

Radio Test Report

47 CFR Part 15.247

Applicant's name : Shenzhen Zhiqu Vehicle Industry Co., Ltd
Address : 1001, Building B, No. 7 Huanping Road, Central Community, Pingdi Street,
Longgang District, Shenzhen
Manufacture's Name : Shenzhen Zhiqu Vehicle Industry Co., Ltd
Address : 1001, Building B, No. 7 Huanping Road, Central Community, Pingdi Street,
Longgang District, Shenzhen

Product description

Trader mark : ENGWE
Product Name: : EPAC Bicycle
Model and/or type reference : M20 3.0 DB
Serial Model : M20 3.0
Rating(s) : DC60V,40A
FCC ID : 2BU5R-M2030DB

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 : 2026-03-05 ~ 2026-04-14
Date of Issue : 2026-04-14
Test Result : **Pass**

Prepared by:



Project Engineer

Reviewed by:



Project Supervisor

Approved by:


Technical Director



REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	2026-04-14	Valid	Initial Release



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1. TEST SUMMARY

No.	Test Item	Basic Standard	Result
1	Antenna requirement	47 CFR Part 15.203	PASS
2	Conducted Emission at AC power line	47 CFR Part 15.207	PASS
3	6dB Bandwidth	47 CFR Part 15.247	PASS
4	Maximum Conducted Output Power	47 CFR Part 15.247	PASS
5	Power Spectral Density	47 CFR Part 15.247	PASS
6	Emissions in non-restricted frequency bands	47 CFR Part 15.247	PASS
7	Band edge emissions (Radiated)	47 CFR Part 15.247,15.205,15.209	PASS
8	Emissions in frequency bands (below 1GHz)	47 CFR Part 15.247,15.205,15.209	PASS
9	Emissions in frequency bands (above 1GHz)	47 CFR Part 15.247,15.205,15.209	PASS

2. MEASUREMENT UNCERTAINTY

The report 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	Conducted Emission (150KHz - 30MHz)	$\pm 2.54\text{dB}$
2	Occupied Channel Bandwidth	$\pm 3.5\%$
3	RF output power, conducted	$\pm 1.19\text{dB}$
4	Power Spectral Density, Conducted	$\pm 0.72\text{dB}$
5	Unwanted Emissions, conducted	$\pm 2.988\text{dB}$
6	All emissions, radiated (1GHz - 18GHz)	$\pm 4.66\text{dB}$
7	All emissions, radiated (30MHz - 1GHz)	$\pm 3.94\text{dB}$
8	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 Zhiqu Vehicle Industry Co., Ltd
Manufacturer Address:	1001, Building B, No. 7 Huanping Road, Central Community, Pingdi Street, Longgang District, Shenzhen
EUT Name:	EPAC Bicycle
Model No:	M20 3.0 DB
Serial Model:	M20 3.0
FCC ID:	2BU5R-M2030DB
Brand Name:	ENGWE
Difference Description:	All models are identical to each other except for model name and appearance.
Operation Frequency:	2402MHz to 2480MHz
Number of channels:	40
Modulation Type:	GFSK
Bluetooth Version:	N/A
Antenna type:	PCB Antenna
Antenna Gain:	-0.51dBi
Hardware Version:	V1.2.6
Software Version:	YG0BLE002-V1.0.3
Power Supply:	DC60V,40A
Maximum Output Power:	-1.86dBm

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)
00	2402	20	2442
01	2404	21	2444
02	2406	22	2446
03	2408	23	2448
04	2410	24	2450

05	2412	25	2452
06	2414	26	2454
07	2416	27	2456
08	2418	28	2458
09	2420	29	2460
10	2422	30	2462
11	2424	31	2464
12	2426	32	2466
13	2428	33	2468
14	2430	34	2470
15	2432	35	2472
16	2434	36	2474
17	2436	37	2476
18	2438	38	2478
19	2440	39	2480

4.2. EUT Test Mode

TM1	GFSK
Channel	CH00
	CH19
	CH39
Test software Version	Test program:FCC_assist_1.0.2.2
Frequency	2402MHz,2440MHz,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-G3NDKR3	N/A	N/A

5. EQUIPMENTS LIST FOR ALL TEST ITEMS

Conducted Emission at AC power line						
No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	EMI test receiver ESCI	R&S	ESCI-3	100503	2026-03-17	2028-03-16
2	LISN	R&S	ENV216	103017	2025-09-10	2026-09-09
3	10dB limiter	Schwarzbeck	VTSD 9561	102834	2026-03-17	2028-03-16

6dB Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in non-restricted frequency bands						
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	QUANJUDA	LNA18	2503130032	2025-07-07	2026-07-06
4	spectrum analyzer	Agilent	N9020A	MY51287427	2025-07-07	2026-07-06
5	Terminal tester	R&S	CMW500	129734	2025-07-07	2026-07-06
6	Vector signal generator	Agilent	N5182A	MY50145556	2025-07-07	2026-07-06
7	RF automatic control unit	TST	CBOX-Full	2752539	2025-07-14	2026-07-13
8	High frequency antenna	Schwarzbeck	9120D-1141	03260	2025-10-19	2026-10-18
9	High-frequency horn antenna	Schwarzbeck	HA-018040L	25098408	2025-10-31	2026-10-30
10	preamplifier	HCT	HC180400-50 G25	25098401	2025-09-19	2026-09-18
11	spectrum analyzer	R&S	FSV40	101373	2025-12-24	2026-12-23
12	preamplifier	SCHWARZBECK	8447D	2944A08081	2026-03-17	2028-03-16

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.
Test Method:	---

6.1.1. Conclusion:

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



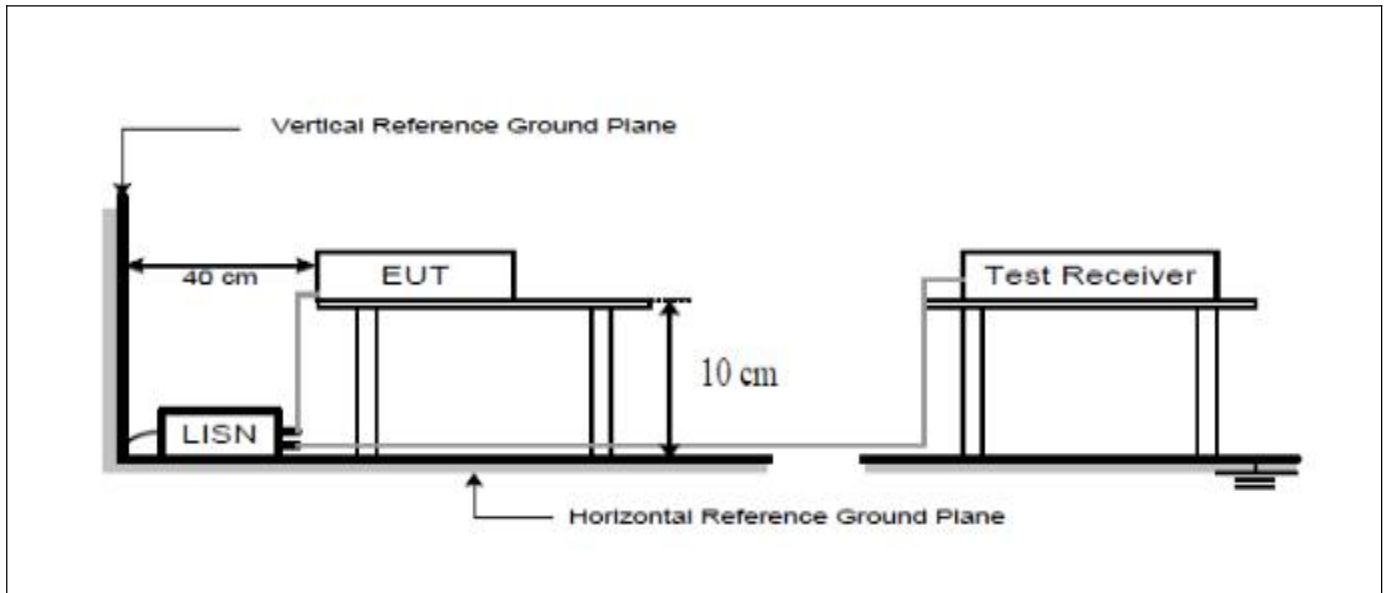
6.2. Conducted Emission at AC power line

Test Requirement:	Refer to 47 CFR 15.207(a), Except as shown in paragraphs (b) and (c) of this section, 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, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN).		
Test Limit:	Frequency of emission (MHz)	Conducted limit (dB μ V)	
		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.			
Test Method:	ANSI C63.10-2020 section 6.2		
Procedure:	Refer to ANSI C63.10-2020 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices		

6.2.1. EUT Operation

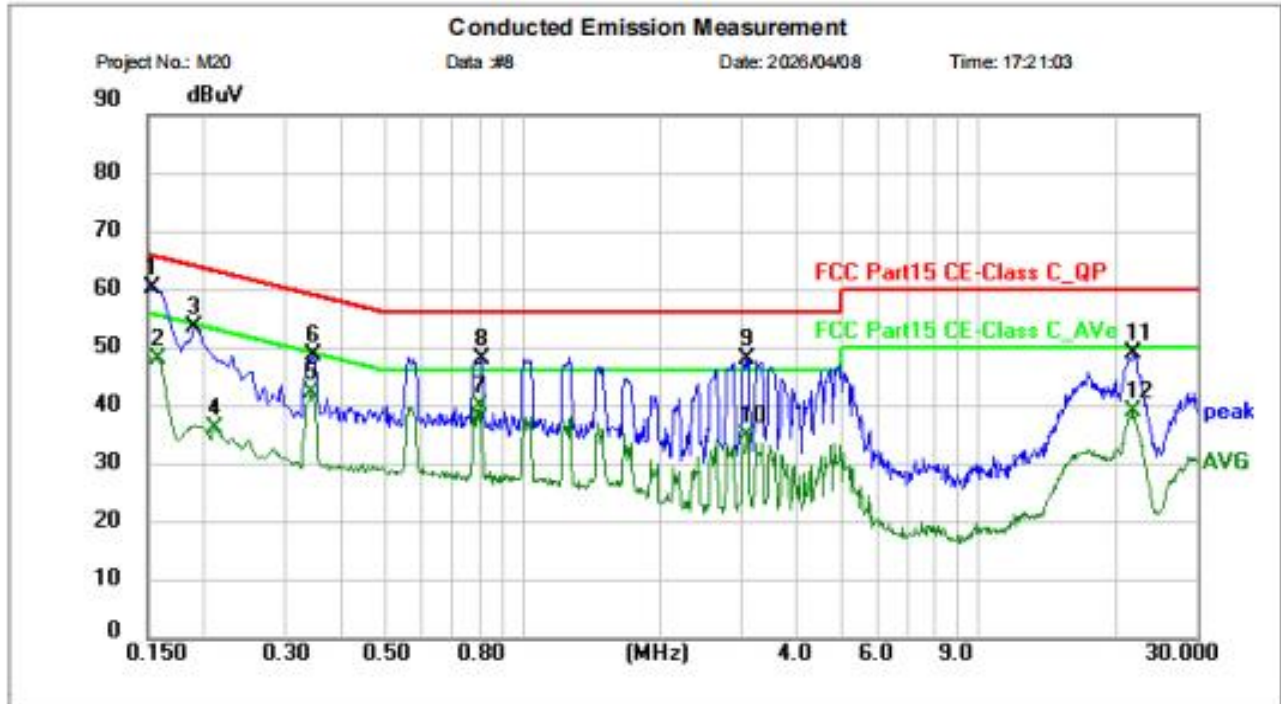
Operating Environment:			
Temperature:	22.6 °C	Humidity:	48.5 %
Atmospheric Pressure:	100.6 kPa		
Pre test mode:	TM1		
Final test mode:	TM1		

6.2.2. Test Setup Diagram:



6.2.3. Test Data

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



Site LAB

Phase: L1

Temperature: 26 °C

Limit: FCC Part15 CE-Class C_QP

Power:

Humidity: 54 %RH

EUT:

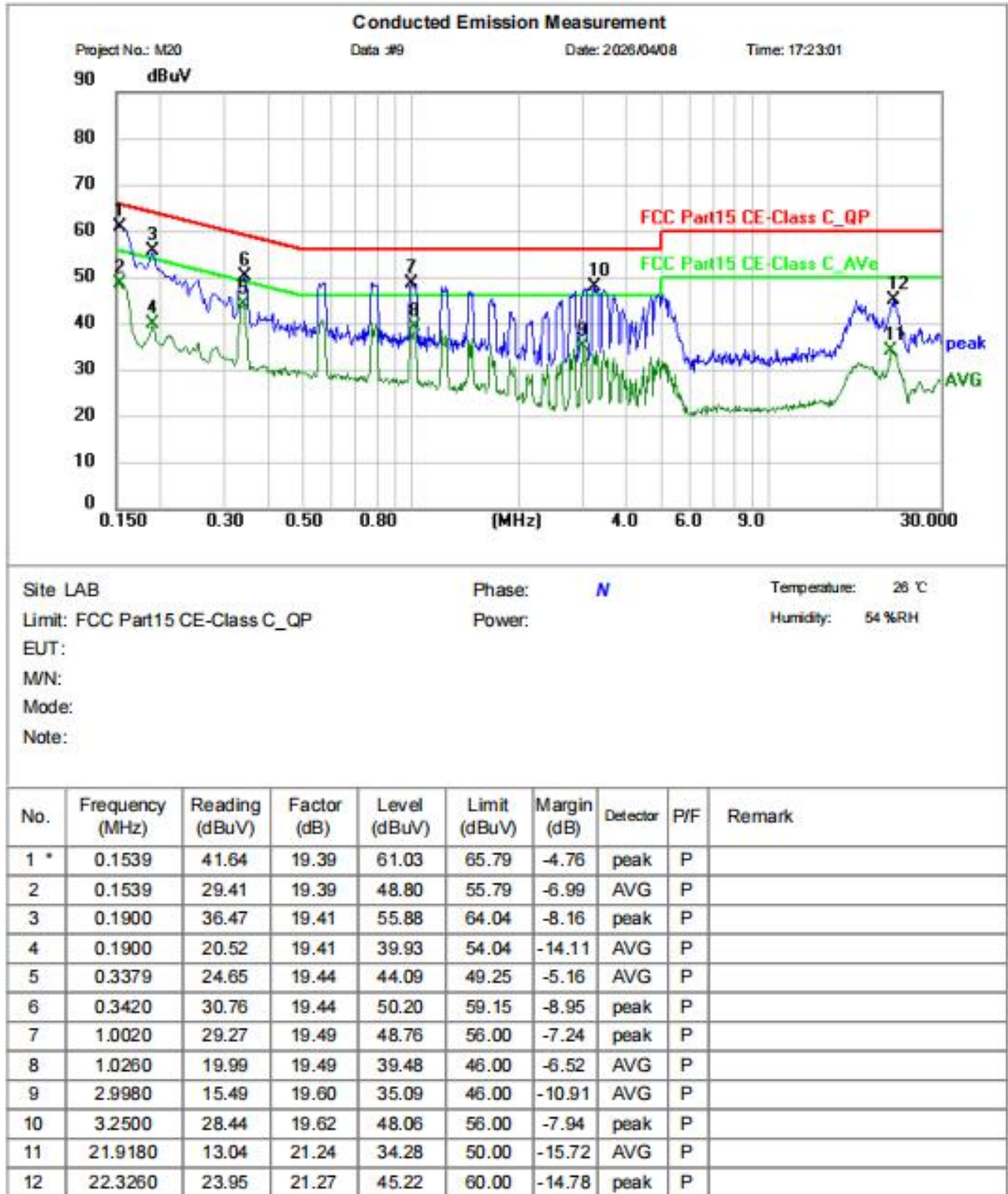
M/N:

Mode:

Note:

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1 *	0.1539	40.70	19.41	60.11	65.79	-5.68	peak	P	
2	0.1580	28.57	19.41	47.98	55.57	-7.59	AVG	P	
3	0.1900	34.01	19.43	53.44	64.04	-10.60	peak	P	
4	0.2100	16.77	19.43	36.20	53.21	-17.01	AVG	P	
5	0.3420	22.82	19.45	42.27	49.15	-6.88	AVG	P	
6	0.3460	29.38	19.45	48.83	59.06	-10.23	peak	P	
7	0.8020	20.47	19.49	39.96	46.00	-6.04	AVG	P	
8	0.8100	28.47	19.49	47.96	56.00	-8.04	peak	P	
9	3.1140	28.57	19.61	48.18	56.00	-7.82	peak	P	
10	3.1140	15.12	19.61	34.73	46.00	-11.27	AVG	P	
11	21.8340	27.66	21.22	48.88	60.00	-11.12	peak	P	
12	21.8340	17.80	21.22	39.02	50.00	-10.98	AVG	P	

TM1 / Line: Neutral / Band: 2400-2483.5 MHz / BW: 1 / CH: L



6.3. 6dB Bandwidth

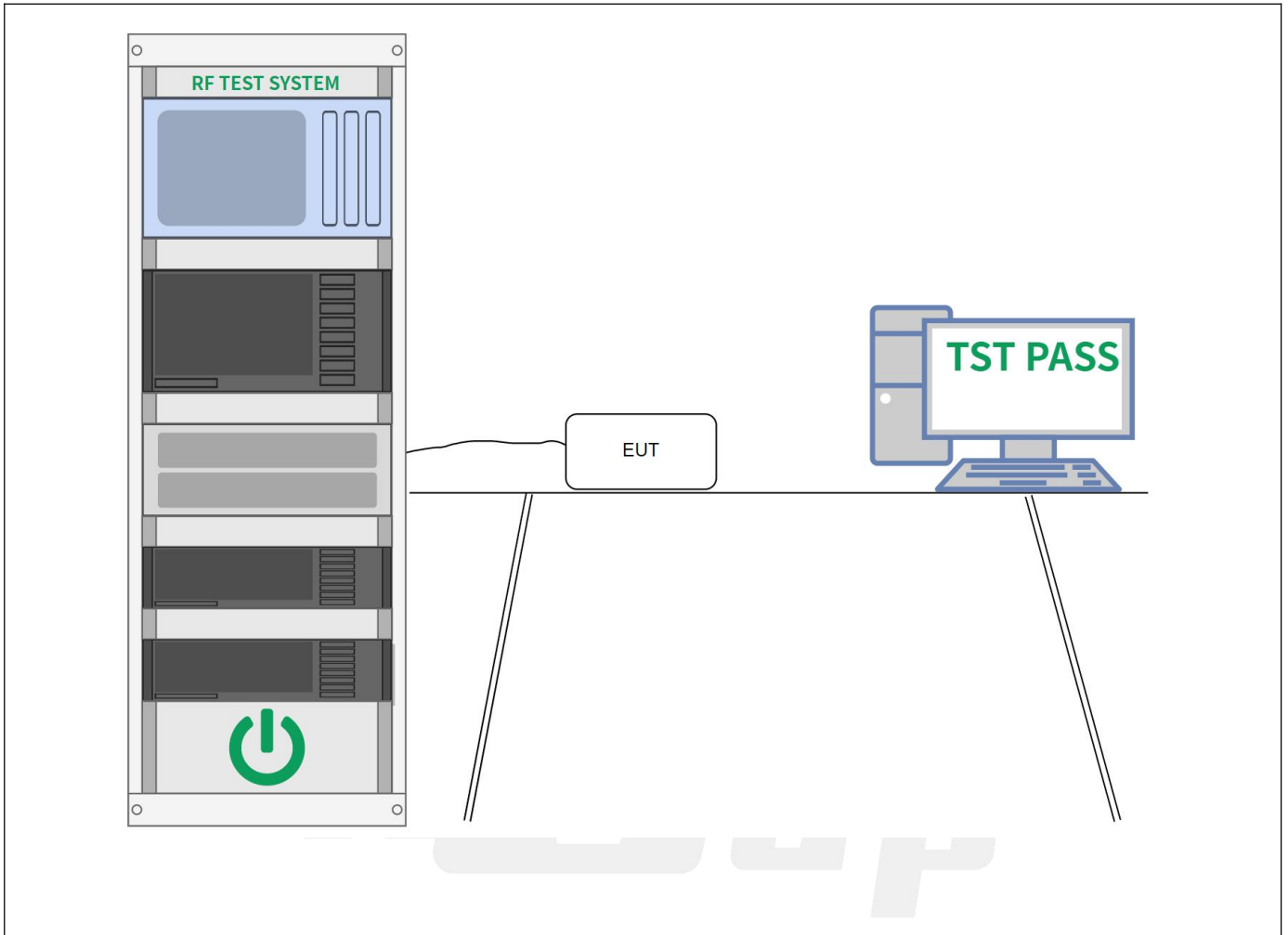
Test Requirement:	47 CFR 15.247(a)(2)
Test Limit:	Refer to 47 CFR 15.247(a)(2), Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
Test Method:	ANSI C63.10-2020, section 11.8
Procedure:	11.8.1 Option 1 The steps for the first option are as follows: a) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz. b) Set the VBW $\geq [3 \times \text{RBW}]$. c) Detector = peak. d) Trace mode = max-hold. e) Sweep = No faster than coupled (auto) time. f) Allow the trace to stabilize. g) Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-6 dB down amplitude”. If a marker is below this “-6 dB down amplitude” value, then it shall be as close as possible to this value. 11.8.2 Option 2 The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in 11.8.1 (i.e., RBW = 100 kHz, VBW $\geq 3 \times \text{RBW}$, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥ 6 dB.

6.3.1. EUT Operation

Operating Environment:					
Temperature:	26.3 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

6.3.2. Test Setup Diagram:

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6.3.3. Test Data

Please Refer to Appendix for Details.

6.4. Maximum Conducted Output Power

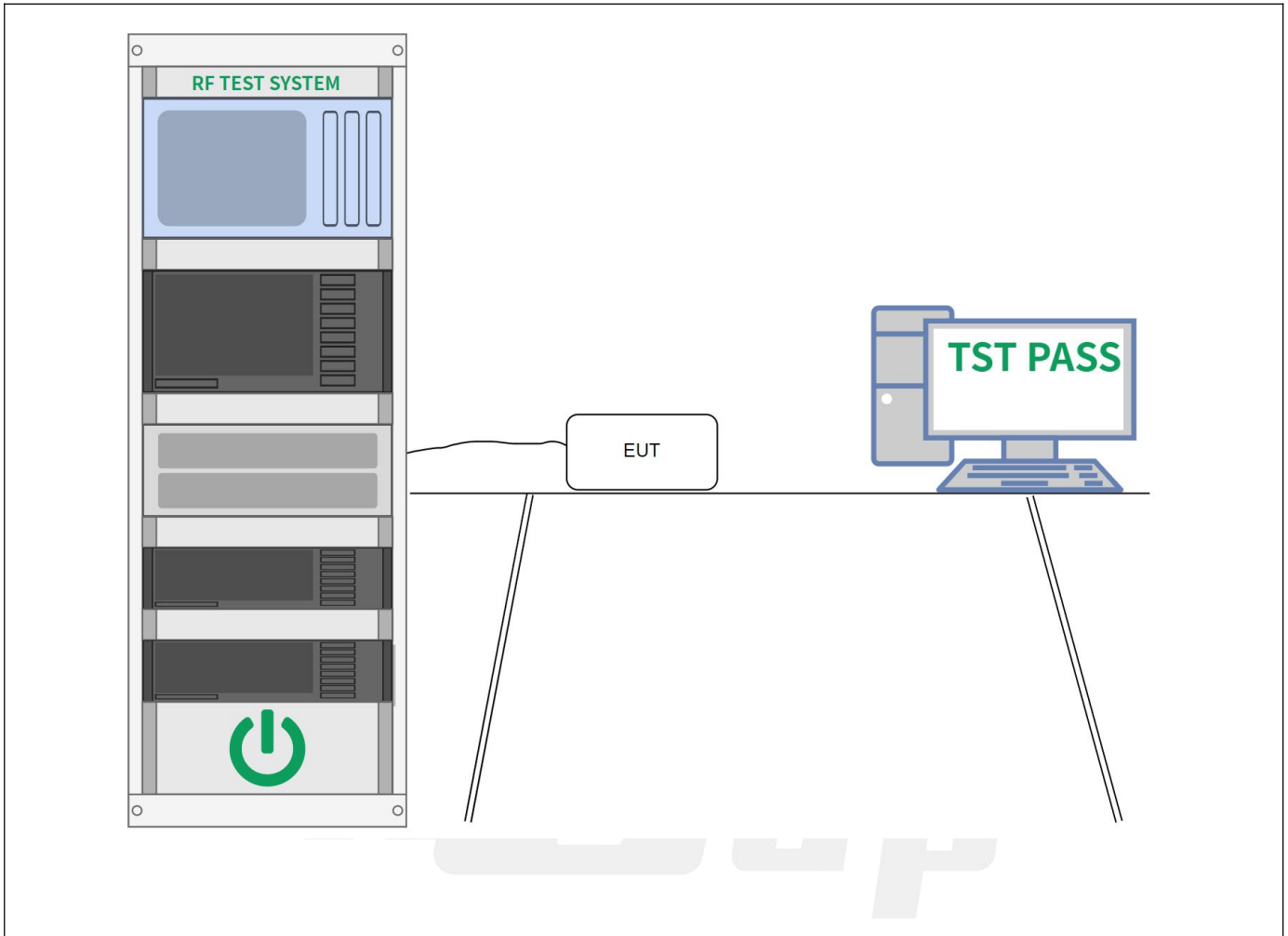
Test Requirement:	47 CFR 15.247(b)(3)
Test Limit:	Refer to 47 CFR 15.247(b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
Test Method:	ANSI C63.10-2020 section 11.9.1
Procedure:	ANSI C63.10-2020, section 11.9.1 Maximum peak conducted output power

6.4.1. EUT Operation

Operating Environment:					
Temperature:	26.3 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

6.4.2. Test Setup Diagram:

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6.4.3. Test Data

Please Refer to Appendix for Details.

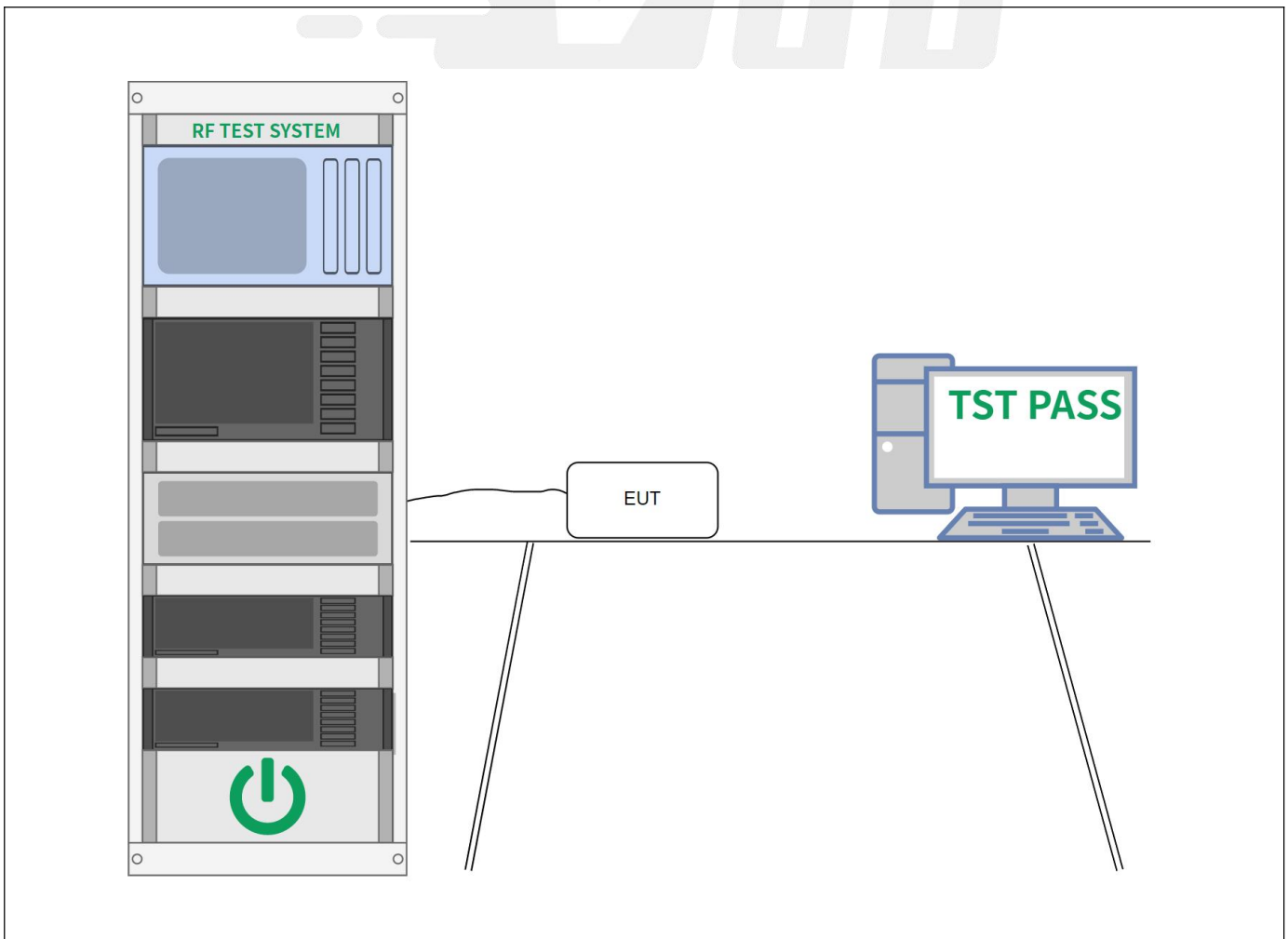
6.5. Power Spectral Density

Test Requirement:	47 CFR 15.247(e)
Test Limit:	Refer to 47 CFR 15.247(e), For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.
Test Method:	ANSI C63.10-2020, section 11.10
Procedure:	ANSI C63.10-2020+Cor 1-2023, section 11.10, Maximum power spectral density level in the fundamental emission

6.5.1. EUT Operation

Operating Environment:					
Temperature:	26.3 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

6.5.2. Test Setup Diagram:



6.5.3. Test Data

Please Refer to Appendix for Details.



