

RF TEST REPORT

Report No.: SHATBL2510009W03

Applicant : Shenzhen Jiutong Zhichuang Technology Co., Ltd.

Product Name : GAMING KEYBOARD

Brand Name : N/A

Model Name : GK330

Series Model : GK331,GK332,GK333,GK334,GK335,GK336,GK337,
GK338,GK339,GK301,GK302,GK303,GK304,GK305,
GK306,GK307,GK308,GK309,GK401

FCC ID : 2A7JV-GK330

Test Standard : FCC CFR Title 47 Part 15 Subpart C Section 15.249

Date of Receipt : Oct.16, 2025

Date of Test : Oct.16, 2025 ~ Oct.17, 2025

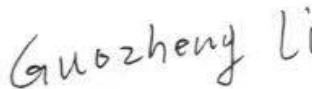
Issue Date : Oct.31, 2025

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(Terry Yang)



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REVISION HISTORY

Rev.	Issue Date	Report No.	Effect Page	Contents
00	Oct.31, 2025	DGATBL2510009W03	ALL	Initial Release

DECLARATION OF REPORT

1. The device has been tested by ATBL, and the test results show that the equipment under test (EUT) is in compliance with the requirements of 47 CFR 15.249. And it is applicable only to the tested sample identified in the report.
2. This report shall not be reproduced except in full, without the written approval of ATBL, this document only be altered or revised by ATBL, personal only, and shall be noted in the revision of the document.
3. The general information of EUT in this report is provided by the customer or manufacture, ATBL is only responsible for the test data but not for the information provided by the customer or manufacture.
4. The results in this report is only apply to the sample as tested under conditions. The customer or manufacturer is responsible for ensuring that the additional production units of this model have the same electrical and mechanical components.
5. In this report, '☐' indicates that EUT does not support content after '☐', and '☑' indicates that it supports content after '☑'

SUMMARY OF TEST RESULT

Report Section	Standard Section	Test Item	Judgment	Remark
3.1	§15.249&15.209	Radiated Emission	Compliant	--
3.2	§15.249	Band Edges	Compliant	--
3.3	§15.215	20dB Bandwidth	Compliant	--
3.4	§15.207	Conducted Emission	Compliant	--
3.5	§15.203	Antenna Requirement	Compliant	--

1. GENERAL DESCRIPTION

1.1. Applicant

Name : Shenzhen Jiutong Zhichuang Technology Co., Ltd.
Address : Room 615, Building B, Xinshiyi Maker Park, No.111 Pingshan 1st Road, Taoyuan Subdistrict, Nanshan District, Shenzhen, Guangdong Province, China

1.2. Manufacturer

Name : Shenzhen Jiutong Zhichuang Technology Co., Ltd.
Address : Room 615, Building B, Xinshiyi Maker Park, No.111 Pingshan 1st Road, Taoyuan Subdistrict, Nanshan District, Shenzhen, Guangdong Province, China

1.3. Factory

Name : Dongguan Nobida Intelligent Technology Co., Ltd.
Address : Chigang Jumart Road, Humen Town, China Electronics Dongguan Zhongdian Panda Industrial Park, Building 7, B5

1.4. General Information of EUT

General Information	
Equipment Name	GAMING KEYBOARD
Brand Name	N/A
Model Name	GK330
Series Model	GK331,GK332,GK333,GK334,GK335,GK336,GK337,GK338,GK339,GK301,GK302,GK303,GK304,GK305,GK306,GK307,GK308,GK309,GK401
Model Difference	Only model name and color are different.
Antenna Gain	2.34dBi
Antenna Type	PCB Antenna
Sample No	202509040005005
Battery	Rated Voltage:3.7V Charge Limit Voltage:4.23V Capacity:4000mAh
Hardware version	V1
Software version	V6
Connecting I/O Port(s)	Refer to the remark below.

Remark:

The above information of EUT was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.5. Equipment Specification

Equipment Specification	
Operation Frequency	2403MHz to 2480MHz
Maximum field strength	90.44dBuV/m(PK)@3m
Modulation	GFSK
Number of channels	16CH
Antenna Designation	PCB Antenna (Met 15.203 Antenna requirement)

1.6. Modification of EUT

No modifications are made to the EUT during all test items.

1.7. Laboratory Information

Company Name:	Shanghai ATBL Technology Co., Ltd.
Address:	Building 8, No. 160, Basheng Road, Waigaoqiao Free Trade Zone, Pudong New Area, Shanghai
Telephone:	+86(0)21-51298625
FCC-Registration Number:	485917
Designation Number:	CN1306
A2LA-Lab Cert. No.:	6184.01

1.8. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

47 CFR Part 15 Subpart C §15.249

ANSI C63.10-2020

Remark:

All test items were verified and recorded according to the standards and without any deviation during the test.

2. TEST CONFIGURATION OF EUT

2.1. Carrier Frequency Channel

Channel	1	2	3	4	5	6	7	8
Frequency (MHz)	2405	2463	2441	2426	2408	2466	2445	2422
Channel	9	10	11	12	13	14	15	16
Frequency (MHz)	2414	2471	2459	2436	2419	2475	2453	2439

Remark:

Low Channel: **CH1_2405MHz**; Middle Channel: **CH3_2441MHz**; High Channel: **CH14_2475MHz**.

2.2. Test Modes

NO.	TEST MODE DESCRIPTION
1	Low channel GFSK
2	Middle channel GFSK
3	High channel GFSK

Note:

- Only the result of the worst case was recorded in the report, if no other cases.
- For Radiated Emission, 3axis were chosen for testing for each applicable mode.
- The EUT adjusts the frequency through the button.

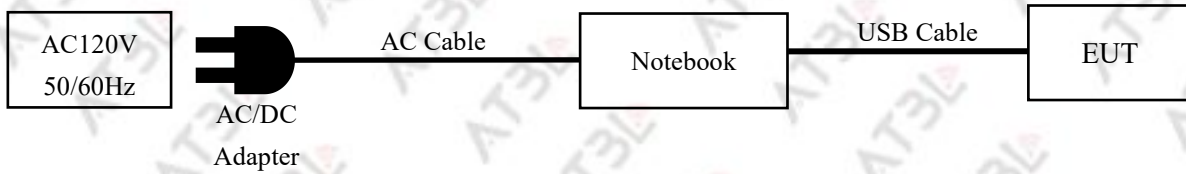
2.3. Environmental conditions

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

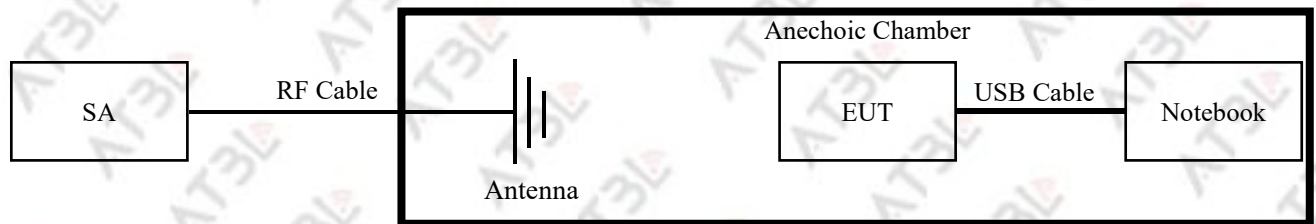
Temperature	Normal Temperature:	25°C
	High Temperature:	55°C
	Low Temperature:	-10°C
Voltage	Normal Voltage:	3.7V
Other	Relative Humidity:	55%
	Air Pressure:	102kPa

2.4. Block Diagram of Test System

2.4.1. For AC Power-Line Conducted Emission



2.4.2. For Radiated Spurious Emission



2.4.3. For Conducted Test



2.5. Description of Support Units

NO.	Unit	Brand	Model	Description
1	Laptop	Lenovo	T480	/
2	USB Line	/	/	/

2.6. Test Software and Power Level

EUT Configure mode No.	Test conditions for modulation technology
Mode A	GFSK
RF Power Setting Value	
Channel	GFSK
	Power setting
0	Default-LV3
3	Default-LV3
14	Default-LV3

Note:

- 1.For the test results, the EUT had been tested with all conditions, and the worst-case mode of data will Recording in the report.
- 2.By means of test software which provided by manufacture, the power levels during the tests were set according to the above table.

2.7. EUT Operating Conditions

For AC power-line conducted emission, the EUT was connected under the large package sizes transmission.

