Shenzhen Huaxia Testing Technology Co., Ltd.

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

Telephone: +86-755-26648640
Fax: +86-755-26648637
Website: www.cqa-cert.com

Report Template Version: V05
Report Template Revision Date: 2021-11-03

TEST REPORT

Report No. :	CQASZ20220200198E-04
Applicant:	Avantronics Limited
Address of Applicant:	The 4th Floor, Yuepeng Building, No.1019 Jiabin Rd, Luohu District, Shenzhen
Equipment Under Test (EUT):	
EUT Name:	Avantree Roadtrip
Model No.:	BTCK-12, BTCK-12-BLK, BTCK-12-BLU, BTCK-12-TTN, BTCK-12-GRY, BTCK-12P, BTCK-12S, BTCK-12B
Test mode No.:	BTCK-12
FCC ID:	WJ5-BTCK-12
Standards:	47 CFR Part 15, Subpart C
Date of Receipt:	2022-2-16
Date of Test:	2022-2-16 to 2022-03-1
Date of Issue:	2022-3-11
Test Result :	**PASS***

* **In the configuration tested, the EUT complied with the standards specified above**

Tested By: lewis zhou

(Lewis Zhou)

Reviewed By: Rock Huang

(Rock Huang)

Approved By:

(Jack ai)

1 Version

Revision History of Report

Report No.	Version	Description	Issue Date
CQASZ20220200198E-04	Rev.01	Initial report	2022-3-11

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
Conducted Emission	47 CFR Part 15, Subpart C Section 15.207	ANSI C63.10-2013	PASS
20dB Bandwidth	47 CFR Part 15, Subpart C Section 15.239(a)	ANSI C63.10-2013	PASS
Field Strength of the Fundamental Signal	47 CFR Part 15, Subpart C Section 15.239(b)	ANSI C63.10-2013	PASS
Radiated Transmitter Spurious Emissions	47 CFR Part 15, Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS

3 Contents

Page

4 General Information

4.1 Client Information

Applicant:	Avantronics Limited
Address of Applicant:	The 4th Floor,Yuepeng Building,No.1019 Jiabin Rd,Luohu District, Shenzhen
Manufacturer:	Avantronics Limited
Address of Manufacturer:	The 4th Floor,Yuepeng Building,No.1019 Jiabin Rd,Luohu District, Shenzhen
Factory:	Avantronics Limited
Address of Factory:	The 4th Floor,Yuepeng Building,No.1019 Jiabin Rd,Luohu District, Shenzhen

4.2 General Description of EUT

Product Name:	Avantree Roadtrip
All Model No.:	BTCK-12, BTCK-12-BLK, BTCK-12-BLU, BTCK-12-TTN, BTCK-12-GRY, BTCK-12P, BTCK-12S, BTCK-12B
Test Model No. :	BTCK-12
Trade Mark:	Avantree
Software Version:	CK1220211109V0
Hardware Version:	PCB_CK12V5.3
Operation Frequency:	88.1MHz-107.9 MHz
Number of Channels:	100CH
Channel Separation:	200KHz
Modulation Type:	FM
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Test Software of EUT:	Adjustment knob
Antenna Type:	PCB antenna
Antenna Gain:	0 dBi
Power Supply:	Li-ion battery: DC 3.7V 1120mAh, Charge by DC 5V for adapter

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	88.1MHz	26	93.1MHz	51	98.1MHz	76	103.1MHz
2	88.3MHz	27	93.3MHz	52	98.3MHz	77	103.3MHz
3	88.5MHz	28	93.5MHz	53	98.5MHz	78	103.5MHz
4	88.7MHz	29	93.7MHz	54	98.7MHz	79	103.7MHz
5	88.9MHz	30	93.9MHz	55	98.9MHz	80	103.9MHz
6	89.1MHz	31	94.1MHz	56	99.1MHz	81	104.1MHz
7	89.3MHz	32	94.3MHz	57	99.3MHz	82	104.3MHz
8	89.5MHz	33	94.5MHz	58	99.5MHz	83	104.5MHz
9	89.7MHz	34	94.7MHz	59	99.7MHz	84	104.7MHz
10	89.9MHz	35	94.9MHz	60	99.9MHz	85	104.9MHz
11	90.1MHz	36	95.1MHz	64	100.1MHz	86	105.1MHz
12	90.3MHz	37	95.3MHz	62	100.3MHz	87	105.3MHz
13	90.5MHz	38	95.5MHz	63	100.5MHz	88	105.5MHz
14	90.7MHz	39	95.7MHz	64	100.7MHz	89	105.7MHz
15	90.9MHz	40	95.9MHz	65	100.9MHz	90	105.9MHz
……	……	……	……	……	……	……	……
25	92.9MHz	50	97.9MHz	75	102.9MHz	100	107.9MHz

Note:
In RSS-Gen, regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The Lowest channel	88.1MHz
The Middle channel	98.1MHz
The Highest channel	107.9MHz

4.3 Test Environment and Mode

Test Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1008 mbar
Test mode:	
Transmitter mode	Keep the EUT in transmitting mode with modulation.
Remark: If the audio input signal is audio and the transmitter is frequency modulated, compliance with the RSS210 B 9(c) requirements shall be demonstrated by modulating the transmitter with a 2.5 kHz tone at a level 16 dB higher than that required to produce a frequency deviation of 75 kHz, or 50 % of the manufacturer's rated deviation, whichever is less.	

4.4 Description of Support Units

The EUT has been tested independently and or

The EUT has been tested with associated equipment below.

1）Support equipment

Description	Manufacturer	Model No.	Certification	Supplied by
/	/	/	/	/

2) Cable

Cable No.	Description	Manufacturer	Cable Type/Length	Supplied by
/	/	/	/	/

4.5 Test Location

All tests were performed at:

Shenzhen Huaxia Testing Technology Co., Ltd.,

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

No tests were sub-contracted:

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	0.31dB (30MHz-1GHz)
		0.57dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.5dB (30MHz-1GHz)
		4.8dB (1GHz-12.75GHz)
4	Conduction emission	3.6dB (9kHz to 150kHz)
		3.2dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	2.8%
7	DC power voltages	0.025%

5 Equipment List

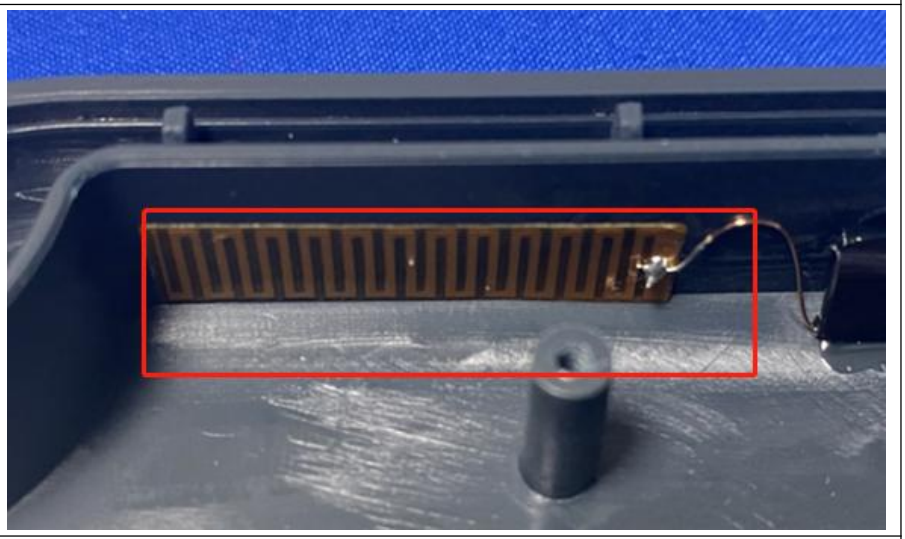
Test Equipment	Manufacturer	Model No.	Instrument No.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR7	CQA-005	2021/9/10	2022/9/9
Spectrum analyzer	R&S	FSU26	CQA-038	2021/9/10	2022/9/9
Preamplifier	MITEQ	AFS4-00010300-18-10P-4	CQA-035	2021/9/10	2022/9/9
Preamplifier	MITEQ	AMF-6D-02001800-29-20P	CQA-036	2021/9/10	2022/9/9
Loop antenna	Schwarzbeck	FMZB1516	CQA-087	2021/9/16	2024/9/15
Bilog Antenna	R&S	HL562	CQA-011	2021/9/16	2024/9/15
Horn Antenna	R&S	HF906	CQA-012	2021/9/16	2024/9/15
Horn Antenna	Schwarzbeck	BBHA 9170	CQA-088	2021/9/16	2024/9/15
Coaxial Cable (Above 1GHz)	CQA	N/A	C019	2021/9/10	2022/9/9
Coaxial Cable (Below 1GHz)	CQA	N/A	C020	2021/9/10	2022/9/9
Antenna Connector	CQA	RFC-01	CQA-080	2021/9/10	2022/9/9
RF cable(9KHz~40GHz)	CQA	RF-01	CQA-079	2021/9/10	2022/9/9
Power divider	MIDWEST	PWD-2533-02-SMA-79	CQA-067	2021/9/10	2022/9/9
EMI Test Receiver	R&S	ESPI3	CQA-013	2021/9/10	2022/9/9
LISN	R&S	ENV216	CQA-003	2021/9/10	2022/9/9
Coaxial cable	CQA	N/A	CQA-C009	2021/9/10	2022/9/9

Note:

The temporary antenna connector is soldered on the Integral board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

6 Test results and Measurement Data

6.1 Antenna Requirement

Standard Requirement:	47 CFR Part 15, Subpart C Section 15.203
EUT Antenna:	
The antenna is PCB antenna. The best case gain of the antenna is 0dBi.	

