

EMC TEST REPORT

Applicant Nokia Shanghai Bell Co., Ltd.

FCC ID 2ADZRG1427GA

Product NOKIA ONT

Brand NOKIA

Model G-1427G-A

Report No. EFTA25090289-IE-06-E1V1

Issue Date December 11, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC Code CFR47 Part15B (2025)/ 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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Version	Revision Description	Issue Date
Rev.0	Initial issue of report.	December 5, 2025
Rev.1	Update description.	December 11, 2025
Note: This revised report (Report No.: EFTA25090289-IE-06-E1V1V1) supersedes and replaces the previously issued report (Report No.: EFTA25090289-IE-06-E1V1). Please discard or destroy the previously issued report and dispose of it accordingly.		

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: September 23, 2025 ~ October 24, 2025			
Date of Sample Received: September 23, 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.			

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 Rd. Raleigh, NC 27612

2.2 General Information

EUT Description			
Device Type	Movable Device		
Model	G-1427G-A		
SN	1#: ALCLFF0F1502 2#: ALCLFF0F155A		
HW Version	3TN01703		
SW Version	3TN01913		
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: MOSO POWER SUPPLY TECHNOLOGY CO.,LTD Model: MS-V1500R120-018L0-US		
Adapter 2	Manufacturer: MOSO POWER SUPPLY TECHNOLOGY CO.,LTD Model: MS-V1500R120-018L0-DE		
Adapter 3	Manufacturer: MOSO POWER SUPPLY TECHNOLOGY CO.,LTD Model: MS-V1500R120-018L0-GB		
Adapter 4	Manufacturer: SHENZHEN RUIDE ELECTRONIC INDUSTRIAL CO.,LTD Model: RD1201500-C55-198MG		

Adapter 5	Manufacturer: SHENZHEN RUIDE ELECTRONIC INDUSTRIAL CO.,LTD Model: RD1201500-C55-198OG
Adapter 6	Manufacturer: SHENZHEN RUIDE ELECTRONIC INDUSTRIAL CO.,LTD Model: RD1201500-C55-198YG
Note: 1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant. 2. There are more than one Adapter, each one should be applied throughout the compliance test respectively, however, only the worst case (Adapter 1 for RE; Adapter 4 for CE) will be recorded in this report.	

Hardware code information

Configuration List:			
Brand Name	Model Name	ONT Package Part Number (KIT Code)	ONT Enclosure Part Number (EMA Code)
NOKIA	G-1427G-A	3TN01703XXXX	3TN01705XXXX
		(X can be A-Z or blank)	(X can be A-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 RF.			

EUT Configuration Difference

Configuration	Configuration 1	Configuration 2
Model Name	G-1427G-A	G-1427G-A
USB Port	with USB port	without USB port
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.		

2.3 Applied Standards

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

Test standards

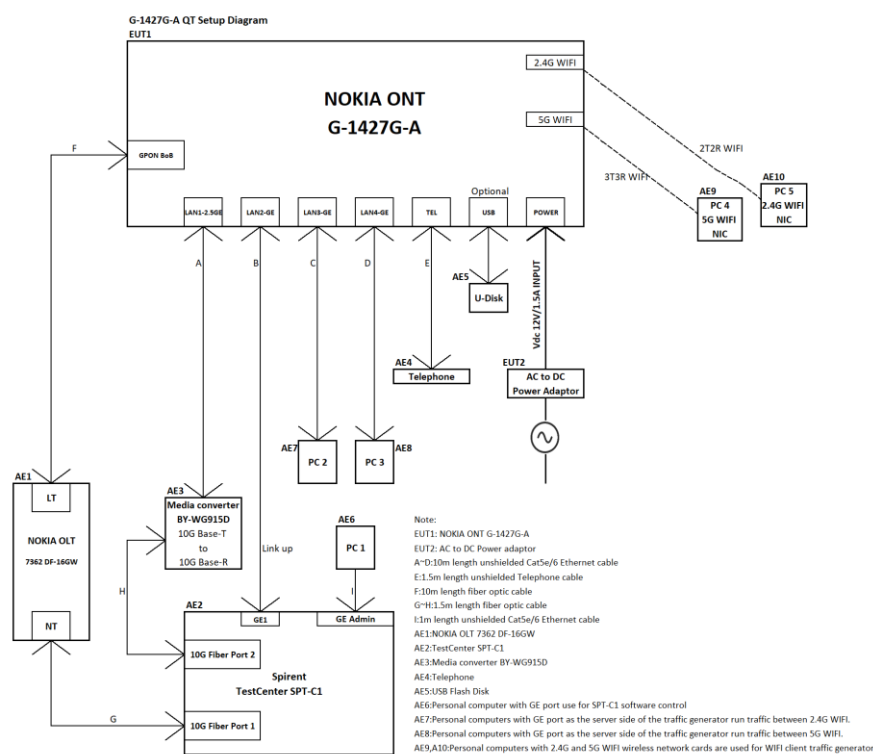
FCC Code CFR47 Part15B (2025)

