

# **FCC Test Report**

Report No.: AGC11758240846FR01

**FCC ID** : 2A482-PPPG1030C

**APPLICATION PURPOSE**: Original Equipment

**PRODUCT DESIGNATION**: Power Bank

**BRAND NAME**: baseus

**MODEL NAME** : PPPG-1030C

**APPLICANT**: Shenzhen Baseus Technology Co., Ltd.

**DATE OF ISSUE** : Dec. 16, 2024

**STANDARD(S)** : FCC Part 15 Subpart C

**REPORT VERSION**: V1.0

Attestation of Global Conce (Shenzhen) Co., Ltd



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# **Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Dec. 16, 2024	Valid	Initial Release

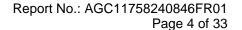


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Web: http://www.agccert.com/





# 1. General Information

Applicant	Shenzhen Baseus Technology Co., Ltd.				
Address	2nd Floor, Building B, Baseus Intelligence Park, No.2008, Xuegang Rd, Gangtou Community, Bantian Street, Longgang District, Shenzhen, China				
Manufacturer	Shenzhen Baseus Technology Co., Ltd.				
Address	2nd Floor, Building B, Baseus Intelligence Park, No.2008, Xuegang Rd, Gangtou Community, Bantian Street, Longgang District, Shenzhen, China				
Factory	Shenzhen Joway Power Supply Co., Ltd.				
Address	Floor 1-5 of Bldg 10th and Bldg 11th, Antuoshan High-Tech Industrial Park, Sha'er Community, Shajing Street, Bao'an District, Shenzhen, China				
Product Designation	Power Bank				
Brand Name	baseus				
Test Model	PPPG-1030C				
Series Model(s)	N/A				
Difference Description	N/A				
Date of receipt of test item	Oct. 31, 2024				
Date of Test	Oct. 31, 2024~ Dec. 16, 2024				
Deviation from Standard	No any deviation from the test method				
Condition of Test Sample	Normal				
Test Result	Pass				
Test Report Form No	AGCER-FCC-WPT-V1				

Note: The test results of this report relate only to the tested sample identified in this report.

Prepared By	Jours bai	
	Jack Gui (Project Engineer)	Dec. 16, 2024
Reviewed By	Calvin Lin	
	Calvin Liu (Reviewer)	Dec. 16, 2024
Approved By	Angole Li	
	Angela Li (Authorized Officer)	Dec. 16, 2024



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# 2. Product Information

# 2.1 Product Technical Description

Equipment Type	⊠WPT System; □WPT Source; □WPT Client		
	☐Desktop Charger		
Device Type	⊠Portable Charger		
	☐Composite charger		
Operation Frequency Band	115KHz-205KHz, 360KHz $\pm$ 5KHz		
Hardware Version	V1.0		
Software Version	v1.0		
Modulation Type	ASK		
Field Strength of Fundamental	56.40dBμV/m (Max)		
Antenna Designation	Coil Antenna		
Number of Coils	1 Primary Coil +1 Secondary Coil		
Input Rating	DC 5V/9V/12V by adapter or DC 3.6V by battery		
Output Rating	5W/7.5W/15W Max		



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# 2.2 Related Submittal(S) / Grant (S)

This submittal(s) (test report) is intended for FCC ID: 2A482-PPPG1030C, filing to comply with Part 2, Part 15 of the Federal Communication Commission rules.

# 2.3 Test Methodology

The tests were performed according to following standards:

No.	Identity	Document Title
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
2	FCC 47 CFR Part 15	Radio Frequency Devices
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

#### 2.5 Special Accessories

Not available for this EUT intended for grant.

#### 2.6 Equipment Modifications

Not available for this EUT intended for grant.

#### 2.7 Antenna Requirement

# **Standard Requirement**

#### 15.203 requirement:

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, 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.

#### **EUT Antenna:**

The non-detachable antenna inside the device cannot be replaced by the user at will.



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#### 3. Test Environment

#### 3.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

# 3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

# CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

#### A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

# FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

#### IC-Registration No.: 24842(CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.



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# 3.3 Environmental Conditions

	Normal Conditions
Temperature range (°C)	0 - 30
Relative humidity range	20 % - 75 %
Pressure range (kPa)	86 - 106
Power supply	DC 5V/9V/12V by adapter or DC 3.6V by battery

# 3.4 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%.

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	$U_c = \pm 2.9 \text{ dB}$
Uncertainty of Radiated Emission below 150kHz	$U_c = \pm 4.2 \text{ dB}$
Uncertainty of Radiated Emission below 30MHz	$U_c = \pm 3.9 \text{ dB}$
Uncertainty of Radiated Emission below 1GHz	$U_c = \pm 4.0 \text{ dB}$
Uncertainty of Occupied Channel Bandwidth	$U_c = \pm 2.7 \%$



