



TEST REPORT

Reference No...... : WTU20U07044924E
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..... : Value Counter
Model(s) : BC-55
Standards..... : FCC PART15 SUBPART B: 2017
Date of Receipt sample : Jul.31, 2020
Date of Test : Jul.31, 2020 to Sep.18, 2020
Date of Issue..... : Oct.09, 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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2 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTU20U07044924E	Jul.31, 2020	Jul.31, 2020 to Sep.18, 2020	Oct.09, 2020	Original	/	Vaild



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3 General Information

3.1 General Description of E.U.T.

Product Name : Value Counter
 Model No..... : BC-55
 Remark..... : None

3.2 Details of E.U.T.

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

3.3 Description of Support Units

The EUT has been tested as an independent unit. BC-55 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
AC Power Line Conducted Emission (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

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5 Equipment Used during Test

5.1 Equipment List

<input checked="" type="checkbox"/> Radiated Emission					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Due
1.	EMI Test Receiver	R&S	ESCI	101346	2021.03.28
2.	Broadband Antenna	SCHWARZBECK	VULB9163	VULB 9163-580	2021.04.21
3.	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1092	2021.04.21
4.	Preamplifier	SCHWARZBECK	BBV 9743	9743-0069	2021.03.28
<input checked="" type="checkbox"/> Conducted Emission					
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Due
1.	Test Receiver	ROHDE& SCHWARZ	ESCI	101297	2021.03.28
2.	Two-Line V-Network	ROHDE& SCHWARZ	ENV216	101538	2021.03.28

5.2 Measurement Uncertainty

Parameter	Uncertainty (Note 1)
Temperature	$\pm 1^{\circ}\text{C}$
Humidity	$\pm 5\%$
DC and low frequency voltages	$\pm 3\%$
Conducted Emissions	$\pm 2.66\text{dB}$
Radiated Emission(30MHz~6GHz)	$\pm 4.75\text{dB}$

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



6 Emission Test Results

6.1 Conducted Emission 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 (dB μ V)	
	Quasi-peak	Average
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

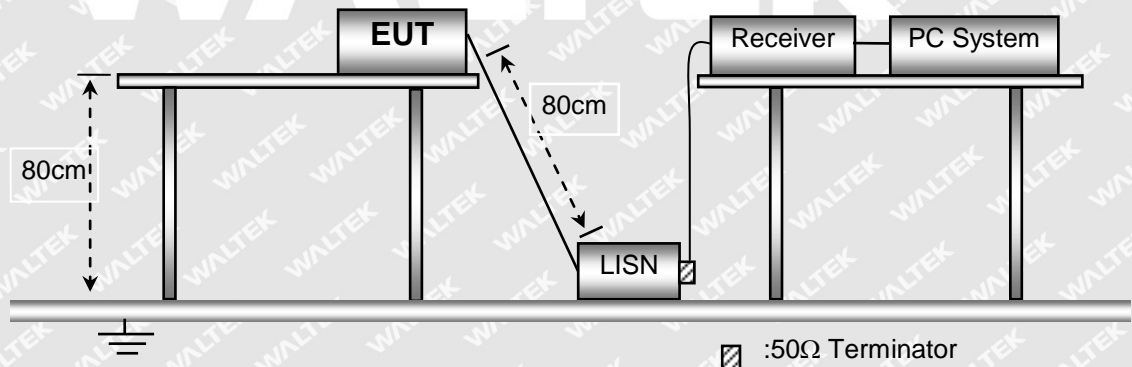
6.1.1 E.U.T. Operation

Operating Environment:

Temperature : 22.2°C
Humidity..... : 53%RH
Atmospheric Pressure..... : 101 kPa
EUT Operation..... : Work mode

