Shenzhen Global Test Service Co..Ltd.

No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong

FCC PART 15 SUBPART C TEST REPORT

FCC PART 15.247

Report Reference No...... GTS20250721010-10-01

FCC ID: 2AG7C-BABYB5

Compiled by

(position+printed name+signature) .: File administrators Peter Xiao

Supervised by

(position+printed name+signature) .: Test Engineer

Approved by

(position+printed name+signature) .:

Manager

Date of issue: Aug.06, 2025

Representative Laboratory Name.: Shenzhen Global Test Service Co., Ltd.

No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Address: Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu

Street, Longgang District, Shenzhen, Guangdong, China

Hangzhou Meari Technology Co., Ltd. Applicant's name.....:

Building 4, Huiding Intelligent Innovation Center, No. 825, Ruguan Address:

Road, Changhe Street, Binjiang District, Hangzhou, Zhejiang, China

Test specification:

Standard FCC Part 15.247

TRF Originator....: Shenzhen Global Test Service Co.,Ltd.

Master TRF Dated 2014-12

Shenzhen Global Test Service Co., Ltd. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen Global Test Service Co., Ltd. is acknowledged as copyright owner and source of the material. Shenzhen Global Test Service Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test item description Baby Monitor

Trade Mark: N/A

Manufacturer: Hangzhou Meari Technology Co., Ltd.

Model/Type reference Baby 9T

Listed Models: Baby 9S, Baby 9Q, Baby 9F, Baby 9FM, Baby 9QM, Baby 9TM,

Baby 9SM, EBM1-1001-WHT, C1, Baby B5, Baby 1T, Baby 1Q,

Baby 2T, Baby 2Q, Baby 6T, Baby 6Q

Modulation Type....:

Operation Frequency...... From 2402MHz to 2480MHz

Hardware Version BABY B7Q-A11MB-MIS4-REV1 1

Software Version: N/A

Rating DC 5.0V by Adapter

Result:

TEST REPORT

Tost Poport No.:	GTS20250721010-10-01	Aug.06, 2025
Test Report No. :	G1320230721010-10-01	Date of issue

Equipment under Test : Baby Monitor

Model /Type : Baby 9T

Listed model Baby 9S, Baby 9Q, Baby 9F, Baby 9FM, Baby 9QM, Baby 9TM,

Baby 9SM, EBM1-1001-WHT, C1, Baby B5, Baby 1T, Baby 1Q,

Baby 2T, Baby 2Q, Baby 6T, Baby 6Q

Applicant : Hangzhou Meari Technology Co., Ltd.

Address Building 4, Huiding Intelligent Innovation Center, No. 825, Ruquan

Road, Changhe Street, Binjiang District, Hangzhou, Zhejiang, China

Manufacturer : Hangzhou Meari Technology Co., Ltd.

2nd to 4th Floor, Building 2 and 3nd to 4th Floor, Building1, No.91,

Address : ChutianRoad, XixingStreet, BinjiangDistrict, Hangzhou, Zhejiang,

China

Test Result:	PASS

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1. TEST STANDARDS	4
2. SUMMARY	5
2.1. General Remarks	5
2.2. Product Description	5
2.3. Equipment Under Test	5
2.4. Short description of the Equipment under Test (EUT)	5
2.5. EUT operation mode	6
2.6. Block Diagram of Test Setup	6
2.7. EUT Exercise Software	6
2.8. Special Accessories	7
2.9. External I/O Cable	7
2.10. Related Submittal(s) / Grant (s)	7
2.11. Modifications	7
3. TEST ENVIRONMENT	8
3.1. Address of the test laboratory	
3.2. Test Facility	8
3.3. Environmental conditions	8
3.4. Statement of the measurement uncertainty	8
3.5. Test Description	9
3.6. Equipments Used during the Test	10
4. TEST CONDITIONS AND RESULTS	11
4.1. AC Power Conducted Emission	11
4.2. Radiated Emission	14
4.3. On Time and Duty Cycle	20
4.4. Maximum Peak Output Power	21
4.5. Power Spectral Density	22
4.6. 99% and 6dB Bandwidth	23
4.7. Conducted Spurious Emissions and Band Edge Compliance of RF Emission	
4.8. Antenna Requirement	26
5. TEST SETUP PHOTOS OF THE EUT	27
6. EXTERNAL AND INTERNAL PHOTOS OF THE EUT	29

1. TEST STANDARDS

The tests were performed according to following standards:

<u>FCC Rules Part 15.247</u>: Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

<u>ANSI C63.10-2020</u>: American National Standard for Testing Unlicensed Wireless Devices

<u>KDB 558074 D01 DTS Meas Guidance v05r02</u>: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247.

2. SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	Jul.24, 2025
Testing commenced on	:	Jul.24, 2025
Testing concluded on	:	Aug.05, 2025

2.2. Product Description

Product Name	Baby Monitor
Trade Mark	N/A
Model/Type reference	Baby 9T
List Models	Baby 9S, Baby 9Q, Baby 9F, Baby 9FM, Baby 9QM, Baby 9TM, Baby 9SM, EBM1-1001-WHT, C1, Baby B5, Baby 1T, Baby 1Q, Baby 2T, Baby 2Q, Baby 6T, Baby 6Q
Model Declaration	PCB board, structure and internal of these model(s) are the same, Only the model name different, So no additional models were tested.
Power supply:	DC 5.0V by Adapter
Sample ID	GTS20250721010-10-S001-1#& GTS20250721010-10-S001-2#
Bluetooth	
Operation frequency	2402-2480MHz
Channel Number	40 channels for Bluetooth (DTS)
Channel Spacing	2MHz for Bluetooth (DTS)
Modulation Type	GFSK for Bluetooth (DTS)
WIFI(2.4G Band)	
Frequency Range	2412MHz ~ 2462MHz
Channel Spacing	5MHz
Channel Number	11 Channel for 20MHz bandwidth(2412~2462MHz) 7 Channel for 20MHz bandwidth(2422~2452MHz)
Modulation Type	802.11b: DSSS; 802.11g/n: OFDM; 802.11ax:OFDMA
Antenna Description	FPC Antenna, 3.39dBi(Max.) for 2.4G Band

2.3. Equipment Under Test

Power supply system utilised

Power supply voltage	:	0	230V/ 50 Hz	0	120V/60Hz
		0	12 V DC	0	24 V DC
		•	Other (specified in blank bel	ow)	

DC 5.0V

2.4. Short description of the Equipment under Test (EUT)

This is a Baby Monitor.

