

0659



FCC Radio Test Report FCC ID: PU5-LN300WG3D

Report No. : BTL-FCCP-2-2102T172A Equipment : Notebook Computer

Model Name : Lenovo 300w Gen 3xxxxxxxx (The "x" in model name can be 0 to 9, A to Z,

a to z, "-" or blank, for marketing purpose only)

Brand Name : Lenovo

Applicant: Wistron Corporation

Address : 21F, No. 88, Sec. 1, Hsin Tai Wu Rd., Hsichih Dist, New Taipei City 221,

Taiwan

Radio Function : Bluetooth LE 5.1

FCC Rule Part(s) Measurement : FCC Part15, Subpart C (15.247)

: ANSI C63.10-2013

Procedure(s)

Date of Receipt : 2021/3/12

Date of Test : 2021/3/12 ~ 2021/5/6

Issued Date : 2021/5/31

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

Prepared by

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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.

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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REVISON HISTORY

Report No.	Version	Description	Issued Date
BTL-FCCP-2-2102T172A	R00	Original Report.	2021/4/27
BTL-FCCP-2-2102T172A	R01	Revised report to address TCB's comments.	2021/5/21
BTL-FCCP-2-2102T172A	R02	Revised report to address TCB's comments.	2021/5/31

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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	Pass	
15.247(a)(2)	Bandwidth	NOTE (3)	Pass	
15.247(b)(3)	Output Power	APPENDIX D	Pass	
15.247(e)	Power Spectral Density	NOTE (3)	Pass	
15.247(d)	Antenna conducted Spurious Emission	NOTE (3)	Pass	
15.203	Antenna Requirement		Pass	

NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report.
- (2) The report format version is TP.1.1.1.
- (3) This item is demonstrated to full compliance referring to the test report number 181210-03.TR04 of the integrated module (model name: AX200NGW, FCC ID: PD9AX200NG), according to KDB 996369 D02 Q1 a) 2).
- (4) The ac power lines conducted emissions and radiated emissions are tested to demonstrate full compliance of both module integrated into the host and host itself.
- (5) The output power of integrated module have been reduced, therefore, the full output power tests are performed and recorded.

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□ CB16

1.1 TEST FACILITY

The test facilities used to collect the test data in this report:

No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan The test sites and facilities are covered under FCC RN: 674415 and DN: TW0659.

ne test sites and facilities are covered under FCC RN: 674415 and DN: 100059. \square CB08 \square CB11 \square CB15

⊠ SR05

1.2 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}_{cisor} 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:

Test Site	Measurement Frequency Range	U,(dB)
CB15	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72
	1 GHz ~ 6 GHz	5.21
	6 GHz ~ 18 GHz	5.51
	18 GHz ~ 26 GHz	3.69
	26 GHz ~ 40 GHz	4.23

C. Conducted test:

Test Item	U,(dB)
Output Power	1.06

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	20 °C, 72 %	AC 120V	Vincent Lee
Radiated emissions below 1 GHz	Refer to data	AC 120V	Jay Kao
Radiated emissions above 1 GHz	Refer to data	AC 120V	Jay Kao
Output Power	25.8 °C, 54 %	AC 120V	Tim Lee

1.4 TABLE OF PARAMETERS OF TEST SOFTWARE SETTING

Test Software	DRTU V.12.1947.0-10428					
Modulation Mode	2402 MHz	2402 MHz 2440 MHz 2480 MHz Data Rate				
BLE5.0(1 Mbps)	DEF	DEF	DEF	1 Mbps		
BLE5.0(2 Mbps)	-1	-1 1 0 2 Mb				

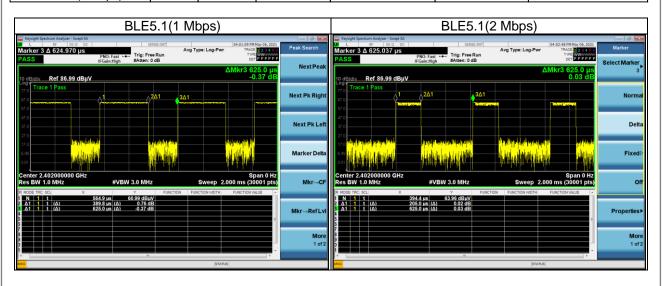
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1.5 DUTY CYCLE

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)
Mode	ON	Numbers	On Time (B)	Period (ON+OFF)	Duty Cycle	Duty Factor
lviode	(ms)	(ON)	(ms)	(ms)	(%)	(dB)
BLE5.1(1 Mbps)	0.390	1	0.390	0.625	62.37%	2.05
BLE5.1(2 Mbps)	0.205	1	0.205	0.625	32.80%	4.84





2 GENERAL INFORMATION

2.1 DESCRIPTION OF EUT

Equipment	Notebook Computer
Model Name	Lenovo 300w Gen 3xxxxxxxx (The "x" in model name can be 0 to 9, A to Z, a to z, "-" or blank, for marketing purpose only)
Brand Name	Lenovo
Model Difference	Different model distribute to different area.
Power Source	DC voltage supplied from External Power Supply. (Lenovo/ADLX45YLC3D)
Power Rating	I/P: 100-240V~1.3A 50-60Hz O/P: 20.0V—2.25A 45.0W / 15.0V—3.0A / 9.0V—2.0A / 5.0V—2.0A 10.0W
Products Covered	1 * Adapter: Lenovo/ADLX45YLC3D
WIFI+BT Module	Intel® Wi-Fi 6 AX200 / AX200NGW
WWAN Module	Fibocom / L850-GL
Operation Band	2400 MHz ~ 2483.5 MHz
Operation Frequency	2402 MHz ~ 2480 MHz
Modulation Technology	DTS
Modulation Type	GFSK
Transfer Rate	1 Mbps, 2 Mbps
Maximum Output Power	1 Mbps: 1.63 dBm (0.0015 W) 2 Mbps: 5.99 dBm (0.0040 W)
Test Model	Lenovo 300w Gen 3
Sample Status	Engineering Sample
EUT Modification(s)	N/A

