TEST REPORT

Reference No.	:	WTX20X06038445W-1
FCC ID	:	A4X-WPC10-1CCOA
Applicant	:	CE LINK LIMITED
Address	:	Building M,LiCheng Technology Industrial Zone,GongHe Village,ShaJing Town,ShenZhen City,China
Product Name	:	Wireless charger
Test Model	:	WPC10-1CCOA
Standards	:	FCC Part 18
Date of Receipt sample	:	Jun.18, 2020
Date of Test	:	Jun.18, 2020 to Jul.07, 2020
Date of Issue	:	Jul.07, 2020
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Report version

Version No.	Date of issue	Description
Rev.00	Jul.07, 2020	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	CE LINK LIMITED
Address of applicant:	Building M,LiCheng Technology Industrial Zone, GongHe Village,ShaJing Town,ShenZhen City,China
Manufacturer:	CE LINK LIMITED
Address of manufacturer:	Building M,LiCheng Technology Industrial Zone, GongHe Village,ShaJing Town,ShenZhen City,China
Factory:	SuiChuan CE LINK LIMITED
Address of factory	SuiChuan county industrial park east zone, Ji'an city, Jiangxi Province, China.

General Description of EUT	
Product Name:	Wireless charger
Trade Name:	CE-LINK
Model No.:	WPC10-1CCOA
Adding Model(s):	/
Note: The test data is gathered from a production sample, provided by the manufacturer.	

Technical Characteristics of EUT	
Frequency Range:	112-205kHz
Antenna Type:	Coil Antenna
Rated Voltage:	DC5V / DC9V
Rated Current:	1A / 1.1A
Rated Power:	5W / 10W

1.2 Test Standards

The tests were performed according to following standards:
FCC Part 18 Subpart C: Industrial, Scientific, and medical medical equipment.

ANSI C63.4-2014: American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.4 Test Facility

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.
Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C. (518101）

FCC – Registration No.: 125990
Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintain ed in our files. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A
The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List:

Test Mode	Description	Remark	Power Supply Mode
TM1	Wireless Charging	/	Input DC5V/2A; Output:DC5V/1A
TM2	Wireless Charging	/	Input DC9V/1.67A; Output:DC9V/1.1A
TM3	Wireless Charging	/	Input DC12V/1.25A; Output:DC9V/1.1A

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	1.0	Unshielded	Without Ferrite

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Power Port Speed	ANKER	A2025	/

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	9-150kHz ±3.74dB
		0.15-30MHz ±3.34dB
Radiated Emissions	Radiated	30-200MHz ±4.52dB
		0.2-1GHz ±5.56dB
		1-6GHz ±3.84dB
		6-18GHz ±3.92dB

1.7 Test Equipment List and Details

Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
Spectrum Analyzer	Agilent	E4407B	MY41440400	2020-04-28	2021-04-27
Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2020-04-28	2021-04-27
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2020-04-28	2021-04-27
Amplifier	Agilent	8447F	3113A06717	2020-04-28	2021-04-27
Amplifier	C&D	PAP-1G18	2002	2020-04-28	2021-04-27
Broadband Antenna	Schwarz beck	VULB9163	9163-333	2019-05-05	2021-05-04
Horn Antenna	ETS	3117	00086197	2019-05-05	2021-05-04
Loop Antenna	Schwarz beck	FMZB 1516	9773	2019-05-05	2021-05-04
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2020-04-28	2021-04-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2020-04-28	2021-04-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2020-04-28	2021-04-27

Software List			
Description	Manufacturer	Model	Version
EMI Test Software (Radiated Emission)*	Farad	EZ-EMC	RA-03A1
EMI Test Software (Conducted Emission)*	Farad	EZ-EMC	RA-03A1

*Remark: indicates software version used in the compliance certification testing

2. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§ 18.307 (b)	Conducted Emission	Compliant
§ 18.305 (b)	Radiated Emission	Compliant

3. Conducted Emissions

3.1 Standard Applicable

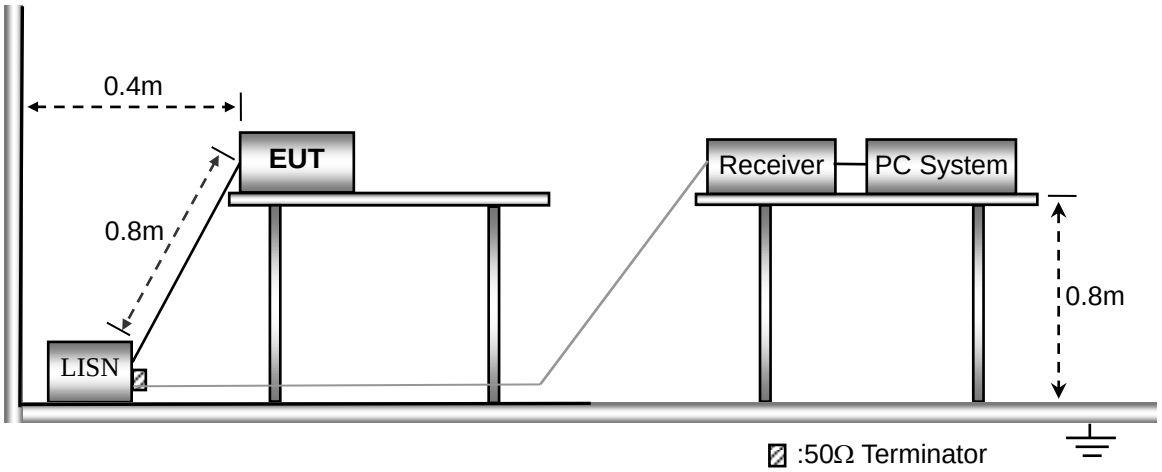
According to FCC 18.307(b), the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies shall not exceed the limits in the following tables:

Frequency (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

3.2 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 18.307 Limit.
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.

3.3 Basic Test Setup Block Diagram



3.4 Environmental Conditions

Temperature:	26° C
Relative Humidity:	60%
ATM Pressure:	1016 mbar

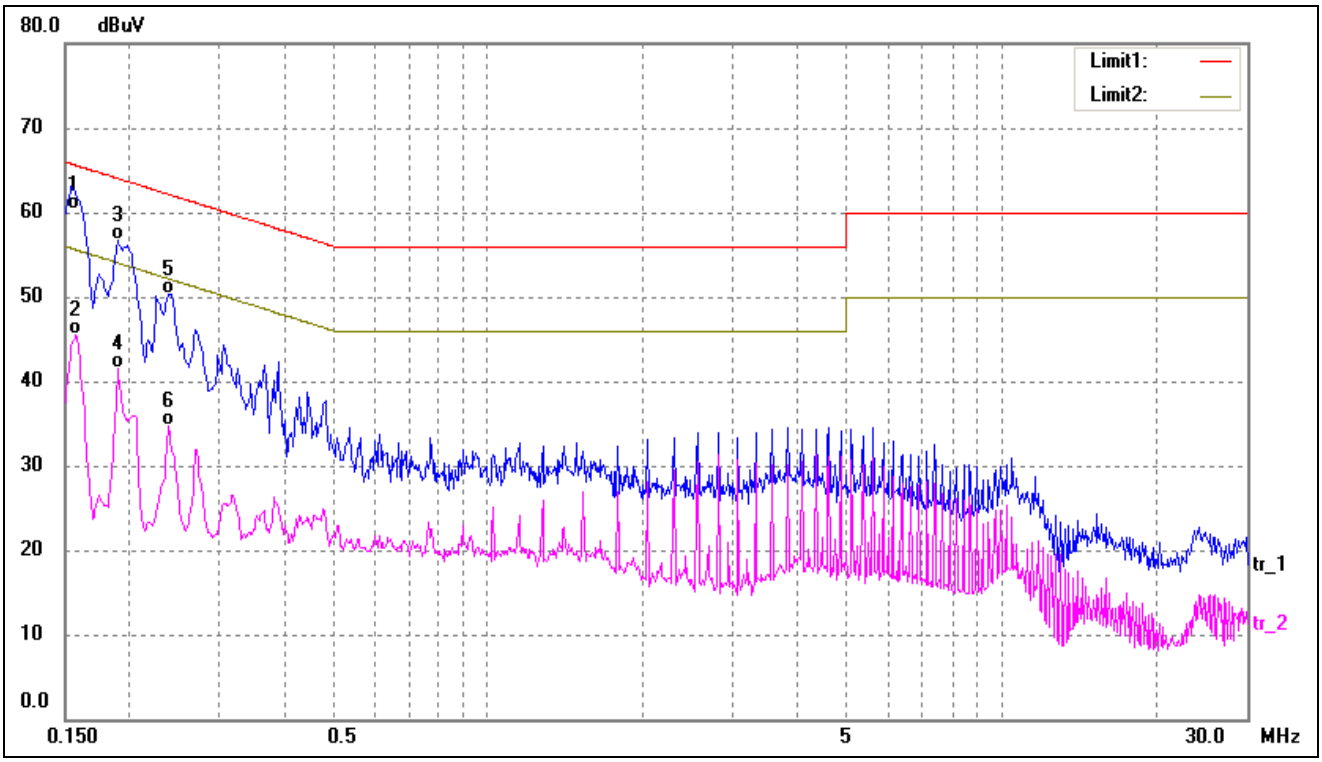
3.5 Test Receiver Setup

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

Start Frequency	150 kHz
Stop Frequency	30 MHz
Sweep Speed	Auto
IF Bandwidth	10 kHz
Quasi-Peak Adapter Bandwidth	9 kHz
Quasi-Peak Adapter Mode	Normal

