

Radio Test Report

47 CFR Part 15.247

Applicant's name : Shenzhenshi Xingbiaohang Technology Co., Ltd.
3rd Floor, Building C, New Era Gongrong industrial Park, No2 ShihuanRoad,
Address : Shilong Community, Shiyuan Street, Baoan District, Shenzhen, Guangdong,
CN(China)
Manufacture's Name : Shenzhenshi Xingbiaohang Technology Co., Ltd.
3rd Floor, Building C, New Era Gongrong industrial Park, No2 ShihuanRoad,
Address : Shilong Community, Shiyuan Street, Baoan District, Shenzhen, Guangdong,
CN(China)

Product description

Trader mark : N/A
Product Name: : Decoding Box
Model and/or type reference : CPB-001
Serial Model : CPB-002 (For other models, please refer to page two.)
Rating(s) : DC12V,300mA,3.6W
Standards : 47 CFR Part 15.247
FCCID : 2BWEJ-CPB001

The EUT described above has been tested by us with the listed standards and found in compliance with the FCC requirements. It is possible to use FCC marking to demonstrate the compliance with this FCC requirements.
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Date of Test

Date (s) of performance of tests : 2026-04-22 ~ 2026-05-15
Date of Issue : 2026-05-15
Test Result : **Pass**

Prepared by:

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Project Engineer

Reviewed by:

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Project Supervisor

Approved by:

Yu

Technical Director



Other models:

CPB-003,CPB-005,CPB-006,CPB-007,CPB-008,CPB-009,CPB-010,CPB-011,CPB-012,CPB-013,CPB-014,
CPB-015,CPB-016,CPB-017,CPB-018,CPB-019,CPB-020,CPB-021,CPB-022,CPB-023,CPB-024,CPB-025,
CPB-026,CPB-027,CPB-028,CPB-029,CPB-030



REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	2026-05-15	Valid	Initial Release



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1. TEST SUMMARY

No.	Test Item	Basic Standard	Requirement	Result
1	Antenna requirement	47 CFR Part 15.247	47 CFR 15.203	PASS
2	20dB Bandwidth	47 CFR Part 15.247	47 CFR 15.247(a)(1)	PASS
3	Maximum Conducted Output Power	47 CFR Part 15.247	47 CFR 15.247(b)(1)	PASS
4	Channel Separation	47 CFR Part 15.247	47 CFR 15.247(a)(1)	PASS
5	Number of Hopping Frequencies	47 CFR Part 15.247	47 CFR 15.247(a)(1)(iii)	PASS
6	Dwell Time	47 CFR Part 15.247	47 CFR 15.247(a)(1)(iii)	PASS
7	Emissions in non-restricted frequency bands	47 CFR Part 15.247	47 CFR 15.247(d)	PASS
8	Band edge emissions (Radiated)	47 CFR Part 15.247	47 CFR 15.247(d), 15.209, 15.205	PASS
9	Emissions in frequency bands (below 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d), 15.209, 15.205	PASS
10	Emissions in frequency bands (above 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d), 15.209, 15.205	PASS

2. MEASUREMENT UNCERTAINTY

The report uncertainty of measurement $y \pm U$, where expended 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	Occupied Channel Bandwidth	$\pm 3.5\%$
2	RF output power, conducted	$\pm 1.19\text{dB}$
3	Unwanted Emissions, conducted	$\pm 2.988\text{dB}$
4	All emissions, radiated (1GHz - 18GHz)	$\pm 4.66\text{dB}$
5	All emissions, radiated (30MHz - 1GHz)	$\pm 3.94\text{dB}$
6	All emissions, radiated (18GHz - 40GHz)	$\pm 4.31\text{dB}$

3. TEST FACILITY

Shenzhen VOP Testing Technology Co., Ltd.

Add:103, Building 5, Wanyan Industrial Park Qiaotou Community, Fuhai Street, Baoan District Shenzhen, Guangdong
People's Republic of China

FCC :Designation Number:CN1438,Certificate Number: 7579.01

3.1. Deviation from Standard

None

3.2. Abnormalities from Standard Conditions

None



4. GENERAL INFORMATION

4.1. General Description of EUT

Manufacturer:	Shenzhen Xingbiaohang Technology Co., Ltd.
Manufacturer Address:	3rd Floor, Building C, New Era Gongrong industrial Park, No2 Shihuan Road, Shilong Community, Shiyuan Street, Baoan District, Shenzhen, Guangdong, CN(China)
EUT Name:	Decoding Box
Model No:	CPB-001
Serial Model:	CPB-002,CPB-003,CPB-005,CPB-006,CPB-007,CPB-008,CPB-009,CPB-010,CPB-011,CPB-012,CPB-013,CPB-014,CPB-015,CPB-016,CPB-017,CPB-018,CPB-019,CPB-020,CPB-021,CPB-022,CPB-023,CPB-024,CPB-025,CPB-026,CPB-027,CPB-028,CPB-029, CPB-030
Brand Name:	N/A
Difference Description:	All models are identical to each other except for model name and appearance.
Operation Frequency:	2402MHz to 2480MHz
Data rate:	1Mbps,2Mbps,3Mbps
Number of channels:	79
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Antenna type:	External Antenna
Antenna Gain:	3.8dBi
Bluetooth Version:	N/A
Hardware Version:	N/A
Software Version:	N/A
Power Supply:	DC12V,300mA,3.6W
Maximum Output Power:	9.64dBm

Note:

- 1.For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- 2.The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.

3.Channel List

Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
0	2402	27	2429	54	2456
1	2403	28	2430	55	2457

2	2404	29	2431	56	2458
3	2405	30	2432	57	2459
4	2406	31	2433	58	2460
5	2407	32	2434	59	2461
6	2408	33	2435	60	2462
7	2409	34	2436	61	2463
8	2410	35	2437	62	2464
9	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	49	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

4.2. EUT Test Mode

TM1	GFSK(TX Mode)
TM2	$\pi/4$ DQPSK(TX Mode)
TM3	8DPSK(TX Mode)
TM4	GFSK(HOPP)
TM5	$\pi/4$ DQPSK(HOPP)
TM6	8DPSK(HOPP)
Test software Version	Test program: WS8100 RF Test EN_V1.0.3
Frequency	2402MHz,2441MHz,2480MHz
Power Setting of Software	0

Note:All above mode have been measurement, only worst data was reported.

4.3. Auxiliary Equipment Used During Test

No.	Equipment	Manufacturer	Model No.	Serial No.	Remark
1	HP laptop	HP	DESKTOP-G3N DKR3	N/A	N/A

5. EQUIPMENTS LIST FOR ALL TEST ITEMS

Emissions in non-restricted frequency bands 20dB Bandwidth Maximum Conducted Output Power Channel Separation Number of Hopping Frequencies Dwell Time						
No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	spectrum analyzer	Agilent	N9020A	MY51287427	2025-07-07	2026-07-06
2	RF automatic control unit	TST	CBOX-Full	2752539	2025-07-14	2026-07-13

Band edge emissions (Radiated) Emissions in frequency bands (above 1GHz)						
No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	preamplifier	QUANJUDA	LNA18	2503130032	2025-07-07	2026-07-06
2	High frequency antenna	Schwarzbeck	9120D-1141	03260	2025-10-19	2026-10-18
3	High-frequency horn antenna	Schwarzbeck	HA-018040L	25098408	2025-10-31	2026-10-30
4	preamplifier	HCT	HC180400-50 G25	25098401	2025-09-19	2026-09-18
5	spectrum analyzer	R&S	FSV40	101373	2025-12-24	2026-12-23

Emissions in frequency bands (below 1GHz)						
No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	EMI test receiver ESCI	R&S	ESPI-7	100754	2026-03-17	2028-03-16
2	Log periodic antenna	SCHWARZBECK	VULB9163	01790	2025-10-24	2026-10-23
3	preamplifier	SCHWARZBECK	8447D	2944A08081	2026-03-17	2028-03-16

6. TEST RESULTS

6.1. Antenna requirement

Test Requirement:	Refer to 47 CFR Part 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.
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6.1.1. Conclusion:

The EUT antenna is External Antenna. It conforms to the standard requirements.



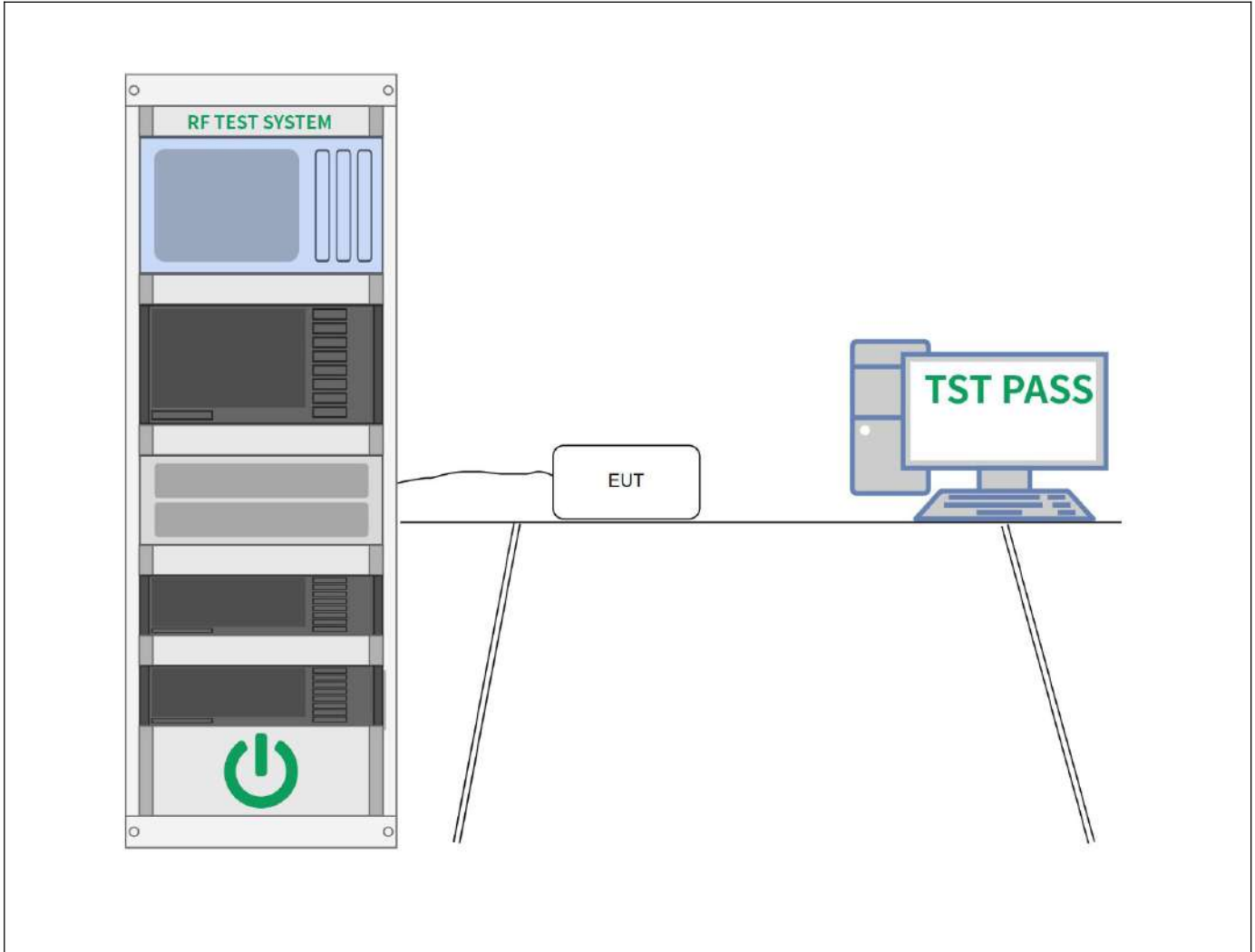
6.2. 20dB Bandwidth

Test Requirement:	47 CFR 15.247(a)(1)
Test Limit:	Refer to 47 CFR 15.215(c), intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.
Test Method:	ANSI C63.10-2020, section 7.8.6, For occupied bandwidth measurements, use the procedure in 6.9.3. Frequency hopping shall be disabled for this test.
Procedure:	The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth: a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW. b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be at least three times the RBW, unless otherwise specified by the applicable requirement. c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.6.2. d) Step a) through step c) might require iteration to adjust within the specified range. e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max-hold mode (until the trace stabilizes) shall be used. f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth. g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies. h) The occupied bandwidth shall be reported by providing spectral plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

6.2.1. EUT Operation

Operating Environment:					
Temperature:	25.7 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM1, TM2, TM3				
Final test mode:	TM1, TM2, TM3				

6.2.2. Test Setup Diagram:



6.2.3. Test Data

Please Refer to Appendix for Details.

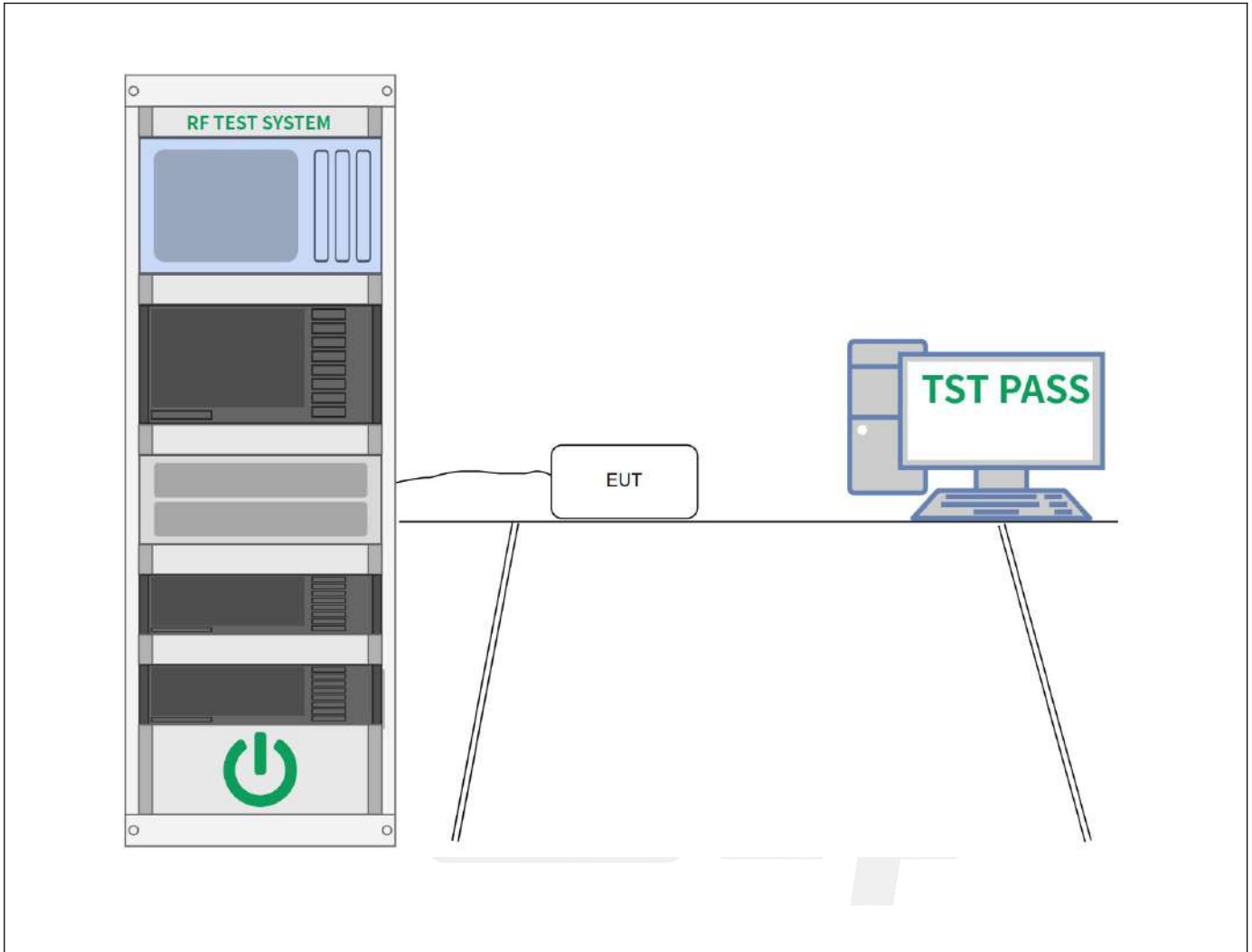
6.3. Maximum Conducted Output Power

Test Requirement:	47 CFR 15.247(b)(1)	
Test Limit:	Refer to 47 CFR 15.247(b)(1), For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.	
Test Method:	ANSI C63.10-2020, section 7.8.5	
Procedure:	This is an RF-conducted test to evaluate maximum peak output power. Use a direct connection between the antenna port of the unlicensed wireless device and the spectrum analyzer, through suitable attenuation. Frequency hopping shall be disabled for this test. Use the following spectrum analyzer settings: a) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel. b) RBW > 20 dB bandwidth of the emission being measured. c) VBW ≥ RBW. d) Sweep: No faster than coupled (auto) time. e) Detector function: Peak. f) Trace: Max-hold. g) Allow trace to stabilize. h) Use the marker-to-peak function to set the marker to the peak of the emission. i) The indicated level is the peak output power, after any corrections for external attenuators and cables. j) A spectral plot of the test results and setup description shall be included in the test report. NOTE—A peak responding power meter may be used, where the power meter and sensor system video bandwidth is greater than the occupied bandwidth of the unlicensed wireless device, rather than a spectrum analyzer.	
Spectrum Analyzer Setting:	Spectrum Analyzer Setting	Setting
	RBW	>DTS Bandwidth
	VBW	3*RBW
	Span	>3*DTS Bandwidth
	Sweep Time	Auto
	Detector	Peak
	Trace Mode	Max Hold

6.3.1. EUT Operation

Operating Environment:					
Temperature:	25.7 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM1, TM2, TM3				
Final test mode:	TM1, TM2, TM3				

6.3.2. Test Setup Diagram:



6.3.3. Test Data

Please Refer to Appendix for Details.

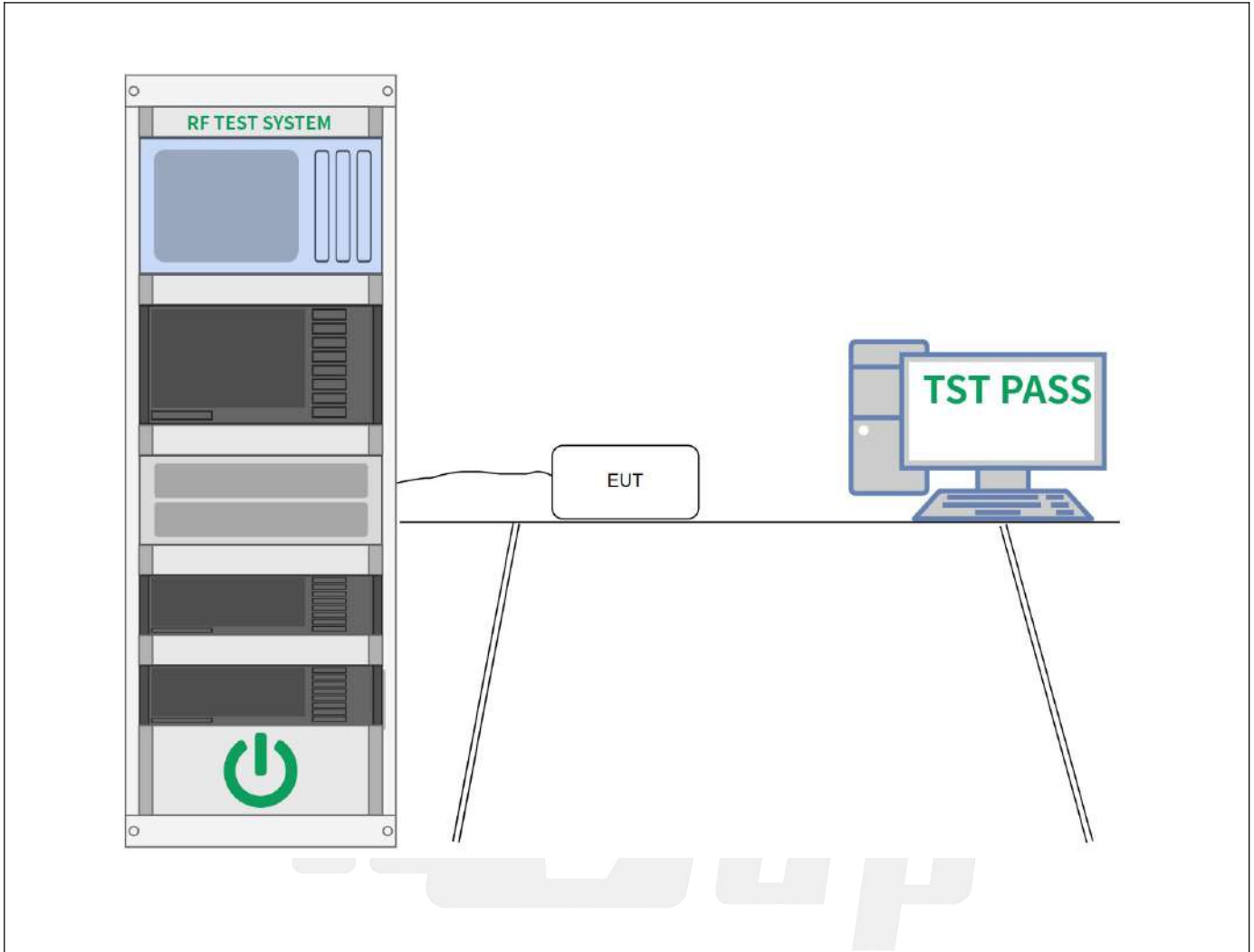
6.4. Channel Separation

Test Requirement:	47 CFR 15.247(a)(1)
Test Limit:	Refer to 47 CFR 15.247(a)(1), Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.
Test Method:	ANSI C63.10-2020, section 7.8.2
Procedure:	The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings: a) Span: Wide enough to capture the peaks of two adjacent channels. b) RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel. c) Video (or average) bandwidth (VBW) $\geq$ RBW. d) Sweep: No faster than coupled (auto) time. e) Detector function: Peak. f) Trace: Max-hold. g) Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. Compliance of an EUT with the appropriate regulatory limit shall be determined. A spectral plot of the data shall be included in the test report.

6.4.1. EUT Operation

Operating Environment:					
Temperature:	25.7 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM4, TM5, TM6				
Final test mode:	TM4, TM5, TM6				

6.4.2. Test Setup Diagram:



6.4.3. Test Data

Please Refer to Appendix for Details.

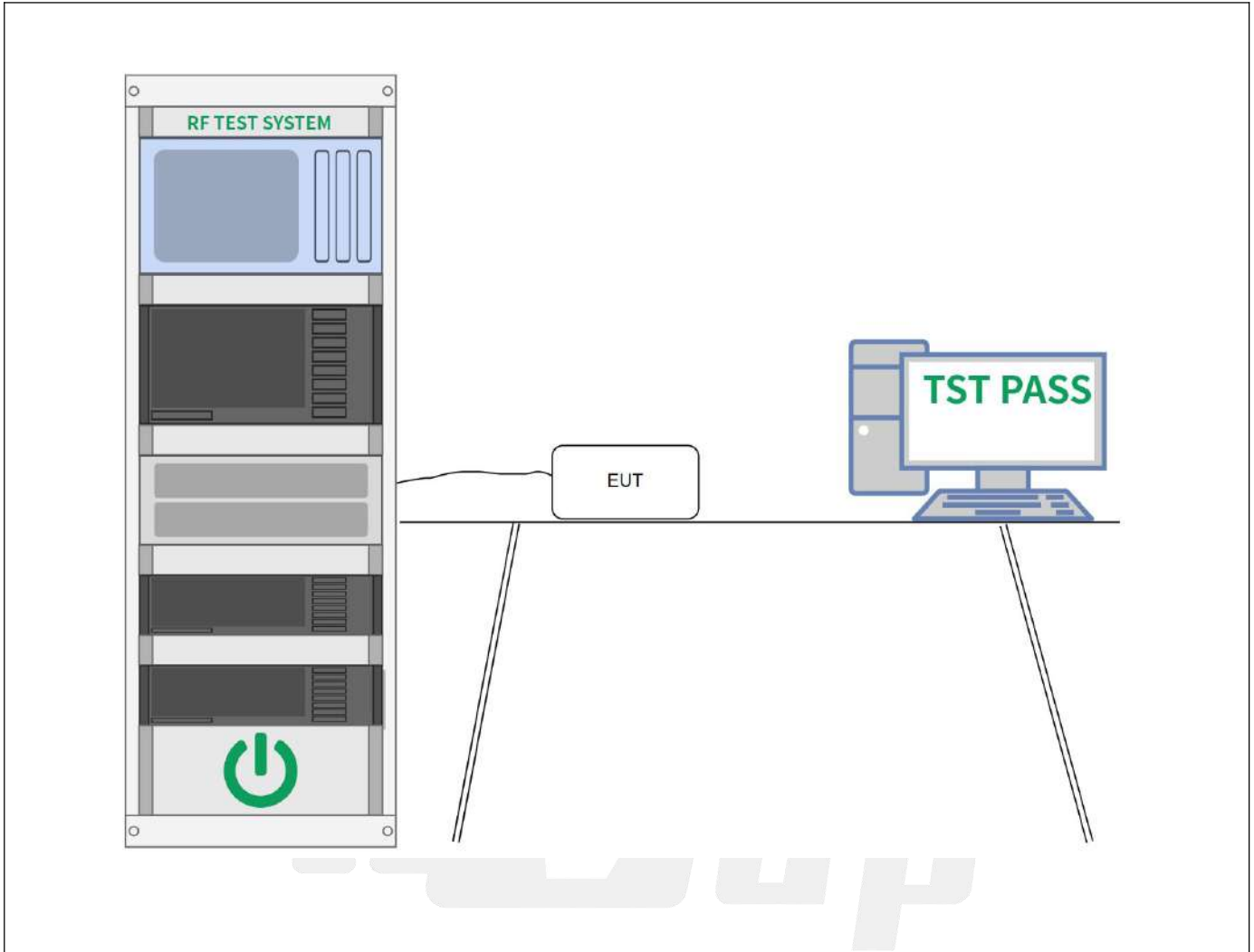
6.5. Number of Hopping Frequencies

Test Requirement:	47 CFR 15.247(a)(1)(iii)
Test Limit:	Refer to 47 CFR 15.247(a)(1)(iii), Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.
Test Method:	ANSI C63.10-2020, section 7.8.3
Procedure:	The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings: a) Span: The frequency band of operation. Depending on the number of channels the device supports, it could be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen. b) RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller. c) VBW $\geq$ RBW. d) Sweep: No faster than coupled (auto) time. e) Detector function: Peak. f) Trace: Max-hold. g) Allow the trace to stabilize. It might prove necessary to break the span up into subranges to show clearly all of the hopping frequencies. Compliance of an EUT with the appropriate regulatory limit shall be determined for the number of hopping channels. A spectral plot of the data shall be included in the test report.

6.5.1. EUT Operation

Operating Environment:					
Temperature:	25.7 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM4, TM5, TM6				
Final test mode:	TM4, TM5, TM6				

6.5.2. Test Setup Diagram:



6.5.3. Test Data

Please Refer to Appendix for Details.

