



# **Compliance Testing, LLC**

Previously Flom Test Lab

EMI, EMC, RF Testing Experts Since 1963

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## **Test Report**

**Prepared for: EMS Technologies Canada Ltd.**

**Model: A781-500**

**Description: Aeronautical Satcom Transceiver**

**Serial Number: N/A**

**FCC ID: K6KA781-MK4**

**To**

**FCC Part 1.1310**

**Date of Issue: May 9, 2016**

**On the behalf of the applicant:**

**EMS Technologies Canada Ltd.  
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**Attention of:**

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Project No: p1610046**

**Alex Macon  
Project Test Engineer**

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All results contained herein relate only to the sample tested

**Test Report Revision History**

Revision	Date	Revised By	Reason for Revision
1.0	March 22, 2016	Alex Macon	Original Document

## ILAC / A2LA

Compliance Testing, LLC, has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated January 2009)

The tests results contained within this test report all fall within our scope of accreditation, unless below

Please refer to <http://www.compliancetesting.com/labscope.html> for current scope of accreditation.

Testing Certificate Number: **2152.01**



**FCC Site Reg. #349717**

**IC Site Reg. #2044A-2**

**Non-accredited tests contained in this report:**

**N/A**

### **EUT Description**

**Model:** A781-500

**Description:** Aeronautical Satcom Transceiver

**Firmware:** N/A

**Software:** N/A

**Serial Number:** N/A

### Source Based Time Averaged Power Calculation

#### Average Power calculations

Average Power = Peak Power \* duty-cycle%

Tuned Frequency (MHz)	Conducted Peak Output Power (mW)	Duty Cycle (%)	Average Power (mW)
1643.5	46238	100	46238

## Minimum Safe Distance Evaluation

This is a mobile device used in Uncontrolled Exposure environment.

### Limits Controlled Exposure 47 CFR 1.1310 Table 1, (A)

0.3-3.0 MHz:	Limit [mW/cm <sup>2</sup> ] = 100
3.0-30 MHz:	Limit [mW/cm <sup>2</sup> ] = (900/f <sup>2</sup> )
30-300 MHz:	Limit [mW/cm <sup>2</sup> ] = 1.0
300-1500 MHz:	Limit [mW/cm <sup>2</sup> ] = f/300
1500-100,000 MHz	Limit [mW/cm <sup>2</sup> ] = 5

### Limits Uncontrolled Exposure 47 CFR 1.1310 Table 1, (B)

0.3-1.234 MHz:	Limit [mW/cm <sup>2</sup> ] = 100
1.34-30 MHz:	Limit [mW/cm <sup>2</sup> ] = (180/f <sup>2</sup> )
30-300 MHz:	Limit [mW/cm <sup>2</sup> ] = 0.2
300-1500 MHz:	Limit [mW/cm <sup>2</sup> ] = f/1500
1500-100,000 MHz	Limit [mW/cm <sup>2</sup> ] = 1.0

## Test Data

Test Frequency, MHz	1643.5
Power, Conducted, mW (P)	46238
Antenna Gain Isotropic	17 dBi
Antenna Gain Numeric (G)	50.11
Antenna Type	patch
Limit (L)	1.0

$R = \sqrt{(PG/4\pi L)}$	
Distance (R) cm	429.5cm

END OF TEST REPORT