

FCC 15.247 2.4GHz Test Report

for

Tyson Bioresearch, Inc.

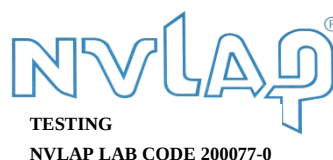
**5F., No. 16, 18, 20, 22, Kedong 3rd Rd., Zhunan
Township, Miaoli County 35053, Taiwan**

**Product : (1)Tyson Bio HS200-B Blood Glucose Meter
(2)Tyson Bio HS100-B Blood Glucose Meter
(3)Tyson Bio JS200-B Blood Glucose Meter
(4)Tyson Bio JS100-B Blood Glucose Meter
(5)rossmax HS200 Blood Glucose Meter
(6)rossmax JS200 Blood Glucose Meter**

**Model : (1)Tyson Bio HS200-B
(2)Tyson Bio HS100-B
(3)JS200-B (4)JS100-B
(5)rossmax HS200 (6)rossmax JS200**

FCC ID : 2AJZ6HS200B

**Prepared by : AUDIX Technology Corporation,
EMC Department**



The test report is based on a single evaluation of one sample of the above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab logo.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

TABLE OF CONTENTS

Description	Page
TEST REPORT	4
1. REVISION RECORD OF TEST REPORT	5
2. SUMMARY OF TEST RESULTS	6
3. GENERAL INFORMATION	7
3.1. Description of Application	7
3.2. Description of EUT	8
3.3. Reference Test Guidance	9
3.4. Antenna Information	9
3.5. EUT Specifications Assessed in Current Report	9
3.6. Descriptions of Key Components	9
3.7. Test Configuration	10
3.8. Output Power Setting	11
3.9. Tested Supporting System List	11
3.10. Setup Configuration	11
3.11. Operating Condition of EUT	12
3.12. Description of Test Facility	12
3.13. Measurement Uncertainty	13
4. MEASUREMENT EQUIPMENT LIST	14
4.1. Radiated Emission Measurement	14
4.2. RF Conducted Measurement	14
5. CONDUCTED EMISSION	15
6. RADIATED EMISSION	16
6.1. Block Diagram of Test Setup	16
6.2. Radiated Emission Limits	17
6.3. Test Procedure	18
6.4. Measurement Result Explanation	19
6.5. Test Results	19
7. DTS/OCCUPIED BANDWIDTH	20
7.1. Block Diagram of Test Setup	20
7.2. Specification Limits	20
7.3. Test Procedure	20
7.4. Test Results	20
8. MAXIMUM PEAK OUTPUT POWER	21
8.1. Block Diagram of Test Setup	21
8.2. Specification Limits	21
8.3. Test Procedure	22
8.4. Test Results	22
9. EMISSION LIMITATIONS	23
9.1. Block Diagram of Test Setup	23
9.2. Specification Limits	23
9.3. Test Procedure	23
9.4. Test Results	24
10. POWER SPECTRAL DENSITY	25
10.1. Block Diagram of Test Setup	25



Audix Technology Corp.
No. 491, Zhongfu Rd., Linkou Dist.,
New Taipei City 244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

10.2. Specification Limits.....	25
10.3. Test Procedure	25
10.4. Test Results	25
11. DEVIATION TO TEST SPECIFICATIONS	26

APPENDIX A TEST DATA AND PLOTS
APPENDIX B TEST PHOTOGRAPHS

TEST REPORT

Applicant : Tyson Bioresearch, Inc.
Manufacturer : Tyson Bioresearch, Inc.
EUT Description
(1)Product : (1)Tyson Bio HS200-B Blood Glucose Meter
(2)Tyson Bio HS100-B Blood Glucose Meter
(3)Tyson Bio JS200-B Blood Glucose Meter
(4)Tyson Bio JS100-B Blood Glucose Meter
(5)rossmax HS200 Blood Glucose Meter
(6)rossmax JS200 Blood Glucose Meter
(2)Model Number : (1)Tyson Bio HS200-B (2)Tyson Bio HS100-B (3)JS200-B
(4)JS100-B (5)rossmax HS200
(6)rossmax JS200
(3) Power Rating : DC 3V

Applicable Standards:

Title 47 CFR FCC Part 15 Subpart C

Audix Technology Corp. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report.

Audix Technology Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens and samples.

Date of Report: 2025. 06. 10

Reviewed by: Tina Huang (Tina Huang/Deputy Manager)

Approved by: Johnny Hsueh (Johnny Hsueh/Deputy Manager)



Audix Technology Corp.
No. 491, Zhongfu Rd., Linkou Dist.,
New Taipei City 244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

1. REVISION RECORD OF TEST REPORT

Edition No	Issued Date	Revision Summary	Report Number
0	2025. 06. 10	Original Report	EM-F250280

2. SUMMARY OF TEST RESULTS

Rule	Description	Results
15.207	Conducted Emission	N/A, NOTE 3
15.247(d)/15.205	Radiated Band Edge and Radiated Spurious Emission	PASS
15.247(a)(2)	DTS/Occupied Bandwidth	PASS
15.247(b)(3)	Maximum Peak Output Power	PASS
15.247(d)	Conducted Band Edges and Conducted Spurious Emission	PASS
15.247 (e)	Peak Power Spectral Density	PASS
15.203	Antenna Requirement	Compliance
Note: 1. Decision rule according to the limit of the test standard chapter, the test value is lower than the limit specified in the test chapter, and it is judged as Pass. 2. The uncertainties value is not used in determining the result. 3. The EUT only employs DC power for operation, so it is unnecessary to test.		

3. GENERAL INFORMATION

3.1. Description of Application

Applicant	Tyson Bioresearch, Inc. 5F., No. 16, 18, 20, 22, Kedong 3rd Rd., Zhunan Township, Miaoli County 35053, Taiwan
Manufacturer	Tyson Bioresearch, Inc. 5F., No. 16, 18, 20, 22, Kedong 3rd Rd., Zhunan Township, Miaoli County 35053, Taiwan
Product	(1)Tyson Bio HS200-B Blood Glucose Meter (2)Tyson Bio HS100-B Blood Glucose Meter (3)Tyson Bio JS200-B Blood Glucose Meter (4)Tyson Bio JS100-B Blood Glucose Meter (5)rossmax HS200 Blood Glucose Meter (6)rossmax JS200 Blood Glucose Meter
Model	(1)Tyson Bio HS200-B (2)Tyson Bio HS100-B (3)JS200-B (4)JS100-B (5)rossmax HS200 (6)rossmax JS200 The difference between all models is different in the USB Port, appearance and FW, others are the same, please refer to the following table.

Table: Model different list

Model	Product Name	Bluetooth Function	USB Port
(1)Tyson Bio HS200-B	Tyson Bio HS200-B Blood Glucose Meter	Support	Support
(2)Tyson Bio HS100-B	Tyson Bio HS100-B Blood Glucose Meter	Support	Not support
(3)JS200-B	Tyson Bio JS200-B Blood Glucose Meter	Support	Support
(4)JS100-B	Tyson Bio JS100-B Blood Glucose Meter	Support	Not support
(5)rossmax HS200	rossmax HS200 Blood Glucose Meter	Support	Support
(6)rossmax JS200	rossmax JS200 Blood Glucose Meter	Support	Support
Note: 1. The model rossmax-HS200 same as model Tysonbio HS200-B, except color of appearance. 2. The model rossmax JS200 same as model JS200-B, except color of appearance and FW. 3. The JS series model same as Tysonbio series model, except color of appearance and FW			

3.2. Description of EUT

Test Model	JS200-B		
Serial Number	N/A		
Software Version	N/A		
Power Rating	DC 3V		
RF Features	BLE		
Transmit Type	1T1R		
Sample Status	Trial sample		
Test Sample	Sample No.	Test Item	Firmware
	01	AC Conduction, RSE, RF Conducted	N/A
Date of Receipt	2025. 05. 13		
Date of Test	2025. 05. 19 ~ 06. 03		
Interface Ports of EUT	• Test Strip Slot x1 • USB Port x1		
Accessories Supplied	None		

Note: Pursuant ISO 17025:2017 section 7.8.2, Audix Technology Corp. does not assume responsibility for all EUT's information including RF features, transmit type, antenna information etc are provided by customer.

