



TEST REPORT

For EMC

Report No..... : CHTW25110007

Project No : SHT2509020804W

FCC ID : 2BSSQ-20166RX

Applicant's name : Dongguan Silverlit Toys Co., LTD

Address..... : No. 292, Huaide Village, Humen Town, Dongguan City, Guangdong Province,523926 China

Product Name : RC28 ZOOM,RC28T ZOOM

Trade Mark..... : -

Model No..... : 20166

Listed Model(s) : 20167

Standard : **FCC CFR Title 47 Part 15 Subpart B**

Date of receipt of test sample.....: 2025/10/17

Date of testing.....: 2025/10/17- 2025/10/31

Date of issue.....: 2025/11/6

Result..... : **Pass**



Compiled by
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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

Test Report Form No. : R0066

Test Report Form(s) Originator : Shenzhen Huatongwei International Inspection Co., Ltd.

Master TRF : Dated 2025-07

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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 B](#) - Unintentional Radiators

[ANSI C63.4: 2014](#) – American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz

1.2. Report version information

Revision No.	Date of issue	Description
N/A	2025-11-06	Original

2. TEST DESCRIPTION

Section	Test Item	Section in CFR 47	Result ^{#1}	Test Engineer
5.1	Conducted Emissions	15.107(a)	PASS	JUNXU.LIN
5.2	Radiated Emissions	15.109(a)	PASS	Yifan Wang

Note:

#1: The test result does not include measurement uncertainty value

3. SUMMARY

3.1. Client Information

Applicant:	Dongguan Silverlit Toys Co., LTD
Address:	No. 292, Huaide Village, Humen Town, Dongguan City, Guangdong Province, 523926 China
Manufacturer:	Dongguan Silverlit Toys Co., LTD
Address:	No. 292, Huaide Village, Humen Town, Dongguan City, Guangdong Province, 523926 China
Factory:	Dongguan Silverlit Toys Co., LTD
Address:	No. 292, Huaide Village, Humen Town, Dongguan City, Guangdong Province, 523926 China

3.2. Product Description

Main unit information:			
Product Name:	RC28 ZOOM,RC28T ZOOM		
Trade Mark:	-		
Model No.:	20166		
Listed Model(s):	20167		
Model difference	Product Name	Model No	Plastic shell
	RC28 ZOOM	20166	
	RC28T ZOOM	20167	
Power supply:	DC 3.7V from Battery		
Hardware version:	V1.0		
Software version:	V1.0		
Accessory unit information:			
Battery information:	3.7V 150mAh 0.555Wh		

3.3. Radio Specification Description

Operation frequency:	2420-2465MHz
Modulation:	GFSK

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	
Connect information:	Tel: 400-963-0755 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. Descriptions of test mode

Test mode O1	The car(Model: 20166) is controlled by a remote control to operate
Test mode O2	The car(Model: 20167) is controlled by a remote control to operate
Test mode O3	Charging mode

Pre-scan above all test mode, found below test mode which it was worse case mode, so only show the test data for worse case mode on the test report

Test Item	Test mode for worse case
Conducted Emissions	Test mode O3
Radiated Emissions	Test mode O1/O2

4.2. Support unit used in test configuration

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?			
✓ Yes			
Item	Equipment	Trade Name	Model No.
1	Adapter (provided by the laboratory)	-	HW-100225C00
2.	Remote control		112726

4.3. Environmental conditions

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

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

4.4. Statement of the measurement uncertainty

No.	Test Items	Measurement Uncertainty
1	AC Conducted Emission	3.21dB
2	Radiated 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.

4.5. Equipments Used during the Test

● EMC Test Software					
Used	Test Item	Software Name	Manufacturer	Equipment No.	Version
●	Conducted Emission	EMC32	R&S	HTWER012	V10.60.20
●	Radiated Emission	EMC32	R&S	HTWER012	V10.60.20

● 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	2025/8/6	2026/8/5
●	Artificial Mains	SCHWARZBECK	HTWE0113	NNLK 8121	573	2025/8/6	2026/8/5
●	Protection Network	SCHWARZBECK	HTWE0567	VTSD9561FN	00899	2025/8/6	2026/8/5
●	ISN	FCC	HTWE0148	FCC-TLISN-T2-02	20371	2025/8/6	2026/8/5
●	ISN	FCC	HTWE0150	FCC-TLISN-T8-02	20375	2025/8/6	2026/8/5

