

Global Product Compliance Laboratory 600-700 Mountain Avenue Room 5B-108 Murray Hill, New Jersey 07974-0636 USA



#### NVLAP LAB CODE: 100275-0

# Title 47 Code of Federal Regulations Test Report

Regulation: FCC Part 2 and 27

<u>Client:</u> Andrew Corporation, Base Station Subsystems Group

Product Evaluated: UHBB RRH Additional NB IOT and GB Carriers

> Report Number: TR-2019-0171-FCC2-27

Date Issued: December 11, 2019

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Carriers

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#### Revisions

Date	Revision	Section	Change
12/11/19	0		Initial Release

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# 1. System Information and Requirements

Report copies and other information not contained in this report are held by either the product engineer or in an identified file at the Global Product Compliance Laboratory in Murray-Hill, NJ.

Equipment Under Test (EUT):	UHBB RRH Additional NB IOT and GB Carriers				
FCC ID:	S8L-RRH700L1				
Serial Number:	LBALLUASZ1532Q0100				
Hardware Version:	KS24822L1 1:1				
Software Version:	FL19A				
Frequency Range:	746 MHz – 756 MHz				
GPCL Project Number:	2019-0171				
Manufacturer:	Andrew Corporation, Base Station Subsystems Group 2601 telecom Pkwy, Richardson, Texas 75082-3521				
	U.S.A				
Test Requirement(s):	Title 47 CFR Parts 2 and 27				
Test Standards:	<ul> <li>Title 47 CFR Parts 2 and 27</li> <li>KDB 971168 D01 Power Measurement License Digital Systems v03r01 April 9, 2018.</li> <li>KDB 662911 D01 Multiple Transmitter Output v02r01 Oct 2013</li> <li>ANSI C63.26 (2015)</li> <li>ANSI C63.4 (2014)</li> </ul>				
Measurement Procedure(s):	<ul> <li>FCC-IC-OB - GPCL Occupied Bandwidth and Power Measurement Test Procedure 12-4-2017</li> <li>FCC-IC-SE - GPCL Spurious Emissions Test Procedure 12-4-2017</li> </ul>				
Test Date(s):	October 2019				
Test Performed By:	October 2019         Nokia         Global Product Compliance Laboratory         600-700 Mountain Ave.         P.O. Box 636         Murray Hill, NJ 07974-0636				
Product Engineer(s):	Ron Remy				
Lead Engineer:	Steve Gordon				
Test Engineer (s):	Nilesh Patel				
Test Results: The EUT, as tested	met the above listed requirements. Report copies and other information				
not contained in this report are held by either the product engineer or in an identified file at the Global Product Compliance Laboratory in New Providence, NJ.					

#### 1.1 Introduction

This Conformity test report applies to the UHBB RRH Additional NB IOT and GB Carriers, hereinafter referred to as the Equipment Under Test (EUT).

### 1.2 Purpose and Scope

The purpose of this document is to provide the testing data required for qualifying the EUT in compliance with FCC Parts 2 and 27 measured in accordance with the procedures set out in Section 2.1033 (c) (14) of the Rules.

The scope of the work is to perform a FCC Class II Permissive Change for FCC ID: S8L-RRH700L1 (Andrew Corporation, Base Station Subsystems Group) to add the NB-IoT Guardband operation for the 10 MHz carrier. This will result in an additional emission designator with wider bandwidth than previously listed on the Grant of Authorization.

### 1.3 EUT Details

#### 1.3.1 Specifications

Specification Items	Description			
Radio Access Technology	LTE			
Duplex Mode	Frequency Division Duplex (FDD)			
Modulation Type(s)	QPSK			
Operation Frequency Range	746 MHz – 756 MHz			
Channel Bandwidth	10 MHz			
Number of Tx Ports per Unit	2			
Number of Rx Ports Per Unit	2			
МІМО	Yes			
Deployment Environment	Outdoor			
Supply Voltage	-48.0 VDC			

#### Global Product Compliance Laboratory

Report No.: TR-2019-0171-FCC2-27 Product: UHBB RRH Additional NB IOT and GB Carriers