3.3. Reference Test Guidance

ANSI C63.10-2020+Cor.1-2023

3.4. Antenna Information

No.	Model	Manufacture	Antenna Type	Frequency (MHz)	Gain(dBi)
1.	MT-B1	Tyson Bioresearch Inc.	PIFA	2400-2480	-4.82

3.5. EUT Specifications Assessed in Current Report

Mode	Fundamental Range (MHz)	Channel Number	Modulation	Data Rate (Mbps)
BLE	2402-2480	40	GFSK	1

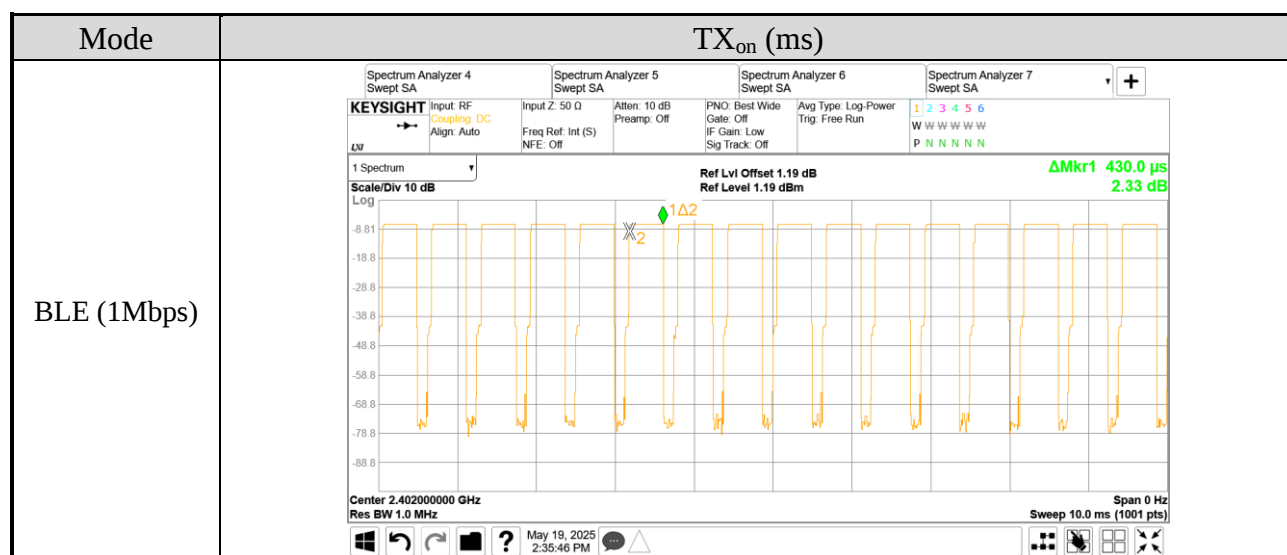
Channel List							
BLE							
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
37	2402	09	2422	18	2442	28	2462
00	2404	10	2424	19	2444	29	2464
01	2406	38	2426	20	2446	30	2466
02	2408	11	2428	21	2448	31	2468
03	2410	12	2430	22	2450	32	2470
04	2412	13	2432	23	2452	33	2472
05	2414	14	2434	24	2454	34	2474
06	2416	15	2436	25	2456	35	2476
07	2418	16	2438	26	2458	36	2478
08	2420	17	2440	27	2460	39	2480

3.6. Descriptions of Key Components

None

3.7. Test Configuration

Mode	TX _{on} (ms)	1/ TX _{on} (kHz)	VBW(>1/ TX _{on}) (kHz)
BLE (1Mbps)	0.430	2.326	3.0



Item		Mode	Data Rate	Test Channel
Radiated Test Case	Radiated Spurious Emission(30MHz~1GHz)	BLE	1Mbps	17
	Radiated Band Edge ^{Note1}	BLE	2Mbps	37/39
	Radiated Spurious Emission ^{Note1}	BLE	1Mbps	37/17/39

Item		Mode	Data Rate	Test Channel
Conducted Test Case	DTS/occupied Bandwidth	BLE	1Mbps	37/17/39
	Peak Output Power	BLE	1Mbps	37/17/39
	Band Edge	BLE	1Mbps	37/39
	Spurious Emission	BLE	1Mbps	37/17/39
	Peak Power Spectral Density	BLE	1Mbps	37/17/39

Note 1: ☐ Mobile Device ☒ Portable Device

and 3 axis were assessed. The worst scenario for Radiated Spurious Emission as follow:

☒ Lie ☐ Side ☐ Stand

3.8. Output Power Setting

Mode	Centre Frequency (MHz)	Power Setting
BLE	2402	Default
	2440	Default
	2480	Default

3.9. Tested Supporting System List

3.9.1. Support Peripheral Unit

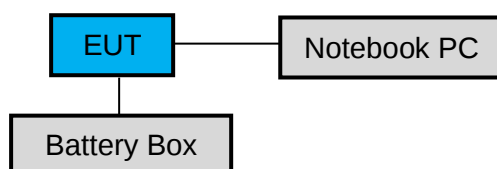
No.	Product	Brand	Model No.	Serial No.	Approval
1.	Notebook Computer	hp	TPN-Q189	5CD8175992	Contains FCC ID:PD93168NG
2.	Battery Box	N/A	N/A	N/A	N/A

3.9.2. Cable Lists

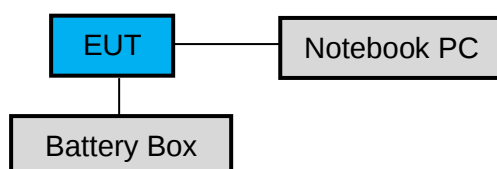
No.	Cable Description Of The Above Support Units
1.	USB Cable: Unshielded, Detachable, 1.5m Adapter: hp, M/N PPP-012C-S, DC Cord: Shielded, Undetachable, 1.8m, Bonded a ferrite core AC Power Cord: Unshielded, Detachable, 1.5m
2.	Cable: Unshielded, Undetachable, 0.17m

3.10. Setup Configuration

3.10.1. EUT Configuration for Radiated Emission



3.10.2. EUT Configuration for RF Conducted Test Items



3.11. Operating Condition of EUT

Test program “nRFgo Studio” is used for enabling EUT RF function under continue transmitting and choosing channel.

3.12. Description of Test Facility

Name of Test Firm	Audix Technology Corporation / EMC Department No. 491, Zhongfu Rd., Linkou Dist., New Taipei City 244, Taiwan Tel: +886-2-26092133 Fax: +886-2-26099303 Website : www.audixtech.com Contact e-mail: attemc_report@audixtech.com
Accreditations	The laboratory is accredited by following organizations under ISO/IEC 17025:2017 (1) NVLAP(USA) NVLAP Lab Code 200077-0 (2) TAF(Taiwan) No. 1724
Test Facilities	FCC OET Designation Number under APEC MRA by NCC is : TW1724 ISED CAB Identifier Number under APEC TEL MRA by NCC is TW1724 (1) No.1 3m Semi Anechoic Chamber

3.13.Measurement Uncertainty

The measurement uncertainty levels have been estimated as specified in ETSI TR 100 028-2001

Test Items/Facilities			Frequency Range	Uncertainty
Conduction Test	☐	No. 7 Shielded Room	9kHz-150kHz	±3.7dB
			150kHz-30MHz	±3.4dB
	☒	No. 8 Shielded Room	9kHz-150kHz	±3.7dB
			150kHz-30MHz	±3.4dB
Radiation Test	☒	No.1 3m Semi Anechoic Chamber	30MHz-200MHz, 3m, Horizontal	±4.0dB
			200MHz-1000MHz, 3m, Horizontal	±4.0dB
			30MHz-200MHz, 3m, Vertical	±4.8dB
			200MHz-1000MHz, 3m, Vertical	±4.5dB
			1GHz-6GHz, 3m	±4.2dB
			6GHz-18GHz, 3m	±4.0dB
	☐	No.3 3m Semi Anechoic Chamber	30MHz-200MHz, 3m, Horizontal	±3.9dB
			200MHz-1000MHz, 3m, Horizontal	±3.9dB
			30MHz-200MHz, 3m, Vertical	±4.6dB
			200MHz-1000MHz, 3m, Vertical	±4.3dB
			1GHz-6GHz, 3m	±4.6dB
			6GHz-18GHz, 3m	±4.1dB
	☐	No.4 3m Semi Anechoic Chamber	30MHz-200MHz, 3m, Horizontal	±4.4dB
			200MHz-1000MHz, 3m, Horizontal	±4.2dB
			30MHz-200MHz, 3m, Vertical	±4.9dB
			200MHz-1000MHz, 3m, Vertical	±5.1dB
			1GHz-6GHz, 3m	±4.4dB
			6GHz-18GHz, 3m	±4.0dB
	☐	No.5 3m Semi Anechoic Chamber	30MHz-200MHz, 3m, Horizontal	±4.2dB
			200MHz-1000MHz, 3m, Horizontal	±4.1dB
			30MHz-200MHz, 3m, Vertical	±4.9dB
			200MHz-1000MHz, 3m, Vertical	±4.6dB
			1GHz-6GHz, 3m	±4.4dB
			6GHz-18GHz, 3m	±4.0dB
		Radiated emissions (18GHz-40GHz)		18GHz-40GHz, 3m

Remark : Uncertainty = $ku_c(y)$

Test Items	Uncertainty
Bandwidth	±0.48%
Maximum peak output power	± 0.8dB
Power spectral density	±0.5dB
Conducted Emission Limitations	±1.24 dB

