

FCC Part 15, Subpart C, Section 15.247 Test Report

On

iSecure Go Anywhere Hub FCC ID: AD8ISECHUB

Customer Name: Napco Security Technologies, Inc.

Customer P.O: PR57115-00

Date of Report: July 23, 2020

Test Report No: R-17172-1, Rev. A

Test Start Date: November 26, 2019

Test Finish Date: December 13, 2019

Test Technicians: K. Luning, M. Griffiths

Test Engineer: R. Soodoo

Approved By: R. Hull

Report Rev. Prepared By: D. Hull

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Technical Information

Report Number: R-17172-1, Rev. A

Customer: Napco Security Technologies, Inc.

Address: 333 Bayview Avenue

Amityville, NY 11701

Manufacturer: Napco Security Technologies, Inc.

Manufacturer Address: 333 Bayview Avenue

Amityville, NY 11701

Test Sample: iSecure Go Anywhere Hub

Model Number: GOANYWHEREHUB

FCC ID: AD8ISECHUB

Digital Transmission - Direct Sequence Spread Spectrum

Type: Transmitter

Power Requirements: 16 VAC from Wall Adapter with 12 V @ 4 AH Battery Backup

Frequency of Operation: 906 - 925.5 MHz

Equipment Class: DTS

Equipment Use: Fixed

900 MHz Half-Wave Internal Antenna

Antenna Type: 319 MHz Loop Internal Antenna

Equipment Use: Security Alarm System

Test Specification:

FCC Rules and Regulations Part 15, Subpart C, Section 15.247

Test Procedure:

ANSI C63.4:2014

ANSI C63.10:2013

FCC 558074 D01 15.247 Meas Guidance V05r02 April 2, 2019

Test Facility:

Retlif Testing Laboratories 795 Marconi Avenue

Ronkonkoma, NY 11779

FCC Accreditation Designation Number: US2322



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Tests Performed

FCC Part 15, Subpart C	Test Method	
15.247(a)(2)	Occupied Bandwidth	
15.247(b)(3)	Power Output	
15.247(d)	Antenna Port, Conducted Emissions	
15.247(e)	Antenna Port, Power Density	
15.209(a)	Spurious Radiated Emissions, 30 MHz to 1 GHz	
15.247(d) and 15.205	Spurious Radiated Emissions, 1 GHz to 10 GHz	
15.207(a)	Conducted Emissions, Power Leads, 150 kHz to 30 MHz	

EUT Operation:

The Hub is the central unit that forms the alarm panel. The Hub connects to a variety of wireless sensors that perform various sensor interfaces in the premises. The data is gathered under software control and this status is processed and relayed to a central monitoring station.



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Certification and Signatures

We certify that this report is a true representation of the results obtained from the tests of the equipment stated. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.

Rennie Soodoo EMI Test Engineer

Michael Giffiths

EMI Laboratory Supervisor

Non-Warranty Provision

The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

Non-Endorsement

This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement or certification of the product or material tested. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.



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Revision History

Revisions to this document are listed below; the latest revised document supersedes all previous issues of this document:

Revision - A	Date February 11, 2020 July 23, 2020	Pages Affected Original Release Global Changes: • Test Report No. R-17172-1 to R-17172-1, Rev. A 11, 12: • Undate RE Exposure Calculation
		 Update RF Exposure Calculation



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Requirements and Test Results

Requirement:

FCC Section 15.247(a)(2)

Operation within the bands 902 - 928 MHz, 2400 - 2483.5 MHz and 5725 - 5850 MHz

Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz and 5725 - 5850 MHz bands. The minimum 6 dB bandwidths shall be at least 500 kHz.

Results:

The minimum 6 dB bandwidth measured 560 kHz which complies with the requirement that the Bandwidth be no less than 500 kHz.

Requirement:

FCC Sections 15.247(b)(3)

Operation within the bands 902 - 928 MHz, 2400 - 2483.5 MHz and 5725 - 5850 MHz

The maximum peak conducted output power of the intentional radiator shall not exceed the following:

For systems using digital modulation in the 902 - 928 MHz, 2400 - 2483.5 MHz and 5725 - 5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antenna and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antenna and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

Results:

The device operates in the 902 - 928 MHz band. The maximum peak conducted output power was measured and was found to be 13.8 mWatts, in compliance with the specified limit of 1 watt.



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Requirement:

FCC Section 15.247(d):

Operation within the bands 902 - 928 MHz, 2400 - 2483.5 MHz and 5725 - 5850 MHz

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) must also comply with the radiated emissions limits specified in Section 15.209(a) (see Section 15.205(c)).

Results:

In any 100 kHz bandwidth outside the frequency band in which the Spread spectrum intentional radiator was operating, the radio frequency power that was produced by the intentional radiator was at least 20 dB below that in the 100 kHz bandwidth within the band that contained the highest level of the desired power. All emissions, which fell within the restricted bands specified in 15.205(a), were measured and found to be in compliance with the limits specified in 15.209(a).



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Requirement:

FCC Section 15.247(e):

Operation within the bands 902 - 928 MHz, 2400 - 2483.5 MHz and 5725 - 5850 MHz

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

Results:

The power spectral density conducted from the intentional radiator to the antenna was not greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density was determined in accordance with Section 15.247(b)(3), herein. The same method of determining the conducted output power was used to determine the power spectral density.

Requirement:

FCC Section 15.209(a) - Radiated Emission Limits, General Requirements

Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in Table 1.

Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 to 88	100	3
88 to 216	150	3
216 to 960	200	3
Above 960	500	3

Table 1 - Radiated Emission Limits

Results:

The field strength of spurious radiated emissions did not exceed the limits specified in Table 1.



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Requirement:

FCC Section 15.207(a) - Conducted Limits

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits shown in Table 2, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of the paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

The conducted emissions shall be measured with a 50 ohm/50 microhenry line impedance stabilization network.

Table 2 - Conducted Emission Limits

Fraguency of Emission (MHz)	Conducted Limit (dBµV)		
Frequency of Emission (MHz)	Quasi-Peak	Average	
0.15 to 0.5	66 to 56*	56 to 46*	
0.5 to 5	56	46	
5 to 30	60	50	
*Decreases due to logarithm of the frequency			

Results:

The conducted emissions observed did not exceed the limits specified in Table 2.



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Field Strength Calculation/Conversion:

The maximized field strength of the emission was obtained as follows:

 $C_R = M_R + C_F$

Where:

C_R = Corrected Reading in dBµV/m

M_R = Uncorrected Meter Reading in dBμV

C_F = Correction Factor in dB (Antenna Factor, Pre-amp + Cable Loss)

Example:

 $M_R = 15.35 dB\mu V$

 $C_F = 16.85 \text{ dB}$

 $C_R = 15.35 \text{ dBuV} + 16.85 = 32.2 \text{ dB}\mu\text{V/m}$

dBµV/M is converted to uV/M for comparison to the specified limit using the formula:

invLog dBµV/M/20

32.2 dBuV/m = 40.74 uV/m

RF Power Conversion:

Power readings in dBm may be converted to mW using the formula:

InvLog dBm/10

Example: 20dBm = 100mW



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FCC Section 15.247 (i)

RF Exposure Limits

Spread Spectrum Transmitters operating under 15.247 must be operated in a manner that ensures the public is not exposed to RF energy levels in access of the commission's guidelines. Based on the transmitter power and maximum antenna gain (see calculation below) the minimum separation distance was calculated to determine the distance for acceptable MPE power density levels to meet both the Occupational/Controlled Exposure and the General Population/Uncontrolled Exposure requirements of FCC Part 1.1310. The calculation below uses the more stringent General Population MPE Limits.

$$S = \frac{PG}{4 \prod Dsq}$$

D = Minimum Separation Distance in cm

S = Max allowed Power Density in mW/cmsq

Per 1.1310 for the Frequency of 902 MHz S = 0.6 mW/cmsq

Power = Max Power Input to Antenna = 13.8 mW

Gain = Max Power Gain of Antenna = 2 dBi = 1.58 numeric

0.6 mW/cmsq
$$\frac{13.8 \times 1.58}{4 \times (3.14) \times D^2} = \frac{21.8}{12.56 \times D^2} =$$

$$D^2 = \frac{21.8}{12.56 \times 0.6} = \sqrt{2.89}$$

D = 1.7 cm

The test sample has an internal antenna and the minimum separation distance will always be maintained.



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RF Exposure Limits (con't)

Note: The calculation below is for the cellular transmitter based on information found under modular approval for FCC ID: QIPELS31-V

D = Minimum Separation Distance in cm

S = Max allowed Power Density in mW/cmsq

Per 1.1310 for the Frequency of 1755 MHz S = 1 mW/cmsq

Power = Max Power Input to Antenna = 251 mW

Gain = Max Power Gain of Antenna = 2 dBi = 1.58 numeric

1 mW/cmsq =
$$\frac{251 \times 1.58}{4 \times (3.14) \times D^2}$$
 = $\frac{396.58}{12.56 \times D^2}$

$$D^2 = \frac{396.58}{12.56 \times 1} = \sqrt{31.57}$$

D = 5.6 cm

Max % MPE - 13.6%*

*In accordance with KDB 447498 D01 v06, section 7.2 Transmitters used in mobile device exposure conditions for simultaneous transmission operations, excel spreadsheet for simple antenna configurations.



