



EMC TEST REPORT

Product Name: 5G Smart phone

Model Name: OB-A99, TANK 4

FCC ID: 2BAVY-OBA99

Issued For : Shenzhen OBLUE Communication Technology Co.,Ltd.
Room 702, Hepingdayou industrial and trade industrial park,
No. 41, Yonghe Road, Heping Community, Fuhai Street,
Baoan District, Shenzhen City,China

Issued By : Shenzhen LGT Test Service Co., Ltd.
Room 205, Building 13, Zone B, Zhenxiong Industrial Park,
No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan
District, Shenzhen, Guangdong, China

Report Number: LGT25E141EM05

Sample Received Date: May 28, 2025

Date of Test: May 28, 2025 ~ July 24, 2025

Date of Issue: July 24, 2025

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TEST REPORT CERTIFICATION

Applicant: Shenzhen OBLUE Communication Technology Co.,Ltd.
Address: Room 702, Hepingdayou industrial and trade industrial park, No. 41,
Yonghe Road, Heping Community, Fuhai Street, Baoan District,
Shenzhen City,China

Manufacturer: Shenzhen OBLUE Communication Technology Co.,Ltd.
Address: Room 702, Hepingdayou industrial and trade industrial park, No. 41,
Yonghe Road, Heping Community, Fuhai Street, Baoan District,
Shenzhen City,China

Product Name: 5G Smart phone

Trademark: 8849, Unihertz, iHunt

Model Name: OB-A99, TANK 4

Sample Status: Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47 CFR Part 15 Subpart B ANSI C63.4-2014	PASS

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Engineer

Approved by:

Vita Li
Technical Director





Table of Contents

1. TEST SUMMARY	5
1.1 TEST LABORATORY	6
1.2 MEASUREMENT UNCERTAINTY	6
2. GENERAL INFORMATION	7
2.1 GENERAL DESCRIPTION OF THE EUT	7
2.2 DESCRIPTION OF THE TEST MODES	8
2.3 DESCRIPTION OF THE SUPPORT UNITS	8
2.4 MEASUREMENT INSTRUMENTS LIST	9
3. EMC EMISSION TEST	10
3.1 CONDUCTED EMISSION MEASUREMENT	10
3.2 RADIATED EMISSION MEASUREMENT	14
APPENDIX I - TEST SETUP	19
APPENDIX II - PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS	21



Revision History

Rev.	Issue Date	Revisions
00	July 24, 2025	Initial Issue



1. TEST SUMMARY

EMC Emission				
Standard	Test Item	Limit	Judgement	Remark
FCC 47 CFR Part 15 Subpart B ANSI C63.4-2014	Conducted Emissions	Class B	PASS	
	Radiated Emissions Below 1GHz	Class B	PASS	
	Radiated Emissions Above 1GHz	Class B	PASS	Note 2

Note:

- 1 "N/A" denotes test is not applicable in this Test Report
- 2 If 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. If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz. If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, measurement shall only be made up to 5 GHz. If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 40 GHz, whichever is less.



1.1 TEST LABORATORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China
Accreditation Certificate:	A2LA Certificate No.: 6727.01
	FCC Registration No.: 746540
	CAB ID: CN0136

1.2 MEASUREMENT UNCERTAINTY

Test Item	Measurement Frequency Range MHz	Uncertainty dB
Conducted Emissions at AC mains power port	0.009 ~ 30	2.80
Radiated Emissions	0.009 ~ 30	2.16
Radiated Emissions	30 ~ 1000	4.61
Radiated Emissions	1000 ~ 18000	5.49

Note: 1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
2. The measurement uncertainty is not included in the test result.



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name:	5G Smart phone
Trademark:	8849, Unihertz, iHunt
Model Name:	OB-A99
Series Model:	TANK 4
Model Difference:	Only the market models are different.
Adapter:	Input: 100-240V 50/60Hz 1.5A Output: 5V, 3A OR 9V, 3A OR 12V, 3A OR 15V, 3A OR 20V, 3.25A OR 11V 6A
Battery:	Capacity: 5750mAh Rated Voltage: 7.74V
Test Voltage:	AC 120V/60Hz Battery: 7.74V
Hardware Version:	A99_V2.0
Software Version:	JOB-A99_20250617
Connecting I/O Port(s):	Please refer to the Note 1.

Note: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.



2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operating mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Test Mode	Description
Mode 1	Charging+GSM link+BT+Wi-Fi+GPS+Camera recording+Earphone+NFC
Mode 2	Charging+WCDMA link+BT+Wi-Fi+GPS+Camera recording+Earphone+NFC
Mode 3	Charging+LTE link+BT+Wi-Fi+GPS+Camera recording+Earphone+NFC
Mode 4	Charging+NR link+BT+Wi-Fi+GPS+Camera recording+Earphone+NFC
Mode 5	USB Data Transmission

Note: Only the data of worst-case was recorded in this report.

2.3 DESCRIPTION OF THE SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Accessories Equipment

Description	Manufacturer	Model	S/N	Rating
Adapter	Shenzhen Huajin Electronics Co.,Ltd	HJ-PD66W-US	N/A	Input: 100-240V, 50/60Hz, 1.5A Output: 5V, 3A OR 9V,3A OR 12V,3A OR 15V,3A OR 20V,3.25A OR 11V 6A
USB-C to USB-C Cable	N/A	N/A	N/A	1m

Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Laptop	Lenovo	HKF-16	N/A	N/A
Earphone	VESAFE	39630078	N/A	N/A

Note:

- (1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



2.4 MEASUREMENT INSTRUMENTS LIST

Conducted Emission					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
EMI Test Receiver	R&S	ESU8	100372	2025.03.06	2026.03.05
LISN	COM-POWER	LI-115	02032	2025.03.05	2026.03.04
LISN	SCHWARZBECK	NNLK 8122	00160	2025.03.05	2026.03.04
LISN	EMTRACE	PWL-50-3200	00317	2025.03.05	2026.03.04
LISN	EMTRACE	PVDC-150R-200	00353	2025.03.12	2026.03.11
ISN	FCC	T4-02	91317	2025.03.05	2026.03.04
ISN	SCHWARZBECK	NTFM 8158	00303	2025.03.05	2026.03.04
Transient Limiter	CYBERTEK	EM5010A	E2250100049	2025.03.05	2026.03.04
Temperature & Humidity	BT-3	JINGCHUANG	N.A	2025.03.10	2026.03.09
Testing Software	SKET	EMC-I	V1.4.0.3	N/A	N/A
Radiated Emission					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
EMI Test Receiver	R&S	ESU8	100372	2025.03.06	2026.03.05
Spectrum Analyzer	Keysight	N9020A	MY50530994	2025.03.05	2026.03.04
Spectrum Analyzer	Keysight	N9010B	MY60242508	2025.03.05	2026.03.04
Active loop Antenna	ETS	6502	00049544	2025.03.11	2028.03.10
Trilog Broadband Antenna	SCHWARZBECK	VULB 9168	01447	2024.05.17	2027.05.16
Horn Antenna	SCHWARZBECK	3115	10SL0060	2025.03.10	2028.03.09
Pre-amplifier (9kHz-1GHz)	EMtrace	RP01A	02017	2025.03.06	2026.03.05
Pre-amplifier (1-26.5G)	Agilent	8449B	3008A4722	2025.03.06	2026.03.05
Temperature & Humidity	BT-3	JINGCHUANG	N.A	2025.03.10	2026.03.09
Testing Software	SKET	EMC-I	V1.4.0.3	N/A	N/A



3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 LIMITS

FREQUENCY (MHz)	Conducted Emission Limits (dBuV)			
	Class A		Class B	
	Quasi-peak	Average	Quasi-peak	Average
0.15 ~ 0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.5 ~ 5	73.00	60.00	56.00	46.00
5 ~ 30	73.00	60.00	60.00	50.00

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.
- (3) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor
Margin Level = Measurement Value - Limit Value

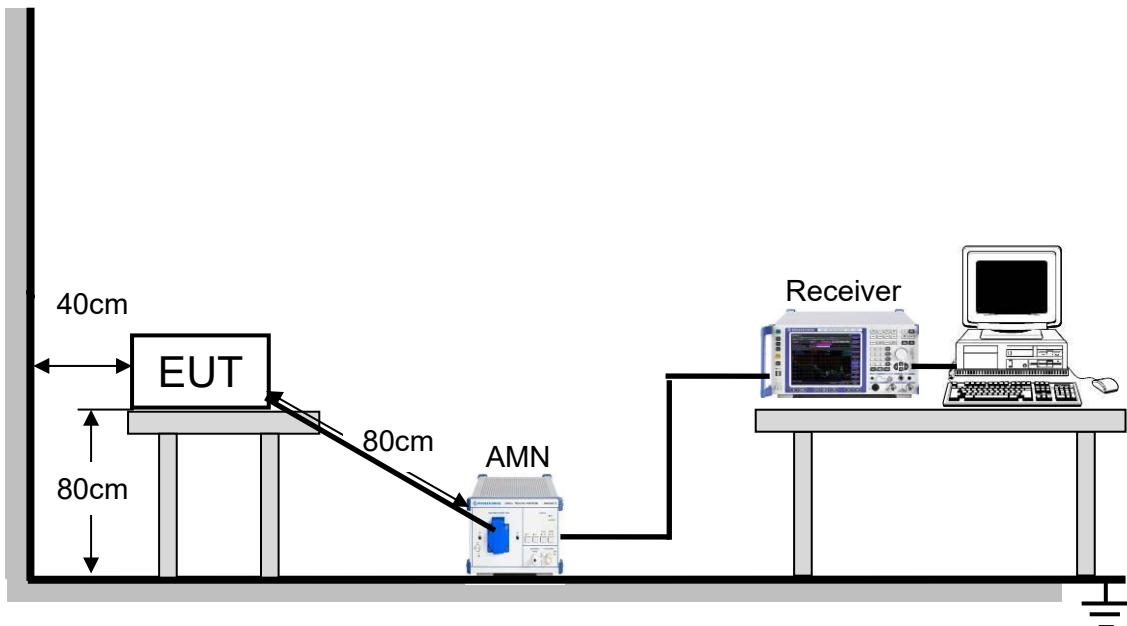
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.2 TEST PROCEDURE

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. 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.
- c. 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.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item - EUT Test Photos.