4. MEASUREMENT EQUIPMENT LIST

4.1. Radiated Emission Measurement

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A-526	MY53400071	2024.08.12	1 Year
2.	Spectrum Analyzer	Keysight	N9020B	MY57120357	2025.02.04	1 Year
3.	Test Receiver	R&S	ESCS30	100338	2024.06.18	1 Year
4.	Amplifier	EMCI	EMC9145	980751	2024.07.09	1 Year
5.	Amplifier	HP	8447D	2944A06305	2024.12.16	1 Year
6.	Microwave Amplifier	HP	8449B	3008A02678	2025.02.12	1 Year
7.	Microwave Amplifier	Keysight	83051A	MY56480113	2024.09.11	1 Year
8.	Loop Antenna	Electro-Metrics	EMCI-LPA600	287	2024.07.31	1 Year
9.	Bilog Antenna	TESEQ	CBL6112D	33821	2025.02.08	1 Year
10.	Horn Antenna	EMCO	3115	9112-3775	2025.05.06	1 Year
11.	Horn Antenna	COM-POWER	AH-840	101092	2025.01.09	1 Year
12.	2.4GHz Notch Filter	K&L Microwave	7NSL10-2441.5/ E130.5-O/O	1	2025.04.10	1 Year
13.	3GHz Notch Filter	Microwave	H3G018G1	484796	2025.04.10	1 Year
14.	Coaxial Cable	MIYAZAKI	5D2W	RE-11	2025.01.03	1 Year
15.	Coaxial Cable	HUBER+SUHNER	RG223/U	RE-33	2025.03.01	1 Year
16.	Coaxial Cable	HUBER+SUHNER	SUCOFLEX 106	RE-14	2025.01.03	1 Year
17.	Coaxial Cable	HUBER+SUHNER	SUCOFLEX 102	RE-30	2024.08.20	1 Year
18.	Digital Thermo-Hygro Meter	iMax	HTC-1	No.1 3m A/C	2025.04.09	1 Year
19.	Test Software	Audix	e3	V9 18621a	N.C.R.	N.C.R.

4.2. RF Conducted Measurement

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Keysight	N9010B	MY65100100	2025.05.03	1 Year
2.	Digital Thermo-Hygro Meter	iMax	HTC-1	RF-03	2025.04.09	1 Year



Audix Technology Corp.
No. 491, Zhongfu Rd., Linkou Dist.,
New Taipei City 244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

5. CONDUCTED EMISSION

【The EUT only employs uses DC power for operation, no conductive emission limits are required according to FCC Part 15 Section §15.207】

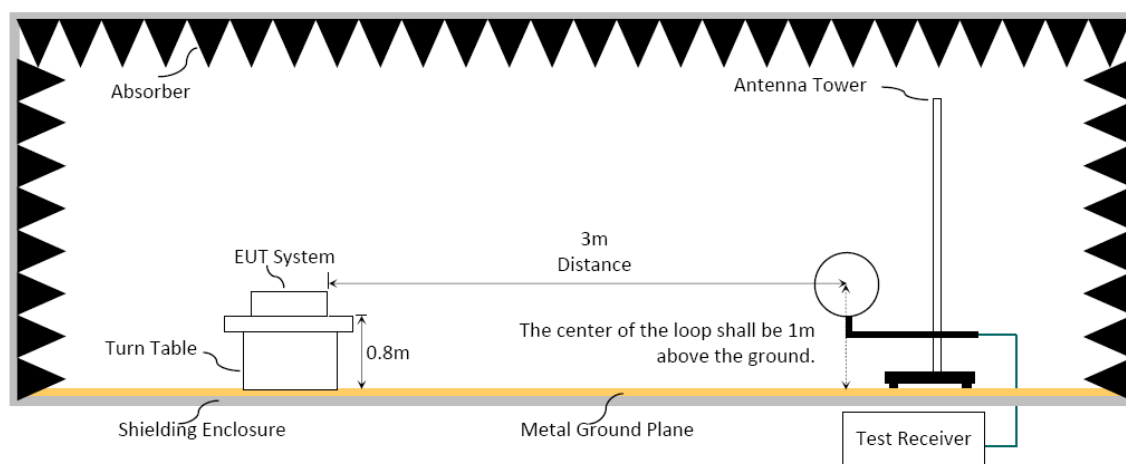
6. RADIATED EMISSION

6.1. Block Diagram of Test Setup

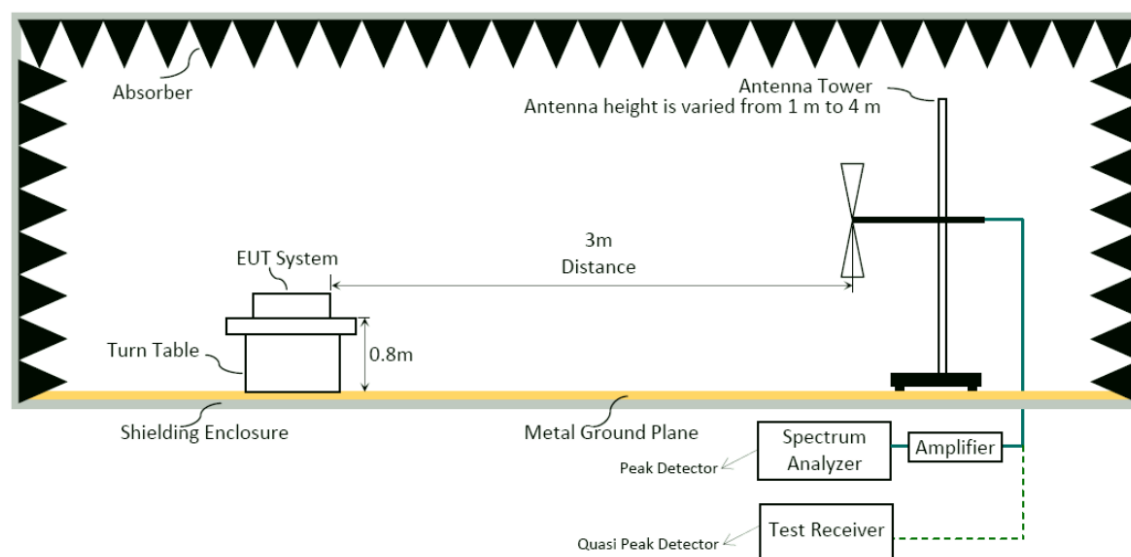
6.1.1. Block Diagram of EUT

Indicated as section 3.10

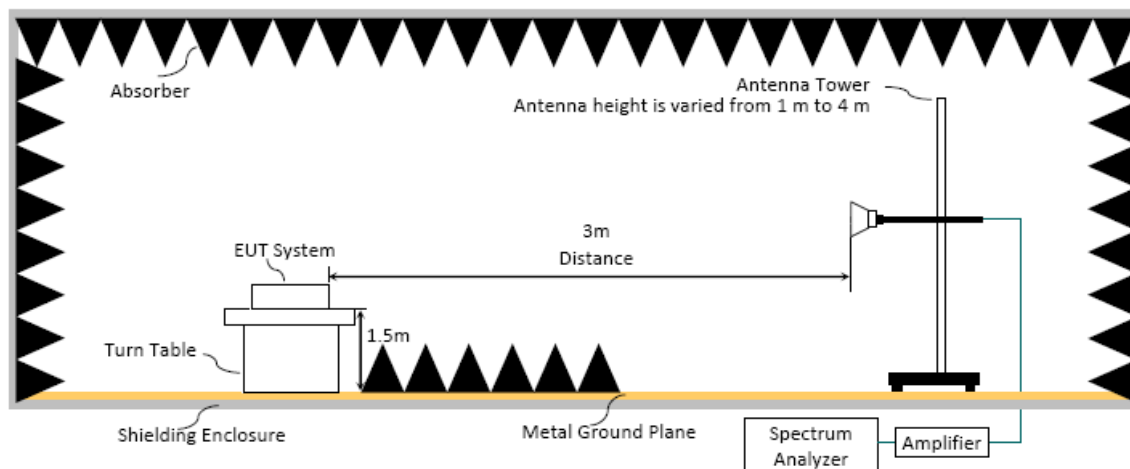
6.1.2. Setup Diagram for 9kHz-30MHz



6.1.3. Setup Diagram for 30-1000MHz



6.1.4. Setup Diagram for above 1GHz



6.2. Radiated Emission Limits

In any 100kHz bandwidth outside the frequency band, the radio frequency power produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified as below.

Frequency (MHz)	Distance(m)	Limits	
		dBμV/m	μV/m
0.009 - 0.490	300	67.6-20 log f(kHz)	2400/f kHz
0.490 - 1.705	30	87.6-20 log f(kHz)	24000/f kHz
1.705 - 30	30	29.5	30
30 - 88	3	40.0	100
88- 216	3	43.5	150
216- 960	3	46.0	200
Above 960	3	54.0	500
Above 1000	3	74.0 dBμV/m (Peak) 54.0 dBμV/m (Average)	

Remark : (1) $\text{dB}\mu\text{V/m} = 20 \log (\mu\text{V/m})$

- (2) The tighter limit applies to the edge between two frequency bands.
- (3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- (4) Fundamental and emission fall within operation band are exempted from this section.
- (5) Pursuant to ANSI C63.10: 6.6.4.3, if the maximized peak measured value complies with the average limit, then it is unnecessary to perform an average measurement.

6.3. Test Procedure

Frequency Range 9kHz~30MHz:

The EUT setup on the turntable which has 0.8 m height to the ground. The turn table rotated 360 degrees and antenna fixed to 1 m to find the maximum emission level. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2020+Cor.1-2023 regulation.

