TEST REPORT

Product	:	"Reign of Serenity" Raiden Shogun Charging Bundle- Portable Charger
Trade mark	:	N/A
Model/Type reference	:	SHJC20240522
Serial Number	:	N/A
Report Number	:	EED32Q80886501
FCC ID	:	2BFZT-SHJC20240522
Date of Issue	:	Aug. 01, 2024
Test Standards	:	47 CFR Part 15 Subpart C
Test result	:	PASS

Prepared for:

Shanghai Jia Chang Industrial Co ., Ltd
No.400, Chuan Qiao Road, Pu dong New District, Shanghai, China

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

Compiled By:	Zhenxia Wen Zhenxia Wen	Reviewed by:	Frazer. Li Frazer Li
Approved by:	Aaron Ma Aaron Ma	Date:	Aug. 01, 2024

CENTRE TESTING INTERNATIONAL GROUP CO.,LTD. CTI Report Seal

Check No.: 5043040624

1 Version

Version No.	Date	Description
00	Aug. 01, 2024	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

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

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4 General Information

4.1 Client Information

Applicant:	Shanghai Jia Chang Industrial Co ., Ltd
Address of Applicant:	No.400, Chuan Qiao Road, Pu dong New District, Shanghai, China
Manufacturer:	Shanghai Jia Chang Industrial Co ., Ltd
Address of Manufacturer:	No.400, Chuan Qiao Road, Pu dong New District, Shanghai, China
Factory:	Shenzhen Yostand Technology Co., Ltd.
Address of Factory:	Room 701, Building 1, Jiuzhou Industrial Park, No.10, Tongguan Road 19th, Tianliao Community, Yutang Street, Guangming District, Shenzhen, China

4.2 General Description of EUT

Product Name:	"Reign of Serenity" Raiden Shogun Charging Bundle- Portable Charger
Model No.(EUT):	SHJC20240522
Trade Mark:	N/A
Device type:	Desktop applications device
Frequency Range:	110-205KHz
Center Frequency:	136kHz
Modulation Type:	ASK
Antenna Type:	Coil antenna
Power Supply:	Type-C Input: 5V-2.6A 9V-2A Type-C Output: 5V-2.4A 9V-2.22A 12V-1.67A Wireless Output: 5W/7.5W/10W Simultaneous Output: 5V-2.4A(Max)
Test Power Grade:	Default
Test Software of EUT:	RF test
Sample Received Date:	Jun. 25, 2024
Sample tested Date:	Jun. 25, 2024 to Jun. 28, 2024

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:5W,7.5W,10W(maximum wireless output 10W during charging)	

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	09-22-2023	09-21-2024
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	12-14-2023	12-13-2024

3M Semi-anechoic Chamber (2)- Radiated disturbance Test					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Due Date
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05/22/2022	05/21/2025
Receiver	R&S	ESCI7	100938-003	09/22/2023	09/21/2024
Spectrum Analyzer	R&S	FSV40	101200	07/25/2023	07/24/2024
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	12/14/2023	12/13/2024
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	---	---
Cable line	Fulai(6M)	SF106	5220/6A	---	---
Cable line	Fulai(3M)	SF106	5216/6A	---	---
Cable line	Fulai(3M)	SF106	5217/6A	---	---

错误!未找到引用源。

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 attached on the main PCB 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:

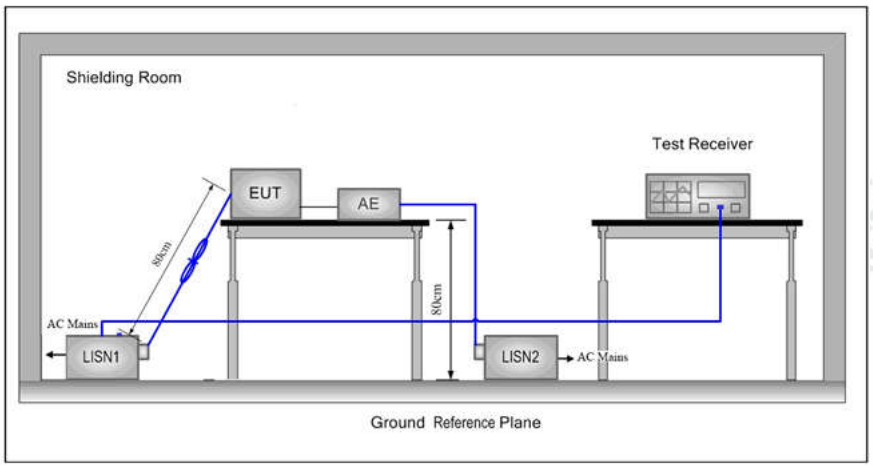
Frequency range (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* 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 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:

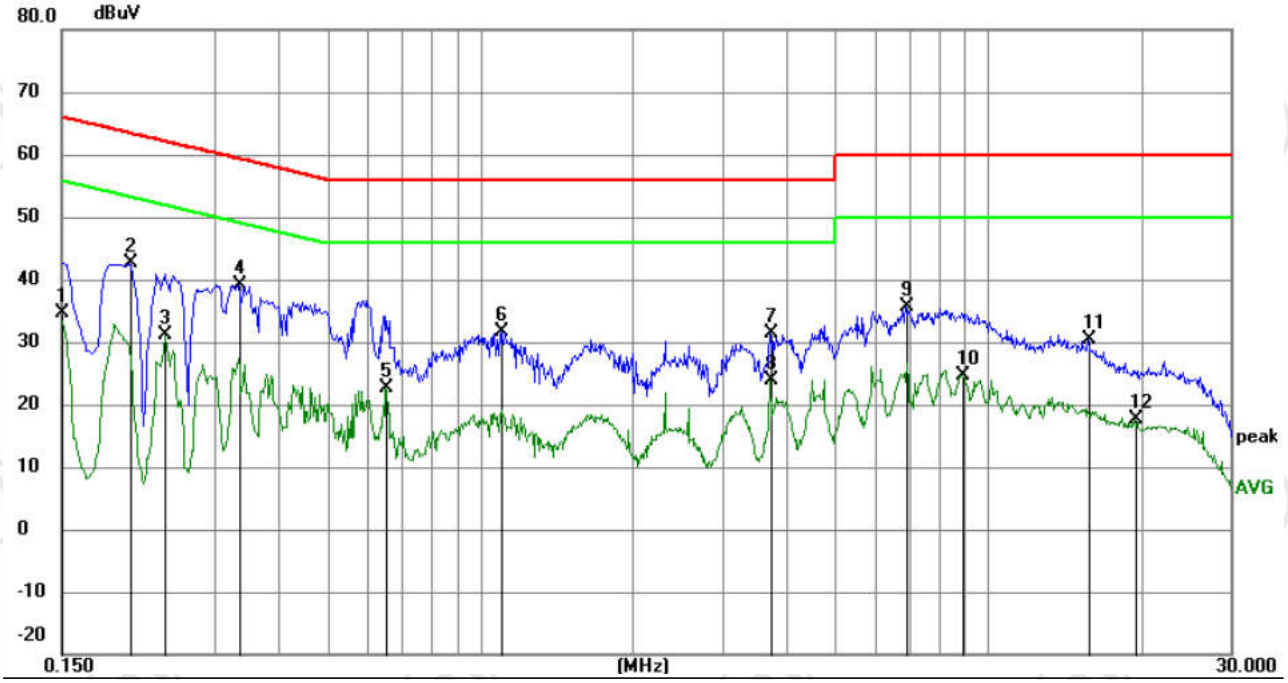


Test Mode: Transmitting mode,refer to section 4.3

Test Results: Pass

Measurement Data (Mode a):

Live line:

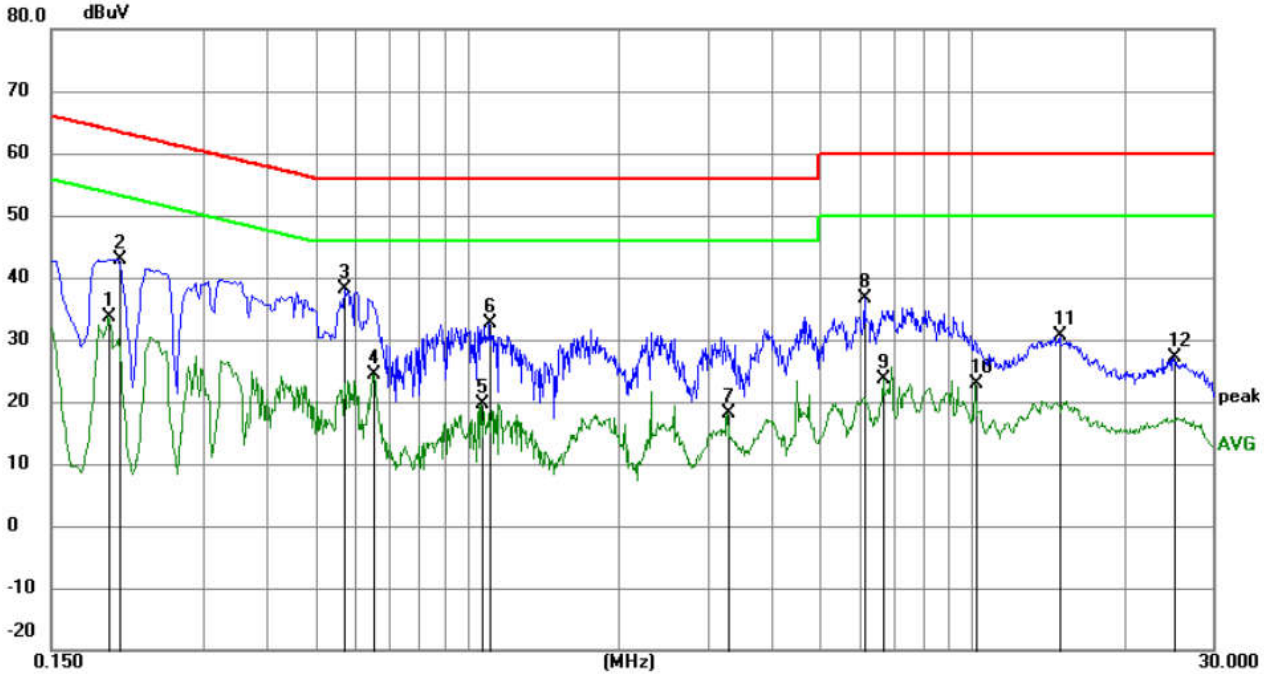


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	24.74	9.87	34.61	56.00	-21.39	AVG	
2		0.2040	32.62	9.90	42.52	63.45	-20.93	QP	
3		0.2400	21.24	9.77	31.01	52.10	-21.09	AVG	
4	*	0.3345	29.52	9.63	39.15	59.34	-20.19	QP	
5		0.6540	12.80	9.81	22.61	46.00	-23.39	AVG	
6		1.1040	22.00	9.74	31.74	56.00	-24.26	QP	
7		3.7320	21.62	9.80	31.42	56.00	-24.58	QP	
8		3.7320	14.13	9.80	23.93	46.00	-22.07	AVG	
9		6.8865	25.68	9.85	35.53	60.00	-24.47	QP	
10		8.9025	14.78	9.84	24.62	50.00	-25.38	AVG	
11		15.7290	20.50	9.88	30.38	60.00	-29.62	QP	
12		19.4325	7.59	10.02	17.61	50.00	-32.39	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.

