

RF TEST REPORT

For

Shen Zhen Shi Fei Xun Hu Dong Co., Limited

Product Name: Game Console With AR gun

Test Model(s): GC05

Report Reference No. : DACE240921003RF001

FCC ID : 2BGPV-GC05

Applicant's Name : Shen Zhen Shi Fei Xun Hu Dong Co., Limited

Address : 401, Chong qing Road No.2, Qiao tou she qu, Fu hai Street, Bao an District, Shen zhen, 518103, Guangdong, China

Testing Laboratory : Shenzhen DACE Testing Technology Co., Ltd.

Address : 101-102, H5 Building & floor 1, Building H, Hongfa Science and Technology Park, Tangtou, Shiyan, Bao'An District, Shenzhen, China

Test Specification Standard : 47 CFR Part 15.249

Date of Receipt : May 17, 2024

Date of Test : May 17, 2024 to May 23, 2024

Data of Issue : September 25, 2024

Result : Pass

Note: This report shall not be reproduced except in full, without the written approval of Shenzhen DACE Testing Technology Co., Ltd. This document may be altered or revised by Shenzhen DACE Testing Technology Co., Ltd. personnel only, and shall be noted in the revision section of the document. The test results in the report only apply to the tested sample

Revision History Of Report

Version	Description	REPORT No.	Issue Date
V1.0	Original	DACE240517023RL001	May 23, 2024
V2.0	Update*	DACE240921003RF001	September 25, 2024

Remark: This report is an update report, the update is to add the EUT model number, there is no other changes. These changes do not involve the EMC and rf performance of the product, so the test data are referred to the original report.

NOTE1:

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. 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.

Compiled by:

Keren Huang

Keren Huang / Test Engineer

Supervised by:

Stone Yin

Stone Yin / Project Engineer

Approved by:

Tom Chen

Tom Chen / Manager

CONTENTS

1	TEST SUMMARY	4
1.1	TEST STANDARDS	4
1.2	SUMMARY OF TEST RESULT	4
2	GENERAL INFORMATION	5
2.1	CLIENT INFORMATION	5
2.2	DESCRIPTION OF DEVICE (EUT)	5
2.3	DESCRIPTION OF TEST MODES	5
2.4	DESCRIPTION OF SUPPORT UNITS	5
2.5	EQUIPMENTS USED DURING THE TEST	6
2.6	STATEMENT OF THE MEASUREMENT UNCERTAINTY	7
2.7	IDENTIFICATION OF TESTING LABORATORY	7
2.8	ANNOUNCEMENT	7
3	EVALUATION RESULTS (EVALUATION)	8
3.1	ANTENNA REQUIREMENT	8
3.1.1	Conclusion	8
4	RADIO SPECTRUM MATTER TEST RESULTS (RF)	9
4.1	OCCUPIED BANDWIDTH	9
4.1.1	E.U.T. Operation:	9
4.1.2	Test Setup Diagram:	10
4.1.3	Test Data:	10
4.2	FIELD STRENGTH OF FUNDAMENTAL	11
4.2.1	E.U.T. Operation:	11
4.2.2	Test Setup Diagram:	11
4.2.3	Test Data:	11
4.3	BAND EDGE EMISSIONS (RADIATED)	12
4.3.1	E.U.T. Operation:	12
4.3.2	Test Setup Diagram:	12
4.3.3	Test Data:	13
4.4	EMISSIONS IN FREQUENCY BANDS (BELOW 1GHz)	15
4.4.1	E.U.T. Operation:	15
4.4.2	Test Setup Diagram:	16
4.4.3	Test Data:	17
4.5	EMISSIONS IN FREQUENCY BANDS (ABOVE 1GHz)	19
4.5.1	E.U.T. Operation:	19
4.5.2	Test Setup Diagram:	20
4.5.3	Test Data:	20
5	TEST SETUP PHOTOS	22
6	PHOTOS OF THE EUT	22

1 TEST SUMMARY

1.1 Test Standards

The tests were performed according to following standards:

47 CFR Part 15.249: Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz

1.2 Summary of Test Result

Item	Standard	Method	Requirement	Result
Antenna requirement	47 CFR Part 15.249		47 CFR Part 15.203	Pass
Occupied Bandwidth	47 CFR Part 15.249	ANSI C63.10-2013, section 6.9.2	47 CFR 15.215(c)	Pass
Field strength of fundamental	47 CFR Part 15.249	ANSI C63.10-2013 section 6.6	47 CFR 15.249(a) 47 CFR 15.249(b)(1)	Pass
Band edge emissions (Radiated)	47 CFR Part 15.249	ANSI C63.10-2013 section 6.6.4	47 CFR 15.249(d)	Pass
Emissions in frequency bands (below 1GHz)	47 CFR Part 15.249	ANSI C63.10-2013 section 6.5	47 CFR 15.249(a) 47 CFR 15.249(d) 47 CFR 15.249(e)	Pass
Emissions in frequency bands (above 1GHz)	47 CFR Part 15.249	ANSI C63.10-2013 section 6.6	47 CFR 15.249(a) 47 CFR 15.249(d) 47 CFR 15.249(e)	Pass

2 GENERAL INFORMATION

2.1 Client Information

Applicant's Name : Shen Zhen Shi Fei Xun Hu Dong Co., Limited
Address : 401, Chong qing Road No.2, Qiao tou she qu, Fu hai Street, Bao an District, Shen zhen, 518103, Guangdong, China

Manufacturer : Shen Zhen Shi Fei Xun Hu Dong Co., Limited
Address : 401, Chong qing Road No.2, Qiao tou she qu, Fu hai Street, Bao an District, Shen zhen, 518103, Guangdong, China

2.2 Description of Device (EUT)

Product Name:	Game Console With AR gun
Sample No.:	Q240517004-1
Model/Type reference:	GC05
Series Model:	DM08,1pc, B608, B609, DM09, DM10, DM11, B10, B11
Model Difference:	There are several models of EUT, with differences in the color of the EUT appearance. The internal circuit remains the same, including PCB layout and BOM. These differences will not affect the EMC and RF performance of the product. Therefore, the test model is GC05 .
Trade Mark:	N/A
Product Description:	Game Console With AR gun
Power Supply:	DC3.0V from AAA*2 battery
Operation Frequency:	2479.65MHz
Number of Channels:	1
Modulation Type:	GFSK
Antenna Type:	PCB ANTENNA
Antenna Gain:	-0.58dBi
Hardware Version:	V2.0
Software Version:	V1.0

2.3 Description of Test Modes

No	Title	Description
TM1	TM1	Continuous transmission using GFSK modulation signal

2.4 Description of Support Units

Title	Manufacturer	Model No.	Serial No.
BATTERY	NANFU	1.5VDC	/

2.5 Equipments Used During The Test

Occupied Bandwidth					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RF Test Software	Tachoy Information	RTS-01	V2.0.0.0	/	/
RF Sensor Unit	Tachoy Information	TR1029-2	000001	2023-11-09	2024-11-08
Wideband radio communication tester	R&S	CMW500	113410	2023-06-13	2024-06-12
Vector signal generator	Keysight	N5181A	MY48180415	2023-11-09	2024-11-08
Signal generator	Keysight	N5182A	MY50143455	2023-11-09	2024-11-08
Spectrum Analyzer	Keysight	N9020A	MY53420323	2023-12-12	2024-12-11

