



# **FCC TEST REPORT** FCC ID:2A4PS-HT-310

Report No	ZHT-241105121V	V02-1	
Product	VIRELESS CHA	RGER	
Trademark			
Model(s)	HT-310, HT-332		
Model difference	are identical in cir	model, other models are derivative n rcuit, only different on the model nam esent the remaining models.	
Applicant	Shenzhen Haitao	SCI&Tech Co. LTD	
Address		ding 1, West Hezhou Industrial Park et, Bao 'an District, Shenzhen China	Hezhou Community,
Manufacturer	Shenzhen Haitao	SCI&Tech Co. LTD	
Address		ding 1, West Hezhou Industrial Park et, Bao 'an District, Shenzhen China	Hezhou Community,
Prepared by	Guangdong Zhon	nghan Testing Technology Co., Ltd.	
Address		ng 1, Yibaolai Industrial Park, Qiaoto strict, Shenzhen, Guangdong, China	
Date of Receipt	Nov. 05, 2024		
Date of Test(s)	Nov. 05, 2024 to I	Nov. 12, 2024	
Date of Issue	Nov. 21, 2024		
Test Standard(s)	CC CFR Title 47	7 Part 15 Subpart C	
Test procedure	ANSI C63.10:201	3	
In the configur	tested, the EUT	complied with the standards specif	ied above.
Tested by:	F	Reviewed by:	thom the provide the provided t

kimi Lu

Kimi Lu/ Engineer

Bastilla

Baret Wu/ Director



Note: The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This test report shall not be reproduced except in full, without prior written approval of ZHT. This document may be altered or revised by ZHT, personnel only, and shall be noted in the revision of the document.



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1. VERSION			
Report No.	Version	Description	Approved
ZHT-241105121W02-1	Rev.01	Initial issue of report	Nov. 21, 2024
C	C		C

B	B B B			



### 2. TEST SUMMARY

Test Item	Section in CFR 47	Result	
Antenna requirement	15.203	Pass	
AC Power Line Conducted Emission	15.207	Pass	
Spurious Emission	15.209(a)(f)	Pass	
20dB Bandwidth	15.215	Pass	

NOTE: (1)" N/A"	denotes test is	not applicable ir	n this Test Repo	rt		Ð
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3. GENERAL INFORMATION





### 3.1 GENERAL DESCRIPTION OF EUT

WIRELESS CHARGER	
HT-310	15
V1.0	
V1.0	
110.1-205KHz	
MSK C	
Coil Antenna	
0dBi	
Input: DC 5 V/3 A, DC 9 V/3 A Wireless Output:15 W /10 W /7.5 W / 5 W	Ð
241105121YP-001	
	HT-310     V1.0     V1.0     110.1-205KHz     MSK     Coil Antenna     0dBi     Input: DC 5 V/3 A, DC 9 V/3 A     Wireless Output:15 W /10 W /7.5 W / 5 W

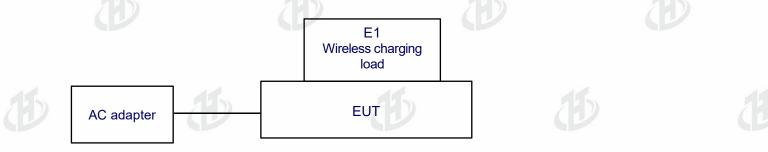
Remark: The antenna gain is provided by the customer, if the data provided by the customer is not accurate, Guangdong Zhonghan Testing Technology Co., Ltd. does not assume any responsibility.

### 3.2 Test mode

Test Mo	des	
Mode 1	AC adapter wireless charging(5W)	15
Mode 2	AC adapter wireless charging(7.5W)	
Mode 3	AC adapter wireless charging(10W)	
Mode 4	AC adapter wireless charging(15W)	
	All full load, half load, and no-load tests have been conducted in each mode, only the solution in the report. Mode 4 full load is the worst mode.	worst-case wa

2.The EUT not supports portable use.

### 3.3 Block Diagram of EUT Configuration





3.4 Test Conditions

Temperature: 23~26℃

Relative Humidity: 54~63 %

3.5 Description Of Support Uni/ (Conducted Mode)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support uni/ or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Wireless charging load	N/A	EESON	N/A	AE
E-2	AC adapter	N/A	CHG-WALL-PD-45W	N/A	AE

Item	Shielded Type	Ferrite Core	Length	Note	•
4		ÿ		C.	CP .

### Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in [Length] column.
- (3) "YES" is means "shielded" "with core"; "NO" is means "unshielded" "without core".



