



# **TEST REPORT**

Report No.: BCTC2412413654-1E

Applicant: Ugreen Group Limited

Product Name: Magnetic Wireless Power Bank

Test Model: PB561

Tested Date: 2024-12-12 to 2024-12-19

Issued Date: 2024-12-19

Shenzhen BCTC Testing Co., Ltd.



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## FCC ID:2AQI5-PB561D

Product Name: Magnetic Wireless Power Bank

Trademark: UGREEN

Model/Type Reference: PB561

Prepared For: Ugreen Group Limited

Address: Ugreen Building, Longcheng Industrial Park, Longguanxi Road, Longhua,

ShenZhen, China

Manufacturer: Ugreen Group Limited

Address: Ugreen Building, Longcheng Industrial Park, Longguanxi Road, Longhua,

ShenZhen, China

Prepared By: Shenzhen BCTC Testing Co., Ltd.

Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road,

Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Sample Received Date: 2024-12-12

Sample Tested Date: 2024-12-12 to 2024-12-19

Issue Date: 2024-12-19

Report No.: BCTC2412413654-1E

Test Standards: FCC Part15.209 ANSI C63.10-2013

Test Results: PASS

Tested by:

kelsey Ton

Kelsey Tan/ Project Handler

Approved by:

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

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(Note: N/A Means Not Applicable)

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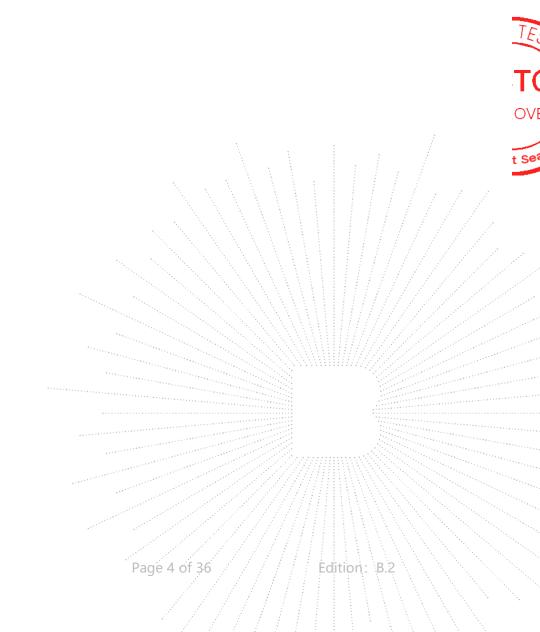
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## 1. Version

Report No.	Issue Date	Description	Approved
BCTC2412413654-1E	2024-12-19	Original	Valid

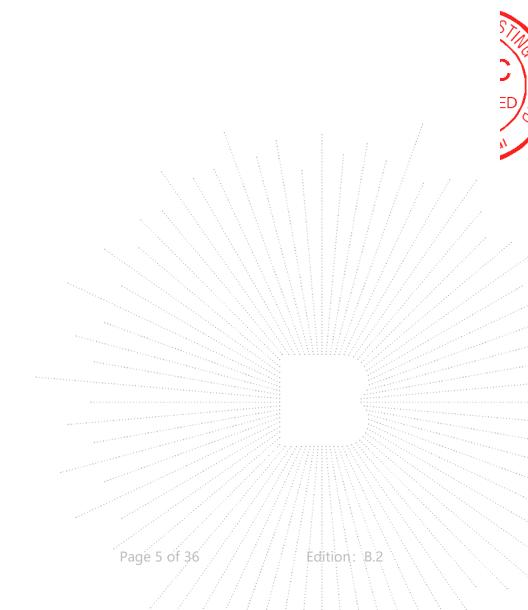




## 2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No.	Results
1	Conducted Emission	15.207	PASS
2	Radiated Emission	15.209	PASS
3	20dB Bandwidth	15.215	PASS
4	Antenna Requirement	15.203	PASS

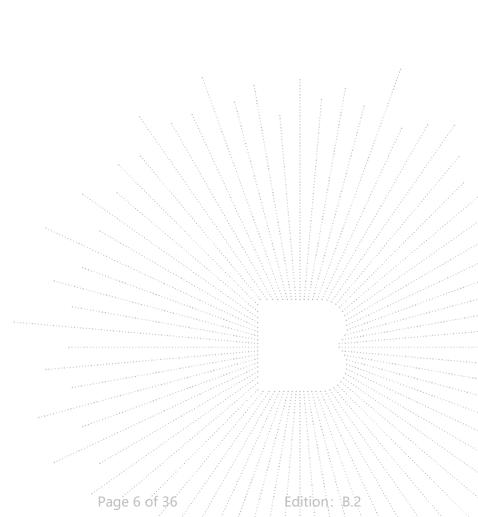




## 3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
2	Conducted Emission (150kHz-30MHz)	U=3.2dB
3	humidity uncertainty	U=5.3%
4	Temperature uncertainty	U=0.59°C





#### 4. Product Information And Test Setup

#### 4.1 Product Information

Model/Type Reference: PB561

P/N code Differences: All the P/N code and test models are the same circuit and RF module, except for

the appearance color and sales platform.

Hardware Version: A03

Software Version: ZX9100:V2.6

Operation Frequency: 112kHz-148.5kHz

Modulation: FSK

Antenna installation: loop coil antenna

Ratings: USB-C(IN) Input: 5V---3A, 9V---2.22A, 12V---1.67A

USB-C(OUT) Output: 5V---3A, 9V---2.22A, 12V---1.67A

Total Output: 5V==1A+5W

Rated Capacity:6250mAh(TYP 5V 3A)

Polymer Lithium-ion Battery Rated Energy: 37Wh 3.7V Battery Capacity: 10000mAh (Two Cells in Parallel)

Wireless Charging Output Power:15W Max

Battery manufacturer 1: Amprius (wuxi) Co., Ltd.

Battery manufacturer 2: Tianjin Juyuan New Energy Technology Co.,Ltd.