NOTE:

(1) For a more detailed features description, please refer to the manufacturer's specifications or the 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	Manufacture	Part Number	Туре	Connector	Frequency Range (MHz)	Gain (dBi)
					2400-2500	-1.26
Main	Main INPAQ Corporation	025.901U1.0001	PIFA	I-PEX	5150-5350	0.41
IVIAIII					5470-5725	0.28
					5725-5850	1.06
					2400-2500	-1.46
Aux	A.m. INPAQ	025.901U2.0001	PIFA	I-PEX	5150-5350	0.65
Corporation	025.90102.0001	PIFA	FIFA I-PEX	5470-5725	-0.25	
					5725-5850	0.15

Antenna	Manufacture	Part Number	Туре	Connector	Frequency Range (MHz)	Gain (dBi)
					2400-2500	0.93
Main	Main AWAN	005 004110 0004	PIFA	I-PEX	5150-5350	0.58
IVIAITI AVVAIN	025.901U3.0001	FIFA	I-PEX	5470-5725	1.68	
					5725-5850	0.86
	A AM/ANI 005 0041		DIEA		2400-2500	1.52
Ausz		005 004114 0004		I-PEX	5150-5350	0.62
Aux AWAN	025.901U4.0001	PIFA	I-PEA	5470-5725	0.93	
					5725-5850	0.93

NOTE: Since the antenna gain of Antenna _ AWAN is the highest one among all, Antenna _ AWAN had used for testing.

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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)	2 Mbps	39	-
Transmitter Radiated Emissions	1/2 Mbps	00/39	Bandedge
(above 1GHz)	1/2 Mbps	00/19/39	Harmonic
Output Power	1/2 Mbps	00/19/39	-

NOTE:

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

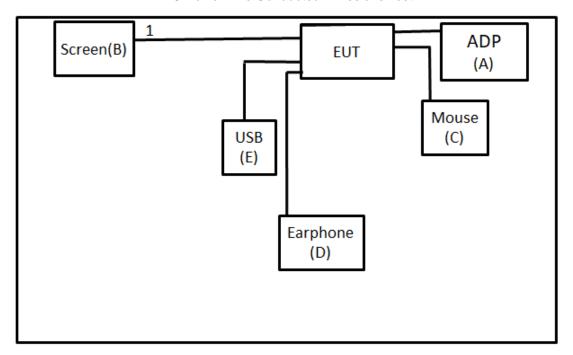
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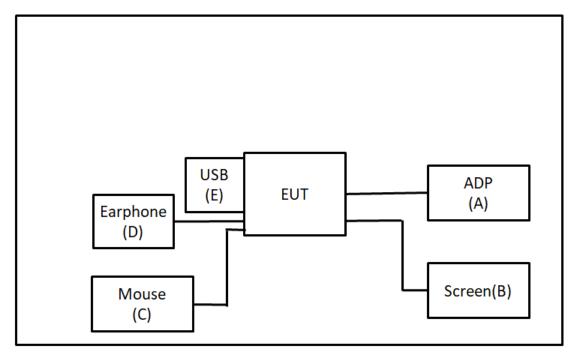
2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

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

AC Power Line Conducted Emissions Test



Radiated Emissions Test



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2.4 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
Α	ADP	Lenovo	ADLX45YLC3D	N/A	Supplied by test requester.
В	Screen	ASUS	MX27U	N/A	Furnished by test lab.
С	Mouse	ACER	MP-368	N/A	Furnished by test lab.
D	Earphone	Sony	MDR-E9LP	N/A	Furnished by test lab.
E	USB	Kingston	C7052-322.AOOL F	N/A	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	N/A	N/A	1.8m	HDMI Cable	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	ı	60	II	-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:

- 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.

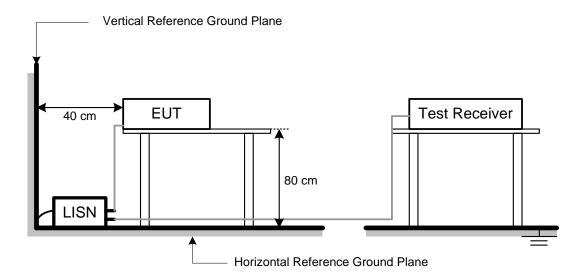
3.3 DEVIATION FROM TEST STANDARD

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 (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

LIMITS OF RADIATED EMISSIONS MEASUREMENT (Above 1000 MHz)

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

NOTE:

- (1) The limit for radiated test was performed according to FCC 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
19.11	+	2.11	=	21.22

Measurement Value		Limit Value		Margin Level
21.22	-	54	=	-32.78

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**

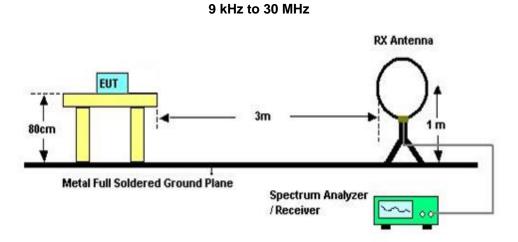
- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- The measuring distance 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)
- 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.
- 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).
- 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.
- 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.
- 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)

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.
4.3 DEVIATION FROM TEST STANDARD
No deviation.