## 1.3.2 Photographs



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Report No.: TR-2019-0171-FCC2-27 Product: UHBB RRH Additional NB IOT and GB Carriers



### **1.4 Test Requirements**

Each required measurement is listed below:

47 CFR FCC Sections	Description of Tests	Test Required
2.1046, 27.53	RF Power Output	Yes
2.1047, 27.53	Modulation Characteristics	Yes
2.1049, 27.53	(a) Occupied Bandwidth (b) Out-of-Band Emissions	Yes
2.1051, 27.53	Spurious Emissions at Antenna Terminals	Yes
2.1053, 27.53	Field Strength of Spurious Radiation	Yes
2.1055, 27.53	Frequency Stability	No

#### 1.5 Standards & Procedures

#### 1.5.1 Standards

- Title 47 Code of Federal Regulations, Federal Communications Commission Part 2.
- Title 47 Code of Federal Regulations, Federal Communications Commission Part 27.
- ANSI C63.26, American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

#### 1.5.2 Procedures

- 1. FCC-IC-0B and FCC-IC-SE
- ANSI C63.4 (2014) entitled: "American National Standard for Methods of Measurement of Radio-Noise Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40 GHz", American National Standards Institute, Institute of Electrical and Electronic Engineers, Inc., New York, NY 10017-2394, USA.
- 3. FCC KDB 971168 D01 Power Measurement License Digital Systems v03r01 April 9, 2018. FCC KDB 662911 D01 Multiple Transmitter Output v02r01 Oct 2013

### **1.5.3 MEASUREMENT UNCERTAINTY**

The results of the calculations to estimate uncertainties for the several test methods and standards are shown in the Table below. These are the worst-case values.

Standard, Method or Procedure		Condition	Frequency MHz	Expanded Uncertainty (k=2)			
a.	Classical Emissions, ( <i>e.g.</i> , ANSI C63.4, CISPR 11, 14, 22, <i>etc.</i> , using ESHS 30,		0.009 - 30	±3.5 dB			
		Radiated Emissions	30 MHz – 200MHz H	±5.1 dB			
		(AR-6 Semi-Anechoic	30 MHz – 200 MHz V	±5.1 dB			
		Chamber)	200 MHz  – 1000 MHz H	±4.7 dB			
			200 MHz – 1000 MHz V	±4.7 dB			
			1 GHz - 18 GHz	±3.3 dB			

#### **Worst-Case Estimated Measurement Uncertainties**

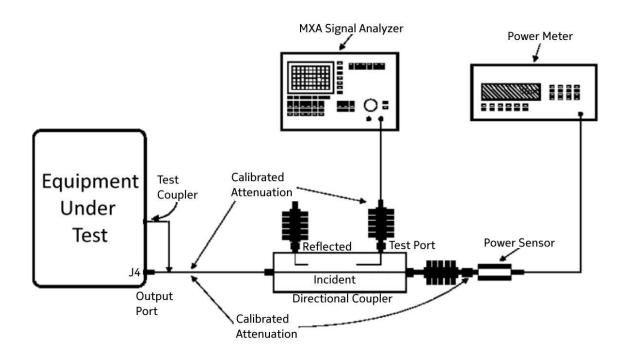
Antenna Port Test	Signal Bandwidth	Frequency Range	Expanded Uncertainty (k=2), Amplitude
	10 Hz	9 kHz to 20 MHz	
Occupied Bandwidth, Edge of Band,	100 Hz	20 MHz to 1 GHz	1.78 dB
Conducted Spurious Emissions	10 kHz to 1 MHz	1 GHz to 10 GHz	1.78 00
	1MHz	10 GHz to 40 GHz:	
RF Power	10 Hz to 20 MHz	50 MHz to 18 GHz	0.5 dB

### **1.6 Executive Summary**

Requirement	Description	Result
47 CFR FCC Parts 2 and 27		
2.1046, 27.53	RF Power Output	COMPLIES
	Peak to Average Power Ratio	COMPLIES
2.1047, 27.53	Modulation Characteristics	COMPLIES
2.1049, 27.53	(a) Occupied Bandwidth	COMPLIES
	(b) Edge of Band Emissions	
2.1051, 27.53	Spurious Emissions at Antenna	COMPLIES
	Terminals	
2.1053, 27.53	Field Strength of Spurious Radiation	COMPLIES
2.1055, 27.53	Frequency Stability	NT

- 1. **COMPLIES -** Passed all applicable tests.
- 2. **N/A –** Not Applicable.
- 3. NT Not Tested.