#### Remark:

- P/N code in the below table, for marketing purpose, will be marked on the marking plate.

25919	25919P	25919X	25919A	25919B	25919C	25919U	25919JP	25919ZD
35380	35380P	35380X	35380A	35380B	35380C	35380U	35380JP	35380ZD
35279	35279P	35279X	35279A	35279B	35279C	35279U	35279JP	35279ZD
45356	45356P	45356X	45356A	45356B	45356C	45356U	45356JP	45356ZD
45358	45358P	45358X	45358A	45358B	45358C	45358U	45358JP	45358ZD
45359	45359P	45359X	45359A	45359B	45359C	45359U	45359JP	45359ZD
45357	45357P	45357X	45357A	45357B	45357C	45357U	45357JP	45357ZD
55421	55421P	55421X	55421A	55421B	55421C	55421U	55421JP	55421ZD
35274	35274P	35274X	35274A	35274B	35274C	35274U	35274JP	35274ZD
35280	35280P	35280X	35280A	35280B	35280C	35280U	35280JP	35280ZD
45525	45525P	45525X	45525A	45525B	45525C	45525U	45525JP	45525ZD
45526	45526P	45526X	45526A	45526B	45526C	45526U	45526JP	45526ZD
25208	25208P	25208X	25208A	25208B	25208C	25208U	25208JP	25208ZD
25208LP	25208FY	25208WZ						***************************************

Battery manufacturer come from two different factories. Conducted Emission and Radiated Emission were tested.

Battery manufacturer 1: Amprius (wuxi) Co., Ltd.

Battery manufacturer 2: Tianjin Juyuan New Energy Technology Co.,Ltd.

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#### 4.2 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Magnetic Wireless Power Bank	UGREEN	PB561	N/A	EUT
E-2	Adapter	UGREEN	CD289	N/A	Auxiliary
E-3	Dummy load	N/A	DL01	N/A	Auxiliary

#### Notes:

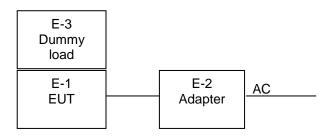
- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

#### 4.3 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

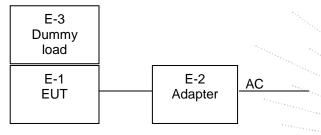
#### Conducted Emission:

Test Mode 1, 2



#### Radiated Spurious Emission:

Test Mode 1, 2



Test Mode 3,4,5

E-3 Dummy load	
E-1 EUT	

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#### 4.4 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

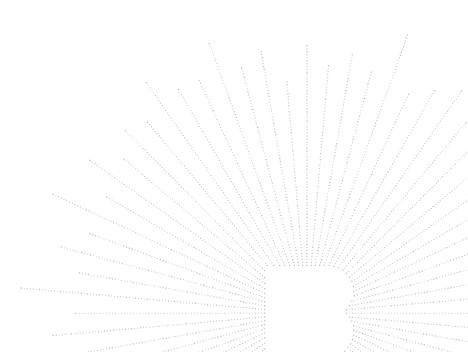
Battery manufacturer 1:

manaration in					
AC Mode	Mode 1	USB-C IN :(5V==-3A)+5W			
AC Mode	Mode 2	USB-C IN :(9V2.22A)+7.5W			
DC Mode	Mode 3	Wireless charge 5W			
	Mode 4	Wireless charge 7.5W			
	Mode 5	Wireless charge 15W			

Battery manufacturer 2:

AC Mode	Mode 1	USB-C IN :(5V===3A)+5W
	Mode 2	USB-C IN :(9V===2.22A)+7.5W
DC Mode	Mode 3	Wireless charge 5W
	Mode 4	Wireless charge 7.5W
	Mode 5	Wireless charge 15W

Note: All test mode were tested and passed, only shows the worst case mode which were recorded in this report.



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## 5. Test Facility And Test Instrument Used

#### 5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address:1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850 A2LA certificate registration number is: CN1212

ISED Registered No.: 23583 ISED CAB identifier: CN0017

#### 5.2 Test Instrument Used

	Conducted Emissions Test							
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.			
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025			
LISN	R&S	ENV216	101375	May 16, 2024	May 15, 2025			
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\			
Pulse limiter	Schwarzbeck	VTSD9561-F	01323	May 16, 2024	May 15, 2025			

		RF Cond	ucted Test		. / /
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power Meter	Keysight	E4419	The state of the s	May 16, 2024	May 15, 2025
Power Sensor (AV)	Keysight	E9300A	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	May 16, 2024	May 15, 2025
Signal Analyzer 20kHz-26.5G Hz	Keysight	N9020A	MY49100060	May 16, 2024	May 15, 2025
Spectrum Analyzer 9kHz-40GHz	R&S	FSP 40		May 16, 2024	May 15, 2025

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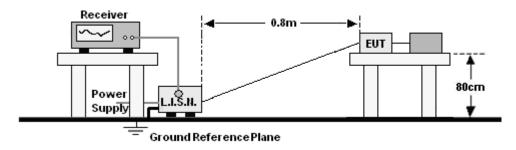
Radiated Emissions Test (966 Chamber01)						
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.	
966 chamber	ChengYu	966 Room	966	May 15, 2023	May 14, 2026	
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025	
Receiver	R&S	ESRP	101154	May 16, 2024	May 15, 2025	
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 16, 2024	May 15, 2025	
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 21, 2024	May 20, 2025	
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 21, 2024	May 20, 2025	
Amplifier	SKET	LAPA_01G18 G-45dB	SK2021040901	May 16, 2024	May 15, 2025	
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 21, 2024	May 20, 2025	
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35- HG	2034381	May 16, 2024	May 15, 2025	
Horn Antenna(18G Hz-40GHz)	Schwarzbeck	BBHA9170	00822	May 21, 2024	May 20, 2025	
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025	
Software	Frad	EZ-EMC	FA-03A2 RE	\	\	





#### 6. Conducted Emissions

## 6.1 Block Diagram Of Test Setup



#### 6.2 Limit

Fraguency (MUz)	Limit (	dBuV)
Frequency (MHz)	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

#### Notes:

- 1. \*Decreasing linearly with logarithm of frequency.
- 2. The lower limit shall apply at the transition frequencies.

