

FCC PART 95
MEASUREMENT AND TEST REPORT

For

3M Company

Personal Safety Division, 3M Center, Building 235-2NW-70, St. Paul, Minnesota, United States

FCC ID: Y9ZMT401050B

Report Type: Original Report	Product Type: PELTOR™ LiteCom Pro II headset
Test Engineer: William Li	<i>William Li</i>
Report Number: RSZ150720007-00A	
Report Date: 2015-08-14	
Reviewed By: Jimmy Xiao	<i>Jimmy Xiao</i>
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

Note: This test report is prepared for the customer shown above and for the equipment described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp.

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The 3M Company's product, model number: MT7H7F4010-NA-50 (FCC ID: Y9ZMT401050B) or the "EUT" in this report was a PELTOR™ LiteCom Pro II headset, which was measured approximately: 26cm (L)×14cm (W)×9.8 cm (H), rated input voltage: DC 3.7 V battery.

Note: the product, series model MT7H7B4010-NA-50; MT7H7P3E4010-NA-50 and MT7H7F4010-NA-50, the model MT7H7F4010-NA-50 was selected for fully testing; the detailed information can be referred to the attached declaration which was stated and guaranteed by the applicant.

** All measurement and test data in this report was gathered from production sample serial number: 1505765 (Assigned by BACL, Shenzhen). The EUT supplied by the applicant was received on 2015-07-20.*

Objective

This report is prepared on behalf of 3M Company in accordance with Part 2 and Part 95, Subpart A & Subpart B & Subpart E of the Federal Communication Commissions rules.

Related Submittal(s)/Grant(s)

FCC Part 90 TNE submission with FCC ID: Y9ZMT401050B.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with Part 95 Subpart A, B and Subpart E of the Federal Communication Commissions rules with TIA-603-D, Land Mobile FM or PM-Communications Equipment-Measurement and Performance Standards.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on October 31, 2013. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user).

Equipment Modifications

No modification was made to the EUT tested.

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§1.1307(b) (1) ,§2.1093	RF Exposure Info	Compliance
§2.1046, §95.639(a), §95.639(d)	RF Output Power	Compliance*
§2.1047, §95.637(a)	Modulation Characteristic	Compliance*
§2.1049, §95.633(a) (c)	Authorized Bandwidth & Emission Mask	Compliance*
§2.1053, §95.635(b) (7)	Spurious Radiated Emissions	Compliance*
§2.1055(d), §95.626(b), §95.621	Frequency Stability	Compliance*

Compliance*: The EUT (Model: MT7H7F4010-NA-50, FCC ID: Y9ZMT401050B) is the same product as the EUT (Model: MT7H7P3E4010-NA-50, FCC ID: Y9ZMT401050), only difference is enable TNE under part by software, the frequency range is 403-470MHz.
So all the test data are referred to FCC ID: Y9ZMT401050 granted on 2012-08-28, report No.: R1DG120426006-00, which was tested by Bay Area Compliance Laboratories Corp. (Shenzhen).
The original report please referred to the Appendix A in this report.

FCC §1.1307(b) & §2.1093 - RF EXPOSURE

Applicable Standard

According to FCC §2.1093 and §1.1307(b) (1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to FCC OET, KDB 447498 D01 General RF Exposure Guidance v05 section 4.3.1 & 6.1 Push-to-talk (PTT) devices:

RF exposure is evaluated with a duty factor of 50% when the actual operating duty factor is $\leq 50\%$. Devices supporting higher duty factors shall be evaluated at the maximum duty factor; for example, devices supporting operator-assisted PSTN calls. Contact the FCC Laboratory when unable to test a device at the required duty factor due to hardware limitations or other reasons.

Result

According to FCC KDB 447498 D01 General RF Exposure Guidance v05 generic portable criteria

The distance between antenna and head is 40mm

The Maximum tune-up output power: 24 dBm (251.19 mW), for PTT device the duty factor is 50%

The time-averaged output power is: $251.19 \times 0.5 = 125.60$ mW

The exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot \left[\sqrt{f(\text{GHz})} \right] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where:}$$

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

So, the exclusion thresholds is 175mW @ 467.6375MHz (worst case)

Conclusion:

The time-averaged output power is 125.60 mW < the exclusion thresholds is 467.6375 mW

Stand-alone SAR evaluation is not required.

PRODUCT SIMILARITY DECLARATION LETTER



Company name: 3M Company

Add: Personal Safety Division, 3M Center, Building 235-2NW-70, St. Paul, Minnesota, United States

Tel: +651-778-6336 Fax: +651-778-6336

Product Similarity Declaration

October 10, 2015

To Whom It May Concern,

We, 3M Company, hereby declare that we have a product named as PELTOR™ LiteCom Pro II headset (Model number: MT7H7F4010-NA-50) was tested by BACL, meanwhile, for our marketing purpose, we would like to list a series models (MT7H7B4010-NA-50; MT7H7P3E4010-NA-50), on reports and certificate, all the models are identical schematics, only named differently.

No other changes are made to them

We confirm that all information above is true, and we'll be responsible for all the consequences. Please contact me if you have any question.

Sincerely,

Signature:

A handwritten signature in black ink, appearing to read "Yuriy Litvinov".

Yuriy Litvinov

Lead EMC Engineer

BELOW IS THE ORIGINAL REPORT (Appendix A)