6.2 Conducted Emissions

Test Requirement: 47 CFR Part 15, Subpart C Section 15.207

Test Method: ANSI C63.10

Test Frequency Range: 150KHz to 30MHz

Limit:

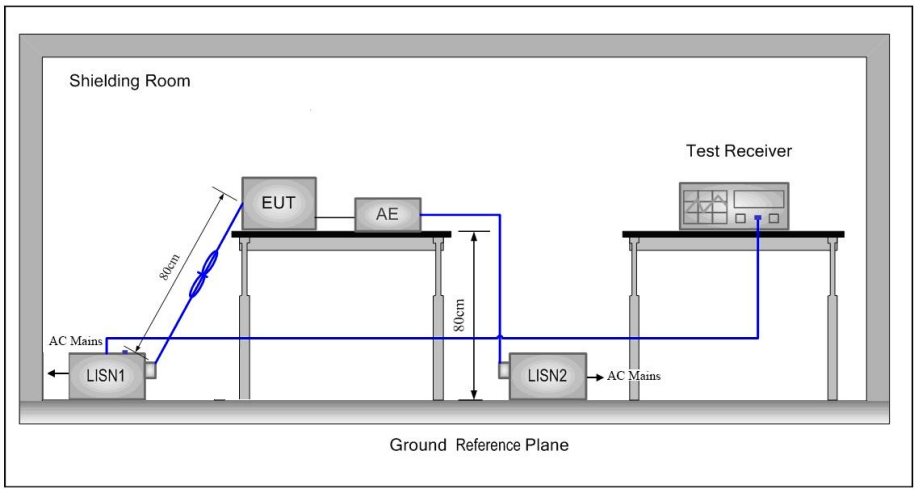
Frequency range (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* 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 were 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 on conducted measurement.

Test Setup:



Instruments Used: Refer to section 6 for details

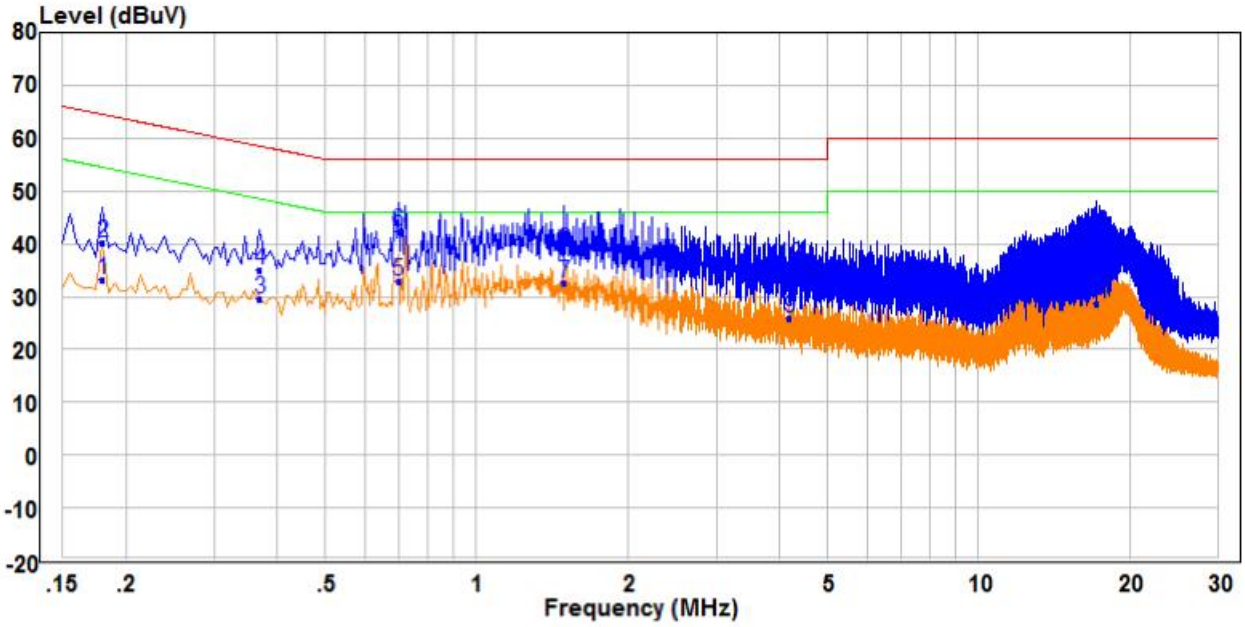
Test Mode: Transmitter mode

Test Results: Pass

Measurement Data

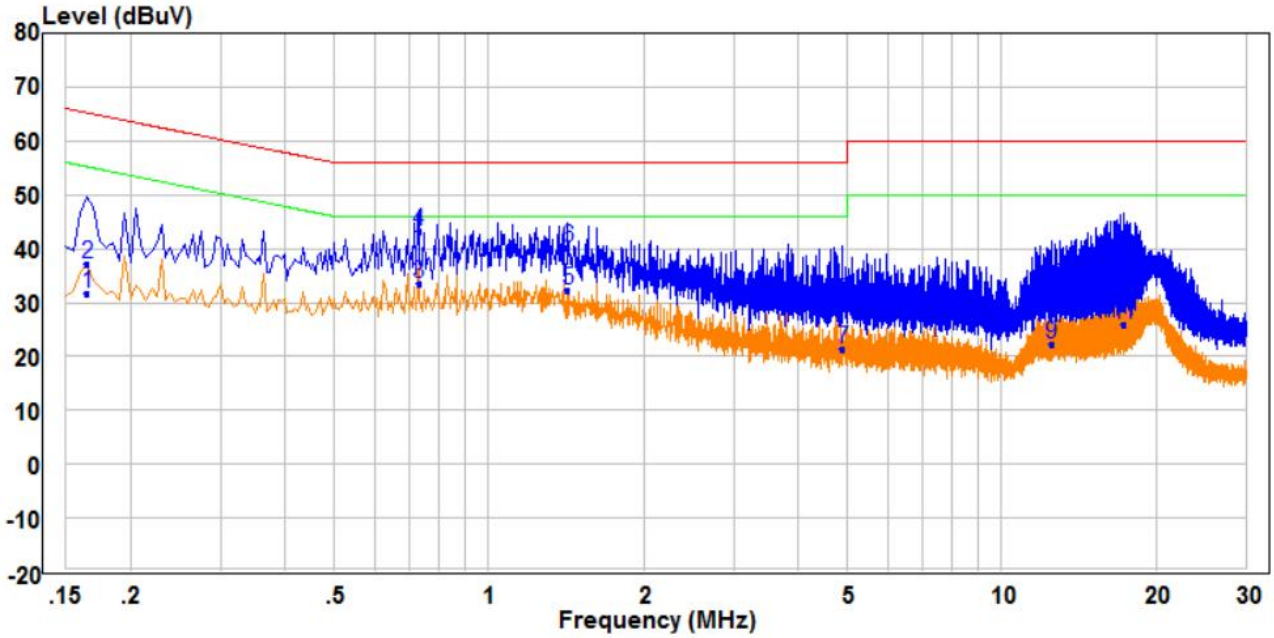
An initial pre-scan was performed on the live and neutral lines with peak detector.
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Line:



		Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.180	23.54	9.64	33.18	54.49	-21.31	Average	Line
2		0.180	30.52	9.64	40.16	64.49	-24.33	QP	Line
3		0.370	19.94	9.58	29.52	48.50	-18.98	Average	Line
4		0.370	25.59	9.58	35.17	58.50	-23.33	QP	Line
5	PP	0.700	22.96	9.90	32.86	46.00	-13.14	Average	Line
6	QP	0.700	32.29	9.90	42.19	56.00	-13.81	QP	Line
7		1.495	21.71	10.82	32.53	46.00	-13.47	Average	Line
8		1.495	27.73	10.82	38.55	56.00	-17.45	QP	Line
9		4.200	15.80	10.09	25.89	46.00	-20.11	Average	Line
10		4.200	25.74	10.09	35.83	56.00	-20.17	QP	Line
11		17.260	18.71	9.78	28.49	50.00	-21.51	Average	Line
12		17.260	31.08	9.78	40.86	60.00	-19.14	QP	Line

Neutral Line:



		Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.165	22.14	9.67	31.81	55.21	-23.40	Average	Neutral
2		0.165	27.61	9.67	37.28	65.21	-27.93	QP	Neutral
3	PP	0.730	23.55	9.88	33.43	46.00	-12.57	Average	Neutral
4	QP	0.730	33.25	9.88	43.13	56.00	-12.87	QP	Neutral
5		1.425	22.47	9.72	32.19	46.00	-13.81	Average	Neutral
6		1.425	30.43	9.72	40.15	56.00	-15.85	QP	Neutral
7		4.895	11.46	9.81	21.27	46.00	-24.73	Average	Neutral
8		4.895	20.49	9.81	30.30	56.00	-25.70	QP	Neutral
9		12.500	12.43	9.80	22.23	50.00	-27.77	Average	Neutral
10		12.500	23.06	9.80	32.86	60.00	-27.14	QP	Neutral
11		17.295	16.26	9.78	26.04	50.00	-23.96	Average	Neutral
12		17.295	26.55	9.78	36.33	60.00	-23.67	QP	Neutral

Remark:

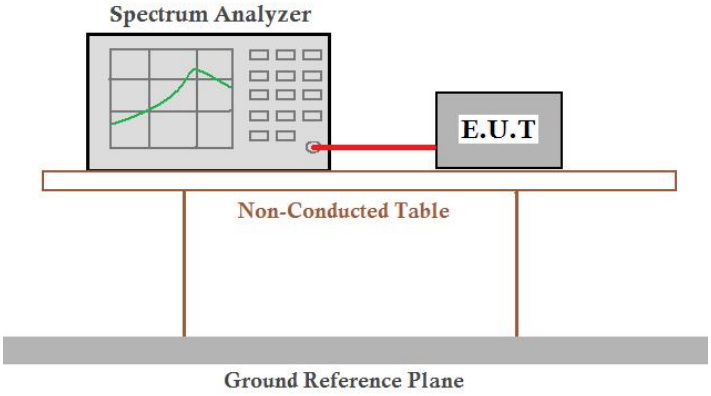
1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

6.3 20dB Bandwidth

Test Requirement: 47 CFR Part 15, Subpart C Section 15.239(a)

Test Method: ANSI C63.10:2013 instead of RSS-GEN 6.7

Test Setup:



Instruments Used: Refer to section 6 for details

Limit: The occupied bandwidth shall not exceed 200 kHz.