● 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	2025/8/6	2026/8/5
●	Ultra-Broadband Antenna	SCHWARZBECK	HTWE0119	VULB9163	546	2023/2/22	2026/2/21
●	Pre-Amplifier	SCHWARZBECK	HTWE0295	BBV 9742	/	2025/5/26	2026/5/25
●	CMAD	SCHWARZBECK	HTWE0537	CMAD1614	1614-530	2025/8/4	2026/8/3

● 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)
●	Full-Anechoic Chamber	Albatross projects	HTWE0122	SAC-3m-01	C11122	2023/4/17	2026/4/16
●	Spectrum Analyzer	R&S	HTWE0098	FSP40	100597	2025/8/6	2026/8/5
●	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	HTWE0551	SCU18F	100855	2025/5/26	2026/5/25

5. TEST CONDITIONS AND RESULTS

5.1. Conducted Emissions

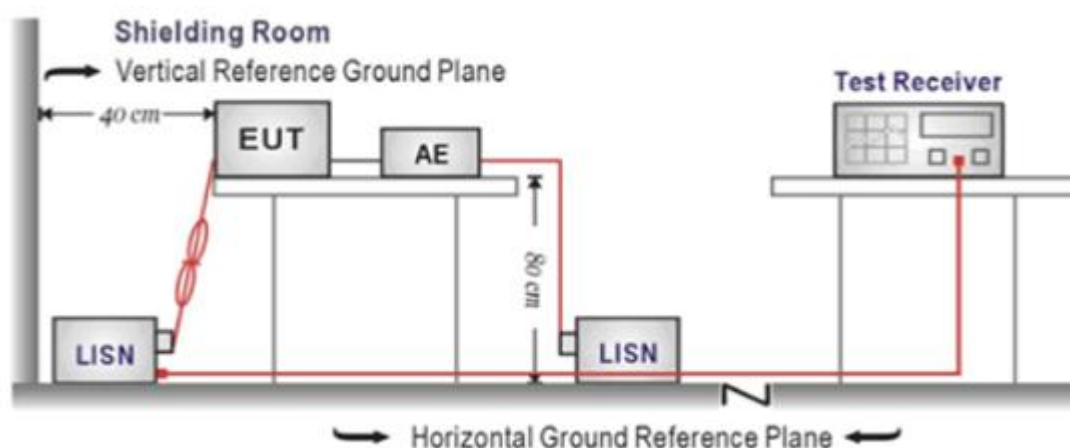
LIMIT

FCC CFR Title 47 Part 15 Subpart B Section 15.107:

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 C63.4:2014
2. The EUT was placed on a plat form 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 impedance stabilization network (LISN). The LISN provides a 50ohm / 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:

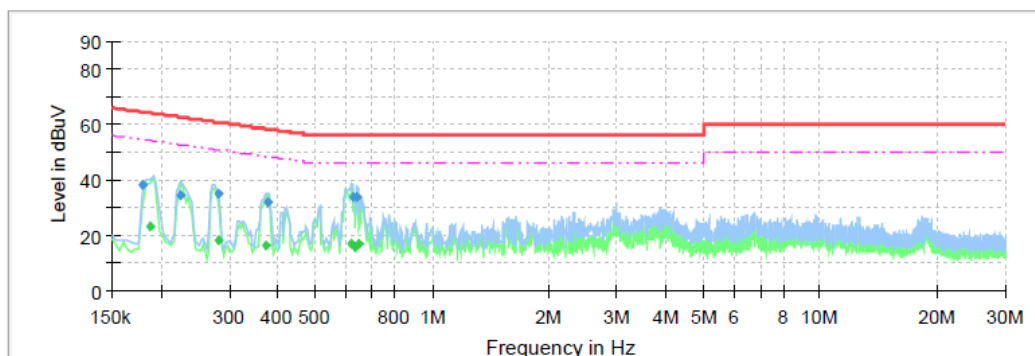
Please refer to the clause 3.3

TEST RESULTS

☒ Passed ☐ Not Applicable

Test Line:

L

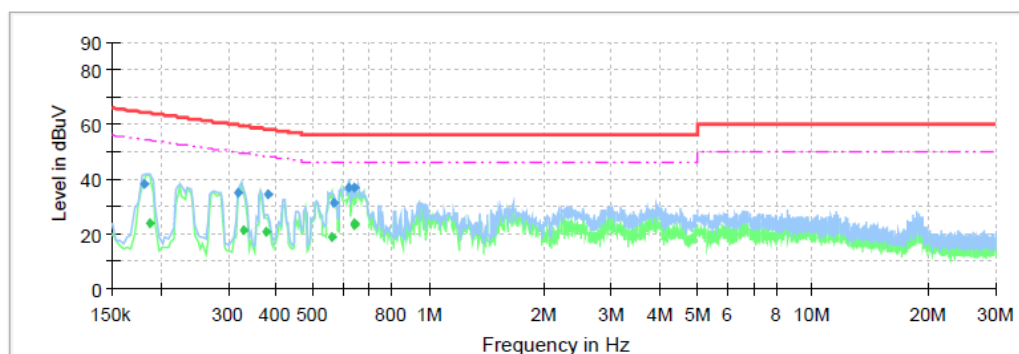


Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Corr. (dB)
0.1805	37.97	---	64.46	26.49	L1	10.4
0.1885	---	23.17	54.10	30.93	L1	10.3
0.2261	34.14	---	62.59	28.45	L1	10.2
0.2824	34.77	---	60.75	25.98	L1	10.0
0.2826	---	17.88	50.74	32.86	L1	10.0
0.3751	---	16.33	48.39	32.06	L1	10.0
0.3754	32.09	---	58.38	26.29	L1	10.0
0.6216	---	16.79	46.00	29.21	L1	10.2
0.6240	33.69	---	56.00	22.31	L1	10.2
0.6360	---	15.45	46.00	30.55	L1	10.2
0.6376	33.58	---	56.00	22.42	L1	10.2
0.6470	---	17.00	46.00	29.00	L1	10.2

Test Line:

N



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Corr. (dB)
0.1808	38.27	---	64.45	26.18	N	10.1
0.1888	---	23.83	54.09	30.26	N	10.1
0.3189	34.96	---	59.74	24.78	N	10.3
0.3309	---	20.98	49.43	28.45	N	10.3
0.3759	---	20.56	48.37	27.81	N	10.3
0.3799	34.44	---	58.28	23.84	N	10.3
0.5622	---	18.96	46.00	27.04	N	10.3
0.5662	31.24	---	56.00	24.76	N	10.3
0.6216	37.11	---	56.00	18.89	N	10.3
0.6376	---	23.36	46.00	22.64	N	10.3
0.6392	---	23.74	46.00	22.26	N	10.3
0.6392	36.71	---	56.00	19.29	N	10.3

