

TEST REPORT

On Behalf of

Product Name: Remote Control Plane

Trademark: Corby Drones

Model Number: CX035

Prepared For: TT TEKNOLOJİ ÜRÜNLERİ A.Ş

Address: Maslak Mah, Bilim Sok. Sun Plaza No:5A/61 Kat:23 Sarıyer/İstanbul

Prepared By: Shenzhen Huaxiang Testing Co , Ltd

Address: 1st Floor, Building A1, No. 2082 Jincheng Road, Shajing Street,
Bao'an District, Shenzhen City, Guangdong Province

Report No.: HUAX250826002RR

TEST REPORT**ETSI EN 300 220-1 V3.1.1 (2017-02) & ETSI EN 300 220-2 V3.2.1 (2018-06)****Report Reference No.**..... : HUAX250826002RR**Date of issue**..... : Aug. 29, 2025**Representative Laboratory Name**..... : Shenzhen Huaxiang Testing Co , Ltd .**Address**..... : 1st Floor, Building A1, No. 2082 Jincheng Road, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province**Applicant's name**..... : TT TEKNOLOJİ ÜRÜNLERİ A.Ş**Address**..... : Maslak Mah, Bilim Sok. Sun Plaza No:5A/61 Kat:23 Sarıyer/İstanbul**Test specification:****Standard**..... : ETSI EN 300 220-1 V3.1.1 (2017-02) &
ETSI EN 300 220-2 V3.2.1 (2018-06)**TRF Originator**..... : Shenzhen Huaxiang Testing Co , Ltd .**Master TRF**..... : Dated 2017-05**Shenzhen Huaxiang Testing Co , Ltd .. All rights reserved.**

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen Huaxiang Testing Co , Ltd .. is acknowledged as copyright owner and source of the material. Shenzhen Huaxiang Testing Co , Ltd .. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test item description..... : Remote Control Plane**Trade Mark**..... : Corby Drones**Model/Type reference**..... : CX035**Listed Models** : N/A**Manufacturer name**..... : Shantou Helicute Model Aircraft Industrial Co., Ltd.**Address**..... : No.8th, East Jiangbei Road, Longtian, Guangyi Street, Chenghai District, Shantou City, Guangdong Province, China**Rating**..... : DC 5V 1A

Testing procedure and testing location

Laboratory name..... : Shenzhen Huaxiang Testing Co., Ltd

Testing location/address: : 1st Floor, Building A1, No. 2082 Jincheng Road, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province

Testing procedure : TL ☒ RMT ☐ SMT ☐ WMT ☐ TMP ☐

Prepared by
(Engineer)

Joan Wang

Joan Wang

Reviewed By
(Supervisor)

: Amy Jiang

Amy Jiang

Contents

1	SUMMARY	5
1.1	TEST STANDARDS	5
1.2	Test Description	5
1.3	Test Facility	6
1.4	Statement of the measurement uncertainty	6
2	GENERAL INFORMATION	7
2.1	General Remarks	7
2.2	Environmental conditions	7
2.3	General Description of EUT	8
2.4	Description of Test Modes and Test Frequency	8
2.5	Equipments Used during the Test	9
2.6	Modifications	9
3	TEST CONDITIONS AND RESULTS	10
3.1	All equipment conformance requirements	10
3.1.1	Operating frequency	10
3.1.2	Unwanted emissions in the spurious domain	11
3.2	Transmitters conformance requirements	16
3.2.1	Effective Radiated Power	16
3.2.2	Duty cycle	18
3.2.3	Occupied Bandwidth	19
3.2.4	Transient power	20
3.2.5	Tx Out of Band Emissions	21
3.2.6	ADJACENT CHANNEL POWER	23
3.2.7	TX behaviour under Low Voltage Conditions	25
3.3	Receivers conformance requirements	26
3.3.1	Blocking	26
4	EXTERNAL AND INTERNAL PHOTOS OF THE EUT	28

1 SUMMARY

1.1 TEST STANDARDS

The tests were performed according to following standards:

[ETSI EN 300 220-1 V3.1.1 \(2017-02\)](#)—Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 1: Technical characteristics and methods of measurement

[ETSI EN 300 220-2 V3.2.1 \(2018-06\)](#)—Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 2: Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU for non specific radio equipment

1.2 Test Description

Clause	Test Parameter	Condition	Result
All equipment conformance requirements			
4.2.1	Operating frequency	Apply to all equipment	PASS
4.2.2	Unwanted emissions in the spurious domain	Apply to all equipment	PASS
Transmitters conformance requirements			
4.3.1	Effective Radiated Power	Apply to transmitters	PASS
4.3.2	Maximum e.r.p. spectral density	Apply to transmitters using annex B bands I, L. Apply to transmitters using DSSS or wideband techniques other than FHSS modulation, in annex C band X.	N/A
4.3.3	Duty Cycle	Apply to all transmitters except EUT with polite spectrum access (described in clause 4.5) where permitted in annex B, table B.1 or annex C, table C.1 or any NRI.	PASS
4.3.4	Occupied Bandwidth	Apply to all transmitters.	PASS
4.3.5	Tx Out of Band Emissions	Apply to all transmitters with OCW > 25 kHz.	N/A
4.3.6	Transient power	Transient power applies to all transmitters.	PASS
4.3.7	Adjacent Channel Power	Apply to all transmitters with OCW ≤ 25 kHz.	PASS
4.3.8	TX behaviour under Low Voltage Conditions	Apply to battery powered EUT.	PASS
4.3.9	Adaptive Power Control	Apply to all EUT with adaptive power control using annex C band AA.	N/A
4.3.10	FHSS equipment	Apply to all FHSS equipment.	N/A
4.3.11	Short term behaviour	Apply to EUT for operation in bands where T _{on} or T _{off} limits are specified in annex C, table C.1 or NRI.	N/A
Receivers conformance requirements			
4.4.1	RX sensitivity	Apply to EUT with polite spectrum access instead of duty cycle where permitted by table B.1 in annex B, or table C.1 in annex C or any NRI.	N/A
4.4.2	Blocking	Apply to all receivers	PASS
Polite spectrum access conformance requirement			
4.5.2	Clear Channel Assessment threshold	Apply to EUT with polite spectrum access instead of duty cycle where permitted by table B.1 in annex B, or table C.1 in annex C or any NRI.	N/A
4.5.3	Polite spectrum access timing parameters	Apply to EUT with polite spectrum access instead of duty cycle where permitted by table B.1 in annex B, or table C.1 in annex C or any NRI.	N/A
4.5.4	Adaptive Frequency Agility	Apply to EUT with AFA.	N/A

1.3 Test Facility

1.3.1 Address of the test laboratory

Shenzhen Huaxiang Testing Co., Ltd ..

Add. : 1st Floor, Building A1, No. 2082 Jincheng Road, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province

Testing Laboratory Authorization:

A2LA Accreditation Code is 4781.01.

FCC Designation Number is CN1229.

Canada IC CAB identifier is CN0045.

CNAS Registration Number is L9589.

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 Beide (Shenzhen) Product Service Limited 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 Shenzhen HUAX Testing Technology Co., Ltd. is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	3.90dB	(1)
Radiated Emission	Above 1GHz	4.26dB	(1)
Conducted Disturbance	0.15~30MHz	2.71dB	(1)

- (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2 GENERAL INFORMATION

2.1 General Remarks

Date of receipt of test sample	:	Aug. 25, 2025
Testing commenced on	:	Aug. 27, 2025
Testing concluded on	:	Aug. 29, 2025

2.2 Environmental conditions

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

Temperature	NT: Normal Temperature	25°C
	HT: High Temperature	40°C
	LV: Low Temperature	-10°C
Voltage	NV: Normal Voltage	TX:DC 5V
	HV: High Voltage	TX:DC 3.5V
	LV: Low Voltage	TX:DC 2.7V
Other	Relative Humidity	55 %
	Air Pressure	101 kPa

2.3 General Description of EUT

Product Name:	Remote Control Plane	
Model/Type reference:	CX035	
List model	N/A	
Difference description	N/A	
Power supply:	DC 5V	
Wireless technology		
Frequency band:	433.050 - 434.790MHz	
Operating frequency:	433.92MHz	
Modulation type:	ASK	
Operating channel width:	13.861KHz	
Maximum RF power:	N/A	
Spread spectrum method:	☒ Duty cycle ☐ Polite spectrum access	
Receiver category:	☐ Category 1:	Category 1 is a high performance level of receiver. In particular to be used where the operation of a SRD may have inherent safety of human life implications.
	☐ Category 1.5:	Category 1.5 is an improved performance level of receiver category 2.
	☒ Category 2:	Category 2 is standard performance level of receiver.
	☐ Category 3:	Category 3 is a low performance level of receiver. Manufacturers have to be aware that category 3 receivers are not able to work properly in case of coexistence with some services such as a mobile radio service in adjacent bands. The manufacturer shall provide another mean to overcome the weakness of the radio link or accept the failure.
Antenna type:	PCB Antenna	

Note: For more details, refer to the user's manual of the EUT.

2.4 Description of Test Modes and Test Frequency

The EUT has been tested under typical operating condition. The user can control the EUT for staying in continuous transmitting & receiving mode for testing.

