TEST REPORT

Reference No.	:	WTU22U02025028E
Applicant	:	Suzhou RIBAO Technology Co.,ltd
Address	:	NO 299, YUANQI RD, YUANHE TECHNOLOGY PARK, XIANGCHENG 215133, SUZHOU, CHINA
Manufacturer	:	Suzhou RIBAO Technology Co.,ltd
Address	:	NO 299, YUANQI RD, YUANHE TECHNOLOGY PARK, XIANGCHENG 215133, SUZHOU, CHINA
Product Name	:	Value Counter
Model No.	:	BC-40
Test specification	:	FCC PART15 SUBPART B: 2020
Date of Receipt sample	:	2022.02.25
Date of Test	:	2022.03.02 to 2022.03.05
Date of Issue	:	2022.03.07
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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WALTEK TESTING GROUP CO.,LTD. WALTEK TEST REPORT

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2 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTU22U02025028E	2022.02.25	2022.03.02 to 2022.03.05	2022.03.07	Original	/	Vaild

3 General Information

3.1 General Description of E.U.T.

Product Name ..... : Value Counter

Model No. ..... : BC-40

Remark..... : None

3.2 Details of E.U.T.

Ratings ..... : AC 100-240V, 50/60Hz, 0.75A,55w

3.3 Description of Support Units

The EUT has been tested as an independent unit. BC-40 is the test sample. The test were performed in the condition of AC 120V/60Hz input.

3.4 Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

3.5 Abnormalities from Standard Conditions

None.

4 Test Summary

Test Item	Test Requirement	Test Result
Disturbance Voltage at the mains terminals (150kHz to 30MHz)	FCC PART 15, SUBPART B	Pass
Radiated Emission (30MHz to 1GHz)	FCC PART 15, SUBPART B	Pass
Radiated Emission (Above 1GHz)	FCC PART 15, SUBPART B	Pass

Remark:

Pass	Test item meets the requirement
Fail	Test item does not meet the requirement
N/A	Test case does not apply to the test object

5 Equipment Used during Test

5.1 Equipment List

☒ Radiated Emission, 30MHz to 1000MHz					
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**
1	EMI Test Receiver	R&S	ESCI	101346	2022.03.25
2	Broadband Antenna	Schwarzbeck	VULB9168	01158	2022.11.10
3	Preamplifier	Schwarzbeck	BBV 9743	9743-0069	2022.03.27
☒ Radiation Emission For Above 1000MHz					
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**
1	EMI Test Receiver	R&S	ESR7	102413	2022.05.22
2	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1092	N/A
3	Preamplifier	Schwarzbeck	BBV 9743	9743-0069	2022.03.27
☒ Mains Terminal Disturbance Voltage(Conducted Emission)					
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**
1	Test Receiver	ROHDE& SCHWARZ	ESCI	101346	2022.03.25
2	Two-Line V-Network	ROHDE& SCHWARZ	ENV216	101538	2022.03.27

5.2 Measurement Uncertainty

Parameter	Uncertainty (Note 1)
Temperature	±1°C
Humidity	±5%
DC and low frequency voltages	±3%
Conducted Emissions	±2.66dB
Radiated Emission(30MHz~6GHz)	±4.75dB

Note 1: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5.3 Test Mode

Test Item	Test Mode	Test Voltage
Disturbance Voltage at the mains terminals (150kHz to 30MHz)	Power on	AC 120V/60Hz
Radiated Emissions (30MHz-1GHz)	Power on	AC 120V/60Hz
Radiated Emission (Above 1GHz)	Power on	AC 120V/60Hz

6 Emission Test Results

6.1 Disturbance Voltage at the Mains Terminals, 150kHz to 30MHz

Test Requirement ..... : FCC PART 15, SUBPART B

Test Method..... : ANSI C63.4

Test Result..... : Pass

Test Limit..... : FCC PART 15, SUBPART B Section 15.107

Frequency Range..... : 150kHz to 30MHz

Class ..... : Class B

Limit .....

Frequency of emission (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

6.1.1 E.U.T. Operation

Operating Environment:

Temperature ..... : 23.0°C

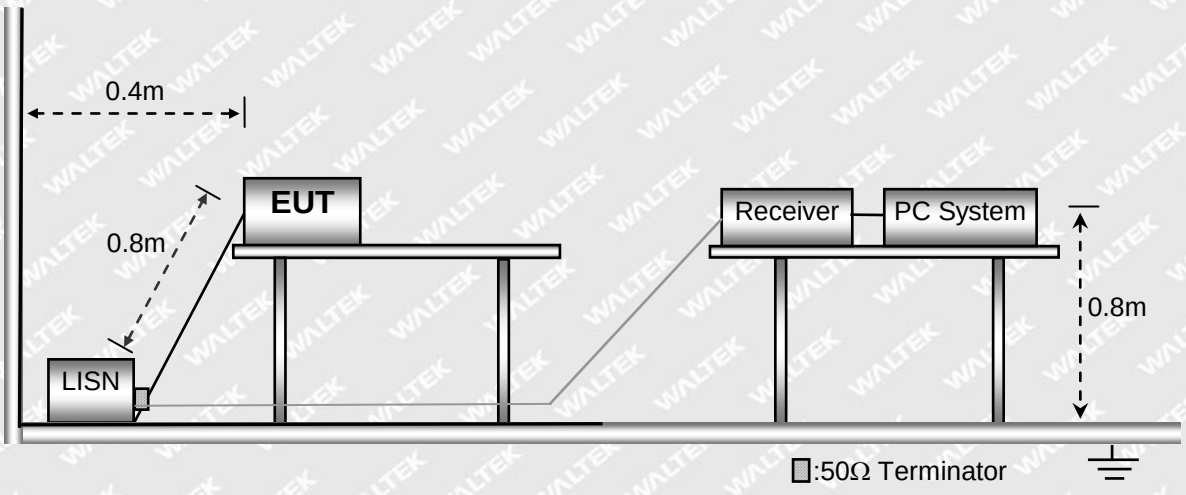
Humidity..... : 59.0%RH

Atmospheric Pressure..... : 101.9kPa

EUT Operation..... : Power on

6.1.2 Block Diagram of Test Setup

The Mains Terminals Disturbance Voltage tests were performed in accordance with the FCC PART 15, SUBPART B

