

FCC EMC Test Report

Report No.: JYTSZ-R01-2400134G1
Applicant: Hangzhou Roombanker Technology Co., Ltd.
Address of Applicant: A#801 Wantong center, Hangzhou, China

Equipment Under Test (EUT)

Product Name: Smart Gateway
Model No.: DSGW-095, DSGW-095-1, DSGW-095-2, DSGW-095-3, DSGW-095-4, DSGW-095-X(X:1~29)
Trade Mark: Roombanker
FCC ID: 2AUXBDSGW-095
Applicable Standards: FCC CFR Title 47 Part 15B
Date of Sample Receipt: 25 Mar., 2024
Date of Test: 26 Mar., to 08 May, 2024
Date of report Issued: 09 Aug., 2024
Test Result: PASS

Project by:

Logan Li

Date:

09 Aug., 2024

Reviewed by:

Project Engineer

Jietao Zhang

Senior Engineer

Date:

09 Aug., 2024

Approved by:

Jianwei Wei

Manager**Date:**

09 Aug., 2024

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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1 Version

Version No.	Date	Description
00	09 May, 2024	Original
01	09 Aug., 2024	Update Page 15

2 Contents

Page

Cover Page	1
1 Version	2
2 Contents.....	3
3 General Information.....	4
3.1 Client Information	4
3.2 General Description of E.U.T.	4
3.3 Test Mode	4
3.4 Description of Test Auxiliary Equipment	5
3.5 Description of Cable Used.....	5
3.6 Measurement Uncertainty	5
3.7 Additions to, Deviations, or Exclusions from the Method	5
3.8 Laboratory Facility	5
3.9 Laboratory Location.....	6
3.10 Test Instruments List.....	6
4 Measurement Setup and Procedure	7
4.1 Test Setup	7
4.2 Test Procedure	9
5 Test Results.....	10
5.1 Summary	10
5.1.1 Clause and data summary	10
5.1.2 Test Limit.....	10
5.2 Conducted Emission	11
5.3 Radiated Emission	15

3 General Information

3.1 Client Information

Applicant:	Hangzhou Roombanker Technology Co., Ltd.
Address:	A#801 Wantong center, Hangzhou, China
Manufacturer/Factory:	Zhejiang Dusun Electron Co., Ltd.
Address:	No.640 Feng Qing St, DeQing Zhejiang China

3.2 General Description of E.U.T.

Product Name:	Smart Gateway
Model No.:	DSGW-095, DSGW-095-1, DSGW-095-2, DSGW-095-3, DSGW-095-4, DSGW-095-X(X:1~29)
Power Supply:	DC 5V 3A by Adapter and DC 48V 0.32A POE power supply
Test Sample Condition:	The test samples were provided in good working order with no visible defects.
Remark:	DSGW-095, DSGW-095-1, DSGW-095-2, DSGW-095-3, DSGW-095-4, DSGW-095-X(X:1~29) were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model name.

3.3 Test Mode

Operating Mode	Detail Description
Adapter power supply	Keep the EUT in Adapter power supply Exchange Data
POE power supply	Keep the EUT in POE power supply Exchange Data

The sample was placed 0.8m above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

3.4 Description of Test Auxiliary Equipment

Manufacturer	Description	Model	S/N	FCC ID/DoC
KEYU	Adapter1	RWX-AA050100G	/	/
CHEN XU	Adapter2	RP028-4800320Z		

3.5 Description of Cable Used

Cable Type	Description	Length	From	To
Network cable	Network cable	100CM	/	/
Type C	USB cable	100CM	/	/

3.6 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Conducted Emission for LISN (9kHz ~ 150kHz)	3.57 dB
Conducted Emission for LISN (150kHz ~ 30MHz)	3.14 dB
Radiated Emission (30MHz ~ 200MHz) (3m SAC)	4.6 dB
Radiated Emission (200MHz ~ 1000MHz) (3m SAC)	5.8 dB
Radiated Emission (1GHz ~ 6GHz) (3m SAC)	4.5 dB
Radiated Emission (6GHz ~ 18GHz) (3m SAC)	4.7 dB
Radiated Emission (30MHz ~ 200MHz) (10m SAC)	4.3 dB
Radiated Emission (200MHz ~ 1000MHz) (10m SAC)	4.3 dB

Note: All the measurement uncertainty value were shown with a coverage $k=2$ to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

3.7 Additions to, Deviations, or Exclusions from the Method

No

3.8 Laboratory Facility

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

● **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

3.9 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: <http://jyt.lets.com>

3.10 Test Instruments List

Radiated Emission(3m SAC):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	ETS	9m*6m*6m	WXJ001-1	04-14-2021	04-13-2026
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ002	01-09-2024	01-08-2025
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-2	01-05-2024	01-04-2025
Pre-amplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9743B	WXJ001-2	12-27-2023	12-26-2024
Pre-amplifier (1GHz ~ 18GHz)	SKET	LNPA_0118G-50	WXJ001-3	12-27-2023	12-26-2024
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	12-27-2023	12-26-2024
Spectrum Analyzer	Rohde & Schwarz	FSP 30	WXJ004	12-27-2023	12-26-2024
Coaxial Cable (30MHz ~ 1GHz)	JYTSZ	JYT3M-1G-NN-8M	WXG001-4	01-17-2024	01-16-2025
Coaxial Cable (1GHz ~ 18GHz)	JYTSZ	JYT3M-18G-NN-8M	WXG001-5	01-17-2024	01-16-2025
Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/A	
Test Software	Tonscend	TS+	Version: 3.0.0.1		