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



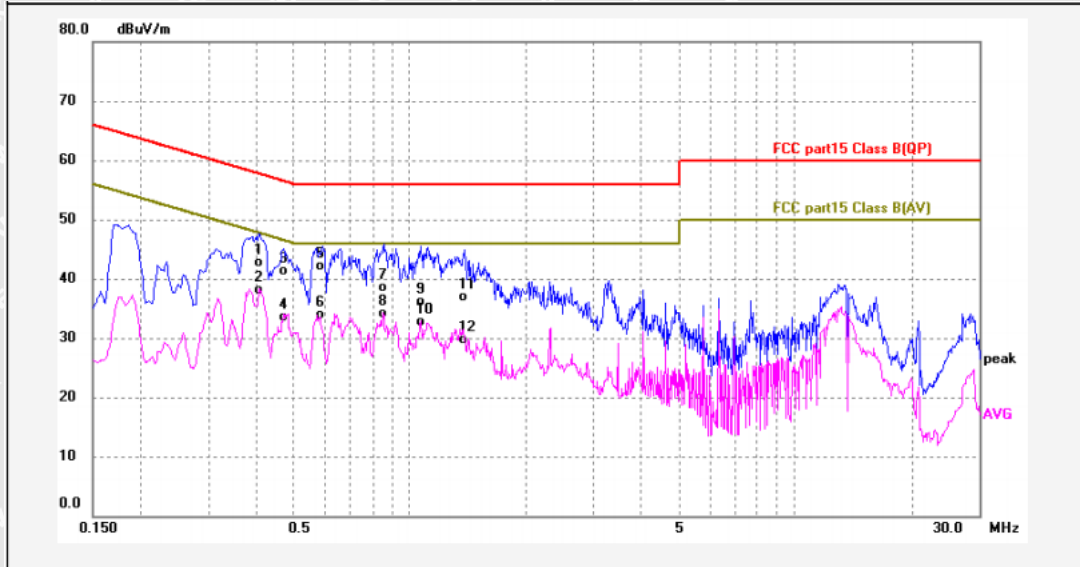


6.1.3 Measurement Data

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 Mains Terminals Disturbance Voltage Test Data

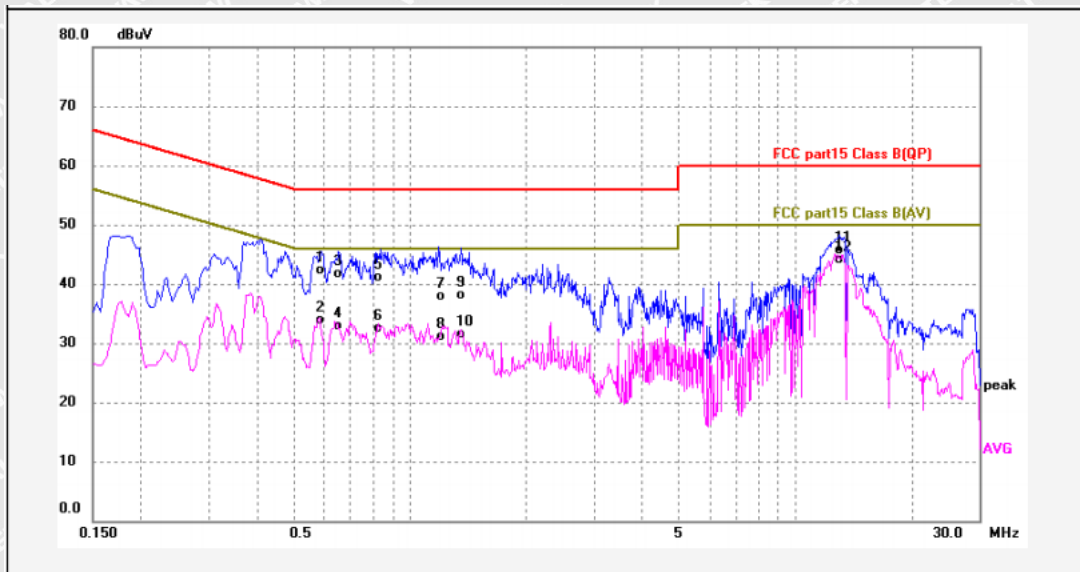
Live Line:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit dBuV/	Margin (dB)	Detector	Remark
1	0.4060	32.99	9.63	42.62	57.73	-15.11	QP	
2	0.4060	28.48	9.63	38.11	47.73	-9.62	AVG	
3	0.4700	31.71	9.62	41.33	56.51	-15.18	QP	
4	0.4700	23.84	9.62	33.46	46.51	-13.05	AVG	
5	0.5940	32.52	9.63	42.15	56.00	-13.85	QP	
6	0.5940	24.30	9.63	33.93	46.00	-12.07	AVG	
7	0.8540	28.84	9.66	38.50	56.00	-17.50	QP	
8	0.8540	24.50	9.66	34.16	46.00	-11.84	AVG	
9	1.0660	26.45	9.66	36.11	56.00	-19.89	QP	
10	1.0660	23.05	9.66	32.71	46.00	-13.29	AVG	
11	1.3820	27.24	9.66	36.90	56.00	-19.10	QP	
12	1.3820	19.98	9.66	29.64	46.00	-16.36	AVG	



