



# **FCC Radio Test Report**

FCC ID: 2ADQS-107001333

Report No. : BTL-FCCP-2-2411T019
Equipment : Portable Bluetooth Speaker
Model Name : ROCKSTER CROSS 2

Brand Name : **Teufel** 

**Applicant**: Lautsprecher Teufel GmbH

Address : Budapester Str. 44, 10787 Berlin, Germany

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 : 2024/11/4

**Date of Test** : 2024/11/12 ~ 2024/11/25

**Issued Date** : 2025/2/14

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

Prepared by : Brett Shen

Brett Shen, 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

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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** 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.

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## **REVISION HISTORY**

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-2-2411T019	R00	Original Report.	2025/2/14	Valid

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#### **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 APPENDIX D	Pass	
15.247(a)(2)	Bandwidth	APPENDIX E	Pass	
15.247(b)(3)	Output Power	APPENDIX F	Pass	
15.247(e)	Power Spectral Density	APPENDIX G	Pass	
15.247(d)	Antenna conducted Spurious Emission	APPENDIX H	Pass	
15.203	Antenna Requirement		Pass	

#### **Statement of Conformity**

The statement of conformity is based on the binary decision rule according to IEC Guide 115 and ILAC G8 "simple acceptance" principle. Without considering measurement uncertainty, its specific risk is less than 50% PFA. (PFA: Probability of False Accept)

#### NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report.(2) The report format version is TP.1.1.1.

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#### 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)

 ☐ CB11

SR10

No. 72, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

(FCC DN: TW0659)

□ C06

□ CB22

#### 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k = 2, providing a level of confidence of approximately 95 %.

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:

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:

teet:				
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.

#### 1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Environment Condition	Test Voltage	Tested by
AC Power Line Conducted Emissions	23 °C, 64 %	AC 120V	Ken Lan
Radiated emissions below 1 GHz	25 °C, 60 %	AC 120V	Emily Chang
Radiated emissions above 1 GHz	25 °C, 60 %	AC 120V	Emily Chang
Bandwidth	22 °C, 54 %	AC 120V	Easton Tsai
Output Power	22 °C, 54 %	AC 120V	Easton Tsai
Power Spectral Density	22 °C, 54 %	AC 120V	Easton Tsai
Antenna conducted Spurious Emission	22 °C, 54 %	AC 120V	Easton Tsai

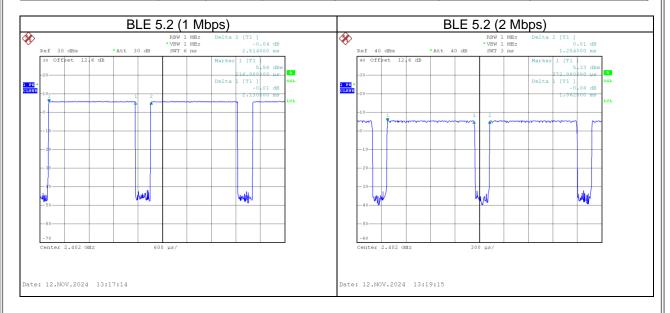
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### 1.4 DUTY CYCLE

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

Remark	Delta 2			Delta 3	On Time/Period	10 log(1/Duty Cycle)
Mode	ON	Numbers	On Time (B)	Period (ON+OFF)	Duty Cycle	Duty Factor
lviode	(ms)	(ON)	(ms)	(ms)	(%)	(dB)
BLE 5.2 (1 Mbps)	2.130	1	2.130	2.514	84.73%	0.72
BLE 5.2 (2 Mbps)	1.062	1	1.062	1.254	84.69%	0.72





### **2 GENERAL INFORMATION**

### 2.1 DESCRIPTION OF EUT

Equipment	Portable Bluetooth Speaker
Model Name	ROCKSTER CROSS 2
Brand Name	Teufel
Model Difference	N/A
Power Source	#1 Supplied from Type-C port. #2 Supplied from battery.
Power Rating	#1 DC 5/9/12/15/20V #2 DC 7.4V / 5510mAh
Products Covered	1 * Type-C USB cable 1 * Strap
HW Version	Main-V4/ IO-V3 / Key_LED-V4
AE Version	Same as current Rockster Cross 2018
ME Version	Released DV2 3D
FW Version	EEPROM:V1.3 BT:V0.8.02
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: 6.65 dBm (0.0046 W) 2 Mbps: 6.57 dBm (0.0045 W)
Test Software Version	BT FCC Tool V2.25
Test Model	ROCKSTER CROSS 2
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

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19	2440	39	2480	

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(3) Table for Filed Antenna:

Antenna	Manufacture	Model Name	Type	Connector	Frequency (MHz)	Gain (dBi)
1	World Elite	YD-S01	PCB	N/A	2400-2480	2.57

(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.

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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)	1 Mbps	39	-
Transmitter Radiated Emissions	1/2 Mbps	00/39	Bandedge
(above 1GHz)	1/2 Mbps	00/19/39	Harmonic
Transmitter Radiated Emissions (above 18GHz)	1 Mbps	39	-
Bandwidth	1/2 Mbps	00/19/39	-
Output Power	1/2 Mbps	00/19/39	-
Power Spectral Density	1/2 Mbps	00/19/39	-
Antenna conducted Spurious Emission	1/2 Mbps	00/19/39	-

- (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 5.3, we will pick BLE 5.3 for testing.

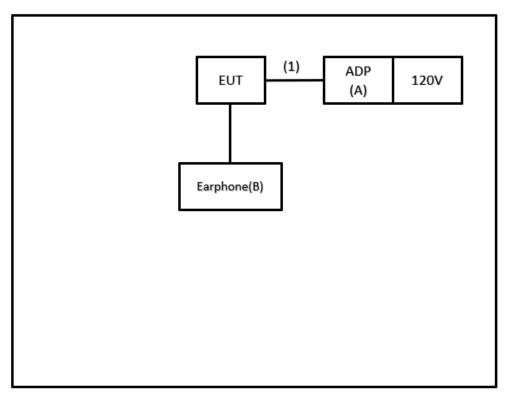
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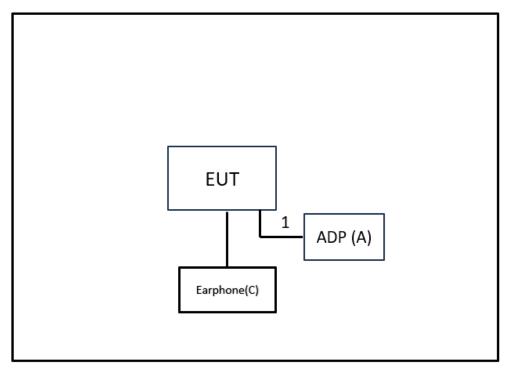
### 2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

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

AC power line conducted emissions



#### **Radiated Emissions**



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### 2.4 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
Α	ADP	N/A	N/A	N/A	Supplied by test requester
В	Earphone	N/A	N/A	N/A	Furnished by test lab.
С	Earphone	N/A	N/A	N/A	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	N/A	N/A	1m	Type C to Type C	Supplied by test requester

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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 (dBµV)		Correct Factor (dB)		Measurement Value (dBµV)
38.22	+	3.45	=	41.67

Measurement Value		Limit Value		Margin Level
(dBµV) 41.67	_	(dBµV) 60	_	(dB) -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.

