

FCC TEST REPORT FCC ID: 2BOB5-Q12

On Behalf of

Yiwu EnjoyCharm Trading Co.,Ltd.

Power Bank

Model No.: Q12

Prepared for	:	Yiwu EnjoyCharm Trading Co.,Ltd.
Address	:	Room 1101, unit 1, building 2, yimeiwangzu, Jiangdong Street, Yiwu City. Zhejiang Province, P.R. China.

Prepared By	:	Shenzhen Alpha Product Testing Co., Ltd.		
Address	:	Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China		

Report Number	:	A2503132-C04-R01
Date of Receipt	:	March 14, 2025
Date of Test	:	March 14, 2025 - April 8, 2025
Date of Report	:	April 8, 2025
Version Number	:	V0
Test Result	:	Pass

TABLE OF CONTENTS

	Description	Page
1.	Test Result Summary	5
2.	General Information	6
	2.1. DESCRIPTION OF DEVICE (EUT)	6
	2.2. Accessories of Device (EUT)	7
	2.3. TESTED SUPPORTING SYSTEM DETAILS	7
	2.4. BLOCK DIAGRAM OF CONNECTION BETWEEN EUT AND SIMULATORS	7
	2.5. DESCRIPTION OF TEST MODES	
	2.6. TEST CONDITIONS	7
	2.7. TEST FACILITY	
	2.8. MEASUREMENT UNCERTAINTY	
	2.9. TEST EQUIPMENT LIST	9
3.	Test Results and Measurement Data	10
	3.1. CONDUCTED EMISSION	10
	3.2. RADIATED SPURIOUS EMISSION MEASUREMENT	14
	3.3. OCCUPIED BANDWIDTH	23
4.	Photos of test setup	25
5.	Photographs of EUT	27

Applicant	:	Yiwu EnjoyCharm Trading Co.,Ltd.			
Address	:	Room 1101, unit 1, building 2, yimeiwangzu, Jiangdong Street, Yiwu City. Zhejiang Province, P.R. China.			
Manufacturer	:	Shenzhen Meiyu Electronic Technology Co., Ltd.			
Address	:	605, Building 14, No. 62, Nanchang Road, Nanchang Community, Xixiang Street, Bao'an District, Shenzhen, China			
EUT Description	:	Power Bank			
		(A) Model No. : Q12			
		(B) Trademark : Qecvec			

Measurement Standard Used: FCC CFR Title 47 Part 15 Subpart C Section 15.209

The device described above is tested by Shenzhen Alpha Product Testing Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with the FCC CFR Title 47 Part 15 Subpart C Section 15.209 requirements.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

Tested by (name + signature):	Yannis Wen Project Engineer	Yannis wen
Approved by (name + signature):	Jack Xu Project Manager	Janes
Date of issue	April 8, 2025	

Revision History

Revision	Issue Date	Revisions	Revised By
V0	April 8, 2025	Initial released Issue	Yannis Wen

1. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203	PASS
AC Power Line Conducted Emission	§15.207	PASS
Spurious Emission	§15.209(a)(f)	PASS
Occupied Bandwidth	§15.215 (c)	PASS

Note:

1. PASS: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.

5. Decision rules for the conclusion of this test report: decision by actual test data without

considering measurement uncertainty.

2. General Information

2.1. Description of Device (EUT)					
EUT Name	:	Power Bank			
Model No.	:	Q12			
DIFF.	:	N/A			
Power supply	:	Input: Type-C 5V 3A, 9V 2A 12V 1.5A			
EUT information		Input: Type-C 5V 3A, 9V 2A 12V 1.5A Output : Type-C 5V 3A, 9V 2.22A 12V 1.67A 10V 2.25A Type-C Cable 5V 3A, 9V 2.22A 12V 1.67A 10V 2.25A Wireless 5W, 7.5W, 10W, 15W			
Radio Technology	:	Wireless power transmission systems			
Operation frequency	:	115-205KHz			
Modulation	:	ASK			
Antenna Type	:	Coil Antenna, Maximum Gain is 0dBi (Antenna information is provided by applicant.).			
Software version	:	V1.0			
Hardware version	:	V1.0			
Intend use environment	:	Residential, commercial and light industrial environment			

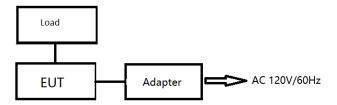
2.2. Accessories of Device (EUT)

Accessories	:	/
Manufacturer	:	/
Model	:	/
specifications	:	/

2.3. Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number	Certification or SDoC
1	N/A	N/A	N/A	N/A	N/A

