



## **FCC** Radio Test Report

FCC ID: QYLWCN3980B41

Report No. : BTL-FCCP-9-2202T096 Equipment : Body Worn Camera

Model Name : BC-4K
Brand Name : Getac

**Applicant**: Getac Technology Corporation

Address : 5F., Building A, No.209, Sec.1, Nangang., Rd., Nangang Dist., Taipei City

11568, Taiwan, R.O.C.

Radio Function : WLAN 2.4 GHz

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

Measurement Procedure(s)

nent : ANSI C63.10-2013

(-)

**Date of Receipt** : 2022/3/23

**Date of Test** : 2022/3/23 ~ 2023/1/18

**Issued Date** : 2023/2/9

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

Prepared by :

Eric Lee, Engineer

lac-MRA

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

Project No.: 2202T096 Page 1 of 68 Report Version: R01



### **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.

Project No.: 2202T096 Page 2 of 68 Report Version: R01





### **CONTENTS REVISION HISTORY** 5 SUMMARY OF TEST RESULTS 6 1.1 **TEST FACILITY** 7 MEASUREMENT UNCERTAINTY 1.2 7 1.3 **TEST ENVIRONMENT CONDITIONS** 8 1.4 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING 8 1.5 **DUTY CYCLE** 9 2 **GENERAL INFORMATION** 10 **DESCRIPTION OF EUT** 2.1 10 2.2 **TEST MODES** 12 2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED 13 2.4 SUPPORT UNITS 14 3 AC POWER LINE CONDUCTED EMISSIONS TEST 15 3.1 LIMIT 15 **TEST PROCEDURE** 3.2 15 3.3 **DEVIATION FROM TEST STANDARD** 15 3.4 **TEST SETUP** 16 3.5 **TEST RESULT** 16 4 RADIATED EMISSIONS TEST 17 4.1 LIMIT 17 4.2 **TEST PROCEDURE** 18 4.3 **DEVIATION FROM TEST STANDARD** 18 4.4 **TEST SETUP** 18 **EUT OPERATING CONDITIONS** 4.5 19 TEST RESULT - BELOW 30 MHZ 20 4.6 4.7 TEST RESULT - 30 MHZ TO 1 GHZ 20 4.8 TEST RESULT – ABOVE 1 GHZ 20 5 **BANDWIDTH TEST** 21 5.1 LIMIT 21 5.2 **TEST PROCEDURE** 21 5.3 **DEVIATION FROM TEST STANDARD** 21 **TEST SETUP** 5.4 21 5.5 **EUT OPERATING CONDITIONS** 21 5.6 **TEST RESULT** 21 6 **OUTPUT POWER TEST** 22 6.1 LIMIT 22 **TEST PROCEDURE** 6.2 22 **DEVIATION FROM TEST STANDARD** 6.3 22 6.4 **TEST SETUP** 22 **EUT OPERATING CONDITIONS** 6.5 22 **TEST RESULT** 22 6.6 POWER SPECTRAL DENSITY 23 7 7.1 LIMIT 23 7.2 **TEST PROCEDURE** 23 **DEVIATION FROM TEST STANDARD** 7.3 23 7.4 **TEST SETUP** 23 7.5 **EUT OPERATING CONDITIONS** 23



7.6	TEST	RESULT	23
8	ANTENN	A CONDUCTED SPURIOUS EMISSIONS TEST	24
8.1	LIMIT		24
8.2	TEST	PROCEDURE	24
8.3	DEVIA	ATION FROM TEST STANDARD	24
8.4	TEST	SETUP	24
8.5	EUT C	PERATING CONDITIONS	24
8.6	TEST	RESULT	24
9	LIST OF	MEASURING EQUIPMENTS	25
10	EUT TES	ST PHOTO	27
11	EUT PHO	DTOS	27
ADDENID	137. 4	AC DOWED LINE COMPLICTED EMISSIONS	00
APPEND	IX A	AC POWER LINE CONDUCTED EMISSIONS	28
APPEND	IX B	RADIATED EMISSIONS - 30 MHZ TO 1 GHZ	33
APPEND	IX C	RADIATED EMISSIONS - ABOVE 1 GHZ	36
APPEND	IX D	BANDWIDTH	55
APPEND	IX E	OUTPUT POWER	59
APPEND	IX F	POWER SPECTRAL DENSITY	61
APPEND	IX G	ANTENNA CONDUCTED SPURIOUS EMISSIONS	65

Project No.: 2202T096 Page 4 of 68 Report Version: R01





### **REVISION HISTORY**

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-9-2202T096	R00	Original Report.	2022/10/3	Invalid
BTL-FCCP-9-2202T096	R01	Revised report to address TAF Audit's	2023/2/9	Valid
		comments.		

Project No.: 2202T096 Page 5 of 68 Report Version: R01



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

### NOTE:

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

Project No.: 2202T096 Page 6 of 68 Report Version: R01

1 1	TEQT	`II I'	Tν

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

No. 72, 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.

□ C06 ⊠ CB21 □ CB22

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.

□ CB08 □ CB11 □ CB15 □ CB16

### 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  $\mathbf{U}_{cispr}$  requirement.

A. AC power line conducted emissions test:

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

### B. Radiated emissions test:

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
CB21	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)
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.

Project No.: 2202T096 Page 7 of 68 Report Version: R01



### 1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Environment Condition	Test Voltage	Tested by
AC Power Line Conducted Emissions	22 °C, 50 %	AC 120V	Jay Tien
Radiated emissions below 1 GHz	23 °C, 59 %	AC 120V	Mark Wang
Radiated emissions above 1 GHz	24~25 °C, 58~65 %	AC 120V	Mark Wang
Bandwidth	23.2 °C, 53 %	AC 120V	Angela Wang
Output Power	23.2 °C, 53 %	AC 120V	Angela Wang
Power Spectral Density	23.2 °C, 53 %	AC 120V	Angela Wang
Antenna conducted Spurious Emission	23.2 °C, 53 %	AC 120V	Angela Wang

### 1.4 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

Test Software	Qu	alcomm Radio Con	trol Tool V4.0.0017	'2.0
Mode	2412 MHz	2437 MHz	2462 MHz	Data Rate
IEEE 802.11b	10	10	10	1 Mbps
IEEE 802.11g	11	11	11	6 Mbps
IEEE 802.11n (HT20)	10	10	10	MCS 0

