

FCC RF Test Report

(FHSS)

Applicant: Nebra Ltd

Address of Applicant: Unit 4 Bells Yew Green Business Court, Bells Yew Green,
Tunbridge Wells, East Sussex, TN3 9BJ

Equipment Under Test (EUT)

Product Name: Nebra HNT 5G Gateway

Model No.: NEBHNT-5G-915-1, NEBHNT-5G-915-2

FCC ID: 2AZDM-HNT5G

Applicable Standards: FCC CFR Title 47 Part 15C (§15.247)

Date of Sample Receipt: 07 Feb., 2023

Date of Test: 08 Feb., to 23 Feb., 2023

Date of Report Issued: 24 Feb., 2023

Test Result: PASS

Tested by:
Test Engineer**Date:**

24 Feb., 2023

Reviewed by:
Project Engineer**Date:**

24 Feb., 2023

Approved by:
Manager**Date:**

24 Feb., 2023

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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1 Version

Version No.	Date	Description
00	24 Feb., 2023	Original

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3 General Information

3.1 Client Information

Applicant:	Nebra Ltd
Address:	Unit 4 Bells Yew Green Business Court, Bells Yew Green, Tunbridge Wells, East Sussex, TN3 9BJ
Manufacturer:	SUNSOAR TECH CO., LIMITED
Address:	4/F, Block E, Fengze Building, Huafeng No.2 Industrial Park, Hangkong Road, XiXiang Town, BaoAn District, Shenzhen, China
Factory:	EvrTech
Address:	No.44, Ying Tai Industry Area, Dalang South RD, Shenzhen, China

3.2 General Description of E.U.T.

Product Name:	Nebra HNT 5G Gateway
Model No.:	NEBHNT-5G-915-1, NEBHNT-5G-915-2
Operation Frequency:	903.9 MHz – 905.3 MHz
Number of Channel:	8
Modulation Type:	LoRa
Modulation Technology:	Hybrid spread-spectrum
Antenna Type:	External Antenna
Antenna Gain:	3dBi (declare by applicant)
AC Adapter:	Model: RC0653-1205000CI Input: AC100-240V, 50/60Hz, 1.5A Output: DC 12.0V, 5.0A 60.0W
Remark:	The difference between the models is that the LoRa Radio module used inside is different for each variant. Along with a respective antenna for each region / frequency. The -2 flag at the end of the model number relates to the specific chip part number for the main LoRa chip.
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

3.3 Test Mode and Test Environment

Test Modes:	
Non-hopping mode:	Keep the EUT in continuous transmitting mode.
Hopping mode:	Keep the EUT in hopping mode.
<i>Remark: The report only reflects the test data of worst mode.</i>	
Operating Environment:	
Temperature:	15°C ~ 35°C
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar

3.4 Description of Test Auxiliary Equipment

The EUT has been tested as an independent unit.

3.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Conducted Emission for LISN (9kHz ~ 10MHz)	1.9 dB
Conducted Emission for LISN (10MHz ~ 30MHz)	2.6 dB
Radiated Emission (30MHz ~ 1GHz) (3m SAC)	3.8 dB
Radiated Emission (1GHz ~ 18GHz) (3m SAC)	3.6 dB
Radiated Emission (18GHz ~ 40GHz) (3m SAC)	5.34 dB
<i>Note: All the measurement uncertainty value were shown with a coverage k=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.</i>	

3.6 Additions to, Deviations, or Exclusions From the Method

No

3.7 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations: ● FCC - Designation No.: CN1211 JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551. ● ISED – CAB identifier.: CN0021 The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1. ● CNAS - Registration No.: CNAS L15527 JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527. ● A2LA - Registration No.: 4346.01 This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf
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3.8 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd. Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China. Tel: +86-755-23118282, Fax: +86-755-23116366 Email: info-JYTee@lets.com, Website: http://jyt.lets.com

3.9 Test Instruments List

Radiated Emission(3m SAC):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	ETS	9m*6m*6m	WXJ001-1	04-14-2021	04-13-2024
Loop Antenna	Schwarzbeck	FMZB 1519 B	WXJ002-4	03-07-2022	03-06-2023
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ002	03-08-2022	03-07-2023
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-2	03-08-2022	03-07-2023
Horn Antenna	Schwarzbeck	BBHA9170	WXJ002-5	04-07-2022	04-06-2023
Pre-amplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9743B	WXJ001-2	01-10-2023	01-09-2024
Pre-amplifier (1GHz ~ 18GHz)	SKET	LNPA_0118G-50	WXJ001-3	01-10-2023	01-09-2024
Pre-amplifier (18GHz ~ 40GHz)	RF System	TRLA-180400G45B	WXJ002-7	03-30-2022	03-29-2023
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	03-05-2022	03-04-2023
Spectrum Analyzer	Rohde & Schwarz	FSP 30	WXJ004	01-10-2023	01-09-2024
Spectrum Analyzer	KEYSIGHT	N9010B	WXJ004-2	10-17-2022	10-16-2023
Coaxial Cable (30MHz ~ 1GHz)	JYTSZ	JYT3M-1G-NN-8M	WXG001-4	01-10-2023	01-09-2024
Coaxial Cable (1GHz ~ 18GHz)	JYTSZ	JYT3M-18G-NN-8M	WXG001-5	01-10-2023	01-09-2024
Coaxial Cable (18GHz ~ 40GHz)	JYTSZ	JYT3M-40G-SS-8M	WXG001-7	01-10-2023	01-09-2024
Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/A	
Test Software	Tonscend	TS+	Version: 3.0.0.1		
EMI Test Software	AUDIX	E3	Version: 6.110919b		

Radiated Emission(10m SAC):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
10m SAC	ETS	RFSD-100-F/A	WXJ090	04-28-2021	04-27-2024
BiConiLog Antenna	SCHWARZBECK	VULB 9168	WXJ090-1	04-01-2022	03-31-2023
BiConiLog Antenna	SCHWARZBECK	VULB 9168	WXJ090-2	03-31-2022	03-30-2023
EMI Test Receiver	R&S	ESR 3	WXJ090-3	03-30-2022	03-29-2023
EMI Test Receiver	R&S	ESR 3	WXJ090-4	03-30-2022	03-29-2023
Low Pre-amplifier	Bost	LNA 0920N	WXJ090-6	01-10-2023	01-09-2024
Low Pre-amplifier	Bost	LNA 0920N	WXJ090-7	01-10-2023	01-09-2024
Cable	Bost	JYT10M-1G-NN-10M	WXG002-7	01-10-2023	01-09-2024
Cable	Bost	JYT10M-1G-NN-10M	WXG002-8	01-10-2023	01-09-2024
Test Software	R&S	EMC32	Version: 10.50.40		

Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESR3	WXJ003-2	07-12-2022	07-11-2023
LISN	Schwarzbeck	NSLK 8127	QCJ001-13	02-24-2022 02-24-2023	02-23-2023 02-23-2024
LISN	Rohde & Schwarz	ESH3-Z5	WXJ005-1	03-30-2022	03-29-2023
LISN Coaxial Cable (9kHz ~ 30MHz)	JYTSZ	JYTCE-1G-NN-2M	WXG003-1	02-24-2022 02-24-2023	02-23-2023 02-23-2024
RF Switch	TOP PRECISION	RSU0301	WXG003	N/A	
Test Software	AUDIX	E3	Version: 6.110919b		

Conducted Method:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
Spectrum Analyzer	Rohde & Schwarz	FSP 30	WXJ004	01-10-2023	01-09-2024
EMI Test Receiver	Rohde & Schwarz	ESCI3	WXJ003	01-10-2023	01-09-2024
Spectrum Analyzer	Keysight	N9010B	WXJ004-3	10-17-2022	10-16-2023
DC Power Supply	Keysight	E3642A	WXJ025-2	10-17-2022	10-16-2023

4 Measurement Setup and Procedure

4.1 Test Channel

According to ANSI C63.10-2013 chapter 5.6.1 Table 4 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:

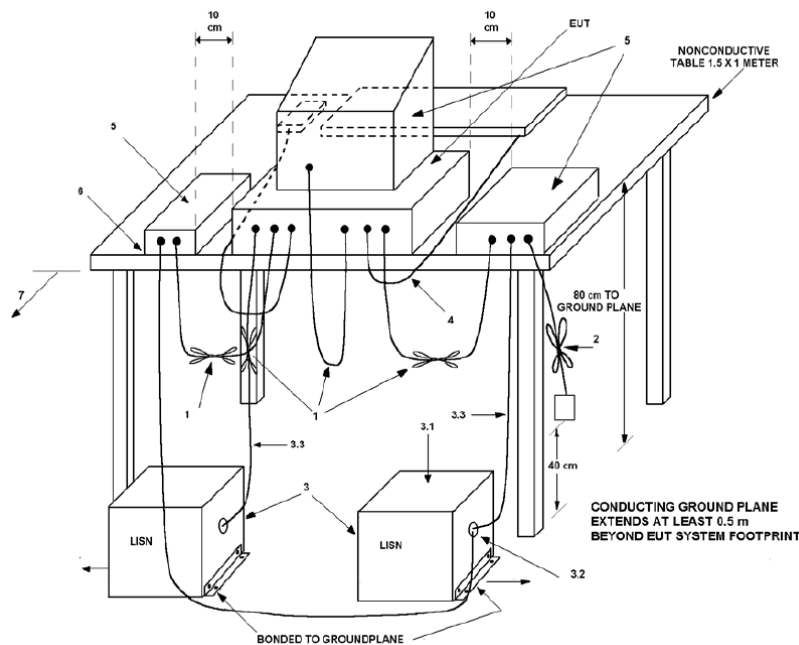
Channel	Frequency	Channel	Frequency	Channel	Frequency
1	903.9MHz	4	904.5MHz	7	905.1MHz
2	904.1MHz	5	904.7MHz	8	905.3MHz
3	904.3MHz	6	904.9MHz		

Note:

Channel No. 1, 5 & 8 were selected as Lowest, Middle and Highest channel.

4.2 Test Setup

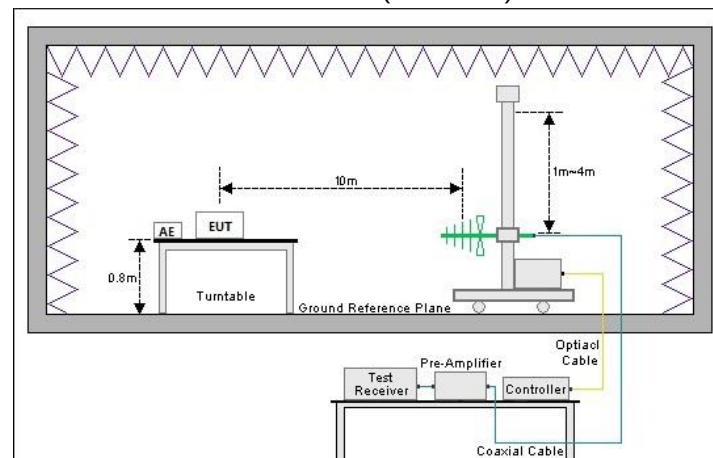
1) Conducted emission measurement:

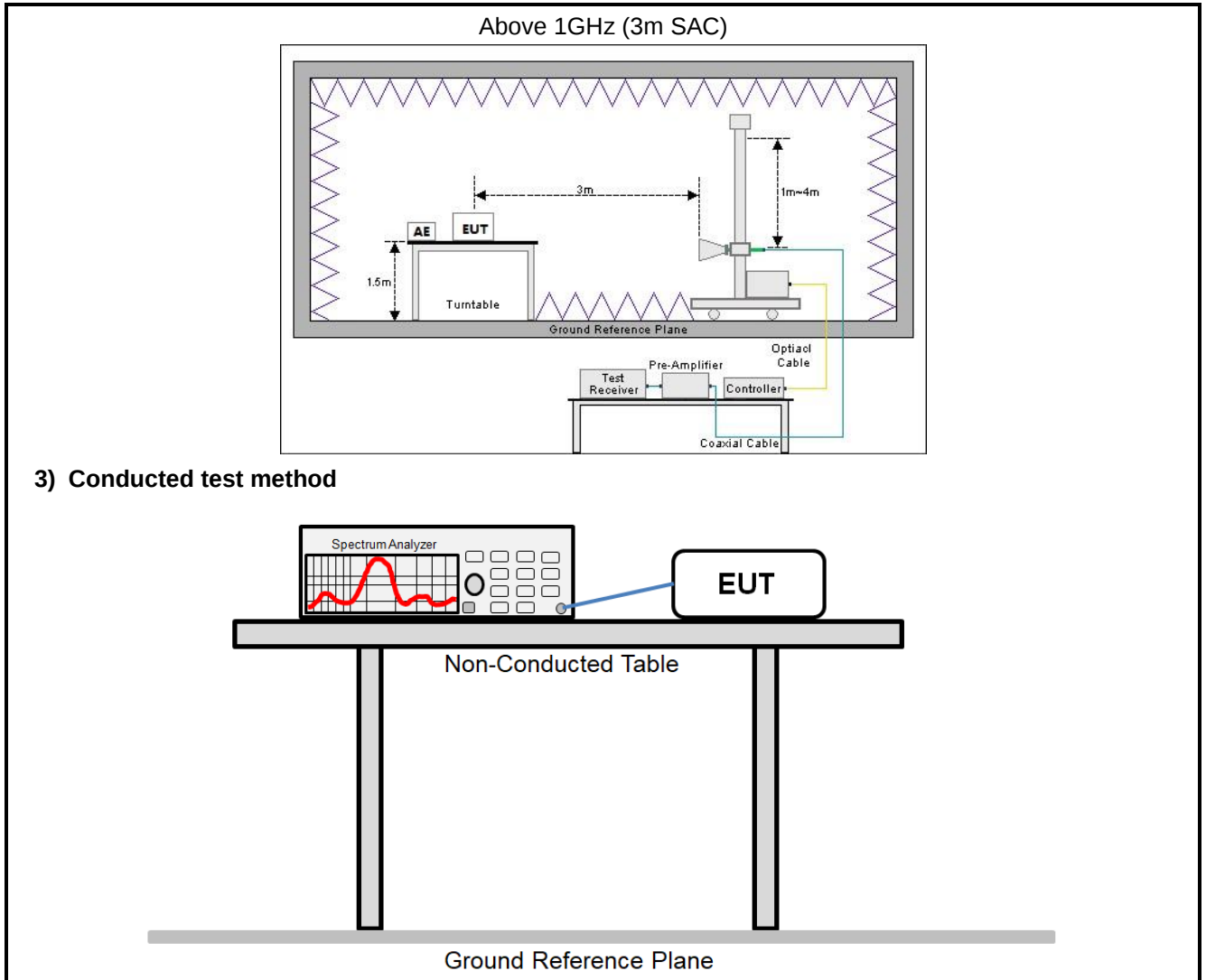


Note: The detailed descriptions please refer to Figure 8 of ANSI C63.4:2014.

