



Candy, Li

Candy Li

TESTREPORT

Applicant Name : Grandstream Networks, Inc.

Address: 126 Brookline Ave, 3rd Floor Boston, MA 02215, USA

ReportNumber: SZNS220407-12824E-RF-00A

FCC ID: YZZGXV3480

Test Standard (s)

FCC PART 15B, CLASS B

Sample Description

Audy. Yu

Andy Yu

Product Type: High-End Smart Video Phone for Android™

Model No.: GXV3480

Trade Mark: GRANDSTREAM

Date Received: 2022/04/07 Report Date: 2022/07/14

Test Result: Pass*

Prepared and Checked By: Approved By:

EMC Engineer EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★".

Shenzhen Accurate Technology Co., Ltd. is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk **. Customer model name, addresses, names, trademarks etc. are not considered data.

This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

Shenzhen Accurate Technology Co., Ltd.

1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China
Tel: +86 755-26503290 Fax: +86 755-26503396 Web: www.atc-lab.com

Version 1 2021-11-09 Page 1 of 33 FCC-EMC

^{*} In the configuration tested, the EUT complied with the standards above.

TABLE OF CONTENTS

1.	TEST	T RESULTS SUMMARY	4
2.	GEN	ERAL INFORMATION	5
	2.1.	Description of Device (EUT)	5
	2.2.	Test Mode	
	2.3.	Description of Test Facility	7
	2.4.	Measurement Uncertainty	7
3.	MEA	SURING DEVICE AND TEST EQUIPMENT	8
	3.1.	For Conducted Emission Test	8
	3.2.	For Radiated Emission Measurement	8
4.	POW	VER LINE CONDUCTED MEASUREMENT	9
	4.1.	Block Diagram of Test Setup	9
	4.2.	Power Line Conducted Emission Measurement Limits (Class B)	
	4.3.	Test mode description	10
	4.4.	Manufacturer	10
	4.5.	Operating Condition of EUT	11
	4.6.	Test Procedure	11
	4.7.	DataExplain	11
	4.8.	Power Line Conducted Emission Measurement Results	11
5.	RAD	IATED EMISSION MEASUREMENT	20
	5.1.	Block Diagram of Test Setup	20
	5.2.	Radiated Emission Limit (Class B)	22
	5.3.	Test Mode Description	22
	5.4.	Manufacturer	23
	5.5.	Operating Condition of EUT	23
	5.6.	Test Procedure	23
	5.7.	Data Sample	24
	5.8.	Radiated Emission Measurement Result	24

Test Report Declaration

Report No.: SZNS220407-12824E-RF-00A

Applicant : Grandstream Networks, Inc.

Manufacturer : Grandstream Networks, Inc.

Product : High-End Smart Video Phone for Android™

Model No. : GXV3480

Trade Mark : GRANDSTREAM

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B Class B ANSI C63.4: 2014

The device described above is tested by Shenzhen Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B Class B limits both radiated and conducted emissions. The measurement results are contained in this test report and Shenzhen Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Accurate Technology Co., Ltd.

Version 1 2021-11-09 Page 3 of 33 FCC-EMC

Report No.: SZNS220407-12824E-RF-00A

1. TEST RESULTS SUMMARY

Test Items	Test Standard	Test Results
Power Line Conducted Emission (0.15-30MHz)	FCC Part 15 Subpart B	Pass
Radiated Emission (30-1000MHz)	FCC Part 15 Subpart B	Pass
Radiated Emission (Above 1GHz)	FCC Part 15 Subpart B	Pass

Version 1 2021-11-09 Page 4 of 33 FCC-EMC

2. GENERAL INFORMATION

2.1.Description of Device (EUT)

Product : High-End Smart Video Phone for Android™

Model No. : GXV3480

Rating : DC 12V from adapter or DC 44-57V from POE

Report No.: SZNS220407-12824E-RF-00A

Trade Mark : GRANDSTREAM

Remark(s) : The highest operation frequency is 5825MHz.

Applicant : Grandstream Networks, Inc.

Address : 126 Brookline Ave, 3rd Floor Boston, MA 02215, USA

Manufacturer : Grandstream Networks, Inc.

Address : 126 Brookline Ave, 3rd Floor Boston, MA 02215, USA

Date of sample : Apr. 07,2022

received

Date of Test : May.13, 2022~May. 22, 2022

Sample Number : SZNS220407-12824E-RF-S1

2.2.Test Mode

Mode: Working

Version 1 2021-11-09 Page 5 of 33 FCC-EMC

Report No.: SZNS220407-12824E-RF-00A

Accessory and Auxiliary Equipment POE : GOSPELL

Model: G0720-480

Notebook1 : DELL

Model:Latitude E4710 S/N: PC201911252059

Notebook DELL

Model: XXJL-2

Router : HUAWEI

Model:WS5100

S/N: A4933FEF1D01

Monitor DELL

Model: RVE A00

S/N: 506250042400R

Headphone YEALINK
Earphone Unknown
Phone Huawei

Model:Nova 7

U disk

IP Phone Grandstream

Model: GXV3480

Version 1 2021-11-09 Page 6 of 33 FCC-EMC

2.3. Description of Test Facility

EMC Lab : Accredited by American Association for Laboratory

Accreditation (A2LA)

The Certificate Number is 4297.01

Listed by Innovation, Science and Economic Development

Report No.: SZNS220407-12824E-RF-00A

Canada (ISEDC)

The Registration Number is 5077A

Accredited by China National Accreditation Service for

Conformity Assessment (CNAS)

The Registration Number is CNAS L3193

Name of Firm : Shenzhen Accurate Technology Co., Ltd.

Site Location : 1/F., Building A, Changyuan New Material Port, Science &

Industry Park, Nanshan District, Shenzhen, Guangdong, P.R.

