



Aibo Standard Technology (Shenzhen) Co., Ltd.

101, Building B, Tuori New Energy Industrial Park, High-tech Park, Tianliao Community, Yutang Street,
Guangming District, Shenzhen City, Guangdong Province, China
Tel.: +(86) 0755 85250797 E-mail: Aibonorm@aibonorm.com Website: www.Aibonorm.com

TEST REPORT

Report No.....: AB25070039FW01
FCC ID.....: 2BRCG-S600
Applicant.....: Shenzhen Xiao Shi Jie Technology Co.,Ltd
Address.....: C1205-1213 Qinghu Science and Technology Park
Qingxiang Road, Longhua Street
Manufacturer.....: Shenzhen Xiao Shi Jie Technology Co.,Ltd
Address.....: C1205-1213 Qinghu Science and Technology Park
Qingxiang Road, Longhua Street
Product Name.....: detector
Trade Mark.....: /
Model/Type reference.....: S600
Listed Model(s): S610, S620, 5630,S650,S500,S501,S502,S503,S505
Standard.....: FCC Part 15 Subpart B
Date of Receipt.....: 2025.07.09
Date of Test Date.....: 2025.07.09-2025.07.23
Date of issue.....: 2025.07.23
Test result.....: Pass

Compiled by:
(Printedname+signature) Huaijie Li

Huaijie Li

Supervised by:
(Printedname+signature) Jay Liu

Jay Liu

Approved by:
(Printedname+signature) Mic Cheng

Mic Cheng

Testing Laboratory Name.....: Aibo Standard Technology (Shenzhen) Co., Ltd.

Address.....: 101, Building B, Tuori New Energy Industrial Park, High-tech Park,
Tianliao Community, Yutang Street, Guangming District, Shenzhen
City, Guangdong Province, China

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1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

[47 CFR FCC Part 15 Subpart B](#): Unintentional Radiators.

[ANSI C63.4: 2014](#): American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz.

1.2. Report version

Revised No.	Date of issue	Description
01	2025.07.23	Original

1.3. Test Description

Test procedures according to the technical standards:

Test	Standard	Class	Result	Test Engineer
Conducted Emission	FCC Part 15 Section 15.107	Class B	PASS	He Chen
Radiated Emission	FCC Part 15 Section 15.109	Class B	PASS	He Chen

1.4. DESCRIPTION OF SUPPORT EQUIPMENT

Description	Manufacturer	Model	Serial Number	Supplied by
AC/DC Adapter	Xiaomi	MDY-11-EX	SA62212LA04358J	Applicant

1.5.Measurement Uncertainty

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.

Items	Measurement Uncertainty
Power Line Conducted Emission (9kHz~150kHz)	±3.62dB
Power Line Conducted Emission (150kHz~30MHz)	±3.40dB
Radiated Emission (9kHz~30MHz)	±3.10dB
Radiated Emission (30MHz~1GHz)	±4.90dB
Radiated Emission (1GHz~18GHz)	±3.88dB
Radiated Emission (8GHz~40GHz)	±5.32dB

Note: All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95 % level of confidence.

1.6.Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	+15°C ~ +35°C
Lative Humidity	20 % ~ 75 %
Air Pressure	98KPa ~ 101KPa

1.7.DESCRPTION OF TEST FACILITY

Test Lab: Aibo Standard Technology (Shenzhen) Co., Ltd.

Address: 101, Building B, Tuori New Energy Industrial Park, High-tech Park, Tianliao Community, Yutang Street, Guangming District, Shenzhen City, Guangdong Province, China

Tel.: +(86) 0755 85250797

E-mail: Aibonorm@aibonorm.com

Website: www.Aibonorm.com

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

A2LA-Lab Certificate No.: 7514.01

Aibo Standard Technology (Shenzhen) Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

2. GENERAL INFORMATION

2.1.General Description of EUT

Product Name:	detector
Trade Mark:	/
Model/Type reference:	S600
Listed Model(s)::	S610,S620,5630,S650,S500,S501,S502,S503,S505
Model Difference:	All models are the same circuit and RF module, except the model name.
Product Description	The same motherboard hardware has different appearances.
Frequency	100MHz-8GHz
Manufacturer	Shenzhen Xiao Shi Jie Technology Co.,Ltd
Manufacturer Address	C1205-1213 Qinghu Science and Technology Park, Qingxiang Road, Longhua Street, Shenzhen City
Power Source	AC 120V/60Hz, DC 5V/1A
Hardware version:	S600_V1.0
Software version:	S600_V1.0

2.2.Description Of Test Modes

As the function of the EUT, test mode selected to test as below to conform this standard

Test Mode	Description	Test Voltage
1	Normal working	AC 120V/60Hz

Pre-scan above all test mode, found below test mode which it was worse case mode, so only show the test data for worse case mode on the test report.

Test item	Worse case operation Test mode
Conducted emission	1
Radiated emission	1

2.3.Measurement Instruments List

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
1	Loop Antenna	Schwarzbeck	FMZB 1519	1519-025	02/19/2025	02/18/2026
2	Power Amplifier	HZEMC	HPA-9K0133	HYP A23029	02/19/2025	02/18/2026
3	Broadband Antenna	Schwarzbeck	VULB 9168	01763	02/19/2025	02/18/2026
4	Attenuator	PRM	ATT50-6-3	ATT50-6-3	01/20/2025	01/19/2026
5	Spectrum Analyzer	R&S	FSV40-N	101365	01/20/2025	01/19/2026
6	Horn Antenna	Schwarzbeck	BBHA 9120 D	02786	02/19/2025	02/18/2026
7	Horn Antenna	Schwarzbeck	ZLB7-18-40G-77	072410839	02/19/2025	02/18/2026
8	Power Amplifier	HZEMC	PA0118-43	HYP A23030	02/19/2025	02/18/2026
9	Power Amplifier	HZEMC	PA01840-45	HYP A23031	02/19/2025	02/18/2026
10	EMI Test Receiver	R&S	ESCI	101196	01/20/2025	01/19/2026
11	LISN	R&S	ENV216	102374	01/20/2025	01/19/2026
12	Pulse Limiter	Schwarzbeck	ESH3-Z2	0357.8810.54	01/20/2025	01/19/2026

