Shenzhen Huatongwei International Inspection Co.,Ltd.
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TEST REPORT

Report No. ..... :	**CHTEW21070137** Report Verification:
Project No.....:	**SHT2106008301EW**
FCC ID ..... :	**YAV-EL03-HH04**
Applicant's name ..... :	**USA Shutter Company LLC dba MaestroShield**
Address.....:	2141 Flint Drive, Ft. Myers, Fl. 33916, USA
Test item description ..... :	**Transmitter**
Trade Mark .....:	-
Model/Type reference.....:	EL03-HH04
Listed Model(s) .....:	-
Standard ..... :	**FCC CFR Title 47 Part 15 Subpart C Section 15.231**
Date of receipt of test sample.....:	Jun.15, 2021
Date of testing.....:	Jun.15, 2021-Jul.20, 2021
Date of issue.....:	Jul.21, 2021
Result..... .....:	**PASS**

Compiled by (Position+Printed name+Signature):	File administrator Fanghui Zhu	Fanghui Zhu
Supervised by (Position+Printed name+Signature):	Project Engineer Cheng Xiao	Chengxiao
Approved by (Position+Printed name+Signature):	RF Manager Hans Hu	Hans Hu

Testing Laboratory Name ..... :	**Shenzhen Huatongwei International Inspection Co., Ltd.**
Address.....:	1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

Contents

1. TEST STANDARDS AND REPORT VERSION

1.1. Test Standards

The tests were performed according to following standards:

– FCC Rules Part 15.231(a): 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	2021-07-21	Original

2. TEST DESCRIPTION

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

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:	USA Shutter Company LLC dba MaestroShield
Address:	2141 Flint Drive, Ft. Myers, Fl. 33916, USA
Manufacturer:	Zhejiang Huzhou SCVE Machine & Motor Co., Ltd
Address:	No. 1206 Taihu Ave., Changxing, Huzhou, Zhejiang 313100, China

3.2. Product Description

Name of EUT:	Transmitter
Trade Mark:	-
Model No.:	EL03-HH04
Listed Model(s):	-
Power supply:	DC3.0V for lithium Cell
Hardware version:	sfeh204-v1.0
Software version:	SF-DY-TX-V100

3.3. Radio Specification Description

Operation frequency:	433.92MHz
Modulation:	FSK
Antenna gain:	0dbi
Antenna type:	Built-in

3.4. Testing Laboratory Information

Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd.	
Laboratory Location	1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China	
Connect information:	Phone: 86-755-26715499 E-mail: cs@szhtw.com.cn http://www.szhtw.com.cn	
Qualifications	Type	Accreditation Number
	FCC	762235

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. Test mode

For RF test items
The engineering test program was provided and enabled to make EUT continuous transmit.
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. 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	Equipement	Trade Name	Model No.	FCC ID	Power cord
1					
2					

4.4. Testing environmental condition

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

4.5. Measurement uncertainty

Test Item	Measurement Uncertainty
AC Conducted Emission (150kHz~30MHz)	3.02 dB
Radiated Emission (30MHz~1000MHz	4.90 dB
Radiated Emissions (1GHz~25GHz)	4.96 dB
Peak Output Power	0.51 dB
Power Spectral Density	0.51 dB
Conducted Spurious Emission	0.51 dB
6dB Bandwidth	70 Hz

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

4.6. Equipment Used during the Test

● Conducted Emission							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Shielded Room	Albatross projects	HTWE0114	N/A	N/A	2018/09/28	2023/09/27
●	EMI Test Receiver	R&S	HTWE0111	ESCI	101247	2020/10/19	2021/10/18
●	Artificial Mains	SCHWARZBECK	HTWE0113	NNLK 8121	573	2020/10/15	2021/10/14
●	Pulse Limiter	R&S	HTWE0033	ESH3-Z2	100499	2020/10/15	2021/10/14
●	RF Connection Cable	HUBER+SUHNER	HTWE0113-02	ENVIROFLEX_142	EF-NM-BNCM-2M	2020/10/15	2021/10/14
●	Test Software	R&S	N/A	ES-K1	N/A	N/A	N/A

● Radiated emission-6th test site							
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	2018/09/30	2021/09/29
●	EMI Test Receiver	R&S	HTWE0099	ESCI	100900	2020/10/19	2021/10/18
●	Loop Antenna	R&S	HTWE0170	HFH2-Z2	100020	2021/04/06	2022/04/05
●	Ultra-Broadband Antenna	SCHWARZBECK	HTWE0123	VULB9163	538	2021/04/06	2022/04/05
●	Pre-Amplifer	SCHWARZBECK	HTWE0295	BBV 9742	N/A	2020/11/13	2021/11/12
●	RF Connection Cable	HUBER+SUHNER	HTWE0062-01	N/A	N/A	2021/02/26	2022/02/25
●	RF Connection Cable	HUBER+SUHNER	HTWE0062-02	SUCOFLEX104	501184/4	2021/02/26	2022/02/25
●	Test Software	R&S	N/A	ES-K1	N/A	N/A	N/A

● Radiated emission-7th test site							
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	N/A	2018/09/27	2021/09/26
●	Spectrum Analyzer	R&S	HTWE0098	FSP40	100597	2020/10/20	2021/10/19
●	Horn Antenna	SCHWARZBECK	HTWE0126	9120D	1011	2020/04/01	2023/03/31
●	Broadband Horn Antenna	SCHWARZBECK	HTWE0103	BBHA9170	BBHA9170472	2018/10/11	2021/10/11
●	Pre-amplifier	CD	HTWE0071	PAP-0102	12004	2020/11/13	2021/11/12
●	Broadband Pre-amplifier	SCHWARZBECK	HTWE0201	BBV 9718	9718-248	2021/03/05	2022/03/04
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-01	6m 18GHz S Serisa	N/A	2021/02/26	2022/02/25
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-02	6m 3GHz RG Serisa	N/A	2021/02/26	2022/02/25
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-03	6m 3GHz RG Serisa	N/A	2021/02/26	2022/02/25
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-04	6m 3GHz RG Serisa	N/A	2021/02/26	2022/02/25
●	RF Connection Cable	HUBER+SUHNER	HTWE0121-01	6m 18GHz S Serisa	N/A	2021/02/26	2022/02/25
●	Test Software	Audix	N/A	E3	N/A	N/A	N/A

●	RF Conducted Method					
Used	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Signal and spectrum Analyzer	R&S	FSV40	100048	2020/10/19	2021/10/18
●	Spectrum Analyzer	Agilent	N9020A	MY50510187	2020/10/19	2021/10/18
●	Power Meter	Anritsu	ML249A	N/A	2020/10/19	2021/10/18
○	Radio communication tester	R&S	CMW500	137688-Lv	2020/10/19	2021/10/18