For radiated spurious emission and conducted test, the engineering test program was provided and make the EUT to continuous transmit/receive.

2.8. Equipment List

2.8.1. For AC Power-Line Conducted Emission

Kind of Equipment	Manufacturer	Type No.	Serial No.	equipment number	Calibrated until	Calibrated due until	Cal. Interval
EMI Test Receiver	R&S	ESPI	100679	SHATBL-E012	2025.03.17	2026.03.16	1 year
LISN	R&S	ENV216	101300	SHATBL-E013	2025.03.17	2026.03.16	1 year
LISN	R&S	ENV216	100333	SHATBL-E041	2025.03.17	2026.03.16	1 year
CE Cable	Chuangcexing	2M	EMI0014	SHATBL-E014	N/A	N/A	N/A
Temperature & Humidity	Deli	Deli	EMI0015	SHATBL-E015	2025.08.01	2026.07.31	1 year
Testing Software	FALA	EZ-EMC(Ver.EMC-CON 3A1.1)	EMI0044	SHATBL-E044	N/A	N/A	N/A

2.8.2. For Radiated Spurious Emission

Kind of Equipment	Manufacturer	Type No.	Serial No.	equipment number	Calibrated until	Calibrated due until	Cal. Interval
Signal analyzer	Agilent	N9020A	MY50200811	SHATBL-E017	2025.03.17	2026.03.16	1 year
Amplifier	JPT	JPA0118-55-303A	1910001800055000	SHATBL-E006	2025.03.24	2026.03.23	1 year
Amplifier	JPT	JPA-10M1G32	21010100035001	SHATBL-E005	2025.03.17	2026.03.16	1 year
Antenna/Turntable Controller	Brilliant	N/A	N/A	SHATBL-E007	N/A	N/A	N/A
Loop Antenna(9kHz-30MHz)	Daze	ZN30900C	20077	SHATBL-E042	2025.05.13	2026.05.12	1 year
Bilog Antenna	SCHWARZBECK	VULB 9168	01174	SHATBL-E008	2025.05.20	2026.05.19	1 year
Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120D	02334	SHATBL-E009	2025.05.20	2026.05.19	1 year
Horn Antenna	COM-POWER	AH-1840	10100008	SHATBL-E043	2025.07.27	2026.07.26	1 year
Thermometer	DeLi	N/A	N/A	SHATBL-E015	2025.08.01	2026.07.31	1 year
Test Software	FALA	EMC-RI(Ver.4A2)	N/A	N/A	N/A	N/A	N/A
Wideband radio communication tester	R&S	CMW500	101331	SHATBL-W044	2025.07.28	2026.07.27	1 year
Spectrum analyzer	R&S	FSV40-N	101761	SHATBL-W036	2025.07.28	2026.07.27	1 year

2.8.3. For Conducted Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	equipment number	Calibrated until	Calibrated due until	Cal. Interval
Power sensor	DARE	RPR3006W	16I00054SN016	SHATBL-W008	2025.07.28	2026.07.27	1 year
Adjustable Attenuator	Agilent	8494B	MY42144015	SHATBL-W009	2025.07.28	2026.07.27	1 year
Adjustable Attenuator	Agilent	8496B	MY42143776	SHATBL-W010	2025.07.28	2026.07.27	1 year
Environmental Test Chamber	KSON	THS-B6C-150	9159K	SHATBL-W019	2025.03.17	2026.03.16	1 year
Signal analyzer	Keysight	N9020A	MY50510136	SHATBL-W003	2025.07.18	2026.07.17	1 year
Vector signal generator	Agilent	N5182A	MY48180764	SHATBL-W043	2025.07.18	2026.07.17	1 year
Analog signal generator	Keysight	N5182B	MY57300196	SHATBL-W005	2025.07.18	2026.07.17	1 year
Wideband radio communication tester	R&S	CMW500	101331	SHATBL-W007	2025.07.28	2026.07.27	1 year
Switch Box	Cesheng	smu 1003	WCS20221215	SHATBL-W046	2025.03.19	2026.03.18	1 year
Thermometer	DeLi	N/A	N/A	SHATBL-W011	2025.08.01	2026.07.31	1 year
Test Software	Cesheng	WCS-WC N	N/A	SHATBL-W021	N/A	N/A	N/A

Remark:

Calibration duration for above equipments is 1 year.

2.9. Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.958\text{dB}$
2	Conducted spurious emissions	$\pm 2.988\text{dB}$
3	All emissions, radiated 9KHz-30MHz	$\pm 0.96\text{dB}$
4	All emissions, radiated 30MHz-1GHz	$\pm 2.50\text{dB}$
5	All emissions, radiated 1GHz-18GHz	$\pm 3.51\text{dB}$
6	Occupied bandwidth	$\pm 23.20\text{Hz}$
7	Power spectral density	$\pm 0.886\text{dB}$

3. TEST RESULT

3.1. Radiated Emission

3.1.1. Radiated Emission Limit

Standard FCC15.249

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
900-928MHz	50	500
2400-2483.5MHz	50	500
5725-5875MHz	50	500
24.0-24.25GHz	250	2500

Standard FCC 15.209

Frequency (MHz)	Distance Meters	Field Strengths Limit	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
0.009 ~ 0.490	300	$2400/\text{F}(\text{kHz})$	---
0.490 ~ 1.705	30	$24000/\text{F}(\text{kHz})$	---
1.705 ~ 30	30	30	---
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	Other:74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Remark:

- (1) Emission level $\text{dB}\mu\text{V} = 20 \log \text{Emission level } \mu\text{V}/\text{m}$
- (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.

3.1.2. Test Procedure

- 1.The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2.Power on the EUT and all the supporting units.
The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3.The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4.For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5.Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use minimum resolution bandwidth of 1 MHz. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7.When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8.If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9.For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10.In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

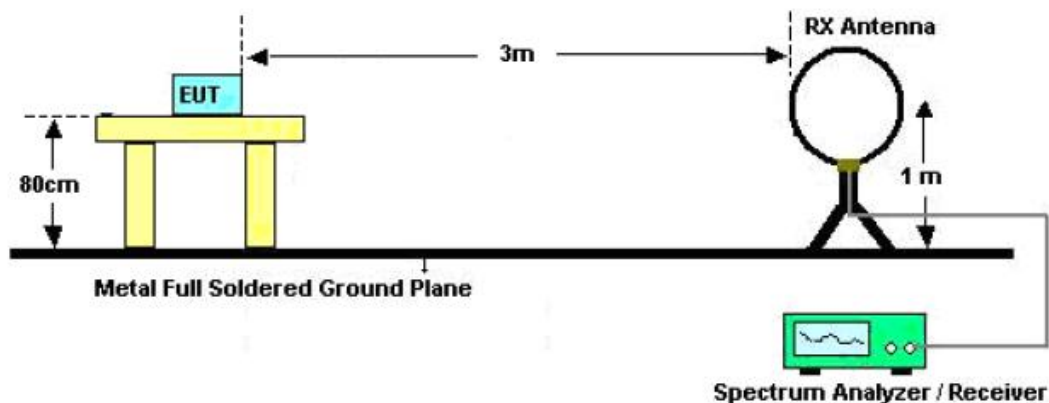
The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz RBW 2.4MHz/ VBW 8MHz for Peak, RBW 2.4MHz/10Hz for Average

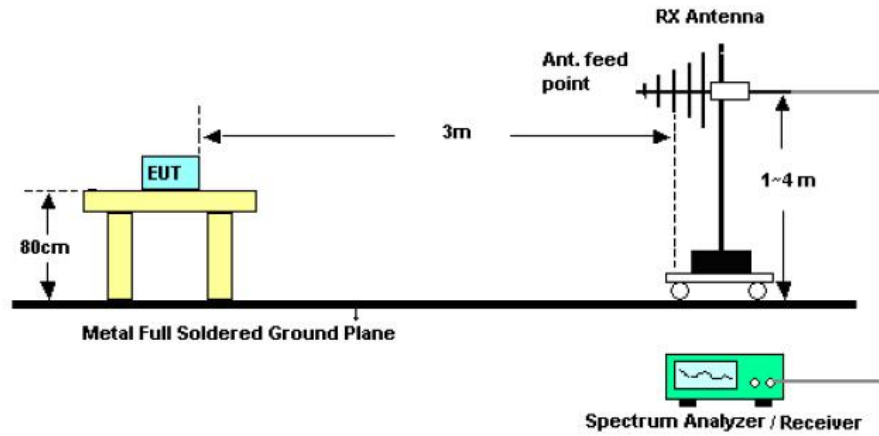
Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP

3.1.3. Test Setup

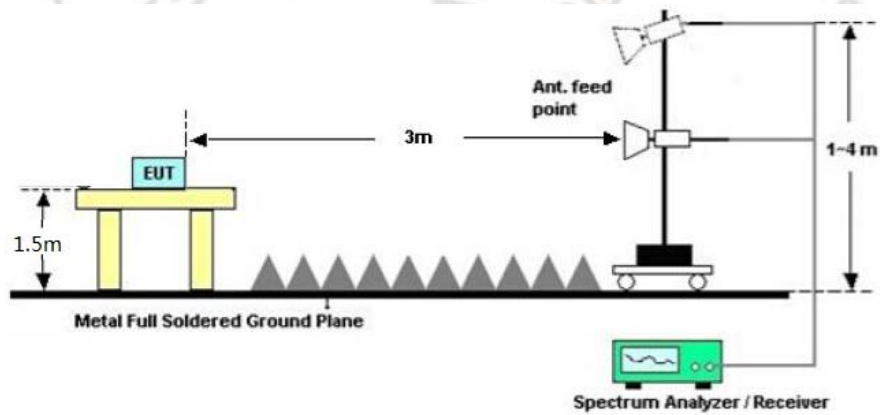
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



3.1.4. Test Result

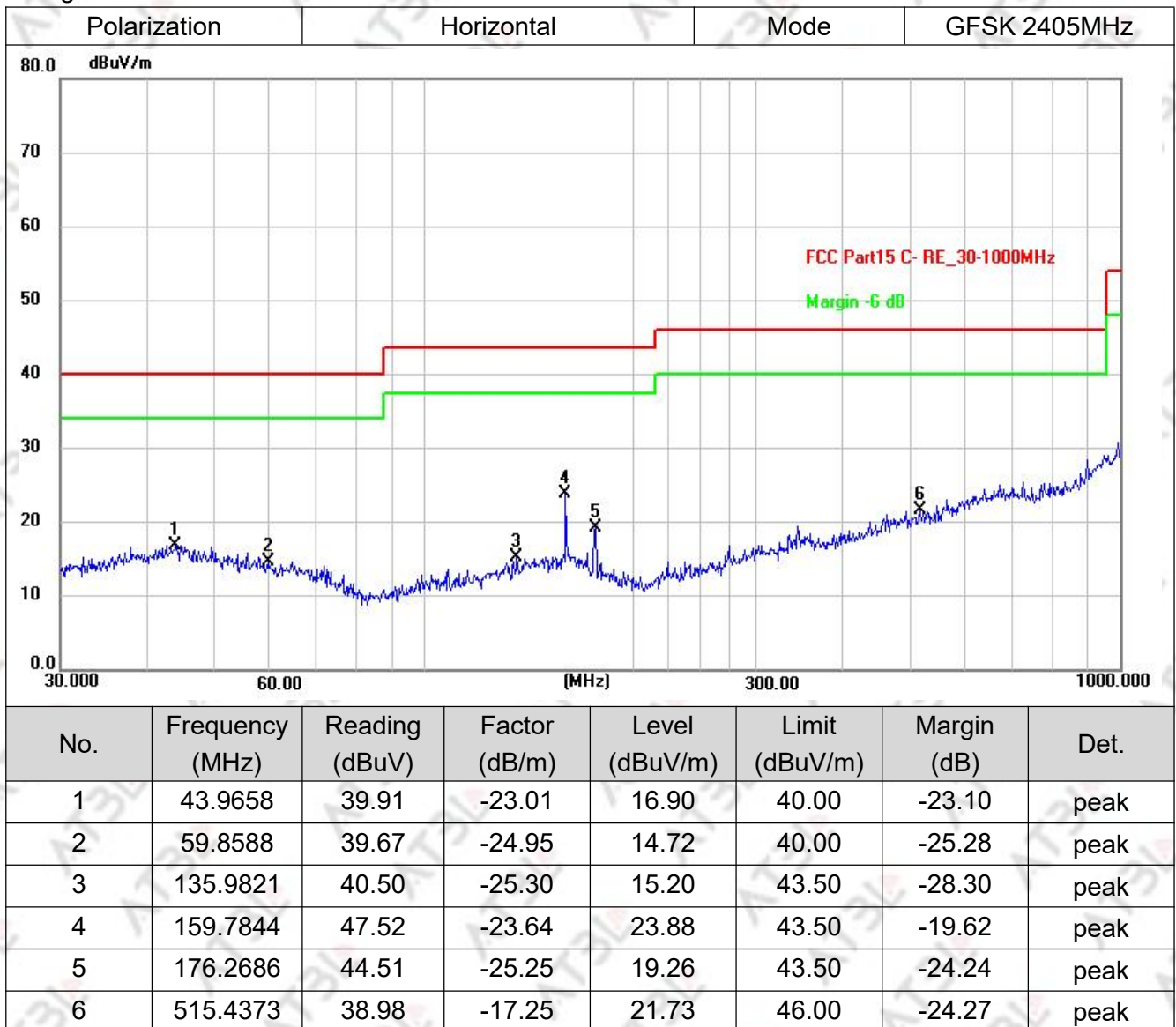
For 9 kHz ~ 30 MHz

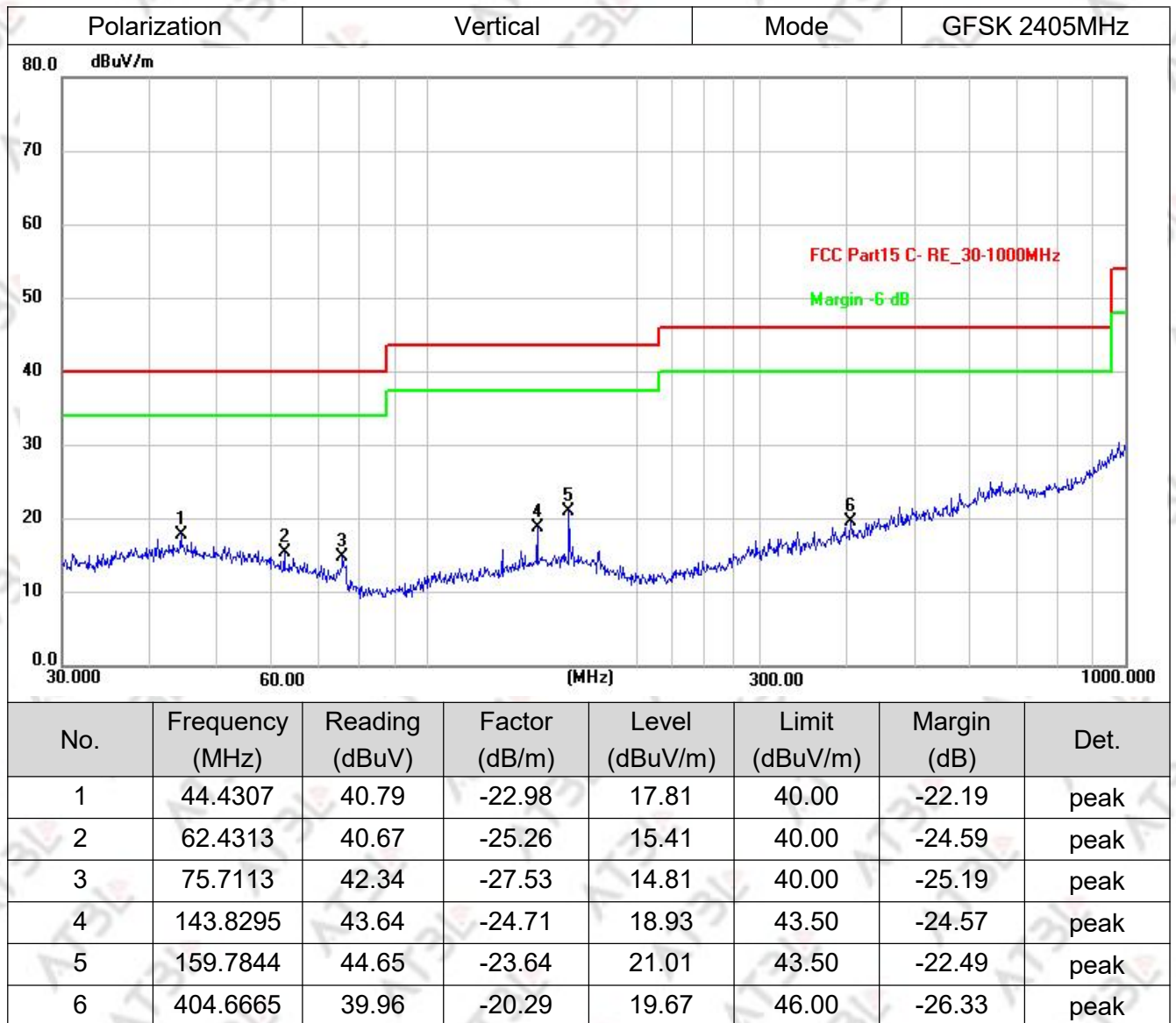
The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

For 30 MHz ~ 1 GHz:

Note:

- 1.All modes have been tested, only worst case(GFSK 2405MHz)mode was recorded in the test report.
- 2.Emission Level = Reading Value + Correction Factor.
- 3.Correction Factor= Antenna Factor+ Cable Factor-Amplifier Gain.
- 4.The emission levels of other frequencies were less than 20dB margin against the limit.
- 5.Margin value = Emission level-Limit value.