2.4.Test software

Test Software		
Software name	Model	Version
Radiated Emission Measurement Software	FASLAB	V4.1
CONDUCTED EMISSION MEASUREMENT	FASLAB	V4.1

3. EMC EMISSION TEST

3.1.CONDUCTED EMISSION MEASUREMENT

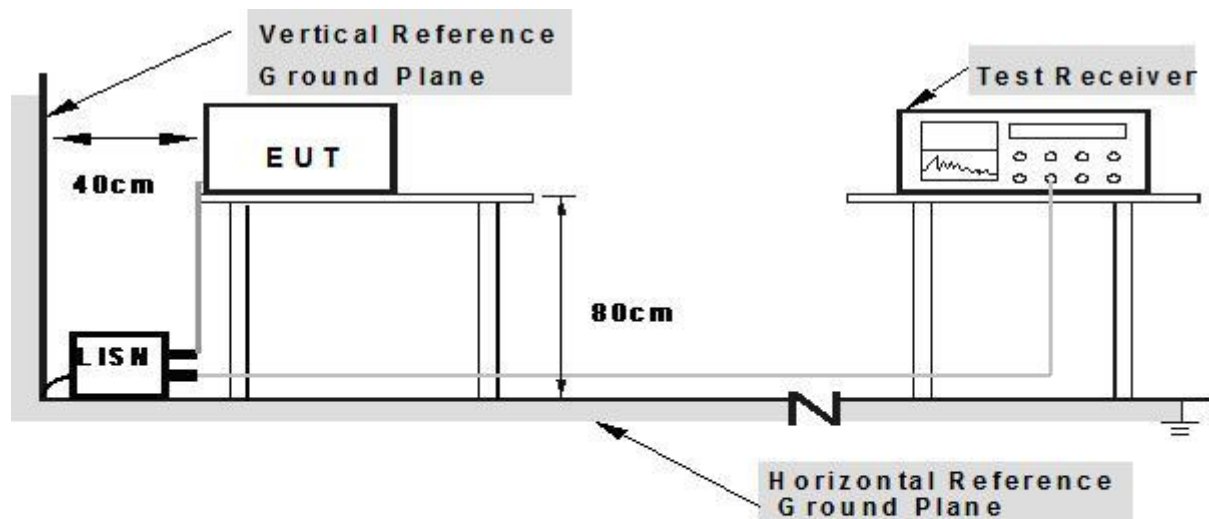
LIMIT

FCC CFR Title 47 Part 15 Subpart Section B 15.107/ IECS-003 Section 6.1

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

* Decreases with the logarithm of the frequency.

TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISN s (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

TEST PROCEDURE

1. The EUT was setup according to ANSI C63.4-2014.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment.
4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
8. During the above scans, the emissions were maximized by cable manipulation.

