

Page: 1 of 25

# **ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT**





**CLASS II & IV PC REPORT** 

**Applicant:** Acer Incorporated

8F., No. 88, Sec. 1, Xintai 5th Rd., Xizhi, New Taipei City

22181, Taiwan (R.O.C)

**Product Name:** 2x2 802.11A/B/G/N/AC WiFi + Bluetooth Module

**Brand Name:** acer

Model No.: QCNFA324

**Model Difference:** N/A

**Report Number:** E2/2021/60035

FCC ID HLZ-QCNFA324

IC: 1754F-QCNFA324

Issue Date: Jul. 26, 2021

Date of Test: Jun. 16, 2021 ~ Jul. 16, 2021

Date of EUT Received: Jun. 11, 2021

Approved By

### We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10:2013 and the energy emitted by the sample EUT comply with FCC rule part §15.247, ISED RSS-247.

The results of this report relate only to the sample identified in this report.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com.tw/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 2 of 25

Revision History					
Report Number Revision Description Issue Date Revised By					
E2/2021/60035	Rev.00	Original.	Jul. 26, 2021	Yi-Shan Tsai	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 3 of 25

# **Contents**

1	GENERAL INFORMATION	4
2	SYSTEM TEST CONFIGURATION	7
3	SUMMARY OF TEST RESULTS	10
4	DESCRIPTION OF TEST MODES	11
5	MEASUREMENT UNCERTAINTY	12
6	PEAK OUTPUT POWER MEASUREMENT	13
7	SPURIOUS EMISSION MEASUREMENT	15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 4 of 25

# **GENERAL INFORMATION**

#### 1.1 **Product Description**

Product Name:	2x2 802.11A/B/G/N/AC WiFi + Bluetooth Module
Brand Name:	acer
Model No.:	QCNFA324
Model Difference:	N/A
Hardware Version:	N/A
Firmware Version:	N/A
EUT Series No.:	N8AWGWW00111180F6AF (Conducted) N8AWGWW0011180F6AF7600 (Radiated)
Power Supply:	11.25Vdc from Rechargeable Lithium Ion Battery Pack 5 / 9 / 12 / 15 / 20Vdc from AC/DC Adapter

#### 1.2 **RF Specification**

Radio Technology:	Bluetooth LE Single mode
Frequency Range:	2402 – 2480MHz
Channel number:	40 channels
Modulation type:	GFSK
Transmit Power:	BLE 1M: 4.34 dBm

#### 1.3 **Antenna Designation**

Antenna	Main / Aux	Freq.	Peak Antenna	Worst Antenna
Type		(MHz)	Gain (dBi)	Gain
PIFA	Aux	2402~2480	0.44	V

### Note:

- 1. Pre-scanned was done on the above antennas, measurements were demonstrated by using the antenna with the highest gain as the worst case scenarios.
- Antenna information is provided by the applicant.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488 www.sgs.com.tw



Page: 5 of 25

# 1.4 Test Methodology of Applied Standards

FCC Part 15, Subpart C §15.247 FCC KDB 558074 D01 DTS Meas. Guidance v05r02 RSS-247 issue 2 Feb. 2017 RSS-Gen Issue 5 ANSI C63.10:2013

#### 1.5 **Test Facility**

Laboratory	Test Site Address	Test Site Name	FCC Designation number	IC CAB identifier
		SAC 1		
		SAC 3		
		Conduction 1		
		Conducted 1		
		Conducted 2		
	No.134, Wu Kung Road, New Taipei Indus-	Conducted 3		
	trial Park, Wuku District, New Taipei City, Tai-	Conducted 4	TW0027	
	wan.	Conducted 5		
		Conducted 6		
		Conducted 7		
		Conducted 8		
		Conducted 9		
		Conducted 10		TW3702
SGS Taiwan Ltd.		Conduction A		
Central RF Lab.		SAC C		
(TAF code 3702)		SAC D		
		SAC E		
		Conducted A		
		Conducted B	-	
		Conducted C		
	No.2, Keji 1st Rd., Guishan District, Taoyuan	Conducted D	TW0028	
	City, Taiwan 333	Conducted E	1 00020	
		Conducted F		
		Conducted G		
		Conducted H		
		Conducted I		TW3702
		Conducted J		
		Conducted		
		TS8997		

Note: Test site name is remarked on the equipment list in each section of this report as an indication where measurements occurred in specific test site and address.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488



Page: 6 of 25

# 1.6 Special Accessories

There are no special accessories used while test was conducted.