#### 6.3 Test procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

- a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

#### 6.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

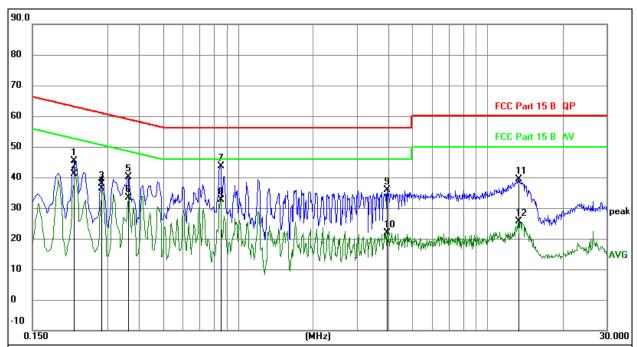
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#### 6.5 Test Result

#### Battery manufacturer 1:

Temperature:	<b>26</b> ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Phase :	L
Test Mode:	Mode 2(Worst)	Test Voltage:	AC 120V/60Hz

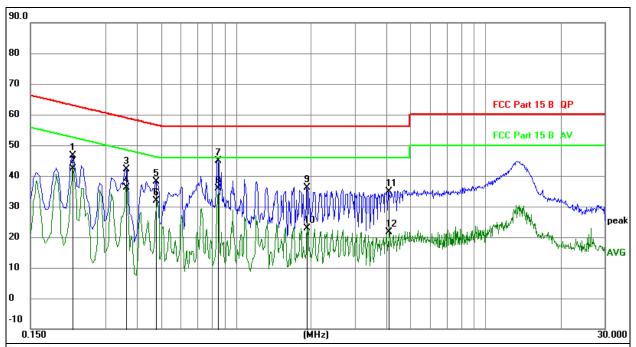


- 1. All readings are Quasi-Peak and Average values.
- Factor = Insertion Loss + Cable Loss.
   Measurement = Reading Level + Correct Factor
- 4. Over = Measurement Limit

			Reading	Correct	Measure-	1 1		
No.	Mk.	Freq.	Level	Factor	ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.2208	25.38	20.07	45.45	62.79	-17.34	QP
2	*	0.2208	21.01	20.07	41.08	52.79	-11.71	AVG
3		0.2847	17.92	20.07	37.99	60.68	-22.69	QP
4		0.2847	16.21	20.07	36.28	50.68	-14.40	AVG
5		0.3615	20.01	20.08	40.09	58.69	-18.60	QP
6		0.3615	13.39	20.08	33.47	48.69	-15.22	AVG
7		0.8483	23.47	20.09	43.56	56.00	-12.44	QP
8		0.8483	12.57	20.09	32.66	46.00	-13.34	AVG
9		3.9639	15.69	20.14	35.83	56.00	-20.17	QP
10		3.9639	1.81	20.14	21.95	46.00	-24.05	AVG
11		13.2667	19.23	20.26	39.49	60.00	-20.51	QP
12		13.2667	5.38	20.26	25.64	50.00	-24.36	AVG



Temperature:	<b>26</b> ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Phase :	N
Test Mode:	Mode 2(Worst)	Test Voltage:	AC 120V/60Hz



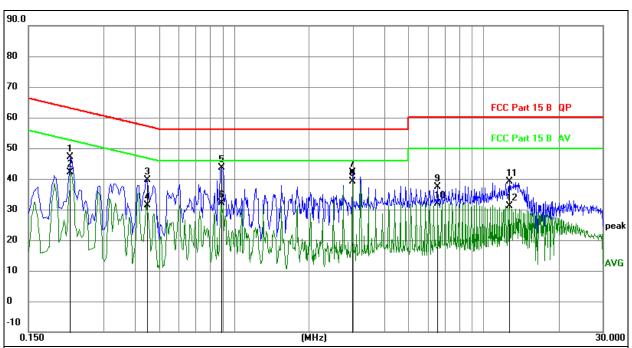
- All readings are Quasi-Peak and Average values.
   Factor = Insertion Loss + Cable Loss.
   Measurement = Reading Level + Correct Factor
   Over = Measurement Limit

1. 0 10.	- Moded		Reading	Correct	Measure-	-		
No.	Mk.	Freq.	Level	Factor	ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.2220	26.45	20.07	46.52	62.74	-16.22	QP
2		0.2220	22.23	20.07	42.30	52.74	-10.44	AVG
3		0.3615	21.93	20.08	42.01	58.69	-16.68	QP
4		0.3615	16.11	20.08	36.19	48.69	-12.50	AVG
5		0.4785	18.13	20.08	38.21	56.37	-18.16	QP
6		0.4785	11.89	20.08	31.97	46.37	-14.40	AVG
7		0.8475	24.76	20.09	44.85	56.00	-11.15	QP
8	*	0.8475	15.80	20.09	35.89	46.00	-10.11	AVG
9		1.9230	16.08	20.10	36.18	56.00	-19.82	QP
10		1.9230	2.66	20.10	22.76	46.00	-23.24	AVG
11		4.0785	14.82	20.14	34.96	56.00	-21.04	QP
12		4.0785	1.43	20.14	21.57	46.00	-24.43	AVG



#### Battery manufacturer 2:

Temperature:	<b>26</b> ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Phase :	L
Test Mode:	Mode 1(Worst)	Test Voltage:	AC 120V/60Hz