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# 3.5 List of Equipment Used

• F	Radiated Spurious Emission& RF Conducted Test						
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2024-02-01	2025-01-31
	AGC-ER-E036	Spectrum Analyzer	Agilent	N9020A	MY49100060	2024-05-24	2025-05-23
	AGC-EM-E116	EMI Test Receiver	R&S	ESCI	100034	2024-05-24	2025-05-23
$\boxtimes$	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2024-05-28	2025-05-27
$\boxtimes$	AGC-EM-E086	Loop Antenna	ZHINAN	ZN30900C	18051	2024-03-05	2026-03-04
$\boxtimes$	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2023-05-11	2025-05-10
$\boxtimes$	AGC-EM-A138	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2025-06-08

• A	AC Power Line Conducted Emission							
Used Equipment No. Test Equipment Manufacturer Model No. Serial No. Last Cal. Date (YY-MM-DD) (YY-MM-DD)								
$\boxtimes$	AGC-EM-E045	EMI Test Receiver	R&S	ESPI	101206	2024-05-28	2025-05-27	
$\boxtimes$	AGC-EM-A130	6dB Attenuator	Eeatsheep	LM-XX-6-5W	DC-6GZ	2023-06-09	2025-06-08	
$\boxtimes$	AGC-EM-E023	AMN	R&S	100086	ESH2-Z5	2024-05-28	2025-05-27	

• Tes	Test Software						
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Version Information		
	AGC-EM-S001	CE Test System	R&S	ES-K1	V1.71		
$\boxtimes$	AGC-EM-S003	RE Test System	FARA	EZ-EMC	VRA-03A		



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# 4. System Test Configuration

# 4.1 EUT Configuration

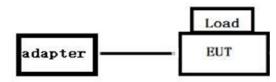
The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

#### 4.2 EUT Exercise

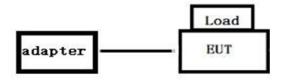
The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

# 4.3 Configuration of Tested System

Radiated Emission Configure:



# Conducted Emission Configure:



#### 4.4 Equipment Used in Tested System

The following peripheral devices and interface cables were connected during the measurement:

No.	Equipment	Manufacturer	Model No.	Specification Information	Cable
1	Wireless Charging Load		YBZ-QI 2.0	5W/7.5W/15W Max	
2	Adapter	HUAWEI	HW-200440C00		0.8m unshielded

☐ Test Accessories Come From The Manufacturer

No.	Equipment	Model No.	Manufacturer	Specification Information	Cable
1		-			



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# 4.5 Summary of Test Results

Item	FCC Rules	Description of Test	Result
1	§15.203	Antenna Equipment	Pass
2	§15.209(a)(f)	Field Strength of Fundamental	Pass
3	§15.209(a)(f)	Radiated Spurious Emission	Pass
4	§15.215(c)	20dB Bandwidth	Pass
5	§15.205(a)	Restricted Bands of Operation	Pass
6	§15.207	AC Power Line Conducted Emission	Pass



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# 5. Description of Test Modes

Config.	Test Descriptions	Test Mode	Client
1	EUT stand alone, standby, powered by AC/DC adapter & battery.	@115-205kHz	None
	Direct contact during charging/operating between the	@360kHz	
2	EUT& WPT Client, EUT is powered by AC/DC adapter & battery.	@115-205kHz	Wireless Charging Load

# Supplementary Test Instructions

- For the radiated emissions and AC power conducted emissions test, the EUT was tested in desktop position in the following configurations: Standby and charging.
- AC power line conducted testing and radiated spurious emission 30MHz to 1GHz was performed on Configuration 2 at EUT minimum and maximum load respectively only as worse case.
- During the radiation emission test, the device will find the worst placement of the X, Y, and Z axes for testing.



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# 6. Field Strength of Fundamental

#### **6.1 Measurement Limits**

Test Requirement:	FCC Part15 C Section 15.209					
Test Method:	ANSI C63.10:2013					
Test Frequency Range:	9kHz to 1GHz					
Test site:	Measurement Distance: 3m					
	Frequency	Detector	RBW	VBW	Value	
	9kHz-150kHz	Quasi-peak	200Hz	600Hz	Quasi-peak	
	150kHz-30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak	
Receiver Setup:	30MHz-1GHz	Quasi-peak	100kHz	300kHz	Quasi-peak	
	Above 1CLL	Peak	1MHz	3MHz	Peak	
	Above 1GHz	Peak	1MHz	10Hz	Average	
	Note: For measuremon quasi-peak detection detection is added.	•	•		1	

#### ■ Limits for frequency below 30MHz

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

#### ■ Limits for frequency Above 30MHz

Frequency	Limit (dBµV/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 1CH7	54.00	Average Value
Above 1GHz	74.00	Peak Value

#### Remark:

- 1) Emission level dBμV= 20 log Emission level μV/m
- The smaller limit shall apply at the cross point between two frequency bands.
- Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.



