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TEST REPORT

For RF

Report No. ..... :	**CHTW24080067**	Report Verification:
Project No.....:	**SHT2406041902W**	
FCC ID..... :	**IN2TX61**	
Applicant's name..... :	**Hunter Fan Company**	
Address.....:	7130 Goodlett Farms Pkwy, Suite 400, Memphis Tennessee 38016 United States	
Product Name ..... :	Remote Control for Ceiling Fan	
Trade Mark .....:	Hunter	
Model No. .....:	KB283-A5	
Listed Model(s) .....:	KB283-A6	
Standard ..... :	**FCC CFR Title 47 Part 15 Subpart C § 15.231**	
Date of receipt of test sample.....:	Aug.08, 2024	
Date of testing.....:	Aug.09, 2024 - Aug.20, 2024	
Date of issue.....:	Aug.21, 2024	
Result..... .....:	**PASS**	

Compiled by (Position+Printed name+Signature):	File administrators Kiki Kong	Kiki Kong
Supervised by (Position+Printed name+Signature):	Project Engineer Kiki Kong	Kiki Kong
Approved by (Position+Printed name+Signature):	RF Manager Xu yang	Xu Yang

Testing Laboratory Name ..... :	**Shenzhen Huatongwei International Inspection Co., Ltd.**
Address.....:	Building 7, Baiwang Idea Factory, No.1051, Songbai Road, Yangguang Community, Xili Subdistrict, Nanshan District, Shenzhen, Guangdong, China

Contents

1. TEST STANDARDS AND REPORT VERSION

1.1. Test Standards

The tests were performed according to following standards:

– FCC CFR Title 47 Part 15 Subpart C § 15.231: Periodic operation in the band 40.66-40.70 MHz and above 70 MHz

– ANSI C63.10:2013: American National Standard for Testing Unlicensed Wireless Devices

1.2. Report version

Revision No.	Date of issue	Description
N/A	2024-08-21	Original

2. TEST DESCRIPTION

Report clause	Test Items	Standard Requirement	Result	Test Engineer
5.1	Antenna Requirement	15.203	PASS	Xiangyu Wei
5.2	AC Conducted Emission	15.207	N/A	N/A
5.3	20dB Bandwidth	15.231(c)	PASS	Xiangyu We
5.4	99% Occupied Bandwidth	-	PASS*1	Xiangyu We
5.5	Transmission time	15.231(a)(1)	PASS	Xiangyu We
5.6	Duty cycle corrected factor	-	PASS*1	Xiangyu We
5.7	Field strength of the Fundamental signal	15.231(b)	PASS	Yifan Wang
5.8	Radiated Spurious Emission	15.231(b)/15.205/15.209	PASS	Yifan Wang

Note:

– The measurement uncertainty is not included in the test result.

– *1: No requirement on standard, only report these test data.

3. SUMMARY

3.1. Client Information

Applicant:	Hunter Fan Company
Address:	7130 Goodlett Farms Pkwy, Suite 400, Memphis Tennessee 38016 United States
Manufacturer:	Hunter Fan Company
Address:	7130 Goodlett Farms Pkwy, Suite 400, Memphis Tennessee 38016 United States
Factory:	Shenzhen H&T Iintelligent Control CO., Ltd.
Address:	H&T Industrial Park,No.18 BaoShan Road,Tian Liao Community,Guangming new district,Shenzhen,Guangdong,China 518132

3.2. Product Description

Main unit information:	
Product Name:	Remote Control for Ceiling Fan
Trade Mark:	Hunter
Model No.:	KB283-A5
Listed Model(s):	KB283-A6
Power supply:	DC 3.0V from Battery
Hardware version:	V04
Software version:	V01
Accessory unit information:	
Battery information:	CR2032 3V LITHIUM BATTERY

3.3. Radio Specification Description

Operation frequency:	433.92MHz
Modulation:	OOK
Channel number:	1
Antenna type:	PCB Antenna

3.4. Testing Laboratory Information

Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd.	
Laboratory Location	Building 7, Baiwang Idea Factory, No.1051, Songbai Road, Yangguang Community, Xili Subdistrict, Nanshan District, Shenzhen, Guangdong, China	
Contact information:	Phone: 86-755-26715499 E-mail: cs@szhtw.com.cn http://www.szhtw.com.cn	
Qualifications	Type	Accreditation Number
	FCC Registration Number	762235
	FCC Designation Number	CN1181

4. TEST CONFIGURATION

4.1. Test frequency list

According to section ANSI C63.10 section 5.6.1,

Measurements of unlicensed wireless devices shall be performed and, if required, reported for each band in which the EUT can be operated with the device operating at the number of frequencies in each band specified in Table 4

Table 4—Number of frequencies to be tested

Frequency range in which device operates	Number of frequencies	Location in frequency range of operation
1 MHz or less	1	Middle
1 MHz to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

So test frequency as follow:

Channel	Frequency (MHz)
CH_M	**433.92**

4.2. Descriptions of Test mode

For RF test items
The engineering test program was provided and enabled to make EUT continuous transmit.
For AC power line conducted emissions:
The EUT was set to connect with large package sizes transmission.
For Radiated spurious emissions test item:
The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data Recorded in the report.

4.3. Test sample information

Test item	HTW sample no.
RF Conducted test items	Please refer to the description in the appendix report
RF Radiated test items	YPHT24060419002
EMI test items	-

Note:

RF Conducted test items: 20dB Bandwidth ,99% Occupied Bandwidth, Transmission time, Duty cycle corrected factor

RF Radiated test items: Field strength of the Fundamental signal

EMI test items: AC Conducted Emission

4.4. Support unit used in test configuration and system

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The following peripheral devices and interface cables were connected during the measurement:

Whether support unit is used?			
✓ No			
Item	Equipment	Trade Name	Model No.
1			
2			

4.5. Testing environmental condition

Type	Requirement	Actual
Temperature:	15~35°C	25°C
Relative Humidity:	25~75%	50%
Air Pressure:	860~1060mbar	1000mbar

4.6. Statement of the measurement uncertainty

No.	Test Items	Measurement Uncertainty
1	AC Conducted Emission	3.21dB
2	20dB Bandwidth	0.002%
3	99% Occupied Bandwidth	0.002%
4	Transmission time	2.3ns
5	Duty cycle corrected factor	-
6	Field strength of the Fundamental signal	4.54dB for 30MHz-1GHz 5.10dB for above 1GHz
7	Radiated Spurious Emission	4.54dB for 30MHz-1GHz 5.10dB for above 1GHz

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

4.7. Equipment Used during the Test

● RF Conducted test item							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Signal and spectrum Analyzer	R&S	HTWE0242	FSV40	100048	2023/08/22	2024/08/21
●	Signal & Spectrum Analyzer	R&S	HTWE0262	FSW26	103440	2023/08/22	2024/08/21
●	Vector signal generator	R&S	HTWE0244	SMBV100A	260790	2023/05/23	2024/05/22
●	Test software	Tonscend	N/A	JS1120	N/A	N/A	N/A

● Conducted Emission							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	EMI Test Receiver	R&S	HTWE0111	ESCI	101247	2023/8/22	2024/8/21
●	Artificial Mains	SCHWARZBECK	HTWE0113	NNLK 8121	573	2023/8/18	2024/8/17
●	Artificial Mains	SCHWARZBECK	HTWE0113	NNLK 8121	573	2024/08/12	2025/08/11
●	Protection Network	SCHWARZBECK	HTWE0567	VTSD9561FN	00899	2023/8/18	2024/8/17
●	Protection Network	SCHWARZBECK	HTWE0567	VTSD9561FN	00899	2024/08/12	2025/08/11
●	ISN	FCC	HTWE0148	FCC-TLISN-T2-02	20371	2023/8/18	2024/8/17
●	ISN	FCC	HTWE0148	FCC-TLISN-T2-02	20371	2024/08/12	2025/08/11
●	ISN	FCC	HTWE0150	FCC-TLISN-T8-02	20375	2023/8/18	2024/8/17
●	ISN	FCC	HTWE0150	FCC-TLISN-T8-02	20375	2024/08/12	2025/08/11
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A