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Equipment List

FCC Section 15.247(a)(2) Occupied Bandwidth

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
1616	OMEGA	HYGROMETER	-20 to 70 deg. C, 0-99% RH	OM-73	9/24/2019	3/31/2020
763	AGILENT / HP	ANALYZER, SPECTRUM	30 Hz - 13.2 GHz	E4405B	3/28/2019	3/31/2020

FCC Section 15.247(b)(3) Power Output

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
1616	OMEGA	HYGROMETER	-20 to 70 deg. C, 0-99% RH	OM-73	9/24/2019	3/31/2020
763	AGILENT / HP	ANALYZER, SPECTRUM	30 Hz - 13.2 GHz	E4405B	3/28/2019	3/31/2020

FCC Section 15.247(d) Antenna Port, Conducted Emissions

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
1616	OMEGA	HYGROMETER	-20 to 70 deg. C, 0-99% RH	OM-73	9/24/2019	3/31/2020
763	AGILENT / HP	ANALYZER, SPECTRUM	30 Hz - 13.2 GHz	E4405B	3/28/2019	3/31/2020

FCC Section 15.247(e) Antenna Port, Power Density

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
1616	OMEGA	HYGROMETER	-20 to 70 deg. C, 0-99% RH	OM-73	9/24/2019	3/31/2020
763	AGILENT / HP	ANALYZER, SPECTRUM	30 Hz - 13.2 GHz	E4405B	3/28/2019	3/31/2020



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FCC Section 15.247(d) and 15.205 Spurious Radiated Emissions, 30 MHz to 10 GHz

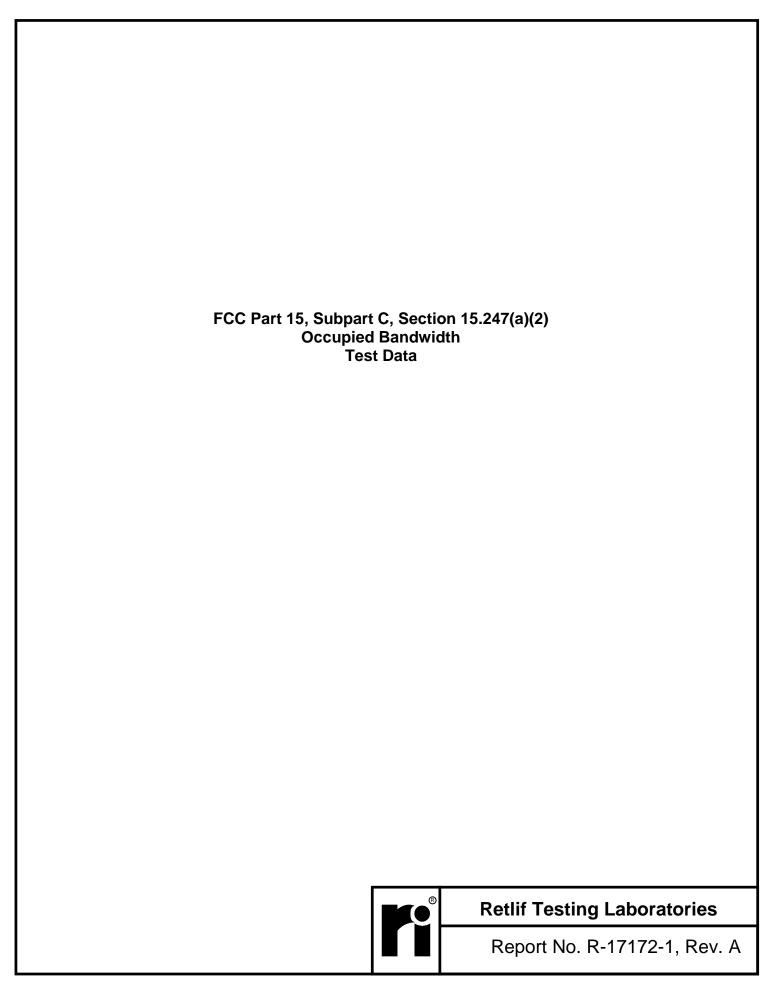
EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
067C	RETLIF	OPEN AREA TEST SITE, ATTENUATION	3 Meter, 30 MHz - 1 GHz	RNY	5/15/2019	5/31/2021
067E	RETLIF	OPEN AREA TEST SITE, SVSWR	3 Meter, 1 - 18 GHz	RNY	6/14/2019	6/30/2021
10028	AGILENT / HP	ANALYZER, SPECTRUM	9 kHz - 22 GHz	8592L	11/7/2019	11/30/2020
1356	ETS / EMCO	ANTENNA, DOUBLE RIDGED GUIDE	1 - 18 GHz	3117	10/23/2018	4/30/2020
543	AGILENT / HP	PRE-AMPLIFIER	1 - 26.5 GHz	8449B	6/5/2019	6/30/2020
544	AGILENT / HP	ANALYZER, SPECTRUM	9.0 KHz - 1.8 GHz	8591EM	6/4/2019	6/30/2020
7033	ETS / EMCO	ANTENNA, BICONICAL	20 - 200 MHz	3110	2/19/2019	8/31/2020
7034	ETS / EMCO	ANTENNA, LOG PERIODIC	200 MHz - 1 GHz	3146	6/15/2018	12/31/2019
712A	MICRO-COAX	CABLE, COAXIAL	10 KHz - 18 GHz	UFB311A-1- 240050U50U	11/11/2019	11/30/2020
712B	MICRO-COAX	CABLE, COAXIAL	10 KHz - 18 GHz	UFB311A-1- 072050U50U	11/11/2019	11/30/2020

FCC Section 15.207(a) Conducted Emissions, Power Leads, 150 kHz to 30 MHz

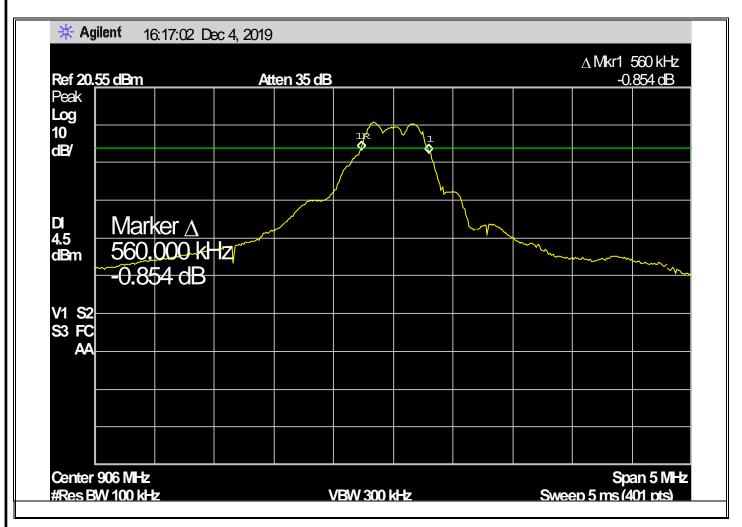
EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
1375	NARDA MICROWAVE	E ATTENUATOR, COAXIAL	10 dB, DC - 11 GHz, 20 W	<i>l</i> 768-10	10/9/2019	10/31/2020
1677	COM-POWER	GENERATOR, COMB	100 kHz - 400 MHz	CGC-510E	6/21/2019	6/30/2020
1704	SOLAR ELECTRONICS	LISN	50 uH, 150 kHz - 30 MHz	21106-50-BP-25-BNC	2/4/2019	2/29/2020
1705	SOLAR ELECTRONICS	LISN	50 uH, 150 kHz - 30 MHz	21106-50-BP-25-BNC	2/4/2019	2/29/2020
544	AGILENT / HP	ANALYZER, SPECTRUM	9.0 KHz - 1.8 GHz	8591EM	6/4/2019	6/30/2020



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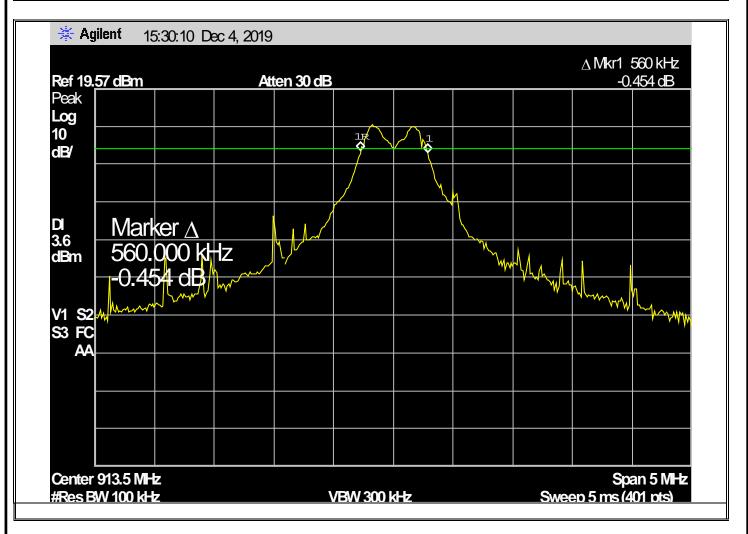


	EMISSIONS TEST DATA SHEET
Test Method:	Occupied Bandwidth
Test Specification:	FCC Part 15, Subpart C, Paragraph 15.247 (a)(2)
Job Number/ Customer:	R-17172-1 / Napco Security Technologies, Inc.
Test Sample:	iSecure Go Anywhere Hub
Model Number:	GOANYWHEREHUB
FCC ID Number:	AD8ISECHUB
Operating Mode:	Transmitting modulated signal (2-GFSK) at 906.0 MHz on channel 7
Technician:	R. Soodoo
Date(s):	December 4, 2019
Temperature:	20.9°C
Relative Humidity:	30.9%
Notes:	Minimum 6dB Bandwidth Limit: 500 kHz , Measured 6dB Bandwidth: 560 kHz



