

FCC TEST REPORT

Product : SeedStudio BeagleBone Green Eco
Trade mark : seed studio
Model/Type reference : SeedStudio BeagleBone Green Eco
Serial Number : N/A
Ratings : DC 5V
FCC ID : Z4T-SSBBGECO
Report Number : EED32R811519
Date of Issue : Jul. 16, 2025
Regulations : See below

Test Standards	Results
47 CFR FCC Part 15 Subpart B	PASS

Prepared for:

Seed Technology Co., Ltd.**9F, G3 Building, TCL International E City, Zhongshanyuan Road,
Nanshan District, Shenzhen, Guangdong Province, P.R.C**

Prepared by:

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Date of Issue:

Jul. 16, 2025

David Wang

Check No.: 8040090725



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(Note: N/A means not applicable)

1. GENERAL INFORMATION

Applicant: Seeed Technology Co., Ltd.
9F, G3 Building, TCL International E City, Zhongshanyuan Road,
Nanshan District, Shenzhen, Guangdong Province, P.R.C

Manufacturer: Seeed Technology Co., Ltd.
9F, G3 Building, TCL International E City, Zhongshanyuan Road,
Nanshan District, Shenzhen, Guangdong Province, P.R.C

Product: SeeedStudio BeagleBone Green Eco

Trade mark: seeed studio

Model/Type reference: SeeedStudio BeagleBone Green Eco

Serial Number: N/A

Report Number: EED32R811519

State of Sample(s): Normal

Sample Received Date: Jul. 09, 2025

Sample tested Date: Jul. 09, 2025 to Jul. 14, 2025

2. TEST SUMMARY

The Product has been tested according to the following specifications:

Standard	Test Item	Test Method	Test
FCC 15.107	Conducted Emission	ANSI C63.4:2014	Yes
FCC 15.109	Radiated Emission	ANSI C63.4:2014	Yes

3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
Conducted disturbance	3.1
Radiated disturbance (30MHz to 1GHz)	4.9
Radiated disturbance (1GHz to 6GHz)	4.7

4. PRODUCT INFORMATION AND TEST SETUP

4.1. PRODUCT INFORMATION

Ratings: DC 5V

Highest frequency ☐ less than 1.705 MHz, the measurement shall only be made

generated or used in the device or on which the device operates or tunes of the EUT is 1 GHz:

- up to 30MHz.
- ☐ between 1.705 MHz and 108 MHz, the measurement shall only be made up to 1 GHz.
- ☐ between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz.
- ☒ between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz.
- ☐ above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 40 GHz, whichever is lower.

4.2. TEST SETUP CONFIGURATION

See test photographs attached in Appendix 1 for the actual connections between Product and support equipment.

4.3. TEST MODE DESCRIPTION

Test Mode	Test Status
①	Normal mode:EUT connected to AE then it powered and works normally.

4.4. SUPPORT EQUIPMENT

No.	Device Type	Brand	Series No.	Model	Data Cable	Power Cord
1.	Adapter	MI	---	MDY-14-EU	----	----
2.	Notebook	DELL	---	Dell G16 7620	----	----

Notes:

- All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

5. FACILITIES AND ACCREDITATIONS

5.1. TEST FACILITY

All test facilities used to collect the test data are located at Hongwei Industrial Park, Zone 70, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4, CISPR 16-1-1 and other equivalent standards.

5.2. TEST EQUIPMENT LIST

Instrumentation: The following list contains equipments used at CTI for testing.

The calibrations of the measuring instruments, including any accessories that may effect such calibration, are checked frequently to assure their accuracy. Adjustments are made and correction factors applied in accordance with instructions contained in the manual for the measuring instrument.

Equipment used during the tests:

Shielding Room No. 3 Hongwei-Conducted emissions				
Equipment	Manufacturer	Model	Series No.	Due Date
Receiver	R&S	ESCI	100435	04/07/2026
LISN	R&S	ENV216	100098	09/13/2025
Software-EZ	Farad Technology	--	EMC-CON 3A1.1	--

3M Semi-anechoic Chamber (2) Hongwei-Radiated emissions				
Equipment	Manufacturer	Model	Series No.	Due Date
3M Chamber & Accessory Equipment	TDK	SAC-3	--	01/12/2027
Receiver	R&S	ESR7	101697	09/13/2025
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-401	09/13/2025
Microwave Preamplifier	Tonscend	EMC051845SE	980380	12/04/2025
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1869	04/06/2026
Automation Controller	SKET	BK-SC1001	S-C-TTAT-2623-002	--
Software-EZ	Farad Technology	--	EMEC-3A1-Pre	--