5. TEST CONDITIONS AND RESULTS

5.1. Antenna Requirement

Requirement

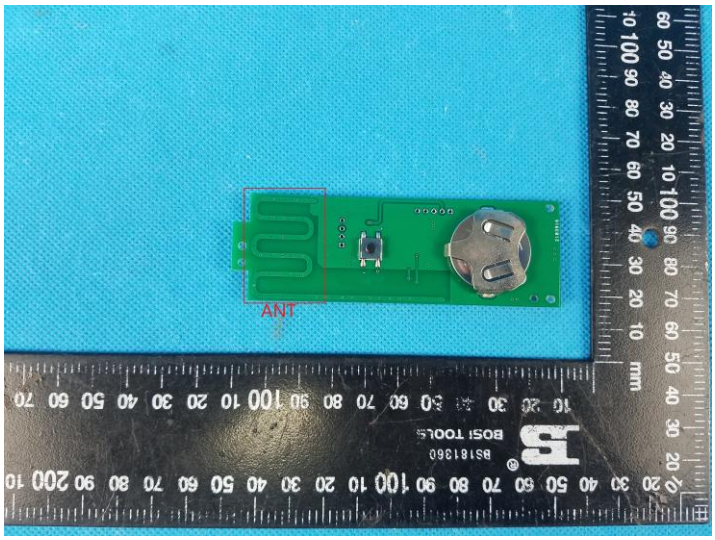
FCC CFR Title 47 Part 15 Subpart C Section 15.203:

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 Built-in antenna, the directional gain of the antenna less than 6 dBi, please refer to the below antenna photo.



5.2. AC Conducted Emission

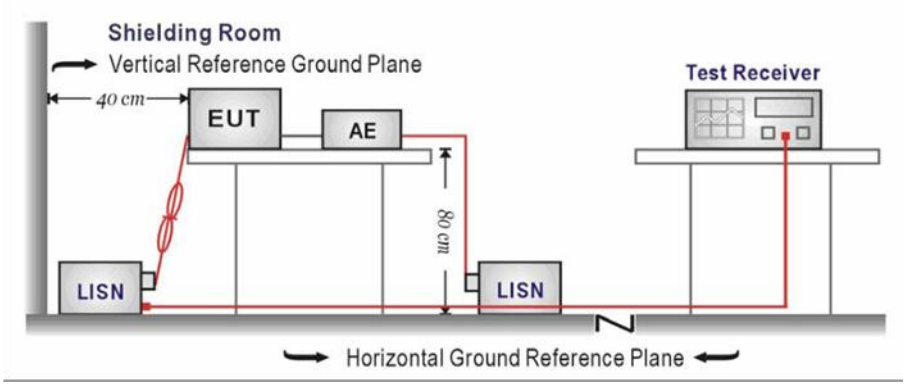
LIMIT

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

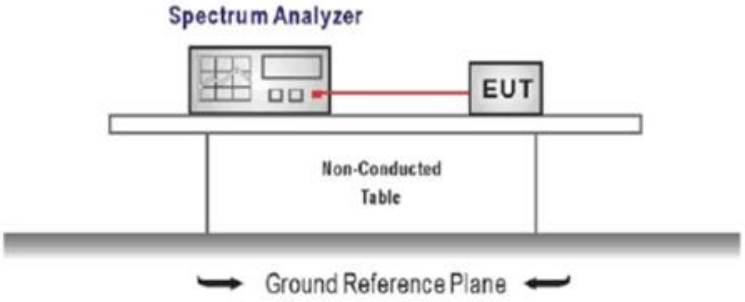
☐ **Passed** ☒ **Not Applicable**

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:

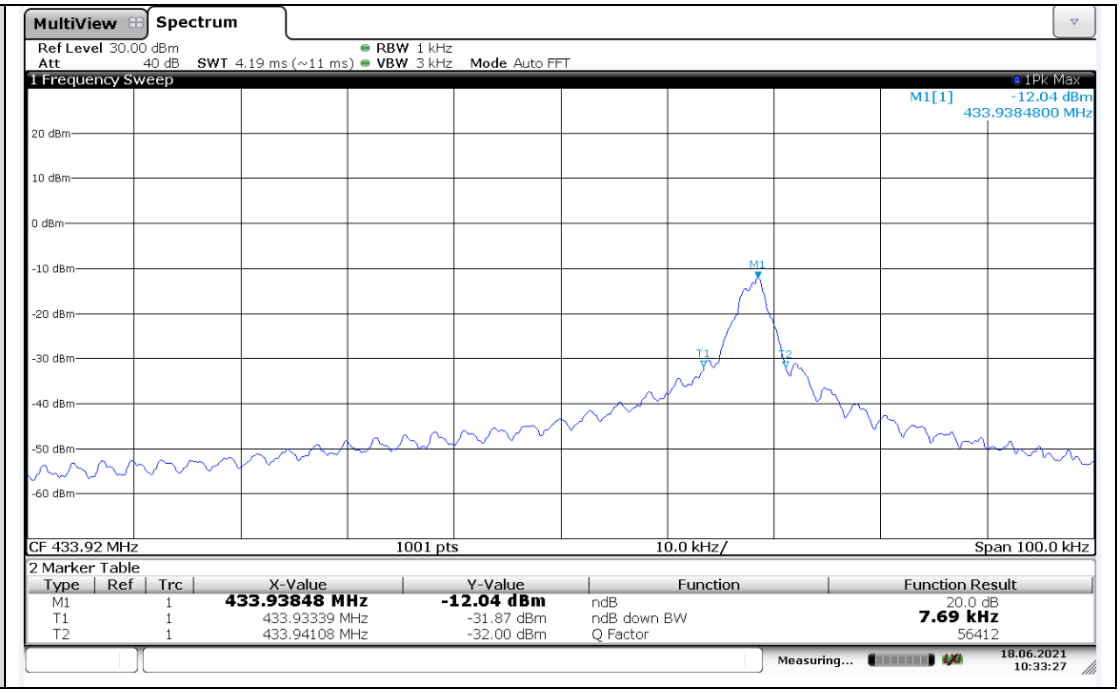
Please refer to the clause 4.2

TEST RESULT

☒ **Passed** ☐ **Not Applicable**

Test Channel	20dB Bandwidth (kHz)	Limit (kHz)	Result
CH_M	7.69	1084.8	Pass

NOTE:Limit=0.25%*Center Frequency=0.25%*433.92MHz=1084.8kHZ

CH_M	

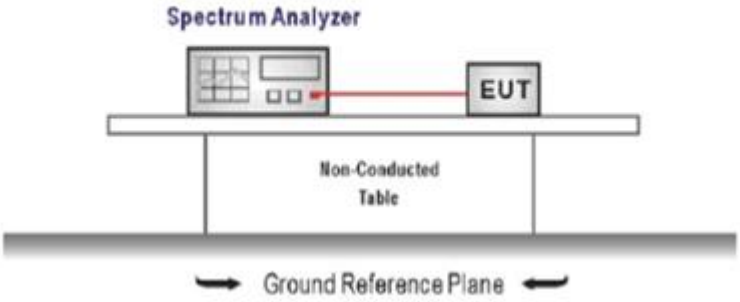
MultiView
Spectrum
Ref Level 30.00 dBm
Att 40 dB
SWT 4.19 ms (~11 ms)
RBW 1 kHz
VBW 3 kHz
Mode Auto FFT
1 Frequency Sweep
1Pk Max
M1[1] -12.04 dBm
433.9384800 MHz
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
M1
T1
T2
CF 433.92 MHz
1001 pts
10.0 kHz/
Span 100.0 kHz
2 Marker Table
Type Ref Trc X-Value Y-Value Function Function Result
M1 1 433.93848 MHz -12.04 dBm ndB 20.0 dB
T1 1 433.93339 MHz -31.87 dBm ndB down BW 7.69 kHz
T2 1 433.94108 MHz -32.00 dBm Q Factor 56412
Measuring...
18.06.2021
10:33:27

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.