Test Mode: Transmitting mode

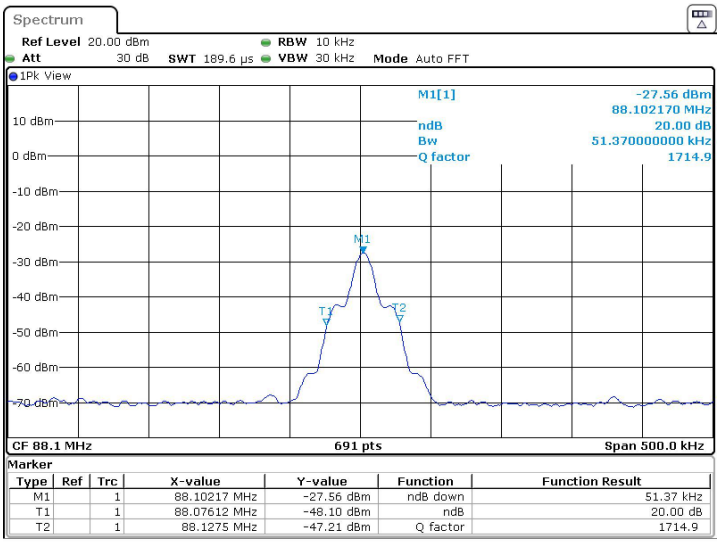
Test Results: Pass

Measurement Data

Test channel	20dB Bandwidth(KHz)	Limit(KHz)
Lowest	51.4	≤200
Middle	50.7	≤200
Highest	50.7	≤200

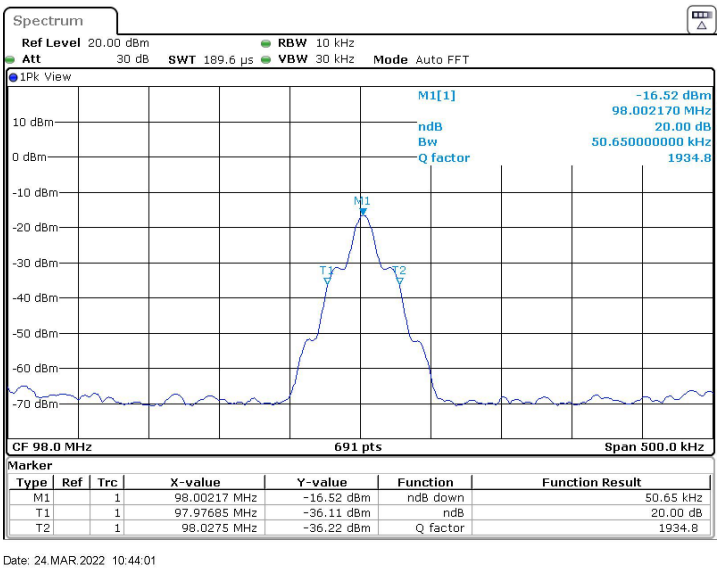
Test plot as follows:

Test channel:	Lowest



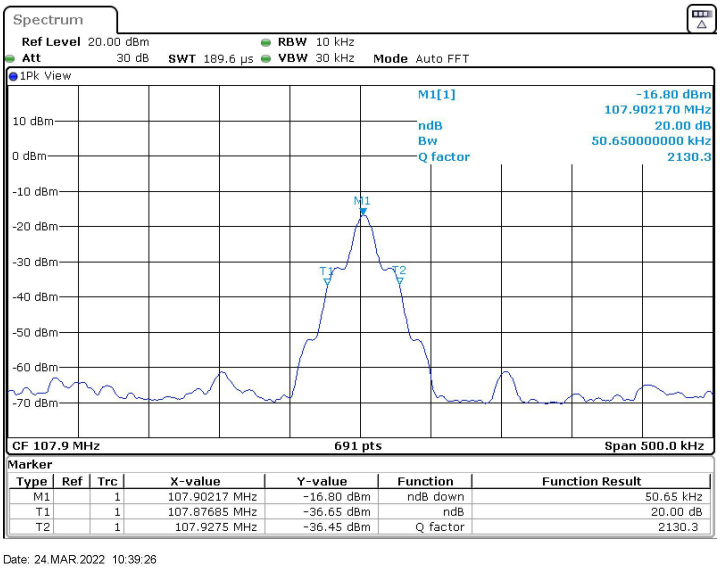
20dB

Test channel:	Middle



20dB

Test channel:	Highest



20dB

6.4 Radiated Transmitter Spurious Emission

Test Requirement: 47 CFR Part 15, Subpart C Section 15.205/15.209

Test Method: ANSI C63.10

Test Site: Measurement Distance: 3m (Semi-Anechoic Chamber)

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.015MHz	Quasi-peak	200Hz	1KHz	Quasi-peak
0.015MHz-30MHz	Quasi-peak	10kHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120kHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Test Setup:

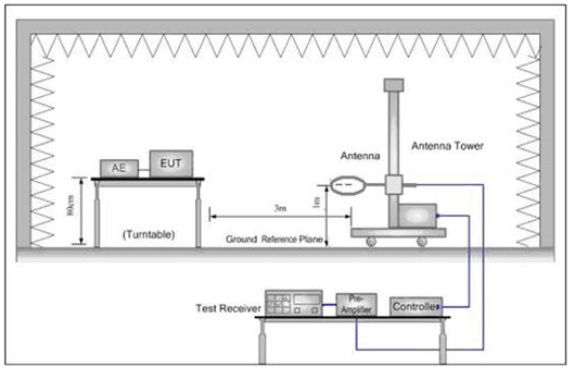


Figure 1. Below 30MHz

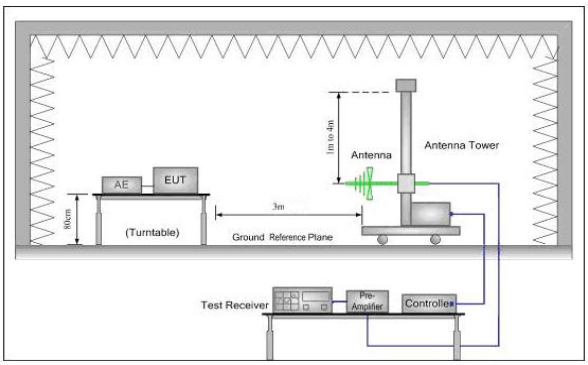


Figure 2. 30MHz to 1GHz

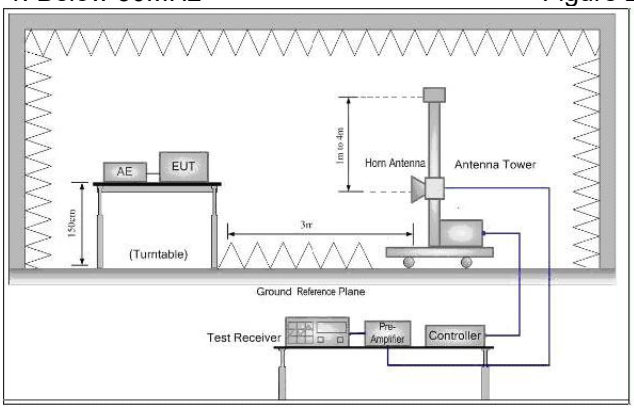


Figure 3. Above 1GHz

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 rotatable 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.

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).

h. Test the EUT in the lowest channel ,middle channel, the Highest channel

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.

j. Repeat above procedures until all frequencies measured was complete.

Limit:

Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	Quasi-peak	300
0.490MHz-1.705MHz	24000/F(kHz)	-	Quasi-peak	30
1.705MHz-30MHz	30	-	Quasi-peak	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3
		74.0	Peak	3

Limit:
(Field strength of the fundamental signal)

Frequency	Limit (dBμV/m @3m)	Remark
88MHz-108MHz	48.0	Average Value
	68.0	Peak Value

Test Mode: Transmitting mode

Instruments Used: Refer to section 6 for details

Test Results: Pass

Field Strength of the Fundamental Signal

Peak value:

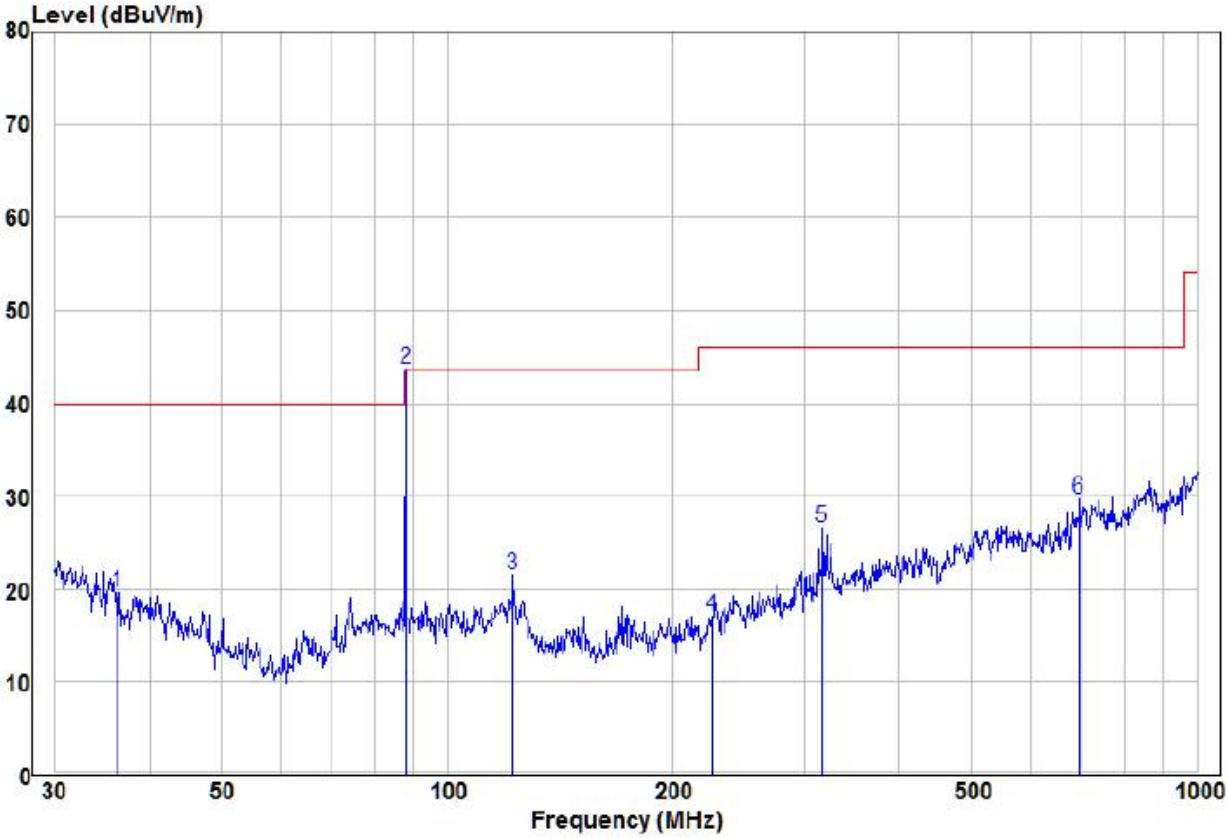
Test frequency	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
88.1	54.63	68.0	-13.37	Pass	H
88.1	61.37	68.0	-6.63	Pass	V
98.1	57.04	68.0	-10.96	Pass	H
98.1	54.38	68.0	-13.62	Pass	V
107.9	57.39	68.0	-10.61	Pass	H
107.9	55.09	68.0	-12.91	Pass	V

