

Test Report



Declaration of Conformity

Product: Electric turntable

Trade Mark: ComXim

Model Number: MT500RL200

FCC ID: 2BB29-RLMAX

Prepared for

Shenzhen ComXim Technologies Co.,Ltd.
2F Block A and B, Donghaiwang Industrial Zone, No. 369 Bulong Road,
Longgang District, Shenzhen

Prepared by

Shenzhen HongBiao Certification & Testing Co., Ltd
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TEST RESULT CERTIFICATION

Applicant's Name..... : Shenzhen ComXim Technologies Co.,Ltd.
Address : 2F Block A and B, Donghaiwang IndustrialZone, No. 369
BulongRoad, Longgang District, Shenzhen
Manufacturer's Name : Shenzhen ComXim Technologies Co.,Ltd.
Address : 2F Block A and B, Donghaiwang IndustrialZone, No. 369
BulongRoad, Longgang District, Shenzhen

Product description

Product name : Electric turntable
Model Number : MT500RL200

Standards : E-CFR Title 47 Part 15 Subpart B

Test procedure..... : ANSI C63.4: 2014

This device described above has been tested by Shenzhen HongBiao Certification& Testing Co.,Ltd and the test results show that the equipment under test (EUT) is in compliance with the EMC requirements. And it is applicable only to the tested sample identified in the report.

Date of Test..... :

Date (s) of performance of tests..... : July 20, 2023~ Aug 27, 2023

Test Result..... : **Pass**

Testing Engineer :

Zoe su

(Z o e S u)

Technical Manager :

Gary Lu

(G a r y L u)

Authorized Signatory :

Leo

(L e o)



[illegible]

1 General Description

1.1 Description of EUT

Product name:	Electric turntable
Model name:	MT500RL200
Series Model:	MT500RL200-A, MT500RL200-B, MT500RL200FU-A, MT500RL200FU-AB, MT500RL200FU-B, MT500RL200FU-BA, MT500RL200P-A, MT500RL200P-B, MT500RL200P-AB, MT500RL200P-BA, NT600RL200, NT600RL200FU-A, NT600RL200FU-AB, NT600RL200FU-B, NT600RL200FU-BA, NT600RL200P-A, NT600RL200P-B, NT600RL200P-AB, NT600RL200P-BA, MT600RL200, MT600RL200FU-A, MT600RL200FU-AB, MT600RL200FU-B, MT600RL200FU-BA, MT600RL200P-A, MT600RL200P-B, MT600RL200P-AB, MT600RL200P-BA, MT800RL300, MT800RL300FU-A, MT800RL300FU-AB, MT800RL300FU-B, MT800RL300FU-BA, MT800RL300P-A, MT800RL300P-B, MT800RL300P-AB, MT800RL300P-BA, MT380RL120
Different of series model:	All the models are the same circuit and module, except the Size and Color..
Battery:	N/A
Power supply:	Input:100-240V~50/60Hz 1.7A MaxOutput:24V ==3A
Adapter information:	MODEL: J652-2403000IX INPUT: 100-240V~50/60Hz 1.7A OUTPUT: DC 24V ==3A 72W

1.2 Test Mode

Pretest Test Mode	Description of Mode
1	On
2	/
3	/

Test Item	Final Test Mode
Conducted Emissions	1
Radiated Emissions 30 to 1000 MHz	1
Radiated Emissions 1 GHz to 6 GHz	1

1.3 Test Setup

See photographs of the test setup in the report for the actual setup and connections between EUT and support equipment.

1.4 Ancillary Equipment

Equipment	Model	S/N	Manufacturer
Remote control	/	/	Shenzhen ComXim Technologies Co.,Ltd

2 Summary of Test Result

Test procedures according to the technical standards:

E-CFR Title 47 Part 15 Subpart B					
No.	Standard Section	Test Item	Limit	Result	Remark
1	15.107	Conducted Emissions	Class B	Pass	
2	15.109	Radiated Emissions	Class B	Pass	
Note: 1. "N/A" means the test case does not apply to the test object.					

3 Test Facilities and Accreditations

3.1 Test Laboratory

Test Site	Shenzhen HongBiao Certification& Testing Co., Ltd
Test Site Location	Room 102, 201, Building 2, Yuanwanggu RFID Industrial Park, Tongguan Road, Tianliao Community, Yutang Street, Guangming District, Shenzhen, China
Telephone:	(86-755) 2998 9321
Fax:	(86-755) 2998 5110
A2LA Certificate No.:	6765.01

3.2 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15°C~35°C
Relative Humidity:	20%~75%
Air Pressure:	98kPa~101kPa

3.3 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 %.

The data and results quoted in this document are true and accurate values, and uncertainties are not involved in the calculations.

In addition, components and mass production processes that are similar to testing equipment may introduce additional deviations, and the manufacturer is solely responsible for the continued compliance of the equipment.

A. Conducted Measurement:

Measurement Frequency Range	U, (dB)	Note
150 kHz to 30 MHz	2.5	AC Power Port

B. Radiated Measurement:

Measurement Frequency Range	U, (dB)	Note
30 MHz to 1000 MHz	4.2	/
1 GHz to 6 GHz	4.7	/

3.4 Test Software

Software name	Manufacturer	Model	Version
EMI Measurement	Farad	EZ-EMC	V1.1.4.2

4 List of Test Equipment

Radiation emission							
Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	HB-E001	Horn Antenna	Schwarzbeck	BBHA 9120D	02592	2022-04-02	2024-04-01
2	HB-E002	Biconical log-periodic composite antenna	Schwarzbeck	VULB 9168	01340	2022-04-06	2024-04-05
3	HB-E003	SHF-EHF Horn	Schwarzbeck	BBHA 91270	01193	2022-04-02	2024-04-01
4	HB-E004	Preamplifier	Noyetec	LAN-0910	NYCM1420101	2023-05-11	2024-05-10
5	HB-E005	Preamplifier	Noyetec	LAN-0118	NYCM1420102	2023-05-12	2024-05-11
6	HB-E006	Preamplifier	Noyetec	LAN-1840	NYCM1420103	2023-06-11	2024-06-10
7	HB-E007	EMI TEST RECEIVER	R&S	ESR7	102520	2023-05-12	2024-05-11
8	HB-E009	POSITINAL COTROLLE R	Noyetec	N/A	N/A	/	/
9	HB-E013	RF switch	Noyetec	NY-RF4	NY0CM1420204	/	/
10	HB-E066	Illuminance Tester	TASI	TA8121	N/A	2023-05-11	2024-05-10
11	HB-E075	Active loop antenna	Schwarzbeck	FMZB 1519B	1519B-245	2022-07-24	2024-07-23
Conduction emission							
Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	HB-E014	4 Path V-LISN	Schwarzbeck	NNLK 8121	00770	2023-05-12	2024-05-11
2	HB-E015	Pulse Limiter	Schwarzbeck	VTSD 9561-F	00949	2023-05-12	2024-05-11
3	HB-E016	ZN23201	Noyetec	ZN23201	N/A	2023-05-11	2024-05-10
4	HB-E059	Attenuator	Xianghua	TS2-6-1	220215166	2023-05-12	2024-05-11
5	HB-E069	EMI TEST RECEIVER	R&S	ESCI	N/A	2023-05-12	2024-05-11

Note: the calibration interval of the above test instruments is 12&24 months and the calibrations are traceable to international system unit (SI).

5 EMC Emission Test

5.1 Conducted Emission

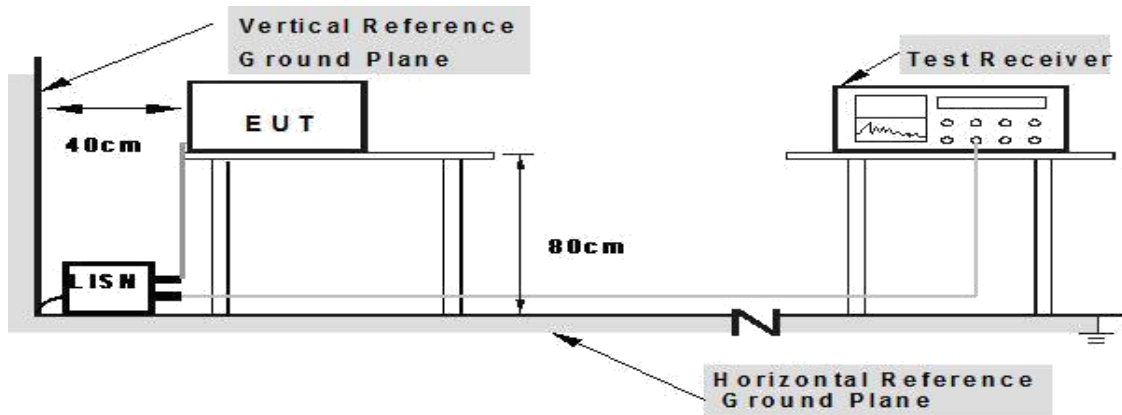
5.1.1 Limits

Limits – Class A		
Frequency (MHz)	Limit (dBμV)	
	Quasi-Peak	Average
0.15 to 0.5	79	66
0.5 to 30	73	60
Limits – Class B		
Frequency (MHz)	Limit (dBμV)	
	Quasi-Peak	Average
0.15 to 0.5	66 to 56*	56 to 46*
0.5 to 5	56	46
5 to 30	60	50
Note: 1. the tighter limit applies at the band edges. 2. the limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.		

