



Compliance Testing, LLC

Previously Flom Test Lab

EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268

fax: (480) 926-3598

<http://www.ComplianceTesting.com>

info@ComplianceTesting.com

Test Report

Prepared for: EMS technologies Canada Lts.

Model: IPLD

Description: Aircraft earth station

Serial Number: N/A

FCC ID: K6KIPLD

To

FCC Part 1.1310

Date of Issue: August 12, 2020

On the behalf of the applicant:

EMS Technologies Canada Ltd.
400 Maple Grove Road
Ottawa, ON K2V 1B8
Canada

Attention of:

Hicham El-Zibawi
Phone: (613)595-7631
Email: Hicham.Zibawi@Honeywell.com

Prepared By
Compliance Testing, LLC
1724 S. Nevada Way
Mesa, AZ 85204
(480) 926-3100 phone / (480) 926-3598 fax
www.compliancetesting.com
Project No: p16c0010

Poona Saber
Project Test Engineer

This report may not be reproduced, except in full, without written permission from Compliance Testing
All results contained herein relate only to the sample tested



Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	August 12, 2020	Poona Saber	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: IPLD

Description: aircraft earth station

Part number: 1524-A-2000

Additional Information:

The aircraft user terminal functions also known as the SATCOM Avionics is an integral part of the complete L-band Inmarsat Satellite communications system and comprises of the following components:

- SDU or HDU-200 Transceiver
- SDU Configuration Module (SCM)
- The IPLD integrates the HPA function, the RF diplexer and a Low Noise Rx Amplifier (i.e. a DLNA)
- Antenna - Intermediate Gain (IGA) or High Gain (HGA)
- Satellite network Services

The IPLD works in conjunction with a Satcom Transceiver unit. An HDU-200 (FCC ID K6K HSDXi) is used as a source generator.

DC Power and Control signaling is used to connect the HDU-200 Transceiver to the IPLD. The High Power Amplifier (HPA), Diplexer and Low-Noise Amplifier functions are integrated into the IPLD.

The testing included in this report exclusively exercises the compliance of the IPLD.

Antennas:

The IPLD as part a SATCOM systems has been configured and tested with the following antenna Types:

- HGA (AMT-3800, AMT-700)
- IGA (AMT-1800)
- LGA (Omnidirectional Blade antenna)

Below are some details on the antennas.

- HGA = AMT-3800 (P/N = 1242-A-0010) [Manufacturer = EMS Aviation] – Maximum Antenna Gain = 17 dBi
- HGA = AMT-700 (P/N = 1428-A-0010) [Manufacturer = EMS Aviation] – Maximum Antenna Gain = 17 dBi
- IGA = AMT-1800 (P/N: 1242-A-7010) [Manufacturer = EMS Aviation] – Maximum Antenna Gain = 12 dBi
- LGA = SATCOM Antenna (Omni-directional Blade Antenna, P/N = S65-8282-101) [Manufacturer = Sensor Systems, Inc.]



MPE Evaluation

This is a mobile device used in Uncontrolled Exposure environment.

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

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

Test Data

Test Frequency, MHz	1643.5
Power, Conducted, mW (P)	14825.1
Antenna Gain Isotropic	17 dBi
Antenna Gain Numeric (G)	50.11
Antenna Type	HGA
Distance (R)	20 cm

$S = \frac{P * G}{4\pi r^2}$
Power Density (S) mw/cm ²

Power Density (S) = 147.8
Limit = (from above table) = 1.096

Minimum Safe Distance Evaluation

This is a mobile device used in Uncontrolled Exposure environment.

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

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

Test Data

Test Frequency, MHz	1643.5
Power, Conducted, mW (P)	14825.1
Antenna Gain Isotropic	17 dBi
Antenna Gain Numeric (G)	50.11
Antenna Type	HGA
Limit (L)	1.096

$R = \sqrt{(PG/4\pi L)}$			
Distance (R) cm	Power mW (P)	Numeric Gain (G)	Limit (L)
232.3062639	14825.1	50.11	1.096

The minimum safe distance for installation is 232.306 centimeters.

END OF TEST REPORT