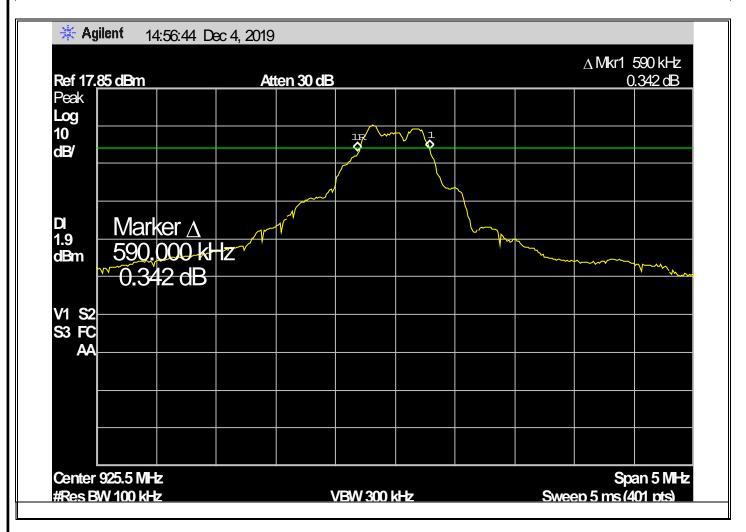


	EMISSIONS TEST DATA SHEET	
Test Method: Occupied Bandwidth		
Test Specification:	FCC Part 15, Subpart C, Paragraph 15.247 (a)(2)	
Job Number/ Customer:	R-17172-1 / Napco Security Technologies, Inc.	
Test Sample:	iSecure Go Anywhere Hub	
Model Number:	GOANYWHEREHUB	
FCC ID Number:	AD8ISECHUB	
Operating Mode:	Transmitting modulated signal (2-GFSK) at 913.5 MHz on channel 22	
Technician:	R. Soodoo	
Date(s):	December 4, 2019	
Temperature:	20.9°C	
Relative Humidity:	30.9%	
Notes:	Minimum 6dB Bandwidth Limit: 500 kHz , Measured 6dB Bandwidth: 560 kHz	

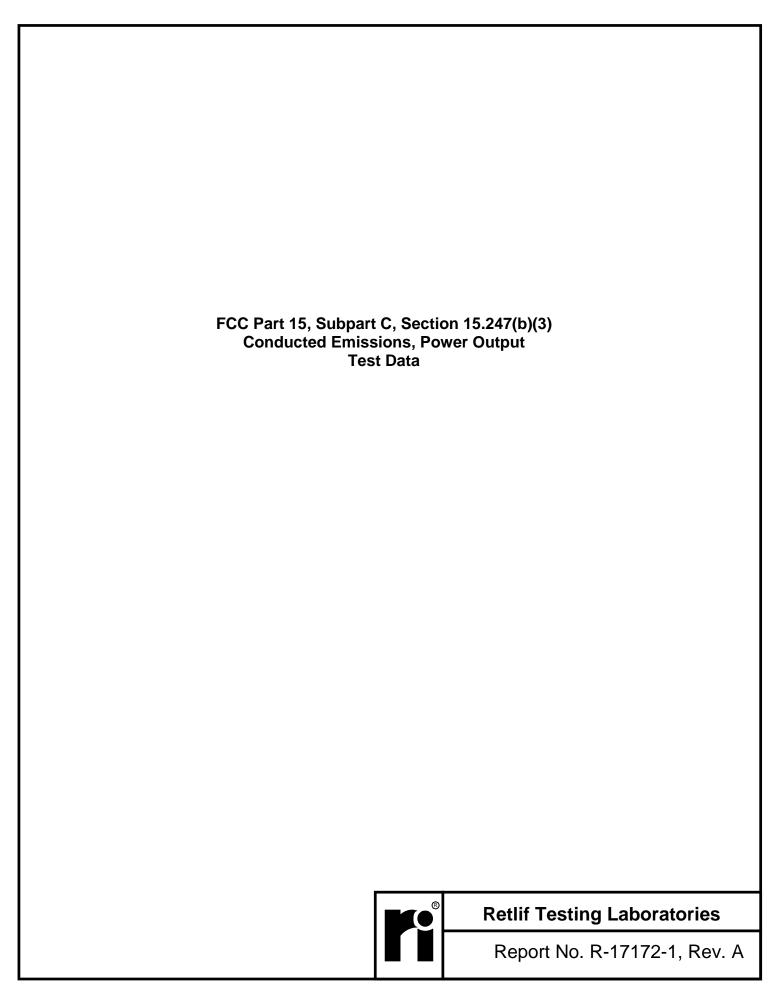




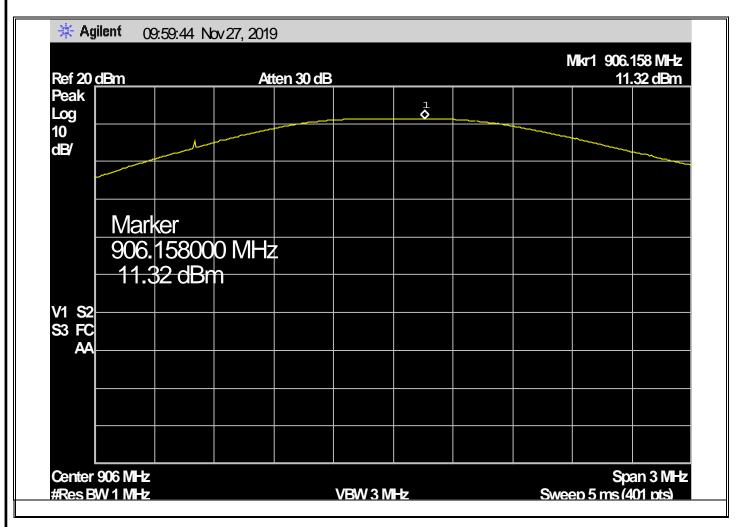
EMISSIONS TEST DATA SHEET	
Test Method:	Occupied Bandwidth
Test Specification:	FCC Part 15, Subpart C, Paragraph 15.247 (a)(2)
Job Number/ Customer:	R-17172-1 / Napco Security Technologies, Inc.
Test Sample:	iSecure Go Anywhere Hub
Model Number:	GOANYWHEREHUB
FCC ID Number:	AD8ISECHUB
Operating Mode:	Transmitting modulated signal (2-GFSK) at 925.5 MHz on channel 22
Technician:	R. Soodoo
Date(s):	December 4, 2019
Temperature:	20.9°C
Relative Humidity:	30.9%
Notes:	Minimum 6dB Bandwidth Limit: 500 kHz , Measured 6dB Bandwidth: 590 kHz





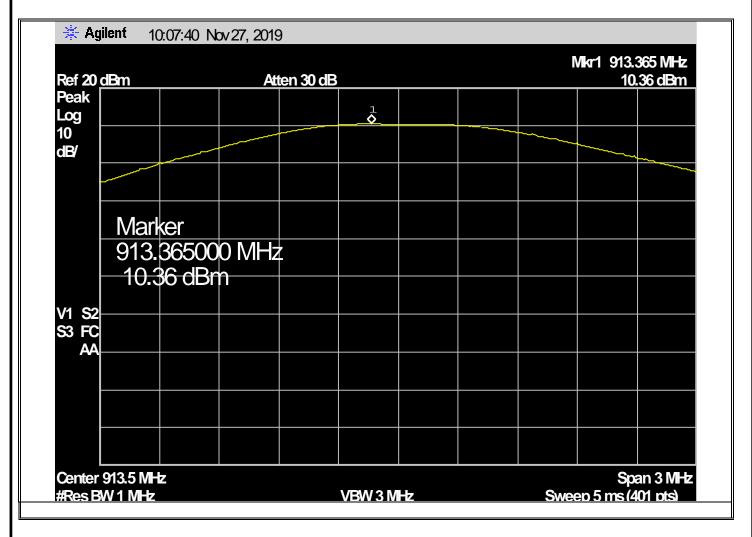


EMISSIONS TEST DATA SHEET	
Test Method:	Power Output
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (b)(3)
Job Number / Customer:	R-17172-1 / Napco Security Technologies, Inc.
Test Sample:	iSecure Go Anywhere Hub
Model Number:	GOANYWHEREHUB
FCC ID Number:	AD8ISECHUB
Operating Mode:	Transmitting modulated signal (2-GFSK) at 906.0 MHz on channel 7
Technician:	K. Luning
Date(s):	November 27, 2019
Temperature:	20.6°C
Relative Humidity:	40.5%
Notes:	Method: ANSI C63.10, 11.9.1.1 RBW≥DTS Bandwidth Maximum Power Output: 1.0W, Measure Power Output: 13.6mW