5.2. Radiated Emissions

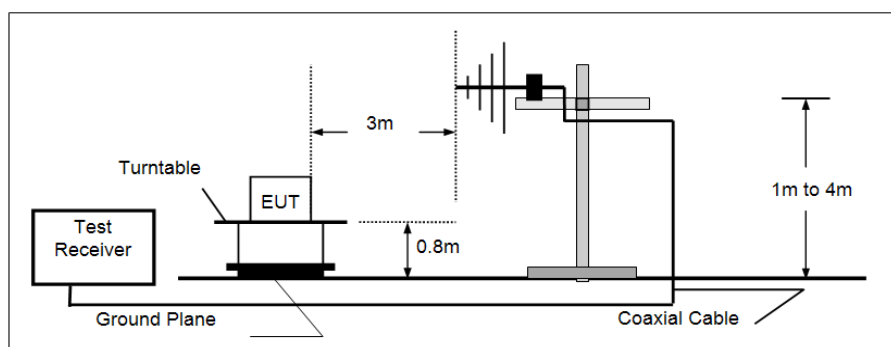
LIMIT

FCC CFR Title 47 Part 15 Subpart B Section 15.109

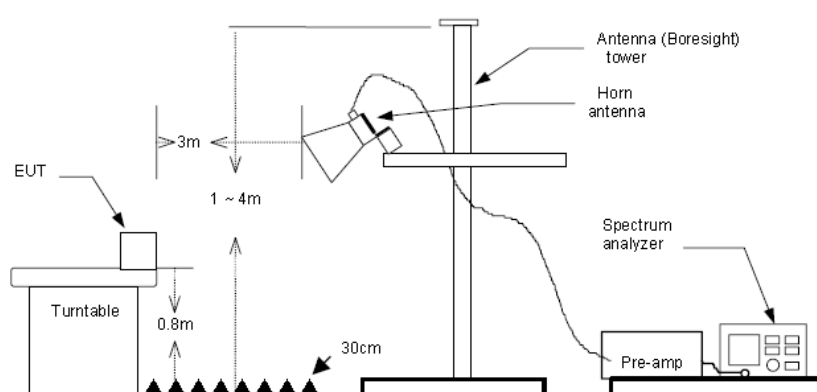
Frequency	Limit (dBuV/m @3m)	Value
30MHz-88MHz	40.00	Quasi-peak
88MHz-216MHz	43.50	Quasi-peak
216MHz-960MHz	46.00	Quasi-peak
960MHz-1GHz	54.00	Quasi-peak
Above 1GHz	54.00	Average
	74.00	Peak

TEST CONFIGURATION

➤ 30MHz ~ 1GHz



➤ Above 1GHz



TEST PROCEDURE

1. The EUT was tested according to ANSI C63.4:2014.
2. The EUT is placed on a turn table which is 0.8 meter above ground.
3. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
4. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
5. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna.
6. Use the following spectrum analyzer settings
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Below 1GHz,
RBW=120KHz, VBW=300KHz, 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.
 - (3) From 1GHz to 5th harmonic, RBW=1MHz, VBW=3MHz

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

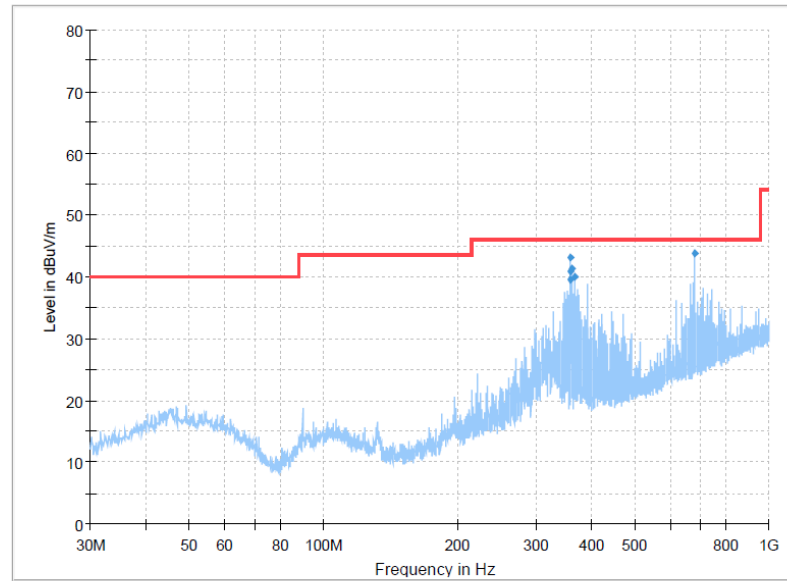
☒ **Passed** ☐ **Not Applicable**

Note: Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
The emission levels of frequency above 6GHz are very lower than limit and not show in test report.

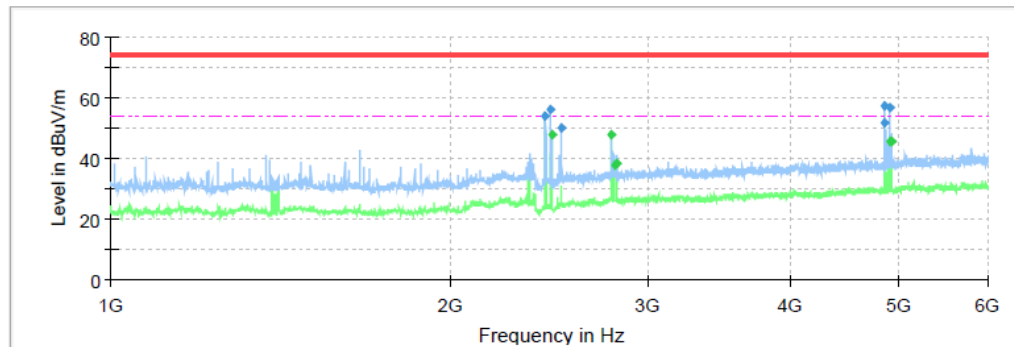
Test mode O1

Polarization:

Horizontal

**Final Result**

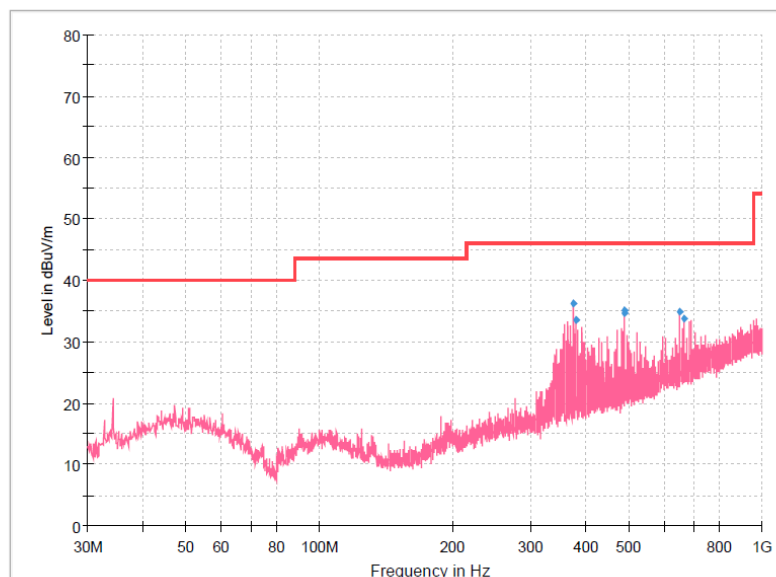
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
358.7088	40.79	46.00	5.21	100.0	H	86.0	-5.8
359.3150	43.16	46.00	2.84	100.0	H	128.0	-5.9
359.6788	39.58	46.00	6.42	100.0	H	279.0	-5.9
360.8913	41.39	46.00	4.61	100.0	H	253.0	-5.9
366.5900	39.96	46.00	6.04	100.0	H	128.0	-5.7
679.7788	43.75	46.00	2.25	100.0	H	102.0	2.1

**Final Result**

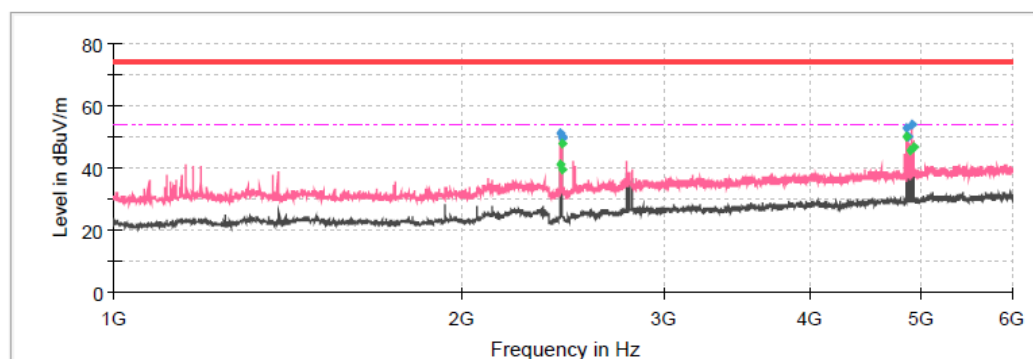
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2430.0000	53.97	---	74.00	20.03	150.0	H	77.0	-9.3
2455.6250	56.06	---	74.00	17.94	100.0	H	136.0	-9.4
2461.2500	---	47.86	54.00	6.14	100.0	H	136.0	-9.4
2509.3750	50.07	---	74.00	23.93	100.0	H	260.0	-9.4
2781.8750	---	47.52	54.00	6.48	100.0	H	158.0	-8.2
2795.6250	---	37.66	54.00	16.34	100.0	H	68.0	-8.1
2815.0000	---	38.28	54.00	15.72	100.0	H	169.0	-8.0
4857.5000	51.94	---	74.00	22.06	150.0	H	247.0	-2.6
4859.3750	57.13	---	74.00	16.87	100.0	H	260.0	-2.6
4915.6250	---	45.43	54.00	8.57	150.0	H	292.0	-2.4
4915.6250	56.46	---	74.00	17.54	150.0	H	292.0	-2.4
4922.5000	---	45.43	54.00	8.57	150.0	H	292.0	-2.4

