Shenzhen CTL Testing Technology Co., Ltd.
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TEST REPORT

FOR FCC PART 15 SUBPART C 15.249

Report Reference No.....	**CTL2601283021-WF**	
Compiled by: (printed name+signature)	Gary Gao	
Reviewed by: (printed name+signature)	Happy Guo	
Approved by: (printed name+signature)	Ivan Xie	

Product Name..... :	1to64 Full Scale Desktop Drift Racing
Model/Type reference..... :	CV-E84
List Model(s)..... :	CV-E85, CV-E86, CV-E87, CV-E88, CE-E89
Trade Mark..... :	N/A
FCC ID..... :	**2AL7W-CV-E84**
Applicant's name..... :	**WEI SHENG DA TOYS FACTORY**
Address of applicant..... :	No.8th, Qianxi Industrial Area, Lianxia Town Chenghai, Shantou City, Guangdong Province, China
Test specification..... :	
Standard..... :	**FCC Part 15.249:**Operation within the bands 920-928 MHz, 2400-2483.5 MHz, 5725-5850 MHz and 24.0 - 24.25 GHz.
TRF Originator..... :	Shenzhen CTL Testing Technology Co., Ltd.
Master TRF..... :	Dated 2011-01
Date of receipt of test item..... :	Feb. 6, 2026
Date of Test Date..... :	Feb. 6, 2026-Mar. 24, 2026
Data of Issue..... :	Mar. 24, 2026
Result..... :	**Pass**

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TEST REPORT

Test Report No. :	CTL2601283021-WF	Mar. 24, 2026 Date of issue

Equipment under Test	:	1to64 Full Scale Desktop Drift Racing
Sample No.		CTL260128302001
Model /Type	:	CV-E84
Listed Models	:	CV-E85, CV-E86, CV-E87, CV-E88, CE-E89
Applicant	:	**WEI SHENG DA TOYS FACTORY**
Address	:	No.8th, Qianxi Industrial Area, Lianxia Town Chenghai, Shantou City, Guangdong Province, China
Manufacturer	:	**WEI SHENG DA TOYS FACTORY**
Address	:	No.8th, Qianxi Industrial Area, Lianxia Town Chenghai, Shantou City, Guangdong Province, China

Test result	Pass *

* In the configuration tested, the EUT complied with the standards specified page 5.

This device (product name: 1to64 Full Scale Desktop Drift Racing) model name: CV-E84, CV-E85, CV-E86, CV-E87, CV-E88, CE-E89. The difference among all models lies in that the remote controls are the same, but the appearance, shape and color of the paired receiver vehicles delivered are different.

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory.

** Modified History **

Revision	Description	Issued Data	Report No.	Remark
Version 1.0	Initial Test Report Release	Mar. 24, 2026	CTL2601283021-WF	Tracy Qi

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1. SUMMARY

1.1. TEST STANDARDS

The tests were performed according to following standards:

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

ANSI C63.10:2020 : American National Standard for Testing Unlicensed Wireless Devices

1.2. Test Description

FCC PART 15.249		
FCC Part 15.249(a)	Field Strength of Fundamental	PASS
FCC Part 15.209	Spurious Emission	PASS
FCC Part 15.209	Band edge	PASS
FCC Part 15.215(c)	20dB bandwidth	PASS
FCC Part 15.207	Conducted Emission	N/A
FCC Part 15.203	Antenna Requirement	PASS

1.3. Test Facility

1.3.1 Address of the test laboratory

Company Name:	Shenzhen CTL Testing Technology Co., Ltd.
Address 1:	Zone A.1/F..Warehouse 2.Baisha Technology Park, No.3011,Shahexi Road, Nanshan District,Shenzhen.518055,P.R.C.
Address 2:	Fl.A1, Bldg.A3, No.2533 GuanGuang Road, Fenghuang Community Fenghuang Street, Guangming District, Shenzhen, Guangdong, PR.C

1.3.2 Test location

All tests were performed at:

Company Name:	Shenzhen CTL Testing Technology Co., Ltd.
☐ Main location	Zone A.1/F..Warehouse 2.Baisha Technology Park, No.3011,Shahexi Road, Nanshan District,Shenzhen.518055,P.R.C.
☒ Satellite location	Fl.A1, Bldg.A3, No.2533 GuanGuang Road, Fenghuang Community Fenghuang Street, Guangming District, Shenzhen, Guangdong, PR.C

1.3.3 Laboratory accreditation

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

CNAS-Lab Code: L7497

Shenzhen CTL Testing Technology Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No. 4343.01

Shenzhen CTL Testing Technology 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.

IC CAB identifier: CN0041

Main Company Number :9618B

Satellite Company Number:35187

The 3m alternate test site of Shenzhen CTL Testing Technology Co., Ltd. EMC Laboratory has been registered by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements with Main Company Number:9618B and Satellite Company Number:35187.

FCC-Registration No.: 399832

Designation No.: CN1216

Shenzhen CTL Testing Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation No.: CN1216. Test Firm Registration 399832.

1.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen CTL Testing Technology Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole

responsibility of continued compliance of the device.
Hereafter the best measurement capability for CTL laboratory is reported:

Test Item	Measurement Uncertainty	Notes
Transmitter power Radiated	±2.20 dB	(1)
Occupied Bandwidth	±0.02ppm	(1)
Radiated Emission 30~1000MHz	±4.08dB	(1)
Radiated Emission Above 1GHz	±4.32dB	(1)
Conducted Disturbance0.15~30MHz	±2.96dB	(1)
20dB Emission Bandwidth	±1.9%	(1)
Carrier Frequency Separation	±1.9%	(1)
Maximum Power Spectral Density Level	±0.98 dB	(1)
Number of Hopping Channel	±1.9%	(1)
Time of Occupancy	±0.11%	(1)
Max Peak Conducted Output Power	±0.98 dB	(1)
Band-edge Spurious Emission	±1.21dB	(1)
Conducted RF Spurious Emission	9kHz-7GHz:±1.09dB 7GHz-26.5GHz: ±3.27dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.
(2) Decision rule for Statement of Conformity: The measurement uncertainty is not taken into account but only measured result.

2. GENERAL INFORMATION

2.1. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	18-28°C
Relative Humidity:	30-60%
Air Pressure:	965-1030hPa

2.2. General Description of EUT

Product Name:	1to64 Full Scale Desktop Drift Racing
Model/Type reference:	CV-E84
Power supply:	DC 3V from battery
Test Voltage	DC 3V from battery
2.4G	
Modulation:	GFSK
Operation frequency:	2405MHz~2475MHz
Channel number:	33
Antenna type:	Integrated antenna
Antenna gain:	0dBi provided by ☒ Applicant ☐ Manufacturer

Note1: For more details, please refer to the user's manual of the EUT.
Note2: The product cannot be configured to operate outside the current frequency band plan through software configuration, Third parties are not allowed to change any software parameter configuration of the product.

2.3. Description of Test Modes and Test Frequency

The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing. There are 33 channels provided to the EUT and Channel 01/19/33 were selected for testing.

Operation Frequency List：

Channel	Frequency (MHz)
01	**2405**
02	2406
03	2407
04	2408
05	2409
06	2410
07	2411
08	2414
09	2418
10	2422
11	2425
12	2427
13	2428
14	2430
15	2435

16	2437
17	2439
18	2442
19	**2445**
20	2446
21	2450
22	2452
23	2454
24	2456
25	2458
26	2462
27	2464
28	2465
29	2466
30	2467
31	2473
32	2474
33	**2475**

Note: The line display in grey is the channel selected to perform test.

RF Cable List and Details

RF Cable	RF Cable loss	RF Cable loss provided by
RG 316	0.5dB	☒Applicant ☐Manufacturer ☐Testing Laboratory (CTL)

2.4. Equipments Used during the Test

Conducted Emission					
Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
EMI Test Receiver	ROHDE & SCHWARZ	ESCI	1166.5950.03	2026/01/05	2027/01/04
LISN	ROHDE & SCHWARZ	ESH2-Z5	860014/010	2026/01/05	2027/01/04
Limitator	ROHDE & SCHWARZ	ESH3-Z2	100408	2026/01/05	2027/01/04
Software:					
Name of Software:			Version:		
ES-K1			V1.71		

Radiated Emissions and Band Edge					
Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
Loop antenna	BEIJING DA ZE TECHNOLOGY CO., LTD	ZN30900A	N/A	2025/07/02	2026/07/01
ULTRA-BROADBAND ANTENNA	Sunol Sciences Corp.	JB1 Antenna	A061713	2025/07/02	2026/07/01
Horn Antenna	Sunol Sciences Corp	DRH-118	A062013	2026/01/05	2027/01/04
Horn Antenna	Ocean Microwave	OBH100400	26999002	2025/07/02	2026/07/01
Amplifier	MRT Technology(Suzhou)Co., Ltd	MRT-AP01M06	S-001	2025/04/28	2026/04/27
Amplifier	Agilent	8449B	3008A02306	2026/01/05	2027/01/04
Amplifier	Brief&Smart	LNA-4018	2104197	2025/07/03	2026/07/02
EMI Test Receiver	ROHDE & SCHWARZ	ESCI	1166.5950.03	2026/01/05	2027/01/04
Spectrum Analyzer	RS	FSP	1164.4391.38	2025/07/03	2026/07/02
Test software					
Name of Software			Version		
EZ_EMC(Below 1GHz)			V1.1.4.2		
EZ_EMC(Above 1GHz)			V1.1.4.2		

Maximum Peak Output Power & 20dB Bandwidth & Frequency Separation & Number of hopping frequency & Dwell Time & Out-of-band Emissions					
Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
Spectrum Analyzer	Keysight	N9020A	MY53420874	2025/07/03	2026/07/02
Power meter	TSTPASS	TSPS2023R	TSCB220016	2025/07/03	2026/07/02
Temperature/Humidity Meter	Ji Yu	MC501	/	2025/07/03	2026/07/02
Test Software					
Name of Software			Version		
TST-PASS			V2.0.2		

2.5. Related Submittal(s) / Grant(s)

This submittal(s) (test report) is intended to comply with Section 15.249 of the FCC Part 15, Subpart C Rules.

2.6. Modifications

No modifications were implemented to meet testing criteria.

3. TEST CONDITIONS AND RESULTS

3.1. Conducted Emissions Test

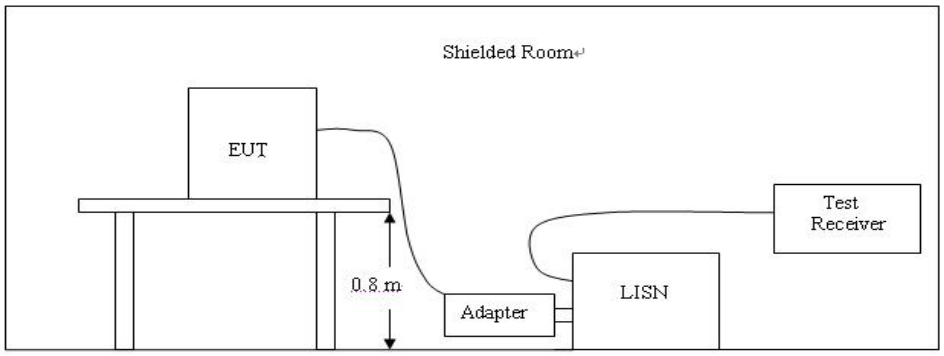
LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.207

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 CONFIGURATION



TEST PROCEDURE

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system; a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10:2020.
2. Support equipment, if needed, was placed as per ANSI C63.10:2020.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10:2020.
4. If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.

TEST RESULTS

Battery powered products do not require this test.

3.2. Radiated Emissions and Band Edge

Limit

According 15.249, the field strength of emissions from intentional radiators operated within 2400MHz-2483.5 MHz shall not exceed 94dBμV/m (50mV/m):

FCC PART 15.249(d) 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.

In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a)

Radiated emission limits

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
0.009-0.49	3	20log(2400/F(KHz))+40log(300/3)	2400/F(KHz)
0.49-1.705	3	20log(24000/F(KHz))+ 40log(30/3)	24000/F(KHz)
1.705-30	3	20log(30)+ 40log(30/3)	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

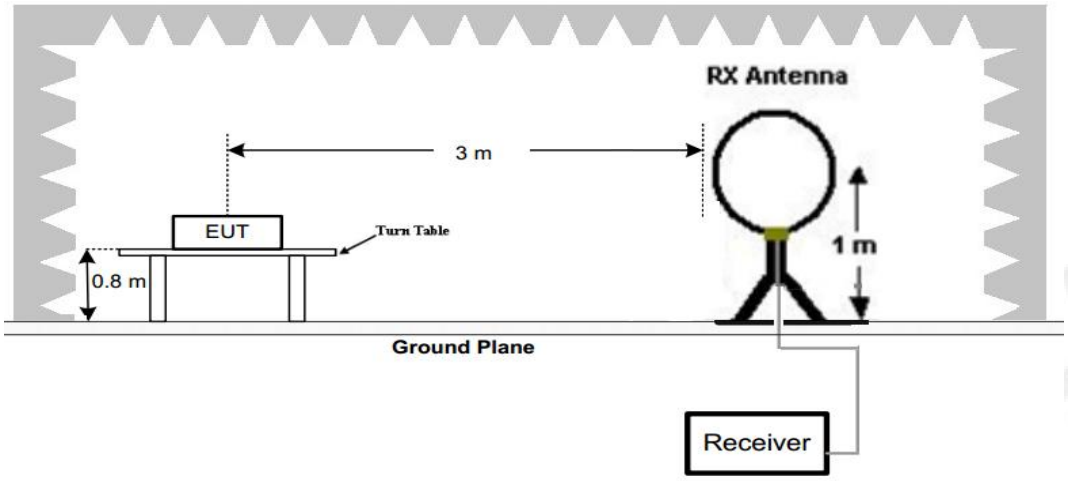
According to §15.249 (a): Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

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

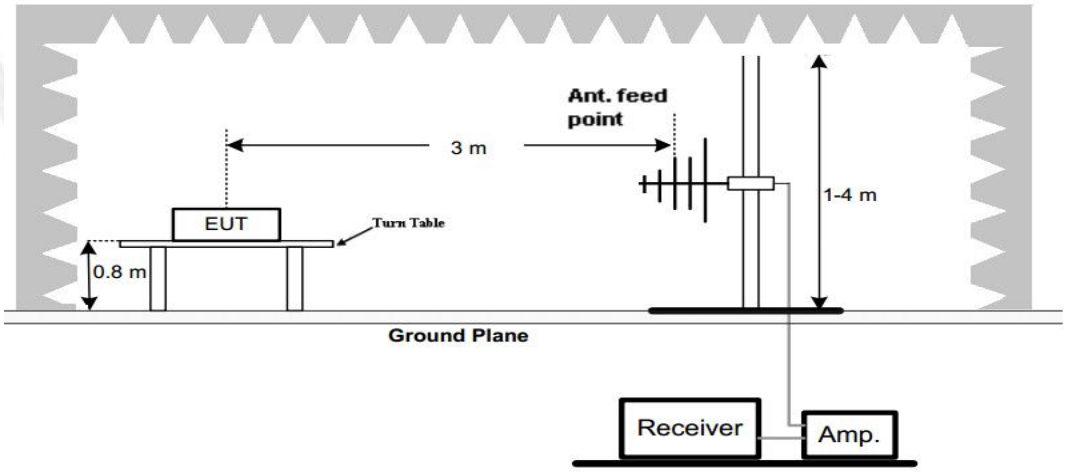
* Field strength limits are specified at a distance of 3 meters.
* As shown in §15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted 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.
* 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 CONFIGURATION