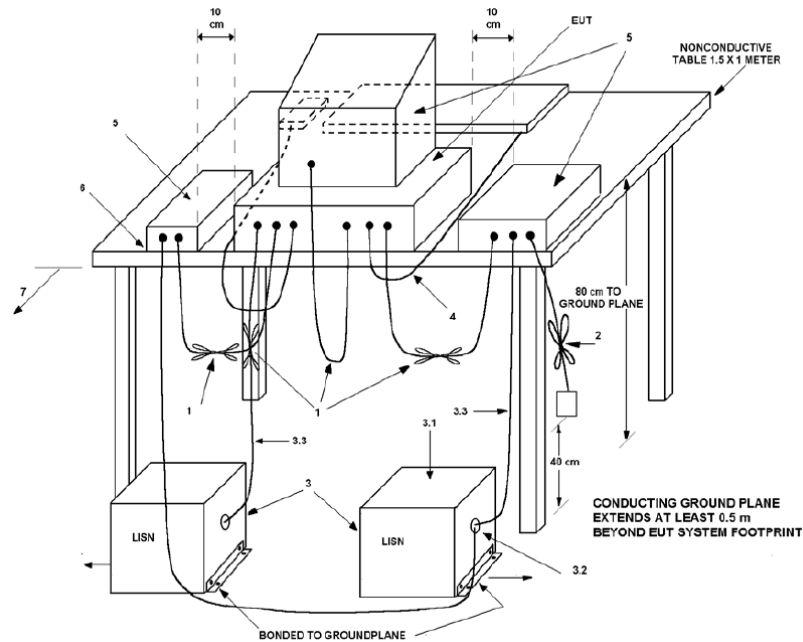
Radiated Emission(10m SAC):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
10m SAC	ETS	RFSD-100-F/A	WXJ090	04-28-2021	04-27-2026
BiConiLog Antenna	SCHWARZBECK	VULB 9168	WXJ090-1	12-28-2023	12-27-2024
BiConiLog Antenna	SCHWARZBECK	VULB 9168	WXJ090-2	12-28-2023	12-27-2024
EMI Test Receiver	R&S	ESR 3	WXJ090-3	12-27-2023	12-26-2024
EMI Test Receiver	R&S	ESR 3	WXJ090-4	12-27-2023	12-26-2024
Low Pre-amplifier	Bost	LNA 0920N	WXJ090-6	12-27-2023	12-26-2024
Low Pre-amplifier	Bost	LNA 0920N	WXJ090-7	12-27-2023	12-26-2024
Cable	Bost	JYT10M-1G-NN-10M	WXG002-7	01-17-2024	01-16-2025
Cable	Bost	JYT10M-1G-NN-10M	WXG002-8	01-17-2024	01-16-2025
Test Software	R&S	EMC32	Version: 10.50.40		

Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESR3	WXJ003-2	07-05-2023	07-04-2024
LISN	Schwarzbeck	NSLK 8127	QCJ001-13	12-27-2023	12-26-2024
LISN	Rohde & Schwarz	ESH3-Z5	WXJ005-1	12-27-2023	12-26-2024
LISN Coaxial Cable (9kHz ~ 30MHz)	JYTSZ	JYTCE-1G-NN-2M	WXG003-1	01-17-2024	01-16-2025
RF Switch	TOP PRECISION	RSU0301	WXG003	N/A	
Test Software	AUDIX	E3	Version: 6.110919b		

4 Measurement Setup and Procedure

4.1 Test Setup

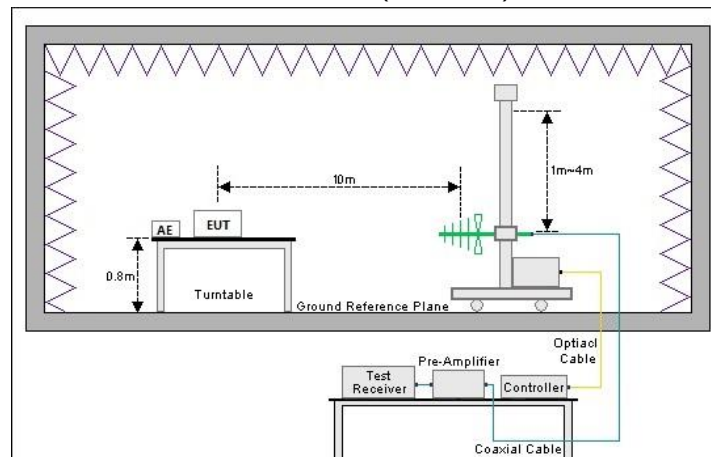
1) Conducted emission measurement:

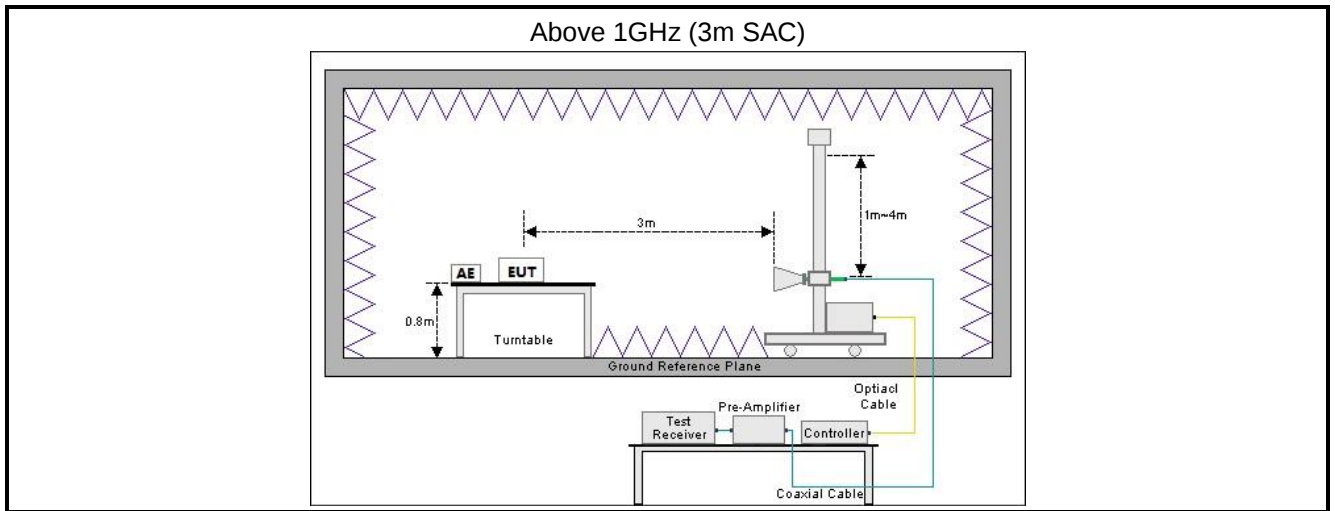


Note: The detailed descriptions please refer to Figure 8 of ANSI C63.4:2014.

2) Radiated emission measurement:

Below 1GHz (10m SAC)





4.2 Test Procedure

Test method	Test step
Conducted emission	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4 on conducted measurement.
Radiated emission	For below 1GHz: 1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 10 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 10 m. 2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data. For above 1GHz: 1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m. 2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.

