

TEST REPORT

Report No..... : KD2403S0918E01
FCC ID..... : 2BFHS-YF-E0216C-R
Applicant..... : Shenzhen Yafei Industrial Co., Ltd.
Address..... : The 5 floor, No. 1, East Lane 9, Qiaolian Community, Ma'antang Community, Bantian Street, Longgang District, Shenzhen
Manufacturer..... : Shenzhen Yafei Industrial Co., Ltd.
Address..... : The 5 floor, No. 1, East Lane 9, Qiaolian Community, Ma'antang Community, Bantian Street, Longgang District, Shenzhen
Product Name..... : Vibrator Sex toys
Trademark..... : yafei
Model/Type reference..... : See Section 2.1 for details
Standard..... : 47 CFR Part 15.249
Date of Receipt..... : March 19, 2024
Date of Test Date..... : March 19, 2024 to April 16, 2024
Date of issue..... : April 16, 2024
Test result..... : Pass

Conclusion..... : The submitted sample was found to COMPLY with the standards above.

Prepared by:
(Printed name + Signature) Pai Zheng



Approved by:
(Printed name + Signature) Sky Dong



Testing Laboratory Name...: KSIGN(Guangdong) Testing Co., Ltd.

Address..... : West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

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

ANSI C63.10-2013: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

1.2. Report Version

Revised No.	Date of issue	Description
01	April 16, 2024	Original

1.3. Test Description

Test Item	Standard	Requirement	Result
Antenna requirement	47 CFR Part 15.249	47 CFR Part 15.203	Pass
Occupied Bandwidth	47 CFR Part 15.249	47 CFR 15.215(c)	Pass
Field strength of fundamental	47 CFR Part 15.249	47 CFR 15.249(a) 47 CFR 15.249(b)(1)	Pass
Band edge emissions (Radiated)	47 CFR Part 15.249	47 CFR 15.249(d)	Pass
Emissions in frequency bands (below 1GHz)	47 CFR Part 15.249	47 CFR 15.249(a) 47 CFR 15.249(d) 47 CFR 15.249(e)	Pass
Emissions in frequency bands (above 1GHz)	47 CFR Part 15.249	47 CFR 15.249(a) 47 CFR 15.249(d) 47 CFR 15.249(e)	Pass

1.4. Test Facility

KSIGN(Guangdong) Testing Co., Ltd.

West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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

CNAS-Lab Code: L13261

KSIGN(Guangdong) Testing Co., Ltd. has been assessed and proved to be in Compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 5457.01

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing

ISED#: 25693 CAB identifier.: CN0096

KSIGN(Guangdong) Testing Co., Ltd. has been listed by Innovation, Science and Economic Development Canada to perform electromagnetic emission measurement.

FCC-Registration No.: 294912 Designation Number: CN1328

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

1.5. Measurement Uncertainty

Test Items	Measurement Uncertainty
RSE (1-18GHz)	± 4.68dB
RSE (30-1000MHz)	± 5.7dB
RSE (18-40GHz)	± 5.18dB

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %. Otherwise required by the applicant or Product Regulations. Decision Rule in this report did not consider the uncertainty.

2. GENERAL INFORMATION

2.1. General Description Of EUT

Test Sample Number:	1-1(Normal Sample), 1-2(Engineering Sample)
Product Name:	Vibrator Sex toys
Trademark:	yafei
Model / Type reference:	<p>YF-E0216C-R-Box, YF-E0251-RL-BOX YF-E0255-VL-BOX YF-E0255-RL-BOX YF-E0255-V-APP-Box YF-E0255-R-APP-Box E0251C-R-Box E0251C-V-Box YF-E0227C-V-Box YF-E0245C-D-Box YF-E0217C-D-APP YF-E0217C-R-APP YF-AN0102C YF-E0245C-V-Box YF-C0186C-APP YF-AN096C-Box YF-E0247-V-BOX YF-E0247-R-BOX YF-AN093C-D-APP YF-E0242C-P-APP YF-E0242C-R-APP YF-E0242C-V-APP YF-E0241C-R YF-E0241C-V YF-E0241C-D YF-AN092C-APP YF-E0233C-P-APP-Box YF-E0233C-V-APP-Box YF-E0237C-F-APP-BOX YF-E0237C-V-APP-BOX YF-AN092C-APP-BOX YF-E0232C-R-APP YF-E0232C-V-APP YF-E0231-V-BOX YF-E0231-R-BOX YF-E082-V-APP YF-E082-R-BOX-APP YF-E082-P-BOX-APP YF-AN089-D-APP YF-AN089-B-APP YF-E0229C-V YF-E0229C-R YF-AN075C-D-APP YF-E0194-R-Box YF-E0194-V-Box YF-AN090C-D-Box-APP YF-E0212-R YF-E0212-V YF-E0216C-R YF-E0216C-V YF-C0178-D-APP-BOX YF-C0176-V-APP-BOX YF-E093-R-APP C0176-R-APP-BOX YF-E0207C-P-Box YF-E0206C-P-Box YF-C0177C-APP YF-AN087C YF-E0195R-APP YF-E0195V-APP-Box YF-C0176-B-APP-BOX YF-E0197C-P YF-V0305C-Box YF-V0214C-D-APP E0196-B-BOX</p>
Model Difference:	The difference between product models is only the appearance of the color is not the same, the different model names are for the market demand. Other power supply methods, internal structure, circuit and key components are the same, do not affect the safety and electromagnetic compatibility performance
Power Supply:	Battery powered DC 3V
Operation Frequency:	2419.90MHz
Number of Channels:	1
Modulation Type:	GFSK
Antenna Type:	Internal antenna
Antenna Gain:	0dBi
Max Tx Power:	91.10 dBuV/m

Note:Antenna gain provided by the applicant Can affect the validity of results

2.2. Accessory Equipment Information

The EUT was tested as an independent device.

2.3. Description of Test Modes

No.	Title	Description of Mode
Test Mode1	TX Mode	Keep EUT in continuous TX mode

2.4. Operation channel list

Channel	Frequency (MHz)
1	2419.90

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2.5. Measurement Instruments List

Occupied Bandwidth				
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Wideband Radio Communication Tester	R&S	CMU200	115297	2025-01-19
Audio Analyzer	R&S	UPL16	100001	2025-01-19
Shielding box	Gxiong	GX-5915A	2201113	2025-01-19
High Pass Filter	COM-MW Technology Co., Ltd	ZHPF-M1.2-9G-1 87	09203403	2025-01-19
Band Stop Filter	COM-MW Technology Co., Ltd	ZBSF6-C820-920 -188	09203401	2025-01-19
Splitter	COM-MW Technology Co., Ltd	ZPD-M1-8-2103	09203407	2025-01-19
Coaxial Cable	BEBES	A40-2.92M2.92F-4.5M	1907021	2025-01-19
Hygrothermograph	Anymetre	JB913	/	2025-01-19
Climate Chamber	Angul	AGNH80L	1903042120	2025-01-19
Spectrum Analyzer	HP	8593E	3831U02087	2025-01-19
Dual Output DC Power Supply	Agilent	E3646A	MY40009992	2025-01-19
RF Control Unit	Tonscend	JS0806-2	/	2025-01-19
Analog Signal Generator	HP	83752A	3344A00337	2025-01-19
Vector Signal Generator	Agilent	N5182A	MY50142520	2025-01-19
Wideband Radio Communication Tester	R&S	CMW500	157282	2025-01-19
Spectrum Analyzer	R&S	FSV40-N	101798	2025-01-19