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#### **6.2 Measurement Procedure**

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.



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#### 6.3 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any), Average Factor (optional) from the measured reading. The basic equation with a sample calculation is as follows:

◆ FS = RA + AF + CF - AG - AV

#### Where

- FS = Field Strength in dBµV/m
- RA = Receiver Amplitude (including preamplifier) in dBµV
- CF = Cable Attenuation Factor in dB
- AF = Antenna Factor in dB/m
- AG = Amplifier Gain in dB
- AV = Average Factor in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows:

♦ FS = RR + LF

#### Where

- FS = Field Strength in dBµV/m
- RR = RA AG AV in dBµV
- LF = CF + AF in dB

Assume a receiver reading of 52.0dBµV is obtained.

- The antenna factor of 7.4dB/m and cable factor of 1.6dB are added.
- The amplifier gain of 29dB and average factor of 5dB are subtracted, giving a field strength of 27dBµV/m.
- This value in dBμV/m was converted to its corresponding level in μV/m.
  - RA =  $52.0 \text{ dB}\mu\text{V/m}$ , AF = 7.4 dB/m
  - RR = 18.0 dBµV, CF = 1.6 dB
  - LF = 9.0 Db, AG = 29.0 dB
  - AV = 5.0 dB, FS = RR + LF
  - $FS = 18 + 9 = 27 \text{ dB}\mu\text{V/m}$
- Level in  $\mu$ V/m = Common Antilogarithm [(27 dB $\mu$ V/m)/20] = 22.4  $\mu$ V/m
- Magnetic field strength calculation (9 kHz 30 MHz)

When the limit is in terms of magnetic field, the following equation applies:

 $+ H[dB(\mu A/m)] = V[dB(\mu V)] + LC [dB] - GPA [dB] + AFH [dB(S/m)]$ 

#### Where.

- H is the magnetic field strength (to be compared with the limit),
- V is the voltage level measured by the receiver or spectrum analyzer,
- > LC is the cable loss,
- > GPA is the gain of the preamplifier (if used), and
- AFH is the magnetic antenna factor.

If the "electrical" antenna factor is used instead, the above equation becomes:

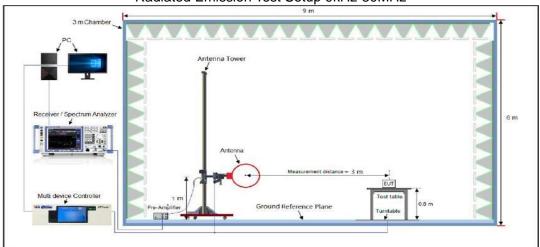
 $\Phi$  H[dB(μA/m)] =V[dB(μV)]+LC [dB]–GPA [dB] + AFE [dB(m-1)]-51.5[dBΩ]

where AFE is the "electric" antenna factor, as provided by the antenna calibration laboratory.

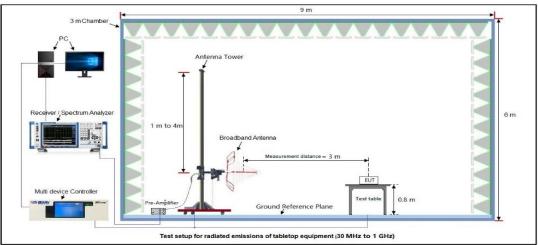


# 6.4 Measurement Setup

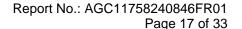
# Radiated Emission Test Setup 9kHz-30MHz



# Radiated Emission Test Setup 30MHz-1000MHz



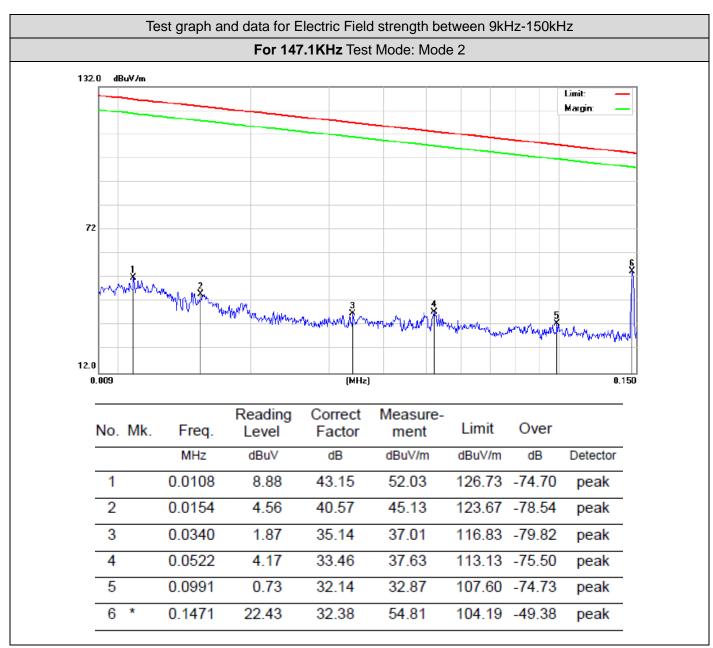
The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.205 limits.