Field strength of fundamental Band edge emissions (Radiated) Emissions in frequency bands (below 1GHz) Emissions in frequency bands (above 1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI Test software	Farad	EZ -EMC	V1.1.42	/	/
Positioning Controller	/	MF-7802	/	/	/
Amplifier(18-40G)	COM-POWER	AH-1840	10100008-1	2022-04-05	2025-04-04
Horn antenna	COM-POWER	AH-1840 (18-40G)	10100008	2023-04-05	2025-04-04
Loop antenna	ZHINAN	ZN30900C	ZN30900C	2021-07-05	2024-07-04
Cable(LF)#2	Schwarzbeck	/	/	2024-02-19	2025-02-18
Cable(LF)#1	Schwarzbeck	/	/	2024-02-19	2025-02-18
Cable(HF)#2	Schwarzbeck	AK9515E	96250	2024-03-20	2025-03-19
Cable(HF)#1	Schwarzbeck	SYV-50-3-1	/	2024-03-20	2025-03-19
Power amplifier(LF)	Schwarzbeck	BBV9743	9743-151	2023-06-13	2024-06-12
Power amplifier(HF)	Schwarzbeck	BBV9718	9718-282	2023-06-13	2024-06-12
Wideband radio communication tester	R&S	CMW500	113410	2023-06-13	2024-06-12
Spectrum Analyzer	R&S	FSP30	1321.3008K40-101729-jR	2023-06-14	2024-06-13
Horn Antenna	Sunol Sciences	DRH-118	A091114	2023-05-13	2025-05-12
Broadband Antenna	Sunol Sciences	JB6 Antenna	A090414	2023-05-21	2025-05-20
Test Receiver	R&S	ESCI	102109	2023-06-13	2024-06-12

2.6 Statement Of The Measurement Uncertainty

Test Item	Measurement Uncertainty
Occupied Bandwidth	$\pm 3.63\%$
Radiated Emission (Above 1GHz)	$\pm 5.46\text{dB}$
Radiated Emission (Below 1GHz)	$\pm 5.79\text{dB}$
Note: (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.	

2.7 Identification of Testing Laboratory

Company Name:	Shenzhen DACE Testing Technology Co., Ltd.
Address:	101-102 Building H5 & 1/F., Building H, Hongfa Science & Technology Park, Tangtou, Shiyan, Bao'an District, Shenzhen, Guangdong, China
Phone Number:	+86-13267178997
Fax Number:	86-755-29113252

Identification of the Responsible Testing Location

Company Name:	Shenzhen DACE Testing Technology Co., Ltd.
Address:	101-102 Building H5 & 1/F., Building H, Hongfa Science & Technology Park, Tangtou, Shiyan, Bao'an District, Shenzhen, Guangdong, China
Phone Number:	+86-13267178997
Fax Number:	86-755-29113252
FCC Registration Number:	0032847402
Designation Number:	CN1342
Test Firm Registration No.:	778666
A2LA Certificate Number:	6270.01

2.8 Announcement

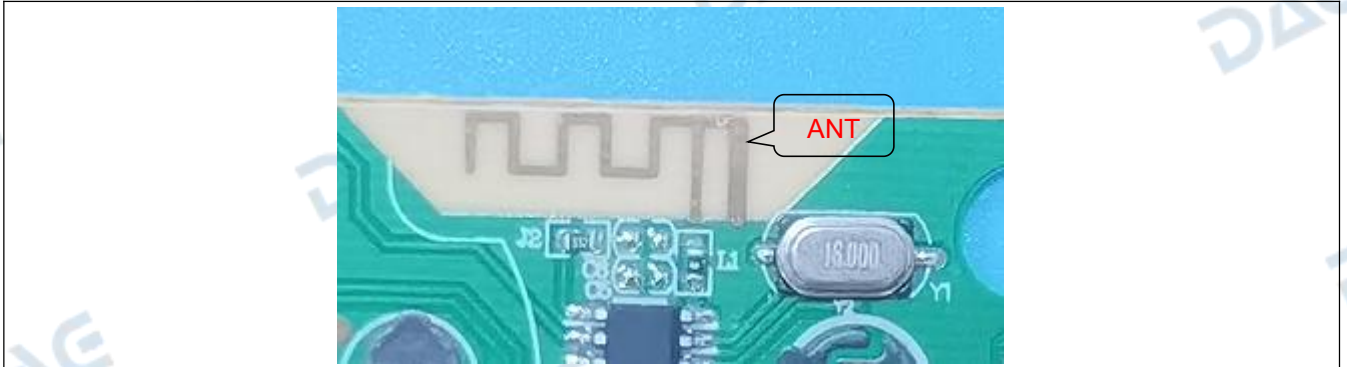
- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by DACE and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) We hereby declare that the laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant. the laboratory is not responsible for the accuracy of the information provided by the client. When the information provided by the customer may affect the effectiveness of the results, the responsibility lies with the customer, and the laboratory does not assume any responsibility.

3 Evaluation Results (Evaluation)

3.1 Antenna requirement

Test Requirement:	Refer to 47 CFR Part 15.203, 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 shall be considered sufficient to comply with the provisions of this section.
-------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