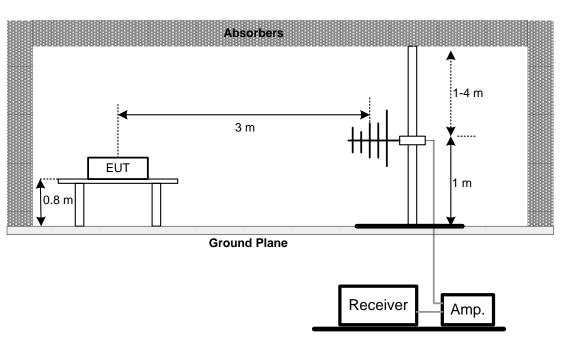
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4.4 TEST SETUP

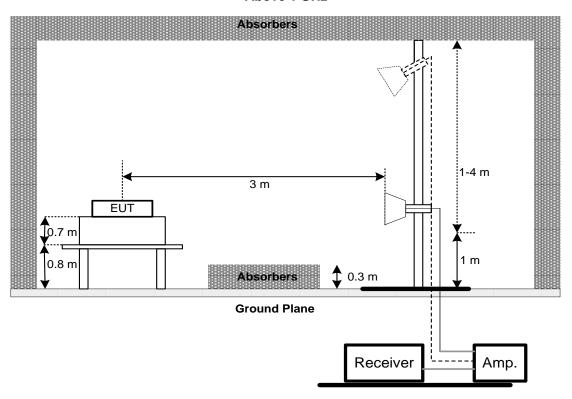


30 MHz to 1 GHz





Above 1 GHz



4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 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 OUTPUT POWER TEST

5.1 LIMIT

FCC Part15 (15.247), Subpart C								
Section	Test Item	Limit	Frequency Range (MHz)	Result				
15.247(b)(1)	Maximum peak conducted output power	0.125 Watts (20.97 dBm)	2400-2483.5	PASS				

5.2 TEST PROCEDURE

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

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP

EUT	Power Meter
	1 OWEI WICKEI

5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS

Please refer to the APPENDIX D.



6 LIST OF MEASURING EQUIPMENTS

	AC Power Line Conducted Emissions								
Item Kind of Manufacturer Equipment			I Manufacturer I Type No I Serial No I		Calibrated Date	Calibrated Until			
1	TWO-LINE R&S		ENV216	101050	2020/6/11	2021/6/10			
2	Test Cable	EMCI	EMC400-BM-BM- 5000	170501	2020/6/8	2021/6/7			
3	EMI Test Receiver	R&S	ESCI	100080	2020/6/15	2021/6/14			
4	Measurement		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	EMC02325B	980217	2020/4/10	2021/4/9
2	Preamplifier	EMCI	EMC012645B	980267	2020/4/10	2021/4/9
3	Test Cable	EMCI	EMC-SM-SM-100 0	180809	2020/4/10	2021/4/9
4	Test Cable	EMCI	EMC104-SM-SM- 3000	151205	2020/4/10	2021/4/9
5	Test Cable	EMCI	EMC-SM-SM-700 0	180408	2020/4/10	2021/4/9
6	MXE EMI Receiver	Agilent	N9038A	MY554200087	2020/6/10	2021/6/9
7	Signal Analyzer	Agilent	N9010A	MY56480554	2020/8/25	2021/8/24
8	Horn Ant	SCHWARZBECK	BBHA 9120D	9120D-1342	2020/6/12	2021/6/11
9	Horn Ant	Schwarzbeck	BBHA 9170	BBHA 9170340	2020/7/9	2021/7/8
10	Loop Ant	Electro-Metrics	EMCI-LPA600	274	2020/6/16	2021/6/15
11	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	VULB 9168-352	2020/7/24	2021/7/23
12	5dB Attenuator	EMCI	EMCI-N-6-05	AT-N0625	2020/7/24	2021/7/23
13	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A	N/A

	Output Power							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until		
1	Power Meter	Anritsu	ML2487A	6K00004714	2020/9/3	2021/9/2		
2	Power Sensor	Anritsu	MA2491A	034138	2020/9/3	2021/9/2		

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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7 EUT TEST PHOTO								
Please refer to document Appendix No.: TP-2102T172A-FCCP-1 (APPENDIX-TEST PHOTOS).								
8 EUT PHOTOS								
Please refer to document Appendix No.: EP-2102T172A-2 (APPENDIX-EUT PHOTOS).								

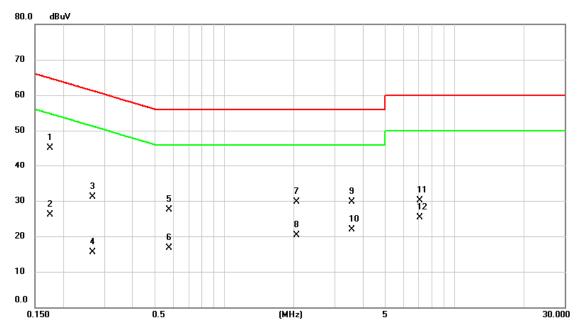
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APPENDIX A	AC POWER LINE CONDUCTED EMISSIONS

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	Test Mode	Normal	Tested Date	2021/3/23
	Test Frequency	-	Phase	Line



