



Neutron Engineering Inc.

FCC RF EXPOSURE REPORT

FCC ID: V7TA302

Project No. : 1311C228
Equipment : Wireless N300 Universal Range Extender
Model : A302
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.

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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

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Tenda	Q5142	Dipole	N/A	5.06
2	Tenda	Q5138	Dipole	N/A	5.06

The EUT incorporates a MIMO function. Physically, the EUT provides two completed two transmitters and two receivers (2T2R).



TEST RESULTS

EUT:	Wireless N300 Universal Range Extender	Model Name :	A302
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
5.06	3.2063	19.13	81.8465	0.05223365	1	Complies
5.06	3.2063	18.92	77.9830	0.04976802	1	Complies
5.06	3.2063	19.01	79.6159	0.05081014	1	Complies

EUT:	Wireless N300 Universal Range Extender	Model Name :	A302
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
5.06	3.2063	23.79	239.3316	0.15273915	1	Complies
5.06	3.2063	24.02	252.3481	0.16104616	1	Complies
5.06	3.2063	22.72	187.0682	0.11938517	1	Complies



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EUT:	Wireless N300 Universal Range Extender	Model Name :	A302
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE /CH01, CH06, CH11 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
5.06	3.2063	23.05	201.8366	0.12881023	1	Complies
5.06	3.2063	23.02	200.4472	0.12792351	1	Complies
5.06	3.2063	23.07	202.7683	0.12940480	1	Complies

EUT:	Wireless N300 Universal Range Extender	Model Name :	A302
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE /CH01, CH06, CH11 ANT2		

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
5.06	3.2063	22.8	190.5461	0.12160470	1	Complies
5.06	3.2063	23.01	199.9862	0.12762929	1	Complies
5.06	3.2063	21.43	138.9953	0.08870546	1	Complies

EUT:	Wireless N300 Universal Range Extender	Model Name :	A302
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE /CH01, CH06, CH11 ANT+ANT2		

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
5.06	3.2063	25.94	392.6449	0.25058229	1	Complies
5.06	3.2063	26.03	400.8667	0.25582935	1	Complies
5.06	3.2063	25.34	341.9794	0.21824805	1	Complies



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EUT:	Wireless N300 Universal Range Extender	Model Name :	A302
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-40M MODE /CH03, CH06, CH09 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
5.06	3.2063	21.17	130.9182	0.08355075	1	Complies
5.06	3.2063	22.85	192.7525	0.12301282	1	Complies
5.06	3.2063	20.67	116.6810	0.07446469	1	Complies

EUT:	Wireless N300 Universal Range Extender	Model Name :	A302
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-40M MODE /CH03, CH06, CH09 ANT2		

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
5.06	3.2063	22.3	169.8244	0.10838031	1	Complies
5.06	3.2063	23.41	219.2805	0.13994274	1	Complies
5.06	3.2063	21.01	126.1828	0.08052864	1	Complies

EUT:	Wireless N300 Universal Range Extender	Model Name :	A302
Temperature:	24 °C	Relative Humidity:	60 %
Pressure:	1016 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-40M MODE /CH03, CH06, CH09 ANT1+ANT2		

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
5.06	3.2063	24.78	300.6076	0.19184495	5.06	Complies
5.06	3.2063	26.15	412.0975	0.26299674	5.06	Complies
5.06	3.2063	23.85	242.6610	0.15486396	5.06	Complies

The calculated distance is 20 cm