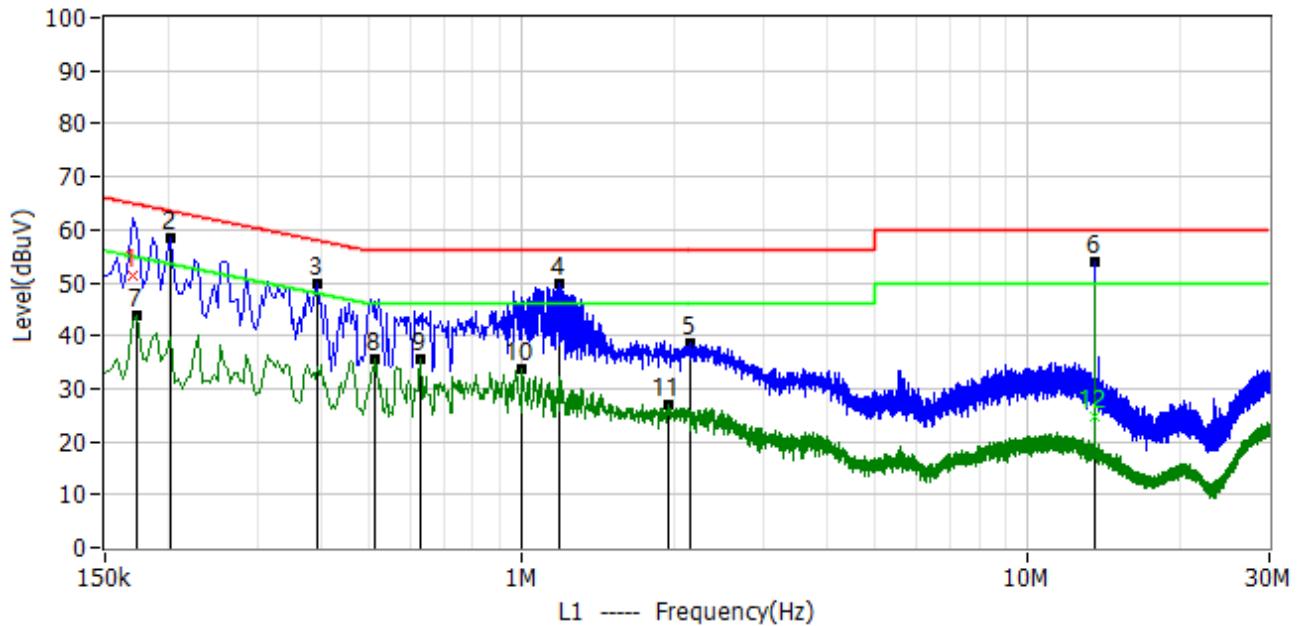
3.1.3 TEST SETUP





3.1.4 TEST RESULTS

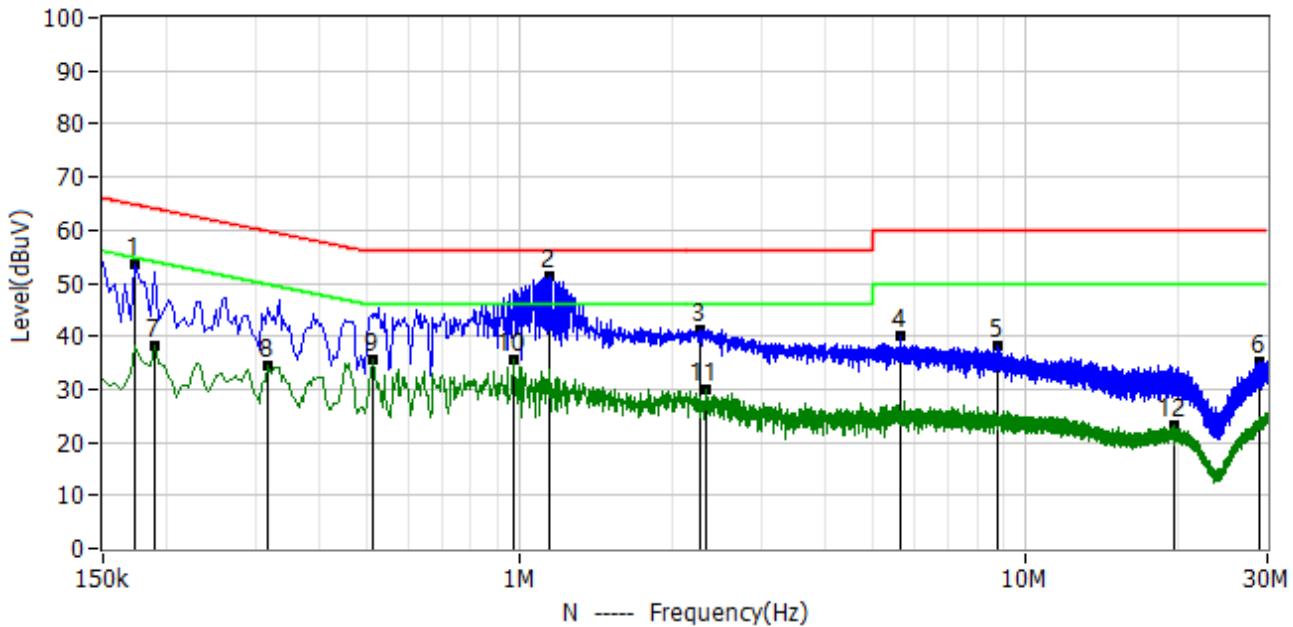
Project: LGT25E141	Test Engineer: LiuH
EUT: 5G Smart phone	Temperature: 23.5°C
M/N: OB-A99	Humidity: 51%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-05-28
Test Mode: Charging+GSM link+BT+Wi-Fi+GPS+Camera recording+Earphone+NFC	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1	0.170	40.75	10.60	51.35	64.96	-13.61	QP	L1
2*	0.202	47.64	10.73	58.37	63.53	-5.15	QP	L1
3*	0.394	38.99	10.86	49.85	57.98	-8.13	QP	L1
4*	1.186	38.68	11.00	49.68	56.00	-6.32	QP	L1
5*	2.142	27.64	11.11	38.75	56.00	-17.25	QP	L1
6*	13.542	42.22	11.66	53.88	60.00	-6.12	QP	L1
7*	0.174	33.11	10.65	43.76	54.77	-11.01	AV	L1
8*	0.514	24.77	10.93	35.70	46.00	-10.30	AV	L1
9*	0.630	24.76	10.91	35.67	46.00	-10.33	AV	L1
10*	1.002	22.97	10.83	33.80	46.00	-12.20	AV	L1
11*	1.954	16.03	11.10	27.13	46.00	-18.87	AV	L1
12	13.550	13.16	11.70	24.86	50.00	-25.14	AV	L1



Project: LGT25E141	Test Engineer: LiuH
EUT: 5G Smart phone	Temperature: 23.5°C
M/N: OB-A99	Humidity: 51%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-05-28
Test Mode: Charging+GSM link+BT+Wi-Fi+GPS+Camera recording+Earphone+NFC	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	0.174	42.79	10.63	53.42	64.77	-11.34	QP	N
2*	1.138	40.45	10.90	51.35	56.00	-4.65	QP	N
3*	2.274	30.19	11.17	41.36	56.00	-14.64	QP	N
4*	5.638	28.67	11.34	40.01	60.00	-19.99	QP	N
5*	8.810	26.59	11.46	38.05	60.00	-21.95	QP	N
6*	28.830	23.36	11.81	35.17	60.00	-24.83	QP	N
7*	0.190	27.68	10.67	38.35	54.04	-15.68	AV	N
8*	0.318	23.81	10.78	34.59	49.76	-15.17	AV	N
9*	0.514	24.58	10.84	35.42	46.00	-10.58	AV	N
10*	0.974	24.78	10.84	35.62	46.00	-10.38	AV	N
11*	2.322	18.85	11.17	30.02	46.00	-15.98	AV	N
12*	19.562	11.27	11.78	23.05	50.00	-26.95	AV	N



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS

Below 1 GHz

Frequency (MHz)	Class A		Class B	
	Field strength (dBuV/m) (at 3m)		Field strength (dBuV/m) (at 3m)	
30 - 88	49.5		40	
88 - 216	53.9		43.5	
216 - 960	56.9		46	
Above 960	60		54	

Above 1 GHz

Frequency (MHz)	Class A		Class B	
	Field strength (dBuV/m) (at 3m)		Field strength (dBuV/m) (at 3m)	
	Peak	Average	Peak	Average
Above 1000	80	60	74	54

Frequency Range of Radiated Disturbance Measurement

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

Note:

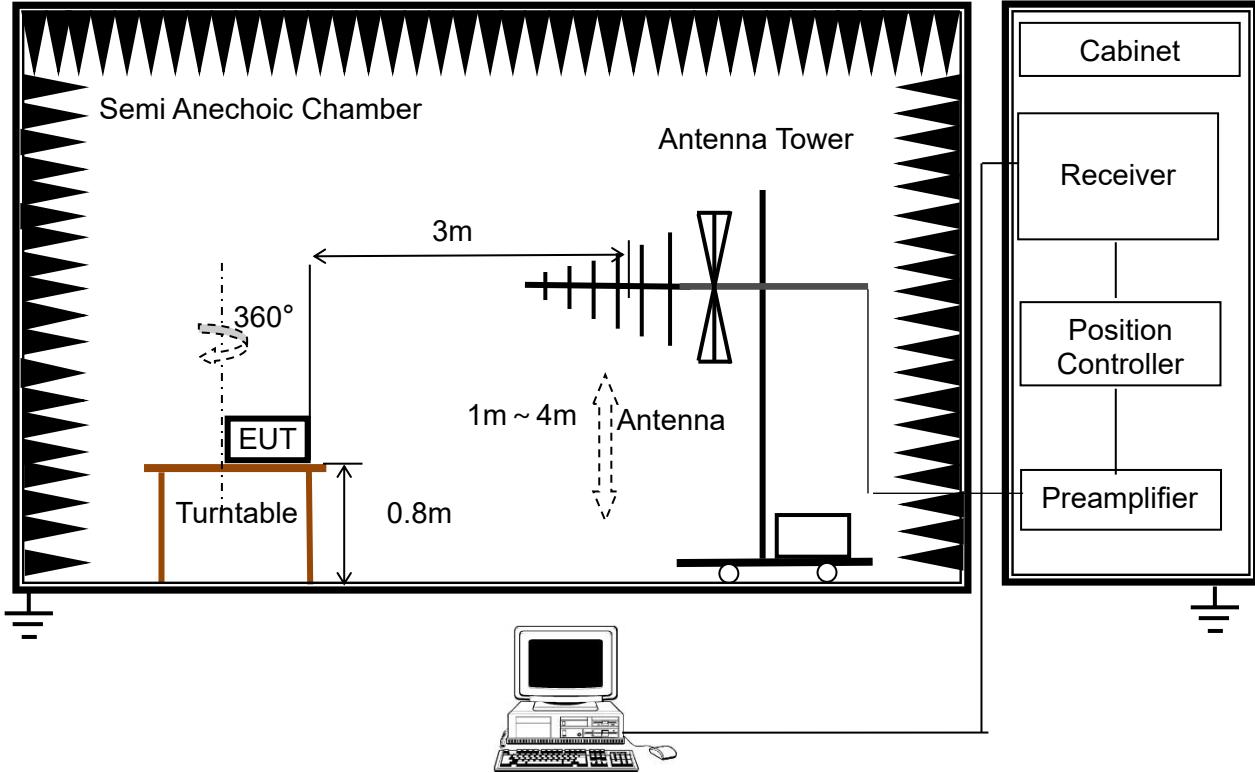
- (1) The limit for radiated test was performed according to FCC Part 15, Subpart B;
- (2) The tighter limit applies at the band edges;
- (3) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor,
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use),
Margin Level = Measurement Value - Limit Value.

3.2.2 TEST PROCEDURE

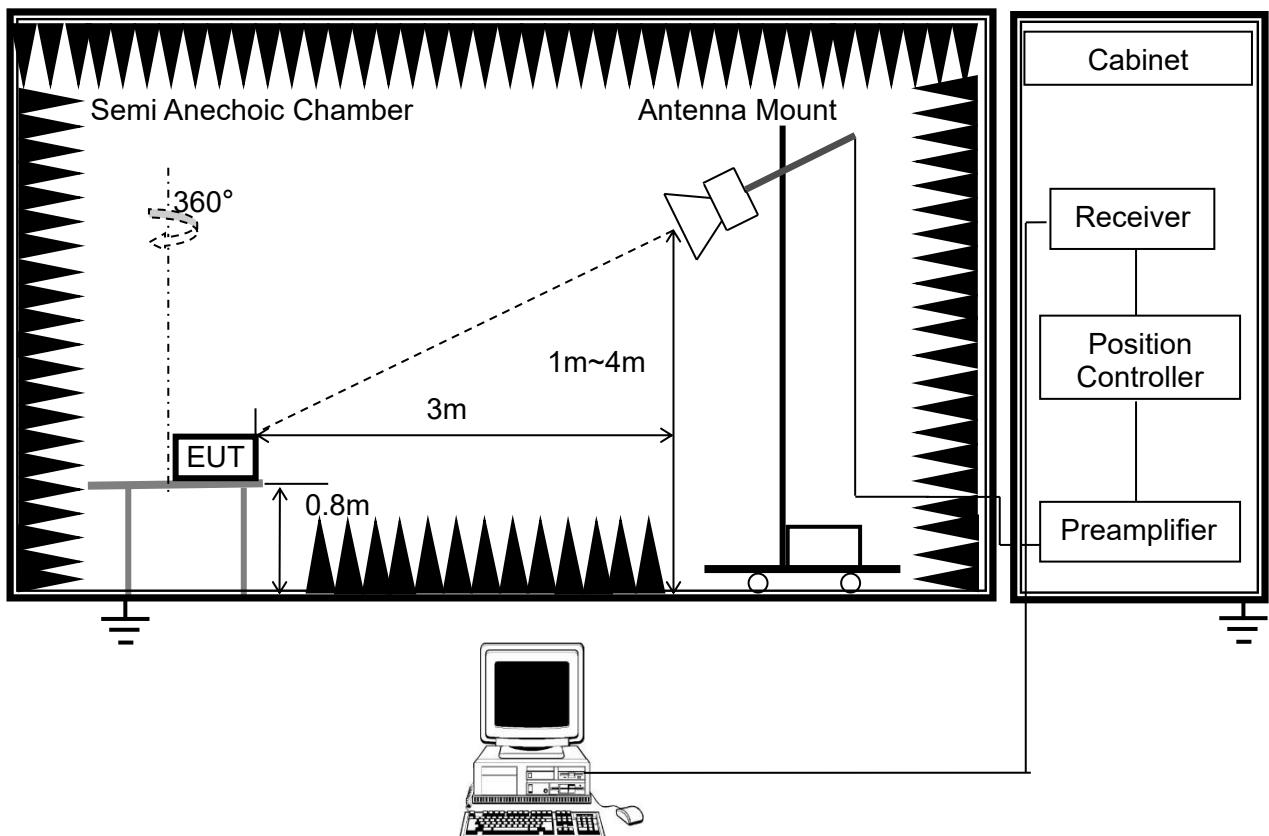
- a. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. EUT as the center to the edge of the auxiliary device, the distance from the maximum edge to the center of the antenna is 3 meter.
- c. The height of antenna is varied from 1 meter to 4 meter 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 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 meter and the rotatable table was turned from 0 degrees to 360 degree to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1GHz.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.2.3 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



