

TEST REPORT

Product : Wireless Power Bank
Trade mark : ROMOSS
Model/Type reference : WSU05-221
Serial Number : N/A
Report Number : EED32R80051701
FCC ID : 2A6QM-WSU05-221
Date of Issue : Mar. 21, 2025
Test Standards : 47 CFR Part 15 Subpart C
Test result : PASS

Prepared for:

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Prepared by:

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Mar. 21, 2025



Check No.: 6942121224

1 Version

Version No.	Date	Description
00	Mar. 21, 2025	Original

2 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203	ANSI C63.10:2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10:2013	PASS
Radiated Emissions	47 CFR Part 15 Subpart C Section 15.209	ANSI C63.10:2013	PASS

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4 General Information

4.1 Client Information

Applicant:	Shenzhen Romoss Technology Co., Ltd.
Address of Applicant:	Room1601, BLOCK B, Building 7, Shenzhen International Innovation Valley, Dashi 1st Road Xili community, Xili Street, Nanshan, Shenzhen, Guangdong, P.R.China
Manufacturer:	Jiangmen Romoss Technology Co., Ltd.
Address of Manufacturer:	Room 01-2, First floor, Building 8, No. 80, Renhe Road, Tangxia Town, Pengjiang District, Jiangmen City
Factory:	Jiangmen Romoss Technology Co., Ltd.
Address of Factory:	Room 01-2, First floor, Building 8, No. 80, Renhe Road, Tangxia Town, Pengjiang District, Jiangmen City

4.2 General Description of EUT

Product Name:	Wireless Power Bank
Model No.:	WSU05-221
Trade Mark:	ROMOSS
Device type:	Desktop applications device
Frequency Range:	111kHz-200kHz
Center Frequency:	127kHz
Modulation Type:	ASK
Antenna Type:	Coil antenna
Power Supply:	TYPE-C: DC 5.0V 3A/DC 9.0V 2.22A/DC 12.0V 1.67A Wireless output: 5W/7.5W/10W/15W
Test Power Grade:	Default
Test Software of EUT:	RF test
Sample Received Date:	Jan. 10, 2025
Sample tested Date:	Jan. 15, 2025 to Mar. 01, 2025

4.3 Test Environment and Mode

Operating Environment:	
Radiated Spurious Emissions:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar
Conducted Emissions:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar
Test mode:Transmitting mode	
Mode a:	Wireless charging mode(Null load)(Connect to adapter)
Mode b:	Wireless charging mode(Half load)(Connect to adapter)
Mode c:	Wireless charging mode(75% load)(Connect to adapter)
Mode d:	Wireless charging mode(Full load)(Connect to adapter)
Note: 1.Wireless output:2.5W,5W,7.5W,10W,15W(maximum wireless output 15W during charging); 2.Through Pre-scan,when EUT power by DC 12.0V was the worst case, only the worst case data was recorded in the report.	

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
AC adapter	MI	MDY-11-EF	FCC ID and DOC	CTI
Intelligent wireless charging full function test module	YBZ	/	FCC ID and DOC	CTI

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 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

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%

5 Equipment List

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	---	---
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

6 Test results and Measurement Data

6.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C 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:	Please see Internal photos
The antenna is Coil antenna and no consideration of replacement.	

6.2 Conducted Emissions

Test Requirement: 47 CFR Part 15C Section 15.207

Test Method: ANSI C63.10: 2013

Test Frequency Range: 150kHz to 30MHz

Limit:

