



# **FCC** Radio Test Report

FCC ID: OL3AT10ANC

Report No. : BTL-FCCP-2-2212G057
Equipment : True Wireless Earbuds (TWS)

Model Name : AT10 ANC

Brand Name : Alcatel-Lucent Enterprise

**Applicant**: ALE International

Address : 32, Avenue Kléber – 92700 Colombes – FRANCE

**Manufacturer** : ALE International

Address : 32, Avenue Kléber – 92700 Colombes – FRANCE

Radio Function : Bluetooth Low Energy

FCC Rule Part(s) : FCC CFR Title 47, Part 15, Subpart C (15.247)

Measurement : ANSI C63.10-2013

Procedure(s)

Date of Receipt : 2023/4/4

**Date of Test** : 2023/5/17 ~ 2023/5/25

**Issued Date** : 2023/8/14

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

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#### **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** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

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**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.

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# **REVISION HISTORY**

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-2-2212G057	R00	Original Report.	2023/6/19	Invalid
BTL-FCCP-2-2212G057	R01	Revised model name.	2023/6/20	Invalid
BTL-FCCP-2-2212G057	R02	Revised report to address TCB's comments.	2023/8/1	Invalid
BTL-FCCP-2-2212G057	R03	Revised report to address TCB's comments.	2023/8/14	Valid

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# 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	APPENDIX A	Pass	
15.205 15.209 15.247(d)	Radiated Emissions	APPENDIX B APPENDIX C	Pass	
15.247(a)(2)	Bandwidth	APPENDIX D	Pass	
15.247(b)(3)	Output Power	APPENDIX E	Pass	
15.247(e)	Power Spectral Density	APPENDIX F	Pass	
15.247(d)	Antenna conducted Spurious Emission	APPENDIX G	Pass	
15.203	Antenna Requirement		Pass	NOTE (3)

#### NOTE

- (1) "N/A" denotes test is not applicable in this Test Report.
- (2) The report format version is TP.1.1.1.
- (3) The EUT has internal antenna, which was permanently attached, fulfill the requirement of this section. Please refer to the EUT photos.

# 1.1 REFERENCE TEST GUIDANCE

KDB 558074 D01 15.247 Meas Guidance v05r02

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# 1.2 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)

□ 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

#### 1.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $\mathbf{y} \pm \mathbf{U}$ , where expanded uncertainty  $\mathbf{U}$  is based on a standard uncertainty multiplied by a coverage factor of  $\mathbf{k} = \mathbf{2}$ , providing a level of confidence of approximately 95 %. The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2  $\mathbf{U}_{\text{cispr}}$  requirement.

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U (dB)
C05	CISPR	150 kHz ~ 30MHz	3.44

B. Radiated emissions test:

Anicolonic toot i					
Test Site	Measurement Frequency Range	U (dB)			
	0.03 GHz ~ 0.2 GHz	4.17			
	0.2 GHz ~ 1 GHz	4.72			
CB21	1 GHz ~ 6 GHz	5.21			
CBZ1	6 GHz ~ 18 GHz	5.51			
	18 GHz ~ 26 GHz	3.69			
	26 GHz ~ 40 GHz	4.23			

C. Conducted test:

1 1001 :				
Test Item	U (dB)			
Occupied Bandwidth	0.5334			
Output power	0.3669			
Power Spectral Density	0.6591			
Conducted Spurious emissions	0.5416			
Conducted Band edges	0.5348			

#### NOTE:

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

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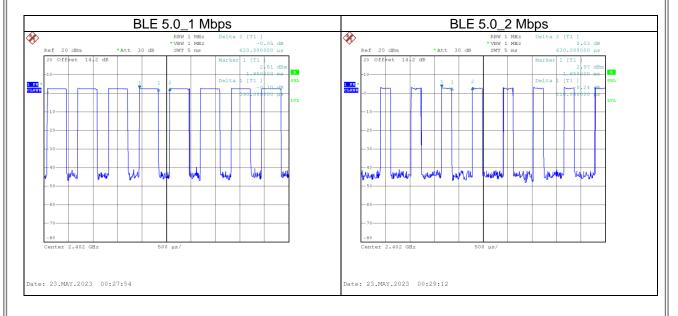
# 1.4 TEST ENVIRONMENT CONDITIONS

Test Item	Environment Condition	Test Voltage	Tested by
AC Power Line Conducted Emissions	21 °C, 58 %	AC 120V	Cora Lin
Radiated emissions below 1 GHz	Refer to data	AC 120V	Mark Wang
Radiated emissions above 1 GHz	Refer to data	AC 120V	Mark Wang
Bandwidth	23.8 °C, 46 %	DC 3.7V	Jay Tien
Output Power	23.8 °C, 46 %	DC 3.7V	Jay Tien
Power Spectral Density	23.8 °C, 46 %	DC 3.7V	Jay Tien
Antenna conducted Spurious Emission	23.8 °C, 46 %	DC 3.7V	Jay Tien

# 1.5 DUTY CYCLE

If duty cycle is  $\geq$  98 %, duty factor is not required. If duty cycle is < 98 %, duty factor shall be considered.

	Remark	Delta 1			Delta 2	On Time/Period	10 log(1/Duty Cycle)
Г	Mada	ON	Numbers	On Time (B)	Period (ON+OFF)	Duty Cycle	Duty Factor
	Mode	(ms)	(ON)	(ms)	(ms)	(%)	(dB)
	BLE (1 Mbps)	0.390	1	0.390	0.620	62.90%	2.01
	BLE (2 Mbps)	0.210	1	0.210	0.630	33.33%	4.77





# **2 GENERAL INFORMATION**

# 2.1 DESCRIPTION OF EUT

Equipment	True Wireless Earbuds (TWS)
Model Name	AT10 ANC
Brand Name	Alcatel-Lucent Enterprise
Model Difference	N/A
Power Source	DC voltage supplied from battery.
Power Rating	DC 3.7V
Products Covered	N/A
HVIN	PCB_EPA399B_V02
FVIN	V2.4.9
Operation Band	2400 MHz ~ 2483.5 MHz
Operation Frequency	2402 MHz ~ 2480 MHz
Modulation Technology	GFSK
Transfer Rate	1 Mbps, 2 Mbps
Output Power Max.	1 Mbps: 3.18 dBm (0.0021 W)
Output Fower Max.	2 Mbps: 3.28 dBm (0.0021 W)
Operating Software	RTLBTAPP V5.2.3.60
Test Model	AT10 ANC
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

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(3) Table for Filed Antenna:

Antenna	Brand	Part number	Туре	Connector	Gain (dBi)
L	Shenzhen cape deep communication technology co., LTD	EPA399B-0014	FPC	N/A	-2.68
R	Shenzhen cape deep communication technology co., LTD	EPA399B-0015	FPC	N/A	-2.74

NOTE: Antenna gain higher is used for testing.

- (4) 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.
- (5) The left earphone and right earphone have the same circuit mechanism, PCB layout and placement. So we select high antenna gain for test.