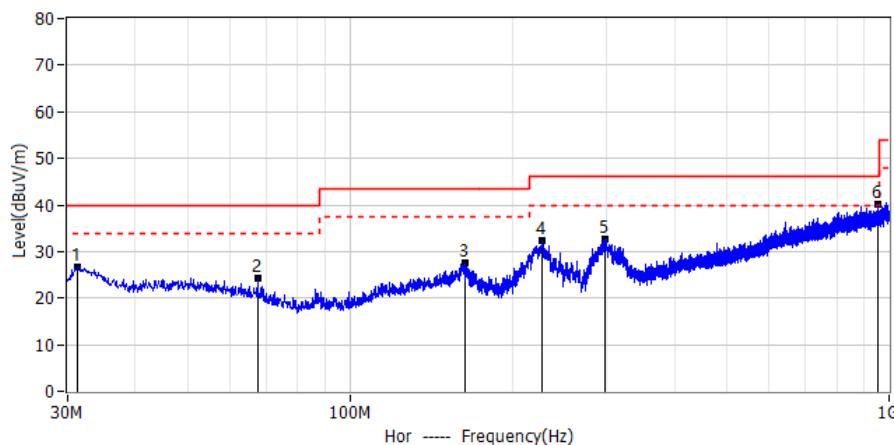
(B) Radiated Emission Test Set-Up Frequency Above 1GHz



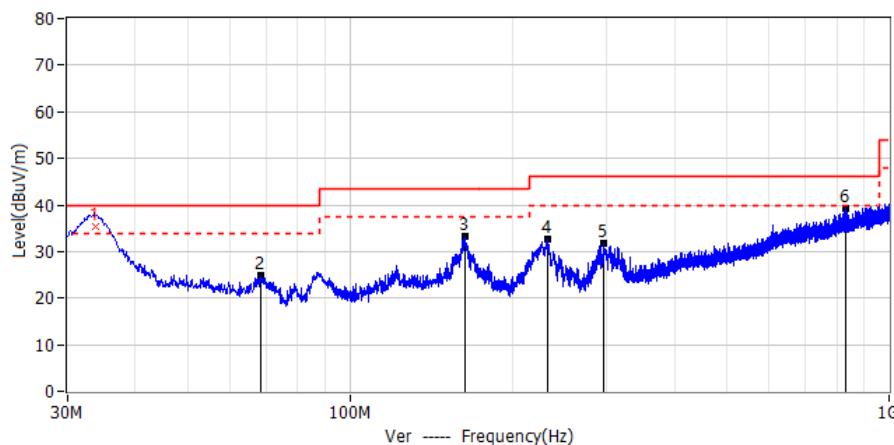
3.2.4 TEST RESULTS

BELow 1GHZ

Project: LGT25E141	Test Engineer: LiuH
EUT: 5G Smart phone	Temperature: 24°C
M/N: OB-A99	Humidity: 50%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-05-29
Test Mode: Charging+GSM link+BT+Wi-Fi+GPS+Camera recording+Earphone+NFC	
Note:	

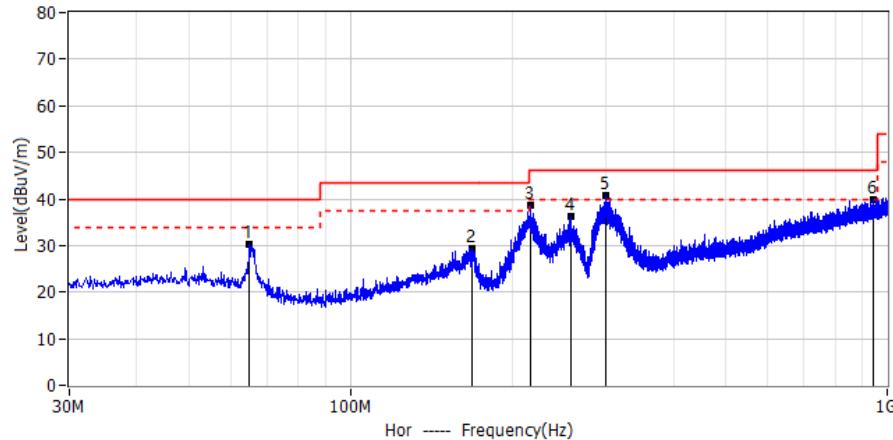


No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	31.213	7.14	19.64	26.78	40.00	-13.22	QP	Hor
2*	67.466	5.88	18.45	24.33	40.00	-15.67	QP	Hor
3*	163.496	6.10	21.59	27.69	43.50	-15.81	QP	Hor
4*	227.759	13.58	18.80	32.38	46.00	-13.62	QP	Hor
5*	297.114	10.77	21.90	32.67	46.00	-13.33	QP	Hor
6*	953.804	5.12	35.07	40.19	46.00	-5.81	QP	Hor

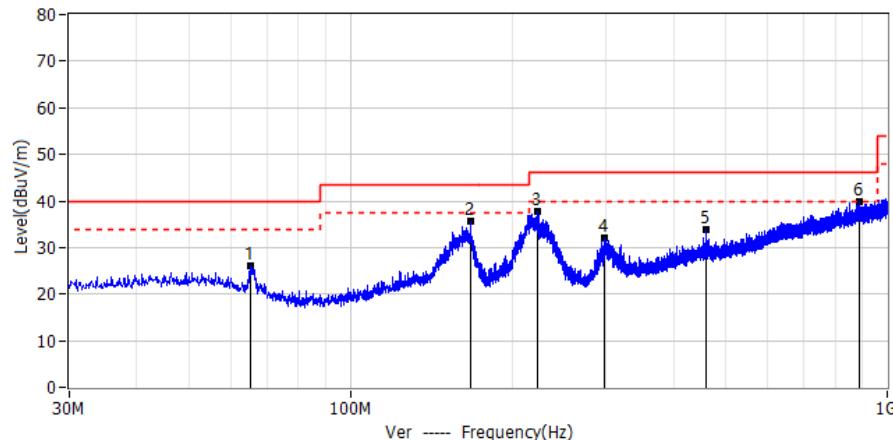


No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1	33.769	15.61	19.80	35.41	40.00	-4.59	QP	Ver
2*	68.315	6.52	18.37	24.89	40.00	-15.11	QP	Ver
3*	163.496	11.63	21.59	33.22	43.50	-10.28	QP	Ver
4*	232.488	13.47	19.14	32.61	46.00	-13.39	QP	Ver
5*	295.174	9.88	21.81	31.69	46.00	-14.31	QP	Ver
6*	829.523	6.15	33.22	39.37	46.00	-6.63	QP	Ver

Project: LGT25E141	Test Engineer: LiuH
EUT: 5G Smart phone	Temperature: 24°C
M/N: OB-A99	Humidity: 50%RH
Test Voltage: Battery	Test Data: 2025-05-29
Test Mode: USB Data Transmission	
Note:	



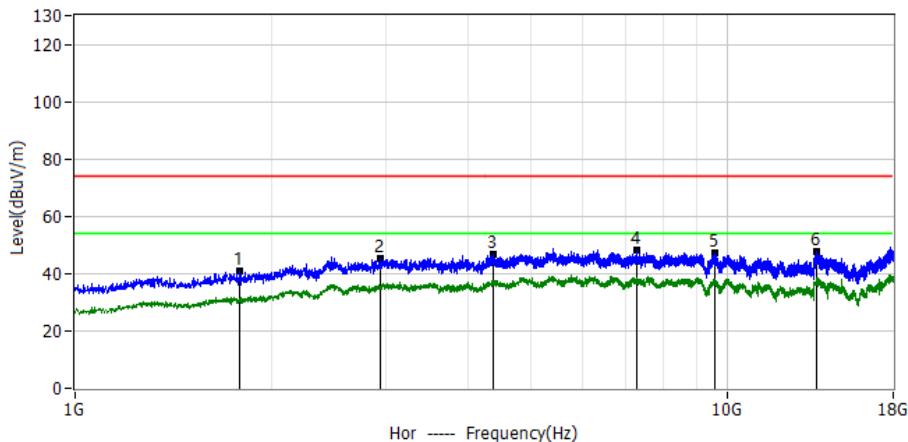
No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	64.920	11.13	19.09	30.22	40.00	-9.78	QP	Hor
2*	168.468	8.21	21.21	29.42	43.50	-14.08	QP	Hor
3*	216.604	20.63	18.14	38.77	46.00	-7.23	QP	Hor
4*	258.314	15.45	20.72	36.17	46.00	-9.83	QP	Hor
5*	298.326	18.65	21.95	40.60	46.00	-5.40	QP	Hor
6*	943.134	5.14	34.78	39.92	46.00	-6.08	QP	Hor



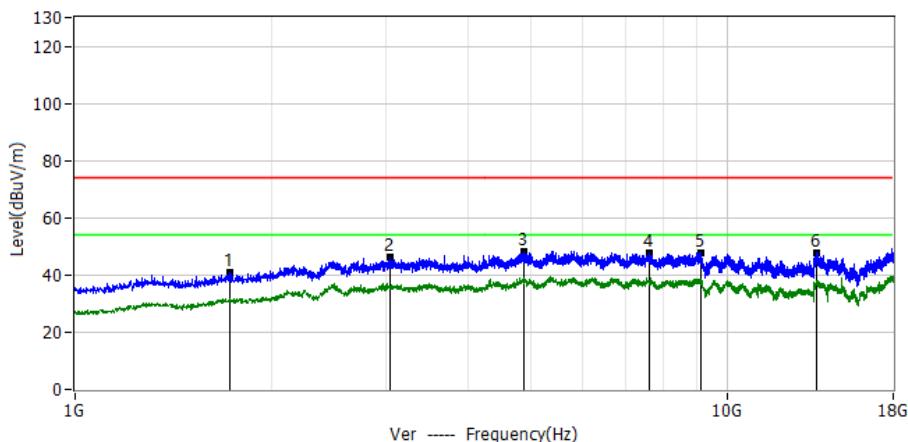
No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	65.405	7.25	18.84	26.09	40.00	-13.91	QP	Ver
2*	167.255	14.60	21.19	35.79	43.50	-7.71	QP	Ver
3*	223.030	19.32	18.44	37.76	46.00	-8.24	QP	Ver
4*	298.205	10.23	21.94	32.17	46.00	-13.83	QP	Ver
5*	460.559	7.50	26.50	34.00	46.00	-12.00	QP	Ver
6*	888.086	5.55	34.41	39.96	46.00	-6.04	QP	Ver

ABOVE 1GHZ

Project: LGT25E141	Test Engineer: LiuH
EUT: 5G Smart phone	Temperature: 24°C
M/N: OB-A99	Humidity: 50%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-05-29
Test Mode: Charging+GSM link+BT+Wi-Fi+GPS+Camera recording+Earphone+NFC	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1784.1000	59.08	-18.14	40.94	74.00	-33.06	PK	Hor
2*	2933.7000	54.23	-9.01	45.22	74.00	-28.78	PK	Hor
3*	4380.9000	52.93	-6.41	46.52	74.00	-27.48	PK	Hor
4*	7262.4000	56.29	-8.23	48.06	74.00	-25.94	PK	Hor
5*	9572.2000	54.40	-7.20	47.20	74.00	-26.80	PK	Hor
6*	13735.1000	51.37	-3.57	47.80	74.00	-26.20	PK	Hor