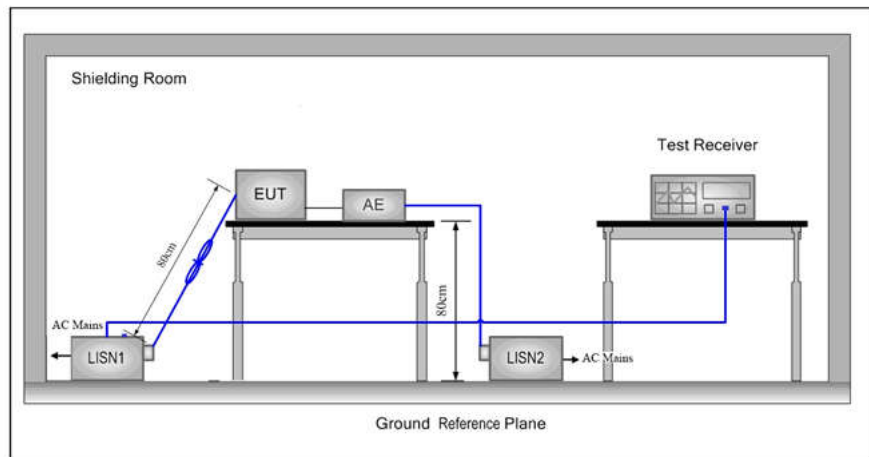
Frequency range (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* 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 $50\Omega/50\mu\text{H} + 5\Omega$ 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:

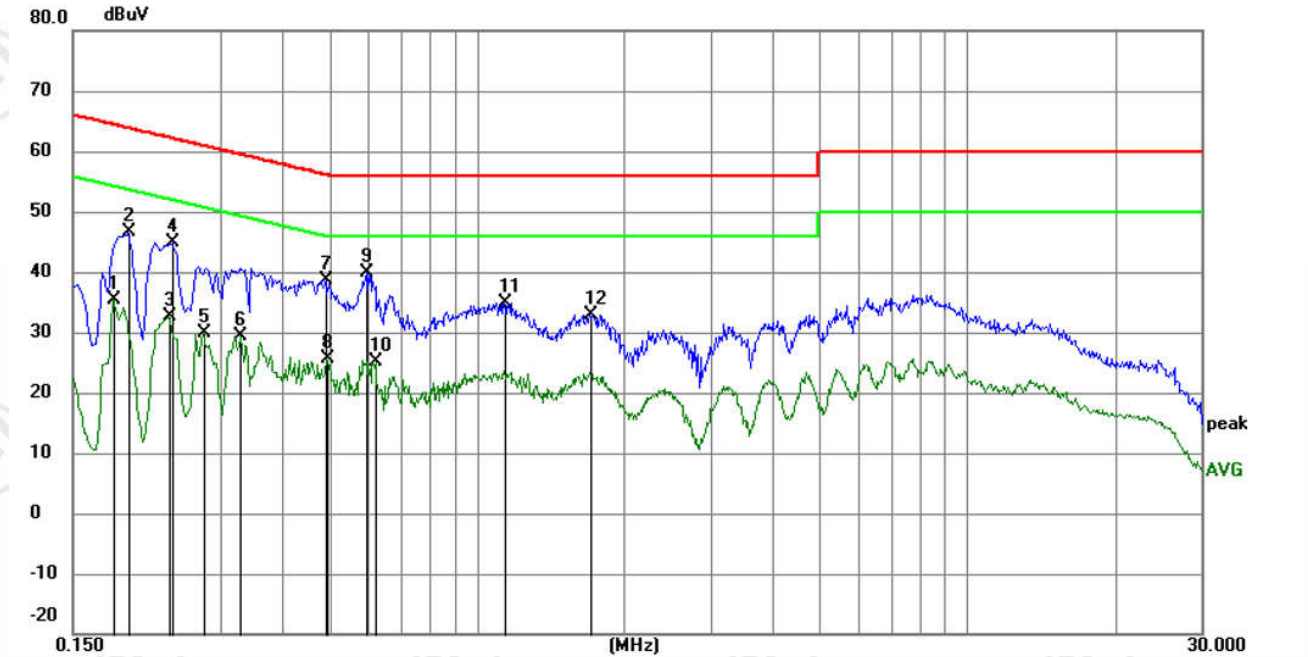


Test Mode: Transmitting mode, refer to section 4.3

Test Results: Pass

Measurement Data (Mode d):

Live line:

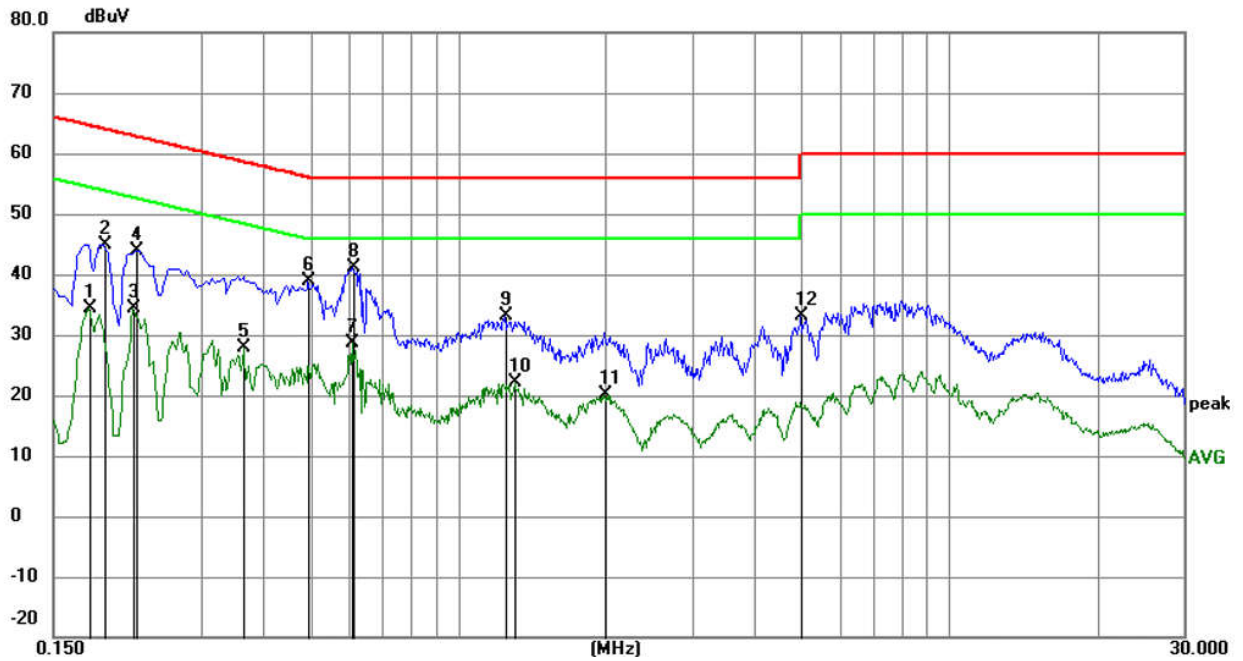


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1815	25.19	10.24	35.43	54.42	-18.99	AVG	
2		0.1949	36.43	10.22	46.65	63.83	-17.18	QP	
3		0.2355	22.52	10.18	32.70	52.25	-19.55	AVG	
4		0.2400	34.62	10.18	44.80	62.10	-17.30	QP	
5		0.2760	19.61	10.15	29.76	50.94	-21.18	AVG	
6		0.3300	19.23	10.12	29.35	49.45	-20.10	AVG	
7		0.4920	28.63	10.08	38.71	56.13	-17.42	QP	
8		0.4965	15.48	10.08	25.56	46.06	-20.50	AVG	
9	*	0.5955	29.83	10.10	39.93	56.00	-16.07	QP	
10		0.6225	15.03	10.11	25.14	46.00	-20.86	AVG	
11		1.1400	24.78	10.18	34.96	56.00	-21.04	QP	
12		1.7070	22.78	10.17	32.95	56.00	-23.05	QP	

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.

Neutral line:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1770	24.20	10.24	34.44	54.63	-20.19	AVG	
2		0.1905	34.70	10.22	44.92	64.01	-19.09	QP	
3		0.2175	24.07	10.20	34.27	52.91	-18.64	AVG	
4		0.2220	33.81	10.19	44.00	62.74	-18.74	QP	
5		0.3660	17.84	10.10	27.94	48.59	-20.65	AVG	
6		0.4965	28.72	10.08	38.80	56.06	-17.26	QP	
7		0.6090	18.52	10.10	28.62	46.00	-17.38	AVG	
8	*	0.6134	30.95	10.10	41.05	56.00	-14.95	QP	
9		1.2435	22.96	10.18	33.14	56.00	-22.86	QP	
10		1.3065	11.94	10.18	22.12	46.00	-23.88	AVG	
11		1.9860	9.96	10.17	20.13	46.00	-25.87	AVG	
12		4.9920	22.98	10.06	33.04	56.00	-22.96	QP	

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.