### 1.7 Test Configuration for all Antenna Port Measurements.



## 2. FCC Section 2.1046 - RF Power Output

### 2.1 **RF Power Output**

This test is a measurement of the total RF power level transmitted at the antenna-transmitting terminal. The product was configured for test as shown in section above and allowed to warm up and stabilize per KDB 971168 D01 and ANSI C63.26.

Power measurements were made with an MXA Signal Analyzer.

Channel Frequency MHz	Signal BW MHz	Modulation	Channel Power dBm
751	10	QPSK	46.53

Tabular Data – Channel RF Power

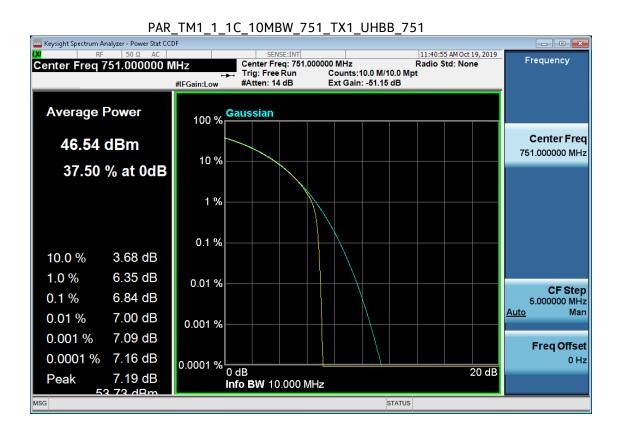
#### 2.1.1 Channel RF Power - Plots

Ref       50.2. AC       SENSE INT       11:40:00 AM Oct 19, 2019         Center Freq: 751.000000 MHz       Radio Std: None       Radio Std: None         10 dB/div       Ref 41.00 dBm       Avg Hold: 20/20       Radio Device: BTS         10 dB/div       Ref 41.00 dBm       Center 751.000000 MHz       Center 751.000000 MHz       Radio Device: BTS         10 dB/div       Ref 41.00 dBm       Center 751.000000 MHz       Center 751.000000 MHz       Radio Device: BTS         10 dB/div       Ref 41.00 dBm       Span 15 MHz       Span 15 MHz       Span 15 MHz         200       Span 15 MHz       VBW 1 MHz       Sweep 1.8 ms       CF i         46.53 dBm / 10 MHz       -23.477 dBm /Hz       Frequenc       Auto							0	
Center Freq 751.000000 MHz       Center Freq: 761.000000 MHz       Radio Std: None       Frequence         #IFGain:Low       Trig: Freq Run       Avg Hold: 20/20       Radio Device: BTS       Center         10 dB/div       Ref 41.00 dBm			wer	CENCEJINT		11,40,00	AM Oct 10, 2010	
Avg hdd: 20/20 #FGaln:Low #Atten: 4 dB Ext Gain:-51.15 dB Radio Device: BTS 10 dB/div Ref 41.00 dBm Center 751.00000 100 100 100 100 100 100 1	10	1	MHz		00000 MHz			Frequency
In come of the second secon			Ŧ				DTO	
Center 751 MHz KRes BW 100 kHz Channel Power 46.53 dBm / 10 MHz Center Ce			#IFGain:Low	#Atten: 4 dB	Ext Gain: -51.15 dB	Radio D	evice: BTS	
Center 751 MHz KRes BW 100 kHz Channel Power 46.53 dBm / 10 MHz Center Ce								
210       100       1		41.00 dB	m					
21.0       1.0	_ <b>og</b>					^		
110       100       1		m	www.walnew	mon man	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~		Center Fre
Image: state of the state	11.0							751.000000 MH
Image: Control of the second secon	1.00							
Image: Conter 751 MHz (Res BW 100 kHz)       Span 15 MHz (Span 15 MHz) (Sp	9.00					<b>`</b>		
230       230       230       240       2								
Channel Power     Power Spectral Density     CF = 1.500000       46.53 dBm / 10 MHz     -23.47 dBm /Hz     Freq O	29.0	*					man many m	