Emissions in frequency bands (above 1GHz) Field strength of fundamental Band edge emissions (Radiated) Emissions in frequency bands (below 1GHz)				
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Color Signal Generator	Philips	PM5418	672926	2025-01-21
Log Periodic Antenna	Schwarzbeck	VULB 9163	1230	2025-01-29
Pre-Amplifier	Schwarzbeck	BBV 9745	9745#129	2025-01-21
Broadcast Television Signal Generator	R&S	SFE100	141038	2025-01-21
Analog Signal Generator	Agilent	8648A	3847M00445	2025-01-21
EMI Test Receiver	R&S	ESR	102525	2025-01-21
Loop Antenna	Beijin ZHINAN	ZN30900C	18050	2025-01-29
Horn Antenna	Schwarzbeck	BBHA 9120 D	2023	2025-01-22
Pre-Amplifier	EMCI	EMC051835SE	980662	2025-01-21
Spectrum Analyzer	Keysight	N9020A	MY46471971	2025-01-21

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3. Evaluation Results (Evaluation)

3.1. Antenna requirement

Test Requirement:	Refer to 47 CFR Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.
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3.1.1. Conclusion:

The directional gain of the antenna less than 6dBi. It comply with the standard requirement. In case of replacement of broken antenna the same antenna type must be used. Antenna structure please refer to the EUT internal photographs antenna photo.
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4. Radio Spectrum Matter Test Results (RF)

4.1. Occupied Bandwidth

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

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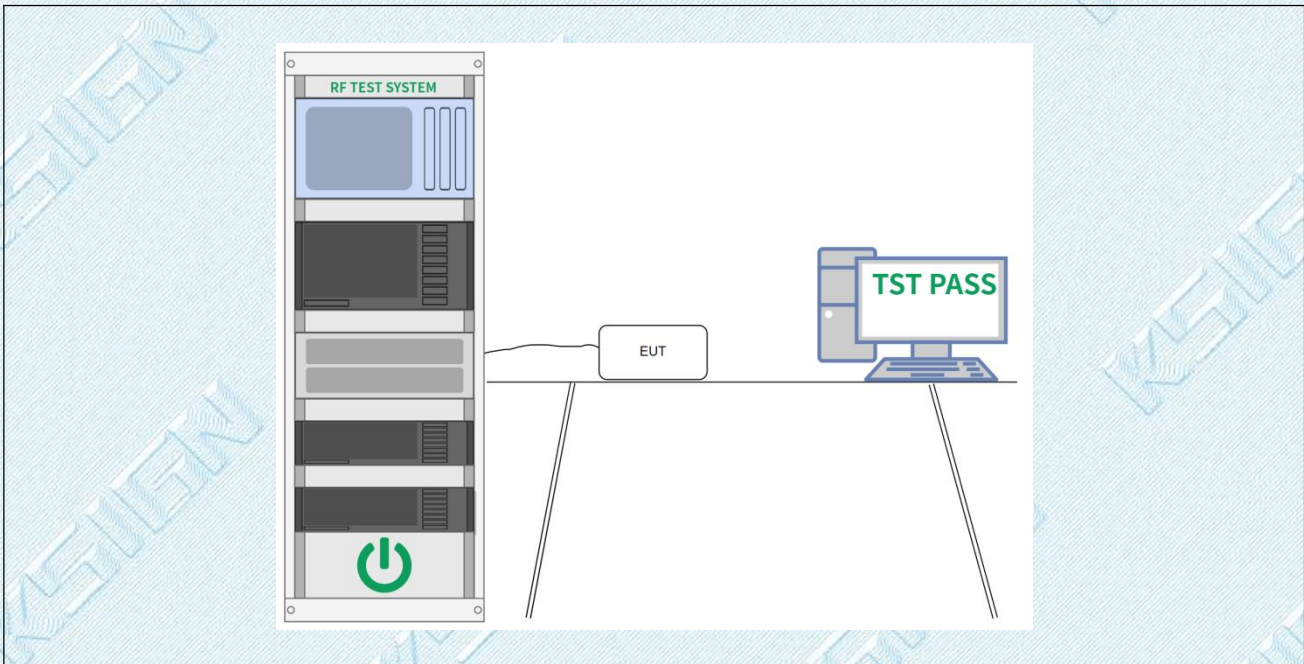
j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-xx dB down amplitude” determined in step h). If a marker is below this “-xx dB down amplitude” value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the “-xx dB down amplitude” determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

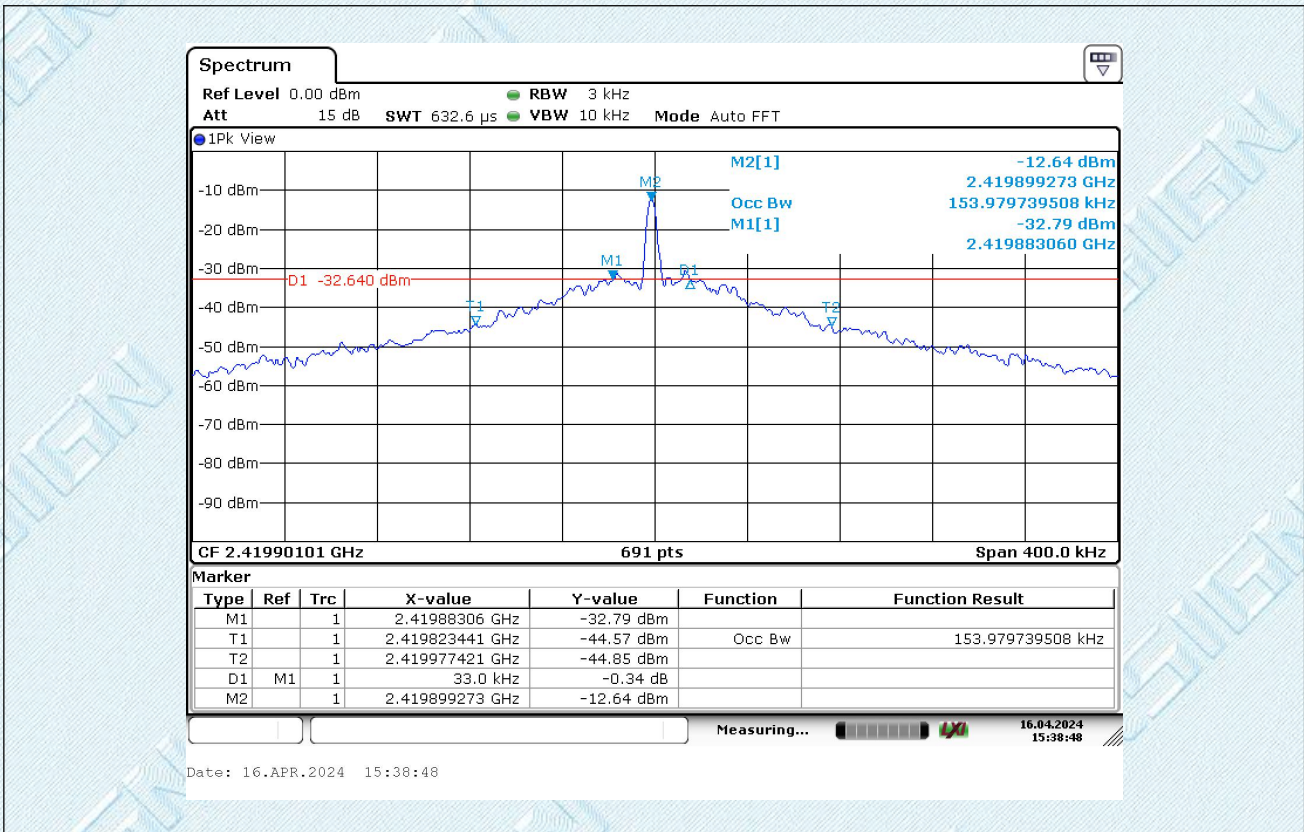
4.1.1. E.U.T. Operation:

Operating Environment:	
Temperature:	24.7 °C
Humidity:	49.7 %
Atmospheric Pressure:	101 kPa
Final test mode:	Test Mode1

4.1.2. Test Setup Diagram:



4.1.3. Test Data:



Freq(MHz)	20dB OCB [kHz]	Verdict
2419.90	33	Pass

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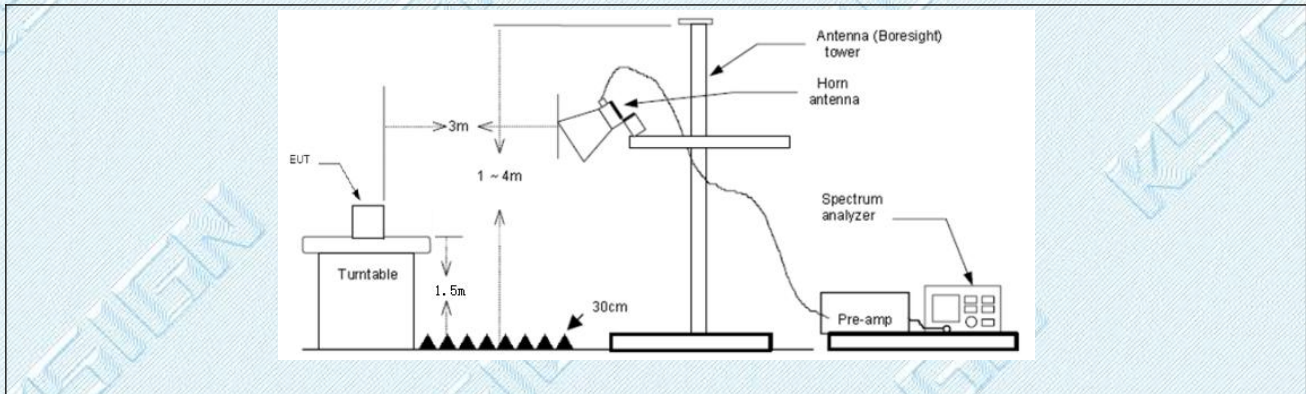
4.2. Field strength of fundamental

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

4.2.1. E.U.T. Operation:

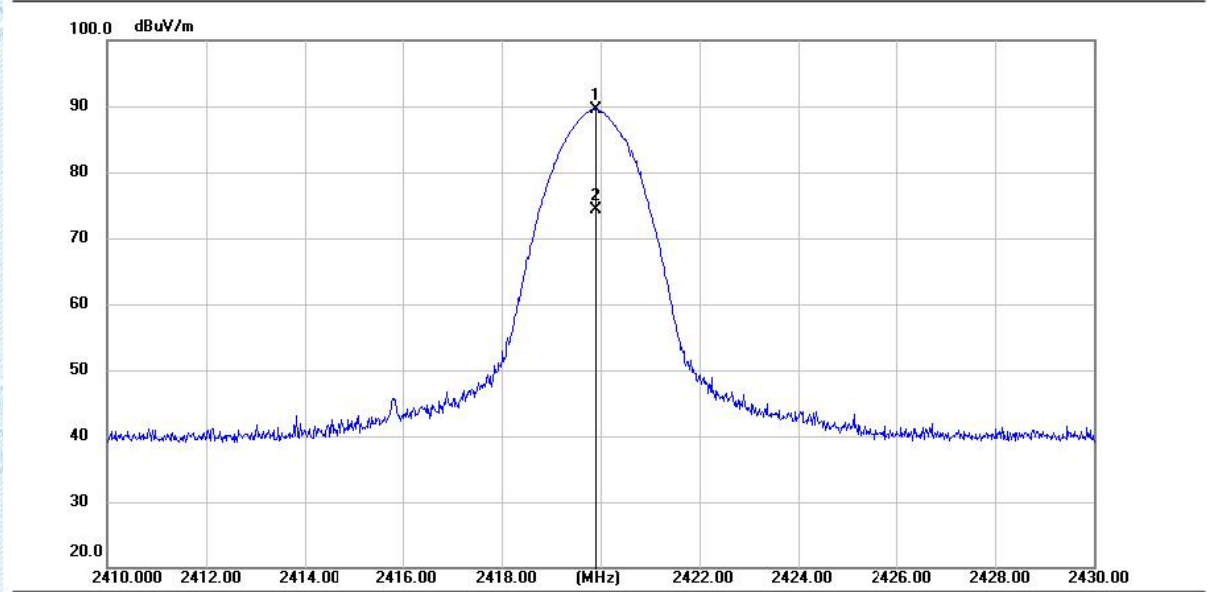
Operating Environment:	
Temperature:	24.7 °C
Humidity:	49.7 %
Atmospheric Pressure:	101 kPa
Final test mode:	Test Mode1