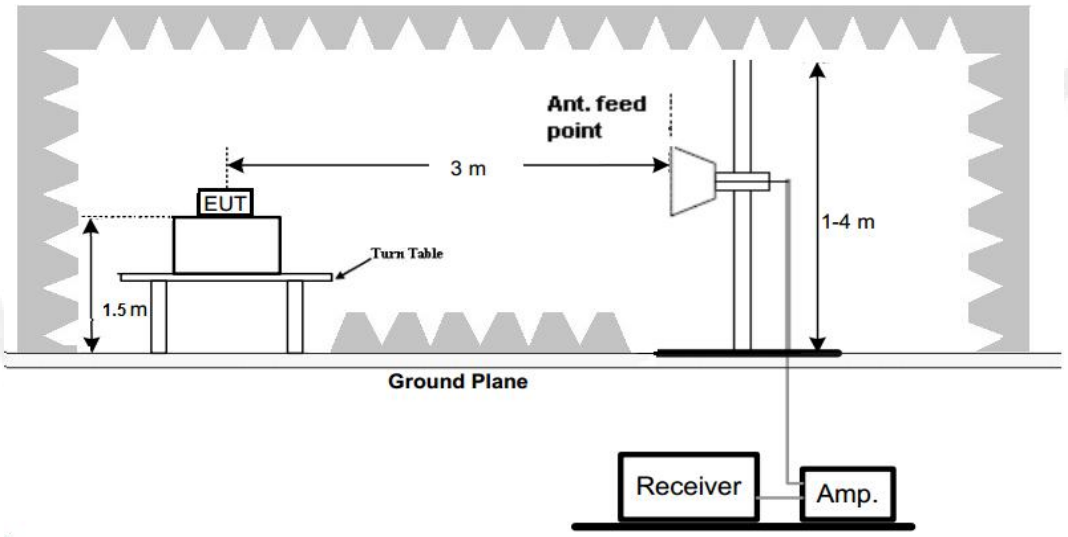
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



Test Procedure

1. Below 1GHz measurement the EUT is placed on a turntable which is 0.8m above ground plane, and above 1GHz measurement EUT was placed on a low permittivity and low loss tangent turn table which is 1.5m above ground plane.
2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0° to 360° to acquire the highest emissions from EUT
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measurements have been completed.
5. Radiated emission test frequency band from 9KHz to 25GHz.
6. The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Bilog Antenna	3
1GHz-18GHz	Horn Antenna	3
18GHz-25GHz	Horn Anternna	1

7. Setting test receiver/spectrum as following table states:

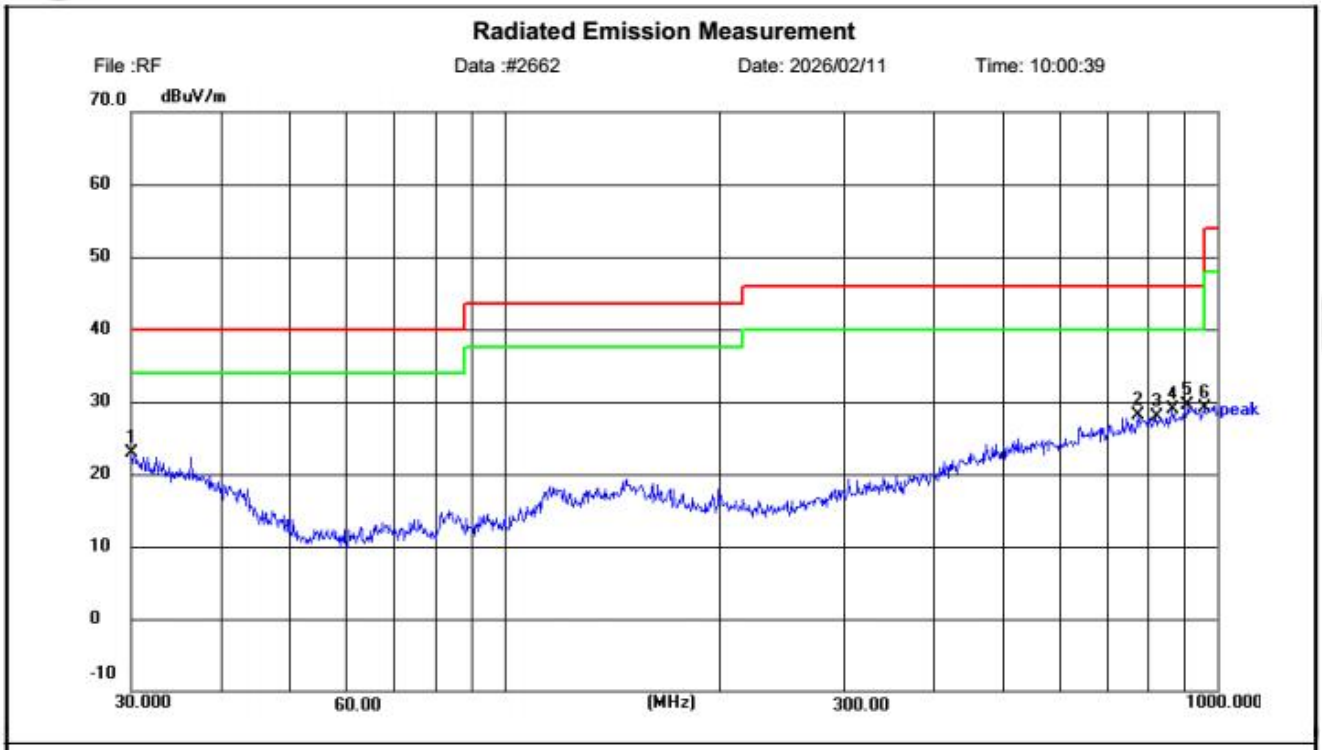
Test Frequency range	Test Receiver/Spectrum Setting	Detector
9KHz-150KHz	RBW=200Hz/VBW=3KHz,Sweep time=Auto	QP
150KHz-30MHz	RBW=9KHz/VBW=100KHz,Sweep time=Auto	QP
30MHz-1GHz	RBW=120KHz/VBW=1000KHz,Sweep time=Auto	QP
1GHz-40GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto	Peak

TEST RESULTS

Remark:
1. We measured Radiated Emission at GFSK mode from 9 KHz to 25GHz and recorded worst case.
2. For below 1GHz testing recorded worst at GFSK low channel.
3. Radiated emission test from 9 KHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9 KHz to 30MHz and not recorded in this report.

For 30MHz-1GHz

Horizontal



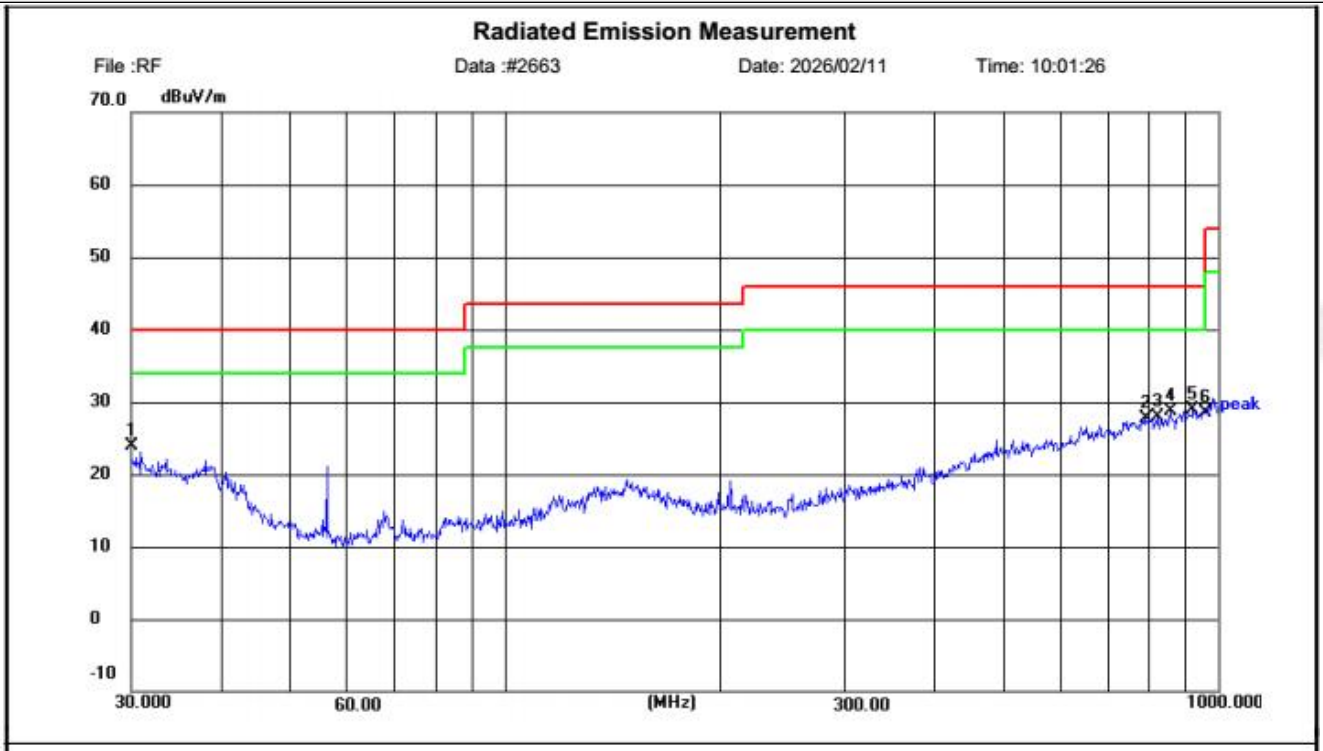
Site LAB Chamber 1
Limit: FCC Part15 Class C_30-1000MHz
EUT:
M/N:
Mode: 2475MHz
Note: CTL2601283021-WF

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	30.0000	33.56	-10.57	22.99	40.00	17.01	peak	100	15	P	
2	774.1584	38.41	-10.24	28.17	46.00	17.83	peak	100	53	P	
3	818.8340	37.62	-9.67	27.95	46.00	18.05	peak	100	144	P	
4	863.0562	38.24	-9.29	28.95	46.00	17.05	peak	100	172	P	
5	909.6666	38.33	-8.74	29.59	46.00	16.41	peak	100	15	P	
6	958.7943	37.32	-8.16	29.16	46.00	16.84	peak	100	336	P	

Vertical



Site LAB Chamber 1
Limit: FCC Part15 Class C_30-1000MHz
EUT:
M/N:
Mode: 2475MHz
Note: CTL2601283021-WF

Polarization: *Vertical*
Power:
Distance: 3m

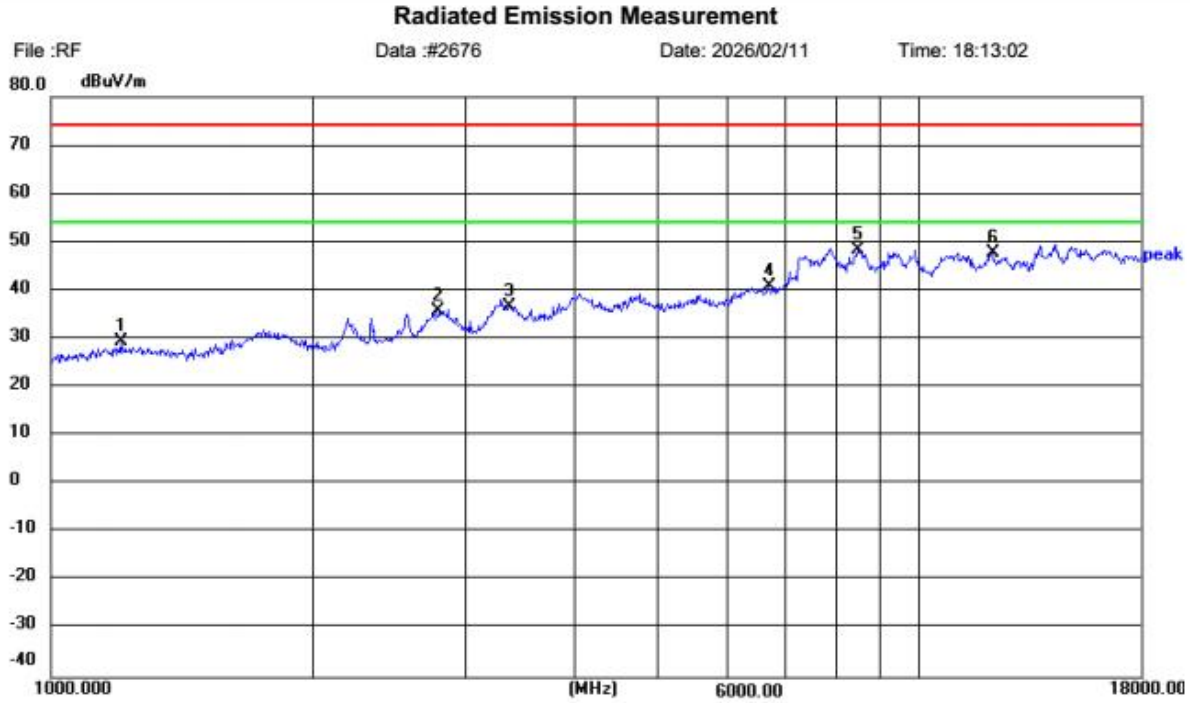
Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	30.0000	34.41	-10.57	23.84	40.00	16.16	peak	100	252	P	
2	790.6188	37.65	-9.97	27.68	46.00	18.32	peak	100	234	P	
3	821.7103	37.56	-9.72	27.84	46.00	18.16	peak	100	160	P	
4	857.0247	38.19	-9.53	28.66	46.00	17.34	peak	100	215	P	
5	922.5157	37.25	-8.40	28.85	46.00	17.15	peak	100	41	P	
6	958.7943	36.69	-8.16	28.53	46.00	17.47	peak	100	87	P	

