



Compliance Testing, LLC

Previously Flom Test Lab

EMI, EMC, RF Testing Experts Since 1963

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Test Report

Prepared for: Freewave Technologies, Inc.

Model: ZumLink Z9-C or Z9-T

Description: Digital Transmission System Radio Transceiver

Serial Number: N/A

FCC ID: KNYPM0101AA

To

FCC Part 1.1310

Date of Issue: June 21, 2016

On the behalf of the applicant:

Freewave Technologies
5395 Pearl Parkway
Boulder, CO 80301

Attention of:

Dean Busch, Sr. Compliance Engineer
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Prepared By
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Project No: p1660006

Alex Macon
Project Test Engineer

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Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	June 15, 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: ZumLink Z9-C or Z9-T

Description: Digital Transmission System Radio Transceiver

Firmware: N/A

Software: N/A

Serial Number: N/A

Additional Information:

All tests are performed with a 6 dBi antenna in mind.

The data rate determines the frequency selected. Below are the high mid and low frequencies per data rate. Duty cycle percentage is also included which will be used within the test report

500	1M	4M
902.707	903.053	904.550
914.458	914.112	914.227
927.360	927.014	925.747
95.6%	91.8%	76.1%



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 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	902.707
Power, Conducted, mW (P)	1000
Antenna Gain Isotropic	6 dBi
Antenna Gain Numeric (G)	3.98
Antenna Type	
Distance (R)	20 cm

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

Power Density (S) = 0.7918191947
Limit =(from above table) = 0.602

R= $\sqrt{(PG/4\pi L)}$			
Distance (R) cm	Power mW (P)	Numeric Gain (G)	Limit (L)
22.94290837	1000	3.98	0.602

The minimum safe distance is 22.94 cm

END OF TEST REPORT