4.2.2. Test Setup Diagram:



4.2.3. Test Data:

Test Mode1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: M



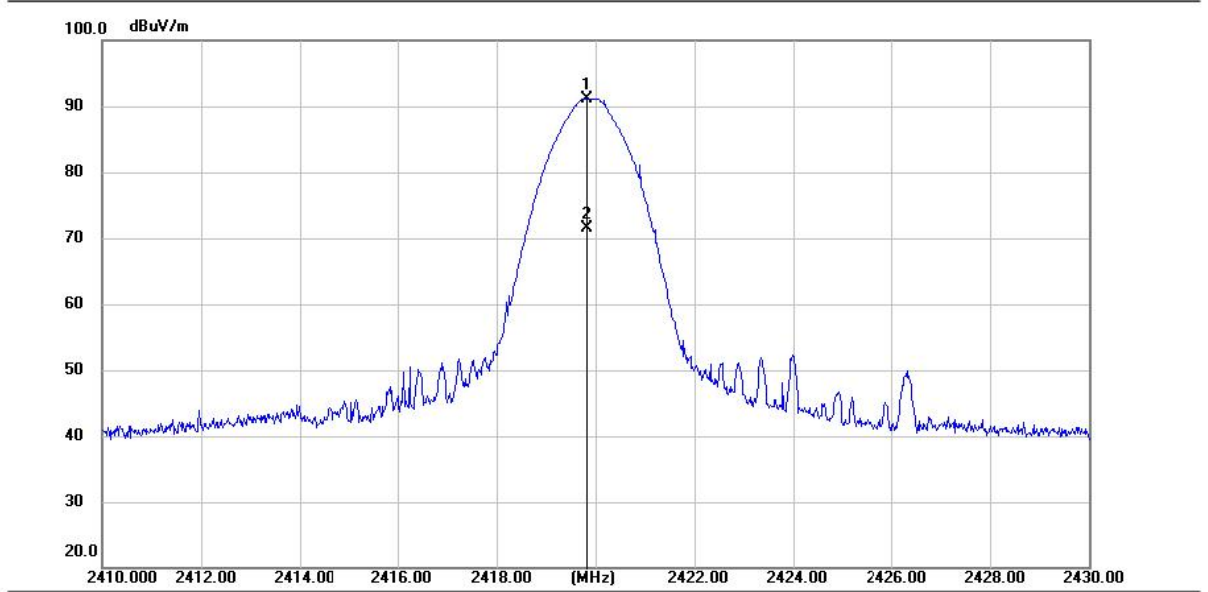
No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		2419.894	91.40	-1.92	89.48			peak
2	*	2419.894	76.14	-1.92	74.22			AVG

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Test Mode1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: M



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		2419.812	93.02	-1.92	91.10	114	-33.55	peak
2	*	2419.812	73.48	-1.92	71.56	94	-30.71	AVG

Frequency (MHz)	Read Level (dBuV)	Correct Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over (dBuV/m)	Polarization	Test value
2419.894	91.40	-1.92	89.48	114	-34.41	Horizontal	Peak
2419.894	76.14	-1.92	74.22	94	-31.34	Horizontal	AVG
2419.812	93.02	-1.92	91.10	114	-33.55	Vertical	Peak
2419.812	74.48	-1.92	71.56	94	-30.71	Vertical	AVG

Note:

1. Correct Factor = Antenna Factor + Cable Loss - Preamplifier Factor.
2. Level = Read Level + Correct Factor.
3. Over = Level - Limit

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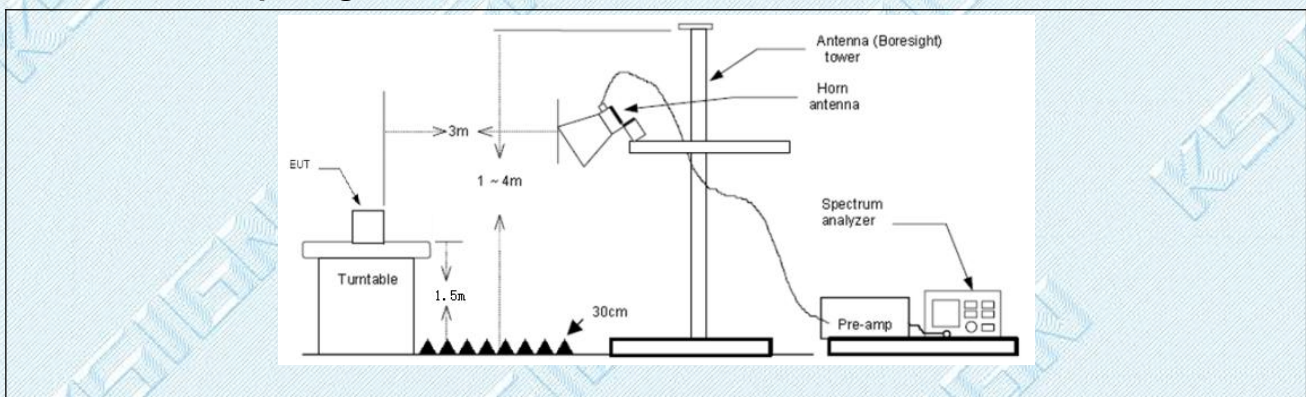
4.3. Band edge emissions (Radiated)

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

4.3.1. E.U.T. Operation:

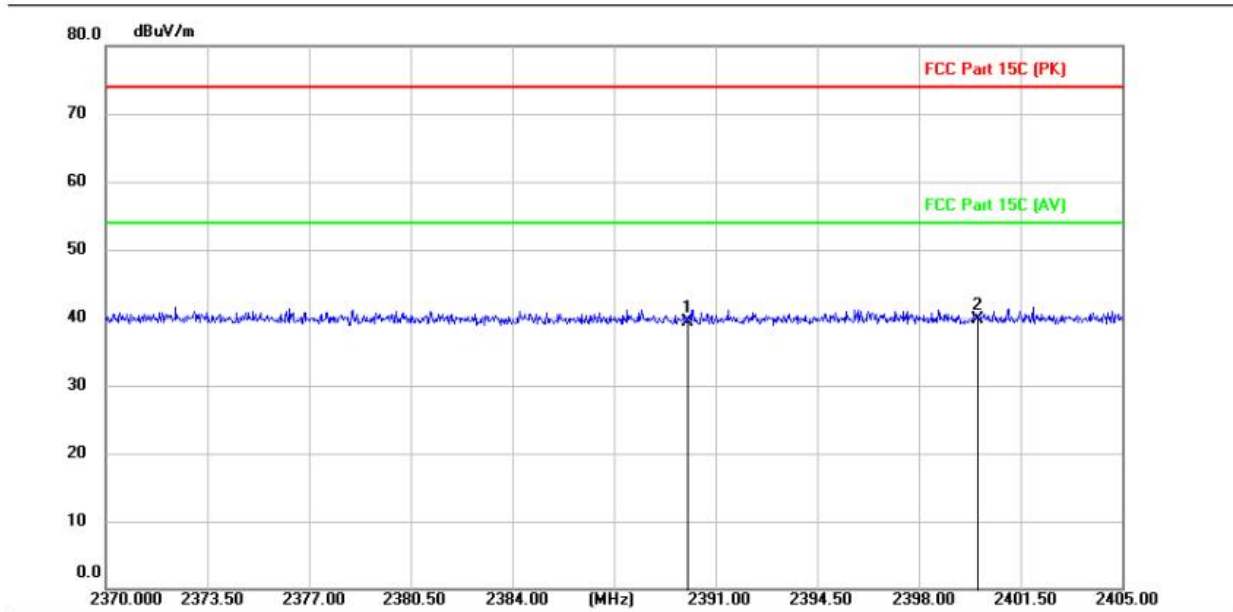
Operating Environment:	
Temperature:	24.7 °C
Humidity:	49.7 %
Atmospheric Pressure:	101 kPa
Final test mode:	Test Mode 1