Neutral Line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.5899	32.59	9.63	42.22	56.00	-13.78	QP	
2	0.5899	24.23	9.63	33.86	46.00	-12.14	AVG	
3	0.6540	31.96	9.65	41.61	56.00	-14.39	QP	
4	0.6540	23.30	9.65	32.95	46.00	-13.05	AVG	
5	0.8380	31.47	9.67	41.14	56.00	-14.86	QP	
6	0.8380	22.92	9.67	32.59	46.00	-13.41	AVG	
7	1.1860	28.26	9.66	37.92	56.00	-18.08	QP	
8	1.1860	21.41	9.66	31.07	46.00	-14.93	AVG	
9	1.3540	28.51	9.66	38.17	56.00	-17.83	QP	
10	1.3540	21.94	9.66	31.60	46.00	-14.40	AVG	
11	13.0260	35.78	9.96	45.74	60.00	-14.26	QP	
12	13.0260	34.06	9.96	44.02	50.00	-5.98	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 (dB μ V/m)
		Quasi-peak
30 to 88	3	40
88 to 216	3	43.5
216 to 960	3	46
960 to 1000	3	54

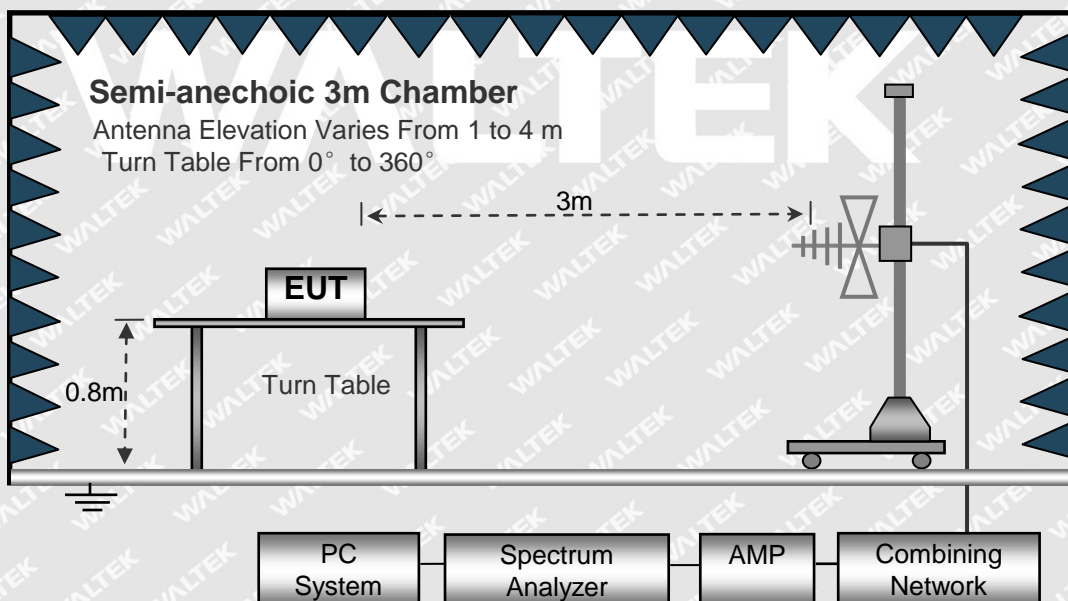
6.2.1 E.U.T. Operation

Operating Environment:

Temperature.....	:	22.3°C
Humidity	:	55%RH
Atmospheric Pressure.....	:	101.1kPa
EUT Operation.....	:	Work mode

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.



