


# TEST REPORT

For FCC Part15B

**Report No.** .....: **CHTEW23030048** **Report verification:** 

**Project No.** .....: **SHT2211046601EW**

**FCC ID**.....: **2ANHPDQAPT**

**Applicant's name** .....: **Guangzhou Longest Science & Technology Co., Ltd.**

**Address**.....: **Floor 3&4, Building B&C, #96 Chuangqiang Road, Ningxi Street, Zengcheng District, 511399 Guangzhou, P.R. China**

**Product Name** .....: **APT Performer**

**Trade Mark** .....: **-**

**Model No.** .....: **DQAPT**

**Listed Model(s)** .....: **-**

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

**Date of receipt of test sample**.....: **Jan.06, 2023**

**Date of testing**.....: **Jan.06, 2023-Mar.10, 2023**

**Date of issue**.....: **Mar.13, 2023**

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

**Compiled by**  
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**Supervised by**  
(position+printedname+signature)....: **Project Engineer Kiki Kong**

*Kiki Kong*

**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**

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*The test report merely corresponds to the test sample.*

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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	2023-03-13	Original

## 2. TEST DESCRIPTION

Section	Test Item	Section in CFR 47	Result <sup>#1</sup>	Test Engineer
5.1	Conducted Emissions	15.107(a)	PASS	Chuanfeng Li
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:	Guangzhou Longest Science & Technology Co., Ltd.
Address:	Floor 3&4, Building B&C, #96 Chuangqiang Road, Ningxi Street, Zengcheng District, 511399 Guangzhou, P.R. China
Manufacturer:	Compass Health Brands Corp
Address:	6753 Engle Road , Middleburg Heights, Ohio, United States44130
Factory:	Guangzhou Longest Science & Technology Co., Ltd.
Address:	Floor 3&4, Building B&C, #96 Chuangqiang Road, Ningxi Street, Zengcheng District, 511399 Guangzhou, P.R. China

#### 3.2. Product Description

Main unit information:	
Product Name:	APT Performer
Trade Mark:	-
Model No.:	DQAPT
Listed Model(s):	-
Power supply:	AC 120V from AC power
Hardware version:	V1.0
Software version:	5100DA (A06)

#### 3.3. 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:	Tel: 86-755-26715499 E-mail: <a href="mailto:cs@szhtw.com.cn">cs@szhtw.com.cn</a> <a href="http://www.szhtw.com.cn">http://www.szhtw.com.cn</a>	
Qualifications	Type	Accreditation Number
	FCC	762235

## 4. TEST CONFIGURATION

### 4.1. Descriptions of test mode

Test mode O1	Working
--------------	---------

Test Item	Test mode
Conducted Emissions	Test mode O1
Radiated Emissions	Test mode O1

### 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?			
✓ NO			
Item	Equipment	Trade Name	Model No.
1			

### 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

● 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)
●	Spectrum Analyzer	Agilent	HTWE0286	N9020A	MY50510187	2022/08/25	2023/08/24
●	Radio communication tester	R&S	HTWE0287	CMW500	137688-Lv	2022/08/25	2023/08/24
●	Test software	Tonscend	N/A	JS1120	N/A	N/A	N/A
●	T-Cock	Weinschel	HTWE0289	1580	SC329	2022/08/25	2022/08/24

● Radiated Spurious Emission							
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	2018/09/27	2023/09/26
●	Spectrum Analyzer	R&S	HTWE0098	FSP40	100597	2022/08/25	2023/08/24
●	Loop Antenna	R&S	HTWE0546	HFH2-Z2E	101073	2021/05/25	2024/05/24
●	Horn Antenna	ETS	HTWE0548	3117	240120	2022/05/20	2025/05/19
●	Ultra-Broadband Antenna	SCHWARZBECK	HTWE0547	VULB9163	945	2022/05/23	2025/05/22
○	Horn Antenna	STEATITE	HTWE0549	QMS-00880	25661	2022/05/20	2025/05/19
●	Pre-amplifier	CD	HTWE0071	PAP-0102	12004	2022/11/04	2023/11/03
●	Broadband Preamplifier	SCHWARZBECK	HTWE0201	BBV 9718	9718-248	2023/02/27	2024/02/26
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-01	6m 18GHz S Serisa	N/A	2023/02/24	2024/02/23
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-02	6m 3GHz RG Serisa	N/A	2023/02/24	2024/02/23
●	RF Connection Cable	HUBER+SUHNER	HTWE0119-05	6m 3GHz RG Serisa	N/A	2023/02/24	2024/02/23
●	RF Connection Cable	HUBER+SUHNER	HTWE0120-04	6m 3GHz RG Serisa	N/A	2023/02/24	2024/02/23
●	EMI Test Software	Audix	N/A	E3	N/A	N/A	N/A