6.3 Radiated Emissions

Test Requirement: 47 CFR Part 15C Section 15.231(b) and 15.209

Test Method: ANSI C63.10 2013

Test Site: Measurement Distance: 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

Test Setup:

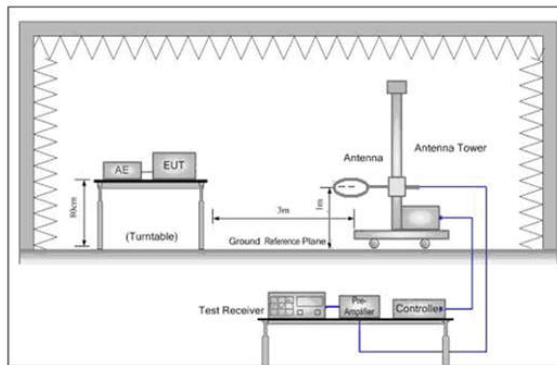


Figure . Below 30MHz

Test Procedure:

Below 1GHz test procedure as below:

- 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.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 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.
- 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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 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.

Limit:
(Spurious
Emissions)

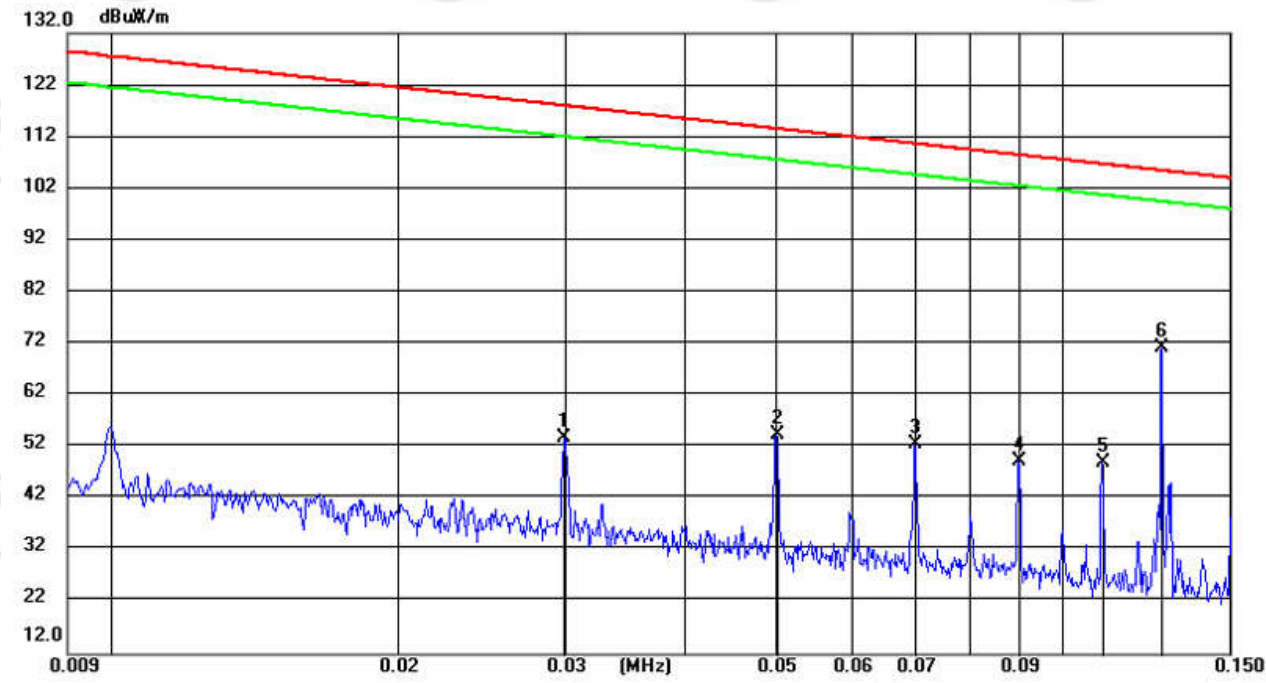
Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Test Mode: Transmitting mode, refer to section 4.3
Test Results: Pass

