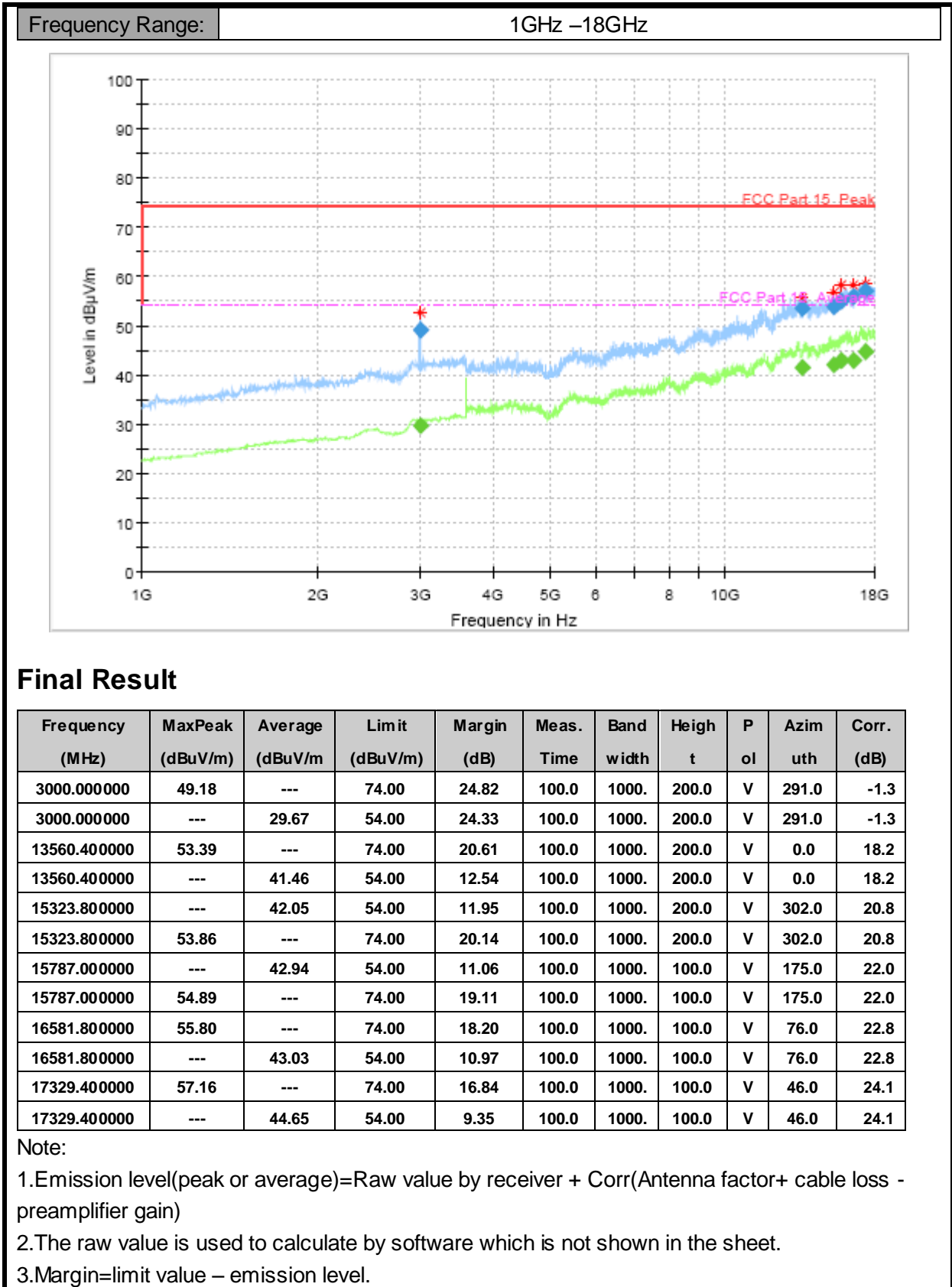
Test Results

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 1: USB cable (Data Link with PC) <Figure 1>



