

Test Report

Applicant : PEAG, LLC dba JLab Audio
Address : 5927 LANDAU CT, Carlsbad, CA 92008, United States
Product Name : Wireless Headset
Brand Mark : 
Model : Midnight Wireless Headset
Series model : N/A
Report Number : BLA-EMC-202602-A4204
FCC ID : 2AHYV-MNWDGH
Date of Receipt : Feb. 05,2026
Date of Test : Feb. 06,2026 to May 11,2026
Test Standard : 47 CFR Part 15, Subpart C 15.249
Test Result : Pass

Compiled by:

charlie

Review by:

Xavier

Approved by:

Blue Zheng

Issued Date:

May 11,2026



BlueAsia Technical Services (Shenzhen) Co., Ltd

Address: No.41, South of Beihuan Road, Shangwu Community, Shiyan
Subdistrict, Bao'an District, Shenzhen, Guangdong, China



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Revise Record

Version No.	Date	Description
01	May 11,2026	Original

1 General information

1.1 General information

Applicant	PEAG, LLC dba JLab Audio
Address	5927 LANDAU CT, Carlsbad, CA 92008, United States
Manufacturer	GuangDong Simpreal Intelligent Technology Co., Ltd
Address	Room 2408, JiaHong ZhenXing DaSha, DongGuan Avenue #13, DongCheng District, DongGuan City, GuangDong Province, P.R. China
Factory	GuangDong Simpreal Intelligent Technology Co., Ltd
Address	Room 2408, JiaHong ZhenXing DaSha, DongGuan Avenue #13, DongCheng District, DongGuan City, GuangDong Province, P.R. China

1.2 General description of EUT

Product name	Wireless Headset
Model no.	Midnight Wireless Headset
Series model	N/A
Differences of Series model	N/A
Operation Frequency	2402MHz-2480MHz
Modulation Type	GFSK
Channel Spacing	2MHz
Number of Channels	40
Antenna Type	Ceramic Chip Antenna
Antenna Gain	2.58dBi(Provided by customer)
Max. Field Strength(PK)	94.36dBuV/m@3m/2442Mhz
Max. Field Strength(AV)	93.15dBuV/m@3m/2442Mhz
Power supply or adapter information	DC3.7V
Hardware version	V05
Software version	V1.0.09
Engineer sample no.	BLA-EMC-202602-A42
<i>Note: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.</i>	

2 Test summary

No.	Test item	FCC Part Section(s)	Test Method(Clause)	Result
1	Antenna Requirement	§15.203	N/A	Pass
2	Conducted Emissions at AC Power Line (150kHz-30MHz)	§15.207	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause 6.2	Pass
3	20dB Bandwidth	N/A	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Section 6.9	Pass
4	Field Strength of the Fundamental Signal	§15.249(a)	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause 6.5&6.6	Pass
5	Radiated Emissions	§15.249 (d) §15.209	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Section 6.4,6.5,6.6	Pass
6	Restricted Band Around Fundamental Frequency	§15.205 §15.209	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Section 6.4,6.5,6.6	Pass

N/A: Not Applicable

3 Test Configuration

3.1 Test mode

Test Mode ^{Note 1}	Description
TX	Keep the EUT in continuously transmitting with modulation mode.
RX	Keep the EUT in receiving mode
TX Low channel	Keep the EUT in continuously transmitting mode in low channel
TX middle channel	Keep the EUT in continuously transmitting mode in middle channel
TX high channel	Keep the EUT in continuously transmitting mode in high channel

Note 1: The EUT was configured to measure its highest possible emission and/or immunity level. The test modes were adapted according to the operation manual for use; the EUT was operated in the engineering mode Note 2 to fix the TX or Rx frequency that was for the purpose of the measurements.

Note 2: Special software is used. The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

Power level setup in software			
Test Software Name	FCC Assist 1.0.4.1		
Mode	Channel	Frequency (MHz)	Soft Set
GFSK	CH0	2402	TX level : default
	CH20	2442	
	CH39	2480	

3.2 Operation Frequency each of channel

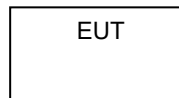
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
...	...	...	...	...	...	...	...
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz

3.3 Test channel

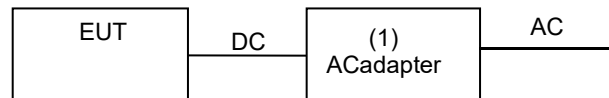
Channel	Frequency
The lowest channel	2402MHz
The middle channel	2442MHz
The Highest channel	2480MHz

3.4 Configuration diagram of EUT

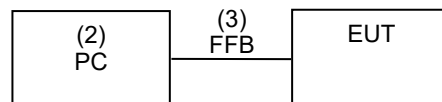
Radiated emission:



Conducted emissions:



RF Test:



Note: see test photographs attached in APPENDIX A for the actual connections between Product and support equipment.

Support equipment

Name	Device type	Brand	Mode	Series No	Remark
(1)	AC Adapter	UGREEN	CD112	N/A	N/A
(2)	PC	lenovo	E460C	N/A	N/A
(3)	Fixed frequency board	N/A	N/A	N/A	Provided by the customer

3.5 Auxiliary equipment

Device Type	Manufacturer	Model Name	Serial No.	Remark
PC	lenovo	E46OC	N/A	From lab (No.BLA-ZC-BS-2022005)
AC adapter	PISEN	ZY2207-A521H	N/A	From lab
Note: “--” mean no any auxiliary device during testing.				

3.6 Test environment

Environment	Temperature	Voltage
Normal	25°C	DC 3.7V

4 Laboratory information

4.1 Laboratory and accreditations

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

Company name:	BlueAsia Technical Services (Shenzhen) Co.,Ltd.
Address:	No.41, South of Beihuan Road, Shangwu Community, Shiyan Subdistrict, Bao'an District, Shenzhen, Guangdong, China
CNAS accredited No.:	L9788
A2LA Cert. No.:	5071.01
FCC Designation No.:	CN1252
Test Firm Registration Number:	923526
ISED CAB identifier No.:	CN0028
Company Number:	24243
Telephone:	+86-755-28682673
FAX:	+86-755-28682673

4.2 Measurement uncertainty

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=1.96$.

Parameter	Expanded Uncertainty
Radiated Emission(9kHz-30MHz)	$\pm 4.34\text{dB}$
Radiated Emission(30Mz-1000MHz)	$\pm 4.24\text{dB}$
Radiated Emission(1GHz-18GHz)	$\pm 4.68\text{dB}$
Radiated Emission(18GHz-40GHz)	$\pm 4.78\text{dB}$
AC Power Line Conducted Emission(150kHz-30MHz)	$\pm 3.45\text{dB}$
Occupied Channel Bandwidth	$\pm 5\%$
RF output power, conducted	$\pm 1.5\text{ dB}$
Power Spectral Density, conducted	$\pm 3.0\text{ dB}$
Unwanted Emissions, conducted	$\pm 3.0\text{ dB}$
Temperature	$\pm 3\text{ }^{\circ}\text{C}$
Supply voltages	$\pm 3\%$
Time	$\pm 5\%$

5 Test equipment

Radiated Spurious Emissions (Below 1GHz)

Equipment	Name	Model	Manufacture	S/N	Cal. Date	Due. Date
BLA-EMC-002-01	Anechoic chamber	9*6*6 chamber	SKET	N/A	2024/3/27	2027/3/26
BLA-EMC-002-02	Control room	966 control room	SKET	N/A	2024/3/27	2027/3/26
BLA-EMC-009	EMI receiver	ESR7	R&S	101199	2025/08/05	2026/08/04
BLA-EMC-043	Loop antenna	FMZB1519B	Schwarzbeck	00102	2024/06/29	2026/06/28
BLA-EMC-065	Broadband antenna	VULB9168	Schwarzbeck	01065P	2024/06/29	2026/06/27
BLA-XC-01	Coaxial Cable	N/A	BlueAsia	V01	N/A	N/A
BLA-XC-02	Coaxial Cable	N/A	BlueAsia	V02	N/A	N/A

Radiated Spurious Emissions (Above 1GHz)

Equipment	Name	Model	Manufacture	S/N	Cal. Date	Due. Date
BLA-EMC-001-01	Anechoic chamber	9*6*6 chamber	SKET	N/A	2023/11/16	2026/11/15
BLA-EMC-001-02	Control Room	966 control room	SKET	N/A	2023/11/16	2026/11/15
BLA-EMC-008	Spectrum	FSP40	R&S	100817	2025/08/05	2026/08/04
BLA-EMC-013	Horn Antenna	BBHA9120D	Schwarzbeck	01892	2024/06/29	2026/06/28
BLA-EMC-014	Amplifier	PA_000318G-45	SKET	PA2018043003	2025/08/05	2026/08/04
BLA-EMC-046	Filter bank	2.4G/5G Filter bank	SKET	N/A	2025/06/09	2026/06/08
BLA-EMC-061	Receiver	ESPI7	R&S	101477	2025/06/09	2026/06/08
BLA-EMC-066	Amplifier	LNPA_30M01 G-30	SKET	SK2021060801	2025/06/09	2026/06/08
BLA-EMC-086	Amplifier	LNPA_18G40 G-50dB	SKET	SK2022071301	2025/06/09	2026/06/08
BLA-EMC-087	Horn Antenna	BBHA 9170	Schwarzbeck	1106	2024/06/29	2026/06/28
BLA-XC-03	Coaxial Cable	N/A	BlueAsia	V03	N/A	N/A
BLA-XC-04	Coaxial Cable	N/A	BlueAsia	V04	N/A	N/A

Conducted emissions at AC power line (150 kHz-30 MHz)

Equipment	Name	Model	Manufacture	S/N	Cal. Date	Due. Date
BLA-EMC-003-001	Shield room	8*3*3	SKET	N/A	2023/11/16	2026/11/15
BLA-EMC-009	EMI receiver	ESR7	R&S	101199	2025/08/05	2026/08/04
BLA-EMC-011	LISN	ENV216	R&S	101372	2025/08/05	2026/08/04
BLA-EMC-033	Impedance transformer	DC-2GHz	DFXP	N/A	2025/06/09	2026/06/08
BLA-EMC-041	LISN	AT166-2	ATTEN	AKK1806000003	2025/08/05	2026/08/04
BLA-EMC-045	Impedance stable network	ISNT8-cat 6	TESEQ	53580	2025/08/05	2026/08/04
BLA-EMC-095	Single-channel vehicle artificial power network	NNBM 8124	Schwarzbeck	01045	2025/06/09	2026/06/08
BLA-EMC-096	Single-channel vehicle artificial power network	NNBM 8124	Schwarzbeck	01075	2025/06/09	2026/06/08
BLA-XC-05	Coaxial Cable	N/A	BlueAsia	V05	N/A	N/A

RF conducted

Equipment	Name	Model	Manufacture	S/N	Cal. Date	Due. Date
BLA-EMC-003-003	Shield room	5*3*3	SKET	N/A	2023/11/16	2026/11/15
BLA-EMC-016	Signal Generator	N5182A	Agilent	MY52420567	2025/06/09	2026/06/08
BLA-EMC-038	Spectrum	N9020A	Agilent	MY49100060	2025/08/05	2026/08/04
BLA-EMC-042	Power sensor	RPR3006 W	DARE	14I00889SN042	2025/08/05	2026/08/04
BLA-EMC-044	Radio communication tester	CMW500	R&S	132429	2025/08/05	2026/08/04
BLA-EMC-064	Signal Generator	N5182B	KEYSIGHT	MY58108892	2025/06/09	2026/06/08
BLA-EMC-079	Spectrum	N9020A	Agilent	MY54420161	2025/08/05	2026/08/04
BLA-EMC-088	Audio Analyzer	ATS-1	Audio Precision	ATS141094	2025/06/09	2026/06/08
BLA-EMC-100	Digital Radio Tester	RWC2010	Redwoodcomm	RWC20102490304	2025/06/09	2026/06/08

Test Software Record

Software No.	Software Name	Manufacture	Software version	Test site
BLA-EMC-S001	EZ-EMC	EZ	EEMC-3A1+	RE
BLA-EMC-S002	EZ-EMC	EZ	EEMC-3A1+	RE
BLA-EMC-S003	EZ-EMC	EZ	EEMC-3A1+	CE
BLA-EMC-S010	MTS 8310	MW	2.0.0.0	RF

6 Test result

6.1 Antenna requirement

Test Standard	47 CFR Part 15, Subpart C 15.203
Test Method	N/A

6.1.1 Requirement

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 an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of a so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT antenna:

The antenna is internal antenna. The best case gain of the antenna is 2.58dBi.

