

TEST REPORT

Product : seed studio reCamera 2002 Series
Trade mark : Seed Studio
Model/Type reference : See section 4.2
Serial Number : N/A
Report Number : EED32Q81957304
FCC ID : Z4T-RECAMERA2002W
Date of Issue : Dec. 19, 2024
Test Standards : 47 CFR Part 15 Subpart E
Test result : PASS

Prepared for:

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2 Version

Version No.	Date	Description
00	Dec. 19, 2024	Original

3 Test Summary

Test Item	Test Requirement	Result															
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203	PASS															
AC Power Line Conducted Emission	47 CFR Part 15 Subpart E Section 15.407 (b)(6)	PASS															
Duty Cycle	47 CFR Part 15 Subpart E Section 15.407	NOTE1															
Maximum Conducted Output Power	47 CFR Part 15 Subpart E Section 15.407 (a)	NOTE1															
26dB emission bandwidth	47 CFR Part 15 Subpart E Section 15.407 (a)	NOTE1															
99% Occupied bandwidth	\	NOTE1															
6dB emission bandwidth	47 CFR Part 15 Subpart E Section 15.407 (e)	NOTE1															
Maximum Power Spectral Density	47 CFR Part 15 Subpart E Section 15.407 (a)	NOTE1															
Frequency stability	47 CFR Part 15 Subpart E Section 15.407 (g)	NOTE1															
Radiated Emissions	47 CFR Part 15 Subpart E Section 15.407 (b)	PASS															
Radiated Emissions which fall in the restricted bands	47 CFR Part 15 Subpart E Section 15.407 (b)	PASS															
DFS Detection Threshold	15.407/KDB 905462 5.2	NOTE2															
U-NII Detection Bandwidth	15.407/KDB 905462 7.8.1	N/A															
Channel Availability Check Time	15.407/KDB 905462 7.8.2	N/A															
Channel Move Time	15.407/KDB 905462 7.8.3	NOTE2															
Channel Closing Transmission Time	15.407/KDB 905462 7.8.3	NOTE2															
Non-Occupancy Period	15.407/KDB 905462 7.8.3	NOTE2															
Statistical Performance Check	15.407/KDB 905462 7.8.4	N/A															
Remark: NOTE1: The test data refer to the report of No.RFBECO-WTW-P22120330-1.(The module's FCC ID:TLZ-AM497617) NOTE2: The test data refer to the report of No.RFBECO-WTW-P22120330-5.(The module's FCC ID:TLZ-AM497617) Because the antenna gain in this case is smaller than the module certification, the module certification is tested under more stringent conditions, so when its module is used on this product, there is no need to perform DFS testing. Company Name and Address shown on Report, the sample(s) and sample Information were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified. Model No.: reCamera 2002w 64GB, reCamera 2002w 8GB, reCamera Core 2002w 64GB, reCamera Core 2002w 8GB Only the model reCamera Core 2002w 64GB was tested. The following description shows the difference between each model and the reCamera 2002w 64GB. <table border="1"> <thead> <tr> <th>Model</th><th>EMMC</th><th>Difference description</th></tr> </thead> <tbody> <tr> <td>reCamera 2002w 64GB</td><td>64GB</td><td>Normal</td></tr> <tr> <td>reCamera 2002w 8GB</td><td>8GB</td><td>The emmc sizes are different</td></tr> <tr> <td>reCamera Core 2002w 64GB</td><td>64GB</td><td>No lens board and interface board and supporting structural parts</td></tr> <tr> <td>reCamera Core 2002w 8GB</td><td>8GB</td><td>The emmc sizes are different and no lens board and interface board and supporting structural parts</td></tr> </tbody> </table>			Model	EMMC	Difference description	reCamera 2002w 64GB	64GB	Normal	reCamera 2002w 8GB	8GB	The emmc sizes are different	reCamera Core 2002w 64GB	64GB	No lens board and interface board and supporting structural parts	reCamera Core 2002w 8GB	8GB	The emmc sizes are different and no lens board and interface board and supporting structural parts
Model	EMMC	Difference description															
reCamera 2002w 64GB	64GB	Normal															
reCamera 2002w 8GB	8GB	The emmc sizes are different															
reCamera Core 2002w 64GB	64GB	No lens board and interface board and supporting structural parts															
reCamera Core 2002w 8GB	8GB	The emmc sizes are different and no lens board and interface board and supporting structural parts															

4 General Information

4.1 Client Information

Applicant:	Seeed Technology Co., Ltd
Address of Applicant:	9F, G3 Building, TCL International E City, Zhongshanyuan Road, Nanshan District, Shenzhen
Manufacturer:	Seeed Technology Co., Ltd
Address of Manufacturer:	9F, G3 Building, TCL International E City, Zhongshanyuan Road, Nanshan District, Shenzhen
Factory:	Shenzhen Xinxian Technology Co., Limited
Address of Factory:	F5, Building B17, Hengfeng Industrial City, No. 739 Zhoushi Rd, Baoan District, Shenzhen, Guangdong, P.R.C.

4.2 General Description of EUT

Product Name:	seeed studio reCamera 2002 Series	
Model No.(EUT):	reCamera 2002w 64GB, reCamera 2002w 8GB, reCamera Core 2002w 64GB, reCamera Core 2002w 8GB	
Test Model No.:	reCamera Core 2002w 64GB	
Trade mark:	Seeed Studio	
Product Type:	☐ Mobile ☒ Portable ☒ Fixed Location	
Type of Modulation:	IEEE 802.11a: OFDM (BPSK, QPSK, 16QAM, 64QAM) IEEE 802.11n(HT20/HT40): OFDM (BPSK, QPSK, 16QAM, 64QAM) IEEE 802.11ac(VHT20): OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)	
Operating Frequency	U-NII-1:5150-5250MHz U-NII-2A:5250-5350MHz U-NII-2C:5500-5700MHz U-NII-3:5745-5825MHz	
Sample Type:	☐ Mobile ☐ Portable ☒ Fixed Location	
DFS(Dynamic Frequency Selection)Operational mode:	Client without radar detection and ad hoc function	
Antenna Type:	PIFA antenna	
Antenna Gain:	1.34dBi	
Function	☒ SISO ☐ 2x2 MIMO ☐ 3x3 MIMO ☐ 4x4MIMO	
Power Supply:	USB port:	DC 5.0V
Test voltage:	DC 5.0V	
Sample Received Date:	Dec. 03, 2024	
Sample tested Date:	Dec. 03, 2024 to Dec. 13, 2024	

Operation Frequency each of channel

802.11a/802.11n/802.11ac(20MHz) Frequency/Channel Operations:

U-NII-1		U-NII-2A		U-NII-2C		U-NII-3	
Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
36	5180	52	5260	100	5500	149	5745
40	5200	56	5280	104	5520	153	5765
44	5220	60	5300	108	5540	157	5785
48	5240	64	5320	112	5560	161	5805
-	-	-	-	116	5580	165	5825
-	-	-	-	132	5660	-	-
-	-	-	-	136	5680	-	-
-	-	-	-	140	5700	-	-

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Test Configuration

EUT Test Software Settings:	
Software:	MobaXterm_Personal_22.1.exe
EUT Power Grade:	Default
Use test software to set the lowest frequency, the middle frequency and the highest frequency keep transmitting of the EUT.	
Test Mode:	
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:	
Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.	
Mode	Data rate
802.11a	6 Mbps
802.11n(HT20)	MCS0
802.11ac(VHT20)	MCS0

4.3 Test Environment

Operating Environment:		
Radiated Spurious Emissions:		
Temperature:	22~25.0 °C	
Humidity:	50~55 % RH	
Atmospheric Pressure:	1010mbar	
Conducted Emissions:		
Temperature:	22~25.0 °C	
Humidity:	50~55 % RH	
Atmospheric Pressure:	1010mbar	
RF Conducted:		
Humidity:	50~55 % RH	
Atmospheric Pressure:	1010mbar	
Temperature:	NT (Normal Temperature)	22~25.0 °C
Working Voltage of the EUT:	NV (Normal Voltage)	5.0V

4.4 Description of Support Units

The EUT has been tested with associated equipment below.

1) support equipment

Description	Manufacturer	Model No.	Certification	Supplied by
Netbook	HP	DESKTOP-H31GDCQ	FCC&CE	CTI
AC adapter	MI	MDY-14-EU	FCC&CE	CTI

4.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.6 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-40GHz)
3	Radiated Spurious emission test	3.3dB (9kHz-30MHz)
		4.5dB (30MHz-1GHz)
		4.8dB (1GHz-18GHz)
		3.4dB (18GHz-40GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

5 Equipment List

Conducted disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Receiver	R&S	ESCI	100435	04-18-2024	04-17-2025
Temperature/ Humidity Indicator	Defu	TH128	/	04-25-2024	04-24-2025
LISN	R&S	ENV216	100098	09-19-2024	09-18-2025
Barometer	changchun	DYM3	1188	---	---
Test software	Fara	EZ-EMC	EMC-CON 3A1.1	---	---
Capacitive voltage probe	Schwarzbeck	CVP 9222C	00124	06-18-2024	06-17-2025
ISN	TESEQ	ISN T800	30297	12/14/2023 12/05/2024	12/13/2024 12/04/2025

3M Semi-anechoic Chamber (2)- Radiated disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05/22/2022	05/21/2025
Receiver	R&S	ESC17	100938-003	09/07/2024	09/06/2025
Spectrum Analyzer	R&S	FSV40	101200	07/18/2024	07/17/2025
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	9163-618	05/22/2022	05/21/2025
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04/16/2024	04/15/2025
Microwave Preamplifier	Tonscend	EMC051845SE	980380	12/14/2023 12/05/2024	12/13/2024 12/04/2025
Horn Antenna	A.H.SYSTEMS	SAS-574	374	07/02/2023	07/01/2026
Horn Antenna	ETS-LINGREN	BBHA 9120D	9120D-1869	04/16/2024	04/15/2025
Preamplifier	Agilent	11909A	12-1	03/22/2024	03/21/2025
Preamplifier	CD	PAP-1840-60	6041.6042	06/19/2024	06/18/2025
Test software	Fara	EZ-EMC	EMEC-3A1-Pre	---	---
Cable line	Fulai(7M)	SF106	5219/6A	05/22/2022	05/21/2025
Cable line	Fulai(6M)	SF106	5220/6A	05/22/2022	05/21/2025
Cable line	Fulai(3M)	SF106	5216/6A	05/22/2022	05/21/2025
Cable line	Fulai(3M)	SF106	5217/6A	05/22/2022	05/21/2025