5.3. LABORATORY ACCREDITATIONS AND LISTINGS

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

6. CONDUCTED EMISSION TEST

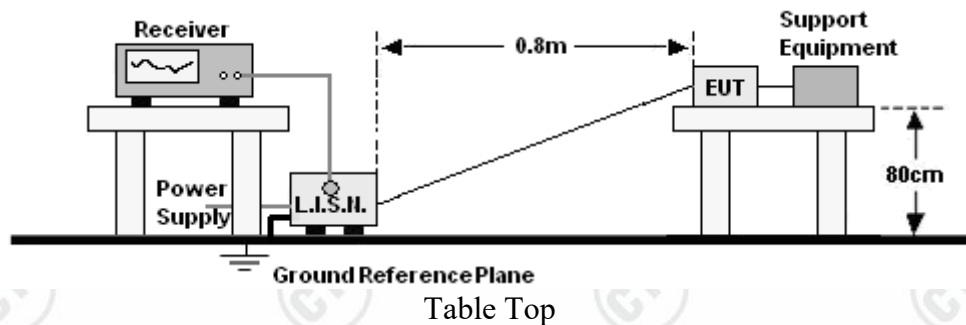
6.1. LIMITS

Limits for Class A digital devices

Frequency range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	79	66
0,50 to 30	73	60

NOTE: 1. The lower limit shall apply at the transition frequencies.

6.2. BLOCK DIAGRAM OF TEST SETUP



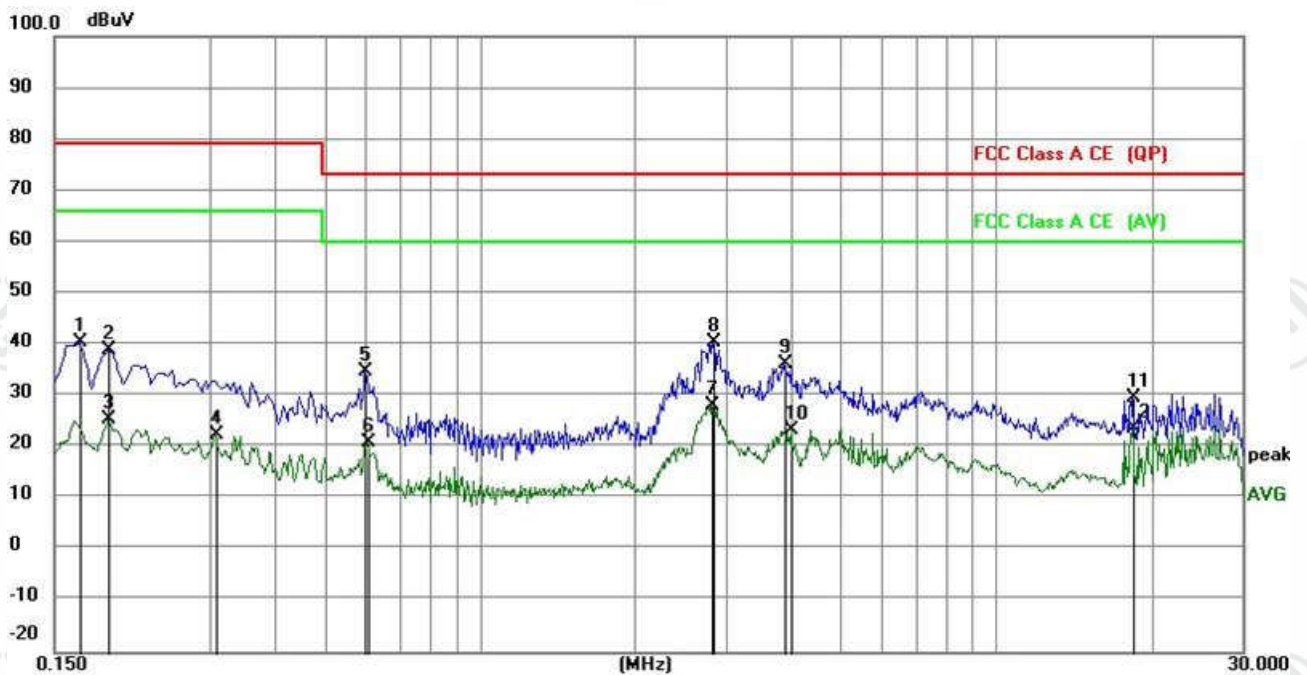
6.3. PROCEDURE OF CONDUCTED EMISSION TEST

Table Top:

- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

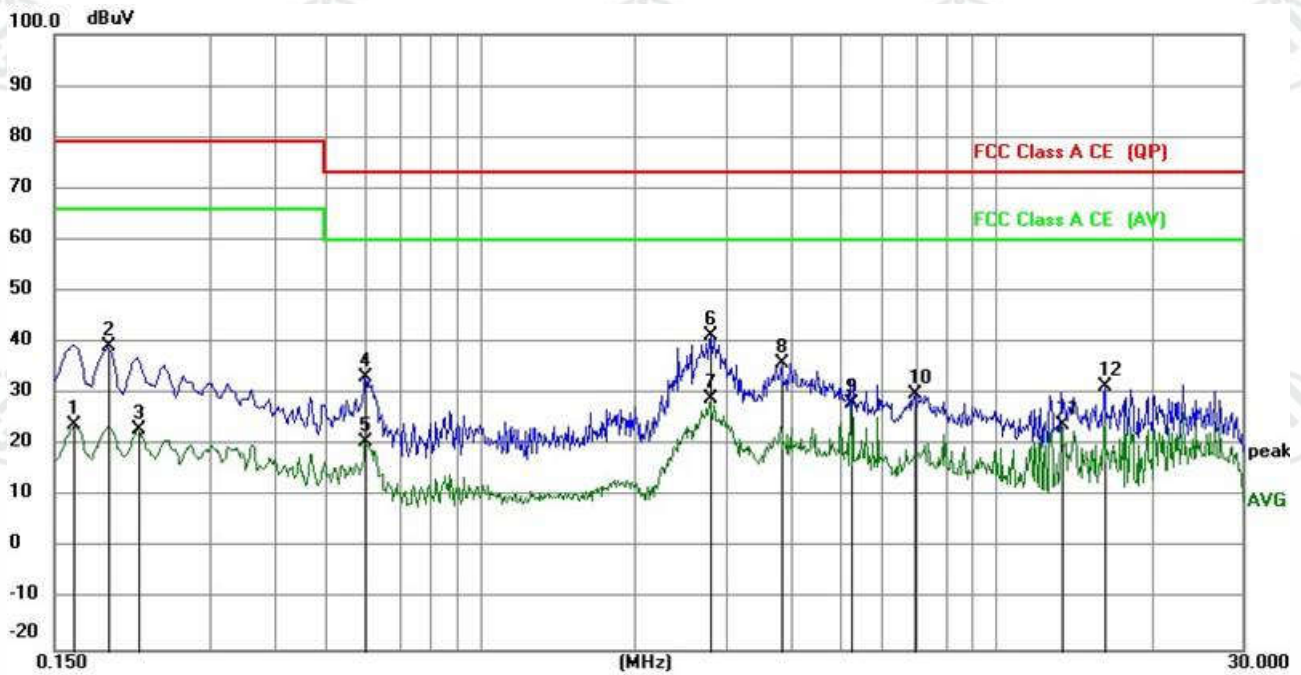
6.4. GRAPHS AND DATA

Product	:	SeedStudio BeagleBone Green Eco			
Model/Type reference	:	SeedStudio BeagleBone Green Eco			
Power	:	AC 120V/60Hz	Temperature	:	25°C
Mode	:	①	Humidity	:	45%R.H.
Phase	:	L1	Press	:	101KPa



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1680	30.13	10.26	40.39	79.00	-38.61	QP
2		0.1905	28.63	10.22	38.85	79.00	-40.15	QP
3		0.1905	15.18	10.22	25.40	66.00	-40.60	AVG
4		0.3075	12.39	10.13	22.52	66.00	-43.48	AVG
5		0.6000	24.67	10.10	34.77	73.00	-38.23	QP
6		0.6045	10.85	10.10	20.95	60.00	-39.05	AVG
7	*	2.8095	18.00	10.14	28.14	60.00	-31.86	AVG
8		2.8365	30.23	10.14	40.37	73.00	-32.63	QP
9		3.8940	26.24	10.10	36.34	73.00	-36.66	QP
10		4.0155	13.13	10.10	23.23	60.00	-36.77	AVG
11		18.3660	19.86	9.82	29.68	73.00	-43.32	QP
12		18.3660	13.95	9.82	23.77	60.00	-36.23	AVG

Product	:	SeedStudio BeagleBone Green Eco			
Model/Type reference	:	SeedStudio BeagleBone Green Eco			
Power	:	AC 120V/60Hz	Temperature	:	25℃
Mode	:	①	Humidity	:	45%R.H.
Phase	:	N	Press	:	101KPa