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# 2.2 TEST MODES

Test Items	Test mode	Channel	Note
AC power line conducted emissions	Normal/Idle	-	-
Transmitter Radiated Emissions (below 1GHz)	BLE 5.0 / 2 Mbps	39	-
Transmitter Radiated Emissions	BLE 5.0 / 1/2 Mbps	00/39	Bandedge
(above 1GHz)	BLE 5.0 / 1/2 Mbps	00/19/39	Harmonic
Bandwidth	BLE 5.0 / 1/2 Mbps	00/19/39	-
Output Power	BLE 5.0 / 1/2 Mbps	00/19/39	-
Power Spectral Density	BLE 5.0 / 1/2 Mbps	00/19/39	-
Antenna conducted Spurious Emission	BLE 5.0 / 1/2 Mbps	00/19/39	1

# NOTE:

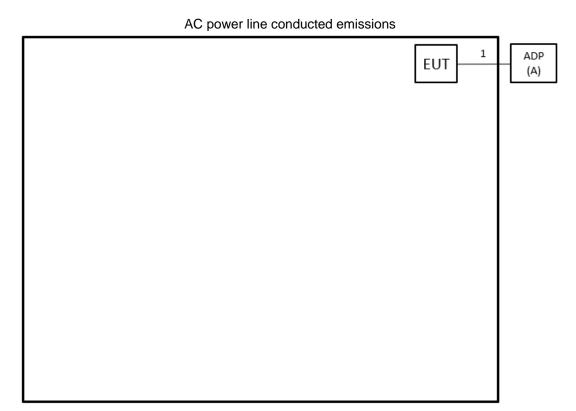
- (1) For radiated emission band edge test, both Vertical and Horizontal are evaluated, but only the worst case (Horizontal) is recorded.
- (2) All X, Y and Z axes are evaluated, but only the worst case (X axis) is recorded.(3) The EUT supports both BLE 4.0 and 5.0, we will pick BLE 5.0 for testing.

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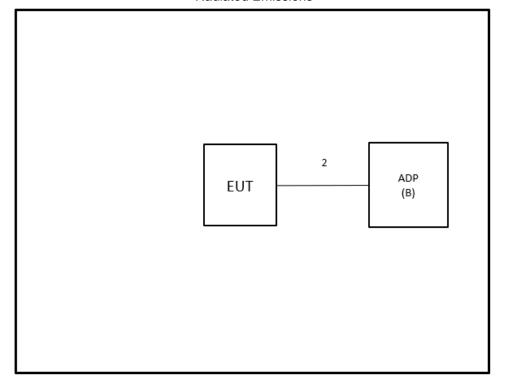


# 2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

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



# **Radiated Emissions**





# 2.4 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
Α	ADAPTER	SAMSUNG	EP-TA800	R37M8JV5R21HM3	Furnished by test lab.
В	ADAPTER	Xlaomi	AD652G	N/A	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	No	No	1.5m	USB type-C to type-C	Furnished by test lab.
2	No	No	1m	TYPE-C To USB	Furnished by test lab.

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#### 3 AC POWER LINE CONDUCTED EMISSIONS TEST

#### 3.1 LIMIT

Frequency	Limit (dBμV)		
(MHz)	Quasi-peak	Average	
0.15 - 0.5	66 - 56 *	56 - 46 *	
0.50 - 5.0	56	46	
5.0 - 30.0	60	50	

#### NOTE:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor (if use)

Margin Level = Measurement Value - Limit Value

Calculation example:

Reading Level		Correct Factor		Measurement Value
38.22	+	3.45	=	41.67

Measurement Value		Limit Value		Margin Level
41.67	•	60	=	-18.33

The following table is the setting of the receiver.

Receiver Parameter	Setting		
Attenuation	10 dB		
Start Frequency	0.15 MHz		
Stop Frequency	30 MHz		
IF Bandwidth	9 KHz		

#### 3.2 TEST PROCEDURE

- a. The EUT was placed 0.8 m above the horizontal ground plane with the EUT being connected to the power mains through a line impedance stabilization network (LISN).
  - All other support equipment were powered from an additional LISN(s).
  - The LISN provides 50 Ohm/50uH of impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle to keep the cable above 40 cm.
- c. Excess I/O cables that are not connected to a peripheral shall be bundled in the center.
  - The end of the cable will be terminated, using the correct terminating impedance.
  - The overall length shall not exceed 1 m.
- d. The LISN is spaced at least 80 cm from the nearest part of the EUT chassis.
- e. For the actual test configuration, please refer to the related Item EUT TEST PHOTO.

#### NOTE:

- (1) In the results, each reading is marked as Peak, QP or AVG per the detector used. BW=9 kHz (6 dB Bandwidth)
- (2) All readings are Peak unless otherwise stated QP or AVG in column of Note. Both the QP and the AVG readings must be less than the limit for compliance.

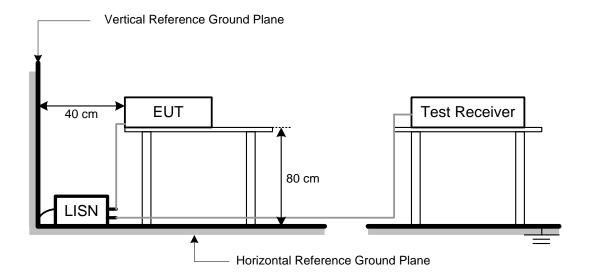
#### 3.3 DEVIATION FROM TEST STANDARD

No deviation.

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# 3.4 TEST SETUP



# 3.5 TEST RESULT

Please refer to the APPENDIX A.



# 4 RADIATED EMISSIONS TEST

# **4.1 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	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(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	Radiated (dBu	Measurement Distance	
(MHz)	Peak	Average	(meters)
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		Correct Factor		Measurement Value
41.91	+	-8.36	=	33.55

Measurement Value		Limit Value		Margin Level
33.55	•	43.50	=	-9.95

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

Mode	VBW(Hz)
BLE (1M)	2700
BLE (2M)	2700

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

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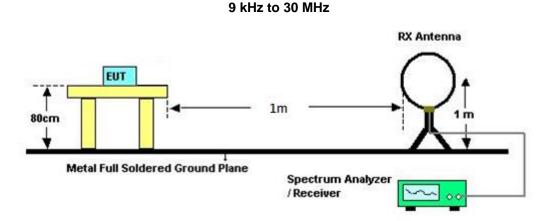
#### 4.2 TEST PROCEDURE

- 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.
- j. In the Radiation bandedge test, the software was automatically obtained the maximum emission point in 2310-2390 MHz and 2483.5-2500 MHz.

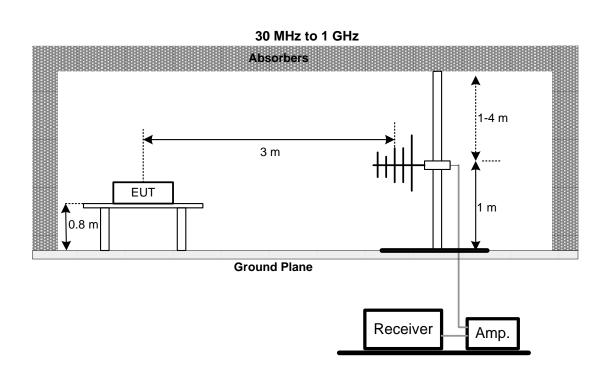
# 4.3 DEVIATION FROM TEST STANDARD

No deviation.

