FCC Radio Test Report

FCC ID: 2AZUJ-SYS-C60-LMC2

Report No.	:	BTL-FCCP-2-2404T114
Equipment	:	Wireless Network Device
Model Name	:	E.8.006.03
Brand Name	:	N/A
Applicant	:	La Marzocco S.R.L
Address	:	Via La Torre 14/H Scarperia e San Piero Italy 50038
Radio Function	:	Bluetooth Low Energy
FCC Rule Part(s)	:	FCC CFR Title 47, Part 15, Subpart C (15.247)
Measurement Procedure(s)	:	ANSI C63.10-2013
Date of Receipt	:	2024/4/24
Date of Test	:	2024/5/13 ~ 2024/6/3
Issued Date	:	2024/7/17

The above equipment has been tested and found in compliance with the requirement of the above standards by BTL Inc.

Prepared by : Eddie Lee, Engineer

Approved by : Jerry Chuang, Supervisor

Testing Laboratory 0659

BTL Inc.

No.18, Ln. 171, Sec. 2, Jiuzong Rd., Neihu Dist., Taipei City 114, Taiwan

Tel: +886-2-2657-3299 Fax: +886-2-2657-3331 Web: www.newbtl.com Service mail: btl_qa@newbtl.com

Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. BTL assumes no responsibility for the data provided by the Customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by BTL.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

CONTENTS

REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-2-2404T114	R00	Original Report.	2024/7/17	Valid

1 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards.

Standard(s) Section	Description	Test Result	Judgement	Remark
15.207	AC Power Line Conducted Emissions	------	N/A	NOTE (3)
15.205 15.209 15.247(d)	Radiated Emissions	APPENDIX A APPENDIX B APPENDIX C	Pass	------
15.247(a)(2)	Bandwidth	NOTE(4)	Pass	------
15.247(b)(3)	Output Power	APPENDIX D	Pass	------
15.247(e)	Power Spectral Density	NOTE(4)	Pass	------
15.247(d)	Antenna conducted Spurious Emission	NOTE(4)	Pass	------
15.203	Antenna Requirement	------	Pass	------

NOTE:
(1) ”N/A” denotes test is not applicable in this Test Report.
(2) The report format version is TP.1.1.1.
(3) This is a DC input device.
(4) This item is demonstrated to full compliance referring to the test report number FR4O0971B of the integrated module (model name: WL18MODGI, FCC ID: Z64-WL18DBMOD), according to KDB 996369 D02 Q1 a) 2).
(5) The radiated emissions are tested to demonstrate full compliance of both module integrated into the host and host itself.
(6) The output power of integrated module have been reduced, therefore, the full output power tests are performed and recorded.

1.1 TEST FACILITY

The test locations stated below are under the TAF Accreditation Number 0659.
The test location(s) used to collect the test data in this report are:
No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
(FCC DN: TW0659)
☐ C05 ☐ CB08 ☐ CB11 ☐ SR10 ☒ SR11
No. 72, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
(FCC DN: TW0659)
☐ C06 ☒ CB21 ☐ CB22

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **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 %**.

A. Radiated emissions test:

Test Site	Measurement Frequency Range	U (dB)
CB21	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72
	1 GHz ~ 6 GHz	5.21
	6 GHz ~ 18 GHz	5.51
	18 GHz ~ 26 GHz	3.69
	26 GHz ~ 40 GHz	4.23

B. Conducted test:

Test Item	U (dB)
Output Power	0.3669

NOTE:
Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Environment Condition	Test Voltage	Tested by
Radiated emissions below 1 GHz	Refer to data	DC 24V	Mark Wang
Radiated emissions above 1 GHz	Refer to data	DC 24V	Mark Wang, Sean Huang
Output Power	23 °C, 54 %	DC 24V	Easton Tsai

2 GENERAL INFORMATION

2.1 DESCRIPTION OF EUT

Equipment	Wireless Network Device
Model Name	E.8.006.03
Brand Name	N/A
Model Difference	N/A
Power Source	DC voltage supplied from DC source.
Power Rating	DC 24V, 0.5A
Products Covered	1* Antenna 1* Power cord
WIFI+BT Module	Texas Instruments / WL18MODGI
Operation Band	2400 MHz ~ 2483.5 MHz
Operation Frequency	2402 MHz ~ 2480 MHz
Maximum Output Power	5.72 dBm (0.0037 W)
Operating Software	PuTTY 0.62
Test Model	E.8.006.03
Sample Status	Engineering Sample
EUT Modification(s)	N/A

NOTE:
(1) The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

(2) 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

(3) Table for Filed Antenna:

Antenna	Manufacture	Part Number	Type	Connector	Frequency Range (MHz)	Gain (dBi)
Red	dynaflex	814B_1000R316 _SMMRP	OEM MULTIFUNCTION	SMA MALE RP	2400-2480	2.7
					5150-5250	0.75
					5250-5350	0.60
					5470-5725	0.42
					5725-5850	0.20
Blue	dynaflex	814B_1000R316 _SMMRP	OEM MULTIFUNCTION	SMA MALE RP	2400-2480	2.1
					5150-5250	1.74
					5250-5350	1.76
					5470-5725	1.12
					5725-5850	-0.37

The above Antenna information are derived from the antenna data sheet provided by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

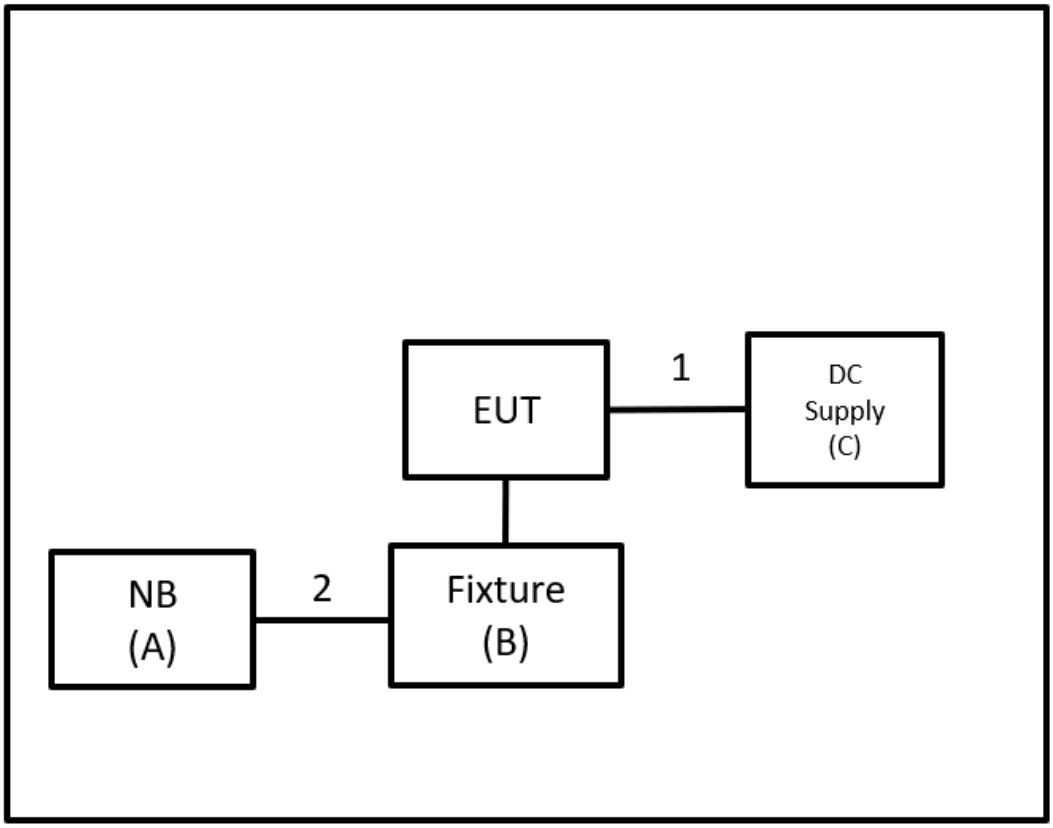
2.2 TEST MODES

Test Items	Test mode	Channel	Note
Transmitter Radiated Emissions (below 1GHz)	1 Mbps	39	-
Transmitter Radiated Emissions (above 1GHz)	1 Mbps	00/39	Bandedge
	1 Mbps	00/19/39	Harmonic
Transmitter Radiated Emissions (above 18GHz)	1 Mbps	39	-
Output Power	1 Mbps	00/19/39	-

NOTE:
(1) The Radiated emissions test was verified based on the worst conducted power and Bandwidth test results reported in the original report.
(2) For radiated emission band edge test, both Vertical and Horizontal are evaluated, but only the worst case (Horizontal) is recorded.
(3) All X, Y and Z axes are evaluated, but only the worst case (X axis) is recorded.

2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Equipment letters and Cable numbers refer to item numbers described in the tables of clause 2.4.



2.4 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	NB	HP	TPN-I119	N/A	Furnished by test lab.
B	Fixture	N/A	N/A	N/A	Supplied by test requester.
C	DC Power Supply	UP-BEST	TDS-60-15	N/A	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	N/A	N/A	1.3m	Power Code	Furnished by test lab.
2	N/A	N/A	2.4m	Console cable	Supplied by test requester.

