



**BUREAU
VERITAS**

Test Report No.: FS160223N031

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

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RELEASE CONTROL RECORD

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



1. CERTIFICATION

FCC ID:	2AF5PMG7540
PRODUCT:	16x4 DOCSIS 3.0 Cable Modem plus AC1600 Router
BRAND NAME:	Motorola
MODEL NO.:	MG7540
ADDITIONAL NO.:	MG7540XY (Where X can be A, B, C, D or blank, and Y can be A, B, C, D or blank)
TEST SAMPLE:	Engineering Sample
APPLICANT:	MTRLC LLC
STANDARDS:	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 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

3. MPE CALCULATION FORMULA

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

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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 ²)	LIMIT (mW/cm ²)
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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