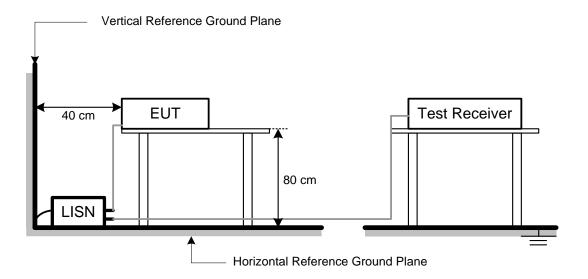
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#### 3.3 DEVIATION FROM TEST STANDARD

No deviation.

#### 3.4 TEST SETUP



#### 3.5 EUT OPERATION CONDITIONS

The EUT was configured for testing in a typical function (as a customer would normally use it), EUT was programmed to be in continuously transmitting/receiving data or hopping on mode.

#### 3.6 TEST RESULT

Please refer to the APPENDIX A.

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#### 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 (MHz)	Radiated (dBu	Measurement Distance	
(IVITZ)	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 (dBµV)		Correct Factor (dB/m)		Measurement Value (dBµV/m)
41.91	+	-8.36	II	33.55

Measurement Value		Limit Value		Margin Level
(dBµV/m)		(dBµV/m)		(dB)
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

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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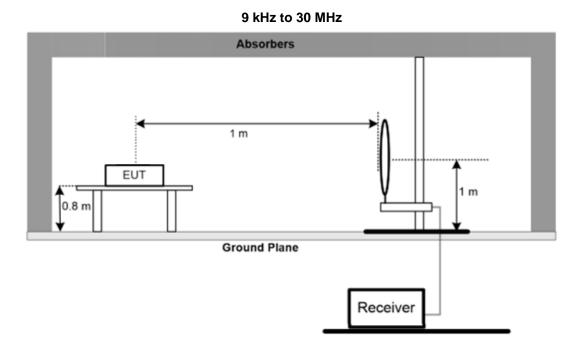
#### 4.2 TEST PROCEDURE

- a. The measuring distance of 1 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 30MHz)
- b. 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)
- c. 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)
- d. 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.
- e. 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).
- f. 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.
- g. 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.
- h. 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)
- 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)
- j. For the actual test configuration, please refer to the related Item EUT TEST PHOTO.

#### 4.3 DEVIATION FROM TEST STANDARD

No deviation.

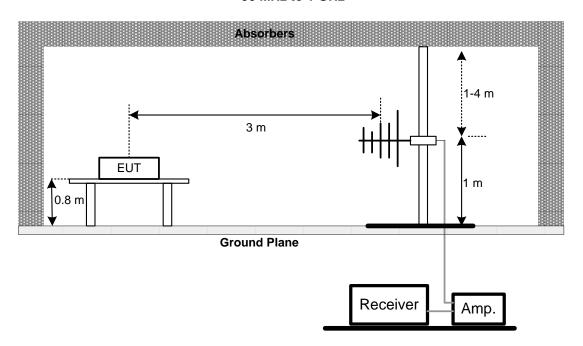
#### 4.4 TEST SETUP



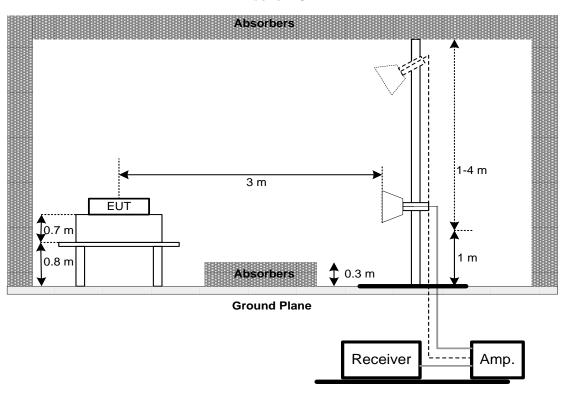
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30 MHz to 1 GHz



**Above 1 GHz** 



#### 4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.



4.6	5 TEST RESULT - 9 KHZ TO 30 MHZ
Ple	ease refer to the APPENDIX B.
4.7	7 TEST RESULT – 30 MHZ TO 1 GHZ
Ple	ease refer to the APPENDIX C.
4.8	3 TEST RESULT – ABOVE 1 GHZ
Ple	ease refer to the APPENDIX D.
NC	OTE:  (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

Section	Test Item	Limit	Frequency Range (MHz)	Result	
15 247(2)(2)	Pandwidth	>= 500KHz	2400-2483.5	PASS	
15.247 (a)(2)	15.247(a)(2) Bandwidth		2400-2463.3	PASS	

#### 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 E.

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#### **6 OUTPUT POWER TEST**

#### 6.1 APPLIED PROCEDURES / LIMIT

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

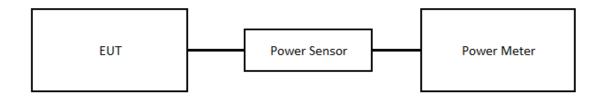
#### 6.2 TEST PROCEDURE

- 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 F.

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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 G.

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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.

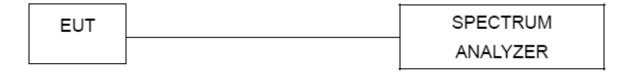
#### 8.2 TEST PROCEDURE

- 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



#### 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 H.

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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	2024/9/5	2025/9/4
2	Test Cable	EMCI	EMCCFD300-BM -BMR-5000	220331	2024/3/30	2025/3/29
3	EMI Test Receiver	R&S	ESR3	102950	2024/4/12	2025/4/11
4	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A	N/A

			Radiated Emission	ons		
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Preamplifier	EMCI	EMC330N	980850	2024/9/5	2025/9/4
2	Preamplifier	EMCI	EMC118A45SE	980819	2024/3/6	2025/3/5
3	Pre-Amplifier	EMCI	EMC184045SE	980907	2024/9/4	2025/9/3
4	Preamplifier	EMCI	EMC001340	980579	2024/9/4	2025/9/3
5	Test Cable	EMCI	EMC104-SM-100 0	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	273	2024/7/31	2025/7/30
10	Horn Antenna	RFSPIN	DRH18-E	211202A18EN	2024/5/9	2025/5/8
11	Horn Ant	Schwarzbeck	BBHA 9170D	1136	2024/5/17	2025/5/16
12	Log-bicon Antenna	Schwarzbeck	VULB9168	1369	2024/6/14	2025/6/13
13	6dB Attenuator	EMCI	EMCI-N-6-06	AT-06001	2024/6/14	2025/6/13
14	Test Cable	EMCI	EMC101G-KM-K M-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

			Bandwidth			
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 40	100129	2024/3/27	2025/3/26

			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



		F	Power Spectral De	nsity		
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 40	100129	2024/3/27	2025/3/26

	Antenna conducted Spurious Emission					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 40	100129	2024/3/27	2025/3/26

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-2411T019-FCCP-1 (APPENDIX-TEST PHOTOS).
11 EUT PHOTOS
Please refer to document Appendix No.: EP-2411T019-2 (APPENDIX-EUT PHOTOS).

