TEST REPORT

Product	:	AMS 2 Pro
Trade mark	:	bambulab
Model/Type reference	:	SA007
Serial Number	:	N/A
Report Number	:	EED32Q81560501
FCC ID	:	2A6J8-SA007
Date of Issue	:	Mar. 20, 2025
Test Standards	:	47 CFR Part 15, Subpart C
Test result	:	PASS

Prepared for:

Shenzhen Tuozhu Technology Co., Ltd.
Room 201, Building A, No. 1 First Qianwan Road, Qianhai Shengang Cooperation Zone, Shenzhen

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
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Compiled by:	Zhenxia Wen	Reviewed by:	Frazer Li
	Zhenxia Wen		Frazer Li
Approved by:	Aaron Ma	Date:	Mar. 20, 2025
	Aaron Ma		

Check No.: 6556300924

1 Version

Version No.	Date	Description
00	Mar. 20, 2025	Original

2 Contents

3 Test Summary

Test Item	FCC Test Requirement	Test Method	Result
Antenna Requirement	47 CFR Part 15, Subpart C Section 15.203	ANSI C63.10 2013	Pass
Conducted Emission (150KHz to 30MHz)	47 CFR Part 15, Subpart C Section 15.207	ANSI C63.10 2013	Pass
Electric Field Strength of Fundamental and Outside the Allocated bands	47 CFR Part 15, Subpart C Section 15.225(a)/(b)/(c)	ANSI C63.10 2013	Pass
Radiated Emission	47 CFR Part 15, Subpart C Section 15.225(d)/15.209	ANSI C63.10 2013	Pass
Frequency Tolerance	47 CFR Part 15, Subpart C Section 15.225(e)	ANSI C63.10 2013	Pass
20dB Occupied Bandwidth	47 CFR Part 15, Subpart C Section 15.215	ANSI C63.10 2013	Pass

Remark:

Note: After the product is connected to the communication line, it will open the emission mode, two identical antennas.

4 General Information

4.1 Client Information

Applicant:	Shenzhen Tuozhu Technology Co., Ltd.
Address of Applicant:	Room 201, Building A, No. 1 First Qianwan Road, Qianhai Shengang Cooperation Zone, Shenzhen
Manufacturer:	Shenzhen Tuozhu Technology Co., Ltd.
Address of Manufacturer:	Room 201, Building A, No. 1 First Qianwan Road, Qianhai Shengang Cooperation Zone, Shenzhen

4.2 General Description of E.U.T.

Product Name:	AMS 2 Pro
Model No.(EUT):	SA007
Trade Mark:	bambulab
Product Type:	☐ Mobile ☐ Portable ☒ Fixed Location
Operation Frequency:	13.56MHz
Modulation Type:	ASK
Test Power Grade:	Default
Test Software of EUT:	RF Test
Antenna Type:	Coil antenna
Power Supply:	External power supply: Input: 100-240V, 1.5A max, 50/60Hz Output: 24V DC, 4.0A Powered by H2D: 24V DC, 4.0A
Test voltage:	DC 24V
Sample Received Date:	Nov. 04, 2024
Sample tested Date:	Nov. 04, 2024 to Nov. 12, 2024

4.3 Test Environment & Test Mode

Operating Environment:	
Radiated Emissions:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010mbar
Conducted Emissions:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010mbar
Test Mode:	
Test mode:	Keep EUT working in continuous transmitting mode with 100% duty cycle.

4.4 Description of Support Units

The EUT has been tested with associated equipment below.

1）Support equipment

Description	Manufacturer	Model No.	Certification	Supplied by
3D printer	Shenzhen Tuozhu Technology Co., Ltd.	PF003-D	FCC SDOC Order No. / Report No.: EED32Q815560	Client

The auxiliary device supplies power to the device to be tested

4.5 Test Location

All tests were performed at:
Centre Testing International Group Co., Ltd.
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 3368 3668 Fax:+86 (0) 755 3368 3385
No tests were sub-contracted.
IC-Registration No.: 7408A,CAB identifier number:CN0037

4.6 Deviation from Standards

None.

4.7 Abnormalities from Standard Conditions

None.

4.8 Other Information Requested by the Customer

None.

4.9 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-18GHz)
3	Radiated Spurious emission test	3.3dB (9kHz-30MHz)
		4.3dB (30MHz-1GHz)
		4.5dB (1GHz-12.75GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

4.10 Equipment List

RF test system					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Communication test set	R&S	CMW500	107929	06-26-2024	06-25-2025
Signal Generator	R&S	SMBV100A	1407.6004K02-262149-CV	09-02-2024	09-01-2025
Spectrum Analyzer	R&S	FSV40	101200	07-18-2024	07-17-2025
RF control unit(power unit)	MWRF-test	MW100-RFCB	MW220620CTI-42	06-25-2024	06-24-2025
High-low temperature test chamber	Dong Guang Qin Zhuo	LK-80GA	QZ20150611879	12-11-2023 11-30-2024	12-10-2024 11-29-2025
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	05-29-2024	05-28-2025
BT&WI-FI Automatic test software	MWRF-test	MTS 8310	V2.0.0.0	---	---
Spectrum Analyzer	R&S	FSV3044	101509	01-17-2024 02-14-2025	01-16-2025 02-13-2026

Conducted disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Receiver	R&S	ESCI	100435	04-18-2024	04-17-2025
Temperature/ Humidity Indicator	Defu	TH128	/	04-25-2024	04-24-2025
LISN	R&S	ENV216	100098	09-19-2024	09-18-2025
Barometer	changchun	DYM3	1188	05-21-2024	05-20-2025
Test software	Fara	EZ-EMC	EMC-CON 3A1.1	---	---
Capacitive voltage probe	Schwarzbeck	CVP 9222C	00124	06-18-2024	06-17-2025
ISN	TESEQ	ISN T800	30297	12-05-2024	12-04-2025