5 Test Results

5.1 Summary

5.1.1 Clause and data summary

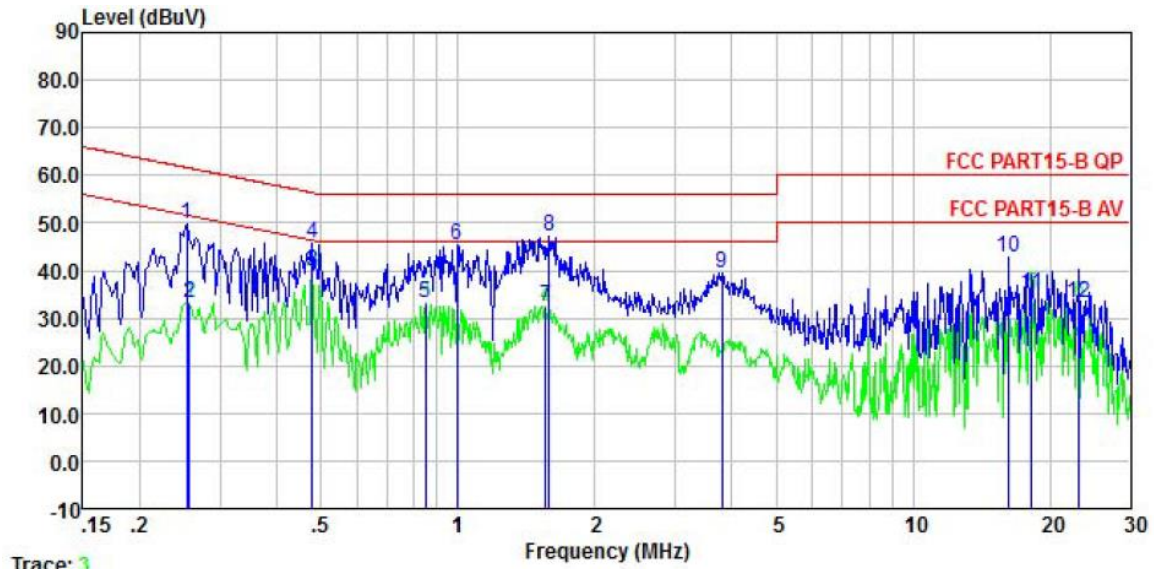
Test items	Standard clause	Test data	Result
Conducted Emission	Part 15.107	See Section 5.2	Pass
Radiated Emission	Part 15.109	See Section 5.3	Pass
Remark: 1. The EUT is a Class B digital device. 2. Pass: The EUT complies with the essential requirements in the standard. 3. N/A: Not Applicable.			
Test Method:	ANSI C63.4:2014		

5.1.2 Test Limit

Test items	Limit																																																					
Conducted Emission	<table><tr><th rowspan="2">Frequency (MHz)</th><th colspan="2">Class A Limit (dBμV)</th><th colspan="2">Class B Limit (dBμV)</th></tr><tr><th>Quasi-Peak</th><th>Average</th><th>Quasi-Peak</th><th>Average</th></tr><tr><td>0.15 – 0.5</td><td>79</td><td>66</td><td>66 to 56 Note 1</td><td>56 to 46 Note 1</td></tr><tr><td>0.5 – 5</td><td>73</td><td>60</td><td>56</td><td>46</td></tr><tr><td>5 – 30</td><td>73</td><td>60</td><td>60</td><td>50</td></tr><tr><td colspan="5">Note 1: The limit level in dBμV decreases linearly with the logarithm of frequency.</td></tr><tr><td colspan="5">Note 2: The more stringent limit applies at transition frequencies.</td></tr></table>	Frequency (MHz)	Class A Limit (dBμV)		Class B Limit (dBμV)		Quasi-Peak	Average	Quasi-Peak	Average	0.15 – 0.5	79	66	66 to 56 Note 1	56 to 46 Note 1	0.5 – 5	73	60	56	46	5 – 30	73	60	60	50	Note 1: The limit level in dBμV decreases linearly with the logarithm of frequency.					Note 2: The more stringent limit applies at transition frequencies.																							
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Radiated Emission	<table><tr><th rowspan="2">Frequency (MHz)</th><th colspan="2">Class A Limit (dBμV/m)</th><th colspan="2">Class B Limit (dBμV/m)</th></tr><tr><th>Quasi-Peak @ 3m</th><th>Quasi-Peak @ 10m</th><th>Quasi-Peak @ 3m</th><th>Quasi-Peak @ 10m</th></tr><tr><td>30 – 88</td><td>49.0</td><td>39.0</td><td>40.0</td><td>30.0</td></tr><tr><td>88 – 216</td><td>53.5</td><td>43.5</td><td>43.5</td><td>33.5</td></tr><tr><td>216 – 960</td><td>56.0</td><td>46.0</td><td>46.0</td><td>36.0</td></tr><tr><td>960 – 1000</td><td>60.0</td><td>50.0</td><td>54.0</td><td>44.0</td></tr><tr><td colspan="5">Note: The more stringent limit applies at transition frequencies.</td></tr><tr><th rowspan="2">Frequency</th><th colspan="2">Class A Limit (dBμV/m) @ 3m</th><th colspan="2">Class B Limit (dBμV/m) @ 3m</th></tr><tr><th>Average</th><th>Peake</th><th>Average</th><th>Peake</th></tr><tr><td>Above 1 GHz</td><td>60.0</td><td>80.0</td><td>54.0</td><td>74.0</td></tr><tr><td colspan="5">Note: The measurement bandwidth shall be 1 MHz or greater.</td></tr></table>	Frequency (MHz)	Class A Limit (dBμV/m)		Class B Limit (dBμV/m)		Quasi-Peak @ 3m	Quasi-Peak @ 10m	Quasi-Peak @ 3m	Quasi-Peak @ 10m	30 – 88	49.0	39.0	40.0	30.0	88 – 216	53.5	43.5	43.5	33.5	216 – 960	56.0	46.0	46.0	36.0	960 – 1000	60.0	50.0	54.0	44.0	Note: The more stringent limit applies at transition frequencies.					Frequency	Class A Limit (dBμV/m) @ 3m		Class B Limit (dBμV/m) @ 3m		Average	Peake	Average	Peake	Above 1 GHz	60.0	80.0	54.0	74.0	Note: The measurement bandwidth shall be 1 MHz or greater.				
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5.2 Conducted Emission

Product name:	Smart Gateway	Product model:	DSGW-095
Test by:	Asher	Test mode:	Adapter power supply
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz		