3 RADIATED EMISSIONS TEST

3.1 LIMIT

In case the emission fall within the restricted band specified on 15.205, then the 15.209 limit in the table below has to be followed.

LIMITS OF RADIATED EMISSIONS MEASUREMENT (9 kHz to 1000 MHz)

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
960~1000	500	3

LIMITS OF RADIATED EMISSIONS MEASUREMENT (Above 1000 MHz)

Frequency (MHz)	Radiated Emissions (dBuV/m)		Measurement Distance (meters)
	Peak	Average	
Above 1000	74	54	3

NOTE:
(1) The limit for radiated test was performed according to FCC CFR Title 47, Part 15, Subpart C.
(2) The tighter limit applies at the band edges.
(3) Emission level (dBuV/m)=20log Emission level (uV/m).
(4) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
Margin Level = Measurement Value - Limit Value
Calculation example:

Reading Level (dBµV)		Correct Factor (dB/m)		Measurement Value (dBµV/m)
19.11	+	2.11	=	21.22

Measurement Value (dBµV/m)		Limit Value (dBµV/m)		Margin Level (dB)
21.22	-	54	=	-32.78

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average

Spectrum Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

3.2 TEST PROCEDURE

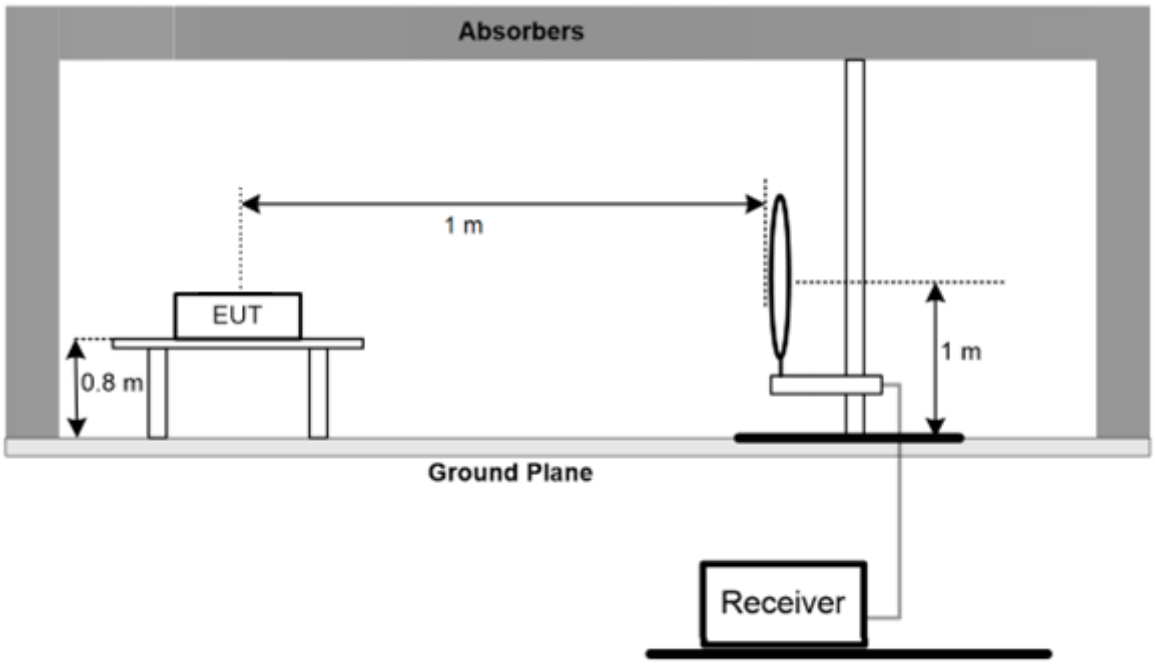
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5 m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform. (below 1GHz)
h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform. (above 1GHz)
i. For the actual test configuration, please refer to the related Item – EUT TEST PHOTO.

3.3 DEVIATION FROM TEST STANDARD

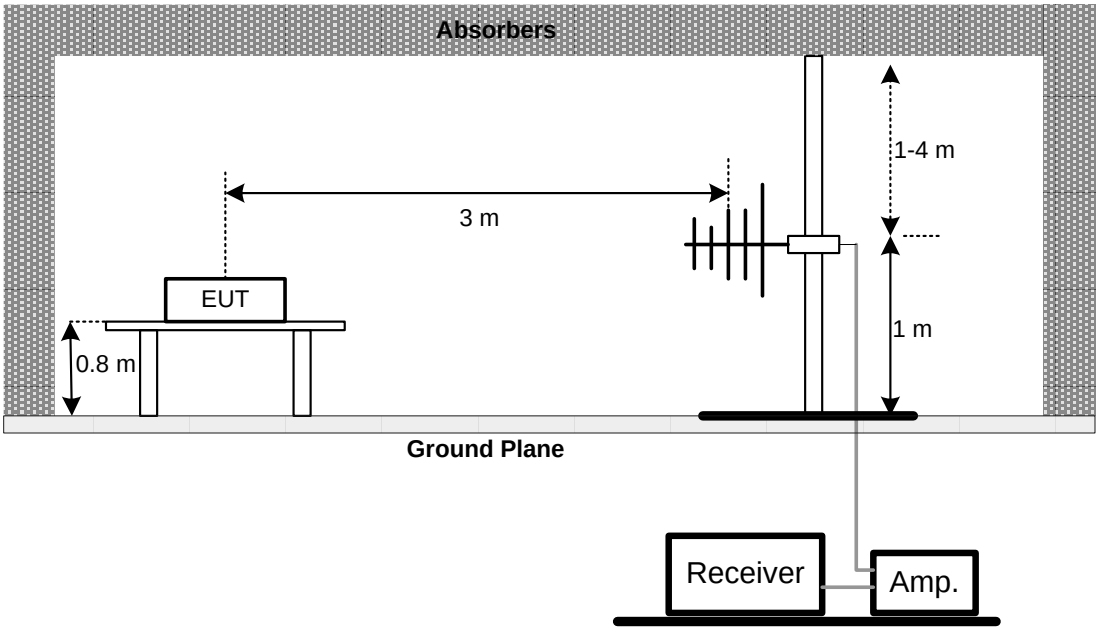
No deviation.

3.4 TEST SETUP

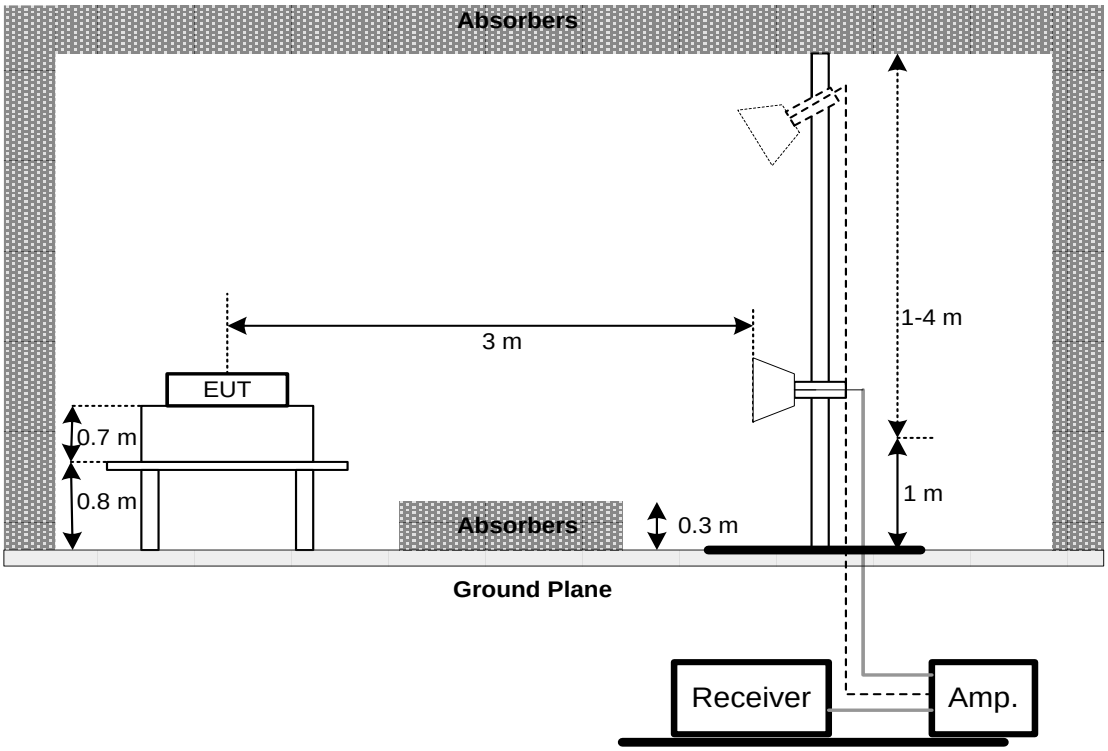
9 kHz to 30 MHz



30 MHz to 1 GHz



Above 1 GHz



3.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

3.6 TEST RESULT – 9kHz TO 30 MHz

Please refer to the APPENDIX A.

3.7 TEST RESULT – 30 MHZ TO 1 GHZ

Please refer to the APPENDIX B.

3.8 TEST RESULT – ABOVE 1 GHZ

Please refer to the APPENDIX C.

NOTE:

(1) No limit: This is fundamental signal, the judgment is not applicable.
For fundamental signal judgment was referred to Peak output test.