● Radiated Emission – 9kHz~30MHz							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0127	SAC-3m-02	C11121	2023/4/6	2026/4/5
●	EMI Test Receiver	R&S	HTWE0099	ESCI 7	100900	2023/8/22	2024/8/21
●	Loop Antenna	R&S	HTWE0170	HFH2-Z2	100020	2024/04/08	2027/04/07
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A

● Radiated Emission - 30MHz~1GHz							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0127	SAC-3m-02	C11121	2023/4/6	2026/4/5
●	EMI Test Receiver	R&S	HTWE0099	ESCI 7	100900	2023/8/22	2024/8/21
●	Ultra-Broadband Antenna	SCHWARZBECK	HTWE0119	VULB9163	546	2023/02/22	2026/02/21
●	Pre-Amplifer	SCHWARZBECK	HTWE0295	BBV 9742	/	2024/5/24	2025/5/23
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A

● Radiated emission-Above 1GHz							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0122	SAC-3m-01	C11121	2023/4/17	2026/4/16
●	Spectrum Analyzer	R&S	HTWE0098	FSP40	100597	2023/8/22	2024/8/21
●	Horn Antenna	SCHWARZBECK	HTWE0126	BBHA 9120D	1011	2023/2/14	2026/2/13
●	Horn Antenna	SCHWARZBECK	HTWE0103	BBHA9170	BBHA9170472	2023/2/20	2026/2/19
●	Broadband Pre-amplifier	SCHWARZBECK	HTWE0201	BBV 9718	9718-248	2023/5/25	2024/5/24
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A

5. TEST CONDITIONS AND RESULTS

5.1. Antenna Requirement

Requirement

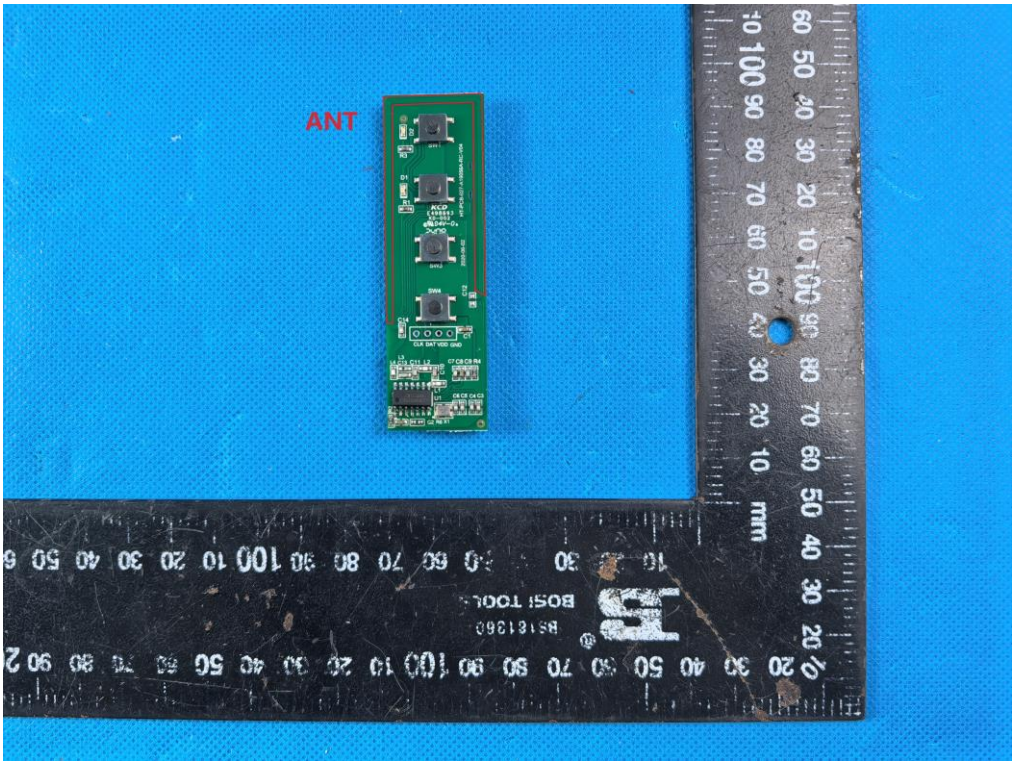
FCC CFR Title 47 Part 15 Subpart C Section 15.203:

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

TEST RESULT

☒ **Passed** ☐ **Not Applicable**

The antenna type is a PCB antenna, the directional gain of the antenna less than 6 dBi, please refer to the below antenna photo.



5.2. AC Conducted Emission

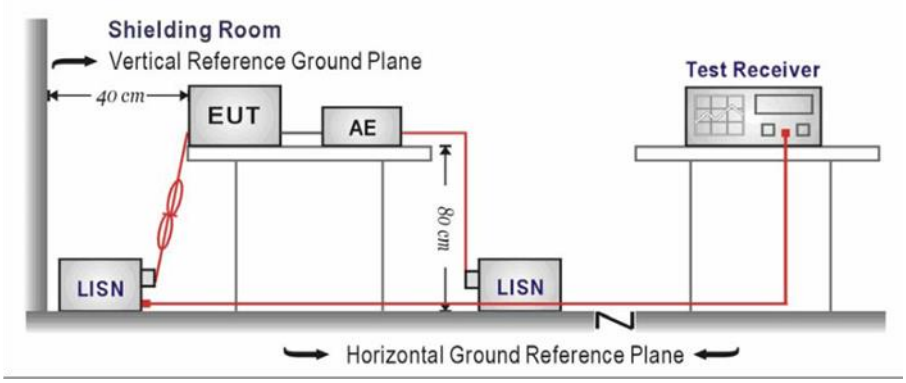
LIMIT

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 EUT was setup according to ANSI C63.10 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment.
4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
8. During the above scans, the emissions were maximized by cable manipulation.

TEST MODE:

Please refer to the clause 4.2

TEST RESULT

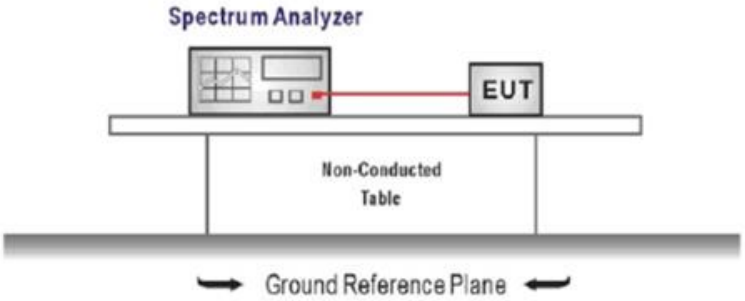
☐ **Passed** ☒ **Not Applicable**

5.3. 20dB bandwidth

LIMIT

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70MHz and below 900 MHz.
For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency.

TEST CONFIGURATION



TEST PROCEDURE

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Configure the spectrum analyzer as shown below (enter all losses between the transmitter output and the spectrum analyzer).

   Center Frequency = channel center frequency

   Span= approximately 2 to 3 times the 20 dB bandwidth

   RBW = 100 kHz, VBW ≥ 3 × RBW

   Sweep time= auto couple

   Detector = Peak

   Trace mode = max hold
3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on the spectrum analyzer.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission, and record the pertinent measurements.

TEST MODE:

Please refer to the clause 4.2

TEST RESULT

☒ **Passed** ☐ **Not Applicable**

TEST DATA:

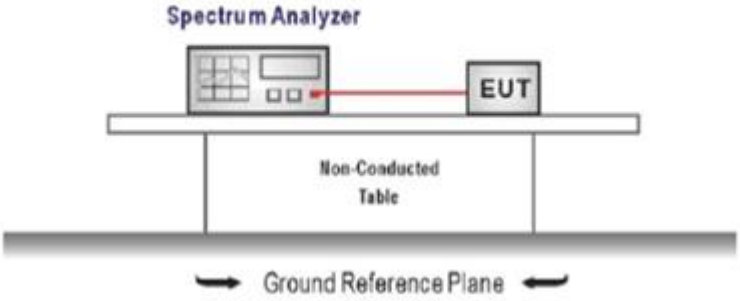
Refer to the appendix report on the section 8

5.4. 99% Occupied Bandwidth

LIMIT

N/A

TEST CONFIGURATION



TEST PROCEDURE

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Configure the spectrum analyzer as shown below (enter all losses between the transmitter output andthe spectrum analyzer).
   Center Frequency =channel center frequency
   Span≥1.5 x OBW
   RBW = 1%~5%OBW
   VBW ≥ 3 × RBW
   Sweep time= auto couple
   Detector = Peak
   Trace mode = max hold
3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on the spectrum analyzer.