4.3.2. Test Setup Diagram:



4.3.3. Test Data:

Test Mode1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: L



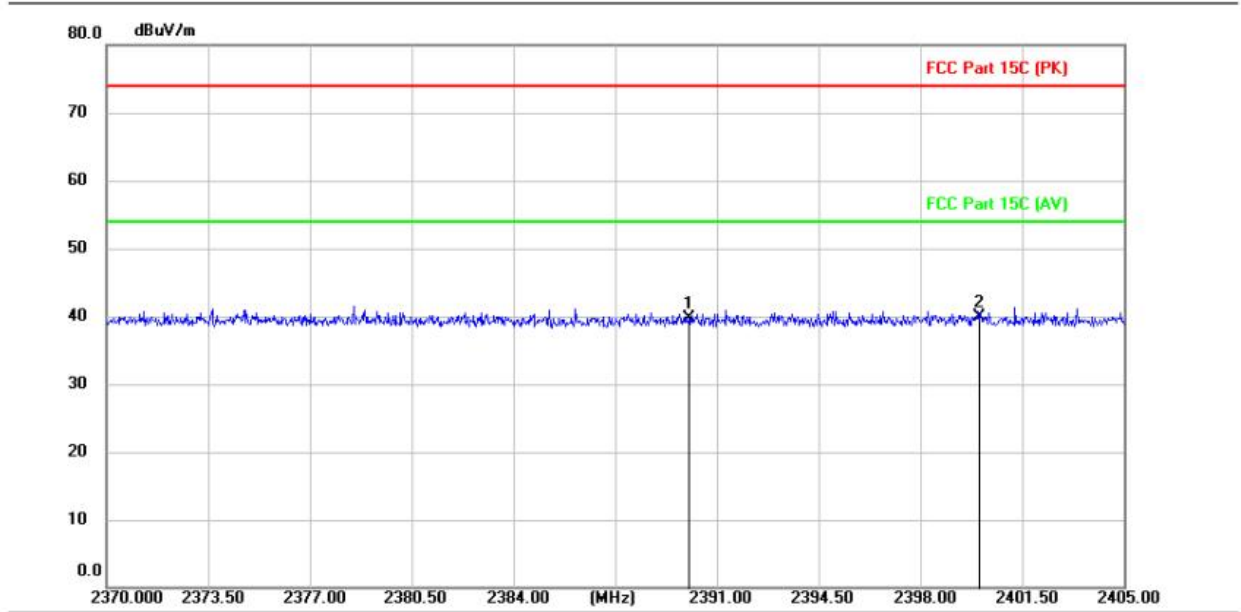
No. Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1	2390.000	41.25	-1.91	39.34	74.00	-34.66	peak
2 *	2400.000	41.53	-1.92	39.61	74.00	-34.39	peak

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Test Mode1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: L



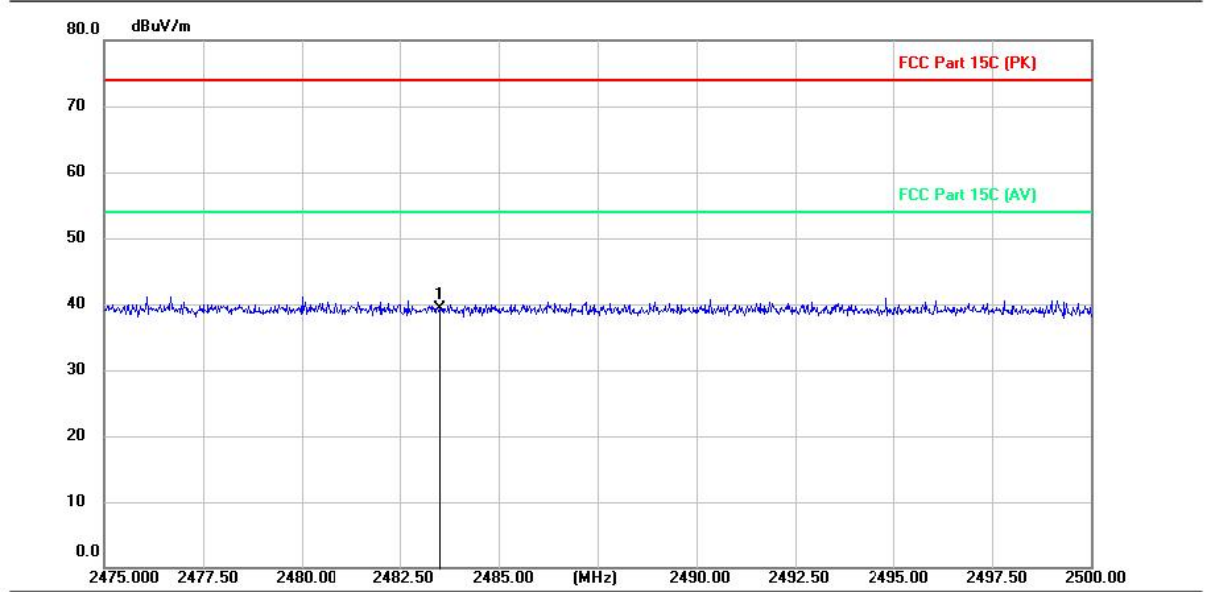
No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		2390.000	41.61	-1.91	39.70	74.00	-34.30	peak
2	*	2400.000	41.81	-1.92	39.89	74.00	-34.11	peak

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Test Mode1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: H



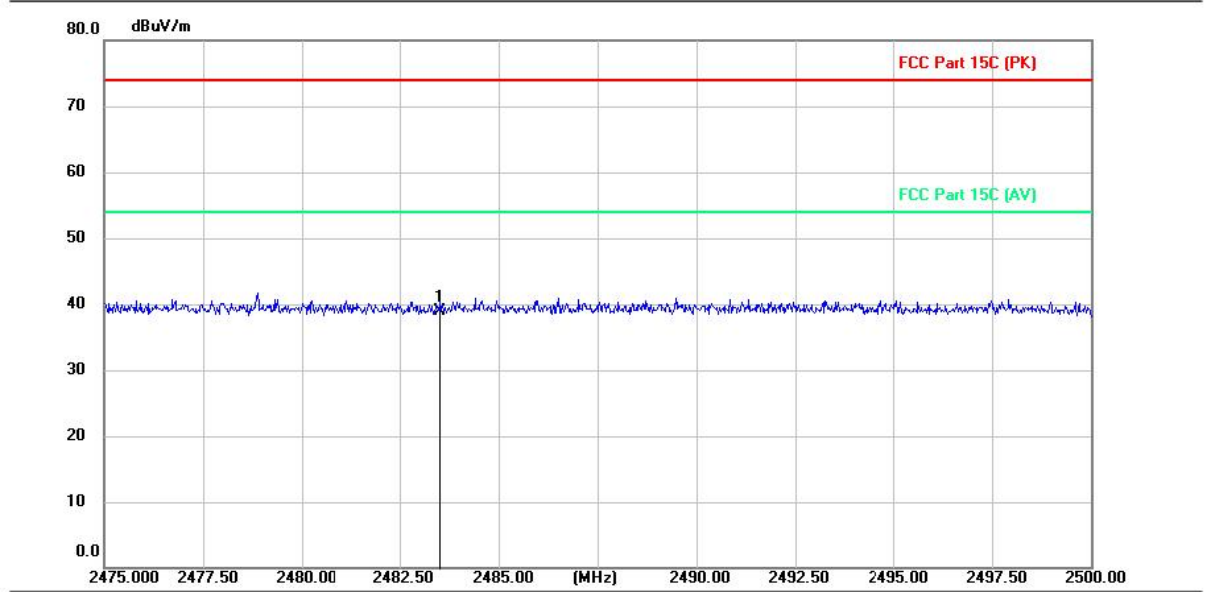
No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1	*	2483.500	41.33	-2.05	39.28	74.00	-34.72	peak