4 OUTPUT POWER TEST

4.1 LIMIT

Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Maximum Output Power	1 watt or 30dBm	2400-2483.5	PASS

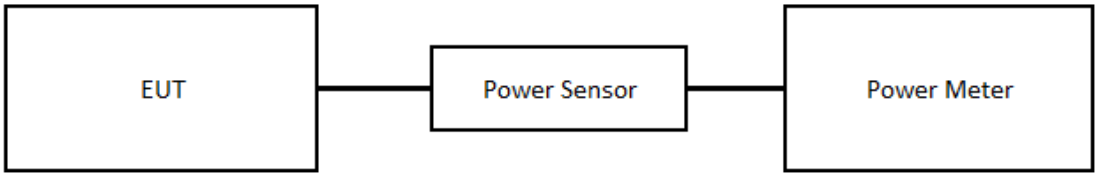
4.2 TEST PROCEDURE

a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
b. The maximum peak conducted output power was performed in accordance with method 9 b) of FCC KDB 558074 D01 DTS Meas Guidance.

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP



4.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULTS

Please refer to the APPENDIX D.

5 LIST OF MEASURING EQUIPMENTS

Radiated Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Preamplifier	EMCI	EMC330N	980850	2023/9/6	2024/9/5
2	Preamplifier	EMCI	EMC118A45SE	980819	2024/3/6	2025/3/5
3	Pre-Amplifier	EMCI	EMC184045SE	980907	2023/9/21	2024/9/20
4	Preamplifier	EMCI	EMC001340	980579	2023/9/6	2024/9/5
5	Test Cable	EMCI	EMC104-SM-1000	180809	2024/3/8	2025/3/7
6	Test Cable	EMCI	EMC104-SM-SM-3000	220322	2024/3/8	2025/3/7
7	Test Cable	EMCI	EMC104-SM-SM-7000	220324	2024/3/8	2025/3/7
8	EXA Signal Analyzer	keysight	N9020B	MY57120120	2024/2/23	2025/2/22
9	Loop Ant	Electro-Metrics	EMCI-LPA600	291	2023/9/12	2024/9/11
10	Horn Antenna	RFSPIN	DRH18-E	211202A18EN	2023/5/12	2024/5/11
					2024/5/9	2025/5/8
11	Horn Ant	Schwarzbeck	BBHA 9170	1136	2023/6/28	2024/6/27
12	TRILOG Broadband Antenna	Schwarzbeck	VULB9168	1371	2023/8/8	2024/8/7
13	6dB Attenuator	EMCI	EMCI-N-6-06	AT-N0625	2023/8/8	2024/8/7
14	Test Cable	EMCI	EMC101G-KM-KM-3000	220329	2024/3/13	2025/3/12
15	Test Cable	EMCI	EMC102-KM-KM-1000	220327	2024/3/13	2025/3/12
16	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A	N/A

Output Power						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Power Meter	Anritsu	ML2495A	1128008	2024/5/11	2025/5/10
2	Power Sensor	Anritsu	MA2411B	1126001	2024/5/11	2025/5/10

Remark: “N/A” denotes no model name, no serial no. or no calibration specified.
All calibration period of equipment list is one year.

6 EUT TEST PHOTO

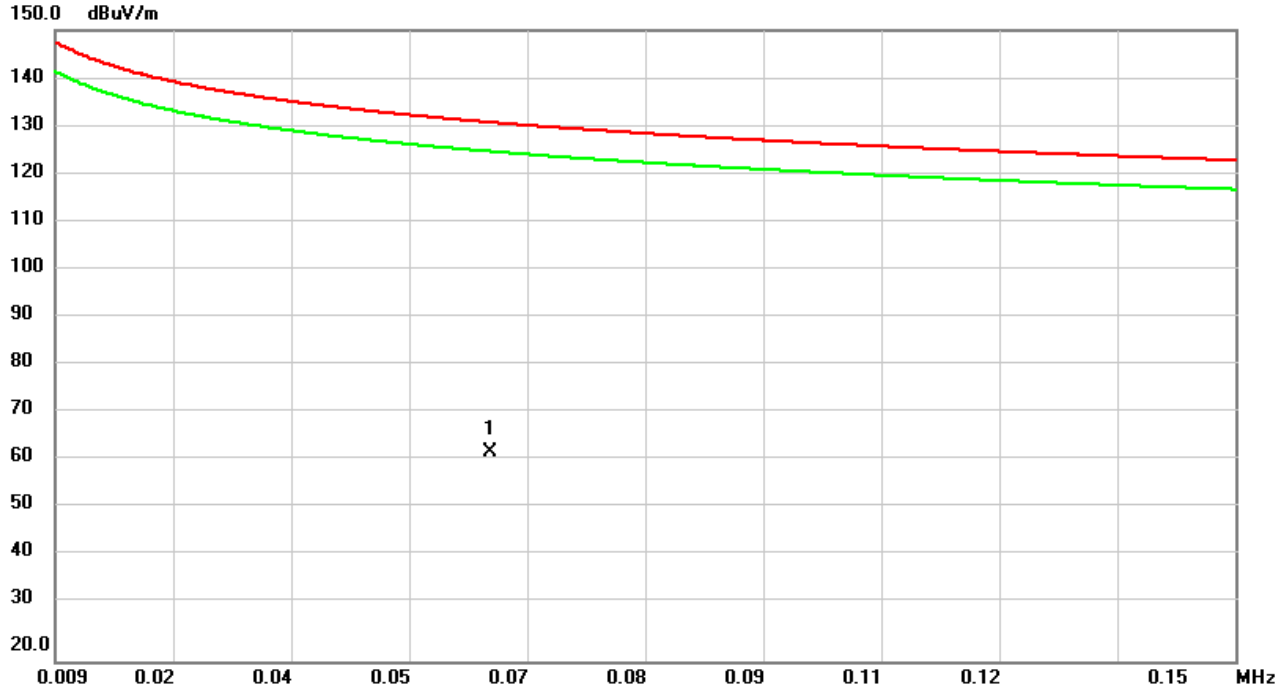
Please refer to document Appendix No.: TP-2404T114-FCCP-1 (APPENDIX-TEST PHOTOS).

7 EUT PHOTOS

Please refer to document Appendix No.: EP-2404T114-2 (APPENDIX-EUT PHOTOS).

APPENDIX A RADIATED EMISSIONS - 9 KHZ TO 30 MHZ

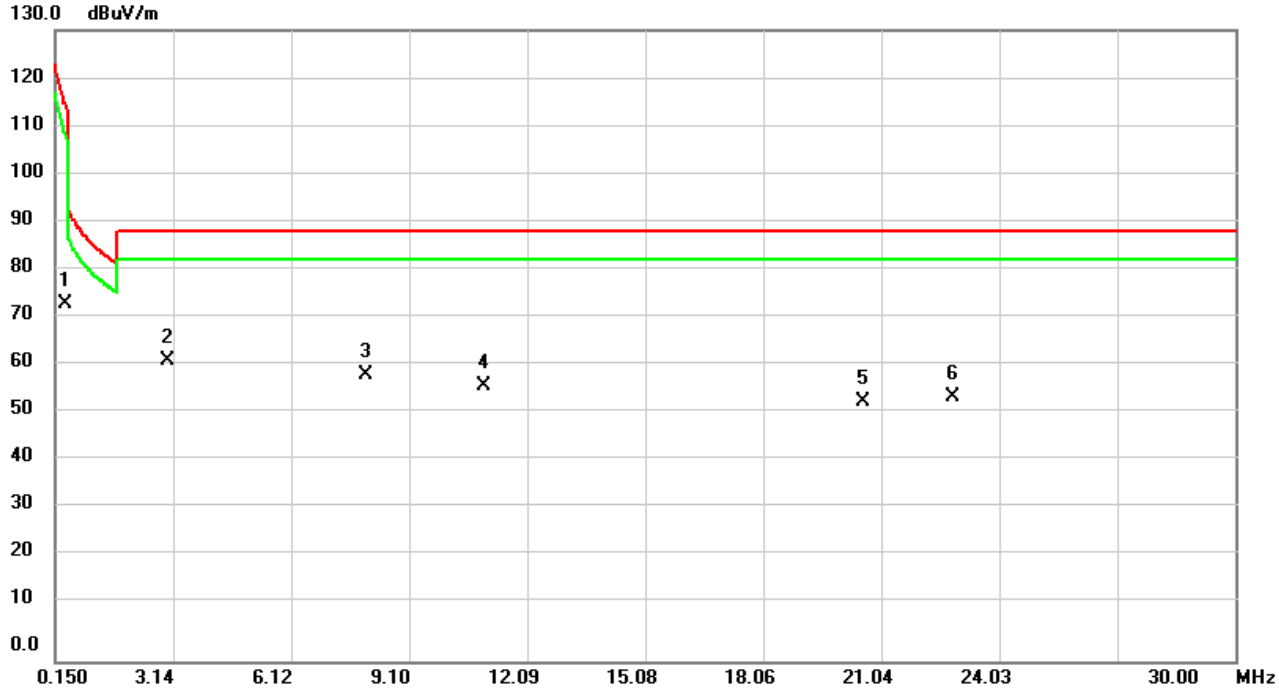
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024-5-13
Test Frequency	2480MHz	Polarization	Vertical
Temp	23°C	Hum.	66%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0610	41.26	21.90	63.16	130.98	-67.82	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