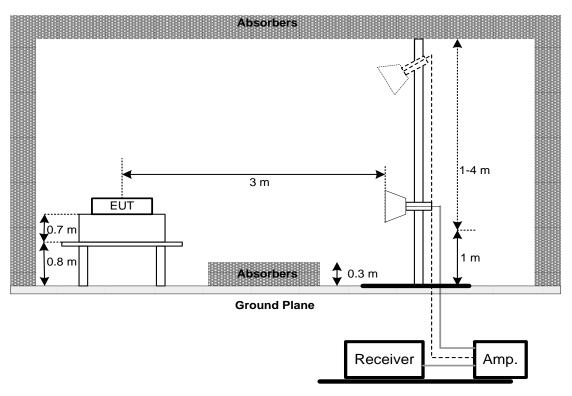
# 4.4 TEST SETUP







# Above 1 GHz





# 4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

# 4.6 TEST RESULT - BELOW 30 MHZ

There were no emissions found below 30 MHz within 20 dB of the limit.

# 4.7 TEST RESULT - 30 MHZ TO 1 GHZ

Please refer to the APPENDIX B.

# 4.8 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.

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# **5 BANDWIDTH TEST**

# 5.1 APPLIED PROCEDURES / LIMIT

Test Item	Limit	Frequency Range (MHz)	Result
Bandwidth	>= 500KHz	2400-2483.5	PASS
		>= 500KHz	>= 500KHz Bandwidth

# 5.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = 2.5 ms.

# 5.3 DEVIATION FROM STANDARD

No deviation.

# 5.4 TEST SETUP



# 5.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 3.5 unless otherwise a special operating condition is specified in the follows during the testing.

#### 5.6 TEST RESULTS

Please refer to the APPENDIX D.

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# **6 OUTPUT POWER TEST**

# 6.1 APPLIED PROCEDURES / LIMIT

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

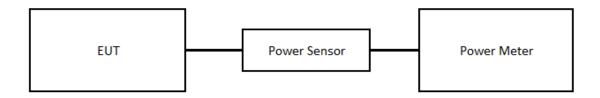
# 6.2 TEST PROCEDURE

- 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 FCC KDB 558074 D01 15.247 Meas Guidance.

# 6.3 DEVIATION FROM STANDARD

No deviation.

# 6.4 TEST SETUP



#### 6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 3.5 unless otherwise a special operating condition is specified in the follows during the testing.

# 6.6 TEST RESULTS

Please refer to the APPENDIX E.

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# 7 POWER SPECTRAL DENSITY TEST

# 7.1 APPLIED PROCEDURES / LIMIT

Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

# 7.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW=3KHz, VBW=10 KHz, Sweep time = auto.

# 7.3 DEVIATION FROM STANDARD

No deviation.

# 7.4 TEST SETUP



# 7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 3.5 unless otherwise a special operating condition is specified in the follows during the testing.

# 7.6 TEST RESULTS

Please refer to the APPENDIX F.

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#### 8 ANTENNA CONDUCTED SPURIOUS EMISSION

# 8.1 APPLIED PROCEDURES / LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits.

# 8.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = 10 ms.

#### 8.3 DEVIATION FROM STANDARD

No deviation.

#### 8.4 TEST SETUP

EUT SPECTRUM ANALYZER

#### 8.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 3.5 unless otherwise a special operating condition is specified in the follows during the testing.

# 8.6 TEST RESULTS

Please refer to the APPENDIX G.

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# 9 LIST OF MEASURING EQUIPMENTS

	AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	TWO-LINE V-NETWORK	R&S	ENV216	101521	2022/9/28	2023/9/27
2	Test Cable	EMCI	EMCRG58-BM-B M-9000	220331	2023/3/30	2024/3/29
3	EMI Test Receiver	R&S	ESR 7	101433	2022/11/16	2023/11/15
4	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A	N/A

	Radiated Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Preamplifier	EMCI	EMC330N	980850	2022/9/19	2023/9/18
2	Preamplifier	EMCI	EMC118A45SE	980819	2023/3/7	2024/3/6
3	Pre-Amplifier	EMCI	EMC184045SE	980907	2022/9/28	2023/9/27
4	Preamplifier	EMCI	EMC001340	980579	2022/9/30	2023/9/29
5	Test Cable	EMCI	EMC104-SM-SM- 1000	220319	2023/3/14	2024/3/13
6	Test Cable	EMCI	EMC104-SM-SM- 3000	220322	2023/3/14	2024/3/13
7	Test Cable	EMCI	EMC104-SM-SM- 7000	220324	2023/3/14	2024/3/13
8	EXA Signal Analyzer	keysight	N9020B	MY57120120	2023/2/24	2024/2/23
9	Loop Ant	Electro-Metrics	EMCI-LPA600	291	2022/9/19	2023/9/18
10	Horn Antenna	RFSPIN	DRH18-E	211202A18EN	2023/5/12	2024/5/11
11	Horn Ant	Schwarzbeck	BBHA 9170D	1136	2023/5/12	2024/5/11
12	Log-bicon Antenna	Schwarzbeck	VULB9168	1369	2023/5/9	2024/5/8
13	6dB Attenuator	EMCI	EMCI-N-6-06	AT-06001	2023/5/9	2024/5/8
14	Test Cable	EMCI	EMC101G-KM-K M-3000	220329	2023/3/14	2024/3/13
15	Test Cable	EMCI	EMC102-KM-KM- 1000	220327	2023/3/14	2024/3/13
16	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A	N/A

	Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 40	100129	2022/10/7	2023/10/6

	Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Power Meter	Keysight	8990B	MY51000517	2023/3/15	2024/3/14
2	Power Sensor	Keysight	N1923A	MY58310005	2023/3/15	2024/3/14





	Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 40	100129	2022/10/7	2023/10/6

	Antenna conducted Spurious Emission					
Item	Item     Kind of Equipment     Manufacturer     Type No.     Serial No.     Calibrated Date     Calibrated Until					
1	Spectrum Analyzer	R&S	FSP 40	100129	2022/10/7	2023/10/6

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

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10 EUT TEST PHOTO
Please refer to document Appendix No.: TP-2212G057-FCCP-1 (APPENDIX-TEST PHOTOS).
11 EUT PHOTOS
Please refer to document Appendix No.: EP-2212G057-1 (APPENDIX-EUT PHOTOS).