TEST MODE

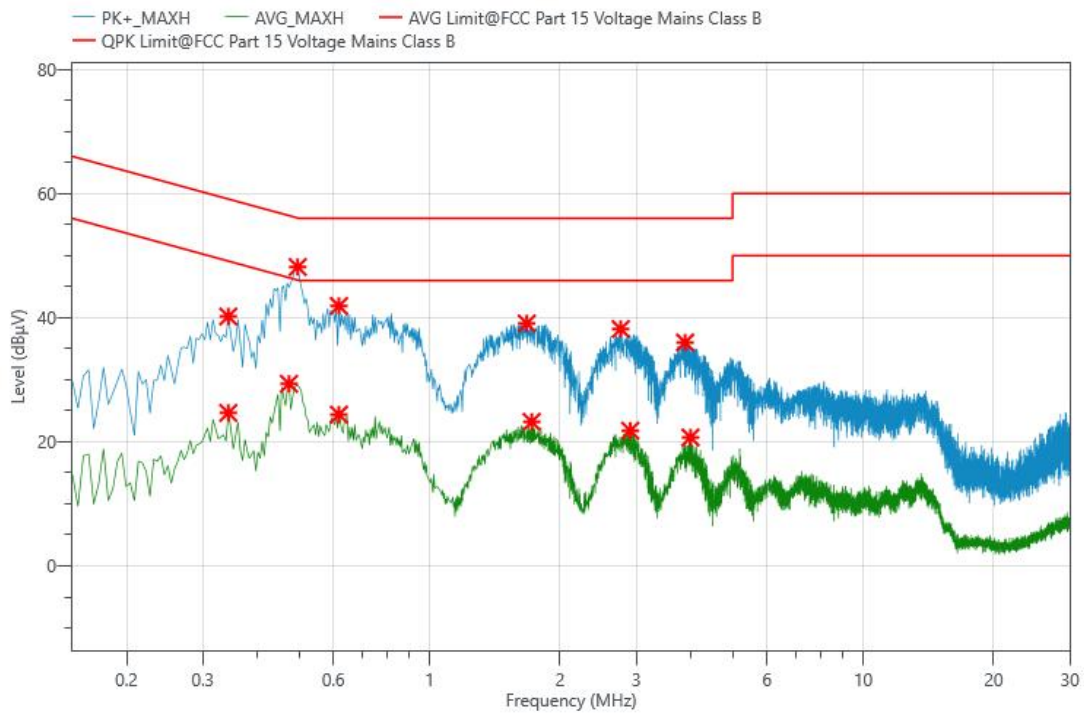
Please refer to the clause 2.2

TEST RESULTS

Polarization

L

Test Mode 1

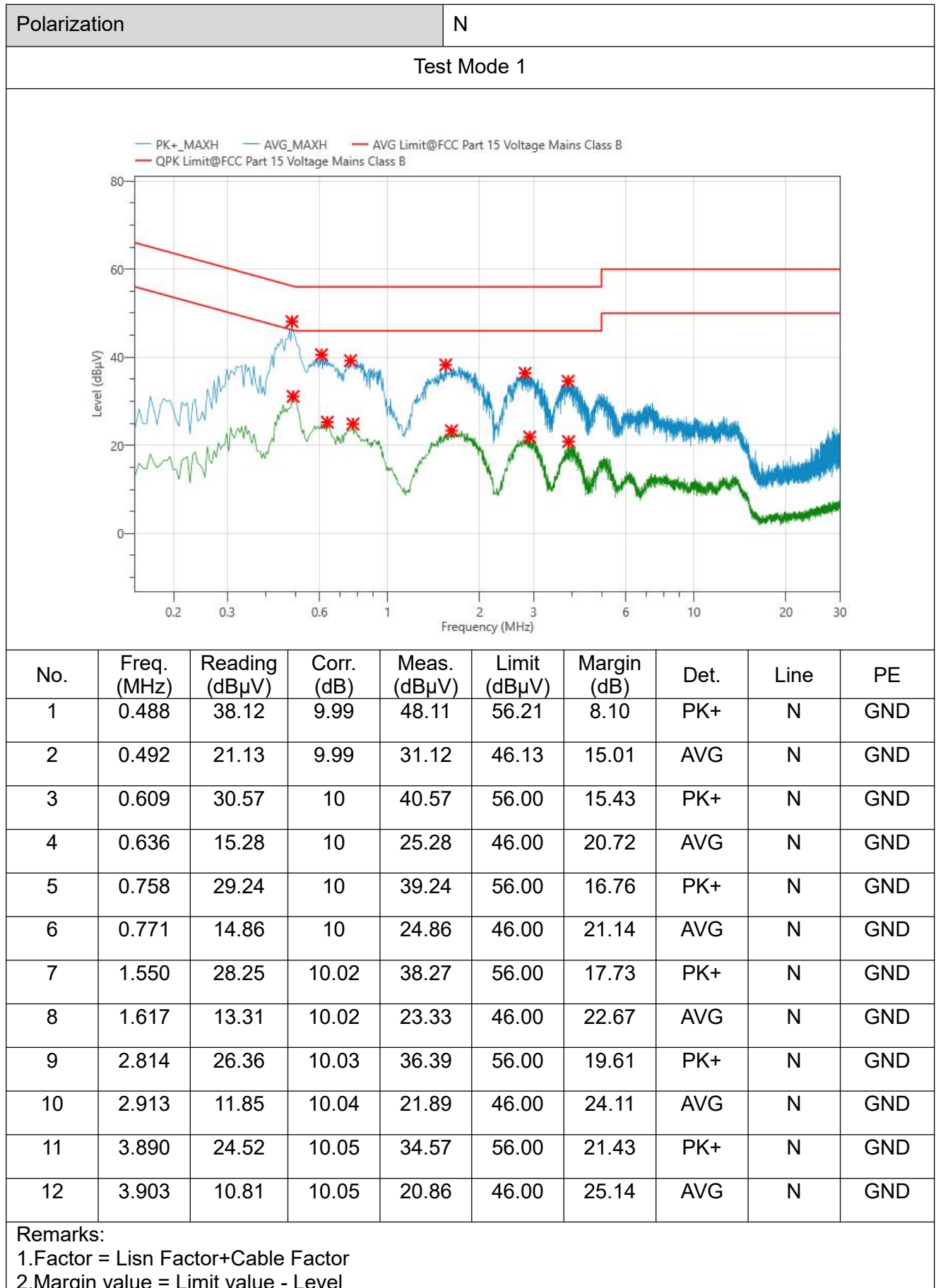


No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV)	Limit (dBμV)	Margin (dB)	Det.	Line	PE
1	0.344	30.21	9.99	40.20	59.12	18.92	PK+	L1	GND
2	0.344	14.67	9.99	24.66	49.12	24.46	AVG	L1	GND
3	0.474	19.36	9.99	29.35	46.44	17.09	PK+	L1	GND
4	0.497	38.18	9.99	48.17	56.06	7.89	AVG	L1	GND
5	0.618	31.89	10	41.89	56.00	14.11	PK+	L1	GND
6	0.618	14.39	10	24.39	46.00	21.61	AVG	L1	GND
7	1.676	29.06	10.02	39.08	56.00	16.92	PK+	L1	GND
8	1.721	13.20	10.02	23.22	46.00	22.78	AVG	L1	GND
9	2.760	28.14	10.03	38.17	56.00	17.83	PK+	L1	GND
10	2.904	11.76	10.04	21.80	46.00	24.20	AVG	L1	GND
11	3.885	25.95	10.05	36.00	56.00	20.00	PK+	L1	GND
12	3.998	10.65	10.05	20.70	46.00	25.30	AVG	L1	GND

Remarks:

1. Factor = Liss Factor + Cable Factor

2. Margin value = Limit value - Level



3.2.RADIATED EMISSION MEASUREMENT

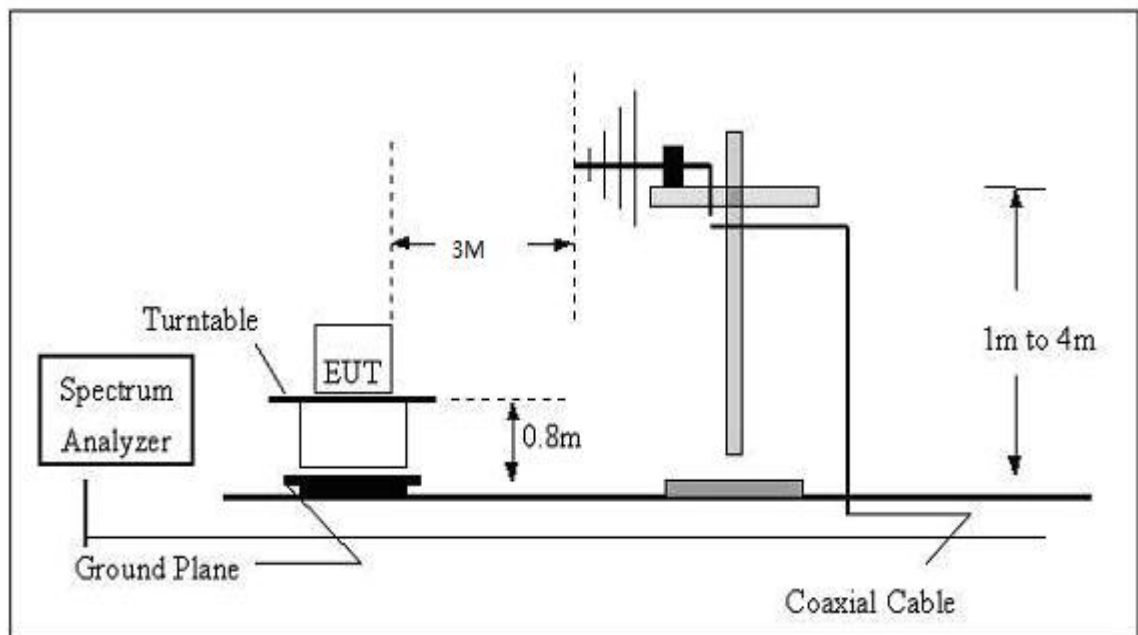
LIMIT

FCC CFR Title 47 Part 15 Subpart B Section 15.109/ IECS-003 Section 6.2:

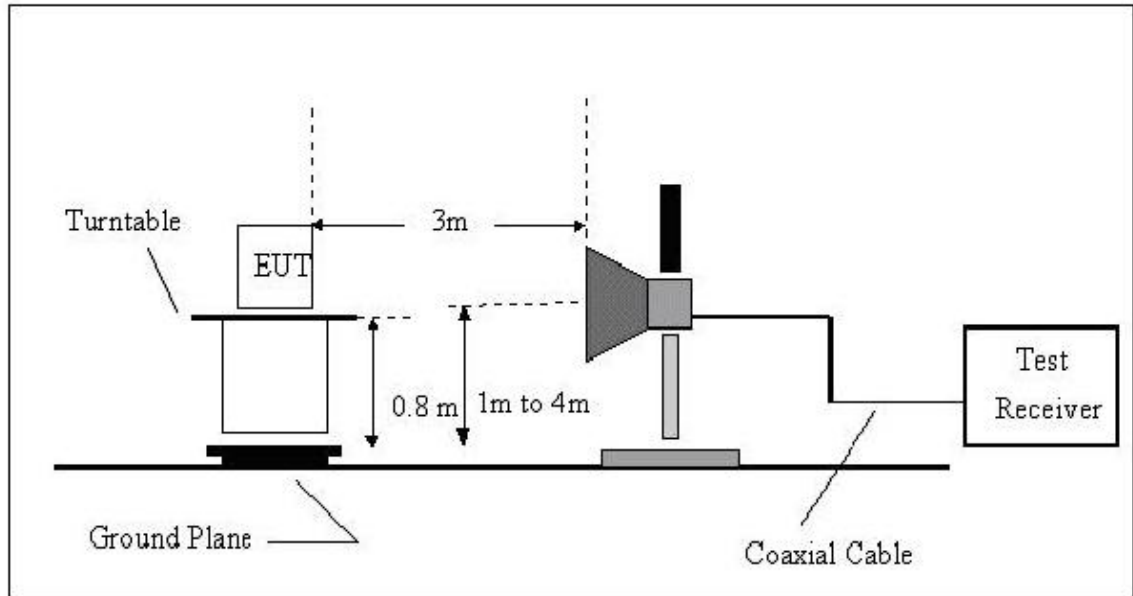
FREQUENCY (MHz)	Class A (at 10m)	Class B (at 3m)	Value
	dBuV/m	dBuV/m	
30 ~ 88	39.0	40.0	Quasi-peak
88 ~ 216	43.5	43.5	Quasi-peak
216 ~ 960	46.5	46.0	Quasi-peak
960 ~1000	49.5	54.0	Quasi-peak
Above 1000	69.5	74	Peak
	49.5	54	Average