2.5 Equipments Used during the Test

Effective radiated power & Spurious Emissions						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Cal.Due
1	Spectrum analyzer	Agilent	N9020A	HKE-048	2024/11/20	2025/11/20
2	Receiver	R&S	ESR-7	HKE-010	2024/11/20	2025/11/20
3	Broadband antenna	Schwarzbeck	VULB 9163	HKE-012	2024/11/20	2025/11/20
4	Horn antenna	Schwarzbeck	9120D	HKE-013	2024/11/20	2025/11/20
5	Spectrum analyzer	R&S	FSP40	HKE-025	2024/11/20	2025/11/20
6	Preamplifier	EMCI	EMC0518 45SE	HKE-015	2024/11/20	2025/11/20
7	Preamplifier	Agilent	83050.02 5A	HKE-016	2024/11/20	2025/11/20
8	Power meter	Agilent	E4419B	HKE-085	2024/11/20	2025/11/20

Blocking						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Cal.Due
1	Spectrum Analyzer	Agilent	N9020	HKE-048	2024/11/20	2025/11/20
2	Wireless Communication Test Set	R&S	CMW500	HKE-027	2024/11/20	2025/11/20

PSD & TX Transient & OOB & OBW & Duty cycle & Adjacent channel power						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Cal.Due
1	Spectrum Analyzer	Agilent	N9020	HKE-048	2024/11/20	2025/11/20

TX behaviour under low voltage conditions						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Cal.Due
1	Spectrum Analyzer	Agilent	N9020	HKE-048	2024/11/20	2025/11/20

The calibration interval is one year.The calibration interval is one year.

2.6 Modifications

No modifications were implemented to meet testing criteria.

3 TEST CONDITIONS AND RESULTS

3.1 All equipment conformance requirements

3.1.1 Operating frequency

Limit

The manufacturer may declare either one or more operating frequencies and operating channels. Operating channel(s) shall be entirely within operational frequency bands allowed by annexes B, C or any NRI.

Manufacturer Declaration

Parameters	Value	Note
Operational Frequency band	433.050-434.790MHz (Refer to Annex B .H)	Declared by the manufacturer
Nominal Operating Frequency	433.92MHz	Declared by the manufacturer
Operating Channel width	13.861KHz	Declared by the manufacturer

3.1.2 Unwanted emissions in the spurious domain

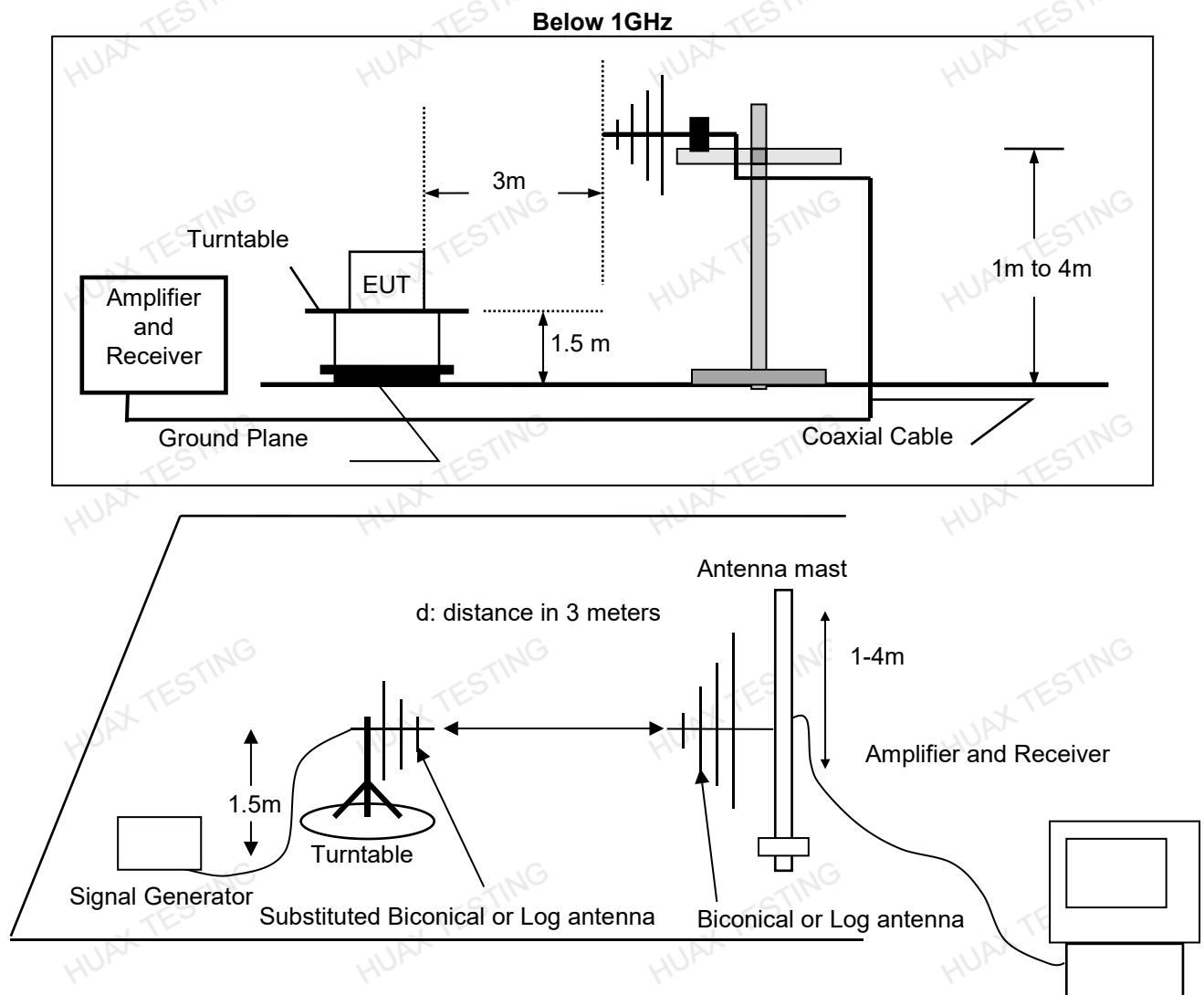
Limit

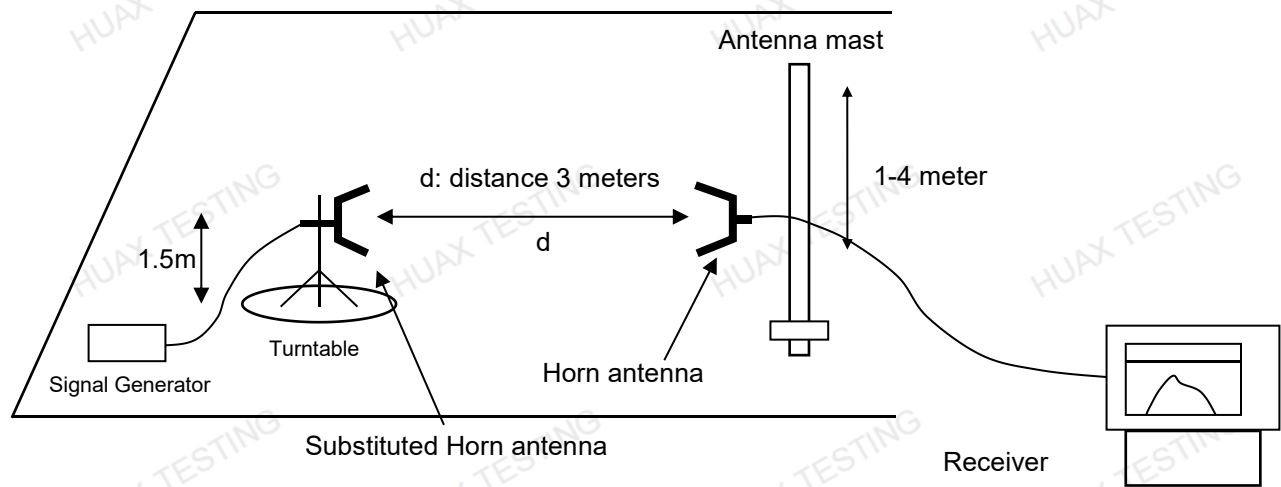
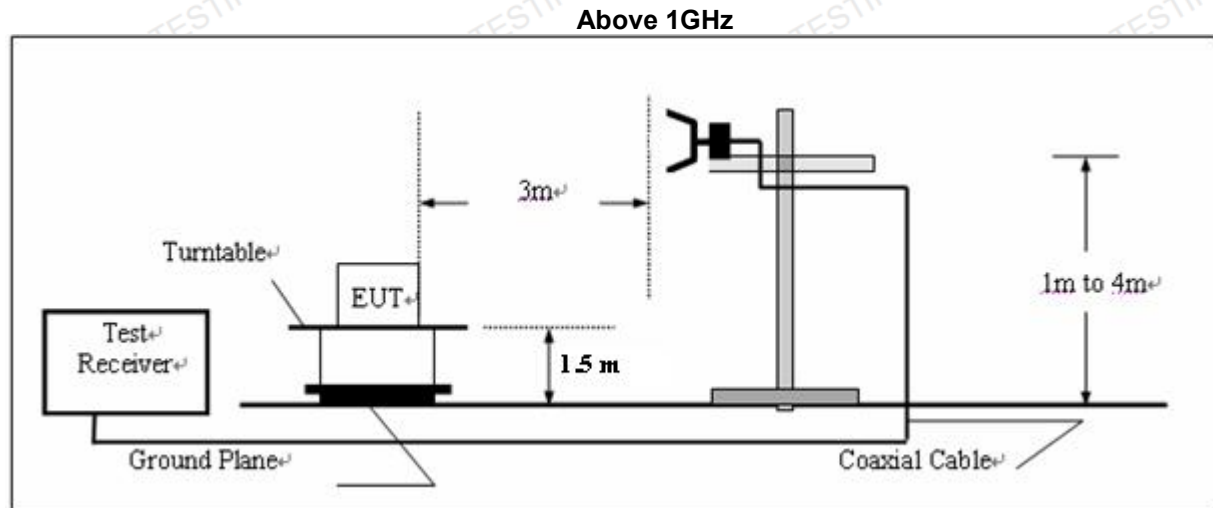
The power of any unwanted emission in the spurious domain shall not exceed the values given as bellow

Spurious domain emission limits

Frequency	47 MHz to 74 MHz 87,5 MHz to 118 MHz 174 MHz to 230 MHz 470 MHz to 790 MHz	Other frequencies below 1 000 MHz	Frequencies above 1 000 MHz
State			
TX mode	-54 dBm	-36 dBm	-30 dBm
RX and all other modes	-57 dBm	-57 dBm	-47 dBm

Test Configuration





Test Procedure

1. Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 4 for the test conditions.
2. Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 5.9.3.3 for the measurement method.