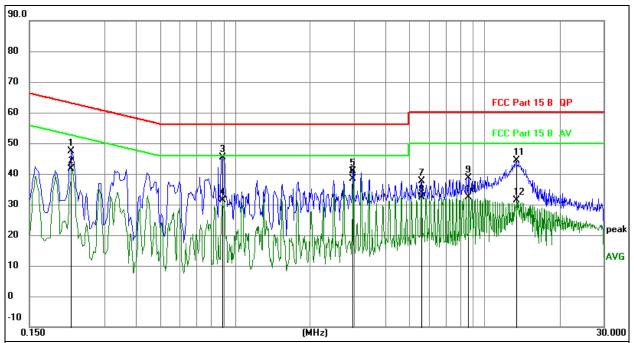


- All readings are Quasi-Peak and Average values.
   Factor = Insertion Loss + Cable Loss.
   Measurement = Reading Level + Correct Factor
   Over = Measurement Limit

4. Over	= ivieasu	irement - Lir	TIIL					
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.2208	26.96	20.07	47.03	62.79	-15.76	QP
2		0.2208	21.94	20.07	42.01	52.79	-10.78	AVG
3		0.4468	19.63	20.08	39.71	56.93	-17.22	QP
4		0.4468	11.29	20.08	31.37	46.93	-15.56	AVG
5		0.8925	23.43	20.09	43.52	56.00	-12.48	QP
6		0.8925	12.00	20.09	32.09	46.00	-13.91	AVG
7		2.9776	22.03	20.12	42.15	56.00	-13.85	QP
8	*	2.9776	19.09	20.12	39.21	46.00	-6.79	AVG
9		6.5573	17.27	20.16	37.43	60.00	-22.57	QP
10		6.5573	11.71	20.16	31.87	50.00	-18.13	AVG
11		12.7161	18.82	20.25	39.07	60.00	-20.93	QP
12		12.7161	10.80	20.25	31.05	50.00	-18.95	AVG



Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Phase :	Ν
Test Mode:	Mode 1(Worst)	Test Voltage:	AC 120V/60Hz



- All readings are Quasi-Peak and Average values.
   Factor = Insertion Loss + Cable Loss.
   Measurement = Reading Level + Correct Factor
   Over = Measurement Limit

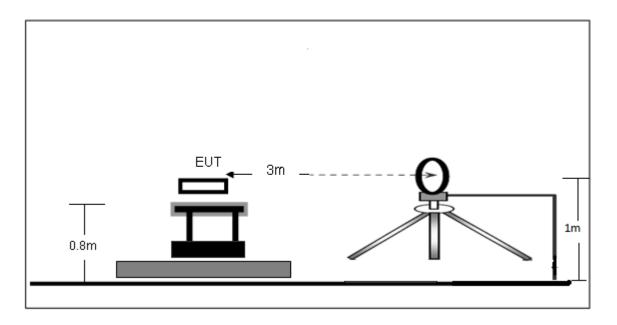
		dicilicit Li	<u> </u>					
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.2208	27.20	20.07	47.27	62.79	-15.52	QP
2		0.2208	21.60	20.07	41.67	52.79	-11.12	AVG
3		0.8897	25.39	20.09	45.48	56.00	-10.52	QP
4		0.8897	11.38	20.09	31.47	46.00	-14.53	AVG
5		2.9619	20.65	20.12	40.77	56.00	-15.23	QP
6	*	2.9619	18.27	20.12	38.39	46.00	-7.61	AVG
7		5.5641	17.58	20.15	37.73	60.00	-22.27	QP
8		5.5641	12.14	20.15	32.29	50.00	-17.71	AVG
9		8.6373	18.48	20.17	38.65	60.00	-21.35	QP
10		8.6373	12.30	20.17	32.47	50.00	-17.53	AVG
11		13.3372	24.22	20.26	44.48	60.00	-15.52	QP
12		13.3372	11.08	20.26	31.34	50.00	-18.66	AVG



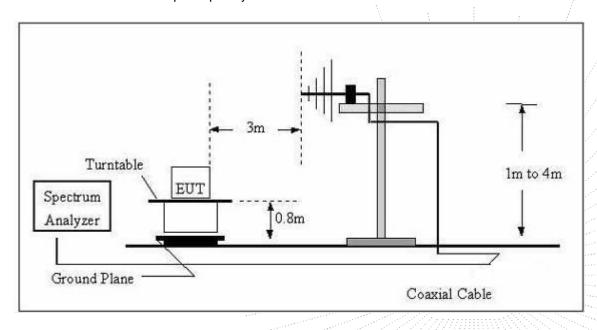
#### 7. Radiated Emissions

## 7.1 Block Diagram Of Test Setup

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



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



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#### 7.2 Limit

FCC §15.209; §15.205.

Test Standard	FCC Part15 C Section 15.2	FCC Part15 C Section 15.209 and 15.205					
	Frequency (MHz)	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)		
	0.009MHz~0.490MHz	2400/F(kHz)	-	-	300		
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30		
	1.705MHz-30MHz	30	-	-	30		
Test Limit	30MHz~88MHz	100	40.0	Quasi-peak	3		
	88MHz~216MHz	150	43.5	Quasi-peak	3		
	216MHz~960MHz	200	46.0	Quasi-peak	3		
	960MHz~1000MHz	500	54.0	Quasi-peak	3		
	Above 1000MHz	500	54.0	Average	3		
	Above 1000MHZ		74.0	Peak	3		

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#### 7.3 Test procedure

Receiver Parameter	Setting
Attenuation	Auto
9kHz~150kHz	RBW 200Hz for QP
150kHz~30MHz	RBW 9kHz for QP
30MHz~1000MHz	RBW 120kHz for QP

Below 1GHz test procedure as below:

a.The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b.The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d.For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e.The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f.If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

g.Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre( Above 18GHz the distance is 1 meter and table is 1.5 metre).

h.Test the EUT in the lowest channel ,the middle channel ,the Highest channel.

