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Report Template Version: V05 Website: Report Template Revision Date: 2021-11-03 www.cqa-cert.com

Test Report

Report No.: CQASZ20230701332E-03 eMoMo Technology Co., Ltd Applicant:

4th, Floor, Yong He Building, Tai Wan Industrial Park, Shi Yan Town, Bao'an Address of Applicant:

District, Shen Zhen, Guangdong, China

Equipment Under Test (EUT):

Product: Smart tabletop

Model No.: iTable3, iTable3BCUT, itable3BCUT-BT06

Test Model No.: iTable3 **Brand Name: EMOMO**

FCC ID: A4E-ITABLE3

Standards: 47 CFR Part 15, Subpart C

Date of Receipt: 2023-07-24

Date of Test: 2023-07-24 to 2023-08-01

Date of Issue: 2023-11-09 PASS* **Test Result:**

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

Tested By: [Lewis Zhou]

Reviewed By:

(Timo Lei)

Approved By:





Report No.: CQASZ20230701332E-03

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20230701332E-03	Rev.01	Initial report	

Note:

The difference between product #1 and product #2 is that the The antenna base and electrostatic tube were added, and the IC chip position of the buck DC was changedr. These changes do not affect RF performance.





2 Test Summary

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

4.2 General Description of EUT

Product Name:	Smart tabletop
Model No.:	iTable3, iTable3BCUT, itable3BCUT-BT06
Test Model No.:	iTable3
Brand Name:	ЕМОМО
Software Version:	5.0
Hardware Version: 5.0	
Power Supply:	Model No.:GS05802900200
	Input:100-240V~50/60Hz 1.5A
	Output:29V 2A 58W

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(Max)

Note:

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





4.4 Test 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	1	1	1	CQA

2) Cable

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

Hereafter the best measurement capability for CQA laboratory is reported:

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℃	(1)
5	Humidity test	2.0%	(1)

⁽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.

4.10 Other Information Requested by the Customer

None.





4.11 Equipment List

			Instrument	Calibration	Calibration
Test Equipment	Manufacturer	Model No.	No.	Date	Due Date
EMI Test Receiver	R&S	ESR7	CQA-005	2022/09/09	2023/09/08
Spectrum analyzer	R&S	FSU26	CQA-038	2022/09/09	2023/09/08
	MITEO	AMF-6D-02001800-29-		2022/00/00	2022/00/00
Preamplifier	MITEQ	20P	CQA-036	2022/09/09	2023/09/08
Loop antenna	Schwarzbeck	FMZB1516	CQA-060	2021/09/16	2024/09/15
Bilog Antenna	R&S	HL562	CQA-011	2021/09/16	2024/09/15
Horn Antenna	R&S	HF906	CQA-012	2021/09/16	2024/09/15
Horn Antenna	Schwarzbeck	BBHA 9170	CQA-088	2021/09/16	2024/09/15
Coaxial Cable (Above 1GHz)	CQA	N/A	C007	2022/09/09	2023/09/08
Coaxial Cable (Below 1GHz)	CQA	N/A	C013	2022/09/09	2023/09/08
Antenna Connector	CQA	RFC-01	CQA-080	2022/09/09	2023/09/08
RF cable(9KHz~40GHz)	CQA	RF-01	CQA-079	2022/09/09	2023/09/08
Power divider	MIDWEST	PWD-2533-02-SMA-79	CQA-067	2022/09/09	2023/09/08
EMI Test Receiver	R&S	ESR7	CQA-005	2022/09/09	2023/09/08
LISN	R&S	ENV216	CQA-003	2022/09/09	2023/09/08
Coaxial cable	CQA	N/A	CQA-C009	2022/09/09	2023/09/08
DC power	KEYSIGHT	E3631A	CQA-028	2022/09/09	2023/09/08