9kHz~150kHz:

Measurement Data (Mode d):



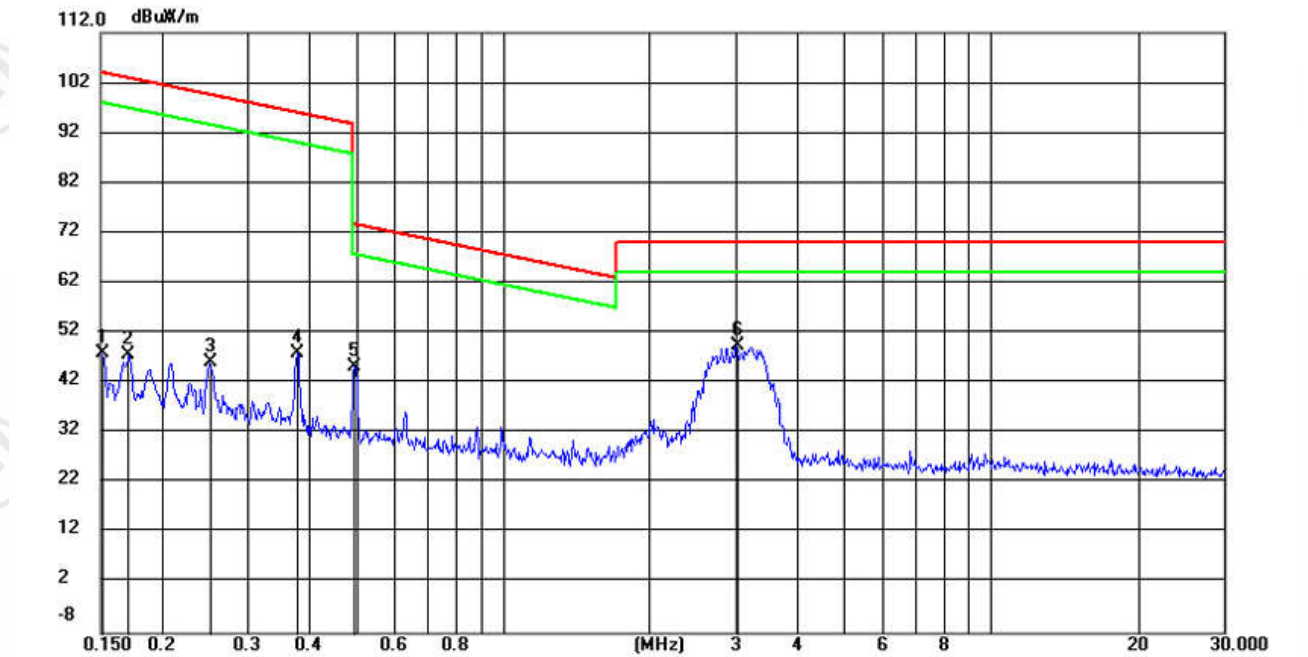
No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	Comment
			dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	
1		0.0299	32.80	20.92	53.72	118.01	-64.29	peak	100	248
2		0.0501	33.67	20.90	54.57	113.54	-58.97	peak	100	7
3		0.0700	31.73	20.83	52.56	110.65	-58.09	peak	100	7
4		0.0899	28.55	20.85	49.40	108.48	-59.08	peak	100	7
5		0.1101	28.17	20.84	49.01	106.72	-57.71	peak	100	7
6	*	0.1274	50.28	20.89	71.17	105.46	-34.29	peak	100	233

Remark:

- 1.According ANSI C63.10-2013 chapter 6.4.6,We tested the parallel,perpendicular,and ground-parallel of loop antenna,and was recorded the worst parallel data of loop antenna in the report.
- 2.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
- Final Test Level =Receiver Reading - Correct Factor
- Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor
- 3.The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning of horizontal which it is the worst case.

