

TEST REPORT

Product : UWB Anchor
Trade mark : N/A
Model/Type reference : AN02
Serial Number : N/A
Report Number : EED32R80573703
FCC ID : 2BFQ6AN02R1
Date of Issue : Sep. 30, 2025
Test Standards : 47 CFR Part 15 Subpart F
Test result : PASS

Prepared for:

Iiwari

Kidekuja 2 Vuokatti 88610 Finland

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Park, Zone 70, Bao'an
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Date:

Sep. 30, 2025



Check No.: 7739180425

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2 Test Summary

Test Item	Test Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart C Section §15.203	Pass
Operational Requirements	47 CFR Part 15, Subpart F Section §15.517(a)	Pass
AC Power Line Conducted Emissions	47 CFR Part 15, Subpart C Section §15.207	Pass
EIRP (Equivalent Isotropic Radiated Power)	47 CFR Part 15, Subpart F Section §15.517(c) & §15.517(e)	Pass
-10dB Bandwidth	47 CFR Part 15, Subpart F Section §15.503(a),(d) & §15.517(b)	Pass
Spurious Emissions Below 1GHz	47 CFR Part 15, Subpart F Section §15.209	Pass
Spurious Emissions Above 1GHz	47 CFR Part 15, Subpart F Section §15.517(c),(d) & §15.521(d)	Pass

3 General Information

3.1 Client Information

Applicant:	iiwari
Address of Applicant:	Kidekuja 2 Vuokatti 88610 Finland
Manufacturer:	KKM Technology Company Limited
Address of Manufacturer:	6A-3CDE, Baoneng Science and Technology Industrial Park, Long Hua district, Shenzhen 518109, Guang Dong, China.
Factory:	KKM Technology Company Limited
Address of Factory:	6A-3CDE, Baoneng Science and Technology Industrial Park, Long Hua district, Shenzhen 518109, Guang Dong, China.

3.2 General Description of EUT

Product Name:	UWB Anchor
Model No.:	AN02
Trade Mark:	N/A
Product Type:	Indoor UWB system
Operation Frequency:	6240MHz to 8237MHz
Modulation Type:	BPM-BPSK
Number of Channels:	Channel list: 6489.6 MHz; 7987.2MHz Channel number: 2
Antenna Type:	PCB Antenna
Antenna Gain:	6489.6MHz: 2.48dBi, 7987.2MHz: 1.54dBi
Power Supply:	DC 12V/1A
Test Voltage:	DC 12V
Sample Received Date:	Apr. 28, 2025
Sample tested Date:	Apr. 28, 2025 to Jul. 03, 2025

3.3 Test Configuration

EUT Test Software Settings:	
Test Software:	N/A
EUT Power Grade:	Default (Power level is built-in set parameters and cannot be changed and selected)

3.4 Test Environment

Operating Environment:	
Radiated Spurious Emissions:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar
RF Conducted:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar

3.5 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	HP ZHAN 66 Pro 14 G4 Notebook PC	FCC&CE	CTI

3.6 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Hongwei Industrial Park, Zone 70, Bao'an District, Shenzhen, Guangdong, China

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

No tests were sub-contracted.

FCC Designation No.: CN1164

3.7 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)
		4.3dB (30MHz-1GHz)
		4.5dB (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%

3.8 Equipment List

RF test system					
Equipment	Manufacturer	Model No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Communication test set	R&S	CMW500	107929	06-26-2024 06-16-2025	06-25-2025 06-15-2026
Signal Generator	R&S	SMBV100A	1407.6004K02- 262149-CV	09-02-2024	09-01-2025
Spectrum Analyzer	R&S	FSV40	101200	07-18-2024	07-17-2025
RF control unit(power unit)	MWRF-test	MW100-RFCB	MW220620CTI-42	06-26-2024 06-16-2025	06-25-2025 06-15-2026
High-low temperature test chamber	Dong Guang Qin Zhuo	LK-80GA	QZ20150611879	11-30-2024	11-29-2025
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	05-29-2024 05-26-2025	05-28-2025 05-25-2026
BT&WI-FI Automatic test software	MWRF-test	MTS 8310	V2.0.0.0	---	---
Spectrum Analyzer	R&S	FSV3044	101509	02-14-2025	02-13-2026

3M Semi-anechoic Chamber (2)- Radiated disturbance Test					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Due Date
3M Chamber & Accessory Equipment	TDK	SAC-3	---	01/13/2024	01/12/2027
Receiver	R&S	ESCI7	100938-003	09/07/2024	09/06/2025
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	9163-618	05/22/2022 05/14/2025	05/21/2025 05/13/2026
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04/07/2025	04/06/2026
Multi device Controller	maturo	NCD/070/10711112	---	---	---
Horn Antenna	ETS-LINGREN	BBHA 9120D	9120D-1869	04/07/2025	04/06/2026
Microwave Preamplifier	Agilent	8449B	3008A02425	06/13/2024 05/22/2025	06/12/2025 05/21/2026
Test software	Fara	EZ-EMC	EMEC-3A1-Pre	---	---

3M Semi-anechoic Chamber (2)- Radiated disturbance Test					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Due Date
3M Chamber & Accessory Equipment	TDK	SAC-3	---	01/13/2024	01/12/2027
Receiver	R&S	ESCI7	100938-003	09/07/2024	09/06/2025
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	9163-618	05/22/2022 05/14/2025	05/21/2025 05/13/2026
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04/07/2025	04/06/2026
Multi device Controller	maturo	NCD/070/10711112	---	---	---
Horn Antenna	ETS-LINGREN	BBHA 9120D	9120D-1869	04/07/2025	04/06/2026
Microwave Preamplifier	Agilent	8449B	3008A02425	06/13/2024 05/22/2025	06/12/2025 05/21/2026
Test software	Fara	EZ-EMC	EMEC-3A1-Pre	---	---

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	01-04-2025	01-03-2026
Spectrum Analyzer	Keysight	N9020B	MY57111112	01-14-2025	01-13-2026
Spectrum Analyzer	Keysight	N9030B	MY57140871	01-14-2025	01-13-2026
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	9163-1148	04-12-2025	04-11-2026
Horn Antenna	Schwarzbeck	BBHA 9170	9170-832	04-12-2025	04-11-2026
Horn Antenna	ETS-LINDGREN	3117	57407	07-03-2024 06-29-2025	07-02-2025 06-28-2026
Preamplifier	EMCI	EMC001330	980563	03-03-2025	03-02-2026
Preamplifier	Tonscend	TAP-011858	AP21B806112	07-18-2024	07-17-2025
Preamplifier	Tonscend	EMC051845SE	980380	12-05-2024	12-04-2025
Communication test set	R&S	CMW500	102898	01-04-2025	01-03-2026
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	03-31-2025	03-30-2026
RSE Automatic test software	JS Tonscend	JS36-RSE	V4.0.0.0	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0001		---
Cable line	Times	SFT205-NMSM-2.50M	394812-0002	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0003	---	---
Cable line	Times	SFT205-NMSM-2.50M	393495-0001	---	---
Cable line	Times	EMC104-NMNM-1000	SN160710	---	---
Cable line	Times	SFT205-NMSM-3.00M	394813-0001	---	---
Cable line	Times	SFT205-NMNM-1.50M	381964-0001	---	---
Cable line	Times	SFT205-NMSM-7.00M	394815-0001	---	---
Cable line	Times	HF160-KMKM-3.00M	393493-0001	---	---

4 Test results and Measurement Data

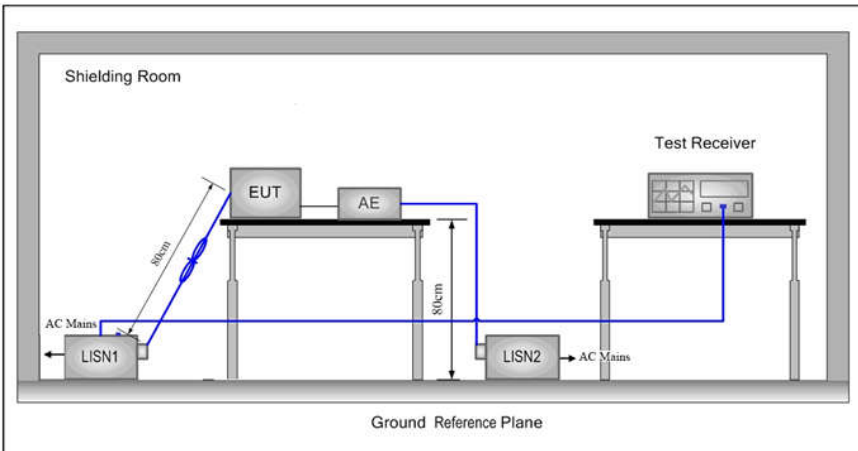
4.1 Antenna Requirement

Standard requirement:	47 CFR Part 15, Subpart C Section § 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply.	
EUT Antenna:	Please see Internal photos
The antenna is PCB Antenna. The best case gain of the antenna is 6489.6MHz:2.48dBi, 7987.2MHz:1.54dBi	

4.2 Operational Requirements

Standard requirement:	47 CFR Part 15, Subpart F Section §15.517(a)
(1) Indoor UWB devices, by the nature of their design, must be capable of operation only indoors. The necessity to operate with a fixed indoor infrastructure, e.g., a transmitter that must be connected to the AC power lines, may be considered sufficient to demonstrate this. Result: Compliant, the EUT is an indoor anchor designed to receive location information from a tag filed under a separate application. The statement required by Section 15.517(f) is located in the manual regarding the use of indoor equipment. (2) The emissions from the equipment operated under this section shall not be intentional directed outside of the building in which the equipment is located, such as through a window or a doorway, to perform an outside function, such as the detection of persons about to enter a building. Result: Not Applicable, Compliant. (3) The use of outdoor mounted antennas, e.g. antennas mounted on the outside of a building or on a telephone pole, or any other outdoors infrastructure is prohibited. Result: Not Applicable, Compliant. (4) Field disturbance sensors installed inside of metal or underground storage tanks are considered to operate indoors provided the emissions are directed towards the ground. Result: Not Applicable, Compliant. (5) A communications system shall transmit only when the intentional radiator is sending information to an associated receiver.	
Result:	Compliant.