Test Results

Remark: Measurement frequency from 25MHz to 6GHz and recorded worst at below:

TX mode					
Fre. (MHz)	ANT. Pol.	Result (dBm)	Limit	Margin	Conclusion
Below 1GHz:					
159.51	V	-71.34	-36	-35.34	PASS
278.16	V	-77.95	-36	-41.95	PASS
406.39	V	-73.01	-36	-37.01	PASS
442.65	V	-77.15	-36	-41.15	PASS
514.72	V	-73.54	-54	-19.54	PASS
859.25	V	-76.66	-54	-22.66	PASS
184.49	H	-74.25	-54	-20.25	PASS
228.61	H	-78.11	-54	-24.11	PASS
318.39	H	-71.36	-36	-35.36	PASS
454.66	H	-76.34	-36	-40.34	PASS
601.09	H	-77.47	-54	-23.47	PASS
804.35	H	-73.25	-54	-19.25	PASS
Note: 1.Cable loss and antenna gain was combined in the calculated result. 2. Other point of the measurements are below 20dB from the limit.					

Fre. (MHz)	ANT. Pol.	Result (dBm)	Limit	Margin	Conclusion
Below 1GHz:					
1224.42	V	-53.87	-30	-23.87	PASS
1539.81	V	-51.52	-30	-21.52	PASS
2581.01	V	-60.57	-30	-30.57	PASS
2501.31	V	-52.41	-30	-22.41	PASS
3570.62	V	-53.65	-30	-23.65	PASS
3930.43	V	-55.41	-30	-25.41	PASS
1283.65	H	-55.57	-30	-25.57	PASS
1676.11	H	-50.49	-30	-20.49	PASS
2366.91	H	-51.04	-30	-21.04	PASS
2746.54	H	-50.73	-30	-20.73	PASS
3733.95	H	-53.38	-30	-23.38	PASS
3852.75	H	-55.17	-30	-25.17	PASS
Note: 1. Cable loss and antenna gain was combined in the calculated result. 2. Other point of the measurements are below 20dB from the limit.					

RX mode

Fre. (MHz)	ANT. Pol.	EIRP (dBm)	Limit	Margin	Conclusion
Below 1GHz:					
229.72	V	-76.75	-57	-19.75	PASS
246.31	V	-76.31	-57	-19.31	PASS
305.49	V	-72.67	-57	-15.67	PASS
413.22	V	-75.09	-57	-18.09	PASS
486.51	V	-75.26	-57	-18.26	PASS
848.34	V	-77.49	-57	-20.49	PASS
181.21	H	-77.58	-57	-20.58	PASS
289.14	H	-75.91	-57	-18.91	PASS
356.16	H	-76.25	-57	-19.25	PASS
445.12	H	-71.15	-57	-14.15	PASS
563.82	H	-77.78	-57	-20.78	PASS
815.93	H	-79.07	-57	-22.07	PASS
Note: 1.Cable loss and antenna gain was combined in the calculated result. 2.Other point of the measurements are below 20dB from the limit.					

Fre. (MHz)	ANT. Pol.	EIRP (dBm)	Limit	Margin	Conclusion
Above 1GHz:					
1848.34	H	-65.91	-47	-18.91	PASS
2146.51	V	-67.48	-47	-20.48	PASS
3049.23	H	-60.19	-47	-13.19	PASS
2970.82	V	-66.51	-47	-19.51	PASS
3364.23	H	-64.66	-47	-17.66	PASS
3302.65	V	-68.31	-47	-21.31	PASS
4019.19	H	-62.74	-47	-15.74	PASS
4048.31	V	-65.56	-47	-18.56	PASS
4637.49	H	-65.35	-47	-18.35	PASS
4682.63	V	-64.76	-47	-17.76	PASS
5791.63	H	-67.17	-47	-20.17	PASS
6132.45	V	-59.05	-47	-12.05	PASS

Note: “--“Other emission levels were very low against the limit and not reported.

3.2 Transmitters conformance requirements

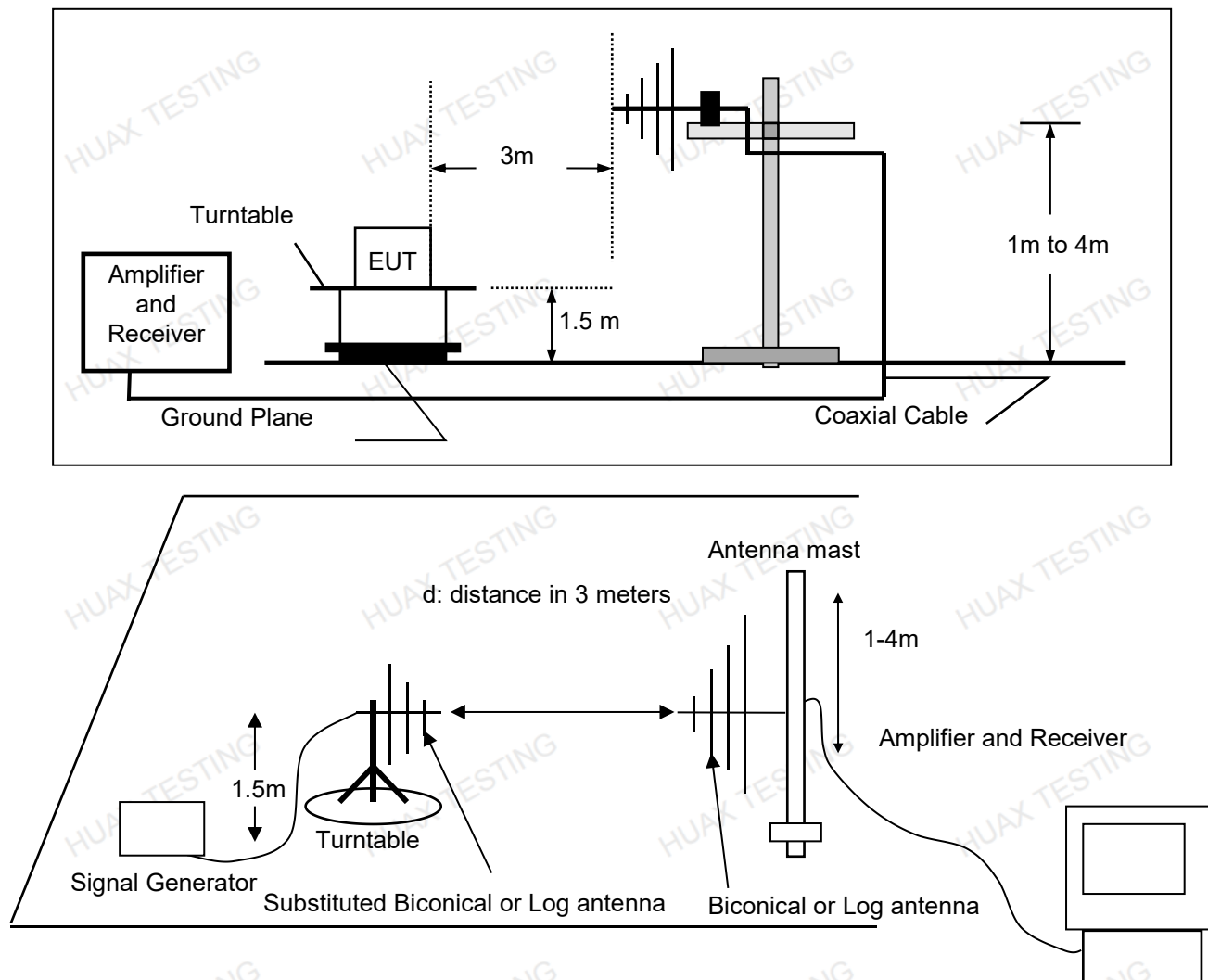
3.2.1 Effective Radiated Power

Limit

The effective radiated power shall not be greater than the value allowed in annexes B or C for the chosen operational frequency band(s):

Frequency range	Radiated power, e.r.p
433.050 - 434.790MHz	25 mW

Test Configuration



Test Procedure

1. Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 4 for the test conditions.
2. Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 5.2.2.2 for the measurement method.

Test Results

Tests	EIRP (dBm)	Limit (mW/dBm)	Tem.	Vol.	Result
Measured radiated power (dBm)	3.37	10/10	TN	VN	Pass
	4.74	10/10	TL	VL	Pass
	4.26	10/10	TH	VH	Pass
	3.02	10/10	TL	VH	Pass
	3.93	10/10	TH	VL	Pass

3.2.2 Duty cycle

Limit

The Duty Cycle at the operating frequency shall not be greater than values in annex B or C for the chosen operational frequency band(s).

Frequency range	Duty cycle
433.050 - 434.790MHz	up to 100%

Test Results

N/A

Note: Since the duty cycle limit is up to 100% for the device, it is deemed to comply without testing

3.2.3 Occupied Bandwidth

Limit

The occupied bandwidth of the EUT according to ETSI EN 300 220-1 [1], clause 5.6.2 shall comply with the limits in annex B or C.