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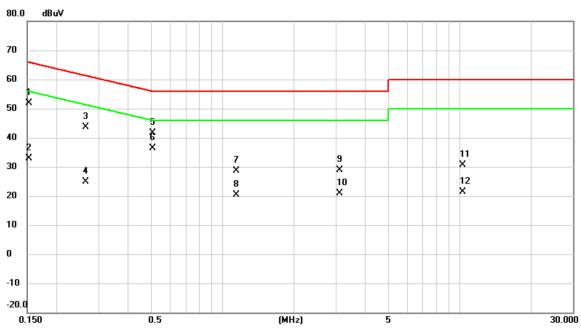


APPENDIX A	AC POWER LINE CONDUCTED EMISSIONS

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Test Mode	Normal	Tested Date	2023/5/17
Test Frequency	-	Phase	Line

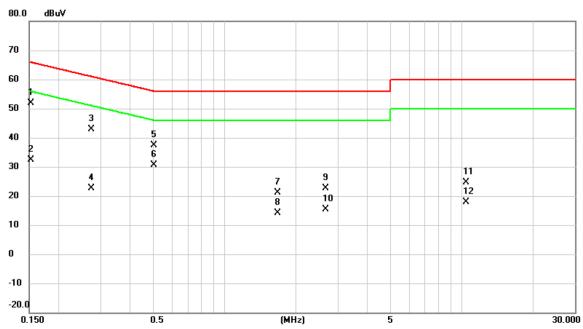


No. Mk	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1522	42.30	9.66	51.96	65.88	-13.92	QP	
2	0.1522	23.34	9.66	33.00	55.88	-22.88	AVG	
3	0.2647	33.89	9.64	43.53	61.28	-17.75	QP	
4	0.2647	15.22	9.64	24.86	51.28	-26.42	AVG	
5	0.5076	32.10	9.63	41.73	56.00	-14.27	QP	
6 *	0.5076	26.67	9.63	36.30	46.00	-9.70	AVG	
7	1.1467	19.00	9.64	28.64	56.00	-27.36	QP	
8	1.1467	10.86	9.64	20.50	46.00	-25.50	AVG	
9	3.1088	19.30	9.69	28.99	56.00	-27.01	QP	
10	3.1088	11.08	9.69	20.77	46.00	-25.23	AVG	
11	10.3133	20.70	9.81	30.51	60.00	-29.49	QP	
12	10.3133	11.45	9.81	21.26	50.00	-28.74	AVG	

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



	Test Mode	Normal	Tested Date	2023/5/17
ĺ	Test Frequency	-	Phase	Neutral

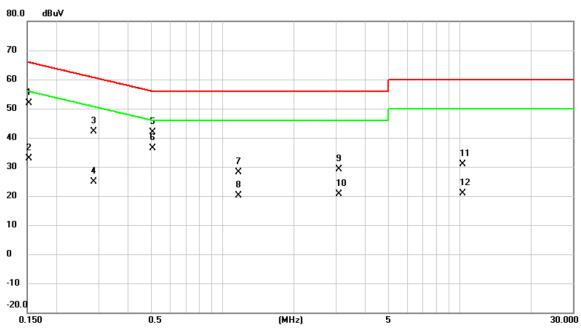


No. Mł	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.1522	42.29	9.67	51.96	65.88	-13.92	QP	
2	0.1522	22.75	9.67	32.42	55.88	-23.46	AVG	
3	0.2737	33.24	9.65	42.89	61.00	-18.11	QP	
4	0.2737	12.92	9.65	22.57	51.00	-28.43	AVG	
5	0.5055	27.62	9.64	37.26	56.00	-18.74	QP	
6	0.5055	20.91	9.64	30.55	46.00	-15.45	AVG	
7	1.6755	11.54	9.69	21.23	56.00	-34.77	QP	
8	1.6755	4.55	9.69	14.24	46.00	-31.76	AVG	
9	2.6678	12.97	9.70	22.67	56.00	-33.33	QP	
10	2.6678	5.80	9.70	15.50	46.00	-30.50	AVG	
11	10.4325	14.77	9.84	24.61	60.00	-35.39	QP	
12	10.4325	7.93	9.84	17.77	50.00	-32.23	AVG	

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



Test Mode	Idle	Tested Date	2023/5/17
Test Frequency	-	Phase	Line

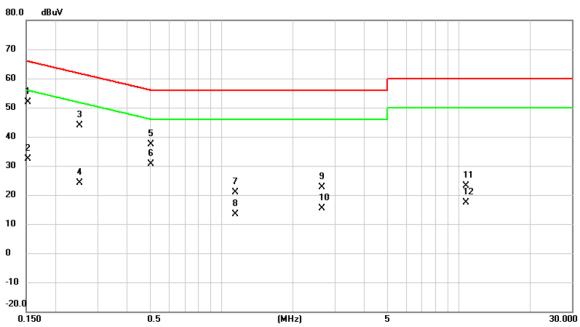


No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1522	42.21	9.66	51.87	65.88	-14.01	QP	
2	0.1522	23.30	9.66	32.96	55.88	-22.92	AVG	
3	0.2872	32.59	9.63	42.22	60.60	-18.38	QP	
4	0.2872	15.25	9.63	24.88	50.60	-25.72	AVG	
5	0.5076	32.16	9.63	41.79	56.00	-14.21	QP	
6 *	0.5076	26.73	9.63	36.36	46.00	-9.64	AVG	
7	1.1715	18.61	9.64	28.25	56.00	-27.75	QP	
8	1.1715	10.51	9.64	20.15	46.00	-25.85	AVG	
9	3.0863	19.39	9.69	29.08	56.00	-26.92	QP	
10	3.0863	10.91	9.69	20.60	46.00	-25.40	AVG	
11	10.3110	21.10	9.81	30.91	60.00	-29.09	QP	
12	10.3110	11.04	9.81	20.85	50.00	-29.15	AVG	

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



T	est Mode	Idle	Tested Date	2023/5/17
Т	est Frequency	-	Phase	Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1522	42.28	9.67	51.95	65.88	-13.93	QP	
2		0.1522	22.72	9.67	32.39	55.88	-23.49	AVG	
3		0.2513	34.28	9.65	43.93	61.71	-17.78	QP	
4		0.2513	14.45	9.65	24.10	51.71	-27.61	AVG	
5		0.5055	27.62	9.64	37.26	56.00	-18.74	QP	
6		0.5055	20.90	9.64	30.54	46.00	-15.46	AVG	
7		1.1467	11.17	9.65	20.82	56.00	-35.18	QP	
8		1.1467	3.80	9.65	13.45	46.00	-32.55	AVG	
9		2.6452	12.96	9.70	22.66	56.00	-33.34	QP	
10		2.6452	5.66	9.70	15.36	46.00	-30.64	AVG	
11		10.7362	13.30	9.85	23.15	60.00	-36.85	QP	
12		10.7362	7.60	9.85	17.45	50.00	-32.55	AVG	

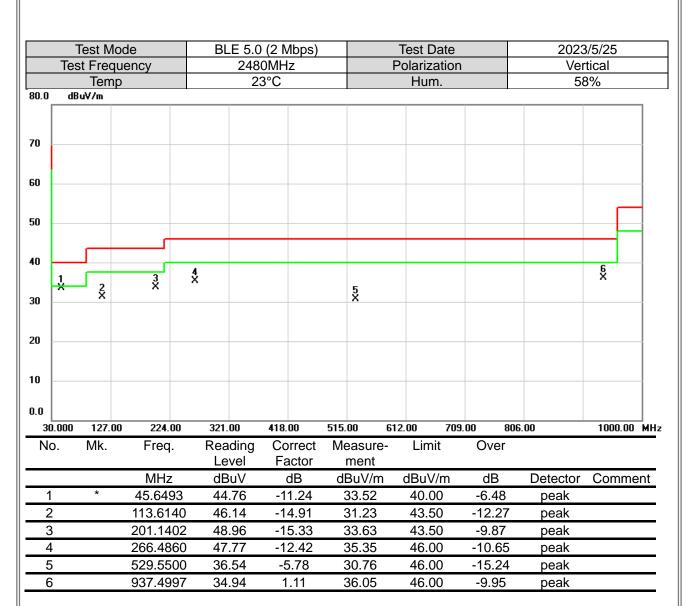
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