#### 6.5 Measurement Result

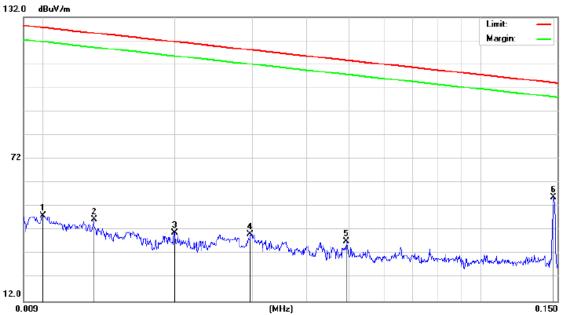
Test Equipment	Power Bank	Model Name	PPPG-1030C
Temperature	22.8℃	Relative Humidity	56.8 %
Air Pressure	985 Mbar	Power supply	DC 3.6V by battery
Worst Mode	Mode 2	Antenna Polarity	Face



**Result: Pass** 

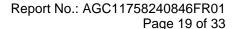


# Test graph and data for Electric Field strength between 9kHz-150kHz For 147.1KHz Test Mode: Mode 2 132.0 dBuV/m



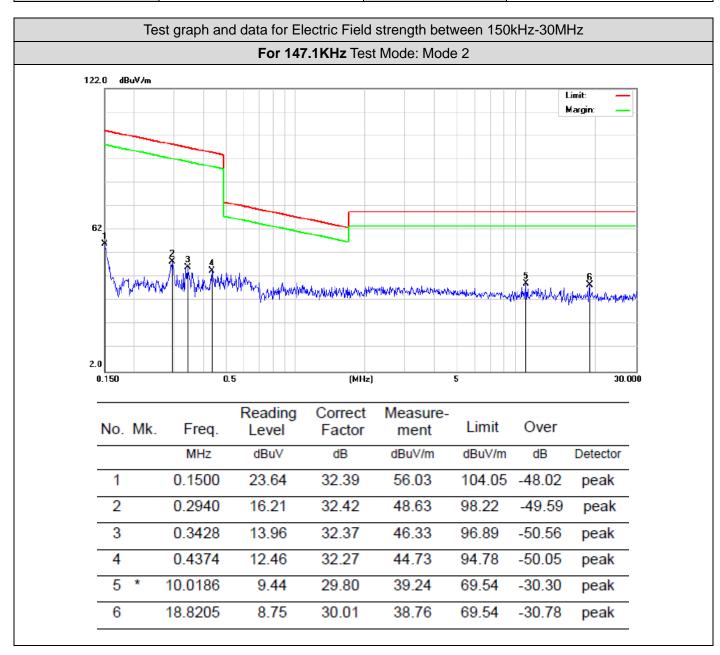
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	0.0100	4.48	43.66	48.14	127.49	-79.35	peak
2	0.0130	4.64	41.95	46.59	125.22	-78.63	peak
3	0.0200	3.06	37.98	41.04	121.49	-80.45	peak
4	0.0298	4.75	35.69	40.44	118.04	-77.60	peak
5	0.0492	3.57	33.63	37.20	113.70	-76.50	peak
6 *	0.1471	23.58	32.38	55.96	104.22	-48.26	peak

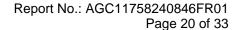
**Result: Pass** 





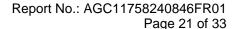
Test Equipment	Power Bank	Model Name	PPPG-1030C
Temperature	22.8℃	Relative Humidity	56.8 %
Air Pressure	985 Mbar	Power supply	DC 3.6V by battery
Worst Mode	Mode 2	Antenna Polarity	Face