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1635	13.67	10.26	23.93	66.00	-42.07	AVG
2		0.1905	28.99	10.22	39.21	79.00	-39.79	QP
3		0.2175	12.85	10.20	23.05	66.00	-42.95	AVG
4		0.6000	23.15	10.10	33.25	73.00	-39.75	QP
5		0.6000	10.46	10.10	20.56	60.00	-39.44	AVG
6		2.8005	31.28	10.14	41.42	73.00	-31.58	QP
7	*	2.8005	18.80	10.14	28.94	60.00	-31.06	AVG
8		3.8400	25.74	10.10	35.84	73.00	-37.16	QP
9		5.2350	18.03	10.06	28.09	60.00	-31.91	AVG
10		6.9765	20.02	10.03	30.05	73.00	-42.95	QP
11		13.3575	14.10	9.89	23.99	60.00	-36.01	AVG
12		16.2285	21.64	9.85	31.49	73.00	-41.51	QP

Note:

1. Margin=Measurement-Limit.

2. Measurement=Reading Level+Correct Factor.

7. RADIATED EMISSION TEST

7.1. LIMITS

For unintentional device , according to §15.109 (b) The field strength of radiated emissions from a Class A digital device, as determined at a distance of 10 meters, shall not exceed the following values.

According to FCC 15.31 section(1), at frequencies at or above 30 MHz measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

According to FCC 15.31 section(2), frequencies below 30 MHz, performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

According to 15.35 Measurement detector functions and bandwidths section (b). Unless otherwise specified, e.g., see §§15.250, 15.252, 15.253(d), 15.255, 15.256, and 15.509 through 15.519 of this part, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.

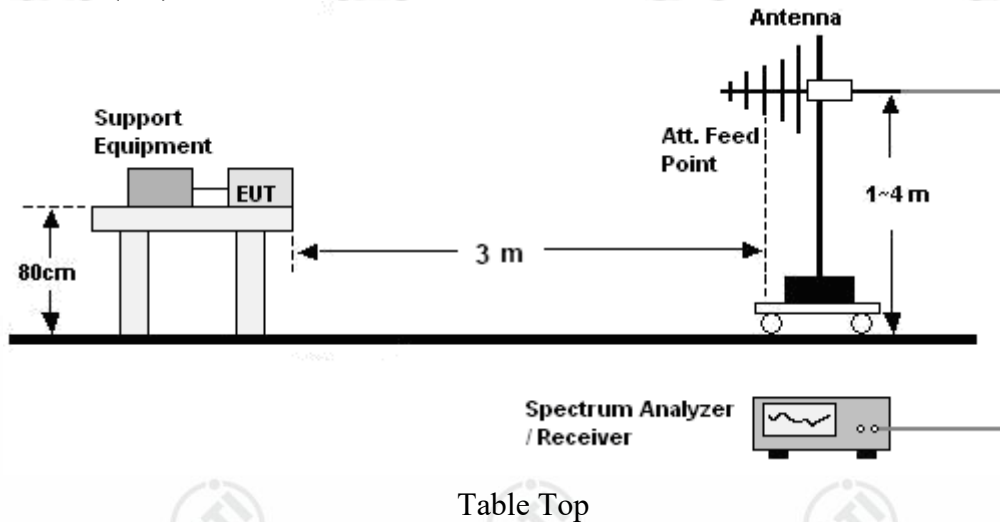
Limits for Class A digital devices

Frequency (MHz)	limits at 3m dB(μV/m)
30-88	49.5
88-216	54.0
216-960	56.9
Above 960	60.0

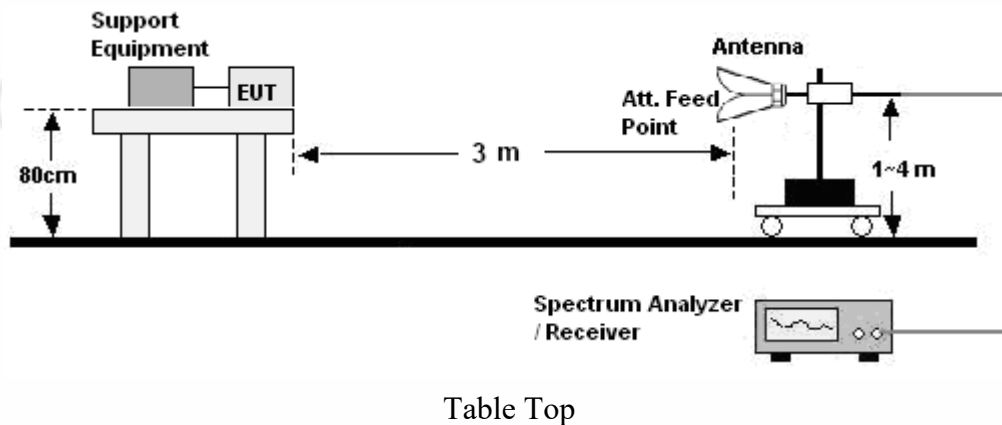
- NOTE:**
1. The lower limit shall apply at the transition frequency.
 2. The limits shown above are based on measuring equipment employing a CISPR quasi-peak detector function for frequencies below or equal to 1000MHz.
 3. The limits shown above are based on measuring equipment employing an average detector function for frequencies above 1000MHz.

