

Shenzhen Huaxia Testing Technology Co., Ltd.

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Report Template Version: V05 Report Template Revision Date: 2021-11-03

Test Report

Report No.: Applicant: Address of Applicant:	CQASZ20221001813E-03 eMoMo Technology Co.,Ltd 4th, Floor, Yong He Building, Tai Wan Industrial Park, Shi Yan Town, Bao'an District, Shen Zhen, 518100, Guangdong, China
Equipment Under Test	(EUT):
Product:	Smart tabletop
Model No.:	iTable3BCRRU, iTable3CRRU, iTable3BCU, iTable3BCRR, iTable3BRRU, iTable3RRU, iTable3CLRRU, iTable3CU, iTable3BCLU, iTable3CRRU, iTable3BCLU-C, iTable3CLRRUA, iTable312BCLRRU, iTable3BCLRRU-C, iTable3CRRUA, iTable312BCHLRU, iTable3
Test Model No.:	iTable3
Brand Name:	ЕМОМО
FCC ID:	A4E-ITABLE3A
Standards:	47 CFR Part 15, Subpart C
Date of Receipt:	2022-10-24
Date of Test:	2022-10-24 to 2023-01-09
Date of Issue:	2023-03-24
Test Result:	PASS*

*In the configuration tested, the EUT complied with the standards specified above

Tested By:	lewis zhou	
	(Lewis Zhou)	TESTING TECH
Reviewed By:	Timo Lej	COA
	(Timo Lei)	各华夏准测 人
Approved By: _	Jamos	30 * APPROVED *
	(Jack Ai)	

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CQA, this report can't be reproduced except in full.



1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20221001813E-03	Rev.01	Initial report	2023-03-24



2 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15, Subpart C Section 15.203	ANSI C63.10 2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15, Subpart C Section 15.207	ANSI C63.10 2013	PASS
20dB Occupied Bandwidth	47 CFR Part 15, Subpart C Section 15.215	ANSI C63.10 2013	PASS
Radiated Emission , Radiated Spurious Emissions	47 CFR Part 15, Subpart C Section 15.209	ANSI C63.10 2013	PASS



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4 General Information

4.1 Client Information

Applicant:	eMoMo Technology Co.,Ltd
Address of Applicant:	4th, Floor, Yong He Building, Tai Wan Industrial Park, Shi Yan Town, Bao'an District, Shen Zhen, 518100, Guangdong, China
Manufacturer:	eMoMo Technology Co.,Ltd
Address of Manufacturer: 4th, Floor, Yong He Building, Tai Wan Industrial Park, Shi Yan To District, Shen Zhen, 518100, Guangdong, China	
Factory:	eMoMo Technology Co.,Ltd
Address of Factory:4th, Floor, Yong He Building, Tai Wan Industrial Park, Shi Ya District, Shen Zhen, 518100, Guangdong, China	

4.2 General Description of EUT

Product Name:	Smart tabletop
Model No.:	iTable3BCRRU, iTable3CRRU, iTable3BCU, iTable3BCRR, iTable3BRRU, iTable3RRU, iTable3CLRRU, iTable3CU, iTable3BCLU, iTable3CRRU, iTable3BCLU-C, iTable3CLRRUA, iTable312BCLRRU, iTable3BCLRRU-C, iTable3CRRUA, iTable312BCHLRU, iTable3
Test Model No.:	iTable3
Brand Name:	ЕМОМО
Software Version:	V01
Hardware Version:	V02
Power Supply:	AC100V~240V/50~60HZ DC:29V2A

4.3 **Product Specification subjective to this standard**

Equipment Category:	Non-ISM frequency	
Operation Frequency range:	115kHz~205kHz	
Modulation Type:	Induction	
Antenna Type:	Induction coil	
Antenna Gain:	0dBi	
Power:	Output: 5W*2(Max)	

Note:

1. In section 15.31(m), regards to the operating frequency range less 1 MHz.



4.4 Test Environment

Operating Environment	Operating Environment:		
Radiated Emissions:			
Temperature:	25.5 °C		
Humidity:	53 % RH		
Atmospheric Pressure:	1009 mbar		
Conducted Emissions:			
Temperature:	25.8 °C		
Humidity:	58 % RH		
Atmospheric Pressure:	1009 mbar		
Radio conducted item to	est (RF Conducted test room):		
Temperature:	27.1 °C		
Humidity:	56 % RH		
Atmospheric Pressure:	1009 mbar		
Test Mode:			
Mode a:	Wireless output Mode at 5W (Max)		

4.5 Description of Support Units

The EUT has been tested with associated equipment below.