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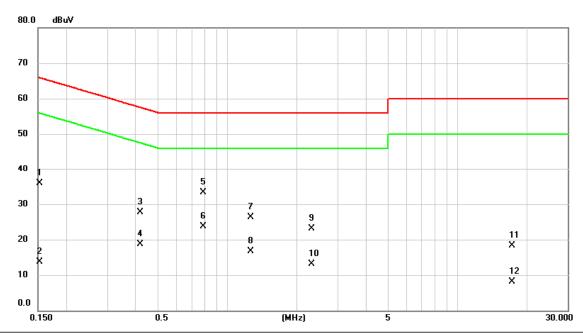


APPENDIX A	AC POWER LINE CONDUCTED EMISSIONS

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Test Mode	Normal	Tested Date	2024/11/12
Test Frequency	-	Phase	Line

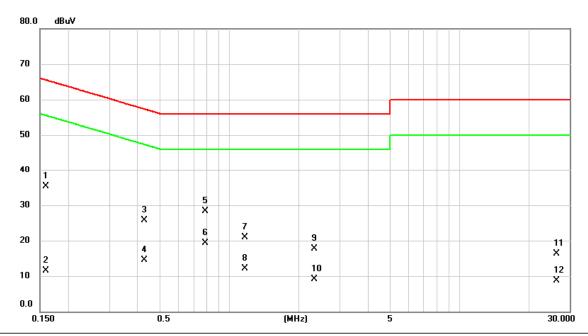


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1		0.1522	26.17	9.68	35.85	65.88	-30.03	QР	
2		0.1522	4.01	9.68	13.69	55.88	-42.19	AVG	
3		0.4200	18.06	9.58	27.64	57.45	-29.81	QP	
4		0.4200	9.05	9.58	18.63	47.45	-28.82	AVG	
5		0.7845	23.79	9.56	33.35	56.00	-22.65	QP	
6	*	0.7845	14.13	9.56	23.69	46.00	-22.31	AVG	
7		1.2593	16.67	9.56	26.23	56.00	-29.77	QP	
8		1.2593	7.07	9.56	16.63	46.00	-29.37	AVG	
9		2.3213	13.46	9.57	23.03	56.00	-32.97	QP	
10		2.3213	3.63	9.57	13.20	46.00	-32.80	AVG	
11		17.1938	8.59	9.73	18.32	60.00	-41.68	QP	
12		17.1938	-1.56	9.73	8.17	50.00	-41.83	AVG	

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



Test Mode	Normal	Tested Date	2024/11/12
Test Frequency	-	Phase	Neutral

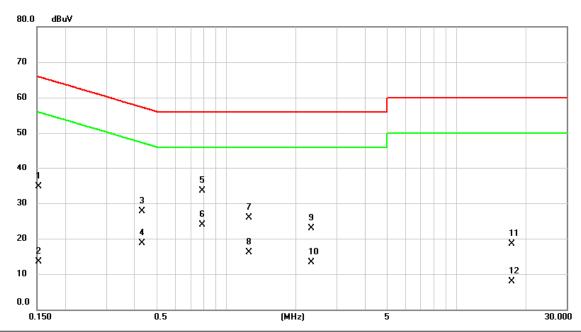


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1		0.1598	25.74	9.66	35.40	65.47	-30.07	QP	
2		0.1598	1.88	9.66	11.54	55.47	-43.93	AVG	
3		0.4290	16.04	9.57	25.61	57.27	-31.66	QP	
4		0.4290	4.90	9.57	14.47	47.27	-32.80	AVG	
5		0.7867	18.67	9.55	28.22	56.00	-27.78	QР	
6	*	0.7867	9.81	9.55	19.36	46.00	-26.64	AVG	
7		1.1692	11.43	9.55	20.98	56.00	-35.02	QР	
8		1.1692	2.65	9.55	12.20	46.00	-33.80	AVG	
9		2.3258	8.21	9.59	17.80	56.00	-38.20	QР	
10		2.3258	-0.47	9.59	9.12	46.00	-36.88	AVG	
11		26.3693	6.52	9.76	16.28	60.00	-43.72	QР	
12		26.3693	-1.13	9.76	8.63	50.00	-41.37	AVG	

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



Test Mode	Idle	Tested Date	2024/11/12
Test Frequency	-	Phase	Line

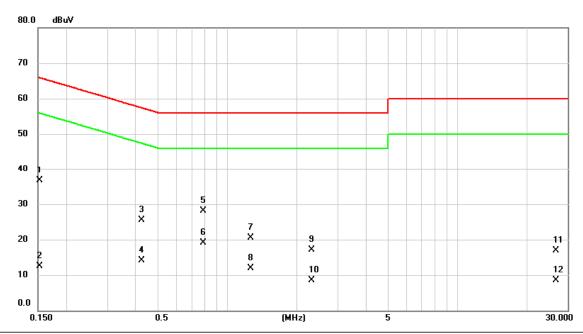


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1		0.1522	25.02	9.68	34.70	65.88	-31.18	QР	
2		0.1522	3.78	9.68	13.46	55.88	-42.42	AVG	
3		0.4312	18.06	9.58	27.64	57.23	-29.59	QP	
4		0.4312	9.03	9.58	18.61	47.23	-28.62	AVG	
5		0.7867	23.94	9.56	33.50	56.00	-22.50	QP	
6	*	0.7867	14.36	9.56	23.92	46.00	-22.08	AVG	
7		1.2548	16.36	9.56	25.92	56.00	-30.08	QP	
8		1.2548	6.57	9.56	16.13	46.00	-29.87	AVG	
9		2.3258	13.37	9.57	22.94	56.00	-33.06	QP	
10		2.3258	3.78	9.57	13.35	46.00	-32.65	AVG	
11		17.3220	8.76	9.73	18.49	60.00	-41.51	QP	
12		17.3220	-1.75	9.73	7.98	50.00	-42.02	AVG	

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



Test Mode	Idle	Tested Date	2024/11/12
Test Frequency	-	Phase	Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1		0.1522	27.05	9.66	36.71	65.88	-29.17	QP	
2		0.1522	2.83	9.66	12.49	55.88	-43.39	AVG	
3		0.4245	15.88	9.57	25.45	57.36	-31.91	QP	
4		0.4245	4.51	9.57	14.08	47.36	-33.28	AVG	
5		0.7845	18.58	9.55	28.13	56.00	-27.87	QP	
6	*	0.7845	9.57	9.55	19.12	46.00	-26.88	AVG	
7		1.2660	10.93	9.56	20.49	56.00	-35.51	QP	
8		1.2660	2.35	9.56	11.91	46.00	-34.09	AVG	
9		2.3145	7.55	9.59	17.14	56.00	-38.86	QP	
10		2.3145	-1.01	9.59	8.58	46.00	-37.42	AVG	
11		26.6303	7.06	9.75	16.81	60.00	-43.19	QP	
12		26.6303	-1.28	9.75	8.47	50.00	-41.53	AVG	