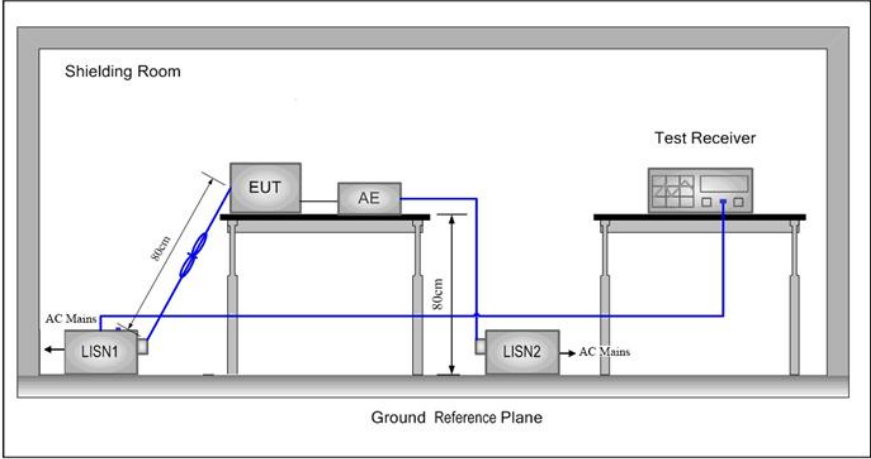
3M full-anechoic Chamber					
Equipment	Manufacturer	Model No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Fully Anechoic Chamber	TDK	FAC-3	---	01-09-2024	01-08-2027
Receiver	Keysight	N9038A	MY57290136	01-09-2024	01-08-2025
Spectrum Analyzer	Keysight	N9020B	MY57111112	01-29-2024	01-28-2025
Spectrum Analyzer	Keysight	N9030B	MY57140871	01-23-2024	01-22-2025
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	9163-1148	04-28-2024	04-27-2025
Horn Antenna	Schwarzbeck	BBHA 9170	9170-832	04-16-2024	04-15-2025
Horn Antenna	ETS-LINDGREN	3117	57407	07-03-2024	07-02-2025
Preamplifier	EMCI	EMC001330	980563	03-08-2024	03-07-2025
Preamplifier	Tonscend	TAP-011858	AP21B806112	07-18-2024	07-17-2025
Preamplifier	Tonscend	EMC051845SE	980380	12-14-2023 12-05-2024	12-13-2024 12-04-2025
Communication test set	R&S	CMW500	102898	12-14-2023	12-13-2024
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	04-07-2024	04-06-2025
RSE Automatic test software	JS Tonscend	JS36-RSE	V4.0.0.0	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0001	01-09-2024	01-08-2027
Cable line	Times	SFT205-NMSM-2.50M	394812-0002	01-09-2024	01-08-2027
Cable line	Times	SFT205-NMSM-2.50M	394812-0003	01-09-2024	01-08-2027
Cable line	Times	SFT205-NMSM-2.50M	393495-0001	01-09-2024	01-08-2027
Cable line	Times	EMC104-NMNM-1000	SN160710	01-09-2024	01-08-2027
Cable line	Times	SFT205-NMSM-3.00M	394813-0001	01-09-2024	01-08-2027
Cable line	Times	SFT205-NMNM-1.50M	381964-0001	01-09-2024	01-08-2027
Cable line	Times	SFT205-NMSM-7.00M	394815-0001	01-09-2024	01-08-2027
Cable line	Times	HF160-KMKM-3.00M	393493-0001	01-09-2024	01-08-2027

6 Radio Technical Requirements Specification

6.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
EUT Antenna:	Please see Internal photos
The antenna is PIFA antenna. The best case gain of the antenna is 1.34dBi.	

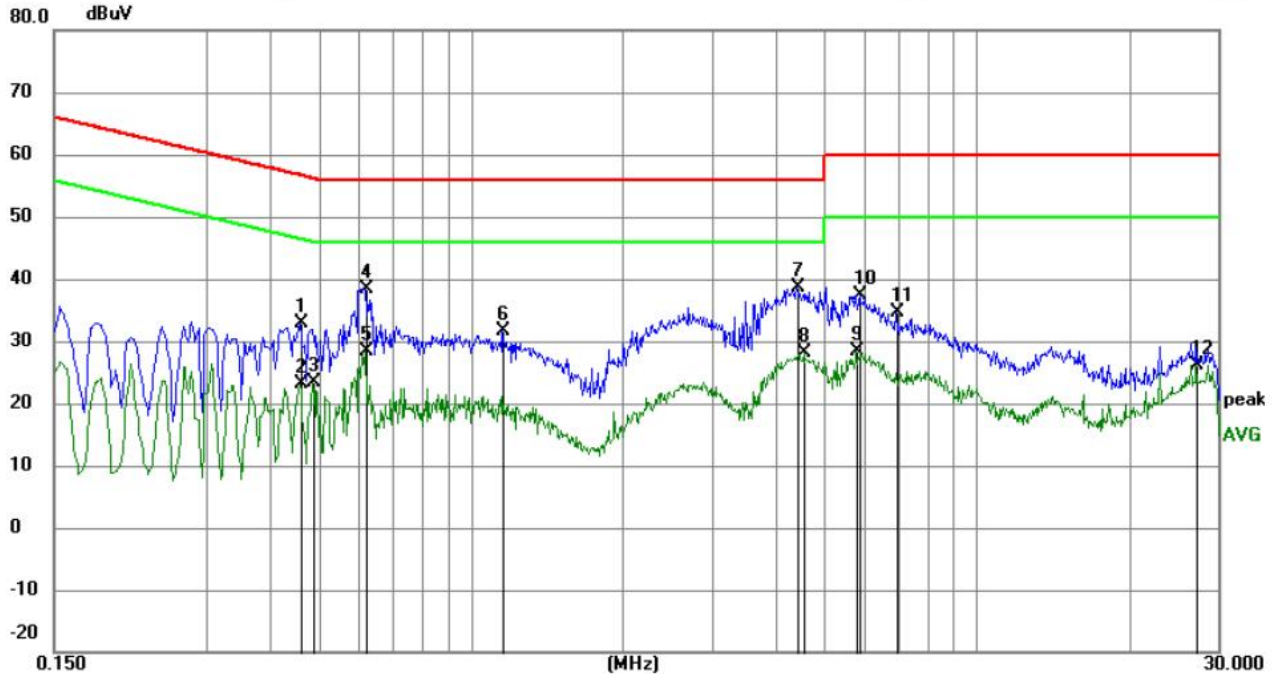
6.2 AC Power Line Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.207		
Test Method:	ANSI C63.10: 2013		
Test Frequency Range:	150kHz to 30MHz		
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto		
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 Setup:			
Test Procedure:	1) The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane. 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.		

Test Mode:	All modes were tested, only the worst case was recorded in the report.
Test Results:	Pass

Measurement Data

Live line:

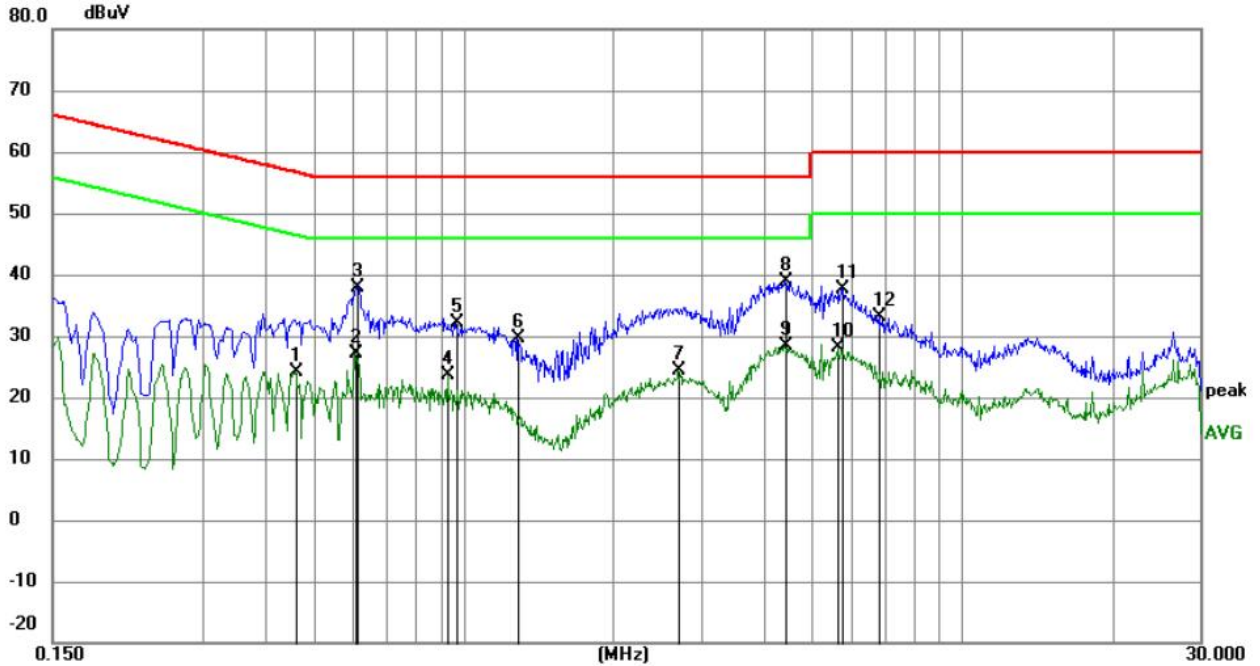


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.4605	22.68	10.08	32.76	56.68	-23.92	QP	
2		0.4605	12.99	10.08	23.07	46.68	-23.61	AVG	
3		0.4875	13.24	10.08	23.32	46.21	-22.89	AVG	
4		0.6180	28.27	10.11	38.38	56.00	-17.62	QP	
5		0.6180	18.37	10.11	28.48	46.00	-17.52	AVG	
6		1.1535	21.41	10.18	31.59	56.00	-24.41	QP	
7	*	4.4250	28.61	10.08	38.69	56.00	-17.31	QP	
8		4.5734	17.94	10.08	28.02	46.00	-17.98	AVG	
9		5.7795	18.41	10.05	28.46	50.00	-21.54	AVG	
10		5.8920	27.32	10.05	37.37	60.00	-22.63	QP	
11		6.9315	24.50	10.03	34.53	60.00	-25.47	QP	
12		27.1590	16.44	9.81	26.25	50.00	-23.75	AVG	

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

Neutral line:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.4605	14.07	10.08	24.15	46.68	-22.53	AVG	
2		0.6045	16.91	10.10	27.01	46.00	-18.99	AVG	
3		0.6134	27.86	10.10	37.96	56.00	-18.04	QP	
4		0.9285	13.35	10.17	23.52	46.00	-22.48	AVG	
5		0.9645	21.99	10.18	32.17	56.00	-23.83	QP	
6		1.2839	19.35	10.18	29.53	56.00	-26.47	QP	
7		2.7015	14.13	10.14	24.27	46.00	-21.73	AVG	
8	*	4.4160	28.72	10.08	38.80	56.00	-17.20	QP	
9		4.4160	18.22	10.08	28.30	46.00	-17.70	AVG	
10		5.6490	18.02	10.05	28.07	50.00	-21.93	AVG	
11		5.7255	27.61	10.05	37.66	60.00	-22.34	QP	
12		6.8100	23.02	10.03	33.05	60.00	-26.95	QP	

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

6.3 Radiated Emission

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.407 (b)				
Test Method:	ANSI C63.10 2013				
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100 kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10kHz	Average
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
	*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (4) For transmitters operating in the 5.725-5.85 GHz band: (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, 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. Note: (i) $EIRP = ((E*d)^2) / 30$ where: • E is the field strength in V/m; • d is the measurement distance in meters; • EIRP is the equivalent isotropically radiated power in watts. (ii) Working in dB units, the above equation is equivalent to: $EIRP[dBm] = E[dB\mu V/m] + 20 \log(d[meters]) - 104.77$ (iii) Or, if d is 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
Test Setup:	