# 1.7 Equipment Modifications

There was no modification incorporated into the EUT.



Page: 7 of 25

## SYSTEM TEST CONFIGURATION

# 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

An engineering test mode (software/firmware) that applicant provided was utilized to manipulate the EUT into transmit, selection of the test channel, and modulation scheme.

#### 2.3 Test Procedure

#### 2.3.1 **Conducted Test (RF)**

The active antenna port of the unlicensed wireless device is connected to the spectrum analyzer with attenuator to protect the instrumentation. If a second antenna port is available, it is tested at one operating frequency, with other port(s) appropriately terminated, to verify it has similar output characteristics as the fully tested port.

#### 2.3.2 **Radiated Emissions**

The EUT is a placed on a turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max, emission, the relative positions of this transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com.tw/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488



Page: 8 of 25

#### 2.4 **Measurement Results Explanation Example**

### 2.4.1 Radiated Emission Test Sites For Measurements From 9 kHz To 30 MHz

Radiated emission below 30MHz is measured in a 9m\*9m\*6m semi-anechoic chamber, the measurements correspond to those obtained at an open-field test site.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

### 2.4.2 For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sqs.com.tw/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 9 of 25

# Configuration of Tested System

Fig. 2-1 Radiated Emission



Fig. 2-2 Conducted (Antenna Port) Configuration



**Table 2-1 Equipment Used in Tested System** 

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	Power Cord
1	Bluetooth Test Software	N/A	N/A	N/A	N/A	N/A
2	Adapter	Chicony	A18-045N1A	N/A	N/A	N/A
3	Notebook	Lenovo	L420	S0011721	N/A	N/A

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 10 of 25

# **SUMMARY OF TEST RESULTS**

FCC Rules	ISED Rules	Description Of Test	Result
§15.247(b) (3)	RSS-247 §5.4(4)	Peak Output Power	Compliant
§15.247(d) §15.209	RSS-247 §5.5 RSS-Gen §8.9	Radiated Spurious Emission	Compliant

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 11 of 25

# 4 DESCRIPTION OF TEST MODES

# 4.1 Operated in 2400 ~ 2483.5MHz Band

40 channels are provided for Bluetooth LE

40 Glarificio de provided for Bideleotif EE						
ITEM	FREQUENCY	ITEM	FREQUENCY	ITEM	FREQUENCY	
1	2402 MHz	15	2430 MHz	29	2458 MHz	
2	2404 MHz	16	2432 MHz	30	2460 MHz	
3	2406 MHz	17	2434 MHz	31	2462 MHz	
4	2408 MHz	18	2436 MHz	32	2464 MHz	
5	2410 MHz	19	2438 MHz	33	2466 MHz	
6	2412 MHz	20	2440 MHz	34	2468 MHz	
7	2414 MHz	21	2442 MHz	35	2470 MHz	
8	2416MHz	22	2444 MHz	36	2472 MHz	
9	2418 MHz	23	2446 MHz	37	2474 MHz	
10	2420 MHz	24	2448 MHz	38	2476 MHz	
11	2422 MHz	25	2450 MHz	39	2478 MHz	
12	2424 MHz	26	2452 MHz	40	2480 MHz	
13	2426 MHz	27	2454 MHz	·		
14	2428 MHz	28	2456 MHz			

#### 4.2 The Worst Test Modes and Channel Details

- 1. The EUT has been tested under operating condition.
- 2. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.
- 3. Investigation has been done on all the possible configurations for searching the worst case.

