TCT 通测检测
TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID. ..... :	2BMWITELLUS-T2000	
Test Report No..... :	TCT250609E012	
Date of issue..... :	Jun. 18, 2025	
Testing laboratory ..... :	SHENZHEN TONGCE TESTING LAB	
Testing location/ address:	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China	
Applicant's name..... :	Guangdong Weldtec Technology Co., Ltd	
Address..... :	2nd and 3rd Floor, Building A, 38th, Yanjiangdongsi Road, Huoju Industrial Zone, Zhongshan, China	
Manufacturer's name ... :	Guangdong Weldtec Technology Co., Ltd	
Address..... :	2nd and 3rd Floor, Building A, 38th, Yanjiangdongsi Road, Huoju Industrial Zone, Zhongshan, China	
Standard(s) ..... :	FCC CFR Title 47 Part 15 Subpart C	
Product Name..... :	Portable Power Station	
Trade Mark ..... :	N/A	
Model/Type reference..... :	TELLUS-T2000	
Rating(s)..... :	Rechargeable Li-ion Battery DC 51.2V	
Date of receipt of test item ..... :	Jun. 09, 2025	
Date (s) of performance of test..... :	Jun. 09, 2025 ~ Jun. 18, 2025	
Tested by (+signature) ... :	Onnado YE	Onnado YE
Check by (+signature).... :	Beryl ZHAO	Beryl Zhao
Approved by (+signature):	Tomsin	Tomsin

SHENZHEN TONGCE TESTING LAB TCT

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Table of Contents

1. General Product Information 3
1.1. EUT description 3
1.2. Model(s) list 3
2. Test Result Summary 4
3. General Information 5
3.1. Test environment and mode 5
3.2. Description of Support Units 6
4. Facilities and Accreditations 7
4.1. Facilities 7
4.2. Location 7
5. Measurement Uncertainty 7
6. Test Results and Measurement Data 8
6.1. Antenna requirement 8
6.2. Conducted Emission 9
6.3. Radiated Spurious Emission Measurement 13
6.4. 20dB Bandwidth 22
Appendix A: Photographs of Test Setup
Appendix B: Photographs of EUT

1. General Product Information

1.1. EUT description

Product Name.....:	Portable Power Station
Model/Type reference.....:	TELLUS-T2000
Sample Number.....:	TCT250609E012-0101
Operation Frequency .....:	123.08kHz ~ 149.68kHz
Output power……...:	5W/7.5W/10W/15W
Modulation Technology .....:	Load modulation
Antenna Type.....:	Inductive loop coil Antenna
Rating(s).....:	Rechargeable Li-ion Battery DC 51.2V

1.2. Model(s) list

None.

2. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203	PASS
AC Power Line Conducted Emission	§15.207	PASS
Spurious Emission	§15.209(a)(f)	PASS
20dB Bandwidth	§15.215(c)	PASS

Note:

1. PASS: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

3. General Information

3.1. Test environment and mode

Operating Environment:		
Condition	Conducted Emission	Radiated Emission
Temperature:	24.4 °C	22.8 °C
Humidity:	51 % RH	51 % RH
Atmospheric Pressure:	1010 mbar	1010 mbar
Test Mode:		
Mode 1	wireless charging(15W)	
The sample was placed 0.8m for the measurement below above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case(Z axis) are shown in Test Results of the following pages.		

3.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
Load	/	/	/	/

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4. Facilities and Accreditations

4.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

- FCC - Registration No.: 645098
  SHENZHEN TONGCE TESTING LAB
  Designation Number: CN1205
  The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.
- A2LA-No.: 4320.01
  SHENZHEN TONGCE TESTING LAB
  The testing lab has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.

4.2. Location

SHENZHEN TONGCE TESTING LAB
Address: 2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China
TEL: +86-755-27673339

5. Measurement Uncertainty

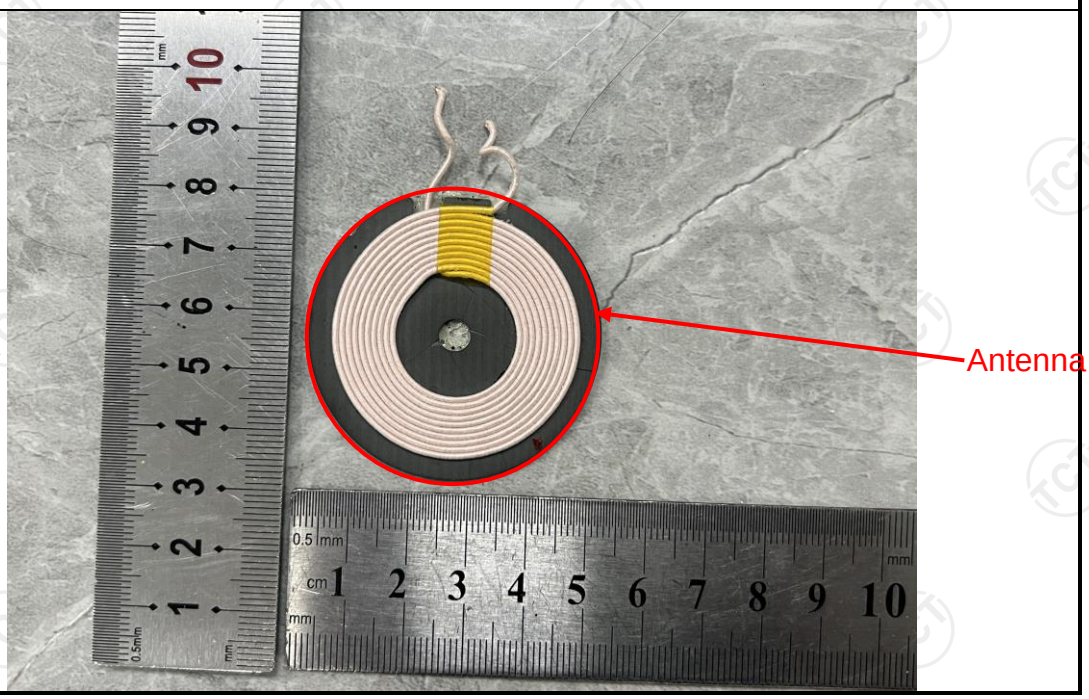
The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	± 3.10 dB
2	RF power, conducted	± 0.12 dB
3	Spurious emissions, conducted	± 0.11 dB
4	All emissions, radiated(<1 GHz)	± 4.56 dB
5	All emissions, radiated(1 GHz - 18 GHz)	± 4.22 dB
6	All emissions, radiated(18 GHz- 40 GHz)	± 4.36 dB

