FCC RF Exposure Report

FCC ID	:	**WBV-AP230**
Equipment	:	**Access Point**
Model No.	:	**AP230**
Brand Name	:	**Aerohive**
Applicant	:	**Aerohive Networks Inc.**
Address	:	**330 Gibraltar Drive, Sunnyvale, CA 94089**
Standard	:	**47 CFR FCC Part 2.1091**
Received Date	:	**Jan. 21, 2014**
Tested Date	:	**Jan. 21 ~ Apr. 01, 2014**

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Approved & Reviewed by:

Gary Chang / Manager

Testing Laboratory
2732

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Release Record

Report No.	Version	Description	Issued Date
FA412201-01	Rev. 01	Initial issue	Apr. 14, 2014

1 MPE EVALUATION OF MOBILE DEVICES

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

1.1 LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

Frequency Range (MHz)	Power Density (mW /cm^2)	Averaging Time (minutes)
300~1500	F/1500	30
1500~100000	1.0	30

1.2 MPE EVALUATION FORMULA

$$\mathbf{Pd} = \frac{Pt}{4 * Pi * R^2}$$

Where

Pd= Power density in mW/cm^2
Pt= EIRP in mW
Pi= 3.1416
R= Measurement distance

1.3 MPE EVALUATION RESULTS

MPE Evaluation of Single Transmission

Legacy/MIMO (CDD) Non-beamforming mode

Frequency Range (MHz)	Mode	Maximum Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
5250-5350	11a	21.45	6.21	24	0.081	1
	HT20	18.67	6.57	24	0.046	1
	HT40	21.29	6.57	24	0.084	1
	VHT20	18.76	6.57	24	0.047	1
	VHT40	21.44	6.57	24	0.087	1
	VHT80	17.95	6.57	24	0.039	1
5470-5725	11a	23.08	6.15	24	0.116	1
	HT20	18.74	6.15	24	0.043	1
	HT40	21.69	6.15	24	0.084	1
	VHT20	18.80	6.15	24	0.043	1
	VHT40	21.78	6.15	24	0.086	1
	VHT80	21.91	6.15	24	0.088	1

MPE Evaluation of Single Transmission

Legacy/MIMO (CDD) beamforming mode

Frequency Range (MHz)	Mode	Maximum Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
5250-5350	11a	21.45	6.21	24	0.081	1
	HT20	18.10	11.02	24	0.113	1
	HT40	18.78	11.02	24	0.132	1
	VHT20	18.17	11.02	24	0.115	1
	VHT40	18.90	11.02	24	0.136	1
	VHT80	16.26	11.02	24	0.074	1
5470-5725	11a	23.08	6.15	24	0.116	1
	HT20	18.80	10.62	24	0.121	1
	HT40	18.78	10.62	24	0.120	1
	VHT20	18.87	10.62	24	0.123	1
	VHT40	19.27	10.62	24	0.135	1
	VHT80	19.35	10.62	24	0.137	1

MPE Evaluation of Simultaneous Transmission

2.4 and 5GHz can transmit at the same time, MPE evaluation is as below formula

PD1 / Limit1 + PD2 / Limit 2 + ….. < 1, PD = Power density

Legacy/MIMO (CDD) Non-beamforming mode of 2.4GHz from original report

Frequency Range (MHz)	Mode	Maximum Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412~2462	11b	22.29	4.34	24	0.064	1
	11g	22.34	4.34	24	0.064	1
	HT20	26.65	4.34	24	0.174	1
	VHT20	26.71	4.34	24	0.176	1

Legacy/MIMO (CDD) beamforming mode of 2.4GHz from original report

Frequency Range (MHz)	Mode	Maximum Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412~2462	11b	22.29	4.34	24	0.064	1
	11g	22.34	4.34	24	0.064	1
	HT20	26.68	8.87	24	0.496	1
	VHT20	26.8	8.87	24	0.510	1

Legacy/MIMO (CDD) Non-beamforming mode

MPE Evaluation = Maximum MPE of 2.4GHz + Maximum MPE of 5 GHz = 0.176 / 1 + 0. 116 / 1 = 0.292 < 1

Legacy/MIMO (CDD) beamforming mode

MPE Evaluation = Maximum MPE of 2.4GHz + Maximum MPE of 5 GHz = 0.510 / 1 + 0.137 / 1 = 0.647 < 1

Conclusion

MPE evaluations of single and simultaneous transmission meet the requirement of standard.

2 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp, it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan Hsiang. Location map can be found on our website http://www.icertifi.com.tw.

Linkou

Tel: 886-2-2601-1640

No. 30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan, R.O.C.

Kwei Shan

Tel: 886-3-271-8666

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If you have any suggestion, please feel free to contact us as below information

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