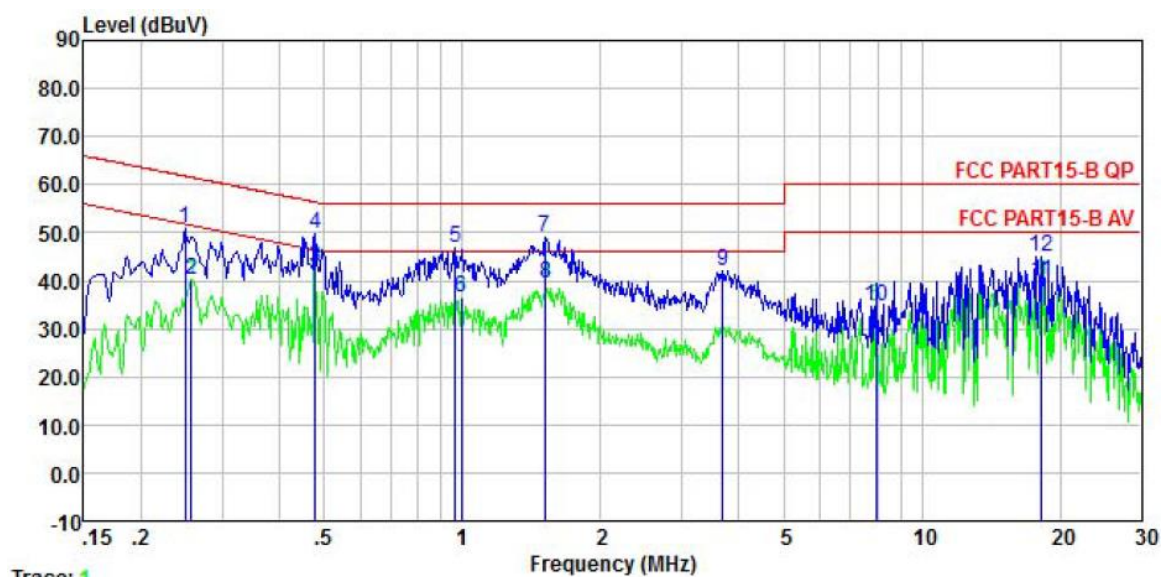


	Freq	Read Level	LISN Factor	Aux Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dB	dBuV	dBuV	dB	
1	0.253	39.83	0.20	0.00	9.88	0.01	49.92	61.64	-11.72	QP
2	0.258	23.19	0.20	0.00	9.88	0.01	33.28	51.51	-18.23	Average
3	0.479	29.84	0.20	0.00	9.88	0.03	39.95	46.36	-6.41	Average
4	0.479	35.69	0.20	0.00	9.88	0.03	45.80	56.36	-10.56	QP
5	0.848	22.97	0.20	0.00	9.88	0.04	33.09	46.00	-12.91	Average
6	0.994	35.29	0.20	0.00	9.88	0.05	45.42	56.00	-10.58	QP
7	1.560	22.18	0.20	0.00	9.88	0.15	32.41	46.00	-13.59	Average
8	1.585	37.07	0.20	0.00	9.88	0.16	47.31	56.00	-8.69	QP
9	3.799	29.15	0.20	0.00	9.89	0.08	39.32	56.00	-16.68	QP
10	16.226	32.25	0.33	0.00	9.94	0.16	42.68	60.00	-17.32	QP
11	18.232	24.38	0.37	0.00	9.95	0.15	34.85	50.00	-15.15	Average
12	23.140	22.75	0.40	0.00	9.99	0.17	33.31	50.00	-16.69	Average

Remark:

1. Level = Read level + LISN Factor + Cable Loss.

Product name:	Smart Gateway	Product model:	DSGW-095
Test by:	Asher	Test mode:	Adapter power supply
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz		



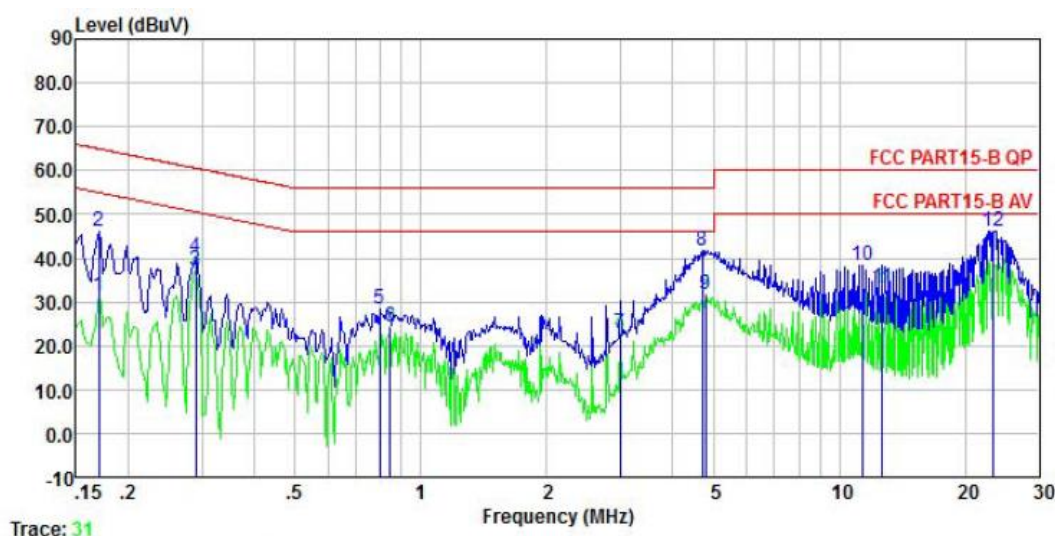
Trace: 1

	Freq	Read Level	LISN Factor	Aux Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dB	dBuV	dBuV	dB	
1	0.249	40.87	0.20	0.00	9.88	0.01	50.96	61.78	-10.82	QP
2	0.258	30.02	0.20	0.00	9.88	0.01	40.11	51.51	-11.40	Average
3	0.479	32.50	0.20	0.00	9.88	0.03	42.61	46.36	-3.75	Average
4	0.479	39.81	0.20	0.00	9.88	0.03	49.92	56.36	-6.44	QP
5	0.963	36.52	0.20	0.00	9.88	0.05	46.65	56.00	-9.35	QP
6	0.994	26.41	0.20	0.00	9.88	0.05	36.54	46.00	-9.46	Average
7	1.511	38.64	0.26	0.00	9.88	0.15	48.93	56.00	-7.07	QP
8	1.519	29.11	0.26	0.00	9.88	0.15	39.40	46.00	-6.60	Average
9	3.681	31.93	0.30	0.00	9.89	0.08	42.20	56.00	-13.80	QP
10	7.935	24.25	0.33	0.00	9.90	0.10	34.58	50.00	-15.42	Average
11	18.232	29.33	0.40	0.00	9.95	0.15	39.83	50.00	-10.17	Average
12	18.232	34.46	0.40	0.00	9.95	0.15	44.96	60.00	-15.04	QP

Remark:

1. Level = Read level + LISN Factor + Cable Loss.

Product name:	Smart Gateway	Product model:	DSGW-095
Test by:	Asher	Test mode:	POE power supply
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz		