ANSI C63.4-2014

2.4 Test Mode

Test Mode	
Mode 1	Adapter + EUT + PC + USB/TEL/LAN/WAN/Fiber optic Port + Streaming

Test Type	Test Mode	Worst Mode
Radiated Emission	Mode 1	Mode 1
Conducted Emission	Mode 1	Mode 1
After technical evaluation or/and preliminary test, the test data of the worst-case condition was recorded in this report.		



Auxiliary test equipment

No.	Name	Brand name	Model
1	OLT	NOKIA	7362 ISAM DF-16GW
2	Testcenter	Spirent	SPT-C1
3	Media Converter 10G Base-T to 10G Base-R	BOYANG	BY-WG915D
4	Telephone	PHILIPS	HCD9889(118) TSD
5	U-Disk	SanDisk	Cruzer Blade 32GB/SDCZ74-032G-Z35
6	PC1	HP	EliteBook 745 G3
7	PC2, PC3, PC4, PC5	ThinkPad	T480

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:

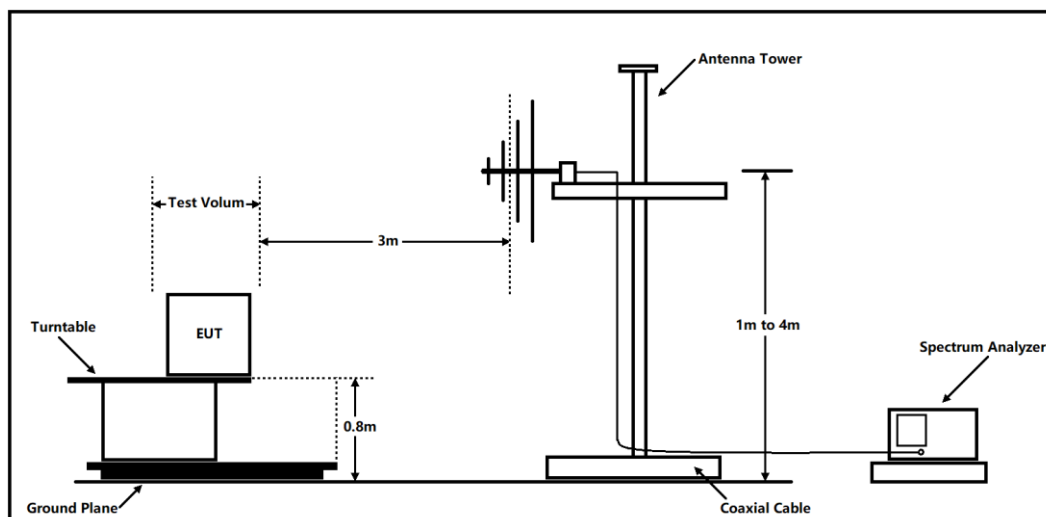
(a) PEAK Detector: RBW=1MHz / VBW=3MHz/ Sweep=AUTO

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

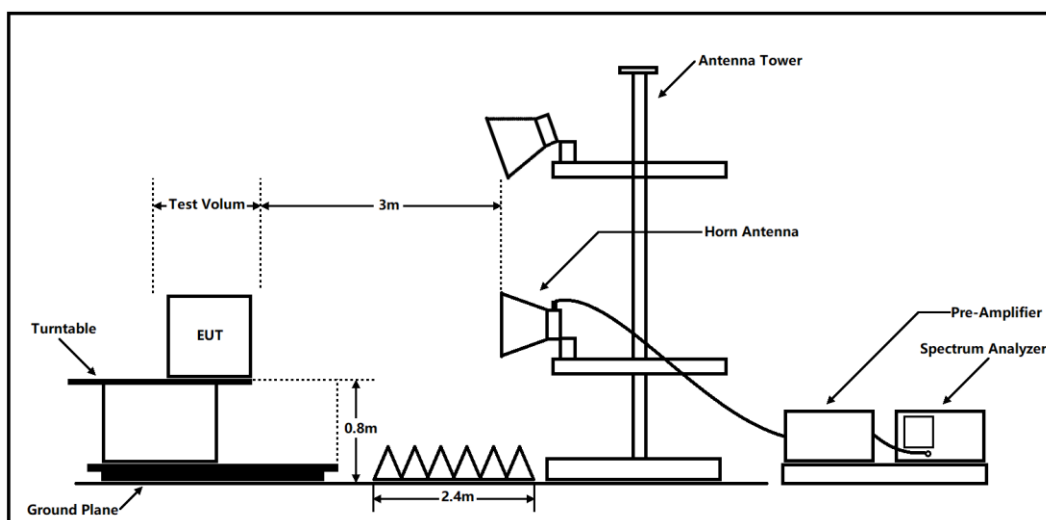
The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the worst case was recorded.