2) Radiated emission measurement:

Below 1GHz (10m SAC)





4.3 Test Procedure

Test method	Test step
Conducted emission	- The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. - The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). - Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.
Radiated emission	For below 1GHz: - The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m. - EUT works in each mode of operation that needs to be tested, and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. - Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data. For above 1GHz: - The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m. - EUT works in each mode of operation that needs to be tested, and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. - Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
Conducted test method	- The antenna port of EUT was connected to the test port of the test system through an RF cable. - The EUT is keeping in continuous transmission mode and tested in all modulation modes. - Open the test software, prepare a test plan, and control the system through the software. After the test is completed, the test report is exported through the test software.

5 Test Results

5.1 Summary

5.1.1 Clause and data summary

Test items	Standard clause	Test data	Result
Antenna Requirement	15.203 15.247 (b)(4)	See Section 5.2	Pass
AC Power Line Conducted Emission	15.207	See Section 5.3	Pass
Conducted Output Power	15.247 (b)(2)	See Section 5.4	Pass
6dB Occupied Bandwidth	15.247 (a)(1)(i)	See Section 5.5	Pass
20dB Occupied Bandwidth	15.247 (a)(1)(i)	See Section 5.5	Pass
Carrier Frequencies Separation	15.247 (a)(1)	See Section 5.6	Pass
Hopping Channel Number	5.247 (a)(1)(i)	See Section 5.7	Pass
Dwell Time	15.247 (a)(1)(i)	See Section 5.8	Pass
Power Spectral Density	15.247 (e)	See Section 5.9	Pass
Spurious Emission	15.205 15.209 15.247 (d)	See Section 5.10	Pass
Remark: 1. Pass: The EUT complies with the essential requirements in the standard. 2. N/A: Not Applicable. 3. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).			
Test Method:	ANSI C63.10-2013 KDB 558074 D01 15.247 Meas Guidance v05r02		

5.1.2 Test Limit

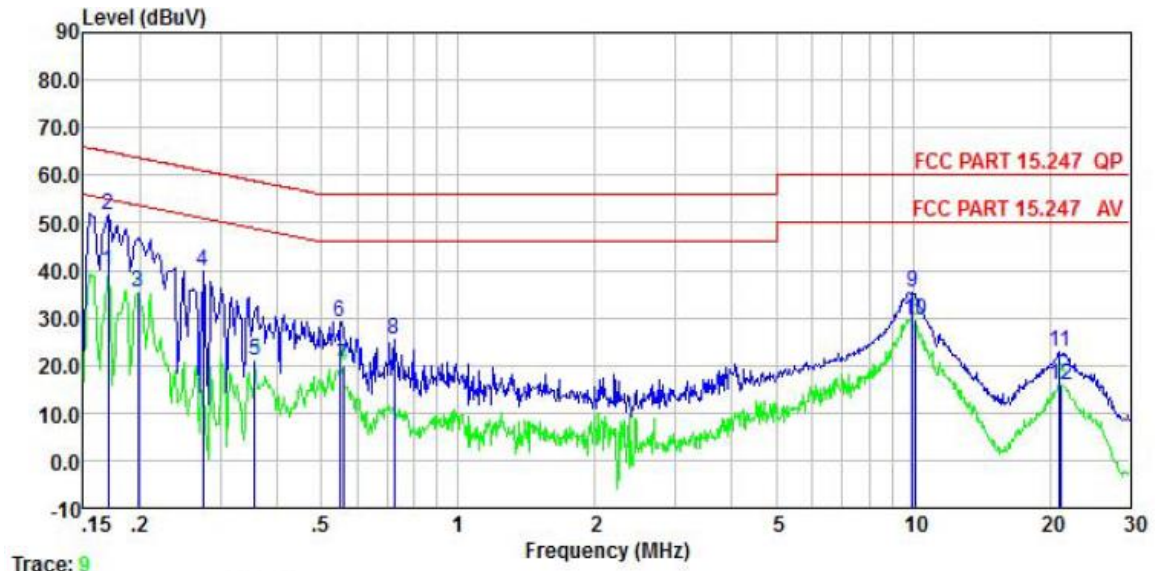
Test items	Limit																														
AC Power Line Conducted Emission	<table><tr><th rowspan="2">Frequency (MHz)</th><th colspan="2">Limit (dBμV)</th></tr><tr><th>Quasi-Peak</th><th>Average</th></tr><tr><td>0.15 – 0.5</td><td>66 to 56 Note 1</td><td>56 to 46 Note 1</td></tr><tr><td>0.5 – 5</td><td>56</td><td>46</td></tr><tr><td>5 – 30</td><td>60</td><td>50</td></tr></table> Note 1: The limit level in dBμV decreases linearly with the logarithm of frequency. Note 2: The more stringent limit applies at transition frequencies.	Frequency (MHz)	Limit (dBμV)		Quasi-Peak	Average	0.15 – 0.5	66 to 56 Note 1	56 to 46 Note 1	0.5 – 5	56	46	5 – 30	60	50																
Frequency (MHz)	Limit (dBμV)																														
	Quasi-Peak	Average																													
0.15 – 0.5	66 to 56 Note 1	56 to 46 Note 1																													
0.5 – 5	56	46																													
5 – 30	60	50																													
Conducted Output Power	For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.																														
6dB Occupied Bandwidth	There is no requirement for this type of hybrid system to comply with the 500 kHz minimum bandwidth normally associated with a DTS device.																														
20dB Occupied Bandwidth	N/A																														
Carrier Frequencies Separation	Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dBbandwidth of the hopping channel, whichever is greater.																														
Hopping Channel Number	N/A																														
Dwell Time	The transmission must comply with a 0.4 second/channel maximum dwell time when the hopping function is turned on.																														
Max Power Density	As specified in Section 15.247(f), a hybrid system must comply with the power density standard of 8 dBm in any 3 kHz band when the frequency hopping function is turned off.																														
Spurious Emission	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 §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)): <table><tr><th rowspan="2">Frequency (MHz)</th><th colspan="2">Limit (dBμV/m)</th><th rowspan="2">Detector</th></tr><tr><th>@ 3m</th><th>@ 10m</th></tr><tr><td>30 – 88</td><td>40.0</td><td>30.0</td><td>Quasi-peak</td></tr><tr><td>88 – 216</td><td>43.5</td><td>33.5</td><td>Quasi-peak</td></tr><tr><td>216 – 960</td><td>46.0</td><td>36.0</td><td>Quasi-peak</td></tr><tr><td>960 – 1000</td><td>54.0</td><td>44.0</td><td>Quasi-peak</td></tr></table> Note: The more stringent limit applies at transition frequencies. <table><tr><th rowspan="2">Frequency</th><th colspan="2">Limit (dBμV/m) @ 3m</th></tr><tr><th>Average</th><th>Peake</th></tr><tr><td>Above 1 GHz</td><td>54.0</td><td>74.0</td></tr></table> Note: The measurement bandwidth shall be 1 MHz or greater.	Frequency (MHz)	Limit (dBμV/m)		Detector	@ 3m	@ 10m	30 – 88	40.0	30.0	Quasi-peak	88 – 216	43.5	33.5	Quasi-peak	216 – 960	46.0	36.0	Quasi-peak	960 – 1000	54.0	44.0	Quasi-peak	Frequency	Limit (dBμV/m) @ 3m		Average	Peake	Above 1 GHz	54.0	74.0
Frequency (MHz)	Limit (dBμV/m)		Detector																												
	@ 3m	@ 10m																													
30 – 88	40.0	30.0	Quasi-peak																												
88 – 216	43.5	33.5	Quasi-peak																												
216 – 960	46.0	36.0	Quasi-peak																												
960 – 1000	54.0	44.0	Quasi-peak																												
Frequency	Limit (dBμV/m) @ 3m																														
	Average	Peake																													
Above 1 GHz	54.0	74.0																													

5.2 Antenna Requirement

Standard requirement:	FCC Part 15 C Section 15.203 & 247(b)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. 15.247(b) (4) requirement: (4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.	
E.U.T Antenna:	
The LoRa antenna is an External antenna which permanently attached, and the best case gain of the antenna is 3 dBi. See product internal photos for details.	

5.3 AC Power Line Conducted Emission

Product name:	Nebra HNT 5G Gateway	Product model:	NEBHNT-5G-915-1
Test by:	Mike	Test mode:	Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz		

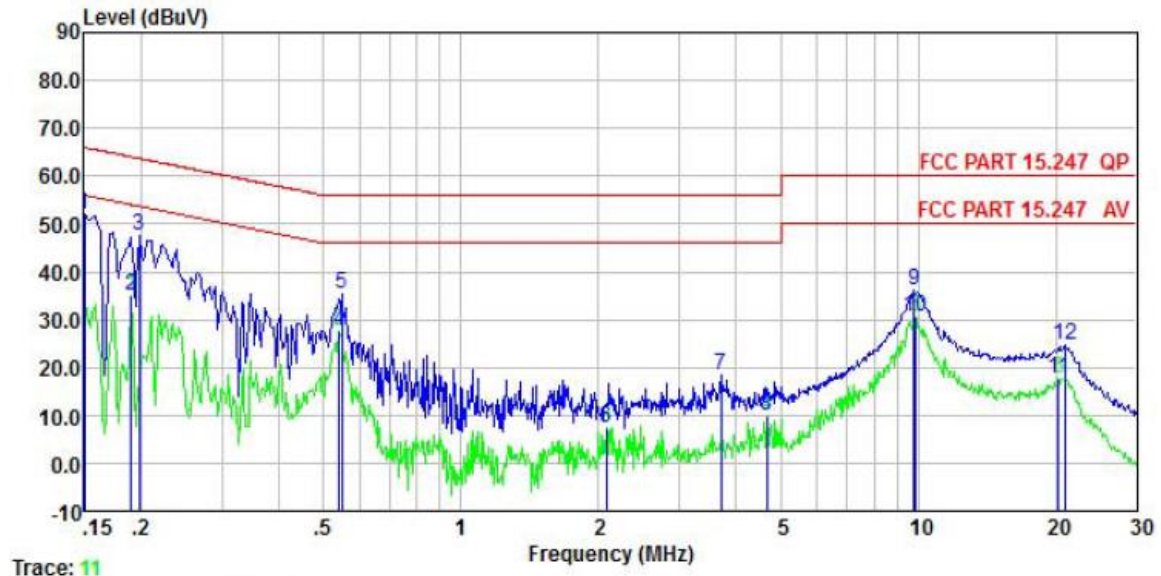


	Freq	Read Level	LISN Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.170	29.38	0.04	10.50	0.01	39.93	54.94	-15.01	Average
2	0.170	40.90	0.04	10.50	0.01	51.45	64.94	-13.49	QP
3	0.198	24.90	0.05	10.50	0.04	35.49	53.71	-18.22	Average
4	0.274	29.20	0.06	10.50	0.02	39.78	60.98	-21.20	QP
5	0.358	10.47	0.06	10.50	0.02	21.05	48.78	-27.73	Average
6	0.549	18.67	0.06	10.50	0.02	29.25	56.00	-26.75	QP
7	0.558	9.29	0.06	10.50	0.02	19.87	46.00	-26.13	Average
8	0.724	14.97	0.07	10.50	0.03	25.57	56.00	-30.43	QP
9	9.966	24.54	0.22	10.50	0.13	35.39	60.00	-24.61	QP
10	10.125	18.73	0.22	10.50	0.13	29.58	50.00	-20.42	Average
11	21.035	11.93	0.35	10.50	0.17	22.95	60.00	-37.05	QP
12	21.147	4.85	0.35	10.50	0.17	15.87	50.00	-34.13	Average

