

# EMC TEST REPORT

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

**FCC ID** 2ADZRG1426GF

**Product** 7368 ISAM ONT

**Brand** NOKIA

**Model** G-1426G-F

**Report No.** EFTA25050054-IE-01-E1

**Issue Date** July 14, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC Code CFR47 Part15B (2024)/ 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.

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*Approved by: Xu Kai*

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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: May 14, 2025 ~ May 20, 2025

Date of Sample Received: May 13, 2025

Note:

1. All indications of Pass/Fail in this report are opinions expressed by Eurofins 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 **Eurofins 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)**

Eurofins 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)**

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

### 1.3 Testing Location

Company: Eurofins TA Technology (Shanghai) Co., Ltd.  
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## 2 General Description of Equipment Under Test

### 2.1 Applicant and Manufacturer Information

Applicant	Nokia Shanghai Bell Co., Ltd.
Applicant address	No.388, Ningqiao Rd, Pilot Free Trade Zone, Shanghai, 201206 P.R. China
Manufacturer	Nokia of America Corporation
Manufacturer address	2301 Sugar Bush Road, Raleigh, NC, 27612 ,United States of America

### 2.2 General Information

EUT Description						
Device Type	Movable Device					
Model	G-1426G-F					
SN	ALCLED0401BF					
HW Version	PEM2					
SW Version	3TN01213JJMJ15					
Power Rating	DC 12V					
Connecting I/O Port(s)	Please refer to the User's Manual.					
Antenna Type	Internal Antenna					
Frequency	Band	Tx (MHz)	Rx (MHz)			
	Wi-Fi 2.4GHz	2400 ~ 2483.5	2400 ~ 2483.5			
	Wi-Fi 5GHz (U-NII-1)	5150 ~ 5250	5150 ~ 5250			
	Wi-Fi 5GHz (U-NII-2A)	5250 ~ 5350	5250 ~ 5350			
	Wi-Fi 5GHz (U-NII-2C)	5470 ~ 5725	5470 ~ 5725			
	Wi-Fi 5GHz (U-NII-3)	5725 ~ 5850	5725 ~ 5850			
EUT Accessory						
Adapter 1	Manufacturer: MNC Model: MAUS-1201001202 Input: 100-240V~50/60Hz 0.35A Output: 12V---1.0A					
Adapter 2	Manufacturer: KELI Model: KL-WA120100-E Input: 100-240V~50/60Hz 0.5A Output: 12V---1.0A					
Note:						
1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.						

## 2.3 Applied Standards

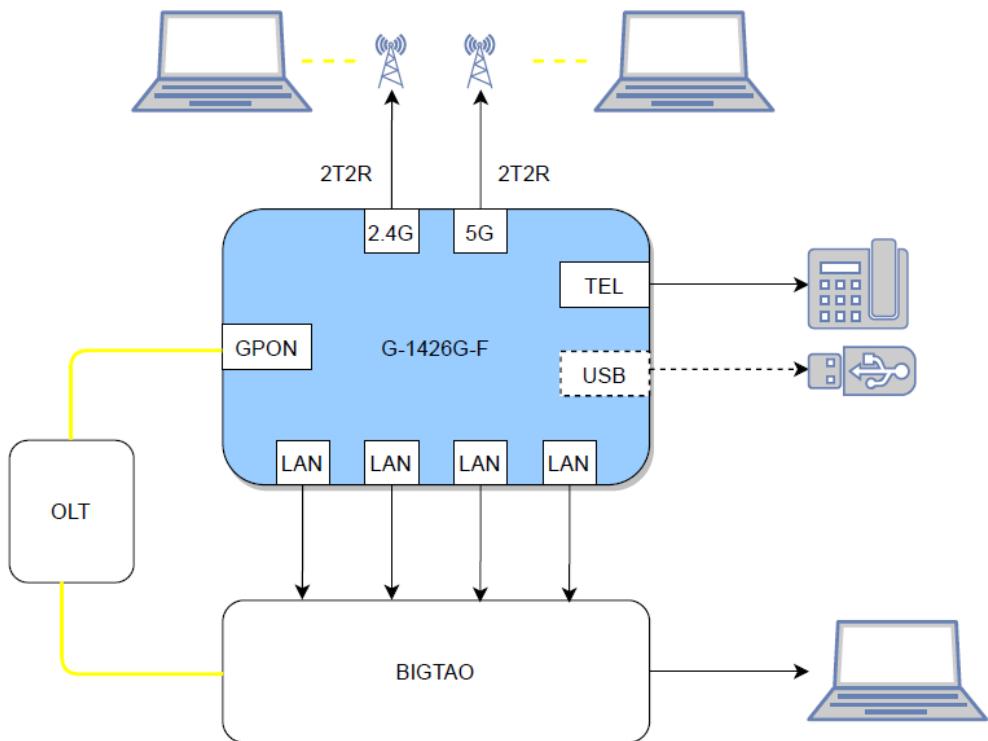
According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