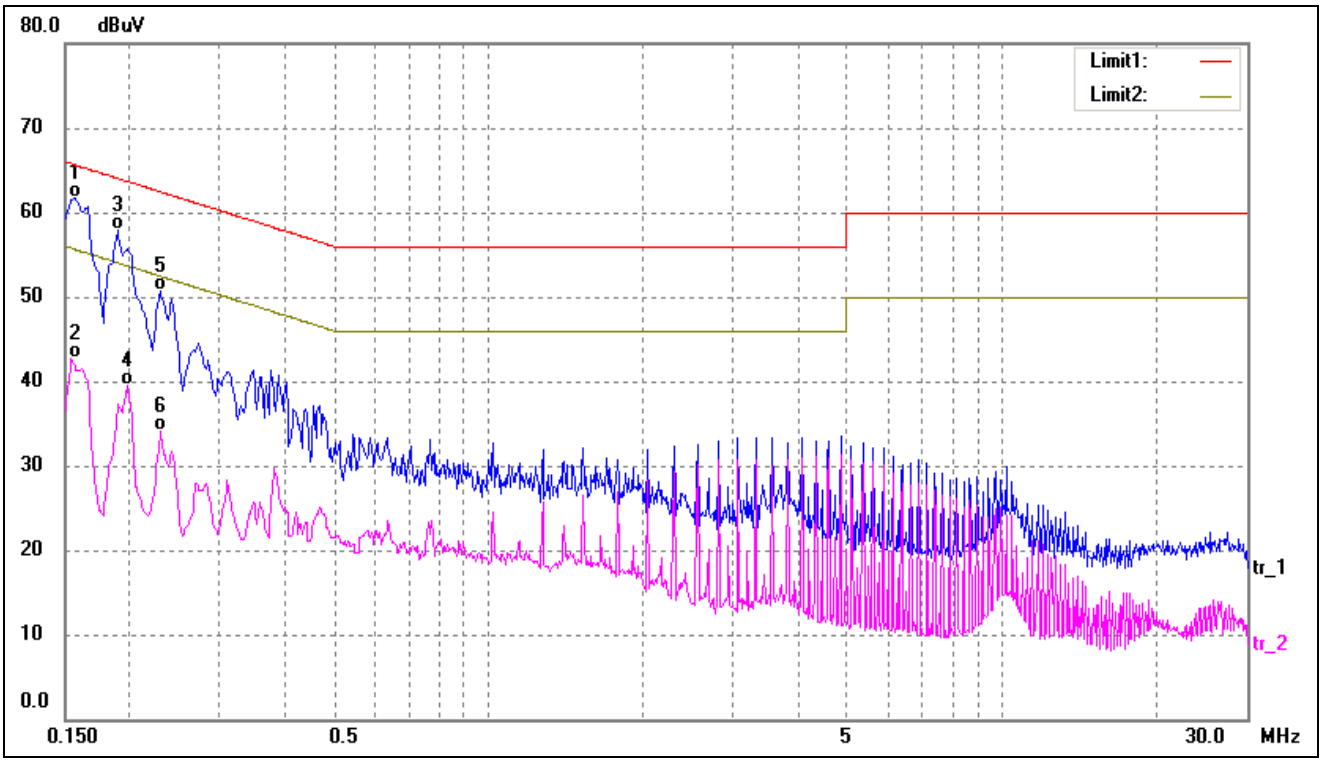
3.6 Summary of Test Results/Plots

Test mode:	TM1	Polarity:	Line



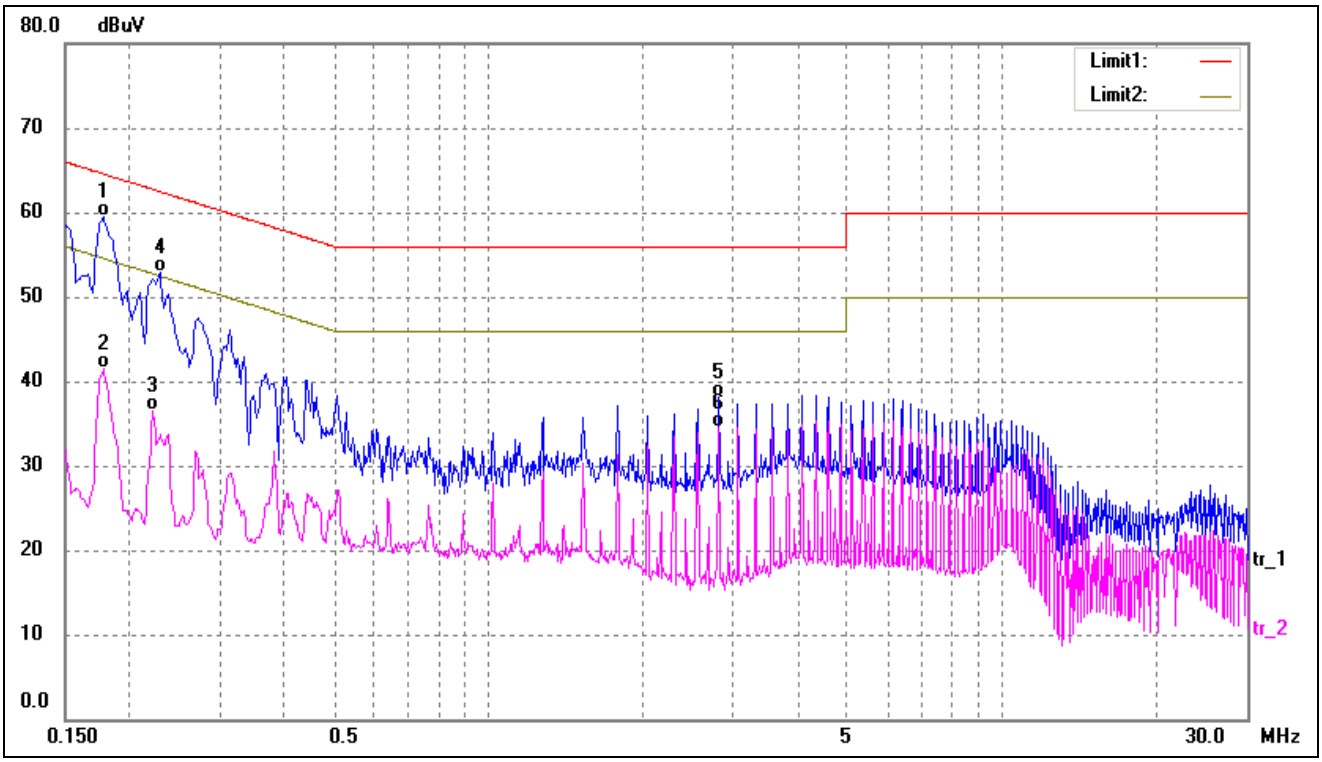
No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1539	50.35	9.95	60.30	65.78	-5.48	QP
2	0.1580	35.59	9.95	45.54	55.56	-10.02	AVG
3	0.1900	46.69	9.96	56.65	64.03	-7.38	QP
4	0.1900	31.48	9.96	41.44	54.03	-12.59	AVG
5	0.2380	40.35	10.00	50.35	62.16	-11.81	QP
6	0.2380	24.71	10.00	34.71	52.16	-17.45	AVG

