

## RF Exposure Report

**Report No.:** SA151229C23

**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. 24, 2016

**Applicant:** EDIMAX TECHNOLOGY CO., LTD.

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**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.)



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### Release Control Record

Issue No.	Description	Date Issued
SA151229C23	Original release	Mar. 24, 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. 24, 2016  
Pettie Chen / Senior Specialist

**Approved by :**  , **Date:** Mar. 24, 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 <sup>2</sup> )	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<sup>2</sup>

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 <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
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
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

#### CONCLUSION:

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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