China

2.4. Measurement Uncertainty

Radiated emission expanded uncertainty : U=4.28dB, k=2

(30MHz-1000MHz)

Radiated emission expanded uncertainty : *U=4.98dB*, *k=2*

(1GHz -18GHz)

Radiated emission expanded uncertainty : U=5.06dB, k=2

(18GHz - 26.5GHz)

Radiated emission expanded uncertainty : U=4.72dB, k=2

(26.5GHz - 40GHz)

Conduction Emission Expanded Uncertainty : U=2.72dB, k=2

(0.15kHz-30MHz)

Version 1 2021-11-09 Page 7 of 33 FCC-EMC

3. MEASURING DEVICE AND TEST EQUIPMENT

3.1.For Conducted Emission Test

Item	Manufacturer Equipment		Model No.	Serial No.	Last Cal.	Cal. Interval	
1.	Rohde& Schwarz EMI Test Receiver		ESCI	100784	2021/12/13	2022/12/12	
2.	Rohde & Schwarz L.I.S.N.		ESH3-Z5	100305	2021/12/13	2022/12/12	
3.	Rohde & Schwarz	L.I.S.N.	ENV216	101314	2021/12/13	2022/12/12	
4.	Unknown	RF Coaxial Cable	No.17	N0350	2021/12/14	2022/12/13	
5.	Conducted Emission Test Software: e3 19821b (V9)						

Report No.: SZNS220407-12824E-RF-00A

3.2.For Radiated Emission Measurement

Item	Manufacturer	Equipment	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Rohde& Schwarz	Test Receiver	ESR	102725	2021/12/13	2022/12/12
2	Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/12/13	2022/12/12
3	SONOMA INSTRUMENT	Amplifier	310 N	186131	2021/11/09	2022/11/08
4	A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2021/11/09	2022/11/08
5	Quinstar	Amplifier	QLW-1840553 6-J0	15964001002	2021/11/11	2022/11/10
6	Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
7	Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
8	Schwarzbeck	Schwarzbeck HORN ANTENNA		9170-359	2020/01/05	2023/01/04
9	Unknown	RF Coaxial Cable	No.10	N050	2021/12/14	2022/12/13
10	Unknown	RF Coaxial Cable	No.11	N1000	2021/12/14	2022/12/13
11	Unknown	RF Coaxial Cable	No.12	N040	2021/12/14	2022/12/13
12	Unknown	RF Coaxial Cable	No.13	N300	2021/12/14	2022/12/13
13	Unknown	RF Coaxial Cable	No.14	N800	2021/12/14	2022/12/13
14	Unknown	RF Coaxial Cable	No.15	N600	2021/12/14	2022/12/13
15	Unknown	RF Coaxial Cable	No.16	N650	2021/12/14	2022/12/13
16	Wainwright High Pass Filter		WHKX3.6/18 G-10SS	5	2021/12/14	2022/12/13
17		Radiated Em	ission Test Softwar	re: e3 19821b (V9)		

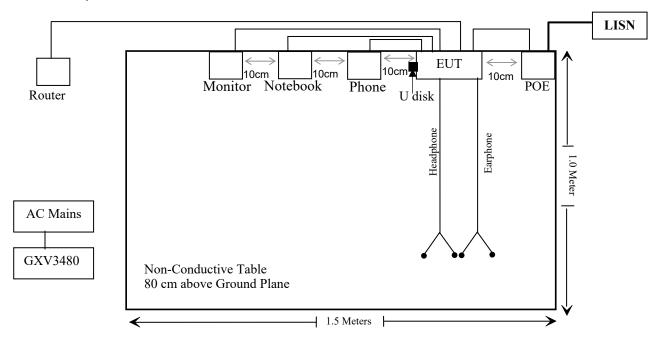
Version 1 2021-11-09 Page 8 of 33 FCC-EMC

4. POWER LINE CONDUCTED MEASUREMENT

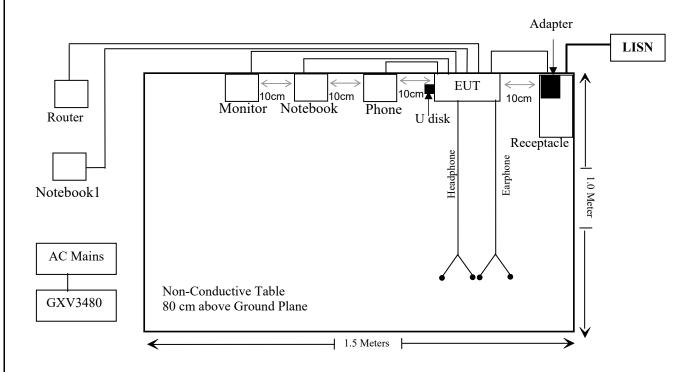
4.1.Block Diagram of Test Setup

4.1.1.Block diagram of connection between the EUT and simulators

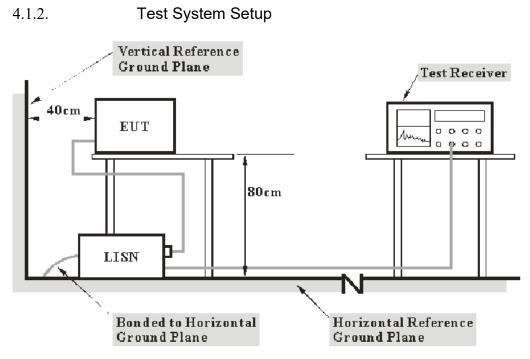
Powered by POE:



Powered by adapter:



 Version 1 2021-11-09
 Page 9 of 33
 FCC-EMC



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

4.2. Power Line Conducted Emission Measurement Limits (Class B)

Frequency	Limit dB(μV)				
(MHz)	Quasi-peak Level	Average Level			
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *			
0.50 - 5.00	56.0	46.0			
5.00 - 30.00	60.0	50.0			

NOTE1: The lower limit shall apply at the transition frequencies.

NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

4.3.Test mode description

Mode: Working

4.4.Manufacturer

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

4.4.1.High-End Smart Video Phone for AndroidTM

Model Number : GXV3480

Manufacturer : Grandstream Networks, Inc.