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 μ 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 th harmonic of the highest frequency or 40GHz, which is lower	54 74	Average Peak

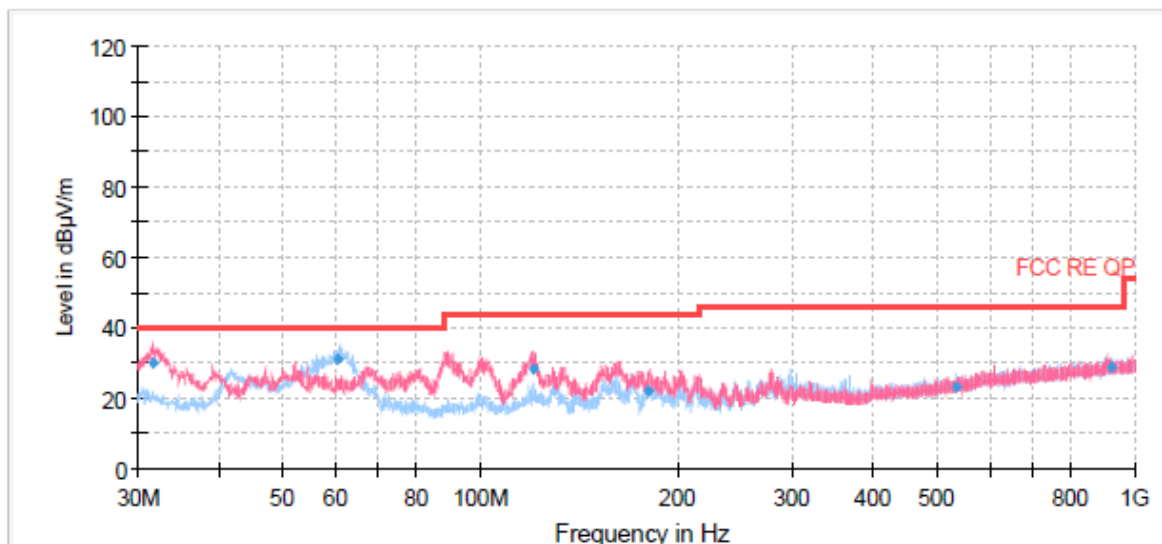
Frequency range of radiated measurements

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 – 40GHz is more than 20dB below the limit are not reported.

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



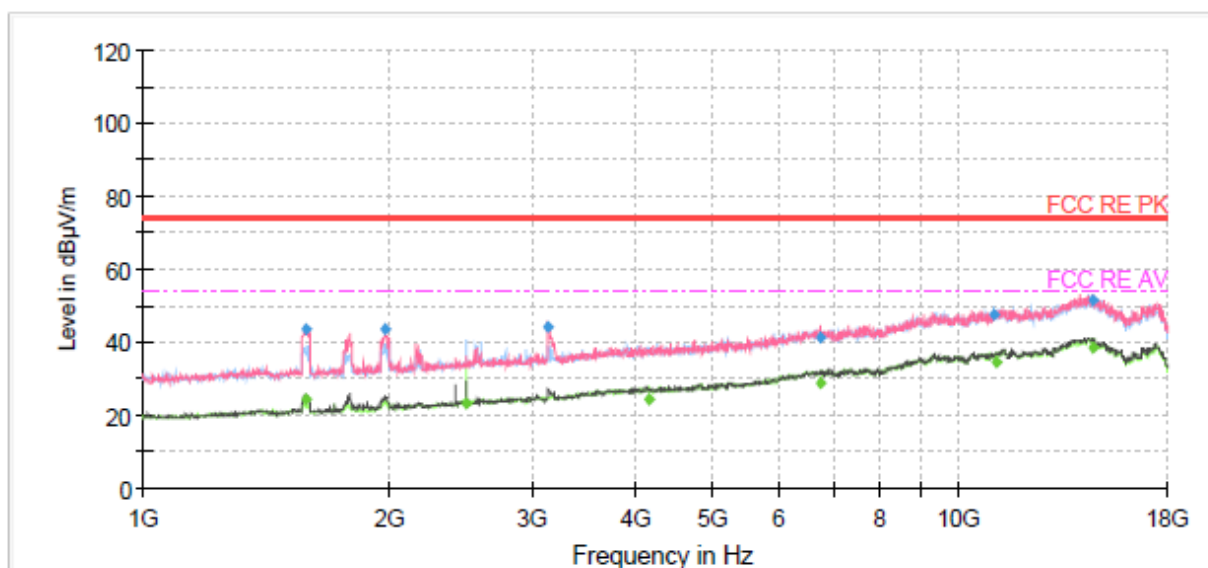
 QP Level @Spectrum Overview H
  QP Level @Spectrum Overview V
  QP Level @Final Results
  QP Limit