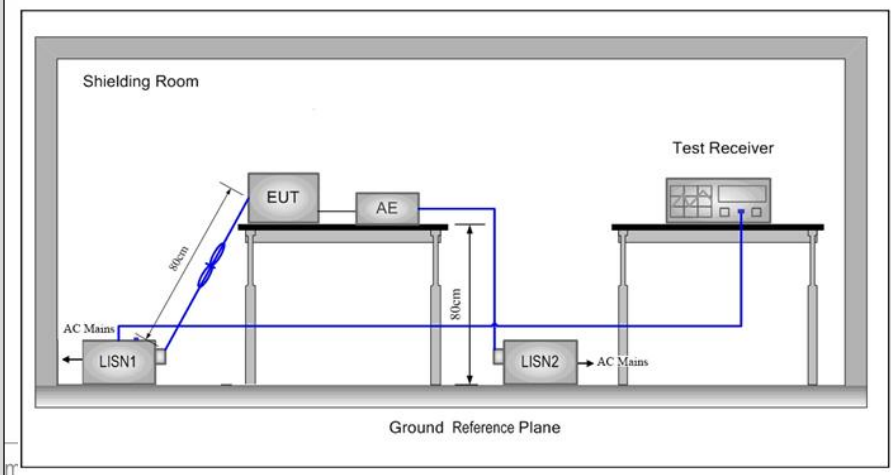
3M Semi-anechoic Chamber (2)- Radiated disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05/22/2022	05/21/2025
Receiver	R&S	ESCI7	100938-003	09/07/2024	09/06/2025
Spectrum Analyzer	R&S	FSV40	101200	07/18/2024	07/17/2025
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	9163-618	05/22/2022	05/21/2025
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04/16/2024	04/15/2025
Microwave Preamplifier	Tonscend	EMC051845SE	980380	12/05/2024	12/04/2025
Horn Antenna	A.H.SYSTEMS	SAS-574	374	07/02/2023	07/01/2026
Horn Antenna	ETS-LINGREN	BBHA 9120D	9120D-1869	04/16/2024	04/15/2025
Preamplifier	Agilent	11909A	12-1	03/22/2024	03/21/2025
Preamplifier	CD	PAP-1840-60	6041.6042	06/19/2024	06/18/2025
Test software	Fara	EZ-EMC	EMEC-3A1-Pre	---	---
Cable line	Fulai(7M)	SF106	5219/6A	05/22/2022	05/21/2025
Cable line	Fulai(6M)	SF106	5220/6A	05/22/2022	05/21/2025
Cable line	Fulai(3M)	SF106	5216/6A	05/22/2022	05/21/2025
Cable line	Fulai(3M)	SF106	5217/6A	05/22/2022	05/21/2025

5 Test Result and Measurement Data

5.1 Antenna Requirment

Standard requirement:	47 CFR Part15 C Section 15.203
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.
EUT Antenna:	
The antenna is coil antenna.	

5.2 Conducted Emissions

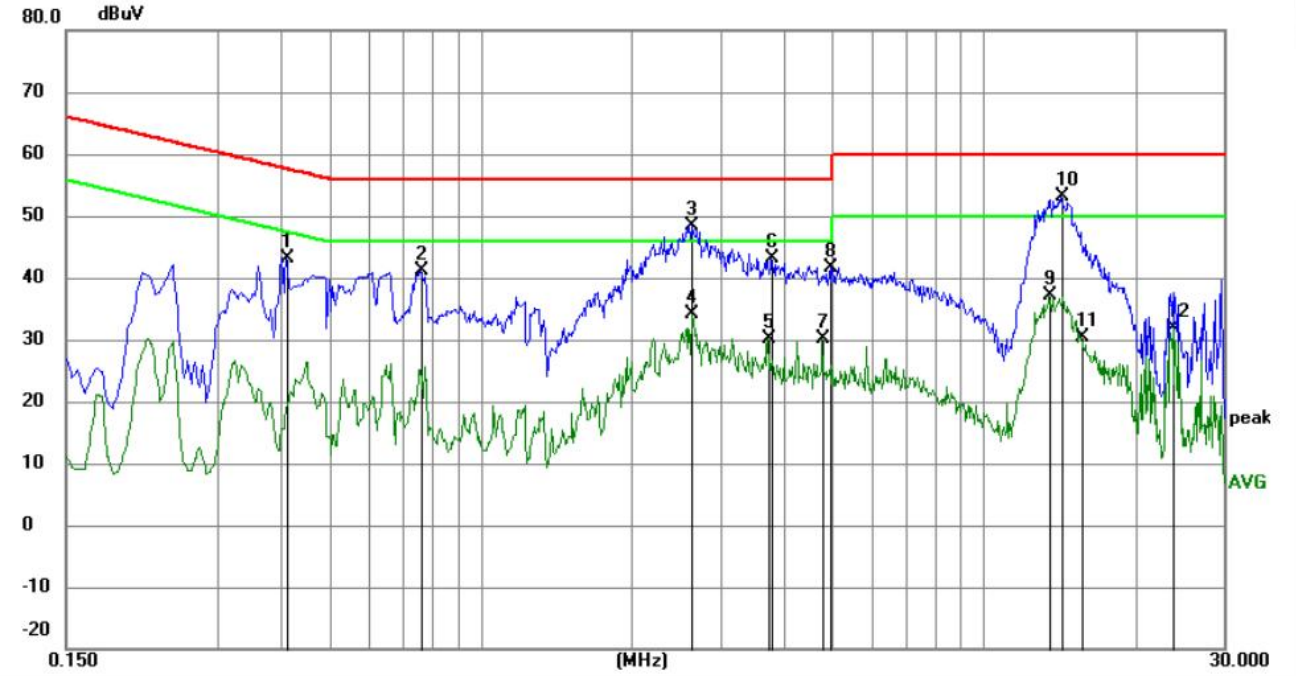
Test Requirement:	47 CFR Part 15C Section 15.207
Test Method:	ANSI C63.10: 2013
Test Frequency Range:	150kHz to 30MHz
Limit:	Frequency range (MHz) / Limit (dBuV): Quasi-peak / Average 0.15-0.5: 66 to 56* / 56 to 46* 0.5-5: 56 / 46 5-30: 60 / 50 * Decreases with the logarithm of the frequency.
Test Procedure:	1) The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane. 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) 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: 2013 on conducted measurement.
Test Setup:	

