FCC REPORT

Applicant:	Bestter(Xiamen) Technology Inc.
Address of Applicant:	No.601 Tonghong Road, Tong'an Park, Tong'an Industrial Zone, Xiamen City, Fujian Province, China

Equipment Under Test (EUT)

Product Name:	Remote control
Model No.:	T162A-ZC17, T20-ZC17 ,T04-ZC17, T05-ZC17，B01-ZC17
FCC ID:	2BA29GC210741
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.231(a)
Date of sample receipt:	April 20, 2023
Date of Test:	April 25, 2023 to May 17, 2023
Date of report issue:	May 17, 2023
Test Result:	PASS*

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

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery orfalsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

1 Modified Information

Version No.	Date	Description
00	May 08, 2023	*Original*

Prepared by: Leo Zhang ***Date:*** May 17, 2023

Leo zhang/ Project Engineer

Reviewed by: ***Date:*** May 17, 2023

Louis ye/Manager

2 Contents

Page

1 COVER PAGE 1

1 MODIFIED INFORMATION 2

2 CONTENTS 3

3 TEST SUMMARY 4

4 GENERAL INFORMATION 5

4.1 CLIENT INFORMATION 5
4.2 GENERAL DESCRIPTION OF E.U.T. 5
4.3 TEST MODE 5
4.4 DESCRIPTION OF SUPPORT UNITS 5
4.5 MEASUREMENT UNCERTAINTY 5
4.6 ADDITIONS TO, DEVIATIONS, OR EXCLUSIONS FROM THE METHOD 5
4.7 LABORATORY FACILITY 6
4.8 LABORATORY LOCATION 6
4.9 TEST INSTRUMENTSLIST 6

5 TEST RESULTS AND MEASUREMENT DATA 7

5.1 ANTENNA REQUIREMENT 7
5.2 RADIATED EMISSION 8
5.2.1 Field Strength Of The Fundamental Signal 10
5.2.2 Spurious Emissions 11
5.3 20DB BANDWIDTH 12
5.4 DURATION TIME 14

3 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
Field strength of the fundamental signal	15.231 (a)	Pass
Spurious emissions	15.231 (b)/15.209	Pass
20dB Bandwidth	15.231(c)	Pass
Duration Time	15.231 (a)	Pass
Conducted Emission	15.207	N/A

Remarks:

1. Pass: The EUT complies with the essential requirements in the standard.

2. N/A: The EUT not applicable of the test item.

Test Method:	*ANSI C63.10-2013*

4 General Information

4.1 Client Information

Applicant:	Bestter(Xiamen) Technology Inc.
Address:	No.601 Tonghong Road, Tong'an Park, Tong'an Industrial Zone, Xiamen City, Fujian Province, China
Manufacturer:	Bestter(Xiamen) Technology Inc.
Address:	No.601 Tonghong Road, Tong'an Park, Tong'an Industrial Zone, Xiamen City, Fujian Province, China

4.2 General Description of E.U.T.

Product Name:	Remote control
Model No.:	T162A-ZC17, T20-ZC17 ,T04-ZC17, T05-ZC17，B01-ZC17
Operation Frequency:	433.92MHz
Channel numbers:	1
Modulation type:	FSK
Antenna Type:	PCB antenna
Antenna gain:	-15dBi
Power supply:	DC 3V (battery)
Test Sample Condition:	The test samples were provided in good working order with no visible defects.
Remark:	The model No. T162A-ZC17, T20-ZC17, T04-ZC17, T05-ZC17 and B01-ZC17 are identical in schematic and structure, only the models name is different for all the models, therefore the test performed on the model T162A-ZC17.

