

FCC PART 15.231

TEST REPORT

For

Jiangyin SINBON Electronics Co., Ltd.

288 Chengjiang Middle Rd., Jiangyin, Jiangsu, China

FCC ID: ZUA-AUTO-NACS01

Report Type: Class II Permissive Change Report	Product Name: NACS Charging Cable Assembly
Report Number:	RKSA240102001-00A
Report Date:	2024-02-20
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Approved By:	Kyle Xu
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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RKSA240102001-00A	R1V1	2024-02-20	Hardware; Antenna

Note:

This is a C2PC report, which is based on CR230954241-00, grant on 11/29/2023, the details as below:

1. The power supply has been modified and some protective measures have been added, such as current limiting resistors R7, TVS tubes D1, and loads R8. It have two different version for D1, the VIN of EUT is different.

Version	D1 Model	VIN
Version 1	P4SMA6.8A	DC 3.3V
Version 2	P4SMA18A	DC 3-15V

2. The RF triggered button SW2 and the charging gun identification resistance switch button SW1 are integrated into the SPDT button.

3. Changed the antenna size.

For above differences, we have retested all test items for version 1 and test Conducted Emissions and Radiated Emissions for version 2 and updated all photos.

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Jiangyin SINBON Electronics Co., Ltd.
Product Name:	NACS Charging Cable Assembly
Tested Model:	NACS01
Power Supply:	DC 3.3V (Version 1) DC 3-15V (Version 2)
RF Function:	SRD
Operating Band/Frequency:	315 MHz
Channel Number:	1
Modulation Type:	ASK
Antenna Type:	PCB Antenna
★Maximum Antenna Gain:	-15.0 dBi

Note: The maximum antenna gain was provided by the applicant.

All measurement and test data in this report was gathered from production sample serial number: RKSA240102001-1 (Version 1) . RKSA240102002-1 (Version 2) (Assigned by the BACL (Kunshan). The EUT supplied by the applicant was received on 2024-01-02.)

Objective

This test report is prepared for *Jiangyin SINBON Electronics Co., Ltd.* All the test measurements were performed according to the measurement procedure described in ANSI C63.10 - 2013.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, section 15.203, 15.205, 15.207, 15.209, 15.35(c) and 15.231 rules.

Related Submittal(s)/Grant(s)

No related submittal(s)/grant(s)

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10 - 2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19 dB
RF conducted test with spectrum		0.9dB
Radiated emission	9 kHz~150 kHz	3.8dB
	150 kHz~30 MHz	3.4dB
	30MHz~1GHz	6.11dB
	1GHz~6GHz	4.45dB
	6GHz ~18GHz	5.23dB
Occupied Bandwidth		0.5kHz
Temperature		1.0°C
Humidity		6%

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) Lab is accredited to ISO/IEC 17025 by NVLAP (Lab code: 600338-0) and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No. : CN5055.

SYSTEM TEST CONFIGURATION

Justification

Channel List:

Channel	Frequency (MHz)
1	315

EUT Exercise Software

For radiated emission testing:
Engineering mode which can continue transmit.

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

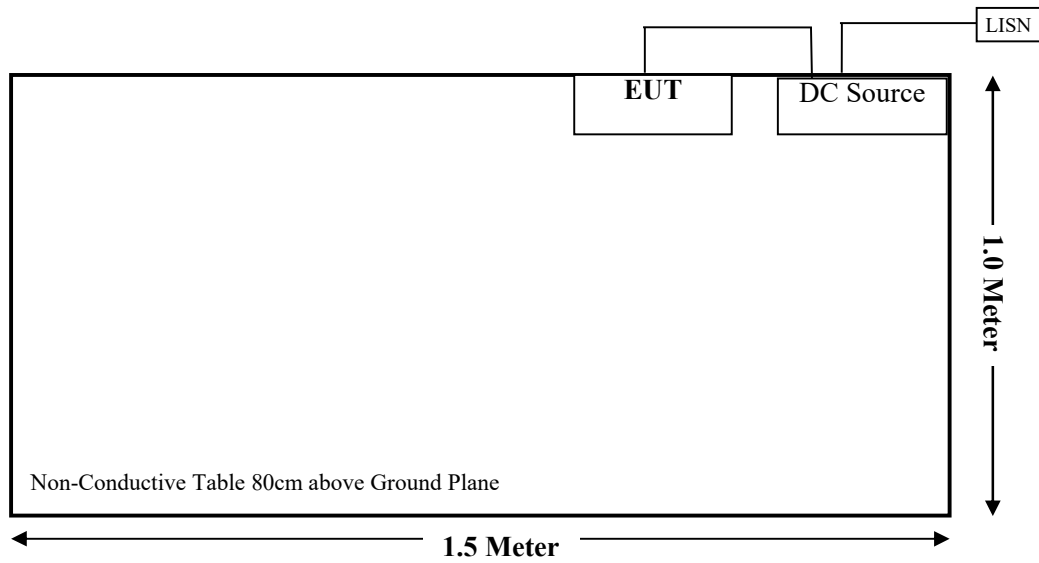
Manufacturer	Description	Model	Serial Number
ZHAOXIN	DC Source	RXN-605D	21R605D0531062

External I/O Cable

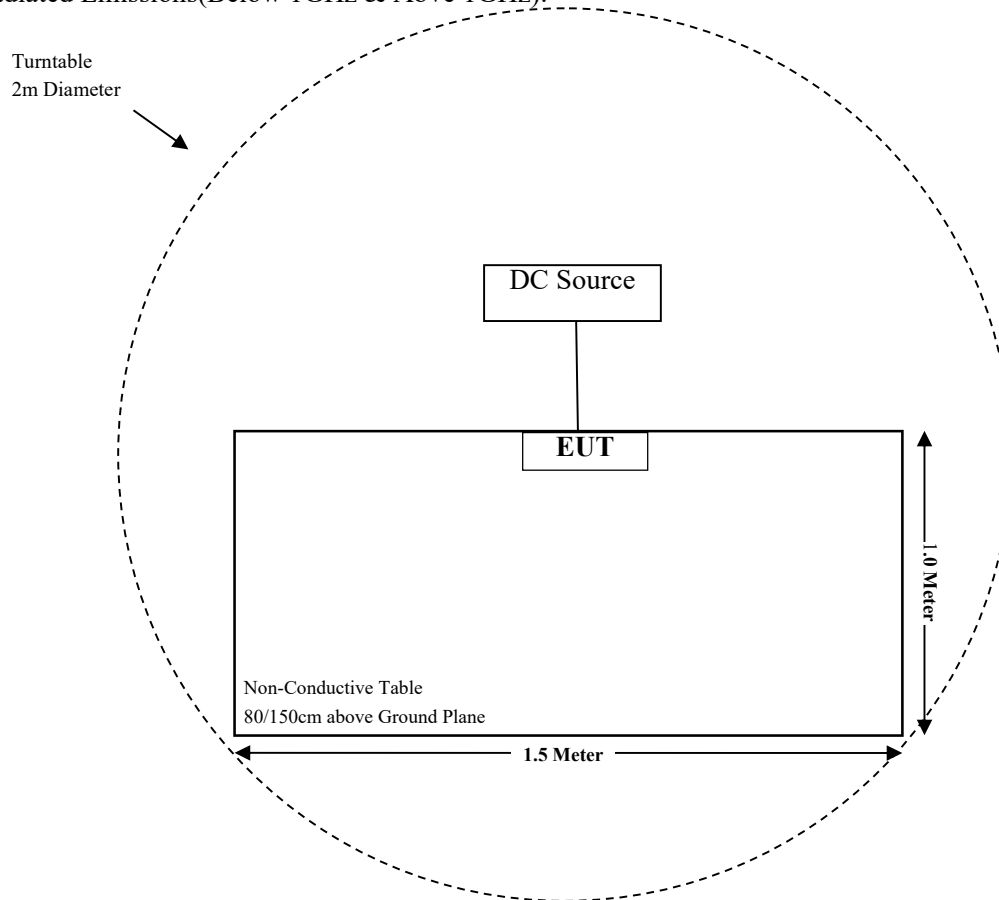
Cable Description	Length (m)	From Port	To
Power Cable 1	2.0	EUT	DC Source
Power Cable 2	1.5	DC Source	LISN