2.4. Block Diagram of connection between EUT and simulators



2.5. Description of Test Modes

Channel	Frequency (KHz)
1	143

2.6. Test Conditions

Items	Required	Actual
Temperature range:	15-35 ℃	23 ℃
Humidity range:	25-75%	55%
Pressure range:	86-106kPa	98kPa

2.7. Test Facility

Shenzhen Alpha Product Testing Co., Ltd Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China

2.8. Measurement Uncertainty

(95% confidence levels, k=2)

Item	Uncertainty
Uncertainty for Power point Conducted Emissions Test	1.63dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	3.5dB
Uncertainty for Radiation Emission test in 3m chamber	3.74dB(Polarize: V)
(30MHz to 1GHz)	3.76dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber	3.77dB(Polarize: V)
(1GHz to 25GHz)	3.80dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber	4.31 dB(Polarize: V)
(18GHz to 40GHz)	4.30 dB(Polarize: H)
Uncertainty for radio frequency	5.06×10 ⁻⁸ GHz
Uncertainty for conducted RF Power	0.40dB
Uncertainty for temperature	0.2 °C
Uncertainty for humidity	1%
Uncertainty for DC and low frequency voltages	0.06%

Equipment	Manufacture	Model No.	Firmware version	Serial No.	Last cal.	Cal Interval
9*6*6 anechoic chamber	CHENYU	9*6*6	/	N/A	2025.03.09	4Year
4*4*3 Shielded room	CHENYU	4*4*3	/	N/A	2025.03.09	4Year
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	2.3	102137	2024.08.08	1Year
Spectrum analyzer	Agilent	N9020A	A.14.16	MY499100060	2024.08.08	1Year
Receiver	ROHDE&SCHWARZ	ESR	2.28 SP1	1316.3003K03-10 2082-Wa	2024.08.08	1Year
Receiver	R&S	ESCI	4.42 SP1	101165	2024.08.08	1Year
Bilog Antenna	Schwarzbeck	VULB 9168	/	VULB 9168#627	2023.08.28	2Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	/	2106	2023.08.19	2Year
Loop Antenna	SCHWARZBECK	FMZB 1519B	/	00128	2023.08.19	2Year
RF Cable	Resenberger	Cable 1	/	RE1	2024.08.08	1Year
RF Cable	Resenberger	Cable 2	/	RE2	2024.08.08	1Year
RF Cable	Resenberger	Cable 3	/	CE1	2024.08.08	1Year
Pre-amplifier	HP	HP8347A	/	2834A00455	2024.08.08	1Year
Pre-amplifier	Agilent	8449B	/	3008A02664	2024.08.08	1Year
L.I.S.N.#1	Schwarzbeck	NSLK8126	/	8126-466	2024.08.08	1Year
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	/	101043	2024.08.08	1Year
Horn Antenna	SCHWARZBECK	BBHA 9170	/	00946	2023.08.19	2Year
Preamplifier	SKET	LNPA_1840 -50	/	SK2018101801	2024.08.08	1 Year
Power Meter	Agilent	E9300A	/	MY41496628	2024.08.08	1 Year
Power Sensor	DARE	RPR3006W	/	15100041SNO91	2024.08.08	1 Year
Temp. & Humid. Chamber	Teelong	TL-HW408S	/	TL-20191205-01	2024.07.15	1 Year
Electronic Thermo-Hygrome ter	S.H.Qixiang	HTC-1	/	N/A	2024.08.11	1 Year
Switching Mode Power Supply	JUNKE	JK12010S	/	20140927-6	2024.08.08	1 Year
Adjustable attenuator	MWRFtest	N/A	/	N/A	N/A	N/A
10dB Attenuator	Mini-Circuits	DC-6G	/	N/A	N/A	N/A

2.9. Test Equipment List

Software Information										
Test Item	Software Name	Version								
RE	EZ-EMC	Farad	Alpha-3A1							
CE	EZ-EMC	Farad	Alpha-3A1							
RF-CE	MTS 8310	MWRFtest	2.0.0.0							