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)
31.61	30.07	40.00	9.93	100.0	V	280.00	17
60.81	30.87	40.00	9.13	100.0	H	344.00	19
120.28	28.47	43.50	15.03	100.0	V	144.00	17
180.91	22.21	43.50	21.29	100.0	V	95.00	17
533.61	23.36	46.00	22.64	198.0	H	52.00	25
921.70	28.91	46.00	17.09	325.0	H	284.00	31

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

2. Margin = Limit – Quasi-Peak



◆ PK Level @Final Results — PK Limit
◆ AVG Level @Final Results - - - AVG Limit
~ PK Level @Spectrum Overview H ~ PK Level @Spectrum Overview V
~ AVG Level @Spectrum Overview H ~ AVG Level @Spectrum Overview V

Radiated Emission from 1GHz to 18GHz

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1584.38	43.50	---	74.00	30.51	1000.00	103.0	V	202.00	-14
1584.38	---	24.32	54.00	29.68	1000.00	101.0	V	186.00	-14
1977.50	43.35	---	74.00	30.65	1000.00	123.0	V	194.00	-12
2487.50	---	23.11	54.00	30.89	1000.00	102.0	H	218.00	-10
3139.88	44.11	---	74.00	29.89	1000.00	104.0	V	2.00	-9
4153.50	---	24.46	54.00	29.54	1000.00	118.0	H	6.00	-6
6741.75	---	29.14	54.00	24.86	1000.00	183.0	V	28.00	0
6763.00	41.50	---	74.00	32.50	1000.00	310.0	V	112.00	0
11053.38	47.42	---	74.00	26.58	1000.00	325.0	H	34.00	6
11089.50	---	34.65	54.00	19.35	1000.00	288.0	H	54.00	5
14593.63	---	38.73	54.00	15.27	1000.00	199.0	V	273.00	9
14600.00	51.63	---	74.00	22.37	1000.00	109.0	H	22.00	9

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

2. Margin = Limit – MaxPeak / Average

3.2 Conducted Emission

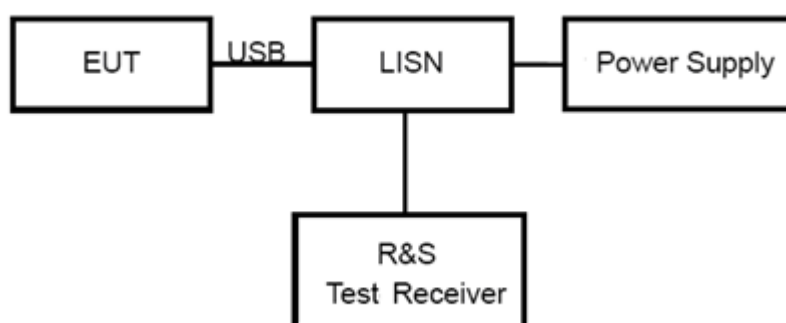
Ambient Condition

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 (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