1) Support equipment

Description	Manufacturer	Model No.	Certification	Supplied by
Wireless charge load	/	/	/	CQA

2)	Cable
----	-------

Cable No.	Description	Manufacturer	Cable Type/Length	Supplied by
1	/	/	1	/



4.6 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate.

The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities.

The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the **Shenzhen Huaxia Testing Technology Co., Ltd.** quality system acc. to DIN EN ISO/IEC 17025.

Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

No.	Item	Uncertainty	Notes
1	Radiated Emission (Below 1GHz)	5.12dB	(1)
2	Radiated Emission (Above 1GHz)	4.60dB	(1)
3	Occupied Bandwidth	1.1%	(1)
4	Temperature test	0.8°C	(1)
5	Humidity test	2.0%	(1)

Hereafter the best measurement capability for CQA laboratory is reported:

(1)This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

4.7 Test Location

Shenzhen Huaxia Testing Technology Co., Ltd.

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

4.8 Test Facility

• A2LA (Certificate No. 4742.01)

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 4742.01.

• FCC Registration No.: 522263

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen 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. Registration No.:522263

4.9 Deviation from Standards

None.

4.10Other Information Requested by the Customer

None.



4.11Equipment List

Test Equipment	Manufacturer	Model No.	Instrument No.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR7	CQA-005	2022/9/9	2023/9/8
Spectrum analyzer	R&S	FSU26	CQA-038	2022/9/9	2023/9/8
Preamplifier	MITEQ	AMF-6D-02001800-29- 20P	CQA-036	2022/9/9	2023/9/8
Loop antenna	Schwarzbeck	FMZB1516	CQA-060	2021/9/16	2024/9/15
Bilog Antenna	R&S	HL562	CQA-011	2021/9/16	2024/9/15
Horn Antenna	R&S	HF906	CQA-012	2021/9/16	2024/9/15
Horn Antenna	Schwarzbeck	BBHA 9170	CQA-088	2021/9/16	2024/9/15
Coaxial Cable (Above 1GHz)	CQA	N/A	C007	2022/9/9	2023/9/8
Coaxial Cable (Below 1GHz)	CQA	N/A	C013	2022/9/9	2023/9/8
Antenna Connector	CQA	RFC-01	CQA-080	2022/9/9	2023/9/8
RF cable(9KHz~40GHz)	CQA	RF-01	CQA-079	2022/9/9	2023/9/8
Power divider	MIDWEST	PWD-2533-02-SMA-79	CQA-067	2022/9/9	2023/9/8
EMI Test Receiver	R&S	ESR7	CQA-005	2022/9/9	2023/9/8
LISN	R&S	ENV216	CQA-003	2022/9/9	2023/9/8
Coaxial cable	CQA	N/A	CQA-C009	2022/9/9	2023/9/8
DC power	KEYSIGHT	E3631A	CQA-028	2022/9/9	2023/9/8



5 Test results and Measurement Data

5.1 Antenna Requirement

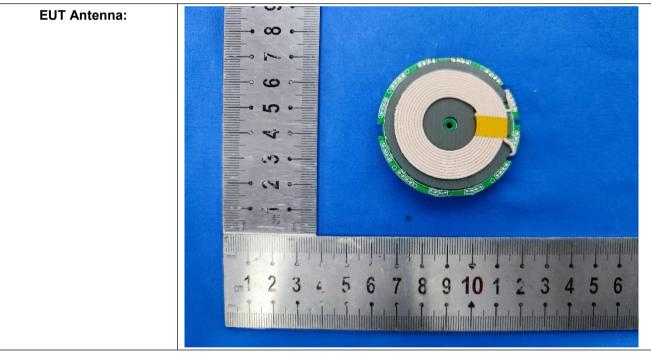
Standard requirement: 47 CFR Part 15C Section 15.203

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.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.