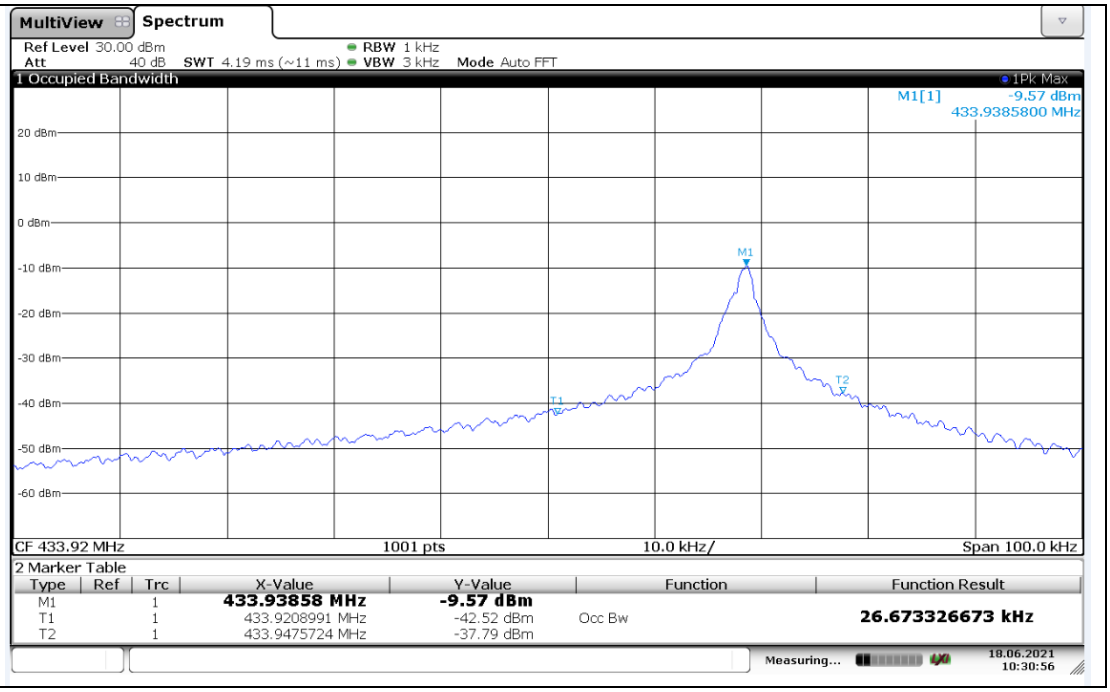
TEST MODE:

Please refer to the clause 4.2

TEST RESULT

☒ **Passed** ☐ **Not Applicable**

Test Channel	99% Occupied Bandwidth (kHz)	Limit (kHz)	Result
CH_M	26.673	-	Pass

CH_M	

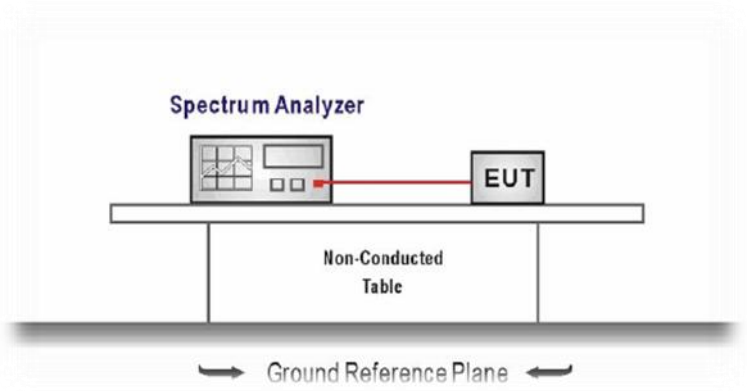
MultiView
Spectrum
Ref Level 30.00 dBm
Att 40 dB
SWT 4.19 ms (~11 ms)
RBW 1 kHz
VBW 3 kHz
Mode Auto FFT
1 Occupied Bandwidth
1Pk Max
M1[1] -9.57 dBm
433.9385800 MHz
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
M1
T1
T2
CF 433.92 MHz
1001 pts
10.0 kHz/
Span 100.0 kHz
2 Marker Table
Type Ref Trc X-Value Y-Value Function Function Result
M1 1 433.93858 MHz -9.57 dBm
T1 1 433.9208991 MHz -42.52 dBm Occ Bw 26.673326673 kHz
T2 1 433.9475724 MHz -37.79 dBm
Measuring...
18.06.2021
10:30:56

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.

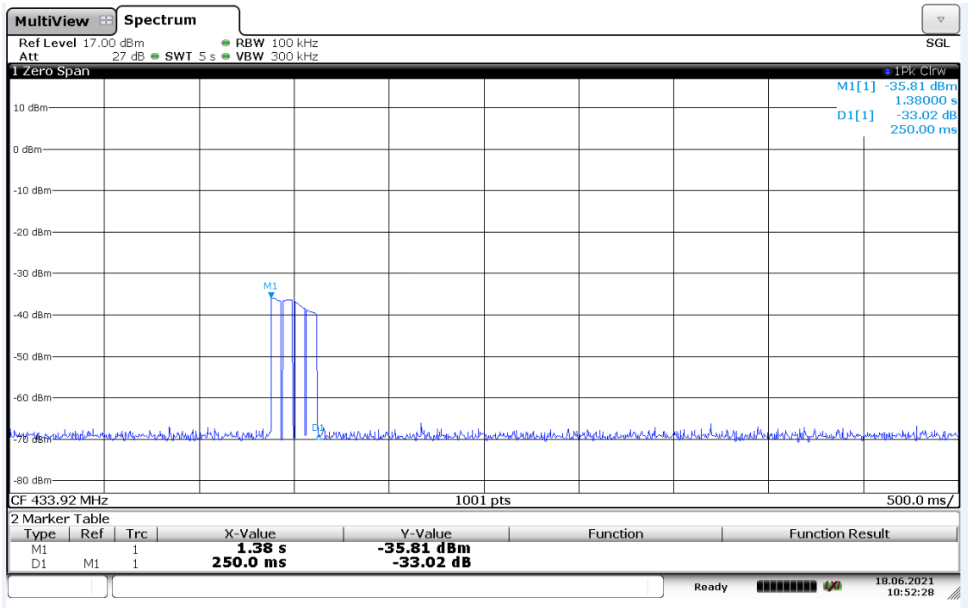
TEST MODE:

Please refer to the clause 4.2

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

Transmission time (second)	Limit (second)	Result
0.25	5	Pass

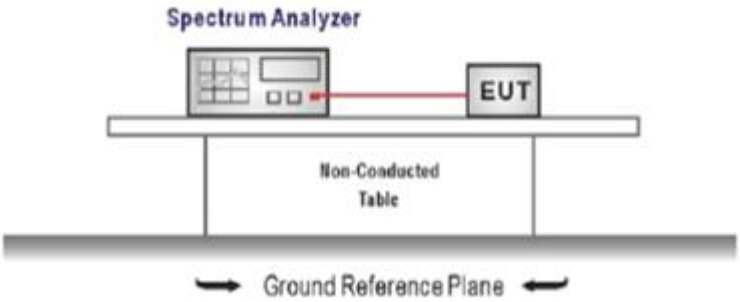


5.6. Duty Cycle Corrected Factor

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

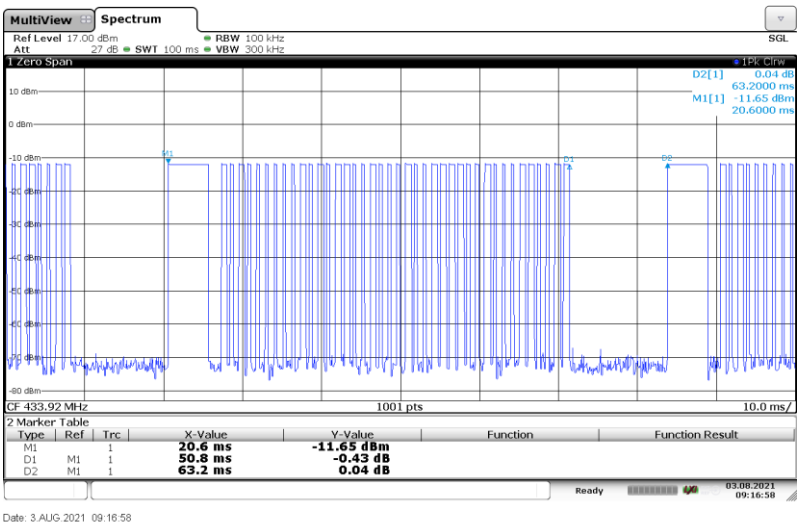
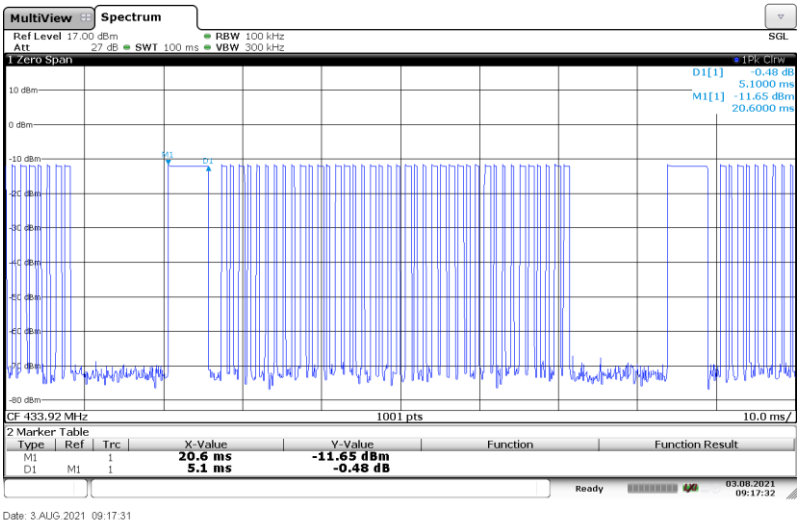
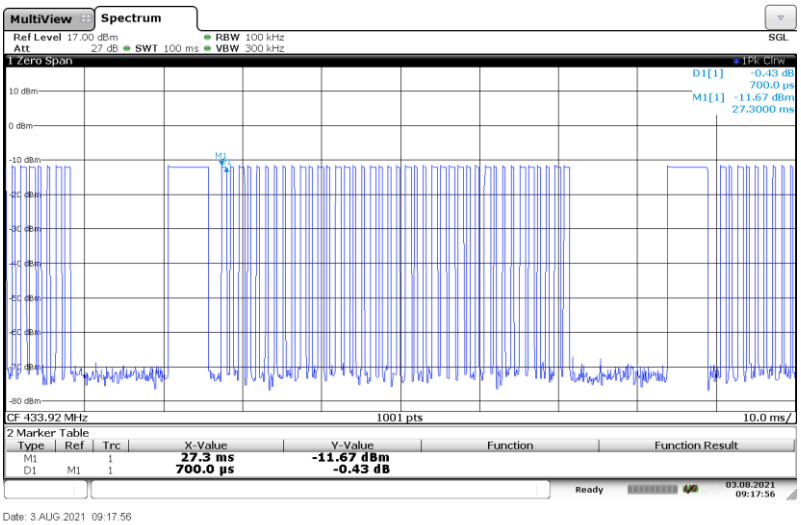
TEST MODE:

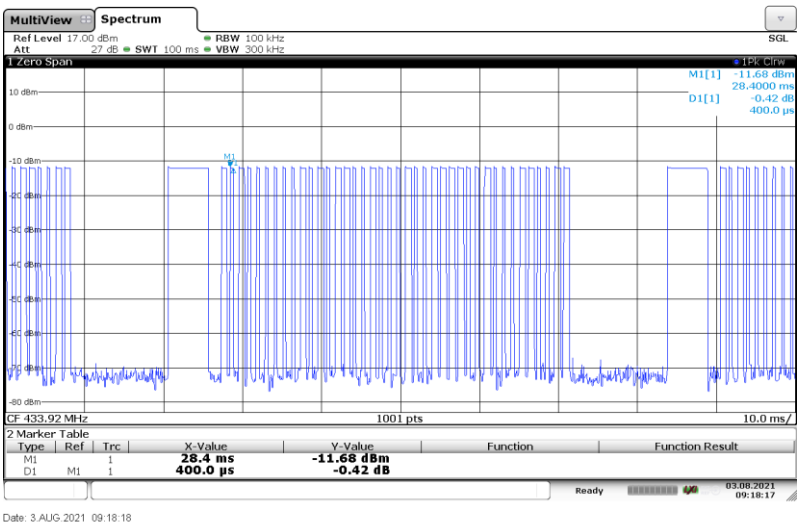
Please refer to the clause 4.2

TEST DATA:

Duty Cycle Corrected Factor/DCCF=20*log (Duty Cycle)

TON1 (ms) :	5.1
TON1 number	1
TON2 (ms) :	0.7
TON2 number	17
TON3 (ms) :	0.4
TON3 number	23
Period (ms) :	100
Duty Cycle :	=(5*1+0.7*17+0.4*23)/100=0.262
Duty Cycle Corrected Factor:	=20*log(0.262)=-11.6