Average value:

Test frequency	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
88.1	43.63	48.0	-4.37	Pass	H
88.1	45.37	48.0	-2.63	Pass	V
98.1	45.04	48.0	-2.96	Pass	H
98.1	44.38	48.0	-3.62	Pass	V
107.9	44.39	48.0	-3.61	Pass	H
107.9	44.09	48.0	-3.91	Pass	V

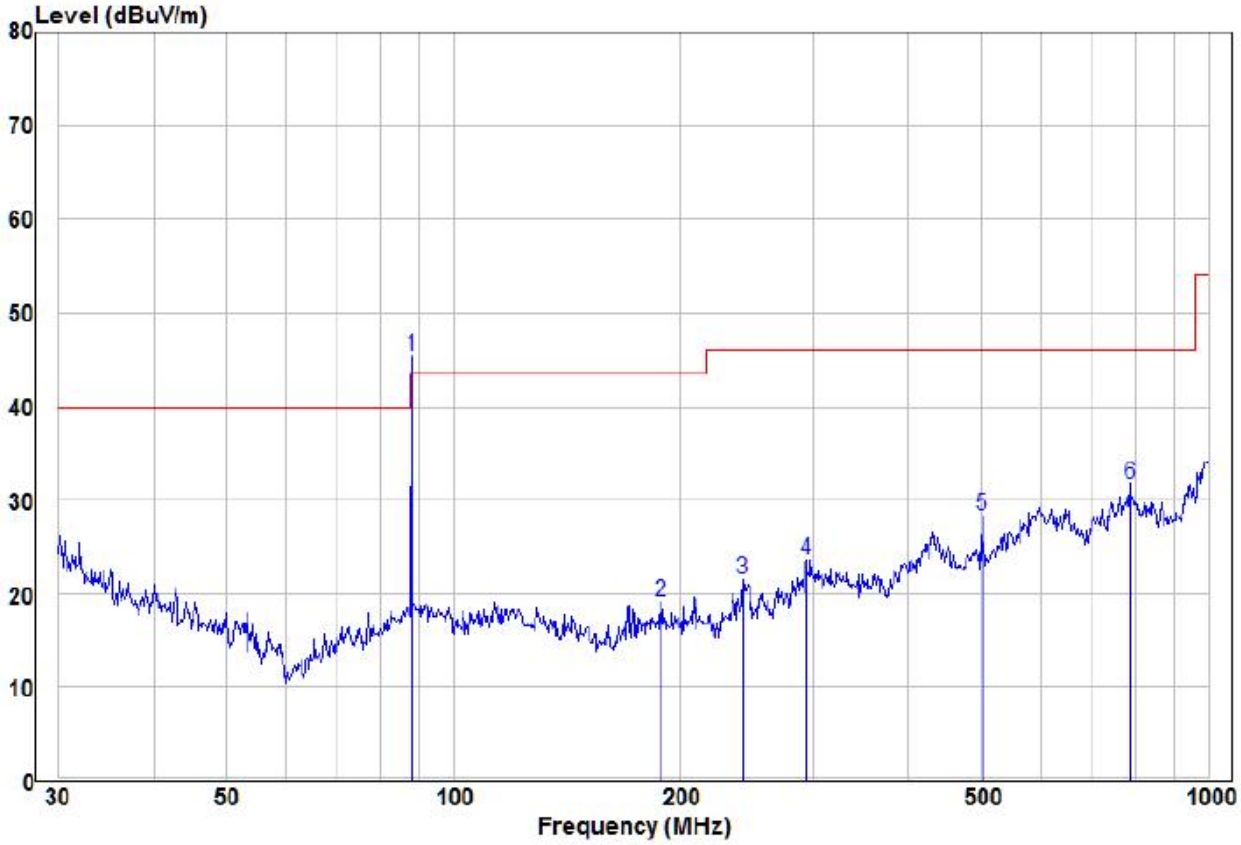
Spurious Emissions

30MHz~1GHz		
Test mode:	88.1MHz AV	Horizontal



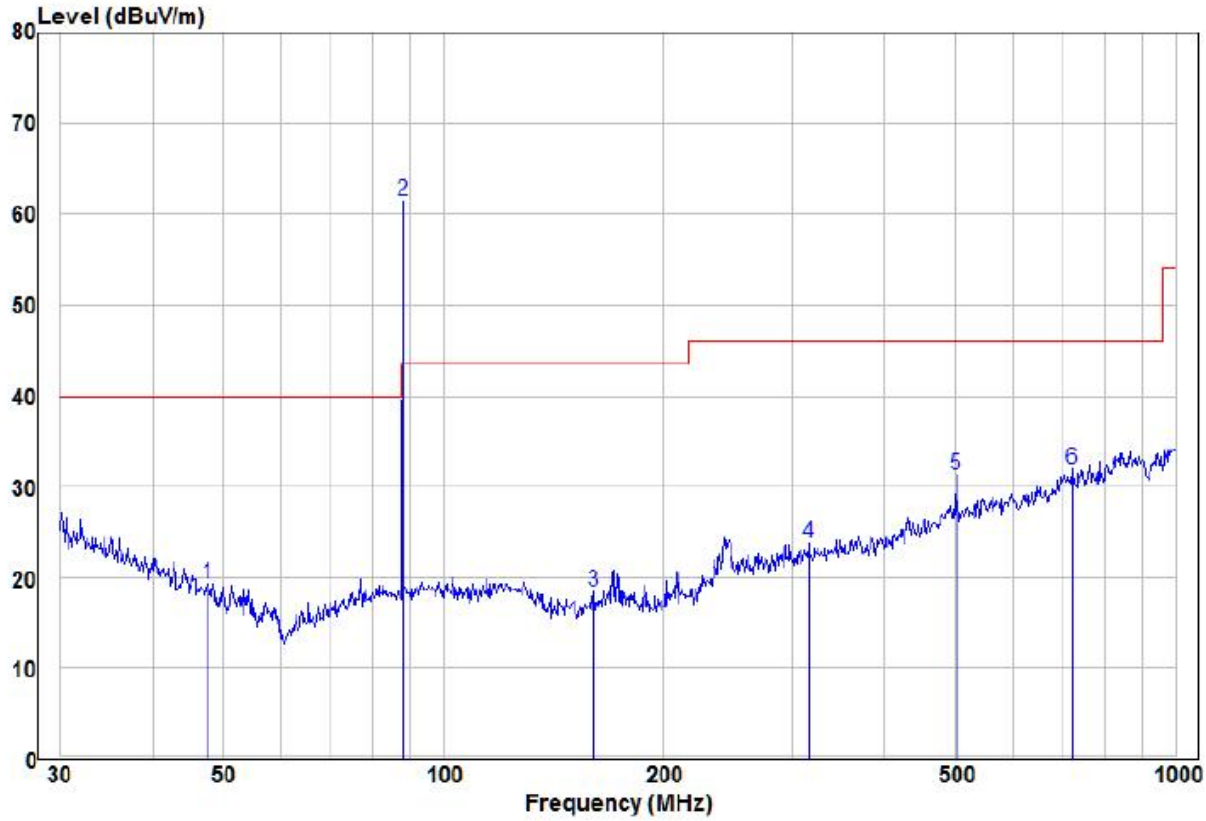
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	36.38	5.59	14.10	19.69	40.00	-20.31	Average	HORIZONTAL
2 pp	88.03	33.66	9.97	43.63	43.50	0.13	Average	HORIZONTAL
3	122.40	10.82	10.60	21.42	43.50	-22.08	Average	HORIZONTAL
4	225.31	7.32	9.82	17.14	46.00	-28.86	Average	HORIZONTAL
5	316.59	12.46	14.13	26.59	46.00	-19.41	Average	HORIZONTAL
6	696.86	8.71	21.04	29.75	46.00	-16.25	Average	HORIZONTAL