Test Requirement:	47 CFR Part 15C Section 15.	47 CFR Part 15C Section 15.207					
Test Method:	ANSI C63.10: 2013	ANSI C63.10: 2013					
Test Frequency Ra	ange: 150kHz to 30MHz	150kHz to 30MHz					
Limit:		Limit (dBuV)					
	Frequency range (MHz)	Quasi-peak	Average				
	0.15-0.5	66 to 56*	56 to 46*				
	0.5-5	56	46				
	5-30	60	50				
	* Decreases with the logarithr	n of the frequency.					
Test Procedure:	1) The mains terminal disturt room.	C C					
	Impedance Stabilization N impedance. The power connected to a second LIS plane in the same way a multiple socket outlet strip single LISN provided the r	2) The EUT was connected to AC power source through a LISN 1 (L Impedance Stabilization Network) which provides a 50Ω/50µH + 5Ω lin impedance. The power cables of all other units of the EUT w connected to a second LISN 2, which was bonded to the ground refere plane in the same way as the LISN 1 for the unit being measured multiple socket outlet strip was used to connect multiple power cables to single LISN provided the rating of the LISN was not exceeded.					
	 The tabletop EUT was pla ground reference plane. A placed on the horizontal g 	nd for floor-standing a					
	 4) The test was performed with a vertical ground reference plane. The the EUT shall be 0.4 m from the vertical ground reference plane vertical ground reference plane was bonded to the horizontal greference plane. The LISN 1 was placed 0.8 m from the boundary unit under test and bonded to a ground reference plane for mounted on top of the ground reference plane. This distance was be the closest points of the LISN 1 and the EUT. All other units of the and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment was at least 0.8 m from the closest points of the maximum emission. 						
		and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.					
Test Setup:		ANSI C63.10: 2013 on conducted measurement.					
	Shielding Room Test Receiver						
Test Dec. #	Deep						
Test Results:	Pass						

5.2 Conducted Emissions

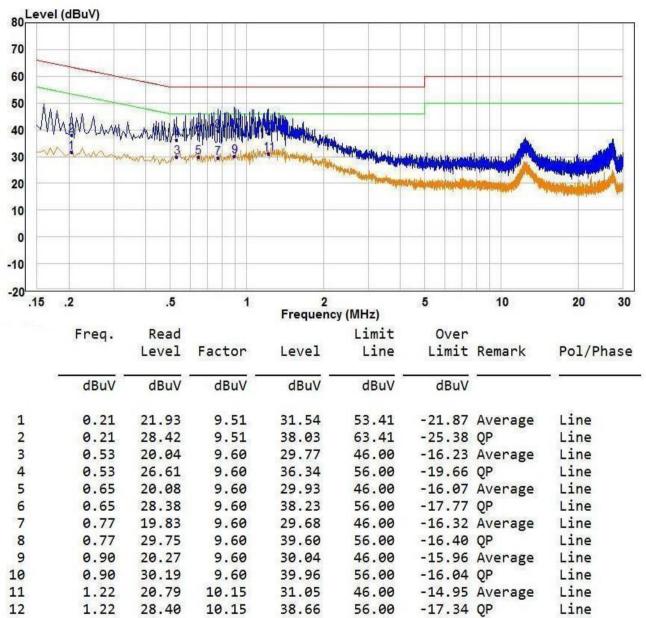


Measurement Data

The worst case:

Mode a:

Live line:



Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

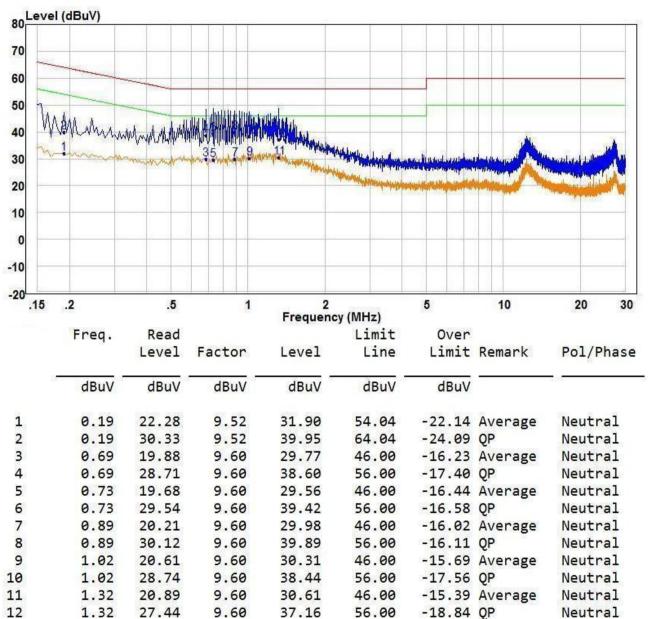
3. If the Peak value under Average limit, the Average value is not recorded in the report.