Neutral line:



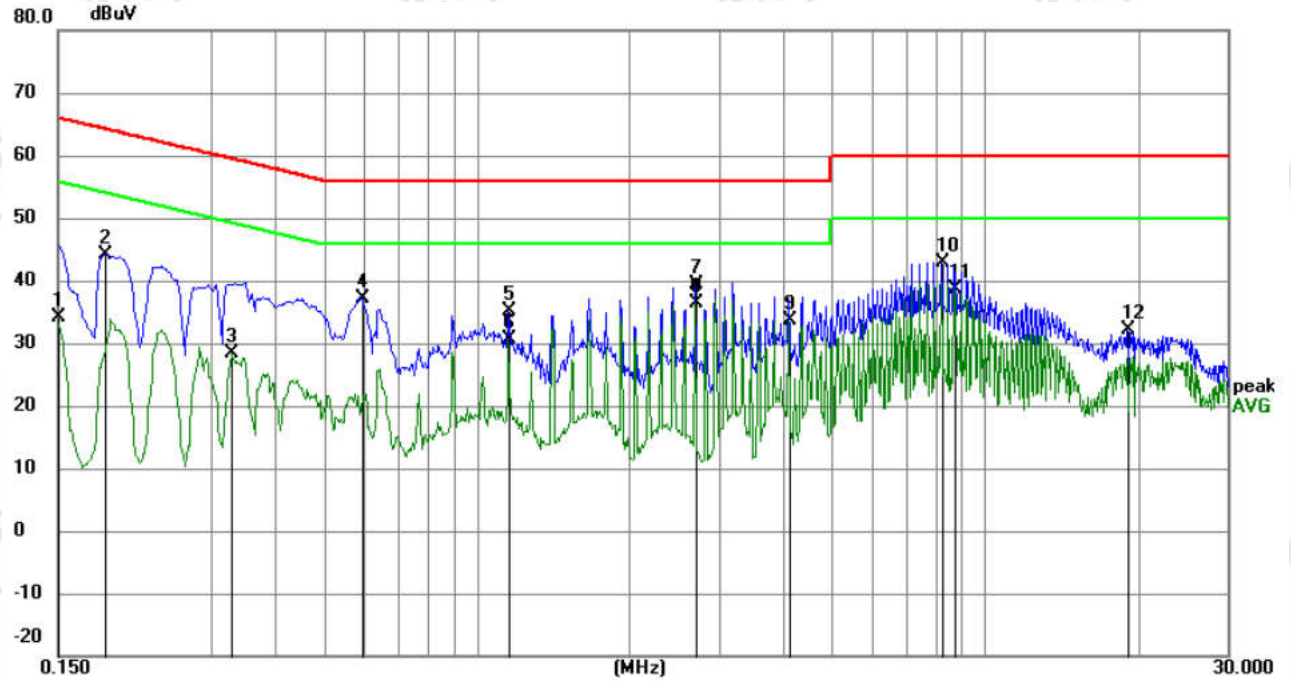
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1949	23.84	9.91	33.75	53.83	-20.08	AVG	
2		0.2040	33.07	9.90	42.97	63.45	-20.48	QP	
3	*	0.5730	28.45	9.64	38.09	56.00	-17.91	QP	
4		0.6540	14.69	9.81	24.50	46.00	-21.50	AVG	
5		1.0680	9.92	9.74	19.66	46.00	-26.34	AVG	
6		1.1085	22.90	9.74	32.64	56.00	-23.36	QP	
7		3.2775	8.44	9.79	18.23	46.00	-27.77	AVG	
8		6.1260	26.66	9.85	36.51	60.00	-23.49	QP	
9		6.6930	13.82	9.85	23.67	50.00	-26.33	AVG	
10		10.1670	13.17	9.83	23.00	50.00	-27.00	AVG	
11		14.9730	20.71	9.85	30.56	60.00	-29.44	QP	
12		25.0665	17.21	9.91	27.12	60.00	-32.88	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.

Measurement Data (Mode b):

Live line:

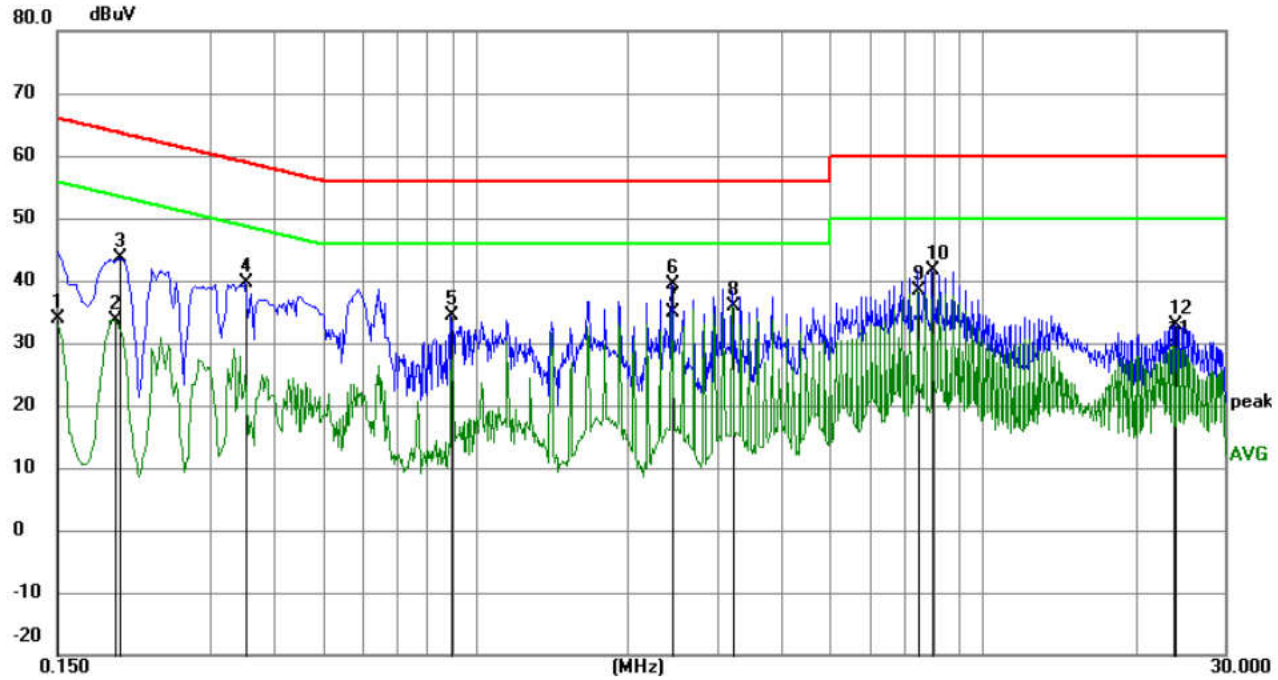


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	24.30	9.87	34.17	56.00	-21.83	AVG	
2		0.1860	34.33	9.91	44.24	64.21	-19.97	QP	
3		0.3300	18.72	9.62	28.34	49.45	-21.11	AVG	
4		0.5955	27.65	9.60	37.25	56.00	-18.75	QP	
5		1.1535	25.31	9.74	35.05	56.00	-20.95	QP	
6		1.1535	20.81	9.74	30.55	46.00	-15.45	AVG	
7		2.6925	29.54	9.77	39.31	56.00	-16.69	QP	
8	*	2.6925	26.70	9.77	36.47	46.00	-9.53	AVG	
9		4.1145	23.91	9.81	33.72	46.00	-12.28	AVG	
10		8.2050	33.15	9.84	42.99	60.00	-17.01	QP	
11		8.7180	28.83	9.84	38.67	50.00	-11.33	AVG	
12		19.0320	22.06	10.00	32.06	60.00	-27.94	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:



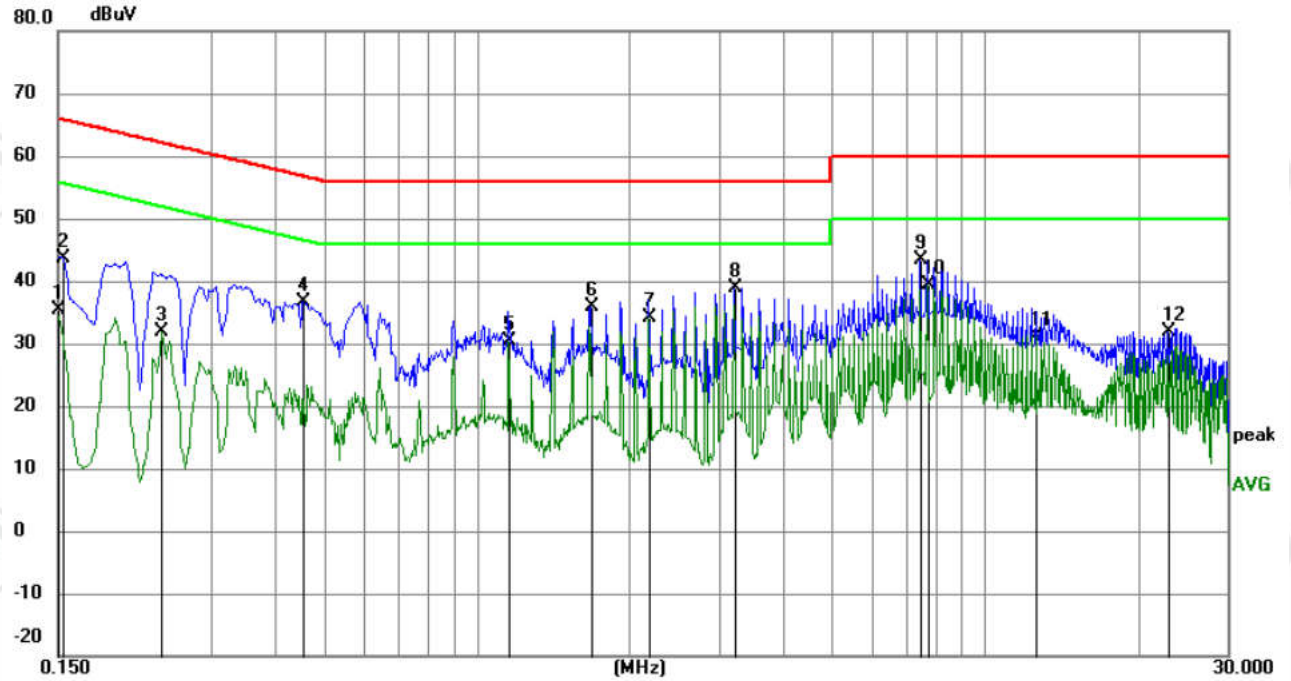
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	24.01	9.87	33.88	56.00	-22.12	AVG	
2		0.1949	23.83	9.91	33.74	53.83	-20.09	AVG	
3		0.1995	33.74	9.92	43.66	63.63	-19.97	QP	
4		0.3525	29.99	9.67	39.66	58.90	-19.24	QP	
5		0.8970	24.56	9.81	34.37	56.00	-21.63	QP	
6		2.4450	29.71	9.76	39.47	56.00	-16.53	QP	
7		2.4450	25.18	9.76	34.94	46.00	-11.06	AVG	
8	*	3.2145	26.18	9.79	35.97	46.00	-10.03	AVG	
9		7.4580	28.53	9.85	38.38	50.00	-11.62	AVG	
10		7.9755	31.77	9.84	41.61	60.00	-18.39	QP	
11		23.6625	19.57	9.95	29.52	50.00	-20.48	AVG	
12		23.9189	22.82	9.94	32.76	60.00	-27.24	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.