30MHz~1GHz		
Test mode:	88.1MHz AV	Vertical



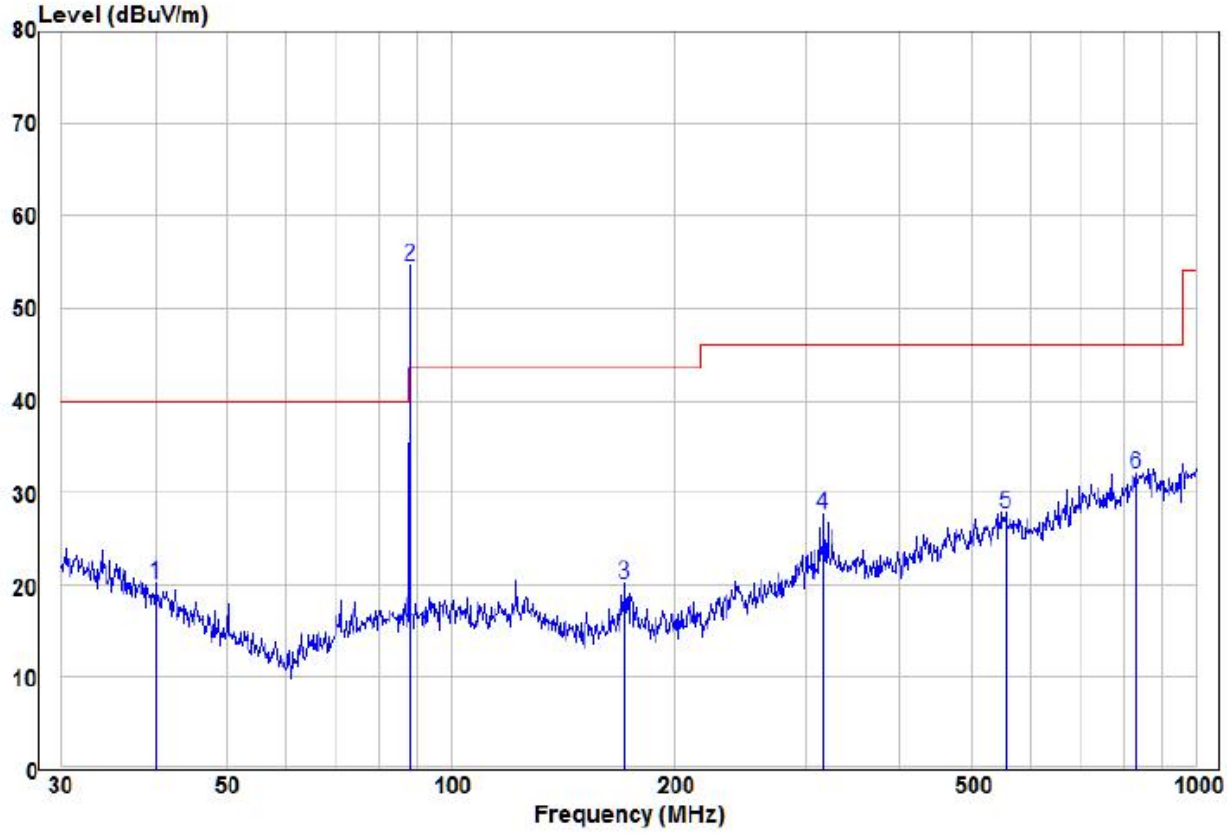
		Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	pp	88.03	35.40	9.97	45.37	43.50	1.87	Average	VERTICAL
2		188.41	11.14	8.02	19.16	43.50	-24.34	Average	VERTICAL
3		241.68	9.75	11.68	21.43	46.00	-24.57	Average	VERTICAL
4		293.08	10.09	13.51	23.60	46.00	-22.40	Average	VERTICAL
5		501.18	9.98	18.29	28.27	46.00	-17.73	Average	VERTICAL
6		787.85	9.48	22.23	31.71	46.00	-14.29	Average	VERTICAL

30MHz~1GHz		
Test mode:	88.1MHz Peak	Vertical



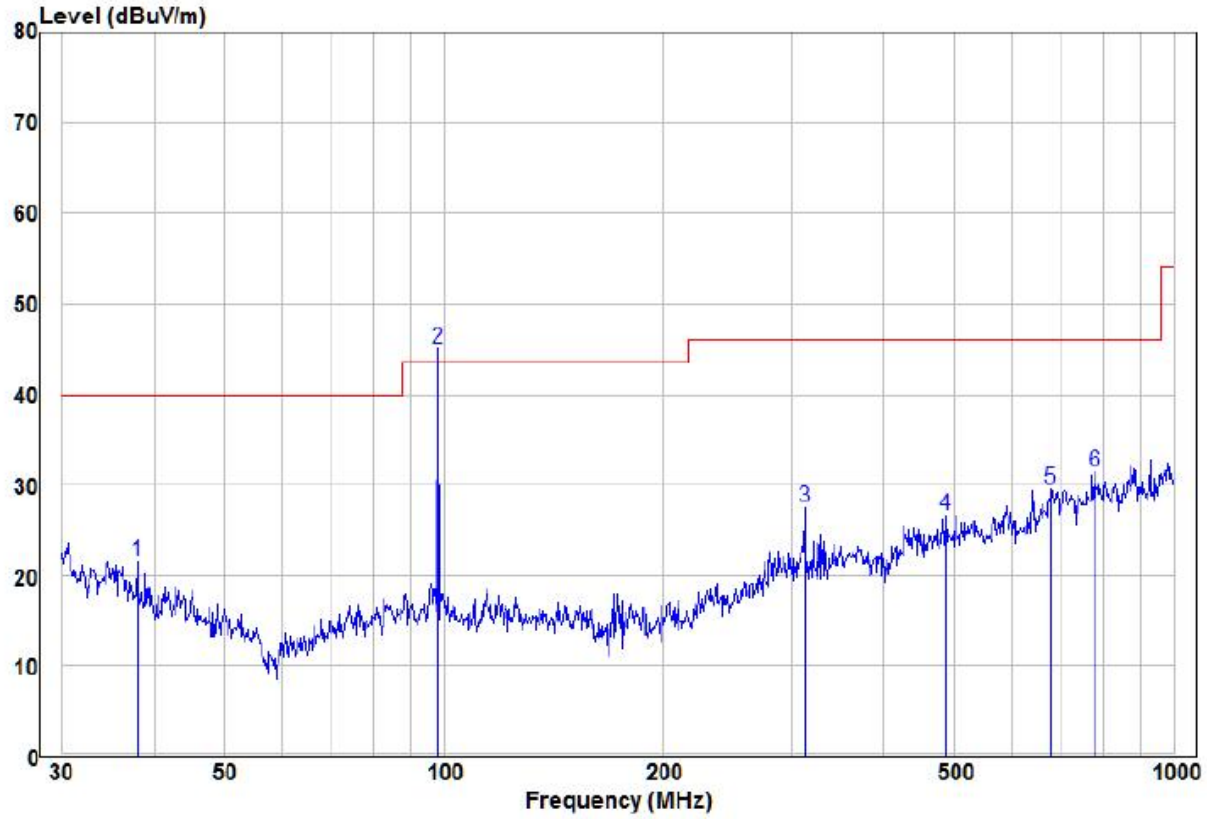
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	47.83	10.17	9.11	19.28	40.00	-20.72	Peak	VERTICAL
2 pp	88.03	51.40	9.97	61.37	43.50	17.87	Peak	VERTICAL
3	160.91	10.70	7.78	18.48	43.50	-25.02	Peak	VERTICAL
4	315.48	9.62	14.11	23.73	46.00	-22.27	Peak	VERTICAL
5	501.18	12.98	18.29	31.27	46.00	-14.73	Peak	VERTICAL
6	721.73	10.70	21.23	31.93	46.00	-14.07	Peak	VERTICAL

30MHz~1GHz		
Test mode:	88.1MHz Peak	Horizontal



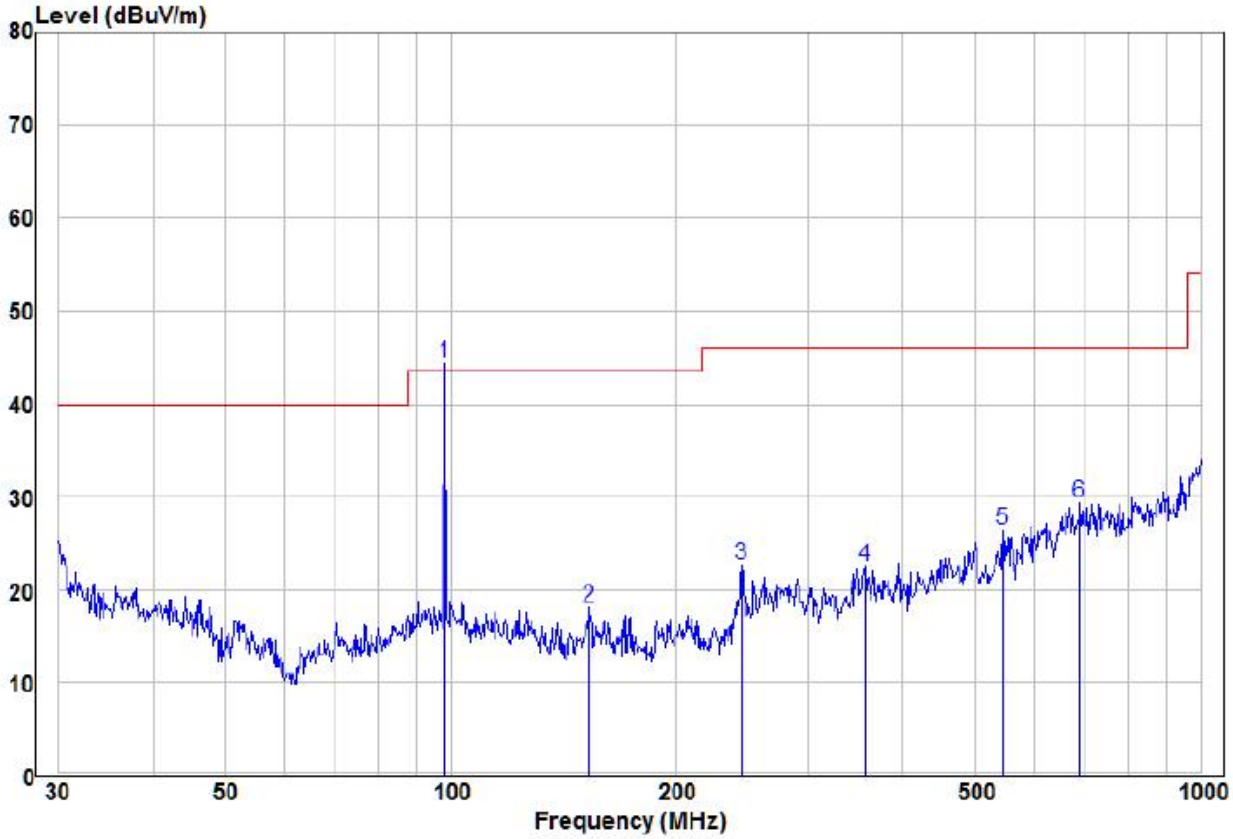
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	39.99	7.29	12.80	20.09	40.00	-19.91	Peak	HORIZONTAL
2 pp	88.03	44.66	9.97	54.63	43.50	11.13	Peak	HORIZONTAL
3	171.39	12.38	7.72	20.10	43.50	-23.40	Peak	HORIZONTAL
4	316.59	13.46	14.13	27.59	46.00	-18.41	Peak	HORIZONTAL
5	554.83	8.97	18.84	27.81	46.00	-18.19	Peak	HORIZONTAL
6	833.32	8.16	23.97	32.13	46.00	-13.87	Peak	HORIZONTAL