Mode 1: USB cable (Data Link with PC) <Figure 1>

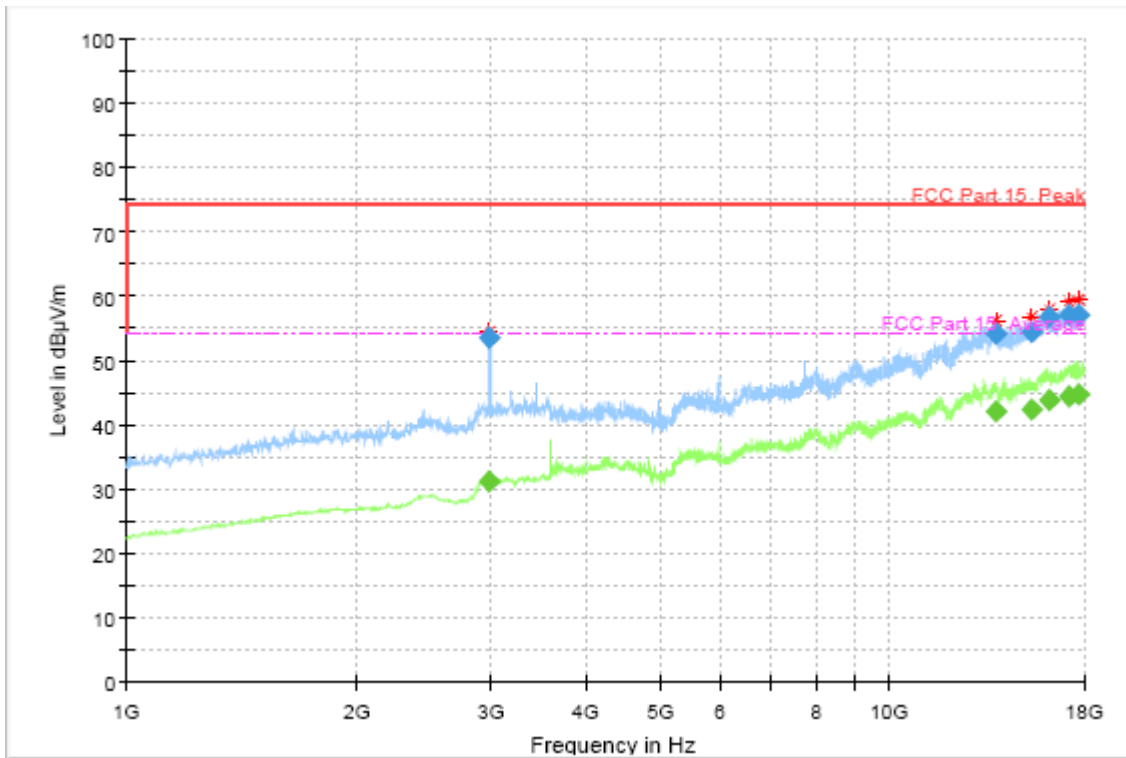


Final Result

| Frequency (MHz) | MaxPeak (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Meas. Time | Band width | Height | P ol | Azim uth | Corr. (dB) |
|-----------------|------------------|------------------|----------------|-------------|------------|------------|--------|------|----------|------------|
| 3000.000000 | 49.18 | --- | 74.00 | 24.82 | 100.0 | 1000. | 200.0 | V | 291.0 | -1.3 |
| 3000.000000 | --- | 29.67 | 54.00 | 24.33 | 100.0 | 1000. | 200.0 | V | 291.0 | -1.3 |
| 13560.400000 | 53.39 | --- | 74.00 | 20.61 | 100.0 | 1000. | 200.0 | V | 0.0 | 18.2 |
| 13560.400000 | --- | 41.46 | 54.00 | 12.54 | 100.0 | 1000. | 200.0 | V | 0.0 | 18.2 |
| 15323.800000 | --- | 42.05 | 54.00 | 11.95 | 100.0 | 1000. | 200.0 | V | 302.0 | 20.8 |
| 15323.800000 | 53.86 | --- | 74.00 | 20.14 | 100.0 | 1000. | 200.0 | V | 302.0 | 20.8 |
| 15787.000000 | --- | 42.94 | 54.00 | 11.06 | 100.0 | 1000. | 100.0 | V | 175.0 | 22.0 |
| 15787.000000 | 54.89 | --- | 74.00 | 19.11 | 100.0 | 1000. | 100.0 | V | 175.0 | 22.0 |
| 16581.800000 | 55.80 | --- | 74.00 | 18.20 | 100.0 | 1000. | 100.0 | V | 76.0 | 22.8 |
| 16581.800000 | --- | 43.03 | 54.00 | 10.97 | 100.0 | 1000. | 100.0 | V | 76.0 | 22.8 |
| 17329.400000 | 57.16 | --- | 74.00 | 16.84 | 100.0 | 1000. | 100.0 | V | 46.0 | 24.1 |
| 17329.400000 | --- | 44.65 | 54.00 | 9.35 | 100.0 | 1000. | 100.0 | V | 46.0 | 24.1 |