Test Mode:	Transmitting with ASK modulation.
Test Results:	Pass

Measurement Data

Mode a:

Live line:



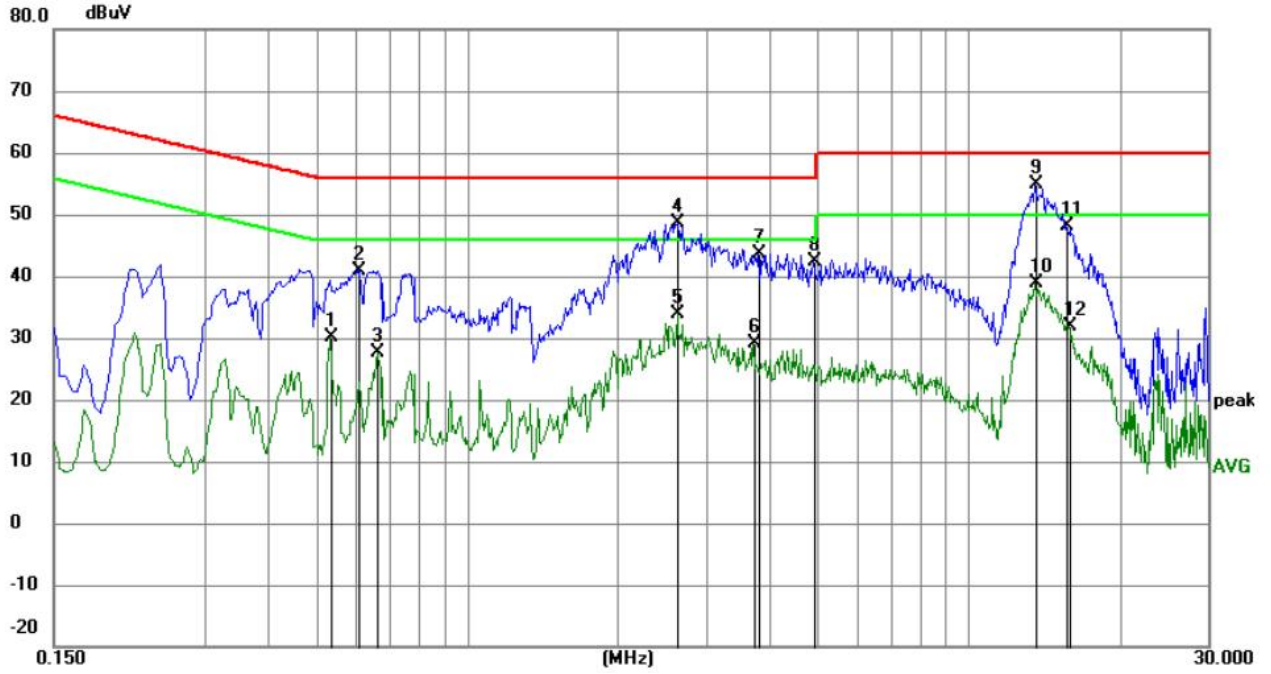
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.4110	33.43	9.79	43.22	57.63	-14.41	QP	
2		0.7620	31.22	9.86	41.08	56.00	-14.92	QP	
3		2.6340	38.60	9.77	48.37	56.00	-7.63	QP	
4		2.6340	24.29	9.77	34.06	46.00	-11.94	AVG	
5		3.7230	20.29	9.80	30.09	46.00	-15.91	AVG	
6		3.7905	33.44	9.80	43.24	56.00	-12.76	QP	
7		4.7850	20.34	9.83	30.17	46.00	-15.83	AVG	
8		4.9605	31.85	9.84	41.69	56.00	-14.31	QP	
9		13.5330	27.27	9.84	37.11	50.00	-12.89	AVG	
10	*	14.2710	43.31	9.85	53.16	60.00	-6.84	QP	
11		15.6975	20.39	9.88	30.27	50.00	-19.73	AVG	
12		23.8650	21.82	9.94	31.76	50.00	-18.24	AVG	

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

Mode a:

Neutral line:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.5325	20.45	9.72	30.17	46.00	-15.83	AVG	
2		0.6090	31.37	9.63	41.00	56.00	-15.00	QP	
3		0.6630	17.73	9.85	27.58	46.00	-18.42	AVG	
4		2.6340	38.80	9.77	48.57	56.00	-7.43	QP	
5		2.6340	24.21	9.77	33.98	46.00	-12.02	AVG	
6		3.7230	19.25	9.80	29.05	46.00	-16.95	AVG	
7		3.8040	33.87	9.80	43.67	56.00	-12.33	QP	
8		4.9064	32.56	9.84	42.40	56.00	-13.60	QP	
9	*	13.5825	44.99	9.84	54.83	60.00	-5.17	QP	
10		13.5825	29.11	9.84	38.95	50.00	-11.05	AVG	
11		15.6840	38.21	9.88	48.09	60.00	-11.91	QP	
12		15.8145	21.98	9.88	31.86	50.00	-18.14	AVG	