30MHz~1GHz		
Test mode:	98MHz AV	Horizontal



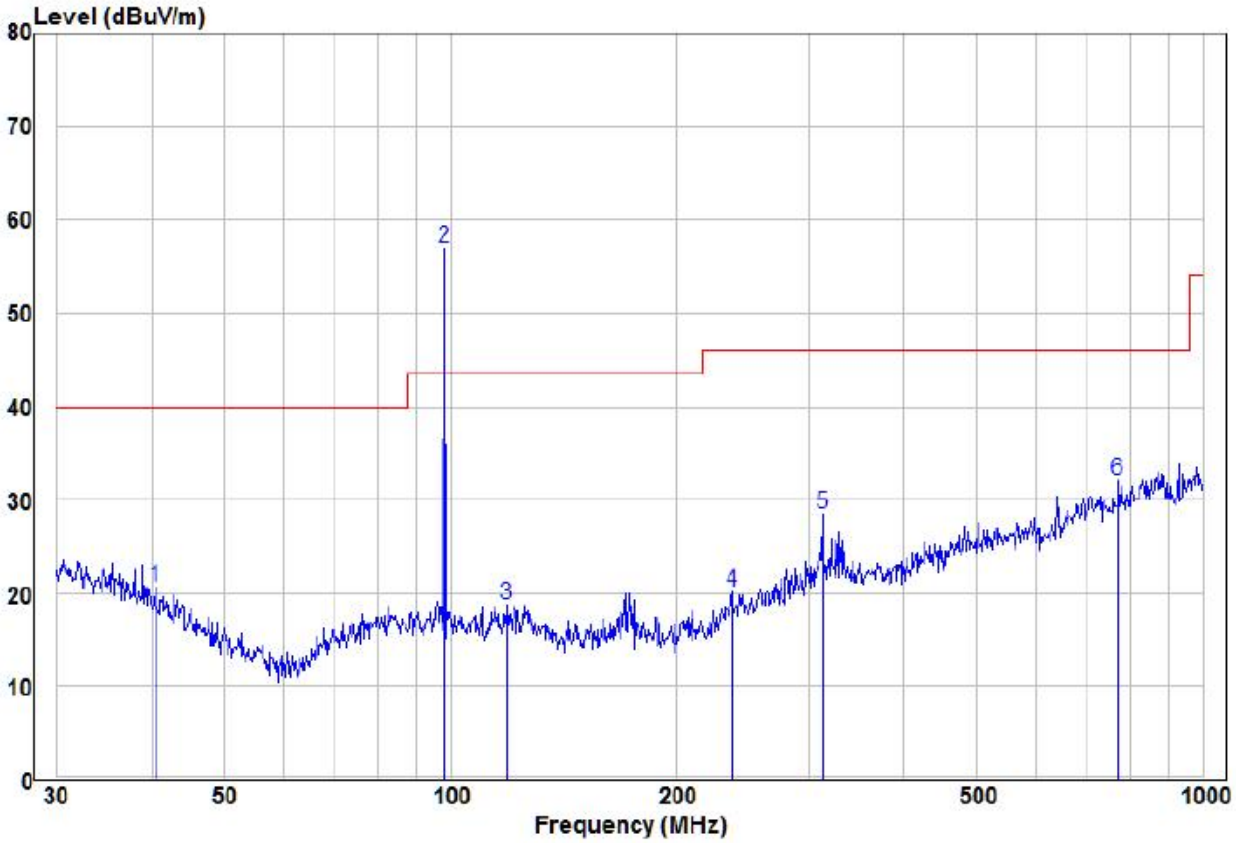
		Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1		37.94	7.97	13.54	21.51	40.00	-18.49	Average	HORIZONTAL
2	pp	98.14	34.51	10.53	45.04	43.50	1.54	Average	HORIZONTAL
3		312.18	13.46	14.03	27.49	46.00	-18.51	Average	HORIZONTAL
4		487.32	8.75	17.88	26.63	46.00	-19.37	Average	HORIZONTAL
5		679.96	9.22	20.23	29.45	46.00	-16.55	Average	HORIZONTAL
6		779.61	9.21	22.16	31.37	46.00	-14.63	Average	HORIZONTAL

30MHz~1GHz		
Test mode:	98MHz AV	Vertical



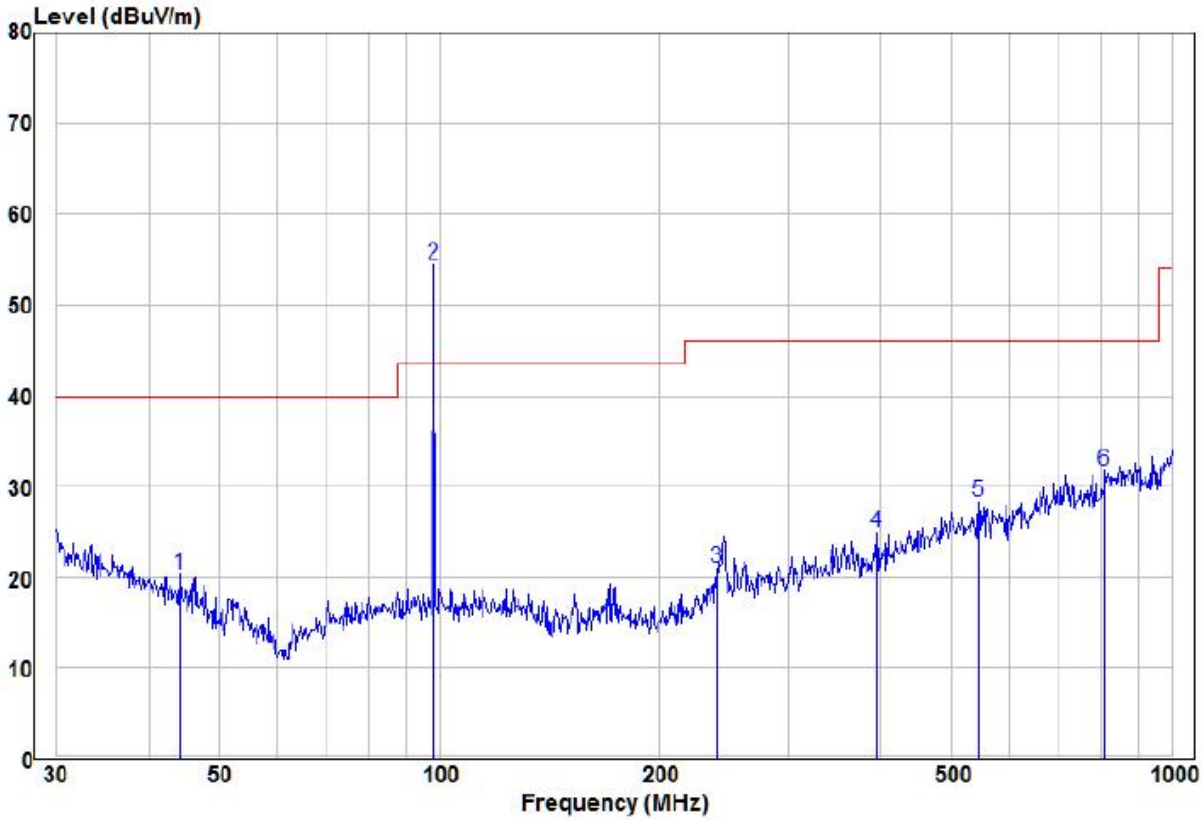
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	pp 98.14	33.85	10.53	44.38	43.50	0.88	Average	VERTICAL
2	153.20	9.83	8.26	18.09	43.50	-25.41	Average	VERTICAL
3	244.23	10.74	11.87	22.61	46.00	-23.39	Average	VERTICAL
4	356.68	7.48	15.11	22.59	46.00	-23.41	Average	VERTICAL
5	545.18	7.64	18.75	26.39	46.00	-19.61	Average	VERTICAL
6	689.56	8.46	20.86	29.32	46.00	-16.68	Average	VERTICAL

