

ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

Test Report No. : OT-19N-RWD-009
AGR No. : A199A-345
Applicant : TESOLLO Inc.
Address : 20, 5F, A, 59, Wonpogongwon 1-ro, Danwon-gu, Ansan-si, Gyeonggi-do, Korea
Manufacturer : SUNG YEON Electronics
Address : 58, Neungan-ro, Danwon-gu, Ansan-si, Gyeonggi-do, Korea
Type of Equipment : NUBO ROSETTA SMART PEN
FCC ID. : 2AUZNNR-P-20-EX
Model Name : NR-P-20
Serial number : N/A
Total page of Report : 7 pages (including this page)
Date of Incoming : October 14, 2019
Date of issue : November 05, 2019

SUMMARY

The equipment complies with the regulation; *FCC PART 15 SUBPART C Section 15.247*

This test report only contains the result of a single test of the sample supplied for the examination.

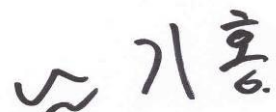
It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by:



Tae-Ho, Kim / Senior Manager
ONETECH Corp.

Approved by:



Ki-Hong, Nam / Chief Engineer
ONETECH Corp.

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Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-19N-RWD-009	November 05, 2019	Initial Release	All

1. VERIFICATION OF COMPLIANCE

Applicant : TESOLLO Inc.
Address : 20, 5F, A, 59, Wonpogongwon 1-ro, Danwon-gu, Ansan-si, Gyeonggi-do, Korea
Contact Person : Nam Tae Kyung / Deputy head of department
Telephone No. : +82-2-2613-3344
FCC ID : 2AUZNNR-P-20-EX
Model Name : NR-P-20
Brand Name : -
Serial Number : N/A
Date : November 05, 2019

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM
E.U.T. DESCRIPTION	NUBO ROSETTA SMART PEN
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247 558074 D01 15.247 Meas Guidance v05r02
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. GENERAL INFORMATION

2.1 Product Description

The TESOLLO Inc., Model NR-P-20 (referred to as the EUT in this report) is an NUBO ROSETTA SMART PEN, Product specification information described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	NUBO ROSETTA SMART PEN
TEMPERATURE RANGE	-10 °C ~ 50 °C
OPERATING FREQUENCY	2 402 MHz ~ 2 480 MHz
MODULATION TYPE	GFSK
RF OUTPUT POWER'	-19.80 dBm
ANTENNA TYPE	PCB Antenna
ANTENNA GAIN	-8.04 dBi
List of each Osc. or crystal Freq.(Freq. >= 1 MHz)	32 MHz

2.2 Alternative type(s)/model(s); also covered by this test report.

-. None

3. EUT MODIFICATIONS

-. None

4. MAXIMUM PERMISSIBLE EXPOSURE

4.1 Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Portable device with its physical nature to be used nearby, the distance between radiating structure and human is less than 20 cm.

As per KDB 447498 D01, The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{Max. Power of channel, including tune-up tolerance, mW}) / (\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}]$
 < 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

F(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison.

4.2 EUT Description

Kind of EUT	NUBO ROSETTA SMART PEN
Device Category	<input type="checkbox"/> Portable (< 20 cm separation) <input type="checkbox"/> Mobile (> 20 cm separation) <input checked="" type="checkbox"/> Others
Exposure Evaluation Applied	<input checked="" type="checkbox"/> MPE <input type="checkbox"/> SAR <input type="checkbox"/> N/A

4.3 Calculated RF Exposure

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW})/(\text{Mim. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3$$

$$= (0.01/5) \times \sqrt{2.480} = 1.38$$

Mode	Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
BLE	2 480.00	-20.00 ± 0.5	-19.50	0.01	5.00	0.004

Conclusion:

SAR evaluation for general population exposure conditions by measurement or numerical simulation is not required.



Tested by: Ju Yun Park / Assistant Manager