





# RF EXPOSURE REPORT

Applicant	MTRLC LLC
Address	PO Box 121147 Boston, MA 02112-1147, United States.

Manufacturer or Supplier	MTRLC LLC
Address	PO Box 121147 Boston, MA 02112-1147, United States.
Product	16x4 DOCSIS 3.0 Cable Modem plus AC1600 Router
Brand Name	Motorola
Model	MG7540
Additional Model & Model Difference	MG7540XY (Where X can be A, B, C, D or blank, and Y can be A, B, C, D or blank),
Date of tests	Feb. 23, 2016 ~ Mar. 29, 2016

- FCC Part 2 (Section 2.1091)
- KDB 447498 D01
- IEEE C95.1

**CONCLUSION: The submitted sample was found to COMPLY with the test requirement**

Tested by Blue zheng Project Engineer / EMC Department	Approved by Chris Chen Manager / EMC Department
	
	Date: Mar. 29, 2016

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification



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**BUREAU**  
**VERITAS**

Test Report No.: FS160223N031

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FS160223N031	Original release	Mar. 29, 2016



## 1. CERTIFICATION

<b>FCC ID:</b>	2AF5PMG7540
<b>PRODUCT:</b>	16x4 DOCSIS 3.0 Cable Modem plus AC1600 Router
<b>BRAND NAME:</b>	Motorola
<b>MODEL NO.:</b>	MG7540
<b>ADDITIONAL NO.:</b>	MG7540XY (Where X can be A, B, C, D or blank, and Y can be A, B, C, D or blank)
<b>TEST SAMPLE:</b>	Engineering Sample
<b>APPLICANT:</b>	MTRLC LLC
<b>STANDARDS:</b>	FCC Part 2 (Section 2.1091)
	KDB 447498 D01
	IEEE C95.1



## 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

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

where

Pd = power density in mW/cm<sup>2</sup>

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

## 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

The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Peak Gain (dBi)	ANT Number	Total Gain (dBi)	Antenna Type
2.4G	3.1	2	6.11	Wire Antenna
5G	2.8	3	7.57	Wire Antenna



## 6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
WLAN 2.4GHz	964.470	6.11	20	0.7829	1.0
WLAN 5G Band 1	324.340	7.57	20	0.3687	1.0
WLAN 5G Band 4	314.051	7.57	20	0.3571	1.0

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