150kHz~30MHz:

Measurement Data (Mode d):



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Antenna Height cm	Table Degree	Comment
1		0.1508	26.95	20.92	47.87	104.00	-56.13	peak	100	359
2		0.1712	26.63	20.94	47.57	102.90	-55.33	peak	100	359
3		0.2508	25.16	21.04	46.20	99.60	-53.40	peak	100	224
4		0.3791	27.02	20.79	47.81	96.02	-48.21	peak	100	260
5		0.4967	24.71	20.56	45.27	73.68	-28.41	peak	100	7
6	*	3.0094	29.02	20.41	49.43	70.00	-20.57	peak	100	289

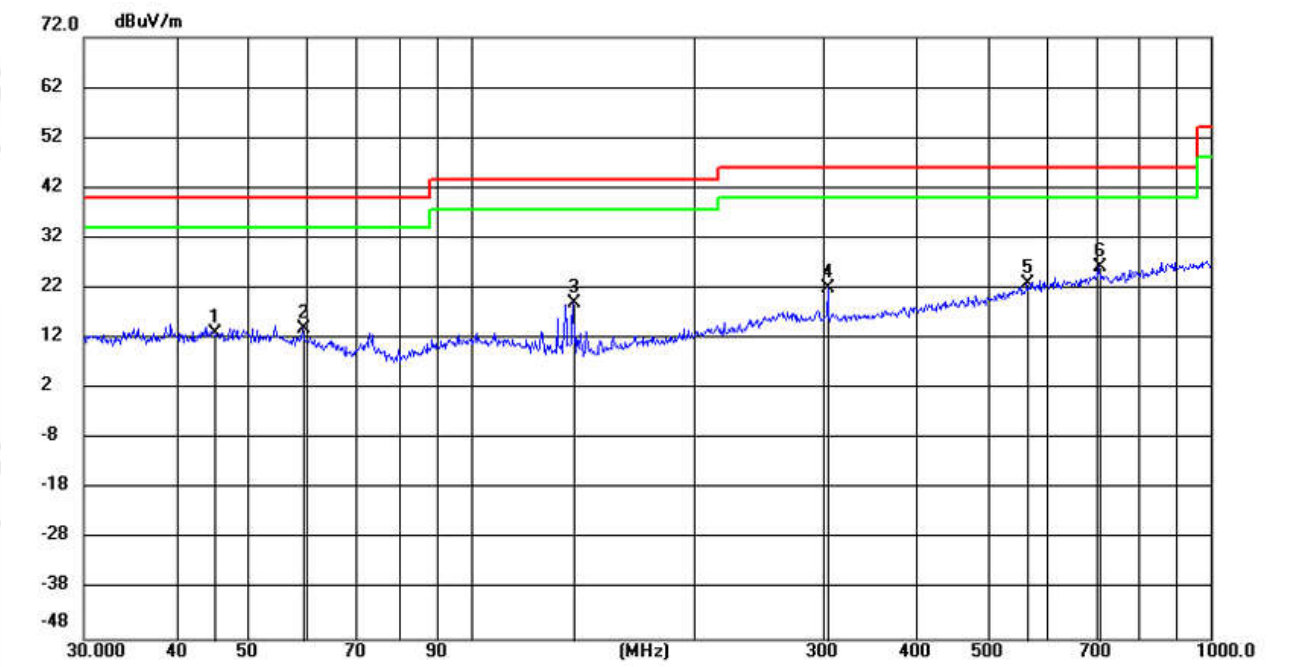
Remark:

1. According ANSI C63.10-2013 chapter 6.4.6, We tested the parallel, perpendicular, and ground-parallel of loop antenna, and was recorded the worst parallel data of loop antenna in the report.
2. The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Final Test Level = Receiver Reading - Correct Factor
Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor
3. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning of horizontal which it is the worst case.