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1728.9000	59.46	-18.72	40.74	74.00	-33.26	PK	Ver
2*	3046.4000	55.07	-8.69	46.38	74.00	-27.62	PK	Ver
3*	4888.7000	54.14	-6.05	48.09	74.00	-25.91	PK	Ver
4*	7585.4000	56.49	-8.57	47.92	74.00	-26.08	PK	Ver
5*	9113.2000	55.66	-7.92	47.74	74.00	-26.26	PK	Ver
6*	13741.5000	51.40	-3.55	47.85	74.00	-26.15	PK	Ver



APPENDIX I - TEST SETUP

Set-up for Conducted Emission on AC Mains (CE)

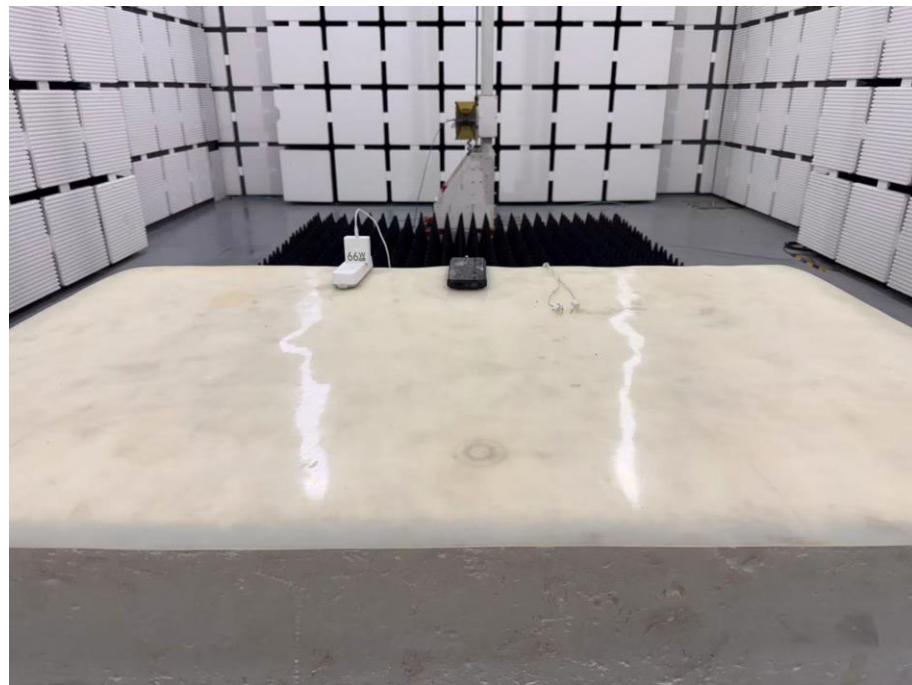


Set-up for Radiated Emission (RE), Below 1GHz





Set-up for Radiated Emission (RE), Above 1GHz



APPENDIX II - PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS

Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6

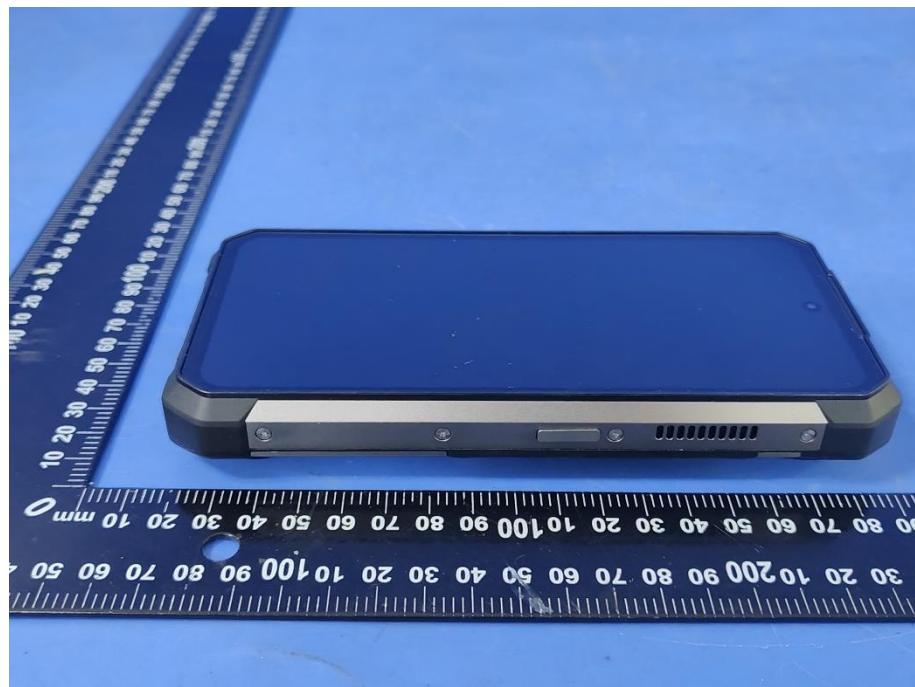


Photo 7

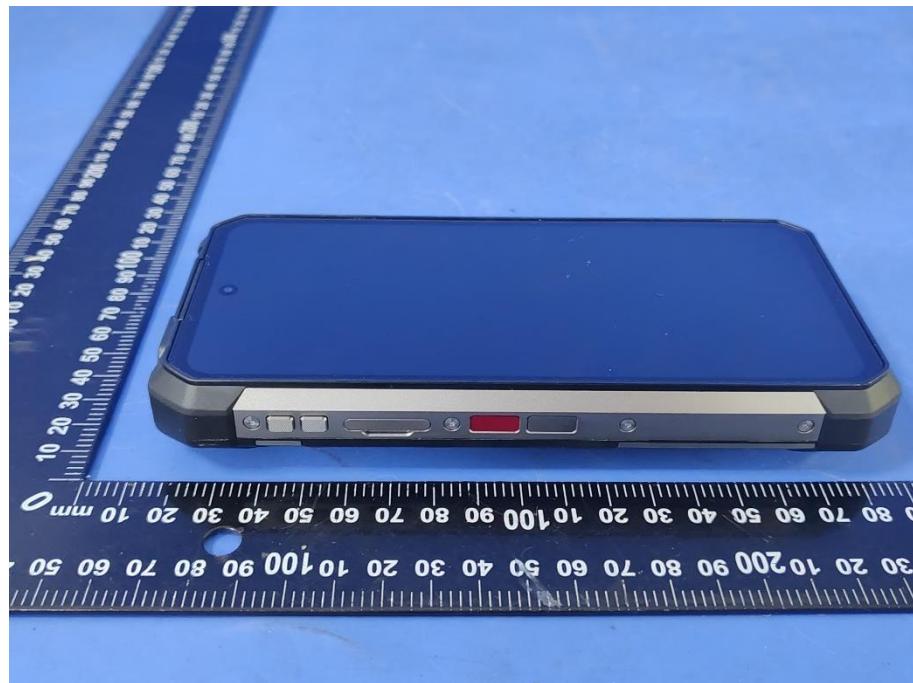


Photo 8



Photo 9

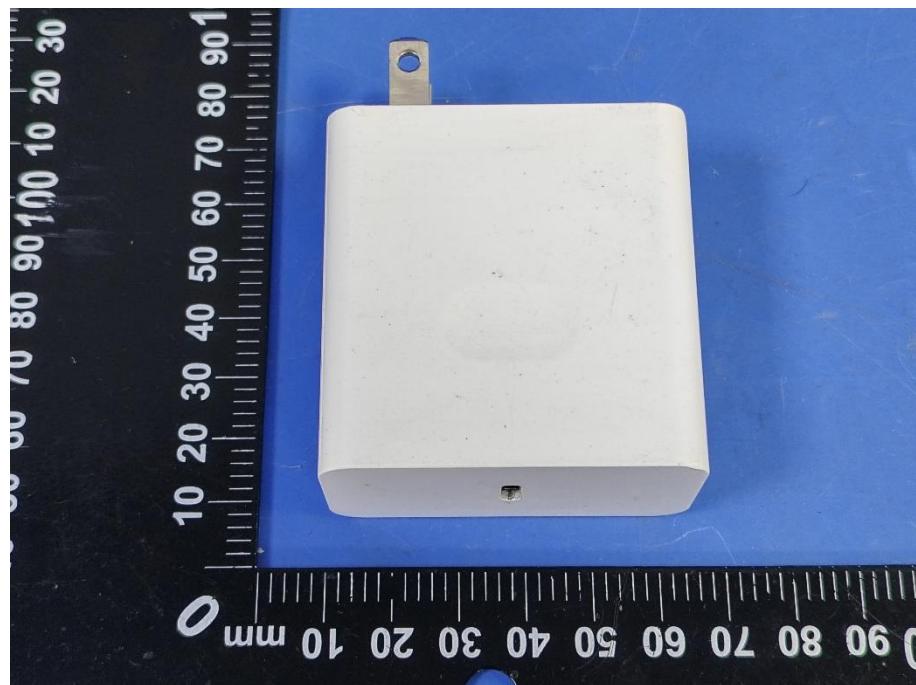


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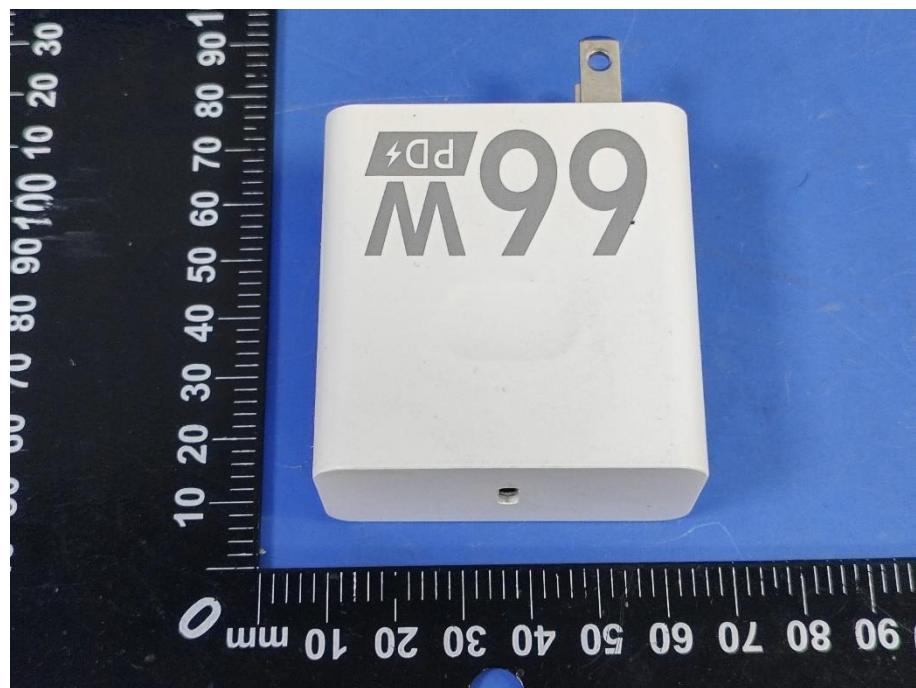