30MHz~1GHz		
Test mode:	98MHz Peak	Horizontal



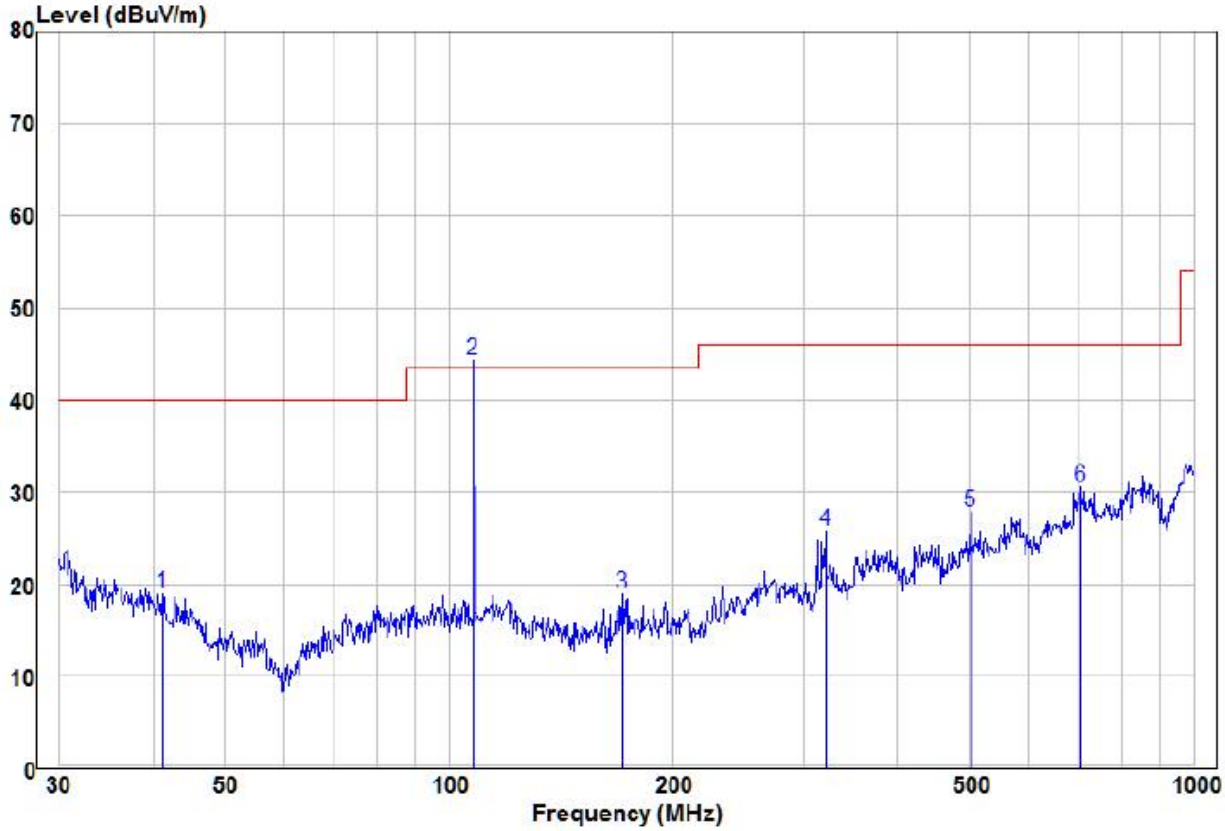
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	40.42	8.07	12.60	20.67	40.00	-19.33	Peak	HORIZONTAL
2 pp	98.14	46.51	10.53	57.04	43.50	13.54	Peak	HORIZONTAL
3	119.02	8.11	10.65	18.76	43.50	-24.74	Peak	HORIZONTAL
4	236.64	8.97	11.19	20.16	46.00	-25.84	Peak	HORIZONTAL
5	312.18	14.46	14.03	28.49	46.00	-17.51	Peak	HORIZONTAL
6	771.45	9.95	22.09	32.04	46.00	-13.96	Peak	HORIZONTAL

30MHz~1GHz		
Test mode:	98MHz Peak	Vertical



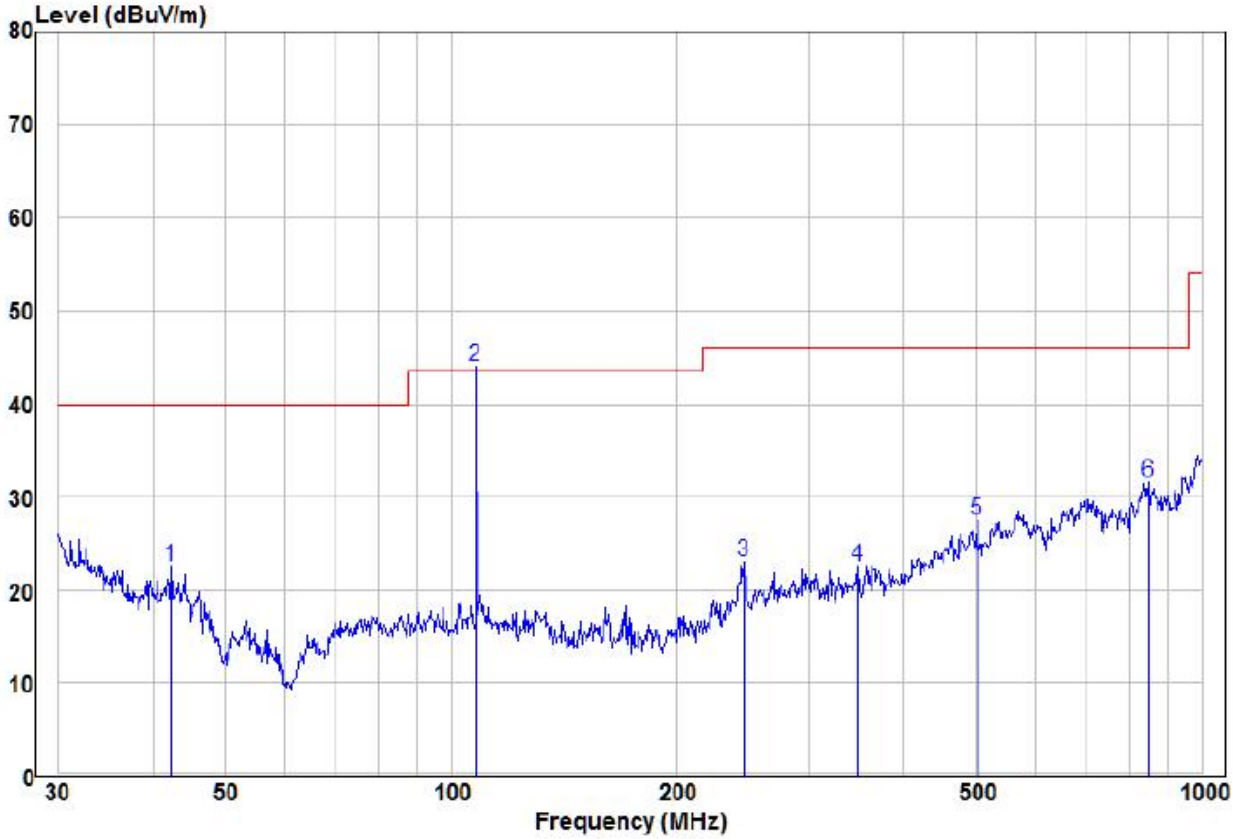
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	44.28	9.50	10.79	20.29	40.00	-19.71	Peak	VERTICAL
2 pp	98.14	43.85	10.53	54.38	43.50	10.88	Peak	VERTICAL
3	239.15	9.45	11.46	20.91	46.00	-25.09	Peak	VERTICAL
4	394.85	9.83	15.02	24.85	46.00	-21.15	Peak	VERTICAL
5	545.18	9.64	18.75	28.39	46.00	-17.61	Peak	VERTICAL
6	810.27	8.51	23.27	31.78	46.00	-14.22	Peak	VERTICAL

30MHz~1GHz		
Test mode:	107.9MHz AV	Horizontal



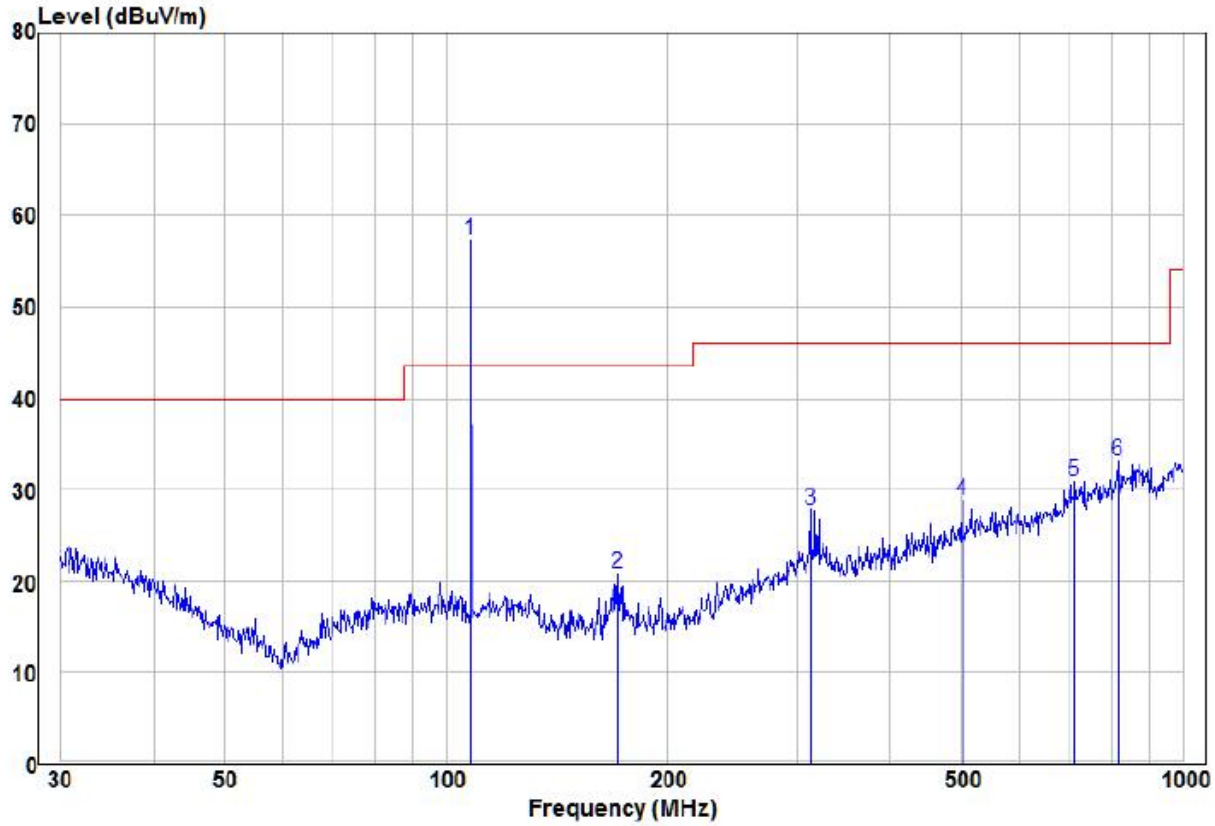
		Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1		41.28	6.75	12.20	18.95	40.00	-21.05	Average	HORIZONTAL
2	pp	107.89	34.11	10.28	44.39	43.50	0.89	Average	HORIZONTAL
3		171.39	11.16	7.72	18.88	43.50	-24.62	Average	HORIZONTAL
4		319.94	11.61	14.22	25.83	46.00	-20.17	Average	HORIZONTAL
5		501.18	9.56	18.29	27.85	46.00	-18.15	Average	HORIZONTAL
6		704.23	9.38	21.12	30.50	46.00	-15.50	Average	HORIZONTAL