Period (ms)	
TON1	
TON2	

TON3	 MultiView Spectrum Ref Level 17.00 dBm Att 27 dB SWT 100 ms RBW 100 kHz VBW 300 kHz SGL 1 Zero Span 1Pk Clrw M1[1] -11.68 dBm 28.4000 ms D1[1] -0.42 dB 400.0 µs 10 dBm 0 dBm -10 dBm -80 dBm CF 433.92 MHz 1001 pts 10.0 ms/ 2 Marker Table Type Ref Trc X-Value Y-Value Function Function Result M1 1 28.4 ms -11.68 dBm D1 M1 1 400.0 µs -0.42 dB Ready 03.08.2021 09:18:17 Date: 3.AUG.2021 09:18:18

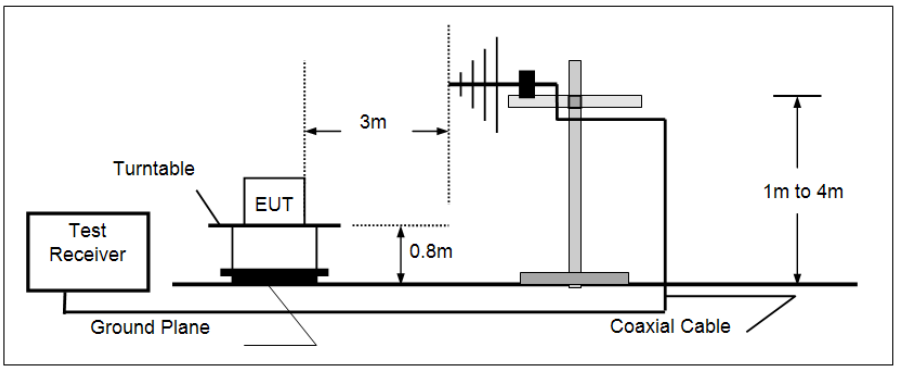
5.7. Radiated field strength of the fundamental signal

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) Margin = Limit – Level

Test channel	CH_M	Polarity	Horizontal

No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarity	Detector
1	433.92	31.31	25.58	56.79	100.80	44.01	Vertical	PK
2	433.92	56.79	-11.6	45.19	80.80	35.61	Horizontal	AV

Test channel	CH_M	Polarity	Vertical

No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polarity	Detector
1	433.92	30.12	25.58	56.70	100.80	44.10	Vertical	PK
2	433.92	56.70	-11.6	45.1	80.80	35.7	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

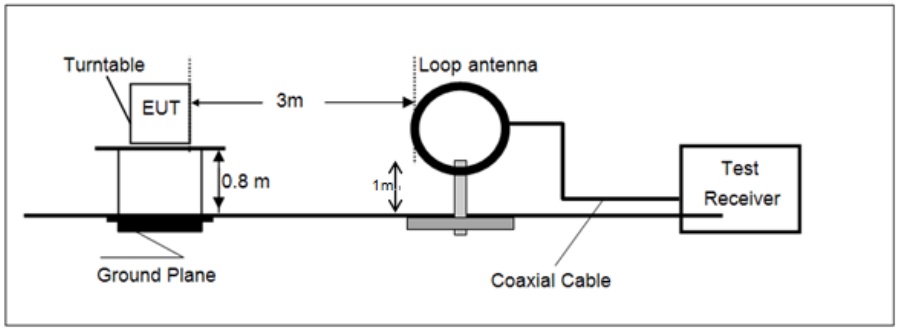
Note: Limit dBuV/m @3m = Limit dBuV/m @300m + 40*log(300/3)= Limit dBuV/m @300m +80,

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

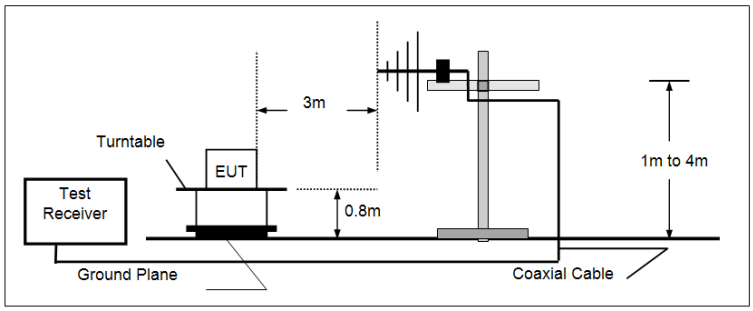
Frequency	Limit (dBuV/m @3m)	Value
30MHz~88MHz	40.00	Quasi-peak
88MHz~216MHz	43.50	Quasi-peak
216MHz~960MHz	46.00	Quasi-peak
960MHz~1GHz	54.00	Quasi-peak
Above 1GHz	54.00	Average
	74.00	Peak

TEST CONFIGURATION

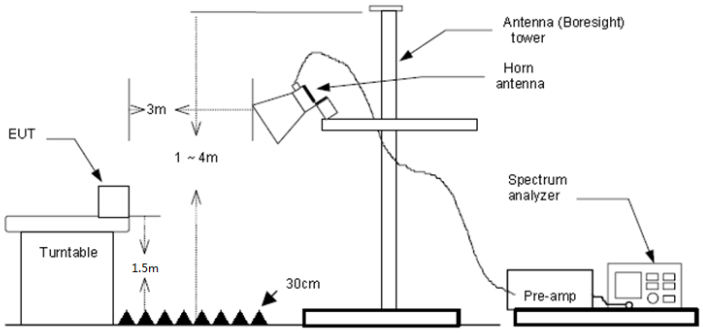
- 9 kHz ~ 30 MHz



- 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:

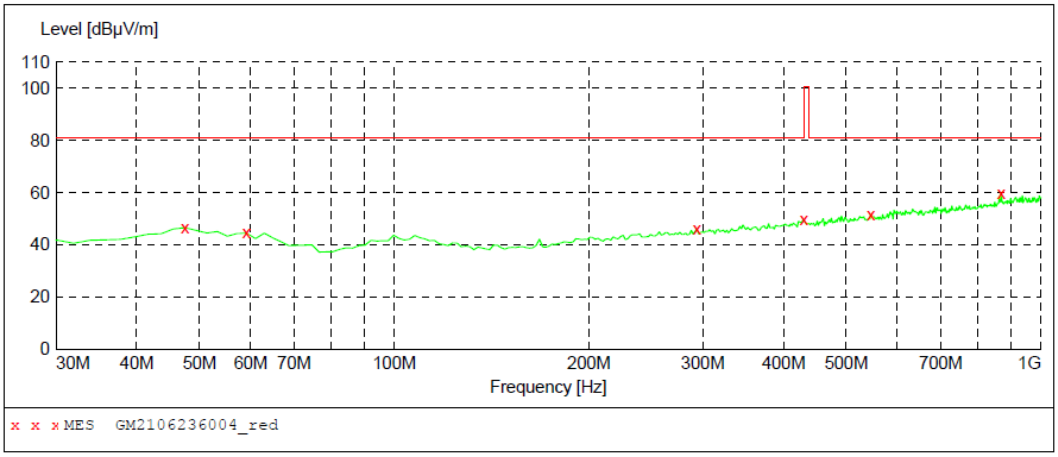
1) Level= Reading + Factor/Transd; Factor/Transd =Antenna Factor+ Cable Loss- Preamp Factor
2) Margin = Limit – Level
3) Average measurement was not performed if peak level is lower than average limit(54 dBuV/m) for above 1GHz.

