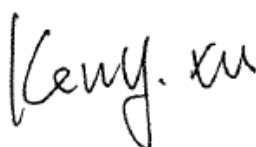


TEST REPORT

Application No.: SZEM1910019437CR(ZR/2019/A0010)
Applicant: BLU Products, inc.
Address of Applicant: 10814 NW 33rd St # 100 Doral, FL 33172, USA
Manufacturer: BLU Products, inc.
Address of Manufacturer: 10814 NW 33rd St # 100 Doral, FL 33172, USA
Equipment Under Test (EUT):
EUT Name: BLU aria2
Model No.: BLU aria2
Trade mark: 
FCC ID: YHLBLUARIA2
Standard(s) : 47 CFR Part 15, Subpart B
Date of Receipt: 2019-10-18
Date of Test: 2019-10-18 to 2019-12-04
Date of Issue: 2019-12-06

Test Result:	Pass*
---------------------	--------------

* In the configuration tested, the EUT complied with the standards specified above.



Keny Xu
EMC Laboratory Manager





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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2019-12-06		Original

Authorized for issue by:			
			
		Damon Su /Project Engineer	
			
		Eric Fu /Reviewer	



2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at Mains Terminals (150kHz-30MHz)	47 CFR Part 15, Subpart B	ANSI C63.4:2014	Class B	Pass
Radiated Emissions (30MHz-1GHz)	47 CFR Part 15, Subpart B	ANSI C63.4:2014	Class B	Pass

Internal Source	Upper Frequency
Below 1.705MHz	30MHz
1.705MHz to 108MHz	1GHz
108MHz to 500MHz	2GHz
500MHz to 1GHz	5GHz
Above 1GHz	5th harmonic of the highest frequency or 40GHz, whichever is lower



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4 General Information

4.1 Details of E.U.T.

Power Supply:	Lithium Ion Battery: DC 3.7V 400mAh rechargeable battery which charged by USB port
---------------	--

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Galaxy S8	SAMSUNG	SM-G9500	R28J9140LPB
U-disk	Sandisk	SDCZ60-016G	REF.No.ZEA0100
Adapter	Apple	A1357W010A051	REF.No.SEA0500
AUX IN Cable	SAMZHE	YPH-8310	REF.No.SEA0800

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Conduction Emission	$\pm 3.0\text{dB}$ (150kHz to 30MHz)
2	Radiated Emission	$\pm 4.5\text{dB}$ (30MHz-1GHz)
3	Temperature test	$\pm 1^\circ\text{C}$
4	Humidity test	$\pm 3\%$

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

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

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



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5 Equipment List

Conducted Emissions at Mains Terminals (150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	ChangZhou ZhongYu	GB-88	SEM001-06	2019-06-13	2022-06-12
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM024-01	2019-07-11	2020-07-10
LISN	Rohde & Schwarz	ENV216	SEM007-01	2019-09-24	2020-09-23
LISN	ETS-LINDGREN	3816/2	SEM007-02	2019-04-01	2020-03-31
EMI Test Receiver	Rohde & Schwarz	ESCI	SEM004-02	2019-04-01	2020-03-31

Radiated Emissions (30MHz-1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2017-08-05	2020-08-04
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2019-07-11	2020-07-10
EMI Test Receiver	Agilent Technologies	N9038A	SEM004-05	2019-09-24	2020-09-23
BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2017-06-27	2020-06-26
Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2019-04-01	2020-03-31

General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2019-09-26	2020-09-25
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2019-09-26	2020-09-25
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2019-09-26	2020-09-25
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2019-04-04	2020-04-03



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6 Emission Test Results

6.1 Conducted Emissions at Mains Terminals (150kHz-30MHz)

Test Requirement:	47 CFR Part 15, Subpart B
Test Method:	ANSI C63.4:2014
Frequency Range:	150kHz to 30MHz
Limit:	
0.15M-0.5MHz	66dB(μV)-56dB(μV) quasi-peak, 56dB(μV)-46dB(μV) average
0.5M-5MHz	56dB(μV) quasi-peak, 46dB(μV) average
5M-30MHz	60dB(μV) quasi-peak, 50dB(μV) average
Detector:	Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22.7 °C Humidity: 60.3 % RH Atmospheric Pressure: 1015 mbar