For 1GHz to 18GHz

2405MHz

Horizontal



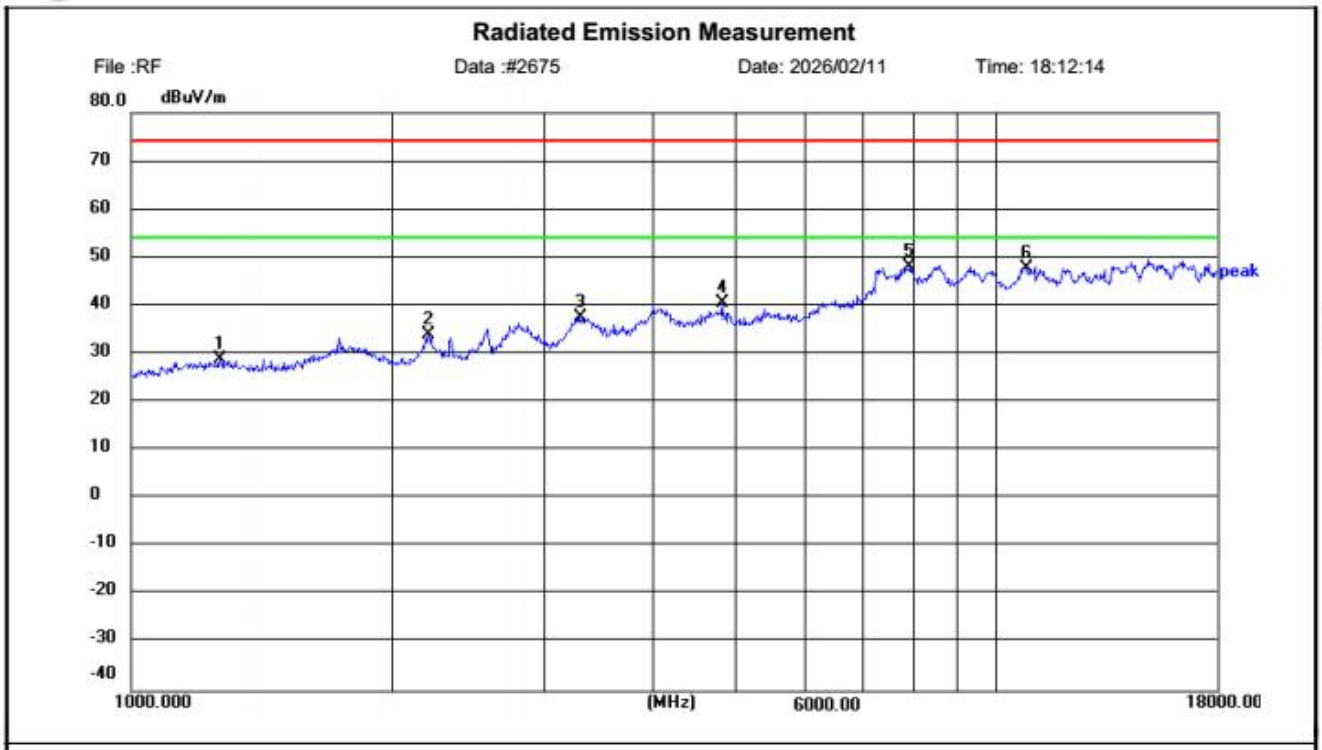
Site LAB Chamber 1
Limit: FCC PART 15C ABOVE 1GHz PK
EUT:
M/N:
Mode: 2405MHz
Note: CTL2601283021-WF

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1203.199	52.90	-23.49	29.41	74.00	44.59	peak	150	0	P	
2	2782.060	50.82	-15.01	35.81	74.00	38.19	peak	150	0	P	
3	3376.523	48.54	-11.77	36.77	74.00	37.23	peak	150	0	P	
4	6698.373	46.31	-5.48	40.83	74.00	33.17	peak	150	0	P	
5	8489.882	51.82	-3.47	48.35	74.00	25.65	peak	150	0	P	
6	12114.352	48.10	-0.22	47.88	74.00	26.12	peak	150	0	P	

Vertical



Site LAB Chamber 1
Limit: FCC PART 15C ABOVE 1GHz PK
EUT:
M/N:
Mode: 2405MHz
Note: CTL2601283021-WF

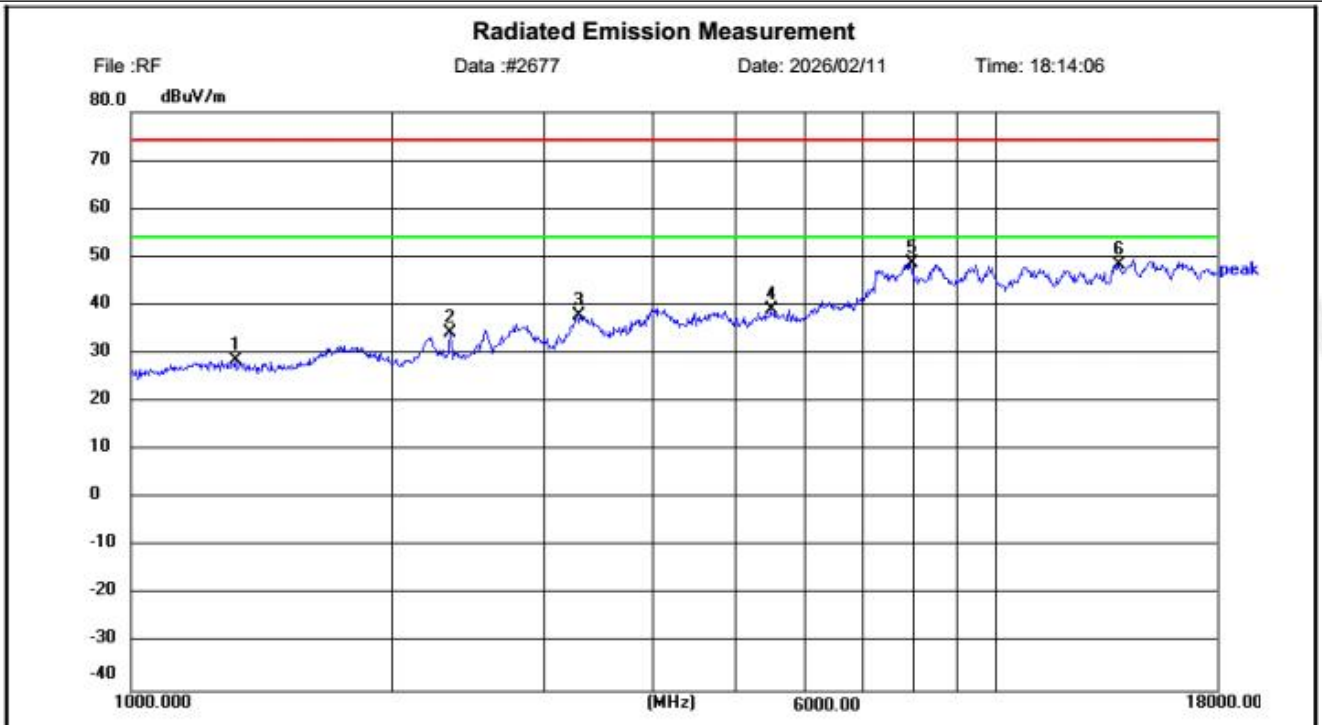
Polarization: *Vertical*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1267.454	52.13	-23.25	28.88	74.00	45.12	peak	150	360	P	
2	2207.723	53.12	-19.03	34.09	74.00	39.91	peak	150	360	P	
3	3299.344	50.37	-12.79	37.58	74.00	36.42	peak	150	360	P	
4	4818.016	49.92	-9.24	40.68	74.00	33.32	peak	150	360	P	
5	7943.838	89.63	-41.63	48.00	74.00	26.00	peak	150	360	P	
6	10822.922	88.57	-40.74	47.83	74.00	26.17	peak	150	360	P	

2445MHz

Horizontal



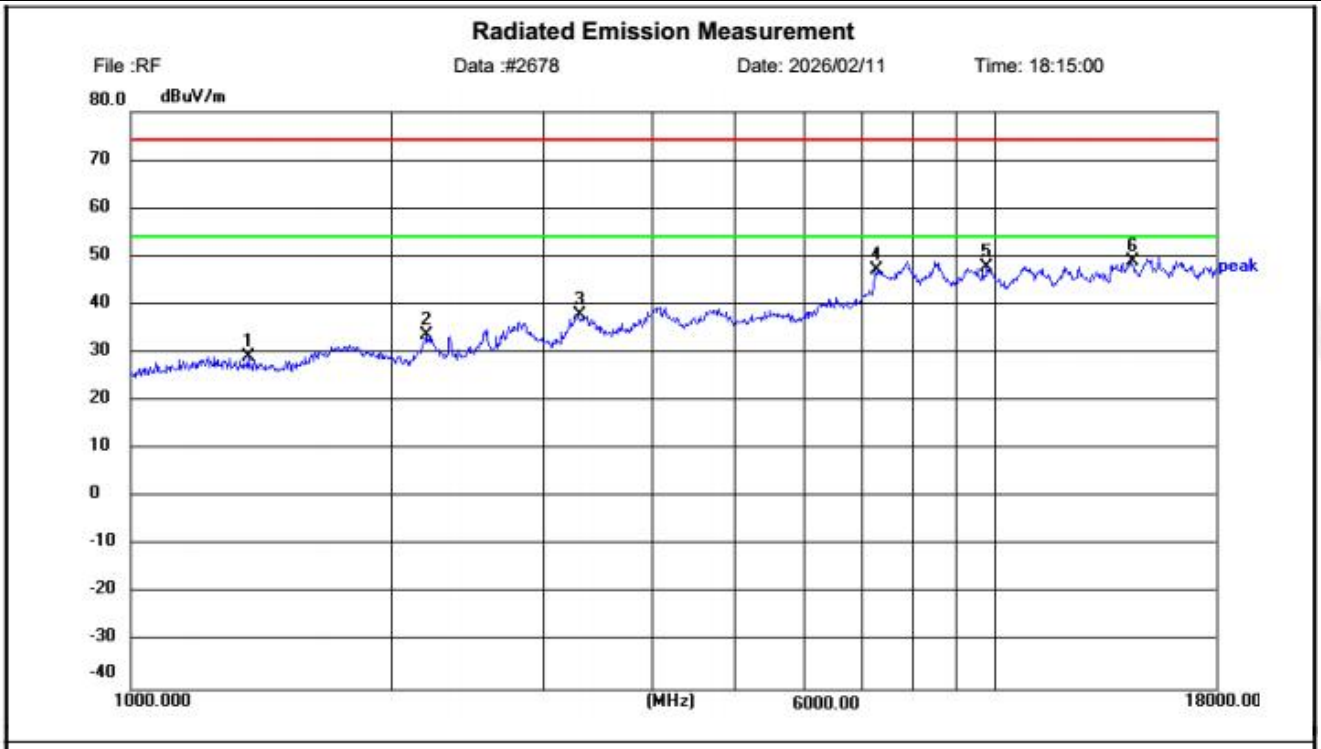
Site LAB Chamber 1
Limit: FCC PART 15C ABOVE 1GHz PK
EUT:
M/N:
Mode: 2445MHz
Note: CTL2601283021-WF

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1319.794	51.39	-22.90	28.49	74.00	45.51	peak	150	360	P	
2	2339.107	51.87	-17.55	34.32	74.00	39.68	peak	150	360	P	
3	3280.326	50.09	-12.28	37.81	74.00	36.19	peak	150	360	P	
4	5487.260	82.10	-43.01	39.09	74.00	34.91	peak	150	360	P	
5	7966.832	90.35	-41.61	48.74	74.00	25.26	peak	150	360	P	
6	13877.076	87.36	-39.07	48.29	74.00	25.71	peak	150	360	P	

Vertical



Site LAB Chamber 1
Limit: FCC PART 15C ABOVE 1GHz PK
EUT:
M/N:
Mode: 2445MHz
Note: CTL2601283021-WF

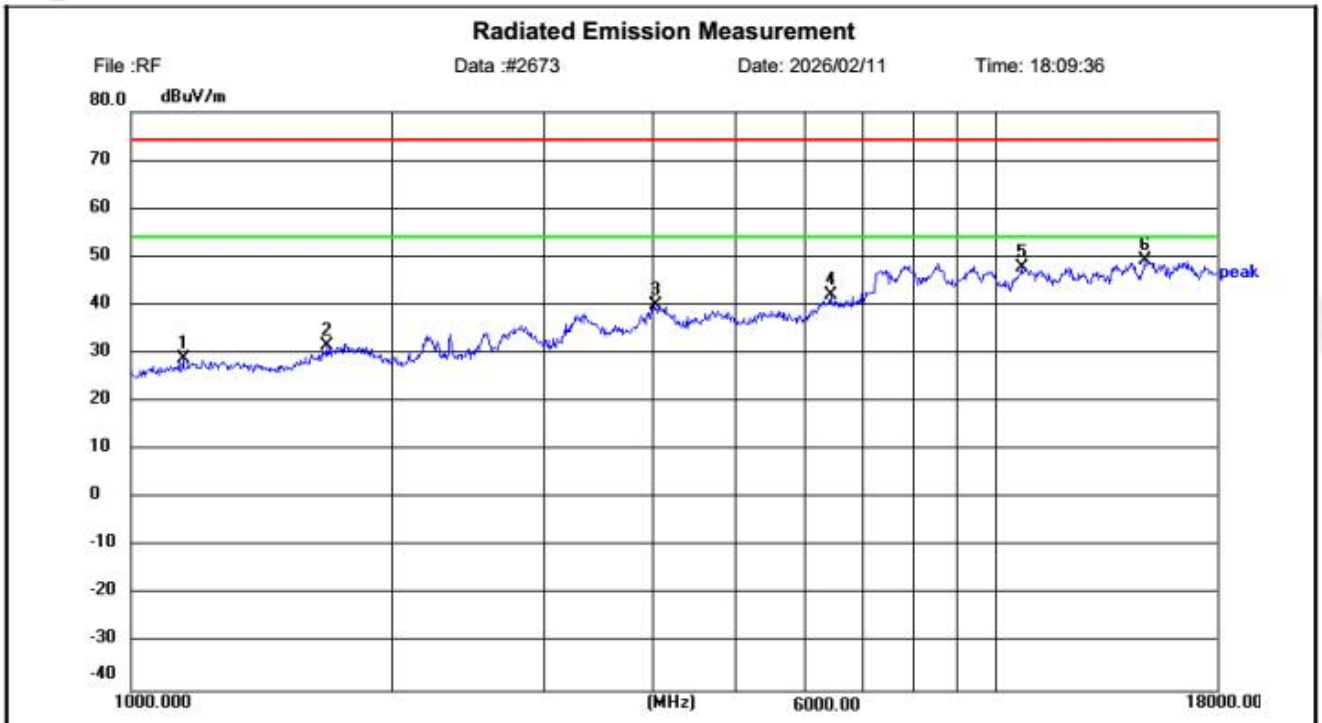
Polarization: *Vertical*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1366.374	52.05	-22.86	29.19	74.00	44.81	peak	150	0	P	
2	2201.351	52.66	-19.08	33.58	74.00	40.42	peak	150	0	P	
3	3299.344	50.58	-12.79	37.79	74.00	36.21	peak	150	0	P	
4	7263.015	52.06	-4.94	47.12	74.00	26.88	peak	150	0	P	
5	9781.602	49.34	-1.51	47.83	74.00	26.17	peak	150	0	P	
6	14366.840	46.31	2.54	48.85	74.00	25.15	peak	150	0	P	