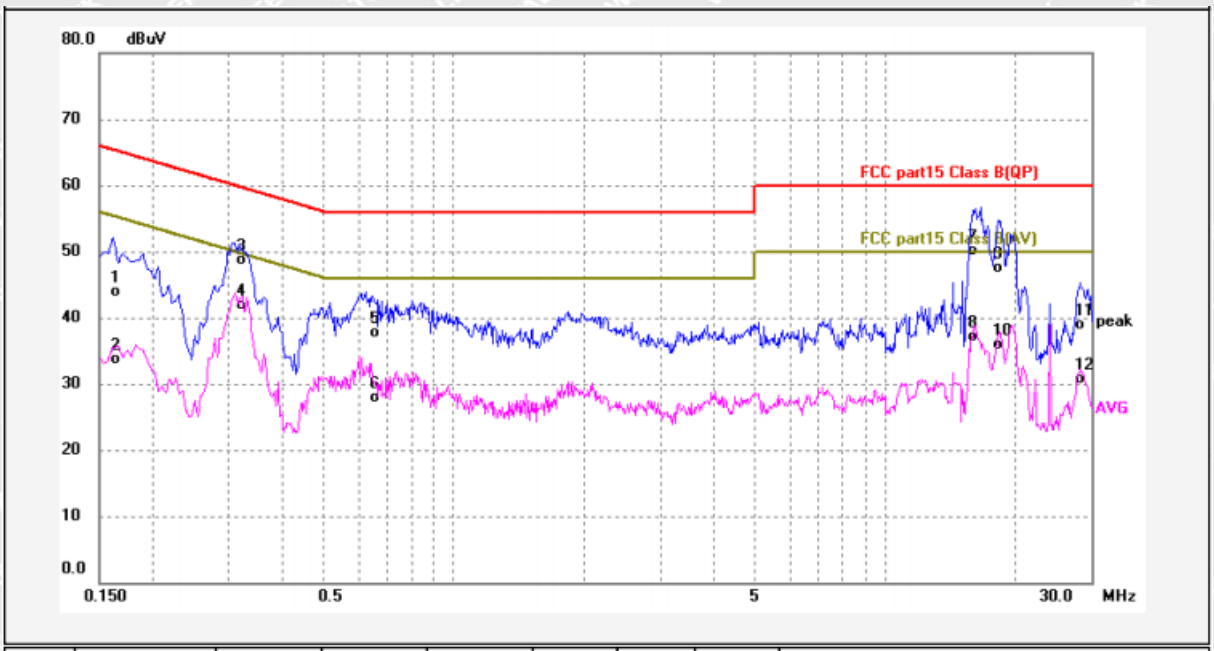


6.1.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

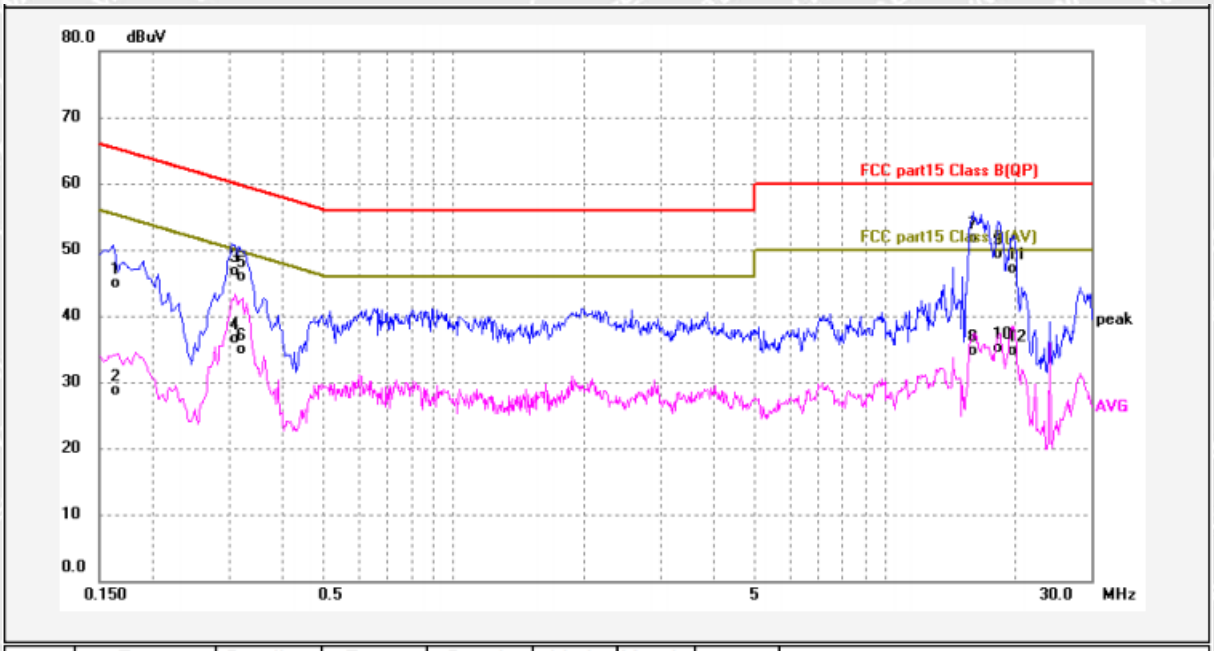
6.1.4 Disturbance Voltage at the Mains Terminals Test Data