5.1.2 Test Procedures

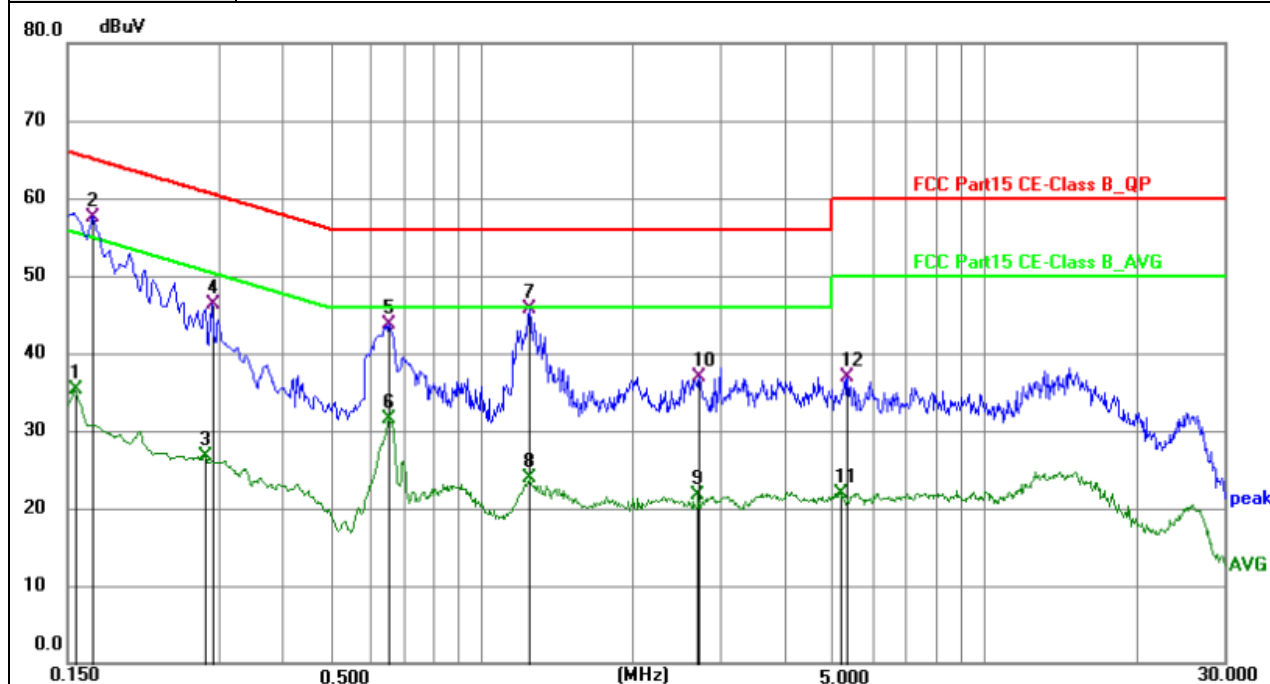
- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN is at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item – photographs of the test setup.

5.1.3 Test setup



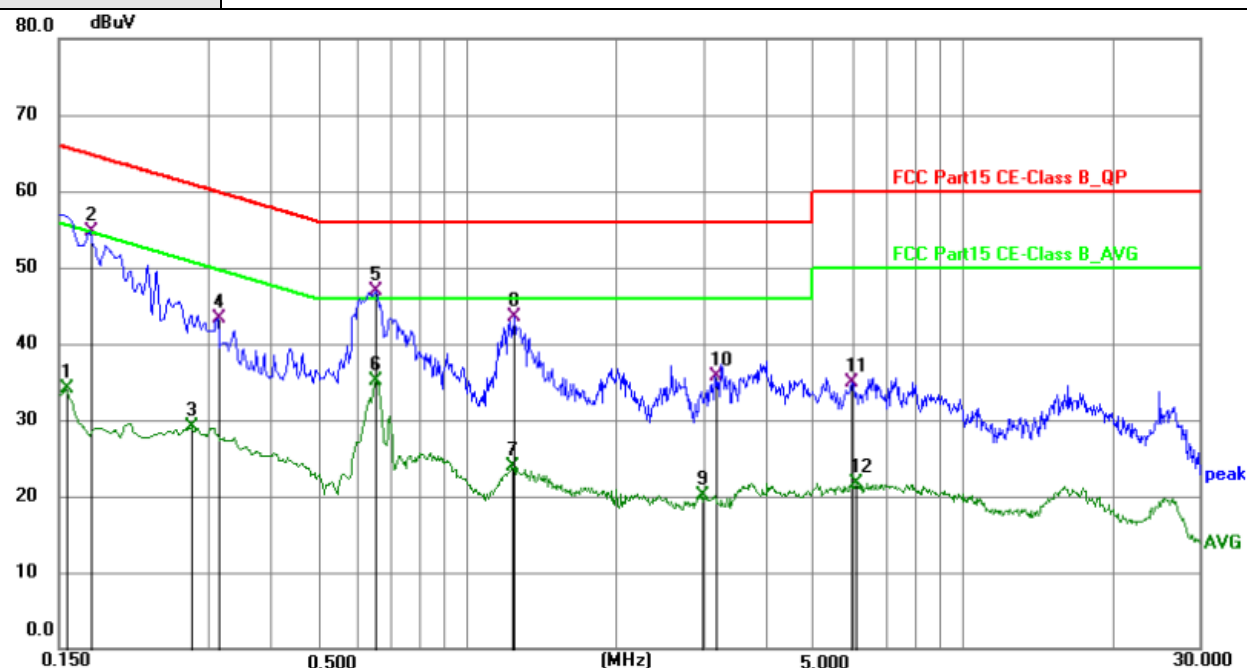
5.1.4 Test Result

EUT:	Electric turntable	Model Name:	MT500RL200
Test Mode:	On	Phase :	L
Test Voltage:	AC 120V, 60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1545	24.80	10.57	35.37	55.75	-20.38	AVG	P
2 *	0.1680	47.03	10.57	57.60	65.06	-7.46	QP	P
3	0.2805	16.16	10.60	26.76	50.80	-24.04	AVG	P
4	0.2895	35.61	10.60	46.21	60.54	-14.33	QP	P
5	0.6540	33.02	10.64	43.66	56.00	-12.34	QP	P
6	0.6540	20.91	10.64	31.55	46.00	-14.45	AVG	P
7	1.2435	35.13	10.66	45.79	56.00	-10.21	QP	P
8	1.2435	13.21	10.66	23.87	46.00	-22.13	AVG	P
9	2.6970	11.05	10.69	21.74	46.00	-24.26	AVG	P
10	2.7105	26.19	10.69	36.88	56.00	-19.12	QP	P
11	5.1935	11.27	10.72	21.99	50.00	-28.01	AVG	P
12	5.3555	26.21	10.72	36.93	60.00	-23.07	QP	P

EUT:	Electric turntable	Model Name:	MT500RL200
Test Mode:	On	Phase :	N
Test Voltage:	AC 120V, 60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1545	23.50	10.57	34.07	55.75	-21.68	AVG	P
2	0.1725	44.05	10.57	54.62	64.84	-10.22	QP	P
3	0.2760	18.41	10.60	29.01	50.94	-21.93	AVG	P
4	0.3120	32.70	10.60	43.30	59.92	-16.62	QP	P
5 *	0.6540	36.26	10.64	46.90	56.00	-9.10	QP	P
6	0.6540	24.49	10.64	35.13	46.00	-10.87	AVG	P
7	1.2345	13.30	10.66	23.96	46.00	-22.04	AVG	P
8	1.2435	32.75	10.66	43.41	56.00	-12.59	QP	P
9	2.9760	9.40	10.69	20.09	46.00	-25.91	AVG	P
10	3.1605	24.93	10.70	35.63	56.00	-20.37	QP	P
11	5.9630	24.15	10.72	34.87	60.00	-25.13	QP	P
12	6.1070	11.03	10.72	21.75	50.00	-28.25	AVG	P