6. Test Results and Measurement Data

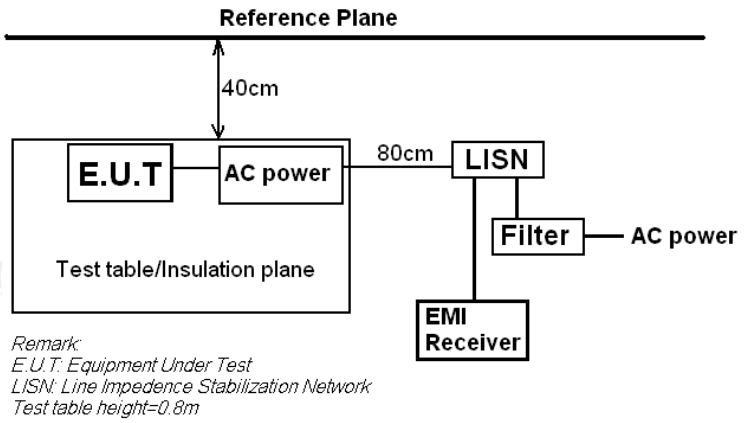
6.1. Antenna requirement

Standard requirement:	FCC Part15 C 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.	
E.U.T Antenna:	
The antennas are inductive loop coil antenna which permanently attached.	



6.2. Conducted Emission

6.2.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.207</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10:2020</td></tr>
<tr><td>Frequency Range:</td><td>150 kHz to 30 MHz</td></tr>
<tr><td>Receiver setup:</td><td>RBW=9 kHz, VBW=30 kHz, Sweep time=auto</td></tr>
<tr><td>Limits:</td><td>
<table>
<tr><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBuV)</td></tr>
<tr><td>Quasi-peak</td><td>Average</td></tr>
<tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td>5-30</td><td>60</td><td>50</td></tr>
</table>
</td></tr>
<tr><td>Test Setup:</td><td>


</td></tr>
<tr><td>Test Mode:</td><td>Refer to item 3.1</td></tr>
<tr><td>Test Procedure:</td><td>1. The E.U.T is connected to an adapter through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.
2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).
3. Both sides of A.C. line are checked for maximum conducted interference. 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: 2020 on conducted measurement.</td></tr>
<tr><td>Test Result:</td><td>PASS</td></tr>
</table>

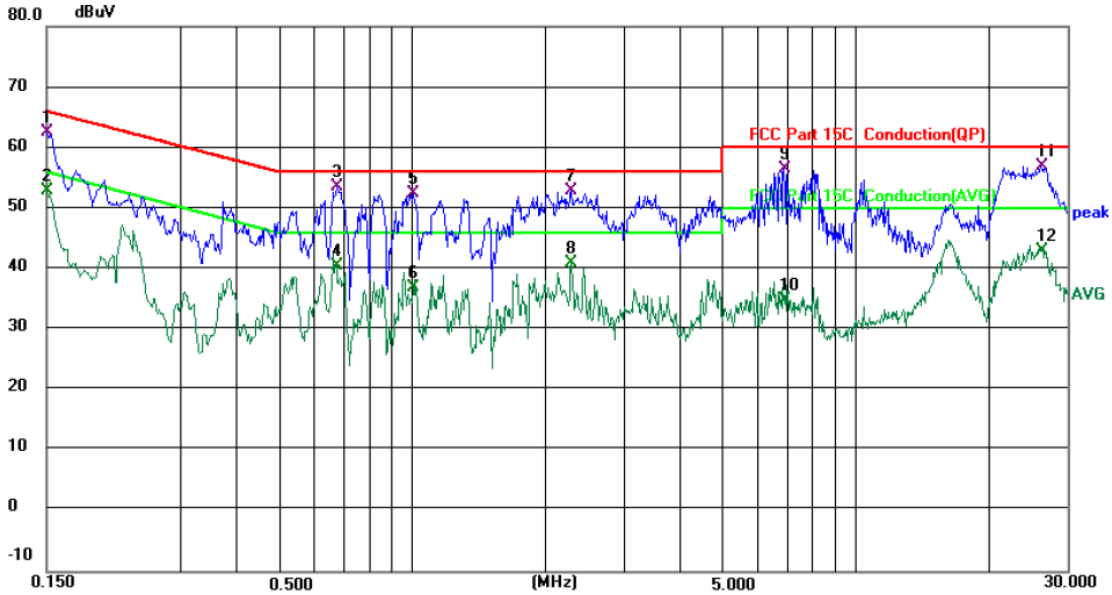
6.2.2. Test Instruments

Conducted Emission Shielding Room Test Site (843)					
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Date of Cal.**	**Due Date**
EMI Test Receiver	R&S	ESCI3	100898	Jun. 27, 2024	Jun. 26, 2025
LISN	Schwarzbeck	NSLK 8126	8126453	Jan. 21, 2025	Jan. 20, 2026
Attenuator	N/A	10dB	164080	Jun. 27, 2024	Jun. 26, 2025
Line-5	TCT	CE-05	/	Jun. 27, 2024	Jun. 26, 2025
EMI Test Software	EZ_EMC	EMEC-3A1	1.1.4.2	/	/