### Test standards

**FCC Code CFR47 Part15B (2024)**

**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:

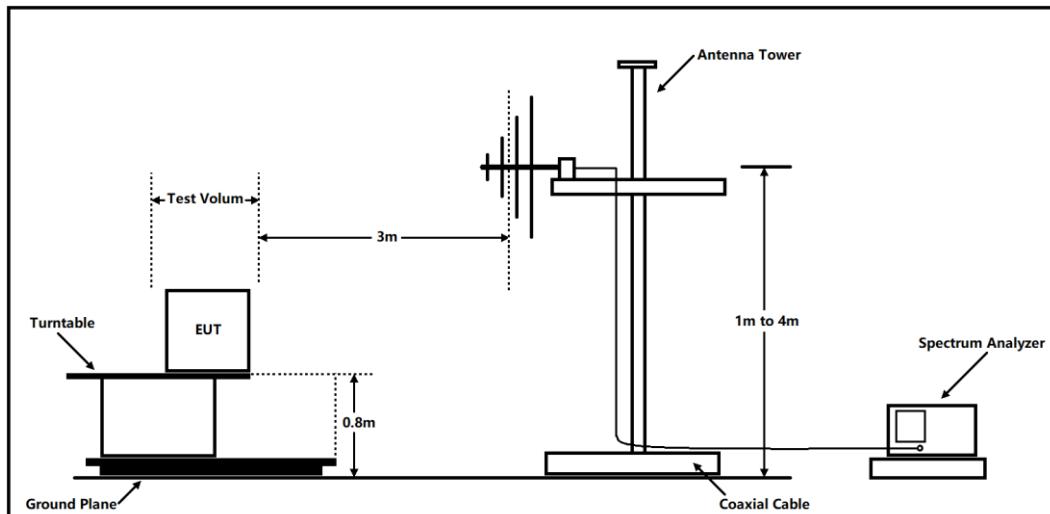
(a) PEAK Detector: RBW=1MHz / VBW=3MHz/ Sweep=AUTO

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

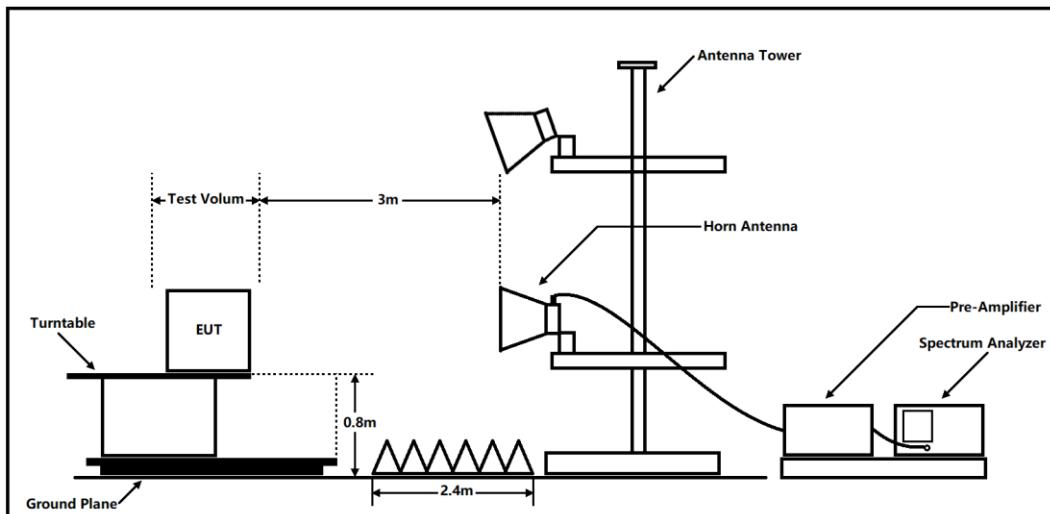
The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the worst case was recorded.

## 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 (dB $\mu$ V/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 74	Average 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.