Pretest these e: Charging_Keep the battery of the EUT in charging mode

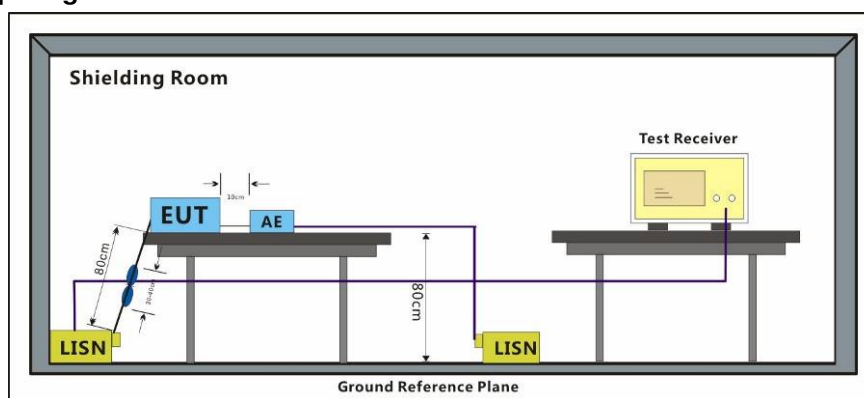
modes to find f: AUX Input+Charging_Sound:1kHz Sine Wave and Keep the battery of the EUT
the worst case: in charging mode.

g: TF Card+Charging_Sound:1kHz Sine Wave and Keep the battery of the EUT in charging mode

h: USB disk+Charging_Sound:1kHz Sine Wave and Keep the battery of the EUT in charging mode

The worst case f: AUX Input+Charging_Sound:1kHz Sine Wave and Keep the battery of the EUT
for final test: in charging mode.