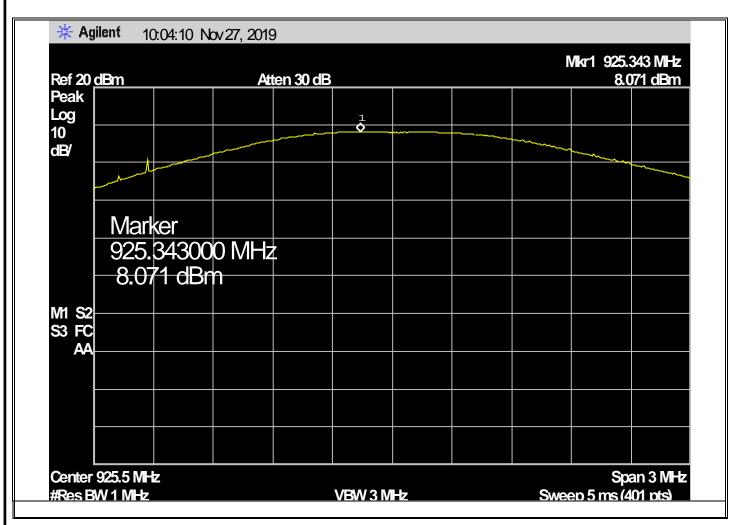


EMISSIONS TEST DATA SHEET	
Test Method:	Power Output
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (b)(3)
Job Number / Customer:	R-17172-1 / Napco Security Technologies, Inc.
Test Sample:	iSecure Go Anywhere Hub
Model Number:	GOANYWHEREHUB
FCC ID Number:	AD8ISECHUB
Operating Mode:	Transmitting modulated signal (2-GFSK) at 913.5 MHz on channel 22
Technician:	K. Luning
Date(s):	November 27, 2019
Temperature:	20.6°C
Relative Humidity:	40.5%
Notes:	Method: ANSI C63.10, 11.9.1.1 RBW≥DTS Bandwidth Maximum Power Output: 1.0W, Measure Power Output: 10.9mW

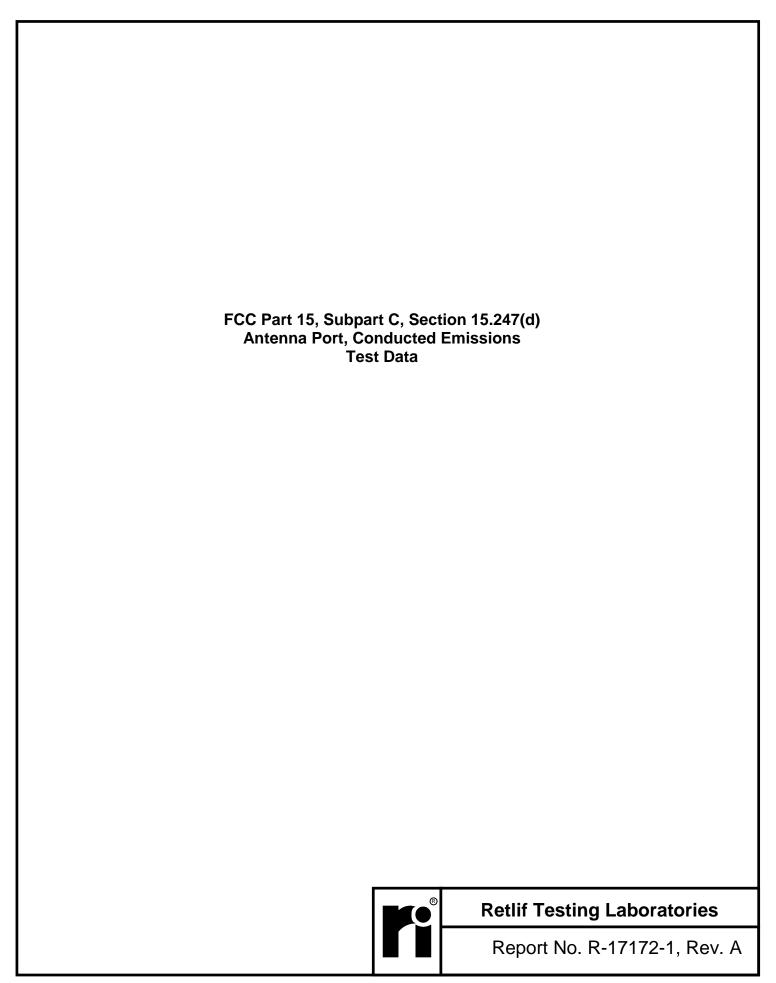




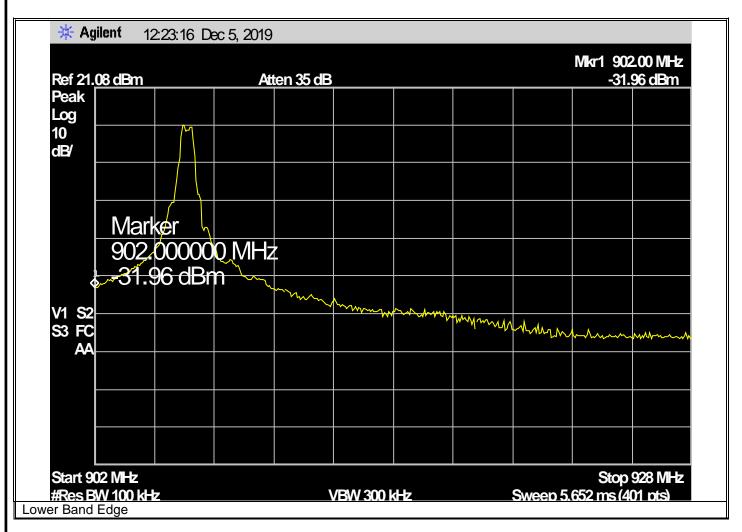
EMISSIONS TEST DATA SHEET	
Test Method:	Power Output
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (b)(3)
Job Number / Customer:	R-17172-1 / Napco Security Technologies, Inc.
Test Sample:	iSecure Go Anywhere Hub
Model Number:	GOANYWHEREHUB
FCC ID Number:	AD8ISECHUB
Operating Mode:	Transmitting modulated signal (2-GFSK) at 925.5 MHz on channel 28
Technician:	K. Luning
Date(s):	November 27, 2019
Temperature:	20.6°C
Relative Humidity:	40.5%
Notes:	Method: ANSI C63.10, 11.9.1.1 RBW≥DTS Bandwidth Maximum Power Output: 1.0W, Measure Power Output: 6.4mW





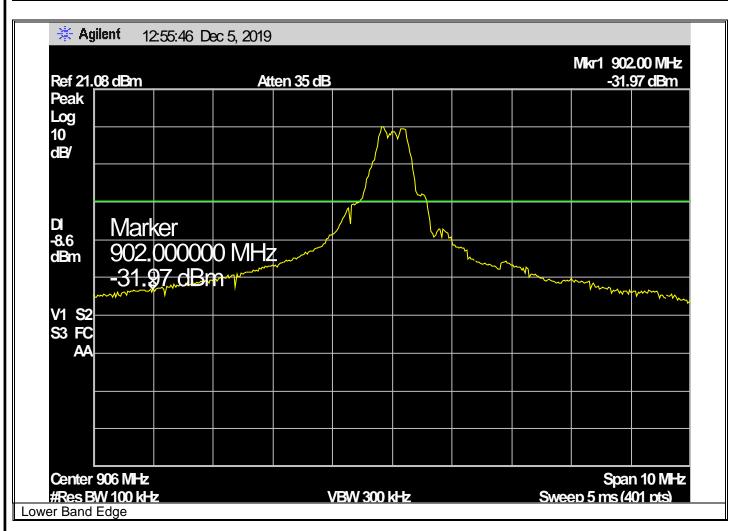


EMISSIONS TEST DATA SHEET	
Test Method:	Band Edge Conducted Emissions
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (d)
Job Number / Customer:	R-17172-1 / Napco Security Technologies, Inc.
Test Sample:	iSecure Go Anywhere Hub
Model Number:	GOANYWHEREHUB
FCC ID Number:	AD8ISECHUB
Operating Mode:	Transmitting modulated signal (2-GFSK) at 906.0 MHz on channel 7
Technician:	R. Soodoo
Date(s):	December 5-6, 2019
Temperature:	21.8°C
Relative Humidity:	30.1%
Notes:	20dBc Limit: -8.6 dBm



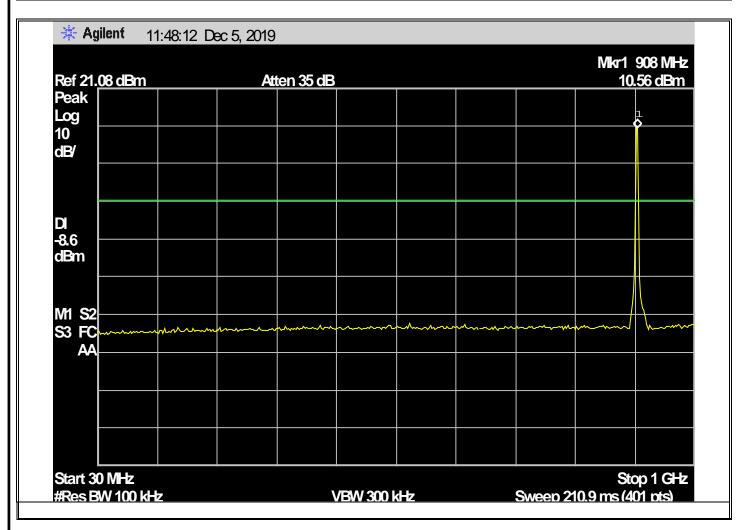


EMISSIONS TEST DATA SHEET	
Test Method:	Band Edge Conducted Emissions
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (d)
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Technician:	R. Soodoo
Date(s):	December 5-6, 2019
Temperature:	21.8°C
Relative Humidity:	30.1%
Notes:	20dBc Limit: -8.6 dBm