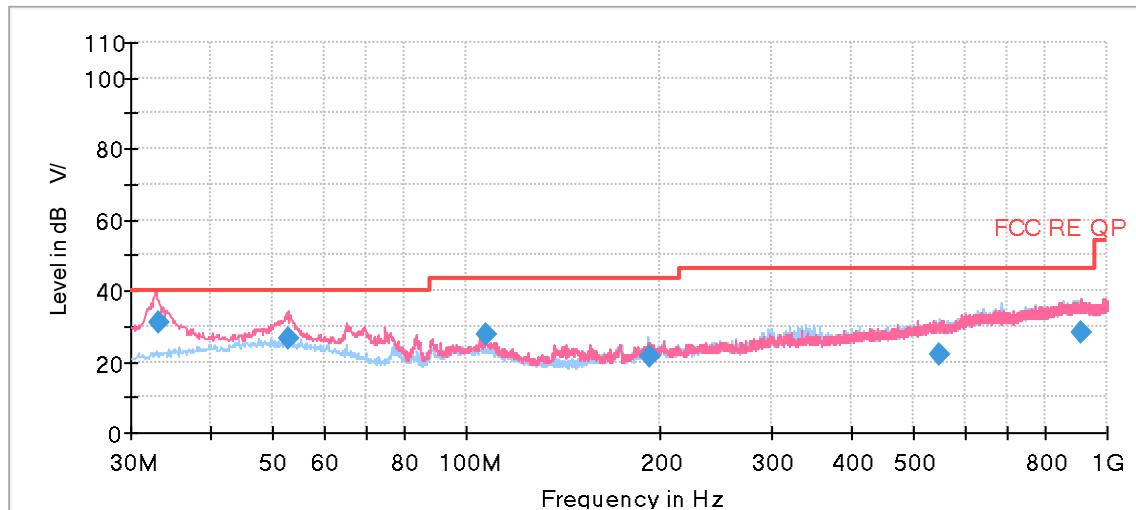
## Test Results

Sweep the whole frequency band through the range from 30MHz to the 5th harmonic of the carrier. The Emissions in the frequency band 18GHz – 26.5GHz is more than 20dB below the limit are not reported.

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

### Adapter 1

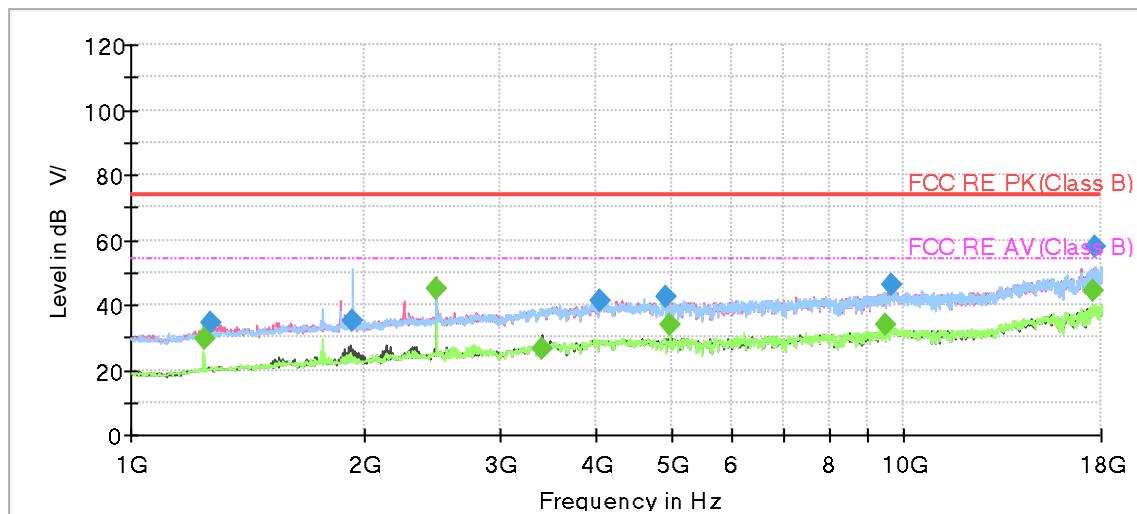


Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
33.068750	30.83	40.00	9.17	100.0	V	4.0	17.8
52.833750	26.48	40.00	13.52	175.0	V	53.0	21.0
107.721250	27.71	43.50	15.79	100.0	V	229.0	19.0
193.432500	21.38	43.50	22.12	100.0	H	270.0	18.9
548.585000	21.84	46.00	24.16	325.0	H	306.0	26.2
909.898750	27.95	46.00	18.05	385.0	V	246.0	31.0