6.2 Conducted emissions at AC power line (150 kHz-30 MHz)

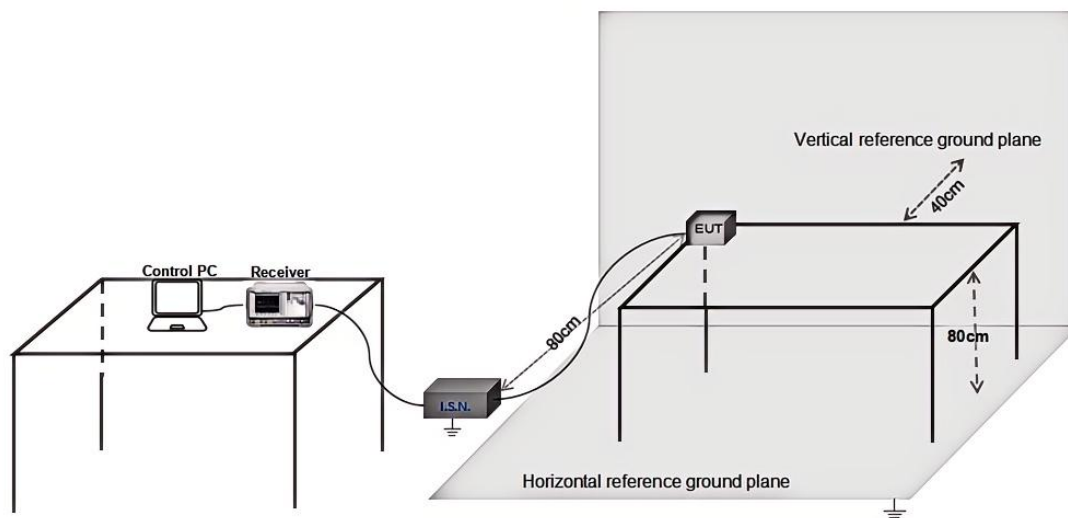
Test Standard	47 CFR Part 15, Subpart C 15.207
Test Method	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Section 6.2
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX

6.2.1 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.

6.2.2 Test setup



Description of test setup connection:

- Connect the control PC to the receiver through a USB to GPIB cable;
- The receiver is connected to the LISN through a coaxial line;
- Connect the power port of LISN to the EUT.

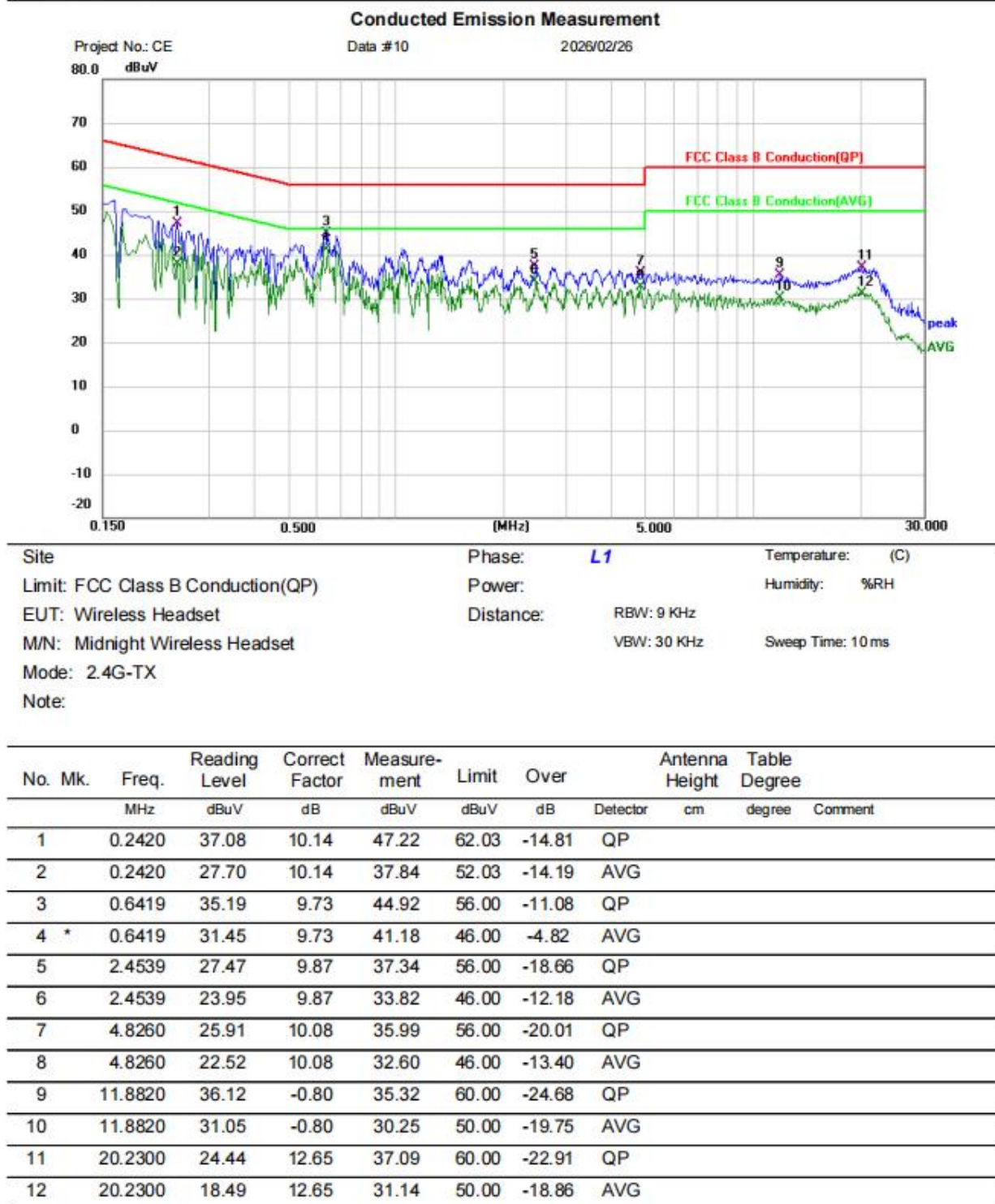
6.2.3 Procedure

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50H + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

LISN=Read Level+ Cable Loss+ LISN Factor

6.2.4 Test data

[Test mode: TX]; [Line: Line];[Power:AC120V/60Hz]



Test Result: Pass

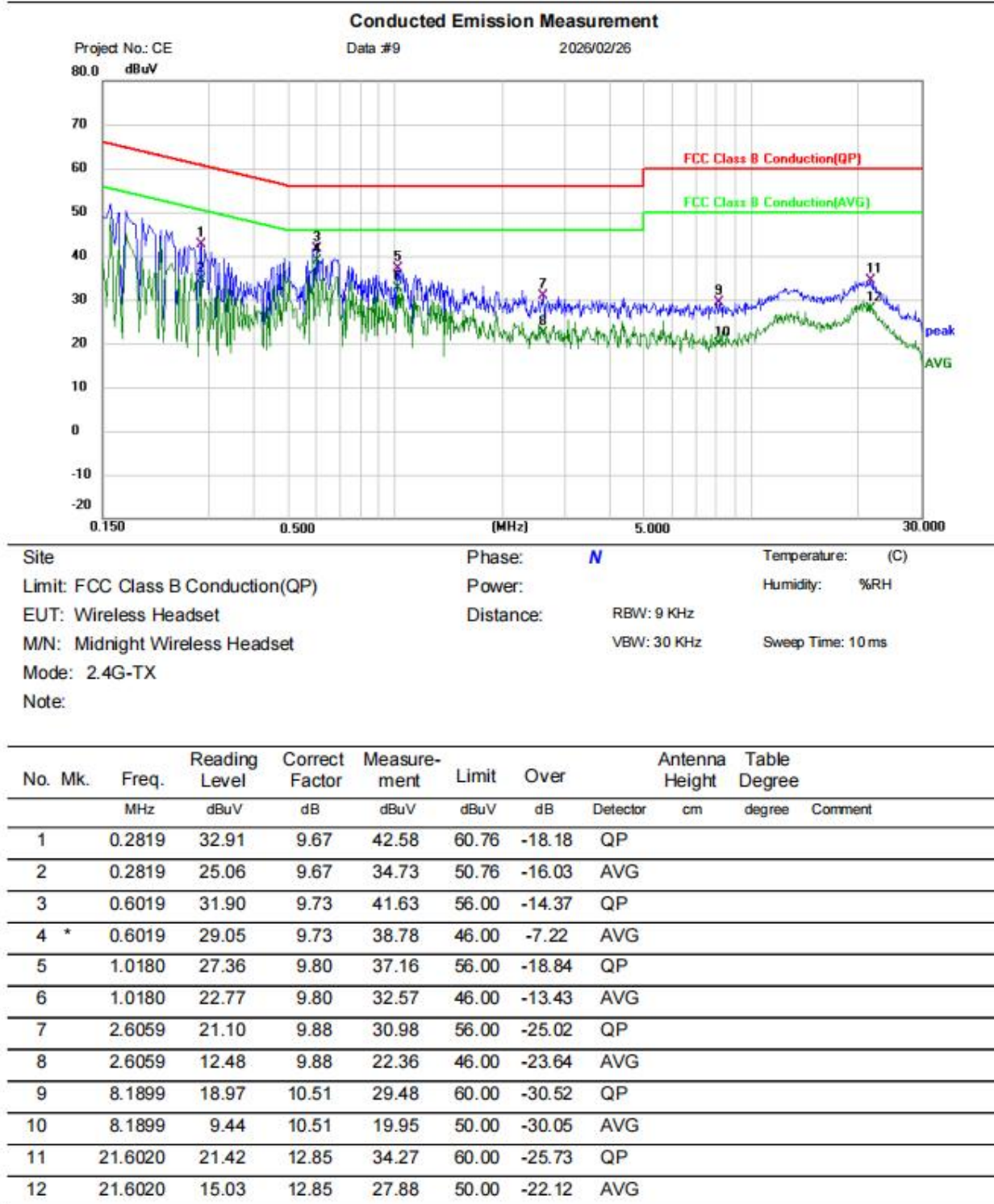
BlueAsia Technical Services (Shenzhen) Co., Ltd

Tel: +86-755-23059481

Email: marketing@cblueasia.com www.cblueasia.com

Report version : V1.2

[Test mode: TX]; [Line: Neutral];[Power:AC120V/60Hz]



Test Result: Pass

tests have been conducted low, medium and high channels. Only the worst low channels mode was reported.

6.3 Field strength of the fundamental signal

Test Standard	47 CFR Part 15, Subpart C 15.249(a)
Test Method	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Section 6.5&6.6
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX

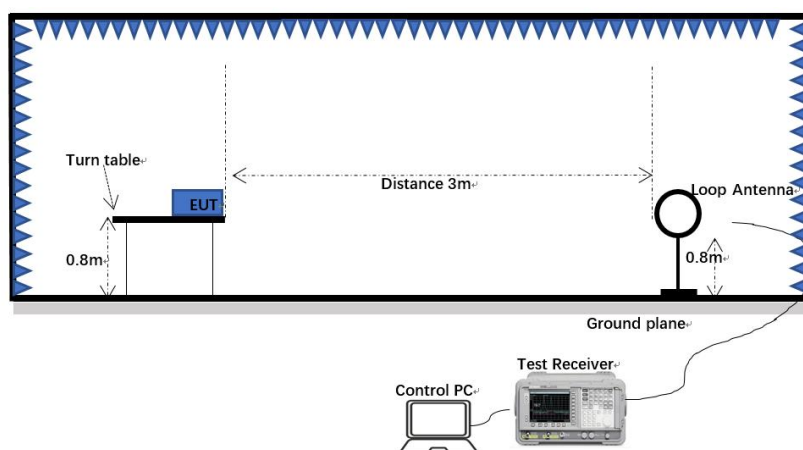
6.3.1 Limit

Fundamental frequency(MHz)	Field strength of fundamental(dBuV/m)	Field strength of harmonics(dBuV/m)
902-928	94	54
2400-2483.5	94	54
5725-5875	94	54
24000-24250	108	68

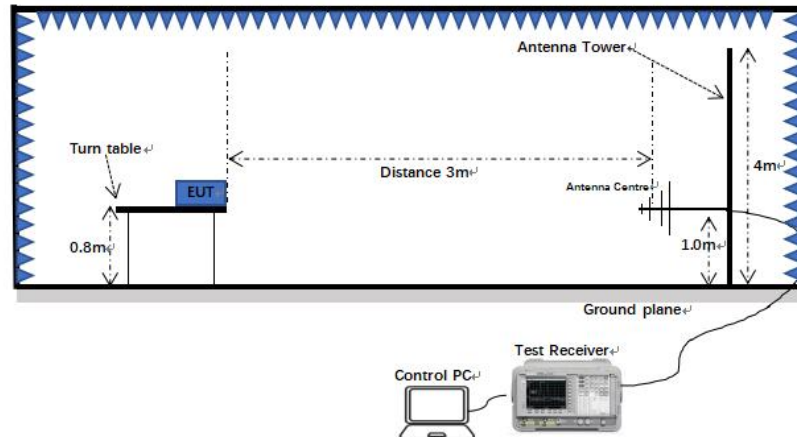
Remark: The frequencies above 1000MHz are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

6.3.2 Test setup

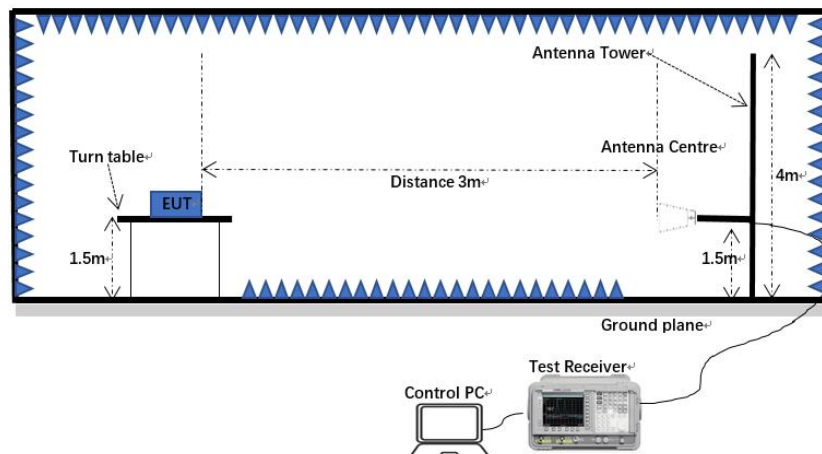
Below 1GHz:



30MHz-1GHz:



Above 1GHz:



6.3.3 Procedure

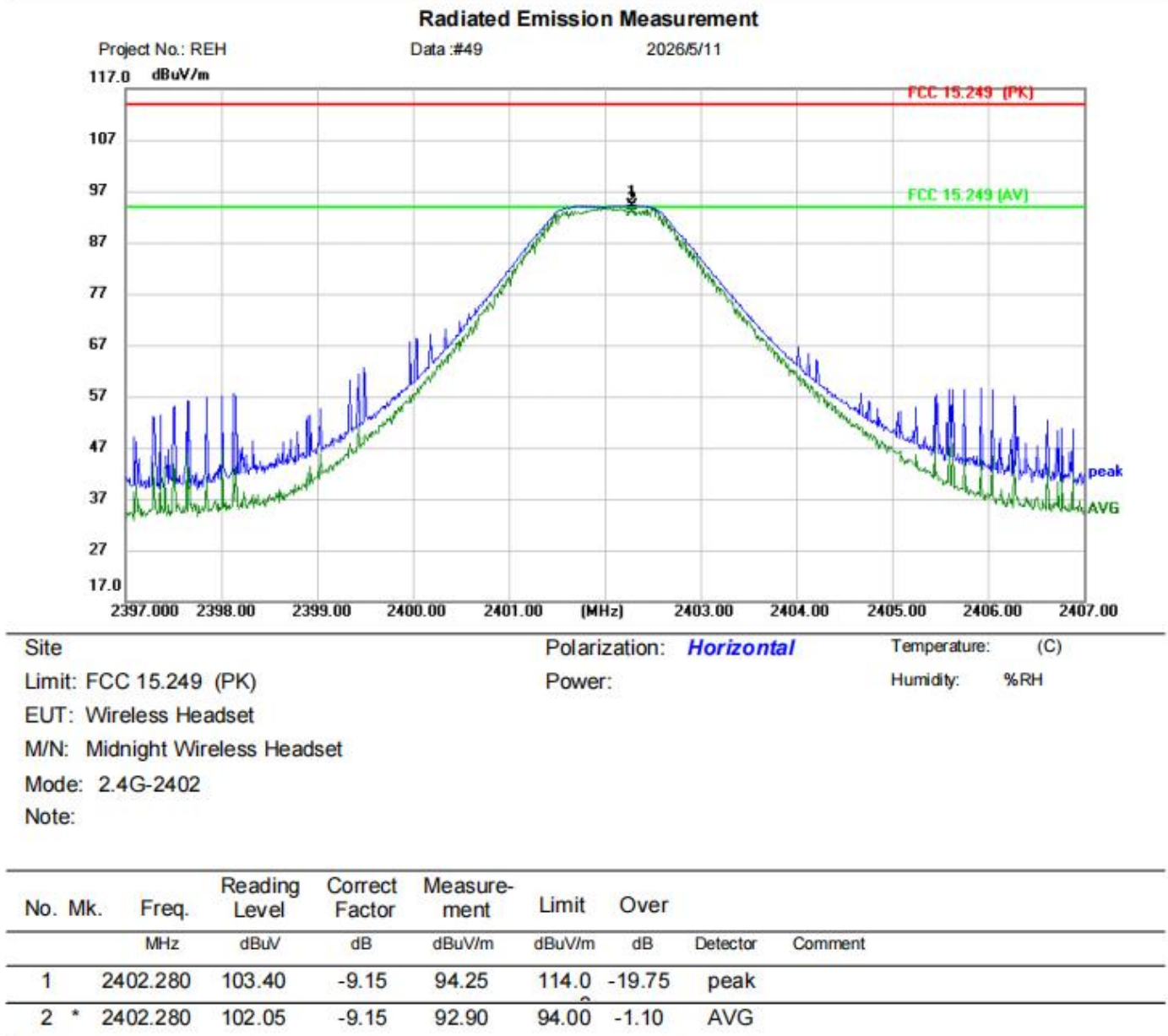
- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum

reading.

- f) The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g) If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h) Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i) The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j) Repeat above procedures until all frequencies measured was complete.
- k) $\text{Level (dB}\mu\text{V/m)} = \text{Reading Level(dBuV)} + \text{Correct Factor (dB)}$
- l) SA setting: RBW=1MHz, VBW=3MHz, PK detector is for PK value ,RMS detector is for AV value.

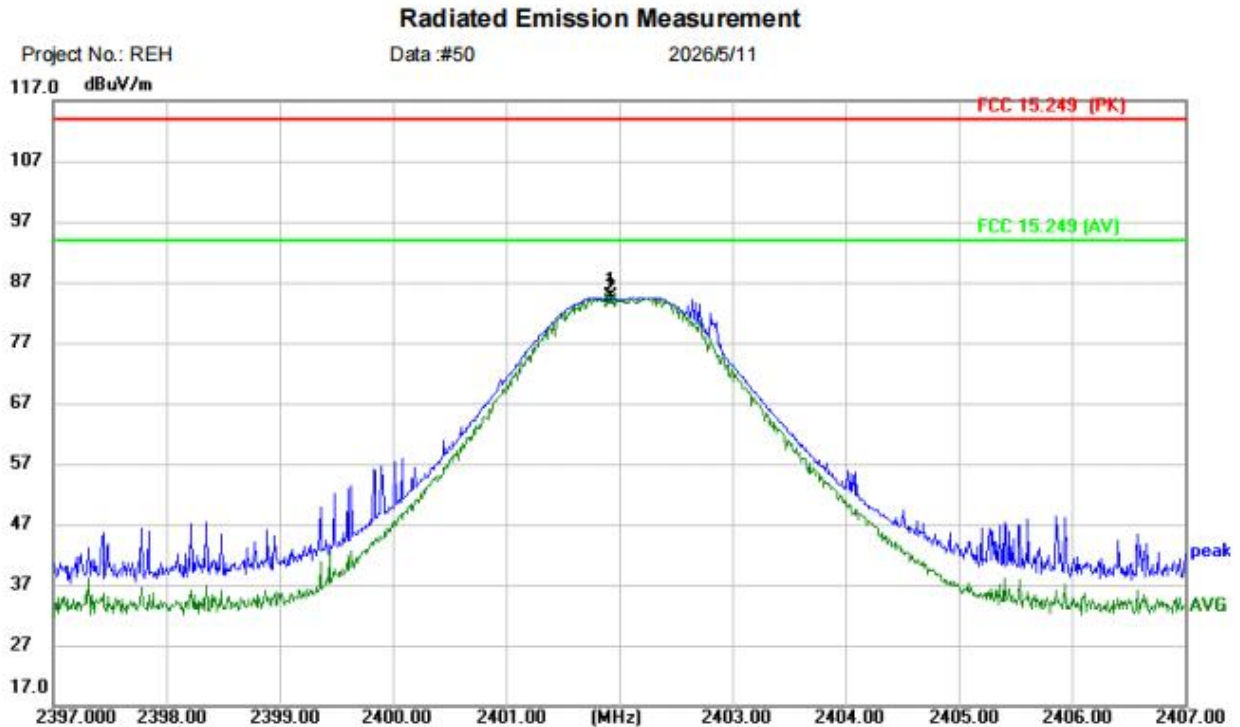
6.3.4 Test data

[Test mode: TX low channel]; [Polarity: Horizontal] ;[Power: DC3.7V]



Test Result: Pass

[Test mode: TX low channel]; [Polarity: Vertical] ;[Power: DC3.7V]



Site Polarization: **Vertical** Temperature: (C)

Limit: FCC 15.249 (PK) Power: Humidity: %RH

EUT: Wireless Headset

M/N: Midnight Wireless Headset

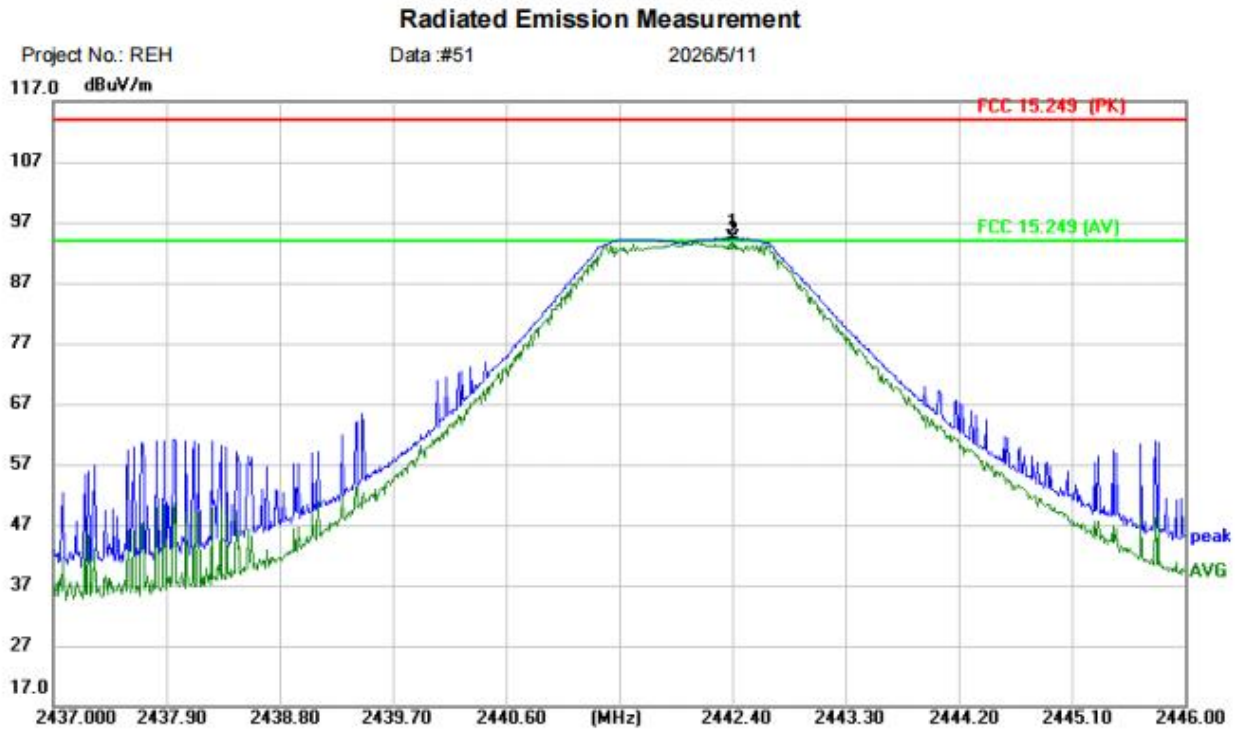
Mode: 2.4G-2402

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2401.930	93.68	-9.15	84.53	114.0	-29.47	peak	
2	*	2401.930	92.81	-9.15	83.66	94.00	-10.34	AVG	

Test Result: Pass

[Test mode: TX middle channel]; [Polarity: Horizontal] ;[Power: DC3.7V]



Site: Polarization: **Horizontal** Temperature: (C)

Limit: FCC 15.249 (PK) Power: Humidity: %RH

EUT: Wireless Headset

M/N: Midnight Wireless Headset

Mode: 2.4G-2442

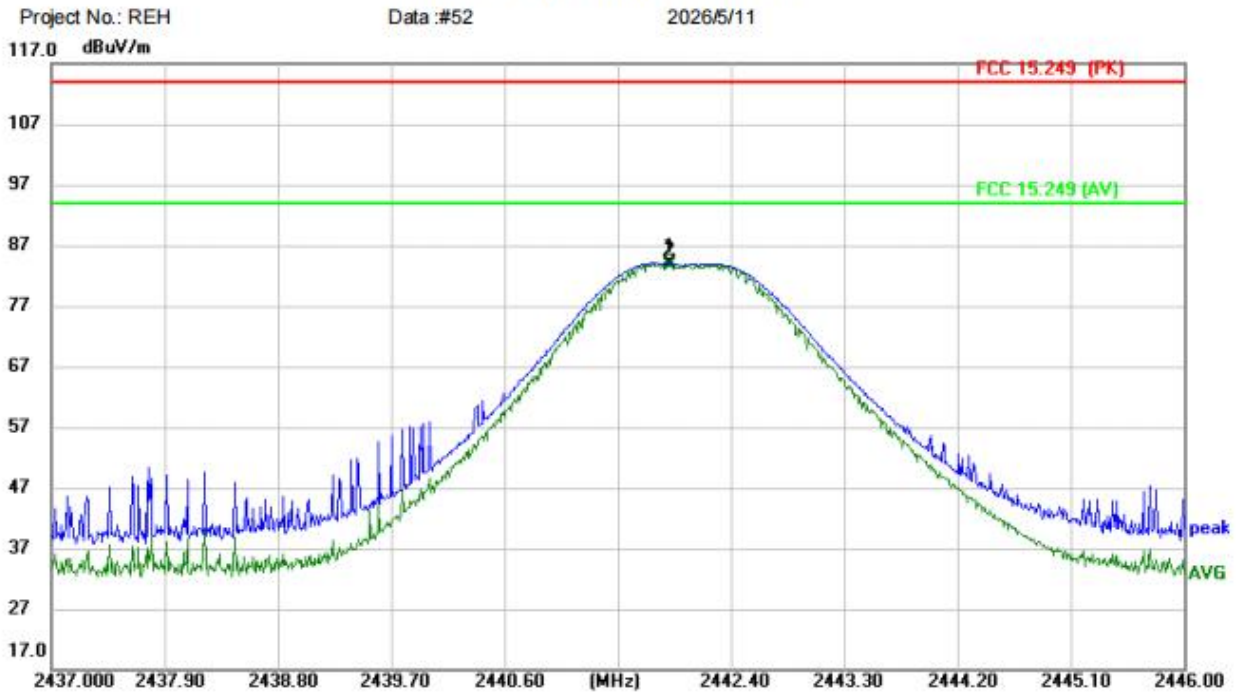
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		2442.400	103.54	-9.18	94.36	114.0	-19.64	peak	
2	*	2442.400	102.33	-9.18	93.15	94.00	-0.85	AVG	