4.3 Test mode

Transmitting mode:	Keep the EUT in transmitting mode with modulation（new battery used）		
Pre-Test Mode:			
We has verified the construction and function in typical operation,The EUT was placed on three different polar directions;i.e. X axis, Y axis, Z axis. which was shown in this test report and defined as follows:			
Axis	X	Y	Z
Field Strength(dBuV/m)	79.67	73.54	68.46
Final Test Mode:			
According to ANSI C63.4a standards, the test results are both the "worst case" and "worst setup": X axis (see the test setup photo)			

4.4 Description of Support Units

N/A

4.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
Radiated Emission (150kHz ~ 30MHz)	±3.80 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.00 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.60 dB (k=2)

4.6 Additions to, deviations, or exclusions from the method

No

4.7 Laboratory Facility

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

●FCC - Designation No.: CN1279

Jianyan Testing Group Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 892155.

● ISED – CAB identifier.: CN0102

Jianyan Testing Group Co., Ltd. has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements with ISED#:26114.

- **CNAS - Registration No.: CNAS L0658**

Jianyan Testing Group Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L0658.

- **A2LA - Registration No.: 5568.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/5568-01.pdf

4.8 Laboratory Location

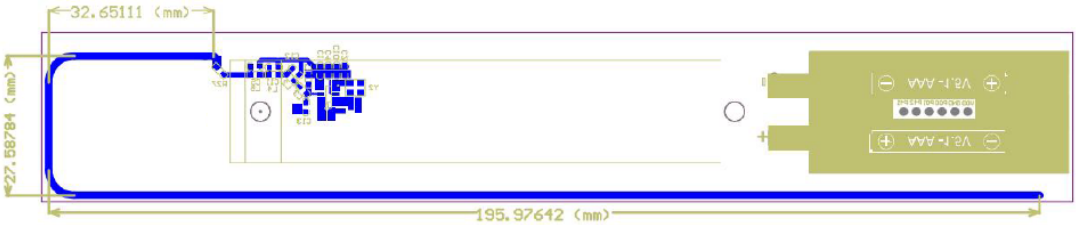
JianYan Testing Group Co., Ltd.
Address: No.760, Fengling Road, Tong'an District, Xiamen, Fujian, China
Tel: +86-592-2273071, Fax:+86-592-2273700
Email: info-jytee@lets.com, Website: http://jyt.lets.com

4.9 Test Instrumentslist

Test Equipment	Manufacturer	Model No.	Equipment No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m Semi-Anechoic Chamber	BOST	CHC-966	SBE0001	2022-11-30	2027-11-30
EMI Test Receiver	R&S	ESR 3	SBE0007-1	2022-07-14	2023-07-13
Loop Antenna	ETS	6502	SBE0007-4	2023-03-03	2024-03-02
BiConiLog Antenna	SCHWARZBECK	VULB 9163	SBE0007-3	2022-12-02	2023-12-01
Horn Antenna	SCHWARZBECK	BBHA 9120 D	SBE0020	2023-03-03	2024-03-02
Pre-amplifier	SCHWARZBECK	BBV9743	SBE0007-2	2022-07-14	2023-07-13
Pre-amplifier	SCHWARZBECK	BBV9718C	SBE0021	2023-02-27	2024-02-26
EMI Test Software	Farad	EZ-EMC	Version: V.EMCE-3A1		