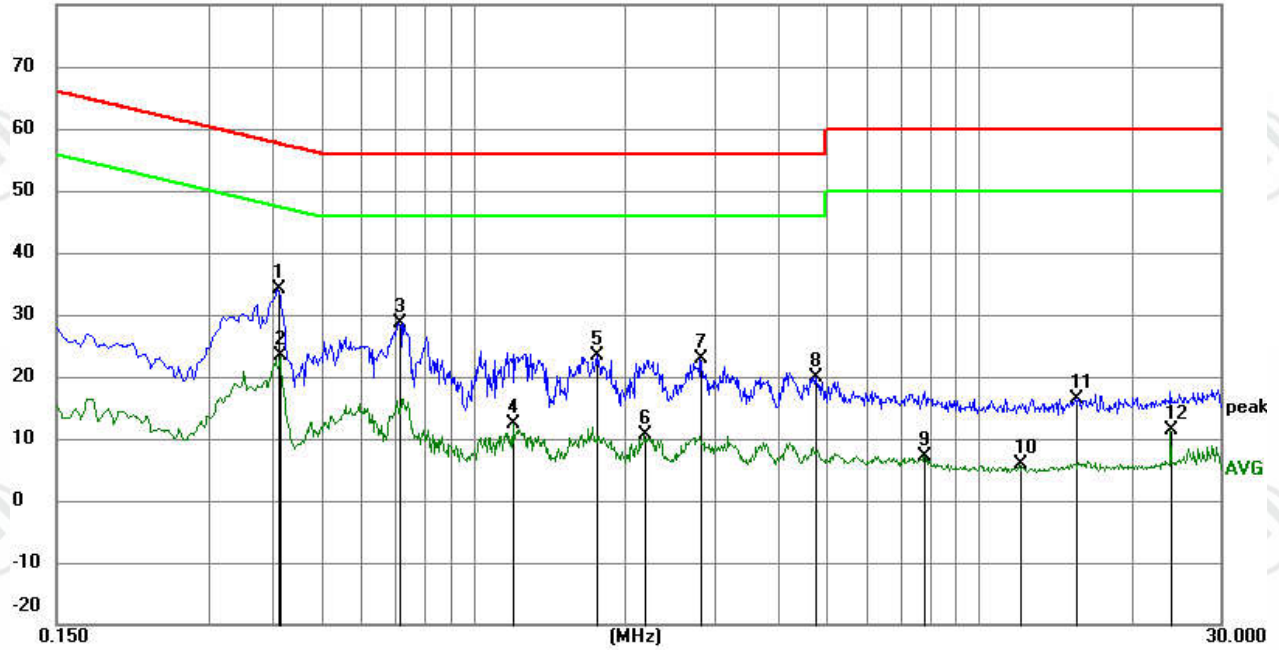
4.3 AC Power Line Conducted Emissions

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:	Continuous Tx Mode, Keep the EUT Transmitting with Modulation		
Test Results:	Pass		

Measurement Data

Live line:

80.0 dBuV



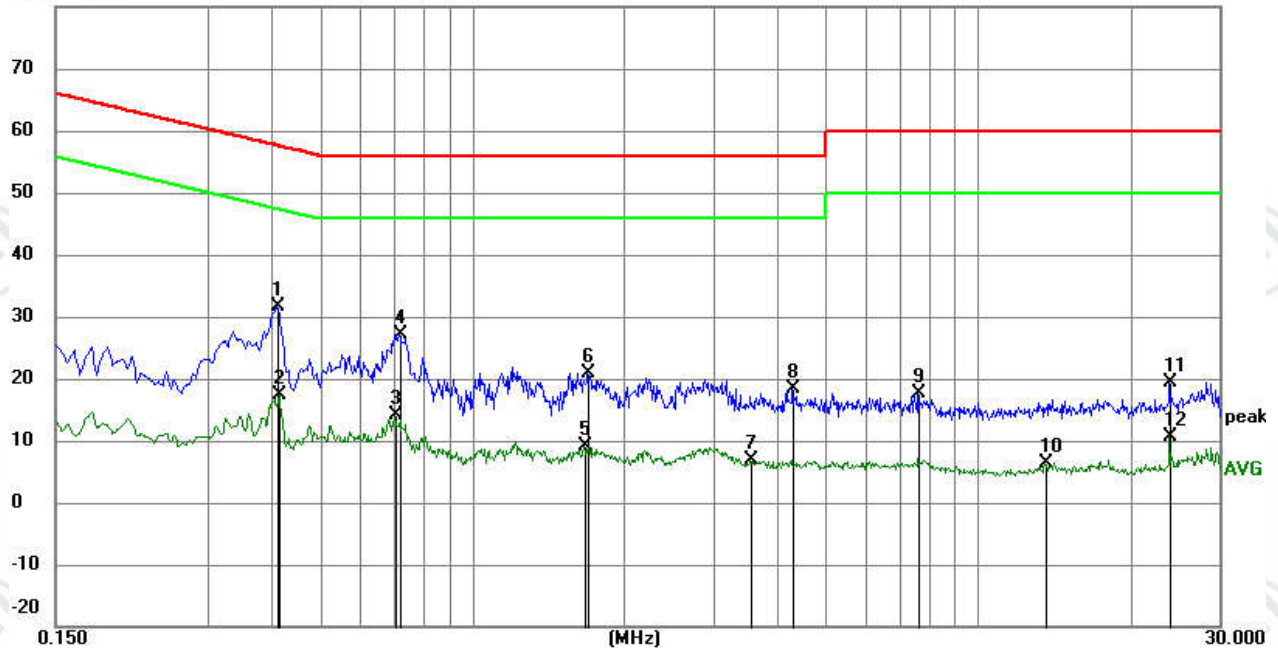
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.4110	23.95	10.09	34.04	57.63	-23.59	QP	
2		0.4155	13.25	10.09	23.34	47.54	-24.20	AVG	
3		0.7125	18.52	10.14	28.66	56.00	-27.34	QP	
4		1.2030	2.25	10.18	12.43	46.00	-33.57	AVG	
5		1.7565	13.30	10.17	23.47	56.00	-32.53	QP	
6		2.1795	0.55	10.16	10.71	46.00	-35.29	AVG	
7		2.8095	12.72	10.14	22.86	56.00	-33.14	QP	
8		4.7535	9.93	10.07	20.00	56.00	-36.00	QP	
9		7.8000	-2.79	10.01	7.22	50.00	-42.78	AVG	
10		12.0300	-4.07	9.91	5.84	50.00	-44.16	AVG	
11		15.5400	6.62	9.85	16.47	60.00	-43.53	QP	
12		24.0000	1.65	9.81	11.46	50.00	-38.54	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:

80.0 dBuV

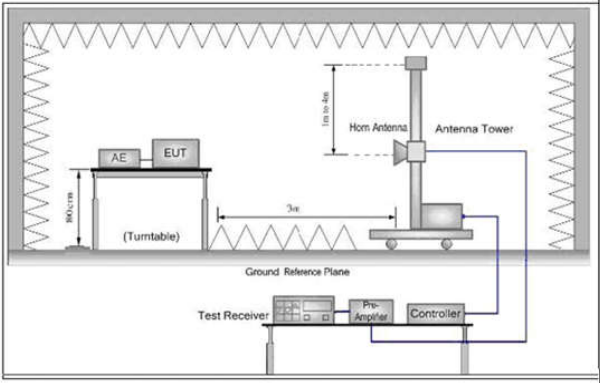


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.4110	21.54	10.09	31.63	57.63	-26.00	QP	
2		0.4155	7.23	10.09	17.32	47.54	-30.22	AVG	
3		0.7035	4.03	10.13	14.16	46.00	-31.84	AVG	
4		0.7170	17.03	10.14	27.17	56.00	-28.83	QP	
5		1.6710	-1.05	10.17	9.12	46.00	-36.88	AVG	
6		1.6980	10.79	10.17	20.96	56.00	-35.04	QP	
7		3.5565	-3.16	10.11	6.95	46.00	-39.05	AVG	
8		4.2945	8.17	10.09	18.26	56.00	-37.74	QP	
9		7.6425	7.65	10.01	17.66	60.00	-42.34	QP	
10		13.5780	-3.54	9.89	6.35	50.00	-43.65	AVG	
11		24.0000	9.52	9.81	19.33	60.00	-40.67	QP	
12		24.0000	0.80	9.81	10.61	50.00	-39.39	AVG	

Remark:

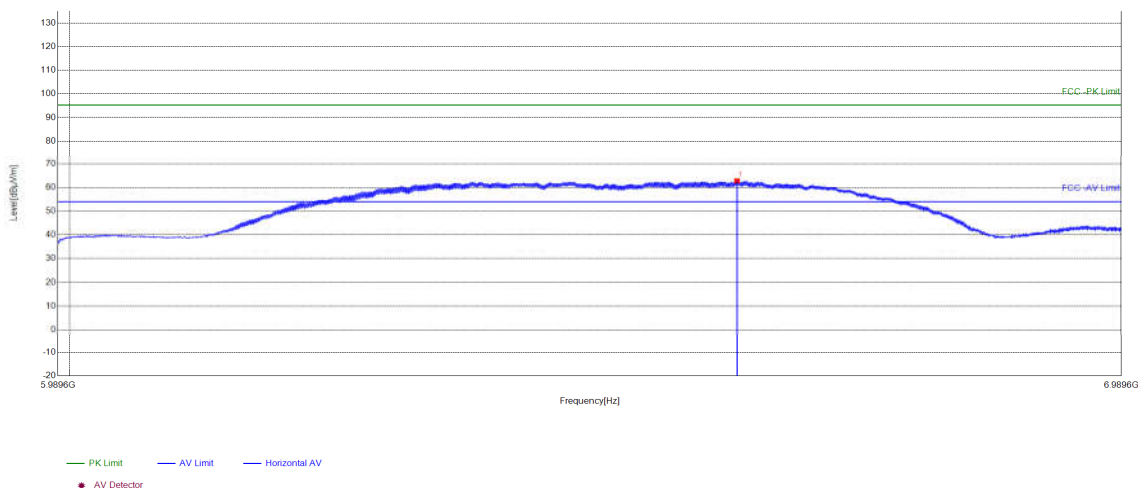
1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