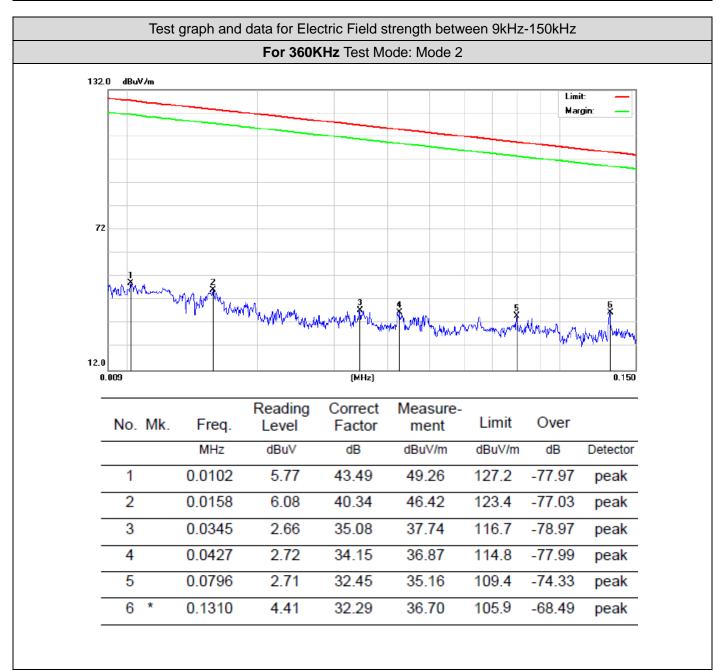


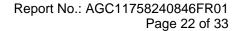
#### Test graph and data for Electric Field strength between 150kHz-30MHz For 147.1KHz Test Mode: Mode 2 dBuV/m 122 በ Limit Margin: 2.0 0.150 (MHz) 30.000 Reading Correct Measure-Limit Over No. Mk. Freq. Level Factor ment MHz dBuV dB dBuV/m dBuV/m dB Detector 0.1500 24.01 32.39 56.40 104.02 -47.62 peak 2 0.2940 16.21 32.42 48.63 98.21 -49.58peak 3 0.3634 32.35 15.99 48.34 96.38 -48.04peak 4 0.5020 11.20 32.21 43.41 73.59 -30.18peak 5 0.6011 10.22 32.18 42.40 72.02 -29.62peak 6 18.7210 7.63 30.01 37.64 69.54 -31.90peak



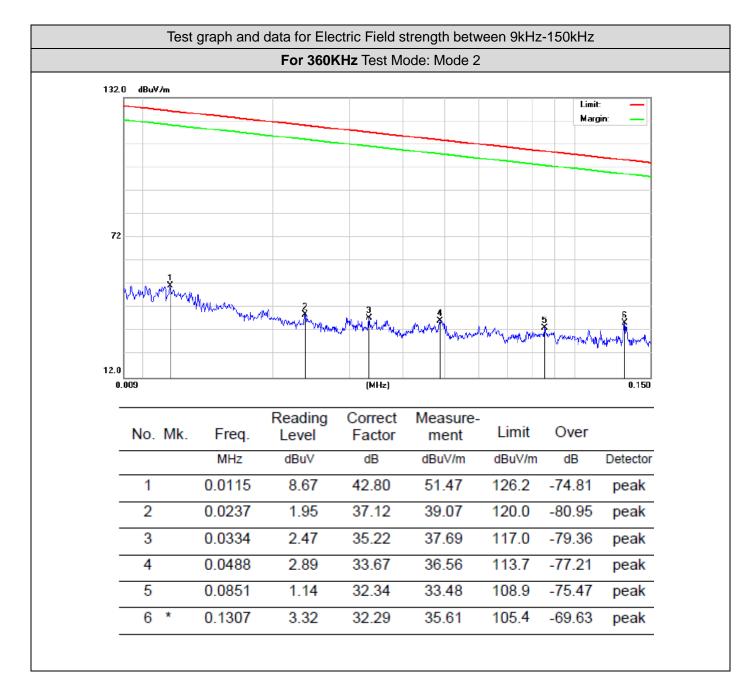


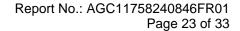
Test Equipment	Power Bank	Model Name	PPPG-1030C
Temperature	22.8℃	Relative Humidity	56.8 %
Air Pressure	985 Mbar	Power supply	DC 3.6V by battery
Worst Mode	Mode 2	Antenna Polarity	Face