5.2 Radiated Emission

5.2.1 Limits

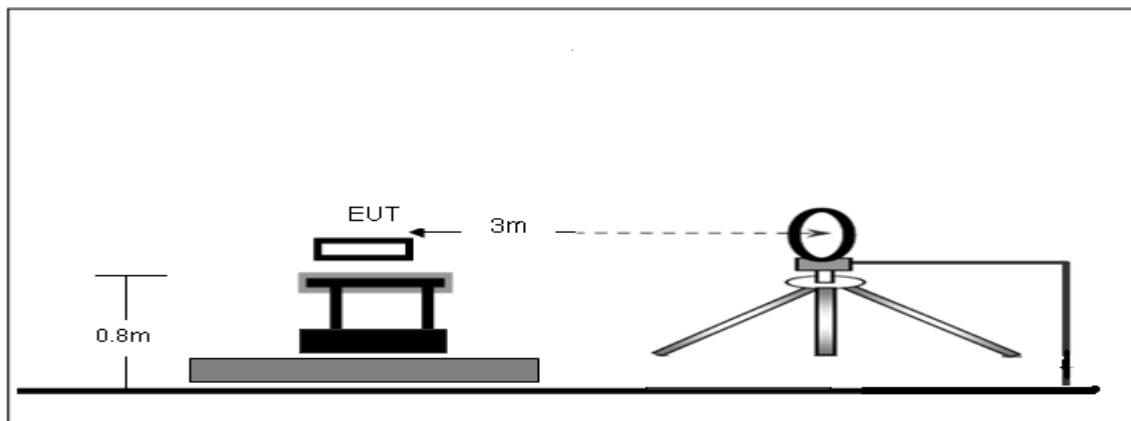
Limits – Class A at 3 m		
Frequency (MHz)	Quasi-Peak(dBμV/m)	Average(dBμV/m)
30 to 88	49	/
88 to 216	53.5	/
216 to 960	56.4	/
960 to 1000	59.5	/
Above 1000	84	64
Limits – Class B at 3 m		
Frequency (MHz)	Quasi-Peak(dBμV/m)	Average(dBμV/m)
30 to 88	40	/
88 to 216	43.5	/
216 to 960	46	/
960 to 1000	54	/
Above 1000	74	54

5.2.2 Test Procedures

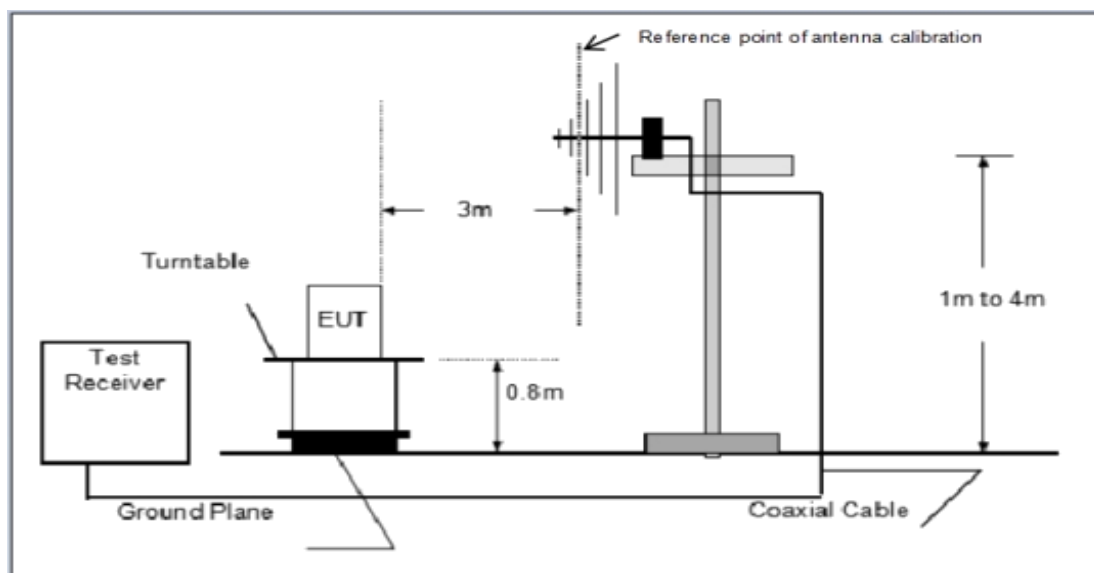
- The radiated emission tests were performed in the 3 meters.
- The EUT was placed on the top of a rotating table 0.8 meters above the ground. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the test antenna shall vary between 1m to 4m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- If the peak mode measured value compliance with and lower than quasi peak mode limit, the EUT shall be deemed to meet QP limits and then no additional QP mode measurement performed.
- If the peak mode measured value compliance with and lower than average mode limit, the EUT shall be deemed to meet average limits and then no additional average mode measurement performed.
- For the actual test configuration, please refer to the related item – EUT test photos.

5.2.3 Test Setup

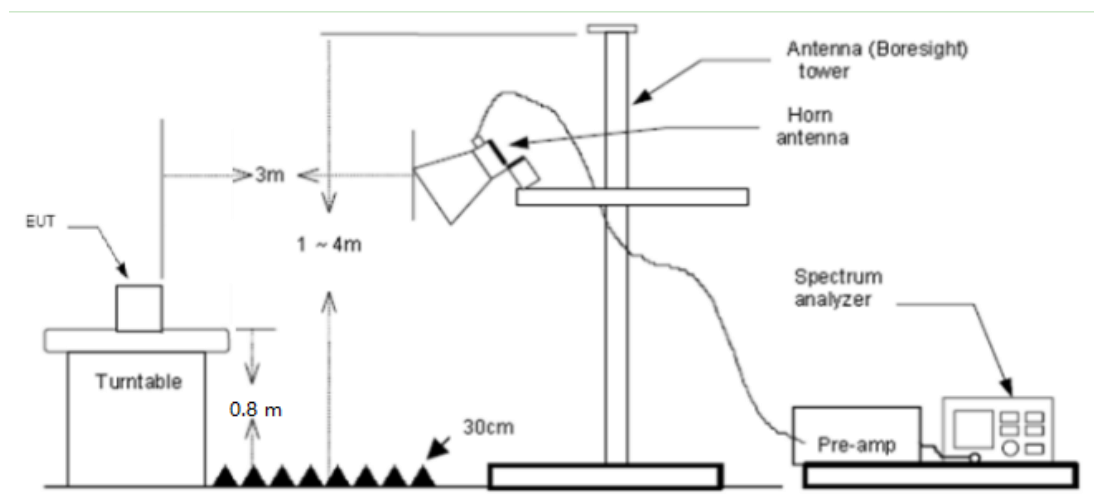
Radiated Emission Test-Up Frequency Below 30MHz



Radiated emission test-up frequency for 30MHz - 1GHz:



Radiated emission test-up frequency for above 1GHz:



5.2.4 Test Result

Note:

1. the highest working frequency of EUT is below 108MHz.
2. For 9kHz-30MHz, the amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Formula:

Measurement Level (dBuV/m) = Reading Level (dBuV/m) + Correct Factor (dBuV/m)

