



Nemko Test Report: 6L0287RUS2

Applicant: TeraHop Networks, Inc.
300 Satellite Blvd.
Suwanee, GA 30024
USA

**Equipment Under Test:
(E.U.T.)** RSI11

In Accordance With: **FCC Part 15, Subpart C, Paragraph 15.209**
General Limits For Low Power Transmitters

Tested By: Nemko USA Inc.
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Authorized By:

Kevin Rose Wireless Engineer

Date: July 24, 2006

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EQUIPMENT: RSI11

Section 1. Summary Of Test Results

Manufacturer: TeraHop Networks, Inc.

Model No.: RSI11

Serial No.: RSI11-0622-000027

General: **All measurements are traceable to national standards.**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 15, Subpart C for low power devices. All tests were conducted using measurement procedure ANSI C63.4-2003. Radiated Emissions were made on an open area test site.



New Submission



Production Unit



Class II Permissive Change



Pre-Production Unit

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.

See " Summary of Test Data". None



NVLAP LAB CODE: 100426-0

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This report applies only to the items tested.

EQUIPMENT: RSI11

Summary Of Test Data

NAME OF TEST	PARA. NO.	RESULT
Powerline Conducted Emissions	15.207	NA
Radiated Emissions	15.209	Complies

Footnotes For N/A's:

The device is battery powered.

EQUIPMENT: RSI11

Section 2. General Equipment Specification

Operating Frequency(ies) of Sample: 123.08

Modulation: OOK

Integral Antenna

Yes
☒

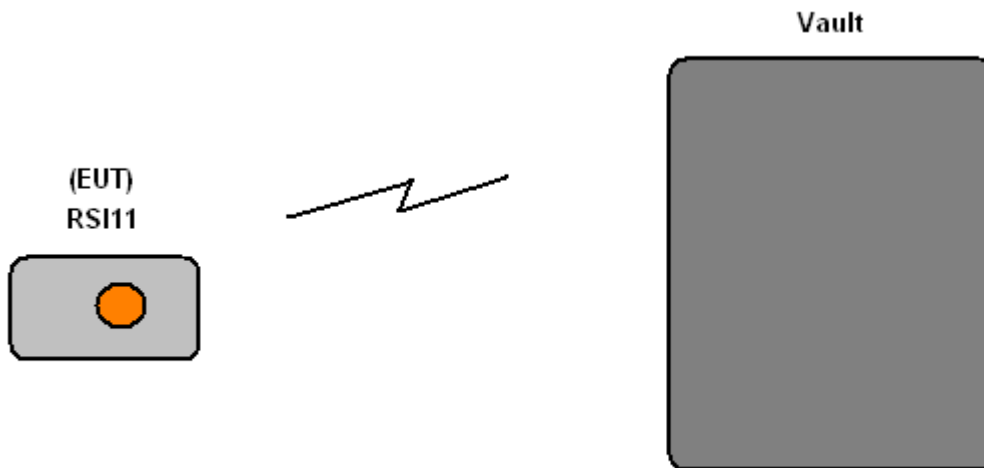
No
☐

EQUIPMENT: RSI11

Description of EUT

The EUT is a key fob remote used to access a vault used for storing automobile keys in dealership parking lots. The remote is placed next to the vault and the button is pushed to activate the 127 kHz low power radio. The remote transmits an authorization code via Bluetooth to the vault. If the remote has successfully unlocked the vault, a green LED lights.

System Diagram



Section 3. Radiated Emissions

NAME OF TEST: Radiated Emissions	PARA. NO.: 15.209
TESTED BY: David Light	DATE: 21 July 2006

Minimum Standard: The field strength of emissions from the device shall not exceed the following limits.