MODE	AVAILABLE FREQUENCY (MHz)	TESTED FREQUENCY (MHz)	MODULATION	DATA RATE (Mbps)
RADIA		TED EMISSION TEST	(ABOVE 1 GHz)	
Bluetooth LE	2402 to 2480	2402, 2442, 2480	GFSK	1

ANTENNA PORT CONDUCTED MEASUREMENT					
MODE	AVAILABLE FREQUENCY (MHz)	TESTED FREQUENCY (MHz)	MODULATION	DATA RATE (Mbps)	
Bluetooth LE	2402 to 2480	2402, 2442, 2480	GFSK	1	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 12 of 25

## **MEASUREMENT UNCERTAINTY**

Test Items		ncertaint	y
AC Power Line Conducted Emission	+/-	2.34	dB
Peak Output Power		1	dB
Emission Bandwidth	+/-	1.53	Hz
100 kHz Bandwidth Of Frequency Band Edges	+/-	1.69	dB
Peak Power Density	+/-	1.53	dB
Temperature	+/-	0.4	°C
Humidity	+/-	3.5	%
DC / AC Power Source	+/-	1	%

Radiated Spurious Emission Measurement Uncertainty							
	+/-	2.64	dB	9kHz~30MHz			
Polarization: Vertical	+/-	4.93	dB	30MHz - 1000MHz			
Polarization, vertical	+/-	4.81	dB	1GHz - 18GHz			
	+/-	4.52	dB	18GHz - 40GHz			
	+/-	2.64	dB	9kHz~30MHz			
Delevization, Herizantel	+/-	4.45	dB	30MHz - 1000MHz			
Polarization: Horizontal	+/-	4.81	dB	1GHz - 18GHz			
	+/-	4.52	dB	18GHz - 40GHz			

### Note:

- 1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
- 2. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnielectronic cornal occuments, subject to Terris and Conditions for Electronic Documents at <a href="https://www.sgs.com.tw/" lerms-and-Conditions.">https://www.sgs.com.tw/ lerms-and-Conditions.</a>
Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 13 of 25

#### 6 PEAK OUTPUT POWER MEASUREMENT

# 6.1 Standard Applicable:

For systems using digital modulation in the 2400-2483.5 MHz bands, the limit for peak output power is 1Watt and the e.i.r.p. shall not exceed 4 W.

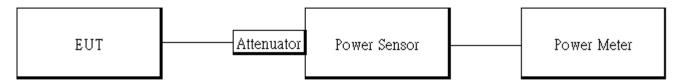
If the transmitting antenna of directional gain greater than 6dBi are used the peak output power form the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the Antenna exceeds 6dBi.

In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of Antenna exceeds 6dBi.

### 6.2 Measurement Equipment Used:

Conducted Emission Test Site: Conducted G								
EQUIPMENT TYPE	LAST CAL.	CAL DUE.						
Power Meter	Anritsu	ML2496A	1326001	08/05/2020	08/04/2021			
Power Sensor	Anritsu	MA2411B	1315048	08/05/2020	08/04/2021			
Power Sensor	Anritsu	MA2411B	1315049	08/05/2020	08/04/2021			
Attenuator	Marvelous	MVE2213- 10	RF12	11/19/2020	11/18/2021			
Attenuator	Marvelous	WATT- 218FS-10	RF18	11/19/2020	11/18/2021			

### 6.3 Test Set-up:



#### 6.4 **Measurement Procedure:**

- 1. Place the EUT on the table and set it in transmitting mode.
- 2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance.
- 3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter.
- 4. Record the max. Reading as observed from Power Meter.
- 5. Repeat above procedures until all test default channel measured was complete.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com.tw/Terms-and-Conditions and for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com.tw/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488 www.sgs.com.tw



Page: 14 of 25

# 6.5 Output Power:

#### 6.5.1 Peak & Avg

### RI F mode

DEL IIIO	<u>uc.</u>			
СН	Frequency (MHz)	Power set	Peak Power Output (dBm)	Required Limit (dBm)
Low	2402	default	3.66	30
Mid	2442	default	4.08	30
High	2480	default	4.34	30
СН	Frequency (MHz)	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Required Limit (dBm)
Low	2402	default	3.52	30
Mid	2442	default	3.91	30
High	2480	default	4.21	30

<sup>\*</sup>Note: Measured by power meter, cable loss dB + Duty cycle factor has been offseted to the power meter for Avg. power and cable loss has been offseted for Peak power measurement.

#### 6.5.2 **EIRP**

### **EIRP BLE mode**

СН	Frequency (MHz)	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)		Limit	
Low	2402	default	3.52	0.44	3.96	4W=	36	dBm
Mid	2442	default	3.91	0.44	4.35	4W=	36	dBm
High	2480	default	4.21	0.44	4.65	4W=	36	dBm

<sup>\*</sup> Note: EIRP = Average Power + Gain

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 15 of 25

### SPURIOUS EMISSION MEASUREMENT

# 7.1 Standard Applicable

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator 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 the transmitter demonstrates compliance with the peak conducted power limits. In addition, radiated emissions which fall in the restricted bands must also comply with the §15.209 and RSS-Gen §8.9 Table 5 and 6 limit as below.