Center 751 MHz       Span 15 MHz         #Res BW 100 kHz       VBW 1 MHz       Sweep 1.8 ms         Channel Power       Power Spectral Density       1.50000         46.53 dBm / 10 MHz       -23.47 dBm /Hz       Freq 0	39.0							
KRes BW 100 kHz     VBW 1 MHz     Sweep 1.8 ms       Channel Power     Power Spectral Density       46.53 dBm / 10 MHz     -23.47 dBm /Hz   Freq O	49.0							
Res BW     100 kHz     VBW     1 MHz     Sweep     1.8 ms       Channel Power     Power Spectral Density     46.53 dBm / 10 MHz     -23.47 dBm /Hz     Auto	enter 751 MHz					Sr	an 15 MHz	
Channel Power Power Spectral Density 46.53 dBm / 10 MHz -23.47 dBm /Hz Freq O		7		VBW 1 MH	7			
Channel Power Power Spectral Density 46.53 dBm / 10 MHz -23.47 dBm /Hz Freq O							op no no	
46.53 dBm / 10 MHz -23.47 dBm /Hz Freq O	Channel Dev			Deve	r Creativel Day	oitr		CF Ste
46.53 dBm / 10 MHz -23.47 dBm /Hz Freq 0	Channel Pov	wer		Powe	er Spectral Der	ISILY		
Freq O								
	46.53	dBm	/ 10 MHz		-23.47 dBn	ר (Hz		
								Freq Offs
								01
G STATUS	G				STAT	ับร		

#### Ch\_Power\_TM1\_1\_1C\_10MBW\_751\_TX1\_UHBB

#### 2.1.2 Peak-to-Average Power Ratio (PAPR) – Plots

The Peak-to-Average Power Ratio (PAPR) was evaluated per KDB 971168 for 10MHz bandwidths with QPSK modulation for In Band and Guard Band. The PAPR values of all carriers measured are below 13dB.



# 3. FCC Section 2.1047 - Modulation Characteristics

### 3.1 Modulation Characteristics

The RF signal at the antenna port was demodulated and verified for correctness of the modulation signal used before each test was performed. For this product the operation with QPSK modulation was evaluated and verified to demonstrate proper operation before testing.

#### 3.1.1 Modulation Characteristics – Plots

eysight LTE & LTE-A FDD - Modulation Analysis	
Image: Market State   RF   50 Ω   AC   SENSE:INT	11:41:25 AM Oct 19, 2019 TRACE 19, 24 5 6
Carrier Ref Freq 751.000000 MHz Carrier Ref Freq: 751.000000 MHz Trig: Free Run	TRACE 12 3 4 5 6 Direction: Downlink
#Atten: 14 dB	Num CC(s): 1
Layer0 OFDM Meas (CC0)	
400 m/diy Ref 0	
1.6	
1.2 800m	
400m	
-400m -800m	
-1.2	
-1.6	
-9.028	9.0282
Res BW 15 kHz	TimeLen 42 Sym
Ch1 Spectrum (CC0)	
10 dB/div Ref -20 dBm	
-40 http://www.com/com/com/com/com/com/com/com/com/com/	
-60	
	Carrier
-100 https://www.ukadalahanananananananananananananananananan	Ref Freq
-110	751.000000 MHz
Center 751 MHz S	pan 25.000076294 MHz
Res BW 1.27312 kHz	TimeLen 3.000023 ms
MSG STA	TUS

QPSK (TM1.1)

# 4. FCC Section 2.1049 – Occupied Bandwidth/Edge of Band Emissions

#### 4.1 Occupied Bandwidth

In 47CFR 2.1049 the FCC requires:

"The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured under the following conditions as applicable."