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



APPENDIX B	RADIATED EMISSIONS - 9 KHZ TO 30 MHZ

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Test Mode		BLE 5.3	(1 Mbps)		Test Date	2024/11/25				
Te			248	0MHz	ŀ	Polarization		Ver	tical	
	Temp		2	5°C		Hum.		60	)%	
150.0 c	BuV/m									_
40										
30										
20										-
110										
100 -										-
30										-
30 <u> </u>										$\parallel$
70 —										$\perp$
50 <u> </u>										+
50										+
10 <u> </u>	1									4
30	×									4
20.0										
0.009	0.02	0.04	0.05	0.07		09 0.11			0.15	MH
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Commo	ent
1	*	0.0160	1.77	33.45	35.22	142.60	-107.38	AVG		

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



	Test Mo		BLE 5.3 (1 Mbps)					Test Date	2024/11/25			
Te	st Freq				0MHz			Polarization	l	Vertical		
	Tem	р		2	5°C			Hum.		60	)%	
120.0 dl	BuV/m											_
110 100 90												
70 60												
50 40												
30 X 20										6 X		
10		2 X	3 X			4 ×			5 X	×		
-10.0												
0.150	3.14	6.12	9.10		12.09	15.0		8.06 21.		03	30.00	MH:
No.	Mk.	Freq.	Le		Correct Factor	I	easure- ment	Limit	Over			
		MHz	dB		dB	dl	3uV/m	dBuV/m	dB	Detector	Comm	ent
1		0.1500	15	.23	13.96	2	29.19	123.16	-93.97	AVG		
2		3.9907	14	.34	-4.08	•	10.26	88.62	-78.36	QP		
3		8.4612	13	.63	-3.44	•	10.19	88.62	-78.43	QP		
4		14.6621	10	.22	-3.47		6.75	88.62	-81.87	QP		
5		21.7753	17.	.73	-3.63		14.10	88.62	-74.52	QP		
6	*	25.7165	22.	.31	-2.86	•	19.45	88.62	-69.17	QP		

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



Test Mode			BLE 5.3 (1 Mbps)			Test Date		2024/11/25		
Test Frequency			2480MHz		Polarization		Horizontal			
Temp		25°C		Hum.			60%			
150.0	dBuV/m									_
140										
130 -										4
120										=
110										4
100 -										4
90										4
30										4
70										4
60										-
50 —										4
40	_									_
30	1 X									_
20.0										
0.009	0.02	0.04	0.05	0.07	0.08 0.	09 0.11	0.12		0.15	 MH
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comm	ent
1	*	0.0153	0.78	33.70	34.48	142.99	-108.51	AVG		

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



	Test Mo	de	BLE 5.3	3 (1 Mbps)		Test Date		2024	/11/25	
	st Frequ			0MHz		Polarization	1		zontal	
	Temp		2	5°C		Hum.		60	0%	
120.0 d	BuV/m									_
110 100 90										
70 60	1									
50 <u> </u>										
30 X										
10 0	2 X		3 3		4 ×	5 X		×		
-10.0										
0.150	3.14	6.12	9.10	12.09	15.08 1	8.06 21.	04 24.	03	30.00	— <sub>МН2</sub>
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comm	ent
1		0.1500	15.52	13.96	29.48	123.16	-93.68	AVG		
2		2.6753	13.06	-3.12	9.94	88.62	-78.68	QP		
3		8.7587	12.35	-3.35	9.00	88.62	-79.62	QP		
4		15.5357	9.82	-3.55	6.27	88.62	-82.35	QP		
5		20.1545	13.67	-3.95	9.72	88.62	-78.90	QP		
6	*	25.8907	17.71	-2.83	14.88	88.62	-73.74	QP		

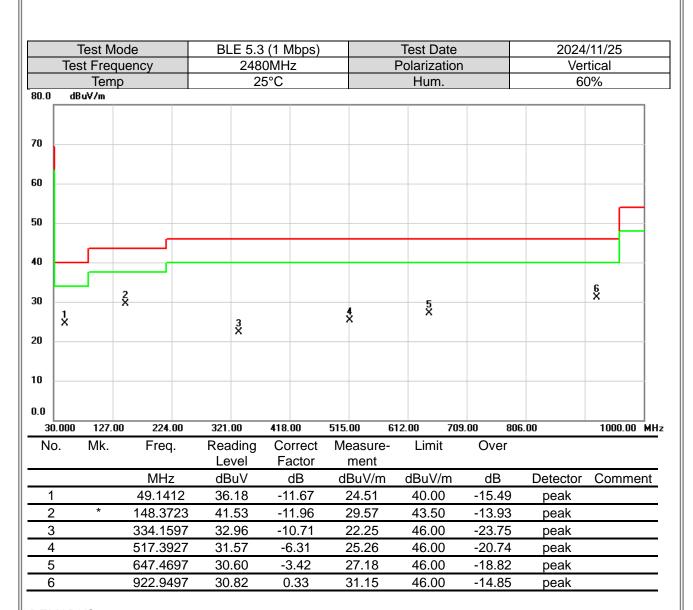
- (1) Measurement Value = Reading Level + Correct Factor.
  (2) Margin Level = Measurement Value Limit Value.



APPENDIX C	RADIATED EMISSIONS - 30 MHZ TO 1 GHZ

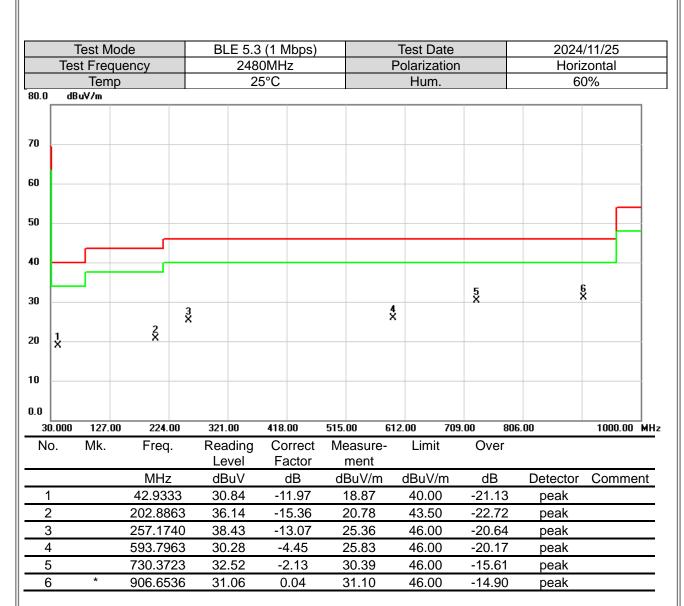
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- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