Block Diagram of Test Setup

For Conducted Emissions:



For Radiated Emissions(Below 1GHz & Abve 1GHz):



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliant
§15.207(a)	Conducted Emissions	Compliant
§15.205, §15.209, §15.231(b)	Radiated Emissions	Compliant
§15.231 (a) (2)	Deactivation	Compliant
§15.231 (c)	20dB Emission Bandwidth	Compliant
§1.1307	RF Exposure Evaluation	Compliant

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test (Chamber 1#)					
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2023-05-23	2024-05-22
ETS-LINDGREN	LOOP Antenna	6512	00108100	2023-11-09	2024-11-08
Sunol Sciences	Hybrid Antenna	JB3	A090314-1	2023-11-11	2024-11-10
Sonoma Instrument	Amplifier	310N	171205	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-8	008	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-9	009	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-10	010	2023-05-23	2024-05-22
Rohde & Schwarz	Test Software	EMC32	100361	N/A	N/A
Radiated Emission Test (Chamber 2#)					
Rohde & Schwarz	EMI Test Receiver	ESU40	100207/040	2023-05-19	2024-05-18
ETS-LINDGREN	Horn Antenna	3115	9311-4159	2023-12-02	2024-12-01
A.H.Systems,inc	Amplifier	PAM-0118P	512	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-11	011	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-12	012	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-13	013	2023-05-23	2024-05-22
Rohde & Schwarz	Test Software	EMC32	100361	N/A	N/A
Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR3	101746	2023-05-23	2024-05-22
Rohde & Schwarz	LISN	ENV216	101115	2023-05-23	2024-05-22
Rohde & Schwarz	Pulse Limiter	ESH3-Z2	0357.8810.54	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-15	015	2023-05-23	2024-05-22
Audix	Test Software	e3	V9	N/A	N/A

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC§15.203 - ANTENNA REQUIREMENT

Applicable Standard

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 shall be considered sufficient to comply with the provisions of this section.

Antenna Connected Construction

The EUT has a PCB antenna which were permanently attached and each antenna gain is -15 dBi; fulfill the requirement of this section. Please refer to EUT photos.

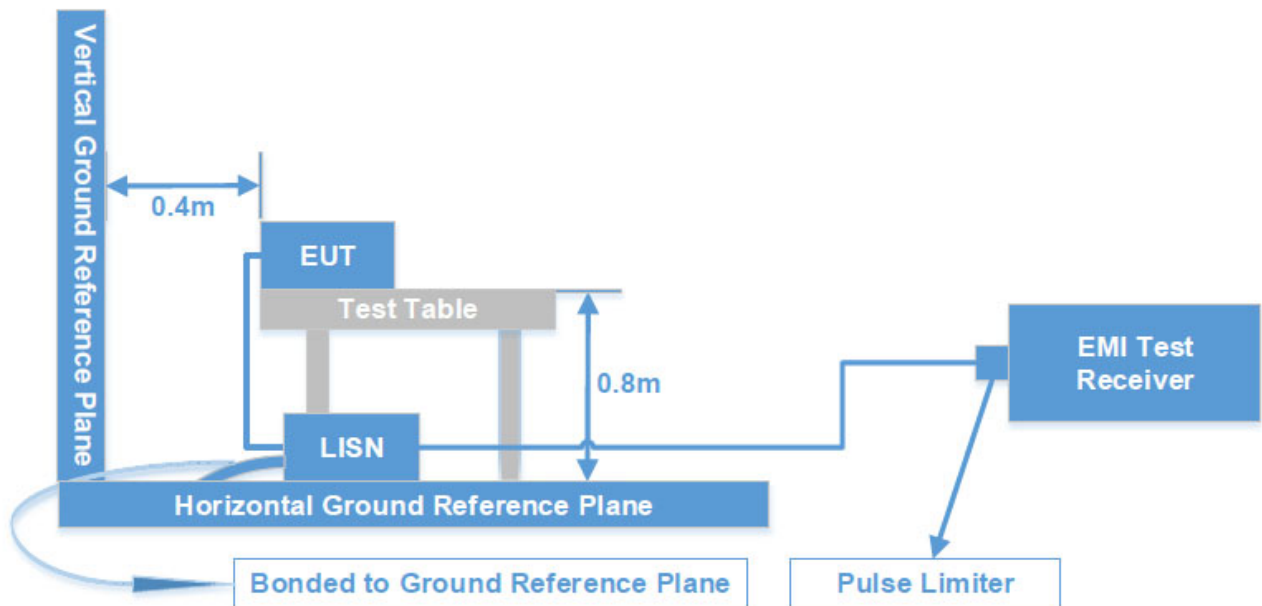
Result: Compliant.

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a)

Test System Setup



The measurement procedure of EUT setup is according with ANSI C63.10-2013. The related limit was specified in FCC Part 15.207.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	VBW
150 kHz – 30 MHz	9 kHz	30 kHz

Test Procedure

ANSI C63.10-2013 clause 6.2

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

If the maximum peak value of the emissions is below the average limit, the QP value and average value measurement will not need to be performed and only record the maximum peak measured value to meet the requirements.