For more details, refer to the user's manual of the EUT.

2.5. EUT operation mode

The Applicant provides communication tools software to control the EUT for staying in continuous transmitting (Duty Cycle more than 98%) and receiving mode for testing .There are 40 channels provided to the EUT. Channel 00/19/39 was selected to test.

Mode of Operations	Frequency Range (MHz)	Data Rate (Mbps)		
	2402	1		
(BLE)	2440	1		
	2480	1		
For Conducted Emission				
Test Mode		TX Mode		
For Radiated Emission				
Test Mode		TX Mode		

Channel	Frequency(MHz)	Channel	Frequency(MHz)
0	2402	20	2442
1	2404	21	2444
2	2406	22	2446
18	2438	38	2478
19	2440	39	2480

The EUT has been tested under operating condition.

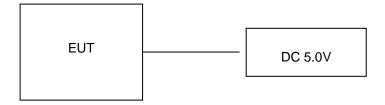
This test was performed with EUT in X, Y, Z position and the worst case was found when EUT in X position.

AC conducted emission pre-test at both at AC 120V/60Hz and AC 240V/50Hz modes, recorded worst case.

Worst-case mode and channel used for 150 KHz-30 MHz power line conducted emissions was the mode and channel with the highest output power, which was determined to be BT LE mode (MCH).

Worst-case mode and channel used for 9 KHz-1000 MHz radiated emissions was the mode and channel with the highest output power, that was determined to be BT LE mode(MCH).

2.6. Block Diagram of Test Setup



2.7. EUT Exercise Software

The system was configured for testing in a continuous transmits condition and change test channels by software provided by application.

2.8. Special Accessories

Manufacturer	Description	Model	Serial Number	Certificate
SHENZHEN TIANYIN ELECTRONICS CO.,LTD.	Adapter	TPA-46B050100UU		FCC
Zhuzhou Dachuan Electronic Technology Co.,Ltd.	Adapter	DCT07W050100US- C1		FCC

2.9. External I/O Cable

I/O Port Description	Quantity	Cable
DC IN Port	1	Non-Shielded, 1.0m
SD Card Port	1	N/A

2.10. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: 2AG7C-BABYB5** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

2.11. Modifications

No modifications were implemented to meet testing criteria.

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen Global Test Service Co.,Ltd.

No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong, China.

3.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS (No. CNAS L8169)

Shenzhen Global Test Service Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2019 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA (Certificate No. 4758.01)

Shenzhen Global Test Service Co., Ltd. has been assessed by the American Association for Laboratory Accreditation (A2LA). Certificate No. 4758.01.

Industry Canada Registration Number. is 24189.

FCC Designation Number is CN1401.

FCC Registered Test Site Number is 684561.

CAB identifier is CN0082.

3.3. Environmental conditions

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

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

3.4. 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 Global Test Service 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.

Hereafter the best measurement capability for Shenzhen GTS laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.10 dB	(1)
Radiated Emission	1~18GHz	4.32 dB	(1)
Radiated Emission	18-40GHz	5.54 dB	(1)
Conducted Disturbance	0.15~30MHz	3.12 dB	(1)
On Time and Duty Cycle	1~18GHz	0.78 dB	(1)
Maximum Conducted Output Power	1~18GHz	0.57 dB	(1)
Power Spectral Density	1~18GHz	0.66 dB	(1)
99% and 6 dB Bandwidth	1~18GHz	1.20 dB	(1)
Conducted Spurious Emissions and Band Edges Test	1~18GHz	1.60 dB	(1)
Conducted at Restricted Band	1~18GHz	1.60 dB	(1)

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

3.5. Test Description

Applied Standard: RSS-247 Issue 3 / RSS-Gen Issue 5							
FCC Rules	Description of Test	Test Sample	Result	Remark			
/	On Time and Duty Cycle	GTS20250721010-10- S001-1#	Compliant	Appendix A			
§15.247(b)	Maximum Conducted Output Power	GTS20250721010-10- S001-1#	Compliant	Appendix A			
§15.247(e)	Power Spectral Density	GTS20250721010-10- S001-1#	Compliant	Appendix A			
§15.247(a)(2)	6dB Bandwidth	GTS20250721010-10- S001-1#	Compliant	Appendix A			
§2.1047	99% Occupied Bandwidth	GTS20250721010-10- S001-1#	Compliant	Appendix A			
§15.209, §15.247(d)	Conducted Spurious Emissions and Band Edges Test	GTS20250721010-10- S001-1#	Compliant	Appendix A			
§15.209, §15.247(d)	Radiated Spurious Emissions	GTS20250721010-10- S001-1# GTS20250721010-10- S001-2#	Compliant	Note 1			
§15.205	Emissions at Restricted Band	GTS20250721010-10- S001-1#	Compliant	Appendix A			
§15.207(a)	AC Conducted Emissions	GTS20250721010-10- S001-2#	Compliant	Note 1			
§15.203 §15.247(c)	Antenna Requirements	GTS20250721010-10- S001-1#	Compliant	Note 1			
§15.247(i)§2.10 91	RF Exposure	/	Compliant	Note 2			

Remark:

- The measurement uncertainty is not included in the test result. $NA = Not \ Applicable; \ NP = Not \ Performed$ 1.
- 2.
- Note 1 Test results inside test report; 3.
- Note 2 Test results in other test report (MPE Report). 4.
- We tested all test mode and recorded worst case in report 5.