2475MHz

Horizontal



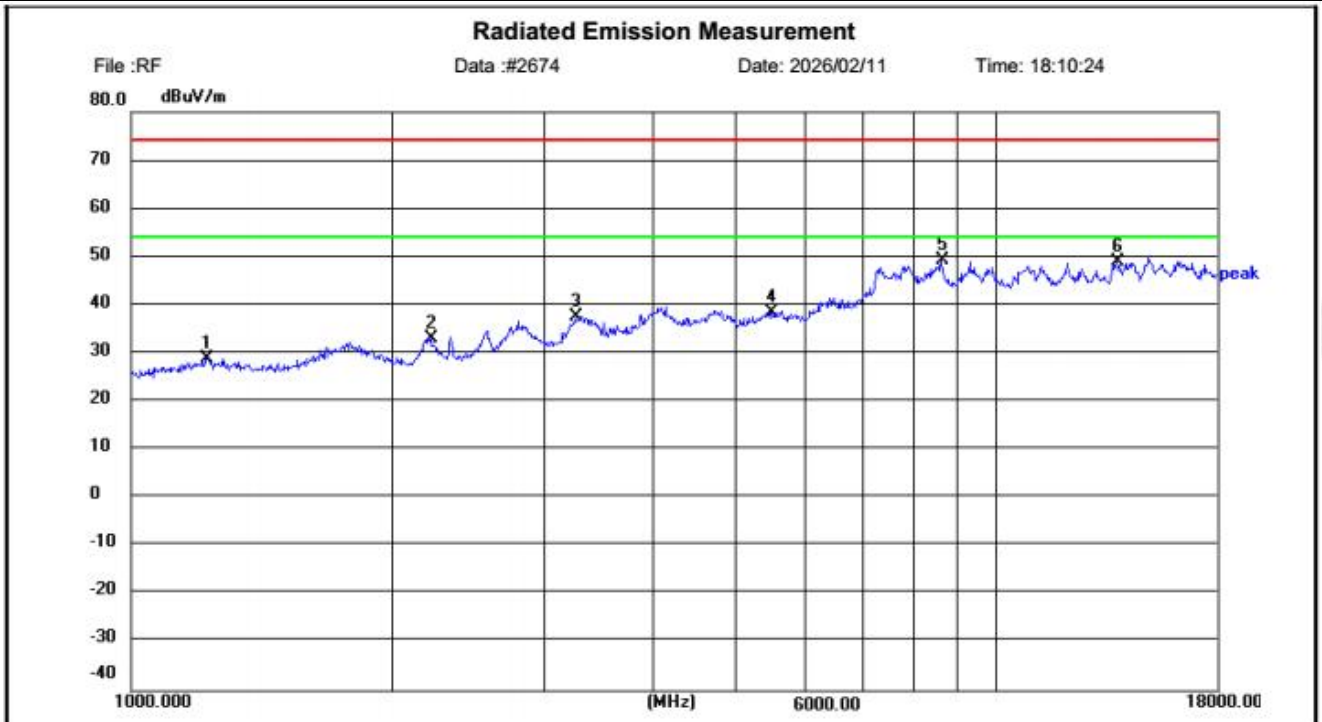
Site LAB Chamber 1
Limit: FCC PART 15C ABOVE 1GHz PK
EUT:
M/N:
Mode: 2475MHz
Note: CTL2601283021-WF

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1148.823	52.49	-23.75	28.74	74.00	45.26	peak	150	360	P	
2	1682.477	52.52	-21.08	31.44	74.00	42.56	peak	150	360	P	
3	4027.554	48.52	-8.51	40.01	74.00	33.99	peak	150	360	P	
4	6432.733	84.54	-42.36	42.18	74.00	31.82	peak	150	360	P	
5	10698.514	88.48	-40.74	47.74	74.00	26.26	peak	150	360	P	
6	14873.888	87.68	-38.44	49.24	74.00	24.76	peak	150	360	P	

Vertical



Site LAB Chamber 1
Limit: FCC PART 15C ABOVE 1GHz PK
EUT:
M/N:
Mode: 2475MHz
Note: CTL2601283021-WF

Polarization: *Vertical*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1224.247	52.35	-23.43	28.92	74.00	45.08	peak	150	0	P	
2	2220.523	52.12	-18.96	33.16	74.00	40.84	peak	150	0	P	
3	3270.858	50.40	-12.89	37.51	74.00	36.49	peak	150	0	P	
4	5487.260	46.70	-8.17	38.53	74.00	35.47	peak	150	0	P	
5	8638.400	52.65	-3.30	49.35	74.00	24.65	peak	150	0	P	
6	13757.267	46.57	2.28	48.85	74.00	25.15	peak	150	0	P	

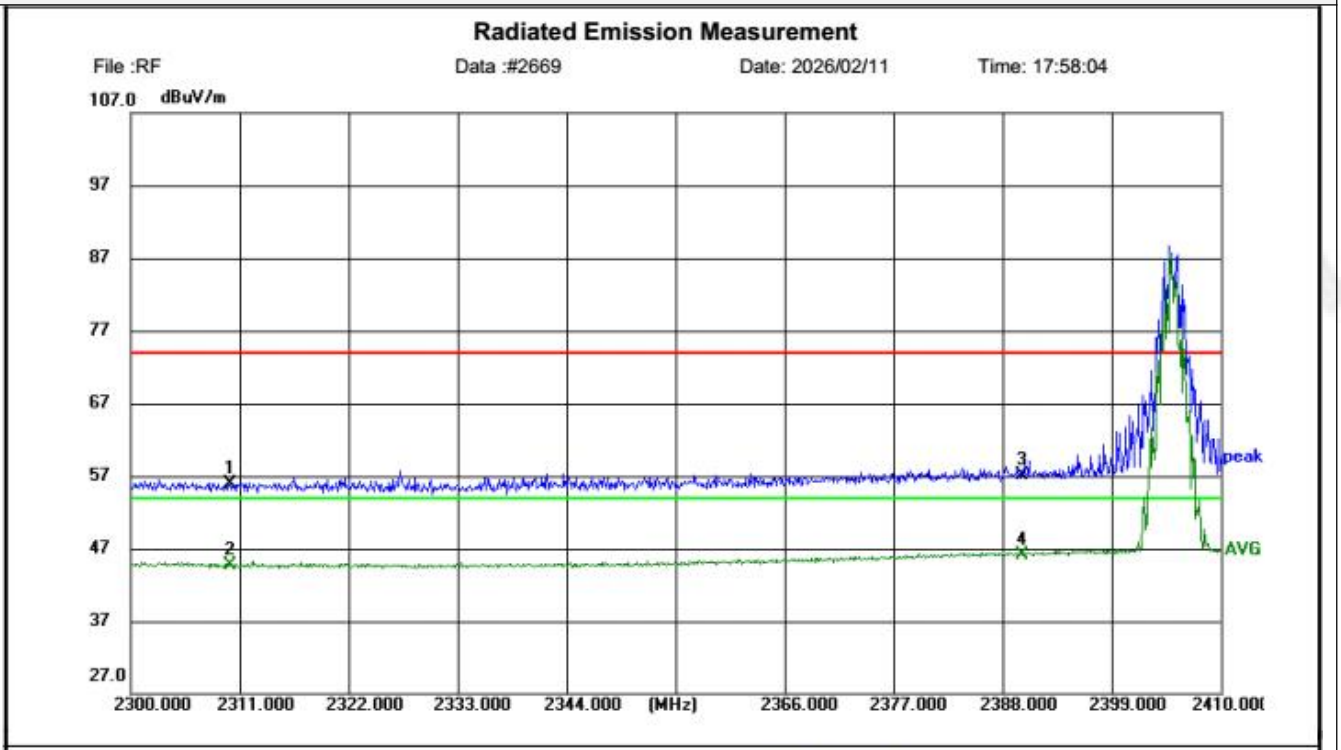
REMARKS:

1. Emission level (dBuV/m) =Raw Value (dBuV)+Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
3. Margin value = Limit value- Emission level.
4. The other emission levels were very low against the limit.
5. RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.
6. For fundamental frequency, RBW 3MHz VBW 3MHz Peak detector is for PK Value ; RMS detector is for AV value.

Frequency bands

2405MHz

Horizontal



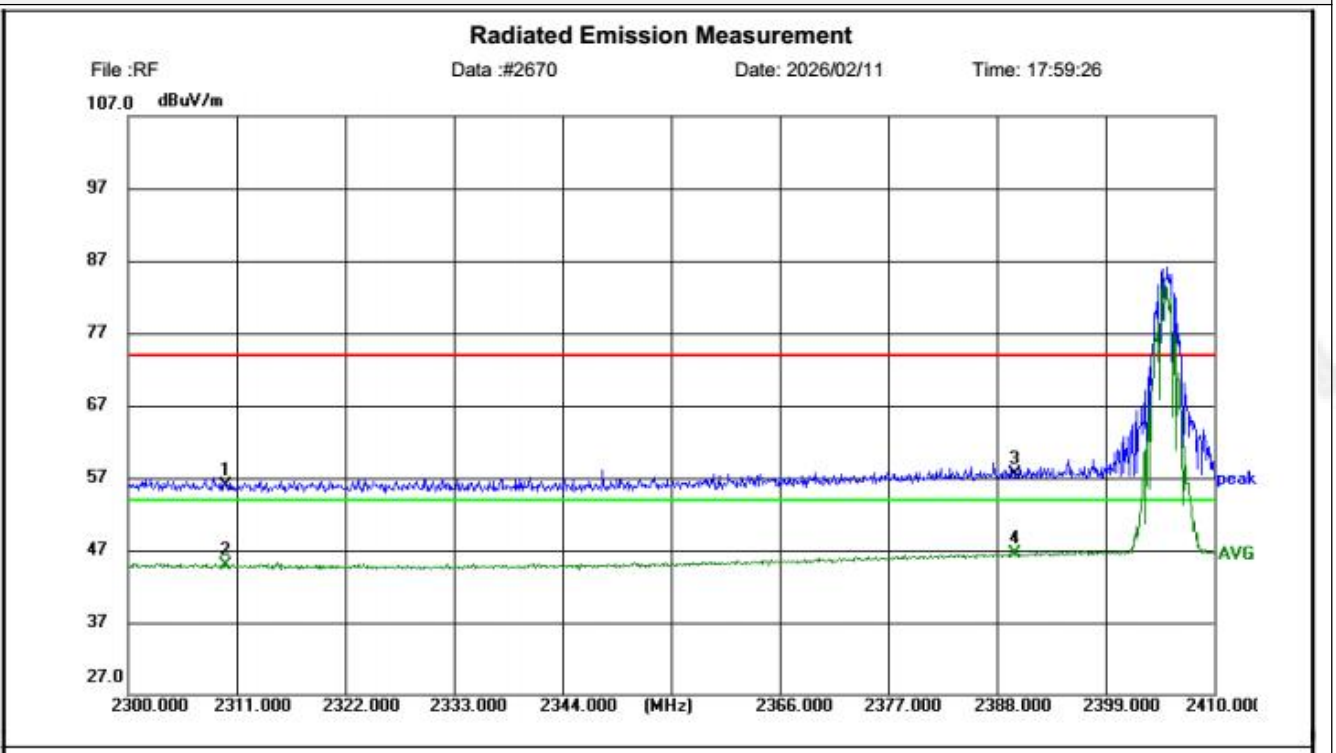
Site LAB Chamber 1
Limit: FCC PART 15C
EUT:
M/N:
Mode: 2405MHz
Note: CTL2601283021-WF

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2310.000	25.17	30.82	55.99	74.00	18.01	peak	150	360	P	
2	2310.000	13.96	30.82	44.78	54.00	9.22	AVG	150	360	P	
3	2390.000	24.95	32.25	57.20	74.00	16.80	peak	150	360	P	
4	2390.000	13.92	32.25	46.17	54.00	7.83	AVG	150	360	P	

Vertical



Site LAB Chamber 1
Limit: FCC PART 15C
EUT:
M/N:
Mode: 2405MHz
Note: CTL2601283021-WF

Polarization: *Vertical*
Power:
Distance: 3m

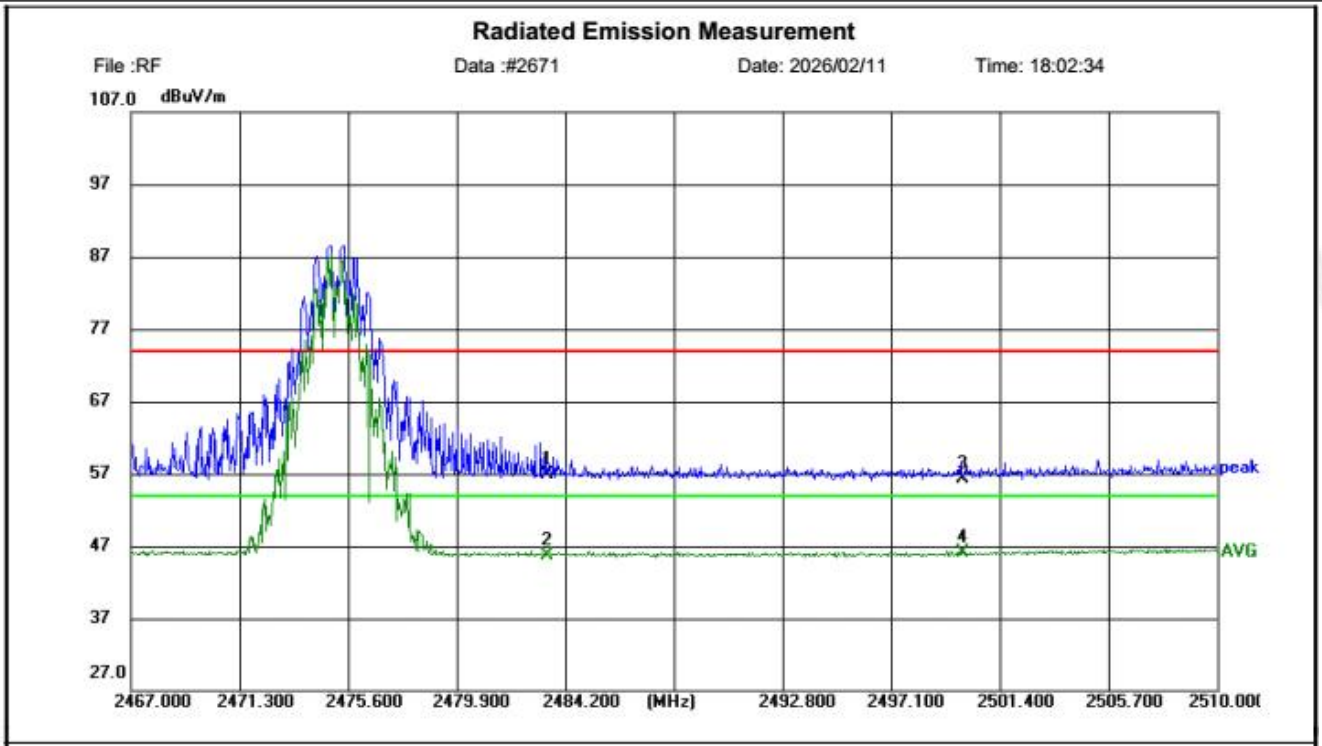
Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2310.000	25.07	30.82	55.89	74.00	18.11	peak	150	0	P	
2	2310.000	14.17	30.82	44.99	54.00	9.01	AVG	150	0	P	
3	2390.000	25.26	32.25	57.51	74.00	16.49	peak	150	0	P	
4	2390.000	14.18	32.25	46.43	54.00	7.57	AVG	150	0	P	