4.4 EIRP(Equivalent Isotropic Radiated Power)

Test Requirement:	47 CFR Part 15,Subpart F Section §15.517(c) & §15.517(e)												
Test Method:	ANSI C63.10: 2013 section 10.3												
Test Setup:	 Remark: Due to some spectrum analyzer does not support 50MHz RBW setting, RBW set to the maximum value, and add a correction factor is allowed for Max Peak EIRP measurement. According to ANSI 63.10 Clause 10.3.9, the EIRP to field strength at a specified measurement distance of 3 m is below: $E \text{ (dBuV/m)} = \text{EIRP(dBm)} + 95.3$ For peak power test, the spectrum anylyzer was set to RBW=8MHz, VBW=10MHz, and add a conversion factor of $20 \cdot \log(50\text{MHz}/8\text{MHz}) = 15.92\text{dB}$.												
Test Procedure:	1) The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semianechoic 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 rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5) The test-receiver system was set to Peak detector with Maximum Hold Mode for Max Peak EIRP measurement and AV detector for Average EIRP measurement. 6) Test the EUT in the lowest channel, the Highest channel 7) The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case. 8) Repeat above procedures until all frequencies measured was complete. Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor												
Limit:	(c) The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not exceed the emission levels in § 15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz: <table border="1"> <thead> <tr> <th>Frequency in MHz</th><th>EIRP in dBm</th></tr> </thead> <tbody> <tr> <td>960-1610</td><td>-75.3</td></tr> <tr> <td>1610-1990</td><td>-53.3</td></tr> <tr> <td>1990-3100</td><td>-51.3</td></tr> <tr> <td>3100-10600</td><td>-41.3</td></tr> <tr> <td>Above 10600</td><td>-51.3</td></tr> </tbody> </table>	Frequency in MHz	EIRP in dBm	960-1610	-75.3	1610-1990	-53.3	1990-3100	-51.3	3100-10600	-41.3	Above 10600	-51.3
Frequency in MHz	EIRP in dBm												
960-1610	-75.3												
1610-1990	-53.3												
1990-3100	-51.3												
3100-10600	-41.3												
Above 10600	-51.3												

	(e) There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs, f_M . That limit is 0 dBm EIRP. It is acceptable to employ a different resolution bandwidth, and a correspondingly different peak emission limit, following the procedures described in § 15.521.
Test Mode:	Continuous Tx Mode, Keep the EUT Transmitting with Modulation
Test Results:	Pass

Test Result



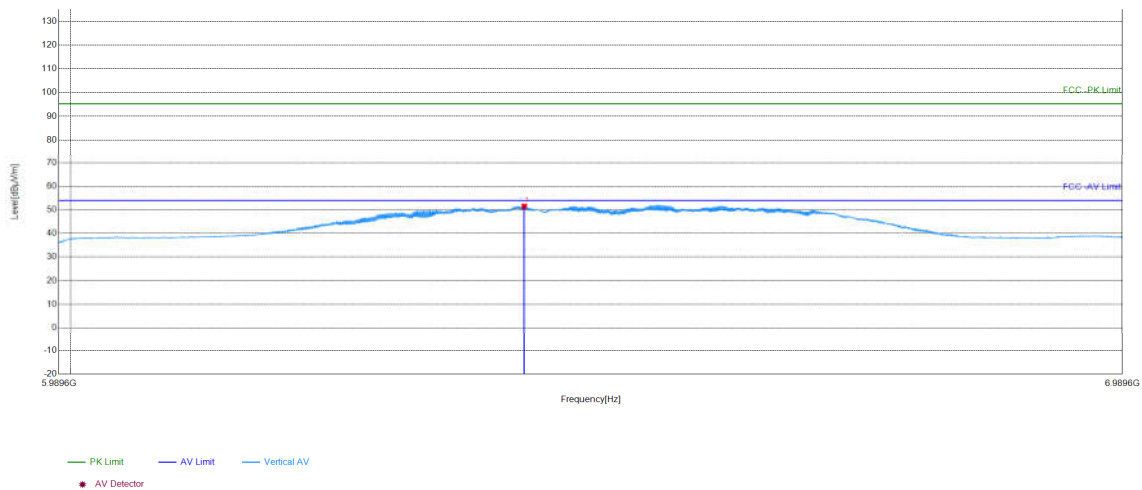
Peak Field Strength for fundamental @ RBW=8MHz					
Freq.[MHz]	Factor[dB]	Reading[dBμV]	Level [dBμV/m]	Polarity	Remark
6610.26	-4.11	66.83	62.72	Horizontal	Peak

Calculated Peak Field Strength of fundamental					
Freq. [MHz]	Measured Field Strength of fundamental (FSM) (dBuV/m)	Limit (dBuV/m)	Margin [dB]	Result	Polarity
6610.26	62.72	79.38	16.66	Pass	Horizontal

Note:

①Limit(dBuV/m) = EIRP(dBm) + 95.3=79.38(dBuV/m);

②EIRP(dBm)=20 log (RBW/50) dBm =20 log (8/50) dBm=-15.92(dBm);

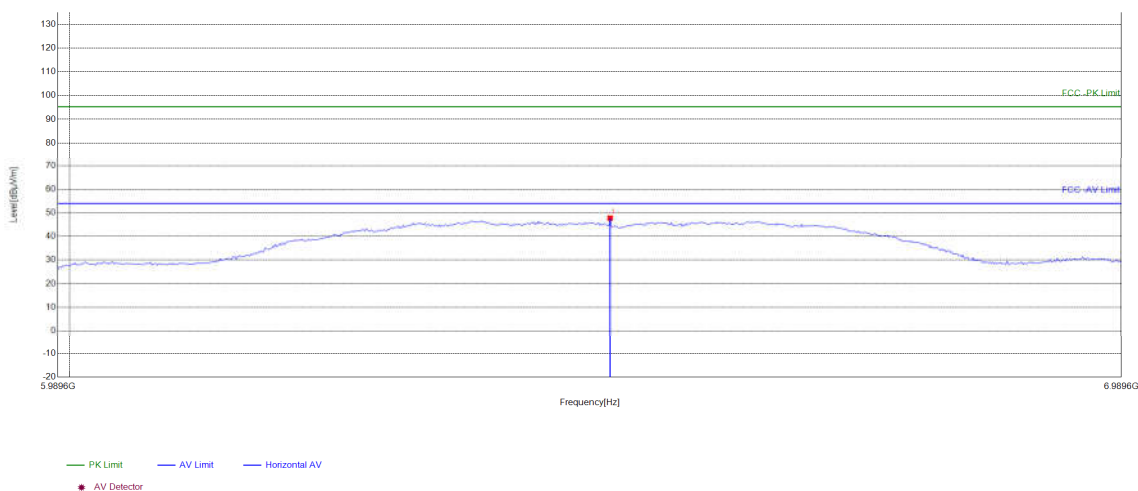


Peak Field Strength for fundamental @ RBW=8MHz					
Freq.[MHz]	Factor[dB]	Reading[dBμV]	Level [dBμV/m]	Polarity	Remark
6408.2667	-4.61	56.10	51.49	Vertical	Peak

Calculated Peak Field Strength of fundamental					
Freq. [MHz]	Measured Field Strength of fundamental (FSM) (dBuV/m)	Limit (dBuV/m)	Margin [dB]	Result	Polarity
6420.8	51.49	79.38	27.89	Pass	Vertical

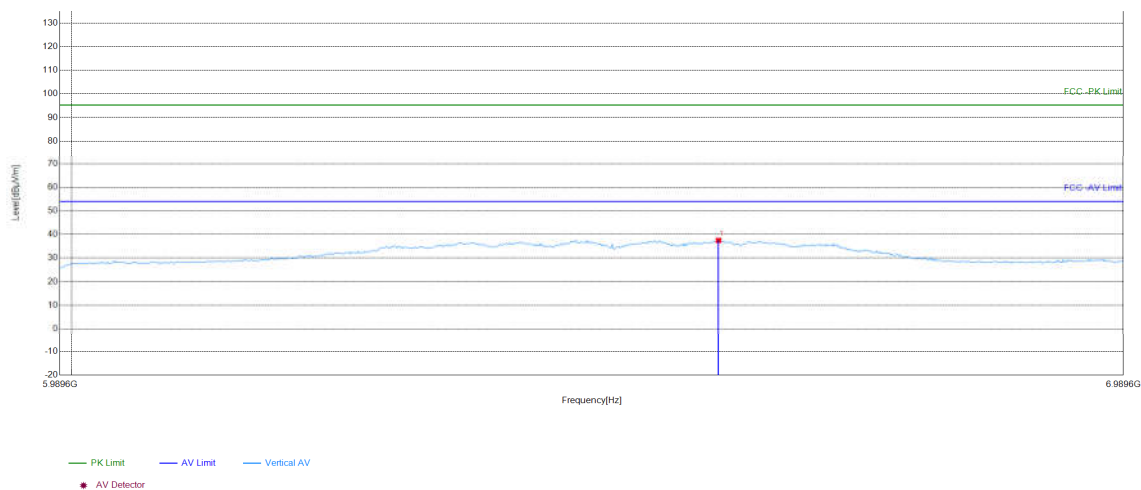
Note:

- ①Limit(dBuV/m) = EIRP(dBm) + 95.3=79.38(dBuV/m);
- ②EIRP(dBm)=20 log (RBW/50) dBm =20 log (8/50) dBm=-15.92(dBm);



Average Field Strength for fundamental @ RBW=1 MHz									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	6489.6	-4.57	52.36	47.79	54.00	6.21	PASS	Horizontal	AV

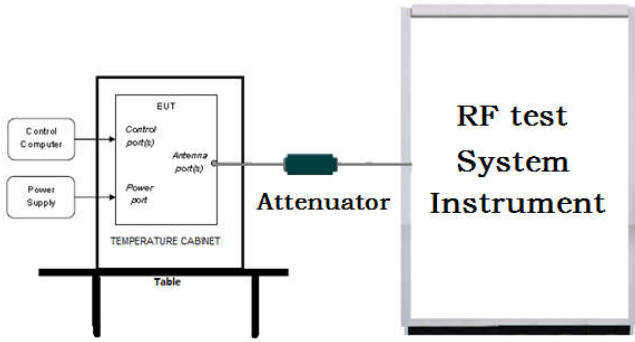
Note: Limit=95.3-41.3=54dBuV/m;



Average Field Strength for fundamental @ RBW=1 MHz									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	6590.6	-4.20	41.68	37.48	54.00	16.52	PASS	Vertical	AV

Note: Limit=95.3-41.3=54dBuV/m;