3. Test Results and Measurement Data

3.1. Conducted Emission

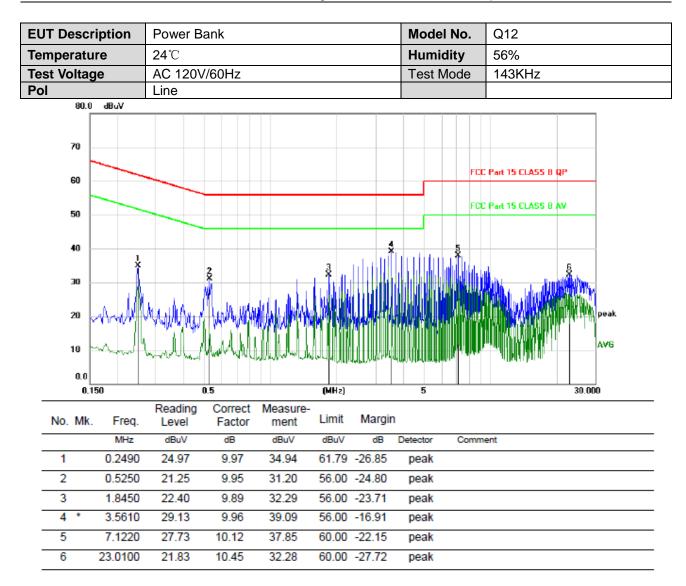
3.1.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.20	07					
· · · · · · · · · · · · · · · · · · ·							
Test Method:	ANSI C63.10:2013						
Frequency Range:	150 kHz to 30 MHz						
Receiver setup:	RBW=9 kHz, VBW=30 kHz,	Sweep time=auto					
	Frequency range (MHz)	Limit (d	,				
Limiter	0.15-0.5	Quasi-peak 66 to 56*	Average 56 to 46*				
Limits:	0.15-0.5	56	46				
	5-30	60	50				
	Reference Plane						
Test Setup:	40cm 80cm Filter AC power Filter AC power E.U.T Adapter Test table/Insulation plane EMI Receiver Remark: E.U.T: Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m						
Test Mode:	Transmitting Mode						
Test Procedure:	 The E.U.T is connected to an adapter through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement. 						
Test Result:	PASS						

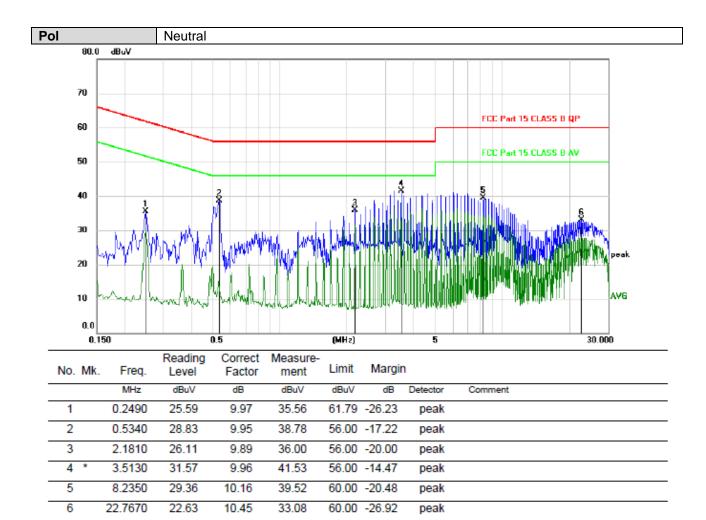
3.1.2. Test data

Please refer to following diagram for individual

Test Mo	ode : 143KHz
Test Re	esults : PASS
Note:	The test results are listed in next pages. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out. If the limits for the measurement with the average detector are met when using a receiver with a quasi-peak detector, the test unit shall be deemed to meet both limits and the measurement with a quasi-peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector are met when using a receiver with a quasi-peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.



```
*:Maximum data x:Over limit !:over margin (Reference Only Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable
```



