



## **Compliance Testing, LLC**

Previously Flom Test Lab

EMI, EMC, RF Testing Experts Since 1963

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### **Test Report**

**Prepared for: Ubiquiti Networks, Inc**

**Model: PBE-5AC**

**Description: PowerBeam 5AC**

**FCC ID: SWX-PBE5AC**

**To**

**FCC Part 1.1310**

**Date of Issue: June 25, 2015**

**On the behalf of the applicant:**

**Ubiquiti Networks, Inc  
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**Attention of:**

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Project No: p14a0019**

**Greg Corbin  
Project Test Engineer**

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### Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	June 19, 2015	Greg Corbin	Original Document



## ILAC / A2LA

Compliance Testing, LLC, has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated January 2009)

The tests results contained within this test report all fall within our scope of accreditation, unless below

Please refer to <http://www.compliancetesting.com/labscope.html> for current scope of accreditation.

Testing Certificate Number: **2152.01**



FCC Site Reg. #349717

IC Site Reg. #2044A-2

**Non-accredited tests contained in this report:**

N/A

### EUT Description

**Model:** PBE-5AC

**Description:** PowerBeam 5AC

**Firmware:** N/A

**Software:** N/A

**Serial Number:** N/A

**Additional Information:**

The EUT is a 2x2 MIMO 802.11ac radio.



### Source Based Time Averaged Power Calculation

#### Average Power calculations

Average Power = Peak Power \* duty-cycle%

Band	Tuned Frequency (MHz)	Peak Conducted Output Power (mW)	Duty Cycle (%)	Average Power (mW)
UNII-2A	5265	128.8	100	128.8
UNII-2C	5600	195.0	100	195.0



## MPE Evaluation

This is a **fixed** device used in uncontrolled /general population exposure environment.

### Limits Uncontrolled Exposure 47 CFR 1.1310 Table 1, (B)

0.3-1.234 MHz:	Limit [mW/cm <sup>2</sup> ] = 100
1.34-30 MHz:	Limit [mW/cm <sup>2</sup> ] = (180/f <sup>2</sup> )
30-300 MHz:	Limit [mW/cm <sup>2</sup> ] = 0.2
300-1500 MHz:	Limit [mW/cm <sup>2</sup> ] = f/1500
1500-100,000 MHz	Limit [mW/cm <sup>2</sup> ] = 1.0

### UNII-2A Test Data

Test Frequency, MHz	5265
Power, Conducted, mW (P)	128.8
Antenna Gain Isotropic	6
Antenna Gain Numeric (G)	3.98
Antenna Type	Omni
Distance (R)	20

$S = \frac{P * G}{4\pi r^2}$			
Power Density (S) mw/cm <sup>2</sup>	Power mW (P)	Numeric Gain (G)	Distance (r <sup>2</sup> ) cm
0.102	128.8	3.98	20

Power Density (S) = 0.102 mw/cm <sup>2</sup>
Limit =(from above table) = 1.0 mw/cm <sup>2</sup>

**Note: Due to out of band emission limitations the highest EIRP occurs with the 6 dBi Omni antenna. Therefore the power density cannot exceed 0.102 mW/cm<sup>2</sup>**



**UNII-2C Test Data**

Test Frequency, MHz	5600
Power, Conducted, mW (P)	195.0
Antenna Gain Isotropic	6
Antenna Gain Numeric (G)	3.98
Antenna Type	Omni
Distance (R)	20

$S = \frac{P * G}{4\pi r^2}$			
Power Density (S) mw/cm <sup>2</sup>	Power mW (P)	Numeric Gain (G)	Distance (r <sup>2</sup> ) cm
0.154	195.0	3.98	20

Power Density (S) = 0.154 mw/cm <sup>2</sup>
Limit =(from above table) = 1.0 mw/cm <sup>2</sup>

**Note: Due to out of band emission limitations the highest EIRP occurs with the 6 dBi Omni antenna. Therefore the power density cannot exceed 0.154 mW/cm<sup>2</sup>**

END OF TEST REPORT