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.

Address: 170 West Tasman Drive, San Jose, CA 95134

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.

Prepared by : _____ , **Date:** Nov. 20, 2015

Suntee Liu / Specialist

Approved by : _____ , **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

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

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 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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