This required measurement is the 99% Occupied Bandwidth, also called the designated signal bandwidth and needs to be within the parameters of the products specified emissions designator. During these measurements it is customary to evaluate the Edge of Band emissions at block/band edges.

The transmitted signal occupied bandwidth was measured using a Keysight MXA Signal Analyzer. All emissions were within the parameters as required.

Channel Frequency MHz	Signal BW MHz	Modulation	Occupied BW MHz
751	10	QPSK	9.419

Tabular Data – Occupied Bandwidth

### 4.1.1 Occupied Bandwidth – Plots

with the sectrum Analyzer - Occupied BW					•	
RF         50 Ω         AC           Center Freq 751.000000 Γ	MHz		Avg Hold: 100/100	11:40:43 AM Radio Std:	None	Frequency
PASS	#IFGain:Low	#Atten: 4 dB	Ext Gain: -51.15 dB	Radio Devi	ce: BTS	
10 dB/div Ref 41.00 dBn	ı					
Log 31.0						
21.0						Center Freq 751.000000 MHz
11.0						751.000000 WH2
-9.00						
-19.0						
-29.0			<b>L</b>	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~	
-39.0					- North	
-49.0						
Center 751 MHz #Res BW 100 kHz		VBW 1 MHz			1 20 MHz 2.4 ms	
Occupied Bandwidt	h	Total P	ower 46	.6 dBm		CF Step
	 4190 M⊦	lz				2.000000 MHz <u>Auto</u> Man
Transmit Freq Error	5.644 k	Hz % of Ol	BW Power 9	99.00 %		Eron Offerst
x dB Bandwidth	9.694 M	Hz x dB	-20	6.00 dB		Freq Offset 0 Hz
MSG			STAT	TUS		

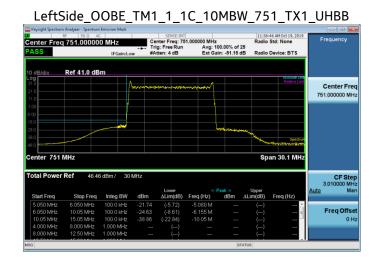
#### OBW\_TM1\_1\_1C\_10MBW\_751\_TX1\_UHBB\_751

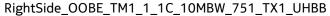
### 4.2 Edge of band Emissions

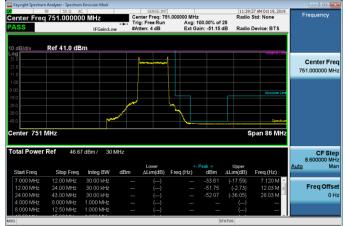
The Edge of Band emissions of the EUT at the external antenna connector (EAC) were measured using a Keysight MXA Signal Analyzer. The RF power level was continuously measured using a RF broadband power meter. The RF output from the EAC port to signal analyzer was reduced (to an amplitude usable by the signal analyzer) by using a calibrated attenuator and test coupler. The path attenuation was offset on the display and the signal for the carrier was adjusted to the corrected RF power level for the resolution bandwidth used for the transmit signal. All mask values were adjusted based upon the designated signal bandwidth and measurement bandwidths. The Top of Mask corresponds to the set rated power level as confirmed by the RF power meter.

#### 4.2.1 Edge of Band Emissions - Plots.

All of the measurements met the requirements of Part 27.53 when measured per Part 2.1049.







# 5. FCC Section 2.1051 - Spurious Emissions at Transmit Antenna Port

#### 5.1 Measurement of Spurious Emissions at Transmit Antenna Port

Spurious Emissions at the transmit-antenna terminals were investigated over the frequency range of 10 MHz to beyond the 10th harmonic of the specific transmit band. For this band of operation, the measurements were performed up to 10 GHz. Measurements were made using a Keysight MXA Signal Analyzer. The RF output from the transmitter was reduced (to an amplitude usable by the receivers) using calibrated attenuators. The RF power level was continuously monitored via a coupled RF Power Meter.