### 4. TEST FACILITY AND TEST INSTRUMENT USED

### 4.1 Test Facility

Guangdong Zhonghan Testing Technology Co., Ltd. Add. : Room 104, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

FCC Registration Number:255941 Designation Number: CN0325 IC Registered No.: 29832 CAB identifier: CN0143

### 4.2 Instrument List For All Test Items

D	Ra	diation Test Instrumen	t				
	ltem	Equipment	Manufacturer	Model	Serial No.	Last Cal.	Next Cal.
	1	Receiver	R&S	ESCI	100874	May 10, 2024	May 09, 2025
	2	Loop antenna	EMCI	LAP600	272	May 10, 2024	May 09, 2025
	3	Amplifier	Schwarzbeck	BBV 9743 B	00378	May 10, 2024	May 09, 2025
	4	Amplifier	Schwarzbeck	BBV 9718 B	00040	May 10, 2024	May 09, 2025
	5	Bilog Antenna	Schwarzbeck	VULB9162	00498	May 28, 2024	May 27, 2025
	6	Horn Antenna	Schwarzbeck	BBHA9120D	02623	May 16, 2024	May 15, 2025
	7	Horn Antenna	A.H.SYSTEMS	SAS574	588	May 10, 2024	May 09, 2025
	8	Amplifier	AEROFLEX	100KHz-40GHz	097	May 10, 2024	May 09, 2025
	9	Spectrum Analyzer	R&S	FSV40	101413	May 16, 2024	May 15, 2025
	10	966 Anechoic Chamber	EMToni	9m6m6m	1	Nov. 25, 2021	Nov. 24, 2024
	11	Spectrum Analyzer	KEYSIGHT	N9020A	MY53420208	May 10, 2024	May 09, 2025
5	12	WIDBAND RADIO COMMUNICATION TESTER	R&S	CMW500	109863	May 10, 2024	May 09, 2025
	13	Single Generator	Agilent	N5182A	MY48180575	May 10, 2024	May 09, 2025
	14	Power Sensor	MWRFtest	MW100-RFCB	/	May 10, 2024	May 09, 2025
	15	Power Amplifier Shielding Room	EMToni	2m3m3m	15	Nov. 25, 2021	Nov. 24, 2024
	16	CABLE	EMToni	DA800-NM- NM-11000MM	/	May 10, 2024	May 09, 2025



### **Conduction Test Instrument**

		1.1				
Equipment	Manufacturer	Model	Serial No.	Last Cal.	Next Cal.	
Receiver	R&S	ESCI	100874	May 10, 2024	May 09, 2025	
LISN	R&S	ENV216	102794	May 10, 2024	May 09, 2025	
ISN CAT 6	Schwarzbeck	NTFM 8158	00318	May 10, 2024	May 09, 2025	
ISN CAT 5	Schwarzbeck	CAT5 8158	00343	May 10, 2024	May 09, 2025	
Capacitive Voltage Probe	Schwarzbeck	CVP 9222 C	00101	May 10, 2024	May 09, 2025	
Current Transformer Clamp	Schwarzbeck	SW 9605	SW9605 #209	May 10, 2024	May 09, 2025	
CE Shielding Room	EMToni	9m4m3m	/	Nov. 25, 2021	Nov. 24, 2024	
CABLE EMTon		G223-NM-BNC M-2000MM	/	May 10, 2024	May 09, 2025	
202		- A				

### 4.3 Testing Software

Project	Software name	Edition
RF Conducted	MTS 8310	2.0.0.0
Conducted Emission	EZ-EMC	EMC-CON 3A1.1+
Radiated Emission	EZ-EMC	FA-03A2 RE+





### 4.4 Measurement Uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF conducted power	±0.16dB
3	Conducted spurious emissions	±0.21dB
4	All radiated emissions (9k-30MHz)	±4.68dB
5	All radiated emissions (<1G)	±4.68dB
6	All radiated emissions (>1G)	±4.89dB
7	Temperature	±0.5°C
8	Humidity	±2%
9	Occupied Bandwidth	±4.96dB

### **Decision Rule**

- $\boxtimes$  Uncertainty is not included
- Uncertainty is included



### 4. CONDUCTED EMISSION TEST

### 4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207	
Test Method:	ANSI C63.10:2013	1
Test Frequency Range:	150KHz to 30MHz	
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto	

### 4.1.1 POWER LINE CONDUCTED EMISSION Limi/

FREQUENCY (MHz)	Limit (	Limit (dBuV)		
	QP	AVG	Standard	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC	
0.50 -5.0	56.00	46.00	FCC	
5.0 -30.0	60.00	50.00	FCC	



(1) \*Decreases with the logarithm of the frequency.

