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TEST REPORT

For FCC Part15B

Report No. .....:	**CHTW24090008**	Report verification:
Project No. .....:	**SHT2407056602W**	
FCC ID ..... :	**2BBCY3588S**	
Applicant's name ..... :	**Lisheng Communications Co., Ltd.**	
Address.....:	5#, ChongXiang St., Econ & Tech. Area, Quanzhou, Fujian, China.	
Product Name ..... :	**POC Two Way Radio / IP Two Way radio**	
Trade Mark .....:	LISHENG	
Model No. .....:	Q-3588S	
Listed Model(s) .....:	3288T	
Standard ..... :	**FCC CFR Title 47 Part 15 Subpart B**	
Date of receipt of test sample.....:	Aug. 14, 2024	
Date of testing.....:	Aug. 15, 2024- Sep. 02, 2024	
Date of issue.....:	Sep. 03, 2024	
Result..... .....:	**Pass**	

Compiled by (position+printed name+signature)...:	File administrators Caspar Chen	Caspar Chen
Supervised by (position+printed name+signature)...:	Project Engineer Caspar Chen	Caspar Chen
Approved by (position+printed name+signature)...:	RF Manager Xu yang	Xu Yang

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

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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	2024-09-03	Original

2. TEST DESCRIPTION

Section	Test Item	Section in CFR 47	Result #1	Test Engineer
5.1	Conducted Emissions	15.107(a)	PASS	Junman Wang
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:	Lisheng Communications Co., Ltd.
Address:	5#, ChongXiang St., Econ & Tech. Area, Quanzhou, Fujian, China.
Manufacturer:	Lisheng Communications Co., Ltd.
Address:	5#, ChongXiang St., Econ & Tech. Area, Quanzhou, Fujian, China.

3.2. Product Description

Main unit information:	
Product Name:	POC Two Way Radio / IP Two Way radio
Trade Mark:	LISHENG
Model No.:	Q-3588S
Listed Model(s):	3288T
Power supply:	DC 3.7V from Battery
Hardware version:	P301_V2.0
Software version:	V1.0
Accessory unit information:	
Battery information:	LI-ION BATTERY PACK Model: 3588-BAT DC 3.7V 3800mAh 14.06Wh
Charger information:	Model: BC-3588 Input: 5V 1A Output: 4.2V 1A
Adapter information:	MODEL: TEKA-UCA20US INPUT: 100-240V~50/60Hz 0.35A MAX OUTPUT: 5.0V, 2.0A

3.3. 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: 86-755-26715499 E-mail: cs@szhtw.com.cn http://www.szhtw.com.cn	
Qualifications	Type	Accreditation Number
	FCC Registration Number	762235
	FCC Designation Number	CN1181

4. TEST CONFIGURATION

4.1. Descriptions of test mode

Test mode	Description
Camera recording mode	Keep the EUT in Camera recording status
Video Playing mode	Keep the EUT in Video Playing status
Charge mode	Keep the EUT in shutdown charging state

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	Charge mode
Radiated Emissions	Video Playing mode

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			
2			

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 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	2024/08/12	2025/08/11
●	Artificial Mains	SCHWARZBECK	HTWE0113	NNLK 8121	573	2024/08/12	2025/08/11
●	Protection Network	SCHWARZBECK	HTWE0567	VTSD9561FN	00899	2024/08/12	2025/08/11
●	ISN	FCC	HTWE0148	FCC-TLISN-T2-02	20371	2024/08/12	2025/08/11
●	ISN	FCC	HTWE0150	FCC-TLISN-T8-02	20375	2024/08/12	2025/08/11
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A

● Radiated Emission - 30MHz~1GHz 3M							
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	2023/04/06	2026/04/05
●	EMI Test Receiver	R&S	HTWE0099	ESCI 7	100900	2024/08/12	2025/08/11
●	Ultra-Broadband Antenna	SCHWARZBECK	HTWE0119	VULB9163	546	2023/2/22	2026/2/21
●	Pre-Amplifer	SCHWARZBECK	HTWE0295	BBV 9742	/	2024/5/24	2025/5/23
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A