And according to §15.33(a) (1) & RSS-Gen §6.13.2.a for an intentional radiator operates below 10GHz, the frequency range of measurements: to the tenth harmonic of the highest fundamental frequency or to 40GHz, whichever is lower.

Frequency (MHz)	Field strength (microvolts/meter)	Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

#### Note:

1. The lower limit shall apply at the transition frequencies.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製



Page: 16 of 25

# 7.2 Measurement Equipment Used

Radiated Emission Test Site: SAC D								
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUM- BER	LAST CAL.	CAL DUE.			
Broadband Antenna	TESEQ	CBL 6112D	35240	09/08/2020	09/07/2021			
Horn Antenna	Schwarzbeck	BBHA9120D	1341	06/22/2020	06/21/2021			
Horn Antenna	Schwarzbeck	BBHA9170	185	07/30/2020	07/29/2021			
Loop Antenna	ETS.LIND- GREN	6502	143303	05/07/2021	05/06/2022			
3m Site NSA	SGS	966 chamber D	N/A	07/12/2020	07/11/2021			
Spectrum Analyzer	KEYSIGHT	N9010A	MY54510568	07/08/2020	07/07/2021			
Pre-Amplifier	EMC Instru- ments	EMC184045B	980135	10/27/2020	10/26/2021			
Pre-Amplifier	EMC Instru- ments	EMC9135	980234	11/19/2020	11/18/2021			
Pre-Amplifier	EMC Instru- ments	EMC12630SE	980271	11/19/2020	11/18/2021			
Attenuator	Marvelous	WATT-218FS- 10	RF25	11/19/2020	11/18/2021			
High Pass Filter	R&S	F13 HPF 3GHz	RF175	11/19/2020	11/18/2021			
Lowpass Filter	Woken	EWT-56-0019	RF173	11/19/2020	11/18/2021			
Notch Filter	Woken	EWT-54-0038	RF178	11/19/2020	11/18/2021			
Coaxial Cable	Huber Suhner	EMC106-SM- SM-7200	150703	11/19/2020	11/18/2021			
Coaxial Cable	Huber+Suhner	RG 214/U	W21.01	11/19/2020	11/18/2021			
Coaxial Cable	Huber Suhner	SUCOFLEX 104	MY17413/4	11/19/2020	11/18/2021			

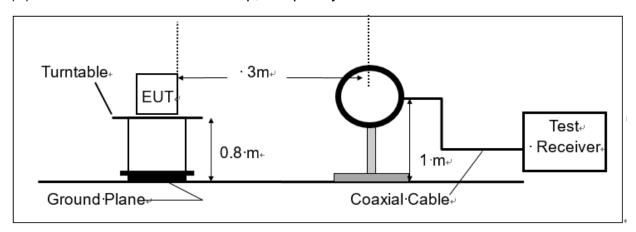
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



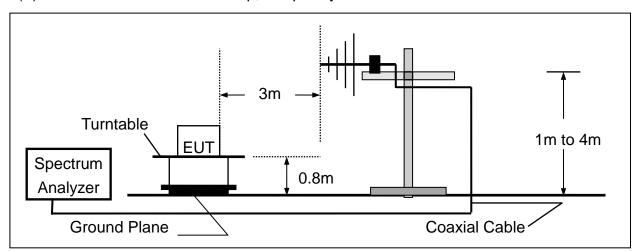
Page: 17 of 25

### 7.3 Test SET-UP

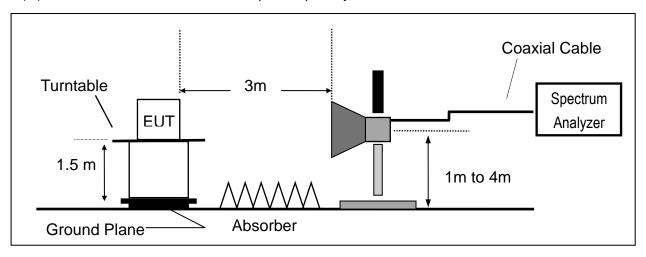
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz.