Version 1 2021-11-09 Page 10 of 33 FCC-EMC

4.5. Operating Condition of EUT

- 4.5.1. Setup the EUT and simulator as shown as Section 4.1.
- 4.5.2. Turn on the power of all equipment.
- 4.5.3.Let the EUT work in test mode and measure it.

4.6.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2014 on Conducted Emission Measurement.

Report No.: SZNS220407-12824E-RF-00A

The bandwidth of test receiver is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

4.7.DataExplain

Over Limit = Level ($dB\mu V$) - Limit($dB\mu V$)

4.8. Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.Emissions attenuated more than 20 dB below the permissible value are not reported.

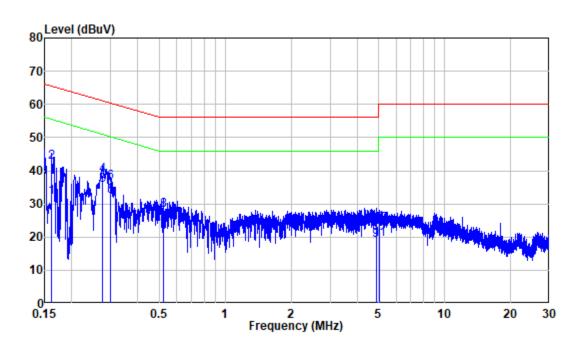
All data was recorded in the Quasi-peak and average detection mode.

The spectral diagrams are attached as below.

Job No.:	SZNS220407-12824E-RF	Power:	AC 120V 60Hz
Mode:	Working	Test By:	Jason
Limit:	FCC Part 15B	Test item:	Conducted Emission
Climatic:	23° C 53%RH 101kPa	Date:	2022-05-13

For Adapter 1 (F18W8-120150SPAUY)

AC 120V/60Hz, Line:



Site : Shielding Room

Condition: Line

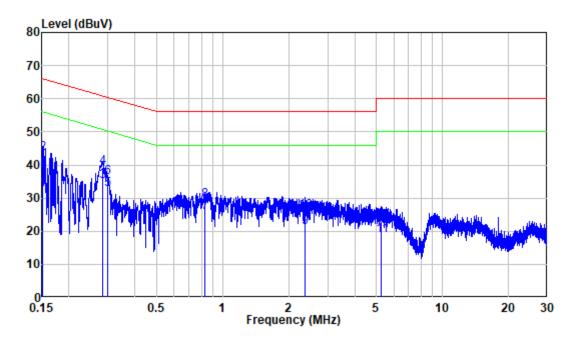
Job No. : SZNS220407-12824E-RF

Mode : Working Power : AC 120V 60Hz

Adapter : F18W8-1201505PAUY

			Read		Limit	Over	
	Freq	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.161	9.80	22.12	31.92	55.39	-23.47	Average
2	0.161	9.80	32.80	42.60	65.39	-22.79	QP
3	0.277	9.80	25.67	35.47	50.91	-15.44	Average
4	0.277	9.80	28.92	38.72	60.91	-22.19	QP
5	0.301	9.80	22.48	32.28	50.22	-17.94	Average
6	0.301	9.80	26.76	36.56	60.22	-23.66	QP
7	0.523	9.81	11.95	21.76	46.00	-24.24	Average
8	0.523	9.81	18.15	27.96	56.00	-28.04	QP
9	4.861	9.85	9.29	19.14	46.00	-26.86	Average
10	4.861	9.85	13.87	23.72	56.00	-32.28	QP
11	5.025	9.85	9.35	19.20	50.00	-30.80	Average
12	5.025	9.85	14.07	23.92	60.00	-36.08	QP

AC 120V/60Hz, Neutral:



Site : Shielding Room

Condition: Neutral

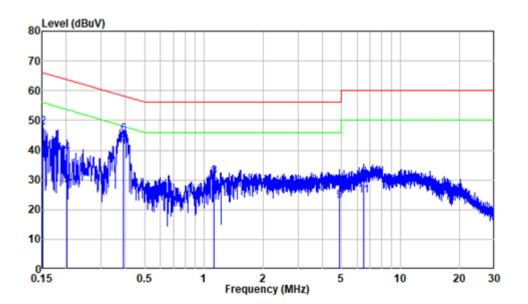
Job No. : SZNS220407-12824E-RF

Mode : Working Power : AC 120V 60Hz

Adapter : F18W8-1201505PAUY

			Read		Limit	0ver	
	Freq	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.152	9.80	22.74	32.54	55.88	-23.34	Average
2	0.152	9.80	33.74	43.54	65.88	-22.34	QP
3	0.284	9.80	25.29	35.09	50.69	-15.60	Average
4	0.284	9.80	29.49	39.29	60.69	-21.40	QP
5	0.300	9.80	22.93	32.73	50.25	-17.52	Average
6	0.300	9.80	26.31	36.11	60.25	-24.14	QP
7	0.828	9.81	15.76	25.57	46.00	-20.43	Average
8	0.828	9.81	19.61	29.42	56.00	-26.58	QP
9	2.363	9.82	11.32	21.14	46.00	-24.86	Average
10	2.363	9.82	16.29	26.11	56.00	-29.89	QP
11	5.280	9.90	8.70	18.60	50.00	-31.40	Average
12	5.280	9.90	13.15	23.05	60.00	-36.95	QP

For Adapter 2 (DSA-18PFR-09 FUS 120150) AC 120V/60Hz, Line:



Site : Shielding Room

Condition: Line

Job No. : SZNS220407-12824E-RF

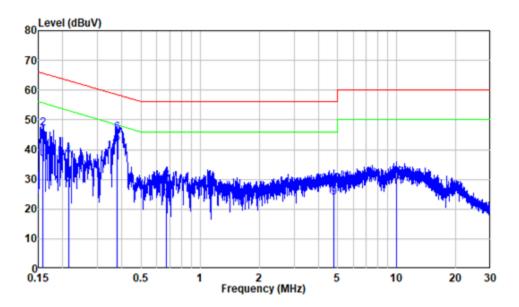
Mode : Working Power : AC 120V 60Hz

Adapter : DSA-18PFR-09 FUS 120150

			Read		Limit	Over	
	Freq	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.152	9.80	26.60	36.40	55.90	-19.50	Average
2	0.152	9.80	37.76	47.56	65.90	-18.34	QP
3	0.201	9.80	18.26	28.06	53.56	-25.50	Average
4	0.201	9.80	29.28	39.08	63.56	-24.48	QP
5	0.390	9.80	32.26	42.06	48.06	-6.00	Average
6	0.390	9.80	35.44	45.24	58.06	-12.82	QP
7	1.129	9.81	14.45	24.26	46.00	-21.74	Average
8	1.129	9.81	21.34	31.15	56.00	-24.85	QP
9	4.883	9.85	13.14	22.99	46.00	-23.01	Average
10	4.883	9.85	17.91	27.76	56.00	-28.24	QP
11	6.462	9.86	15.00	24.86	50.00	-25.14	Average
12	6.462	9.86	19.08	28.94	60.00	-31.06	QP

Version 1 2021-11-09 Page 14 of 33 FCC-EMC

AC 120V/60Hz, Neutral:



Site : Shielding Room

Condition: Neutral

Job No. : SZNS220407-12824E-RF

Mode : Working Power : AC 120V 60Hz

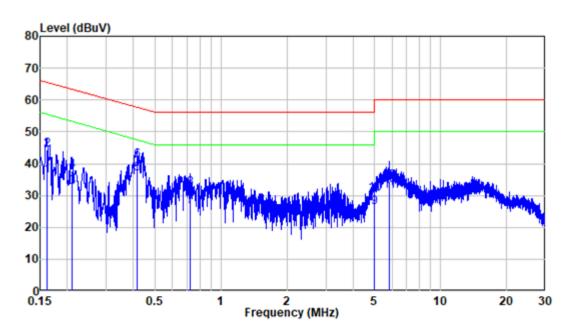
Adapter : DSA-18PFR-09 FUS 120150

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.158	9.80	25.17	34.97	55.56	-20.59	Average
2	0.158	9.80	37.21	47.01	65.56	-18.55	QP
3	0.213	9.80	18.70	28.50	53.08	-24.58	Average
4	0.213	9.80	27.86	37.66	63.08	-25.42	QP
5	0.378	9.80	32.20	42.00	48.33	-6.33	Average
6	0.378	9.80	35.89	45.69	58.33	-12.64	QP
7	0.676	9.81	13.20	23.01	46.00	-22.99	Average
8	0.676	9.81	19.77	29.58	56.00	-26.42	QP
9	4.775	9.88	13.94	23.82	46.00	-22.18	Average
10	4.775	9.88	18.37	28.25	56.00	-27.75	QP
11	9.999	10.00	17.59	27.59	50.00	-22.41	Average
12	9.999	10.00	20.38	30.38	60.00	-29.62	QP

Version 1 2021-11-09 Page 15 of 33 FCC-EMC

For Adapter 3 (H18US1200150A)

AC 120V/60Hz, Line:



Site : Shielding Room

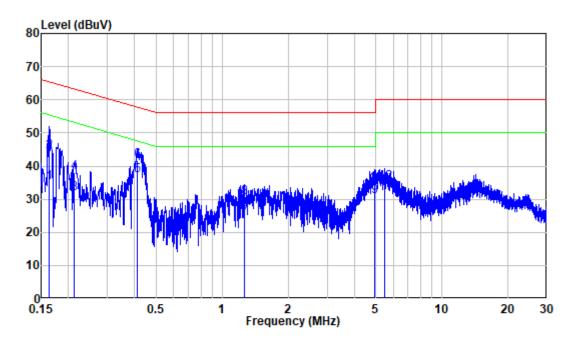
Condition: Line

Job No. : SZNS220407-12824E-RF

Mode : Working
Power : AC 120V 60Hz
Adapter : H18US1200150A

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.161	9.80	26.35	36.15	55.41	-19.26	Average
2	0.161	9.80	34.48	44.28	65.41	-21.13	QP
3	0.209	9.80	22.81	32.61	53.23	-20.62	Average
4	0.209	9.80	27.95	37.75	63.23	-25.48	QP
5	0.414	9.80	27.16	36.96	47.57	-10.61	Average
6	0.414	9.80	31.15	40.95	57.57	-16.62	QP
7	0.722	9.81	16.90	26.71	46.00	-19.29	Average
8	0.722	9.81	22.63	32.44	56.00	-23.56	QP
9	4.972	9.85	16.34	26.19	46.00	-19.81	Average
10	4.972	9.85	20.67	30.52	56.00	-25.48	QP
11	5.809	9.86	21.57	31.43	50.00	-18.57	Average
12	5.809	9.86	24.70	34.56	60.00	-25.44	QP

AC 120V/60Hz, Neutral:



Site : Shielding Room

Condition: Neutral

Job No. : SZNS220407-12824E-RF

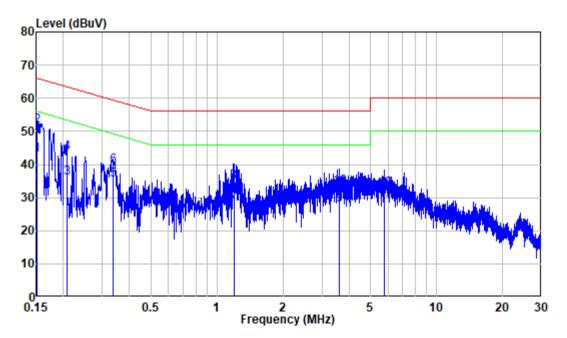
Mode : Working Power : AC 120V 60Hz Adapter : H18US1200150A