The Operating Channel shall be declared and shall reside entirely within the Operational Frequency Band. The Maximum Occupied Bandwidth at 99 % shall reside entirely within the Operating Channel defined by F_{low} and F_{high} .

Test Configuration



Test Procedure

1. Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 4 for the test conditions.
2. Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 5.6.3.4 for the measurement method.

Test Results

Test CONDITION		Frequency Range	
Temperature	Voltage	Low Frequency(MHz)	High Frequency(MHz)
25℃	DC 5V	433.92374	434.02754
-10℃	DC 3.5V	433.92481	434.01663
	DC 2.7V	433.92219	433.01477
40℃	DC 3.5V	433.92859	434.02821
	DC 2.7V	433.92643	434.02708
Messured frequecies(Lowset and Highest)		433.92219	434.02821
Limit		FL>433.65	FH<434.19

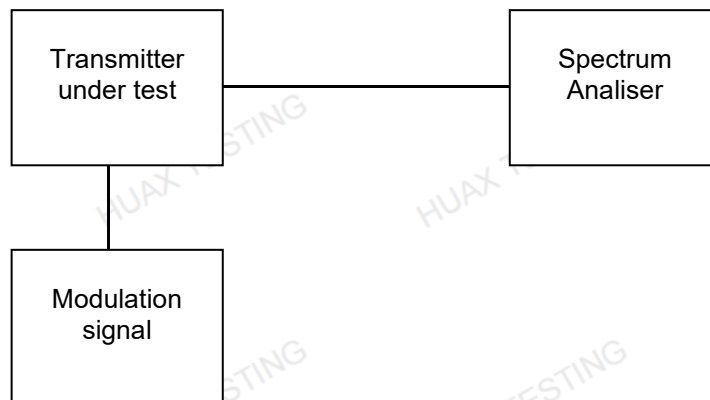
3.2.4 Transient power

Limit

The transient power shall not exceed the values given in Table below:

Absolute offset from centre frequency	RBW _{REF}	Peak power limit applicable at measurement points
≤ 400 kHz	1 kHz	0 dBm
> 400 kHz	1 kHz	-27 dBm

Test Configuration



Test Procedure

1. Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 4 for the test conditions.
2. Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 5.10.3.2 for the measurement method.

Test Results

Measurement points	Measurement Power (dBm)	Limit	Test result
-0.5 x OCW - 3kHz	-4.58	0	PASS
0.5 x OCW + 3kHz	-6.61	0	PASS
-12.5 kHz or -OCW	-10.66	0	PASS
+12.5 kHz or +OCW	-12.93	0	PASS
-0.5 x OCW - 400kHz	-27.06	-27	PASS
0.5 x OCW + 400kHz	-28.38	-27	PASS
-0.5 x OCW -1200kHz	-45.29	-27	PASS
0.5 x OCW + 1200kHz	-38.67	-27	PASS

3.2.5 Tx Out of Band Emissions

Limit

The EUT emissions level in OOB domains for the Operating Channel and the Operational Frequency Band shall be less or equal to Table 15 spectrum mask.

Table 15: Emission limits in the Out Of Band domains

Domain	Frequency Range	RBW _{REF}	Max power limit
OOB limits applicable to Operational Frequency Band (See Figure 6)	$f \leq f_{\text{low_OFB}} - 400 \text{ kHz}$	10 kHz	-36 dBm
	$F_{\text{low_OFB}} - 400 \text{ kHz} \leq f \leq f_{\text{low_OFB}} - 200 \text{ kHz}$	1 kHz	-36 dBm
	$f_{\text{low}} - 200 \text{ kHz} \leq f < f_{\text{low_OFB}}$	1 kHz	See Figure 6
	$f = f_{\text{low_OFB}}$	1 kHz	0 dBm
	$f = f_{\text{high_OFB}}$	1 kHz	0 dBm
	$F_{\text{high_OFB}} < f \leq f_{\text{high_OFB}} + 200 \text{ kHz}$	1 kHz	See Figure 6
	$F_{\text{high_OFB}} + 200 \text{ kHz} \leq f \leq f_{\text{high_OFB}} + 400 \text{ kHz}$	1 kHz	-36 dBm
OOB limits applicable to Operating Channel (See Figure 5)	$F_{\text{high_OFB}} + 400 \text{ kHz} \leq f$	10 kHz	-36 dBm
	$f = f_c - 2.5 \times \text{OCW}$	1 kHz	-36 dBm
	$f_c - 2.5 \times \text{OCW} \leq f \leq f_c - 0.5 \times \text{OCW}$	1 kHz	See Figure 5
	$f = f_c - 0.5 \times \text{OCW}$	1 kHz	0 dBm
	$f = f_c + 0.5 \times \text{OCW}$	1 kHz	0 dBm
	$f_c + 0.5 \times \text{OCW} \leq f \leq f_c + 2.5 \times \text{OCW}$	1 kHz	See Figure 5
	$f = f_c + 2.5 \times \text{OCW}$	1 kHz	-36 dBm

NOTE: f is the measurement frequency.
 f_c is the Operating Frequency.
 $F_{\text{low_OFB}}$ is the lower edge of the Operational Frequency Band.
 $F_{\text{high_OFB}}$ is the upper edge of the Operational Frequency Band.
OCW is the operating channel bandwidth.

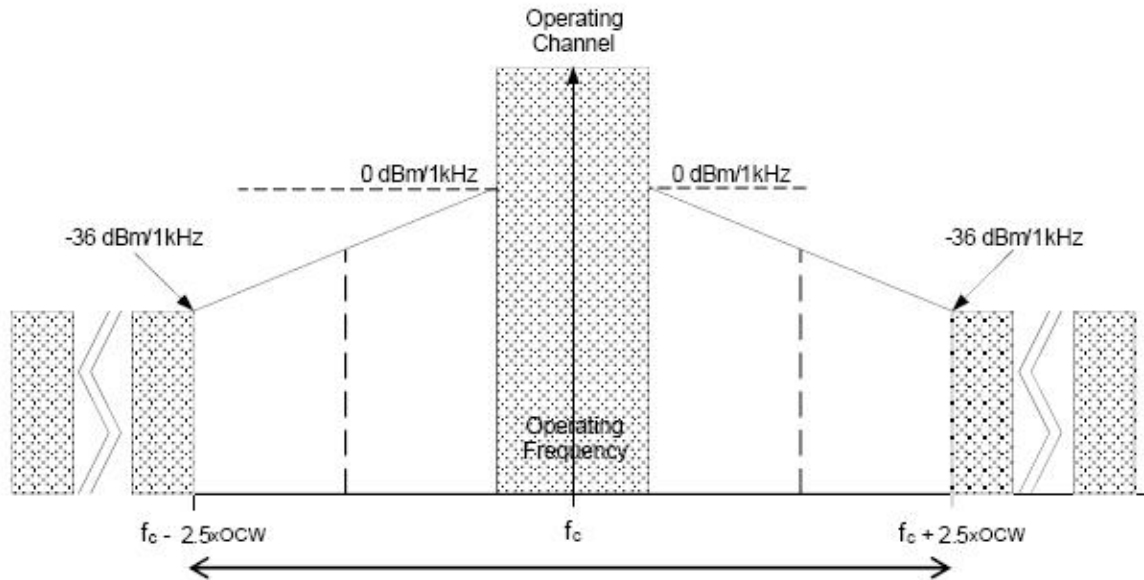


Figure 5: Out Of Band Domain for Operating Channel with reference BW

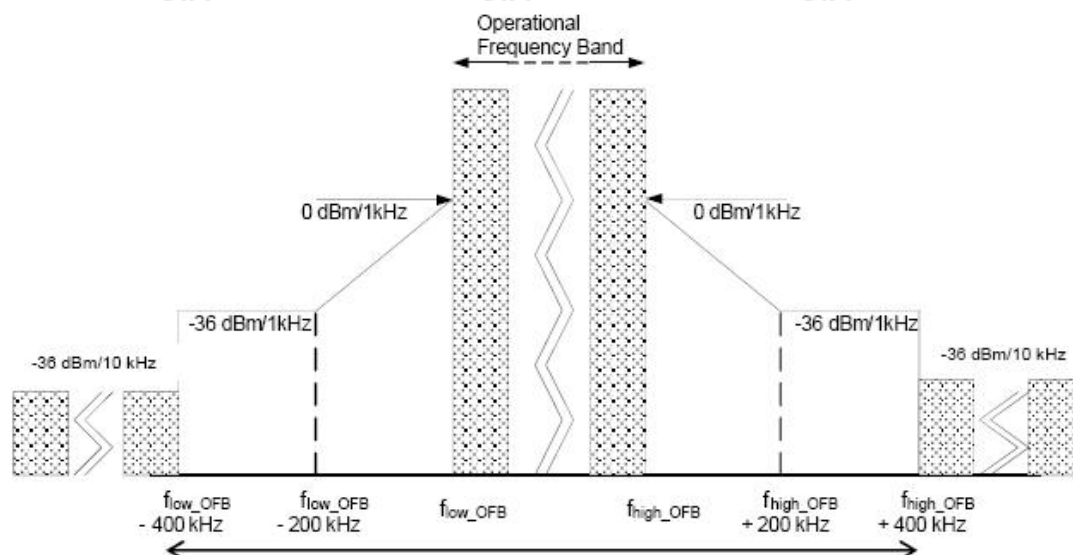


Figure 6: Out Of Band Domain for Operational Frequency Band with reference BW

Specific limits apply at frequencies immediately above and below the Operational Frequency Band as shown in Figure 6.