6.6. Emissions in non-restricted frequency bands

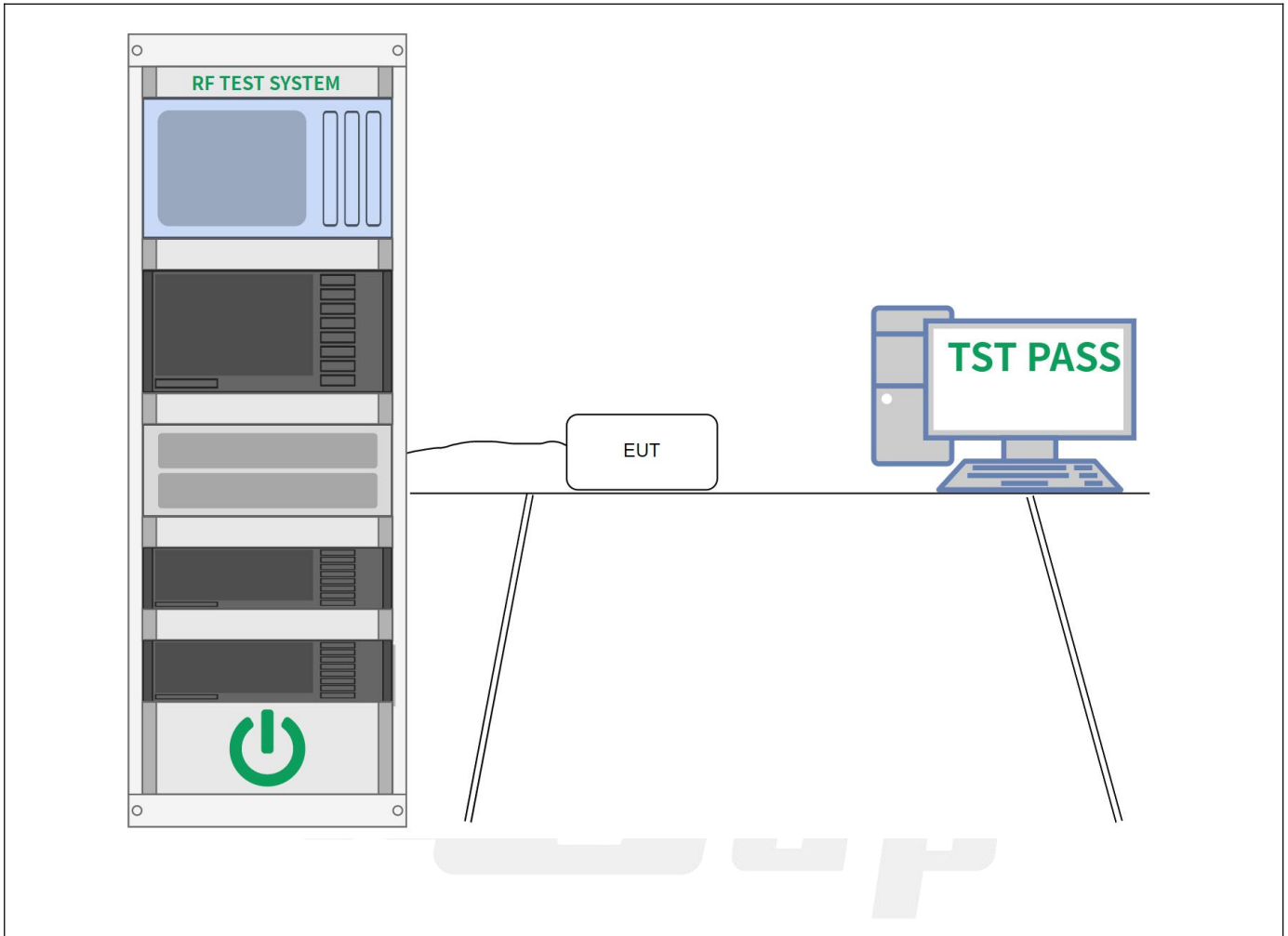
Test Requirement:	47 CFR 15.247(d)
Test Limit:	Refer to 47 CFR 15.247(d), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 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 11.11
Procedure:	ANSI C63.10-2020 Section 11.11.1, Section 11.11.2, Section 11.11.3

6.6.1. EUT Operation

Operating Environment:					
Temperature:	26.3 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

6.6.2. Test Setup Diagram:

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6.6.3. Test Data

Please Refer to Appendix for Details.

6.7. Band edge emissions (Radiated)

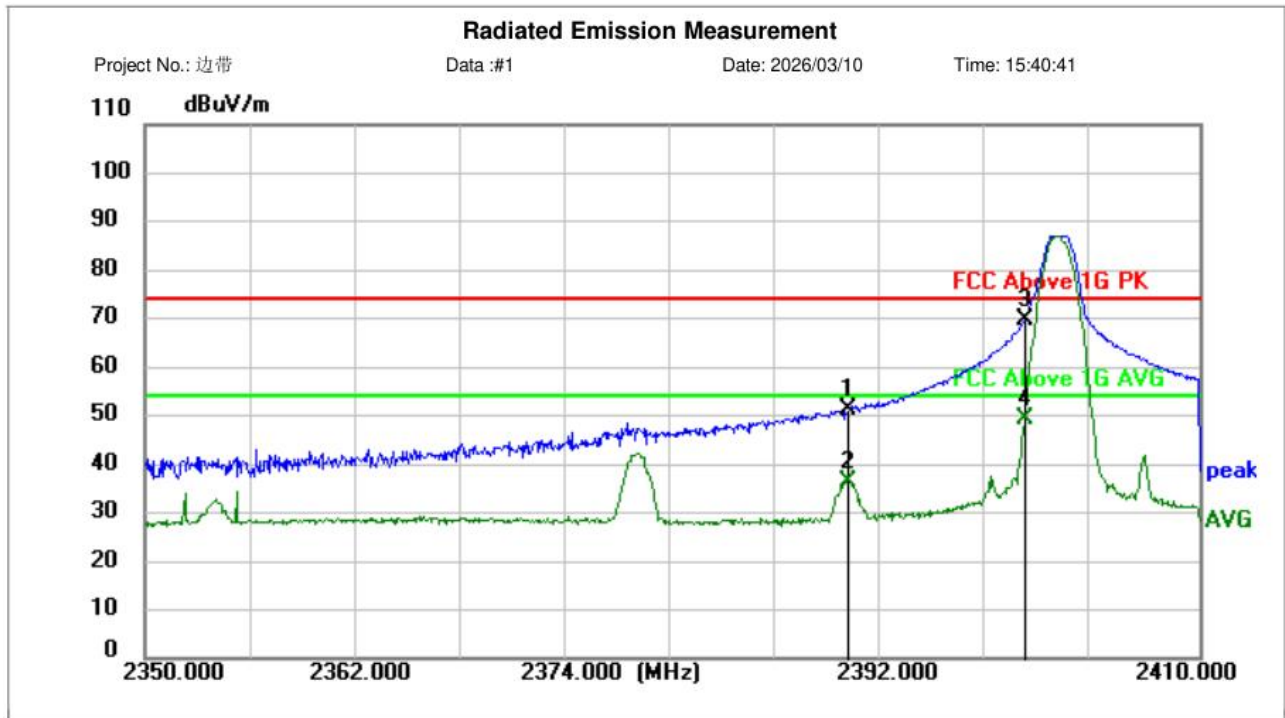
Test Requirement:	Refer to 47 CFR 15.247(d), In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement 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		

6.7.1. EUT Operation

Operating Environment:			
Temperature:	26.3 °C	Humidity:	54 %
		Atmospheric Pressure:	101.1 kPa
Pre test mode:	TM1		
Final test mode:	TM1		

6.7.2. Test Data

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



Site LAB

Limit: FCC Above 1G PK

EUT: M20

M/N: 1M 2402

Mode:

Note:

Polarization: **Horizontal**

Power:

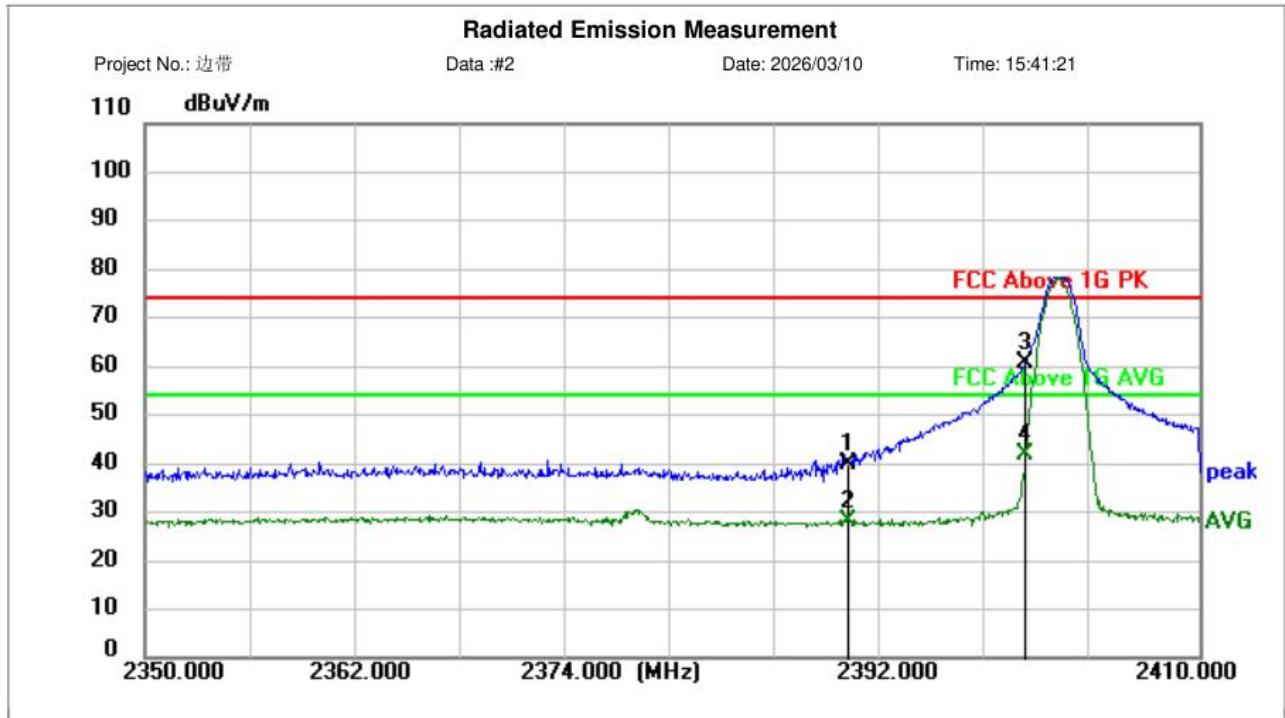
Distance: 3m

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	2390.0000	73.98	-22.71	51.27	74.00	-22.73	peak			P	
2	2390.0000	58.88	-22.71	36.17	54.00	-17.83	AVG			P	
3 *	2400.0000	92.22	-22.67	69.55	74.00	-4.45	peak			P	
4	2400.0000	71.93	-22.67	49.26	54.00	-4.74	AVG			P	

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



Site LAB

Limit: FCC Above 1G PK

EUT: M20

M/N: 1M 2402

Mode:

Note:

Polarization: **Vertical**

Power:

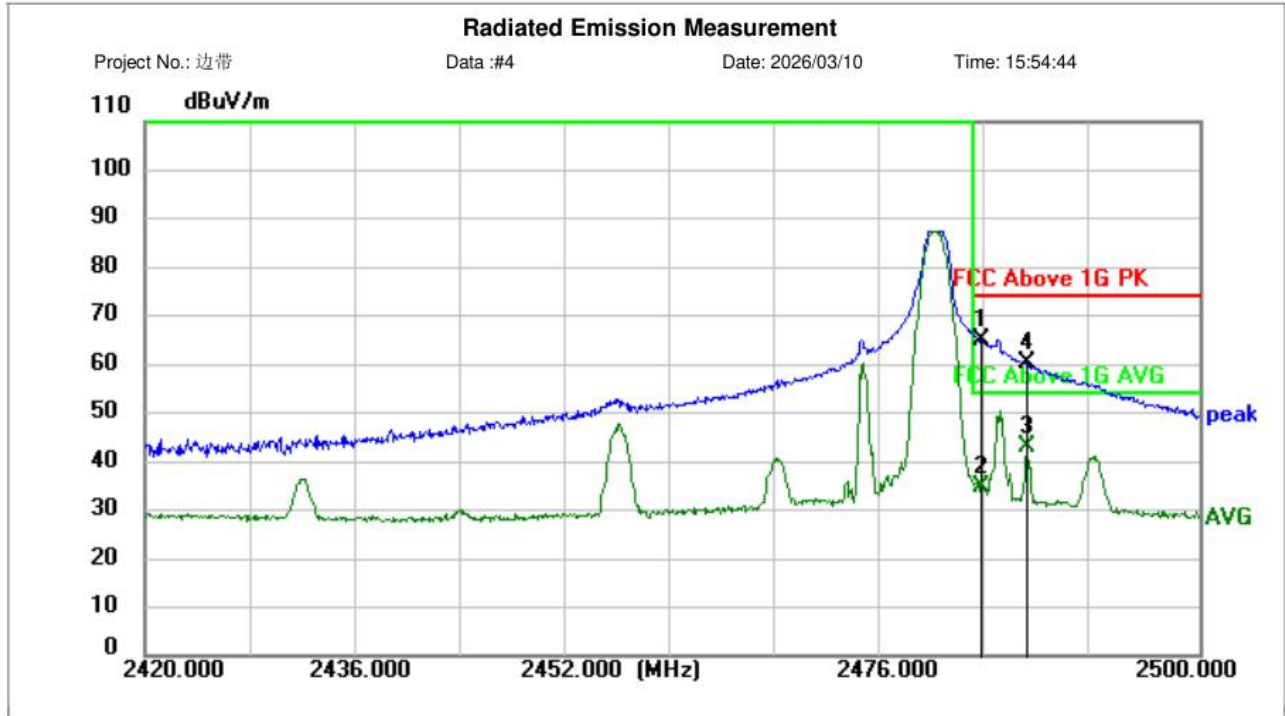
Distance: 3m

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	2390.0000	62.39	-22.71	39.68	74.00	-34.32	peak			P	
2	2390.0000	50.61	-22.71	27.90	54.00	-26.10	AVG			P	
3	2400.0000	83.47	-22.67	60.80	74.00	-13.20	peak			P	
4 *	2400.0000	64.36	-22.67	41.69	54.00	-12.31	AVG			P	

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



Site LAB

Limit: FCC Above 1G PK

EUT: M20

M/N: 1M 2480

Mode:

Note:

Polarization: **Horizontal**

Power:

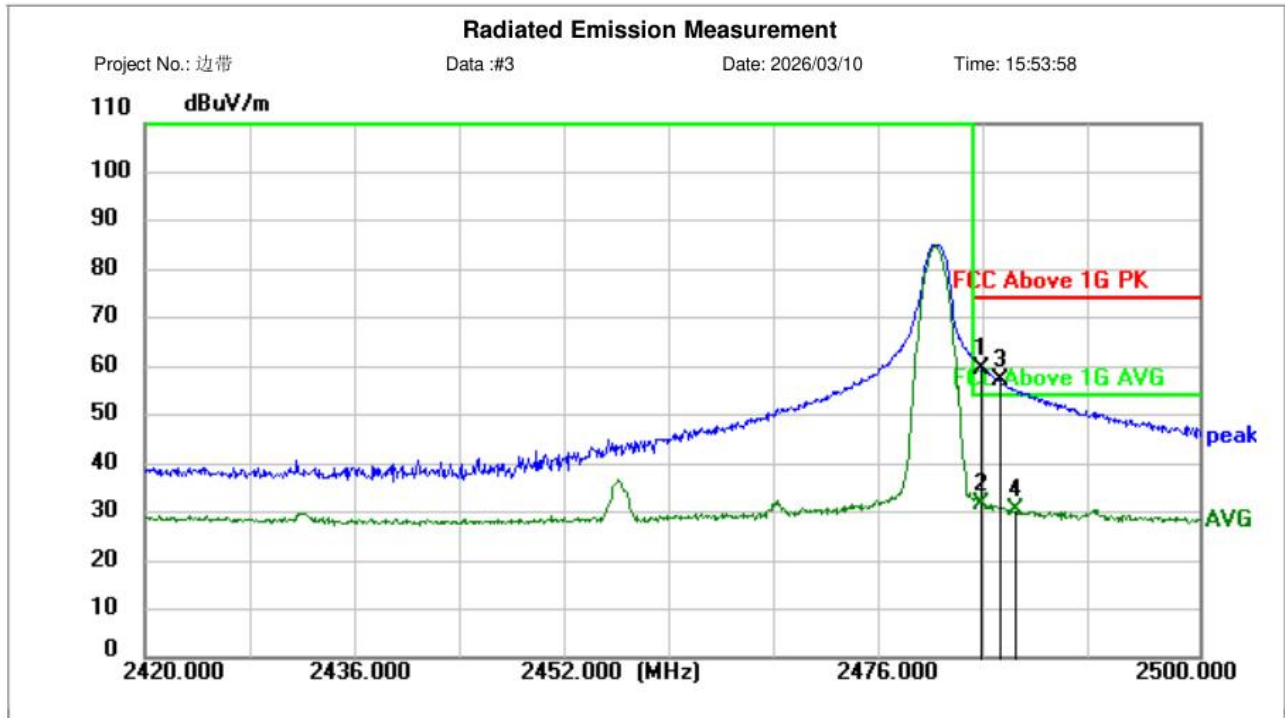
Distance: 3m

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 *	2483.5000	87.12	-22.27	64.85	74.00	-9.15	peak			P	
2	2483.5000	56.95	-22.27	34.68	54.00	-19.32	AVG			P	
3	2486.9200	65.28	-22.26	43.02	54.00	-10.98	AVG			P	
4	2486.9440	82.61	-22.26	60.35	74.00	-13.65	peak			P	

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



Site LAB

Limit: FCC Above 1G PK

EUT: M20

M/N: 1M 2480

Mode:

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	81.93	-22.27	59.66	74.00	-14.34	peak			P	
2	2483.5000	53.86	-22.27	31.59	54.00	-22.41	AVG			P	
3	2484.9440	79.38	-22.27	57.11	74.00	-16.89	peak			P	
4	2486.1359	52.64	-22.26	30.38	54.00	-23.62	AVG			P	

6.8. Emissions in frequency bands (below 1GHz)

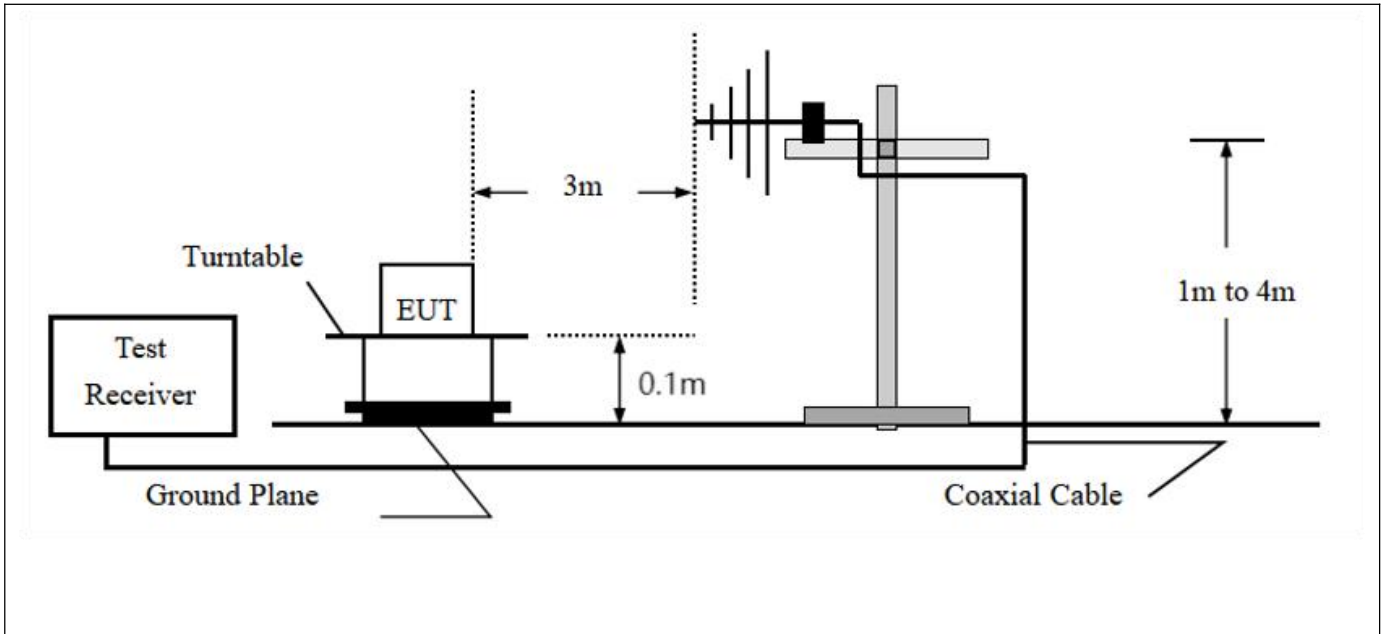
Test Requirement:	Refer to 47 CFR 15.247(d), In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement 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		

6.8.1. EUT Operation

Operating Environment:			
Temperature:	21.2 °C	Humidity:	51.1 %
Pre test mode:		TM1	
Final test mode:		TM1	

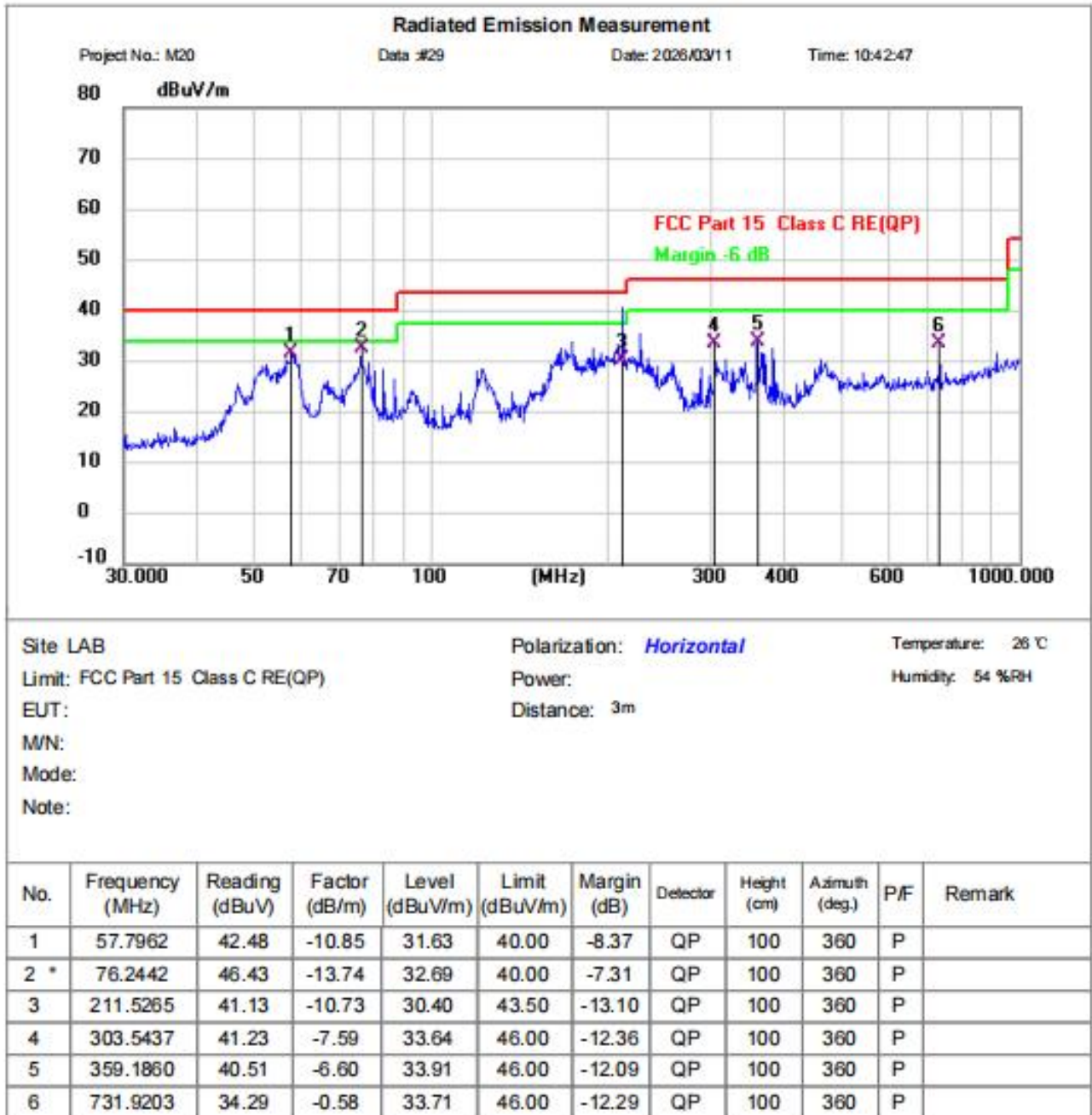
6.8.2. Test Setup Diagram:

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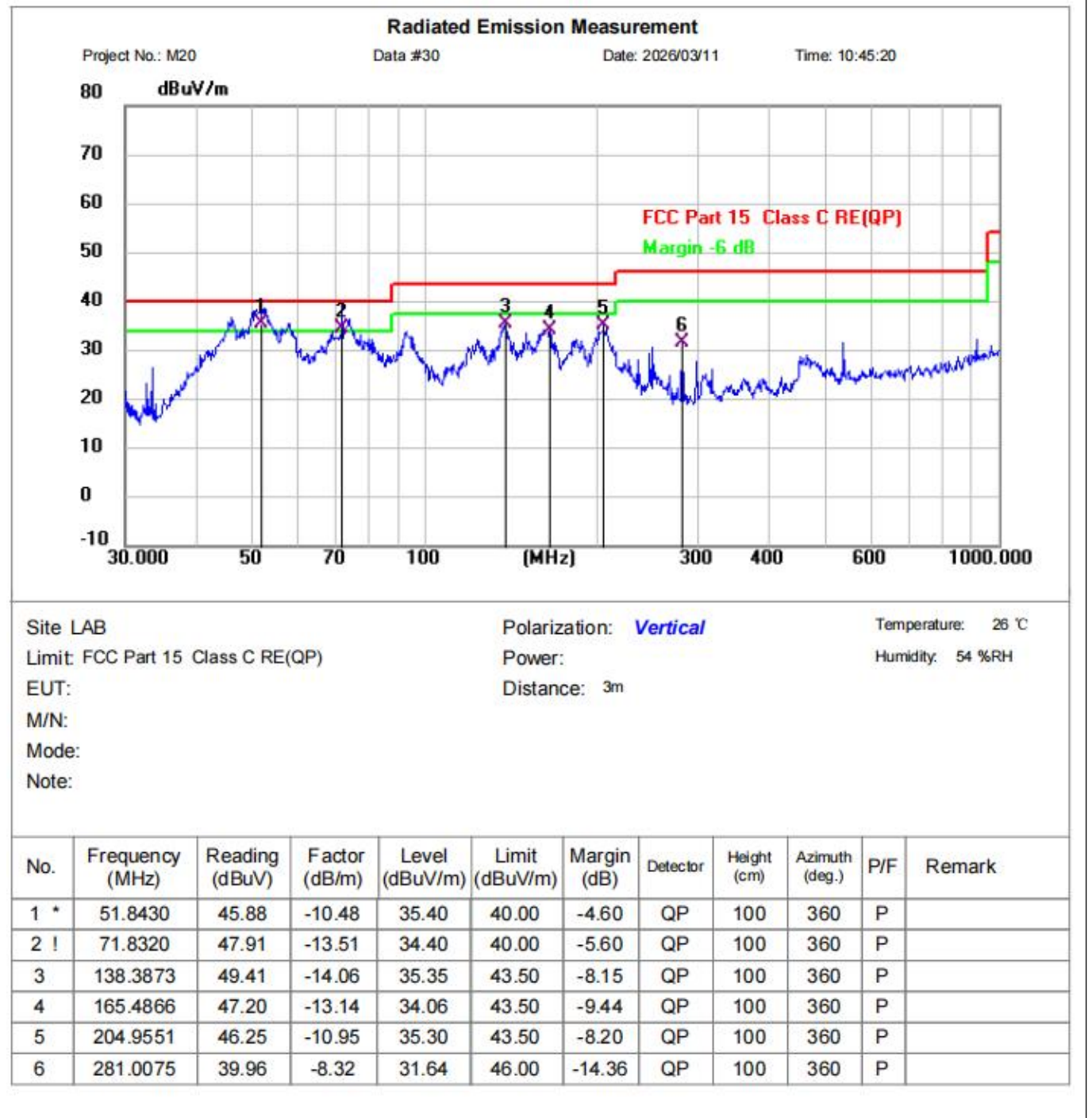


6.8.3. Test Data

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



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



6.9. Emissions in frequency bands (above 1GHz)

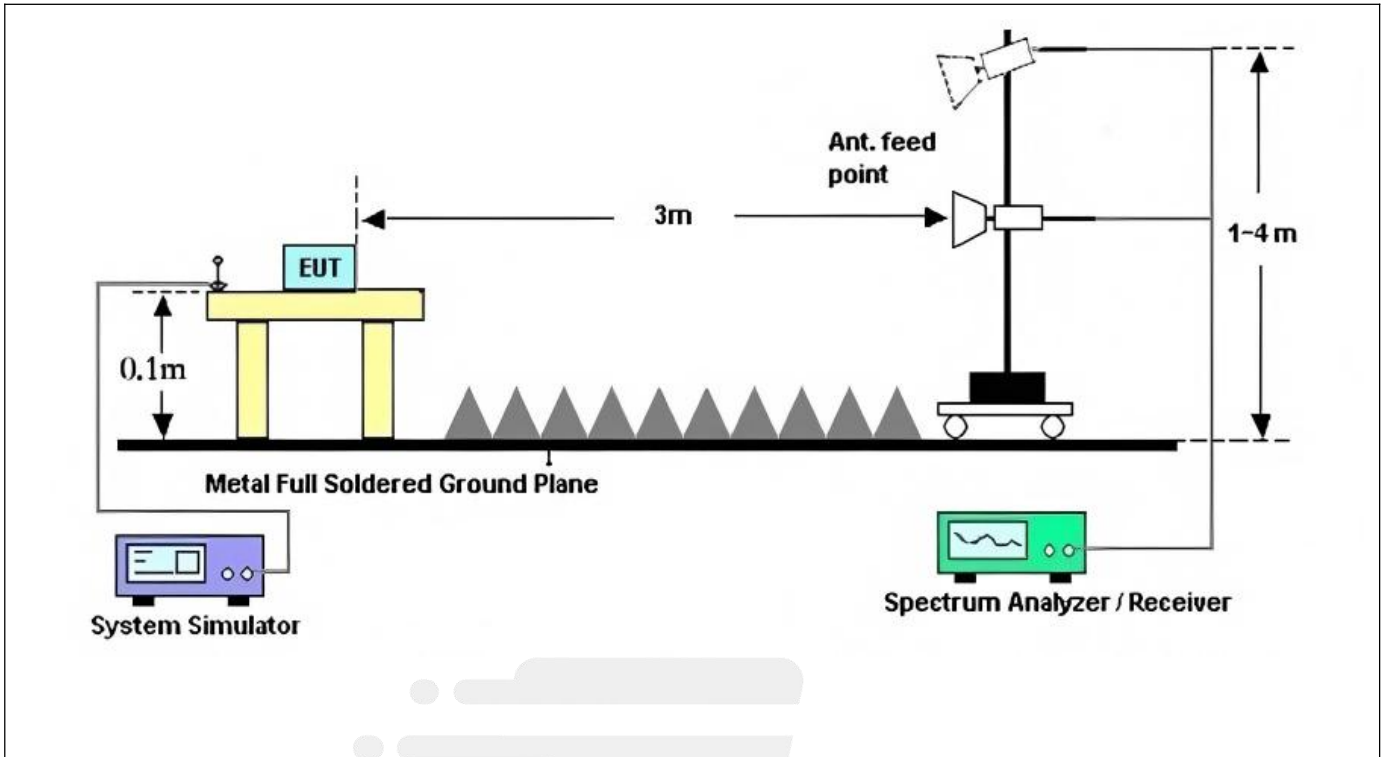
Test Requirement:	Refer to 47 CFR 15.247(d), in addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement 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		

6.9.1. EUT Operation

Operating Environment:			
Temperature:	23.6 °C	Humidity:	54.4 %
Pre test mode:		TM1	
Final test mode:		TM1	

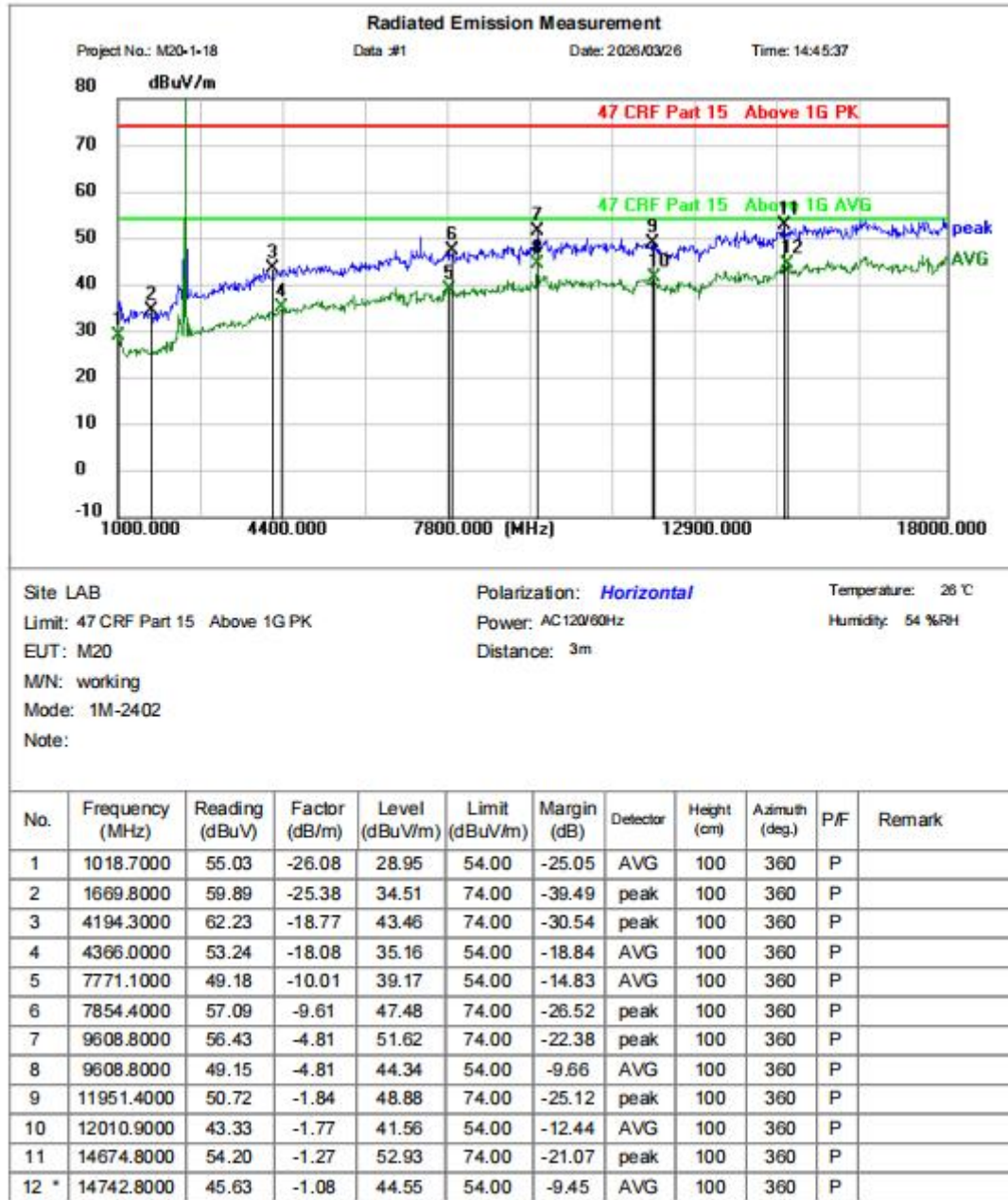
6.9.2. Test Setup Diagram:

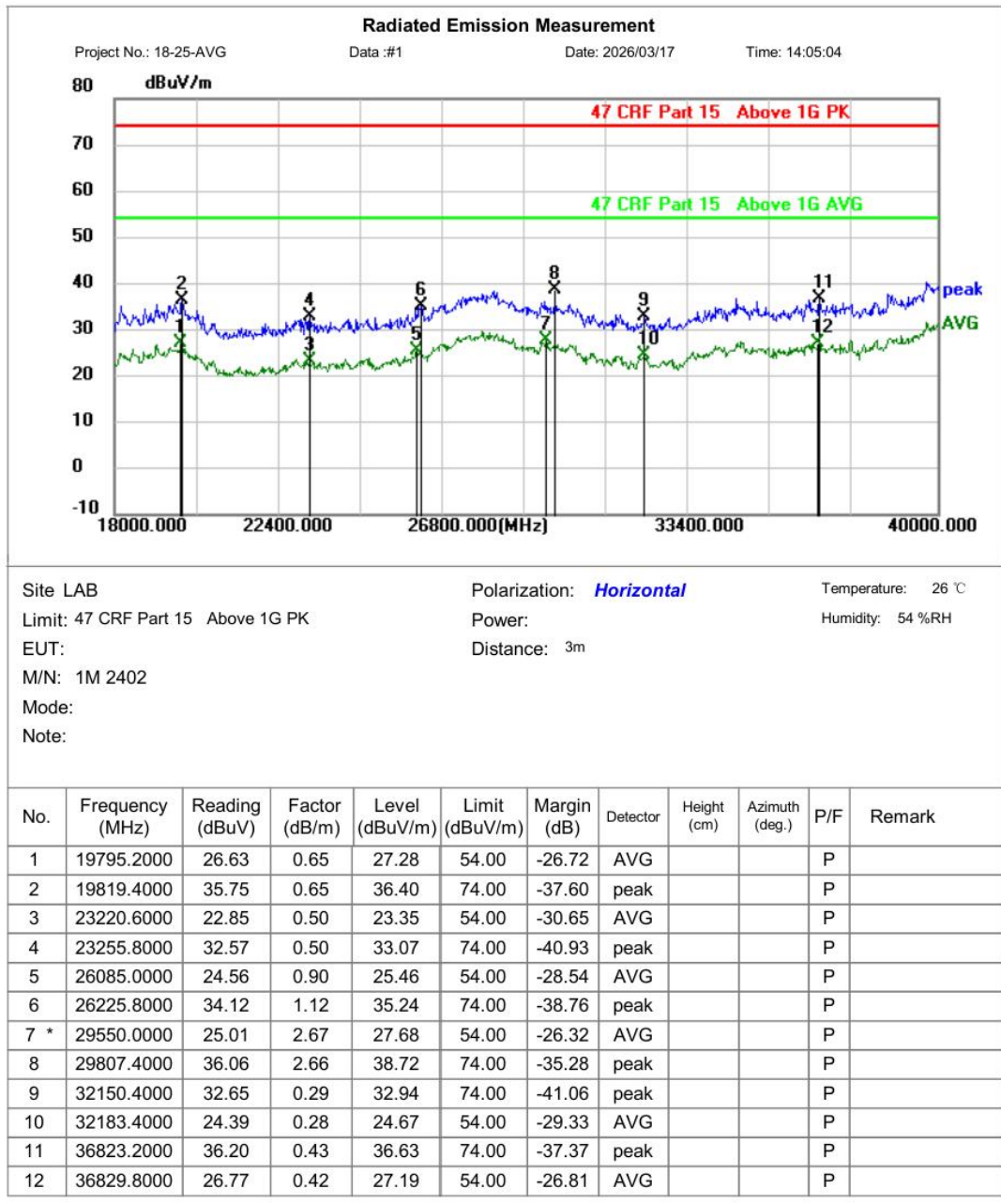
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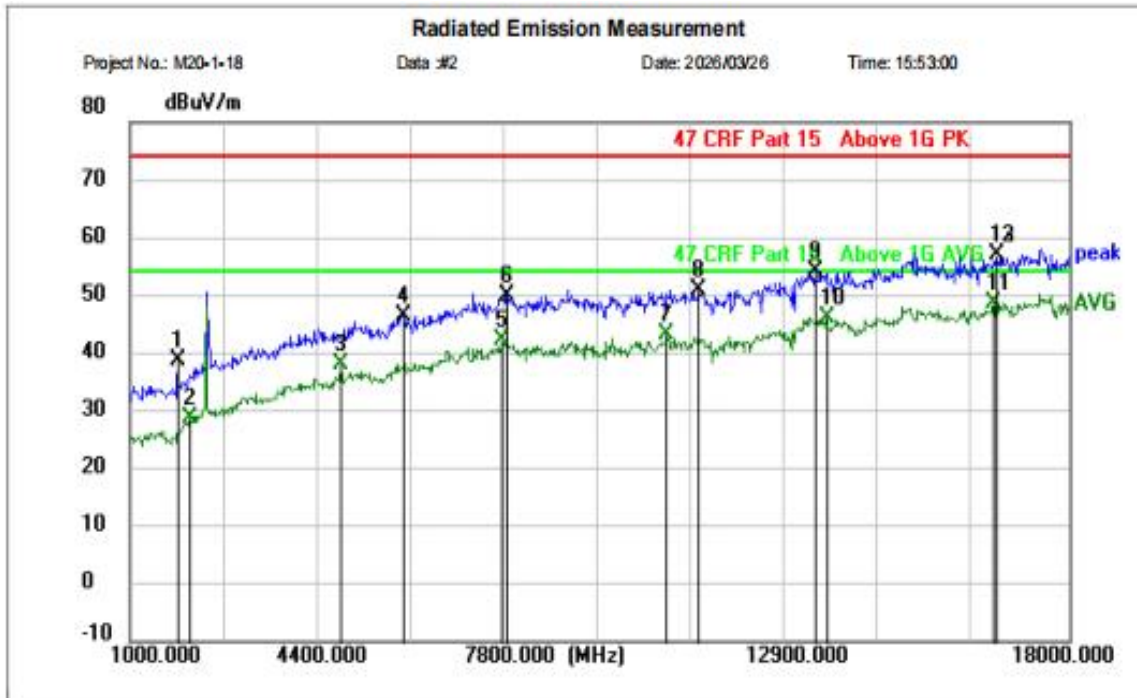
6.9.3. Test Data