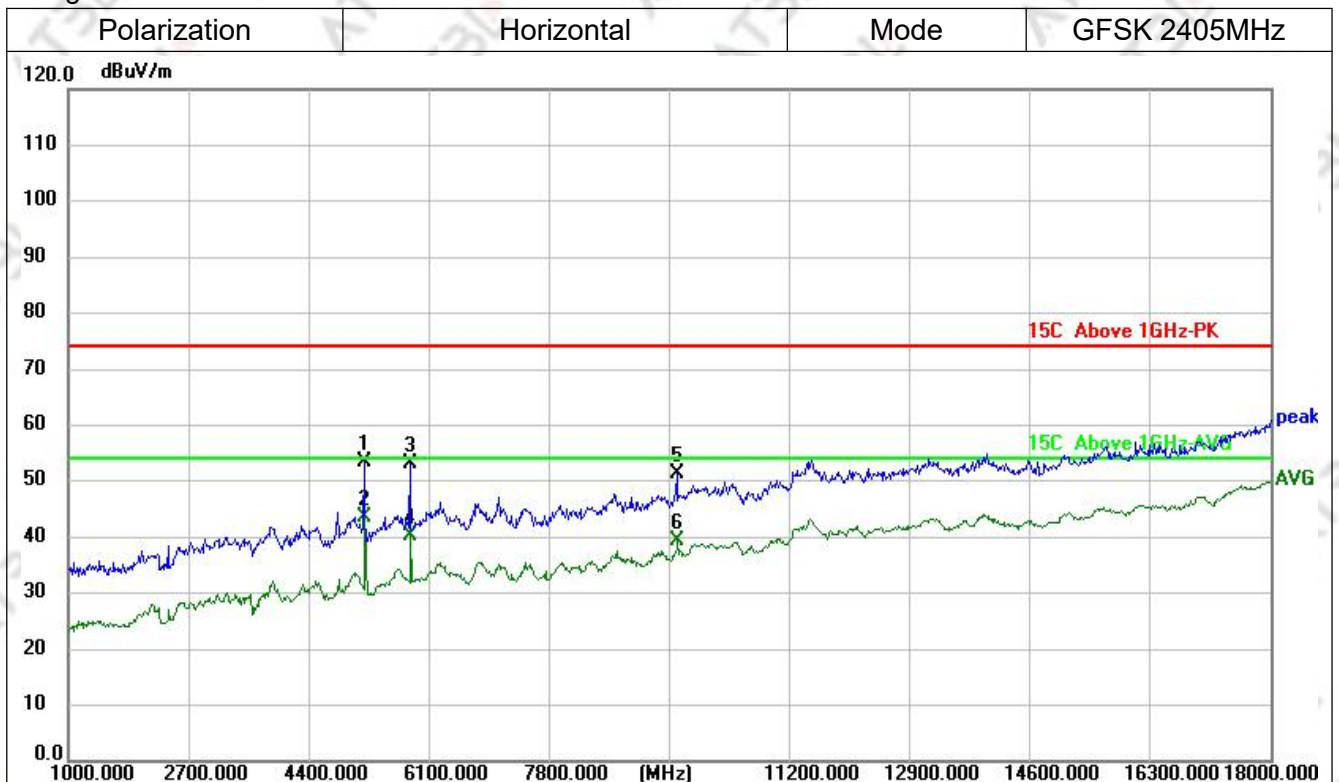




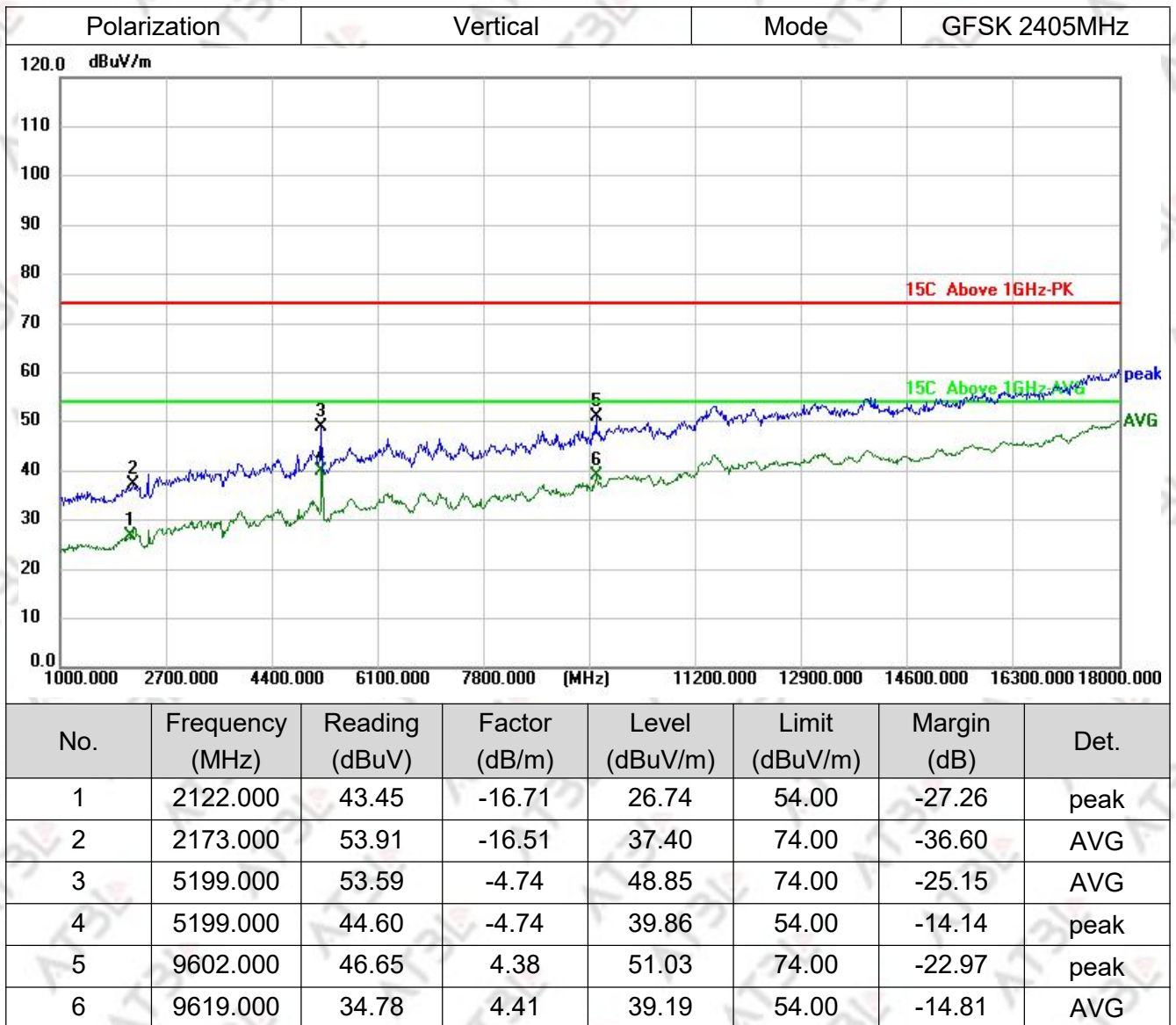
For 1 GHz ~ 18GHz:

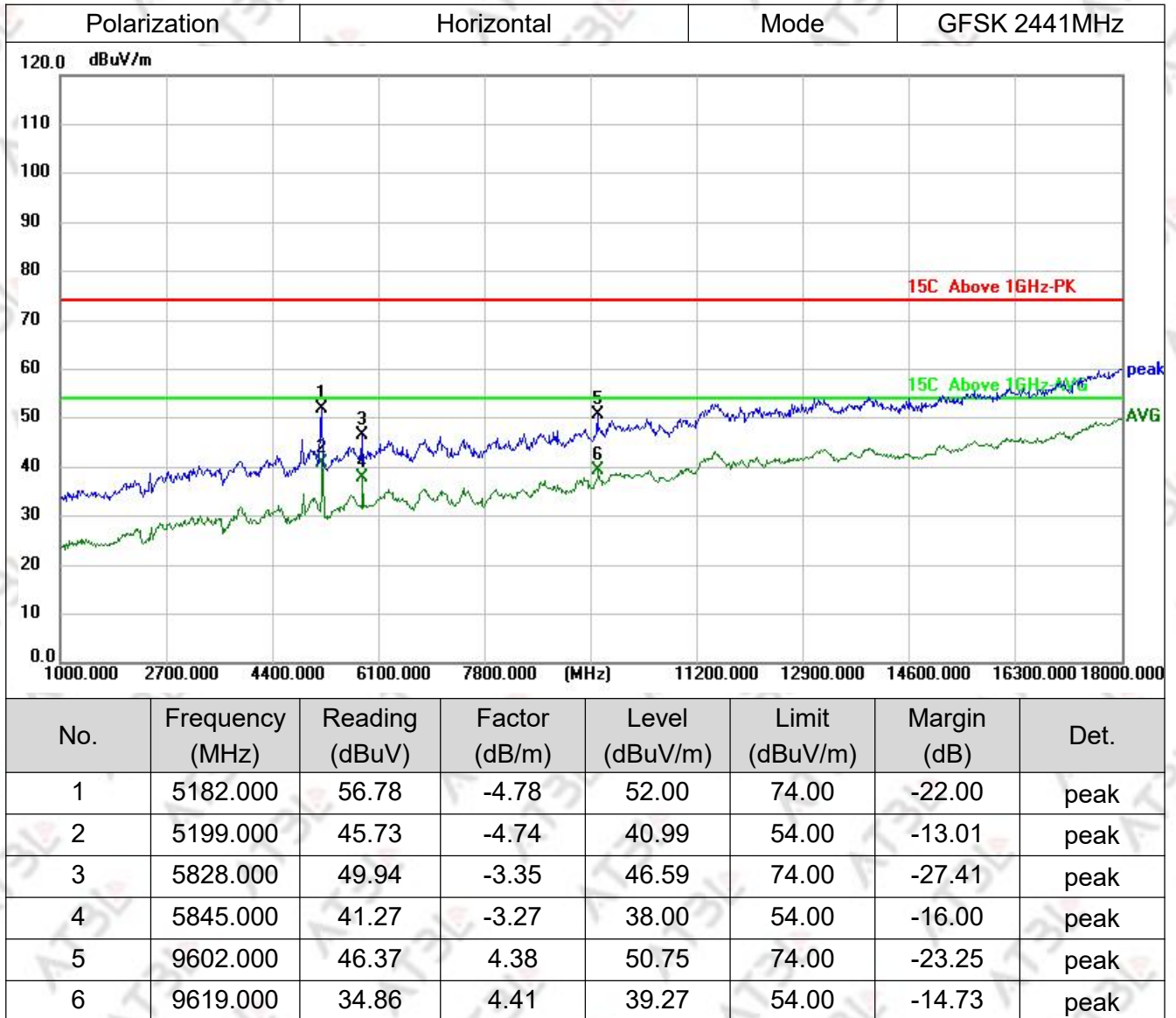
Note:

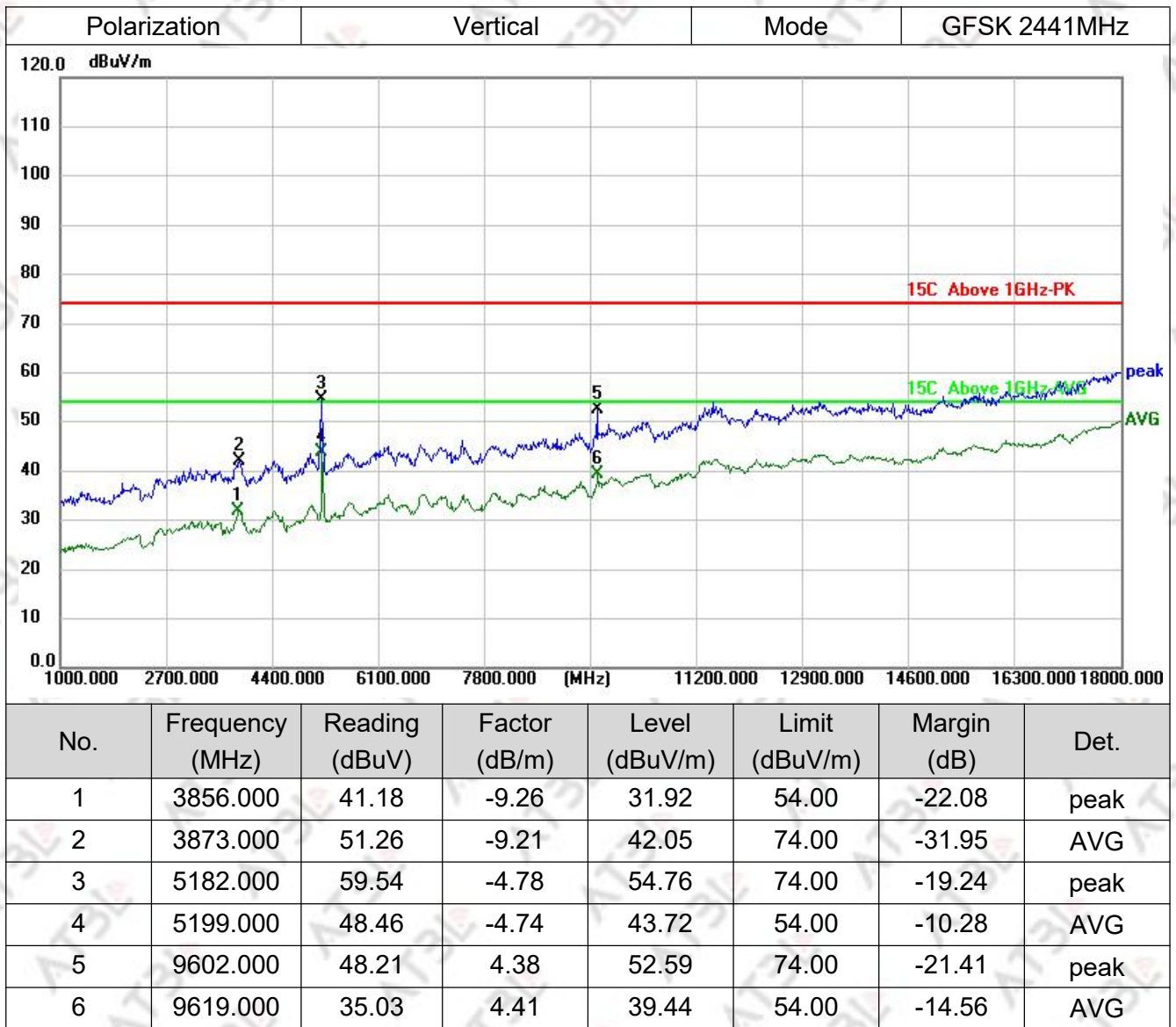
- 1.The all data rate modes had been test, but only worse test data was recorded in the test report.
- 2.In frequency ranges 18 ~25GHz no any other harmonic emissions detected which are tested to compliance with the limit. No recording in the test report. No any other emissions level which are attenuated less than 20dB below the limit. No recording in the test report.
- 3.We used the filter to test and the main frequency was filtered out.
- 4.Emission Level= Reading Value+ Correction Factor.
- 5.Correction Factor= Antenna Factor+ Cable Factor-Amplifier Gain.
- 6.The emission levels of other frequencies were less than 20dB margin against the limit.
- 7.Margin value = Emission level-Limit value.