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

5.3 Electric Field Strength of Fundamental and Outside the Allocated bands

Test Requirement: 47 CFR Part 15, Subpart C Section 15.225(a)/(b)/(c)

Test Method: ANSI C63.10: 2013

Test Site: 3m (Semi-Anechoic Chamber)

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak

Limit:

Frequency Range(MHz)	E-field Strength Limit @ 30 m (μV/m)	E-field Strength Limit @ 3 m (dBμV/m)
13.560 ± 0.007	15848	124
13.410 to 13.553 13.567 to 13.710	334	90
13.110 to 13.410 13.710 to 14.010	106	81

Note: Where the limits have been defined at one distance, and a signal level measured at another, the limits have been extrapolated using the following formula:

Extrapolation(dB)=40log$_{10}$(Measurement Distance/Specification Distance)

Test Setup:

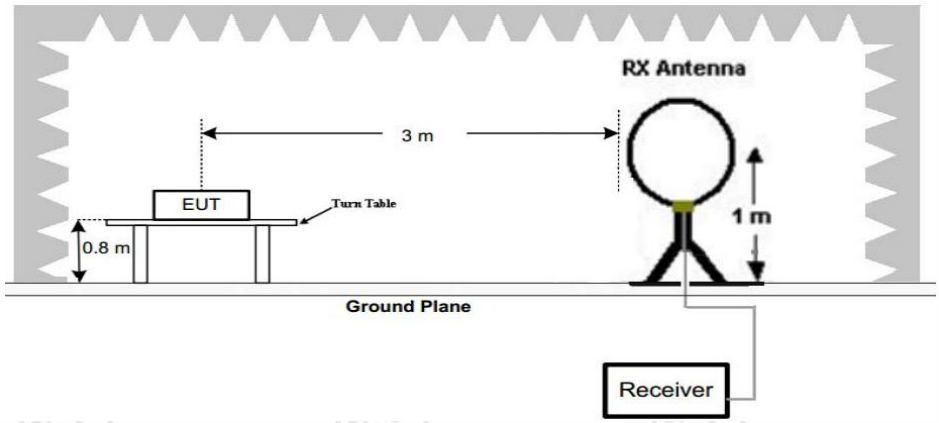


Figure 1. Below 30MHz

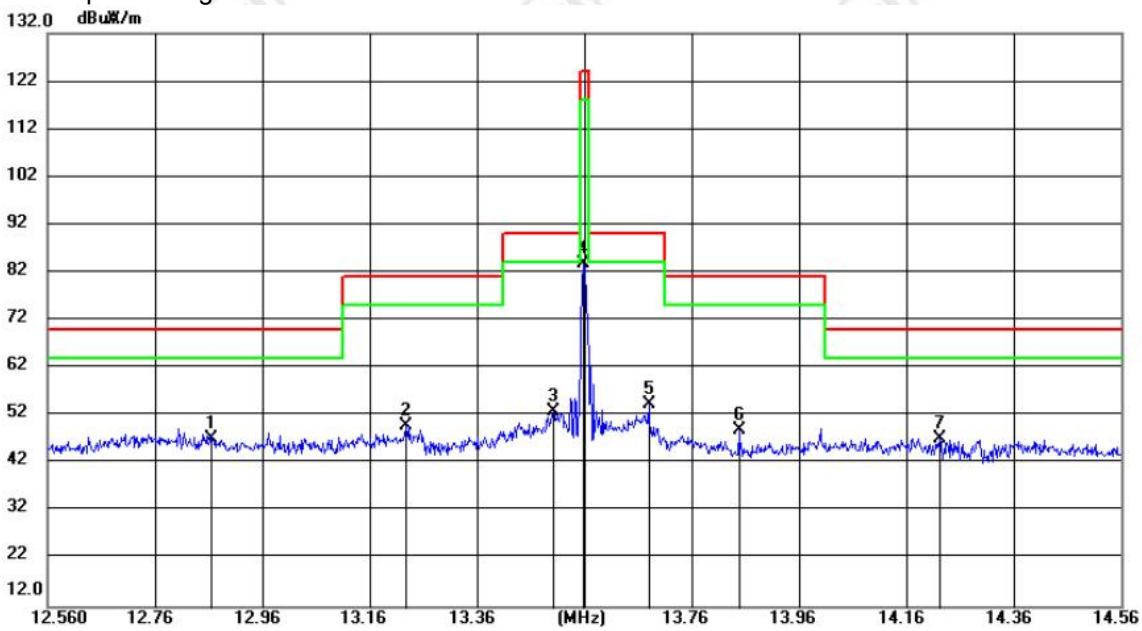
Test Procedure:

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height is varied from one meter to four meters above the

	ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. 7. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.
Test Mode:	Transmitting with ASK modulation.
Test Result:	Pass

Measurement MIMO Data

X axis positioning



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		12.8659	26.62	20.49	47.11	70.00	-22.89	peak	100	154	
2		13.2279	29.32	20.50	49.82	81.00	-31.18	peak	100	112	
3		13.5020	32.35	20.50	52.85	90.00	-37.15	peak	100	130	
4		13.5579	63.37	20.50	83.87	124.00	-40.13	peak	100	114	
5		13.6800	34.02	20.50	54.52	90.00	-35.48	peak	100	155	
6		13.8480	28.42	20.50	48.92	81.00	-32.08	peak	100	120	
7	*	14.2219	26.87	20.49	47.36	70.00	-22.64	peak	100	21	

Remark:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic

equation with a sample calculation is as follows:

Factor= Antenna Factor + Cable Factor – Preamplifier Factor,

Level = Read Level + Factor,

Over Limit=Level-Limit Line.