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





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



Site LAB

Polarization: **Vertical**

Temperature: 26 °C

Limit: 47 CRF Part 15 Above 1G PK

Power: AC120/60Hz

Humidity: 54 %RH

EUT: M20

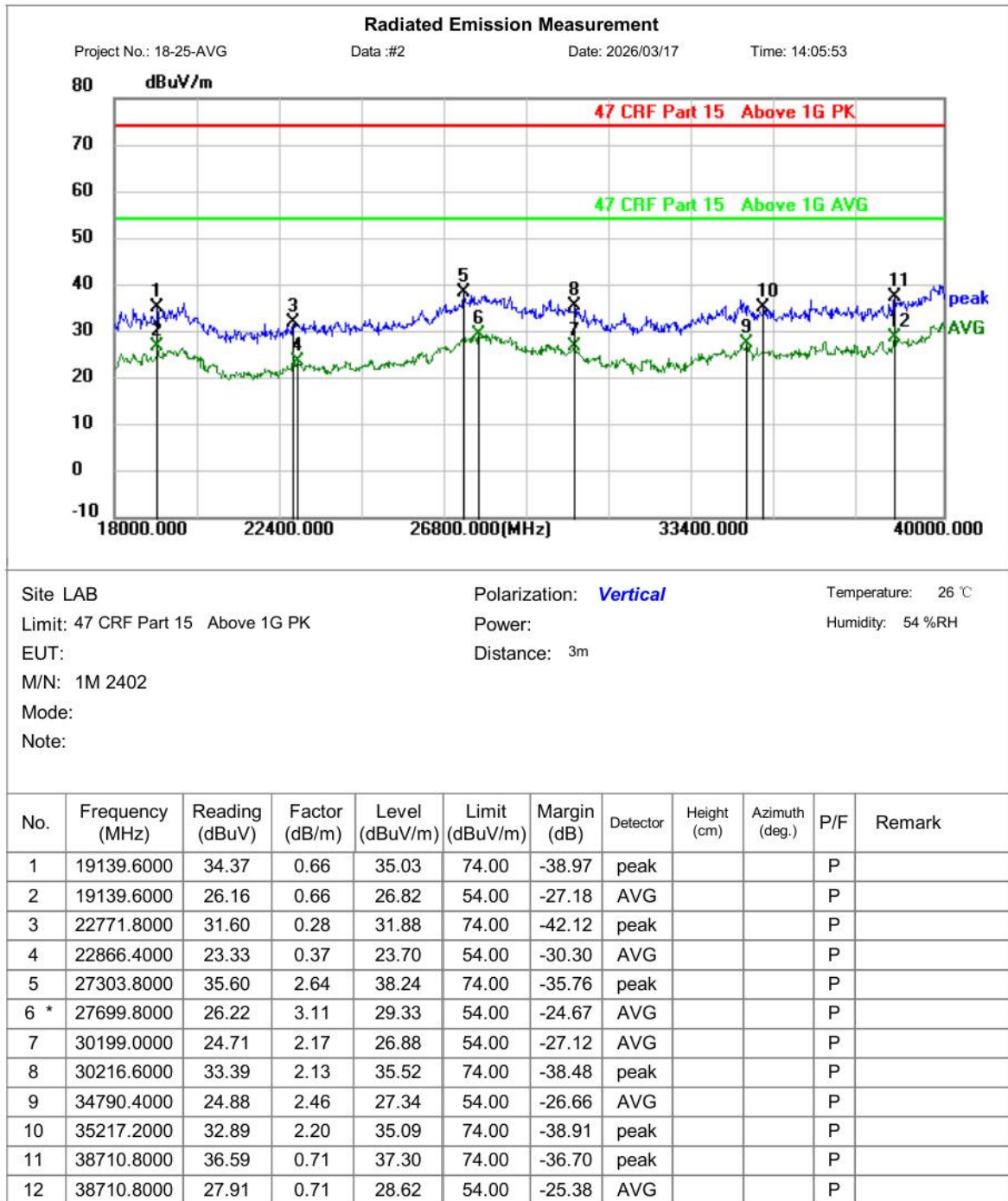
Distance: 3m

M/N: working

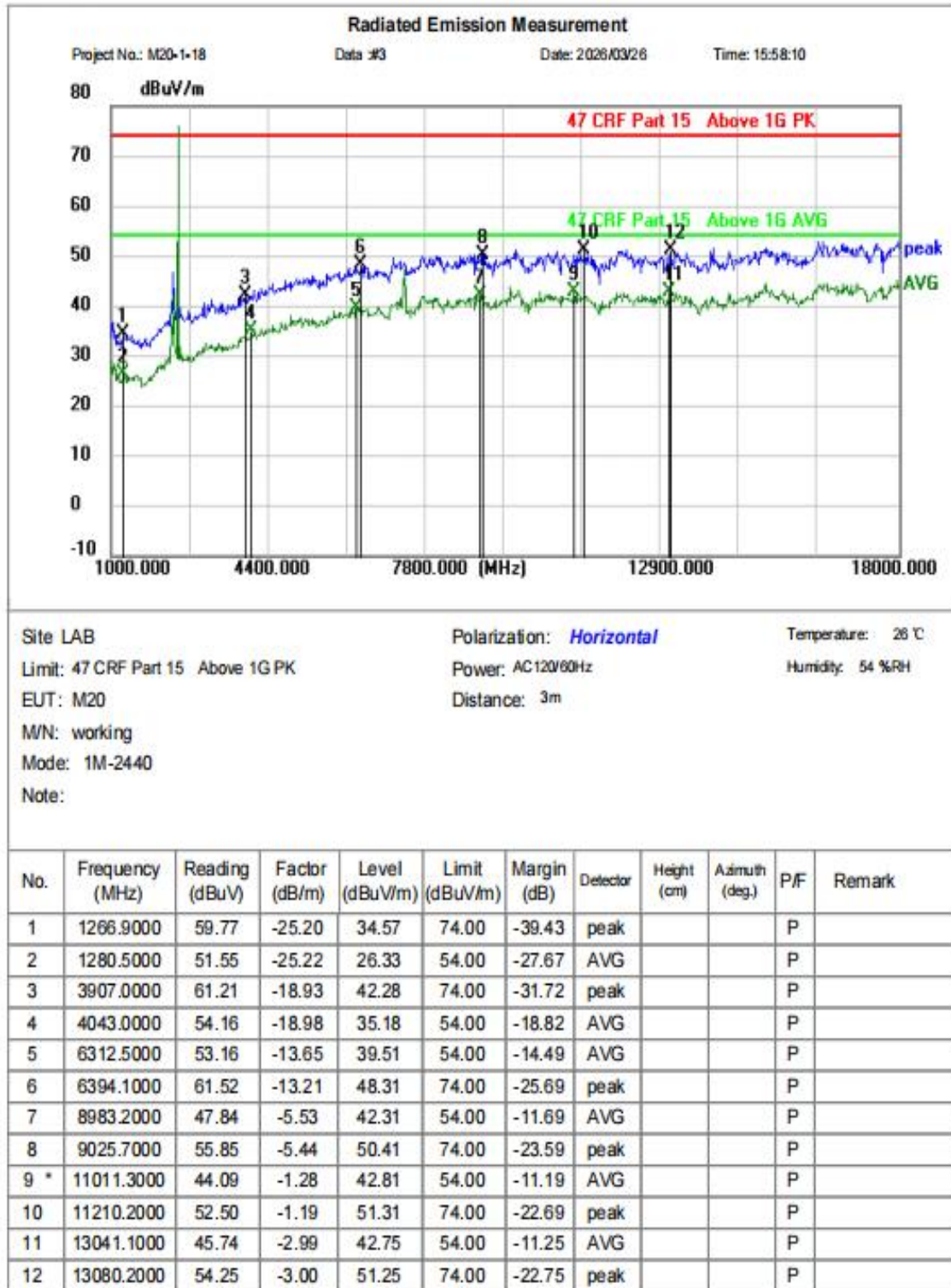
Mode: 1M-2402

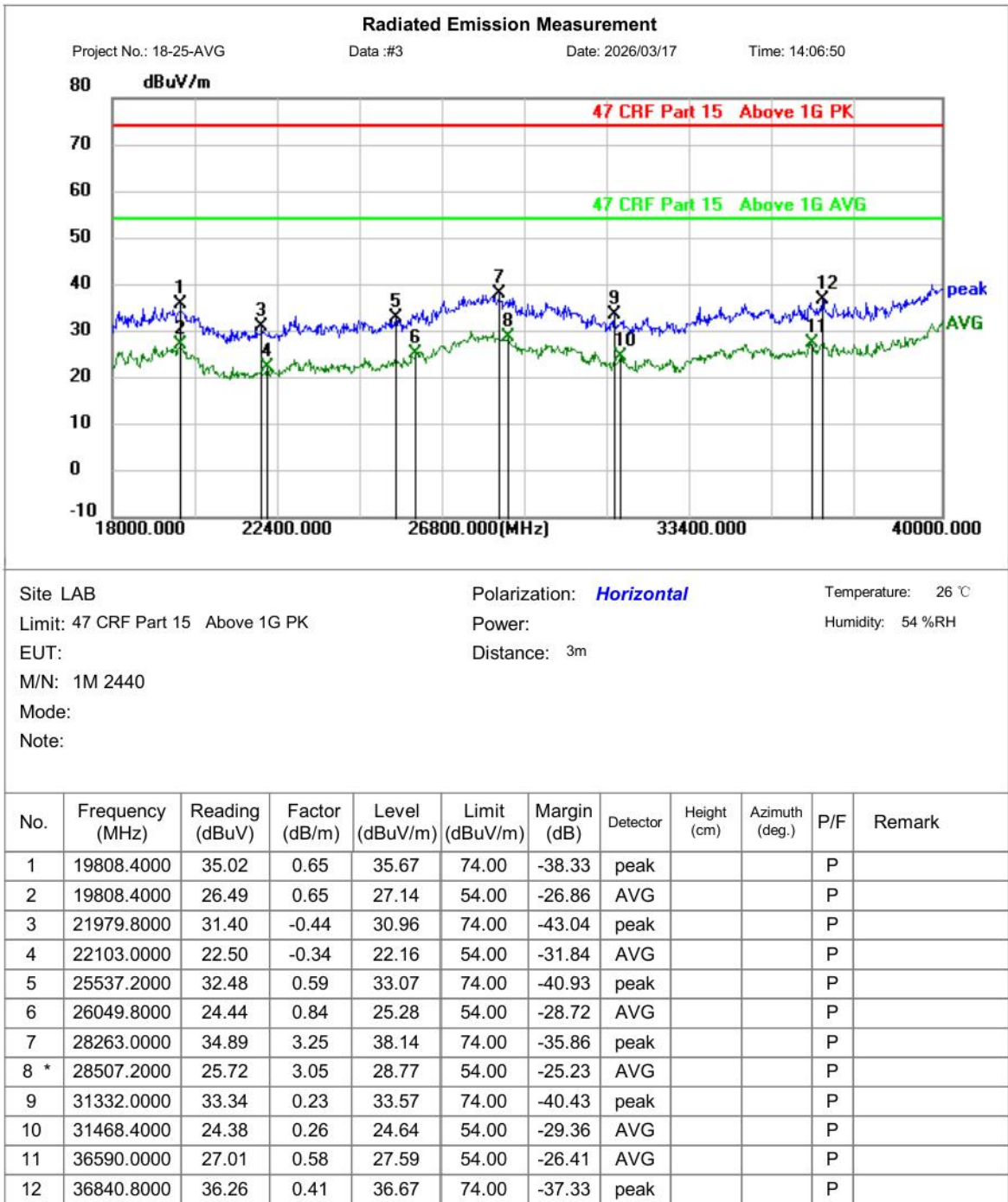
Note:

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	1870.4000	63.57	-25.02	38.55	74.00	-35.45	peak			P	
2	2079.5000	52.06	-23.46	28.60	54.00	-25.40	AVG			P	
3	4802.9000	55.09	-16.92	38.17	54.00	-15.83	AVG			P	
4	5931.7000	60.69	-14.23	46.46	74.00	-27.54	peak			P	
5	7749.0000	52.42	-10.09	42.33	54.00	-11.67	AVG			P	
6	7845.9000	59.58	-9.65	49.93	74.00	-24.07	peak			P	
7	10713.8000	45.36	-2.11	43.25	54.00	-10.75	AVG			P	
8	11298.6000	52.06	-1.16	50.90	74.00	-23.10	peak			P	
9	13404.9000	56.93	-2.67	54.26	74.00	-19.74	peak			P	
10	13622.5000	48.84	-2.74	46.10	54.00	-7.90	AVG			P	
11 *	16631.5000	50.11	-1.31	48.80	54.00	-5.20	AVG			P	
12	16725.0000	58.22	-1.32	56.90	74.00	-17.10	peak			P	
13	16725.0000	58.22	-1.32	56.90	74.00	-17.10	peak			P	

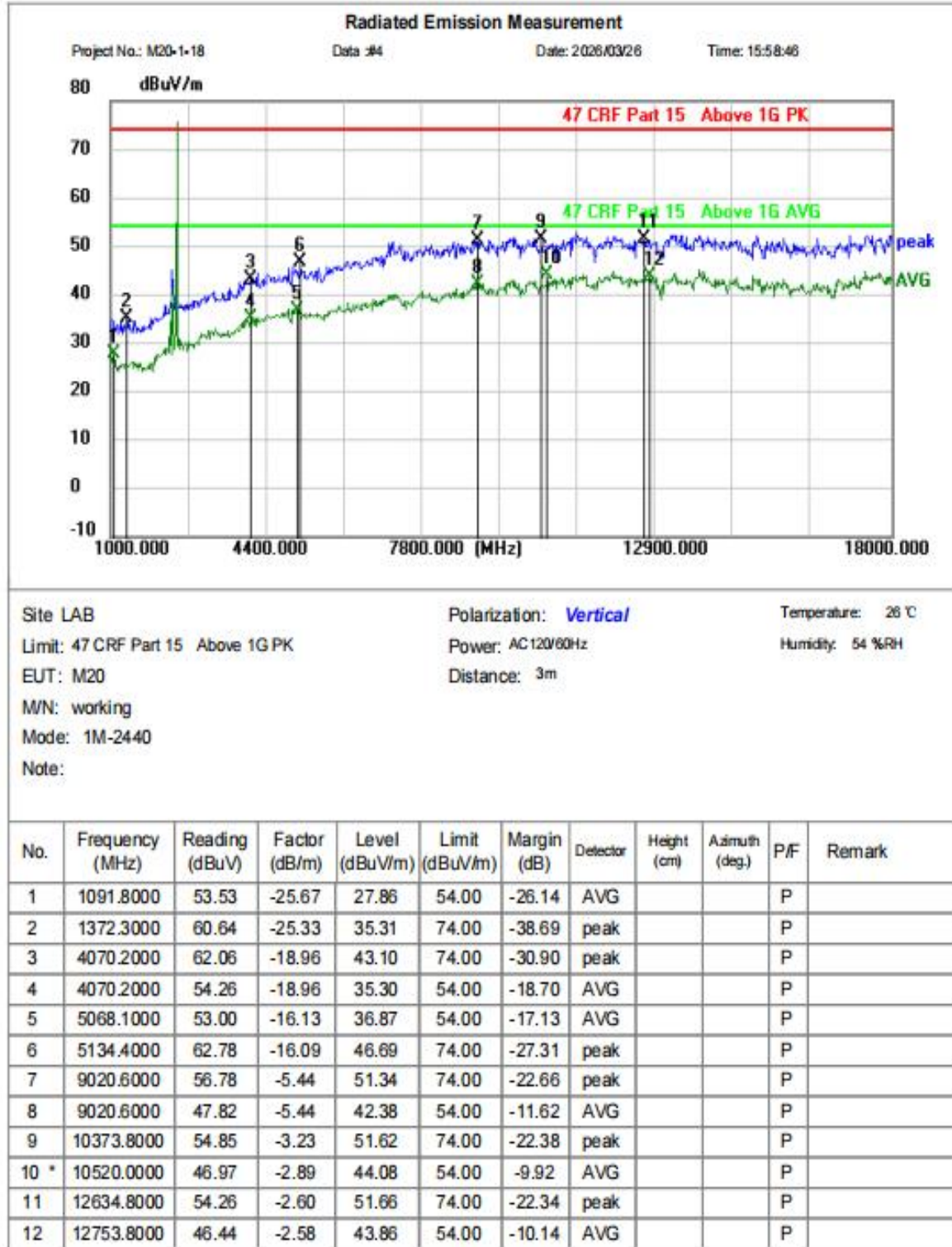


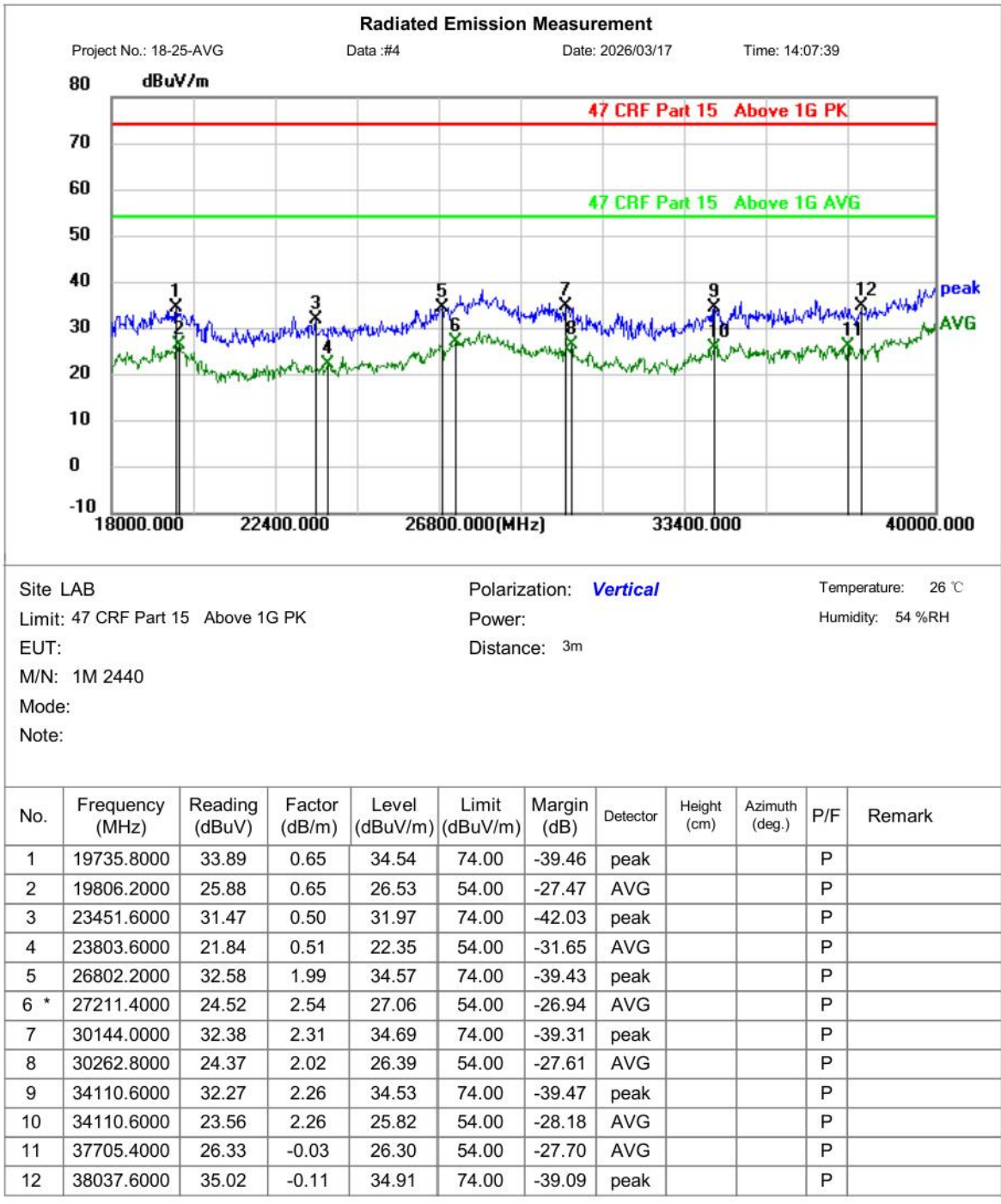
TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: M