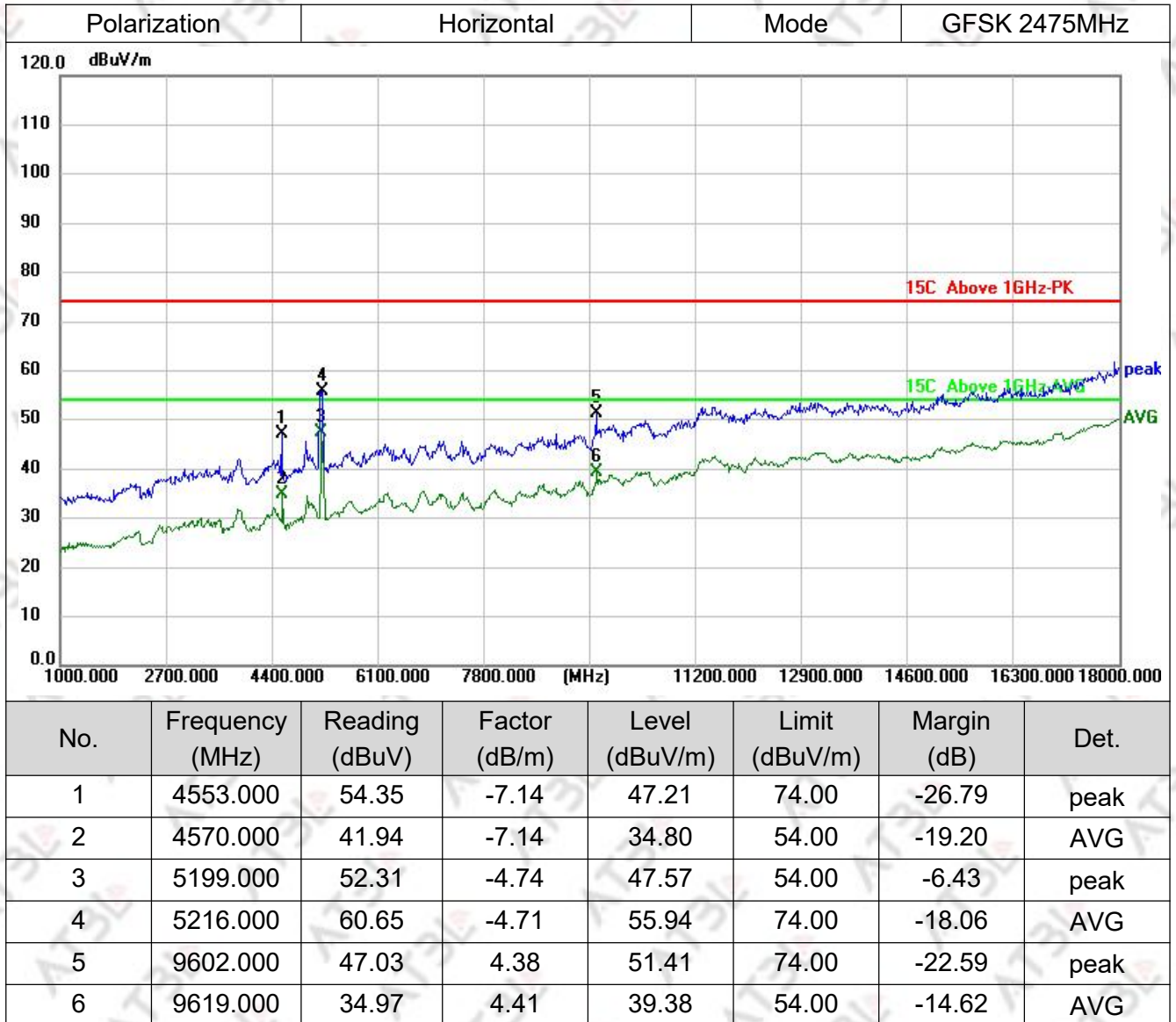


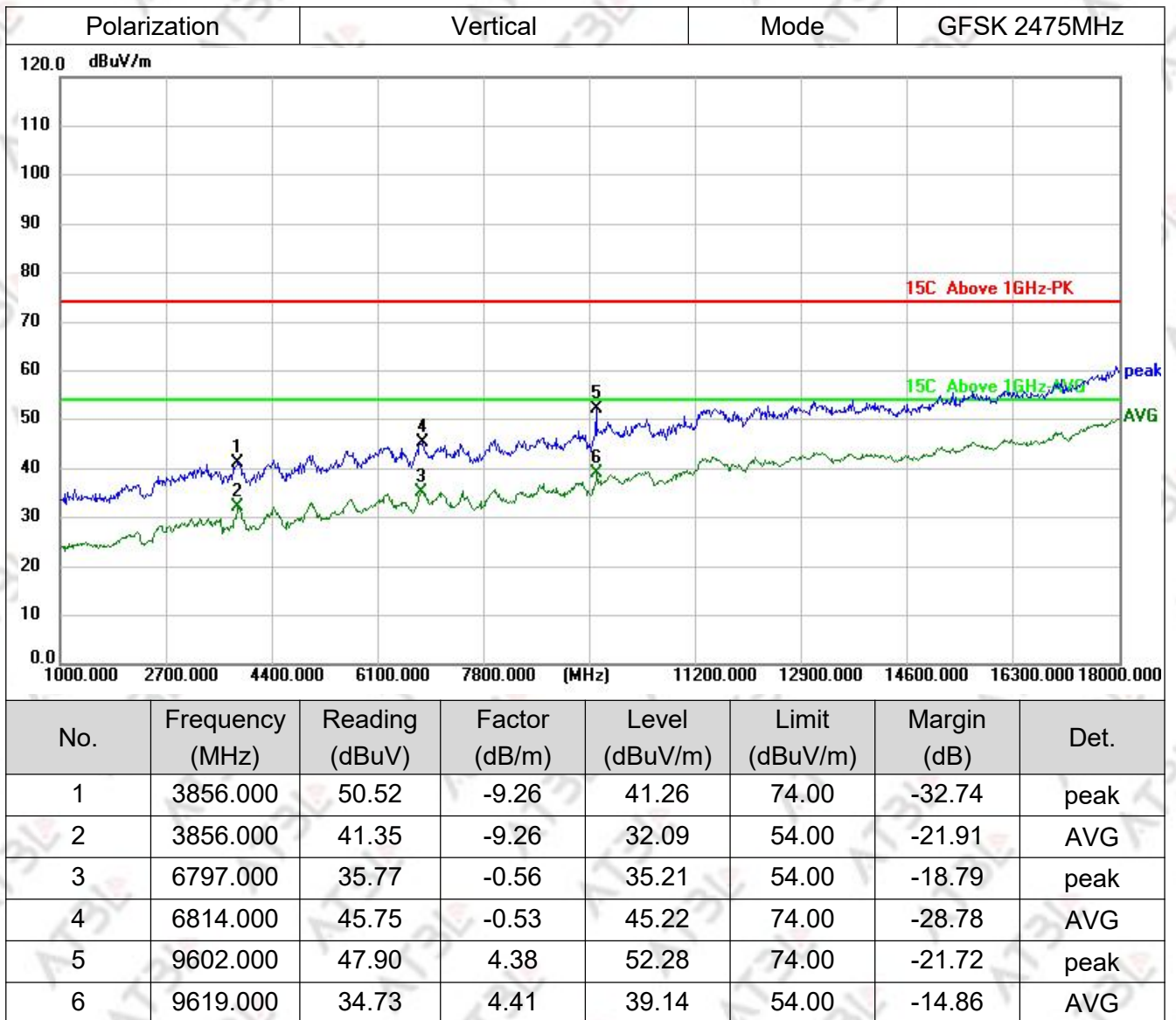
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	5182.000	58.19	-4.78	53.41	74.00	-20.59	peak
2	5199.000	48.30	-4.74	43.56	54.00	-10.44	AVG
3	5828.000	56.54	-3.35	53.19	74.00	-20.81	peak
4	5845.000	43.44	-3.27	40.17	54.00	-13.83	AVG
5	9602.000	46.89	4.38	51.27	74.00	-22.73	peak
6	9619.000	34.89	4.41	39.30	54.00	-14.70	AVG











Field Strength of Fundamental

Note:

1. Level= Reading Value+ Correction Factor.
2. Correction Factor = Antenna Factor+ Cable Factor-Amplifier Gain.

Test Mode: GFSK							
Test Channel: Channel 1							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarity
2405.000	106.26	-15.82	90.44	114	-23.56	peak	Horizontal
2405.000	85.76	-15.82	69.94	94	-24.06	AVG	Horizontal
2405.000	95.02	-15.82	79.2	114	-34.8	peak	Vertical
2405.000	72.65	-15.82	56.83	94	-37.17	AVG	Vertical
Test Channel: Channel 3							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Result
2441.000	101.13	-15.59	85.54	114	-28.46	peak	Horizontal
2441.000	83.49	-15.59	67.9	94	-26.1	AVG	Horizontal
2441.000	90.22	-15.35	74.87	114	-39.13	peak	Vertical
2441.000	72.64	-15.35	57.29	94	-36.71	AVG	Vertical
Test Channel: Channel 16							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Result
2475.000	104.91	-15.35	89.32	114	-24.68	peak	Horizontal
2475.000	79.73	-15.35	64.14	94	-29.86	AVG	Horizontal
2475.000	95.79	-15.35	80.44	114	-33.56	peak	Vertical
2475.000	64.28	-15.35	48.93	94	-45.07	AVG	Vertical

3.2. Band edge Test

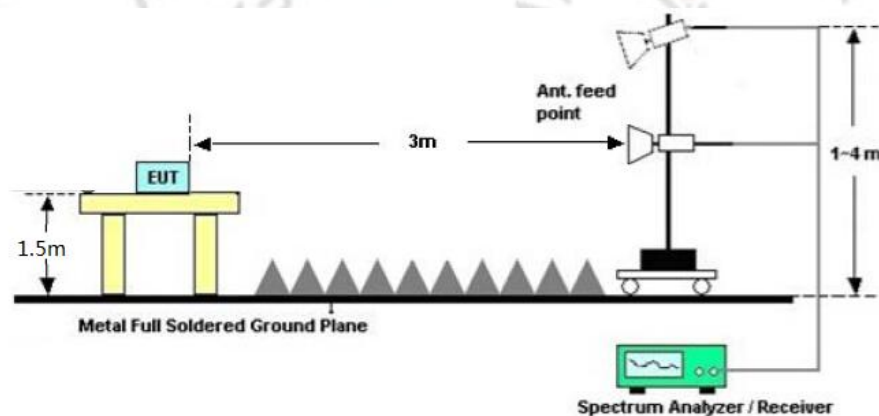
3.2.1. Limit

Frequency Band	Limit of the Field Strength (dB μ V/m)	
	Peak	Average
$f \leq 2390\text{MHz}$	74	54
$f \geq 2483.5\text{MHz}$	74	54

3.2.2. Test Procedure

- 1.The EUT operates at transmitting mode. The operate channel is tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.
- 2.Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission: (a) PEAK: RBW=1MHz, VBW=3MHz / Sweep=AUTO
(b) AVERAGE: RBW=1MHz ; VBW=1/on time(1KHz) / Sweep=AUTO

3.2.3. Test Setup



3.2.4. Test Result

Note:

- 1.All data rate modes had been test, only worst case mode was recorded in the test report.
- 2.Emission Level= Reading Value+ Correction Factor.
- 3.Correction Factor= Antenna Factor+ Cable Factor-Amplifier Gain.
- 4.Margin value = Emission level-Limit value.

Test Mode: GFSK							
Test Channel: Channel 1, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Result
2310.000	53.37	-16.09	37.28	74.00	-36.72	peak	Pass
2310.000	42.97	-16.09	26.88	54.00	-27.12	AVG	Pass
2390.000	53.21	-15.88	37.33	74.00	-36.67	peak	Pass
2390.000	42.82	-15.88	26.94	54.00	-27.06	AVG	Pass
2400.000	53.28	-15.82	37.46	74.00	-36.54	peak	Pass
2400.000	42.94	-15.82	27.12	54.00	-26.88	AVG	Pass
Test Channel: Channel 1, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Result
2310.000	52.91	-16.09	36.82	74.00	-37.18	peak	Pass
2310.000	42.96	-16.09	26.87	54.00	-27.13	AVG	Pass
2390.000	52.28	-15.88	36.40	74.00	-37.60	peak	Pass
2390.000	42.68	-15.88	26.80	54.00	-27.20	AVG	Pass
2400.000	52.64	-15.82	36.82	74.00	-21.36	peak	Pass
2400.000	42.85	-15.82	27.03	54.00	-11.15	AVG	Pass
Test Channel: Channel 16, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Result
2483.500	52.71	-15.30	37.41	74.00	-36.59	peak	Pass
2483.500	43.21	-15.30	27.91	54.00	-26.09	AVG	Pass
2500.000	53.44	-15.19	38.25	74.00	-35.75	peak	Pass
2500.000	42.74	-15.19	27.55	54.00	-26.45	AVG	Pass
Test Channel: Channel 16, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Result
2483.500	53.25	-15.30	37.95	74.00	-36.05	peak	Pass
2483.500	42.96	-15.30	27.66	54.00	-26.34	AVG	Pass
2500.000	52.71	-15.19	37.52	74.00	-36.48	peak	Pass
2500.000	42.85	-15.19	27.66	54.00	-26.34	AVG	Pass

3.3. 20dB Bandwidth

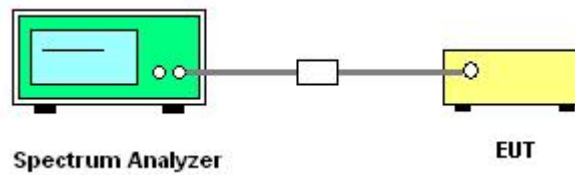
3.3.1. Limit

There is no limit requirement for 20dB Bandwidth.

3.3.2. Test Procedure

1. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
2. Set SPA Centre Frequency = Operation Frequency, RBW= 30 KHz, VBW $\geq 3 \times$ RBW.
3. Set SPA Trace 1 Max hold, then View.

3.3.3. Test Setup



3.3.4. Test Result of 20dB Bandwidth

TEST ITEM	20dB Bandwidth
TEST MODULATION	GFSK

Test Data (MHz)		Criteria
Low Channel	1.798	PASS
Middle Channel	1.797	PASS
High Channel	1.795	PASS



Low Channel



Middle Channel



High Channel



N/A

N/A

3.4. AC Power-Line Conducted Emission

3.4.1. Limit

47 CFR 15.207(a): For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table:

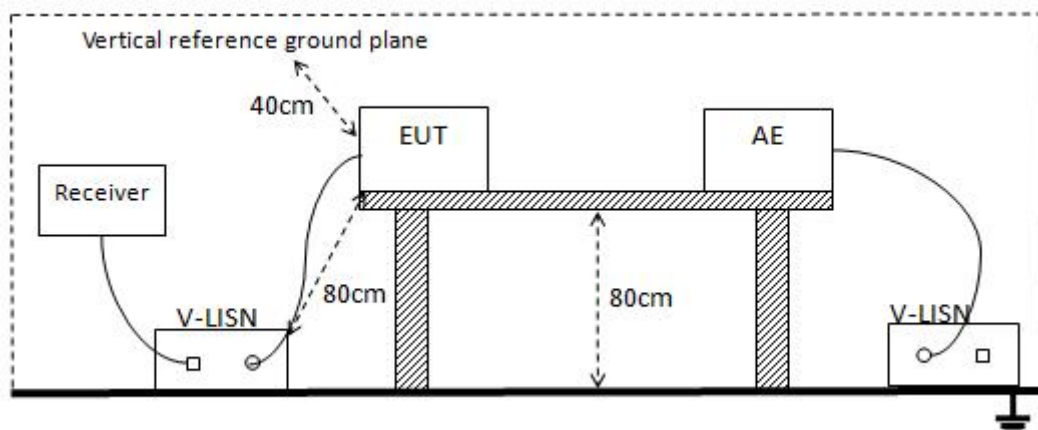
Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

3.4.2. Test Procedure

- 1.The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- 2.Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3.All the support units are connecting to the other LISN.
- 4.The LISN provides 50 ohm coupling impedance for the measuring instrument.
- 5.The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- 6.Both sides of AC line were checked for maximum conducted interference.
- 7.The frequency range from 150 kHz to 30 MHz was searched.
- 8.Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9 kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