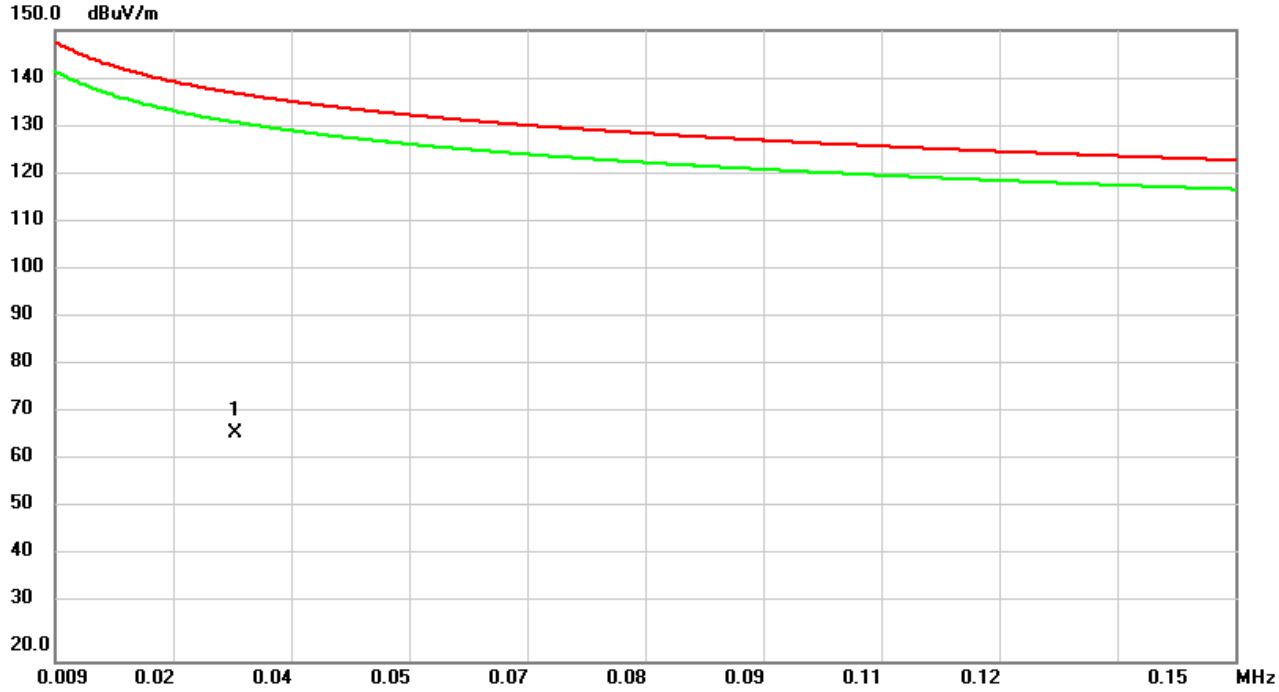
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024-5-13
Test Frequency	2480MHz	Polarization	Vertical
Temp	23°C	Hum.	66%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.3947	66.80	6.68	73.48	114.76	-41.28	QP	
2	*	2.9996	65.64	-3.75	61.89	88.62	-26.73	QP	
3		8.0004	62.78	-3.66	59.12	88.62	-29.50	QP	
4		11.0004	60.13	-3.26	56.87	88.62	-31.75	QP	
5		20.5733	57.36	-3.82	53.54	88.62	-35.08	QP	
6		22.8568	57.07	-2.73	54.34	88.62	-34.28	QP	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

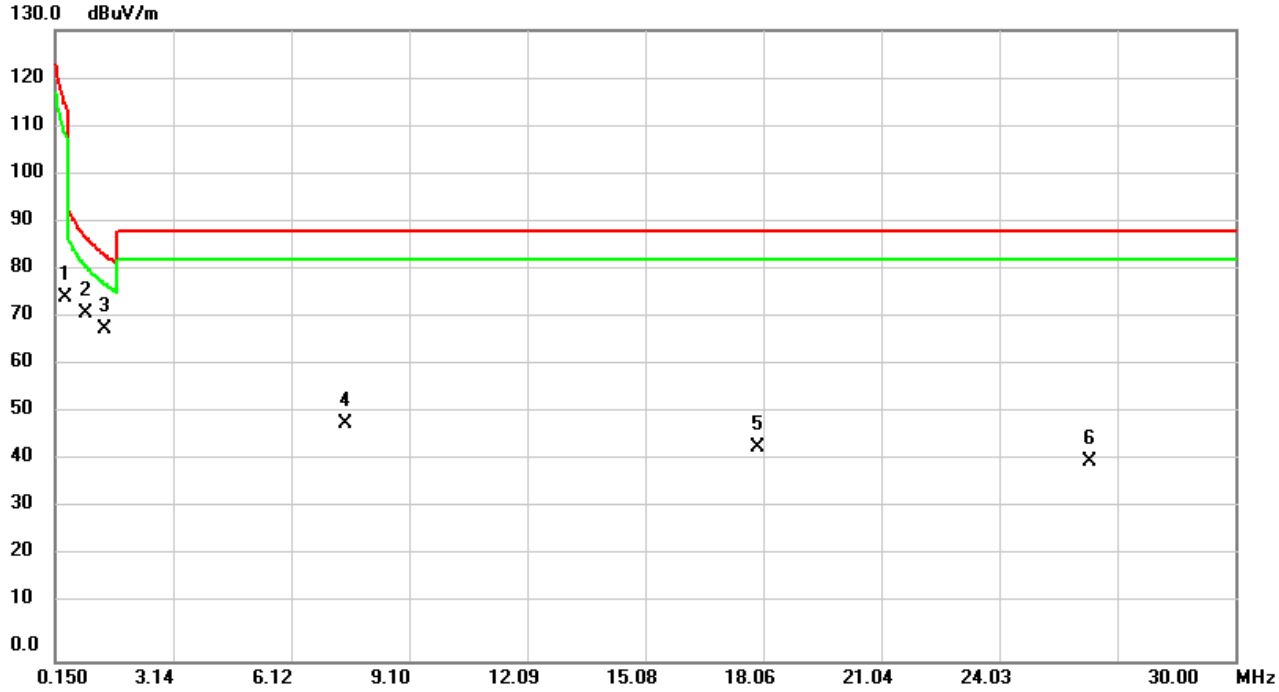
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024-5-13
Test Frequency	2480MHz	Polarization	Horizontal
Temp	23°C	Hum.	66%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0305	38.72	28.16	66.88	137.00	-70.12	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024-5-13
Test Frequency	2480MHz	Polarization	Horizontal
Temp	23°C	Hum.	66%

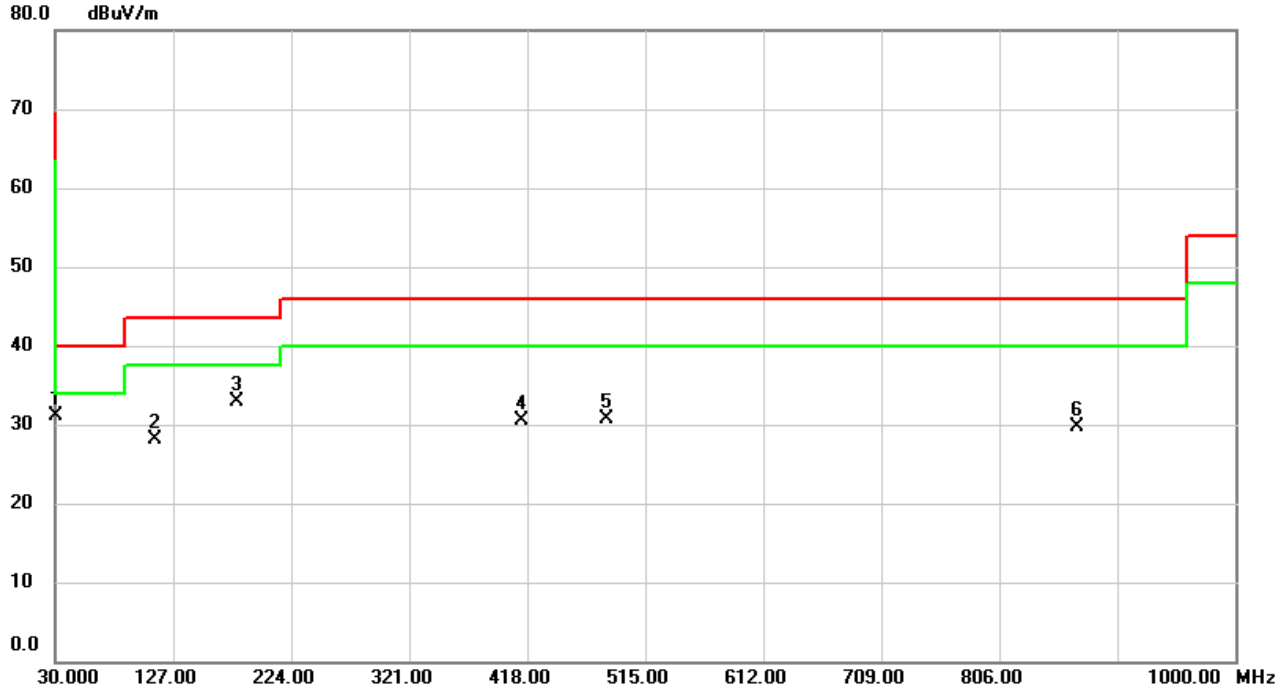


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.3948	68.19	6.68	74.87	114.76	-39.89	QP	
2		0.9440	70.18	1.37	71.55	87.18	-15.63	QP	
3	*	1.4206	68.59	-0.23	68.36	83.63	-15.27	QP	
4		7.5050	52.80	-3.79	49.01	88.62	-39.61	QP	
5		17.9048	47.78	-3.90	43.88	88.62	-44.74	QP	
6		26.3185	42.15	-1.10	41.05	88.62	-47.57	QP	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX B RADIATED EMISSIONS - 30 MHZ TO 1 GHZ