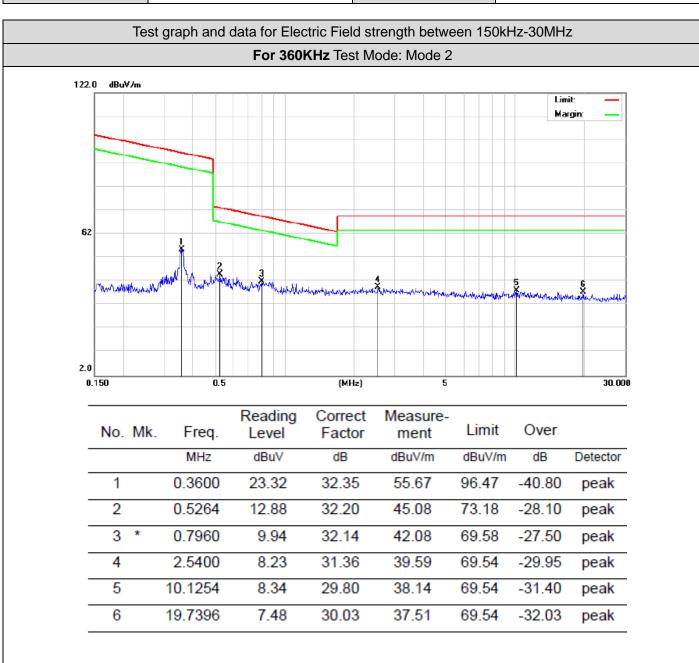


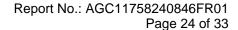






Test Equipment	Power Bank	Model Name	PPPG-1030C
Temperature	22.8℃	Relative Humidity	56.8 %
Air Pressure	985 Mbar	Power supply	DC 3.6V by battery
Worst Mode	Mode 2	Antenna Polarity	Face

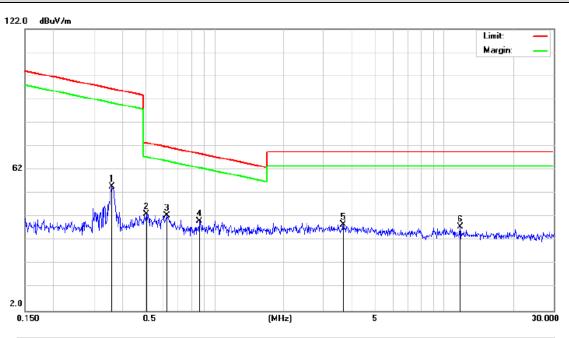






# Test graph and data for Electric Field strength between 150kHz-30MHz

# For 360KHz Test Mode: Mode 2

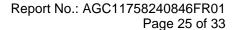


No. M	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	0.3600	22.47	32.35	54.82	96.47	-41.65	peak
2	0.5074	11.09	32.21	43.30	73.50	-30.20	peak
3	0.6238	10.47	32.18	42.65	71.70	-29.05	peak
4 *	0.8618	8.10	32.12	40.22	68.89	-28.67	peak
5	3.6418	7.91	30.72	38.63	69.54	-30.91	peak
6	11.7446	8.07	29.85	37.92	69.54	-31.62	peak

# **Result: Pass**

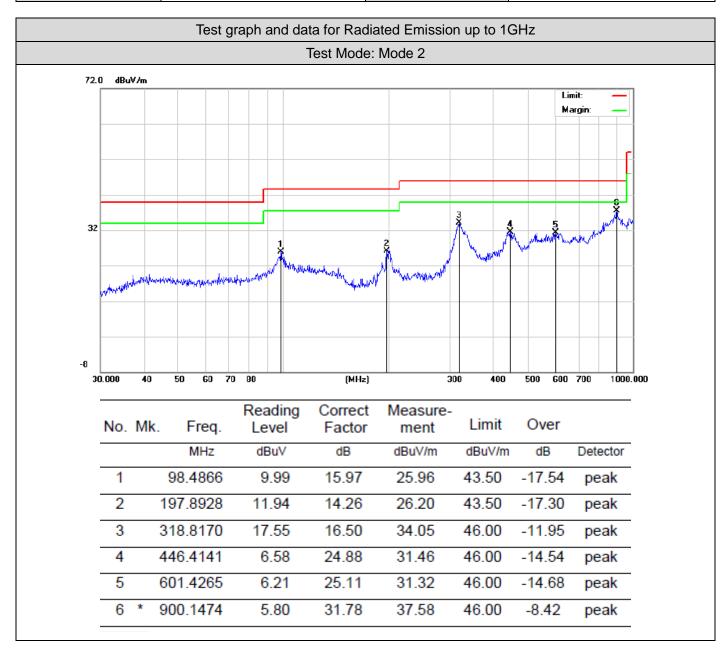
#### Notes:

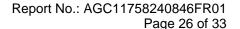
- 1. Quasi-Peak detector is used for frequency below 30MHz.
- 2. Negative value in the margin column shows emission below limit.
- 3. All measurements were made with 0.6m loop antenna at 3m distance. All emissions are below the QP limit.
- 4. Corr. Factor= Antenna Factor (dB/m) + Cable Loss (dB)
- 5. Loop antenna is used for the emission under 30MHz.



