

FCC REPORT

Applicant: Autel Robotics Co., Ltd

Address of Applicant: 9th Floor, Bldg.B1, Zhiyuan, 1001 Xueyuan Rd., Xili, Nanshan, Shenzhen, China

Equipment Under Test (EUT)

Product Name: Dragon Fish Remote Control

Model No.: DFRC-1

Trade Mark: AUTEL

FCC ID: 2AGNTDFRC2409A

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: 24 Aug., 2020

Date of Test: 25 Aug., to 27 Oct., 2020

Date of report issued: 03 Dec., 2020

Test Result: PASS*

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

Authorized Signature:



Bruce Zhang
Laboratory Manager

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.

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2 Version

Version No.	Date	Description
00	06 Nov., 2020	Original
01	03 Dec., 2020	Update page 5

Tested by:

Mike Ou

Date:

03 Dec., 2020

Test Engineer

Reviewed by:

Winner Zhang

Date:

03 Dec., 2020

Project Engineer

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4 Test Summary

Test Items	Section in CFR 47	Result
Antenna requirement	15.203 & 15.247 (b)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(3)	Pass
6dB Emission Bandwidth 99% Occupied Bandwidth	15.247 (a)(2)	Pass
Power Spectral Density	15.247 (e)	Pass
Band Edge	15.247 (d)	Pass
Spurious Emission	15.205 & 15.209	Pass
Remark: 1. Pass: The EUT complies with the essential requirements in the standard. 2. N/A: Not Applicable. 3. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).		
Test Method:	ANSI C63.10-2013 KDB 558074 D01 15.247 Meas Guidance v05r02	

5 General Information

5.1 Client Information

Applicant:	Autel Robotics Co., Ltd
Address:	9th Floor, Bldg.B1, Zhiyuan, 1001 Xueyuan Rd., Xili, Nanshan, Shenzhen, China
Manufacturer:	Autel Robotics Co., Ltd
Address:	9th Floor, Bldg.B1, Zhiyuan, 1001 Xueyuan Rd., Xili, Nanshan, Shenzhen, China
Factory:	Autel Robotics Co.,Ltd
Address:	9th Floor, Bldg.B1, Zhiyuan, 1001 Xueyuan Rd., Xili, Nanshan, Shenzhen, China

5.2 General Description of E.U.T.

Product Name:	Dragon Fish Remote Control	
Model No.:	DFRC-1	
Operation Frequency:	906.0MHz~924.0MHz, 2403.5MHz~2473.5MHz	
Channel numbers:	906.0MHz~924.0MHz: 19 for 1.4MHz Bandwidth 13 for 10 MHz Bandwidth	2403.5MHz~2473.5MHz: 71 for 1.4MHz Bandwidth 65 for 10 MHz Bandwidth
Channel separation:	1MHz	
Modulation technology:	QPSK for 1.4MHz Bandwidth 16QAM for 10MHz Bandwidth	
ANT TXRX Type:	MISO Mode(ANT 6 support TXRX, ANT5 only RX)	
Antenna Type:	External Antenna	
Antenna gain:	906.0MHz~924.0MHz : 2.7dBi 2403.5MHz~2473.5MHz: 2.6dBI	
Power supply:	Rechargeable Li-ion Battery DC11.4V-8.2Ah	
AC adapter:	Model: DF_CHARGER Input: AC100-240V, 50/60Hz, 4.0A Output 1/2/3: DC 26.4V, 7.0A	
Test Sample Condition:	The test samples were provided in good working order with no visible defects.	

900MHz:

Operation Frequency each of channel for 19 for 1.4MHz Bandwidth					
Channel	Frequency	Channel	Frequency	Channel	Frequency
1	906MHz	....	....	....	....
2	907MHz	10	915MHz	18	923MHz
3	908MHz	....	....	19	924MHz

Note:

1. Channel 1, 15 & 19 selected as Lowest, Middle and Highest channel.

Operation Frequency each of channel for 13 for 10MHz Bandwidth					
Channel	Frequency	Channel	Frequency	Channel	Frequency
1	909MHz	....	....	....	....
2	910MHz	7	915MHz	12	920MHz
3	911MHz	....	....	13	921MHz

Note:

2. Channel 1, 7 & 13 selected as Lowest, Middle and Highest channel.

2.4GHz:

Operation Frequency each of channel for 71 for 1.4MHz Bandwidth							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2403.5MHz	4	2406.5MHz	....	....	71	2473.5MHz
2	2404.5MHz	5	2407.5MHz	36	2439.5MHz		
3	2405.5MHz	6	2408.5MHz	....	....		

Note:

3. Channel 1, 36 & 72 selected as Lowest, Middle and Highest channel.

Operation Frequency each of channel for 65 for 10MHz Bandwidth							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2407.5MHz	4	2410.5MHz	....	....	64	2470.5MHz
2	2408.5MHz	5	2411.5MHz	33	2439.5MHz	65	2471.5MHz
3	2409.5MHz	6	2412.5MHz	....	....		

Note:

1. Channel 1, 33 & 65 selected as Lowest, Middle and Highest channel.

5.3 Test environment and test mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Transmitting mode	Keep the EUT in continuous transmitting with modulation (Duty cycle>98%)

The sample was placed 0.8m (below 1GHz)/1.5m (above 1GHz) 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 are shown in Test Results of the following pages.

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

5.4 Description of Support Units

The EUT has been tested as an independent unit.

5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±1.60 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±3.12 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.16 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±3.20 dB (k=2)

5.6 Laboratory Facility

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

- **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

5.7 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.110~116, Building B, Jinyuan Business Building, Xixiang Road,
Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info@ccis-cb.com, Website: <http://www.ccis-cb.com>

5.8 Test Instruments list

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	SAEMC	9m*6m*6m	966	07-22-2020	07-21-2021
Loop Antenna	SCHWARZBECK	FMZB1519B	044	03-07-2020	03-06-2021
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-07-2020	03-06-2021
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-07-2020	03-06-2021
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2020	06-21-2021
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-18-2019	11-17-2020
EMI Test Software	AUDIX	E3	Version: 6.110919b		
Pre-amplifier	HP	8447D	2944A09358	03-07-2020	03-06-2021
Pre-amplifier	CD	PAP-1G18	11804	03-07-2020	03-06-2021
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-05-2020	03-04-2021
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-18-2019	11-17-2020
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-05-2020	03-04-2021
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-07-2020	03-06-2021
Cable	MICRO-COAX	MFR64639	K10742-5	03-07-2020	03-06-2021
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-07-2020	03-06-2021
RF Switch Unit	MWRFTTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTTEST	MTS8200	Version: 2.0.0.0		

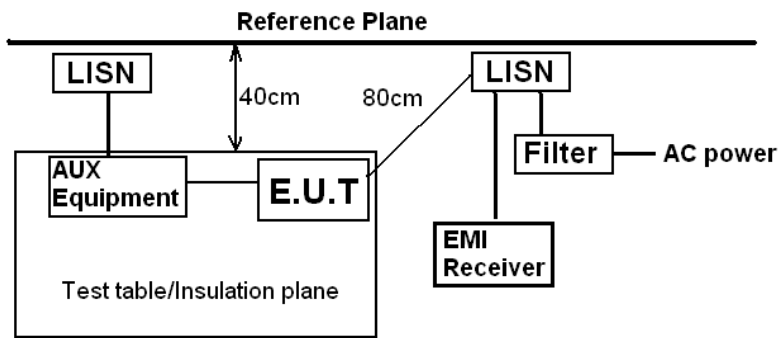
Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESCI	101189	03-05-2020	03-04-2021
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-05-2020	03-04-2021
LISN	CHASE	MN2050D	1447	03-05-2020	03-04-2021
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2020	07-20-2021
Cable	HP	10503A	N/A	03-05-2020	03-04-2021
EMI Test Software	AUDIX	E3	Version: 6.110919b		

6 Test results and Measurement Data

6.1 Antenna requirement

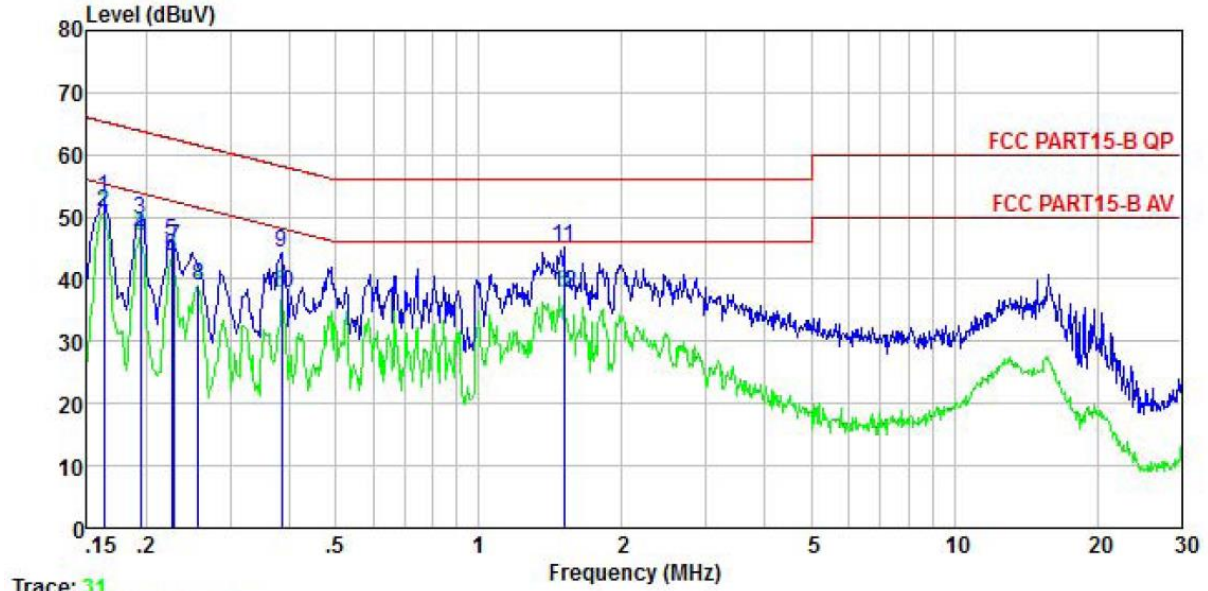
Standard requirement:	FCC Part 15 C Section 15.203 /247(b)						
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses 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. 15.247(b) (4) requirement: (4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.							
E.U.T Antenna:							
The Wi-Fi antenna is an External antenna which cannot replace by end-user, the best case gain of the antenna as bllow: <table border="1"> <thead> <tr> <th>ANTBand</th><th>ANT Gain</th></tr> </thead> <tbody> <tr> <td>902~928MHz</td><td>2.7dBi</td></tr> <tr> <td>2.4GHz</td><td>2.6dBi</td></tr> </tbody> </table>		ANTBand	ANT Gain	902~928MHz	2.7dBi	2.4GHz	2.6dBi
ANTBand	ANT Gain						
902~928MHz	2.7dBi						
2.4GHz	2.6dBi						

6.2 Conducted Emission

Test Requirement:	FCC Part 15 C Section 15.207		
Test Method:	ANSI C63.10: 2013		
Test Frequency Range:	150 kHz to 30 MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9 kHz, VBW=30 kHz		
Limit:	Frequency range (MHz)	Limit (dBuV)	
		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	- The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which provides a 50ohm/50uH coupling impedance for the measuring equipment. - 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). - 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 C63.4: 2014 on conducted measurement.		
Test setup:	 Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m		
Test Instruments:	Refer to section 5.8 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Passed		

Measurement Data:

Product name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test by:	Mike	Test mode:	2.4G Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5°C Humi: 55%

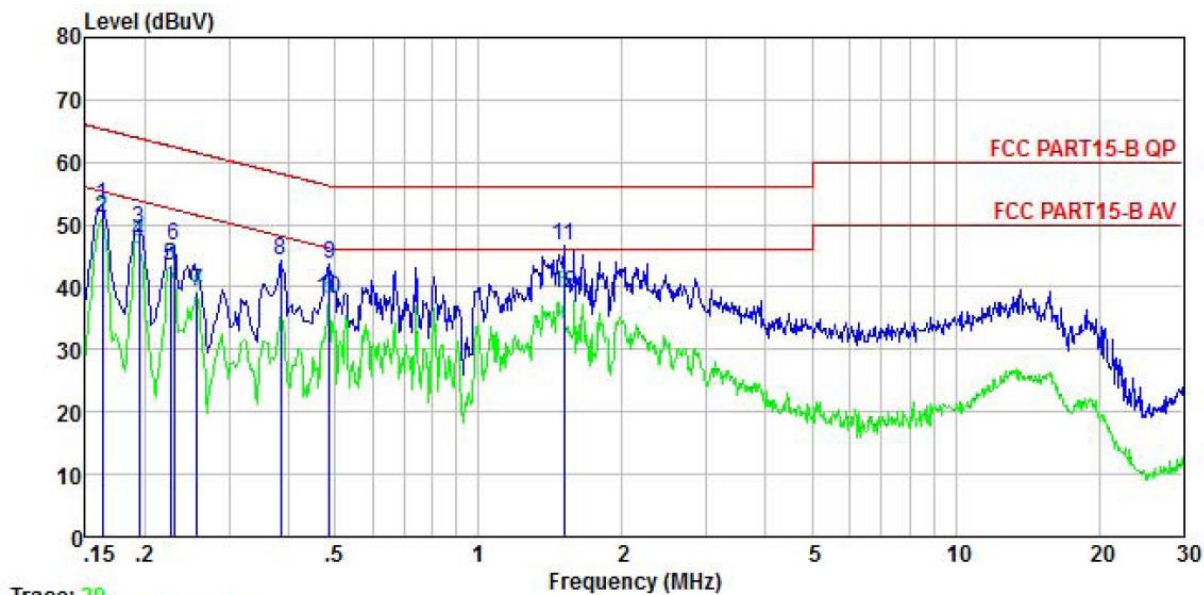


	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.162	43.14	-0.58	-0.08	10.77	53.25	65.34	-12.09	QP
2	0.162	40.74	-0.58	-0.08	10.77	50.85	55.34	-4.49	Average
3	0.194	39.62	-0.59	-0.15	10.76	49.64	63.84	-14.20	QP
4	0.194	37.05	-0.59	-0.15	10.76	47.07	53.84	-6.77	Average
5	0.226	36.10	-0.58	-0.19	10.75	46.08	62.61	-16.53	QP
6	0.226	33.70	-0.58	-0.19	10.75	43.68	52.61	-8.93	Average
7	0.229	35.25	-0.58	-0.19	10.75	45.23	62.48	-17.25	QP
8	0.258	29.14	-0.57	-0.22	10.75	39.10	51.51	-12.41	Average
9	0.385	33.70	-0.49	0.33	10.72	44.26	58.17	-13.91	QP
10	0.385	27.37	-0.49	0.33	10.72	37.93	48.17	-10.24	Average
11	1.511	34.78	-0.55	-0.01	10.92	45.14	56.00	-10.86	QP
12	1.511	27.34	-0.55	-0.01	10.92	37.70	46.00	-8.30	Average

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss.

Product name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test by:	Mike	Test mode:	2.4G Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5°C Humi: 55%

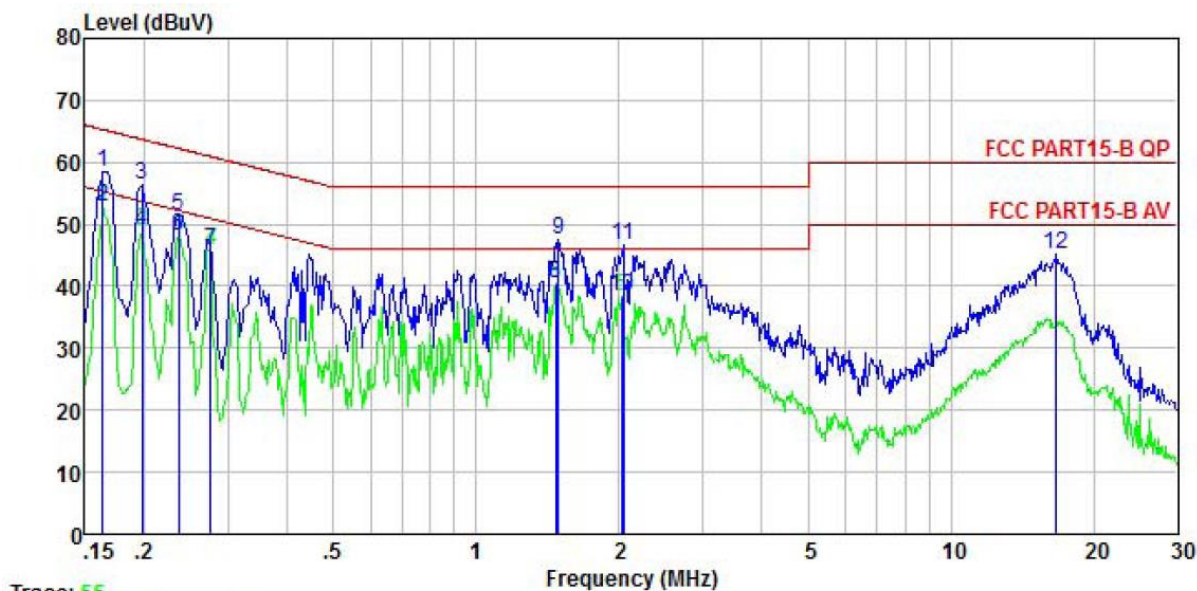


	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.162	43.13	-0.68	0.01	10.77	53.23	65.34	-12.11	QP
2	0.162	40.98	-0.68	0.01	10.77	51.08	55.34	-4.26	Average
3	0.194	39.19	-0.67	0.00	10.76	49.28	63.84	-14.56	QP
4	0.194	37.28	-0.67	0.00	10.76	47.37	53.84	-6.47	Average
5	0.226	33.33	-0.67	0.00	10.75	43.41	52.61	-9.20	Average
6	0.230	36.44	-0.67	0.00	10.75	46.52	62.44	-15.92	QP
7	0.258	29.22	-0.67	0.01	10.75	39.31	51.51	-12.20	Average
8	0.385	34.25	-0.64	-0.05	10.72	44.28	58.17	-13.89	QP
9	0.486	33.60	-0.65	0.02	10.76	43.73	56.23	-12.50	QP
10	0.486	28.00	-0.65	0.02	10.76	38.13	46.23	-8.10	Average
11	1.511	36.30	-0.70	0.13	10.92	46.65	56.00	-9.35	QP
12	1.511	28.61	-0.70	0.13	10.92	38.96	46.00	-7.04	Average

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss.

