



# **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](mailto:info@ComplianceTesting.com)

## **Test Report**

**Prepared for: Bird Technologies**

**Model: 3-25999-XX**

**Description: 800MHz Public Safety/CMRS Class B Signal Booster Module**

**Serial Number: N/A**

**FCC ID: EZZ25999**

**To**

**FCC Part 1.1310**

**Date of Issue: August 26, 2016**

**On the behalf of the applicant:**

**Bird Technologies  
30303 Aurora Road  
Cleveland, OH 44139**

**Attention of:**

**Tim O'Brien, Technical Product Manager  
Ph: (440)519-2194  
Email: [tobrien@bird-technologies.com](mailto:tobrien@bird-technologies.com)**

**Prepared By  
Compliance Testing, LLC  
1724 S. Nevada Way  
Mesa, AZ 85204  
(480) 926-3100 phone / (480) 926-3598 fax  
[www.compliancetesting.com](http://www.compliancetesting.com)  
Project No: p1680007**

**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	August 17, 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:** 3-25999-XX

**Description:** 800MHz Public Safety/CMRS Class B Signal Booster Module

**Firmware:** N/A

**Serial Number:** N/A

**Additional Information:**

The EUT is classified as a Part 20 (CMRS 90-S) **Class B** industrial signal booster.

The EUT is a Bi-directional Amplifier that operates from 817 – 824 MHz (Mobile to Base) and 862 – 869 MHz (Base to Mobile).

System Power is 120 VAC @ 60 Hz. The device also has a selection for battery backup at 12 VDC

MPE calculations were using an antenna with 0 dBi gain.

MPE calculations were performed at the manufacturer's rated output power +20% using an antenna with 0 dBi gain.



### Average Power calculations

Average Power = Peak Power \* duty-cycle%

Tuned Frequency (MHz)	Conducted Peak Output Power (mW)	Duty Cycle (%)	Average Power (mW)
817.83	4150	100	4150 mW
868.93	2770	100	2770 mW



## MPE Evaluation

This is a Fixed device used in an **Uncontrolled** Exposure environment.

### 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	817
Power, Conducted, mW (P)	4980
Antenna Gain Isotropic	0 dBi
Antenna Gain Numeric (G)	1
Antenna Type	
Distance (R)	20 cm

$S = \frac{P * G}{4\pi r^2}$
Power Density (S) mw/cm <sup>2</sup>
0.99

Power Density (S) =1.0
Limit =(from above table) = 0.545

EUT does not meet the power density requirements at 20 cm, so the minimum safe distance was calculated below.

formula $R = \sqrt{(PG/4\pi L)}$			
Distance (R) (cm)	Power (mW)	Numeric Gain (G)	Limit (mW/cm)
26.97252477	4980	1	0.545

The minimum safe distance is 27cm

END OF TEST REPORT