

NGX Technologies Pvt Ltd

MPE ASSESSMENT REPORT

Report Type:
FCC MPE assessment report

Model:
N80

REPORT NUMBER:
190900141SHA-002

ISSUE DATE:
Sep 20, 2019

DOCUMENT CONTROL NUMBER:
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TEST REPORT

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Report no.: 190900141SHA-002

Applicant: NGX Technologies Pvt Ltd
No.12, 20th Cross, Malagala, Nagarabhavi 2nd Satage, Bangalore 5600091, India

Manufacturer: NGX Technologies Pvt Ltd
Lower Ground Floor, Foundation for sandbox start-up initiatives Opp.Gokul Viliage Gokul Road, Hubli, 580030, India

FCC ID: 2AUP7-N80
IC: /

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06
FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:

Project Engineer
Stephanie Zhang

REVIEWED BY:

Reviewer
Wakeyou Wang

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TEST REPORT**Revision History**

Report No.	Version	Description	Issued Date
190900141SHA-002	Rev. 01	Initial issue of report	Sep 20, 2019

TEST REPORT**1 GENERAL INFORMATION****1.1 Description of Equipment Under Test (EUT)**

Product name:	Bluetooth Module-N80
Type/Model:	N80
Description of EUT:	There is one model only. The device supports Bluetooth (LE mode) function.
Rating:	DC 3.3V
Category of EUT:	Class B
EUT type:	<input checked="" type="checkbox"/> Table top <input type="checkbox"/> Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	Sep 10, 2019
Date of test:	Sep 10, 2019 – Sep 19, 2019

1.2 Technical Specification

Frequency Range:	2402-2480MHz
Support Standards:	Bluetooth LE
Type of Modulation:	GFSK
Channel Number:	40
Channel Separation:	2MHz
Antenna Information:	2.42dBi, PCB antenna

TEST REPORT**1.3 Description of Test Facility**

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN1175
	IC Registration Lab Registration code No.: 2042B-1
	VCCI Registration Lab Registration No.: R-4243, G-845, C-4723, T-2252
	NVLAP Accreditation Lab NVLAP LAB CODE: 200849-0
	A2LA Accreditation Lab Certificate Number: 3309.02

TEST REPORT**2 MPE Assessment****Test result:** Pass**2.1 MPE Assessment Limit**

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	$4 000/f$	$5 000/f$	-
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	-
0,8-3 kHz	$250/f$	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	$0,73/f$	$0,92/f$	-
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

TEST REPORT**2.2 Assessment Results**

Power density (S) is calculated according to the formula:

$$S = P / (4\pi R^2)$$

Where S = power density in mW/cm²

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 190900141SHA-001:

The maximum radiated power = 12.83dBm = 19.187mW;

Here R is chosen to be 20cm,

$$S = P / (4\pi R^2) = 19.187 / (4 * 3.14 * 20 * 20) = 0.0038 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

TEST REPORT**Appendix I**

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.

***** END *****