Product name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test by:	Mike	Test mode:	900M Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5°C Humi: 55%

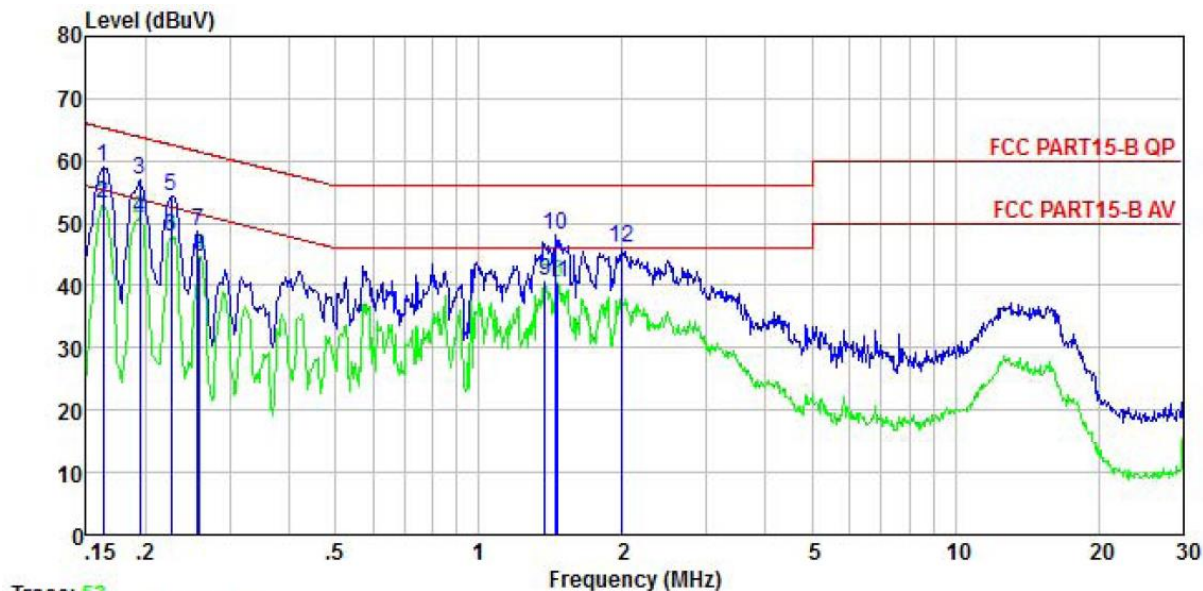


	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.163	48.48	-0.58	-0.08	10.77	58.59	65.30	-6.71	QP
2	0.163	42.72	-0.58	-0.08	10.77	52.83	55.30	-2.47	Average
3	0.198	46.25	-0.59	-0.16	10.76	56.26	63.71	-7.45	QP
4	0.198	39.07	-0.59	-0.16	10.76	49.08	53.71	-4.63	Average
5	0.237	41.49	-0.57	-0.20	10.75	51.47	62.22	-10.75	QP
6	0.237	38.02	-0.57	-0.20	10.75	48.00	52.22	-4.22	Average
7	0.276	35.77	-0.56	-0.24	10.74	45.71	50.94	-5.23	Average
8	1.472	29.91	-0.56	0.03	10.92	40.30	46.00	-5.70	Average
9	1.487	37.12	-0.56	0.01	10.92	47.49	56.00	-8.51	QP
10	2.023	28.34	-0.51	-0.32	10.96	38.47	46.00	-7.53	Average
11	2.044	36.40	-0.51	-0.31	10.96	46.54	56.00	-9.46	QP
12	16.661	32.36	-0.75	2.68	10.91	45.20	60.00	-14.80	QP

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss.

Product name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test by:	Mike	Test mode:	900M Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5°C Humi: 55%

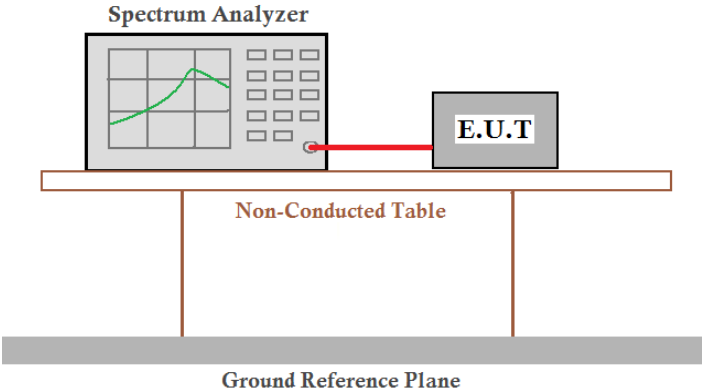


	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.162	48.81	-0.68	0.01	10.77	58.91	65.34	-6.43	QP
2	0.162	43.13	-0.68	0.01	10.77	53.23	55.34	-2.11	Average
3	0.194	46.81	-0.67	0.00	10.76	56.90	63.84	-6.94	QP
4	0.194	40.74	-0.67	0.00	10.76	50.83	53.84	-3.01	Average
5	0.226	44.23	-0.67	0.00	10.75	54.31	62.61	-8.30	QP
6	0.226	37.81	-0.67	0.00	10.75	47.89	52.61	-4.72	Average
7	0.258	38.59	-0.67	0.01	10.75	48.68	61.51	-12.83	QP
8	0.259	34.50	-0.67	0.01	10.75	44.59	51.47	-6.88	Average
9	1.374	30.32	-0.69	0.12	10.91	40.66	46.00	-5.34	Average
10	1.449	37.87	-0.70	0.13	10.92	48.22	56.00	-7.78	QP
11	1.464	30.06	-0.70	0.13	10.92	40.41	46.00	-5.59	Average
12	2.001	35.56	-0.71	0.17	10.96	45.98	56.00	-10.02	QP

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss.

6.3 Conducted Output Power

Test Requirement:	FCC Part 15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.10:2013 and KDB 558074
Limit:	30dBm
Test setup:	
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

2.4GHz:

Test CH	Maximum Conducted Output Power (dBm)		Limit(dBm)	Result
	1.4M	10M		
Lowest	19.30	19.25	30.00	Pass
Middle	19.50	19.33		
Highest	19.22	19.13		

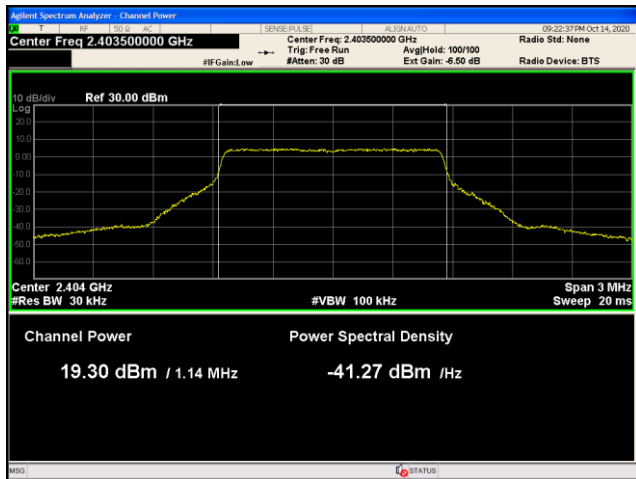
900MHz:

Test CH	Maximum Conducted Output Power (dBm)		Limit(dBm)	Result
	1.4M	10M		
Lowest	19.16	18.92	30.00	Pass
Middle	19.04	18.84		
Highest	18.90	18.80		

Test plot as follows:

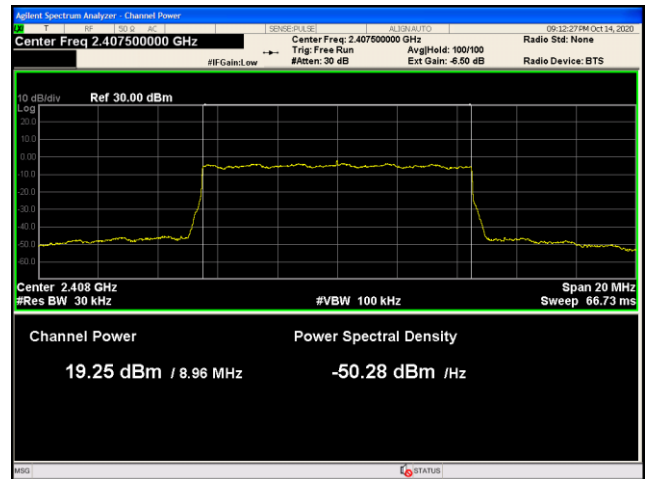
2.4GHz:

1.4M

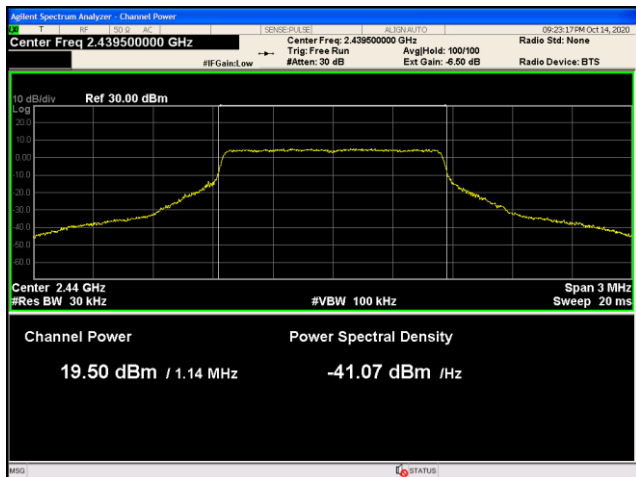


Lowest channel

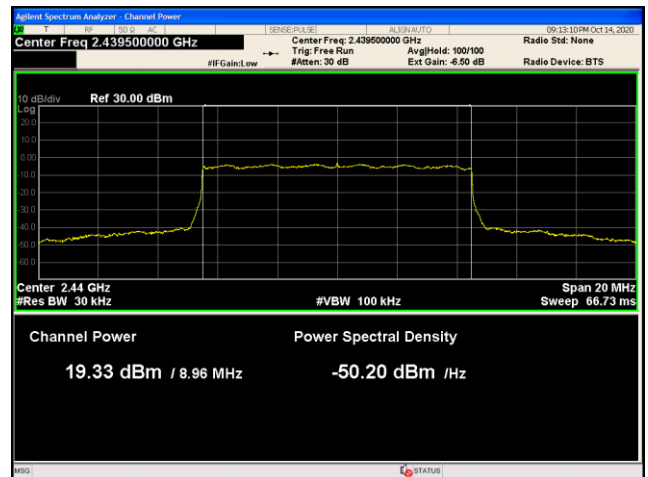
10M



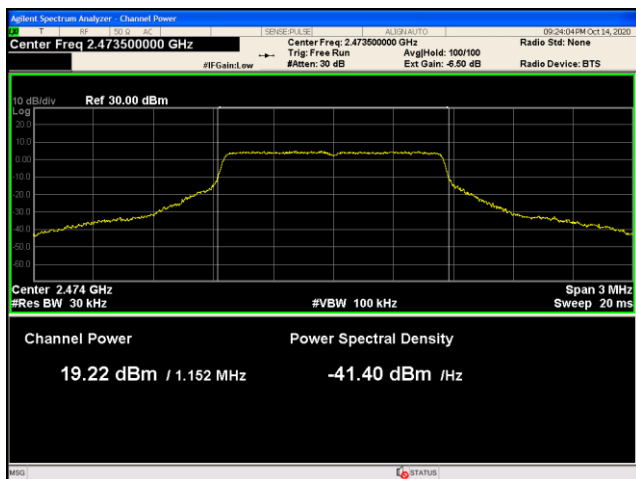
Lowest channel



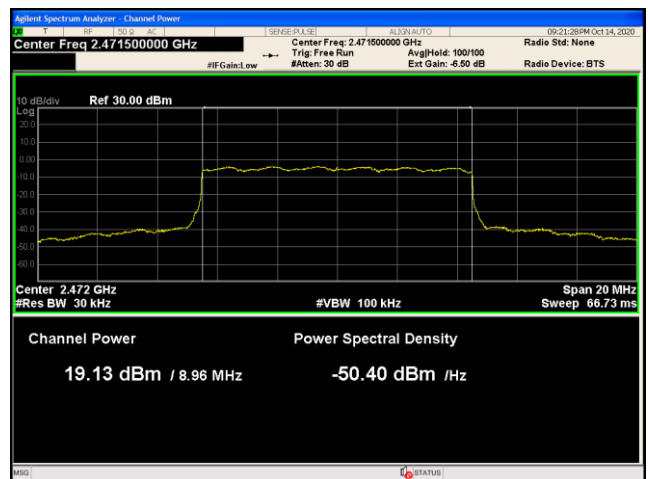
Middle channel



Middle channel



Highest channel

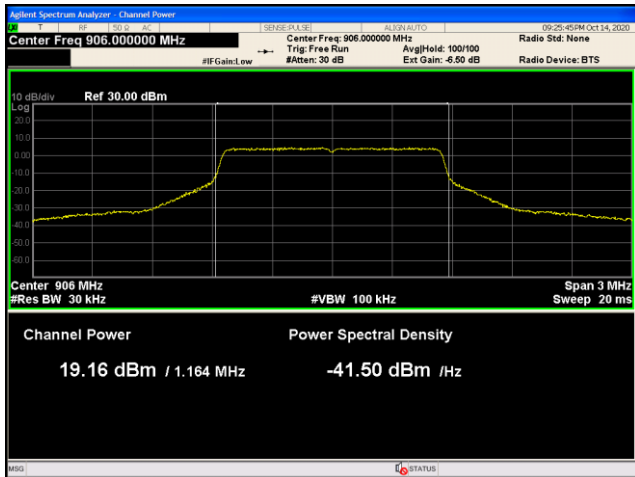


Highest channel

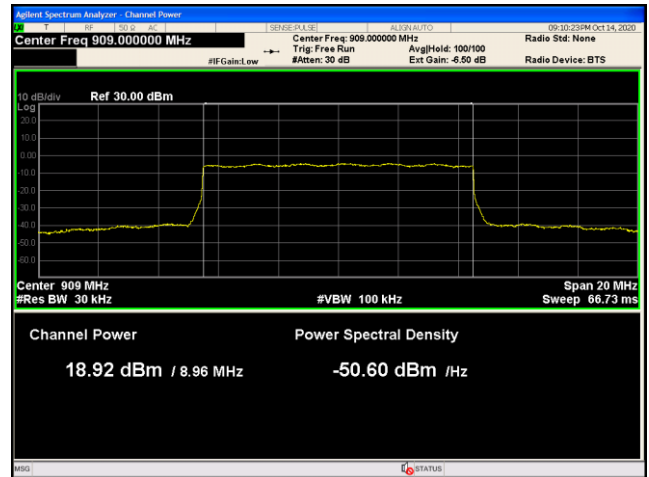
900MHz:

1.4M

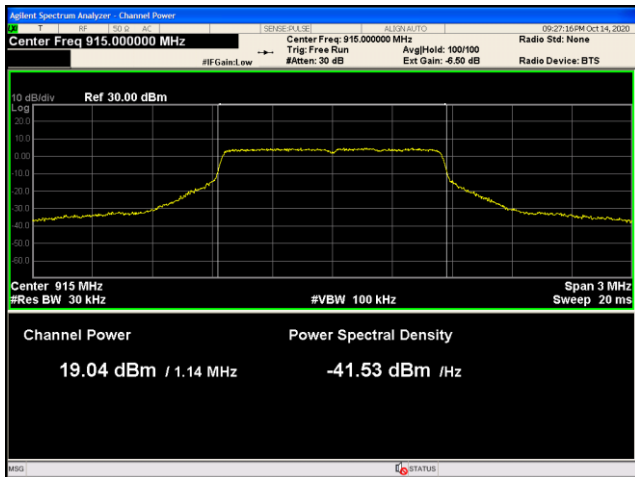
10M



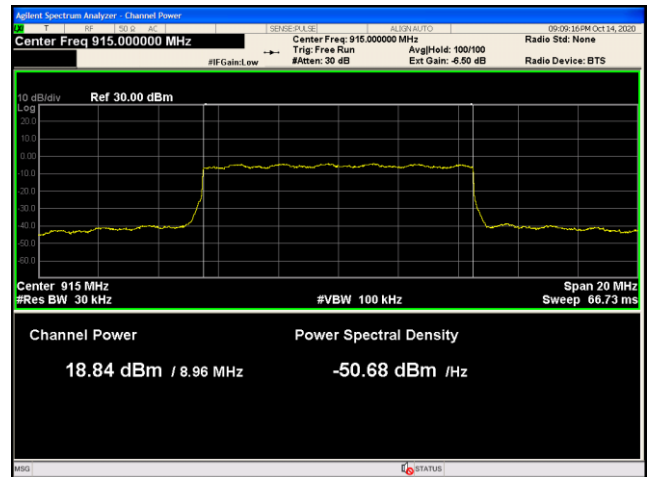
Lowest channel



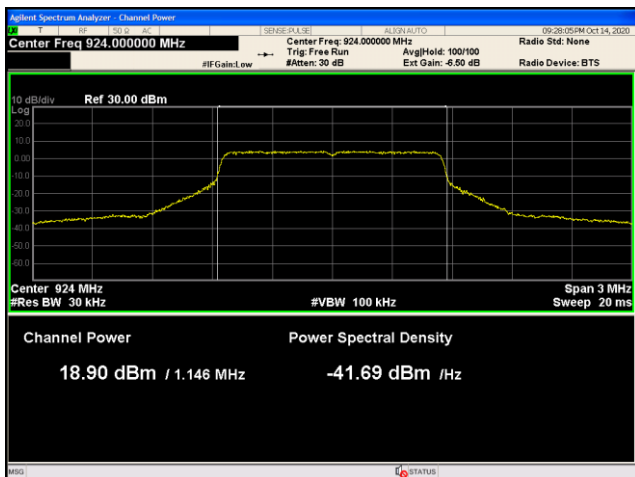
Lowest channel



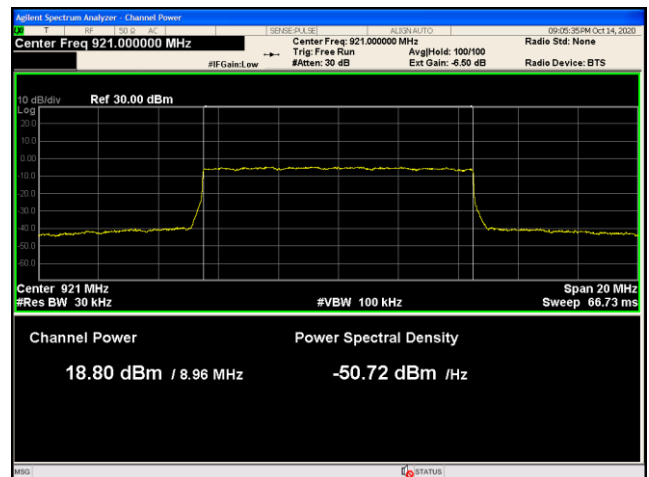
Middle channel



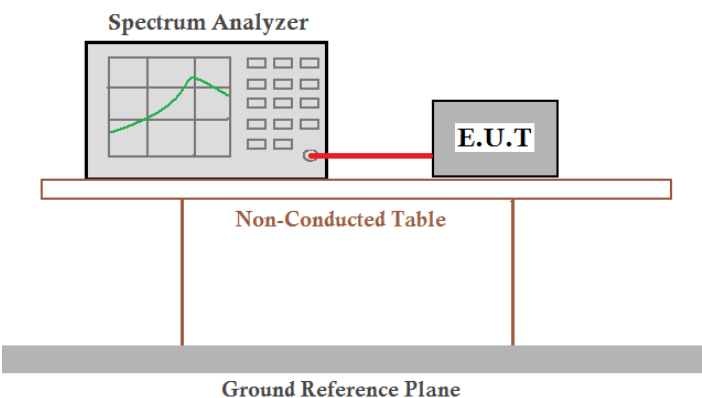
Middle channel



Highest channel



6.4 Occupy Bandwidth

Test Requirement:	FCC Part 15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.10:2013 and KDB 558074
Limit:	>500kHz
Test setup:	 The diagram illustrates the test setup for Occupy Bandwidth. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table, which is supported by two vertical legs. Below the table is a Ground Reference Plane.
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:
2.4GHz:

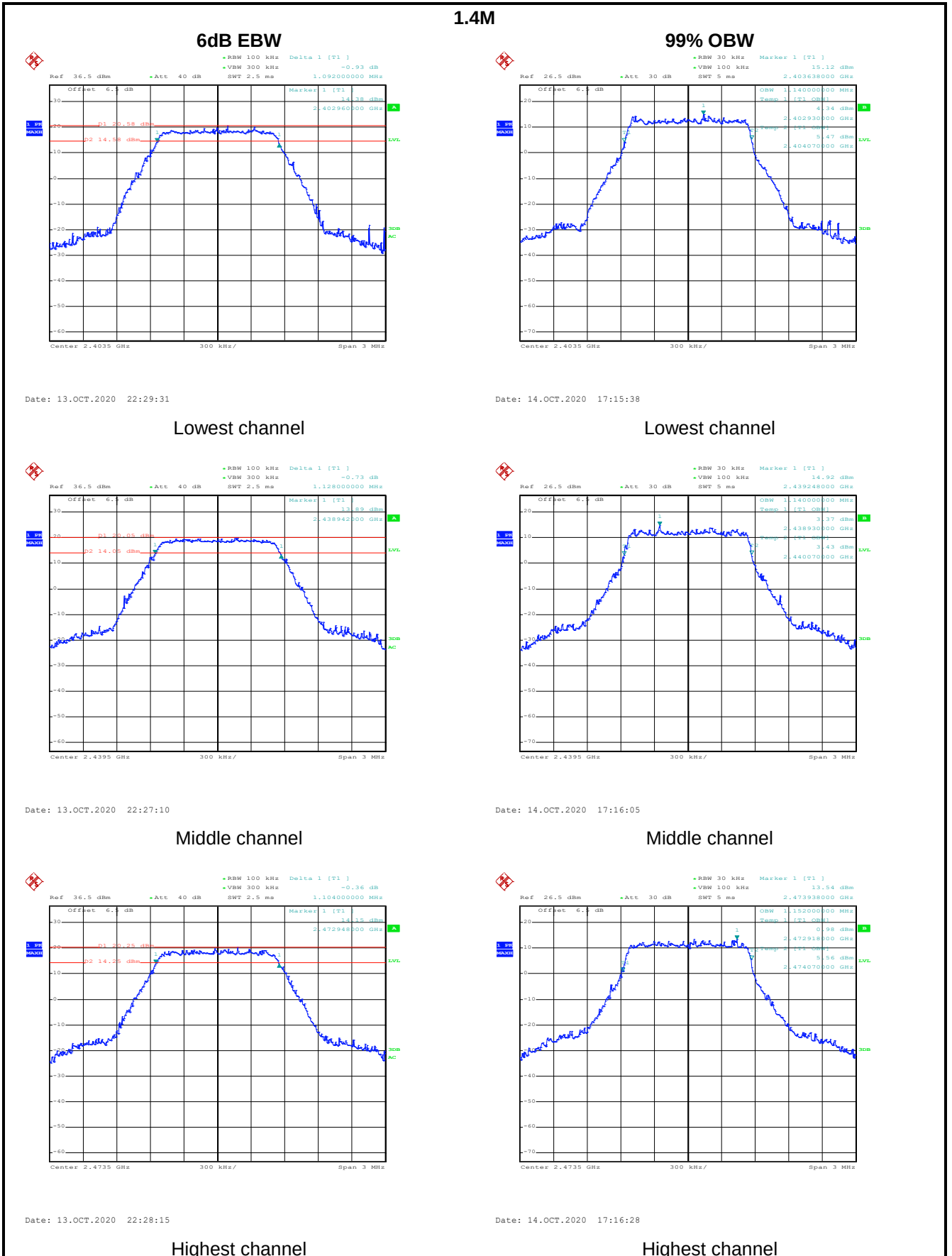
Test CH	6dB Emission Bandwidth (MHz)		Limit(kHz)	Result
	1.4M	10M		
Lowest	1.092	9.04	>500	Pass
Middle	1.128	9.08		
Highest	1.104	9.08		
Test CH	99% Occupy Bandwidth (MHz)		Limit(kHz)	Result
	1.4M	10M		
Lowest	1.140	8.96	N/A	N/A
Middle	1.140	8.96		
Highest	1.152	8.96		

900MHz:

Test CH	6dB Emission Bandwidth (MHz)		Limit(kHz)	Result
	1.4M	10M		
Lowest	1.134	9.08	>500	Pass
Middle	1.146	9.08		
Highest	1.104	9.12		
Test CH	99% Occupy Bandwidth (MHz)		Limit(kHz)	Result
	1.4M	10M		
Lowest	1.164	8.96	N/A	N/A
Middle	1.140	8.96		
Highest	1.146	8.96		

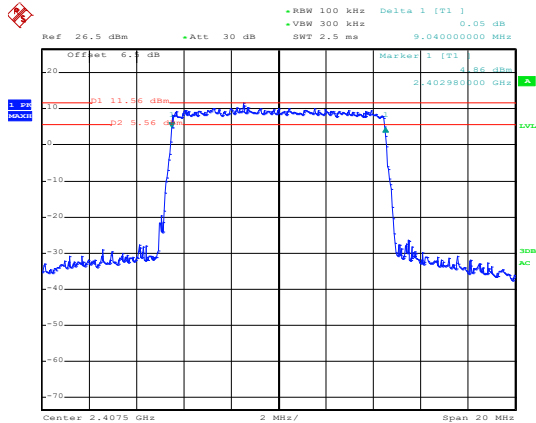
Test plot as follows:

2.4GHz:



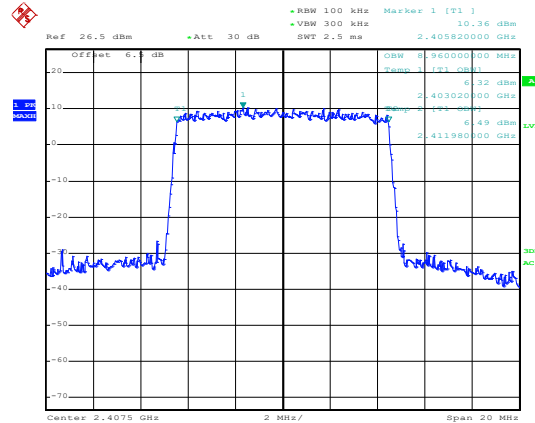
10M

6dB EBW



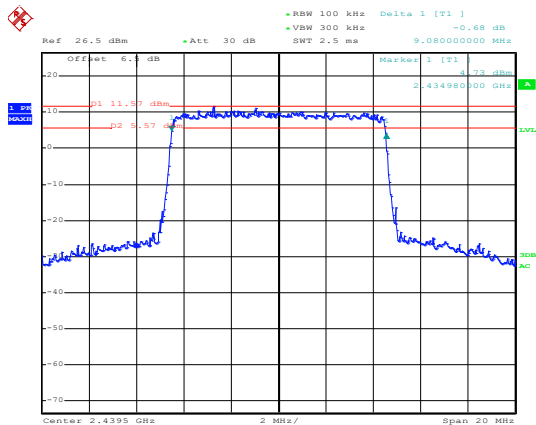
Date: 13.OCT.2020 22:07:11

99% OBW



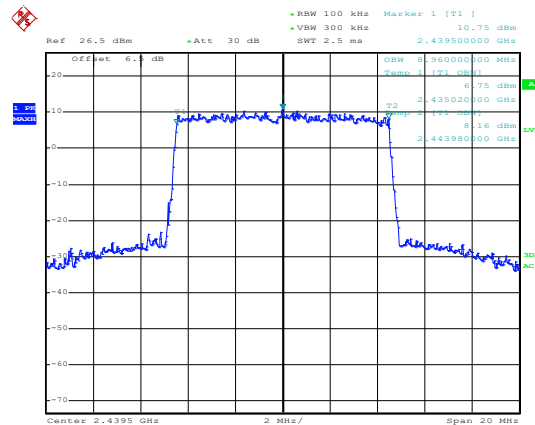
Date: 13.OCT.2020 22:01:47

Lowest channel



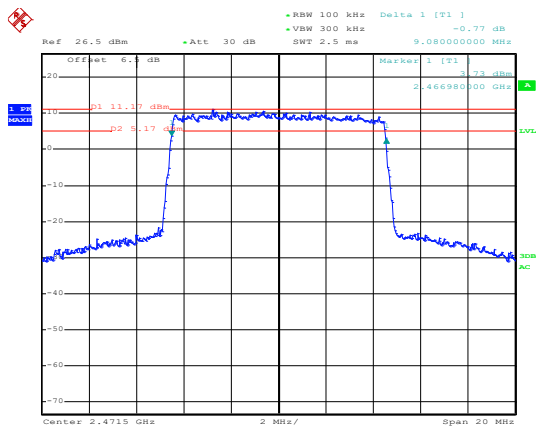
Date: 13.OCT.2020 22:05:33

Lowest channel



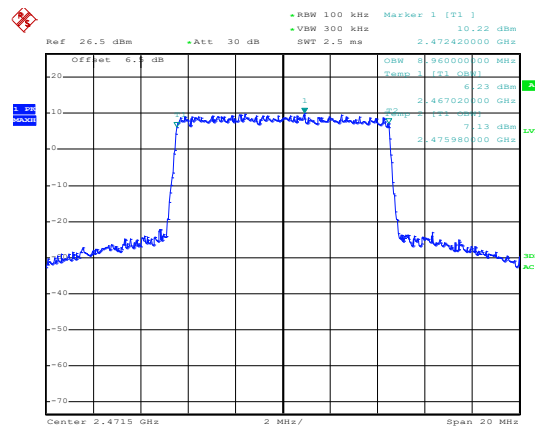
Date: 13.OCT.2020 22:02:16

Middle channel



Date: 13.OCT.2020 22:04:47

Middle channel



Date: 13.OCT.2020 22:03:08

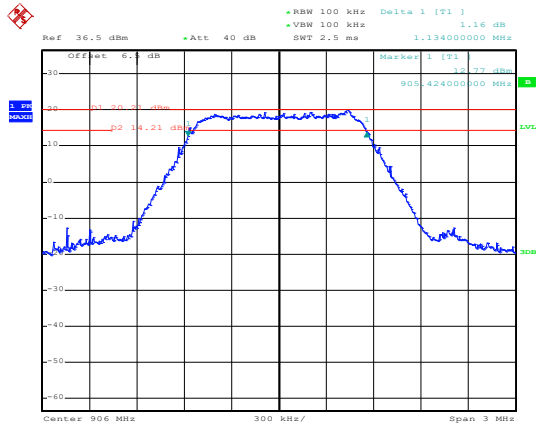
Highest channel

Highest channel

900MHz:

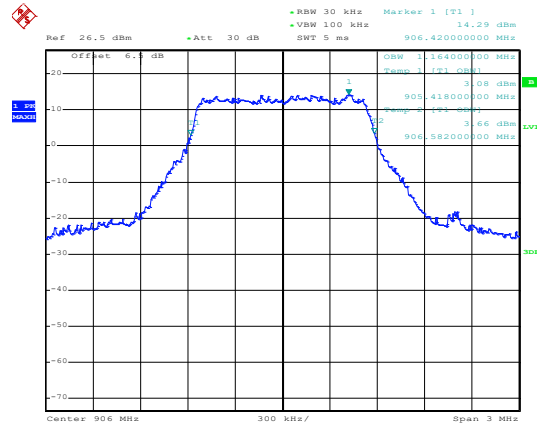
1.4M

6dB EBW



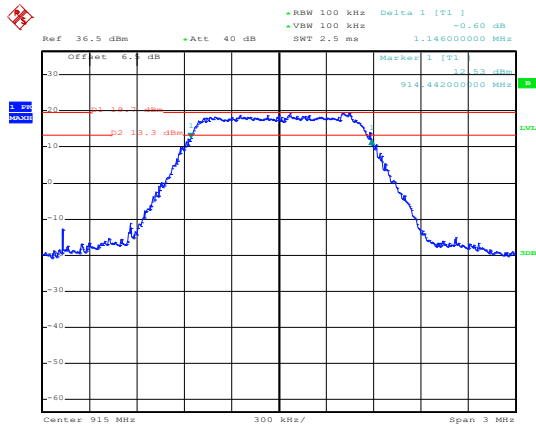
Date: 14.OCT.2020 00:03:56

99% OBW



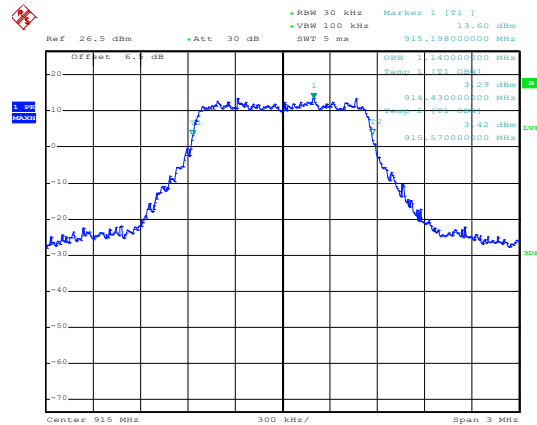
Date: 14.OCT.2020 17:21:55

Lowest channel



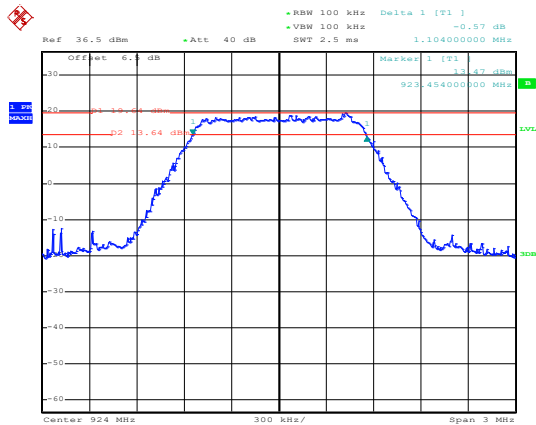
Date: 14.OCT.2020 00:11:23

Lowest channel



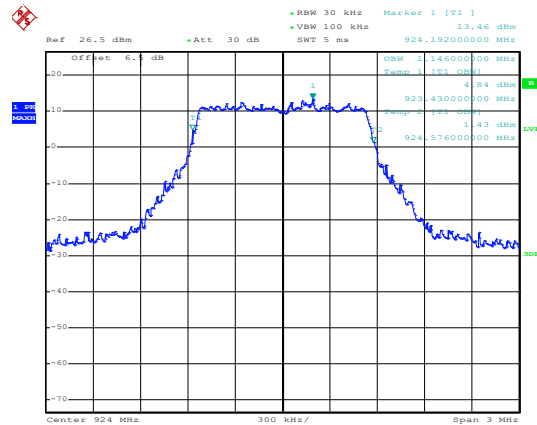
Date: 14.OCT.2020 17:22:11

Middle channel



Date: 14.OCT.2020 00:13:01

Middle channel



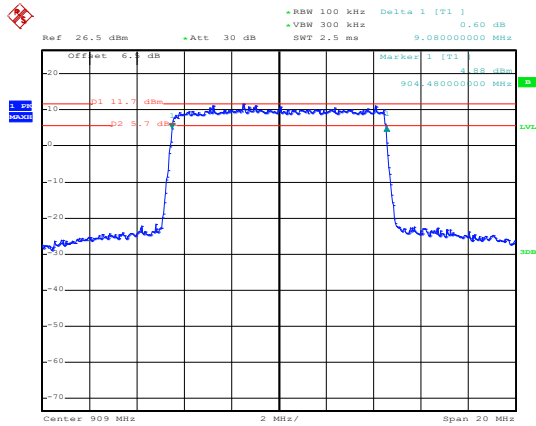
Date: 14.OCT.2020 17:22:29

Highest channel

Highest channel

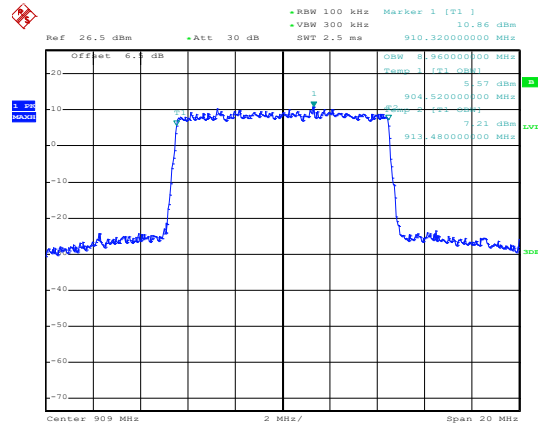
10M

6dB EBW



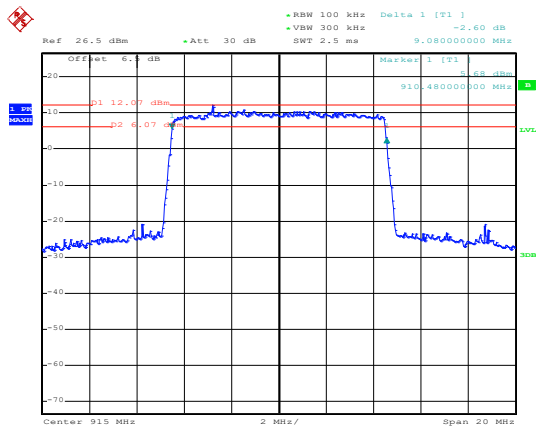
Date: 14.OCT.2020 17:53:59

99% OBW



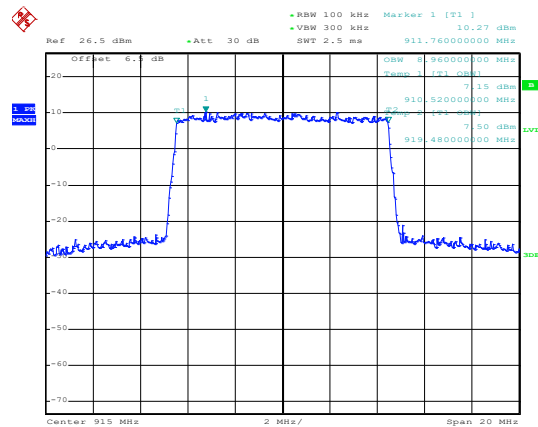
Date: 14.OCT.2020 17:58:22

Lowest channel



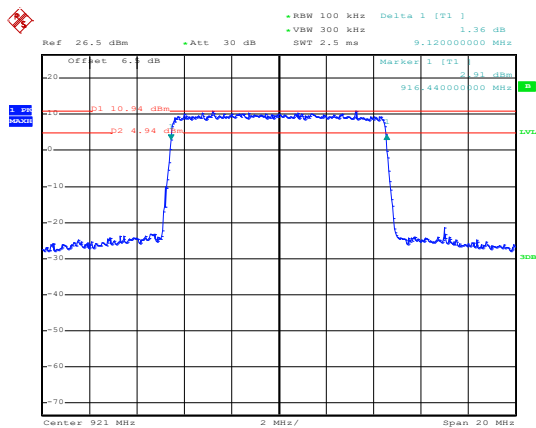
Date: 14.OCT.2020 17:55:32

Lowest channel



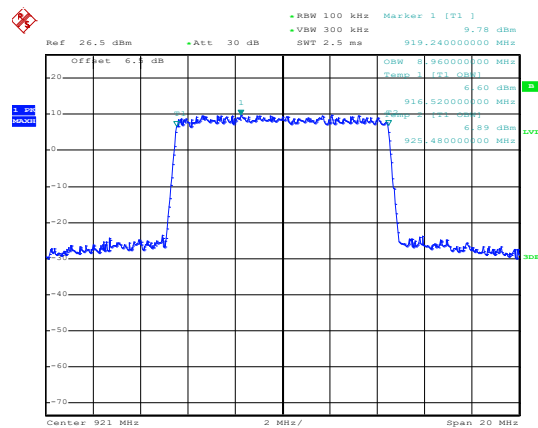
Date: 14.OCT.2020 17:58:01

Middle channel



Date: 14.OCT.2020 17:57:12

Middle channel

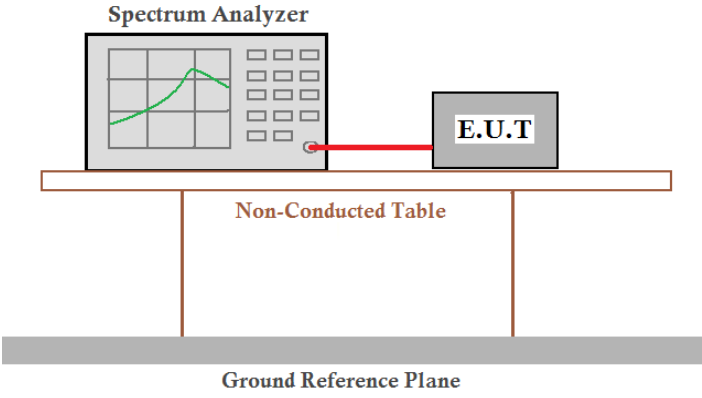


Date: 14.OCT.2020 17:57:42

Highest channel

Highest channel

6.5 Power Spectral Density

Test Requirement:	FCC Part 15 C Section 15.247 (e)
Test Method:	ANSI C63.10:2013 and KDB 558074
Limit:	8dBm/3KHz
Test setup:	
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

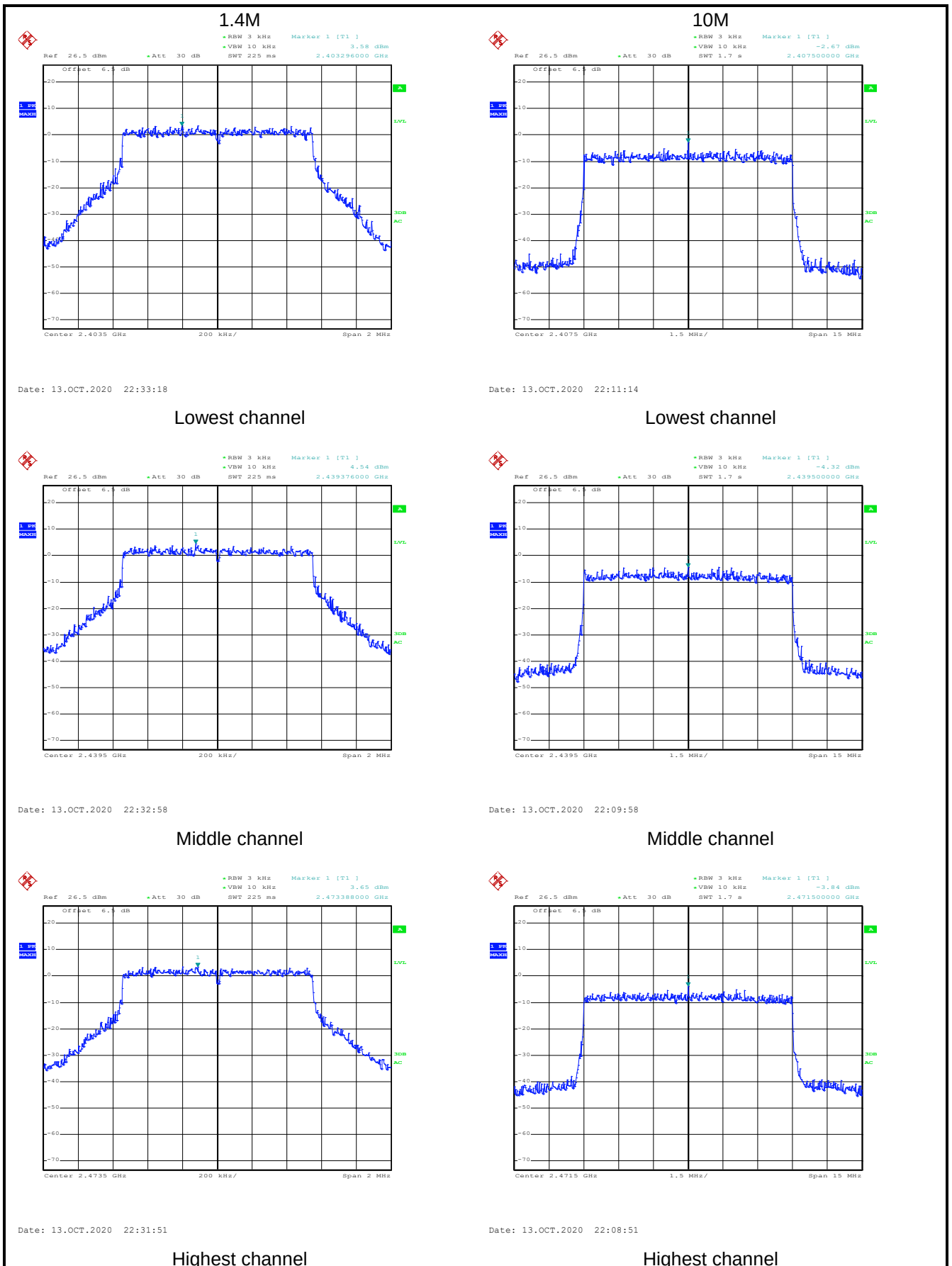
2.4GHz:

Test CH	Power Spectral Density (dBm/3KHz)		Limit(dBm/3KHz)	Result
	1.4M	10M		
Lowest	3.58	-2.67	8.00	Pass
Middle	4.54	-4.32		
Highest	3.65	-3.84		

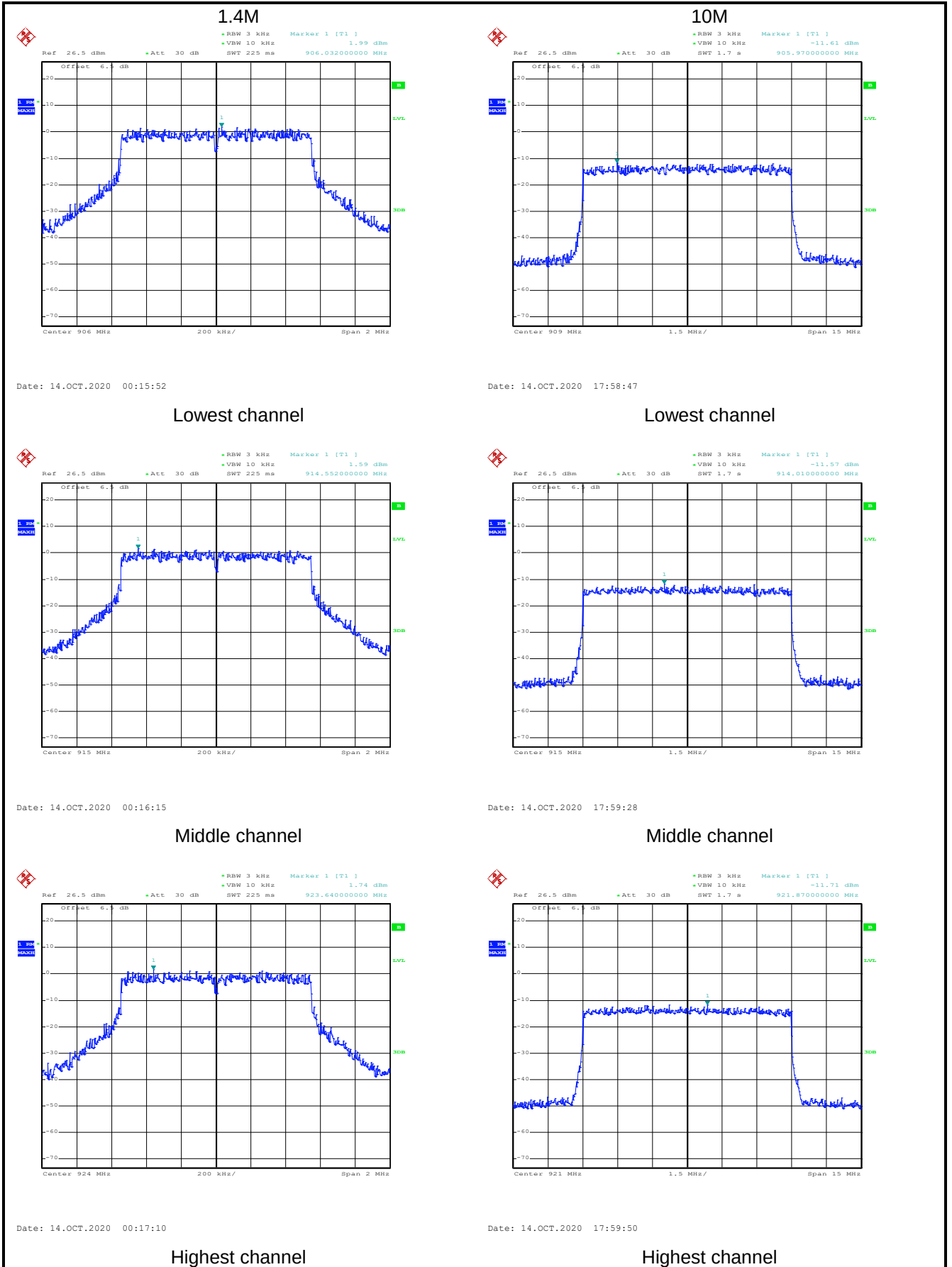
900MHz:

Test CH	Power Spectral Density (dBm dBm/3KHz)		Limit(dBm/3KHz)	Result
	1.4M	10M		
Lowest	1.99	-11.61	8.00	Pass
Middle	1.59	-11.57		
Highest	1.74	-11.71		

Test plot as follows:
2.4GHz

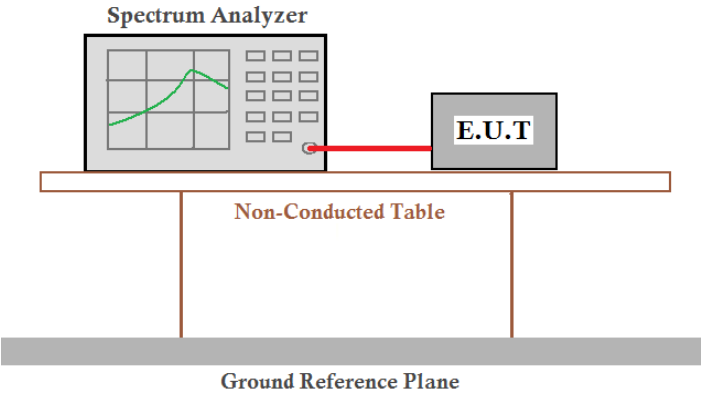


900MHz:



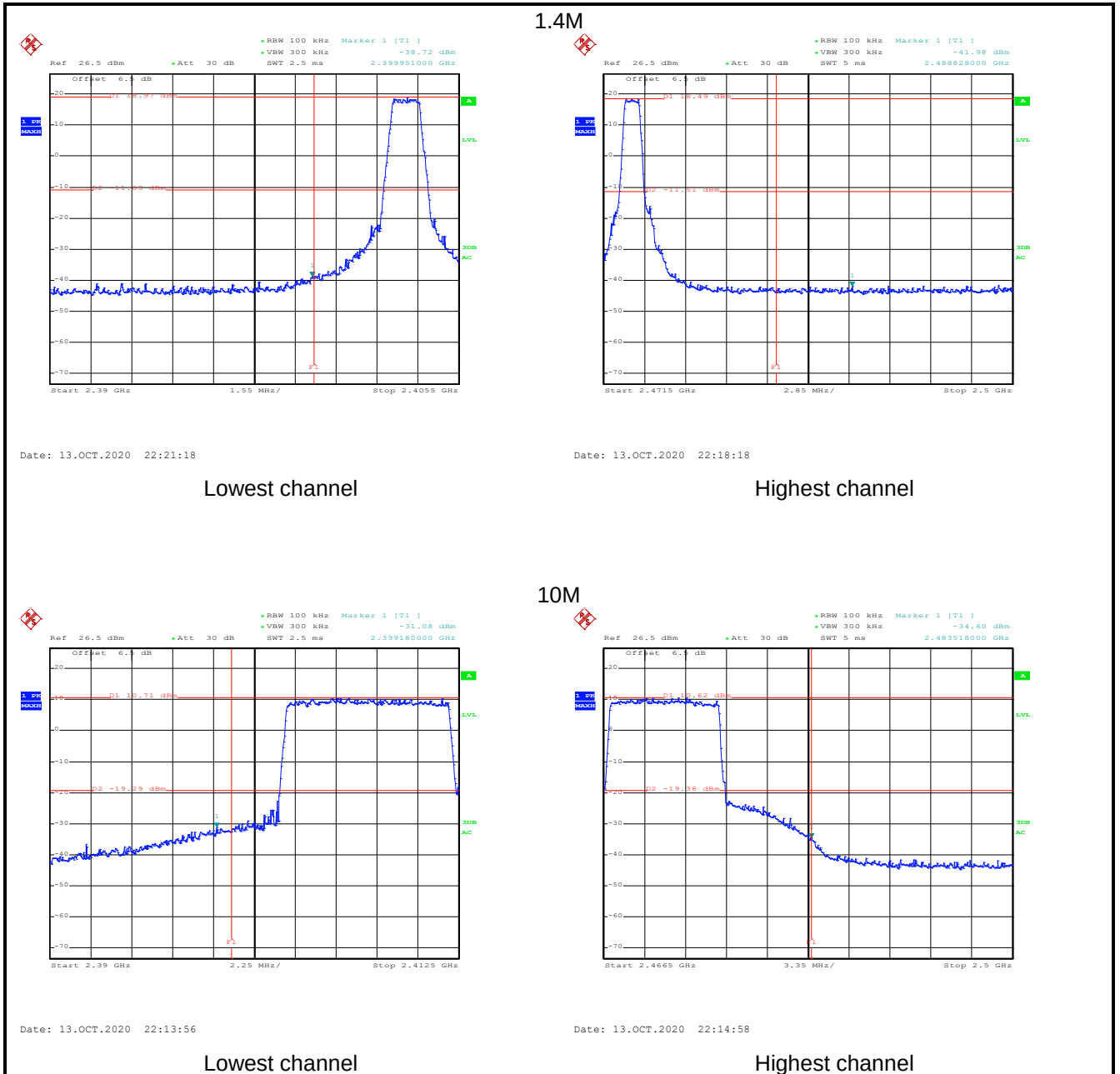
6.6 Band Edge

6.6.1 Conducted Emission Method

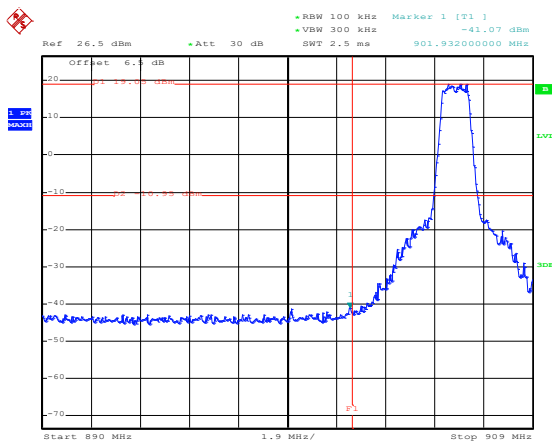
Test Requirement:	FCC Part 15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB 558074
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Test plot as follows:

2.4GHz



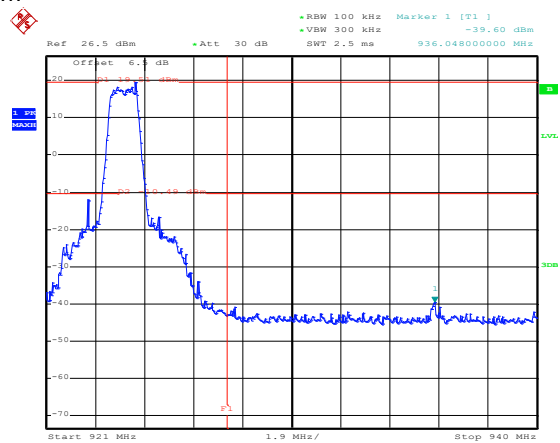
900MHz



Date: 14.OCT.2020 18:53:26

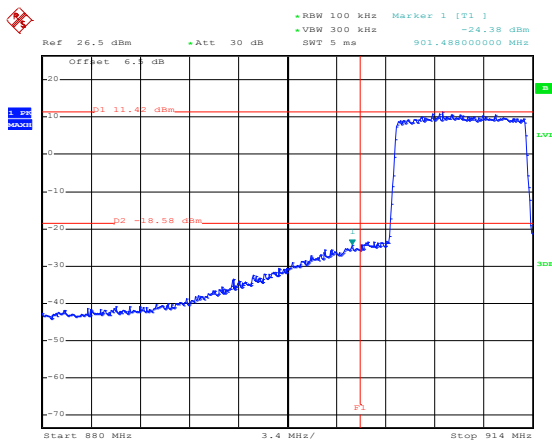
Lowest channel

1.4M



Date: 14.OCT.2020 18:54:53

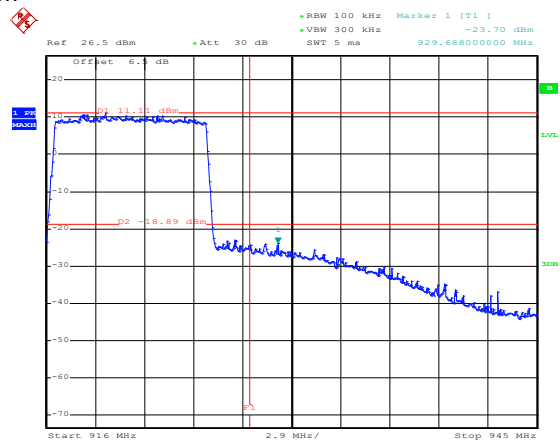
Highest channel



Date: 14.OCT.2020 18:45:07

Lowest channel

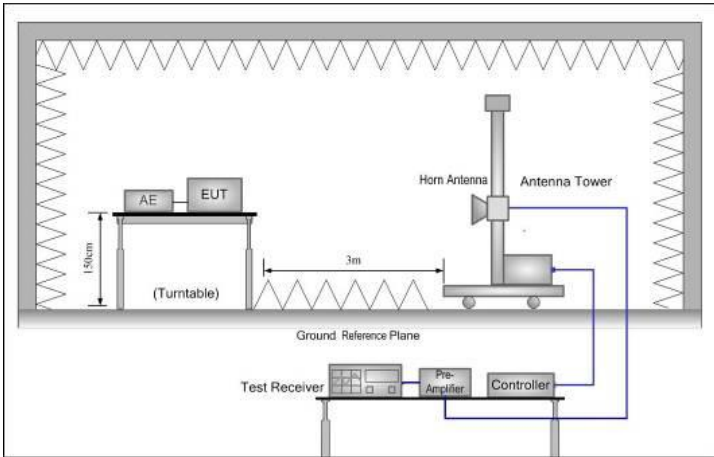
10M



Date: 14.OCT.2020 18:48:25

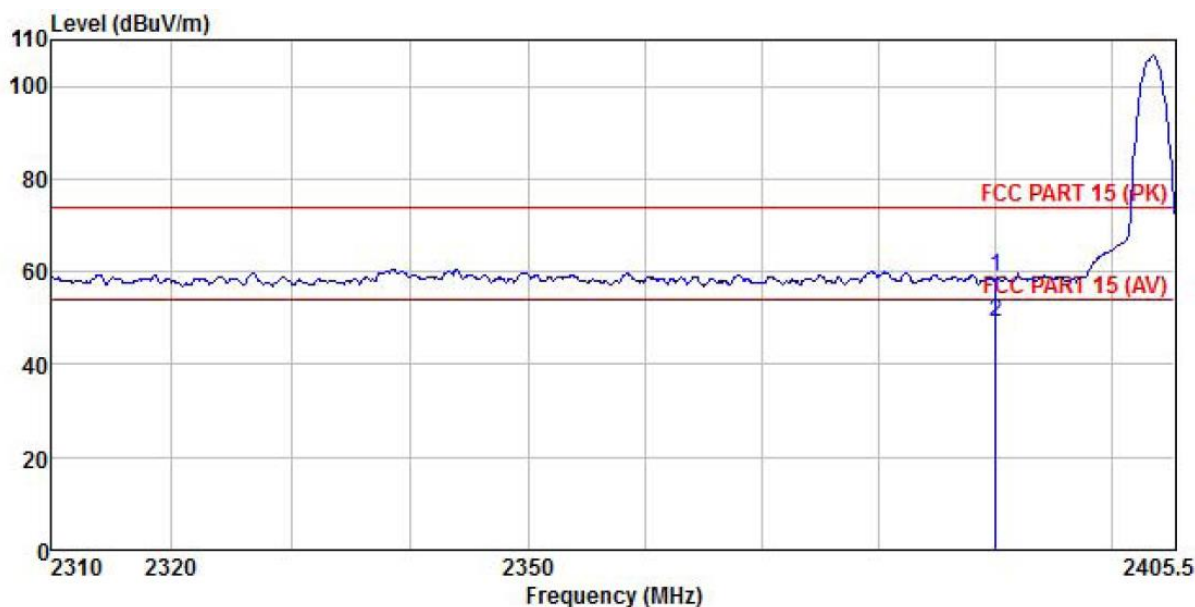
Highest channel

6.6.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10: 2013 and KDB 558074				
Test Frequency Range:	2.3GHz to 2.5GHz				
Test Distance:	3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		RMS	1MHz	3MHz	Average Value
Limit:	Frequency		Limit (dBuV/m @3m)		Remark
	Above 1GHz		54.00		Average Value
			74.00		Peak Value
Test Procedure:	1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. 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. 4. 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 and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. 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.				
Test setup:					
Test Instruments:	Refer to section 5.8 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Passed				

2.4GHz

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	2.4G-1.4M Bandwidth
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%

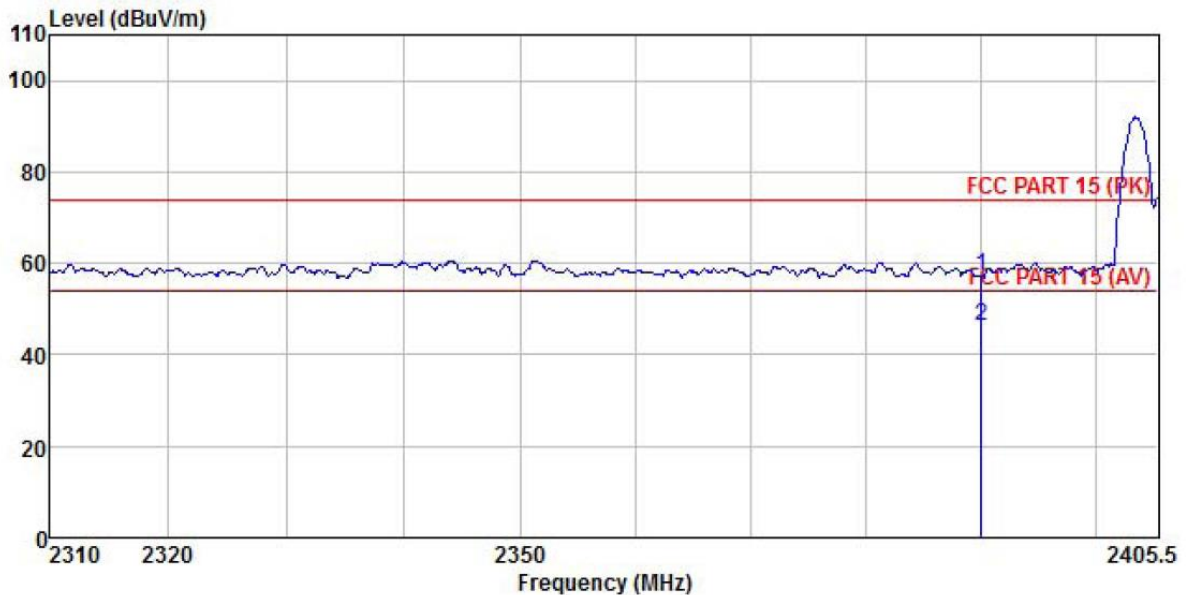


	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamplifier Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	2390.000	25.26	27.03	4.69	1.68	0.00	58.66	74.00	-15.34	Peak
2	2390.000	15.72	27.03	4.69	1.68	0.00	49.12	54.00	-4.88	Average

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	2.4G-1.4M Bandwidth
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

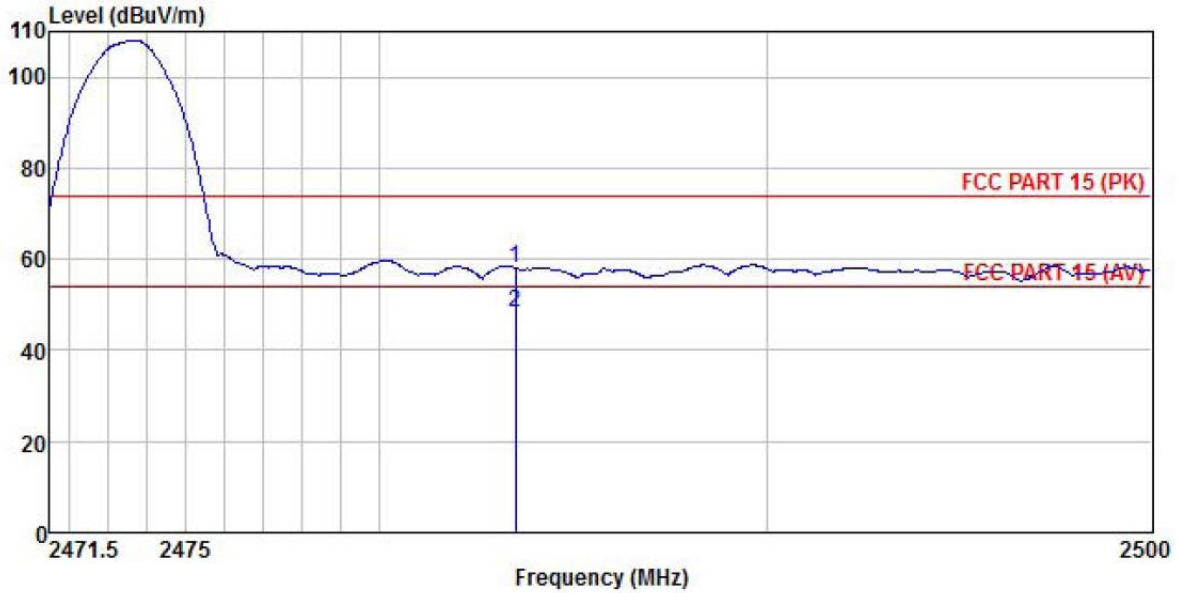


	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	2390.000	23.80	27.03	4.69	1.68	0.00	57.20	74.00	-16.80	Peak
2	2390.000	13.03	27.03	4.69	1.68	0.00	46.43	54.00	-7.57	Average

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	2.4G-1.4M Bandwidth
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Humi: 57%

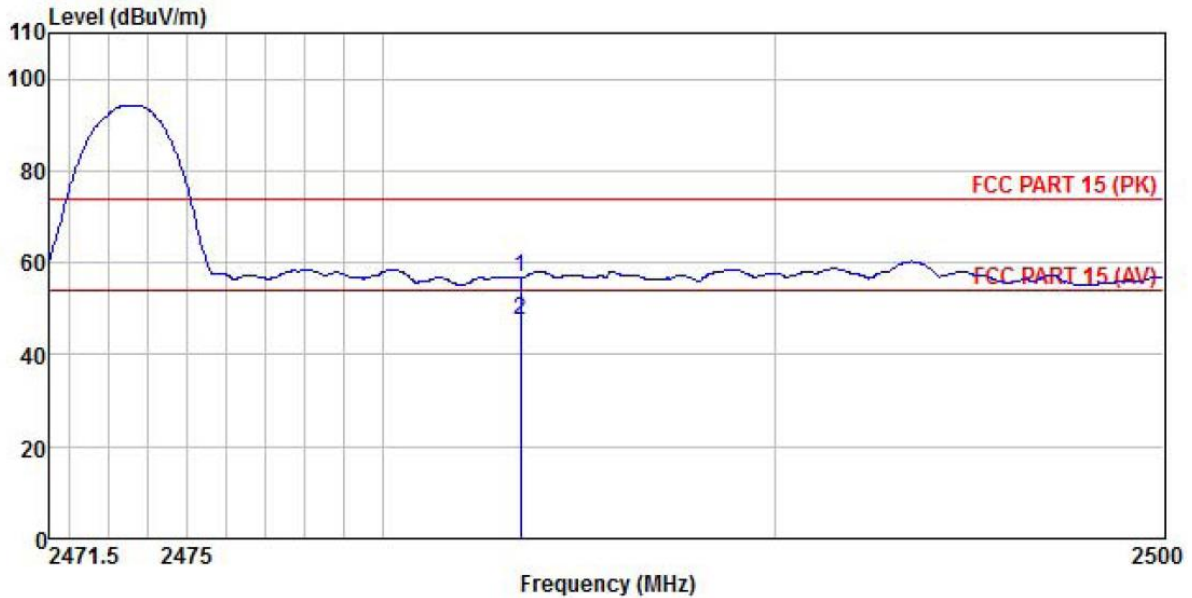


	Freq	ReadAntenna	Cable	Aux	Preamp	Level	Limit	Over	
	MHz	Level	Factor	Loss	Factor	Factor	Line	Limit	Remark
		dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB
1	2483.500	24.18	27.27	4.81	1.70	0.00	57.96	74.00	-16.04 Peak
2	2483.500	14.47	27.27	4.81	1.70	0.00	48.25	54.00	-5.75 Average

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	2.4G-1.4M Bandwidth
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%

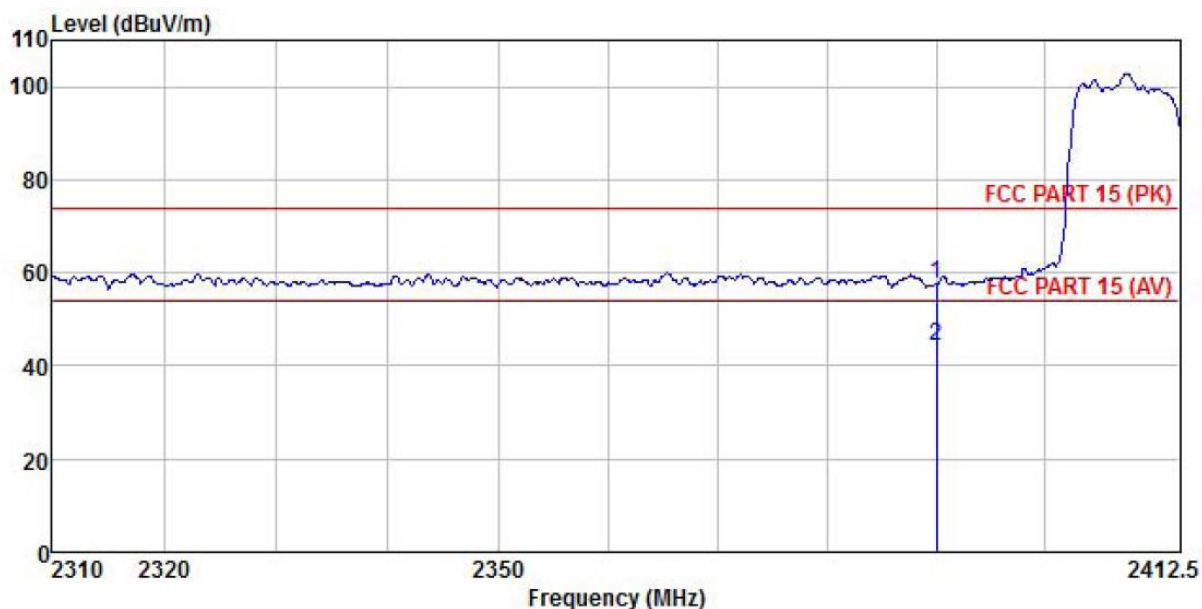


	Freq	ReadAntenna	Cable	Aux	Preamp	Level	Limit	Over	Remark
	MHz	Level	Factor	Loss	Factor	Factor	Line	Limit	
		dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB
1	2483.500	23.13	27.27	4.81	1.70	0.00	56.91	74.00	-17.09 Peak
2	2483.500	13.60	27.27	4.81	1.70	0.00	47.38	54.00	-6.62 Average

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamp Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	2.4G-10M Bandwidth
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%

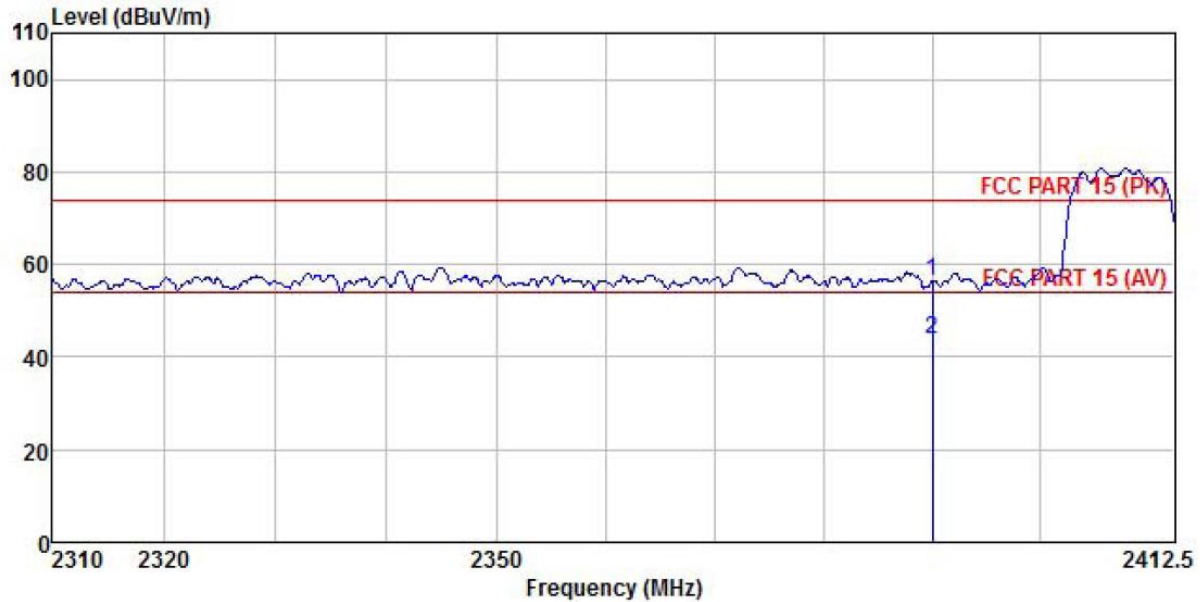


	Freq	ReadAntenna	Cable	Aux	Preamp	Level	Limit	Over	
	MHz	Level	Factor	Loss	Factor	Factor	Line	Limit	Remark
		dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	24.32	27.03	4.69	1.68	0.00	57.72	74.00	-16.28 Peak
2	2390.000	10.85	27.03	4.69	1.68	0.00	44.25	54.00	-9.75 Average