Note: Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

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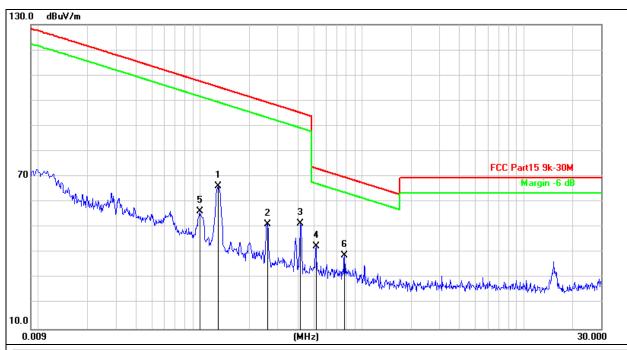


## 7.4 Test Result

#### 9kHz-30MHz

Battery manufacturer 1

Temperature:	26℃	Relative Humidity:	54%RH
Pressure:	101 kPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 2	Polarization:	Coaxial(Worst)

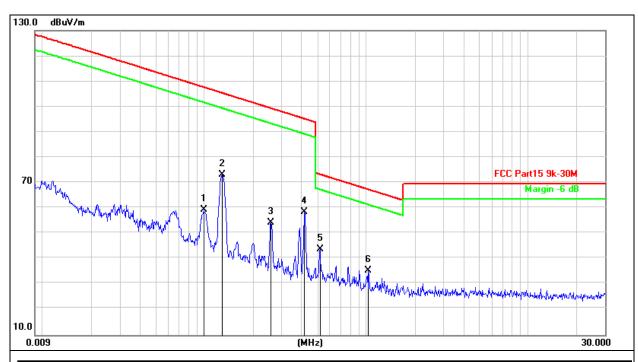


No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	0.1287	73.72	-7.54	66.18	105.4	-39.23	peak
2	0.2607	59.06	-7.74	51.32	99.28	-47.96	peak
3	0.4173	59.14	-7.63	51.51	95.19	-43.68	peak
4 *	0.5195	50.03	-7.55	42.48	73.29	-30.81	peak
5	0.0991	63.81	-7.50	56.31	107.6	-51.37	peak
6	0.7794	46.22	-7.36	38.86	69.78	-30.92	peak

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Temperature:	26℃	Relative Humidity:	54%RH
Pressure:	101 kPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 2	Polarization:	Coplanar(Worst)

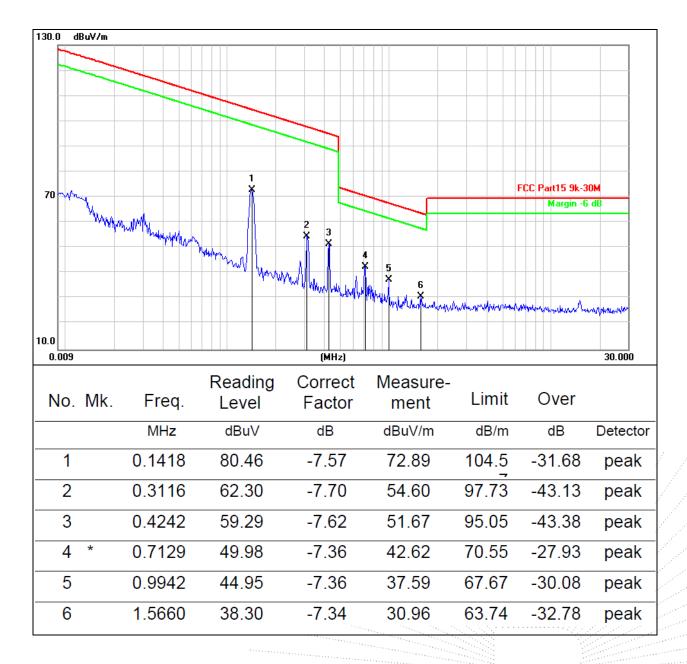


No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	A I
	MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	0.0991	66.71	-7.50	59.21	107.6	-48.47	peak
2	0.1297	80.84	-7.54	73.30	105.3	-32.05	peak
3	0.2586	61.89	-7.74	54.15	99.35	-45.20	peak
4	0.4173	65.99	-7.63	58.36	95.19	-36.83	peak
5 *	0.5195	51.40	-7.55	43.85	73.29	-29.44	peak
6	1.0354	42.78	-7.36	35.42	67.32	-31.90	peak

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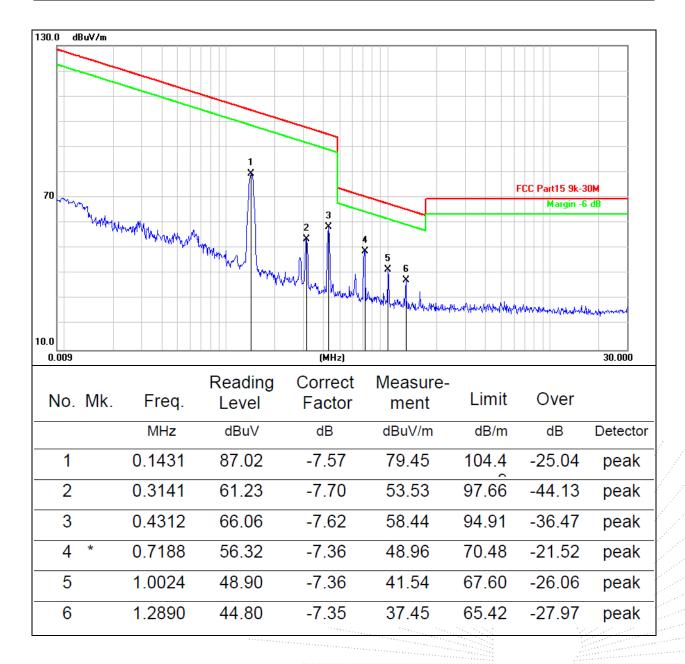
Temperature:	26℃	Relative Humidity:	54%RH
Pressure:	101 kPa	Test Voltage:	DC 3.7V
Test Mode:	Mode 5	Polarization:	Coaxial(Worst)



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Temperature:	26℃	Relative Humidity:	54%RH
Pressure:	101 kPa	Test Voltage:	DC 3.7V
Test Mode:	Mode 5	Polarization:	Coplanar(Worst)