Measurement Data (Mode c):

Live line:

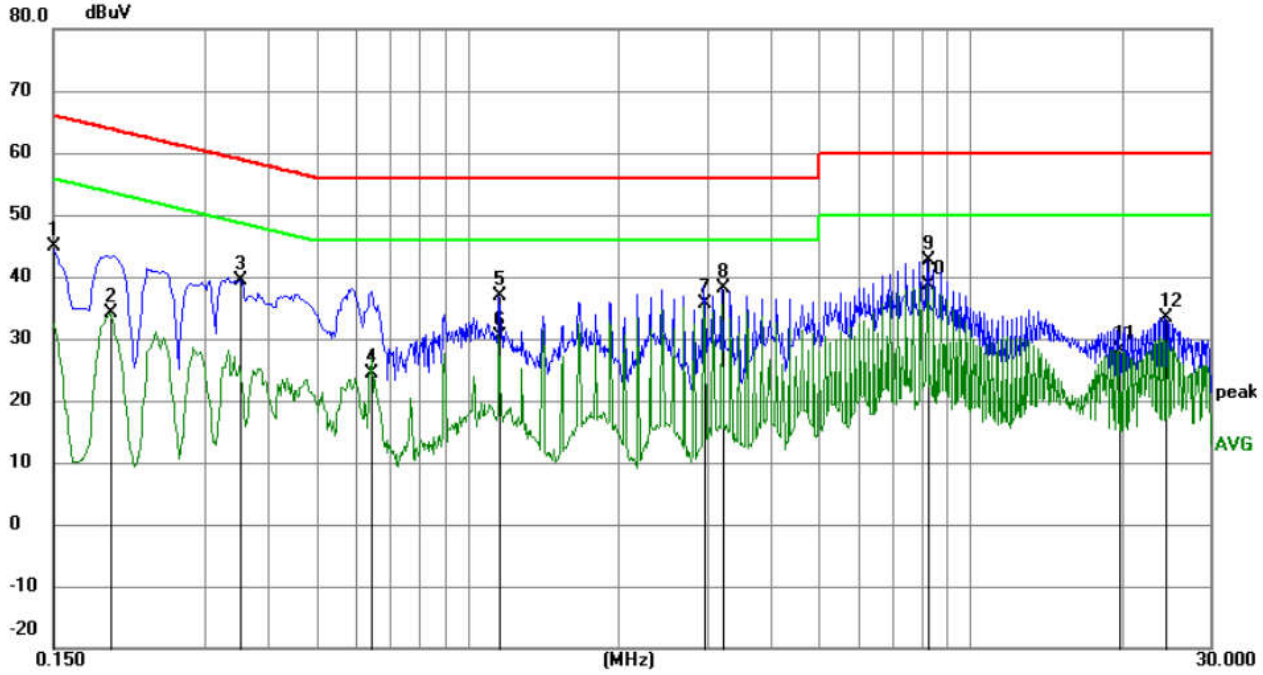


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	25.53	9.87	35.40	56.00	-20.60	AVG	
2		0.1532	33.83	9.87	43.70	65.82	-22.12	QP	
3		0.2400	22.09	9.77	31.86	52.10	-20.24	AVG	
4		0.4560	26.91	9.78	36.69	56.77	-20.08	QP	
5		1.1580	20.61	9.74	30.35	46.00	-15.65	AVG	
6		1.6755	26.14	9.75	35.89	56.00	-20.11	QP	
7		2.1885	24.44	9.76	34.20	46.00	-11.80	AVG	
8		3.2145	29.12	9.79	38.91	56.00	-17.09	QP	
9		7.4625	33.52	9.85	43.37	60.00	-16.63	QP	
10	*	7.7190	29.60	9.85	39.45	50.00	-10.55	AVG	
11		12.6059	21.18	9.84	31.02	50.00	-18.98	AVG	
12		22.8974	21.92	9.97	31.89	60.00	-28.11	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:



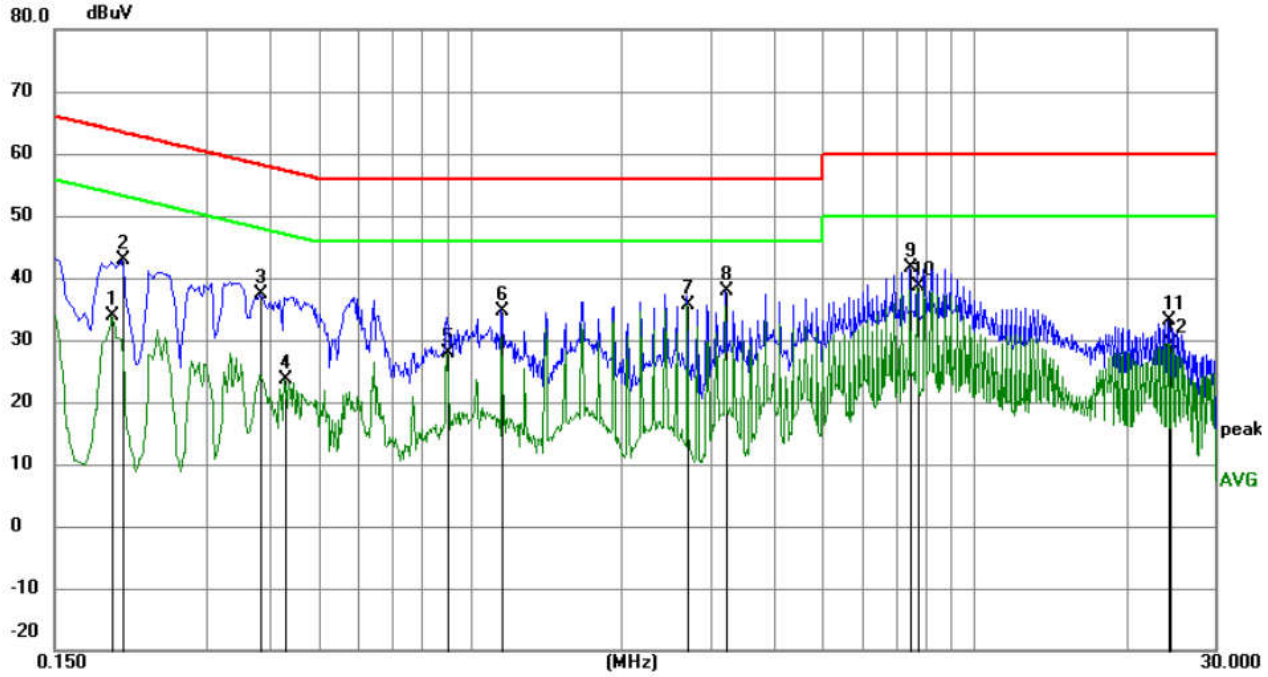
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	35.11	9.87	44.98	66.00	-21.02	QP	
2		0.1949	24.25	9.91	34.16	53.83	-19.67	AVG	
3		0.3525	29.78	9.67	39.45	58.90	-19.45	QP	
4		0.6406	14.52	9.76	24.28	46.00	-21.72	AVG	
5		1.1580	27.07	9.74	36.81	56.00	-19.19	QP	
6		1.1580	20.72	9.74	30.46	46.00	-15.54	AVG	
7	*	2.9580	25.94	9.78	35.72	46.00	-10.28	AVG	
8		3.2145	28.25	9.79	38.04	56.00	-17.96	QP	
9		8.2319	32.79	9.84	42.63	60.00	-17.37	QP	
10		8.2319	28.91	9.84	38.75	50.00	-11.25	AVG	
11		19.8105	18.13	10.03	28.16	50.00	-21.84	AVG	
12		24.4410	23.43	9.93	33.36	60.00	-26.64	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.

Measurement Data (Mode d):

Live line:

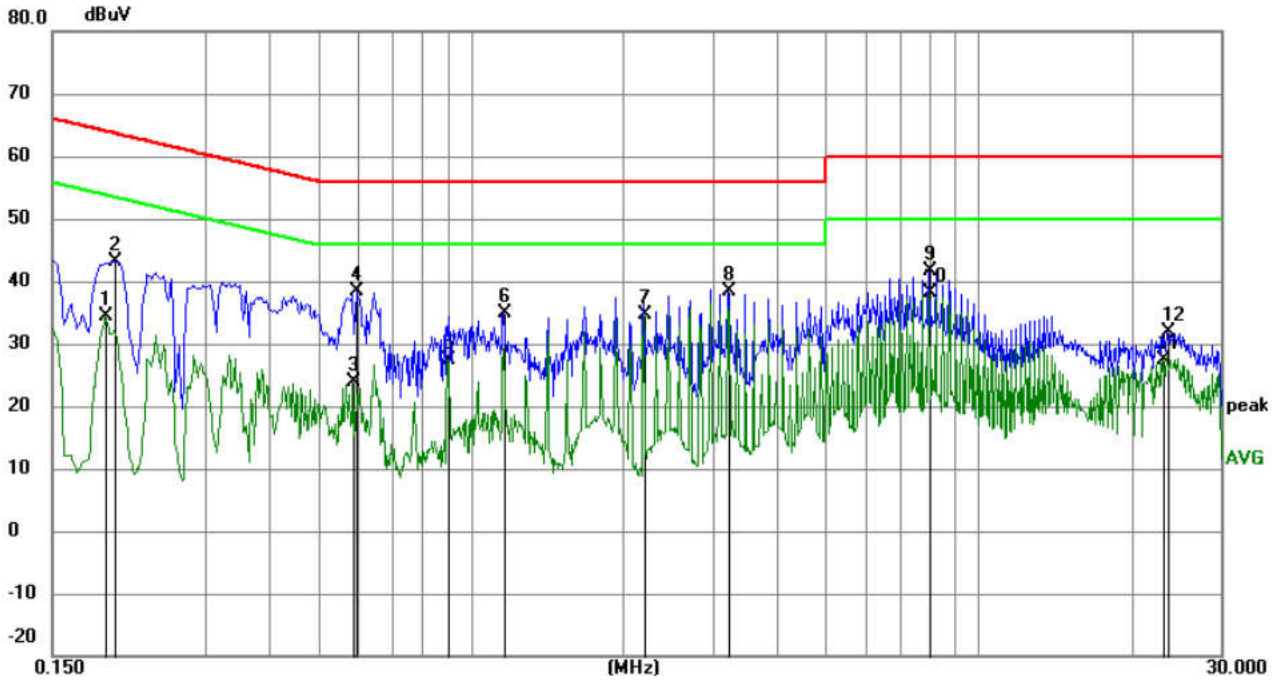


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1949	23.85	9.91	33.76	53.83	-20.07	AVG	
2		0.2040	33.08	9.90	42.98	63.45	-20.47	QP	
3		0.3840	27.71	9.75	37.46	58.19	-20.73	QP	
4		0.4290	13.83	9.79	23.62	47.27	-23.65	AVG	
5		0.9015	18.18	9.81	27.99	46.00	-18.01	AVG	
6		1.1580	25.01	9.74	34.75	56.00	-21.25	QP	
7	*	2.7015	25.75	9.77	35.52	46.00	-10.48	AVG	
8		3.2145	28.16	9.79	37.95	56.00	-18.05	QP	
9		7.4625	31.82	9.85	41.67	60.00	-18.33	QP	
10		7.7190	28.71	9.85	38.56	50.00	-11.44	AVG	
11		24.1890	23.14	9.94	33.08	60.00	-26.92	QP	
12		24.4455	19.49	9.93	29.42	50.00	-20.58	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.