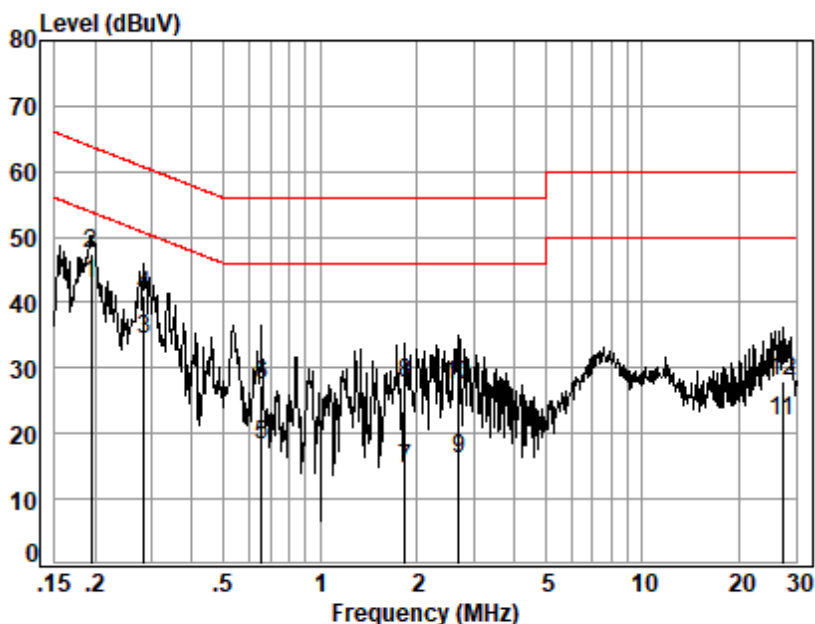
6.1.2 Test Setup Diagram



6.1.3 Measurement Data

An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

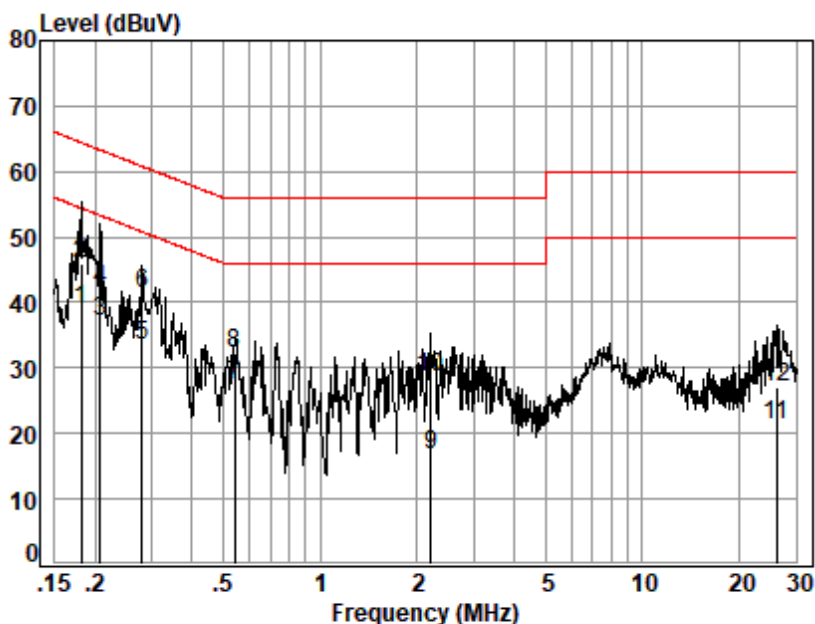
Mode:f; Line:Live Line



Site : Shielding Room
Condition: Line
Job No. : 19437CR
Test mode: f

	Freq	Cable Loss	LISN Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.19	0.02	9.51	33.25	42.78	53.84	-11.06	Average
2	0.19	0.02	9.51	37.95	47.48	63.84	-16.36	QP
3	0.28	0.04	9.54	24.72	34.30	50.68	-16.38	Average
4	0.28	0.04	9.54	31.44	41.02	60.68	-19.66	QP
5	0.66	0.07	9.63	8.62	18.32	46.00	-27.68	Average
6	0.66	0.07	9.63	17.72	27.42	56.00	-28.58	QP
7	1.83	0.15	9.64	4.72	14.51	46.00	-31.49	Average
8	1.83	0.15	9.64	17.77	27.56	56.00	-28.44	QP
9	2.69	0.16	9.66	6.19	16.01	46.00	-29.99	Average
10	2.69	0.16	9.66	17.41	27.23	56.00	-28.77	QP
11	27.27	0.27	10.24	11.45	21.96	50.00	-28.04	Average
12	27.27	0.27	10.24	17.53	28.04	60.00	-31.96	QP

Mode:f; Line:Neutral Line



Site : Shielding Room
Condition: Neutral
Job No. : 19437CR
Test mode: f

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.18	0.02	9.44	29.58	39.04	54.42	-15.38	Average
2	0.18	0.02	9.44	36.37	45.83	64.42	-18.59	QP
3	0.21	0.02	9.45	27.75	37.22	53.32	-16.10	Average
4	0.21	0.02	9.45	32.37	41.84	63.32	-21.48	QP
5	0.28	0.04	9.48	23.96	33.48	50.81	-17.33	Average
6	0.28	0.04	9.48	31.75	41.27	60.81	-19.54	QP
7	0.54	0.06	9.59	17.88	27.53	46.00	-18.47	Average
8	0.54	0.06	9.59	22.67	32.32	56.00	-23.68	QP
9	2.20	0.16	9.70	7.02	16.88	46.00	-29.12	Average
10	2.20	0.16	9.70	18.83	28.69	56.00	-27.31	QP
11	26.14	0.27	10.42	10.55	21.24	50.00	-28.76	Average
12	26.14	0.27	10.42	16.26	26.95	60.00	-33.05	QP

6.2 Radiated Emissions (30MHz-1GHz)

Test Requirement: 47 CFR Part 15, Subpart B
Test Method: ANSI C63.4:2014
Frequency Range: 30MHz to 1GHz
Measurement Distance: 3m
Limit:
30MHz -88MHz 40.0(dBμV/m) quasi-peak
88MHz-216MHz 43.5(dBμV/m) quasi-peak
216MHz-960MHz 46.0(dBμV/m) quasi-peak
960MHz-1000MHz 54.0(dBμV/m) quasi-peak
Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to1000MHz

6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 23 °C Humidity: 55 % RH Atmospheric Pressure: 1015 mbar

Pretest these d: AUX Input_Sound:1kHz Sine Wave

modes to find e: Charging_Keep the battery of the EUT in charging mode

the worst case:

f: AUX Input+Charging_Sound:1kHz Sine Wave and Keep the battery of the EUT in charging mode.

g: TF Card+Charging_Sound:1kHz Sine Wave and Keep the battery of the EUT in charging mode

h: USB disk+Charging_Sound:1kHz Sine Wave and Keep the battery of the EUT in charging mode

i: Idle_Keep the EUT standby.