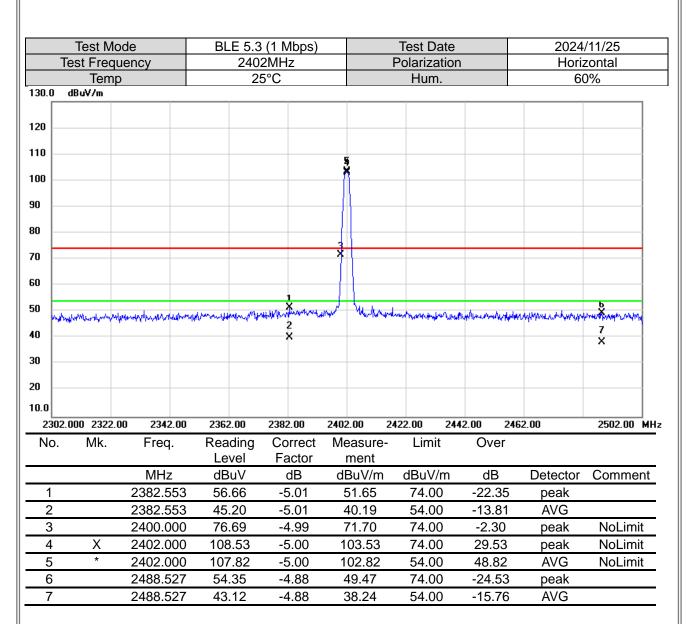
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



# APPENDIX D RADIATED EMISSIONS - ABOVE 1 GHZ

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



	Test Mod			3 (1 Mbps)		Test Date			/11/25	
Te	est Freque	ency		BOMHz	·	Polarization	)		zontal	
130.0 d	Temp BuV/m			25°C		Hum.		60	0%	
130.0	JD 477 III									٦
120										-
110					<u>_</u>					-
100										-
90 —										-
80										-
70										-
					111					
60										-
				No. of the last the second	E STATE OF THE STA	<u> </u>				
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50	ra ramandan jan	tokrykurybilinde y Va-dyd	astronomist de appete	hyperti jaddi vast gelekkessilfersjed	Arabay Agranga	francisti nadobatelariones	manifesta de la companya de la comp	بديود راه الإدارة والمعالمة	and the first should be a fire	1
50 X 40 2 X 30 20	revenuent fre	terperakan appel institut of institution	an ann an de de la company	الهريد والمسالين والم	Arabay Mayaraya	francisti nadobatelariones	and particular designations	phone and good of a love and	and the said of th	1
50	000 2400.00		a.tr.ya.a.d.d.yy.** 2440.00	2460.00	Andrew Commenced	Samuel Marie Construction of the Construction		, had ad all all all all all all all all al	ሥ <sup>/</sup> -/-/-/-/-/	
50			2440.00 Reading	2460.00 Correct	2480.00 25 Measure-	Samuel Land Control of the Control o				
50 × 40 2 × 80 × 80 × 80 × 80 × 80 × 80 × 80 ×	000 2400.00	0 2420.00 Freq.	2440.00 Reading Level	2460.00 Correct Factor	2480.00 25 Measure- ment	500.00 252 Limit	20.00 254 Over	40.00	2580.00	MI
10.0 2 × 80 10.0 2380.0 No.	000 2400.00	0 2420.00 Freq.	2440.00 Reading Level dBuV	2460.00 Correct Factor dB	2480.00 25  Measurement dBuV/m	500.00 252 Limit	20.00 254 Over dB	10.00 Detector		MI
60 X 80 2 0.0 2 2380.0 No.	000 2400.00	2420.00 Freq. MHz 2380.833	2440.00 Reading Level dBuV 55.48	2460.00 Correct Factor dB -5.02	2480.00 25 Measure- ment dBuV/m 50.46	500.00 252 Limit dBuV/m 74.00	20.00 254 Over dB -23.54	Detector peak	2580.00	MI
10 2 X X X X X X X X X X X X X X X X X X	000 2400.00 Mk.	2420.00 Freq. MHz 2380.833 2380.833	2440.00 Reading Level dBuV 55.48 43.05	2460.00 Correct Factor dB -5.02	2480.00 25 Measure- ment dBuV/m 50.46 38.03	500.00 252 Limit dBuV/m 74.00 54.00	20.00 254 Over dB -23.54 -15.97	Detector peak AVG	2580.00 Comme	MI-
10.0 2380.0 No.	000 2400.00	2420.00 Freq. MHz 2380.833 2380.833 2480.000	2440.00 Reading Level dBuV 55.48 43.05 106.99	2460.00 Correct Factor dB -5.02 -5.02 -4.89	2480.00 25 Measure- ment dBuV/m 50.46 38.03 102.10	600.00 252 Limit dBuV/m 74.00 54.00 74.00	20.00 254 Over dB -23.54 -15.97 28.10	Detector peak AVG peak	2580.00 Comme	MH-
50 X 40 Z 30 Z 10.0 Z No.	000 2400.00 Mk.	2420.00 Freq. MHz 2380.833 2380.833	2440.00 Reading Level dBuV 55.48 43.05	2460.00 Correct Factor dB -5.02	2480.00 25 Measure- ment dBuV/m 50.46 38.03	500.00 252 Limit dBuV/m 74.00 54.00	20.00 254 Over dB -23.54 -15.97	Detector peak AVG	2580.00 Comme	MH ent

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



	Test Mod			3 (2 Mbps)		Test Date			/11/25
Te	st Freque	ency		2MHz		Polarizatio	on		zontal
130.0 dl	Temp BuV/m		2	5°C		Hum.		60	0%
130.0 01	BUY/M								
120									
110									
100					<b>.</b>				
90									
80					3				
70									
60									
50				1 X					- Š
	paga-anara ang paga	tando Marianteglo Arregholy	programme of the second of the	wyddigwyddigw 2	geographic by the second	unadatah jarah salipah jarah salipat sal	was the state of the state of	nature of the market of the second	Mirasmandrinally 7
40				×					×
30									
20									
10.0	2000 00	0040.00	2000.00	2000 00	0400.00	400.00	110.00	20.00	2500.00
	00 2322.00		2362.00	2382.00				52.00	2502.00 Mi
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2377.307	55.86	-5.02	50.84	74.00	-23.16	peak	
2		2377.307	44.09	-5.02	39.07	54.00	-14.93	AVG	
3	Χ	2400.000	82.90	-4.99	77.91	74.00	3.91	peak	NoLimit
4	Χ	2402.000	104.80	-5.00	99.80	74.00	25.80	peak	NoLimit
5	*	2402.000	102.19	-5.00	97.19	54.00	43.19	AVG	NoLimit
6		2495.200	56.26	-4.87	51.39	74.00	-22.61	peak	
7		2495.200	43.45	-4.87	38.58	54.00	-15.42	AVG	