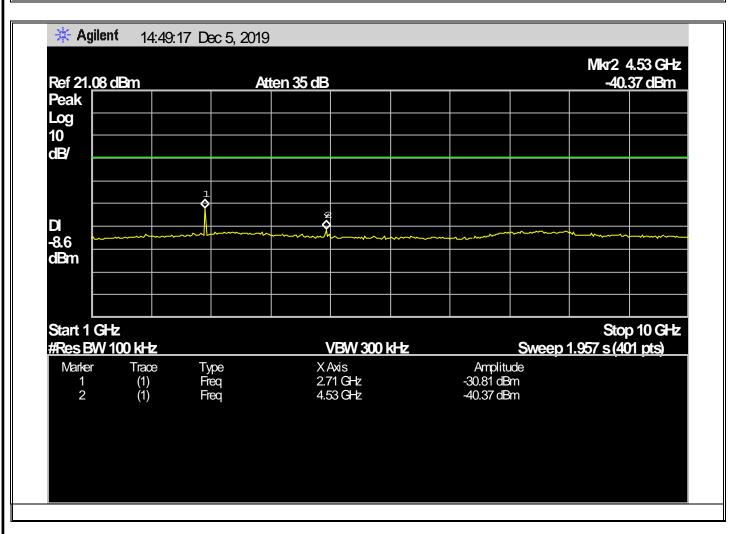


EMISSIONS TEST DATA SHEET	
Test Method:	Out of Band Conducted Emissions
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (d)
Job Number / Customer:	R-17172-1 / Napco Security Technologies, Inc.
Test Sample:	iSecure Go Anywhere Hub
Model Number:	GOANYWHEREHUB
FCC ID Number:	AD8ISECHUB
Operating Mode:	Transmitting modulated signal (2-GFSK) at 906.0 MHz on channel 7
Technician:	R. Soodoo
Date(s):	December 5-6, 2019
Temperature:	21.8°C
Relative Humidity:	30.1%
Notes:	20dBc Limit: -8.6 dBm



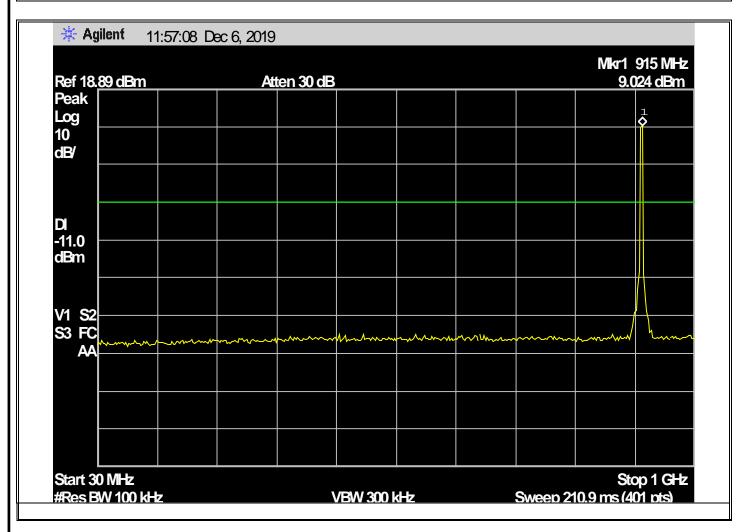


EMISSIONS TEST DATA SHEET	
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Technician:	R. Soodoo
Date(s):	December 5-6, 2019
Temperature:	21.8°C
Relative Humidity:	30.1%
Notes:	20dBc Limit: -8.6 dBm



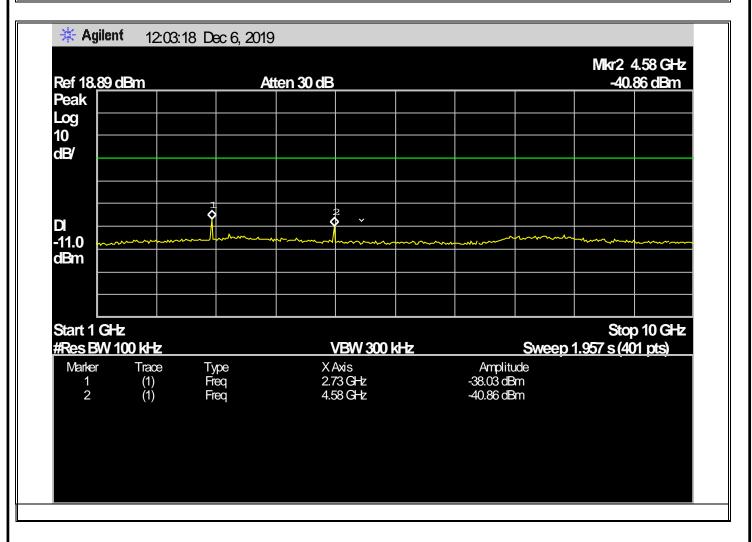


EMISSIONS TEST DATA SHEET	
Test Method:	Out of Band Conducted Emissions
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (d)
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Date(s):	December 5-6, 2019
Temperature:	21.8°C
Relative Humidity:	30.1%
Notes:	20dBc Limit: -8.6 dBm



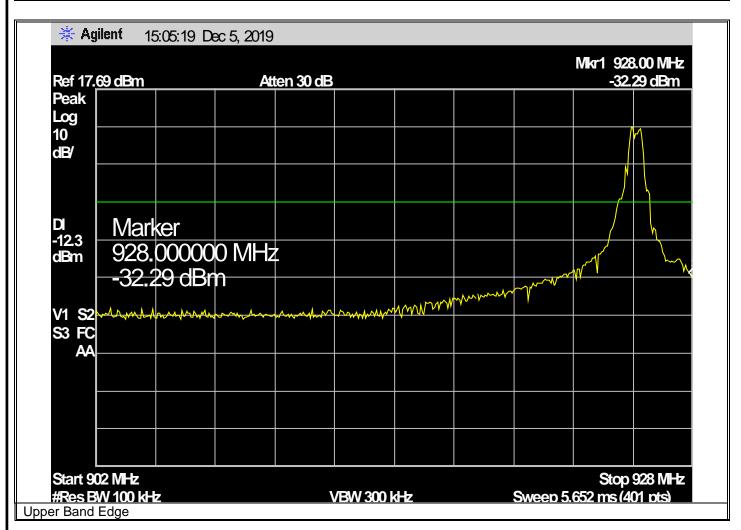


EMISSIONS TEST DATA SHEET	
Test Method:	Out of Band Conducted Emissions
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (d)
Job Number / Customer:	R-17172-1 / Napco Security Technologies, Inc.
Test Sample:	iSecure Go Anywhere Hub
Model Number:	GOANYWHEREHUB
FCC ID Number:	AD8ISECHUB
Operating Mode:	Transmitting modulated signal (2-GFSK) at 913.5 MHz on channel 22
Technician:	R. Soodoo
Date(s):	December 5-6, 2019
Temperature:	21.8°C
Relative Humidity:	30.1%
Notes:	20dBc Limit: -8.6 dBm



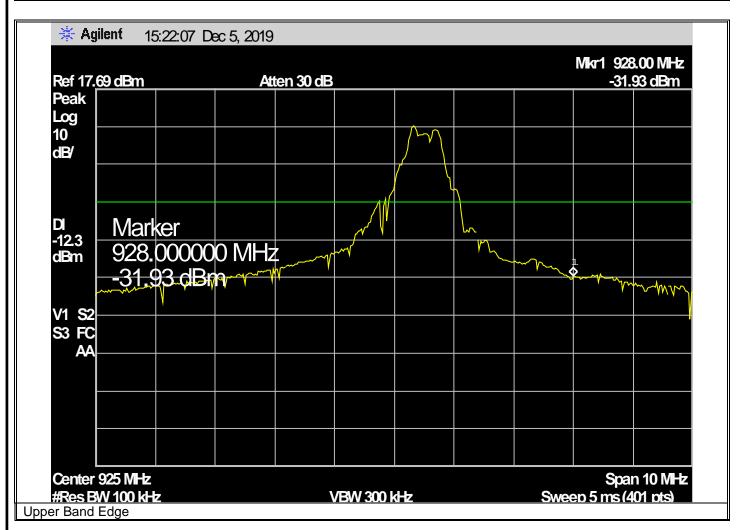


EMISSIONS TEST DATA SHEET	
Test Method:	Band Edge Conducted Emissions
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (d)
Job Number / Customer:	R-17172-1 / Napco Security Technologies, Inc.
Test Sample:	iSecure Go Anywhere Hub
Model Number:	GOANYWHEREHUB
FCC ID Number:	AD8ISECHUB
Operating Mode:	Transmitting modulated signal (2-GFSK) at 925.5 MHz on channel 27
Technician:	R. Soodoo
Date(s):	December 5-6, 2019
Temperature:	21.8°C
Relative Humidity:	30.1%
Notes:	20dBc Limit: -12.3 dBm



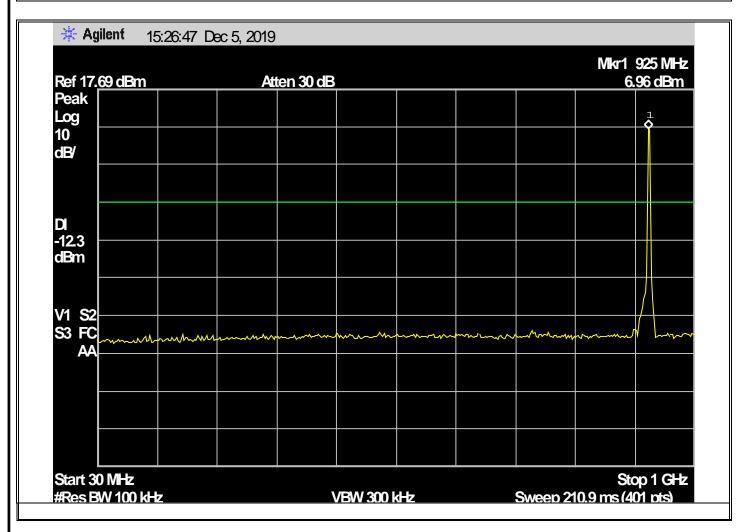


EMISSIONS TEST DATA SHEET	
Test Method:	Band Edge Conducted Emissions
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (d)
Job Number / Customer:	R-17172-1 / Napco Security Technologies, Inc.
Test Sample:	iSecure Go Anywhere Hub
Model Number:	GOANYWHEREHUB
FCC ID Number:	AD8ISECHUB
Operating Mode:	Transmitting modulated signal (2-GFSK) at 925.5 MHz on channel 27
Technician:	R. Soodoo
Date(s):	December 5-6, 2019
Temperature:	21.8°C
Relative Humidity:	30.1%
Notes:	20dBc Limit: -12.3 dBm