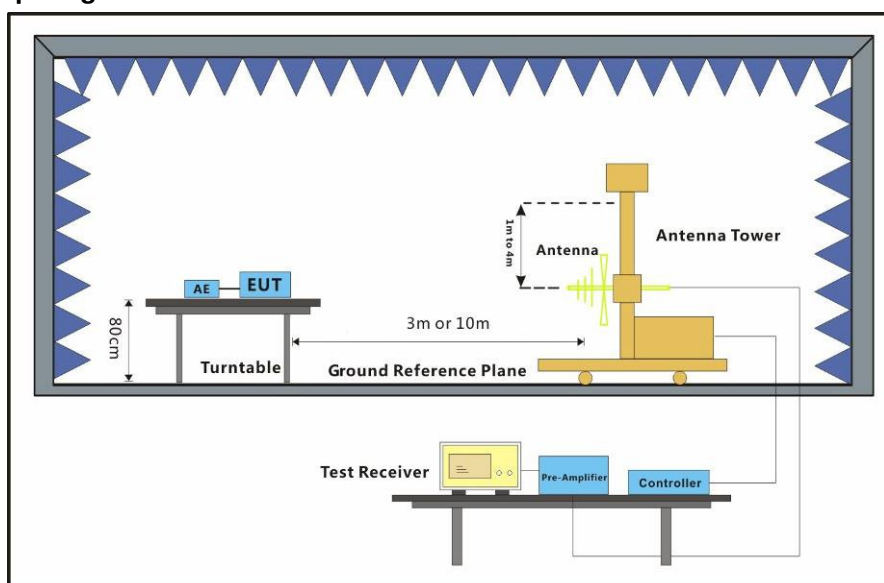
The worst case
for final test:

g: TF Card+Charging_Sound:1kHz Sine Wave and Keep the battery of the EUT in charging mode

h: USB disk+Charging_Sound:1kHz Sine Wave and Keep the battery of the EUT in charging mode



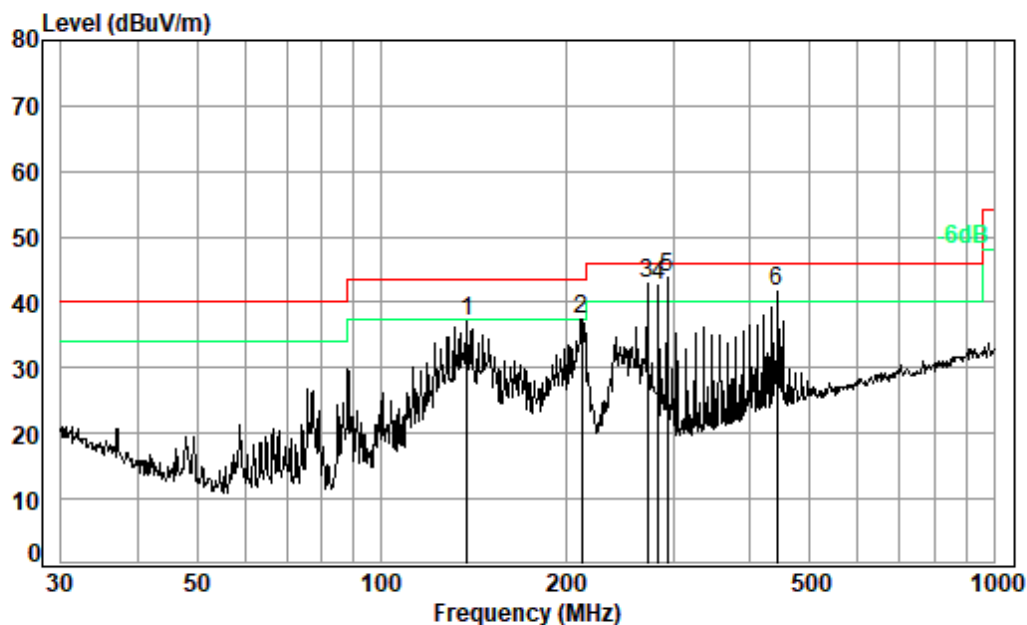
6.2.2 Test Setup Diagram



6.2.3 Measurement Data

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.