5.4 Radiated Emissions

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.225(d),
Test Method:	ANSI C63.10: 2013
Test Site:	3m (Semi-Anechoic Chamber)

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Peak	100 kHz	300kHz	Peak

Limit:

Frequency	Field strength (microvolt/meter)	Limit (dBuV/m) @ 3 m	Remark
0.009MHz-0.490MHz	2400/F(kHz) @300m	128.5-93.8	Quasi-peak
0.490MHz-1.705MHz	24000/F(kHz) @30m	73.8-63	Quasi-peak
1.705MHz-30MHz	30 @30m	70	Quasi-peak
30MHz-88MHz	100 @3m	40.0	Quasi-peak
88MHz-216MHz	150 @3m	43.5	Quasi-peak
216MHz-960MHz	200 @3m	46.0	Quasi-peak
960MHz-1GHz	500 @3m	54.0	Quasi-peak

Note: Where the limits have been defined at one distance, and a signal level measured at another, the limits have been extrapolated using the following formula:

Extrapolation(dB)=40log$_{10}$(Measurement Distance/Specification Distance)

Test Setup:

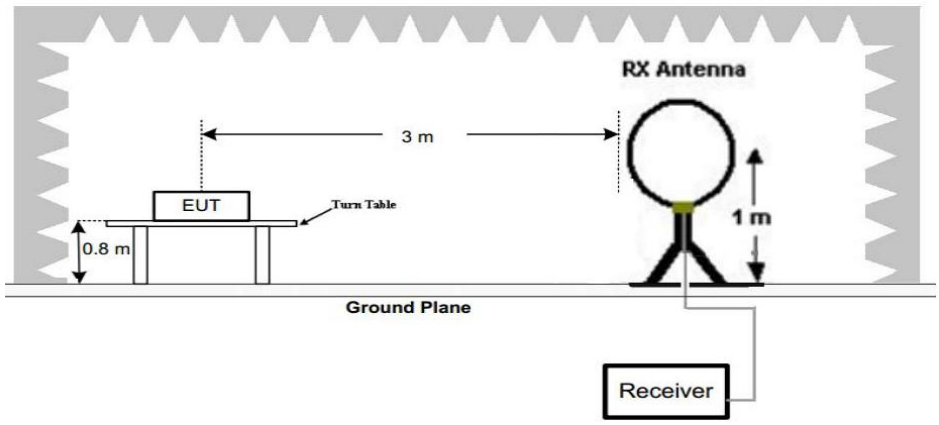


Figure 1. Below 30MHz

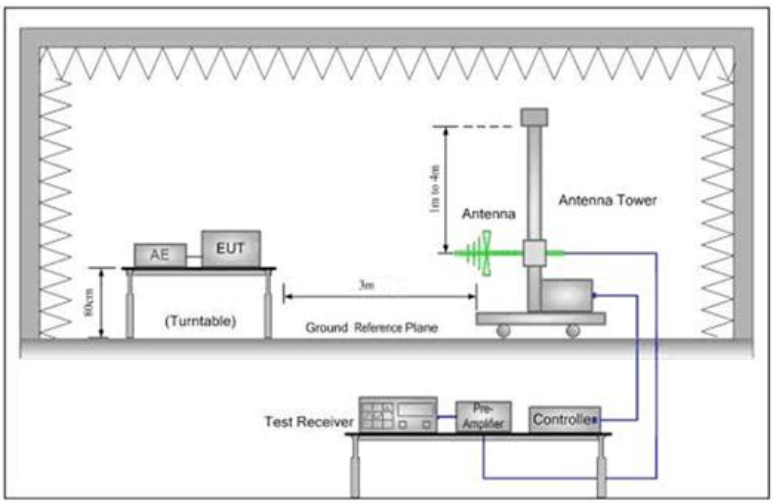


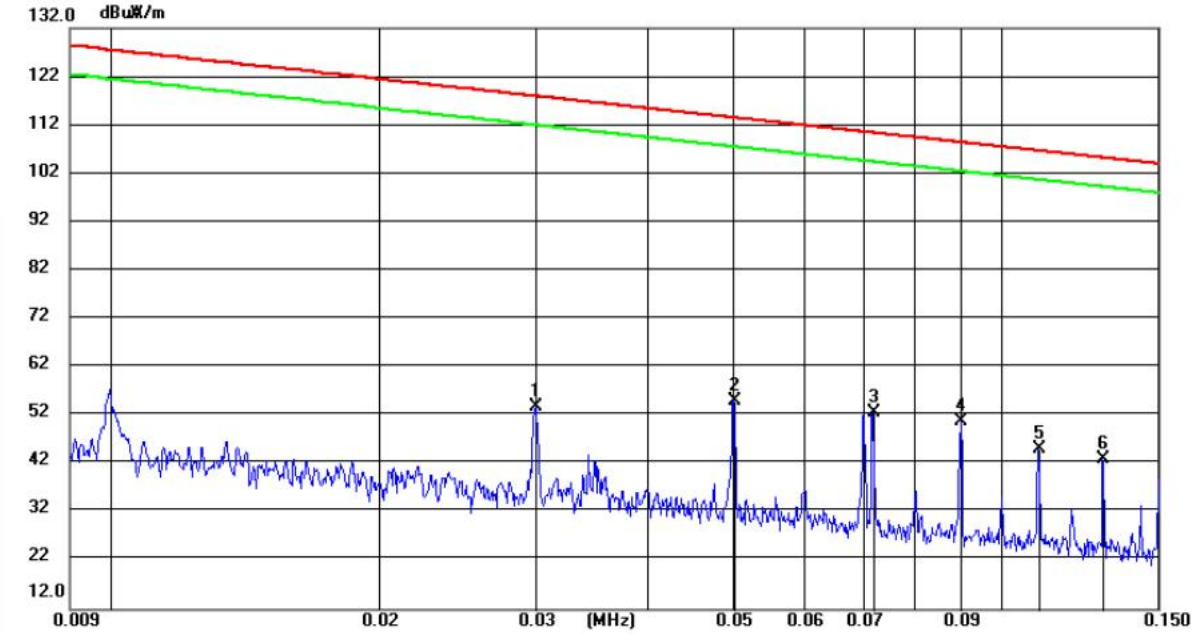
Figure 2. 30MHz to 1GHz

Test Procedure:	5. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. 6. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 7. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 8. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. 7. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.
Test Mode:	Transmitting with ASK modulation.
Test Result:	Pass