# APPENDIX B RADIATED EMISSIONS - 30 MHZ TO 1 GHZ

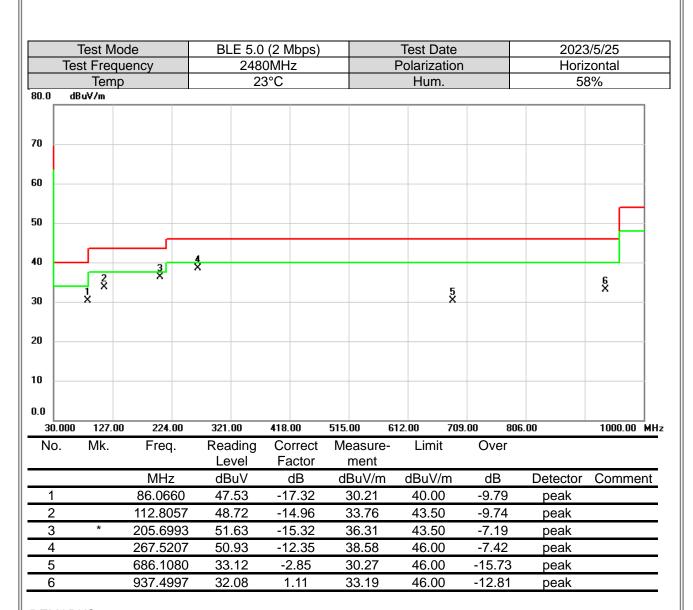
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- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





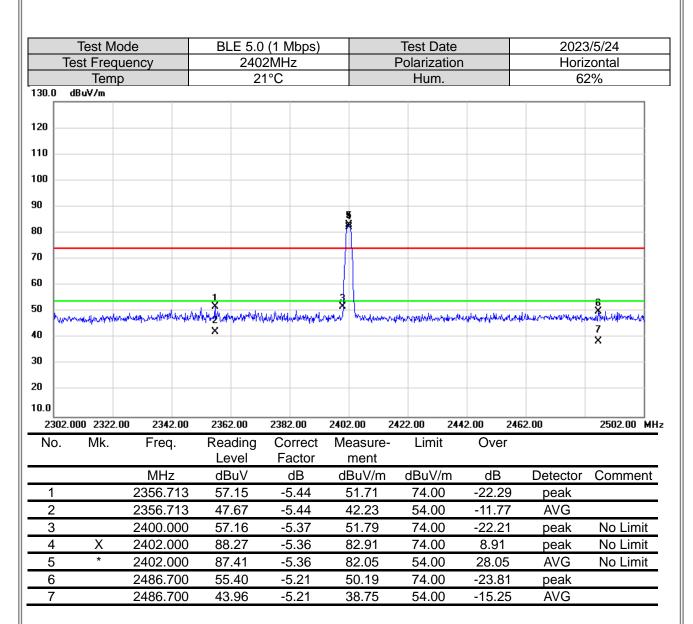
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



# APPENDIX C RADIATED EMISSIONS - ABOVE 1 GHZ

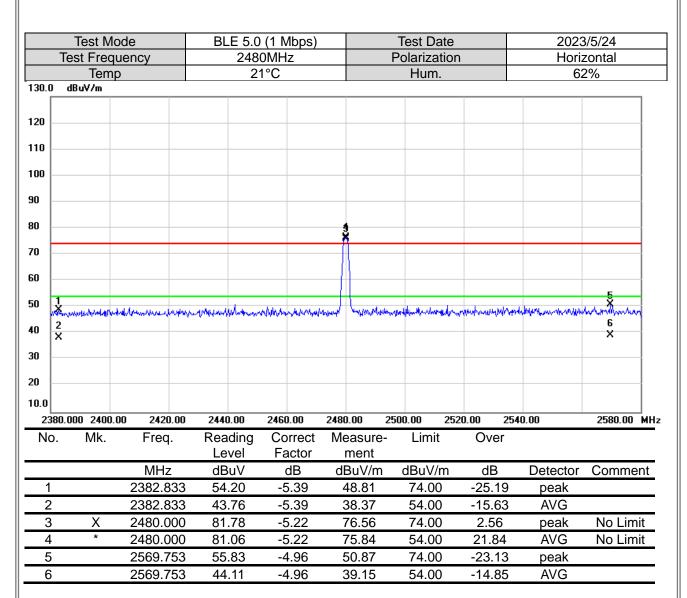
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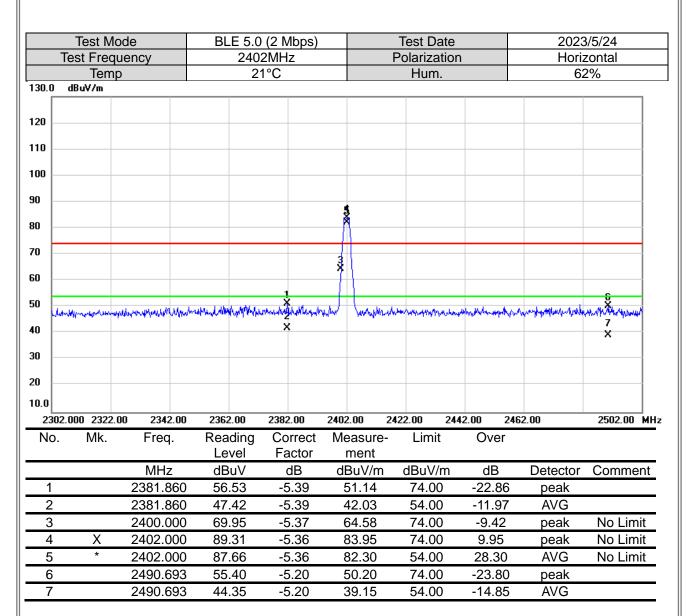
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