● Radiated emission-Above 1GHz							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0122	SAC-3m-01	C11121	2023/04/17	2026/04/16
●	Spectrum Analyzer	R&S	HTWE0098	FSP40	100597	2024/08/12	2025/08/11
●	Horn Antenna	SCHWARZBECK	HTWE0126	BBHA 9120D	1011	2023/02/14	2026/02/13
●	Horn Antenna	SCHWARZBECK	HTWE0103	BBHA9170	BBHA9170472	2023/02/20	2026/02/19
●	Broadband Pre-amplifier	SCHWARZBECK	HTWE0551	SCU18F	100855	2024/06/06	2025/06/05
●	Test Software	R&S	N/A	EMC32	N/A	N/A	N/A

5. TEST CONDITIONS AND RESULTS

5.1. Conducted Emissions

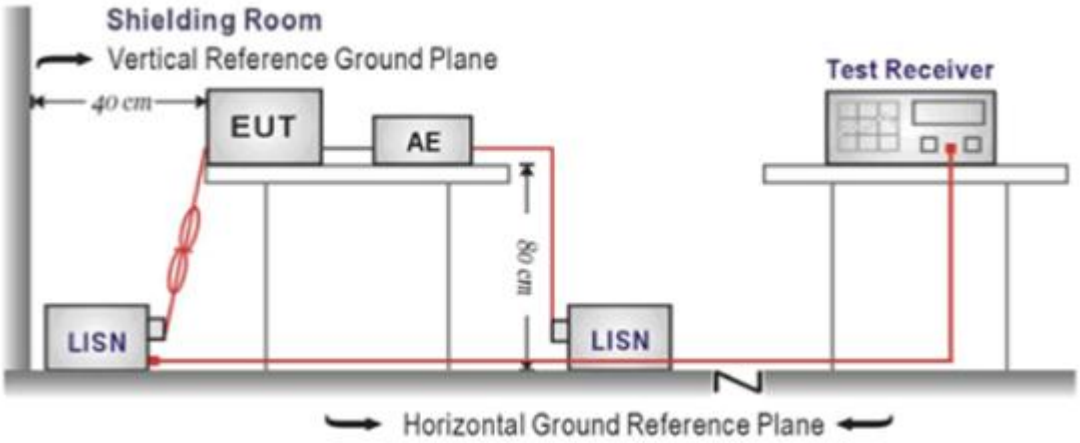
LIMIT

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.

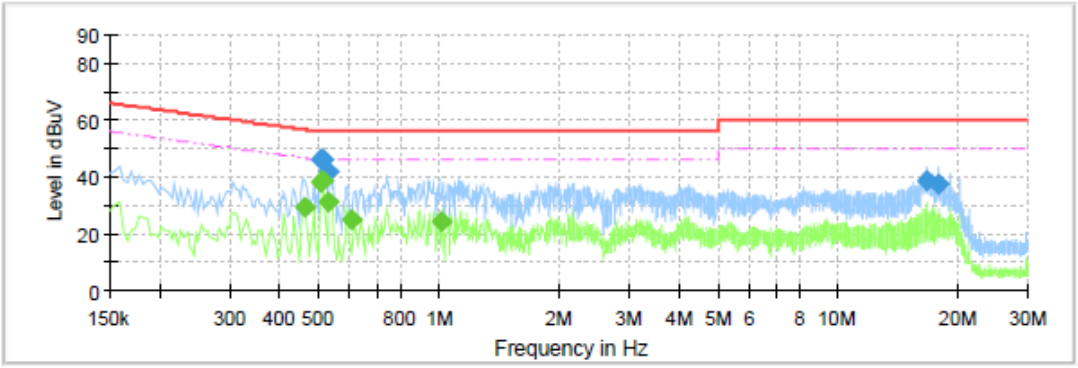
TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