(B) Radiated Emission Test Set-Up, Frequency From 30MHz to 1000MHz



(C) Radiated Emission Test Set-Up, Frequency Above 1GHz



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 18 of 25

### 7.4 Measurement Procedure

- 1. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance.
- 2. The EUT was placed on a turn table with 0.8m for frequency< 1GHz and 1.5m for frequency> 1GHz above ground plane.
- 3. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
- 4.EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
- 5. Set the spectrum analyzer as RBW=100 kHz and VBW=300 kHz for Peak Detector (PK) at frequency between 30MHz and 1 GHz.
- 6. Use receiver mode as RBW=120 kHz for Quasi-peak (QP) at frequency between 30MHz and 1 GHz.
- 7. Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz for Peak Detector at frequency above 1 GHz.
- 8. Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) or VBW ≥ 1/T (Duty cycle < 98%) for Average Detector at frequency above 1 GHz.
- 9. When measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.
- 10. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 11. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. On spectrum, change spectrum mode in linear display mode, and reduce VBW = 10Hz if average reading is measured.
- 12. Repeat above procedures until all default test channel measured were complete.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製



Page: 19 of 25

#### 7.5 **Field Strength Calculation**

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

**Where** FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

The limit of the emission level is expressed in dBuV/m, which converts 20\*log(uV/m)

Actual  $FS(dB\mu V/m) = SPA$ . Reading level(dB $\mu V$ ) + Factor(dB)

Factor(dB) = Antenna Factor(dBµV/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

## 7.6 Test Results of Radiated Spurious Emissions from 9 kHz to 30 MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit per 15.31(o) was not reported.

### **Measurement Result:**

Note: Refer to next page spectrum analyzer data chart and tabular data sheets.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com.tw/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488 www.sgs.com.tw



Page: 20 of 25

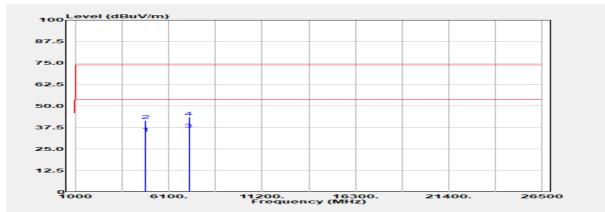
#### 7.7.1 **Radiated Spurious Emission above 1GHz**

Report Number :E2/2021/60035 Test Site :966 Chamber D

**Operation Mode** :BLE Test Date :2021-06-16

Test Frequency Temp./Humi. :22.6/61 :2402 MHz Test Mode :TX CH LOW Antenna Pol. :Vertical

**EUT Pol** :NB Plane :Andy Wang Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
4804.000	Average	37.31	-3.03	34.28	54.00	-19.72
4804.000	Peak	44.62	-3.03	41.59	74.00	-32.41
7206.000	Average	33.61	2.98	36.60	54.00	-17.40
7206.000	Peak	40.53	2.98	43.51	74.00	-30.49

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Page: 21 of 25

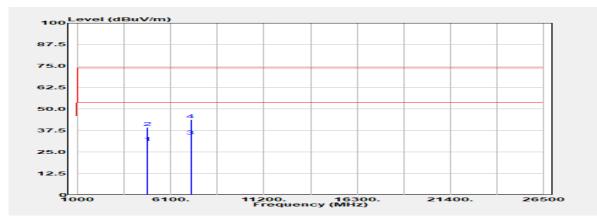
Report Number :E2/2021/60035 Test Site :966 Chamber D

:BLE Operation Mode Test Date :2021-06-16

Test Frequency :2402 MHz Temp./Humi. :22.6/61

Test Mode :Horizontal :TX CH LOW Antenna Pol.