Live Line :



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1620	24.41	19.58	43.99	65.36	-21.37	QP	
2	0.1620	14.06	19.58	33.64	55.36	-21.72	AVG	
3	0.3180	29.10	19.61	48.71	59.76	-11.05	QP	
4	0.3180	22.22	19.61	41.83	49.76	-7.93	AVG	
5	0.6620	17.98	19.64	37.62	56.00	-18.38	QP	
6	0.6620	8.32	19.64	27.96	46.00	-18.04	AVG	
7	15.9980	29.88	20.13	50.01	60.00	-9.99	QP	
8	15.9980	17.07	20.13	37.20	50.00	-12.80	AVG	
9	18.2660	27.33	20.11	47.44	60.00	-12.56	QP	
10	18.2660	15.75	20.11	35.86	50.00	-14.14	AVG	
11	28.2820	18.59	20.24	38.83	60.00	-21.17	QP	
12	28.2820	10.39	20.24	30.63	50.00	-19.37	AVG	

Neutral Line :



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1621	25.31	19.58	44.89	65.35	-20.46	QP	
2	0.1621	9.06	19.58	28.64	55.35	-26.71	AVG	
3	0.3059	27.20	19.60	46.80	60.08	-13.28	QP	
4	0.3059	16.81	19.60	36.41	50.08	-13.67	AVG	
5	0.3199	26.38	19.61	45.99	59.71	-13.72	QP	
6	0.3199	15.33	19.61	34.94	49.71	-14.77	AVG	
7	15.9977	31.57	20.13	51.70	60.00	-8.30	QP	
8	15.9977	14.51	20.13	34.64	50.00	-15.36	AVG	
9	18.2655	29.17	20.11	49.28	60.00	-10.72	QP	
10	18.2655	15.01	20.11	35.12	50.00	-14.88	AVG	
11	19.8699	27.01	20.10	47.11	60.00	-12.89	QP	
12	19.8699	14.51	20.10	34.61	50.00	-15.39	AVG	

6.2 Radiation Emission, 30MHz to 1000MHz

Test Requirement..... : FCC PART 15, SUBPART B

Test Method..... : ANSI C63.4

Test Limit ..... FCC PART 15, SUBPART B Section 15.109

Test Result..... : Pass

Frequency Range ..... : 30MHz to 1000MHz

Class..... : Class B

Limit..... :

Frequency (MHz)	Distance (Meter)	Limit (dBμV/m) Quasi-peak
30 to 88	3	40
88 to 216	3	43.5
216 to 960	3	46
960 to 1000	3	54

6.2.1 E.U.T. Operation

Operating Environment:

Temperature..... : 23.4°C

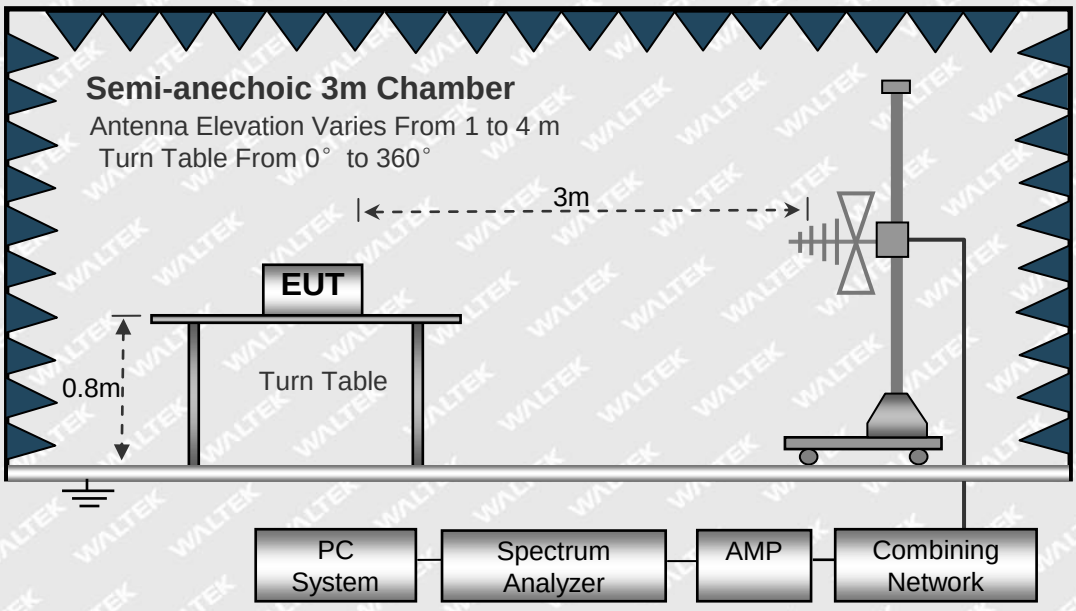
Humidity ..... : 46.2%RH

Atmospheric Pressure..... : 101.7kPa

EUT Operation..... : Power on

6.2.2 Block Diagram of Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4.

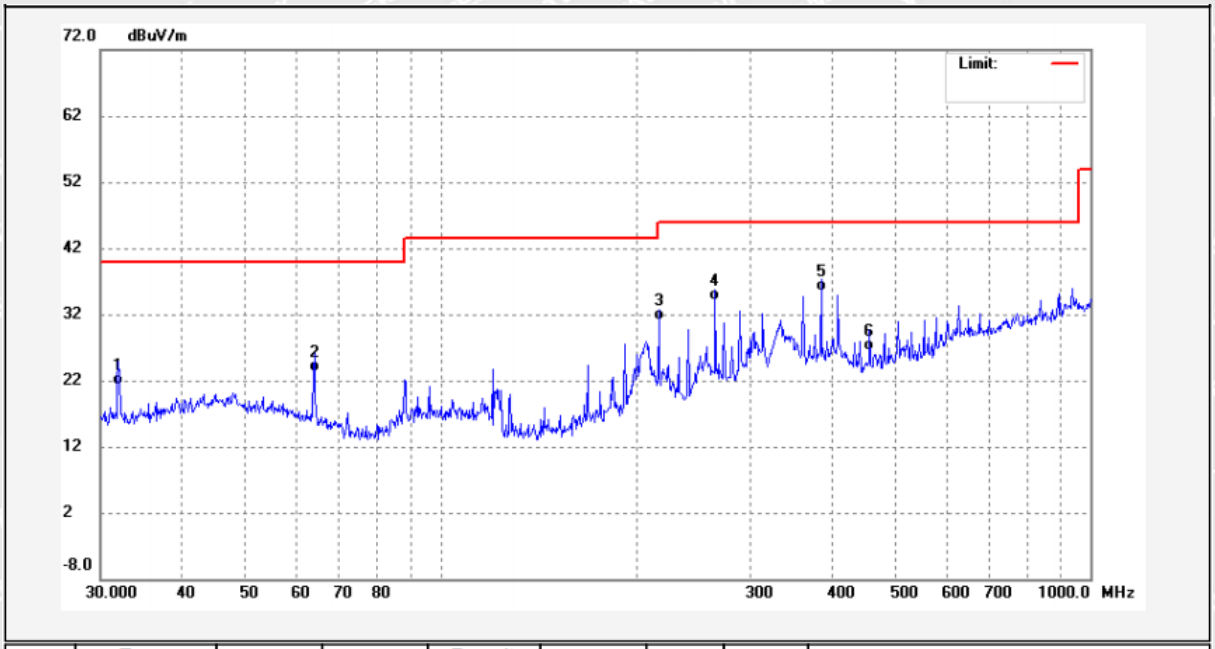


6.2.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Antenna Vertical Polarization and Antenna Horizontal Polarization. Quasi-peak measurements were performed if peak emissions were within 6dB of the Quasi-peak limit line.

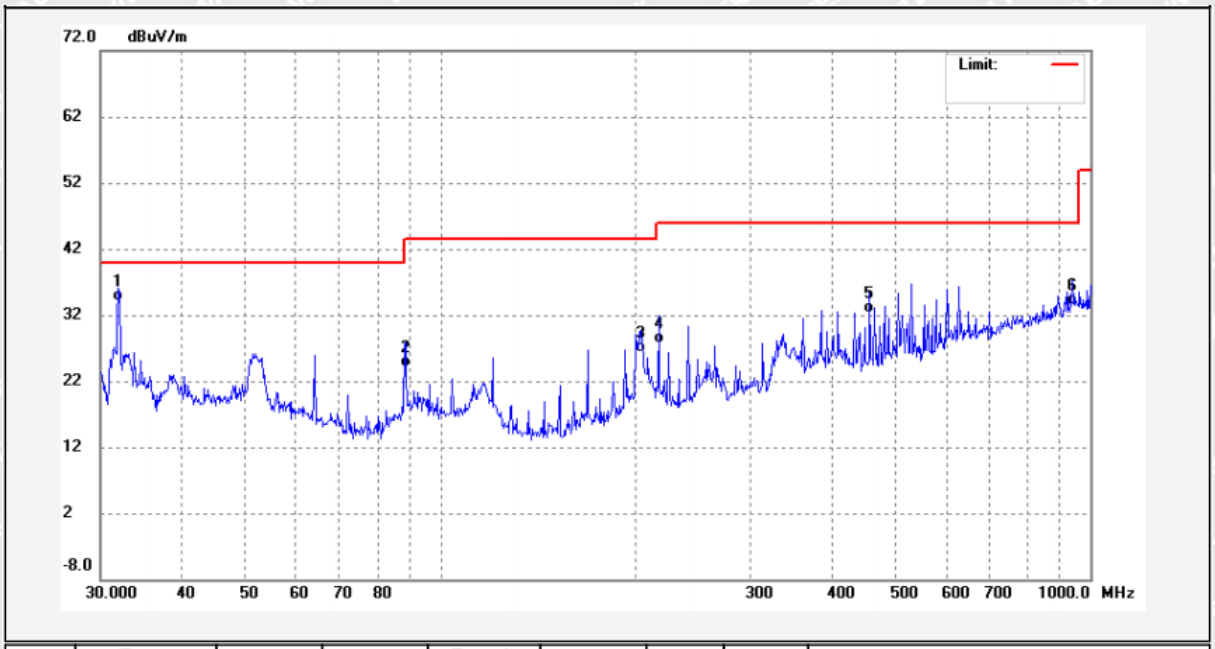
6.2.4 Radiated Emission Test Data, 30MHz to 1000MHz

Antenna Horizontal:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	31.9544	10.53	11.61	22.14	40.00	-17.86	QP	
2	63.9827	12.33	11.70	24.03	40.00	-15.97	QP	
3	216.7828	18.97	12.85	31.82	46.00	-14.18	QP	
4	264.7456	20.22	14.59	34.81	46.00	-11.19	QP	
5	384.9805	17.63	18.68	36.31	46.00	-9.69	QP	
6	457.5072	7.47	19.75	27.22	46.00	-18.78	QP	

Antenna Vertical:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	32.0334	23.21	11.62	34.83	40.00	-5.17	QP	
2	88.3421	12.92	11.91	24.83	43.50	-18.67	QP	
3	203.5226	14.05	13.06	27.11	43.50	-16.39	QP	
4	216.7828	15.67	12.85	28.52	46.00	-17.48	QP	
5	457.5072	13.39	19.75	33.14	46.00	-12.86	QP	
6	938.8325	6.26	28.01	34.27	46.00	-11.73	QP	

