

# EMC TEST REPORT

**Applicant**      Nokia Shanghai Bell Co., Ltd.

**FCC ID**          2ADZRG1426GA

**Product**        NOKIA ONT

**Brand**           NOKIA

**Model**          G-1426G-A

**Report No.**     R2305A0552-E1

**Issue Date**     August 31, 2023

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC Code CFR47 Part15B (2022)/ ANSI C63.4-2014**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

*Liu Wei*

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## Summary of measurement results

| Number                                                                                                                                                                                                                                                                                | Test Case          | Clause in FCC Rules             | Conclusion |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------|------------|
| 1                                                                                                                                                                                                                                                                                     | Radiated Emission  | FCC Part15.109, ANSI C63.4-2014 | PASS       |
| 2                                                                                                                                                                                                                                                                                     | Conducted Emission | FCC Part15.107, ANSI C63.4-2014 | PASS       |
| Date of Testing: July 5, 2023 ~ August 2, 2023                                                                                                                                                                                                                                        |                    |                                 |            |
| Date of Sample Received: July 4, 2023                                                                                                                                                                                                                                                 |                    |                                 |            |
| Note: All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. |                    |                                 |            |

# 1 Test Laboratory

## 1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

## 1.2 Test Facility

### **FCC (Designation number: CN1179, Test Firm Registration Number: 446626)**

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

### **A2LA (Certificate Number: 3857.01)**

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

## 1.3 Testing Location

|            |                                                                                  |
|------------|----------------------------------------------------------------------------------|
| Company:   | TA Technology (Shanghai) Co., Ltd.                                               |
| Address:   | Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China                       |
| City:      | Shanghai                                                                         |
| Post code: | 201201                                                                           |
| Country:   | P. R. China                                                                      |
| Contact:   | Fan Guangchang                                                                   |
| Telephone: | +86-021-50791141/2/3                                                             |
| Fax:       | +86-021-50791141/2/3-8000                                                        |
| Website:   | <a href="http://www.ta-shanghai.com">http://www.ta-shanghai.com</a>              |
| E-mail:    | <a href="mailto:fanguangchang@ta-shanghai.com">fanguangchang@ta-shanghai.com</a> |

## 2 General Description of Equipment Under Test

### 2.1 Applicant and Manufacturer Information

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Applicant</b>            | Nokia Shanghai Bell Co., Ltd.                                          |
| <b>Applicant address</b>    | No.388, Ningqiao Rd, Pilot Free Trade Zone Shanghai, 201206 P.R. China |
| <b>Manufacturer</b>         | Nokia of America Corporation                                           |
| <b>Manufacturer address</b> | 2301 Sugar Bush Rd. Raleigh, NC 27612                                  |

### 2.2 General Information

| EUT Description        |                                                                                                                                                 |                     |               |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------|
| Device Type            | Movable Device                                                                                                                                  |                     |               |
| Model                  | G-1426G-A                                                                                                                                       |                     |               |
| SN                     | ALCLFCC9557A                                                                                                                                    |                     |               |
| HW Version             | PEM2                                                                                                                                            |                     |               |
| SW Version             | 3TN00383                                                                                                                                        |                     |               |
| Power Rating           | DC 12V                                                                                                                                          |                     |               |
| Connecting I/O Port(s) | Please refer to the User's Manual.                                                                                                              |                     |               |
| Antenna Type           | Wi-Fi 2.4G                                                                                                                                      | External Antenna    |               |
|                        |                                                                                                                                                 | PCB onboard Antenna |               |
|                        | Wi-Fi 5G                                                                                                                                        | External Antenna    |               |
| Frequency              | Band                                                                                                                                            | Tx (MHz)            | Rx (MHz)      |
|                        | Wi-Fi 2.4G                                                                                                                                      | 2400 ~ 2483.5       | 2400 ~ 2483.5 |
|                        | Wi-Fi 5G (U-NII-1)                                                                                                                              | 5150 ~ 5250         | 5150 ~ 5250   |
|                        | Wi-Fi 5G (U-NII-2A)                                                                                                                             | 5250 ~ 5350         | 5250 ~ 5350   |
|                        | Wi-Fi 5G (U-NII-2C)                                                                                                                             | 5470 ~ 5725         | 5470 ~ 5725   |
|                        | Wi-Fi 5G (U-NII-3)                                                                                                                              | 5725 ~ 5850         | 5725 ~ 5850   |
| EUT Accessory          |                                                                                                                                                 |                     |               |
| Adapter 1              | Manufacturer: SHENZHEN RUIDE ELECTRONIC INDUSTRIAL CO.,LTD<br>Model: RD1201500-C55-198MG<br>Part Number: BW120150-UC6C-LL05; BW120150-UC6C-HH00 |                     |               |
| Adapter 2              | Manufacturer: SHENZHEN RUIDE ELECTRONIC INDUSTRIAL CO.,LTD<br>Model: RD1201500-C55-198OG<br>Part Number: BW120150-EC6C-LL05; BW120150-EC6C-HH00 |                     |               |
| Adapter 3              | Manufacturer: SHENZHEN RUIDE ELECTRONIC INDUSTRIAL CO.,LTD<br>Model: RD1201500-C55-198YG                                                        |                     |               |

|                                                                                                                   |                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
|                                                                                                                   | Part Number: BW120150-YC6C-LL05                                                                                 |
| Adapter 4                                                                                                         | Manufacturer: XIAMEN KELI ELECTRONICS CO.,LTD<br>Model: KL-WA120150-H1<br>Part Number: SW-WB330TEA; SW-WB330TEC |
| Adapter 5                                                                                                         | Manufacturer: XIAMEN KELI ELECTRONICS CO.,LTD<br>Model: KL-AD3060VA<br>Part Number: SW-WB330TC6; SW-WB330TC7    |
| Adapter 6                                                                                                         | Manufacturer: XIAMEN KELI ELECTRONICS CO.,LTD<br>Model: KL-AD3060VAB<br>Part Number: SW-WB330BA                 |
| Note:<br>1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant. |                                                                                                                 |

| Configuration                                                                                                                                                                                        | Configuration 1 | Configuration 2 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|
| Model                                                                                                                                                                                                | G-1426G-A       | G-1426G-A       |
| USB                                                                                                                                                                                                  | with USB        | without USB     |
| Others                                                                                                                                                                                               | the same        |                 |
| During the test, the preliminary test was performed in all Configuration, Configuration 1 is selected as the worst condition. The test data of the worst-case condition was recorded in this report. |                 |                 |

#### Auxiliary test equipment

| No. | Name           | Brand name | Model                             |
|-----|----------------|------------|-----------------------------------|
| 1   | Testcenter     | Spirent    | SPT-C1                            |
| 2   | OLT            | NOKIA      | 7362 ISAM DF-16GW                 |
| 3   | Telephone      | BOTEL      | HCD6238(20)P/TSDL13               |
| 4   | U-Disk         | SanDisk    | Cruzer Blade 32GB/SDCZ74-032G-Z35 |
| 5   | PC (1)         | HP         | EliteBook 745 G3                  |
| 6   | PC (2), PC (3) | ThinkPad   | T480                              |

#### Hardware code information

| Configuration List:                                                                                                                                                                               |            |                                                         |                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------------------------------------------|---------------------------------------------------------|
| Brand Name                                                                                                                                                                                        | Model Name | ONT Package Part Number<br>(KIT Code)                   | ONT Enclosure Part Number<br>(EMA Code)                 |
| NOKIA                                                                                                                                                                                             | G-1426G-A  | 3TN00456XXXX (X can be any letter from A to Z or blank) | 3TN00384XXXX (X can be any letter from A to Z or blank) |
| Explanation of the part number: XXXX in the part number varies according to different customer markets, the products have no differences on hardware, which have no impact on the EMC and Safety. |            |                                                         |                                                         |

## 2.3 Applied Standards

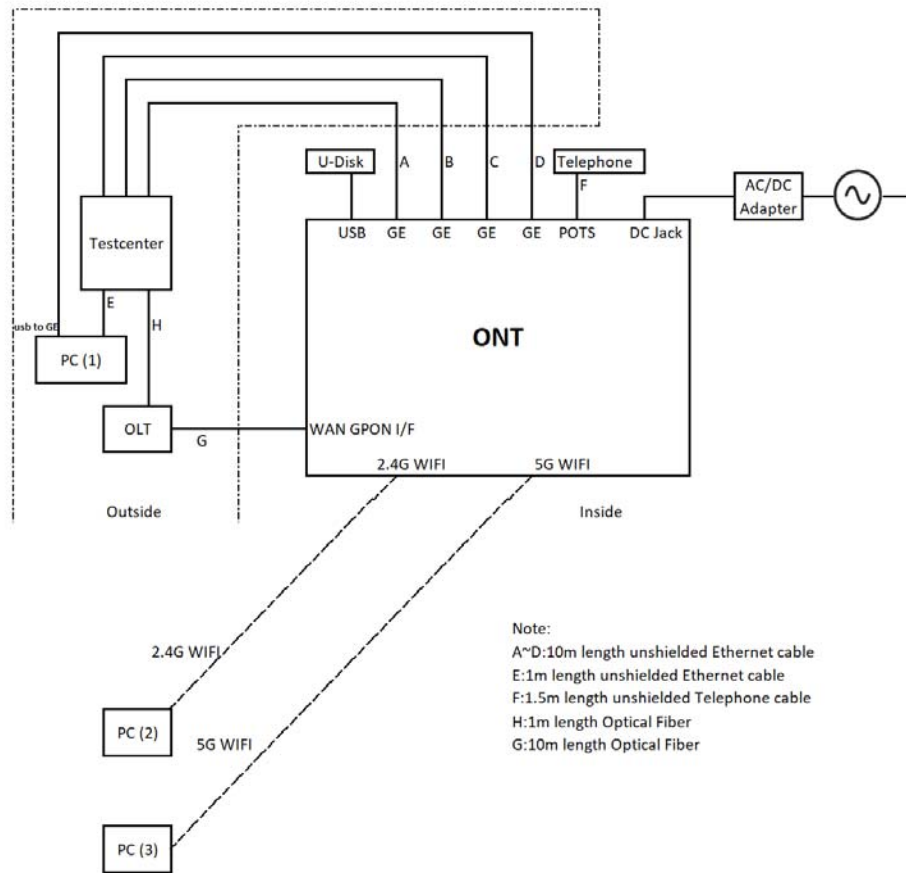
According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

### Test standards

**FCC Code CFR47 Part15B (2022)**

**ANSI C63.4-2014**

## 2.4 Test Mode



### 3 Test Case Results

#### 3.1 Radiated Emission

##### Ambient Condition

| Temperature | Relative humidity |
|-------------|-------------------|
| 15°C~35°C   | 30%~60%           |

##### Methods of Measurement

The EUT is placed on a non-metallic table 0.8m above the horizontal metal reference ground plane. The distance between EUT and receive antenna should be 3 meters. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2014. Sweep the whole frequency band through the range from 30MHz to the 5th harmonic of the carrier. During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum of radiated signal level.

The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing. During the test, the EUT is worked at maximum output power.

Set the spectrum analyzer in the following:

Below 1GHz:

RBW=100 kHz / VBW=300 kHz / Sweep=AUTO

Above 1GHz:

(a) PEAK Detector: RBW=1MHz / VBW=3MHz/ Sweep=AUTO

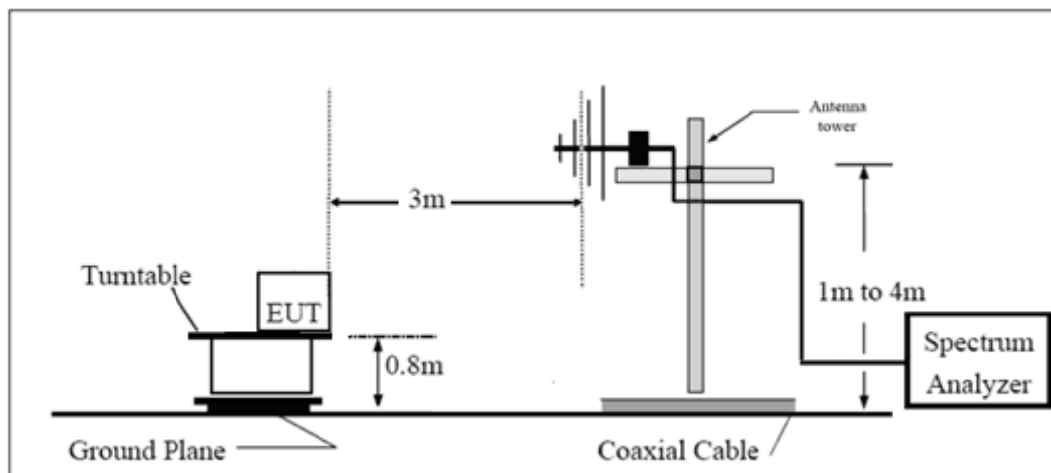
(b) AVERAGE Detector: RBW=1MHz / VBW=3MHz / Sweep=AUTO

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the worst case was recorded.

