Company: Actiontec Electronics Inc

Test of: WCB5200
To: FCC CFR 47 Part 15 RF Exposure Requirements

Report No.: ATEC15-MPE Rev A

MPE TEST REPORT

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FROM

Test of: Actiontec Electronics Inc WCB5200
to

To: FCC CFR 47 Part 15 RF Exposure Requirements

Test Report Serial No.: ATEC15-MPE Rev A

This report supersedes: NONE

Applicant:	Actiontec Electronics Inc 760 N Mary Avenue Sunnyvale, California 94085 USA
Product Function:	11ac Wireless Network Extender
Issue Date:	7th March 2016

This Test Report is Issued Under the Authority of:

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TESTING CERT #2381.01

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1. MAXIMUM PERMISSABLE EXPOSURE

Calculations for Maximum Permissible Exposure Levels
Power Density = Pd (mW/cm^2) = EIRP/($4*\pi*d^2$)
EIRP = P * G
P = Peak output power (mW)
G = Antenna numeric gain (numeric)
d = Separation distance (cm)
Numeric Gain = 10 ^ (G (dBi)/10)
Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is 1.0 mW/cm^2

The calculations in the table below use the highest conducted power values together with the lowest antenna gain specified for the EUT. These calculations represent worst case in terms of the exposure levels.

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm²	Calculated Power Density @ 20cm	Minimum Separation Distance (cm)
5725.0 - 5850.0	3.80	2.40	26.41	437.63	9.14	0.21	20.00
5150.0 - 5250.0	3.80	2.40	26.25	421.77	8.97	0.20	20.00
2400.0 - 2483.5	1.34	1.36	27.84	608.22	8.12	0.16	20.00

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

Assessment for simultaneous operation in 2.4 GHz and 5 GHz bands

The Actiontec WCB5200 can transmit simultaneously in the 2.4 GHz and 5 GHz bands. The following assessment is based on simultaneous operation in the 2.4 GHz and 5 GHz bands.

Freq. Band (MHz)	Antenna Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm2 Limit(cm)	Minimum Separation Distance (cm)
2400.0 - 2483.5	1.34	1.36	27.84	608.22	8.12	20.00
5725.0 - 5850.0	3.80	2.40	26.41	437.63	9.14	20.00
			EIRP Total			
			1877.5 mW		12.2	20.0

Specification
Maximum Permissible Exposure Limits

FCC §1.1310 Limit = 1mW / cm^2 from 1.310 Table 1

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