

RF Exposure Report

Report No.: SA190531C22B

FCC ID: VBNAHIB-01

Test Model: AHIB

Received Date: Oct. 23, 2019

Test Date: Oct. 29 ~ Nov. 02, 2019

Issued Date: Nov. 06, 2019

Applicant: Nokia Solutions and Networks

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 788550 / TW0003
Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
SA190531C22B	Original release	Nov. 06, 2019

1 Certificate of Conformity

Product: AirScale Base Station RRH 2100MHz
Brand: Nokia
Test Model: AHIB
Sample Status: Mass product
Applicant: Nokia Solutions and Networks
Test Date: Oct. 29 ~ Nov. 02, 2019
Standards: FCC Part 2 (Section 2.1091)
KDB 447498 D01 General RF Exposure Guidance v06
IEEE C95.1

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Pettie Chen, **Date:** Nov. 06, 2019
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Approved by : Bruce Chen, **Date:** Nov. 06, 2019
Bruce Chen / Senior Project Engineer

2 RF Exposure

2.1 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 Exposure				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

2.2 MPE 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

2.3 Classification

For General Population

The antenna of this product, under normal use condition, is at least 178cm away from the body of the user. So, this device is classified as **fixed device**.

For Occupational Population

The antenna of this product, under normal use condition, is at least 80cm away from the body of the user. So, this device is classified as **fixed device**.

2.4 Antenna Gain

Antenna Spec.	Direction Panel antenna with 12.5dBi gain
Antenna Model	AAFA
Antenna Gain	12.5dBi (Note)

Note:

1. This device operate with Multiple Antennas Using Multiple-input, Multiple-output (MIMO) Technology for uncorrelated Transmission. Base on NOKIA's declaration that the maximum permissible directional gain is 12.5dBi
2. Representative antenna used for evaluation is AAFA at 12.5dBi.

3 Calculation Result of Maximum Tune up Power

For General Population

Function	Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
n66	2110 ~ 2200	55.99	178	0.998	1

For Occupational Population

Function	Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
n66	2110 ~ 2200	55.99	80	4.939	5

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

4 Brief Summary of results

The wireless device described within this report has been shown to be capable of compliance with the basic restrictions related to human exposure to electromagnetic fields for both General public and Occupational. The calculations shown in this report were made in accordance the procedures specified in the applied test specification(s)

Configuration	Required Compliance Boundary(cm)	
	Occupational	General Population
n66	80	178

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