6.2.3. Test data

Please refer to following diagram for individual

Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)



Site 844 Shielding Room | Phase: *L1* | Temperature: 24.4 (℃) | Humidity: 51 %

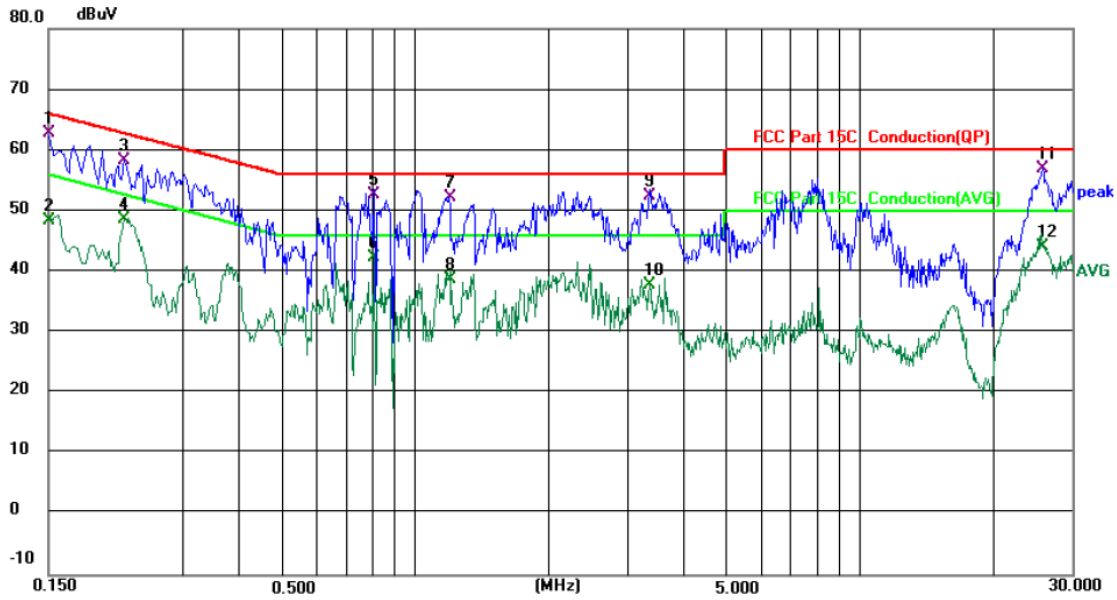
Limit: FCC Part 15C Conduction(QP) | Power: AC 120 V/60 Hz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1507	52.58	9.96	62.54	65.96	-3.42	QP	
2		0.1507	42.92	9.96	52.88	55.96	-3.08	AVG	
3	*	0.6780	43.76	9.90	53.66	56.00	-2.34	QP	
4		0.6780	30.68	9.90	40.58	46.00	-5.42	AVG	
5		1.0060	42.46	9.94	52.40	56.00	-3.60	QP	
6		1.0060	26.95	9.94	36.89	46.00	-9.11	AVG	
7		2.2900	42.96	10.03	52.99	56.00	-3.01	QP	
8		2.2900	30.83	10.03	40.86	46.00	-5.14	AVG	
9		6.8819	46.23	10.19	56.42	60.00	-3.58	QP	
10		6.8819	24.75	10.19	34.94	50.00	-15.06	AVG	
11		26.2459	46.08	10.80	56.88	60.00	-3.12	QP	
12		26.2459	32.22	10.80	43.02	50.00	-6.98	AVG	

Note:

Freq. = Emission frequency in MHz
Reading level (dBµV) = Receiver reading
Corr. Factor (dB) = LISN factor + Cable loss
Measurement (dBµV) = Reading level (dBµV) + Corr. Factor (dB)
Limit (dBµV) = Limit stated in standard
Margin (dB) = Measurement (dBµV) – Limits (dBµV)
Q.P. =Quasi-Peak
AVG =average
** is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz*

Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)



Site 844 Shielding Room | Phase: *N* | Temperature: 24.4 (℃) | Humidity: 51 %

Limit: FCC Part 15C Conduction(QP) | Power: AC 120 V/60 Hz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	52.87	9.94	62.81	66.00	-3.19	QP	
2		0.1500	38.47	9.94	48.41	56.00	-7.59	AVG	
3		0.2220	48.45	9.93	58.38	62.74	-4.36	QP	
4		0.2220	38.65	9.93	48.58	52.74	-4.16	AVG	
5		0.8100	42.70	9.96	52.66	56.00	-3.34	QP	
6		0.8100	32.26	9.96	42.22	46.00	-3.78	AVG	
7		1.1938	42.31	9.98	52.29	56.00	-3.71	QP	
8		1.1938	28.71	9.98	38.69	46.00	-7.31	AVG	
9		3.3740	42.33	10.08	52.41	56.00	-3.59	QP	
10		3.3740	27.63	10.08	37.71	46.00	-8.29	AVG	
11	*	25.7620	45.89	10.94	56.83	60.00	-3.17	QP	
12		25.7620	33.24	10.94	44.18	50.00	-5.82	AVG	