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Test Mode1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: H



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1	*	2483.500	40.94	-2.05	38.89	74.00	-35.11	peak

Note:

1.Measurement = Reading level + Correct Factor

Correct Factor=Antenna Factor + Cable Loss - Preamplifier Factor

2. Since the peak value is less than the limit of the AVG value, there is no AVG data.

4.4. Emissions in frequency bands (below 1GHz)

Test Requirement:	47 CFR 15.249(a) 47 CFR 15.249(d) 47 CFR 15.249(e)																																									
Test Limit:	<p>Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:</p> <table border="1"> <thead> <tr> <th>Fundamental frequency</th> <th>Field strength of fundamental (millivolts/meter)</th> <th>Field strength of harmonics (microvolts/meter)</th> </tr> </thead> <tbody> <tr> <td>902-928 MHz</td> <td>50</td> <td>500</td> </tr> <tr> <td>2400-2483.5 MHz</td> <td>50</td> <td>500</td> </tr> <tr> <td>5725-5875 MHz</td> <td>50</td> <td>500</td> </tr> <tr> <td>24.0-24.25 GHz</td> <td>250</td> <td>2500</td> </tr> </tbody> </table> <p>Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.</p> <table border="1"> <thead> <tr> <th>Frequency (MHz)</th> <th>Field strength (microvolts/meter)</th> <th>Measurement distance (meters)</th> </tr> </thead> <tbody> <tr> <td>0.009-0.490</td> <td>2400/F(kHz)</td> <td>300</td> </tr> <tr> <td>0.490-1.705</td> <td>24000/F(kHz)</td> <td>30</td> </tr> <tr> <td>1.705-30.0</td> <td>30</td> <td>30</td> </tr> <tr> <td>30-88</td> <td>100 **</td> <td>3</td> </tr> <tr> <td>88-216</td> <td>150 **</td> <td>3</td> </tr> <tr> <td>216-960</td> <td>200 **</td> <td>3</td> </tr> <tr> <td>Above 960</td> <td>500</td> <td>3</td> </tr> </tbody> </table> <p>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</p> <p>In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.</p>			Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)	902-928 MHz	50	500	2400-2483.5 MHz	50	500	5725-5875 MHz	50	500	24.0-24.25 GHz	250	2500	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	0.009-0.490	2400/F(kHz)	300	0.490-1.705	24000/F(kHz)	30	1.705-30.0	30	30	30-88	100 **	3	88-216	150 **	3	216-960	200 **	3	Above 960	500	3
	Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)																																							
902-928 MHz	50	500																																								
2400-2483.5 MHz	50	500																																								
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1.705-30.0	30	30																																								
30-88	100 **	3																																								
88-216	150 **	3																																								
216-960	200 **	3																																								
Above 960	500	3																																								
Test Method:	ANSI C63.10-2013 section 6.5																																									
Procedure:	ANSI C63.10-2013 section 6.5																																									

4.4.1. E.U.T. Operation:

Operating Environment:

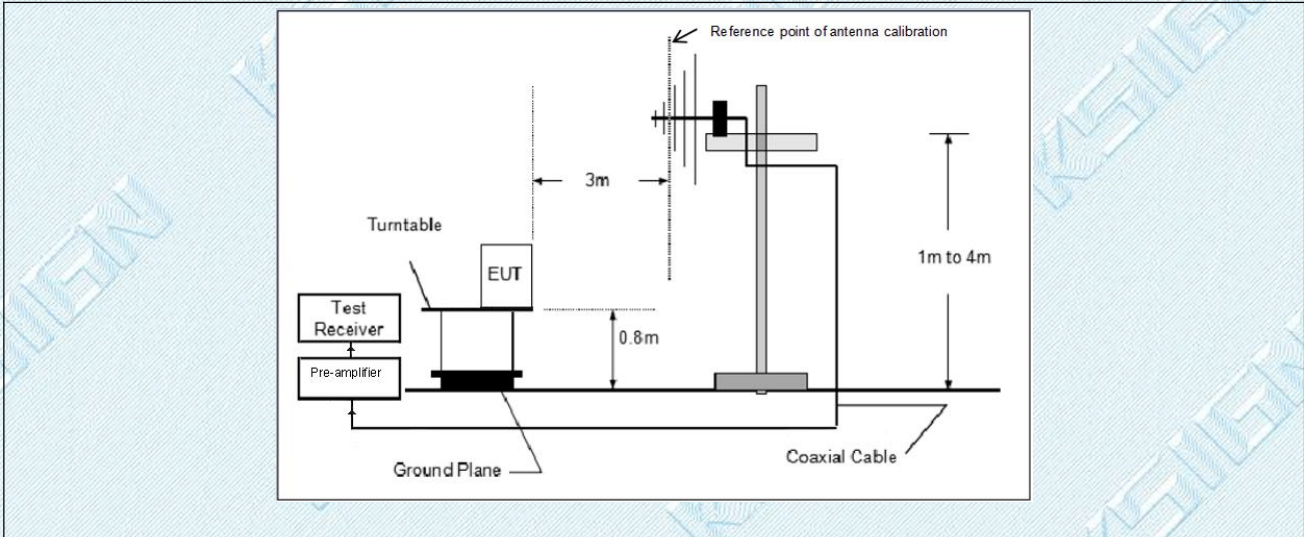
TRF RF_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com

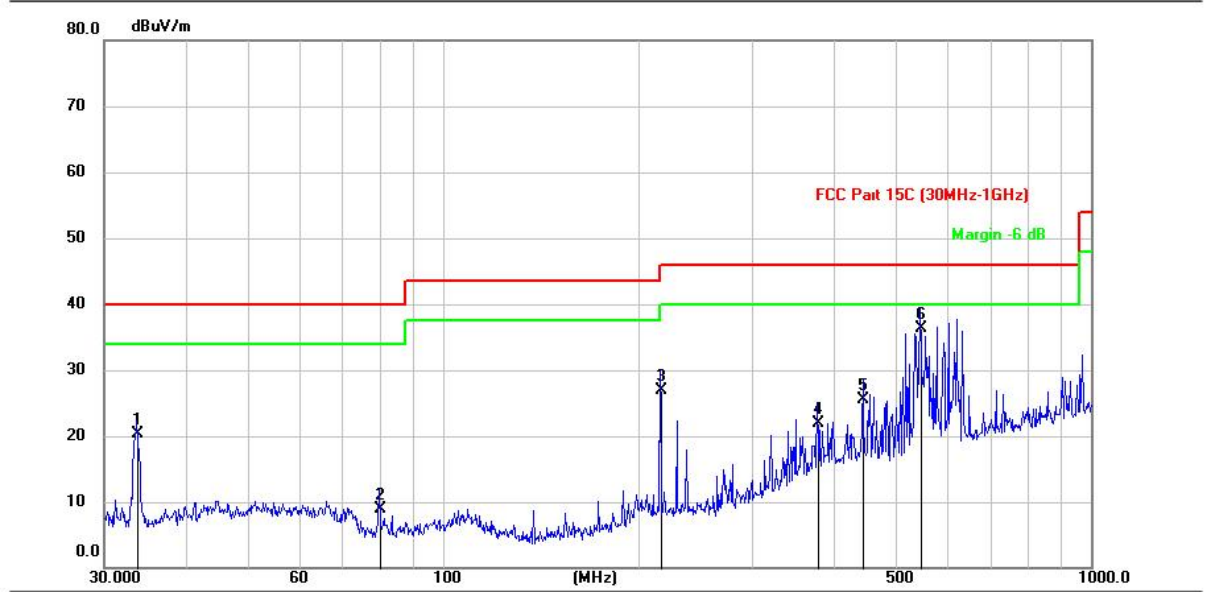
Temperature:	24.7 °C
Humidity:	49.7 %
Atmospheric Pressure:	101 kPa
Final test mode:	Test Mode 1