Test mode:	TM1	Polarity:	Neutral



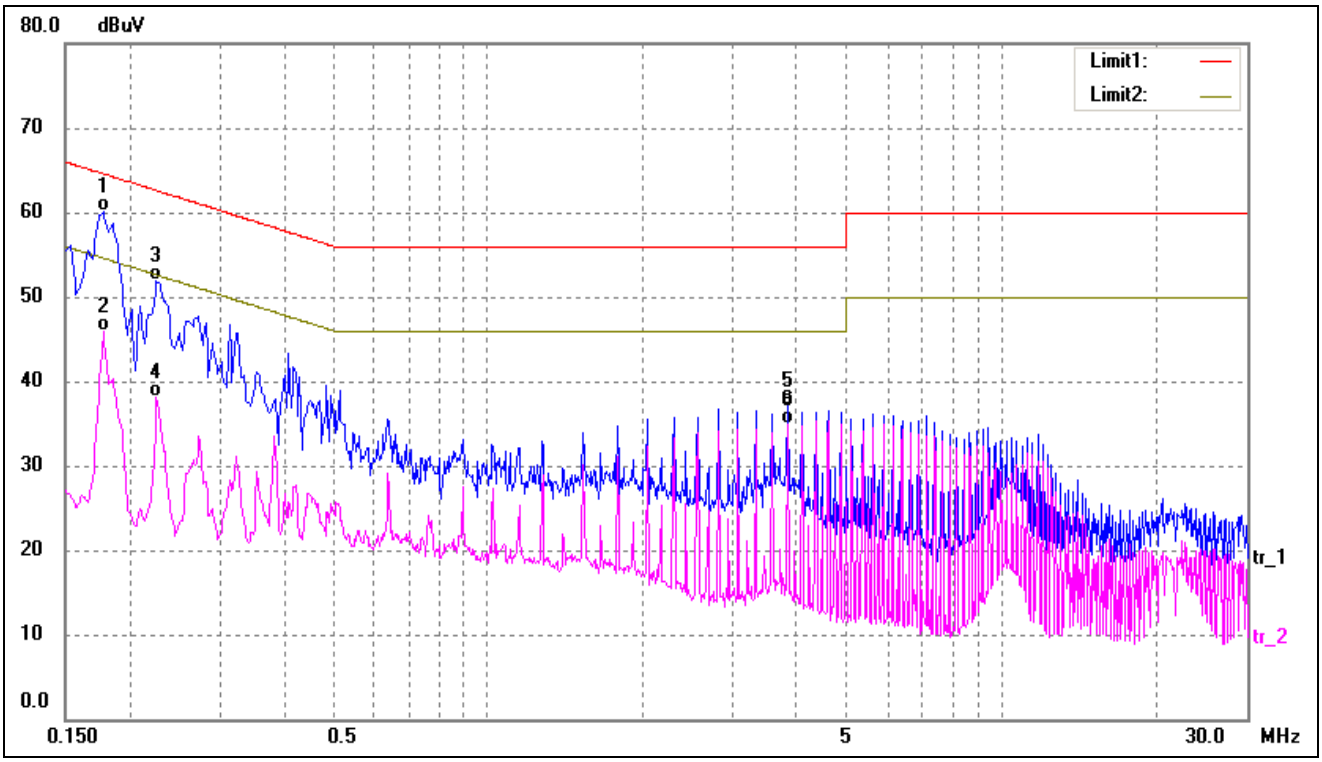
No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1580	51.79	9.95	61.74	65.56	-3.82	QP
2	0.1580	32.80	9.95	42.75	55.56	-12.81	AVG
3	0.1900	47.97	9.96	57.93	64.03	-6.10	QP
4	0.1980	29.63	9.97	39.60	53.69	-14.09	AVG
5	0.2300	40.74	9.99	50.73	62.45	-11.72	QP
6	0.2300	24.05	9.99	34.04	52.45	-18.41	AVG

Test mode:	TM2	Polarity:	Line



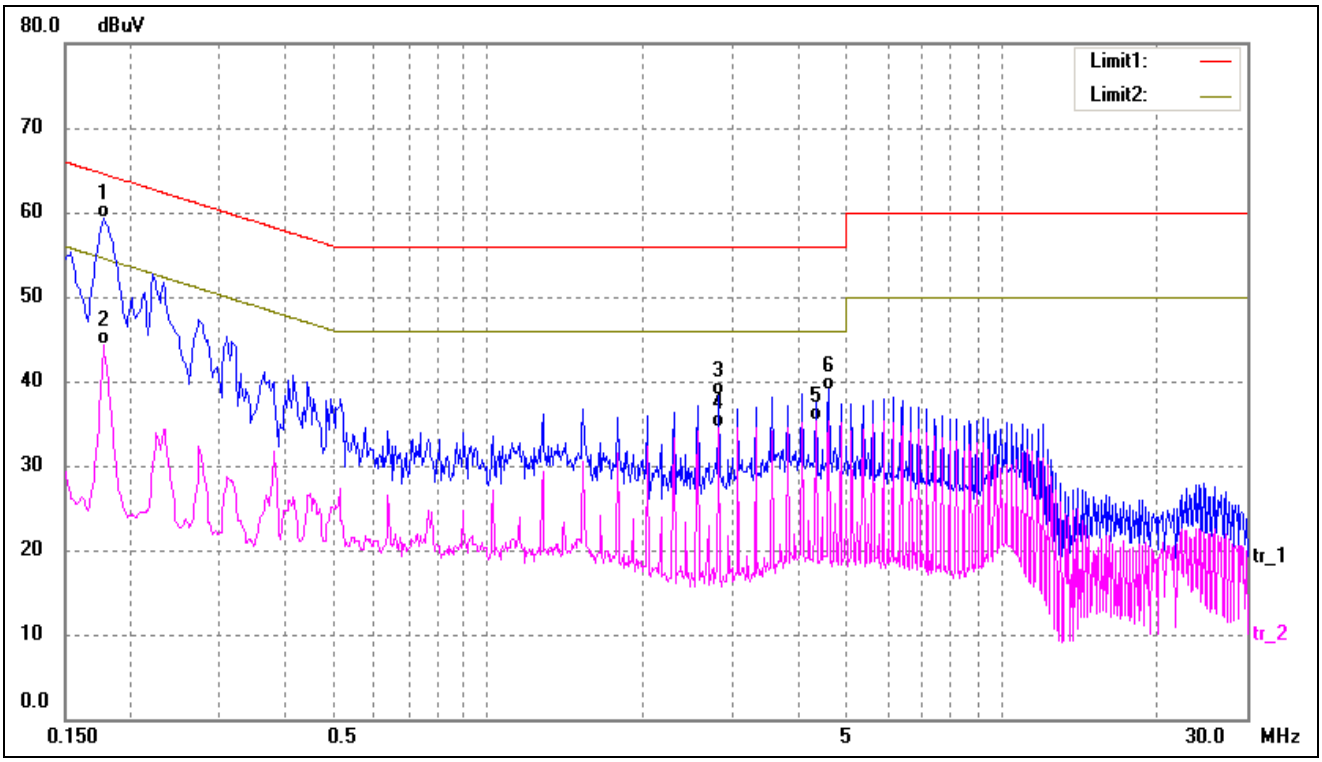
No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1780	49.51	9.96	59.47	64.57	-5.10	QP
2	0.1780	31.48	9.96	41.44	54.57	-13.13	AVG
3	0.2220	26.53	9.99	36.52	52.74	-16.22	AVG
4	0.2300	43.01	9.99	53.00	62.45	-9.45	QP
5	2.8100	27.76	10.39	38.15	56.00	-17.85	QP
6	2.8100	24.08	10.39	34.47	46.00	-11.53	AVG

Test mode:	TM2	Polarity:	Neutral



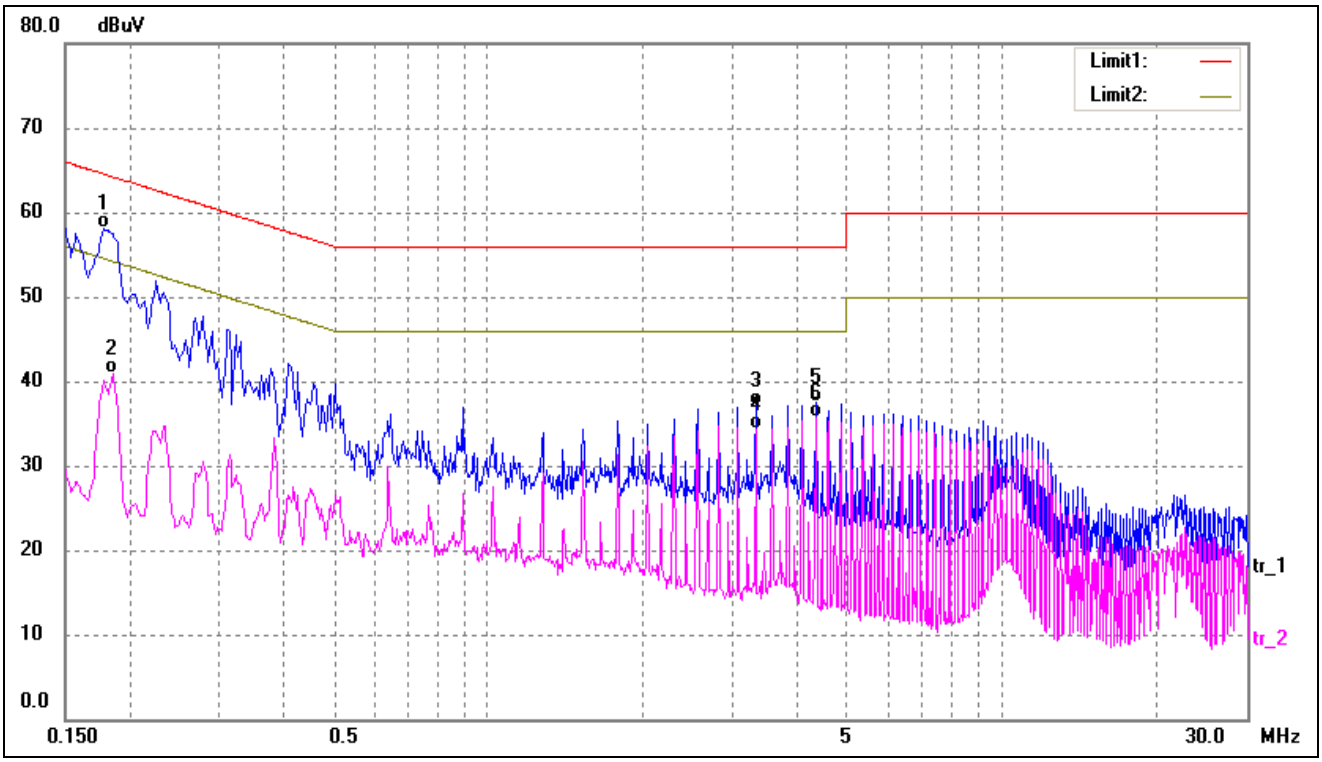
No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1780	50.11	9.96	60.07	64.57	-4.50	QP
2	0.1780	35.88	9.96	45.84	54.57	-8.73	AVG
3	0.2260	41.91	9.99	51.90	62.59	-10.69	QP
4	0.2260	28.14	9.99	38.13	52.59	-14.46	AVG
5	3.8300	26.87	10.32	37.19	56.00	-18.81	QP
6	3.8300	24.54	10.32	34.86	46.00	-11.14	AVG