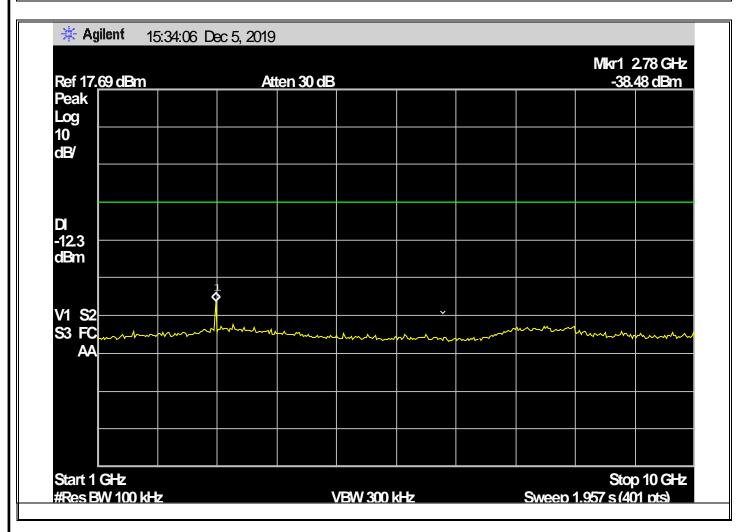


EMISSIONS TEST DATA SHEET		
Test Method:	Out of Band Conducted Emissions	
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (d)	
Job Number / Customer:	R-17172-1 / Napco Security Technologies, Inc.	
Test Sample:	iSecure Go Anywhere Hub	
Model Number:	GOANYWHEREHUB	
FCC ID Number:	AD8ISECHUB	
Operating Mode:	Transmitting modulated signal (2-GFSK) at 925.5 MHz on channel 27	
Technician:	R. Soodoo	
Date(s):	December 5-6, 2019	
Temperature:	21.8°C	
Relative Humidity:	30.1%	
Notes:	20dBc Limit: -12.3 dBm	

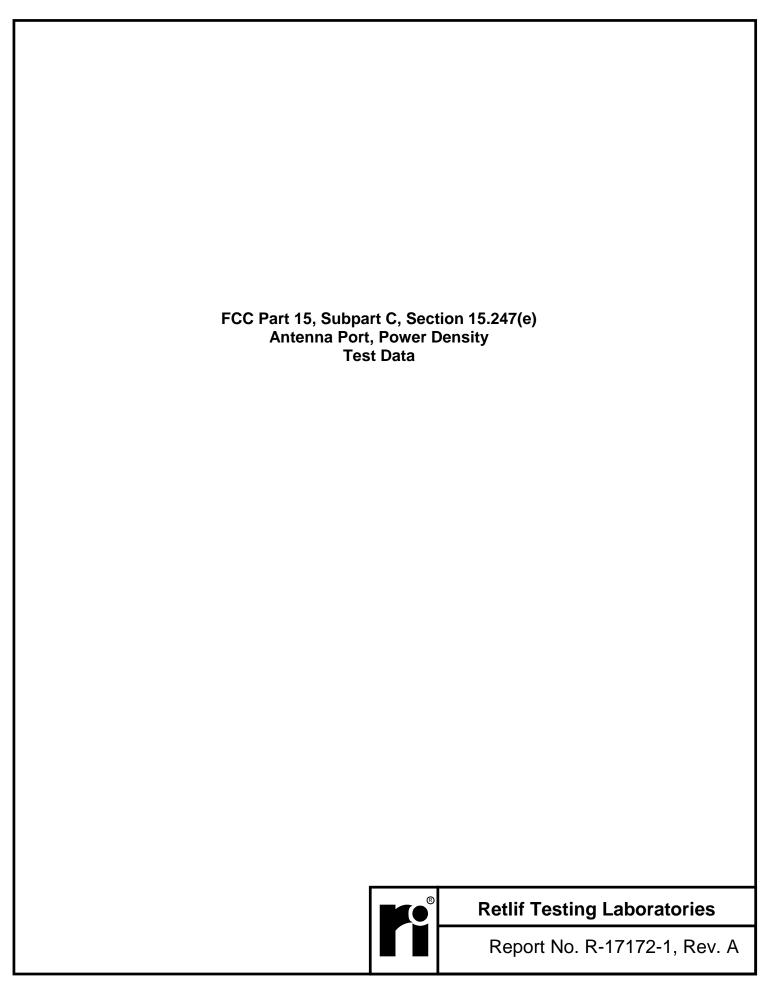




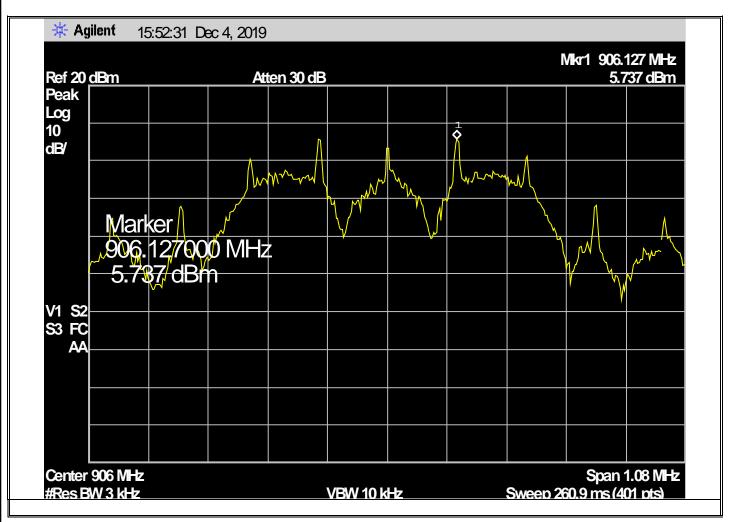
EMISSIONS TEST DATA SHEET		
Test Method:	Out of Band Conducted Emissions	
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (d)	
Job Number / Customer:	R-17172-1 / Napco Security Technologies, Inc.	
Test Sample:	iSecure Go Anywhere Hub	
Model Number:	GOANYWHEREHUB	
FCC ID Number:	AD8ISECHUB	
Operating Mode:	Transmitting modulated signal (2-GFSK) at 925.5 MHz on channel 27	
Technician:	R. Soodoo	
Date(s):	December 5-6, 2019	
Temperature:	21.8°C	
Relative Humidity:	30.1%	
Notes:	20dBc Limit: -12.3 dBm	





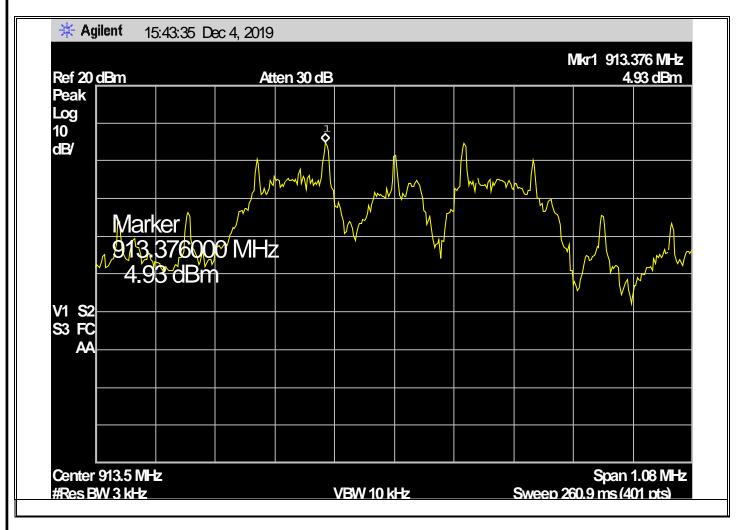


EMISSIONS TEST DATA SHEET			
Test Method:	Power Density		
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (e)		
Job Number/ Customer:	R-17172-1 / Napco Security Technologies, Inc.		
Test Sample:	iSecure Go Anywhere Hub		
Model Number:	GOANYWHEREHUB		
FCC ID Number:	AD8ISECHUB		
Operating Mode:	Transmitting modulated signal (2-GFSK) at 906.0 MHz on channel 7		
Technician:	R. Soodoo		
Date(s):	December 4, 2019		
Temperature:	20.9°C		
Relative Humidity:	30.9%		
Notes:	ANSI C63.10, Method: 11.10.2 PKPSD Power Density Limit: 8.0dBm, Measured Power Density: 5.737dBm		



