

RF Exposure Report

Report No.: SA130911C29E

FCC ID: UDX-60026010

Test Model: MR18-HW

Received Date: Oct. 05, 2015

Test Date: Oct. 13 ~ Nov. 10, 2015

Issued Date: Nov. 20, 2015

Applicant: Cisco Systems, Inc.

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

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Release Control Record

Issue No.	Description	Date Issued
SA130911C29E	Original release	Nov. 20, 2015

1 Certificate of Conformity

Product: Wireless 802.11 abgn AP

Brand: Cisco

Test Model: MR18-HW

Sample Status: Engineering sample

Applicant: Cisco Systems, Inc.

Test Date: Oct. 13 ~ Nov. 10, 2015

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D03

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.

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Sunt Lee / Specialist

Approved by : Ken Liu , **Date:** Nov. 20, 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

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

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

2.3 Classification

The antenna of this product, under normal use condition, is at least 23cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result Of Maximum Conducted Power

Radio	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
1	2412-2462	29.25	7.01	23	0.636	1
2	5180-5240	23.84	7.01	23	0.183	1
	5745-5825	22.73	9.01	23	0.225	1
3	2412-2462	25.28	2	23	0.080	1
	5180-5240	19.27	2	23	0.020	1
	5745-5825	16.47	2	23	0.011	1

Note:

Radio 1 2412-2462MHz Directional gain = 4dBi + 10log(2) = 7.01dBi

Radio 2 5180-5240MHz Directional gain = 4dBi + 10log(2) = 7.01dBi

Radio 2 5745-5825MHz Directional gain = 6dBi + 10log(2) = 9.01dBi

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

Radio 1 + Radio 2 + Radio 3 = 0.636 + 0.225 + 0.080 = 0.941

Therefore all the maximum calculations of above situations are less than the "1" limit.

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