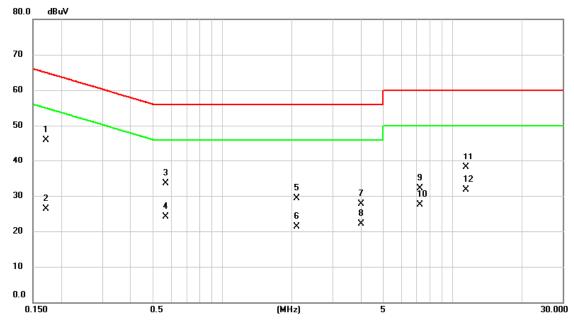
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1 *	0.1747	35.36	9.68	45.04	64.73	-19.69	QΡ	
2	0.1747	16.48	9.68	26.16	54.73	-28.57	AVG	
3	0.2672	21.47	9.68	31.15	61.20	-30.05	QP	
4	0.2672	5.76	9.68	15.44	51.20	-35.76	AVG	
5	0.5752	17.84	9.68	27.52	56.00	-28.48	QP	
6	0.5752	7.00	9.68	16.68	46.00	-29.32	AVG	
7	2.0535	19.96	9.74	29.70	56.00	-26.30	QΡ	
8	2.0535	10.58	9.74	20.32	46.00	-25.68	AVG	
9	3.5587	20.01	9.78	29.79	56.00	-26.21	QP	
10	3.5587	12.22	9.78	22.00	46.00	-24.00	AVG	
11	7.0912	20.15	9.87	30.02	60.00	-29.98	QР	
12	7.0912	15.36	9.87	25.23	50.00	-24.77	AVG	

REMARKS:

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

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Test Mode	Normal	Tested Date	2021/3/23
Test Frequency	-	Phase	Neutral



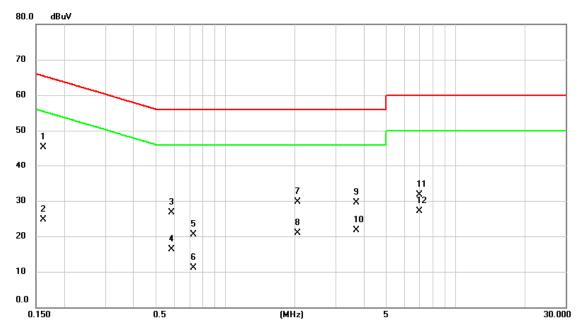
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1	0.1712	36.19	9.68	45.87	64.90	-19.03	QP	
2	0.1712	16.58	9.68	26.26	54.90	-28.64	AVG	
3	0.5685	23.78	9.68	33.46	56.00	-22.54	QP	
4	0.5685	14.34	9.68	24.02	46.00	-21.98	AVG	
5	2.1053	19.56	9.74	29.30	56.00	-26.70	QP	
6	2.1053	11.62	9.74	21.36	46.00	-24.64	AVG	
7	3.9818	17.99	9.79	27.78	56.00	-28.22	QP	
8	3.9818	12.31	9.79	22.10	46.00	-23.90	AVG	
9	7.2173	22.18	9.87	32.05	60.00	-27.95	QP	
10	7.2173	17.72	9.87	27.59	50.00	-22.41	AVG	
11	11.4428	28.24	9.93	38.17	60.00	-21.83	QP	
12 *	11.4428	21.73	9.93	31.66	50.00	-18.34	AVG	

REMARKS:

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

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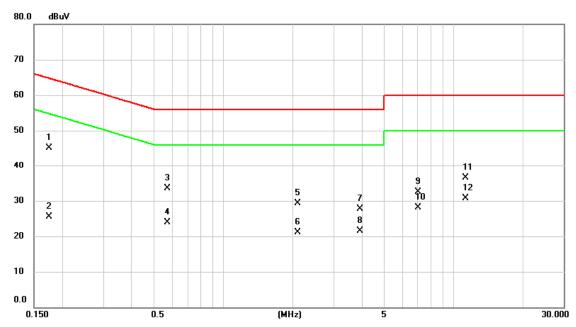
Ш				
	Test Mode	Idle	Tested Date	2021/3/23
	Test Frequency	-	Phase	Line



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1 *	0.1615	35.54	9.68	45.22	65.39	-20.17	QР	
2	0.1615	15.09	9.68	24.77	55.39	-30.62	AVG	
3	0.5842	16.94	9.68	26.62	56.00	-29.38	QP	
4	0.5842	6.65	9.68	16.33	46.00	-29.67	AVG	
5	0.7260	10.73	9.68	20.41	56.00	-35.59	QP	
6	0.7260	1.35	9.68	11.03	46.00	-34.97	AVG	
7	2.0603	20.06	9.74	29.80	56.00	-26.20	QP	
8	2.0603	11.10	9.74	20.84	46.00	-25.16	AVG	
9	3.6870	19.73	9.79	29.52	56.00	-26.48	QP	
10	3.6870	11.97	9.79	21.76	46.00	-24.24	AVG	
11	6.9720	21.83	9.87	31.70	60.00	-28.30	QР	
12	6.9720	17.15	9.87	27.02	50.00	-22.98	AVG	

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

Ш				
	Test Mode	Idle	Tested Date	2021/3/23
	Test Frequency	-	Phase	Neutral



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1	0.1748	35.33	9.68	45.01	64.73	-19.72	QΡ	
2	0.1748	15.81	9.68	25.49	54.73	-29.24	AVG	
3	0.5707	23.77	9.68	33.45	56.00	-22.55	QP	
4	0.5707	14.14	9.68	23.82	46.00	-22.18	AVG	
5	2.0963	19.54	9.74	29.28	56.00	-26.72	QP	
6	2.0963	11.44	9.74	21.18	46.00	-24.82	AVG	
7	3.9120	17.88	9.79	27.67	56.00	-28.33	QP	
8	3.9120	11.79	9.79	21.58	46.00	-24.42	AVG	
9	7.0328	22.62	9.87	32.49	60.00	-27.51	QP	
10	7.0328	18.15	9.87	28.02	50.00	-21.98	AVG	
11	11.3100	26.60	9.93	36.53	60.00	-23.47	QP	
12 *	11.3100	20.79	9.93	30.72	50.00	-19.28	AVG	