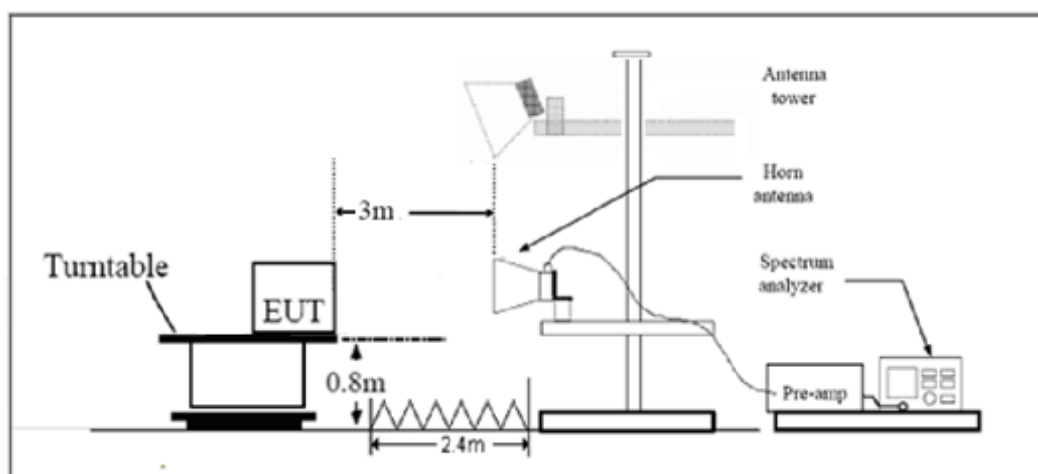
During the test, EUT is connected to a laptop via a USB cable in the case of Transfer Data mode. The EUT is used as the peripheral equipment of the PC. The data is transferred from EUT to PC; PC is connected to server via a long LAN cable.

## Test Setup

### Below 1GHz



### Above 1GHz



Note: Area side: 2.4mX3.6m

Antenna Tower meets ANSI C63.4 requirements for measurements above 1 GHz by keeping the antenna aimed at the EUT during the antenna's ascent/ descent along the antenna mast.

## Limits

### Class B

| Frequency (MHz)                                                                 | Field Strength (dBμV/m) | Detector        |
|---------------------------------------------------------------------------------|-------------------------|-----------------|
| 30 -88                                                                          | 40.0                    | Quasi-peak      |
| 88-216                                                                          | 43.5                    | Quasi-peak      |
| 216 – 960                                                                       | 46.0                    | Quasi-peak      |
| 960-1000                                                                        | 54.0                    | Quasi-peak      |
| 1000-5 <sup>th</sup> harmonic of the highest frequency or 40GHz, which is lower | 54<br>74                | Average<br>Peak |

### Frequency range of radiated measurements

| Highest frequency generated or used in the device or on which the device operates or tunes (MHz) | Upper frequency of measurement range (MHz)                           |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Below 1.705                                                                                      | 30                                                                   |
| 1.705-108                                                                                        | 1000                                                                 |
| 108-500                                                                                          | 2000                                                                 |
| 500-1000                                                                                         | 5000                                                                 |
| Above 1000                                                                                       | 5th harmonic of the highest frequency or 40 GHz, whichever is lower. |

## Test Results

Sweep the whole frequency band through the range from 30MHz to the 5th harmonic of the carrier.

The following graphs display the maximum values of horizontal and vertical by software.

For above 1GHz, Blue trace uses the peak detection, Green trace uses the average detection.

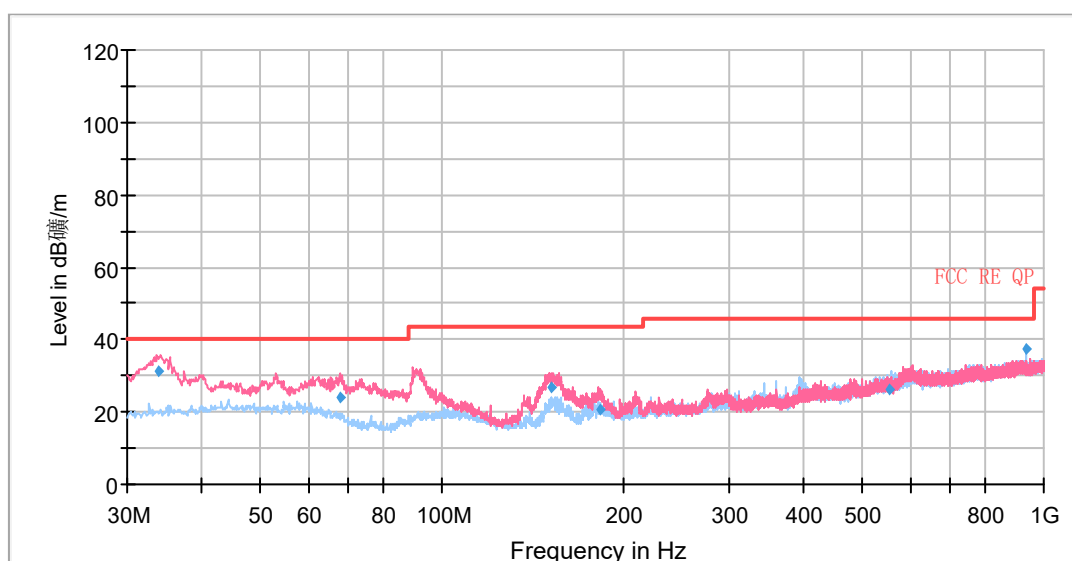
A symbol (  $\text{dB}\mu\text{V/m}$  ) in the test plot below means (dB $\mu\text{V/m}$ )

A symbol (  $\text{dB V/}$  ) in the test plot below means (dB $\mu\text{V/m}$ )

US

Adapter 1

BW120150-UC6C-LL05 is the worst case

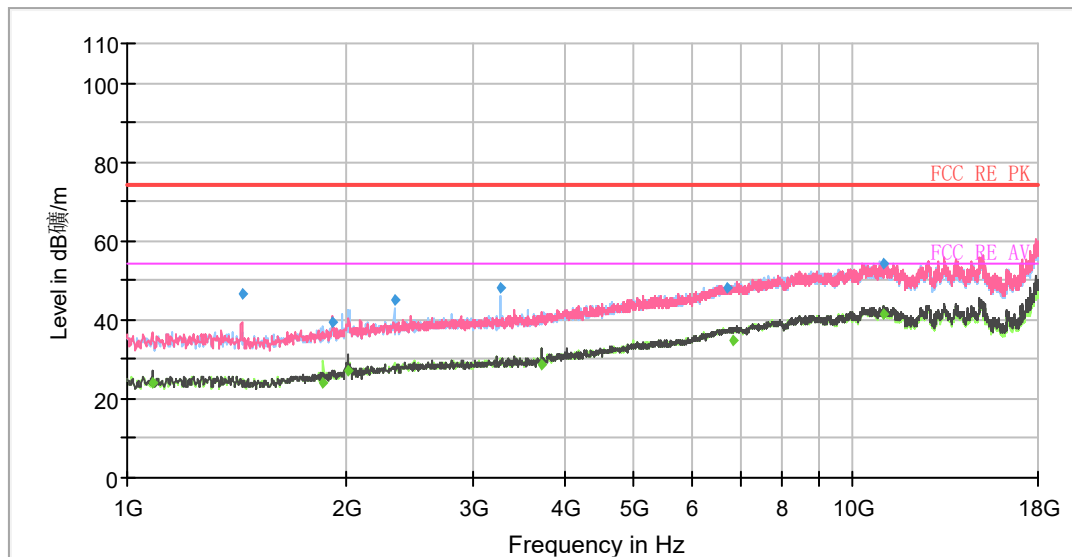


Radiated Emission from 30MHz to 1GHz

| Frequency (MHz) | Quasi-Peak (dB $\mu\text{V/m}$ ) | Limit (dB $\mu\text{V/m}$ ) | Margin (dB) | Height (cm) | Polarization | Azimuth (deg) | Correct Factor (dB) |
|-----------------|----------------------------------|-----------------------------|-------------|-------------|--------------|---------------|---------------------|
| 33.81           | 31.44                            | 40.00                       | 8.56        | 100.0       | V            | 76.00         | 13                  |
| 67.61           | 23.82                            | 40.00                       | 16.18       | 104.0       | V            | 0.00          | 11                  |
| 151.53          | 26.97                            | 43.50                       | 16.53       | 103.0       | V            | 336.00        | 9                   |
| 182.96          | 20.87                            | 43.50                       | 22.63       | 103.0       | V            | 212.00        | 12                  |
| 554.29          | 26.50                            | 46.00                       | 19.50       | 100.0       | H            | 85.00         | 21                  |
| 933.00          | 37.33                            | 46.00                       | 8.67        | 100.0       | H            | 1.00          | 26                  |

Remark: 1. Correction Factor = Antenna factor + Insertion loss(cable loss+amplifier gain)

2. Margin = Limit – Quasi-Peak



Note: The signal beyond the limit is carrier.

Radiated Emission from 1GHz to 18GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1082.88         | ---              | 23.91            | 54.00            | 30.09       | 1000.00         | 103.0       | V   | 164.00        | -20          |
| 1437.75         | 46.66            | ---              | 74.00            | 27.34       | 1000.00         | 100.0       | V   | 96.00         | -18          |
| 1864.88         | ---              | 23.86            | 54.00            | 30.14       | 1000.00         | 100.0       | H   | 9.00          | -17          |
| 1915.88         | 39.58            | ---              | 74.00            | 34.42       | 1000.00         | 191.0       | V   | 1.00          | -17          |
| 2015.75         | ---              | 27.04            | 54.00            | 26.96       | 1000.00         | 103.0       | V   | 192.00        | -17          |
| 2332.38         | 45.05            | ---              | 74.00            | 28.95       | 1000.00         | 210.0       | H   | 336.00        | -16          |
| 3265.25         | 47.89            | ---              | 74.00            | 26.11       | 1000.00         | 100.0       | H   | 62.00         | -14          |
| 3730.63         | ---              | 28.41            | 54.00            | 25.59       | 1000.00         | 109.0       | H   | 284.00        | -13          |
| 6720.50         | 47.97            | ---              | 74.00            | 26.03       | 1000.00         | 109.0       | H   | 62.00         | -2           |
| 6848.00         | ---              | 34.90            | 54.00            | 19.10       | 1000.00         | 198.0       | H   | 175.00        | -1           |
| 11027.88        | ---              | 41.50            | 54.00            | 12.50       | 1000.00         | 104.0       | V   | 305.00        | 4            |
| 11030.00        | 54.41            | ---              | 74.00            | 19.59       | 1000.00         | 190.0       | H   | 350.00        | 4            |

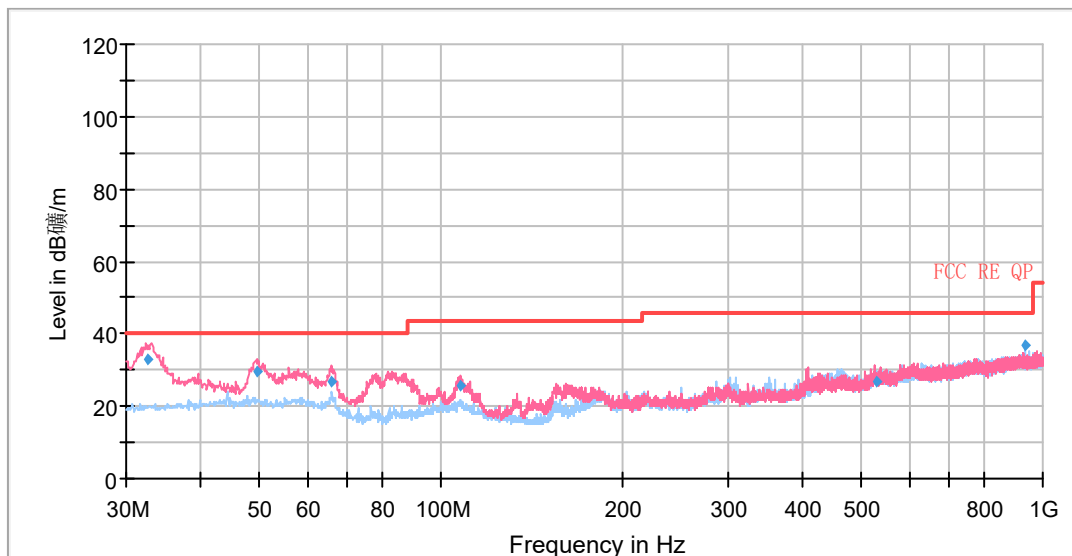
Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)

2. Peak Margin = Limit - MAX Peak/ Average

EU

Adapter 2

BW120150-EC6C-HH00 is the worst case

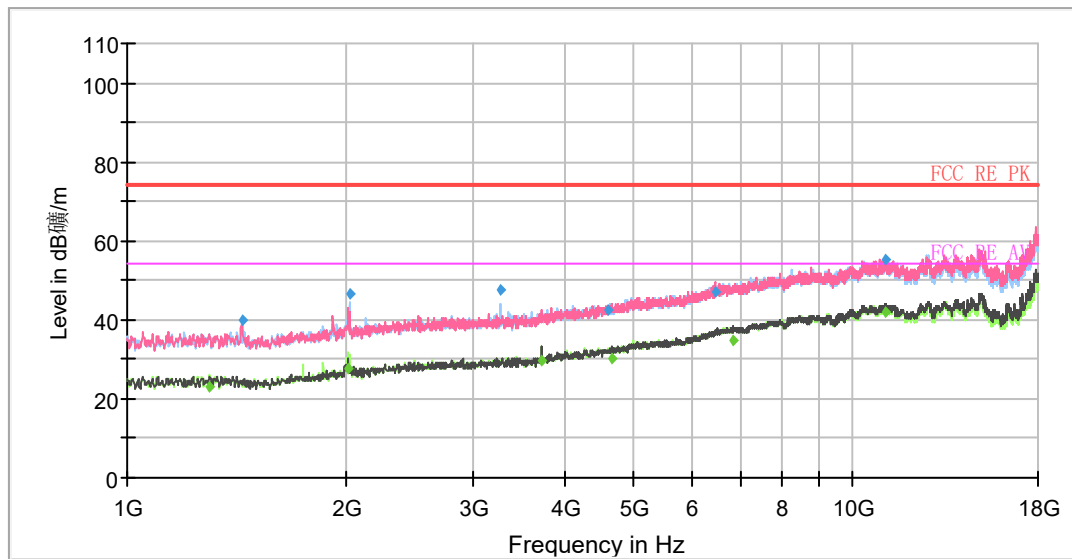


Radiated Emission from 30MHz to 1GHz

| Frequency (MHz) | Quasi-Peak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Polarization | Azimuth (deg) | Correct Factor (dB) |
|-----------------|---------------------|----------------|-------------|-------------|--------------|---------------|---------------------|
| 32.58           | 32.72               | 40.00          | 7.28        | 100.0       | V            | 82.00         | 13                  |
| 49.43           | 29.50               | 40.00          | 10.50       | 102.0       | V            | 126.00        | 14                  |
| 65.96           | 27.02               | 40.00          | 12.98       | 102.0       | V            | 258.00        | 12                  |
| 107.54          | 25.63               | 43.50          | 17.87       | 100.0       | V            | 70.00         | 13                  |
| 529.29          | 26.74               | 46.00          | 19.26       | 102.0       | V            | 216.00        | 20                  |
| 933.00          | 36.68               | 46.00          | 9.32        | 100.0       | H            | 22.00         | 26                  |

Remark: 1. Correction Factor = Antenna factor + Insertion loss(cable loss+amplifier gain)

2. Margin = Limit – Quasi-Peak



Note: The signal beyond the limit is carrier.