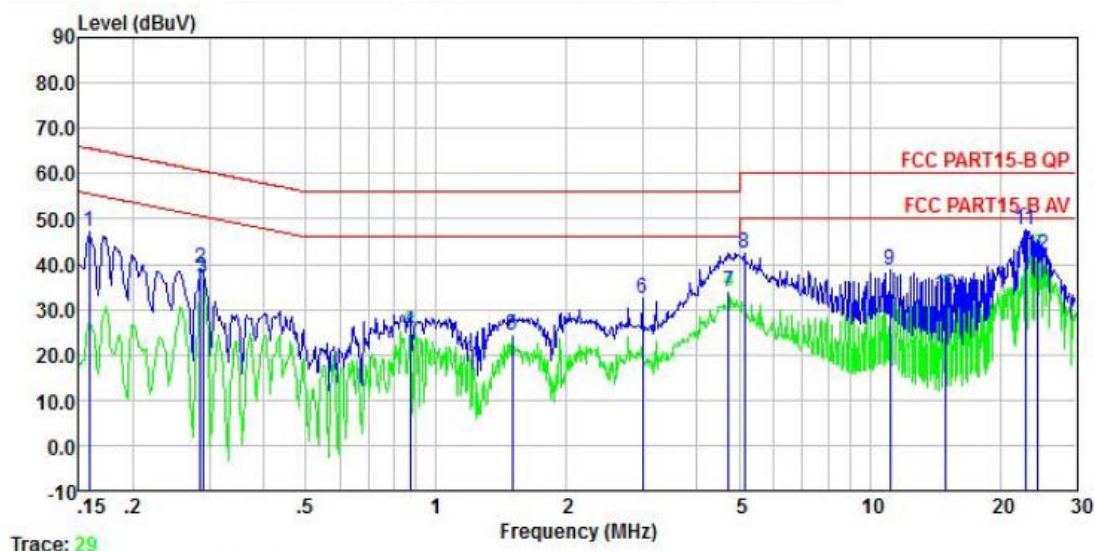


	Freq	Read Level	LISN Factor	Aux Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dB	dBuV	dBuV	dB	
1	0.170	21.28	0.20	0.00	9.88	0.01	31.37	54.94	-23.57	Average
2	0.170	35.85	0.20	0.00	9.88	0.01	45.94	64.94	-19.00	QP
3	0.289	27.04	0.20	0.00	9.88	0.03	37.15	50.54	-13.39	Average
4	0.289	29.96	0.20	0.00	9.88	0.03	40.07	60.54	-20.47	QP
5	0.796	18.20	0.20	0.00	9.88	0.03	28.31	56.00	-27.69	QP
6	0.844	14.17	0.20	0.00	9.88	0.04	24.29	46.00	-21.71	Average
7	2.993	12.77	0.20	0.00	9.89	0.07	22.93	46.00	-23.07	Average
8	4.696	31.44	0.20	0.00	9.89	0.09	41.62	56.00	-14.38	QP
9	4.797	21.42	0.20	0.00	9.89	0.09	31.60	46.00	-14.40	Average
10	11.377	28.24	0.23	0.00	9.92	0.11	38.50	60.00	-21.50	QP
11	12.649	22.90	0.26	0.00	9.92	0.11	33.19	50.00	-16.81	Average
12	23.387	35.63	0.40	0.00	9.99	0.17	46.19	60.00	-13.81	QP

Remark:

1. Level = Read level + LISN Factor + Cable Loss.

Product name:	Smart Gateway	Product model:	DSGW-095
Test by:	Asher	Test mode:	POE power supply
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz		



	Freq	Read Level	LISN Factor	Aux Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dB	dBuV	dBuV	dB	
1	0.158	36.92	0.20	0.00	9.88	0.01	47.01	65.56	-18.55	QP
2	0.286	29.11	0.20	0.00	9.88	0.03	39.22	60.63	-21.41	QP
3	0.289	26.92	0.20	0.00	9.88	0.03	37.03	50.54	-13.51	Average
4	0.871	14.84	0.20	0.00	9.88	0.04	24.96	46.00	-21.04	Average
5	1.495	14.03	0.26	0.00	9.88	0.14	24.31	46.00	-21.69	Average
6	2.993	22.29	0.30	0.00	9.89	0.07	32.55	56.00	-23.45	QP
7	4.721	23.47	0.30	0.00	9.89	0.09	33.75	46.00	-12.25	Average
8	5.139	32.18	0.30	0.00	9.89	0.09	42.46	60.00	-17.54	QP
9	11.139	28.39	0.40	0.00	9.92	0.11	38.82	60.00	-21.18	QP
10	14.986	22.65	0.40	0.00	9.93	0.14	33.12	50.00	-16.88	Average
11	22.896	37.10	0.40	0.00	9.99	0.16	47.65	60.00	-12.35	QP
12	24.400	31.43	0.40	0.00	10.00	0.18	42.01	50.00	-7.99	Average

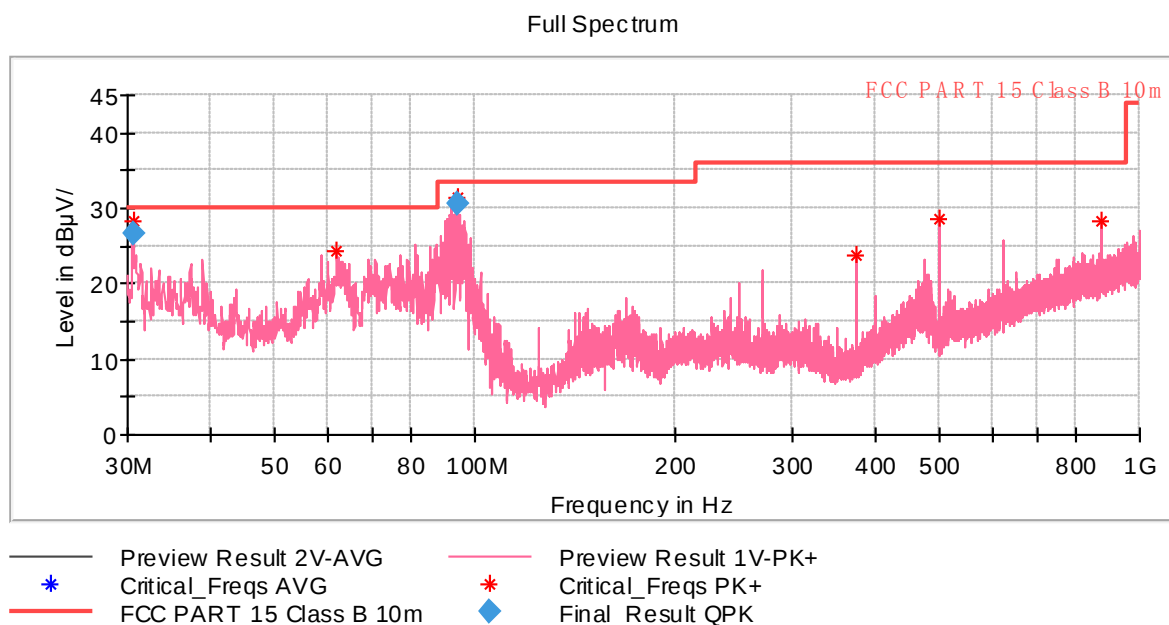
Remark:

1. Level = Read level + LISN Factor + Cable Loss.

5.3 Radiated Emission

Below 1GHz:

Product Name:	Smart Gateway	Product Model:	DSGW-095
Test By:	Asher	Test mode:	Adapter power supply
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz		



