RF EXPOSURE REPORT

REPORT NO.: SA140922C14A

MODEL NO.: MX64W-HW

FCC ID: UDX-60032015

RECEIVED: Sep. 22, 2014

TESTED: Oct. 07, 2014 ~ Jan. 07, 2015

ISSUED: Jan. 07, 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

LAB ADDRESS: No. 47-2, 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 Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

TABLE OF CONTENTS

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA140922C14A	Original release	Jan. 07, 2015

1. CERTIFICATION

PRODUCT:	Wireless 802.11abgn/ac Router
MODEL NO.:	MX64W-HW
BRAND:	Cisco
APPLICANT:	Cisco Systems, Inc.
TESTED:	Oct. 07, 2014 ~ Jan. 07, 2015
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARDS:	**FCC Part 2 (Section 2.1091)**
	KDB 447498 D03
	IEEE C95.1

The above equipment (model: MX64W-HW) 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 :** Jan. 07, 2015

Pettie Chen / Senior Specialist

APPROVED BY : _____ **, DATE :** Jan. 07, 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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	TX	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412-2462	1TX	24.47	3.36	20	0.121	1
	2TX	27.93	6.37	20	0.535	1
5180-5240	1TX	24.73	3.60	20	0.135	1
	2TX	26.20	6.61	20	0.380	1
5260-5320	1TX	22.72	3.44	20	0.082	1
	2TX	23.98	6.45	20	0.220	1
5500-5700	1TX	23.03	3.76	20	0.095	1
	2TX	23.03	6.77	20	0.190	1
5745-5825	1TX	23.06	3.33	20	0.087	1
	2TX	22.77	6.34	20	0.162	1

NOTE:

2TX:
2.4GHz Band: Directional gain = 3.36dBi + 10log(2) = 6.37dBi
5.0GHz Band (5180-5240MHz): Directional gain = 3.6dBi + 10log(2) = 6.61dBi
5.0GHz Band (5260-5320MHz): Directional gain = 3.44dBi + 10log(2) = 6.45dBi
5.0GHz Band (5500-5700MHz): Directional gain = 3.76dBi + 10log(2) = 6.77dBi
5.0GHz Band (5745-5825MHz): Directional gain = 3.33dBi + 10log(2) = 6.34dBi

CONCULSION:

Both of the 2.4 and 5GHz 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

1. WLAN 2.4G + WLAN 5.0G = 0.535 + 0.380 = 0.915

Therefore, the maximum calculation of this situation is 0.915, which is less than the “1” limit.