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	2.4G-10M Bandwidth
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%

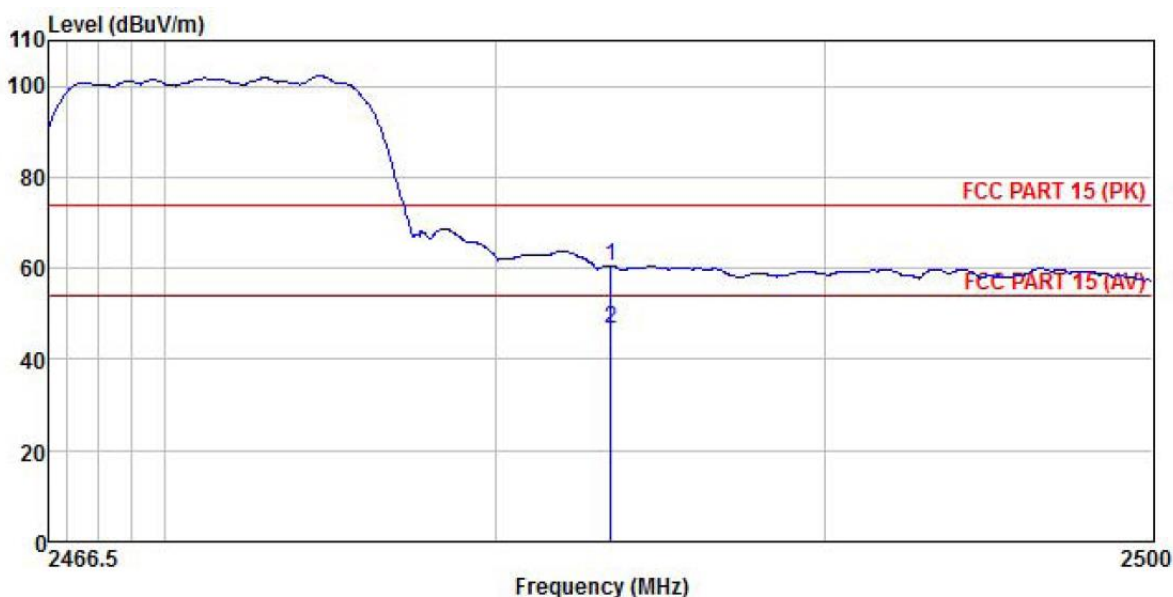


	Freq	ReadAntenna	Cable	Aux	Preamp	Level	Limit	Over	
	MHz	Level	Factor	Loss	Factor	Factor	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	22.97	27.03	4.69	1.68	0.00	56.37	74.00	-17.63 Peak
2	2390.000	10.56	27.03	4.69	1.68	0.00	43.96	54.00	-10.04 Average

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	2.4G-10M Bandwidth
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%

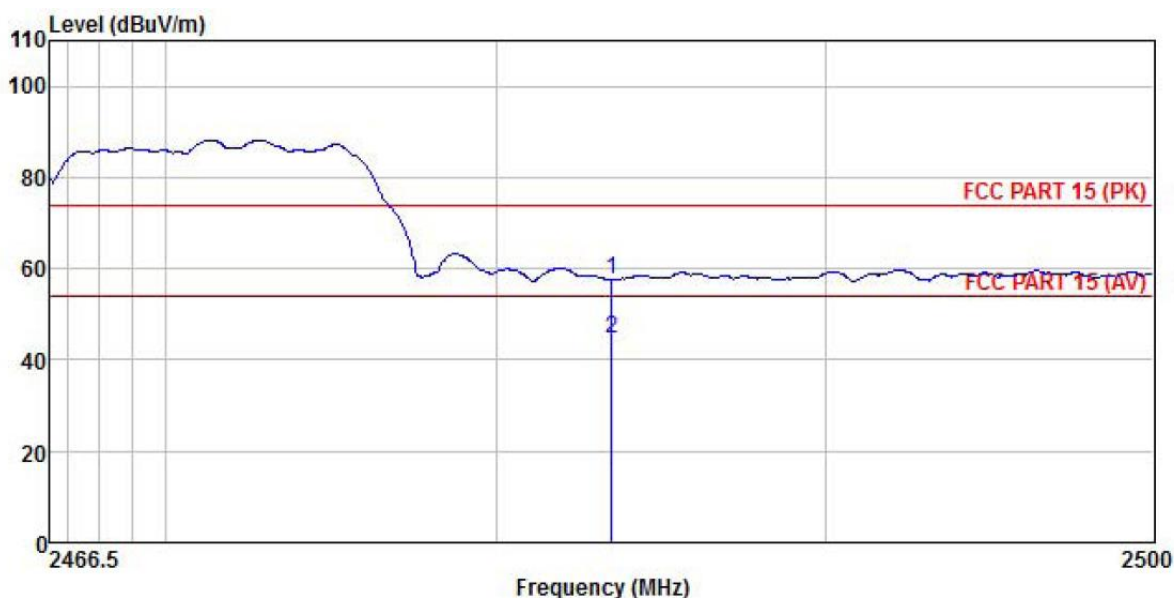


	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	2483.500	26.84	27.27	4.81	1.70	0.00	60.62	74.00	-13.38	Peak
2	2483.500	12.80	27.27	4.81	1.70	0.00	46.58	54.00	-7.42	Average

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	2.4G-10M Bandwidth
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%



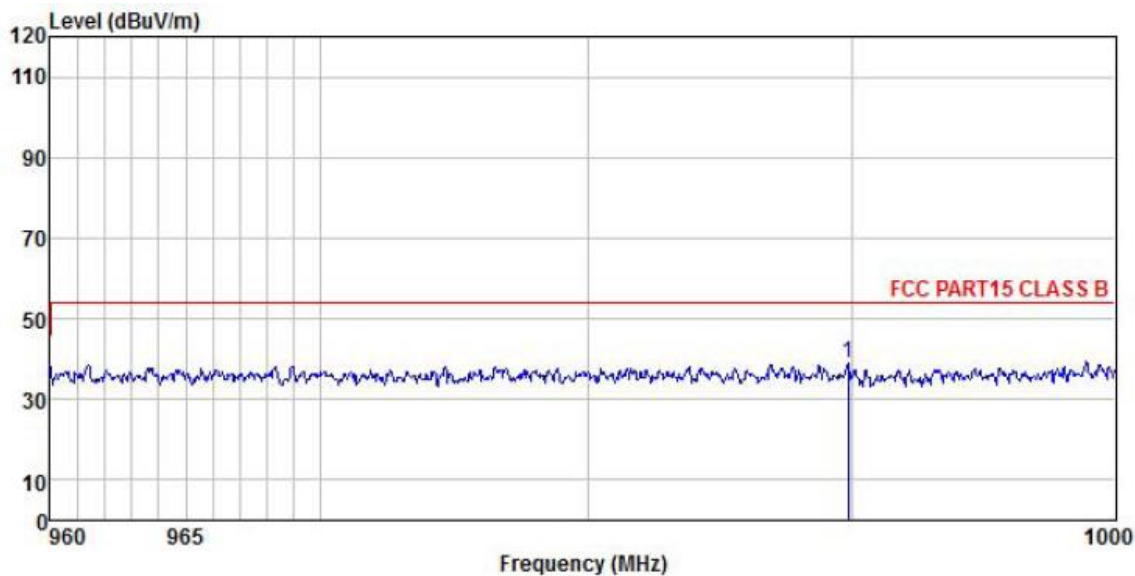
	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	2483.500	23.90	27.27	4.81	1.70	0.00	57.68	74.00	-16.32	Peak
2	2483.500	11.05	27.27	4.81	1.70	0.00	44.83	54.00	-9.17	Average

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

900MHz:

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	900M-1.4M Bandwidth
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%

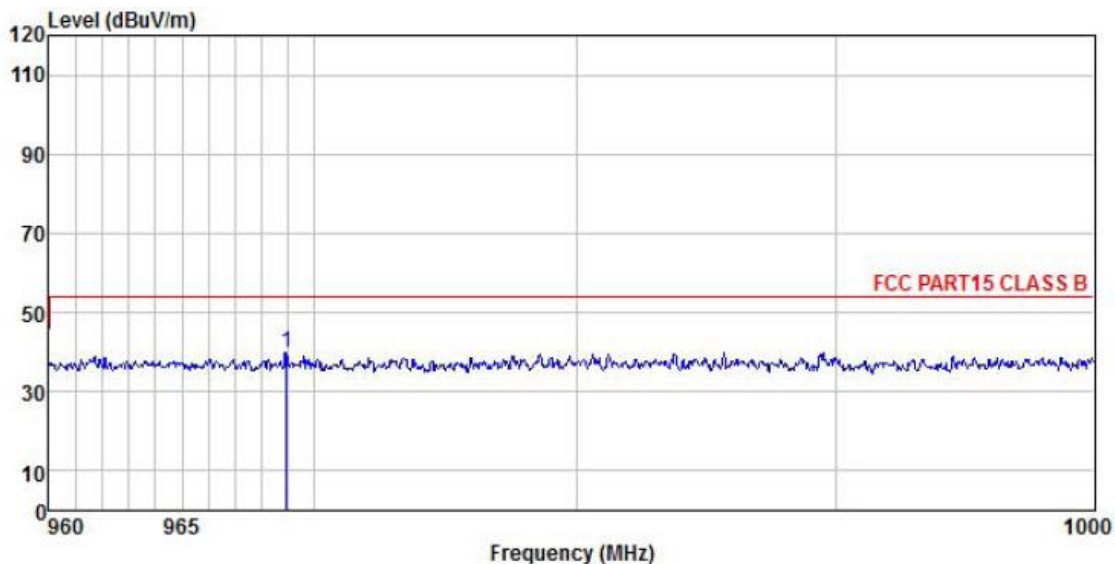


	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	989.806	14.36	23.04	1.58	0.00	0.00	38.98	54.00	-15.02	QP

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	900M-1.4M Bandwidth
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%

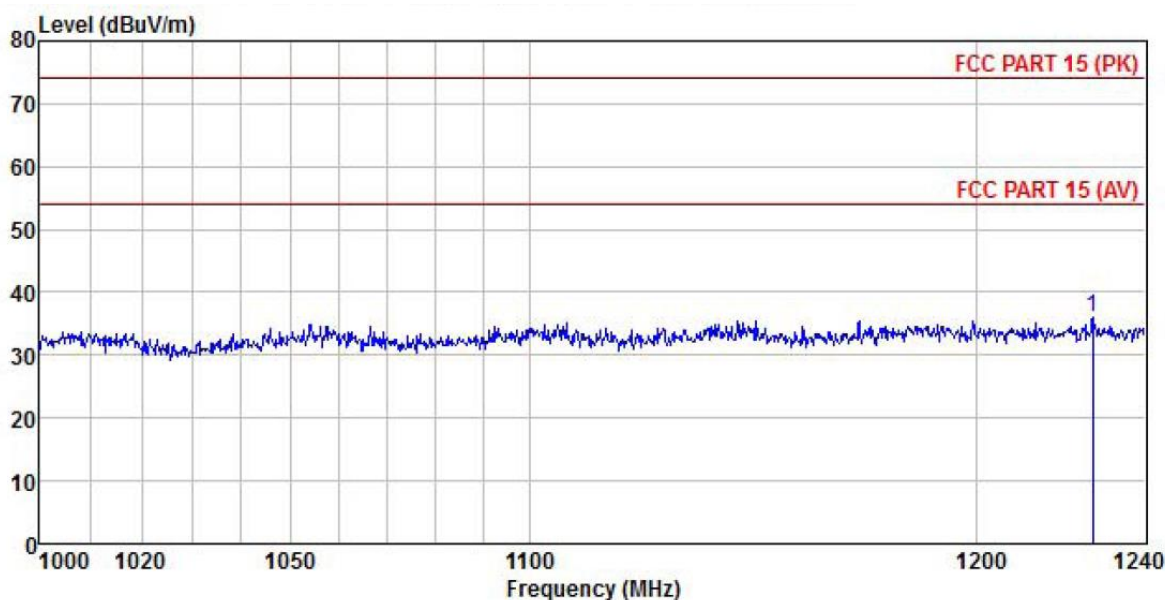


	Freq	ReadAntenna	Cable	Aux	Preamp	Level	Limit	Over	
	MHz	Level	Factor	Loss	Factor	Factor	Line	Limit	Remark
		dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB
1	968.937	15.45	22.92	1.57	0.00	0.00	39.94	54.00	-14.06 QP

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	900M-1.4M Bandwidth
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%

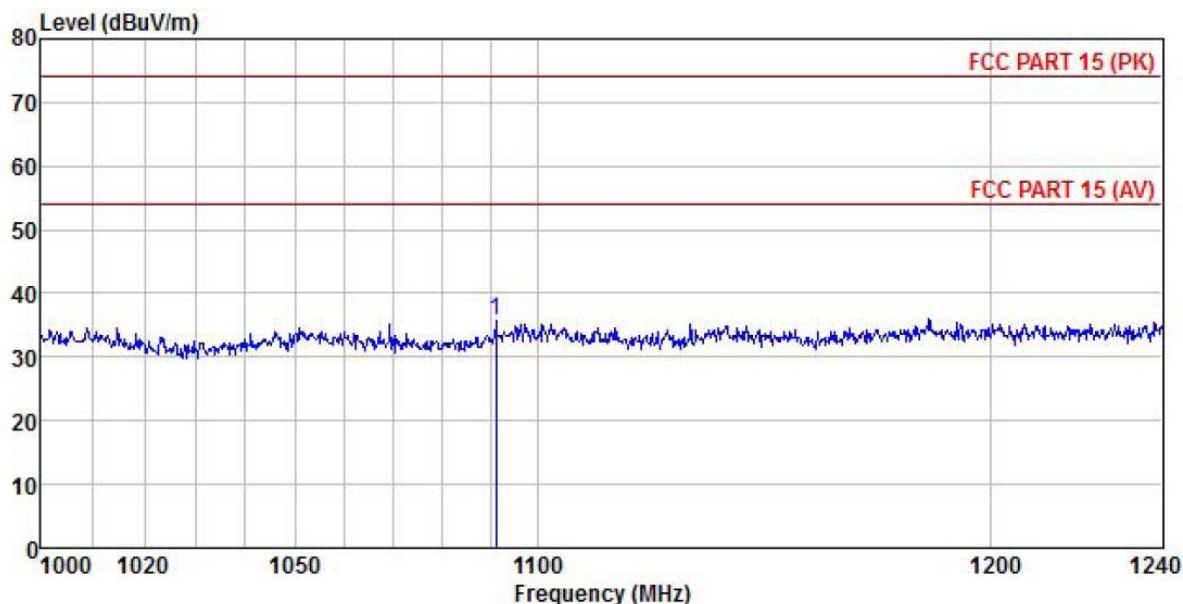


	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	1227.262	47.96	24.45	3.36	1.21	41.06	35.92	74.00	-38.08	Peak

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamp Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	900M-1.4M Bandwidth
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%

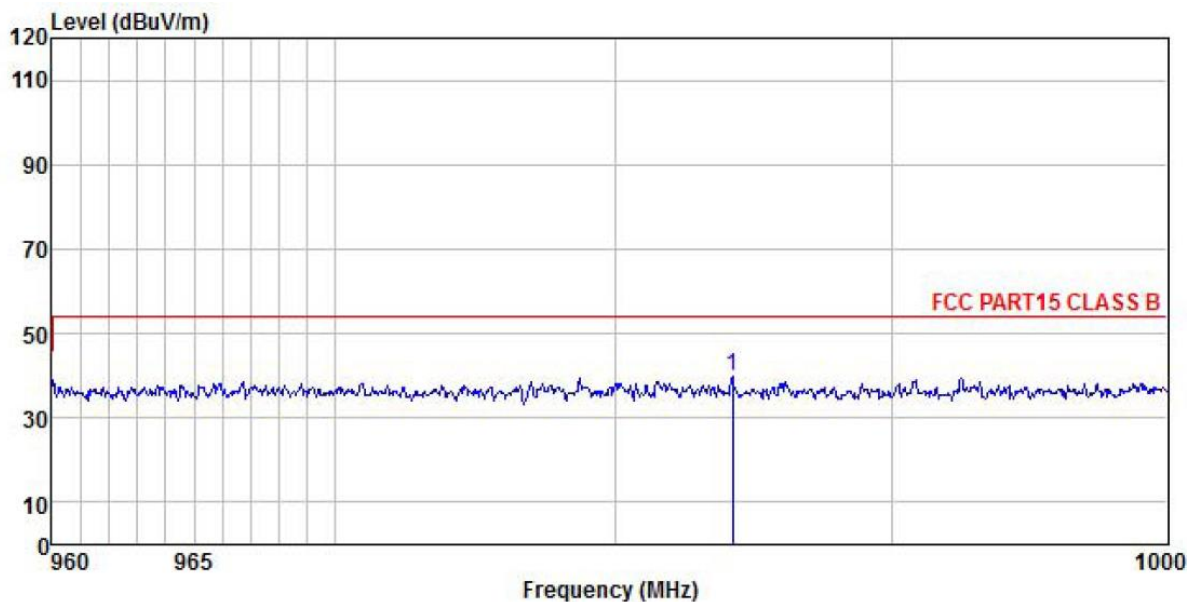


	Read	Antenna	Cable	Aux	Preamp		Limit	Over	
Freq	Level	Factor	Loss	Factor	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1 1091.262	48.45	24.25	3.16	1.19	41.24	35.81	74.00	-38.19	Peak

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	900M-10M Bandwidth
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%

