



Neutron Engineering Inc.

FCC RF EXPOSURE REPORT

FCC ID: V7TAH302

Project No. : 1312C082
Equipment : Wireless N300 High Power Universal Range Extender
Model : AH302
Applicant : SHENZHEN TENDA TECHNOLOGY CO.,LTD.
**Address : Tenda Industrial Park, No.34-1, Shilong Rd.,
Shiyan Town, Bao'an District, Shenzhen, P.R.
China 518108**

According: : FCC Guidelines for Human Exposure IEEE C95.1

Neutron Engineering Inc.

No.3, Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China.

TEL : (0769) 8318-3000 FAX : (0769) 8319-6000



MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

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

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

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Length	Note
0	Tenda	Q5102	Dipole	N/A	4.94	80mm	TX/RX
1	Tenda	Q5108	Dipole	N/A	4.94	195mm	TX/RX

Note:

(1)The EUT incorporates a MIMO function. Physically, the EUT provides two completed two transmitters and two receivers (2T2R), all transmit signals are completely uncorrelated, then, **Direction gain = G_{ANT}**, that is Directional gain=4.94.



TEST RESULTS

EUT:	Wireless N300 High Power Universal Range Extender	Model Name :	AH302
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX B MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
4.94	3.1189	22.19	165.5770	0.10278988	1	Complies
4.94	3.1189	24.23	264.8500	0.16441838	1	Complies
4.94	3.1189	22.65	184.0772	0.11427477	1	Complies

EUT:	Wireless N300 High Power Universal Range Extender	Model Name :	AH302
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX G MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
4.94	3.1189	25.01	316.9567	0.19676614	1	Complies
4.94	3.1189	26.82	480.8393	0.29850415	1	Complies
4.94	3.1189	26.23	419.7590	0.26058557	1	Complies



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EUT:	Wireless N300 High Power Universal Range Extender	Model Name :	AH302
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE /CH01, CH06, CH11 ANT0+ANT1		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
4.94	3.1189	24.57	286.4178	0.17780762	1	Complies
4.94	3.1189	28.27	671.4289	0.41682175	1	Complies
4.94	3.1189	26.21	417.8304	0.25938829	1	Complies

EUT:	Wireless N300 High Power Universal Range Extender	Model Name :	AH302
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-40M MODE /CH03, CH06, CH09 ANT 0+ANT 1		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
4.94	3.1189	22.66	184.5015	0.11453820	1	Complies
4.94	3.1189	27.83	606.7363	0.37666075	1	Complies
4.94	3.1189	25.23	333.4264	0.20699048	1	Complies

Note: The calculated distance is 20 cm.