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

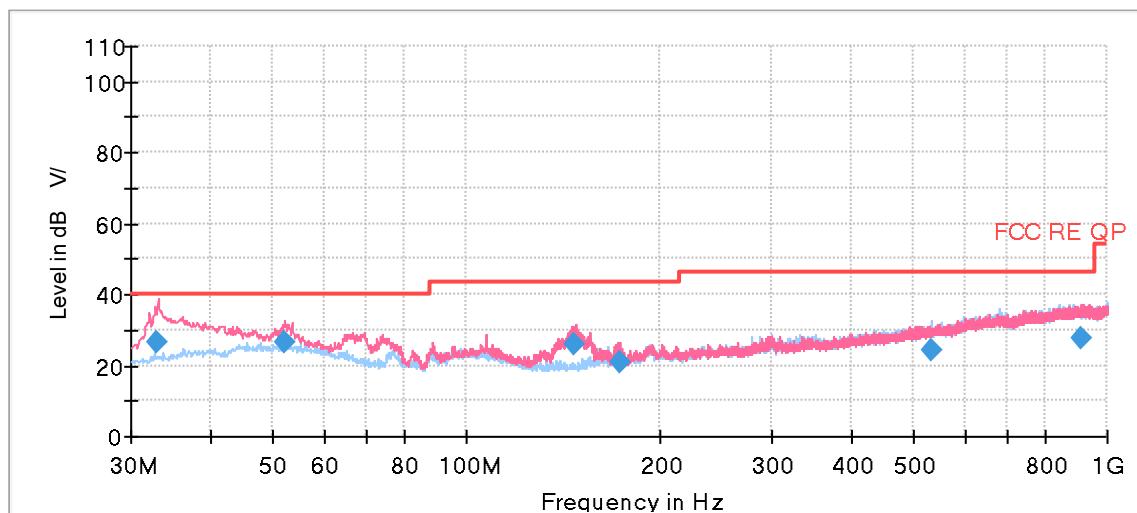
**2. Margin = Limit – Quasi-Peak**


**Radiated Emission from 1GHz to 18GHz**

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1244.178750	---	29.42	54.00	24.58	500.0	100.0	H	40.0	-18.6
1271.193750	34.65	---	74.00	29.35	500.0	125.0	V	32.0	-18.4
1935.875000	35.02	---	74.00	38.98	500.0	400.0	H	304.0	-14.8
2488.372500	---	44.66	54.00	9.34	500.0	123.0	V	133.0	-12.2
3403.887500	---	26.73	54.00	27.27	500.0	299.0	V	94.0	-8.6
4034.733750	41.02	---	74.00	32.98	500.0	299.0	H	233.0	-6.7
4911.398750	42.42	---	74.00	31.58	500.0	392.0	H	222.0	-5.3
4976.597500	---	33.69	54.00	20.32	500.0	199.0	H	58.0	-5.5
9446.223750	---	33.79	54.00	20.21	500.0	225.0	H	288.0	-0.4
9647.795000	46.02	---	74.00	27.98	500.0	375.0	V	265.0	-0.5
17529.838750	---	44.34	54.00	9.66	500.0	215.0	H	25.0	9.9
17707.758750	57.77	---	74.00	16.23	500.0	285.0	V	120.0	10.3

**Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)**
**2. Margin = Limit – MaxPeak / Average**

## Adapter 2

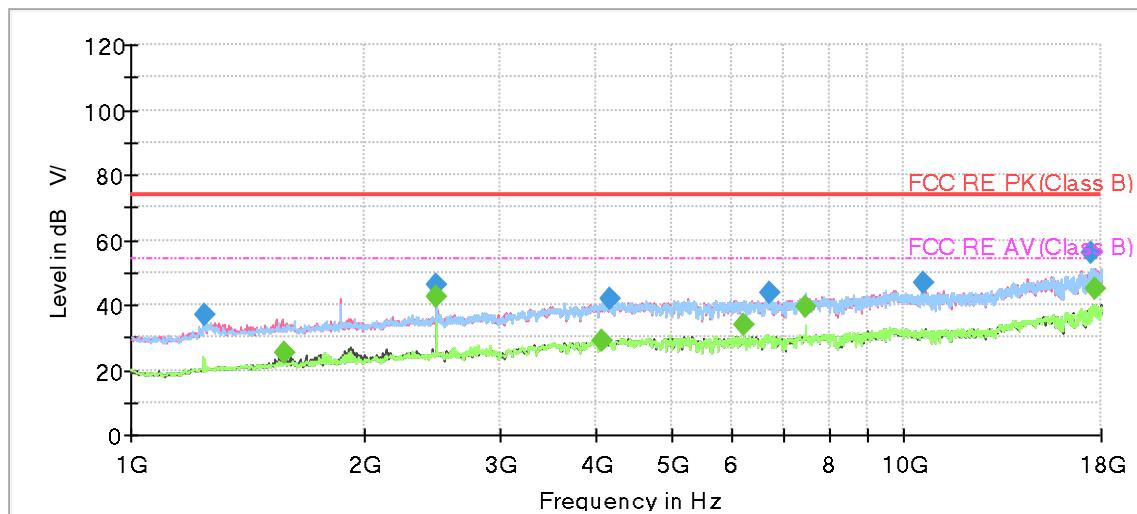


Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
32.912500	26.48	40.00	13.52	109.0	V	336.0	17.7
52.227500	26.64	40.00	13.36	100.0	V	265.0	21.1
147.541250	26.13	43.50	17.37	100.0	V	238.0	15.6
174.003750	20.87	43.50	22.63	100.0	V	292.0	20.2
533.386250	24.46	46.00	21.54	100.0	H	46.0	26.1
909.913750	27.89	46.00	18.11	297.0	V	47.0	31.0

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

2. Margin = Limit – Quasi-Peak


**Radiated Emission from 1GHz to 18GHz**

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1244.486250	36.70	---	74.00	37.30	500.0	125.0	V	168.0	-18.6
1577.148750	---	25.45	54.00	28.55	500.0	193.0	V	169.0	-16.6
2488.348750	---	42.21	54.00	11.79	500.0	109.0	V	167.0	-12.2
2488.573750	46.31	---	74.00	27.69	500.0	125.0	V	163.0	-12.2
4057.757500	---	28.70	54.00	25.30	500.0	376.0	V	292.0	-6.6
4167.988750	41.62	---	74.00	32.38	500.0	185.0	H	261.0	-6.7
6220.886250	---	33.74	54.00	20.26	500.0	201.0	V	281.0	-4.3
6711.621250	43.89	---	74.00	30.11	500.0	400.0	V	346.0	-3.5
7464.991250	---	39.11	54.00	14.89	500.0	125.0	H	284.0	-3.0
10596.062500	46.63	---	74.00	27.37	500.0	393.0	V	280.0	-0.9
17507.731250	55.70	---	74.00	18.30	500.0	285.0	H	330.0	9.8
17713.943750	---	45.05	54.00	8.95	500.0	400.0	V	156.0	10.3

**Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)**
**2. Margin = Limit – MaxPeak / Average**

## 3.2 Conducted Emission

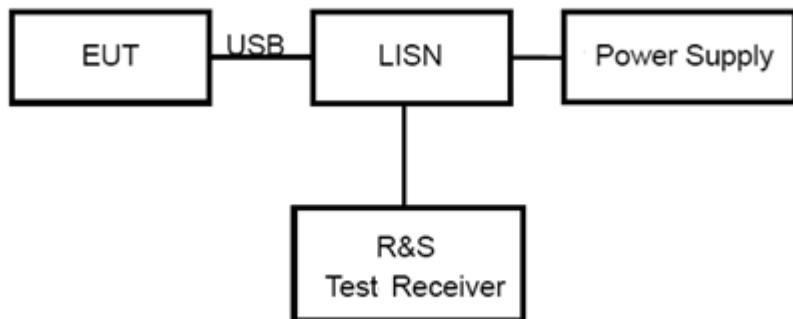
### Ambient Condition

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.

### Test Setup



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

### Limits

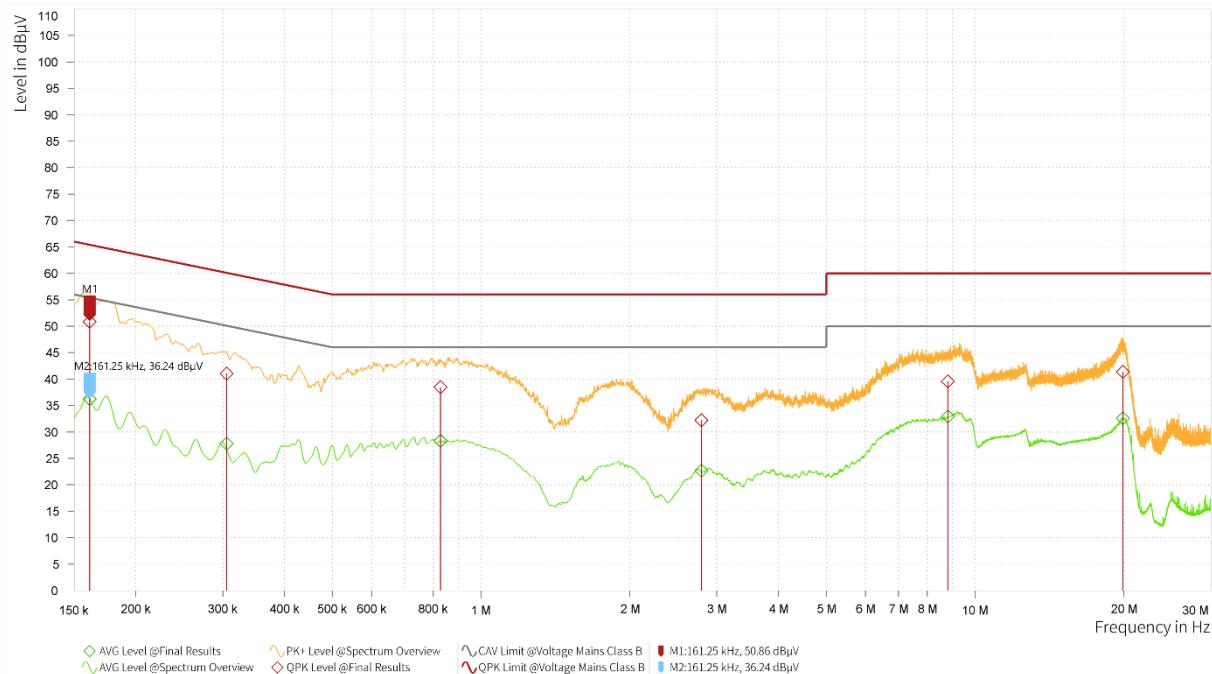
Frequency (MHz)	Class A (dB $\mu$ V)		Class B (dB $\mu$ V)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 to 56 *	56 to 46*
0.5 - 5	73	60	56	46
5 - 30	73	60	60	50

