FCC TEST REPORT

For

DIGITAL MATTER EMBEDDEDSOUTH AFRICA

Yabby3-4G

Test Model: Yabby3-4G

Prepared for	:	DIGITAL MATTER EMBEDDEDSOUTH AFRICA
Address	:	Oval, St Georges Block, Cnr Meadowbrook Lane and Sloane Street, Bryanston, Gauteng, South Africa
Prepared by	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address	:	Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China
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Mail	:	webmaster@lcs-cert.com
Date of receipt of test sample	:	February 20, 2024
Number of tested samples	:	1
Serial number	:	Prototype
Date of Test	:	February 20, 2024 to February 22, 2024
Date of Report	:	February 23, 2024

TEST REPORT

Report No.	:	**LCSA02204009E**
Date of Issue	:	February 23, 2024
Testing Laboratory Name	:	**Shenzhen LCS Compliance Testing Laboratory Ltd.**
Address	:	Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China
Testing Location/ Procedure	:	Full application of Harmonised standards ■ Partial application of Harmonised standards □ Other standard testing method □
Applicant's Name	:	**DIGITAL MATTER EMBEDDEDSOUTH AFRICA**
Address	:	Oval, St Georges Block, Cnr Meadowbrook Lane and Sloane Street, Bryanston, Gauteng, South Africa
Test Specification		
Standard	:	FCC 47 CFR Part 15, Subpart B ANSI C63.4-2014
Test Report Form No.	:	LCSEMC-1.0
TRF Originator	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Master TRF	:	Dated 2011-03

Test Item Description.	:	**Yabby3-4G**
Trade Mark	:	Digital Matter
Test Model	:	Yabby3-4G
Result	:	**Positive**

Compiled by:	**Supervised by:**	**Approved by:**
Cindy Nie	Baron Wen	Gavin Liang
Cindy Nie / File Administrator	Baron Wen / Technique principal	Gavin Liang / Manager

TEST REPORT

Test Report No.: LCSA02204009E	February 23, 2024 Date of issue

Test Model	:	**Yabby3-4G**
EUT	:	Yabby3-4G
Applicant	:	**DIGITAL MATTER EMBEDDEDSOUTH AFRICA**
Address	:	Oval, St Georges Block, Cnr Meadowbrook Lane and Sloane Street, Bryanston, Gauteng, South Africa
Telephone	:	/
Fax	:	/
Manufacturer	:	**DIGITAL MATTER EMBEDDEDSOUTH AFRICA**
Address	:	Oval, St Georges Block, Cnr Meadowbrook Lane and Sloane Street, Bryanston, Gauteng, South Africa
Telephone	:	/
Fax	:	/
Factory	:	**DIGITAL MATTER EMBEDDEDSOUTH AFRICA**
Address	:	Oval, St Georges Block, Cnr Meadowbrook Lane and Sloane Street, Bryanston, Gauteng, South Africa
Telephone	:	/
Fax	:	/

Test Result	**Positive**

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.

Revision History

Report Version	Issue Date	Revision Content	Revised By
000	February 23, 2024	Initial Issue	/

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Test Report Description Page

1. SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

Description of Test Item	Standard	Limits	Result
Radiated emissions (Below 1GHz)	FCC 47 CFR Part 15, Subpart B ANSI C63.4-2014	15.109, Class B	Pass

1.2 Description of Test Modes

No	Title	Description
TM1	Working(DC 4.5V From battery)	Record

2. GENERAL INFORMATION

2.1 Description of Device (EUT)

EUT : Yabby3-4G
Test Model : Yabby3-4G
Power Supply : DC 4.5V From battery
Highest Internal Frequency : 1.705-108MHz
Classification of Equipment : Class B

Highest internal frequency (Fx)	Highest measured frequency
Fx ≤ 1.705MHz	30MHz
1.705MHz < Fx ≤ 108MHz	1GHz
108MHz < Fx ≤ 500MHz	2GHz
500MHz < Fx ≤ 1000MHz	5GHz
Fx > 1GHz	5 x Fx up to a maximum of 40GHz

2.2 Support equipment List

The EUT was tested as an independent device.

2.3 Description of Test Facility

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 LCS 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.

NVLAP Accreditation Code is 600167-0.
FCC Designation Number is CN5024.
CAB identifier is CN0071.
CNAS Registration Number is L4595.