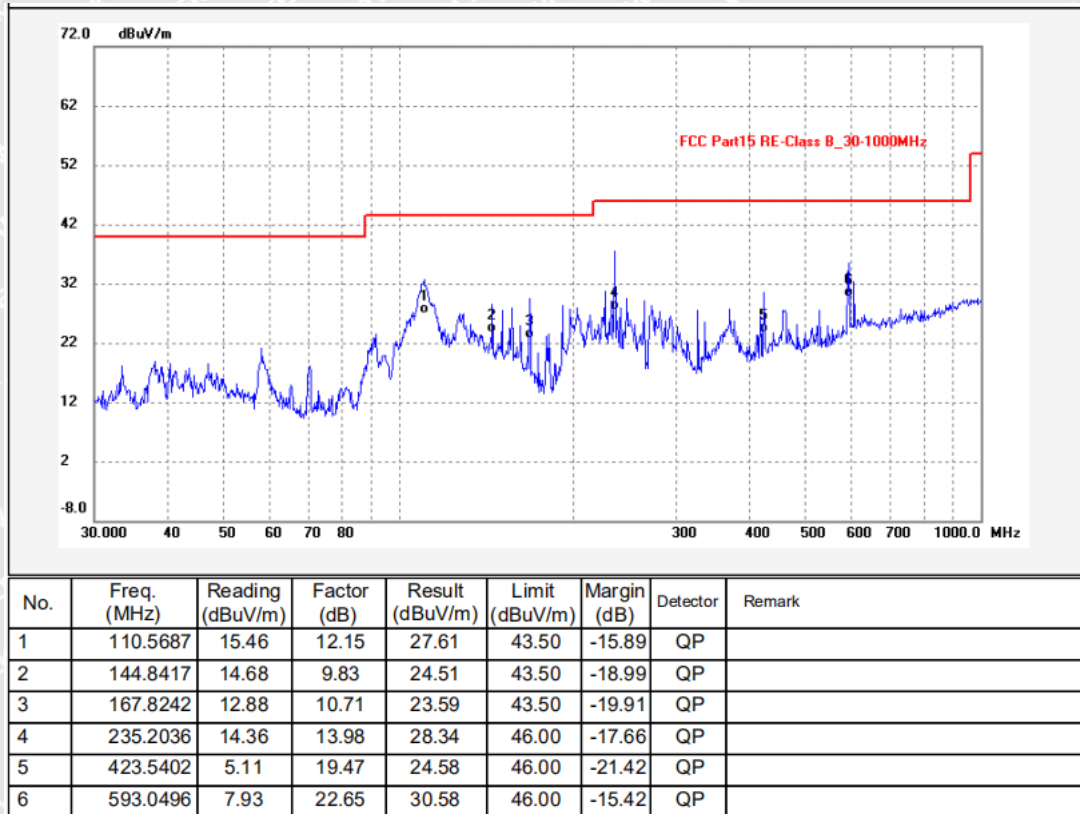


6.2.3 Measurement Data

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.

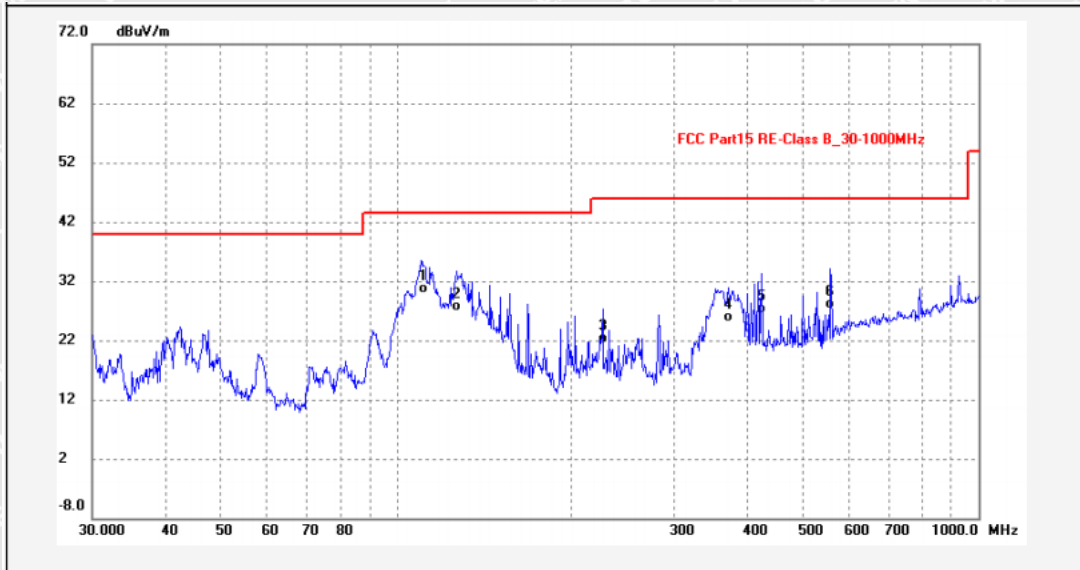
6.2.4 Radiated Emission Test Data, 30MHz to 1000MHz