Test mode:	TM3	Polarity:	Line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1780	49.37	9.96	59.33	64.57	-5.24	QP
2	0.1780	34.27	9.96	44.23	54.57	-10.34	AVG
3	2.8100	27.84	10.39	38.23	56.00	-17.77	QP
4	2.8100	24.05	10.39	34.44	46.00	-11.56	AVG
5	4.3420	24.93	10.33	35.26	46.00	-10.74	AVG
6	4.5980	28.65	10.35	39.00	56.00	-17.00	QP

Test mode:	TM3	Polarity:	Neutral



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1780	48.20	9.96	58.16	64.57	-6.41	QP
2	0.1860	31.00	9.96	40.96	54.21	-13.25	AVG
3	3.3220	26.75	10.36	37.11	56.00	-18.89	QP
4	3.3220	23.92	10.36	34.28	46.00	-11.72	AVG
5	4.3420	27.24	10.33	37.57	56.00	-18.43	QP
6	4.3420	25.39	10.33	35.72	46.00	-10.28	AVG

4. Radiated Emissions

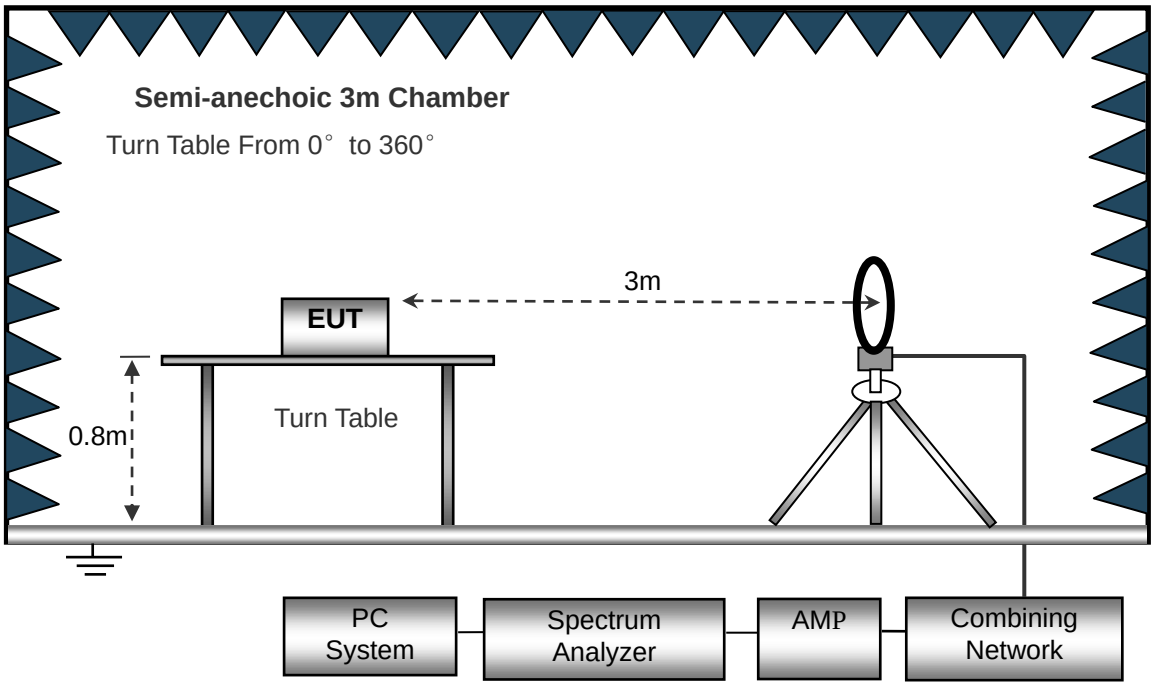
4.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 18.305 Limit.

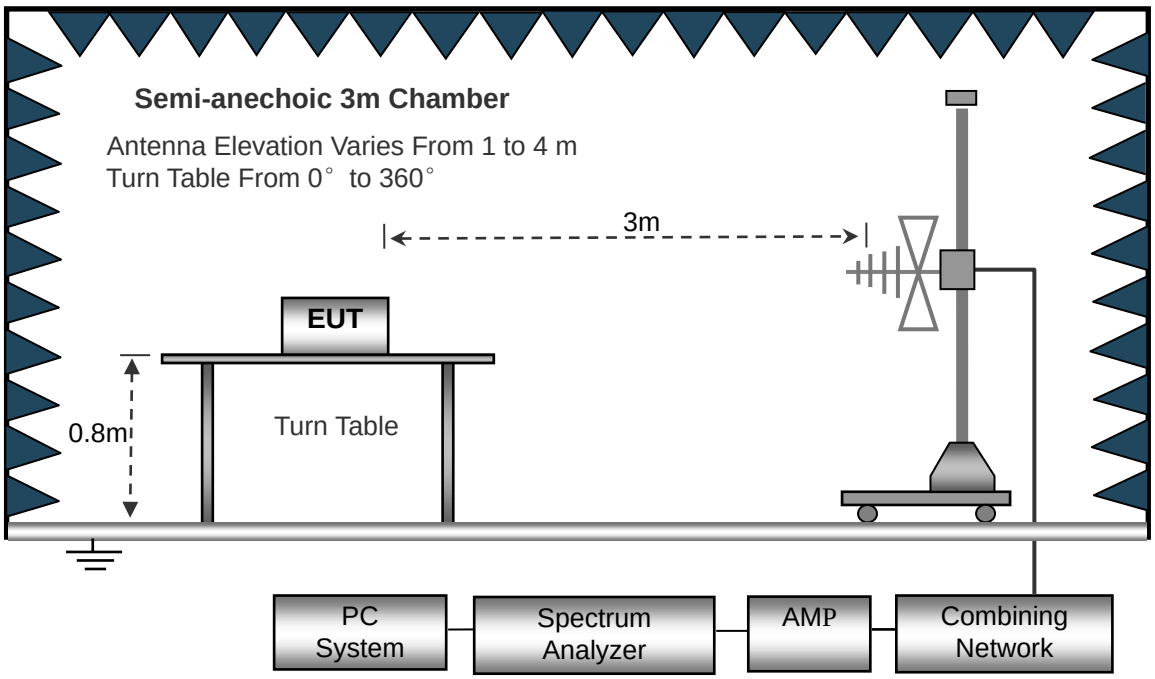
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

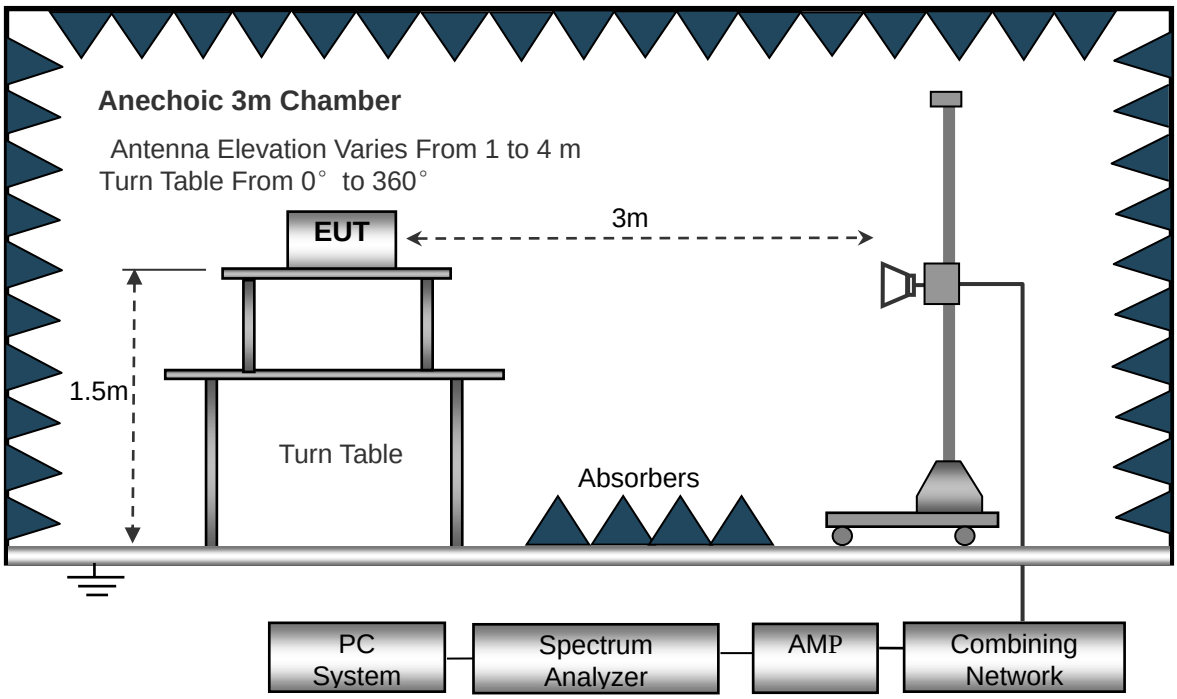
The test setup for emission measurement below 30MHz..