3.6. Equipments Used during the Test

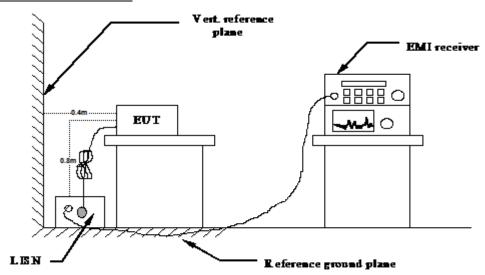
Test Equipment Manufacturer Model No. Serial No. Calibration Date Artificial Mains CYBERTEK EM5040A E1850400205 2025/07/07 LISN R&S ESH2-Z5 893606/008 2025/07/07 EMI Test Receiver R&S ESPI 3 / 2025/07/04 Test Receiver R&S ESCI 7 101102 2025/07/04 Spectrum Analyzer Agilent N9020A MY48010425 2025/07/04 Spectrum Analyzer R&S FSV40-N 101800 2025/07/04 Vector Signal generator Agilent N5181A MY49060502 2025/07/15 Signal generator Agilent N5182A MY50141550 2025/07/04 Climate Chamber ESPEC EL-10KA A20120523 2025/07/15 Controller EM Electronics Controller EM 1000 N/A N/A	Calibration Due Date 2026/07/06 2026/07/06 2026/07/03 2026/07/03 2026/07/03 2026/07/14 2026/07/03
LISN R&S ESH2-Z5 893606/008 2025/07/07 EMI Test Receiver R&S ESPI 3 / 2025/07/04 Test Receiver R&S ESCI 7 101102 2025/07/04 Spectrum Analyzer Agilent N9020A MY48010425 2025/07/04 Spectrum Analyzer R&S FSV40-N 101800 2025/07/04 Vector Signal generator Agilent N5181A MY49060502 2025/07/15 Signal generator Agilent N5182A MY50141550 2025/07/04 Climate Chamber ESPEC EL-10KA A20120523 2025/07/15	2026/07/06 2026/07/03 2026/07/03 2026/07/03 2026/07/14
EMI Test Receiver R&S ESPI 3 / 2025/07/04 Test Receiver R&S ESCI 7 101102 2025/07/04 Spectrum Analyzer Agilent N9020A MY48010425 2025/07/04 Spectrum Analyzer R&S FSV40-N 101800 2025/07/04 Vector Signal generator Agilent N5181A MY49060502 2025/07/15 Signal generator Agilent N5182A MY50141550 2025/07/04 Climate Chamber ESPEC EL-10KA A20120523 2025/07/15	2026/07/03 2026/07/03 2026/07/03 2026/07/14
Test Receiver R&S ESCI 7 101102 2025/07/04 Spectrum Analyzer Agilent N9020A MY48010425 2025/07/04 Spectrum Analyzer R&S FSV40-N 101800 2025/07/04 Vector Signal generator Agilent N5181A MY49060502 2025/07/15 Signal generator Agilent N5182A MY50141550 2025/07/04 Climate Chamber ESPEC EL-10KA A20120523 2025/07/15	2026/07/03 2026/07/03 2026/07/03 2026/07/14
Spectrum Analyzer Agilent N9020A MY48010425 2025/07/04 Spectrum Analyzer R&S FSV40-N 101800 2025/07/04 Vector Signal generator Agilent N5181A MY49060502 2025/07/15 Signal generator Agilent N5182A MY50141550 2025/07/04 Climate Chamber ESPEC EL-10KA A20120523 2025/07/15	2026/07/03 2026/07/03 2026/07/14
Spectrum Analyzer R&S FSV40-N 101800 2025/07/04 Vector Signal generator Agilent N5181A MY49060502 2025/07/15 Signal generator Agilent N5182A MY50141550 2025/07/04 Climate Chamber ESPEC EL-10KA A20120523 2025/07/15	2026/07/03 2026/07/14
Vector Signal generator Agilent N5181A MY49060502 2025/07/15 Signal generator Agilent N5182A MY50141550 2025/07/04 Climate Chamber ESPEC EL-10KA A20120523 2025/07/15	2026/07/14
generator Agilent N5181A M149060302 2025/07/13 Signal generator Agilent N5182A MY50141550 2025/07/04 Climate Chamber ESPEC EL-10KA A20120523 2025/07/15	
Climate Chamber ESPEC EL-10KA A20120523 2025/07/15	2026/07/03
	2020/01/03
Controller EM Electronics Controller EM 1000 N/A N/A	2026/07/14
	N/A
Horn Antenna Schwarzbeck BBHA 9120D 01622 2024/12/16	2025/12/15
Active Loop Antenna Beijing Da Ze Technology ZN30900C / 2025/07/04 Co.,Ltd.	2026/07/03
By-log Antenna SCHWARZBECK VULB9163 00976 2025/07/15	2026/07/14
Broadband Horn Antenna SCHWARZBECK BBHA 9170 791 2025/07/15	2026/07/14
Amplifier SKET LAPA_30M01G-32 SK2024010400 1 2025/01/21	2026/01/20
Amplifier EMCI EMC012645SE 980340 2025/01/21	2026/01/20
Amplifier Schwarzbeck BBV9179 9719-025 2025/01/21	2026/01/20
Temperature/Humidity Meter HUATU HTC-1 / 2025/07/16	2026/07/15
High-Pass Filter Stest 1 / 2025/07/04	2026/07/03
High-Pass Filter Stest 2 / 2025/07/04	2026/07/03
RF Cable(below 1GHz) HUBER+SUHNER RG214 RE01 2025/07/15	2026/07/14
RF Cable(above 1GHz) HUBER+SUHNER RG214 RE02 2025/07/15	2026/07/14
Data acquisition card Agilent U2531A TW53323507 2025/07/15	2026/07/14
Power Sensor Keysight E9301A MY41495308 2025/07/04	2026/07/03
Control Unit Tonscend JS0806-2 / 2025/07/07	2026/07/06
Control Unit Tonscend JS0806-2 / 2025/07/07	2026/07/06
integrated measuring instrument R&S CMW500 107519 2025/07/04	2026/07/03
EMI Test Software Tonscend JS1120-1 Ver 2.6.8.0518 /	1
EMI Test Software Tonscend JS1120-3 Ver 2.5.77.0418 /	/
	/
EMI Test Software Tonscend JS32-CE Ver 2.5 /	+