Level & Over Limit Calculation

The Level is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation from the Meter Reading. The basic equation is as follows:

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)

Level (dBμV) = Read level (dBμV) + Factor (dB)

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of 7 dB means the emission is 7 dB above the limit. The equation for Over Limit calculation is as follows:

Over Limit (dB) = Level (dBμV) - Limit (dBμV)

Test Results Summary

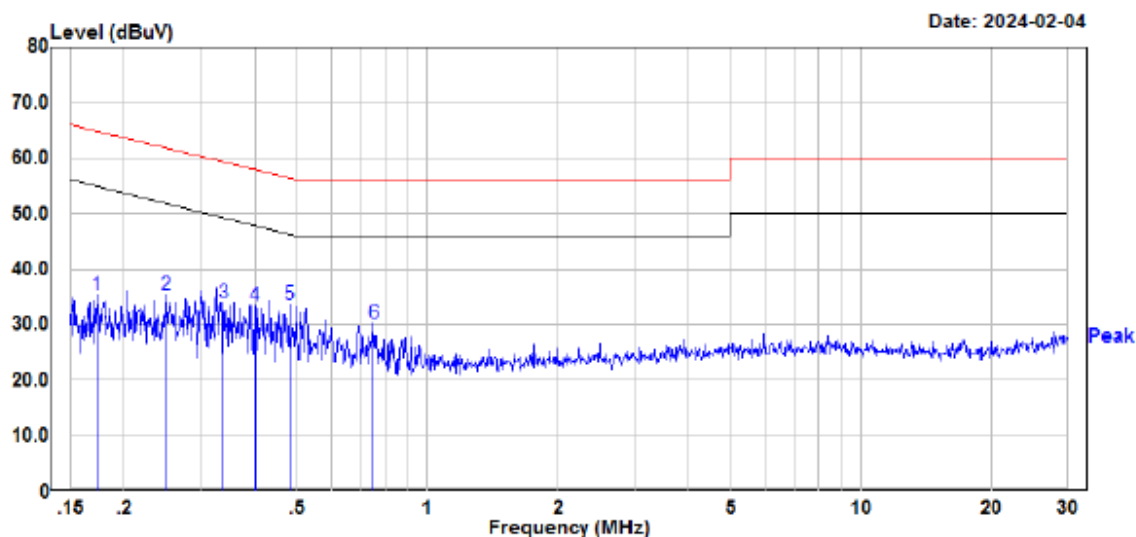
According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

Test Data

Environmental Conditions & Test Information

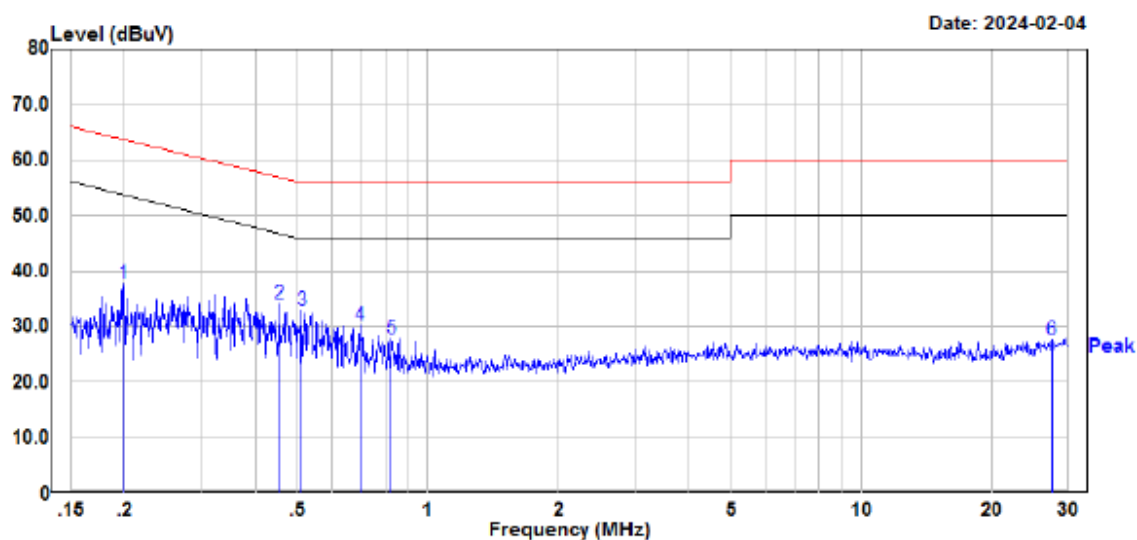
Temperature:	22.0 °C
Relative Humidity:	49 %
ATM Pressure:	102.5 kPa
Test Date:	2024-02-04
Test Engineer:	Aaron Sun

Test Result: Compliant.

Version 1:**Line:**

Site : CE
Condition : FCC Part 15.207
: DET:Peak
Model : NACS01 (version 1)
Phase : L
Voltage : 120V/60HZ
Mode : Transmitting
Test Equipment : ENV216,ESR
Temperature : 22.0°C
Humidity : 49%
Atmospheric pressure: 102.5kPa
Test Engineer : Aaron Sun

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.172	15.31	19.92	35.23	64.84	-29.61	Peak
2	0.249	15.31	19.98	35.29	61.78	-26.49	Peak
3	0.338	13.88	20.04	33.92	59.25	-25.33	Peak
4	0.400	13.38	20.07	33.45	57.84	-24.39	Peak
5	0.482	13.46	20.11	33.57	56.31	-22.74	Peak
6	0.750	10.25	20.00	30.25	56.00	-25.75	Peak

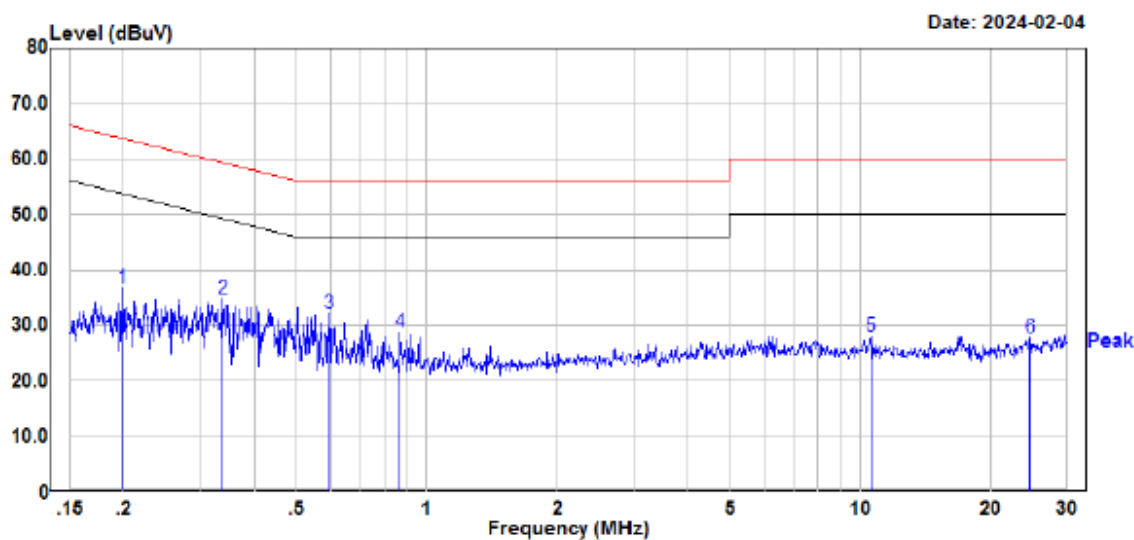
Neutral:

Site : CE
Condition : FCC Part 15.207
: DET:Peak
Model : NACS01 (version 1)
Phase : N
Voltage : 120V/60HZ
Mode : Transmitting
Test Equipment : ENV216,ESR
Temperature : 22.0°C
Humidity : 49%
Atmospheric pressure: 102.5kPa
Test Engineer : Aaron Sun

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.198	17.78	19.95	37.73	63.68	-25.95	Peak
2	0.454	13.99	20.09	34.08	56.81	-22.73	Peak
3	0.511	12.77	20.11	32.88	56.00	-23.12	Peak
4	0.696	10.18	20.07	30.25	56.00	-25.75	Peak
5	0.825	7.82	19.92	27.74	56.00	-28.26	Peak
6	27.426	7.65	19.98	27.63	60.00	-32.37	Peak

Version 2:

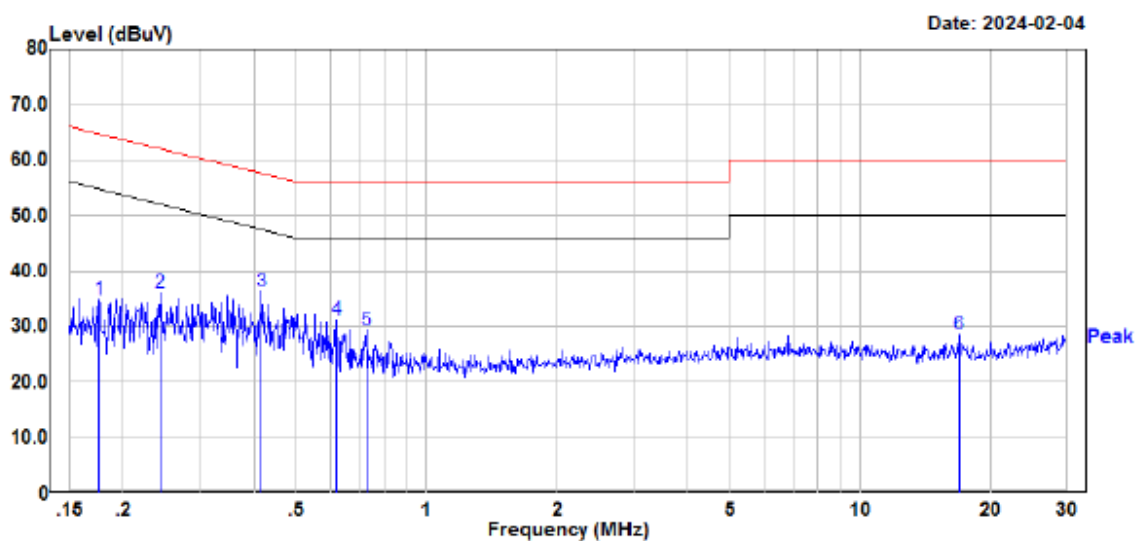
AC 120V/60 Hz, Line



Site : CE
Condition : FCC Part 15.207
: DET:Peak
Model : NACS01 (version 2)
Phase : L
Voltage : 120V/60HZ
Mode : Transmitting
Test Equipment : ENV216,ESR
Temperature : 22.0℃
Humidity : 49%
Atmospheric pressure: 102.5kPa
Test Engineer : Aaron Sun

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.198	16.83	19.95	36.78	63.68	-26.90	Peak
2	0.338	14.77	20.04	34.81	59.25	-24.44	Peak
3	0.594	12.16	20.09	32.25	56.00	-23.75	Peak
4	0.867	8.85	19.88	28.73	56.00	-27.27	Peak
5	10.585	8.14	20.00	28.14	60.00	-31.86	Peak
6	24.577	7.86	19.94	27.80	60.00	-32.20	Peak

AC 120V/60 Hz, Neutral



Site : CE
Condition : FCC Part 15.207
: DET:Peak
Model : NACS01 (version 2)
Phase : N
Voltage : 120V/60HZ
Mode : Transmitting
Test Equipment : ENV216,ESR
Temperature : 22.0°C
Humidity : 49%
Atmospheric pressure: 102.5kPa
Test Engineer : Aaron Sun

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.176	14.79	19.92	34.71	64.68	-29.97	Peak
2	0.243	16.15	19.98	36.13	61.98	-25.85	Peak
3	0.417	16.28	20.07	36.35	57.51	-21.16	Peak
4	0.621	11.01	20.08	31.09	56.00	-24.91	Peak
5	0.728	9.31	20.03	29.34	56.00	-26.66	Peak
6	16.912	8.79	19.82	28.61	60.00	-31.39	Peak

FCC §15.205, §15.209, §15.231 (b) - RADIATED EMISSIONS**Applicable Standard**

FCC §15.205, §15.209, §15.231 (b)

According to FCC §15.231(b), the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emission (microvolts/meter)
40.66-40.70	2250	225
70-130	1250	125
130-174	1250 to 3750 ★	125 to 375 ★
174-260	3750	375
260-470	3750 to 12500 ★	375 to 1250 ★
Above 470	12500	1250

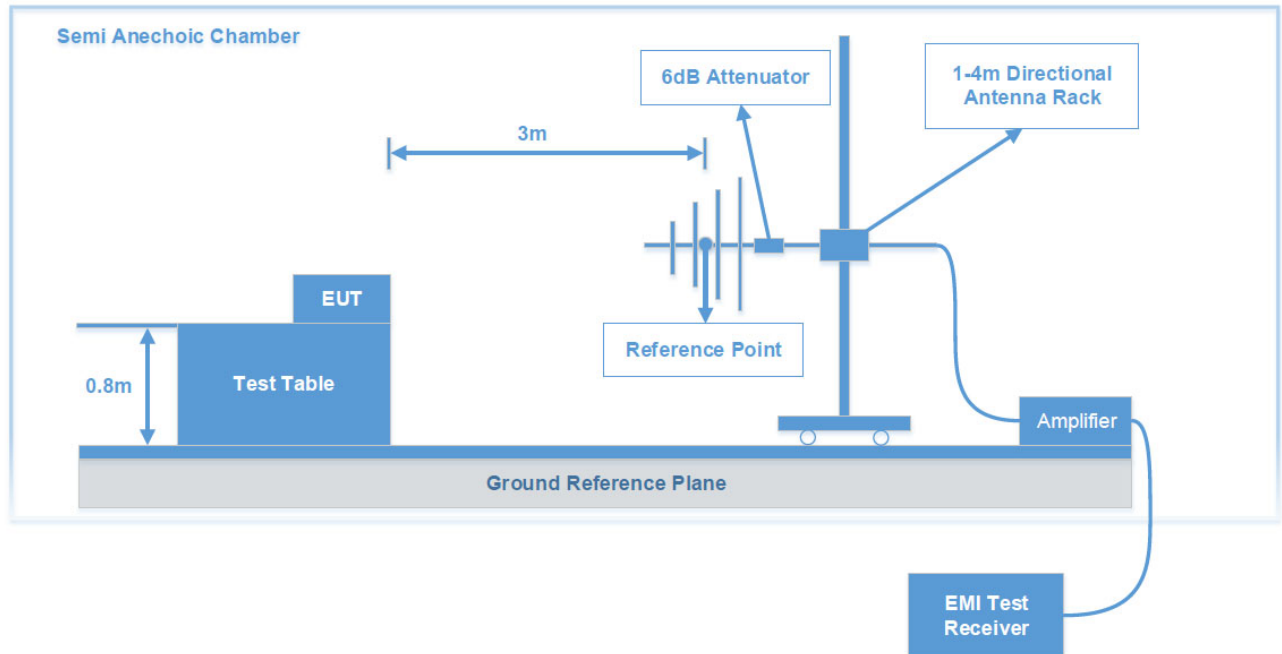
(1) The above field strength limits are specified at a distance of 3 meters. The tighter limits apply at the band edges.