Neutral line:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1905	24.47	9.91	34.38	54.01	-19.63	AVG	
2		0.1995	33.27	9.92	43.19	63.63	-20.44	QP	
3		0.5865	14.23	9.62	23.85	46.00	-22.15	AVG	
4		0.5955	28.85	9.60	38.45	56.00	-17.55	QP	
5		0.9015	17.50	9.81	27.31	46.00	-18.69	AVG	
6		1.1625	25.23	9.74	34.97	56.00	-21.03	QP	
7	*	2.1929	24.90	9.76	34.66	46.00	-11.34	AVG	
8		3.2235	28.60	9.79	38.39	56.00	-17.61	QP	
9		7.9980	31.86	9.84	41.70	60.00	-18.30	QP	
10		7.9980	28.39	9.84	38.23	50.00	-11.77	AVG	
11		23.0910	17.34	9.96	27.30	50.00	-22.70	AVG	
12		23.6084	21.89	9.95	31.84	60.00	-28.16	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:

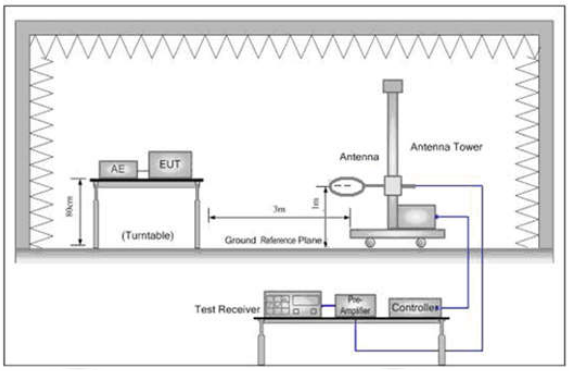


Figure . Below 30MHz

Test Procedure:

Below 1GHz test procedure as below:

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

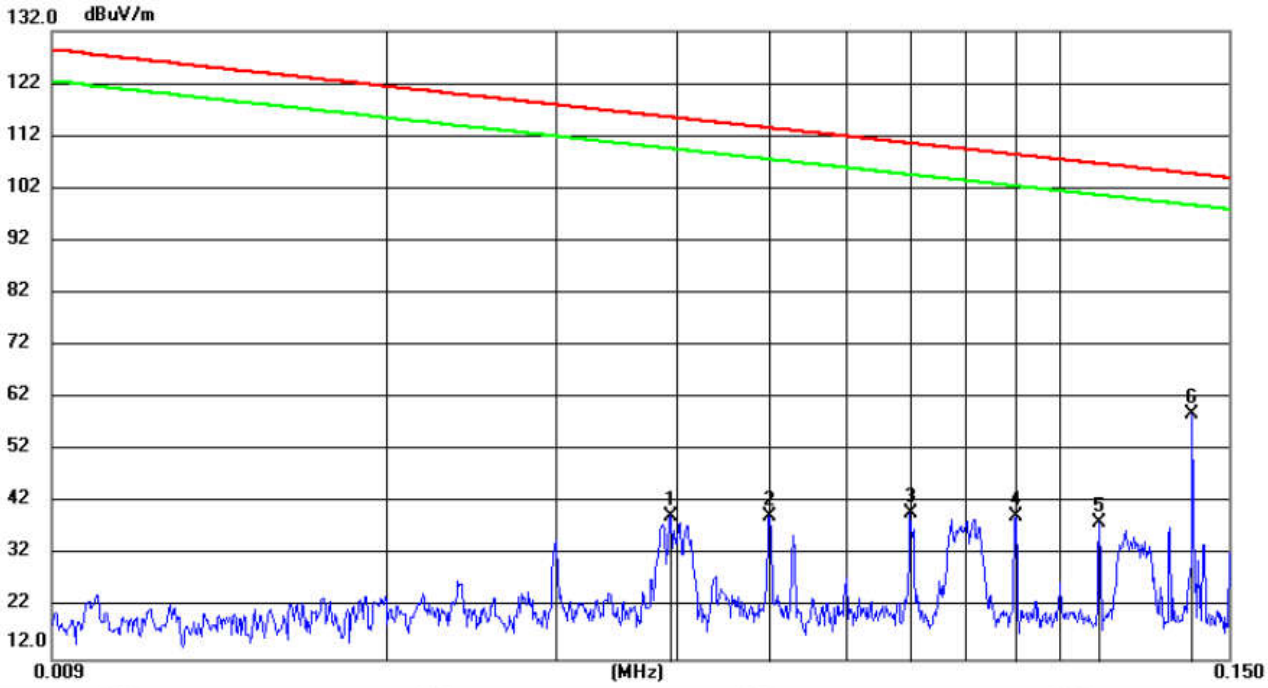
Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Test Mode: Transmitting mode,refer to section 4.3

Test Results: Pass

9kHz~150kHz:

Measurement Data (Mode a):



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.0395	18.43	20.91	39.34	115.54	-76.20	peak	100	264	
2		0.0500	18.69	20.90	39.59	113.50	-73.91	peak	100	352	
3		0.0700	19.20	20.83	40.03	110.60	-70.57	peak	100	352	
4		0.0901	18.46	20.85	39.31	108.42	-69.11	peak	100	352	
5		0.1100	17.51	20.84	38.35	106.70	-68.35	peak	100	352	
6	*	0.1374	38.13	20.91	59.04	104.78	-45.74	peak	100	227	

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.

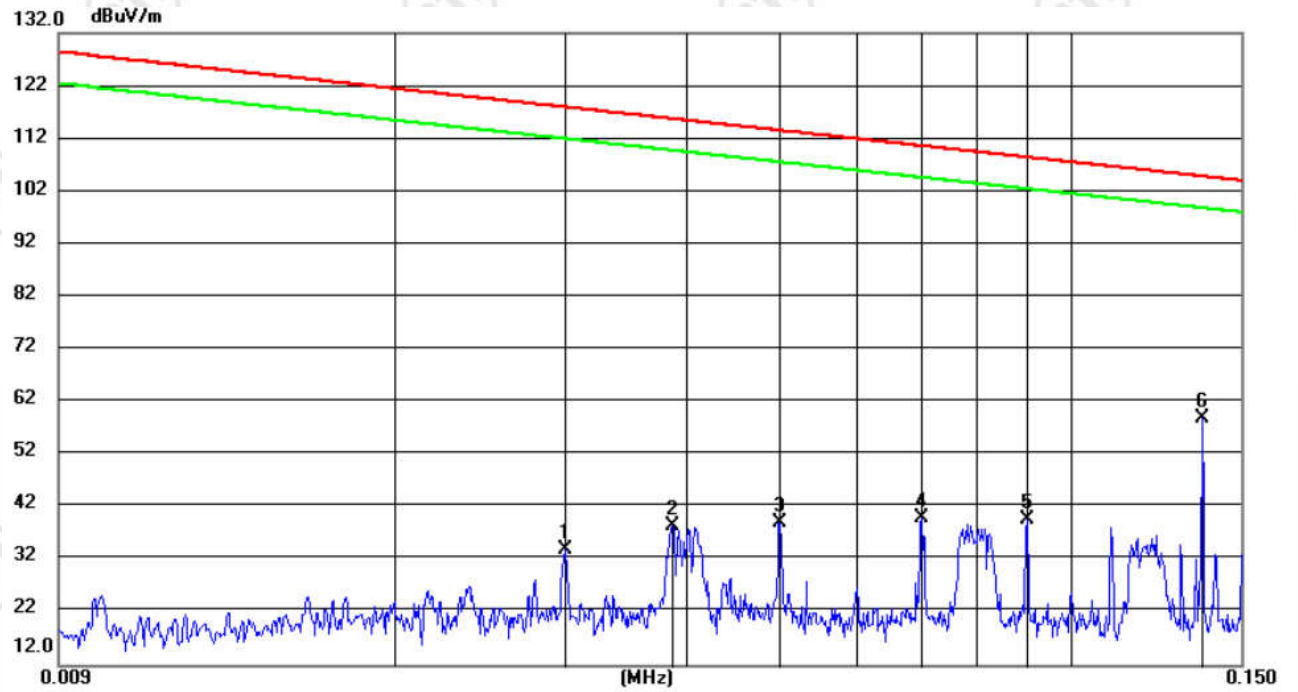
2.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

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.

Measurement Data (Mode b):



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.0300	13.27	20.92	34.19	117.91	-83.72	peak	100	316	
2		0.0387	17.71	20.91	38.62	115.71	-77.09	peak	100	265	
3		0.0500	18.22	20.90	39.12	113.50	-74.38	peak	100	352	
4		0.0701	19.14	20.83	39.97	110.59	-70.62	peak	100	0	
5		0.0901	18.97	20.85	39.82	108.42	-68.60	peak	100	352	
6	*	0.1367	38.17	20.91	59.08	104.82	-45.74	peak	100	228	

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.

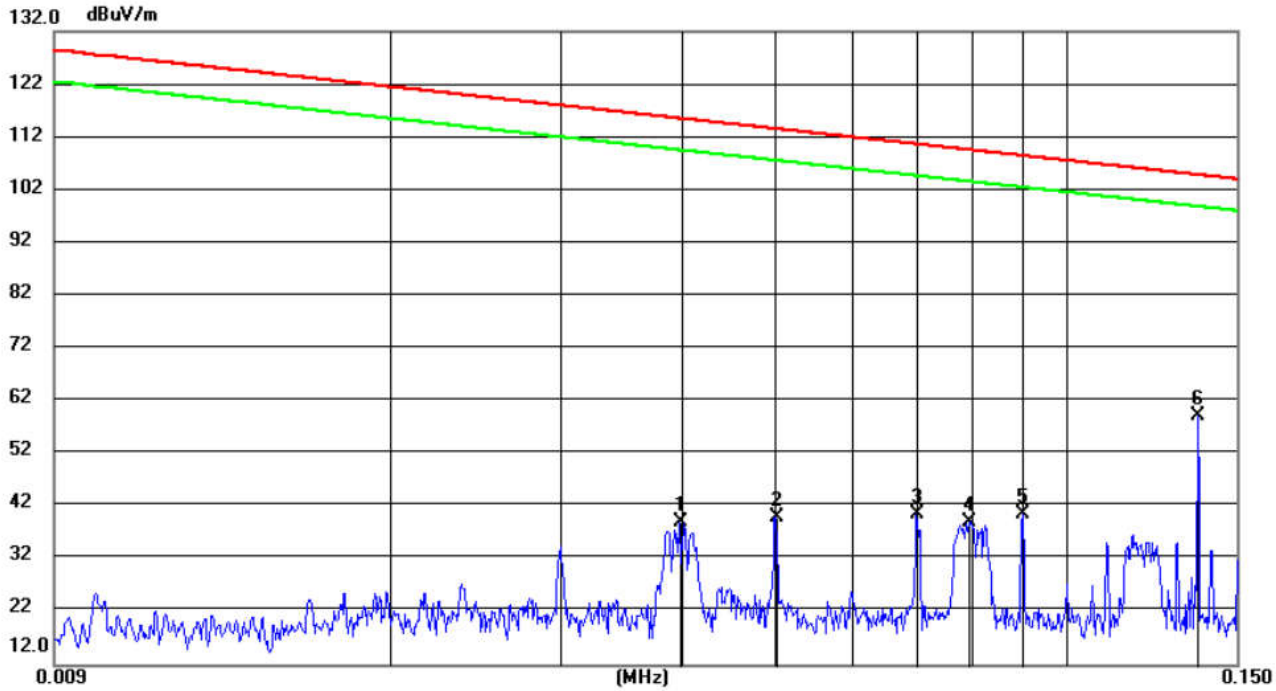
2.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

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.