### 4.1.2 TEST PROCEDURE

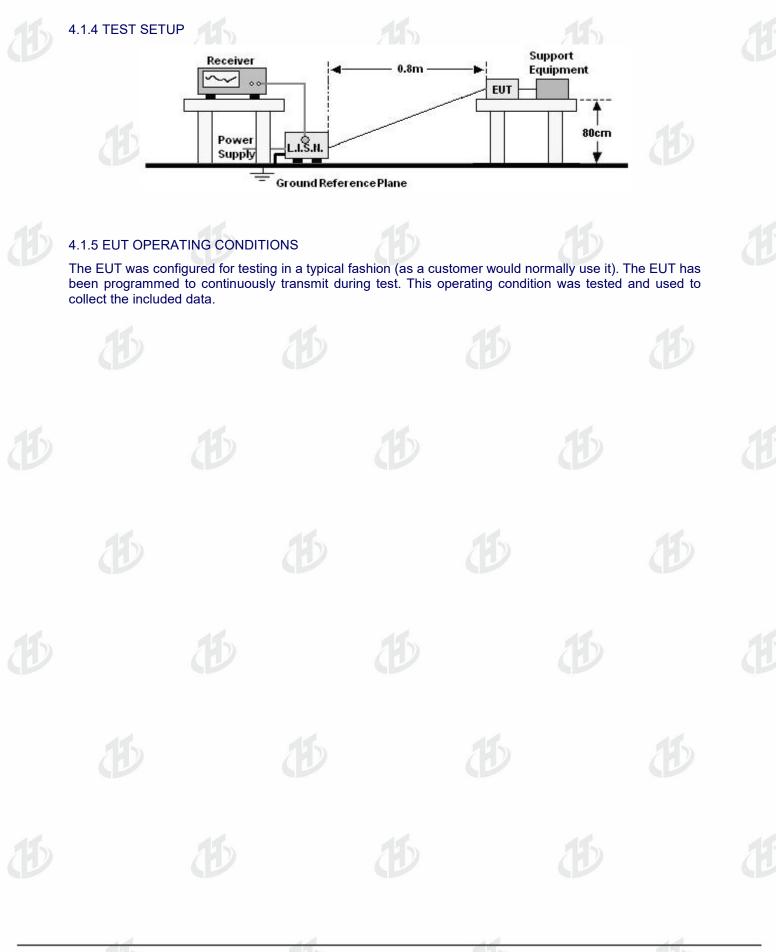
Note:

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipmen/ powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

### 4.1.3 DEVIATION FROM TEST STANDARD







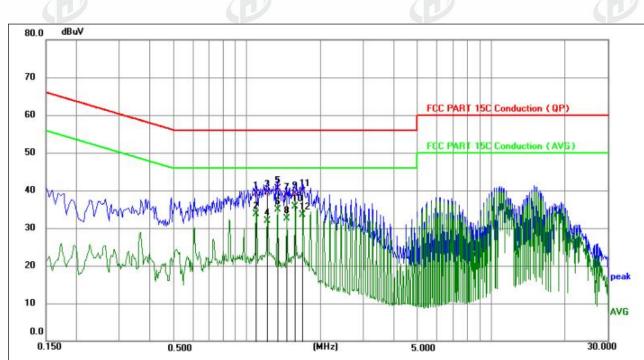
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4.1.6 Test Result

Temperature:	<b>26</b> ℃	Relative Humidity:	54%
Pressure:	101kPa	Phase :	L
Test Voltage:	AC 120V/60Hz	Test Mode:	Mode 4
Test Voltage:	AC 120V/60Hz	Test Mode:	Mode 4