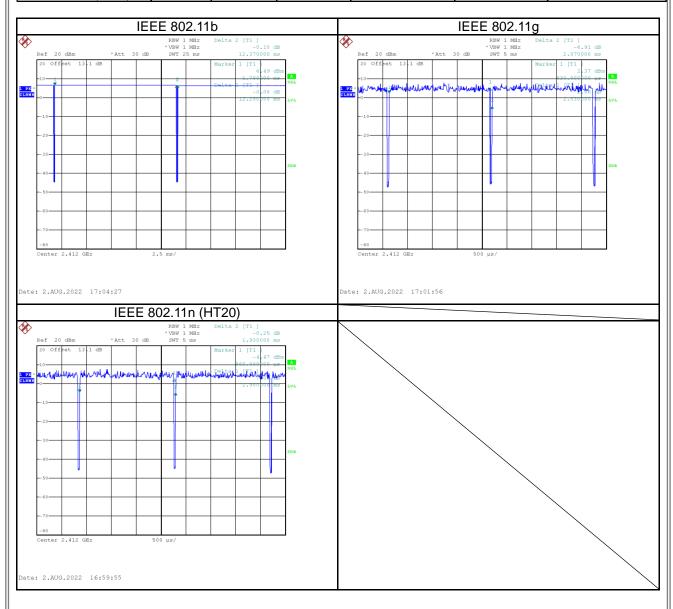
Project No.: 2202T096 Page 8 of 68 Report Version: R01



### 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)
IEEE 802.11b	12.280	1	12.280	12.370	99.27%	0.03
IEEE 802.11g	2.030	1	2.030	2.070	98.07%	0.08
IEEE 802.11n (HT20)	1.900	1	1.900	1.930	98.45%	0.07





### 2 GENERAL INFORMATION

### 2.1 DESCRIPTION OF EUT

Equipment	Body Worn Ca	mera					
Model Name	BC-4K						
Brand Name	Getac						
Model Difference	N/A						
Power Source		system or power adapter. oplied.					
	(1)						
	BC-4K	Cable type	Input Voltage				
	Pogo pins	Magnetic USB type A to pogo Cable	5V /1.5A				
Power Rating	USB type C	Type C To C cable	5V/3A and 9V/2.2A				
	Rated Voltage: Rated capacity Typical capacit	(2) Getac / BP1S1P5000P: Rated Voltage: 3.63 Vdc Rated capacity: 4750 mAh, 17.24 Wh Typical capacity: 5000 mAh, 18.15 Wh					
Products Covered	1 * Clip Mount 1 * Magnetic M 1 * Molle Mour	1 * Adjustable Pocket Mount 1 * Clip Mount 1 * Magnetic Mount 1 * Molle Mount 1 * Dual Magnetic Mount					
Operation Band	2400 MHz ~ 24	483.5 MHz					
Operation Frequency	2412 MHz ~ 24	462 MHz					
Modulation Technology	IEEE 802.11g:	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM					
Transfer Rate	IEEE 802.11g:	IEEE 802.11b: 11/5.5/2/1 Mbps IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 72.2 Mbps					
Output Power Max.	IEEE 802.11g:	15.77 dBm (0.0378 W) 18.56 dBm (0.0718 W) (HT20): 17.68 dBm (0.0586 W)					
Test Model							
Sample Status	Engineering Sa	Engineering Sample					
EUT Modification(s)	N/A	<u> </u>					

### 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:

(Z) Onamici List.									
CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n (HT20)									
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)				
01	2412	05	2432	09	2452				
02	2417	06	2437	10	2457				
03	2422	07	2442	11	2462				
04	2427	08	2447						

Project No.: 2202T096 Page 10 of 68 Report Version: R01



(3) Table for Filed Antenna:

Ant.	Brand Name	Model Name	Туре	Connector	Frequency (MHz)	Gain (dBi)
					2400-2500	2.02
		BC-4K	IFA		5150-5250	2.65
-	Getac			N/A	5250-5350	3.39
					5470-5725	3.87
					5725-5850	2.39

(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.

Project No.: 2202T096 Page 11 of 68 Report Version: R01



### 2.2 TEST MODES

Test Items	Test mode	Channel	Note
AC power line conducted emissions	Normal/Idle	-	-
Transmitter Radiated Emissions (below 1GHz)	TX Mode_IEEE 802.11g	01	-
	TX Mode_IEEE 802.11b		
Transmitter Radiated Emissions	TX Mode_IEEE 802.11g	01/11	Pandadaa
(above 1GHz)	TX Mode_IEEE 802.11n (HT20)		Bandedge
	TX Mode_IEEE 802.11n (HT40)	03/09	
	TX Mode_IEEE 802.11b		
Transmitter Radiated Emissions	TX Mode_IEEE 802.11g	01/06/11	Harmonia
(above 1GHz)	TX Mode_IEEE 802.11n (HT20)		Harmonic
	TX Mode_IEEE 802.11n (HT40)	03/06/09	
Bandwidth &	TX Mode_IEEE 802.11b		
Output Power &	TX Mode_IEEE 802.11g	01/06/11	
Power Spectral Density &	TX Mode_IEEE 802.11n (HT20)		-
Antenna conducted Spurious Emission	TX Mode_IEEE 802.11n (HT40)	03/06/09	

### NOTE:

(1)	For radiat	ted emission	band edge t	est, both	n Vertical	and I	Horizontal	are e	evaluated,	but on	ly the	worst	case
	(Vertical)	is recorded.											

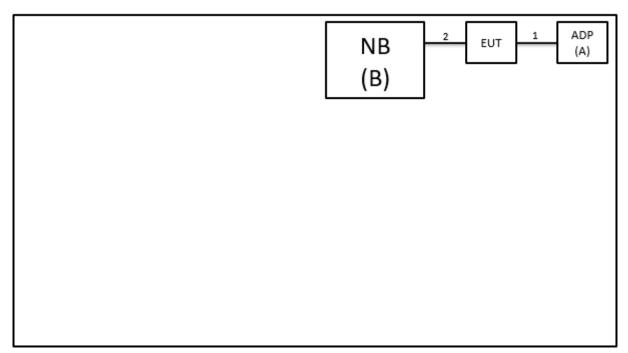
Project No.: 2202T096 Page 12 of 68 Report Version: R01



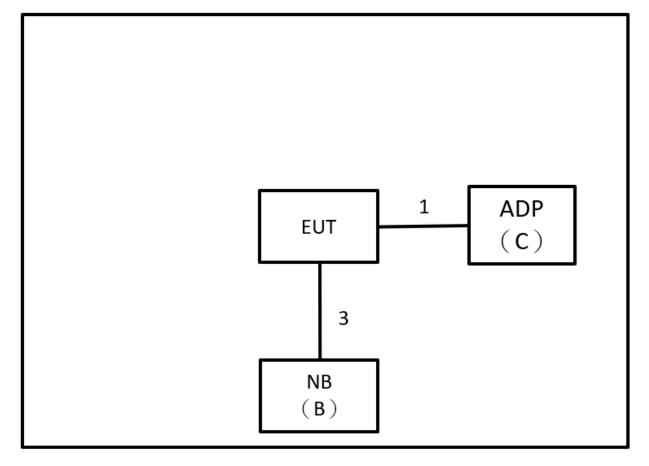
### 2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

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

AC power line conducted emissions



### Radiated Emissions



Project No.: 2202T096 Page 13 of 68 Report Version: R01

### 2.4 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
Α	Adapter	SONY	AC-0051-TW	4017W29100317	Furnished by test lab.
В	NB	ASUS	X555LN-0021B4 210U	N/A	Furnished by test lab.
С	Adapter	SAMSUNG	EP-TA12JWS	N/A	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
				Magnetic USB	
1	N/A	N/A	1m	typeA to pogo	Supplied by test requester.
				Cable	
2	N/A	N/A	1.2m	USB Cable	Furnished by test lab.
3	N/A	N/A	1m	Type C to USB	Furnished by test lab.