The worst case:

Mode a:

Neutral line:



Remark:

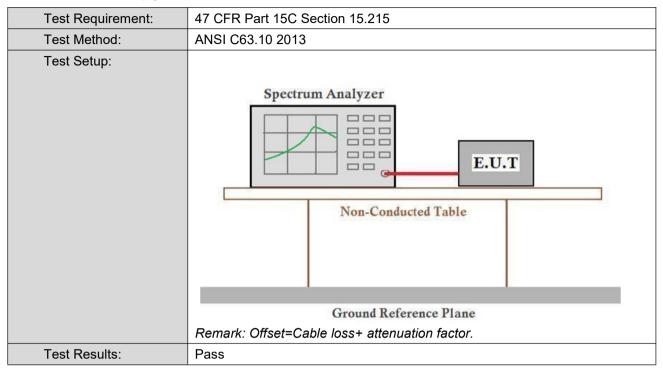
1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

3. If the Peak value under Average limit, the Average value is not recorded in the report.



5.3 20dB Occupy Bandwidth



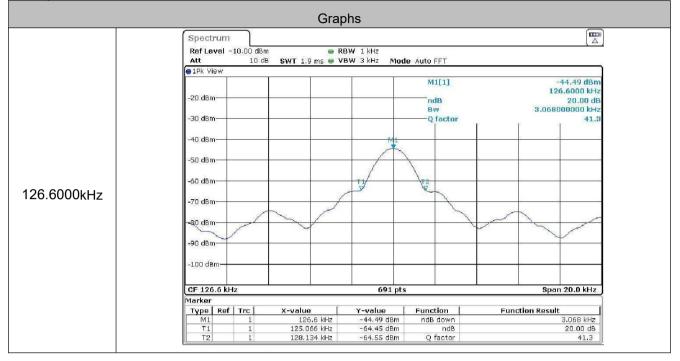
Measurement Data

1#

Mode a				
Test Frequency (kHz)	20dB Occupy Bandwidth (Hz)	Result		
126.600	3068	Pass		



Test plot as follows:



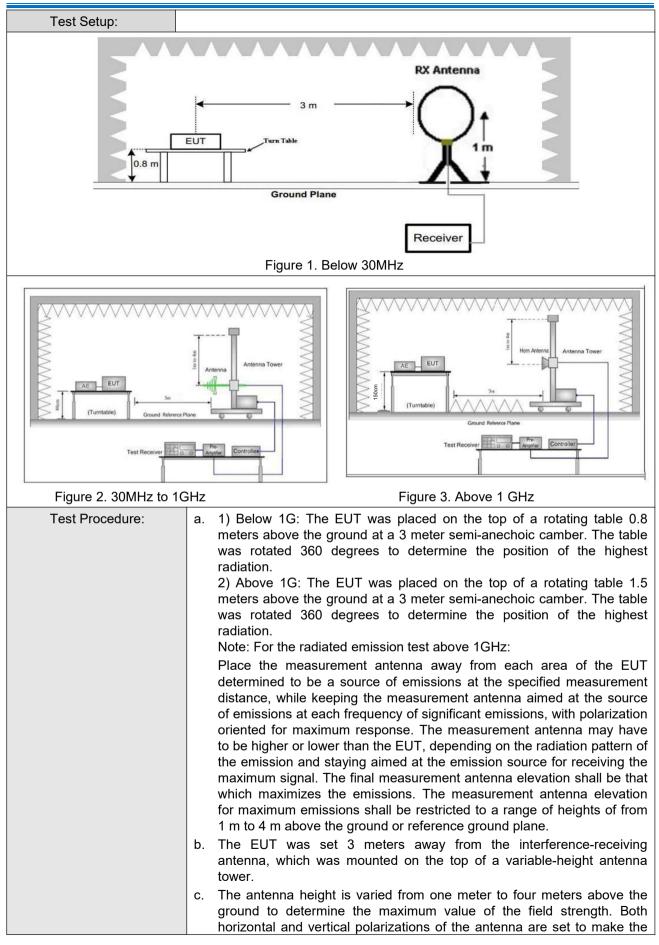


5.4 Radiated Spurious Emission & Restricted bands

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205						
Test Method:	ANSI C63.10 2013						
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)						
Receiver Setup:	Frequency		Detector	RBW	VBW	Remark	
	0.009MHz-0.090MH	z	Peak 10kH		z 30kHz	Peak	
	0.009MHz-0.090MH	z	Average	10kHz	z 30kHz	Average	
	0.090MHz-0.110MH	z	Quasi-peak	10kHz	z 30kHz	Quasi-peak	
	0.110MHz-0.490MH	z	Peak	10kHz	z 30kHz	Peak	
	0.110MHz-0.490MH	z	Average	10kHz	z 30kHz	Average	
	0.490MHz -30MHz		Quasi-peak	10kHz	z 30kHz	Quasi-peak	
	30MHz-1GHz Quasi-pe Above 1GHz Peak		Quasi-peak	100 kH	z 300kHz	Quasi-peak	
			Peak	1MHz	3MHz	Peak	
			Peak	1MHz	10Hz	Average	
Limit:	Frequency		eld strength crovolt/meter)	Limit (dBuV/m)	Remark	Measuremer distance (m	
	0.009MHz-0.490MHz	0.009MHz-0.490MHz 24		-	-	300	
	0.490MHz-1.705MHz	24	1000/F(kHz)	-	-	30	
	1.705MHz-30MHz		30	-	-	30	
	30MHz-88MHz		100	40.0	Quasi-peak	3	
	88MHz-216MHz		150	43.5	Quasi-peak	3	
	216MHz-960MHz	216MHz-960MHz200960MHz-1GHz500		46.0	Quasi-peak	3	
	960MHz-1GHz			54.0	Quasi-peak	3	
	Above 1GHz 500		54.0	Average	3		
	Note: 15.35(b), Unless otherwise specified, the limit on p frequency emissions is 20dB above the maximum permitted average limit applicable to the equipment under test. This peak limit applies t peak emission level radiated by the device.				erage emission		









		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.
	g.	Repeat above procedures until all frequencies measured was complete.
Test Results:	Pass	

 Radiated Emission below 9k~30MHz

 the worst case

 Test mode:
 Mode a

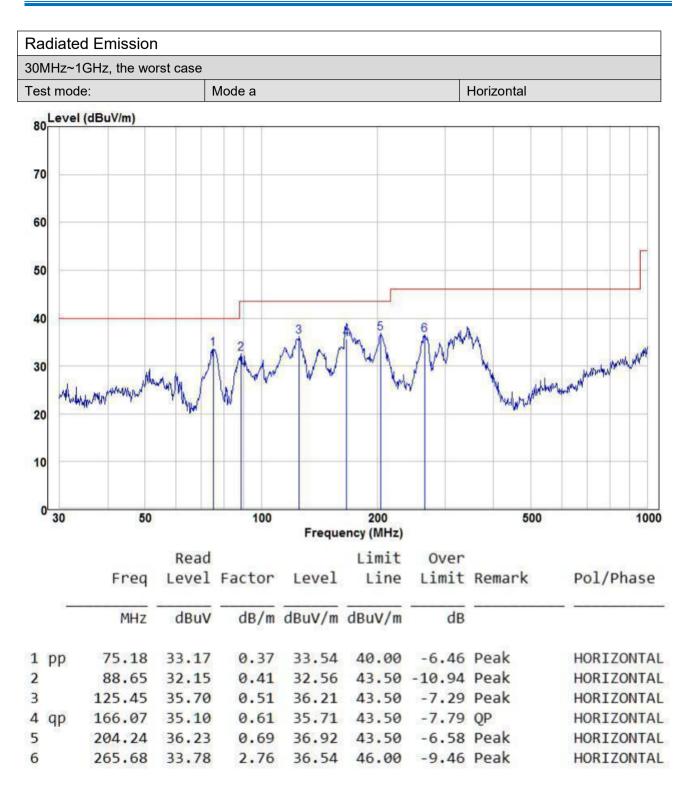
Frequency MHz	Polarization	Reading dB(uV)	Factor dB (1/m)	Level dB(uV/m) Peak	Limit dB(uV/m) Average	Margin dB	Pass/Fail
0.127	AV	41.47	19.80	61.27	105.50	-44.24	Pass
0.196	AV	42.37	19.80	62.17	101.78	-39.60	Pass
0.225	AV	39.20	19.80	59.00	100.54	-41.54	Pass
0.370	QP	37.70	19.80	57.50	96.23	-38.73	Pass
1.393	QP	18.99	19.70	38.69	64.73	-26.04	Pass
2.539	QP	11.68	19.70	31.38	69.54	-38.16	Pass