*:Maximum data x:Over limit !:over margin

(Reference Only

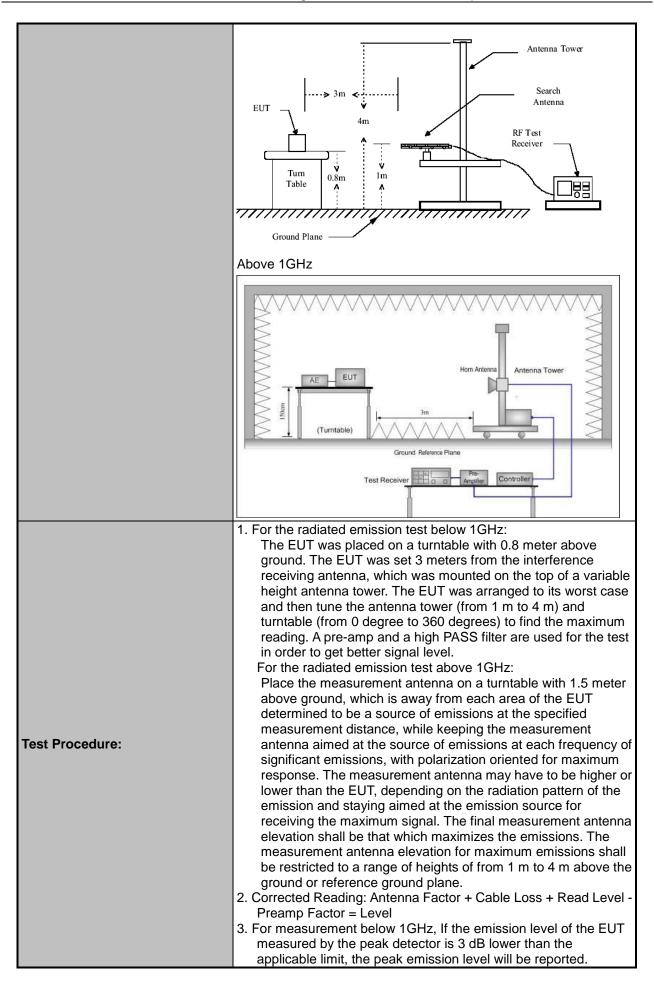
Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

(Reference Off

3.2. Radiated Spurious Emission Measurement

3.2.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.209								
Test Method:	ANSI C63.10: 2	2013							
Frequency Range:	9 kHz to 25 GH	z							
Measurement Distance:	3 m								
Antenna Polarization:	Horizontal & Ve	ertical							
Operation mode:	Refer to item 4.	1							
	Frequency 9kHz- 150kHz 150kHz-	Qua	etector Isi-pea	ak	RBW 200Hz 9kHz	VBW 1kHz 30kHz		Remark si-peak Value si-peak Value	
Receiver Setup:	30MHz							-	
	30MHz-1GHz		isi-pea Peak	ak	100KHz 1MHz	300KHz		si-peak Value eak Value	
	Above 1GHz		^p eak Peak	_	1MHz	<u>3MHz</u> 10Hz		eak value erage Value	
				-			, ,,,,,		
	Frequen	су		(Field Stre /microvolts/	-		asurement Ince (meters)	
	0.009-0.490				2400/F(k	,	300		
	0.490-1.705			24000/F(KHz)		KHz)	30		
	1.705-30		30			30			
	30-88			100			3		
Limit:	88-216 216-96			150 200			3		
	Above 9			500			3		
								-	
	Frequency			eld Strength rovolts/meter)		Measure Distan (meter	се	Detector	
	Above 1GHz			500		3		Average	
				5000		3		Peak	
	For radiated emissions below 30MHz								
	Distance = 3m								
Test setup:	EUT U.8m- Ground Plane						tiver		
	30MHz to 1GH	Z				_			



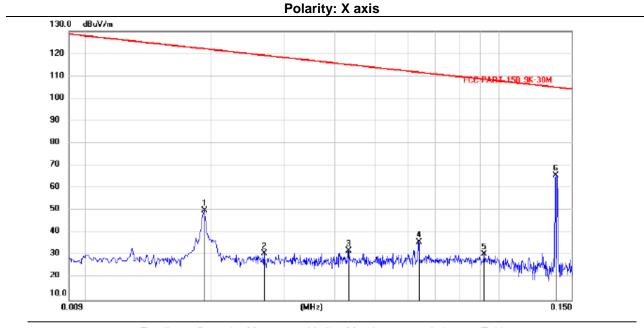
	 the quasi-peak detector and reported. Use the following spectrum analyzer settings: (1) Span shall wide enough to fully capture the emission being measured; (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥RBW; Sweep = auto; Detector function = peak; Trace = max hold; (3) Set RBW = 1 MHz, VBW= 3MHz for f 1 GHz for peak measurement.
	For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW \geq 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Test mode:	Refer to section 4.1 for details
Test results:	PASS