TEST MODE:

Please refer to the clause 4.2

TEST RESULT

☒ **Passed** ☐ **Not Applicable**

TEST DATA

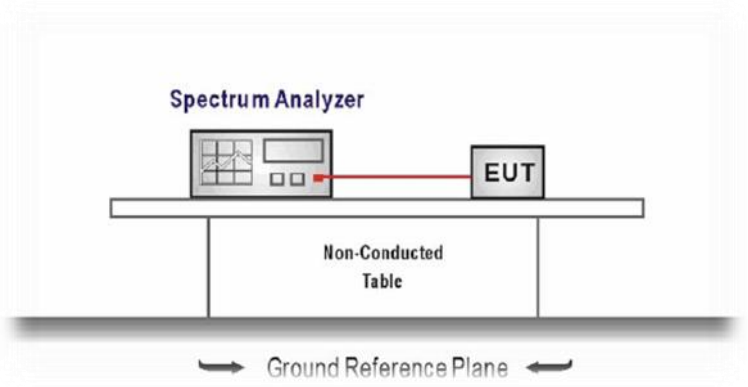
Refer to the appendix report on the section 8

5.5. Transmission Time

LIMIT

A manually operated transmitter shall employ a switch that will auto-matically deactivate the transmitter within not more than 5 seconds of being released.

TEST CONFIGURATION



TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. Use the following spectrum analyzer settings:
   Frequency=Center carrier frequency
   RBW=100kHz, VBW=300kHz, Span= zero,
   Sweep time= 10second, Detector function = peak, Trace = single
4. Measure and record the results in the test report.

TEST MODE:

Please refer to the clause 4.2

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

TEST DATA

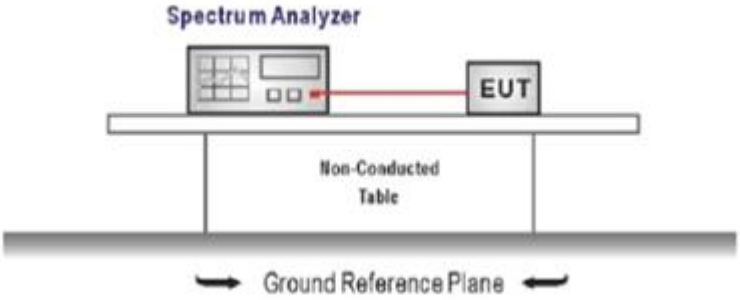
Refer to the appendix report on the section 8

5.6. Duty Cycle Corrected Factor

LIMIT

N/A

TEST CONFIGURATION



TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. Use the following spectrum analyzer settings:
   Span=zero span, Frequency=centered channel, RBW= 1MHz, VBW ≥ RBW
   Sweep time=as necessary to capture the entire dwell time,
   Detector function = peak, Trigger mode
4. Measure and record the duty cycle data

TEST MODE:

Please refer to the clause 4.2

TEST DATA

Refer to the appendix report on the section 8

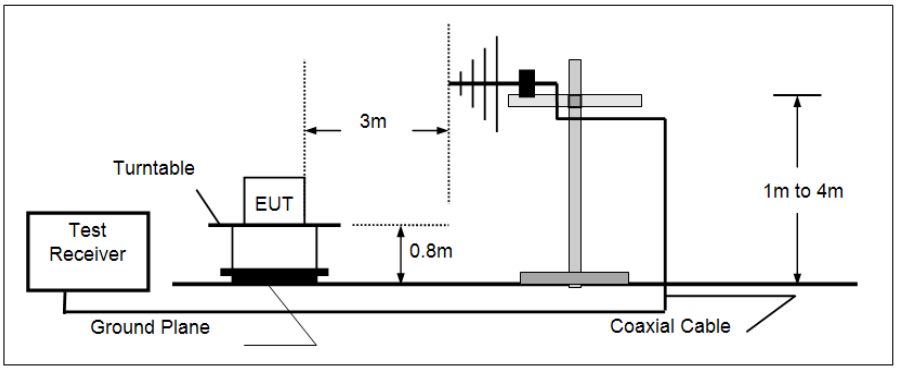
5.7. Radiated field strength of the fundamental signal

LIMIT

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emissions (microvolts/meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	[1]1,250 to 3,750	[1]125 to 375
174-260	3,750	375
260-470	[1]3,750 to 12,500	[1]375 to 1,250
Above 470	12,500	1,250

[1]Linear interpolations.

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was setup and tested according to ANSI C63.10.
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1GHz, The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
   a) Span shall wide enough to fully capture the emission being measured;
   b) RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;

   If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

TEST MODE:

Please refer to the clause 4.2

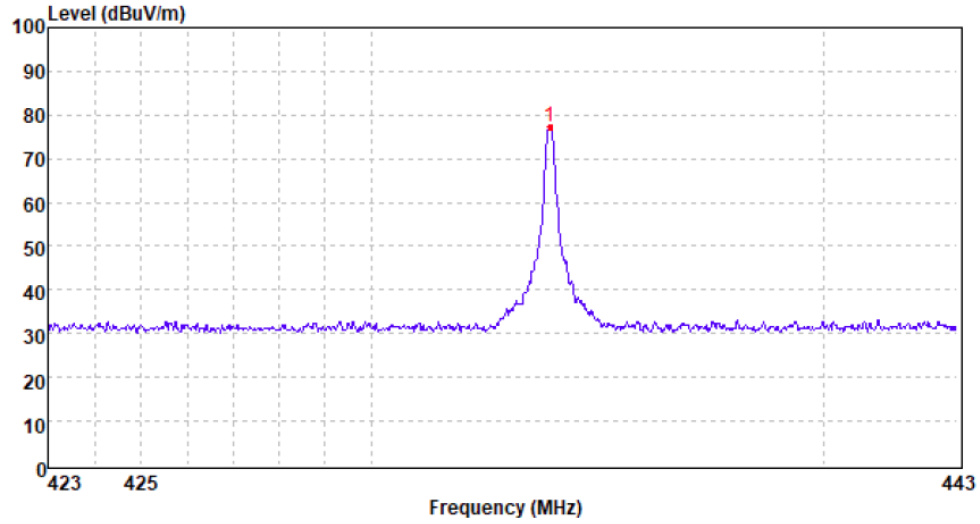
TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

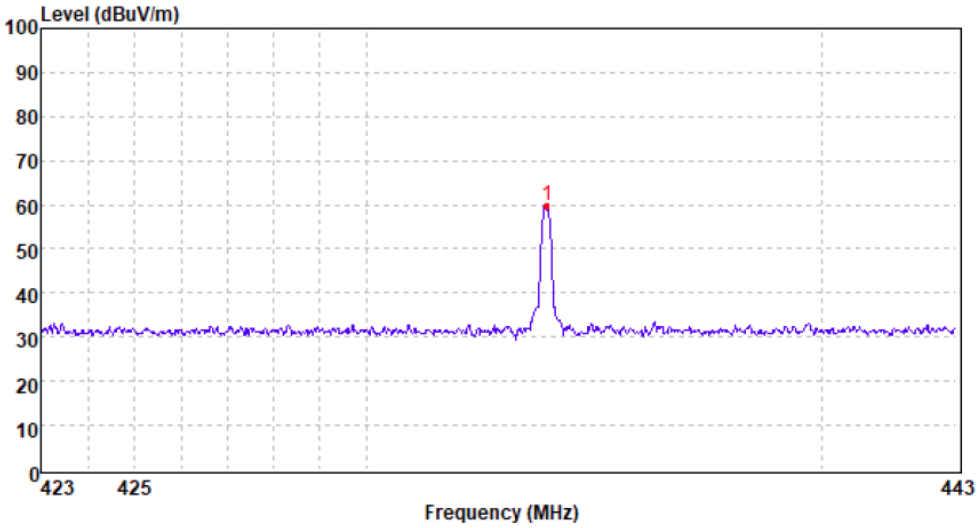
Note:

1) Level= Reading + Factor; Factor =Antenna Factor+ Cable Loss- Preamp Factor
2) Over Limit = Level - Limit

Test channel	CH_M	Polarity	Horizontal



Test channel	CH_M	Polarity	Vertical



Fundamental of Peak								
No.	Freq. [MHz]	Reading [dBµV/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Detector
1	433.92	40.40	19.50	59.90	100.80	40.90	Vertical	PK
2	433.92	57.65	19.50	77.15	100.80	23.65	Horizontal	PK
Fundamental of Average								
No.	Freq. [MHz]	PK level [dBµV/m]	DCCF [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Detector
1	433.92	59.90	-9.48	50.42	80.80	30.38	Vertical	AV
2	433.92	77.15	-9.48	67.67	80.80	13.13	Horizontal	AV

5.8. Radiated Spurious Emission

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.231(b)

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emissions (microvolts/meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	[1]1,250 to 3,750	[1]125 to 375
174-260	3,750	375
260-470	[1]3,750 to 12,500	[1]375 to 1,250
Above 470	12,500	1,250

FCC CFR Title 47 Part 15 Subpart C Section 15.209

Frequency	Limit (dBuV/m)	Value
0.009 MHz ~0.49 MHz	2400/F(kHz) @300m	Quasi-peak
0.49 MHz ~ 1.705 MHz	24000/F(kHz) @30m	Quasi-peak
1.705 MHz ~30 MHz	30 @30m	Quasi-peak

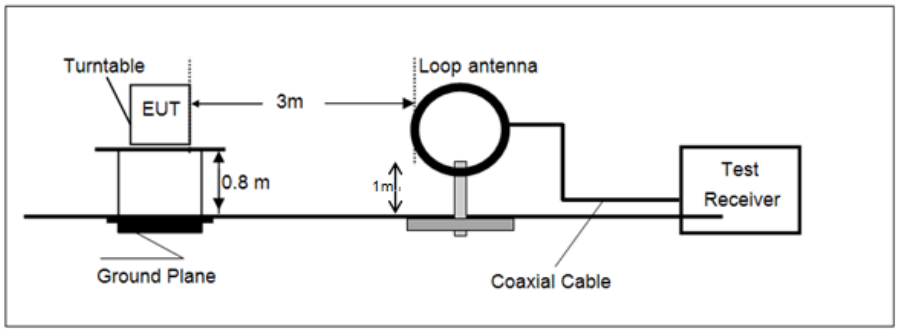
Note: Limit dBuV/m @3m = Limit dBuV/m @300m + 40*log(300/3)= Limit dBuV/m @300m +80,

Limit dBuV/m @3m = Limit dBuV/m @30m +40*log(30/3)= Limit dBuV/m @30m + 40.

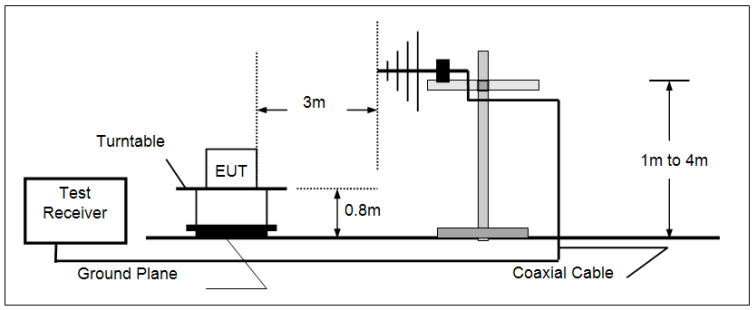
Frequency	Limit (dBuV/m @3m)	Value
30MHz~88MHz	40.00	Quasi-peak
88MHz~216MHz	43.50	Quasi-peak
216MHz~960MHz	46.00	Quasi-peak
960MHz~1GHz	54.00	Quasi-peak
Above 1GHz	54.00	Average
	74.00	Peak

TEST CONFIGURATION

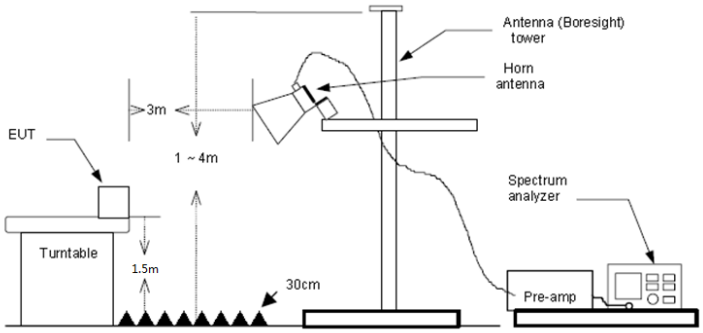
- 9 kHz ~ 30 MHz



- 30 MHz ~ 1 GHz



- Above 1 GHz



TEST PROCEDURE

1. The EUT was setup and tested according to ANSI C63.10.
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
   a) Span shall wide enough to fully capture the emission being measured;
   b) Below 1 GHz:

      RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;

      If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
   c) Set RBW=1MHz, VBW=3MHz for >1GHz, Sweep time=auto, Detector=peak, Trace=max hold for Peak measurement

      For average measurement:

      Average level = Peak level – DCCF

TEST MODE:

Please refer to the clause 4.2

TEST RESULT

☒ **Passed** ☐ **Not Applicable**

Note:

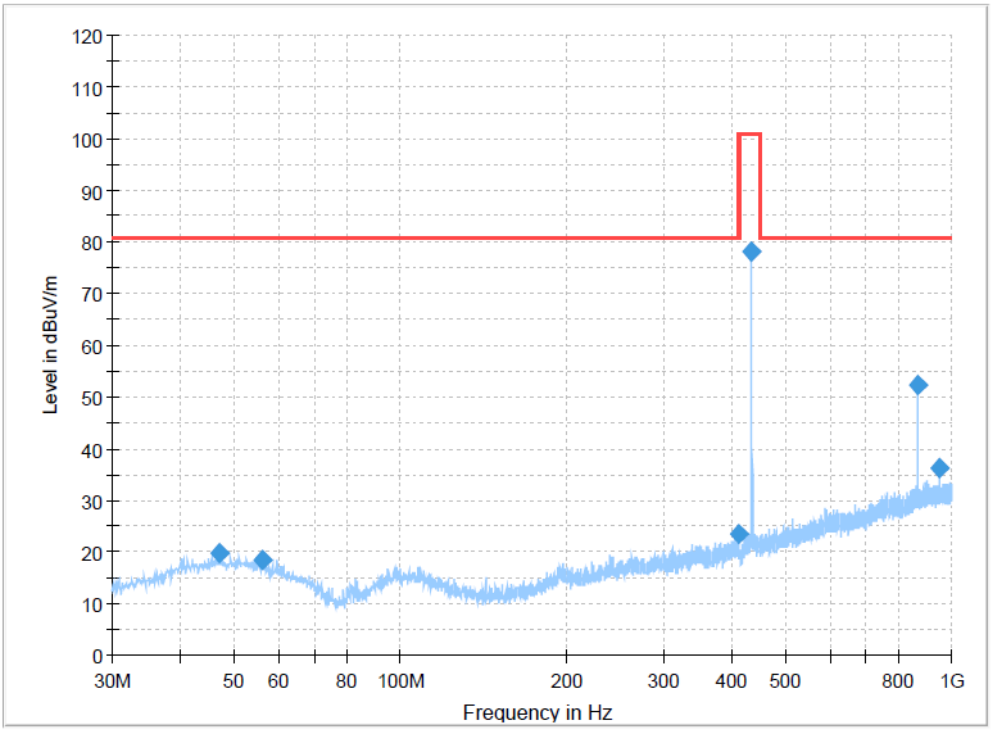
1) Level= Reading + Factor/Transd; Factor/Transd =Antenna Factor+ Cable Loss- Preamp Factor
2) Margin = Limit – Level
3) Over Limit = Level – Limit

FOR 9 kHz ~ 30 MHz

The EUT was pre-scanned this frequency band, found the radiated level 20dB lower than the limit, so don't show data on this report.