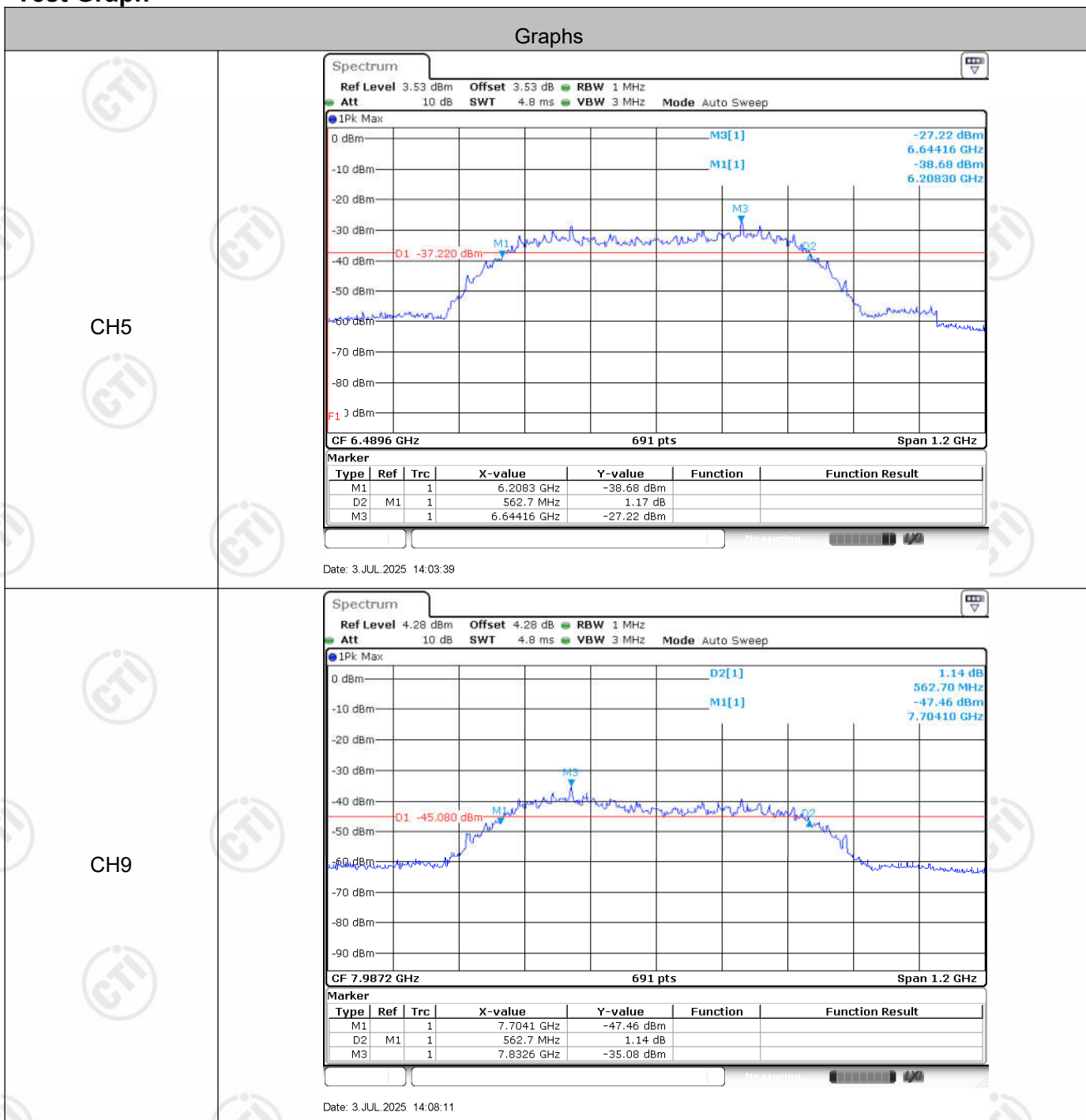
4.5 -10dB Bandwidth

Test Requirement:	47 CFR Part 15,Subpart F Section § 15.503(a),(d) & § 15.517(b)
Test Method:	ANSI C63.10:2013 section 10.1
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	The frequency at which the maximum power level is measured with the peak detector is designated f_M. The peak power measurements shall be made using a spectrum analyzer or EMI receiver with a 1 MHz resolution bandwidth and a video bandwidth of 1 MHz or greater. The instrument shall be set to peak detection using the maximum-hold trace mode. The outermost 1 MHz segments above and below f_M, where the peak power falls by 10 dB relative to the level at f_M, are designated as f_H and f_L, respectively: - For the lowest frequency bound f_L, the emission is searched from a frequency lower than f_M that has, by inspection, a peak power much lower than 10 dB less than the power at f_M and increased toward f_M until the peak power indicates 10 dB less than the power at f_M. The frequency of that segment is recorded. - This process is repeated for the highest frequency bound f_H, beginning at a frequency higher than f_M that has, by inspection, a peak power much lower than 10 dB below the power at f_M. The frequency of that segment is recorded. - The two recorded frequencies represent the highest f_H and lowest f_L bounds of the UWB transmission, and the -10 dB bandwidth ($B - 10$) is defined as $(f_H - f_L)$. The center frequency(f_c) is mathematically determined from $(f_H - f_L) / 2$. - The fractional bandwidth is defined as $2(f_H - f_L) / (f_H + f_L)$.e) Determine whether the -10 dB bandwidth $(f_H - f_L)$ is ≥ 500 MHz, or whether the fractional bandwidth $2(f_H - f_L) / (f_H + f_L)$ is ≥ 0.2.
Limit:	≥ 500 MHz
Test Mode:	Continuous Tx Mode, Keep the EUT Transmitting with Modulation
Test Results:	Pass

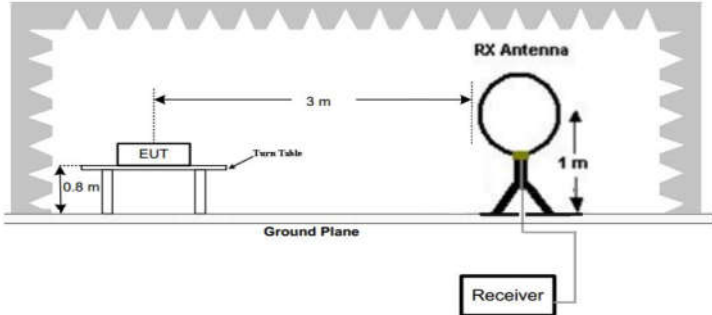
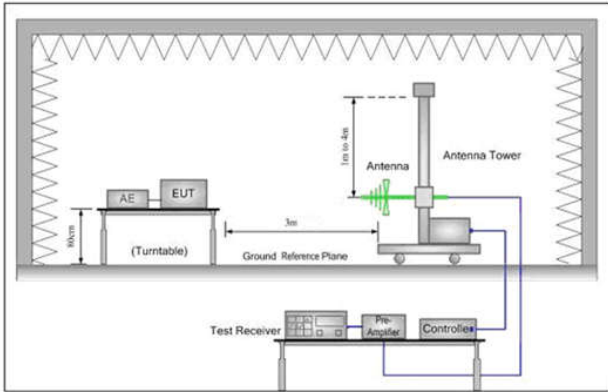
Test Result

Test Frequency (MHz)	FL (MHz)	FH (MHz)	-10dB Bandwidth (MHz)	Limit (MHz)	Results
6489.6	6208.3	6771	562.7	≥ 500	pass
7987.2	7704.1	8266.8	562.7	≥ 500	pass

Test Graph



4.6 Spurious Emissions Below 1GHz

Test Requirement:	47 CFR Part 15, Subpart F Section §15.209
Test Method:	ANSI C63.10: 2013 section 10.2
Test Setup:	 Figure 1. Below 30MHz  Figure 2. 30MHz to 1GHz
Test Procedure:	1) The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic 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 (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. 5) The test-receiver system was set to Peak detector with Maximum Hold Mode. And use Quasi-Peak to measure the six highest frequencies. 6) Test the EUT in the lowest channel, the Highest channel and only recorded worst channel--Lowest channel in the test report. 7) The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case. 8) Repeat above procedures until all frequencies measured was complete.

	Remark: 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor. 2. According to FCC Part 15.521(h), test was performed from 9kHz to 40GHz for the EUT. Emission below 30MHz was very low, so it's not recorded in the test report.																																												
Limit:	<table><tr><th>Frequency</th><th>Field strength (microvolt/meter)</th><th>Limit (dBuV/m)</th><th>Remark</th><th>Measurement distance (m)</th></tr><tr><td>0.009MHz-0.490MHz</td><td>2400/F(kHz)</td><td>-</td><td>-</td><td>300</td></tr><tr><td>0.490MHz-1.705MHz</td><td>24000/F(kHz)</td><td>-</td><td>-</td><td>30</td></tr><tr><td>1.705MHz-30MHz</td><td>30</td><td>-</td><td>-</td><td>30</td></tr><tr><td>30MHz-88MHz</td><td>100</td><td>40.0</td><td>Quasi-peak</td><td>3</td></tr><tr><td>88MHz-216MHz</td><td>150</td><td>43.5</td><td>Quasi-peak</td><td>3</td></tr><tr><td>216MHz-960MHz</td><td>200</td><td>46.0</td><td>Quasi-peak</td><td>3</td></tr><tr><td>960MHz-1000MHz</td><td>-</td><td>20</td><td>AV</td><td>3</td></tr></table>					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-1000MHz	-	20	AV	3
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-1000MHz	-	20	AV	3																																									
Test Mode:	Continuous Tx Mode, Keep the EUT Transmitting with Modulation																																												
Test Results:	Pass																																												

Radiated Spurious Emission below 30MHz:

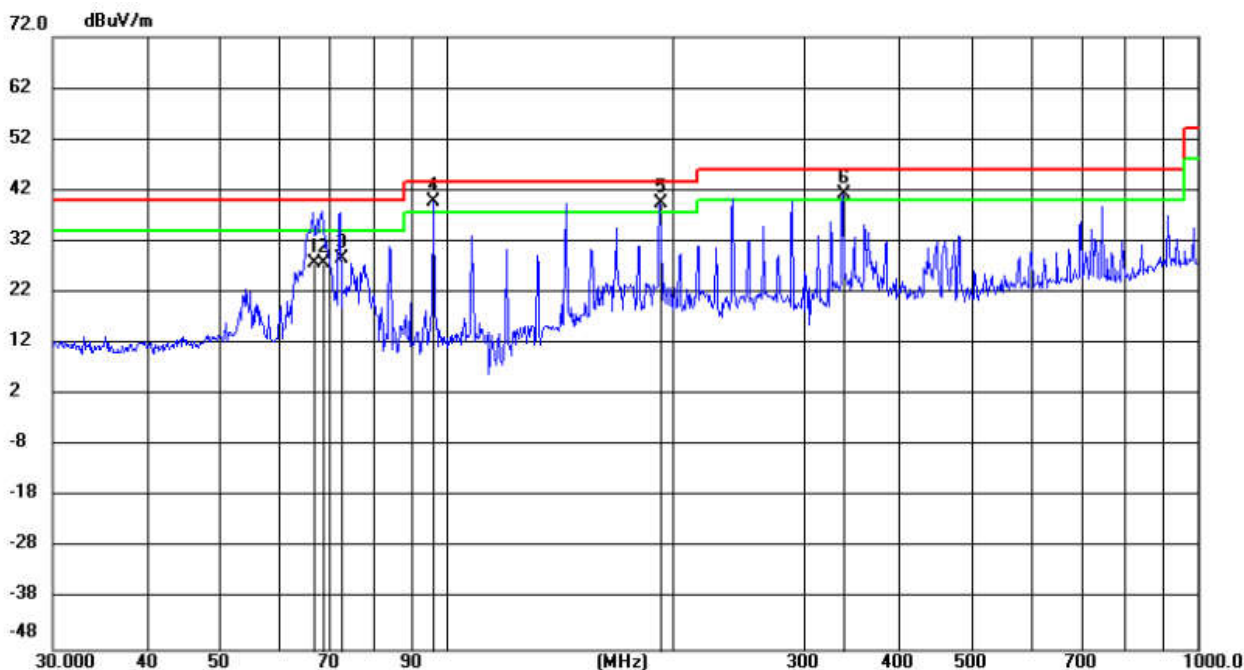
9 kHz~30 MHz Field Strength of Unwanted Emissions. Quasi-Peak Measurement

The measurements with active loop antenna were greater than 20dB below the limit, so the test data were not recorded in the test report.

Radiated Spurious Emission below 1GHz:

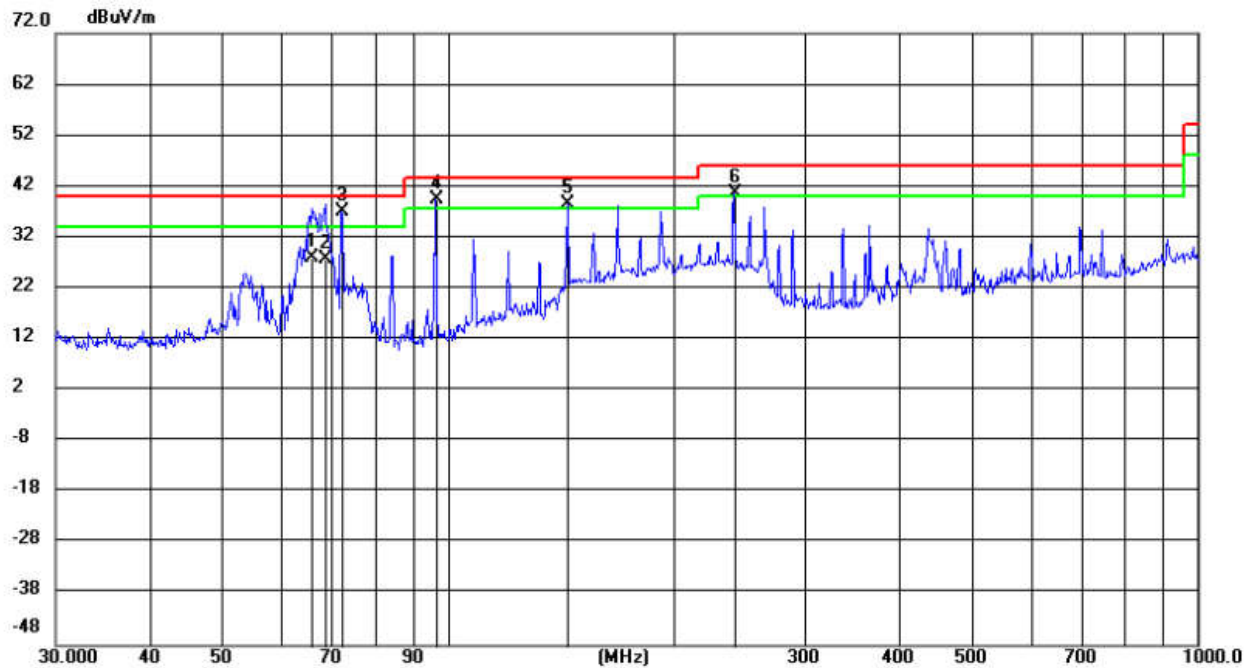
Test Result

Horizontal



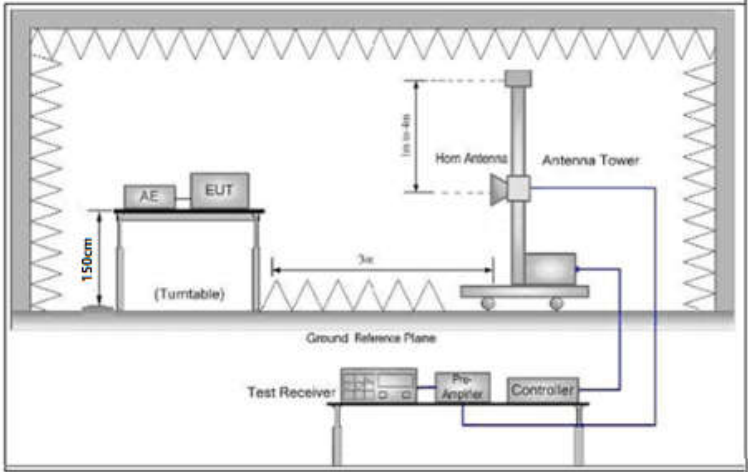
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Antenna Height cm	Table Degree degree	Comment
1		66.6506	16.25	11.55	27.80	40.00	-12.20	QP	199	15
2		68.4988	16.54	11.06	27.60	40.00	-12.40	QP	199	352
3		72.3502	18.20	10.40	28.60	40.00	-11.40	QP	199	3
4	*	96.4023	27.11	12.58	39.69	43.50	-3.81	QP	199	25
5	!	192.8238	26.77	12.79	39.56	43.50	-3.94	QP	100	120
6	!	337.5704	23.47	17.71	41.18	46.00	-4.82	QP	100	110

Vertical:



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 degree	Comment
1		65.8954	16.34	11.76	28.10	40.00	-11.90	QP	200	288	
2		68.8118	16.92	10.98	27.90	40.00	-12.10	QP	200	267	
3	*	72.3122	26.57	10.41	36.98	40.00	-3.02	QP	200	288	
4	!	96.4531	26.77	12.59	39.36	43.50	-4.14	QP	100	25	
5	!	144.6641	28.14	10.41	38.55	43.50	-4.95	QP	100	14	
6	!	241.0838	26.31	14.35	40.66	46.00	-5.34	QP	100	14	

4.7 Spurious Emissions Above 1GHz

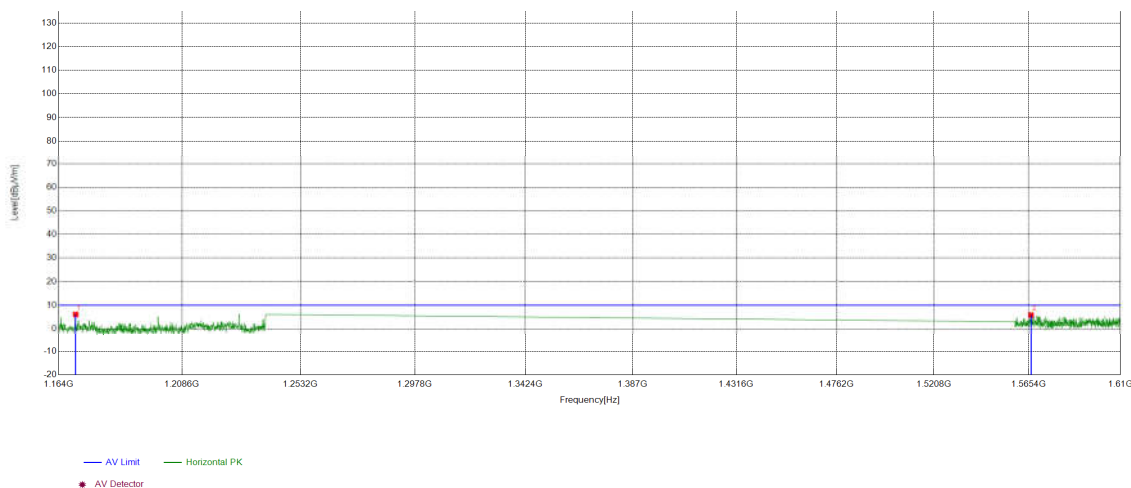
Test Requirement:	47 CFR Part 15, Subpart F Section §15.517(c),(d) & §15.521(d)												
Test Method:	ANSI C63.10: 2013 section 10.3												
Test Setup:	 Figure .Above 1 GHz												
Test Procedure:	1) The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meters semi-anechoic 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 rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5) The test-receiver system was set to Peak detector with Maximum Hold Mode. 6) Test the EUT in the lowest channel, the Highest channel 7) The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case. 8) Repeat above procedures until all frequencies measured was complete Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor. 2: As the EUT operate at 6489.6MHz, according to Part 15.521(h), test was performed at frequency up to 40GHz. For frequency above 18GHz, emission was very low, so it's not recorded in the test report.												
Limit:	(c) The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not exceed the emission levels in § 15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz: <table border="1"> <thead> <tr> <th>Frequency in MHz</th><th>EIRP in dBm</th></tr> </thead> <tbody> <tr> <td>960-1610</td><td>-75.3</td></tr> <tr> <td>1610-1990</td><td>-53.3</td></tr> <tr> <td>1990-3100</td><td>-51.3</td></tr> <tr> <td>3100-10600</td><td>-41.3</td></tr> <tr> <td>Above 10600</td><td>-51.3</td></tr> </tbody> </table>	Frequency in MHz	EIRP in dBm	960-1610	-75.3	1610-1990	-53.3	1990-3100	-51.3	3100-10600	-41.3	Above 10600	-51.3
Frequency in MHz	EIRP in dBm												
960-1610	-75.3												
1610-1990	-53.3												
1990-3100	-51.3												
3100-10600	-41.3												
Above 10600	-51.3												