3.1.1 Conclusion



4 Radio Spectrum Matter Test Results (RF)

4.1 Occupied Bandwidth

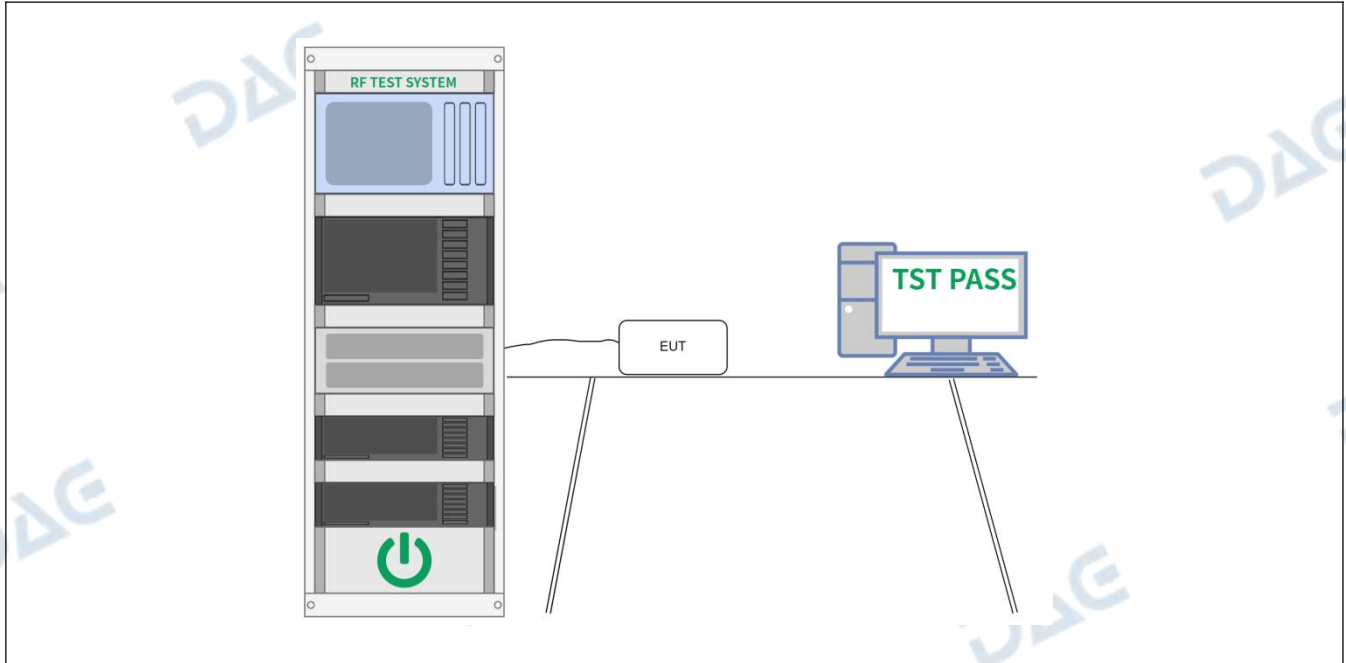
Test Requirement:	47 CFR 15.215(c)
Test Limit:	Refer to 47 CFR 15.215(c), intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.
Test Method:	ANSI C63.10-2013, section 6.9.2
Procedure:	<p>a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.</p> <p>b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement.</p> <p>c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.5.2.</p> <p>d) Steps a) through c) might require iteration to adjust within the specified tolerances.</p> <p>e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target “-xx dB down” requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.</p> <p>f) Set detection mode to peak and trace mode to max hold.</p> <p>g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).</p> <p>h) Determine the “-xx dB down amplitude” using $[(\text{reference value}) - \text{xx}]$. Alternatively, this calculation may be made by using the marker-delta function of the instrument.</p> <p>i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).</p> <p>j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-xx dB down amplitude” determined in step h). If a marker is below this “-xx dB down amplitude” value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the “-xx dB down amplitude” determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.</p> <p>k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).</p>

4.1.1 E.U.T. Operation:

Operating Environment:

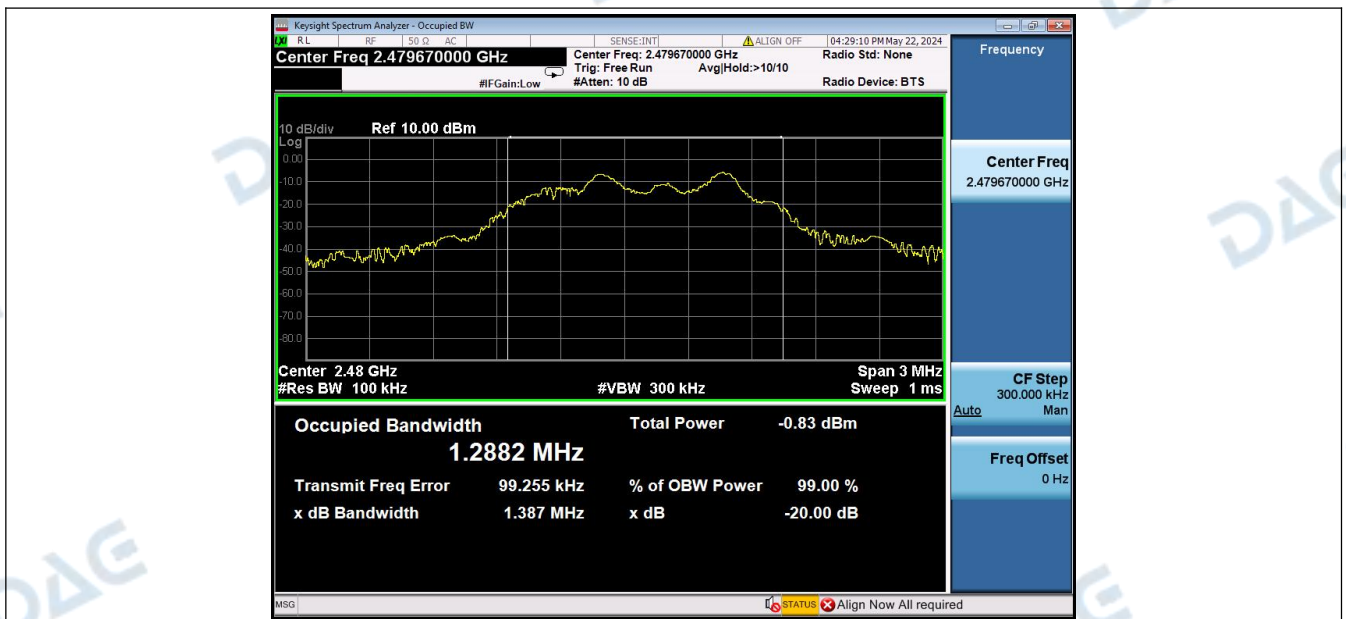
Temperature:	22.3 °C	Humidity:	46.3 %	Atmospheric Pressure:	101 kPa
Pretest mode:	TM1				
Final test mode:	TM1				

4.1.2 Test Setup Diagram:



4.1.3 Test Data:

Condition	Antenna	Frequency (MHz)	20dB BW(kHz)	Result
NVNT	ANT1	2479.65	1.387	Pass