Test Result: Pass

[Test mode: TX middle channel]; [Polarity: Vertical] ;[Power: DC3.7V]

Radiated Emission Measurement

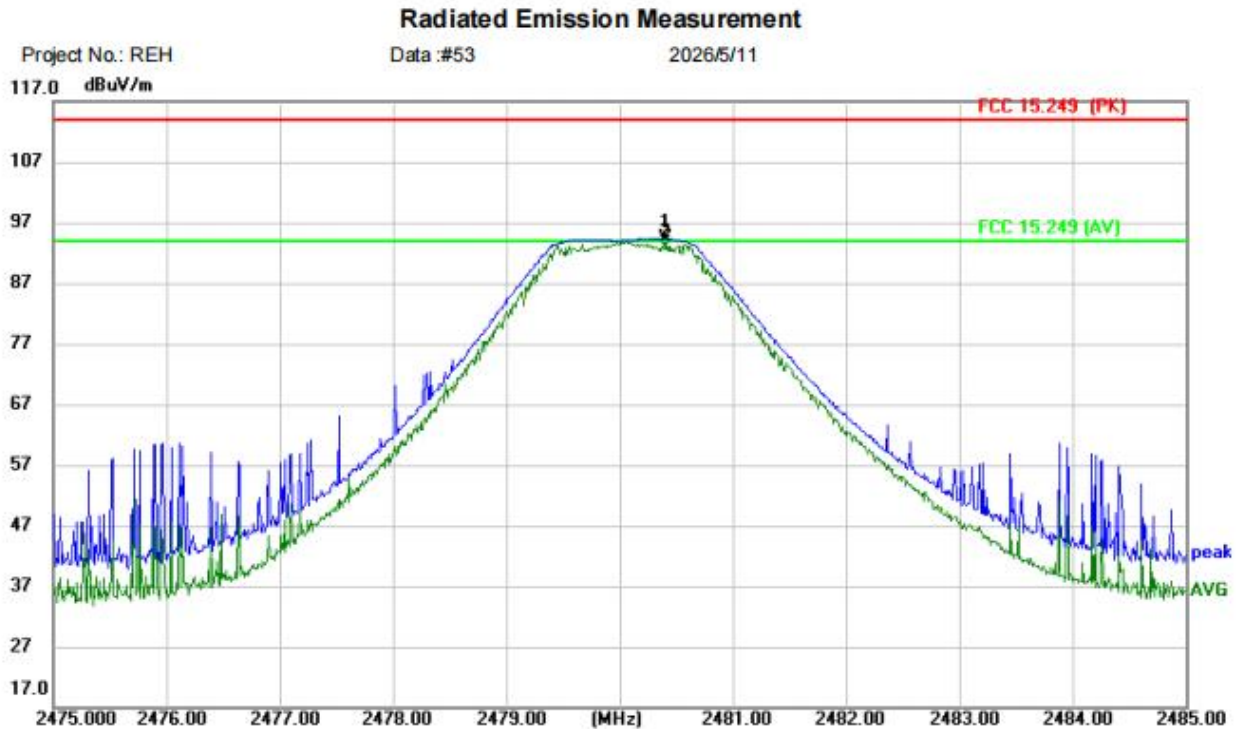


Site: Polarization: **Vertical** Temperature: (C)
 Limit: FCC 15.249 (PK) Power: Humidity: %RH
 EUT: Wireless Headset
 M/N: Midnight Wireless Headset
 Mode: 2.4G-2442
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2441.914	93.37	-9.18	84.19	114.0	-29.81	peak	
2	*	2441.914	92.92	-9.18	83.74	94.00	-10.26	AVG	

Test Result: Pass

[Test mode: TX High channel]; [Polarity: Horizontal] ;[Power: DC3.7V]



Site Polarization: **Horizontal** Temperature: (C)

Limit: FCC 15.249 (PK) Power: Humidity: %RH

EUT: Wireless Headset

M/N: Midnight Wireless Headset

Mode: 2.4G-2480

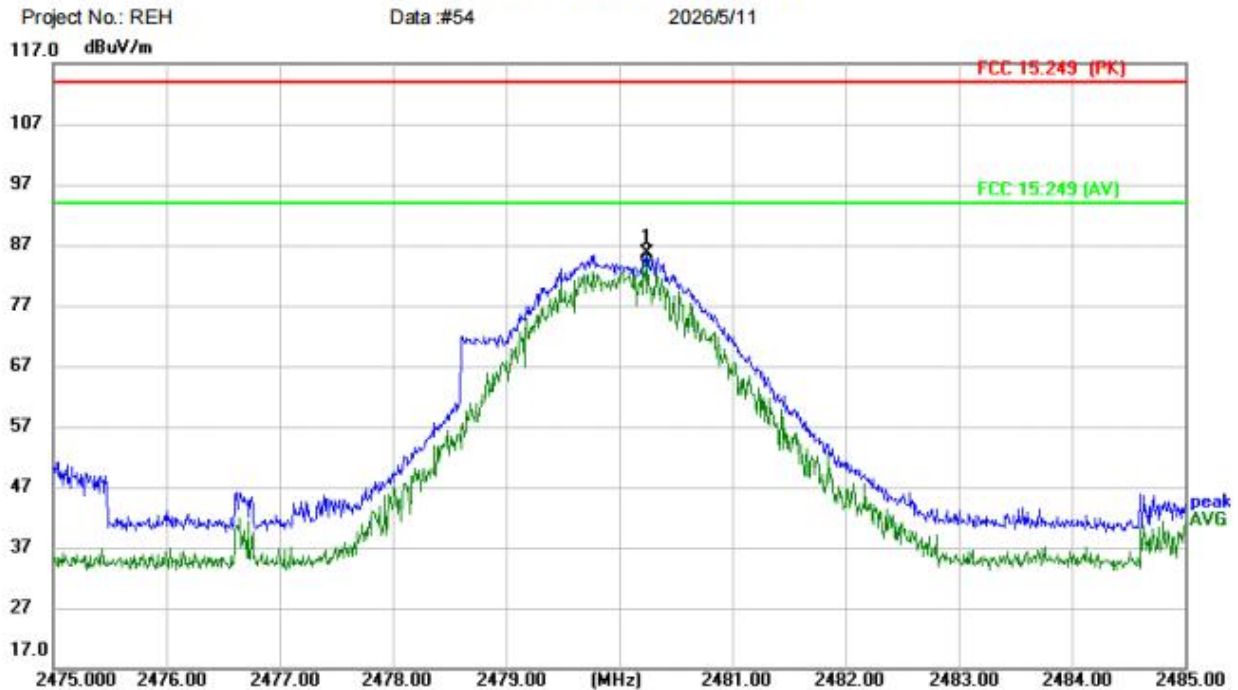
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2480.410	103.48	-9.14	94.34	114.0	-19.66	peak	
2	*	2480.410	102.03	-9.14	92.89	94.00	-1.11	AVG	

Test Result: Pass

[Test mode: TX High channel]; [Polarity: Vertical] ;[Power: DC3.7V]

Radiated Emission Measurement



Site Polarization: **Vertical** Temperature: (C)

Limit: FCC 15.249 (PK) Power: Humidity: %RH

EUT: Wireless Headset

M/N: Midnight Wireless Headset

Mode: 2.4G-2480

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2480.250	94.79	-9.14	85.65	114.0	-28.35	peak	
2	*	2480.250	92.40	-9.14	83.26	94.00	-10.74	AVG	

Test Result: Pass

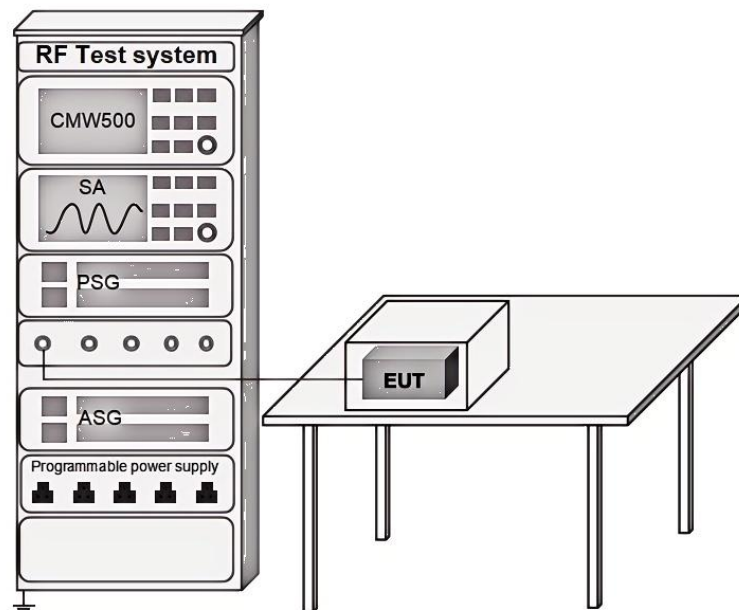
6.4 20dB bandwidth

Test Standard	47 CFR Part 15, Subpart C 15.249
Test Method	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Section 6.9
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX

6.4.1 Limit

N/A

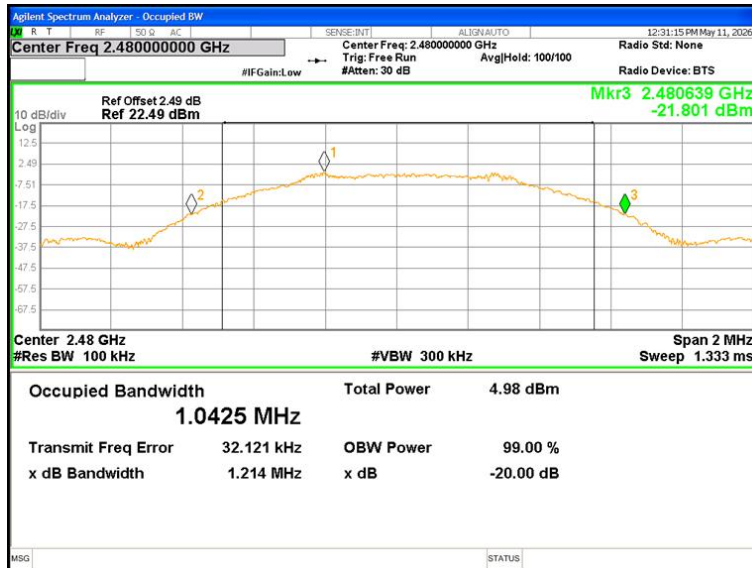
6.4.2 Test setup



6.4.3 Test data

Test Frequency MHz	-20 dB Bandwidth (MHz)	Result
2402	1.223	Pass
2442	1.218	Pass
2480	1.214	Pass





6.5 Radiated spurious emissions

Test Standard	47 CFR Part 15, Subpart C 15.249(d) 47 CFR Part 15, Subpart C 15.209
Test Method	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Section 6.4,6.5,6.6
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX

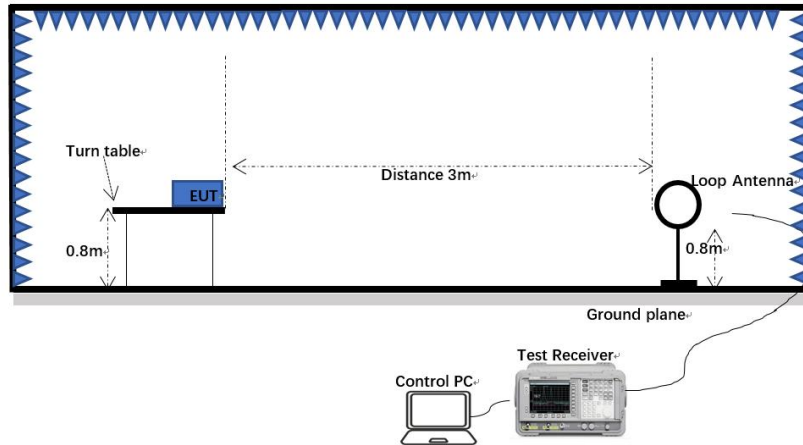
6.5.1 Limit

Frequency(MHz)	Field strength (microvolts/meter)	Limit (dBuV/m)	Detector	Measurement Distance (meters)
0.009-0.490	2400/F(kHz)	-	-	300
0.490-1.705	24000/F(kHz)	-	-	30
1.705-30	30	-	-	30
30-88	100	40.0	QP	3
88-216	150	43.5	QP	3
216-960	200	46.0	QP	3
960-1000	500	54.0	QP	3
Above 1000	500	54.0	AV	3