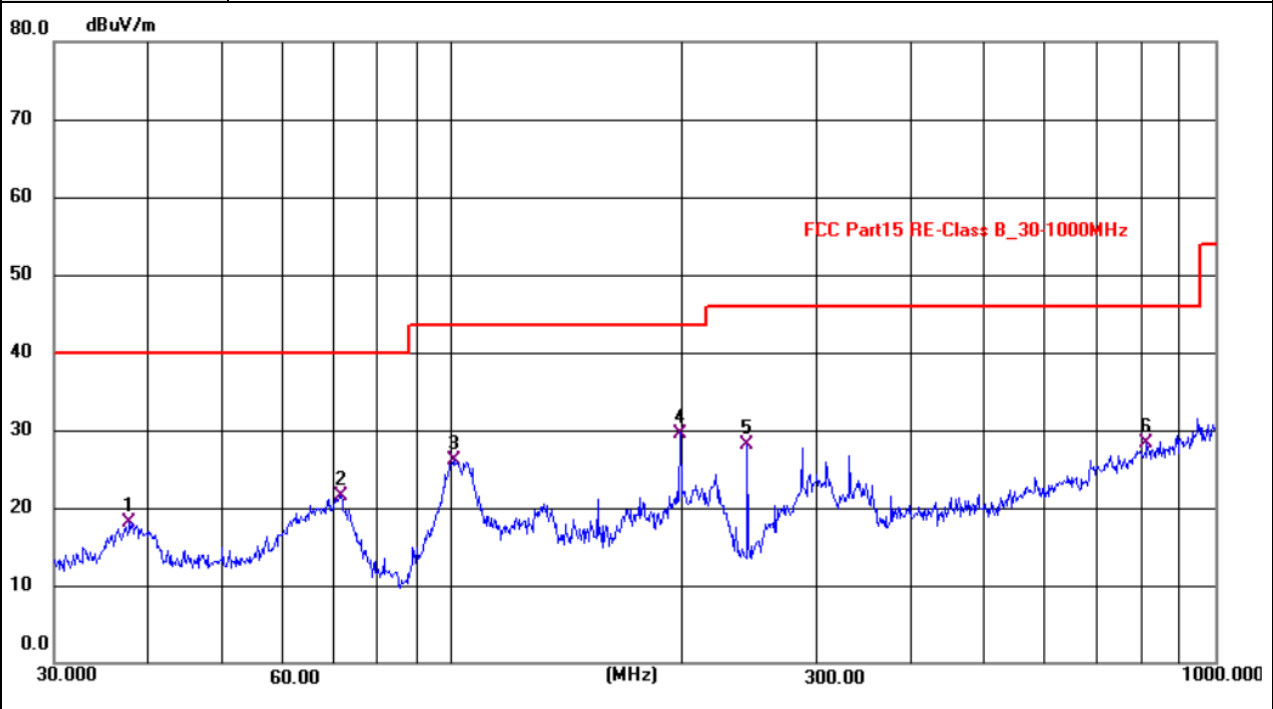
Margin Level (dBuV/m) = Measurement Level (dBuV/m) – Limit Level (dBuV/m)

Below 30MHz

EUT:	--	Model Name:	--
Pressure:	--	Test Voltage:	--
Test Mode:	--	Polarization:	--

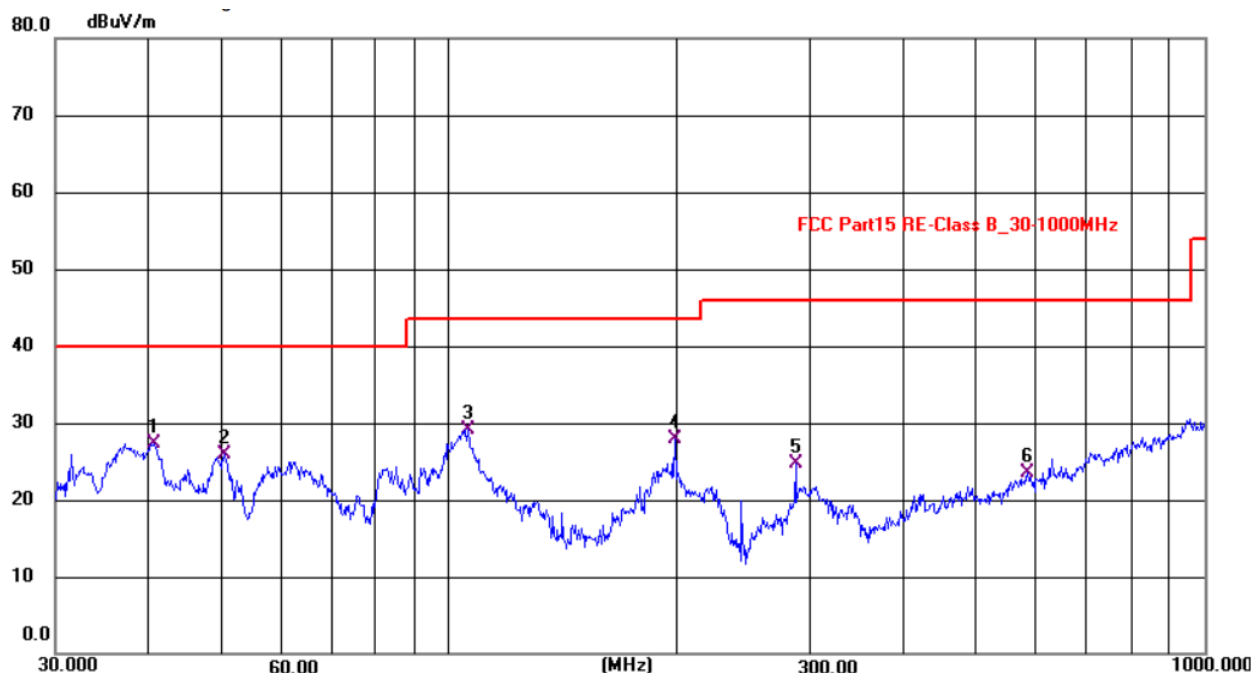
Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	Pass
--	--	--	--	Pass

EUT:	Electric turntable	Model Name:	MT500RL200
Test Mode:	On	Phase :	Horizontal
Test Voltage:	AC 120V, 60Hz		



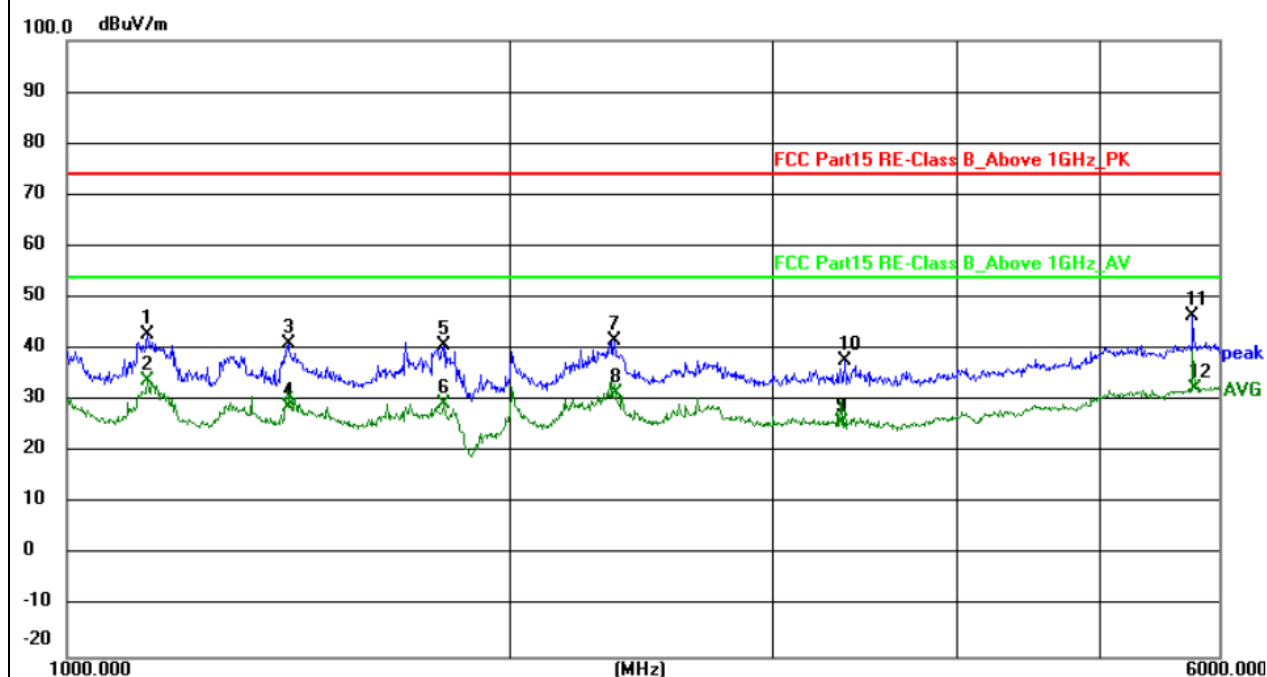
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F
1	37.6798	33.23	-15.03	18.20	40.00	-21.80	QP	100	0	P
2	71.3300	38.92	-17.43	21.49	40.00	-18.51	QP	100	0	P
3	100.4045	45.19	-18.99	26.20	43.50	-17.30	QP	100	0	P
4 *	198.9364	48.31	-18.71	29.60	43.50	-13.90	QP	100	0	P
5	243.3772	45.32	-17.22	28.10	46.00	-17.90	QP	100	0	P
6	813.1115	31.94	-3.62	28.32	46.00	-17.68	QP	100	0	P

