

FCC RF EXPOSURE REPORT

FCC ID: V7TAC9

Project No. : 1603C223
Equipment : AC1200 Smart Dual-Band Gigabit WiFi Router
Model : AC9
Applicant : SHENZHEN TENDA TECHNOLOGY CO.,LTD
**Address : 6-8 Floor, Tower E3, No. 1001, Zhongshanyuan
Road, Nanshan District, Shenzhen, China. 518052**

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

B T L I N C .

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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 radiat

R = distance to the center of radiation of the antenna

Table for Filed Antenna

2.4G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)
1	Tenda	N/A	Dipole	N/A	3
2	Tenda	N/A	Dipole	N/A	3

Note:

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

(2) ANT 1 for 1TX was found to be the worst case and recorded.

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

5G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)
1	Tenda	N/A	Dipole	N/A	3
2	Tenda	N/A	Dipole	N/A	3

Note:

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

(2) ANT 1 for 1TX was found to be the worst case and recorded.

Operating Mode	1TX	2TX
TX Mode		
802.11A	V (ANT 1)	-
802.11N (20MHz)	-	V (ANT 1+ANT 2)
802.11N (40MHz)	-	V (ANT 1+ANT 2)
802.11AC (VHT20MHz)	-	V (ANT 1+ANT 2)
802.11AC (VHT40MHz)	-	V (ANT 1+ANT 2)
802.11AC (VHT80MHz)	-	V (ANT 1+ANT 2)

TEST RESULTS

2.4G

EUT :	AC1200 Smart Dual-Band Gigabit WiFi Router	Model Name :	AC9
Temperature :	25 °C	Relative Humidity:	55 %
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
3	1.9953	29.95	988.5531	0.39260007	1	Complies
3	1.9953	29.93	984.0111	0.39079623	1	Complies
3	1.9953	25.22	332.6596	0.13211446	1	Complies

UNII-1

EUT :	AC1200 Smart Dual-Band Gigabit WiFi Router	Model Name :	AC9
Temperature:	24 °C	Relative Humidity:	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC (VHT40MHz) MODE / CH38, CH46-Ant 1+Ant 2		

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
3	1.9953	19.95	98.8553	0.03926001	1	Complies
3	1.9953	19.93	98.4011	0.03907962	1	Complies

UNII-3

EUT :	AC1200 Smart Dual-Band Gigabit WiFi Router	Model Name :	AC9
Temperature:	24 °C	Relative Humidity:	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC(VHT80) MODE / CH155-Ant 1+Ant 2		

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
3	1.9953	19.85	96.6051	0.03836634	1	Complies

For 2.4G+5G simultaneous transmission MPE:

$$0.3926/1+0.0393/1=0.4319<1$$

Note: the calculation distance is 20cm.