- (1) RBW = 9kHz with peak and average detector.
- (2) Detector: average and peak (9kHz-490kHz)
Q.P. (490kHz-30MHz)

Frequency Range 30MHz ~ 25GHz:

The EUT setup on the turn table which has 80cm (for 30-1000MHz) and 1.5m (for above 1GHz) height to the ground. The turn table rotated 360 degrees and antenna varied from 1 m to 4 m to find the maximum emission level. Both horizontal and vertical polarization are required. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2020+Cor.1-2023 regulation.

Frequency below 1GHz:

Spectrum Analyzer is used for pre-testing with following setting:

- (1) RBW = 120KHz
- (2) VBW $\geq 3 \times$ RBW.
- (3) Detector = Peak.
- (4) Sweep time = auto.
- (5) Trace mode = max hold.
- (6) Allow sweeps to continue until the trace stabilizes.

Note 1: When peak-detected value is lower than limit that the measurement using the Q.P. detector is not required, otherwise using Q.P. for final measurement.

Note 2: When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds.

Frequency above 1GHz to 10th harmonic (up to 25 GHz):

Peak Detector:

- (1) RBW = 1MHz
- (2) VBW $\geq 3 \times$ RBW.
- (3) Detector = Peak.
- (4) Sweep time = auto.
- (5) Trace mode = max hold.
- (6) Allow sweeps to continue until the trace stabilizes.

Note: When peak-detected value is lower than limit that the measurement using the average detector is not required, otherwise using average detector for final measurement.

Average Detector:

■ Option 1:

(1) RBW = 1MHz

(2) VBW $\geq 1/T$. (Duty Cycle $< 98\%$, when duty cycle presented in section 3.7)

Modulation Type	VBW Setting (VBW $\geq 1/T$)
BLE (1Mbps)	3kHz

(3) VBW = 10Hz (Duty Cycle $\geq 98\%$, when duty cycle presented in section 3.7)

(4) Detector = Peak.

(5) Sweep time = auto.

(6) Trace mode = max hold.

(7) Allow sweeps to continue until the trace stabilizes.

□ Option 2:

Average Emission Level = Peak Emission Level + D.C.C.F.

6.4. Measurement Result Explanation

■ Peak Emission Level (dB μ V/m) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB) + Reading (dB μ V).

■ Average Emission Level (dB μ V/m) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB) + Reading (dB μ V).

□ Average Emission Level (dB μ V/m) = Peak Emission Level (dB μ V/m) + DCCF (dB)
Duty Cycle Correction Factor (DCCF) (dB) = $20\log(TX_{on}/TX_{on+off})$ presented in section 3.7.

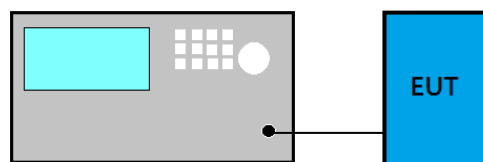
□ ERP (dBm) = Peak Emission Level (dB μ V/m) - 95.2dB - 2.14dB

6.5. Test Results

Please refer to Appendix A.

7. DTS/OCCUPIED BANDWIDTH

7.1. Block Diagram of Test Setup



7.2. Specification Limits

The minimum 6dB bandwidth shall be at least 500kHz.

7.3. Test Procedure

Following measurement procedure is reference to ANSI C63.10-2020+Cor.1-2023:

For DTS Bandwidth

- (1) Set RBW shall be in the range of 1% to 5% of the OBW, but not less than 100kHz.
- (2) Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$.
- (3) Detector = Peak.
- (4) Trace mode = max hold.
- (5) Sweep = auto couple.
- (6) Allow the trace to stabilize.
- (7) Setting channel bandwidth function x to -6dB power to record the final bandwidth..

For 99% Occupied Bandwidth

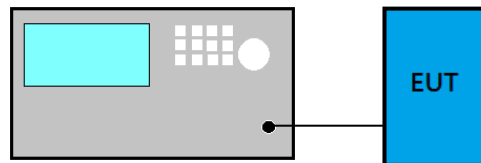
- (1) Set Span range 1.5~5 times the OBW
- (2) Set RBW close to 1% to 5% of OBW.
- (3) Set $\text{VBW} \geq 3 \times \text{RBW}$.
- (4) Detector = Peak.
- (5) Trace mode = Max hold
- (6) Sweep = Auto couple.
- (7) Allow the trace to stabilize.

7.4. Test Results

Please refer to Appendix A

8. MAXIMUM PEAK OUTPUT POWER

8.1. Block Diagram of Test Setup



8.2. Specification Limits

The Limits of maximum Peak Output Power for digital modulation in 2400-2483.5MHz is : 1Watt. (30dBm), and E.I.R.P.: 4Watt (36dBm)

8.3. Test Procedure

Following measurement procedure is reference to ANSI C63.10-2020+Cor.1-2023:

☐ **PKPM1 Peak power meter method:**

EUT is connected to power sensor and record the maximum output power.

☒ **Maximum peak conducted output power method:**

- (1) Set the RBW $\geq$ DTS bandwidth
- (2) Set VBW $\geq 3 \times$ RBW
- (3) Set span $\geq 3 \times$ RBW.
- (4) Sweep time = auto couple
- (5) Detector = peak.
- (6) Trace mode = max hold.
- (7) Allow trace to fully stabilize.
- (8) Use peak marker function to determine the peak amplitude level.

☐ **Method AVGPM (Measurement using an RF average power meter):**

EUT is connected to power sensor and record the maximum average output power and duty cycle factor is added when duty cycle presented in section 3.7 is $< 98\%$.

☐ **Method AVGSA-2 (Spectrum channel power)**

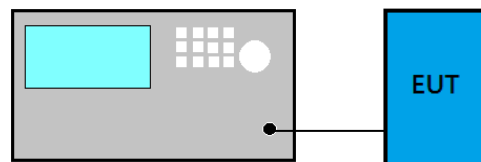
- (1) Set span to at least 1.5 times the OBW
- (2) Set RBW = 1 -5% of OBW
- (3) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- (4) Detector = RMS.
- (5) Trace mode = trace average at least 100 traces
- (6) Sweep = auto couple.
- (7) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function with band limits set equal to the OBW band edges.
- (8) Duty cycle factor is added when duty cycle presented in section 3.7 is $< 98\%$.

8.4. Test Results

Please refer to Appendix A

9. EMISSION LIMITATIONS

9.1. Block Diagram of Test Setup



9.2. Specification Limits

In any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, that the required attenuation shall be 30 dB instead of 20 dB.

Attenuation below the general limits specified in Section 15.209(a)/RSS-Gen Section 8.9 table 4 is not required. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205(a)/RSS-Gen Section 8.10 table 6, must also comply with the radiated emission limits specified in Section 15.209(a)/RSS-Gen Section 8.9 table 4 (See Section 15.205(c)).

9.3. Test Procedure

Following measurement procedure is reference to ANSI C63.10-2020+Cor.1-2023:

■ Reference Level

- (1) Set analyzer center frequency to DTS channel center frequency.
- (2) Set the span to 1.5 times the DTS bandwidth.
- (3) Set the RBW to: 100 kHz.
- (4) Set the VBW $\geq 3 \times$ RBW.
- (5) Detector = peak.
- (6) Sweep time = auto couple.
- (7) Trace mode = max hold.
- (8) Allow trace to fully stabilize to find the max PSD as reference level.

■ Emission Level Measurement

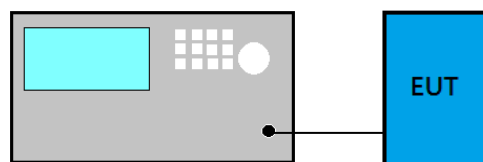
- (1) Set analyzer center frequency to DTS channel center frequency.
- (2) Set the span to 1.5 times the DTS bandwidth.
- (3) Set the RBW to: 100 kHz.
- (4) Set the VBW $\geq 3 \times$ RBW.
- (5) Detector = peak.
- (6) Sweep time = auto couple.
- (7) Trace mode = max hold.
- (8) Allow trace to fully stabilize to find the max level.

9.4. Test Results

Please refer to Appendix A

10. POWER SPECTRAL DENSITY

10.1. Block Diagram of Test Setup



10.2. Specification Limits

The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band.