6.6. Dwell Time

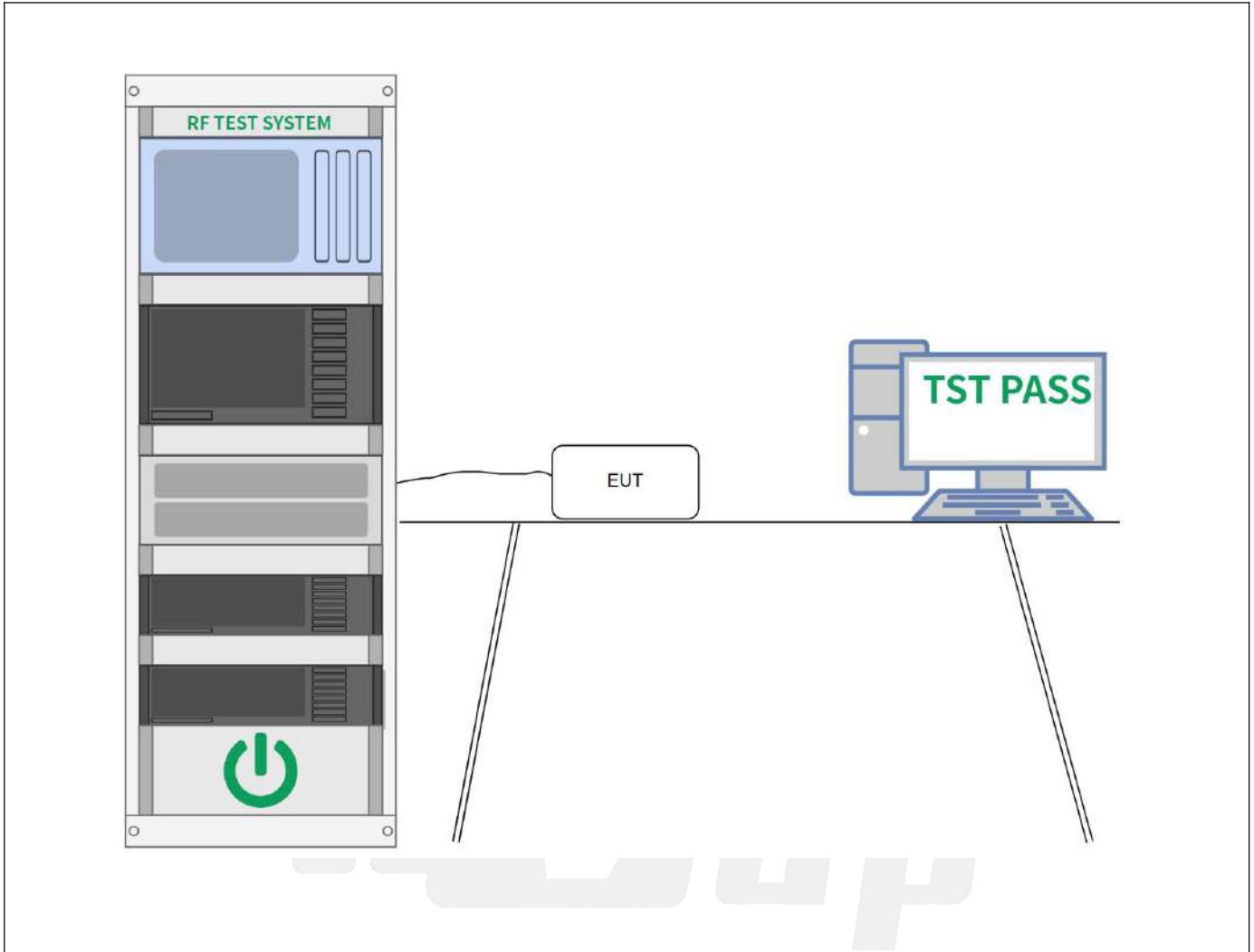
Test Requirement:	47 CFR 15.247(a)(1)(iii)
Test Limit:	Refer to 47 CFR 15.247(a)(1)(iii), Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.
Test Method:	ANSI C63.10-2020, section 7.8.4
Procedure:	The dwell time per hop on a channel is the time from the start of the first transmission to the end of the last transmission for that hop. If the device has a single transmission per hop then the dwell time is the duration of that transmission. If the device has a multiple transmissions per hop then the dwell time is measured from the start of the first transmission to the end of the last transmission. The time of occupancy is the total time that the device dwells on a channel over an observation period specified in the regulatory requirement. To determine the time of occupancy the spectrum analyzer will be configured to measure both the dwell time per hop and the number of times the device transmits on a specific channel in a given period. The EUT shall have its hopping function enabled. Compliance with the requirements shall be made with the minimum and with the maximum number of channels enabled. If the dwell time per channel does not vary with the number of channels then compliance with the requirements may be based on the minimum number of channels. If the device supports different dwell times per channel (example Bluetooth devices can dwell on a channel for 1, 3 or 5 time slots) then measurements can be limited to the longest dwell time with the minimum number of channels. Use the following spectrum analyzer settings to determine the dwell time per hop: a) Span: Zero span, centered on a hopping channel. b) RBW shall be $\leq$ channel spacing and where possible RBW should be set $\gg 1 / T$, where T is the expected transmission time per hop. c) Sweep time: Set so that the start of the first transmission and end of the last transmission for the hop are clearly captured. Setting the sweep time to be slightly longer than the hopping period per channel (hopping period = $1/\text{hopping rate}$) should achieve this. d) Use a video trigger, where possible with a trigger delay, so that the start of the transmission is clearly observed. The trigger level might need adjustment to reduce the chance of triggering when the system hops on an adjacent channel. e) Detector function: Peak. f) Trace: Clear-write, single sweep. g) Place markers at the start of the first transmission on the channel and at the end of the

	last transmission. The dwell time per hop is the time between these two markers. To determine the number of hops on a channel in the regulatory observation period repeat the measurement using a longer sweep time. When the device uses a single hopping sequence the period of measurement should be sufficient to capture at least 2 hops. When the device uses a dynamic hopping sequence, or the sequence varies, the period of measurement may need to capture multiple hops to better determine the average time of occupancy. Count the number of hops on the channel across the sweep time. The average number of hops on the same channel within the regulatory observation period is calculated from the number of hops on the channel divided by the spectrum analyzer sweep time multiplied by the regulatory observation period. For example, if three hops are counted with an analyzer sweep time of 500 ms and the regulatory observation period is 10 s, then the number of hops in that ten seconds is $3 / 0.5 \times 10$, or 60 hops. The average time of occupancy is calculated by multiplying the dwell time per hop by the number of hops in the observation period.
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6.6.1. EUT Operation

Operating Environment:					
Temperature:	25.7 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM4, TM5, TM6				
Final test mode:	TM4, TM5, TM6				

6.6.2. Test Setup Diagram:



6.6.3. Test Data

Please Refer to Appendix for Details.

6.7. Emissions in non-restricted frequency bands

Test Requirement:	47 CFR 15.247(d)
Test Limit:	Refer to 47 CFR 15.247(d), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required.
Test Method:	ANSI C63.10-2020 section 7.8.7 ANSI C63.10-2020+Cor 1-2023 section 7.8.7
Procedure:	7.8.7.1 General considerations To demonstrate compliance with the relative out-of-band emissions requirements conducted spurious emissions shall be measured for the transmit frequencies, per 5.5 and 5.6, and at the maximum transmit powers. Frequency hopping shall be disabled for this test with the exception of measurements at the allocated band-edges which shall be repeated with hopping enabled. Connect the primary antenna port through an attenuator to the spectrum analyzer input; in the results, account for all losses between the unlicensed wireless device output and the spectrum analyzer. The frequency range of testing shall span 30 MHz to 10 times the operating frequency and this may be done in a single sweep or, to aid resolution, across a number of sweeps. The resolution bandwidth shall be 100 kHz, video bandwidth 300 kHz, and a coupled sweep time with a peak detector. The limit is based on the highest in-band level across all channels measured using the same instrument settings (resolution bandwidth of 100 kHz, video bandwidth of 300 kHz, and a coupled sweep time with a peak detector). To help clearly demonstrate compliance a display line may be set at the required offset (typically 20 dB) below the highest in-band level. Where the highest in-band level is not clearly identified in the out-of-band measurements a separate spectral plot showing the in-band level shall be provided. When conducted measurements cannot be made (for example a device with integrated, non-removable antenna) radiated measurements shall be used. The reference level for determining the limit shall be established by maximizing the field strength from the highest power channel and measuring using the resolution and video bandwidth settings and peak detector as described above. The field strength limit for spurious emissions outside of restricted-bands shall then be set at the required offset (typically 20 dB) below the highest in-band level. Radiated measurements will follow the standards measurement procedures described in Clause 6 with the exception that the resolution

bandwidth shall be 100 kHz, video bandwidth 300 kHz, and a coupled sweep time with a peak detector. Note that use of wider measurement bandwidths are acceptable for measuring the spurious emissions provided that the peak detector is used and that the measured value of spurious emissions are compared to the highest in-band level measured with the 100 kHz / 300 kHz bandwidth settings to determine compliance.

7.8.7.2 Band-edges

Compliance with a relative limit at the band-edges (e.g., -20 dBc) shall be made on the lowest and on the highest channels with frequency hopping disabled and repeated with frequency hopping enabled. For the latter test the hopping sequence shall include the lowest and highest channels.

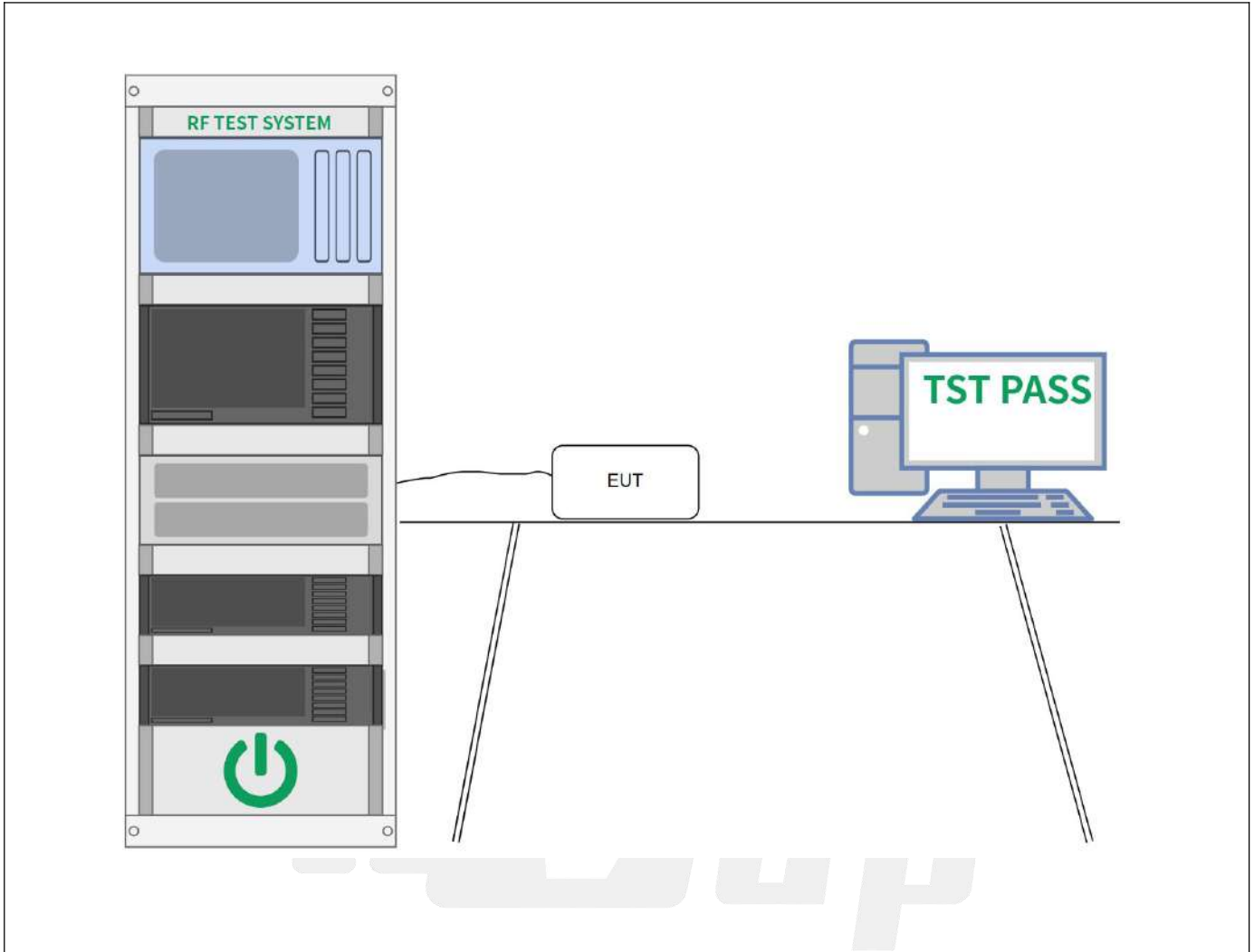
For measurements with the hopping disabled the analyzer screen shall clearly show compliance with the requirement within 10 MHz of the allocated band-edge.

For measurements with the hopping enabled the analyzer screen shall clearly show compliance with the requirement within 10 MHz of both of the allocated band-edges. This could require separate spectral plots for each band-edge.

6.7.1. EUT Operation

Operating Environment:					
Temperature:	25.7 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

6.7.2. Test Setup Diagram:



6.7.3. Test Data

Please Refer to Appendix for Details.

6.8. Band edge emissions (Radiated)

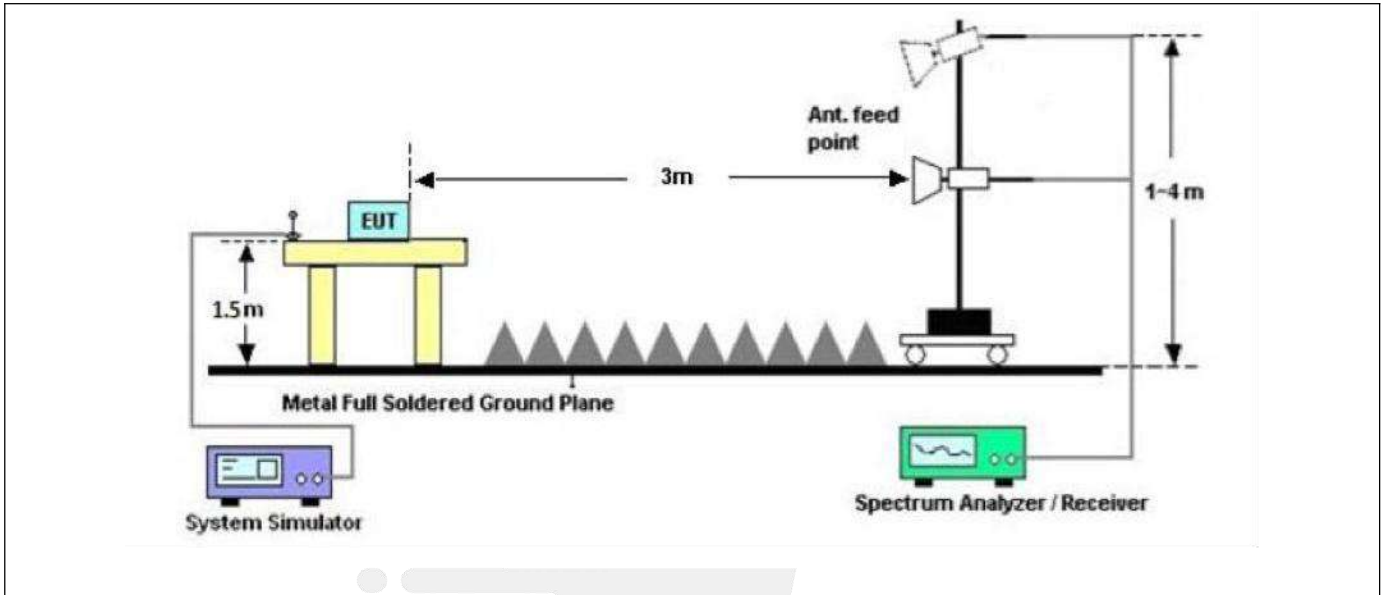
Test Requirement:	Refer to 47 CFR 15.247(d), In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
	30-88	100 **	3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.			
Test Method:	ANSI C63.10-2020 section 6.10		
Procedure:	ANSI C63.10-2020 section 6.10.5.2		
Spectrum Analyzer Setting:	Spectrum Analyzer Setting	Setting	
	RBW	1MHz	
	VBW	PEAK Measurement	AVG Measurement
		3MHz	Duty cycle ≥ 98%, VBW=10Hz
			Duty cycle < 98%, VBW ≥ 1/T
	Start frequency	2.35GHz	
	Stop frequency	2.50GHz	
	Sweep Time	Auto	
	Detector	Peak	
	Trace Mode	Max Hold	

6.8.1. EUT Operation

Operating Environment:

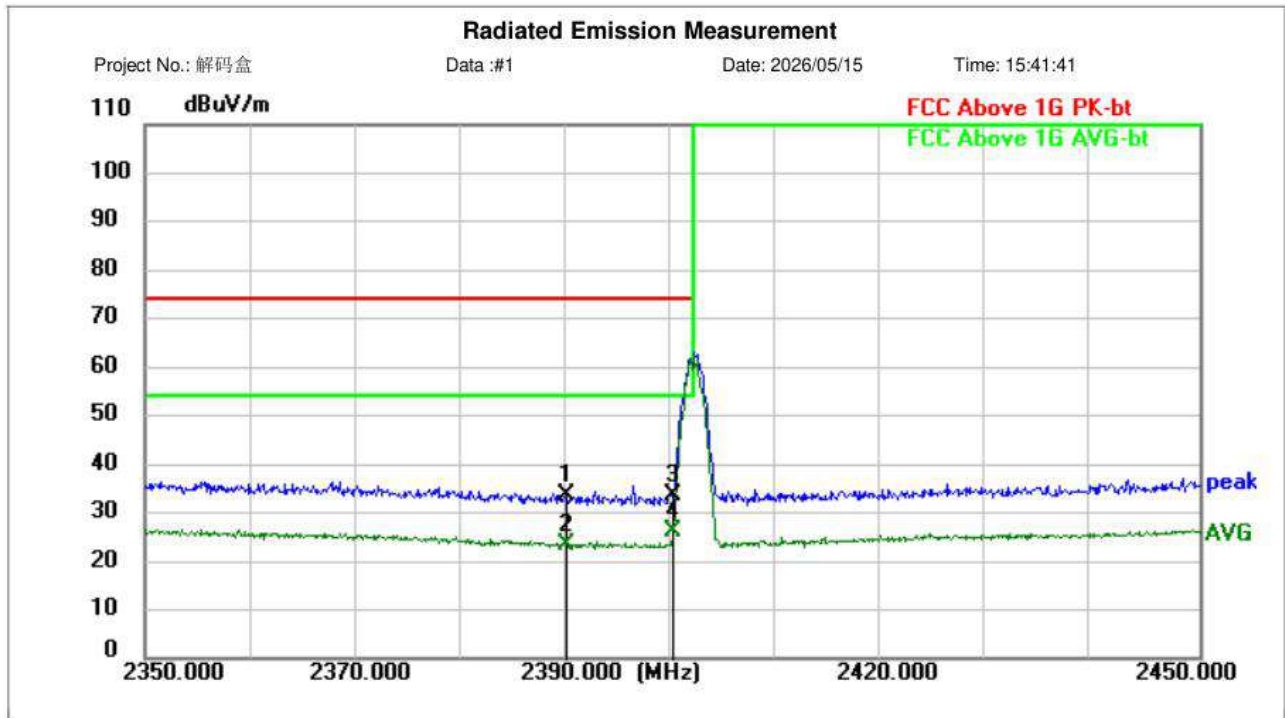
Temperature:	25.7 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM1, TM2, TM3				
Final test mode:	TM1, TM2, TM3				

6.8.2. Test Setup Diagram:



6.8.3. Test Data

TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: H



Site LAB

Limit: FCC Above 1G PK-bt

EUT:

M/N: 2402

Mode: GFSK

Note:

Polarization: **Horizontal**

Power:

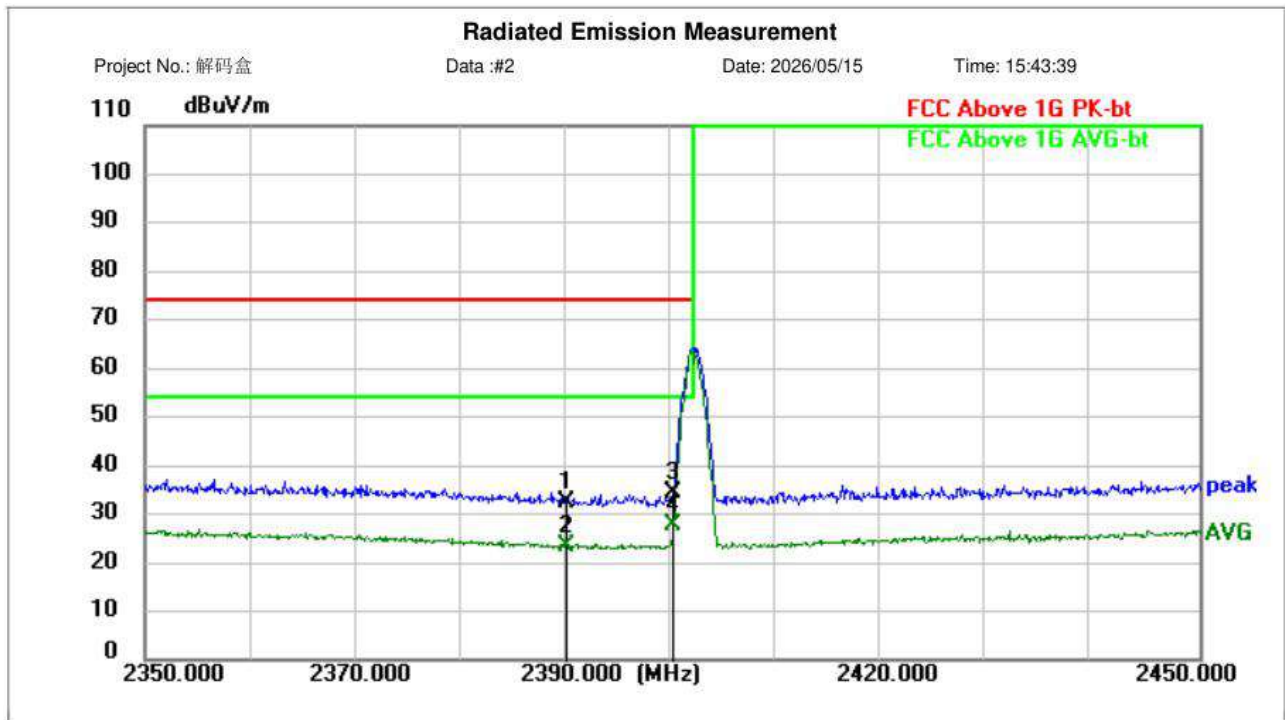
Distance: 3m

Temperature: 26 °C

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2390.0000	58.72	-25.27	33.45	74.00	-40.55	peak	149	360	P	
2	2390.0000	48.60	-25.27	23.33	54.00	-30.67	AVG	149	360	P	
3	2400.0000	59.55	-25.87	33.68	74.00	-40.32	peak	149	360	P	
4 *	2400.0000	52.19	-25.87	26.32	54.00	-27.68	AVG	149	360	P	

TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: V



Site LAB

Polarization: **Vertical**

Temperature: 26 °C

Limit: FCC Above 1G PK-bt

Power:

Humidity: 54 %RH

EUT:

Distance: 3m

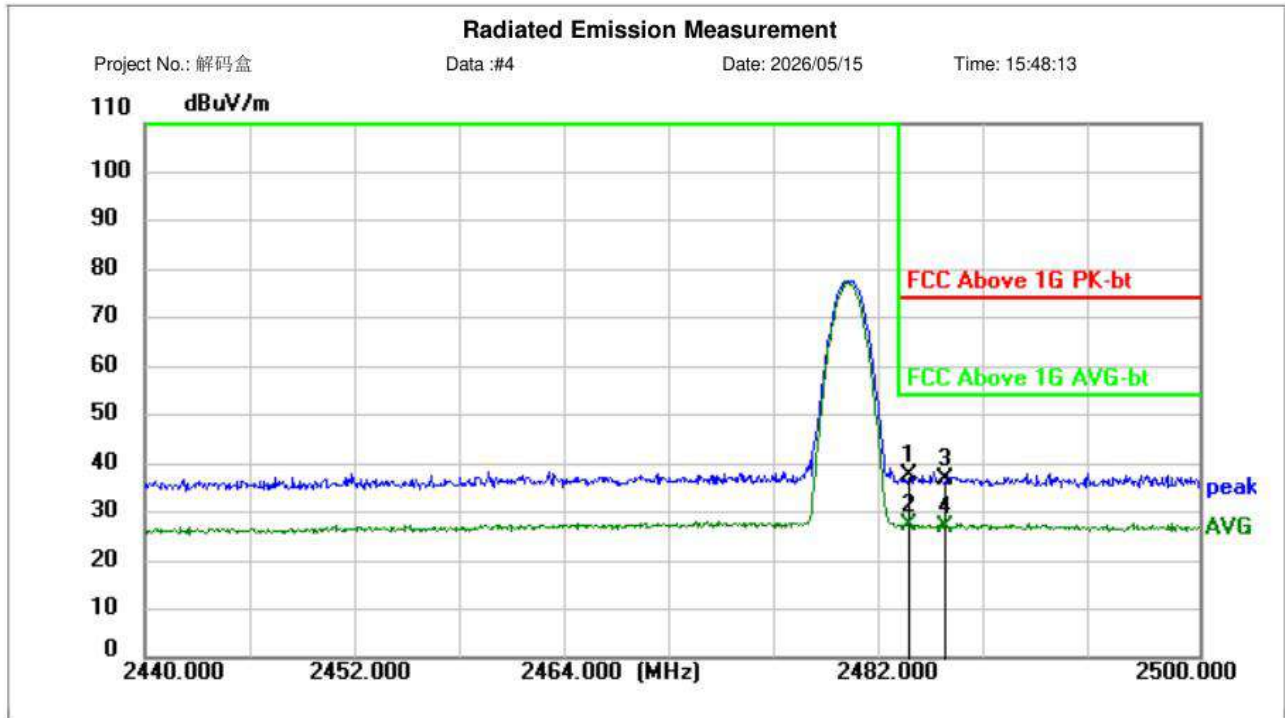
M/N: 2402

Mode: GFSK

Note:

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2390.0000	54.98	-22.71	32.27	74.00	-41.73	peak	149	360	P	
2	2390.0000	46.28	-22.71	23.57	54.00	-30.43	AVG	149	360	P	
3	2400.0000	56.85	-22.67	34.18	74.00	-39.82	peak	149	360	P	
4 *	2400.0000	50.54	-22.67	27.87	54.00	-26.13	AVG	149	360	P	

TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: H



Site LAB

Limit: FCC Above 1G PK-bt

EUT:

M/N: 2480

Mode: GFSK

Note:

Polarization: **Horizontal**

Power:

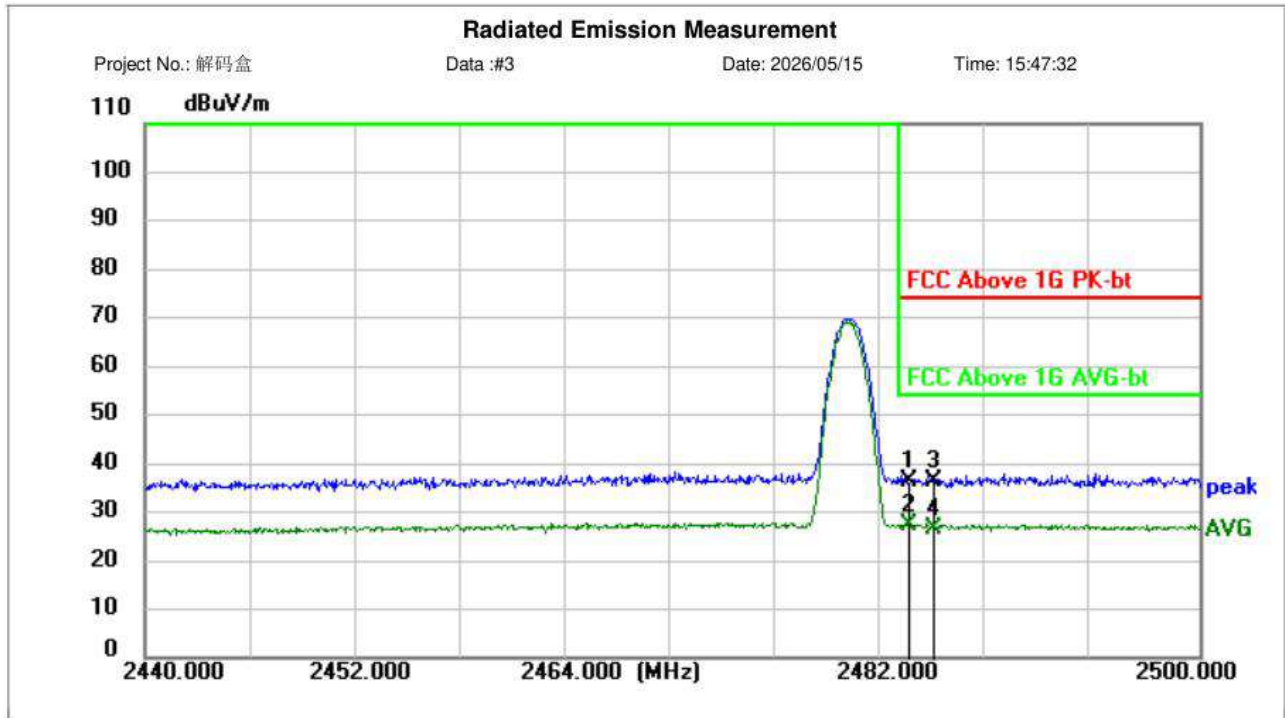
Distance: 3m

Temperature: 26 ℃

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2483.5000	60.32	-22.81	37.51	74.00	-36.49	peak	149	360	P	
2 *	2483.5000	50.09	-22.81	27.28	54.00	-26.72	AVG	149	360	P	
3	2485.6000	59.38	-22.79	36.59	74.00	-37.41	peak	149	360	P	
4	2485.6000	49.70	-22.79	26.91	54.00	-27.09	AVG	149	360	P	

TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: V



Site LAB

Polarization: **Vertical**

Temperature: 26 °C

Limit: FCC Above 1G PK-bt

Power:

Humidity: 54 %RH

EUT:

Distance: 3m

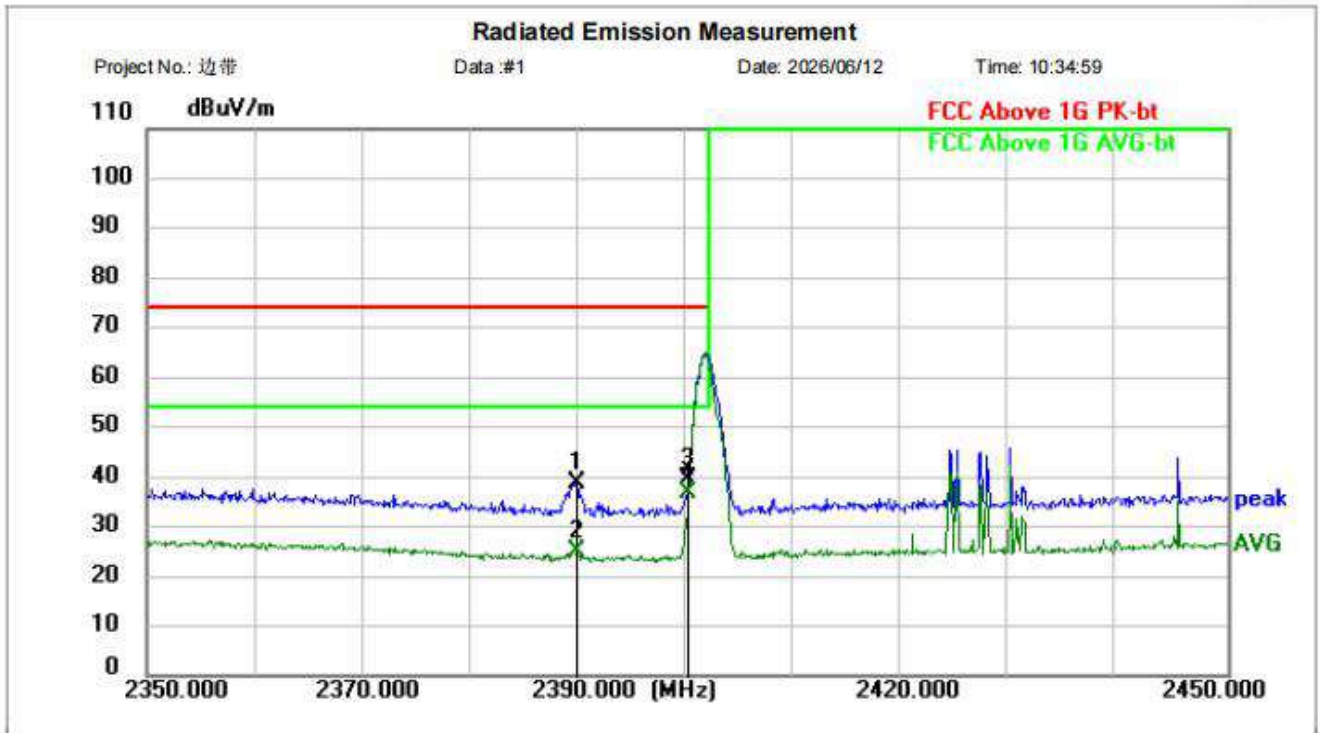
M/N: 2480

Mode: GFSK

Note:

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2483.5000	58.60	-22.27	36.33	74.00	-37.67	peak	149	360	P	
2 *	2483.5000	49.38	-22.27	27.11	54.00	-26.89	AVG	149	360	P	
3	2485.0000	58.43	-22.27	36.16	74.00	-37.84	peak	149	360	P	
4	2485.0000	48.93	-22.27	26.66	54.00	-27.34	AVG	149	360	P	

TM2 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: H



Site LAB

Limit: FCC Above 1G PK-bt

EUT:

M/N: 2402

Mode: Π4 DQPSK

Note:

Polarization: **Horizontal**

Power:

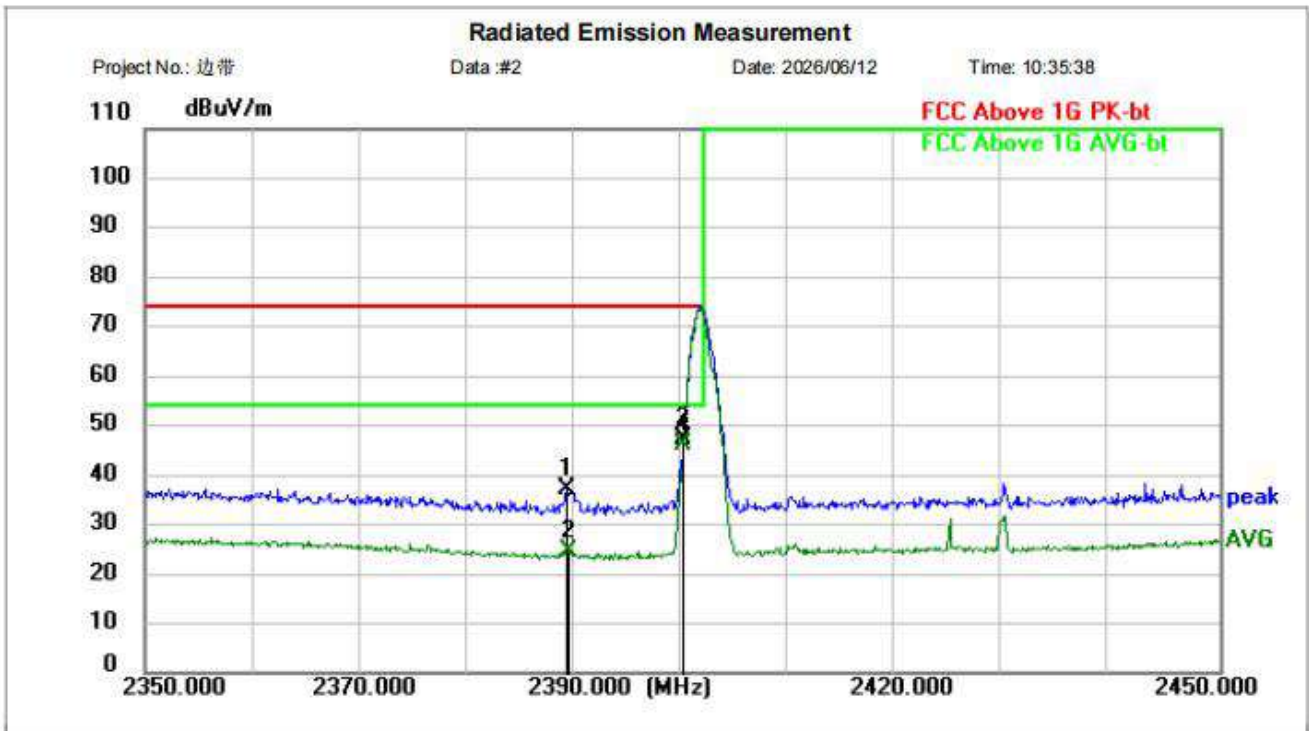
Distance: 3m

Temperature: 26 °C

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2389.8200	64.00	-25.26	38.74	74.00	-35.26	peak	150	0	P	
2	2389.8200	50.28	-25.26	25.02	54.00	-28.98	AVG	150	0	P	
3	2400.0000	65.46	-25.87	39.59	74.00	-34.41	peak	150	0	P	
4 *	2400.0000	62.54	-25.87	36.67	54.00	-17.33	AVG	150	0	P	

TM2 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: V



Site LAB

Limit: FCC Above 1G PK-bt

EUT:

M/N: 2402

Mode: Π4 DQPSK

Note:

Polarization: **Vertical**

Power:

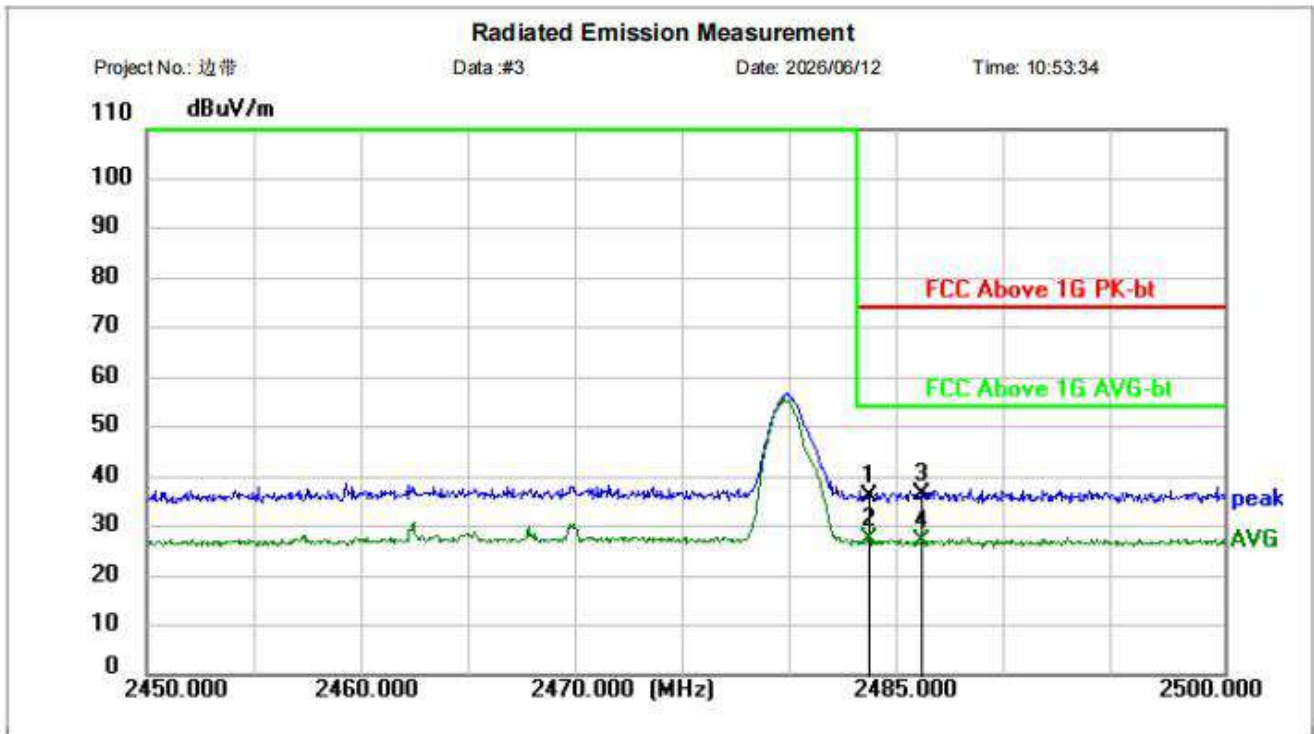
Distance: 3m

Temperature: 26 °C

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2389.3400	59.75	-22.71	37.04	74.00	-36.96	peak			P	
2	2389.4600	47.13	-22.71	24.42	54.00	-29.58	AVG			P	
3	2400.0000	69.87	-22.67	47.20	74.00	-26.80	peak			P	
4 *	2400.0000	68.76	-22.67	46.09	54.00	-7.91	AVG			P	

TM2 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: H



Site LAB

Limit: FCC Above 1G PK-bt

EUT:

M/N: 2480

Mode: Π4 DQPSK

Note:

Polarization: **Horizontal**

Power:

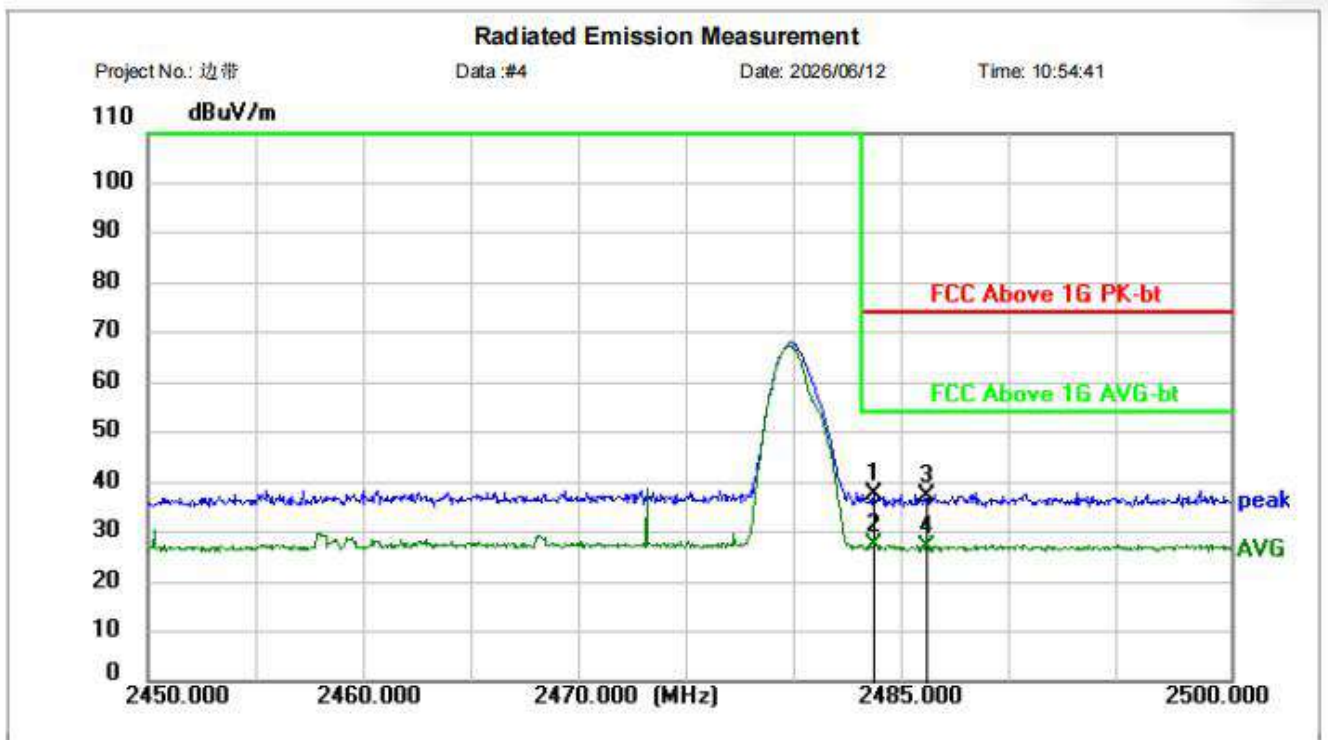
Distance: 3m

Temperature: 26 °C

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2483.5000	58.85	-22.81	36.04	74.00	-37.96	peak			P	
2 *	2483.5000	49.92	-22.81	27.11	54.00	-26.89	AVG			P	
3	2486.0000	59.07	-22.79	36.28	74.00	-37.72	peak			P	
4	2486.0000	49.62	-22.79	26.83	54.00	-27.17	AVG			P	

TM2 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: V



Site LAB

Limit: FCC Above 1G PK-bt

EUT:

M/N: 2480

Mode: Π4 DQPSK

Note:

Polarization: **Vertical**

Power:

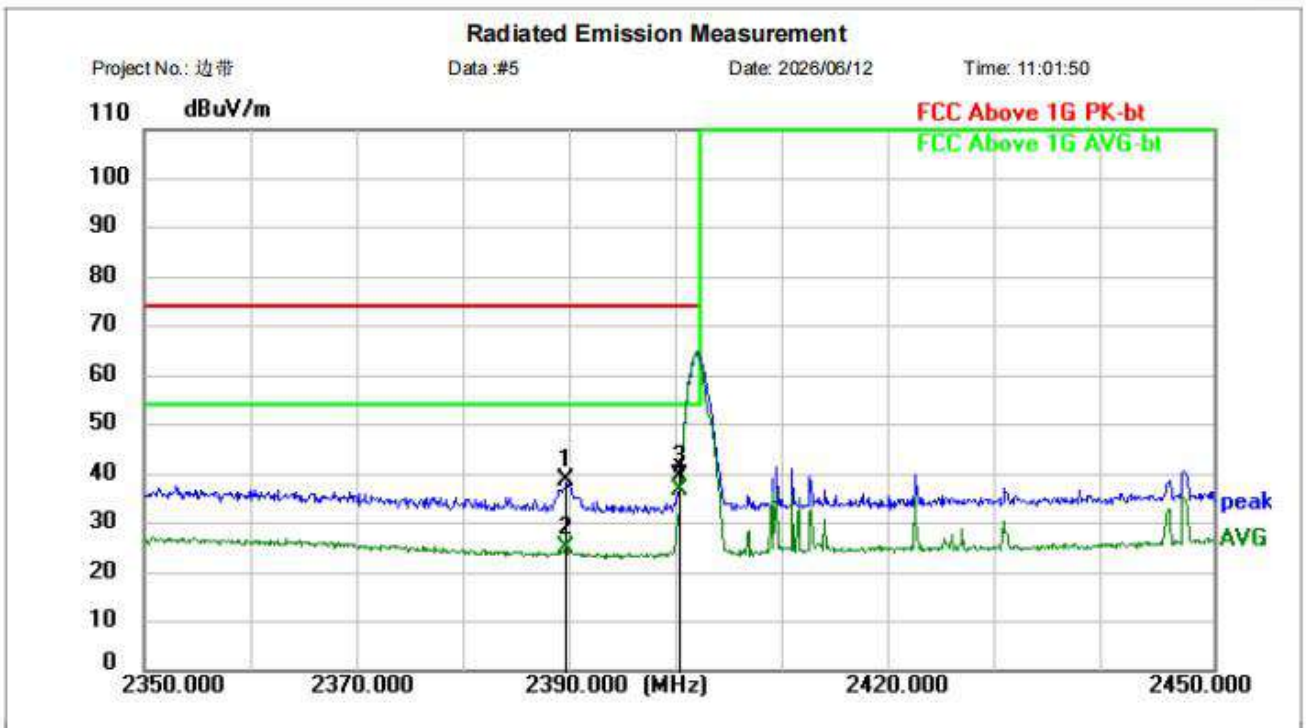
Distance: 3m

Temperature: 26 °C

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2483.5000	59.79	-22.27	37.52	74.00	-36.48	peak	150	0	P	
2 *	2483.5000	49.54	-22.27	27.27	54.00	-26.73	AVG	150	0	P	
3	2486.0000	59.23	-22.26	36.97	74.00	-37.03	peak	150	0	P	
4	2486.0000	49.10	-22.26	26.84	54.00	-27.16	AVG	150	0	P	

TM3 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: H



Site LAB

Limit: FCC Above 1G PK-bt

EUT:

M/N: 2402

Mode: 8DPSK

Note:

Polarization: **Horizontal**

Power:

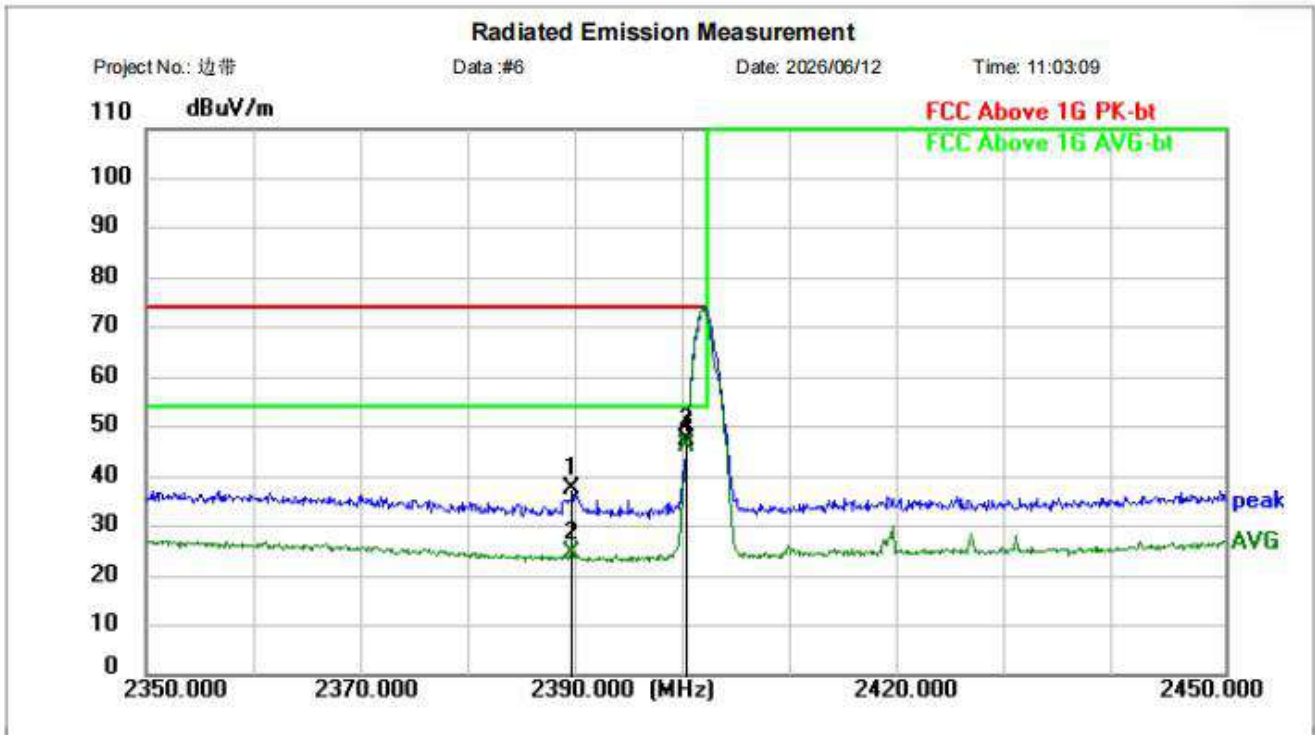
Distance: 3m

Temperature: 26 °C

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2389.5900	63.82	-25.25	38.57	74.00	-35.43	peak	150	0	P	
2	2389.5900	50.16	-25.25	24.91	54.00	-29.09	AVG	150	0	P	
3	2400.0000	65.32	-25.87	39.45	74.00	-34.55	peak	150	0	P	
4 *	2400.0000	62.78	-25.87	36.91	54.00	-17.09	AVG	150	0	P	

TM3 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: V



Site LAB

Polarization: **Vertical**

Temperature: 26 °C

Limit: FCC Above 1G PK-bt

Power:

Humidity: 54 %RH

EUT:

Distance: 3m

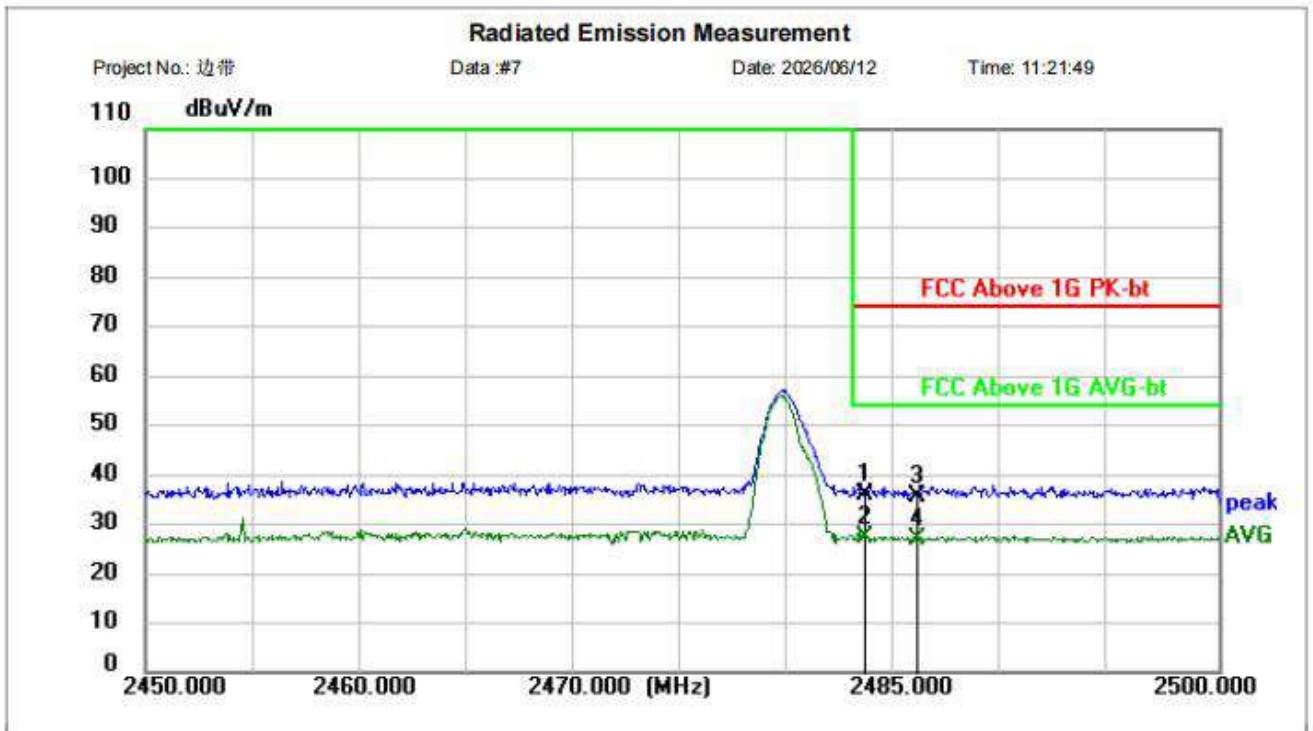
M/N: 2402

Mode: 8DPSK

Note:

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2389.5000	60.37	-22.71	37.66	74.00	-36.34	peak	150	0	P	
2	2389.6000	47.07	-22.71	24.36	54.00	-29.64	AVG	150	0	P	
3	2400.0000	69.97	-22.67	47.30	74.00	-26.70	peak	150	0	P	
4 *	2400.0000	68.94	-22.67	46.27	54.00	-7.73	AVG	150	0	P	

TM3 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: H



Site LAB

Limit: FCC Above 1G PK-bt

EUT:

M/N: 2480

Mode: 8DPSK

Note:

Polarization: **Horizontal**

Power:

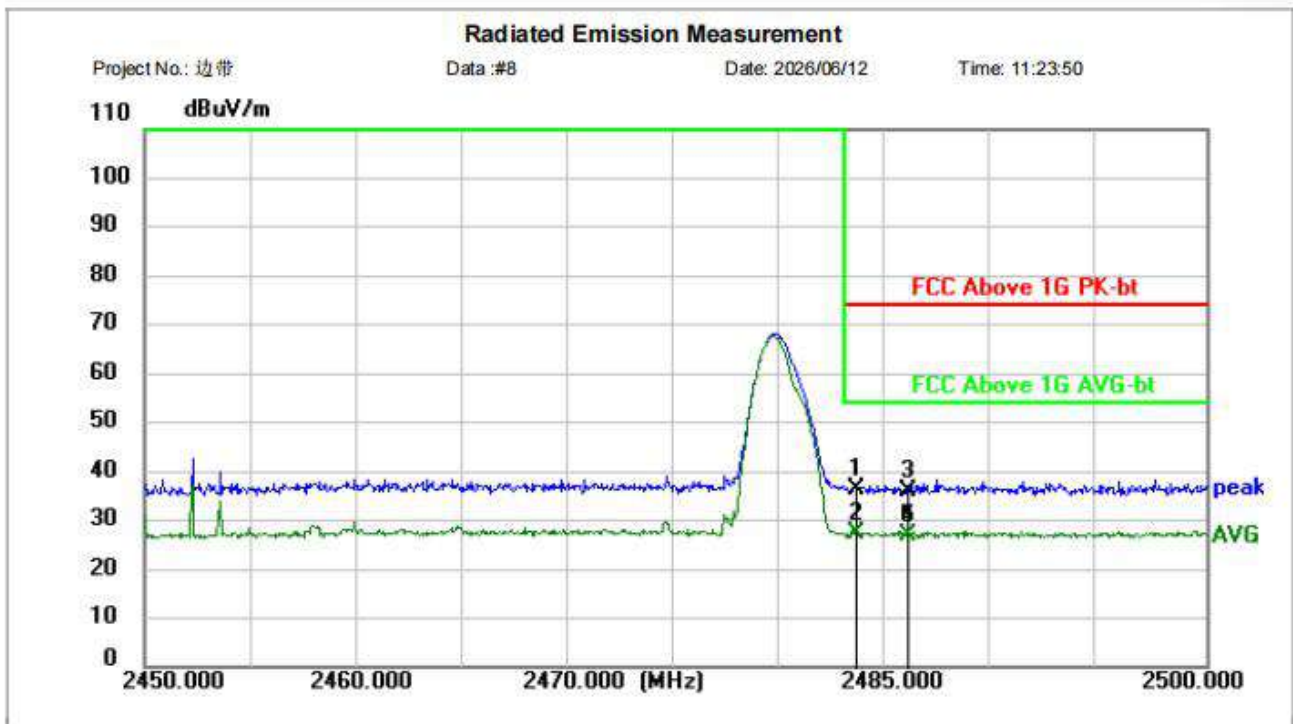
Distance: 3m

Temperature: 26 °C

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2483.5000	58.92	-22.81	36.11	74.00	-37.89	peak	150	0	P	
2 *	2483.5000	49.92	-22.81	27.11	54.00	-26.89	AVG	150	0	P	
3	2486.0000	58.40	-22.79	35.61	74.00	-38.39	peak	150	0	P	
4	2486.0000	49.75	-22.79	26.96	54.00	-27.04	AVG	150	0	P	

TM3 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: V



Site LAB

Limit: FCC Above 1G PK-bt

EUT:

M/N: 2480

Mode: 8DPSK

Note:

Polarization: **Vertical**

Power:

Distance: 3m

Temperature: 26 °C

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2483.5000	58.48	-22.27	36.21	74.00	-37.79	peak	150	0	P	
2 *	2483.5000	49.61	-22.27	27.34	54.00	-26.66	AVG	150	0	P	
3	2486.0000	58.35	-22.26	36.09	74.00	-37.91	peak	150	0	P	
4	2486.0000	49.30	-22.26	27.04	54.00	-26.96	AVG	150	0	P	
5	2486.0000	49.30	-22.26	27.04	54.00	-26.96	AVG	150	0	P	

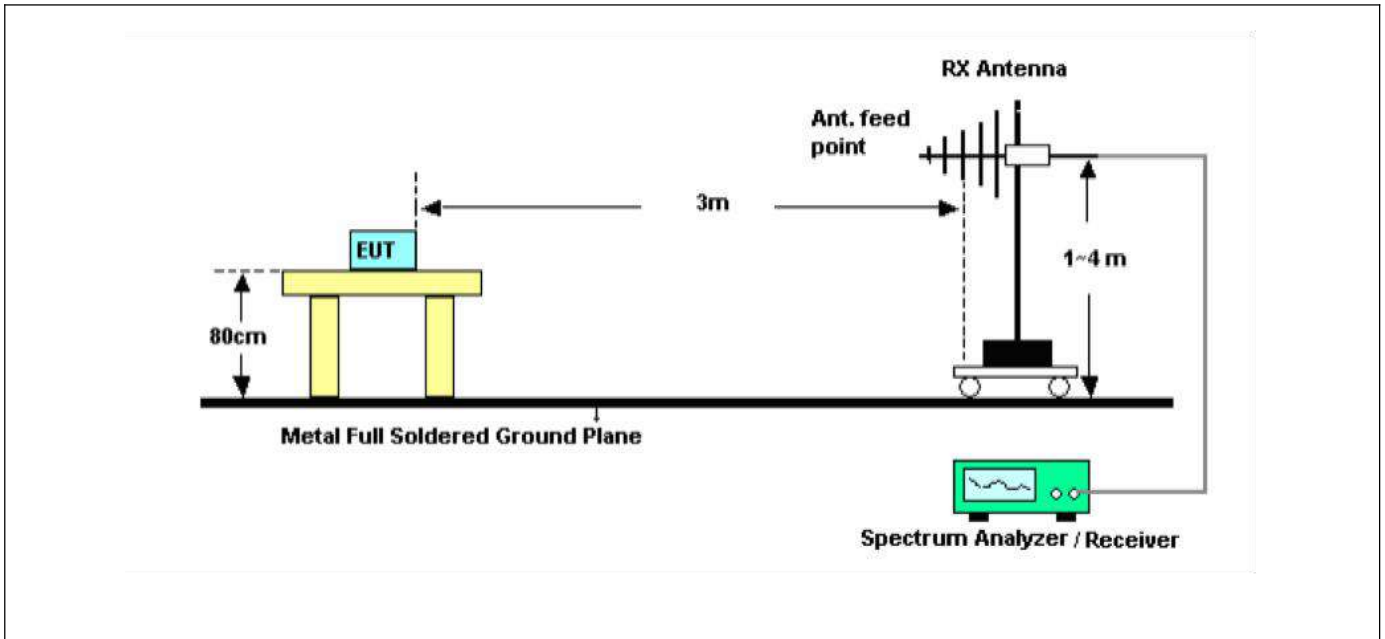
6.9. Emissions in frequency bands (below 1GHz)

Test Requirement:	Refer to 47 CFR 15.247(d), In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
	30-88	100 **	3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3
	** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.		
Test Method:	ANSI C63.10-2020 section 6.5.4		
Procedure:	ANSI C63.10-2020 section 6.5.4		
Spectrum Analyzer Setting:	Spectrum Analyzer Setting	Setting	
	RBW	120KHz	
	VBW	300KHz	
	Start frequency	30MHz	
	Stop frequency	1GHz	
	Sweep Time	Auto	
	Detector	QP	
	Trace Mode	Max Hold	