Radiated Emission from 1GHz to 18GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1299.63         | ---              | 23.10            | 54.00            | 30.90       | 1000.00         | 191.0       | H   | 353.00        | -19          |
| 1439.88         | 39.97            | ---              | 74.00            | 34.03       | 1000.00         | 104.0       | V   | 146.00        | -18          |
| 2013.63         | ---              | 27.49            | 54.00            | 26.51       | 1000.00         | 110.0       | H   | 163.00        | -17          |
| 2022.13         | 46.31            | ---              | 74.00            | 27.69       | 1000.00         | 101.0       | H   | 153.00        | -17          |
| 3265.25         | 47.74            | ---              | 74.00            | 26.26       | 1000.00         | 109.0       | H   | 1.00          | -14          |
| 3730.63         | ---              | 29.48            | 54.00            | 24.52       | 1000.00         | 100.0       | H   | 291.00        | -13          |
| 4591.25         | 42.49            | ---              | 74.00            | 31.51       | 1000.00         | 198.0       | V   | 92.00         | -9           |
| 4644.38         | ---              | 30.01            | 54.00            | 23.99       | 1000.00         | 100.0       | H   | 327.00        | -9           |
| 6450.63         | 47.18            | ---              | 74.00            | 26.82       | 1000.00         | 198.0       | V   | 207.00        | -3           |
| 6850.13         | ---              | 34.88            | 54.00            | 19.12       | 1000.00         | 100.0       | V   | 253.00        | -1           |
| 11083.13        | 55.31            | ---              | 74.00            | 18.69       | 1000.00         | 193.0       | V   | 222.00        | 4            |
| 11089.50        | ---              | 41.89            | 54.00            | 12.11       | 1000.00         | 102.0       | V   | 250.00        | 4            |

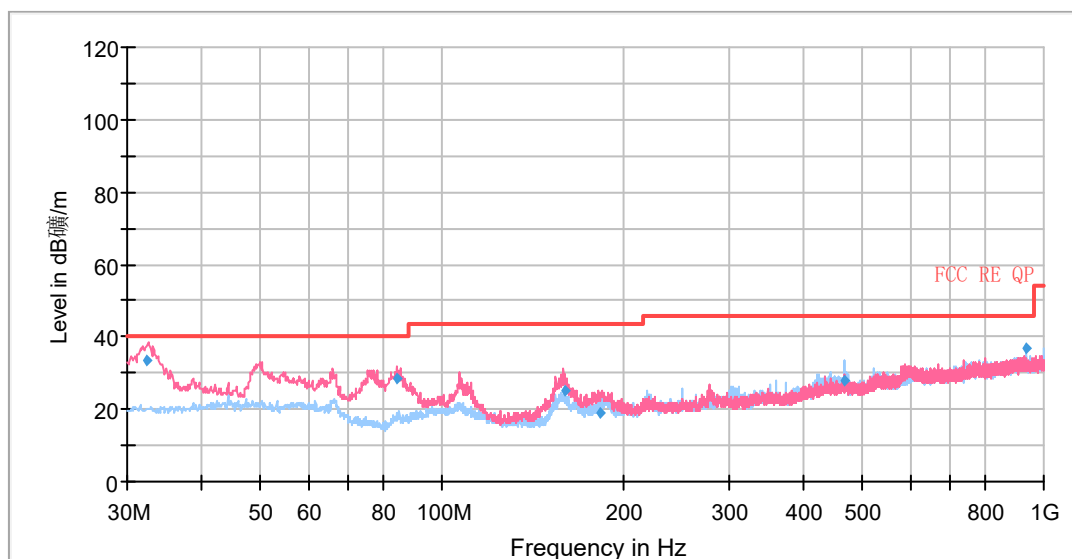
Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)

2. Peak Margin = Limit –MAX Peak/ Average

UK

Adapter 3

BW120150-YC6C-LL05

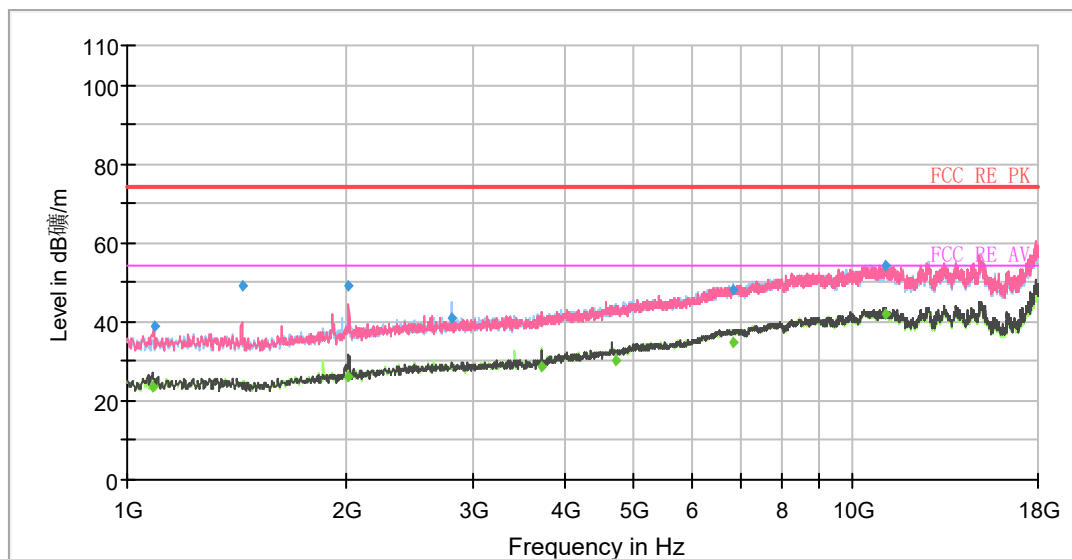


Radiated Emission from 30MHz to 1GHz

| Frequency (MHz) | Quasi-Peak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Polarization | Azimuth (deg) | Correct Factor (dB) |
|-----------------|---------------------|----------------|-------------|-------------|--------------|---------------|---------------------|
| 32.38           | 33.65               | 40.00          | 6.35        | 100.0       | V            | 83.00         | 13                  |
| 84.06           | 28.49               | 40.00          | 11.51       | 123.0       | V            | 112.00        | 9                   |
| 160.02          | 25.23               | 43.50          | 18.27       | 103.0       | V            | 8.00          | 10                  |
| 183.20          | 19.14               | 43.50          | 24.36       | 100.0       | V            | 214.00        | 12                  |
| 466.49          | 28.03               | 46.00          | 17.97       | 208.0       | H            | 2.00          | 19                  |
| 933.00          | 36.61               | 46.00          | 9.39        | 100.0       | H            | 2.00          | 26                  |

Remark: 1. Correction Factor = Antenna factor + Insertion loss(cable loss+amplifier gain)

2. Margin = Limit – Quasi-Peak



Note: The signal beyond the limit is carrier.

Radiated Emission from 1GHz to 18GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1085.00         | ---              | 23.30            | 54.00            | 30.70       | 1000.00         | 109.0       | V   | 205.00        | -20          |
| 1089.25         | 38.68            | ---              | 74.00            | 35.32       | 1000.00         | 102.0       | V   | 201.00        | -20          |
| 1439.88         | 49.01            | ---              | 74.00            | 24.99       | 1000.00         | 102.0       | V   | 170.00        | -18          |
| 2020.00         | ---              | 25.97            | 54.00            | 28.03       | 1000.00         | 198.0       | V   | 186.00        | -17          |
| 2020.00         | 49.19            | ---              | 74.00            | 24.81       | 1000.00         | 190.0       | V   | 180.00        | -17          |
| 2797.75         | 40.73            | ---              | 74.00            | 33.27       | 1000.00         | 109.0       | H   | 136.00        | -15          |
| 3730.63         | ---              | 28.41            | 54.00            | 25.59       | 1000.00         | 198.0       | H   | 41.00         | -13          |
| 4723.00         | ---              | 29.98            | 54.00            | 24.02       | 1000.00         | 100.0       | H   | 78.00         | -9           |
| 6850.13         | 48.08            | ---              | 74.00            | 25.92       | 1000.00         | 110.0       | H   | 0.00          | -1           |
| 6850.13         | ---              | 34.95            | 54.00            | 19.05       | 1000.00         | 210.0       | H   | 76.00         | -1           |
| 11085.25        | ---              | 42.03            | 54.00            | 11.97       | 1000.00         | 109.0       | V   | 258.00        | 4            |
| 11087.38        | 54.41            | ---              | 74.00            | 19.59       | 1000.00         | 198.0       | H   | 96.00         | 4            |

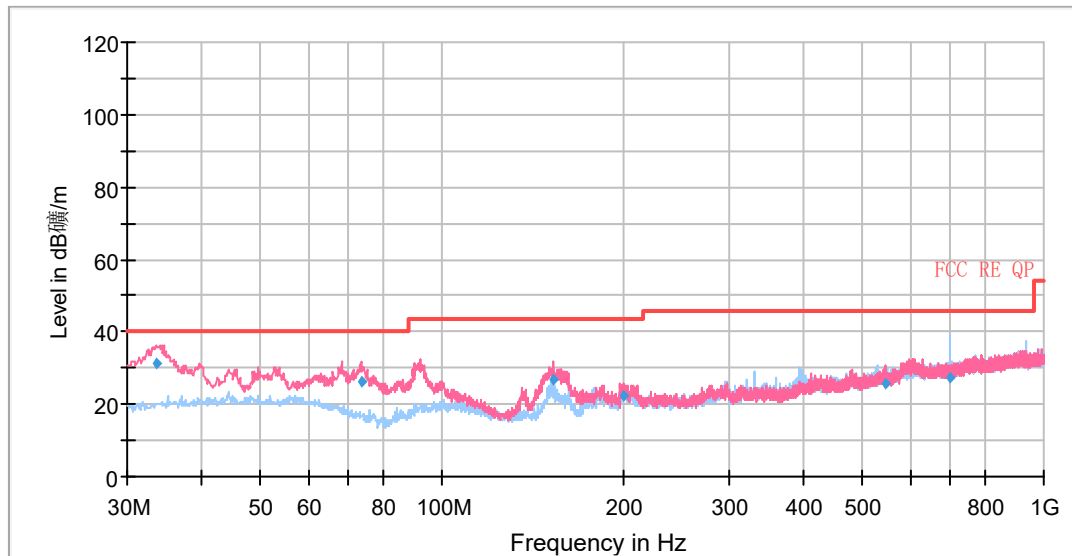
Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)

2. Peak Margin = Limit - MAX Peak/ Average

US

Adapter 4

SW-WB330TEC is the worst case

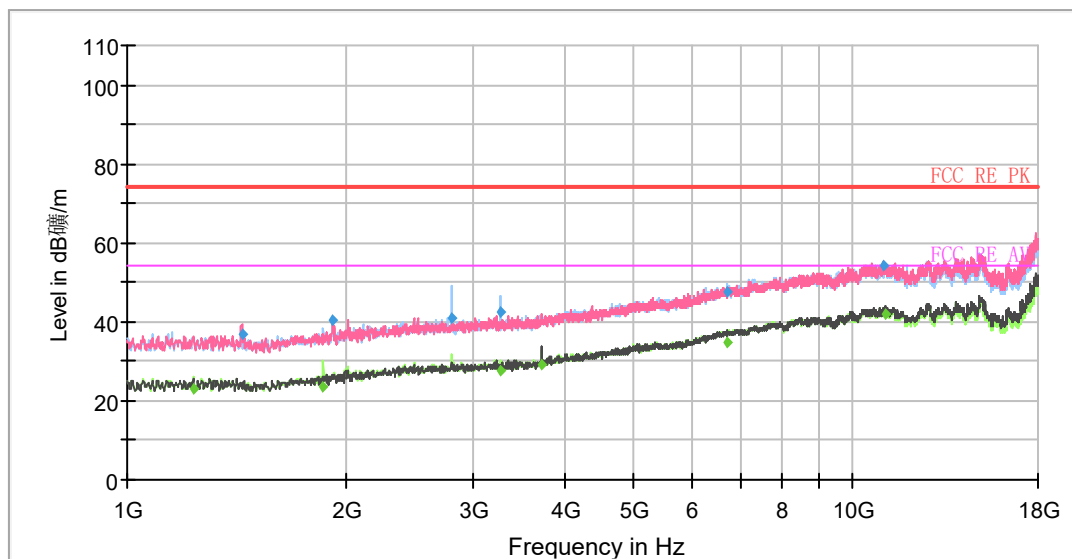


Radiated Emission from 30MHz to 1GHz

| Frequency (MHz) | Quasi-Peak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Polarization | Azimuth (deg) | Correct Factor (dB) |
|-----------------|---------------------|----------------|-------------|-------------|--------------|---------------|---------------------|
| 33.68           | 31.10               | 40.00          | 8.90        | 102.0       | V            | 248.00        | 13                  |
| 73.68           | 26.32               | 40.00          | 13.68       | 103.0       | V            | 289.00        | 9                   |
| 153.46          | 26.72               | 43.50          | 16.78       | 101.0       | V            | 184.00        | 10                  |
| 200.00          | 22.12               | 43.50          | 21.38       | 103.0       | V            | 328.00        | 12                  |
| 543.98          | 25.67               | 46.00          | 20.33       | 100.0       | V            | 2.00          | 20                  |
| 699.85          | 27.58               | 46.00          | 18.42       | 116.0       | H            | 58.00         | 23                  |

Remark: 1. Correction Factor = Antenna factor + Insertion loss(cable loss+amplifier gain)

2. Margin = Limit – Quasi-Peak



Note: The signal beyond the limit is carrier.