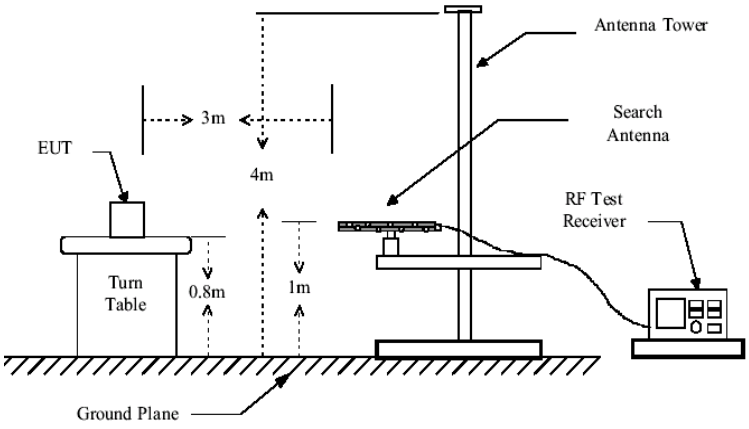
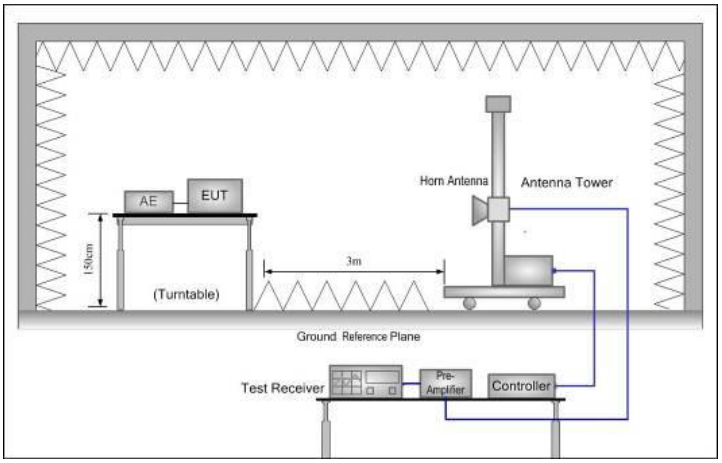
5 Test results and Measurement Data

5.1 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 EUT make use of an PCB antenna, The typical gain of the antenna is -15dBi.	
	

5.2 Radiated Emission

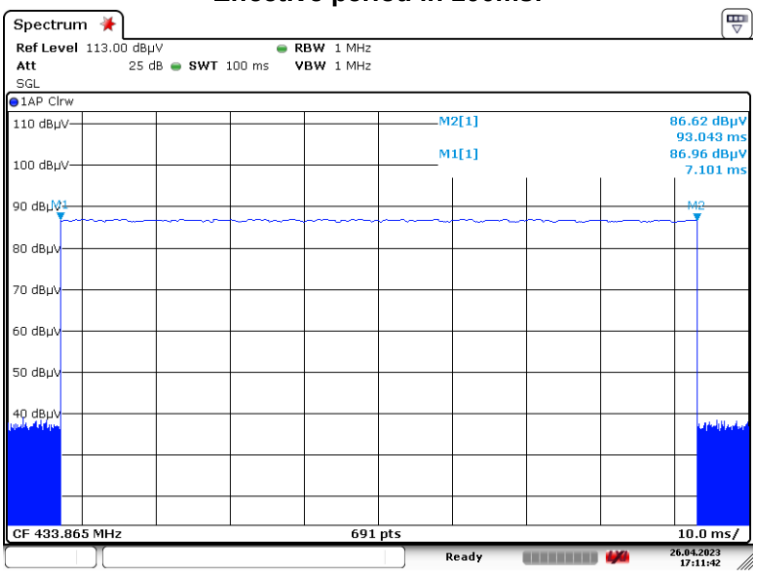
<table>
<tr><td>Test Requirement:</td><td colspan="5">FCC Part15 C Section 15.231(a) and 15.209</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="5">30MHz to 4500MHz</td></tr>
<tr><td>Test site:</td><td colspan="5">Measurement Distance: 3m(Semi-Anechoic Chamber)</td></tr>
<tr><td rowspan="3">Receiver setup:</td><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120kHz</td><td>300kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td rowspan="3">Limit:
(Field strength of the fundamental signal)</td><td colspan="2">Frequency</td><td colspan="2">Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td colspan="2" rowspan="2">433.92MHz</td><td colspan="2">80.8</td><td>Average Value</td></tr>
<tr><td colspan="2">100.8</td><td>Peak Value</td></tr>
<tr><td rowspan="8">Limit:
(Spurious Emissions)</td><td colspan="2">Frequency</td><td colspan="2">Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td colspan="2">30MHz-88MHz</td><td colspan="2">40.0</td><td>Quasi-peak Value</td></tr>
<tr><td colspan="2">88MHz-216MHz</td><td colspan="2">43.5</td><td>Quasi-peak Value</td></tr>
<tr><td colspan="2">216MHz-960MHz</td><td colspan="2">46.0</td><td>Quasi-peak Value</td></tr>
<tr><td colspan="2">960MHz-1GHz</td><td colspan="2">54.0</td><td>Quasi-peak Value</td></tr>
<tr><td colspan="2" rowspan="2">Above 1GHz</td><td colspan="2">54.0</td><td>Average Value</td></tr>
<tr><td colspan="2">74.0</td><td>Peak Value</td></tr>
<tr><td colspan="5">Or The maximum permitted unwanted emission level is 20 dB below themaximum permitted fundamental level whichever limit permits higher field strength.</td></tr>
<tr><td>Test Procedure:</td><td colspan="5">a. The EUT was placed on the top of a rotating table 0.8m(below 1GHz) /1.5m(above 1GHz) above the ground at a 3 meter chamber. 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, whichwas 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 thenthe antenna was tuned to heights from 1 meter to 4 meters and the rotatabletable 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 SpecifiedBandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limitspecified, then testing could be stopped and the peak values of the EUT wouldbe reported. Otherwise the emissions that did not have 10dB margin would bere-tested one by one using peak, quasi-peak or average method as specified andthen reported in a data sheet.
g. 9 kHz~30 MHz Field Strength of Unwanted Emissions. Peak or Quasi-Peak measurement. The measurements with active loop antenna were greater than 20dB below the limit, so the test data were not recorded in the test report.</td></tr>
</table>