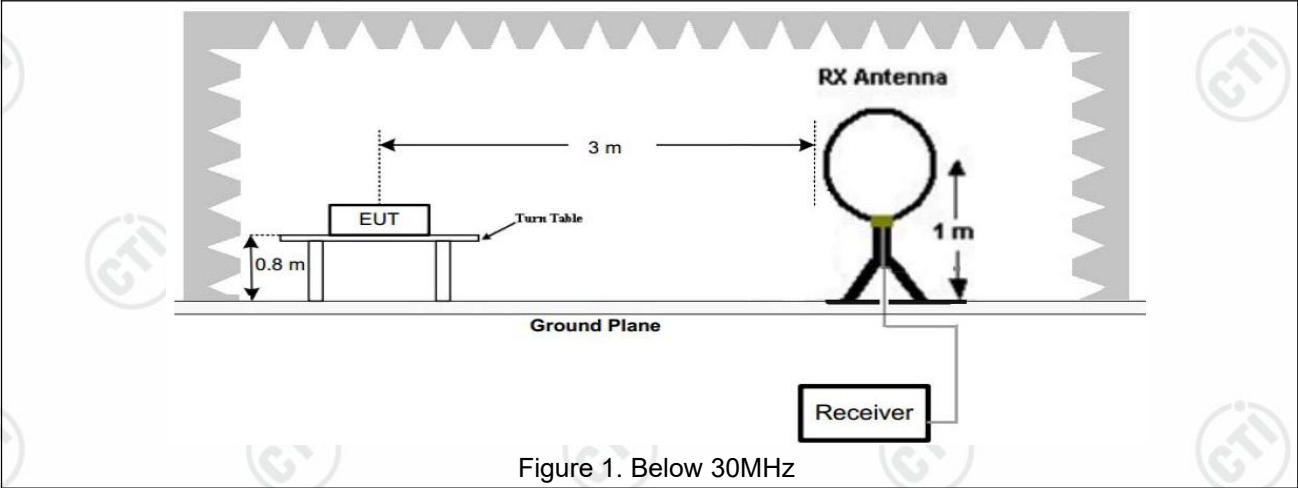


Figure 1. Below 30MHz

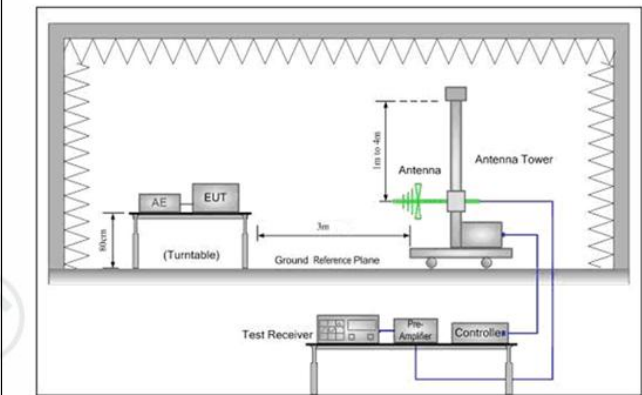


Figure 2. 30MHz to 1GHz

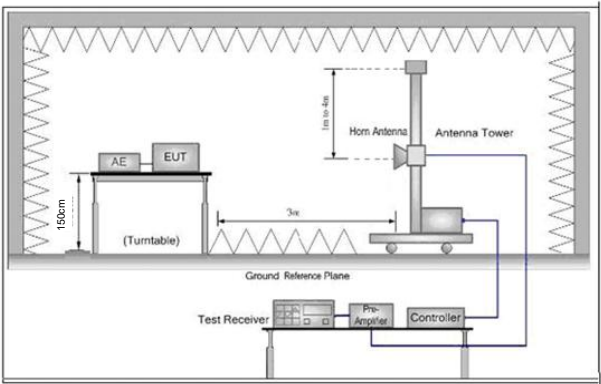


Figure 3. Above 1 GHz

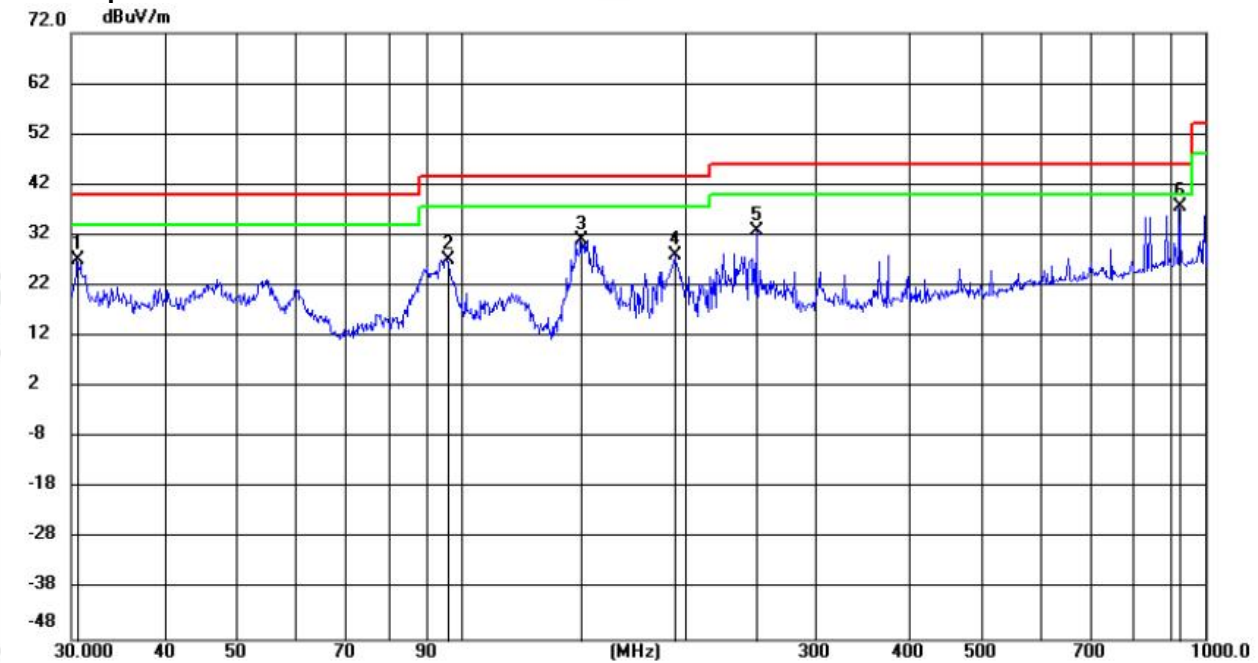
Test Procedure:	a. 1) Below 1G: The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. 2) Above 1G: The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. Note: For the radiated emission test above 1GHz:
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	Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. 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. g. Test the EUT in the lowest channel, the middle channel and the highest channel h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete.
Test Mode:	Transmitting mode with modulation
Test Results:	Pass

Radiated Spurious Emissions test Data:
Radiated Emission below 1GHz

Remark: During the test, the Radiates Emission from 30MHz to 1GHz was performed in all modes, only the worst case middle channel of 6Mbps for 802.11a was recorded in the report.

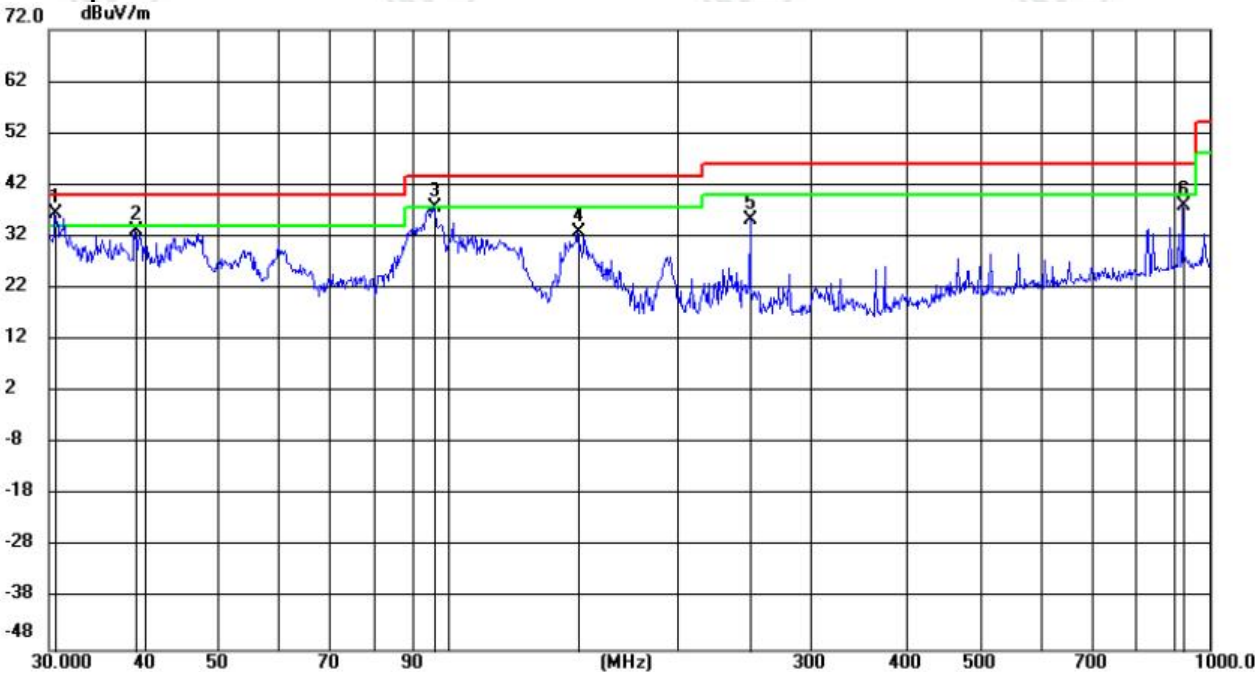
Horizontal:
Test Graph



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Antenna Height cm	Table Degree	Comment
1		30.6217	14.90	12.32	27.22	40.00	-12.78	QP	100	341	
2		95.8461	14.72	12.55	27.27	43.50	-16.23	QP	199	179	
3		145.2995	21.93	9.16	31.09	43.50	-12.41	QP	199	169	
4		194.0107	15.97	12.12	28.09	43.50	-15.41	QP	199	7	
5		249.9941	18.66	14.26	32.92	46.00	-13.08	QP	100	352	
6	*	925.5939	11.59	26.07	37.66	46.00	-8.34	QP	199	7	

Vertical:

Test Graph



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	*	30.5949	24.06	12.31	36.37	40.00	-3.63	QP	100	286
2		38.9493	19.54	13.48	33.02	40.00	-6.98	QP	100	286
3	!	95.7790	25.05	12.54	37.59	43.50	-5.91	QP	100	178
4		148.1290	23.80	9.17	32.97	43.50	-10.53	QP	100	60
5		249.9942	21.09	14.26	35.35	46.00	-10.65	QP	100	92
6		925.5940	11.86	26.07	37.93	46.00	-8.07	QP	100	103

Transmitter Emission above 1GHz

Remark: During the test, the Radiates Emission from 1GHz to 40GHz was performed in all modes,,
for 20MHz Occupied Bandwidth, 802.11 a mode was the worst case;
only the worst case was recorded in the report.

Mode:			802.11 a Transmitting			Channel:		5180MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1138.1655	9.96	38.27	48.23	68.20	19.97	PASS	Horizontal	PK
2	2065.5026	15.34	36.19	51.53	68.20	16.67	PASS	Horizontal	PK
3	2943.7778	17.53	35.26	52.79	68.20	15.41	PASS	Horizontal	PK
4	6997.9749	-5.11	49.29	44.18	68.20	24.02	PASS	Horizontal	PK
5	10616.6308	3.97	45.69	49.66	68.20	18.54	PASS	Horizontal	PK
6	15128.3064	11.31	41.73	53.04	68.20	15.16	PASS	Horizontal	PK
7	1171.8269	9.71	38.46	48.17	68.20	20.03	PASS	Vertical	PK
8	1940.0976	16.88	35.75	52.63	68.20	15.57	PASS	Vertical	PK
9	2938.7175	17.44	35.65	53.09	68.20	15.11	PASS	Vertical	PK
10	6913.4457	-4.81	48.66	43.85	68.20	24.35	PASS	Vertical	PK
11	9805.2653	2.99	45.38	48.37	68.20	19.83	PASS	Vertical	PK
12	14258.2879	11.98	40.13	52.11	68.20	16.09	PASS	Vertical	PK

Mode:			802.11 a Transmitting			Channel:		5200MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1141.0256	10.05	37.15	47.20	68.20	21.00	PASS	Horizontal	PK
2	1734.6094	12.95	36.20	49.15	68.20	19.05	PASS	Horizontal	PK
3	2611.7845	15.76	36.18	51.94	68.20	16.26	PASS	Horizontal	PK
4	7579.904	-3.85	48.13	44.28	68.20	23.92	PASS	Horizontal	PK
5	10272.7636	2.78	45.33	48.11	68.20	20.09	PASS	Horizontal	PK
6	13829.8915	7.54	43.11	50.65	68.20	17.55	PASS	Horizontal	PK
7	1218.4687	8.87	37.02	45.89	68.20	22.31	PASS	Vertical	PK
8	1847.4739	15.55	35.67	51.22	68.20	16.98	PASS	Vertical	PK
9	3557.1623	18.89	34.42	53.31	68.20	14.89	PASS	Vertical	PK
10	7359.668	-4.34	48.51	44.17	68.20	24.03	PASS	Vertical	PK
11	11242.8371	4.92	46.87	51.79	68.20	16.41	PASS	Vertical	PK
12	14251.3876	12.59	39.80	52.39	68.20	15.81	PASS	Vertical	PK