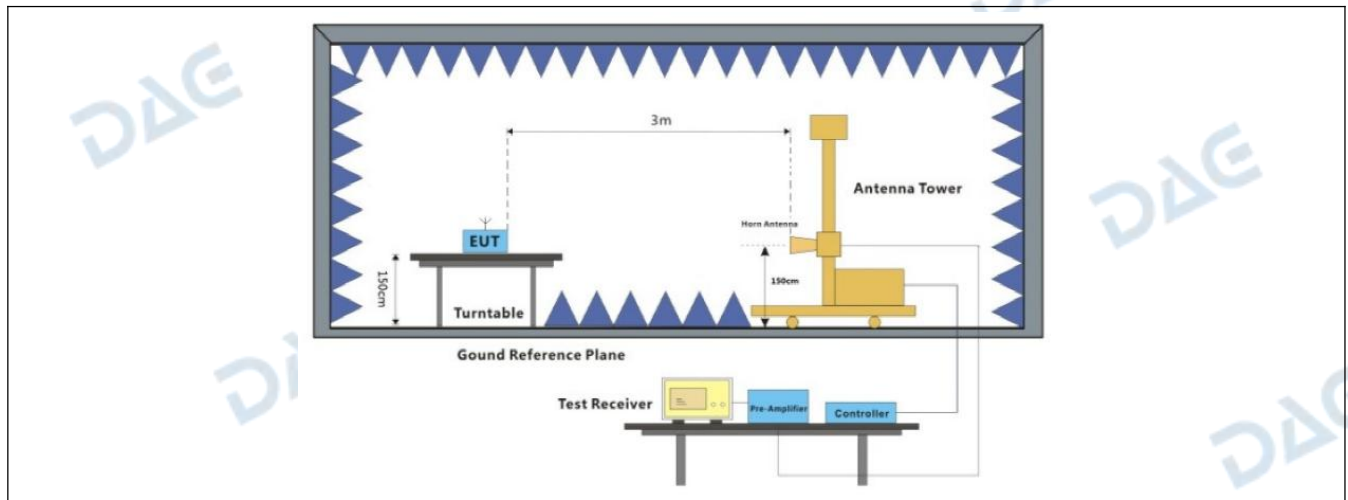
4.2 Field strength of fundamental

Test Requirement:	Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:		
	Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
	902-928 MHz	50	500
	2400-2483.5 MHz	50	500
	5725-5875 MHz	50	500
	24.0-24.25 GHz	250	2500
	The field strength of emissions in this band shall not exceed 2500 millivolts/meter.		
Test Method:	ANSI C63.10-2013 section 6.6		
Procedure:	ANSI C63.10-2013 section 6.6		

4.2.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22.3 °C	Humidity:	46.3 %	Atmospheric Pressure:	101 kPa
Pretest mode:	TM1				
Final test mode:	TM1				

4.2.2 Test Setup Diagram:



4.2.3 Test Data:

Frequency (MHz)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dBuV/m)	Detector (PK/AV)	Polarization (H/V)
2479.65	87.6	114.00	-26.40	PK	H
2479.65	84.2	114.00	-29.80	PK	V

Note: Margin = Emission Level – Limit; For fundamental frequency, RBW>20dB BW, VBW>=3XRBW

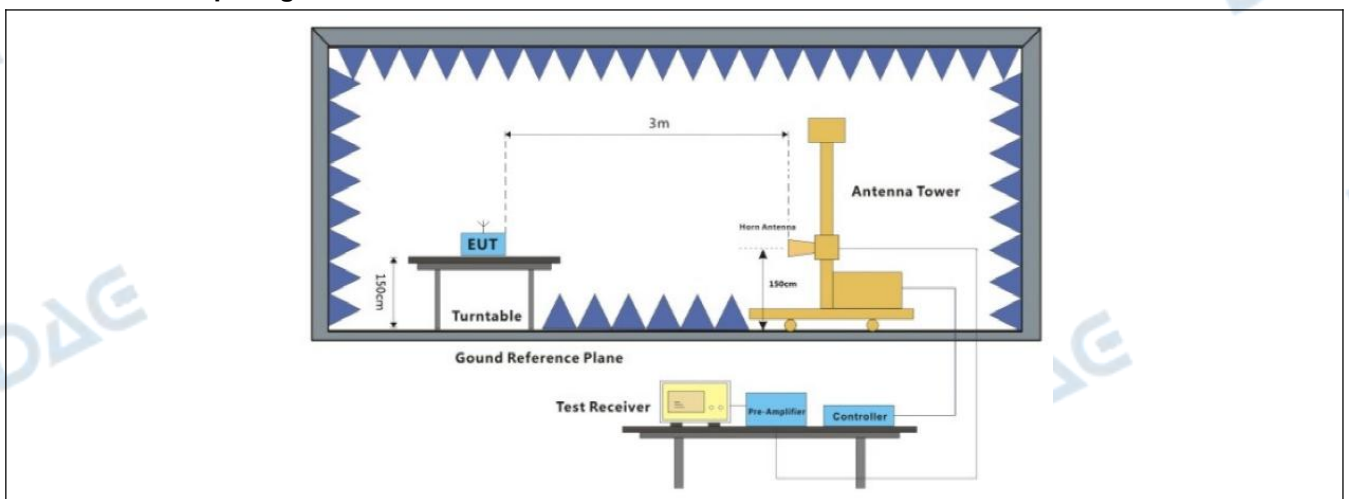
4.3 Band edge emissions (Radiated)

Test Requirement:	Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.		
Test Limit:	Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.		
	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
	30-88	100 **	3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3
	<p>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</p> <p>In the emission table above, the tighter limit applies at the band edges.</p> <p>The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</p>		
Test Method:	ANSI C63.10-2013 section 6.6.4		
Procedure:	ANSI C63.10-2013 section 6.6.4		

4.3.1 E.U.T. Operation:

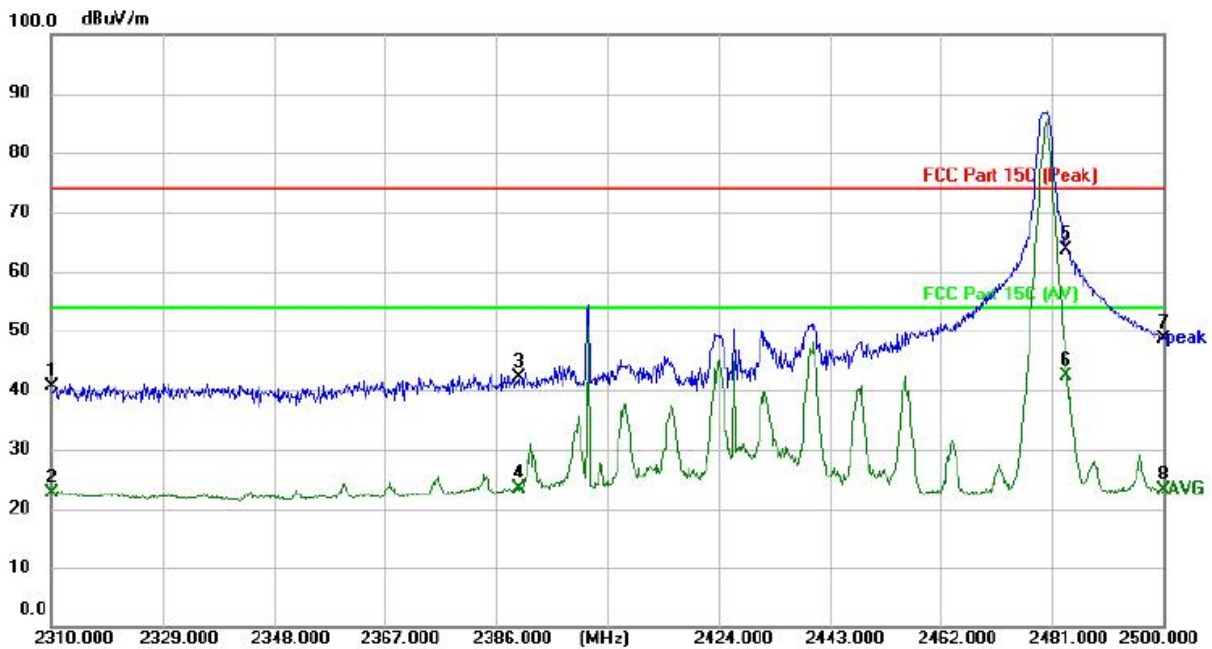
Operating Environment:				
Temperature:	22.3 °C	Humidity:	46.3 %	Atmospheric Pressure: 101 kPa
Pretest mode:	TM1			
Final test mode:	TM1			