Polarization:

Vertical

**Final Result**

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
375.9263	36.23	46.00	9.77	100.0	V	147.0	-5.2
381.1400	33.56	46.00	12.44	100.0	V	155.0	-5.0
489.1738	35.01	46.00	10.99	100.0	V	147.0	-2.2
489.7800	34.53	46.00	11.47	100.0	V	169.0	-2.2
653.9525	34.83	46.00	11.17	100.0	V	83.0	1.6
667.5325	33.78	46.00	12.22	100.0	V	118.0	1.9

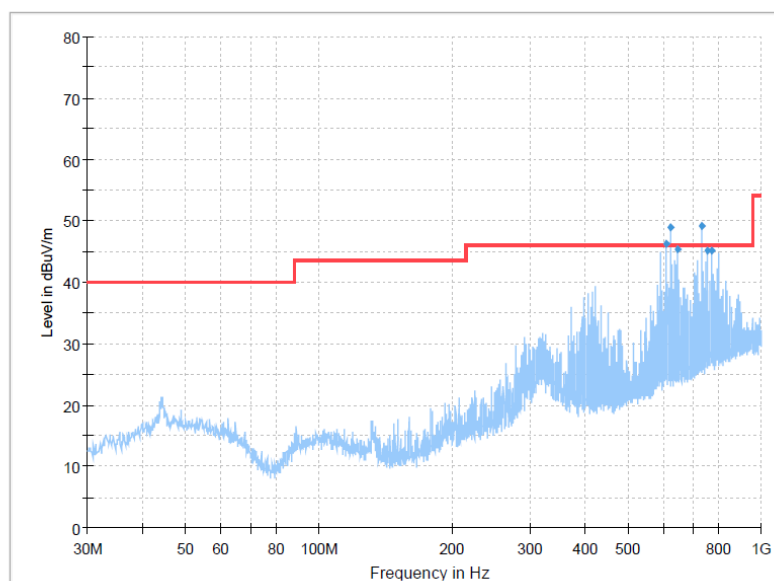
**Final Result**

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2434.3750	---	41.30	54.00	12.70	100.0	V	137.0	-9.3
2434.3750	50.96	---	74.00	23.05	100.0	V	137.0	-9.3
2443.7500	---	47.83	54.00	6.17	150.0	V	226.0	-9.4
2443.7500	49.53	---	74.00	24.47	150.0	V	226.0	-9.4
2447.5000	49.92	---	74.00	24.08	100.0	V	10.0	-9.4
2447.5000	---	39.25	54.00	14.75	100.0	V	10.0	-9.4
4864.3750	---	50.21	54.00	3.79	150.0	V	238.0	-2.6
4865.0000	52.82	---	74.00	21.18	150.0	V	238.0	-2.6
4875.6250	50.25	---	74.00	23.75	100.0	V	250.0	-2.5
4888.1250	---	45.55	54.00	8.45	150.0	V	122.0	-2.5
4918.7500	53.85	---	74.00	20.15	150.0	V	7.0	-2.4
4922.5000	---	46.41	54.00	7.59	150.0	V	7.0	-2.4

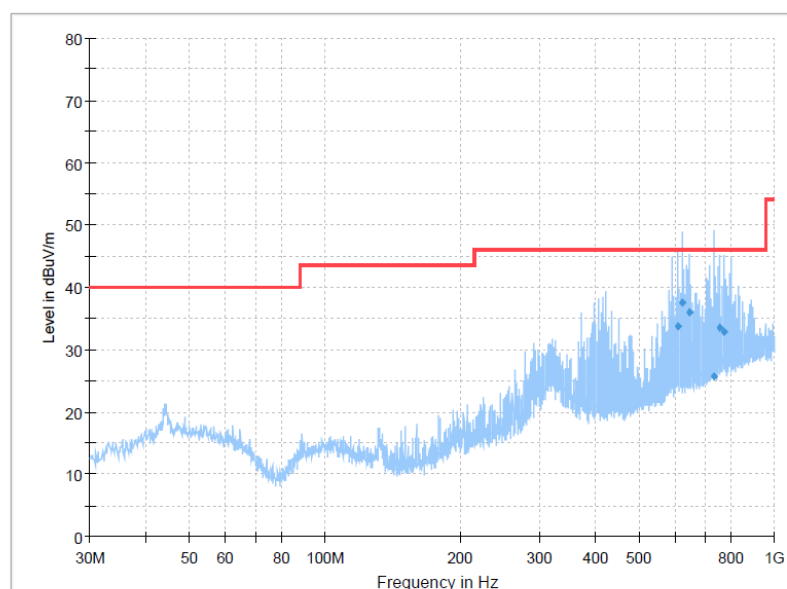
Test mode O2

Polarization:

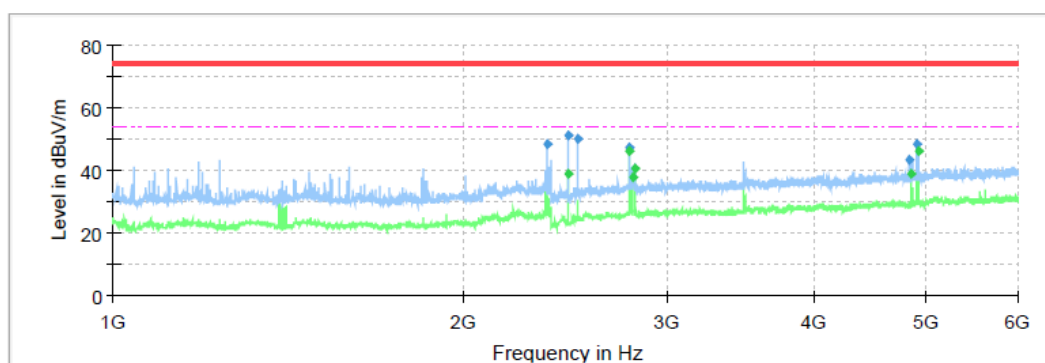
Horizontal

**Final Result**

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
608.6050	46.24	46.00	-0.24	100.0	H	236.0	1.1
624.9738	48.97	46.00	-2.97	100.0	H	226.0	1.2
646.4350	45.34	46.00	0.66	100.0	H	226.0	1.5
735.0688	49.14	46.00	-3.14	100.0	H	210.0	3.3
755.0750	45.19	46.00	0.81	100.0	H	236.0	3.9
771.2013	45.13	46.00	0.87	100.0	H	226.0	4.1

**Final Result**

Frequency (MHz)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
608.6650	33.77	46.00	12.23	100.0	H	236.0	1.1
624.7538	37.60	46.00	8.40	100.0	H	226.0	1.2
646.2950	36.01	46.00	9.99	100.0	H	226.0	1.6
735.3288	25.59	46.00	20.41	100.0	H	210.0	3.3
755.3750	33.61	46.00	12.39	100.0	H	236.0	3.9
771.3413	32.82	46.00	13.18	100.0	H	226.0	4.1