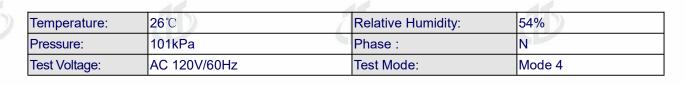
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	(dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	1.0905	28.99	10.06	39.05	56.00	-16.95	QP	P	
2	1.0905	23.73	10.06	33.79	46.00	-12.21	AVG	P	
3	1.2120	29.50	10.06	39.56	56.00	-16.44	QP	Ρ	
4	1.2120	21.81	10.06	31.87	46.00	-14.13	AVG	P	
5	1.3334	30.48	10.06	40.54	56.00	-15.46	QP	Ρ	
6	1.3334	24.79	10.06	34.85	46.00	-11.15	AVG	P	
7	1.4550	28.69	10.07	38.76	56.00	-17.24	QP	P	
8	1.4550	22.40	10.07	32.47	46.00	-13.53	AVG	P	
9	1.5809	29.02	10.06	39.08	56.00	-16.92	QP	P	
10 *	1.5809	25.57	10.06	35.63	46.00	-10.37	AVG	Ρ	
11	1.6935	29.57	10.06	39.63	56.00	-16.37	QP	Р	
12	1.6935	23.39	10.06	33.45	46.00	-12.55	AVG	P	

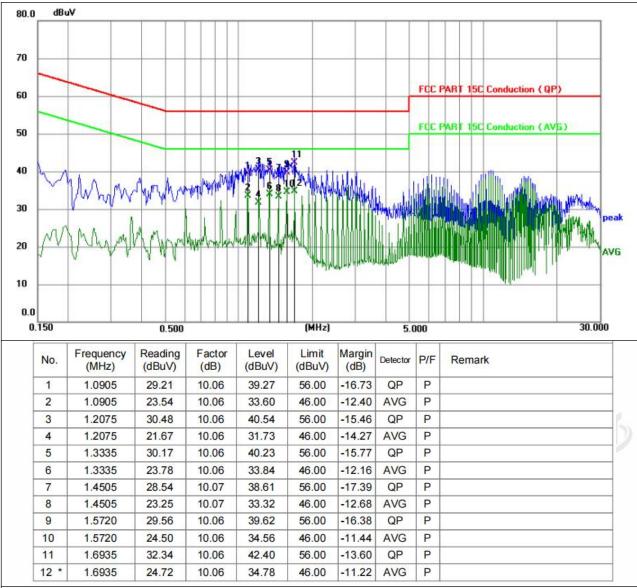
### Notes:

1.An initial pre-scan was performed on the line and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
Mesurement Level = Reading level + Correct Factor



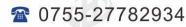




### Notes:

1.An initial pre-scan was performed on the line and neutral lines with peak detector.

2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.3.Mesurement Level = Reading level + Correct Factor



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### 5. RADIATED EMISSION MEASUREMENT

FCC Part15 C Section 15.209				
ANSI C63.10:2013				
9kHz to 1GHz				
Measurement Dista	ince: 3m	15		
Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average
		44		44
	ANSI C63.10:2013 9kHz to 1GHz Measurement Dista Frequency 9KHz-150KHz 150KHz-30MHz	ANSI C63.10:20139kHz to 1GHzMeasurement Distance: 3mFrequencyDetector9KHz-150KHzQuasi-peak150KHz-30MHzQuasi-peak30MHz-1GHzQuasi-peakAbove 1GHzPeak	ANSI C63.10:20139kHz to 1GHzMeasurement Distance: 3mFrequencyDetector9KHz-150KHzQuasi-peak200Hz150KHz-30MHzQuasi-peak30MHz-1GHzQuasi-peak100KHzAbove 1GHz	ANSI C63.10:20139kHz to 1GHzMeasurement Distance: 3mFrequencyDetector9KHz-150KHzQuasi-peak200Hz600Hz150KHz-30MHzQuasi-peak30MHz-1GHzQuasi-peak100KHz300KHzAbove 1GHzPeak1MHz3MHz

### 5.1 Radiated Emission Limit

### Limi/ for frequency below 30MHz

))	Frequency	Limit (uV/m)	Measurement Distance(m)	Remark
	0.009-0.490	2400/F(kHz)	300	Peak Value
	0.490-1.705	24000/F(kHz)	30	Quasi-peak Value
	1.705-30	30	30	Quasi-peak Value