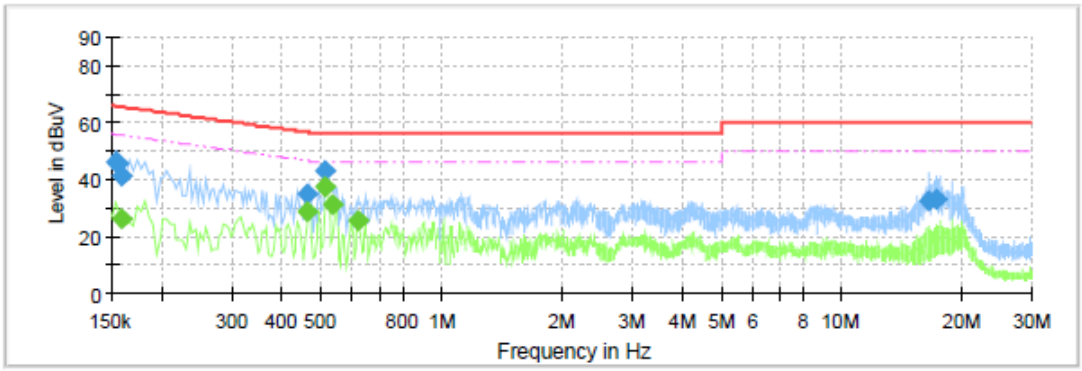
Test Line:	L



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Corr. (dB)
0.4595	---	29.55	46.70	17.15	L1	10.3
0.5075	---	38.08	46.00	7.92	L1	10.4
0.5075	46.28	---	56.00	9.72	L1	10.4
0.5085	---	38.57	46.00	7.43	L1	10.4
0.5085	46.42	---	56.00	9.58	L1	10.4
0.5115	46.00	---	56.00	10.00	L1	10.4
0.5315	41.61	---	56.00	14.39	L1	10.4
0.5315	---	31.22	46.00	14.78	L1	10.4
0.6085	---	25.13	46.00	20.87	L1	10.4
1.0155	---	24.38	46.00	21.62	L1	10.5
16.7005	38.56	---	60.00	21.44	L1	10.7
17.8915	37.20	---	60.00	22.80	L1	10.8

Test Line:	N



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Corr. (dB)
0.1540	46.09	---	65.78	19.69	N	10.1
0.1555	45.73	---	65.70	19.97	N	10.1
0.1595	---	26.20	55.49	29.29	N	10.1
0.1595	40.99	---	65.49	24.50	N	10.1
0.4595	---	28.71	46.70	18.00	N	10.2
0.4595	34.94	---	56.70	21.76	N	10.2
0.5115	---	37.65	46.00	8.35	N	10.2
0.5115	43.17	---	56.00	12.83	N	10.2
0.5355	---	31.52	46.00	14.48	N	10.2
0.6155	---	25.41	46.00	20.59	N	10.2
16.5355	32.38	---	60.00	27.62	N	10.5
17.2595	32.96	---	60.00	27.04	N	10.5