(2) Intentional radiators operating under the provisions of this section shall demonstrate compliance with the limits on the field strength of emissions, as shown in the above table, based on the average value of the measured emissions. As an alternative, compliance with the limits in the above table may be based on the use of measurement instrumentation with a CISPR quasi-peak detector. The specific method of measurement employed shall be specified in the application for equipment authorization. If average emission measurements are employed, the provisions in §15.35 for averaging pulsed emissions and for limiting peak emissions apply. Further, compliance with the provisions of §15.205 shall be demonstrated using the measurement instrumentation specified in that section.

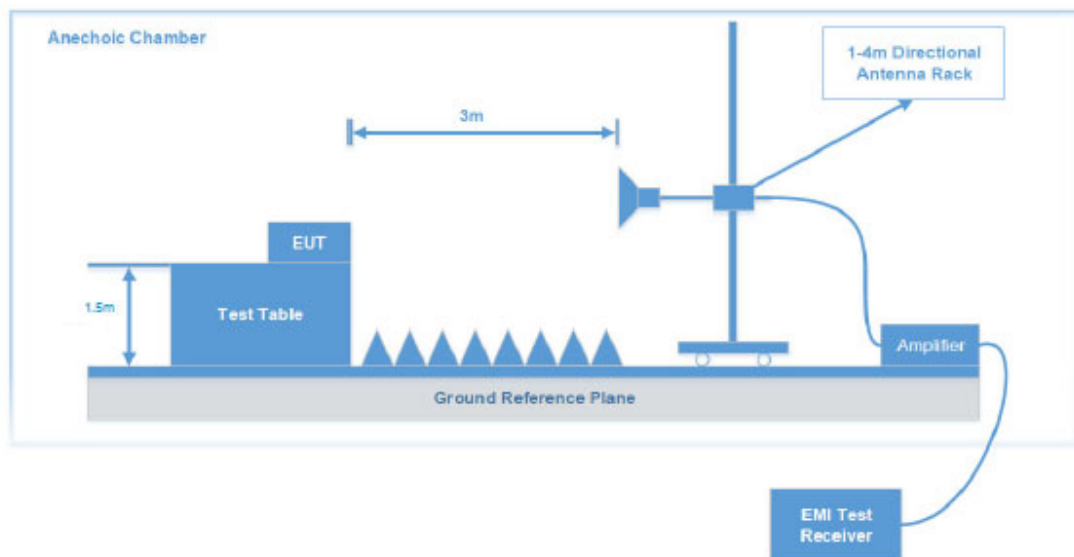
(3) The limits on the field strength of the spurious emissions in the above table are based on the fundamental frequency of the intentional radiator. Spurious emissions shall be attenuated to the average (or, alternatively, CISPR quasi-peak) limits shown in this table or to the general limits shown in §15.209, whichever limit permits a higher field strength.

Test System Setup

Below 1 GHz:



Above 1 GHz:



The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.10 - 2013. The specification used was the FCC 15 § 15.209, 15.205 and 15.231.

EMI Test Receiver Setup

The system was investigated from 9 kHz to 4 GHz.

During the radiated emission test, the EMI test Receiver was set with the following configurations:

Frequency Range	RBW	VBW	IF B/W	Measurement
9 kHz – 150 kHz	300 Hz	1 kHz	200 Hz	QP/AV
150 kHz – 30 MHz	10 kHz	30 kHz	9 kHz	QP/AV
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	PK
Above 1 GHz	1 MHz	3 MHz	/	PK

Test Procedure

Maximizing procedure was performed on at least six (6) highest emissions to ensure that the EUT complied with all installation combinations.

If the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at least 6 dB below the QP emission limit, there's no need to record the measured QP level of the emissions in the report.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude (dB μ V/m) = Meter Reading (dB μ V) + Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin (dB) = Limit (dB μ V/m) – Corrected Amplitude (dB μ V/m)

Test Results Summary

According to the data in the following table, the EUT complied with the FCC §15.205, §15.209, §15.231 (b).

Test Data

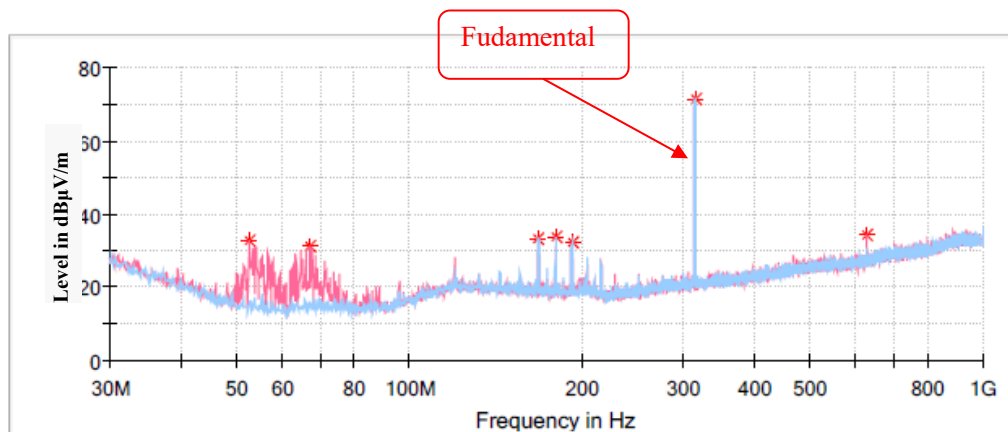
Environmental Conditions & Test Information

Frequency Range:	Below 1 GHz	Above 1 GHz
Temperature:	16.8 °C	20.3 °C
Relative Humidity:	41 %	52 %
ATM Pressure:	102.5 kPa	102.5 kPa
Test Date:	2024-01-17	2024-01-17
Test Engineer:	Joe Zhang	Peter Wang

Test mode: Transmitting
After pre-scan in the X, Y and Z axes of orientation, the worst case is below:
For 9kHz-30MHz, the amplitude of spurious emissions attenuated more than 20 dB below the limit was not be recorded.