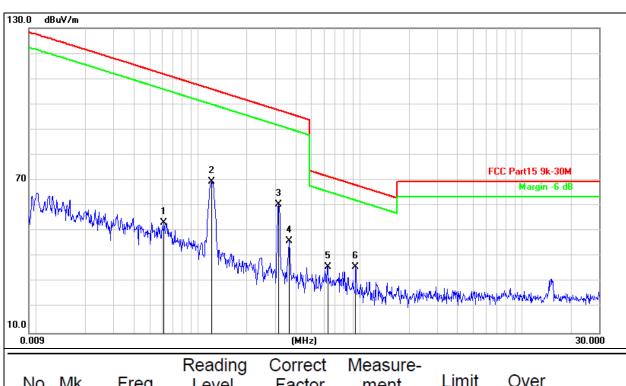


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Battery manufacturer 2

Temperature:	26℃	Relative Humidity:	54%RH		
Pressure:	101 kPa	Test Voltage:	AC120V/60Hz		
Test Mode:	Mode 2	Polarization:	Coaxial(Worst)		



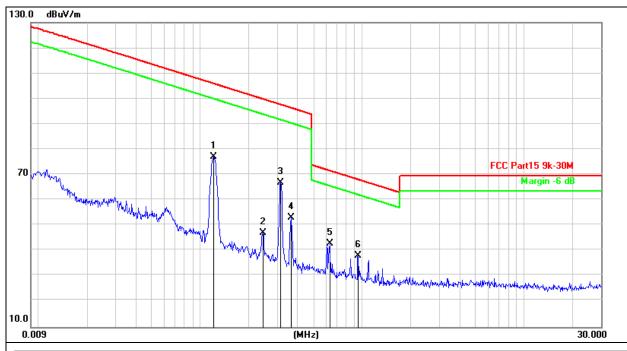
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz	dBu∨	dB	dBu∀/m	dB/m	dB	Detector
1	0.0615	60.81	-7.52	53.29	111.8	-58.54	peak
2	0.1216	77.17	-7.53	69.64	105.9	-36.27	peak
3	0.3141	68.25	-7.70	60.55	97.66	-37.11	peak
4	0.3666	53.75	-7.66	46.09	96.32	-50.23	peak
5	0.6313	43.34	-7.43	35.91	71.61	-35.70	peak
6 *	0.9394	43.40	-7.36	36.04	68.16	-32.12	peak

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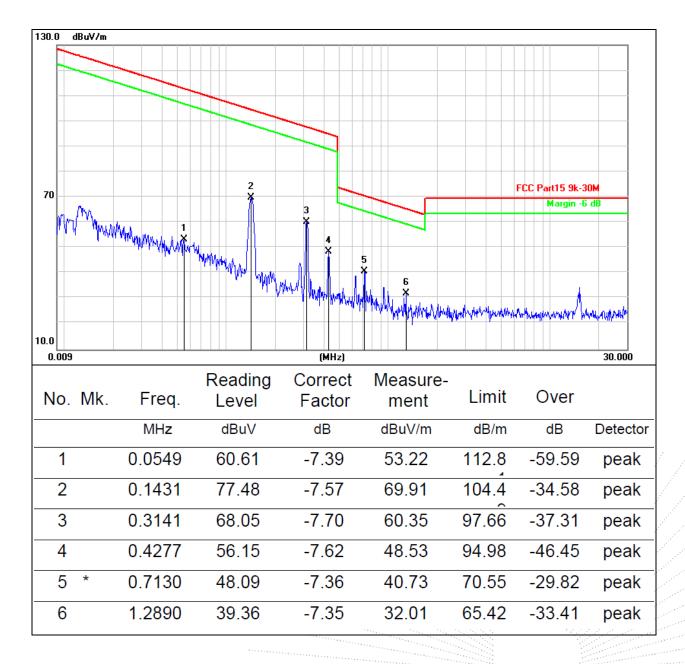
Temperature:	26℃	Relative Humidity:	54%RH
Pressure:	101 kPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 2	Polarization:	Coplanar(Worst)



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz	dBu∨	dB	dBu∀/m	dB/m	dB	Detector
1	0.1215	84.48	-7.53	76.95	105.9	-28.96	peak
2	0.2444	54.84	-7.75	47.09	99.84	-52.75	peak
3	0.3141	74.55	-7.70	66.85	97.66	-30.81	peak
4	0.3635	60.60	-7.67	52.93	96.39	-43.46	peak
5 *	0.6312	50.33	-7.43	42.90	71.61	-28.71	peak
6	0.9471	45.49	-7.36	38.13	68.09	-29.96	peak



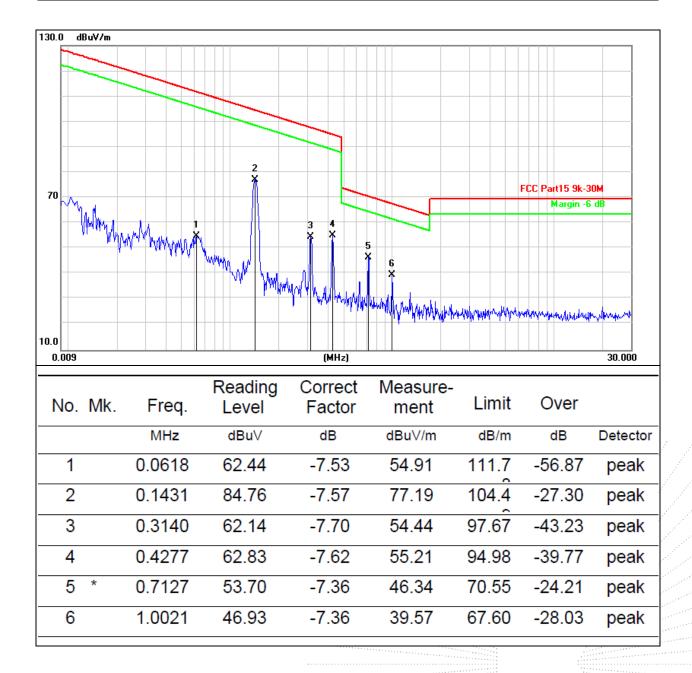
Temperature:	26℃	Relative Humidity:	54%RH
Pressure:	101 kPa	Test Voltage:	DC 3.7V
Test Mode:	Mode 5	Polarization:	Coaxial(Worst)