Note: 1. The Cal.Interval was one year.

4. TEST CONDITIONS AND RESULTS

4.1. AC Power Conducted Emission

TEST CONFIGURATION



TEST PROCEDURE

- 1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10-2020.
- 2 Support equipment, if needed, was placed as per ANSI C63.10-2020
- 3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10-2020
- 4 The EUT received DC 5.0V power, the adapter received AC120V/60Hz or AC 240V/50Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5 All support equipments received AC power from a second LISN, if any.
- 6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
- 8 During the above scans, the emissions were maximized by cable manipulation.

AC Power Conducted Emission Limit

For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following:

Frequency range (MHz)	Limit (d	dBuV)			
Frequency range (IMF12)	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 logarithm of the frequency.					

DISTURBANCE Calculation

The AC mains conducted disturbance is calculated by adding the 10dB Pulse Limiter and Cable Factor and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

CD (dBuV) = RA (dBuV) + PL (dB) + CL (dB)

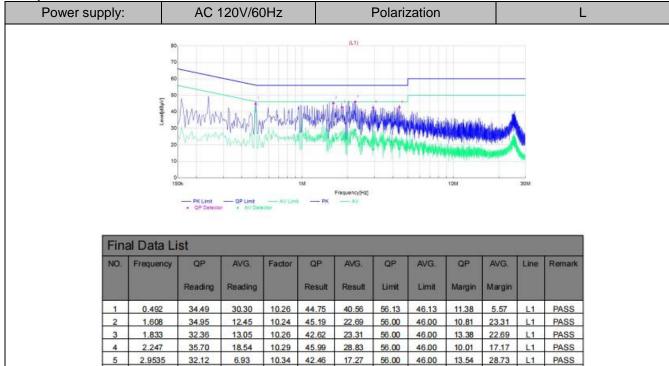
Where CD = Conducted Disturbance	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	PL = 10 dB Pulse Limiter Factor

TEST RESULTS

Remark: We measured Conducted Emission at GFSK mode from 150 KHz to 30MHz in AC120V and the worst case was recorded.

Temperature	25°C	Humidity	60%
Test Engineer	Evan Ouyang	Configurations	BT

Adapter: TPA-46B050100UU



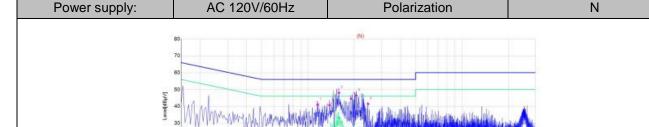
Note: 1. Result (dBμV) = Reading (dBμV) + Factor (dB).

32.31

4.4025

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

7.24



10.36 42.67

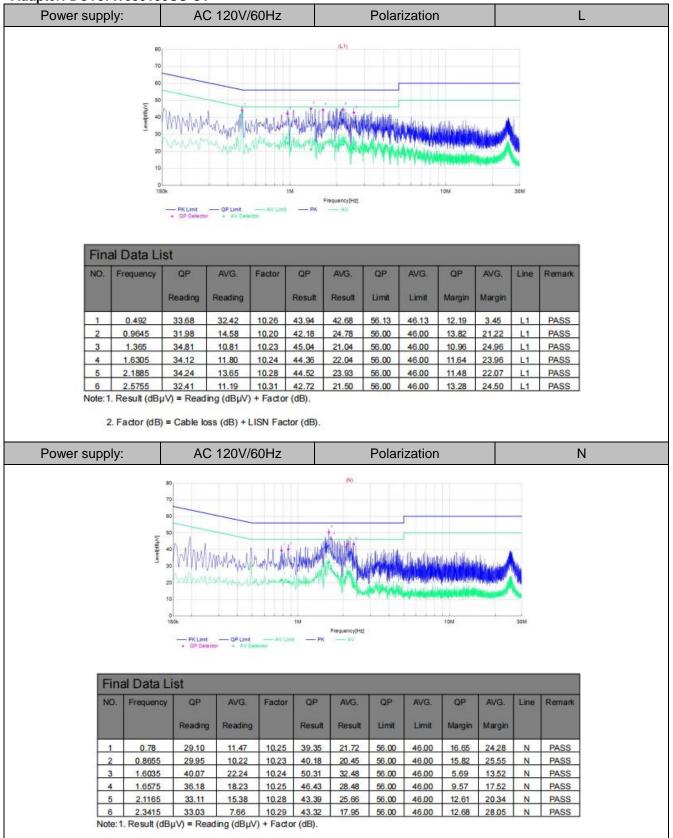
Frequency[H

Final Data List												
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG.	QP Margin	AVG. Margin	Line	Remark
1	1.1535	30.74	12.46	10.21	40.95	22.67	56.00	46.00	15.05	23.33	N	PASS
2	1.3785	30.48	11.52	10.23	40.71	21.75	56.00	46.00	15.29	24.25	N	PASS
3	1.59	37.75	23.12	10.24	47.99	33.36	56.00	46.00	8.01	12.64	N	PASS
4	1.905	34.30	13.54	10.26	44.56	23.80	56.00	46.00	11.44	22.20	N	PASS
5	2.0625	36.10	10.81	10.27	46.37	21.08	56.00	46.00	9.63	24.92	N	PASS
6	2.4585	31.15	8.38	10.30	41.45	18.68	56.00	46.00	14.55	27.32	N	PASS