Radiated Emission from 1GHz to 18GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1233.75         | ---              | 23.01            | 54.00            | 30.99       | 1000.00         | 109.0       | H   | 0.00          | -19          |
| 1437.75         | 36.86            | ---              | 74.00            | 37.14       | 1000.00         | 100.0       | V   | 22.00         | -18          |
| 1864.88         | ---              | 23.57            | 54.00            | 30.43       | 1000.00         | 100.0       | H   | 346.00        | -17          |
| 1918.00         | 40.59            | ---              | 74.00            | 33.41       | 1000.00         | 103.0       | V   | 184.00        | -17          |
| 2797.75         | 40.74            | ---              | 74.00            | 33.26       | 1000.00         | 100.0       | H   | 130.00        | -15          |
| 3265.25         | ---              | 27.50            | 54.00            | 26.50       | 1000.00         | 100.0       | H   | 135.00        | -14          |
| 3265.25         | 42.57            | ---              | 74.00            | 31.43       | 1000.00         | 109.0       | H   | 136.00        | -14          |
| 3730.63         | ---              | 29.15            | 54.00            | 24.85       | 1000.00         | 100.0       | V   | 10.00         | -13          |
| 6729.00         | 47.54            | ---              | 74.00            | 26.46       | 1000.00         | 191.0       | H   | 300.00        | -2           |
| 6731.13         | ---              | 34.67            | 54.00            | 19.33       | 1000.00         | 210.0       | V   | 280.00        | -2           |
| 11044.88        | 54.40            | ---              | 74.00            | 19.60       | 1000.00         | 109.0       | V   | 349.00        | 4            |
| 11087.38        | ---              | 42.03            | 54.00            | 11.97       | 1000.00         | 109.0       | V   | 72.00         | 4            |

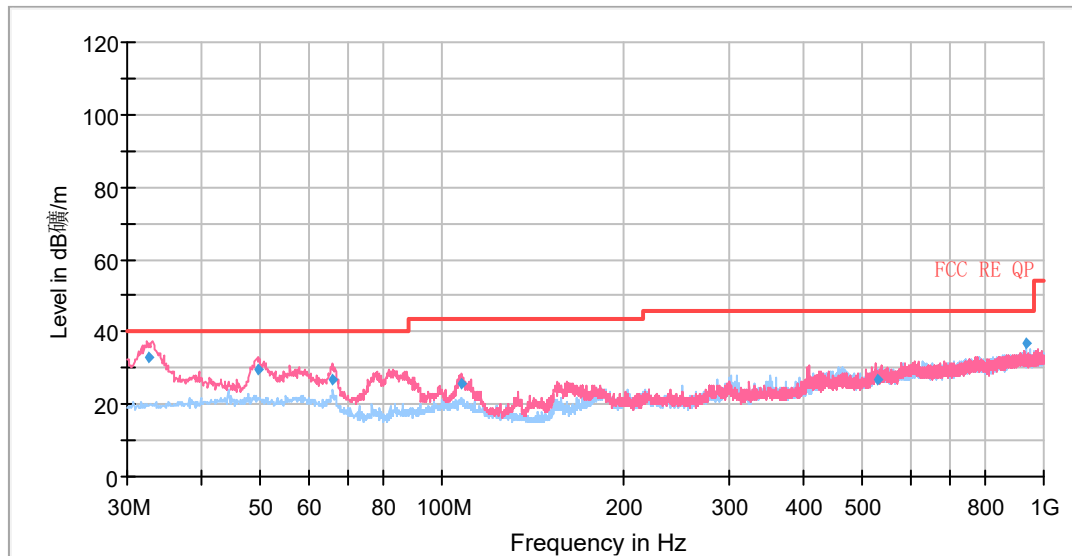
Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)

2. Peak Margin = Limit –MAX Peak/ Average

EU

Adapter 5

SW-WB330TC6 is the worst case

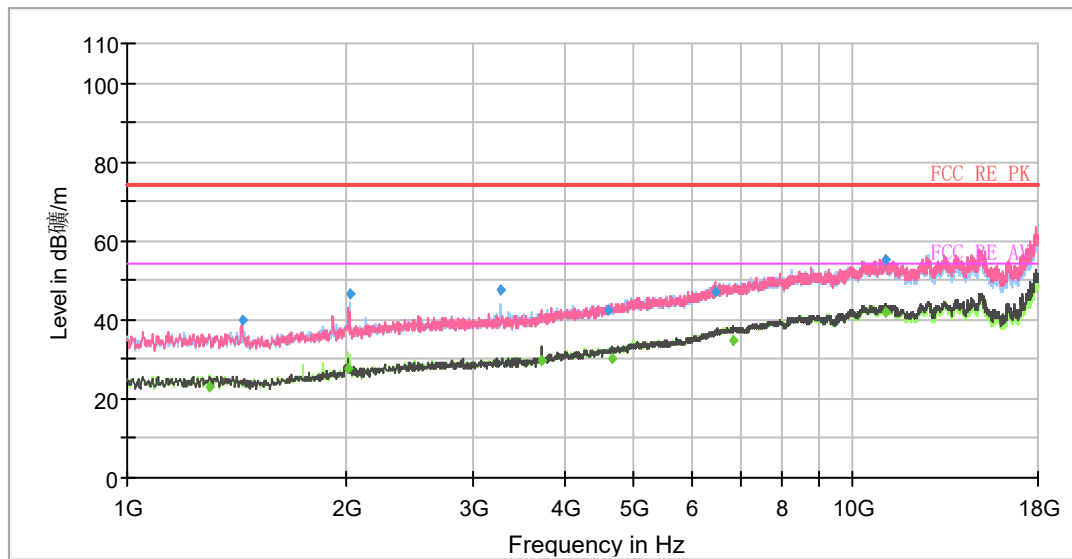


Radiated Emission from 30MHz to 1GHz

| Frequency (MHz) | Quasi-Peak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Polarization | Azimuth (deg) | Correct Factor (dB) |
|-----------------|---------------------|----------------|-------------|-------------|--------------|---------------|---------------------|
| 32.58           | 32.72               | 40.00          | 7.28        | 100.0       | V            | 82.00         | 13                  |
| 49.43           | 29.50               | 40.00          | 10.50       | 102.0       | V            | 126.00        | 14                  |
| 65.96           | 27.02               | 40.00          | 12.98       | 102.0       | V            | 258.00        | 12                  |
| 107.54          | 25.63               | 43.50          | 17.87       | 100.0       | V            | 70.00         | 13                  |
| 529.29          | 26.74               | 46.00          | 19.26       | 102.0       | V            | 216.00        | 20                  |
| 933.00          | 36.68               | 46.00          | 9.32        | 100.0       | H            | 22.00         | 26                  |

Remark: 1. Correction Factor = Antenna factor + Insertion loss(cable loss+amplifier gain)

2. Margin = Limit – Quasi-Peak



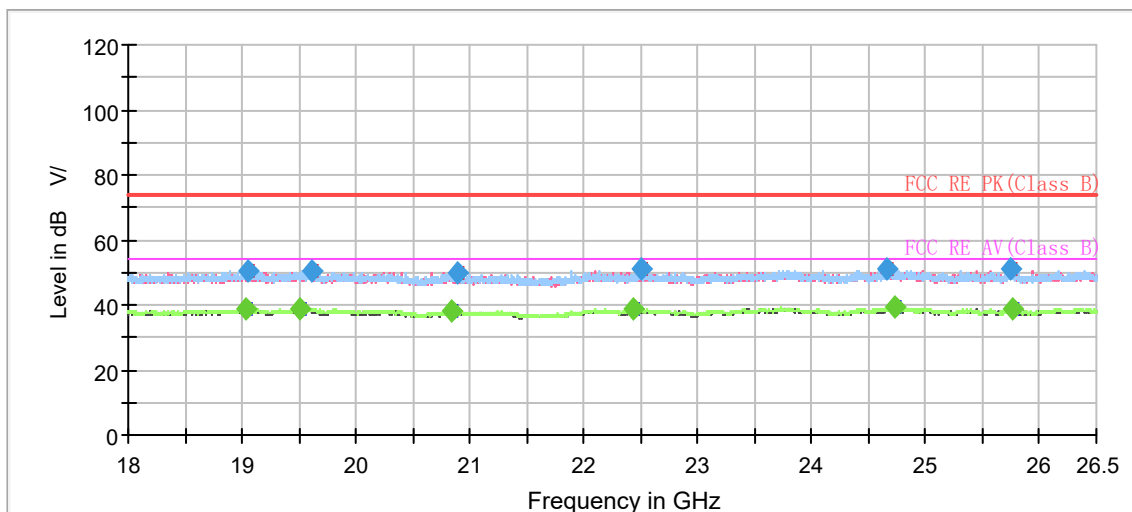
Note: The signal beyond the limit is carrier.

Radiated Emission from 1GHz to 18GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1299.63         | ---              | 23.10            | 54.00            | 30.90       | 1000.00         | 191.0       | H   | 353.00        | -19          |
| 1439.88         | 39.97            | ---              | 74.00            | 34.03       | 1000.00         | 104.0       | V   | 146.00        | -18          |
| 2013.63         | ---              | 27.49            | 54.00            | 26.51       | 1000.00         | 110.0       | H   | 163.00        | -17          |
| 2022.13         | 46.31            | ---              | 74.00            | 27.69       | 1000.00         | 101.0       | H   | 153.00        | -17          |
| 3265.25         | 47.74            | ---              | 74.00            | 26.26       | 1000.00         | 109.0       | H   | 1.00          | -14          |
| 3730.63         | ---              | 29.48            | 54.00            | 24.52       | 1000.00         | 100.0       | H   | 291.00        | -13          |
| 4591.25         | 42.49            | ---              | 74.00            | 31.51       | 1000.00         | 198.0       | V   | 92.00         | -9           |
| 4644.38         | ---              | 30.01            | 54.00            | 23.99       | 1000.00         | 100.0       | H   | 327.00        | -9           |
| 6450.63         | 47.18            | ---              | 74.00            | 26.82       | 1000.00         | 198.0       | V   | 207.00        | -3           |
| 6850.13         | ---              | 34.88            | 54.00            | 19.12       | 1000.00         | 100.0       | V   | 253.00        | -1           |
| 11083.13        | 55.31            | ---              | 74.00            | 18.69       | 1000.00         | 193.0       | V   | 222.00        | 4            |
| 11089.50        | ---              | 41.89            | 54.00            | 12.11       | 1000.00         | 102.0       | V   | 250.00        | 4            |

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)

2. Peak Margin = Limit - MAX Peak/ Average

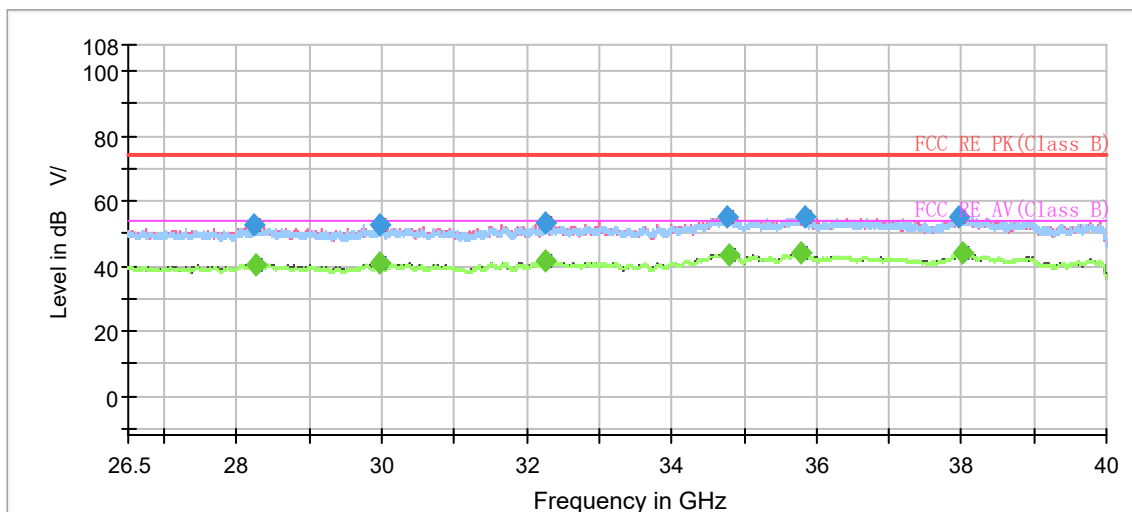


Radiated Emission from 18GHz to 26.5GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 19030.625000    | ---              | 38.97            | 54.00            | 15.03       | 500.0           | 100.0       | H   | 291.0         | -5.6         |
| 19043.375000    | 50.37            | ---              | 74.00            | 23.63       | 500.0           | 200.0       | H   | 6.0           | -5.6         |
| 19509.812500    | ---              | 38.89            | 54.00            | 15.11       | 500.0           | 100.0       | H   | 161.0         | -5.3         |
| 19615.000000    | 50.68            | ---              | 74.00            | 23.32       | 500.0           | 200.0       | V   | 128.0         | -5.3         |
| 20847.500000    | ---              | 38.15            | 54.00            | 15.85       | 500.0           | 200.0       | V   | 88.0          | -5.1         |
| 20886.812500    | 50.05            | ---              | 74.00            | 23.95       | 500.0           | 200.0       | V   | 58.0          | -5.1         |
| 22439.125000    | ---              | 38.68            | 54.00            | 15.32       | 500.0           | 100.0       | H   | 175.0         | -4.0         |
| 22502.875000    | 50.81            | ---              | 74.00            | 23.19       | 500.0           | 100.0       | H   | 156.0         | -3.9         |
| 24654.437500    | 50.93            | ---              | 74.00            | 23.07       | 500.0           | 100.0       | H   | 9.0           | -2.2         |
| 24732.000000    | ---              | 39.38            | 54.00            | 14.62       | 500.0           | 100.0       | H   | 132.0         | -2.1         |
| 25747.750000    | 51.23            | ---              | 74.00            | 22.77       | 500.0           | 100.0       | H   | 296.0         | -2.6         |
| 25757.312500    | ---              | 39.02            | 54.00            | 14.98       | 500.0           | 100.0       | H   | 306.0         | -2.6         |

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)

2. Peak Margin = Limit –MAX Peak/ Average



Note: The signal beyond the limit is carrier.