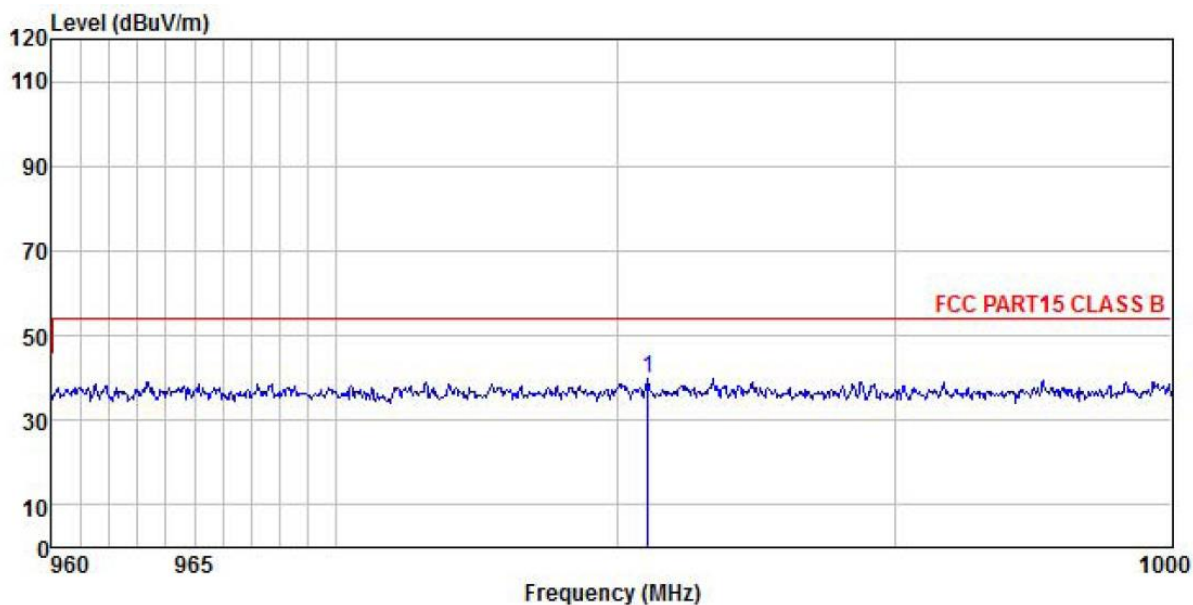


	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	984.206	15.35	23.00	1.58	0.00	0.00	39.93	54.00	-14.07	QP

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	900M-10M Bandwidth
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%

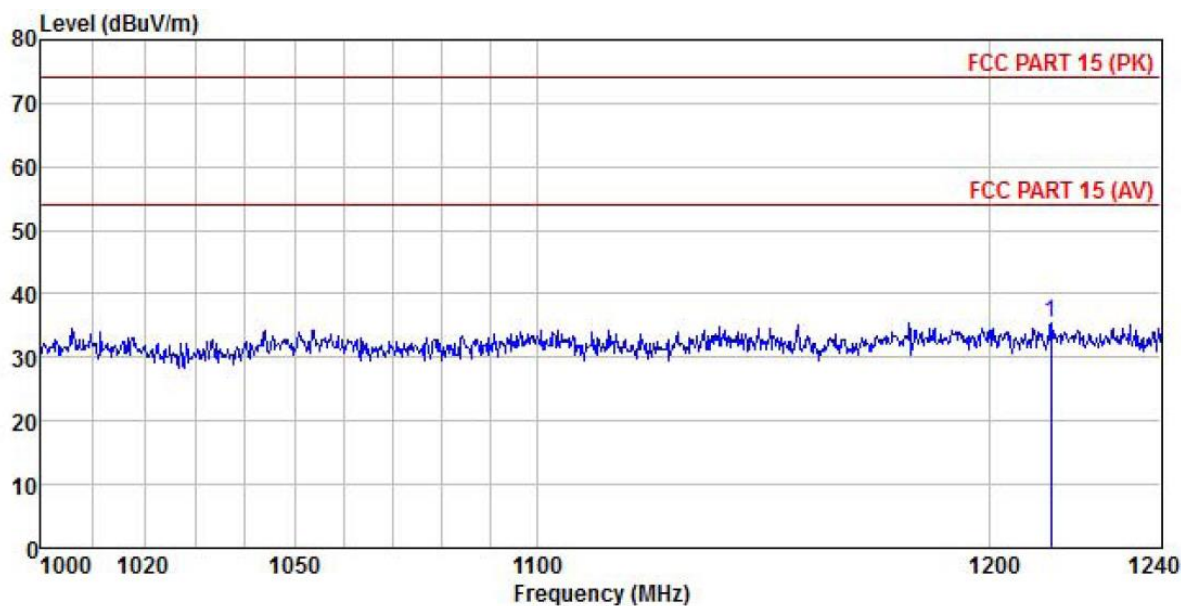


	Freq	ReadAntenna	Cable	Aux	Preamp	Level	Limit	Over	
	Level	Factor	Loss	Factor	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB
1	981.077	15.43	23.00	1.58	0.00	0.00	40.01	54.00	-13.99 QP

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	900M-10M Bandwidth
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%

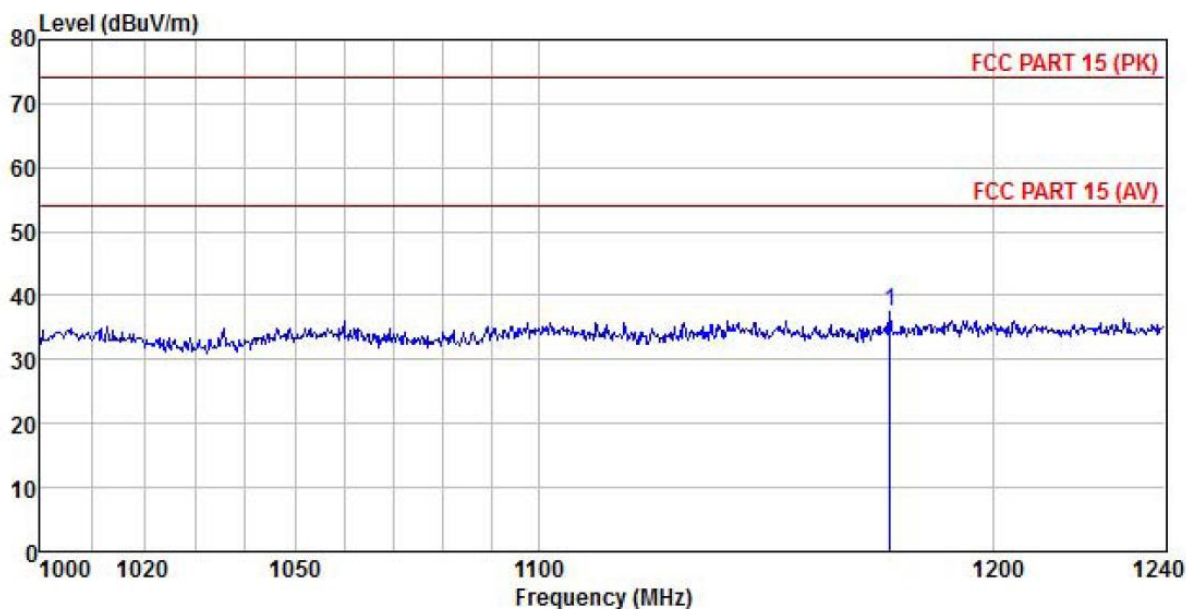


	Read	Antenna	Cable	Aux	Preamp	Level	Limit	Over	
Freq	Level	Factor	Loss	Factor	Factor	Level	Line	Limit	Remark
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1 1214.133	47.44	24.38	3.33	1.21	41.06	35.30	74.00	-38.70	Peak

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	900M 10M Bandwidth
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%



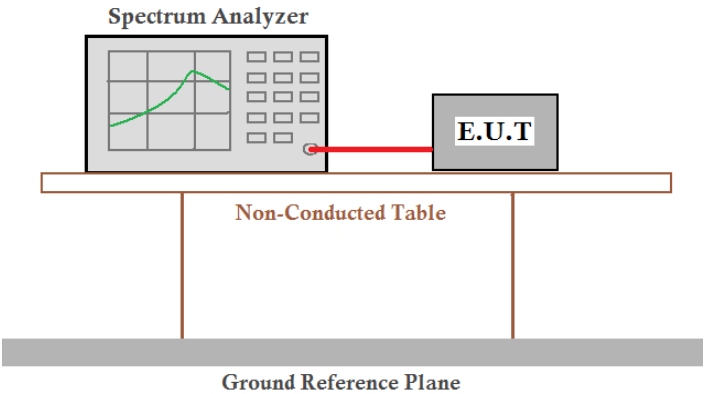
	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	1176.341	49.82	24.29	3.28	1.20	41.10	37.49	74.00	-36.51	Peak

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamp Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

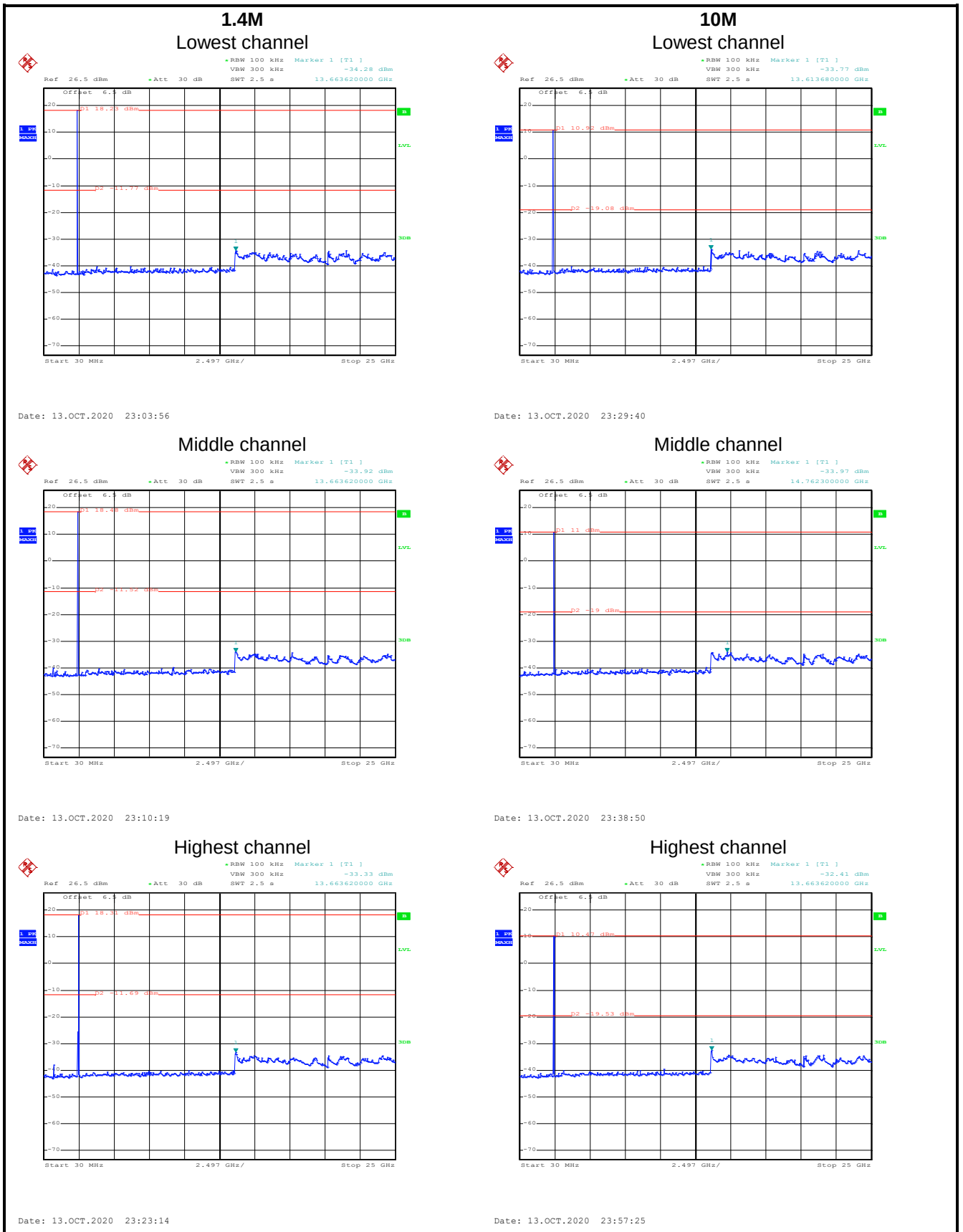
6.7 Spurious Emission

6.7.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB 558074
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph(b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.
Test setup:	 The diagram illustrates the test setup for conducted emission testing. A Spectrum Analyzer is connected via a red cable to an E.U.T (Equipment Under Test). Both are placed on a Non-Conducted Table, which is supported by two vertical legs. Below the table is a Ground Reference Plane, represented by a thick grey bar.
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

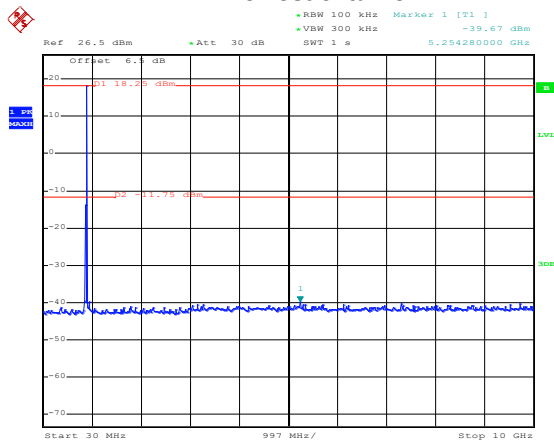
Test plot as follows:

2.4GHz:



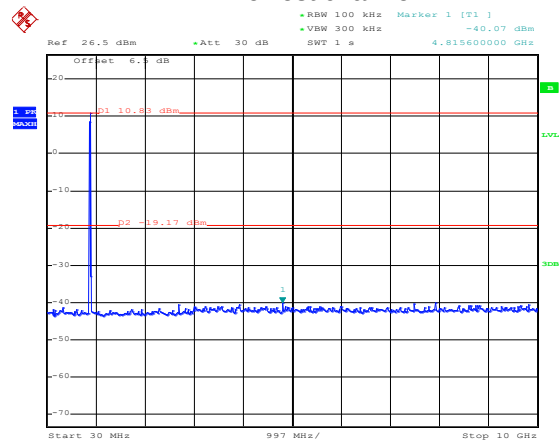
900MHz:

1.4M Lowest channel



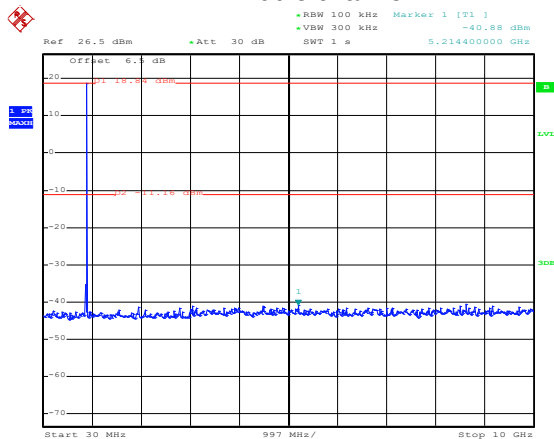
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10M Lowest channel



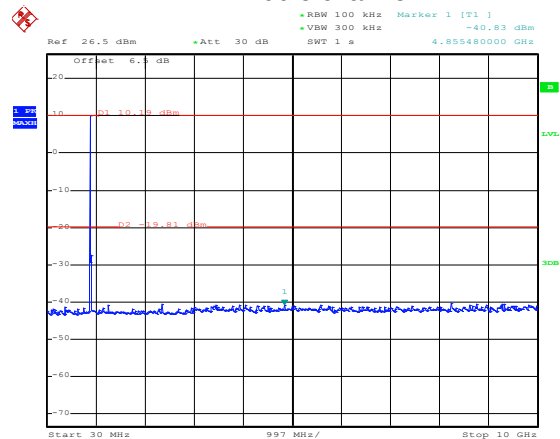
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Middle channel



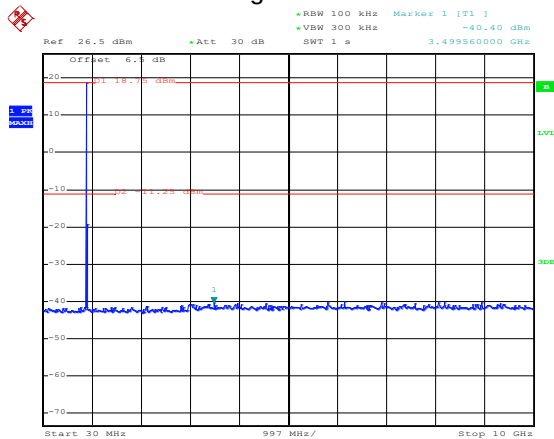
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Middle channel



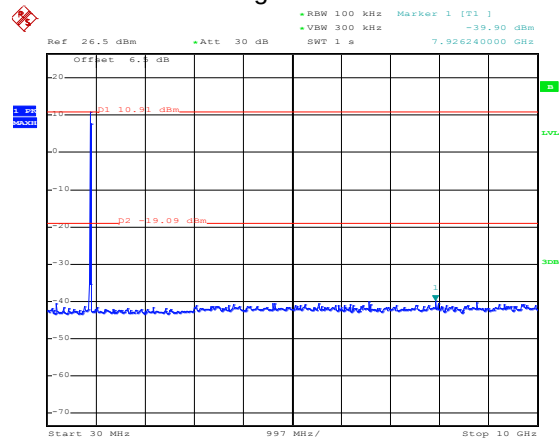
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Highest channel



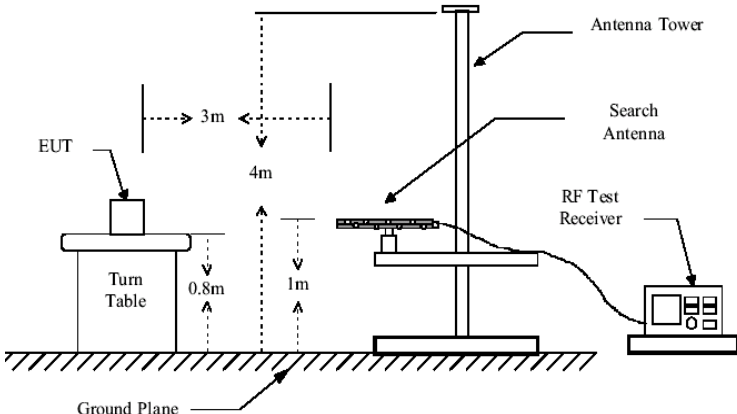
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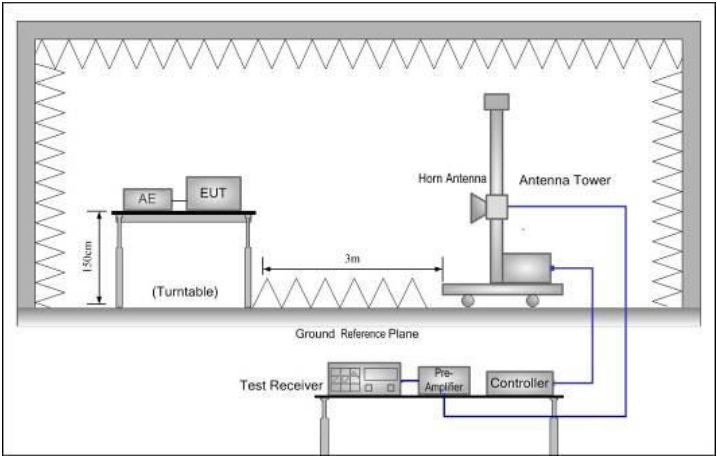
Highest channel



