

MPE TEST REPORT

Applicant Nokia Shanghai Bell Co., Ltd.
FCC ID 2ADZRG1427GA
Product NOKIA ONT
Brand NOKIA
Model G-1427G-A
Report No. EFTA25090289-IE-08-M1
Issue Date December 5, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC 47 CFR Part 1 §1.1310, §2.1091**. The test results show that the equipment tested can demonstrate compliance with the requirements as documented in this report.



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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.

1.3 Testing Location

Company: Eurofins TA Technology (Shanghai) Co., Ltd.
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1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25°C
Relative humidity	Min. = 20%, Max. = 80%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

2 Description of Equipment Under Test

Client 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

General Technologies

EUT Description			
Model	G-1427G-A		
SN	ALCLFF0F14E1		
Hardware Version	3TN01703		
Software Version	3TN01913		
Frequency	Band	TX (MHz)	RX (MHz)
	Wi-Fi 2.4G	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		
Date of Testing	September 23, 2025 ~ November 10, 2025		

Date of Sample Received	September 23, 2025
Note: 1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant. 2. 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.	

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 Safety.			

Differences in EUT product configuration:

Configuration	Configuration 1	Configuration 2
Model Name	G-1427G-A	G-1427G-A
USB Port	without USB port	without USB port
Others	the same	
All test data in this report are derived from Configuration 1.		

3 Maximum Tune up and Antenna Gain

The numeric gain (G) of the antenna with a gain specified in dB is determined by

$$\text{Numeric gain (G)} = 10^{(\text{antenna gain}/10)}$$

Band	Maximum Tune up Tolerance		Antenna Gain (dBi)	Numeric Gain
	(dBm)	(mW)		
Wi-Fi 2.4G	25.00	316.23	4.50	2.82
Wi-Fi 5GHz (U-NII-1)	27.00	501.19	2.35	1.72
Wi-Fi 5GHz (U-NII-2A)	25.00	316.23	2.35	1.72
Wi-Fi 5GHz (U-NII-2C)	25.00	316.23	2.48	1.77
Wi-Fi 5GHz (U-NII-3)	28.00	630.96	2.30	1.70

4 MPE Limit

According to section 1.1310 of FCC 47 CFR Part 1, limits for maximum permissible exposure (MPE) are as following.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) LIMITS FOR OCCUPATIONAL/CONTROLLED EXPOSURE				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f ²)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

*f = frequency in MHz. * = Plane-wave equivalent power density.*

Note1. Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational / controlled limits apply provided he or she is made aware of the potential for exposure.

Note2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

The maximum permissible exposure for 1500~100,000MHz is 1.0. So

Band	The Maximum Permissible Exposure (mW/cm ²)
Wi-Fi 2.4GHz	1.000
Wi-Fi 5GHz	1.000

5 RF Exposure Evaluation Result

RF exposure evaluation method is based on KDB 447498 D01, this calculation is based on the conducted power, maximum power and antenna gain with provides the minimum separation distance. The formula shown below is from OET Bulletin 65 Edition 97-01 Per KDB 447498 D01:

$$S = PG / 4\pi R^2$$

Where: S = power density (in appropriate units, e.g. mW/cm²)

P = Time-average maximum tune up procedure (in appropriate units, e.g., mW)

G = the numeric gain of the antenna

R = distance to the center of radiation of the antenna (20 cm = limit for MPE)

Band	Maximum EIRP (dBm)	PG (mW)	Result (mW/cm ²)	Limit Value (mW/cm ²)	The MPE Ratio
Wi-Fi 2.4G	29.500	891.251	0.177	1.000	0.177
Wi-Fi 5GHz (U-NII-1)	29.350	860.994	0.171	1.000	0.171
Wi-Fi 5GHz (U-NII-2A)	27.350	543.25	0.108	1.000	0.108
Wi-Fi 5GHz (U-NII-2C)	27.480	559.76	0.111	1.000	0.111
Wi-Fi 5GHz (U-NII-3)	30.300	1071.519	0.213	1.000	0.213
Note: R = 20cm $\pi = 3.1416$ The MPE Ratio = Mac Result÷Limit Value					

This device only supports simultaneous transmission via Wi-Fi 2.4GHz and Wi-Fi 5G.

So, the simultaneous transmitting antenna pairs as below:

TER = Wi-Fi 2.4GHz Antenna MPE Ratio + Wi-Fi 5GHz Antenna MPE Ratio = 0.177 + 0.213 = 0.390<1

So, the limit is kept.

Note: For this device, minimum separation distance is 20cm, even if calculations indicate MPE distance is less.

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. No change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

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