5 Test results and Measurement Data

5.1 Antenna Requirement

Standard requirement: 47 CFR Part 15C Section 15.203

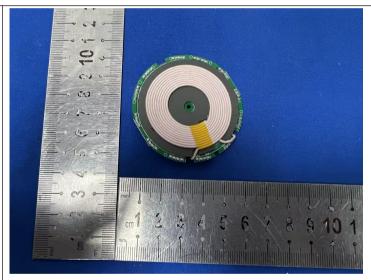
15.203 requirement:

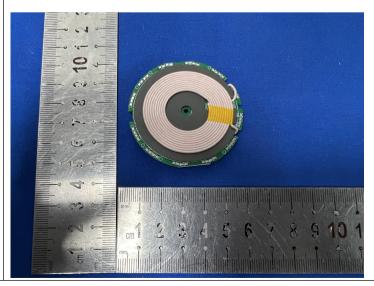
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit 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.

EUT Antenna:





The antenna is Induction coil. The best case gain of the antenna is 0dBi.





5.2 Conducted Emissions

Toot Poquiroment:	47 CFR Part 15C Section 15.207			
Test Requirement: Test Method:	ANSI C63.10: 2013			
	150kHz to 30MHz			
Test Frequency Range:	150KHZ 10 30WHZ		ID 10	
Limit:	Frequency range (MHz)	Limit (c	1	
		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 logarithn	•		
Test Procedure:	The mains terminal disturb room.	-		
	2) The EUT was connected to AC power source through a LISN 1 (LIMPED INTEGER INTEG			
	3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.			
	4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.			
	5) In order to find the maximu			nent
	and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.			
Test Setup:	, 11101 000. 10. 2010 011 001	iaastoa moasuroment.	9	1
, oct octup.	Shielding Room EUT AC Mains LISN1	AE LISN2 AC Ma Ground Reference Plane	Test Receiver	
Test Results:	Pass			





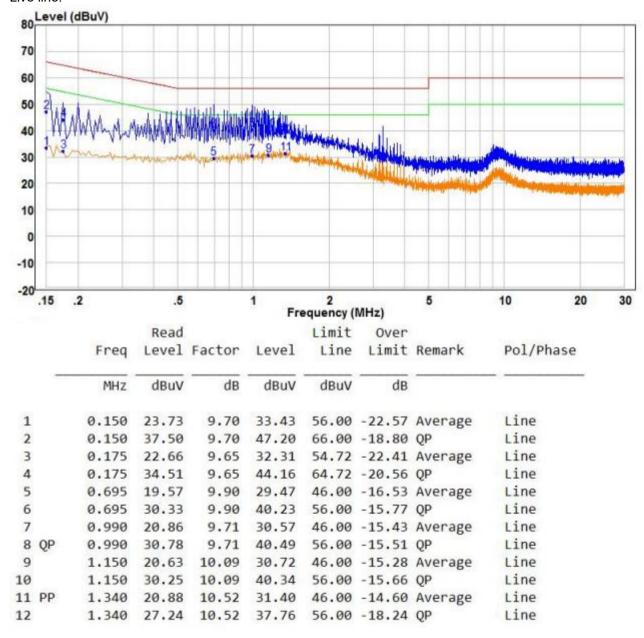
Measurement Data

The worst case:

Mode a:

1#

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.





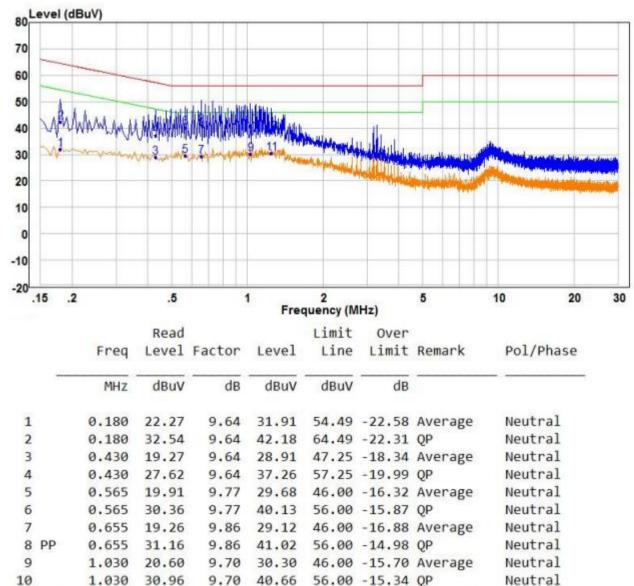
Neutral

Neutral

The worst case:

Mode a:

Neutral line:



Remark:

12

11 AV

- 1. The following Quasi-Peak and Average measurements were performed on the EUT:
- 2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

1.245 20.72

1.245 28.67

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

9.71 30.43 46.00 -15.57 Average

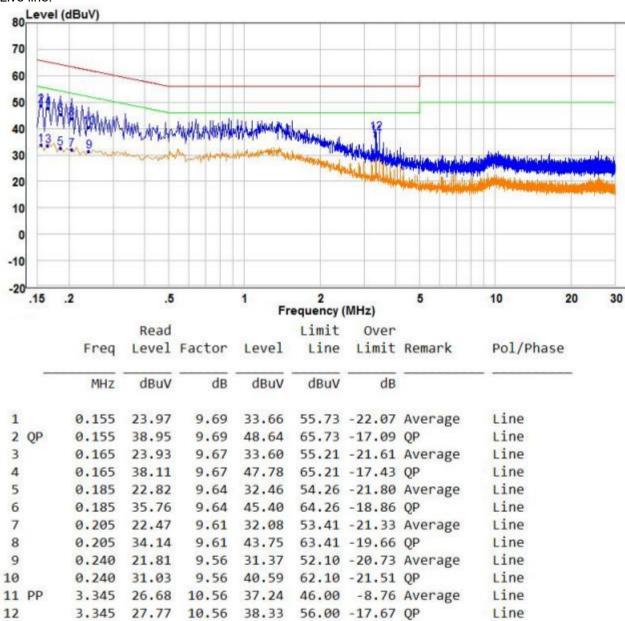
9.71 38.38 56.00 -17.62 QP





2#

Live line:



Remark:

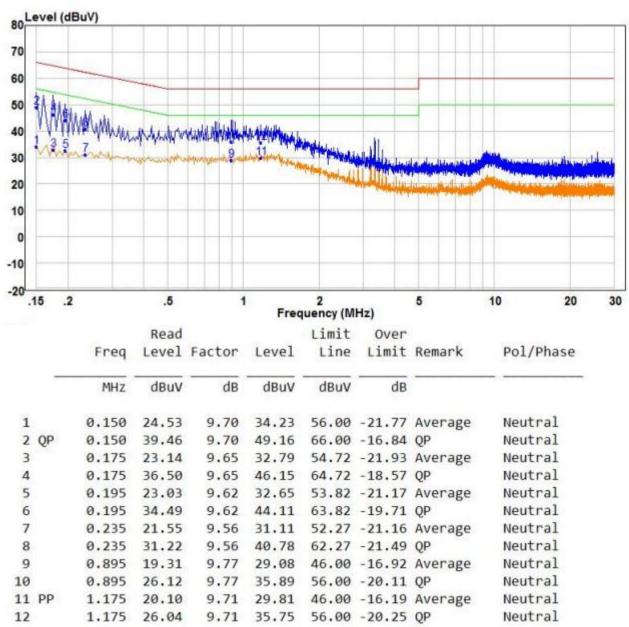
- 1. The following Quasi-Peak and Average measurements were performed on the EUT:
- 2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
- 3. If the Peak value under Average limit, the Average value is not recorded in the report.