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μV/m)	Limit (dB μV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.582000	28.21	30.00	1.79	100.0	V	1.0	-17.4
62.010000	24.34	30.00	5.66	100.0	V	330.0	-17.4
94.359500	31.44	33.50	2.06	100.0	V	43.0	-20.0
374.980500	23.87	36.0	12.13	100.0	V	202.0	-13.0
499.965000	28.52	36.00	7.48	100.0	V	169.0	-9.6
875.015500	28.27	36.00	7.73	100.0	V	60.0	-1.7

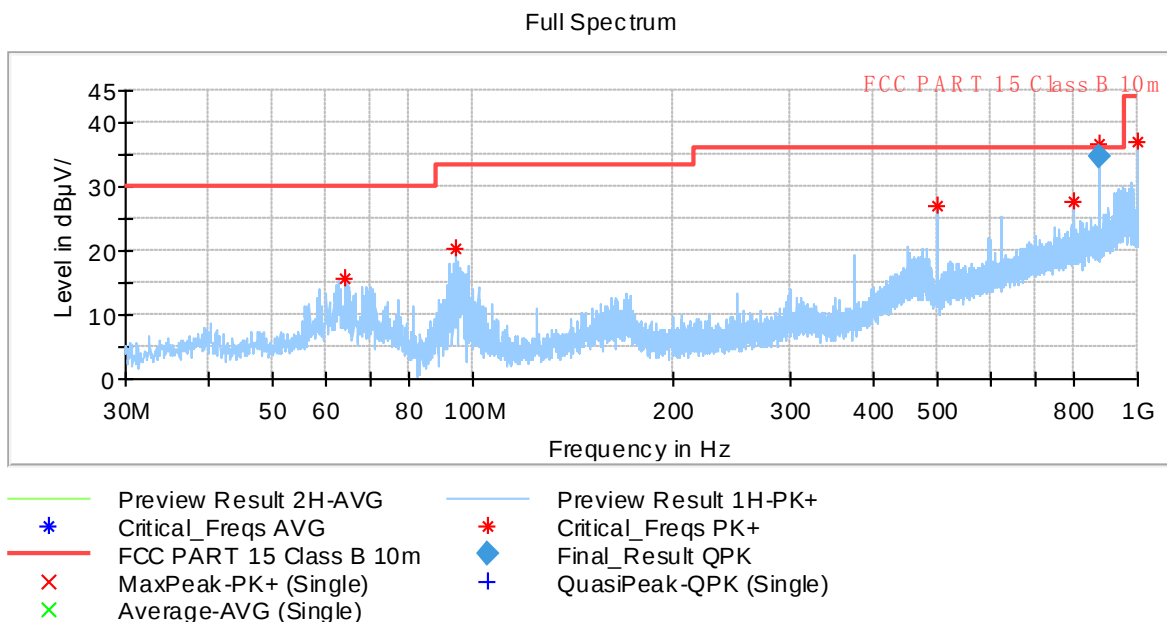
Final_Result

Frequency (MHz)	QuasiPeak (dB μV/m)	Limit (dB μV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.600000	26.63	30.00	3.37	100.0	V	1.0	-17.4
94.359500	30.43	33.50	3.07	100.0	V	43.0	-20.0

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Smart Gateway	Product Model:	DSGW-095
Test By:	Asher	Test mode:	Adapter power supply
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz		



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
64.095500	15.61	30.00	14.39	100.0	H	221.0	-17.8
94.359500	20.17	33.50	13.33	100.0	H	229.0	-20.0
500.013500	26.87	36.00	9.13	100.0	H	77.0	-9.6
799.937500	27.52	36.00	8.48	100.0	H	250.0	-2.4
875.015500	36.77	36.00	-0.77	100.0	H	196.0	-1.7
1000.000000	37.12	44.00	6.88	100.0	H	342.0	0.0

Final_Result

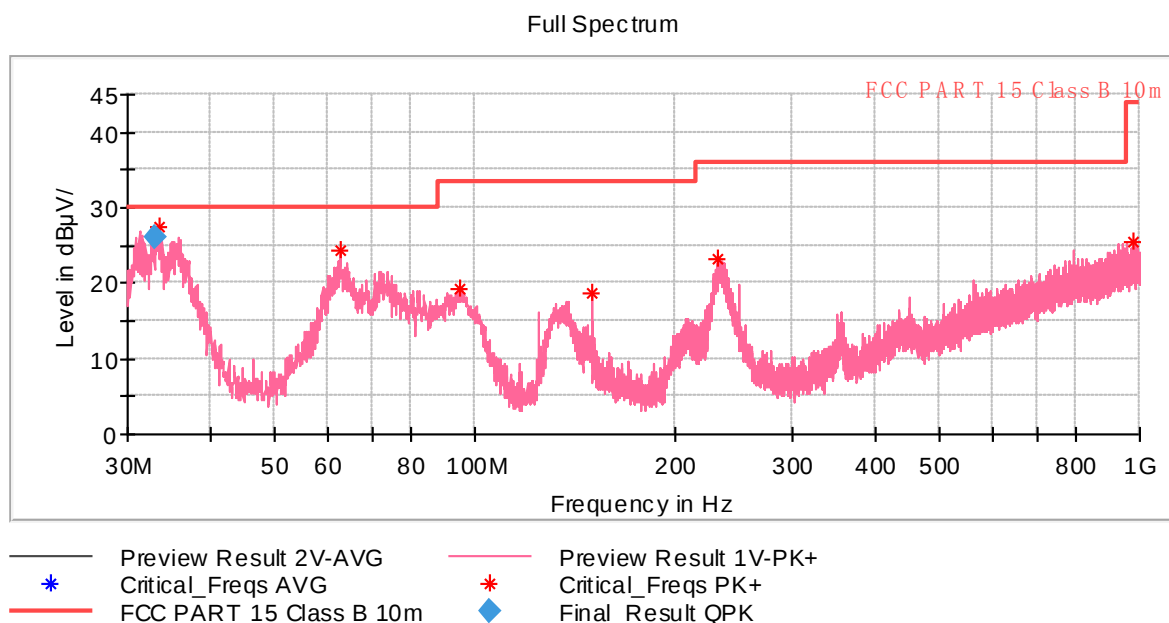
Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
875.015500	34.58	36.00	1.42	100.0	H	196.0	-1.7

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).