Mode:			802.11 a Transmitting			Channel:		5240MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1172.2669	9.70	38.49	48.19	68.20	20.01	PASS	Horizontal	PK
2	1955.0582	16.83	35.65	52.48	68.20	15.72	PASS	Horizontal	PK
3	2819.6928	16.52	36.01	52.53	68.20	15.67	PASS	Horizontal	PK
4	6877.2189	-4.80	48.85	44.05	68.20	24.15	PASS	Horizontal	PK
5	10601.6801	4.84	45.26	50.10	68.20	18.10	PASS	Horizontal	PK
6	15097.8299	10.96	41.15	52.11	68.20	16.09	PASS	Horizontal	PK
7	1171.8269	9.71	37.97	47.68	68.20	20.52	PASS	Vertical	PK
8	2145.3658	15.19	36.29	51.48	68.20	16.72	PASS	Vertical	PK
9	3548.5819	19.05	34.67	53.72	68.20	14.48	PASS	Vertical	PK
10	6896.1948	-4.49	48.72	44.23	68.20	23.97	PASS	Vertical	PK
11	9788.5894	2.60	46.00	48.60	68.20	19.60	PASS	Vertical	PK
12	15106.4553	11.27	40.98	52.25	68.20	15.95	PASS	Vertical	PK

Mode:			802.11 a Transmitting			Channel:		5260MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1188.7676	9.22	36.02	45.24	68.20	22.96	PASS	Horizontal	PK
2	1512.6205	10.52	35.94	46.46	68.20	21.74	PASS	Horizontal	PK
3	2185.8474	14.68	35.91	50.59	68.20	17.61	PASS	Horizontal	PK
4	7596.0048	-3.26	46.97	43.71	68.20	24.49	PASS	Horizontal	PK
5	10073.8037	2.08	44.78	46.86	68.20	21.34	PASS	Horizontal	PK
6	13453.2477	8.67	41.45	50.12	68.20	18.08	PASS	Horizontal	PK
7	1192.9477	9.10	36.27	45.37	68.20	22.83	PASS	Vertical	PK
8	1734.3894	12.95	36.12	49.07	68.20	19.13	PASS	Vertical	PK
9	2336.3335	14.85	36.58	51.43	68.20	16.77	PASS	Vertical	PK
10	7258.4629	-4.19	47.69	43.50	68.20	24.70	PASS	Vertical	PK
11	9450.4725	1.95	43.68	45.63	68.20	22.57	PASS	Vertical	PK
12	11770.1385	3.40	44.81	48.21	68.20	19.99	PASS	Vertical	PK

Mode:			802.11 a Transmitting			Channel:		5280MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1130.2452	9.70	36.49	46.19	68.20	22.01	PASS	Horizontal	PK
2	1555.7422	11.08	36.02	47.10	68.20	21.10	PASS	Horizontal	PK
3	2331.0532	14.88	35.55	50.43	68.20	17.77	PASS	Horizontal	PK
4	7112.9806	-4.87	47.53	42.66	68.20	25.54	PASS	Horizontal	PK
5	10033.5517	2.42	44.64	47.06	68.20	21.14	PASS	Horizontal	PK
6	13450.3725	8.91	40.86	49.77	68.20	18.43	PASS	Horizontal	PK
7	1130.4652	9.71	36.49	46.20	68.20	22.00	PASS	Vertical	PK
8	1675.427	12.42	35.39	47.81	68.20	20.39	PASS	Vertical	PK
9	2309.4924	15.00	35.53	50.53	68.20	17.67	PASS	Vertical	PK
10	7103.2052	-4.87	48.59	43.72	68.20	24.48	PASS	Vertical	PK
11	9448.1724	1.82	44.03	45.85	68.20	22.35	PASS	Vertical	PK
12	13440.597	8.62	41.36	49.98	68.20	18.22	PASS	Vertical	PK

Mode:			802.11 a Transmitting			Channel:		5320MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1140.5856	10.03	36.89	46.92	68.20	21.28	PASS	Horizontal	PK
2	1616.2446	11.97	35.70	47.67	68.20	20.53	PASS	Horizontal	PK
3	2583.6233	15.92	35.70	51.62	68.20	16.58	PASS	Horizontal	PK
4	7368.8684	-4.42	48.11	43.69	68.20	24.51	PASS	Horizontal	PK
5	10048.5024	3.04	44.17	47.21	68.20	20.99	PASS	Horizontal	PK
6	13431.9716	8.34	41.77	50.11	68.20	18.09	PASS	Horizontal	PK
7	1139.9256	10.01	36.54	46.55	68.20	21.65	PASS	Vertical	PK
8	1698.748	12.82	35.56	48.38	68.20	19.82	PASS	Vertical	PK
9	2613.5445	15.75	35.17	50.92	68.20	17.28	PASS	Vertical	PK
10	7276.8638	-4.31	47.55	43.24	68.20	24.96	PASS	Vertical	PK
11	10084.7292	1.62	45.19	46.81	68.20	21.39	PASS	Vertical	PK
12	13449.2225	8.91	41.08	49.99	68.20	18.21	PASS	Vertical	PK

Mode:			802.11 a Transmitting			Channel:		5500MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1218.1812	9.08	36.51	45.59	68.20	22.61	PASS	Horizontal	PK
2	1764.9177	13.88	35.94	49.82	68.20	18.38	PASS	Horizontal	PK
3	2599.1399	16.21	35.64	51.85	68.20	16.35	PASS	Horizontal	PK
4	7232.2155	-4.56	47.47	42.91	68.20	25.29	PASS	Horizontal	PK
5	10059.1039	2.71	44.87	47.58	68.20	20.62	PASS	Horizontal	PK
6	13829.0553	7.50	41.91	49.41	68.20	18.79	PASS	Horizontal	PK
7	1217.8145	9.08	37.05	46.13	68.20	22.07	PASS	Vertical	PK
8	1640.6094	12.32	36.56	48.88	68.20	19.32	PASS	Vertical	PK
9	2311.6541	15.80	35.40	51.20	68.20	17.00	PASS	Vertical	PK
10	7203.8469	-5.24	48.19	42.95	68.20	25.25	PASS	Vertical	PK
11	10096.6731	1.12	45.96	47.08	68.20	21.12	PASS	Vertical	PK
12	13859.724	7.94	42.47	50.41	68.20	17.79	PASS	Vertical	PK

Mode:			802.11 a Transmitting			Channel:		5580MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1211.9475	9.08	36.91	45.99	68.20	22.21	PASS	Horizontal	PK
2	1687.1791	13.29	35.66	48.95	68.20	19.25	PASS	Horizontal	PK
3	2237.2158	15.59	35.05	50.64	68.20	17.56	PASS	Horizontal	PK
4	7791.1527	-3.78	47.62	43.84	68.20	24.36	PASS	Horizontal	PK
5	10043.0029	2.81	44.11	46.92	68.20	21.28	PASS	Horizontal	PK
6	13444.9297	8.77	40.99	49.76	68.20	18.44	PASS	Horizontal	PK
7	1195.0797	9.25	36.85	46.10	68.20	22.10	PASS	Vertical	PK
8	1640.6094	12.32	36.52	48.84	68.20	19.36	PASS	Vertical	PK
9	2251.1501	15.81	35.30	51.11	68.20	17.09	PASS	Vertical	PK
10	7757.4172	-3.53	46.17	42.64	68.20	25.56	PASS	Vertical	PK
11	10141.9095	1.37	45.38	46.75	68.20	21.45	PASS	Vertical	PK
12	13353.6902	8.23	42.00	50.23	68.20	17.97	PASS	Vertical	PK

Mode:			802.11 a Transmitting			Channel:		5700MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1194.713	9.25	36.55	45.80	68.20	22.40	PASS	Horizontal	PK
2	1768.2179	13.95	35.84	49.79	68.20	18.41	PASS	Horizontal	PK
3	2330.722	15.60	35.26	50.86	68.20	17.34	PASS	Horizontal	PK
4	7785.019	-3.73	47.12	43.39	68.20	24.81	PASS	Horizontal	PK
5	10048.3699	3.03	43.83	46.86	68.20	21.34	PASS	Horizontal	PK
6	13349.8567	8.30	42.02	50.32	68.20	17.88	PASS	Horizontal	PK
7	1221.4814	9.07	36.69	45.76	68.20	22.44	PASS	Vertical	PK
8	1734.1156	13.57	36.60	50.17	68.20	18.03	PASS	Vertical	PK
9	2329.2553	15.62	36.27	51.89	68.20	16.31	PASS	Vertical	PK
10	7615.5744	-3.70	47.17	43.47	68.20	24.73	PASS	Vertical	PK
11	10249.25	2.45	44.70	47.15	68.20	21.05	PASS	Vertical	PK
12	13838.2559	7.96	41.83	49.79	68.20	18.41	PASS	Vertical	PK

Mode:			802.11 a Transmitting			Channel:		5745MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1078.1078	9.06	38.96	48.02	68.20	20.18	PASS	Horizontal	PK
2	1933.9934	16.62	35.56	52.18	68.20	16.02	PASS	Horizontal	PK
3	2419.1419	16.18	36.37	52.55	68.20	15.65	PASS	Horizontal	PK
4	6891.0261	-4.57	48.92	44.35	68.20	23.85	PASS	Horizontal	PK
5	10274.5516	2.80	46.84	49.64	68.20	18.56	PASS	Horizontal	PK
6	11967.4645	5.30	46.02	51.32	68.20	16.88	PASS	Horizontal	PK
7	1078.1078	9.06	38.58	47.64	68.20	20.56	PASS	Vertical	PK
8	1936.7437	16.70	35.12	51.82	68.20	16.38	PASS	Vertical	PK
9	2443.8944	15.99	36.51	52.50	68.20	15.70	PASS	Vertical	PK
10	6807.4538	-4.75	49.08	44.33	68.20	23.87	PASS	Vertical	PK
11	9810.6874	2.89	45.89	48.78	68.20	19.42	PASS	Vertical	PK
12	12390.6927	6.32	44.83	51.15	68.20	17.05	PASS	Vertical	PK

Mode:			802.11 a Transmitting			Channel:		5785MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1394.9395	10.48	38.86	49.34	68.20	18.86	PASS	Horizontal	PK
2	1941.1441	16.83	35.41	52.24	68.20	15.96	PASS	Horizontal	PK
3	2394.3894	16.14	35.63	51.77	68.20	16.43	PASS	Horizontal	PK
4	7331.8888	-4.34	48.87	44.53	68.20	23.67	PASS	Horizontal	PK
5	9271.6848	0.78	48.26	49.04	68.20	19.16	PASS	Horizontal	PK
6	11957.4972	5.09	47.26	52.35	68.20	15.85	PASS	Horizontal	PK
7	1172.1672	9.70	38.23	47.93	68.20	20.27	PASS	Vertical	PK
8	1923.5424	16.34	35.40	51.74	68.20	16.46	PASS	Vertical	PK
9	2504.4004	15.71	36.21	51.92	68.20	16.28	PASS	Vertical	PK
10	7607.9072	-3.41	48.16	44.75	68.20	23.45	PASS	Vertical	PK
11	9797.6532	2.98	45.48	48.46	68.20	19.74	PASS	Vertical	PK
12	10899.4266	4.73	44.98	49.71	68.20	18.49	PASS	Vertical	PK

