

Amped Wireless
13089 Peyton Dr. #C307 Chino Hills California 91709 United States

Federal Communications Commission
Authorization and Evaluation Division
Equipment Authorization Branch
7435 Oakland Mills Road
Columbia, MD 21046

Applicant's declaration concerning RF Radiation Exposure

We hereby indicate that the product

Product description: High Power 700mW Dual Band AC Wi-Fi Access Point
Model No: APA20

The equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The integral antennas used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter within the host device.

A safety statement concerning minimum separation distances from enclosure of the Product : High Power 700mW Dual Band AC Wi-Fi Access Point will be integrated in the user's manual to provide end-users with transmitter operating conditions for satisfying RF exposure compliance.

The appropriate information can be drawn from the test report no: W6D21310-13579-C-1 and the accompanying calculations.

Company: Amped Wireless
Address: 13089 Peyton Dr. #C307 Chino Hills California 91709 United States

Date: July 26, 2013

Signature



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain

5.8GHz:802.11a

$$\begin{aligned} \text{EIRP} &= 21.38 \text{ dBm} + 7.52 \text{ dBi} \\ &= 28.90 \text{ dBm} \end{aligned}$$

5.8GHz:802.11n(20MHz), 802.11n(40MHz)

$$\begin{aligned} \text{EIRP} &= 23.73 \text{ dBm} + 7.52 \text{ dBi} \\ &= 31.25 \text{ dBm} \end{aligned}$$

5.8GHz:802.11ac

$$\begin{aligned} \text{EIRP} &= 21.88 \text{ dBm} + 7.52 \text{ dBi} \\ &= 29.40 \text{ dBm} \end{aligned}$$

2.4GHz:802.11b/g

$$\begin{aligned} \text{EIRP} &= 28.92 \text{ dBm} + 6.64 \text{ dBi} \\ &= 35.56 \text{ dBm} \end{aligned}$$

2.4GHz: 802.11n(20MHz), 802.11n(40MHz)

$$\begin{aligned} \text{EIRP} &= 28.66 \text{ dBm} + 6.64 \text{ dBi} \\ &= 35.30 \text{ dBm} \end{aligned}$$

Limit: EIRP = +36 dBm for Antenna gain <6dBi

Test equipment used: ETSTW-RE 055

3.3 RF Exposure Compliance Requirements

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.

The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

$$S = \frac{P G}{4 \pi R^2}$$

S – Power Density

P – Output power ERP

R – Distance

D – Cable Loss

AG – Antenna Gain

5.8GHz:802.11a

Item	Unit	Value	Remarks
P	mW	137.4042	Peak value
D	dB		
AG	dBi	7.52	
G		5.6494	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.1544	Calculated value



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5.8GHz:802.11n(20MHz), 802.11n(40MHz)

Item	Unit	Value	Remarks
P	mW	236.0478	Peak value
D	dB		
AG	dBi	7.52	
G		5.6494	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.2653	Calculated value

5.8GHz:802.11ac

Item	Unit	Value	Remarks
P	mW	154.1700	Peak value
D	dB		
AG	dBi	7.52	
G		5.6494	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.1733	Calculated value

802.11b/g

Item	Unit	Value	Remarks
P	mW	779.8301	Peak value
D	dB		
AG	dBi	6.64	
G		4.6132	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.7157	Calculated value

2.4G:802.11n(20MHz), 802.11n(40MHz)

Item	Unit	Value	Remarks
P	mW	734.5139	Peak value
D	dB		
AG	dBi	6.64	
G		4.6132	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.6741	Calculated value

Limits:

Limit for General Population / Uncontrolled Exposure	
Frequency (MHz)	Power Density (mW/cm ²)
1500 – 100.000	1.0