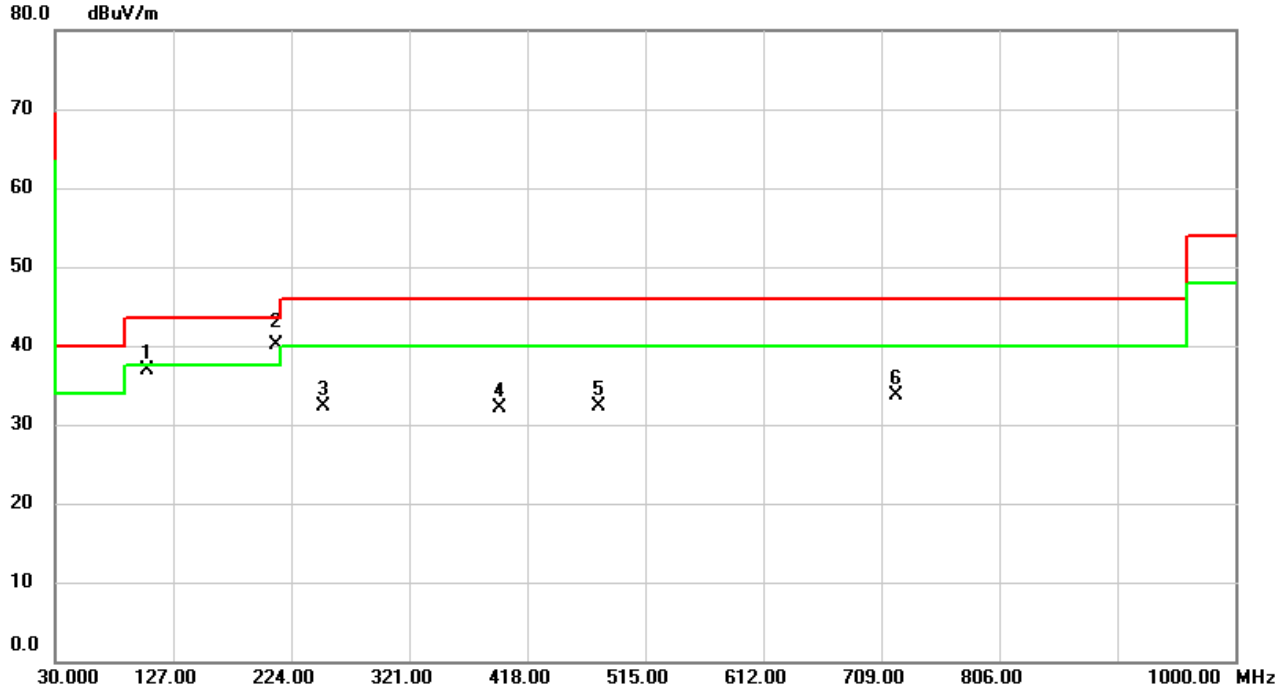
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024-5-13
Test Frequency	2480MHz	Polarization	Vertical
Temp	23°C	Hum.	66%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	30.0000	45.23	-14.06	31.17	40.00	-8.83	peak	
2		112.4500	43.89	-15.85	28.04	43.50	-15.46	peak	
3		179.2507	47.37	-14.46	32.91	43.50	-10.59	peak	
4		413.0530	39.87	-9.36	30.51	46.00	-15.49	peak	
5		482.8283	38.33	-7.72	30.61	46.00	-15.39	peak	
6		870.1170	30.82	-1.06	29.76	46.00	-16.24	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024-5-13
Test Frequency	2480MHz	Polarization	Horizontal
Temp	23°C	Hum.	66%

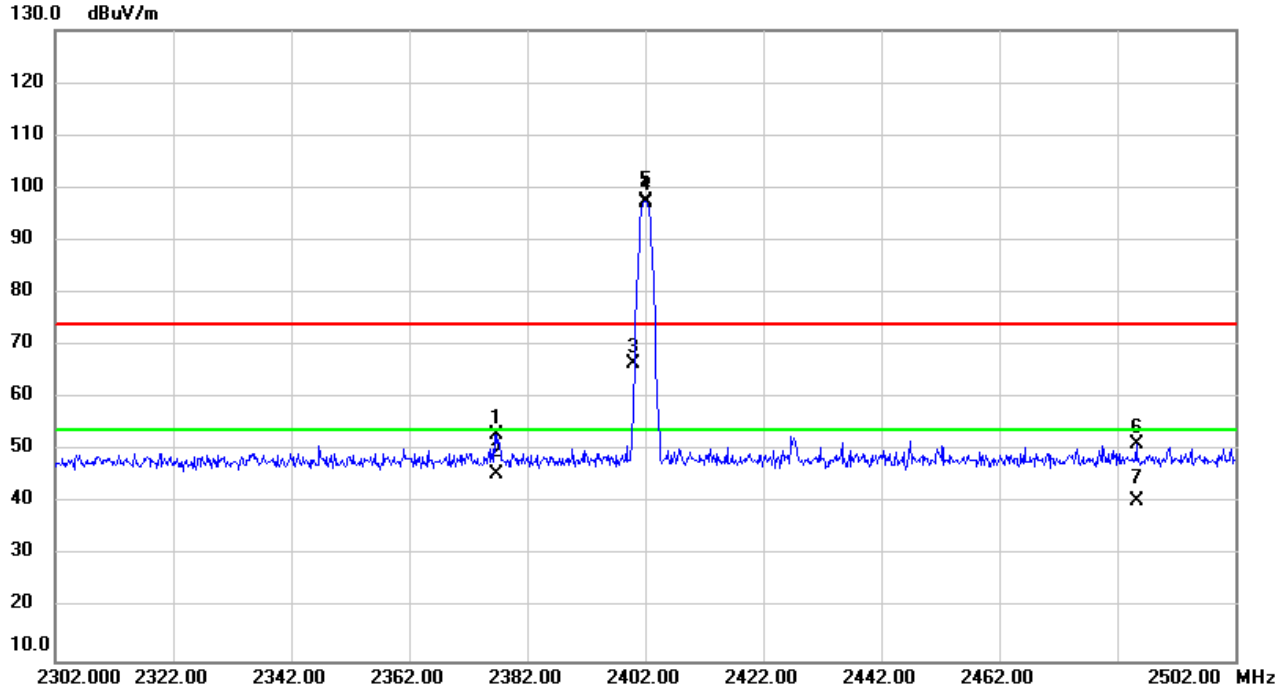


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		105.6923	53.71	-16.74	36.97	43.50	-6.53	peak	
2	*	211.8426	56.39	-16.19	40.20	43.50	-3.30	QP	
3		249.9960	46.48	-14.17	32.31	46.00	-13.69	peak	
4		396.0133	41.98	-9.89	32.09	46.00	-13.91	peak	
5		476.9113	40.02	-7.80	32.22	46.00	-13.78	peak	
6		721.7716	36.95	-3.33	33.62	46.00	-12.38	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX C RADIATED EMISSIONS - ABOVE 1 GHZ