6.9.1. EUT Operation

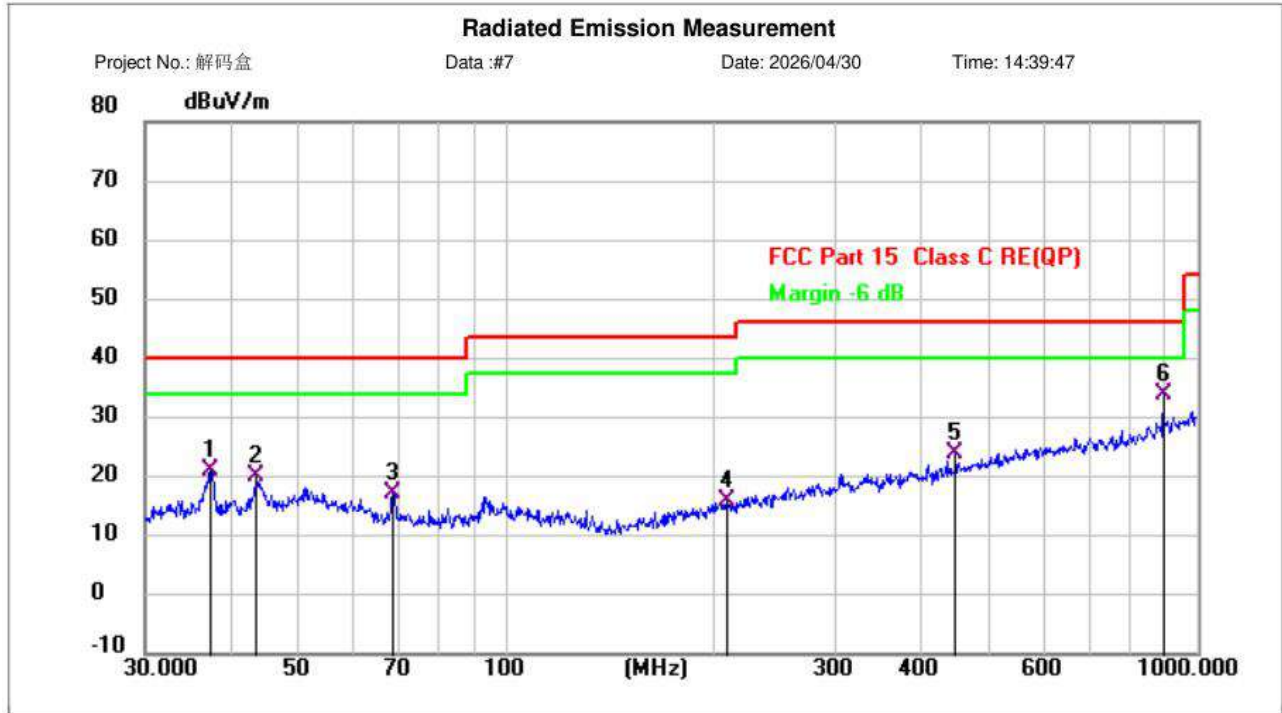
Operating Environment:					
Temperature:	25.7 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:		TM1			
Final test mode:		TM1			

6.9.2. Test Setup Diagram:



6.9.3. Test Data

TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: L



Site LAB

Limit: FCC Part 15 Class C RE(QP)

EUT:

M/N: working

Mode:

Note:

Polarization: **Horizontal**

Power:

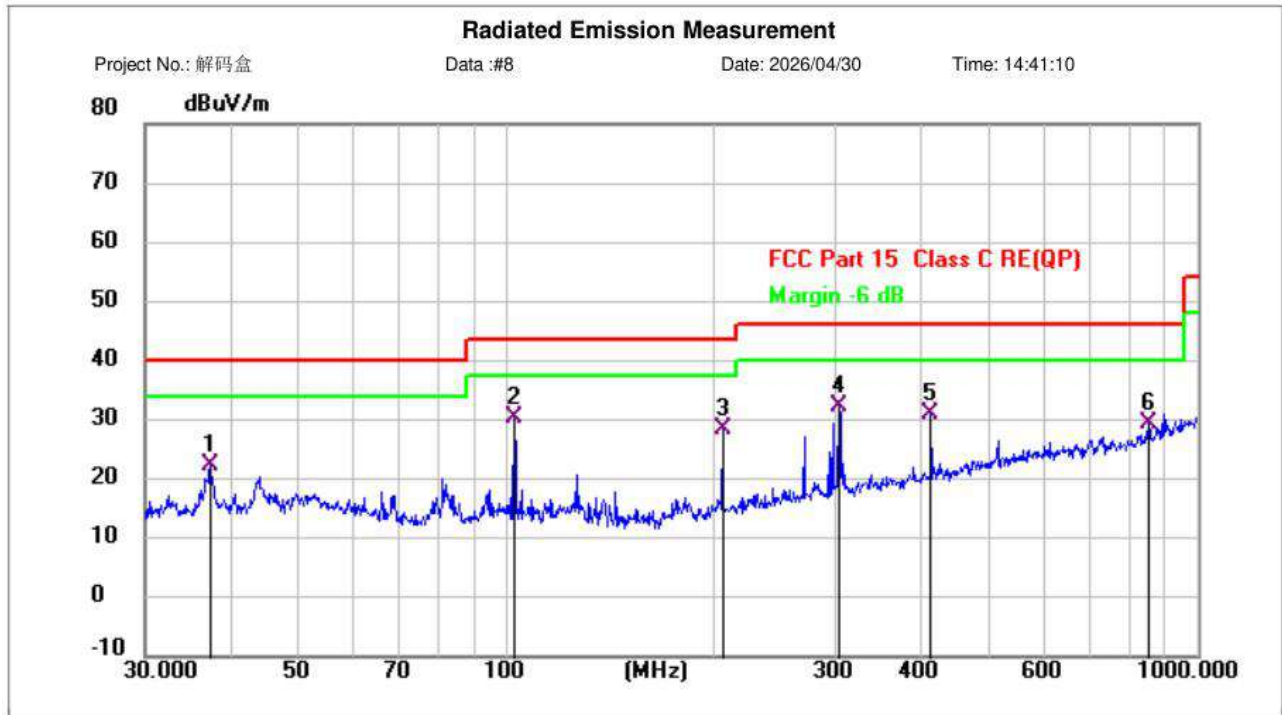
Distance: 3m

Temperature: 26 °C

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	37.2855	32.54	-11.58	20.96	40.00	-19.04	QP	100	0	P	
2	43.5057	31.00	-11.00	20.00	40.00	-20.00	QP	100	0	P	
3	68.3908	30.23	-13.03	17.20	40.00	-22.80	QP	100	0	P	
4	209.3129	26.75	-10.81	15.94	43.50	-27.56	QP	100	0	P	
5	446.4141	28.66	-4.72	23.94	46.00	-22.06	QP	100	0	P	
6 *	893.8567	32.78	1.02	33.80	46.00	-12.20	QP	100	0	P	

TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: L



Site LAB

Polarization: **Vertical**

Temperature: 26 °C

Limit: FCC Part 15 Class C RE(QP)

Power:

Humidity: 54 %RH

EUT:

Distance: 3m

M/N: working

Mode:

Note:

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	37.2855	33.88	-11.58	22.30	40.00	-17.70	QP	100	360	P	
2 *	102.7192	42.08	-11.78	30.30	43.50	-13.20	QP	100	360	P	
3	205.6751	39.35	-10.93	28.42	43.50	-15.08	QP	100	360	P	
4	302.4812	39.91	-7.61	32.30	46.00	-13.70	QP	100	360	P	
5	411.8240	36.60	-5.58	31.02	46.00	-14.98	QP	100	360	P	
6	851.0353	29.02	0.39	29.41	46.00	-16.59	QP	100	360	P	

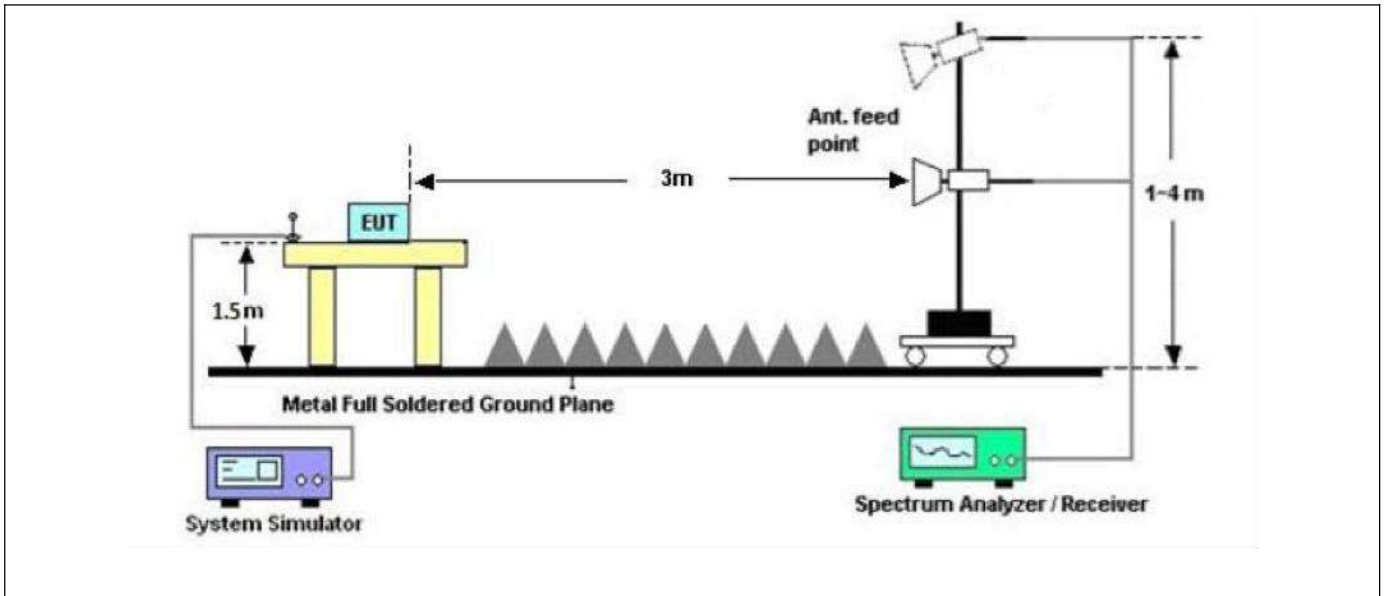
6.10. Emissions in frequency bands (above 1GHz)

Test Requirement:	Refer to 47 CFR 15.247(d), in addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
	30-88	100 **	3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.			
Test Method:	ANSI C63.10-2020 section 6.5.4		
Procedure:	ANSI C63.10-2020 section 6.5.4		

6.10.1. EUT Operation

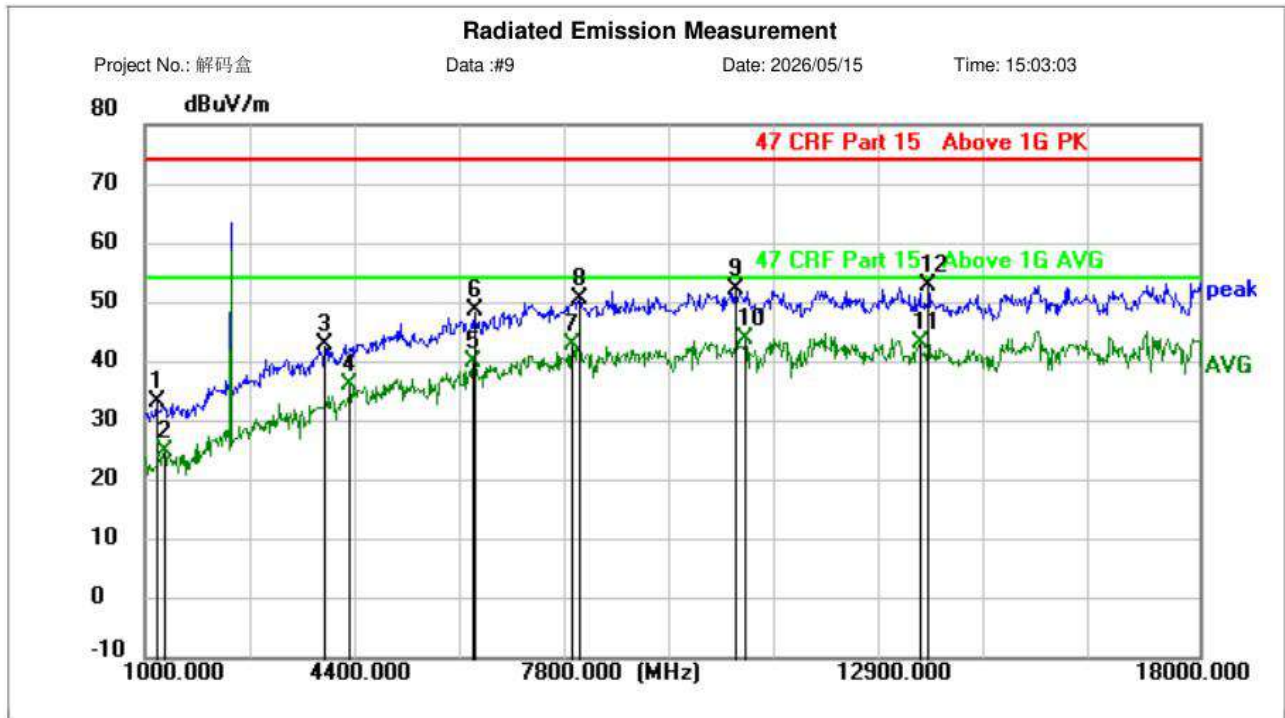
Operating Environment:					
Temperature:	25.7 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM1, TM2, TM3				
Final test mode:	TM1, TM2, TM3				

6.10.2. Test Setup Diagram:



6.10.3. Test Data

TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: L



Site LAB

Limit: 47 CRF Part 15 Above 1G PK

EUT:

M/N: 2402

Mode: GFSK

Note:

Polarization: **Horizontal**

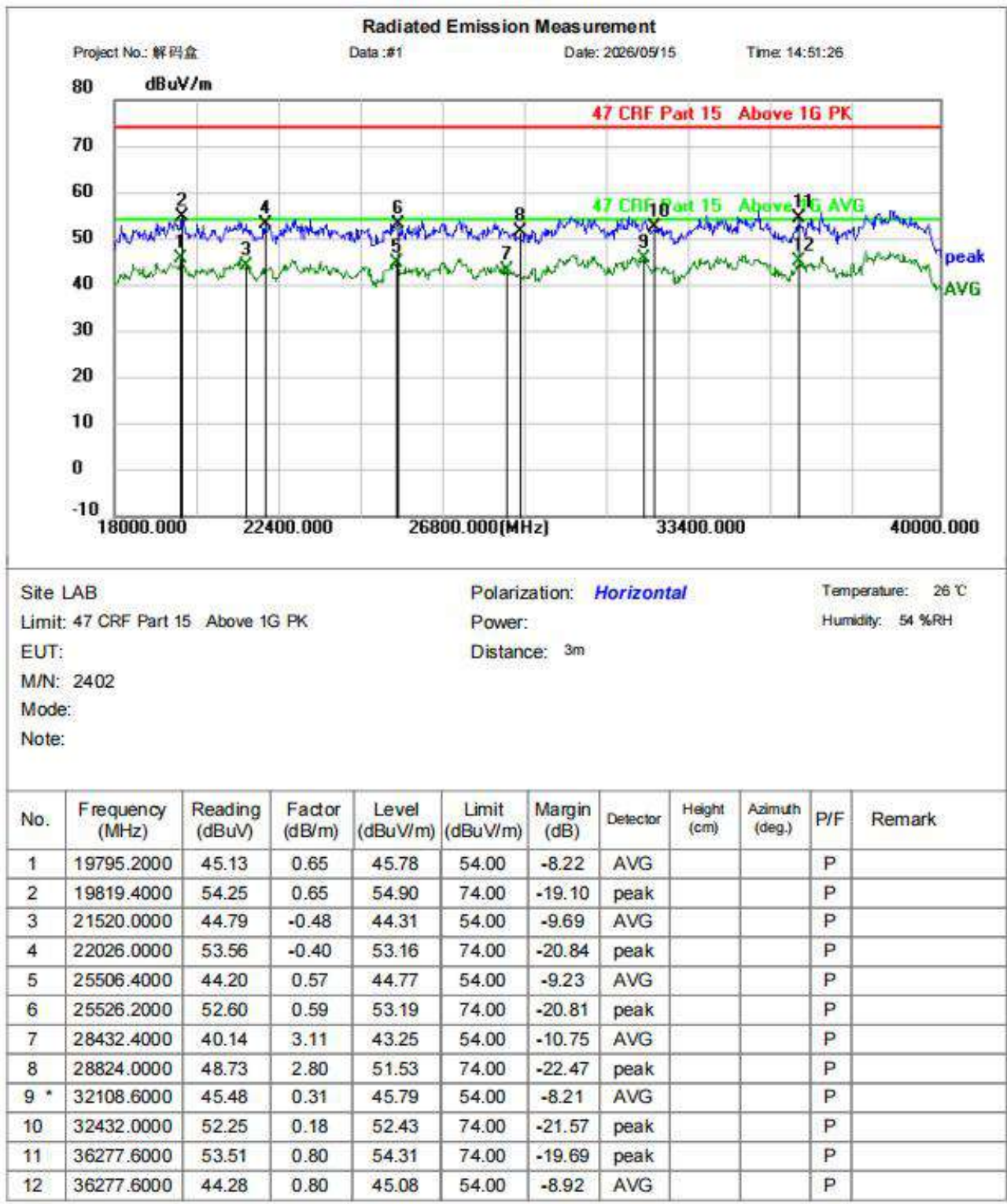
Power:

Distance: 3m

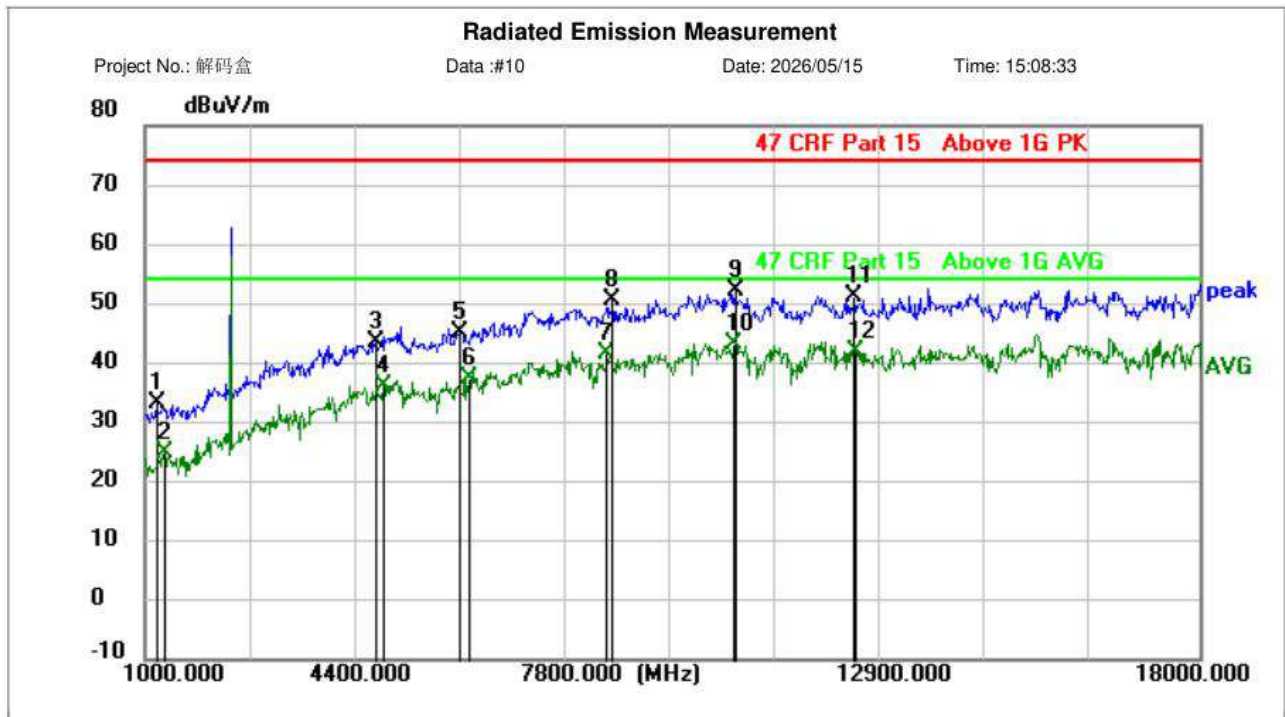
Temperature: 26 °C

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1171.7000	58.73	-25.46	33.27	74.00	-40.73	peak			P	
2	1340.0000	50.20	-25.45	24.75	54.00	-29.25	AVG			P	
3	3917.2000	61.88	-18.99	42.89	74.00	-31.11	peak			P	
4	4309.9000	54.27	-18.27	36.00	54.00	-18.00	AVG			P	
5	6297.2000	53.50	-13.52	39.98	54.00	-14.02	AVG			P	
6	6344.8000	62.26	-13.55	48.71	74.00	-25.29	peak			P	
7	7893.5000	52.47	-9.69	42.78	54.00	-11.22	AVG			P	
8	7992.1000	60.08	-9.64	50.44	74.00	-23.56	peak			P	
9	10504.7000	55.11	-2.96	52.15	74.00	-21.85	peak			P	
10 *	10678.1000	46.11	-2.35	43.76	54.00	-10.24	AVG			P	
11	13489.9000	45.71	-2.49	43.22	54.00	-10.78	AVG			P	
12	13615.7000	55.70	-2.75	52.95	74.00	-21.05	peak			P	



TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: L



Site LAB

Limit: 47 CRF Part 15 Above 1G PK

EUT:

M/N: 2402

Mode: GFSK

Note:

Polarization: **Vertical**

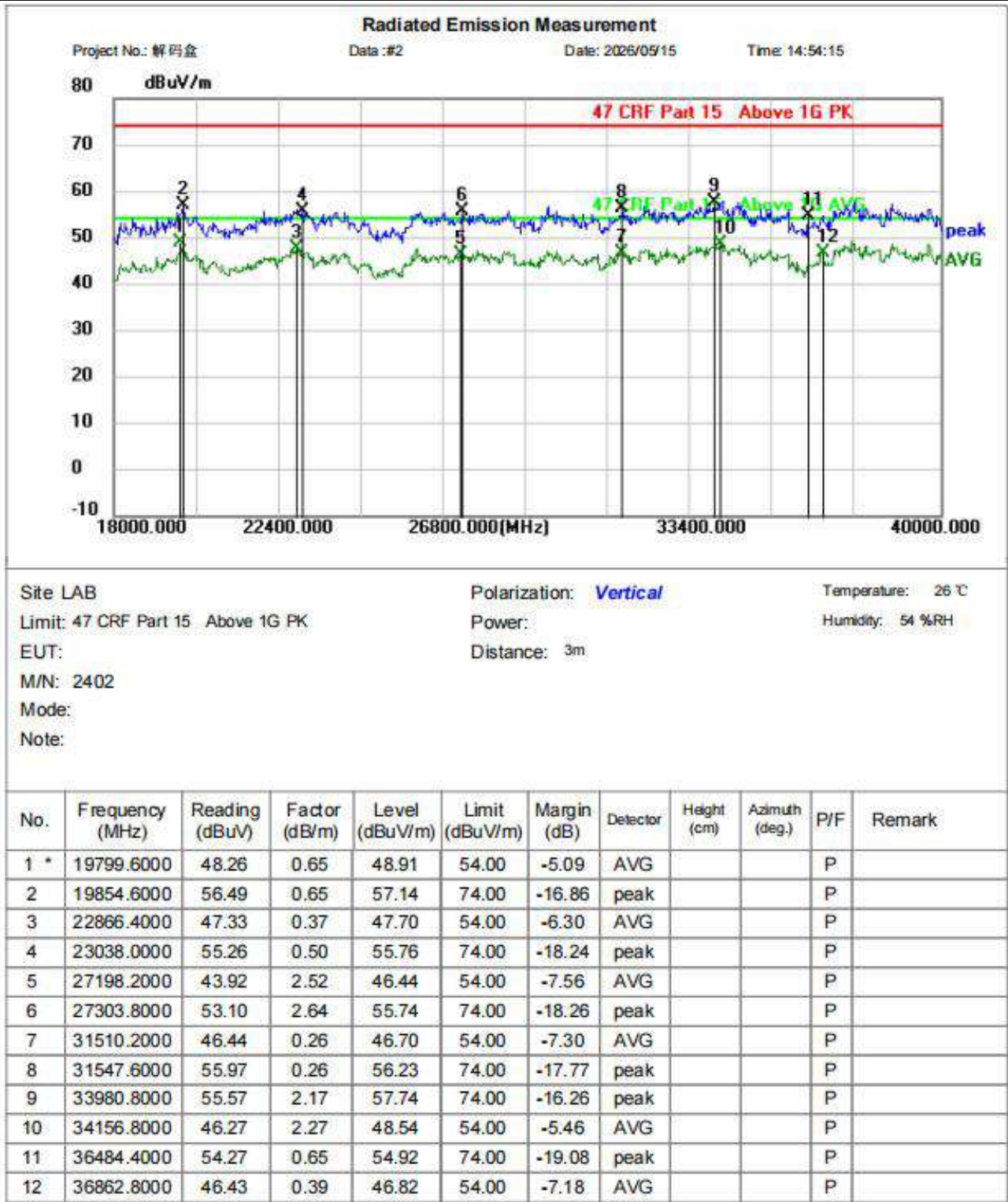
Power:

Distance: 3m

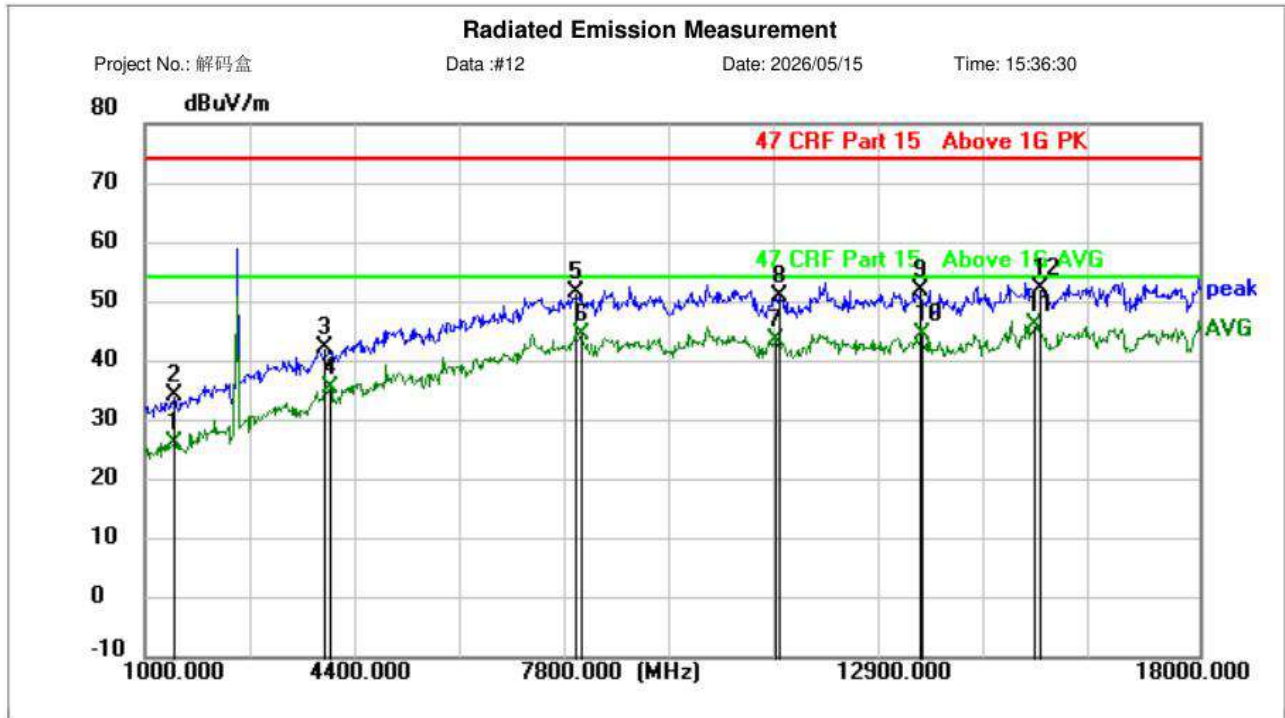
Temperature: 26 °C

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1171.7000	58.73	-25.46	33.27	74.00	-40.73	peak			P	
2	1340.0000	50.20	-25.45	24.75	54.00	-29.25	AVG			P	
3	4707.7000	60.74	-17.38	43.36	74.00	-30.64	peak			P	
4	4828.4000	52.88	-16.91	35.97	54.00	-18.03	AVG			P	
5	6079.6000	59.23	-14.00	45.23	74.00	-28.77	peak			P	
6	6236.0000	50.98	-13.63	37.35	54.00	-16.65	AVG			P	
7	8463.0000	49.36	-7.81	41.55	54.00	-12.45	AVG			P	
8	8559.9000	58.23	-7.49	50.74	74.00	-23.26	peak			P	
9	10504.7000	55.11	-2.96	52.15	74.00	-21.85	peak			P	
10 *	10508.1000	46.01	-2.95	43.06	54.00	-10.94	AVG			P	
11	12452.9000	54.08	-2.76	51.32	74.00	-22.68	peak			P	
12	12490.3000	44.80	-2.85	41.95	54.00	-12.05	AVG			P	



TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: M



Site LAB

Polarization: **Horizontal**

Temperature: 26 °C

Limit: 47 CRF Part 15 Above 1G PK

Power:

Humidity: 54 %RH

EUT:

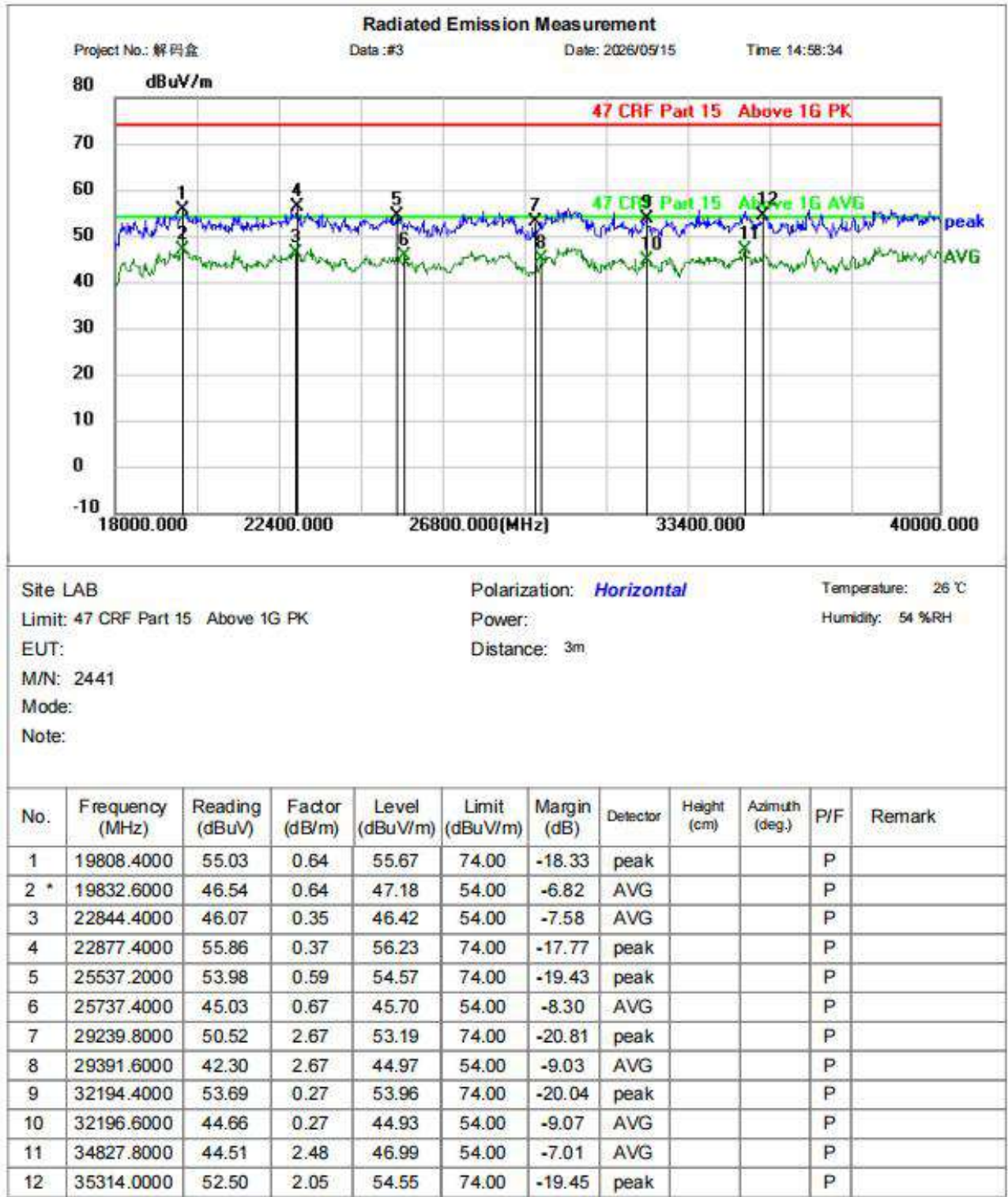
Distance: 3m

M/N: 2441

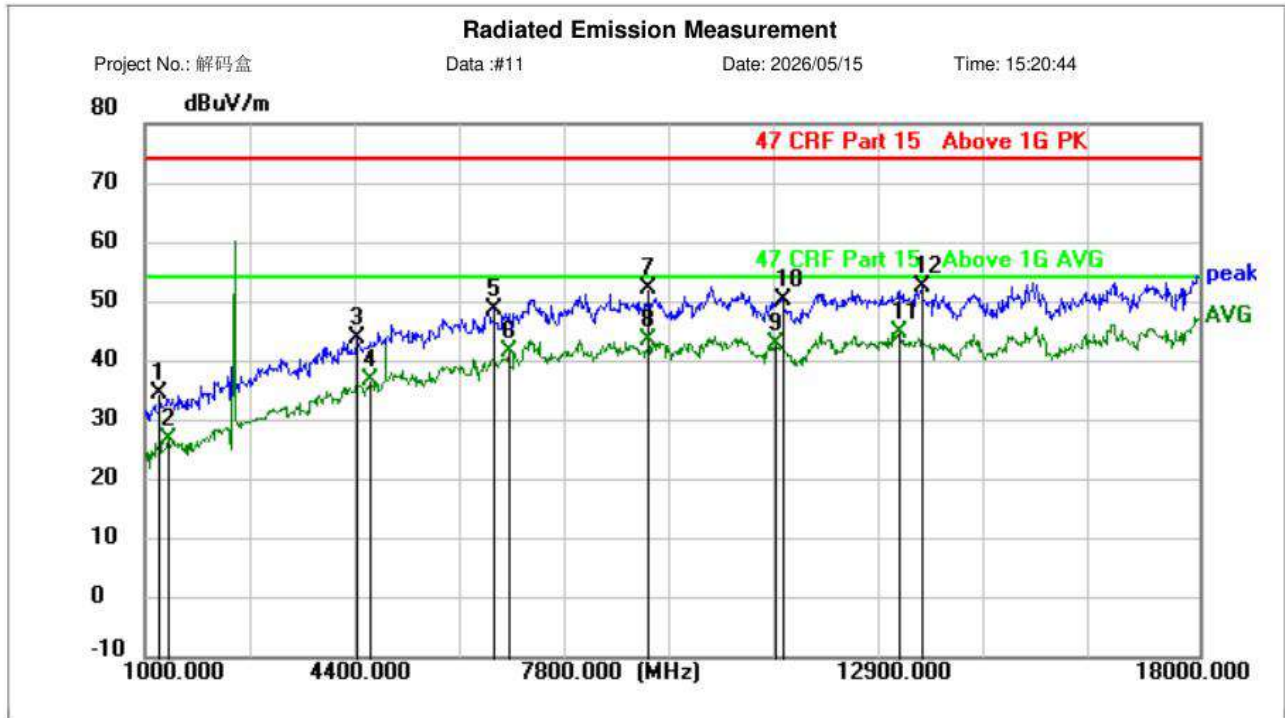
Mode: GFSK

Note:

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1467.5000	51.59	-25.57	26.02	54.00	-27.98	AVG			P	
2	1491.3000	59.96	-25.67	34.29	74.00	-39.71	peak			P	
3	3907.0000	61.32	-19.01	42.31	74.00	-31.69	peak			P	
4	3978.4000	54.32	-18.91	35.41	54.00	-18.59	AVG			P	
5	7947.9000	61.16	-9.66	51.50	74.00	-22.50	peak			P	
6	8044.8000	53.86	-9.40	44.46	54.00	-9.54	AVG			P	
7	11176.2000	45.43	-1.78	43.65	54.00	-10.35	AVG			P	
8	11220.4000	52.71	-1.79	50.92	74.00	-23.08	peak			P	
9	13496.7000	54.44	-2.50	51.94	74.00	-22.06	peak			P	
10	13537.5000	47.16	-2.59	44.57	54.00	-9.43	AVG			P	
11 *	15361.6000	47.66	-1.60	46.06	54.00	-7.94	AVG			P	
12	15446.6000	54.16	-1.82	52.34	74.00	-21.66	peak			P	



TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: M



Site LAB

Limit: 47 CRF Part 15 Above 1G PK

EUT:

M/N: 2441

Mode: GFSK

Note:

Polarization: **Vertical**

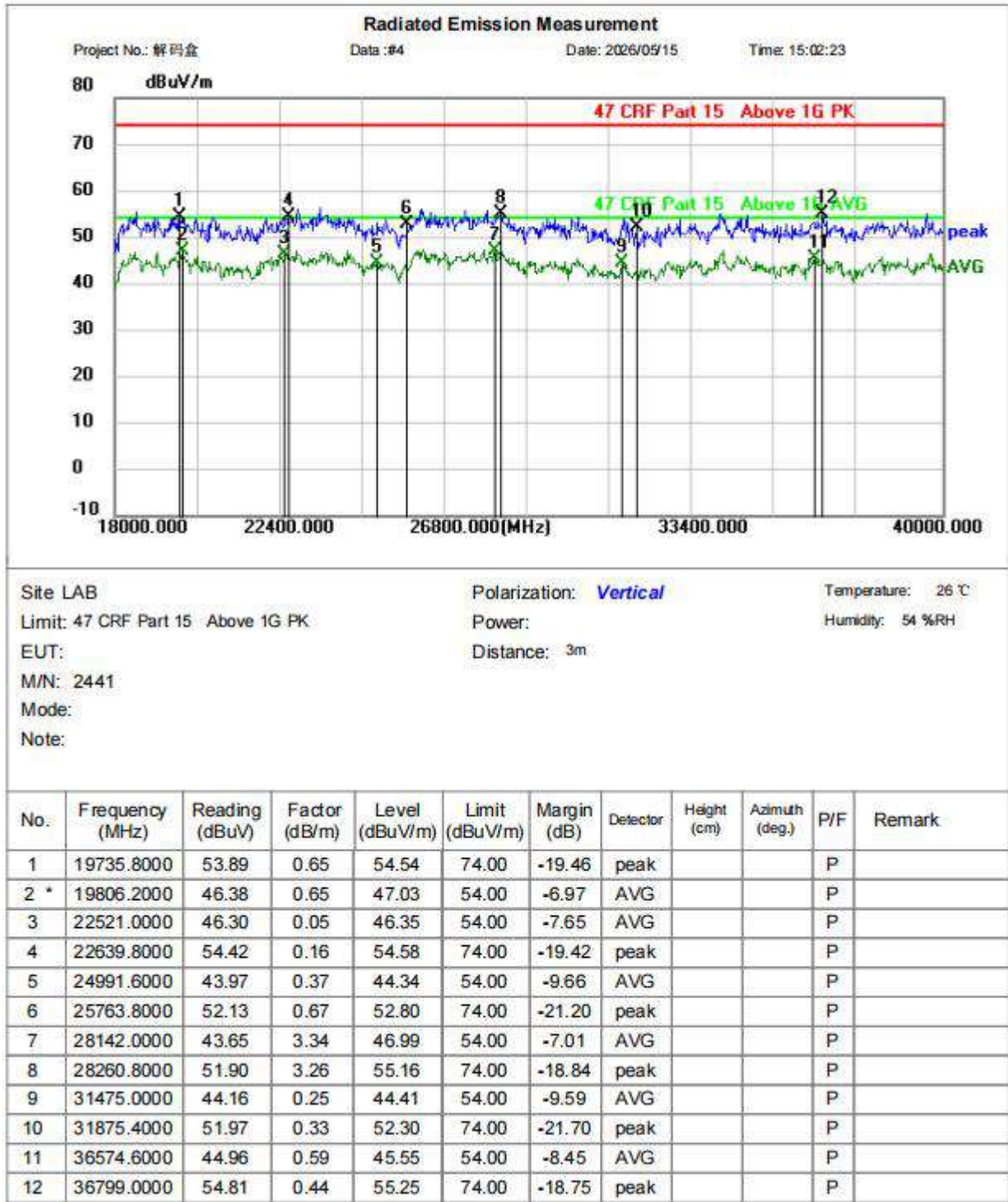
Power:

Distance: 3m

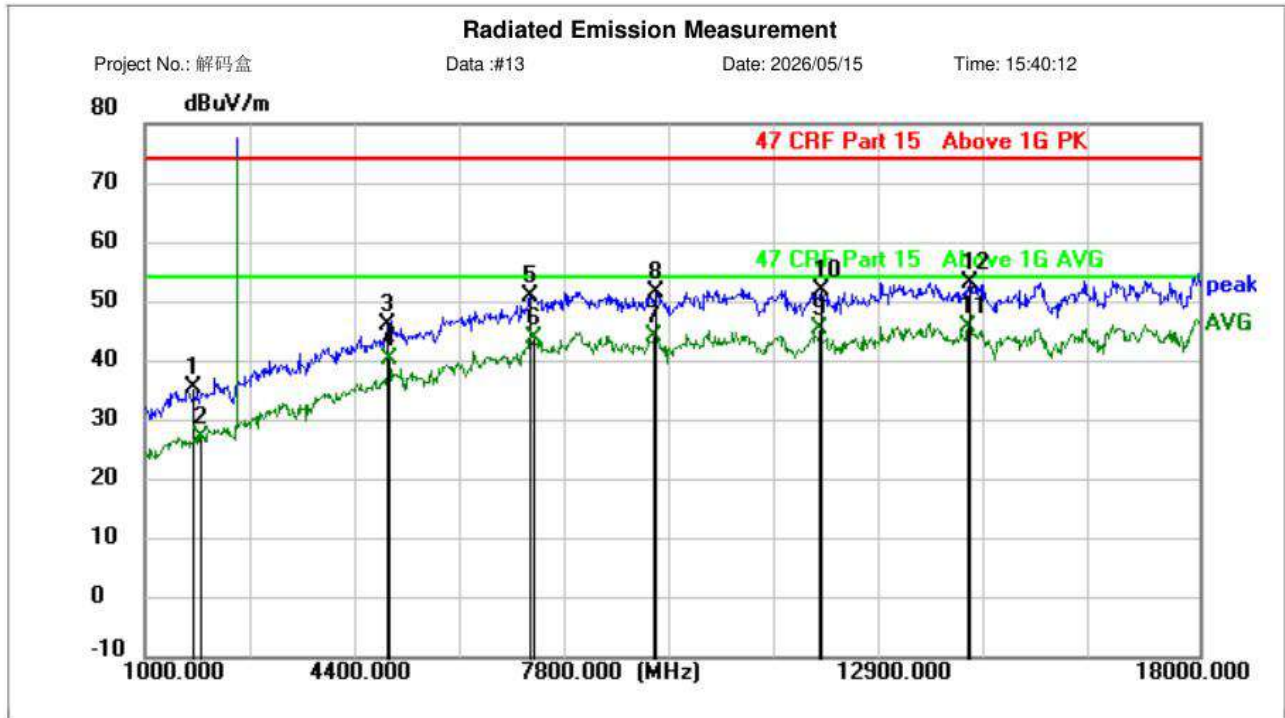
Temperature: 26 °C

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1226.1000	59.62	-25.18	34.44	74.00	-39.56	peak			P	
2	1391.0000	51.99	-25.33	26.66	54.00	-27.34	AVG			P	
3	4449.3000	61.53	-17.79	43.74	74.00	-30.26	peak			P	
4	4631.2000	54.41	-17.54	36.87	54.00	-17.13	AVG			P	
5	6632.1000	60.60	-11.85	48.75	74.00	-25.25	peak			P	
6	6858.2000	52.89	-11.41	41.48	54.00	-12.52	AVG			P	
7	9141.3000	57.37	-5.30	52.07	74.00	-21.93	peak			P	
8	9141.3000	48.94	-5.30	43.64	54.00	-10.36	AVG			P	
9	11183.0000	44.05	-1.22	42.83	54.00	-11.17	AVG			P	
10	11271.4000	51.35	-1.17	50.18	74.00	-23.82	peak			P	
11 *	13158.4000	47.83	-2.96	44.87	54.00	-9.13	AVG			P	
12	13535.8000	55.12	-2.65	52.47	74.00	-21.53	peak			P	



TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: H



Site LAB

Limit: 47 CRF Part 15 Above 1G PK

EUT:

M/N: 2480

Mode: GFSK

Note:

Polarization: **Horizontal**

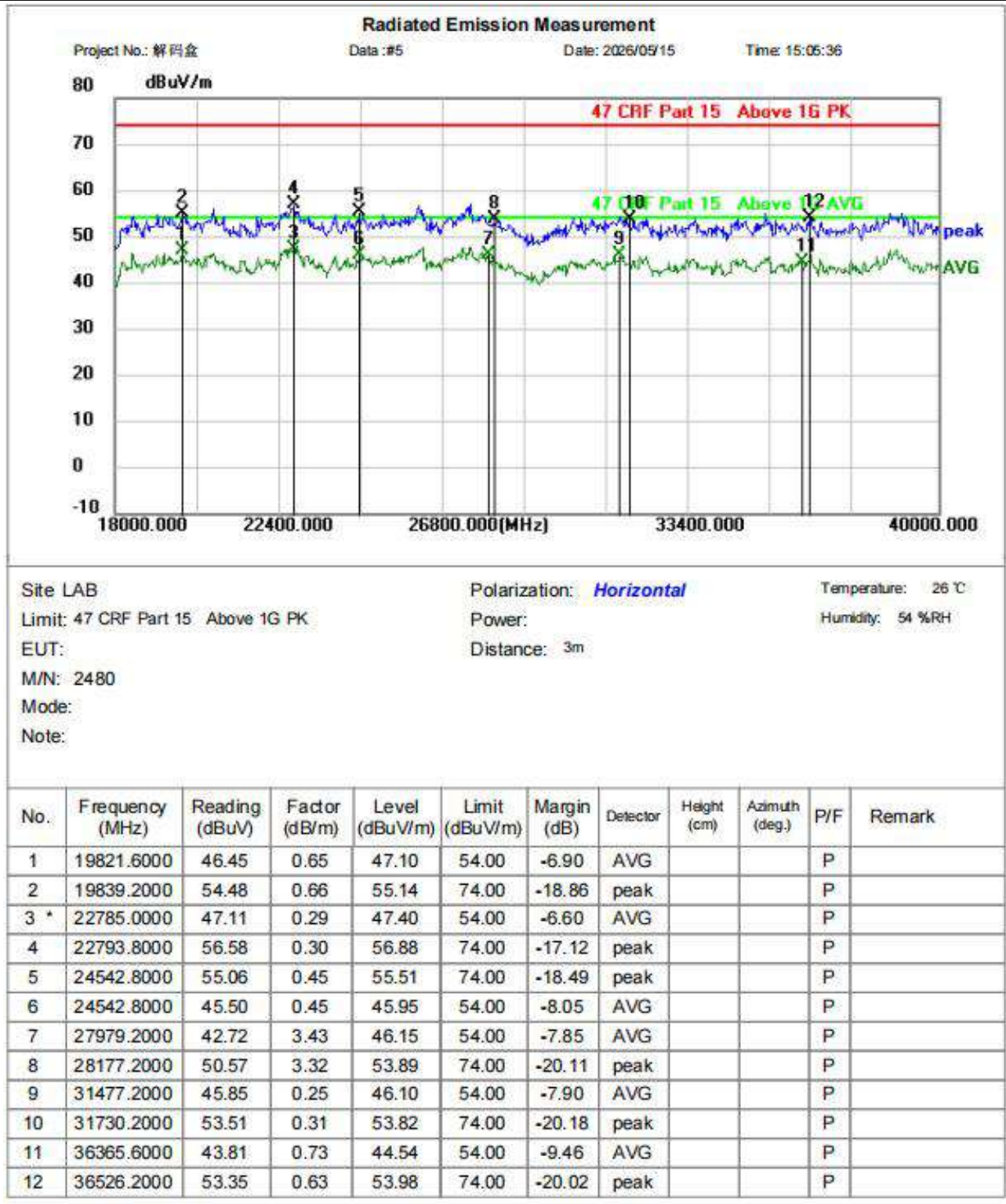
Power:

Distance: 3m

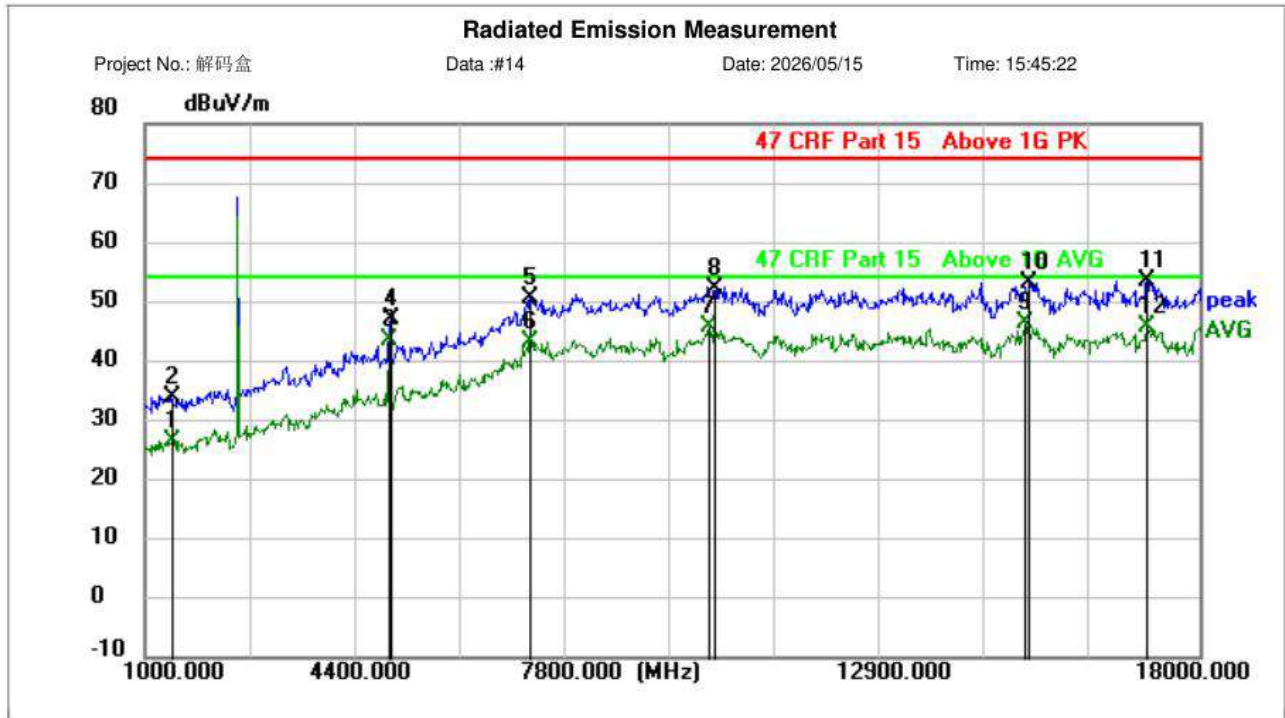
Temperature: 26 ℃

Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1790.5000	61.10	-25.62	35.48	74.00	-38.52	peak			P	
2	1918.0000	51.89	-24.83	27.06	54.00	-26.94	AVG			P	
3	4899.8000	62.52	-16.56	45.96	74.00	-28.04	peak			P	
4	4959.3000	56.42	-16.16	40.26	54.00	-13.74	AVG			P	
5	7218.6000	61.26	-10.22	51.04	74.00	-22.96	peak			P	
6	7262.8000	54.18	-10.36	43.82	54.00	-10.18	AVG			P	
7	9195.7000	49.61	-5.49	44.12	54.00	-9.88	AVG			P	
8	9255.2000	56.93	-5.34	51.59	74.00	-22.41	peak			P	
9	11876.6000	47.67	-2.09	45.58	54.00	-8.42	AVG			P	
10	11900.4000	53.76	-2.01	51.75	74.00	-22.25	peak			P	
11 *	14277.0000	47.58	-1.75	45.83	54.00	-8.17	AVG			P	
12	14295.7000	54.73	-1.70	53.03	74.00	-20.97	peak			P	



TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: H



Site LAB

Limit: 47 CRF Part 15 Above 1G PK

EUT:

M/N: 2480

Mode: GFSK

Note:

Polarization: **Vertical**

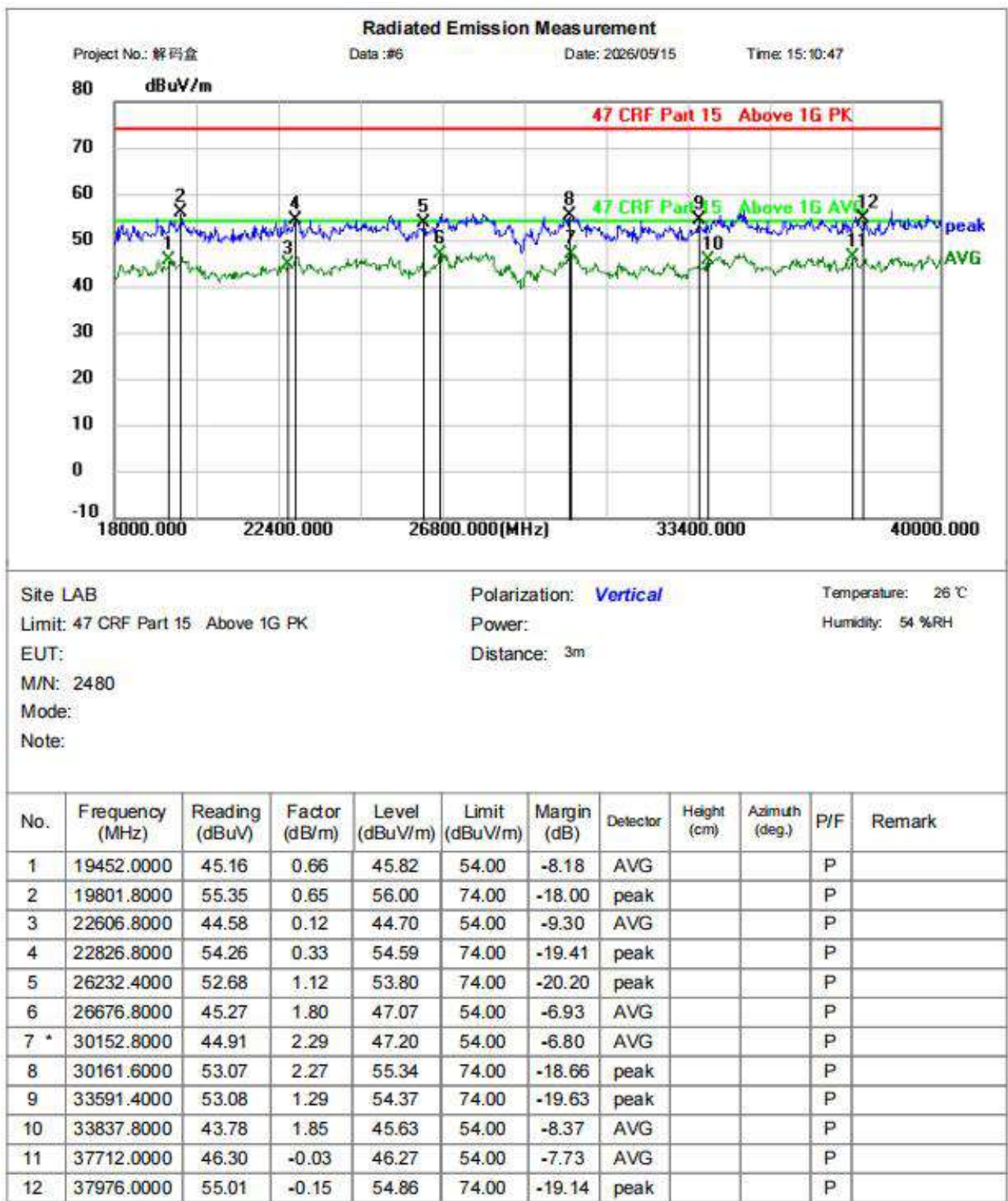
Power:

Distance: 3m

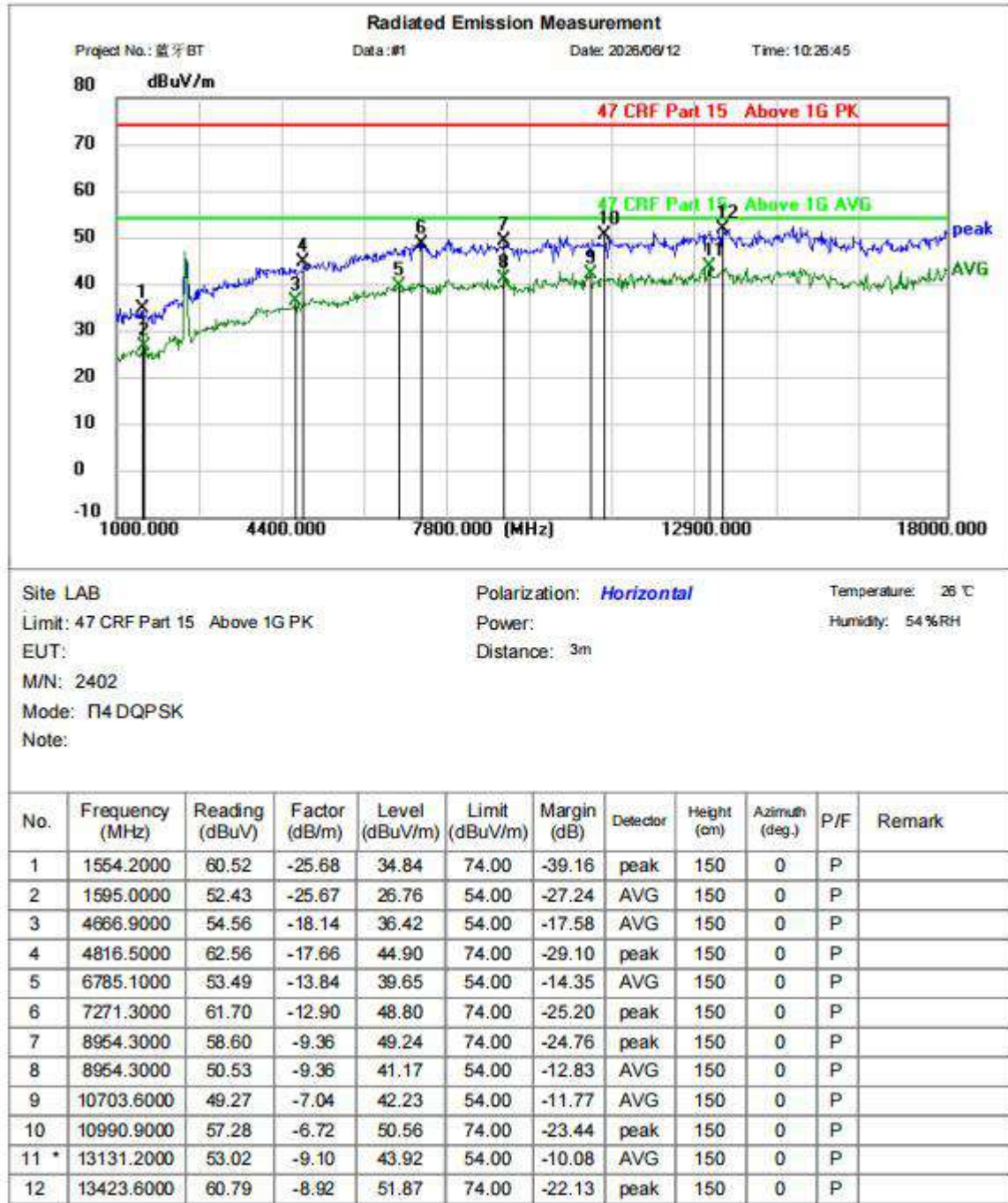
Temperature: 26 °C

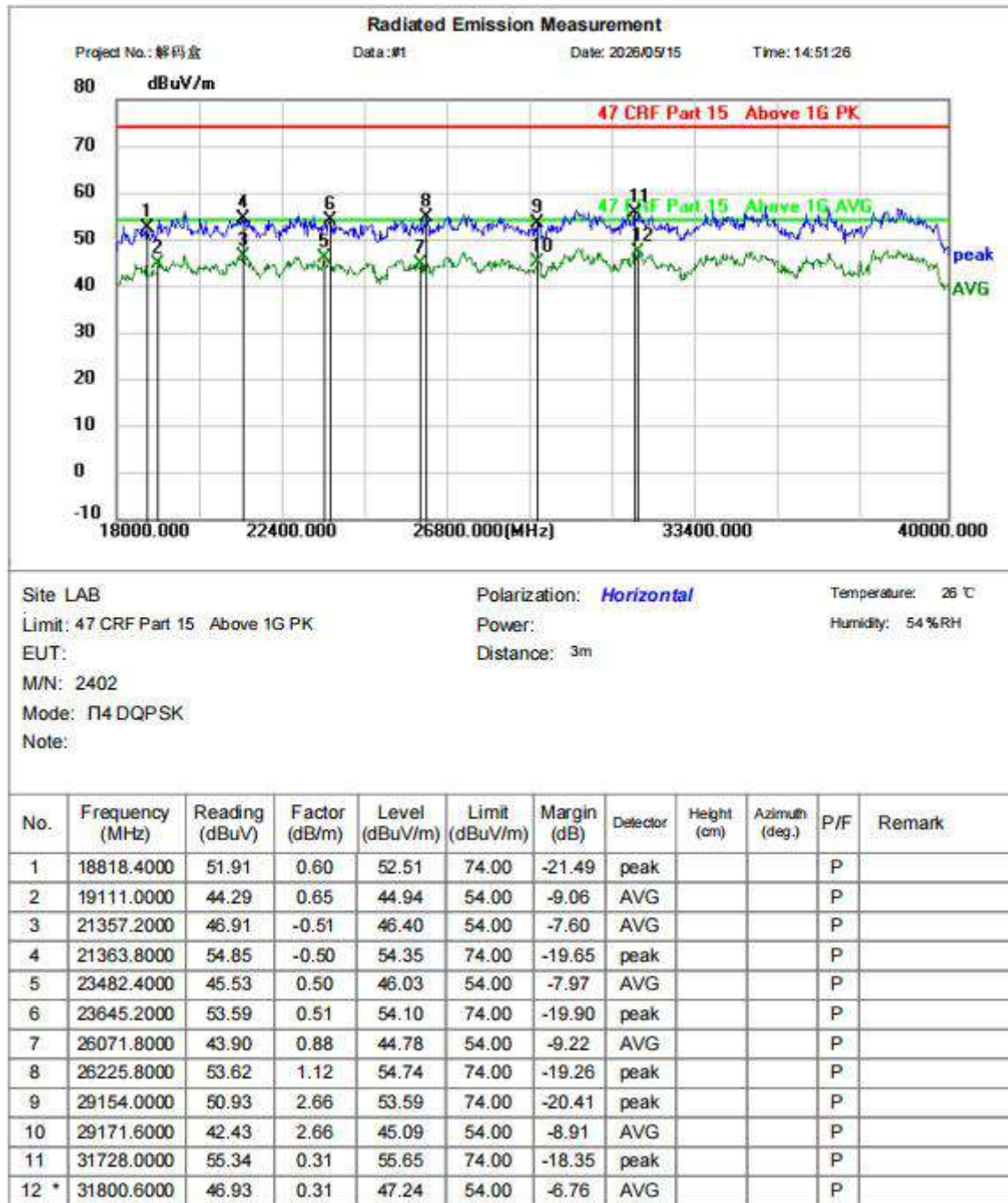
Humidity: 54 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1448.8000	51.85	-25.31	26.54	54.00	-27.46	AVG			P	
2	1457.3000	59.11	-25.30	33.81	74.00	-40.19	peak			P	
3	4959.3000	59.82	-16.30	43.52	54.00	-10.48	AVG			P	
4	4961.0000	63.31	-16.30	47.01	74.00	-26.99	peak			P	
5	7210.1000	60.94	-10.36	50.58	74.00	-23.42	peak			P	
6	7210.1000	53.70	-10.36	43.34	54.00	-10.66	AVG			P	
7	10120.5000	49.58	-3.93	45.65	54.00	-8.35	AVG			P	
8	10212.3000	55.70	-3.62	52.08	74.00	-21.92	peak			P	
9 *	15200.1000	47.12	-0.73	46.39	54.00	-7.61	AVG			P	
10	15273.2000	54.01	-0.83	53.18	74.00	-20.82	peak			P	
11	17158.5000	54.40	-0.91	53.49	74.00	-20.51	peak			P	
12	17158.5000	46.55	-0.91	45.64	54.00	-8.36	AVG			P	

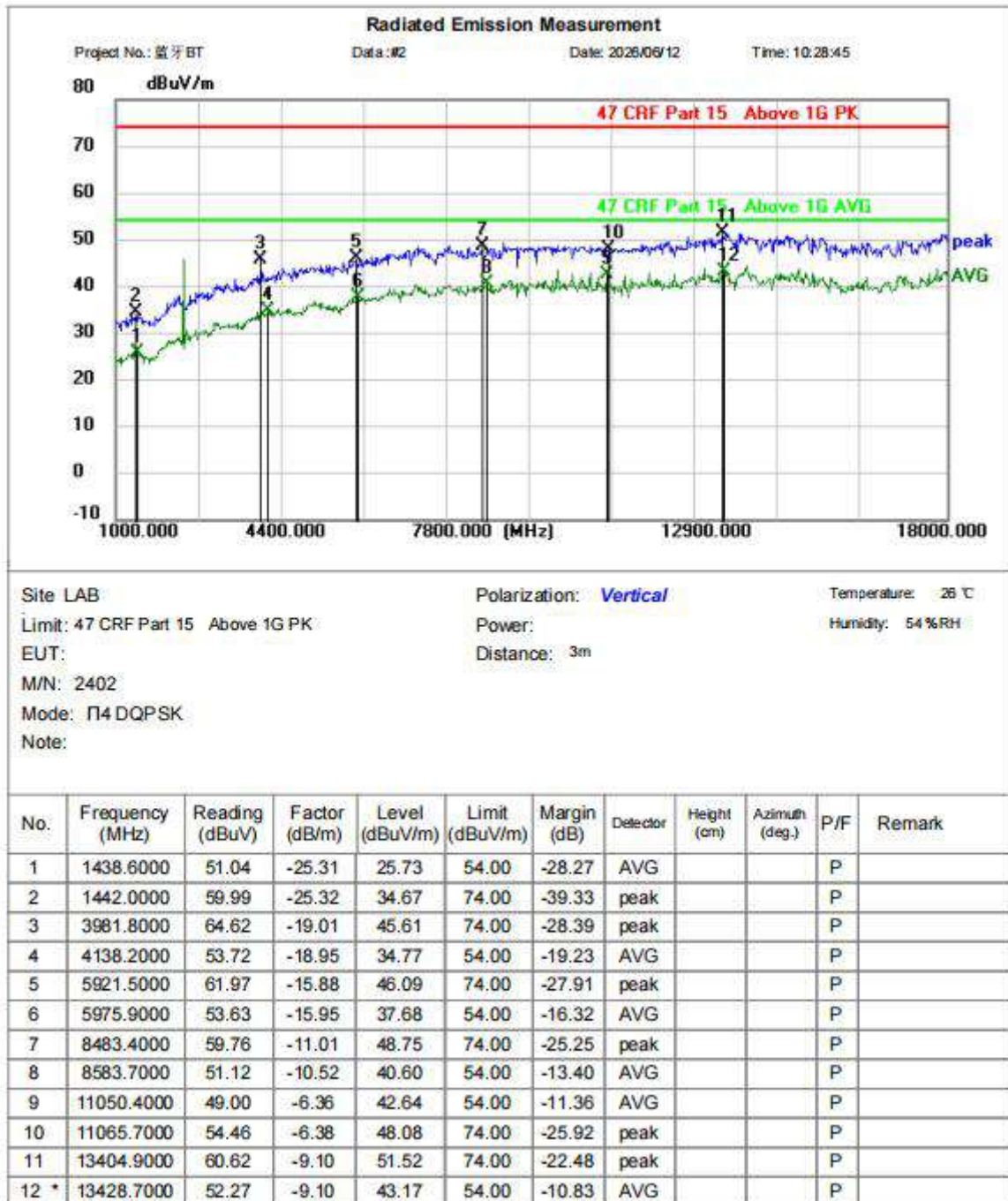


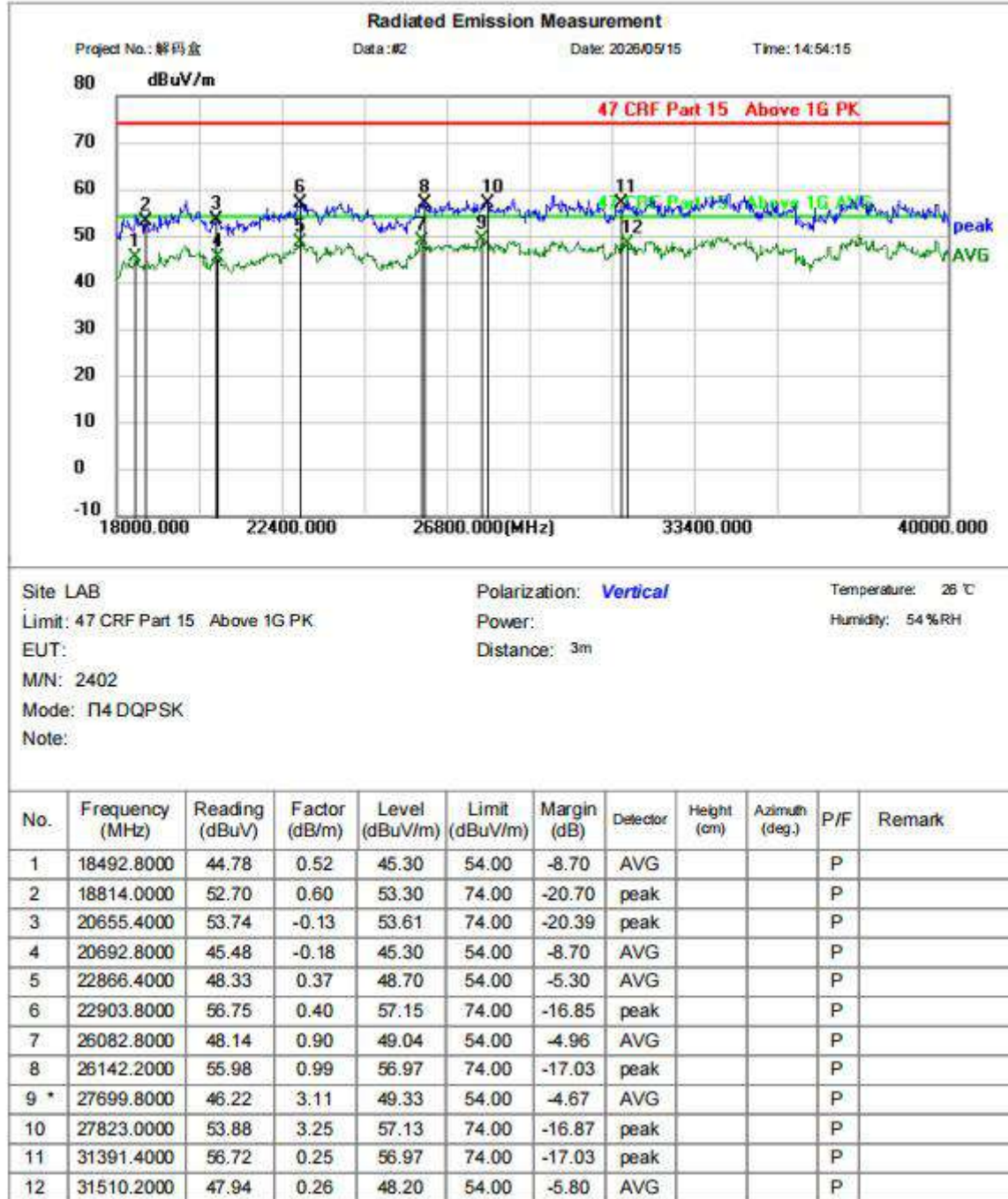
TM2 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: LVertical



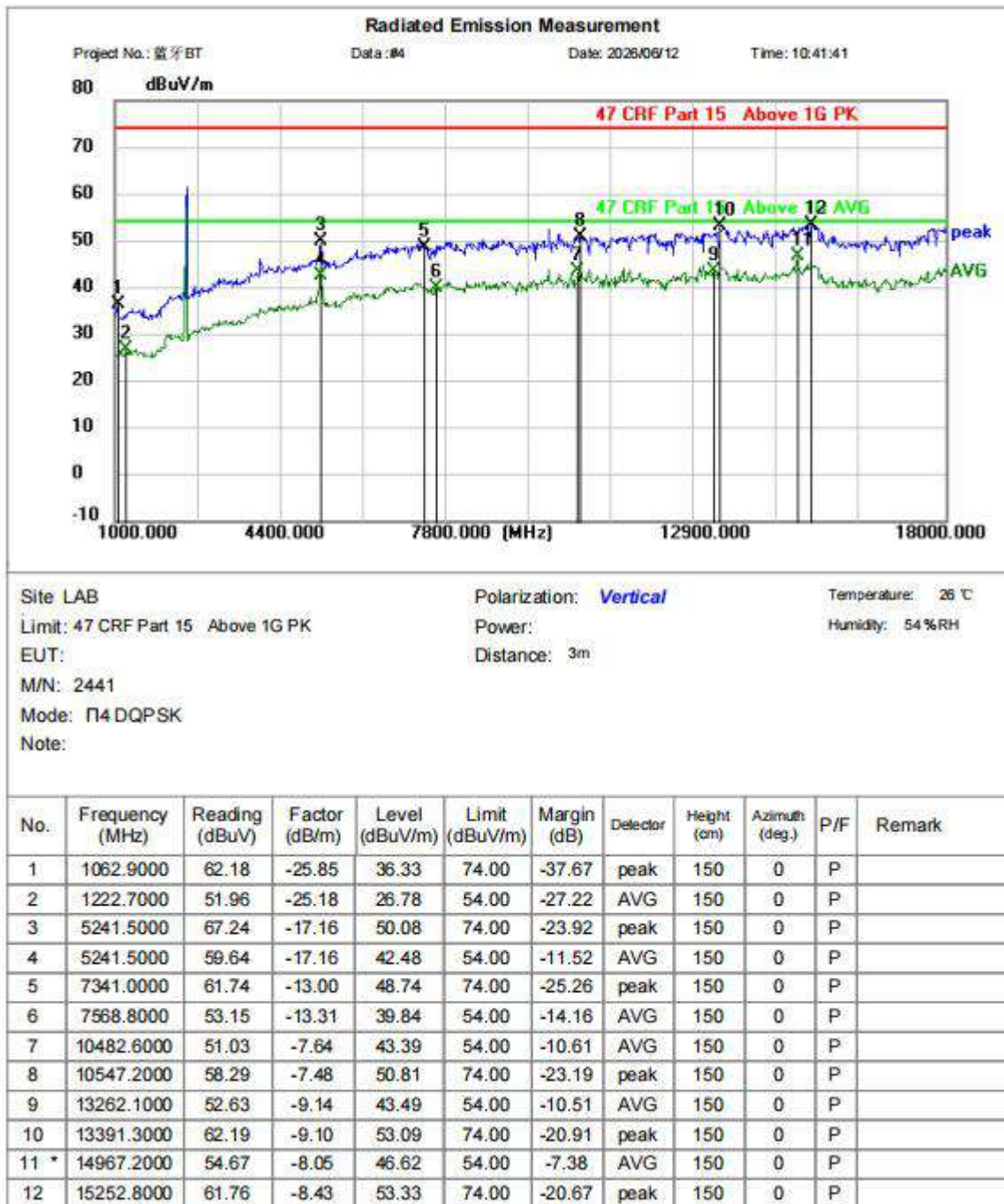


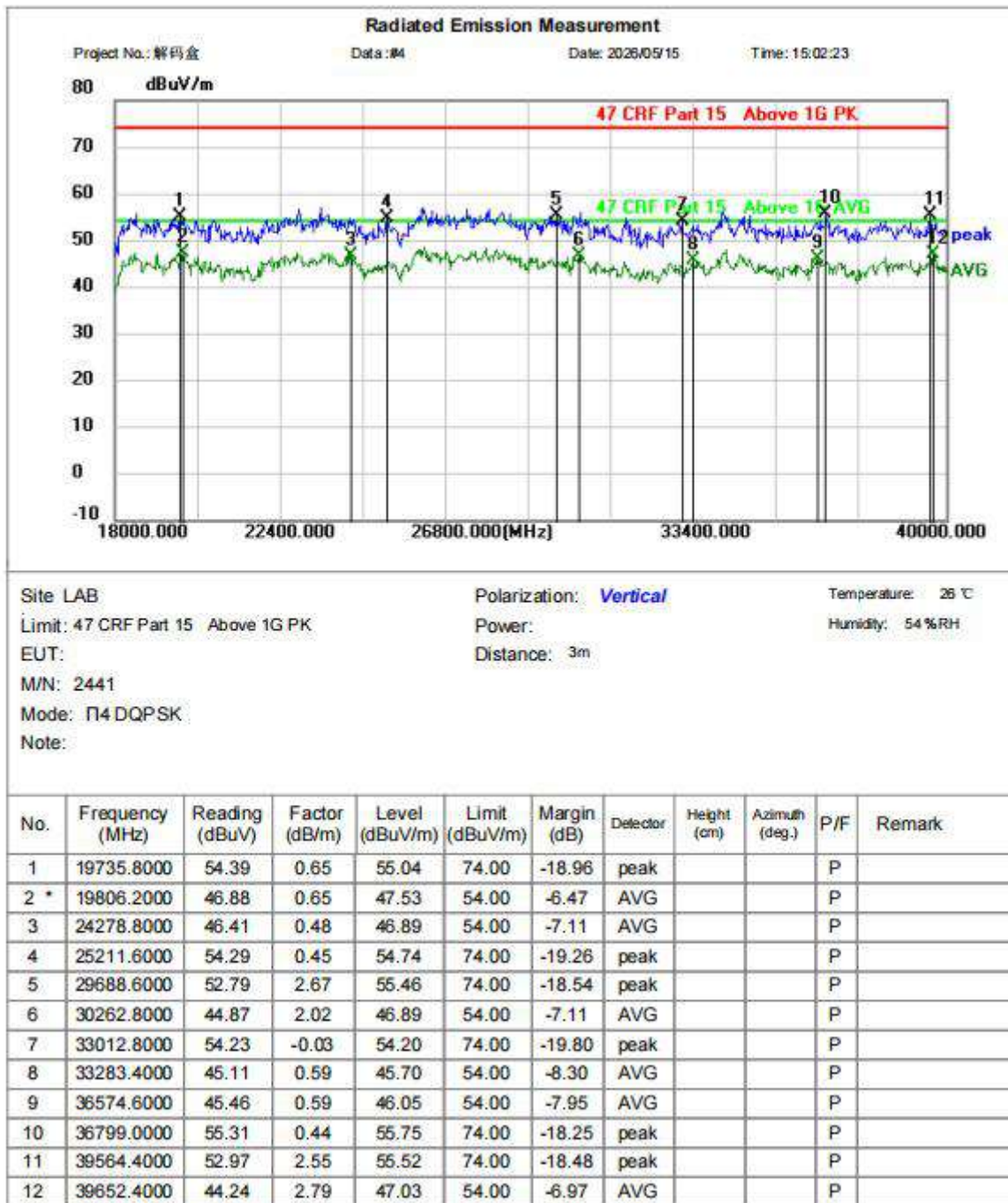
TM2/ Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: L



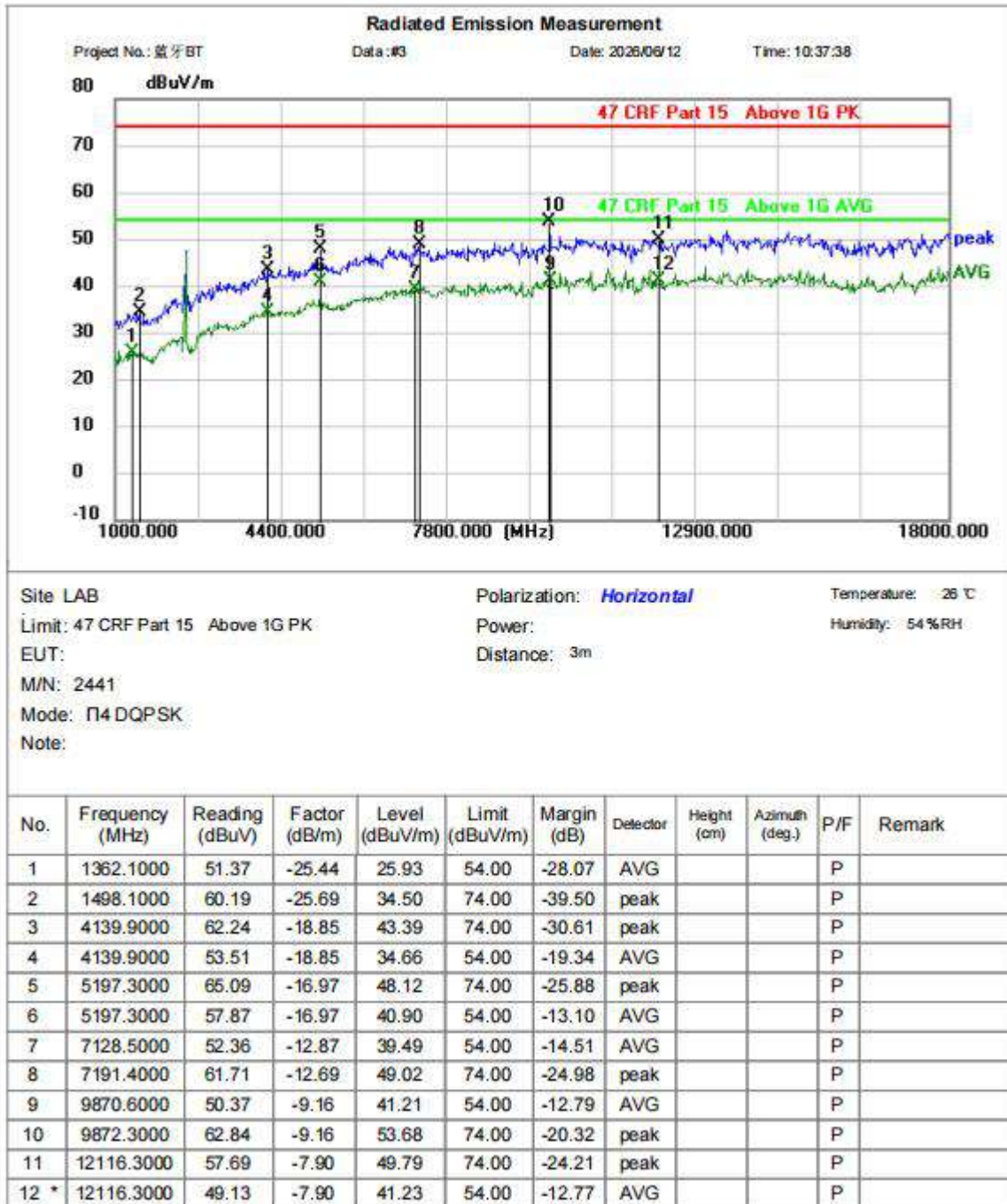


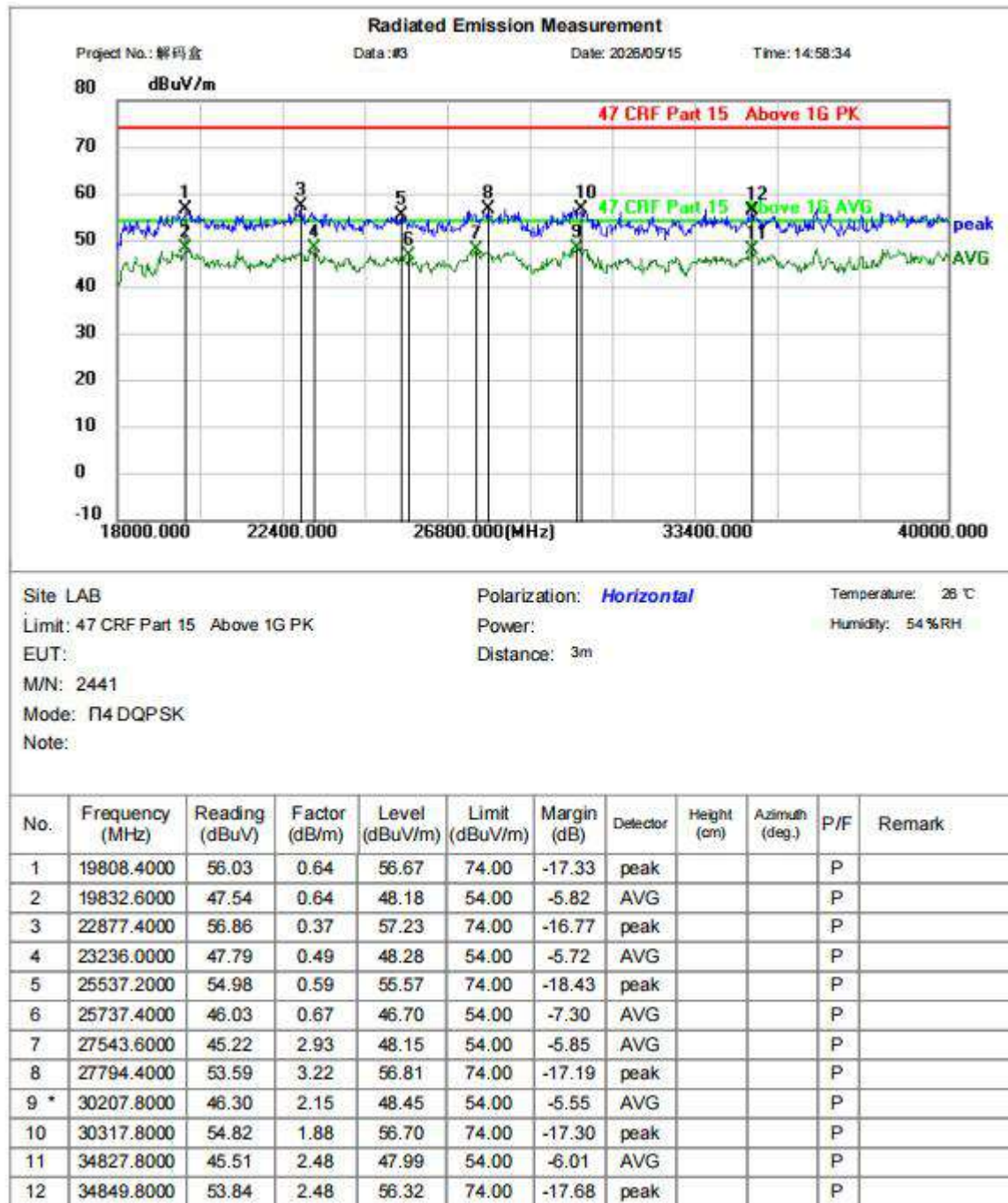
TM2/ Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: M