7.2. BLOCK DIAGRAM OF TEST SETUP

30MHz ~ 1GHz(3m):



Above 1GHz:



7.3. PROCEDURE OF RADIATED EMISSION TEST

30MHz ~ 1GHz(Table Top):

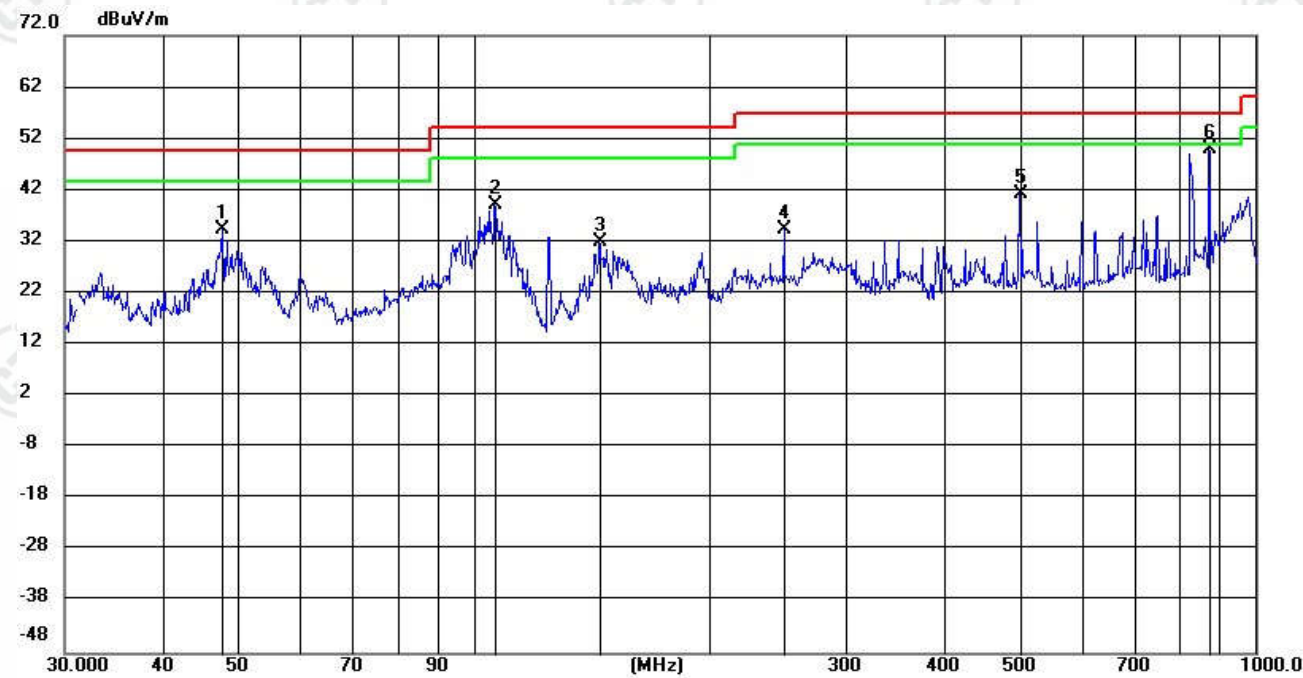
- The Product was placed on the non-conductive turntable 0.8m above the ground at a chamber.
- Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

Above 1GHz(Table Top):

- a. The Product was placed on the non-conductive turntable 0.8m above the ground at a chamber.
- b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- c. For each frequency whose maximum record was higher or close to limit, measure its AV value: rotate the turntable from 0 to 360 degrees to find the degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to AV value and specified bandwidth with Maximum Hold Mode, and record the maximum value.