The test setup for emission measurement from 30 MHz to 1 GHz..



The test setup for emission measurement above 1 GHz..



4.2 Test Receiver Setup

Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

4.3 Corrected Amplitude & Margin Calculation

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

Corr. Ampl. = Indicated Reading – Corr. Factor

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for Any non-ISM frequency device. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCC Part 18.305 Limit

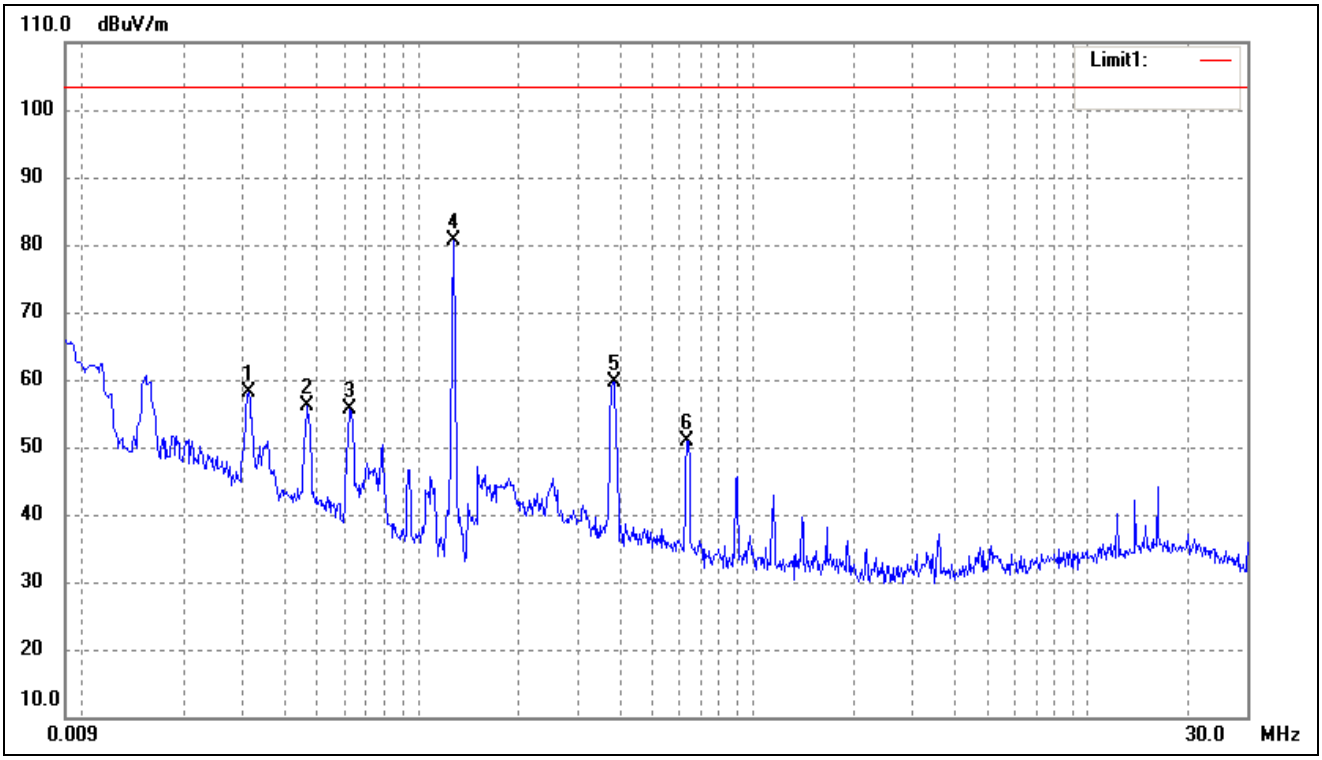
4.4 Environmental Conditions

Temperature:	22 °C
Relative Humidity:	54 %
ATM Pressure:	1011 mbar

4.5 Summary of Test Results/Plots

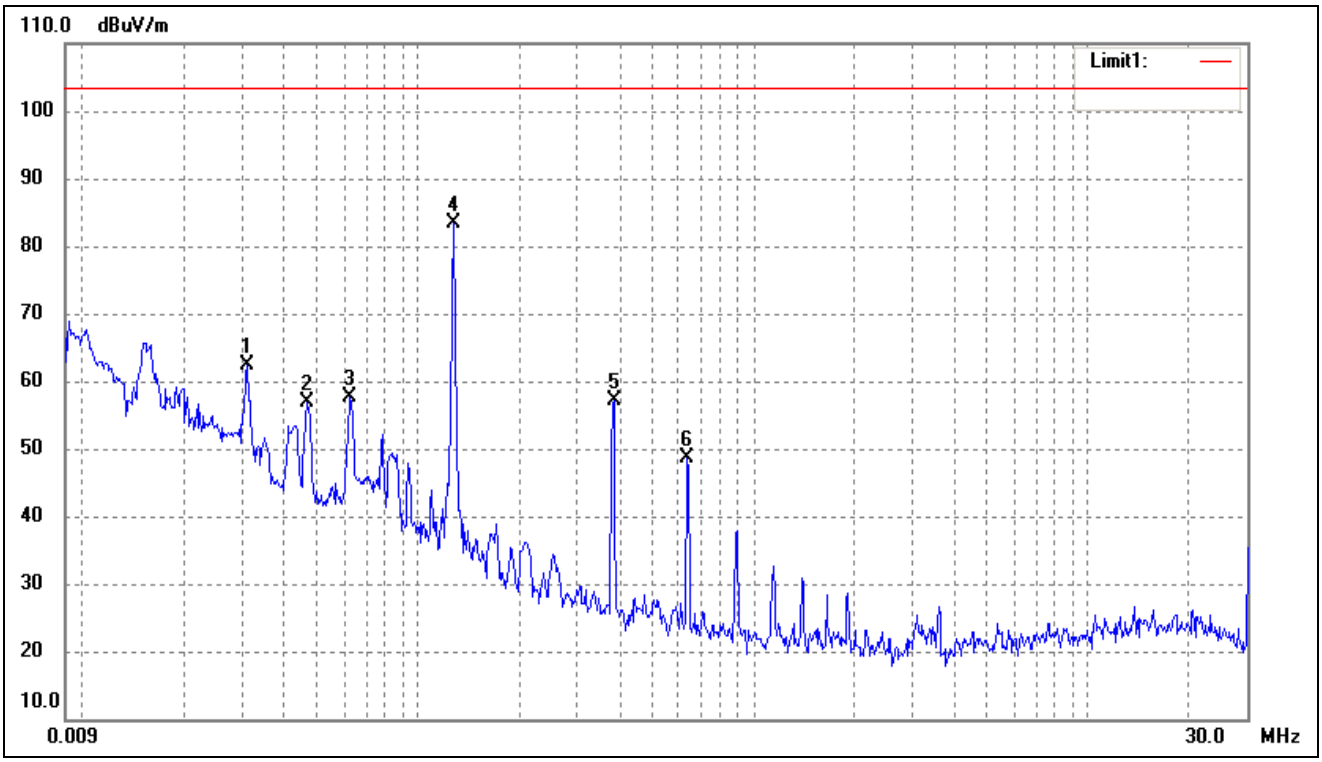
Plot of Radiated Emissions Test Data (Below 30MHz)