REMARKS:

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

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APPENDIX B	RADIATED EMISSIONS - 30 MHZ TO 1 GHZ

Project No.: 2102T172A Page 27 of 48 Report Version: R02

	Test Mo	de	BLE5.	1(2 Mbps)		Test Date		2021	1/3/24	
Te	st Frequ	ency		30MHz		Polarizatio	n	Vei	rtical	
	Temp		2	1°C		Hum.		6	8%	
80.0 dE	BuV/m									7
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20										
10										-
0.0										
30.000	127.00	224.00	321.00	418.00	515.00 6	12.00 70	9.00 806	.00	1000.00	MH
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comme	ent
1		117.0413	36.37	-10.74	25.63	43.50	-17.87	peak		
2		226.0370	36.92	-10.56	26.36	46.00	-19.64	peak		
3		399.8610	37.53	-4.83	32.70	46.00	-13.30	peak		
4		593.4083	36.01	-0.79	35.22	46.00	-10.78	peak		
5	*	890.1313	31.23	4.00	35.23	46.00	-10.77	peak		
6		998.4803	29.39	5.68	35.07	54.00	-18.93	peak		

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

	Test Mo			1(2 Mbps)		Test Date			1/3/24	
ıe	st Frequ			80MHz 21°C		Polarizatio	n		zontal	
30.0 dl	Temp			2170		Hum.		0	8%	
70 60 50 40	1		2 X	3 X	4	\		5 X		66 X
10										
0.0										
30.000	127.00		321.00	418.00	515.00 61		9.00 806	.00	1000.00	MH
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comm	ent
1		91.5303	44.92	-14.55	30.37	43.50	-13.13	peak		
2		296.7177	42.08	-7.46	34.62	46.00	-11.38	peak		
3		399.8933	39.66	-4.83	34.83	46.00	-11.17	peak		
4		593.4083	31.73	-0.79	30.94	46.00	-15.06	peak		
5	*	890.0990	32.05	4.00	36.05	46.00	-9.95	peak		
6		998.6743	29.23	5.69	34.92	54.00	-19.08	peak		

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



APPENDIX C RADIATED EMISSIONS - ABOVE 1 GHZ

Project No.: 2102T172A Page 30 of 48 Report Version: R02

Т	est Mod	le	BLE5.0	O(1 Mbps)		Test Date	Э	202	1/3/22
Tes	t Freque	ency		2MHz		Polarization	on		zontal
	Temp		2	3°C		Hum.		6	6%
130.0 dBu	.V/m								
120									
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20									
2302 000	2322.00	2342.00	2362.00	2382.00	2402.00	2422.00 24	442.00 246	52.00	2502.00 MI
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment		Over		2302.00
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2372.453	26.38	30.72	57.10	74.00	-16.90	peak	
2		2372.453	5.98	30.72	36.70	54.00	-17.30	AVG	
3		2400.000	35.81	30.83	66.64	74.00	-7.36	peak	
4	Χ	2402.000	63.53	30.84	94.37	74.00	20.37	peak	NoLimit
5	*	2402.000	62.71	30.84	93.55	54.00	39.55	AVG	NoLimit
6		2483.500	26.24	31.16	57.40	74.00	-16.60	peak	
7		2483.500	4.04	31.16	35.20	54.00	-18.80	AVG	
8		2483.753	26.24	31.16	57.40	74.00	-16.60	peak	
9		2483.753	3.93	31.16	35.09	54.00	-18.91	AVG	

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

	Test Mod			0(1 Mbps)		Test Da			1/3/22
ies	st Freque	ency		0MHz		Polarizat			zontal
30.0 dE	Temp			3°C		Hum.		б	6%
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No.	Mk.	Freq.	Reading	Correct	Measure-	- Limit	Over		
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/n		Detector	Comment
1		2384.507	25.27	30.77	56.04	74.00	-17.96	peak	
3		2384.507	3.37 23.64	30.77 30.83	34.14 54.47	54.00 74.00	-19.86 -19.53	AVG	
4	Χ	2400.000 2480.000	71.54	31.15	102.69	74.00		peak peak	NoLimit
5	*	2480.000	71.07	31.15	102.09	54.00	48.22	AVG	NoLimit
6		2483.500	24.20	31.16	55.36	74.00	-18.64	peak	NOLIIIII
7		2483.500	12.41	31.16	43.57	54.00	-10.43	AVG	
8		2575.220	26.51	31.54	58.05	74.00	-15.95	peak	
9		2575.220	14.00	31.54	45.54	54.00	-8.46	AVG	