**EUT Pol** :NB Plane :Andy Wang Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
4804.000	Average	33.51	-3.03	30.47	54.00	-23.53
4804.000	Peak	42.39	-3.03	39.36	74.00	-34.64
7206.000	Average	31.46	2.98	34.44	54.00	-19.56
7206.000	Peak	40.79	2.98	43.78	74.00	-30.22

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



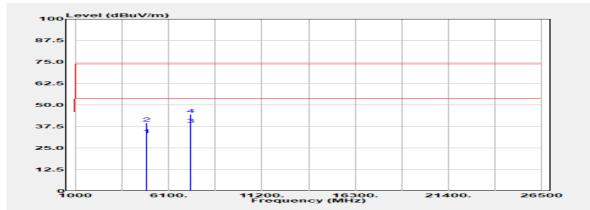
Page: 22 of 25

Report Number :E2/2021/60035 Test Site :966 Chamber D

:BLE Operation Mode Test Date :2021-06-16

Test Frequency :2442 MHz Temp./Humi. :22.6/61 Test Mode :TX CH MID Antenna Pol. :Vertical

**EUT Pol** :NB Plane :Andy Wang Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
4884.000	Average	35.99	-3.17	32.82	54.00	-21.18
4884.000	Peak	42.66	-3.17	39.49	74.00	-34.51
7326.000	Average	35.83	3.14	38.97	54.00	-15.03
7326.000	Peak	41.56	3.14	44.70	74.00	-29.30

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 23 of 25

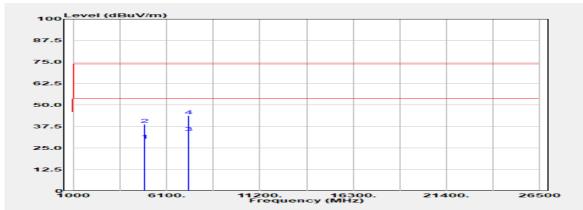
Report Number :E2/2021/60035 Test Site :966 Chamber D

:BLE Operation Mode Test Date :2021-06-16

Test Frequency :2442 MHz Temp./Humi. :22.6/61

Test Mode :Horizontal :TX CH MID Antenna Pol.

**EUT Pol** :NB Plane :Andy Wang Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
4884.000	Average	32.74	-3.17	29.57	54.00	-24.43
4884.000	Peak	42.10	-3.17	38.93	74.00	-35.07
7326.000	Average	30.96	3.14	34.10	54.00	-19.90
7326.000	Peak	40.80	3.14	43.94	74.00	-30.06

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



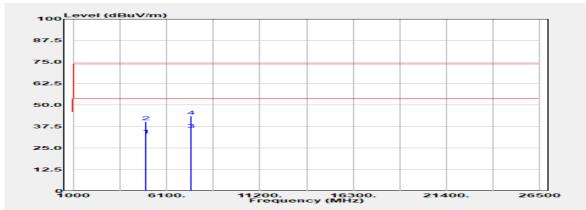
Page: 24 of 25

Report Number :E2/2021/60035 Test Site :966 Chamber D

:BLE Operation Mode Test Date :2021-06-16

Test Frequency :2480 MHz Temp./Humi. :22.6/61 Test Mode :TX CH HIGH Antenna Pol. :Vertical

**EUT Pol** :NB Plane :Andy Wang Engineer



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	_
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
4960.000	Average	35.51	-2.89	32.62	54.00	-21.38
4960.000	Peak	43.23	-2.89	40.34	74.00	-33.66
7440.000	Average	32.23	3.65	35.88	54.00	-18.12
7440.000	Peak	39.87	3.65	43.52	74.00	-30.48

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488



Page: 25 of 25

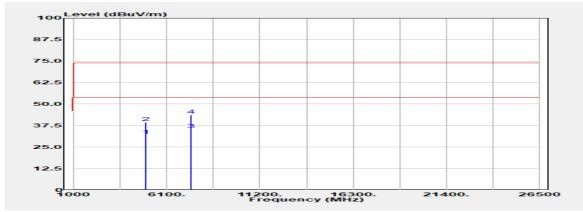
Report Number Test Site :966 Chamber D :E2/2021/60035

:BLE Operation Mode Test Date :2021-06-16

Test Frequency :2480 MHz Temp./Humi. :22.6/61

Test Mode :TX CH HIGH Antenna Pol. :Horizontal

**EUT Pol** :NB Plane :Andy Wang Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
4960.000	Average	34.81	-2.89	31.92	54.00	-22.08
4960.000	Peak	42.29	-2.89	39.40	74.00	-34.60
7440.000	Average	31.76	3.65	35.41	54.00	-18.59
7440.000	Peak	39.91	3.65	43.56	74.00	-30.44

~ End of Report ~

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488 www.sgs.com.tw