Radiated Emission from 26.5GHz to 40GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 28229.687500    | 52.66            | ---              | 74.00            | 21.34       | 500.0           | 200.0       | V   | 314.0         | -0.1         |
| 28263.437500    | ---              | 40.48            | 54.00            | 13.52       | 500.0           | 200.0       | V   | 349.0         | 0.0          |
| 29969.500000    | 52.43            | ---              | 74.00            | 21.57       | 500.0           | 100.0       | H   | 317.0         | -0.4         |
| 29974.562500    | ---              | 40.68            | 54.00            | 13.32       | 500.0           | 100.0       | H   | 266.0         | -0.4         |
| 32262.812500    | ---              | 41.38            | 54.00            | 12.62       | 500.0           | 200.0       | V   | 280.0         | -1.2         |
| 32264.500000    | 52.95            | ---              | 74.00            | 21.05       | 500.0           | 200.0       | V   | 314.0         | -1.2         |
| 34773.812500    | 55.10            | ---              | 74.00            | 18.90       | 500.0           | 200.0       | V   | 0.0           | 3.0          |
| 34787.312500    | ---              | 43.47            | 54.00            | 10.53       | 500.0           | 100.0       | H   | 17.0          | 3.0          |
| 35777.875000    | ---              | 43.85            | 54.00            | 10.15       | 500.0           | 200.0       | V   | 153.0         | 3.2          |
| 35847.062500    | 55.31            | ---              | 74.00            | 18.69       | 500.0           | 200.0       | V   | 169.0         | 3.3          |
| 37973.312500    | 55.10            | ---              | 74.00            | 18.90       | 500.0           | 100.0       | H   | 61.0          | 3.6          |
| 38015.500000    | ---              | 43.89            | 54.00            | 10.11       | 500.0           | 200.0       | H   | 125.0         | 3.7          |

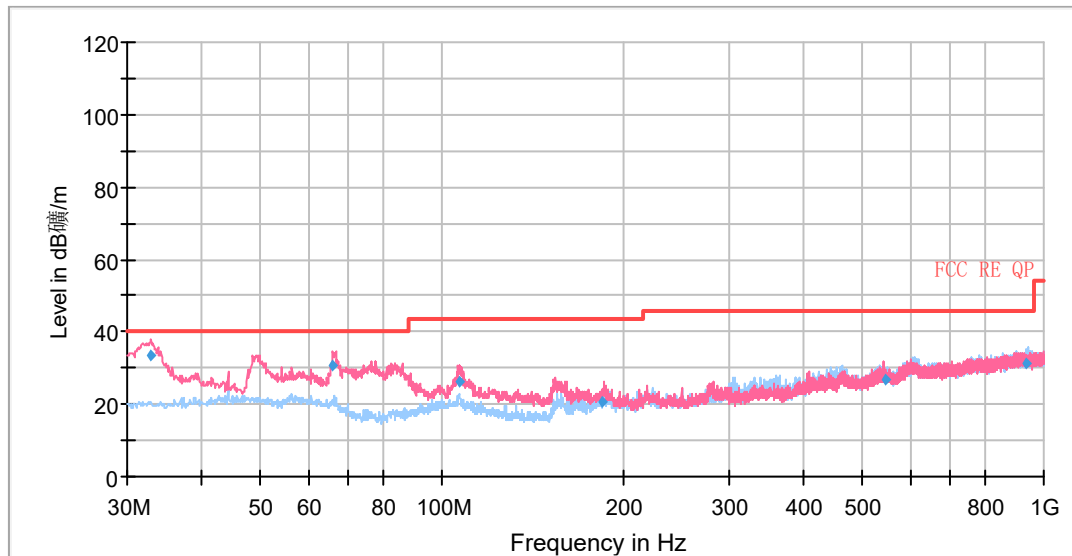
Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)

2. Peak Margin = Limit –MAX Peak/ Average

UK

Adapter 6

SW-WB330BA

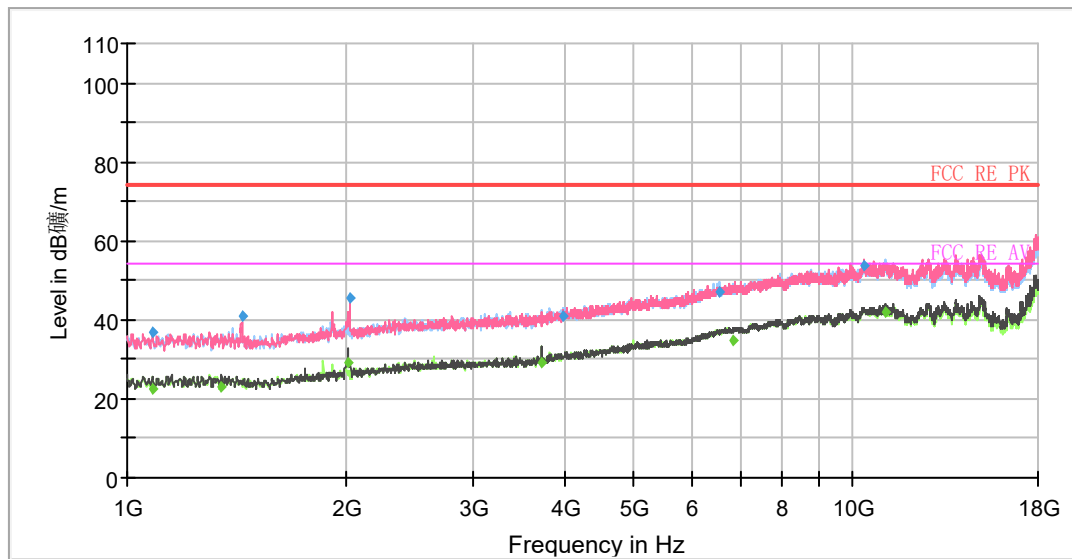


Radiated Emission from 30MHz to 1GHz

| Frequency (MHz) | Quasi-Peak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Height (cm) | Polarization | Azimuth (deg) | Correct Factor (dB) |
|-----------------|---------------------|----------------|-------------|-------------|--------------|---------------|---------------------|
| 32.75           | 33.59               | 40.00          | 6.41        | 100.0       | V            | 107.00        | 13                  |
| 65.88           | 30.58               | 40.00          | 9.42        | 101.0       | V            | 262.00        | 12                  |
| 106.66          | 26.46               | 43.50          | 17.04       | 100.0       | V            | 24.00         | 13                  |
| 185.20          | 20.44               | 43.50          | 23.06       | 223.0       | V            | 206.00        | 12                  |
| 544.01          | 26.71               | 46.00          | 19.29       | 201.0       | V            | 38.00         | 20                  |
| 934.60          | 31.30               | 46.00          | 14.70       | 202.0       | H            | 326.00        | 26                  |

Remark: 1. Correction Factor = Antenna factor + Insertion loss(cable loss+amplifier gain)

2. Margin = Limit – Quasi-Peak



Note: The signal beyond the limit is carrier.

Radiated Emission from 1GHz to 18GHz

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|------------------|------------------|-------------|-----------------|-------------|-----|---------------|--------------|
| 1082.88         | 37.00            | ---              | 74.00            | 37.00       | 1000.00         | 102.0       | V   | 205.00        | -20          |
| 1082.88         | ---              | 22.49            | 54.00            | 31.51       | 1000.00         | 210.0       | H   | 173.00        | -20          |
| 1350.63         | ---              | 22.96            | 54.00            | 31.04       | 1000.00         | 100.0       | V   | 16.00         | -19          |
| 1437.75         | 40.71            | ---              | 74.00            | 33.29       | 1000.00         | 100.0       | V   | 183.00        | -18          |
| 2011.50         | ---              | 29.13            | 54.00            | 24.88       | 1000.00         | 191.0       | V   | 185.00        | -17          |
| 2024.25         | 45.67            | ---              | 74.00            | 28.33       | 1000.00         | 204.0       | V   | 184.00        | -17          |
| 3730.63         | ---              | 29.13            | 54.00            | 24.87       | 1000.00         | 100.0       | H   | 294.00        | -13          |
| 3989.88         | 40.99            | ---              | 74.00            | 33.01       | 1000.00         | 110.0       | H   | 151.00        | -11          |
| 6548.38         | 46.84            | ---              | 74.00            | 27.16       | 1000.00         | 210.0       | H   | 115.00        | -2           |
| 6852.25         | ---              | 34.87            | 54.00            | 19.13       | 1000.00         | 210.0       | V   | 242.00        | -1           |
| 10373.38        | 53.94            | ---              | 74.00            | 20.06       | 1000.00         | 190.0       | V   | 289.00        | 3            |
| 11085.25        | ---              | 41.99            | 54.00            | 12.01       | 1000.00         | 110.0       | V   | 8.00          | 4            |

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)

2. Peak Margin = Limit –MAX Peak/ Average

## 3.2 Conducted Emission

### Ambient Condition

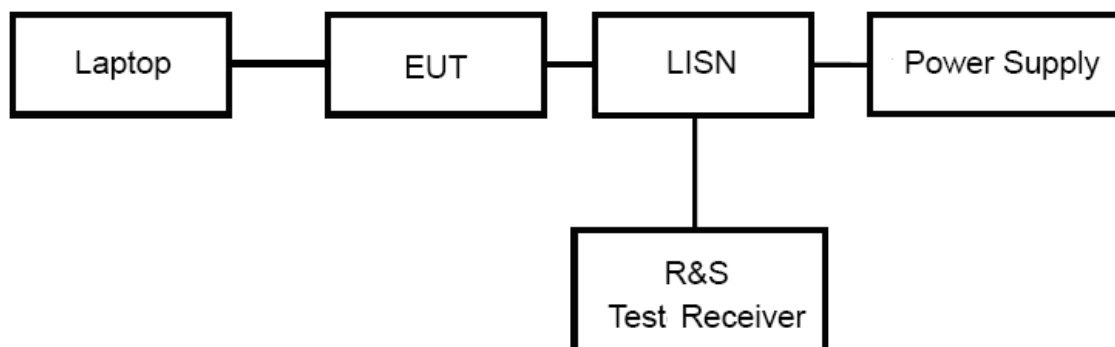
| Temperature | Relative humidity |
|-------------|-------------------|
| 15°C~35°C   | 30%~60%           |

### Methods of Measurement

The EUT is placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2014. Connect the AC power line of the EUT to the L.I.S.N. Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9 kHz, VBW is set to 30kHz. The measurement result should include both L line and N line.

During the test, EUT is connected to a laptop via a USB cable in the case of Transfer Data mode. The EUT is used as the peripheral equipment of the PC. The data is transferred from EUT to PC; PC is connected to server via a long LAN cable.

### Test Setup



Note: Power Supply is AC Power source and it is used to change the voltage 120V/60Hz.

### Limits

| Frequency (MHz) | Class A (dBμV) |         | Class B (dBμV) |           |
|-----------------|----------------|---------|----------------|-----------|
|                 | Quasi-peak     | Average | Quasi-peak     | Average   |
| 0.15 - 0.5      | 79             | 66      | 66 to 56 *     | 56 to 46* |
| 0.5 - 5         | 73             | 60      | 56             | 46        |
| 5 - 30          | 73             | 60      | 60             | 50        |

\*: Decreases with the logarithm of the frequency.

Note: The EUT should meet CLASS B limit.

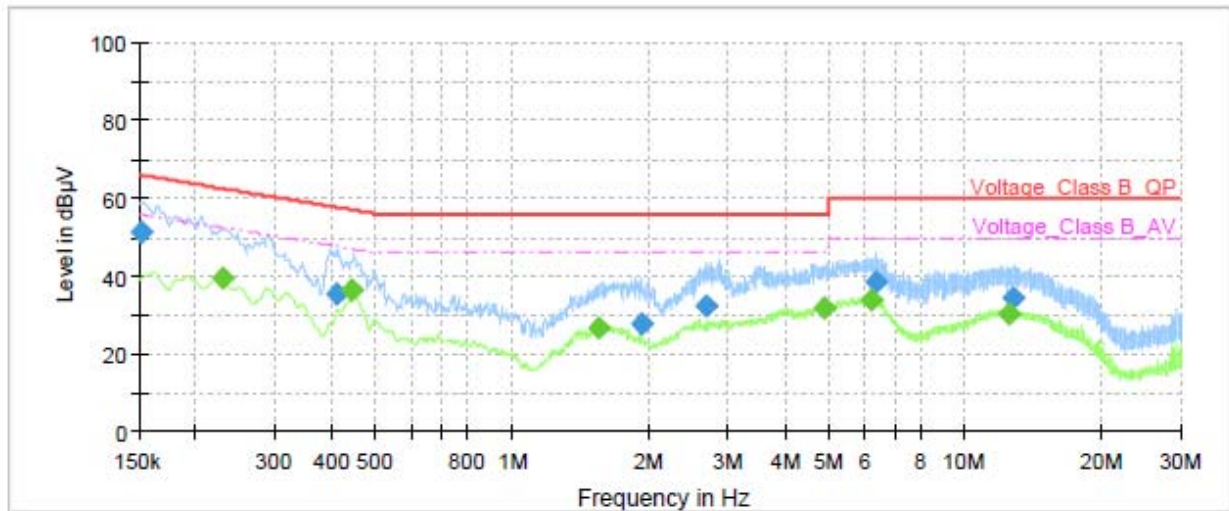
## Test Results

Following plots, Blue trace uses the peak detection; Green trace uses the average detection.