Mode:g; Polarization:Horizontal



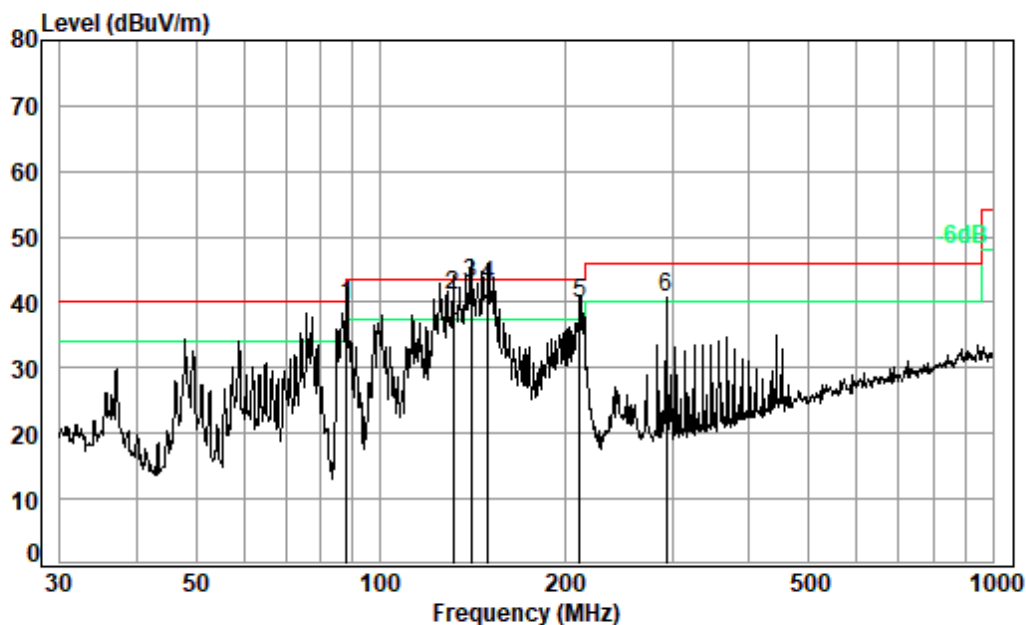
Condition: 3m HORIZONTAL

Job No. : 19437CR

Test mode: g

	Freq	Cable	Ant	Preamp	Read	Limit	Over	
	MHz	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	137.90	1.29	13.64	27.42	49.64	37.15	43.50	-6.35 QP
2	212.27	1.47	16.94	27.13	46.23	37.51	43.50	-5.99 QP
3	272.28	1.78	18.91	26.96	49.15	42.88	46.00	-3.12 QP
4	282.99	1.83	18.92	26.93	48.87	42.69	46.00	-3.31 QP
5 pp	293.08	1.87	19.33	26.91	49.61	43.90	46.00	-2.10 QP
6	443.29	2.38	23.41	27.61	43.51	41.69	46.00	-4.31 QP