5.2. Radiated Emissions

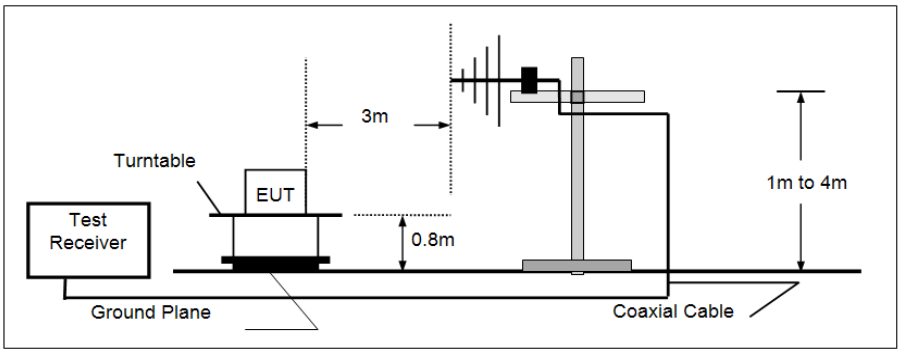
LIMIT

FCC CFR Title 47 Part 15 Subpart B Section 15.109

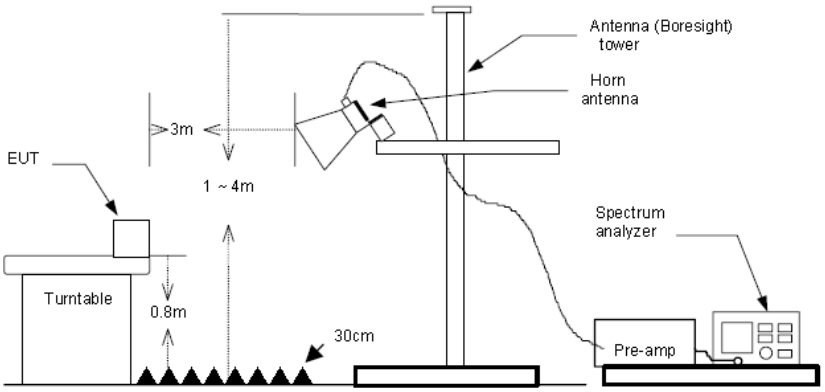
Frequency	Limit (dBuV/m @3m)	Value
30MHz-88MHz	40.00	Quasi-peak
88MHz-216MHz	43.50	Quasi-peak
216MHz-960MHz	46.00	Quasi-peak
960MHz-1GHz	54.00	Quasi-peak
Above 1GHz	54.00	Average
	74.00	Peak

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 waspositioned 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. Thisis 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 detectoris 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, theemission measurement will be repeated using the quasi-peak detector and reported.
   (3) From 1GHz to 5th harmonic, RBW=1MHz, VBW=3MHz

TEST MODE:

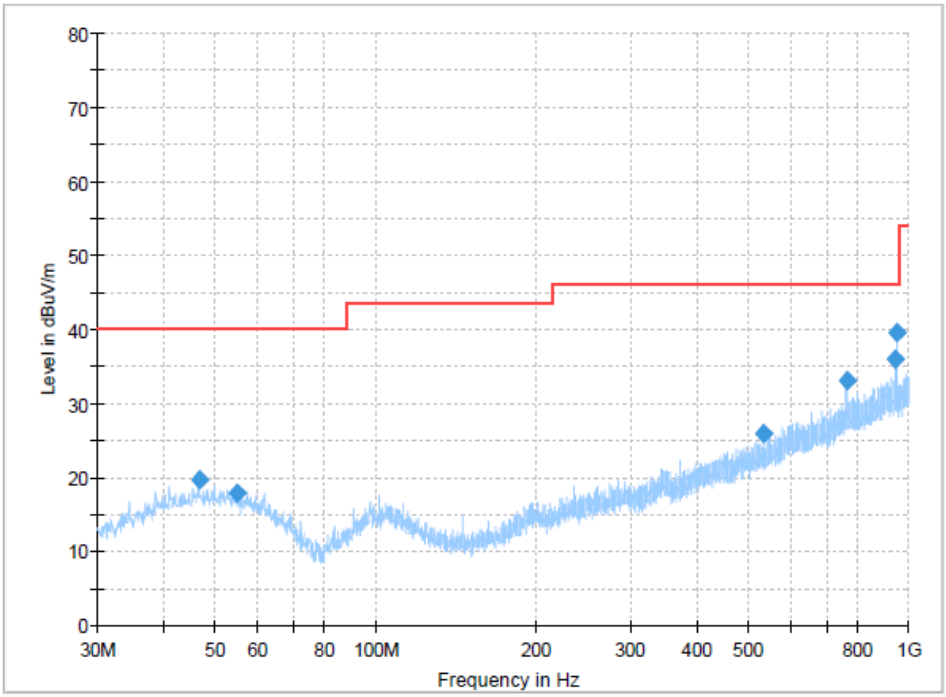
Please refer to the clause 3.3

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

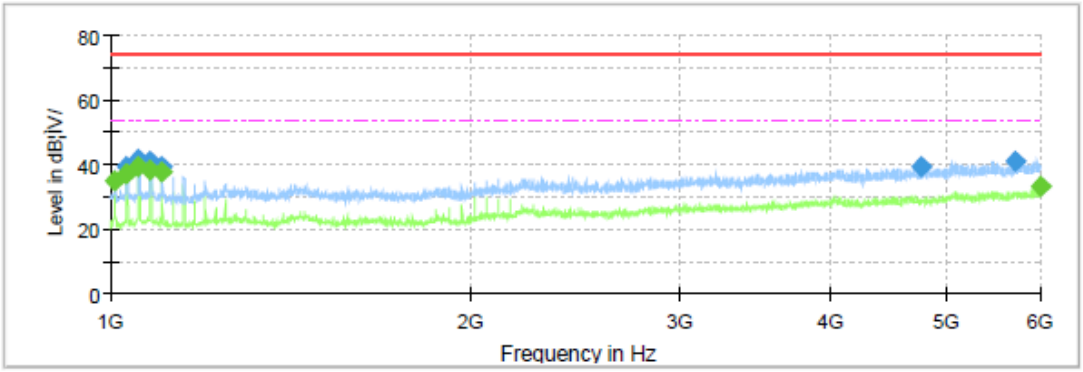
Note: Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
The emission levels of frequency above 6GHz are very lower than limit and not show in test report.

Polarization:	Horizontal



Final_Result

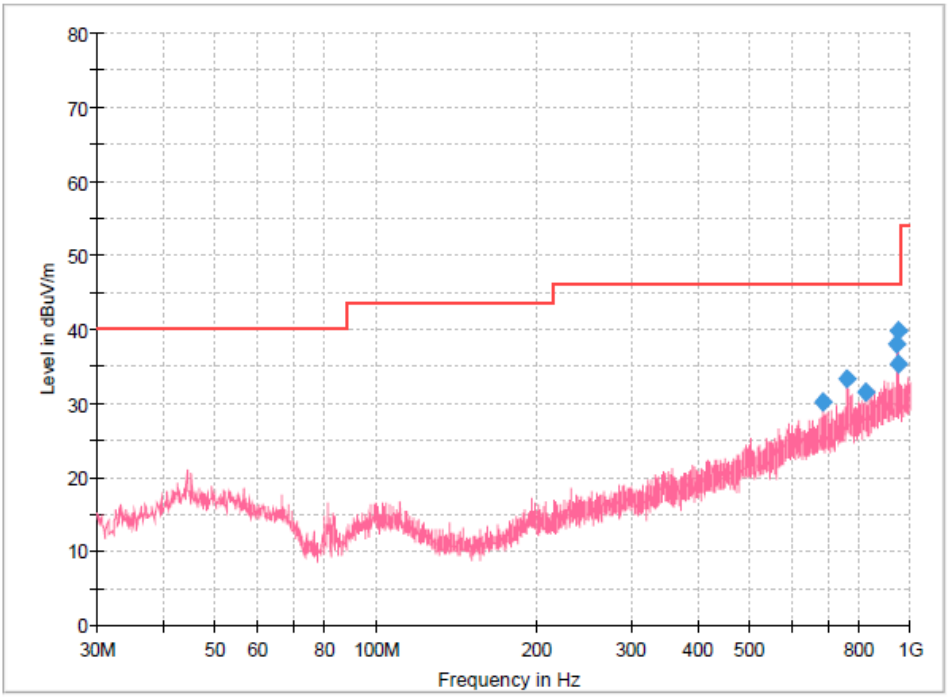
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
46.7325	19.57	40.00	20.43	100.0	H	209.0	-8.3
54.8563	17.94	40.00	22.06	100.0	H	251.0	-8.8
535.4913	26.01	46.00	19.99	300.0	H	319.0	-0.9
764.0475	33.04	46.00	12.96	300.0	H	209.0	4.4
945.3163	35.95	46.00	10.05	100.0	H	193.0	7.5
948.2263	39.45	46.00	6.55	300.0	H	309.0	7.5



