

# RF EXPOSURE REPORT

**REPORT NO.:** SA990114L03

**MODEL NO.:** RFS-4011

**FCC ID:** UZ7RFS4011

**ACCORDING:** FCC Guidelines for Human Exposure  
IEEE C95.1

**APPLICANT:** Motorola, Inc.

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

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

**LAB ADDRESS:** No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou  
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**TEST LOCATION:** No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei  
Shan Hsiang, Taoyuan Hsien 333, Taiwan,  
R.O.C.

## 1. 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)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

## 2. 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

## 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**.

#### 4. CALCULATION RESULT OF MAXIMUM EIRP

##### For 2412~2462MHz

ANTENNA TYPE	MAX CONDUCTED POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
ANT 1 : ML-2452-PTA4M3X3-1	29.8	2.1	20	0.308	1.00
ANT 2 : ML-2452-PTA3M3-036	29.8	3.5	20	0.425	1.00
ANT 3 : ML-2452-HPA5-036	29.3	3.1	20	0.346	1.00
ANT 4 : ML-2452-PNA7-01R	28.1	7.5	20	0.722	1.00

##### For 5180~5240MHz

ANTENNA TYPE	MAX CONDUCTED POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
ANT 1 : ML-2452-PTA4M3X3-1	15.6	3.95	20	0.018	1.00
ANT 2 : ML-2452-PTA3M3-036	15.7	5	20	0.023	1.00
ANT 3 : ML-2452-HPA5-036	16.7	4.6	20	0.027	1.00
ANT 4 : ML-2452-PNA7-01R	15.8	6.3	20	0.032	1.00

##### For 5745~5825MHz

ANTENNA TYPE	MAX CONDUCTED POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
ANT 1 : ML-2452-PTA4M3X3-1	28.4	3.95	20	0.342	1.00
ANT 2 : ML-2452-PTA3M3-036	28.5	5	20	0.445	1.00
ANT 3 : ML-2452-HPA5-036	29.6	4.6	20	0.523	1.00
ANT 4 : ML-2452-PNA7-01R	25.7	10	20	0.739	1.00