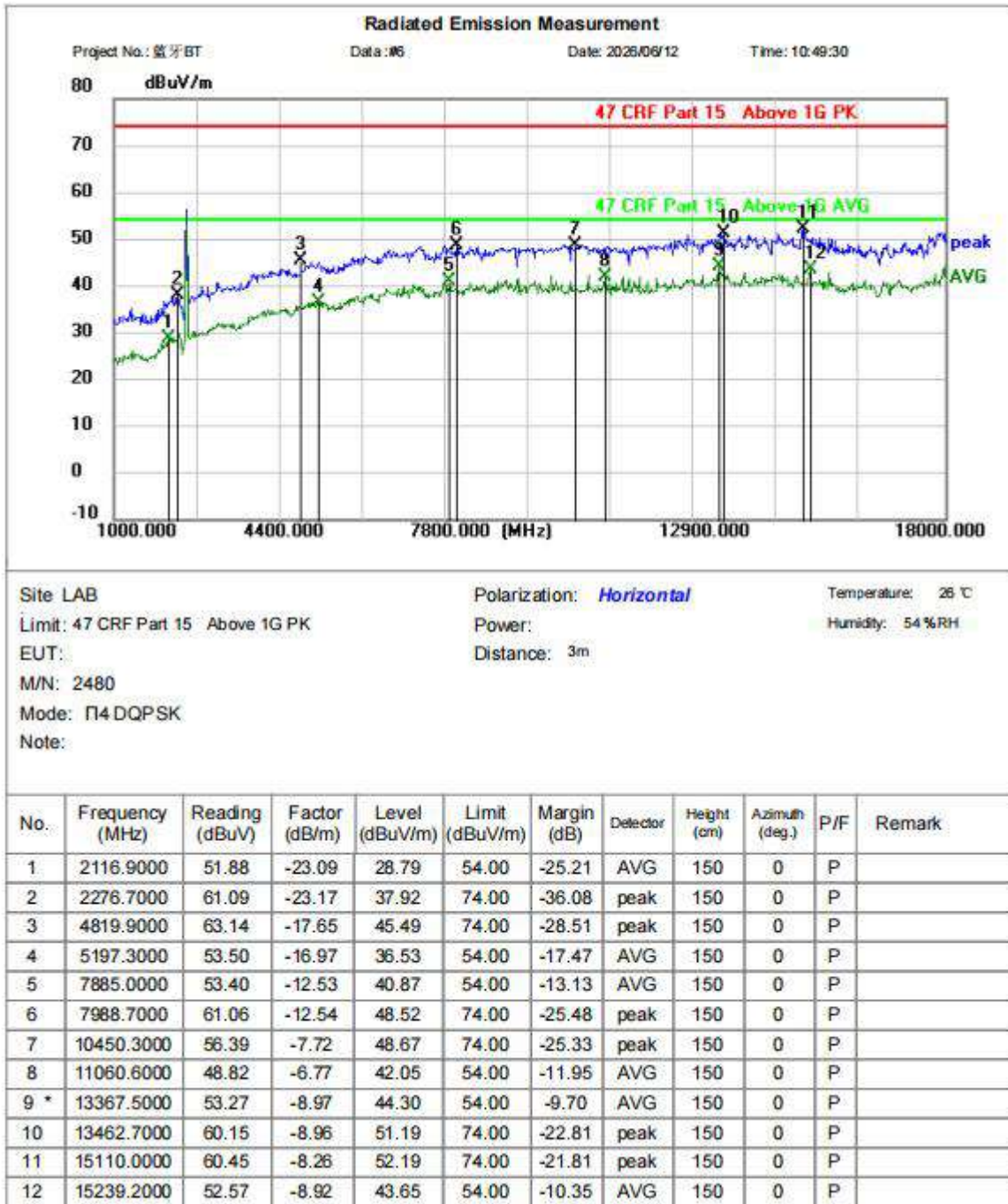


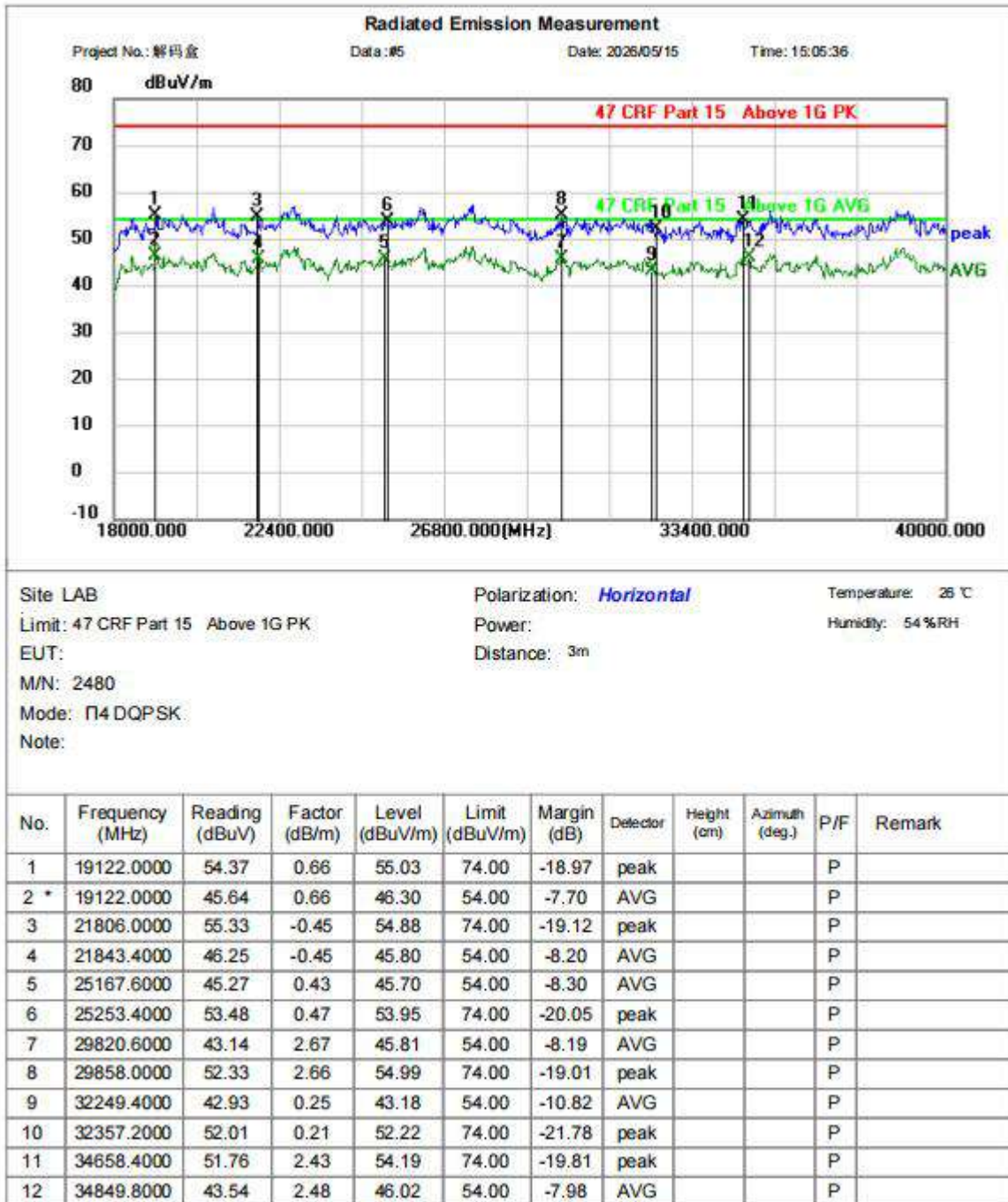
TM2 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: M



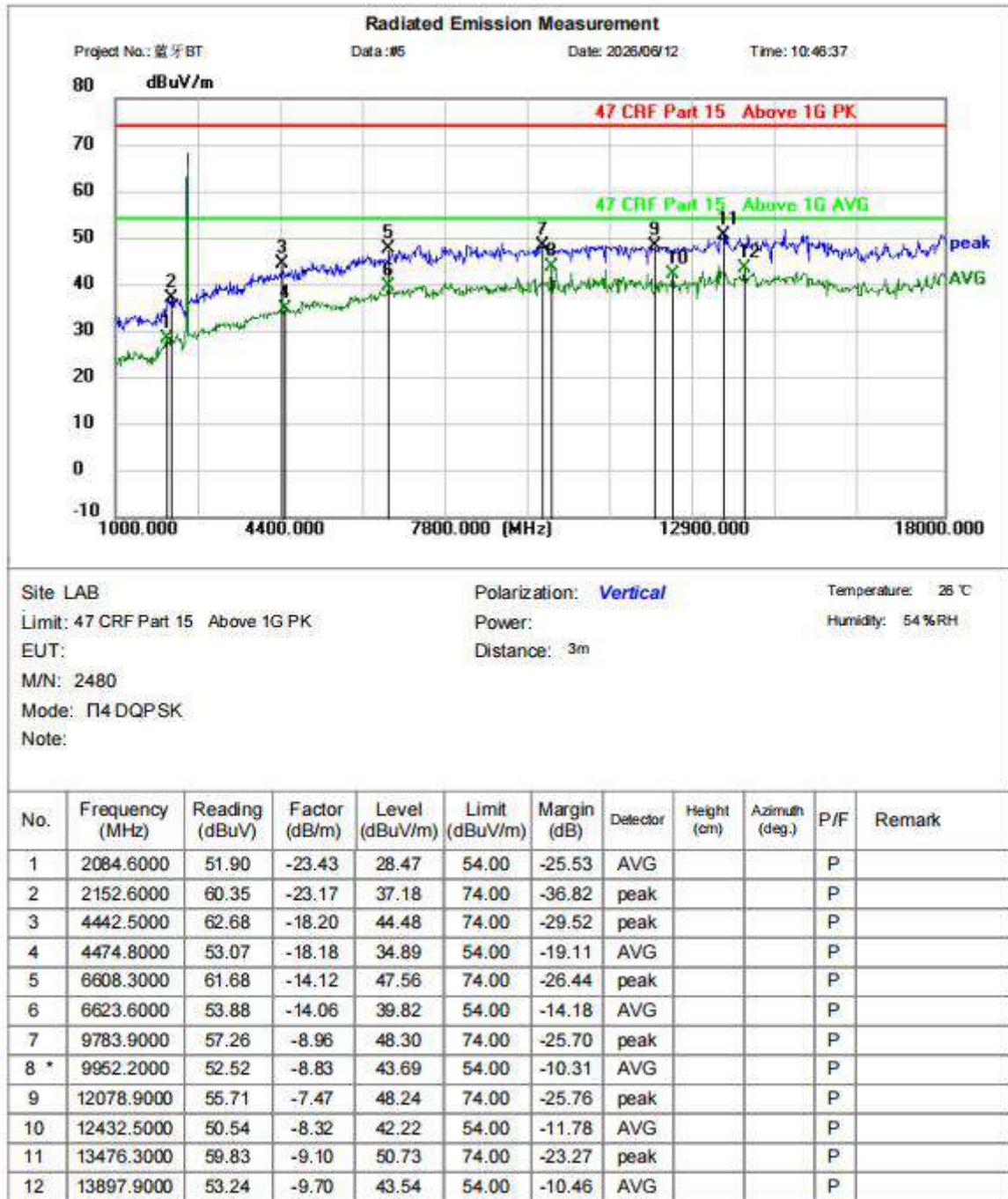


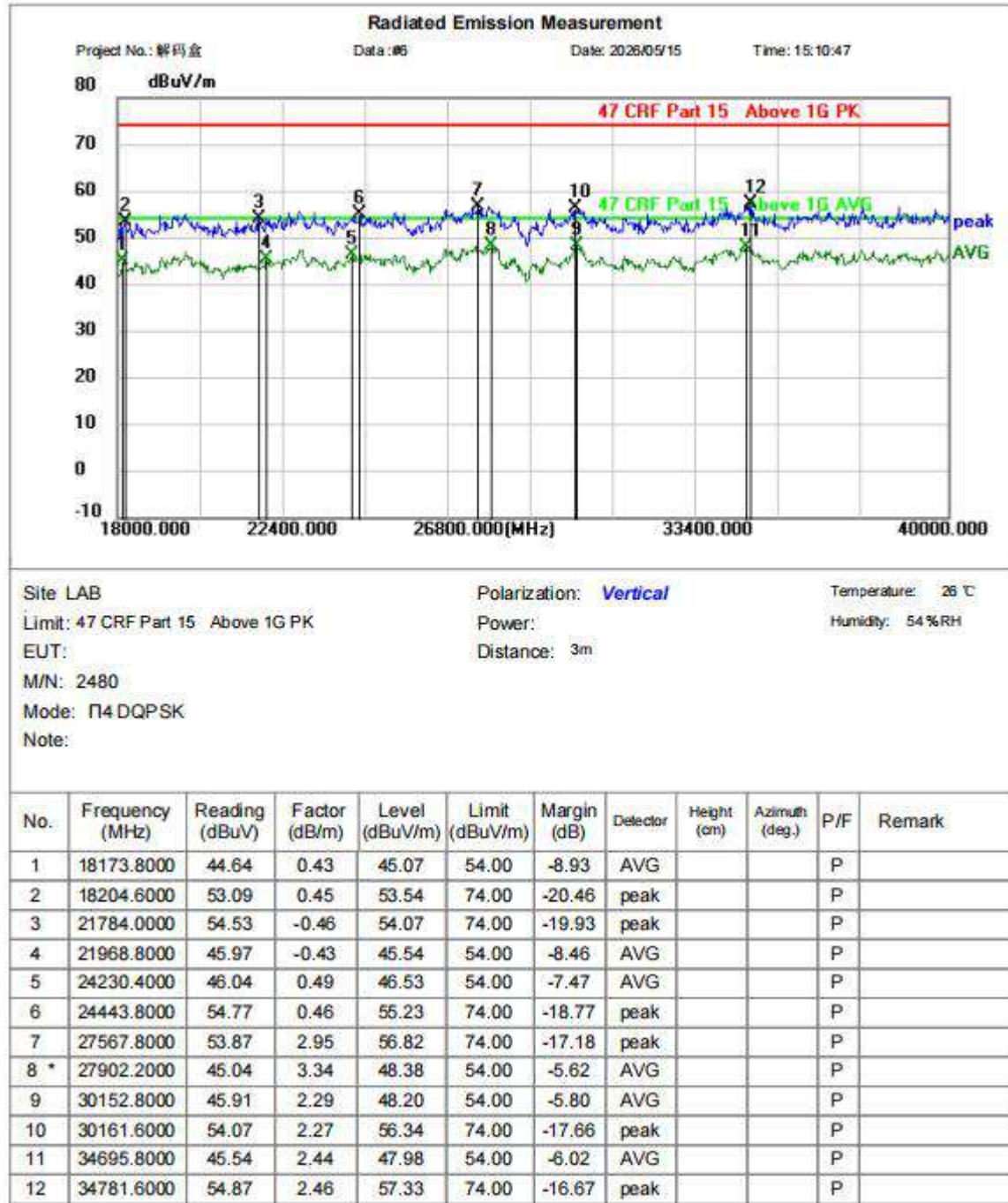
TM2 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: H



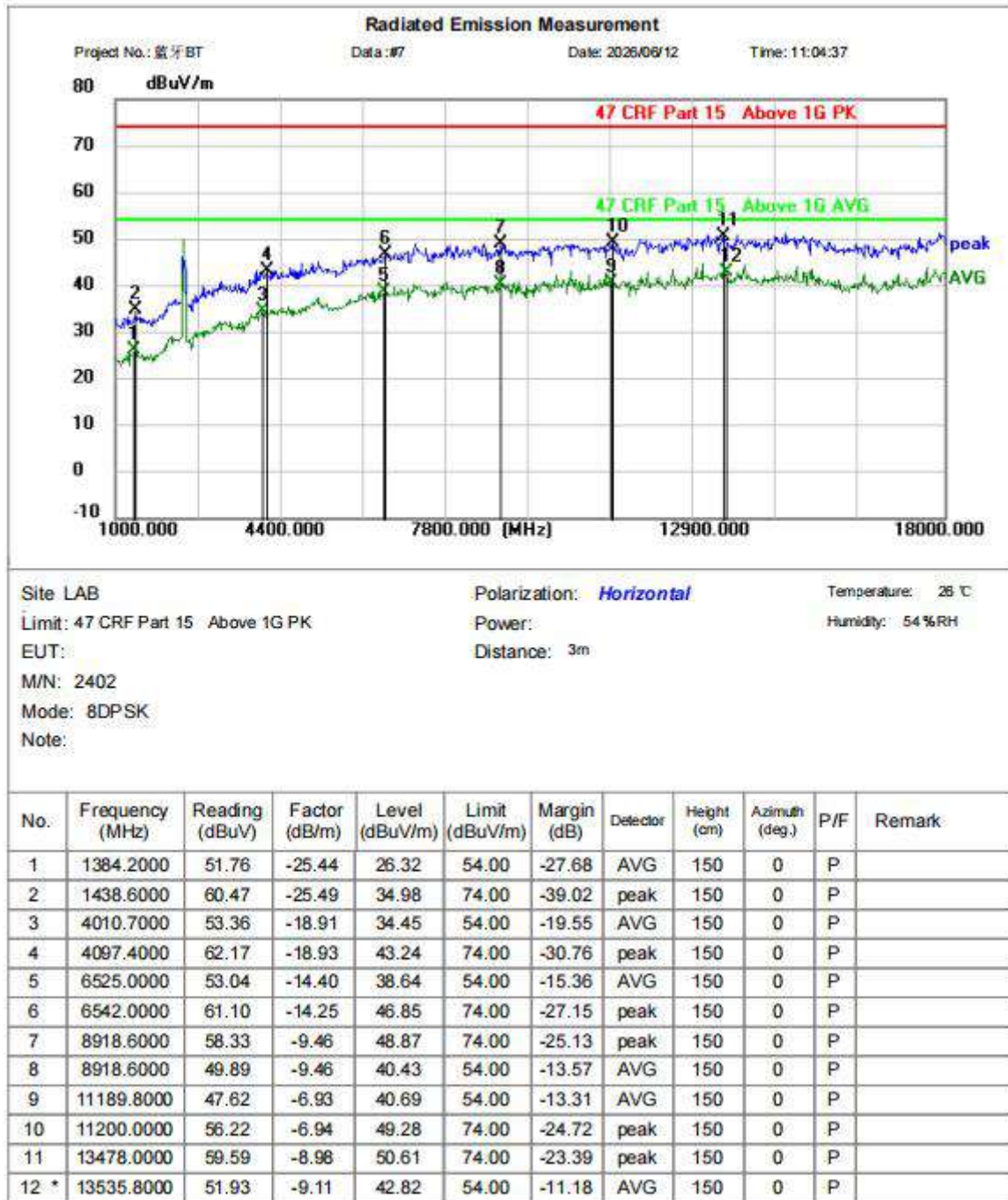


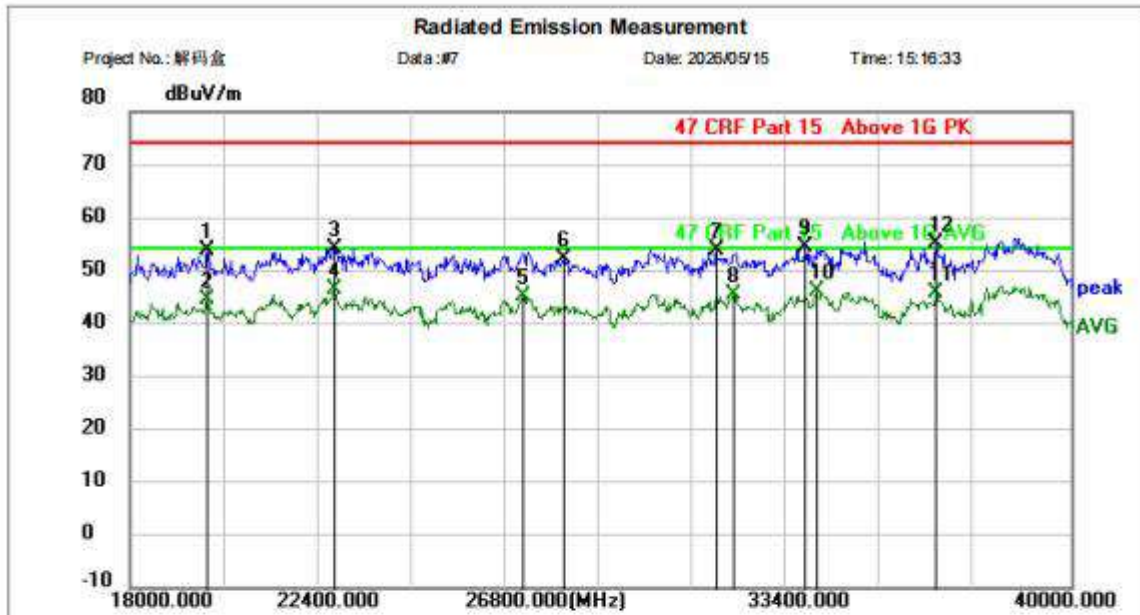
TM2 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: H





TM3 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: L





Site: LAB

Polarization: **Horizontal**

Temperature: 26 °C

Limit: 47 CFR Part 15 Above 1G PK

Power:

Humidity: 54 %RH

EUT:

Distance: 3m

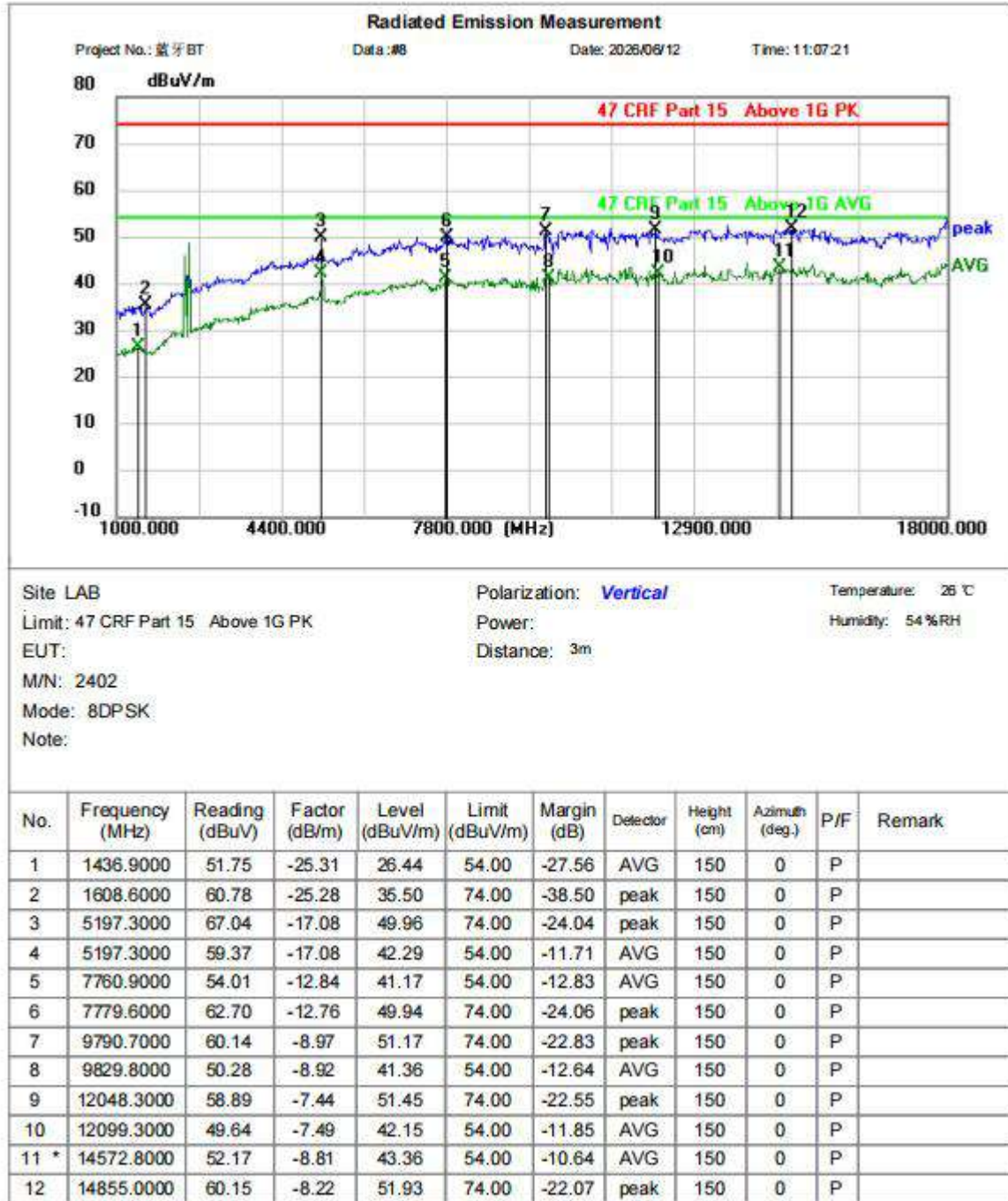
M/N: 2402

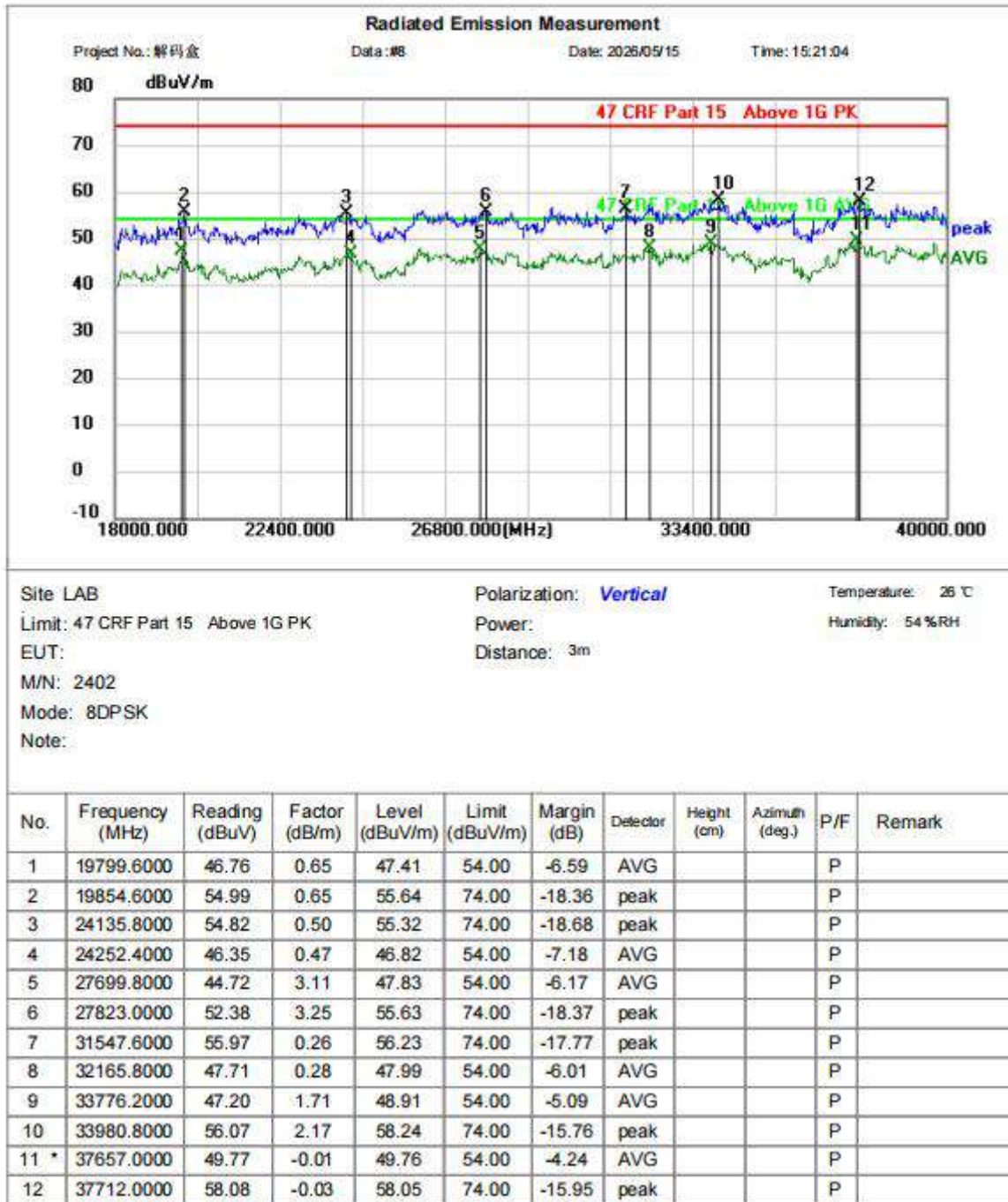
Mode: 8DPSK

Note:

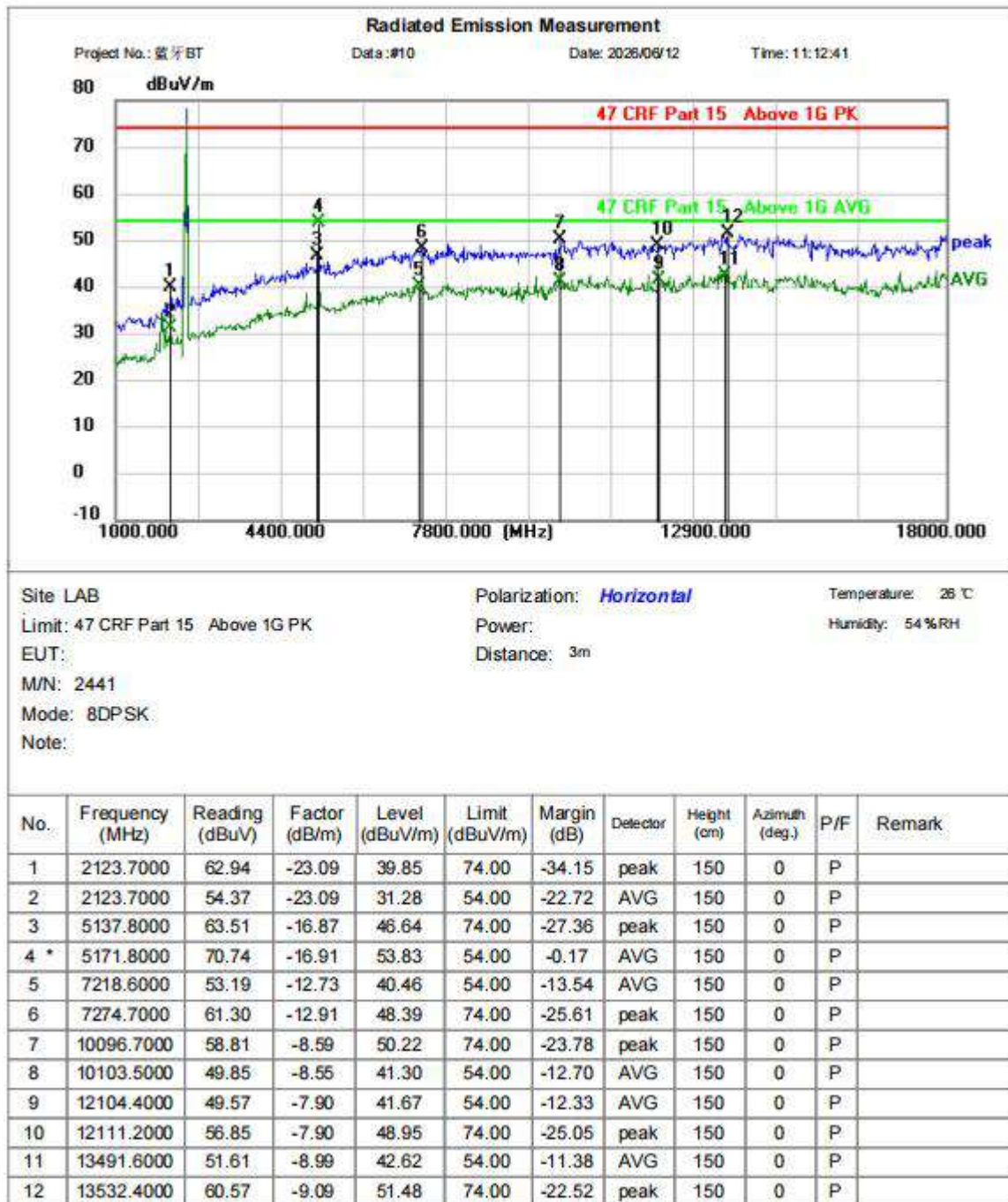
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	19819.4000	53.25	0.65	53.90	74.00	-20.10	peak			P	
2	19843.6000	43.96	0.66	44.62	54.00	-9.38	AVG			P	
3	22815.8000	53.96	0.32	54.28	74.00	-19.72	peak			P	
4 *	22815.8000	46.18	0.32	46.50	54.00	-7.50	AVG			P	
5	27154.2000	42.79	2.47	45.26	54.00	-8.74	AVG			P	
6	28128.8000	48.98	3.36	52.34	74.00	-21.66	peak			P	
7	31728.0000	53.34	0.31	53.65	74.00	-20.35	peak			P	
8	32108.6000	44.98	0.31	45.29	54.00	-8.71	AVG			P	
9	33811.4000	52.80	1.79	54.59	74.00	-19.41	peak			P	
10	34046.8000	43.72	2.23	45.95	54.00	-8.05	AVG			P	
11	36854.0000	45.29	0.39	45.68	54.00	-8.32	AVG			P	
12	36873.8000	54.75	0.38	55.13	74.00	-18.87	peak			P	