Note: 1. Result ($dB\mu V$) = Reading ($dB\mu V$) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Adapter: DCT07W050100US-C1

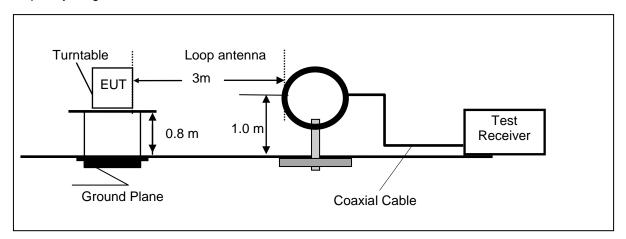


2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

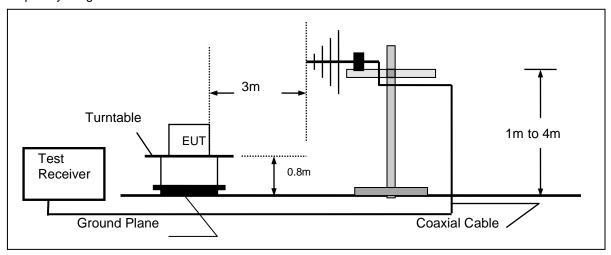
4.2. Radiated Emission

TEST CONFIGURATION

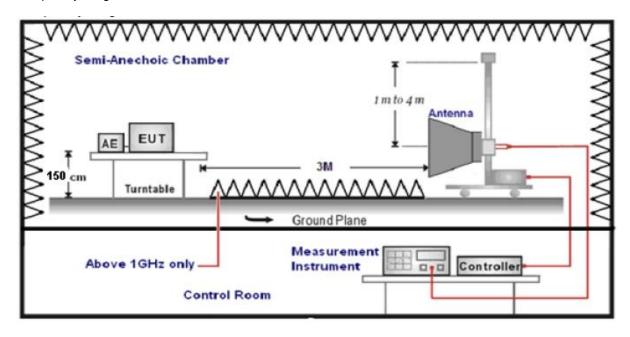
Frequency range 9 KHz - 30MHz



Frequency range 30MHz - 1000MHz



Frequency range above 1GHz-25GHz



TEST PROCEDURE

- 1. The EUT was placed on a turn table which is 0.8m above ground plane when testing frequency range 9 KHz –1GHz;the EUT was placed on a turn table which is 1.5m above ground plane when testing frequency range 1GHz 25GHz.
- 2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0°C to 360°C to acquire the highest emissions from EUT.
- 3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 4. Repeat above procedures until all frequency measurements have been completed.
- 5. Radiated emission test frequency band from 30MHz to 25GHz.
- 6. The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Ultra-Broadband Antenna	3
1GHz-18GHz	Double Ridged Horn Antenna	3
18GHz-25GHz	Horn Anternna	1

7. Setting test receiver/spectrum as following table states:

Test	Frequency	Test Receiver/Spectrum Setting	Detector
range			
9KHz-1	150KHz	RBW=200Hz/VBW=3KHz,Sweep time=Auto	QP
150KH	z-30MHz	RBW=9KHz/VBW=100KHz,Sweep time=Auto	QP
30MHz	-1GHz	RBW=120KHz/VBW=1000KHz,Sweep time=Auto	QP
		Peak Value: RBW=1MHz/VBW=3MHz,	
1GHz-40GHz		Sweep time=Auto	Peak
		Average Value: RBW=1MHz/VBW=10Hz,	
		Sweep time=Auto	

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

Transd=AF +CL-AG

RADIATION LIMIT

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emission from intentional radiators at a distance of 3 meters shall not exceed the following table. According to § 15.247(d), in any 100kHz bandwidth outside the frequency band in which the EUT is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the100kHz bandwidth within the band that contains the highest level of desired power.

The pre-test have done for the EUT in three axes and found the worst emission at position shown in test setup photos.

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (µV/m)
0.009-0.49	3	20log(2400/F(KHz))+40log(300/3)	2400/F(KHz)
0.49-1.705	3	20log(24000/F(KHz))+ 40log(30/3)	24000/F(KHz)
1.705-30	3	20log(30)+ 40log(30/3)	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

TEST RESULTS

Remark: We measured Radiated Emission at GFSK mode from 9KHz to 25GHz in AC120V and the worst case was recorded.

Temperature	23.8℃	Humidity	48%
Test Engineer	Evan Ouyang	Configurations	BT

For 9 KHz~30MHz

Freq.	Level	Over Limit	Over Limit	Remark
(MHz)	(dBuV)	(dB)	(dBuV)	
-	-	-	-	See Note

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

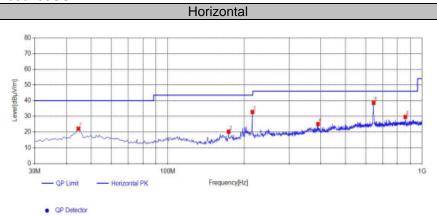
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

For 30MHz to 1000MHz Adapter: TPA-46B050100UU

6

859.35



Suspected List requency [MHz] Angle Detector Polarity Remark [dBµV/m] 44.55 PASS 1 33.57 -11.41 22.16 40.00 17.84 100 258 PK Horizonta -12.62 20.26 43.50 23.24 26 PK Horizonta PASS 173.56 32.88 100 215.27 32.78 43.50 10.72 93 Horizonta -5.50 PK PASS 389.87 30.62 25.12 46.00 20.88 100 144 Horizonta 5 644.98 38.54 0.09 38.63 46.00 7.37 PK Horizonta PASS

100

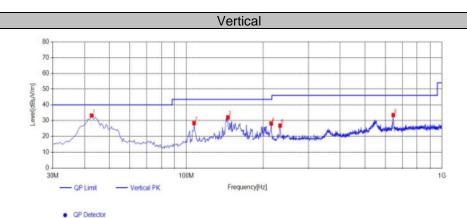
16.35

228

Horizonta

Note: 1. Result (dB μ V/m) = Reading(dB μ V/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).