Project No.: 2202T096 Page 14 of 68 Report Version: R01



### 3 AC POWER LINE CONDUCTED EMISSIONS TEST

### 3.1 LIMIT

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

### NOTE:

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

Measurement Value = Reading Level + Correct Factor

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

Margin Level = Measurement Value - Limit Value

Calculation example:

Reading Level		Correct Factor		Measurement Value
38.22	+	3.45	=	41.67

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

The following table is the setting of the receiver.

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

### 3.2 TEST PROCEDURE

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

### NOTE:

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

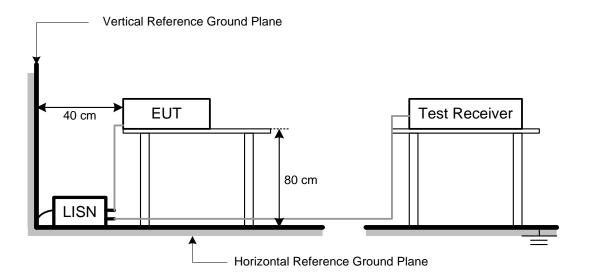
### 3.3 DEVIATION FROM TEST STANDARD

No deviation.

Project No.: 2202T096 Page 15 of 68 Report Version: R01



### 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	Radiated (dBu	Measurement Distance	
(MHz)	Peak	Average	(meters)
Above 1000	74	54	3

### NOTE:

- (1) The limit for radiated test was performed according to FCC CFR Title 47, Part 15, Subpart C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)

Margin Level = Measurement Value - Limit Value

Calculation example:

Reading Level		Correct Factor		Measurement Value		
19.11	+	2.11	II	21.22		

Measurement Value		Limit Value		Margin Level
21.22	ı	54	II	-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

Project No.: 2202T096 Page 17 of 68 Report Version: R01



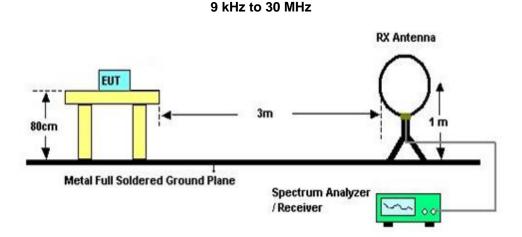
### 4.2 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5 m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1GHz)
- i. For the actual test configuration, please refer to the related Item EUT TEST PHOTO.

### 4.3 DEVIATION FROM TEST STANDARD

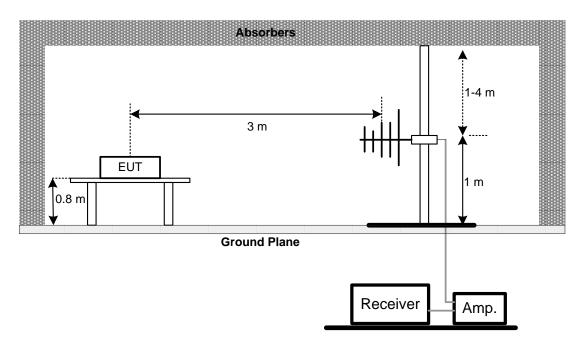
No deviation.

### 4.4 TEST SETUP

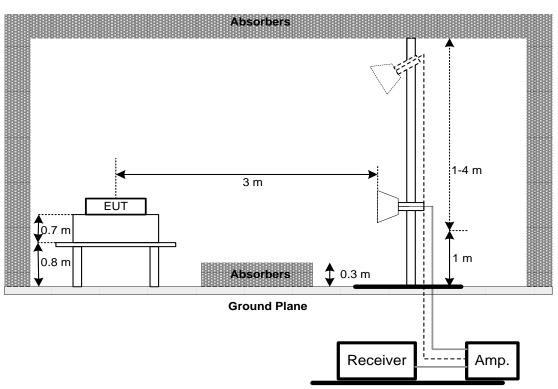




30 MHz to 1 GHz



### **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.

Project No.: 2202T096 Page 20 of 68 Report Version: R01

### **5 BANDWIDTH TEST**

### 5.1 LIMIT

FCC Part15, Subpart C (15.247)			
Section	Test Item	Limit	
15.247(a)	6 dB Bandwidth	500 kHz	

### 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 TEST STANDARD

No deviation.

### 5.4 TEST SETUP

EUT SPECTRUM ANALYZER

### 5.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 5.6 TEST RESULT

Please refer to the APPENDIX D.



### **6 OUTPUT POWER TEST**

### 6.1 LIMIT

FCC Part15, Subpart C (15.247)				
Section Test Item Limit				
15.247(b)	Maximum Output Power	1 Watt or 30dBm		

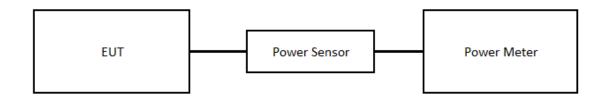
### 6.2 TEST PROCEDURE

- 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.
- c. Subclause 11.9.1.1 of ANSI C63.10 is applied. The maximum peak conducted output power may be measured using a broadband peak RF power meter.
  - The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

### 6.3 DEVIATION FROM TEST STANDARD

No deviation.

### 6.4 TEST SETUP



### 6.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 6.6 TEST RESULT

Please refer to the APPENDIX E.

Project No.: 2202T096 Page 22 of 68 Report Version: R01

### 7 POWER SPECTRAL DENSITY

### **7.1 LIMIT**

FCC Part15, Subpart C (15.247)					
Section	Limit				
15.247(e)	Power Spectral Density	8 dBm			
15.247 (e)	Fower Spectral Density	(in any 3 kHz)			

### 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 = 3 kHz, VBW = 10 kHz, Sweep time = Auto.

### 7.3 DEVIATION FROM TEST STANDARD

No deviation.

### 7.4 TEST SETUP



### 7.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 7.6 TEST RESULT

Please refer to the APPENDIX F.

Project No.: 2202T096 Page 23 of 68 Report Version: R01

### 8 ANTENNA CONDUCTED SPURIOUS EMISSIONS TEST

### **8.1 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 = 100 kHz, VBW=300 kHz, Sweep time = Auto.
- c. Offset = antenna gain + cable loss.

### 8.3 DEVIATION FROM TEST STANDARD

No deviation.

### 8.4 TEST SETUP

EUT SPECTRUM ANALYZER

### 8.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 8.6 TEST RESULT

Please refer to the APPENDIX G.