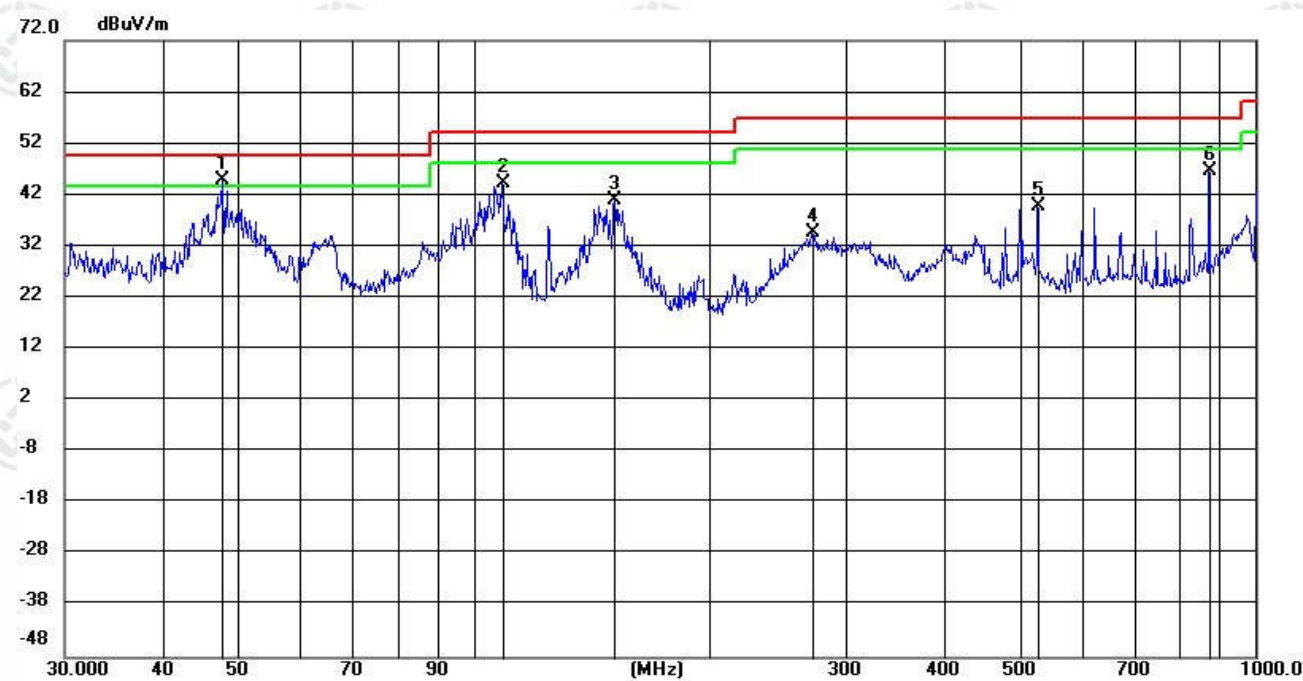
7.4. GRAPHS AND DATA

Product	: SeedStudio BeagleBone Green Eco		
Model/Type reference	: SeedStudio BeagleBone Green Eco		
Power	: AC 120V/60Hz	Temperature	: 23℃
Mode	: ①	Humidity	: 54%R.H.
Polarization	: Horizontal	Press	: 101KPa