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



	Test Mo			3 (2 Mbps)		Test Date			/11/25
	Test Frequ			0MHz	F	Polarization	1		zontal
	Temp		2	5°C		Hum.		60	)%
130.0	dBuV/m								
120									
110									
100					3 X				
90					$-\parallel$				
BO									
70									
									I
50 <u> </u>									
_	and marine and	an handalahan Janasa	and Hoperen physiophysiological medical	aparper Presentation	with Warmington	entropy many many the last	process at Mary May	Virgales/entransferonses/de/pe	-philipped "Ny apendra
50	1 	youthur any and display and of the desired	and hoperaphy applications being	app per transferdient and artistical	Warming or	and and have a field of	production to the control of the con	ong her was a start of the	-plipped Nepherory
50 50 40 30		grategy, graphy graphy y the book on a	en Magamay hoyang kembha	isto pet tradições de meteores.	Marcal Name of State	rahmore/monderafilled	previous autoMay Africa	graphet in somether week before	-philippes, I his populary
50 40 30		grategraphy planter and a second	en/Majarra/ryanjeken/hr	apy polemaly decarders	When the second	rahmort/manden/rafilhi	previous and an of the operation of the	graphis and an artist of the	-philippe-e_I higher etc
50 40 30 20	2 X				*				
50 40 30 20	2 X 0.000 2400.0		2440.00 Reading	2460.00 Correct	2480.00 25 Measure-			0.00	2580.00 MI
50 10 30 20 2380	2 X 0.000 2400.0	00 2420.00 Freq.	2440.00 Reading Level	2460.00 Correct Factor	2480.00 25 Measure-ment	00.00 252 Limit	20.00 25 <b>4</b> Over	0.00	2580.00 MI
60 60 60 0.0 2380 No.	2 X 0.000 2400.0	00 2420.00 Freq.	2440.00 Reading Level dBuV	2460.00 Correct Factor dB	2480.00 25 Measurement dBuV/m	00.00 252 Limit dBuV/m	20.00 254 Over dB	0.00 Detector	
60 60 60 0.0 2380 No.	2 X 0.000 2400.0	00 2420.00 Freq. MHz 2387.733	2440.00 Reading Level dBuV 54.93	2460.00 Correct Factor dB -5.01	2480.00 25 Measurement dBuV/m 49.92	500.00 252 Limit dBuV/m 74.00	20.00 254 Over dB -24.08	0.00  Detector peak	2580.00 MI
60 60 0.0 2380 No.	2 X 0.000 2400.0 Mk.	00 2420.00 Freq. MHz 2387.733 2387.733	2440.00 Reading Level dBuV 54.93 43.42	2460.00 Correct Factor dB -5.01 -5.01	2480.00 25  Measurement  dBuV/m  49.92  38.41	00.00 252 Limit dBuV/m 74.00 54.00	20.00 254 Over dB -24.08 -15.59	Detector peak AVG	2580.00 MI
60 80 80 2380 No.	2 X 0.000 2400.0	MHz 2387.733 2387.733 2480.000	2440.00 Reading Level dBuV 54.93 43.42 105.31	2460.00 Correct Factor dB -5.01 -5.01 -4.89	2480.00 25 Measurement dBuV/m 49.92 38.41 100.42	dBuV/m 74.00 54.00 74.00	20.00 254 Over dB -24.08 -15.59 26.42	Detector peak AVG peak	2580.00 MI
50 40 30 20 10.0 2380 No.	2 X 0.000 2400.0 Mk.	00 2420.00 Freq. MHz 2387.733 2387.733	2440.00 Reading Level dBuV 54.93 43.42	2460.00 Correct Factor dB -5.01 -5.01	2480.00 25  Measurement  dBuV/m  49.92  38.41	00.00 252 Limit dBuV/m 74.00 54.00	20.00 254 Over dB -24.08 -15.59	Detector peak AVG	2580.00 MI

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



	Test				BL		(1 Mbp	s)			Test Da				/11/25
	Test Fre		ency				2MHz			ŀ	Polariza				rtical
130.0	dBuV/m	mp				2:	5°C				Hum	l		0	0%
	upur														
120															
110															
100															
90															
80															
70															
60 _															
50				1 X											
40															
30				2 X											
20															
10.0															
	0.000 270				6100.		7800.00		0.00	11	200.00			4600.00	18000.00 MH:
No.	Mk		Freq		Read Lev		Correct Facto		easui ment		Limi	t	Over		
			MHz		dΒι		dB		BuV/		dBuV/	m /	dB	Detector	Comment
1			4804.0	00	44.	56	0.88		45.44	ļ.	74.00	0	-28.56	6 peak	
2	*		4804.0	00	31.3	37	0.88		32.25	5	54.00	0	-21.75	5 AVG	

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



_	Test Mo			3 (1 Mbps)		Test Date			/11/25
T	est Frequ			2MHz		Polarization	n		zontal
120.0	Temp	)	2	5°C		Hum.		60	)%
130.0	dBuV/m								
120									
110									
100 -									
90									
80									
70									
60									
50		1 X							
40									
30		2 X							
20									
10.0									
1000.	.000 2700.0	00 4400.00	6100.00	7800.00	9500.00	11200.00 12	900.00 146	00.00	18000.00 MH
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4804.000		0.88	45.61	74.00	-28.39	peak	
2	*	4804.000		0.88	32.34	54.00	-21.66	AVG	

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



	Test	Mod	de		BL			/lbps)				Test Da					/11/25	
	Test Fre		ency				0MH	Z			Р	olariza					tical	
		mp				2	5°C					Hum				60	)%	
130.0	dBuV/m																	_
120																		-
10																		-
00																		_
90 <u> </u>																		
30																	_	
o																	_	
:o																	_	
o				1 ×														
o				2 2														4
:0				×														
0																		
0.0																		
	0.000 270				6100		7800		9500	).00	112	00.00		00.00	1460	0.00	18000.	00 MI
No.	Mk	•	Freq	•		ding vel		rrect actor		easure ment	∋-	Limit		Ove	r			
			MHz		dB			dB	dl	3uV/n	า	dBuV/	m	dB		Detector	Comm	ent
1			4880.0	00	44	.02	1	.03		15.05		74.00	)	-28.9	)5	peak		
2	*		4880.0	00	32	.49	1	.03	- (	33.52		54.00	)	-20.4	8	AVG		

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



	Test Mo			3 (1 Mbps)		Test Date			/11/25
	Test Frequ			0MHz		Polarization	n		zontal
100.0	Temp	)	2	5°C		Hum.		60	)%
130.0	dBuV/m								
120									
110									
100									
90									
80									
70									
60									
50			ı K						
40			2						
30			Κ						
20									
10.0									
	.000 2700.0			7800.00				00.00	18000.00 MHz
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure ment	- Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4880.000		1.03	45.54	74.00	-28.46	peak	
2	*	4880.000	32.59	1.03	33.62	54.00	-20.38	AVG	

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



	Test Mo				Mbps)				est Dat				/11/25	
Т	est Frequ			2480N				Po	olarizati	ion			tical	
130.0	Temp dBuV/m	)		25°(	;				Hum.			60	)%	
130.0	ana/w													ı
120														
110														
100														
90														
80														
70														
60														
50			1 X											
40														
30			2 X											
20														
10.0														
	.000 2700.0				300.00	9500				12900.00		00.00	18000.00	MHz
No.	Mk.	Freq.	Read Leve		Correct Factor		easure ment	-	Limit	Ov	er			
		MHz	dBu		dB		3uV/m	(	dBuV/n	n di	3	Detector	Commer	nt
1		4960.000			1.21		15.94		74.00	-28.		peak	-	_
2	*	4960.000			1.21		33.79		54.00	-20.	21	AVG		_