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Temperature:	26℃	Relative Humidity:	54%RH
Pressure:	101 kPa	Test Voltage:	DC 3.7V
Test Mode:	Mode 5	Polarization:	Coplanar(Worst)

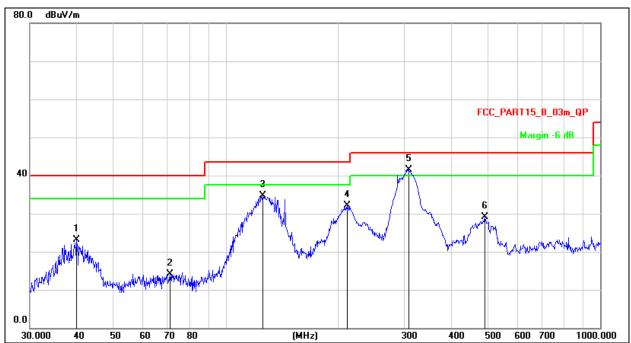




#### Between 30MHz - 1GHz

#### Battery manufacturer 1

Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Phase :	Horizontal
Test Mode:	Mode 2(Worst)	Test Voltage:	AC 120V/60Hz



#### Remark:

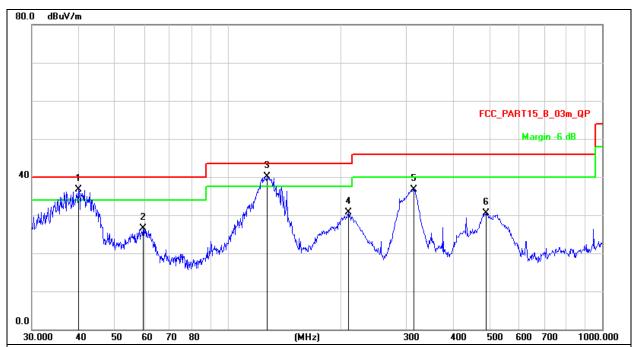
- 1. Factor = Antenna Factor + Cable Loss Pre-amplifier.
- 2. Measurement = Reading Level + Correct Factor

3. Over = Measurement - Limit

S. Over	= IVIE	asurement - Li	11111				1 1 1	
		_	Reading	Correct	Measure-		_	
No.	Mk.	Freq.	Level	Factor	ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		39.9942	37.86	-14.72	23.14	40.00	-16.86	QP
2		71.0803	32.29	-18.19	14.10	40.00	-25.90	QP
3		125.4457	52.39	-17.71	34.68	43.50	-8.82	QP
4		210.7860	47.42	-15.41	32.01	43.50	-11.49	QP
5	*	307.8313	54.56	-12.96	41.60	46.00	-4.40	QP
6		492.4685	37.88	-8.80	29.08	46.00	-16.92	QP



Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Phase :	Vertical
Test Mode:	Mode 2(Worst)	Test Voltage:	AC 120V/60Hz



Remark:

- Factor = Antenna Factor + Cable Loss Pre-amplifier.
   Measurement = Reading Level + Correct Factor

3. Over = Measurement - Limit

0.0.0		-						
No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	*	39.9941	51.51	-14.72	36.79	40.00	-3.21	QP
2		59.4405	41.72	-15.17	26.55	40.00	-13.45	QP
3	İ	127.2176	58.00	-17.84	40.16	43.50	-3.34	QP
4		210.0482	46.11	-15.43	30.68	43.50	-12.82	QP
5		314.3765	49.51	-12.73	36.78	46.00	-9.22	QP
6		489.0269	39.31	-8.88	30.43	46.00	-15.57	QP



#### Battery manufacturer 2

Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Phase :	Horizontal
Test Mode:	Mode 2(Worst)	Test Voltage:	AC 120V/60Hz

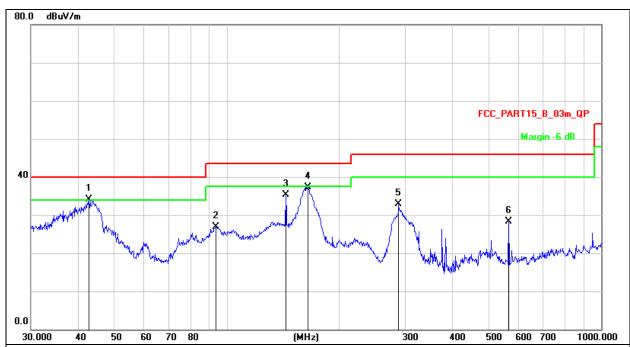


- Factor = Antenna Factor + Cable Loss Pre-amplifier.
   Measurement = Reading Level + Correct Factor
- 3. Over = Measurement Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		43.2017	34.67	-14.46	20.21	40.00	-19.79	QP
2		80.9275	44.23	-19.53	24.70	40.00	-15.30	QP
3		162.6106	55.16	-18.49	36.67	43.50	-6.83	QP
4	2	216.7828	42.33	-15.24	27.09	46.00	-18.91	QP
5	* 4	287.9904	53.94	-13.49	40.45	46.00	-5.55	QP
6	-	782.3453	26.46	-4.61	21.85	46.00	-24.15	QP



Temperature:	<b>26</b> ℃	Relative Humidity:	54%RH
Pressure:	101KPa	Phase :	Vertical
Test Mode:	Mode 2(Worst)	Test Voltage:	AC 120V/60Hz



#### Remark:

- Factor = Antenna Factor + Cable Loss Pre-amplifier.
   Measurement = Reading Level + Correct Factor