Photo 11



Photo 12



Photo 13



Photo 14

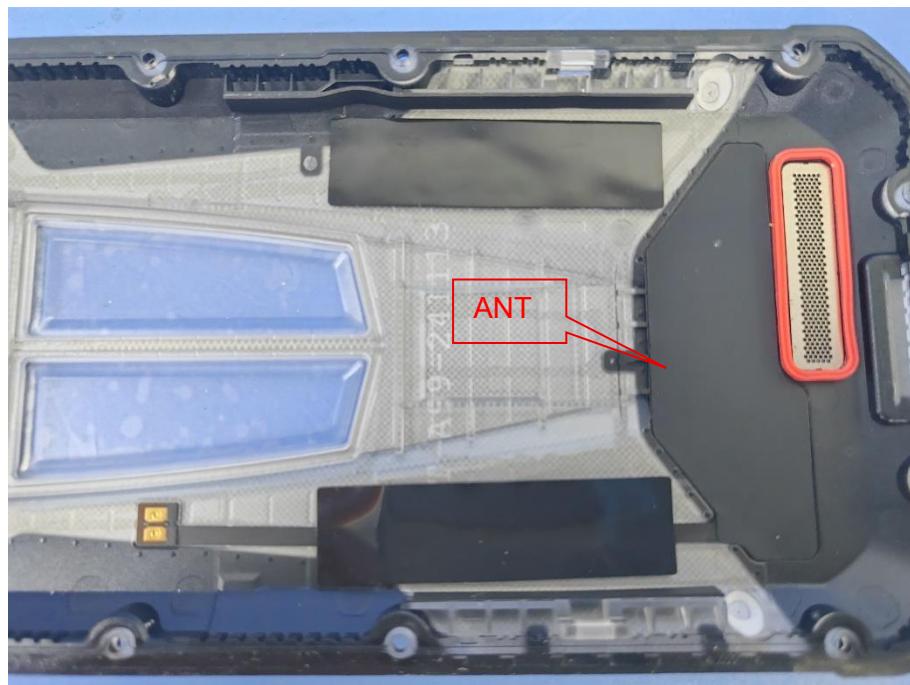


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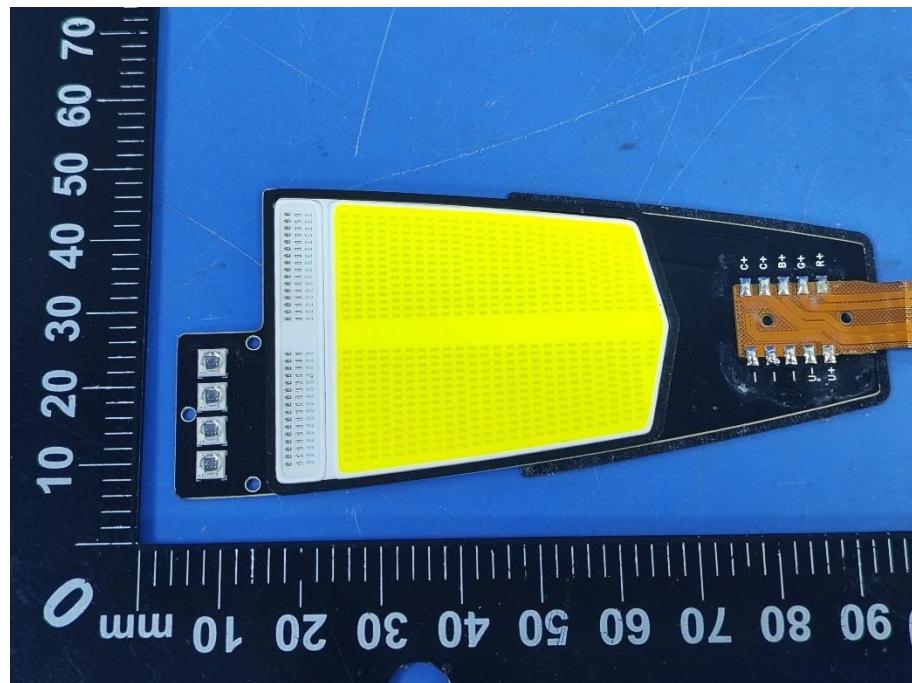


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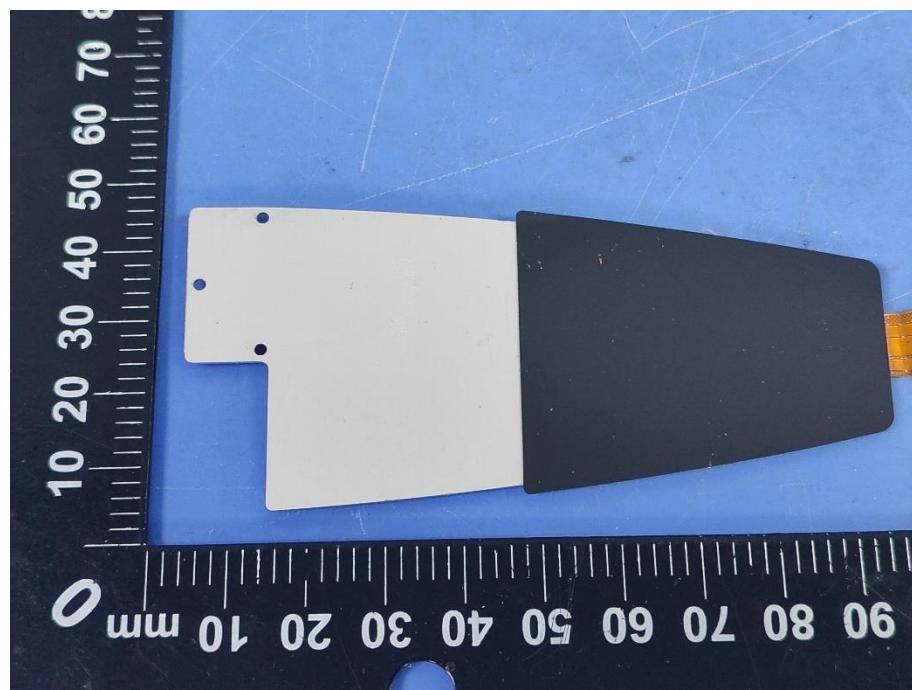


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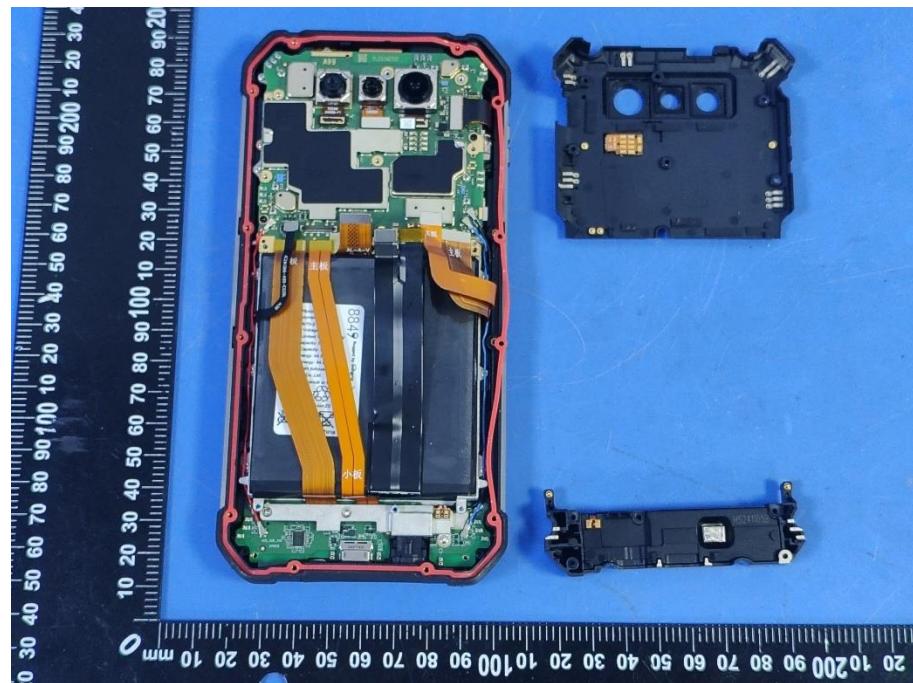


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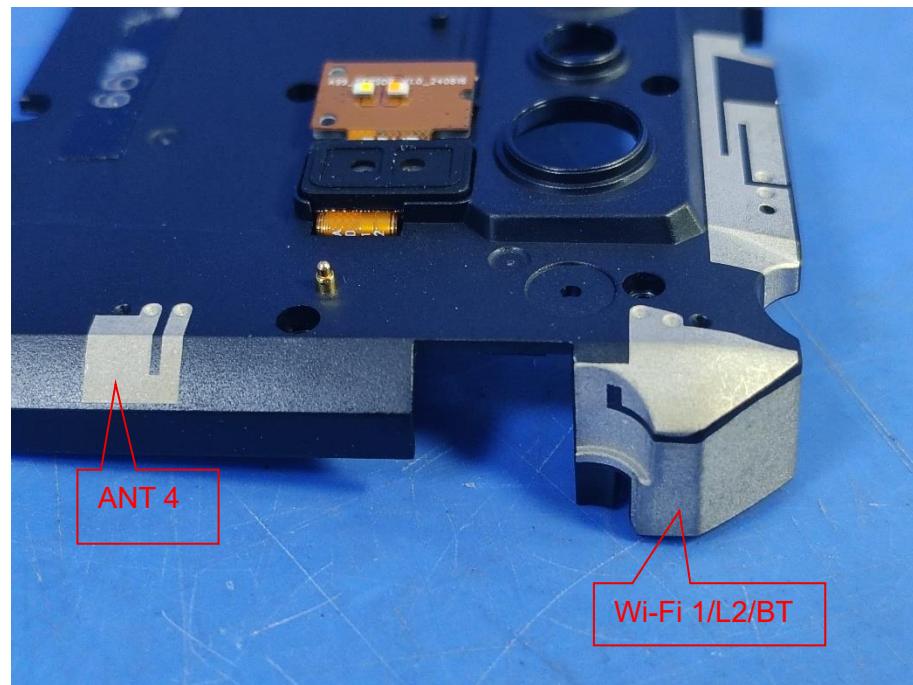




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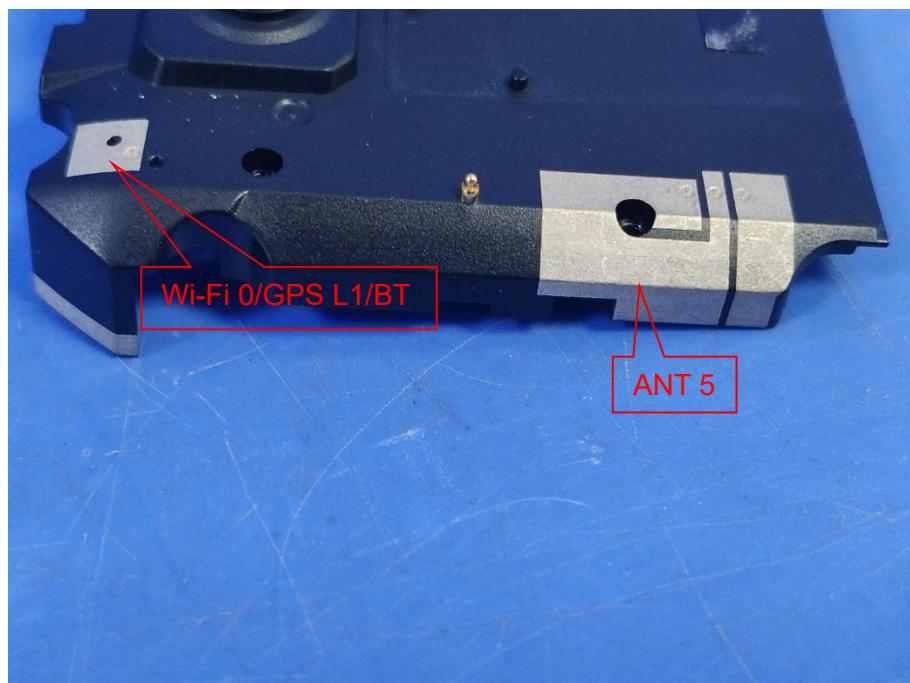


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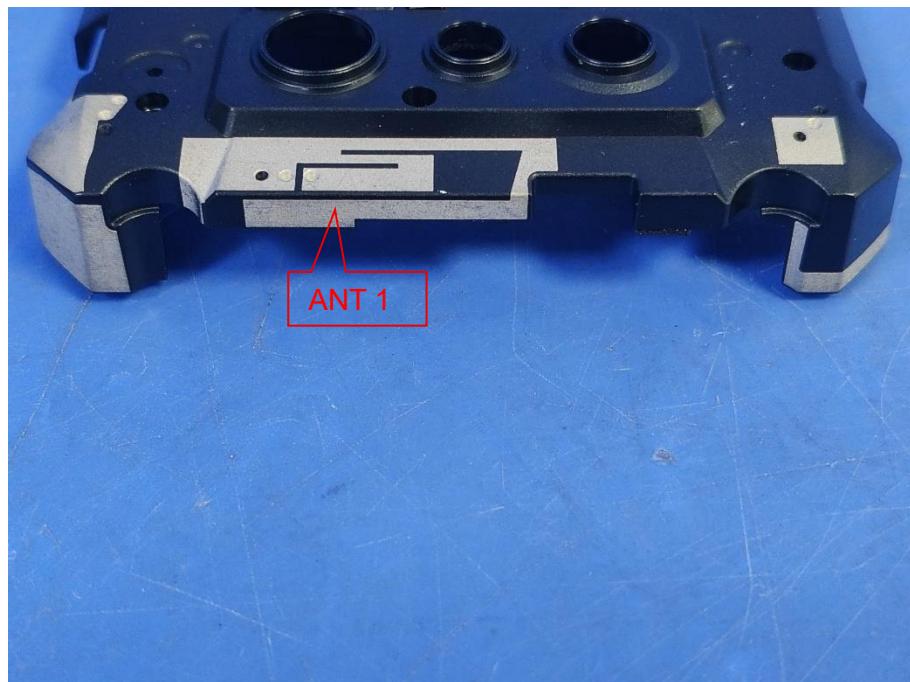