Mode:			802.11 a Transmitting			Channel:		5825MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1171.6172	9.72	39.13	48.85	68.20	19.35	PASS	Horizontal	PK
2	1942.2442	16.86	35.31	52.17	68.20	16.03	PASS	Horizontal	PK
3	2414.1914	16.22	36.03	52.25	68.20	15.95	PASS	Horizontal	PK
4	7351.0567	-4.27	49.43	45.16	68.20	23.04	PASS	Horizontal	PK
5	10588.1392	4.35	46.10	50.45	68.20	17.75	PASS	Horizontal	PK
6	12989.4993	7.74	44.50	52.24	68.20	15.96	PASS	Horizontal	PK
7	1172.1672	9.70	37.86	47.56	68.20	20.64	PASS	Vertical	PK
8	1920.7921	16.26	36.08	52.34	68.20	15.86	PASS	Vertical	PK
9	2691.9692	16.23	36.38	52.61	68.20	15.59	PASS	Vertical	PK
10	7398.5932	-4.67	48.64	43.97	68.20	24.23	PASS	Vertical	PK
11	9794.5863	2.85	45.50	48.35	68.20	19.85	PASS	Vertical	PK
12	11952.1301	4.97	45.78	50.75	68.20	17.45	PASS	Vertical	PK

Note:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor

2) Scan from 9kHz to 25GHz, the disturbance above 18GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

6.4 Radiated Emission which fall in the restricted bands

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.407 (b)				
Test Method:	ANSI C63.10 2013				
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100 kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10kHz	Average
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
	*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (4) For transmitters operating in the 5.725-5.85 GHz band: (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, 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. Note: (i) $EIRP = ((E*d)^2) / 30$ where: • E is the field strength in V/m; • d is the measurement distance in meters; • EIRP is the equivalent isotropically radiated power in watts. (ii) Working in dB units, the above equation is equivalent to: $EIRP[dBm] = E[dB\mu V/m] + 20 \log(d[meters]) - 104.77$ (iii) Or, if d is 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
Test Setup:	

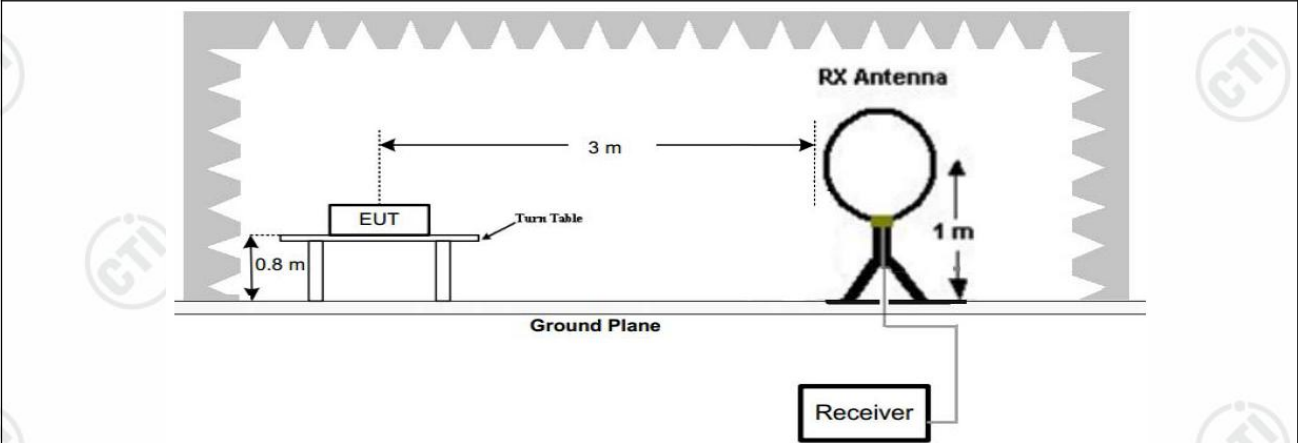


Figure 1. Below 30MHz

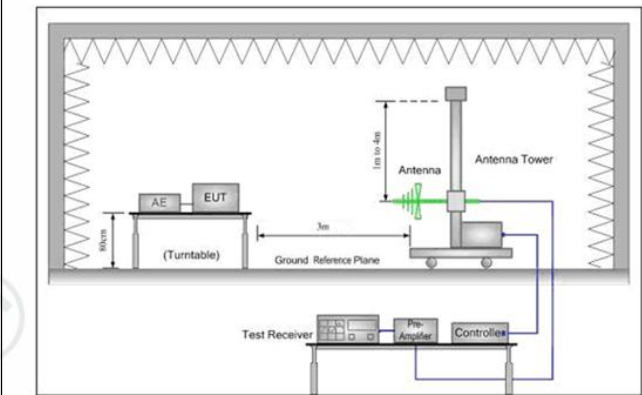


Figure 2. 30MHz to 1GHz

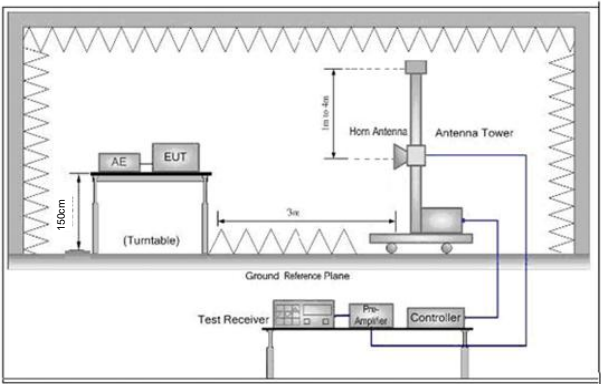


Figure 3. Above 1 GHz

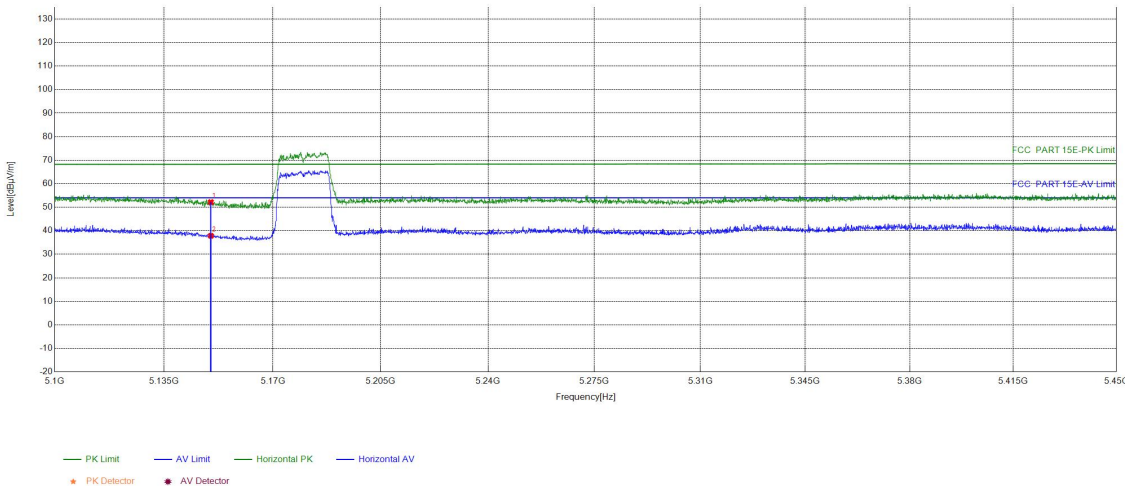
Test Procedure:	j. 1) Below 1G: The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. 2) Above 1G: The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. Note: For the radiated emission test above 1GHz:
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	Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. k. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. l. 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. m. 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. n. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. o. 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. p. Test the EUT in the lowest channel, the Highest channel q. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. r. Repeat above procedures until all frequencies measured was complete.
Test Mode:	Transmitting mode with modulation
Test Results:	Pass

Test Data:

EUT_Name		Test_Model	
Test_Mode	802.11 a Transmitting	Test_Frequency	5180MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

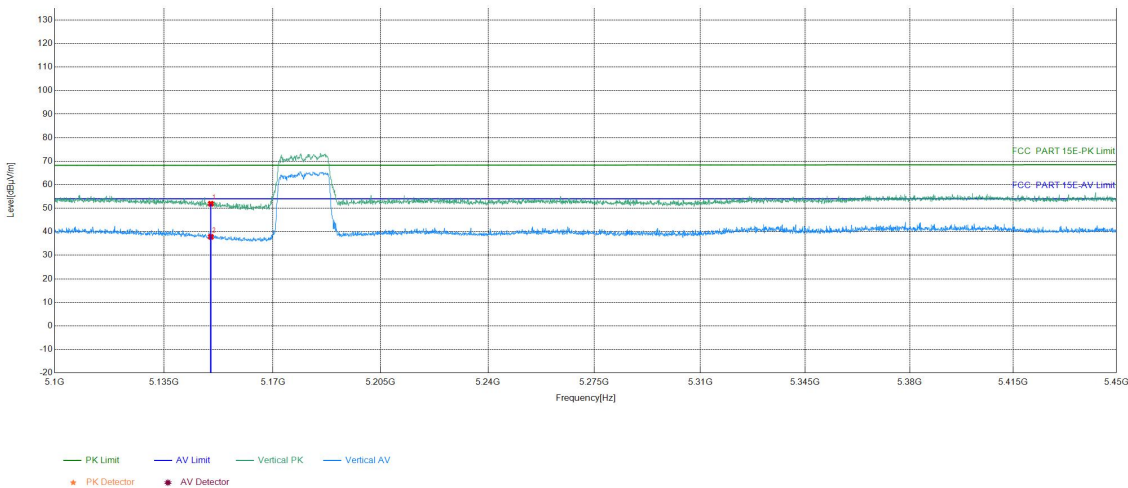
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5150	21.98	30.21	52.19	68.24	16.05	PASS	Horizontal	PK
2	5150	21.98	15.88	37.86	54.00	16.14	PASS	Horizontal	AV

EUT_Name		Test_Model	
Test_Mode	802.11 a Transmitting	Test_Frequency	5180MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

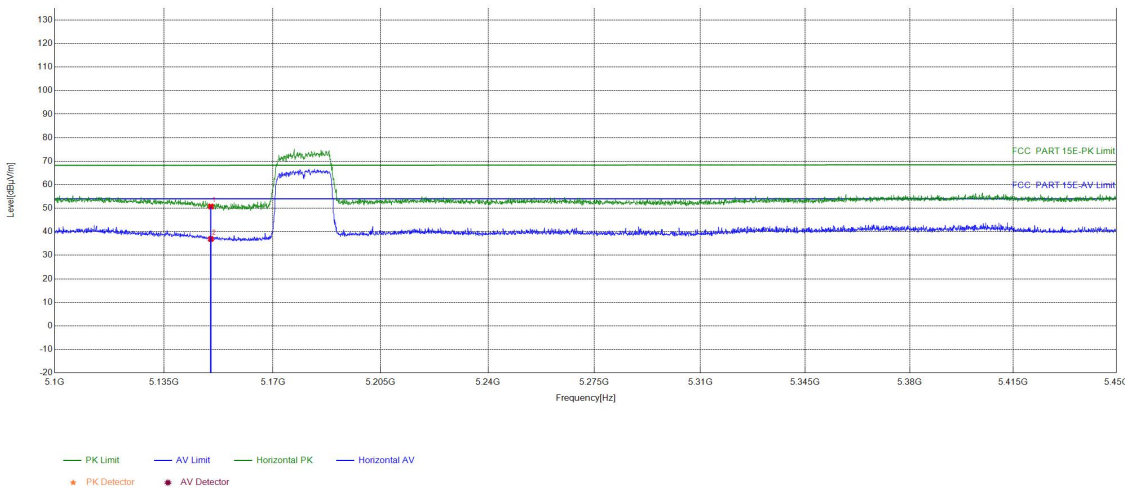
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5150	21.98	29.93	51.91	68.24	16.33	PASS	Vertical	PK
2	5150	21.98	15.85	37.83	54.00	16.17	PASS	Vertical	AV

EUT_Name		Test_Model	
Test_Mode	802.11 n(HT20) Transmitting	Test_Frequency	5180MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