The required emission limitation is specified as appropriate in 27.53. The measured spurious emission levels were plotted for the frequency range as specified in 2.1057. There were no reportable emissions. Data below documents performance up to 10 GHz.

### 5.1.1 Spurious Emissions at Tx Port - Plots

NOTE: Only a sample of the plots are used in this report. The full suite of raw data resides at the MH, New Jersey location.

	RF	- Spurious Emissions 50 Q 🛕 DC   DOOOOOO MHZ IFGain:	Trig: Free Ru	751.000000 MHz		None	Frequency
0 dB/div	Ref 0	.00 dBm				71 MHz 4 dBm	
og						1	
0.0			chercher and the sector of the				Center Fr
0.0							751.000000 M
30.0							
100							
120							
140							
180							
start 10	MHz				Stop	740 MHz	
Spur	Range	Frequency	Amplitude	Limit	∆ Limit		CF Ste 5.000000 M
1	1	739.7 MHz	-38.10 dBm	-16.00 dBm	-22.10 dB	÷.	Auto M
2	1	740.0 MHz	-38.63 dBm	-16.00 dBm	-22.63 dB		
3	1	738.9 MHz	-39.32 dBm	-16.00 dBm	-23.32 dB		
4	1	739.4 MHz	-39.36 dBm	-16.00 dBm	-23.36 dB		Freq Offs
5	1	738.7 MHz	-39.39 dBm	-16.00 dBm	-23.39 dB		01
6	1	739.5 MHz	-39.53 dBm	-16.00 dBm	-23.53 dB	-	

Spurious\_TM1\_1\_1C\_10MBW\_751\_TX1\_UHBB\_10\_to\_740

Spurious\_TM1\_1\_1C\_10MBW\_751\_TX1\_UHBB\_760\_to\_1000

enter F	req 751.0	000000 MHz IFGain:	Trig: Free Run	51.000000 MHz		Frequency
dB/div	Ref 0	.00 dBm	Low PAttern out	Ext Gain. 401.4	760.12   -32.706 c	MHZ
						Center Free 751.000000 MH
art 760	U MH2				Stop 1	GHZ
Spur	Range	Frequency	Amplitude	Limit	∆ Limit	CF Ste 5.00000 MH
		760.1 MHz	-32.71 dBm	-16.00 dBm	-16.71 dB	Auto Ma
2	1	760.2 MHz	-33.12 dBm	-16.00 dBm	-17.12 dB	-
3	1	760.4 MHz	-33.96 dBm	-16.00 dBm	-17.96 dB	Freq Offse
4	1	760.3 MHz	-34.14 dBm	-16.00 dBm	-18.14 dB	0 H
5		760.6 MHz 760.8 MHz	-35.68 dBm	-16.00 dBm	-19.68 dB	
6	1		-37.76 dBm	-16.00 dBm	-21.76 dB	

Spurious\_TM1\_1\_1C\_10MBW\_751\_TX1\_UHBB\_1000\_to\_10000

enter F ASS	req 751.0	DOOOOO MHz IFGain:	Center Free Trig: Free F #Atten: 8 d	lun	000 MHz Avg Hold: 50/5 Ext Gain: -55.9		td: None evice: BTS	Frequency
d <u>B/div</u>	Ref 0	.00 dBm					120 GHz 731 dBm	
og 0.0 0.0 0.0				<b>1</b>				Center Fre 751.000000 Mi
0.0								
140								
tart 1 C	Hz					SI	op 10 GHz	
Spur	Range	Frequency	Amplitude		Limit	∆ Limit		CF Ste
1	1	6.112 GHz	-21.73 dBm	-	16.00 dBm	-5.731 dB	<u>^</u>	5.000000 M Auto M
2	1	6.037 GHz	-21.77 dBm		16.00 dBm	-5.774 dB		
3	1	2.250 GHz	-21.78 dBm		16.00 dBm	-5.777 dB		
4	1	6.102 GHz	-21.78 dBm		16.00 dBm	-5.777 dB		Freq Offs
5	1	6.033 GHz	-21.82 dBm		16.00 dBm	-5.818 dB		01
6	1	6.060 GHz	-21.84 dBm		16.00 dBm	-5.838 dB		