3.2.2. Test Data

Please refer to following diagram for individual

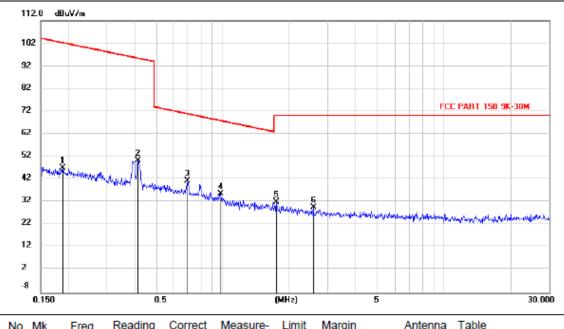
Freque	ncy Range	:	9KHz~30MHz						
Test Mode		:	TX: 143kHz						
Test Results			PASS						
Note:	1. The test	res	ults are listed in next pages.						
	2. This mo	de is	s worst case mode, so this report only reflected the worst mode.						
	3. If the limits for the measurement with the average detector are met when using a receiver with								
a peak detector, the test unit shall be deemed to meet both limits and the measurement with quasi-peak detector need not be carried out.									





No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		Antenna Height	Table Degree	
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	0.0192	28.67	21.27	49.94	122.1	-72.18	peak			
2	0.0269	9.69	21.08	30.77	119.2	-88.43	peak			
3	0.0430	11.80	20.28	32.08	115.1	-83.04	peak			
4	0.0638	15.91	20.11	36.02	111.7	-75.68	peak			
5	0.0919	10.63	19.88	30.51	108.5	-78.02	peak			
6 *	0.1372	45.65	20.01	65.66	105.0	-39.39	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin. 2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		0.1887	26.94	20.14	47.08	102.2	-55.20	peak			
2		0.4142	30.43	19.82	50.25	95.46	-45.21	peak			
3	*	0.6947	21.59	19.82	41.41	70.92	-29.51	peak			
4		0.9818	15.60	19.99	35.59	67.87	-32.28	peak			
5		1.7455	11.86	20.19	32.05	70.00	-37.95	peak			
6		2.5753	9.24	20.39	29.63	70.00	-40.37	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin. 2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

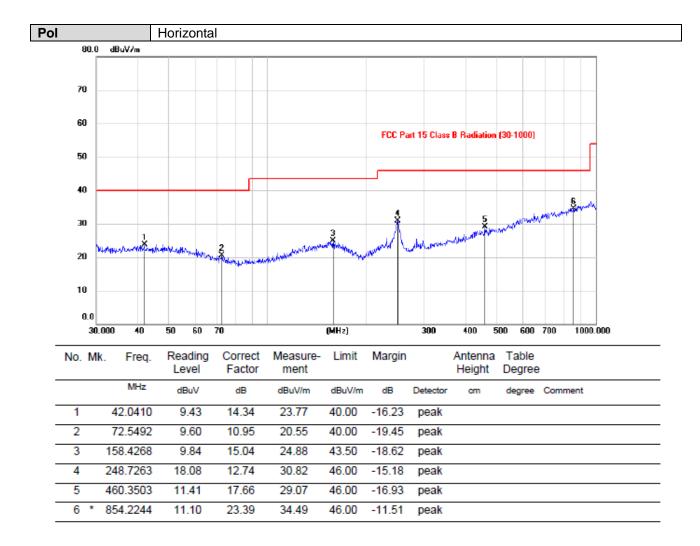
Frequency Range :		:	30MHz~1000MHz						
Test Mode		:	143KHz						
Test Results		:	PASS						
Note:	te: 1. The test results are listed in next pages.								
	2. All test modes has been tested, this report only reflected the worst mode.								
	3. If the limits for the measurement with the average detector are met when using a receiver with								
	a peak detector, the test unit shall be deemed to meet both limits and the measurement with the quasi-peak detector need not be carried out.								

Frequenc	cy Range	:	Above 1GHz					
EUT		:	/	Test Date	:	/		
M/N		:	/	Temperature	:	/		
Test Engineer		:	/	Humidity	:	/		
Test Mode		:	/					
Test Results		:	N/A					
1. The highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz. So the frequency rang above 1GHz radiation test not applicable.								

			30	0MHz-1	GHz							
EUT Description	ption Power Bank							. (Q12			
Temperature	24 ℃	24 °C						Ę	56%			
Test Voltage		AC 120V/60Hz						-	143KHz			
Pol	Vertical											
80.0 dBuV/n												
70												
60					FCC Part	15 Clase	R Radiation	. (30-100)	01			
50							5 Clas# B Radiation (30-1000)					
40										6		
301	2			3 X	3		n Belinger and	m	Whenter	A. Marine and		
20	undunitary	Williamanne	Well and a stranger	martines	and the second second	مىلىمەيدلەر م						
10												
0.0												
30.000	D 50 60	70 80		(MHz)		300	400	500 60	0 700	1000.000		
No. Mk. Fr	eq. Reading Level	Correct Factor	Measure- ment	Limit	Margin		Antenna Height	Table Degree				
M	z dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degre	e Comr	ment		
1 39.61	73 9.13	14.47	23.60	40.00	-16.40	peak						
2 56.25	00 9.69	13.53	23.22	40.00	-16.78	peak						
3 156.42		15.05	26.23	43.50	-17.27	peak						
4 249.01		12.75	24.61	46.00	-21.39	peak						
5 581.99		19.87	30.94	46.00	-15.06	peak						
6 * 941.69	01 11.56	24.58	36.14	46.00	-9.86	peak						