Test mode:	TM1	Polarity:	Vertical



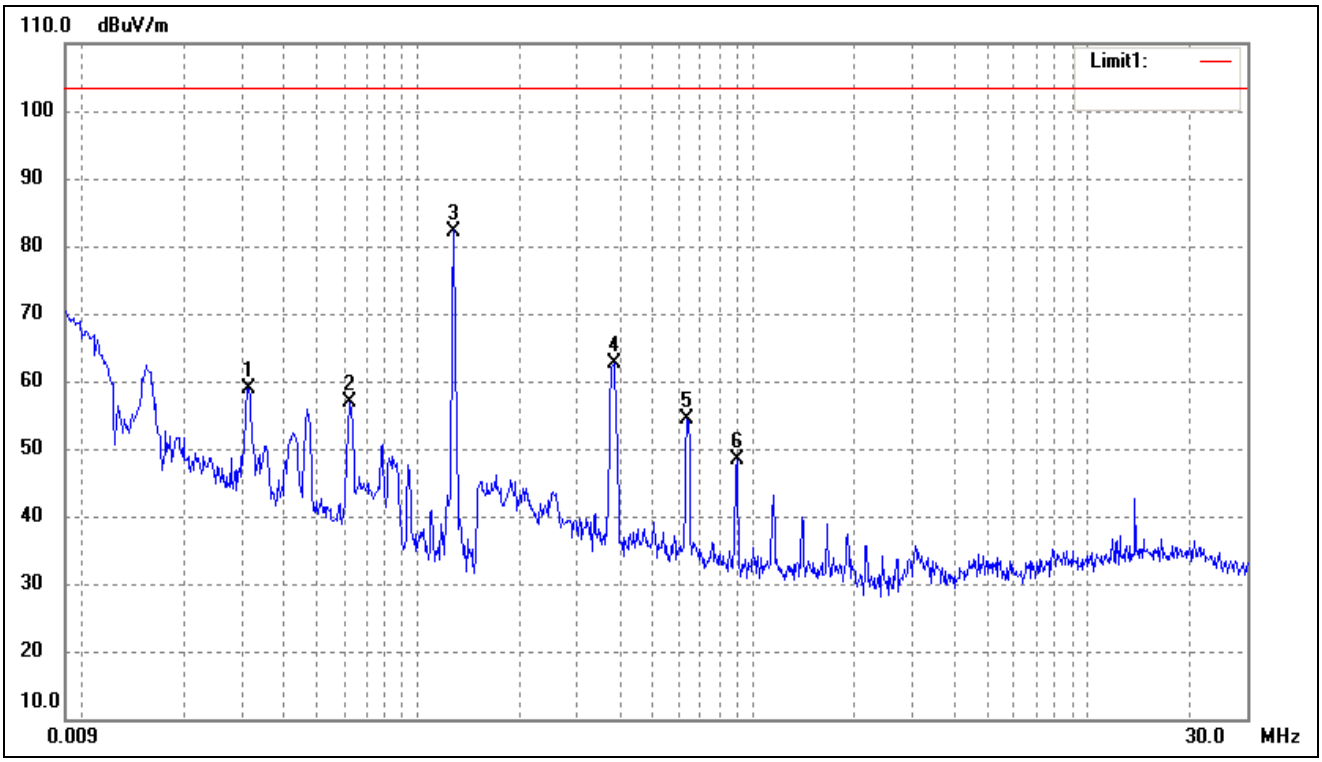
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	0.0313	64.22	-6.03	58.19	103.50	-45.31	-	-	peak
2	0.0471	61.04	-4.93	56.11	103.50	-47.39	-	-	peak
3	0.0627	60.71	-5.02	55.69	103.50	-47.81	-	-	peak
4	0.1278	85.78	-5.13	80.65	103.50	-22.85	-	-	peak
5	0.3832	67.57	-7.83	59.74	103.50	-43.76	-	-	peak
6	0.6372	58.01	-7.03	50.98	103.50	-52.52	-	-	peak

Test mode:	TM2	Polarity:	Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	0.0309	68.40	-6.06	62.34	103.50	-41.16	-	-	peak
2	0.0468	61.90	-4.95	56.95	103.50	-46.55	-	-	peak
3	0.0627	62.72	-5.02	57.70	103.50	-45.80	-	-	peak
4	0.1278	88.56	-5.13	83.43	103.50	-20.07	-	-	peak
5	0.3832	64.99	-7.83	57.16	103.50	-46.34	-	-	peak
6	0.6372	55.67	-7.03	48.64	103.50	-54.86	-	-	peak

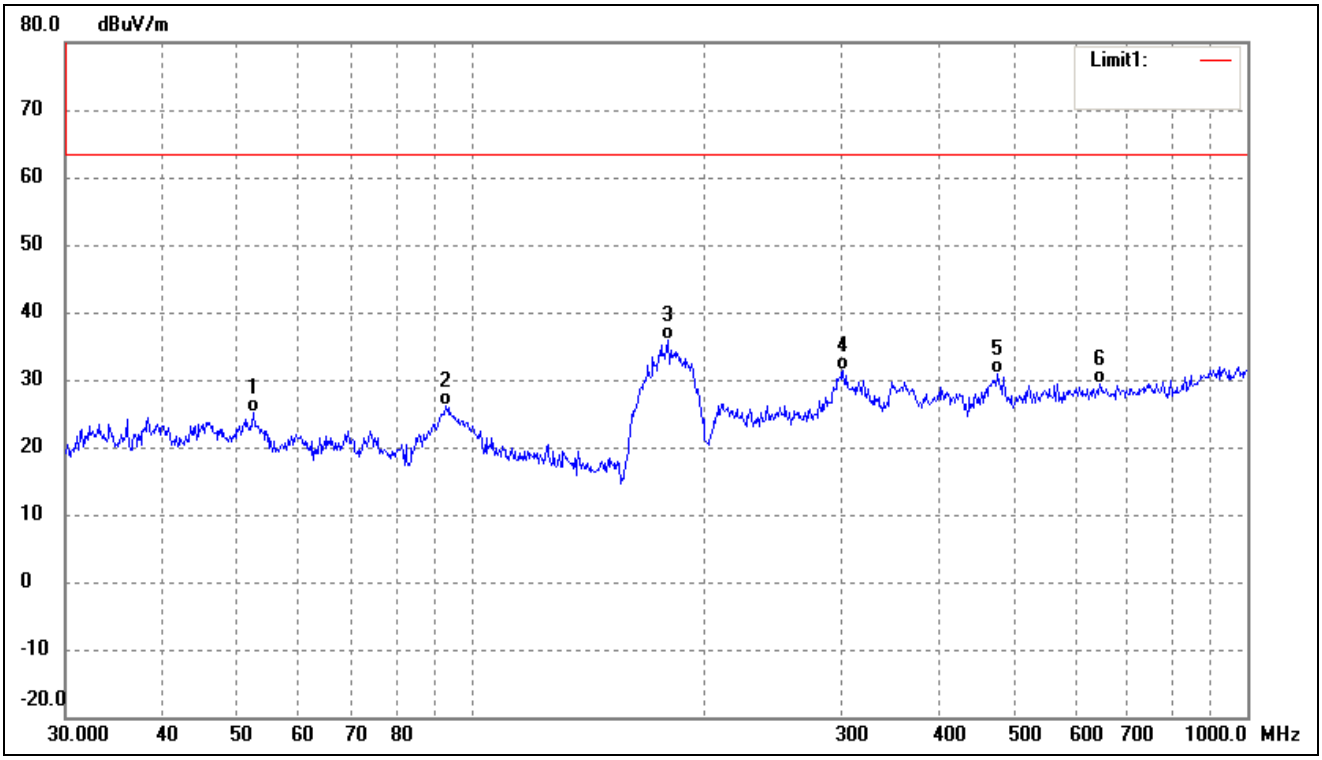
Test mode:	TM3	Polarity:	Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	0.0314	64.84	-6.02	58.82	103.50	-44.68	-	-	peak
2	0.0625	61.94	-5.01	56.93	103.50	-46.57	-	-	peak
3	0.1278	87.38	-5.13	82.25	103.50	-21.25	-	-	peak
4	0.3832	70.40	-7.83	62.57	103.50	-40.93	-	-	peak
5	0.6372	61.30	-7.03	54.27	103.50	-49.23	-	-	peak
6	0.8944	54.68	-6.41	48.27	103.50	-55.23	-	-	peak

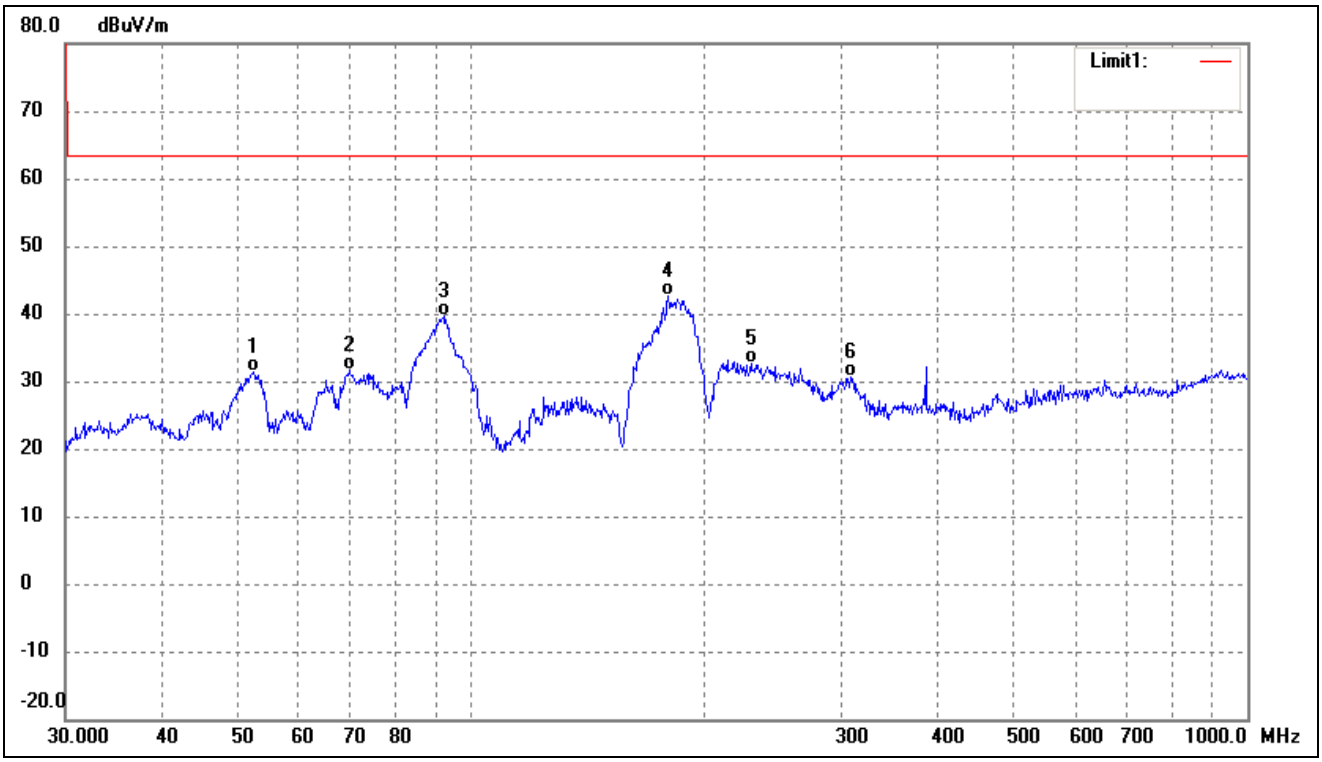
Plot of Radiated Emissions Test Data (Above 30MHz)