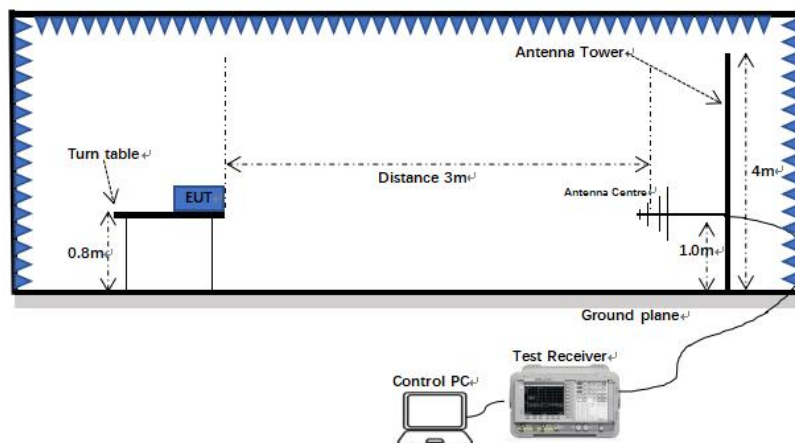
Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

6.5.2 Test setup

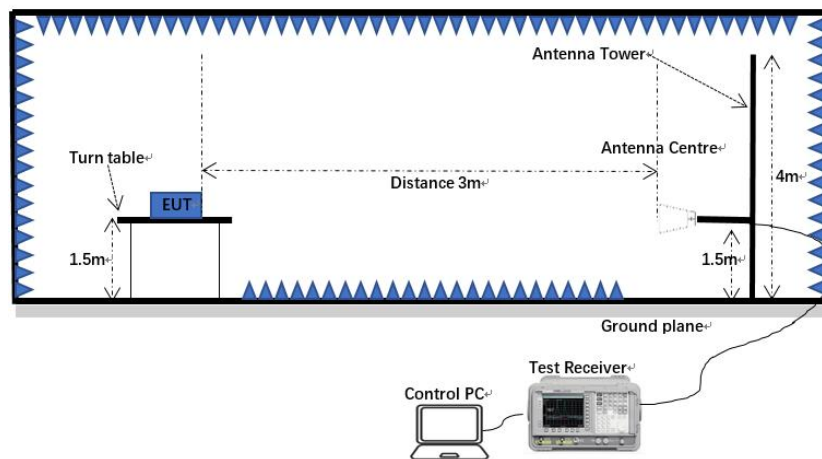
Below 1GHz:



30MHz-1GHz:



Above 1GHz:



6.5.3 Procedure

For testing performed with the loop antenna, the center of the loop was positioned 1 m above the ground and positioned with its plane vertical at the specified distance from the EUT. During testing the loop was rotated about its vertical axis for maximum response at each azimuth and also investigated with the loop positioned in the horizontal plane. Only the worst position of vertical was shown in the report.

Remark:

1) For emission below 1GHz, through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

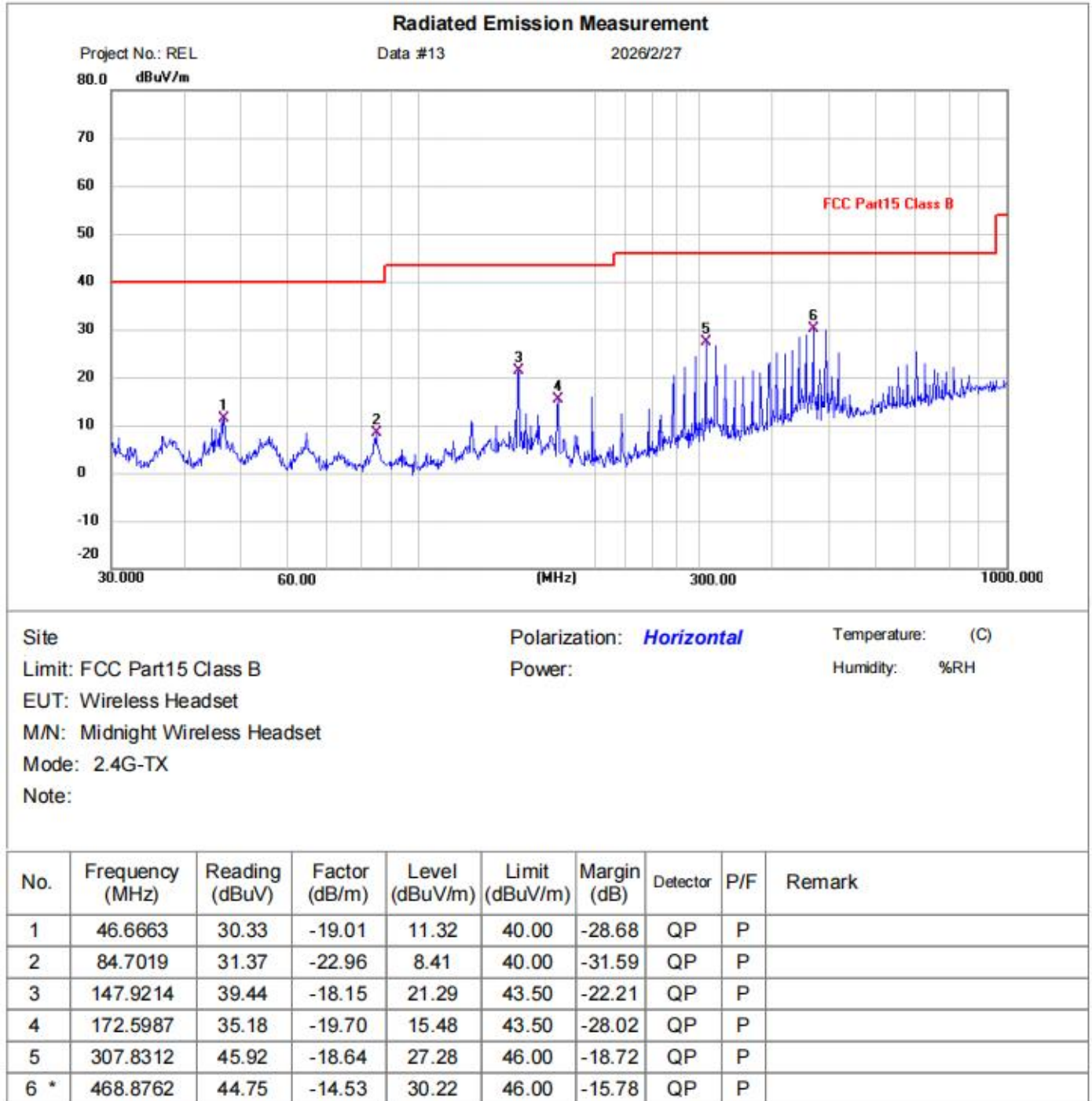
3) Scan from 9kHz to 40GHz, the disturbance above 18GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. Fundamental frequency is blocked by filter, and only spurious emission is shown.

4) For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

6.5.4 Test data

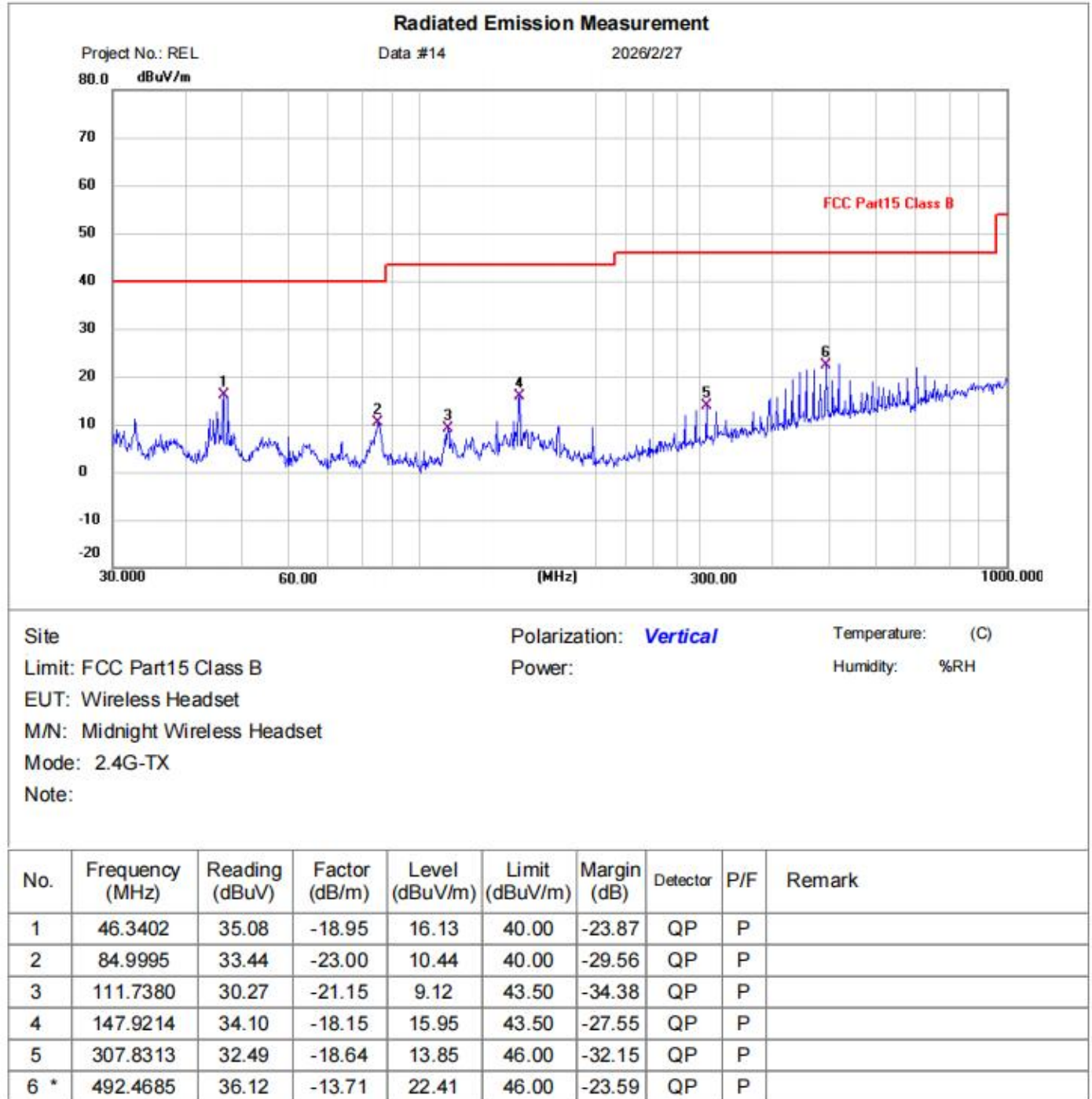
Below 1GHz

[Test mode: TX]; [Polarity: Horizontal] ;[Power: DC3.7V]



Test Result: Pass

[Test mode: TX]; [Polarity: Vertical] ;[Power: DC3.7V]