Test setup:	Below 1GHz  Above 1GHz 
Test Instruments:	Refer to section 4.9 for details
Test mode:	Refer to section 4.3 for details
Test results:	Pass

5.2.1 Field Strength Of The Fundamental Signal

Peak value						
Frequency (MHz)	Read Level (dBuV)	Correct Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
433.92	83.70	-7.51	76.19	100.8	-24.61	Vertical
433.92	87.18	-7.51	79.67	100.8	-21.13	Horizontoal
Average value						
Frequency (MHz)	Level (dBuV/m)	Duty Cycle factor	Average value (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
433.92	76.19	-1.32	74.87	80.8	-5.93	Vertical
433.92	79.67	-1.32	78.35	80.8	-2.45	Horizontoal
Calculate Formula:	Average value=Peak value + Duty Cycle Factor					
	Duty cycle factor = 20log(Duty cycle)					
	Duty cycle = on time/100 milliseconds or period, whichever is less					
Test data:	Effective period in 100ms:85.942(ms)					
	Duty cycle =85.942%					
	Duty cycle factor = 20log(Duty cycle) = -1.32					

Effective period in 100ms:

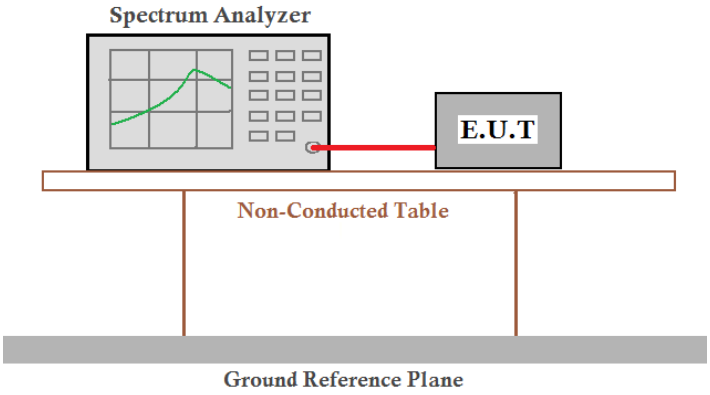


5.2.2 Spurious Emissions

Below 1GHz (30MHz-1000MHz)							
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	polarization
722.58	28.78	-1.98	26.80	60.8	-34.00	QP	Vertical
868.08	40.51	0.01	40.52	60.8	-20.28	QP	Vertical
758.46	29.15	-1.25	27.90	60.8	-32.90	QP	Horizontal
868.08	50.69	0.01	50.70	60.8	-10.10	QP	Horizontal