30MHz-1GHz

Note:1. *:Maximum data; x:Over limit; !:over margin. 2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.



Note:1. *:Maximum data; x:Over limit; I:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

3.3. Occupied Bandwidth

3.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.215(c)
Test Method:	ANSI C63.10: 2013
Limit:	N/A
Test Procedure:	 According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. Set to the maximum power setting and enable the EUT transmit continuously. Use the following spectrum analyzer settings for 20dB Bandwidth measurement. Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel; RBW≥1% of the 20 dB bandwidth; VBW≥RBW; Sweep = auto; Detector function = peak; Trace = max hold. Measure and record the results in the test report.
Test setup:	Spectrum Analyzer EUT
Test Mode:	Refer to section 4.1 for details
Test results:	PASS

3.3.2. Test data

For Airpods:

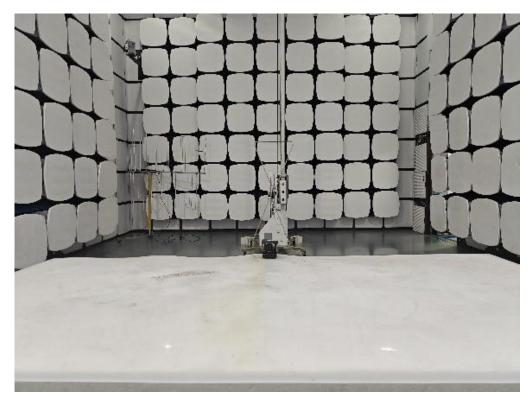
Frequency(kHz)	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Conclusion	
143	0.296		Pass	

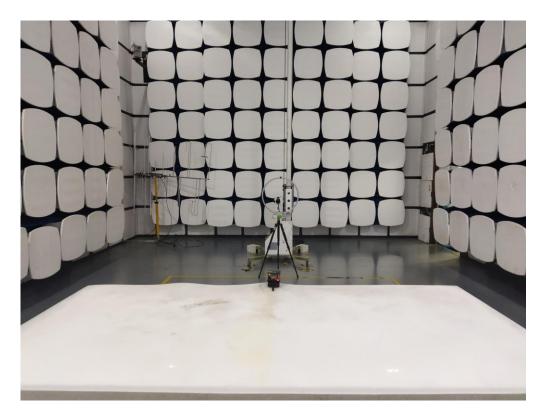
		16	est plots a	as 101101	WS.			
🧱 Keysight Sp	ectrum Analyzer - Occupied BW							
Contor 5	RF 50 Ω AC	Cen	SENSE:PULSE SOUR ter Freq: 143.000			46 PM Apr 08, 2025 Std: None	F	requency
Center Freq 143.000 kHz		Trig	Trig: Free Run Avg Hold:>10/10					
	#1F	Gain:Low #At	en: 10 dB		Radio	Device: BTS		
10 dB/div	Ref Offset 15 dB Ref 10.00 dBm							
Log 0.00								Contor From
-10.0								Center Freq 143.000 kHz
-20.0								145.000 KH2
-20.0								
-40.0								
-50.0								
-60.0								
-70.0								
-80.0					~			
Center 1 #Res BW			#VBW 300 F			Span 2 kHz Sweep FFT		CF Step
#Res Dw			#VEVV JUUR	12		SweepFFT	Auto	200 Hz Man
Occu	pied Bandwidth		Total P	ower	-50.9 dBm		Auto	Warr
		245 Hz						
		24 3 NZ						Freq Offset
Trans	mit Freq Error	193 Hz	% of O	BW Power	99.00 %			0 Hz
x dB E	Bandwidth	296 Hz	x dB		-20.00 dB			
MSG					STATUS A.C.	coupled: Accy u	inspec'	1 < 10MHz
						oouploa. Hooy a		2 · · · · · · · · · · · · · · · · · · ·

Test plots as follows:

4. Photos of test setup

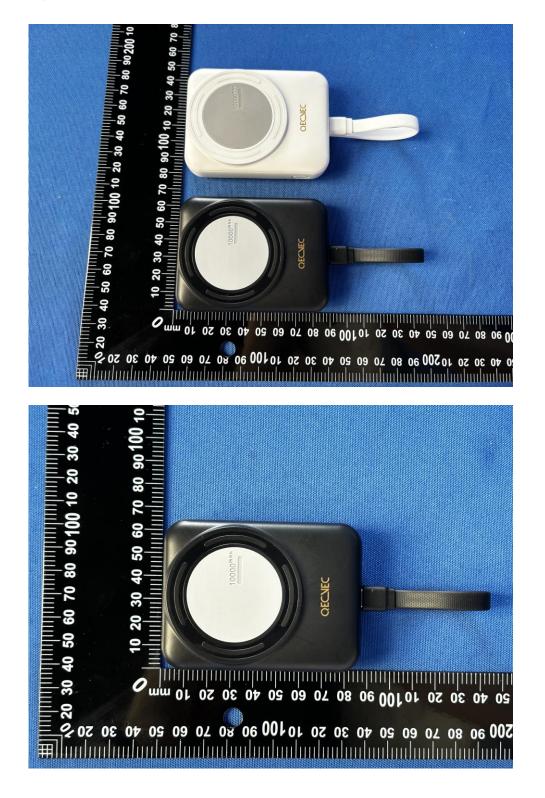
Radiated Emission







5. Photographs of EUT



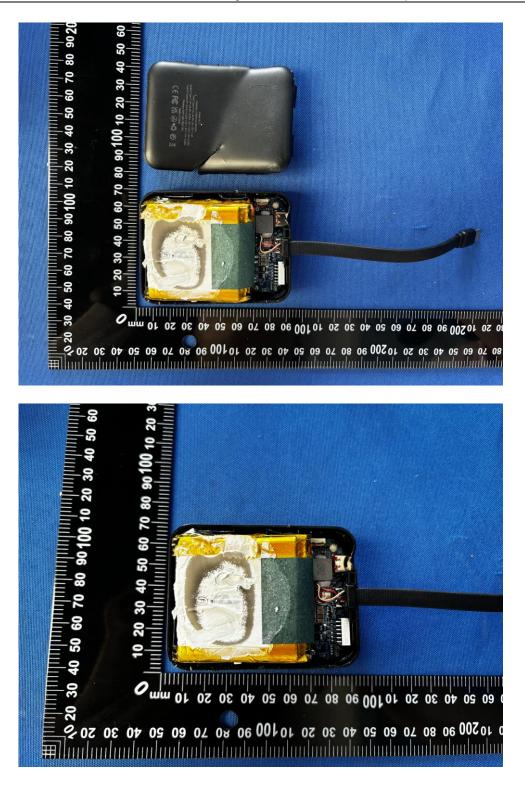


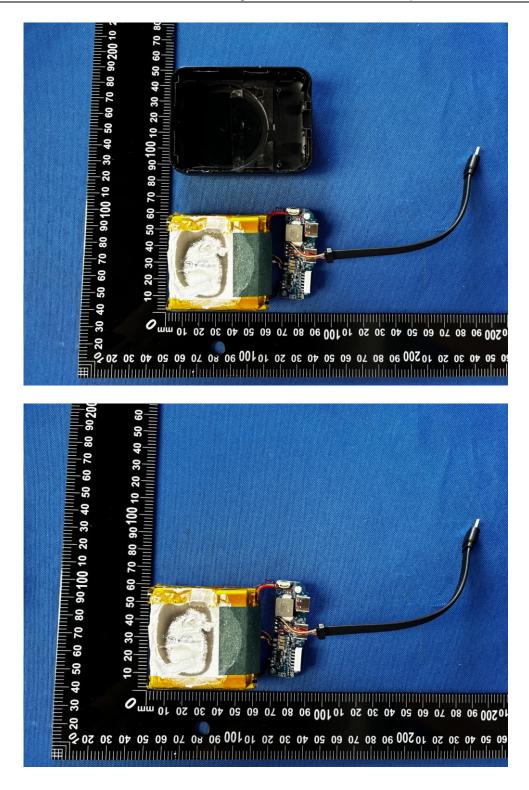


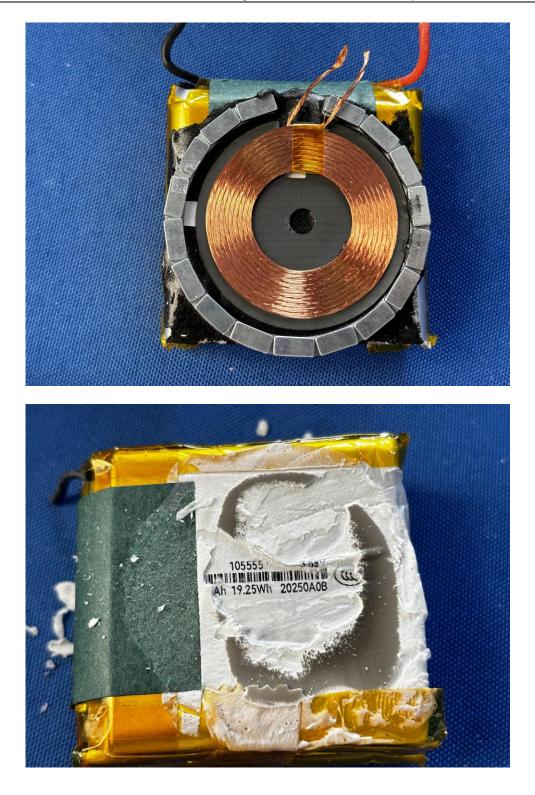


