

FCC RF EXPOSURE REPORT

FCC ID: V7TA301V4

Project No. : 1909C113
Equipment : N300 Mini WiFi Range Extender
Brand Name : Tenda
Test Model : A301
Series Model : N/A
Applicant : SHENZHEN TENDA TECHNOLOGY CO.,LTD
Address : 6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052
Manufacturer : SHENZHEN TENDA TECHNOLOGY CO.,LTD
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Date of Receipt : Sep. 19, 2019
Date of Test : Sep. 19, 2019 ~ Oct. 19, 2019
Issued Date : Oct. 23, 2019
Report Version : R00
Test Sample : Engineering Sample No.: DG201909206
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091
FCC Title 47 Part 2.1091, OET Bulletin 65 Supplement C

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue	Oct. 23, 2019

1. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1		N/A	Dipole	N/A	3.46
2		N/A	Dipole	N/A	3.46

Note:

The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), any transmit signals are correlated with each other, so Directional gain = $G_{ANT} + 10\log(N)$ dBi, that is Directional gain = $3.46 + 10\log(2)$ dBi = 6.47. So, the output power limit is $30 - 6.47 + 6 = 29.53$

the power spectral density limit is $8 - 6.47 + 6 = 7.53$

Table for Antenna Configuration:

Operating Mode	1TX	2TX
TX Mode		
IEEE 802.11b	V (Ant. 1)	-
IEEE 802.11g	V (Ant. 1)	-
IEEE 802.11n(20 MHz)	-	V (Ant. 1 + Ant. 2)
IEEE 802.11n(40 MHz)	-	V (Ant. 1 + Ant. 2)

2. TEST RESULTS

Tune up tolerance(dBm)
2.4GHz
1.5

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
6.47	4.4361	30.32	1076.4652	0.95050	1	Complies

Note: The calculated distance is 20 cm.

Output power including tune up tolerance(tune up tolerance: 1.5 dBm).

End of Test Report