Above 1GHz						
Peak value						
Frequency (MHz)	Read Level (dBuV/m)	Correct Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1301.76	64.18	-22.90	41.28	80.8	-39.52	Vertical
1735.68	84.95	-29.91	55.04	80.8	-25.76	Vertical
2169.60	79.29	-28.56	50.73	80.8	-30.07	Vertical
2603.52	79.18	-27.69	51.49	80.8	-29.31	Vertical
3037.44	76.07	-26.88	49.19	80.8	-31.61	Vertical
3471.36	76.94	-25.79	51.15	80.8	-29.65	Vertical
1301.76	72.39	-22.90	49.49	80.8	-31.31	Horizontal
1735.68	80.29	-29.91	50.38	80.8	-30.42	Horizontal
2169.60	81.20	-28.56	52.64	80.8	-28.16	Horizontal
2603.52	80.60	-27.69	52.91	80.8	-27.89	Horizontal
3037.44	79.67	-26.88	52.79	80.8	-28.01	Horizontal
3471.36	79.25	-25.79	53.46	80.8	-27.34	Horizontal
Average value						
Frequency (MHz)	Level (dBuV/m)	Duty cycle factor	Average value (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1301.76	41.28	-1.32	39.96	60.8	-20.84	Vertical
1735.68	55.04	-1.32	53.72	60.8	-7.08	Vertical
2169.60	50.73	-1.32	49.41	60.8	-11.39	Vertical
2603.52	51.49	-1.32	50.17	60.8	-10.63	Vertical
3037.44	49.19	-1.32	47.87	60.8	-12.93	Vertical
3471.36	51.15	-1.32	49.83	60.8	-10.97	Vertical
1301.76	49.49	-1.32	48.17	60.8	-12.63	Horizontal
1735.68	50.38	-1.32	49.06	60.8	-11.74	Horizontal
2169.60	52.64	-1.32	51.32	60.8	-9.48	Horizontal
2603.52	52.91	-1.32	51.59	60.8	-9.21	Horizontal
3037.44	52.79	-1.32	51.47	60.8	-9.33	Horizontal
3471.36	53.46	-1.32	52.14	60.8	-8.66	Horizontal

5.3 20dB Bandwidth

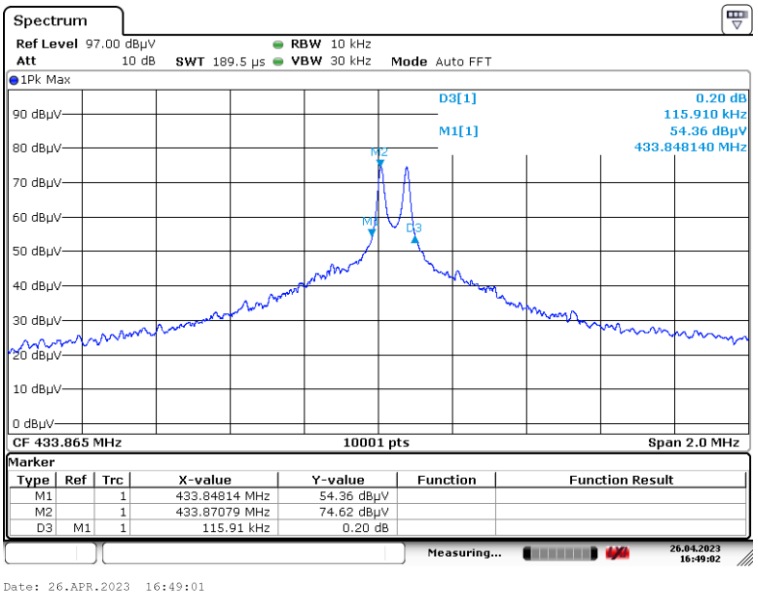
Test Requirement:	FCC Part15 C Section 15.231 (c)
Receiver setup:	RBW=10kHz, VBW=30kHz, detector: Peak
Limit:	The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.
Test Procedure:	1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set the EUT to proper test channel. 3. Max hold the radiated emissions, mark the peak power frequency point and the -20dB upper and lower frequency points. 4. Read 20dB bandwidth.
Test setup:	
Test Instruments:	Refer to section 4.9 for details
Test mode:	Refer to section 4.3 for details
Test results:	Passed