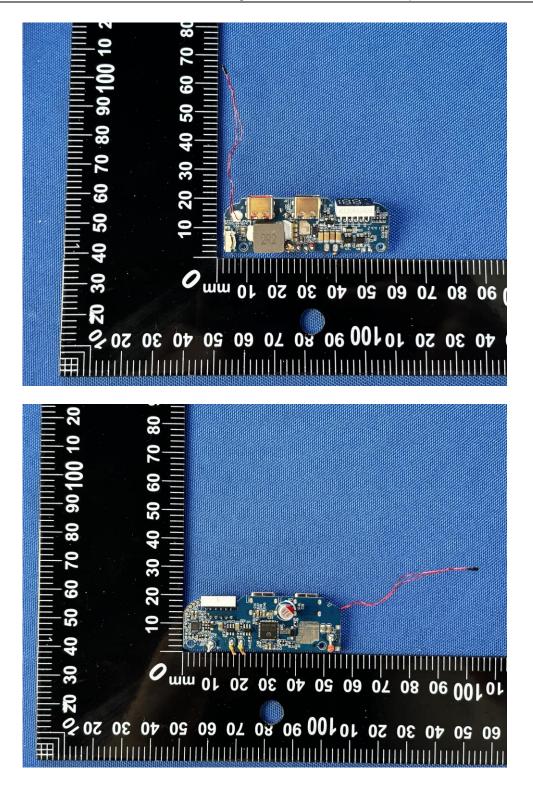


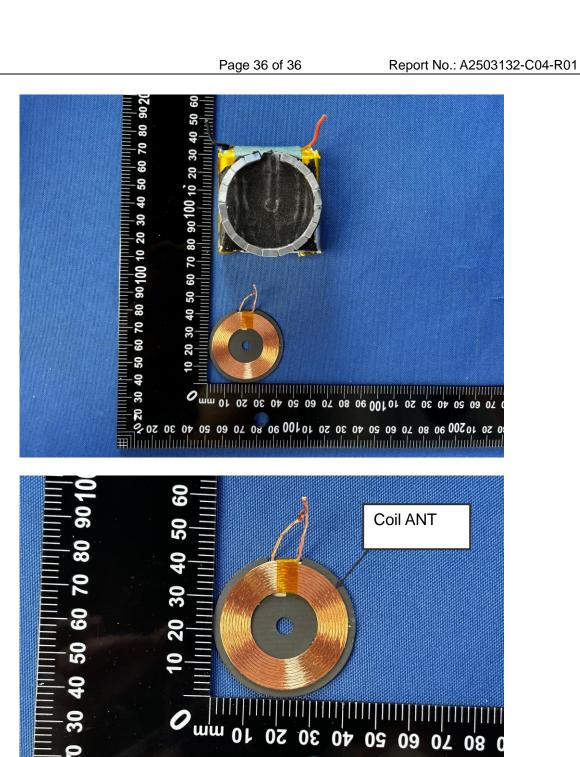












0 30 20 60 60 40 30 30 40 30 30 50 10100 30 80 20 90 20 70 30 50 9 10100 1000 10100 10100 10100 10100 10100 10100 10100 10100 10100 10100 10100 1000

----- END OF REPORT------