4.3.2 Test Setup Diagram:



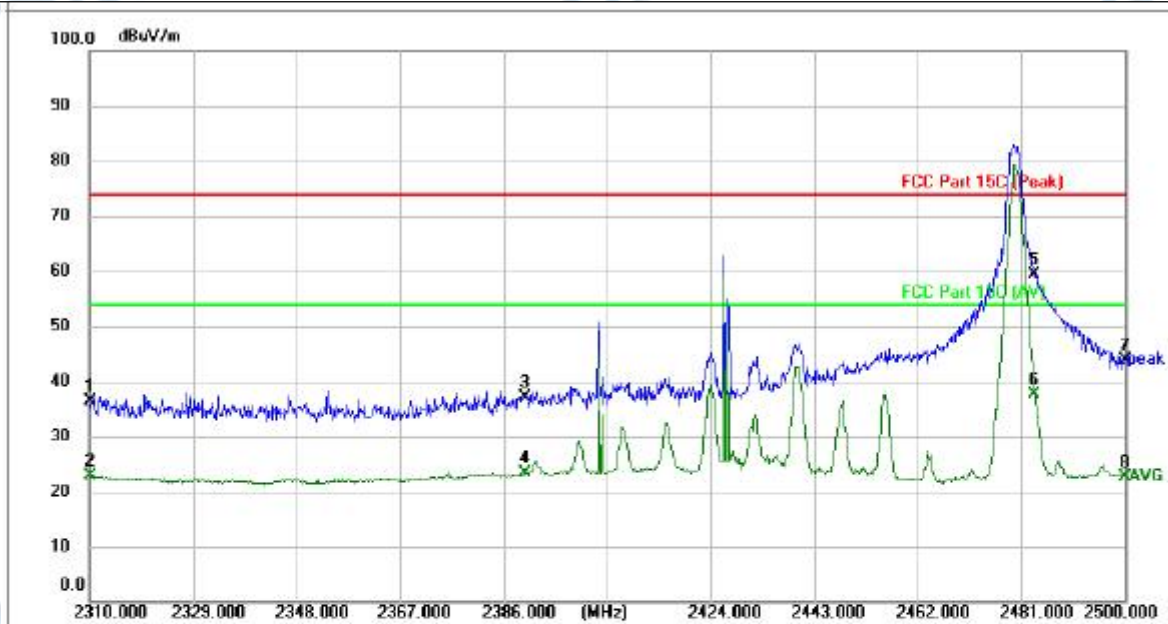
4.3.3 Test Data:

TM1 / Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2310.000	44.63	-3.93	40.70	74.00	-33.30	peak	150		P	
2	2310.000	26.67	-3.93	22.74	54.00	-31.26	AVG	150		P	
3	2390.000	45.75	-3.72	42.03	74.00	-31.97	peak	150		P	
4	2390.000	27.10	-3.72	23.38	54.00	-30.62	AVG	150		P	
5 *	2483.500	67.14	-3.47	63.67	74.00	-10.33	peak	150		P	
6	2483.500	45.87	-3.47	42.40	54.00	-11.60	AVG	150		P	
7	2500.000	52.16	-3.43	48.73	74.00	-25.27	peak	150		P	
8	2500.000	26.48	-3.43	23.05	54.00	-30.95	AVG	150		P	

TM1 / Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2310.000	41.57	-5.23	36.34	74.00	-37.66	peak	150		P	
2	2310.000	28.04	-5.23	22.81	54.00	-31.19	AVG	150		P	
3	2390.000	42.03	-4.91	37.12	74.00	-36.88	peak	150		P	
4	2390.000	28.20	-4.91	23.29	54.00	-30.71	AVG	150		P	
5 *	2483.500	63.86	-4.54	59.32	74.00	-14.68	peak	150		P	
6	2483.500	42.08	-4.54	37.54	54.00	-16.46	AVG	150		P	
7	2500.000	48.29	-4.48	43.81	74.00	-30.19	peak	150		P	
8	2500.000	27.12	-4.48	22.64	54.00	-31.36	AVG	150		P	

1. Margin = Measurement Level - Limit ; Measurement Level=Test receiver reading + correction factor
2. The test software will only record the worst test angle and height, and only the worst case will be recorded in the test report.