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





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



	Test Mo			0 (2 Mbps)		Test Date			3/5/24
	Test Frequ			30MHz	I	Polarization	)		zontal
120.0	Temp 0 dBuV/m	)	2	1°C		Hum.		62	2%
130.0	n agas/w								
120									
110									
100									
90									
80					<b>3</b>				
70									
					111				
60									
	T matigary manage with the space	water from the form of the	Agandra Mangrapan	odon, manual propuldo hably	want houseness	w/hphylpoparamal	pr/philosophistoposs	agilialkantanaknis kriji	Modernskolgsgraden
50	1 1000 -	was singular pender de mad de	agametra Mangaranana	ordern, manuscript op order bat (	hand handrane	whoughtenment	prigiptured allers, provided	5 naphálkarhunnalmáráp 6 X	
60 50 40 30	2	ndring god og product for en statel	Againgted Lymanica	ordyny-masteretapydgoldegolodigi	hand handraman	ud paylare species d	pr <sup>a</sup> nglightredja <sup>tello</sup> tis.pr <sup>ass</sup> va.saq	6	
50 40 30 20	2	nd the signal region about the constant	Againgted Lymania	ondynymasianespydysoldypilosity	hand handramak	ud farftrænderend	pe <sup>t</sup> aglight, are dystelleris, personal sag	6	
50 <b>4</b> 0 30 20 10.0	2 X							6 X	
50 <b>4</b> 0 30 20 10.0	2 X 380.000 2400.0	00 2420.00	2440.00	2460.00	2480.00 25	500.00 252	20.00 254	6	
50 <b>4</b> 0 30 20 10.0	2 X 380.000 2400.0	00 2420.00 Freq.						6 X	
50 <b>4</b> 0 30 20 10.0	2 X 380.000 2400.0	00 2420.00 Freq.	2440.00 Reading Level dBuV	2460.00 Correct Factor dB	2480.00 25 Measure- ment dBuV/m	500.00 252 Limit dBuV/m	20.00 254 Over	6 X	
50 40 30 20 10.0	2 X 380.000 2400.0 O. Mk.	00 2420.00 Freq.	2440.00 Reading Level	2460.00 Correct Factor	2480.00 25 Measure- ment	500.00 252 Limit	20.00 254 Over	0.00	2580.00 M
50 40 30 20 10.0 23 No	2 X 380.000 2400.0 O. Mk.	00 2420.00 Freq. MHz 2383.587 2383.587	2440.00 Reading Level dBuV 54.67 44.26	2460.00 Correct Factor dB -5.39 -5.39	2480.00 25 Measure- ment dBuV/m 49.28 38.87	500.00 252 Limit dBuV/m 74.00 54.00	20.00 254 Over dB -24.72 -15.13	0.00  Detector	2580.00 M
50 40 30 20 10.0 23 No	2 X 380.000 2400.0 o. Mk.	00 2420.00 Freq. MHz 2383.587 2383.587 2480.000	2440.00 Reading Level dBuV 54.67 44.26 87.09	2460.00 Correct Factor dB -5.39 -5.39 -5.22	2480.00 25 Measure- ment dBuV/m 49.28 38.87 81.87	500.00 252 Limit dBuV/m 74.00 54.00 74.00	20.00 254 Over dB -24.72 -15.13 7.87	Detector peak AVG peak	2580.00 M
50 40 30 20 10.0 23 No	2 X 380.000 2400.0 O. Mk.	00 2420.00 Freq. MHz 2383.587 2383.587	2440.00 Reading Level dBuV 54.67 44.26	2460.00 Correct Factor dB -5.39 -5.39	2480.00 25 Measure- ment dBuV/m 49.28 38.87	500.00 252 Limit dBuV/m 74.00 54.00	20.00 254 Over dB -24.72 -15.13	0.00  Detector peak AVG	2580.00 M
50 40 30 20 10.0 23 No	2 X X 380.000 2400.0 O. Mk.	00 2420.00 Freq. MHz 2383.587 2383.587 2480.000	2440.00 Reading Level dBuV 54.67 44.26 87.09	2460.00 Correct Factor dB -5.39 -5.39 -5.22	2480.00 25 Measure- ment dBuV/m 49.28 38.87 81.87	500.00 252 Limit dBuV/m 74.00 54.00 74.00	20.00 254 Over dB -24.72 -15.13 7.87	Detector peak AVG peak	2580.00 M

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



	Test M		Bl		(1 Mbps)		Test Da			3/5/24
	Test Freq				2MHz		Polariza			rtical
120.0	Tem	p		21	1°C		Hum.		6	2%
130.0	dBuV/m									
120										
110 _										
100										
90 <u> </u>										
80										
70 <b>–</b>										
io										
io		1 X								
10										
:0		2 X								
20										
0.0										
1000	.000 3550.	00 6100.0			11200.00	13750.00	16300.00		21400.00	26500.00 MH
No.	Mk.	Freq.		iding vel	Correct Factor	Measure ment	e- Limit	Over		
		MHz		BuV	dB	dBuV/m	ı dBuV/ı	m dB	Detector	Comment
1		4804.00		.80	0.53	45.33	74.00			
2	*	4804.00		.26	0.53	33.79	54.00			

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



		st Mo			BL		(1 Mt	ps)				Test D					3/5/24
			uency				2MHz				F	<u>Polariza</u>					zontal
30.0	dBuV	Temp	)			2	1°C					Hum	۱.			62	2%
30.0	abuv	7111															
20																	
10																	
00																	
90																	
30																	
o																	
io																	
io			1														
10 L			X X														
			2 X														
20																	
0.0																	
1000	0.000	3550.0	00 6100	0.00	8650	.00	11200	.00	1375	0.00	16	300.00	188	50.00	2140	00.00	26500.00 MI
No.	N	Иk.	Freq		Rea Le		Corr Fac			asur nent	e-	Limi	t	Ove	er		
			MHz	7	dB		dE			3uV/r	n	dBuV	/m	dB	}	Detector	Comment
1			4804.0	000	44.	21	0.5	3		4.74		74.0	0	-29.2	26	peak	
2		*	4804.0	000	33.	52	0.5	3	3	34.05		54.0	0	-19.9	95	AVG	

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



	Test Mo		В		(1 Mbps)		Test Da			3/5/24
Te	est Frequ				0MHz		Polarizat			rtical
100.0	Temp	)		2	1°C		Hum.	1	6	2%
130.0	dBuV/m									
120										
110 -										
100 -										
90										
во										
70										
60										
50		4								
40		X X								
30		2 X								
20										
10.0										
1000.0	000 3550.0	00 6100.0	00 86!	50.00	11200.00	13750.00	16300.00		21400.00	26500.00 MH
No.	Mk.	Freq.		ading evel	Correct Factor	Measure ment	e- Limit	Over		
		MHz		ЗuV	dB	dBuV/n	n dBuV/r	m dB	Detector	Comment
1		4880.00	0 4	1.04	0.75	44.79	74.00	-29.21	l peak	
2	*	4880.00	0 3	3.86	0.75	34.61	54.00	-19.39	AVG	

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



_		st Mo			BL		(1 M					Test D					3/5/24
			iency				0MHz	<u>'</u>			<u> </u>	Polariza					zontal
130.0	dBuV	Temp	)			2	1°C					Hum	۱.			62	2%
JU.U	ubu+	7111															
120																	
110 —																	
100																	
90 <u> </u>																	
30																	
'o																	
io																	
0			1 X														
0			2														
:0			x														
eo																	
10.0																	
		3550.0			8650		1120			0.00		300.00		50.00		00.00	26500.00 N
No.	Λ	∕lk.	Freq	•	Rea Le			rect ctor		easur ment		Limi	t	Ove	er		
			MHz		dB	uV	d	В	dE	3uV/r	n	dBuV	/m	dE	3	Detector	Commen
1			4880.0	00	45.	30	0.	75		16.05		74.0	0	-27.	95	peak	
2		*	4880.0	00	34.	.11	0.	75	3	34.86		54.0	0	-19.	14	AVG	