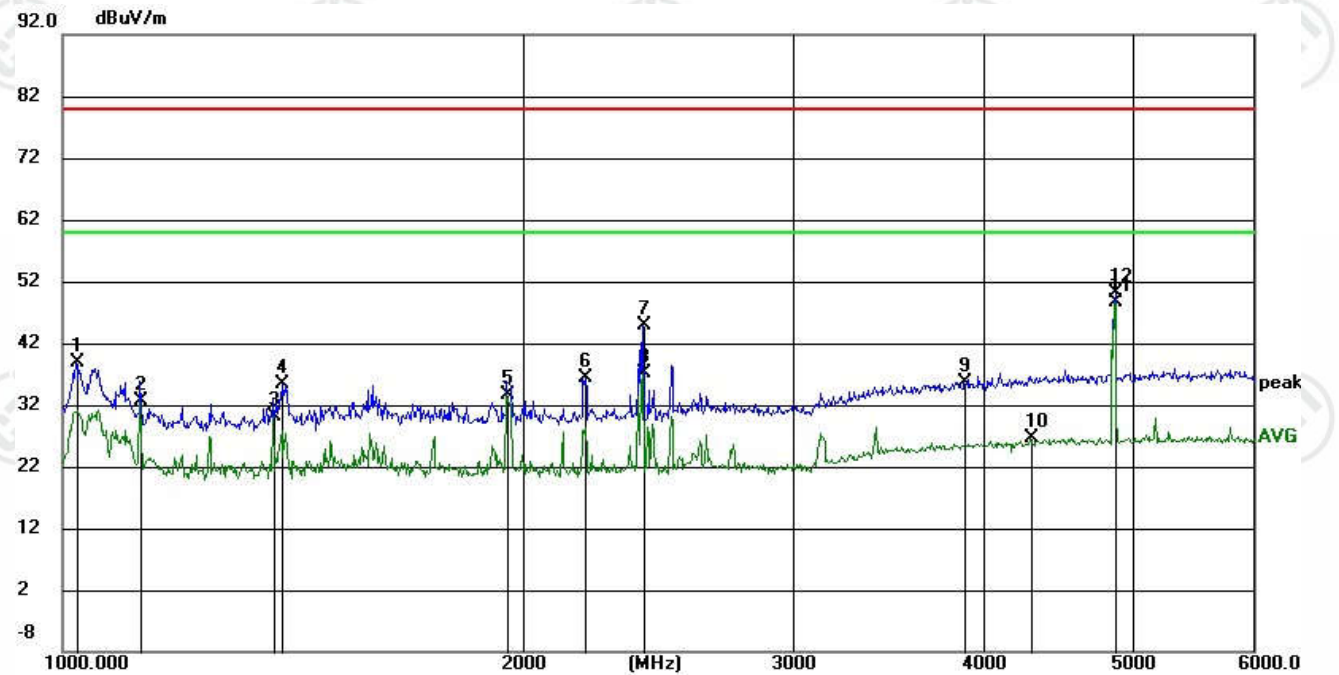
No.	Mk.	Freq.	Reading	Correct	Measurement	Limit	Margin	Antenna	Table
		MHz	Level	Factor				Height	Degree
			dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree
1		47.8092	20.01	14.22	34.23	49.50	-15.27	QP 200	6
2		106.7587	25.16	13.88	39.04	54.00	-14.96	QP 200	336
3		145.2995	21.49	10.39	31.88	54.00	-22.12	QP 200	39
4		250.0380	19.58	14.68	34.26	56.90	-22.64	QP 100	277
5		500.1256	20.45	20.81	41.26	56.90	-15.64	QP 100	285
6	*	875.2469	23.16	26.72	49.88	56.90	-7.02	QP 100	251

Product	:	SeedStudio BeagleBone Green Eco			
Model/Type reference	:	SeedStudio BeagleBone Green Eco			
Power	:	AC 120V/60Hz	Temperature	:	23℃
Mode	:	①	Humidity	:	54%R.H.
Polarization	:	Vertical	Press	:	101KPa



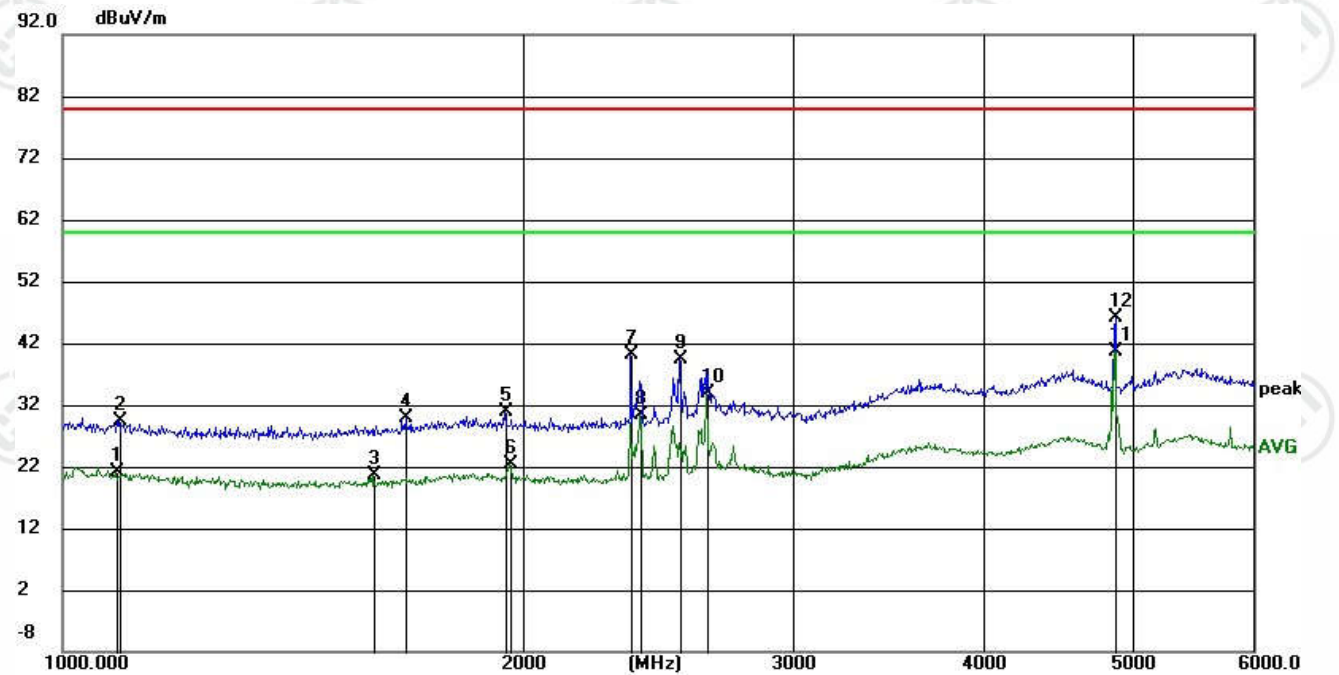
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree
1	*	47.7925	30.74	14.21	44.95	49.50	-4.55	100	6
2		108.8186	30.08	14.09	44.17	54.00	-9.83	100	285
3		151.5972	30.57	10.40	40.97	54.00	-13.03	100	175
4		270.7068	19.12	15.46	34.58	56.90	-22.32	200	184
5		528.0606	18.15	21.52	39.67	56.90	-17.23	100	226
6		875.0935	19.97	26.72	46.69	56.90	-10.21	100	6