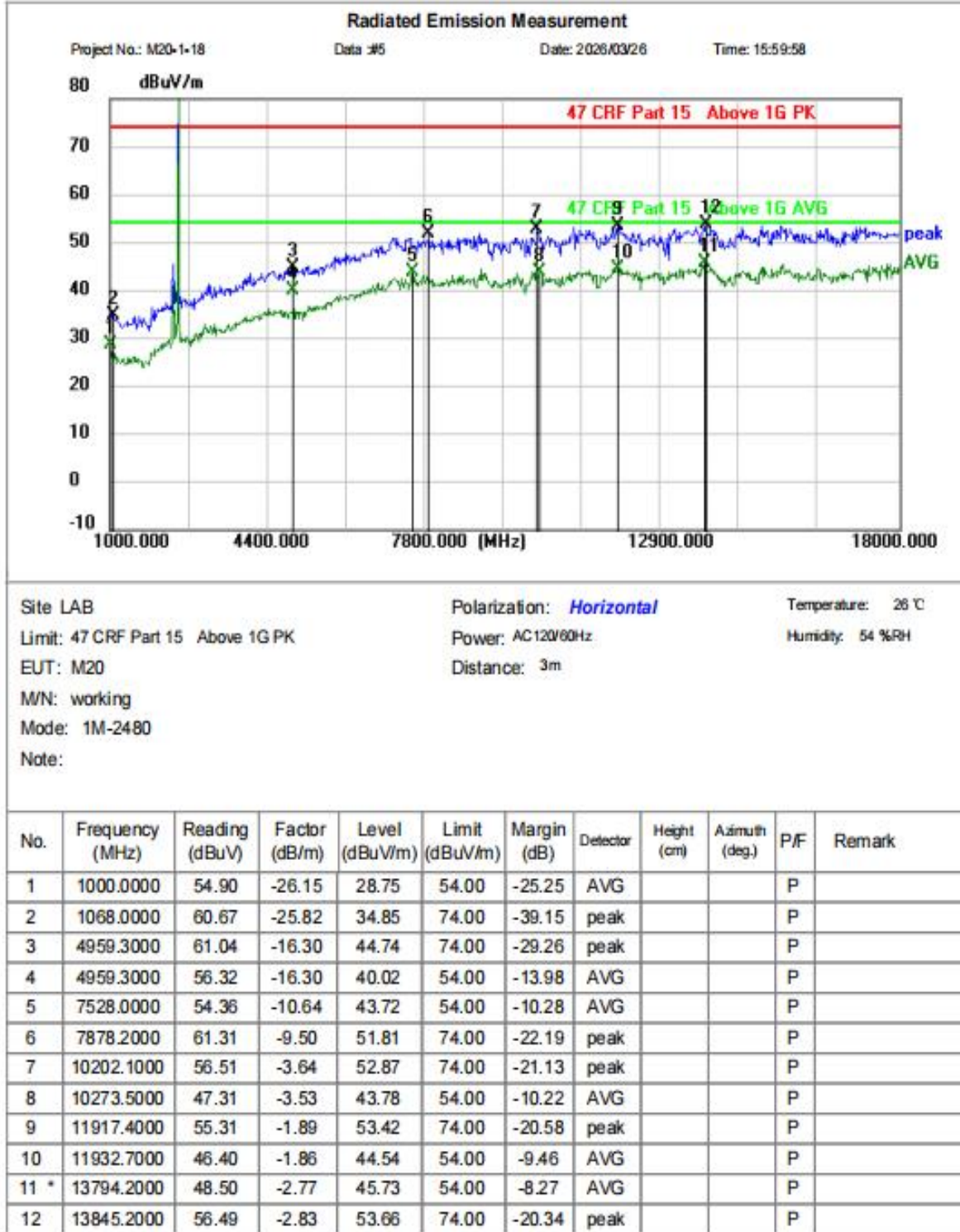


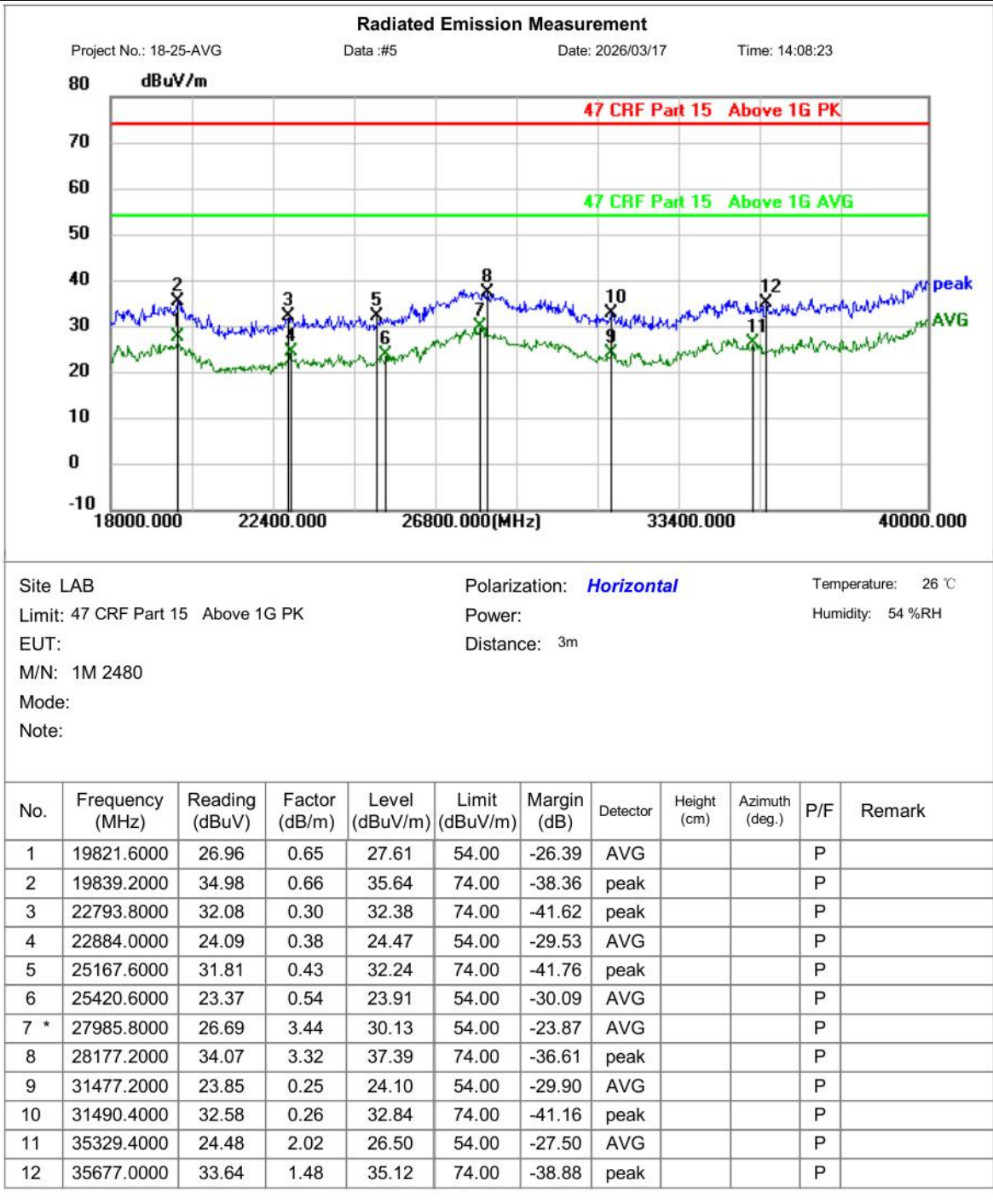
TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: M



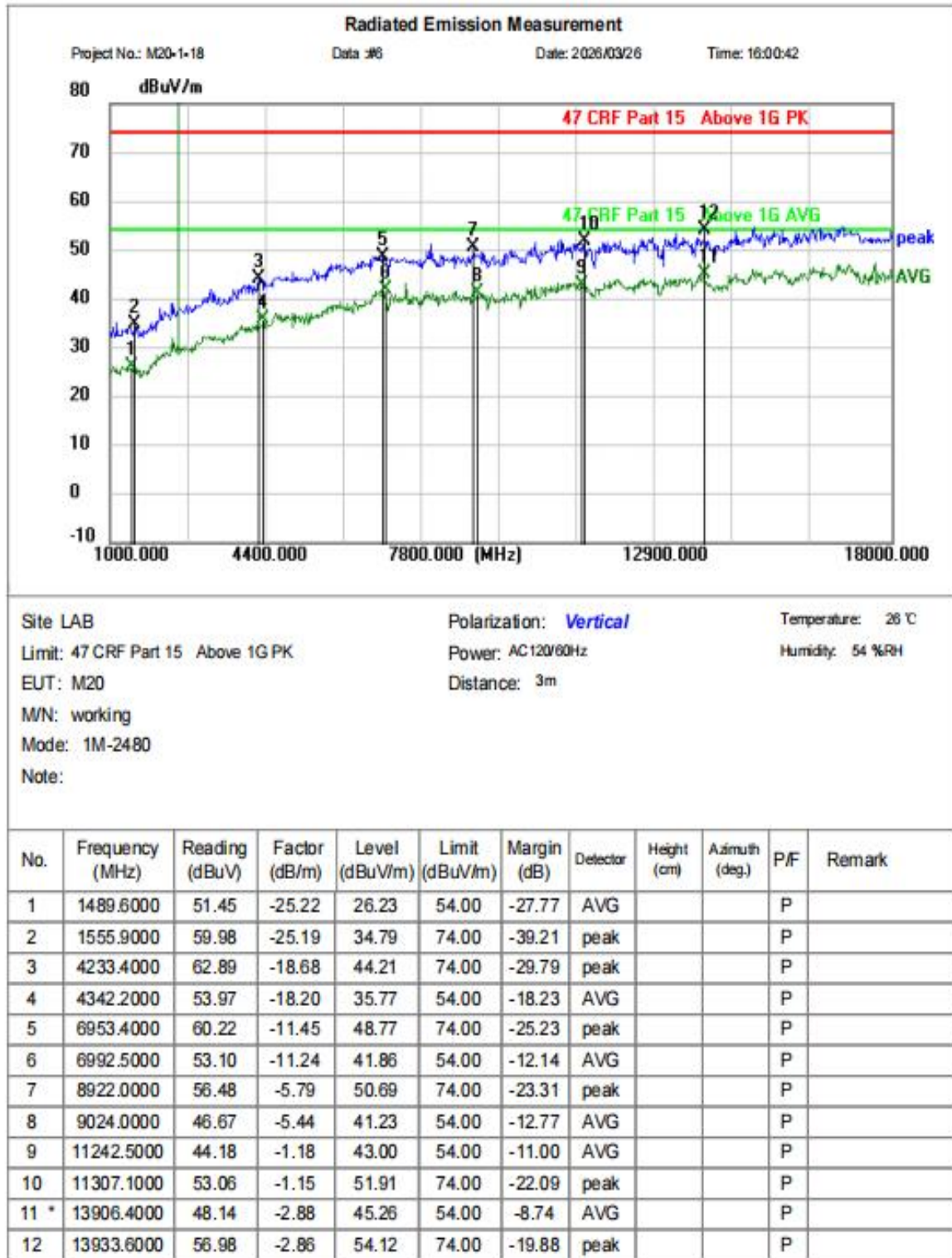


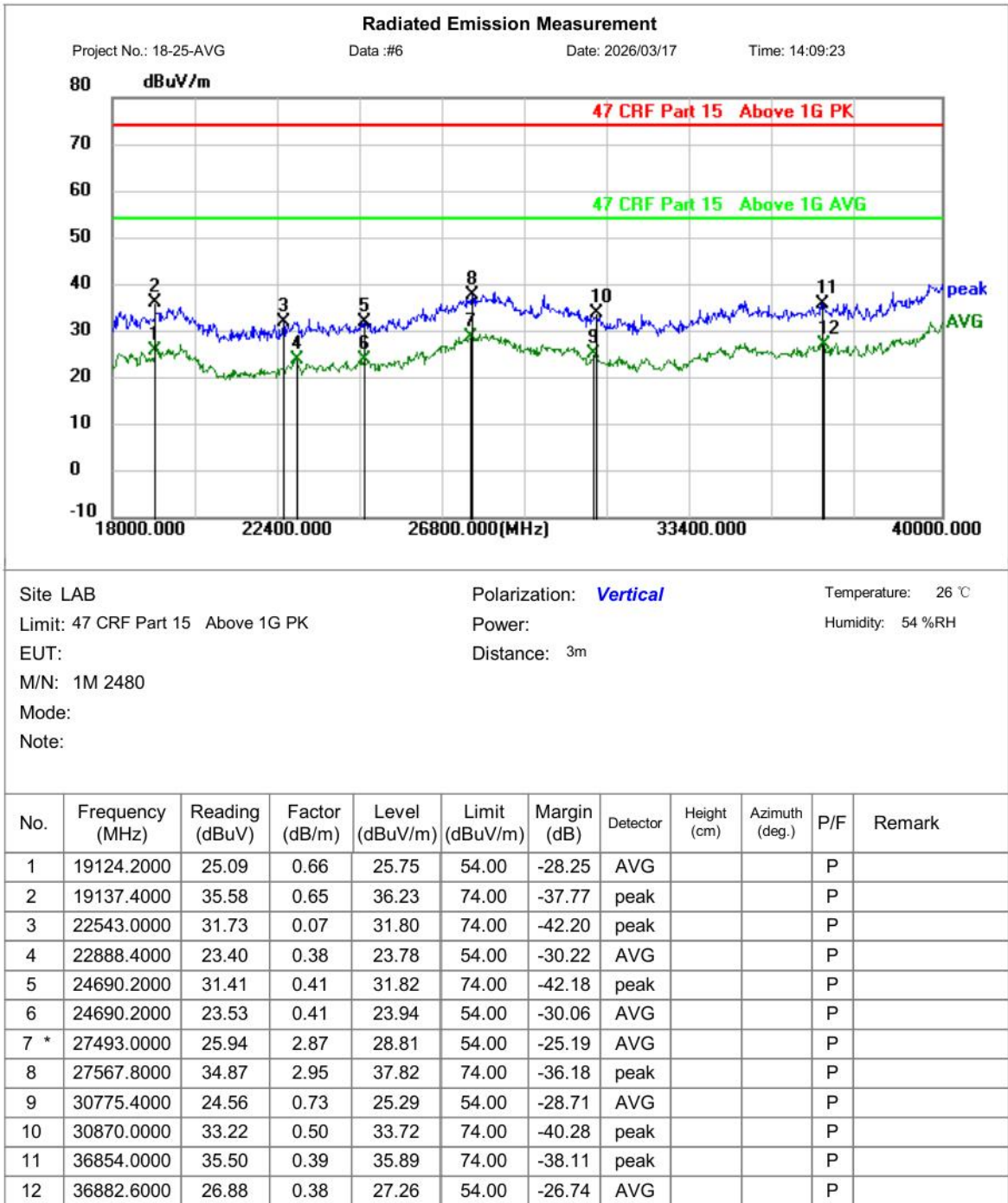
TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: H





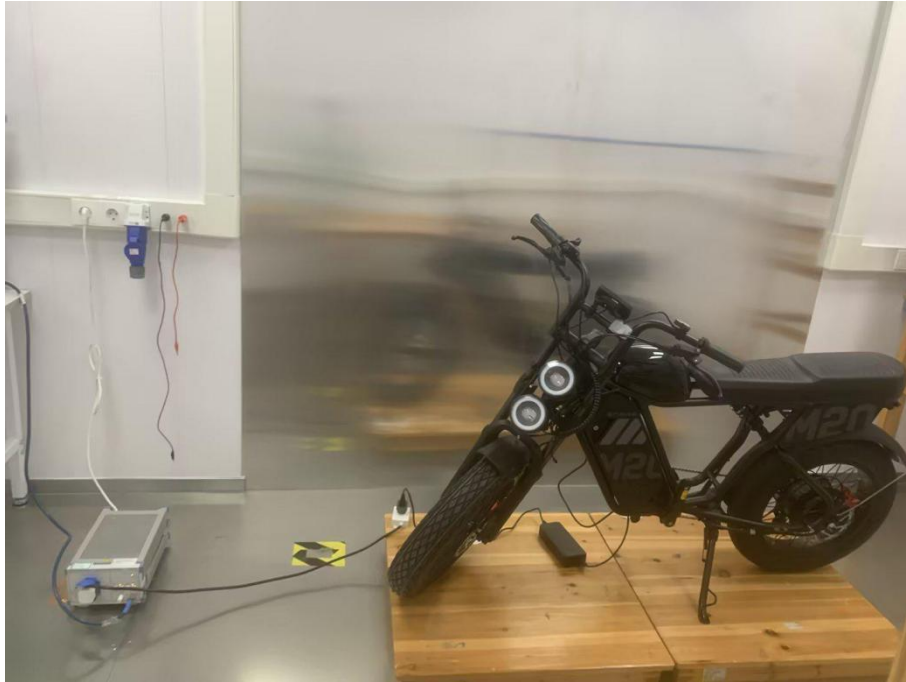
TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: H





7. TEST SETUP PHOTOS

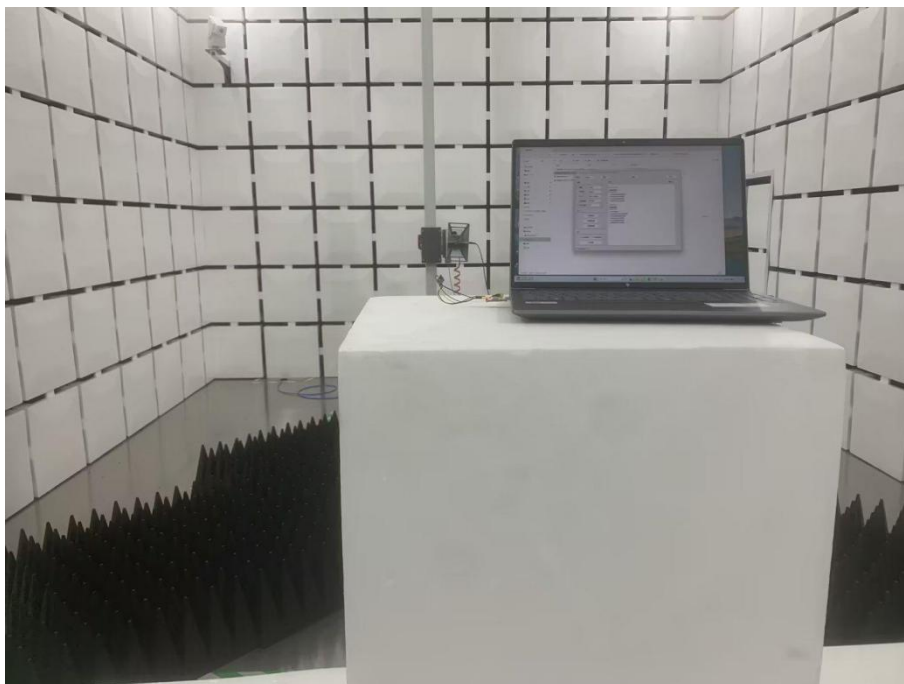
Conducted Emission at AC power line



Emissions in frequency bands (below 1GHz)



Emissions in frequency bands (above 1GHz)



8. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

EUT External photos