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.164	9.80	25.34	35.14	55.27	-20.13	Average
2	0.164	9.80	34.59	44.39	65.27	-20.88	QP
3	0.213	9.80	21.85	31.65	53.10	-21.45	Average
4	0.213	9.80	28.09	37.89	63.10	-25.21	QP
5	0.412	9.80	27.43	37.23	47.60	-10.37	Average
6	0.412	9.80	31.81	41.61	57.60	-15.99	QP
7	1.256	9.81	14.77	24.58	46.00	-21.42	Average
8	1.256	9.81	20.77	30.58	56.00	-25.42	QP
9	4.962	9.89	20.94	30.83	46.00	-15.17	Average
10	4.962	9.89	24.47	34.36	56.00	-21.64	QP
11	5.462	9.91	21.77	31.68	50.00	-18.32	Average
12	5.462	9.91	25.19	35.10	60.00	-24.90	QP

Version 1 2021-11-09 Page 17 of 33 FCC-EMC

For POE

AC 120V/60Hz, Line:



Site : Shielding Room

Condition: Line

Job No. : SZNS220407-12824E-RF

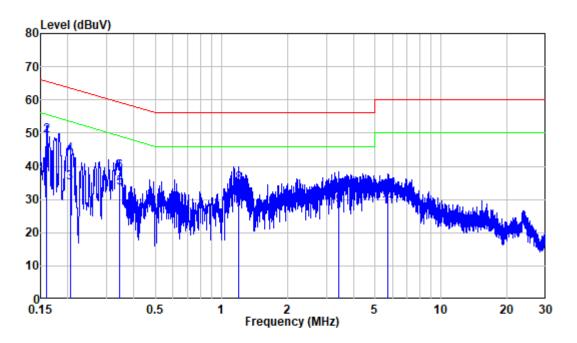
Mode : Working

Power : AC 120V 60Hz POE

		Read		Limit	0ver	
Freq	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dBuV	dBuV	dBuV	dB	
0.152	9.80	33.08	42.88	55.87	-12.99	Average
0.152	9.80	41.96	51.76	65.87	-14.11	QP
0.207	9.80	26.15	35.95	53.32	-17.37	Average
0.207	9.80	33.78	43.58	63.32	-19.74	QP
0.335	9.80	25.48	35.28	49.32	-14.04	Average
0.335	9.80	29.68	39.48	59.32	-19.84	QP
1.191	9.81	18.36	28.17	46.00	-17.83	Average
1.191	9.81	25.04	34.85	56.00	-21.15	QP
3.603	9.84	17.85	27.69	46.00	-18.31	Average
3.603	9.84	23.24	33.08	56.00	-22.92	QP
5.790	9.86	17.60	27.46	50.00	-22.54	Average
5.790	9.86	22.71	32.57	60.00	-27.43	QP
	MHz 0.152 0.152 0.207 0.207 0.335 0.335 1.191 1.191 3.603 3.603 5.790	MHz dB 0.152 9.80 0.152 9.80 0.207 9.80 0.207 9.80 0.335 9.80 0.335 9.80 1.191 9.81 1.191 9.81 1.191 9.81 3.603 9.84 3.603 9.84 5.790 9.86	MHz dB dBuV 0.152 9.80 33.08 0.152 9.80 41.96 0.207 9.80 26.15 0.207 9.80 33.78 0.335 9.80 25.48 0.335 9.80 29.68 1.191 9.81 18.36 1.191 9.81 25.04 3.603 9.84 17.85 3.603 9.84 23.24 5.790 9.86 17.60	MHz dB dBuV dBuV 0.152 9.80 33.08 42.88 0.152 9.80 41.96 51.76 0.207 9.80 26.15 35.95 0.207 9.80 33.78 43.58 0.335 9.80 25.48 35.28 0.335 9.80 29.68 39.48 1.191 9.81 18.36 28.17 1.191 9.81 25.04 34.85 3.603 9.84 17.85 27.69 3.603 9.84 23.24 33.08 5.790 9.86 17.60 27.46	MHz dB dBuV dBuV dBuV 0.152 9.80 33.08 42.88 55.87 0.152 9.80 41.96 51.76 65.87 0.207 9.80 26.15 35.95 53.32 0.207 9.80 33.78 43.58 63.32 0.335 9.80 25.48 35.28 49.32 0.335 9.80 29.68 39.48 59.32 1.191 9.81 18.36 28.17 46.00 1.191 9.81 25.04 34.85 56.00 3.603 9.84 17.85 27.69 46.00 3.603 9.84 23.24 33.08 56.00 5.790 9.86 17.60 27.46 50.00	MHz dB dBuV dB

Report No.: SZNS220407-12824E-RF-00A

AC 120V/60Hz, Neutral:



Site : Shielding Room

Condition: Neutral

Job No. : SZNS220407-12824E-RF

Mode : Working

Power : AC 120V 60Hz POE

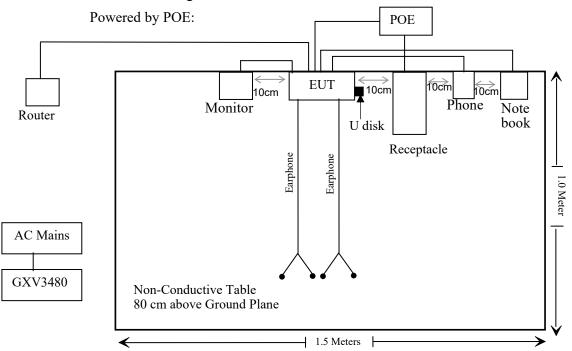
			Read		Limit	0ver	
	Freq	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.160	9.80	28.99	38.79	55.44	-16.65	Average
2	0.160	9.80	39.33	49.13	65.44	-16.31	QP
3	0.205	9.80	25.09	34.89	53.43	-18.54	Average
4	0.205	9.80	33.76	43.56	63.43	-19.87	QP
5	0.343	9.80	23.78	33.58	49.13	-15.55	Average
6	0.343	9.80	28.59	38.39	59.13	-20.74	QP
7	1.198	9.81	17.02	26.83	46.00	-19.17	Average
8	1.198	9.81	24.79	34.60	56.00	-21.40	QP
9	3.417	9.83	18.11	27.94	46.00	-18.06	Average
10	3.417	9.83	22.92	32.75	56.00	-23.25	QP
11	5.698	9.92	17.76	27.68	50.00	-22.32	Average
12	5.698	9.92	22.80	32.72	60.00	-27.28	QP