Sus	Suspected List										
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark
	[2]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]			
1	42.61	44.79	-11.56	33.23	40.00	6.77	100	307	PK	Vertical	PASS
2	107.115	39.76	-11.32	28.44	43.50	15.06	100	251	PK	Vertical	PASS
3	145.43	46.34	-14.25	32.09	43.50	11.41	100	304	PK	Vertical	PASS
4	214.785	38.05	-9.78	28.27	43.50	15.23	100	294	PK	Vertical	PASS
5	232.73	36.15	-9.26	26.89	46.00	19.11	100	304	PK	Vertical	PASS
6	645.465	33.45	0.11	33.56	46.00	12.44	100	131	PK	Vertical	PASS

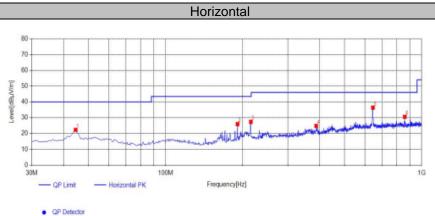
Note: 1. Result ($dB\mu V/m$) = Reading($dB\mu V/m$) + Factor (dB).

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

PASS

Horizonta

Adapter: DCT07W050100US-C1



Suspected List Reading Result Limit Margin Height Frequency [MHz] Factor Angle Detector Polarity [dBµV/m] 1 44.55 33.72 -11.41 22.31 40.00 17.69 100 240 PK Horizonta PASS 2 191.02 37.00 -11.00 26.00 43.50 17.50 100 220 PK Horizonta PASS PASS 215.27 16.08 PK Horizonta 3 37.18 -9.7627.42 43.50 100 76 387.445 30.36 -5.53 24.83 46.00 21.17 100 122 PK Horizonta PASS PASS 645.465 36.28 0.11 36.39 46.00 9.61 100 PK Horizonta

46.00

15.41

100

132

Note: 1. Result (dB μ V/m) = Reading(dB μ V/m) + Factor (dB) .

28.99

859.35

1.60

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

30.59

Vertical **Properties** **Pr

Sus	Suspected List										
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]			
1	43.58	45.36	-11.49	33.87	40.00	6.13	100	44	PK	Vertical	PASS
2	107.6	41.35	-11.34	30.01	43.50	13.49	100	40	PK	Vertical	PASS
3	143.49	46.33	-14.27	32.06	43.50	11.44	100	316	PK	Vertical	PASS
4	214.785	37.70	-9.78	27.92	43.50	15.58	100	298	PK	Vertical	PASS
5	232.73	36.93	-9.26	27.67	46.00	18.33	100	269	PK	Vertical	PASS
6	644.495	36.37	0.08	36.45	46.00	9.55	100	124	PK	Vertical	PASS

Note: 1. Result (dB μ V/m) = Reading(dB μ V/m) + Factor (dB) .

QP Detector

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

For 1GHz to 25GHz

BT LE

Channel 0 / 2402 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4804.00	50.50	32.44	30.25	7.95	60.64	74.00	-13.36	Peak	Horizontal
4804.00	36.47	32.44	30.25	7.95	46.61	54.00	-7.39	Average	Horizontal
4804.00	54.26	32.44	30.25	7.95	64.40	74.00	-9.60	Peak	Vertical
4804.00	34.54	32.44	30.25	7.95	44.68	54.00	-9.32	Average	Vertical

Channel 19 / 2440 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4880.00	49.55	32.52	30.31	8.12	59.88	74.00	-14.12	Peak	Horizontal
4880.00	37.35	32.52	30.31	8.12	47.68	54.00	-6.32	Average	Horizontal
4880.00	52.33	32.52	30.31	8.12	62.66	74.00	-11.34	Peak	Vertical
4880.00	35.60	32.52	30.31	8.12	45.93	54.00	-8.07	Average	Vertical

Channel 39 / 2480 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4960.00	51.62	32.68	30.27	7.88	61.91	74.00	-12.09	Peak	Horizontal
4960.00	36.23	32.68	30.27	7.88	46.52	54.00	-7.48	Average	Horizontal
4960.00	48.60	32.68	30.27	7.88	58.89	74.00	-15.11	Peak	Vertical
4960.00	30.65	32.68	30.27	7.88	40.94	54.00	-13.06	Average	Vertical

Notes:

- 1). Measuring frequencies from 9 KHz~10th harmonic or 26.5GHz (which is less), No emission found between lowest internal used/generated frequency to 30MHz.
- 2). Radiated emissions measured in frequency range from 9 KHz~10th harmonic or 26.5GHz (which is less) were made with an instrument using Peak detector mode.
- 3). Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4). Measured= Reading- Pre. Fac.+ Ant. Fac.+ Cab. Loss
- 5). Margin = Measured- Limit

4.3. On Time and Duty Cycle

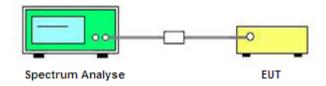
LIMIT

None; for reporting purpose only.