FOR 30 MHz ~ 1000 MHz

Polarization:	Horizontal

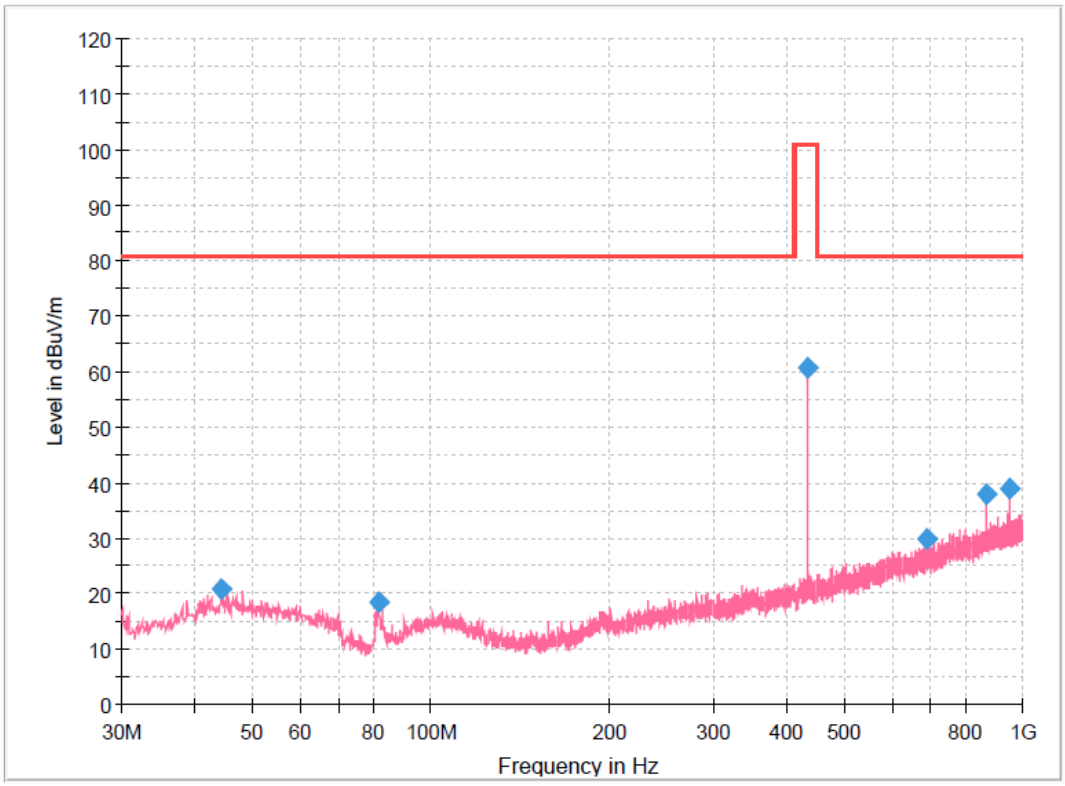


Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
47.0963	19.61	80.80	61.19	300.0	H	5.0	-8.3
56.0688	18.31	80.80	62.49	300.0	H	319.0	-8.8
412.0588	23.35	100.80	77.45	300.0	H	335.0	-4.3
433.8838	78.02	100.80	22.78	100.0	H	70.0	-3.0
867.8375	52.28	80.80	28.52	100.0	H	96.0	6.3
948.5900	36.11	80.80	44.69	300.0	H	303.0	7.4

Spurious Emission of Average								
No.	Freq. [MHz]	PK level [dBµV/m]	DCCF [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Detector
1	47.0963	19.61	-9.48	10.13	60.80	50.67	Horizontal	AV
2	56.0688	18.31	-9.48	8.83	60.80	51.97	Horizontal	AV
3	412.0588	23.35	-9.48	13.87	60.80	46.93	Horizontal	AV
4	433.8838	78.05	-9.48	68.57	80.80	12.23	Horizontal	AV
5	867.8375	52.28	-9.48	42.80	60.80	18.00	Horizontal	AV
6	948.5900	36.11	-9.48	26.63	60.80	34.17	Horizontal	AV

Polarization:	Vertical



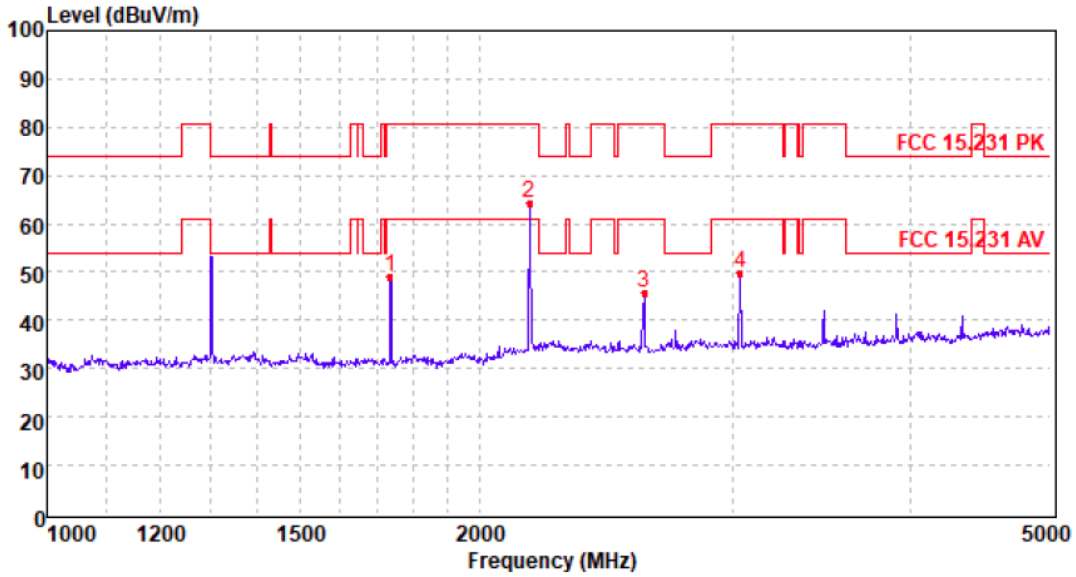
Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
44.3075	20.90	80.80	59.90	100.0	V	87.0	-8.5
81.7738	18.32	80.80	62.48	100.0	V	172.0	-15.3
433.8838	60.60	100.80	40.20	100.0	V	0.0	-3.0
687.5388	29.78	80.80	51.02	100.0	V	0.0	2.5
867.9588	37.91	80.80	42.89	100.0	V	187.0	6.3
948.4688	38.72	80.80	42.08	100.0	V	349.0	7.5

Spurious Emission of Average								
No.	Freq. [MHz]	PK level [dBµV/m]	DCCF [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Detector
1	44.3075	20.90	-9.48	11.42	60.80	49.38	Vertical	AV
2	81.7738	18.32	-9.48	8.84	60.80	51.96	Vertical	AV
3	433.8838	60.60	-9.48	51.12	80.80	29.68	Vertical	AV
4	687.5388	29.78	-9.48	20.30	60.80	40.50	Vertical	AV
5	867.9588	37.91	-9.48	28.43	60.80	32.37	Vertical	AV
6	948.4688	38.72	-9.48	29.24	60.80	31.56	Vertical	AV