Mode:g; Polarization:Vertical



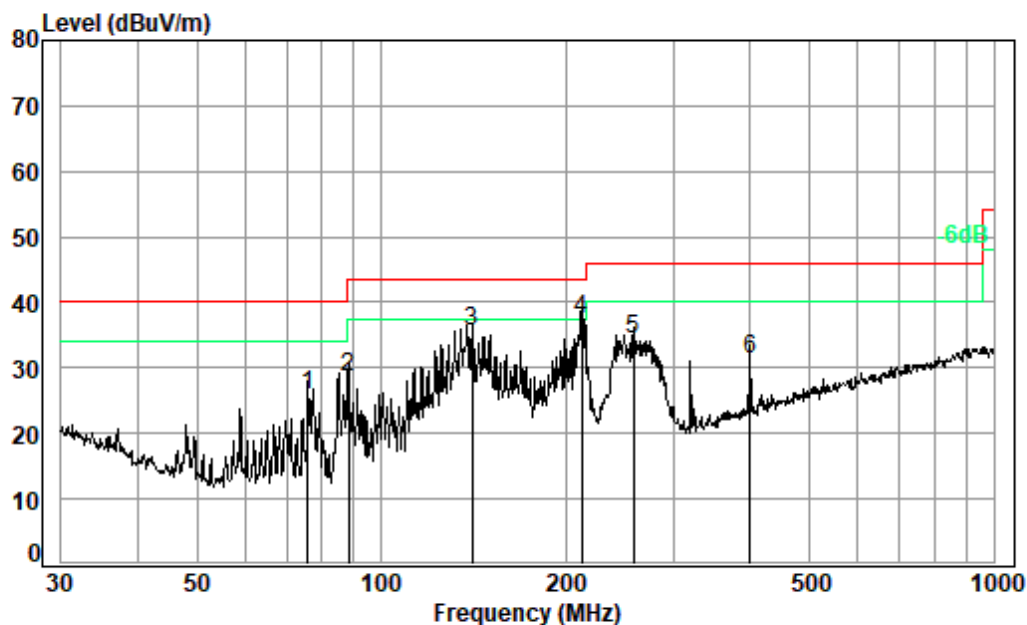
Condition: 3m VERTICAL

Job No. : 19437CR

Test mode: g

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	88.03	1.10	12.89	27.65	53.09	39.43	43.50	-4.07	QP
2	131.30	1.28	13.45	27.45	53.87	41.15	43.50	-2.35	QP
3 pp	140.84	1.30	13.78	27.41	55.21	42.88	43.50	-0.62	QP
4	150.01	1.32	14.63	27.36	53.87	42.46	43.50	-1.04	QP
5	211.53	1.47	16.91	27.13	48.58	39.83	43.50	-3.67	QP
6	293.08	1.87	19.33	26.91	46.44	40.73	46.00	-5.27	QP