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

	Test Mod)(2 Mbps)		Test Date			1/3/22
les	st Freque	ency		2MHz		Polarizatio	on		zontal
1000 ID	Temp		2	3°C		Hum.		60	6%
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								52.00	2502.00 MI
2302.00	0 2322.00		2362.00	2382.00				JZ.00	2302.00 141
	0 2322.00 Mk.	2342.00 Freq.	2362.00 Reading Level	Correct Factor	Measure- ment		142.00 248 Over		2302.00
2302.00			Reading	Correct	Measure- ment dBuV/m		Over dB	Detector	Comment
2302.00		Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
2302.00 No.		Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	
2302.00 No.		Freq. MHz 2303.267	Reading Level dBuV 26.59	Correct Factor dB 30.44	Measure- ment dBuV/m 57.03	Limit dBuV/m 74.00	Over dB -16.97	Detector peak	
2302.00 No.	Mk.	Freq. MHz 2303.267 2303.267	Reading Level dBuV 26.59 5.29	Correct Factor dB 30.44 30.44	Measure- ment dBuV/m 57.03 35.73	dBuV/m 74.00 54.00	Over dB -16.97 -18.27	Detector peak AVG	Comment
2302.00 No.	Mk.	Freq. MHz 2303.267 2303.267 2400.000	Reading Level dBuV 26.59 5.29 45.94	Correct Factor dB 30.44 30.44 30.83	Measure- ment dBuV/m 57.03 35.73 76.77	Limit dBuV/m 74.00 54.00 74.00	Over dB -16.97 -18.27 2.77	Detector peak AVG peak	Comment
2302.00 No. 1 2 3 4	Mk.	Freq. MHz 2303.267 2303.267 2400.000 2402.000	Reading Level dBuV 26.59 5.29 45.94 68.45	Correct Factor dB 30.44 30.83 30.83	Measure- ment dBuV/m 57.03 35.73 76.77 99.29	Limit dBuV/m 74.00 54.00 74.00 74.00	Over dB -16.97 -18.27 2.77 25.29	Detector peak AVG peak peak	Comment NoLimit NoLimit
2302.00 No. 1 2 3 4 5	Mk.	Freq. MHz 2303.267 2303.267 2400.000 2402.000 2402.000	Reading Level dBuV 26.59 5.29 45.94 68.45 66.75	Correct Factor dB 30.44 30.84 30.83 30.84 30.84	Measure- ment dBuV/m 57.03 35.73 76.77 99.29 97.59	Limit dBuV/m 74.00 54.00 74.00 74.00 54.00	Over dB -16.97 -18.27 2.77 25.29 43.59	Detector peak AVG peak peak AVG	Comment NoLimit NoLimit
2302.00 No. 1 2 3 4 5 6	Mk.	Freq. MHz 2303.267 2303.267 2400.000 2402.000 2402.000 2483.500	Reading Level dBuV 26.59 5.29 45.94 68.45 66.75 24.21	Correct Factor dB 30.44 30.83 30.84 30.84 31.16	Measure- ment dBuV/m 57.03 35.73 76.77 99.29 97.59 55.37	Limit dBuV/m 74.00 54.00 74.00 74.00 54.00 74.00 74.00	Over dB -16.97 -18.27 2.77 25.29 43.59 -18.63	Detector peak AVG peak peak AVG peak	Comment NoLimit NoLimit

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

	Test Mod)(2 Mbps)		Test Date			1/3/22
Tes	st Freque	ency		0MHz		Polarizatio	n		zontal
1000	Temp		2	3°C		Hum.		6	6%
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20 10.0 2380.00	0 2400.00		2440.00	2460.00				10.00	2580.00 M
20 10.0	0 2400.00 Mk.	2420.00 Freq.	2440.00 Reading Level	2460.00 Correct Factor	2480.00 2 Measure- ment		520.00 25 Over	10.00	2580.00 M
20 10.0 2380.00 No.		Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit	Over dB	Detector	2580.00 M
20 10.0 2380.00 No.		Freq. MHz 2381.413	Reading Level dBuV 25.88	Correct Factor dB 30.76	Measure- ment dBuV/m 56.64	dBuV/m 74.00	Over dB -17.36	Detector peak	
20 2380.00 No.		Freq. MHz 2381.413 2381.413	Reading Level dBuV 25.88 3.78	Correct Factor dB 30.76 30.76	Measure- ment dBuV/m 56.64 34.54	dBuV/m 74.00 54.00	Over dB -17.36 -19.46	Detector peak AVG	
20 2380.00 No.	Mk.	Freq. MHz 2381.413 2381.413 2400.000	Reading Level dBuV 25.88 3.78 24.10	Correct Factor dB 30.76 30.76 30.83	Measure- ment dBuV/m 56.64 34.54 54.93	dBuV/m 74.00 54.00 74.00	Over dB -17.36 -19.46 -19.07	Detector peak AVG peak	Comment
20 2380.00 No.	Mk.	Freq. MHz 2381.413 2381.413 2400.000 2480.000	Reading Level dBuV 25.88 3.78 24.10 71.17	Correct Factor dB 30.76 30.76 30.83 31.15	Measure- ment dBuV/m 56.64 34.54 54.93 102.32	dBuV/m 74.00 54.00 74.00 74.00	Over dB -17.36 -19.46 -19.07 28.32	Detector peak AVG peak peak	Comment
20 2380.00 No. 1 2 3 4 5	Mk.	Freq. MHz 2381.413 2381.413 2400.000 2480.000 2480.000	Reading Level dBuV 25.88 3.78 24.10 71.17 69.57	Correct Factor dB 30.76 30.76 30.83 31.15 31.15	Measure- ment dBuV/m 56.64 34.54 54.93 102.32 100.72	dBuV/m 74.00 54.00 74.00 74.00 54.00	Over dB -17.36 -19.46 -19.07 28.32 46.72	Detector peak AVG peak peak AVG	Comment
20 2380.00 No. 1 2 3 4 5 6	Mk.	Freq. MHz 2381.413 2381.413 2400.000 2480.000 2480.000 2483.500	Reading Level dBuV 25.88 3.78 24.10 71.17 69.57 26.18	Correct Factor dB 30.76 30.76 30.83 31.15 31.15	Measure- ment dBuV/m 56.64 34.54 54.93 102.32 100.72 57.34	dBuV/m 74.00 54.00 74.00 74.00 54.00 74.00	Over dB -17.36 -19.46 -19.07 28.32 46.72 -16.66	Detector peak AVG peak peak AVG peak	Comment
20 2380.00 No. 1 2 3 4 5	Mk.	Freq. MHz 2381.413 2381.413 2400.000 2480.000 2480.000	Reading Level dBuV 25.88 3.78 24.10 71.17 69.57	Correct Factor dB 30.76 30.76 30.83 31.15 31.15	Measure- ment dBuV/m 56.64 34.54 54.93 102.32 100.72	dBuV/m 74.00 54.00 74.00 74.00 54.00	Over dB -17.36 -19.46 -19.07 28.32 46.72	Detector peak AVG peak peak AVG	Comment

