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Test Report

Prepared for: L-3 Aviation Products

Model: 228E5733-00

Description: AFIRS 228S Satellite Data Unit

Serial Number: N/A

FCC ID: IB2AFIRS228S0

To

FCC Part 1.1310

Date of Issue: November 14, 2017

On the behalf of the applicant:	**L-3 Aviation Products** **PO Box 3041** **Sarasota, FL 34232**
Attention of:	**Dan Gross, Program Manager** **Ph: (941)371-0811** **E-Mail: Dan.Gross@L3T.com**

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Project No: p1790002

Alex Macon
Project Test Engineer

Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	October 20, 2017	Alex Macon	Original Document
2.0	November 14, 2017	Amanda Reed	Updated FCC ID

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

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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: 228E5733-00
Description: AFIRS 228S Satellite Data Unit
Firmware: N/A
Software: N/A
Serial Number: N/A
Additional Information: The unit is a sitcom system used within aircrafts

Average Power calculations

Average Power = Peak Power * duty-cycle%

Tuned Frequency (MHz)	Conducted Peak Output Power (mW)	Duty Cycle (%)	Average Power (mW)
1620.9825	7570	100	7570

MPE Evaluation

This is a portable device used in Uncontrolled Exposure environment.

Limits Uncontrolled Exposure 47 CFR 1.1310 Table 1, (B)	0.3-1.234 MHz:	Limit [mW/cm²] = 100
	1.34-30 MHz:	Limit [mW/cm²] = (180/f²)
	30-300 MHz:	Limit [mW/cm²] = 0.2
	300-1500 MHz:	Limit [mW/cm²] = f/1500
	1500-100,000 MHz	Limit [mW/cm²] = 1.0

Test Data

Test Frequency, MHz	1620.9825
Power, Conducted, mW (P)	7570
Antenna Gain Isotropic	3 dBi
Antenna Gain Numeric (G)	2
Antenna Type	Dipole
Distance (R)	20 cm

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

Power Density (S) = 3.012
Limit = (from above table) = 1

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/cm²] = 100
	1.34-30 MHz:	Limit [mW/cm²] = (180/f²)
	30-300 MHz:	Limit [mW/cm²] = 0.2
	300-1500 MHz:	Limit [mW/cm²] = f/1500
	1500-100,000 MHz	Limit [mW/cm²] = 1.0

Test Data

Test Frequency, MHz	1620.9825
Power, Conducted, mW (P)	7570
Antenna Gain Isotropic	3 dBi
Antenna Gain Numeric (G)	2
Antenna Type	Dipole
Limit (L)	1.0 mW/cm²

R=√(PG/4πL)			
Distance (R) cm	Power mW (P)	Numeric Gain (G)	Limit (L)
34.72	7570	2	1

34.7cm is the minimum safe distance when utilized with a 3dBi antenna.

Note: Max output power value is obtained from associated report.

END OF TEST REPORT