Remark:

1. Level = Read level + LISN Factor + Cable Loss.

Product name:	Nebra HNT 5G Gateway	Product model:	NEBHNT-5G-915-1
Test by:	Mike	Test mode:	Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz		



	Freq	Read Level	LISN Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.150	41.36	0.06	10.50	0.01	51.93	66.00	-14.07	QP
2	0.190	24.42	0.05	10.50	0.03	35.00	54.02	-19.02	Average
3	0.198	37.12	0.05	10.50	0.04	47.71	63.71	-16.00	QP
4	0.541	16.92	0.04	10.50	0.03	27.49	46.00	-18.51	Average
5	0.549	24.64	0.05	10.50	0.02	35.21	56.00	-20.79	QP
6	2.077	-3.36	0.07	10.50	0.20	7.41	46.00	-38.59	Average
7	3.700	7.80	0.10	10.50	0.08	18.48	56.00	-37.52	QP
8	4.672	-0.75	0.11	10.50	0.09	9.95	46.00	-36.05	Average
9	9.809	25.32	0.21	10.50	0.13	36.16	60.00	-23.84	QP
10	9.861	19.65	0.21	10.50	0.13	30.49	50.00	-19.51	Average
11	20.270	6.70	0.34	10.50	0.19	17.73	50.00	-32.27	Average
12	21.035	13.50	0.35	10.50	0.17	24.52	60.00	-35.48	QP

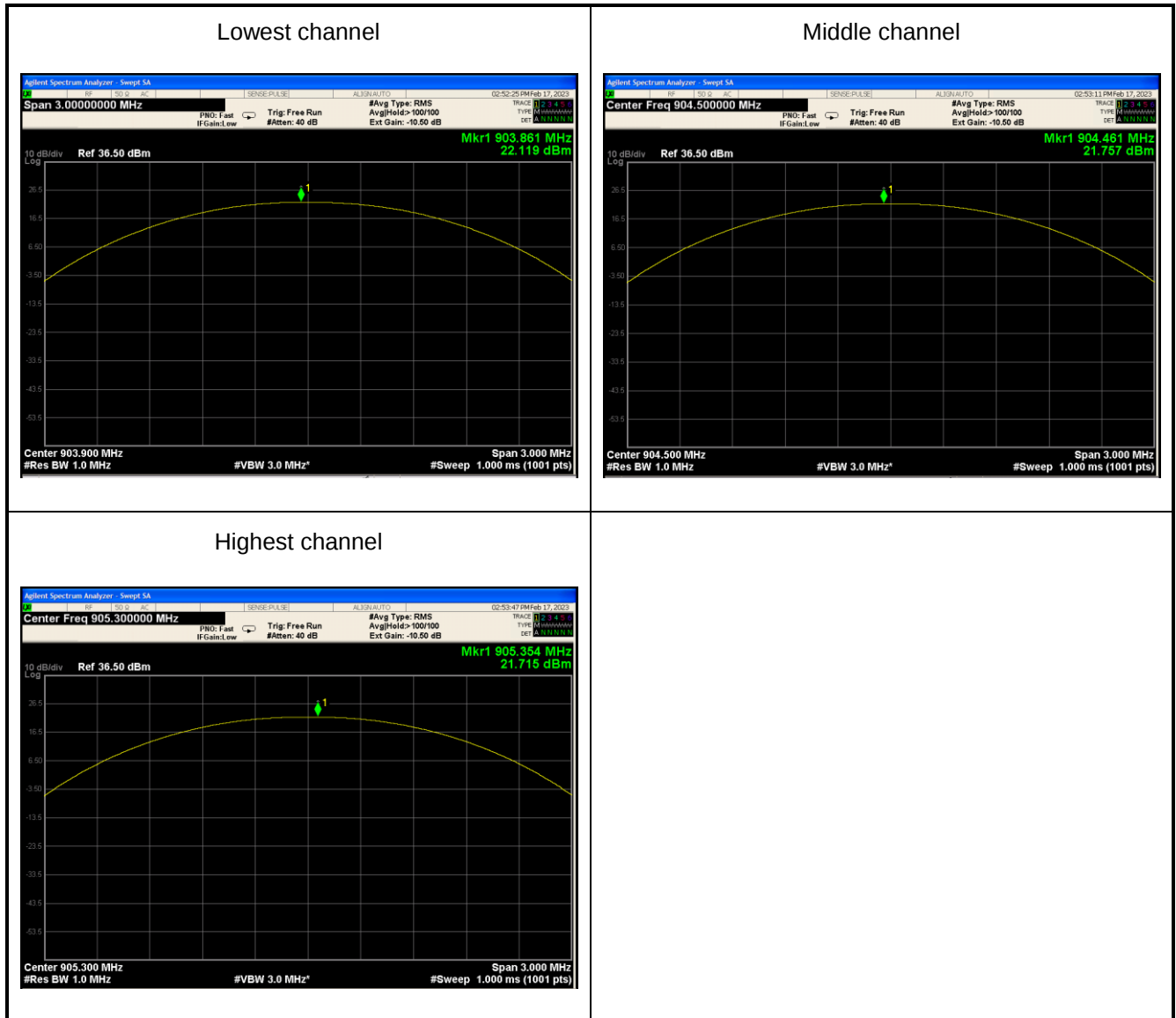
Remark:

1. Level = Read level + LISN Factor + Cable Loss.

5.4 Conducted Output Power

Test channel	Maximum Output Power (dBm)	Limit (dBm)	Result
Lowest channel	22.119	24.00	Pass
Middle channel	21.757	24.00	Pass
Highest channel	21.715	24.00	Pass

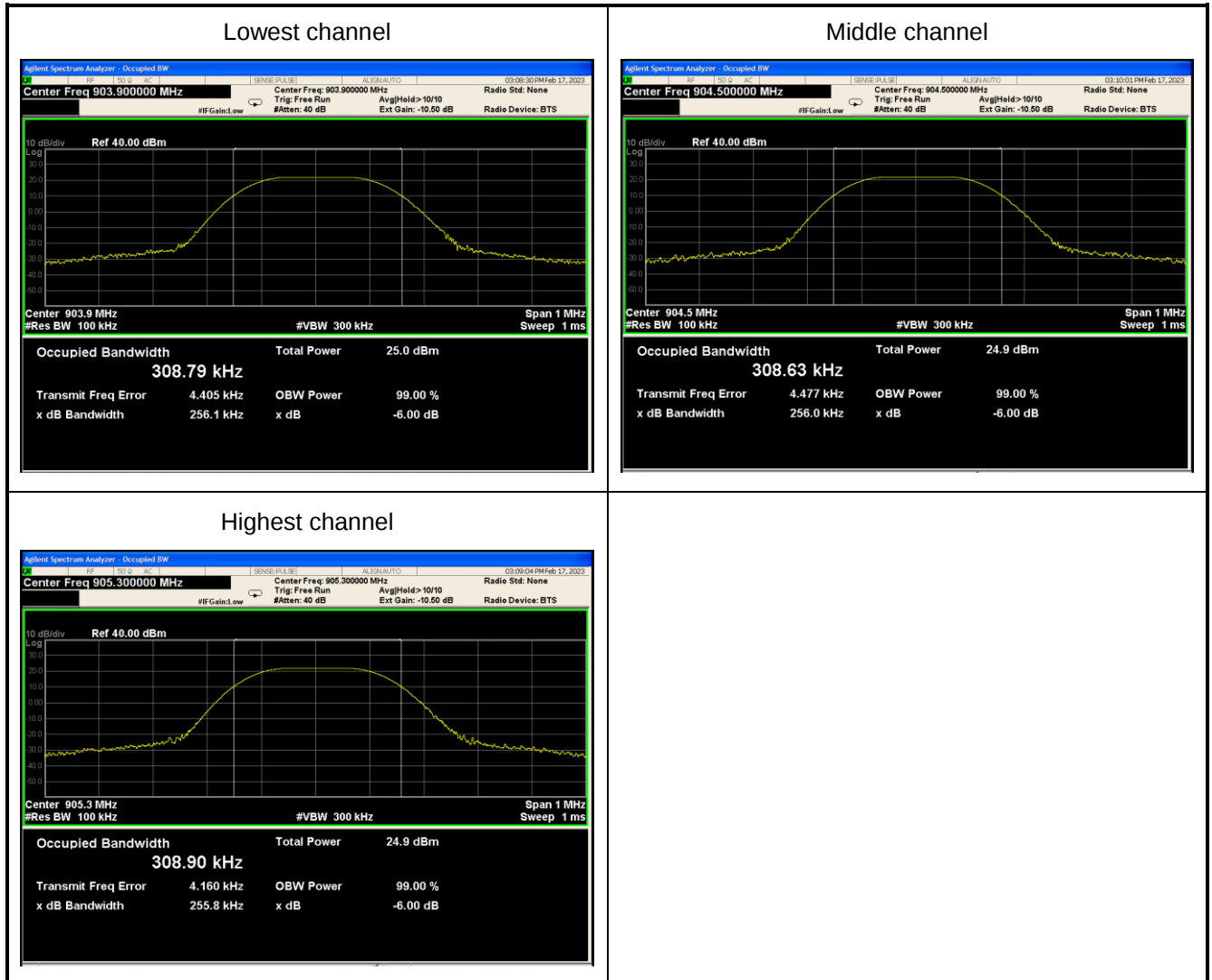
Test plot as follows:



5.5 6dB Occupied Bandwidth

Test channel	6dB Occupy Bandwidth (kHz)	Limit (kHz)	Result
Lowest channel	256.1	N/A	Pass
Middle channel	256.0		Pass
Highest channel	255.8		Pass

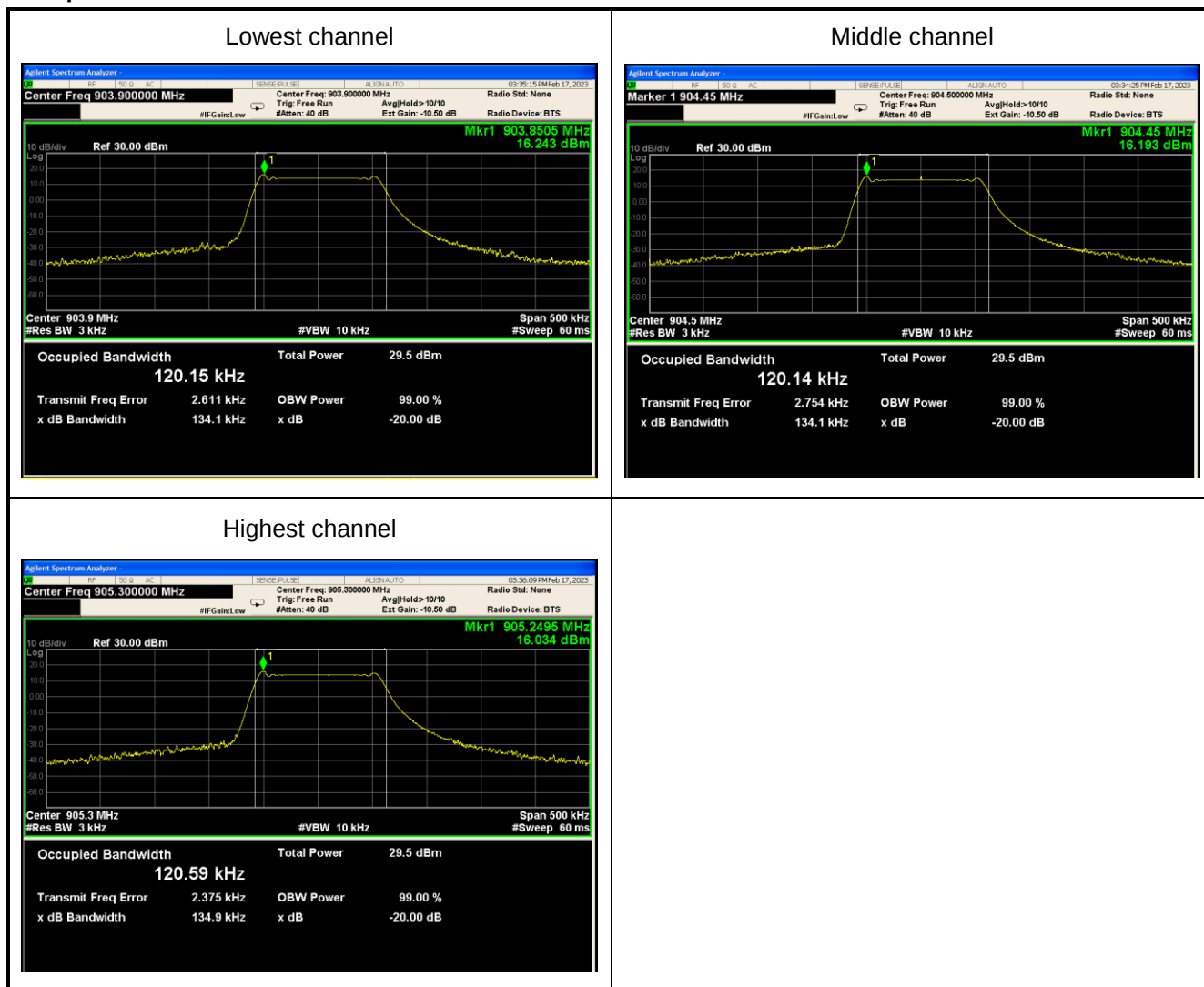
Test plot as follows:



5.6 20dB Occupied Bandwidth

Test channel	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Result
Lowest channel	134.1	N/A	Pass
Middle channel	134.1		Pass
Highest channel	134.9		Pass

Test plot as follows:



5.7 Carrier Frequencies Separation

Test channel	Carrier Frequencies Separation (kHz)	Limit (kHz)	Result
Lowest channel	200	156.0	Pass
Middle channel	200		Pass
Highest channel	200		Pass

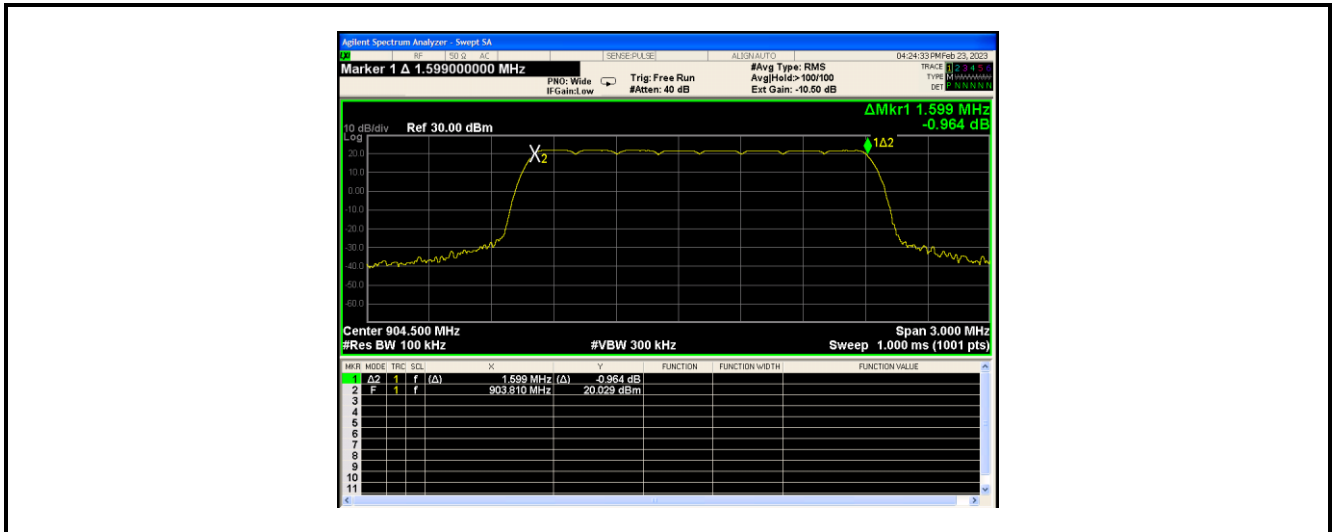
Test plot as follows:



5.8 Hopping Channel Number

Hopping channel numbers	Limit	Result
8	N/A	Pass

Test plot as follows:



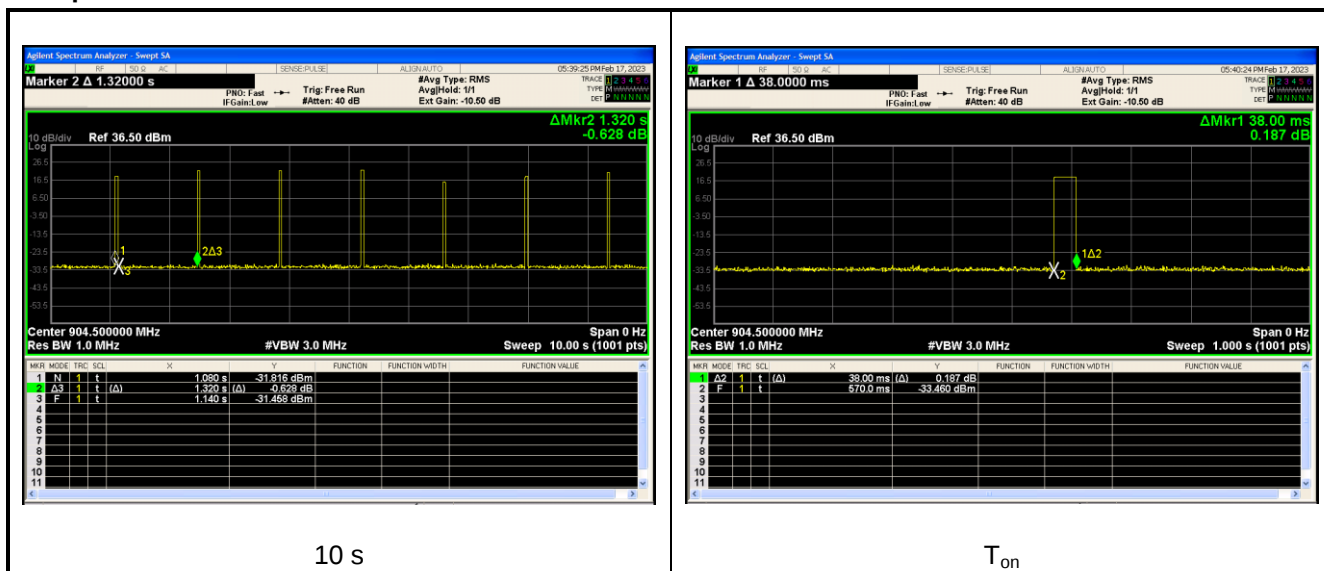
5.9 Dwell Time

T_{on} (s)	Hopping numbers (10 s period)	Dwell time (s)	Limit (s)	Result
0.038	7	0.266	0.4	Pass

Note:

- T_{on} is time per hop.
- Dwell time = $T_{on} * \text{Hopping numbers}$.

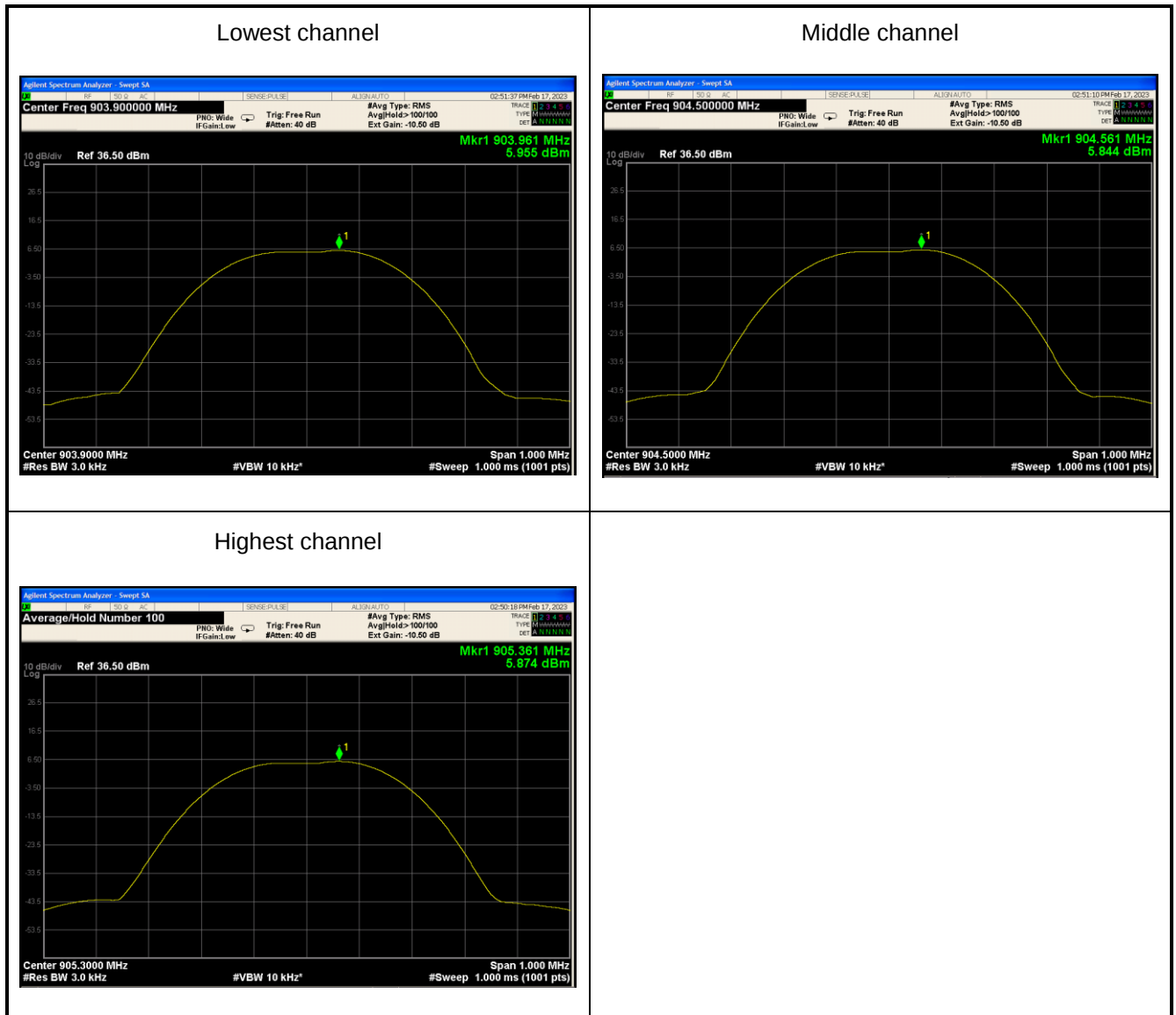
Test plot as follows:



5.10 Power Spectral Density

Test Channel	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
Lowest channel	5.995	8.00	Pass
Middle channel	5.844		
Highest channel	5.874		

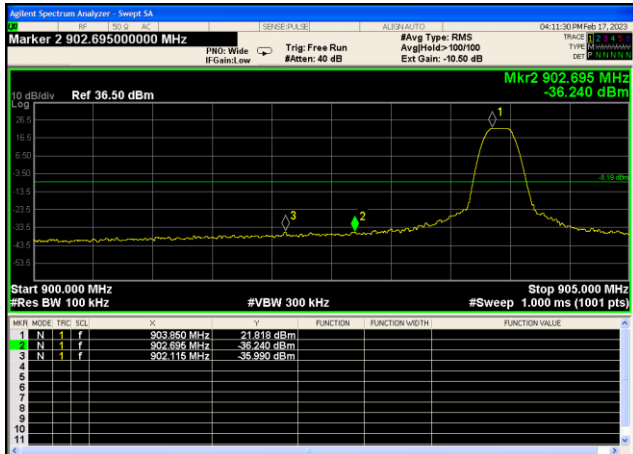
Test plot as follows:



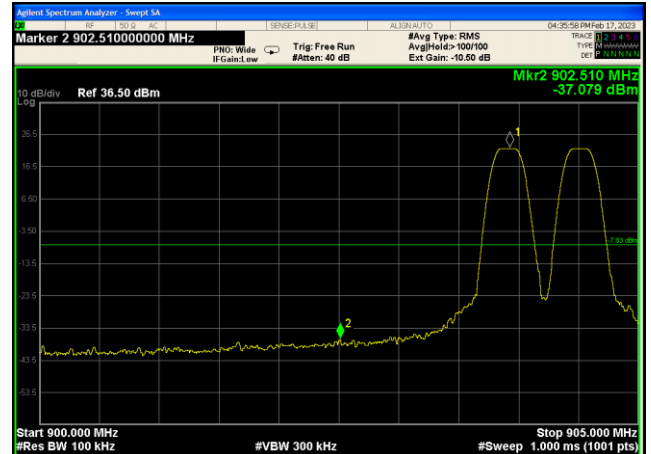
5.11 Spurious Emission

5.11.1 Band-edge Emission

Lowest Channel

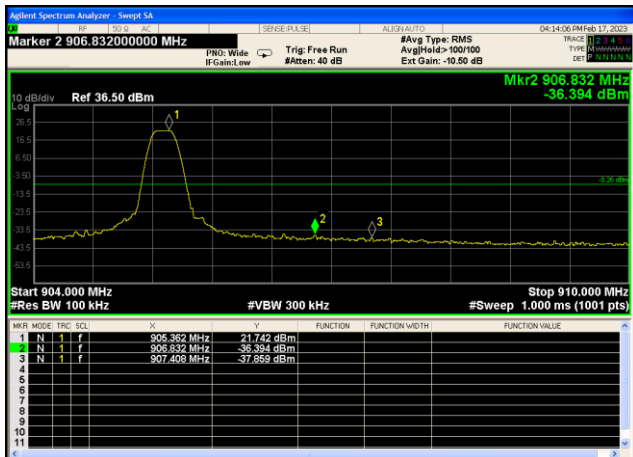


No-hopping mode

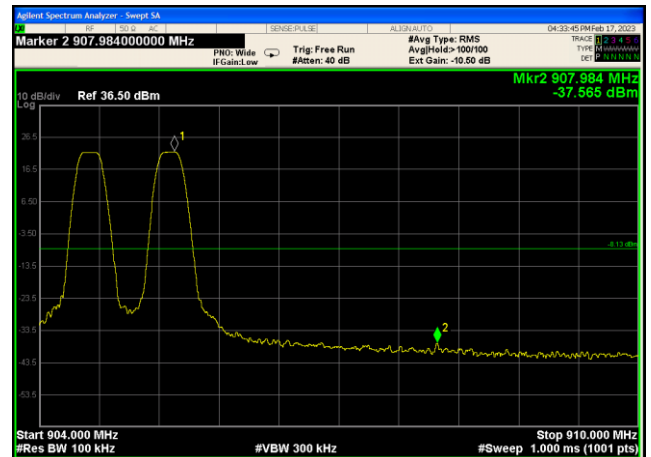


Hopping mode

Highest Channel



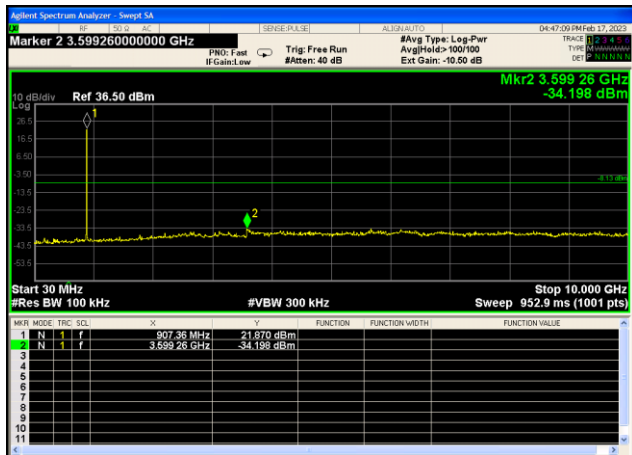
No-hopping mode



Hopping mode

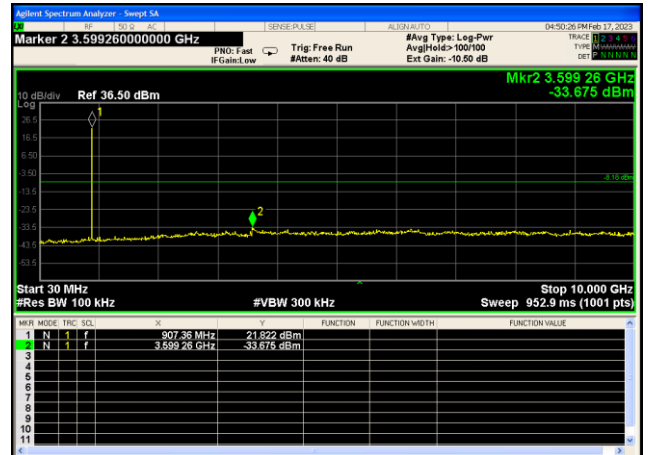
5.11.2 Conducted Spurious Emission

Lowest channel



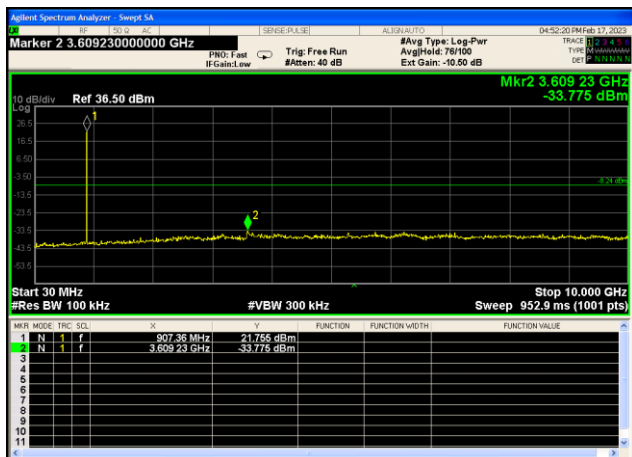
30MHz~10GHz

Middle channel



30MHz~10GHz

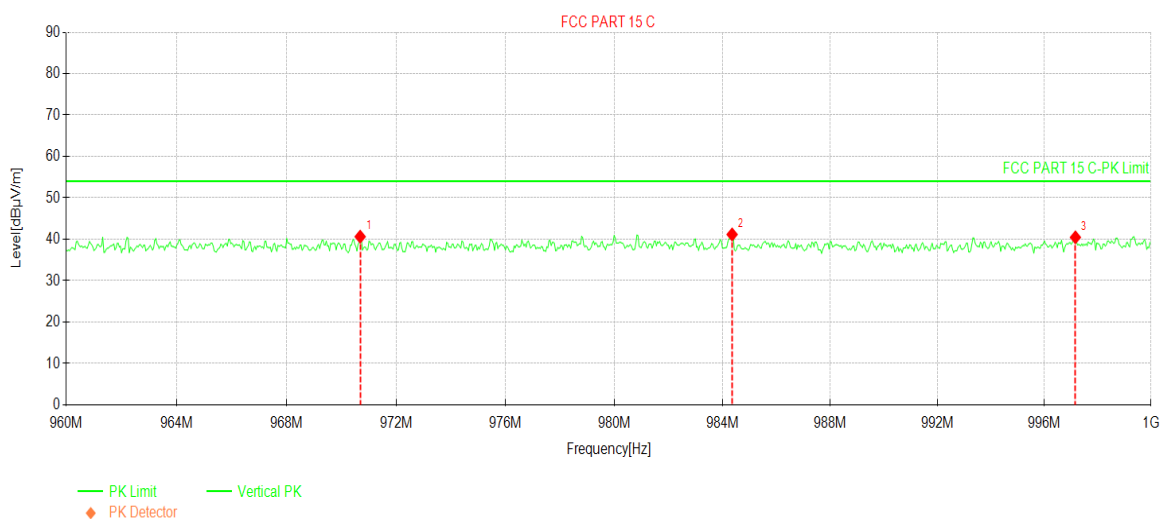
Highest channel



30MHz~10GHz

5.11.3 Emissions in Restricted Frequency Bands

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Channel:	960 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		



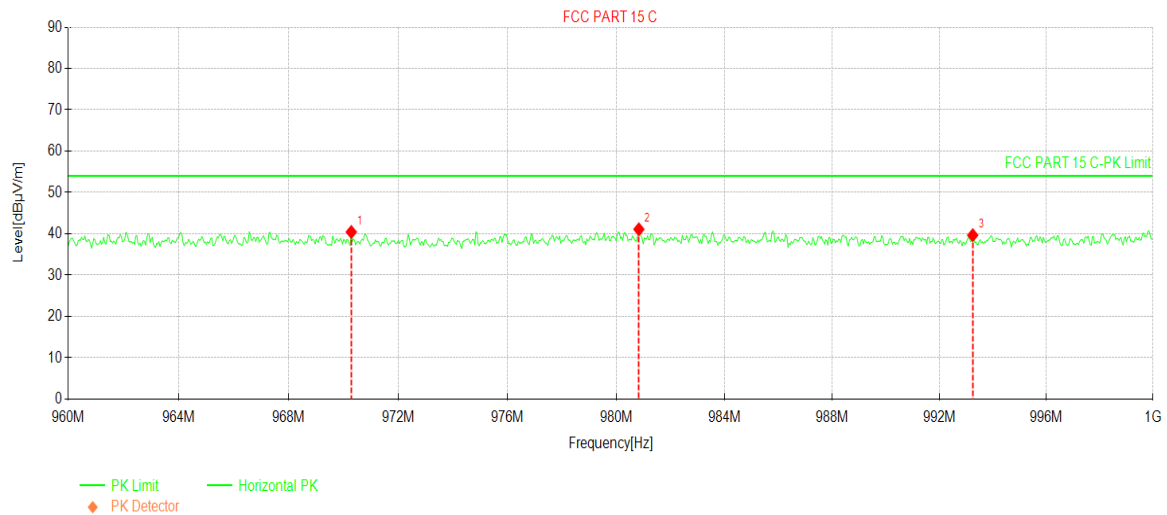
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	970.680	15.19	40.63	25.44	54.00	13.37	PK	Vertical
2	984.360	15.52	41.16	25.64	54.00	12.84	PK	Vertical
3	997.160	14.75	40.47	25.72	54.00	13.53	PK	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Channel:	960 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



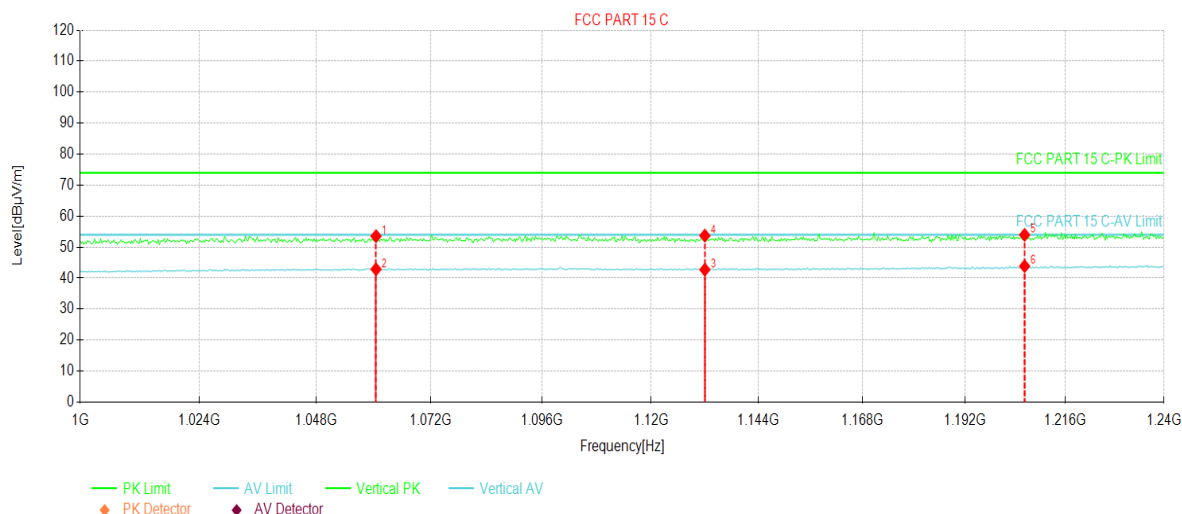
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	970.280	15.01	40.44	25.43	54.00	13.56	PK	Horizontal
2	980.840	15.53	41.09	25.56	54.00	12.91	PK	Horizontal
3	993.240	13.93	39.67	25.74	54.00	14.33	PK	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Channel:	1000 MHz ~ 1240 MHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		



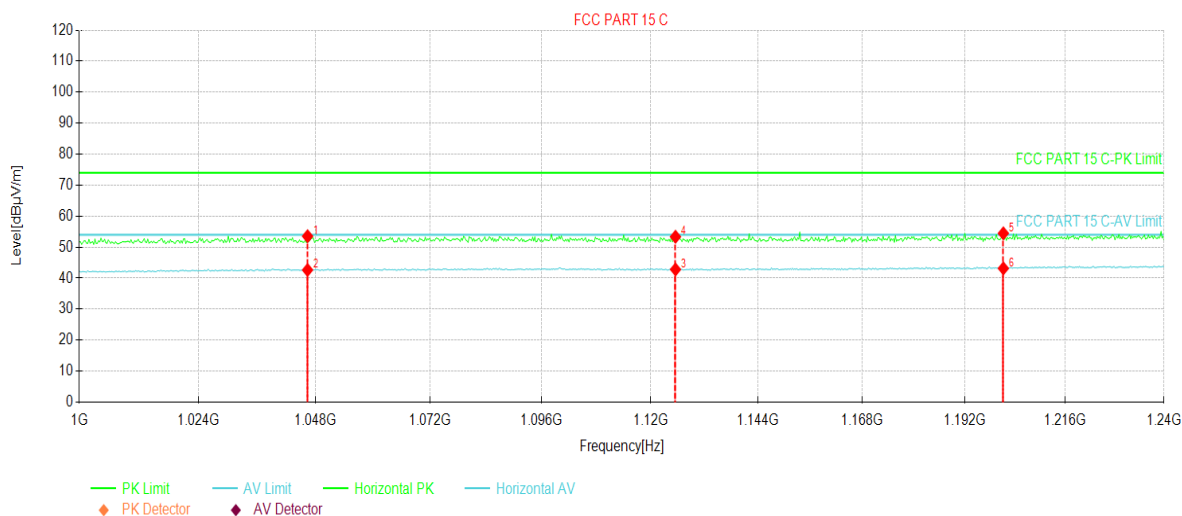
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	1060.48	23.29	30.25	53.54	74.00	20.46	PK	Vertical
2	1060.48	12.61	30.25	42.86	54.00	11.14	AV	Vertical
3	1132.00	12.15	30.60	42.75	54.00	11.25	AV	Vertical
4	1132.00	23.11	30.60	53.71	74.00	20.29	PK	Vertical
5	1206.16	23.15	30.80	53.95	74.00	20.05	PK	Vertical
6	1206.16	13.07	30.80	43.87	54.00	10.13	AV	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Channel:	1000 MHz ~ 1240 MHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	1046.32	23.37	30.15	53.52	74.00	20.48	PK	Horizontal
2	1046.32	12.48	30.15	42.63	54.00	11.37	AV	Horizontal
3	1125.52	12.22	30.59	42.81	54.00	11.19	AV	Horizontal
4	1125.52	22.76	30.59	53.35	74.00	20.65	PK	Horizontal
5	1201.12	23.68	30.78	54.46	74.00	19.54	PK	Horizontal
6	1201.12	12.37	30.78	43.15	54.00	10.85	AV	Horizontal