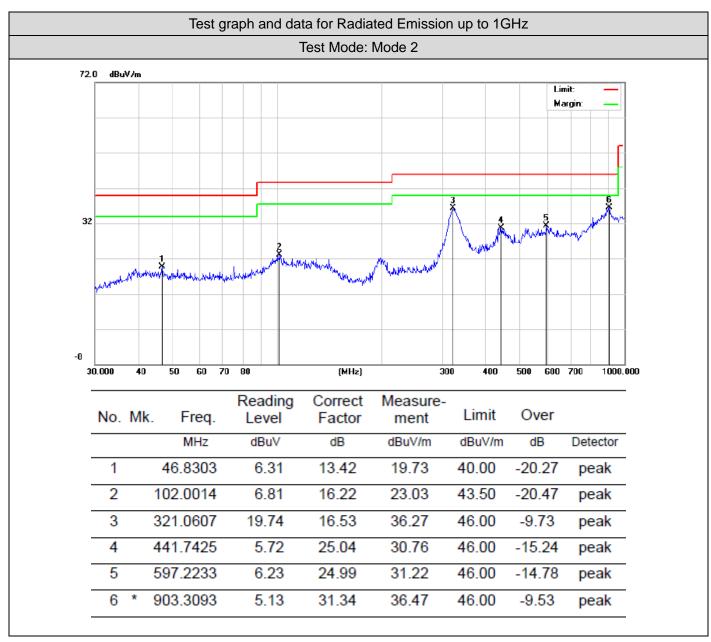


Test Equipment	Power Bank	Model Name	PPPG-1030C
Temperature	22.8℃	Relative Humidity	56.8 %
Air Pressure	985 Mbar	Power supply	DC 3.6V by battery
Worst Mode	Mode 2	Antenna Polarity	Horizontal









**Note:** 1. Factor=Antenna Factor + Cable loss, Over = Measurement-Limit.

- 2. All test modes had been pre-tested. The mode 2 is the worst case and recorded in the report.
- 3. The "Factor" value can be calculated automatically by software of measurement system.



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#### 7. -20 dB Bandwidth Measurement

# 7.1 Provisions Applicable

N/A

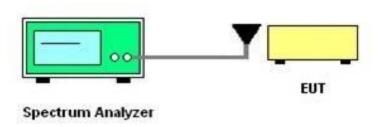
#### 7.2 Measurement Procedure

Set the parameters of SPA as below:

- 1. The spectrum analyzer connected via a receive antenna placed near the EUT in peak Max hold mode.
- 2. Centre frequency = Operation Frequency
- 3. The resolution bandwidth of 300 Hz and the video bandwidth of 1 kHz were used.
- 4. Span: 3kHz, Sweep time: Auto
- 5. Set the EUT to continue transmitting mode. Allow the trace to stabilize. Use the "N dB down" function of SPA to define the bandwidth.
- 6. Measured the spectrum width with power higher than 20dB below carrier.
- 7. Measured the 99% OBW.
- 8. Record the plots and Reported.

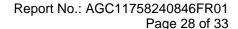
**Note:** Since the measured signal is CW-like, it is not practical to adjust the RBW according to C63.10, as the measured bandwidth will always follow the RBW, resulting in approximately twice the RBW.

#### 7.3 Measurement Setup



#### 7.4 Measurement Result

Test Data of Occupied Bandwidth and -20dB Bandwidth							
Configuration	Frequency (kHz)	99%Bandwidth (Hz)	-20dB Bandwidth (Hz)	Limits (Hz)	Pass or Fail		
1	147.1	694	929	N/A	Pass		
2	360.0	701	819	N/A	Pass		





# Test Graphs of -20dB Bandwidth



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#### 8. AC Power Line Conducted Emission Test

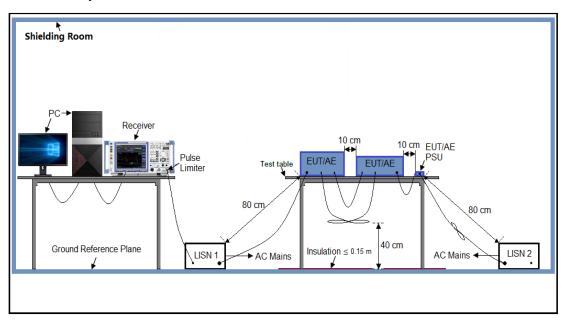
#### **8.1 Measurement Limits**

Fraguenay Danga	Maximum RF Line Voltage				
Frequency Range	Q.P. (dBμV)	Average (dBµV)			
150kHz~500kHz	66-56	56-46			
500kHz~5MHz	56	46			
5MHz~30MHz	60	50			

