



RF Exposure Evaluation Declaration

FCC ID: 2ADZR23002690FM20

APPLICANT: Nokia Shanghai Bell Co., Ltd

Application Type: Certification

Product: FastMile 4G Receiver

Model No.: 4G03-A

Brand Name: Nokia

FCC Classification: Licensed Non-Broadcast Station Transmitter (TNB)
Part 15 Spread Spectrum Transmitter (DSS)

Test Procedure(s): KDB 447498 D01v06

Test Date: July 28 ~ September 04, 2020

Reviewed By:

(Sunny Sun)

Approved By:

(Robin Wu)



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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Revision History

Report No.	Version	Description	Issue Date	Note
2007RSU064-U2	Rev. 01	Initial Report	10-19-2020	Valid

General Information

Applicant:	Nokia Shanghai Bell Co., Ltd
Applicant Address:	388#, Ningqiao Road, China (Shanghai) Pilot Free Trade Zone, Shanghai 201206, China
Manufacturer:	Nokia Shanghai Bell Co., Ltd
Manufacturer Address:	388#, Ningqiao Road, China (Shanghai) Pilot Free Trade Zone, Shanghai 201206, China
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
Test Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is an FCC accredited testing laboratory (MRT Designation No. CN1166) on the FCC website.
- MRT facility is an ISED recognized testing laboratory (MRT Reg. No. CN0001) on the ISED website.
- MRT facility is a VCCI registered (R-20025, G-20034, C-20020, T-20020) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the A2LA under the A2LA Program (Cert. No. 3628.01) and CNAS under the CNAS Program (Cert. No. L10551) in EMC, Safety, Radio, Telecommunications and SAR testing.

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name:	FastMile 4G Receiver
Model No.:	4G03-A
Brand Name:	Nokia
Intra-Band:	CA_7C, CA_41C
Modulation Type:	QPSK, 16QAM, 64QAM
T _x Frequency Range:	Band 7: 2500 ~ 2570 MHz Band 41: 2496 ~ 2690 MHz
R _x Frequency Range:	Band 7: 2620 ~ 2690 MHz Band 41: 2496 ~ 2690 MHz

2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.2. Test Result of RF Exposure Evaluation

Product	FastMile 4G Gateway
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum Conducted Power (dBm)	Maximum EIRP (dBm)	Safety Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
LTE Band 7	2500 ~ 2570	25.7	38.2	50	0.2103	1
LTE Band 41	2496 ~ 2690	25.7	38.2		0.2103	

Note: The max Power Density at R (50 cm) = 0.2103 mW/cm² < 1 mW/cm².

The End

Appendix A – EUT Photograph

Refer to “2007RSU064-UE” file.