FOR 1 GHz ~ 5 GHz

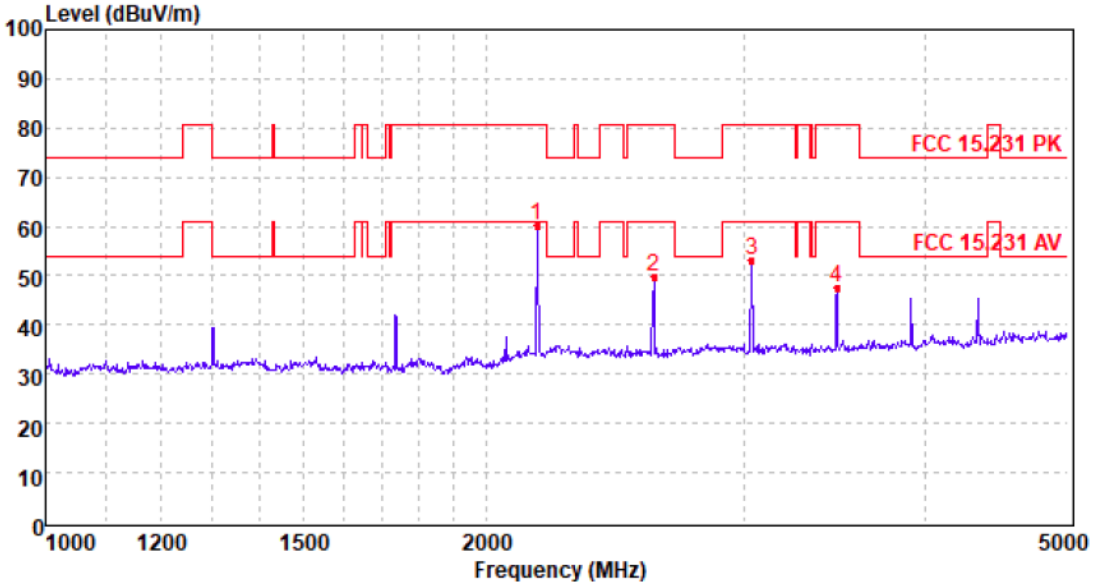
Polarization:	Horizontal



Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	1734.00	61.79	25.14	3.40	41.40	48.93	80.80	-31.87	Peak
2	2168.73	73.56	27.75	3.94	41.10	64.15	80.80	-16.65	Peak
3	2605.48	54.87	27.51	4.25	41.06	45.57	80.80	-35.23	Peak
4	3040.80	57.58	28.58	4.54	40.92	49.78	80.80	-31.02	Peak

Spurious Emission of Average								
No.	Freq. [MHz]	PK level [dBµV/m]	DCCF [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Detector
1	1734.00	48.93	-9.48	39.45	60.80	21.35	Horizontal	AV
2	2168.73	64.15	-9.48	54.67	60.80	6.13	Horizontal	AV
3	2605.48	45.57	-9.48	36.09	60.80	24.71	Horizontal	AV
4	3040.80	49.78	-9.48	40.30	60.80	20.50	Horizontal	AV

Polarization:	Vertical

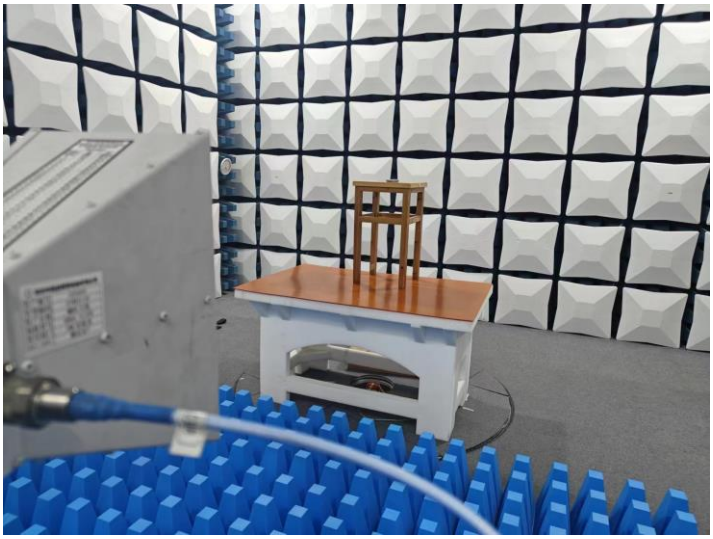


Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	2168.73	69.60	27.75	3.94	41.10	60.19	80.80	-20.61	Peak
2	2605.48	59.12	27.51	4.25	41.06	49.82	80.80	-30.98	Peak
3	3040.80	60.91	28.58	4.54	40.92	53.11	80.80	-27.69	Peak
4	3475.38	54.66	28.85	5.02	40.91	47.62	80.80	-33.18	Peak

Spurious Emission of Average								
No.	Freq. [MHz]	PK level [dBµV/m]	DCCF [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Detector
1	2168.73	60.19	-9.48	50.71	60.80	10.09	Vertical	AV
2	2605.48	49.82	-9.48	40.34	60.80	20.46	Vertical	AV
3	3040.80	53.11	-9.48	43.63	60.80	17.17	Vertical	AV
4	3475.38	47.62	-9.48	38.14	60.80	22.66	Vertical	AV