Date: 14.OCT.2020 18:28:15

6.7.2 Radiated Emission Method

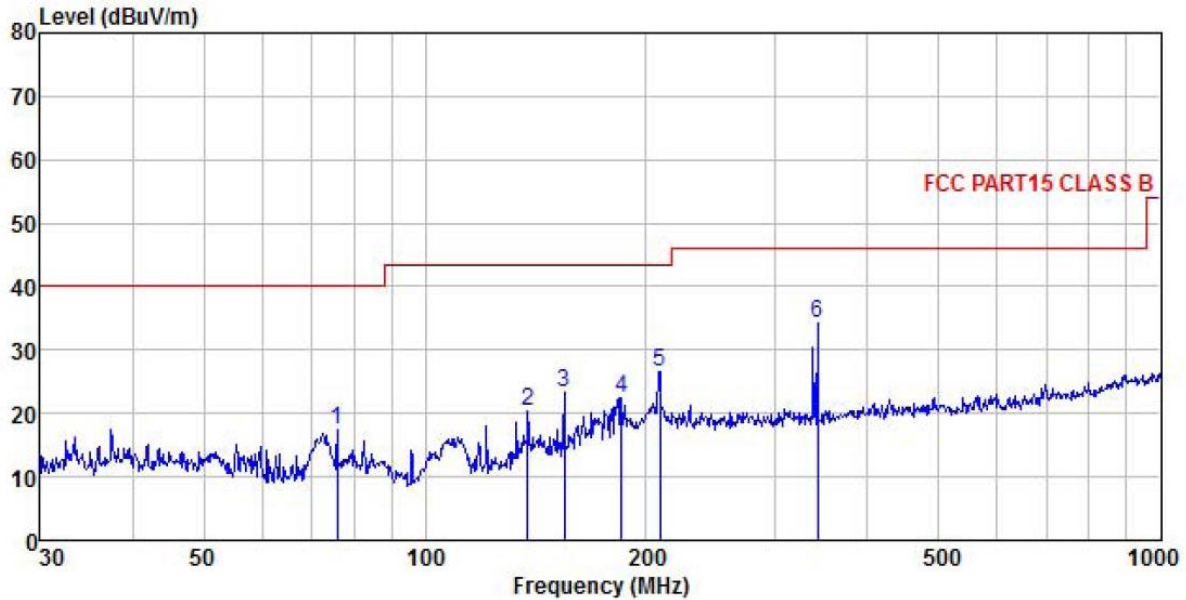
Test Requirement:	FCC Part 15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	9kHz to 25GHz				
Test Distance:	3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
RMS		1MHz	3MHz	Average Value	
Limit:	Frequency		Limit (dBuV/m @3m)		Remark
	30MHz-88MHz		40.0		Quasi-peak Value
	88MHz-216MHz		43.5		Quasi-peak Value
	216MHz-960MHz		46.0		Quasi-peak Value
	960MHz-1GHz		54.0		Quasi-peak Value
	Above 1GHz		54.0		Average Value
74.0			Peak Value		
Test Procedure:	1. 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. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. 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. 4. 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 and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. 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.				
Test setup:	Below 1GHz  Above 1GHz				

	
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case. 2. 9 kHz to 30MHz is too low, so only shows the data of above 30MHz in this report.

Measurement Data (worst case):

Below 1GHz:

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	2.4G TX mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Humi: 57%

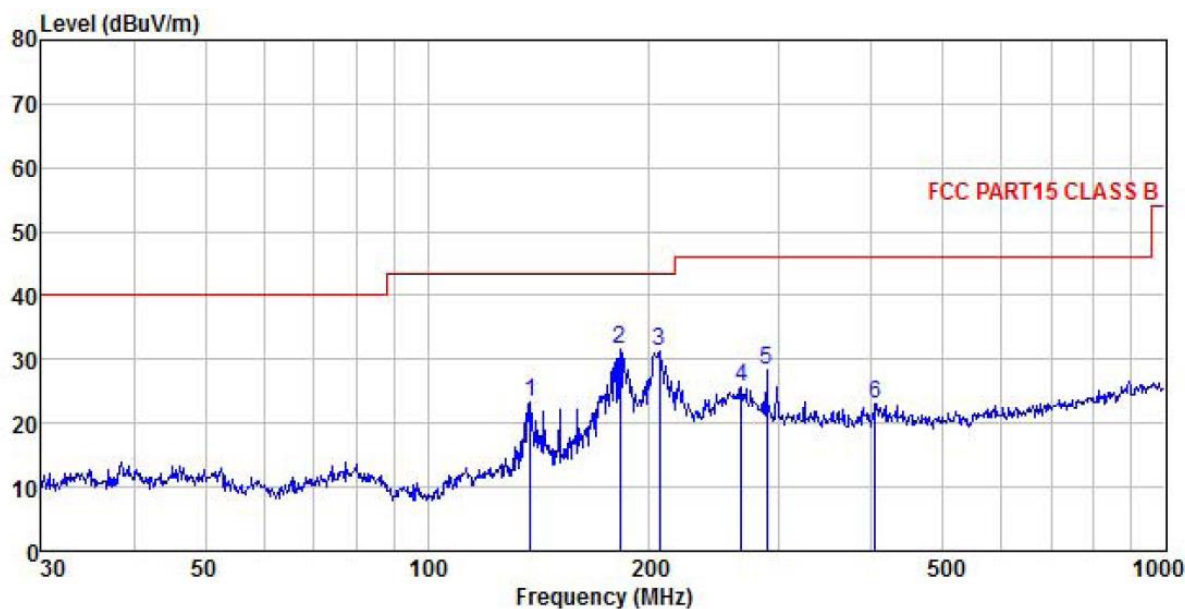


	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit	Over	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	75.977	34.85	11.77	0.46	0.00	29.67	17.41	40.00	-22.59	QP
2	137.903	35.49	13.68	0.60	0.00	29.28	20.49	43.50	-23.01	QP
3	154.821	37.56	14.40	0.62	0.00	29.18	23.40	43.50	-20.10	QP
4	185.138	33.54	17.20	0.69	0.00	28.93	22.50	43.50	-21.00	QP
5	208.580	36.35	18.34	0.73	0.00	28.78	26.64	43.50	-16.86	QP
6	341.979	43.08	18.78	0.92	0.00	28.54	34.24	46.00	-11.76	QP

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	2.4G TX mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%



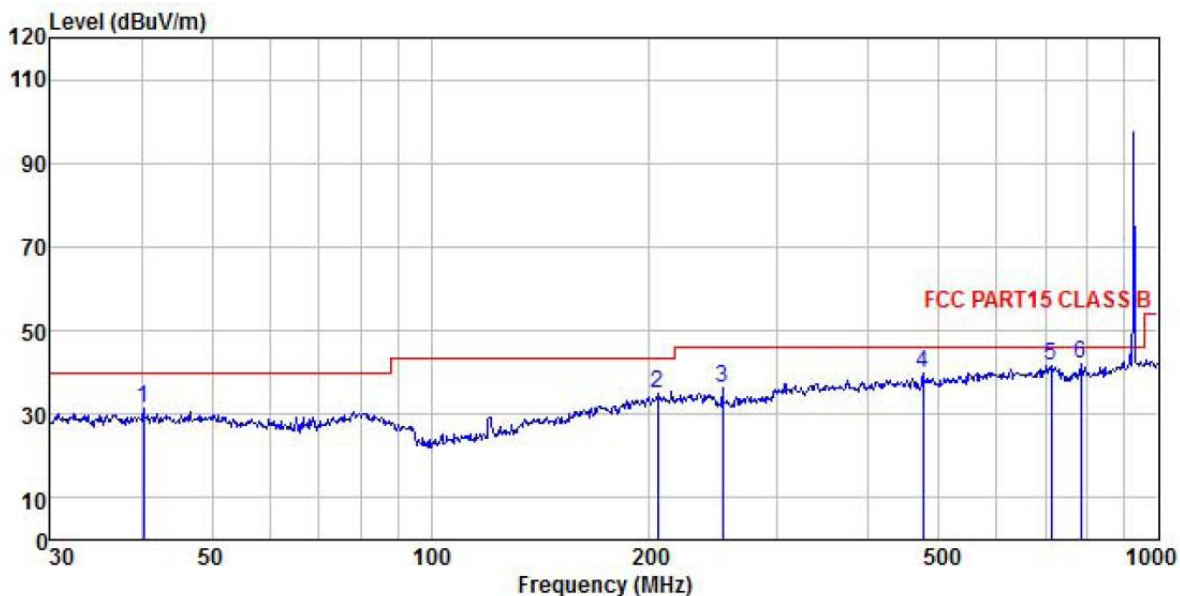
	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	137.903	38.24	13.68	0.60	0.00	29.28	23.24	43.50	-20.26	QP
2	182.559	42.93	17.05	0.69	0.00	28.95	31.72	43.50	-11.78	QP
3	206.398	41.09	18.33	0.73	0.00	28.79	31.36	43.50	-12.14	QP
4	266.609	34.89	18.57	0.81	0.00	28.51	25.76	46.00	-20.24	QP
5	287.990	37.20	18.65	0.85	0.00	28.47	28.23	46.00	-17.77	QP
6	404.667	31.70	19.11	1.00	0.00	28.79	23.02	46.00	-22.98	QP

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Below 1GHz:

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	900M TX mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Humi: 57%

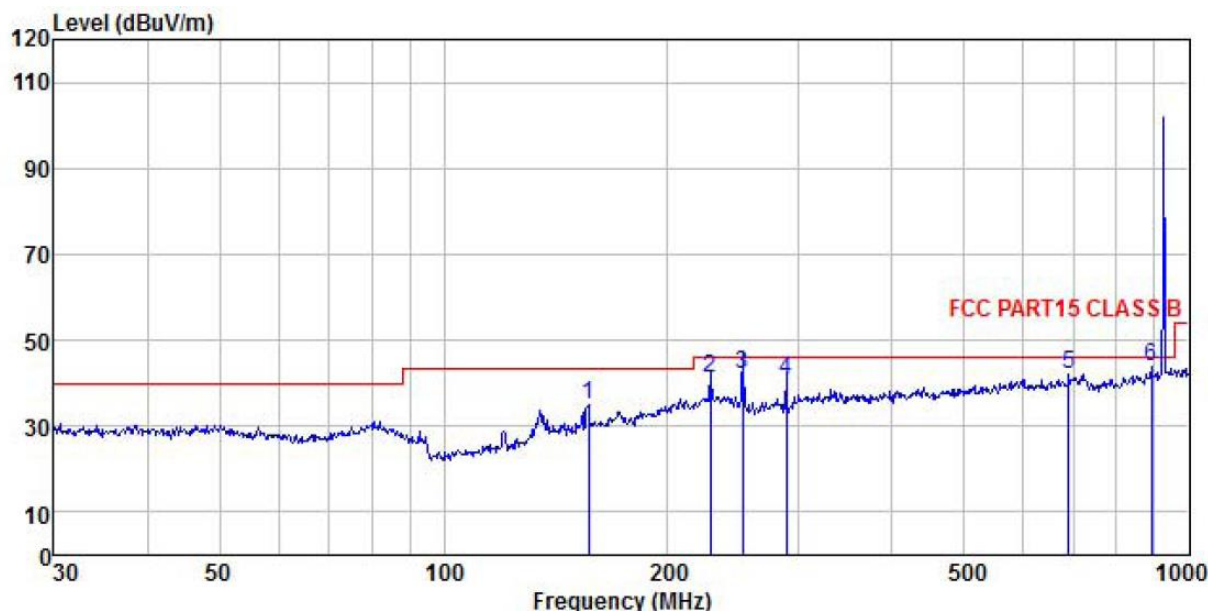


	Freq	ReadAntenna	Cable	Aux	Preamp	Level	Limit	Over	Remark
	MHz	Level	Factor	Loss	Factor	Factor	dBuV/m	dBuV/m	dB
		dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	
1	40.276	18.38	12.81	0.35	0.00	0.00	31.54	40.00	-8.46 QP
2	204.955	16.14	18.32	0.73	0.00	0.00	35.19	43.50	-8.31 QP
3	252.063	17.11	18.51	0.78	0.00	0.00	36.40	46.00	-9.60 QP
4	475.499	19.59	19.31	1.08	0.00	0.00	39.98	46.00	-6.02 QP
5	711.674	19.64	20.52	1.34	0.00	0.00	41.50	46.00	-4.50 QP
6	782.345	19.74	20.80	1.38	0.00	0.00	41.92	46.00	-4.08 QP

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Dragon Fish Remote Control	Product model:	DFRC-1
Test By:	Mike	Test mode:	900M TX mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%



	Freq	Read	Antenna	Cable	Aux	Preamp	Level	Limit	Over	Remark
	MHz	Level	Factor	Loss	Factor	Factor	Level	Line	Limit	
		dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	156.458	19.37	14.77	0.63	0.00	0.00	34.77	43.50	-8.73	QP
2	227.691	21.94	18.42	0.75	0.00	0.00	41.11	46.00	-4.89	QP
3	252.063	22.80	18.51	0.78	0.00	0.00	42.09	46.00	-3.91	QP
4	287.990	21.06	18.65	0.85	0.00	0.00	40.56	46.00	-5.44	QP
5	689.565	20.45	20.42	1.32	0.00	0.00	42.19	46.00	-3.81	QP
6	890.728	19.90	22.38	1.47	0.00	0.00	43.75	46.00	-2.25	QP

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

Above 1GHz

900MHz

1.4M								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1812.00	56.42	25.24	4.12	1.51	41.22	46.07	74.00	Vertical
1812.00	56.22	25.24	4.12	1.51	41.22	45.87	74.00	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1812.00	45.89	25.24	4.12	1.51	41.22	35.54	54.00	Vertical
1812.00	47.20	25.24	4.12	1.51	41.22	36.85	54.00	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1830.00	53.67	25.33	4.15	1.52	41.27	43.40	74.00	Vertical
1830.00	56.15	25.33	4.15	1.52	41.27	45.88	74.00	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1830.00	44.55	25.33	4.15	1.52	41.27	34.28	54.00	Vertical
1830.00	45.53	25.33	4.15	1.52	41.27	35.26	54.00	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1848.00	55.79	25.39	4.17	1.53	41.31	45.57	74.00	Vertical
1848.00	56.44	25.39	4.17	1.53	41.31	46.22	74.00	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1848.00	45.49	25.39	4.17	1.53	41.31	35.27	54.00	Vertical
1848.00	46.24	25.39	4.17	1.53	41.31	36.02	54.00	Horizontal
Remark: 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor. 2. The emission levels of other frequencies are very lower than the limit and not show in test report.								

10M								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1818.00	52.15	25.29	4.13	1.51	41.25	41.83	74.00	Vertical
1818.00	51.75	25.29	4.13	1.51	41.25	41.43	74.00	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1818.00	43.34	25.29	4.13	1.51	41.25	33.02	54.00	Vertical
1818.00	42.17	25.29	4.13	1.51	41.25	31.85	54.00	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1830.00	49.67	25.33	4.15	1.52	41.27	39.40	74.00	Vertical
1830.00	51.12	25.33	4.15	1.52	41.27	40.85	74.00	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1830.00	40.60	25.33	4.15	1.52	41.27	30.33	54.00	Vertical
1830.00	40.80	30.96	6.86	2.47	41.84	39.25	54.00	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1842.00	50.01	25.37	4.16	1.53	41.30	39.77	74.00	Vertical
1842.00	51.75	25.37	4.16	1.53	41.30	41.51	74.00	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1842.00	40.29	25.37	4.16	1.53	41.30	30.05	54.00	Vertical
1842.00	42.67	25.37	4.16	1.53	41.30	32.43	54.00	Horizontal
Remark:								
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.								
2. The emission levels of other frequencies are very lower than the limit and not show in test report.								

2.4GHz

1.4M								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4807.00	58.68	30.78	6.80	2.44	41.81	56.89	74.00	Vertical
4807.00	54.45	30.78	6.80	2.44	41.81	52.66	74.00	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4807.00	50.77	30.78	6.80	2.44	41.81	48.98	54.00	Vertical
4807.00	44.59	30.78	6.80	2.44	41.81	42.80	54.00	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4879.00	58.75	30.96	6.86	2.47	41.84	57.20	74.00	Vertical
4879.00	54.04	30.96	6.86	2.47	41.84	52.49	74.00	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4879.00	50.96	30.96	6.86	2.47	41.84	49.41	54.00	Vertical
4879.00	44.50	30.96	6.86	2.47	41.84	42.95	54.00	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4947.00	58.57	31.11	6.91	2.49	41.87	57.21	74.00	Vertical
4947.00	54.23	31.11	6.91	2.49	41.87	52.87	74.00	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4947.00	50.67	31.11	6.91	2.49	41.87	49.31	54.00	Vertical
4947.00	44.70	31.11	6.91	2.49	41.87	43.34	54.00	Horizontal
Remark:								
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.								
2. The emission levels of other frequencies are very lower than the limit and not show in test report.								

10M								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4815.00	53.55	30.78	6.80	2.44	41.81	51.76	74.00	Vertical
4815.00	49.38	30.78	6.80	2.44	41.81	47.59	74.00	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4815.00	43.88	30.78	6.80	2.44	41.81	42.09	54.00	Vertical
4815.00	39.17	30.78	6.80	2.44	41.81	37.38	54.00	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4879.00	53.88	30.96	6.86	2.47	41.84	52.33	74.00	Vertical
4879.00	49.83	30.96	6.86	2.47	41.84	48.28	74.00	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4879.00	43.44	30.96	6.86	2.47	41.84	41.89	54.00	Vertical
4879.00	39.34	30.96	6.86	2.47	41.84	37.79	54.00	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4943.00	54.37	31.11	6.91	2.49	41.87	53.01	74.00	Vertical
4943.00	49.85	31.11	6.91	2.49	41.87	48.49	74.00	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4943.00	43.58	31.11	6.91	2.49	41.87	42.22	54.00	Vertical
4943.00	39.14	31.11	6.91	2.49	41.87	37.78	54.00	Horizontal
Remark:								
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.								
2. The emission levels of other frequencies are very lower than the limit and not show in test report.								