Below 1GHz:

Product Name:	Smart Gateway	Product Model:	DSGW-095
Test By:	Asher	Test mode:	POE power supply
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz		



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
33.395000	27.36	30.00	2.64	100.0	V	103.0	-17.2
62.737500	24.33	30.00	5.67	100.0	V	110.0	-17.6
94.990000	19.32	33.50	14.18	100.0	V	42.0	-19.9
149.989000	18.76	33.50	14.74	100.0	V	280.0	-15.3
232.099500	23.27	36.00	12.73	100.0	V	131.0	-17.6
977.641500	25.56	44.00	18.44	100.0	V	56.0	-0.1

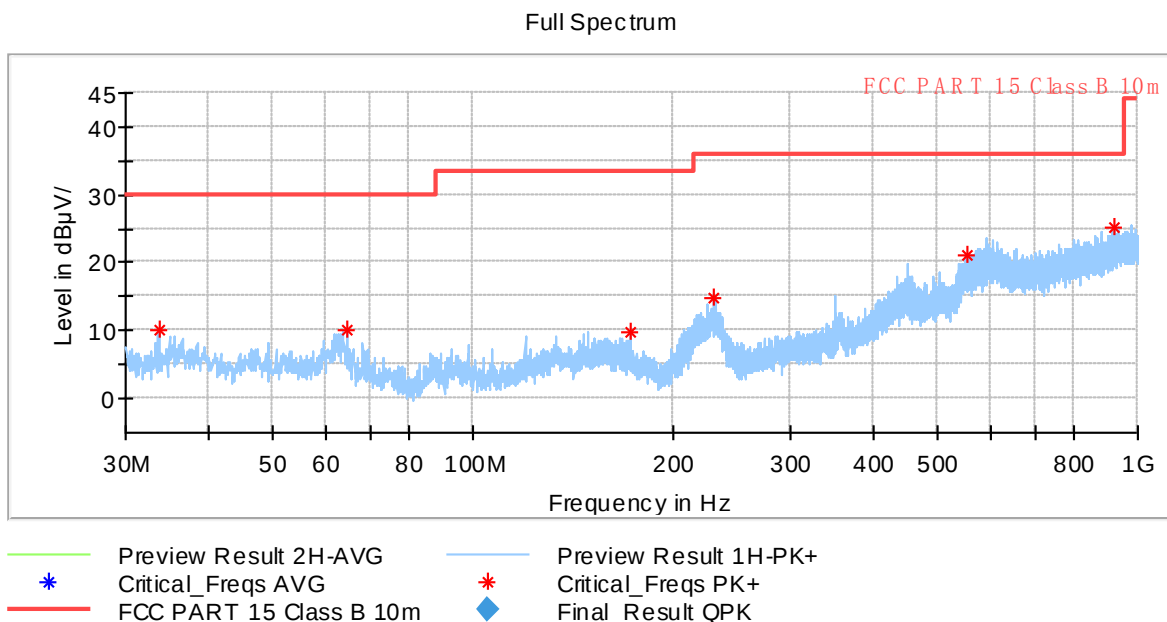
Final Result

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
32.995000	26.12	30.00	3.88	100.0	V	103.0	-17.2

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Smart Gateway	Product Model:	DSGW-095
Test By:	Asher	Test mode:	POE power supply
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz		



Critical_Freqs

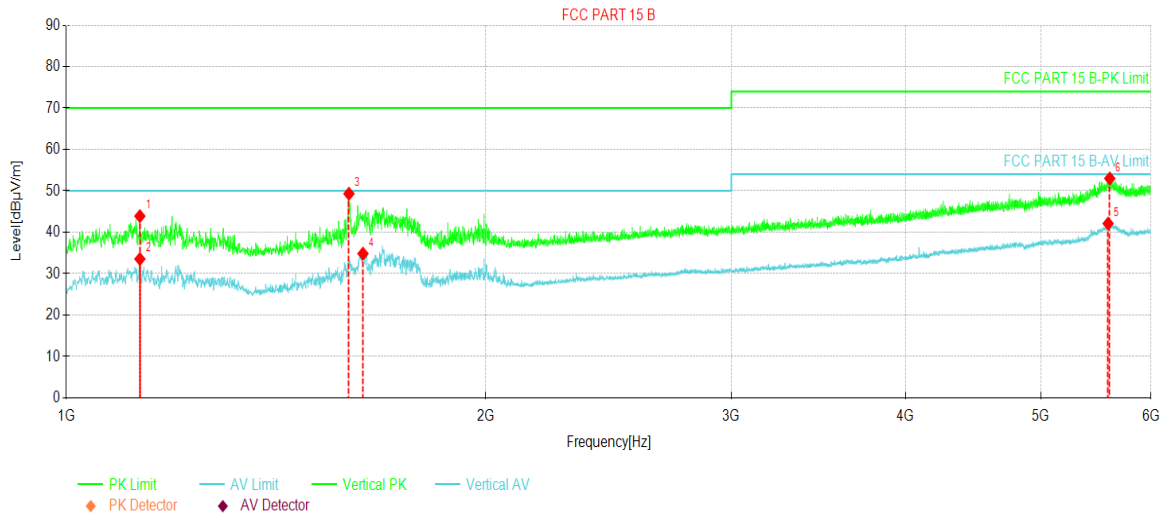
Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
172.056500	9.77	33.50	23.73	100.0	H	49.0	-16.3
64.580500	10.01	30.00	19.99	100.0	H	85.0	-17.9
33.637500	10.00	30.00	20.00	100.0	H	128.0	-17.1
552.005500	20.99	36.00	15.01	100.0	H	254.0	-7.8
919.102000	25.29	36.00	10.71	100.0	H	265.0	-0.9
230.499000	14.67	36.00	21.33	100.0	H	314.0	-17.7

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).

Above 1GHz:

Product Name:	Smart Gateway	Product Model:	DSGW-095
Test By:	Robin	Test mode:	Adapter power supply
Test Frequency:	1000 MHz ~ 6000 MHz	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz		