4.4 Emissions in frequency bands (below 1GHz)

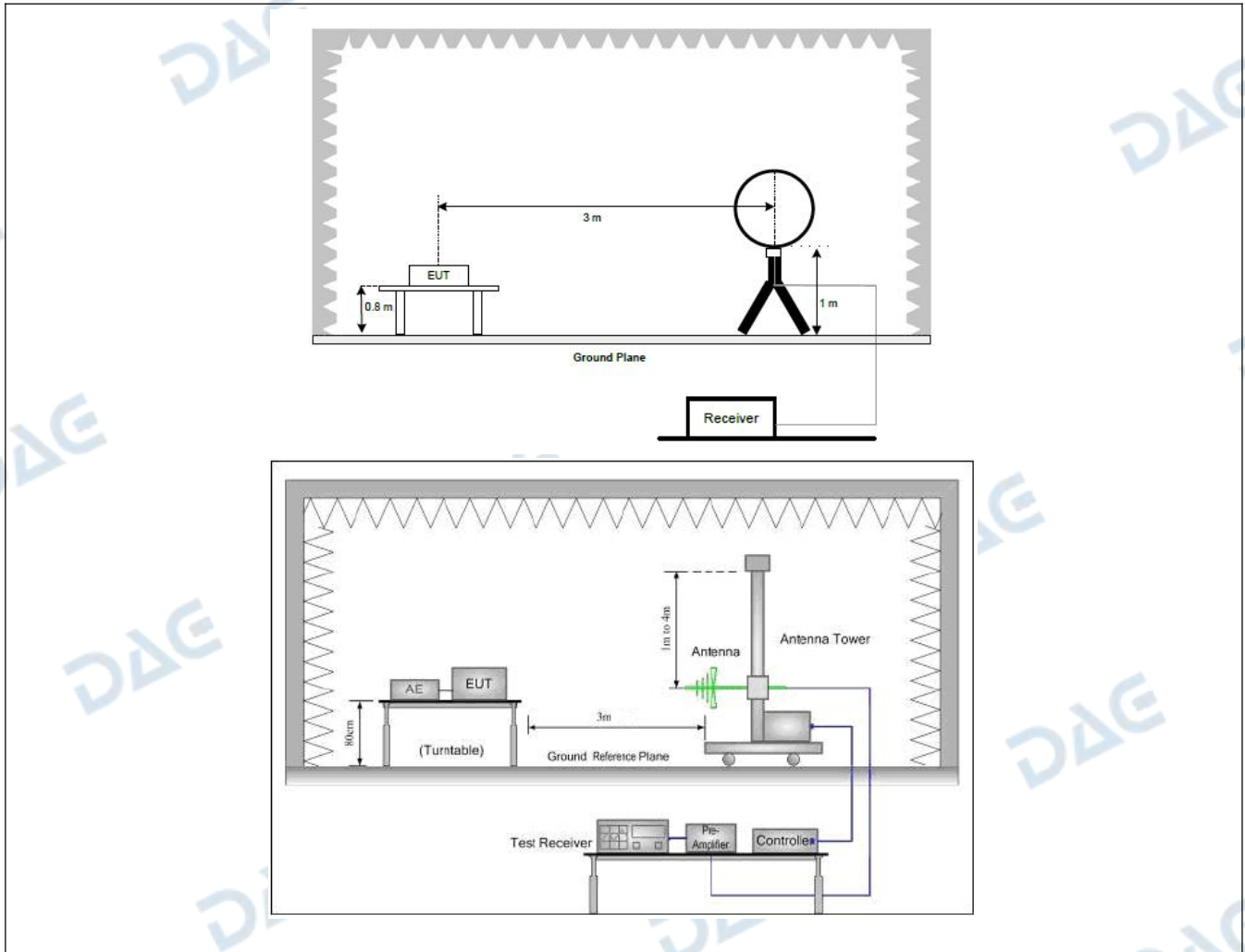
Test Requirement:	47 CFR 15.249(a) 47 CFR 15.249(d) 47 CFR 15.249(e)																																									
Test Limit:	<div>Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:</div> <table><tr><td>Fundamental frequency</td><td>Field strength of fundamental (millivolts/meter)</td><td>Field strength of harmonics (microvolts/meter)</td></tr><tr><td>902-928 MHz</td><td>50</td><td>500</td></tr><tr><td>2400-2483.5 MHz</td><td>50</td><td>500</td></tr><tr><td>5725-5875 MHz</td><td>50</td><td>500</td></tr><tr><td>24.0-24.25 GHz</td><td>250</td><td>2500</td></tr></table> <div>Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.</div> <table><tr><td>Frequency (MHz)</td><td>Field strength (microvolts/meter)</td><td>Measurement distance (meters)</td></tr><tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr><tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr><tr><td>1.705-30.0</td><td>30</td><td>30</td></tr><tr><td>30-88</td><td>100 **</td><td>3</td></tr><tr><td>88-216</td><td>150 **</td><td>3</td></tr><tr><td>216-960</td><td>200 **</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>3</td></tr></table> <div>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</div> <div>In the emission table above, the tighter limit applies at the band edges.</div> <div>The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</div> <div>As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.</div>			Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)	902-928 MHz	50	500	2400-2483.5 MHz	50	500	5725-5875 MHz	50	500	24.0-24.25 GHz	250	2500	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	0.009-0.490	2400/F(kHz)	300	0.490-1.705	24000/F(kHz)	30	1.705-30.0	30	30	30-88	100 **	3	88-216	150 **	3	216-960	200 **	3	Above 960	500	3
Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)																																								
902-928 MHz	50	500																																								
2400-2483.5 MHz	50	500																																								
5725-5875 MHz	50	500																																								
24.0-24.25 GHz	250	2500																																								
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)																																								
0.009-0.490	2400/F(kHz)	300																																								
0.490-1.705	24000/F(kHz)	30																																								
1.705-30.0	30	30																																								
30-88	100 **	3																																								
88-216	150 **	3																																								
216-960	200 **	3																																								
Above 960	500	3																																								
Test Method:	ANSI C63.10-2013 section 6.5																																									
Procedure:	ANSI C63.10-2013 section 6.5																																									

4.4.1 E.U.T. Operation:

Operating Environment:

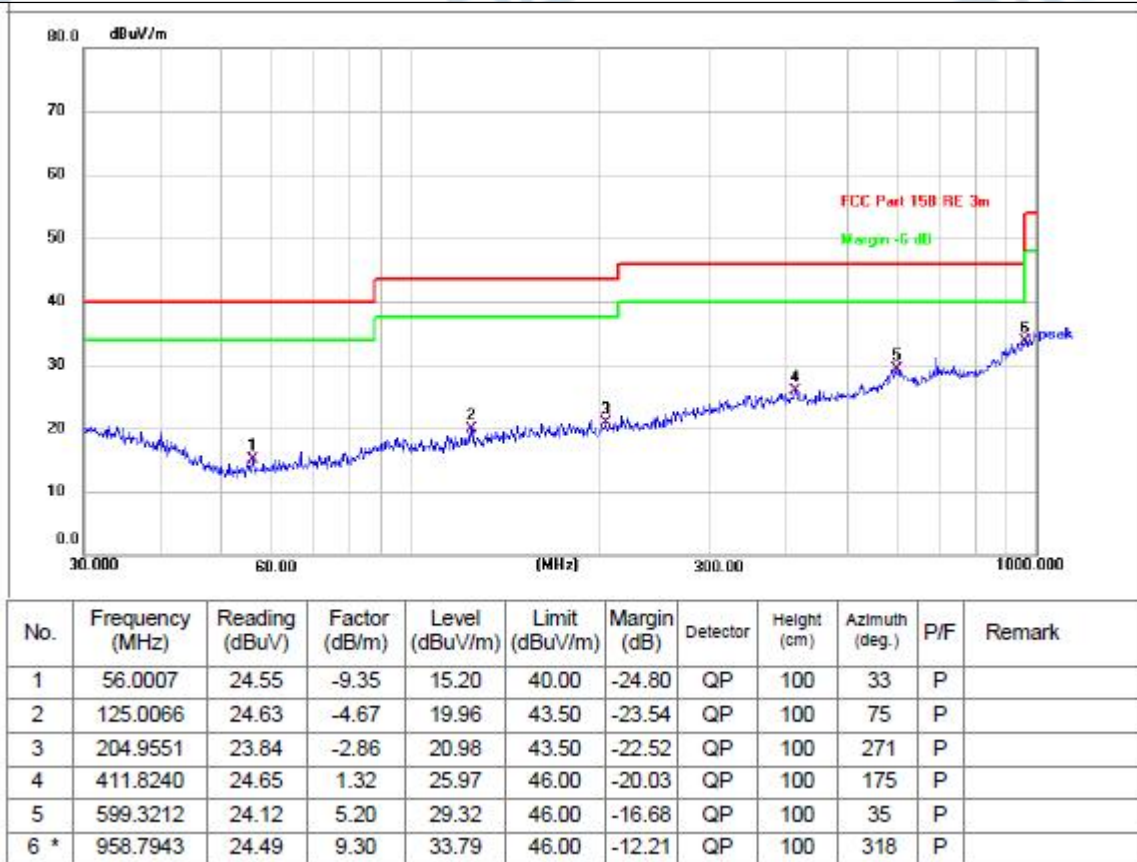
Temperature:	22.3 °C	Humidity:	46.3 %	Atmospheric Pressure:	101 kPa
Pretest mode:	TM1				
Final test mode:	TM1				