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



	Te	st Mo	ode		BL	E 5.0						Test Da					3/5/24	
			uency				<u>OMH</u>	Z			Р	olariza					tical	
		Temp	)			2	1°C					Hum.				62	2%	
130.0	dBu∀	//m																_
120																		-
110																		_
100																		_
90																		_
30																		_
70 F																		+
50 <u> </u>																		4
50			1 X															-
10 <u> </u>			2 X															-
30			X															4
20																		4
10.0																		
		3550.0			8650		1120			0.00		00.00	1885			00.00	26500.0	00 MH
No.	1	Mk.	Freq	Ē	Rea Le			rrect ctor		easure ment	<del>)</del> -	Limit		Ove	er			
			MHz	<u>'</u>	dB			dΒ	dl	3uV/m	1	dBuV/ı	m	dB	}	Detector	Comm	ent
1			4960.0	000	45.	56	1	.00		16.56		74.00	)	-27.4	44	peak		
2		*	4960.0	000	33.	89	1	.00	3	34.89		54.00	)	-19.1	11	AVG		

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



		st Mo			BL		(1 M					Test D					3/5/24
			iency				0MHz	<u> </u>			F	<u>Polariza</u>					zontal
30.0	dBu\	Temp	)			2	1°C					Hum	1.			62	2%
130.0	авич	//M															
120 _																	
10																	
100																	
90																	
30																	
'o																	
io																	
io <u> </u>			1 X														
10 L																	
0			2 X														
20																	
0.0																	
1000	0.000	3550.0	00 6100	.00	8650	.00	11200	).00	1375	0.00	16	300.00	188	50.00	2140	00.00	26500.00 M
No.	ı	Mk.	Freq	•	Rea Le			rect		easur ment	e-	Limi	t	Ove	er		
			MHz		dB			В		3uV/r	n	dBuV	/m	dB	,	Detector	Comment
1			4960.0		44.			00		15.76		74.0		-28.2	24	peak	
2		*	4960.0	00	34.	08	1.	00	3	35.08		54.0	0	-18.9	92	AVG	

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



	Test M			BLI		(2 Mbps)	)			est Da				3/5/24	_
16		quency				2MHz			Po	olarizati	ion			tical	
130.0 d	Tem BuV/m	ıp			2	1°C				Hum.			62	2%	
130.0	10 G ¥ 7 III														1
120															
110															
100															
90															
80															
70															
60															
50		1 X													
40		2													
30		X													
20															
10.0															
1000.0	000 3550	).00 61	00.00	8650.	.00	11200.00	137	50.00	1630	00.00	18850.00	214	00.00	26500.00	MHz
No.	Mk.	Fre	eq.	Read Lev		Correct Factor		easure ment	-	Limit	Ov	er			
		MI	Ιz	dBı		dB		BuV/m	(	dBuV/n	n dl	В	Detector	Commer	nt
1		4804		45.		0.53		45.73		74.00	-28		peak		
2	*	4804	.000	33.	52	0.53		34.05		54.00	-19	.95	AVG		

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



Te	Test Mest Free				BL	E 5.0	(2 M 2MHz				F	Test D					3/5/24 zontal	
	Ten		,				1°C					Hun		<u> </u>			2%	
130.0 c	BuV/m	٠,٢							<u> </u>							<u> </u>	_,,	
120																		-
110																		
110																		
100																		-
90																		
50																		
80																		$\dashv$
70																		_
60																		1
50			1															
40			1 X															
40			2 X															
30			X															-
20																		
10.0	000 3550	1 00	6100		8650	1 00	1120	0.00	107	50.00	10	300.00	100	50.00	21.4	00.00	26500.0	
No.	лоо зээс Mk.	J.UU						rrect		easur		Lim		Ove		UU. UU	26300.0	UMHZ
INO.	IVIK.		Freq	•		ding vel		ctor		nent		LIIII	ıı	Ovi	<del>-</del> 1			
			MHz	<u>,</u>		uV		IB		BuV/r		dBuV	/m	dE	3	Detector	Commo	ent
1			4804.C			.99		53		15.52		74.0		-28.		peak	20	
2	*		4804.C			.47		53		34.00		54.0		-20.		AVG		

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



	Test M				BL		(2 Mk					Test Da					3/5/24	
16	est Free		ncy				<u>0MHz</u> 1°C				- 1	Polariza					rtical 2%	
130.0	Ten BuV/m	ıρ					1 0					Hum				· ·	<b>2</b> 70	
																		$\neg$
120																		4
110																		
'''																		Tj.
100																		$\dashv$
90																		_
80																		
70																		$\dashv$
60																		-
50			_															_
			X															
40			2															1
30			×															-
20																		
10.0																		
1000.0	000 3550	0.00	6100	).00	8650	).00	11200	.00	1375	50.00	16	300.00	188	50.00	21400	).00	26500.0	 )0 MHz
No.	Mk.		Freq			ding vel	Cori			easur ment		Limit	t	Ove	r			
			MHz	<u>-</u>		uV	dl			3uV/r		dBuV/	m	dB		Detector	Comm	ent
1			4880.C	000	45	.16	0.7	<b>7</b> 5	4	15.91		74.00	)	-28.0	9	peak		
2	*		4880.C	000	33	.10	0.7	75	3	33.85		54.00	)	-20.1	5	AVG		

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



_		st Mo			BL		(2 M				Test D					3/5/24
			uency				0MHz				 <u>Polariza</u>					zontal
130.0	dBuV	Temp	)			2	1°C				Hum	1.			62	2%
130.0	abuv	/M														
120																
10																
100																
90																
во																
70 <u> </u>																
io —																
50			1 ×													
0			2													
:o			x													
20																
0.0																
	0.000				8650		11200			0.00	300.00		50.00		00.00	26500.00 M
No.	N	∕lk.	Freq			ding vel	Cor Fac	rect ctor		easur ment	Limi	t	Ove	er		
			MHz		dB	uV		В		3uV/r	dBuV	/m	dE	3	Detector	Commen
1			4880.0	000	44.	.90	0.	75		15.65	74.0	0	-28.	35	peak	
2		*	4880.0	000	34.	.13	0.	75	3	34.88	54.0	0	-19.	12	AVG	

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



	Test N				BL		(2 M					Test D					3/5/24	
	Test Fre		ncy				0MHz					Polariza					rtical	
130.0	Ten dBuV/m	np					1°C					Hun	1.			64	2%	
T	abarriii																	$\neg$
120																		-
110																		-
100																		_
90 _																		4
80																		_
70																		_
60																		_
50			1 X															+
40			 2 X															-
30			×															4
20																		4
10.0																		
	0.000 355		6100		8650		11200			0.00		300.00		50.00		00.00	26500.0	)0 MHz
No.	Mk.		Freq		Read Lev			rect ctor		easur ment		Lim	It	Ove	er			
			MHz		dB	uV	d	В	dl	3uV/r	n	dBuV	/m	dE	3	Detector	Comm	ent
1			4960.0	00	45.	75	1.0	00		16.75	,	74.0	0	-27.	25	peak		
2	*		4960.0	00	34.	20	1.0	00	3	35.20		54.0	0	-18.	80	AVG		

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



	Test Mo			0 (2 Mbps)		Test Date			3/5/24
Т	Test Frequency			2480MHz		Polarization		Horizontal	
100.0	Temp	)	2	21°C		Hum.		62	2%
130.0	dBuV/m								
120									
110									
100									
90									
80									
70									
60									
50		1 X							
40		2							
30		×							
20									
10.0									
	.000 3550.0			11200.00				00.00	26500.00 MHz
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure ment	- Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4960.000	44.94	1.00	45.94	74.00	-28.06	peak	
2	*	4960.000	34.07	1.00	35.07	54.00	-18.93	AVG	

