



# **Compliance Testing, LLC**

Previously Flom Test Lab

EMI, EMC, RF Testing Experts Since 1963

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## **Test Report**

**Prepared for: Bird Technologies**

**Model: 3-26075-XX**

**Description: 700MHz Public Safety Class B Signal Booster Module**

**Serial Number: N/A**

**FCC ID: EZZ26075**

**To**

**FCC Part 1.1310**

**Date of Issue: November 2, 2016**

**On the behalf of the applicant:**

**Bird Technologies  
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**Attention of:**

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Project No: p1680006**

**Alex Macon  
Project Test Engineer**

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### Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	August 16, 2016	Alex Macon	Original Document
2.0	November 2, 2016	Amanda Reed	Changed frequency range 763–775MHz to 764-775MHz

## 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:** 3-26075-XX

**Description:** 700MHz Public Safety Class B Signal Booster Module

**Firmware:** N/A

**Software:** N/A

**Serial Number:** N/A

**Additional Information:**

The EUT is classified as a Part 90 PS **Class B** industrial signal booster.

The EUT is a Bi-directional Amplifier that operates in the Frequency ranges listed in Table 1.

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

The emission designators listed in Table 1 are representative emission designators used by transmitters whose signal is amplified by this booster.

**Table 1**

	<b>Frequency (MHz)</b>	<b>Emission Designators</b>
Downlink	764 – 775	F3E, G1D, G1E, W7W, F2D
Uplink	793 - 806	F3E, G1D, G1E, W7W, F2D



### Average Power calculations

Average Power = Peak Power \* duty-cycle%

Tuned Frequency (MHz)	Conducted Peak Output Power (mW)	Duty Cycle (%)	Average Power (mW)
769	1910	100	1910 mW
799	2940	100	2940 mW

All calculations below are with a 0dBi antenna in mind.

20% is added to the highest power in the calculations below.



## MPE Evaluation

This is a fixed device used in 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	794
Power, Conducted, mW (P)	3528
Antenna Gain Isotropic	0 dBi
Antenna Gain Numeric (G)	1
Distance (R)	20 cm

$S = \frac{P * G}{4\pi r^2}$
Power Density (S) mw/cm <sup>2</sup>
0.701

Power Density (S) =0.701
Limit =(from above table) = 0.529

The power density is over the limit so the minimum safe distance was calculated

formula $R = \sqrt{(PG/4\pi L)}$			
Distance (R) (cm)	Power (mW)	Numeric Gain (G)	Limit (mW/cm)
23.04313863	3528	1	0.529

The minimum safe distance is 23cm

END OF TEST REPORT