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



	Test M			BL		(1 Mb	ps)				Test D					/11/25	
T	est Fred					0MHz				Р	olariza					zontal	
	Tem	ıp			2	5°C					Hum	١.			6	0%	
130.0	dBuV/m												1				_
120																	4
110 —																	4
100 -																	_
90																	_
80																	4
70																	
60																	-
50			1 X														=
<b>4</b> 0 —			2														$\perp$
30 —			×														4
20																	_
10.0																	
1000.	.000 2700	.00 440	0.00	6100	.00	7800.0	0	9500	0.00	112	00.00	129	00.00	14600	0.00	18000.	00 MH
No.	Mk.	Fred	٦.	Read Lev		Corr Fac			easure ment	<del>)</del> -	Limi	t	Ove	r			
		MH	Z	dB		dE			BuV/n	า	dBuV/	m	dB		Detector	Comm	ent
1		4960.	000	45.	69	1.2	1		16.90		74.00	0	-27.1	0	peak		
2	*	4960.	000	32.	44	1.2	1	3	33.65		54.00	0	-20.3	5	AVG		

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



	Tes	st Mo	de		BL	E 5.3	(2 Mbps	)		٦	Test Da	ite		2024	/11/25	
•	Test F	requ	iency				2MHz			Р	olarizat				tical	
		Гетр				2	5°C				Hum.			60	0%	
30.0	dBuV.	/m							1							7
20																
110																
100																-
90																
30																
'o																
:0																l
io				1 X												1
o  -				2												l
io				x												ł
20																
0.0																
1000 No.	D.000 2	2700.0 1k.			6100		7800.00 Correct	950	0. <b>00</b> easure		00.00 Limit	12900.0	00 14 Over	600.00	18000.00	I MI
INU.	IV	ΊΚ.	Freq	•	Rea Le		Factor		easure ment	_	LIIIIII		Jvei			
			MHz		dB	uV	dB	d	BuV/m		dBuV/r		dB	Detector	Comme	nt
1			4804.0		44.		0.88		45.09		74.00		28.91	peak		
2		*	4804.0	00	31.	37	0.88	;	32.25		54.00	) -2	21.75	AVG		

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



	Test I	Mod	de		BL			(lbps				Test Da					/11/25	
•	Test Fre		ency				2MH	Z			Р	olariza					zontal	
		mp				2	5°C					Hum				6	0%	
130.0	dBuV/m																	_
120																		-
110 –																		$\dashv$
100																		_
90																		4
30																		
'o																		
50 <u> </u>																		-
50				1 X														
10 <u> </u>																		_
30				2 X														_
20																		_
10.0																		
	0.000 270				6100		7800		9500			:00.00			14600.	00	18000.	00 MF
No.	Mk.		Freq	•	Rea Le			rrect actor		easure ment	9-	Limit	İ	Ove	r			
			MHz		dB	uV		dB	dl	3uV/n	1	dBuV/	m	dB		Detector	Comm	ent
1			4804.0	00	43.	54	0	.88		14.42		74.00	)	-29.5	8	peak	_	
2	*		4804.0	00	31.	41	0	.88	- 3	32.29		54.00	)	-21.7	'1	AVG		

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



	Test M				BL	E 5.3						Test Da					/11/25	
	est Fred		ncy				0MH	Z			Р	olariza					tical	
130.0	Tem	ηp				2	5°C					Hum				60	)%	
130.0	abuv/m																	$\neg$
120																		-
110																		-
100 -																		_
10																		
eo																		
o																		-
o																		_
io 🗀				1														$\dashv$
o  _				X X														_
0				2 X														
0																		
0.0																		
1000.	000 2700	0.00	4400	.00	6100	0.00	7800	0.00	9500	0.00	112	00.00	1290	00.00	1460	00.00	18000.0	00 MH
No.	Mk.		Freq		Rea Le	ding vel		rrect		easure ment	9-	Limit		Ove	er			
			MHz			uV		dB		3uV/n	า	dBuV/	m	dB	,	Detector	Comm	ent
1		4	4880.0	00		.00		.03	4	15.03		74.00	)	-28.9	97	peak		
2	*	4	4880.0	00	32	.38	1	.03	3	33.41		54.00	)	-20.5	59	AVG		

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



	Test M				(2 Mbps)		Test Date			/11/25
Ţ	est Freq				0MHz		Polarization	n		zontal
120.0	Tem dBuV/m	p		2	5°C		Hum.		60	0%
130.0	dBuV/m									
120										
110										
100 -										
90										
BO										
'o										
io										
50			1 X							
10			2							
30			X							
20										
10.0										
	.000 2700.			6100.00	7800.00				500.00	18000.00 MH
No.	Mk.	Freq.		Reading Level	Correct Factor	Measure ment	- Limit	Over		
		MHz		dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4880.00	00	45.44	1.03	46.47	74.00	-27.53	peak	
2	*	4880.00	00	32.42	1.03	33.45	54.00	-20.55	AVG	

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



	Test N				BL	E 5.3						Test Da					/11/25	
<u> </u>	est Fre		ncy				OMH	Z			Р	olariza					tical	
130.0	Ten	np				2	5°C					Hum				60	)%	
130.0	UDUY/III																	$\neg$
120																		
110 -																		$\dashv$
100																		
90																		
BO																		
70																		_
60 <u> </u>																		-
50				1 X														-
10																		4
30				2 X														4
20																		
10.0																		
	.000 270	0.00	4400	.00	6100		780		9500	).00	112	00.00		00.00		00.00	18000.0	00 MH
No.	Mk.		Freq	-		ding vel		rrect		easur ment	e-	Limit	İ	Ove	er			
			MHz			uV		dB		3uV/r	n	dBuV/	m	dB	,	Detector	Comm	ent
1			4960.0	00	45	.14	1	.21	4	16.35		74.00	)	-27.6	35	peak		
2	*		4960.0	00	32	.47	1	.21	3	33.68		54.00	)	-20.3	32	AVG		

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



		t Mo			BL	E 5.3						Test Da					/11/25	
	Test F		ency				0MH	Z			<u> </u>	olariza					zontal	
130.0	dBuV/	emp				2	5°C					Hum				60	)%	
- JO. 0	dbuti	<del></del>																$\neg$
120																		-
110																		-
100																		4
90																		4
30																		
70 F																		_
io <u> </u>																		_
io				1 X														-
10 L																		
o				2 X														
20																		
0.0																		
1000	.000 2	700.00	0 4400	.00	6100	).00	7800	.00	9500	).00	112	00.00	1290	00.00	1460	00.00	18000.0	00 MH
No.	M	k.	Freq		Rea Le	ding vel		rrect		easur ment	e-	Limit	t	Ove	er			
			MHz			uV		dB		3uV/n	n	dBuV/	m	dB	,	Detector	Comm	ent
1			4960.0	00	44	.70	1	.21		15.91		74.00		-28.0	)9	peak		
2		*	4960.0	00	32	.51	1	.21	3	33.72		54.00	)	-20.2	28	AVG		

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



_	Test Mo			3 (1 Mbps)		Test Date			/11/25
I	est Frequ			0MHz		Polarizatio	n		tical
130.0	Temp dBuV/m	l.	2	5°C		Hum.		60	0%
130.0	ana/w								
120									
110									
100									
30									
30									
'O -									
io  -									
50		1 *							
10		2							
30		×							
20									
10									
0.0									
18000	0.000 18850.	00 19700.00	20550.00	21400.00	22250.00	23100.00 23	3950.00 248	00.00	26500.00 MH
No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		19840.00	50.65	-6.85	43.80	74.00	-30.20	peak	
2	*	19840.00	40.26	-6.85	33.41	54.00	-20.59	AVG	