Antenna Polarization: Horizontal





Antenna Polarization: Vertical



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	111.3468	18.61	12.11	30.72	43.50	-12.78	QP	
2	126.7723	17.94	9.82	27.76	43.50	-15.74	QP	
3	226.0994	8.99	13.37	22.36	46.00	-23.64	QP	
4	372.0045	7.53	18.30	25.83	46.00	-20.17	QP	
5	423.5402	7.85	19.47	27.32	46.00	-18.68	QP	
6	556.7743	6.81	21.24	28.05	46.00	-17.95	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

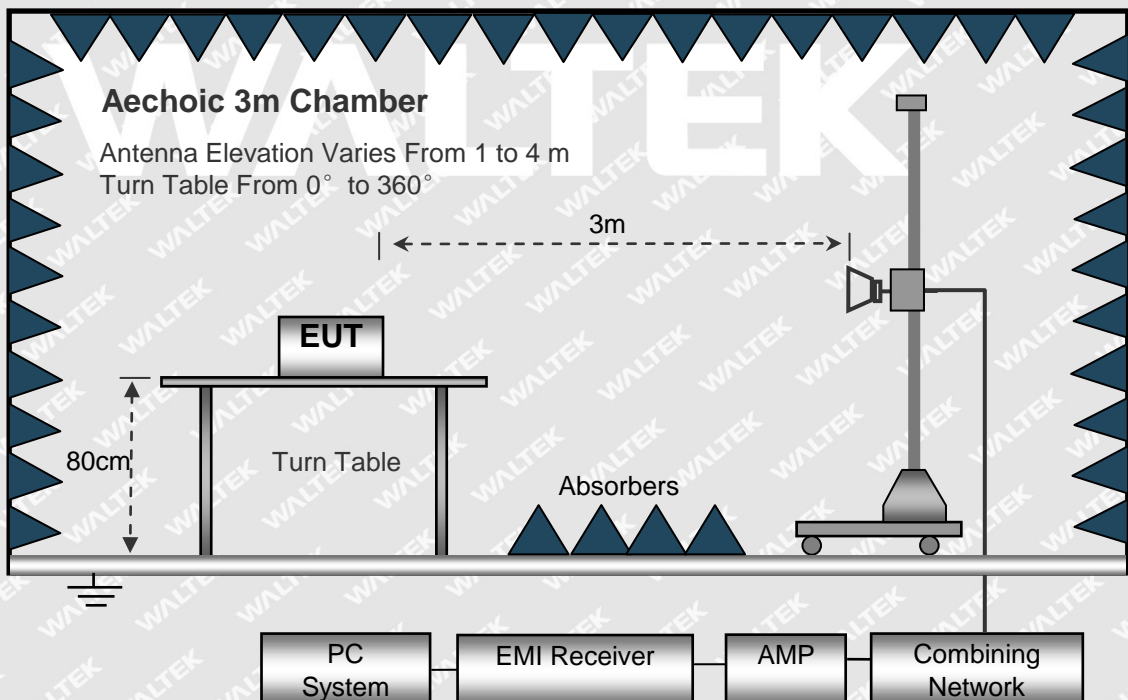
6.3.1 E.U.T. Operation

Operating Environment:

Temperature.....	:	22.3°C
Humidity	:	55%RH
Atmospheric Pressure.....	:	101.1kPa
EUT Operation.....	:	Work mode

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.