6.3 Radiation Emission For Above 1000MHz

Test Requirement..... : FCC PART 15, SUBPART B

Test Method..... : ANSI C63.4

Test Limit ..... FCC PART 15, SUBPART B Section 15.109

Test Result..... : Pass

Frequency Range ..... : 1000MHz to 6000MHz

Class..... : Class B

Limit..... :

Frequency Range (MHz)	Distance (Meter)	Average Limit dB(uV/m)	Peak Limit (dBuV/m)
Above 1GHz	3	54	74

6.3.1 E.U.T. Operation

Operating Environment:

Temperature..... : 26.0°C

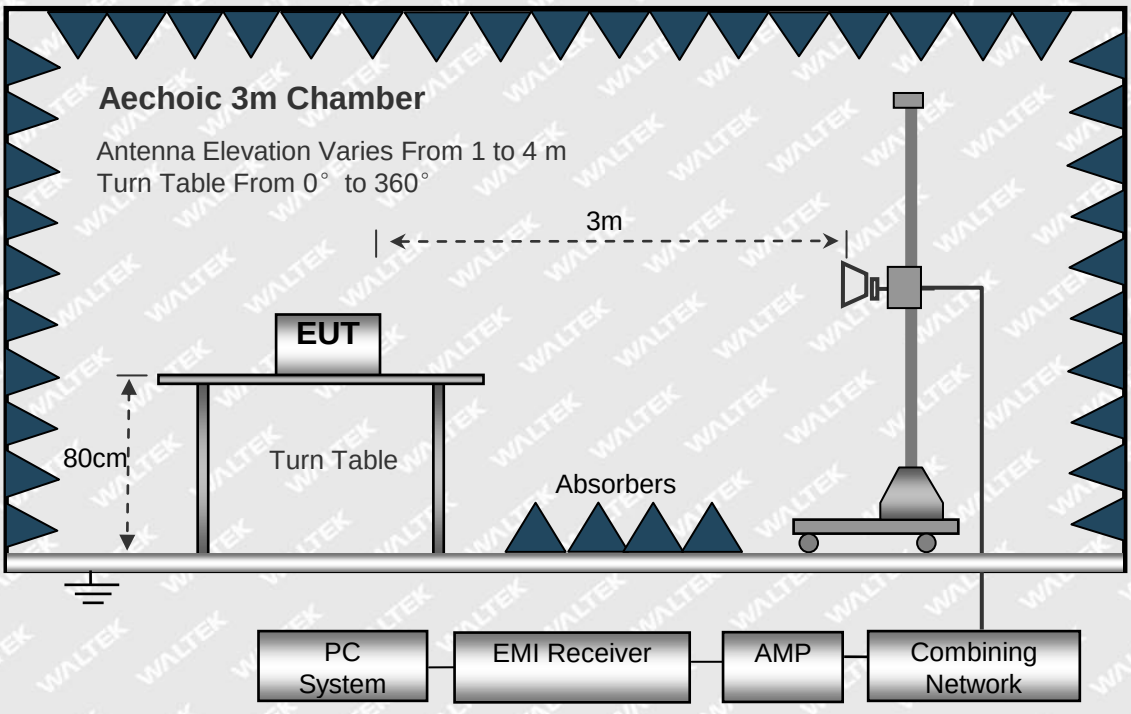
Humidity ..... : 54.0%RH

Atmospheric Pressure..... : 101.7kPa

EUT Operation..... : Power on

6.3.2 Block Diagram of Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4.

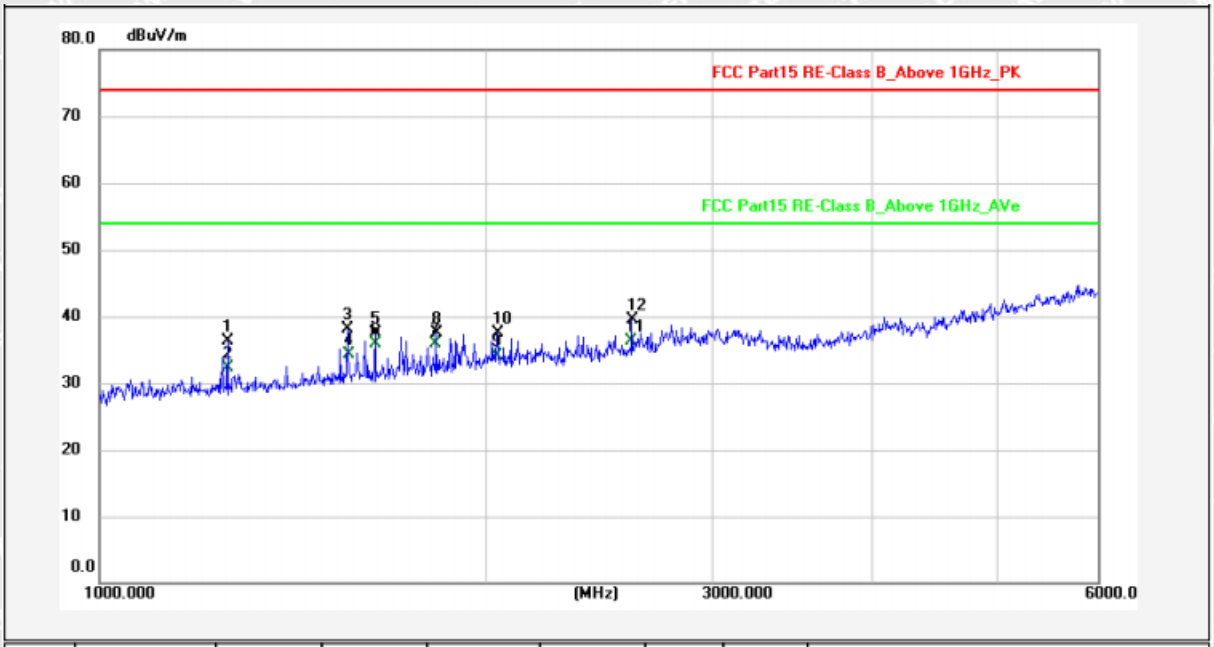


6.3.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Antenna Vertical Polarization and Antenna Horizontal Polarization.