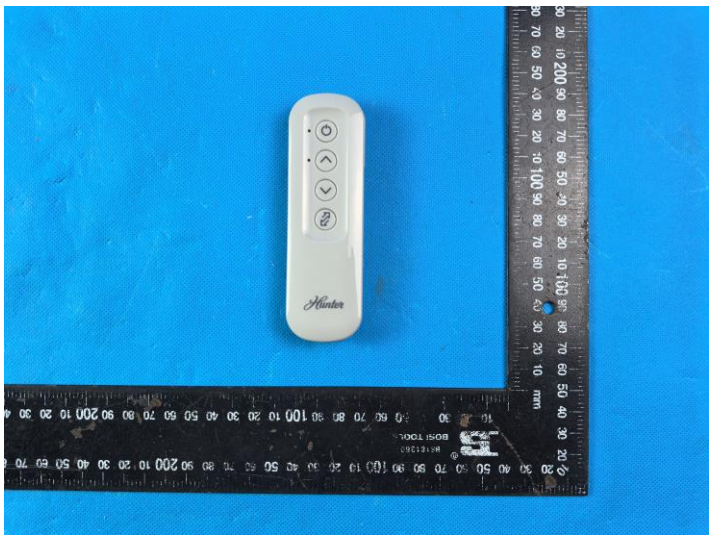
6. TEST SETUP PHOTOS

Radiated Emission



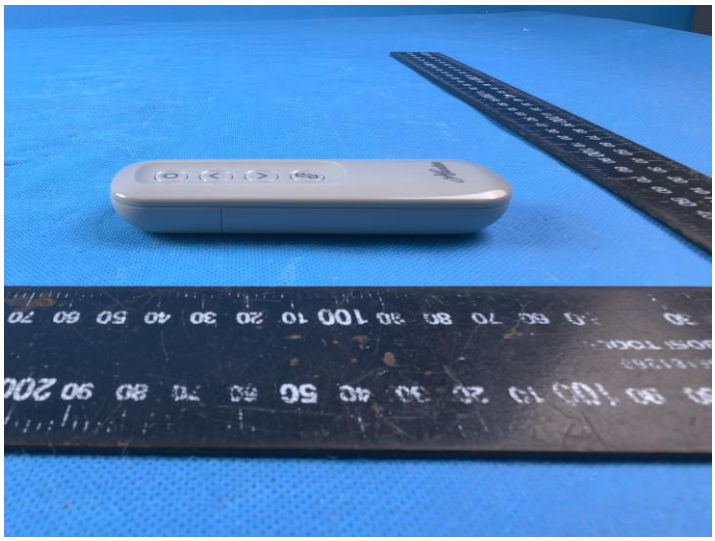
7. EXTERNAL AND INTERNAL PHOTOS

7.1. External Photos



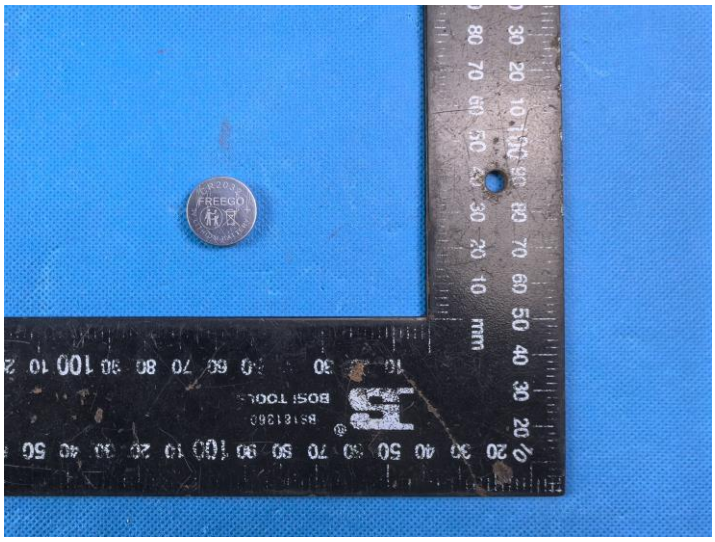
KB283-A5

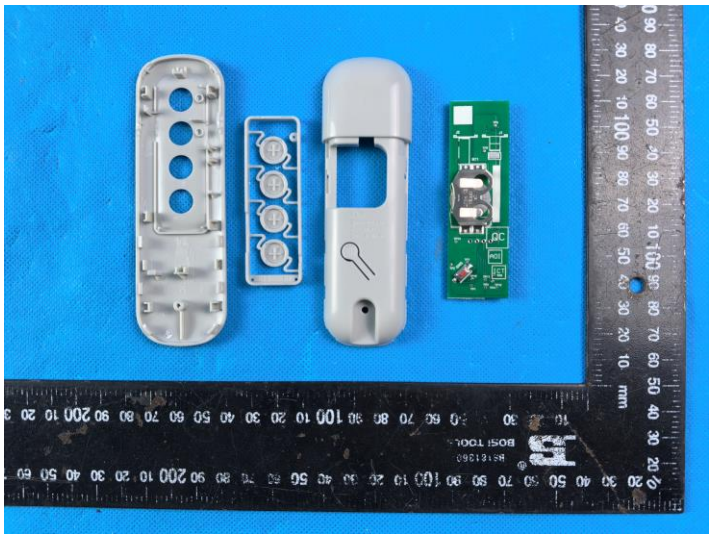
KB283-A6

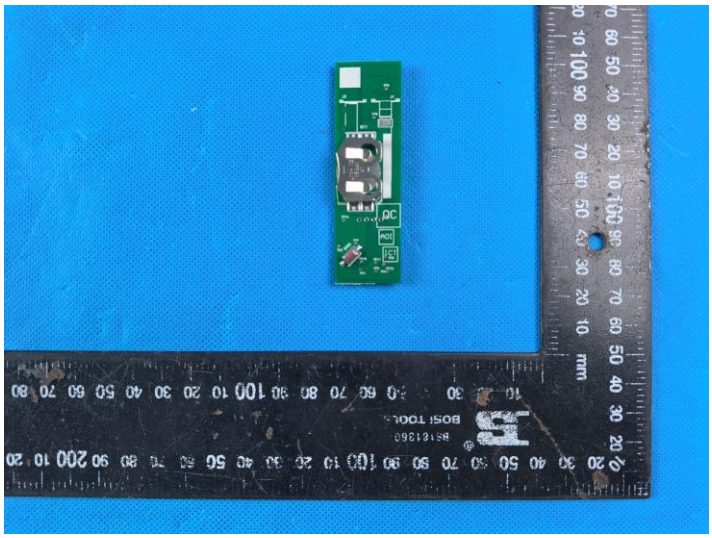


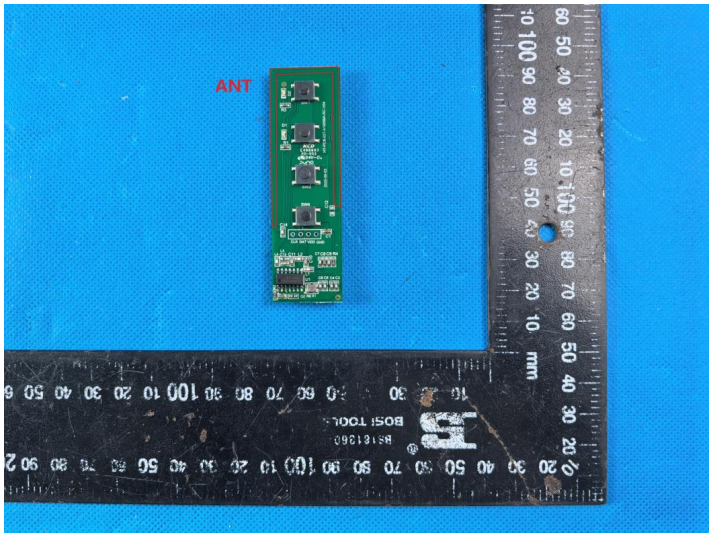

Hunter

7.2. Internal Photos





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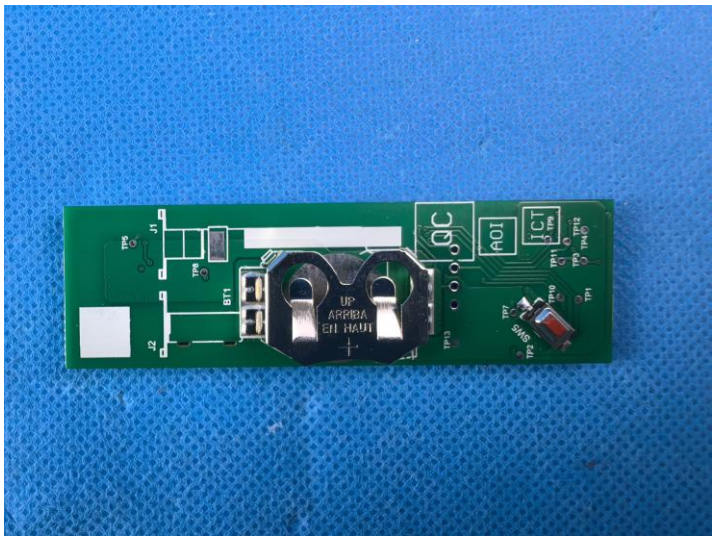
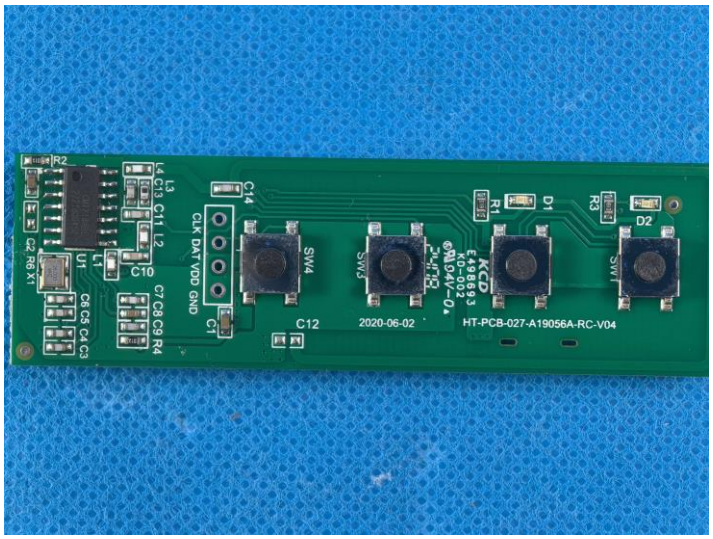




8. APPENDIX REPORT

APPENDIX REPORT

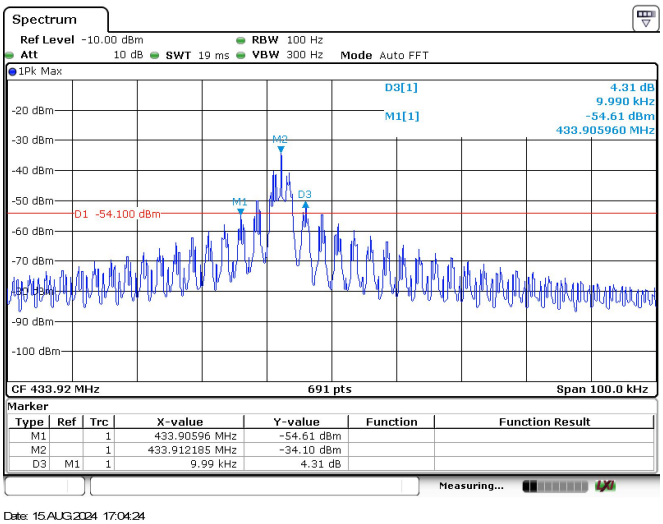
Project No.	SHT2406041902W		
Test sample No.	YPHT24060419002	Model No.	KB283-A5
Start test date	2024-08-15	Finish date	2024-08-15
Temperature	25.1℃	Humidity	53%
Test Engineer	Xiangyu Wei	Auditor	Xiaodong Zhao

Appendix clause	Test item	Result
A	20dB Bandwidth	PASS
B	99% Occupied Bandwidth	PASS
C	Deactivation Time	PASS
D	Duty Cycle Corrected Factor	PASS