Project No.: 2202T096 Page 24 of 68 Report Version: R01



### 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	101051	2022/6/15	2023/6/14	
2	Test Cable	EMCI	EMCRG58-BM-B M-9000	210501	2022/5/2	2023/5/1	
3	EMI Test Receiver	R&S	ESR 7	101433	2021/11/24	2022/11/23	
4	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A	N/A	

	Radiated Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until	
1	Preamplifier	EMCI	EMC330N	980850	2021/9/23	2022/9/22	
	•				2022/9/19	2023/9/18	
2	Preamplifier	EMCI	EMC118A45SE	980819	2022/3/8	2023/3/7	
3	Preamplifier	EMCI	EMC001340	980555	2022/4/6	2023/4/5	
4	Test Cable	EMCI	EMC104-SM-SM- 1000	220319	2022/3/15	2023/3/14	
5	Test Cable	EMCI	EMC104-SM-SM- 3000	220322	2022/3/15	2023/3/14	
6	Test Cable	EMCI	EMC104-SM-SM- 7000	220324	2022/3/15	2023/3/14	
7	EXA Signal Analyzer	keysight	N9020A	MY57120120	2022/3/7	2023/3/6	
8	Loop Ant	Electro-Metrics	EMCI-LPA600	274	2022/6/28	2023/6/27	
9	Horn Antenna	RFSPIN	DRH18-E	211202A18EN	2022/5/18	2023/5/17	
10	Horn Ant	Schwarzbeck	BBHA 9170D	1136	2022/5/18	2023/5/17	
11	Log-bicon Antenna	Schwarzbeck	VULB9168	1369	2022/5/20	2023/5/19	
12	6dB Attenuator	EMCI	EMCI-N-6-06	AT-N0625	2022/5/20	2023/5/19	
13	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A	N/A	
14	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	FSP38	101139	2022/3/2	2023/3/1

	Output Power						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until	
1	Power Meter	Keysight	8990B	MY51000517	2022/3/18	2023/3/17	
2	Power Sensor	Keysight	N1923A	MY58310005	2022/3/18	2023/3/17	



Power Spectral Density						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP38	101139	2022/3/2	2023/3/1

	Antenna conducted Spurious Emission						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until	
1	Spectrum Analyzer	R&S	FSP38	101139	2022/3/2	2023/3/1	

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

Project No.: 2202T096 Page 26 of 68 Report Version: R01



10 EUT TEST PHOTO
Please refer to document Appendix No.: TP-2202T096-FCCP-1 (APPENDIX-TEST PHOTOS).
11 EUT PHOTOS
Please refer to document Appendix No.: EP-2202T096-3 (APPENDIX-EUT PHOTOS).

Project No.: 2202T096 Page 27 of 68 Report Version: R01

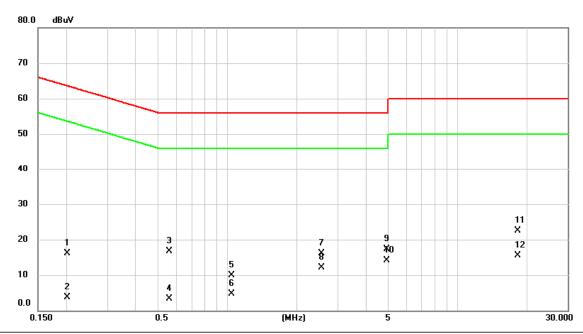


APPENDIX A	AC POWER LINE CONDUCTED EMISSIONS

Project No.: 2202T096 Page 28 of 68 Report Version: R01



Test Mode	Normal	Tested Date	2022/8/5
Test Frequency	-	Phase	Line

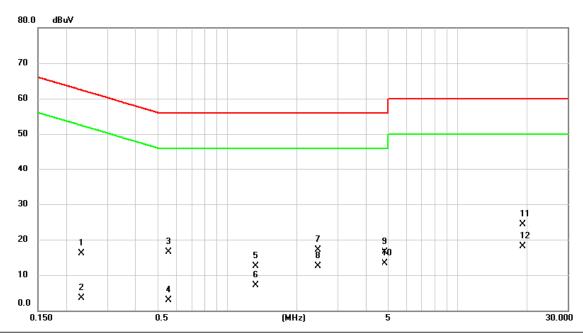


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1		0.2017	6.46	9.63	16.09	63.54	-47.45	QР	
2		0.2017	-5.96	9.63	3.67	53.54	-49.87	AVG	
3		0.5595	7.04	9.62	16.66	56.00	-39.34	QP	
4		0.5595	-6.26	9.62	3.36	46.00	-42.64	AVG	
5		1.0410	0.15	9.66	9.81	56.00	-46.19	QP	
6		1.0410	-4.87	9.66	4.79	46.00	-41.21	AVG	
7		2.5598	6.39	9.71	16.10	56.00	-39.90	QP	
8		2.5598	2.38	9.71	12.09	46.00	-33.91	AVG	
9		4.9312	7.58	9.75	17.33	56.00	-38.67	QP	
10	*	4.9312	4.45	9.75	14.20	46.00	-31.80	AVG	
11		18.2018	12.62	9.82	22.44	60.00	-37.56	QP	
12		18.2018	5.68	9.82	15.50	50.00	-34.50	AVG	

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



Test Mode	Normal	Tested Date	2022/8/5
Test Frequency	-	Phase	Neutral

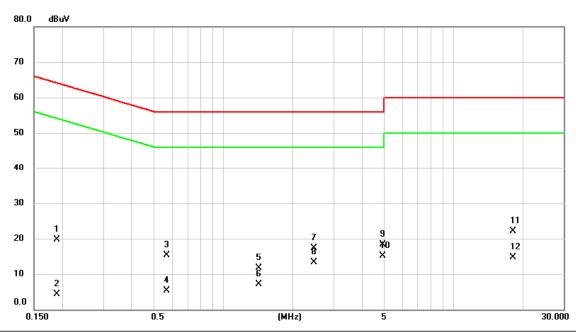


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1		0.2310	6.57	9.62	16.19	62.41	-46.22	QР	
2		0.2310	-6.21	9.62	3.41	52.41	-49.00	AVG	
3		0.5571	6.90	9.62	16.52	56.00	-39.48	QP	
4		0.5571	-6.65	9.62	2.97	46.00	-43.03	AVG	
5		1.3266	2.74	9.67	12.41	56.00	-43.59	QP	
6		1.3266	-2.49	9.67	7.18	46.00	-38.82	AVG	
7		2.4652	7.37	9.70	17.07	56.00	-38.93	QP	
8		2.4652	2.81	9.70	12.51	46.00	-33.49	AVG	
9		4.8345	6.82	9.76	16.58	56.00	-39.42	QP	
10		4.8345	3.54	9.76	13.30	46.00	-32.70	AVG	
11		19.2007	14.33	9.94	24.27	60.00	-35.73	QP	
12	*	19.2007	8.10	9.94	18.04	50.00	-31.96	AVG	

