

# **RF Exposure Report**

Report No.: SA160920E06 R2

FCC ID: 2AD8UFW2QADPM01

Test Model: FW2QADPM01

Received Date: Sep. 20, 2016

Test Date: Oct. 14, 2016

**Issued Date:** Sep. 13, 2018

Applicant: Nokia Solutions and Networks, OY.

Address: 2000 W. Lucent Lane, Naperville, IL 60563, USA

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Hsin Chu Laboratory

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,

Taiwan R.O.C.

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. The report must not be used by the client to claim product certification, approval, or endorsement by any government agencies.

Report No.: SA160920E06 R2 Page No. 1 / 8 Report Format Version: 6.1.1 Cancels and replaces the report No.: SA160920E06 R1 dated Apr. 25, 2018



## **Table of Contents**

Relea	se Control Record	3
1	Certificate of Conformity	4
2	RF Exposure	5
	Limits for Maximum Permissible Exposure (MPE)	
	MPE Calculation Formula  Classification	
	Antenna Gain	
2.5	Calculation Result	7
3	Brief Summary of results	8



## **Release Control Record**

Issue No. Description		Date Issued
SA160920E06	Original release.	Mar. 02, 2017
SA160920E06 R1 Modified the applicant address.		Apr. 25, 2018
SA160920E06 R2	Modified the applicant name and added the FCC ID.	Sep. 13, 2018

Report No.: SA160920E06 R2 Page No. 3 / 8 Cancels and replaces the report No.: SA160920E06 R1 dated Apr. 25, 2018 Report Format Version: 6.1.1



### 1 Certificate of Conformity

Product: Flexi Zone Multiband Indoor Pico BTS

Brand: Nokia

Test Model: FW2QADPM01

Sample Status: MASS-PRODUCTION

Applicant: Nokia Solutions and Networks, OY.

Test Date: Oct. 14, 2016

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

**IEEE C95.1** 

FCC Part 1 (Section 1.1310)

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 EMC characteristics under the conditions specified in this report.

Prepared by: , Date: Sep. 13, 2018

Claire Kuan / Specialist

**Approved by:** , **Date:** Sep. 13, 2018

May Chen / Manager

Report Format Version: 6.1.1



### 2 RF Exposure

## 2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Ctue is othe (A/sec)		Power Density (mW/cm2)	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

 $Pd = (Pout*G) / (4*pi*r^2)$ 

where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

#### 2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **fixed device** and installations by professional service personnel.

Report No.: SA160920E06 R2 Page No. 5 / 8 Report Format Version: 6.1.1 Cancels and replaces the report No.: SA160920E06 R1 dated Apr. 25, 2018



#### Antenna Gain 2.4

The antennas provided to the EUT, please refer to the following table:

Antenna Spec.								
Antenna Condition	Brand	Model	Antenna Type	Antenna Net Gain(dBi)	Frequency range			
Chain0	NA	NA	Slot Antenna	6.36	3.4~3.8GHz			
Chain1	NA	NA	Slot Antenna	4.61	3.4~3.8GHz			

Cable Spec.								
Brand	Model	Connector Type	Cable Loss(dB)	Cable Length (mm)				
NA	NA	Right angle MMCX Plug	peak gain included	287mm				

Report No.: SA160920E06 R2 Page No. 6 / 8 Cancels and replaces the report No.: SA160920E06 R1 dated Apr. 25, 2018 Report Format Version: 6.1.1



### 2.5 Calculation Result

**For General Population** 

Tor Ocheral Topulation							
Operating Frequency (MHz)	Max. EIRP Power (dBm)	Max. EIRP Power (mW)	Distance (cm)	Power Density (mW/cm²)	Limit (mW/cm²)		
3560	28.88	772.681	20	0.153719559	1		

**For Occupational** 

1 or occupation					
Operating Frequency (MHz)	Max. EIRP Power (dBm)	Max. EIRP Power (mW)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm²)
3560	28.88	772.681	20	0.153719559	5



#### 3 **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 Compli	ance Boundary(m)		
Configuration	Occupational	General Population		
LTE CBRS Band	0.2	0.2		

Report No.: SA160920E06 R2 Page No. 8 / 8 Cancels and replaces the report No.: SA160920E06 R1 dated Apr. 25, 2018 Report Format Version: 6.1.1