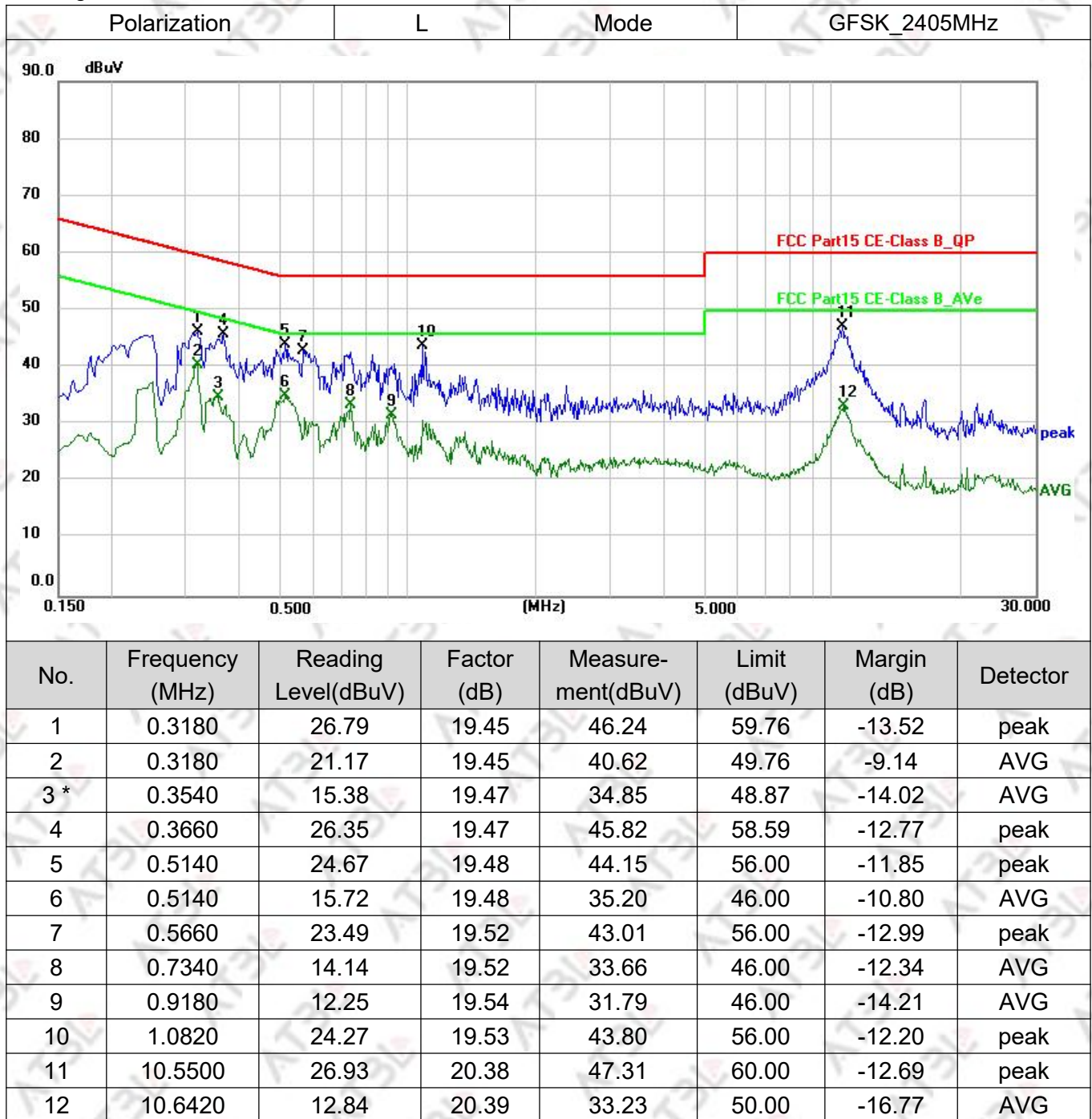
3.4.3. Test Setup

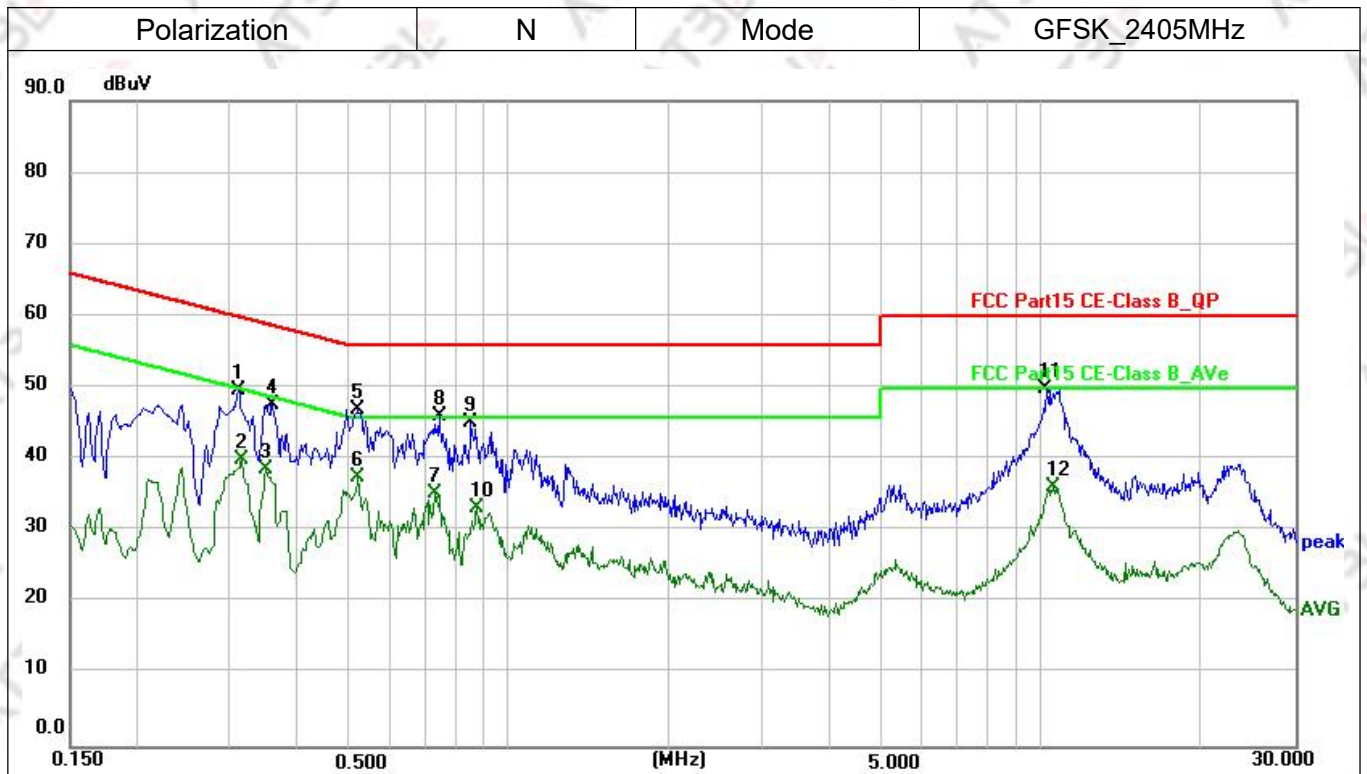


3.4.4. Test Result of AC Power-Line Conducted Emission

Note:

- 1.All modes have been tested, only worst case(GFSK_2405MHz)mode was recorded in the test report.
- 2.Emission Level = Reading Value+ Correction Factor.
- 3.Correction Factor= Insertion loss + Cable loss.
- 4.The emission levels of other frequencies were less than 20dB margin against the limit.
- 5.Margin value = Emission level-Limit value.





No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Measure-ment(dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3100	30.34	19.43	49.77	59.97	-10.20	peak
2	0.3140	20.52	19.44	39.96	49.86	-9.90	AVG
3	0.3500	19.30	19.45	38.75	48.96	-10.21	AVG
4	0.3580	28.26	19.46	47.72	58.77	-11.05	peak
5	0.5220	27.51	19.48	46.99	56.00	-9.01	peak
6	0.5220	18.10	19.48	37.58	46.00	-8.42	AVG
7	0.7260	15.92	19.50	35.42	46.00	-10.58	AVG
8	0.7420	26.70	19.51	46.21	56.00	-9.79	peak
9	0.8500	25.72	19.50	45.22	56.00	-10.78	peak
10	0.8740	13.76	19.51	33.27	46.00	-12.73	AVG
11	10.2739	29.41	20.42	49.83	60.00	-10.17	peak
12	10.5300	15.84	20.46	36.30	50.00	-13.70	AVG

3.5. Antenna Requirement

3.5.1. Standard Requirement

According to 47 CFR 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

3.5.2. EUT Antenna

The antenna used for the EUT is PCB Antenna, which meets the antenna requirements.

4. TEST SETUP PHOTOGRAPHS

Please refer to the Appendix F.

5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

External Please refer to the Appendix G.

Internal Please refer to the Appendix H.

*****END OF THE REPORT*****