Frequency bands

2475MHz

Horizontal



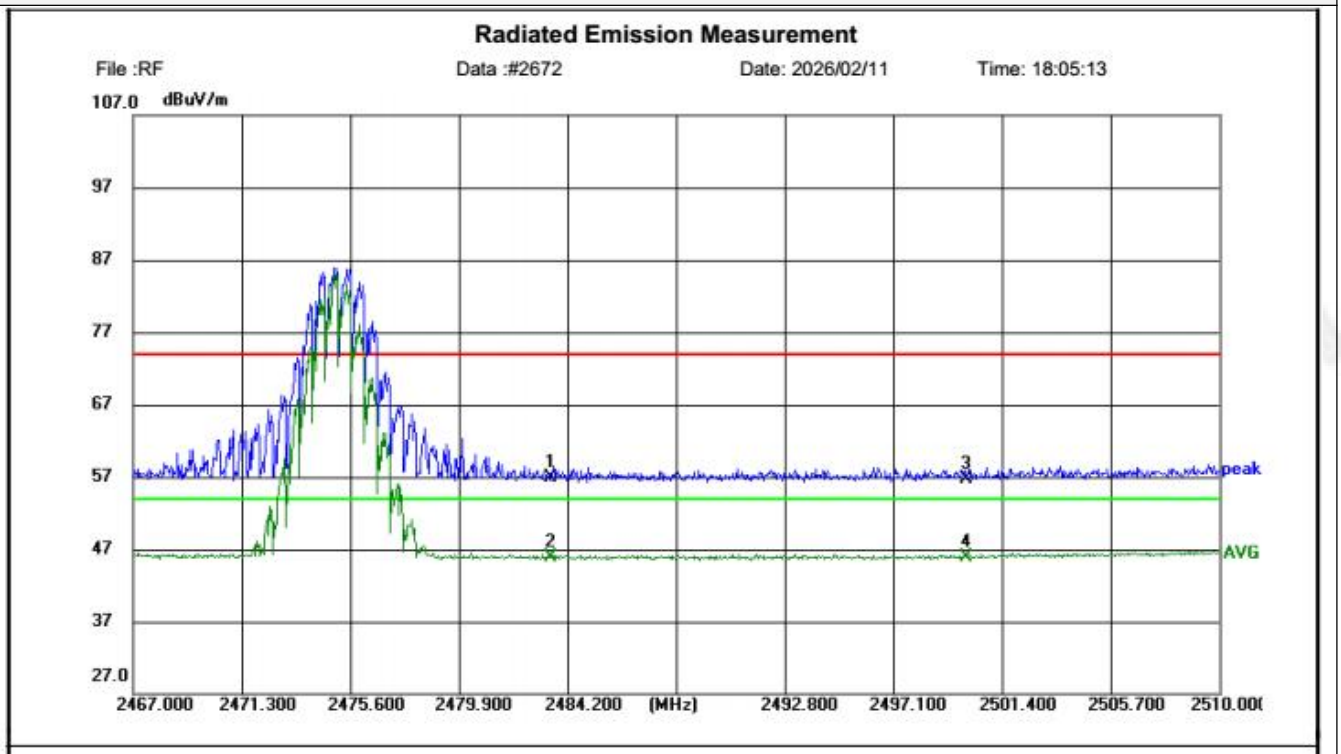
Site LAB Chamber 1
Limit: FCC PART 15C
EUT:
M/N:
Mode: 2475MHz
Note: CTL2601283021-WF

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2483.500	24.56	32.28	56.84	74.00	17.16	peak	150	360	P	
2	2483.500	13.52	32.28	45.80	54.00	8.20	AVG	150	360	P	
3	2500.000	23.95	32.32	56.27	74.00	17.73	peak	150	360	P	
4	2500.000	13.69	32.32	46.01	54.00	7.99	AVG	150	360	P	

Vertical



Site LAB Chamber 1
Limit: FCC PART 15C
EUT:
M/N:
Mode: 2475MHz
Note: CTL2601283021-WF

Polarization: *Vertical*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

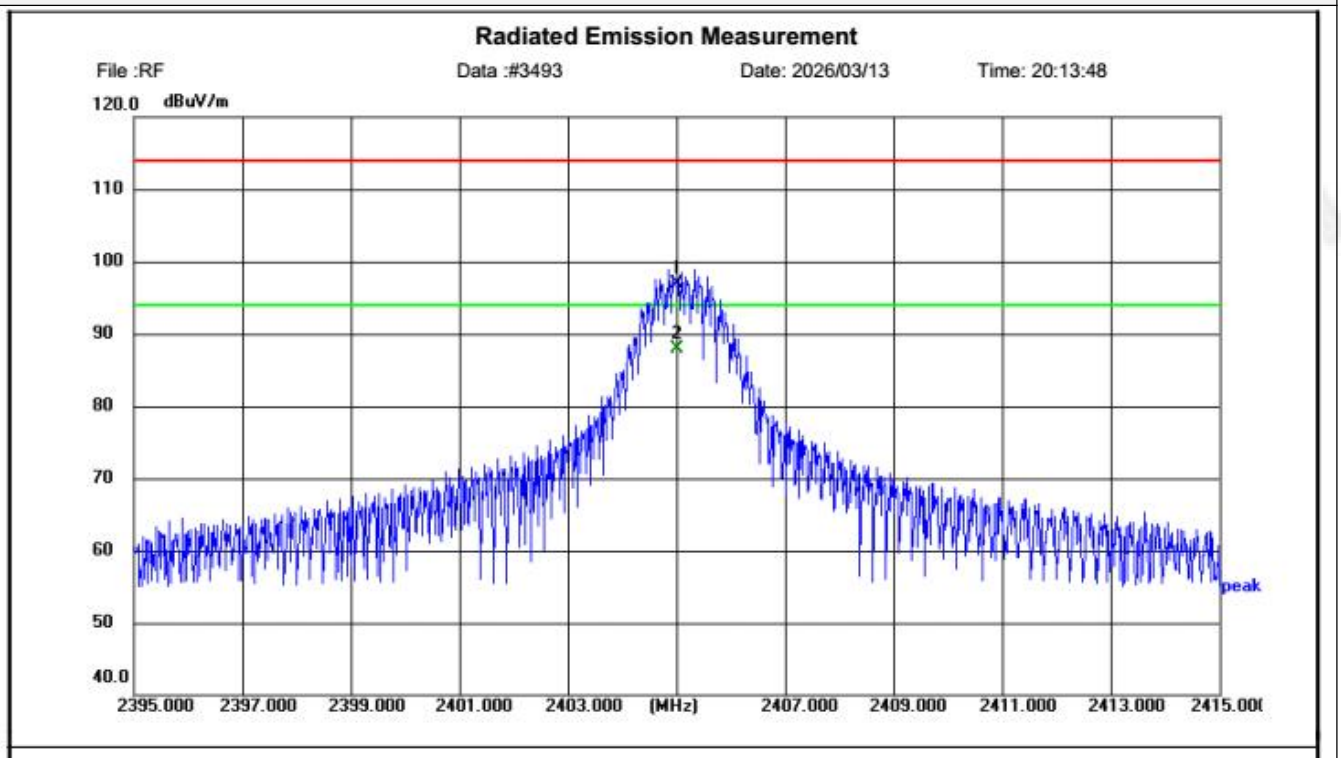
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2483.500	24.56	32.28	56.84	74.00	17.16	peak	150	0	P	
2	2483.500	13.54	32.28	45.82	54.00	8.18	AVG	150	0	P	
3	2500.000	24.45	32.32	56.77	74.00	17.23	peak	150	0	P	
4	2500.000	13.53	32.32	45.85	54.00	8.15	AVG	150	0	P	

Field Strength of Fundamental

Remark: This test was performed with EUT in X, Y, Z position and the worst case was found when EUT in X position.

2405MHz

Horizontal



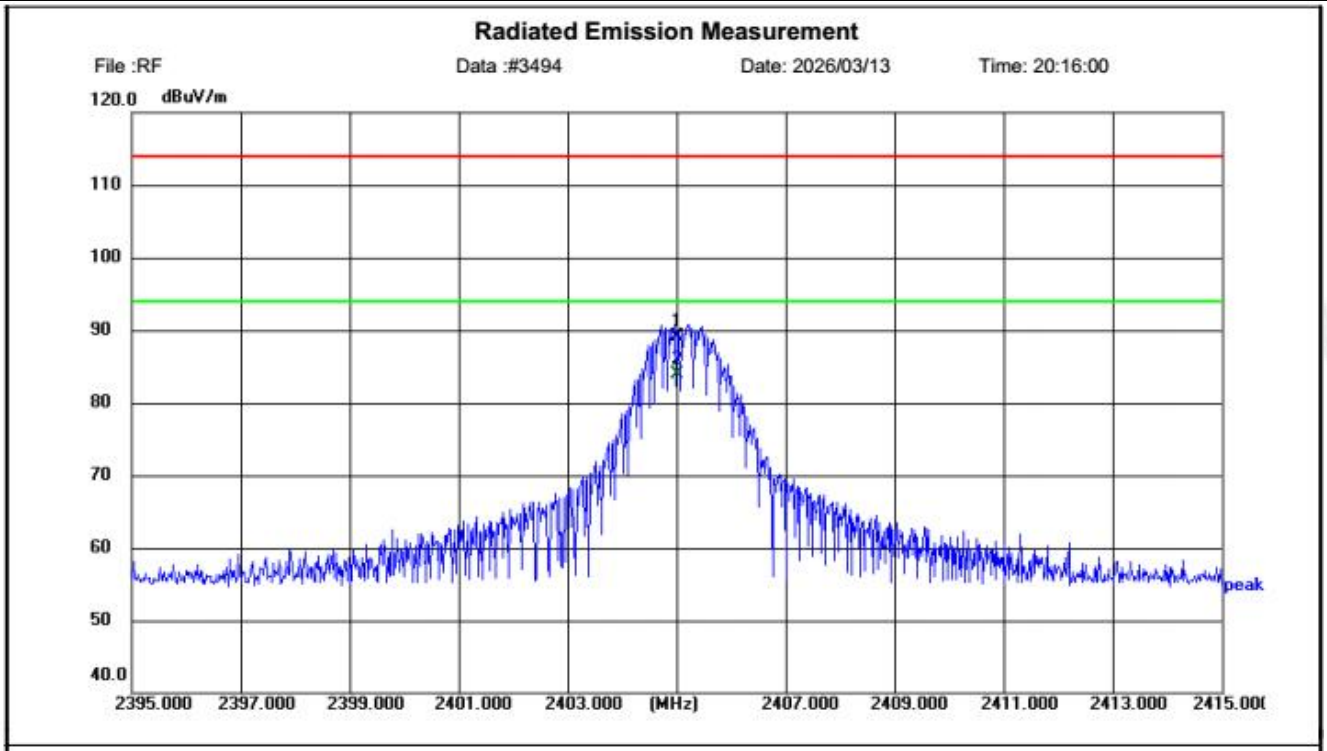
Site LAB Chamber 1
Limit: 114
EUT:
M/N:
Mode: 2405MHz
Note: CTL2601283021-WF

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2405.000	64.44	32.50	96.94	114.00	17.06	peak	150	0	P	
2	2405.000	55.31	32.50	87.81	94.00	6.19	AVG	150	0	P	

Vertical



Site LAB Chamber 1
Limit: 114
EUT:
M/N:
Mode: 2405MHz
Note: CTL2601283021-WF

Polarization: *Vertical*
Power:
Distance: 3m

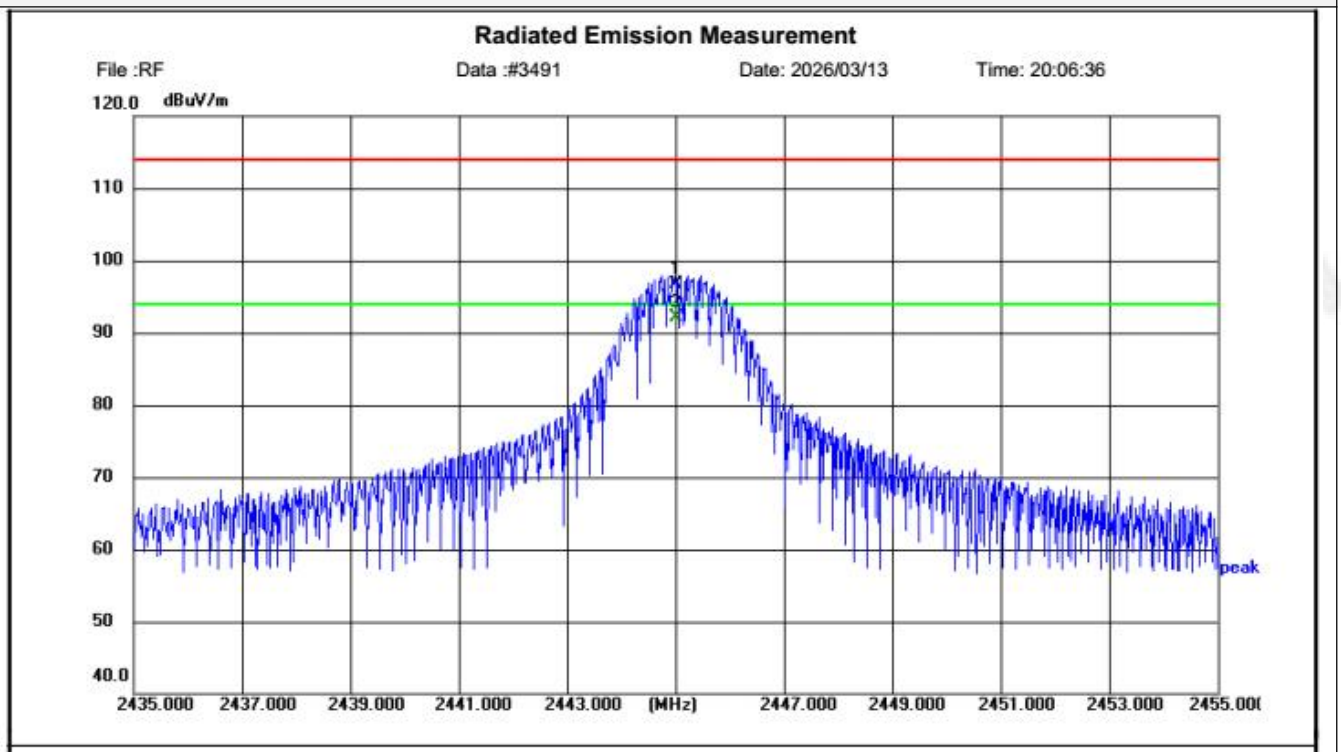
Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2405.000	56.52	32.50	89.02	114.00	24.98	peak	150	360	P	
2	2405.000	51.48	32.50	83.98	94.00	10.02	AVG	150	360	P	