Note:

Freq. = Emission frequency in MHz

Reading level (dBµV) = Receiver reading

Corr. Factor (dB) = LISN factor + Cable loss

Measurement (dBµV) = Reading level (dBµV) + Corr. Factor (dB)

Limit (dBµV) = Limit stated in standard

Margin (dB) = Measurement (dBµV) – Limits (dBµV)

Q.P. =Quasi-Peak AVG =average

** is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz*

6.3. Radiated Spurious Emission Measurement

6.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.209
Test Method:	ANSI C63.10: 2020
Frequency Range:	9 kHz to 25 GHz
Measurement Distance:	3 m
Antenna Polarization:	Horizontal & Vertical
Operation mode:	Refer to item 3.1
Receiver Setup:	

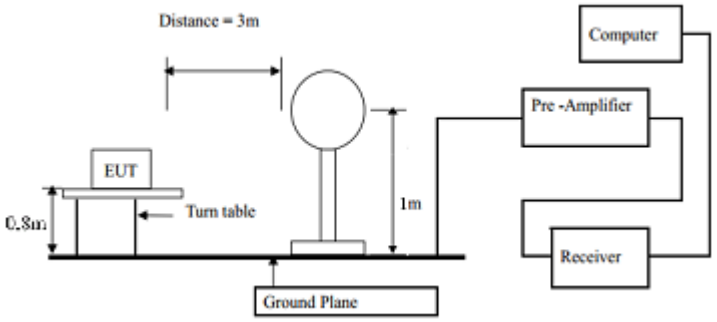
Frequency	Detector	RBW	VBW	Remark
9kHz- 150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value
150kHz-30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value

Limit:

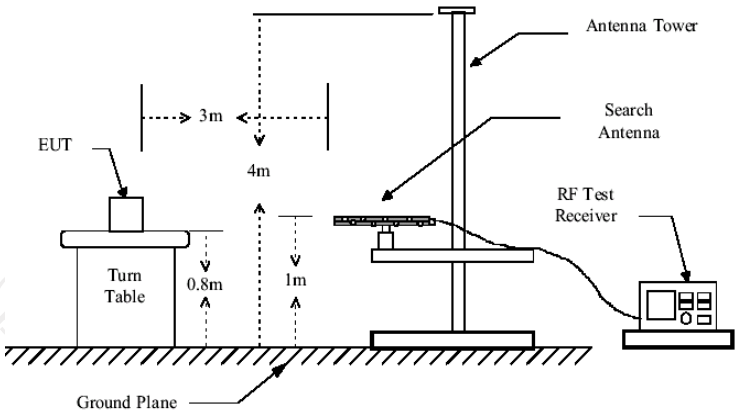
Frequency	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009-0.490	2400/F(KHz)	300
0.490-1.705	24000/F(KHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test setup:

For radiated emissions below 30MHz



30MHz to 1GHz

	
Test Procedure:	1. For the radiated emission test below 1GHz: The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level. 2. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level 3. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported. 4. Use the following spectrum analyzer settings: (1) Span shall wide enough to fully capture the emission being measured; (2) Set RBW=120 kHz for f < 1 GHz; VBW ≥RBW; Sweep = auto; Detector function = peak; Trace = max hold; (3) Set RBW = 1 MHz, VBW= 3MHz for f 1 GHz for peak measurement. For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Test mode:	Refer to section 3.1 for details
Test results:	PASS