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



7	Test Mo Test Frequ		BL		(1 Mbps) 0MHz				Test Da				/11/25 zontal
	Temp				5°C				Hum				2011tai 2%
130.0	dBuV/m								1		Î		
120													
110													
100													
90													
80													
70													
60													
50													
40		1	:										
30		2											
20													
10													
0.0													
	0.00018850.	00 19700.	00 2055	50.00	21400.00	2225	0.00	231	00.00	239	50.00 2	4800.00	26500.00 MH
No.	Mk.	Freq.		ding vel	Correct Factor		asure	; <b>-</b>	Limit		Over		
		MHz	dB	uV	dB	dE	BuV/m		dBuV/		dB	Detector	Comment
1	*	19840.0		.37	-6.85		4.52		74.00		-29.48		
2	*	19840.0	0 40	.81	-6.85	3	3.96		54.00	J	-20.04	AVG	

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

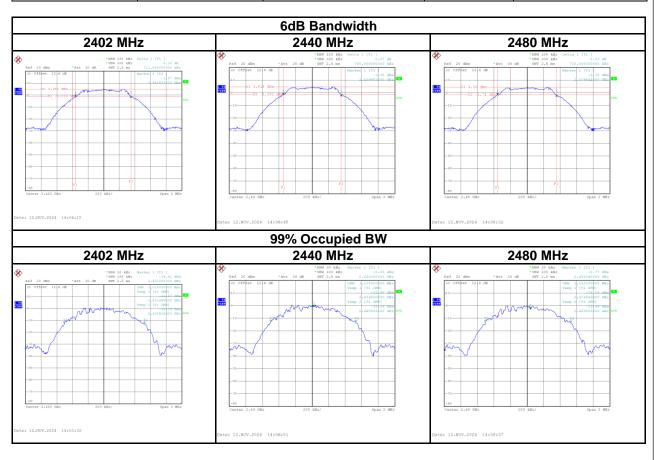
3 <b>T</b> L		Report No.: BTL-FCCP-2-2411T019
	APPENDIX E	BANDWIDTH

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Test Mode: 1Mbps

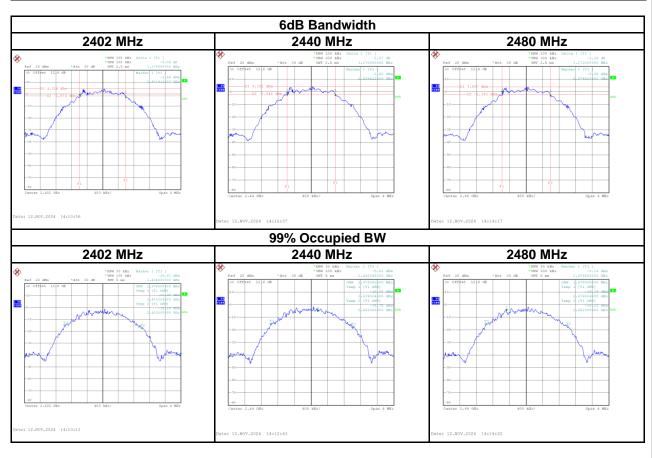
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2402	0.71	1.03	500	Pass
2440	0.70	1.03	500	Pass
2480	0.71	1.03	500	Pass





Test Mode: 2Mbps

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2402	1.18	1.98	500	Pass
2440	1.17	1.98	500	Pass
2480	1.17	1.98	500	Pass







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APPENDIX F	OUTPUT POWER

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Test Mode:	1Mbps	Tested Date	2024/11/12
------------	-------	-------------	------------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2402	6.65	0.0046	30.00	1.0000	Pass
2440	6.36	0.0043	30.00	1.0000	Pass
2480	5.95	0.0039	30.00	1.0000	Pass

Test	Mode :	2Mbps	Tested Date	2024/11/12
------	--------	-------	-------------	------------

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2402	6.57	0.0045	30.00	1.0000	Pass
2440	6.27	0.0042	30.00	1.0000	Pass
2480	5.86	0.0039	30.00	1.0000	Pass

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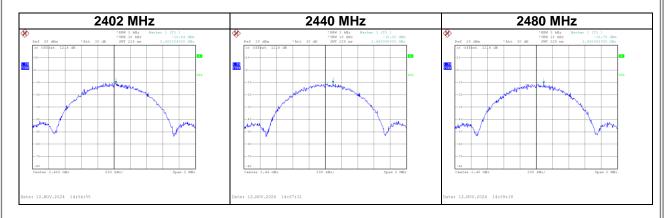
	Report No.: BTL-FCCP-2-24111019
A DDEAIDIY O	
APPENDIX G	POWER SPECTRAL DENSITY TEST

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Test Mode: 1Mbps

Frequency (MHz)	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Test Result
2402	-10.54	8	Pass
2440	-10.20	8	Pass
2480	-10.75	8	Pass





Test Mode: 2Mbps

Frequency (MHz)	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Test Result
2402	-14.55	8	Pass
2440	-13.88	8	Pass
2480	-13.98	8	Pass

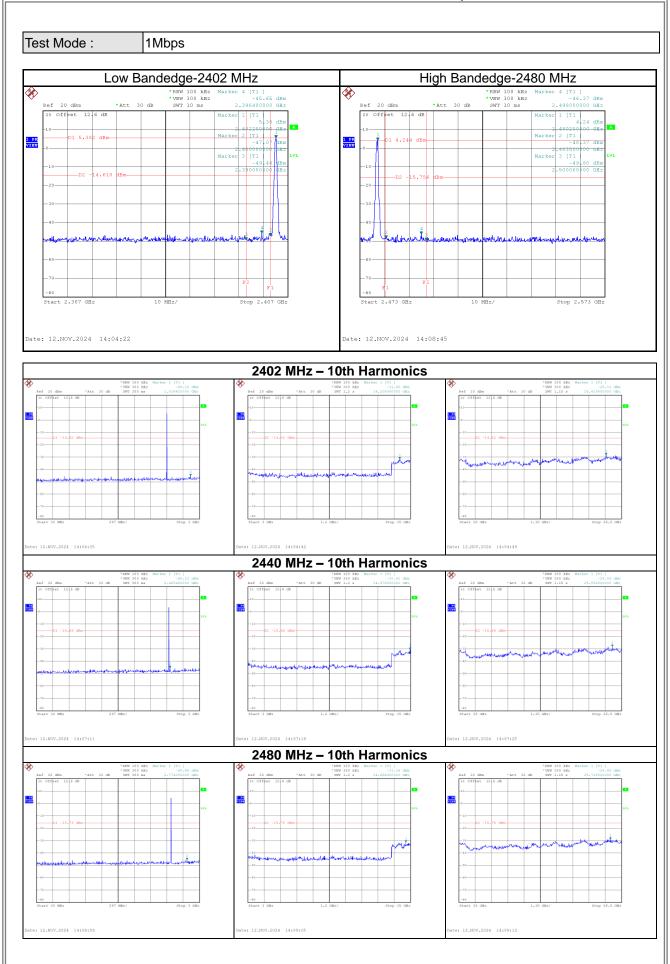




APPENDIX H	ANTENNA CONDUCTED SPURIOUS EMISSION

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