Version 1 2021-11-09 Page 19 of 33 FCC-EMC

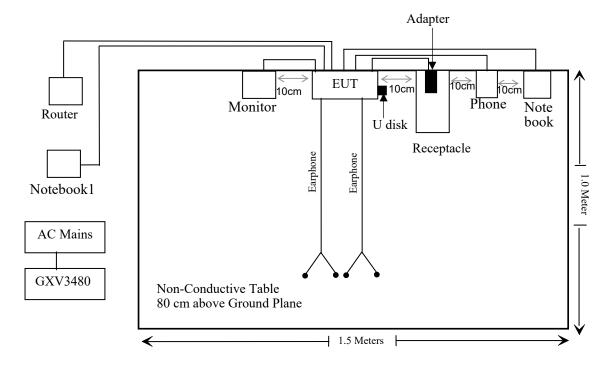
5. RADIATED EMISSION MEASUREMENT

5.1.Block Diagram of Test Setup

5.1.1.Block diagram of connection between the EUT and simulators

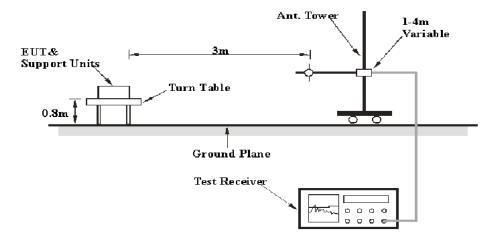


Powered by adapter

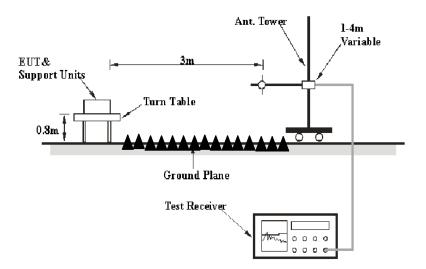


5.1.2.Test System Setup

Below 1GHz:



Above 1GHz:



5.2. Radiated Emission Limit (Class B)

All emanations from a class B device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

Report No.: SZNS220407-12824E-RF-00A

Frequency	Distance	Field Strengths QP Limit		
MHz	Meters	μV/m	dB(μV/m)	
30-88	3	100	40.0	
88-216	3	150	43.5	
216-960	3	200	46.0	
Above 960	3	500	54.0	

Remark:

- (1) Emission level dB(μ V) = 20 log Emission level μ V/m.
- (2)The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument antenna and the closest point of any part of the device or system.

Frequency	Distance	Field StrengthsLimit		
MHz	Meters	Peak	AVGdB(μV/m)	
		dB(μV/m)		
Above 1GHz	3	74	54	

5.3.Test Mode Description

Mode: Working

Version 1 2021-11-09 Page 22 of 33 FCC-EMC

5.4.Manufacturer

The following equipments are installed on Radiated Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

Report No.: SZNS220407-12824E-RF-00A

5.4.1. High-End Smart Video Phone for Android™

Model Number : GXV3480

Manufacturer : Grandstream Networks, Inc.

5.5. Operating Condition of EUT

5.5.1. Setup the EUT and simulator as shown as Section 5.1.

5.5.2. Turn on the power of all equipment.

5.5.3. Let the EUT work in test mode and measure it.

5.6.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2014 on radiated emission measurement.

The bandwidth of the Receiver/Spectrum Analyzer is set at 9kHz in 9kHz-30MHz, 120 kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The frequency range from 30MHz to 30000MHz is investigated.

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measure- ment range (MHz)
Below 1.705	30. 1000. 2000. 5000. 5th harmonic of the highest frequency or 40 GHz, whichever is lower.

5.7. Data Sample

Over limit (dB) = Result(dB μ v/m) - Limit (dB μ v/m) QP = Quasi-peak Reading

The "Over limit" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit of -7dB means the emission is 7dB below the limit.

5.8. Radiated Emission Measurement Result

PASS.

The frequency range from 30MHz to 30GHz is investigated.

The spectral diagrams are attached as below.

Note 1: For 30MHz-1GHz, when the test result of peak was less than the limit of QP more than 6dB, just record the peak value.

Note 2: For above 1GHz, the test result of peak was less than the limit of average, just record the peak value.

Note 3: The other spurious emission is 20dB below to the limit or in the noise floor was not recorded.

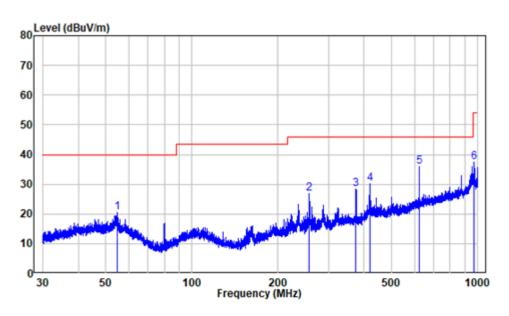
Note 4: Pre-scan in the X,Y and Z axes of orientation, the worst case X-axis of orientation was recorded

30MHz~1GHz

Job No.:	SZNS220407-12824E-RF	Power:	AC 120V 60Hz
Mode:	Working	Test By:	Leo
Limit:	FCC PART 15B	Test item:	Radiated Emission
Climatic:	26° C 65%RH	Date:	2022.5.17

For Adapter 1 (F18W8-120150SPAUY)