The worst case:

Mode a:

Neutral line:

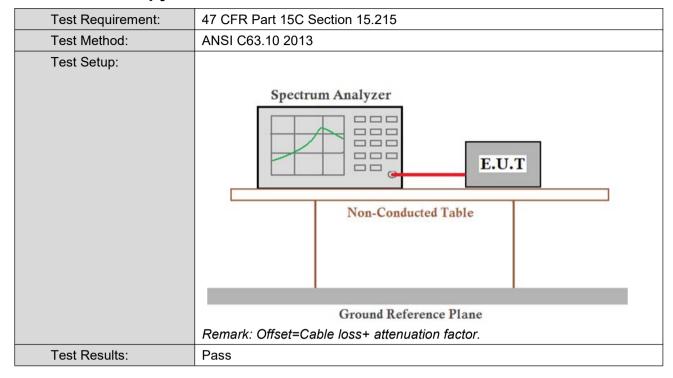


Remark:

- 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

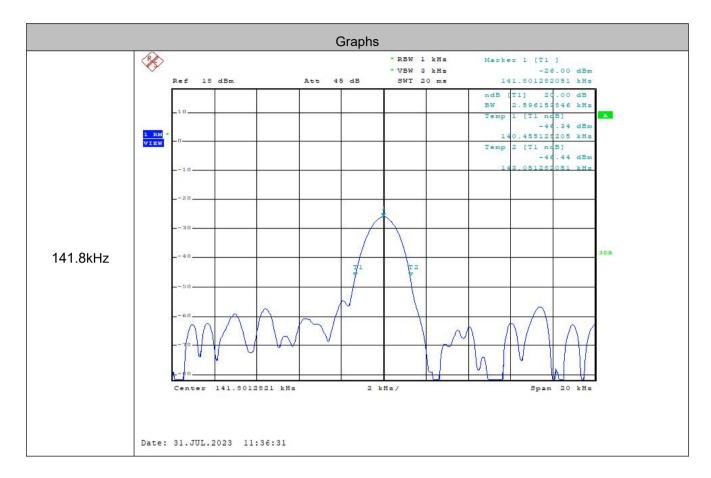


Measurement Data

Mode a				
Test Frequency (kHz) 20dB Occupy Bandwidth (Hz) Result				
141.8	2596.15	Pass		



Test plot as follows:





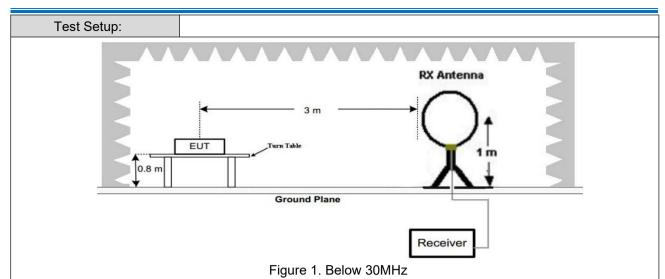


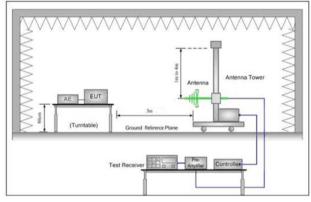
5.4 Radiated Spurious Emission & Restricted bands

5.4.1 Spurious Emissions								
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	10kHz	<u>z</u>	30kHz	Peak	
	0.009MHz-0.090MH	z	Average	10kHz	<u>z</u>	30kHz	Average	
	0.090MHz-0.110MH	z	Quasi-peak	10kHz	<u>z</u>	30kHz	Quasi-peak	
	0.110MHz-0.490MH	z	Peak	10kHz	7	30kHz	Peak	
	0.110MHz-0.490MH	Z	Average	10kHz	<u>z</u>	30kHz	Average	
	0.490MHz -30MHz		Quasi-peak	10kHz	2	30kHz	Quasi-peak	
	30MHz-1GHz		Quasi-peak	100 kH	lz :	300kHz	Quasi-peak	
	Above 1GHz		Peak	1MHz		3MHz	Peak	
			Peak	1MHz	<u>. </u>	10Hz	Average	
Limit:	l Frequency		eld strength crovolt/meter)	Limit (dBuV/m)	R	Remark	Measuremer distance (m)	
	0.009MHz-0.490MHz	2	400/F(kHz)	-	-		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		200	46.0	6.0 Quasi-peak		3	
	960MHz-1GHz		500	54.0	4.0 Quasi-peak		3	
	Above 1GHz	54.0	Α	verage	3			
	Note: 15.35(b), frequency emissions is limit applicable to the epeak emission level race	20c quip	dB above the oment under t	maximum est. This p	pern	nitted ave	erage emission	