Mode:h; Polarization:Horizontal



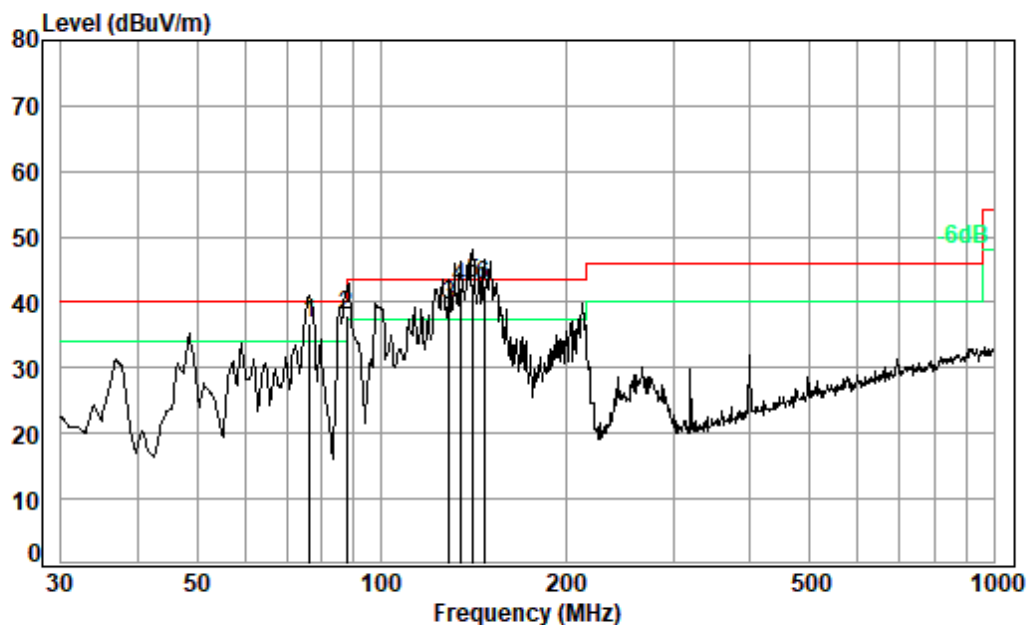
Condition: 3m HORIZONTAL

Job No. : 19437CR

Test mode: h

	Freq	Cable	Ant	Preamp	Read	Limit	Over	
	MHz	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	75.98	0.98	12.31	27.66	40.28	25.91	40.00	-14.09 QP
2	88.34	1.10	12.93	27.65	42.25	28.63	43.50	-14.87 QP
3	140.84	1.30	13.78	27.41	48.04	35.71	43.50	-7.79 QP
4 pp	212.27	1.47	16.94	27.13	46.05	37.33	43.50	-6.17 QP
5	258.33	1.71	19.08	26.99	40.45	34.25	46.00	-11.75 QP
6	400.43	2.20	22.41	27.42	34.27	31.46	46.00	-14.54 QP

Mode:h; Polarization:Vertical



Condition: 3m VERTICAL

Job No. : 19437CR

Test mode: h

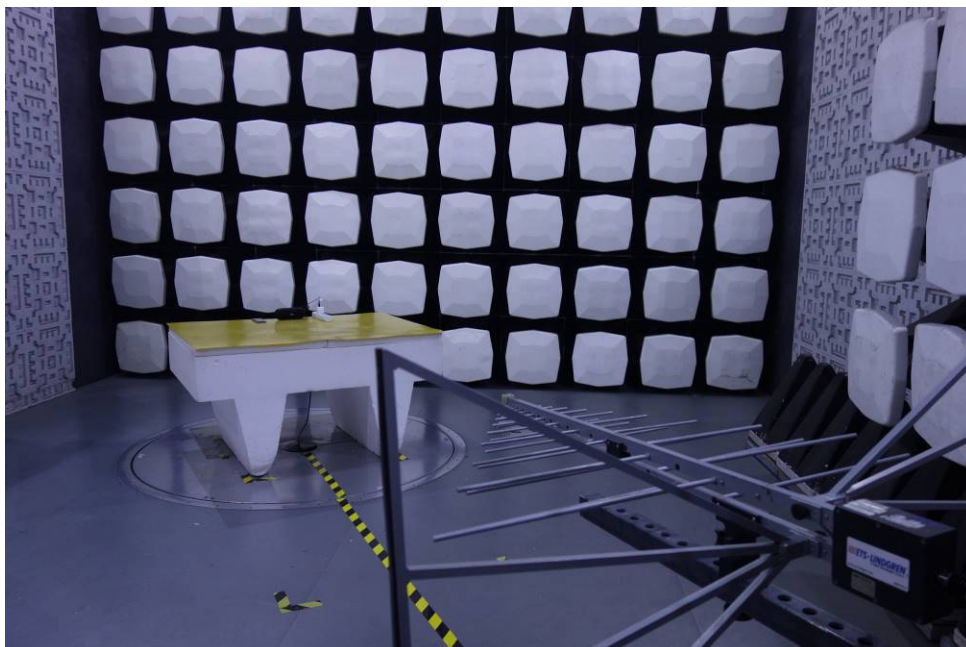
	Freq	Cable	Ant	Preamp	Read	Limit	Over	
	MHz	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	76.51	1.00	12.27	27.66	51.24	36.85	40.00	-3.15 QP
2	87.72	1.10	12.86	27.65	51.75	38.06	40.00	-1.94 QP
3	129.01	1.27	13.38	27.47	52.45	39.63	43.50	-3.87 QP
4	134.56	1.29	13.55	27.44	54.80	42.20	43.50	-1.30 QP
5 pp	141.33	1.30	13.83	27.40	55.26	42.99	43.50	-0.51 QP
6	147.40	1.31	14.39	27.38	54.18	42.50	43.50	-1.00 QP

7 Photographs

7.1 Conducted Emissions at Mains Terminals (150kHz-30MHz) Test Setup



7.2 Radiated Emissions (30MHz-1GHz) Test Setup





7.3 EUT Constructional Details (EUT Photos)

Refer to Appendix A-Photographs of EUT Constructional Details for ZR/2019/A0010.

- End of the Report -