Final_Result

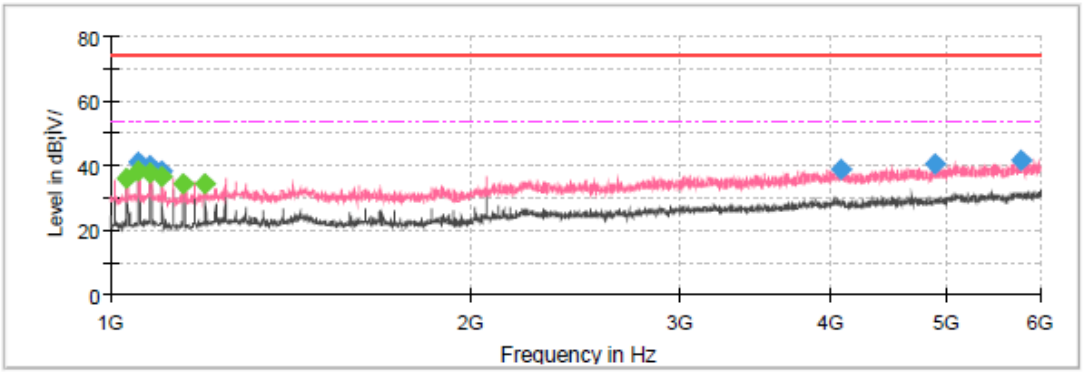
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1008.125000	---	35.15	54.00	18.85	150.0	H	348.0	-14.3
1031.875000	---	37.37	54.00	16.63	150.0	H	358.0	-14.3
1031.875000	39.63	---	74.00	34.37	150.0	H	358.0	-14.3
1055.625000	---	39.64	54.00	14.36	150.0	H	168.0	-14.3
1055.625000	41.39	---	74.00	32.61	150.0	H	168.0	-14.3
1080.000000	40.92	---	74.00	33.08	150.0	H	337.0	-14.3
1080.000000	---	38.12	54.00	15.88	150.0	H	337.0	-14.3
1103.750000	39.67	---	74.00	34.33	150.0	H	337.0	-14.2
1103.750000	---	37.54	54.00	16.46	150.0	H	337.0	-14.2
4761.250000	39.58	---	74.00	34.42	150.0	H	258.0	-3.2
5716.250000	41.19	---	74.00	32.81	150.0	H	0.0	-0.9
5999.375000	---	33.25	54.00	20.75	150.0	H	157.0	-0.1

Polarization:	Vertical



Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
687.5388	30.12	46.00	15.88	100.0	V	349.0	2.5
762.1075	33.37	46.00	12.63	100.0	V	10.0	4.4
823.7025	31.58	46.00	14.42	100.0	V	247.0	5.2
945.3163	38.00	46.00	8.00	100.0	V	162.0	7.5
946.6500	35.22	46.00	10.78	100.0	V	247.0	7.5
948.3475	39.77	46.00	6.23	100.0	V	48.0	7.5