TEST DATA 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.

TEST DATA FOR 30 MHz ~ 1000 MHz

Polarization:	Horizontal

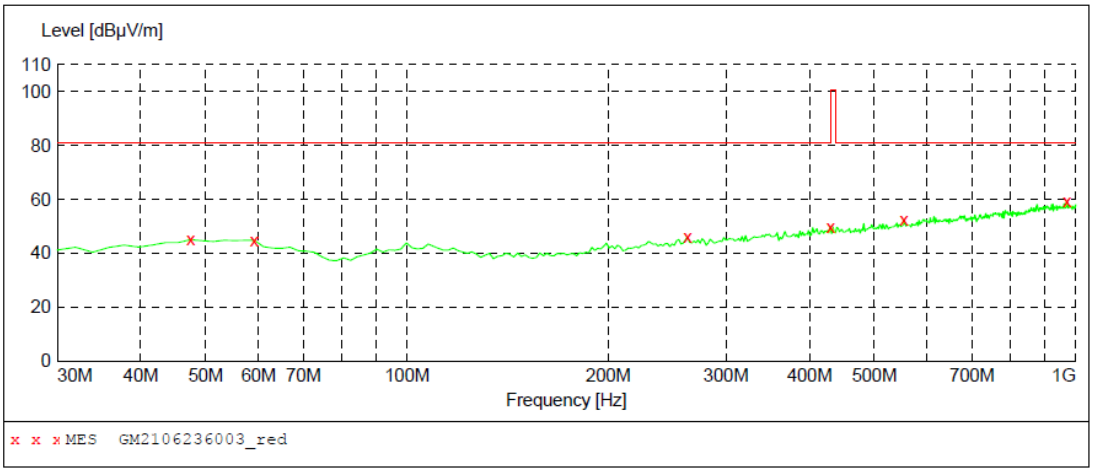


MEASUREMENT RESULT: "GM2106236004_red"

6/23/2021 8:57AM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	46.60	21.2	80.8	34.2	QP	100.0	245.00	HORIZONTAL
59.100000	44.50	20.1	80.8	36.3	QP	100.0	268.00	HORIZONTAL
293.840000	46.10	21.3	80.8	34.7	QP	100.0	359.00	HORIZONTAL
429.640000	49.60	24.6	80.8	31.2	QP	100.0	0.00	HORIZONTAL
546.040000	51.50	26.4	80.8	29.3	QP	100.0	14.00	HORIZONTAL
868.080000	59.60	31.4	80.8	21.2	QP	100.0	124.00	HORIZONTAL

Polarization:	Vertical



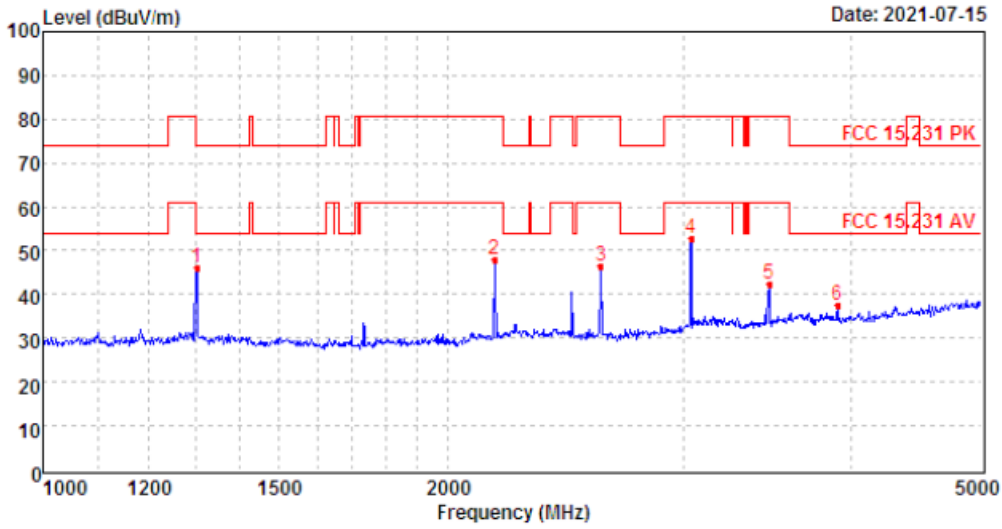
MEASUREMENT RESULT: "GM2106236003_red"

6/23/2021 8:55AM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	45.10	21.2	80.8	35.7	QP	100.0	106.00	VERTICAL
59.100000	44.90	20.1	80.8	35.9	QP	100.0	277.00	VERTICAL
262.800000	46.00	20.6	80.8	34.8	QP	100.0	76.00	VERTICAL
429.640000	49.90	24.6	80.8	30.9	QP	100.0	6.00	VERTICAL
553.800000	52.40	26.7	80.8	28.4	QP	100.0	14.00	VERTICAL
970.900000	59.10	32.2	80.8	21.7	QP	100.0	147.00	VERTICAL

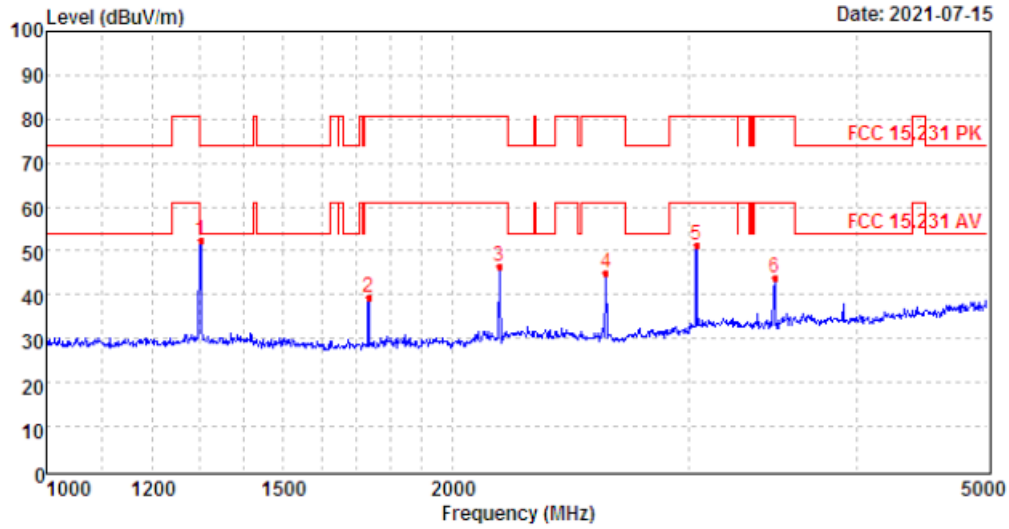
TEST DATA FOR 1000 MHz ~ 5000 MHz

Polarization:	Horizontal



Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	1302.06	50.94	26.01	5.42	36.30	46.07	74.00	-27.93	Peak
2	2168.73	50.49	27.89	7.14	37.39	48.13	80.80	-32.67	Peak
3	2605.48	48.38	27.52	7.78	37.07	46.61	80.80	-34.19	Peak
4	3040.80	52.82	28.78	8.52	37.51	52.61	80.80	-28.19	Peak
5	3475.38	40.69	29.00	9.42	36.58	42.53	80.80	-38.27	Peak
6	3908.66	34.56	29.82	9.98	36.68	37.68	74.00	-36.32	Peak