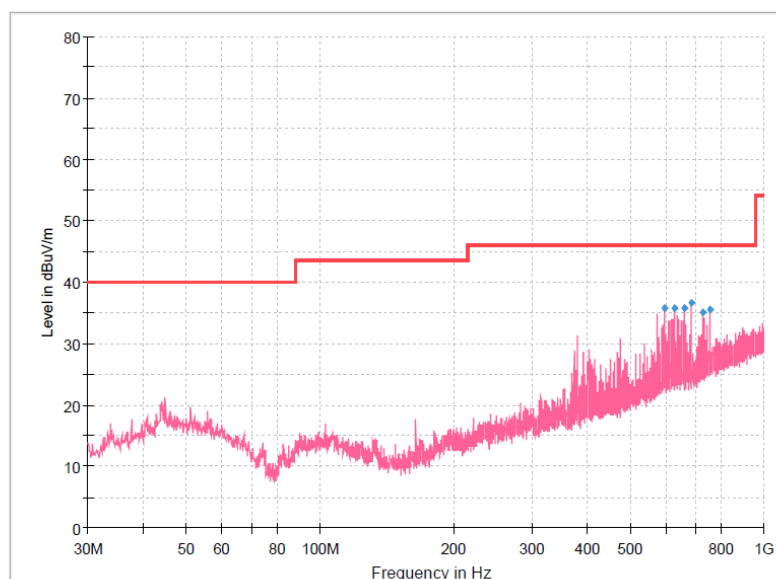


Final Result

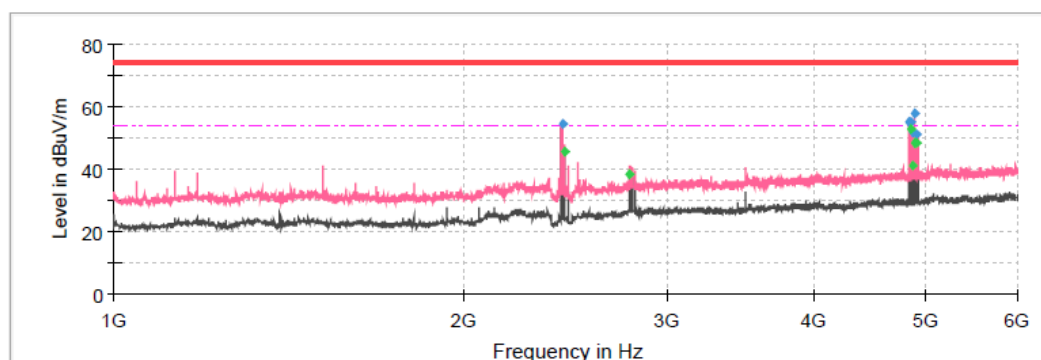
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2361.8750	48.11	---	74.00	25.89	100.0	H	284.0	-9.2
2465.6250	---	39.02	54.00	14.98	150.0	H	292.0	-9.4
2465.6250	51.15	---	74.00	22.85	150.0	H	292.0	-9.4
2506.8750	49.96	---	74.00	24.04	100.0	H	78.0	-9.4
2781.8750	---	45.85	54.00	8.15	100.0	H	247.0	-8.2
2781.8750	47.18	---	74.00	26.82	100.0	H	247.0	-8.2
2795.6250	---	38.06	54.00	15.94	100.0	H	112.0	-8.1
2815.0000	---	40.35	54.00	13.65	100.0	H	89.0	-8.0
4848.1250	43.55	---	74.00	30.45	100.0	H	157.0	-2.6
4864.3750	---	38.79	54.00	15.21	100.0	H	225.0	-2.6
4921.8750	48.55	---	74.00	25.45	150.0	H	0.0	-2.4
4922.5000	---	46.34	54.00	7.66	150.0	H	0.0	-2.4

Polarization:

Vertical

**Final Result**

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
597.5713	35.81	46.00	10.19	100.0	V	262.0	0.8
627.0350	35.80	46.00	10.20	100.0	V	66.0	1.2
660.6213	35.75	46.00	10.25	100.0	V	240.0	1.8
687.5388	36.67	46.00	9.33	100.0	V	80.0	2.1
729.6125	35.06	46.00	10.94	100.0	V	299.0	3.2
753.0138	35.44	46.00	10.56	100.0	V	350.0	3.9

**Final Result**

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2431.8750	54.31	---	74.00	19.69	100.0	V	328.0	-9.3
2444.3750	---	45.68	54.00	8.32	150.0	V	122.0	-9.4
2781.8750	---	38.57	54.00	15.43	150.0	V	305.0	-8.2
4848.1250	55.09	---	74.00	18.91	100.0	V	65.0	-2.6
4860.0000	54.88	---	74.00	19.12	100.0	V	65.0	-2.6
4860.6250	---	52.82	54.00	1.19	100.0	V	65.0	-2.6
4867.5000	51.78	---	74.00	22.22	150.0	V	88.0	-2.5
4867.5000	---	41.14	54.00	12.86	150.0	V	88.0	-2.5
4887.5000	57.55	---	74.00	16.45	100.0	V	192.0	-2.5
4889.3750	---	48.14	54.00	5.86	100.0	V	192.0	-2.5
4921.8750	---	48.21	54.00	5.79	150.0	V	111.0	-2.4
4921.8750	51.00	---	74.00	23.00	150.0	V	111.0	-2.4

6. TEST SETUP PHOTOS OF THE EUT

Conducted Emissions (AC Mains)



Radiated Emissions (30MHz-1GHz)



Radiated Emissions (Above 1GHz)



7. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

Refer to the test report No.: CHTW25110006

--- End of Report ---