EUT:	Electric turntable	Model Name:	MT500RL200
Test Mode:	On	Phase :	Horizontal
Test Voltage:	AC 120V, 60Hz		



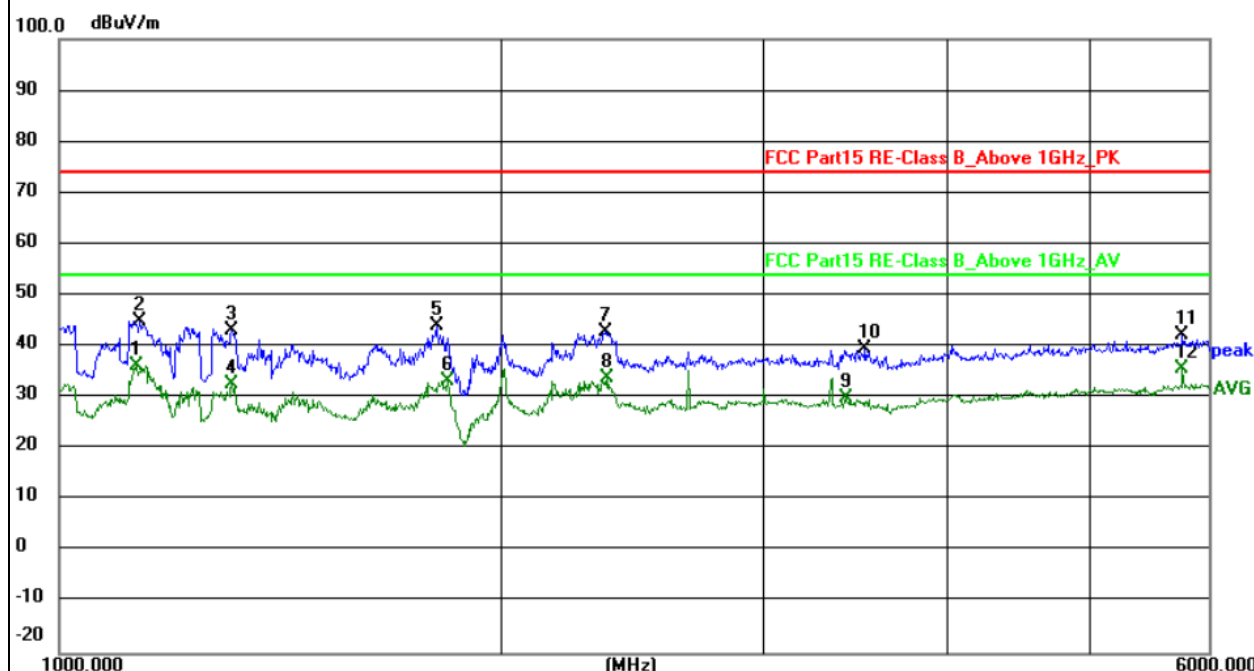
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F
1 *	40.6303	41.52	-14.26	27.26	40.00	-12.74	QP	100	360	P
2	50.3206	40.94	-15.08	25.86	40.00	-14.14	QP	100	360	P
3	106.0126	47.49	-18.36	29.13	43.50	-14.37	QP	100	360	P
4	198.9364	46.70	-18.71	27.99	43.50	-15.51	QP	100	360	P
5	287.4859	40.56	-15.90	24.66	46.00	-21.34	QP	100	360	P
6	584.7895	31.53	-8.00	23.53	46.00	-22.47	QP	100	360	P

EUT:	Electric turntable	Model Name:	MT500RL200
Test Mode:	On	Phase :	Horizontal
Test Voltage:	AC 120V, 60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1134.250	51.08	-8.16	42.92	74.00	-31.08	peak
2 *	1134.250	41.95	-8.16	33.79	54.00	-20.21	AVG
3	1412.500	47.80	-6.71	41.09	74.00	-32.91	peak
4	1415.250	35.57	-6.70	28.87	54.00	-25.13	AVG
5	1799.250	45.59	-4.84	40.75	74.00	-33.25	peak
6	1799.250	34.27	-4.84	29.43	54.00	-24.57	AVG
7	2345.000	44.89	-3.23	41.66	74.00	-32.34	peak
8	2349.000	34.56	-3.22	31.34	54.00	-22.66	AVG
9	3343.500	27.20	-1.57	25.63	54.00	-28.37	AVG
10	3353.250	39.38	-1.55	37.83	74.00	-36.17	peak
11	5765.750	40.73	5.70	46.43	74.00	-27.57	peak
12	5786.250	26.63	5.75	32.38	54.00	-21.62	AVG

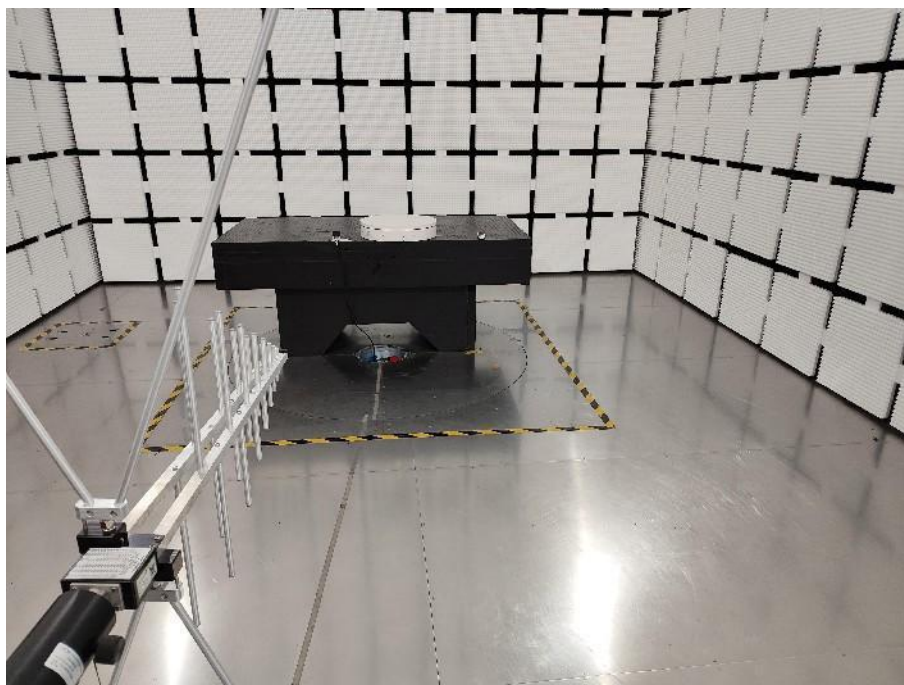
EUT:	Electric turntable	Model Name:	MT500RL200
Test Mode:	On	Phase :	Horizontal
Test Voltage:	AC 120V, 60Hz		



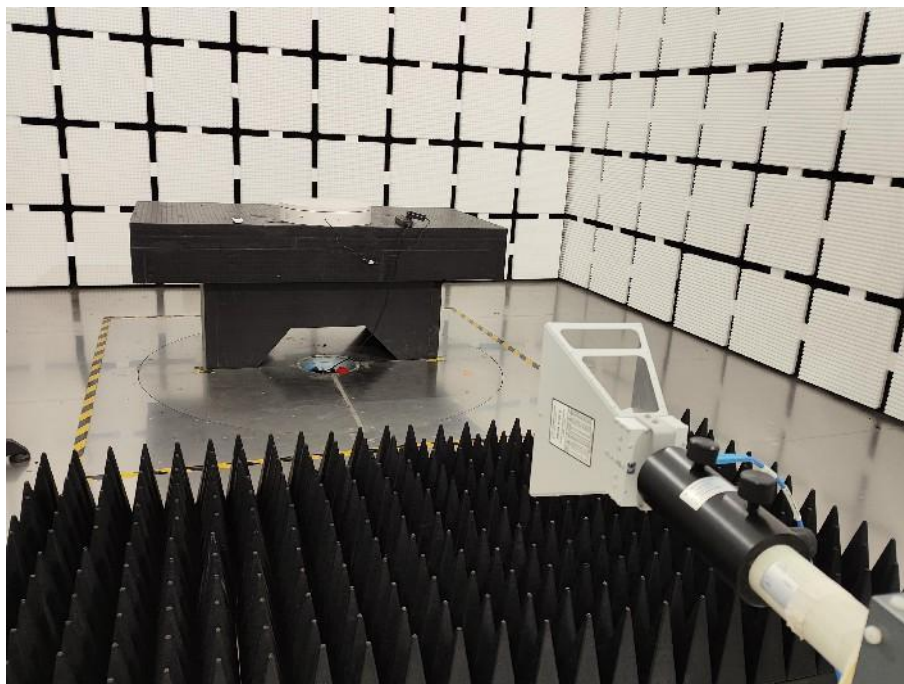
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	1129.000	43.16	-6.84	36.32	54.00	-17.68	AVG
2	1135.250	51.79	-6.80	44.99	74.00	-29.01	peak
3	1310.500	49.19	-5.96	43.23	74.00	-30.77	peak
4	1310.500	38.47	-5.96	32.51	54.00	-21.49	AVG
5	1800.250	47.56	-3.60	43.96	74.00	-30.04	peak
6	1835.250	36.68	-3.44	33.24	54.00	-20.76	AVG
7	2342.250	44.43	-1.63	42.80	74.00	-31.20	peak
8	2354.250	35.55	-1.58	33.97	54.00	-20.03	AVG
9	3411.250	29.60	0.48	30.08	54.00	-23.92	AVG
10	3515.000	38.89	0.54	39.43	74.00	-34.57	peak
11	5760.750	35.15	7.10	42.25	74.00	-31.75	peak
12	5760.750	28.54	7.10	35.64	54.00	-18.36	AVG