10.3. Test Procedure

Following measurement procedure is reference to ANSI C63.10-2020+Cor.1-2023:

■ Method PKPSD (peak PSD)

- (1) Set analyzer center frequency to DTS channel center frequency.
- (2) Set the span to 1.5 times the DTS bandwidth.
- (3) Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- (4) Set the VBW $\geq 3 \times \text{RBW}$.
- (5) Detector = peak.
- (6) Sweep time = auto couple.
- (7) Trace mode = max hold.
- (8) Allow trace to fully stabilize.
- (9) Use the peak marker function to determine the maximum amplitude level.
- (10) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

□ Method AVGPSD-2

- (1) Using peak PSD procedure step 1 to step 4.
- (2) Detector = RMS detector
- (3) Sweep time = auto couple
- (4) Trace mode = trace averaging over a minimum of 100 traces
- (5) Use the peak marker function to determine the maximum amplitude level.
- (6) Duty cycle factor is added when duty cycle presented in section 3.7 < 98%.
- (7) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

10.4. Test Results

Please refer to Appendix A



Audix Technology Corp.
No. 491, Zhongfu Rd., Linkou Dist.,
New Taipei City 244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

11.DEVIATION TO TEST SPECIFICATIONS

【NONE】



Audix Technology Corp.
No. 491, Zhongfu Rd., Linkou Dist.,
New Taipei City 244, Taiwan

APPENDIX A

Tel: +886 2 26099301
Fax: +886 2 26099303

APPENDIX A

TEST DATA AND PLOTS

(Model: Tyson Bio HS200-B)

TABLE OF CONTENTS

A.1 RADIATED EMISSION	2
A.1.1 Emissions within Restricted Frequency Bands.....	2
A.1.2 Emissions outside the frequency band:.....	7
A.1.3 Emissions in Non-restricted Frequency Bands:.....	8
A.2 DTS/OCCUPIED BANDWIDTH.....	9
A.2.1 DTS/Occupied Bandwidth Result.....	9
A.2.2 Measurement Plots	10
A.3 MAXIMUM PEAK OUTPUT POWER	11
A.3.1 Peak Output Power	11
A.3.2 Measurement Plots	11
A.4 EMISSION LIMITATIONS	12
A.5 POWER SPECTRAL DENSITY	14
A.5.1 Power Spectral Density Result	14
A.5.2 Measurement Plots	14

A.1 RADIATED EMISSION

Test Date	2025/06/02	Temp./Hum.	25°C/62%
Test Voltage	DC 3V (Via Battery)	Tested By	Harry Huang

A.1.1 Emissions within Restricted Frequency Bands

A.1.1.1 Frequency 9kHz~30MHz

The emissions (9kHz~30MHz) not reported for there is no emission be found.

A.1.1.2 Frequency Below 1GHz

Mode	BLE (1Mbps)	Frequency	TX 2440MHz
------	-------------	-----------	------------

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Reading level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
50.500	13.95	1.79	26.45	42.09	31.38	40.00	8.62	Peak
132.000	17.50	3.00	26.08	41.06	35.48	43.50	8.02	Peak
204.000	15.47	3.72	25.78	36.52	29.93	43.50	13.57	Peak
360.000	20.61	5.55	26.11	37.13	37.18	46.00	8.82	Peak
492.000	23.00	6.88	27.03	28.79	31.63	46.00	14.37	Peak
652.500	24.44	7.41	27.40	29.36	33.80	46.00	12.20	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Reading level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
57.000	12.56	1.95	26.42	45.86	33.96	40.00	6.04	Peak
156.000	16.04	3.25	25.96	44.66	37.99	43.50	5.51	Peak
288.000	19.03	4.57	25.62	38.13	36.11	46.00	9.89	Peak
384.000	21.10	5.86	26.30	37.35	38.01	46.00	7.99	Peak
600.000	24.28	7.13	27.38	31.26	35.29	46.00	10.71	Peak
720.000	24.58	7.75	27.37	30.23	35.19	46.00	10.81	Peak

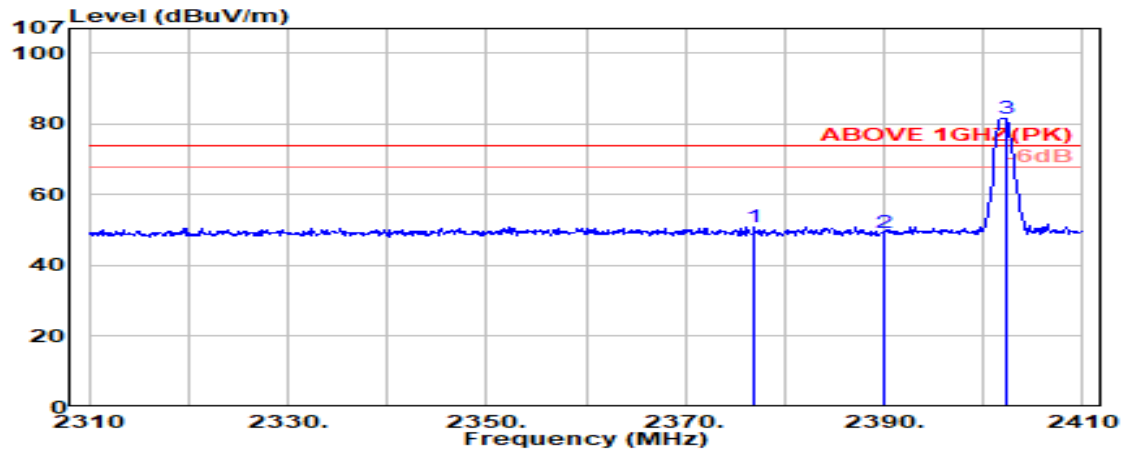
Audix Technology Corp.
No. 491, Zhongfu Rd., Linkou Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

A.1.1.3 Frequency Above 1 GHz to 10th harmonics

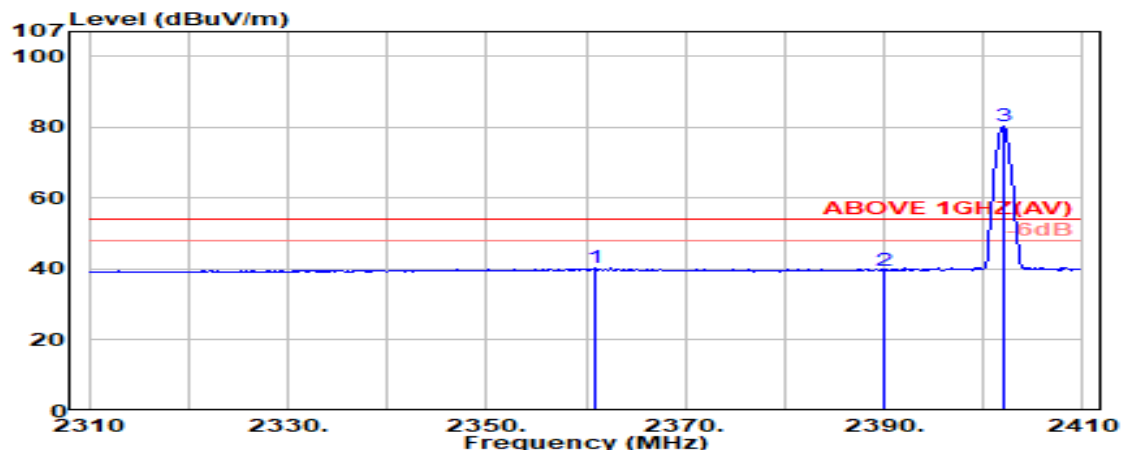
Band Edge:

Mode	BLE (1Mbps)	Frequency	TX 2402MHz
------	-------------	-----------	------------



Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2376.900	28.19	5.68	33.46	50.62	51.03	74.00	22.97	Peak
2390.000	28.14	5.70	33.47	48.97	49.35	74.00	24.65	Peak
@ 2402.200	28.11	5.72	33.47	81.21	81.57	---	---	Peak

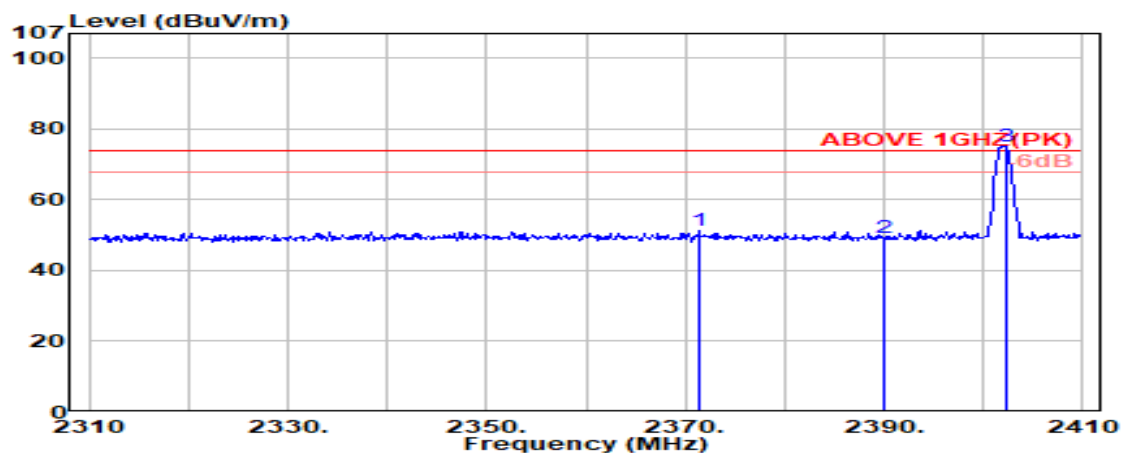


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2360.900	28.26	5.66	33.46	39.90	40.36	54.00	13.64	Average
2390.000	28.14	5.70	33.47	39.26	39.63	54.00	14.37	Average
@ 2402.000	28.11	5.72	33.47	79.90	80.26	---	---	Average