● Auxiliary Equipment							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Radio communication tester	R&S	HTWE0287	CMW500	137688-Lv	2022/08/25	2023/08/24
●	High pass filter	Wainwright	HTWE0297	WHKX3.0/18G-10SS	38	2022/05/16	2023/05/15
○	Band Stop filter	-	HTWE0039	N/A	N/A	2022/01/27	2023/01/26

## 5. TEST CONDITIONS AND RESULTS

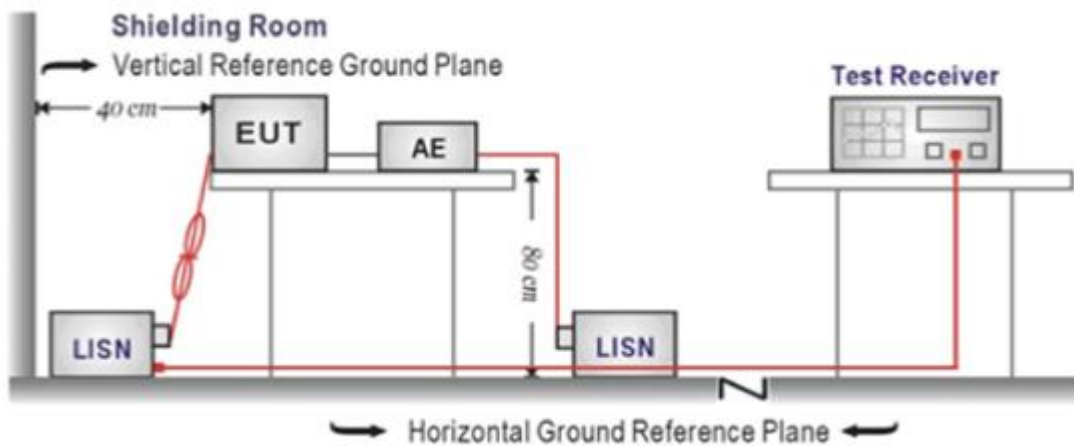
### 5.1. Conducted Emissions

#### LIMIT

FCC CFR Title 47 Part 15 Subpart B Section 15.107:

Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15-0.5	79	66
0.5-30	73	60

#### 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

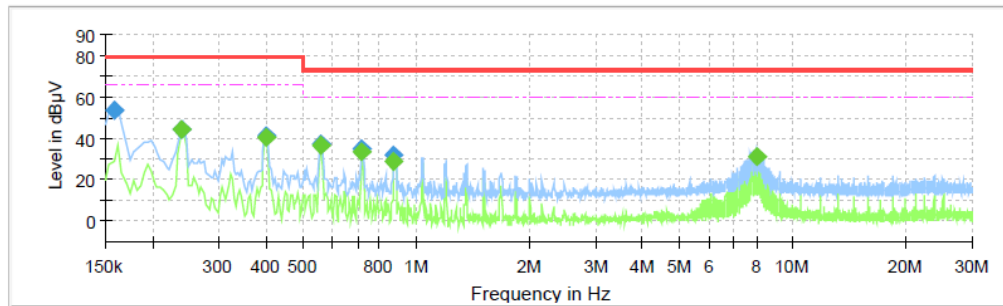
#### TEST RESULTS

☒ Passed ☐ Not Applicable



Test Line:

L

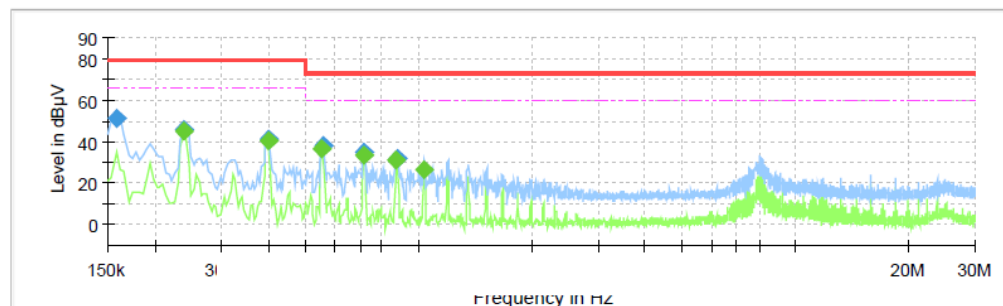


### Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.158000	53.55	---	79.00	25.45	L1	10.2
0.239500	44.57	---	79.00	34.43	L1	10.2
0.239500	---	44.16	66.00	21.84	L1	10.2
0.399500	40.92	---	79.00	38.08	L1	10.2
0.399500	---	40.36	66.00	25.64	L1	10.2
0.559500	37.46	---	73.00	35.54	L1	10.2
0.559500	---	36.61	60.00	23.39	L1	10.2
0.719500	34.58	---	73.00	38.42	L1	10.3
0.719500	---	33.12	60.00	26.88	L1	10.3
0.875500	31.51	---	73.00	41.49	L1	10.3
0.875500	---	28.56	60.00	31.44	L1	10.3
8.011500	---	31.14	60.00	28.86	L1	10.5

Test Line:

N



### Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.158000	51.46	---	79.00	27.54	N	10.2
0.239500	45.69	---	79.00	33.31	N	10.2
0.239500	---	44.93	66.00	21.07	N	10.2
0.399500	41.34	---	79.00	37.66	N	10.2
0.399500	---	40.08	66.00	25.92	N	10.2
0.555500	---	36.62	60.00	23.38	N	10.2
0.559500	37.80	---	73.00	35.20	N	10.2
0.715500	---	33.67	60.00	26.33	N	10.2
0.719500	34.78	---	73.00	38.22	N	10.2
0.875500	---	30.78	60.00	29.22	N	10.3
0.879500	31.96	---	73.00	41.04	N	10.3
1.031500	---	26.80	60.00	33.20	N	10.3

## 5.2. Radiated Emissions

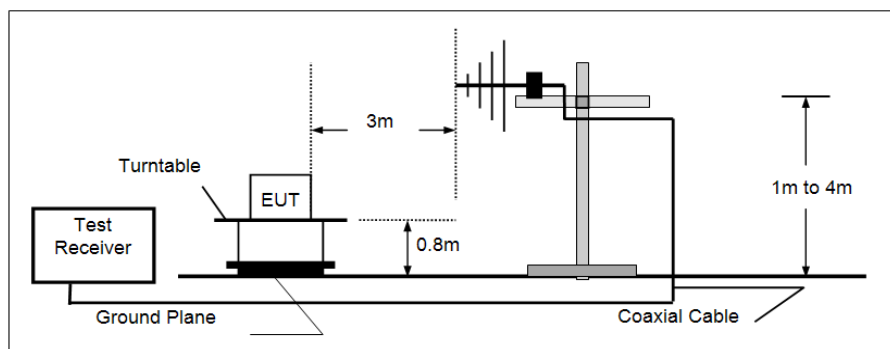
### LIMIT

#### FCC CFR Title 47 Part 15 Subpart B Section 15.109

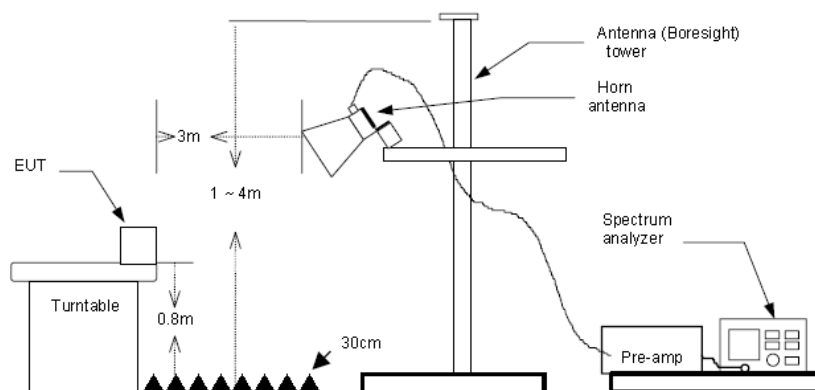
Frequency	Limit (dBuV/m @3m)	Value
30MHz-88MHz	49.00	Quasi-peak
88MHz-216MHz	53.50	Quasi-peak
216MHz-960MHz	56.40	Quasi-peak
960MHz-1GHz	59.50	Quasi-peak
Above 1GHz	59.5	Average
	79.5	Peak