	(d) In addition to the radiated emission limits specified in the table in paragraph (c) of this section, UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz: <table> <tr> <th>Frequency in MHz</th><th>EIRP in dBm</th></tr> <tr> <td>1164-1240</td><td>-85.3</td></tr> <tr> <td>1559-1610</td><td>-85.3</td></tr> </table>	Frequency in MHz	EIRP in dBm	1164-1240	-85.3	1559-1610	-85.3
Frequency in MHz	EIRP in dBm						
1164-1240	-85.3						
1559-1610	-85.3						
Test Mode:	Continuous Tx Mode, Keep the EUT Transmitting with Modulation						
Test Results:	Pass						

Test Result

EUT_Name		Test_Model	
Test_Mode	UWB	Test_Frequency	CH9
Tset_Engineer	chenjun	Test_Date	2025/07/01
Remark	22.1°C50.8%/		

Test Graph



Suspected List

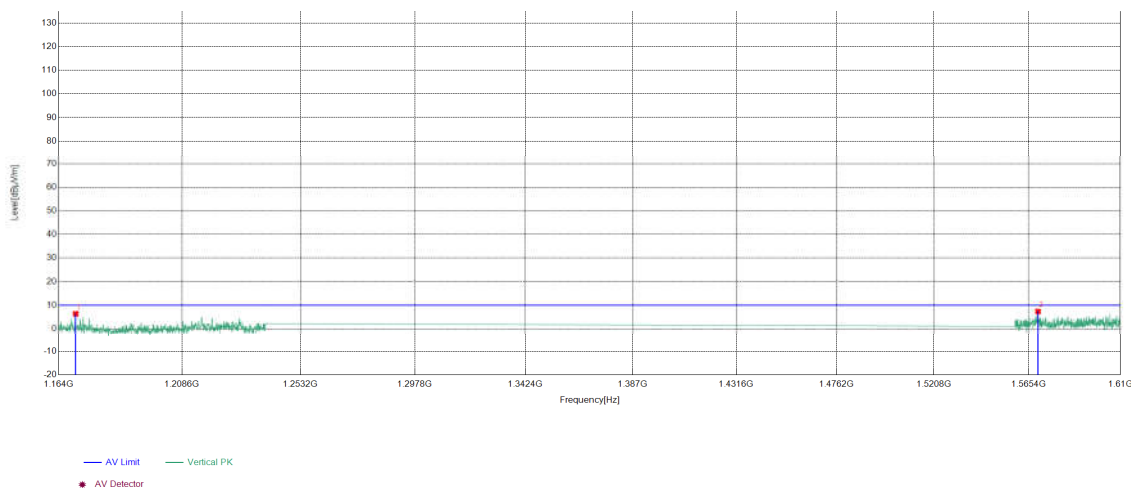
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1170.01	-22.60	28.68	6.08	10.00	3.92	PASS	Horizontal	PK
2	1566.6066	-21.19	27.02	5.83	10.00	4.17	PASS	Horizontal	PK

Note:

Field strength of the fundamental signal(dBuV/m@3m) = EIRP(dBm)+95.3;

EUT_Name		Test_Model	
Test_Mode	UWB	Test_Frequency	CH9
Tset_Engineer	chenjun	Test_Date	2025/07/01
Remark	22.1°C50.8%/		

Test Graph



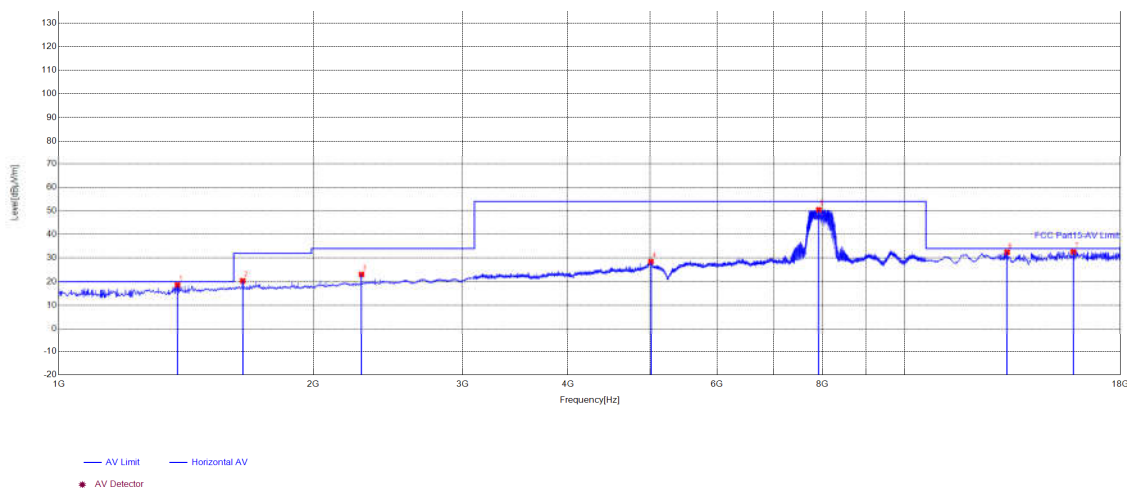
Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1170.01	-22.60	28.97	6.37	10.00	3.63	PASS	Vertical	PK
2	1569.976	-21.17	28.53	7.36	10.00	2.64	PASS	Vertical	PK

Note:

Field strength of the fundamental signal(dBuV/m@3m) = EIRP(dBm)+95.3;

EUT_Name		Test_Model	
Test_Mode	UWB	Test_Frequency	CH9
Tset_Engineer	chenjun	Test_Date	2025/07/01
Remark	22.1°C50.8%/		

Test Graph



Suspected List

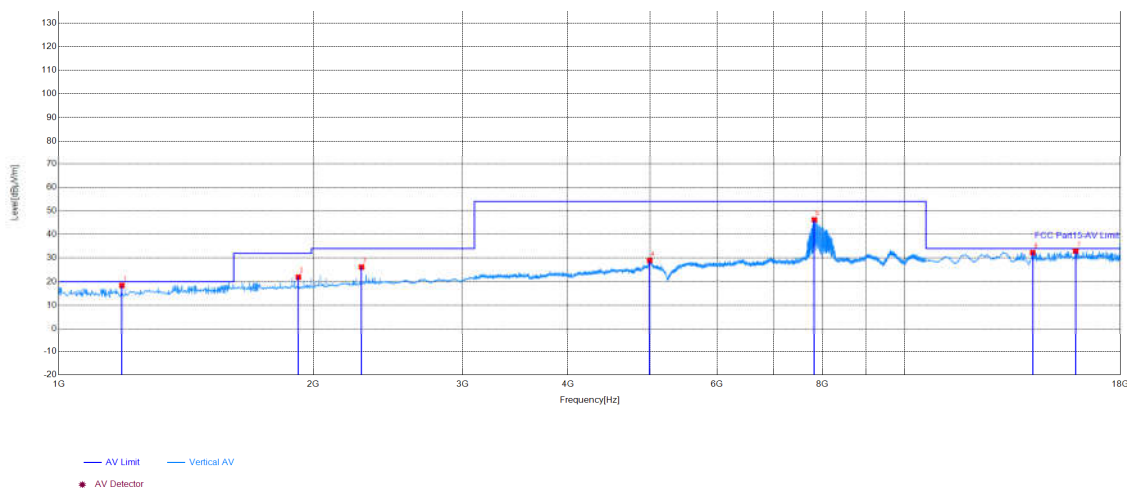
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1381.6316	-21.81	40.40	18.59	20.00	1.41	PASS	Horizontal	AV
2	1649.9399	-20.65	41.00	20.35	32.00	11.65	PASS	Horizontal	AV
3	2280	-18.28	41.33	23.05	34.00	10.95	PASS	Horizontal	AV
4	5014.1914	-8.21	36.70	28.49	54.00	25.51	PASS	Horizontal	AV
5	7919.2319	-1.56	52.01	50.45	54.00	3.55	PASS	Horizontal	AV
6	13222.2222	6.41	26.05	32.46	34.00	1.54	PASS	Horizontal	AV
7	15837.037	9.54	23.04	32.58	34.00	1.42	PASS	Horizontal	AV

Note:

Field strength of the fundamental signal(dBuV/m@3m) = EIRP(dBm)+95.3;

EUT_Name		Test_Model	
Test_Mode	UWB	Test_Frequency	CH9
Tset_Engineer	chenjun	Test_Date	2025/07/01
Remark	22.1°C50.8%/		

Test Graph



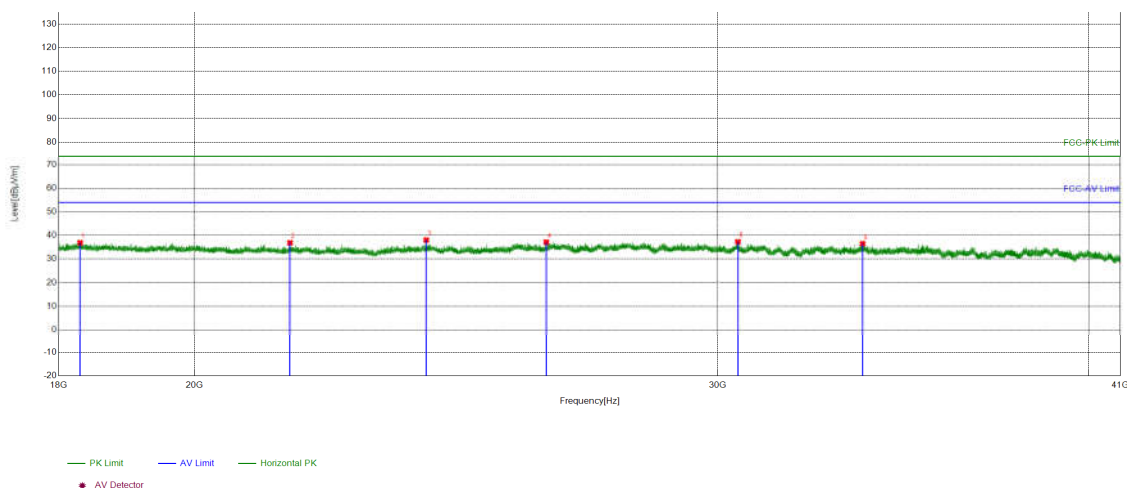
Suspected List									
N O	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1187.4575	-22.42	40.78	18.36	20.00	1.64	PASS	Vertical	AV
2	1920.01	-19.72	41.64	21.92	32.00	10.08	PASS	Vertical	AV
3	2280	-18.28	44.46	26.18	34.00	7.82	PASS	Vertical	AV
4	4996.9397	-8.31	37.25	28.94	54.00	25.06	PASS	Vertical	AV
5	7823.2223	-2.16	48.38	46.22	54.00	7.78	PASS	Vertical	AV
6	14177.7778	7.99	24.30	32.29	34.00	1.71	PASS	Vertical	AV
7	15933.3333	9.94	22.97	32.91	34.00	1.09	PASS	Vertical	AV