TEST SETUP

A Radiated Emission Test Set-Up Frequency below 1 GHz



B Radiated Emission Test Set-Up Frequency above 1GHz



TEST PROCEDURE

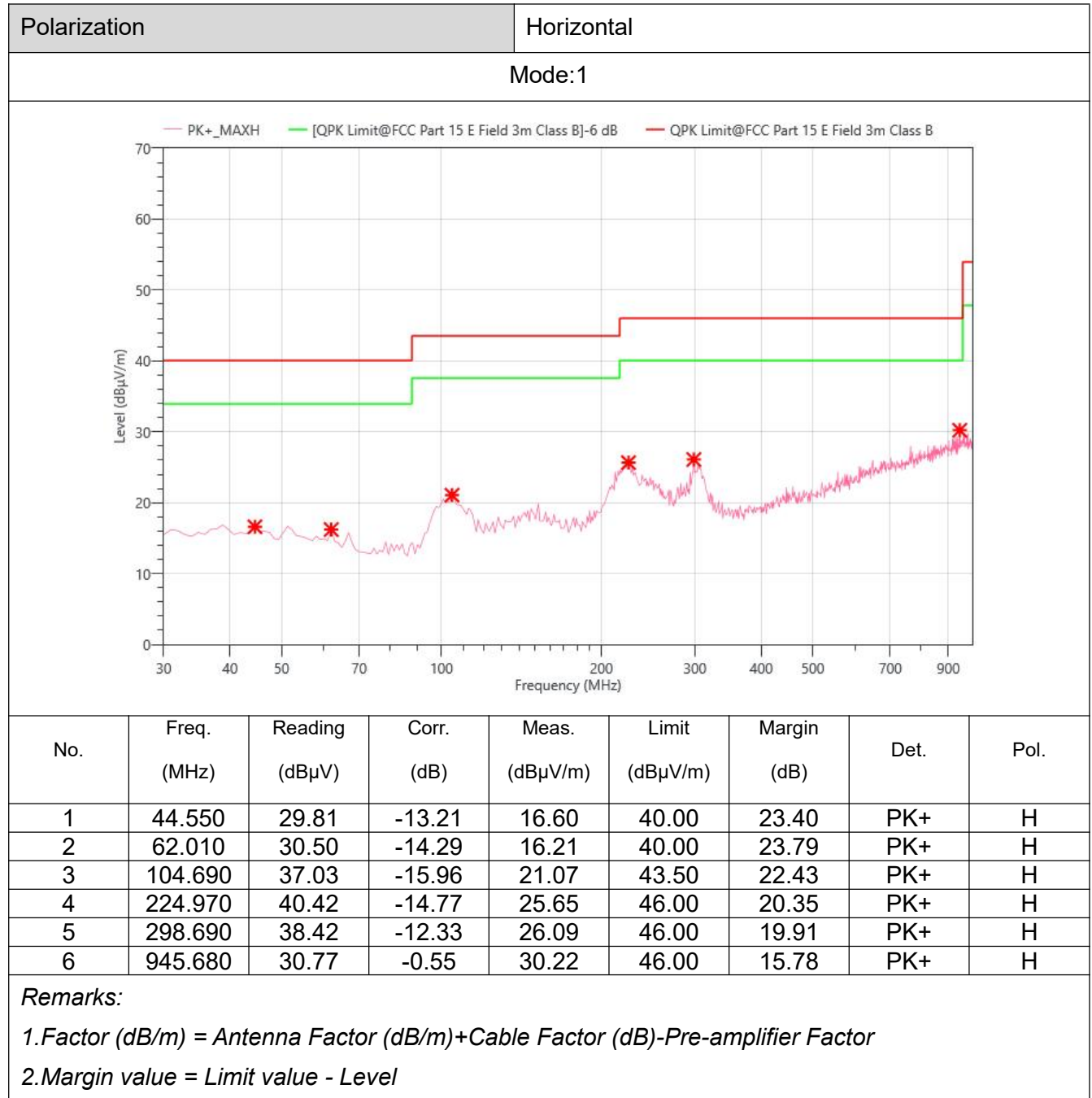
1. The EUT was tested according to ANSI C63.4:2014.
2. The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna.
5. The initial step in collecting radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured, above 1G Average detector mode will be instead.
6. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP(AV) Limits and then no additional QP Mode measurement performed.
7. For the actual test configuration, please refer to the related Item –EUT Test Photos.