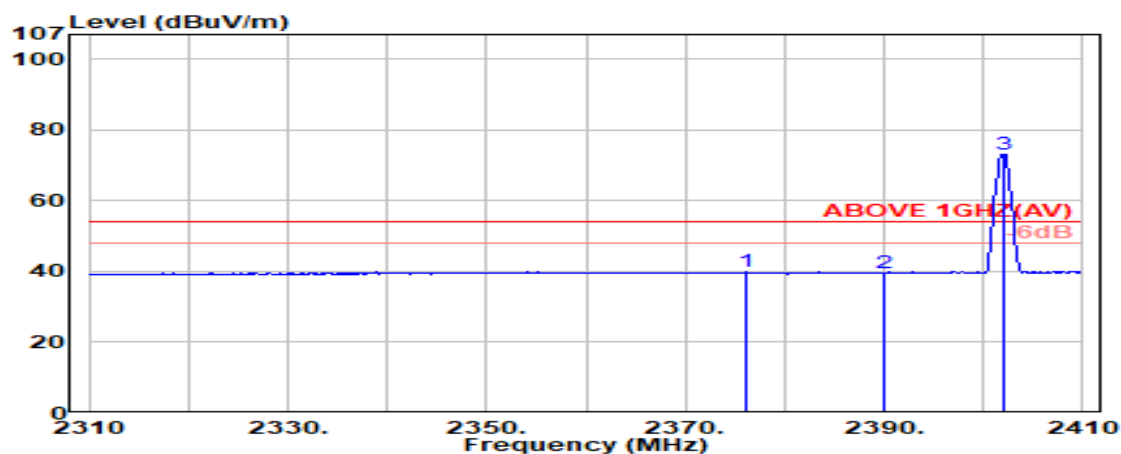
Remark: The “@” means fundamental frequency, it is ignored in this section.

Mode	BLE (1Mbps)	Frequency	TX 2402MHz
------	-------------	-----------	------------



Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2371.400	28.21	5.68	33.46	50.66	51.09	74.00	22.91	Peak
2390.000	28.14	5.70	33.47	48.72	49.09	74.00	24.91	Peak
@ 2402.300	28.11	5.72	33.47	74.75	75.11	---	---	Peak

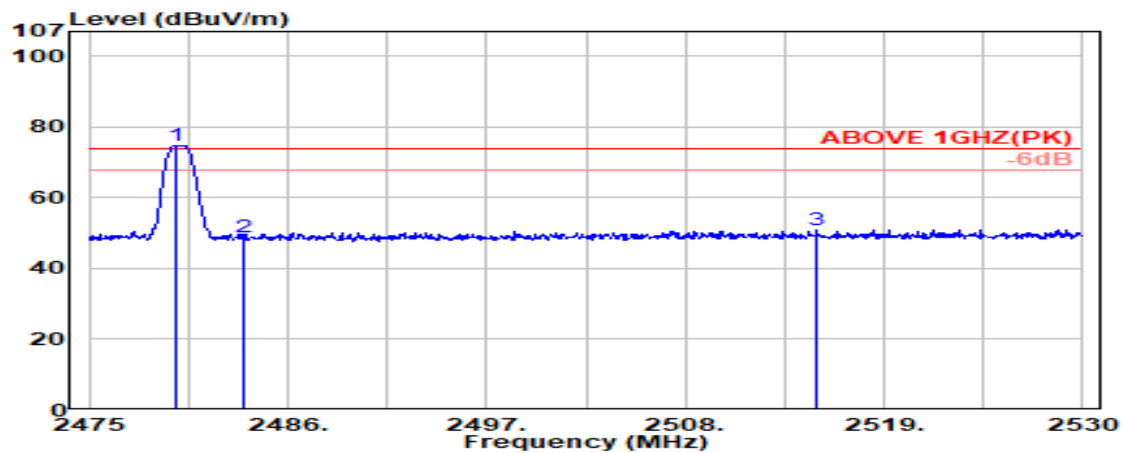


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2376.100	28.20	5.68	33.46	39.47	39.89	54.00	14.11	Average
2390.000	28.14	5.70	33.47	39.16	39.54	54.00	14.46	Average
@ 2402.100	28.11	5.72	33.47	72.91	73.27	---	---	Average

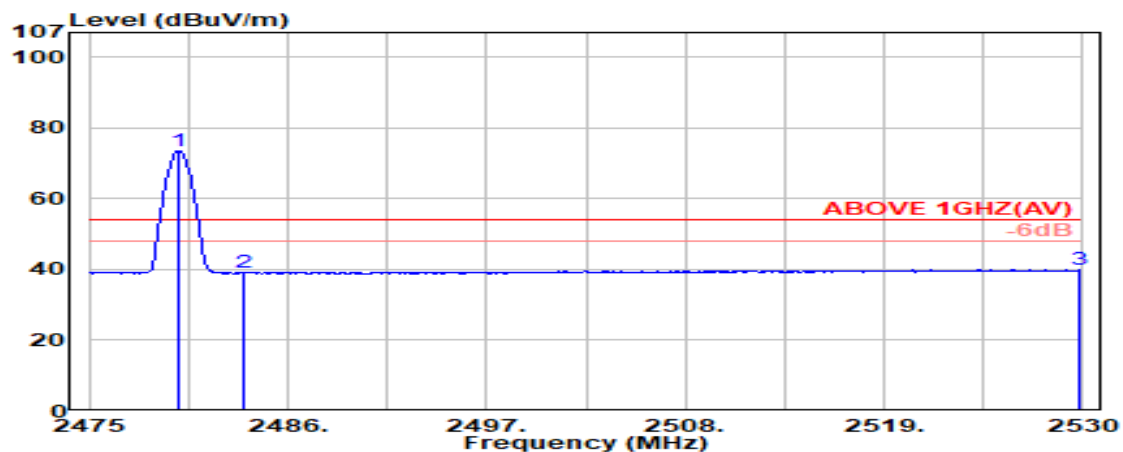
Remark: The “@” means fundamental frequency, it is ignored in this section.

Mode	BLE (1Mbps)	Frequency	TX 2480MHz
------	-------------	-----------	------------



Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Detector
@	2479.800	28.36	5.82	33.49	74.19	74.89	---	---	Peak
	2483.500	28.37	5.83	33.49	48.05	48.76	74.00	25.24	Peak
	2515.250	28.49	5.87	33.49	50.17	51.04	74.00	22.96	Peak

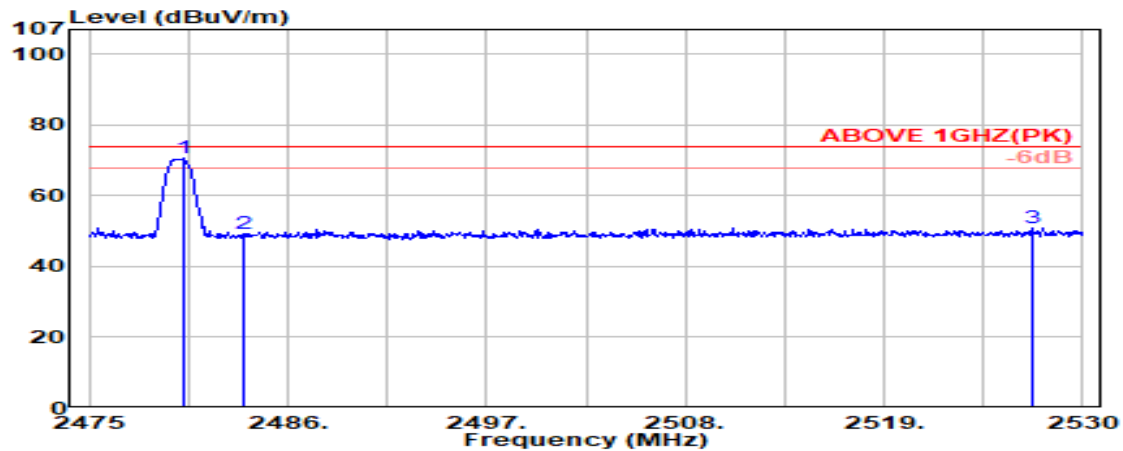


Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Detector
@	2480.000	28.36	5.82	33.49	72.96	73.66	---	---	Average
	2483.500	28.37	5.83	33.49	38.37	39.08	54.00	14.92	Average
	2529.750	28.58	5.88	33.49	39.01	39.98	54.00	14.02	Average

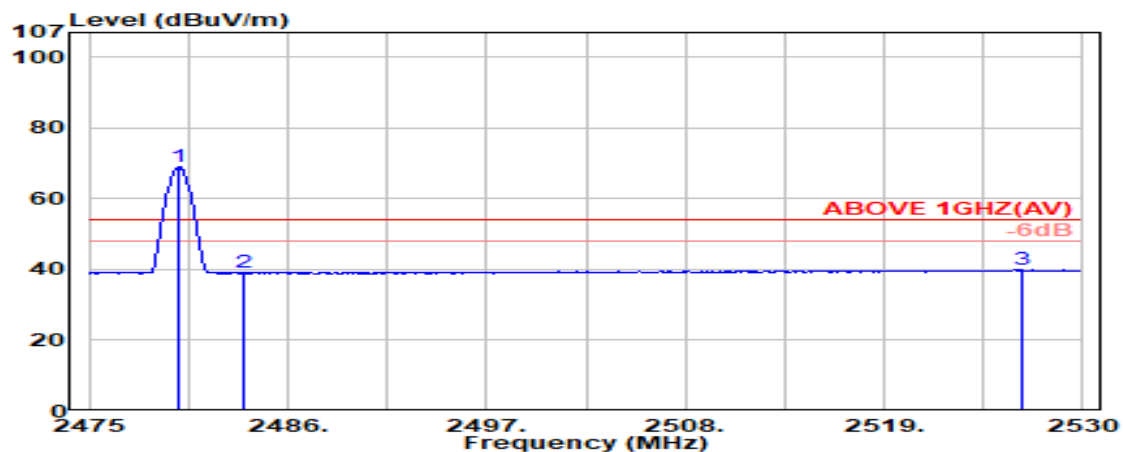
Remark: The “@” means fundamental frequency, it is ignored in this section.