2.4 Measurement Uncertainty

Test Item	Measurement Uncertainty
Radiated Emission (30MHz to 1000MHz)	± 3.48 dB
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3. MEASURING DEVICES AND TEST EQUIPMENT

Radiated emissions (Below 1GHz)					
Equipment	**Manufacturer**	**Model No**	**Serial No.**	**Cal Date**	**Due Date**
EMI Test Software	AUDIX	E3	/	/	/
By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2021-09-12	2024-09-11
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1925	2021-09-05	2024-09-04
EMI Test Receiver	R&S	ESR3	102311	2023-08-15	2024-08-14
Broadband Preamplifier	/	BP-01M18G	P190501	2023-06-09	2024-06-08
EMI Test Software	Farad	EZ	/	/	/
MXA Signal Analyzer	Agilent	N9020A	MY53290398	2023-06-09	2024-06-08

4. EMISSION TEST RESULTS (EMI)

4.1 Radiated emissions (Below 1GHz)

Test Requirement:	15.109, Class B
Test Limit:	Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

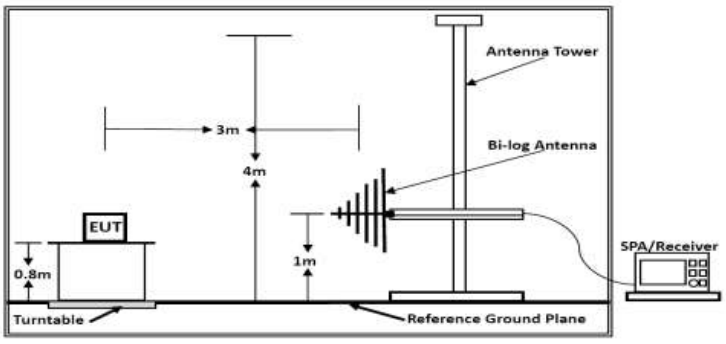
Frequency of emission (MHz)	Field strength @3m		Field strength @10m	
	(uV/m)	(dBuV/m)	(uV/m)	(dBuV/m)
30 – 88	100	40	30	29.5
88 – 216	150	43.5	45	33.1
216 – 960	200	46	60	35.6
Above 960	500	54	150	43.5

Test Method:	ANSI C63.4-2014
Procedure:	An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

4.1.1 E.U.T. Operation:

Operating Environment:			
Temperature:	26.4 °C	Humidity:	54.2 %
Pre test mode:	TM1		
Final test mode:	TM1		

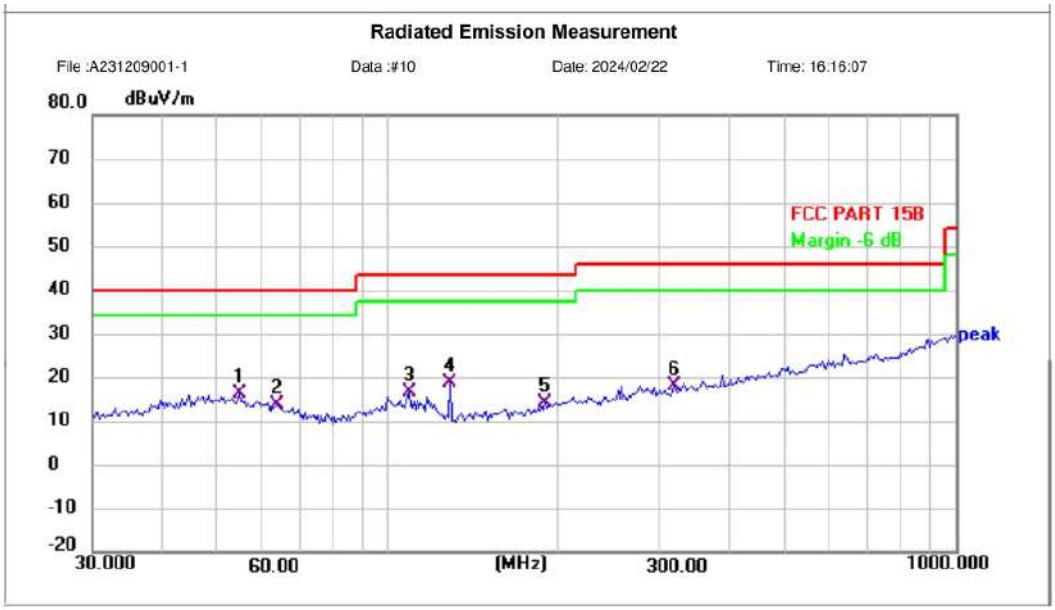
4.1.2 Test Setup Diagram:



Below 1GHz

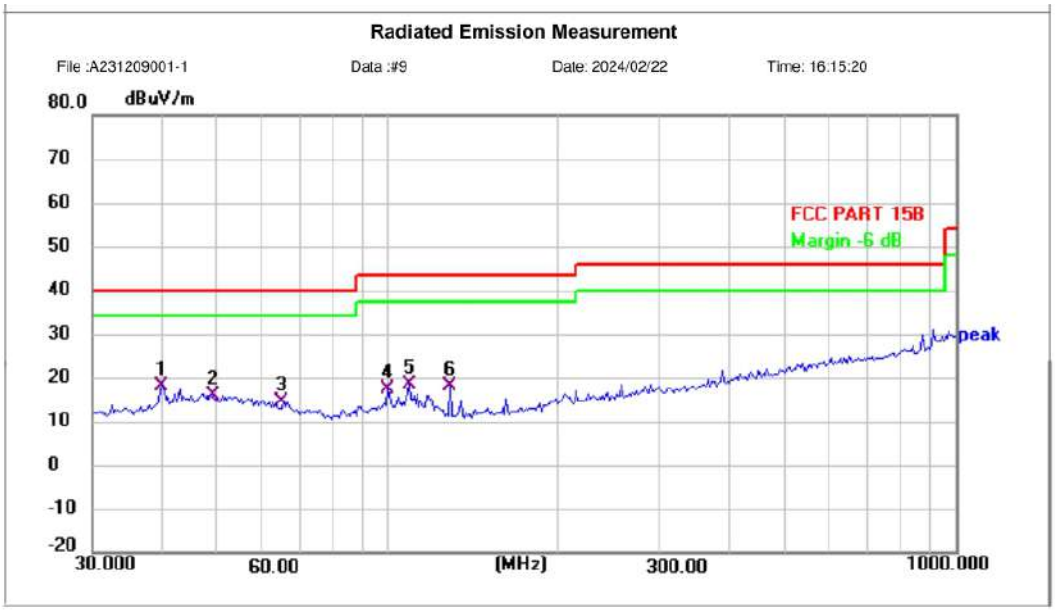
4.1.3 Test Data:

TM1 / Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	54.5167	34.12	-17.75	16.37	40.00	-23.63	QP			P	
2	63.6312	33.31	-19.57	13.74	40.00	-26.26	QP			P	
3	108.5455	36.23	-19.46	16.77	43.50	-26.73	QP			P	
4	128.4861	41.45	-22.65	18.80	43.50	-24.70	QP			P	
5	189.1076	34.31	-20.35	13.96	43.50	-29.54	QP			P	
6	318.0875	34.43	-16.28	18.15	46.00	-27.85	QP			P	

TM1 / Polarization: Vertical



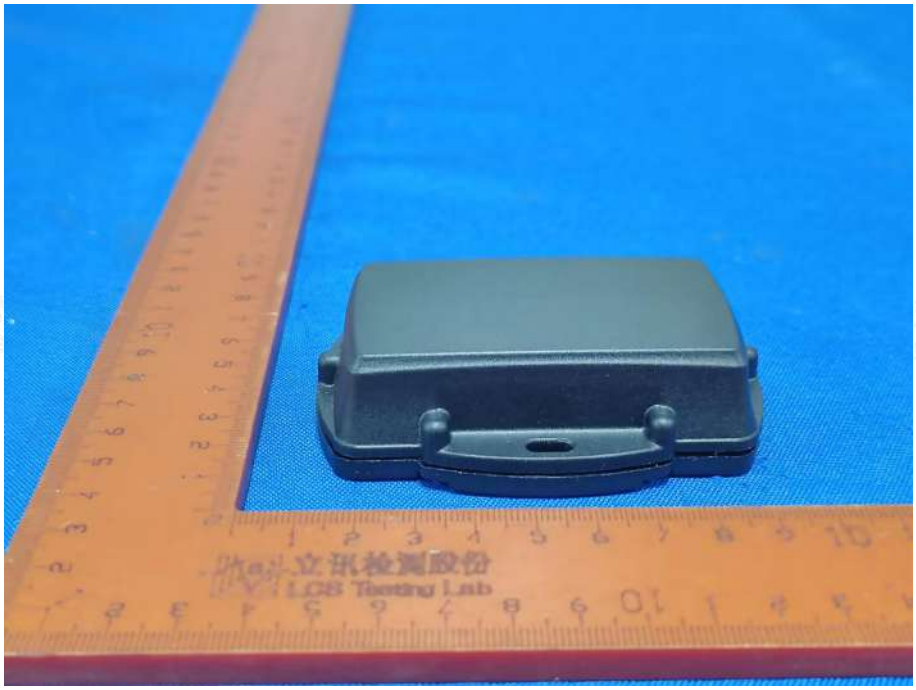
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	39.7371	36.11	-18.07	18.04	40.00	-21.96	QP			P	
2	49.0627	33.04	-16.98	16.06	40.00	-23.94	QP			P	
3	64.9869	34.42	-19.89	14.53	40.00	-25.47	QP			P	
4	99.7676	36.72	-19.51	17.21	43.50	-26.29	QP			P	
5	108.5455	37.81	-19.46	18.35	43.50	-25.15	QP			P	
6	128.4861	40.66	-22.65	18.01	43.50	-25.49	QP			P	