Note: No other emissions found between lowest internal used/generated frequencies to 30MHz. The peak level of the emission is less than the average limit, so the average level shall be less than1 the limit without test.



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Remark:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

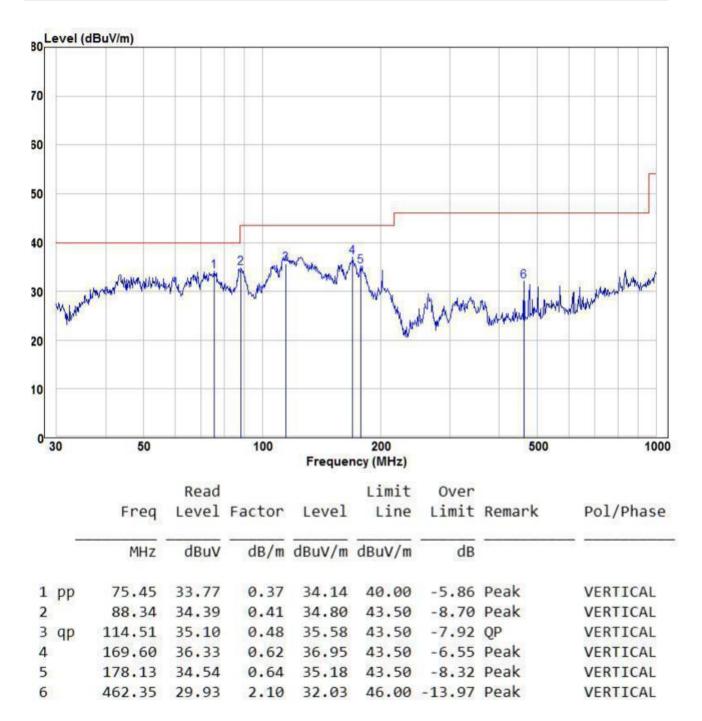
Final Test Level =Receiver Reading + Antenna Factor + Cable Factor



Shenzhen Huaxia Testing Technology Co., Ltd.

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30MHz~1GHz, the worst case				
Test mode:	Mode a	Vertical		



Remark:

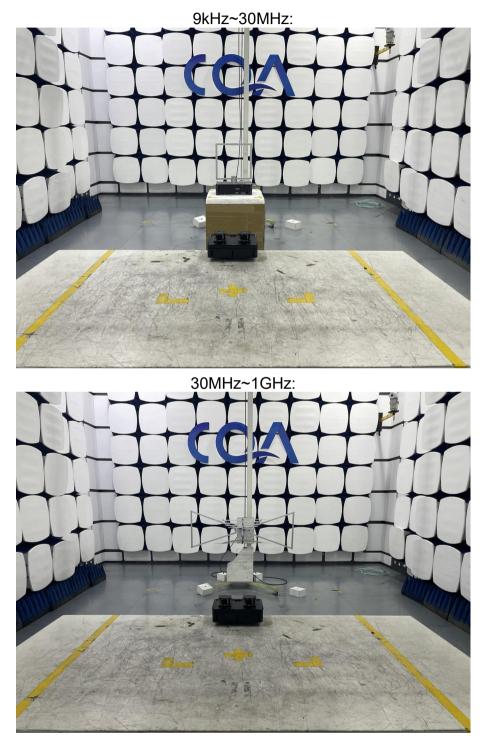
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor



6 Photographs - EUT Test Setup

6.1 Radiated Emission





6.2 Conducted Emission





7 Photographs - EUT Constructional Details

Refer to Photographs - EUT Constructional Details OF EUT for CQASZ20221001813E-01.

*** END OF REPORT ***