RF Exposure Report

Report No.: SA151229C23A

FCC ID: NDD9576791501

Test Model: EW-7679OAP

Series Model: GAP-679OAP, OAP1750

Received Date: Jan. 11, 2016

Test Date: Jan. 24 ~ Mar. 18, 2016

Issued Date: Mar. 25, 2016

Applicant: EDIMAX TECHNOLOGY CO., LTD.

Address: No. 3, Wu-Chuan 3rd Road, Wu-Gu, New Taipei City 24891, Taiwan

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
SA151229C23A	Original release	Mar. 25, 2016

1 Certificate of Conformity

Product:	11ac Dual Band Concurrent Outdoor AP
Brand:	EDIMAX
Test Model:	EW-7679OAP
Series Model:	GAP-679OAP, OAP1750
Sample Status:	Engineering sample
Applicant:	EDIMAX TECHNOLOGY CO., LTD.
Test Date:	Jan. 24 ~ Mar. 18, 2016
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 (October 23, 2015) IEEE C95.1

The above equipment 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 : _____ , **Date:** Mar. 25, 2016

Pettie Chen / Senior Specialist

Approved by : _____ , **Date:** Mar. 25, 2016

Ken Liu / Senior Manager

2 RF Exposure

2.1 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

2.2 MPE Calculation Formula

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

2.3 Classification

The antenna of this product, under normal use condition, is at least 33cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Modulation Mode	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	802.11b	25.83	3.56	33	0.063	1
	802.11g	26.71	3.56	33	0.078	1
	802.11n (HT20)	29.62	8.33	33	0.456	1
	802.11n (HT40)	29.05	8.33	33	0.400	1
5180-5240	802.11a	14.99	5.6	33	0.008	1
	802.11n (HT20)	14.89	10.37	33	0.025	1
	802.11n (HT40)	14.99	10.37	33	0.025	1
	802.11ac (VHT20)	14.98	10.37	33	0.025	1
	802.11ac (VHT40)	14.97	10.37	33	0.025	1
	802.11ac (VHT80)	14.32	10.37	33	0.022	1
5260-5320	802.11a	23.84	5.6	33	0.064	1
	802.11n (HT20)	20.97	10.37	33	0.099	1
	802.11n (HT40)	23.64	10.37	33	0.184	1
	802.11ac (VHT20)	20.57	10.37	33	0.091	1
	802.11ac (VHT40)	22.60	10.37	33	0.145	1
	802.11ac (VHT80)	13.34	10.37	33	0.017	1
5500-5700	802.11a	23.96	5.6	33	0.066	1
	802.11n (HT20)	21.25	10.37	33	0.106	1
	802.11n (HT40)	23.93	10.37	33	0.197	1
	802.11ac (VHT20)	20.84	10.37	33	0.097	1
	802.11ac (VHT40)	22.45	10.37	33	0.140	1
	802.11ac (VHT80)	14.42	10.37	33	0.022	1
5745-5825	802.11a	23.45	5.6	33	0.059	1
	802.11n (HT20)	27.97	10.37	33	0.499	1
	802.11n (HT40)	22.46	10.37	33	0.140	1
	802.11ac (VHT20)	28.00	10.37	33	0.502	1
	802.11ac (VHT40)	22.55	10.37	33	0.143	1
	802.11ac (VHT80)	12.58	10.37	33	0.014	1

Note:
2.4GHz Band 802.11n(HT20), 802.11n(HT40): Directional gain = 3.56dBi + 10log(3) = 8.33dBi
5GHz Band 802.11n(HT20), 802.11n(HT40), 802.11ac(VHT20), 802.11ac(VHT40), 802.11ac(VHT80): Directional gain = 5.6dBi + 10log(3) = 10.37dBi

CONCULSION:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

2.4GHz + 5GHz = 0.456+0.502=0.958

Therefore, the maximum calculation of this situation is 0.958, which is less than the “1” limit.

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