### TEST CONFIGURATION

#### ➤ 30MHz ~ 1GHz



#### ➤ Above 1GHz



### TEST PROCEDURE

- The EUT was tested according to ANSI C63.4:2014.
- The EUT is placed on a turn table which is 0.8 meter above ground.
- The turn table is rotated 360 degrees to determine the position of the maximum emission level.
- The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
- 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.
- Use the following spectrum analyzer settings
  - Span shall wide enough to fully capture the emission being measured;
  - 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.
  - From 1GHz to 5th harmonic, RBW=1MHz, VBW=3MHz

**TEST MODE:**

Please refer to the clause 3.3

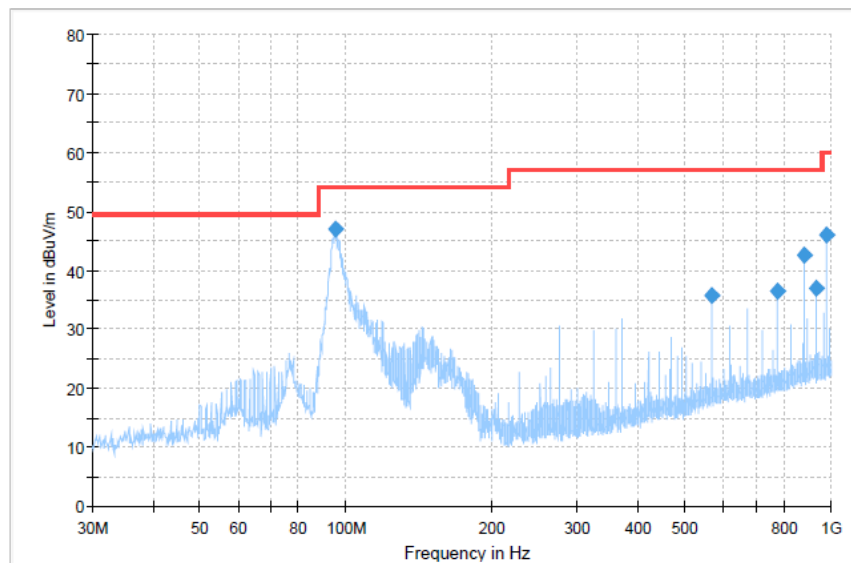
**TEST RESULTS**

☒ **Passed**      ☐ **Not Applicable**

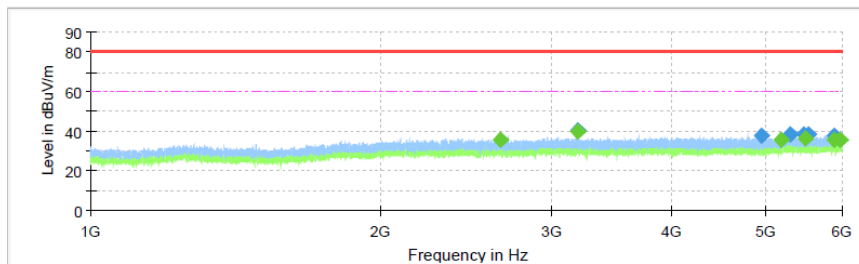
Note: Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor  
The emission levels of frequency above 6GHz are very lower than limit and not show in test report.

Polarization:

Horizontal

**Final Result**

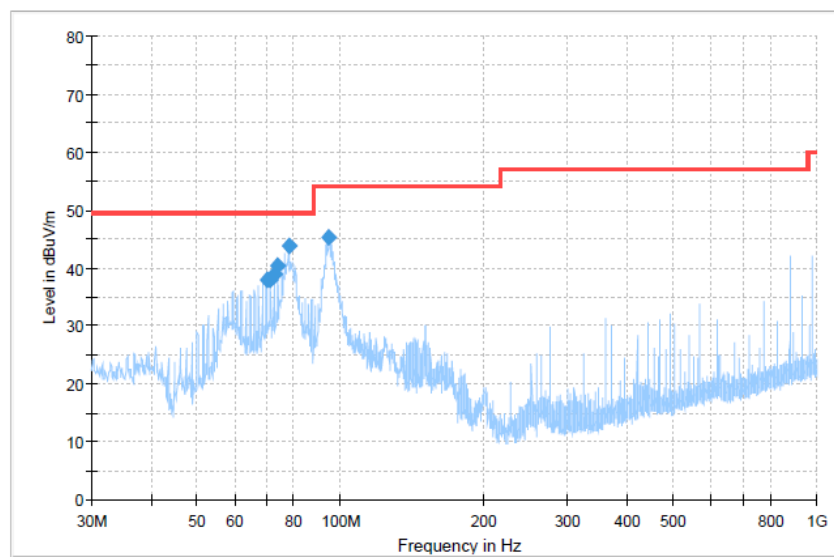
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
94.868750	46.87	54.00	7.13	300.0	H	6.0	-10.9
567.743750	35.62	57.00	21.38	100.0	H	327.0	0.3
774.111250	36.43	57.00	20.57	100.0	H	163.0	2.7
877.416250	42.51	57.00	14.49	100.0	H	27.0	4.0
929.068750	36.90	57.00	20.10	100.0	H	39.0	4.4
980.600000	46.03	60.00	13.97	100.0	H	75.0	4.8

**Final Result**

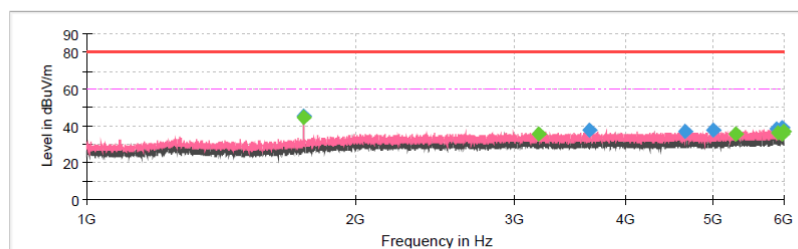
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2652.968750	---	35.27	60.00	24.73	150.0	H	359.0	-5.2
3200.000000	---	39.52	60.00	20.48	150.0	H	169.0	-4.1
3200.156250	40.77	---	80.00	39.23	150.0	H	152.0	-4.1
4946.562500	37.65	---	80.00	42.35	150.0	H	346.0	-1.4
5198.437500	---	35.62	60.00	24.38	150.0	H	118.0	-0.5
5305.000000	38.08	---	80.00	41.92	150.0	H	320.0	-0.1
5476.250000	38.28	---	80.00	41.72	150.0	H	6.0	0.0
5497.031250	---	35.96	60.00	24.04	150.0	H	210.0	0.0
5548.437500	38.11	---	80.00	41.89	150.0	H	0.0	0.1
5888.750000	37.94	---	80.00	42.06	150.0	H	352.0	1.1
5891.718750	---	35.83	60.00	24.17	150.0	H	229.0	1.1
5980.156250	---	35.44	60.00	24.56	150.0	H	142.0	1.2

Polarization:

Vertical

**Final Result**

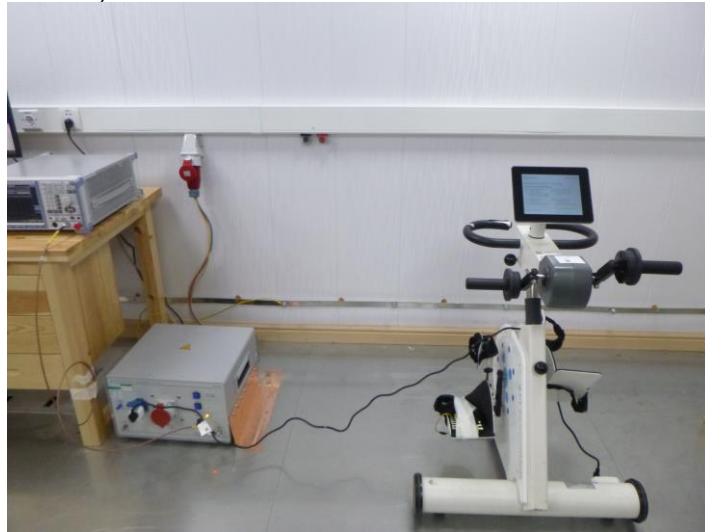
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
70.012500	37.84	49.50	11.66	100.0	V	43.0	-12.3
71.346250	37.86	49.50	11.64	100.0	V	36.0	-12.8
72.680000	38.84	49.50	10.66	100.0	V	36.0	-13.1
74.013750	40.39	49.50	9.11	100.0	V	43.0	-13.5
77.893750	43.71	49.50	5.79	100.0	V	26.0	-14.5
94.383750	45.24	54.00	8.76	100.0	V	112.0	-11.0