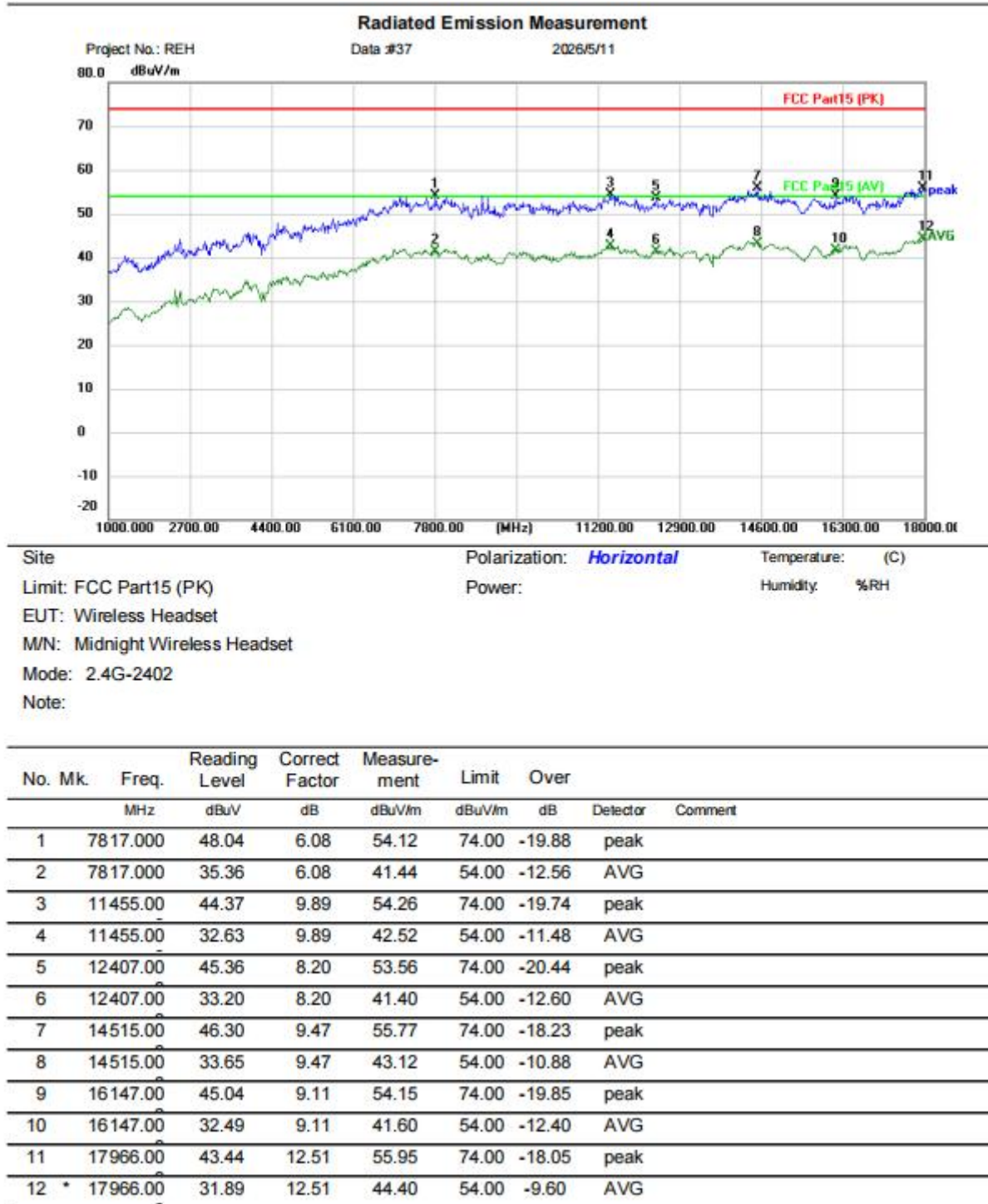


Test Result: Pass

tests have been conducted low, medium and high channels. Only the worst low channels mode was reported.

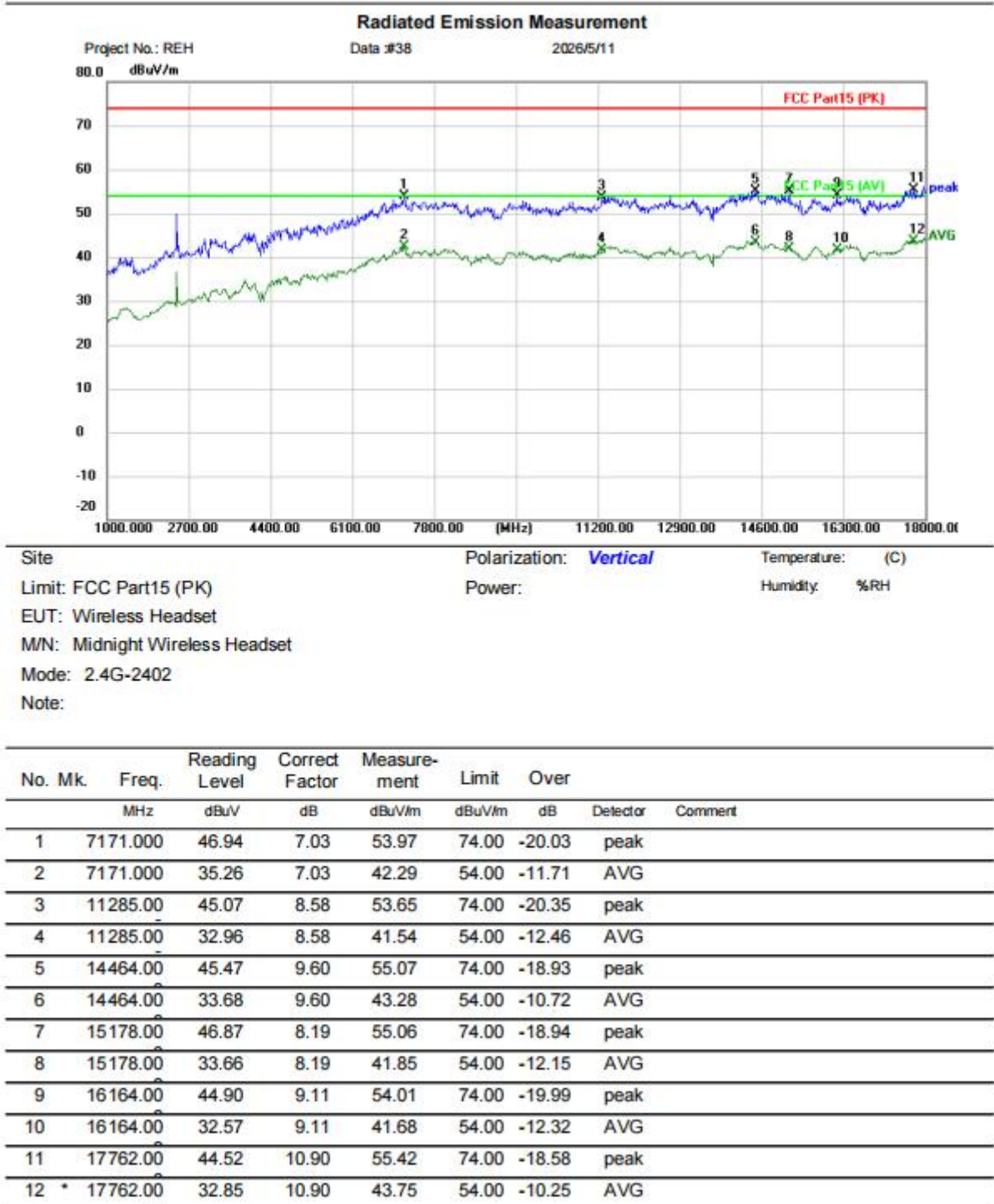
Above 1GHz:

[Test mode: TX low channel]; [Polarity: Horizontal] ;[Power: DC3.7V]



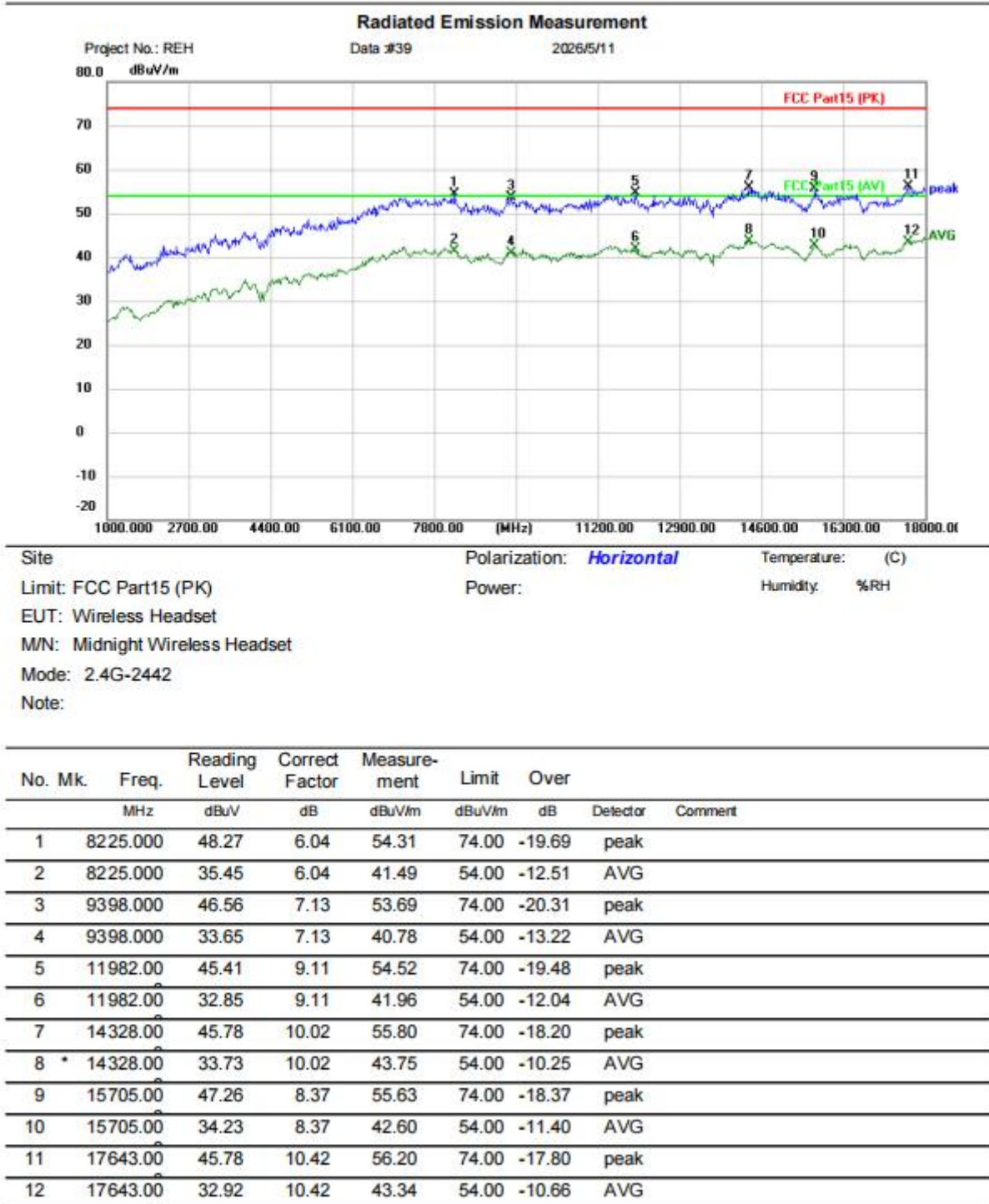
Test Result: Pass

[Test mode: TX low channel]; [Polarity: Vertical] ;[Power: DC3.7V]



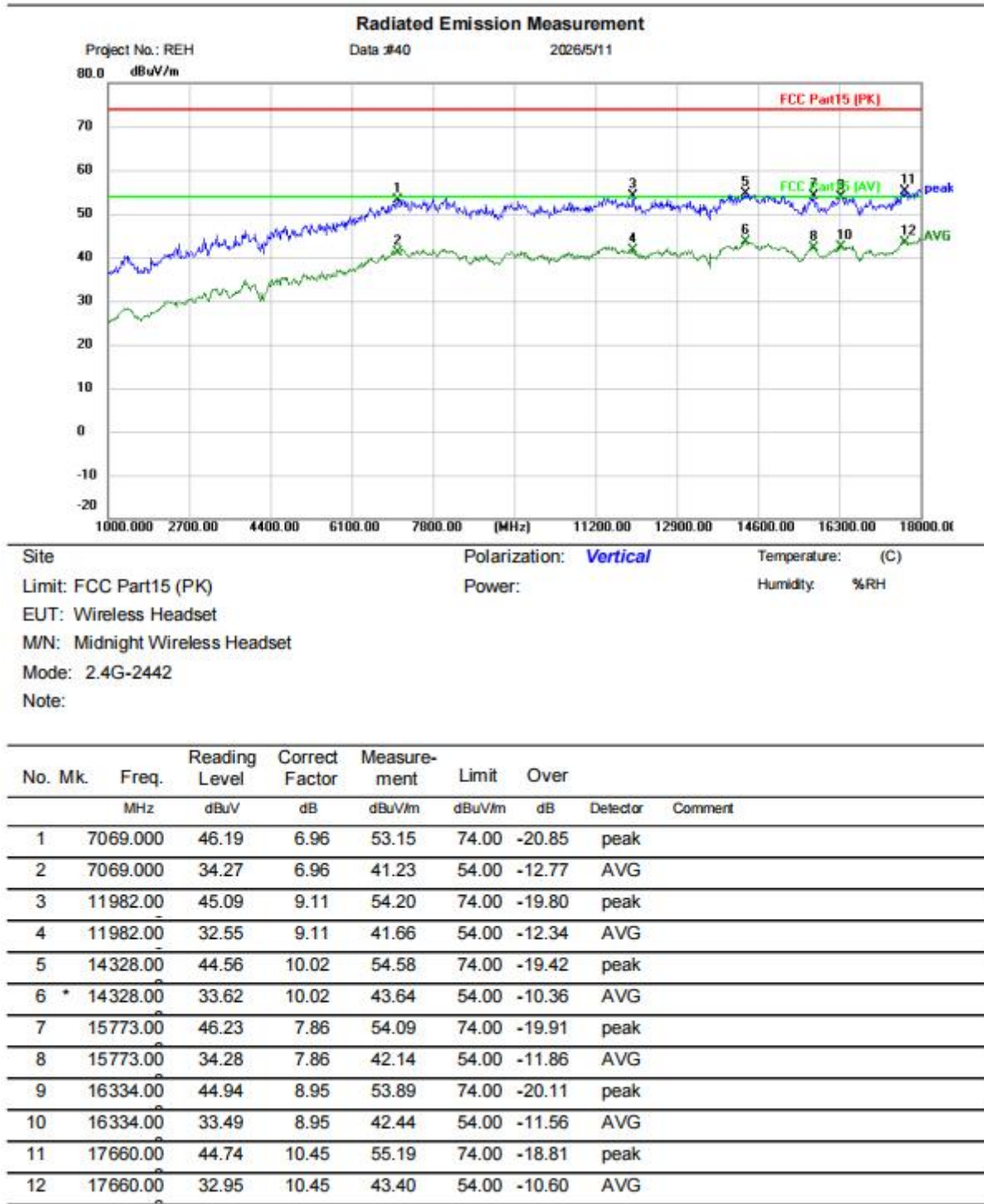
Test Result: Pass

[Test mode: TX middle channel]; [Polarity: Horizontal] ;[Power: DC3.7V]



