RF EXPOSURE REPORT

REPORT NO.:	SA140507C31A
MODEL NO.:	WBSac-2450-ODDDDDD, WBSac-2450-NADDDDDD (“D” can be any alphanumeric value, “-“ or blank, for software changes or marketing purposes only.)
FCC ID:	LKTWBSACO12450-1
RECEIVED:	May 03, 2014
TESTED:	May 10 ~ Jun. 21, 2014
ISSUED:	Aug. 26, 2015

APPLICANT:	Alvarion Technologies Ltd.
ADDRESS:	13-15 Ha'amal St. Park Afek, Rosh Ha'ayin 48091, ISRAEL

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
LAB ADDRESS:	No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.
TEST LOCATION:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

This report should not be used by the client to claim product certification, approval, or endorsement by any government agencies.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA140507C31A	Original release.	Aug. 26, 2015

1. CERTIFICATION

PRODUCT:	Outdoor Access Point
MODEL:	WBSac-2450-ODDDDDD, WBSac-2450-NADDDDDD (“D” can be any alphanumeric value, “-“ or blank, for software changes or marketing purposes only.)
BRAND:	Alvarion
APPLICANT:	Alvarion Technologies Ltd.
TESTED:	May 10 ~ Jun. 21, 2014
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARDS:	**FCC Part 2 (Section 2.1091)**
	KDB 447498 D03
	IEEE C95.1

The above equipment (Model: WBSac-2450-O-US) 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 : Celine Chou **, DATE :** Aug. 26, 2015

Celine Chou / Specialist

APPROVED BY : Ken Liu **, DATE :** Aug. 26, 2015

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 27cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

For Indoor Access Point

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412-2462	28.54	7.61	27	0.450	1
5180-5240	27.80	9.04	27	0.527	1
5745-5825	24.64	9.04	27	0.255	1

NOTE:

2.4GHz Band: Directional gain = 4.6dBi + 10log(2) = 7.61dBi

5.0GHz Band: Directional gain = 6.03dBi + 10log(2) = 9.04dBi

CONCULSION:

Both of the WLAN 2.4G & WLAN 5G can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4G + WLAN 5.0G = 0.450 + 0.527 = 0.977

Therefore, the maximum calculation of this situation is 0.977, which is less than the “1” limit.

For Outdoor Access Point

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412-2462	28.54	7.61	23	0.620	1
5180-5240	11.94	9.04	23	0.019	1
5745-5825	24.64	9.04	23	0.351	1

NOTE:

2.4GHz Band: Directional gain = 4.6dBi + 10log(2) = 7.61dBi

5.0GHz Band: Directional gain = 6.03dBi + 10log(2) = 9.04dBi

CONCULSION:

Both of the WLAN 2.4G & WLAN 5G can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4G + WLAN 5.0G = 0.620 + 0.351 = 0.971

Therefore, the maximum calculation of this situation is 0.971, which is less than the “1” limit.