TEST PROCEDURE

- 1. Set the center frequency of the spectrum analyzer to the transmitting frequency;
- 2. Set the span=0MHz, RBW=8MHz, VBW=8MHz, Sweep time= auto couple;
- 3. Detector = peak;
- 4. Trace mode = Single hold.

TEST CONFIGURATION



TEST RESULTS

For reporting purpose only.

Please refer to Appendix A.7.

4.4. Maximum Peak Output Power

TEST CONFIGURATION



TEST PROCEDURE

According to KDB 558074 D01 15.247 Measurement Guidance v05r02 Section 8.3.1 Maximum peak conducted output power, 8.3.1.3 The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

<u>LIMIT</u>

The Maximum Peak Output Power Measurement is 30dBm.

TEST RESULTS

For reporting purpose only.

Please refer to Appendix A.3.

4.5. Power Spectral Density

TEST CONFIGURATION



TEST PROCEDURE

- 1.Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
- 2.Set the RBW =3 kHz.
- 3.Set the VBW =10 KHz.
- 4. Set the span to 1.5 times the DTS channel bandwidth.
- 5.Detector = peak.
- 6.Sweep time = auto couple.
- 7. Trace mode = \max hold.
- 8. Allow trace to fully stabilize.
- 9.Use the peak marker function to determine the maximum power level.
- 10.If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.
- 11. The resulting peak PSD level must be less than 8dBm.

LIMIT

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST RESULTS

For reporting purpose only.

Please refer to Appendix A.4.

4.6. 99% and 6dB Bandwidth

TEST CONFIGURATION



TEST PROCEDURE

6dB Bandwidth:

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW=100 KHz and VBW=300KHz. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB. According to KDB 558074 D01 DTS Meas Guidance v05r02 for one of the following procedures may be used to determine the modulated DTS device signal bandwidth.

- 1. Set RBW = 100 kHz.
- 2. Set the video bandwidth (VBW) ≥ 3 RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

99% Bandwidth:

According to section 6.9.3 of ANSI C63.10-2020, for the 99% emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99% emission bandwidth).

- 1. The transmitter output (antenna port) was connected to the spectrum analyzer in peak hold mode.
- 2. Set RBW = 1%~5% OBW; VBW≥3*RBW (for occupied bandwidth measurement).
- 3. Measured the 6dB bandwidth and 99% occupied bandwidth by related function of the spectrum analyzer. **LIMIT**

For digital modulation systems, the minimum 6 dB bandwidth shall be at least 500 kHz

TEST RESULTS

For reporting purpose only.

Please refer to Appendix A.1.

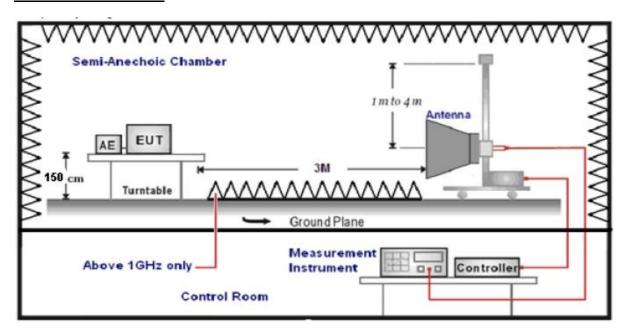
Please refer to Appendix A.2.

4.7. Conducted Spurious Emissions and Band Edge Compliance of RF Emission

TEST REQUIREMENT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20dB. Attenuation below the general field strength limits specified in RSS-Gen Issue 4 is not required.

TEST CONFIGURATION



TEST PROCEDURE

- 1. The EUT was placed on a turn table which is 1.5m above ground plane.
- 2.Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0°C to 360°C to acquire the highest emissions from EUT.
- 3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 4.Repeat above procedures until all frequency measurements have been completed...
- 5. The distance between test antenna and EUT was 3 meter:
- 6.Setting test receiver/spectrum as following table states:

Test Frequency range	Test Receiver/Spectrum Setting	Detector
1GHz-40GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto	Peak

LIMIT

Below -20dB of the highest emission level in operating band.

Radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)

TEST RESULTS

4.6.1 For Conducted at Restricted Band Measurement

For reporting purpose only.

Please refer to Appendix A.8.

4.6.2 For Conducted Bandedge Measurement

For reporting purpose only.

Please refer to Appendix A.5.

4.6.3 For Conducted Spurious Emissions Measurement

For reporting purpose only.

Please refer to Appendix A.6.

4.8. Antenna Requirement

Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, 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.

And according to FCC 47 CFR Section 15.247 (c), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Test Result

The antenna used for this product is FPC Antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 3.39 dBi.

Reference to the **Internal photos**.