Measurement MIMO Data

X axis positioning

9kHz – 150KHz:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.0300	32.84	20.92	53.76	117.91	-64.15	peak	100	265	
2		0.0501	34.17	20.90	55.07	113.49	-58.42	peak	100	1	
3		0.0718	31.80	20.83	52.63	110.38	-57.75	peak	100	301	
4	*	0.0901	29.91	20.85	50.76	108.42	-57.66	peak	100	352	
5		0.1101	24.36	20.84	45.20	106.69	-61.49	peak	100	352	
6		0.1300	22.03	20.90	42.93	105.25	-62.32	peak	100	352	

Remark:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

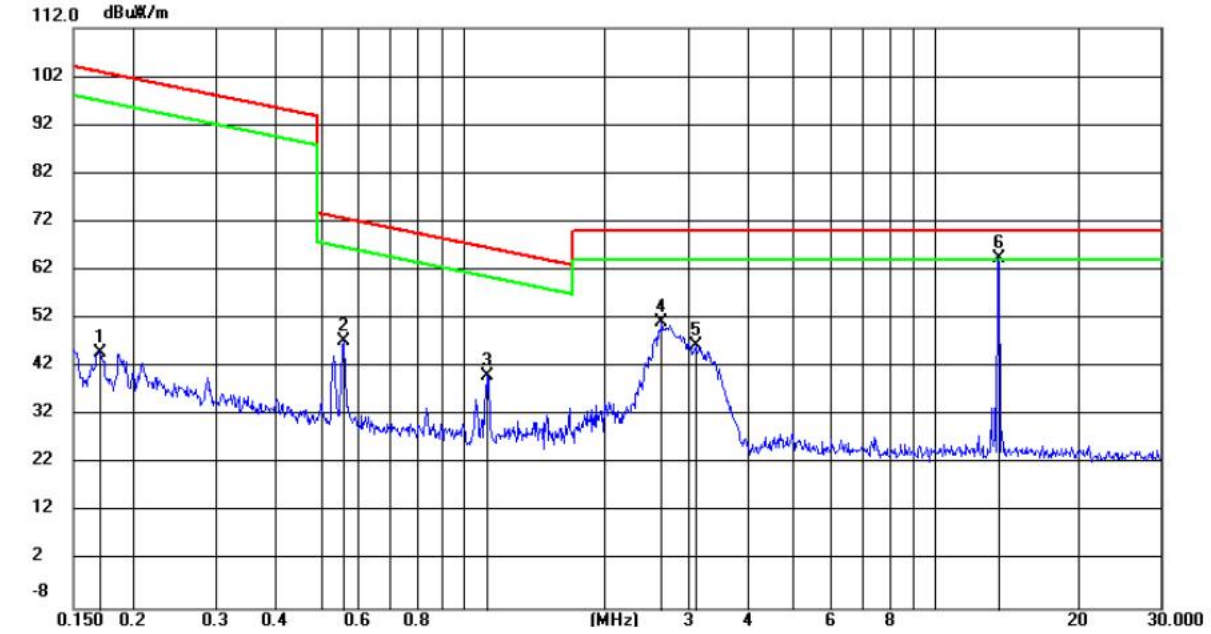
Factor= Antenna Factor + Cable Factor – Preamplifier Factor,

Level = Read Level + Factor,

Over Limit=Level-Limit Line.

X axis positioning

150KHz-30MHz:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.1712	24.07	20.94	45.01	102.88	-57.87	peak	100	256	
2		0.5581	26.74	20.55	47.29	72.67	-25.38	peak	100	109	
3		1.1292	19.71	20.49	40.20	66.57	-26.37	peak	100	183	
4		2.6360	30.83	20.43	51.26	70.00	-18.74	peak	100	36	
5		3.1066	26.02	20.41	46.43	70.00	-23.57	peak	100	227	
6	*	13.5509	43.97	20.50	64.47	70.00	-5.53	peak	100	102	

Remark:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Factor= Antenna Factor + Cable Factor – Preamplifier Factor,