US

Adapter 1

BW120150-UC6C-HH00 is the worst case

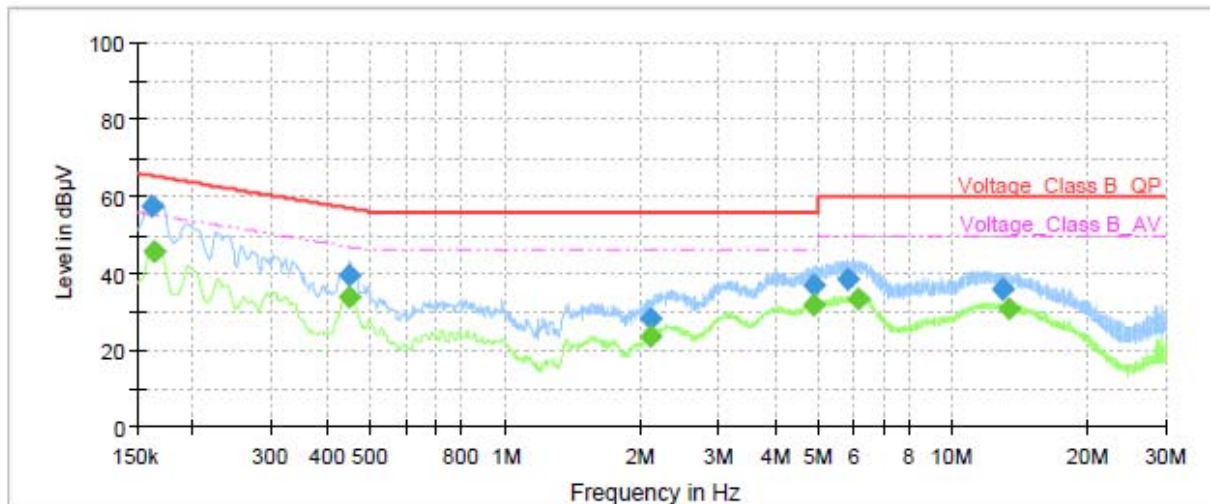


| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.15            | 51.19            | ---            | 65.88        | 14.69       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.23            | ---              | 39.41          | 52.50        | 13.09       | 1000.0          | 9.000           | L1   | ON     | 21.1       |
| 0.41            | 35.42            | ---            | 57.63        | 22.21       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.44            | ---              | 36.33          | 46.97        | 10.64       | 1000.0          | 9.000           | L1   | ON     | 20.9       |
| 1.55            | ---              | 26.48          | 46.00        | 19.52       | 1000.0          | 9.000           | L1   | ON     | 19.9       |
| 1.94            | 27.90            | ---            | 56.00        | 28.10       | 1000.0          | 9.000           | L1   | ON     | 19.7       |
| 2.68            | 32.17            | ---            | 56.00        | 23.83       | 1000.0          | 9.000           | L1   | ON     | 19.6       |
| 4.90            | ---              | 31.96          | 46.00        | 14.04       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 6.23            | ---              | 33.74          | 50.00        | 16.26       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 6.35            | 38.59            | ---            | 60.00        | 21.41       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 12.55           | ---              | 30.01          | 50.00        | 19.99       | 1000.0          | 9.000           | L1   | ON     | 19.6       |
| 12.74           | 34.41            | ---            | 60.00        | 25.59       | 1000.0          | 9.000           | L1   | ON     | 19.6       |

Remark: Correct factor=cable loss + LISN factor

L line

Conducted Emission from 150 KHz to 30 MHz



| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.16            | 57.51            | ---            | 65.40        | 7.89        | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.16            | ---              | 45.81          | 55.28        | 9.47        | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.45            | ---              | 33.80          | 46.89        | 13.09       | 1000.0          | 9.000           | N    | ON     | 20.9       |
| 0.45            | 39.27            | ---            | 56.89        | 17.62       | 1000.0          | 9.000           | N    | ON     | 20.9       |
| 2.11            | 28.06            | ---            | 56.00        | 27.94       | 1000.0          | 9.000           | N    | ON     | 19.7       |
| 2.11            | ---              | 23.75          | 46.00        | 22.25       | 1000.0          | 9.000           | N    | ON     | 19.7       |
| 4.88            | ---              | 31.60          | 46.00        | 14.40       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 4.91            | 36.96            | ---            | 56.00        | 19.04       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 5.81            | 38.47            | ---            | 60.00        | 21.53       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 6.17            | ---              | 33.33          | 50.00        | 16.67       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 12.91           | 35.76            | ---            | 60.00        | 24.24       | 1000.0          | 9.000           | N    | ON     | 19.6       |
| 13.42           | ---              | 30.90          | 50.00        | 19.10       | 1000.0          | 9.000           | N    | ON     | 19.6       |

Remark: Correct factor=cable loss + LISN factor

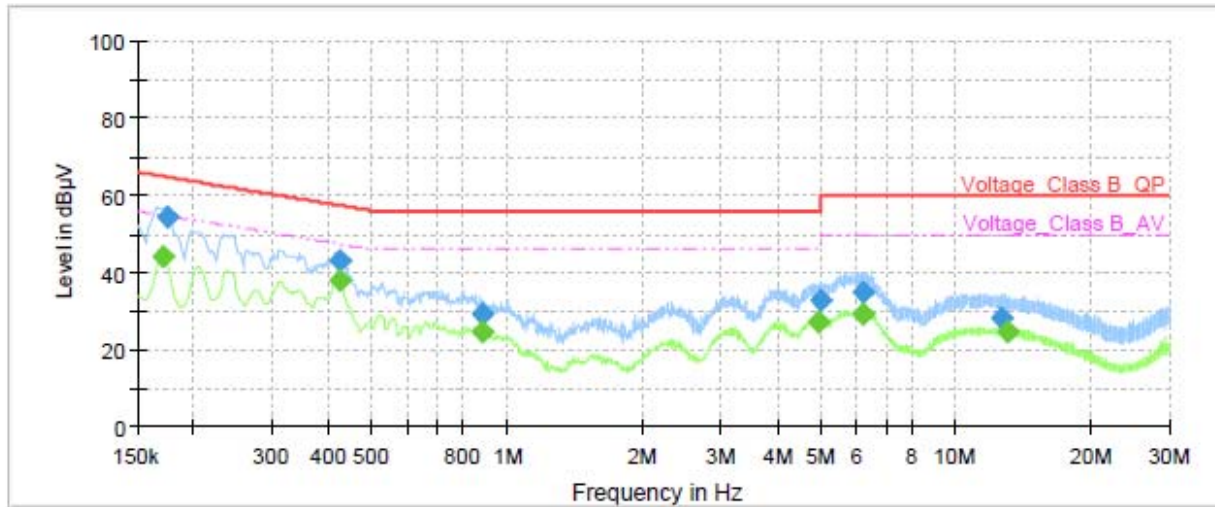
N line

Conducted Emission from 150 KHz to 30 MHz

EU

Adapter 2

BW120150-EC6C-HH00 is the worst case

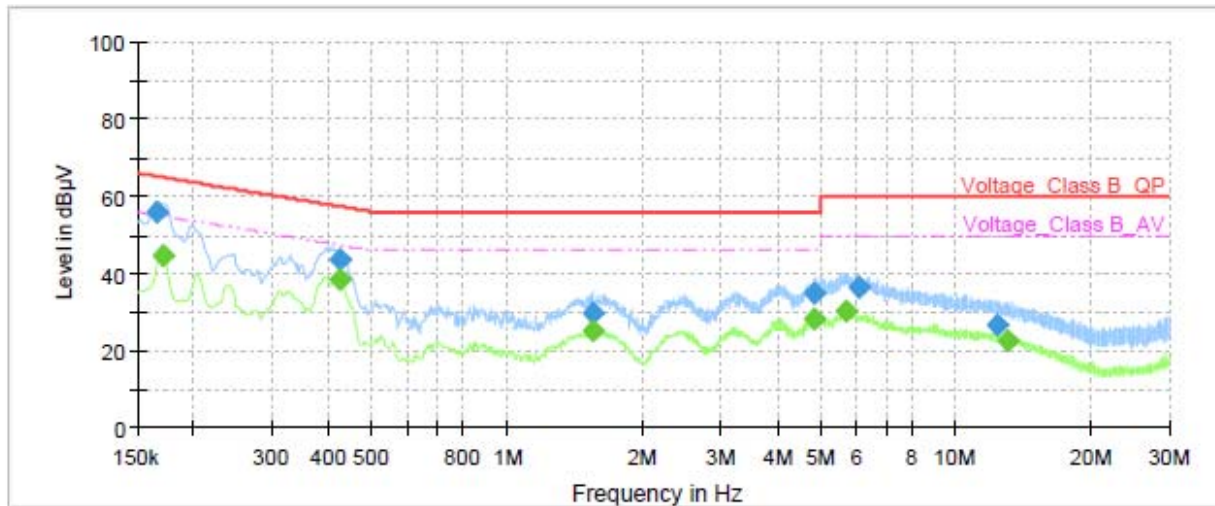


| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.17            | ---              | 44.12          | 54.95        | 10.83       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.17            | 54.40            | ---            | 64.73        | 10.33       | 1000.0          | 9.000           | L1   | ON     | 21.1       |
| 0.42            | ---              | 38.06          | 47.40        | 9.34        | 1000.0          | 9.000           | L1   | ON     | 20.9       |
| 0.42            | 42.91            | ---            | 57.36        | 14.45       | 1000.0          | 9.000           | L1   | ON     | 20.9       |
| 0.88            | 29.10            | ---            | 56.00        | 26.90       | 1000.0          | 9.000           | L1   | ON     | 20.3       |
| 0.88            | ---              | 24.39          | 46.00        | 21.61       | 1000.0          | 9.000           | L1   | ON     | 20.3       |
| 4.96            | ---              | 27.10          | 46.00        | 18.90       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 4.99            | 32.91            | ---            | 56.00        | 23.09       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 6.22            | ---              | 29.38          | 50.00        | 20.62       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 6.25            | 34.81            | ---            | 60.00        | 25.19       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 12.61           | 28.43            | ---            | 60.00        | 31.57       | 1000.0          | 9.000           | L1   | ON     | 19.6       |
| 13.07           | ---              | 24.53          | 50.00        | 25.47       | 1000.0          | 9.000           | L1   | ON     | 19.6       |

Remark: Correct factor=cable loss + LISN factor

L line

Conducted Emission from 150 KHz to 30 MHz



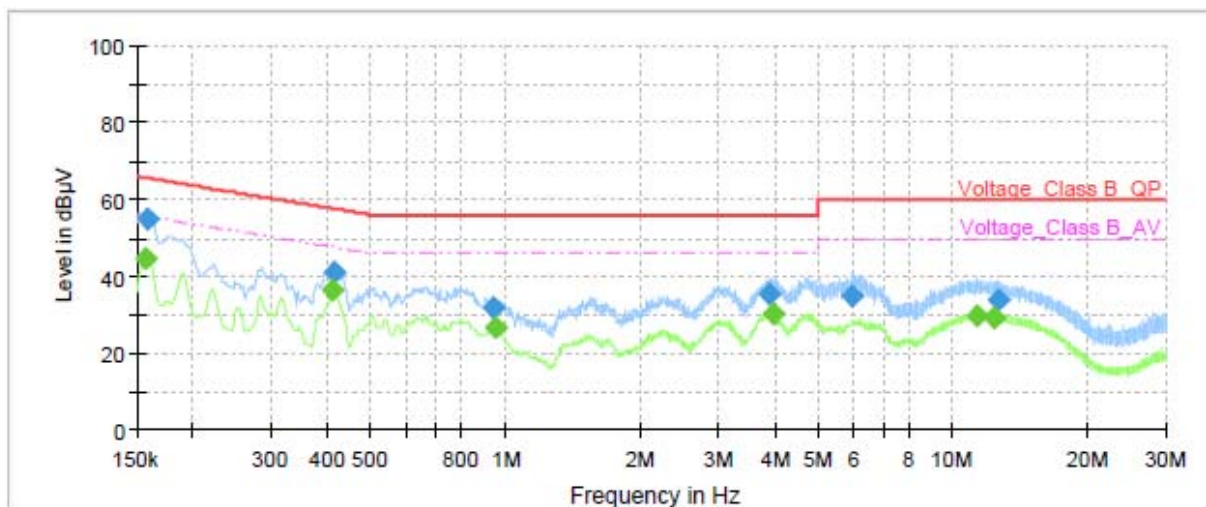
| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.17            | 56.13            | ---            | 65.17        | 9.04        | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.17            | ---              | 44.54          | 54.95        | 10.41       | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.42            | ---              | 38.63          | 47.36        | 8.73        | 1000.0          | 9.000           | N    | ON     | 20.9       |
| 0.42            | 43.63            | ---            | 57.36        | 13.73       | 1000.0          | 9.000           | N    | ON     | 20.9       |
| 1.55            | 29.84            | ---            | 56.00        | 26.16       | 1000.0          | 9.000           | N    | ON     | 19.9       |
| 1.55            | ---              | 25.22          | 46.00        | 20.78       | 1000.0          | 9.000           | N    | ON     | 19.9       |
| 4.84            | ---              | 28.38          | 46.00        | 17.62       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 4.86            | 34.76            | ---            | 56.00        | 21.24       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 5.72            | ---              | 30.26          | 50.00        | 19.74       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 6.06            | 36.19            | ---            | 60.00        | 23.81       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 12.42           | 26.89            | ---            | 60.00        | 33.11       | 1000.0          | 9.000           | N    | ON     | 19.6       |
| 13.12           | ---              | 22.62          | 50.00        | 27.38       | 1000.0          | 9.000           | N    | ON     | 19.6       |

