



RADIO EXPOSURE TEST REPORT

FCC ID : 2AXSZAMTNB20213

Equipment : Verizon Auto-Certification Platform- NBIOT Band 13

Brand Name : Verizon

Model Name : NBTP20213

Applicant : Amantya Technologies, Inc
2803, Philadelphia Pike, Suite B 304, Claymont
DELAWARE 19703

Manufacturer : Amantya Technologies, Inc
2803, Philadelphia Pike, Suite B 304, Claymont
DELAWARE 19703

Standard : 47 CFR Part 2.1091

The product was received on Feb. 03, 2021, and testing was started from Apr. 26, 2021 and completed on Jul. 28, 2021. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR Part 2.1091 and shown compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 EUT General Information	5
1.2 Antenna Information	5
1.3 Table for Class II Change.....	5
1.4 Accessories	5
1.5 Testing Location	7
2 Maximum Permissible Exposure	8
2.1 Limit of Maximum Permissible Exposure	8
2.2 MPE Calculation Method.....	8
2.3 Calculated Result and Limit.....	9
Photographs of EUT v01	



TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A1_1 Ver1.1



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Wendy Pan



1 General Description

1.1 EUT General Information

RF General Information						
Evaluation Mode	Bandwidth (kHz)	Uplink Frequency (MHz)	Downlink Frequency (MHz)	TX Frequency (MHz)	RX Frequency (MHz)	Modulation Type
Band 13	200	777 ~ 787	746 ~ 756	746.2, 751.2 and 755.8	746.2, 751.2 and 755.8	QPSK

1.2 Antenna Information

Antenna Type: Dipole

Antenna Gain: 0.6 dBi

Note: The above information was declared by manufacturer.

1.3 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FA112912

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
1. Adding the test Frequency: 751.2, 755.8MHz.	MPE
2. Changing the model name, from "AMTNB202101" to "NBTP20213".	After evaluating, it doesn't affect the test results.
3. Changing the equipment name from "NBioT iCell" to "Verizon Auto-Certification Platform-NBIOT Band 13".	
4. Changing the brand name, from " verizon" to " Verizon".	

Note: For other MPE result was based on original report.

1.4 Accessories

Accessories					
No.	Equipment Name	Brand Name	Model Name	Rating	DC Power cable
1	Adapter	Huntkey	HKA09019047-6U	INPUT: 100-240V ~ 50/60Hz, 1.5A OUTPUT: 19.0V, 4.74A, 90.06W	Non-Shielded 1.8m
Other					



Power cable*1: Non-Shielded, 0.7m



1.5 Testing Location

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065 FAX: 886-3-656-9085
	Test site Designation No. TW3787 with FCC.
	Conformity Assessment Body Identifier (CABID) TW3787 with ISED.



2 Maximum Permissible Exposure

2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	*(100)	<6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1500	-	-	f/300	<6
1500-100,000	-	-	5	<6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	*(100)	<30
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

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Method

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$



2.3 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)
Band 13;G7D (746.2 MHz)	0.6	4.49	5.09	0.50	5.59	0.00362	20	0.00072	0.49747
Band 13;G7D (751.2 MHz)	0.60	4.47	5.07	0.50	5.57	0.00361	20	0.00072	0.50080
Band 13;G7D (755.8 MHz)	0.60	4.14	4.74	0.50	5.24	0.00334	20	0.00665	0.50386

Note: The above antenna gain was declared by manufacturer.

————THE END————