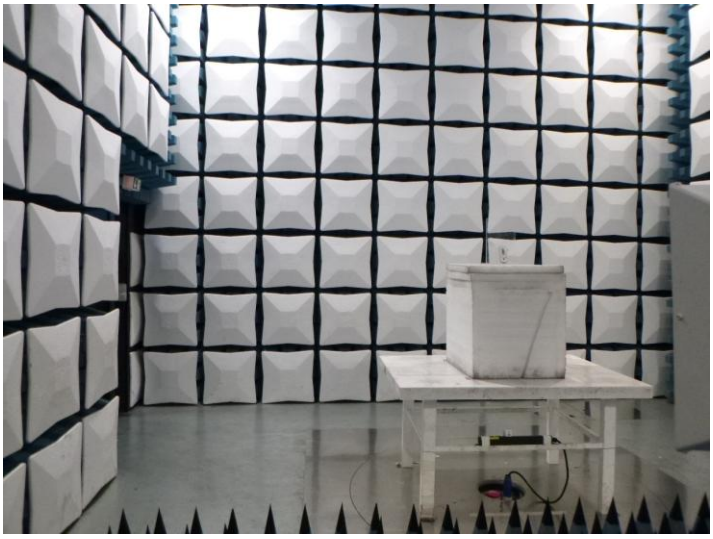
Polarization:	Vertical



Mark	Frequency MHz	Reading dBuV/m	Antenna dB	Cable dB	Preamp dB	Level dBuV/m	Limit dBuV/m	Over limit	Remark
1	1302.06	57.24	26.01	5.42	36.30	52.37	74.00	-21.63	Peak
2	1736.79	45.26	25.17	6.29	37.16	39.56	80.80	-41.24	Peak
3	2168.73	48.66	27.89	7.14	37.39	46.30	80.80	-34.50	Peak
4	2605.48	46.82	27.52	7.78	37.07	45.05	80.80	-35.75	Peak
5	3040.80	51.45	28.78	8.52	37.51	51.24	80.80	-29.56	Peak
6	3475.38	41.91	29.00	9.42	36.58	43.75	80.80	-37.05	Peak