\*: Decreases with the logarithm of the frequency.

Note: The EUT should meet CLASS B limit.

## Test Results

### Adapter 1

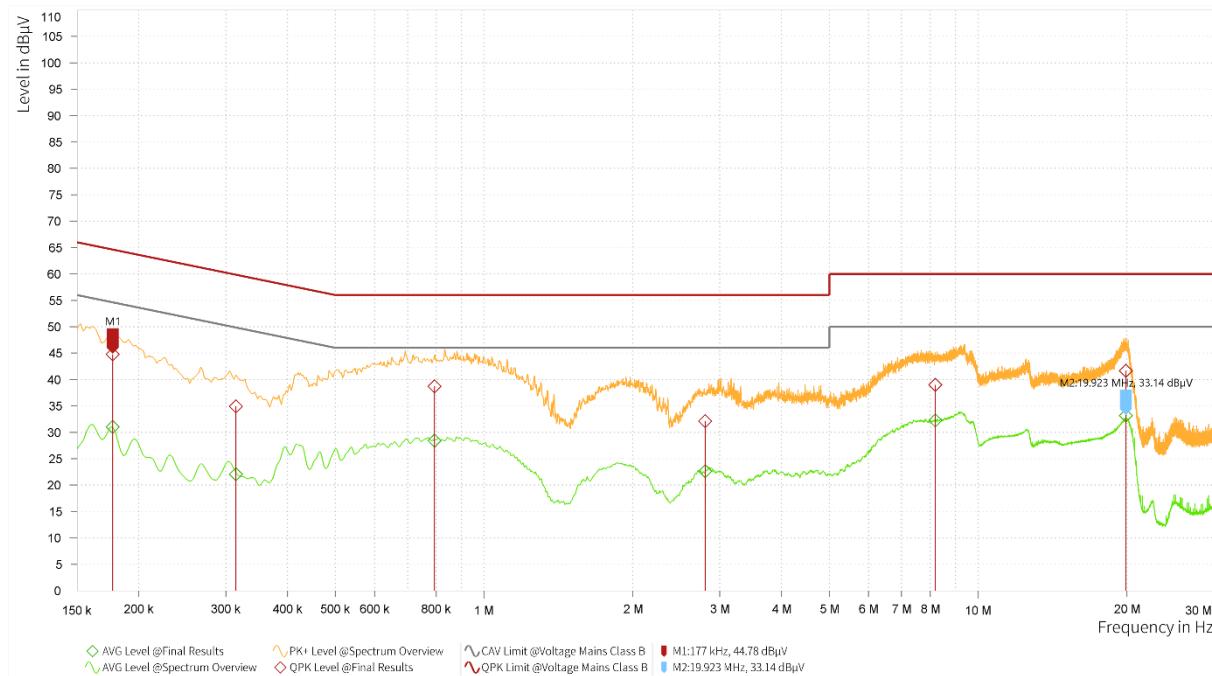


Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	AVG Level [dBμV]	AVG: CAV Limit [dBμV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.161	50.86	65.40	14.54	36.24	55.40	19.16	20.89	L1	9.000	1.000
0.305	41.04	60.10	19.06	27.81	50.10	22.29	20.94	L1	9.000	1.000
0.827	38.48	56.00	17.52	28.34	46.00	17.66	20.30	L1	9.000	1.000
2.794	32.19	56.00	23.81	22.66	46.00	23.34	19.51	L1	9.000	1.000
8.806	39.57	60.00	20.43	32.93	50.00	17.07	19.41	L1	9.000	1.000
19.912	41.38	60.00	18.62	32.57	50.00	17.43	19.65	L1	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