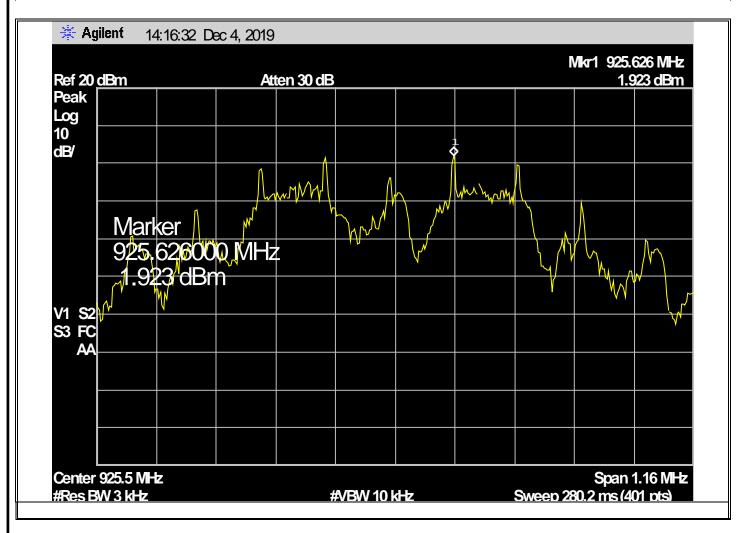


EMISSIONS TEST DATA SHEET			
Method:	Power Spectral Density		
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (e)		
Job Number/ Customer:	R-17172-1 / Napco Security Technologies, Inc.		
Test Sample:	iSecure Go Anywhere Hub		
Model Number:	GOANYWHEREHUB		
FCC ID Number:	AD8ISECHUB		
Operating Mode:	ting Mode: Transmitting modulated signal (2-GFSK) at 913.5 MHz on channel 22		
Technician:	R. Soodoo		
Date(s):	December 4, 2019		
Temperature:	20.9°C		
Relative Humidity:	30.9%		
Notes:	ANSI C63.10, Method: 11.10.2 PKPSD Power Density Limit: 8.0dBm, Measured Power Density: 4.93dBm		

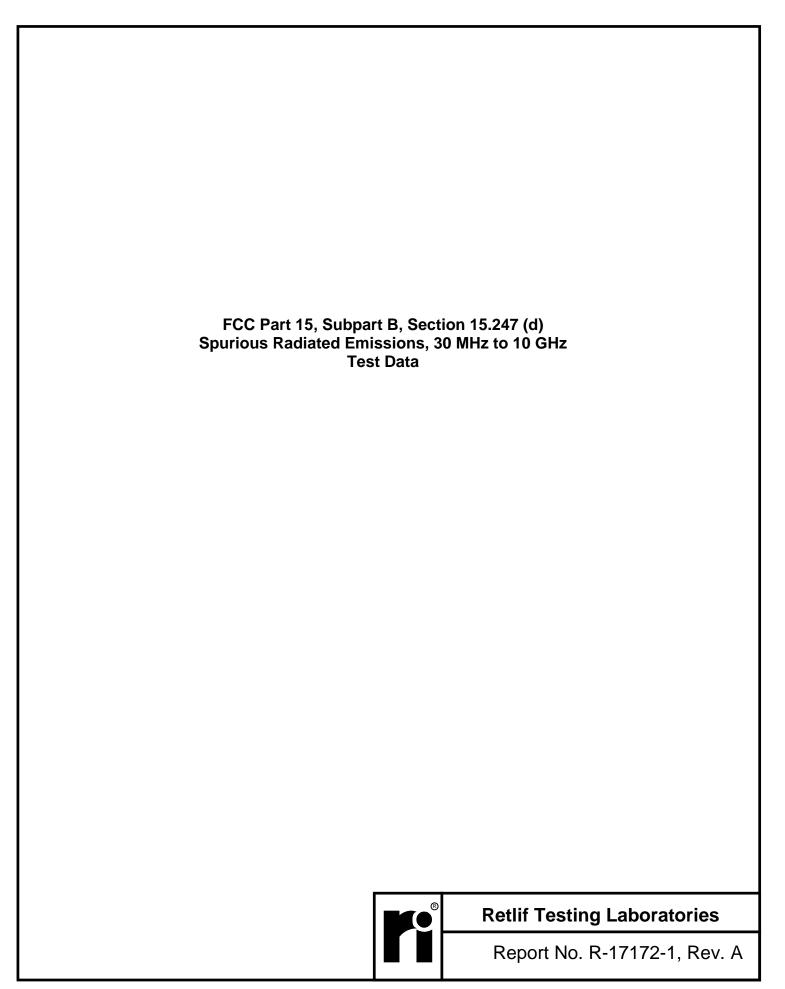




EMISSIONS TEST DATA SHEET			
Test Method:	Power Spectral Density		
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (e)		
Job Number/ Customer:	R-17172-1 / Napco Security Technologies, Inc.		
Test Sample:	iSecure Go Anywhere Hub		
Model Number:	GOANYWHEREHUB		
FCC ID Number:	AD8ISECHUB		
Operating Mode: Transmitting modulated signal (2-GFSK) at 925.5 MHz on channel 28			
Technician:	R. Soodoo		
Date(s):	December 4, 2019		
Temperature:	20.9°C		
Relative Humidity:	30.9%		
Notes:	ANSI C63.10, Method: 11.10.2 PKPSD Power Density Limit: 8.0dBm, Measured Power Density: 1.923dBm		







EMISSIONS TEST DATA SHEET			
Method:	Restricted Band Emissions 30 MHz to 10 GHz		
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (d)		
Job Number/Customer:	R-17172-1 / Napco Security Technologies, Inc.		
Test Sample:	iSecure Go Anywhere Hub		
Model Number:	GOANYWHEREHUB		
FCC ID Number:	AD8ISECHUB		
Operating Mode:	Transmitting modulated signal (2-GFSK)		
Technician:	M. Griffiths		
Date(s):	December 13, 2019		
Temperature:	10.6°C		
Relative Humidity:	y : 54.2%		
Detector:	Detector: Quasi-Peak <1GHz, Average >1GHz		
Test Distance:	3m		

Notes:

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum.

*This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor)

TEST PARAMETERS						
Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Limit a
MHz	MHz	dBuV	dB	dBuV/m	uV/m	uV/m
37.50						100.00
	38.00*	31.9	-3.1	28.8	27.5	I
38.25						100.00
73.00						100.00
	74.00*	26.5	-12.1	14.4	5.2	I
75.20						100.00
108.00						150.00
	115.00*	30.7	-5.6	25.1	18.0	1
121.94						150.00
123.00						150.00
	130.00*	31.2	-3.9	27.3	23.2	
138.00						150.00
149.90						150.00
	150.00*	25.4	-2.2	23.2	14.5	I
150.05						150.00
156.52475						150.00
	156.52500*	24.3	-2.2	22.1	12.7	
156.52525						150.00



Retlif Testing Laboratories

EMISSIONS TEST DATA SHEET			
Restricted Band Emissions 30 MHz to 10 GHz			
FCC Part 15, Subpart C, Paragraph: 15.247 (d)			
R-17172-1 / Napco Security Technologies, Inc.			
iSecure Go Anywhere Hub			
GOANYWHEREHUB			
AD8ISECHUB			
Transmitting modulated signal (2-GFSK)			
M. Griffiths			
December 13, 2019			
10.6ºC			
54.2%			
Quasi-Peak <1GHz, Average >1GHz			
3m			

Notes:

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given requency spectrum.

This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor)

TEST PARAMETERS						
Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Limit at
MHz	MHz	dBuV	dB	dBuV/m	uV/m	uV/m
156.70						150.00
	156.80*	25.3	-2.2	23.1	14.3	
156.90						150.00
162.0125						150.00
	165.00*	29.1	-1.6	27.5	23.7	
167.1700						150.00
167.72						150.00
1	170.00*	28.2	-1.4	26.8	21.9	
173.20						150.00
240.00						200.00
	260.00*	24.6	-4.8	19.8	9.8	1
285.00						200.00
322.00						200.00
	330.00*	24.4	-2.2	22.2	12.9	
335.40						200.00
399.90	-	-	-	-		200.00
	405.00*	20.9	-0.8	20.1	10.1	
410.00						200.00



Retlif Testing Laboratories

EMISSIONS TEST DATA SHEET			
Restricted Band Emissions 30 MHz to 10 GHz			
FCC Part 15, Subpart C, Paragraph: 15.247 (d)			
R-17172-1 / Napco Security Technologies, Inc.			
iSecure Go Anywhere Hub			
GOANYWHEREHUB			
AD8ISECHUB			
Transmitting modulated signal (2-GFSK)			
M. Griffiths			
December 13, 2019			
10.6°C			
54.2%			
Quasi-Peak <1GHz, Average >1GHz			
3m			

Notes:

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum.

*This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor)

TEST PARAMETERS						
Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Limit at 3m
MHz	MHz	dBuV	dB	dBuV/m	uV/m	uV/m
608.00						200.00
	611.00*	25.1	4.3	29.4	29.5	
614.00	-					200.00
960.00						500.00
	975.00*	20.5	11.7	32.2	40.7	
1240.00						500.00
1300.00						500.00
	1350.00*	33.5	1.4	34.9	55.6	
1427.00						500.00
1435.00						500.00
	1500.00*	34.8	1.7	36.5	66.8	
1646.50						500.00
1660.00						500.00
	1680.00*	31.2	1.7	32.9	44.2	
1710.00						500.00
1718.80						500.00
	1720.00*	33.8	2.1	35.9	62.4	
1722.20						500.00



Retlif Testing Laboratories

EMISSIONS TEST DATA SHEET			
Method:	Restricted Band Emissions 30 MHz to 10 GHz		
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (d)		
Job Number/Customer:	R-17172-1 / Napco Security Technologies, Inc.		
Test Sample:	iSecure Go Anywhere Hub		
Model Number:	GOANYWHEREHUB		
FCC ID Number:	AD8ISECHUB		
Operating Mode:	Transmitting modulated signal (2-GFSK)		
Technician:	M. Griffiths		
Date(s):	December 13, 2019		
Temperature:	10.6ºC		
Relative Humidity:	54.2%		
Detector:	Quasi-Peak <1GHz, Average >1GHz		
Test Distance:	3m		
Notes:			

Notes:
No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given flequency spectrum.