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



Test Mode	Idle	Tested Date	2022/8/5
Test Frequency	-	Phase	Line

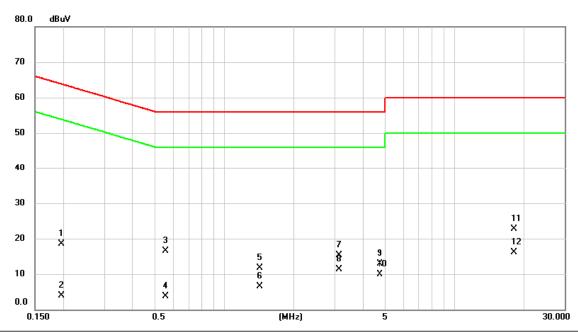


No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1	0.1883	10.01	9.63	19.64	64.11	-44.47	QP	
2	0.1883	-5.38	9.63	4.25	54.11	-49.86	AVG	
3	0.5662	5.67	9.62	15.29	56.00	-40.71	QP	
4	0.5662	-4.37	9.62	5.25	46.00	-40.75	AVG	
5	1.4235	2.03	9.67	11.70	56.00	-44.30	QР	
6	1.4235	-2.56	9.67	7.11	46.00	-38.89	AVG	
7	2.4653	7.57	9.70	17.27	56.00	-38.73	QP	
8	2.4653	3.56	9.70	13.26	46.00	-32.74	AVG	
9	4.9290	8.64	9.75	18.39	56.00	-37.61	QP	
10 *	4.9290	5.34	9.75	15.09	46.00	-30.91	AVG	
11	18.1613	12.24	9.82	22.06	60.00	-37.94	QP	
12	18.1613	4.95	9.82	14.77	50.00	-35.23	AVG	

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



Te	est Mode	Idle	Tested Date	2022/8/5
Te	est Frequency	-	Phase	Neutral



No. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1	0.1950	8.79	9.62	18.41	63.82	-45.41	QР	
2	0.1950	-5.73	9.62	3.89	53.82	-49.93	AVG	
3	0.5571	6.92	9.62	16.54	56.00	-39.46	QP	
4	0.5571	-6.00	9.62	3.62	46.00	-42.38	AVG	
5	1.4235	1.98	9.67	11.65	56.00	-44.35	QP	
6	1.4235	-3.12	9.67	6.55	46.00	-39.45	AVG	
7	3.1290	5.63	9.73	15.36	56.00	-40.64	QP	
8	3.1290	1.67	9.73	11.40	46.00	-34.60	AVG	
9	4.7423	3.21	9.76	12.97	56.00	-43.03	QP	
10	4.7423	0.11	9.76	9.87	46.00	-36.13	AVG	
11	18.0555	12.77	9.92	22.69	60.00	-37.31	QP	
12 *	18.0555	6.21	9.92	16.13	50.00	-33.87	AVG	

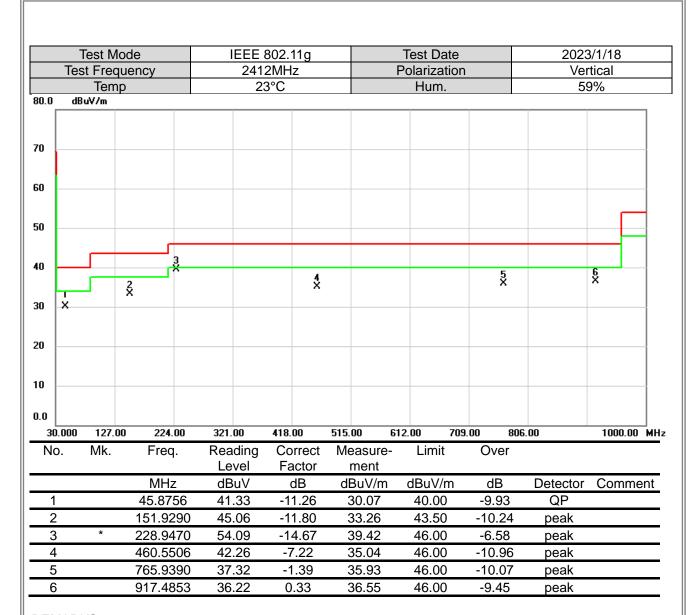
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



## APPENDIX B RADIATED EMISSIONS - 30 MHZ TO 1 GHZ

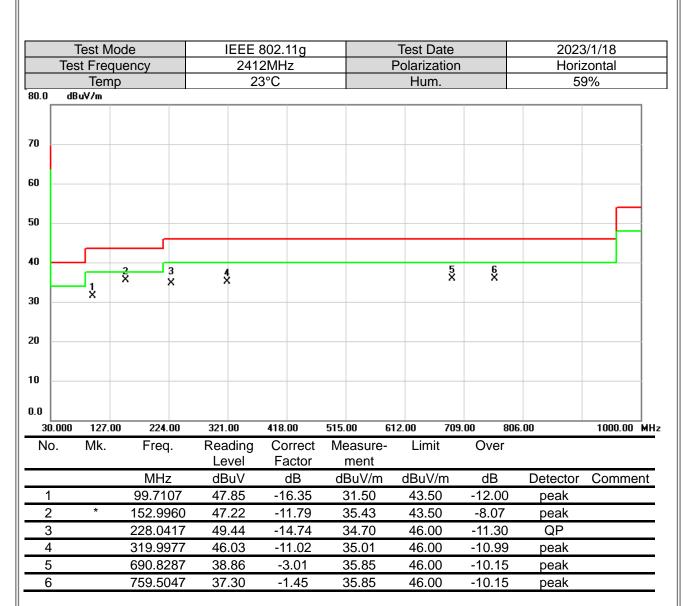
Project No.: 2202T096 Page 33 of 68 Report Version: R01





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





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



# APPENDIX C RADIATED EMISSIONS - ABOVE 1 GHZ

Project No.: 2202T096 Page 36 of 68 Report Version: R01



	Test M					2.11b				est Dat				2/8/1
Te	est Freq			2	4121				Po	larizati	ion			tical
00.0	Tem	р			25°	С				Hum.			6	5%
30.0	dBuV/m													
20														
10														
00														
10 L														
80														
'o 🗀														
io														
io 🗀														
0		1 X												
30 <u> </u>		2 X												
20														
0.0														
	000 3550.			8650.00		1200.00	1375				18850.0		400.00	26500.00 MF
No.	Mk.	Freq	-	Readin Level		Correct Factor		easure- ment	-	Limit	C	ver		
		MHz	<u> </u>	dBuV		dB	dE	3uV/m	C	dBuV/m	n	dB	Detector	Comment
1		4824.0	000	38.80		0.72		39.52		74.00	-3	4.48	peak	
2	*	4824.0	000	30.45		0.72	3	31.17		54.00	-2	2.83	AVG	

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



	Test Mo			I		802.11	b				Test Da					2/8/1
Te	est Freq					2MHz				Р	olariza					zontal
	Tem	ρ			2	5°C					Hum				65	5%
130.0	dBuV/m															
120																
110																
100																
90																
80																
70																
60																
50																
40		1 2 X														
30		2 X														
20																
10.0																
	000 3550.			8650		11200.		1375			300.00	1885		21400.00		26500.00 MH
No.	Mk.	Freq	•	Rea Le		Corr Fact			easure ment	ə- <sup>¯</sup>	Limit	t _	Over			
		MHz	7	dB	uV	dE			3uV/n	า	dBuV/	m	dB	Dete	ector	Comment
1		4824.0	000	39.	17	0.7	2	3	39.89		74.00	)	-34.11	l ре	ak	
2	*	4824.0	000	31.	66	0.7	2	3	32.38		54.00	)	-21.62	2 A\	/G	