Measurement Data:

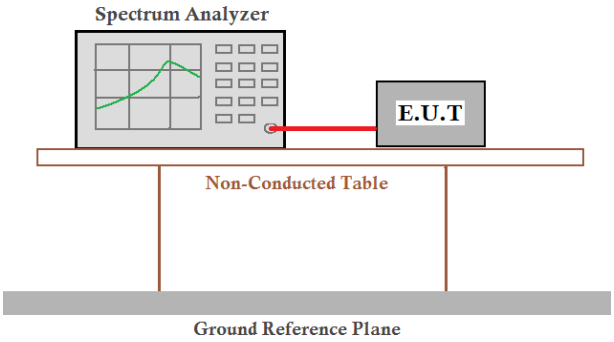
20dB bandwidth (KHz)	Limit (MHz)	Results
115.91	1.08	Pass

Note: Limit= Fundamental frequency×0.25%=433.92×0.25%=1.08MHz

Test plot as follows:



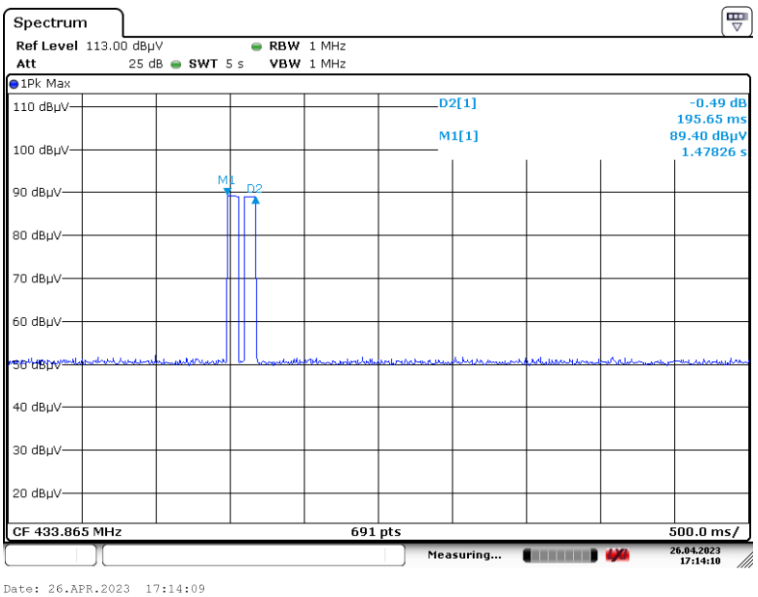
5.4 Duration Time

Test Requirement:	FCC Part15 C Section 15.231 (a)
Receiver setup:	RBW=1MHz, VBW=1MHz, span=0Hz, detector: Peak
Limit:	Not more than 5 seconds
Test mode:	Transmitting mode
Test Procedure:	1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set the EUT to proper test channel. 3. Single scan the transmission, and read the transmission time.
Test setup:	
Test Instruments:	Refer to section 4.9 for details
Test mode:	Refer to section 4.3 for details
Test results:	Passed

Measurement Data:

Duration time (second)	Limit (second)	Result
0.195	<5.0	Pass

Test plot as follows:



------End of report------