This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor)

	TEST PARAMETERS						
Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Limit at 3m	
MHz	MHz	dBuV	dB	dBuV/m	uV/m	uV/m	
2200.00						500.00	
	2250.00	47.1	4.8	51.9	393.6	ı	
2300.00						500.00	
2310.00						500.00	
	2360.00	37.1	5.2	42.3	130.3	ı	
2390.00						500.00	
2483.50						500.00	
	2490.00*	34.1	5.5	39.6	95.5	1	
2500.00						500.00	
2690.00						500.00	
	2750.00*	35.6	5.9	41.5	118.9		
2900.00						500.00	
3260.00						500.00	
	3263.00*	26.4	6.6	33.0	44.7		
3267.00						500.00	
3332.00						500.00	
	3336.00*	29.8	6.8	36.6	67.6		
3339.00						500.00	



Retlif Testing Laboratories

EMISSIONS TEST DATA SHEET						
Method:	Restricted Band Emissions 30 MHz to 10 GHz					
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.247 (d)					
Job Number/Customer:	R-17172-1 / Napco Security Technologies, Inc.					
Test Sample:	iSecure Go Anywhere Hub					
Model Number:	GOANYWHEREHUB					
FCC ID Number:	AD8ISECHUB					
Operating Mode:	Transmitting modulated signal (2-GFSK)					
Technician:	M. Griffiths					
Date(s):	December 13, 2019					
Temperature:	10.6°C					
Relative Humidity:	54.2%					
Detector:	Quasi-Peak <1GHz, Average >1GHz					
Test Distance:	3m					
N1 4						

Notes:

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum.

*This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor)

TEST PARAMETERS						
Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Limit a
MHz	MHz	dBuV	dB	dBuV/m	uV/m	uV/m
3345.80						500.00
	3350.00*	28.4	6.9	35.3	58.2	
3358.00						500.00
3600.00						500.00
1	4000.00*	24.7	7.0	31.7	38.5	1
4400.00						500.00
4500.00						500.00
1	4825.00*	27.5	10.8	38.3	82.2	1
5150.00						500.00
5350.00						500.00
	5413.80*	24.9	10.3	35.2	57.5	
5460.00						500.00
7250.00						500.00
	7268.00*	27.1	12.7	39.8	97.7	
7750.00						500.00
8025.00						500.00
<u> </u>	8234.10*	28.6	12.7	41.3	116.1	
8500.00						500.00



Retlif Testing Laboratories

EMISSIONS TEST DATA SHEET						
Restricted Band Emissions 30 MHz to 10 GHz						
FCC Part 15, Subpart C, Paragraph: 15.247 (d)						
R-17172-1 / Napco Security Technologies, Inc.						
iSecure Go Anywhere Hub						
GOANYWHEREHUB						
AD8ISECHUB						
Transmitting modulated signal (2-GFSK)						
M. Griffiths						
December 13, 2019						
10.6°C						
54.2%						
Quasi-Peak <1GHz, Average >1GHz						
3m						

Notes:

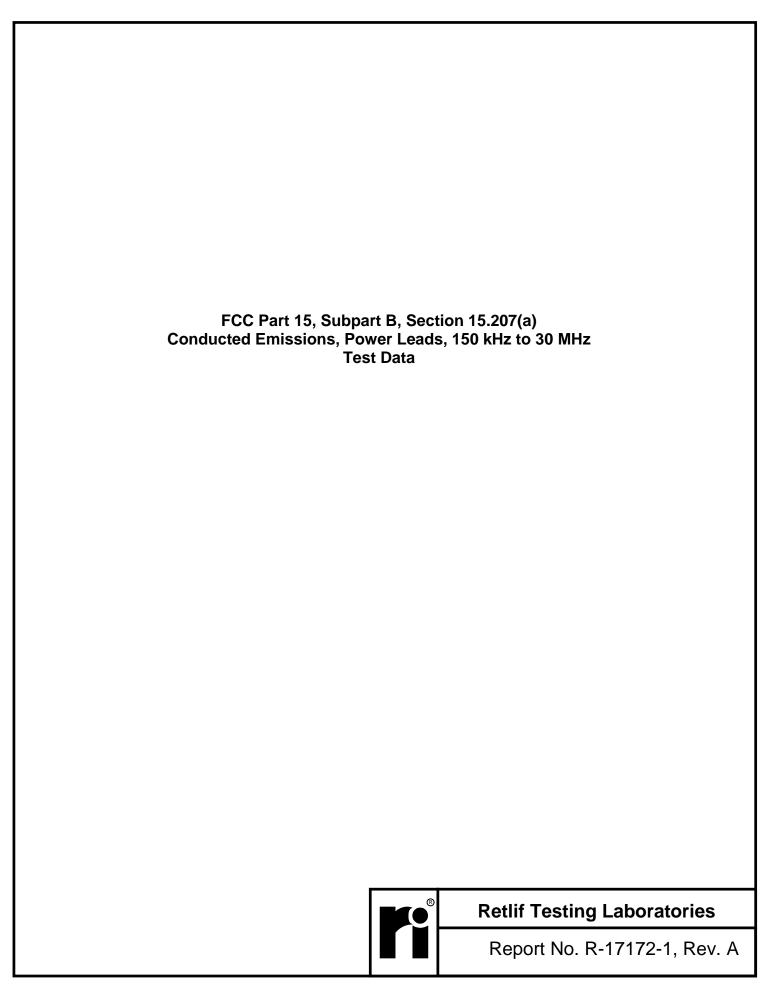
No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given requency spectrum.

This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor)

	TEST PARAMETERS						
Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Limit at 3m	
MHz	MHz	dBuV	dB	dBuV/m	uV/m	uV/m	
9000.00						500.00	
	9023.00*	28.1	12.9	41.0	112.2	1	
9200.00						500.00	
9300.00						500.00	
1	9650.00*	29.6	12.9	42.5	133.4		
10000.00						500.00	



Retlif Testing Laboratories



EMISSIONS TEST DATA SHEET						
Method:	Method: Conducted Emissions, Power Leads, 150 kHz to 30 MHz					
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.207(a)					
Job Number/ Customer:	R-17172-1 / Napco Security Technologies, Inc.					
Test Sample:	iSecure Go Anywhere Hub					
Model Number:	Model Number: GOANYWHEREHUB					
FCC ID Number: AD8ISECHUB						
Operating Mode: Transmitting modulated signal (2-GFSK) on all channel						
Technician: R. Soodoo						
Date(s):	December 11, 2019					
Temperature:	20.4°C					
Method: Test Specification: Job Number/ Customer: Test Sample: Model Number: FCC ID Number: Operating Mode: Technician: Date(s): Temperature: Relative Humidity: Lead Tested:	38.0%					
Lead Tested: 120 VAC, 60 Hz, Hot						
The feature and the control feature of the co						

The frequency range was scanned from 0.15 MHz to 30 MHz. The six highest emissions relative to the limit are presented.

The emissions observed from the EUT do not exceed the specified limits.

Frequency	Detector	Meter Reading	Total Correction Factor	Corrected Reading	Average Limit	Margin
MHz	_	dΒμV	dB	dΒμV	dΒμV	dB
0.1500	Peak	16.8	10.1	26.9	56.0	29.1
2.7600	Peak	15.0	10.1	25.2	46.0	20.8
6.6400	Peak	14.0	10.1	24.2	50.0	25.8
15.6000	Peak	15.0	10.1	25.1	50.0	24.9
22.0900	Peak	12.0	10.1	22.1	50.0	27.9
28.5800	Peak	14.5	10.1	24.6	50.0	25.4



Retlif Testing Laboratories

EMISSIONS TEST DATA SHEET						
Method:	Method: Conducted Emissions, Power Leads, 150 kHz to 30 MHz					
Test Specification:	FCC Part 15, Subpart C, Paragraph: 15.207(a)					
Job Number/ Customer:	R-17172-1 / Napco Security Technologies, Inc.					
Test Sample:	iSecure Go Anywhere Hub					
Model Number:	GOANYWHEREHUB					
FCC ID Number:	AD8ISECHUB					
Operating Mode:	Transmitting modulated signal (2-GFSK) on all channel					
Technician:	R. Soodoo					
Date(s):	December 11, 2019					
Temperature:	20.4°C					
Relative Humidity:	38.0%					
Lead Tested:	120 VAC, 60 Hz, Neutral					
The frequency are no used account from OAF MILE to 20 MILE.						

The frequency range was scanned from 0.15 MHz to 30 MHz.
The six highest emissions relative to the limit are presented.
The emissions observed from the EUT do not exceed the specified limits.

Frequency	Detector	Meter Reading	Total Correction Factor	Corrected Reading	Limit	Margin
MHz	-	dΒμV	dB	dΒμV	dΒμV	dB
0.1500	Peak	17.4	10.1	27.6	56.0	28.4
4.9300	Peak	15.6	10.1	25.8	46.0	20.2
9.7000	Peak	14.8	10.1	25.0	50.0	25.0
19.8500	Peak	14.7	10.1	24.8	50.0	25.0
24.1000	Peak	14.9	10.1	25.0	50.0	25.0
28.8800	Peak	14.2	10.1	24.3	50.0	25.7



Retlif Testing Laboratories