### Limi/ for frequency Above 30MHz

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

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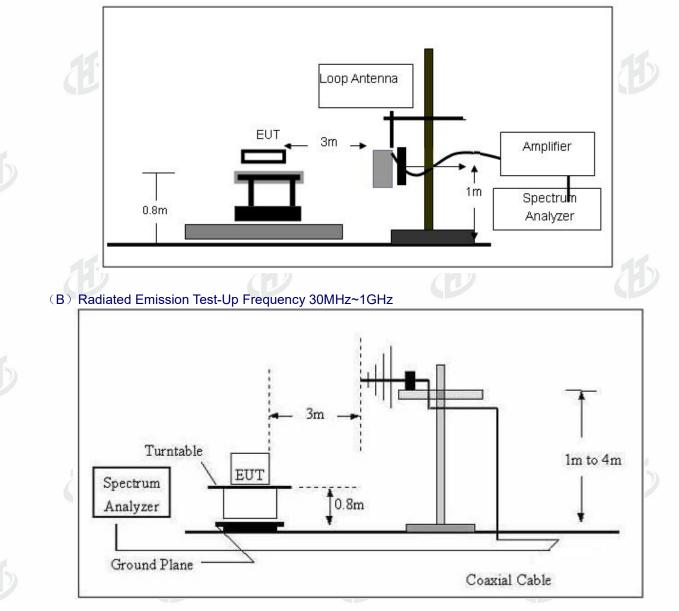






### 5.2 Anechoic Chamber Test Setup Diagram

(A) Radiated Emission Test-Up Frequency Below 30MHz



The radiated emission test were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.205 limit.

### 5.3 Test Procedure

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna (calibrated by dipole antenna) are used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on measurement.

### 5.4 DEVIATION FROM TEST STANDARD

No deviation



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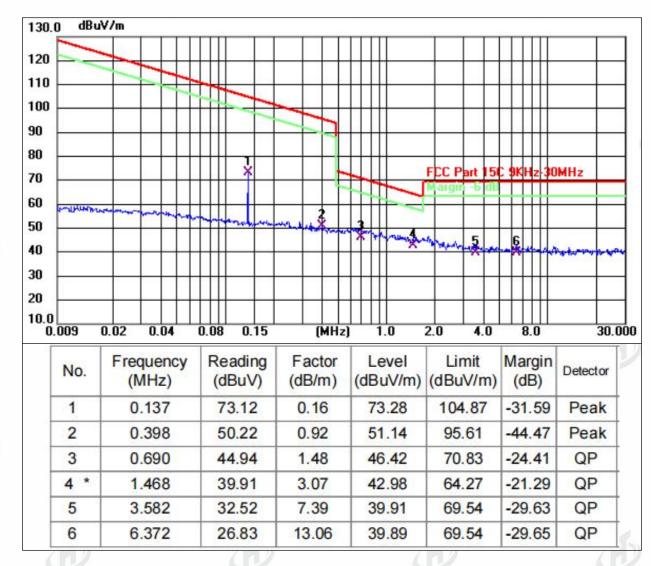
### 5.5 Test Result

Measurement data:

Note: Limit dBuV/m @3m = Limit dBuV/m @300m+ 80 Limit dBuV/m @3m = Limit dBuV/m @30m + 40

### 9 kHz~30 MHz

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	coaxial
Test Voltage:	AC 120V/60Hz	Test Modes:	Mode 4



### Note:

Pre-scan in the all of mode, the worst case in of was recorded.

Factor = antenna factor + cable loss – pre-amplifier.

Emission Level = Meter Reading - Factor

Margin = Emission Level- Limit.

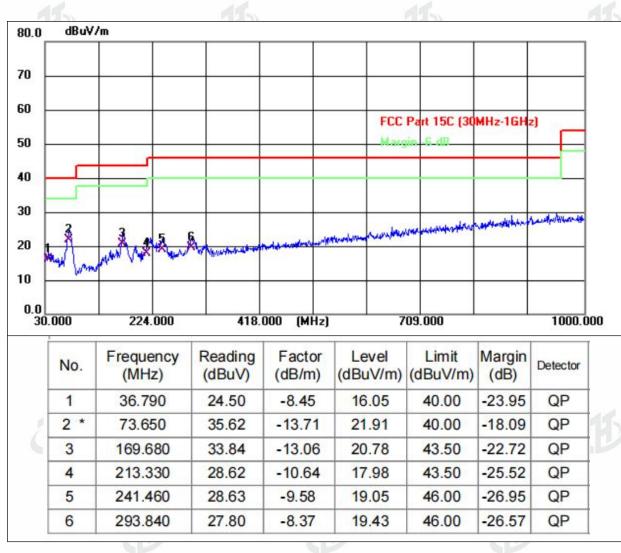
The amplitude of emissions which are attenuated by more than 20db below the permissible value has no need to be reported.