4.4.2 Test Setup Diagram:

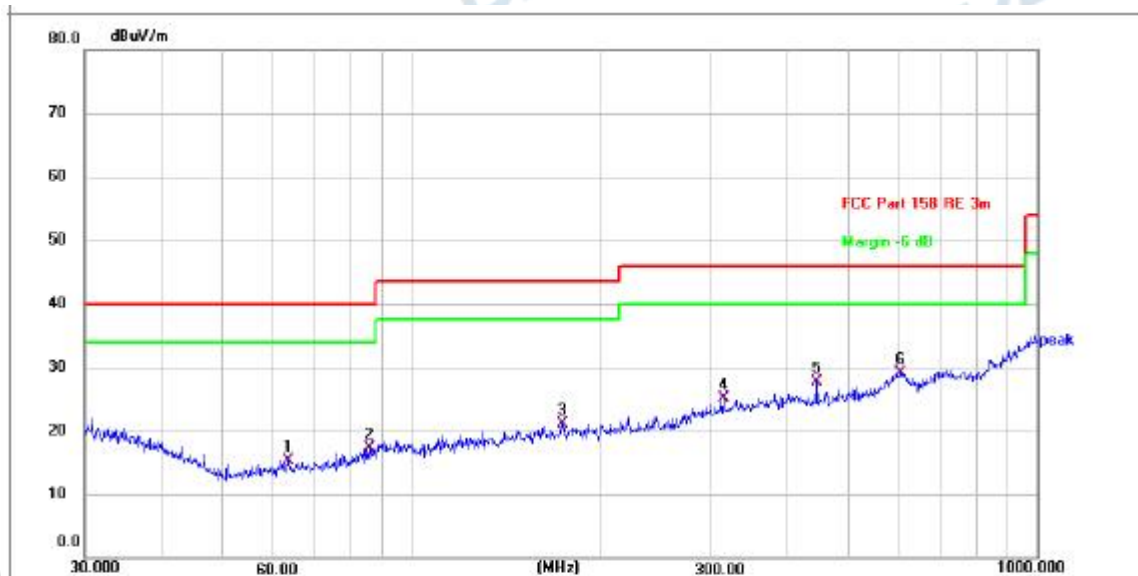


4.4.3 Test Data:

TM1 / Polarization: Horizontal



TM1 / Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	63.5356	24.16	-8.87	15.29	40.00	-24.71	QP	100	360	P	
2	85.5977	24.07	-6.74	17.33	40.00	-22.67	QP	100	298	P	
3	174.4241	24.28	-3.23	21.05	43.50	-22.45	QP	100	252	P	
4	315.4808	23.99	1.02	25.01	46.00	-20.99	QP	100	122	P	
5	444.8514	26.57	1.16	27.73	46.00	-18.27	QP	100	95	P	
6 *	605.6592	26.00	3.18	29.18	46.00	-16.82	QP	100	25	P	

1. Margin = Measurement Level - Limit ; Measurement Level=Test receiver reading + correction factor
2. The test software will only record the worst test angle and height, and only the worst case will be recorded in the test report.

4.5 Emissions in frequency bands (above 1GHz)

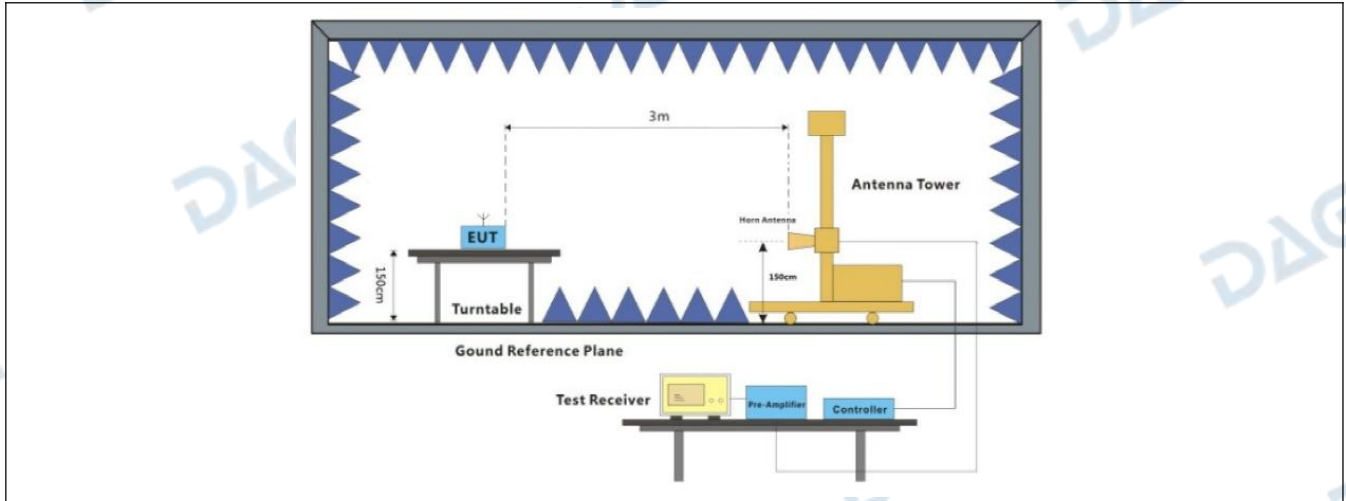
Test Requirement:	47 CFR 15.249(a) 47 CFR 15.249(d) 47 CFR 15.249(e)																																								
Test Limit:	<p>Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:</p> <table border="1"> <thead> <tr> <th>Fundamental frequency</th><th>Field strength of fundamental (millivolts/meter)</th><th>Field strength of harmonics (microvolts/meter)</th></tr> </thead> <tbody> <tr> <td>902-928 MHz</td><td>50</td><td>500</td></tr> <tr> <td>2400-2483.5 MHz</td><td>50</td><td>500</td></tr> <tr> <td>5725-5875 MHz</td><td>50</td><td>500</td></tr> <tr> <td>24.0-24.25 GHz</td><td>250</td><td>2500</td></tr> </tbody> </table> <p>Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.</p> <table border="1"> <thead> <tr> <th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr> </thead> <tbody> <tr> <td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr> <tr> <td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr> <tr> <td>1.705-30.0</td><td>30</td><td>30</td></tr> <tr> <td>30-88</td><td>100 **</td><td>3</td></tr> <tr> <td>88-216</td><td>150 **</td><td>3</td></tr> <tr> <td>216-960</td><td>200 **</td><td>3</td></tr> <tr> <td>Above 960</td><td>500</td><td>3</td></tr> </tbody> </table> <p>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</p> <p>In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.</p>		Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)	902-928 MHz	50	500	2400-2483.5 MHz	50	500	5725-5875 MHz	50	500	24.0-24.25 GHz	250	2500	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	0.009-0.490	2400/F(kHz)	300	0.490-1.705	24000/F(kHz)	30	1.705-30.0	30	30	30-88	100 **	3	88-216	150 **	3	216-960	200 **	3	Above 960	500	3
Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)																																							
902-928 MHz	50	500																																							
2400-2483.5 MHz	50	500																																							
5725-5875 MHz	50	500																																							
24.0-24.25 GHz	250	2500																																							
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)																																							
0.009-0.490	2400/F(kHz)	300																																							
0.490-1.705	24000/F(kHz)	30																																							
1.705-30.0	30	30																																							
30-88	100 **	3																																							
88-216	150 **	3																																							
216-960	200 **	3																																							
Above 960	500	3																																							
Test Method:	ANSI C63.10-2013 section 6.6																																								
Procedure:	ANSI C63.10-2013 section 6.6																																								