4.4.2. Test Setup Diagram:



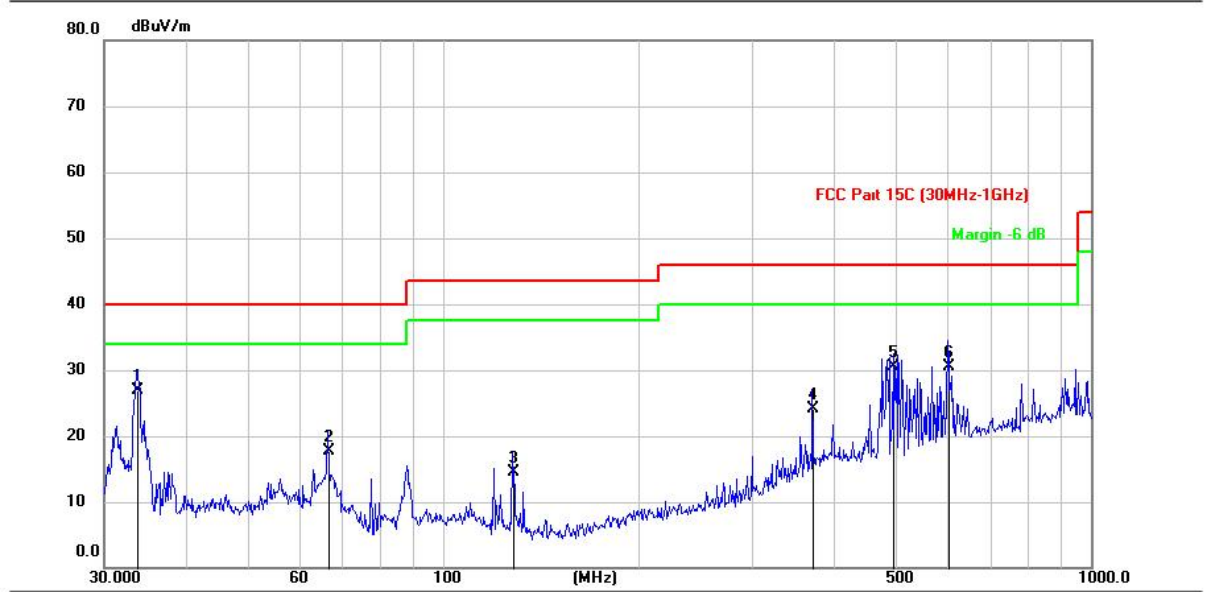
4.4.3. Test Data:

Test Mode1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: M



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		33.7157	38.56	-18.19	20.37	40.00	-19.63	QP
2		79.9963	29.71	-20.84	8.87	40.00	-31.13	QP
3		216.1755	45.52	-18.66	26.86	46.00	-19.14	QP
4		377.3913	33.16	-11.16	22.00	46.00	-24.00	QP
5		444.2279	35.35	-9.86	25.49	46.00	-20.51	QP
6	*	546.3308	45.14	-8.88	36.26	46.00	-9.74	QP

Test Mode1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: M



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1	*	33.7986	45.01	-18.16	26.85	40.00	-13.15	QP
2		66.4290	35.23	-17.60	17.63	40.00	-22.37	QP
3		128.2027	35.05	-20.55	14.50	43.50	-29.00	QP
4		371.2226	35.43	-11.36	24.07	46.00	-21.93	QP
5		496.8047	40.30	-9.86	30.44	46.00	-15.56	QP
6		602.9046	37.80	-7.25	30.55	46.00	-15.45	QP

Note:

1.Measurement = Reading level + Correct Factor

2.Correct Factor=Antenna Factor + Cable Loss - Preamplifier Factor

4.5. Emissions in frequency bands (above 1GHz)

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

4.5.1. E.U.T. Operation:

Operating Environment:

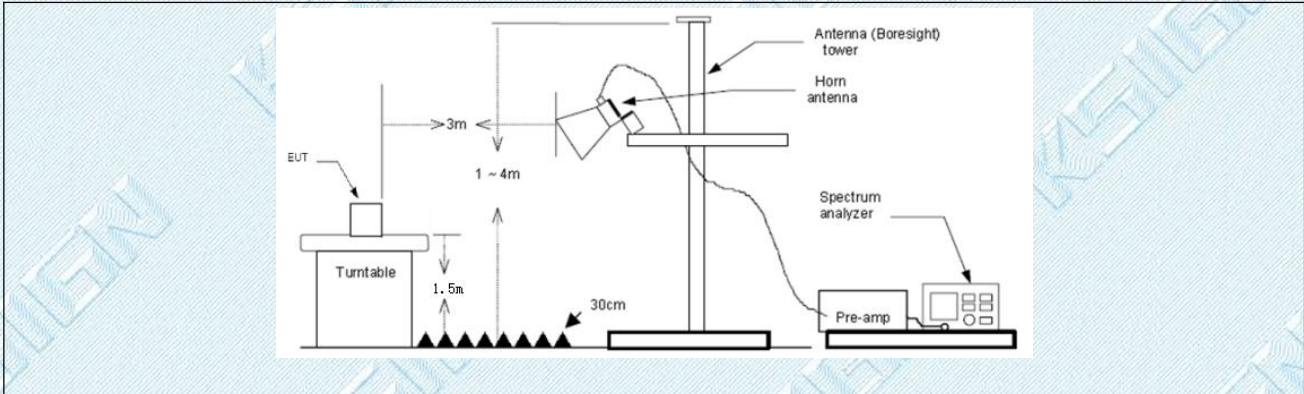
TRF RF_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com