6 Photographs of the Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



Conducted emission



7 Photographs of the EUT

Photo 1



Photo 2

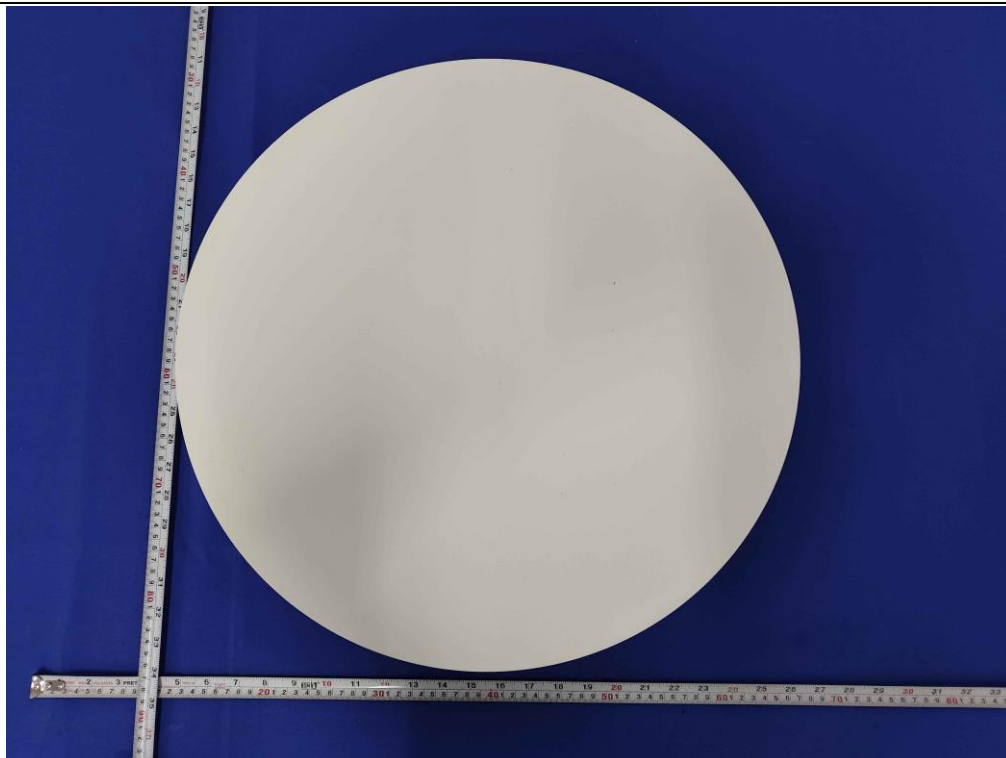


Photo 3