Fundamental (MHz)	Field Strength ($\mu\text{V/m}$)	Field Strength ($\text{dB}\mu\text{V}$)
0.009 - 0.490	2400/F(kHz) @ 300m	—
0.490 - 1.705	24000/F(kHz) @ 30m	—
1.705 - 30	30 @ 30m	—
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above 960	500	54.0

Test Results: Complies. The worst-case emission level is 38.7 $\text{dB}\mu\text{V/m}$ @ 3m at 123.08 kHz. This is 67.1 dB below the specification limit of 105.8 $\text{dB}\mu\text{V/m}$.

Measurement Data: (Procedure ANSI C63.4-2003)

There were no emissions detected (other than the carrier) above the noise floor which was at least 20 dB below the specification limit. The spectrum was searched from 9 kHz to 2 MHz.

RBW=VBW=10 kHz

Temperature 28°C

Relative Humidity 32%

Maximizing Emission Levels:

For hand held equipment or equipment that may be mounted in a variety of positions, the E.U.T. was tested on three orthogonal axis to determine orientation of worst-case emission levels. Below 30 MHz an active loop antenna is used at a fixed height of 1 meter. The loop is rotated about it's vertical axis to obtain worst-case results.

Spectrum Searched:

The spectrum was searched from the lowest frequency generated in the E.U.T. up to 1000 MHz, or the 10th harmonic of the fundamental emission.

EQUIPMENT: RSI11

Near-Field Measurement:

Emissions below 30 MHz are measured in the near-field and an extrapolation factor of 40 dB per decade is used to determine the 10m limit.

Example: Measurement Distance = 10m
 Specification Distance = 300m

10m Limit: Specified limit (at 300m) - $(40 \text{ Log } \frac{10}{300})$

 Thus for measurement at 10m the specified limit is increased by 59 dB.

Test Equipment Used: 1140-1484-1659

EQUIPMENT: RSI11

Radiated Photographs (Worst Case Configuration)



EQUIPMENT: RSI11

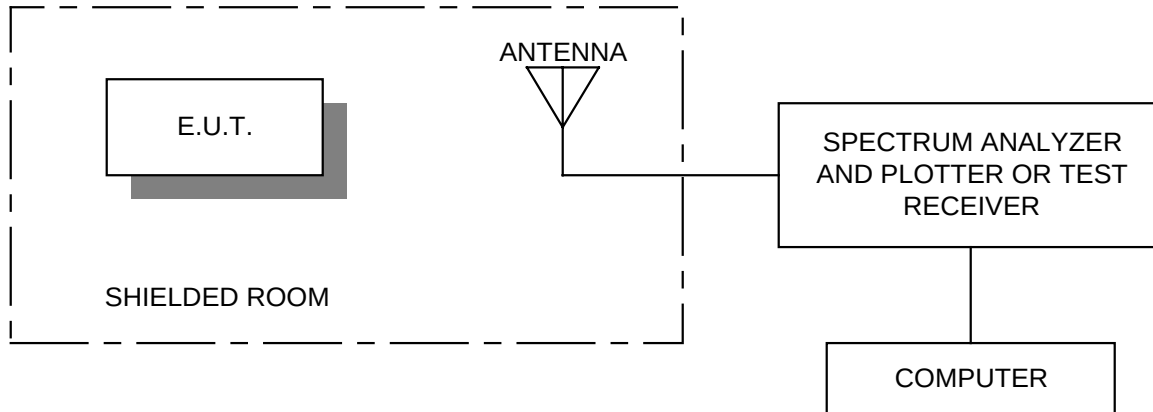
Section 4. Test Equipment List

Nemko ID	Description	Manufacturer Model Number	Serial Number	Calibration Date	Calibration Due
1140	ACTIVE LOOP ANTENNA	A.H. SYSTEMS SAS-200/562B	213	03/09/06	03/09/08
1659	Spectrum Analyzer	Rhode & Schwarz FSP	973353	01/10/06	01/10/07
1484	Cable	Storm PR90-010-072	N/A	08/26/05	08/26/06

ANNEX A
TEST DIAGRAMS

EQUIPMENT: RSI11

Radiated Prescan



Test Site For Radiated Emissions