#### Note:

- 1. The lower limit shall apply at the transition frequency.
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

# 8.2 Measurement Setup





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#### 8.3 Preliminary Procedure of Line Conducted Emission Test

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipment received AC120V/60Hz power from a LISN, if any.
- The EUT received DC 12V power from adapter which received AC120V/60Hz power from a LISN.
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

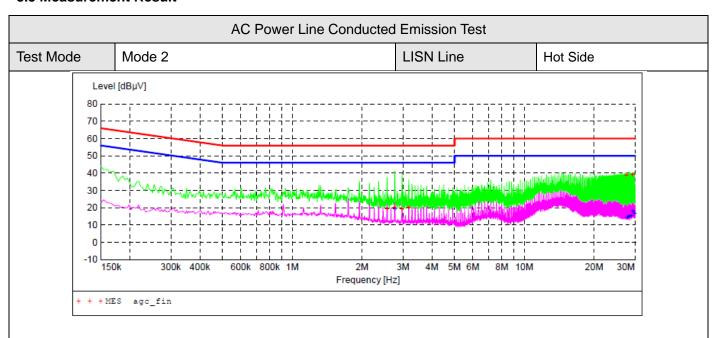
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

#### 8.4 Final Procedure of Line Conducted Emission Test

- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less 2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- The test data of the worst case condition(s) was reported on the Summary Data page.



#### 8.5 Measurement Result



# MEASUREMENT RESULT: "agc\_fin"

2024/11/4 17:	00					
Frequency	Level	Transd	Limit	Margin	Detector	Line
MHz	dΒμV	dB	dΒμV	dB		

PILL	abav	uБ	αυμν	aБ		
2.562000	19.10	6.3	56	36.9	QP	L1
2.766000	20.20	6.3	56	35.8	QP	L1
2.970000	19.40	6.3	56	36.6	QP	L1
3.178000	20.10	6.3	56	35.9	QP	L1
27.554000	38.60	8.2	60	21.4	QP	L1
29.390000	38.90	8.3	60	21.1	OP	T.1

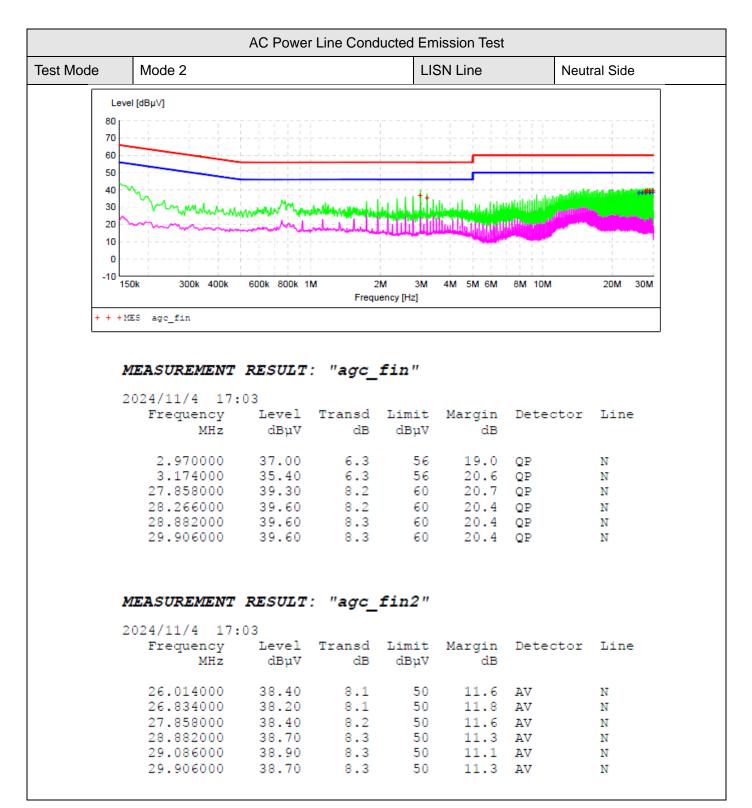
# MEASUREMENT RESULT: "agc fin2"

2024/11/4 17:00

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
2.766000	19.20	6.3	46	26.8	AV	L1
27.758000	14.50	8.2	50	35.5	AV	L1
28.166000	14.90	8.2	50	35.1	AV	L1
28.778000	15.30	8.2	50	34.7	AV	L1
29.390000	18.00	8.3	50	32.0	AV	L1
29.798000	16.50	8.3	50	33.5	AV	L1

# **Result: Pass**







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# **Appendix I: Photographs of Test Setup**

Refer to the Report No.: AGC11758240846AP02

**Appendix II: Photographs of Test EUT** 

Refer to the Report No.: AGC11758240846AP03

----End of Report----



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