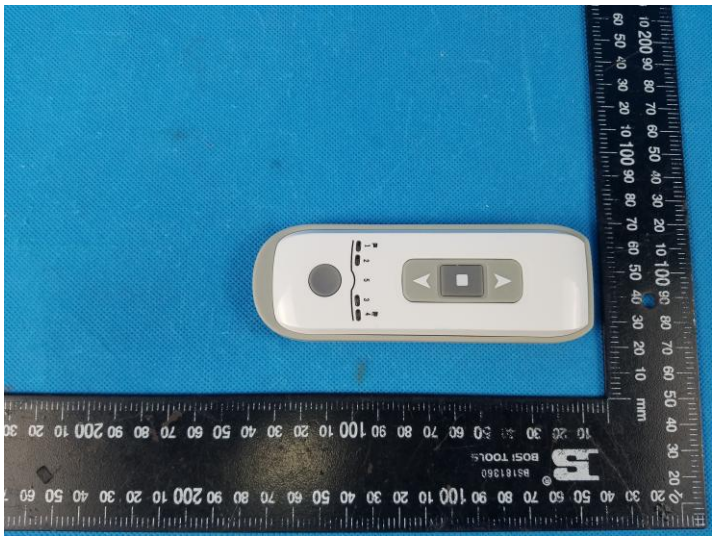
6. TEST SETUP PHOTOS

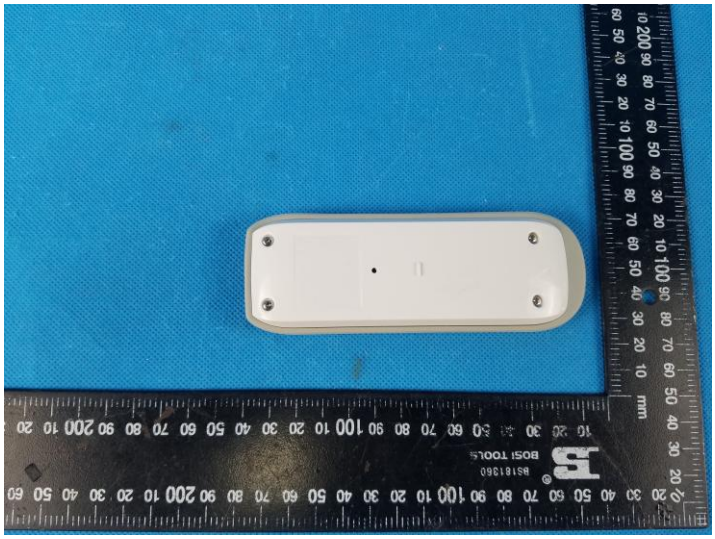
Radiated Emission

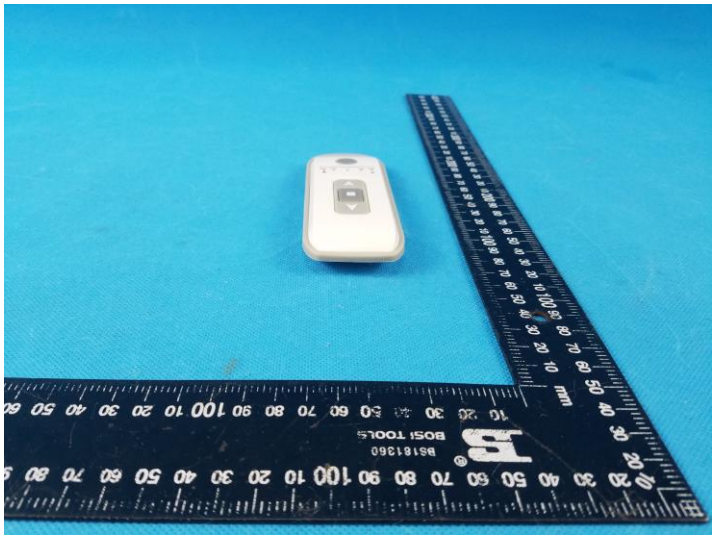


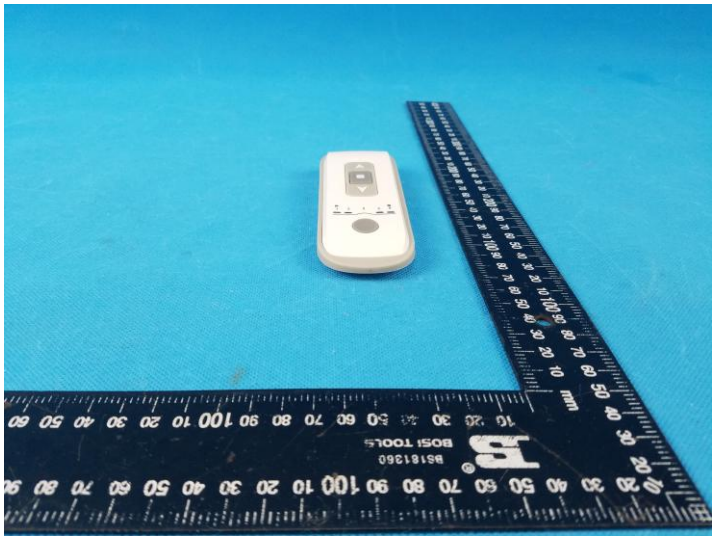
7. EXTERANAL AND INTERNAL PHOTOS

External Photos

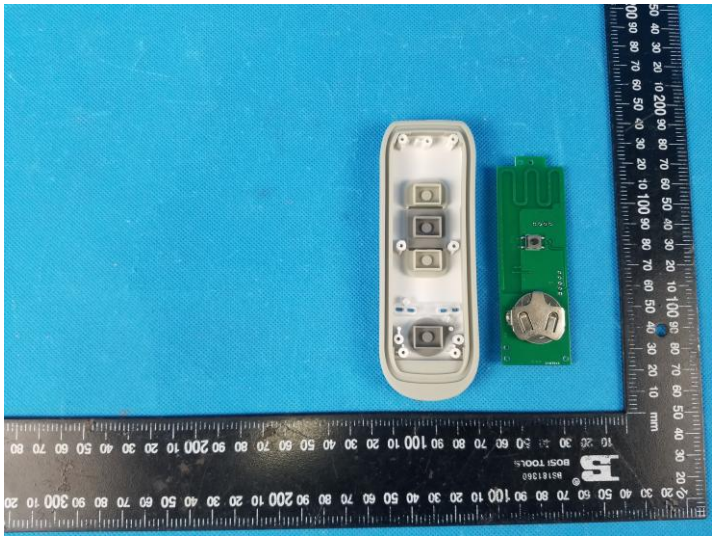


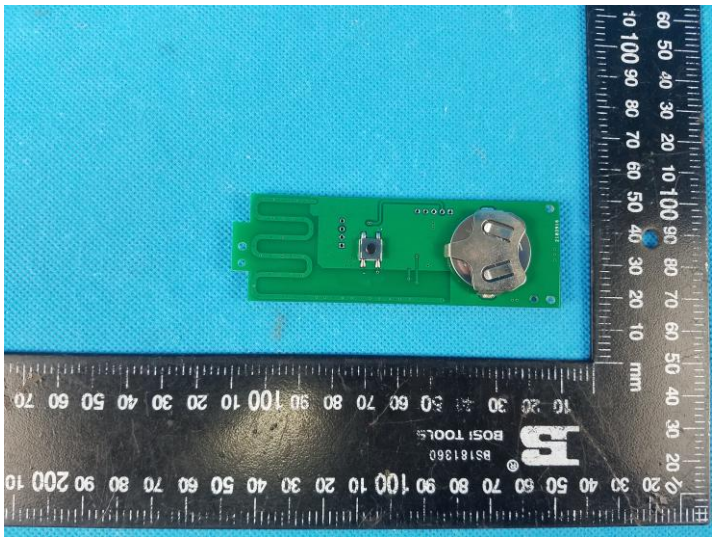


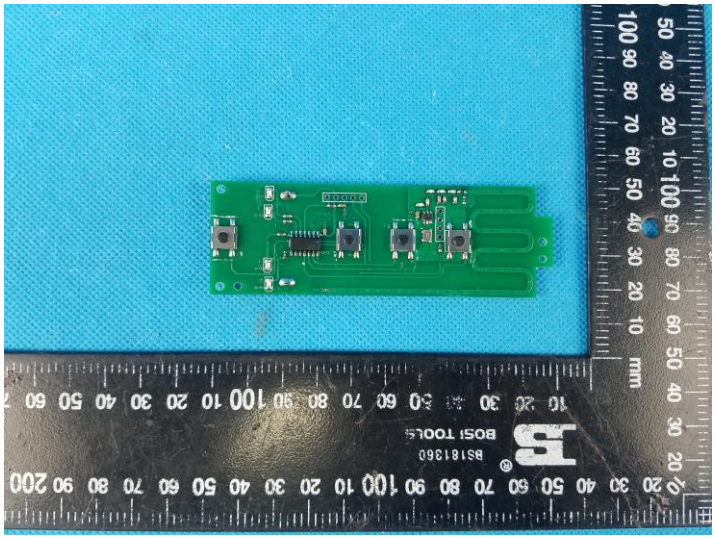


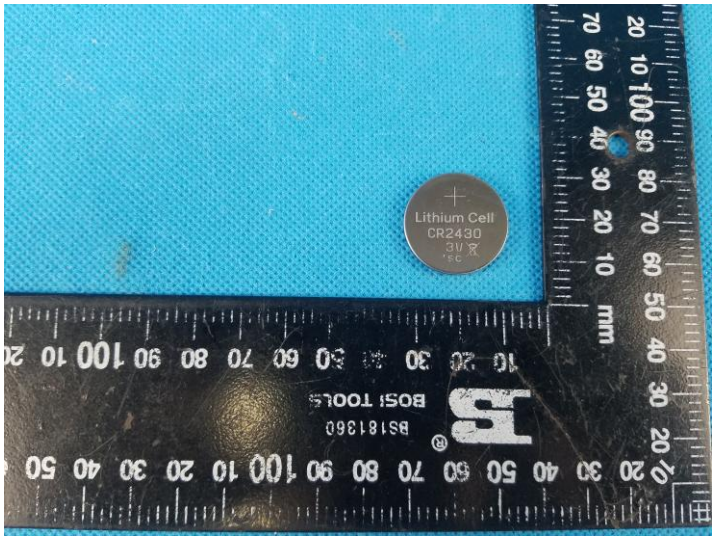


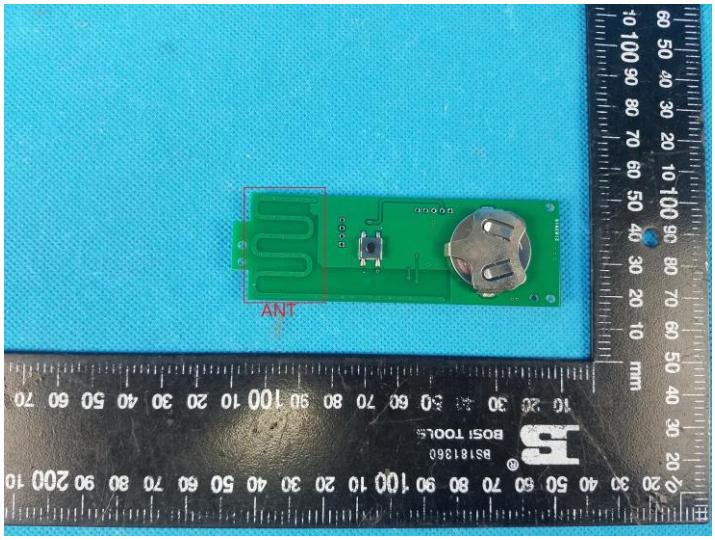
Internal Photos











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