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



	Test M				802.11b		Test Date			2/8/1
Te	est Freq				37MHz		Polarizatio	n		rtical
20.0	Tem	p		2	25°C		Hum.		6	5%
30.0	dBuV/m									
20										
10										
00										
10										
80										
70 <u> </u>										
io										
io										
ю		1 X								
10 <u> </u>		2 X								
20										
0.0										
	000 3550.			8650.00	11200.00				100.00	26500.00 MH
No.	Mk.	Freq	•	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	<u>-</u>	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.0		39.24	0.89	40.13	74.00	-33.87	peak	
2	*	4874.0	000	30.61	0.89	31.50	54.00	-22.50	AVG	

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



	Test Mo			I		802.11	b				Test Da					2/8/1	
Te	est Frequ					7MHz				P	olariza					zontal	
100.0	Temp	)			2	5°C					Hum				6	5%	
130.0	dBuV/m																7
120																	
110 -																	-
100																	-
90																	1
80																	
																	-
70																	1
60																	1
50																	†
40		1 X															
30		2 X															
		^															1
20																	1
10.0	200 0550			2050		44000		4075			200.00	4000		04.400		22502.00	]
	000 3550.0			8650		11200.		1375			300.00	1885		21 <b>4</b> 00.	UU	26500.00	MHZ
No.	Mk.	Freq	•	Rea Le		Corr Fact			easure ment	∃-	Limit	L	Over				
		MHz	<u> </u>	dB		dE			3uV/n	n	dBuV/	m	dB		Detector	Comme	ent
1		4874.0	00	41.	.84	0.8	9	۷	12.73		74.00	)	-31.2	7	peak		_
2	*	4874.0	000	29.	98	0.8	9	3	30.87		54.00	)	-23.13	3	AVG		

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



	Test Mo			IE		802.11b			est Dat				2/8/1
Te	est Freq					2MHz		Po	<u>larizati</u>	on			tical
130.0	Tem dBuV/m	p			2	5°C			Hum.			65	5%
130.0	aga4/w												
120													
110													
100													
90													
30													
·o 🗀													
:0													
50													
10		1 X											
		2 X											
80		x											
20 —													
10.0													
	000 3550.			8650.		11200.00	50.00			18850.00		00.00	26500.00 MF
No.	Mk.	Freq	-	Read Lev		Correct Factor	easure ment	-	Limit	Ove	er		
		MHz	7	dΒι	ιV	dB	BuV/m	(	dBuV/m	n dE	3	Detector	Comment
1		4924.0	000	40.3	31	1.07	41.38		74.00	-32.	62	peak	
2	*	4924.0	000	30.0	09	1.07	31.16		54.00	-22.	84	AVG	

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



	Test Mo	ode		IE	EE 8	802.11b		Te	est Dat	te		202	2/8/1
To	est Freq	uency				2MHz		Ро	larizati	ion			zontal
	Tem	р			2	5°C			Hum.			65	5%
130.0	dBuV/m												
120													
110													
100													
10													
80													
o =													
50													
50		1											
10		X X											
10		2 X											
20													
0.0													
	000 3550.	00 6100	).00	8650.		11200.00		1630		18850.00		00.00	26500.00 MF
No.	Mk.	Freq	•	Read Lev		Correct Factor	easure ment	-	Limit	Ov	er		
		MHz	<u>-</u>	dBu		dB	BuV/m	С	BuV/m	n dl	3	Detector	Comment
1		4924.0	000	43.4	14	1.07	44.51		74.00	-29.	.49	peak	
2	*	4924.0	000	32.8	31	1.07	33.88		54.00	-20.	.12	AVG	

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



	Test M			IE		802.11g				est Da				2/8/2
Te	est Freq					2MHz			Po	olarizati	ion			tical
100.0	Tem	p			24	4°C				Hum.			58	3%
30.0	dBuV/m													
20														
110														
100														
30														
30														
0														
io														
50														
10 <u> </u>		1 ×												
80		2 X												
20		^												
10.0														
	000 3550.	00 6100	).00	8650.	.00	11200.00	137	50.00	1630	00.00	18850.00	214	100.00	26500.00 MH
No.	Mk.	Freq	•	Read		Correc Factor		easure ment	-	Limit	O۷	er/		
		MHz	<u> </u>	dBı		dB		BuV/m	(	dBuV/n	n d	В	Detector	Comment
1		4824.0		39.		0.72		40.36		74.00		.64	peak	
2	*	4824.0	000	27.	95	0.72		28.67		54.00	-25	.33	AVG	

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



	Test Mo	ode		IE	EE 8	802.11g			Te	st Dat	te		202	2/8/2
To	est Freq	uency			241	2MHz			Pol	arizati	on			zontal
	Tem	р			24	4°C			I	Hum.			58	3%
30.0	dBuV/m													
120														
110														
100														
90														
30														
'o														
io														
50														
10 <u> </u>		1 X												
30 <u> </u>		2 X												
20														
10.0														
	000 3550.			8650.		11200.00			16300		18850.00		00.00	26500.00 MH
No.	Mk.	Freq		Read Lev		Correct Factor		easure- ment	-	Limit	Ov	er		
		MHz	<u> </u>	dΒι	ιV	dB	dl	BuV/m	dl	3uV/m	n dE	3	Detector	Comment
1		4824.0	000	39.6	69	0.72		40.41	7	74.00	-33.	59	peak	
2	*	4824.0	000	27.8	31	0.72	-	28.53	5	54.00	-25.	47	AVG	

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



	Test M			ļ.		802.11	g				Test Da				022/8/2	2
Te	est Fred					7MHz				F	olarizat				Vertical	
30.0	Tem	p			24	4°C					Hum.				58%	
30.0	OBUY/M															
20																
110																
100																
90																
30																
0																
io																
50																
10		1 X														
		2														
30		×														
20 —																
10.0																
	000 3550			8650		11200.0		1375			300.00	18850		1400.00	26	500.00 MF
No.	Mk.	Fred	•	Read Lev		Corre Fact			asure nent	<b>)</b> -	Limit		Over			
		MHz	7	dB		dB			BuV/m	1	dBuV/r	m	dB	Detect	or Co	mment
1		4874.0		40.		0.89			1.38		74.00		-32.62			
2	*	4874.0	000	28.	70	0.89	9	2	9.59		54.00	)	-24.41	AVG	i	