30MHz-1GHz*(Pre-scan in the X, Y and Z axes of orientation, the worst case Y-axis of orientation was recorded.)***Version 1:****Common Information**

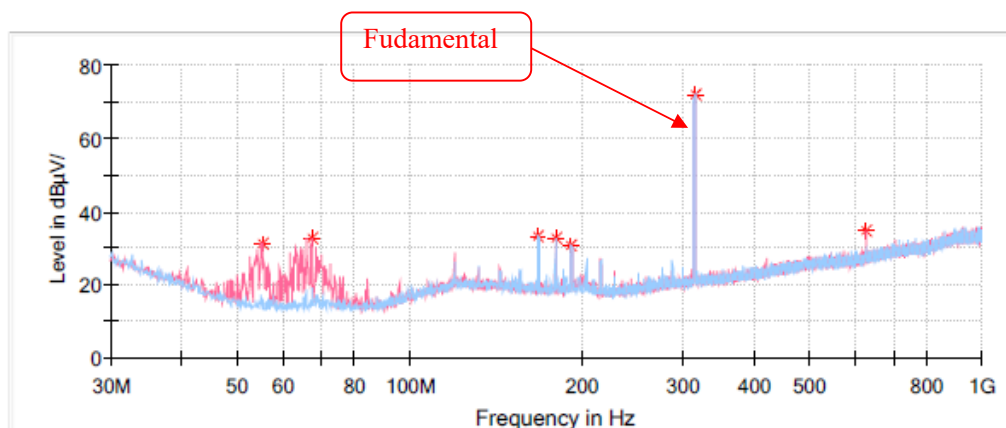
Project No:	RKSA240102001
EUT Model:	NACS01 (version 1)
Test Mode:	Transmitting
Standard:	FCC Part 15.231 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESCI, JB3, 310N
Temperature:	16.8°C
Humidity:	41%
Barometric Pressure:	102.5kPa
Test Engineer:	Joe Zhang
Test Date:	2024/1/17

**Critical_Freqs**

Frequency (MHz)	Corrected Amplitude MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
52.552500	32.79	55.62	22.83	100.0	V	84.0	-16.9
67.102500	31.11	55.62	24.51	200.0	V	67.0	-17.0
167.982500	33.17	43.50	10.33	200.0	H	157.0	-12.8
179.865000	33.56	55.62	22.06	200.0	H	302.0	-13.3
192.111250	32.04	55.62	23.58	200.0	H	317.0	-12.8
315.000000	71.61	95.62	24.01	100.0	H	12.0	-10.7
630.000000	34.08	75.62	41.54	100.0	V	34.0	-4.1

Version 2:**Common Information**

Project No:	RKSA240102001
EUT Model:	NACS01 (version 2)
Test Mode:	Transmitting
Standard:	FCC Part 15.231 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESCI, JB3, 310N
Temperature:	16.8°C
Humidity:	41%
Barometric Pressure:	102.5kPa
Test Engineer:	Joe Zhang
Test Date:	2024/1/17

**Critical Freqs**

Frequency (MHz)	Corrected Amplitude	Limit (dBμ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
	MaxPeak (dBμ V/m)						
55.220000	31.44	55.62	24.18	100.0	V	18.0	-17.1
67.587500	32.82	55.62	22.80	100.0	V	110.0	-16.9
168.103750	33.41	43.50	10.09	200.0	H	309.0	-12.9
180.228750	32.51	55.62	23.11	100.0	H	152.0	-13.3
191.868750	30.80	55.62	24.82	200.0	H	330.0	-12.8
315.000000	71.80	95.62	23.82	100.0	H	0.0	-10.7
630.000000	34.68	75.62	40.94	100.0	V	38.0	-4.1

1GHz-4 GHz

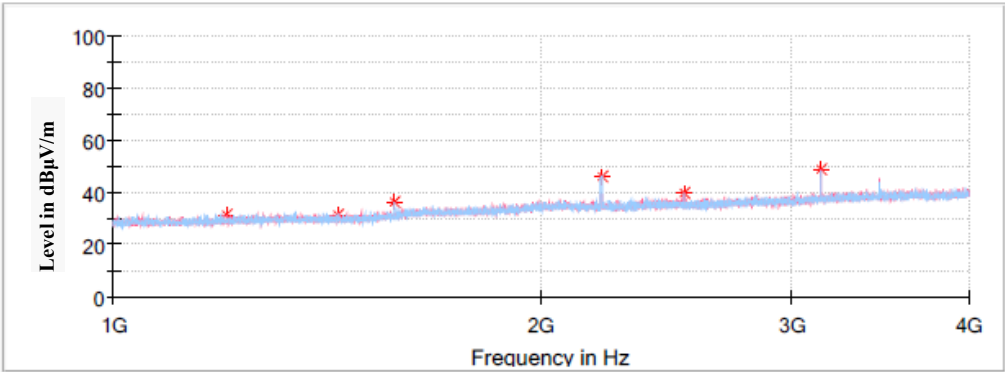
(Pre-scan in the X, Y and Z axes of orientation, the worst case **Y-axis of orientation** was recorded.)

Version 1:

Common Information

Project No.:	RKSA240102001
EUT Model:	NACS01 (version 1)
Test Mode:	Transmitting
Standard:	FCC Part 15.231 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40、3115、PAM-0118P
Temperature:	20.3℃
Humidity:	52%
Atmospheric pressure:	102.5KPa
Test Engineer:	Peter Wang
Test Date:	2024/1/17

Full Spectrum

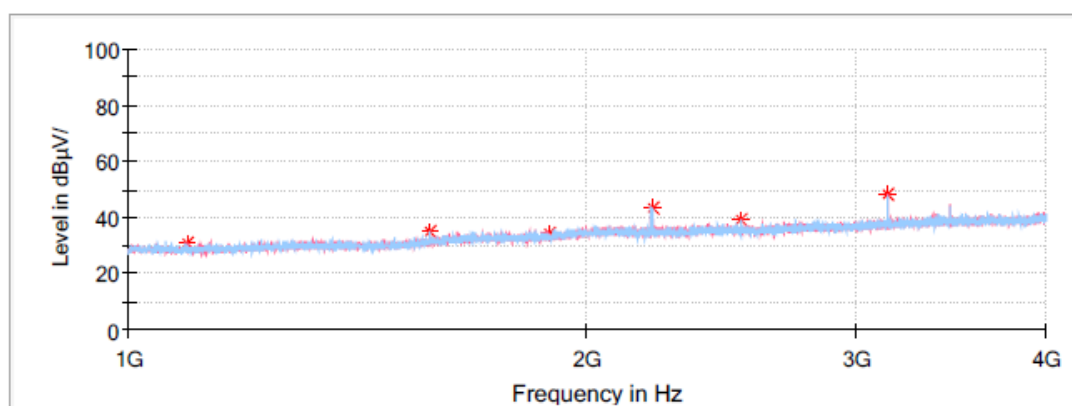


Critical Freqs

Frequency (MHz)	Corrected Amplitude MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1202.500000	31.71	74.00	42.29	200.0	V	10.0	-14.9
1436.500000	31.48	74.00	42.52	100.0	H	137.0	-14.1
1575.100000	36.66	74.00	37.34	100.0	H	152.0	-13.4
2205.000000	46.12	74.00	27.88	200.0	H	48.0	-10.2
2520.000000	39.94	75.62	35.68	100.0	H	176.0	-9.7
3150.000000	48.88	75.62	26.74	100.0	V	197.0	-7.4