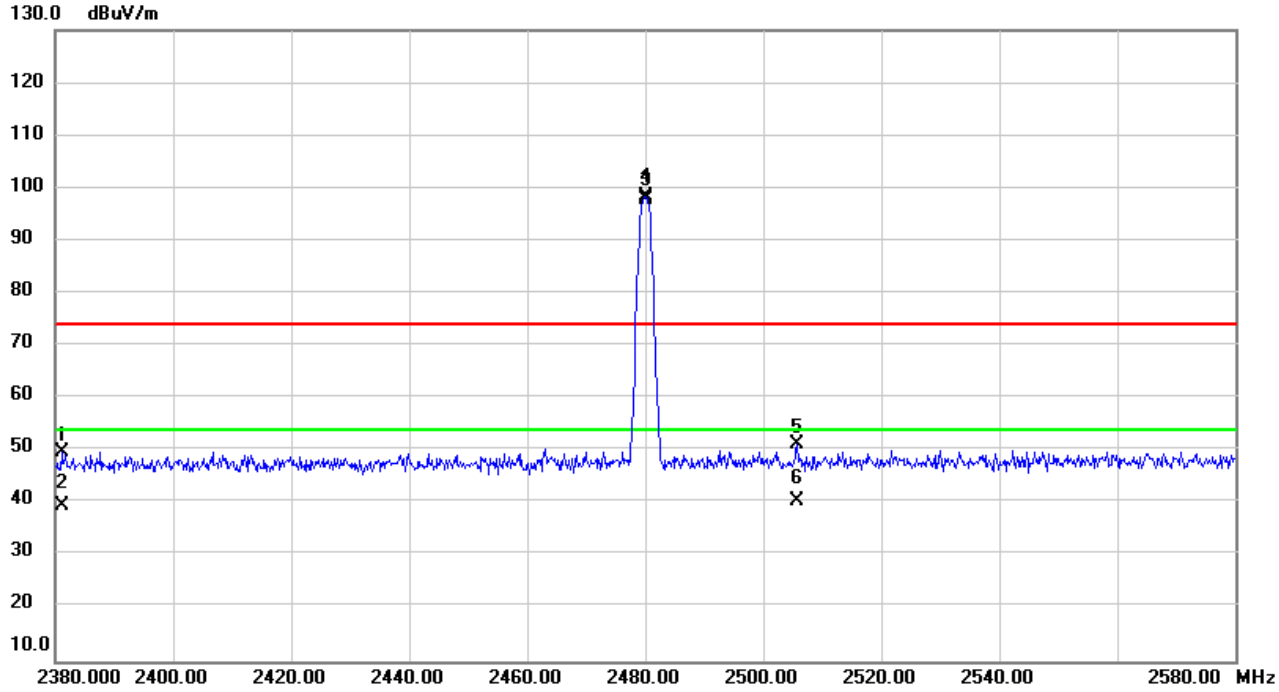
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024/6/1
Test Frequency	2402MHz	Polarization	Horizontal
Temp	21°C	Hum.	60%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2376.893	58.10	-5.02	53.08	74.00	-20.92	peak	
2		2376.893	50.47	-5.02	45.45	54.00	-8.55	AVG	
3		2400.000	71.57	-4.99	66.58	74.00	-7.42	peak	No Limit
4	X	2402.000	102.55	-5.00	97.55	74.00	23.55	peak	No Limit
5	*	2402.000	102.24	-5.00	97.24	54.00	43.24	AVG	No Limit
6		2485.287	56.10	-4.88	51.22	74.00	-22.78	peak	
7		2485.287	45.23	-4.88	40.35	54.00	-13.65	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

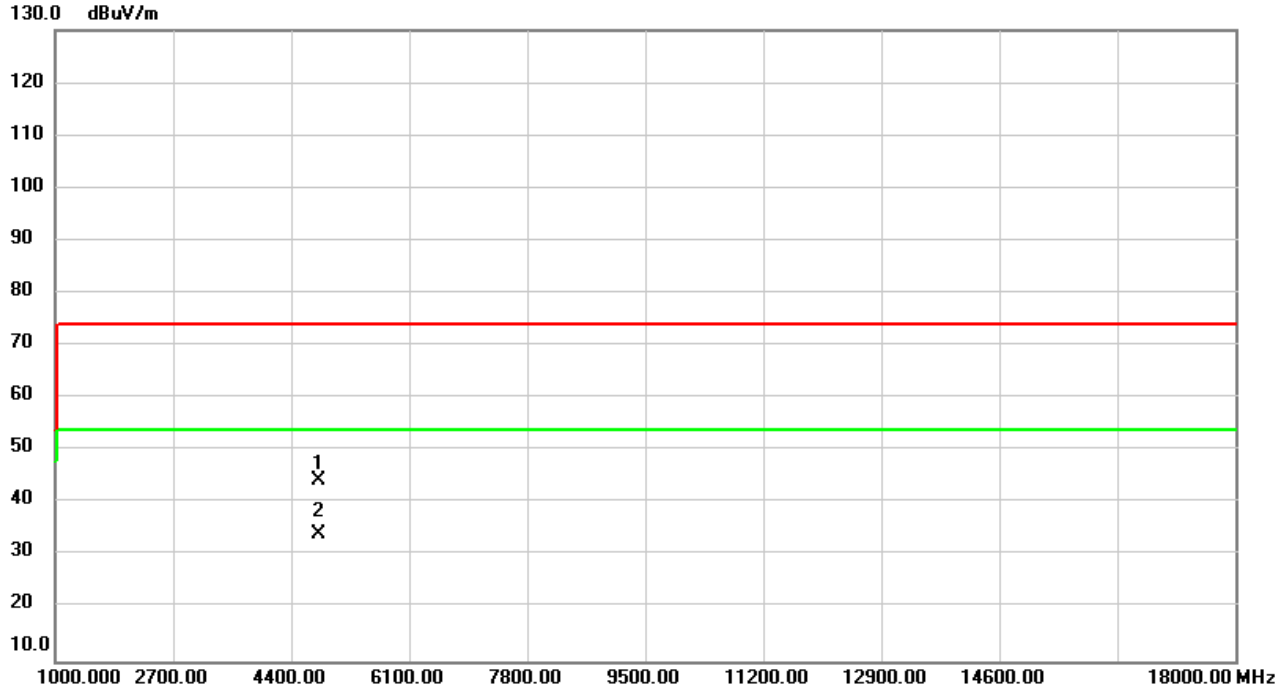
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024/6/1
Test Frequency	2480MHz	Polarization	Horizontal
Temp	21°C	Hum.	60%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2381.167	54.72	-5.02	49.70	74.00	-24.30	peak	
2		2381.167	44.64	-5.02	39.62	54.00	-14.38	AVG	
3	X	2480.000	103.11	-4.89	98.22	74.00	24.22	peak	No Limit
4	*	2480.000	102.71	-4.89	97.82	54.00	43.82	AVG	No Limit
5		2505.700	55.98	-4.85	51.13	74.00	-22.87	peak	
6		2505.700	45.25	-4.85	40.40	54.00	-13.60	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

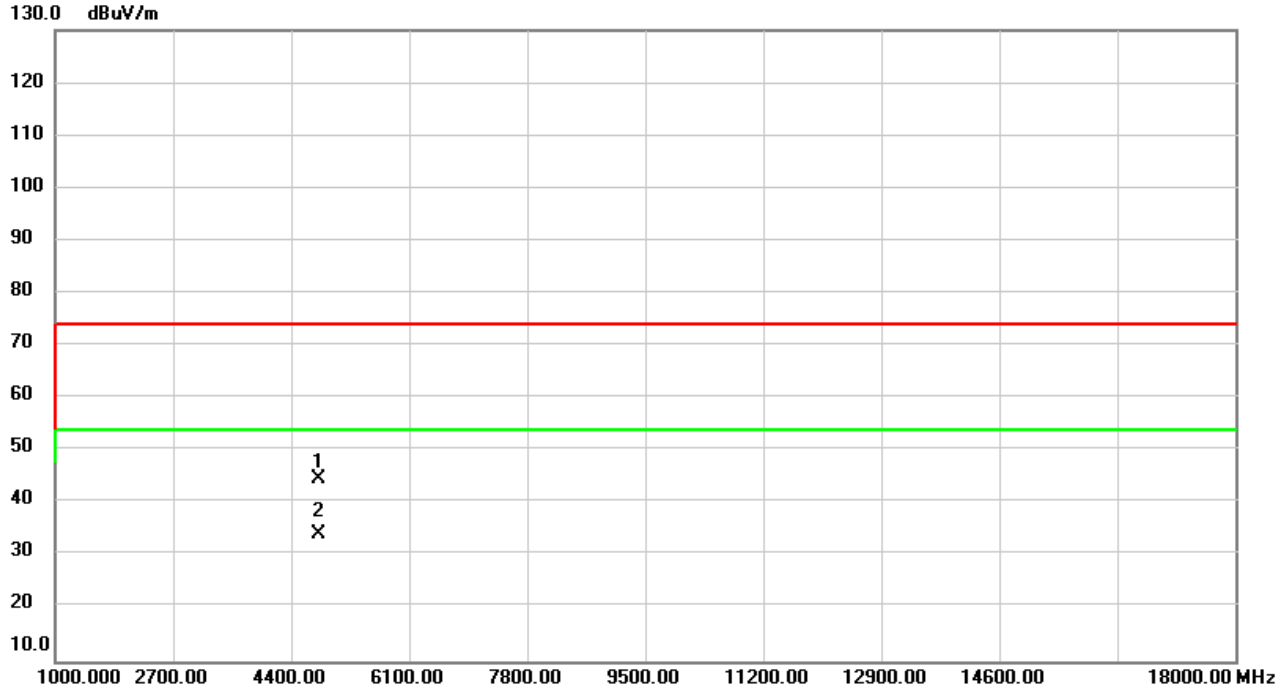
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024/6/3
Test Frequency	2402MHz	Polarization	Vertical
Temp	20°C	Hum.	69%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4804.000	43.56	0.88	44.44	74.00	-29.56	peak	
2	*	4804.000	33.26	0.88	34.14	54.00	-19.86	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