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



T	Test Mo				802.11g 7MHz		Test Date			2/8/2 zontal
10	Tem				4°C		Hum.	ווע		3%
130.0	dBuV/m									
120										
110										
100										
90										
80										
70										
60										
50										
40		1 X								
30		2 X								
20		^								
10.0										
1000.0	000 3550.	00 6100.	.00	8650.00	11200.00	13750.00	16300.00 1	8850.00 214	100.00	26500.00 MHz
No.	Mk.	Freq.		Reading Level	Correct Factor	Measure ment	- Limit	Over		
		MHz		dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.0		39.89	0.89	40.78	74.00	-33.22	peak	
2	*	4874.0	00	28.53	0.89	29.42	54.00	-24.58	AVG	

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



		est Mo			I		802.11	3				Test Da					2/8/2	
	lest		uency				2MHz				P	olariza					rtical	
30.0	dBu\	Temp	)			24	4°C					Hum	l			58	8%	
30.0	ubu	77111																l
20																		
10 _																		
00																		
10																		
30 <u> </u>																		
o																		
o																		
0																		
0			1 X															
:0			2 X															
20																		
0.0																		
		3550.0	00 6100	).00	8650	.00	11200.0	0	13750	).00	16	300.00		50.00	2140	0.00	26500.00	МН
No.		Mk.	Freq	•	Rea Le		Corre Fact			asure nent	<del>)</del> -	Limi	t	Ove	r			
			MHz	<u>-</u>	dB		dB			uV/m	1	dBuV/	m /	dB		Detector	Comme	nt
1			4924.0	000	40.	64	1.07	7	4	1.71		74.00	0	-32.2	29	peak		
2		*	4924.0	000	28.	94	1.07	7	3	0.01		54.00	0	-23.9	9	AVG		

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



	Test M				802.11g		Test Date			2/8/2
	est Fred Tem				62MHz 24°C		Polarizatio Hum.	n		zontal 3%
130.0	dBuV/m	iΡ			14 0		Huin.		- 30	<i>57</i> 0
120										
110										
100										
90										
80										
70										
60										
50		1								
40		X X								
30		2 X								
		^								
20										
10.0										
	000 3550			8650.00	11200.00				100.00	26500.00 MHz
No.	Mk.	Fred	ļ.	Reading Level	Correct Factor	Measure ment	- Limit	Over		
		MHz	7	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.0		41.11	1.07	42.18	74.00	-31.82	peak	20111110111
2	*	4924.0		29.10	1.07	30.17	54.00	-23.83	AVG	

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



_	Test Mo			.11n (HT20	))	Test Date			2/8/2
le	est Frequ			2MHz		Polarization			tical
120.0	Temp	)	2	4°C		Hum.		58	3%
130.0	dBuV/m								
120									
110									
100									
90									
80									
70									
60									
50									
40		1 X							
30		2 X							
20									
10.0									
	000 3550.0			11200.00				00.00	26500.00 MH:
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	39.41	0.72	40.13	74.00	-33.87	peak	
2	*	4824.000	28.06	0.72	28.78	54.00	-25.22	AVG	

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



	Test Mo			.11n (HT20	D)	Test Date			2/8/2
Te	est Frequ			2MHz		Polarization			zontal
120.0	Temp	)	2	4°C		Hum.		58	3%
130.0	dBuV/m								
120									
110									
100									
90									
80									
70									
60									
50									
40		1 ×							
30		2 X							
20									
10.0									
	000 3550.0			11200.00				00.00	26500.00 MHz
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	- Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1_		4824.000	38.95	0.72	39.67	74.00	-34.33	peak	
2	*	4824.000	28.31	0.72	29.03	54.00	-24.97	AVG	

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



Test Mode Test Frequency				.11n (HT20	0)	Test Date			2/8/2		
	rest		•			7MHz 4°C		Polarizatio		tical	
130.0	dBu\	Temp //m	)			4°C		Hum.		50	3%
20 _											
10											
00											
0											
:0											
o											
L											
0											
o  -			*								
			2 X								
0											
0.0											
	0.000	3550.0	00 6100.	00	8650.00	11200.00	13750.00	16300.00 18	850.00 214	00.00	26500.00 MH
No.		Mk.	Freq.		Reading	Correct	Measure-		Over		
					Level	Factor	ment				
			MHz		dBuV	dB	dBuV/m		dB	Detector	Comment
1			4874.00		40.69	0.89	41.58	74.00	-32.42	peak	
2		*	4874.00	00	29.01	0.89	29.90	54.00	-24.10	AVG	

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



Test Mode Test Frequency			11n (HT20	0)	Test Date			2/8/2	
<u> </u>				37MHz 4°C		Polarization		zontal	
130.0	Temp dBuV/m	)		4-0		Hum.		50	3%
	db d f f iii								
120									
10									
100									
30									
"									
30 <u> </u>									
'o 🗀									
50 —									
50 🗀									
ŧo		1 X							
30		2 X							
20									
10.0									
1000.	.000 3550.0	00 6100.00	8650.00	11200.00	13750.00	16300.00 18	850.00 214	00.00	26500.00 MH
No.	Mk.	Freq.	Reading	Correct	Measure-	- Limit	Over		
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m		dB	Detector	Comment
1		4874.000		0.89	41.76	74.00	-32.24	peak	
2	*	4874.000	28.94	0.89	29.83	54.00	-24.17	AVG	

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



Test Mode Test Frequency					11n (HT20	))			Test Da				2/8/2		
	lest				2462MHz 24°C				Polarization				Vertical 58%		
30.0	dBu\	Temp //m	)			24	r C				Hum.			58	3%
20															
10															
00															
UU															
0  -															
o															
o															
0															
0			_												
o			1 X												
o			2 X												
			^												
0															
0.0 1000	1 000	3550.0	00 6100.	nn	8650.00		11200.00	1375	0 00	163	800.00	1885	in nn 21	400.00	26500.00 MH
No.		Mk.	Freq.		Readir		Correct		asure		Limit		Over	100.00	20300.00 MF
					Leve		Factor		nent						
			MHz		dBu∖	/	dB	dE	3uV/m		dBuV/ı	m	dB	Detector	Comment
1			4924.00		40.45		1.07		1.52		74.00		-32.48	peak	
2		*	4924.00	00	29.00	)	1.07	3	0.07		54.00	)	-23.93	AVG	

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



	Test	Mo	de		IEEE		.11n (		))			Test Da					2/8/2	
Т	est F				2462MHz					Polarization					Horizontal			
		emp				2	4°C					Hum				58	3%	
30.0	dBuV/r	n																7
20																		-
10																		-
00																		$\parallel$
0																		$\parallel$
0  -																		$\parallel$
																		-
o  -																		$\parallel$
0																		7
0			1 X															
o			2 X															-
o																		-
0.0																		
1000.	000 3		0 6100	0.00	8650	).00	1120	0.00	1375			00.00		50.00	2140	0.00	26500.0	0 M
No.	MI	<.	Freq	.		ding vel		rect ctor		easure ment	:-	Limit	t	Ove	er			
			MHz	7	dB	uV		B		3uV/m	1	dBuV/	m	dB		Detector	Comme	ent
1			4924.0	000	40	.92	1.	07		11.99		74.00	)	-32.0	01	peak		
2	*		4924.0	000	29	.08	1.	07	3	30.15		54.00	)	-23.8	35	AVG		