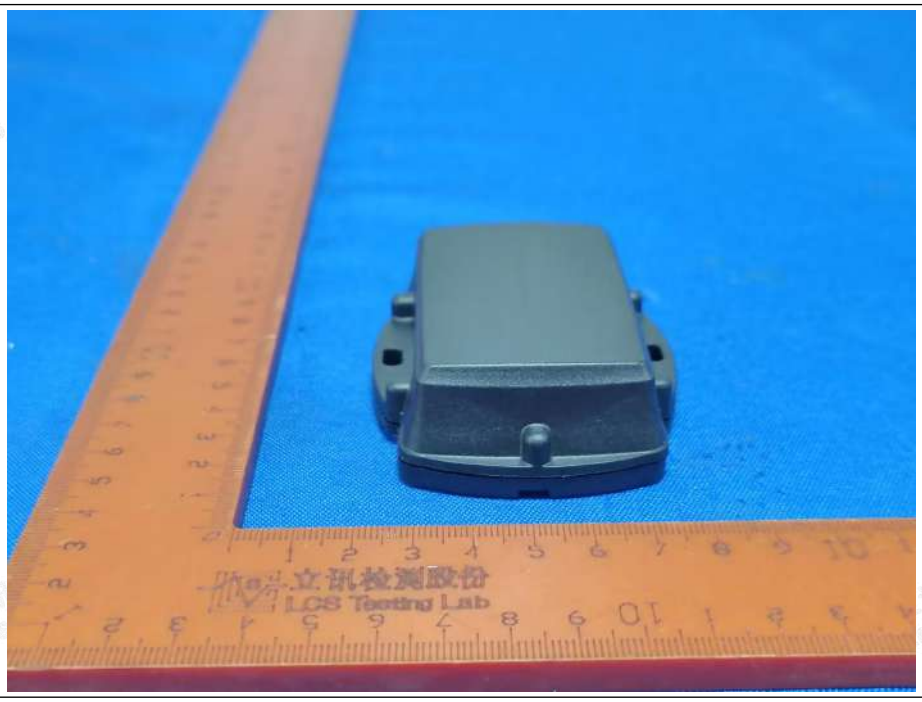
5. TEST SETUP PHOTOS

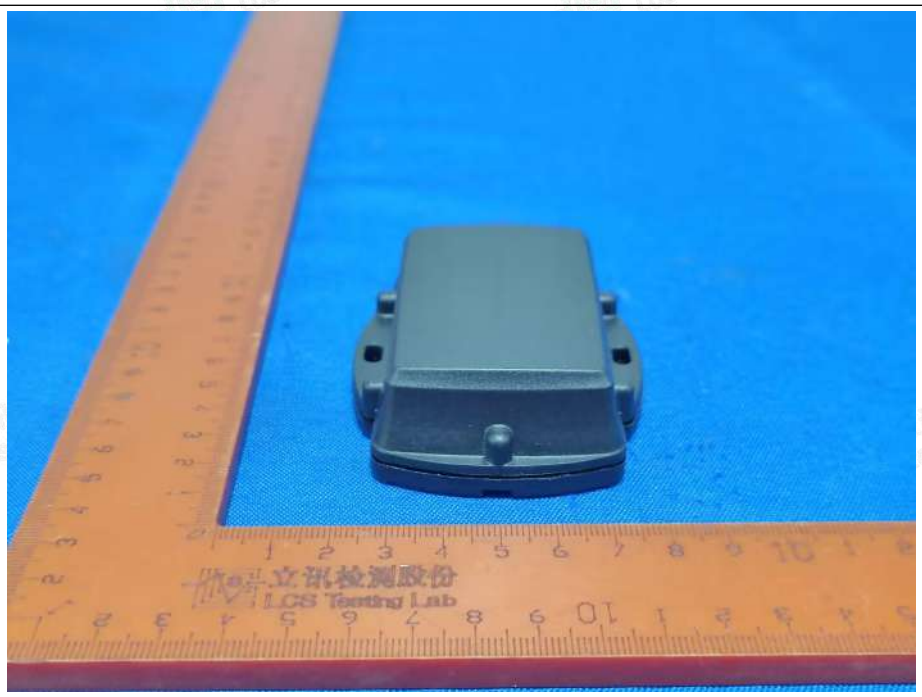
Radiated emissions (Below 1GHz)


6. EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS)

External

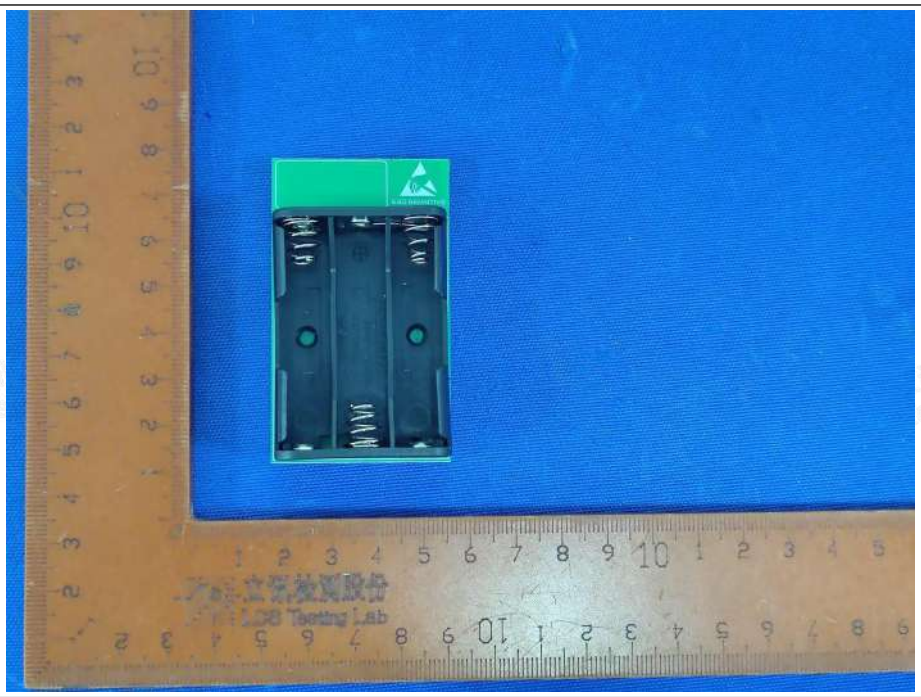


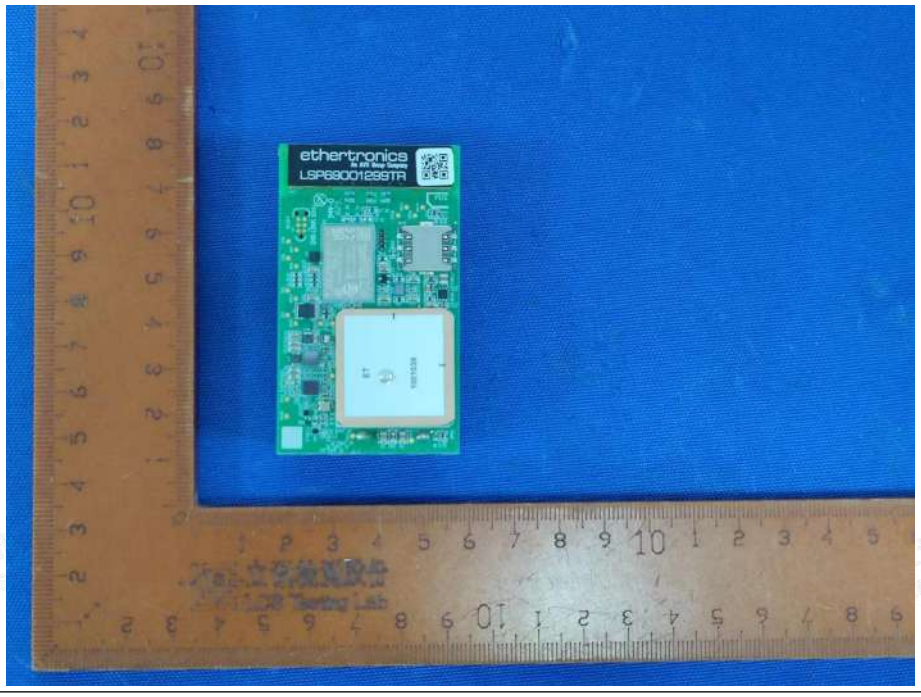





YABBY3-4G

Internal





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