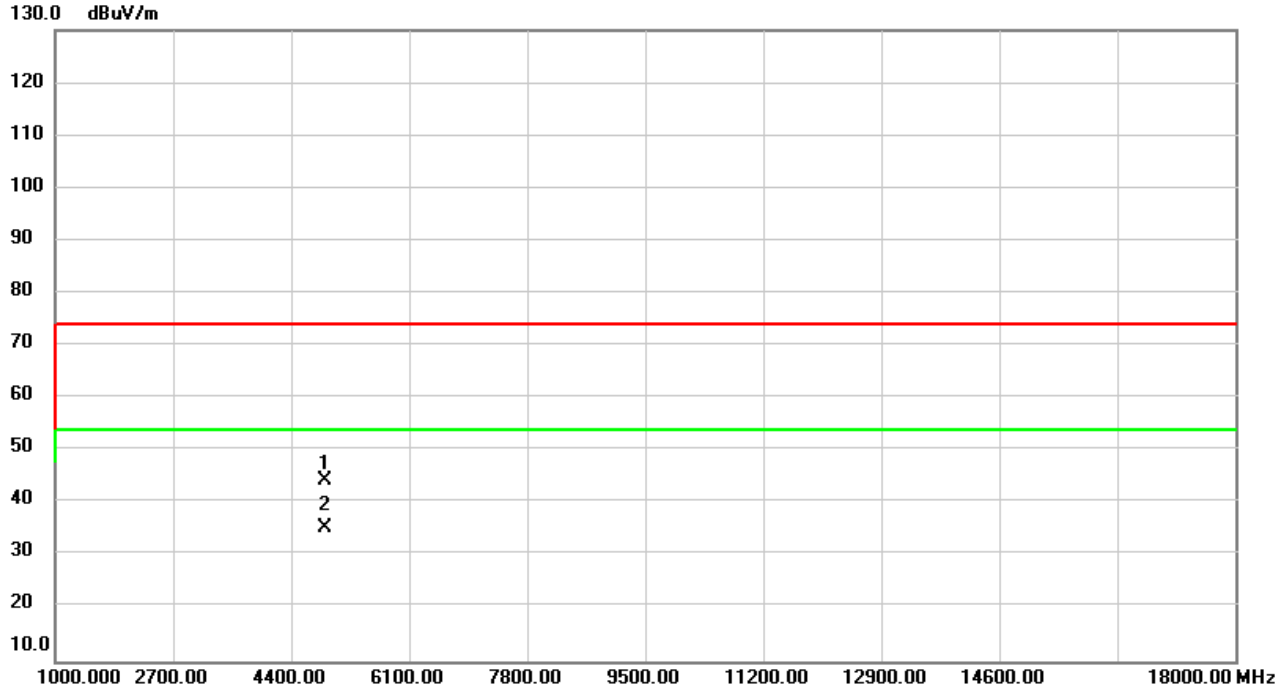
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024/6/3
Test Frequency	2402MHz	Polarization	Horizontal
Temp	20°C	Hum.	69%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4804.000	43.82	0.88	44.70	74.00	-29.30	peak	
2	*	4804.000	33.32	0.88	34.20	54.00	-19.80	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

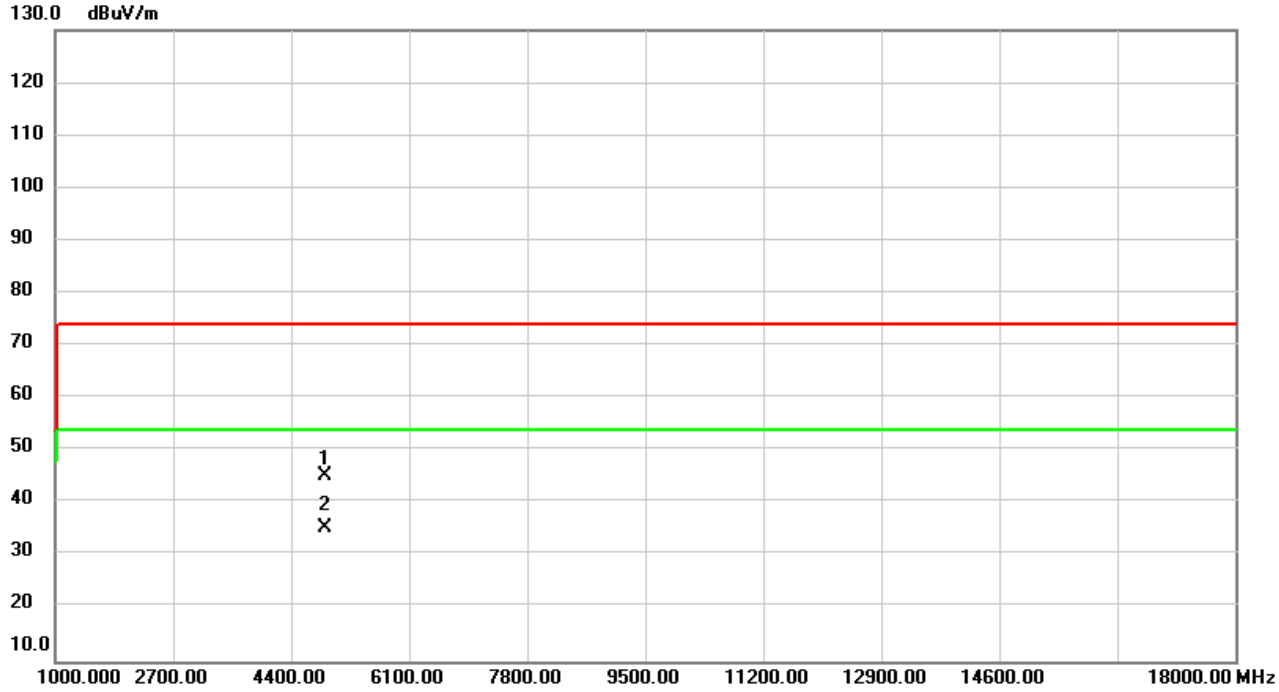
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024/6/3
Test Frequency	2440MHz	Polarization	Vertical
Temp	20°C	Hum.	69%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4880.000	43.42	1.03	44.45	74.00	-29.55	peak	
2	*	4880.000	34.46	1.03	35.49	54.00	-18.51	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

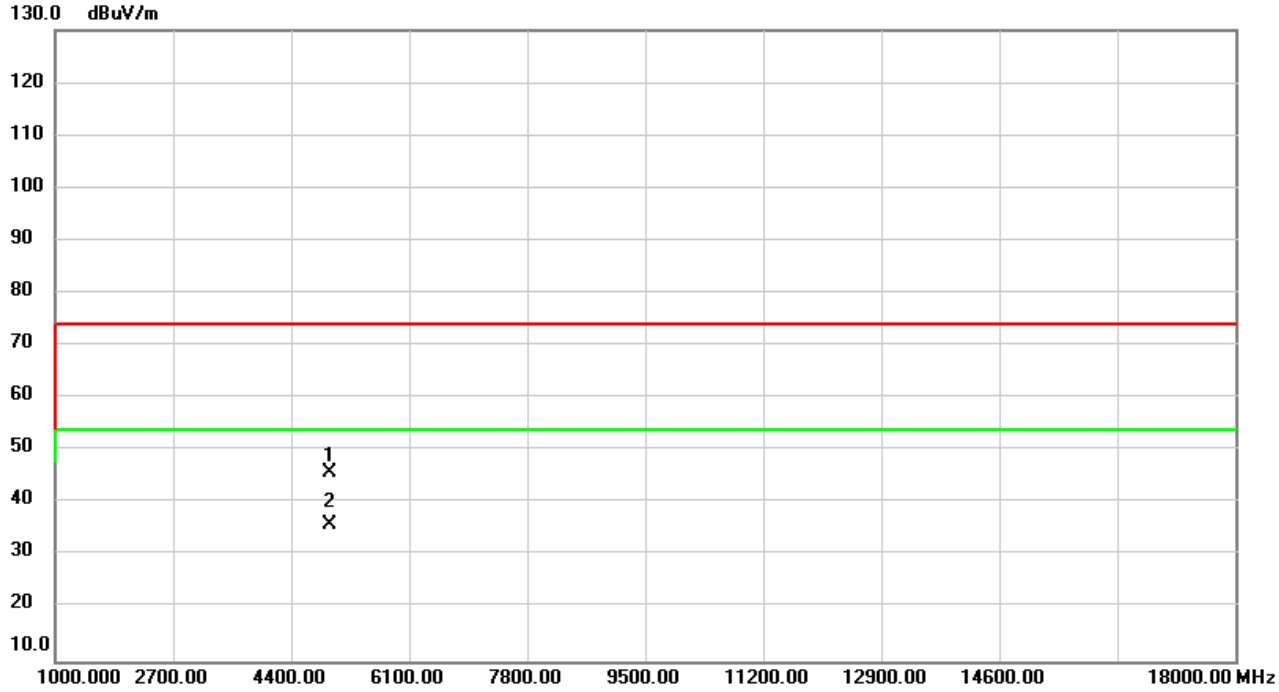
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024/6/3
Test Frequency	2440MHz	Polarization	Horizontal
Temp	20°C	Hum.	69%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4880.000	44.27	1.03	45.30	74.00	-28.70	peak	
2	*	4880.000	34.33	1.03	35.36	54.00	-18.64	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