Photo 21



Photo 22





Photo 23

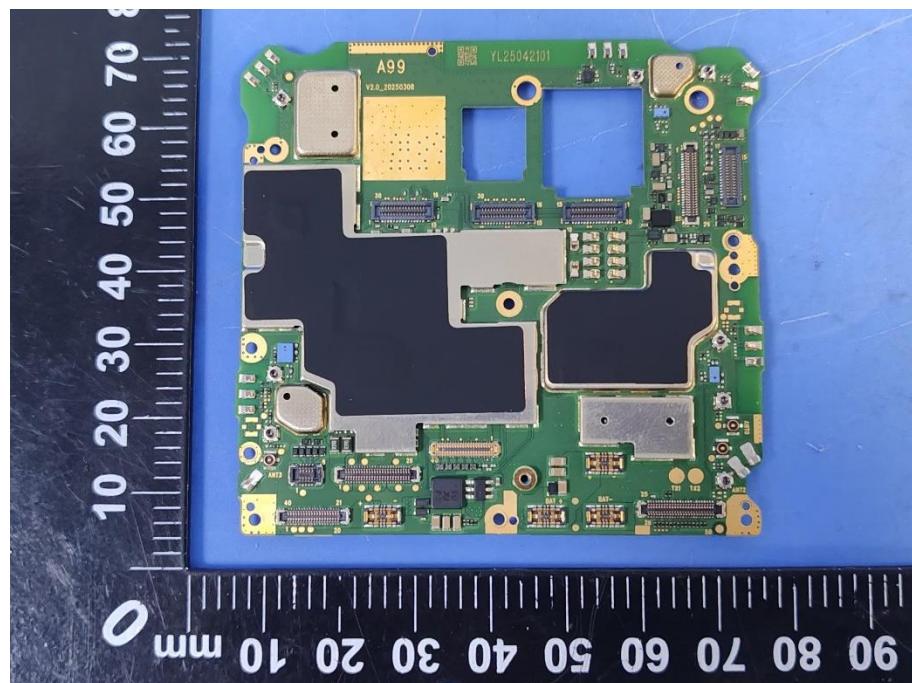


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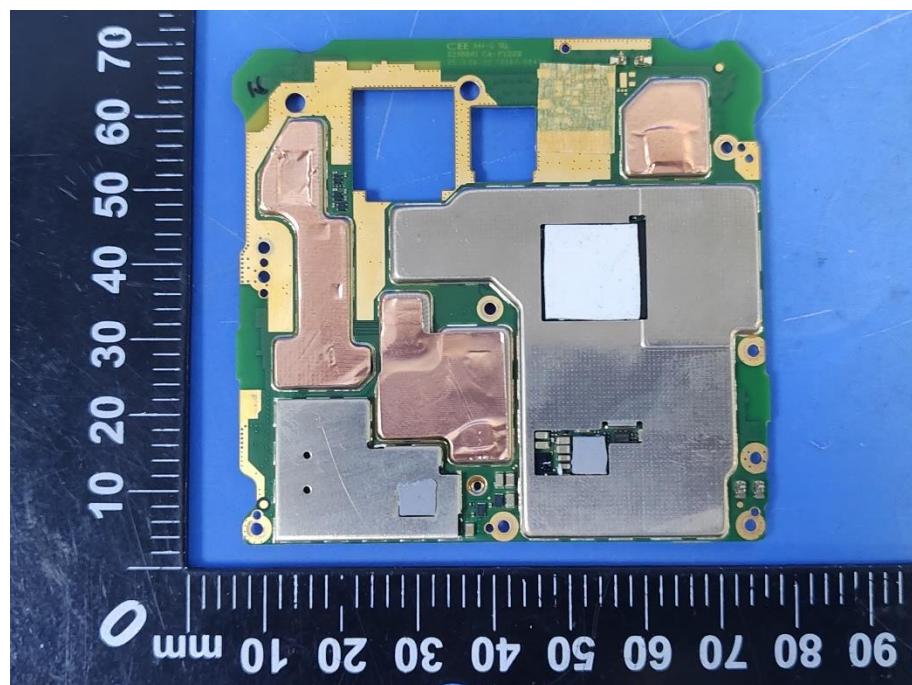




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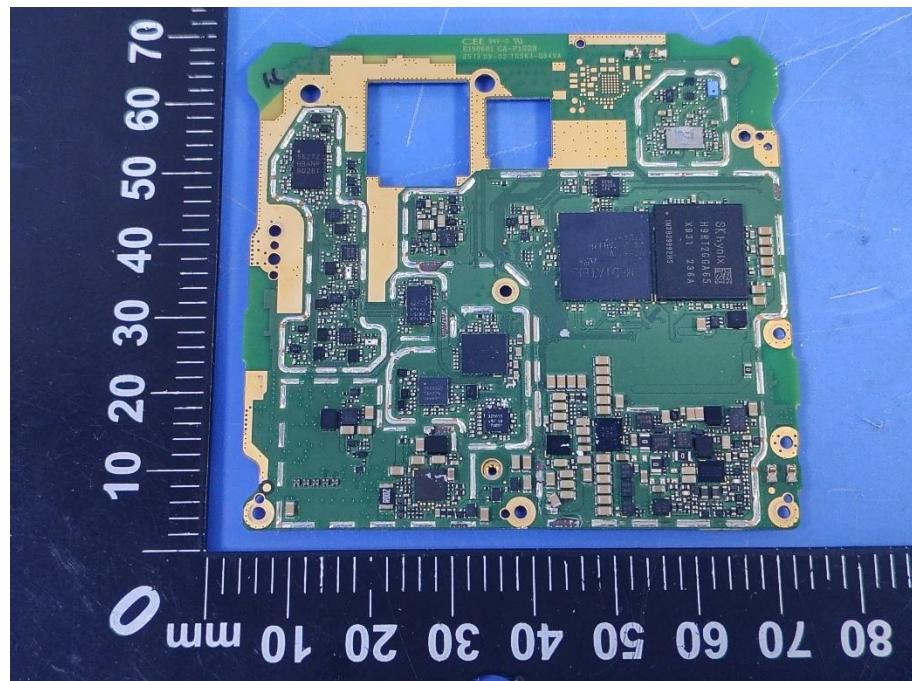


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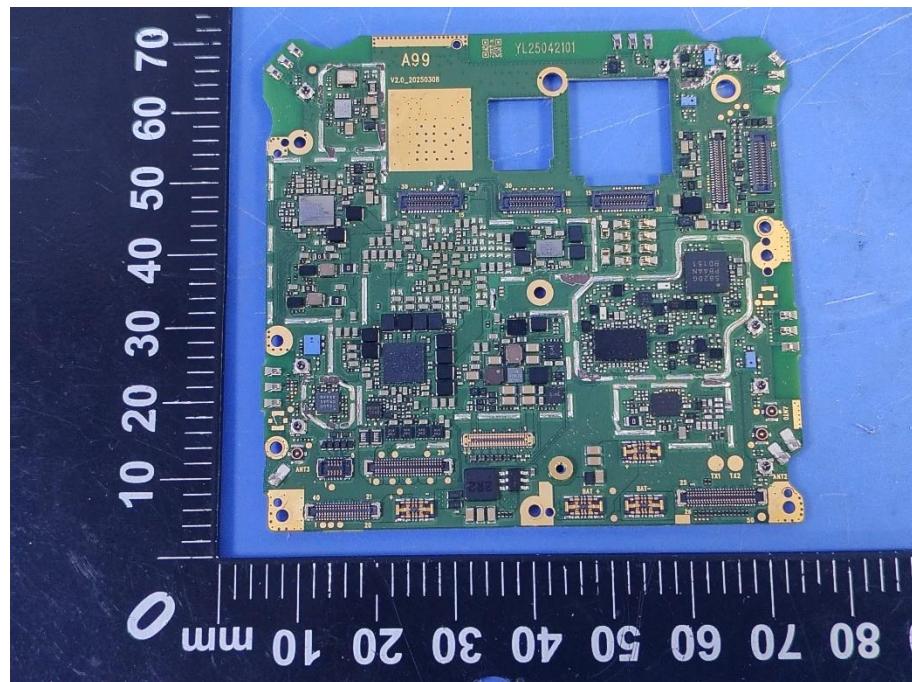




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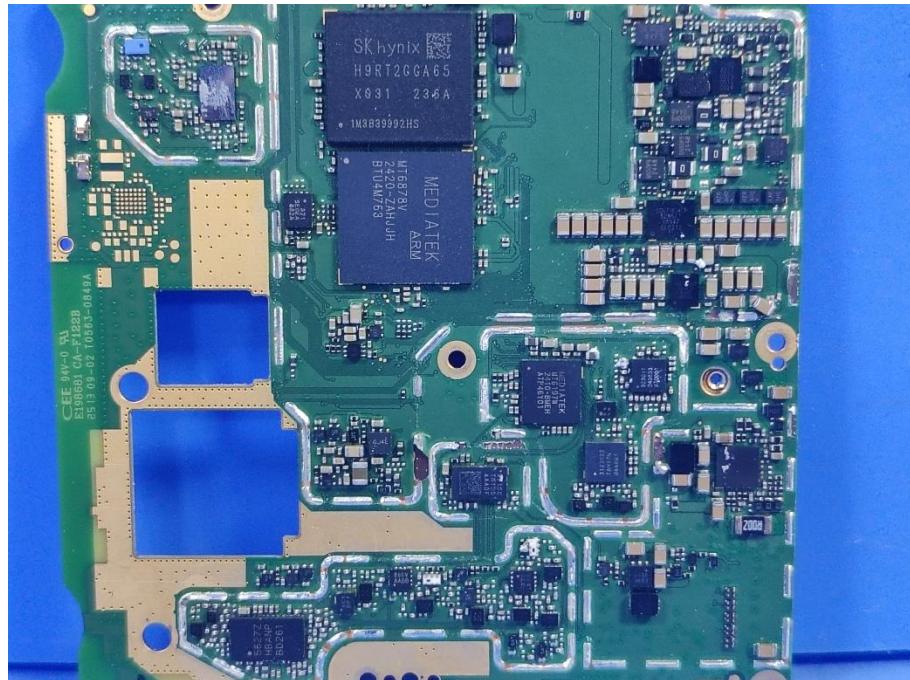


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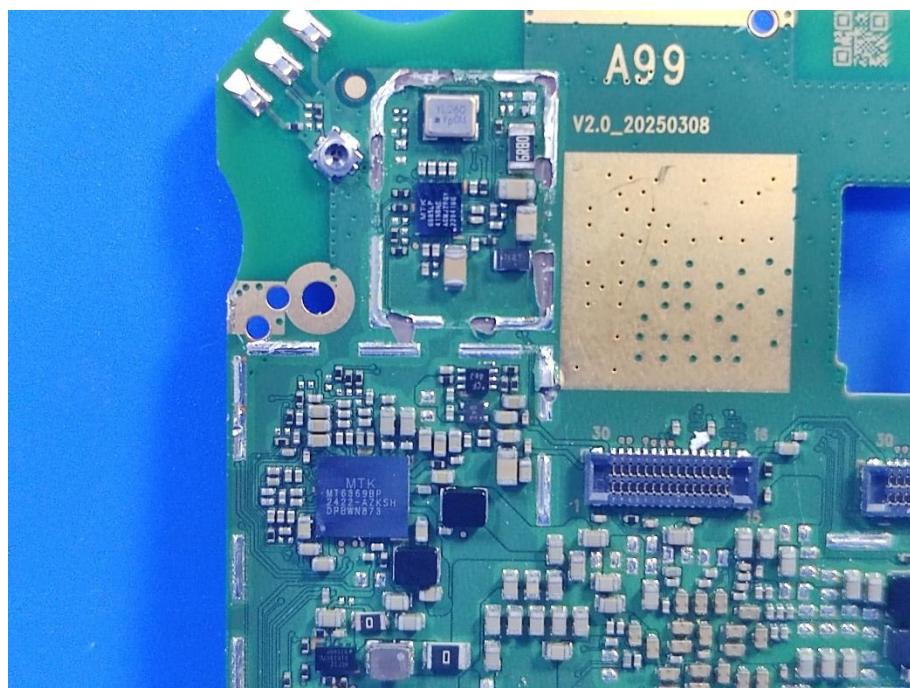