Mode	BLE (1Mbps)	Frequency	TX 2480MHz
------	-------------	-----------	------------



Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2480.200	28.36	5.82	33.49	69.84	70.53	---	---	Peak
2483.500	28.37	5.83	33.49	48.46	49.16	74.00	24.84	Peak
2527.200	28.56	5.88	33.49	49.98	50.93	74.00	23.07	Peak



Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2479.950	28.36	5.82	33.49	68.41	69.10	---	---	Average
2483.500	28.37	5.83	33.49	38.29	39.00	54.00	15.00	Average
2526.600	28.56	5.88	33.49	38.95	39.90	54.00	14.10	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

A.1.2 Emissions outside the frequency band:

The emissions (up to 25GHz) not reported for there is no emission be found.

Mode	BLE (1Mbps)	Frequency	TX 2402MHz
------	-------------	-----------	------------

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Reading level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4804.000	32.91	8.02	33.27	40.09	47.76	54.00	6.24	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Reading level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4804.000	32.92	8.02	33.27	41.90	49.58	54.00	4.42	Peak

Mode	BLE (1Mbps)	Frequency	TX 2440MHz
------	-------------	-----------	------------

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Reading level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4880.000	33.16	8.08	33.25	41.06	49.05	54.00	4.95	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Reading level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4880.000	33.16	8.08	33.25	41.73	49.72	54.00	4.28	Average
4880.000	33.16	8.08	33.25	46.29	54.28	74.00	19.72	Peak

Mode	BLE (1Mbps)	Frequency	TX 2480MHz
------	-------------	-----------	------------

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Reading level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4960.000	33.24	8.13	33.23	38.56	46.70	54.00	7.30	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Reading level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4960.000	33.24	8.13	33.23	41.11	49.25	54.00	4.75	Peak

Audix Technology Corp.

No. 491, Zhongfu Rd., Linkou Dist.,

New Taipei City 244, Taiwan

Tel: +886 2 26099301

Fax: +886 2 26099303

A.1.3 Emissions in Non-restricted Frequency Bands:

Pursuant to ANSI C63.10:2013 that emission levels below the FCC 15.209(a) general radiated emissions limits is not required.

A.2 DTS/OCCUPIED BANDWIDTH

Test Date	2025/05/19	Temp./Hum.	25°C/61%
Cable Loss	1.19dB	Tested By	Harry Huang
Test Voltage	DC 3V (Via Battery)		

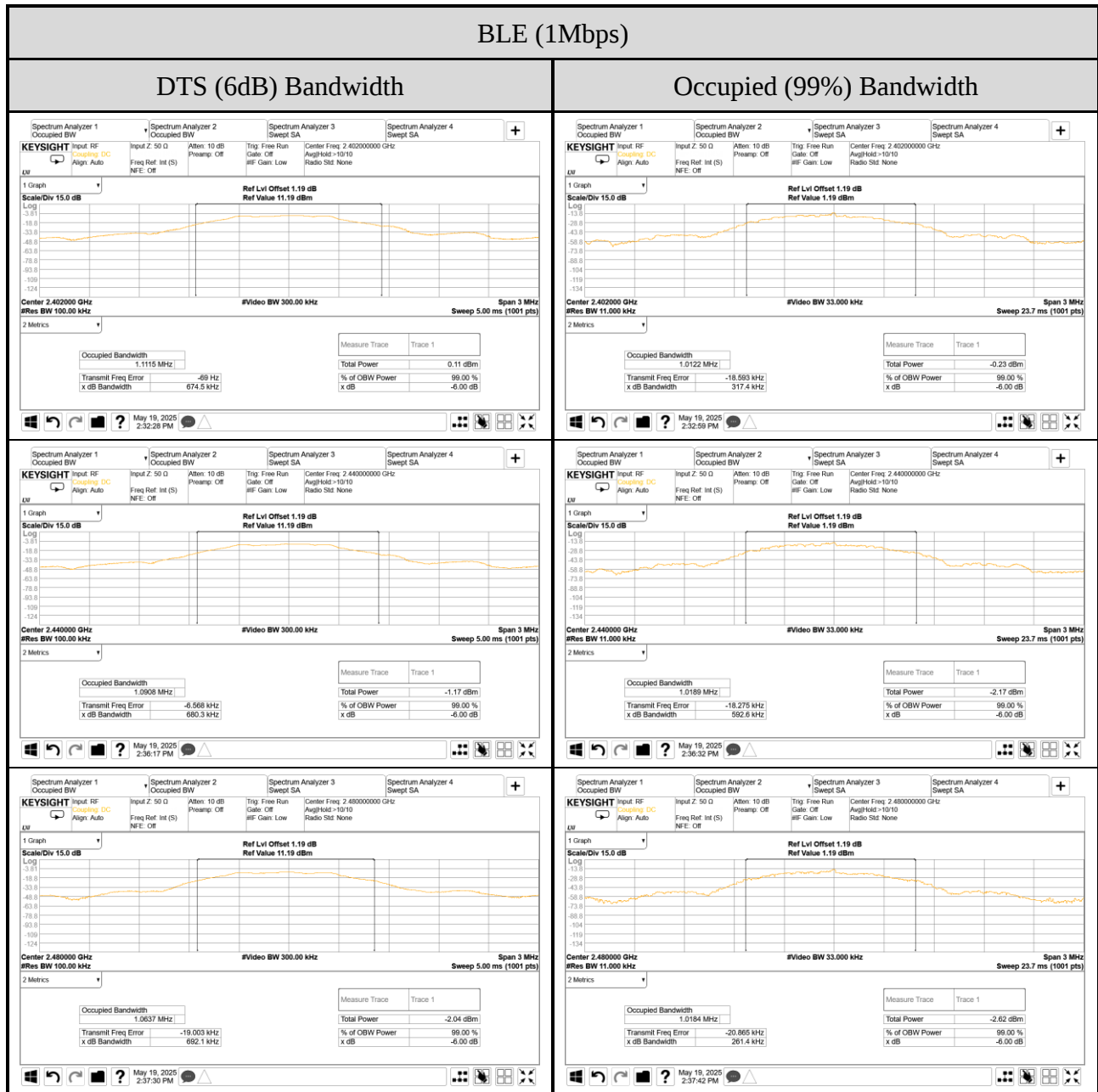
A.2.1 DTS/Occupied Bandwidth Result

Mode	Centre Frequency (MHz)	DTS (6dB) Bandwidth (MHz)	Occupied (99%) Bandwidth (MHz)	Limit
BLE (1Mbps)	2402	0.6745	1.0122	>500kHz
	2440	0.6803	1.0189	
	2480	0.6921	1.0184	

Audix Technology Corp.
No. 491, Zhongfu Rd., Linkou Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

A.2.2 Measurement Plots



Audix Technology Corp.
No. 491, Zhongfu Rd., Linkou Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