Measurement Data (Mode c):



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.0399	18.29	20.91	39.20	115.51	-76.31	peak	100	256	
2		0.0501	19.27	20.90	40.17	113.54	-73.37	peak	100	7	
3		0.0700	19.94	20.83	40.77	110.65	-69.88	peak	100	7	
4		0.0793	18.35	20.84	39.19	109.57	-70.38	peak	100	271	
5		0.0901	19.67	20.85	40.52	108.46	-67.94	peak	100	7	
6	*	0.1367	38.34	20.91	59.25	104.85	-45.60	peak	100	234	

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.

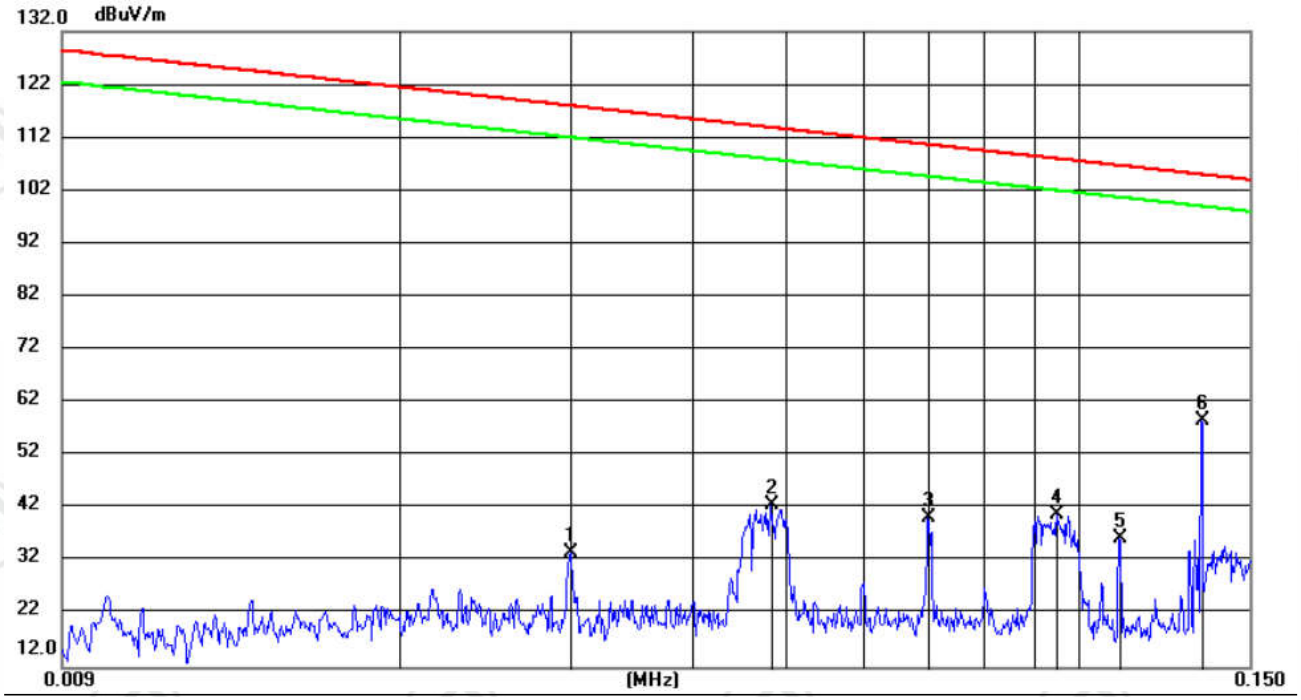
2.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

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.

Measurement Data (Mode d):



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.0300	12.84	20.92	33.76	117.98	-84.22	peak	100	358	
2		0.0483	21.84	20.90	42.74	113.86	-71.12	peak	100	255	
3		0.0700	19.63	20.83	40.46	110.65	-70.19	peak	100	7	
4		0.0950	20.09	20.83	40.92	108.00	-67.08	peak	100	277	
5		0.1101	15.68	20.84	36.52	106.72	-70.20	peak	100	7	
6	*	0.1337	37.90	20.90	58.80	105.04	-46.24	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:

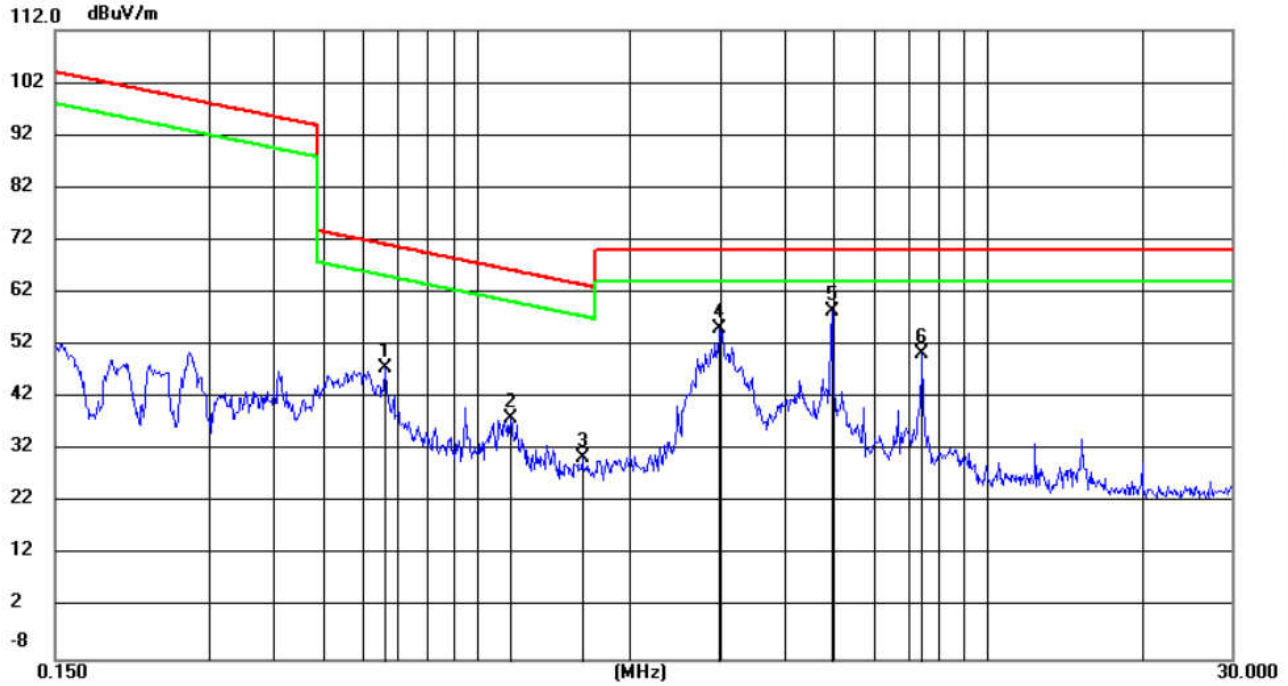
Final Test Level =Receiver Reading - Correct Factor

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 a):



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.6611	27.01	20.54	47.55	71.21	-23.66	peak	100	352	
2		1.1657	17.50	20.49	37.99	66.29	-28.30	peak	100	29	
3		1.6104	10.04	20.46	30.50	63.49	-32.99	peak	100	264	
4		2.9934	34.74	20.41	55.15	70.00	-14.85	peak	100	352	
5	*	4.9518	38.09	20.41	58.50	70.00	-11.50	peak	100	330	
6		7.4464	29.83	20.41	50.24	70.00	-19.76	peak	100	44	

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.

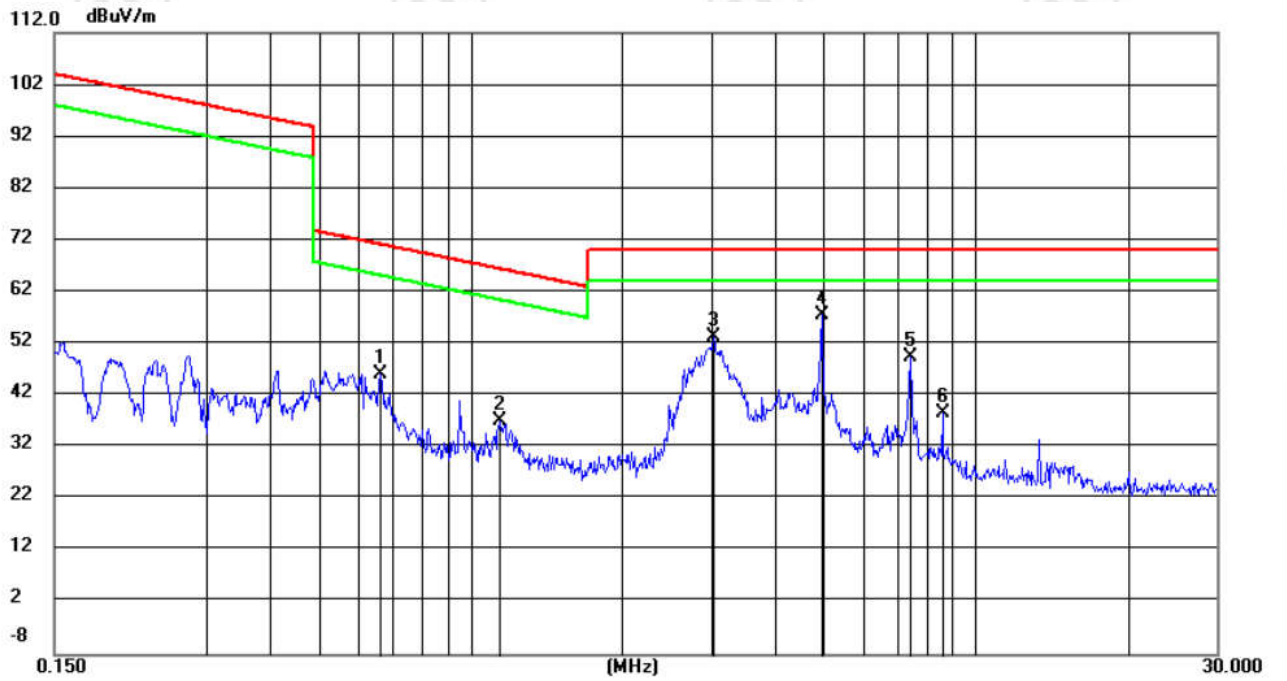
2.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

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.

Measurement Data (Mode b):



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.6611	25.75	20.54	46.29	71.21	-24.92	peak	100	7	
2		1.1412	16.75	20.49	37.24	66.48	-29.24	peak	100	22	
3		3.0253	33.00	20.41	53.41	70.00	-16.59	peak	100	352	
4	*	4.9518	37.08	20.41	57.49	70.00	-12.51	peak	100	330	
5		7.4464	29.18	20.41	49.59	70.00	-20.41	peak	100	352	
6		8.5916	18.29	20.44	38.73	70.00	-31.27	peak	100	73	

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.