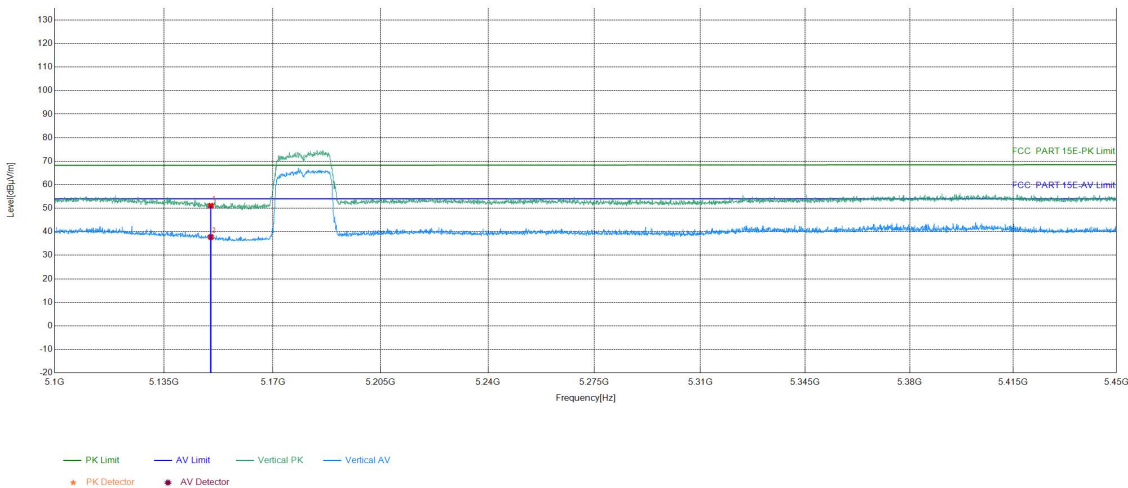
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5150	21.98	28.76	50.74	68.24	17.50	PASS	Horizontal	PK
2	5150	21.98	14.94	36.92	54.00	17.08	PASS	Horizontal	AV

EUT_Name		Test_Model	
Test_Mode	802.11 n(HT20) Transmitting	Test_Frequency	5180MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

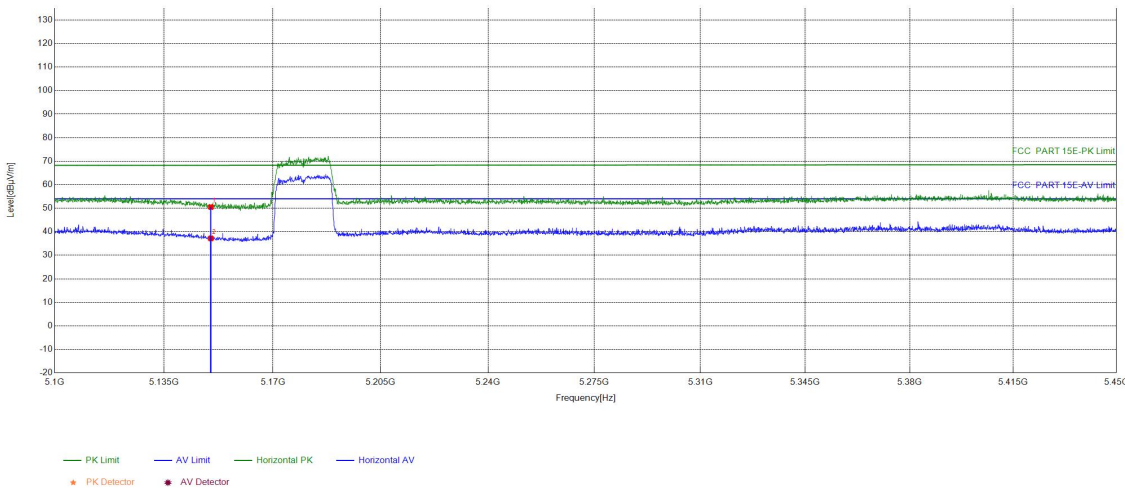
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5150	21.98	29.09	51.07	68.24	17.17	PASS	Vertical	PK
2	5150	21.98	15.76	37.74	54.00	16.26	PASS	Vertical	AV

EUT_Name		Test_Model	
Test_Mode	802.11 ac(VHT20) Transmitting	Test_Frequency	5180MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

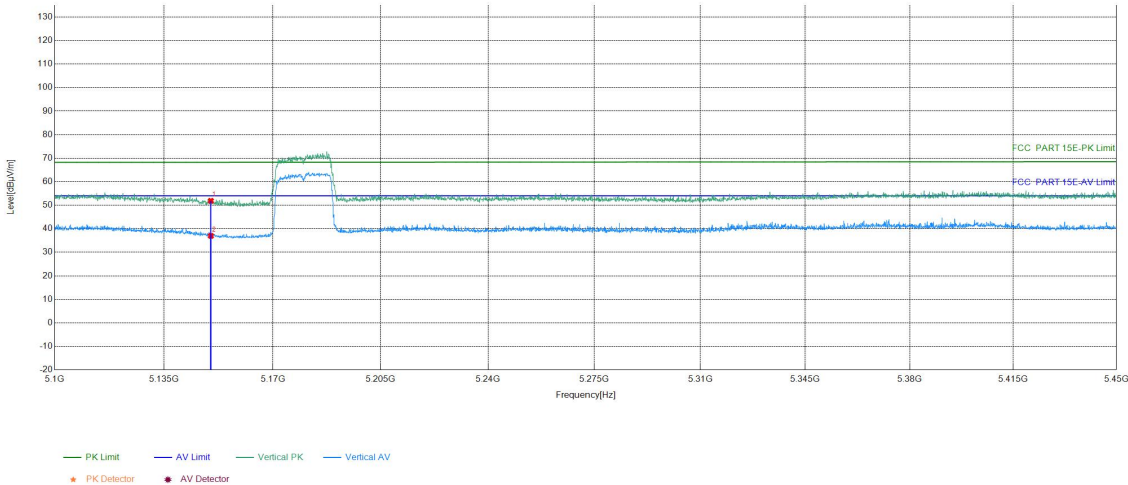
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5150	21.98	28.53	50.51	68.24	17.73	PASS	Horizontal	PK
2	5150	21.98	15.21	37.19	54.00	16.81	PASS	Horizontal	AV

EUT_Name		Test_Model	
Test_Mode	802.11 ac(VHT20) Transmitting	Test_Frequency	5180MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

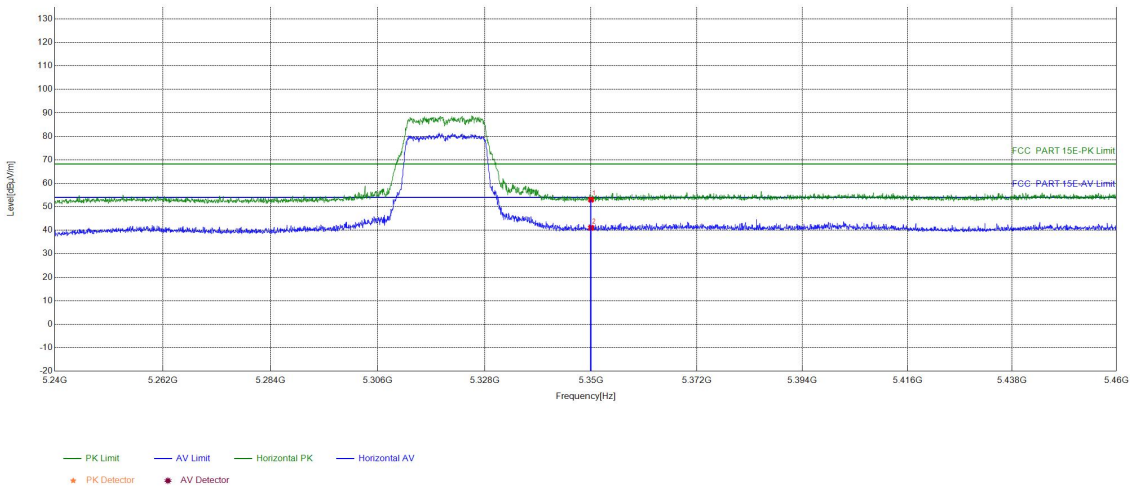
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5150	21.98	29.90	51.88	68.24	16.36	PASS	Vertical	PK
2	5150	21.98	15.01	36.99	54.00	17.01	PASS	Vertical	AV

EUT_Name		Test_Model	
Test_Mode	802.11 a Transmitting	Test_Frequency	5320MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

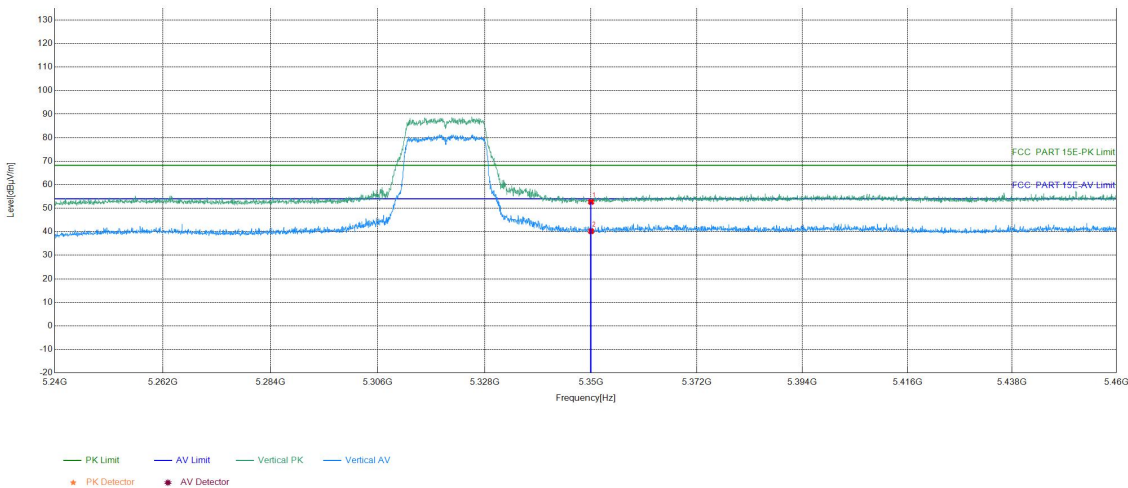
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5350	22.37	30.65	53.02	68.20	15.18	PASS	Horizontal	PK
2	5350	22.37	18.67	41.04	54.00	12.96	PASS	Horizontal	AV

EUT_Name		Test_Model	
Test_Mode	802.11 a Transmitting	Test_Frequency	5320MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

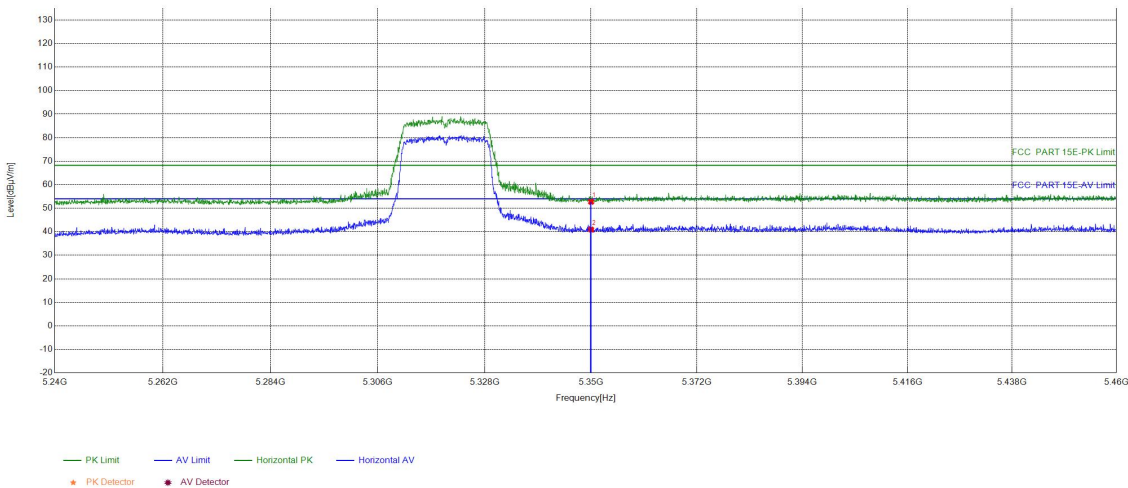
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5350	22.37	30.32	52.69	68.20	15.51	PASS	Vertical	PK
2	5350	22.37	17.85	40.22	54.00	13.78	PASS	Vertical	AV