6.3.2. Test Instruments

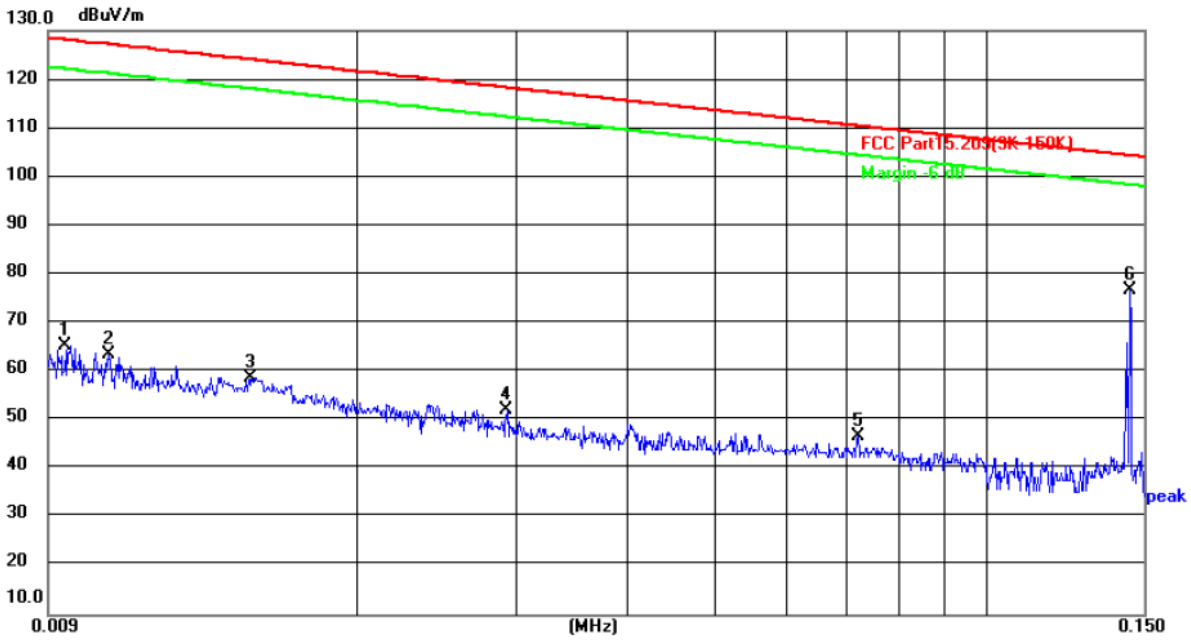
Radiated Emission Test Site (966)					
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Date of Cal.**	**Due Date**
EMI Test Receiver	R&S	ESCI7	100529	Jan. 21, 2025	Jan. 20, 2026
Spectrum Analyzer	R&S	FSQ40	200061	Jun. 27, 2024	Jun. 26, 2025
Pre-amplifier	HP	8447D	2727A05017	Jun. 27, 2024	Jun. 26, 2025
Pre-amplifier	SKET	LNPA_0118G-45	SK2021012102	Jan. 21, 2025	Jan. 20, 2026
Pre-amplifier	SKET	LNPA_1840G-50	SK202109203500	Jan. 21, 2025	Jan. 20, 2026
Loop antenna	Schwarzbeck	FMZB1519B	00191	Jun. 27, 2024	Jun. 26, 2025
Broadband Antenna	Schwarzbeck	VULB9163	340	Jun. 29, 2024	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Jun. 29, 2024	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Jan. 23, 2025	Jan. 22, 2026
Coaxial cable	SKET	RE-03-D	/	Jun. 27, 2024	Jun. 26, 2025
Coaxial cable	SKET	RE-03-M	/	Jun. 27, 2024	Jun. 26, 2025
Coaxial cable	SKET	RE-03-L	/	Jun. 27, 2024	Jun. 26, 2025
Antenna Mast	Keleto	RE-AM	/	/	/
EMI Test Software	EZ_EMC	FA-03A2 RE+	1.1.4.2	/	/

6.3.3. Test Data

Please refer to following diagram for individual

9KHz-30MHz

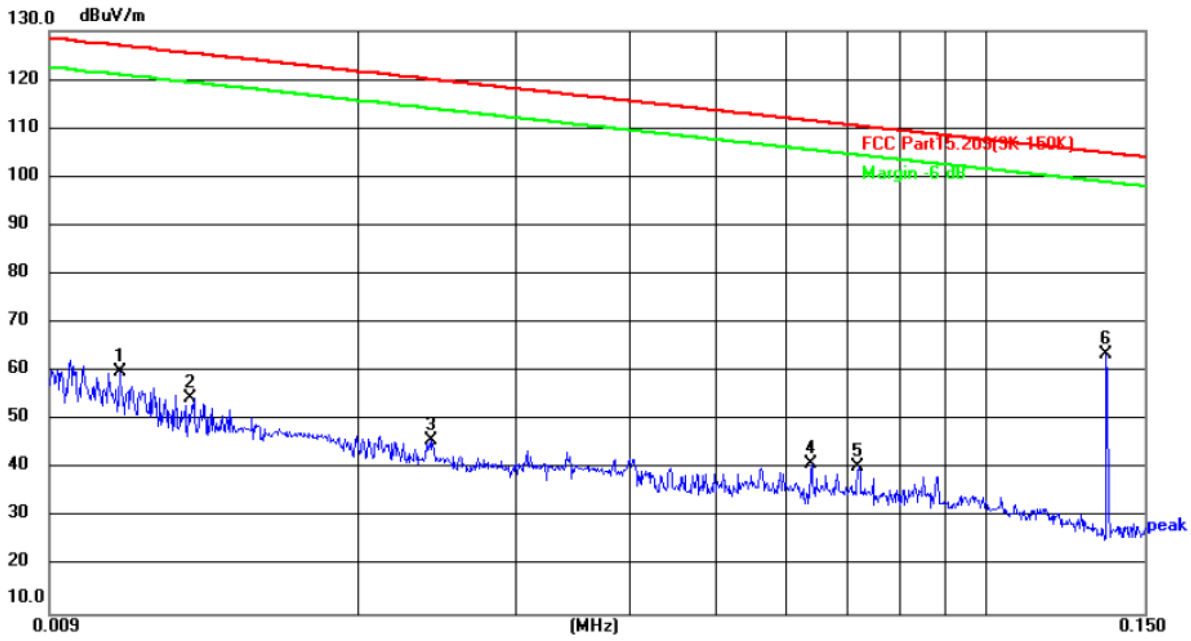
9KHz-150KHz:



Site: 3m Anechoic Chamber Polarization: *Coaxial* Temperature: 24(℃) Humidity: 54%

Limit: FCC Part15.209(9K-150K) Power:DC 51.2 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.0094	44.72	20.51	65.23	128.14	-62.91	peak	P	
2	0.0105	43.10	20.53	63.63	127.18	-63.55	peak	P	
3	0.0151	38.32	20.55	58.87	124.03	-65.16	peak	P	
4	0.0292	31.57	20.58	52.15	118.30	-66.15	peak	P	
5	0.0719	26.40	20.28	46.68	110.47	-63.79	peak	P	
6 *	0.1449	56.16	20.68	76.84	104.38	-27.54	peak	P	