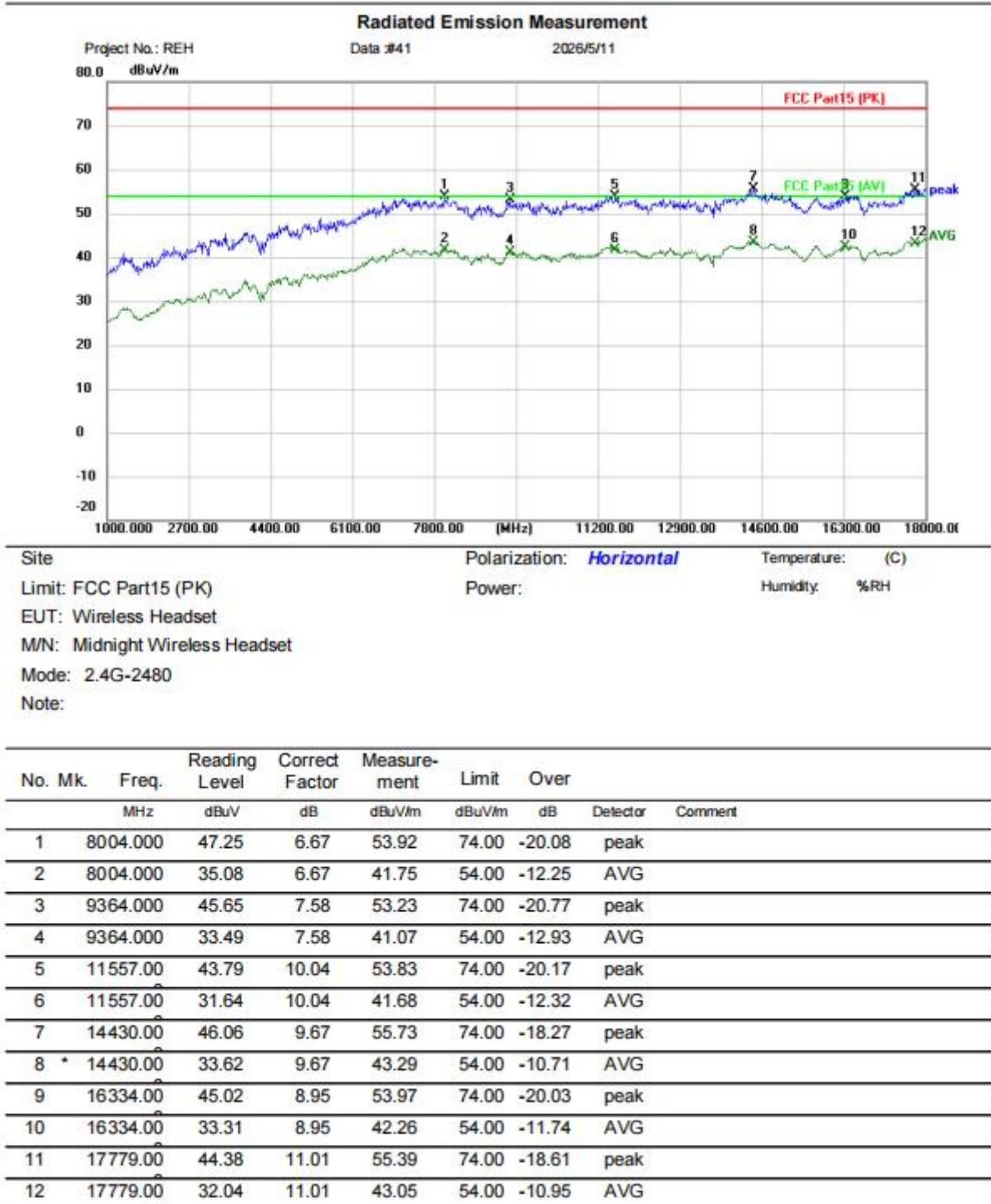
Test Result: Pass

[Test mode: TX middle channel]; [Polarity: Vertical] ;[Power: DC3.7V]



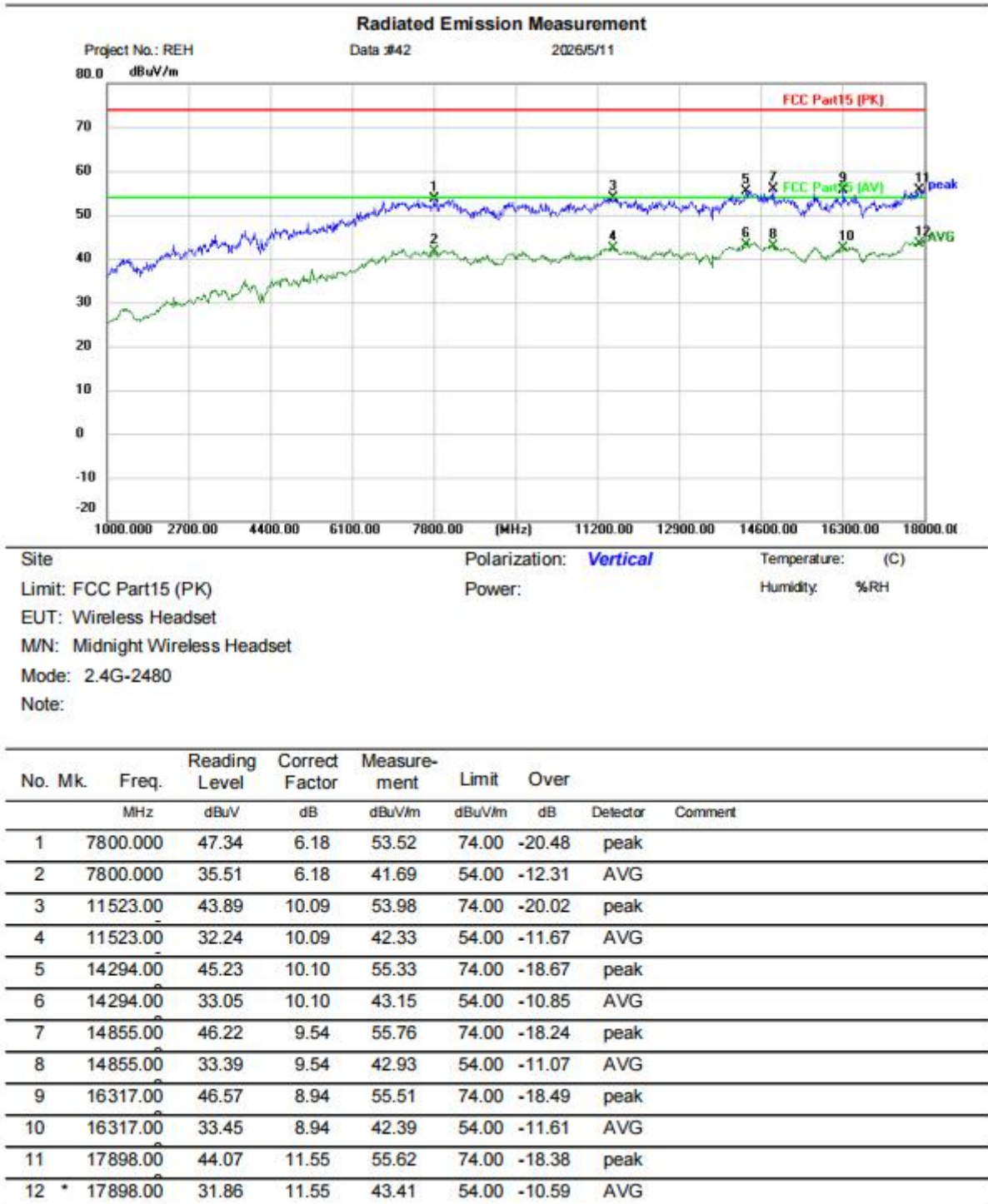
Test Result: Pass

[Test mode: TX High channel]; [Polarity: Horizontal] ;[Power: DC3.7V]



Test Result: Pass

[Test mode: TX High channel]; [Polarity: Vertical] ;[Power: DC3.7V]



Test Result: Pass

Note: When scanning in the range of 1GHz~ 25GHz and the interference above 18GHz is very small, it is a low noise signal. The point shown in the figure above is the highest emission that can be found during the test, so only the above point is shown. The fundamental frequency is blocked by the filter. Only stray emission.

6.6 Restricted bands around fundamental frequency

Test Standard	47 CFR Part 15, Subpart C 15.205 & 209
Test Method	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Section 6.4&6.5&6.6
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX

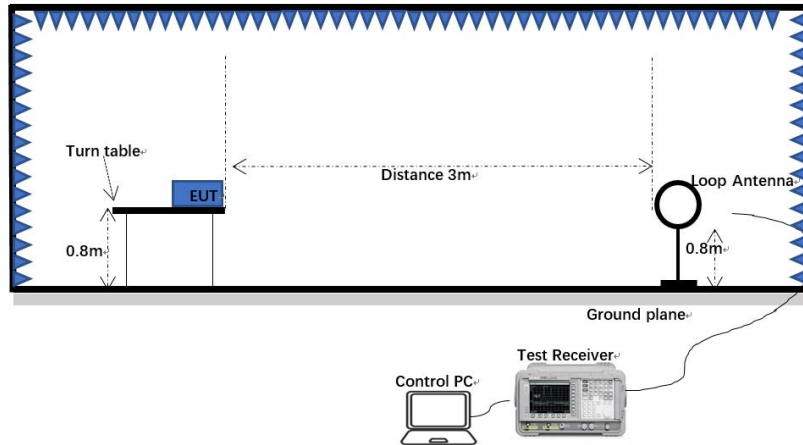
6.6.1 Limit

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
Above 1GHz	74.0	Peak Value

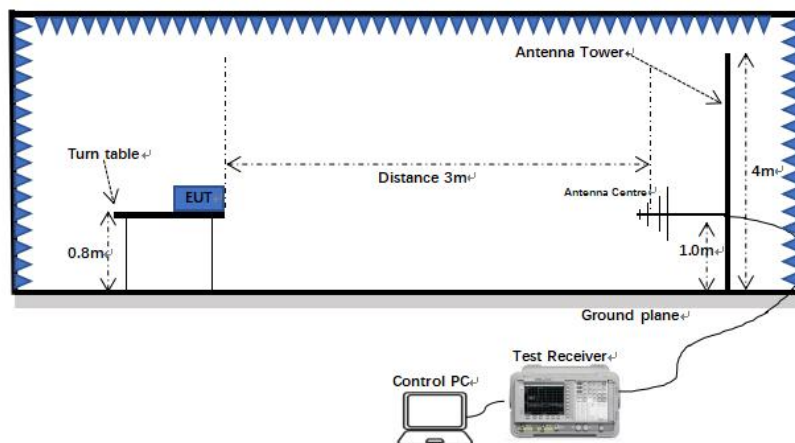
Remark: Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

6.6.2 Test setup

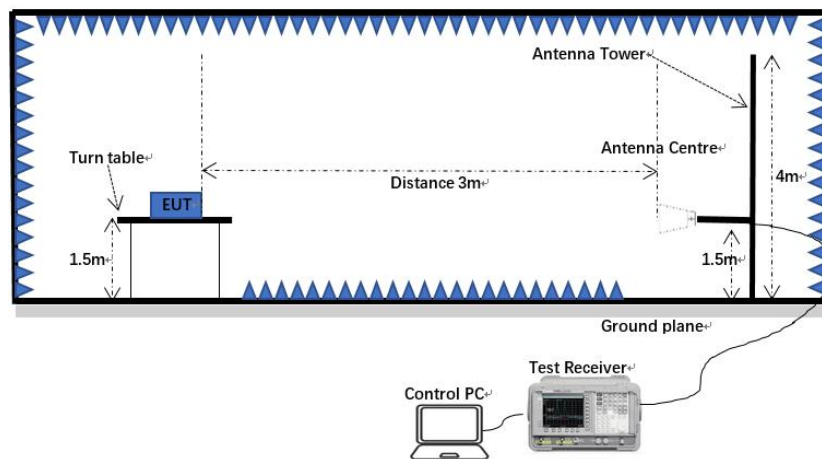
Below 1GHz:



30MHz-1GHz:



Above 1GHz:



6.6.3 Procedure

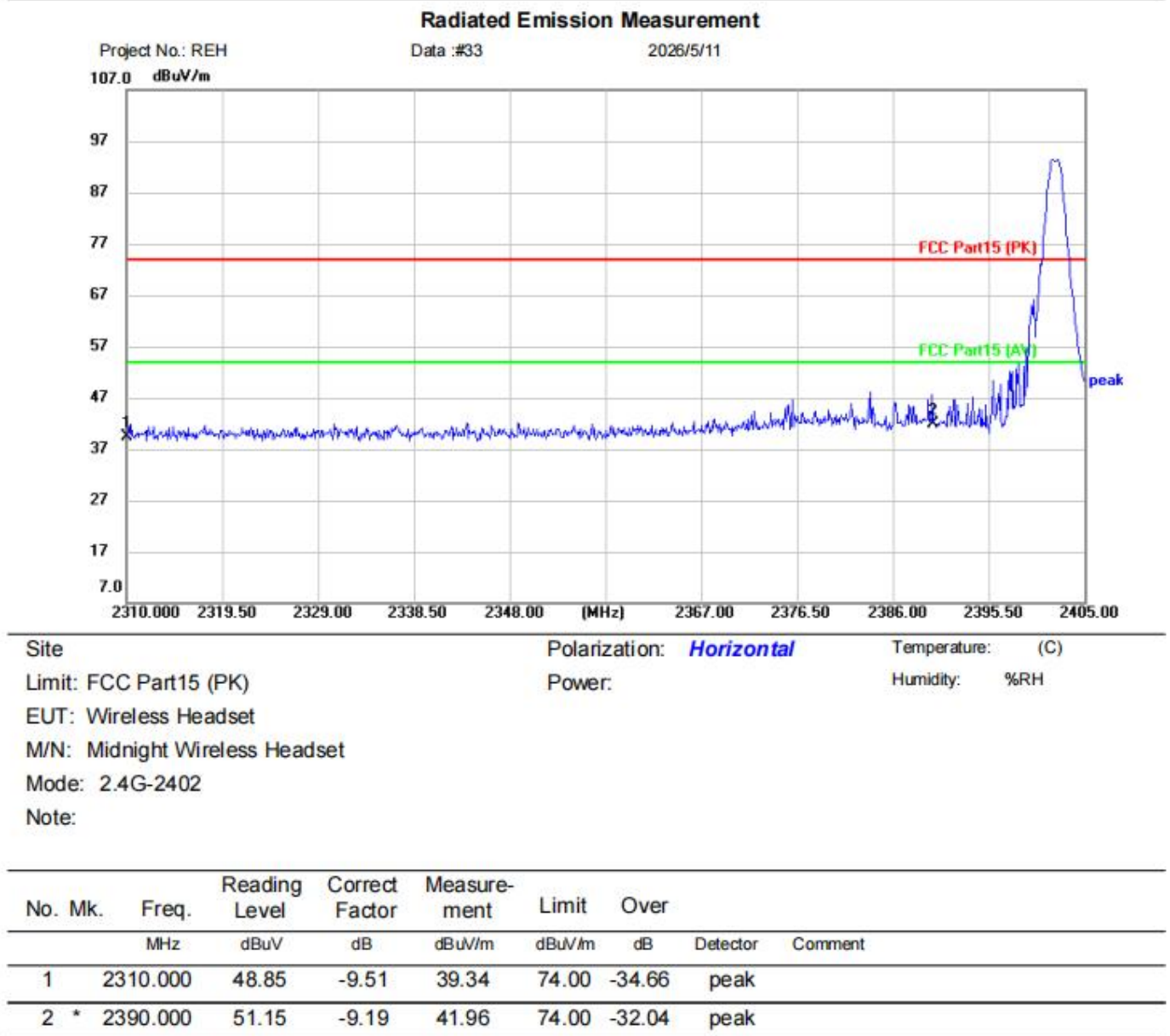
- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Note 1: Level (dBuV) = Reading (dBuV) + Factor (dB/m)

Note 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

6.6.4 Test data

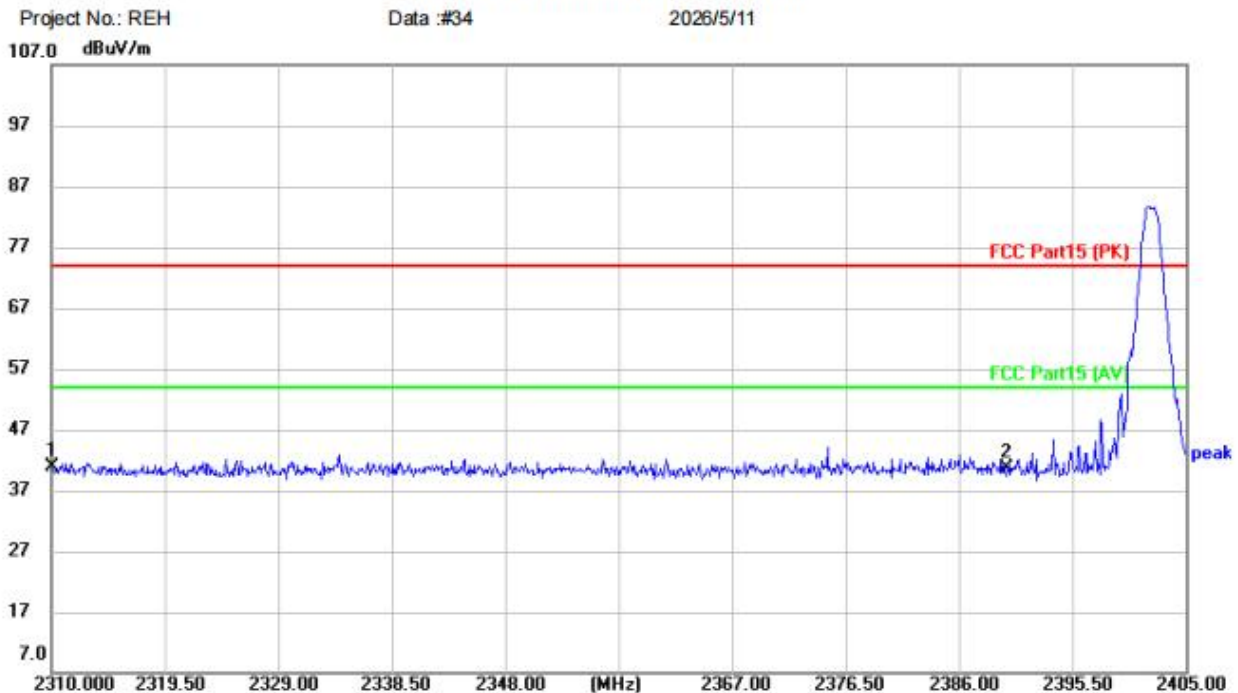
[Test mode: TX low channel]; [Polarity: Horizontal] ;[Power: DC3.7V]



Test Result: Pass

[Test mode:TX low channel]; [Polarity: Vertical] ;[Power: DC3.7V]

Radiated Emission Measurement



Site Polarization: **Vertical** Temperature: (C)

Limit: FCC Part15 (PK) Power: Humidity: %RH

EUT: Wireless Headset

M/N: Midnight Wireless Headset

Mode: 2.4G-2402

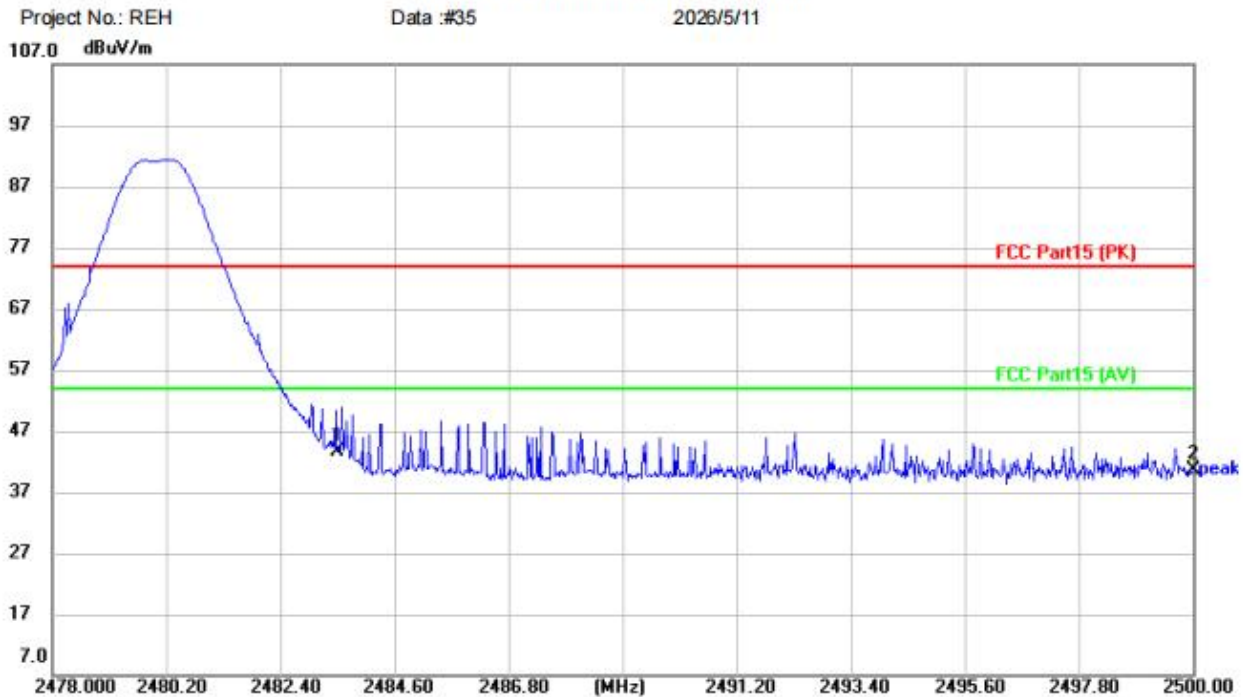
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	2310.000	50.29	-9.51	40.78	74.00	-33.22	peak	
2		2390.000	49.72	-9.19	40.53	74.00	-33.47	peak	

Test Result: Pass

[Test mode: TX High channel]; [Polarity: Horizontal] ;[Power: DC3.7V]

Radiated Emission Measurement



Site Polarization: **Horizontal** Temperature: (C)

Limit: FCC Part15 (PK) Power: Humidity: %RH

EUT: Wireless Headset

M/N: Midnight Wireless Headset

Mode: 2.4G-2480

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2483.500	52.68	-9.14	43.54	74.00	-30.46	peak	
2		2500.000	49.84	-9.11	40.73	74.00	-33.27	peak	

Test Result: Pass

[Test mode:TX High channel]; [Polarity: Vertical] ;[Power: DC3.7V]

Radiated Emission Measurement



Site: Polarization: **Vertical** Temperature: (C)

Limit: FCC Part15 (PK) Power: Humidity: %RH

EUT: Wireless Headset

M/N: Midnight Wireless Headset

Mode: 2.4G-2480

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2483.500	53.96	-9.14	44.82	74.00	-29.18	peak	
2		2500.000	49.76	-9.11	40.65	74.00	-33.35	peak	

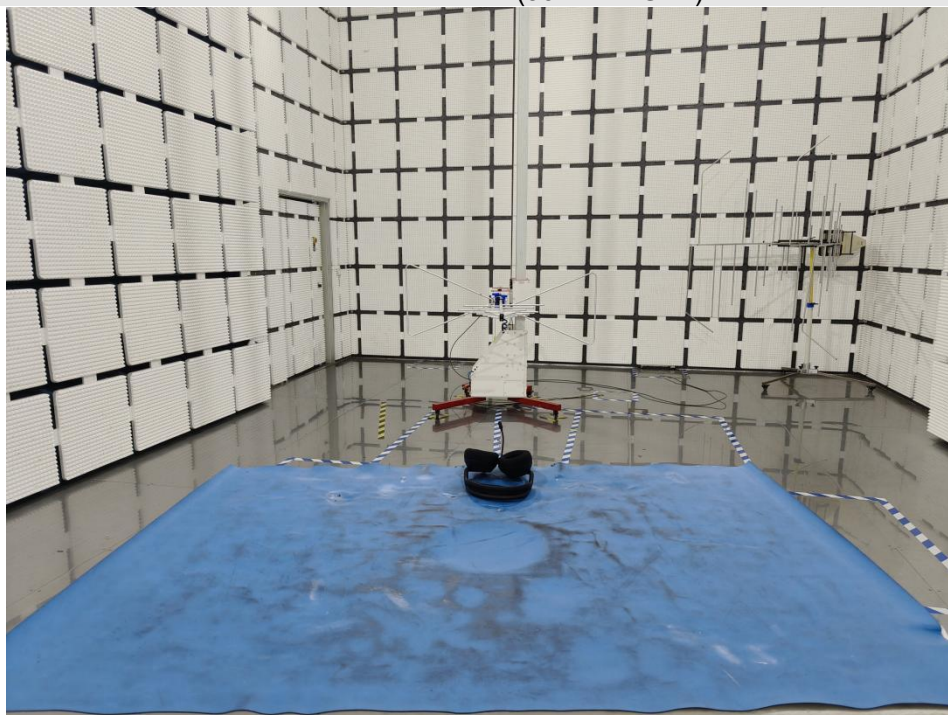
Test Result: Pass

Appendix A: photographs of test setup

Conducted emissions at AC power line (150kHz-30MHz)



Radiated Emissions (30MHz-1GHz)



Radiated Emissions (above 1GHz)



RF TEST



Appendix B: photographs of EUT

Reference to the test report no. BLA-EMC-202602-A4201

----END OF REPORT----

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