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

Test Mode Test Frequency			E	3LE5.1		Test Date					2021/3/22		
				2402MHz			Polarization				Vertical		
Temp				2		Hum.					6	66%	
130.0 dB	.V/m												
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No.	Mk.	Freq.		ading	Correc		easure		Limit		Over		
		4.		evel	Factor		ment				J. J.		
		MHz	dl	∃uV	dB		dBuV/m		dBuV/m		dB	Detector	Comment
1	4804.000		0 5´	51.98 -10.03			41.95		74.00		-32.05	peak	
2	*	4804.00	0 43	3.37	-10.03		33.34		54.00)	-20.66	AVG	

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

Test Mode Test Frequency					I(1 Mbps)			est Date		2021/3/22	
					2MHz	Polarization				Horizontal	
Temp				2	3°C			Hum.	6	66%	
130.0 dB	ıV/m										
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No.	Mk.	Freq.		Reading	Correct	Measur		Limit	Over		
		- T		Level	Factor	ment	-				
		MHz		dBuV	dB	dBuV/n	n dl	BuV/m	dB	Detector	Comment
1	4804.000		00	52.37 -10.03		42.34	7	74.00	-31.66	peak	
2	*	4804.00	00	43.72	-10.03	33.69	- 5	54.00	-20.31	AVG	

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

	est Mo		Е		I(1 Mbps)				est Da				1/3/22
Tes	t Frequ				·0MHz			Po	olarizat	ion			rtical
	Temp)		2	3°C				Hum.			6	6%
130.0 dB	.V/m												
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1000.000	3550.0	0 6100.0	0 865	D. 00	11200.00	1375	0.00	1630	0.00	18850.00	2140	00.00	26500.00 MH
No.	Mk.	Freq.		ding	Correct	Me	asure-	-	Limit	O۱	/er		
				vel	Factor		ment						
		MHz		BuV	dB		3uV/m		dBuV/n		В	Detector	Comment
1		4880.00		.18	-9.77		3.41		74.00		.59	peak	
2	*	4880.00	0 43	.24	-9.77	3	3.47		54.00	-20	.53	AVG	

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

T	est Mo	de			(1 Mbps)		Test [1/3/22
Tes	t Frequ	ency			0MHz		Polariz	ation		zontal
	Temp			2	3°C		Hur	n.	6	6%
30.0 dB	.V/m									
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1000.000		0 6100.0	00 86	50.00	11200.00	13750.00	16300.00	18850.00	21400.00	26500.00 MI
No.	Mk.	Freq.		eading evel	Correct Factor	Measure ment	- Lim	it Ov	er	
		MHz		BuV	dB	dBuV/m	dBu√	//m d	B Detector	Comment
1		4880.00	0 5	2.49	-9.77	42.72	74.0			
2	*	4880.00	0 4	2.97	-9.77	33.20	54.0	0 -20	.80 AVG	

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

т.	Test Mo			1(1 Mbps)		Test Date	_		1/3/22
16	st Frequ Temp			3°C		Polarization Hum.	n		rtical 6%
130.0 d	BuV/m	,		.5 0		Tiuiii.		0	J 70
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	00 3550.0			11200.00				00.00	26500.00 MH
No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
		MHz	Level dBuV	Factor dB	ment dBuV/m	dBuV/m	dB	Detector	Comment
		4960.000		-9.49	44.06	74.00	-29.94	peak	Comment
1		4960 000	カイカカ	<u>-</u> u ⊿u	44 Hh	741111	- /u u/i	neak	

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

	Test Mo			1(1 Mbps)		Test Date			1/3/22
Ie:	st Frequ Temp			3°C		Polarization	n		zontal 6%
30.0 dE	ienip BuV/m			.5 C		nuiii.		0	0 70
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1000.00	0 3550.0	0 6100.00	8650.00	11200.00	13750.00 1	6300.00 18	B50.00 21 4	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	*	4960.000		-9.49	44.12	74.00	-29.88	peak	
2		4960.000	43.22	-9.49	33.73	54.00	-20.27	AVG	

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

	Test Mo		I		1(2 Mbp	s)				est Da					1/3/22
le	st Frequ				2MHz 3°C				Р	olariza					rtical
130.0 dl	Temp)			3.0					Hum	l			б	6%
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120															
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30															
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1000.00	0 3550.0	00 6100.0	0 86!	50.00	11200.0	0	13750.	00	1630	00.00	1885	0.00	21400	0.00	26500.00 M
No.	Mk.	Freq.		ading	Corre			sure	-	Limit	t	Ove	er		
				evel	Fact			ent		15	,			<u> </u>	•
		MHz		BuV	dB			ıV/m	(dBuV/		dB		Detector	Commen
1	*	4804.00		2.29	-10.0			2.26		74.00		-31.7		peak	
2		4804.00	U 42	2.57	-10.0	IJ	32	.54		54.00	J	-21.4	+0	AVG	