Remark: Correct factor=cable loss + LISN factor

N line

Conducted Emission from 150 KHz to 30 MHz

UK  
Adapter 3  
BW120150-YC6C-LL05

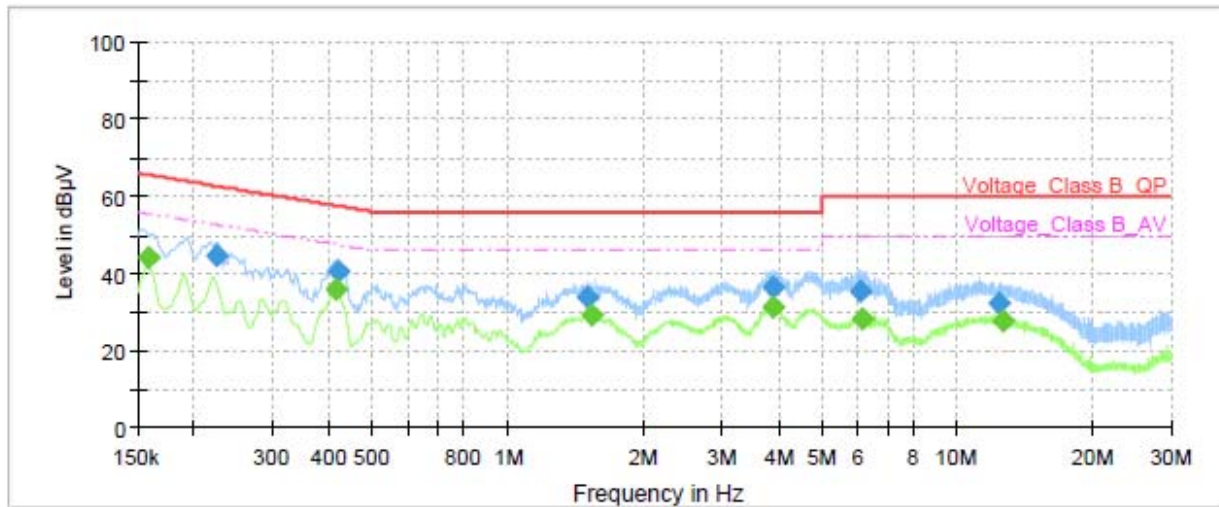


| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.16            | ---              | 44.87          | 55.63        | 10.76       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.16            | 54.93            | ---            | 65.52        | 10.59       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.41            | ---              | 36.29          | 47.63        | 11.34       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.41            | 41.22            | ---            | 57.58        | 16.36       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.94            | 31.66            | ---            | 56.00        | 24.34       | 1000.0          | 9.000           | L1   | ON     | 20.3       |
| 0.96            | ---              | 26.44          | 46.00        | 19.56       | 1000.0          | 9.000           | L1   | ON     | 20.3       |
| 3.89            | 35.50            | ---            | 56.00        | 20.50       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 3.96            | ---              | 30.12          | 46.00        | 15.88       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 5.97            | 34.71            | ---            | 60.00        | 25.29       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 11.33           | ---              | 29.75          | 50.00        | 20.25       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 12.42           | ---              | 29.47          | 50.00        | 20.53       | 1000.0          | 9.000           | L1   | ON     | 19.6       |
| 12.61           | 33.90            | ---            | 60.00        | 26.10       | 1000.0          | 9.000           | L1   | ON     | 19.6       |

Remark: Correct factor=cable loss + LISN factor

L line

Conducted Emission from 150 KHz to 30 MHz



| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.16            | ---              | 44.32          | 55.52        | 11.20       | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.22            | 44.58            | ---            | 62.66        | 18.08       | 1000.0          | 9.000           | N    | ON     | 21.1       |
| 0.42            | ---              | 36.14          | 47.54        | 11.40       | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.42            | 40.69            | ---            | 57.49        | 16.80       | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 1.51            | 33.79            | ---            | 56.00        | 22.21       | 1000.0          | 9.000           | N    | ON     | 19.9       |
| 1.53            | ---              | 29.27          | 46.00        | 16.73       | 1000.0          | 9.000           | N    | ON     | 19.9       |
| 3.88            | ---              | 31.07          | 46.00        | 14.93       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 3.89            | 36.32            | ---            | 56.00        | 19.68       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 6.09            | 35.47            | ---            | 60.00        | 24.53       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 6.16            | ---              | 28.27          | 50.00        | 21.73       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 12.42           | 32.33            | ---            | 60.00        | 27.67       | 1000.0          | 9.000           | N    | ON     | 19.6       |
| 12.61           | ---              | 27.79          | 50.00        | 22.21       | 1000.0          | 9.000           | N    | ON     | 19.6       |

Remark: Correct factor=cable loss + LISN factor

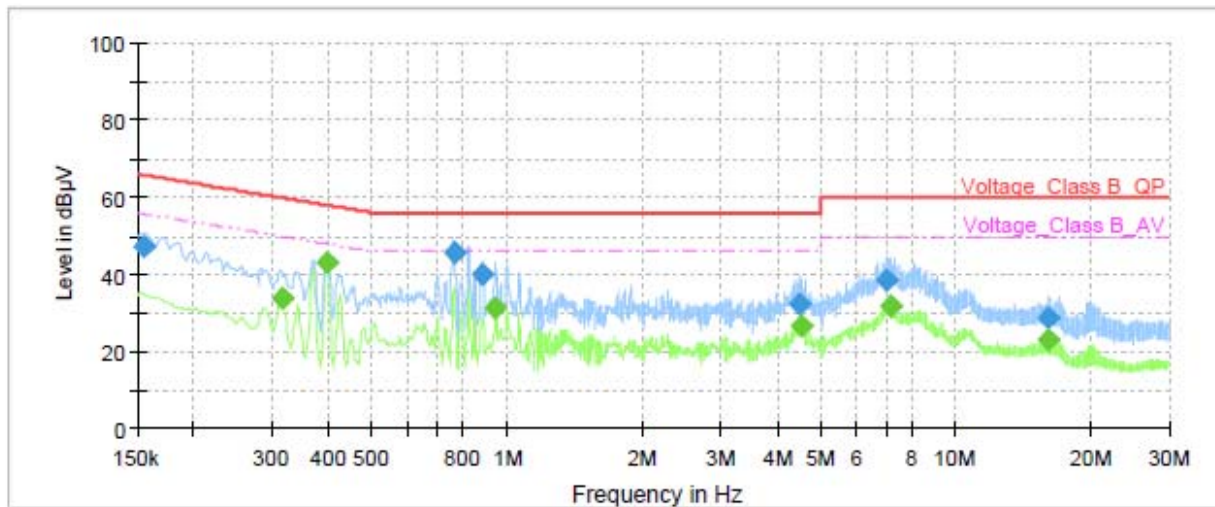
N line

Conducted Emission from 150 KHz to 30 MHz

US

Adapter 4

SW-WB330TEA is the worst case

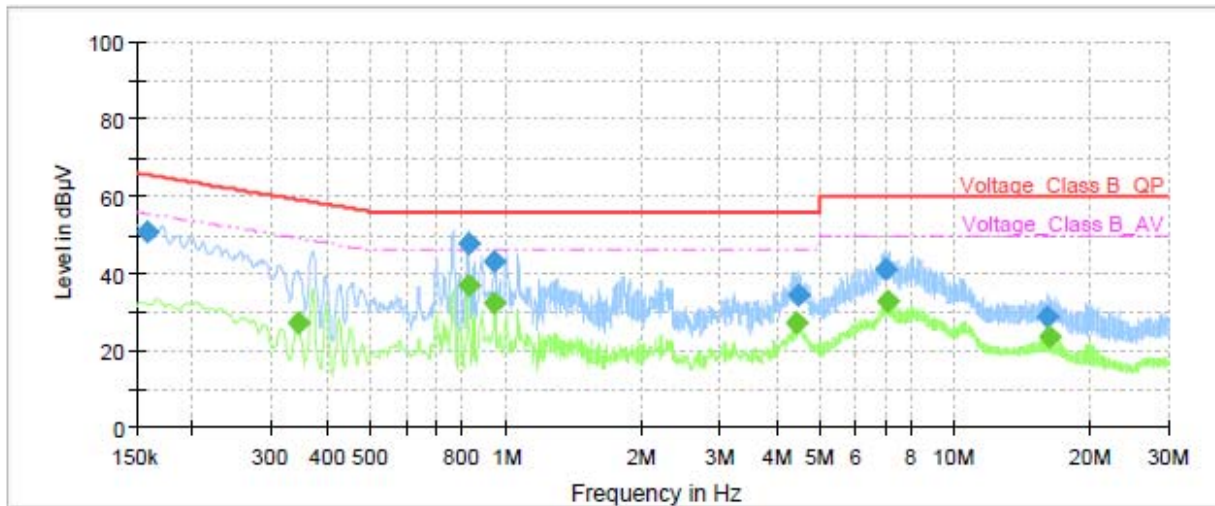


| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.15            | 47.25            | ---            | 65.75        | 18.50       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.31            | ---              | 33.67          | 49.86        | 16.19       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.40            | ---              | 43.07          | 47.95        | 4.88        | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.76            | 45.66            | ---            | 56.00        | 10.34       | 1000.0          | 9.000           | L1   | ON     | 20.4       |
| 0.88            | 40.15            | ---            | 56.00        | 15.85       | 1000.0          | 9.000           | L1   | ON     | 20.3       |
| 0.94            | ---              | 31.14          | 46.00        | 14.86       | 1000.0          | 9.000           | L1   | ON     | 20.3       |
| 4.50            | 32.44            | ---            | 56.00        | 23.56       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 4.52            | ---              | 26.90          | 46.00        | 19.10       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 6.98            | 38.37            | ---            | 60.00        | 21.63       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 7.14            | ---              | 31.90          | 50.00        | 18.10       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 16.10           | ---              | 23.03          | 50.00        | 26.97       | 1000.0          | 9.000           | L1   | ON     | 19.6       |
| 16.10           | 28.89            | ---            | 60.00        | 31.11       | 1000.0          | 9.000           | L1   | ON     | 19.6       |

Remark: Correct factor=cable loss + LISN factor

L line

Conducted Emission from 150 KHz to 30 MHz



| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.16            | 50.60            | ---            | 65.52        | 14.92       | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.34            | ---              | 27.17          | 49.12        | 21.95       | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.82            | ---              | 36.88          | 46.00        | 9.12        | 1000.0          | 9.000           | N    | ON     | 20.4       |
| 0.82            | 47.75            | ---            | 56.00        | 8.25        | 1000.0          | 9.000           | N    | ON     | 20.4       |
| 0.94            | ---              | 32.24          | 46.00        | 13.76       | 1000.0          | 9.000           | N    | ON     | 20.3       |
| 0.94            | 42.83            | ---            | 56.00        | 13.17       | 1000.0          | 9.000           | N    | ON     | 20.3       |
| 4.46            | ---              | 27.00          | 46.00        | 19.00       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 4.50            | 34.36            | ---            | 56.00        | 21.64       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 7.02            | 40.99            | ---            | 60.00        | 19.01       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 7.08            | ---              | 32.74          | 50.00        | 17.26       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 16.04           | 28.96            | ---            | 60.00        | 31.04       | 1000.0          | 9.000           | N    | ON     | 19.7       |
| 16.35           | ---              | 23.65          | 50.00        | 26.35       | 1000.0          | 9.000           | N    | ON     | 19.7       |