Field Strength of Fundamental

2445MHz

Horizontal



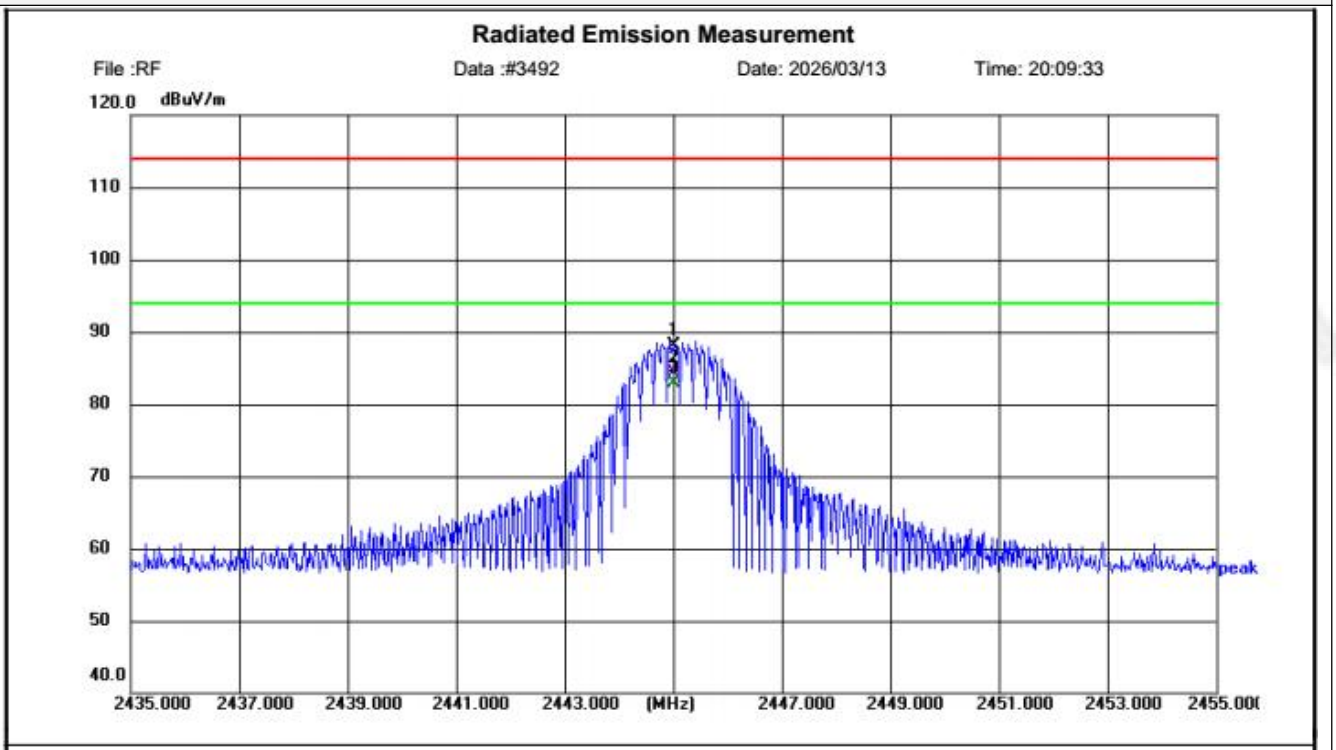
Site LAB Chamber 1
Limit: 114
EUT:
M/N:
Mode: 2445MHz
Note: CTL2601283021-WF

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2445.000	64.58	32.22	96.80	114.00	17.20	peak	150	0	P	
2	2445.000	59.88	32.22	92.10	94.00	1.90	AVG	150	0	P	

Vertical



Site LAB Chamber 1
Limit: 114
EUT:
M/N:
Mode: 2445MHz
Note: CTL2601283021-WF

Polarization: *Vertical*
Power:
Distance: 3m

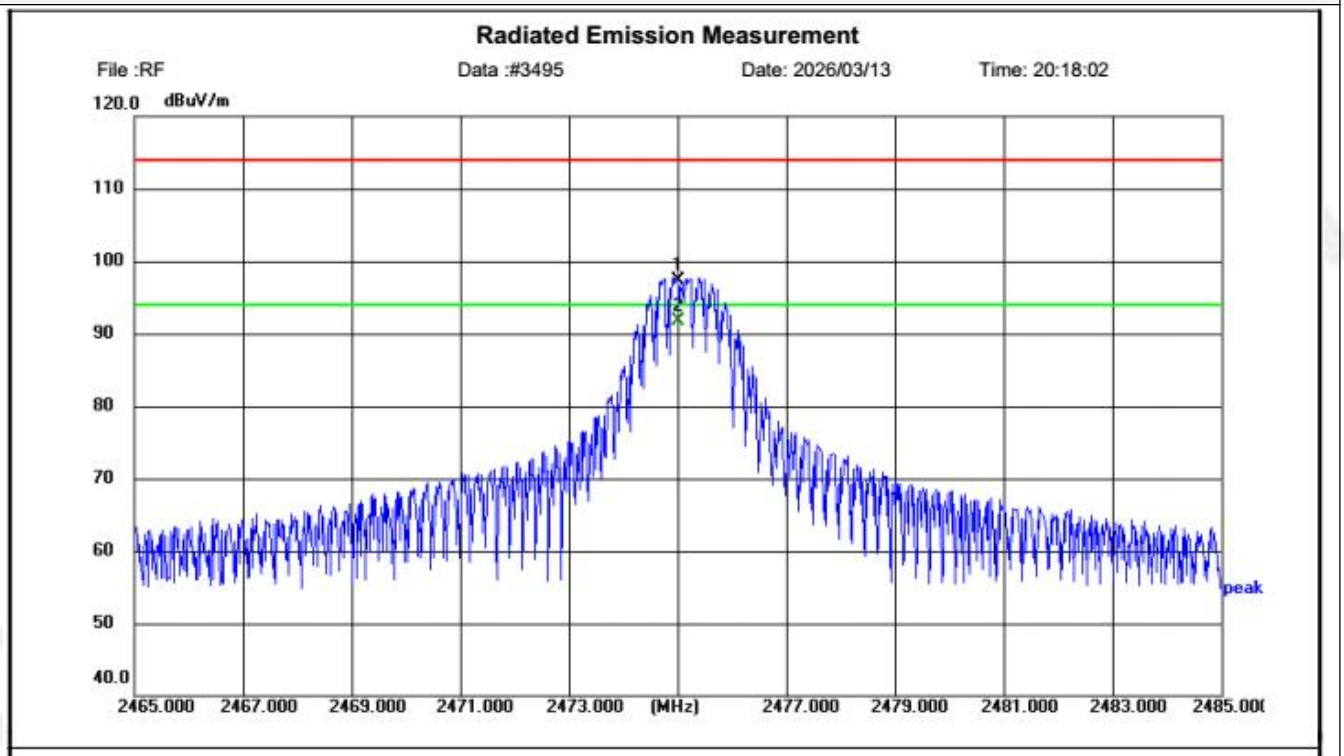
Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2445.000	55.82	32.22	88.04	114.00	25.96	peak	150	0	P	
2	2445.000	52.16	32.22	84.38	114.00	29.62	QP	150	0	P	
3	2445.000	50.74	32.22	82.96	94.00	11.04	AVG	150	0	P	

Field Strength of Fundamental

2475MHz

Horizontal



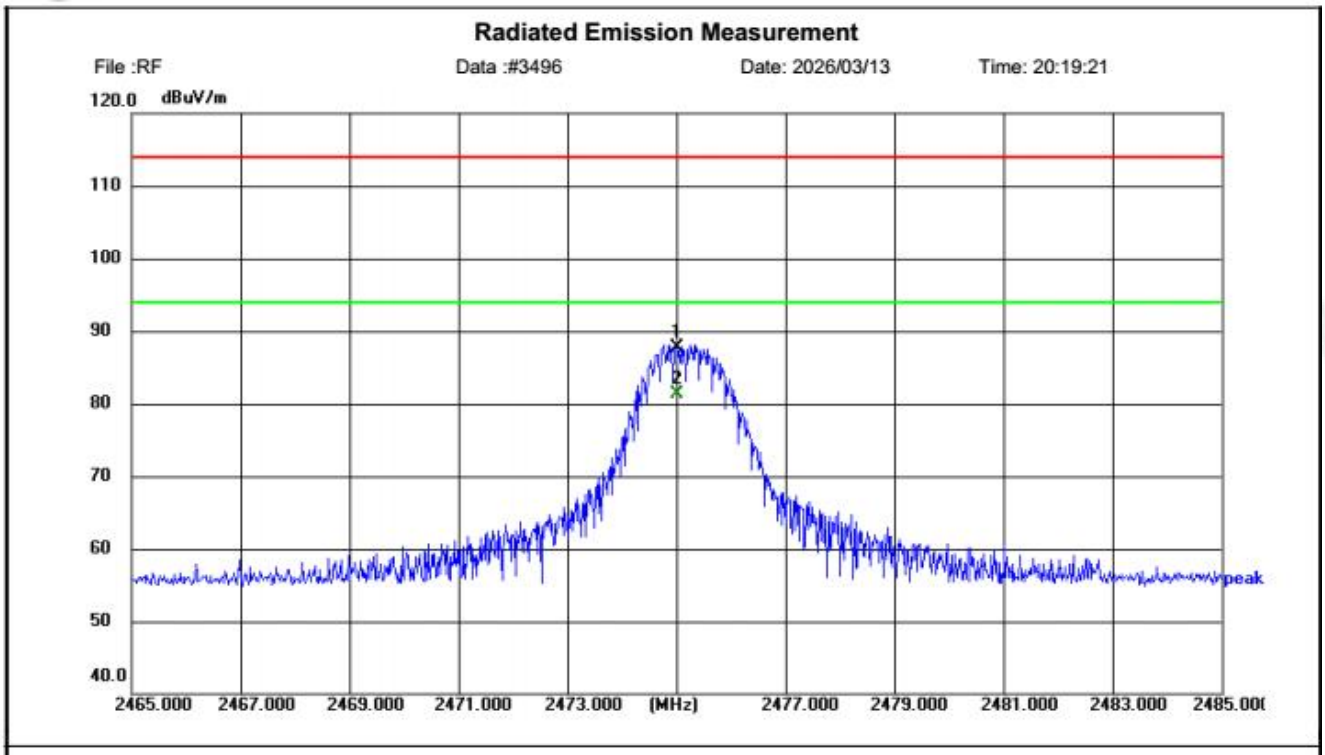
Site LAB Chamber 1
Limit: 114
EUT:
M/N:
Mode: 2475MHz
Note: CTL2601283021-WF

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2475.000	65.11	32.25	97.36	114.00	16.64	peak	150	0	P	
2	2475.000	59.39	32.25	91.64	94.00	2.36	AVG	150	0	P	

Vertical



Site LAB Chamber 1
Limit: 114
EUT:
M/N:
Mode: 2475MHz
Note: CTL2601283021-WF

Polarization: *Vertical*
Power:
Distance: 3m

Temperature: 25(C)
Humidity: 50 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2475.000	55.36	32.25	87.61	114.00	26.39	peak	150	360	P	
2	2475.000	49.14	32.25	81.39	94.00	12.61	AVG	150	360	P	

REMARKS:

1. Emission level (dBuV/m) =Raw Value (dBuV)+Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
3. Margin value = Limit value- Emission level.
4. -- Mean the PK detector measured value is below average limit.
5. The other emission levels were very low against the limit.
6. RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.
7. For fundamental frequency, RBW 3MHz VBW 3MHz Peak detector is for PK Value; RMS detector is for AV value.

3.3. Occupied Bandwidth Measurement

Limit

N/A

Test Configuration

Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100KHz RBW and 300KHz VBW.

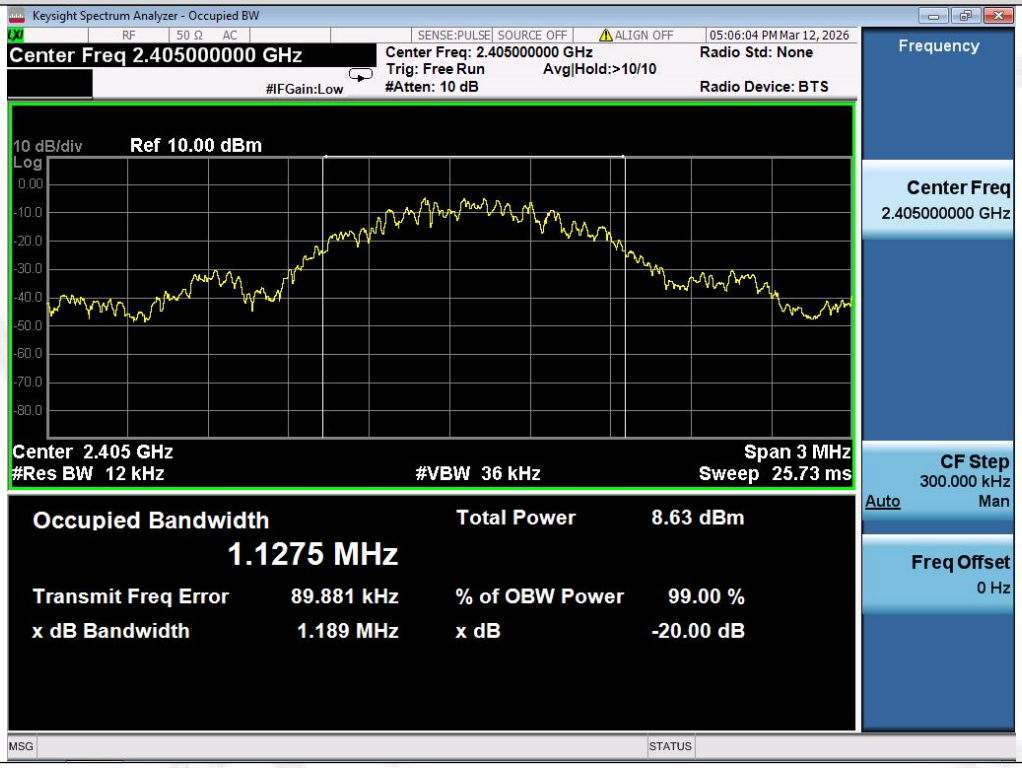
The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