30MHz~1GHz		
Test mode:	107.9MHz AV	Vertical



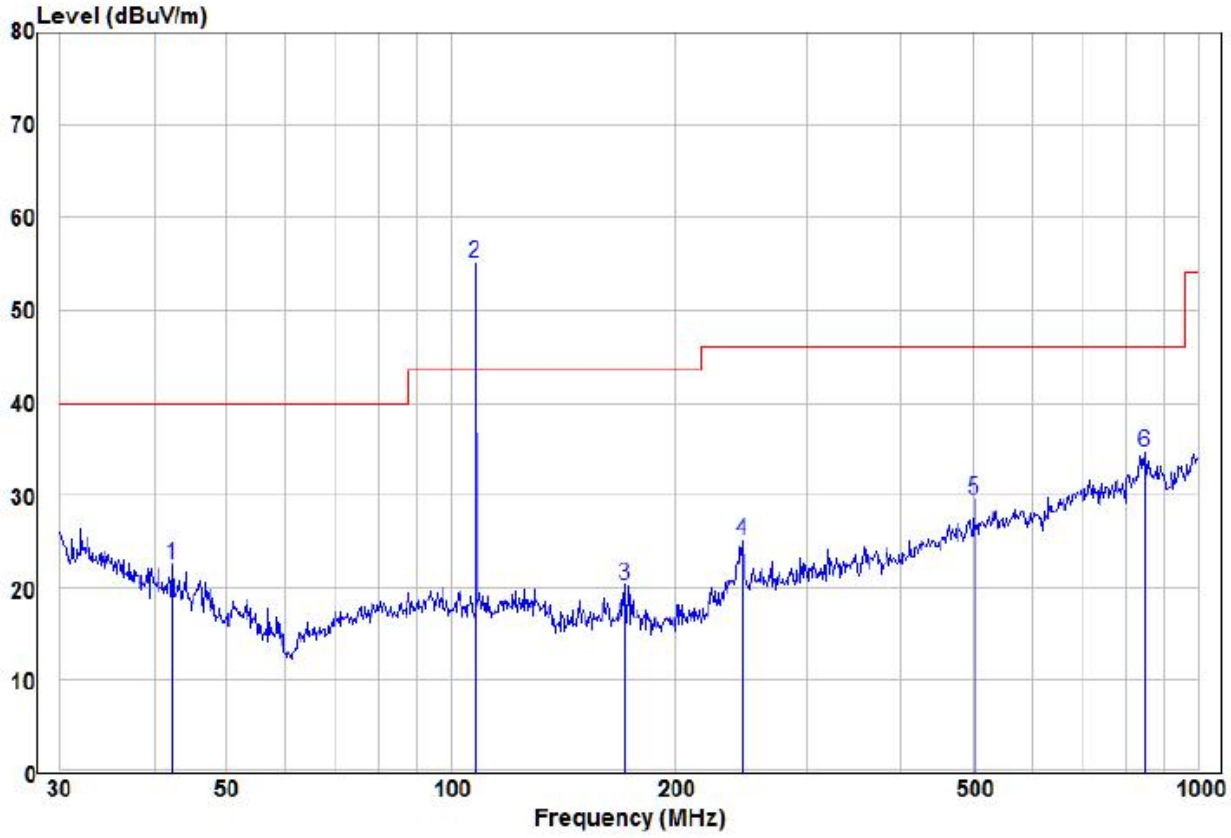
		Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1		42.30	10.85	11.72	22.57	40.00	-17.43	Average	VERTICAL
2	pp	107.89	33.81	10.28	44.09	43.50	0.59	Average	VERTICAL
3		245.09	11.10	11.93	23.03	46.00	-22.97	Average	VERTICAL
4		348.03	7.68	14.90	22.58	46.00	-23.42	Average	VERTICAL
5		501.18	9.26	18.29	27.55	46.00	-18.45	Average	VERTICAL
6		848.06	7.57	24.06	31.63	46.00	-14.37	Average	VERTICAL

30MHz~1GHz		
Test mode:	107.9MHz Peak	Horizontal



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1 pp	107.89	47.11	10.28	57.39	43.50	13.89	Peak	HORIZONTAL
2	171.39	13.16	7.72	20.88	43.50	-22.62	Peak	HORIZONTAL
3	312.18	13.77	14.03	27.80	46.00	-18.20	Peak	HORIZONTAL
4	501.18	10.56	18.29	28.85	46.00	-17.15	Peak	HORIZONTAL
5	714.17	9.77	21.19	30.96	46.00	-15.04	Peak	HORIZONTAL
6	815.97	9.87	23.23	33.10	46.00	-12.90	Peak	HORIZONTAL

30MHz~1GHz		
Test mode:	107.9MHz Peak	Vertical



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	42.30	10.85	11.72	22.57	40.00	-17.43	Peak	VERTICAL
2 pp	107.89	44.81	10.28	55.09	43.50	11.59	Peak	VERTICAL
3	171.39	12.54	7.72	20.26	43.50	-23.24	Peak	VERTICAL
4	245.09	13.10	11.93	25.03	46.00	-20.97	Peak	VERTICAL
5	501.18	11.26	18.29	29.55	46.00	-16.45	Peak	VERTICAL
6	848.06	10.57	24.06	34.63	46.00	-11.37	Peak	VERTICAL

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:

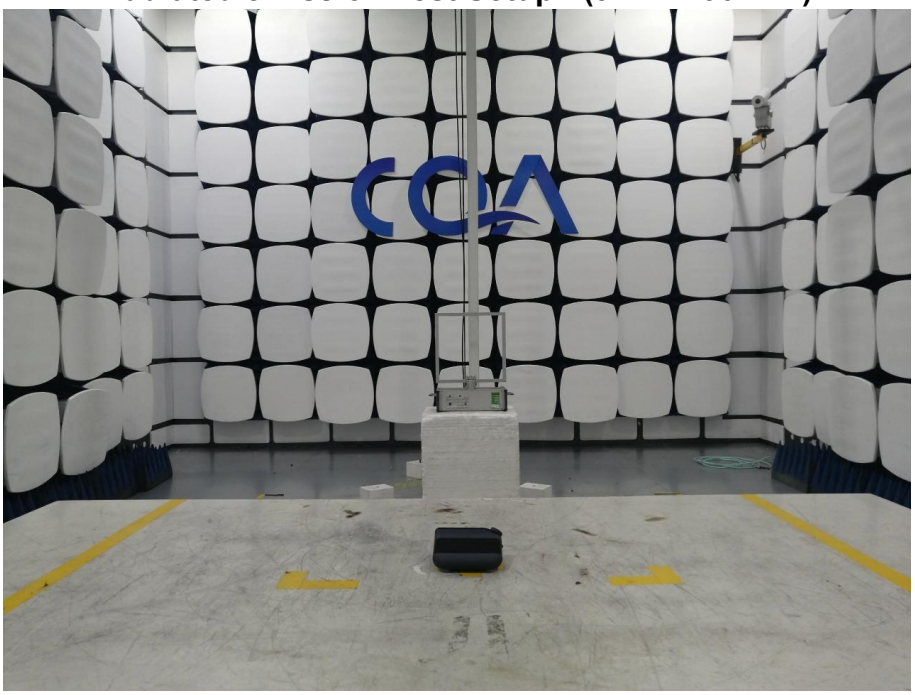
   Final Test Level =Receiver Reading - Correct Factor

   Correct Factor = *Preamplifier Factor– Antenna Factor–Cable Factor*

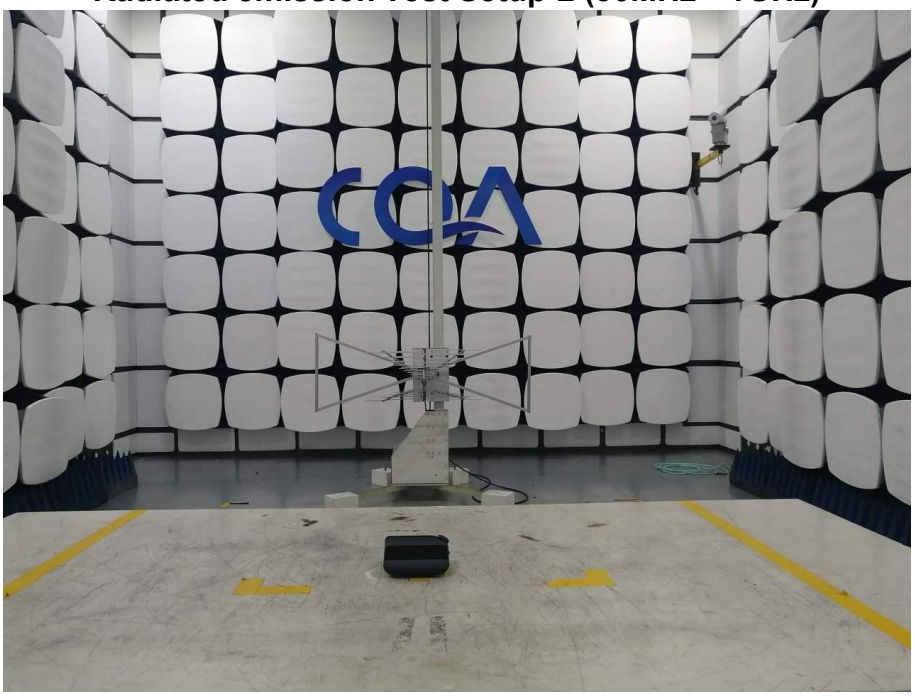
2) *Scan from 9kHz to 1GHz, the disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.*

APENDIX 1 PHOTOGRAPHS OF TEST SETUP

Radiated emission Test Setup-1(9kHz～30MHz)



Radiated emission Test Setup-2 (30MHz～1GHz)



Conducted Emissions

PHOTOGRAPHS OF EUT Constructional Details

Refer to Photographs - EUT Constructional Details OF EUT for CQASZ20220200198E-01.

*** END OF REPORT ***