Version 2:**Common Information**

Project No.: RKSA240102001
EUT Model: NACS01 (version 2)
Test Mode: Transmitting
Standard: FCC Part 15.231 & FCC Part 15.205 & FCC Part 15.209
Test Equipment: ESU40、3115、PAM-0118P
Temperature: 20.3℃
Humidity: 52%
Atmospheric pressure: 101.5KPa
Test Engineer: Peter Wang
Test Date: 2024/1/17

Full Spectrum**Critical_Freqs**

Frequency (MHz)	Corrected Amplitude	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
	MaxPeak (dB μ V/m)						
1093.600000	30.85	74.00	43.15	100.0	V	247.0	-15.2
1575.000000	34.84	74.00	39.16	200.0	H	191.0	-13.4
1890.000000	34.49	75.62	41.13	100.0	H	207.0	-11.3
2205.000000	43.56	74.00	30.44	200.0	H	355.0	-10.2
2520.000000	39.13	75.62	36.49	100.0	V	7.0	-9.7
3150.000000	47.93	75.62	27.69	100.0	V	7.0	-7.4

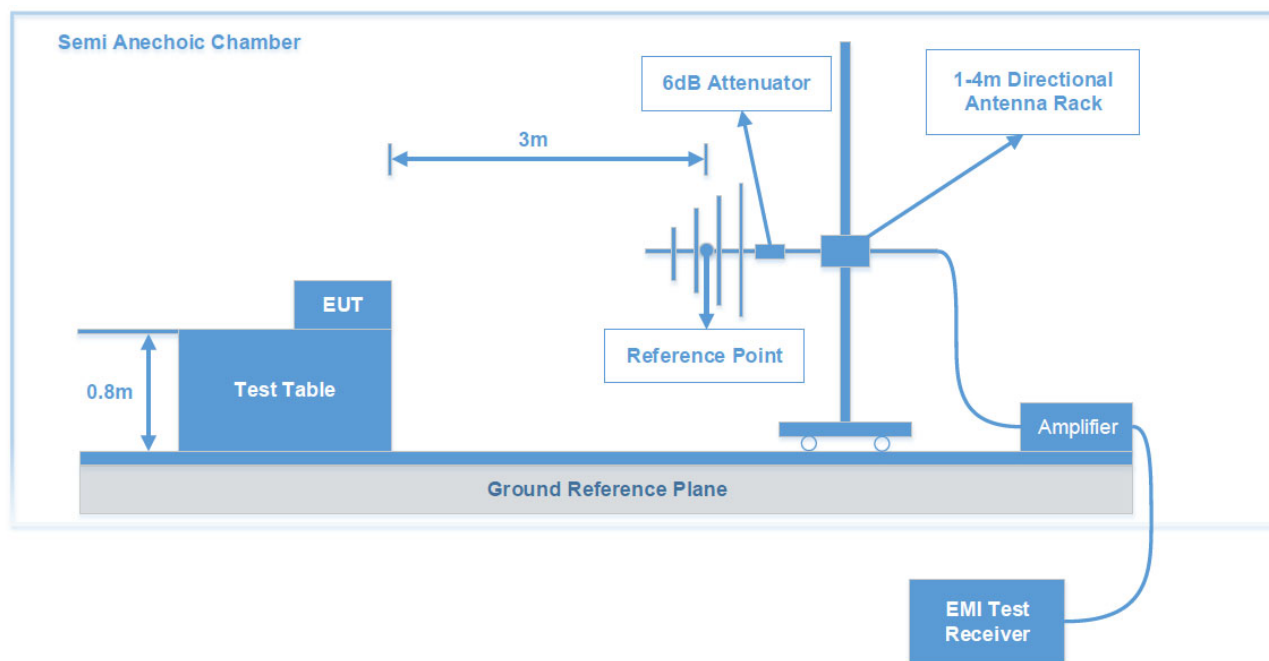
Note: The measured peak level of the emissions that the measuring more than 20 dB below the peak limit , there's not record the measured average level of the emissions in the report.

FCC §15.231(a) (2) - DEACTIVATION TESTING

Applicable Standard

Per FCC §15.231(a), (2) A transmitter activated automatically shall cease transmission within 5 seconds after activation.

Test System Setup



Test Procedure

1. With the EUT's antenna attached, the waveform was received by the test antenna which was connected to the spectrum analyzer.
2. Set center frequency of spectrum analyzer=operating frequency.
3. Set the spectrum analyzer as RBW=100k VBW=300k Span=0Hz.
4. Repeat above procedures until all frequency measured was complete.

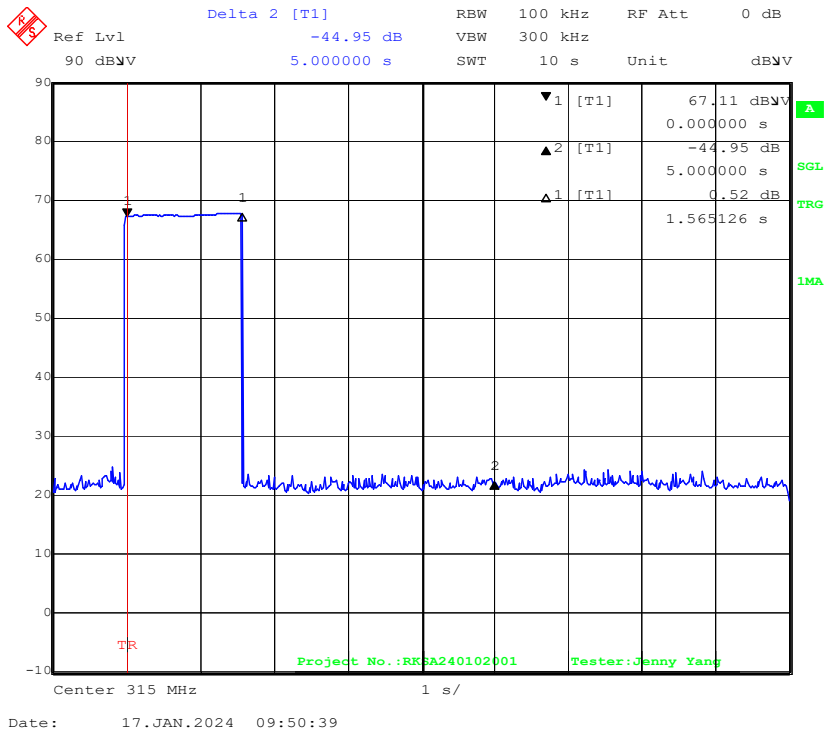
Test Data

Environmental Conditions & Test Information

Temperature:	23.8 °C
Relative Humidity:	49 %
ATM Pressure:	102.5 kPa
Test Date:	2024-01-17
Test Engineer:	Jenny Yang