Test Results

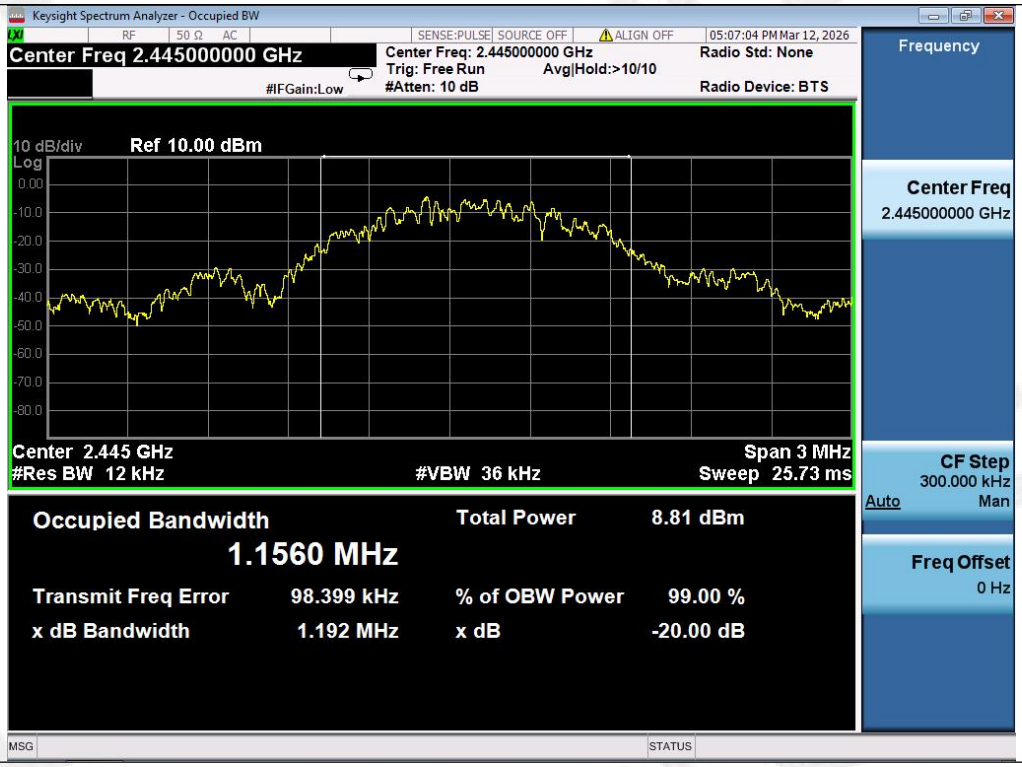
Modulation	Channel	99% OBW (kHz)	20dB bandwidth (kHz)	Result
GFSK	CH01	1127.5	1189	Pass
	CH19	1156	1192	
	CH33	1175.4	1257	

Test plot as follows:

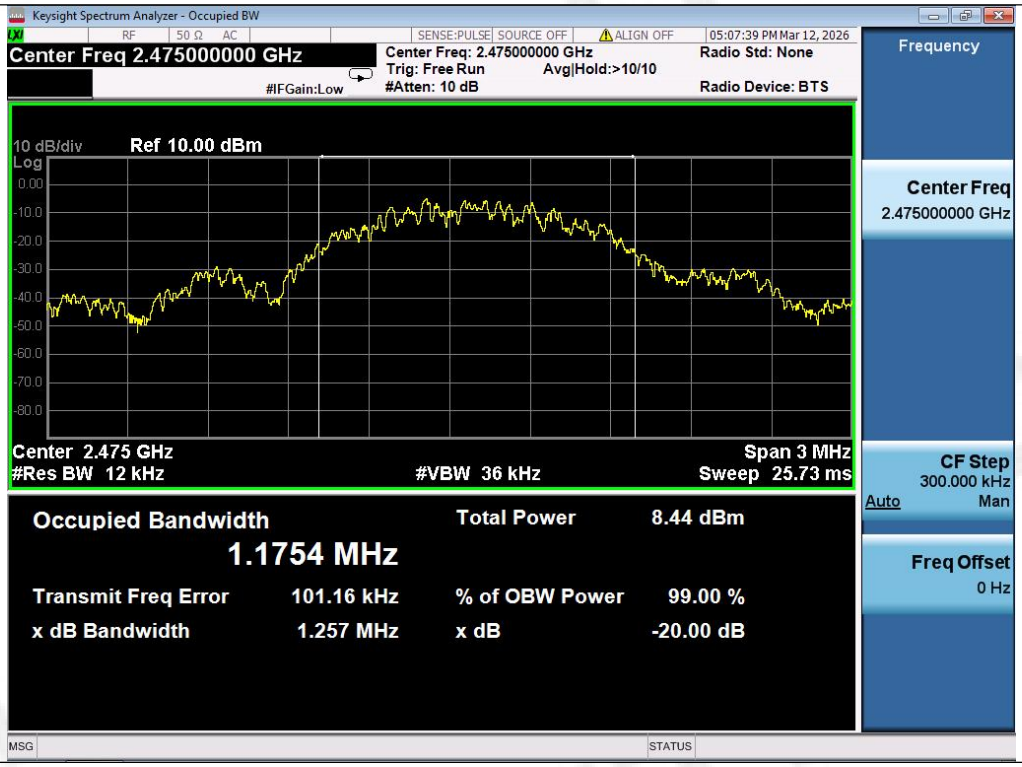
GFSK Modulation



CH01


Keysight Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:PULSE SOURCE OFF ALIGN OFF 05:07:04 PM Mar 12, 2026
Center Freq 2.445000000 GHz
Center Freq: 2.445000000 GHz
Trig: Free Run Avg|Hold:>10/10
#Atten: 10 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div Ref 10.00 dBm
Log
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Center 2.445 GHz
#Res BW 12 kHz
#VBW 36 kHz
Span 3 MHz
Sweep 25.73 ms
Occupied Bandwidth
1.1560 MHz
Total Power 8.81 dBm
Transmit Freq Error 98.399 kHz
% of OBW Power 99.00 %
x dB Bandwidth 1.192 MHz
x dB -20.00 dB
Center Freq
2.445000000 GHz
CF Step
300.000 kHz
Auto Man
Freq Offset
0 Hz
MSG
STATUS

CH19


Keysight Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:PULSE SOURCE OFF ALIGN OFF 05:07:39 PM Mar 12, 2026
Center Freq 2.475000000 GHz
Center Freq: 2.475000000 GHz
Trig: Free Run Avg|Hold:>10/10
#Atten: 10 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div Ref 10.00 dBm
Log
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Center 2.475 GHz
#Res BW 12 kHz
#VBW 36 kHz
Span 3 MHz
Sweep 25.73 ms
Occupied Bandwidth
1.1754 MHz
Total Power 8.44 dBm
Transmit Freq Error 101.16 kHz
% of OBW Power 99.00 %
x dB Bandwidth 1.257 MHz
x dB -20.00 dB
Center Freq
2.475000000 GHz
CF Step
300.000 kHz
Auto Man
Freq Offset
0 Hz
MSG
STATUS

CH33

3.4. Antenna Requirement

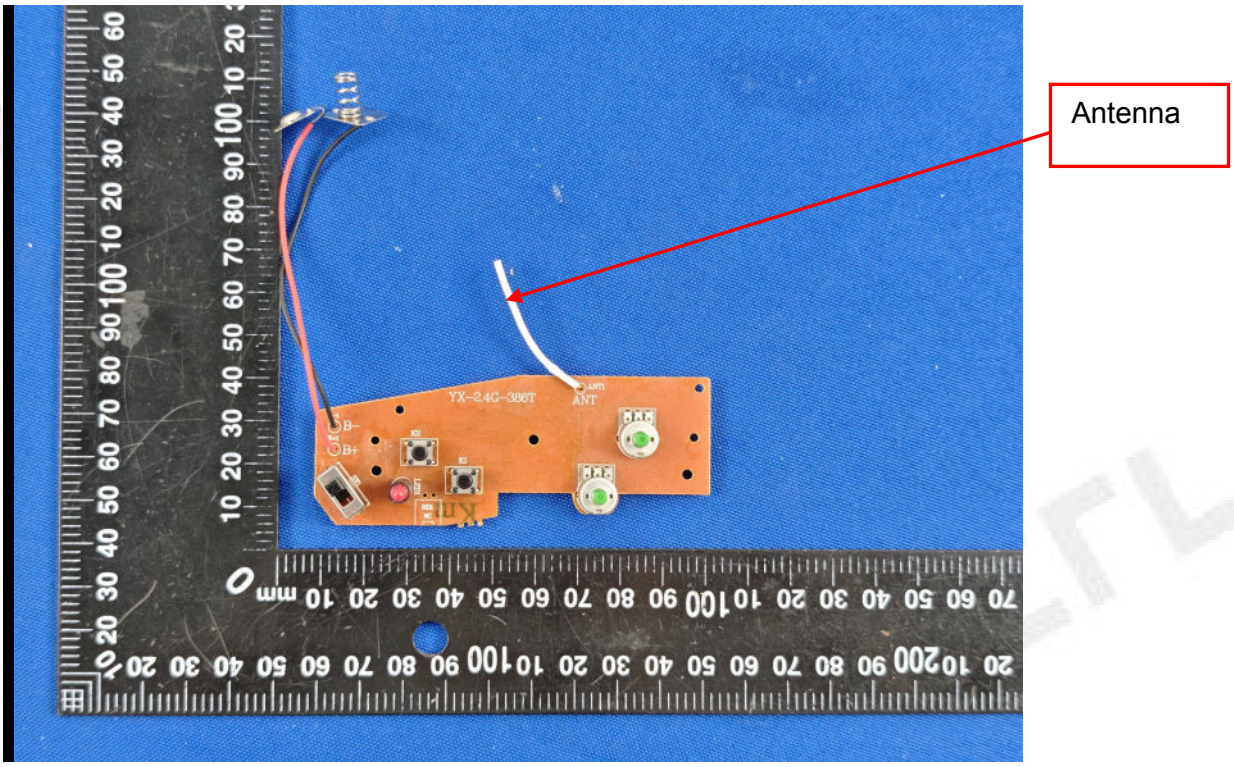
Standard Applicable

For intentional device, according to FCC 47 CFR Section 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.

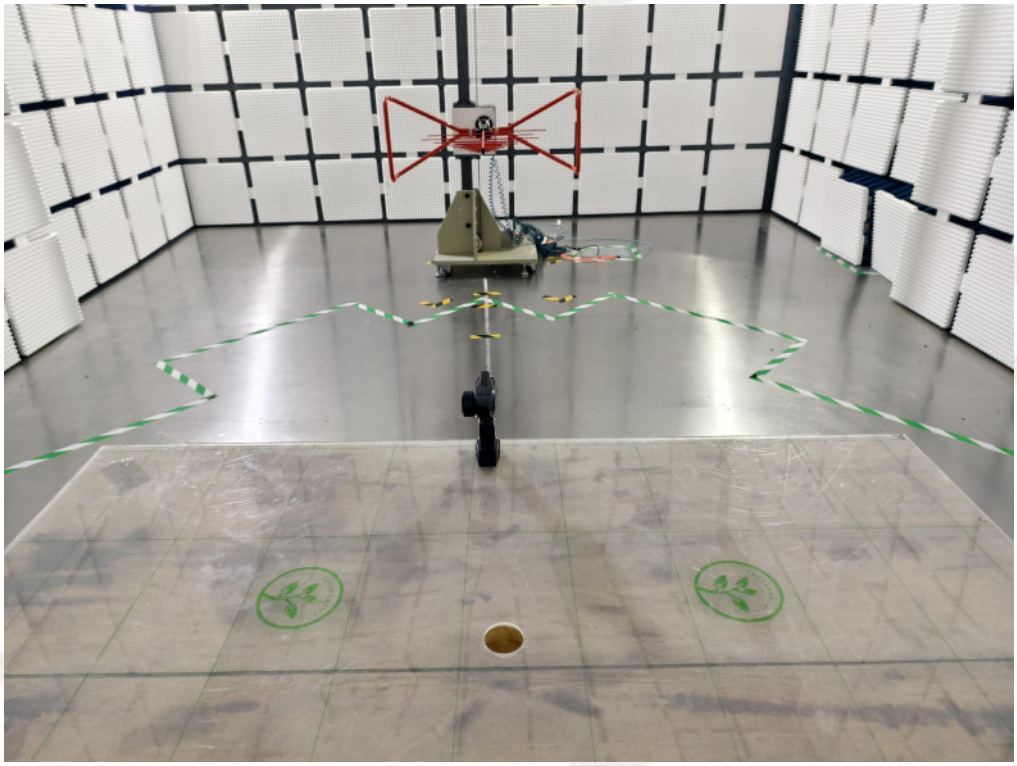
Refer to statement below for compliance.
The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

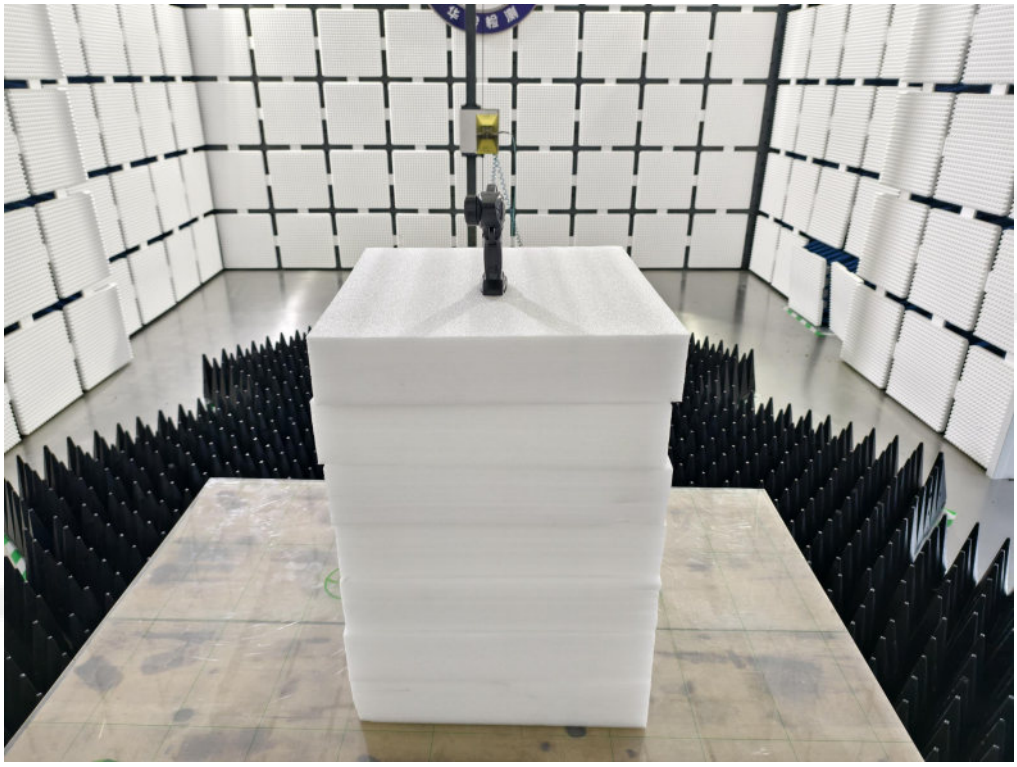
Antenna Connected Construction

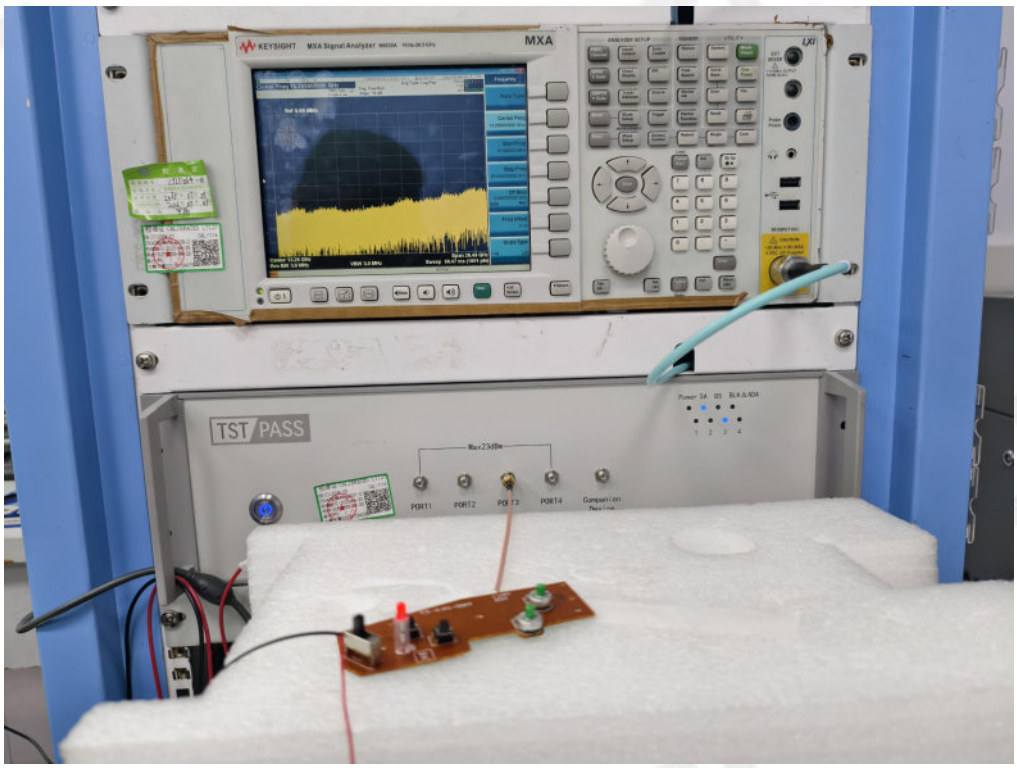
The antenna used in this product is a Integrated antenna, The directional gains of antenna used for transmitting is 0.00dBi.