Product	:	SeedStudio BeagleBone Green Eco			
Model/Type reference	:	SeedStudio BeagleBone Green Eco			
Power	:	AC 120V/60Hz	Temperature	:	23℃
Mode	:	①	Humidity	:	54%R.H.
Polarization	:	Horizontal	Press	:	101KPa



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree
1		1022.100	54.57	-15.81	38.76	80.00	-41.24	100	160
2		1125.028	48.23	-15.51	32.72	60.00	-27.28	100	286
3		1375.043	44.97	-14.79	30.18	60.00	-29.82	100	313
4		1391.650	50.16	-14.74	35.42	80.00	-44.58	199	5
5		1954.118	46.75	-13.09	33.66	60.00	-26.34	100	326
6		2192.341	48.24	-11.91	36.33	80.00	-43.67	199	300
7		2393.308	55.65	-10.81	44.84	80.00	-35.16	199	5
8		2393.308	47.93	-10.81	37.12	60.00	-22.88	199	5
9		3888.658	39.05	-3.36	35.69	80.00	-44.31	199	90
10		4293.313	28.69	-2.08	26.61	60.00	-33.39	199	189
11	*	4874.002	49.17	-0.52	48.65	60.00	-11.35	100	353
12		4874.439	50.75	-0.52	50.23	80.00	-29.77	100	353

Product	:	SeedStudio BeagleBone Green Eco			
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Power	:	AC 120V/60Hz	Temperature	:	23℃
Mode	:	①	Humidity	:	54%R.H.
Polarization	:	Vertical	Press	:	101KPa



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree
1		1084.455	36.86	-15.63	21.23	60.00	-38.77	100	303
2		1089.518	44.93	-15.62	29.31	80.00	-50.69	100	357
3		1598.527	34.64	-14.13	20.51	60.00	-39.49	100	5
4		1678.362	43.68	-13.91	29.77	80.00	-50.23	200	137
5		1946.779	43.99	-13.12	30.87	80.00	-49.13	200	164
6		1961.660	35.56	-13.07	22.49	60.00	-37.51	100	235
7		2353.336	51.27	-11.03	40.24	80.00	-39.76	100	235
8		2387.954	41.20	-10.84	30.36	60.00	-29.64	200	191
9		2531.138	49.44	-10.13	39.31	80.00	-40.69	100	32
10		2639.990	43.67	-9.79	33.88	60.00	-26.12	100	5
11	*	4874.002	41.25	-0.52	40.73	60.00	-19.27	100	249
12		4874.439	46.57	-0.52	46.05	80.00	-33.95	100	249

Note:

- 1. Margin=Measurement(Level)-Limit.
- 2. Measurement(Level)=Reading Level+Correct Factor.

Statement

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule stated in ILAC-G8:09/2019/CNAS-GL015:2022;
5. Without written approval of CTI, this report can't be reproduced except in full;

*** End of Report ***