NOTE: f_{low_OFB} is the lower edge of the Operational Frequency Band.

f_{high_OFB} is the upper edge of the Operational Frequency Band.

Test Configuration



Test Procedure

1. Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 4 for the test conditions.
2. Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 5.11.3.2 for the measurement method.

Test Results

EUT OCB is less than 25kHz

3.2.6 ADJACENT CHANNEL POWER

Limit

Table 26: Adjacent channel power limits for transmitters with OCW $\leq$ 25 kHz

		Adjacent Channel power integrated over 0,7 x OCW	Alternate Adjacent Channel power integrated over 0,7 x OCW
OCW < 20 kHz	Normal test conditions	-20 dBm	-20 dBm
	Extreme test conditions	-15 dBm	-20 dBm
OCW $\geq$ 20 kHz	Normal test conditions	-37 dBm	-40 dBm
	Extreme test conditions	-32 dBm	-37 dBm

Test Configuration



Test Procedure

- Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 4 for the test conditions.
- Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 5.11.3.2 for the measurement method.

Test Results

Frequency(433.92MHz)

Normal Voltage and Normal temperature (AC220-240V, 25°C)

Reference BW	Offset from centre frequency(MHz)	Level(dBm)	Limit(dBm)	Margin(dB)
0.7*OCW	+OCW	-43.14	20	-23.14
0.7*OCW	-OCW	-40.42	20	-20.42
0.7*OCW	+2* OCW	-50.72	20	-30.72
0.7*OCW	-2* OCW	-49.11	20	-29.11

Lowest Voltage and Highest temperature (DC 4.223.7V, 55°C)

Reference BW	Offset from centre frequency(MHz)	Level(dBm)	Limit(dBm)	Margin(dB)
0.7*OCW	+OCW	-40.48	15	-25.48
0.7*OCW	-OCW	-43.41	15	-28.41
0.7*OCW	+2* OCW	-48.22	20	-28.22
0.7*OCW	-2* OCW	-47.05	20	-27.05

Highest Voltage and Highest temperature (DC 3.143.7V, 55°C)

Reference BW	Offset from centre frequency(MHz)	Level(dBm)	Limit(dBm)	Margin(dB)
0.7*OCW	+OCW	-40.57	15	-25.57
0.7*OCW	-OCW	-37.74	15	-22.74
0.7*OCW	+2* OCW	-45.61	20	-25.61
0.7*OCW	-2* OCW	-43.03	20	-23.03

Lowest Voltage and Lowest temperature (DC 4.223.7V, -20°C)

Reference BW	Offset from centre frequency(MHz)	Level(dBm)	Limit(dBm)	Margin(dB)
0.7*OCW	+OCW	-42.36	15	-27.36
0.7*OCW	-OCW	-36.11	15	-21.11
0.7*OCW	+2* OCW	-45.73	20	-25.73
0.7*OCW	-2* OCW	-44.33	20	-24.33

Highest Voltage and Lowest temperature (DC 3.143.7V, -20°C)

Reference BW	Offset from centre frequency(MHz)	Level(dBm)	Limit(dBm)	Margin(dB)
0.7*OCW	+OCW	-44.72	15	-29.72
0.7*OCW	-OCW	-38.17	15	-23.17
0.7*OCW	+2* OCW	-47.17	20	-27.17
0.7*OCW	-2* OCW	-45.44	20	-25.44

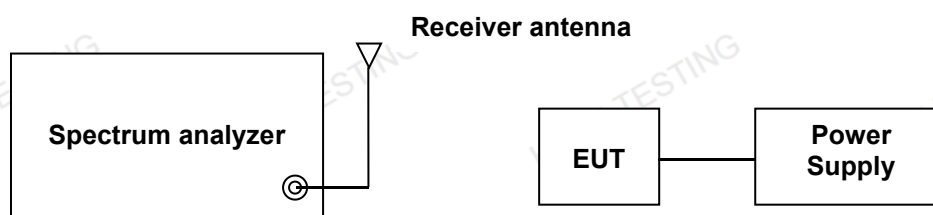
3.2.7 TX behaviour under Low Voltage Conditions

Limit

The equipment shall either:

- a) remain in the Operating Channel OC without exceeding any applicable limits (e.g. Duty Cycle); or b) reduce its effective radiated power below the Spurious Emission limits without exceeding any applicable limits (e.g. Duty Cycle); or
- c) shut down, (ceasing function); as the voltage falls below the manufacturers declared operating voltage.

Test Configuration



Test Procedure

- 5. Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 4 for the test conditions.
- 6. Please refer to ETSI EN 300 220-1 V3.1.1 (2017-02) Sub-clause 5.12.3.2 for the measurement method.

Test Results

Voltage Supply(Vdc)	Measurement Frequency(MHz)
3.3	433.92
2.7	433.83
2.0	No emission

3.3 Receivers conformance requirements

3.3.1 Blocking

Limit

The blocking levels at the specified frequency offsets shall be equal to or greater than the limits show in below tables for each receiver category.

Limits for receiver category 3

Requirement	Limits
	Receiver category 3
Blocking at ± 2 MHz from OC edge f_{high} and f_{low}	≥ -80 dBm
Blocking at ± 10 MHz from OC edge f_{high} and f_{low}	≥ -60 dBm
Blocking at ± 5 % of Centre Frequency or 15 MHz, whichever is the greater	≥ -60 dBm

Limits for receiver category 2

Requirement	Limits
	Receiver category 2
Blocking at ± 2 MHz from OC edge f_{high} and f_{low}	≥ -69 dBm
Blocking at ± 10 MHz from OC edge f_{high} and f_{low}	≥ -44 dBm
Blocking at ± 5 % of Centre Frequency or 15 MHz, whichever is the greater	≥ -44 dBm

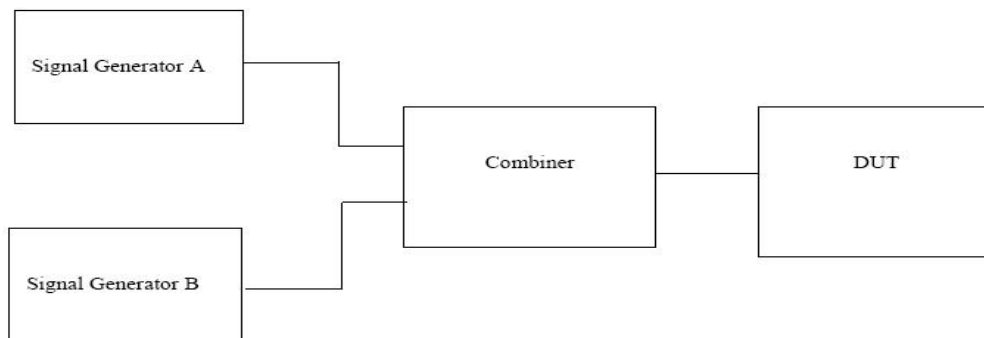
Limits for receiver category 1.5

Requirement	Limits
	Receiver category 1.5
Blocking at ± 2 MHz from OC edge f_{high} and f_{low}	≥ -43 dBm
Blocking at ± 10 MHz from OC edge f_{high} and f_{low}	≥ -33 dBm
Blocking at ± 5 % of Centre Frequency or 15 MHz, whichever is the greater	≥ -33 dBm

Limits for receiver category 1

Requirement	Limits
	Receiver category 1
Blocking at ± 2 MHz from Centre Frequency	≥ -20 dBm
Blocking at ± 10 MHz from Centre Frequency	≥ -20 dBm
Blocking at ± 5 % of Centre Frequency or 15 MHz, whichever is the greater	≥ -20 dBm

Test Configuration



TEST PROCEDURE

1. Please refer to ETSI EN 300 220-1 V 2.4.1 (2012-05) Sub-clause 6 for the test conditions.
2. Please refer to ETSI EN 300 220-1 V 2.4.1 (2012-05) Sub-clause 8.4.2 for the measurement method.

TEST RESULTS

Test Channel	Blocking Signal Frequency(MHz)	Blocking Signal Power Level (dBm)	Limit (dBm)	Result
Low	431.92	-54.75	-69	PASS
	435.92	-44.49	-69	PASS
	423.92	-28.76	-44	PASS
High	443.92	-24.06	-44	PASS
	412.22	-29.44	-44	PASS
	455.62	-28.39	-44	PASS