Horizontal



Site : chamber

Condition: 3m HORIZONTAL

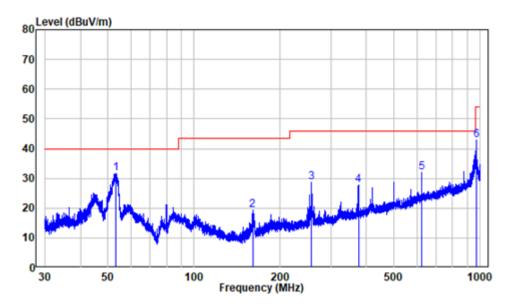
Job No. : SZNS220407-12824E-RF

Test Mode: Working

	Freq	Factor			Limit Line		Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	54.907	-10.28	30.86	20.58	40.00	-19.42	Peak
2	256.296	-10.60	37.50	26.90	46.00	-19.10	Peak
3	374.951	-7.27	35.55	28.28	46.00	-17.72	Peak
4	420.028	-6.13	36.35	30.22	46.00	-15.78	Peak
5	625.078	-2.35	38.40	36.05	46.00	-9.95	Peak
6	972.337	2.42	35.00	37.42	54.00	-16.58	Peak

Version 1 2021-11-09 Page 25 of 33 FCC-EMC

Vertical



Site : chamber Condition: 3m VERTICAL

Job No. : SZNS220407-12824E-RF

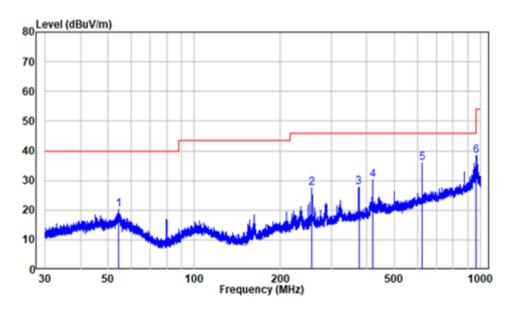
Test Mode: Working

	Freq	Factor	Read Level		Limit Line		Remark	
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB		-
1	53.155	-10.19	42.00	31.81	40.00	-8.19	Peak	
2	159.995	-14.19	33.42	19.23	43.50	-24.27	Peak	
3	256.296	-10.60	39.26	28.66	46.00	-17.34	Peak	
4	375.116	-7.28	35.09	27.81	46.00	-18.19	Peak	
5	625.078	-2.35	34.34	31.99	46.00	-14.01	Peak	
6	972.337	2.42	40.33	42.75	54.00	-11.25	Peak	
6	972.337	2.42	40.33	42.75	54.00	-11.25	Peak	

Version 1 2021-11-09 Page 26 of 33 FCC-EMC

For Adapter 2 (DSA-18PFR-09 FUS 120150)

Horizontal



Site : chamber

Condition: 3m HORIZONTAL

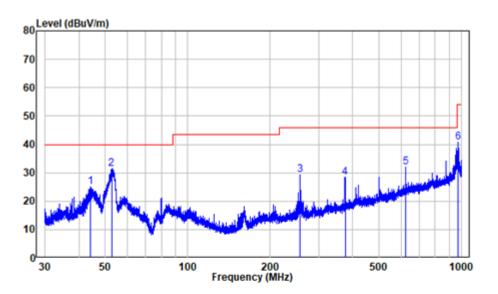
Job No. : SZNS220407-12824E-RF

Test Mode: Working

	Freq	Factor	Read Level		Limit Line		Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	54.213	-10.33	30.69	20.36	40.00	-19.64	Peak
2	256.296	-10.60	37.94	27.34	46.00	-18.66	Peak
3	375.116	-7.28	34.93	27.65	46.00	-18.35	Peak
4	420.028	-6.13	36.17	30.04	46.00	-15.96	Peak
5	625.078	-2.35	38.28	35.93	46.00	-10.07	Peak
6	965.542	2.43	35.88	38.31	54.00	-15.69	Peak

Version 1 2021-11-09 Page 27 of 33 FCC-EMC

Vertical



Site : chamber Condition: 3m VERTICAL

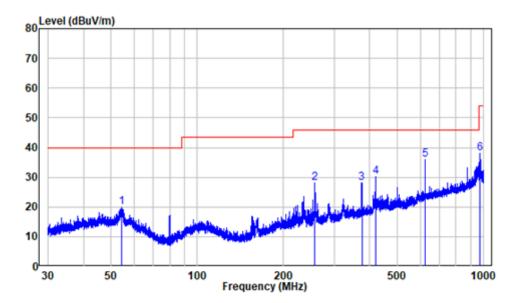
Job No. : SZNS220407-12824E-RF

Test Mode: Working

			Read		Limit	Over	
	Freq	Factor	Level	Level	Line	Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	44.043	-9.90	35.09	25.19	40.00	-14.81	Peak
2	52.621	-10.09	41.45	31.36	40.00	-8.64	Peak
3	256.296	-10.60	39.82	29.22	46.00	-16.78	Peak
4	375.116	-7.28	35.68	28.40	46.00	-17.60	Peak
5	625.078	-2.35	34.36	32.01	46.00	-13.99	Peak
6	968.934	2.48	38.26	40.74	54.00	-13.26	Peak

For Adapter 3 (H18US1200150A)

Horizontal



Site : chamber

Condition: 3m HORIZONTAL

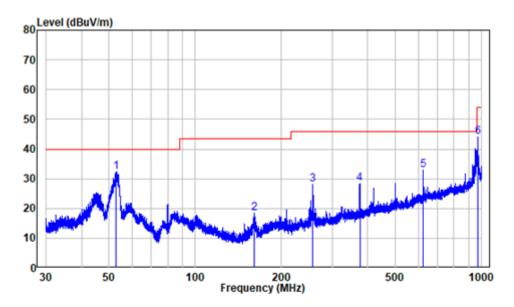
Job No. : SZNS220407-12824E-RF

Test Mode: Working

	Freq	Factor			Limit Line		Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	54.404	-10.32	30.27	19.95	40.00	-20.05	Peak
2	256.296	-10.60	38.71	28.11	46.00	-17.89	Peak
3	375.116	-7.28	35.26	27.98	46.00	-18.02	Peak
4	420.028	-6.13	36.44	30.31	46.00	-15.69	Peak
5	625.078	-2.35	38.42	36.07	46.00	-9.93	Peak
6	971.060	2.45	35.48	37.93	54.00	-16.07	Peak