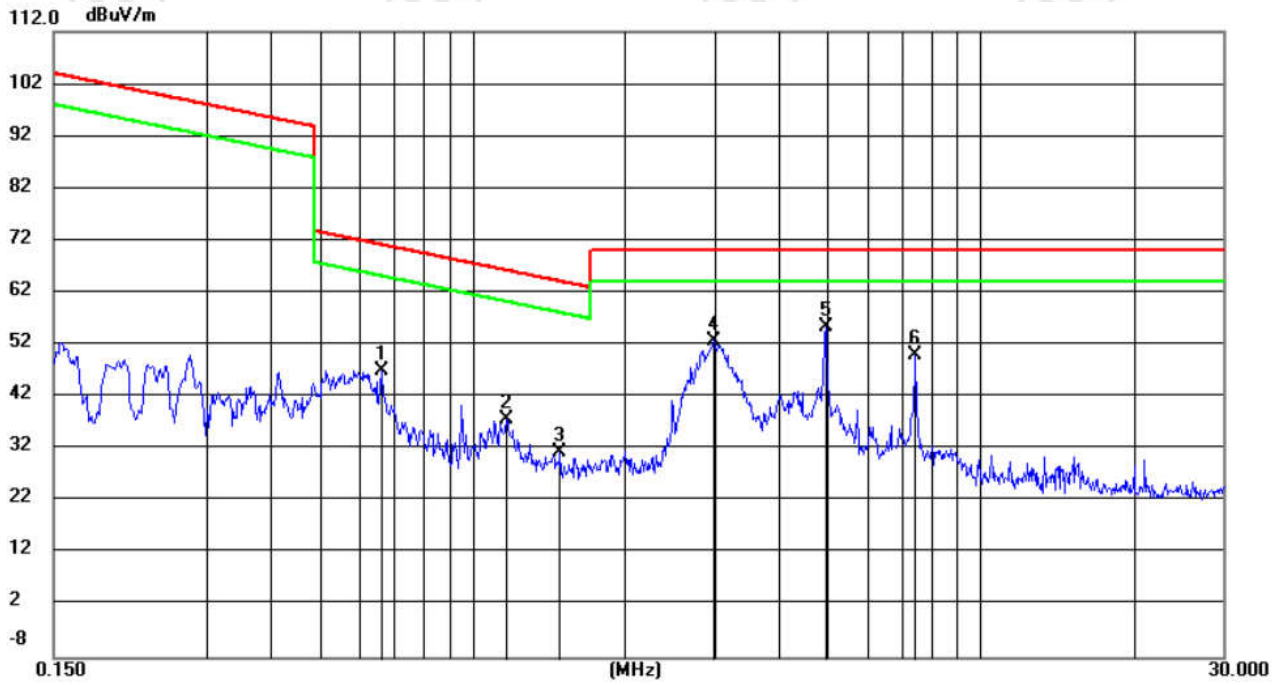
2.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

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.

Measurement Data (Mode c):



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.6611	26.64	20.54	47.18	71.21	-24.03	peak	100	352	
2		1.1657	17.14	20.49	37.63	66.29	-28.66	peak	100	249	
3		1.4874	10.94	20.47	31.41	64.18	-32.77	peak	100	52	
4		2.9934	32.49	20.41	52.90	70.00	-17.10	peak	100	44	
5	*	4.9518	35.15	20.41	55.56	70.00	-14.44	peak	100	88	
6		7.4464	29.76	20.41	50.17	70.00	-19.83	peak	100	352	

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.

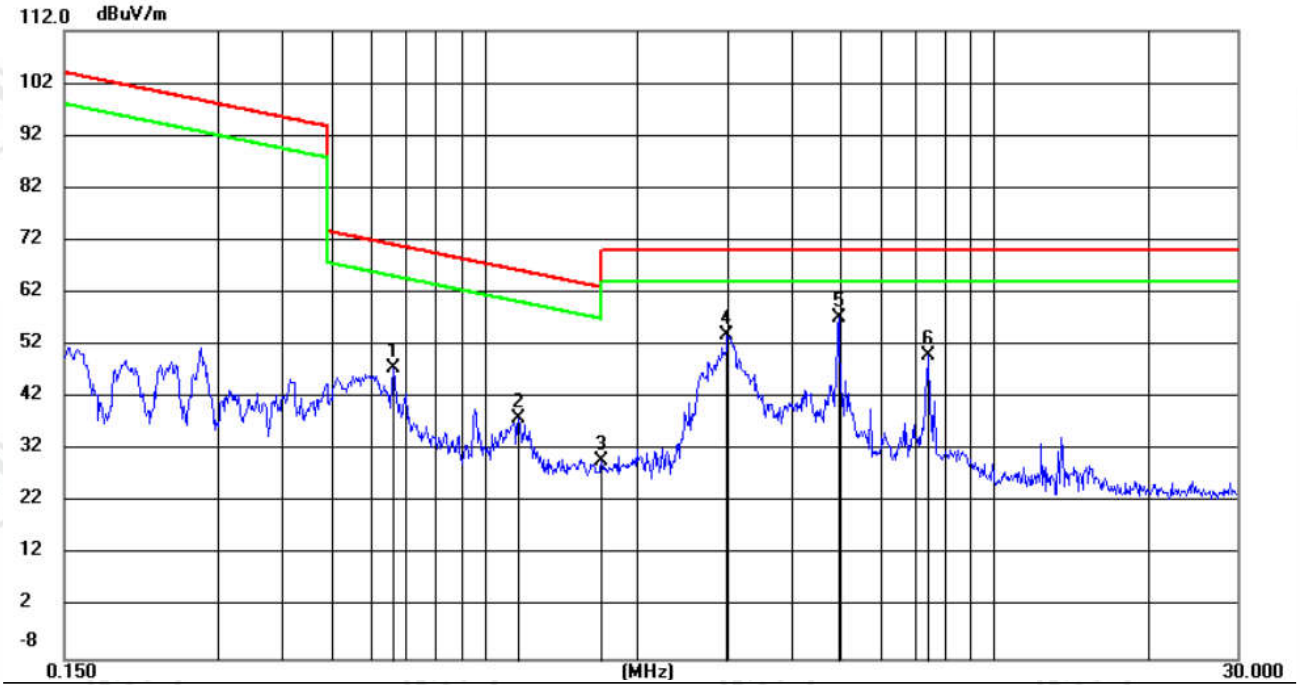
2.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

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.

Measurement Data (Mode d):



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.6611	27.17	20.54	47.71	71.21	-23.50	peak	100	352	
2		1.1657	17.54	20.49	38.03	66.29	-28.26	peak	100	256	
3		1.6980	9.63	20.46	30.09	63.04	-32.95	peak	100	301	
4		2.9934	33.57	20.41	53.98	70.00	-16.02	peak	100	52	
5	*	4.9518	36.89	20.41	57.30	70.00	-12.70	peak	100	147	
6		7.4464	29.65	20.41	50.06	70.00	-19.94	peak	100	73	

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

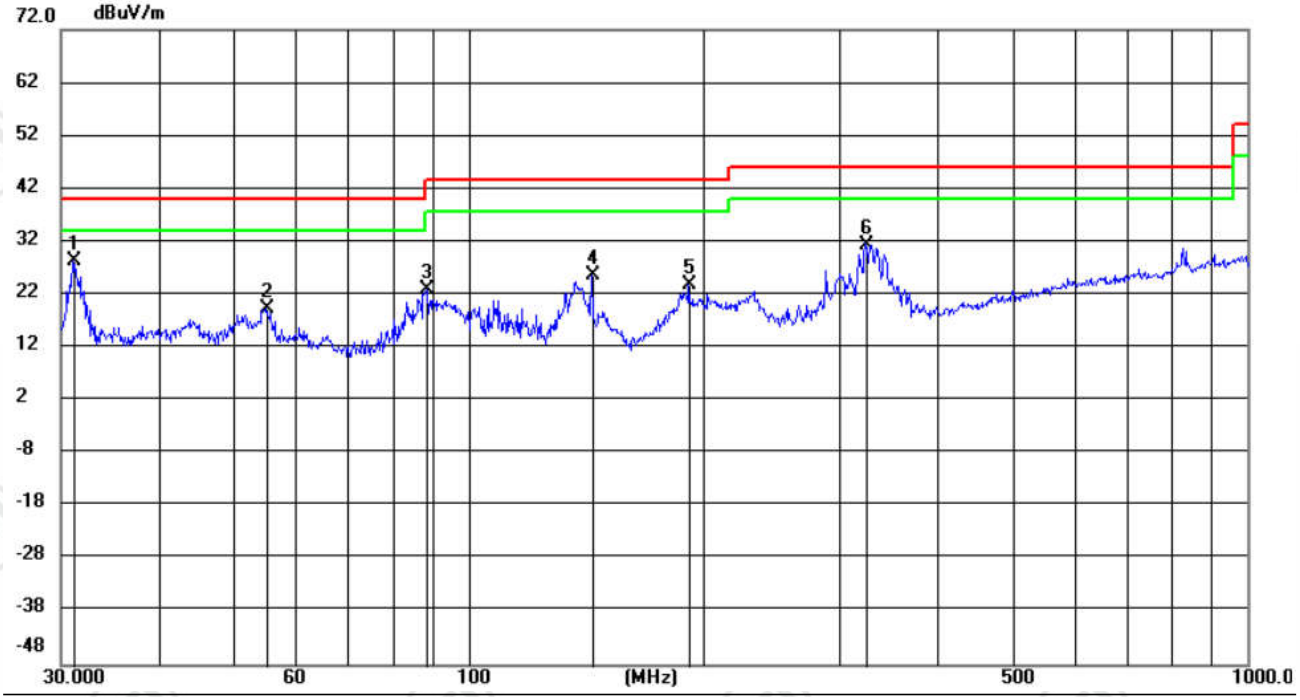
Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

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 a):

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	31.1579	15.49	12.82	28.31	40.00	-11.69	QP	199	93	
2		55.0756	5.57	13.71	19.28	40.00	-20.72	QP	199	223	
3		88.3421	11.28	11.65	22.93	43.50	-20.57	QP	199	17	
4		144.0061	16.00	9.63	25.63	43.50	-17.87	QP	199	330	
5		192.0141	11.37	12.45	23.82	43.50	-19.68	QP	100	172	
6		324.2853	14.35	17.15	31.50	46.00	-14.50	QP	100	98	

Remark:

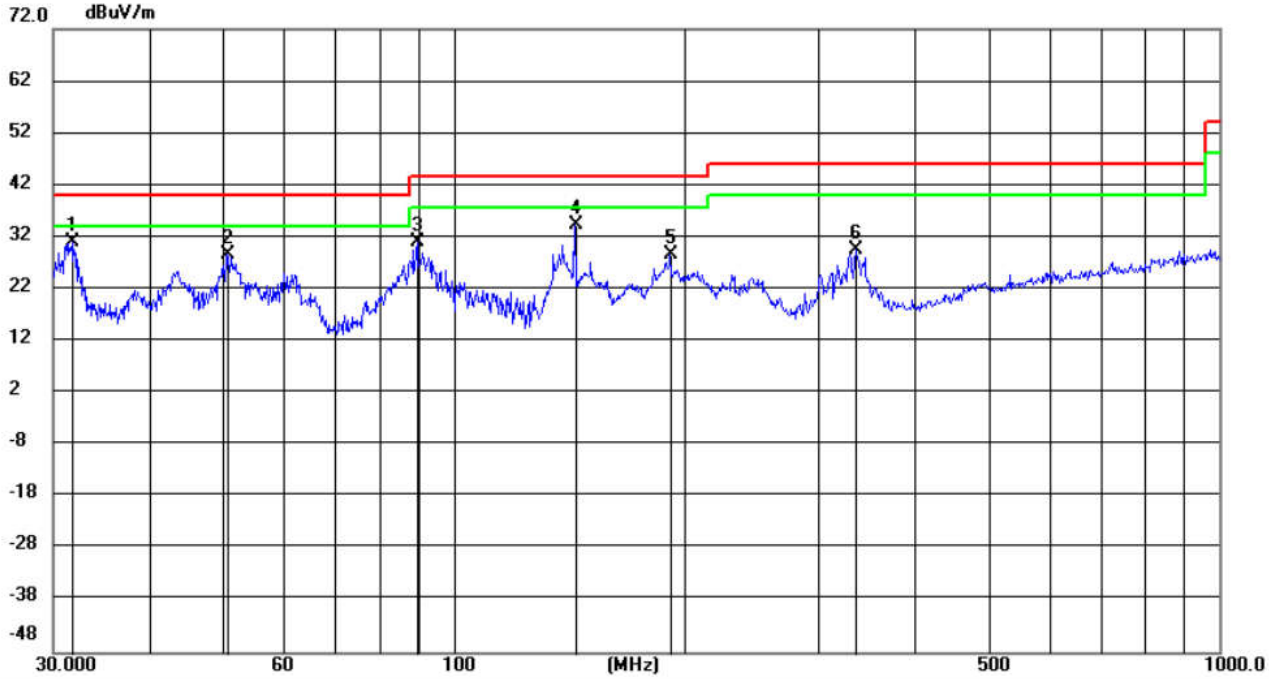
1.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equati on with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Measurement Data (Mode a):

Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	31.7591	18.07	12.90	30.97	40.00	-9.03	QP	200	50	
2		50.7370	14.61	14.11	28.72	40.00	-11.28	QP	100	7	
3		89.7157	18.96	11.98	30.94	43.50	-12.56	QP	100	7	
4		144.0062	24.62	9.63	34.25	43.50	-9.25	QP	100	50	
5		191.9805	16.27	12.45	28.72	43.50	-14.78	QP	100	136	
6		335.5642	12.27	17.37	29.64	46.00	-16.36	QP	200	39	

Remark:

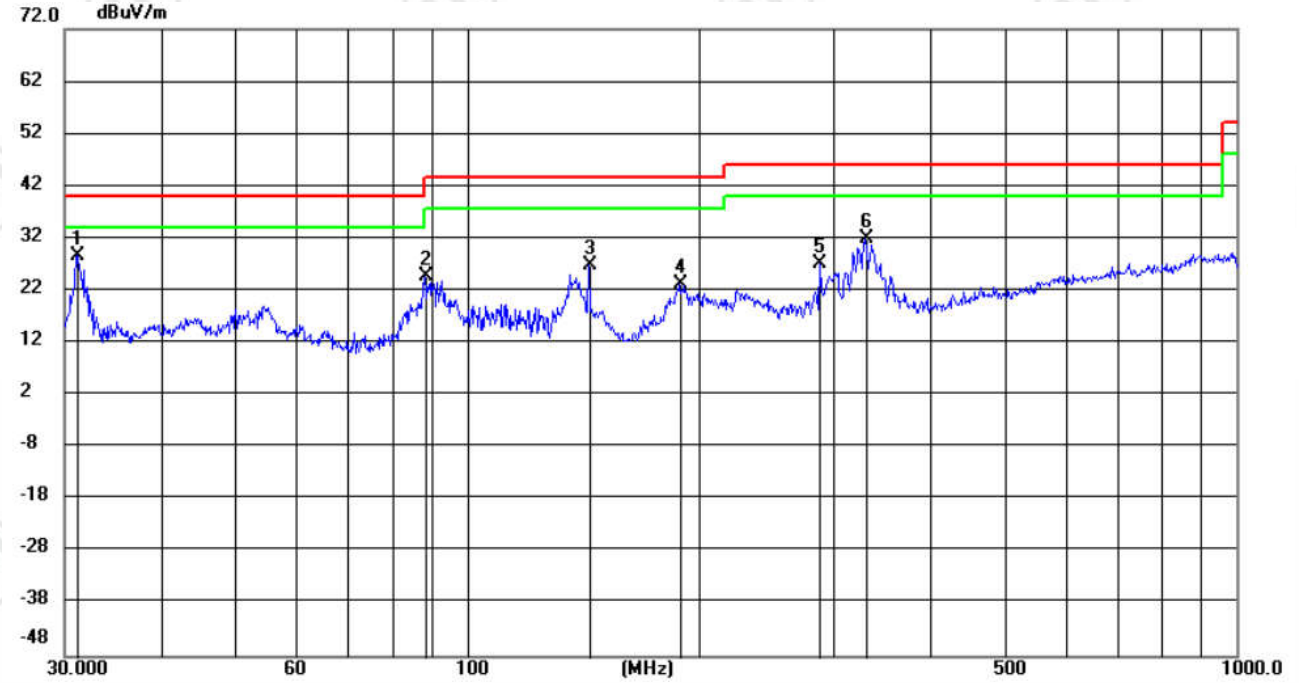
1.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equati on with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Measurement Data (Mode b):

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	31.1797	15.97	12.82	28.79	40.00	-11.21	QP	199	92	
2		88.2028	13.18	11.62	24.80	43.50	-18.70	QP	199	7	
3		144.0061	17.26	9.63	26.89	43.50	-16.61	QP	199	329	
4		189.7051	10.82	12.37	23.19	43.50	-20.31	QP	100	299	
5		287.9904	10.90	16.19	27.09	46.00	-18.91	QP	100	288	
6		329.3853	14.70	17.26	31.96	46.00	-14.04	QP	100	278	

Remark:

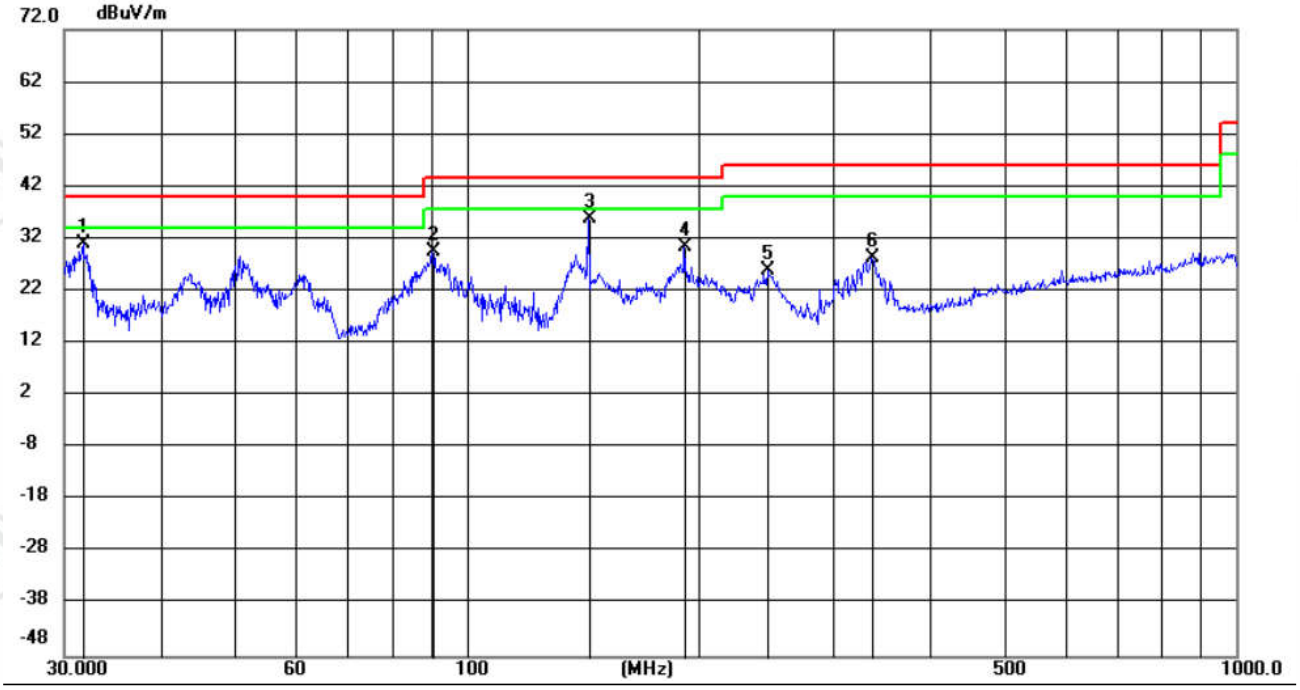
1.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equati on with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Measurement Data (Mode b):

Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.7925	18.19	12.90	31.09	40.00	-8.91	QP	100	7	
2		90.3947	17.45	12.11	29.56	43.50	-13.94	QP	100	360	
3	*	144.0062	26.20	9.63	35.83	43.50	-7.67	QP	100	72	
4		192.0142	17.95	12.45	30.40	43.50	-13.10	QP	100	136	
5		246.2962	11.53	14.55	26.08	46.00	-19.92	QP	100	201	
6		337.1564	10.96	17.41	28.37	46.00	-17.63	QP	100	40	

Remark:

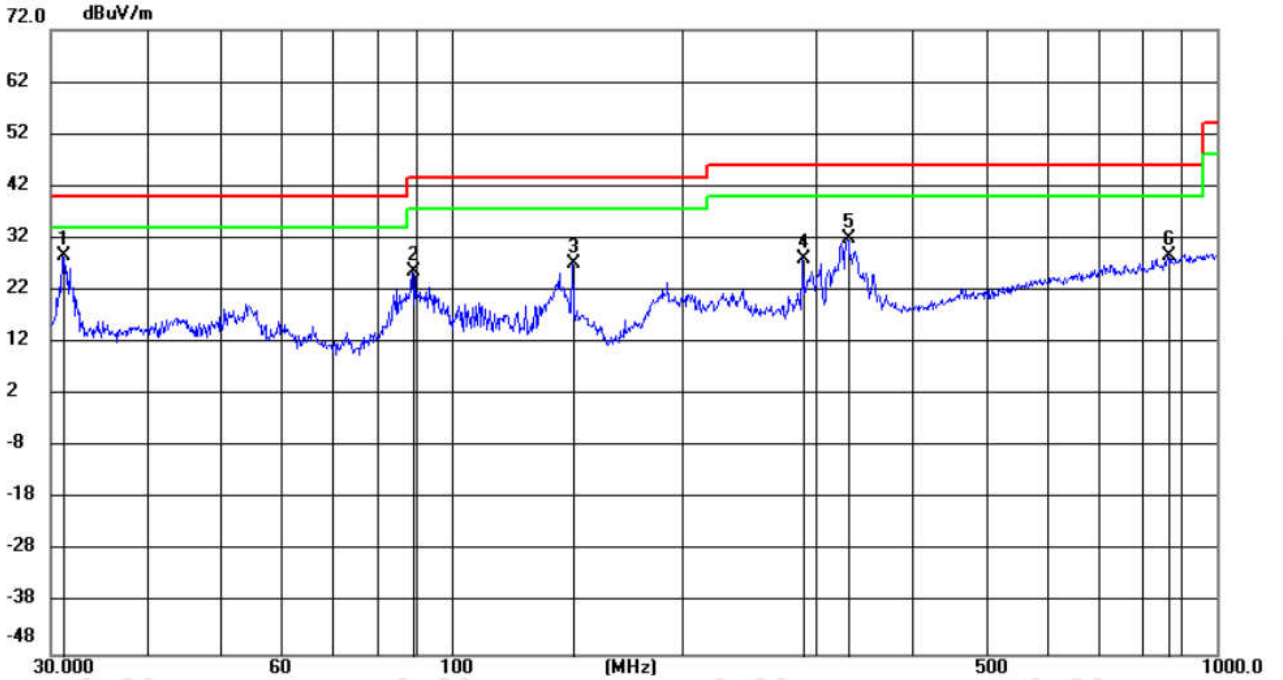
1.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Measurement Data (Mode c):