L line

Conducted Emission from 150 kHz to 30 MHz

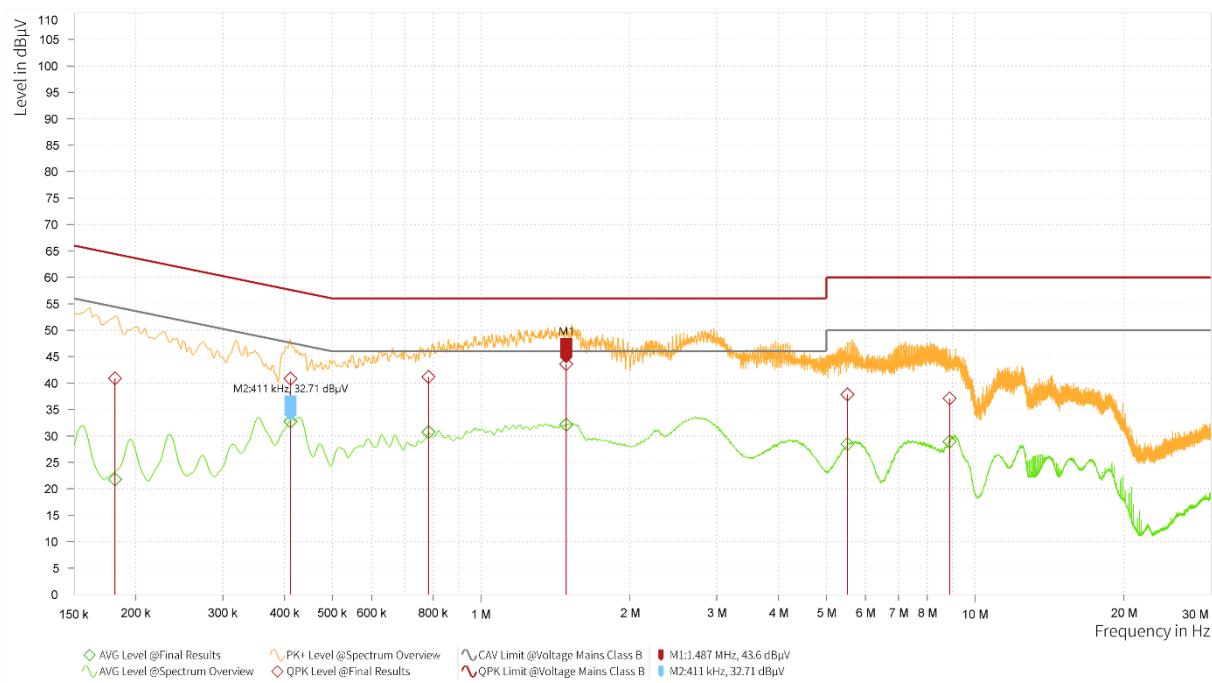


Frequency [MHz]	QPK Level [dB $\mu$ V]	QPK Limit [dB $\mu$ V]	QPK Margin [dB]	Avg Level [dB $\mu$ V]	Avg: CAV Limit [dB $\mu$ V]	Avg Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.177	44.78	64.63	19.85	31.01	54.63	23.61	21.04	N	9.000	1.000
0.314	34.90	59.86	24.96	22.03	49.86	27.82	20.94	N	9.000	1.000
0.794	38.68	56.00	17.32	28.42	46.00	17.58	20.34	N	9.000	1.000
2.803	32.10	56.00	23.90	22.64	46.00	23.36	19.51	N	9.000	1.000
8.189	38.98	60.00	21.02	32.25	50.00	17.75	19.42	N	9.000	1.000
19.923	41.66	60.00	18.34	33.14	50.00	16.86	19.70	N	9.000	1.000