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 | Height | Po l | Azimuth | Corr. (dB) |
|-----------------|------------------|------------------|----------------|-------------|------------|-----------|--------|------|---------|------------|
| 2989.800000 | --- | 31.14 | 54.00 | 22.86 | 100.0 | 1000.00 | 200.0 | H | 346.0 | -1.2 |
| 2989.800000 | 53.64 | --- | 74.00 | 20.36 | 100.0 | 1000.00 | 200.0 | H | 346.0 | -1.2 |
| 13753.800000 | 54.05 | --- | 74.00 | 19.95 | 100.0 | 1000.00 | 100.0 | H | 10.0 | 18.8 |
| 13753.800000 | --- | 41.99 | 54.00 | 12.01 | 100.0 | 1000.00 | 100.0 | H | 10.0 | 18.8 |
| 15328.200000 | 54.52 | --- | 74.00 | 19.48 | 100.0 | 1000.00 | 200.0 | H | 199.0 | 20.9 |
| 15328.200000 | --- | 42.36 | 54.00 | 11.64 | 100.0 | 1000.00 | 200.0 | H | 199.0 | 20.9 |
| 16134.000000 | 56.62 | --- | 74.00 | 17.38 | 100.0 | 1000.00 | 100.0 | H | 185.0 | 22.4 |
| 16134.000000 | --- | 43.74 | 54.00 | 10.26 | 100.0 | 1000.00 | 100.0 | H | 185.0 | 22.4 |
| 17201.800000 | --- | 44.53 | 54.00 | 9.47 | 100.0 | 1000.00 | 100.0 | H | 155.0 | 24.2 |
| 17201.800000 | 56.97 | --- | 74.00 | 17.03 | 100.0 | 1000.00 | 100.0 | H | 155.0 | 24.2 |
| 17677.600000 | 57.18 | --- | 74.00 | 16.82 | 100.0 | 1000.00 | 200.0 | H | 231.0 | 24.4 |
| 17677.600000 | --- | 44.73 | 54.00 | 9.27 | 100.0 | 1000.00 | 200.0 | H | 231.0 | 24.4 |

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.