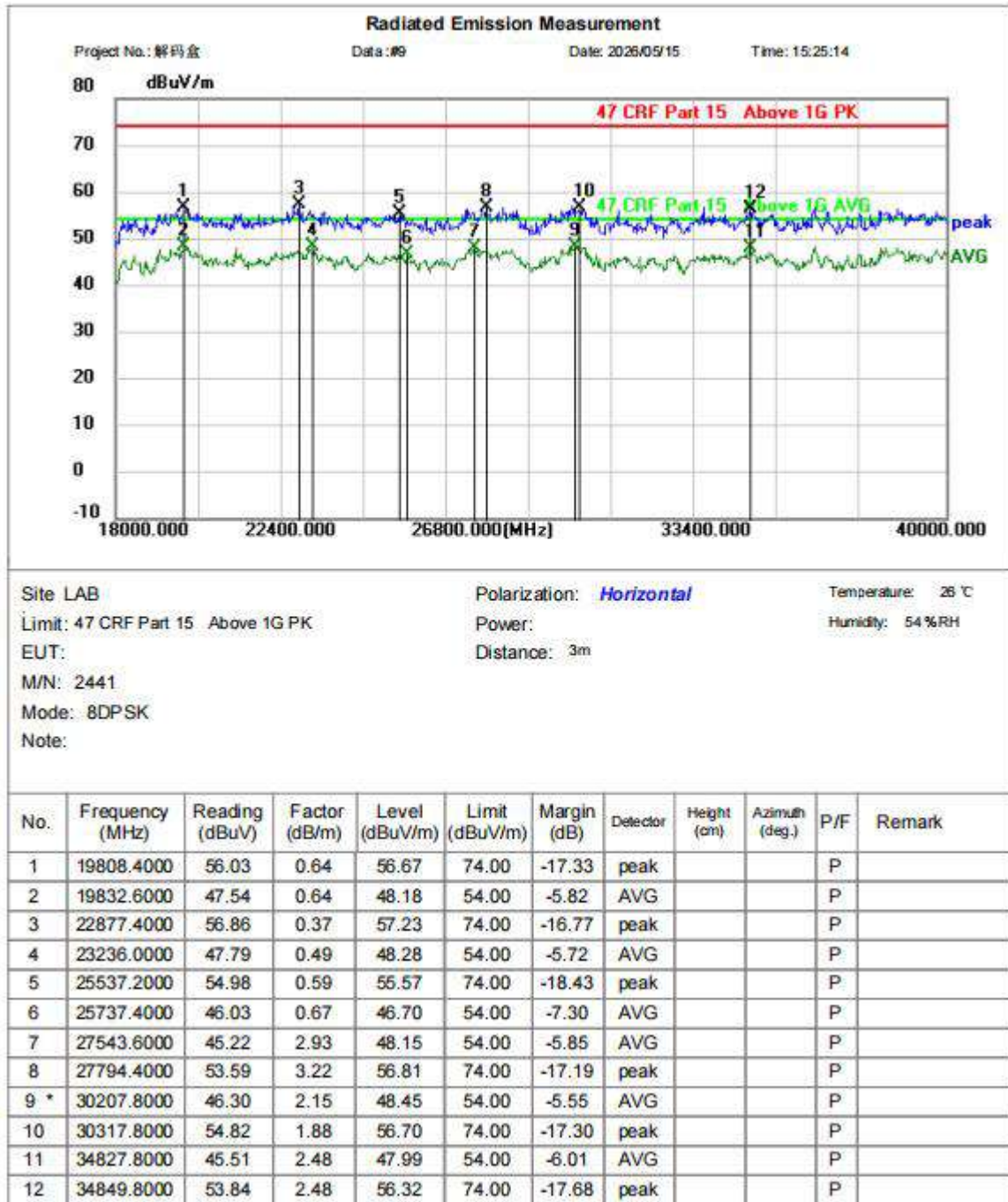
TM3/ Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: L



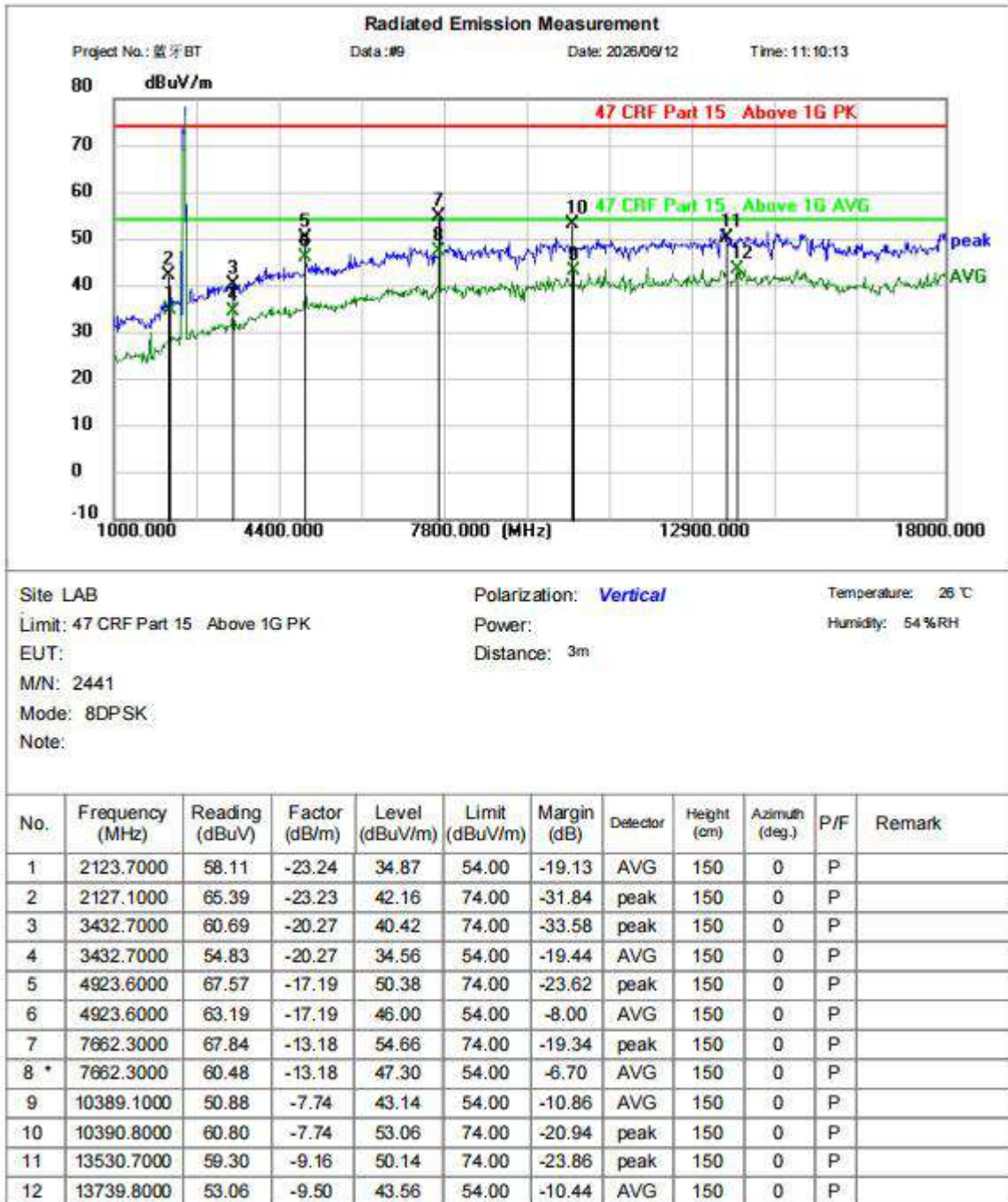


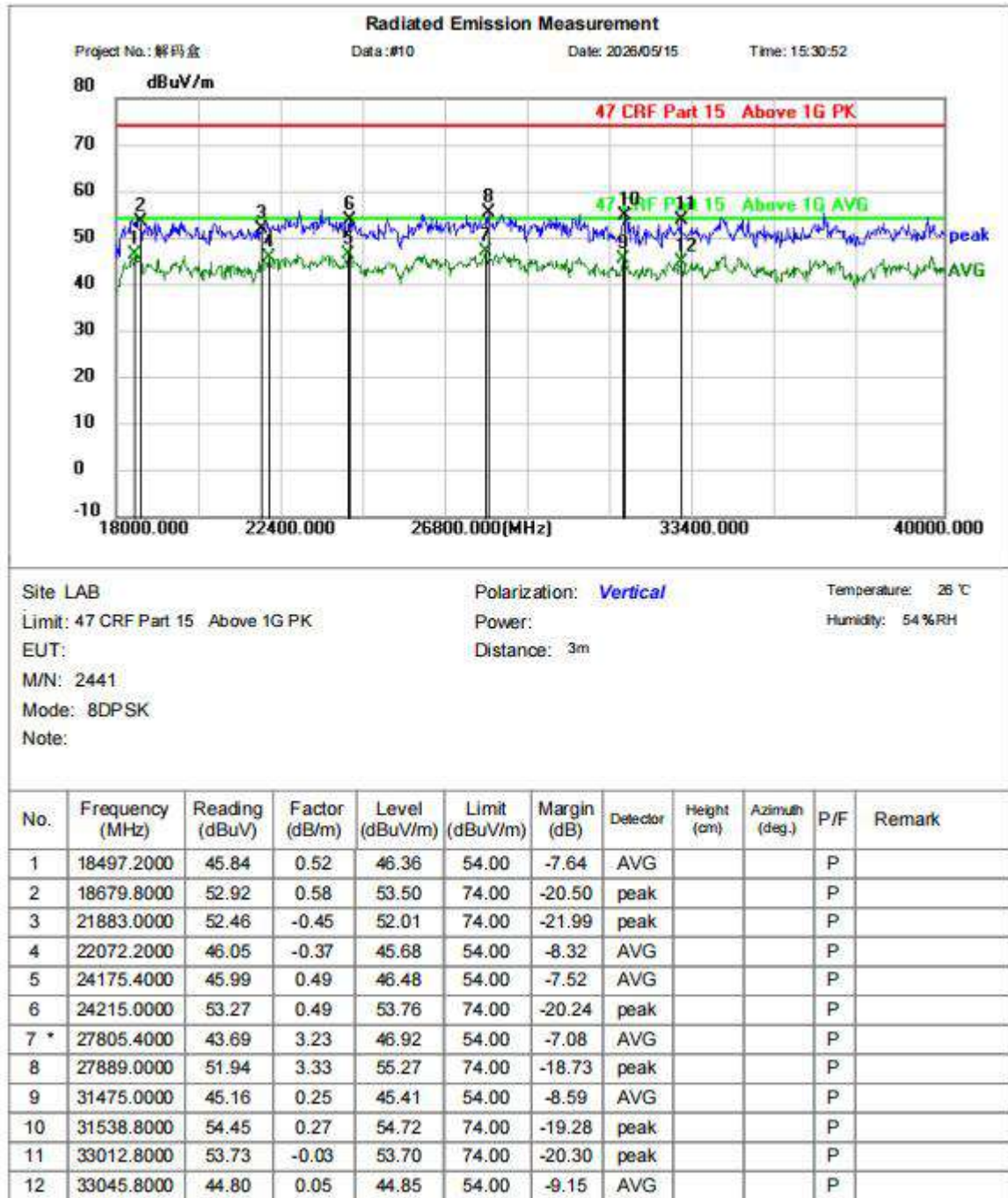
TM3 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: M



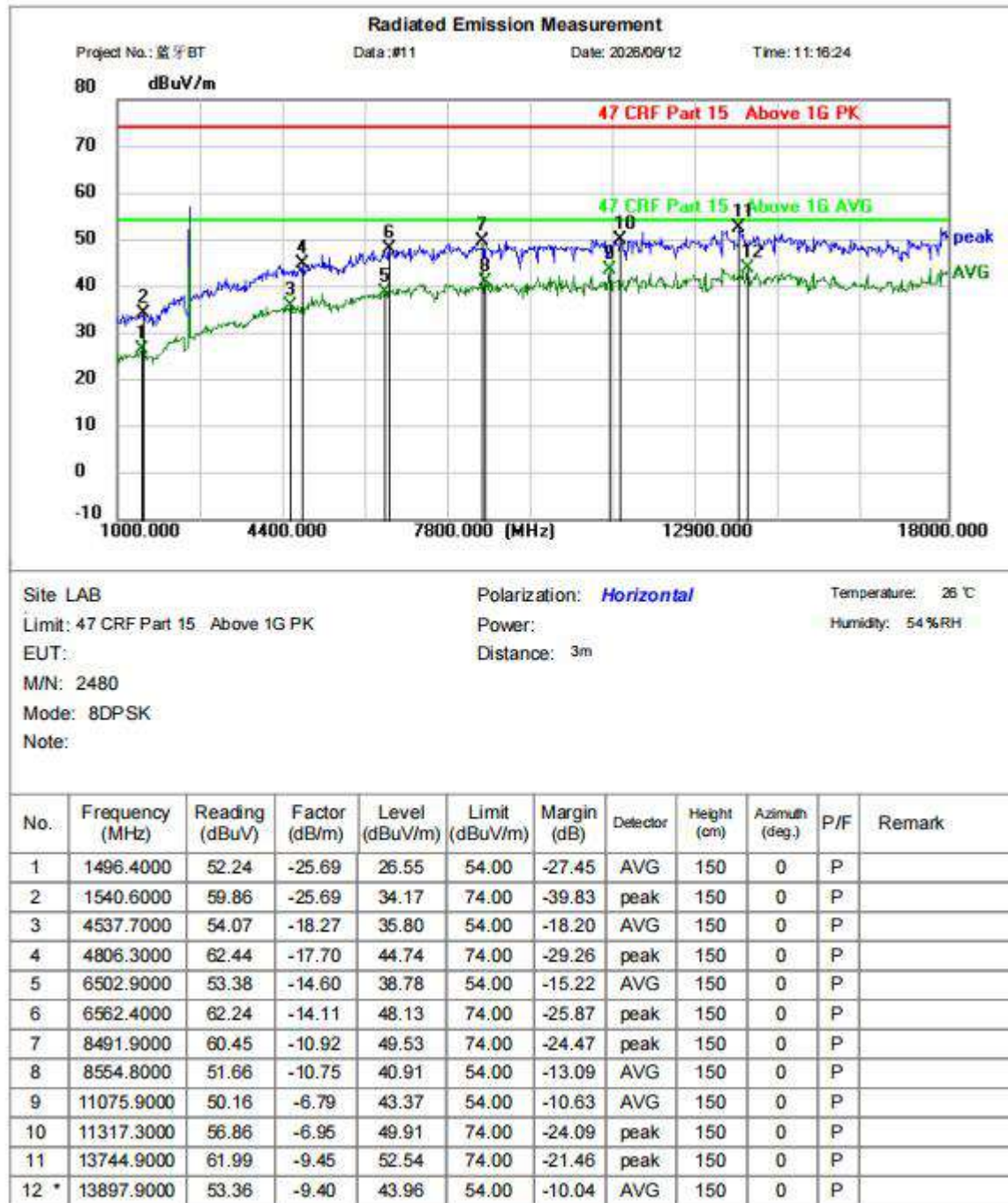


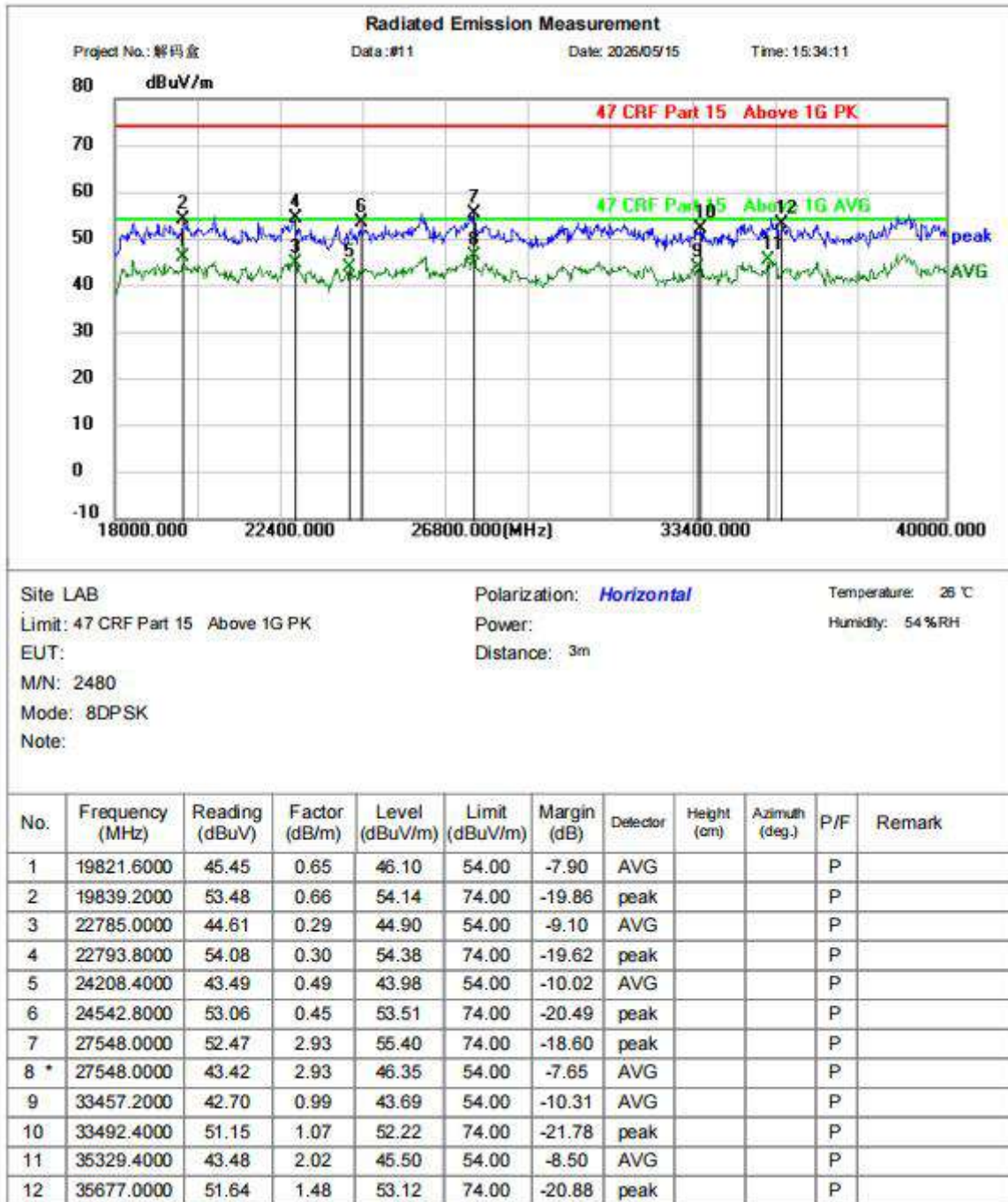
TM3/ Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: M



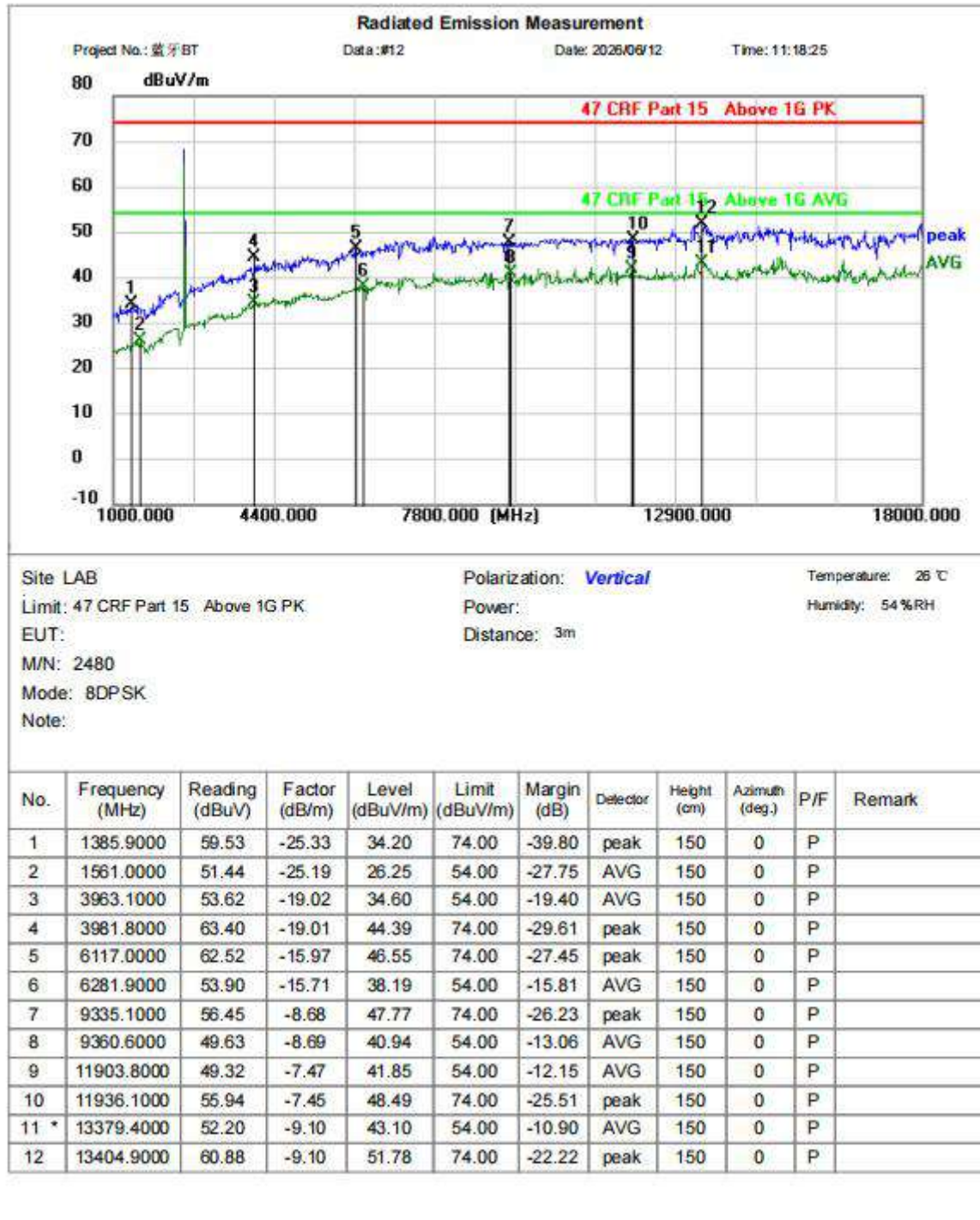


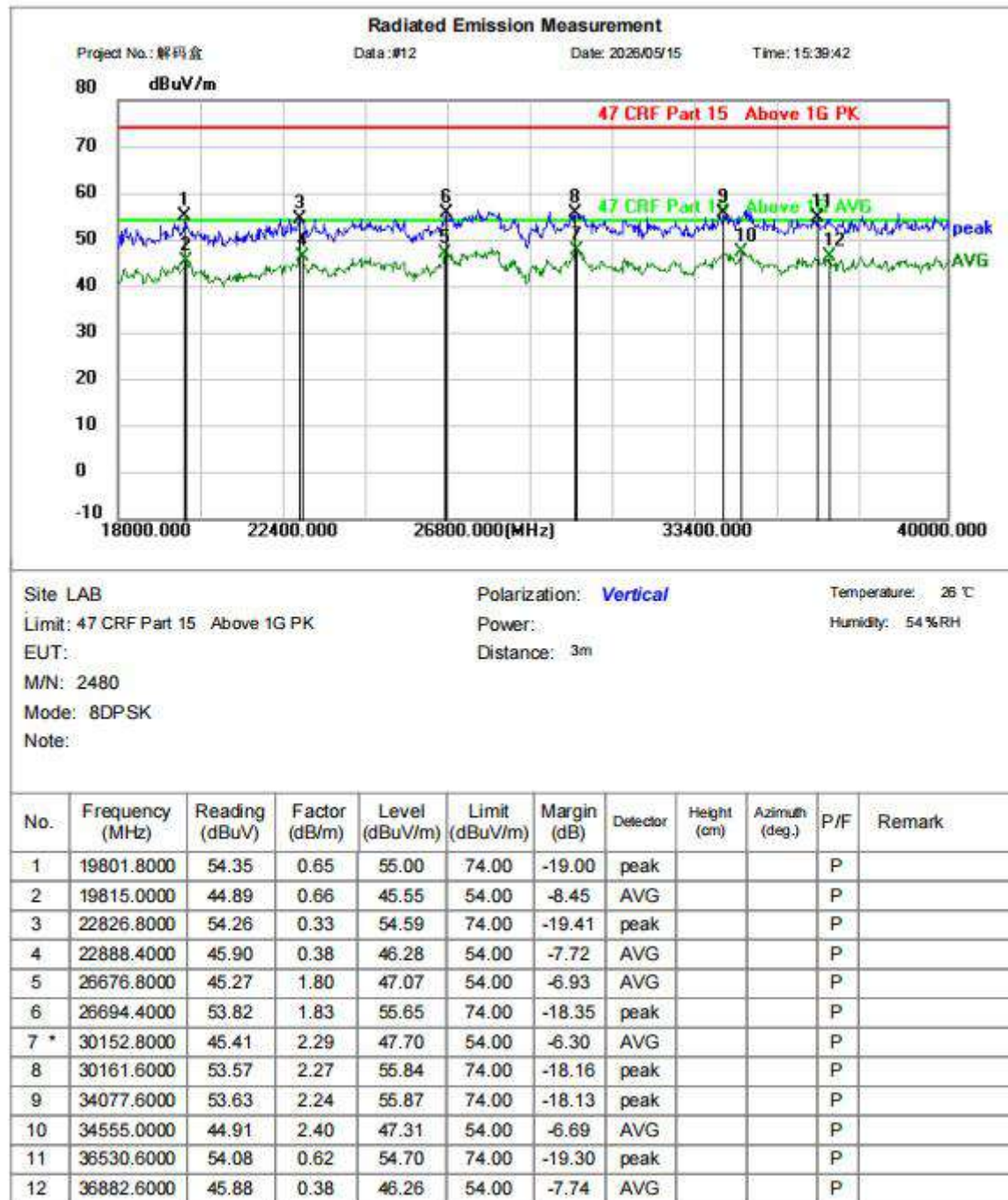
TM3 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: H





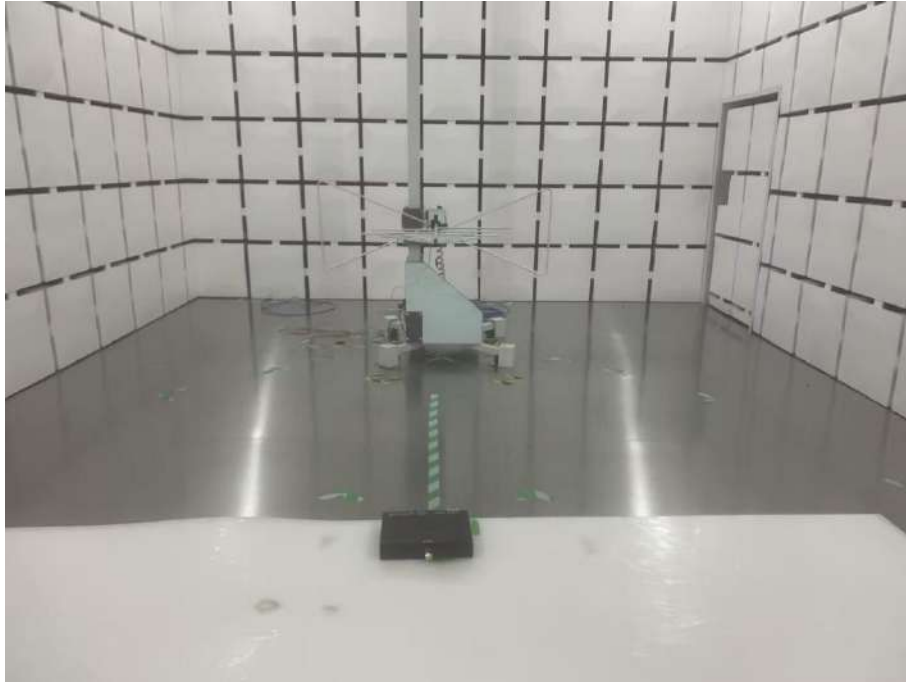
TM3/ Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: H



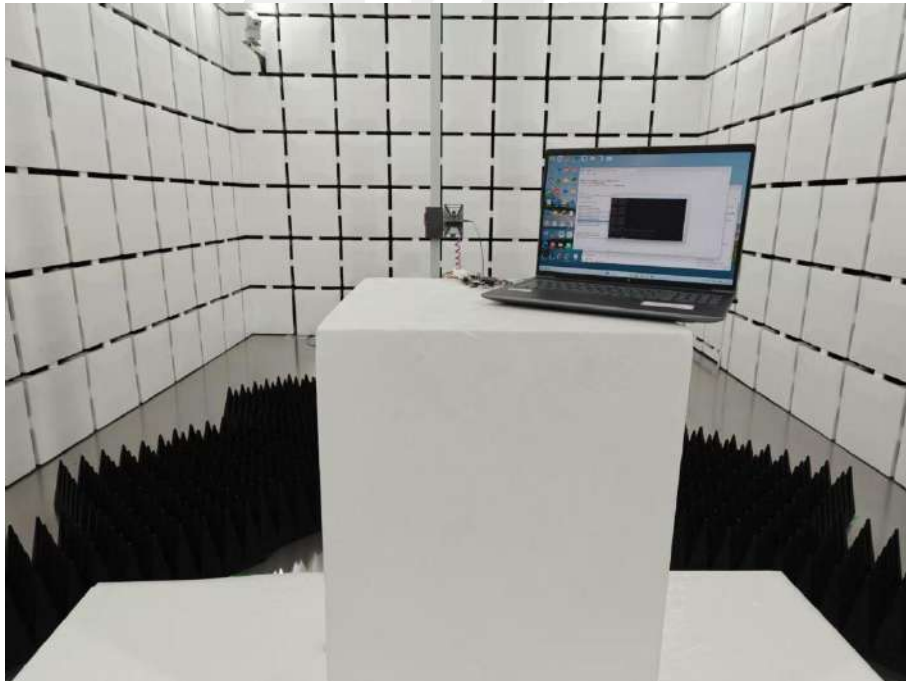


7. TEST SETUP PHOTOS

Emissions in frequency bands (below 1GHz)



Emissions in frequency bands (above 1GHz)



****End of the report****