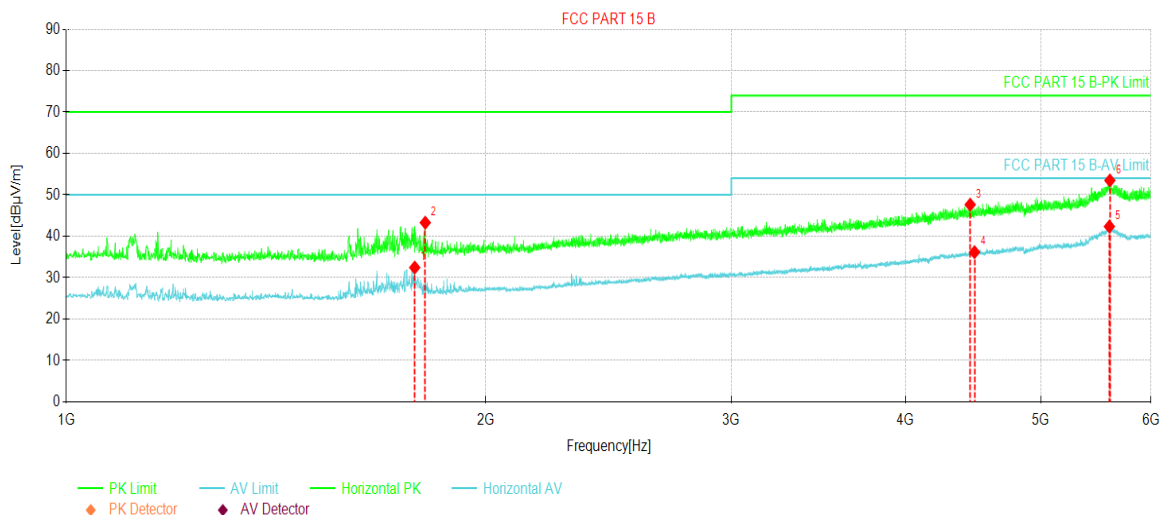
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	1129.39	66.80	43.90	-22.90	70.00	26.10	PK	Vertical
2	1129.39	56.44	33.54	-22.90	50.00	16.46	AV	Vertical
3	1595.07	72.10	49.31	-22.79	70.00	20.69	PK	Vertical
4	1632.57	57.54	34.84	-22.70	50.00	15.16	AV	Vertical
5	5589.94	46.64	42.11	-4.53	54.00	11.89	AV	Vertical
6	5604.95	57.39	52.99	-4.40	74.00	21.01	PK	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Smart Gateway	Product Model:	DSGW-095
Test By:	Robin	Test mode:	Adapter power supply
Test Frequency:	1000 MHz ~ 6000 MHz	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz		



Suspected Data List

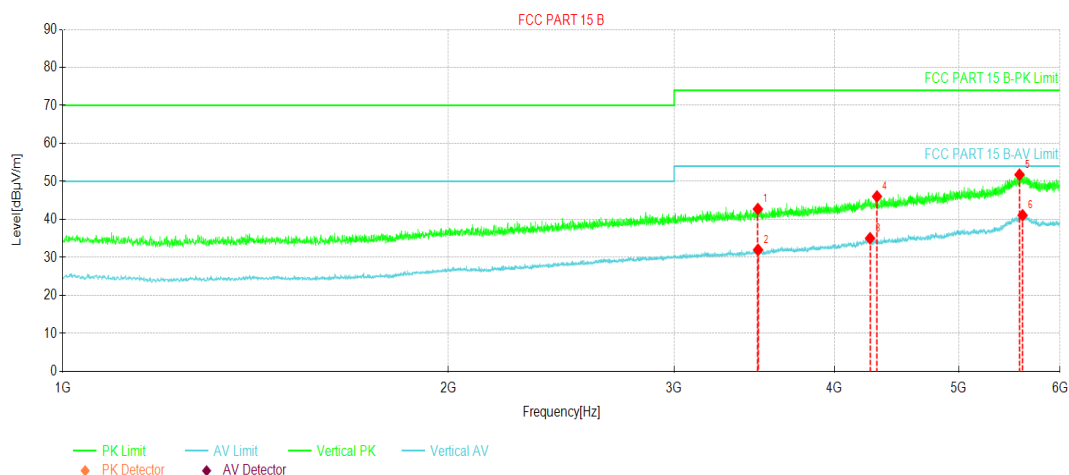
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	1778.22	54.72	32.44	-22.28	50.00	17.56	AV	Horizontal
2	1809.47	65.43	43.28	-22.15	70.00	26.72	PK	Horizontal
3	4451.05	59.38	47.63	-11.75	74.00	26.37	PK	Horizontal
4	4482.93	47.75	36.16	-11.59	54.00	17.84	AV	Horizontal
5	5601.20	46.72	42.36	-4.36	54.00	11.64	AV	Horizontal
6	5606.20	57.89	53.48	-4.41	74.00	20.52	PK	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).

Above 1GHz:

Product Name:	Smart Gateway	Product Model:	DSGW-095
Test By:	Robin	Test mode:	POE power supply
Test Frequency:	1000 MHz ~ 6000 MHz	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz		



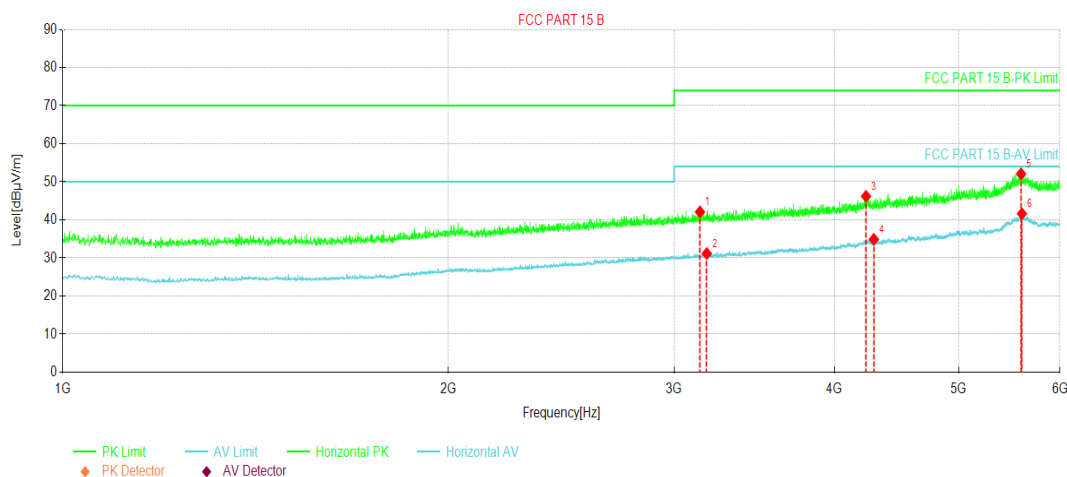
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	3486.56	58.57	42.74	-15.83	74.00	31.26	PK	Vertical
2	3487.81	47.81	31.98	-15.83	54.00	22.02	AV	Vertical
3	4264.78	47.55	35.03	-12.52	54.00	18.97	PK	Vertical
4	4318.53	58.35	46.04	-12.31	74.00	27.96	AV	Vertical
5	5578.07	56.49	51.76	-4.73	74.00	22.24	AV	Vertical
6	5609.32	45.53	41.09	-4.44	54.00	12.91	PK	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Smart Gateway	Product Model:	DSGW-095
Test By:	Robin	Test mode:	POE power supply
Test Frequency:	1000 MHz ~ 6000 MHz	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz		



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	3142.14	59.00	42.08	-16.92	74.00	31.92	AV	Horizontal
2	3180.89	47.95	31.14	-16.81	54.00	22.86	PK	Horizontal
3	4234.15	58.84	46.20	-12.64	74.00	27.80	PK	Horizontal
4	4294.16	47.30	34.89	-12.41	54.00	19.11	AV	Horizontal
5	5594.32	56.54	52.09	-4.45	74.00	21.91	AV	Horizontal
6	5602.45	46.00	41.63	-4.37	54.00	12.37	PK	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).

-----End of report-----