Note:

Field strength of the fundamental signal(dBuV/m@3m) = EIRP(dBm)+95.3;

EUT_Name		Test_Model	
Test_Mode	UWB	Test_Frequency	CH9
Tset_Engineer	chenjun	Test_Date	2025/07/01
Remark	22.1°C50.8%/		

Test Graph



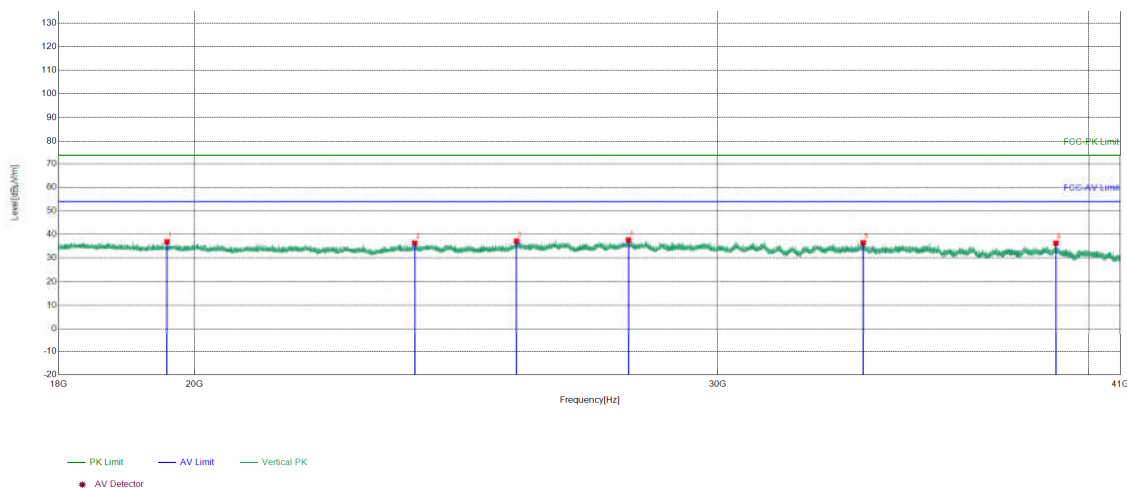
Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	18299.932	-26.84	63.75	36.91	74.00	37.09	PASS	Horizontal	PK
2	21534.7814	-25.78	62.65	36.87	74.00	37.13	PASS	Horizontal	PK
3	23933.3173	-22.07	60.11	38.04	74.00	35.96	PASS	Horizontal	PK
4	26268.3707	-21.30	58.46	37.16	74.00	36.84	PASS	Horizontal	PK
5	30476.6191	-20.43	57.73	37.30	74.00	36.70	PASS	Horizontal	PK
6	33570.7028	-17.44	53.98	36.54	74.00	37.46	PASS	Horizontal	PK

Note:

Field strength of the fundamental signal(dBuV/m@3m) = EIRP(dBm)+95.3;

EUT_Name		Test_Model	
Test_Mode	UWB	Test_Frequency	CH9
Tset_Engineer	chenjun	Test_Date	2025/07/01
Remark	22.1°C50.8%/		

Test Graph



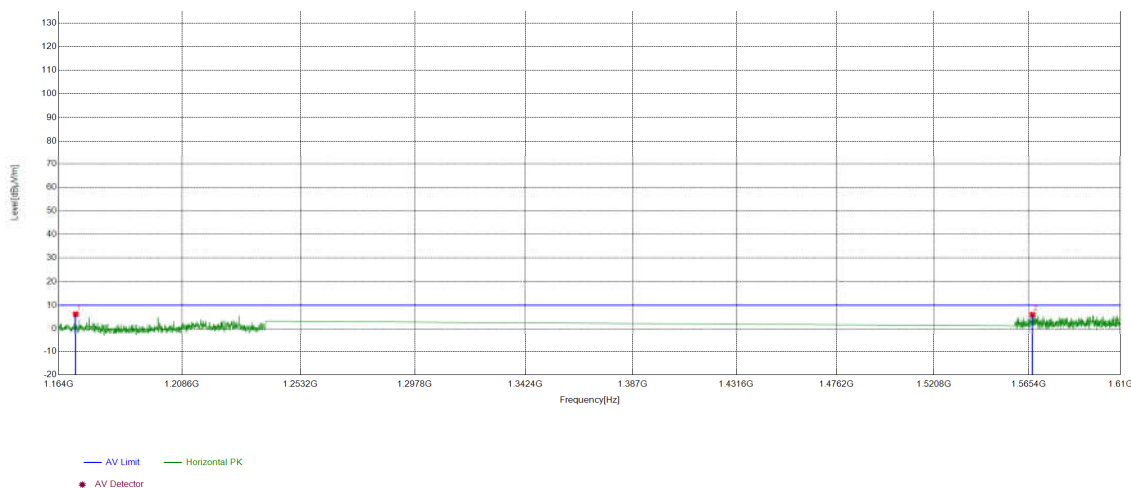
Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	19575.103	-25.59	62.51	36.92	74.00	37.08	PASS	Vertical	PK
2	23720.7888	-22.62	58.97	36.35	74.00	37.65	PASS	Vertical	PK
3	25669.4268	-20.75	57.94	37.19	74.00	36.81	PASS	Vertical	PK
4	27998.96	-21.20	58.85	37.65	74.00	36.35	PASS	Vertical	PK
5	33585.4234	-17.38	53.85	36.47	74.00	37.53	PASS	Vertical	PK
6	39000.76	-12.86	49.21	36.35	74.00	37.65	PASS	Vertical	PK

Note:

Field strength of the fundamental signal(dBuV/m@3m) = EIRP(dBm)+95.3;

EUT_Name		Test_Model	
Test_Mode	UWB	Test_Frequency	CH5
Tset_Engineer	chenjun	Test_Date	2025/07/01
Remark	22.1°C50.8%/		

Test Graph



Suspected List

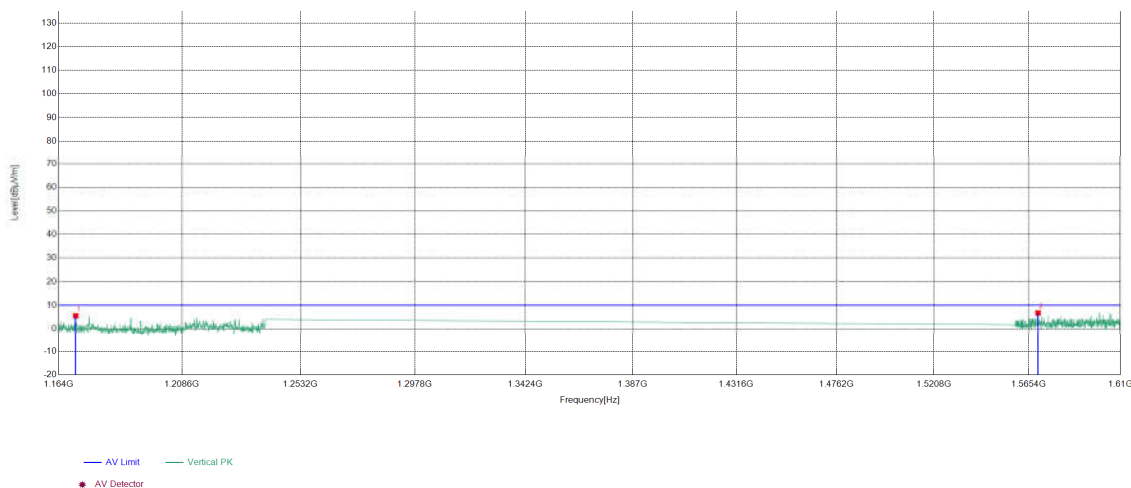
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1170.01	-22.60	28.79	6.19	10.00	3.81	PASS	Horizontal	PK
2	1567.3213	-21.18	27.14	5.96	10.00	4.04	PASS	Horizontal	PK

Note:

Field strength of the fundamental signal(dBuV/m@3m) = EIRP(dBm)+95.3;

EUT_Name		Test_Model	
Test_Mode	UWB	Test_Frequency	CH5
Tset_Engineer	chenjun	Test_Date	2025/07/01
Remark	22.1°C50.8%/		

Test Graph



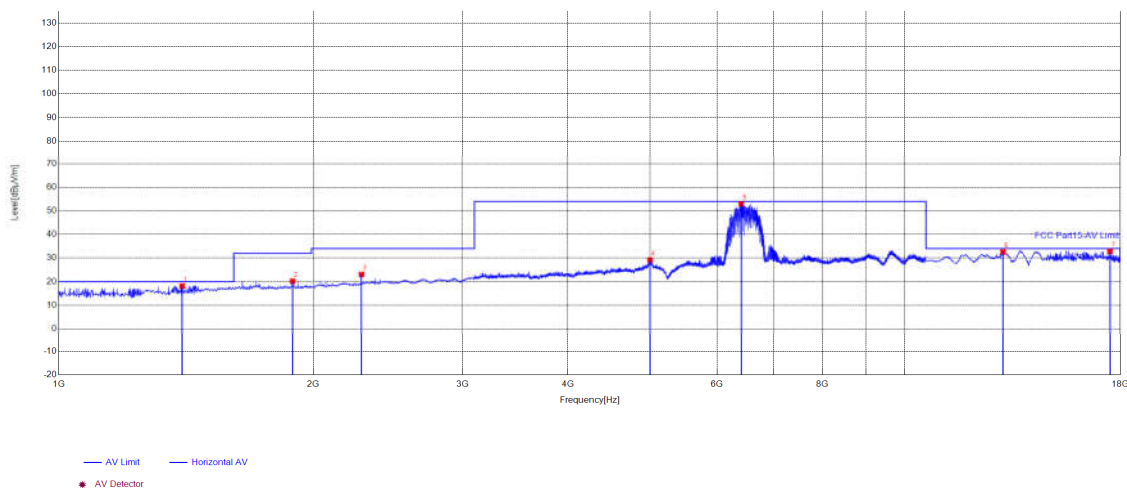
Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1170.01	-22.60	28.12	5.52	10.00	4.48	PASS	Vertical	PK
2	1569.976	-21.17	27.91	6.74	10.00	3.26	PASS	Vertical	PK

