



# RF EXPOSURE REPORT

**REPORT NO.:** SA110408E05

**MODEL NO.:** XWING1

**FCC ID:** UZ7XWING1

**APPLICANT:** Motorola Solutions, Inc.

**ADDRESS:** One Motorola Plaza, Holtsville, NY  
11742-1300 USA

**ISSUED BY:** Bureau Veritas Consumer Products Services  
(H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory

**LAB ADDRESS:** No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen,  
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## TABLE OF CONTENTS

RELEASE CONTROL RECORD .....	3
1. CERTIFICATION .....	4
2. RF EXPOSURE LIMIT .....	5
3. MPE CALCULATION FORMULA .....	5
4. CLASSIFICATION .....	5
5. ANTENNA GAIN .....	5
6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER .....	6



## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA110408E05	Original release	July 28, 2011



## 1. CERTIFICATION

**PRODUCT:** XWING1  
**BRAND NAME:** MOTOROLA  
**MODEL NO.:** XWING1  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**APPLICANT:** Motorola Solutions, Inc.  
**STANDARDS:** FCC Part 2 (Section 2.1091)  
FCC OET Bulletin 65, Supplement C (01-01)  
IEEE C95.1

The above equipment (Model: XWING1) 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:** July 28, 2011  
( Claire Kuan, Specialist )

**APPROVED BY** :  , **DATE:** June 28, 2011  
( May Chen, Deputy Manager )

## 2. RF EXPOSURE LIMIT

### 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)
<b>LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE</b>				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

### 3. MPE CALCULATION FORMULA

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

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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

### 4. 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**.

### 5. ANTENNA GAIN

There is antenna provided to this EUT, please refer to the following table:

Antenna Model	Antenna Type	Antenna Gain(dBi)	cable loss (dBi)	Net Gain (dBi)	Connector Type	Frequency range (MHz)
ML-2452-APA2-01	Dipole	3 dBi (2.4GHz) 5 dBi (5GHz)	0.4 dBi (2.4GHz) 0.8 dBi (5GHz)	2.6 dBi (2.4GHz) 4.2 dBi (5GHz)	SMA Female	2400 ~ 2500 5150 ~ 5850

## 6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

### For 15.247(2.4GHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2412-2462	269.2	2.6	20	0.097	1.00

### For 15.247(5GHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5745-5825	166.0	4.2	20	0.087	1.00

### For 15.407(5GHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
5180-5240	72.4	4.2	20	0.038	1.00

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