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

	est Mo				I(2 Mbps)		Test I				/3/22
Tes	t Frequ				2MHz		Polariz				zontal
	Temp			2	3°C		Hu	m.		60	6%
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1000.000	3550.0	0 6100.	nn	8650.00	11200.00	13750.00	16300.00	18850.0	n 2140	00.00	26500.00 MH
No.	Mk.	Freq.		Reading	Correct	Measure			Over		_5000.00 MI
	.,,,,,			Level	Factor	ment					
		MHz		dBuV	dB	dBuV/m	n dBu\	//m	dB	Detector	Comment
1		4804.00	00	53.16	-10.03	43.13	74.0	OO -:	30.87	peak	
2	*	4804.00	00	43.12	-10.03	33.09	54.0	00 -:	20.91	AVG	

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

	est Mo				(2 Mbps)			Test Da				1/3/22
ies	t Frequ				0MHz 3°C			Polariza Hum				rtical 6%
130.0 dB	Temp JV/m				3.0			Hum			0	0%
130.0 UB	247III											
20												
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	3550.00	6100.0		50.00	11200.00	13750.00		300.00	18850.00		00.00	26500.00 MH
No.	Mk.	Freq.		eading Level	Correct Factor	Measi mer		Limit	t C	ver		
		MHz		<u>level</u> IBuV	dB	dBu√		dBuV/	m	dB	Detector	Comment
1		4880.00		3.65	-9.77	43.8		74.00		0.12	peak	20
2	*	4880.00	00 4	3.45	-9.77	33.6	8	54.00) -2	0.32	AVG	

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

	est Mo		В		(2 Mbps)				est Da				1/3/22
Tes	t Frequ				0MHz			Po	olarizat	ion			zontal
	Temp)		2	3°C				Hum.			6	6%
30.0 dB	ıV/m												
20													
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1000.000	3550.0	0 6100.0	0 8650	0.00	11200.00	1375	0.00	1630	0.00	18850.00	2140	00.00	26500.00 MH
No.	Mk.	Freq.		ding	Correct	Me	asure-	-	Limit	O,	ver		
				vel	Factor		ment						
		MHz		BuV	dB		3uV/m	C	BuV/n		В	Detector	Comment
1		4880.00		.67	-9.77		3.90		74.00).10	peak	
2	*	4880.00	u 43	.13	-9.77	3	33.36		54.00	-20).64	AVG	

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

Test Frequency 2480MHz Polarization Vertical Temp 23°C Hum. 66% 130.0 dBuV/m 120 110 100 90 80 70 60 50 1		Test Mo			BLE	5.1(2 N	lbps)				est Da					21/3/22	
130.0 dBuV/m 120 110 100 90 80 70 40 2 30 20 10.0 Mk. Freq. Reading Correct Measure- Limit Over Level Factor ment	Te				24		Z			Po							
1100 100 100 100 100 100 100 100 100 10	120.0)			23°C					Hum.					00%	
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No. Mk. Freq. Reading Correct Measure- Limit Over Level Factor ment	10 L																_
No. Mk. Freq. Reading Correct Measure- Limit Over Level Factor ment			X														
10.0 1000.000 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 No. Mk. Freq. Reading Correct Measure- Limit Over Level Factor ment	50																
1000.000 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 No. Mk. Freq. Reading Correct Measure- Limit Over Level Factor ment Over Correct Measure- Limit Over Measure- Measure- Limit Over Measure- Mea																	\dashv
No. Mk. Freq. Reading Correct Measure- Limit Over Level Factor ment	20																
Level Factor ment	10.0																
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IVIHZ ABILV AB ABILV/M ABILV/M AB Detector Commi	0.0 1000.0				Readin	g Co	rrect	Me	easure			18850.)	26500.	00 MH
	0.0 1000.0		Freq	•	Reading Level	g Co Fa	rrect actor	Me r	asure ment	-	Limit		Over				
1 4960.000 52.89 -9.49 43.40 74.00 -30.60 peak 2 * 4960.000 43.66 -9.49 34.17 54.00 -19.83 AVG	0.0 1000.0 No.		Freq.		Reading Level dBuV	g Co Fa	rrect actor dB	Me r dE	easure ment BuV/m	- C	Limit IBuV/n	n	Over dB	De	etector		

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

То	Test Mo				(2 Mbps) 0MHz		Test D Polariza			1/3/22 zontal
16	st Frequ Temp				3°C		Polariza Hum			2011ai 6%
30.0 d	BuV/m	<u>, </u>			0 0		Han	1.	J	070
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	00 3550.0			8650.00	11200.00	13750.00	16300.00		1400.00	26500.00 MH
No.	Mk.	Freq.	F	Reading Level	Correct Factor	Measure ment	e- Limi	t Over		
		MHz		dBuV	dB	dBuV/m	n dBuV	/m dB	Detector	Comment
1		4960.00	0	53.35	-9.49	43.86	74.0			
2	*	4960.00	0	43.56	-9.49	34.07	54.0	0 -19.93		

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



APPENDIX D	OUTPUT POWER

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Test Mode: BLE5.0(1 Mbps) Tested Date 2021/3/19
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Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2402	1.63	0.0015	30.00	1.0000	Pass
2440	1.43	0.0014	30.00	1.0000	Pass
2480	0.95	0.0012	30.00	1.0000	Pass

Test Mode:	BLE5.0(2 Mbps)	Tested Date	2021/3/19

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2402	5.92	0.0039	30.00	1.0000	Pass
2440	5.75	0.0038	30.00	1.0000	Pass
2480	5.99	0.0040	30.00	1.0000	Pass

End of Test Report

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