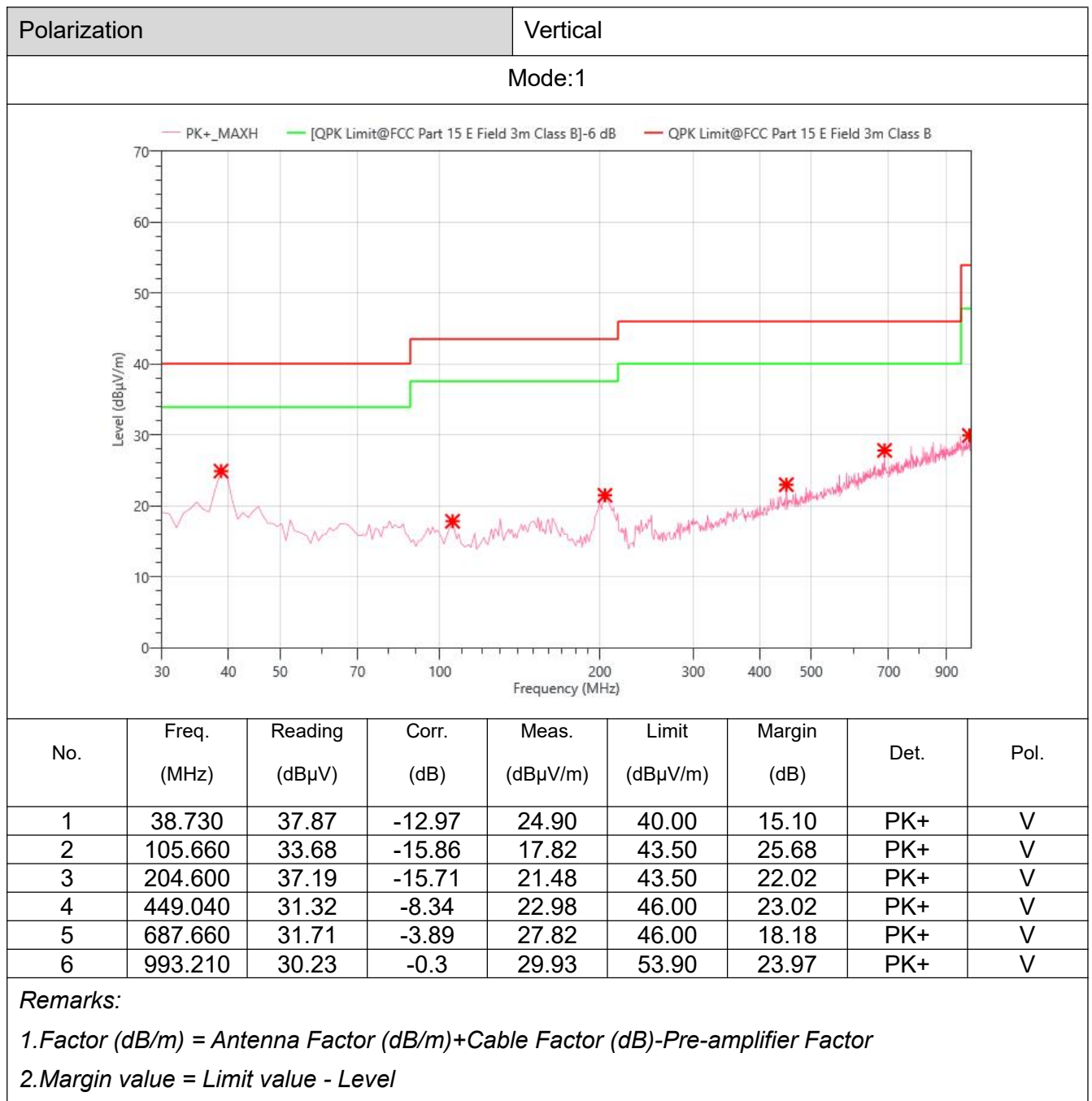
TEST MODE

Please refer to the clause 2.2

TEST RESULT

30MHz-1GHz

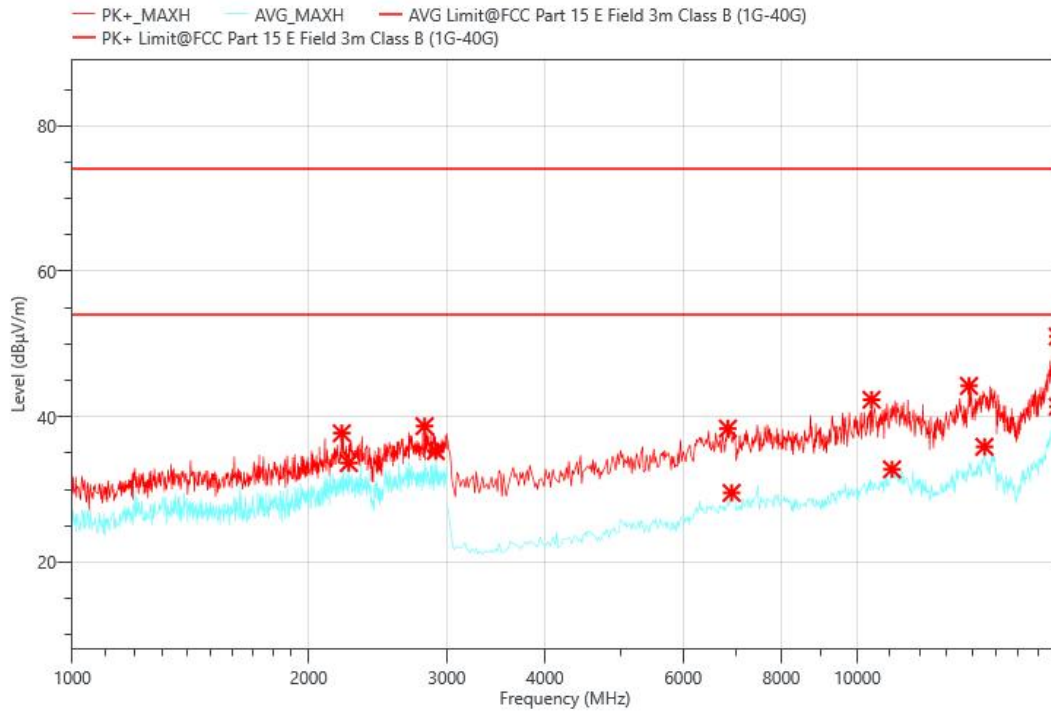




Polarization

Horizontal

Test mode 1



No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Det.	Pol.
1	2204.000	46.13	-8.39	37.74	74.00	36.26	PK+	H
2	2250.000	41.94	-8.3	33.64	54.00	20.36	AVG	H
3	2810.000	46.96	-8.25	38.71	74.00	35.29	PK+	H
4	2904.000	43.33	-8.03	35.30	54.00	18.70	AVG	H
5	6840.000	47.22	-8.84	38.38	74.00	35.62	PK+	H
6	6915.000	37.89	-8.36	29.53	54.00	24.47	AVG	H
7	10425.000	44.16	-1.82	42.34	74.00	31.66	PK+	H
8	11070.000	32.65	0.12	32.77	54.00	21.23	AVG	H
9	13875.000	41.72	2.53	44.25	74.00	29.75	PK+	H
10	14520.000	32.62	3.25	35.87	54.00	18.13	AVG	H
11	18000.000	39.53	11.5	51.03	74.00	22.97	PK+	H
12	18000.000	29.89	11.5	41.39	54.00	12.61	AVG	H

Remarks:

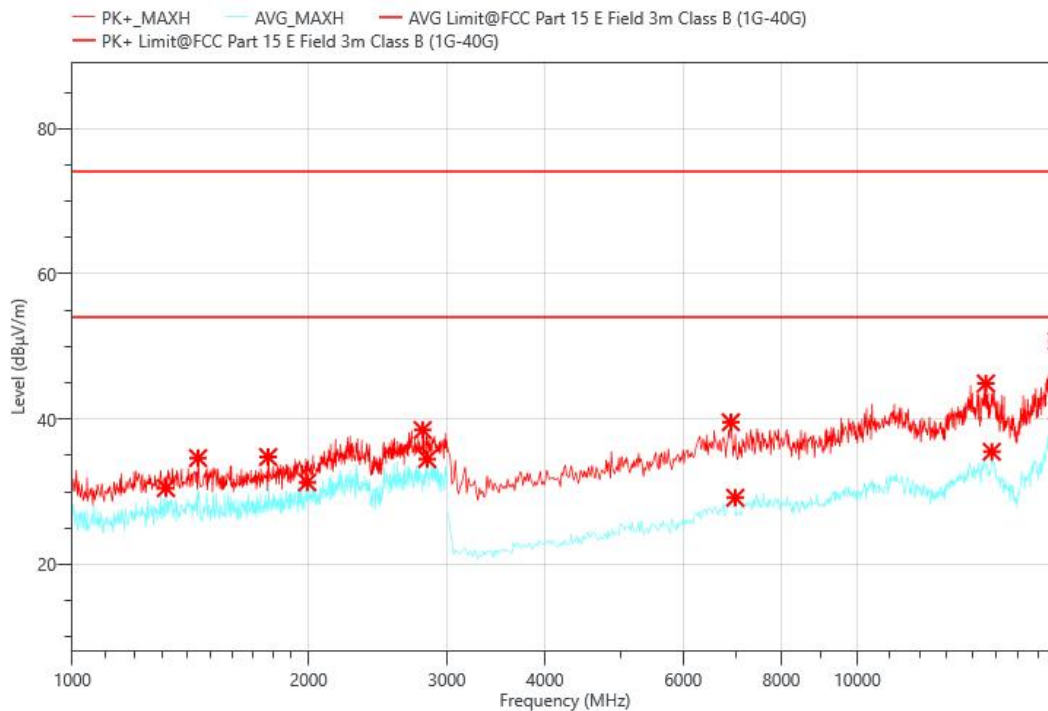
1. Factor = Antenna Factor + Cable Factor - Pre-amplifier Factor

2. Margin value = Limit value - Level

Polarization

Vertical

Test mode 1



No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Det.	Pol.
1	1316.000	41.59	-11.08	30.51	54.00	23.49	AVG	V
2	1446.000	45.74	-11.09	34.65	74.00	39.35	PK+	V
3	1776.000	45.69	-10.9	34.79	74.00	39.21	PK+	V
4	1992.000	41.00	-9.7	31.30	54.00	22.70	AVG	V
5	2794.000	46.85	-8.34	38.51	74.00	35.49	PK+	V
6	2832.000	42.59	-8.09	34.50	54.00	19.50	AVG	V
7	6900.000	47.94	-8.36	39.58	74.00	34.42	PK+	V
8	6990.000	37.33	-8.15	29.18	54.00	24.82	AVG	V
9	14580.000	41.68	3.24	44.92	74.00	29.08	PK+	V
10	14835.000	32.45	3.07	35.52	54.00	18.48	AVG	V
11	17970.000	39.68	11.08	50.76	74.00	23.24	PK+	V
12	18000.000	29.65	11.5	41.15	54.00	12.85	AVG	V

Remarks:

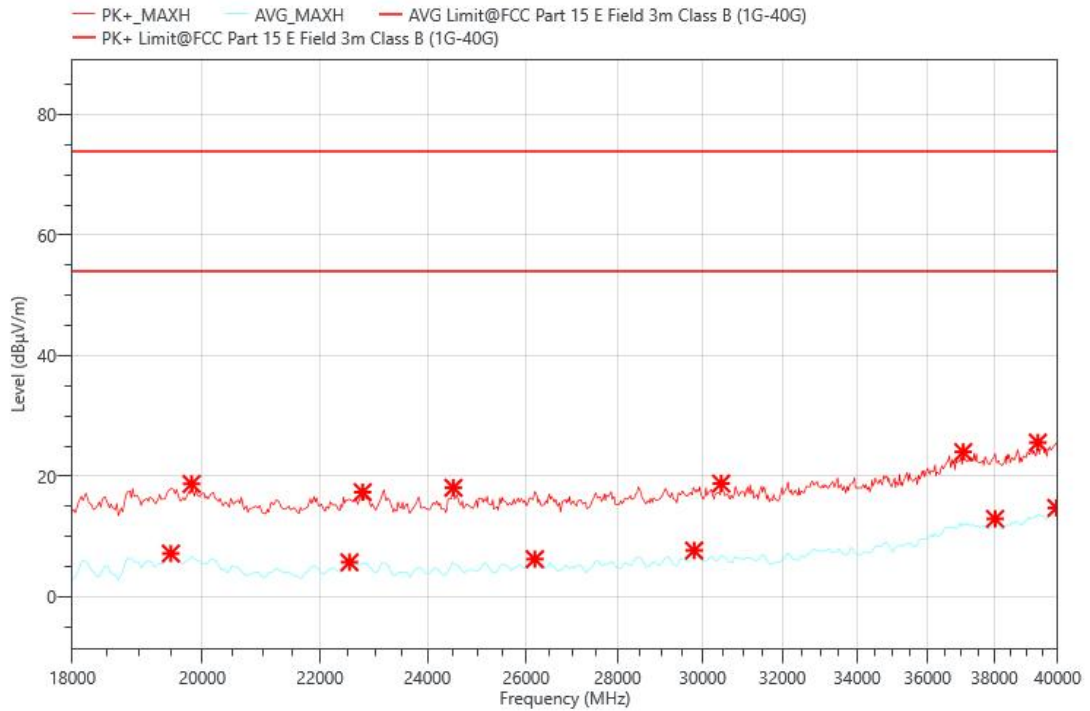
1. Factor = Antenna Factor + Cable Factor - Pre-amplifier Factor