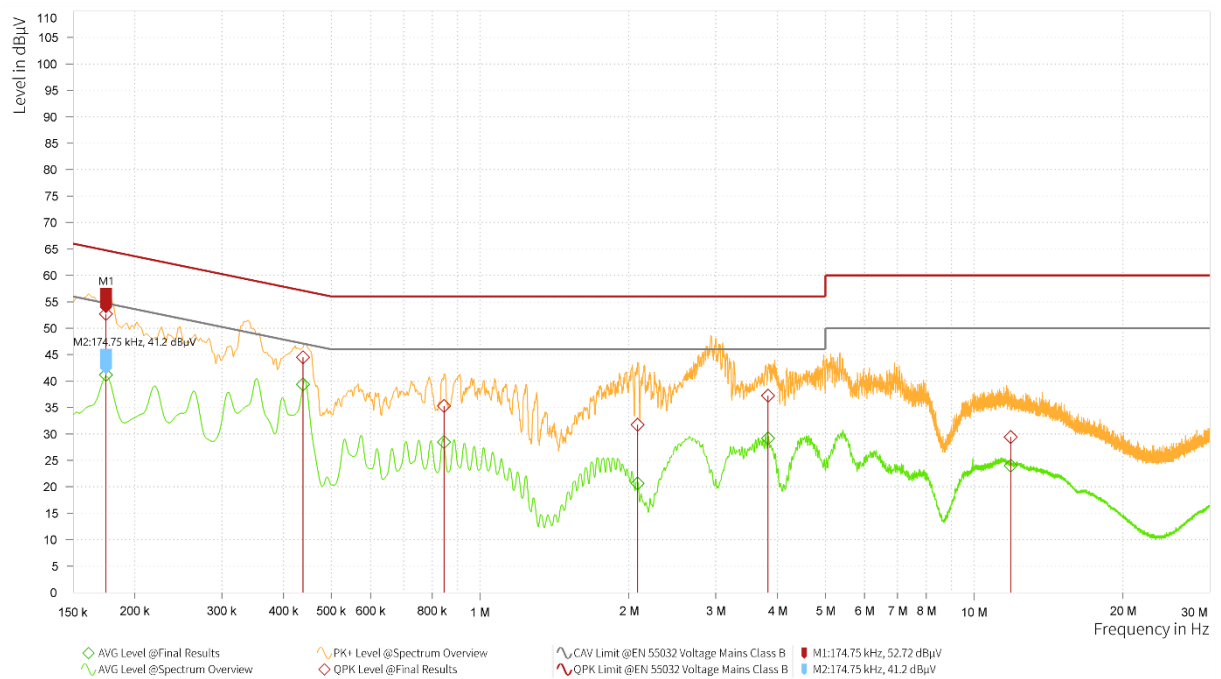


Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	AVG Level [dBμV]	AVG: CAV Limit [dBμV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.177	52.66	64.63	11.96	40.20	54.63	14.43	21.03	L1	9.000	1.000
0.436	43.99	57.14	13.15	38.57	47.14	8.57	20.84	L1	9.000	1.000
0.839	31.02	56.00	24.98	25.25	46.00	20.75	20.29	L1	9.000	1.000
1.853	36.50	56.00	19.50	29.51	46.00	16.49	19.69	L1	9.000	1.000
3.838	38.70	56.00	17.30	30.91	46.00	15.09	19.43	L1	9.000	1.000
11.335	29.69	60.00	30.31	23.55	50.00	26.45	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 [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]
0.175	52.72	64.73	12.01	41.20	54.73	13.53	21.04	N	9.000	1.000
0.438	44.47	57.10	12.63	39.38	47.10	7.72	20.85	N	9.000	1.000
0.845	35.28	56.00	20.72	28.45	46.00	17.55	20.30	N	9.000	1.000
2.083	31.74	56.00	24.26	20.62	46.00	25.38	19.64	N	9.000	1.000
3.829	37.25	56.00	18.75	29.19	46.00	16.81	19.44	N	9.000	1.000
11.864	29.41	60.00	30.59	24.01	50.00	25.99	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
Conducted Emission	2.57 dB	2

5 Main Test Instruments

Name of Equipment	Manufacturer	Type/Model	Serial Number/Version	Calibration Date	Expiration Time
Radiated Emission					
EMI Test Receiver	R&S	ESR	102389	2025-05-06	2026-05-05
Signal Analyzer	R&S	FSV40	101298	2025-05-07	2026-05-06
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9163	1023	2023-07-14	2026-07-13
Horn Antenna	R&S	HF 907	102723	2023-11-24	2026-11-23
Amplifier	R&S	SCU18	10034	2025-05-06	2026-05-05
Horn Antenna	R&S	BBHA 9170	01301	2023-09-16	2026-09-15
Amplifier	MicroWave	KLNA-18040050	220826001	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	2025-12-01
EMI Test Receiver	R&S	ESR	101667	2025-05-06	2026-05-05
Software	R&S	EMC32	9.26.01	/	/

6 The EUT Appearance

Refer to *EUT Appearance*.

7 Test Setup Photos

Refer to *EMC Test Setup*.

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