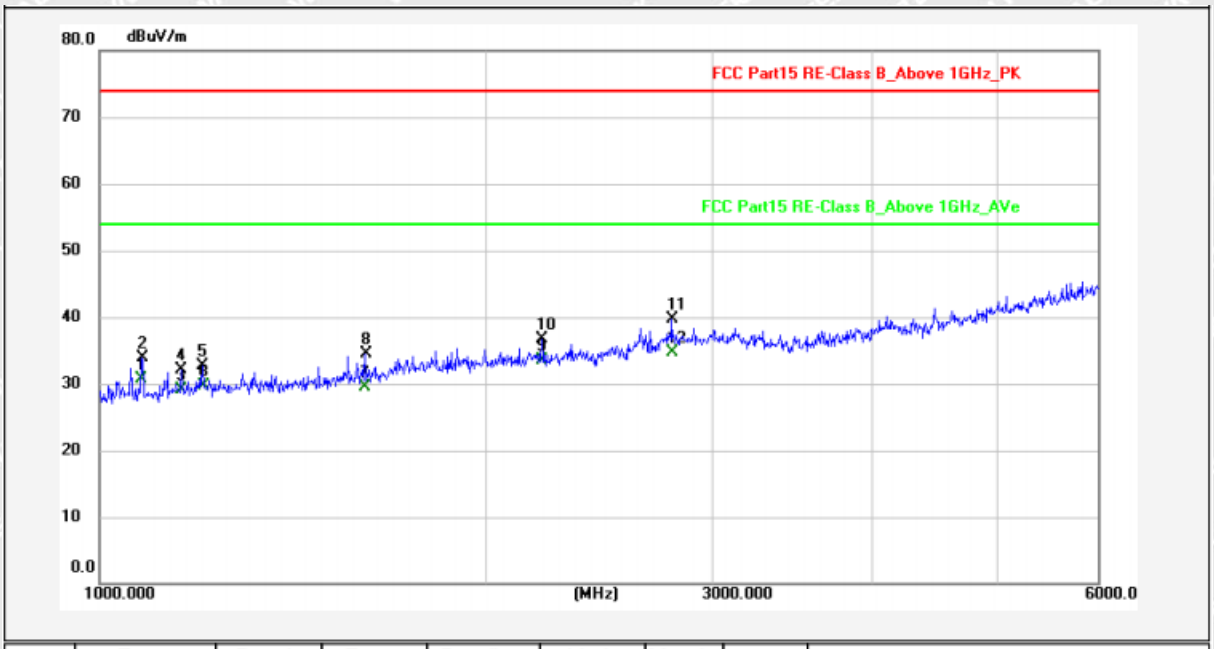
6.3.4 Radiated Emission Test Data, 1000MHz to 6000MHz

Antenna Horizontal:



No.	Freq. (MHz)	Result (dBuV/m)	Factor (dB)	Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	1257.776	36.21	1.32	34.89	74.00	-37.79	peak	
2	1257.776	32.23	1.32	30.91	54.00	-21.77	AVG	
3	1559.486	38.06	2.65	35.41	74.00	-35.94	peak	
4	1564.061	34.22	2.68	31.54	54.00	-19.78	AVG	
5	1639.720	37.45	3.14	34.31	74.00	-36.55	peak	
6	1639.990	35.94	3.14	32.80	54.00	-18.06	AVG	
7	1828.738	35.98	4.31	31.67	54.00	-18.02	AVG	
8	1829.098	37.49	4.31	33.18	74.00	-36.51	peak	
9	2039.988	34.07	5.55	28.52	54.00	-19.93	AVG	
10	2040.348	37.44	5.55	31.89	74.00	-36.56	peak	
11	2598.688	36.32	8.18	28.14	54.00	-17.68	AVG	
12	2598.691	39.44	8.18	31.26	74.00	-34.56	peak	