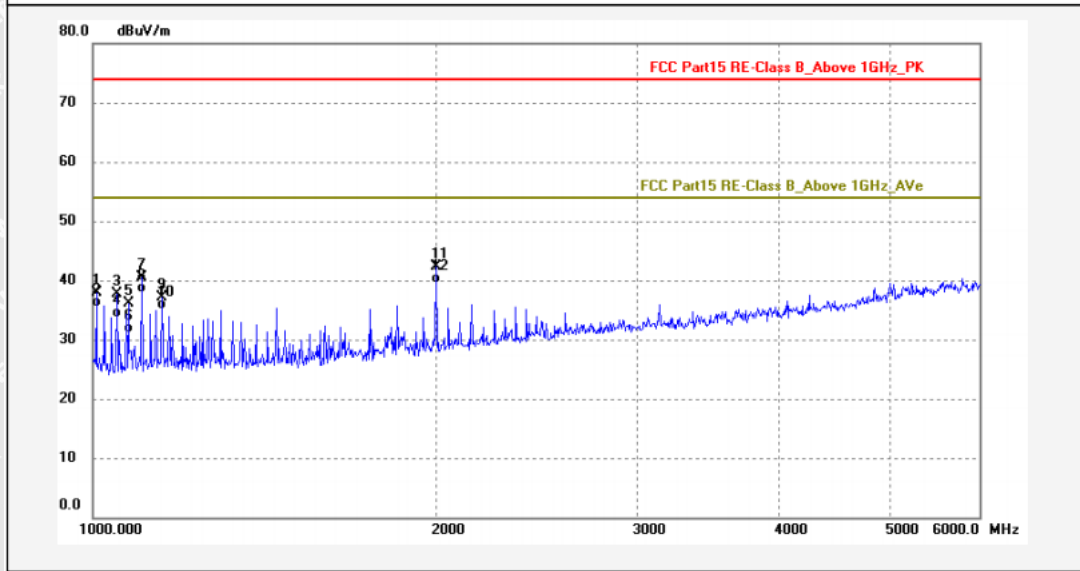


6.3.3 Measurement Data

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

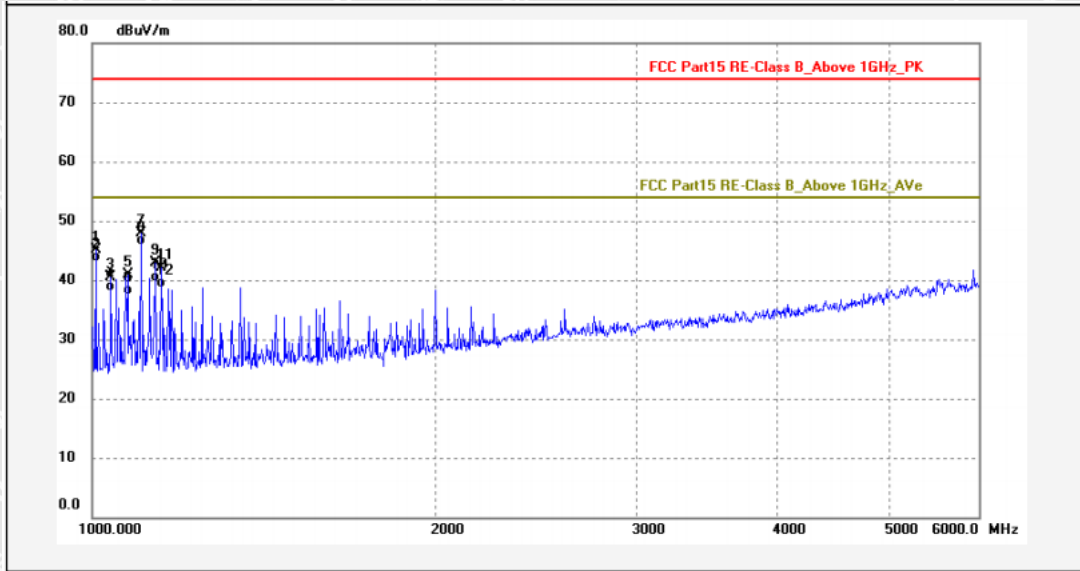
Antenna Polarization: Horizontal



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	1008.022	36.23	1.61	37.84	74.00	-36.16	peak	
2	1008.022	34.64	1.61	36.25	54.00	-17.75	AVG	
3	1049.567	35.91	1.71	37.62	74.00	-36.38	peak	
4	1049.567	32.76	1.71	34.47	54.00	-19.53	AVG	
5	1074.301	34.32	1.77	36.09	74.00	-37.91	peak	
6	1074.301	30.10	1.77	31.87	54.00	-22.13	AVG	
7	1103.566	38.75	1.84	40.59	74.00	-33.41	peak	
8	1104.006	36.84	1.84	38.68	54.00	-15.32	AVG	
9	1149.995	35.22	1.96	37.18	74.00	-36.82	peak	
10	1149.995	33.88	1.96	35.84	54.00	-18.16	AVG	
11	2000.528	37.46	4.84	42.30	74.00	-31.70	peak	
12	2000.528	35.38	4.84	40.22	54.00	-13.78	AVG	