2. Margin value = Limit value - Level

Polarization

Horizontal

Test mode 1

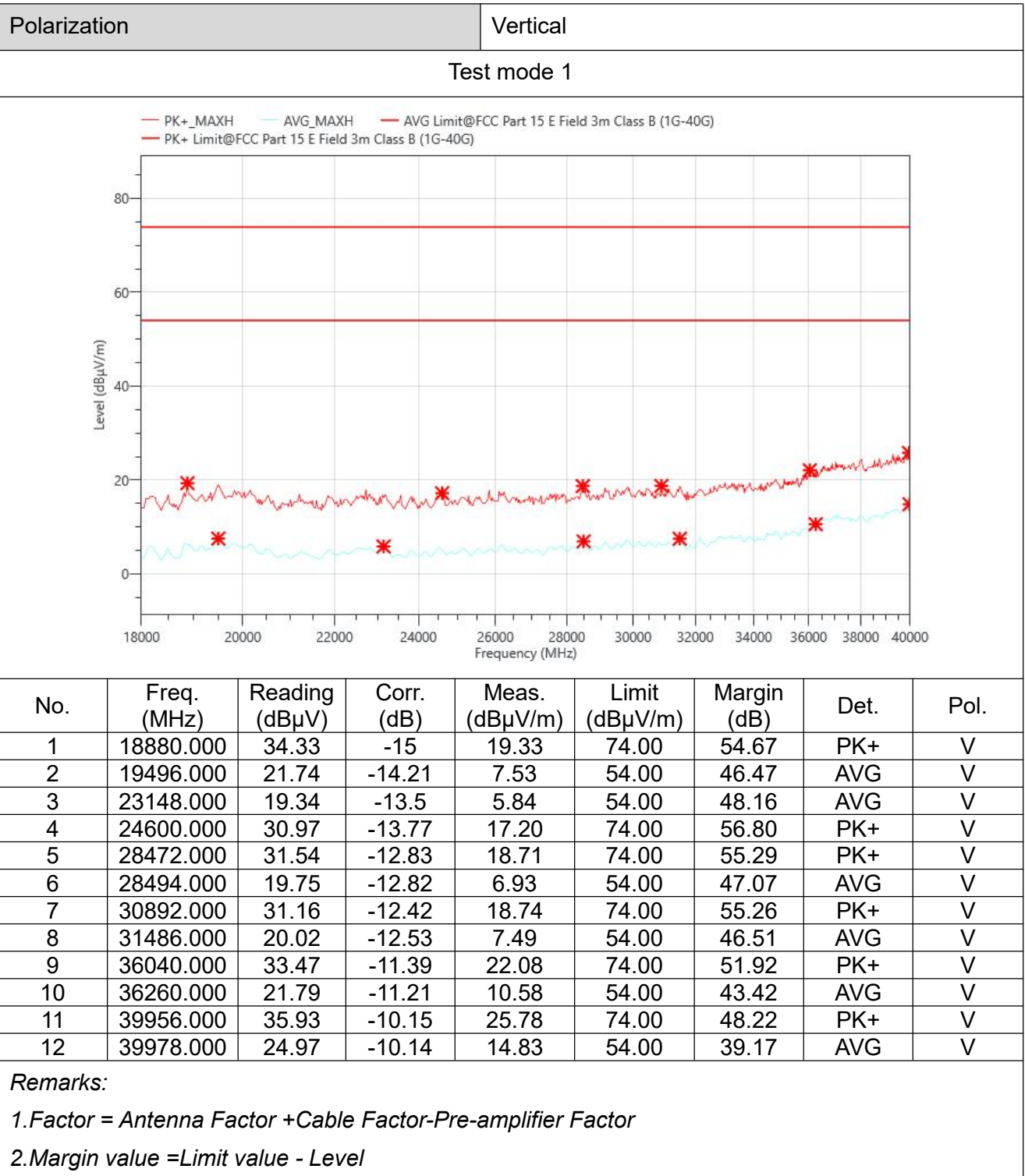


No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Det.	Pol.
1	19496.000	21.37	-14.21	7.16	54.00	46.84	AVG	H
2	19826.000	32.57	-13.86	18.71	74.00	55.29	PK+	H
3	22532.000	19.49	-13.78	5.71	54.00	48.29	AVG	H
4	22774.000	30.93	-13.58	17.35	74.00	56.65	PK+	H
5	24512.000	31.92	-13.84	18.08	74.00	55.92	PK+	H
6	26184.000	19.74	-13.51	6.23	54.00	47.77	AVG	H
7	29792.000	20.18	-12.52	7.66	54.00	46.34	AVG	H
8	30452.000	31.23	-12.45	18.78	74.00	55.22	PK+	H
9	37052.000	34.63	-10.62	24.01	74.00	49.99	PK+	H
10	38020.000	23.64	-10.72	12.92	54.00	41.08	AVG	H
11	39362.000	35.97	-10.39	25.58	74.00	48.42	PK+	H
12	39956.000	24.89	-10.15	14.74	54.00	39.26	AVG	H

Remarks:

1. Factor = Antenna Factor + Cable Factor - Pre-amplifier Factor

2. Margin value = Limit value - Level



4. EUT TEST PHOTO

Please refer to separated files Appendix for Photographs of The EUT.

5. PHOTOGRAPHS OF EUT

Please refer to separated files Appendix for Photographs of The EUT.

*****THE END*****