**Remark: Correct factor=cable loss + LISN factor**

N line  
Conducted Emission from 150 kHz to 30 MHz

## Adapter 2

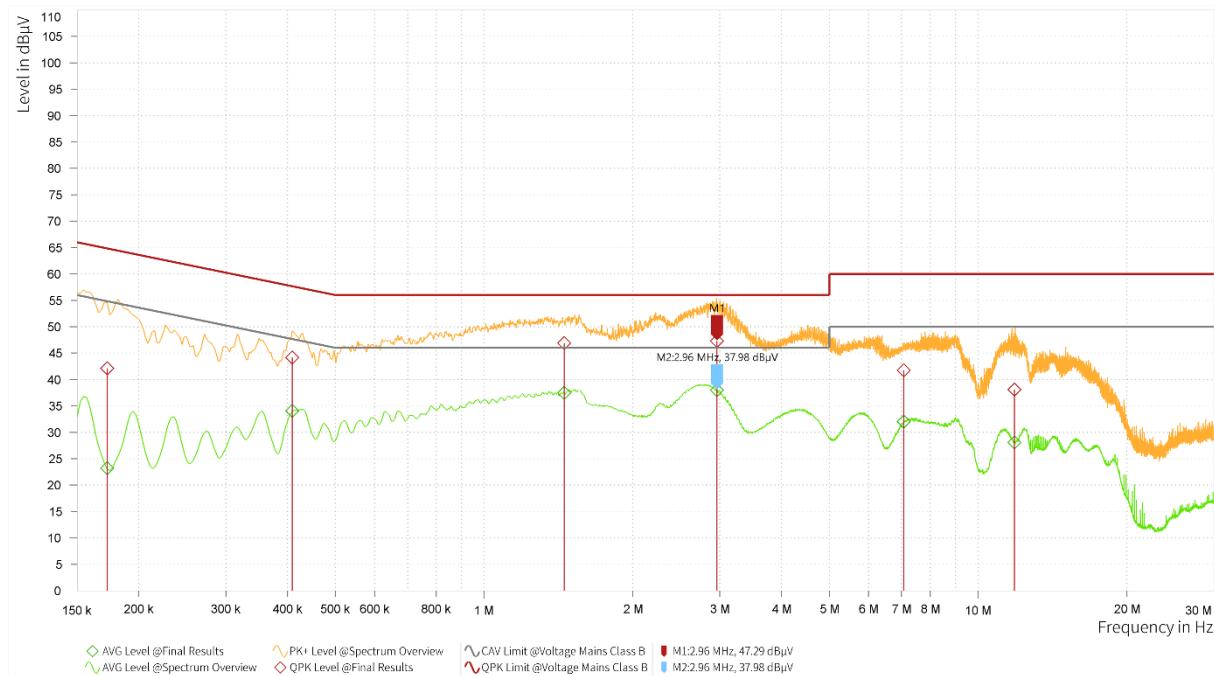


Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	AVG Level [dBμV]	AVG: CAV Limit [dBμV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.182	40.89	64.42	23.53	21.79	54.42	32.62	21.03	L1	9.000	1.000
0.411	40.84	57.63	16.78	32.71	47.63	14.92	20.86	L1	9.000	1.000
0.782	41.15	56.00	14.85	30.72	46.00	15.28	20.34	L1	9.000	1.000
1.487	43.60	56.00	12.40	32.12	46.00	13.88	19.85	L1	9.000	1.000
5.512	37.84	60.00	22.16	28.48	50.00	21.52	19.40	L1	9.000	1.000
8.878	37.11	60.00	22.89	28.92	50.00	21.08	19.41	L1	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

L line

Conducted Emission from 150 kHz to 30 MHz



Frequency [MHz]	QPK Level [dB $\mu$ V]	QPK Limit [dB $\mu$ V]	QPK Margin [dB]	AVG Level [dB $\mu$ V]	AVG: CAV Limit [dB $\mu$ V]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.173	42.12	64.84	22.72	23.19	54.84	31.65	20.90	N	9.000	1.000
0.409	44.18	57.67	13.50	34.04	47.67	13.63	20.88	N	9.000	1.000
1.453	46.91	56.00	9.09	37.49	46.00	8.51	19.88	N	9.000	1.000
2.960	47.29	56.00	8.71	37.98	46.00	8.02	19.50	N	9.000	1.000
7.073	41.72	60.00	18.28	32.04	50.00	17.96	19.41	N	9.000	1.000
11.848	38.09	60.00	21.91	28.07	50.00	21.93	19.45	N	9.000	1.000

**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	2025-05-07	2026-05-06
Signal Analyzer	R&S	FSV40	101186	2025-05-06	2026-05-05
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9163	1023	2023-07-14	2026-07-13
Horn Antenna	SCHWARZBECK	BBHA 9120D	430	2024-07-18	2027-07-17
Amplifier	R&S	SCU18F	101022	2025-05-06	2026-05-05
Software	R&S	EMC32	9.26.01	/	/
Conducted Emission					
Artificial main network	R&S	ENV216	102191	2024-12-02	2026-12-01
EMI Test Receiver	R&S	ESR	101667	2025-05-06	2026-05-05
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 \*\*\*\*\*