30MHz-1GHz:

Measurement Data (Mode d):

Polarization: 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
1		45.0188	-0.43	13.58	13.15	40.00	-26.85	QP	200	360
2		59.3155	0.89	12.99	13.88	40.00	-26.12	QP	200	223
3		137.5166	9.65	9.33	18.98	43.50	-24.52	QP	100	76
4		304.2363	5.93	16.23	22.16	46.00	-23.84	QP	200	7
5		565.3322	1.56	21.42	22.98	46.00	-23.02	QP	200	7
6	*	706.8237	3.28	23.10	26.38	46.00	-19.62	QP	200	7

Remark:

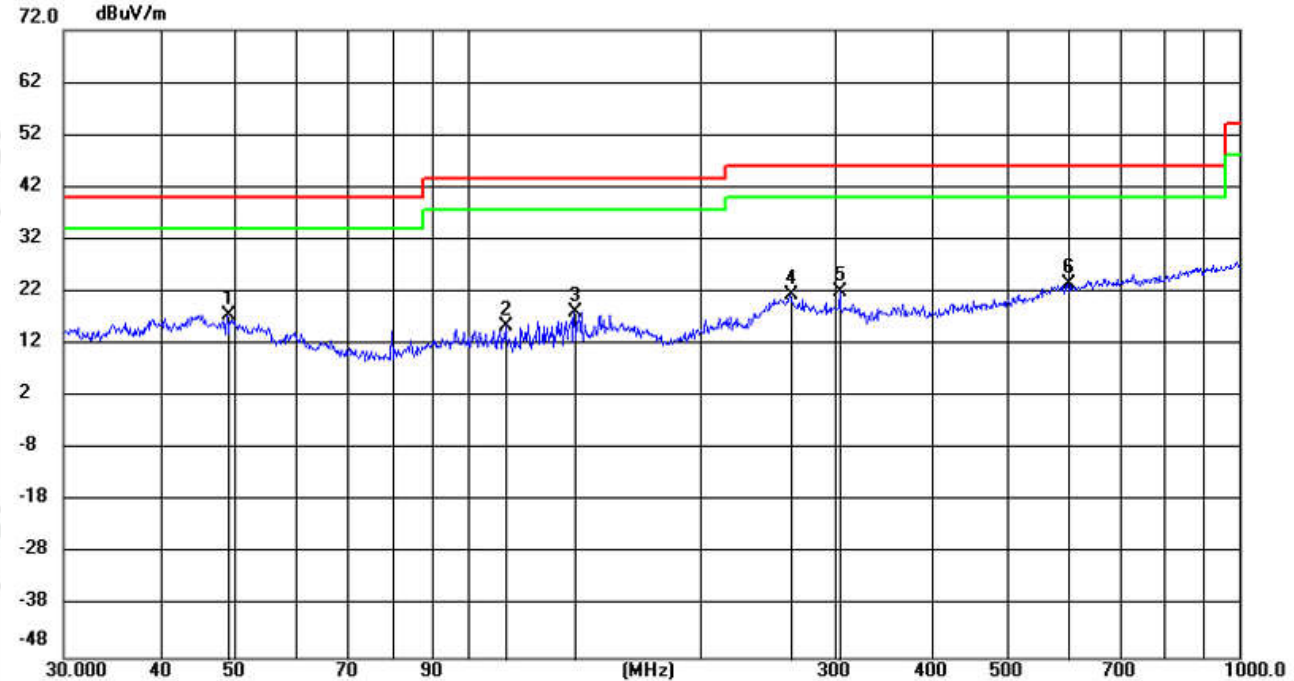
1.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Measurement Data (Mode d):

Polarization: Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	*	48.9285	3.91	13.55	17.46	40.00	-22.54	QP	100	18
2		112.2288	2.88	12.64	15.52	43.50	-27.98	QP	100	331
3		137.8063	8.98	9.31	18.29	43.50	-25.21	QP	100	290
4		262.7573	6.57	14.75	21.32	46.00	-24.68	QP	100	227
5		304.2363	5.72	16.23	21.95	46.00	-24.05	QP	200	352
6		600.5835	1.19	22.26	23.45	46.00	-22.55	QP	100	7

Remark:

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

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

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 ***