A.3 MAXIMUM PEAK OUTPUT POWER

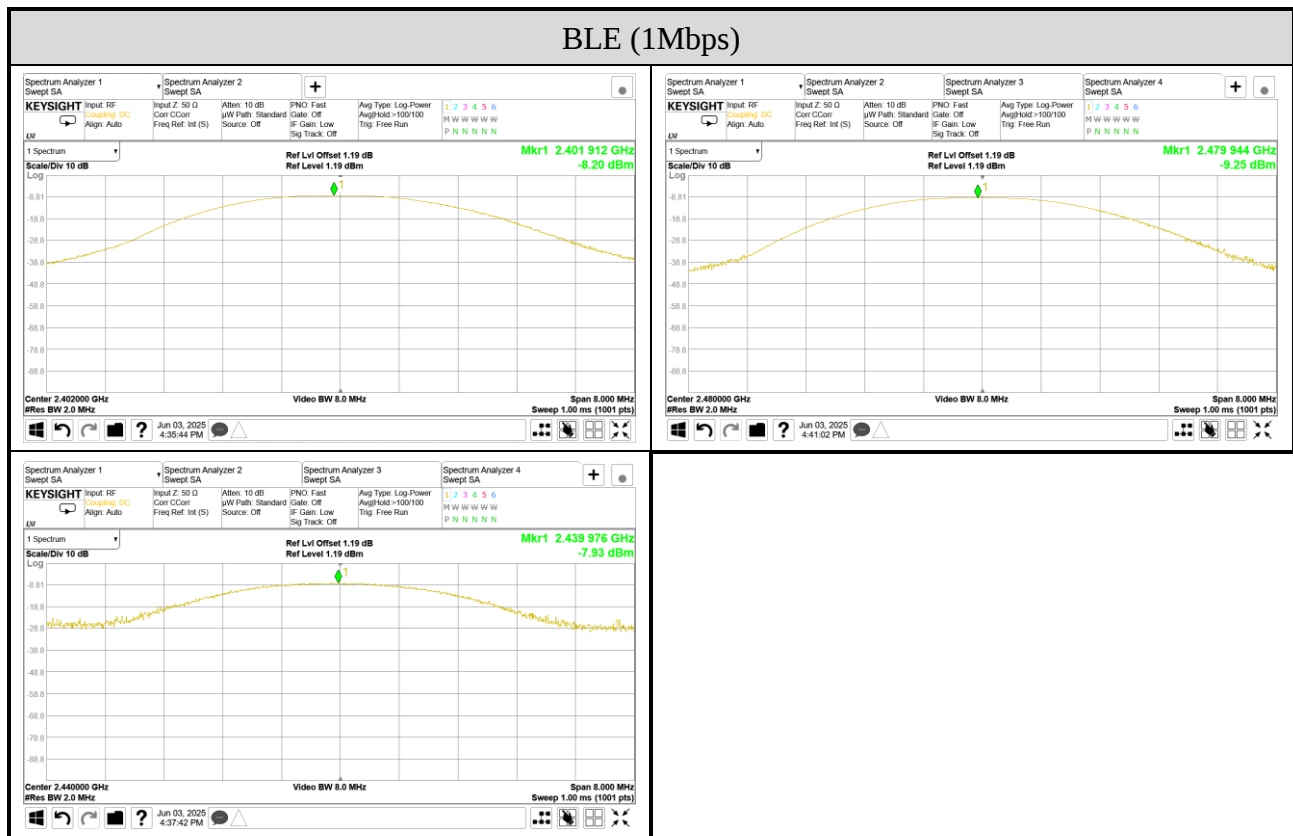
Test Date	2025/06/03	Temp./Hum.	25°C/67%
Cable Loss	1.19dB	Tested By	Harry Huang
Test Voltage	DC 3V (Via Battery)		

A.3.1 Peak Output Power

Mode	Centre Frequency (MHz)	Peak Output Power (dBm)	Limit
BLE (1Mbps)	2402	-8.20	<30dBm
	2440	-7.93	
	2480	-9.25	

Note: The results have been included cable loss.

A.3.2 Measurement Plots



Audix Technology Corp.
No. 491, Zhongfu Rd., Linkou Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

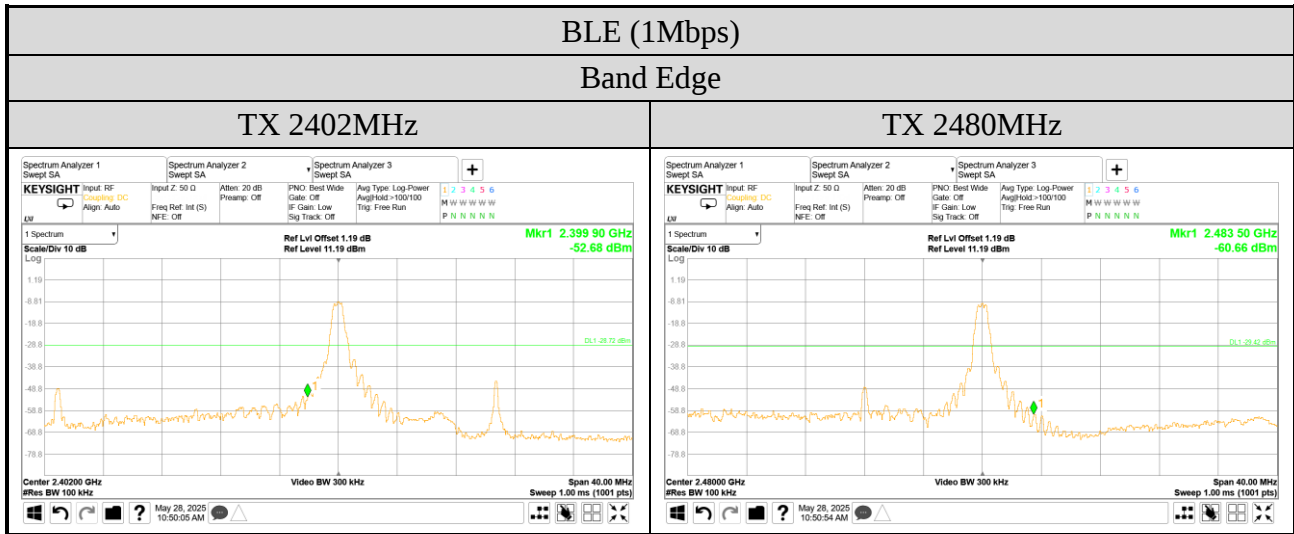
A.4 EMISSION LIMITATIONS

Test Date	2025/05/28	Temp./Hum.	23°C/61%
Cable Loss	1.19dB	Tested By	Harry Huang
Test Voltage	DC 3V (Via Battery)		



Audix Technology Corp.
No. 491, Zhongfu Rd., Linkou Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303



Audix Technology Corp.
No. 491, Zhongfu Rd., Linkou Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

A.5 POWER SPECTRAL DENSITY

Test Date	2025/05/28	Temp./Hum.	23°C/61%
Cable Loss	1.19dB	Tested By	Harry Huang
Test Voltage	DC 3V (Via Battery)		

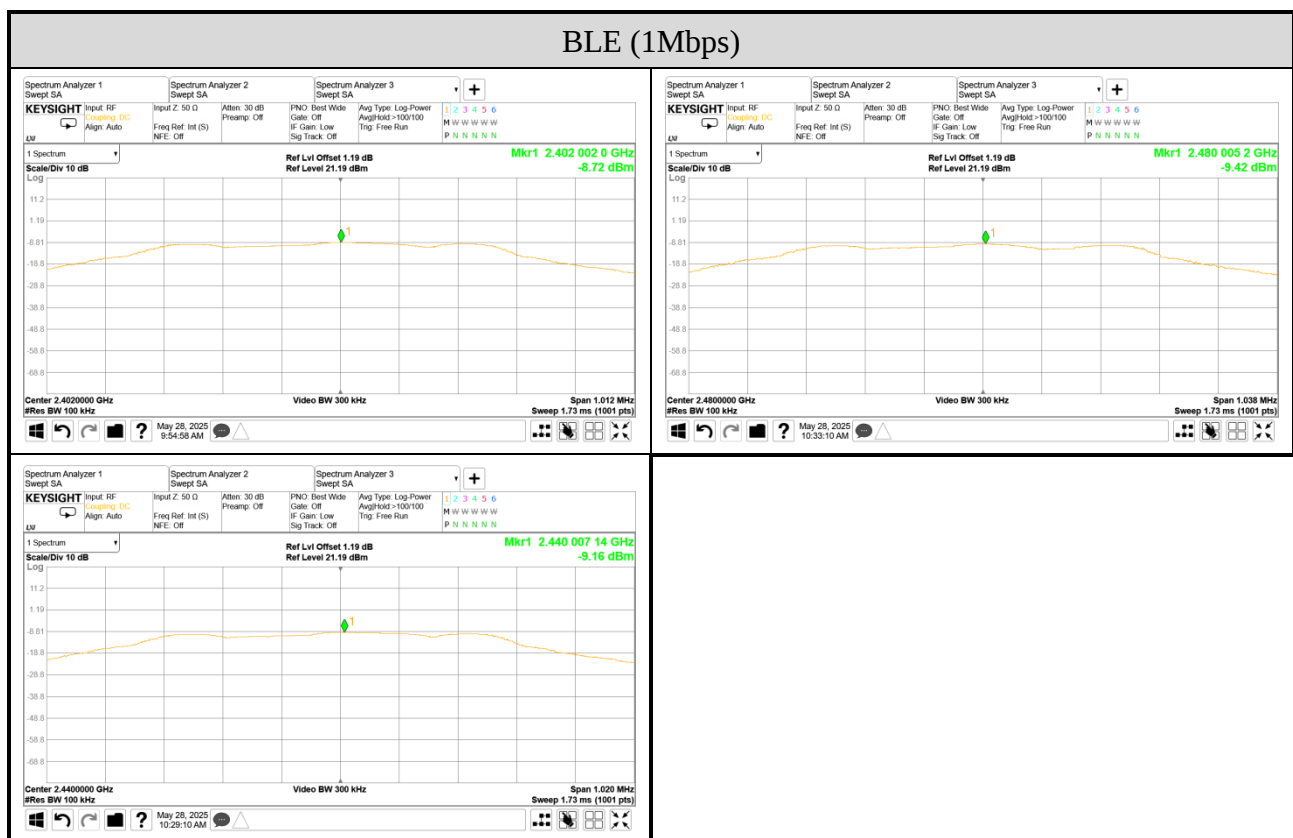
A.5.1 Power Spectral Density Result

Mode	Centre Frequency (MHz)	Power Spectral Density (dBm)	Limit
BLE (1Mbps)	2402	-8.72	<8 dBm/3kHz
	2440	-9.16	
	2480	-9.42	

Note: 1. All results have been included cable loss and Simultaneous Factor.

2. For KDB558074 D01V04, in the test result, when RBW set at 100kHz is stricter than 3kHz.

A.5.2 Measurement Plots



Note: All results have been included cable loss.