

RF Exposure Report

Report No.: SA170515E06

FCC ID: PY317200381

Test Model: NM8207

Received Date: May 16, 2017

Test Date: June 04, 2017

Issued Date: June 22, 2017

Applicant: NETGEAR, INC.

Address: 350 East Plumeria Drive San Jose, CA 95134

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

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Release Control Record

Issue No.	Description	Date Issued
SA170515E06	Original release.	June 22, 2017

1 Certificate of Conformity

Product: WWAN module

Brand: Netgear

Test Model: NM8207

Sample Status: ENGINEERING SAMPLE

Applicant: NETGEAR, INC.

Test Date: June 04, 2017

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

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:** June 22, 2017
Claire Kuan / Specialist

Approved by :  , **Date:** June 22, 2017
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/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

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

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 **Mobile Device**.

2.4 Antenna Gain

Antenna	Antenna Gain(dBi)	Frequency range (MHz to MHz)	Antenna Type	Connector Type
1	3.4	824 to 849	PIFA	I-PEX MHF IV
	4.39	880 to 915		
2	2.62	1850 to 1915	PIFA	I-PEX MHF IV
	4.25	1710 to 1785		
	3.82	1920 to 1980		

2.5 Calculation Result of Maximum Conducted Power

GPRS & EDGE

Operation Mode	Directional Gain		The Worst Case			Total Peak. Power Output		Time average power (mW)		Power Density (mW/cm ²)		
	dBi	Linear	Mode	Channel Number	Freq. (MHz)	dBm	mW	mW	dBm	Value	Limit	Result
850 band	3.40	2.1878	GPRS	251	848.8	32.19	1655.77	413.943	26.17	0.18016	0.5659	PASS
850 band	3.40	2.1878	EDGE	251	848.8	32.15	1640.59	410.148	26.13	0.17851	0.5659	PASS
1900 band	2.62	1.8281	GPRS	661	1880	29.63	918.333	229.583	23.61	0.08350	1	PASS
1900 band	2.62	1.8281	EDGE	810	1909.8	29.54	899.498	224.875	23.52	0.08178	1	PASS

Note: 1. Limit of Power Density = $F/1500$ (For frequency below 1500MHz)

2. Calculations for RF Exposure compliance in the cellular and PCS bands are base on the maximum source based time-average power obtained from 2-Slot GPRS operation. The resulting duty cycle factor is 2/8, or 6.02dB.

WCDMA

Operation Mode	Directional Gain		The Worst Case			Total Peak. Power Output		Power Density (mW/cm ²)		
	dBi	Linear	Mode	Channel Number	Freq. (MHz)	dBm	mW	Value	Limit	Result
850 band	3.40	2.1878	WCDMA V	4233	846.6	21.92	155.597	0.06772	0.5644	PASS
1900 band	2.62	1.8281	WCDMA II	9662	1852.4	21.51	141.579	0.05149	1	PASS

Note: 1. Limit of Power Density = $F/1500$ (For frequency below 1500MHz)

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