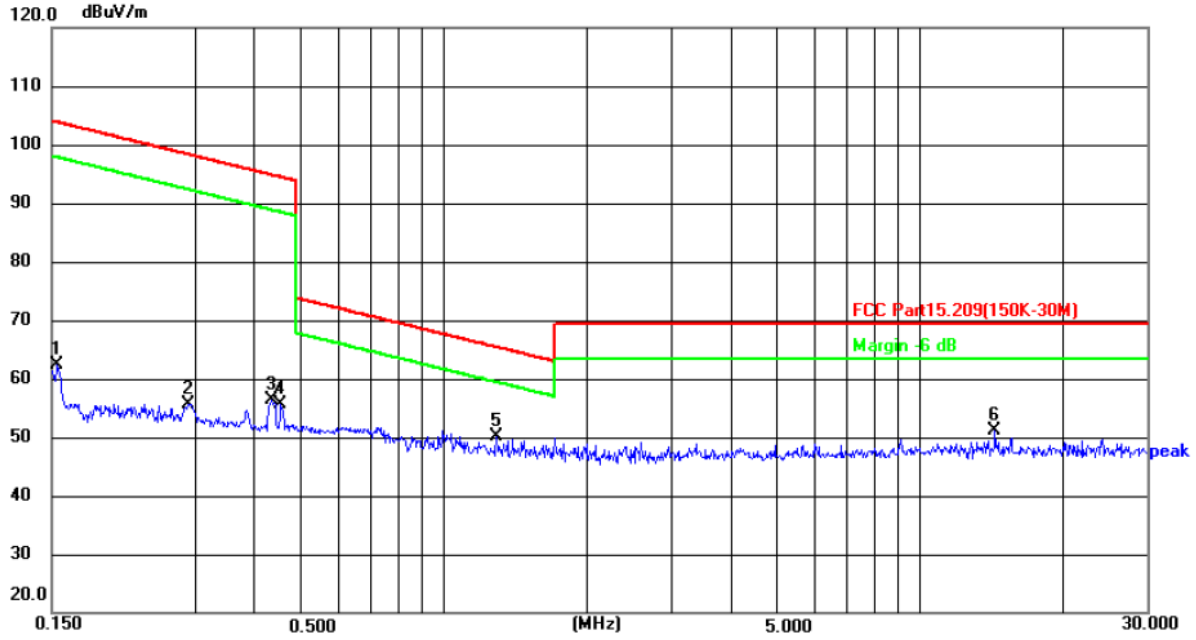


Site: 3m Anechoic Chamber Polarization: *Coplanar* Temperature: 24(℃) Humidity: 54%

Limit: FCC Part15.209(9K-150K) Power:DC 51.2 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.0108	39.47	20.53	60.00	126.94	-66.94	peak	P	
2	0.0129	34.02	20.53	54.55	125.39	-70.84	peak	P	
3	0.0240	25.32	20.56	45.88	120.00	-74.12	peak	P	
4	0.0637	20.90	20.27	41.17	111.52	-70.35	peak	P	
5	0.0719	20.13	20.28	40.41	110.47	-70.06	peak	P	
6 *	0.1360	42.77	20.64	63.41	104.93	-41.52	peak	P	

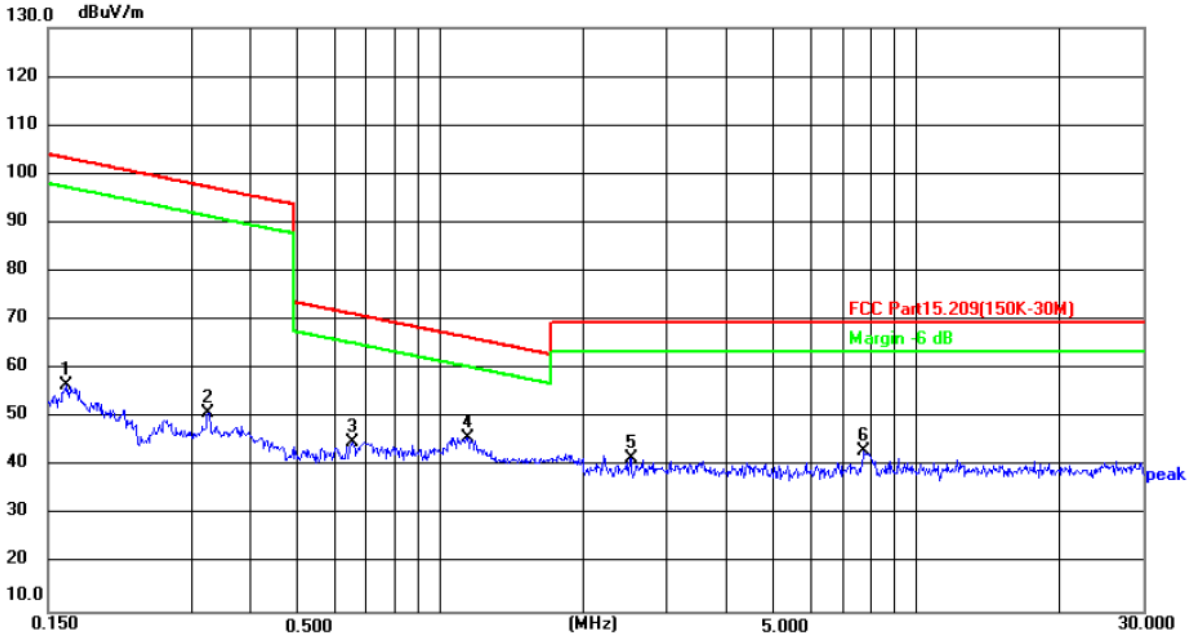
150KHz-30MHz:



Site: 3m Anechoic Chamber Polarization: *Coaxial* Temperature: 24(℃) Humidity: 54%

Limit: FCC Part15.209(150K-30M) Power:DC 51.2 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.1542	41.65	20.73	62.38	103.84	-41.46	peak	P	
2	0.2893	34.61	20.98	55.59	98.38	-42.79	peak	P	
3	0.4354	35.13	21.25	56.38	94.83	-38.45	peak	P	
4	0.4556	34.42	21.28	55.70	94.43	-38.73	peak	P	
5 *	1.2923	27.08	22.96	50.04	65.40	-15.36	peak	P	
6	14.4212	30.53	20.50	51.03	69.50	-18.47	peak	P	



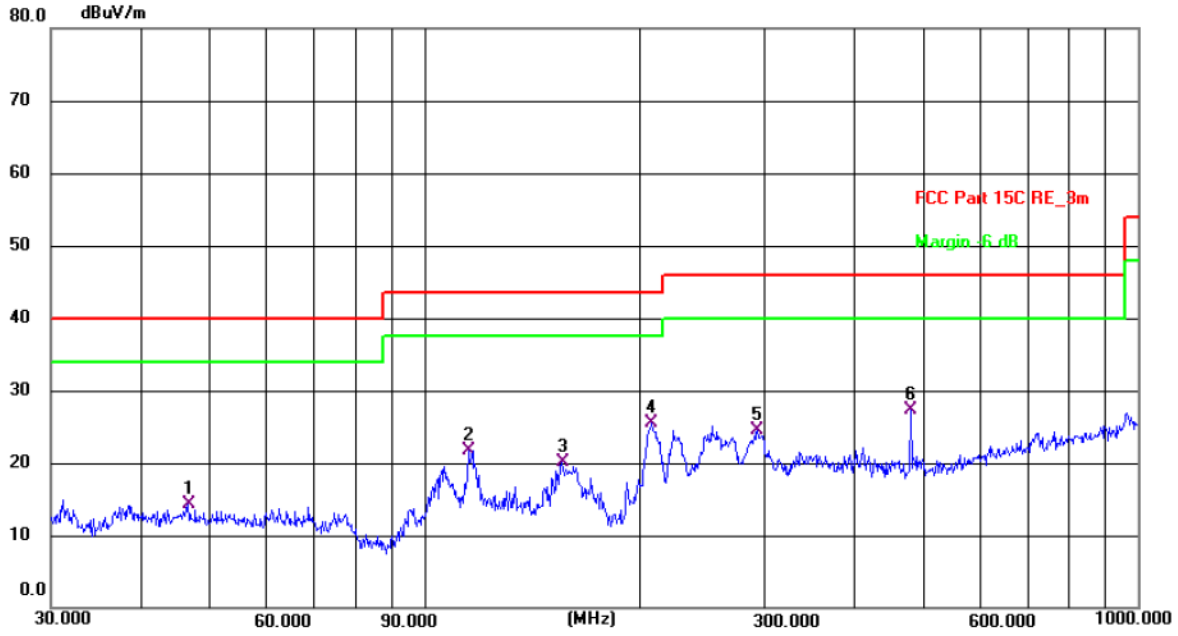
Site: 3m Anechoic Chamber Polarization: *Coplanar* Temperature: 24(℃) Humidity: 54%

Limit: FCC Part15.209(150K-30M) Power:DC 51.2 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.1645	35.81	20.75	56.56	103.28	-46.72	peak	P	
2	0.3266	29.96	21.05	51.01	97.32	-46.31	peak	P	
3	0.6560	23.41	21.68	45.09	71.27	-26.18	peak	P	
4 *	1.1411	23.33	22.65	45.98	66.48	-20.50	peak	P	
5	2.5148	16.30	25.49	41.79	69.50	-27.71	peak	P	
6	7.7945	7.10	35.99	43.09	69.50	-26.41	peak	P	

30MHz-1GHz

Horizontal:

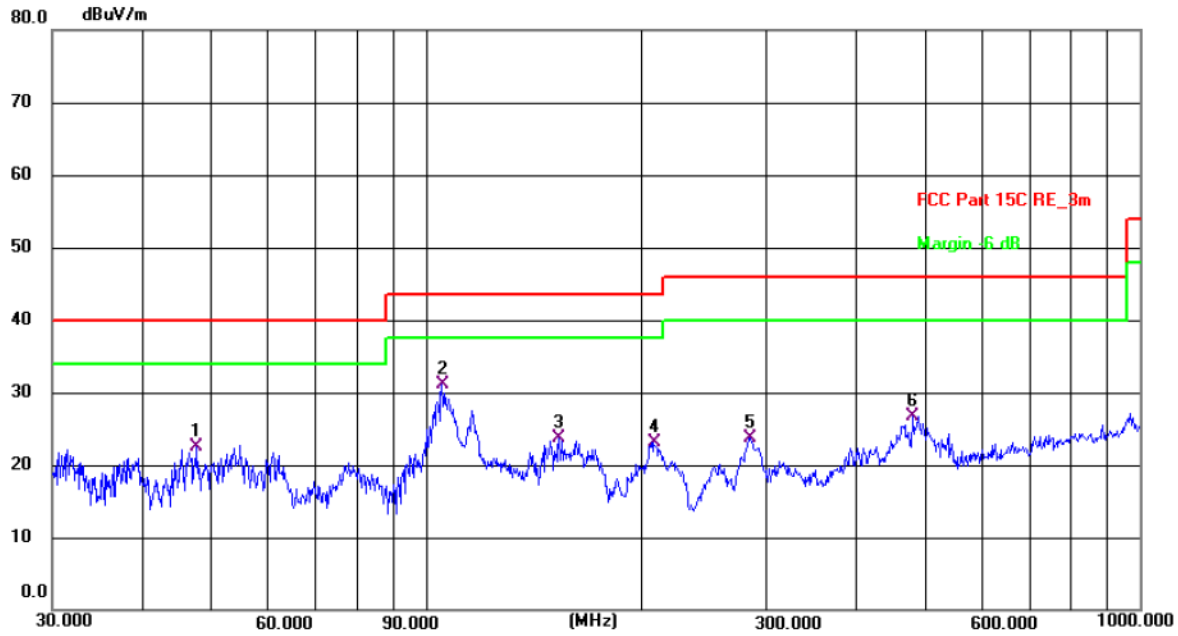


Site 3m Anechoic Chamber2 Polarization: *Horizontal* Temperature: 22.8(C) Humidity: 51 %

Limit: FCC Part 15C RE_3m Power: DC 51.2 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	46.6663	32.93	-18.66	14.27	40.00	-25.73	QP	P	
2	115.3205	41.71	-20.00	21.71	43.50	-21.79	QP	P	
3	155.9101	37.02	-16.88	20.14	43.50	-23.36	QP	P	
4 *	208.5801	46.50	-21.05	25.45	43.50	-18.05	QP	P	
5	293.0842	42.16	-17.68	24.48	46.00	-21.52	QP	P	
6	480.5276	39.96	-12.69	27.27	46.00	-18.73	QP	P	

Vertical:



Site 3m Anechoic Chamber2 Polarization: *Vertical* Temperature: 22.8(C) Humidity: 51 %

Limit: FCC Part 15C RE_3m Power: DC 51.2 V

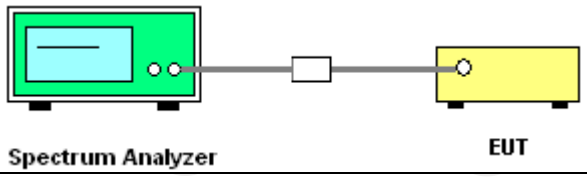
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	47.8260	41.19	-18.72	22.47	40.00	-17.53	QP	P	
2 *	105.2718	51.89	-20.84	31.05	43.50	-12.45	QP	P	
3	153.7385	40.64	-17.03	23.61	43.50	-19.89	QP	P	
4	208.5803	44.21	-21.05	23.16	43.50	-20.34	QP	P	
5	284.9767	41.61	-17.82	23.79	46.00	-22.21	QP	P	
6	480.5276	39.40	-12.69	26.71	46.00	-19.29	QP	P	

Note:

Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier

6.4. 20dB Bandwidth

6.4.1. Test Specification

Test Requirement:	§15.215(c)
Test Method:	ANSI C63.10: 2020
Limit:	N/A
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. The transmitter shall be operated at its maximum carrier power measured under normal test conditions. 2. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. 3.The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3x RBW. Sweep = auto; Detector function = peak; Trace = max hold. 4. Measure and record the results in the test report.
Test Result:	PASS

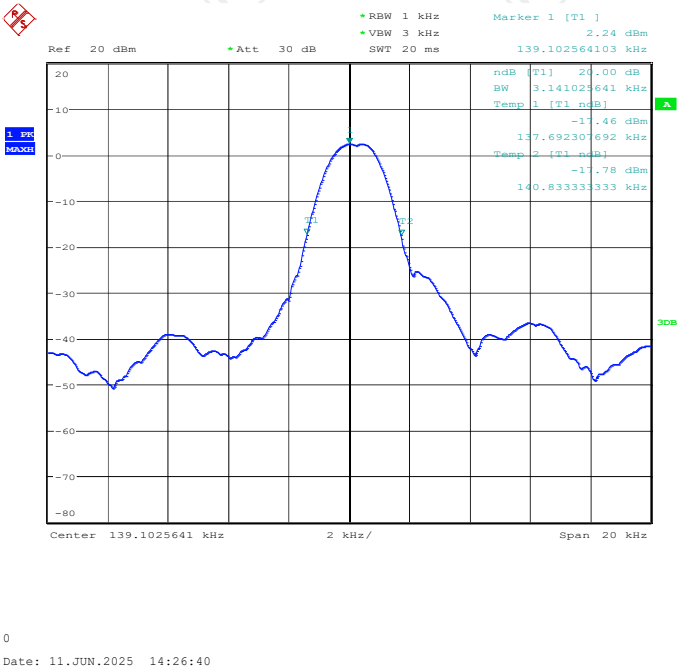
6.4.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial Number	Date of Cal.	Due Date
Spectrum Analyzer	R&S	FSU	200054	Jun. 27, 2024	Jun. 26, 2025

6.4.3. Test data

Frequency (KHz)	20dB Bandwidth (kHz)	Conclusion
139.10KHz	3.14	PASS

Test plots as follows:



Note: The measured signal is Cw-like, adjusting the RBW per C63.10 would not be practical since measurement bandwidth will always follow the RBW. The RBW is set to 1kHz and VBW is set to 3kHz to perfomm the occupied bandwidth test.

Appendix A: Photographs of Test Setup

Please refer to document Appendix No.: TCT250609E012-A

Appendix B: Photographs of EUT

Please refer to document Appendix No.: TCT250609E012-B & TCT250609E012-C

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