Appendix A：20dB bandwidth

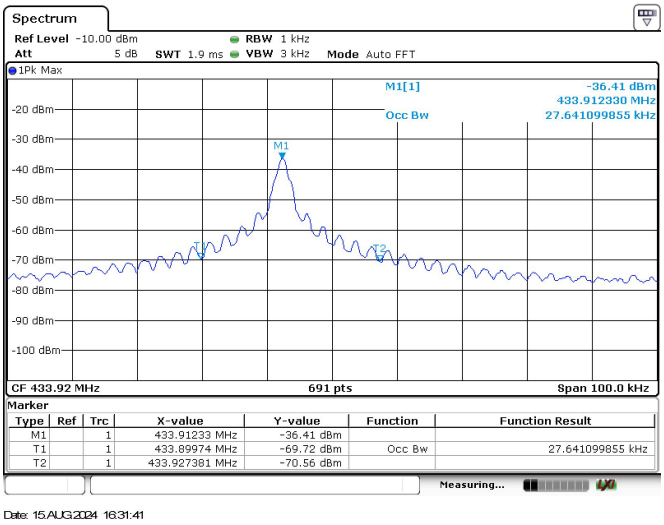
Test Channel	20dB Bandwidth (kHz)	Limit (kHz)	Result
CH_M	9.99	1084.78	Pass

NOTE:Limit=0.25%*Center Frequency=1084.8 kHz

CH_M	

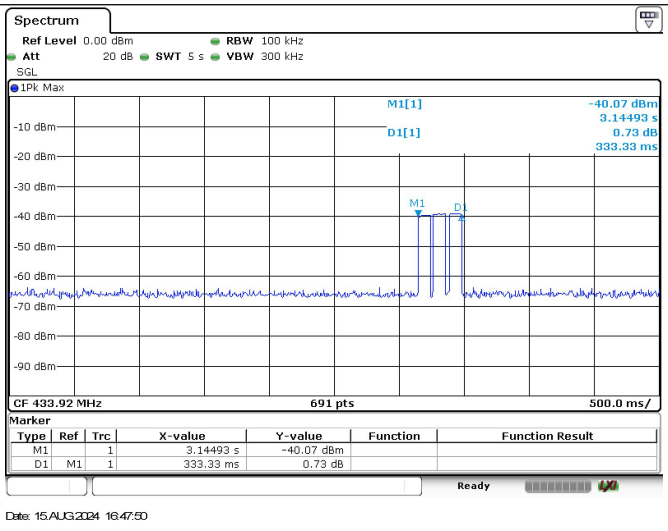
Appendix B：99% Occupied Bandwidth

Test Channel	99% Occupied Bandwidth (kHz)	Limit (kHz)	Result
CH_M	27.64	-	Pass

CH_M	

Appendix C：Deactivation Time

Transmission time (second)	Limit (second)	Result
0.33	5	Pass

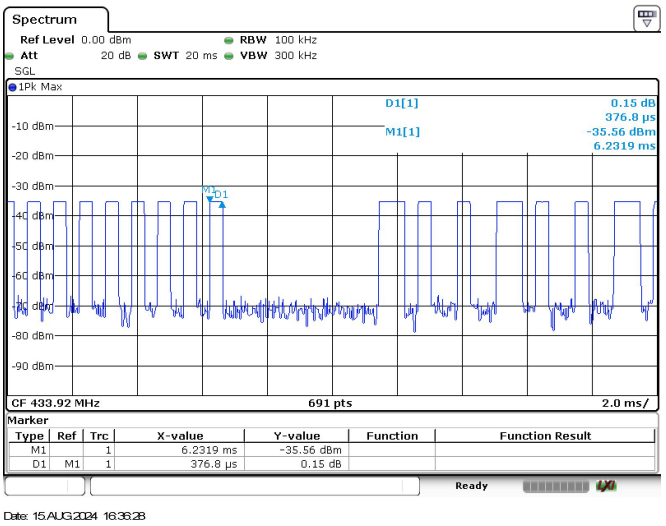
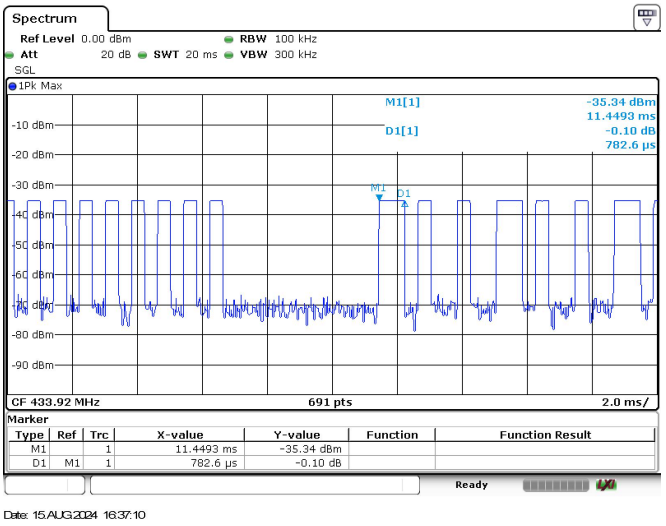
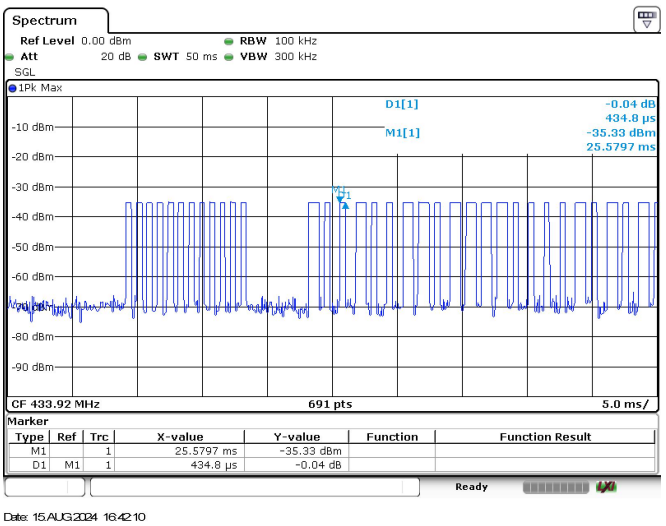
CH_M	

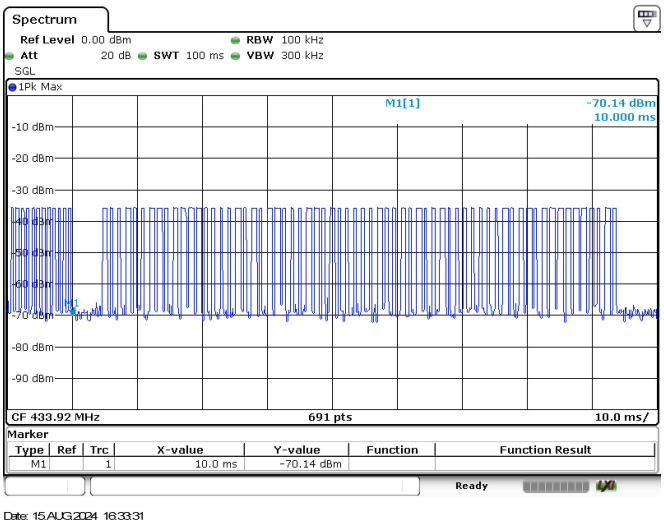
Appendix D：Duty Cycle Corrected Factor

T_{ON1} (ms) :	0.38
T_{ON1} number	29
T_{ON2} (ms) :	0.78
T_{ON2} number	21
T_{ON3} (ms) :	0.43
T_{ON3} number	19
Period (ms) :	100
Duty Cycle :	35.570%
Duty Cycle Corrected Factor:	-9.48

Note：

1) Duty cycle= Ton1* T_{ON1} number +Ton2* T_{ON2} number+Ton3* T_{ON3} number / Tperiod
2) Duty Cycle Corrected Factor/DCCF=20*log (Duty Cycle)

T_{ON1} (ms) :	
T_{ON2} (ms) :	
T_{ON3} (ms) :	

Period (ms) :	

--------End of Report--------