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	31.1797	15.88	12.82	28.70	40.00	-11.30	QP	199	61	
2		89.0417	13.93	11.82	25.75	43.50	-17.75	QP	199	7	
3		144.0061	17.51	9.63	27.14	43.50	-16.36	QP	199	7	
4		288.0409	11.79	16.20	27.99	46.00	-18.01	QP	100	256	
5		329.6164	14.68	17.26	31.94	46.00	-14.06	QP	100	299	
6		863.6617	1.81	26.83	28.64	46.00	-17.36	QP	199	82	

Remark:

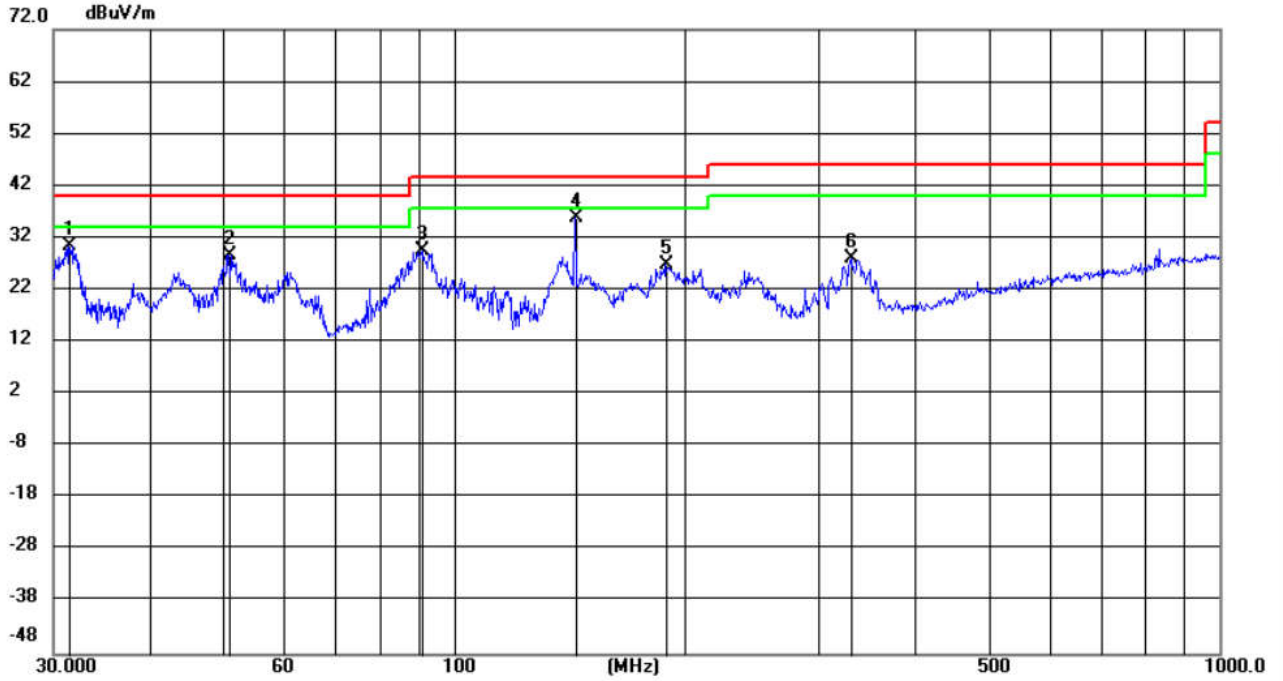
1.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equati on with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Measurement Data (Mode c):

Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.5040	17.73	12.87	30.60	40.00	-9.40	QP	200	115	
2		50.7815	14.60	14.10	28.70	40.00	-11.30	QP	100	104	
3		91.0308	17.28	12.20	29.48	43.50	-14.02	QP	100	7	
4	*	144.0314	26.17	9.63	35.80	43.50	-7.70	QP	100	60	
5		189.2070	14.38	12.35	26.73	43.50	-16.77	QP	100	147	
6		331.1805	10.68	17.29	27.97	46.00	-18.03	QP	200	40	

Remark:

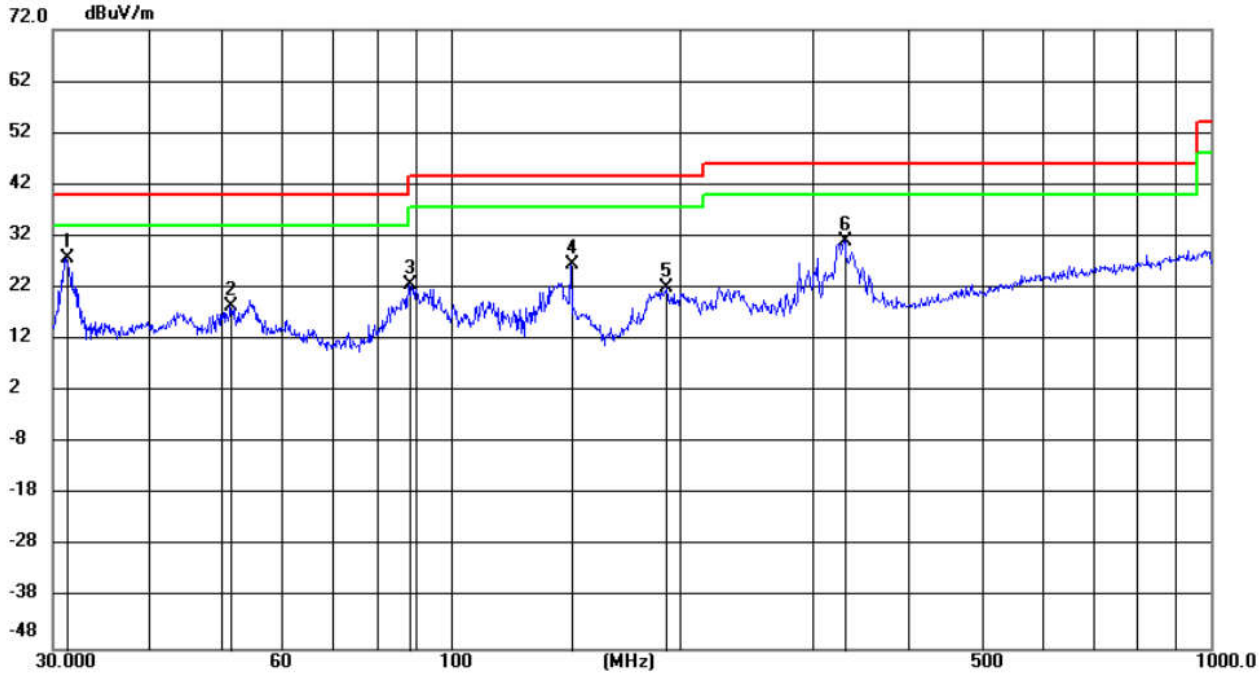
1.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Measurement Data (Mode d):

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	31.1907	14.95	12.82	27.77	40.00	-12.23	QP	200	355	
2		51.4084	4.35	14.04	18.39	40.00	-21.61	QP	200	175	
3		88.2956	10.96	11.64	22.60	43.50	-20.90	QP	200	7	
4		144.0314	16.94	9.63	26.57	43.50	-16.93	QP	200	344	
5		192.4185	9.60	12.47	22.07	43.50	-21.43	QP	100	310	
6		330.6003	13.82	17.28	31.10	46.00	-14.90	QP	100	100	

Remark:

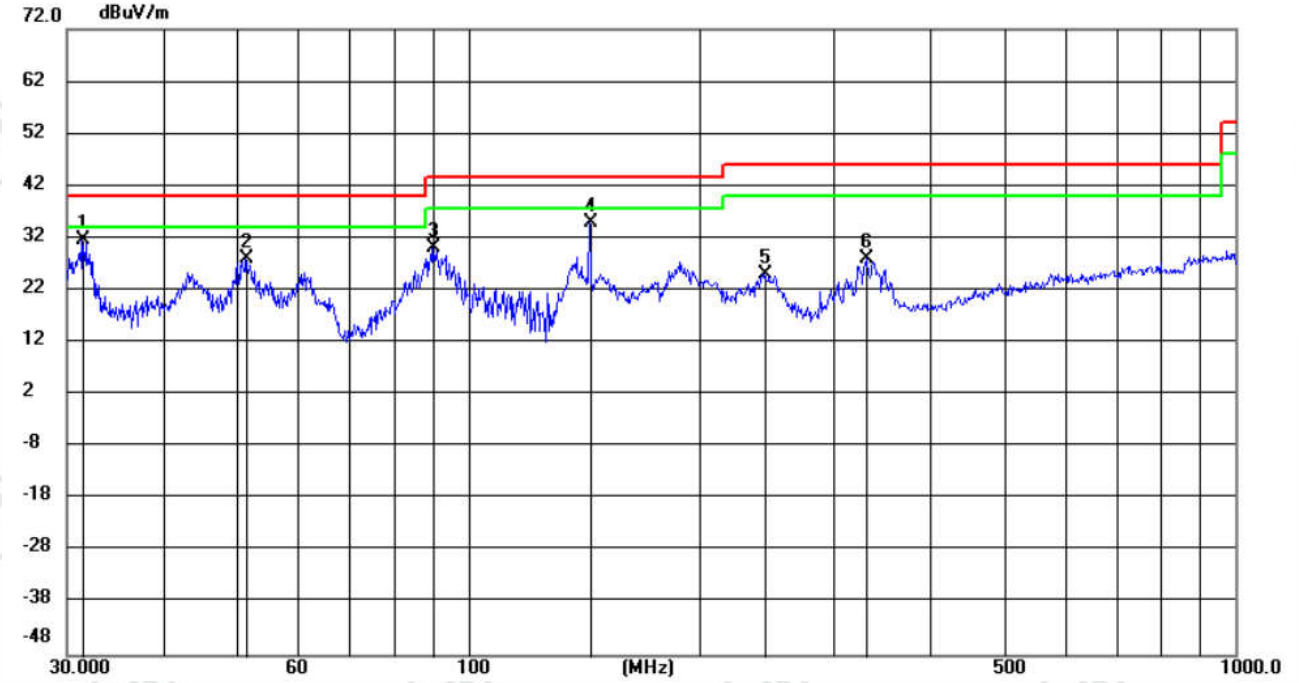
1.The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

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 Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	31.4874	18.66	12.86	31.52	40.00	-8.48	QP	200	88	
2		51.3725	13.91	14.04	27.95	40.00	-12.05	QP	100	127	
3		90.0467	18.05	12.06	30.11	43.50	-13.39	QP	100	288	
4		144.0062	25.36	9.63	34.99	43.50	-8.51	QP	100	50	
5		243.5479	10.58	14.44	25.02	46.00	-20.98	QP	100	202	
6		331.2386	10.67	17.29	27.96	46.00	-18.04	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