Remark:

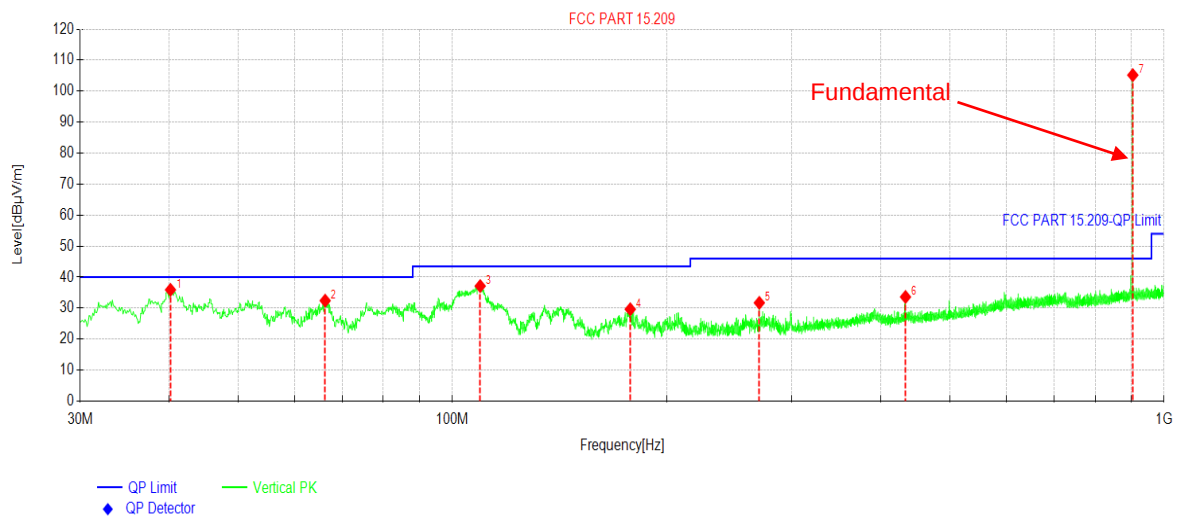
1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

5.11.4 Emissions in Non-restricted Frequency Bands

Below 1GHz:

903.9MHz:

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		



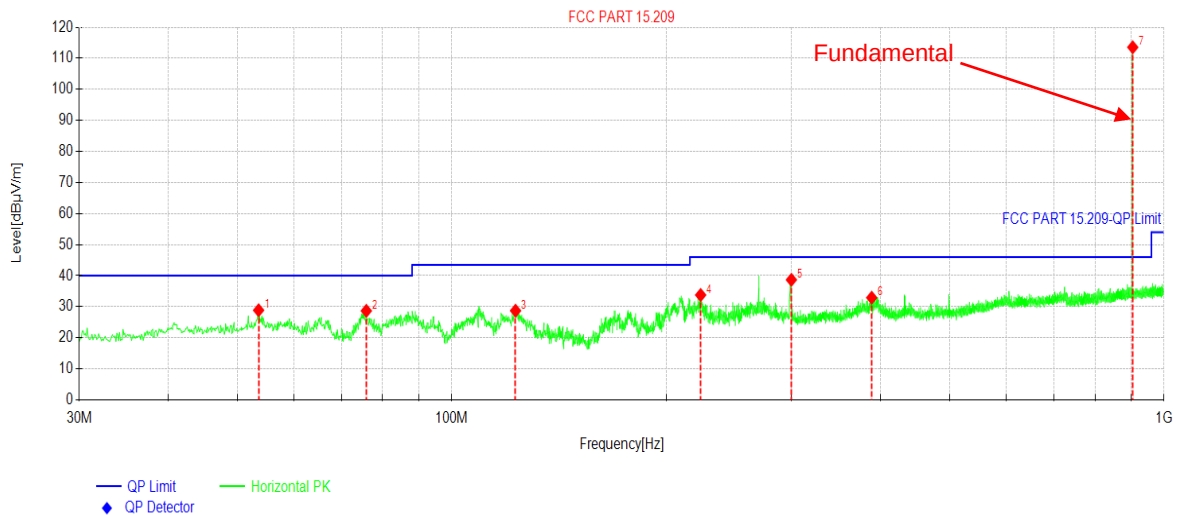
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	40.1860	49.64	35.91	-13.73	40.00	4.09	PK	Vertical
2	66.2816	47.76	32.41	-15.35	40.00	7.59	PK	Vertical
3	109.450	51.96	37.12	-14.84	43.50	6.38	PK	Vertical
4	177.842	46.81	29.64	-17.17	43.50	13.86	PK	Vertical
5	270.002	45.47	31.72	-13.75	46.00	14.28	PK	Vertical
6	433.269	43.88	33.61	-10.27	46.00	12.39	PK	Vertical
7	903.960	107.83	105.19	-2.64	46.00	-59.19	PK	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



Suspected Data List

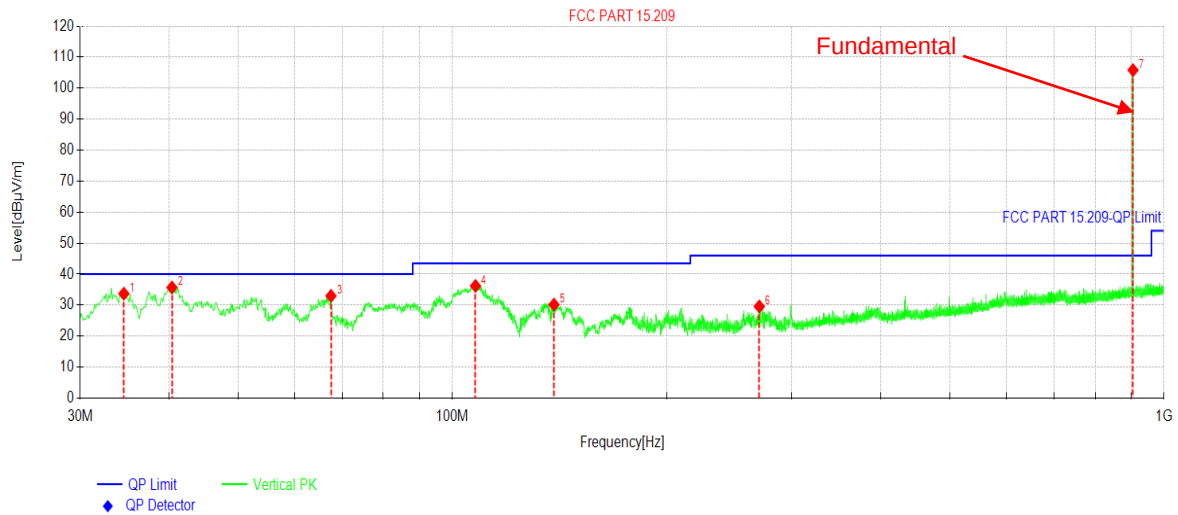
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	53.5734	41.93	28.86	-13.07	40.00	11.14	PK	Horizontal
2	75.8856	47.21	28.67	-18.54	40.00	11.33	PK	Horizontal
3	122.935	45.84	28.73	-17.11	43.50	14.77	PK	Horizontal
4	223.631	48.46	33.77	-14.69	46.00	12.23	PK	Horizontal
5	299.881	51.74	38.67	-13.07	46.00	7.33	PK	Horizontal
6	388.741	43.87	32.92	-10.95	46.00	13.08	PK	Horizontal
7	903.960	116.19	113.55	-2.64	46.00	-67.55	PK	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

904.5MHz:

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		

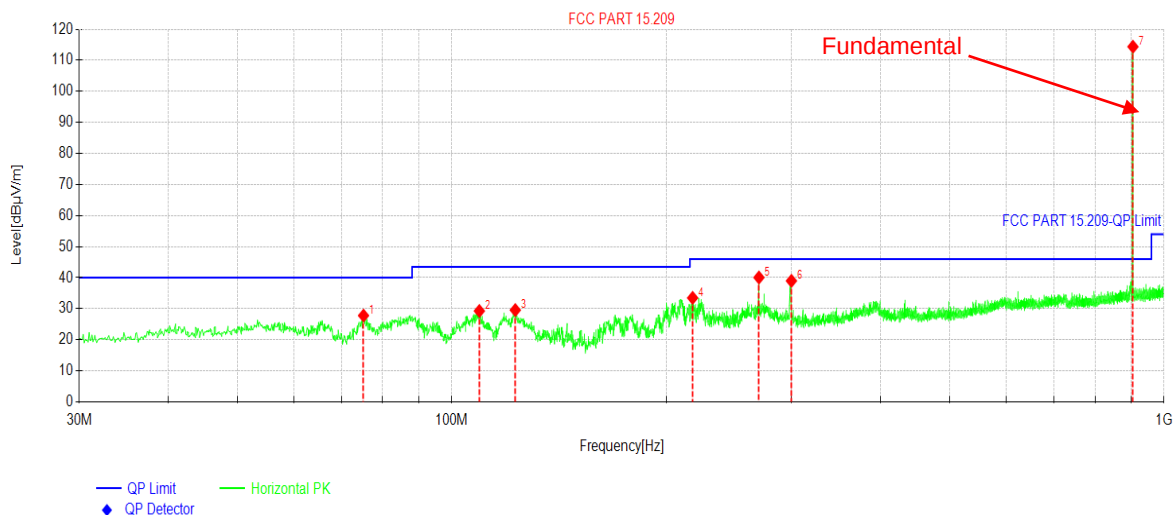

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	34.5595	49.12	33.69	-15.43	40.00	6.31	PK	Vertical
2	40.3800	49.40	35.70	-13.70	40.00	4.30	PK	Vertical
3	67.5428	48.91	32.98	-15.93	40.00	7.02	PK	Vertical
4	107.801	50.91	36.20	-14.71	43.50	7.30	PK	Vertical
5	138.941	48.50	30.16	-18.34	43.50	13.34	PK	Vertical
6	270.002	43.33	29.58	-13.75	46.00	16.42	PK	Vertical
7	904.542	108.46	105.82	-2.64	46.00	-59.82	PK	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



Suspected Data List

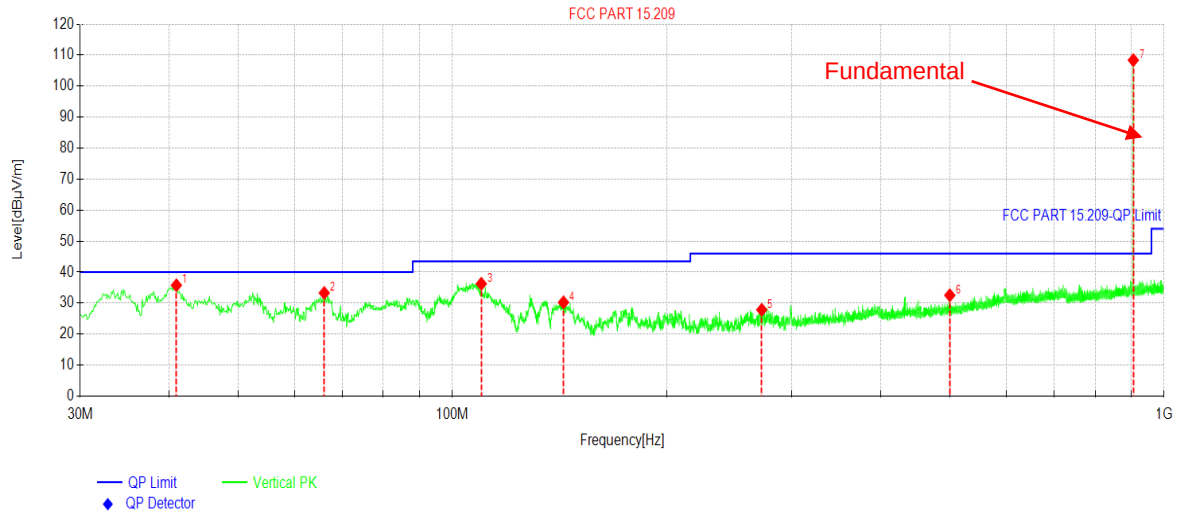
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	75.2065	46.29	27.80	-18.49	40.00	12.20	PK	Horizontal
2	109.353	44.11	29.27	-14.84	43.50	14.23	PK	Horizontal
3	122.838	46.65	29.56	-17.09	43.50	13.94	PK	Horizontal
4	217.907	48.29	33.49	-14.80	46.00	12.51	PK	Horizontal
5	270.002	53.81	40.06	-13.75	46.00	5.94	PK	Horizontal
6	299.881	52.05	38.98	-13.07	46.00	7.02	PK	Horizontal
7	904.542	117.02	114.38	-2.64	46.00	-68.38	PK	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