Remark: Correct factor=cable loss + LISN factor

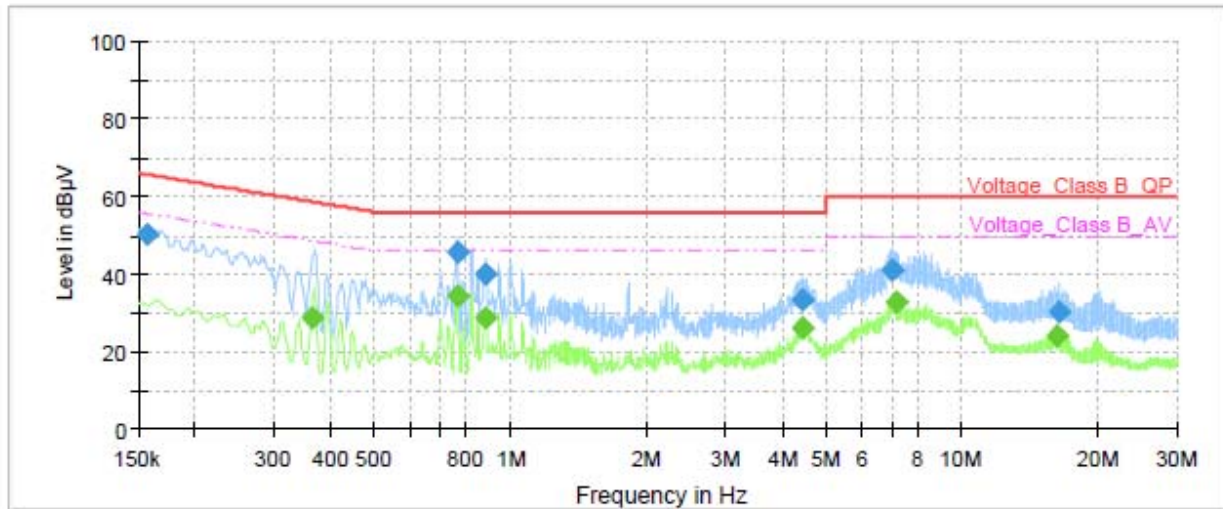
N line

Conducted Emission from 150 KHz to 30 MHz

EU

Adapter 5

SW-WB330TC6 is the worst case

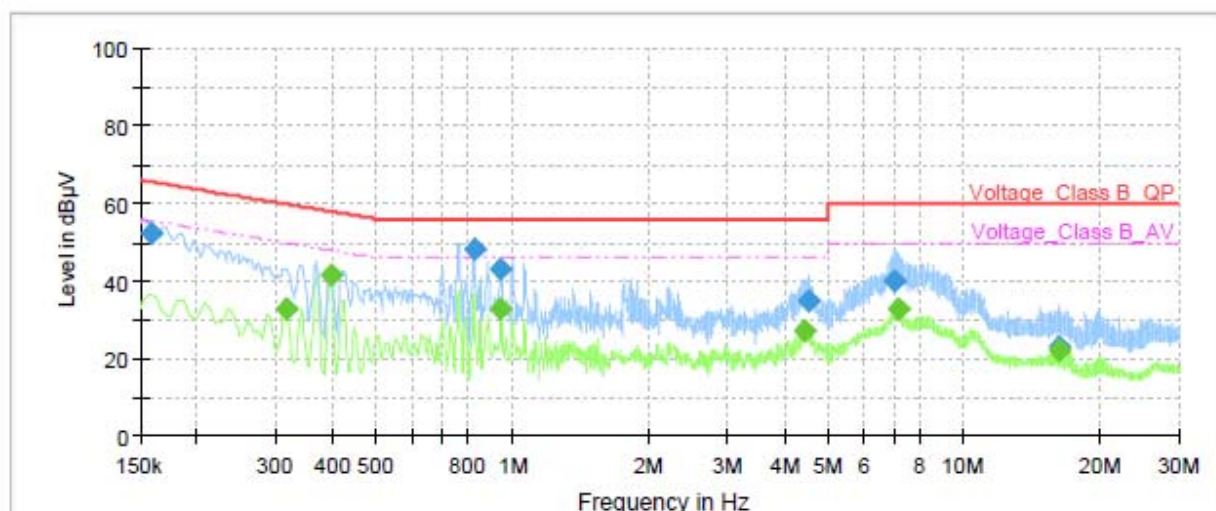


| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.16            | 50.25            | ---            | 65.63        | 15.38       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.36            | ---              | 28.78          | 48.69        | 19.91       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.76            | ---              | 34.17          | 46.00        | 11.83       | 1000.0          | 9.000           | L1   | ON     | 20.4       |
| 0.76            | 45.45            | ---            | 56.00        | 10.55       | 1000.0          | 9.000           | L1   | ON     | 20.4       |
| 0.88            | ---              | 28.69          | 46.00        | 17.31       | 1000.0          | 9.000           | L1   | ON     | 20.3       |
| 0.88            | 40.16            | ---            | 56.00        | 15.84       | 1000.0          | 9.000           | L1   | ON     | 20.3       |
| 4.46            | 33.57            | ---            | 56.00        | 22.43       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 4.46            | ---              | 25.98          | 46.00        | 20.02       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 7.02            | 41.21            | ---            | 60.00        | 18.79       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 7.14            | ---              | 32.79          | 50.00        | 17.21       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 16.28           | ---              | 24.02          | 50.00        | 25.98       | 1000.0          | 9.000           | L1   | ON     | 19.6       |
| 16.40           | 30.11            | ---            | 60.00        | 29.89       | 1000.0          | 9.000           | L1   | ON     | 19.7       |

Remark: Correct factor=cable loss + LISN factor

L line

Conducted Emission from 150 KHz to 30 MHz



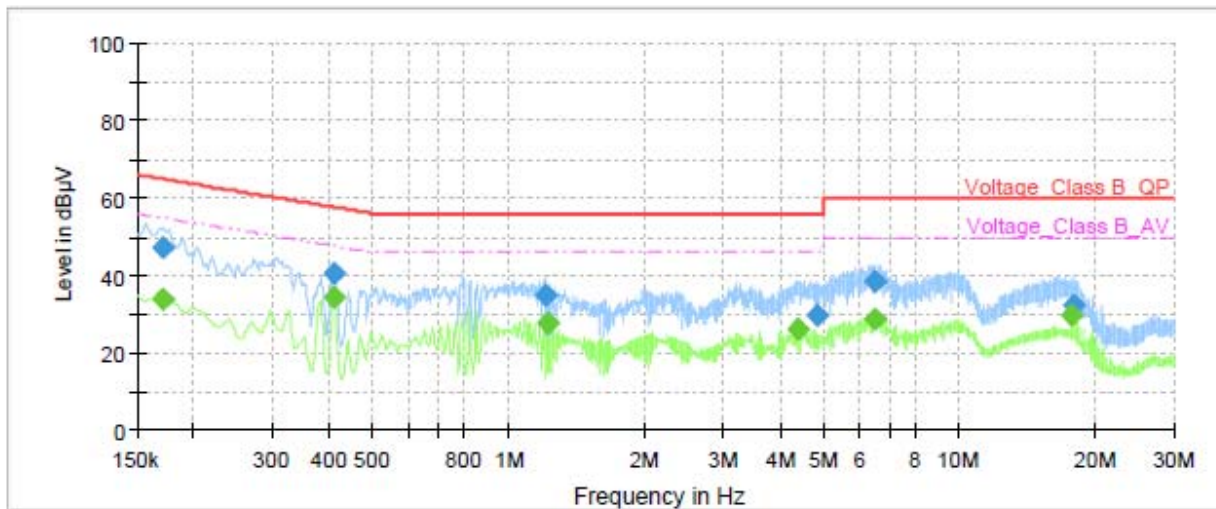
| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.16            | 52.24            | ---            | 65.52        | 13.28       | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.31            | ---              | 32.94          | 49.86        | 16.92       | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.40            | ---              | 41.48          | 47.95        | 6.47        | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.82            | 48.05            | ---            | 56.00        | 7.95        | 1000.0          | 9.000           | N    | ON     | 20.4       |
| 0.94            | ---              | 32.96          | 46.00        | 13.04       | 1000.0          | 9.000           | N    | ON     | 20.3       |
| 0.94            | 43.18            | ---            | 56.00        | 12.82       | 1000.0          | 9.000           | N    | ON     | 20.3       |
| 4.45            | ---              | 26.98          | 46.00        | 19.02       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 4.52            | 34.74            | ---            | 56.00        | 21.26       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 6.99            | 39.75            | ---            | 60.00        | 20.25       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 7.14            | ---              | 33.01          | 50.00        | 16.99       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 16.22           | ---              | 22.02          | 50.00        | 27.98       | 1000.0          | 9.000           | N    | ON     | 19.7       |
| 16.24           | 23.17            | ---            | 60.00        | 36.83       | 1000.0          | 9.000           | N    | ON     | 19.7       |

Remark: Correct factor=cable loss + LISN factor

N line

Conducted Emission from 150 KHz to 30 MHz

UK  
Adapter 6  
SW-WB330BA

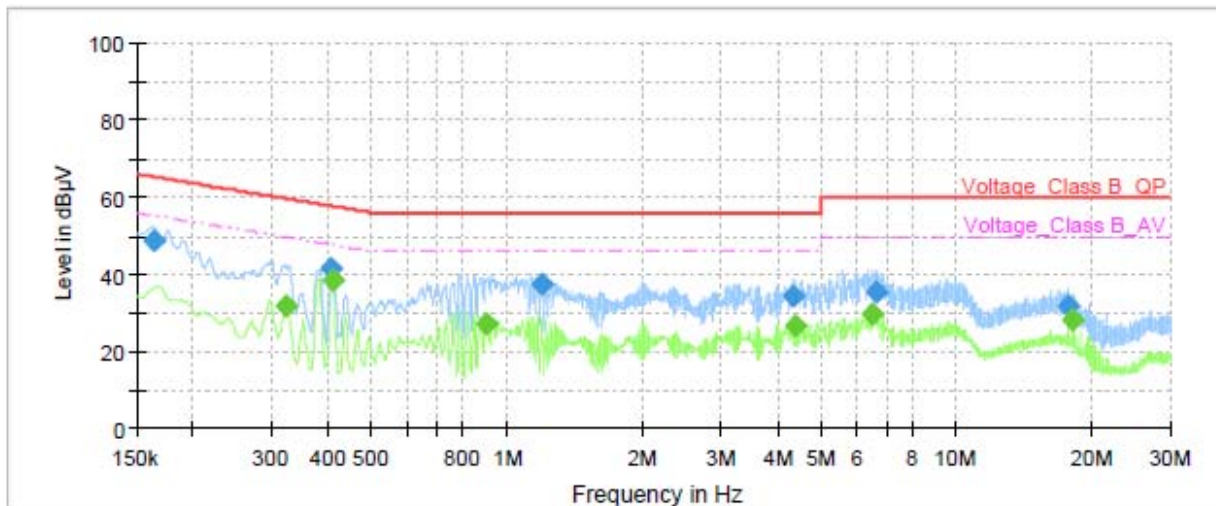


| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.17            | ---              | 33.83          | 54.95        | 21.12       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.17            | 47.15            | ---            | 64.95        | 17.80       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.41            | ---              | 34.41          | 47.67        | 13.26       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 0.41            | 40.36            | ---            | 57.67        | 17.31       | 1000.0          | 9.000           | L1   | ON     | 21.0       |
| 1.20            | 35.09            | ---            | 56.00        | 20.91       | 1000.0          | 9.000           | L1   | ON     | 20.1       |
| 1.23            | ---              | 27.56          | 46.00        | 18.44       | 1000.0          | 9.000           | L1   | ON     | 20.1       |
| 4.40            | ---              | 26.15          | 46.00        | 19.85       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 4.86            | 29.78            | ---            | 56.00        | 26.22       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 6.48            | ---              | 28.49          | 50.00        | 21.51       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 6.49            | 38.54            | ---            | 60.00        | 21.46       | 1000.0          | 9.000           | L1   | ON     | 19.5       |
| 17.69           | ---              | 29.93          | 50.00        | 20.07       | 1000.0          | 9.000           | L1   | ON     | 19.7       |
| 17.94           | 32.37            | ---            | 60.00        | 27.63       | 1000.0          | 9.000           | L1   | ON     | 19.7       |

Remark: Correct factor=cable loss + LISN factor

L line

Conducted Emission from 150 KHz to 30 MHz



| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.16            | 48.94            | ---            | 65.28        | 16.34       | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.32            | ---              | 31.93          | 49.62        | 17.69       | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.41            | 41.75            | ---            | 57.72        | 15.97       | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.41            | ---              | 38.68          | 47.67        | 8.99        | 1000.0          | 9.000           | N    | ON     | 21.0       |
| 0.90            | ---              | 27.07          | 46.00        | 18.93       | 1000.0          | 9.000           | N    | ON     | 20.3       |
| 1.19            | 37.65            | ---            | 56.00        | 18.35       | 1000.0          | 9.000           | N    | ON     | 20.1       |
| 4.34            | 34.39            | ---            | 56.00        | 21.61       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 4.37            | ---              | 26.73          | 46.00        | 19.27       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 6.52            | ---              | 29.59          | 50.00        | 20.41       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 6.67            | 35.23            | ---            | 60.00        | 24.77       | 1000.0          | 9.000           | N    | ON     | 19.5       |
| 17.70           | 32.04            | ---            | 60.00        | 27.96       | 1000.0          | 9.000           | N    | ON     | 19.7       |
| 18.24           | ---              | 28.23          | 50.00        | 21.77       | 1000.0          | 9.000           | N    | ON     | 19.7       |

Remark: Correct factor=cable loss + LISN factor

N line

Conducted Emission from 150 KHz to 30 MHz

## 4 Uncertainty Measurement

| Case                              | Uncertainty | Factor k |
|-----------------------------------|-------------|----------|
| Radiated Emission 30MHz – 200MHz  | 4.17 dB     | 1.96     |
| Radiated Emission 200MHz – 1GHz   | 4.84 dB     | 1.96     |
| Radiated Emission 1GHz – 18GHz    | 4.35 dB     | 1.96     |
| Radiated Emission 18GHz – 26.5GHz | 5.90 dB     | 1.96     |
| Radiated Emission 26.5GHz – 40GHz | 5.92 dB     | 1.96     |
| Conducted Emission                | 2.57 dB     | 2        |

## 5 Main Test Instruments

| Name of Equipment        | Manufacturer | Type/Model        | Serial Number | Calibration Date | Expiration Time |
|--------------------------|--------------|-------------------|---------------|------------------|-----------------|
| Radiated Emission        |              |                   |               |                  |                 |
| EMI Test Receiver        | R&S          | ESCI3             | 100948        | 2023-05-12       | 2024-05-11      |
| Signal Analyzer          | R&S          | FSV40             | 101298        | 2023-05-12       | 2024-05-11      |
| TRILOG Broadband Antenna | SCHWARZBECK  | VULB 9163         | 01111         | 2022-10-25       | 2025-10-24      |
| Horn Antenna             | R&S          | HF907             | 102723        | 2021-07-24       | 2024-07-23      |
| Horn Antenna             | ETS-Lindgren | 3160-09           | 00102643      | 2021-10-10       | 2024-10-09      |
| Horn Antenna             | STEATITE     | QSH-SL-26-40-K-15 | 16779         | 2023-01-17       | 2026-01-16      |
| Software                 | R&S          | EMC32             | 9.26.01       | /                | /               |
| Conducted Emission       |              |                   |               |                  |                 |
| Artificial main network  | R&S          | ENV216            | 102191        | 2022-12-13       | 2024-12-09      |
| EMI Test Receiver        | R&S          | ESR               | 101667        | 2023-05-12       | 2024-05-11      |
| Software                 | R&S          | EMC32             | 10.35.10      | /                | /               |

## ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

## ANNEX B: Test Setup Photos

The Test Setup Photos are submitted separately.

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