4 External and Internal Photos of the EUT



Photo 1



Photo 2



Photo 3



Photo 4

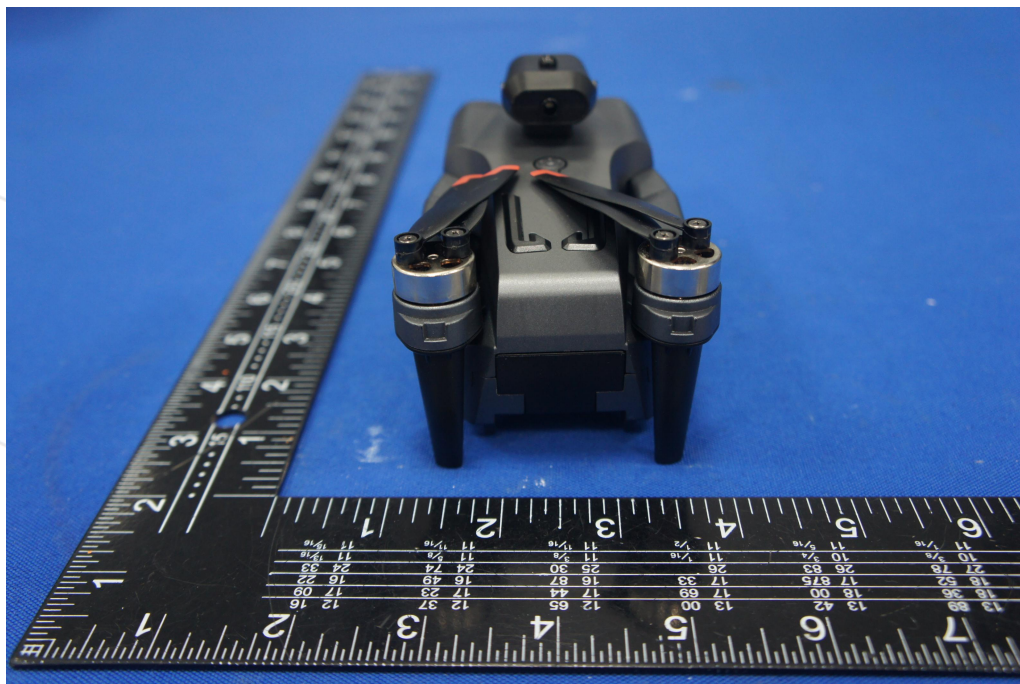


Photo 5



Photo 6



Photo 7



Photo 8

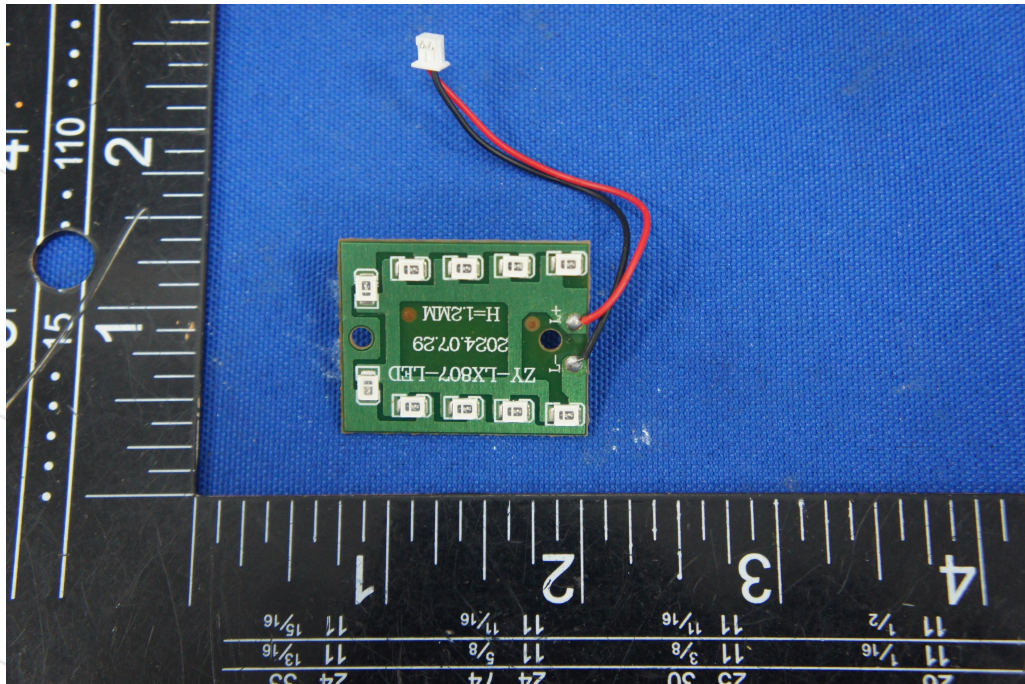


Photo 9

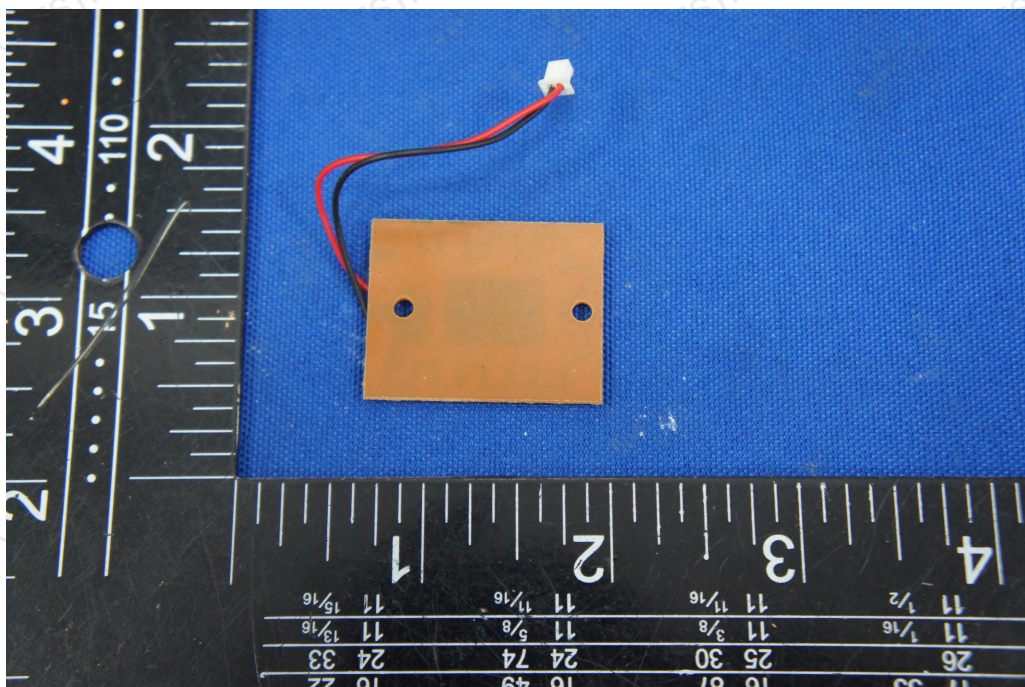


Photo 10

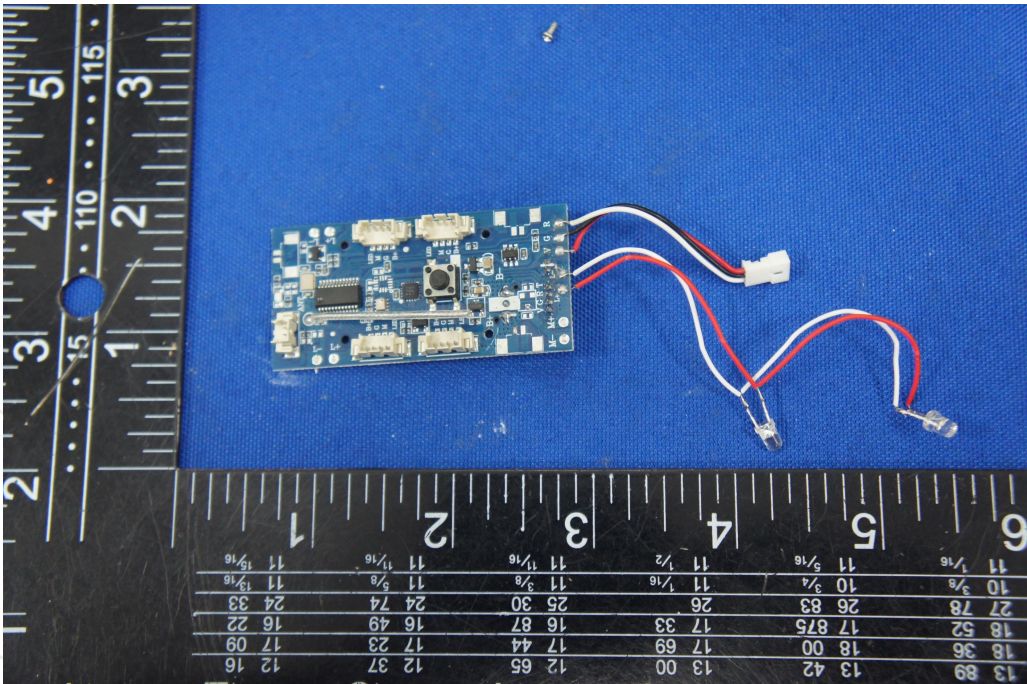