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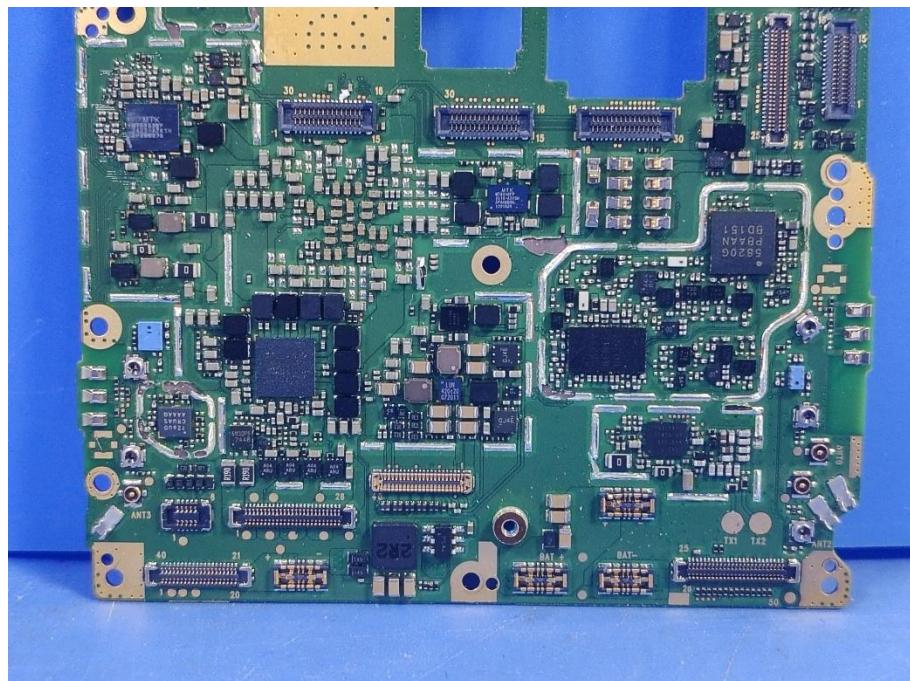


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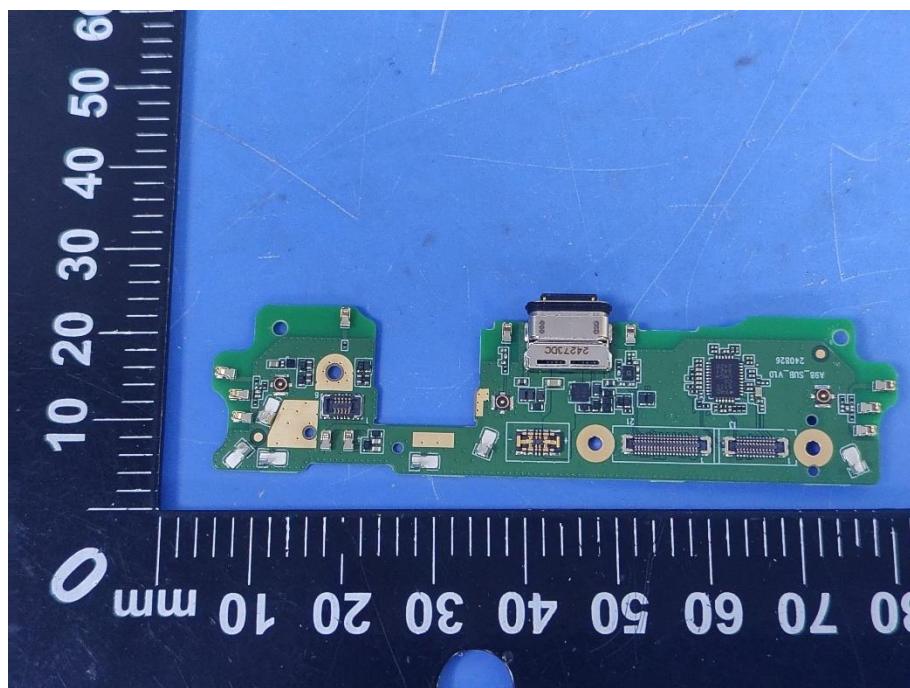




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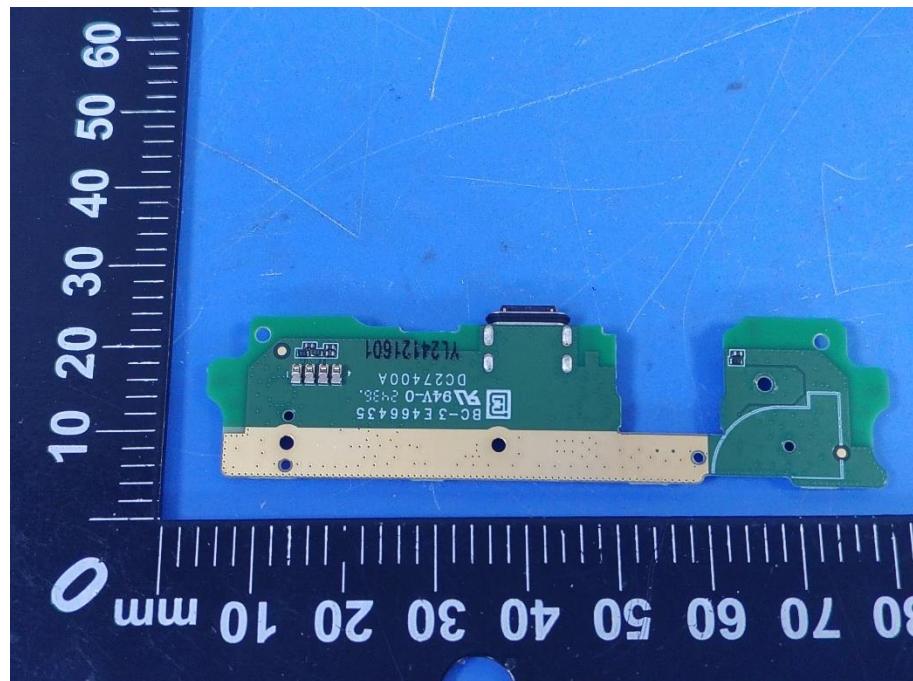


Photo 32



Photo 33

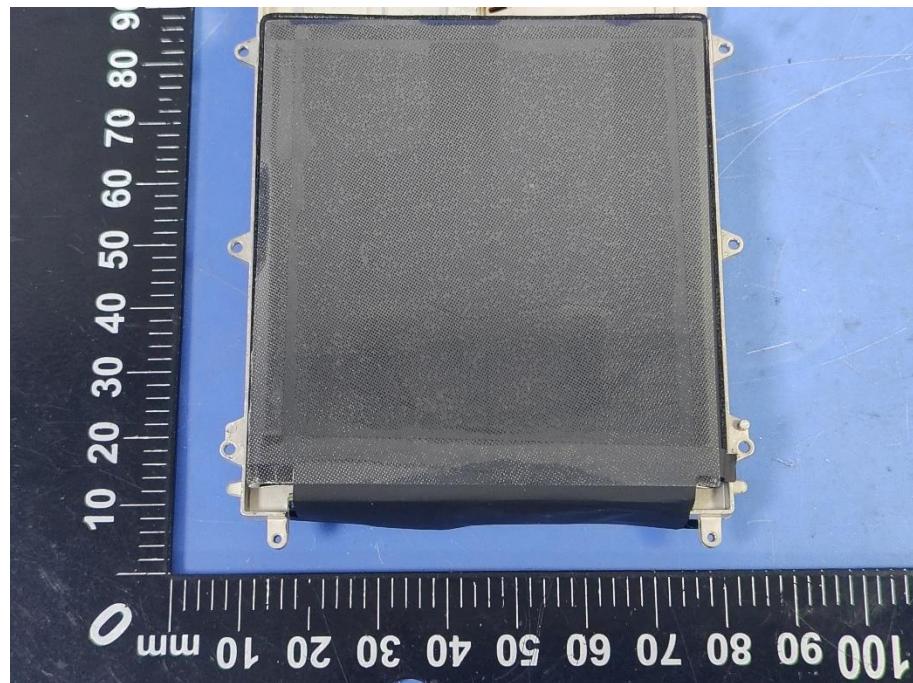


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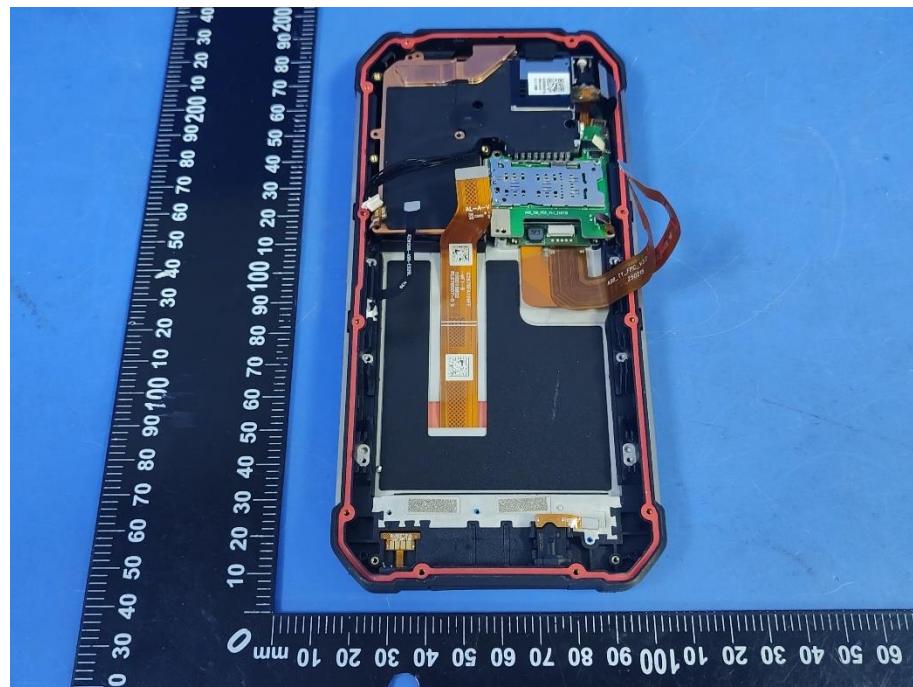


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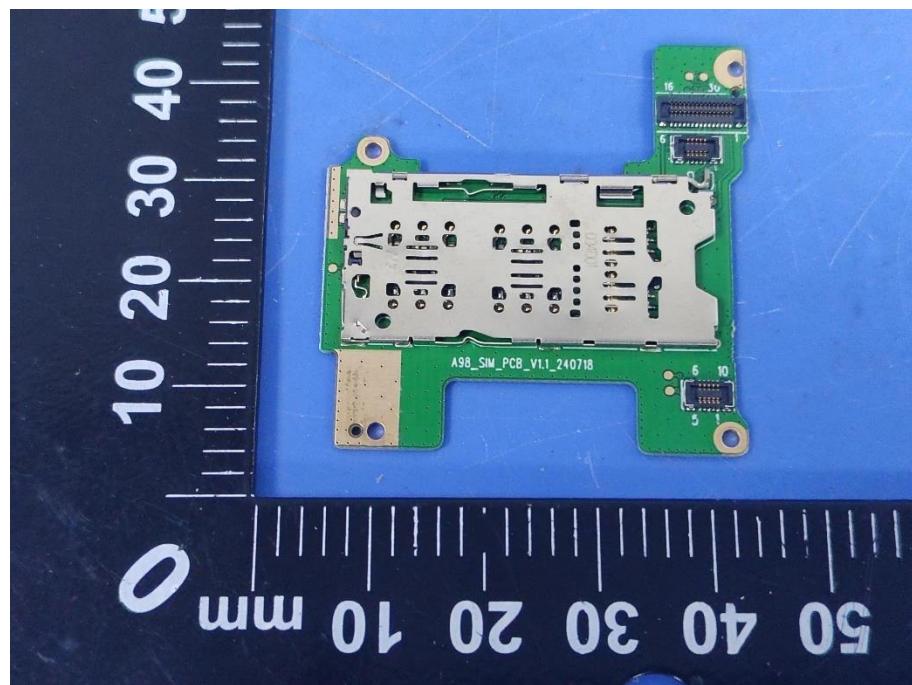