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



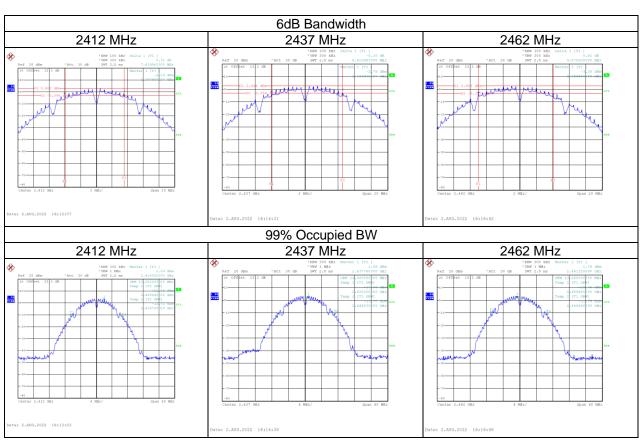


APPENDIX D	BANDWIDTH

Project No.: 2202T096 Page 55 of 68 Report Version: R01



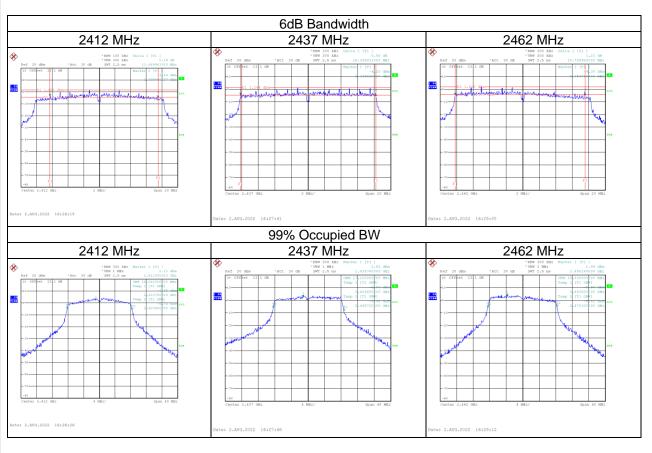
Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	7.64	13.28	≥ 500	Pass
2437	8.62	14.00	≥ 500	Pass
2462	9.07	13.68	≥ 500	Pass





Test Mode IEEE 802.11g

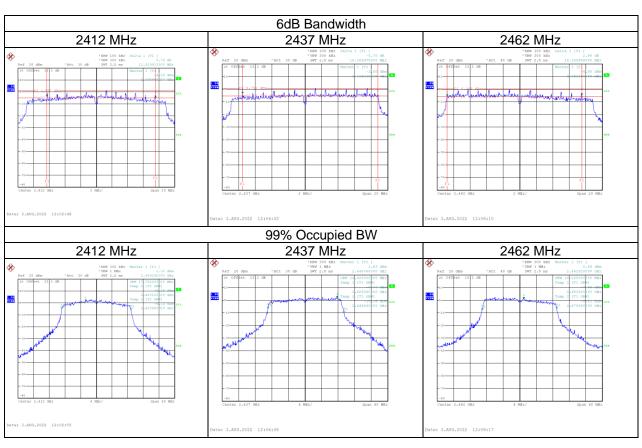
Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	13.87	16.64	≥ 500	Pass
2437	16.40	17.12	≥ 500	Pass
2462	15.80	16.80	≥ 500	Pass





Test Mode	IEEE 802.11n (	(HT20)
	, _ , , , , , , , , , , , , , ,	,

Test Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Minimum 6 dB Bandwidth Limit (kHz)	Result
2412	13.92	17.76	≥ 500	Pass
2437	16.39	18.40	≥ 500	Pass
2462	16.36	18.08	≥ 500	Pass







APPENDIX E	OUTPUT POWER

Project No.: 2202T096 Page 59 of 68 Report Version: R01



Test Mode	IEEE 802.11b	Tested Date	2022/8/2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Limit (dBm)	Limit (W)	Result
2412	15.77	0.0378	30.00	1.0000	Complies
2437	15.63	0.0366	30.00	1.0000	Complies
2462	15.41	0.0348	30.00	1.0000	Complies

Test Mode IEEE 8	802.11g	Tested Date	2022/8/2
------------------	---------	-------------	----------

Frequency	Conducted Power	Conducted Power	Limit	Limit	Dogult
(MHz)	(dBm)	(W)	(dBm)	(W)	Result
2412	18.56	0.0718	30.00	1.0000	Complies
2437	17.92	0.0619	30.00	1.0000	Complies
2462	18.34	0.0682	30.00	1.0000	Complies

Test Mode	IEEE 802.11n (HT20)	Tested Date	2022/8/2
-----------	---------------------	-------------	----------

Frequency	Conducted Power	Conducted Power	Limit	Limit	Result
(MHz)	(dBm)	(W)	(dBm)	(W)	Kesuit
2412	17.68	0.0586	30.00	1.0000	Complies
2437	17.57	0.0571	30.00	1.0000	Complies
2462	17.23	0.0528	30.00	1.0000	Complies

Project No.: 2202T096 Page 60 of 68 Report Version: R01



BTL-FCCP-9-2202T096
SITY

Project No.: 2202T096 Page 61 of 68 Report Version: R01



	Test Mode	IEEE 802.11b
--	-----------	--------------

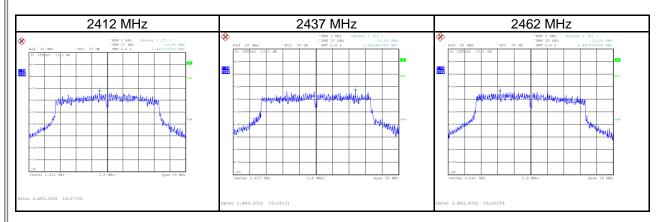
Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-10.38	8.00	Pass
2437	-12.18	8.00	Pass
2462	-13.19	8.00	Pass





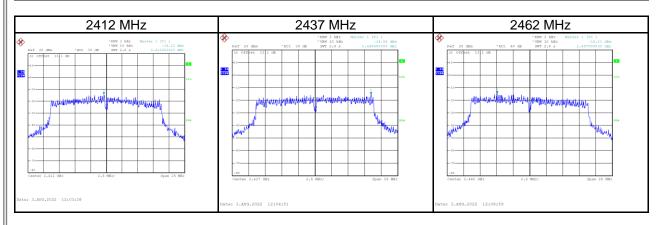
Test Mode IE	EEE 802.11g
--------------	-------------

Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-12.88	8.00	Pass
2437	-13.56	8.00	Pass
2462	-14.09	8.00	Pass





Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2412	-14.12	8.00	Pass
2437	-14.94	8.00	Pass
2462	-14.21	8.00	Pass





APPENDIX G	ANTENNA CONDUCTED SPURIOUS EMISSIONS

Project No.: 2202T096 Page 65 of 68 Report Version: R01