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



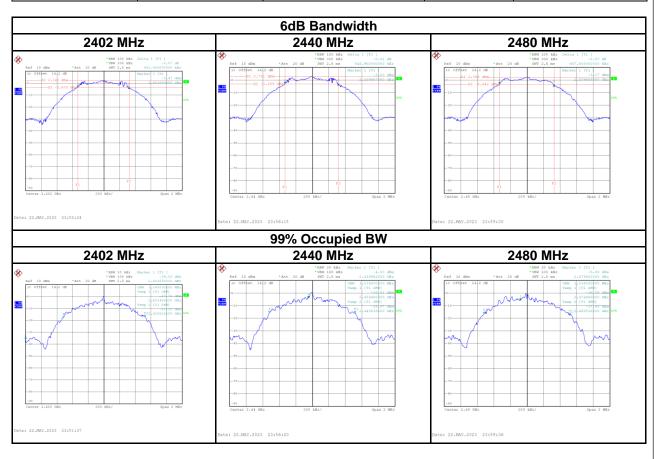
	Report No.: BTE 1 OOI 2 2212 OOJ
APPENDIX D	BANDWIDTH

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Test Mode: BLE 5.0\_1 Mbps

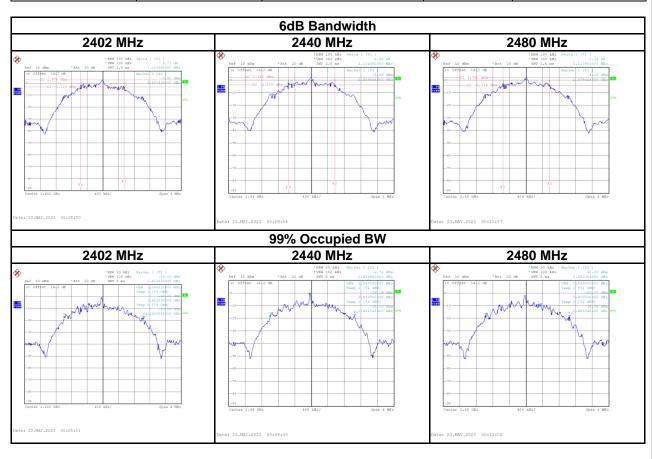
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2402	0.65	1.04	500	Pass
2440	0.65	1.04	500	Pass
2480	0.66	1.04	500	Pass





Test Mode: BLE 5.0\_2 Mbps

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2402	1.10	2.04	500	Pass
2440	1.12	2.05	500	Pass
2480	1.13	2.04	500	Pass







# APPENDIX E OUTPUT POWER

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Test Mode : BLE 5.0\_1 Mbps Tested Date 2023/5/22

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2402	2.98	0.0020	30.00	1.0000	Pass
2440	3.18	0.0021	30.00	1.0000	Pass
2480	2.79	0.0019	30.00	1.0000	Pass

Test Mode : BLE 5.0\_2 Mbps Tested Date 2023/5/22

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2402	3.28	0.0021	30.00	1.0000	Pass
2440	2.70	0.0019	30.00	1.0000	Pass
2480	2.43	0.0017	30.00	1.0000	Pass

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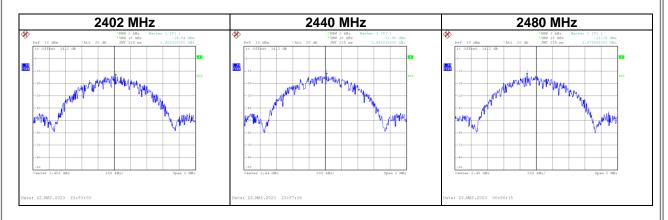
# APPENDIX F POWER SPECTRAL DENSITY TEST

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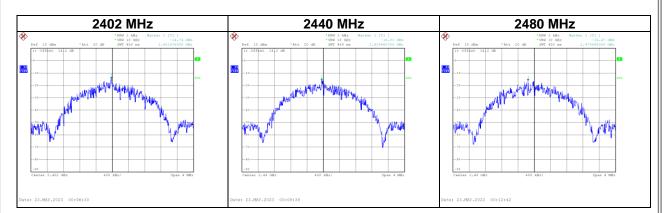
Test Mode : BLE 5.0\_1 Mbps

Frequency (MHz)	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Test Result
2402	-14.04	8	Pass
2440	-12.90	8	Pass
2480	-13.16	8	Pass



Test Mode : BLE 5.0\_2 Mbps

Frequency (MHz)	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Test Result
2402	-14.74	8	Pass
2440	-16.03	8	Pass
2480	-16.47	8	Pass



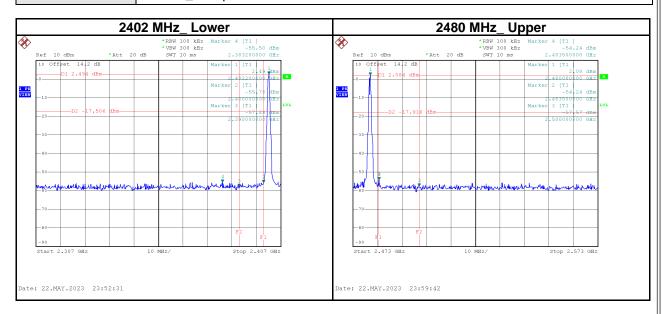


APPENDIX G	ANTENNA CONDUCTED SPURIOUS EMISSION

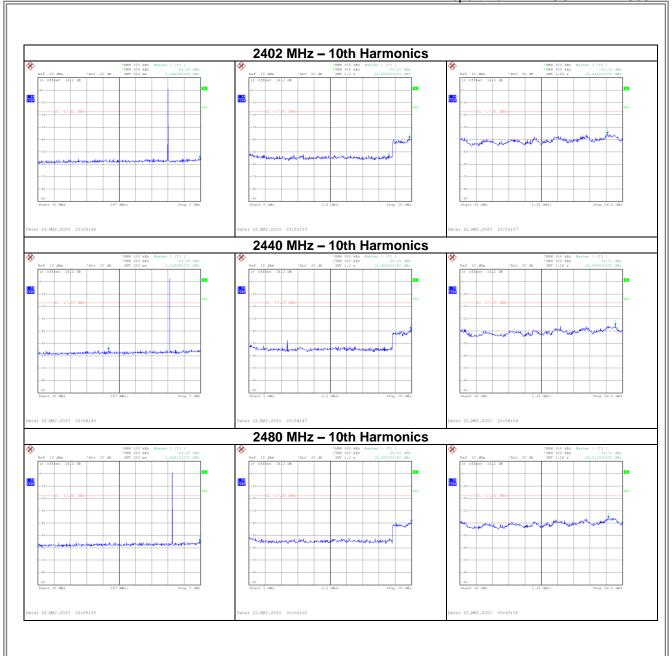
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Test Mode: BLE 5.0\_1 Mbps









Test Mode: BLE 5.0\_2 Mbps