**Final Result**

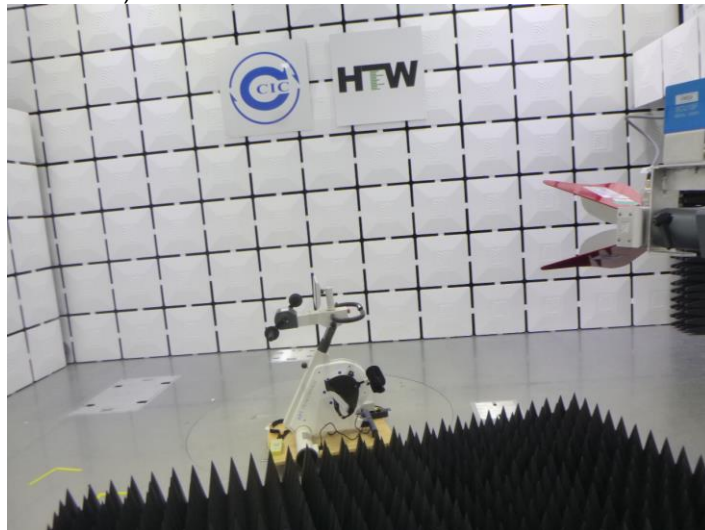
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1746.718750	---	44.64	60.00	15.36	150.0	V	0.0	-8.9
1746.718750	45.58	---	80.00	34.42	150.0	V	0.0	-8.9
3199.843750	---	35.48	60.00	24.52	150.0	V	86.0	-4.1
3645.937500	37.44	---	80.00	42.56	150.0	V	15.0	-3.4
4654.843750	37.09	---	80.00	42.91	150.0	V	301.0	-1.5
5003.437500	37.81	---	80.00	42.19	150.0	V	120.0	-1.2
5302.656250	---	35.25	60.00	24.75	150.0	V	318.0	-0.1
5897.812500	38.52	---	80.00	41.48	150.0	V	184.0	1.1
5906.406250	---	36.21	60.00	23.79	150.0	V	258.0	1.2
5972.968750	---	35.55	60.00	24.45	150.0	V	136.0	1.2
5977.343750	38.86	---	80.00	41.14	150.0	V	29.0	1.2
5997.187500	---	36.97	60.00	23.03	150.0	V	43.0	1.2

## 6. TEST SETUP PHOTOS OF THE EUT

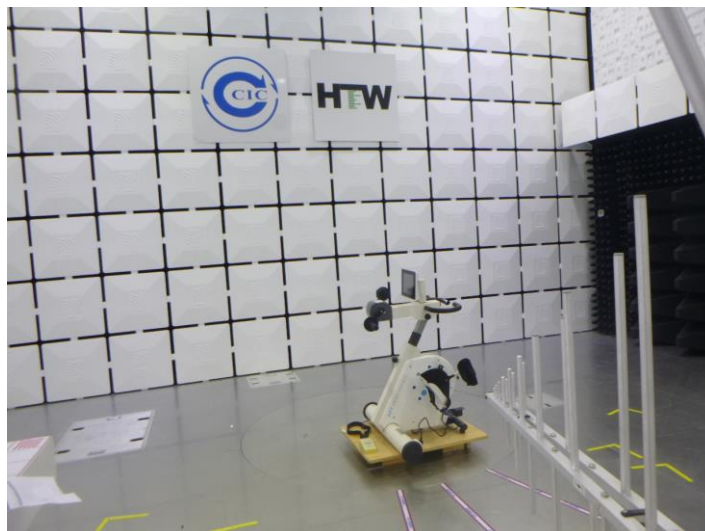
### Conducted Emissions (AC Mains)



### Radiated Emissions (30MHz-1GHz)



### Radiated Emissions (Above 1GHz)



## **7. EXTERNAL AND INTERNAL PHOTOS OF THE EUT**

Refer to the test report No.: CHTEW23030047

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