5. TEST SETUP PHOTOS OF THE EUT

Radiated Emission





Conducted Emission



6. EXTERNAL AND INTERNAL PHOTOS OF THE EUT



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11



Fig. 12

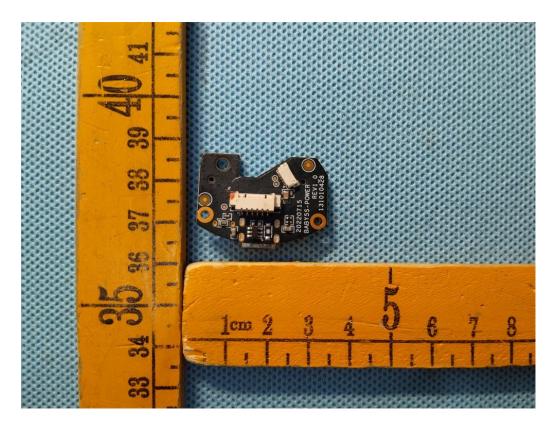


Fig. 13

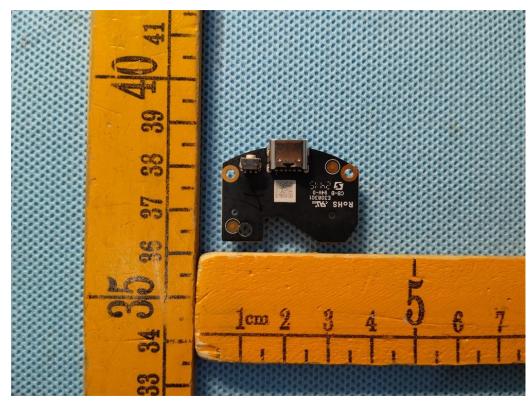


Fig. 14

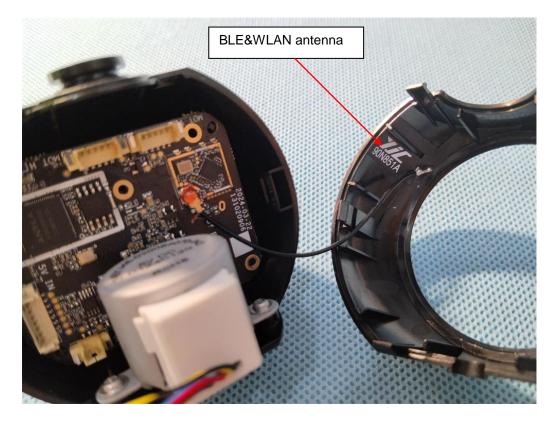


Fig. 15

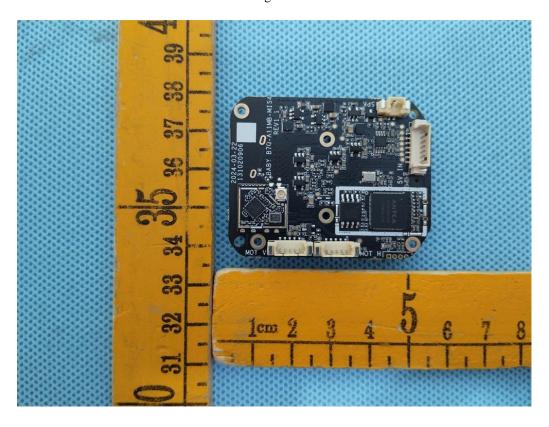


Fig. 16

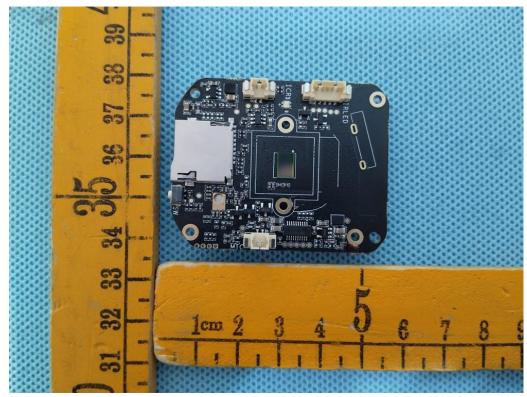


Fig. 17

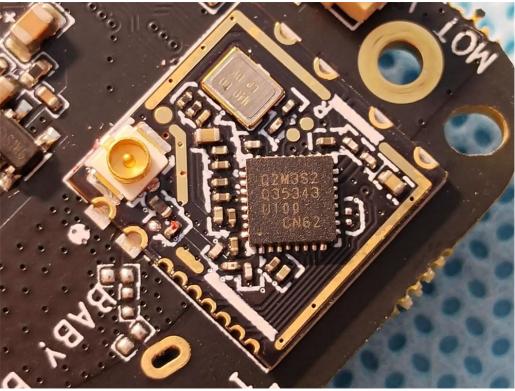


Fig. 18

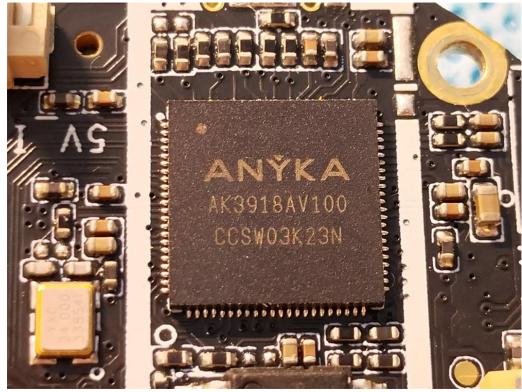


Fig. 19

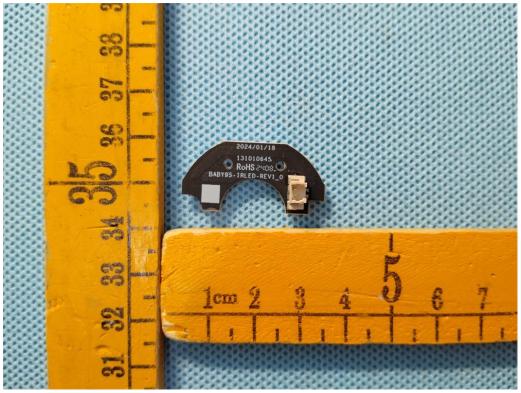


Fig. 20

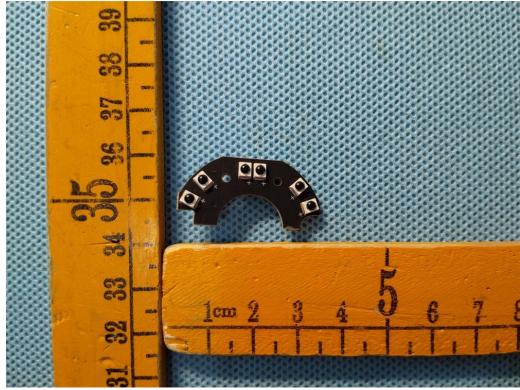


Fig. 21

.....End of Report.....