3. Over = Measurement - Limit

0. 0 10		acaronioni L						
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	*	42.8998	48.58	-14.48	34.10	40.00	-5.90	QP
2		93.4402	43.76	-16.89	26.87	43.50	-16.63	QP
3		143.8295	54.28	-19.00	35.28	43.50	-8.22	QP
4		164.9075	55.62	-18.32	37.30	43.50	-6.20	QP
5		287.9904	46.41	-13.49	32.92	46.00	-13.08	QP
6		566.6223	37.60	-9.26	28.34	46.00	-17.66	QP

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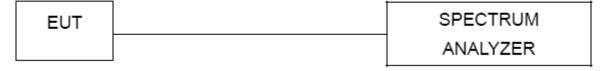


#### 8. Bandwidth Test

#### 8.1 Test Procedure

- 1. Set RBW = 1%~5% OBW.
- 2. Set the video bandwidth (VBW)  $\geq$  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 points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

### 8.2 Test Setup

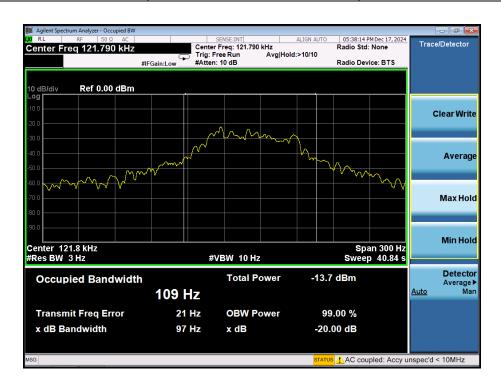


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#### 8.3 Test Result

Frequency (kHz)	20dB bandwidth (kHz)	Result
121.8	0.097	Pass



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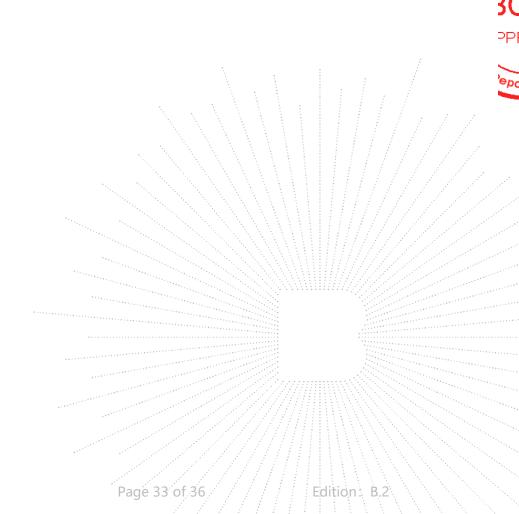
## 9. Antenna Requirements

#### 9.1 Limit

For intentional device, according to FCC 47 CFR Section 15.203, An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

#### 9.2 Test Result

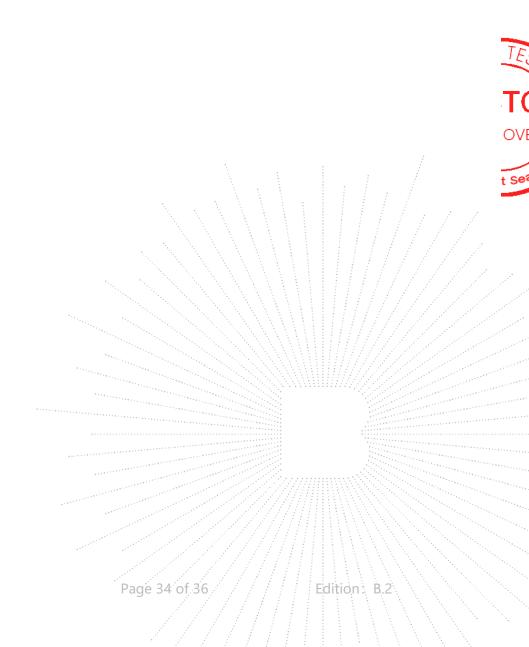
The antenna used for this product is loop coil antenna.





## 10. EUT Photographs

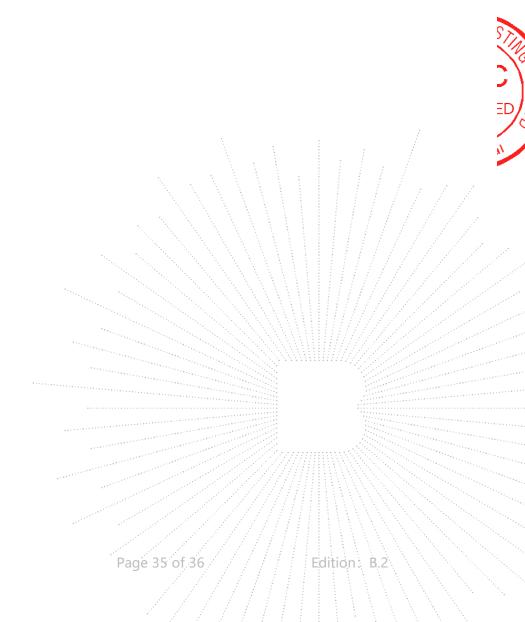
NOTE: Appendix-Photographs Of EUT Constructional Details





## 11. EUT Test Setup Photographs

NOTE: Appendix-Test Photos





#### **STATEMENT**

- 1. The equipment lists are traceable to the national reference standards.
- 2. The test report can not be partially copied unless prior written approval is issued from our lab.
- 3. The test report is invalid without the "special seal for inspection and testing".
- 4. The test report is invalid without the signature of the approver.
- 5. The test process and test result is only related to the Unit Under Test.
- 6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
- 7. The quality system of our laboratory is in accordance with ISO/IEC17025.
- 8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

#### Address:

1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

TEL: 400-788-9558

P.C.: 518103

FAX: 0755-33229357

Website: http://www.chnbctc.com

Consultation E-mail: bctc@bctc-lab.com.cn

Complaint/Advice E-mail: advice@bctc-lab.com.cn

\*\*\*\* END \*\*\*\*

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