Photo 11

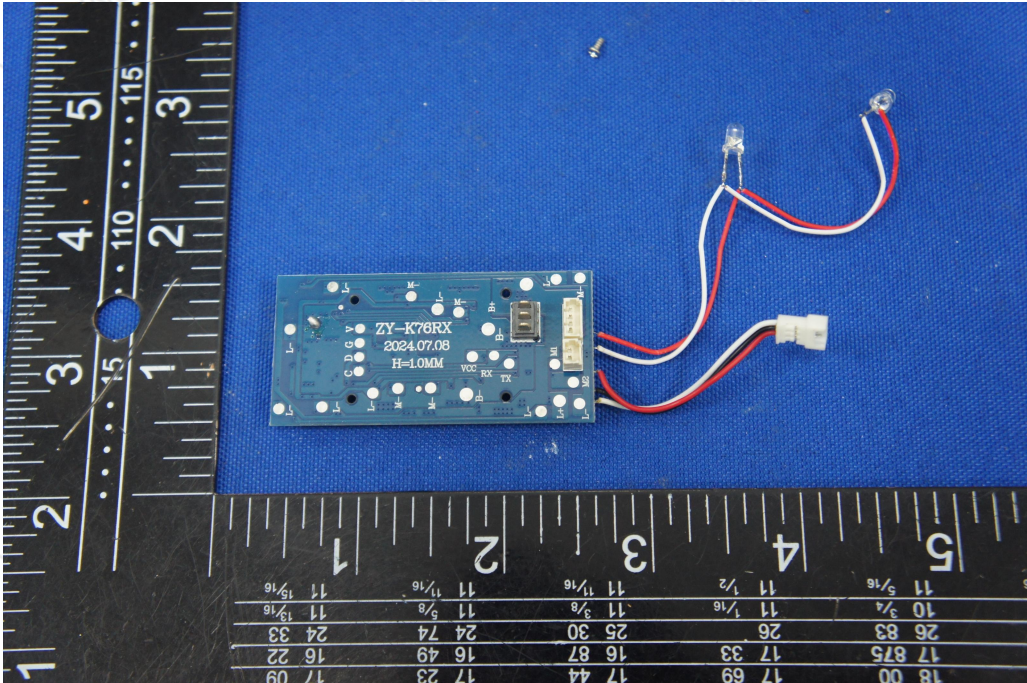


Photo 12

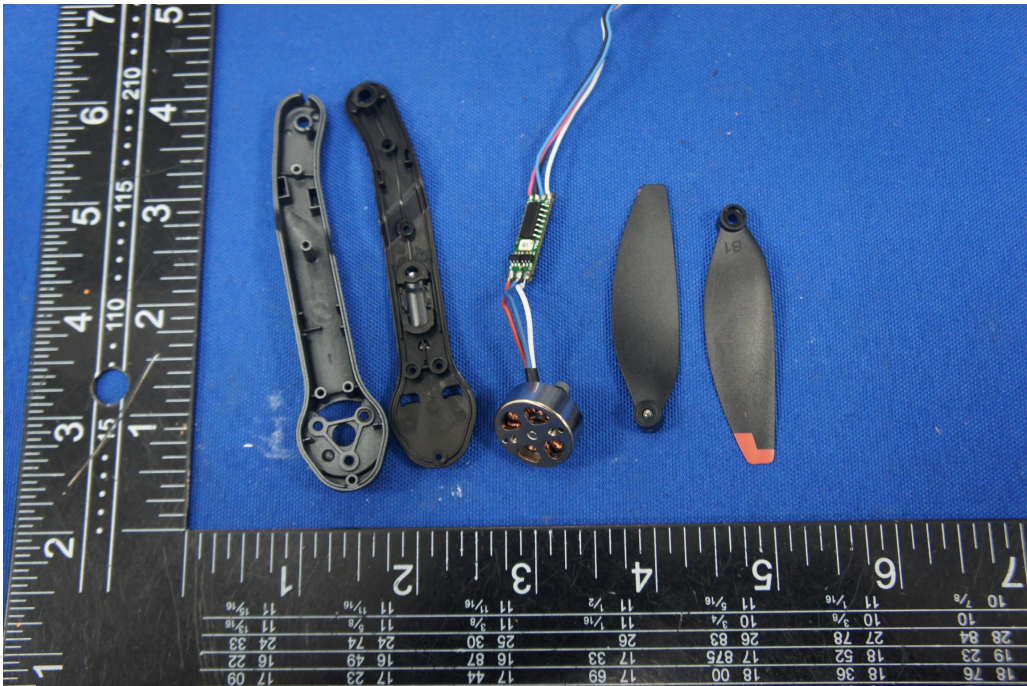


Photo 13



Photo 14

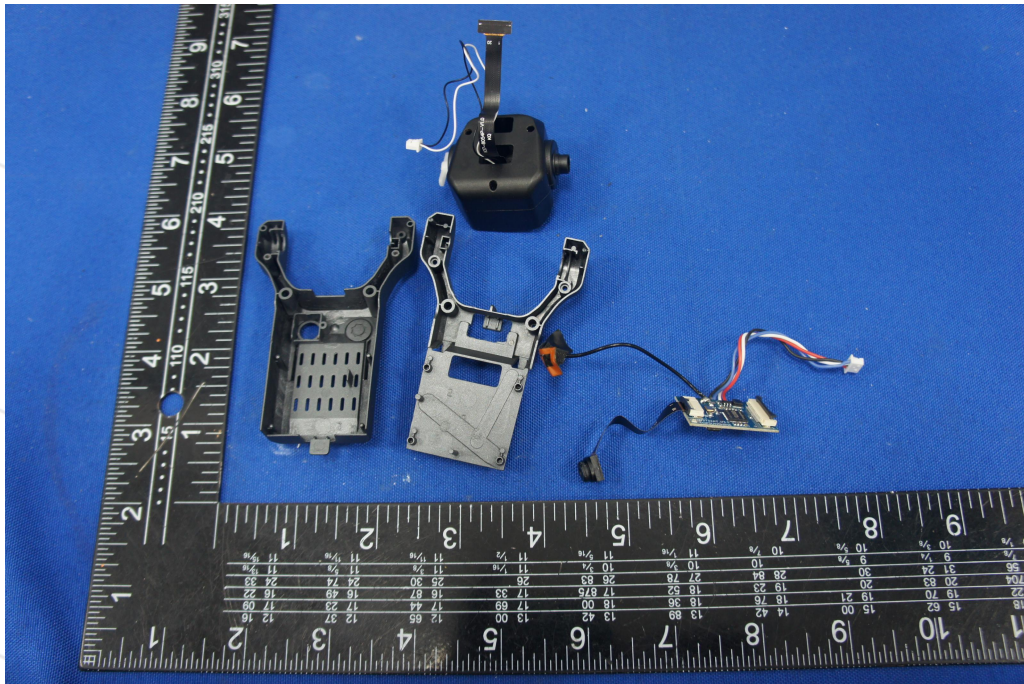


Photo 15



Photo 16

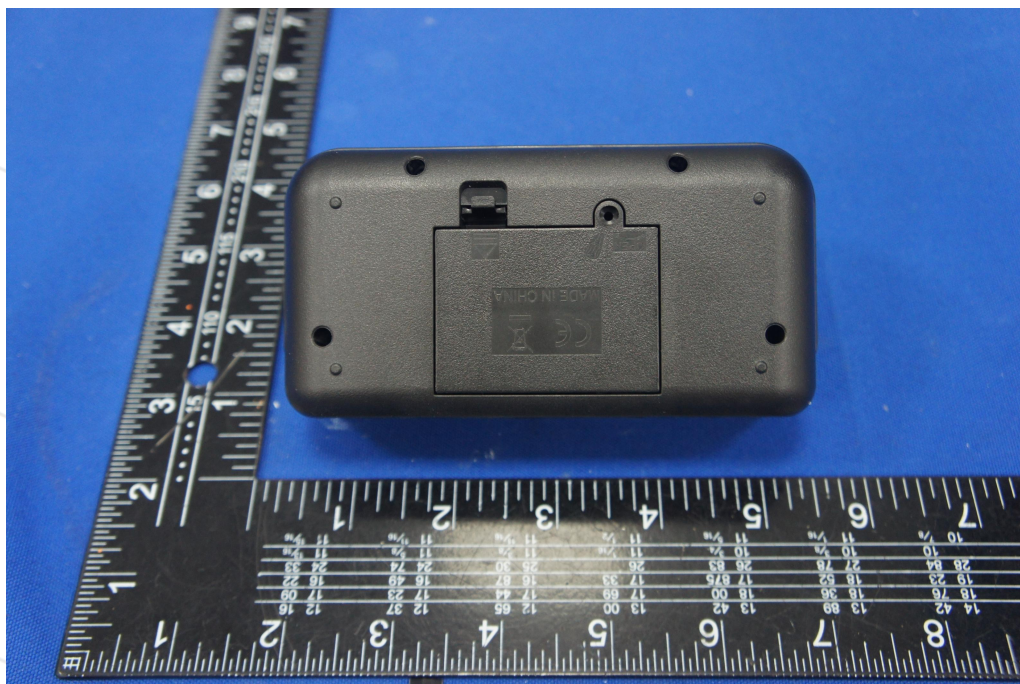


Photo 17



Photo 18