#### Global Product Compliance Laboratory

Report No.: TR-2019-0171-FCC2-27 Product: UHBB RRH Additional NB IOT and GB Carriers

# Photographs





Asset ID	Manufacturer	Туре	Description	Model	Serial	Calibration Date	Calibration Due
E1152	Agilent Technologies	MXA Signal Analyzer	20Hz-26.5GHz Analyzer	N9020A	MY53420147	2019-04-24	2021-04-24
E1006	Weinschel	Attenuator	30 dB DC-18GHz 150W	6528-30- 34-LIM	BN4172	CNR	CNR
E896	Agilent Technologies	Network Analyzer	10 MHz - 40 GHz	N5230C	MY49000897	2019-01-31	2021-01-31
E1120	Extech	Data Logger	Pressure Humidity Temp Data Logger	SD700	Q673552	2019-01-16	2021-01-16

### **Test Equipment**

CNR: Calibration Not Required

Environmental Conditions: RH= 43.0%, Temp=23.5oC, Pressure=1006.5hPa

# 6. FCC Section 2.1053 - Field strength of spurious radiation

#### 6.1 Section 2.1053 Field Strength of Spurious Emissions

Field strength measurements of radiated spurious emissions were made in an FCC registered 3m Semi-Anechoic Chamber which is maintained by Nokia Bell Labs in Murray Hill, New Jersey. A complete description and full measurement data for the site is on file with the Commission (Site Registration Number: 515091).

The spectrum from 30 MHz to beyond the tenth harmonic of the carrier, 10 GHz, was searched for spurious radiation. Measurements were made using both horizontally and vertically polarized broadband antennas. Per FCC regulations, the comparison of out of band spurious emissions directly to the limit is appropriately made using the substitution method. However, when the emissions are more than 20 dB below the specification limit, the use of field strength measurements for compliance determination is acceptable and those emissions are considered not reportable (Section 2.1053 and the FCC Interpretive database for 2.1053). For this case the evaluation of acceptable radiated field strength is as follows.

### 6.2 Field Strength of Spurious Emissions - Limits

Sections 2.1053 and 27.53 contain the requirements for the levels of spurious radiation as a function of the level of the unmodulated carrier. The reference level for the unmodulated carrier is calculated as the field produced by an ideal dipole excited by the transmitter output power according to the following relation taken from Reference Data for Radio Engineers, page 676, 4<sup>th</sup> edition, IT&T Corp.

E= [(30\*P)<sup>1/2</sup>]/R

20 log (E\*10<sup>6</sup>) – (43 + 10 log P) = 82.23 dBµV/meter

Where:

E = Field Intensity in Volts/meter R = Measurement distance in meters = 3 m

P = Transmitted Power in Watts

The Part 27 Limit is 82.23 dBuV/m at 3m and 91.77 dBuV/m at 1m The Part 27 non-report level is 62.23 dBuV/m at 3m.

The calculated emission levels were found by:

Measured level (dB $\mu$ V) + Cable Loss(dB)+Antenna Factor(dB) = Field Strength (dB $\mu$ V/m)

#### RESULTS:

For compliance with 47CFR Parts 2 and 27, the field strength of any spurious radiation, measured at 3m, is required to be less than 82.23 dB $\mu$ V/meter (82.23 @ 3m). Emissions equal to or less than 62.23 dB $\mu$ V/meter at 3m are not reportable and may be verified using field strength measurements and broadband antennas. Over the out of band spectrum investigated from 30 MHz to beyond the tenth harmonic of the carrier (up to 10 GHz), no reportable spurious emissions were detected.

NVLAP Certificate of Accreditation