Test mode:	TM1	Polarity:	Horizontal



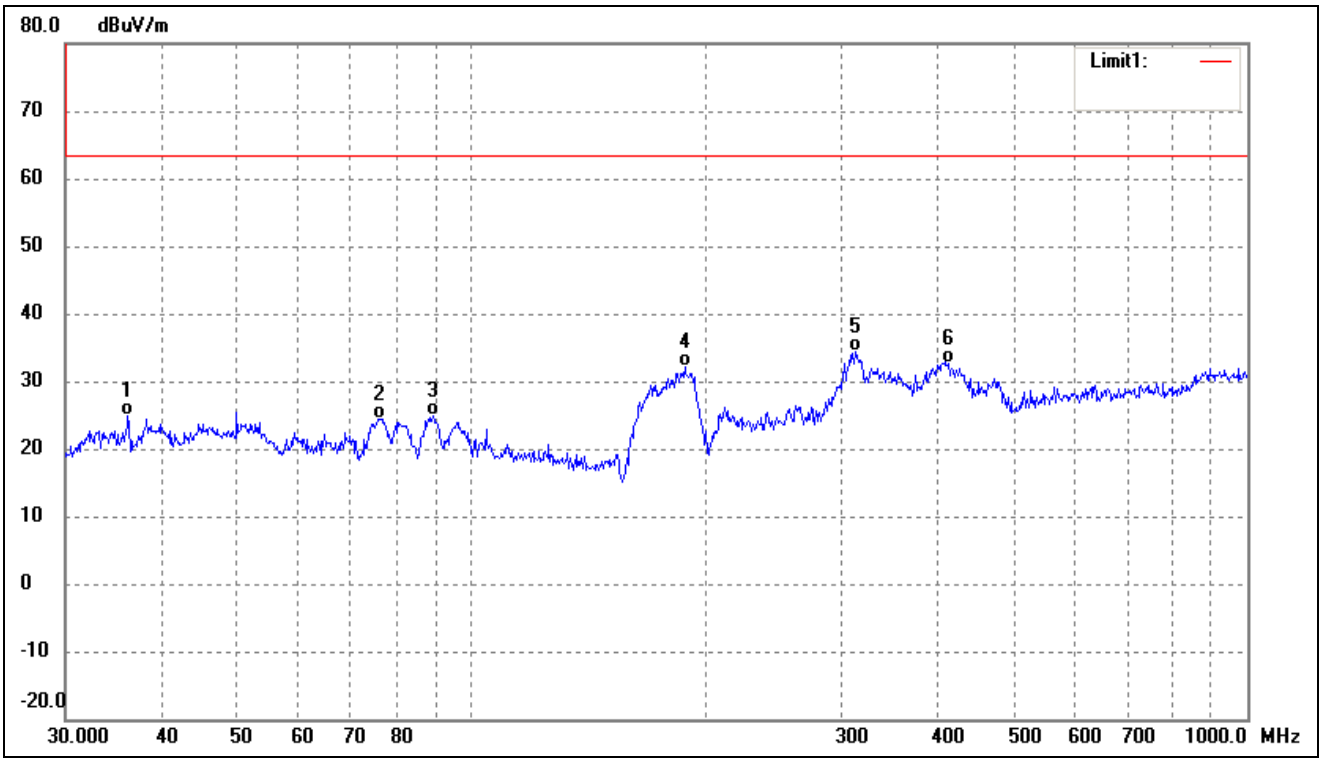
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	52.3913	37.40	-12.20	25.20	63.50	-38.30	-	-	QP
2	92.7872	40.63	-14.51	26.12	63.50	-37.38	-	-	QP
3	179.3864	50.23	-14.35	35.88	63.50	-27.62	-	-	QP
4	301.4224	40.30	-8.92	31.38	63.50	-32.12	-	-	QP
5	477.1694	35.64	-4.74	30.90	63.50	-32.60	-	-	QP
6	645.1195	31.81	-2.33	29.48	63.50	-34.02	-	-	QP

Test mode:	TM1	Polarity:	Vertical



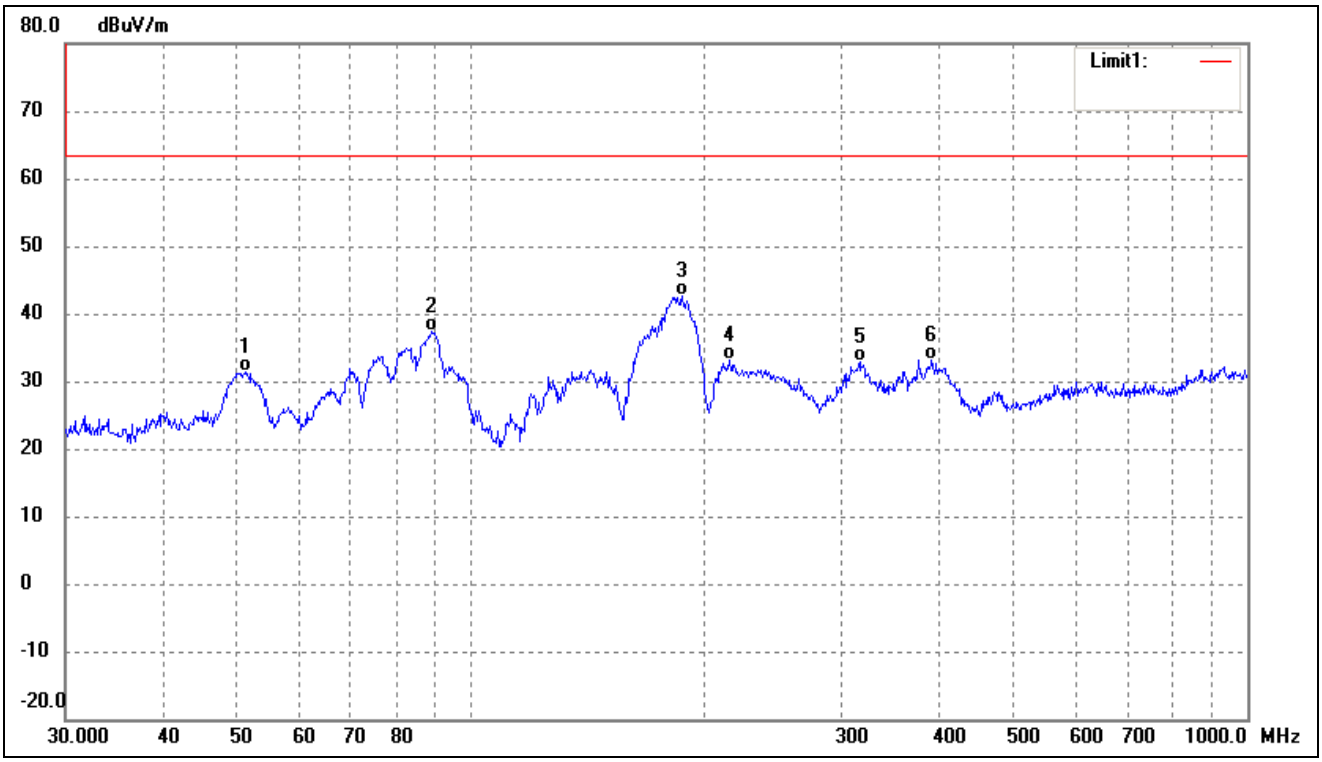
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	52.3912	43.54	-12.20	31.34	63.50	-32.16	-	-	QP
2	69.6005	46.13	-14.58	31.55	63.50	-31.95	-	-	QP
3	92.1388	54.30	-14.61	39.69	63.50	-23.81	-	-	QP
4	179.3863	57.09	-14.35	42.74	63.50	-20.76	-	-	QP
5	229.2931	44.53	-11.93	32.60	63.50	-30.90	-	-	QP
6	308.9126	39.51	-8.94	30.57	63.50	-32.93	-	-	QP