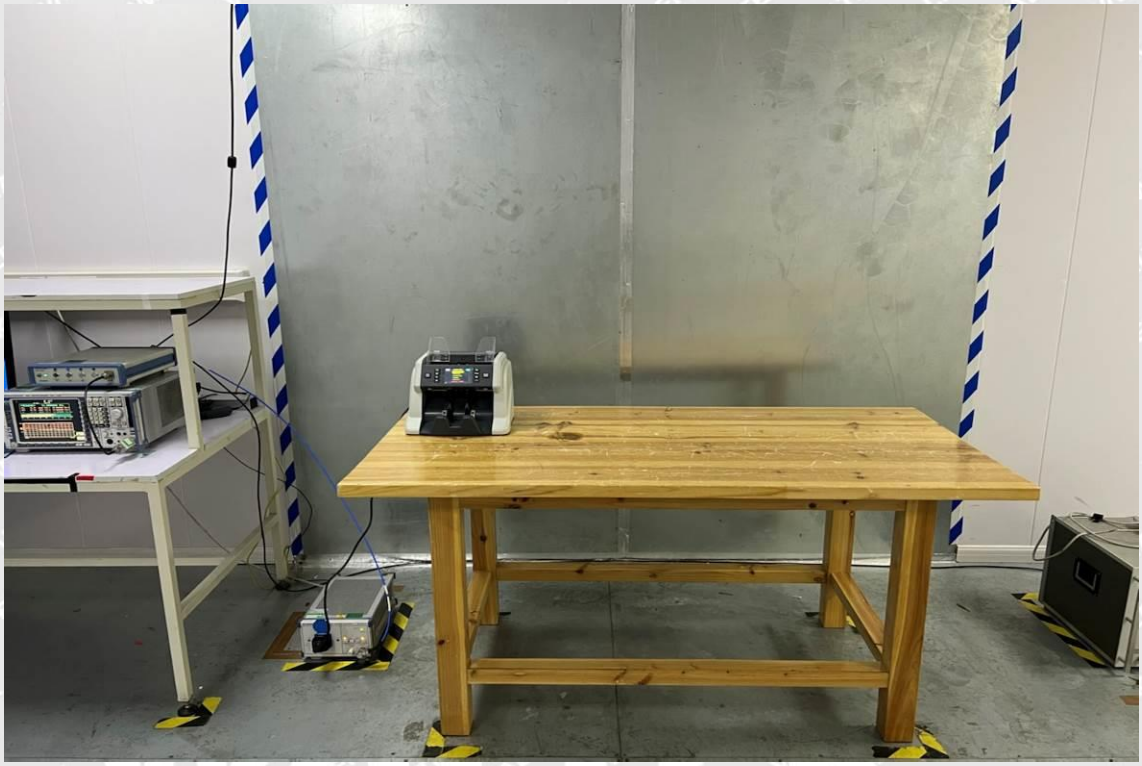
Antenna Vertical:



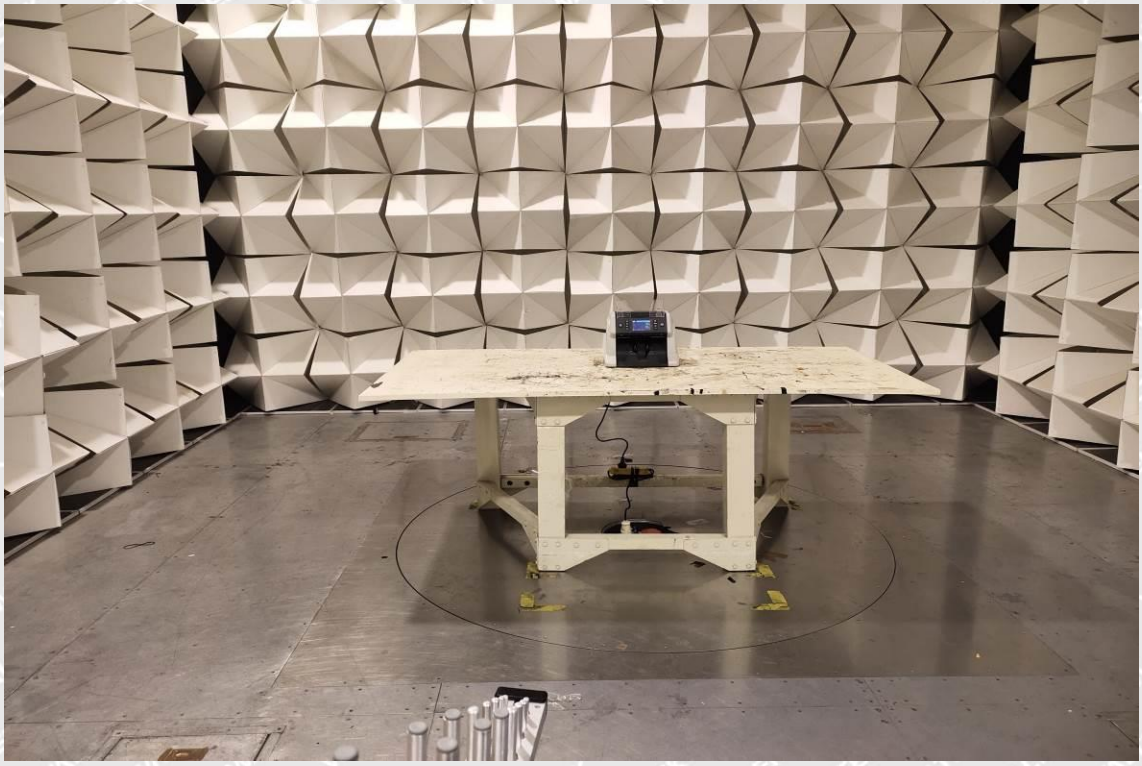
No.	Freq. (MHz)	Result (dBuV/m)	Factor (dB)	Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	1078.156	30.72	0.62	30.10	54.00	-23.28	AVG	
2	1078.158	33.84	0.62	33.22	74.00	-40.16	peak	
3	1158.263	29.20	0.92	28.28	54.00	-24.80	AVG	
4	1158.266	32.13	0.92	31.21	74.00	-41.87	peak	
5	1202.678	32.62	1.10	31.52	74.00	-41.38	peak	
6	1202.679	29.62	1.10	28.52	54.00	-24.38	AVG	
7	1610.599	29.56	2.97	26.59	54.00	-24.44	AVG	
8	1610.602	34.55	2.97	31.58	74.00	-39.45	peak	
9	2211.672	33.58	6.29	27.29	54.00	-20.42	AVG	
10	2211.673	36.61	6.29	30.32	74.00	-37.39	peak	
11	2791.777	39.64	9.41	30.23	74.00	-34.36	peak	
12	2791.788	34.66	9.41	25.25	54.00	-19.34	AVG	

