

RF EXPOSURE REPORT

REPORT NO.: SA121205E03C

MODEL NO.: WMC-AC01

FCC ID: RRK2012060056-1

RECEIVED: June 27, 2014

TESTED: July 25, 2014

ISSUED: Aug. 07, 2014

APPLICANT: Alpha Networks Inc.

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ISSUED BY: Bureau Veritas Consumer Products Services
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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA121205E03C	Original release	Aug. 07, 2014

1. CERTIFICATION

PRODUCT: Wireless AC Module
BRAND NAME: Alpha
MODEL NO.: WMC-AC01
TEST SAMPLE: R&D SAMPLE
APPLICANT: Alpha Networks Inc.
TESTED DATE: July 25, 2014
STANDARDS: FCC Part 2 (Section 2.1091)
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (Model: WMC-AC01) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Midoli Peng , **DATE:** Aug. 07, 2014
(Midoli Peng, Specialist)

APPROVED BY : May Chen , **DATE:** Aug. 07, 2014
(May Chen, Manager)

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

5. ANTENNA GAIN

Set 1								
Transmitter Circuit	Brand	Model name	Antenna Type	Gain (dBi) (Exclude cable loss)	Cable Loss (dB)	Net Gain (dBi)	Connector Type	Cable Length(mm)
Chain (0)	WHA YU	C037-511226-A	PCB	4	0.416	3.584	I-PEX	80
Chain (1)	WHA YU	C037-511226-A	PCB	4	0.416	3.584	I-PEX	80
Chain (2)	WHA YU	C037-511226-A	PCB	4	0.416	3.584	I-PEX	80
Set 2								
Transmitter Circuit	Brand	Model name	Antenna Type	Gain (dBi) (Exclude cable loss)	Cable Loss (dB)	Net Gain (dBi)	Connector Type	Cable Length(mm)
Chain (0)	WHA YU	C037-511225-A	PCB	4	0.572	3.428	I-PEX	110
Chain (1)	WHA YU	C037-511225-A	PCB	4	0.572	3.428	I-PEX	110
Chain (2)	WHA YU	C037-511225-A	PCB	4	0.572	3.428	I-PEX	110
Set 3								
Transmitter Circuit	Brand	Model name	Antenna Type	Gain (dBi) (Exclude cable loss)	Cable Loss (dB)	Net Gain (dBi)	Connector Type	Cable Length(mm)
Chain (0)	WHA YU	SSR-30247	PCB	4	0.18	3.82	I-PEX	50
Chain (1)	WHA YU	SSR-30247	PCB	4	0.18	3.82	I-PEX	50
Chain (2)	WHA YU	SSR-30247	PCB	4	0.18	3.82	I-PEX	50

Antenna (Set 3) was chosen for final test.

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
5180 ~ 5240	913.593	3.82	20	0.43801	1

--- END ---