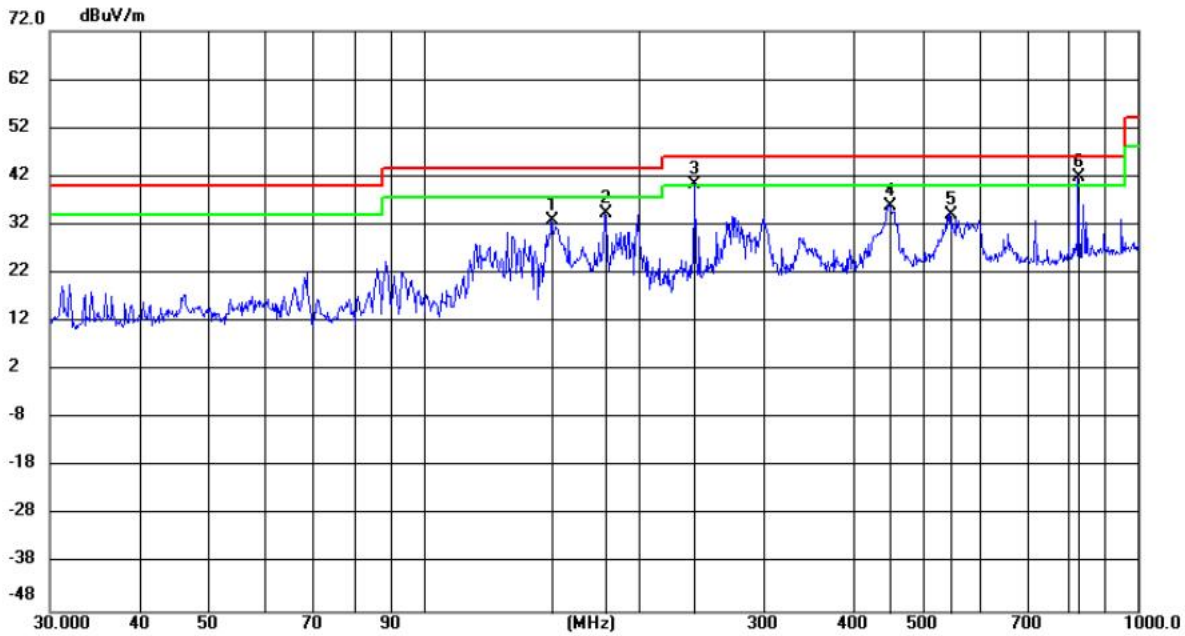
Level = Read Level + Factor,

Over Limit=Level-Limit Line.

MIMO Data:

30MHz-1GHz

Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		151.1195	23.63	9.26	32.89	43.50	-10.61	QP	199	288	
2		179.9849	23.00	11.30	34.30	43.50	-9.20	QP	100	80	
3	!	239.9873	26.48	13.89	40.37	46.00	-5.63	QP	100	280	
4		449.3194	17.01	18.93	35.94	46.00	-10.06	QP	199	116	
5		546.3308	13.24	20.96	34.20	46.00	-11.80	QP	100	226	
6	*	824.8860	17.08	24.85	41.93	46.00	-4.07	QP	100	313	

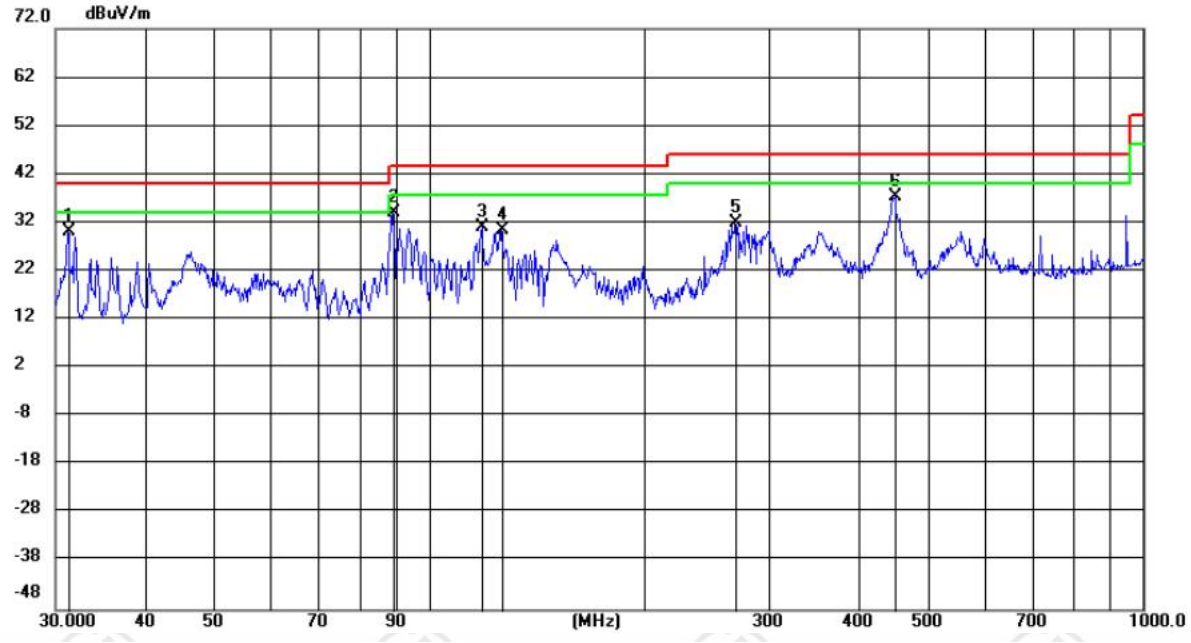
Remark:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Factor= Antenna Factor + Cable Factor – Preamplifier Factor,

Level = Read Level + Factor,
Over Limit=Level-Limit Line.

Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.2728	17.97	12.07	30.04	40.00	-9.96	QP	100	180	
2		89.1044	23.43	10.48	33.91	43.50	-9.59	QP	100	8	
3		118.7678	20.35	10.66	31.01	43.50	-12.49	QP	100	331	
4		126.3950	21.19	9.35	30.54	43.50	-12.96	QP	100	180	
5		268.6736	18.90	13.17	32.07	46.00	-13.93	QP	100	287	
6	*	450.0290	20.82	16.65	37.47	46.00	-8.53	QP	100	106	

Remark:

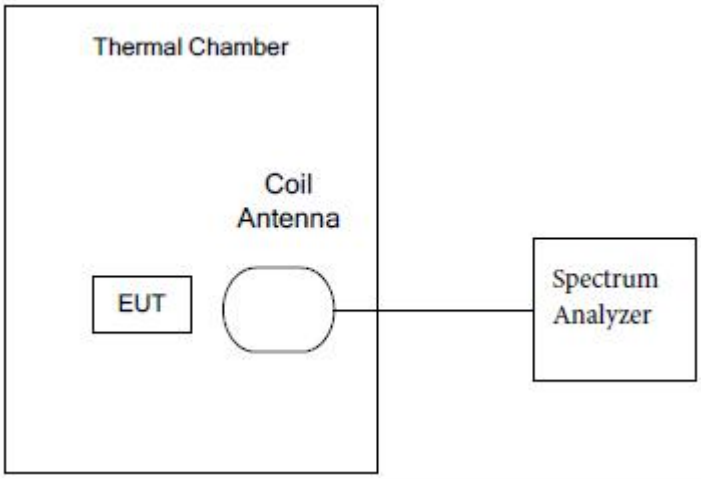
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Factor= Antenna Factor + Cable Factor – Preamplifier Factor,

Level = Read Level + Factor,

Over Limit=Level-Limit Line.

5.5 Frequency Stability

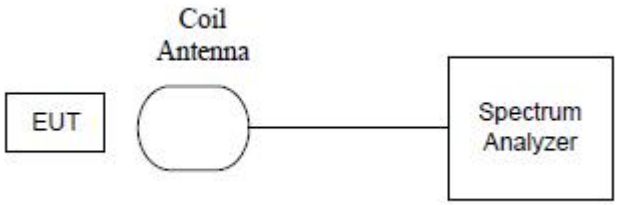
Test Requirement:	47 CFR Part 15 C Section 15.225(e)
Test Method:	ANSI C63.10: 2013
Test Setup:	
Frequency Range:	Operation within the band 13.110-14.010 MHz
Requirements:	The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of –20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.
Method of Measurement:	The EUT was placed in an environmental test chamber and powered such that control element received normal voltage and the transmitter provided maximum RF output.
Test Result:	The unit does meet the FCC Part 15 C Section 15.225(e) requirements.

Test Frequency: 13.56MHz				Temperature:20℃
Supply Voltage （V）DC	Test Result (MHz)	Deviation (kHz)	Limit ±0.01% (kHz)	Result
24	13.55978	-0.22	1.3560	Pass
26.4	13.55976	-0.24	1.3560	Pass
21.6	13.55974	-0.26	1.3560	Pass

Test Frequency: 13.56MHz				Normal Voltage:3.7Vdc
Temperature （℃）	Test Result (MHz)	Deviation (kHz)	Limit ±0.01% (kHz)	Result
10	13.55978	-0.22	1.3560	Pass
30	13.55979	-0.21	1.3560	
24	13.55977	-0.23	1.3560	
10	13.55978	-0.22	1.3560	
20	13.55976	-0.24	1.3560	
30	13.55979	-0.21	1.3560	

Note: Deviation (KHz) = (Test Result-13.56MHz)*1000

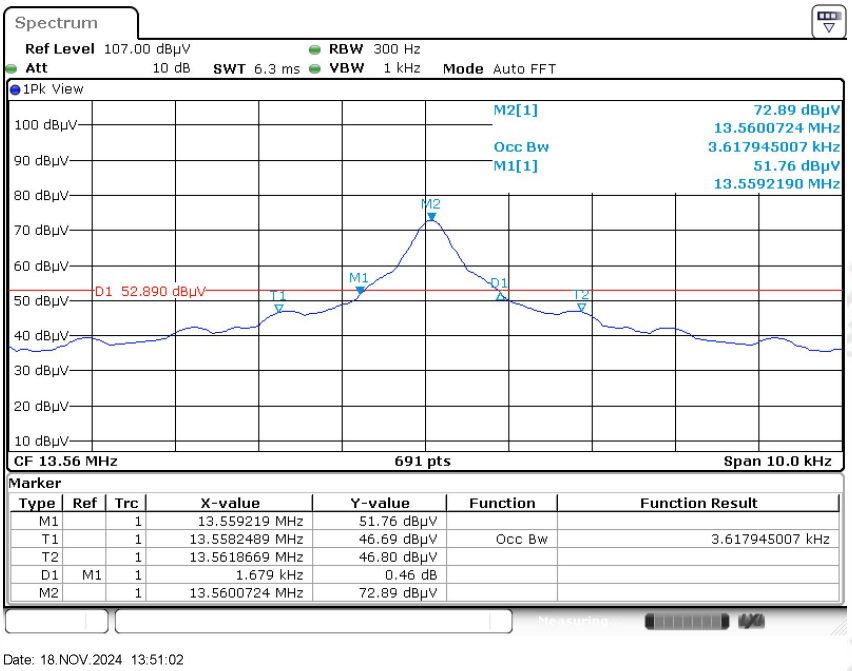
5.6 20dB Occupied Bandwidth

Test Requirement:	47 CFR Part 15 C Section 15.215 (C)
Test Method:	ANSI C63.10: 2013
Test Setup:	
Frequency Range:	Operation within the band 13.110 – 14.010 MHz
Requirements:	Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §15.217 through §15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the 20 dB bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.
Limit:	For 13.56 MHz the permitted frequency band is 14kHz, so the limit is 11.2 kHz.

Test Data:

20dB bandwidth (kHz)	FL (MHz)	FH (MHz)	Limit(MHz)	Result
1.679	13.559219	13.560898	13.110 – 14.010	Pass

Test plot as follows:



Date: 18.NOV.2024 13:51:02

Statement

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;

2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;

3. The result(s) shown in this report refer(s) only to the sample(s) tested;

4. Unless otherwise stated,the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule stated in ILAC-G8:09/2019/CNAS-GL015:2022;

5. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***