905.3MHz:

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		

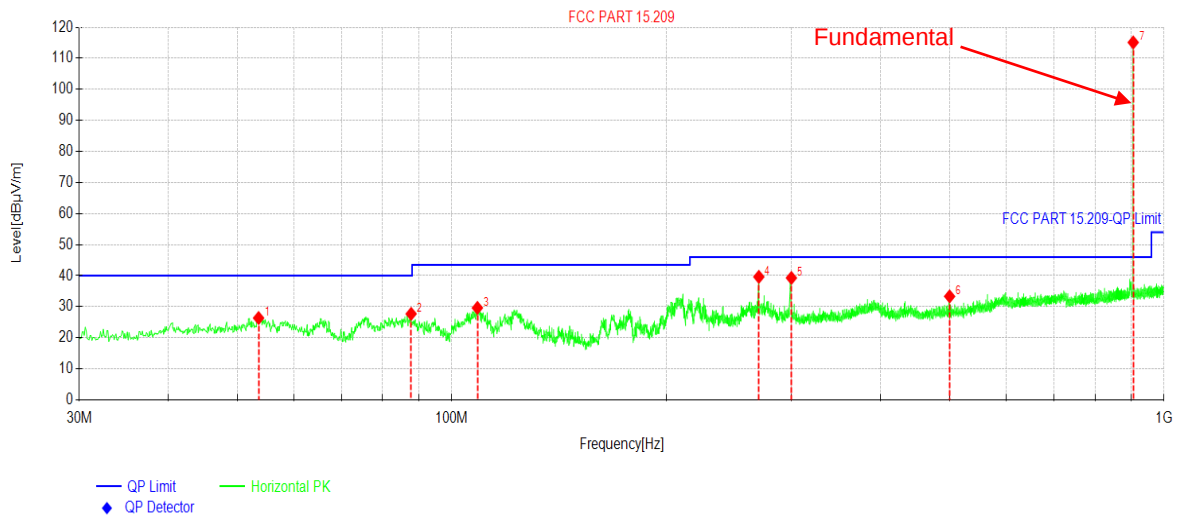

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	40.9621	49.36	35.78	-13.58	40.00	4.22	PK	Vertical
2	66.0876	48.55	33.29	-15.26	40.00	6.71	PK	Vertical
3	109.839	51.13	36.25	-14.88	43.50	7.25	PK	Vertical
4	143.307	48.65	30.24	-18.41	43.50	13.26	PK	Vertical
5	272.136	41.56	27.85	-13.71	46.00	18.15	PK	Vertical
6	500.012	41.53	32.54	-8.99	46.00	13.46	PK	Vertical
7	905.415	111.03	108.39	-2.64	46.00	-62.39	PK	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	53.5734	39.43	26.36	-13.07	40.00	13.64	PK	Horizontal
2	87.7208	44.63	27.70	-16.93	40.00	12.30	PK	Horizontal
3	108.674	44.41	29.63	-14.78	43.50	13.87	PK	Horizontal
4	269.905	53.36	39.61	-13.75	46.00	6.39	PK	Horizontal
5	299.881	52.34	39.27	-13.07	46.00	6.73	PK	Horizontal
6	500.109	42.32	33.33	-8.99	46.00	12.67	PK	Horizontal
7	905.318	117.76	115.12	-2.64	46.00	-69.12	PK	Horizontal

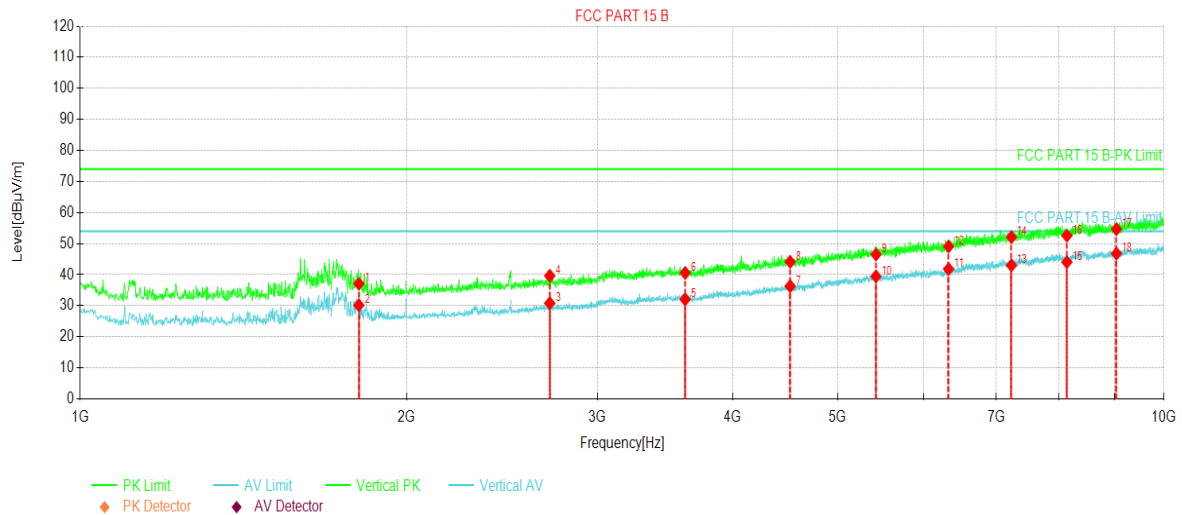
Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

Above 1GHz:

903.9MHz:

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Frequency:	1 GHz ~ 10 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		



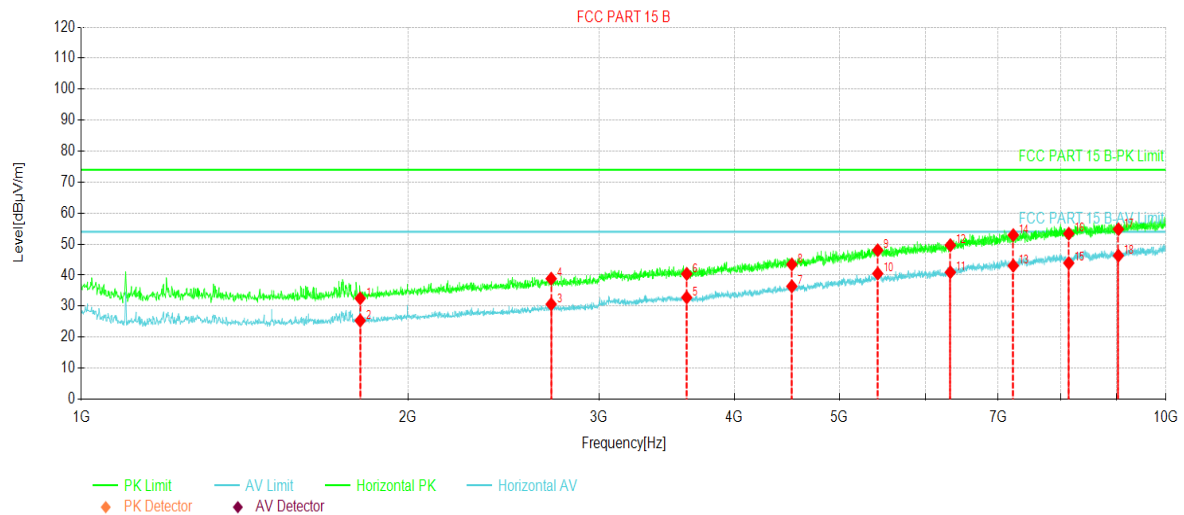
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	1807.80	58.93	-21.85	37.08	74.00	36.92	PK	Vertical
2	1807.80	52.01	-21.85	30.16	54.00	23.84	AV	Vertical
3	2711.70	48.43	-17.62	30.81	54.00	23.19	AV	Vertical
4	2711.70	57.25	-17.62	39.63	74.00	34.37	PK	Vertical
5	3615.60	46.65	-14.60	32.05	54.00	21.95	AV	Vertical
6	3615.60	55.17	-14.60	40.57	74.00	33.43	PK	Vertical
7	4519.50	46.33	-10.03	36.30	54.00	17.70	AV	Vertical
8	4519.50	54.17	-10.03	44.14	74.00	29.86	PK	Vertical
9	5423.40	52.50	-5.99	46.51	74.00	27.49	PK	Vertical
10	5423.40	45.43	-5.99	39.44	54.00	14.56	AV	Vertical
11	6327.30	45.23	-3.42	41.81	54.00	12.19	AV	Vertical
12	6327.30	52.51	-3.42	49.09	74.00	24.91	PK	Vertical
13	7231.20	43.30	-0.29	43.01	54.00	10.99	AV	Vertical
14	7231.20	52.38	-0.29	52.09	74.00	21.91	PK	Vertical
15	8135.10	42.82	1.22	44.04	54.00	9.96	AV	Vertical
16	8135.10	51.36	1.22	52.58	74.00	21.42	PK	Vertical
17	9039.00	52.15	2.52	54.67	74.00	19.33	PK	Vertical
18	9039.00	44.29	2.52	46.81	54.00	7.19	AV	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Frequency:	1 GHz ~ 10 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



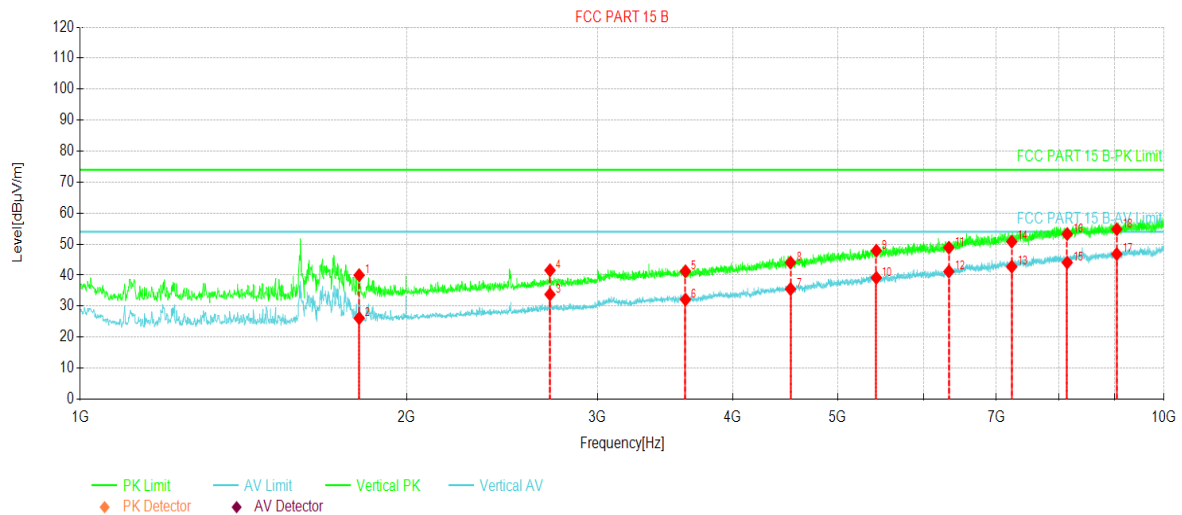
Suspected Data List								
NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	1807.80	54.36	-21.85	32.51	74.00	41.49	PK	Horizontal
2	1807.80	47.17	-21.85	25.32	54.00	28.68	AV	Horizontal
3	2711.70	48.25	-17.62	30.63	54.00	23.37	AV	Horizontal
4	2711.70	56.47	-17.62	38.85	74.00	35.15	PK	Horizontal
5	3615.60	47.38	-14.60	32.78	54.00	21.22	AV	Horizontal
6	3615.60	55.00	-14.60	40.40	74.00	33.60	PK	Horizontal
7	4519.50	46.43	-10.03	36.40	54.00	17.60	AV	Horizontal
8	4519.50	53.50	-10.03	43.47	74.00	30.53	PK	Horizontal
9	5423.40	54.02	-5.99	48.03	74.00	25.97	PK	Horizontal
10	5423.40	46.49	-5.99	40.50	54.00	13.50	AV	Horizontal
11	6327.30	44.36	-3.42	40.94	54.00	13.06	AV	Horizontal
12	6327.30	53.09	-3.42	49.67	74.00	24.33	PK	Horizontal
13	7231.20	43.35	-0.29	43.06	54.00	10.94	AV	Horizontal
14	7231.20	53.20	-0.29	52.91	74.00	21.09	PK	Horizontal
15	8135.10	42.69	1.22	43.91	54.00	10.09	AV	Horizontal
16	8135.10	52.16	1.22	53.38	74.00	20.62	PK	Horizontal
17	9039.00	52.29	2.52	54.81	74.00	19.19	PK	Horizontal
18	9039.00	43.78	2.52	46.30	54.00	7.70	AV	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

904.5MHz:

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Frequency:	1 GHz ~ 10 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		

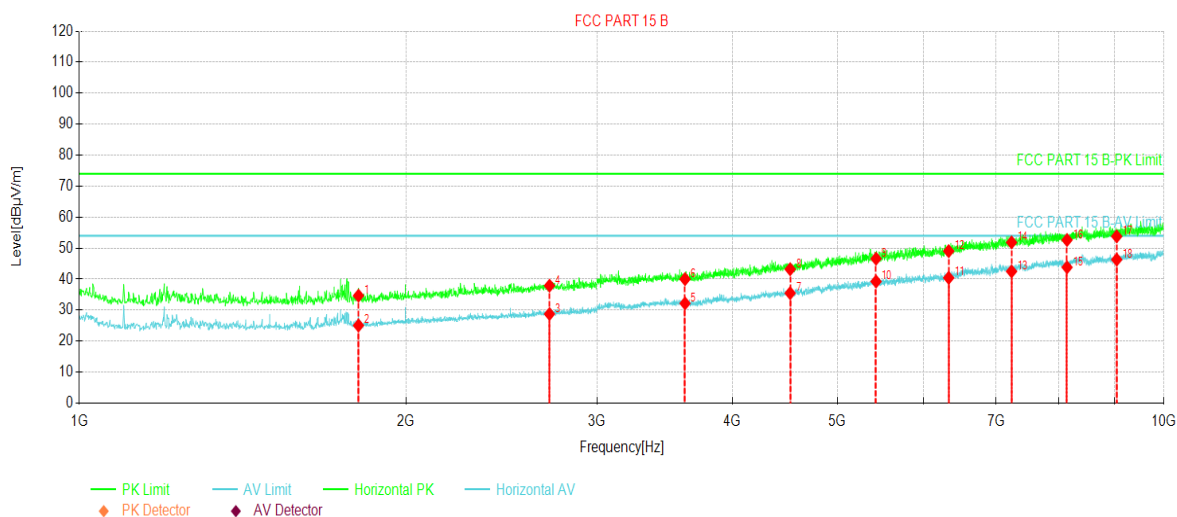


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	1809.00	61.83	-21.85	39.98	74.00	34.02	PK	Vertical
2	1809.00	47.97	-21.85	26.12	54.00	27.88	AV	Vertical
3	2713.37	51.40	-17.62	33.78	54.00	20.22	AV	Vertical
4	2713.37	59.18	-17.62	41.56	74.00	32.44	PK	Vertical
5	3618.00	55.83	-14.58	41.25	74.00	32.75	PK	Vertical
6	3618.00	46.70	-14.58	32.12	54.00	21.88	AV	Vertical
7	4522.50	45.54	-10.02	35.52	54.00	18.48	AV	Vertical
8	4522.50	54.08	-10.02	44.06	74.00	29.94	PK	Vertical
9	5427.00	53.88	-6.00	47.88	74.00	26.12	PK	Vertical
10	5427.00	45.14	-6.00	39.14	54.00	14.86	AV	Vertical
11	6331.50	52.24	-3.37	48.87	74.00	25.13	PK	Vertical
12	6331.50	44.55	-3.37	41.18	54.00	12.82	AV	Vertical
13	7236.00	43.02	-0.29	42.73	54.00	11.27	AV	Vertical
14	7236.00	51.09	-0.29	50.80	74.00	23.20	PK	Vertical
15	8140.50	42.85	1.22	44.07	54.00	9.93	AV	Vertical
16	8140.50	52.03	1.22	53.25	74.00	20.75	PK	Vertical
17	9045.00	44.26	2.54	46.80	54.00	7.20	AV	Vertical
18	9045.00	52.27	2.54	54.81	74.00	19.19	PK	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Pre-amplifier Factor) .

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Frequency:	1 GHz ~ 10 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



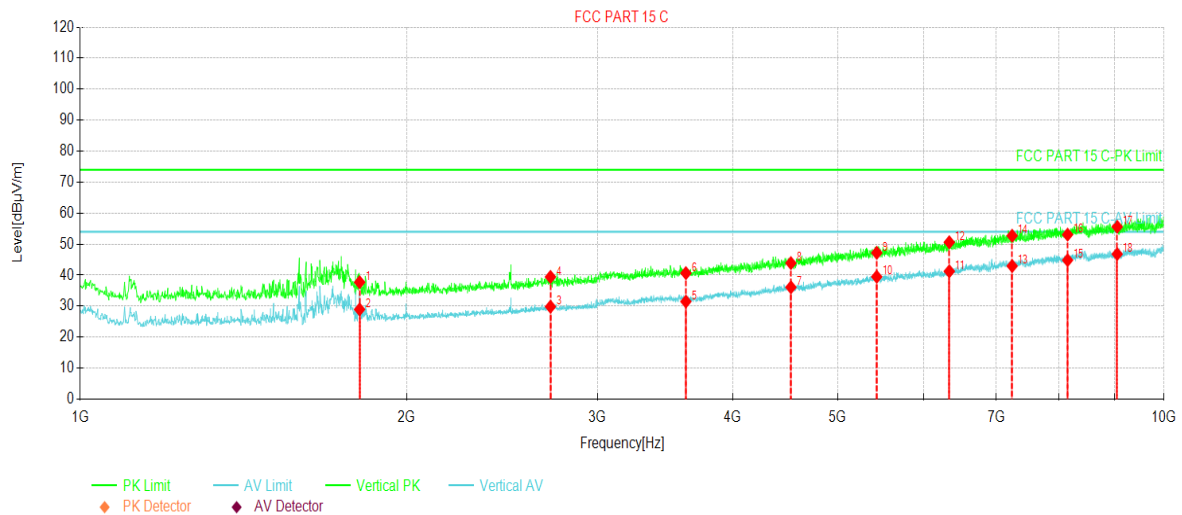
Suspected Data List								
NO.	Freq. [MHz]	Reading [dBuV/m]	Factor [dB]	Level [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Trace	Polarity
1	1809.00	56.51	-21.85	34.66	74.00	39.34	PK	Horizontal
2	1809.00	46.91	-21.85	25.06	54.00	28.94	AV	Horizontal
3	2713.50	46.38	-17.62	28.76	54.00	25.24	AV	Horizontal
4	2713.50	55.51	-17.62	37.89	74.00	36.11	PK	Horizontal
5	3618.00	46.76	-14.58	32.18	54.00	21.82	AV	Horizontal
6	3618.00	54.60	-14.58	40.02	74.00	33.98	PK	Horizontal
7	4522.50	45.50	-10.02	35.48	54.00	18.52	AV	Horizontal
8	4522.50	53.22	-10.02	43.20	74.00	30.80	PK	Horizontal
9	5427.00	52.59	-6.00	46.59	74.00	27.41	PK	Horizontal
10	5427.00	45.24	-6.00	39.24	54.00	14.76	AV	Horizontal
11	6331.50	43.79	-3.37	40.42	54.00	13.58	AV	Horizontal
12	6331.50	52.42	-3.37	49.05	74.00	24.95	PK	Horizontal
13	7236.00	42.79	-0.29	42.50	54.00	11.50	AV	Horizontal
14	7236.00	52.14	-0.29	51.85	74.00	22.15	PK	Horizontal
15	8140.50	42.60	1.22	43.82	54.00	10.18	AV	Horizontal
16	8140.50	51.42	1.22	52.64	74.00	21.36	PK	Horizontal
17	9045.00	51.25	2.54	53.79	74.00	20.21	PK	Horizontal
18	9045.00	43.77	2.54	46.31	54.00	7.69	AV	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

905.5MHz:

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Frequency:	1 GHz ~ 10 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz		

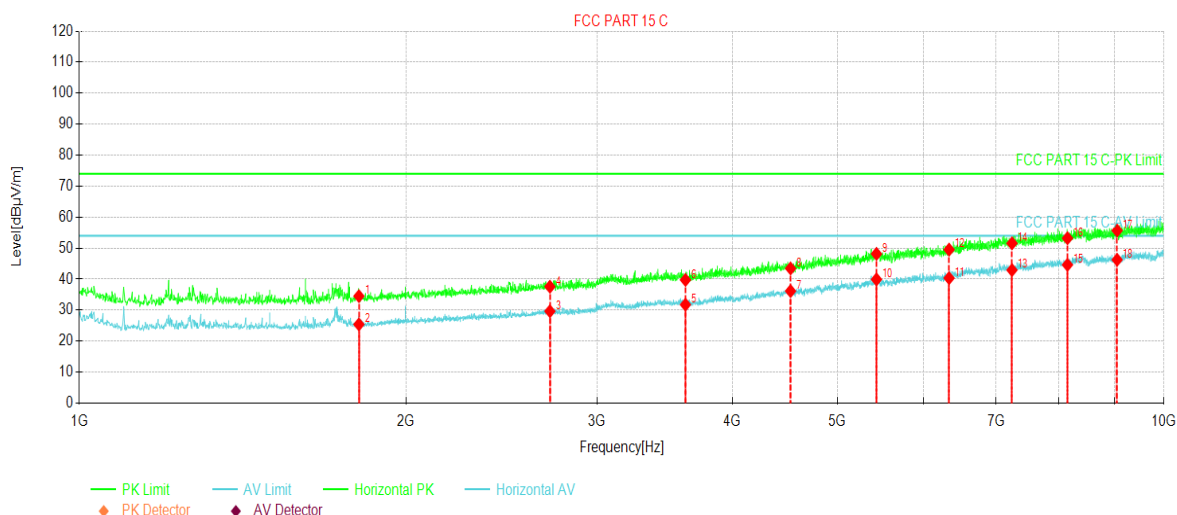


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	1810.60	59.55	-21.84	37.71	74.00	36.29	PK	Vertical
2	1810.60	50.79	-21.84	28.95	54.00	25.05	AV	Vertical
3	2715.90	47.44	-17.62	29.82	54.00	24.18	AV	Vertical
4	2715.90	57.05	-17.62	39.43	74.00	34.57	PK	Vertical
5	3621.20	46.06	-14.57	31.49	54.00	22.51	AV	Vertical
6	3621.20	55.22	-14.57	40.65	74.00	33.35	PK	Vertical
7	4526.50	46.09	-10.01	36.08	54.00	17.92	AV	Vertical
8	4526.50	53.89	-10.01	43.88	74.00	30.12	PK	Vertical
9	5431.80	53.21	-6.01	47.20	74.00	26.80	PK	Vertical
10	5431.80	45.48	-6.01	39.47	54.00	14.53	AV	Vertical
11	6337.10	44.55	-3.30	41.25	54.00	12.75	AV	Vertical
12	6337.10	53.91	-3.30	50.61	74.00	23.39	PK	Vertical
13	7242.40	43.25	-0.30	42.95	54.00	11.05	AV	Vertical
14	7242.40	53.01	-0.30	52.71	74.00	21.29	PK	Vertical
15	8147.70	43.62	1.22	44.84	54.00	9.16	AV	Vertical
16	8147.70	51.85	1.22	53.07	74.00	20.93	PK	Vertical
17	9053.00	53.06	2.55	55.61	74.00	18.39	PK	Vertical
18	9053.00	44.24	2.55	46.79	54.00	7.21	AV	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

Product Name:	Nebra HNT 5G Gateway	Product Model:	NEBHNT-5G-915-1
Test By:	Mike	Test mode:	Tx mode
Test Frequency:	1 GHz ~ 10 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



Suspected Data List								
NO.	Freq. [MHz]	Reading [dBuV/m]	Factor [dB]	Level [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Trace	Polarity
1	1810.60	56.36	-21.84	34.52	74.00	39.48	PK	Horizontal
2	1810.60	47.23	-21.84	25.39	54.00	28.61	AV	Horizontal
3	2715.90	47.27	-17.62	29.65	54.00	24.35	AV	Horizontal
4	2715.90	55.19	-17.62	37.57	74.00	36.43	PK	Horizontal
5	3621.20	46.33	-14.57	31.76	54.00	22.24	AV	Horizontal
6	3621.20	54.31	-14.57	39.74	74.00	34.26	PK	Horizontal
7	4526.50	46.16	-10.01	36.15	54.00	17.85	AV	Horizontal
8	4526.50	53.46	-10.01	43.45	74.00	30.55	PK	Horizontal
9	5431.80	54.16	-6.01	48.15	74.00	25.85	PK	Horizontal
10	5431.80	45.92	-6.01	39.91	54.00	14.09	AV	Horizontal
11	6337.10	43.63	-3.30	40.33	54.00	13.67	AV	Horizontal
12	6337.10	52.82	-3.30	49.52	74.00	24.48	PK	Horizontal
13	7242.40	43.22	-0.30	42.92	54.00	11.08	AV	Horizontal
14	7242.40	51.85	-0.30	51.55	74.00	22.45	PK	Horizontal
15	8147.70	43.40	1.22	44.62	54.00	9.38	AV	Horizontal
16	8147.70	52.00	1.22	53.22	74.00	20.78	PK	Horizontal
17	9053.00	53.14	2.55	55.69	74.00	18.31	PK	Horizontal
18	9053.00	43.69	2.55	46.24	54.00	7.76	AV	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor) .

-----End of report-----