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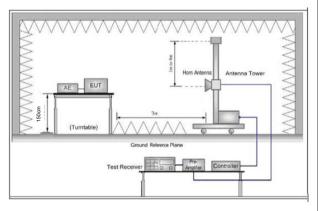


Figure 2. 30MHz to 1GHz

Figure 3. Above 1 GHz

Test Procedure:

- a. 1) Below 1G: 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.
 - 2) Above 1G: The EUT was placed on the top of a rotating table 1.5 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.

Note: For the radiated emission test above 1GHz:

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.

- 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



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	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
0.1418	Face	39.41	19.63	59.04	105.99	-46.95	Pass
0.1418	Side	40.35	19.63	59.98	105.99	-46.01	Pass
0.253	Face	38.16	19.80	57.96	99.56	-41.60	Pass
0.320	Side	40.58	19.80	60.38	97.49	-37.11	Pass
1.064	Face	18.76	19.70	38.46	67.07	-28.61	Pass
5.395	Side	13.47	19.70	33.17	69.54	-36.37	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 than 1 the limit without test.

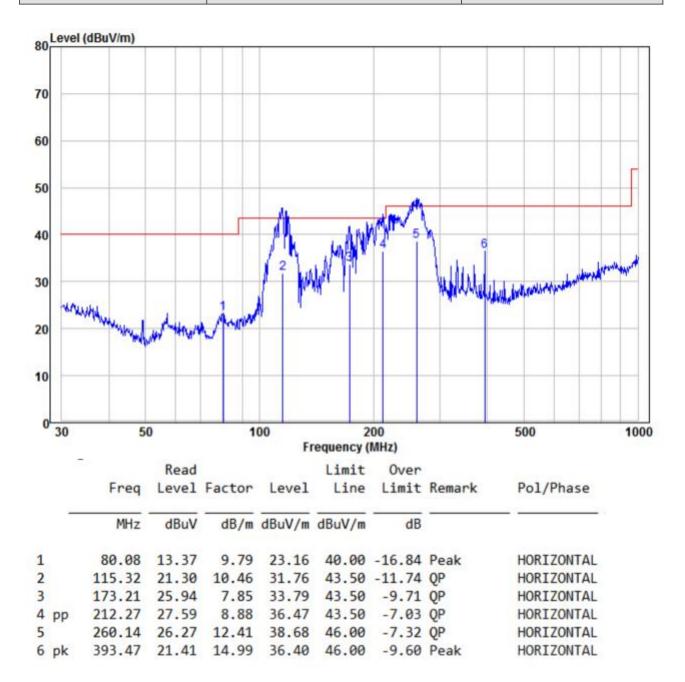




Radiated Emission

1#

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



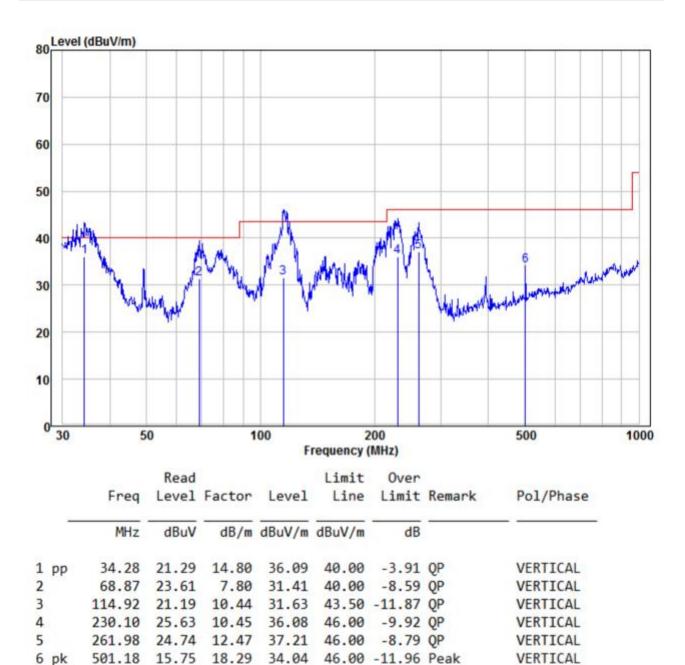
Remark:

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



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



Remark:

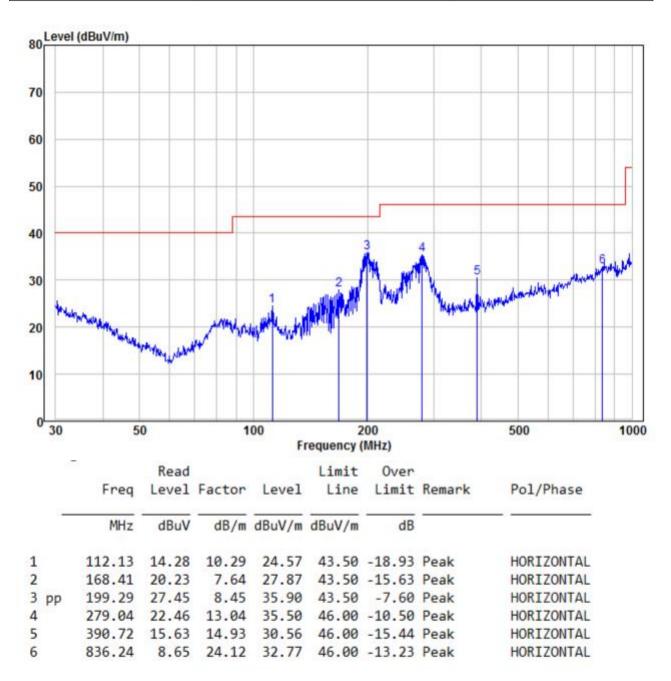
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:





2#

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



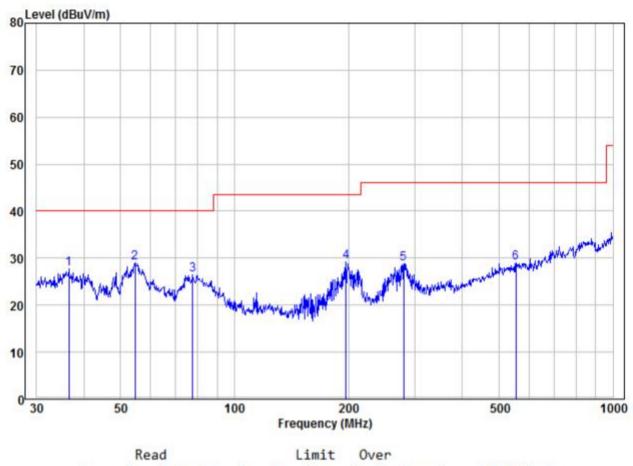
Remark:

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



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



	Freq	Level	Factor	Level	Line		Remark	Pol/Phase
_	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		_
1	36.51	13.61	14.06	27.67	40.00	-12.33	Peak	VERTICAL
2 pp	54.64	21.92	7.13	29.05	40.00	-10.95	Peak	VERTICAL
3	77.59	16.96	9.39	26.35	40.00	-13.65	Peak	VERTICAL
4	197.20	20.88	8.34	29.22	43.50	-14.28	Peak	VERTICAL
5	280.02	15.78	13.07	28.85	46.00	-17.15	Peak	VERTICAL
6	554.83	10.22	18.84	29.06	46.00	-16.94	Peak	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:

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 CQASZ20230701332E-01.

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