EUT_Name		Test_Model	
Test_Mode	802.11 n(HT20) Transmitting	Test_Frequency	5320MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

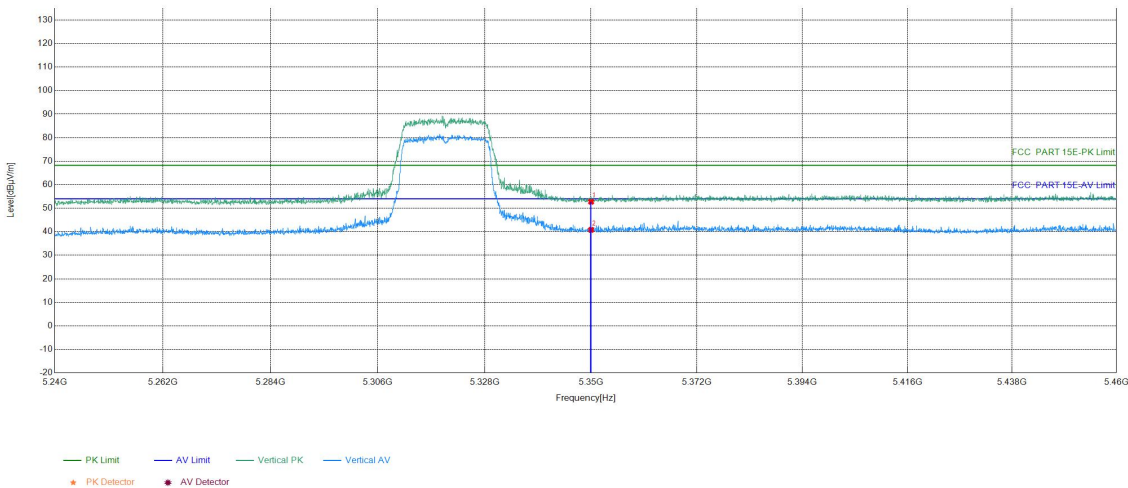
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5350	22.37	30.36	52.73	68.20	15.47	PASS	Horizontal	PK
2	5350	22.37	18.57	40.94	54.00	13.06	PASS	Horizontal	AV

EUT_Name		Test_Model	
Test_Mode	802.11 n(HT20) Transmitting	Test_Frequency	5320MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

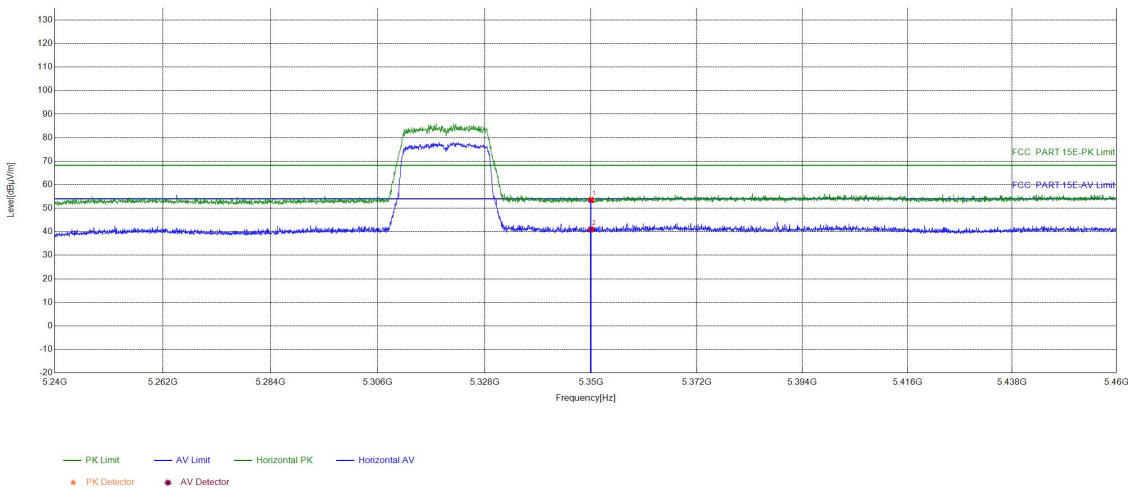
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5350	22.37	30.37	52.74	54.00	1.26	PASS	Vertical	PK
2	5350	22.37	18.43	40.80	54.00	13.20	PASS	Vertical	AV

EUT_Name		Test_Model	
Test_Mode	802.11 ac(VHT20) Transmitting	Test_Frequency	5320MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

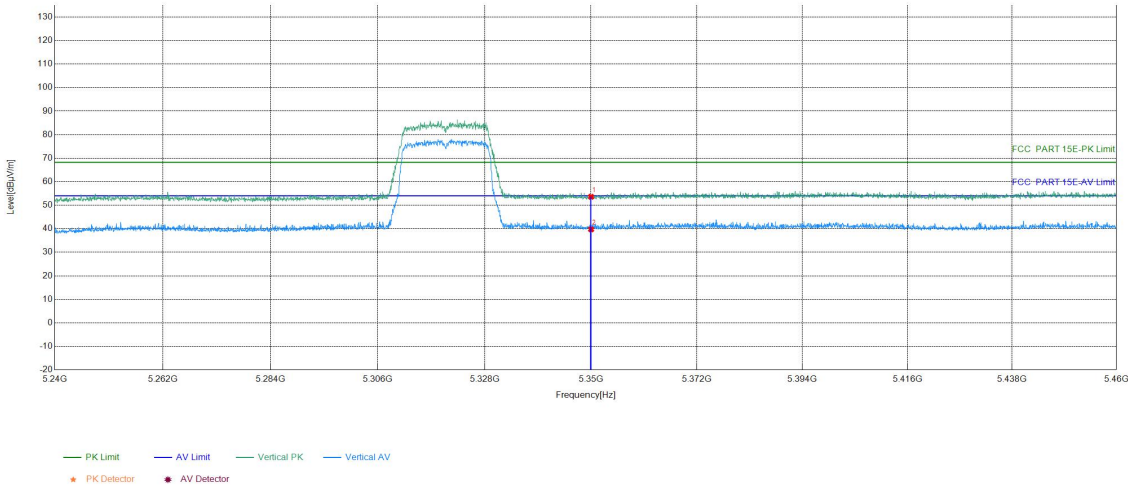
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5350	22.37	31.11	53.48	54.00	0.52	PASS	Horizontal	PK
2	5350	22.37	18.64	41.01	54.00	12.99	PASS	Horizontal	AV

EUT_Name		Test_Model	
Test_Mode	802.11 ac(VHT20) Transmitting	Test_Frequency	5320MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

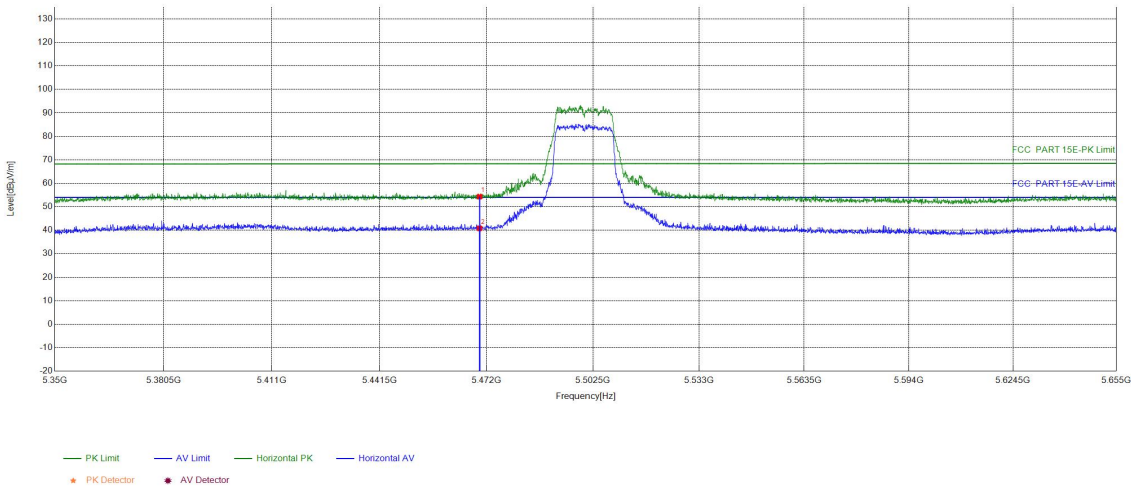
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5350	22.37	31.22	53.59	68.20	14.61	PASS	Vertical	PK
2	5350	22.37	17.38	39.75	54.00	14.25	PASS	Vertical	AV

EUT_Name		Test_Model	
Test_Mode	802.11 a Transmitting	Test_Frequency	5500MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

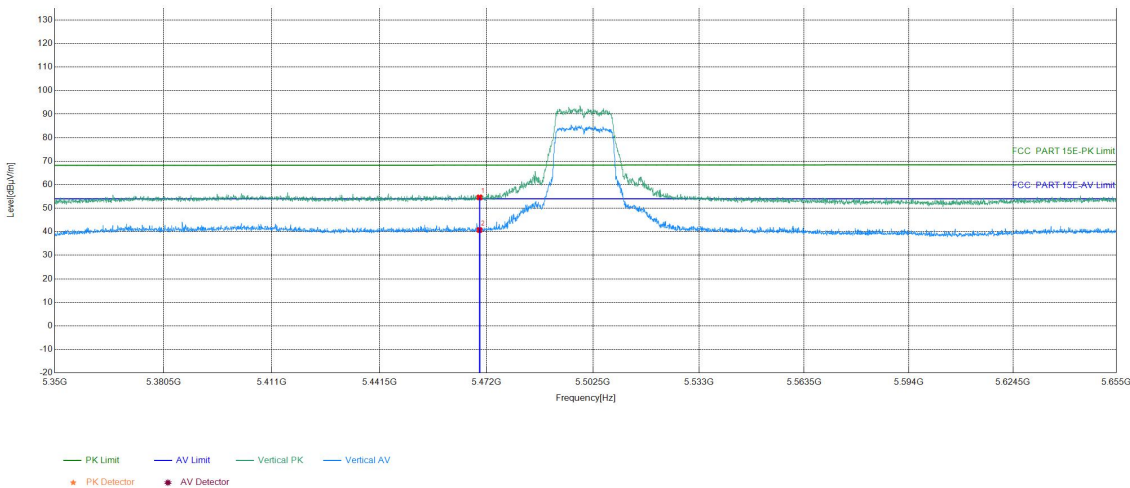
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5470	22.48	31.85	54.33	68.32	13.99	PASS	Horizontal	PK
2	5470	22.48	18.35	40.83	54.00	13.17	PASS	Horizontal	AV

EUT_Name		Test_Model	
Test_Mode	802.11 a Transmitting	Test_Frequency	5500MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