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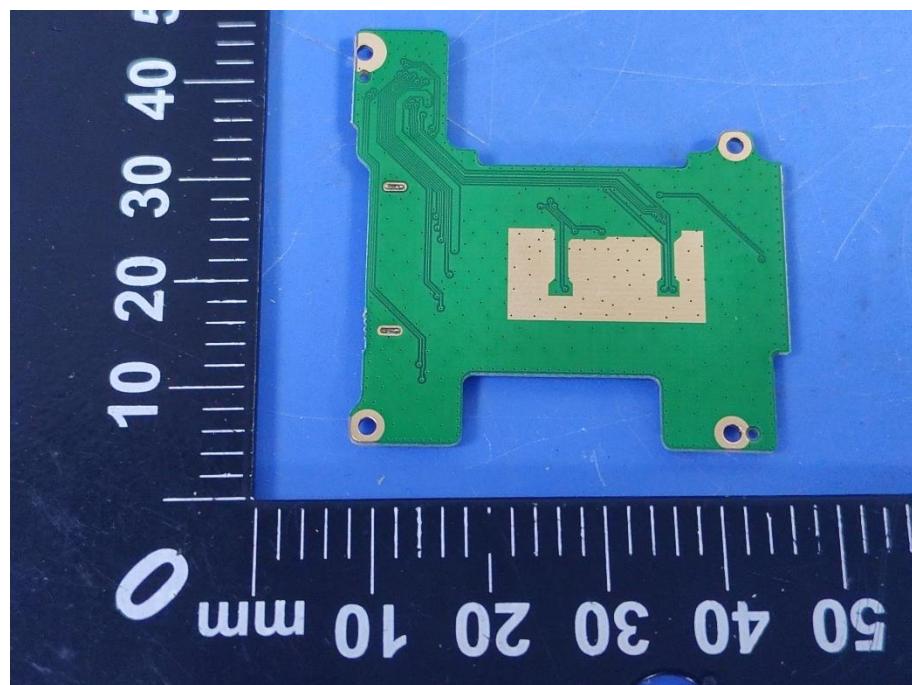


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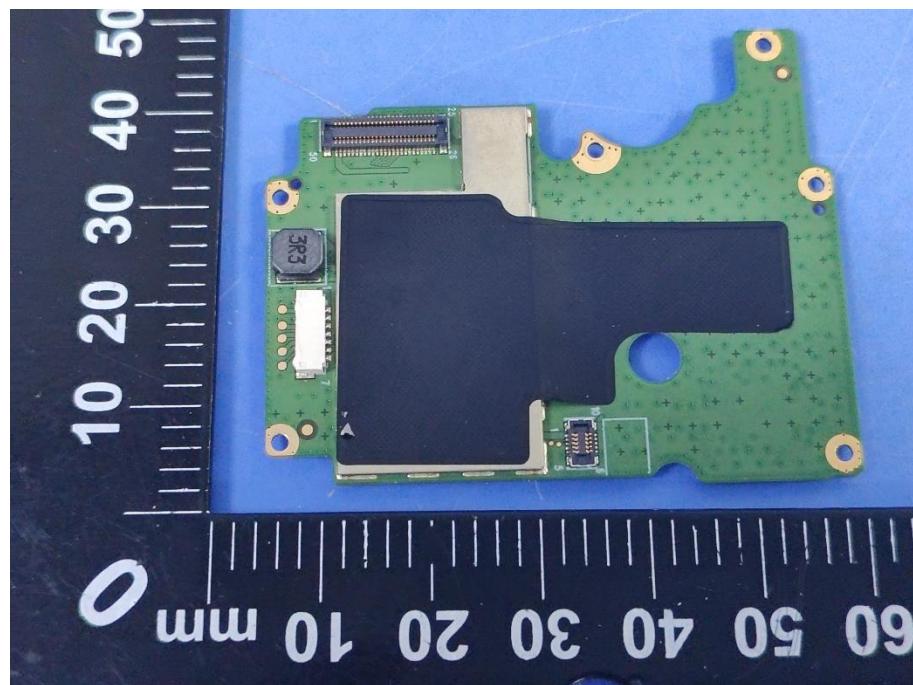


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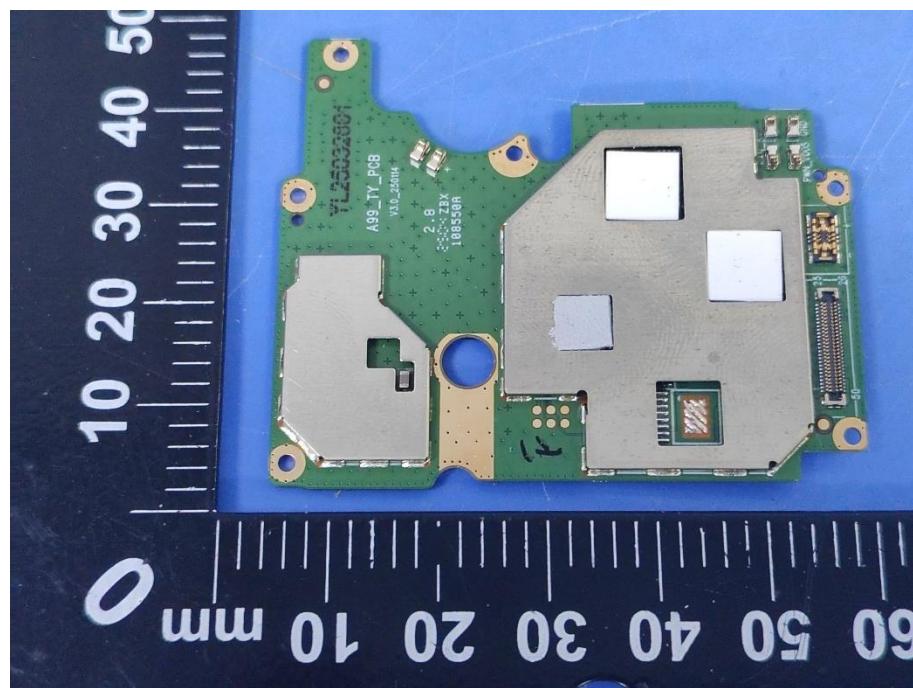


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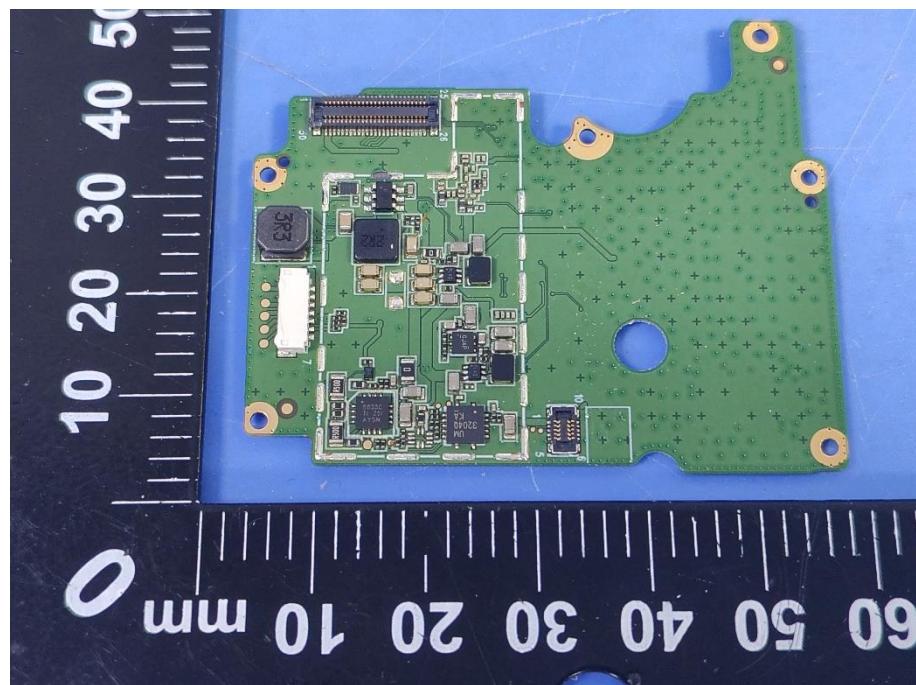


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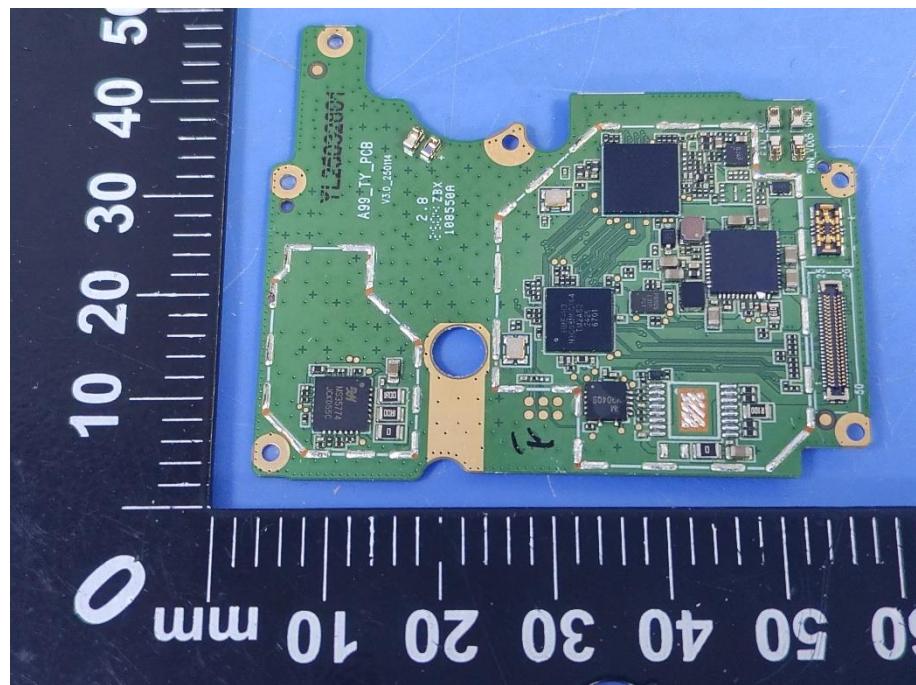




Photo 41



Photo 42

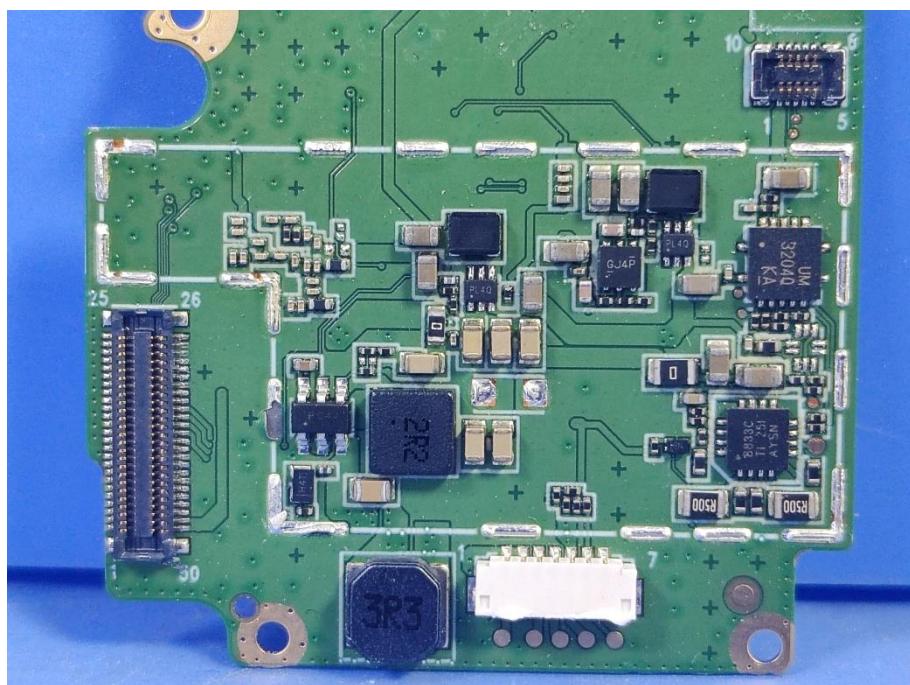




Photo 43



※※※※ END OF THE REPORT ※※※※