Test mode: Transmitting

Low Channel, T_{Stop}<5s

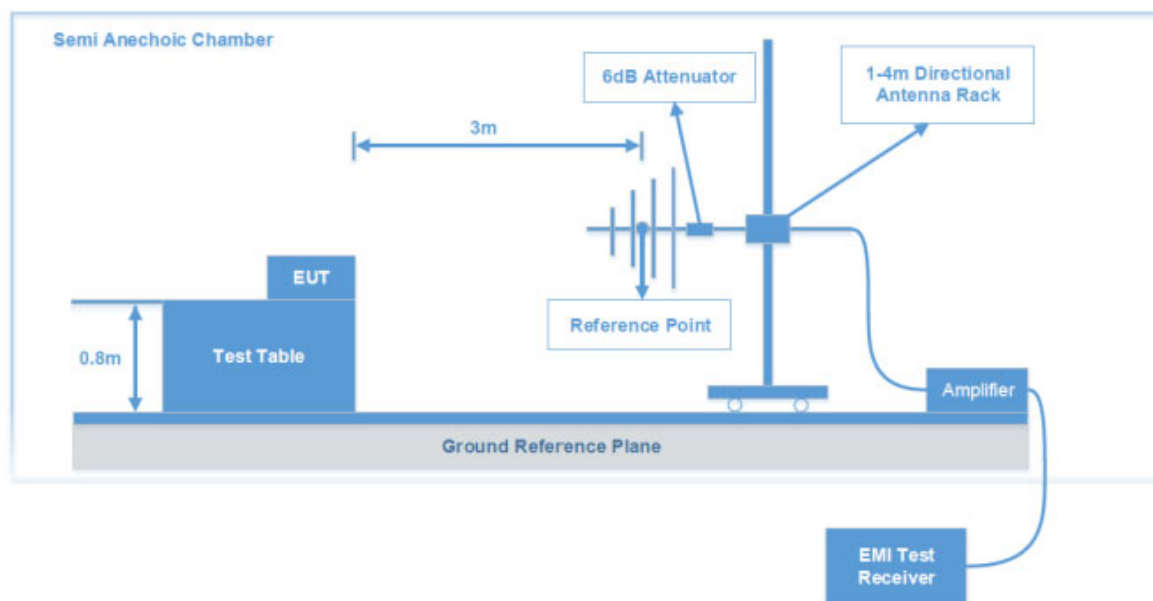


FCC §15.231(c) - 20dB EMISSION BANDWIDTH TESTING

Applicable Standard

Per 15.231(c), The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. Bandwidth is determined at the points 20 dB down from the modulated carrier.

Test System Setup



Test Procedure

With the EUT's antenna attached, the waveform was received by the test antenna which was connected to the spectrum analyzer, plot the 20 dB bandwidth.

Test Data

Environmental Conditions & Test Information

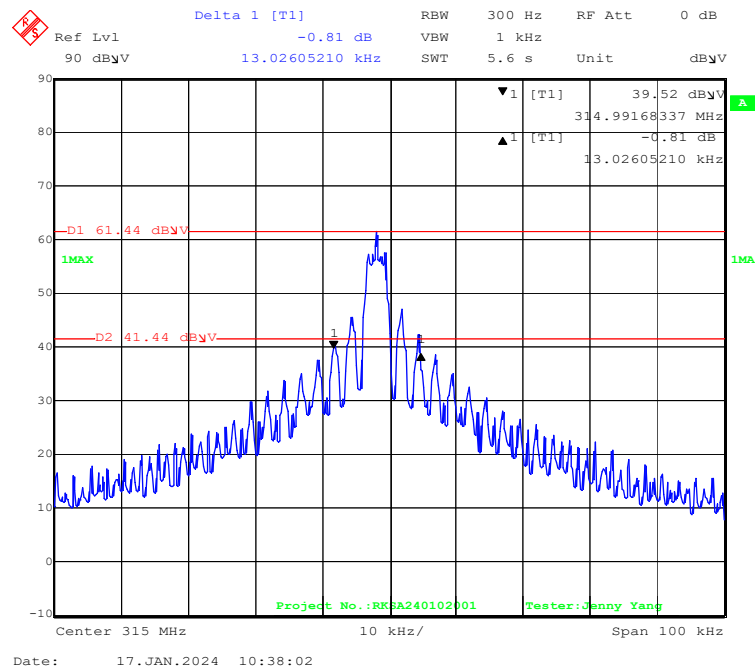
Temperature:	23.8 °C
Relative Humidity:	49 %
ATM Pressure:	102.5 kPa
Test Date:	2024-01-17
Test Engineer:	Jenny Yang

Test Mode: Transmitting

Channel Frequency (MHz)	20dB Bandwidth (kHz)	Limit (kHz)	Result
315	13.026	787.5	Pass

Note: Limit = 0.25% * Center Frequency = 0.25% * 315 MHz = 787.5 kHz

Low Channel, 20 dB Emission Bandwidth



RF EXPOSURE EVALUATION

Applicable Standard

§1.1307(b)(3)(i) For single RF sources (*i.e.*, any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

(A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A).

Measurement Result

Frequency (MHz)	Maximum ERP (dBm)	Maximum ERP		1-mW Test Exemption
		dBm	mW	
315	-23.40	-25.55	0.002786	Compliant

Note:

1. Chose the maximum power to do MPE analysis.
2. This device maximum E-Field level is 71.80 dB μ V/m at 3m, so the EIRP power is -23.40 dBm.
3. Pout EIRP (dBm)= Field Strength of Fundamental(dB μ V/m)-95.2

Result: Compliant. RF Exposure is exemption.

EUT PHOTOGRAPHS

Please refer to the attachment EXHIBIT A_EUT EXTERNAL PHOTOGRAPHS and EXHIBIT B_EUT INTERNAL PHOTOGRAPHS.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment EXHIBIT C_ TEST SETUP PHOTOGRAPHS.

Declarations

1. Bay Area Compliance Laboratories Corp. (Kunshan) is not responsible for authenticity of any test data provided by the applicant. Test data from the applicant that may affect test results are marked with an asterisk “★”. The model number, product name, address, trademark, etc. from the applicant are not considered as test data.
2. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.
3. Unless required by the rule provided by the applicant or product regulations, then decision rule in this report did not consider the uncertainty.
4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $k=2$ with the 95.45% confidence interval.
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******* END OF REPORT *******