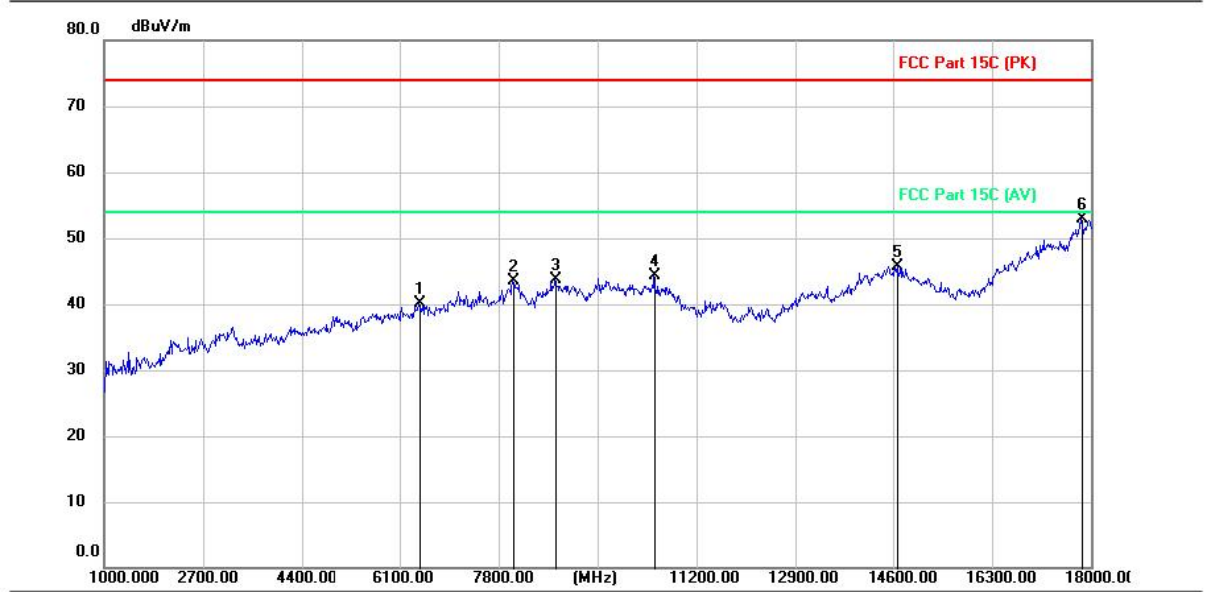
Temperature:	24.7 °C
Humidity:	49.7 %
Atmospheric Pressure:	101 kPa
Final test mode:	Test Mode1

4.5.2. Test Setup Diagram:



4.5.3. Test Data:

Test Mode1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: M



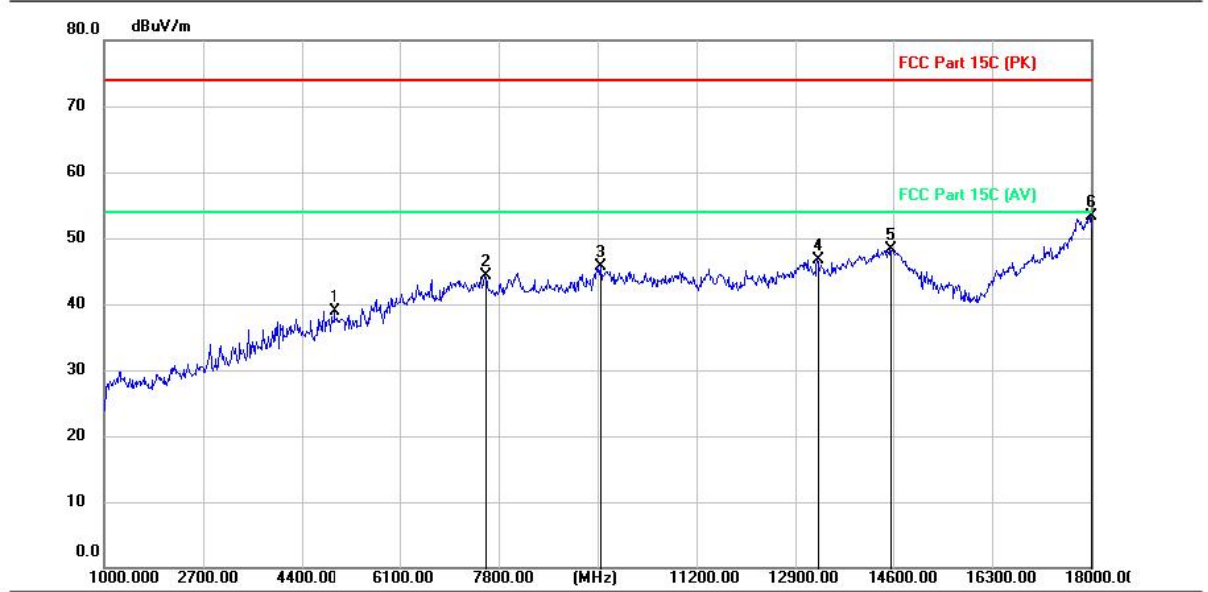
No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		6436.600	33.72	6.29	40.01	74.00	-33.99	peak
2		8048.200	32.77	10.83	43.60	74.00	-30.40	peak
3		8772.400	33.44	10.22	43.66	74.00	-30.34	peak
4		10484.300	31.07	13.22	44.29	74.00	-29.71	peak
5		14676.500	27.63	18.12	45.75	74.00	-28.25	peak
6	*	17845.300	30.09	22.83	52.92	74.00	-21.08	peak

TRF RF_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com

Test Mode1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: M



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		4967.800	36.06	2.85	38.91	74.00	-35.09	peak
2		7573.900	34.84	9.38	44.22	74.00	-29.78	peak
3		9551.000	34.32	11.39	45.71	74.00	-28.29	peak
4		13277.400	30.59	16.21	46.80	74.00	-27.20	peak
5		14554.100	30.45	17.89	48.34	74.00	-25.66	peak
6	*	17998.300	29.59	23.71	53.30	74.00	-20.70	peak

Note:

1. From 18GHz to 26.5GHz, the amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Since the peak value is less than the limit of the AVG value, there is no AVG data.

5. EUT TEST PHOTOS

Occupied Bandwidth



Emissions in frequency bands (below 1GHz)



Emissions in frequency bands (above 1GHz)

TRF RF_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com

6. PHOTOGRAPHS OF EUT CONSTRUCTIONAL

Refer to Appendix - EUT Photos for KD2403S0918E.docx

--THE END--

Important Notice

1.	The results are valid only for the samples submitted.
2.	The report is invalid without the "APPROVED" and the "seal for riding".
3.	The test report is invalid without the signatures of Approver, Reviewer and Testing engineer.
4.	The test report can not be partially copied unless prior written approval is issued from our lab.
5.	If the report is not stamped with the CMA seal, it indicates that the report does not have the role of proof for society.
6.	Product information, customer information and sample sources are provided by the client, and we are not responsible for their authenticity;
7.	The test basis or test items marked ★ are not within the scope of CNAS accreditation and CMA accreditation of our laboratory.
8.	The report is invalid when anything of following happens – illegal transfer, reproduce, embezzlement, imposture, modification or tampering in any media form.
9.	If there is any objection to report, the client should inform issuing laboratory within 15 days from the date of.
10.	For cases where compliance is determined based on test values, when relevant specifications, standards, documents, and customers have no relevant requirements and no other special instructions, the test report issued by this laboratory is carried out in full value and adopts ILAC-G8:09 /2019 "Simple Acceptance Rule" for judgment.