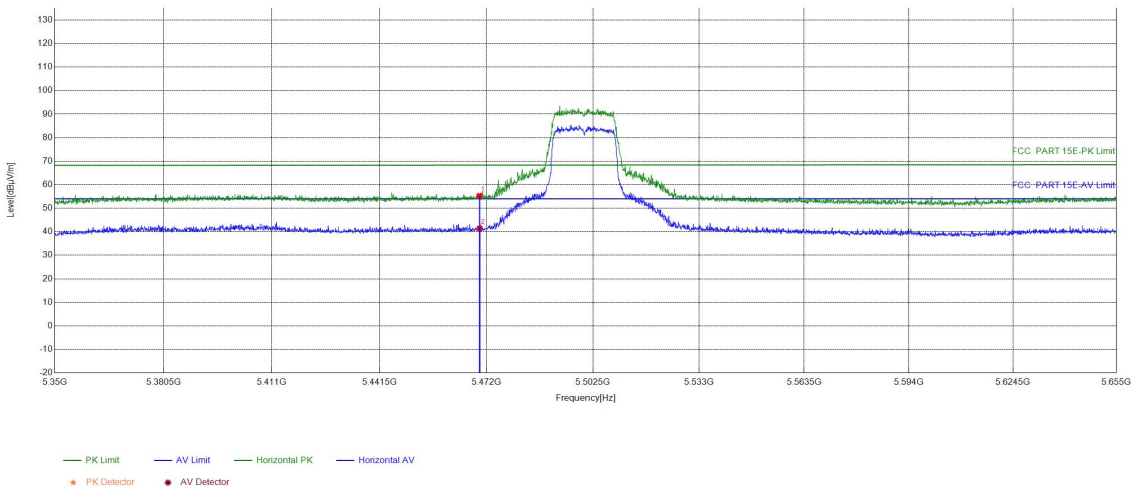
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5470	22.48	32.14	54.62	68.32	13.70	PASS	Vertical	PK
2	5470	22.48	18.25	40.73	54.00	13.27	PASS	Vertical	AV

EUT_Name		Test_Model	
Test_Mode	802.11 n(HT20) Transmitting	Test_Frequency	5500MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

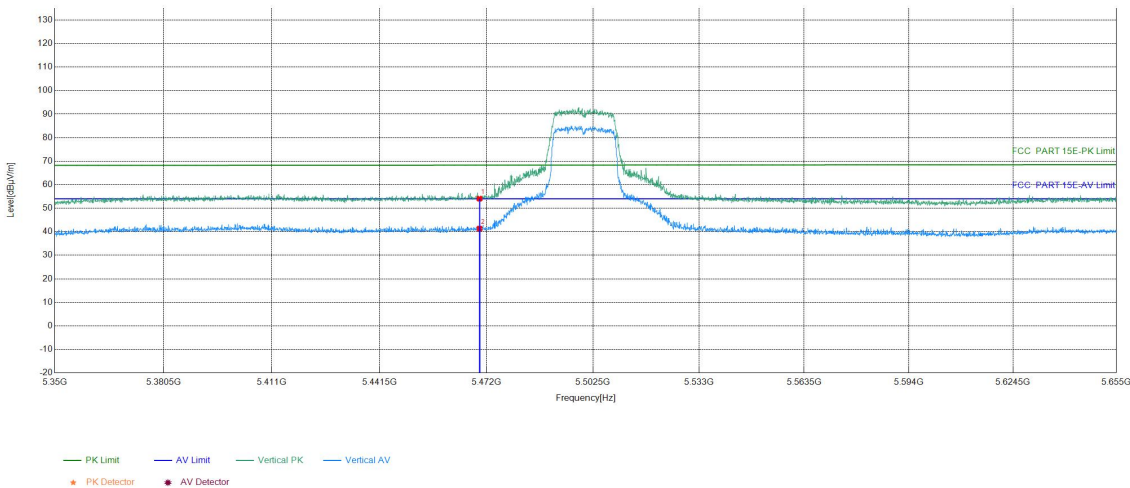
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5470	22.48	32.81	55.29	68.32	13.03	PASS	Horizontal	PK
2	5470	22.48	18.94	41.42	54.00	12.58	PASS	Horizontal	AV

EUT_Name		Test_Model	
Test_Mode	802.11 n(HT20) Transmitting	Test_Frequency	5500MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

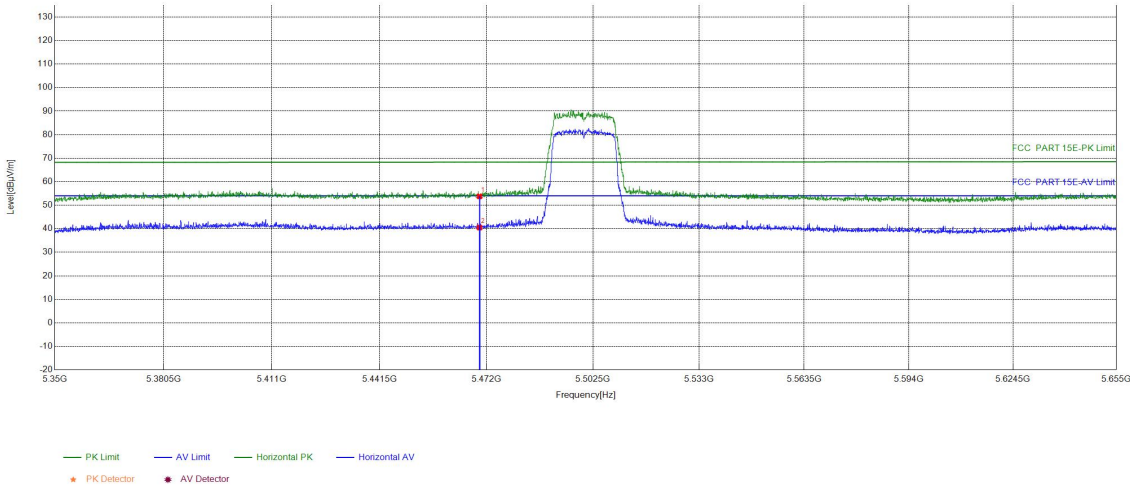
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5470	22.48	31.58	54.06	68.32	14.26	PASS	Vertical	PK
2	5470	22.48	18.86	41.34	54.00	12.66	PASS	Vertical	AV

EUT_Name		Test_Model	
Test_Mode	802.11 ac(VHT20) Transmitting	Test_Frequency	5500MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

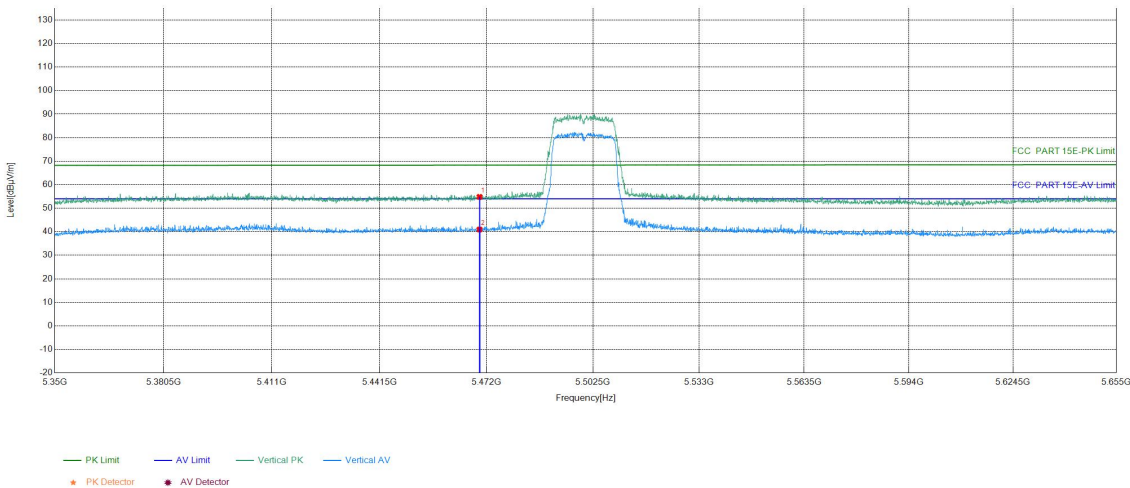
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5470	22.48	31.29	53.77	68.32	14.55	PASS	Horizontal	PK
2	5470	22.48	18.04	40.52	54.00	13.48	PASS	Horizontal	AV

EUT_Name		Test_Model	
Test_Mode	802.11 ac(VHT20) Transmitting	Test_Frequency	5500MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

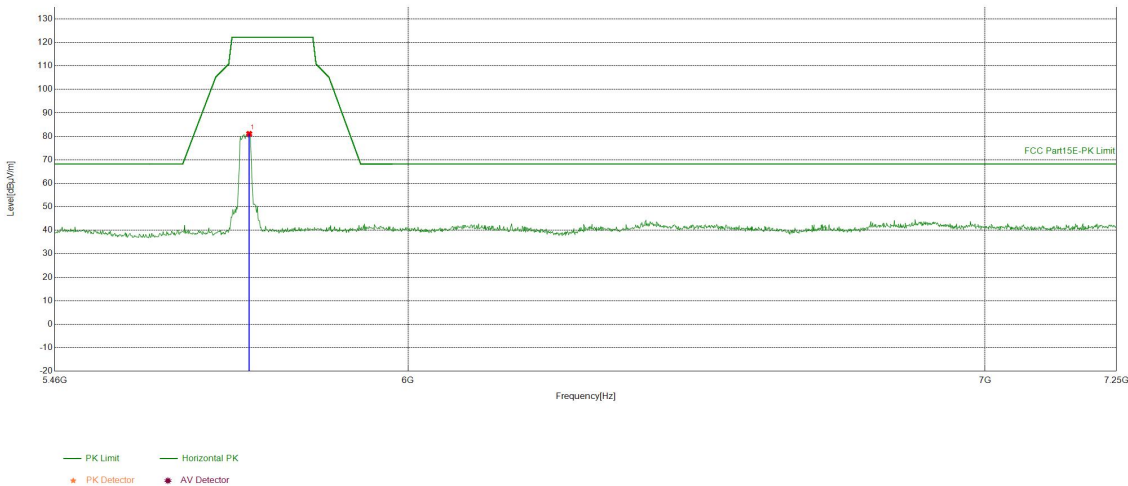
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5470	22.48	32.35	54.83	68.32	13.49	PASS	Vertical	PK
2	5470	22.48	18.47	40.95	54.00	13.05	PASS	Vertical	AV

EUT_Name		Test_Model	
Test_Mode	802.11 a Transmitting	Test_Frequency	5745MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

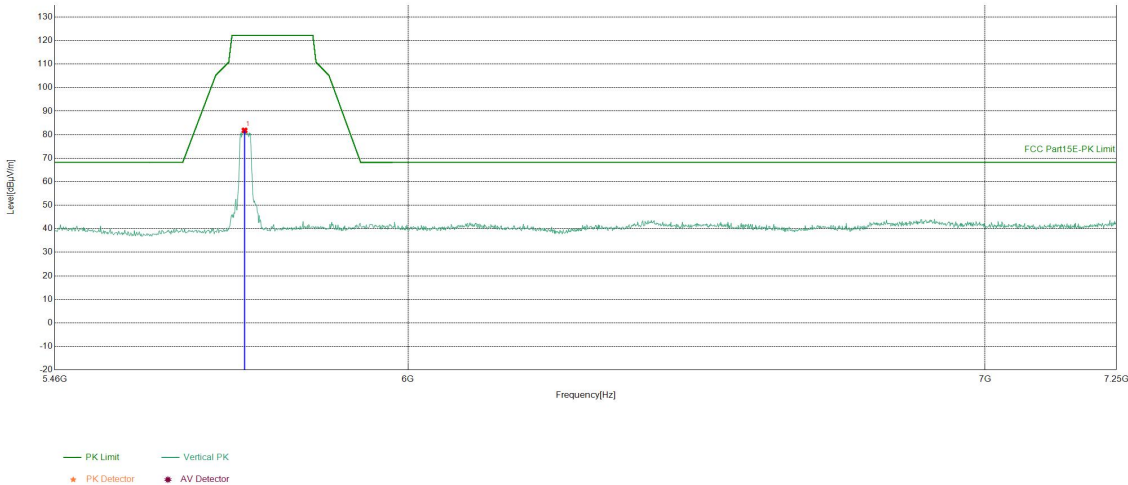
Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5751.0205	-7.49	88.55	81.06	122.20	41.14	PASS	Horizontal	PK

EUT_Name		Test_Model	
Test_Mode	802.11 a Transmitting	Test_Frequency	5745MHz
Tset_Engineer	Aiden.wang	Test_Date	2024/12/11
Remark	23.5°C56.9%\		

Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	5743.8569	-7.72	89.52	81.80	122.20	40.40	PASS	Vertical	PK