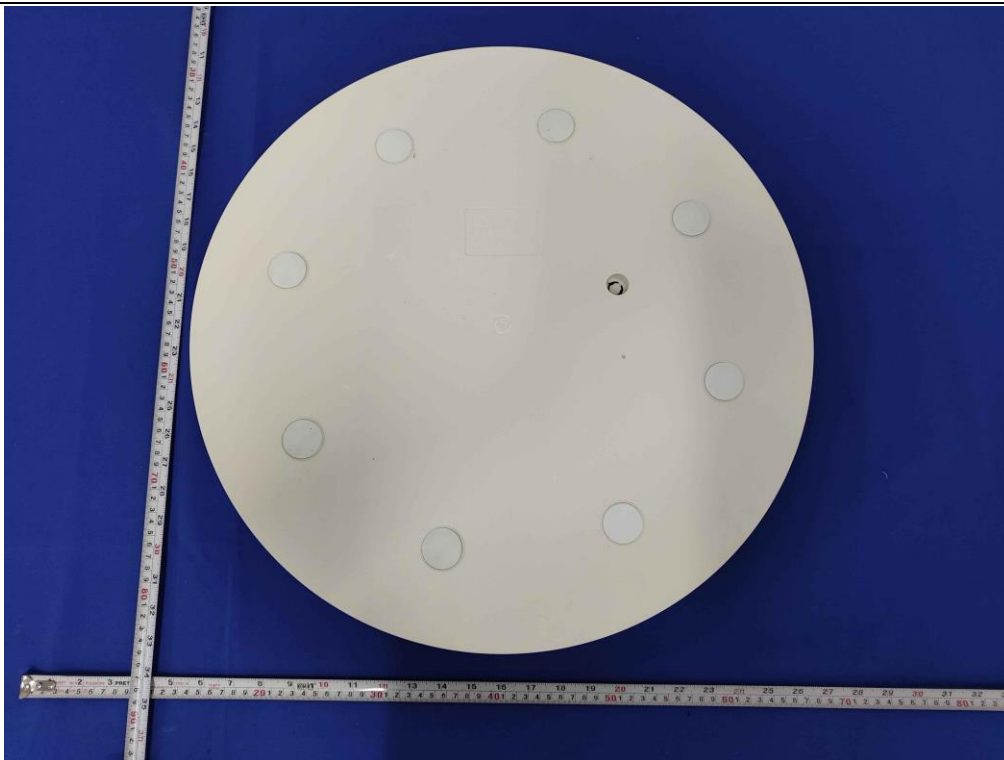


Photo 4

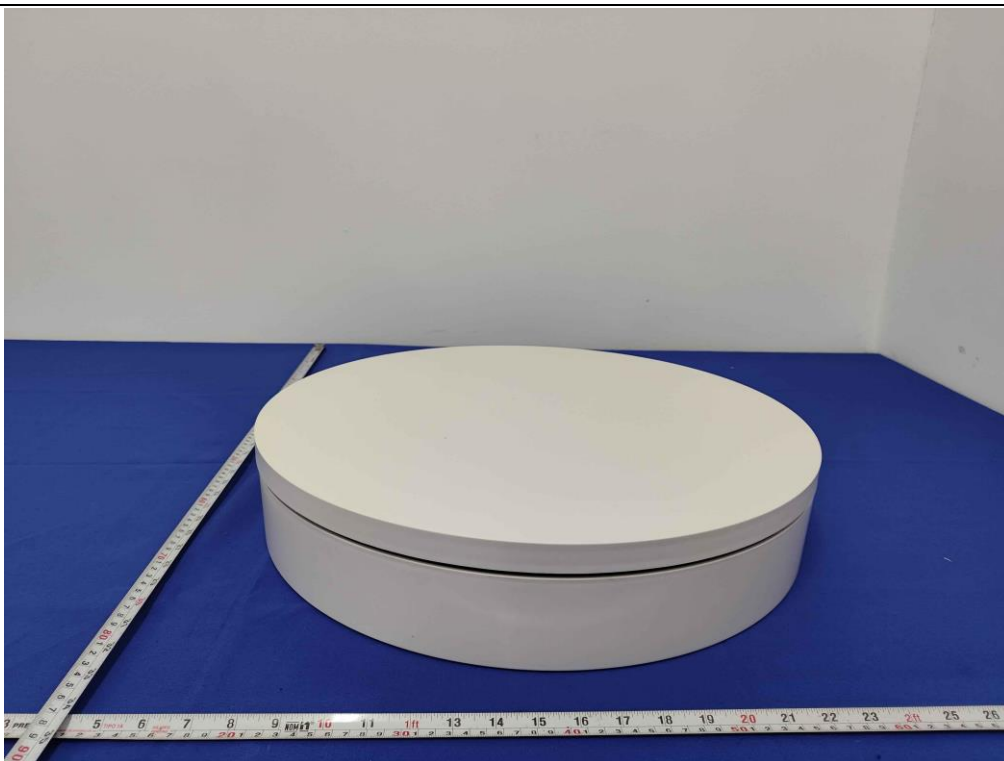


Photo 5



Photo 6

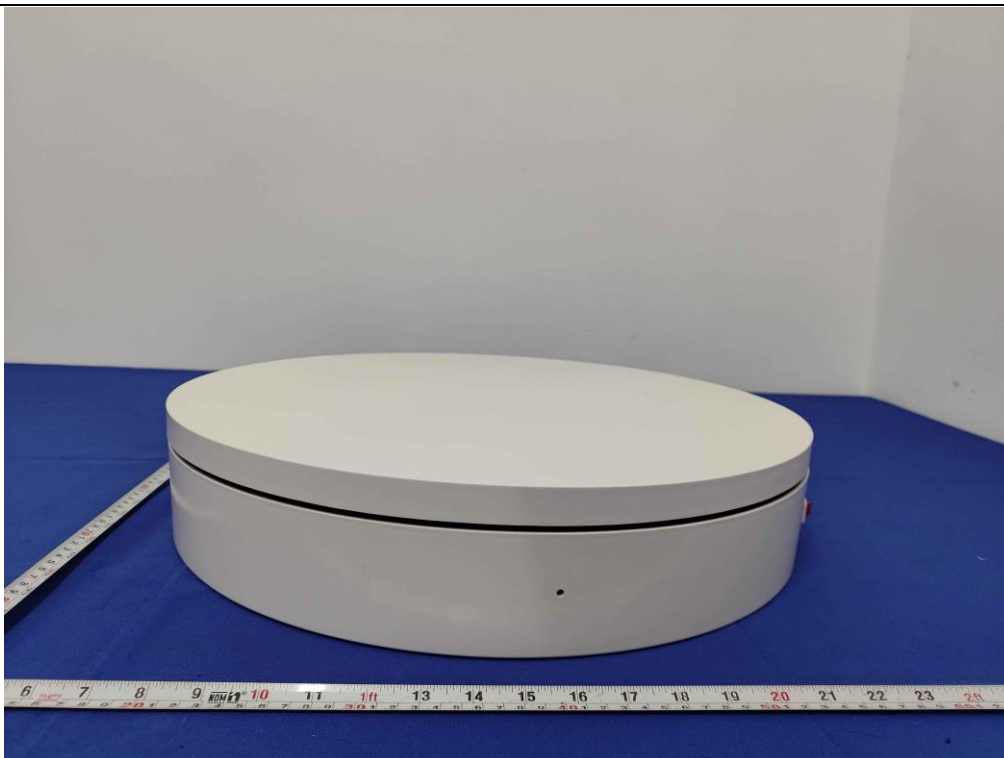


Photo 7

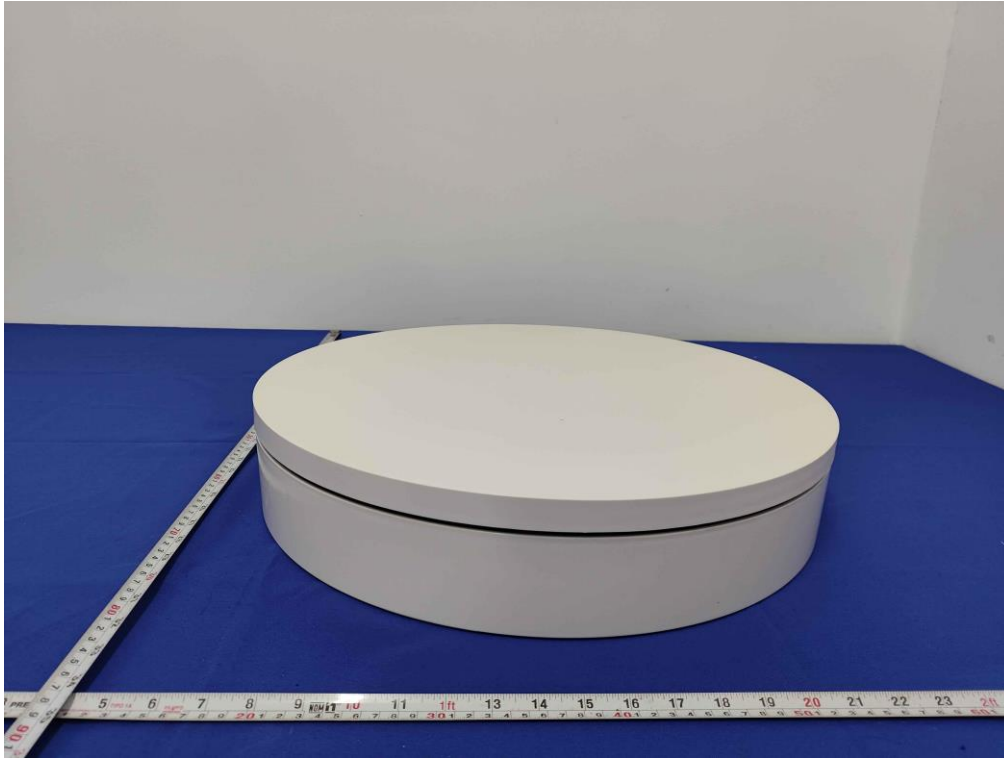


Photo 8