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 |

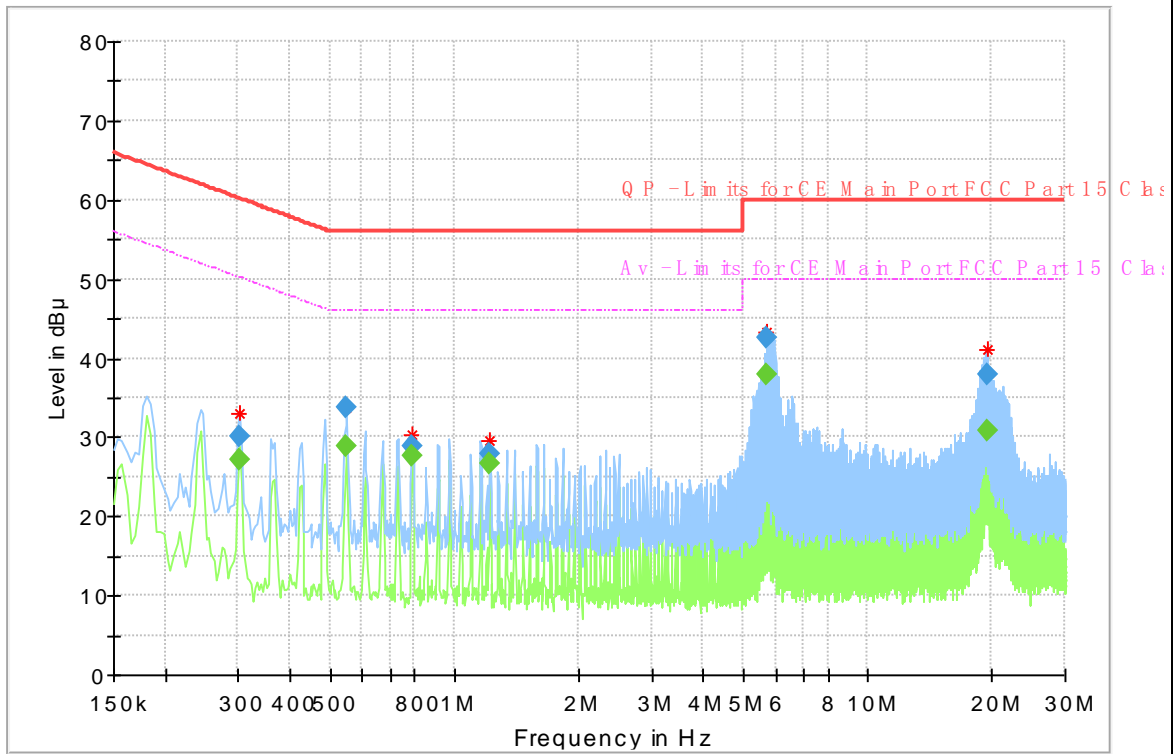
Uncertainty Measurement

The measurement uncertainty is 3.66dB (k=2).

Test Results

Mode 1: USB cable (Data Link with PC) <Figure 1>

Frequency Range: 150kHz – 30MHz



| Frequency (MHz) | QuasiPeak (dBµ V) | Average (dBµ V) | Limit (dBµ V) | Margin (dB) | Meas. Time | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|-------------------|-----------------|---------------|-------------|------------|-----------------|------|--------|------------|
| 0.302981 | --- | 27.15 | 50.16 | 23.01 | 15000. | 9.000 | L1 | ON | 9.6 |
| 0.302981 | 30.01 | --- | 60.16 | 30.16 | 15000. | 9.000 | L1 | ON | 9.6 |
| 0.549244 | --- | 28.76 | 46.00 | 17.24 | 15000. | 9.000 | L1 | ON | 9.6 |
| 0.549244 | 33.77 | --- | 56.00 | 22.23 | 15000. | 9.000 | L1 | ON | 9.6 |
| 0.791775 | 28.89 | --- | 56.00 | 27.11 | 15000. | 9.000 | N | ON | 9.8 |
| 0.791775 | --- | 27.60 | 46.00 | 18.40 | 15000. | 9.000 | N | ON | 9.8 |
| 1.220869 | --- | 26.64 | 46.00 | 19.36 | 15000. | 9.000 | N | ON | 9.8 |
| 1.220869 | 27.90 | --- | 56.00 | 28.10 | 15000. | 9.000 | N | ON | 9.8 |
| 5.672250 | --- | 37.81 | 50.00 | 12.19 | 15000. | 9.000 | N | ON | 10.0 |
| 5.672250 | 42.63 | --- | 60.00 | 17.37 | 15000. | 9.000 | N | ON | 10.0 |
| 19.578619 | 37.81 | --- | 60.00 | 22.19 | 15000. | 9.000 | L1 | ON | 10.1 |
| 19.578619 | --- | 30.91 | 50.00 | 19.09 | 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.
- 4.L1 and N line is all have been tested, the result of them is synthesized in the above data diagram.

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