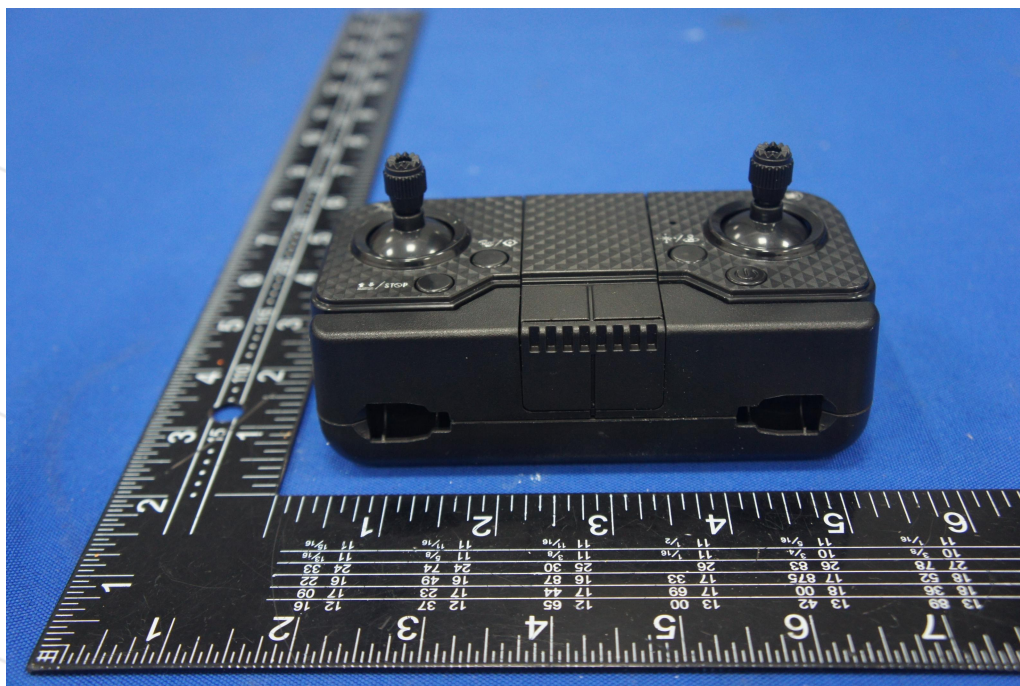


Photo 19

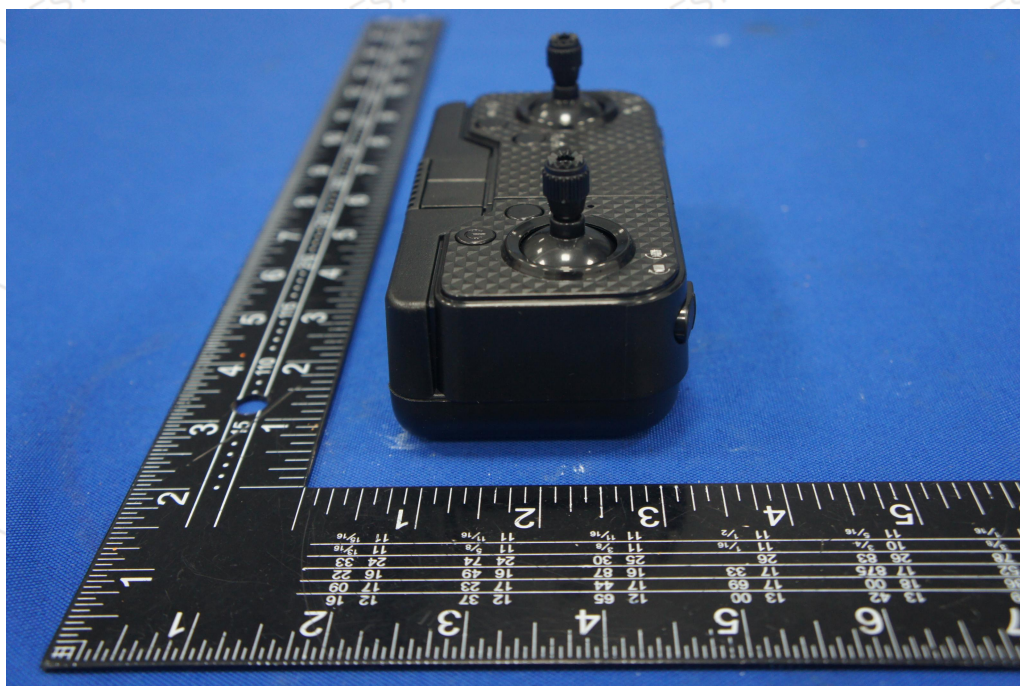


Photo 20

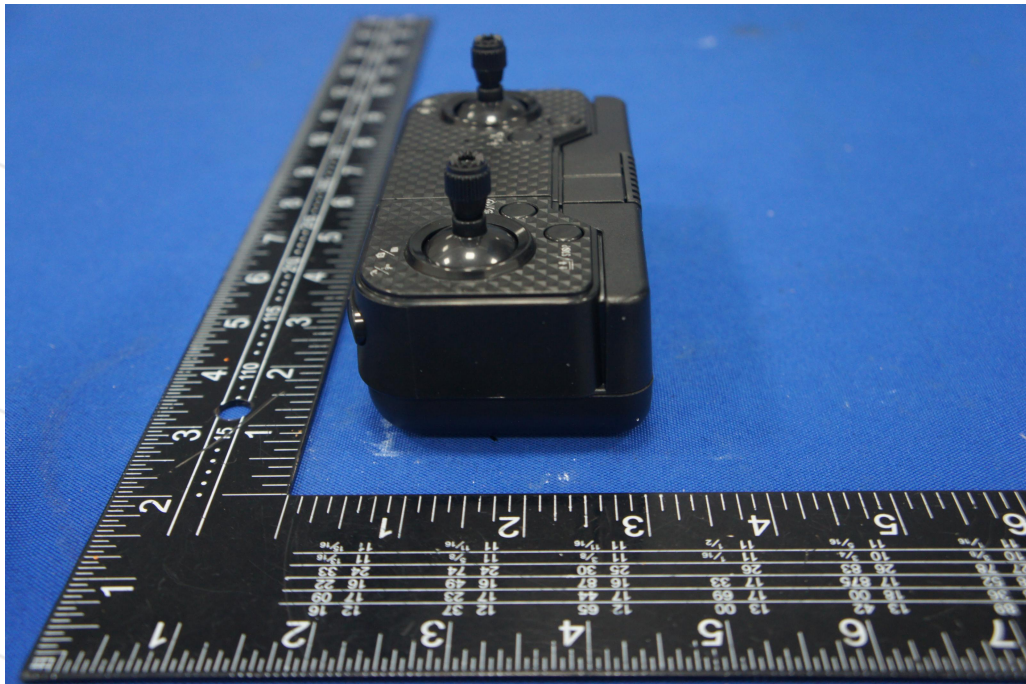


Photo 21

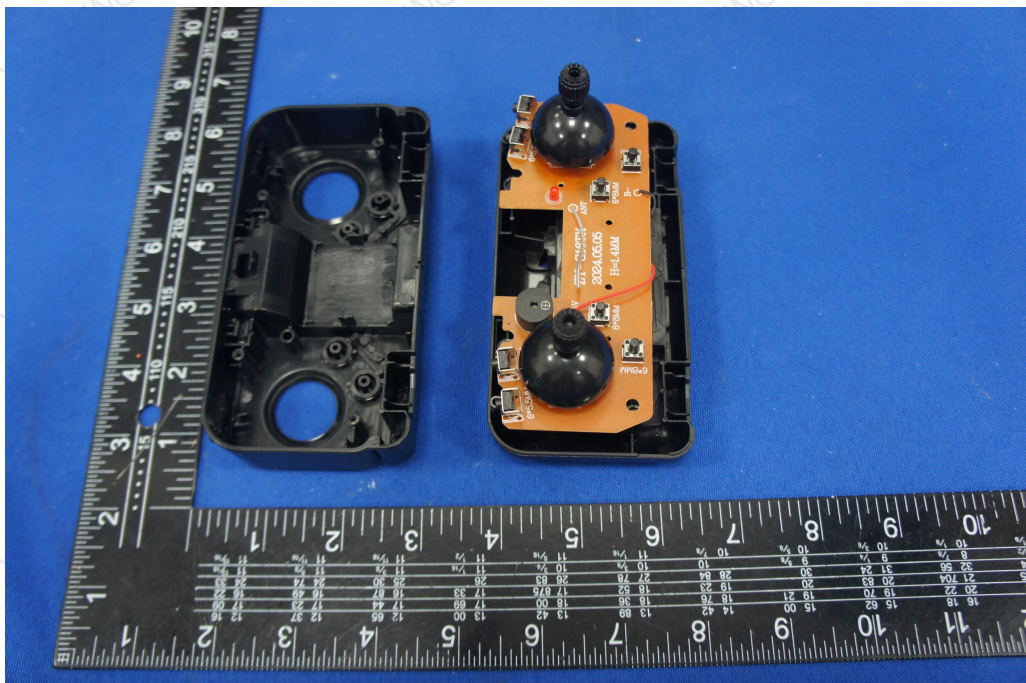


Photo 22

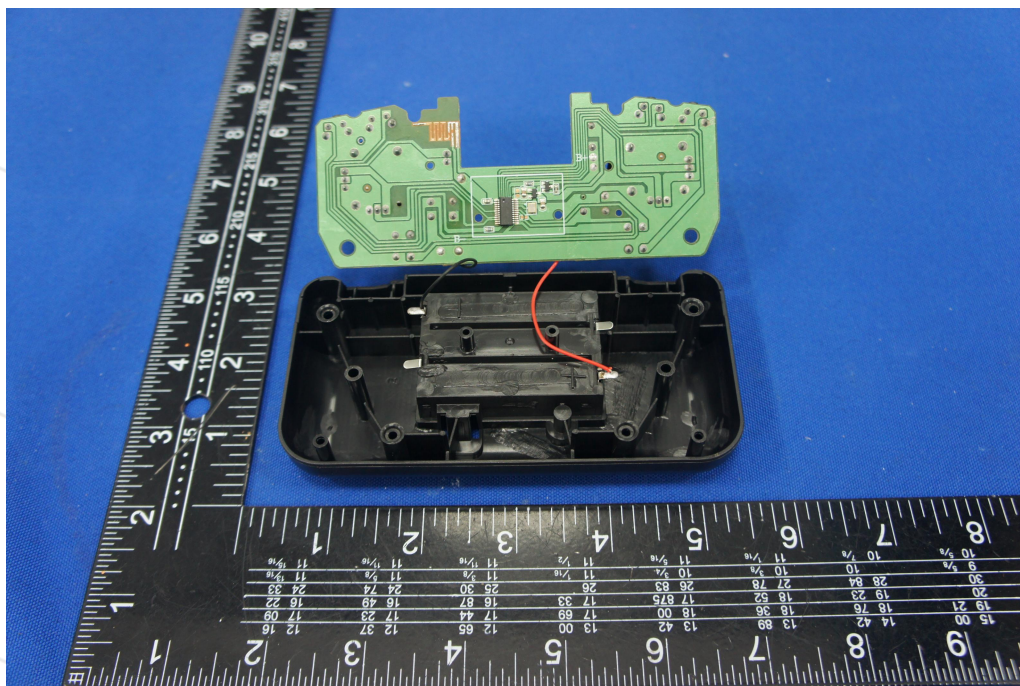


Photo 23

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