4.5.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22.3 °C	Humidity:	46.3 %	Atmospheric Pressure:	101 kPa
Pretest mode:	TM1				

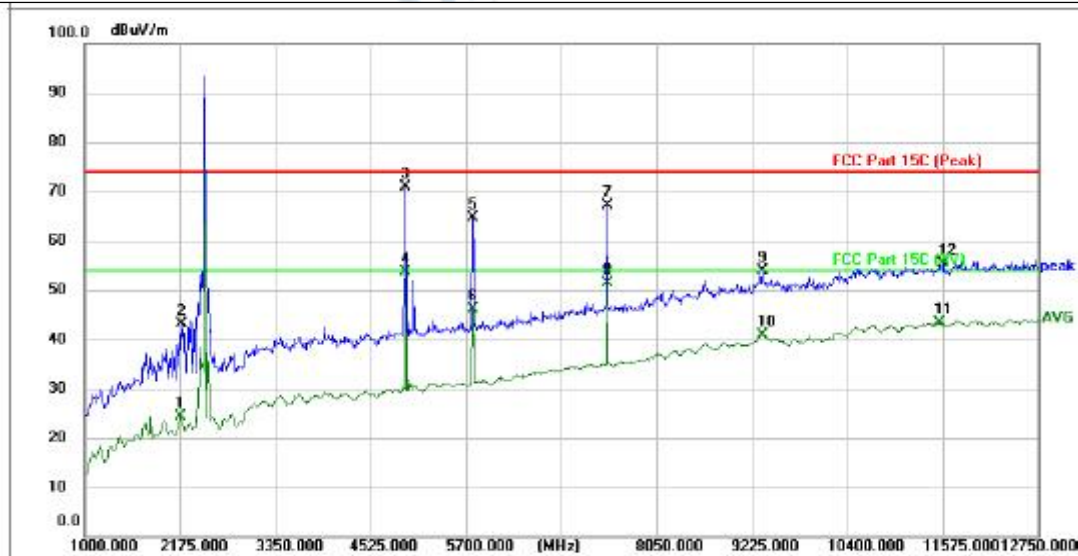
Final test mode: TM1

4.5.2 Test Setup Diagram:



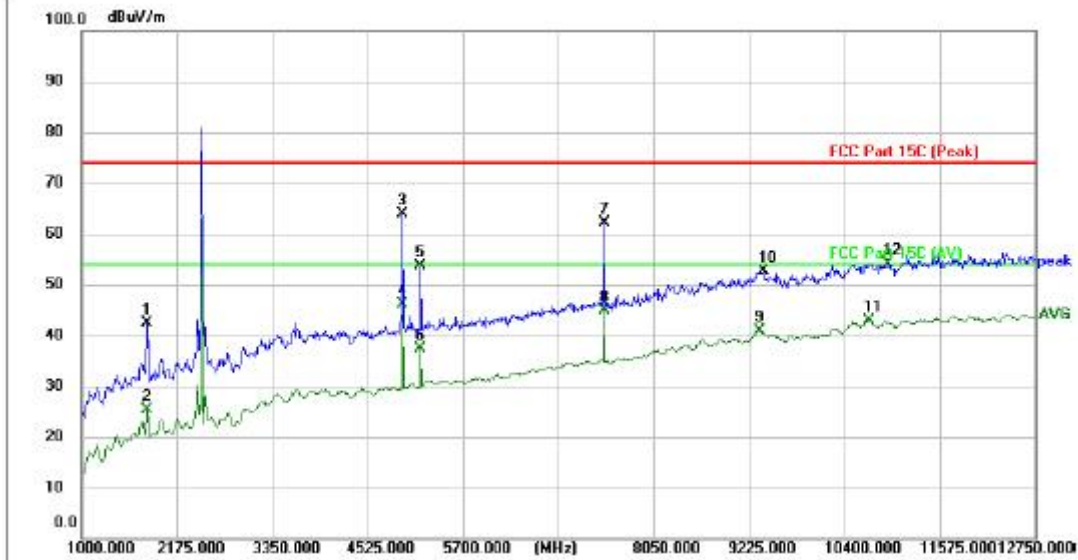
4.5.3 Test Data:

TM1 / Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2175.000	28.78	-4.29	24.49	54.00	-29.51	AVG	150		P	
2	2198.500	47.42	-4.22	43.20	74.00	-30.80	peak	150		P	
3	4959.750	67.25	3.63	70.88	74.00	-3.12	peak	150		P	
4 *	4959.750	50.08	3.63	53.71	54.00	-0.29	AVG	150		P	
5	5782.250	58.77	5.84	64.61	74.00	-9.39	peak	150		P	
6	5782.250	40.21	5.84	46.05	54.00	-7.95	AVG	150		P	
7	7439.000	56.52	10.49	67.01	74.00	-6.99	peak	150		P	
8	7439.000	40.88	10.49	51.37	54.00	-2.63	AVG	150		P	
9	9354.250	38.79	15.06	53.85	74.00	-20.15	peak	150		P	
10	9354.250	25.85	15.06	40.91	54.00	-13.09	AVG	150		P	
11	11539.750	25.60	17.70	43.30	54.00	-10.70	AVG	150		P	
12	11575.000	37.56	17.72	55.28	74.00	-18.72	peak	150		P	

TM1 / Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1799.000	49.83	-7.38	42.45	74.00	-31.55	peak	150		P	
2	1810.750	32.63	-7.33	25.30	54.00	-28.70	AVG	150		P	
3	4959.750	59.74	4.23	63.97	74.00	-10.03	peak	150		P	
4 *	4959.750	41.80	4.23	46.03	54.00	-7.97	AVG	150		P	
5	5171.250	49.09	4.64	53.73	74.00	-20.27	peak	150		P	
6	5171.250	32.69	4.64	37.33	54.00	-16.67	AVG	150		P	
7	7439.000	51.41	10.64	62.05	74.00	-11.95	peak	150		P	
8	7439.000	34.20	10.64	44.84	54.00	-9.16	AVG	150		P	
9	9354.250	26.01	14.84	40.85	54.00	-13.15	AVG	150		P	
10	9401.250	37.84	14.88	52.72	74.00	-21.28	peak	150		P	
11	10705.500	26.34	16.51	42.85	54.00	-11.15	AVG	150		P	
12	10940.500	37.26	16.92	54.18	74.00	-19.82	peak	150		P	

1. Margin = Measurement Level - Limit ; Measurement Level=Test receiver reading + correction factor

2.The test software will only record the worst test angle and height, and only the worst case will be recorded in the test report.

5 TEST SETUP PHOTOS

Please refer to Test Setup file for details

6 PHOTOS OF THE EUT

Please refer to External photos file and Internal photos file for details

***** End of Report *****