4. Test Setup Photos of the EUT

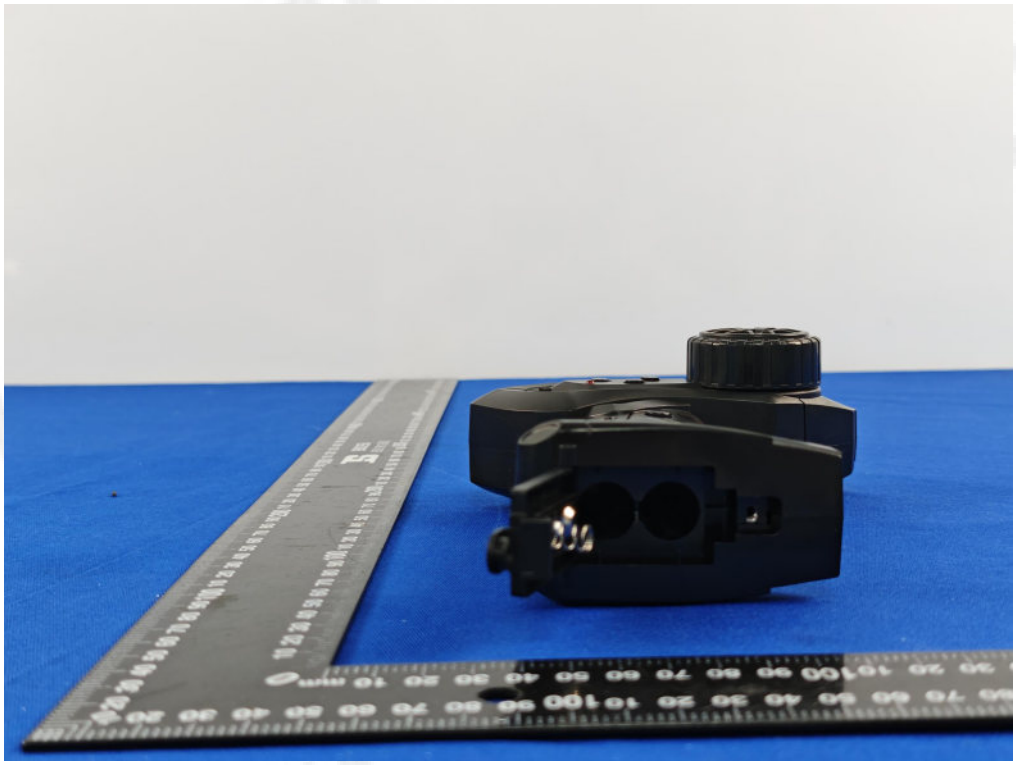




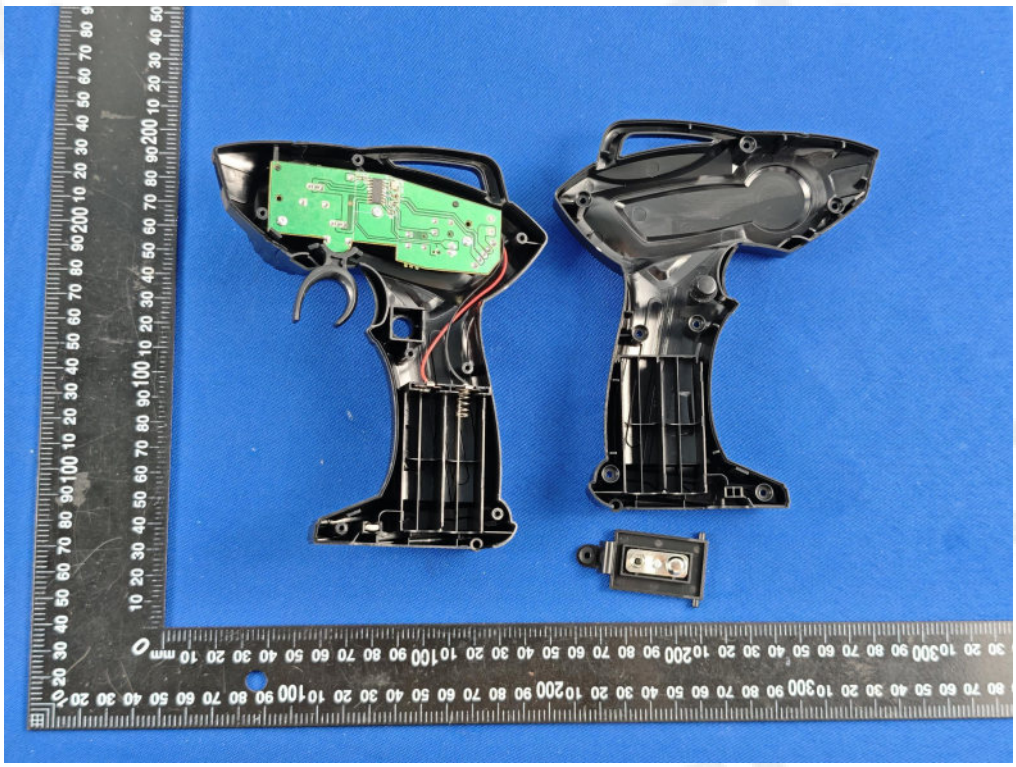

KEYSIGHT
MXA
TST PASS
PORT1
PORT2
PORT3
PORT4

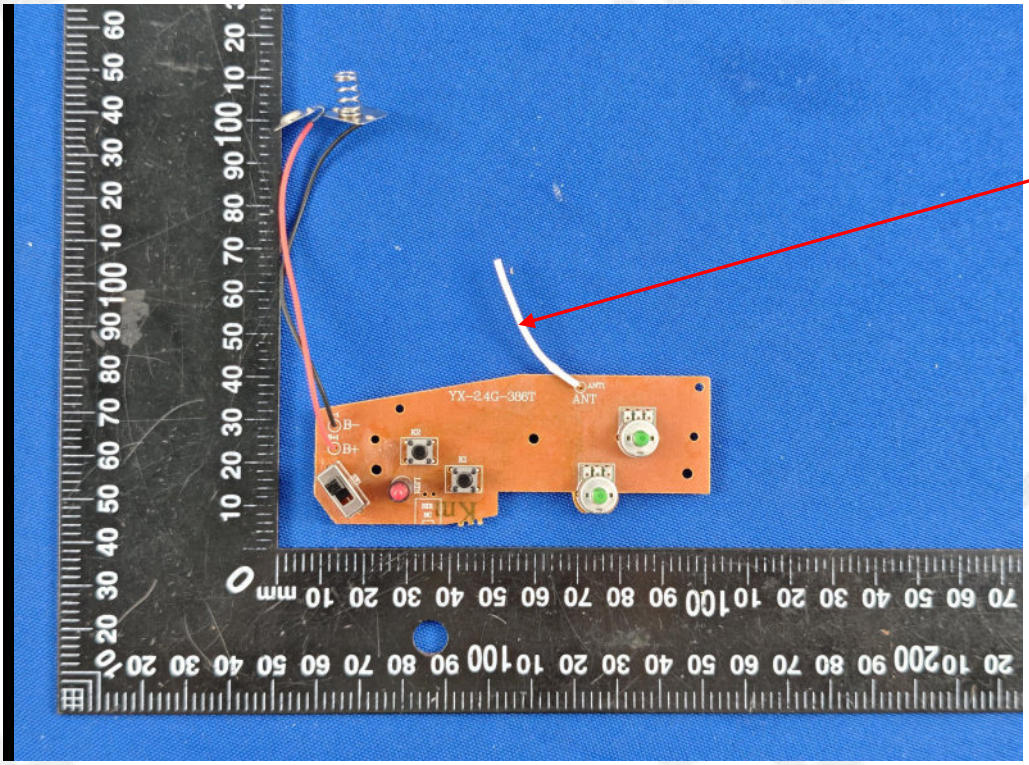
5. External and Internal Photos of the EUT

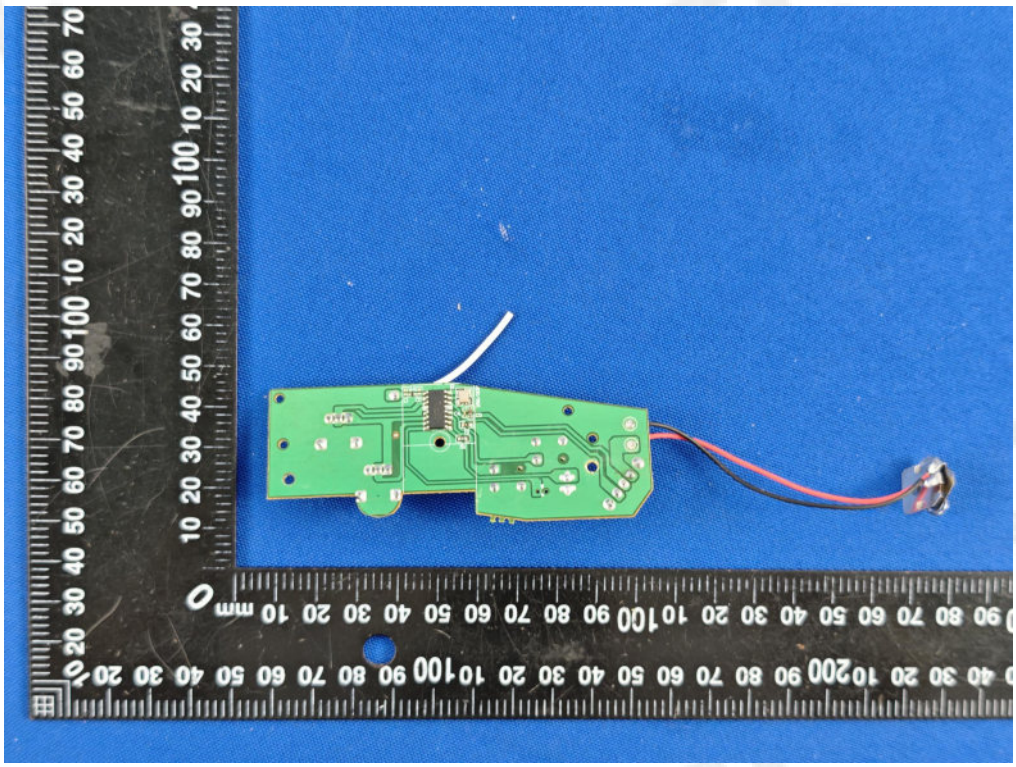
External Photos of EUT

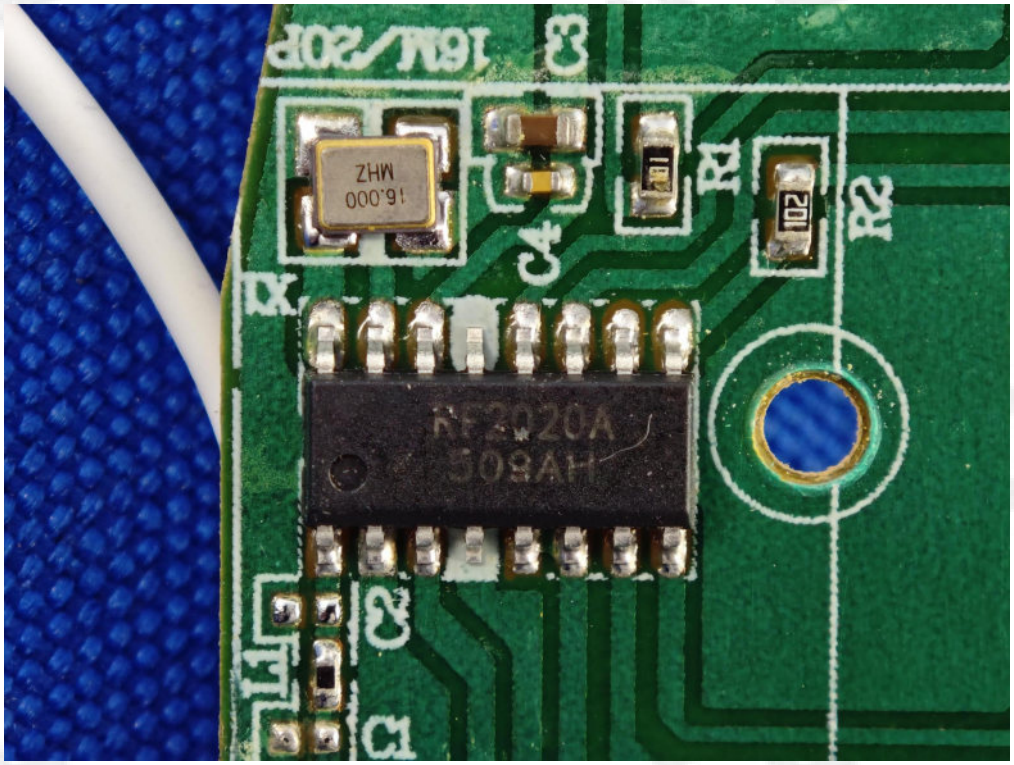


Internal Photos of EUT




Transmit Antenna
YX-2.4G-386T
ANT
B-
B+





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