7 Photographs – Test Setup

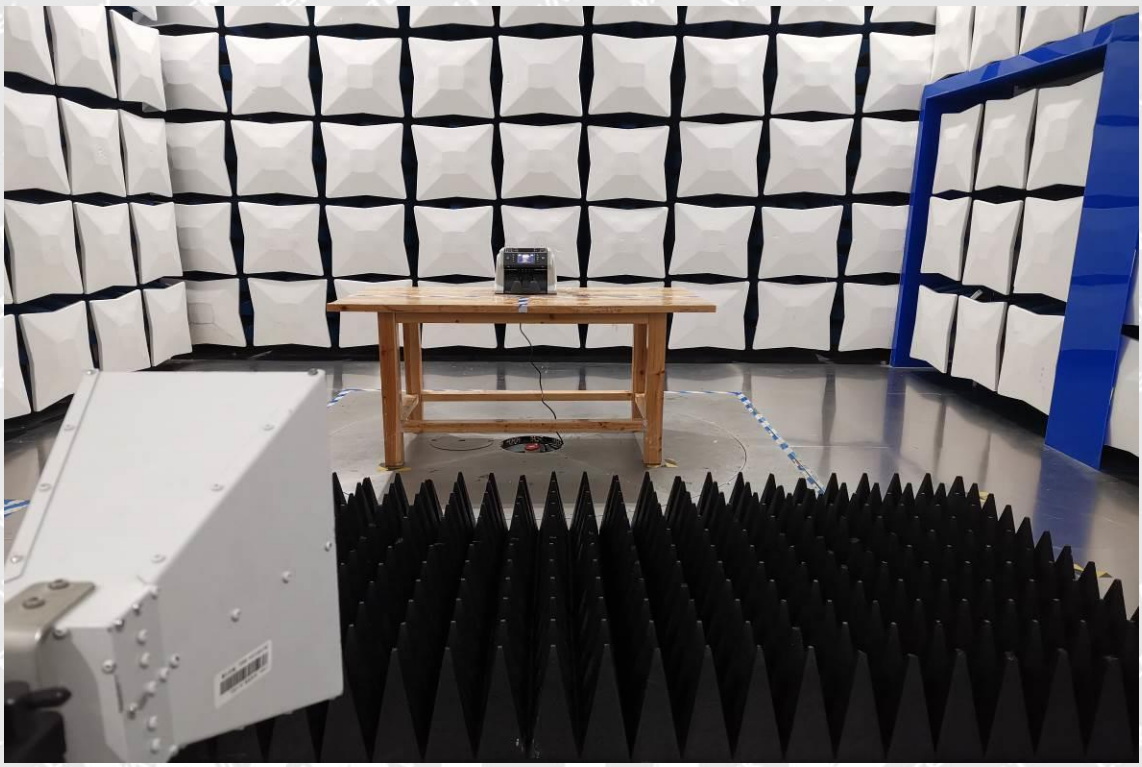
7.1 Photograph –Disturbance Voltage at the Mains Terminals Test Setup



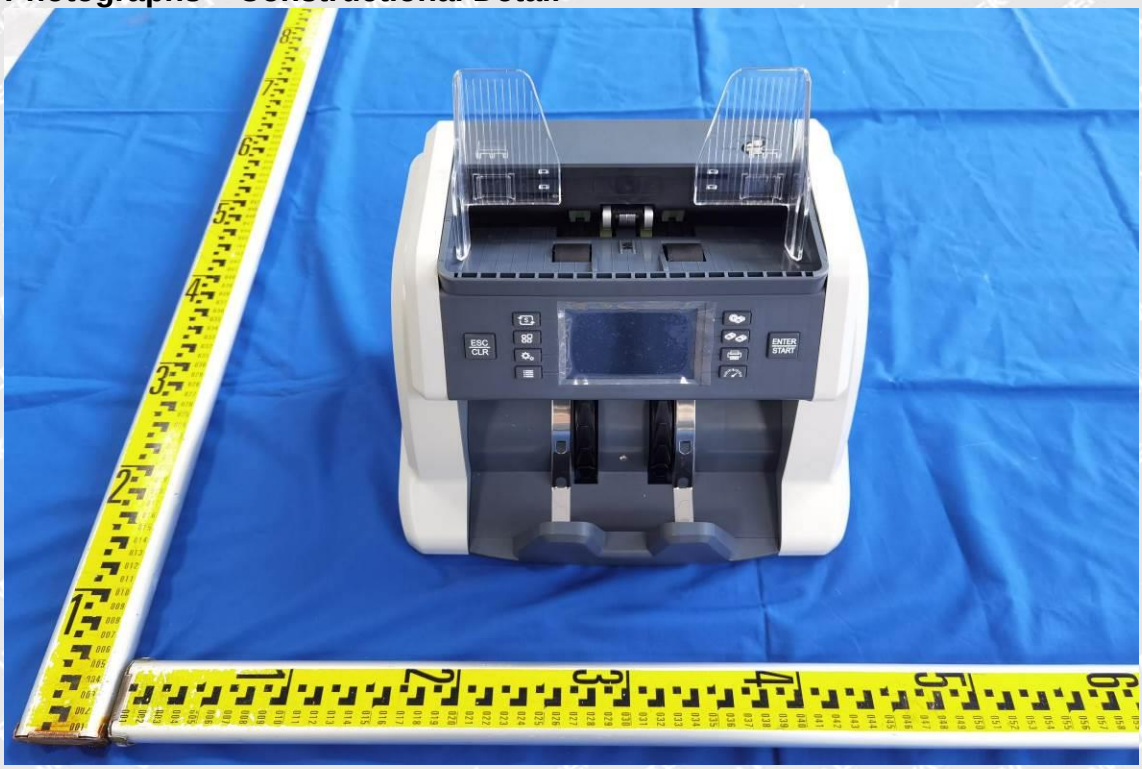
7.2 Photograph –Radiated Emission Test Setup For 30MHz-1000MHz



7.3 Photograph –Radiated Emission Test Setup For 1000MHz-6000MHz



8 Photographs – Constructional Detail



======End of Report======