30MHz-1GHz

Temperature:	<b>26</b> ℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Test Modes:	Mode 4



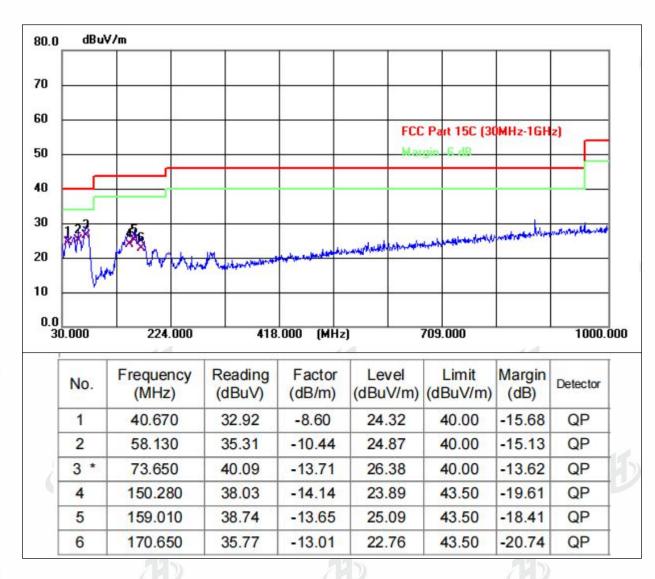








	Temperature:	26℃	Relative Humidity:	54%
0	Pressure:	101 kPa	Polarization:	Vertical
	Test Voltage:	AC 120V/60Hz	Test Modes:	Mode 4



### Remarks:

- 1. Factor = Antenna Factor + Cable Loss Preamplifier Factor
- 2. Level = Reading + Factor
- 3. Margin = Emission Level- Limit.
- 4. The emission levels of other frequencies are very lower than the limit and not show in test report.



### 6. BANDWIDTH TEST

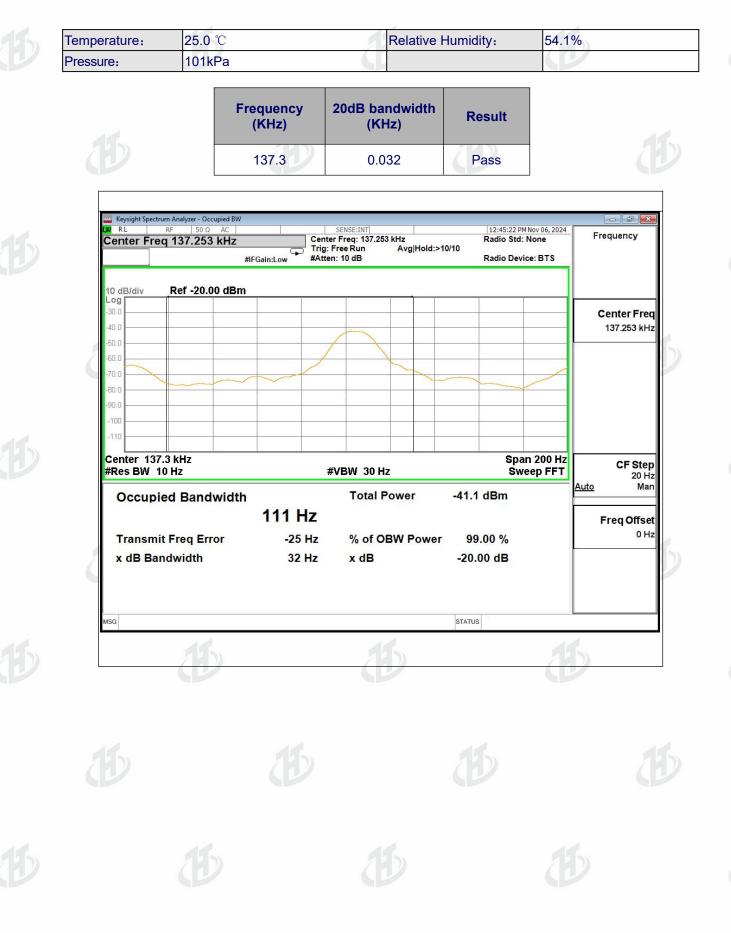
- 1. Set RBW = 10 Hz.
- 2. Set the video bandwidth (VBW)  $\ge$  3 x RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.

7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude point (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP					
EUT	•		22		
P	ān.		U	C	

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### ANTENNA REQUIREMENT

The antenna is C letails	coil Antenna, the	best case gain	of the antennas	s is 0dBi, referer	nce to the appe	ndix II for

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8. TEST SET	ГИР РНОТО						
Referer	nce to the appendix	I for details.					
9. EUT CON	STRUCTIONAL DE	TAILS					
Referer	nce to the appendix	II for details.					
	>	**** END	OF REPORT >	****			
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