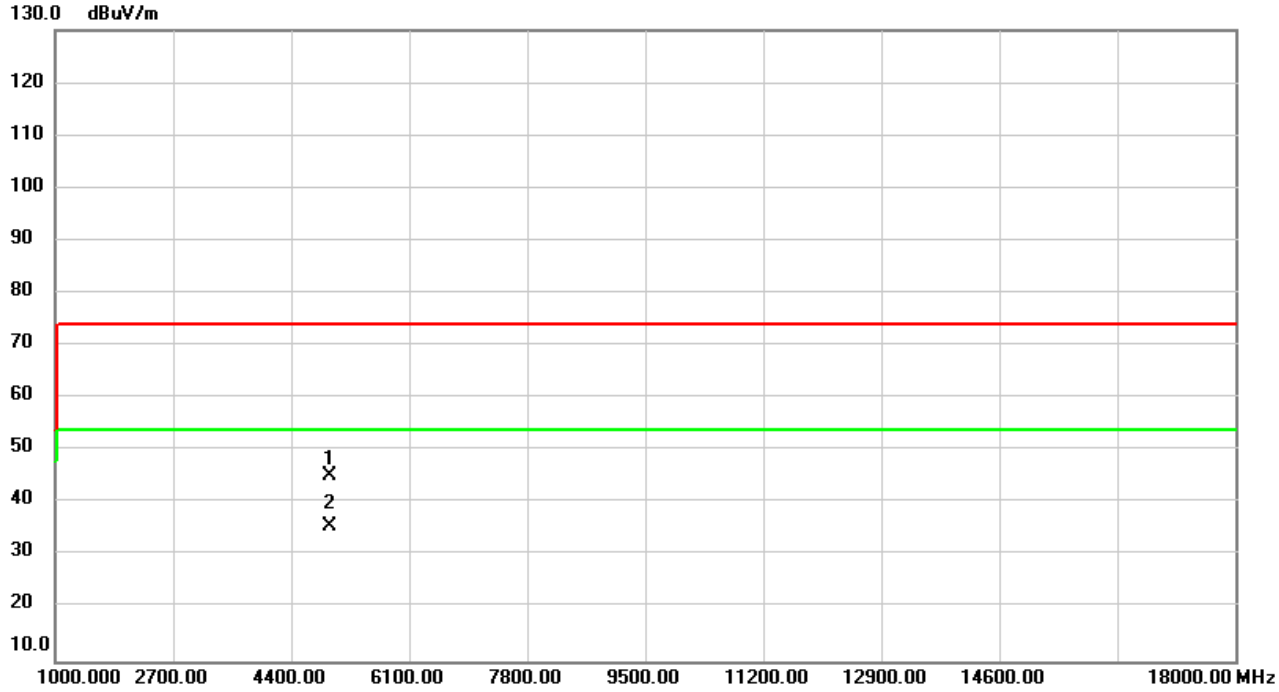
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024/6/3
Test Frequency	2480MHz	Polarization	Vertical
Temp	20°C	Hum.	69%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4960.000	44.73	1.21	45.94	74.00	-28.06	peak	
2	*	4960.000	34.83	1.21	36.04	54.00	-17.96	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

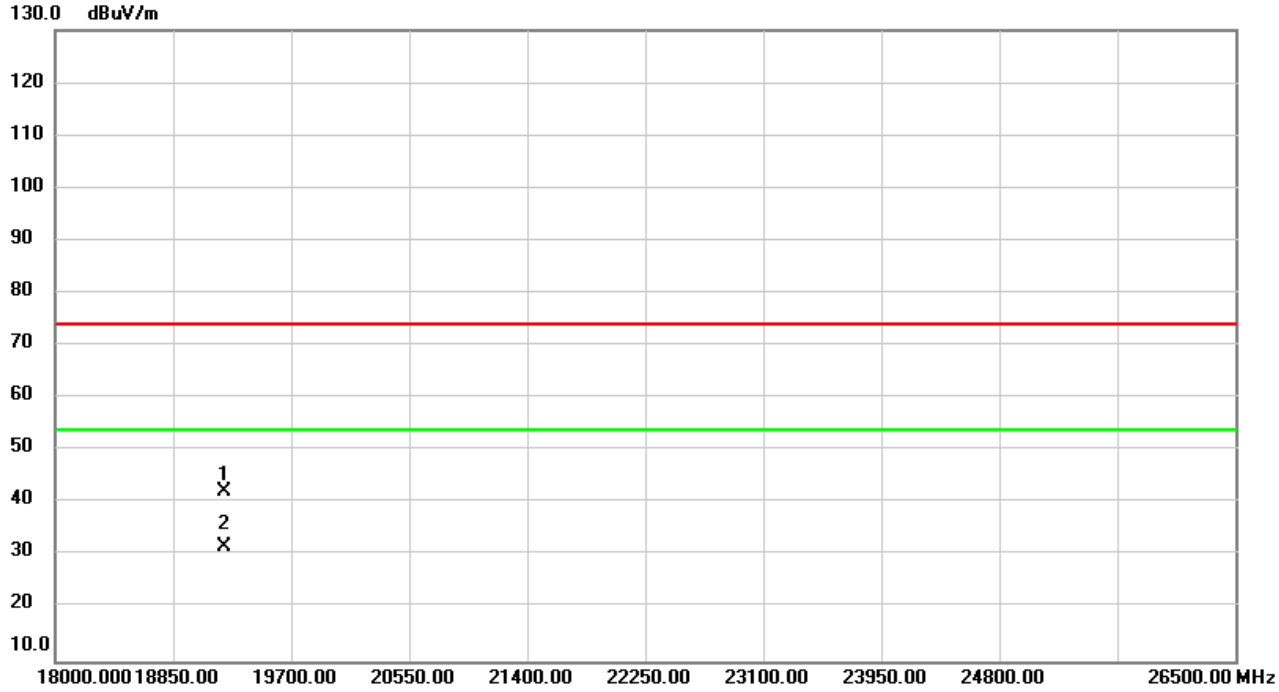
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024/6/3
Test Frequency	2480MHz	Polarization	Horizontal
Temp	20°C	Hum.	69%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4960.000	44.01	1.21	45.22	74.00	-28.78	peak	
2	*	4960.000	34.43	1.21	35.64	54.00	-18.36	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

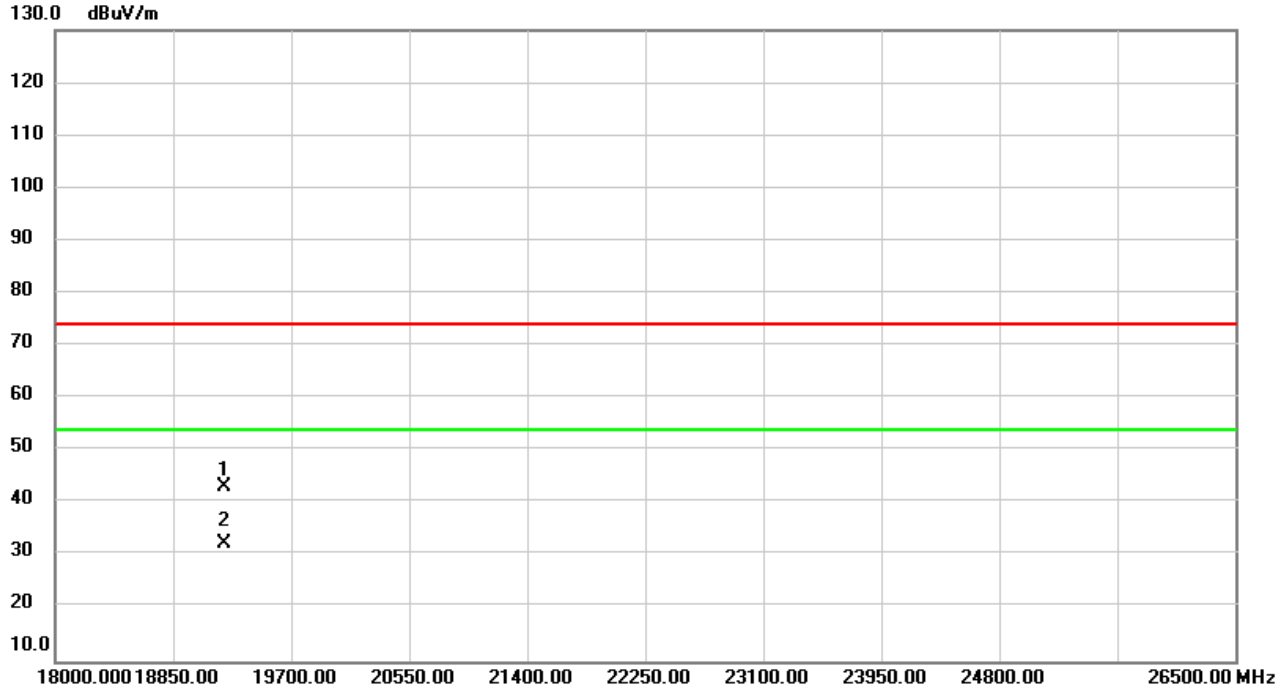
Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024/5/13
Test Frequency	2480MHz	Polarization	Vertical
Temp	23°C	Hum.	66%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		19216.00	49.30	-6.96	42.34	74.00	-31.66	peak	
2	*	19216.00	38.60	-6.96	31.64	54.00	-22.36	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	BLE 5.0 (1 Mbps)	Test Date	2024/5/13
Test Frequency	2480MHz	Polarization	Horizontal
Temp	23°C	Hum.	66%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		19216.00	50.20	-6.96	43.24	74.00	-30.76	peak	
2	*	19216.00	39.40	-6.96	32.44	54.00	-21.56	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX D OUTPUT POWER

Test Mode :	BLE 5.0 (1Mbps)	Tested Date	2024/5/20

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2402	5.63	0.0037	30.00	1.0000	Pass
2440	5.72	0.0037	30.00	1.0000	Pass
2480	5.35	0.0034	30.00	1.0000	Pass

End of Test Report