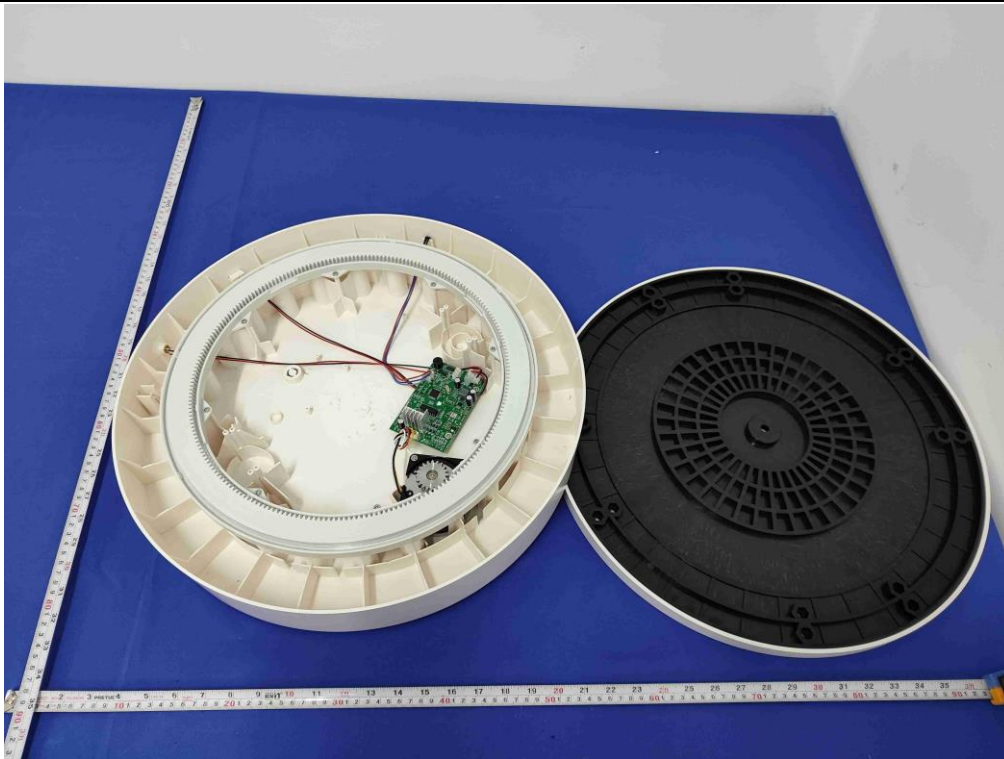


Photo 9

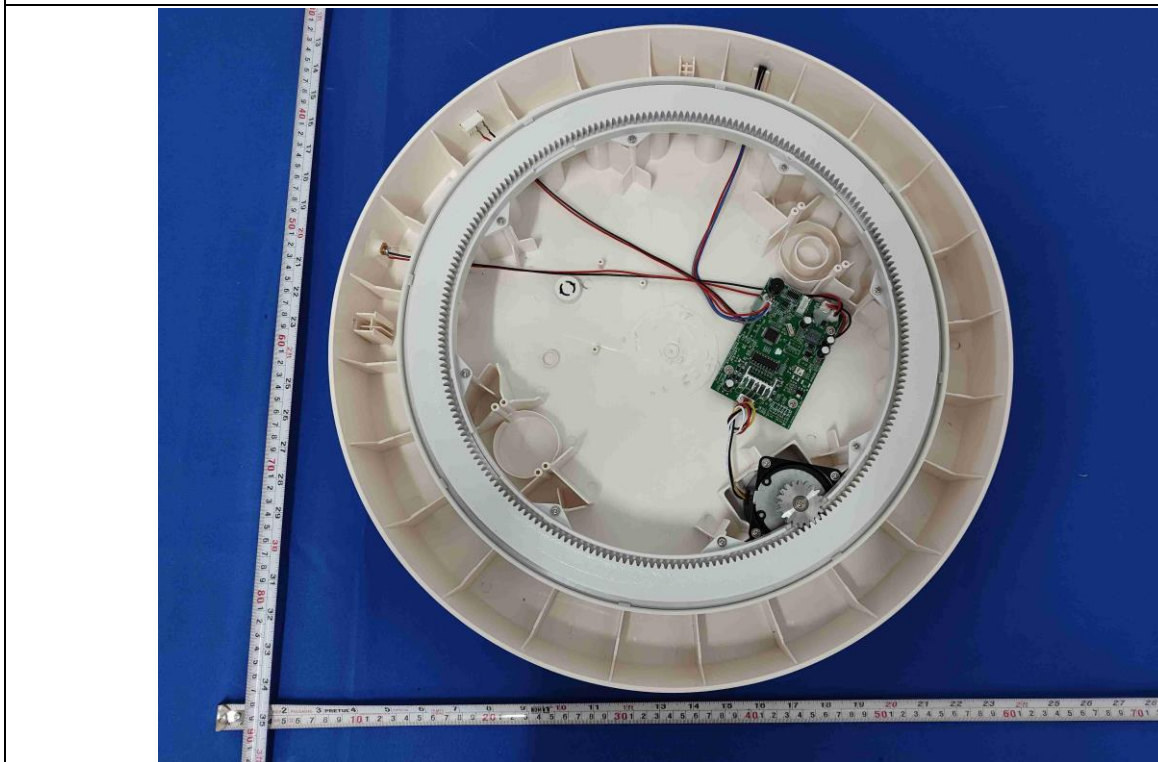


Photo 10

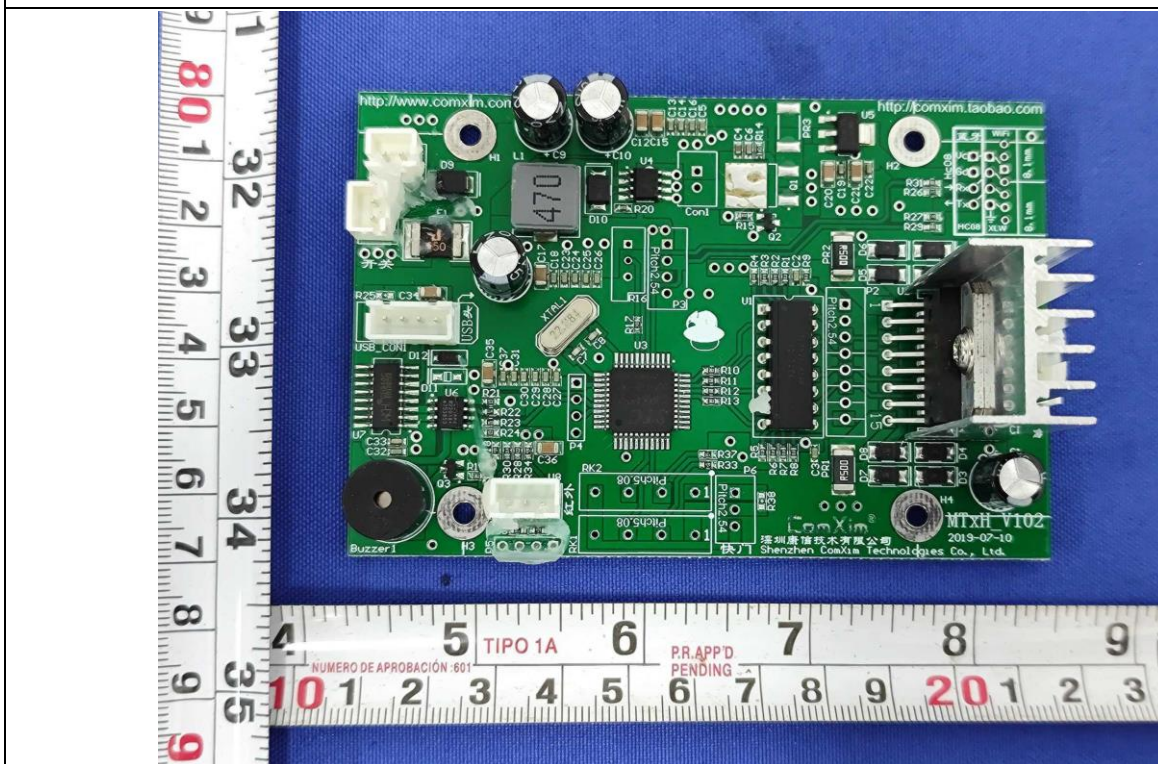


Photo 11

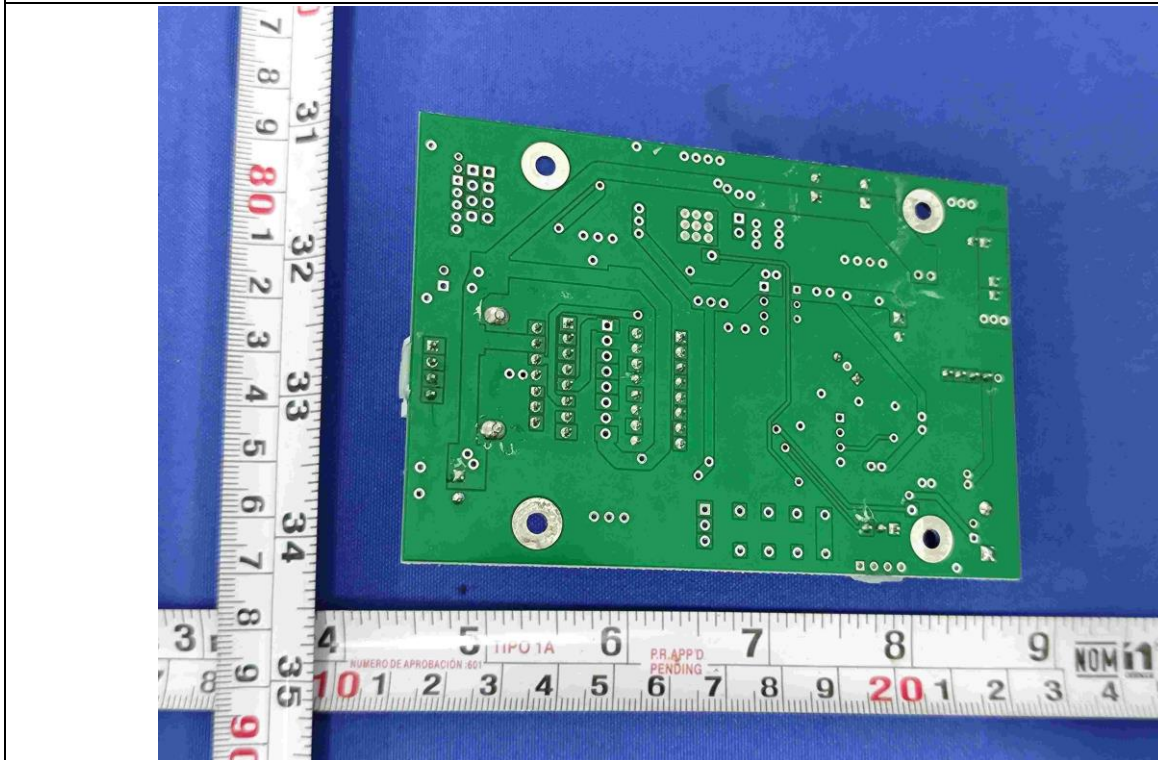


Photo 12



***** END OF REPORT *****