Antenna Polarization: Vertical



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	1007.193	43.44	1.61	45.05	74.00	-28.95	peak	
2	1007.193	42.22	1.61	43.83	54.00	-10.17	AVG	
3	1038.344	38.90	1.68	40.58	74.00	-33.42	peak	
4	1038.344	37.29	1.68	38.97	54.00	-15.03	AVG	
5	1074.301	39.16	1.77	40.93	74.00	-33.07	peak	
6	1074.301	36.55	1.77	38.32	54.00	-15.68	AVG	
7	1103.566	46.04	1.84	47.88	74.00	-26.12	peak	
8	1103.566	44.79	1.84	46.63	54.00	-7.37	AVG	
9	1135.661	40.93	1.93	42.86	74.00	-31.14	peak	
10	1135.661	38.66	1.93	40.59	54.00	-13.41	AVG	
11	1149.995	40.18	1.96	42.14	74.00	-31.86	peak	
12	1149.995	37.51	1.96	39.47	54.00	-14.53	AVG	





7 Photographs – Test Setup

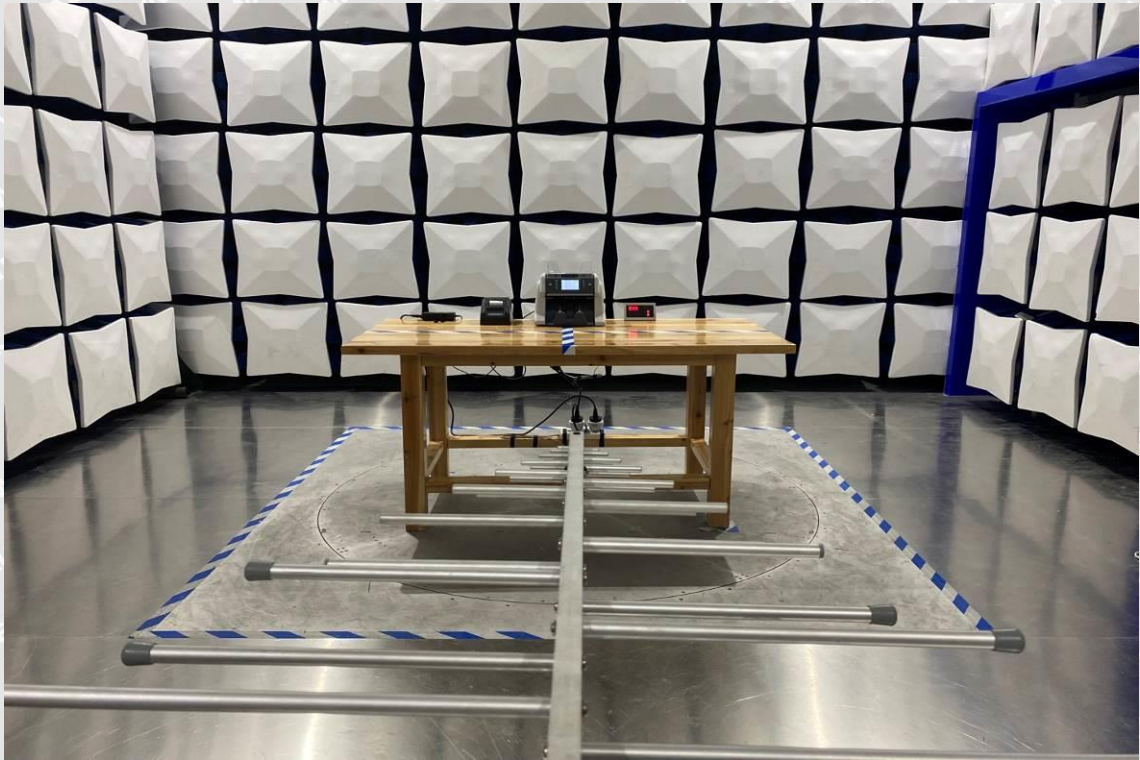
7.1 Photograph –Conducted Emission at the mains terminals Test Setup



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



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





8 Photographs – EUT View





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

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