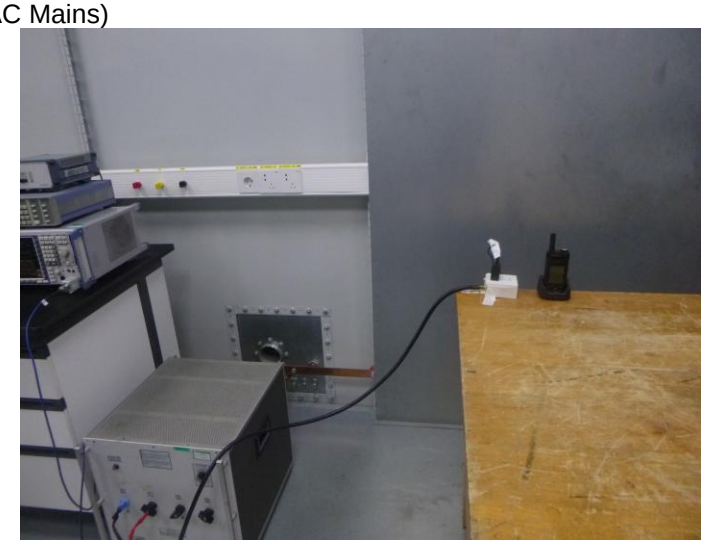


Final_Result

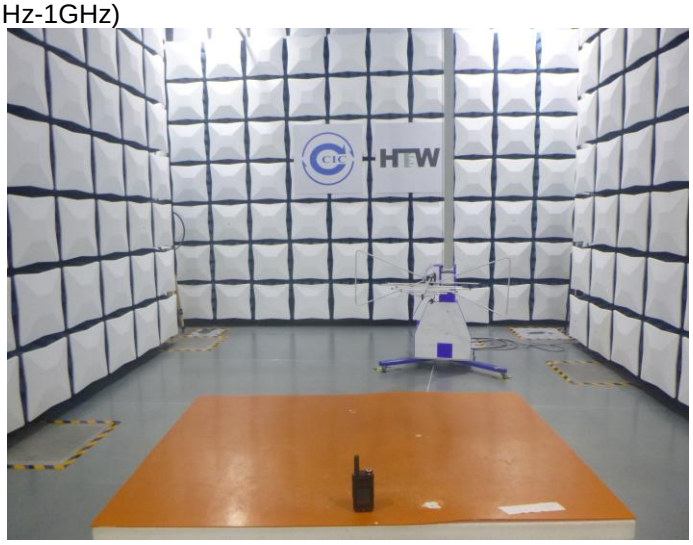
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1031.875000	---	36.05	54.00	17.95	150.0	V	80.0	-14.3
1055.625000	41.10	---	74.00	32.90	150.0	V	57.0	-14.3
1055.625000	---	38.46	54.00	15.54	150.0	V	57.0	-14.3
1079.375000	39.91	---	74.00	34.09	150.0	V	80.0	-14.3
1080.000000	---	37.86	54.00	16.14	150.0	V	80.0	-14.3
1103.750000	---	36.73	54.00	17.27	150.0	V	226.0	-14.2
1104.375000	38.58	---	74.00	35.42	150.0	V	68.0	-14.2
1151.875000	---	34.30	54.00	19.70	150.0	V	237.0	-13.7
1200.000000	---	34.18	54.00	19.82	150.0	V	237.0	-13.5
4082.500000	39.12	---	74.00	34.88	150.0	V	113.0	-4.8
4886.875000	40.30	---	74.00	33.70	150.0	V	2.0	-3.1
5780.000000	41.65	---	74.00	32.35	150.0	V	0.0	-0.7

6. TEST SETUP PHOTOS OF THE EUT

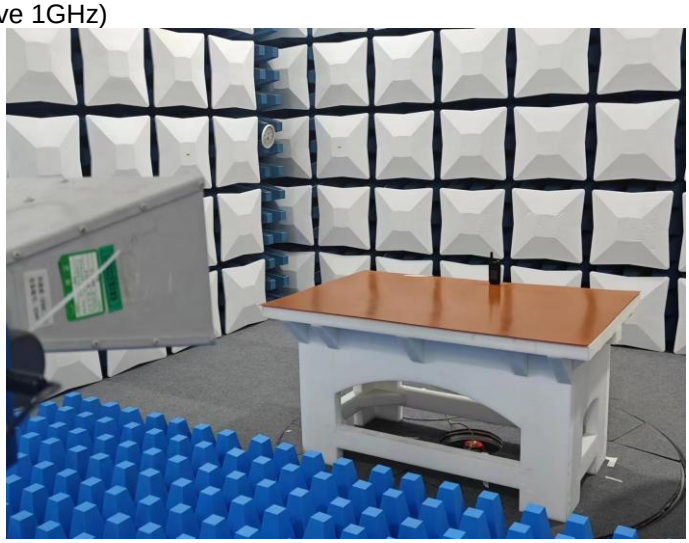
Conducted Emissions (AC Mains)



Radiated Emissions (30MHz-1GHz)



Radiated Emissions (Above 1GHz)



7. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

Refer to the test report No.: CHTW24090001

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