RF Exposure Report

Report No.:	SA160112E05
FCC ID:	2AD8UFW2IADPM01
Test Model:	FW2IADPM01
Received Date:	Jan. 12, 2016
Test Date:	Feb. 02, 2016

Applicant:	Nokia Solutions and Networks
Address:	1455 West Shure Drive, Arlington Heights, IL 60004, 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.
Test Location (1):	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

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Release Control Record

Issue No.	Description	Date Issued
SA160112E05	Original release.	

1 Certificate of Conformity

Product:	Nokia FW2IA LTE Module
Brand:	Nokia
Test Model:	FW2IADPM01
Test Sample S/N:	EB155110009, EB154810036
Hardware Version:	X23
Sample Status:	MASS-PRODUCTION
Applicant:	Nokia Solutions and Networks
Test Date:	Feb. 02, 2016
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 GENERAL RF EXPOSURE GUIDANCE V06 IEEE STD C95.1-2005 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:** Feb. 25, 2016

Claire Kuan / Specialist

Approved by : _____ , **Date:** Feb. 25, 2016

May Chen / Manager

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/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^2

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 station and installations by professional service persionnel device.

2.4 Antenna Gain

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

Antenna Spec.					
Antenna No	Brand	Model	Antenna Type	Gain(dBi)	Frequency (GHz)
LTE Ant1(Main)	Nokia	FW2IADPM01	Slot Antenna	6.03	1.7~2.7
Antenna No	Brand	Model	Antenna Type	Gain(dBi)	Frequency (GHz)
LTE Ant2(Aux)	Nokia	FW2IADPM01	Slot Antenna	4.64	1.7~2.7

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

2.5 Calculation Result

Calculation for Maximum EIRP

For LTE

Frequency Band (MHz)	EIRP Power (mW)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2112.5-2177.5	912.011	20	0.1814	1

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 Compliance Boundary(m)	
	Occupational	General Population
AWS Band	0.2	0.2

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