Version 1 2021-11-09 Page 29 of 33 FCC-EMC

Vertical



Site : chamber Condition: 3m VERTICAL

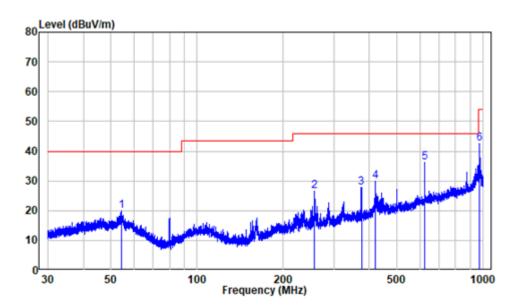
Job No. : SZNS220407-12824E-RF

Test Mode: Working

	Freq	Factor			Limit Line		Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	52.922	-10.15	42.40	32.25	40.00	-7.75	Peak
2	160.557	-14.22	32.69	18.47	43.50	-25.03	Peak
3	256.296	-10.60	38.64	28.04	46.00	-17.96	Peak
4	375.116	-7.28	35.65	28.37	46.00	-17.63	Peak
5	625.078	-2.35	35.19	32.84	46.00	-13.16	Peak
6	972.337	2.42	41.52	43.94	54.00	-10.06	Peak

For POE:

Horizontal



Site : chamber

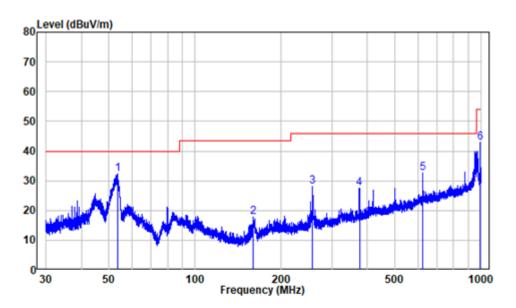
Condition: 3m HORIZONTAL

Job No. : SZNS220407-12824E-RF

Test Mode: Working Note : POE

	Freq	Factor		Level		Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	54.285	-10.33	30.28	19.95	40.00	-20.05	Peak
2	256.296	-10.60	37.27	26.67	46.00	-19.33	Peak
3	375.116	-7.28	35.12	27.84	46.00	-18.16	Peak
4	420.028	-6.13	36.10	29.97	46.00	-16.03	Peak
5	625.078	-2.35	38.50	36.15	46.00	-9.85	Peak
6	970.634	2.46	39.96	42.42	54.00	-11.58	Peak

Vertical



Site : chamber Condition: 3m VERTICAL

Job No. : SZNS220407-12824E-RF

Test Mode: Working Note : POE

	Freq	Read Factor Level		Level		Over Limit	Remark	
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB		
1	53.412	-10.24	42.60	32.36	40.00	-7.64	Peak	
2	159.714	-14.23	32.08	17.85	43.50	-25.65	Peak	
3	256.184	-10.60	38.53	27.93	46.00	-18.07	Peak	
4	375.116	-7.28	34.86	27.58	46.00	-18.42	Peak	
5	625.078	-2.35	34.97	32.62	46.00	-13.38	Peak	
6	990.403	2.83	40.09	42.92	54.00	-11.08	Peak	

Version 1 2021-11-09 Page 32 of 33 FCC-EMC

Report No.: SZNS220407-12824E-RF-00A

Above 1GHz:

Job No.:SZNS220407-12824E-RFPower:AC 120V 60HzMode:WorkingTest By:Jeff Jiang

Limit: FCC PART 15B Test item: Radiated Emission

Climatic: 27° C 58%RH 101kPa Date: 2022-05-22

Fraguency	Receiver		Turntable Rx Antenna			Factor	Absolute	Limit	Margin
Frequency (MHz)	Reading (dBµV)	PK/Ave	Angle Degree	Height (m)	Polar (H/V)	(dB/m)	Level (dBµV/m)	(dBµV/m)	(dB)
H18US1200150A									
1374.88	50.58	PK	70	2.3	Н	-9.99	40.59	74	-33.41
1374.88	48.98	PK	90	1.1	V	-9.99	38.99	74	-35.01
2843.02	54.66	PK	260	1.5	Н	-6.19	48.47	74	-25.53
2843.02	53.85	PK	16	2.2	V	-6.19	47.66	74	-26.34
F18W8-1201505PAUY									
1354.73	50.73	PK	320	2.1	Н	-10.10	40.63	74	-33.37
1354.73	48.99	PK	320	2.2	V	-10.10	38.89	74	-35.11
2848.46	54.81	PK	162	1.8	Н	-6.18	48.63	74	-25.37
2848.46	53.39	PK	207	2.3	V	-6.18	47.21	74	-26.79
D5A-18PFR-09									
1363.74	50.42	PK	212	2.4	Н	-10.00	40.42	74	-33.58
1363.74	48.98	PK	164	2.1	V	-10.00	38.98	74	-35.02
2834.39	54.33	PK	235	1.3	Н	-6.20	48.13	74	-25.87
2834.39	53.06	PK	128	2	V	-6.20	46.86	74	-27.14
POE									
1364.19	50.73	PK	102	1.4	Н	-10.00	40.73	74	-33.27
1364.19	49.08	PK	77	1.7	V	-10.00	39.08	74	-34.92
2834.95	54.13	PK	299	1.7	Н	-6.20	47.93	74	-26.07
2834.95	53.09	PK	202	1.6	V	-6.20	46.89	74	-27.11

Margin = Corrected Amplitude - Limit

----- THE END OF TEST REPORT -----

Version 1 2021-11-09 Page 33 of 33 FCC-EMC