Test mode:	TM2	Polarity:	Horizontal



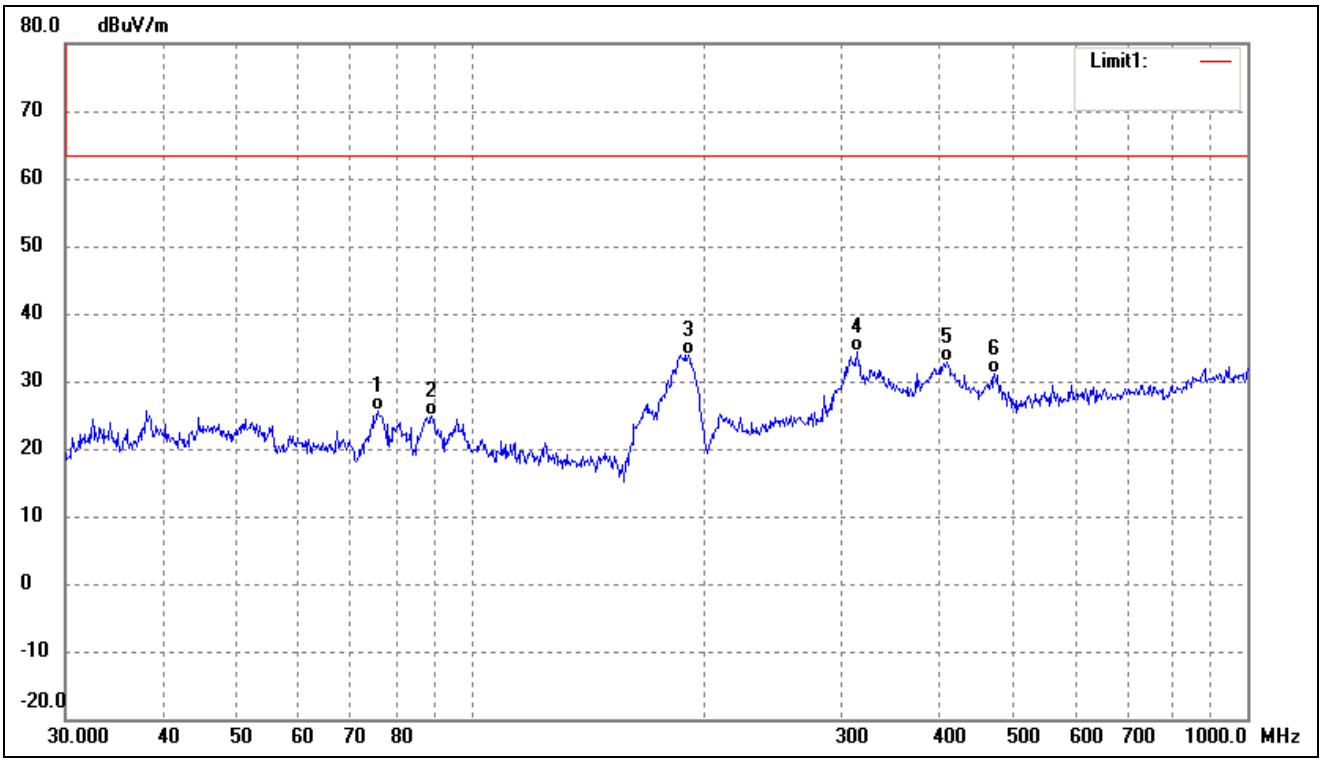
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	36.1272	38.37	-13.45	24.92	63.50	-38.58	-	-	QP
2	76.2442	40.66	-16.23	24.43	63.50	-39.07	-	-	QP
3	89.2764	39.94	-15.12	24.82	63.50	-38.68	-	-	QP
4	188.4125	45.34	-13.30	32.04	63.50	-31.46	-	-	QP
5	313.2760	43.34	-8.94	34.40	63.50	-29.10	-	-	QP
6	411.8240	38.81	-6.19	32.62	63.50	-30.88	-	-	QP

Test mode:	TM2	Polarity:	Vertical



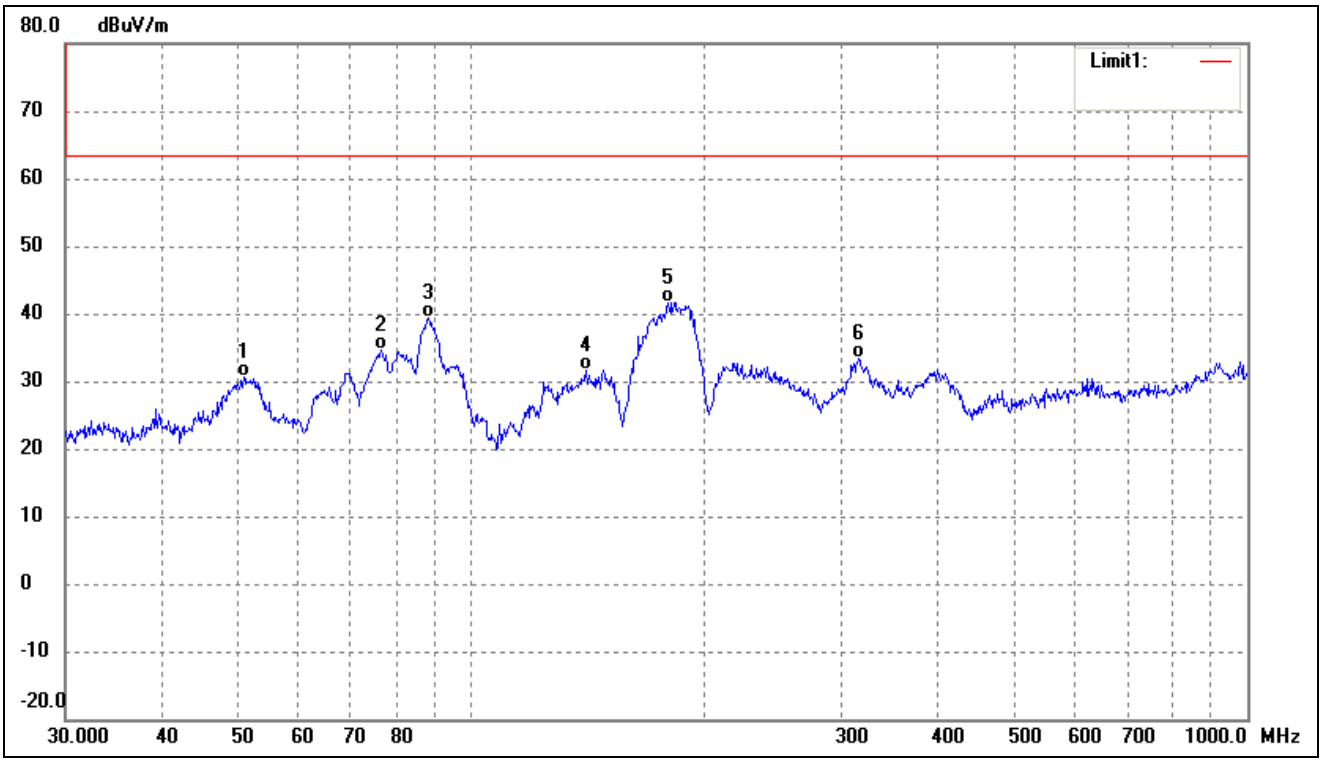
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	51.1209	43.30	-11.85	31.45	63.50	-32.05	-	-	QP
2	88.9639	52.46	-15.18	37.28	63.50	-26.22	-	-	QP
3	187.0958	56.00	-13.46	42.54	63.50	-20.96	-	-	QP
4	215.2678	45.34	-12.24	33.10	63.50	-30.40	-	-	QP
5	316.5890	41.92	-8.95	32.97	63.50	-30.53	-	-	QP
6	392.0951	39.93	-6.69	33.24	63.50	-30.26	-	-	QP

Test mode:	TM3	Polarity:	Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	75.7114	41.71	-16.14	25.57	63.50	-37.93	-	-	QP
2	88.9639	39.98	-15.18	24.80	63.50	-38.70	-	-	QP
3	190.4050	47.07	-13.09	33.98	63.50	-29.52	-	-	QP
4	314.3765	43.38	-8.94	34.44	63.50	-29.06	-	-	QP
5	410.3825	39.11	-6.22	32.89	63.50	-30.61	-	-	QP
6	472.1760	36.10	-4.90	31.20	63.50	-32.30	-	-	QP

Test mode:	TM3	Polarity:	Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	50.9420	42.45	-11.80	30.65	63.50	-32.85	-	-	QP
2	76.5121	50.83	-16.27	34.56	63.50	-28.94	-	-	QP
3	88.0329	54.68	-15.38	39.30	63.50	-24.20	-	-	QP
4	140.8351	47.87	-16.17	31.70	63.50	-31.80	-	-	QP
5	179.3864	55.95	-14.35	41.60	63.50	-21.90	-	-	QP
6	315.4808	42.27	-8.95	33.32	63.50	-30.18	-	-	QP

Remark: '-'Means' the test Degree and Height are not recorded by the test software and only show the worst case in the test report.

******* END OF REPORT *******