Note:

Field strength of the fundamental signal(dBuV/m@3m) = EIRP(dBm)+95.3;

EUT_Name		Test_Model	
Test_Mode	UWB	Test_Frequency	CH5
Tset_Engineer	chenjun	Test_Date	2025/07/01
Remark	22.1°C50.8%/		

Test Graph



Suspected List

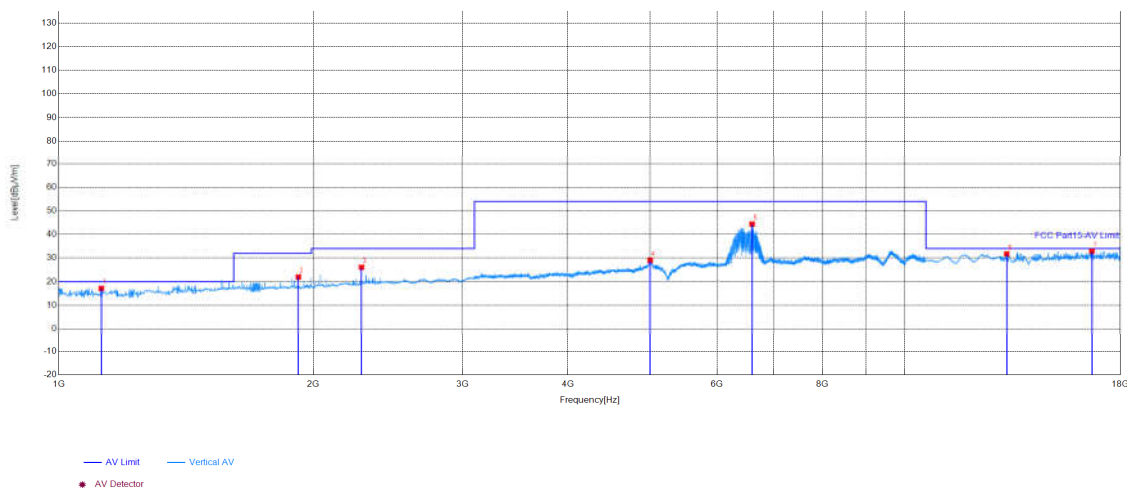
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1399.3393	-21.69	39.85	18.16	20.00	1.84	PASS	Horizontal	AV
2	1889.96	-19.88	40.07	20.19	32.00	11.81	PASS	Horizontal	AV
3	2280	-18.28	41.32	23.04	34.00	10.96	PASS	Horizontal	AV
4	5001.4401	-8.30	37.40	29.10	54.00	24.90	PASS	Horizontal	AV
5	6410.8311	-4.59	57.56	52.97	54.00	1.03	PASS	Horizontal	AV
6	13074.0741	6.41	26.17	32.58	34.00	1.42	PASS	Horizontal	AV
7	17496.2963	13.02	19.81	32.83	34.00	1.17	PASS	Horizontal	AV

Note:

Field strength of the fundamental signal(dBuV/m@3m) = EIRP(dBm)+95.3;

EUT_Name		Test_Model	
Test_Mode	UWB	Test_Frequency	CH5
Tset_Engineer	chenjun	Test_Date	2025/07/01
Remark	22.1°C50.8%/		

Test Graph



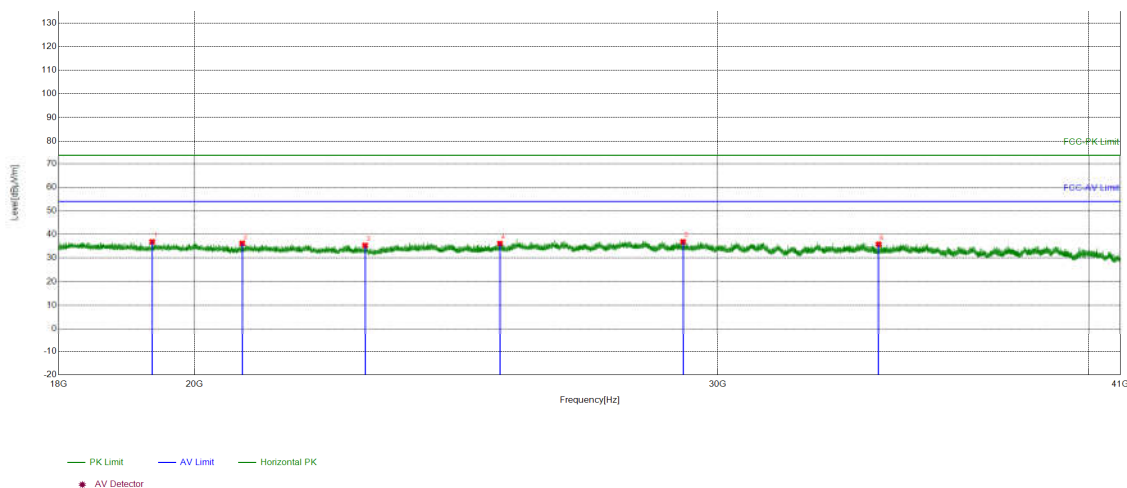
Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1122.7327	-22.81	39.93	17.12	20.00	2.88	PASS	Vertical	AV
2	1920.01	-19.72	41.69	21.97	32.00	10.03	PASS	Vertical	AV
3	2280	-18.28	44.36	26.08	34.00	7.92	PASS	Vertical	AV
4	5002.9403	-8.28	37.26	28.98	54.00	25.02	PASS	Vertical	AV
5	6602.8503	-4.13	48.51	44.38	54.00	9.62	PASS	Vertical	AV
6	13207.4074	6.53	25.21	31.74	34.00	2.26	PASS	Vertical	AV
7	16659.2593	10.89	21.99	32.88	34.00	1.12	PASS	Vertical	AV

Note:

Field strength of the fundamental signal(dBuV/m@3m) = EIRP(dBm)+95.3;

EUT_Name		Test_Model	
Test_Mode	UWB	Test_Frequency	CH5
Tset_Engineer	chenjun	Test_Date	2025/07/01
Remark	22.1°C50.8%/		

Test Graph



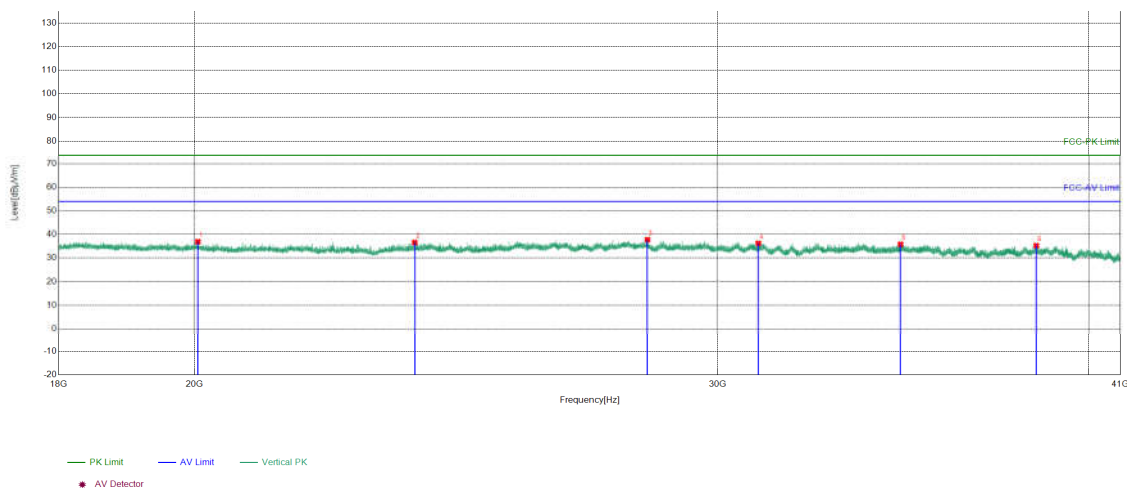
Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	19351.5341	-25.73	62.59	36.86	74.00	37.14	PASS	Horizontal	PK
2	20750.91	-25.75	62.01	36.26	74.00	37.74	PASS	Horizontal	PK
3	22825.593	-25.13	60.49	35.36	74.00	38.64	PASS	Horizontal	PK
4	25341.8937	-21.32	57.49	36.17	74.00	37.83	PASS	Horizontal	PK
5	29207.8883	-21.48	58.34	36.86	74.00	37.14	PASS	Horizontal	PK
6	33989.3196	-17.90	53.75	35.85	74.00	38.15	PASS	Horizontal	PK

Note:

Field strength of the fundamental signal(dBuV/m@3m) = EIRP(dBm)+95.3;

EUT_Name		Test_Model	
Test_Mode	UWB	Test_Frequency	CH5
Tset_Engineer	chenjun	Test_Date	2025/07/01
Remark	22.1°C50.8%/		

Test Graph



Suspected List									
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	20048.922	-24.84	61.78	36.94	74.00	37.06	PASS	Vertical	PK
2	23720.7888	-22.62	59.23	36.61	74.00	37.39	PASS	Vertical	PK
3	28412.9765	-21.53	59.30	37.77	74.00	36.23	PASS	Vertical	PK
4	30964.2386	-19.39	55.62	36.23	74.00	37.77	PASS	Vertical	PK
5	34573.5429	-16.24	52.06	35.82	74.00	38.18	PASS	Vertical	PK
6	38410.0964	-13.55	48.80	35.25	74.00	38.75	PASS	Vertical	PK

Remark:

1) Scan from 9kHz to 40GHz, 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.

2) Field strength of the fundamental signal(dBuV/m@3m) = EIRP(dBm)+95.3;

6 PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32R80573701 for EUT external and internal photos.

Statement

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Unless otherwise stated,the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule stated in ILAC-G8:09/2019/CNAS-GL015:2022;
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*** End of Report ***